

COMMONWEALTH OF MASSACHUSETTS



CONTRACT DOCUMENTS
AND SPECIAL PROVISIONS

PROPOSAL NO.	614087-132949
P.V. =	\$2,707,000.00
PLANS	NO

FOR

Scheduled and Emergency Substructure Repairs at Various Locations

in

DISTRICT 5

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

This Proposal to be opened and read:

TUESDAY, DECEMBER 9, 2025 at 2:00 P.M.

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DOCUMENT 00010

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*** END OF DOCUMENT ***

DOCUMENT 00102

**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 9, 2025 at 2:00 P.M. ****DISTRICT 5****Scheduled and Emergency Substructure Repairs at Various Locations******Date Subject to Change**PROJECT VALUE = \$2,707,000.00

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.

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 \$2.752 per gallon, and gasoline \$2.280 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: Phillip Eng, Interim MassDOT Secretary
Jonathan L. Gulliver, Undersecretary and Highway Administrator
SATURDAY, NOVEMBER 8, 2025

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.

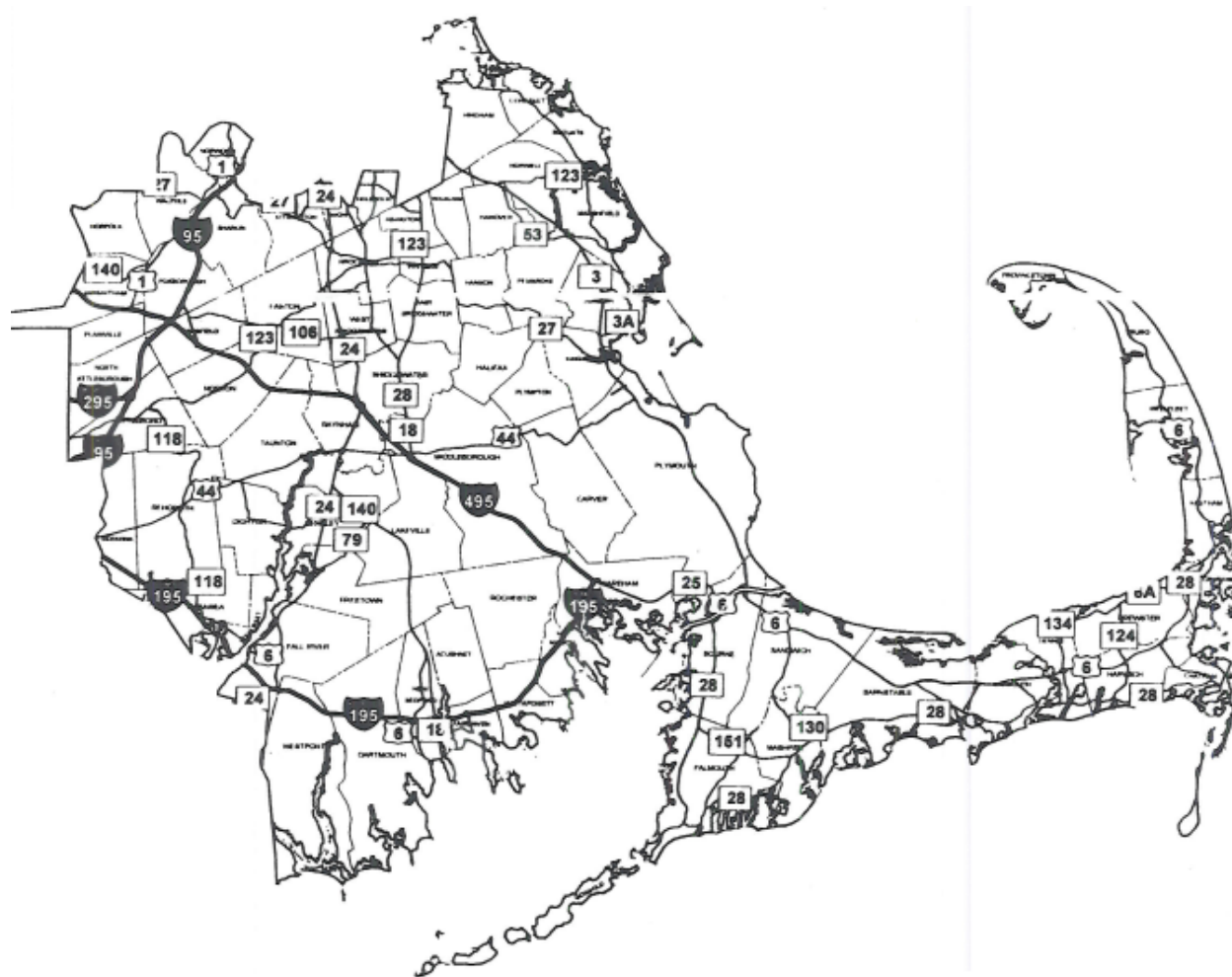
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DOCUMENT 00331

LOCUS MAP

DISTRICT 5

Scheduled and Emergency Substructure Repairs at Various Locations



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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/DateContractor 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): __________

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: _____

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.

DOCUMENT 00718

SPECIAL PROVISION FOR PARTICIPATION BY MINORITY OR WOMEN'S BUSINESS ENTERPRISES
AND SERVICE- DISABLED VETERAN- OWNED BUSINESS ENTERPRISES(Implementing Chapter 102, Section 24 and
Chapter 273, Section 124, of the Acts of 1994 and Chapter 56, Sections 1 to 5 of the Acts of 2010
and subsequent Acts)

Revised: September 27, 2021

I. PARTICIPATION

M/WBE PARTICIPATION GOAL

On this Contract, the Massachusetts Department of Transportation (MassDOT) has established a goal for participation by Minority or Women Business Enterprise(s) (M/WBE). One half of the goal shall be met in the form of contractor activity. This goal shall remain in effect throughout the life of the Contract.

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

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

SDVOBE PARTICIPATION BENCHMARK

On this Contract, the Massachusetts Department of Transportation (MassDOT) has established a goal for participation by Service- Disabled Veteran- Owned Business Enterprise(s) (SDVOBE). This goal shall remain in effect throughout the life of the Contract.

☐ Design-Bid-Build Projects: SDVOBE Participation Goal %

☐ Design-Build Projects: SDVOBE Design Participation Goal % and SDVOBE
Construction Participation Goal %

II. POLICY

It is the policy of the MassDOT that Minority, Women Business Enterprises (M/WBEs) and Service- Disabled Veteran- Owned Business Enterprises (SDVOBEs) have equal opportunity to receive and participate in the performance of its state funded Contracts.

III. M/WBE and SDVOBE OBLIGATION

The Contractor agrees to take all necessary and reasonable steps to ensure that MBE, WBE, and SDVOBEs have the maximum opportunity to compete for, and to perform, Department Contracts.

IV. FAILURE TO COMPLY WITH M/WBE OR SDVOBE REQUIREMENTS

All Contractors and Subcontractors are hereby advised that failure to carry out the requirements of these Provisions constitutes a breach of Contract which may result in termination of the Contract, a determination that the Contractor or Subcontractor be barred from bidding on Department Contracts for up to three (3) years, or any other remedy as the Department may impose under Section XIV of these Special Provisions.

V. REQUIRED SUBCONTRACT PROVISIONS

The Prime Contractor shall include the Provisions of Sections II, III, and IV above in every subcontract making those provisions binding on each subcontractor, supplier, manufacturer, consultant or service provider.

VI. DEFINITIONS

For the purpose of these Special Provisions, the terms listed below are defined as follows:

Minority Business Enterprise or MBE means any individual, business organization, or non-profit corporation certified as a MBE by the Supplier Diversity Office (SDO), formerly known as the State Office of Minority and Women Business Assistance (SOMWBA), or by the Department for the purposes of a particular bid or proposal to be submitted to the Department.

Women Business Enterprise or WBE means any individual, business or organization, or non-profit corporation certified as a WBE by SDO, or by the Department for the purposes of a particular bid or proposal to be submitted to the Department.

Service- Disabled Veterans- Owned Businesses or SDVOBE means a business not less than 51 percent of which is owned by one or more service- disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and the management and daily business operations of which are controlled by one or more service- disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

"Contractor activity" means any work, including but not limited to, construction, demolition, renovation, survey, test boring services, or maintenance work performed under the Contract.

"Approved Joint Venture" means a joint venture between M/WBEs and non-M/WBEs, or SDVOBEs and non-SDVOBEs, which has been established for the purpose of participation on a particular contract, where:

1. The M/WBE or SDVOBE partner(s) shares in the ownership, control, management responsibilities, risks and profits of the joint venture; and
2. The Joint Venture has been approved by the Department for M/WBE or SDVOBE participation on the particular contract.

"Equipment Rental Firm" means a firm that owns equipment and assumes actual and contractual responsibility to rent said equipment to perform a useful function of the work of the contract consistent with normal industry practice.

"Material Supplier" means a vendor engaged in sales to the highway construction industry from an established place of business or source of supply, which:

- (a) Manufactures goods from raw materials or substantially alters them before resale, or
- (b) Provides and maintains a storage facility for materials used in the work, consistent with normal industry practice.

"Department" means the Massachusetts Department of Transportation (MassDOT).

"SDO" means the Massachusetts Supplier Diversity Office.

VII. ELIGIBILITY of M/WBEs

Only firms, *OTHER THAN THE PRIME CONTRACTOR*, which have been certified by SDO and/or the Department as eligible to participate on state funded contracts as MBEs or WBEs may be used on this contract for credit toward the toward the M/WBE participation goal.

1. SDO Directory of Certified M/WBEs: The Supplier Diversity Office publishes a Directory of certified MBE and WBEs. This Directory can be obtained from SDO at <https://www.sdo.osd.state.ma.us/>. This site lists those firms which have been certified as minority owned (MBEs) or women owned (WBEs) in accordance with the criteria of 425 CMR 2.00 et seq to participate as M/WBEs on state funded contracts. It also lists the kinds of work in which each firm engages but does not constitute an endorsement of the quality or performance of any business and does not represent Department subcontractor approval.
2. Application for Certification by the Department for a Particular Project: A firm which has (1) submitted a fully completed M/WBE application to SDO at least 30 days previously, (2) has provided in a timely manner, any additional information which may have been requested by SDO, and (3) can provide evidence, satisfactory to the Department, of a bidder's conditional commitment to subcontract with the firm, if certified, may apply directly to the MassDOT Office of Civil Rights to be certified for participation on the particular contract.
3. Joint Venture Approval: To obtain recognition as an approved joint venture between M/WBEs and non-M/WBEs, the Joint Venture must provide to the MassDOT Office of Civil Rights, at least 14 business days before the bid opening date, the Joint Venture Affidavit Document B00847, and a copy of the Joint Venture Agreement, which shall include a detailed breakdown of the following:
 - (a) Capital participation by the M/WBE,
 - (b) Specific equipment to be provided to the Joint Venture by the M/WBE,
 - (c) Specific responsibilities of the M/WBE in the management of the Joint Venture,
 - (d) Workforce and specific skills to be provided to the Joint Venture by the M/WBE, and
 - (e) Percentage distribution to the M/WBE of the projected profit or loss incurred by the Joint Venture.
 - (f) The Joint Venture shall provide all such additional information as may be requested by the Department for the purpose of determining joint venture eligibility.

VIII. ELIGIBILITY of SDVOBEs

Only firms, *OTHER THAN THE PRIME CONTRACTOR*, which have demonstrated that they are listed as a service-disabled veteran- owned small businesses within the VetBiz database may be used on this contract for credit toward the SDVOBE participation goal.

1. VetBiz Database: The website, located at www.VetBiz.gov, listing verified service- disabled veteran- owned businesses.
2. Joint Venture Approval: To obtain recognition as an approved joint venture between SDVOBEs and non-SDVOBEs, the joint venture must provide to the MassDOT Office of Civil Rights, at least 14 business days before the bid opening date, an application for joint venture participation approval, and a copy of the Joint Venture Agreement, which shall include a detailed breakdown of the following:
 - (a) Capital participation by the SDVOBE,
 - (b) Specific equipment to be provided to the joint venture by the SDVOBE,
 - (c) Specific responsibilities of the SDVOBE in the management of the Joint Venture,
 - (d) Workforce and specific skills to be provided to the joint venture by the SDVOBE, and

- (e) Percentage distribution to the SDVOBE of the projected profit or loss incurred by the Joint Venture.
- (f) The Joint Venture shall provide all such additional information as may be requested by the Department for the purpose of determining joint venture eligibility.

IX. COUNTING M/WBE PARTICIPATION AND SDVOBE BENCHMARKS TOWARDS M/WBE AND SDVOBE GOALS

In order for M/WBE participation and SDVOBE benchmarks to count toward the Contract goal, the M/WBE and SDVOBE must have independently managed, supervised and performed the Contract work with its own workforce, equipment and resources. M/WBE and SDVOBE participation which fulfills these requirements shall be counted toward meeting the M/WBE and SDVOBE goals in accordance with the following rules:

- 1 If a firm has been determined to be an eligible MBE, WBE or SDVOBE, the total dollar value of the contract performed by the M/WBE or SDVOBE is counted toward the applicable goal as follows:
 - a. Except as provided below, in Section IX (1)(g), work performed by a M/WBE or a SDVOBE Prime Contractor shall not be counted toward the M/WBE or SDVOBE goal, and all Prime Contractors, including M/WBE or SDVOBE Prime Contractors, must comply with the M/WBE and SDVOBE requirements of this Contract.
 - b. For a M/WBE or SDVOBE material supplier, sixty percent (60%) of the amount to be paid for materials and supplies required under this Contract shall be credited toward the goal.
 - c. For a M/WBE or SDVOBE who provides a bonafide service such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract, reasonable fees or commissions charged for the service shall be listed, but the cost of items themselves shall not be credited.
 - d. For a M/WBE or SDVOBE hauler, trucker, or delivery service, which is not also the manufacturer of or a regular dealer in the materials and supplies, reasonable fees charged for delivery of materials and supplies required on the job site shall be credited; the cost of the materials and supplies themselves shall not be credited.
 - e. For a M/WBE or SDVOBE who provides any bonds or insurance specifically required for the performance of the contract, reasonable fees or commissions charged for such service shall be listed, but the face amount or actual premium paid for the bond or insurance shall not be credited.
 - f. The Department shall determine if the fees or commissions listed in accordance with paragraphs (c), (d), and (e) are not excessive as compared with fees or commissions customarily allowed for similar services.
 - g. That portion of the contract total dollar value equal to the percentage of ownership and control of the M/WBE partner(s) or SDVOBE partner(s) in an approved Joint Venture shall be counted toward the Contract goal, except that credit for M/WBE and SDVOBE participation in an approved Prime Joint Venture shall not exceed one half of the Contract goal.

X. JOINT CHECK POLICY

1. 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 M/WBE or SDVOBE third party such as a regular dealer of material or supplies. The Prime Contractor issues the check as payor to the M/WBE or SDVOBE 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 M/WBE or SDVOBE. MassDOT has established criteria to ensure that M/WBEs or SDVOBEs are in fact performing a commercially useful function ("CUF") while using a joint check arrangement. Contractors and M/WBEs or SDVOBEs must meet and conform to these conditions and criteria governing the use of joint checks.

2. In the event that a Contractor, M/WBE or SDVOBE Subcontractor desires to use a joint check, MassDOT will require prior notice and will closely monitor the arrangement for compliance. MassDOT may allow a joint check arrangement and give credit to a Contractor for use of the M/WBE or SDVOBE 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 (M/WBEs, SDVOBE and non-M/WBEs or non-SDVOBEs); 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 M/WBE or SDVOBE (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.
3. Other factors MassDOT may consider:
 - Whether there is a requirement by the Prime Contractor that a M/WBE or SDVOBE should use a specific vendor or supplier to meet their Subcontractor specifications;
 - Whether there is a requirement that a M/WBE or SDVOBE use the Prime Contractor's negotiated price;
 - The independence of the M/WBE or SDVOBE;
 - 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 M/WBE or SDVOBE has made an effort to establish alternate arrangements for following periods (i.e., the M/WBE or SDVOBE 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 M/WBE or SDVOBE remain responsible for compliance with all other elements of the Special Provisions, and must still be able to prove that a commercially useful function is being performed for the Contractor.

XI. JOINT CHECK PROCEDURES

- The M/WBE or SDVOBE 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 B00846) and by notification on the M/WBE Letter of Intent (Document B00843) or SDVOBE Letter of Intent (Document B00845), 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 Contractor and M/WBE or SDVOBE must have:
 - (a) a written agreement with the material supplier/vendor;
 - (b) applied for credit with the subject material supplier and has supplied the vendor's response;

- (c) shown that it will place all orders to the subject material supplier/vendor;
 - (d) made and retains all decision-making responsibilities concerning the materials; and
 - (e) provided a Joint Check Agreement that is acceptable to MassDOT;
- The MassDOT Office of Civil Rights will review the request and render a decision as part of the approval process for M/WBE or SDVOBE 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 M/WBE or SDVOBE 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 M/WBE or SDVOBE (i.e. if possible, funds or the joint check should be processed by the M/WBE or SDVOBE and sent by the M/WBE or SDVOBE 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 M/WBE or SDVOBE 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 M/WBE or SDVOBE Program policies and procedures as part of the Subcontractor approval process.

XII. AWARD DOCUMENTATION AND PROCEDURES

1. The two lowest bidders/the two bidders with the lowest price per quality score point, including any M/WBE bidder or SDVOBE bidder, shall submit, by the close of business on the third business day after the bid opening, a completed Schedule of M/WBE and SDVOBE participation, in the form attached, which shall list:
 - a. The full company name, address and telephone number of each M/WBE or SDVOBE with whom the bidder intends to make a commitment;
 - b. The Contract item(s), by number(s) and quantity(ies), if applicable, or specific description of other business activity to be performed by each M/WBE or SDVOBE 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 Section XII of these Special Provisions.
 - c. The total dollar amount to be paid to each M/WBE or SDVOBE. (Bidders are cautioned that at least one half of the participation goal must be met with Contract work.)
 - d. The total dollar amount to be paid to each M/WBE or SDVOBE which is eligible for credit toward the M/WBE or SDVOBE goal under the crediting rules set out in Section IX.
 - e. The total creditable M/WBE or SDVOBE participation as a percentage of the total bid price.
2. All firms listed on the Schedule must be currently certified.
3. The two lowest bidders/the two bidders with the lowest price per quality score point shall submit with their Schedules of Participation, fully completed, signed Letters of Intent from each of the M/WBEs or SDVOBEs listed on the Schedule. The Letters of Intent shall be in the form attached and shall identify specifically the contract activity the M/WBE or SDVOBE proposes to perform, expressed as contract item number, if applicable, description of the activity, 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.

4. Evidence of good faith efforts will be evaluated by the Department in the selection of the lowest responsible bidder/best value bidder. All information requested by the Department for the purpose of evaluating the bidder's efforts to achieve the goal must be provided within three calendar days and must be accurate and complete in every detail. The apparent low bidder's/best value bidder's attainment of the M/WBE or SDVOBE goal or a satisfactory demonstration of good faith efforts is a prerequisite for Award of the Contract.
5. 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 on the Schedule of Participation, and provide the required Letters of Intent for, M/WBE or SDVOBE 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 the Department, that good faith efforts were made to achieve the goal.
6. If the Department finds that the percentage of M/WBE or SDVOBE participation submitted by the bidder on its Schedule does not meet the Contract goal, or that the 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 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.
7. If, after administrative reconsideration, the Department 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.
8. Actions which constitute evidence of good faith efforts to meet the M/WBE or SDVOBE goals include, but are not limited to, all of the following examples:
 - a. Efforts made to select portions of the work proposed to be performed by M/WBEs or SDVOBEs in order to increase the likelihood of achieving the stated goal, including, where appropriate, but not limited to, breaking down contracts into economically feasible units to facilitate M/WBE and SDVOBE participation. The value of such work is required to at least equal the M/WBE and SDVOBE goal.
 - b. Reasonable written notification prior to the opening of bids soliciting individual M/WBEs or SDVOBEs interested in participation in the contract as subcontractors, regular dealers, manufacturers, consultants, or service providers and identifying the specific items or type of work being solicited.
 - c. Written notification to M/WBE or SDVOBE economic development assistance agencies and organizations which provide assistance in recruitment and placement of M/WBEs and SDVOBEs, describing the type of work, supplies or services being considered for M/WBE or SDVOBE subcontracting on this contract.
 - d. Efforts made to negotiate with M/WBEs or SDVOBEs for specific items of work including evidence of:
 - (1) The names, addresses, telephone numbers of M/WBEs or SDVOBEs who were contacted, the dates of initial contact and whether initial solicitations of interest were followed up by contacts with M/WBEs or SDVOBEs to determine with certainty whether the M/WBEs or SDVOBEs were interested. Personal or phone contacts are expected.
 - (2) A description of the information provided by the M/WBEs or SDVOBEs regarding the plans and specifications and estimated quantities for portions of the work to be performed.
 - (3) A statement of why additional agreements with M/WBEs or SDVOBEs were not reached.
 - (4) Documentation of each M/WBE or SDVOBE contacted but rejected and the reasons for the rejection.
 - e. Absence of any agreements between the Contractor and the M/WBE or SDVOBE in which M/WBE or SDVOBE promises not to provide subcontracting quotations to other bidders.
 - f. Efforts made to assist the M/WBEs or SDVOBEs that need assistance in obtaining bonding, insurance, or lines of credit required by the Contractor.

- g. Documentation that qualified M/WBEs or SDVOBEs are not available, or are not interested.
 - h. Attendance at any meeting scheduled by the Department to encourage better Contractor-M/WBE or Contractor- SDVOBE relationships and/or to inform M/WBEs or SDVOBEs of forthcoming M/WBE or SDVOBE utilization opportunities.
 - i. Advertisement, in general circulation media, in trade association publications and in disadvantaged business enterprise-focused media, of interest in utilizing M/WBEs or SDVOBEs and the area of interest.
 - j. Efforts to effectively use the services of available minority community organizations; women organizations, veteran organizations, minority, women disadvantaged and veteran contractor's groups; local, state and federal disadvantaged business assistance offices; and other organizations that provide assistance in recruitment and placement of M/WBEs or SDVOBEs.
9. The demonstration of good faith efforts must establish that the Contractor has actively and aggressively sought out M/WBEs or SDVOBEs to participate in the project and has taken all actions which could be reasonably expected to achieve the goal. Examples of circumstances or actions not acceptable as reasons for failure to meet the M/WBE or SDVOBE goal, include, but are not limited to:
- a. The M/WBE or SDVOBE was unable to provide performance and/or payment bonds.
 - b. The M/WBEs or SDVOBEs commercially reasonable bid was rejected based on price.
 - c. The M/WBE or SDVOBE would not agree to perform items of work at the unit bid price.
 - d. The Contractor does not want to subcontract a percentage of the work sufficient to meet the goal.
 - e. Solicitation by mail or fax only.

XIII. COMPLIANCE

- 1. All activity performed by a M/WBE or SDVOBE for credit toward the Contract goal must be performed, managed and supervised by the M/WBE or SDVOBE. Prime Contractor shall not enter into, or condone, any other arrangement.
- 2. The Prime Contractor shall not perform with its own organization, or assign to any other business, any activity designated for the M/WBEs or SDVOBEs named on the Schedule submitted by the Prime Contractor under Section IX, or under Section XII(6), without the approval of the Department in accordance with the requirements of Sections XIII(6) and XIII(10).
- 3. The Department may suspend payment for any activity which was not performed by the M/WBE or SDVOBE to whom the activity was committed on the approved Schedule of Participation, or which was not performed in accordance with the requirements of Section XIII(1).
- 4. The Department retains the right to approve or disapprove all subcontractors. Requests by the Prime Contractor for approval of participation by a M/WBE or SDVOBE subcontractor for credit toward the Contract goal must include, in addition to any other requirements for subcontractor approval, the following:
 - a. A copy of the proposed subcontract. The subcontract must be for at least the dollar amount, and for the work described, in the Prime Contractor's Schedule of Participation.
 - b. A resume stating the qualifications and experience of the M/WBE or SDVOBE 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.
 - c. A Schedule of Operations indicating when the M/WBE or SDVOBE is expected to perform the work.

- d. A list of (1) equipment owned by the M/WBE or SDVOBE to be used on the Project, and (2) equipment to be leased by the M/WBE or SDVOBE for use on the Project.
 - e. A list of: (1) all projects (public and private) which the M/WBE or SDVOBE is currently performing, (2) all projects (public and private) to which the M/WBE or SDVOBE is committed, (3) all projects (public and private) to which the M/WBE or SDVOBE 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 M/WBEs or SDVOBEs work schedule for each project.
5. If, pursuant to the subcontractor approval process, the Department finds that a M/WBE or SDVOBE subcontractor does not have sufficient experience or resources to perform, manage and supervise work of the kind proposed in accordance with the requirements of Section XIII(1), approval of the M/WBE or SDVOBE subcontractor may be denied. In the event of such denial, the Prime Contractor shall proceed in accordance with the requirements of Sections XIII(6) and XIII(10).
 6. If, for reasons beyond its control, the Prime Contractor cannot comply with its M/WBE or SDVOBE commitment in accordance with the Schedule of participation submitted under Section IX and the terms of these Special Provisions, the Prime Contractor shall submit to the Department the reasons for its inability to comply with its obligations under Section I and shall submit, and request approval for, a revised Schedule of Participation. If approved by the Department, the revised Schedule shall govern the Prime Contractor's performance in meeting its obligations under these special provisions.
 7. A Prime Contractor's compliance with the participation goal in Section I shall be determined by reference to the required percentage of the total Contract price, including any additions and modifications thereto, provided, however, that no decrease in the dollar amount of a bidder's commitment to any M/WBE or SDVOBE shall be allowed without the approval of the Department.
 8. If the Contract amount is increased, the Prime Contractor shall submit a revised Schedule of Participation in accordance with Sections XIII(6) and XIII(10).
 9. In the event of the decertification of a M/WBE or SDVOBE participating or scheduled to participate on the contract for credit toward the goal, the Contractor shall proceed in accordance with Sections XIII(6) and XIII(10).
 10. The Prime Contractor shall notify the Department immediately of any facts which come to its attention indicating that it may or will be unable to comply with any aspect of its M/WBE or SDVOBE obligation under this Contract.
 11. Any notice required by these Special Provisions shall be given in writing to the Resident Engineer and the district designated Compliance Officer with a copy to the Director of Compliance, Office of Diversity and Civil Rights, 10 Park Plaza, Room 3170, Boston MA 02116.
 12. The Prime Contractor and its subcontractors shall comply with the Department's Electronic Reporting System Requirements (Contract Document 00821) and submit all information required by the Department related to the M/WBE Special Provisions and SDVOBE Special Provisions through the Equitable Business Opportunity Solution (EBO). The Department reserves the right to request reports in the format it deems necessary anytime during the performance of the Contract.
 13. The Contractor shall pay each M/WBE or SDVOBE for satisfactory performance of its Contract no later than 10 days from receipt of payment for the work from the Department. Any delay or postponement of payment to the M/WBEs or SDVOBEs must be for good cause and only with the prior approval of the Department.
 14. The Department may withhold the Contractor's next periodic payment if each M/WBE or SDVOBE is not paid in accordance with Section XIII(13).
 15. The Department may require specific performance of the Prime Contractor's commitment under the Contract by requiring the Prime Contractor to subcontract with a M/WBE or SDVOBE for any contract or specialty item.

XIV. SANCTIONS

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

1. Retain, in connection with final acceptance and final payment, an amount determined by multiplying the total contract amount by the percentage in Section I, less the amount paid to approved M/WBEs or SDVOBEs for work performed under the Contract in accordance with the provisions of Section X. The Prime Contractor shall have the right to appeal such retention of funds in accordance with the provisions of M.G.L. c. 30A s.10.
2. 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.
3. 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 5.07.
4. Initiate debarment proceedings under M.G.L. c.29 §29F.

XV. FURTHER INFORMATION

Any proposed M/WBE, SDVOBE, bidder, Contractor or subcontractor shall provide such information as is necessary in the judgement of the Department to ascertain its compliance with the terms of this Special Provision.

XVI. LIST OF ADDITIONAL DOCUMENTS

1. The following documents shall be completed and signed by the bidder and designated M/WBEs or SDVOBEs in accordance with Section XII - Award Documentation and Procedures. These documents must be returned by the bidder to MassDOT's Bid Document Distribution Center:
 - ☐ Schedule of M/WBEs (Document B00842) or SDVOBE Participation (Document B00844)
 - ☐ Letter of Intent: M/WBEs (Document B00843) or SDVOBE (Document B00845)
 - ☐ M/WBEs or SDVOBE Joint Check Arrangement Approval Form (Document B00846), if Contractor and M/WBE or SDVOBE plan, or if M/WBE or SDVOBE is required to use a Joint Check (when applicable)
2. The following document shall be signed and returned by Contractor and Subcontractors/M/WBEs or SDVOBEs 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 (M/WBEs or SDVOBEs and non-M/WBEs or SDVOBEs alike)).
3. 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:
 - ☐ Joint Venture Affidavit of M/WBE or SDVOBE/Non-M/WBE or Non-SDVOBE (Document B00847)
4. The following document shall be provided to MassDOT's District Office of Civil Rights within 30 calendar days after the work of the M/WBE is completed, or no later than 30 calendar days after the work of the M/WBE 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/WBE) (Form No. CSD-100)

** END OF DOCUMENT ***

DOCUMENT 00761

**SPECIAL PROVISIONS FOR CERTIFICATION REGARDING DEBARMENT,
SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

Revised: 02/09/16

I. Instructions for Certification - Primary Covered Transactions:

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

1. 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 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 MassDOT's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
2. The certification in this clause is a material representation of fact upon which reliance was placed when the MassDOT determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available, the MassDOT may terminate this transaction for cause of default.
3. The prospective primary participant shall provide immediate written notice to the MassDOT if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the MassDOT for assistance in obtaining a copy of those regulations.
5. The prospective primary 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 MassDOT.
6. The prospective primary 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 Transaction," provided by the MassDOT, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. 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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration and the Debarment Lists compiled by both the Massachusetts Office of the Attorney General and the Department of Capital Asset Management and Maintenance (DCAMM) and published separately in the Central Register.
8. 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.
9. Except for transactions authorized under paragraph 5 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, the MassDOT may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -- Primary Covered Transactions

The prospective primary 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 covered transactions by any Federal, State or local department or agency;
2. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement 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;
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 2 of this certification; and
4. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

II. Instructions for Certification - Lower Tier Covered Transactions:

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

1. 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 the MassDOT may pursue available remedies, including suspension and/or debarment.
2. 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.
3. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the MassDOT for assistance in obtaining a copy of those regulations.
4. 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 MassDOT.
5. 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.
6. 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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List and the Debarment Lists.

7. 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.
8. Except for transactions authorized under paragraph 4 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, the MassDOT may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions

The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal, State or local department or agency.

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

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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 = $\$0.82/\text{Pound} \times 0.950 = \$0.78/\text{Pound}$

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 151 B).

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

III. Minority and Women Workforce Participation

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

IV. Liaison Committee

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

V. Reports and Records

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

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

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

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

VI. Access to Work Site

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

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

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

VIII. Sanctions

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

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

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

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

IX. Severability

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

X. Contractor's Certification

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

XI. Subcontractor Requirements

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

Rev'd 03/07/14

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DOCUMENT 00821

ELECTRONIC REPORTING REQUIREMENTS
CIVIL RIGHTS PROGRAMS AND CERTIFIED PAYROLL

Implemented on March 2, 2009

Revised June 04, 2019

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

Contractor and Sub-Contractor EBO User Certification

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

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

Vetting of Firms and Designated Firm Individuals

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

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

Interim Reporting Requirements

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

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DOCUMENT 00859

CONTRACTOR/SUBCONTRACTOR CERTIFICATION FORM ‡*The contractor shall submit this completed document 00859 to MassDOT for each subcontract.*_____
(Contractor) Date: __________
(Subcontractor) ☐ District Approved SubcontractorContract No: 132949 Project No. 614087 Federal Aid No.: NFALocation: DISTRICT 5Project Description: Scheduled and Emergency Substructure Repairs at Various Locations

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: _____

 (Print Name and Title)

Telephone Number: _____

Federal I.D. Number: _____

Estimated Start Date: _____

Estimated Completion Date: _____

Estimated Dollar Amount: _____

 (Authorized Signature)

 (Date)

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 than two weeks 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.

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DOCUMENT 00861

STATE PREVAILING WAGE RATES

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DOCUMENT A00801
SPECIAL PROVISIONS

DISTRICT 5

Scheduled and Emergency Substructure Repairs at Various Locations

Labor participation goals for this Project shall be 15.3% for minorities and 6.9% for women for each job category. The goals are applicable to both Contractor's and Subcontractor's on-site construction workforce. Refer to Document 00820 for details.

SCOPE OF WORK

All work under this Contract shall be done in conformance with the *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.

The work to be done under this Contract consists of scheduled and emergency substructure repairs and related work performed on bridges under the control of District 5 at various locations. The Contractor will be notified of the scheduled repairs by work order per each Location. The Work will include but not be limited to:

- 1) Removing the deteriorated concrete from any element of the substructure, including but not limited to stem piers, pier caps, pier columns, wing walls, backwalls, and abutments.
- 2) Jacking and shoring to support pier caps and/or various beams over piers and abutments may be required to allow concrete repairs to the substructure.
- 3) Removing the deteriorated concrete from retaining walls, both connected/associated and not connected/not associated with any bridge in the jurisdiction of District 5
- 4) Replacing excavated, spalled, delaminated, or deteriorated concrete, and replacing any broken, missing or deteriorated reinforcing steel with new material.
- 5) Removing and resetting or replacing bearing devices as required.
- 6) Replacing missing or damaged granite or cement concrete slope paving, either in kind or with cement concrete slope paving where needed and as directed by the Engineer.
- 7) Any additional repairs in either the superstructure or deck that are related to the substructure work.

SCOPE OF WORK (Continued)

The work to be done under this Contract also includes preparing the designs for structural repairs, furnishing various artisans (cement masons, iron workers, welders, carpenters, laborers.) as specified in Item 100.1 “Base Labor Rate”, materials, equipment, and engineering services to perform scheduled repairs for non-itemized related work. This work could also include repairs to parts of the superstructure and/or deck joints in close proximity to the substructure element under repair.

Where work is directed by the Engineer and is not in the list of bid items, the Contractor will be reimbursed under Non-Bid Items and Item 100.1 Base Labor Rate (Time and Materials).

All work shall be performed within, and accessed by, existing State, City or Town roadway layouts. No rights to enter on, or occupy, private property have been acquired for this project.

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 insurance requirements set forth in this section are in addition to the requirements of the Standard Specifications and supersede all other requirements.

Paragraphs 1 and 2

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

RAILROAD INSURANCE REQUIREMENTS

Railroad insurance will be in accordance with Subsection 7.05 of the Standard Specifications and the following:

The insurance requirements set forth in this section are in addition to the requirements of the Standard Specifications and supersede all other requirements.

Since the locations of bridges involving railroads are unknown, the Contractor will not be required to submit railroad insurance prior to execution of the Contract.

Upon assignment of a work order which requires railroad insurance, the Contractor shall submit to the Engineer all statements/estimates from a licensed insurer, which will meet the insurance requirements of the affected railroad. The Contractor should be aware that each railroad has its own specified minimum insurance requirements.

RAILROAD INSURANCE REQUIREMENTS (Continued)

After determination of the necessity and amount of the proposed insurance required by the affected railroad, the Contractor will be given a written notice to proceed with the acquisition of the insurance.

After acquisition of insurance, the Contractor shall submit the railroad insurance information to the MassDOT in accordance with Subsection 7.05 of the Standard Specifications. The Contractor shall submit the railroad insurance amount as well as railroad license and review fees to the Department for reimbursement.

The Contractor will be reimbursed for the insurance premium upon submittal of paid receipts.

If the Contractor is unable to secure said railroad insurance or is uninsurable, the Engineer may decide to cancel all future obligations and terminate the contract.

Following is the list (but not limited) of the railroad companies that operate railroad in the District at various locations:

RAILROAD CONTACT INFORMATION

CSX
1 Bell Crossing Road
Selkirk, NY 12158
Attn: John Heigel
(518) 767 – 6373

CSX –Flagger
4 Neshaminy Interplex
Suite 205
Trevose, PA 19053
Derek S. Mihaly
Office: 215-218-3391
derek_mihaly@csx.com

Mass. Central Railroad
P.O. Box 250
South Barre, MA 01074
Attn: Robert Bentley
(978) 355-5900

Mass Central Railroad Flagging

RAILROAD CONTACT INFORMATION (Continued)

AMTRAK, Contractor Safety **
30th & Market Street
Philadelphia, PA 1904
Attn: Dawn Bey
(215) 349-1553

AMTRAK Flagging

MBTA
100 Summer Street – Suite 1200
Boston, MA 02110
Christine Bresnahan
(617) 222-3361
CBresnahan@mbta.com

Note: Prior to the start of the Contract, the Contractor is required to obtain AMTRAK safety and security certificates for respective personnel that will work on bridges involving AMTRAK rail lines. The cost of the training shall be borne by the Contractor. A copy of the certificates shall be provided to the Engineer. The Contractor shall abide by all AMTRAK and Federal Regulations and requirements when working on AMTRAK property. It should be noted that all workers are required to wear **Orange reflectorized vests when working on or near AMTRAK property. No other color safety vest shall be used.

Contractors shall have their field staff properly ROW trained with valid ROW training cards to be allowed access to enter upon RR Property when necessary.

If directed by the Engineer, the Contractor shall begin the application process for Right of Entry/License Agreements for railroad entities designated by the Engineer. Such agreements are for providing a timely response to emergency work orders. The Contractor shall obtain additional site specific access agreements for the follow up scheduled repair.

LOCATION OF WORK

Work under this contract may include any bridges, viaducts, tunnels, and approach ramps within District 5 as assigned by the Engineer. The following web link provides the cities and towns under the jurisdiction of District 5

<https://www.mass.gov/service-details/find-your-highway-district-office>

Select the district and click “Submit” button.

No work shall be performed under this contract until specifically authorized and directed by the Engineer. Furthermore, this Contract does not assign to the Contractor complete maintenance of the bridges owned by the Department. The Department reserves the right to perform such work as it deems best with its own forces, and/or to enter into special contracts for the maintenance of specific items.

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.

SCHEDULE OF WORK

All proposed work hours shall conform to Subsection 7.09 and be subject to the written approval of the Engineer.

For specific locations, allowable work hours will be determined by the District Highway Director or designated representative. On high volume and/or high-speed roadways, work may be restricted to non-peak hours or night work as required by the Engineer to avoid peak traffic volumes and to maintain safety and productivity.

Night Time Work

All work locations requiring night hours, as approved by the Engineer, are restricted as follows:

Sunday: 9:00 PM to 5:30AM Monday
Monday: 9:00 PM to 5:30AM Tuesday
Tuesday: 9:00 PM to 5:30 AM Wednesday
Wednesday: 9:00 PM to 5:30 AM Thursday
Thursday: 9:00 PM to 5:30 AM Friday

Work may not proceed beyond the normal 8-hour day unless prior approval is obtained from the Engineer for that day. Approval to work beyond the scheduled work will only be given when special conditions exist that warrant working beyond the scheduled work, as determined by the Engineer.

The Contractor may schedule night shifts longer than 8-hours with prior approval by the Engineer. No additional compensation will be made for work scheduled during nighttime or longer working hours.

No entrance or exit ramp shall be closed to traffic except between the hours of 9:00 PM and 5:30 AM the following day or as directed. The Contractor shall be required to schedule the work activities such that not more than one ramp shall be closed during any given work period.

These time periods include the "set-up" and "breakdown" of the traffic pattern employed. No operations, personnel, or equipment will be allowed on the roadways except during working hours.

The work hour restrictions do not apply to emergency conditions, as determined by the Engineer.

CONTRACTOR ACCESS

Contractors shall be aware that there are multi-span bridges with piers located away from the road and or near rivers and streams. No separate payment will be made for access roads to get equipment or personnel to the work site or for staging access to repair areas, etc., but all costs in connection therewith shall be included in the Contract.

HOLIDAY WORK RESTRICTIONS

(Supplementing Subsection 7.09)

The District Highway Director (DHD) may authorize work to continue during these specified time periods if it is determined by the District that the work will not negatively impact the traveling public. DHD may allow work in those areas on a case by case basis and where work is behind barrier and will not impact traffic

Below are the holiday work restrictions:

New Years Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day. No work on local roadways on the holiday without permission by the DHD and the local police chief.

Martin Luther King's Birthday (Federal Holiday)

No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

President's Day (Federal Holiday)

No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

Evacuation Day (Suffolk County State Holiday)

No work restrictions due to traffic concerns.

Patriot's Day (State Holiday)

Work restrictions will be in place for Districts 3 and 6 along the entire Boston Marathon route and any other locations that the DHD in those districts determine are warranted so as to not to impact the marathon. All other districts work restrictions will be as per DHD.

Mother's Day

No work on Western Turnpike and Metropolitan Highway System from 5:00 AM on the Friday before, until the normal start of business on the following day.

Memorial Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the Friday before, until the normal start of business on the following day.

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.

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.

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 Contractor 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.

TRAFFIC OFFICERS AND RAILROAD FLAGGING SERVICE

(Supplementing Subsection 7.11)

Under the provisions of Chapter 634 of the Acts of 1971, the railroad (excluding MBTA) shall furnish, without cost, the necessary flag protection on the railroad right-of-way which may be required for the performance of the work. For MBTA railroad, MassDOT will pay the Contractor for flagging costs in accordance with the procedure described in Subsection 7.11.

For non-Chapter 634 bridges MassDOT will pay the Contractor for flagging costs in accordance with the procedure described in Subsection 7.11.

The Contractor, however, is responsible for all costs incurred in restoring tracks that have been disturbed by the Contractor's operations. Contractor shall comply with the requirements of the Railroad Special Provisions.

MBTA FLAGGING

The Contractor shall provide a minimum two week notice for flagging support for MBTA bridges and railroads. This applies only to bridges and railroads operated by Keolis Commuter Services (KCS). This two week notice does not apply to emergency work, only to routine or scheduled work activities. The contact person for advance request for flagging services is Rich Arnold, MBTA Railroad Operations Department, Phone number (617)-222-3635, email address: rarnold@mbta.com.

MBTA COMMUTER RAIL

Keolis Commuter Service (KCS) operates the commuter rail for the MBTA. All references to MBCR in the provisions will mean Keolis Commuter Service (KCS).

MBTA RAILROAD COORDINATION / ACCESS TO MBTA PROPERTY

The Contractor shall be required to coordinate the work of this Contract with the MBTA and Keolis Commuter Services Co. ("KCS") through the MassDOT Resident Engineer and MassDOT designated Field Staff. A majority of the prerequisites for the Contractor to perform work on or adjacent to MBTA transit lines may be found in the "MBTA Special Instructions" provided herein. The Contractor shall be required to comply with the all applicable requirements of the latest edition of the MBTA Special Instructions available at the time of Contract Award.

The Contractor will have to perform construction related activities on, over, under, within or adjacent to railroad property owned or controlled by the MBTA. Any work that will affect Commuter Rail operations, involve work on, over, under, within or adjacent to the commuter rail right of way must be coordinated with MBTA Railroad Operations and KCS and shall comply with the latest version of the MBTA Railroad Operations Directorate.

An owner or Contractor who wishes permission to enter upon or perform work over, on, under or adjacent to MBTA property shall submit to the offices of the MBTA's designated representative, a request in writing, a minimum of forty-two (42) days prior to the owner or the Contractor's planned commencement of any of the above stated activities.

MBTA COORDINATION – SUBSTITUTE BUSING

Substitute bus transportation will be required for weekend MBTA Commuter Rail shutdowns. The Contractor must coordinate with MBTA Operations Department for provision of bus service. The Contractor shall contact MBTA Operations Dept. a minimum of 6 weeks prior to any planned rail shutdown. The MBTA will be responsible for planning, procuring, and administering the necessary substitute bus transportation services and operations based on the Contractor's approved work schedule.

Prime Contact:

Eric Ciborowski

32 Cobble Hill Road

Somerville, MA 02143

617-634-2567

ECIBOROWSKI@MBTA.com**Secondary Contact:**

Delrico Gomes

32 Cobble Hill Road

Somerville, MA 02143

857-366-0404

DGOMES@MBTA.COM

The Contractor shall be required to attend the MBTA Weekly Track Outage Schedule Coordination Meetings held Wednesdays at 10:00 am at 32 Cobble Hill Road in the small classroom located in the training area at the rear of the building.

FORMWORK AND SITEWORK

The temporary formwork used for concrete placement, shall be removed, and disposed of by the contractor. Any formwork that is not removed within forty-five (45) days after the concrete placement and is reported by Bridge Inspection or other MassDOT personnel will impose a damage of \$500.00 for each form location (On one bridge there may be multiple locations). Payment for removal of concrete forms shall be included in the unit price under the applicable item.

The Contractor is required to broom and clean all work site areas after the removal of excavated debris, regardless of the pre-existing conditions. These include areas excavated under joints such as pier caps, revetment areas. This removal of debris is incidental to the contract with no additional compensation.

PREPARATION OF CONCRETE SURFACES:

All concrete surfaces to be patched shall be roughened, cleaned of all laitance, dirt, grease, oil, other contaminants, and all standing water. All reinforcing steel encountered in the excavation shall be thoroughly cleaned by abrasive blasting before being covered with new concrete.

Option 1: SSD Only

In bonding new concrete to already set concrete, the surface of the concrete shall be thoroughly cleaned, roughened, and ponded with clean water to achieve Saturated Surface Dry (SSD) condition then it shall then be blown off with oil free compressed air.

CONTRACTOR NOTIFICATION

Contractor notification and response will be classified into three categories as follows:

1. EMERGENCY REPAIR:

An Emergency Repair is defined as the work required to repair failed bridge elements, which is of an EMERGENCY NATURE and requires IMMEDIATE ATTENTION as determined by the Engineer. The Contractor will be required to commence an Emergency Repair within four (4) hours after notification by the Department, unless otherwise directed. The nature of the Emergency work will require the Contractor to be available 24 hours per day. In addition to required construction Items, payment for any Emergency Repair Work performed will be paid under Item 748.1 Emergency Response. Emergency Repairs may be initiated verbally due to the need for immediate action but will be followed up by a Work Order assignment in the work order management system soon after.

2. PRIORITY REPAIR:

A Priority Repair is defined as work required to repair failed bridge elements, which is not of an Emergency nature; however, needs to be completed in a timely manner to prevent further deterioration or to meet the need of other constraints. The Contractor will be required to commence a Priority Repair within seven (7) calendar days after notification by the Department, unless otherwise directed. Priority Repairs will be initiated, and Work Orders assigned using the work order management system.

3. SCHEDULED REPAIR:

A Scheduled Repair is not considered to be of an Emergency nature and has no priority over other repairs. The Contractor will be required to commence scheduled work within thirty (30) calendar days after notification by the Department, unless otherwise directed. The Contractor shall immediately notify the Engineer if unable to begin physical work within thirty (30) calendar days and provide an explanation for the delay. Scheduled repairs will be initiated and Work Orders assigned using the work order management system.

The Contractor will be notified of all Work Orders through the work order management system except for Emergency repairs which may first be assigned verbally with a follow up assignment through the work order management system. The Work Order will identify the location of the work, the category of work (Emergency, Scheduled or Priority), and identify the major items required for the work. The date from which potential non-response damages will be assessed for each work order will be based on the date the work order is assigned in the work order management system to the date the Contractor begins Physical Work.

CONTRACTOR NOTIFICATION (Continued)

For a Priority or Scheduled Repair, the Contractor must submit a work schedule and estimate for the Engineer's review and approval within seven (7) calendar days of issuance of the work order. The Contractor's schedule and estimate shall provide information relating to equipment, materials, anticipated work hours, labor availability, itemized estimated value of the repairs, a breakdown of major components of the work (i.e. staging installation, concrete work, etc.) and estimated start and completion dates.

"Physical Work" shall be defined as "physical implementation of the required repair at the bridge site". In no case will Physical Work include any of the following: ordering materials, fabrication of materials, organizing labor forces, coordinating with subcontractors, installing means of access and/or traffic control to implement the required repairs, installing temporary works, or other operations needed to be performed in advance of the required repairs.

This Contract contains both Emergency response mobilization payment items for Emergency Repair work, and Non-Response damages to ensure prompt action by the Contractor.

The ability to assign Emergency Repair work, if required, shall take effect as soon as this Contract is executed.

The Contractor shall have the appropriate communication capabilities that will allow the Department to notify the Contractor of an Emergency Repair on a twenty-four hour (24) per day basis.

The Contractor shall supply the District 5 Highway Director with a list of telephone numbers for personnel who can be contacted twenty-four (24) hours a day in case of an emergency.

WORK ORDER SCHEDULE MILESTONES

Work Orders may include complexities which will have separate milestones as indicated below. All timeframes shown below are in calendar days.

<i>Complexity</i>	<i>Milestone</i>
Engineering Design	Approved Design within 60 days of Work Order
Fabricated Materials	Approved Shop Drawings within 30 Days of Work Order or approved engineering design if engineering design required. Fabrication shall begin within 14 Days of Approved Shop Drawings.
Utility Coordination	Engagement with utilities shall occur within two weeks of issuing the work order. Final approval from the utility of the proposed work or utility protection shall be within 60 days of work order issuance or 60 days of approved engineering design if engineering design required.
Railroad Coordination	Engagement with Railroads shall occur within 14 days of issuing the work order. Access agreement to railroad property shall be in place within 60 days of work order assignment. If engineering is required for a repair, the engineering design shall be provided to the railroad for approval within 30 days. Railroad flaggers shall be requested within two weeks of railroad access agreement.
Physical Work	“Physical Work” shall refer to physical implementation of the required repair at the bridge site. For repairs with no additional complexities as identified in this chart time to start of Physical Work will be measured from the issuance of the work order. In no case will Physical Work include any of the following: ordering materials, fabrication of materials, organizing labor forces, coordinating with subcontractors, installing means of access and/or traffic control to implement the required repairs, installing temporary works, or other operations needed to be performed in advance of the required repairs. For work orders with complexities as outlined in this chart, “Physical Work” will be measured from the receipt of approval for all the necessary complexities. Examples: Work order requiring engineering design and fabrication shall measure time to beginning of Physical Work from the time of approval of the shop drawings. Work order requiring engineering design, fabrication, and utility coordination shall measure time to beginning of Physical Work from the approval of the shop drawings or approval of utility agreement whichever is later. Work order requiring engineering design, fabrication, and railroad coordination shall begin immediately upon flagger availability.

All complexities and components of work orders shall be identified with milestones in the work order bar chart schedule.

NON-RESPONSE DAMAGES

It is the intent of this provision to ensure prompt response to Work Orders based on priority. These Non-Response Damages may be waived by MassDOT when, in the opinion of the Engineer, it is in the best interest of MassDOT to do so.

If the Contractor has not met the complexity milestones as outlined in the Work Order and above, a notification will be sent to the Contractor regarding Non-Responses Damages that will be assessed. The Engineer shall assess damages in the amount of \$1,000 per day (or portion thereof) for each day beyond the milestone due date that the milestone is not met.

Emergency Repairs: If the Contractor has not started Physical Work on an assigned Emergency Repair within four (4) hours from the receipt of the notification, payment under Item 748.1 will only be made at the discretion of the Engineer. Furthermore, the Contractor will be assessed damages in the amount of \$1,000 per hour for each hour Physical Work is delayed.

Priority Repairs (assuming 7 days)

The Contractor shall commence priority work within 7 days after an assignment is issued by the Department, unless otherwise directed. If the Contractor has not started Physical Work on an assignment within 7 days, the Department will notify the Contractor in writing of the intent to issue damages. Damages will begin five (5) days after written notification to the Contractor. The Engineer will assess damages in the amount of \$1,000 per day for each day (or portion thereof) that the Work is delayed.

Scheduled Repairs (assuming 30 days)

The Contractor shall commence scheduled work within 30 days after an assignment is issued by the Department, unless otherwise directed. If the Contractor has not started Physical Work on an assignment within 30 days, the Department will notify the Contractor in writing of the intent to issue damages. Damages will begin five (5) days after written notification to the Contractor. The Engineer will assess damages in the amount of \$1,000 per day for each day (or portion thereof) that the Work is delayed.

“Physical Work” shall refer to physical implementation of the required repair at the bridge site. For repairs with no additional complexities as identified in this chart time to start of Physical Work will be measured from the issuance of the work order. In no case will Physical Work include any of the following: ordering materials, fabrication of materials, organizing labor forces, coordinating with subcontractors, installing means of access and/or traffic control to implement the required repairs, installing temporary works, or other operations needed to be performed in advance of the required repairs.

If the Contractor has not submitted a work schedule or estimate for the Engineer’s review and approval on a Priority or Scheduled Repair within seven (7) calendar days after issuance of the Work Order, the Contractor will be subject to non-response damages in the amount \$500 per day.

In addition, the Engineer shall consider such delays in evaluating the Contractor’s performance.

ENVIRONMENTAL REQUIREMENTS

This heading identifies procedures that shall be followed for bridges over or adjacent to waterways, wetlands, or other bodies of water. Some repairs may be needed in emergency situations where work needs to be performed prior to final permitting.

Work on bridges below the Ordinary High Water line over non-tidal waterways will usually require Section 404 approval from the Army Corps of Engineers and Section 401 Water Quality Certification from the Department of Environmental Protection.

Repairs to bridges in tidal areas and/or navigable waters may require a Coast Guard Bridge Permit, and consistency review by Coastal Zone Management. Time frames for these bridges typically require 4 months for non-tidal bridge repairs and possibly longer for tidal bridge repairs. For permitting purposes, all proposed construction methods that may be required in, on or above water resources shall be identified by the Contractor. The proposed methods shall be reviewed with the District Environmental Engineer who will coordinate with the Environmental Division the appropriate review of permit applicability.

For emergency repairs, the District Environmental Engineer and/or Environmental Division shall be notified immediately for further guidance on obtaining appropriate approvals.

If any locations are located within rare species habitat as designated by the Massachusetts Natural Heritage and Endangered Species Program (NHESP), coordination will be undertaken by the MassDOT District Environmental Engineer. HQ MassDOT Environmental Services Unit is available to provide support. The contractor must notify the District Highway Director and Resident Engineer in writing at least 60 days prior to desired commencement of the proposed activity, however coordination with the MassDOT District Environmental Engineer should occur as early as possible. The contractor shall be responsible for complying with any permit/restrictions/stipulations regarding work in rare species habitat.

Where repairs or reconstruction will not involve work in any waterways, wetlands or other bodies of water, erosion and siltation controls shall be implemented to ensure that construction activity does not result in siltation of the adjacent water resources. This work, when needed, will be paid under Non-Bid Items and Item 100.1 (Base Labor Rate) as required by the Engineer. Regardless of exemptions from regulations, Enforcement Actions and/or Cease and Desist Orders due to resource damages resulting from construction activity may be invoked at any time.

CONT

AMINATED 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.

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. As there is no Federal nexus (Federal funding or permits) for this project, Section 7 consultation was not required or conducted. However, Section 9 of the ESA prohibits anyone from “taking” or harming an endangered species, and the below language shall be adhered to in order to maintain compliance with the ESA.

If any of the project locations require work within U.S. Army Corps of Engineers (ACOE) jurisdictional wetlands, the ACOE will be the lead federal agency for ESA consultation with the U.S. Fish & Wildlife Service (USFWS). Most consultations for the NLEB take 30 days.

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 & Endangered Species Unit Supervisor (David Paulson, david.j.paulson@dot.state.ma.us, 857-262-3378) for questions about project limits, restrictions, or conservation measures.

The Resident Engineer can check on the status of AMM applicability by sending a locus map of the proposed work to MassDOT Highway Division’s Environmental Services Section - Wildlife & Endangered Species Unit Supervisor for review and a determination if some of the AMMs and TOY restriction can be waived.

Required AMM for all projects:

- 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 Bat 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.

If temporary lighting is proposed within the project scope, the following AMM is applicable:

Lighting AMM:

- Direct temporary lighting away from suitable habitat during the active season: **April 15 to October 31.**

If the Removal of Trees and/or Woody Vegetation >3-inch in diameter is proposed within the project scope, the following AMMs are applicable:

Tree 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.

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

- 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).
- In order to protect northern long-eared bats and their young during their active season, **no tree cutting shall be conducted during the Time of Year (TOY) restriction of April 15 to October 31.**
- Do not remove **documented** or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year
(<http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/rare-mammals/northern-long-eared-bat.html>).
- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and TCB, including the **TOY** restriction.

**If the Bridge Work is proposed within the project scope, the following AMMs are applicable:
Bridge AMMs:**

- **Bridge AMM 1** - To completely avoid direct effects to roosting bats, perform any bridge removal, replacement, and/or maintenance work during the winter hibernation period unless a hibernating colony of bats is present (contact your local USFWS Field Office for exact dates). Also, follow Bridge AMM 4.
 - **Note:** Bridge AMM 1 is an avoidance measure for direct effects; the full implementation of which may

not always be practicable. **If bridge removal, replacement, and/or maintenance work must be performed outside of the winter hibernation period, then follow Bridge AMMs 2-4.**
- **Bridge AMM 2 - Colony or Assuming Presence of Bats**
 - If assuming presence of bats or if bridge assessment or P/A surveys suggest presence of a colony of bats, and work is conducted during the active season, ensure activity will not disturb bats. The following types of bridge work can generally be conducted with the presence of bats:
 - above deck work where construction equipment or materials do not extend to the underside of deck where bats may be located (e.g., materials that may drip down to underside of deck), or does not include percussives (vibration) or noise levels above general traffic (e.g., road line painting, wing-wall work).

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

- below deck work that is conducted away from roosting bats and does not involve percussives or noise level above general traffic (e.g., wing-wall work, some abutment, beam end, scour, or pier repair).
- **Bridge AMM 3 - Small Number of Bats**
 - If bridge assessment or P/A surveys suggest presence of a small number of bats (<5 – not a colony), and work is conducted during the active season, the following types of bridge work can generally be conducted with the presence of bats:
 - above deck work where construction equipment or materials do not extend to the underside of deck where bats may be located (e.g., materials that may drip down to underside of deck), or does not include percussives (vibration) or noise levels above general traffic (e.g., road line painting, wing-wall work).
 - below deck work that is conducted away from roosting bats and does not involve percussives or noise level above general traffic (e.g., wing-wall work, some abutment, beam end, scour, or pier repair).
 - any other bridge removal, replacement, and/or maintenance work (which may include activities with percussives) conducted in the evening while the bats are feeding, starting one hour after sunset, and ending one hour before daylight excluding the hours between 10 p.m. and midnight and keep the light localized.
- **Bridge AMM 4** - If assuming presence of bats, or if bridge assessment or P/A surveys suggest presence of bats, ensure suitable roosting habitat is maintained. Suitable roosting sites may be incorporated into the design of a new bridge.

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.

ENVIRONMENTAL PERMITTING

No environmental permits have been obtained at this time. If Contractor erection, demolition, storage, or other procedures require work to occur in or otherwise impact water or wetland resource areas or their buffer zones, 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 the Engineer in writing at least 60 days prior to desired commencement of the proposed activity. All environmental submittals, including any contact with Local, State, or Federal environmental agencies, must be coordinated through the District Environmental Engineer. The Contractor shall 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. The Contractor is responsible for preventing debris of any type to enter waterways or wetland resource areas either temporarily or permanently.

After Notice to Proceed, the Contractor is responsible for complying with any and all environmental permits issued for the work covered under this Contract. The Contractor will not receive additional compensation for work required to achieve compliance with any issued environmental permits as payment for the work will be included in the various bid items.

TREATED WOOD PRODUCTS

The presence of potential treated wood products is unknown at this time, but in the event that an assignment calls for the disposal of portions of treated timber, the Contractor must dispose of the materials in accordance with all applicable state and federal regulations at a licensed facility. The Contractor will be required to submit manifests and/or certificates of disposal to the Engineer prior to the completion of the contract. All work in conjunction with the proper testing, loading, transportation, and all incidental costs required for legal disposal of treated wood products shall be covered and paid under Non-Bid Items and Item 100.1 Base Labor Rate when needed and as required by the Engineer.

All new treated wood shall meet the requirements of M9.05.1 for Wood Products, including the most recent versions of AWWA UI and M4 which are incorporated by reference. No new wood shall be treated with inorganic arsenic [including chromated copper arsenate (CCA), ammoniacal copper arsenate (ACA), and ammoniacal copper zinc arsenate (ACZA)], creosote, or pentachlorophenol in all project construction, including all guardrail and timber check dam components.

CONTRACTOR ACTIVITY ADJACENT TO WETLANDS

The Contractor shall not stockpile material or equipment, perform maintenance or refuel equipment in a wetland area, within 100 feet of a wetland, or within 200 feet of a river, stream, pond, or other similar open body of water.

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.

EROSION AND SEDIMENT CONTROL

The Engineer has the authority to limit the surface areas of erodible earth material exposed by excavation, borrow and fill or similar operations, and to direct the Contractor to provide immediate, permanent, or temporary control measures to prevent contamination of any adjacent bodies of water or drainage systems by installing compost filter tubes, staked hay bales, sedimentation basins, silt fences or other control devices. Work or methods as necessary to control erosion and sedimentation will be paid under related items of work.

The erosion and sediment control features installed by the Contractor shall be satisfactorily maintained by the Contractor until acceptance of work under this Contract.

In the event of conflict between these Specifications and Laws, Rules, or Regulations of local agencies, the more restrictive requirements shall apply.

If temporary erosion and sediment control measures become necessary due to the Contractor's negligence or carelessness, the control measures shall be performed at the Contractor's own expense.

Failure by the Contractor to control erosion, pollution, and/or siltation shall be cause for the Engineer to employ departmental action and/or outside assistance to provide the necessary corrective measures, the cost of which shall be deducted from the Contractor's monthly progress estimate.

ASBESTOS CONCERNS – ASBESTOS LIABILITY INSURANCE

Asbestos may be present on bridges in forms including but not limited to asbestos cement utility conduit, pipe insulation, pipe wrap, and/or gunite/shotcrete. The contractor shall identify potential asbestos-containing material (ACM) that may be impacted as part of the contract work. If ACM or potential ACM will be physically impacted, the contractor shall communicate this information to the Engineer, District Environmental Engineer (DEE), receive approval prior to beginning work, and conduct all work in accordance with applicable federal, state, and local regulations. The work will be paid under Non-Bid items and Item 100.1 as required by the Engineer. No Assignment of work will be allowed without the approval of the Engineer.

Upon assignment of a work order, if asbestos-containing material is anticipated to be encountered, prior to any testing or removal of asbestos, Asbestos Liability Insurance shall be obtained for this project in accordance with Subsection 7.05 of the Standard Specifications. The Contractor and the Massachusetts Department of Transportation shall be named as additional insureds. Costs will be reimbursed to the Contractor.

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.

**GENERAL REQUIREMENTS FOR DEMOLITION AND
WORK INVOLVING PAINTED STEEL**

(02/06/2020)

Demolition and work involving painted steel shall conform to the requirements of Subsection 961 of the Standard Specifications.

Work Involving Painted Steel.

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

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

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

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”.

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.

**GENERAL REQUIREMENTS FOR DEMOLITION AND
WORK INVOLVING PAINTED STEEL** (Continued)**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 $30\mu\text{g}/\text{m}^3$.

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.

NOTICE TO OWNERS OF UTILITIES

(Supplementing Subsection 7.13)

District 5 Utility/Constructability Engineer

Christopher Lockett 857-368-5073

chris.lockett@dot.state.ma.us

If available, existing bridge plans indicate the location of the existing known utilities in the vicinity of the work. As the accuracy and completeness of the plans are not guaranteed in any manner, it is the Contractor's responsibility to make their own investigation to assure that no damage to existing structures, drainage lines, traffic signal conduits, etc., will occur.

Written notice shall be given by the Contractor to all public service corporations or officials owning or having charge of publicly or privately owned utilities of the Contractor's intention to commence operations affecting such utilities at least one week in advance of the commencement of such operations and the Contractor shall at that time file a copy of such notice with the Engineer.

A list of public and private utilities can be found on the MassDOT website at:

<https://www.mass.gov/info-details/utility-contacts-by-district-and-municipality>

Select District

Select the City/Town, and then locate the utility

The utility contact list is for guidance only and is not guaranteed to be complete or up to date.

NATIONAL GRID EMERGENCY TELEPHONE NUMBERS**GAS:**

Emergency: 1-800-233-5325

New Service: 1- 877-696-4743

Customer Support: 1-800-732-3400

ELECTRIC:

Outage/ Emergency: 1-800-465-1212

New Service: 1-800-375-7405

Customer Support: 1-800-322-3223

EVERSOURCE EMERGENCY TELEPHONE NUMBERS**GAS:**

Outage/ Emergency: 800-592-2000

New Service: 866-678-2744

Customer Support: 800-592-2000

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

NOTIFICATION OF PUBLIC OFFICIALS

Town officials are shown at website <https://www.mass.gov/lists/massachusetts-cities-and-towns> and select the required City/Town website.

State Police are shown at website <https://www.mass.gov/info-details/massachusetts-state-police-troop-boundaries>. Select the area of jurisdiction to find the local station.

The Contractor shall inform the following officials in each area that he is assigned to work in:

Superintendent, Department of Public Works, or Town Engineer. Superintendent, Water Department, Superintendent, Sewer Departments. Police Department, Fire Department, Electric Company, Railroads.

SUPPLEMENTAL REQUIREMENTS FOR NON-BID ITEMS

(Supplementing Subsection 3.04)

The Contractor will be paid for additional artisans, equipment rental, materials, engineering services and specialty services required to perform the work plus (10%) percent, plus actual increased bond premium.

The Contractor shall be required to furnish certified paid receipts for additional artisans, equipment rental, materials, engineering services and specialty services that are required to perform the work prior to payment by the Department. Increased bond premium for additional artisans, equipment rental, materials, engineering services and specialty services will be paid after a certified paid receipt is submitted showing payment of the increased bond.

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.

NON-BID ITEMS

For work not covered by the various bid items in this Contract, it is the intent to pay for such related work on a time and materials basis, as directed by the Engineer. The payment for such work is outlined in the following sections: Payment for Materials, Payment for Rental Equipment, Payment for Engineering Services, Payment for Specialty Services/Additional Artisans.

A. PAYMENT FOR MATERIALS

The Contractor will be paid the actual cost for materials that are required to maintain or repair a bridge but are not covered under the Contract bid Items plus ten (10) percent. Any arrangements for the purchase of materials will be considered incidental. Delivery charges will be incidental to the material charges. State and Federal taxes if billed will not be reimbursed by MassDOT. No materials shall be ordered until approved by the Engineer and competitive prices may be required if the Engineer directs.

The District may have surplus materials on hand that could be included into the work. The transportation of materials and/or parts supplied by MassDOT will be included for payment under Item 100.1.

NON-BID ITEMS (Continued)

Payments for the installation of materials and/or parts will be made under Item 100.1.

All materials which are necessary to perform the work under the various contract bid items shall be incidental to those Items at no additional compensation.

B. PAYMENT FOR RENTAL EQUIPMENT

The Contractor will be paid the actual rental cost for the equipment, which may be required to perform certain repair work that has not been included in the contract bid items, plus ten (10) percent. No equipment shall be rented until approved by the Engineer. The rental equipment shall not be part of the tradesman basic toolbox as specified under Item 100.1 Base Labor Rate.

Contractor-owned equipment required under this contract, (with the exception of equipment listed under the various artisans' descriptions in Item 100.1 Base Labor Rate will be reimbursed in the format outlined under Subsection 9.03 "Payment for extra Work" Section C of the Standard Specifications. Rental Equipment will not carry any overtime premium rate after being in full operation for more than 8 hours in a day.

Unless the rented equipment cost includes the operator, the Contractor will receive compensation for the operator of the "Rental Equipment" used for "Related Work" as specified in Item 100.1 Base Labor Rate.

The Contractor must get the authorization of the Resident Engineer before any equipment is rented and competitive prices may be required if the Engineer directs.

All rental equipment and tools shall be in excellent working condition. The Contractor shall not be paid for the time that the equipment is broken down.

The actual cost for rental equipment including equipment that is required when working from water below (i.e., barge equipped with 60' or higher boom lift, boat, operator, and other safety equipment) shall be judged in accordance with the rate specified in the Rental Blue Book and it is the Contractor's responsibility to provide a copy of this Blue Book to the Department. The rental compensation shall also include the cost of a boat captain/tender crew. The rental for equipment will be paid on an hourly basis and will not carry any overtime rate after eight hours of operation.

All rental equipment and tools which are necessary to prosecute the work under the various contract bid items shall be incidental to those Items at no additional compensation.

NON-BID ITEMS (Continued)**C. PAYMENT FOR ENGINEERING SERVICES**

Each non-routine structural repair for which there is no Contract bid Item to cover the work, the Contractor shall submit a design by a Professional Engineer of the appropriate discipline registered in Massachusetts (who shall be from the Department's approved consultant list) within one week of notification (seven (7) calendar days after receipt of formal Work Order).

This design shall address all structural defects itemized in the Work Order. It shall be submitted to the Engineer and the proper railroad authority (i.e., Amtrak, MBTA, etc.) when applicable. The Contractor must get the proposed design approved by both the Engineer and proper railroad authority (when applicable) prior to commencing any work.

The Contractor will be paid the actual cost for the Engineering Services for the structural design by a Professional Engineer of the appropriate discipline registered in Massachusetts, plus ten (10) percent when any Engineering Services are required for work done on a time and materials basis for which there is no bid Item. The Engineer shall approve all engineering costs prior to any design work being undertaken.

All engineering services which are necessary to prosecute the work under the various Contract bid items shall be incidental to those Items at no additional compensation.

Engineering Services Cost Estimate

When engineering designs or other consulting services are deemed necessary by the Engineer, the design firm will submit a cost estimate of the proposed work. This estimate will include the classification, estimated hours needed, and actual hourly rate for each individual anticipated to be used in developing the finished product. The billable rates shall include overhead and profit. Overhead shall be as approved by MassDOT Audit Section or in absence of approved audited rates a maximum 155% shall apply for overhead. The profit fee is 10%. The billable rate shall be calculated using $1.10 \times (\text{Base Hourly Rate} + \text{Base Hourly Rate} \times \text{Overhead Rate } \%)$.

D. PAYMENT FOR SPECIALTY SERVICES/ ADDITIONAL ARTISANS

The Contractor will be paid for any artisans that are not categorized under Item 100.1 "Base Labor Rate" (Regardless of whether the additional artisans are hired by the Contractor as a specialty sub-contractor crew, or as an individual artisan) required to repair or maintain the bridges or any work that has not been included as incidental to any Contract Bid Item plus ten (10) percent. However, no artisans shall be hired until approved by the Engineer and competitive prices may be required if the Engineer so directs. The Contractor will not bid this item. If the Engineer has knowledge of source of additional artisans, which are competitive with the Contractor's choice, then the Contractor may be required to investigate and use an alternative choice.

NON-BID ITEMS (Continued)**COST ESTIMATES**

Where the scope of a repair task can be adequately determined and described, the Contractor, when directed by the Engineer, shall be required to submit a Cost Estimate for the repair task.

Each Cost Estimate, submitted in writing, shall include an itemized scope of work, a working schedule (including the number of working days and hours worked each day by each category of artisan), work procedures and a NOT-TO-EXCEED cost breakdown itemized by the following: the number and type of workers, the number and type of equipment, barges, materials, specialty contractors, engineering services, traffic controls and police, etc. The Cost Estimate submittal must also state if roadway closures and waterway and/or bridge closures will be required.

The Engineer will approve each Cost Estimate submittal in writing. A submittal does not guarantee the Contractor will be assigned the work. Payment will be based on actual hours worked at the contractual rates for various items as previously described up to the maximum task amount. Completion of the task is the sole responsibility of the Contractor once the not-to-exceed amount has been reached. Should unforeseen problems develop during the task completion, the Contractor will submit to the Engineer a revised scope of work with a comparison to the original scope of work along with a breakdown of the additional costs for approval by the Engineer. Approval for any increases to the agreed upon not-to-exceed cost will be dependent upon the justification of the additional work.

If the Contractor performs work which is not provided for in this Contract, or which was not authorized in writing by the Engineer, said Contractor shall receive no compensation for such work.

The management of the project and generating Cost Estimates, including such items as the planning of repair details, hiring of subcontractors, meetings with affected parties, scheduling of required artisans, purchasing of the necessary materials and the arrangement of equipment rentals, etc., will be considered incidental to the work and as such, no additional compensation will be provided.

RATES OF PAYMENT

Payment for Non-Bid Items and Item 100.1 Base Labor Rate will be made for time spent on the project doing actual work on the Department's bridges and shall NOT include travel time to and from the Contractor's place of business and it shall also not include time for investigative field trips to find out how much material, equipment, tools, etc., may be needed for the work.

All equipment, materials, engineering costs and artisans' compensation which are necessary to prosecute the work under the various contract bid items shall be incidental to those bid Items at no additional compensation.

Note: For work covered by bid items in this contract and those not covered, there may be situations where the Department has pertinent materials or equipment stockpiled. The Department reserves the right to utilize these materials or equipment as seen fit in the prosecution of the work.

RATES OF PAYMENT (Continued)

The Contractor will be reimbursed for the total actual cost (plus a percentage markup as indicated) for materials, equipment rental, additional artisans and engineering services required for related work directed by the Engineer. Artisans will be compensated as specified in Item 100.1 "Base Labor Rate". The Contractor will not bid the materials, equipment rental, additional artisan, and engineering services Items.

Payment for Non-Bid Items will be based on bills submitted, covering all charges for labor, materials, and equipment according to the respective terms of the contract. Bills covering the total charges incurred in any given month are to be submitted by the fifteenth of the following month for processing.

The Contractor is encouraged to submit bills/invoices of all charges to the Engineer by the 15th of the following month. It shall be required that the Contractor furnish certified copies of any or all payrolls for the Contract, showing the name, address, and occupational classification of each employee on said works, the hours worked by, and the wages paid to such employee.

CONTRACTOR DESIGN REQUIREMENTS

All design drawings and calculation submittals that are prepared and stamped by a Professional Engineer shall be checked by a second Professional Engineer. Both Professional Engineers shall be registered in the Commonwealth of Massachusetts, and be of the appropriate engineering discipline. All drawings calculation sheets shall contain the "calculated by" or "drawn by", and "checked by" sections with the initials of both Professional Engineers. "

SECTION 722

CONSTRUCTION SCHEDULING

DESCRIPTION

722.20 General

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

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

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

Type A –

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

Type B –

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

Type C –

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

SECTION 722 (Continued)**Type D -**

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

EQUIPMENT, PERSONNEL**722.40 General****A. Software Requirements**

The Contractor shall use Primavera P6 computer scheduling software.

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

B. Scheduler Requirements

The Scheduler shall be approved by the Engineer.

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

SCHEDULING METHODS**722.60 General****A. Schedule Planning Session**

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

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

SECTION 722 (Continued)

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

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

B. Schedule Reviews by the Department**1. Baseline Schedule Reviews**

The Engineer will respond to the Baseline Schedule Submission within thirty (30) Calendar Days of receipt providing comments, questions and/or disposition that either accepts the schedule or requires revision and resubmittal. Rejected Baseline Schedules shall be resubmitted within fifteen (15) Calendar Days after receipt of the Engineer's comments.

2. Contract Progress Schedule / Monthly Update Reviews / Recovery Schedules

The Engineer will respond to each submittal within twenty-one (21) Calendar Days. Rejected schedules shall be resubmitted by the Contractor within five (5) Calendar Days after receipt of the Engineer's comments.

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

722.61 Schedule Content and Preparation Requirements

All schedules shall be prepared and submitted in accordance with the instructions contained in the Construction Schedule Toolkit located on the MassDOT-Highway Division website at:

<https://www.mass.gov/info-details/massdot-highway-contractors-schedule-toolkit>

and the following:

A. LOGIC

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

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

SECTION 722 (Continued)**B. ACTIVITIES**

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

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

SECTION 722 (Continued)

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

C. EARLY AND LATE DATES

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

D. DURATIONS

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

SECTION 722 (Continued)

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

E. MATERIALS ON HAND

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

F. ACTIVITY DESCRIPTIONS

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

G. ACTIVITY IDENTIFICATION NUMBERS

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

H. ACTIVITY CODES

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

I. CALENDARS

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

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

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

SECTION 722 (Continued)

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

J. FLOAT

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

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

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

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

SECTION 722 (Continued)**L. NOT TO BE USED IN THE CONTRACTOR'S CPM SCHEDULE**

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

722.62 Submittal Requirements

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

Each monthly Contract Progress Schedule submittal shall be uniquely identified.

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

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

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

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

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

A. Narratives

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

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

SECTION 722 (Continued)

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

SECTION 722 (Continued)**B. CPM Bar Charts**

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

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

C. Detailed Activity Schedule Comparisons

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

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

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

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

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

E. Resource Graphs (Type A only)

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

SECTION 722 (Continued)**F. Projected Spending Reports**

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

722.63. Progress Schedule Requirements**A. Baseline Schedule**

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

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

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

B. Interim Progress-Only Schedule Submissions

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

SECTION 722 (Continued)**C. Contract Progress Schedules / Monthly Updates**

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

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

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

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

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

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

SECTION 722 (Continued)**D. Short-Term Construction Schedule**

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

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

722.64 Impacted Schedule Requirements**A. Notice of Delay**

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

B. Time Entitlement Analysis

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

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

SECTION 722 (Continued)

TEAs shall be submitted:

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

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

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

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

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

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

C. Recovery Schedules

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

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

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

SECTION 722 (Continued)**D. Proposal Schedules**

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

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

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

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

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

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

E. Disputes

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

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

SECTION 722 (Continued)**722.65 Schedule Type D Requirements**

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

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

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

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

A. Bar Chart Schedule

A Bar Chart that shall include the following:

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

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

SECTION 722 (Continued)**B. Short-Term Construction Schedule**

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

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

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

C. Project Spending Report (PSR)

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

SECTION 722 (Continued)**COMPENSATION****722.80 Method of Measurement****Schedule of Operations (Type A, B and C)**

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

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

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

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

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

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

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

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

Schedule of Operations (Type D)

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

SECTION 722 (Continued)**722.81 Basis of Payment**

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

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

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

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

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

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

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

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

722.82 Payment Items

722.1 SCHEDULE OF OPERATIONS (TYPE A) - FIXED PRICE \$ _____ LUMP SUM

722.2 SCHEDULE OF OPERATIONS (TYPE B) - FIXED PRICE \$ _____ LUMP SUM

722.3 SCHEDULE OF OPERATIONS (TYPE C) - FIXED PRICE \$ _____ LUMP SUM

SCHEDULE OF OPERATIONS - SCHEDULE TYPE

The applicable schedule type for this project is Type D.

ITEM 100.1**BASE LABOR RATE****HOUR**

The Contractor shall provide competent artisans, possessing all pertinent licenses and/or certifications, as required by the Engineer, to maintain and repair various components of the bridges. As described more fully below, included in this Item will be a tool kit for each trade with incidental tools, special apparel and any required personal safety equipment, and a vehicle for each trade with no additional charge to the Department. The Contractor shall submit to the Engineer all pertinent licenses and/or certifications for each artisan prior to the commencement of any work. Failure to provide the pertinent licenses and/or certifications could result in the artisan being compensated at the laborer rate regardless of how the Contractor so compensated him/her.

The payment under this Item will be for the time spent by the artisan and the artisan's toolkit only.

Payment will be based upon time spent on the project doing actual work assigned by the Engineer and shall NOT include travel time to and from the Contractor's place of business and it shall also not include time for investigative field trips.

Payment for equipment (other than the usual artisan toolbox) will be made under payment for equipment rental as stated elsewhere in these special provisions.

This Item shall only be used to compensate the Contractor for the time that their in-house workforce spends on work orders assigned by the Engineer.

Incidental to this item, vehicles are to be supplied for each artisan. If more than one artisan of a certain type (for example, carpenter) are working at a work site, the Contractor need only supply the minimum vehicles required to transport the artisans, their equipment, laborers, materials, and supplies. The artisan vehicle(s) shall be capable of transporting materials consistent with the trade. It is the intent under this item for material deliveries to be reimbursable only for bulk items or materials of sufficient quantity as determined by the Engineer. The Contractor shall make his bid with the understanding that ownership and operating costs do not apply and are not reimbursable for the vehicles utilized under the artisan items.

Described below, and included in this item, will be a tool kit for each trade with all incidental tools, special apparel, and any required personal safety equipment and a vehicle for each trade with no additional charge to the Department.

All tools and equipment in artisan tool kit shall be in excellent working condition.

If a separate tool truck is utilized, such vehicle shall also be considered incidental to this item.

Any Additional vehicles the Engineer deems necessary will be paid for under the rental equipment item. If it is the Contractor's policy for the artisan to use their personal vehicles for the above purposes, no additional vehicles are required.

Artisans and toolboxes are described below:

ITEM 100.1 (Continued)**Laborer**

Small hand tools, hand held power tools, chipping hammer, eye shields, gloves, protective clothing, generators as necessary to run the equipment and equipment that is normally used in the trade.

Carpenter

Hammer, framing square, tape measure, pouch, levels, hand saws, power saws, all electric power tools, air tools and generators and compressors as necessary to run the equipment. Saw blades and drill bits are also included.

Cement Mason

All trowels, floats, Chipping Hammers, Wire Brushes, Trowels, Floats, Reinforcing Tie Wires, Mortar Boards, Jointing Tools and Buckets, mortar board and mixing tub/buckets, and other hand tools as necessary to complete masonry patching work.

Electrician

Wire cutters, wire strippers, pliers, screwdrivers, utility knives, hex keys, crimping tools, fish lines, multimeters, clamp on ammeters, AC ammeter, DC megger, flashlights, gloves, protective clothing, allen wrenches, files, scrapers, electric power tools and generators necessary to run the equipment and other equipment that is normally used in the trade.

Ironworker / Welder

Spud wrench, dowels, alignment pins, tape measure, pouch, levels, eye shields, gloves, protective clothing, rivet buster, air hammer, jackhammer, reamers, chipping hammer, wire brushes AC/DC-300 amp- 100% duty cycle (minimum size) welding machine, torches for cutting, burning, or preheating steel, including fuel tanks & fuel / oxygen, grinders, heating oven for all welding consumables and other equipment that is normally used in the trade.

ITEM 100.1 (Continued)**Backhoe/Front-End Loader**

Operator shall have all licenses and certifications required by the Commonwealth of Massachusetts for the equipment they will be operating. Operators shall be in possession of their licenses at all times and show it to the Engineer when requested. Typical equipment includes a backhoe, skid-steer loader, and front-end loader.

Equipment which does not require a special license or certification for its operation shall be considered incidental to the artisan using it.

METHOD OF MEASUREMENT

Item 100.1 will be measured for payment by the Hour.

The Engineer will calculate total Base Labor Rate hours spent on the project by artisans.

Overtime hours will be paid for work exceeding eight (8) consecutive hours per day or forty (40) hours per week and shall be compensated as specified in this Item.

To calculate the total Base Labor Rate hours, the Engineer will modify hours spent by various artisans on the project using adjustment factor(s) described below:

<u>COMPENSATION FACTORS</u>		
<u>ARTISAN</u>	<u>REGULAR</u>	<u>OVERTIME</u>
LABORER	1.00	1.30
CARPENTER	1.17	1.53
CEMENT MASON	1.17	1.52
ELECTRICIAN	1.21	1.57
IRON WORKER / WELDER	0.98	1.27
BACKHOE/FRONT-END LOADER	1.32	1.71

If an artisan has an apprentice, then that apprentice's compensation factor shall be determined from the State Wages Apprentice level.

The Compensation Factors above will be used to adjust the number of hours a specific artisan will be paid for, per one (1) hour of work.

ITEM 100.1 (Continued)**Example:**

If the time spent on this project by various artisans is:

Laborer	8 hrs
Carpenter	4 hrs
Cement Mason	6 hrs

then the total hours for “Base Labor Rate” will be calculated as follows:

“Artisan A(hrs)” x “Compensation Factor A” +
“Artisan B(hrs)” x “Compensation Factor B” +
“Artisan C(hrs)” x “Compensation Factor C”

$$8(\text{hr}) \times 1.00 + 4(\text{hr}) \times 1.17 + 6(\text{hr}) \times 1.17 = \\ 8.00(\text{hr}) + 4.70(\text{hr}) + 7.03(\text{hr}) =$$

19.73 (billable hours)

BASIS OF PAYMENT

Item 100.1, Base Labor Rate, will be paid for at the Contract unit price per Hour, which price shall include all equipment (usual artisan tool kit), tools required to perform the normal artisans work. all clothing or safety equipment normally associated with the artisans work.

Any transportation required for an artisan and their toolbox to travel to and from a job site will be incidental to this Item. Ownership and operating costs, fuel and maintenance are not reimbursable for the vehicles and tools utilized under the artisan items.

SPECIAL NOTES REGARDING PREVAILING WAGE REQUIREMENTS

Item 100.1, Base Labor Rate establishes a unit price for the Department’s compensation to the Contractor for furnishing competent artisans to maintain and repair various components of the bridges. Nothing herein should be construed as establishing, altering or otherwise affecting the prevailing wages rates applicable to the work performed or relieving the Contractor of its obligations to ensure that workers are paid in accordance with applicable labor and wage laws.

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 106.88**JACKING AND SHORING****EACH**

The work under this item consists of jacking and supporting existing beams/girders, pier caps and columns as required by work order or the Engineer.

Shoring materials may be new or second hand. The Contractor shall submit a plan of the proposed work showing the details and indicating the materials to be used. The submittal shall include the jacking load calculations and shoring design computations based on the bridge configurations and the working stresses of the materials used, sequence of operations, and all details incidental thereto. Unless otherwise directed by the Engineer, the proposed jacking and shoring system shall be designed to apply force in increments to the existing beam/girder to relieve load from the existing substructure. The jack(s) shall have a locking mechanism preventing the beam/girder from lowering in the event of loss of hydraulic pressure. All components of the system shall have load capacity greater than the total calculated load carried by the existing beam/girder during normal traffic operation, which includes but is not limited to dead load, live load, and impact load.

Bridge Loads: The Contractor shall be responsible for calculating loads (live and impact loads, dead loads...etc.) necessary to design shoring paid under this Item. Soil bearing values shall be determined per section 2.5.2 of the AASHTO Guide Design Specifications for Bridge Temporary Works. All materials (except jacks) shall be designed by working stress design (ASD). Type of jacks used and factor of safety shall be per industry standards.

Approval of this submission shall be obtained prior to the commencement of any work under this item. The above plan and computations shall bear the seal and signature of a Professional Engineer of the appropriate discipline registered in Massachusetts.

Materials shall meet the following:

Anchor Bolts, Nuts and Washers:	M8.01.5
Structural Steel:	M8.05.0
Wood Products:	M9.05.1

All treated wood supplied by the Contractor shall meet the requirements of M9.05.1 for Wood Products, including the most recent versions of AWPA U1 and M4, which are incorporated by reference. No new wood shall be treated with inorganic arsenic (including chromated copper arsenate (CCA), ammoniacal copper arsenate (ACA), and ammoniacal copper zinc arsenate (ACZA)), creosote or pentachlorophenol in all project construction.

The Contractor is alerted that some of the beams/girders may have been temporarily shored by MassDOT personnel or by others. At such locations, the Contractor shall install a jacking support system before removing any temporary supports. The cost of removing and stacking, or the disposal of the temporary supports at an on-site location, as directed by the Engineer, shall be considered incidental work hereunder with no additional compensation.

Maintenance of previously installed shoring is incidental until repairs are completed.

When required by the Engineer extensive repairs require temporarily supporting some of the beams/girders on one or both sides of a pier cap(s), or abutment(s) those beams/girders shall be jacked/shored all at once as one unit for the length of time required.

ITEM 106.88 (Continued)

The work shall be performed as follows:

Erect supports under each beam/girder as required by the Engineer. When possible, all supports shall be located 4'-0" from the centerline of each corresponding pier or centerline of bearing at each corresponding abutment. The cribbing for the support footings shall be of a sufficient size to prevent any settlement or damage to the footings while the superstructure is being adequately supported as required by the Engineer.

In the event of any damage to the structure due to the Contractor's operations, the Contractor shall repair or replace any such damaged components, at no cost to the department.

The support of beams/girders shall remain in place until all the requirements of Item 127.12 Reinforced Concrete Substructure Excavation and Item 905.2 5000 PSI, 3/8 INCH, 710 HP Cement Concrete repair is completed and accepted by the Engineer.

When the repairs are completed and the supports are no longer needed as determined by the Engineer, all supporting materials shall be removed and become the property of the Contractor unless other prior arrangements were previously made with MassDOT.

Each bridge will be kept open to traffic while the beams/girders or pier caps/columns are supported. The expressways and some other roads are heavily traveled high-speed roads with high volumes of truck traffic.

Some of the bridges in District 5 are over water and may require a shoring plan that is beyond typical. In those cases, any equipment required and approved by the engineer prior to use that is needed to place the shoring or any additional time needed during set-up or attachment of shoring will be compensated under the non-bid items.

Additional costs associated with designing and placing shoring in water will be allowed under the appropriate non-bid Items, as required by the Engineer.

METHOD OF MEASUREMENT

Item 106.88, Jacking and Shoring will be measured for payment by the Each steel or concrete beam/girder end jacked and shored as required by the Engineer. Multiple jacking of the same end for the same repair will not be measured separately.

BASIS OF PAYMENT

Items 106.88, Jacking and Shoring will be paid for at the Contract unit price per Each, which price shall include all labor, materials, tools, equipment, engineering services and all incidental costs required to complete the work.

Placement of shoring that is required to support a pier cap during the repair of a pier column will also be compensated under this Item.

ITEM 106.881 JACKING AND SHORING REMOVED AND RESET EACH

When an assigned work location requires more than one shoring tower and one or more of those towers can be reset at a subsequent repair within the same work location after the initial repair has been completed, those tower(s) shall be removed and reset to the new location as directed by the Engineer. It is not intended for this item to be used when shoring towers are to be transported to a different work location. Bridges adjacent to each other will not be considered as different work locations.

METHOD OF MEASUREMENT

Item 106.881 will be measured for payment by the Each, jacking and shoring removed and reset.

BASIS OF PAYMENT

Item 106.881 will be paid for at the Contract unit price per Each, which price shall include all labor, materials, tools, equipment, and incidentals necessary to disassemble the shoring unit, prepare the bedding on which the tower will be reset, re-assemble the shoring unit and place jack or shims as necessary, and all incidental costs required to complete the work.

ITEM 106.894**BLOCKING PER LOCATION****EACH**

The work to be done under this Item consists of installing pressure treated wood block supports under the diaphragms next to the beam seats to support existing steel beams. The material shall conform to section M9.05.1, Wood Products. For additional information and criteria see Document A00803. Typically, there would be two locations per interior beam end and one location for an exterior beam end.

The blocking is used as required, at the discretion of the Engineer, to assure the stability of the bridge structure and to prevent any beam distortion or settlement before permanent substructure repairs are completed.

This method of beam end supports is recommended for cases where the steel end diaphragm and the concrete encasement are in sound condition, i.e. without any concrete spalling and/or deterioration of steel connection at steel diaphragm to beam.

METHOD OF MEASUREMENT

Item 106.894 will be measured and paid at the Contract unit price per Each location of end blocking support as required for beams by this system as directed by the Engineer, complete in place and accepted.

BASIS OF PAYMENT

Item 106.894 will be paid for at the Contract price per EACH, which price shall include all labor, materials, tools, equipment, engineering service, and installation and removal of blocking system after completion of required repairs, restoring the site to its original condition, and incidental costs required to complete the work, as required by the Engineer.

ITEM 127.12**REINFORCED CONCRETE SUBSTRUCTURE
EXCAVATION****CUBIC YARD**

The work under this Item shall conform to the relevant Provisions of Subsection 120 and 482 of the Standard Specifications and the following:

The work under this Item consists of the removal and disposal of all deteriorated, spalled, and scaled concrete as required to repair the existing concrete substructure elements to the general lines identified on the drawings and as required by the Engineer. Any concrete excavation necessary to access concrete substructure elements for repair shall be paid for under this Item.

The Contractor shall take all measures necessary to protect pedestrian and vehicular traffic from the construction operations. No debris, tools or incidental equipment of any kind will be permitted to fall into river bed or river bank areas or where vehicular or pedestrian traffic exists. Any material that accidentally falls into such areas shall be removed.

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 or any part thereof. Pneumatic hammers heavier than the nominal 25 pounds mass shall not be used unless approved by the Engineer.

Minimum depth of excavation to sound concrete shall be one inch (1") beyond the inner most layer of reinforcing steel, but not less than four inches (4") from the original surface. The Contractor shall stop excavating deteriorated concrete when the depth of excavation reaches six inches (6") and shall notify the Engineer immediately. The edges of the patch shall be cut to neat lines by saw cutting or by methods approved by the Engineer, and the patch areas shall be made rectangular in shape, if possible, with horizontal and vertical edges and avoid over cutting square corners.

The Contractor shall limit extent of excavation of the pier caps and columns as shown on the repair sequence contract drawings. If the Contractor exceeds the limits of excavation as shown on the repair sequence contract drawings, then temporary shoring shall be installed to alleviate loading on the substructure, at no additional cost to the Department. The Contractor may submit an alternate method of reinforced concrete excavation to be approved by the Engineer. The alternate method, if approved by the Engineer, shall not incur any additional costs to the Department, and Item 127.12 Reinforced Concrete Substructure Excavation will be paid at the contract unit price regardless of the method used to complete the work.

The Contractor shall take all precautions necessary so as not to damage those portions of the bridge including reinforcing steel that are to remain. This includes determining the concrete cover to the steel bars at the edge of each patch prior to excavating concrete. Any steel that is unsuitable for further use through no fault of the Contractor shall be replaced under Item 910.1 Steel Reinforcement for Structures – Epoxy Coated. All reinforcing steel that is loose shall be tied tightly together using epoxy coated wire ties.

Also, included under this Item are all costs in connection with the cleaning, cutting, and bending of the existing reinforcing steel designated to be retained in the proposed repair.

ITEM 127.12 (Continued)

METHOD OF MEASUREMENT

Item 127.12 will be measured for payment by the Cubic Yard of substructure concrete excavated, removed, and properly disposed of.

BASIS OF PAYMENT

Item 127.12 will be paid for at the Contract price per Cubic Yard , which price shall include all labor, tools, equipment, materials, sawcutting, cleaning, disposal of all debris and incidental costs required to complete the work.

New reinforcing steel will be paid under Item 910.1

<u>ITEM 628.4</u>	<u>TEMPORARY IMPACT ATTENUATOR REMOVED AND RESET</u>	<u>EACH</u>
<u>ITEM 628.73</u>	<u>TEMPORARY IMPACT ATTENUATOR BI-DIRECTIONAL NON-REDIRECTIVE (TL-3)</u>	<u>EACH</u>

The work under Item 628.4 shall conform to the relevant provisions of Subsection 628 of the Standard Specifications and shall consist of maintaining, removing and reinstalling temporary impact attenuators where indicated on the plans or as directed by the Engineer.

The work under Item 628.73 shall conform to the relevant provisions of Subsection 628 of the Standard Specifications and shall consist of furnishing, installing, maintaining and final removal of temporary impact attenuator systems for protection of the ends of temporary barrier and other roadside hazards in work zones. All work shall be in conformance with the specifications of the manufacturer and in close conformance with the locations, lines, and grades shown on the plans.

MATERIALS

The Contractor shall supply a temporary impact attenuator that meets the same or higher crash Test Level (TL) as the adjacent temporary barrier unless otherwise shown on the plans. The temporary attenuator shall be listed on the Department's Qualified Traffic Control Equipment List.

The temporary impact attenuator shall be designed to fit within reasonably close tolerance of the dimensions given on the plans.

The Contractor shall supply shop drawings for the temporary attenuator and for any anchorage system and for any transitions or connections between the temporary attenuator and the adjacent barrier or other roadside hazard.

The side of the temporary attenuator that faces traffic shall include a Type 3 Object Marker that conforms to the language found in Sections 2C.64 and 2C.65 of the Manual on Uniform Traffic Control Devices.

Unless a separate barrier system protects it from opposing traffic, only temporary impact attenuators that are certified for bi-directional use shall be used in medians.

CONSTRUCTION METHODS

Installation means and methods shall be per the manufacturer's specifications and/or drawings.

Temporary Impact Attenuators Removed and Reset consists of removing temporary impact attenuators, relocating, and reinstalling at a new location per the specifications and recommendations of the manufacturer and as shown on the plans or as directed by the Engineer.

Excavation for temporary attenuator foundations and anchorage shall be made to the required depth and to a width that will permit the installation and bracing of forms where necessary. All soft and unsuitable material shall be replaced with compacted gravel borrow.

ITEMS 628.4 and 628.73 (Continued)

The Contractor shall supply to the Engineer instructions for installation and the manufacturer's recommended routine inspection and maintenance program. The cost of inspection and maintenance of temporary attenuators shall be considered incidental in nature.

Damaged temporary impact attenuators shall be replaced by the Contractor within 24 hours or as directed by the Engineer. A truck mounted attenuator that meets the same or higher TL or other means of protecting the damaged temporary impact attenuator shall be deployed until the repairs or replacement has been completed at the Contractor's expense.

METHOD OF MEASUREMENT

Item 628.4 will be measured for payment as a single unit Each temporary impact attenuator removed and reset.

Item 628.73 will be measured for payment as a single unit each furnished and installed, complete in place.

BASIS OF PAYMENT

Items 628.4, and 628.73 will be paid for at the respective Contract unit prices per each, which prices shall include all labor, materials, equipment, foundations and anchorages, installation, maintenance, final removal, and all incidental costs required to complete the work.

ITEM 740. ENGINEERS FIELD OFFICE AND EQUIPMENT (TYPE A) MONTH

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 the 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:	500GB
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 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 be 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) – 128 GB 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 | - 600 x 600 dpi capability |
| - LCD touch panel display | - 30 pages per minute print speed (color), |
| - 50 page reversing automatic document feeder | - 4 Paper Trays Standard
(RADF) (not including the bypass tray) |
| - Reduction/enlargement capability | - Automatic duplexing |
| - Ability to copy and print 11" x 17" paper size | - Finisher with staple functions |
| - email and network pc connectivity | - Standard Ethernet. Print Controller |
| - Microsoft and Apple compatibility | - Scan documents to PDF, PC and USB |
| - ability to overwrite latent images on hard drive | - 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 748.1**EMERGENCY RESPONSE****EACH**

The work under this Item shall conform to the relevant provisions of Subsection 748 of the Standard Specifications and the following:

Item 748.1 is intended to be used as a means of providing payment to the Contractor for purposes of mobilizing those forces and equipment necessary for the timely response to an emergency and to begin work as directed.

This Item shall consist of preparatory work and operations for emergency response after notification from the Engineer. It shall include preparations necessary for the movement of personnel, equipment, and incidentals to the project site for the establishment of an effective response under the work assignment.

Note: The Contractor is required to commence emergency work within (4) four hours of notification.

METHOD OF MEASUREMENT

Item 748.1 will be measured for payment by the Each notified emergency Work Order when the Contractor commences work within (4) four hours of notification.

In the event that another emergency occurs during the period that the Contractor's forces have been notified and are mobilizing or working, all additional responses performed by a different emergency response crew at a different work site during that period will be considered an additional emergency response in accordance to the requirements specified herein.

The engineer will determine if conditions required another crew to be mobilized as a separate emergency response.

The Emergency Response item is not applicable if the emergency occurs during scheduled working hours.

BASIS OF PAYMENT

Item 748.1 will be paid for at the Contract unit price per Each, which price shall be full compensation for all costs associated with ensuring prompt response to emergency situations and to get equipment to an emergency location in time.

In the event that the Contractor does not satisfy the (4) four hours response time, payment for Emergency Response will be made only at the discretion of the Engineer.

Non-response damages will be assessed in the amount specified under NON-RESPONSE DAMAGES for each assignment the Contractor fails to report as required.

All labor, material and equipment to perform the emergency work will be paid for under the appropriate pay items.

ITEM 853.8**TEMPORARY ILLUMINATION FOR WORK ZONE****DAY**

The work under this Item shall conform to the relevant provisions of Subsection 850 of the Standard Specifications and the following:

The work under this Item shall include furnishing, deploying and maintaining in proper operating condition a LED balloon diffuser lighting system. These portable light towers shall be used throughout the project area for temporary work zone lighting. The use of unshielded high wattage flood lights shall not be permitted.

The Contractor shall illuminate the following work zone areas:

- Change in direction (i.e., work zone entrances and exits, crossovers, etc.)
- Tapered areas
- Actual area where the construction is being performed

Light measurement shall be based on the illuminance method and the lighting levels shall be based on the classification of construction activity that is taking place. At no time shall the light level be below 5 fc and the uniformity shall not exceed 6:1. Task Classifications and recommended illumination levels are shown in Table 1.

Task Classifications	Illumination Level	Average Minimum Maintained Illuminance
All work operations areas, setup of lane or road closures, lane closure tapers, and flagging stations such as Excavation (all types), Embankment Fill and Compaction, Reworking Shoulders, Asphalt Pavement Rolling, Subgrade, Stabilization and Construction, Base Course Rolling, Sweeping, Cleaning and Landscaping.	Level I	5 foot-candles
Areas on or around construction equipment; asphalt paving, milling, and concrete placement and/or removal such as Milling, Removal of Pavement, Asphalt Paving and Resurfacing, Concrete Pavement, Waterproofing and Sealing, Sidewalk Construction, Base Course Grading and Shaping, Surface Treatment, Bridge Decks, Drainage Structures and Drainage Piping, Other Concrete Structures, Barrier Wall and Traffic Separators, Guardrails and Fencing, Striping and Pavement Markings, Repair of Concrete Pavement, Highway Signs, Hole Filling and Repair of Guardrails and Fencing.	Level II	10 foot-candles
Pavement or structural crack/ pothole filling; joint repair, pavement patching and/or repairs, installation of signal/electrical/mechanical equipment such as Traffic Signals, Highway Lighting Systems and Crack Filling	Level III	20 foot-candles

TABLE 1
TASK CLASSIFICATIONS AND ILLUMINATION LEVELS

Prior to commencement of work the Contractor shall submit to MassDOT for approval a description of illumination equipment that is proposed to be used on this project, and shall include photometrics that detail the light levels that are to be provided for the particular operation for the type of equipment, level of luminance, and height to be installed.

Any potential glare from the lighting system should be considered from each direction and on all approaching roadways and opposing lanes of traffic. Glare from the illumination system should be minimized as much as possible for both workers and motorists in adjacent active travel lanes. If required, the Contractor shall provide supplemental hardware such as visors, louvers, shields, glare screen and barrier, to reduce glare in adjacent active travel lanes.

ITEM 853.8 (Continued)

Equipment mounted lighting may be used to supplement light towers to achieve the required lighting levels for the activity involved per Table 1.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 853.8 will be measured and paid per Subsections 850.80 and 850.81, respectively.

ITEM 854.6**TEMPORARY PORTABLE RUMBLE STRIP****DAY**

Work under this item consists of furnishing, deploying, maintaining in proper operating conditions, and removing temporary portable rumble strips (TPRS) for temporary lane closures of 24 hours or less.

Materials

The TPRS shall be 10' to 11' wide, measured perpendicular to the path of travel, 12" to 16" long, measured parallel to the path of travel, and 0.5" to 0.75" tall. All edges shall be beveled. The surfaces shall be grooved to limit potential hydroplaning.

The TPRS shall lay flat on the road surface without the use of nails, anchors, or adhesives, and shall be flexible so as to conform to the surface profile.

The TPRS shall be able to withstand vehicle weights of up to 80,000 lbs. and operate in temperatures between 0° to 120° F.

The manufacturer shall certify the TPRS to be safe for use on roads with speed limits of at least 70 mph.

TPRS that appear damaged or functioning in an unsafe manner may be ordered removed by the Engineer and replaced at no additional cost.

Construction Methods

The TPRS shall be installed per the plans or at the discretion of the Engineer.

The Contractor shall conform to the manufacturer's specifications for installation and the following:

- A. The road surface shall be cleared of all gravel, sand, and debris.
- B. If RoadQuake 2™ model is used, the modular pieces shall be assembled into 11-foot strips per the manufacturer's instructions in advance of deployment. The interconnected segments shall form a smooth and flat, continuous section.
- C. A Truck-Mounted Attenuator, conforming to Section 850, shall be used as shadow vehicle protection during the deployment and removal of TPRS on any roadway with speeds of 45 mph or greater.
- D. TPRS shall be deployed in conjunction with all other temporary traffic control devices. MA-W28-1 (Rumble Strips Ahead) sign(s) shall be installed per the Temporary Traffic Control Plan.
- E. TPRS deployment:
 1. TPRS shall be placed perpendicular to the direction of travel, centered in the lane.

ITEM 854.6 (Continued)

2. Three (3) individual strips are required for a single array.
3. Refer to the Temporary Traffic Control Plan for the location of the array respective to the lane closure.
4. The spacing of the individual strips within the array shall conform to the following table:

Speed Limit	Distance Between Rumble Strips (measured center-to-center)
>55 mph	20 feet
40 mph to 55 mph	15 feet
<40 mph	10 feet

5. The TPRS shall be placed without the use of nails, adhesives, or other methods of affixing them to the road surface.
- F. All TPRS shall be maintained in proper condition, alignment, spacing, and location throughout the duration of the lane closure, at no additional cost.
- G. The TPRS shall be removed prior to the removal of the traffic control devices used to close the travel lane.
- H. TPRS shall not be used during snow events.

METHOD OF MEASUREMENT

An array of three (3) temporary portable rumble strips is considered one (1) unit and will be measured by the Day. Each period of up to 24 hours during which this unit is in use will be measured as one day regardless of the number of times the array is deployed, repositioned, or removed.

BASIS OF PAYMENT

Temporary Portable Rumble Strips will be paid for at the contract unit price per Day, which shall include full compensation for furnishing, deploying, repositioning, and removing the array of three (3) individual strips as directed by the Engineer.

ITEM 859.1**REFLECTORIZED DRUMS
WITH SEQUENTIAL FLASHING WARNING LIGHTS****DAY**

The work under this Item shall conform to the relevant provisions of Subsection 850 of the Standard Specifications and the following:

The 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 retro reflectivity.

The Contractor shall use one of the following sequential flashing warning light systems unless otherwise approved by the Engineer:

1. Empco-Lite LWCSO.
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 drums in any merging or shifting taper shall be equipped with sequential flashing warning lights. These lights shall be operating, at a minimum, between dusk and dawn when the taper is deployed.

The successive flashing of the sequential warning lights shall occur from the upstream end of the merging or shifting taper to the downstream end of the taper in order to identify the desired vehicle path. Each warning light in the sequence shall be flashed at a rate of not less than 55, nor more than 75 times per minute.

Warning lights shall be powered off when drums are not deployed in a taper.

METHOD OF MEASUREMENT

A group of ten (10) reflectorized drums with sequential flashing warning lights is considered one (1) unit and will be measured by the Day. Each period of up to 24 hours during which this unit is in use will be measured as one day regardless of the number of times that the drums are positioned, repositioned, removed, or returned to service.

BASIS OF PAYMENT

Reflectorized Drums with Sequential Flashing Warning Lights will be paid for at the Contract unit price per Day, which shall include full compensation for furnishing, positioning, repositioning, and removing the group of ten (10) drums as directed by the Engineer.

ITEM 905.2 **5000 PSI, 3/8 INCH, 710 HP CEMENT CONCRETE** **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 under this item shall consist of forming and placing 5000 PSI, 3/8 inch HP Cement Concrete. This item shall be used for patching after all deteriorated and/or unsound concrete is removed under Item 127.12.

The Contractor's attention is directed towards the Repair Procedure as noted in Document A00803.

All existing concrete surfaces that will be in contact with the proposed concrete shall be prepared in accordance with PREPARATION OF CONCRETE SURFACES.

All formwork shall be approved by the Engineer prior to concrete placement.

METHOD OF MEASUREMENT

Item 905.2 will be measured for payment by Cubic Yard of cement concrete furnished and placed, complete in place.

BASIS OF PAYMENT

Item 905.2 will be paid for at the Contract unit price per Cubic Yard, which price shall include all labor, materials, equipment, surface preparation, and all incidental costs required to complete the work.

No separate payment will be made for the installation of subsequent removal of any formwork, coating/patching of the steel reinforcing, but all costs in connection therewith shall be included in the Contract unit price bid.

Where formwork is installed for concrete placement, payment of seventy percent (70%) of the Cubic Yard price of this item will be made upon complete concrete installation. The remaining thirty percent (30%) of the Cubic Yard Price of this Item will be paid only after the complete formwork removal by the Contractor.

ITEM 909.2**CEMENTITIOUS MORTAR FOR PATCHING****SQUARE FOOT**

The work under this Item shall conform to the relevant provisions of Subsection 901 of the Standard Specifications and the following:

The work under this Item consists of patching vertical surfaces on the existing structures at areas of spalled, delaminated, or cracked concrete as directed by the Engineer.

This Item does not include the repair of any vertical patch that exceeds two (2) inches in depth. The repairs to those patches shall be made using Item 905.2.

MATERIALS

Concrete and High Strength Mortar Products shall be in accordance with M4.04.1.

CONSTRUCTION METHODS

The contractor shall remove all deteriorated and spalled areas as designated by the Engineer. All costs to remove the deteriorated and spalled concrete shall be compensated for under Item 127.12. The Contractor shall have the approval of the Engineer certifying that all spalled and deteriorated concrete has been removed prior to patching deteriorated areas.

All concrete surfaces shall be prepared in accordance with PREPARATION OF CONCRETE SURFACES.

Mortar must be worked into the substrate filling all pores and voids. Force the material against the edge of the repair, working towards the center. After filling, consolidate, then screed.

The maximum thickness of application in one pass shall be one (1) inch. If the depth of patch exceeds one (1) inch, the mortar shall be placed in two passes of approximate equal thickness, with a total thickness not to exceed two (2) inches. Before the first pass has achieved an initial set, the surface shall be prepared for the second pass by scratching with a trowel to form a grid of deformation on the surface. The preceding lift shall be allowed to reach final set before applying fresh material. The fresh mortar must be scrubbed into the preceding lift.

Prime and work the mix into the substrate, filling all pores and voids. Avoid puddling of the primer on horizontal substrates.

Use a fine mist spray of water, wet burlap, or a non-solvent approved curing compound if ambient conditions might cause premature surface drying (high temperature, low humidity, strong winds, etc.). If necessary, protect the newly applied mortar from rain. To prevent freezing, cover with insulating material.

Protective sealing compounds shall be applied to repair areas where required by the Engineer. Protective sealing compounds shall be in accordance with Subsection 901.41.

ITEM 909.2 (Continued)**METHOD OF MEASUREMENT**

Item 909.2 will be measured for payment by the Square Foot of patch area, complete in place.

BASIS OF PAYMENT

Item 909.2 will be paid for at the Contract unit price per Square Foot, which price shall include all labor, materials, equipment, certification, samples, curing, protective sealing, and all incidental costs required to complete the work.

<u>ITEM 910.1</u>	<u>STEEL REINFORCEMENT FOR STRUCTURES -</u> <u>EPOXY COATED</u>	<u>POUND</u>
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The work under this Item shall conform to the relevant Provisions of Subsection 901 of the Standard Specifications and the following:

All requirements of Subsection 901.35 Reinforcement shall be adhered to, including but not limited to lapping at splices and ties at every other intersection.

The Contractor may be required to submit for approval, detail plans and schedule of bar reinforcement. The Contractor will replace reinforcing bars as directed by the Engineer. Any reinforcing steel damaged by the Contractor's operations will be replaced by the Contractor at their own expense.

The Contractor may be required to use standard non-epoxy coated (black bar) instead of epoxy coated bar as directed by the Engineer.

METHOD OF MEASUREMENT

Item 910.1 will be measured for payment per Subsection 901.70.

BASIS OF PAYMENT

Item 910.1 will be paid per Subsection 901.71.

The use of non-epoxy coated black bar will be substituted with no additional compensation, as required by the Engineer.

ITEM 912.**DRILLING AND GROUTING DOWELS****EACH**

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 drilling holes, furnishing, installing, and grouting of steel dowel reinforcement at the locations shown on the drawings or as required by the Engineer.

The dowel embedment must be adequate to fully develop 125% of the yield strength of the bar. The embedment length, the method and equipment used to drill the dowel holes, and the diameter of the drilled hole shall at a minimum conform to the recommendations of the manufacturer and be submitted to the Engineer for approval.

MATERIALS

The grout to be used for these dowels shall be selected from the MassDOT Qualified Construction Materials List for its specific application. Reinforcing steel dowels shall meet the requirements of AASHTO M31 Grade 60. All reinforcing steel dowels shall be epoxy coated in accordance with ASTM A775. Reinforcing steel dowels shall be incidental to the work under this Item.

CONSTRUCTION METHODS

All dowel holes shall be air drilled provided that the minimum edge distance of 6 inches is observed. Should, in the Engineer's opinion, air drilling be inappropriate due to questionable strength of the existing concrete or insufficient edge distance, the dowel holes shall be diamond core drilled. The inner surfaces of the diamond core drilled dowel hole's inner surfaces shall be subject to the approval of the Engineer. The diameter of the drilled dowel holes shall be in accordance with the recommendations of the grout manufacturer. The holes shall be blown clear of any debris and shall have the approval of the Engineer prior to the placement of any grout material. The drilling operation shall be performed without damage to any portion of the existing structure that is to remain in place. Any damage to any portion of the existing structure that is to remain in place shall be repaired to a condition equal to or better than that existing prior to the beginning of the Contractor's operations and shall be repaired at the Contractor's expense.

The Contractor shall strictly follow the recommendations of the manufacturer for mixing and placing the grout material prior to the placement of the dowel. The Contractor shall adhere to the recommendations of the manufacturer regarding minimum and maximum temperatures while placing the grout. Any excessive grout around the hole after placement of the dowel shall be struck off smooth while the grout is still fresh.

ITEM 912. (Continued)

The Contractor shall perform on site a minimum of two (2) tests of the dowels (one test for each side of stage construction) for capacity in tension in each location or component. The test shall be performed in the presence of and to the acceptance of the Engineer. The testing, including the necessary material and equipment to perform the test, is incidental to the work under this Item. The pullout force shall correspond to 90% of the yield strength of the bar. If the test bar pulls out or if the concrete utilized in the test shows signs of fracture, the Contractor shall adjust the hole diameter, embedment length, and/or grout material to meet this requirement. The method of applying the tension load to the dowels shall conform to ASTM E488. Details of the test procedure, materials, and equipment shall be submitted to the Engineer for review and approval prior to commencement of the test. Dowels shall not be ordered until the embedment lengths have been approved by the Engineer.

The Contractor shall arrange with the material's manufacturer or distributor to have the services of a competent field representative at the work site prior to any drilling of the proposed dowel holes to instruct the work crews in proper dowel installation procedures. The field representative shall remain at the job site after work commences and continue to instruct until the representative, the Contractor, and Engineer are satisfied that the crew has mastered the technique of installing the dowels successfully. The representative shall make periodic visits to the project as the work progresses and shall confer on each visit with the Contractor, Inspector and/or Engineer. The manufacture's field representative must be fully qualified to perform the work and shall be subject to the approval of the Engineer.

METHOD OF MEASUREMENT

Item 912. will be measured for payment by the Each dowel installed, complete in place.

BASIS OF PAYMENT

Item 912. will be paid for at the Contract unit price per Each, which price shall include all labor, materials, equipment, furnishing dowels, drilling holes, grouting the dowels regardless of the diameter or depth of the hole, and all incidental costs required to complete the work.

The Contractor shall be completely responsible for the expense of the service of the required field representative and the contract unit price shall be considered full compensation for all costs in connection therewith.

ITEM 964.3**ELASTOMERIC PROTECTIVE COATING****SQUARE FOOT**

The work under this item shall consist of applying a minimum of two coats of an elastomeric acrylic protective coating to bridge copings and the above grade surfaces of the substructure components and other locations as directed by the Engineer.

A total dry film thickness (DFT) of 16 mils shall be required.

The acrylic protective coating shall be breathable, durable, flexible, and color retentive. It shall provide protection and be resistant to weathering, carbon dioxide, chlorides, UV light, wind driven rain, dirt pick up and mildew. It shall also bridge hairline cracks up to 1/32". The acrylic protective coating system shall be one of the following or an approved equal:

- SikaGard 550W Elastocolor by Sika Corp.
- Flexxide Elastomer by Carboline
- Colorlastic by ChemMasters

The proposed coating product shall be submitted to the Engineer for approval. The Contractor shall submit the proposed application procedures and Manufacturer's Product Data Sheet(s) that completely describe the product. The color of the coating shall be AMS-STD 25630 from the AMS Standard 595 Colors.

Preparation and Protection of Surfaces

All vegetation growing adjacent to or within the limits of the concrete surfaces to be coated shall be removed and properly discarded. All debris adjacent to or within the limits of the concrete surfaces to be coated shall be removed and properly discarded.

All surfaces to be coated must be dry, clean, sound, and free of all contaminants that could interfere with adhesion of the coating. All loose material shall be removed. If directed by the Engineer, the contractor shall repair any holes and any spalled and damaged concrete prior to applying the coating. All concrete repair areas shall be cured for a minimum 28 days before coating.

The Contractor shall pressure wash all concrete surfaces to be coated. The pressure washer shall operate at a minimum of 3,000 psi. The protective coating shall not be applied until the surface is dry and the surface preparation has been approved by the Engineer. All concrete to be coated must be tested for the presence of moisture after the surface preparation has been completed and prior to application of coating. Testing shall be in accordance with ASTM D 4263.

ITEM 964.3 (Continued)**Application**

Application shall be done by airless sprayer or roller or a combination of both and in accordance with the manufacturer's recommendations. The use of a primer shall not be required unless stipulated for that particular coating by the manufacturer. A minimum of two coats shall be applied to achieve a total DFT of 16 mils. The recommended minimum wet film thickness (WFT) must be maintained during each application. The manufacturer's specified temperature and weather limitations for the application shall be strictly adhered to.

METHOD OF MEASUREMENT

Item 964.3 will be measured for payment by the Square Foot for all concrete surfaces to which the coating is applied, complete in place.

BASIS OF PAYMENT

Item 964.3 will be paid for at the Contract unit price per Square Foot, which price shall include all labor, materials, tools, equipment, preparation and protection of surfaces, wet/dry film thickness gauge for the use by the Engineer, and all incidental costs required to complete the work.

<u>ITEM 987.01</u>	<u>SPECIAL SLOPE PAVING UNDER BRIDGE</u> <u>- REPAIRS</u>	<u>SQUARE YARD</u>
<u>ITEM 987.02</u>	<u>SPECIAL SLOPE PAVING UNDER BRIDGE</u> <u>REMOVED AND RESET</u>	<u>SQUARE YARD</u>

The Work under this Item shall conform to the relevant provisions of Subsections 150, 170 and 983 of the Standard Specifications and the following:

The work under Item 987.01 consists of furnishing and placing special slope paving under bridge as required by the Engineer. The work may include areas of missing or damaged existing special slope paving, or new areas where no paving was originally installed.

The work under Item 987.02 consists of resetting existing slope paving under bridge where Required by the Engineer.

MATERIALS

Materials shall meet the requirements specified in the following Subsection of Division III, in addition to those listed in Subsection 983.40:

M1.03.0 Gravel Borrow

The Engineer shall determine what type of special slope paving to be used in each area under repair. The various types to be considered are quarry stone, precast concrete blocks, or cement concrete, all of which will be firmly embedded on a six (6) inch gravel foundation. Generally, if more than 50% of the original special sloped paving is still in place it shall be replenished in kind. If less than 50% of the original special sloped paving is still in place, full replacement with concrete slope paving should be considered.

The thickness of the special slope paving shall be equal to the existing quarry stones, cement concrete blocks or cement concrete slabs, where present. The thickness of the special slope paving shall be six (6) inches where grouted hot mix asphalt paving or no paving is present throughout the embankment.

CONSTRUCTION METHODS

The new slope paving shall maintain the original undisturbed section of paved or unpaved slope.

REMOVAL OF EXISTING SLOPE PAVING

For existing slope paving that has settled, has been displaced from it's original position or otherwise directed to be removed by the Engineer, that is not designated to be reset under Item 987.02:

- Special slope paving quarry stones shall be removed from the site, transported to and stacked at the nearest MassDOT Maintenance Depot.
- Special slope paving concrete blocks and cement concrete slabs shall become the property of the Contractor and shall be removed and disposed of away from the site.

ITEMS 987.01 and 987.02 (Continued)

- Special slope paving consisting of cement grout over hot mix asphalt shall become the property of the Contractor and shall be removed and disposed of away from the site.

METHOD OF MEASUREMENT

Item 987.01 will be measured for payment by the Square Yard on the surface of the paved slope as constructed.

Item 987.02 will be measured for payment by the Square Yard on the surface of the reset paved slope.

BASIS OF PAYMENT

Item 987.01 will be paid for at the Contract unit price per Square Yard, which price shall include all labor, materials, equipment, grading and compacting, removal and disposal/transportation of existing paving, and all incidental costs required to complete the work.

Item 987.02 will be paid for at the Contract unit price per Square Yard, which price shall include all labor, materials, equipment, grading and compacting, and all incidental costs required to complete the work.

The price for Item 987.01 shall be based on cement concrete special slope paving. If quarry stone or precast concrete blocks are required, the difference of the cost of material between cement concrete and the material used shall be compensated under Payment for Materials (Non-Bid Items).

ITEM 994.1**TEMPORARY PROTECTIVE SHIELDING****SQUARE FOOT**

The work under this Item shall provide for the protection of traffic, persons, and facilities on the roadway beneath bridges from falling debris during the removal of the unsound concrete from parapets, and copings. This shall be accomplished by the utilization of adequate shielding methods.

Note that some of the bridges, due to their height (vertical clearance), will require special lifting equipment in order to place shielding for the assigned bridge repair work. Any equipment necessary to erect forms will be considered incidental to these items.

Any existing formwork on the bridge shall also be removed and disposed by the Contractor away from the job area, at no additional expense.

All shielding shall meet the following requirements:

1. Temporary Protective Shielding must be used on bridges over roadways, railroads, and waterways during substructure excavation when, in the opinion of the Engineer, there is the possibility of dislodging concrete from the bottom of the deck, parapets or coping. In some cases, the Contractor may be able to utilize the bottom flanges of existing steel beams as supports for the protective shielding. However, the Contractor will not be permitted to weld onto, drill into, or cut any existing structural steel beams.
2. The Contractor shall submit drawings and calculations stamped by a Professional Engineer of the appropriate discipline registered in Massachusetts of the proposed temporary shielding to the Engineer for approval prior to its installation. The drawings shall include details of all connections, brackets, and fasteners. However, when the spacing between existing steel beams is 70 inches or less, the Contractor may utilize a wood plank shielding scheme.
3. Shielding shall be designed to safely withstand all loads that it will be subjected to. The allowable design stresses shall be in accordance with AASHTO Standard Specifications for Highway Bridges, 17th Edition. The design shall also include a description of the equipment and construction methods proposed for the deck, parapet, or coping excavation and the maximum size of the area being excavated. The shielding shall also be designed to withstand the maximum size of the excavated area should it fall during excavation or removal. No debris shall be swung over traffic, on or below the bridge.
4. Shielding shall be designed such that impact on traffic during installation and removal shall be minimal. The Contractor shall submit the traffic plan to the Engineer for approval.
5. The shielding shall extend a sufficient distance above and beyond the deck overhang at the fascia where concrete excavation is required outside the fascia beams. The shielding shall extend the length of the damaged or distressed portion of the deck a length of sufficient distance to do the required demolition. Also, the width of shielding shall completely extend over the travel lanes and shoulders of the highway below and shall extend a minimum of one beam width in the transverse direction beyond the limits of the excavation.

ITEM 994.1 (Continued)

6. The area for shielding shall be approved by the Engineer prior to any installation of any shielding. The Contractor may utilize the bottom flanges of existing beams as supports for the protective shielding. However, the Contractor will not be permitted to weld onto, drill into, or cut any existing structural steel beams. All spaces along the perimeter of the shielding and at the seams shall be sealed to prevent dust, water, and debris from escaping and falling onto traffic below the bridge.
7. The Engineer may request that the shielding be designed so that it may also serve as false work (forms) for all areas of full-depth concrete replacement/repair.
8. The shielding shall not decrease the minimum vertical bridge clearance to the roadway unless otherwise approved by the Engineer.
9. The shielding shall be maintained and remain in place until the strength of the concrete used to repair the deck has cured and reached the design strength requirement, except where shielding needs to be removed and reset to install formwork for the areas of the repair. The shielding shall remain the property of the Contractor and shall be removed by the Contractor from the site when no longer needed.

If the Contractor's operations damage any existing portions of the bridge that are to remain, such damage shall be repaired at the Contractor's own expense.

All materials used in the temporary shielding system shall become the property of the Contractor and shall be removed from the site upon the completion of the project.

METHOD OF MEASUREMENT

Item 994.1 will be measured for payment by the Square Foot of shielding installed, maintained, and removed upon completion of repair work as required by the Engineer.

BASIS OF PAYMENT

Item 994.1 will be paid at the Contract unit price per Square Foot of shielding installed, maintained, and removed upon completion of repair work as directed by the Engineer.

The Contract price shall include all labor, materials, tools, equipment, and incidental costs required to complete the work as required by the Engineer.

60% of the Unit bid Price will be paid upon installation of the shielding and the remaining 40% will be paid upon removal.

Compensation to provide Engineering Services, when required, will be separately reimbursed as a Non-Bid Item.

ITEM 994.12**TEMPORARY PROTECTIVE SHIELDING
REMOVED AND RESET****SQUARE FOOT**

The work under this Item consists of removing and resetting any previously installed protective shielding that may interfere with operations.

Note: Previously installed protective shielding may interfere with the Contractor's operations for substructure repairs. Prior to commencing work, the Contractor shall submit to the Engineer for approval, proposed construction methods for removing and resetting the protective shielding.

Any debris that falls on the shielding shall be completely cleaned off from the protective shielding and disposed of offsite by the Contractor. Removal and disposal of materials will be subject to the regulations and requirements of local authorities governing the disposal of such materials. The disposal shall be done at no additional charge.

Any shielding damaged by the Contractor shall be replaced at the Contractor's expense. Any existing locations where protective netting has become damaged beyond the control of the Contractor, (in the opinion of the Engineer), may be replaced at the Engineer's discretion.

Compensation to provide new replacement protective netting will be made under Payment for Materials (Non-Bid Item).

METHOD OF MEASUREMENT

Item 994.12 will be measured for payment by the Square Foot. The quantity paid for shall be the actual number of Square Foot of protective shielding removed and reset.

BASIS OF PAYMENT

Item 994.12 will be paid at the Contract unit price per Square Foot of protective shielding actually removed and reset. The Contract Price shall include all labor, materials, tools, equipment, and incidental costs required to complete the work as required by the Engineer.

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DRAWINGS AND SKETCHES

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 BRIDGE PRESERVATION UNIT	PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS	SHEET: 1 OF 12
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NOTES FOR CONTRACTOR:

IF ANY OF THE FOLLOWING CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL STOP REMOVING DETERIORATED CONCRETE AND IMMEDIATELY NOTIFY THE DISTRICT BRIDGE ENGINEER TO DETERMINE IF THE EXCAVATION CAN BE CONTINUED:

- 1. WHEN A MAXIMUM EXCAVATION DEPTH OF 6 INCHES IS REACHED IN ANY SUBSTRUCTURE REPAIR.
- 2. WHEN THE EXCAVATION ENCROACHES ON THE BEARING DEVICES.
- 3. WHEN THE COLUMN SPACING IS MORE THAN 16 FT, OR MORE THAN TWO ADJACENT BEAMS ARE SUPPORTED BY THE COLUMN BAY IN PIER CAP REPAIR.
- 4. WHEN THE PIER CAP OVERHANG, (MEASURING FROM THE FACE OF THE COLUMN), IS MORE THAN 4 FT, AND/OR THE BEARING DEVICES ARE WITHIN THE OUTER HALF OF THE OVERHANG IN PIER END CAP REPAIR.



BRIDGE PRESERVATION UNIT

PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS

SUBJECT: NOTES FOR CONTRACTOR

SHEET: 2 OF 12

DRAWN BY: MJC

DATE: 08/28/2025

CHKD BY: JAM

DATE: 08/28/2025

SUBSTRUCTURE CONCRETE REPAIR NOTES:

1. SUBSTRUCTURE REPAIRS SHALL CONSIST OF REMOVING DETERIORATED CONCRETE, PREPARING THE REPAIR SURFACE, FORMING WHERE REQUIRED, PLACING AND FINISHING NEW CONCRETE OR CEMENTITIOUS MORTAR. THE SCOPE OF REPAIRS MAY ALSO REQUIRE APPLYING ELASTOMERIC COATING (ITEM 964.3) TO THE REPAIRED SUBSTRUCTURE UNITS. THE LIMITS FOR THE ELASTOMERIC COATING WILL BE ESTABLISHED BY THE ENGINEER.
2. THE REPAIR IS DESIGNATED AS A DEEP PATCH WHEN THE EXCAVATED DEPTH TO SOUND CONCRETE EXCEEDS 2” FROM THE FACE OF THE CONCRETE OR REINFORCING STEEL IS ENCOUNTERED.
3. THE REPAIR IS DESIGNATED AS A SHALLOW DEPTH WHEN THE DEPTH OF SOUND CONCRETE IS REACHED AT OR LESS THAN 2” FROM THE FACE OF THE CONCRETE AND REINFORCING STEEL IS NOT ENCOUNTERED.
4. 5000 PSI, $\frac{3}{8}$ INCH, 710 CEMENT CONCRETE (ITEM 905.2) SHALL BE USED FOR ALL DEEP PATCH REPAIRS. ALL SHALLOW DEPTH REPAIRS SHALL BE PATCHED WITH CEMENTITIOUS MORTAR FOR PATCHING (ITEM 909.2) OR IF ITEM 909.2 IS NOT INCLUDED IN THIS CONTRACT, MORTAR REPAIRS DIRECTED BY THE ENGINEER WILL BE PAID AS NON BID ITEMS. CEMENTITIOUS MORTAR SHALL BE SELECTED FROM MASSDOT QUALIFIED PRODUCT LIST AND APPROVED BY THE ENGINEER.
5. THE CONTRACTOR SHALL ESTABLISH LIMITS OF REPAIRS AT THE DIRECTION OF THE ENGINEER. THE EXTENT, LOCATION AND REPAIR TYPE (DEEP PATCH OR SHALLOW DEPTH REPAIR) ARE TO BE FIELD VERIFIED AND APPROVED BY THE ENGINEER AFTER THE CONTRACTOR HAS SOUNDED AND MARKED OUT THE REPAIR AREA. THE AREAS OF REPAIR SHALL BE MADE APPROXIMATELY RECTANGULAR WITH THE SIDES GENERALLY PERPENDICULAR TO THE SURFACE BEING REPAIRED.
6. THE DETERIORATED CONCRETE SHALL BE REMOVED AS REQUIRED TO PROVIDE GOOD SOUND CONCRETE ON WHICH NEW CONCRETE CAN BE PLACED AND SATISFACTORILY BONDED TO UNDAMAGED OR UNDISTURBED REINFORCEMENT.
7. SAW CUT ALONG NEAT LINES AROUND REPAIR AREA PRIOR TO CONCRETE EXCAVATION. USE SAW CUT DEPTH OF $\frac{3}{4}$ ”, OR AS REQUIRED TO AVOID CUTTING REINFORCING STEEL.
8. SUBSTRUCTURE REPAIR SHOULD INCLUDE THE REMOVAL OF ALL DETERIORATED, LOOSE, SPALLED, AND HOLLOW SOUNDING CONCRETE. THE DETERIORATED CONCRETE SHALL BE REMOVED FROM WITHIN THE REPAIR AREAS TO THE DEPTH OF SOUND CONCRETE. WHEN REINFORCING STEEL IS UNCOVERED, CARE SHALL BE TAKEN SO AS NOT TO DAMAGE THE STEEL OR ITS BOND TO THE SURROUNDING CONCRETE. MAXIMUM 25 LB. HAMMERS WITH CHISEL POINTS SHALL BE USED FOR CONCRETE REMOVAL. MAXIMUM 15 LB. HAMMERS SHALL BE USED ONCE REINFORCING STEEL IS EXPOSED.
9. THE CONTRACTOR SHALL STOP REMOVING DETERIORATED CONCRETE WHEN A MAXIMUM DEPTH OF 6 INCHES IS REACHED. THE DISTRICT BRIDGE ENGINEER SHALL BE IMMEDIATELY NOTIFIED TO DETERMINE IF THE EXCAVATION CAN BE CONTINUED.



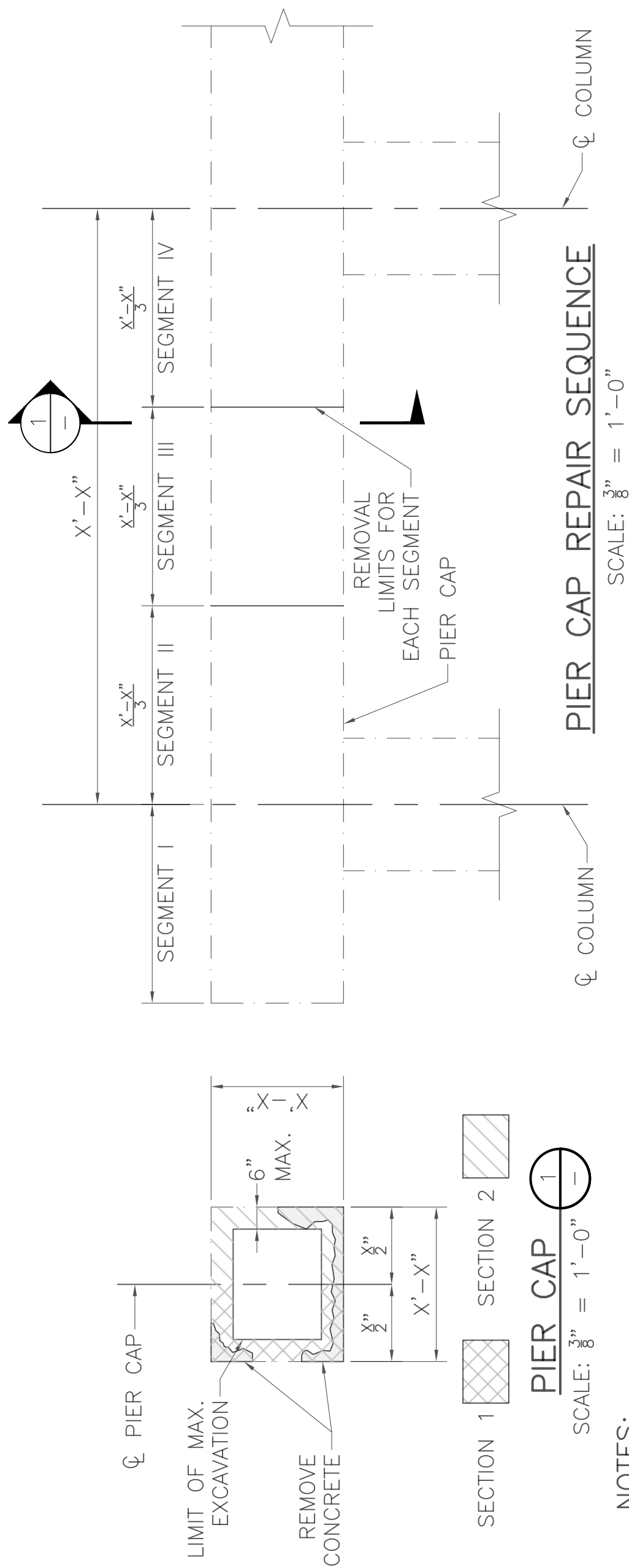
BRIDGE PRESERVATION UNIT

PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS

SUBJECT: SUBSTRUCTURE CONCRETE REPAIR NOTES

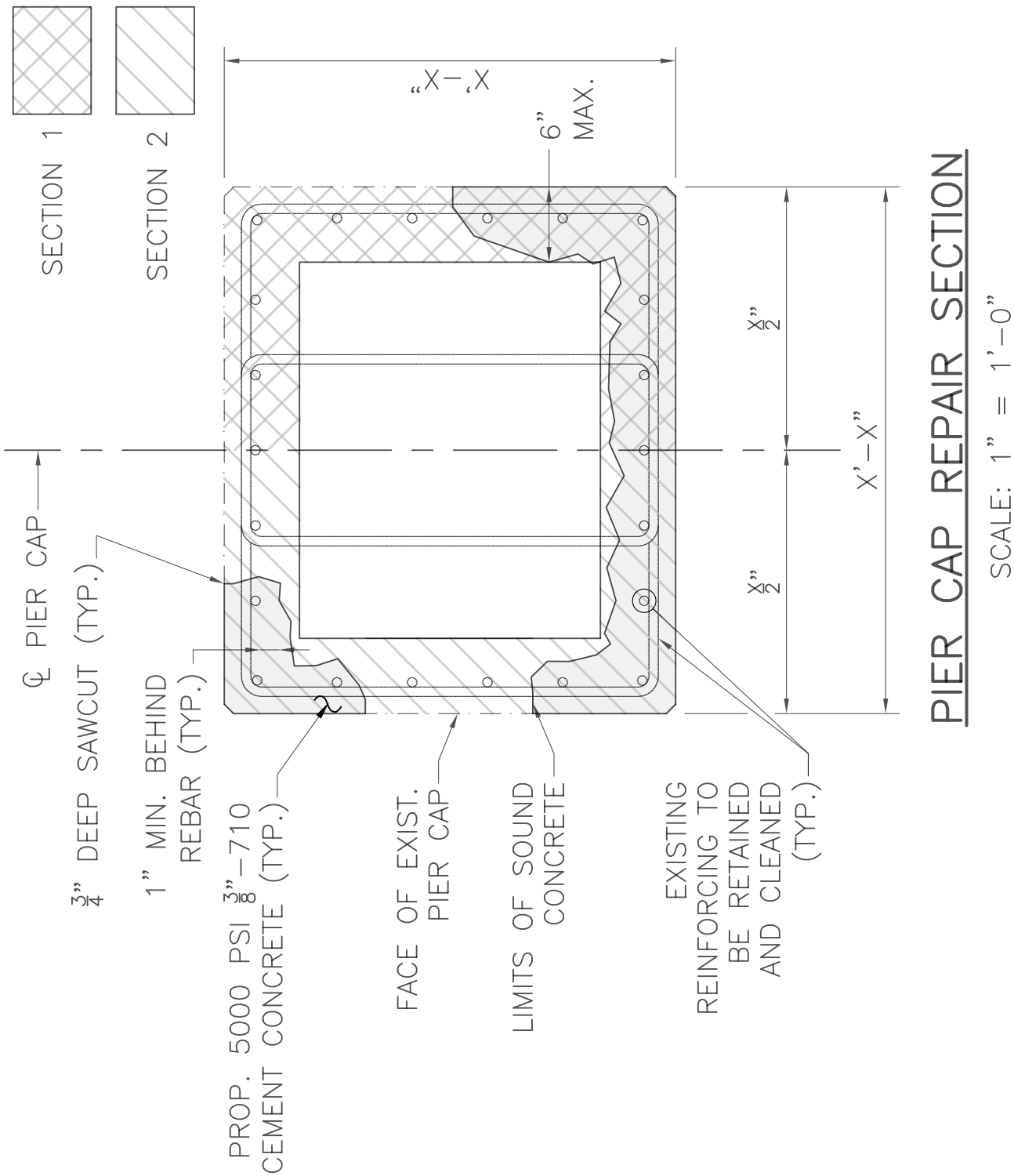
SHEET: 3 OF 12
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10. IF REINFORCING STEEL IS EXPOSED THEN CLEAN BY MECHANICAL CLEANING OR HIGH PRESSURE WASHING WITH WATER THAT CONTAINS NO DETERGENTS OR BOND INHIBITING CHEMICALS. WHERE ACTIVE CORROSION HAS OCCURRED THAT WOULD INHIBIT BONDING, CLEAN STEEL USING ABRASIVE BLASTING METHODS ACCEPTABLE TO THE ENGINEER, THEN PAINT WITH A ZINC-RICH PRIMER CONFORMING TO MASSDOT STANDARD SPECIFICATION NO. M7.04.11. 11. AFTER REMOVAL AND EDGE PREPARATIONS ARE COMPLETE, REMOVE BOND INHIBITING MATERIALS (DIRT, GREASE, LOOSELY BONDED AGGREGATE) BY ABRASIVE BLASTING OR HIGH PRESSURE WATER BLASTING WITH WATER THAT CONTAINS NO DETERGENTS OR BOND INHIBITING CHEMICALS. CHECK THE CONCRETE SURFACES AFTER CLEANING TO ENSURE THAT SURFACE IS FREE FROM ADDITIONAL LOOSE AGGREGATE OR THAT ADDITIONAL DELAMINATIONS ARE NOT PRESENT. 12. NEW REINFORCEMENT SHALL BE PLACED TO SUPPLEMENT EXISTING REINFORCEMENT THAT HAS A SECTION LOSS OF 25% OR MORE OF THE ORIGINAL CROSS SECTION AREA OR HAS BROKEN, AS DETERMINED BY THE ENGINEER. ADEQUATE LAP LENGTH SHALL BE PROVIDED IN EACH DIRECTION FROM WHERE THE SECTION LOSS OR BREAK ENDS. THE LIMITS OF THE REPAIR SHALL BE MODIFIED TO MEET THE REINFORCEMENT STEEL LAP SPLICE REQUIREMENTS. NEW REINFORCING STEEL SHALL BE PLACED AT THE SAME LEVEL ALONGSIDE THE EXISTING DETERIORATED OR BROKEN REINFORCING STEEL. 13. ALL EXISTING CONCRETE SURFACES WHERE NEW CONCRETE WILL BE BONDED TO EXISTING CONCRETE SHALL BE PREPARED IN ACCORDANCE WITH THE PREPARATION OF CONCRETE SURFACES SECTION OF THE SPECIAL PROVISIONS. 14. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL INSTALL CATHODIC PROTECTION ANODES TO THE LIMITS AND AT THE SPACINGS DETERMINED BY THE ENGINEER. THE CATHODIC PROTECTION ANODES WILL BE PROVIDED BY THE ENGINEER. THE COST OF ANODE INSTALLATION AND TESTING SHALL BE CONSIDERED INCIDENTAL TO ITEM 910.1. 15. ALL CONCRETE SURFACES ONCE CURED, SHALL BE RUBBED TO PRODUCE A SMOOTH FINISH TO MATCH EXISTING SURFACES. CURING SHALL BE IN ACCORDANCE WITH SUBSECTION 901.38. 16. CONCRETE PIER CAPS, COLUMNS, ABUTMENT SEATS, AND EXPOSED SECTIONS OF ABUTMENT STEMS SHALL (AS DETERMINED BY THE ENGINEER) RECEIVE A CONCRETE PENETRANT/SEALER OR ELASTOMERIC PROTECTIVE COATING (ITEM 964.3), 30 DAYS AFTER ALL REPAIRS HAVE BEEN MADE. CONCRETE PENETRANT/SEALER IS INCIDENTAL TO ITEM 905.2. 17. THE REPAIR OF PIER CAP SHALL BE COMPLETED PRIOR TO THE START OF ANY COLUMN REPAIR, UNLESS OTHERWISE APPROVED BY THE ENGINEER. 18. THE CONTRACTOR SHALL FOLLOW THE CONCRETE PIER CAPS AND COLUMNS REPAIR SEQUENCE OUTLINED ON THE PLANS. THE CONTRACTOR WILL HAVE THE OPTION TO SUBMIT AN ALTERNATE REPAIR PROCEDURE FOR REVIEW AND APPROVAL. THE CONTRACTOR MAY ALSO USE TEMPORARY SHORING TO COMPLETE THE REPAIRS IN ONE STAGE. IF SHORING IS PROPOSED TO ACCOMMODATE THE CONTRACTOR’S MEANS AND METHODS OR REPAIR SCHEDULE, NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THIS SHALL REQUIRE APPROVAL OF THE ENGINEER AND THE SHORING WILL BE CONSIDERED INCIDENTAL TO THE REPAIR WORK. 19. THE REPAIR PHASING AND SEQUENCE MAY BE MODIFIED BY THE ENGINEER SO THAT THE SECTIONS WITH WORSE DETERIORATION ARE REPAIRED FIRST.		 BRIDGE PRESERVATION UNIT PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS SUBJECT: SUBSTRUCTURE CONCRETE REPAIR NOTES (CONT.)	SHEET: 4 OF 12 DRAWN BY: MJC DATE: 08/28/2025 CHKD BY: JAM DATE: 08/28/2025
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NOTES:

1. CONCRETE ELEMENTS ARE DIVIDED INTO SEGMENTS. WORK TO BE PERFORMED ON SECTIONS AS SHOWN.
2. THE CONTRACTOR SHALL PROVIDE A TEMPORARY SHORING SYSTEM TO SUPPORT THE PIER CAP DEAD AND LIVE LOADS IF THE EXCAVATION LIMITS ARE TO BE EXTENDED PER EVALUATION OF THE DISTRICT BRIDGE ENGINEER.
3. THE CONTRACTOR SHALL PROVIDE A TEMPORARY SHORING SYSTEM TO SUPPORT THE PIER CAP DEAD AND LIVE LOADS IF THE EXCAVATION IS WITHIN 6" OF THE BEARING.
4. CONTRACTOR SHALL STAGE THE WORK SO THAT THE SECTIONS IN POOREST CONDITION ARE REPAIRED FIRST, AS APPROVED BY THE ENGINEER.
5. CONTRACTOR SHALL NOT WORK ON ADJACENT SECTIONS SIMULTANEOUSLY UNLESS APPROVED BY THE DISTRICT BRIDGE ENGINEER.
6. CONTRACTOR SHALL WAIT 72 HOURS AFTER COMPLETING REPAIRS TO A SECTION BEFORE REPAIRS TO ADJACENT SECTIONS, HOWEVER HE/SHE MAY PERFORM WORK ON OTHER BRIDGE ELEMENTS.
7. CONTRACTOR SHALL STOP REMOVING DETERIORATING CONCRETE WHEN A MAXIMUM DEPTH OF 6 IN. IS REACHED. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED IF MORE REMOVAL SEEMS NECESSARY ON THE BRIDGE SECTION.
8. EXISTING REINFORCING NOT SHOWN.
9. THE CONTRACTOR SHALL SUBMIT AN ALTERNATE REPAIR SEQUENCE FOR APPROVAL OF THE ENGINEER WHEN TEMPORARY SHORING IS UTILIZED DURING REPAIRS.
10. MAXIMUM SEGMENT LENGTH SHALL BE LIMITED TO 8 FEET.

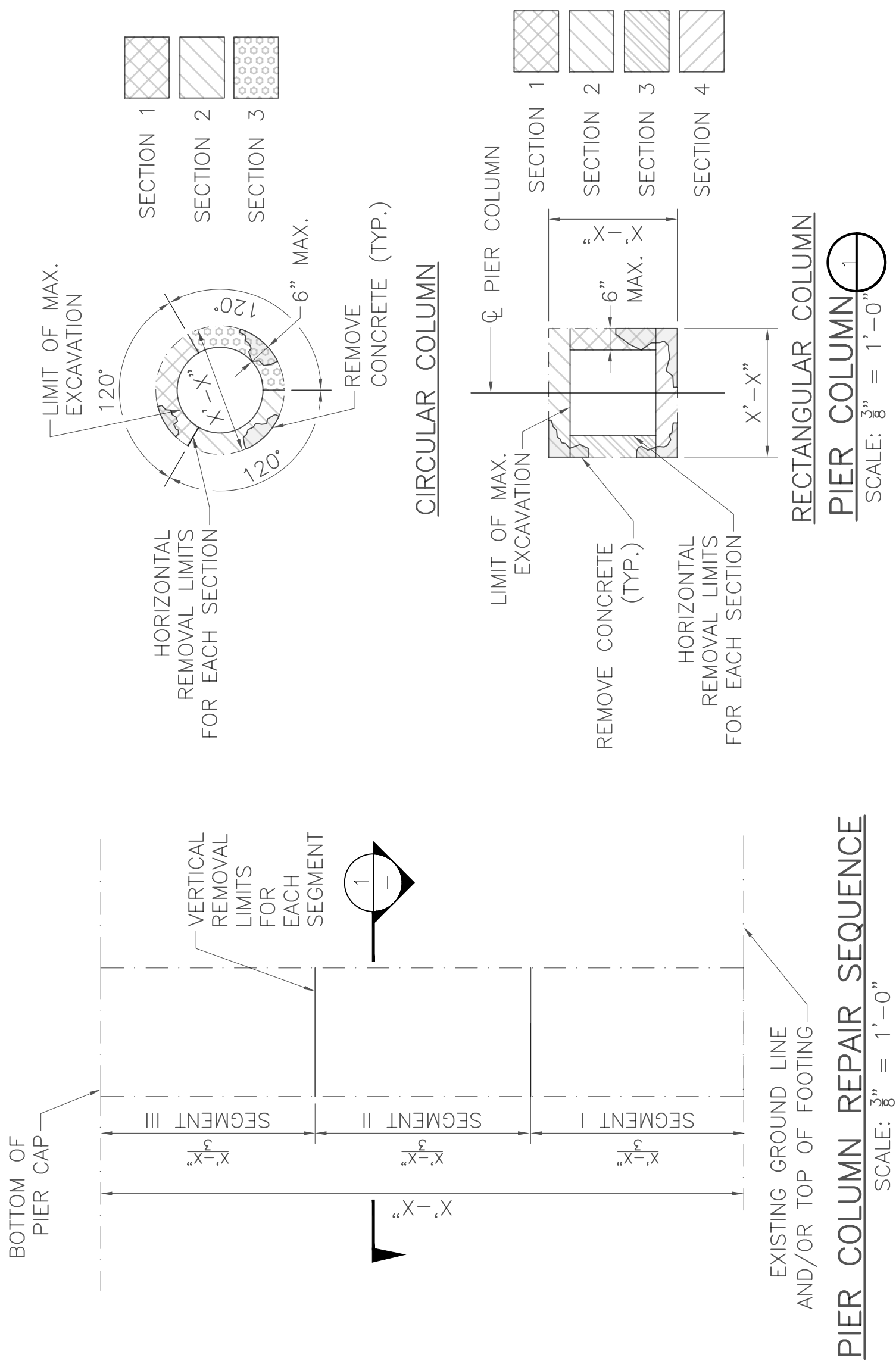


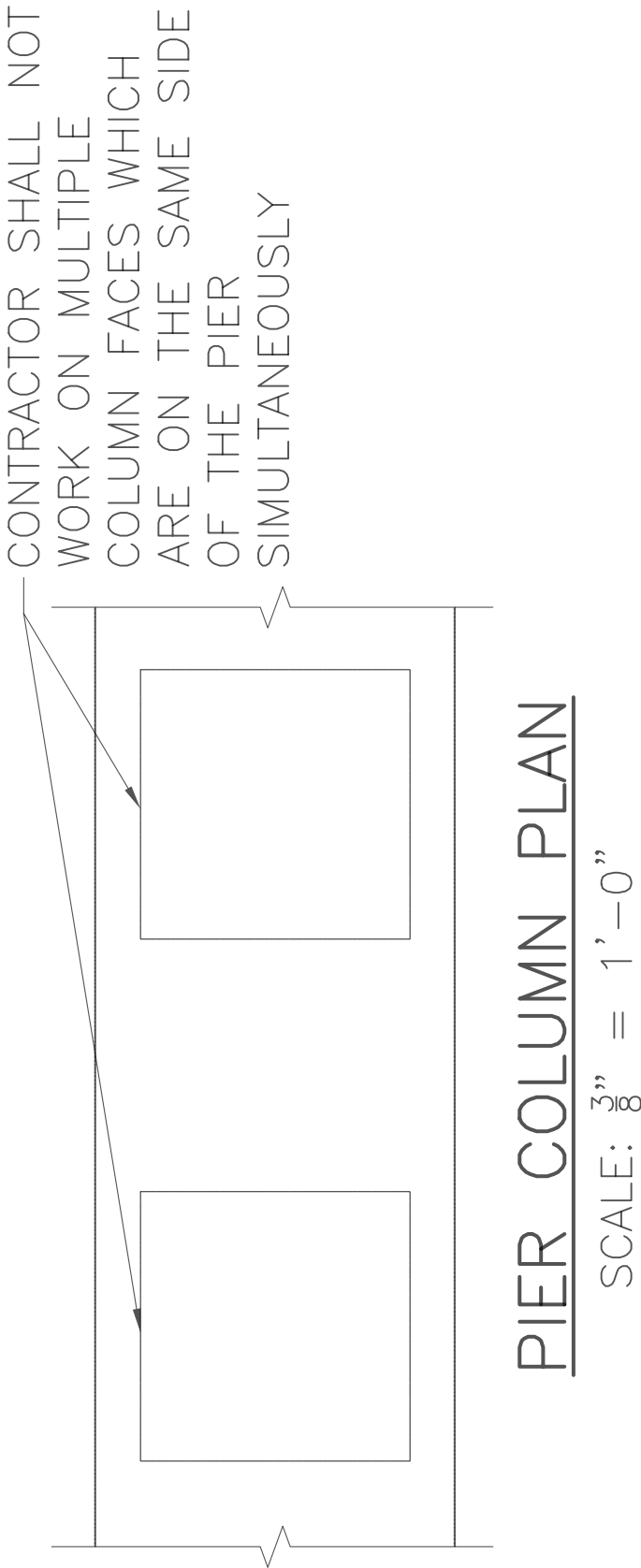
BRIDGE PRESERVATION UNIT

PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS

SUBJECT: PIER CAP REPAIR SECTION

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DATE: 08/28/2025





BRIDGE PRESERVATION UNIT

PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS

SUBJECT: PIER COLUMN PLAN

SHEET: 8 OF 12

DRAWN BY: MJC

DATE: 08/28/2025

CHKD BY: JAM

DATE: 08/28/2025

NOTES:

1. CONCRETE ELEMENTS ARE DIVIDED INTO SEGMENTS. WORK TO BE PERFORMED ON SECTIONS AS DEFINED BELOW.
2. THE CONTRACTOR SHALL PROVIDE A TEMPORARY SHORING SYSTEM TO SUPPORT THE PIER CAP DEAD AND LIVE LOADS IF THE EXCAVATION LIMITS ARE TO BE EXTENDED PER EVALUATION OF THE DISTRICT BRIDGE ENGINEER.
3. NOTE CONTRACTOR SHALL STAGE THE WORK SO THAT THE WORSE SECTIONS ARE REPAIRED FIRST.
4. CONTRACTOR SHALL NOT WORK ON ADJACENT SECTIONS SIMULTANEOUSLY UNLESS APPROVED BY THE DISTRICT BRIDGE ENGINEER.
5. CONTRACTOR SHALL WAIT 72 HOURS AFTER COMPLETING REPAIRS TO A SECTION BEFORE CHIPPING ADJACENT SECTIONS, HOWEVER HE/SHE MAY PERFORM WORK ON OTHER BRIDGE ELEMENTS.
6. CONTRACTOR SHALL STOP REMOVING DETERIORATING CONCRETE WHEN A MAXIMUM DEPTH OF 6 IN. IS REACHED. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED IF MORE REMOVAL SEEMS NECESSARY.
7. EXISTING REINFORCING NOT SHOWN.
8. THE CONTRACTOR SHALL SUBMIT AN ALTERNATE REPAIR SEQUENCE FOR APPROVAL OF THE ENGINEER WHEN TEMPORARY SHORING IS UTILIZED DURING REPAIRS.
9. WHEN HEIGHT OF COLUMN IS MORE THAN 18 FEET, THE CONTRACTOR WILL BE RESTRICTED TO 6 FOOT SEGMENTS.



BRIDGE PRESERVATION UNIT

PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS

SUBJECT: PIER COLUMN REPAIR SEQUENCE NOTES

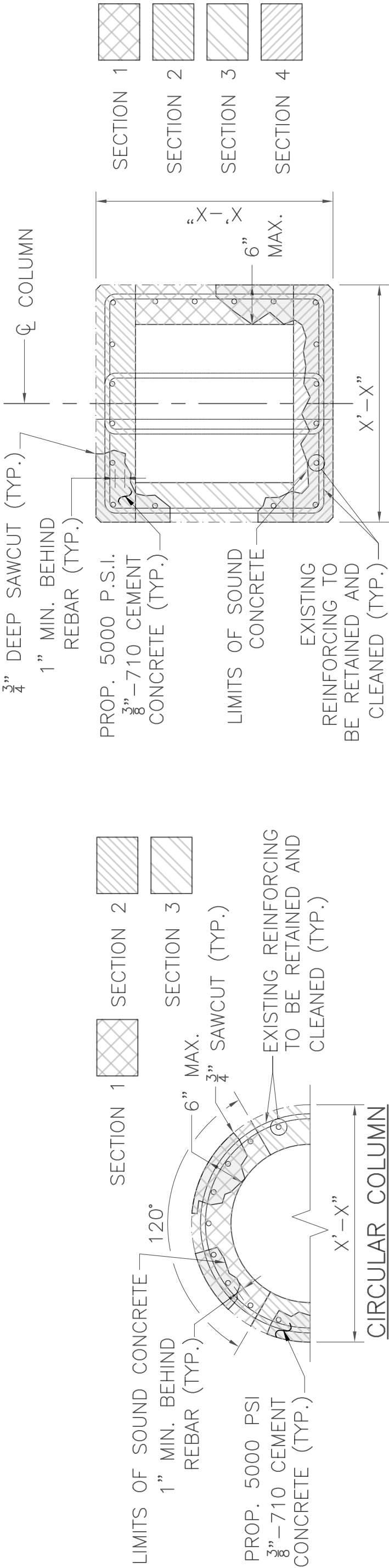
SHEET: 9 OF 12

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CHKD BY: JAM

DATE: 08/28/2025



RECTANGULAR COLUMN

NOTE:

IF THERE IS LESS THAN 1½" CONCRETE COVER, THEN THE CONTRACTOR SHALL BUILD OUT THE FORM TO ENSURE A MINIMUM OF 1½" COVER.

COLUMN REPAIR SECTION

SCALE: $\frac{3}{4}$ " = 1'-0"

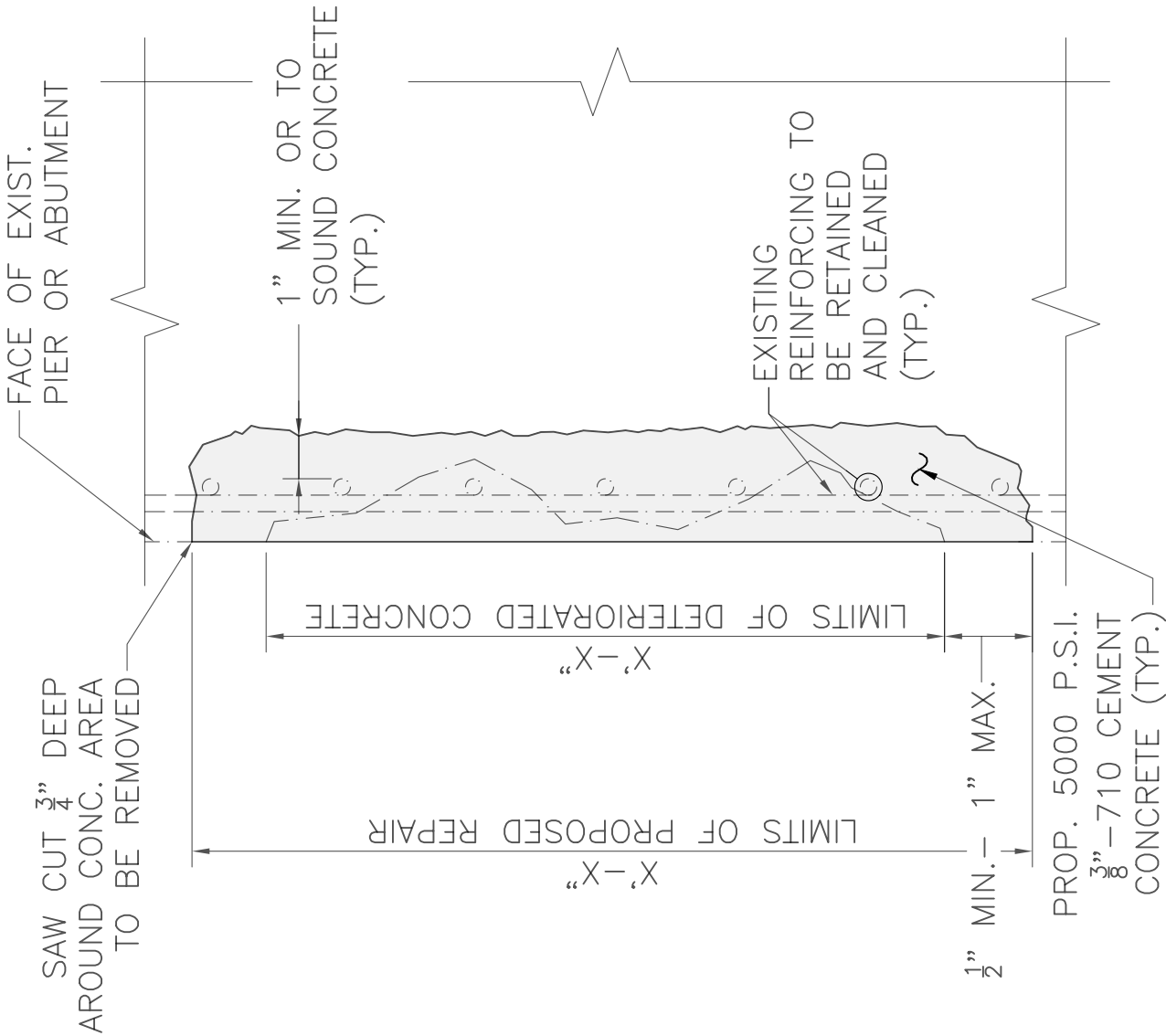


BRIDGE PRESERVATION UNIT

PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS

SUBJECT: PIER COLUMN REPAIR SECTION

SHEET: 10 OF 12
DRAWN BY: MJC
DATE: 08/28/2025
CHKD BY: JAM
DATE: 08/28/2025



NOTES:

- 1. IF THERE IS LESS THAN 1½” CONCRETE COVER, THEN THE CONTRACTOR SHALL BUILD OUT THE FORM TO ENSURE A MINIMUM OF 1½” COVER.
- 2. IF THE MINIMUM LAP SPlice CANNOT BE ACHIEVED, MECHANICAL SPLICERS MAY BE USED WITH THE APPROVAL OF THE ENGINEER. FORMS MAY NEED TO BE BUMPED OUT TO ENSURE THAT A MINIMUM OF 1½” COVER OVER THE MECHANICAL SPLICERS IS MAINTAINED.

PARTIAL DEPTH REPAIR

SCALE: 1½” = 1’-0”

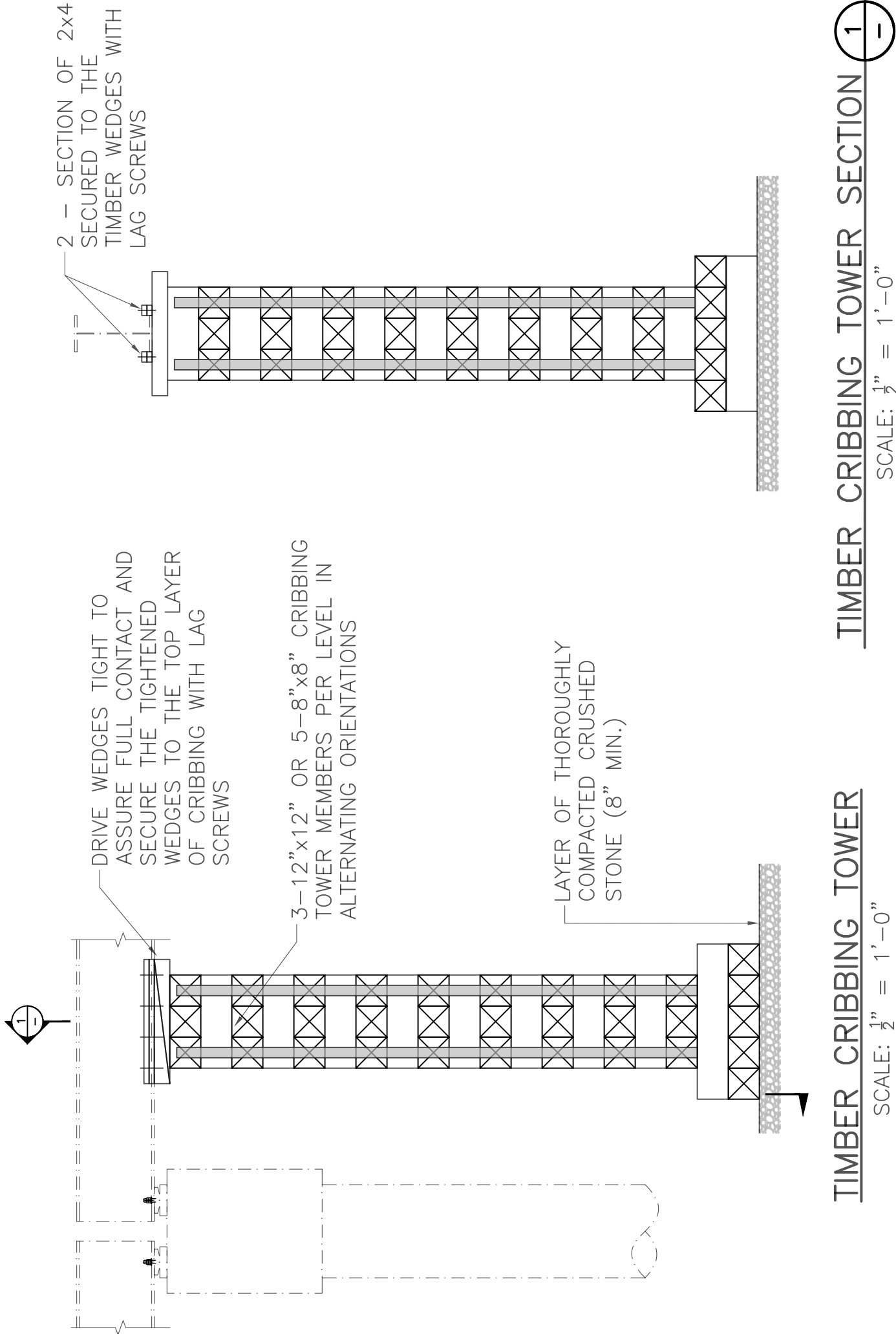


BRIDGE PRESERVATION UNIT

PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS

SUBJECT: ABUTMENT OR PIER STEM REPAIR SECTION

SHEET: 11 OF 12
DRAWN BY: MJC
DATE: 08/28/2025
CHKD BY: JAM
DATE: 08/28/2025



BRIDGE PRESERVATION UNIT

PROJECT: DISTRICT 5 – SCHEDULED AND EMERGENCY SUBSTRUCTURE REPAIRS AT VARIOUS LOCATIONS

SUBJECT: TYPICAL TIMBER CRIBBING SHORING TOWER

SHEET: 12 OF 12
DRAWN BY: MJC
DATE: 08/28/2025
CHKD BY: JAM
DATE: 08/28/2025

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: DISTRICT 5Project File Number: 614087Contract Number: 132949Project Description: Scheduled and Emergency Substructure Repairs at Various Locations

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 A00875

**POLICY DIRECTIVE P-22-001
AND
POLICY DIRECTIVE P-22-002**

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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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Number: P-22-002Date: 9/23/22

POLICY DIRECTIVE

Jonathan Gulliver (signature on original)

HIGHWAY ADMINISTRATOR

Use of MassDOT Property for Staging and other Construction-Related Operations

Purpose

This Policy Directive is intended to address the use of MassDOT property by MassDOT Contractors for construction staging and other construction-related operations that are not specifically defined in the construction contract. Such use of MassDOT property will only be allowed if permitted by the District Office in accordance with 700 CMR 13.00, Approval of Access to MassDOT Highways and Other Property. This includes the use of MassDOT property for staging, laydown, and storage of equipment and materials, including soil excavated from a project site.

This Policy Directive requires the Contractor/applicant to obtain a Non-Vehicular Access Permit from MassDOT to use MassDOT property for these purposes.

This Policy Directive is effective immediately and applies to all MassDOT construction projects.

General Permit Considerations and Conditions

In addition to other normal MassDOT Access Permit procedures, MassDOT shall consider the following during the application, review, implementation and monitoring processes of Access Permits required by this Policy Directive:

- Storage and placement of the Contractor's equipment and materials should not be allowed within the clear zone of the roadway.
- Stockpiled soils should not be located within 500 feet of residential receptors, as defined herein to include, but not be limited to, residential dwellings, residentially zoned property, schools, daycare facilities, playgrounds, parks, recreational areas, hospitals, elderly housing and convalescent facilities.
- The Contractor/applicant shall identify the access/egress locations of the proposed storage areas. MassDOT will only approve locations determined to be safe for roadway users, construction workers and the general public.
- The Contractor may be required to submit a Traffic Management Plan and/or Lighting Plan for MassDOT review and approval as part of the permit application, depending on the proposed use of the area.

- The Contractor shall submit the permit application through MassDOT's online State Highway Access Permit System (SHAPS).
- MassDOT will waive the permit application fee for any application received from a MassDOT Contractor for any permit required by this Policy Directive and will waive any subsequent amendment and extension fees that may otherwise be required.
- MassDOT will review the permit application in accordance with applicable standard procedures and will apply standard permit terms and conditions, as necessary.
- The Resident Engineer will verify that the permit is approved before allowing the Contractor to use the affected area for the requested purpose.
- Areas permitted are for use by the approved applicant only and are not to be shared with or used by other vendors. Subcontractors specifically engaged with the applicant working on the specific MassDOT project will be allowed to use the area in accordance with the terms of the permit.
- Permits are issued on an annual basis and will require the Contractor to file for an extension each year to continue use.

Exemptions from Permit Requirements

Equipment and materials being used for active construction operations and located within the work zone of the construction contract are exempt from this permit requirement, provided they do not interfere with the safety or operation of the roadway or the work zone. Examples of these types of exempt uses are:

- Equipment and materials parked or stored within a protected (barriered) work zone.
- Materials placed in the work zone prior to same-day installation or use.
- Soils excavated temporarily and scheduled to be replaced, such as for trenching operations or for installation of drainage structures.

DOCUMENT B00420

PROPOSAL

DISTRICT 5

For: **Scheduled and Emergency Substructure Repairs at Various Locations**

COMMONWEALTH OF MASSACHUSETTS

LOCATION

The work referred to herein is in the Cities and Towns of DISTRICT 5 in Barnstable, Bristol, Norfolk, and Plymouth Counties, in the Commonwealth of Massachusetts, and is shown by the locus map (Document 00331) in the Proposal Pamphlet, the work locations extend as follows:

at Various Locations

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 **730 CALENDAR DAYS** upon receipt of a Notice to Proceed.

The Work of this project is described by the following Items and quantities.

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Project # 614087		Contract # 132949		
Location : DISTRICT5				
Description : Scheduled and Emergency Substructure Repairs at Various Locations				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
100.1	320	BASE LABOR RATE AT _____ PER HOUR		
102.	1	SELECTIVE CLEARING AND THINNING AT _____ PER ACRE		
106.88	40	JACKING AND SHORING AT _____ EACH		
106.881	40	JACKING AND SHORING REMOVED AND RESET AT _____ EACH		
106.894	25	BLOCKING PER LOCATION AT _____ EACH		
120.1	150	UNCLASSIFIED EXCAVATION AT _____ PER CUBIC YARD		
127.12	195	REINFORCED CONCRETE SUBSTRUCTURE EXCAVATION AT _____ PER CUBIC YARD		
151.	150	GRAVEL BORROW AT _____ PER CUBIC YARD		
628.4	2	TEMPORARY IMPACT ATTENUATOR, REMOVED AND RESET AT _____ EACH		

Project # 614087		Contract # 132949		
Location : DISTRICT5				
Description : Scheduled and Emergency Substructure Repairs at Various Locations				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
628.73	4	TEMPORARY IMPACT ATTENUATOR BI-DIRECTIOAL NON-REDIRECTIVE (TL-3) AT _____ EACH		
740.	24	ENGINEER'S FIELD OFFICE AND EQUIPMENT (TYPE A) AT _____ PER MONTH		
748.1	10	EMERGENCY RESPONSE AT _____ EACH		
850.41	100	ROADWAY FLAGGER AT _____ PER HOUR		
851.1	250	TRAFFIC CONES FOR TRAFFIC MANAGEMENT AT _____ PER DAY		
852.	1,000	SAFETY SIGNING FOR TRAFFIC MANAGEMENT AT _____ PER SQUARE FOOT		
853.21	1,000	TEMPORARY BARRIER REMOVED AND RESET AT _____ PER FOOT		
853.23	500	TEMPORARY BARRIER (TL-3) AT _____ PER FOOT		
853.33	500	TEMPORARY BARRIER - LIMITED DEFLECTION (TL-3) AT _____ PER FOOT		

Project # 614087		Contract # 132949		
Location : DISTRICT5				
Description : Scheduled and Emergency Substructure Repairs at Various Locations				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
853.403	250	TRUCK MOUNTED ATTENUATOR AT _____ PER DAY		
853.8	250	TEMPORARY ILLUMINATION FOR WORK ZONE AT _____ PER DAY		
854.6	250	TEMPORARY PORTABLE RUMBLE STRIP AT _____ PER DAY		
856.	250	ARROW BOARD AT _____ PER DAY		
856.12	250	PORTABLE CHANGEABLE MESSAGE SIGN AT _____ PER DAY		
859.	10,000	REFLECTORIZED DRUM AT _____ PER DAY		
859.1	3,500	REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS AT _____ PER DAY		
905.2	195	5000 PSI, 3/8 INCH, 710 HP CEMENT CONCRETE AT _____ PER CUBIC YARD		
909.2	500	CEMENTITIOUS MORTAR FOR PATCHING AT _____ PER SQUARE FOOT		

Project # 614087		Contract # 132949		
Location : DISTRICT5				
Description : Scheduled and Emergency Substructure Repairs at Various Locations				
ITEM #	QUANTITY	ITEM WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	AMOUNT
910.1	4,880	STEEL REINFORCEMENT FOR STRUCTURES - EPOXY COATED AT _____ PER POUND		
912.	100	DRILLING AND GROUTING DOWELS AT _____ EACH		
964.3	36,000	ELASTOMERIC PROTECTIVE COATING AT _____ PER SQUARE FOOT		
987.01	300	SPECIAL SLOPE PAVING UNDER BRIDGE REPAIRS AT _____ PER SQUARE YARD		
987.02	300	SPECIAL SLOPE PAVING UNDER BRIDGE REMOVED AND RESET AT _____ PER SQUARE YARD		
994.1	500	TEMPORARY PROTECTIVE SHIELDING AT _____ PER SQUARE FOOT		
994.12	1,600	TEMPORARY PROTECTIVE SHIELDING REMOVED AND RESET AT _____ PER SQUARE FOOT		
Total Qty:		63,436		

DOCUMENT B00842

SCHEDULE OF PARTICIPATION
BY MINORITY OR WOMEN BUSINESS ENTERPRISES (M/WBE)

MASSDOT PROJECT NUMBER: 614087PROJECT LOCATION: DISTRICT 5

DATE OF BID OPENING: _____

NAME OF PRIME BIDDER: _____

Name Address and Phone Number of M/WBE	Name of Activity	(a) M/WBE Contractor Activity Amount	(b) M/WBE Other Business Amount	(c) Total amount eligible for credit under rules in Section VIII of the Special Provisions
Total Bid Amount	TOTALS:	\$		\$
\$	M/WBE Percentage of Total bid:	%		%

Column (a) must be at least one-half of the M/WBE percentage goal.

SIGNATURE: _____ Date: _____ Tel No: _____

NAME AND TITLE (PRINT): _____

BIDDERS ARE CAUTIONED TO REVIEW DOCUMENT 00718 -- SPECIAL PROVISION FOR
PARTICIPATION BY MINORITY OR WOMEN BUSINESS ENTERPRISES AND SERVICE DISABLED
VETERAN OWNED BUSINESS ENTERPRISES.

*** END OF DOCUMENT ***

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DOCUMENT B00843

MINORITY OR WOMEN'S BUSINESS ENTERPRISE PARTICIPATION LETTER OF INTENT
PAGE 1 OF 2MASSDOT PROJECT NUMBER: 614087

PROJECT LOCATION: DISTRICT 5

DATE OF BID OPENING:

FROM

(Minority or Women's Business Enterprise Company)

TO:

(Name of Prime Contractor)

1. My company is currently certified as an MBE or WBE by the Massachusetts Supplier Diversity Office, formerly known as the State Office of Minority and Women Business Assistance (SOMWBA). There have been no changes affecting the ownership, control or independence of my company since my last certification review.
2. If any such change occurs prior to my company's completion of this proposed work, I will give written notification to your firm and to the Massachusetts Department of Transportation (MassDOT).
3. (For contractor activity only.) My firm will provide to you, upon request, for the purpose of obtaining subcontractor approval from MassDOT; (1) a resume stating the qualifications and experience of the superintendent or foreperson who will supervise on site-work; (2) a list of equipment owned or leased by my firm for use on the project; (3) a list of all projects (public or private) which my firm is currently performing, is committed to perform, or intends to make a commitment to perform. I shall include, for each project, the names and telephone number of a contact person for the contracting organization, the dollar value of the work, a description of the work, and my firm's work schedule for the Project.
4. If you are awarded the Contract, my company intends to enter into an agreement with your firm to perform the items of work or other activity described on the following sheet for the prices indicated.
5. My firm has the ability to manage, supervise and perform the activity described on the following page.

M/WBE Authorized Signature

Date

MINORITY OR WOMEN'S BUSINESS ENTERPRISE PARTICIPATION LETTER OF INTENT
PAGE 2 OF 2

MASSDOT PROJECT NUMBER: 614087

PROJECT LOCATION: DISTRICT 5

DATE OF BID OPENING:

NAME OF PRIME BIDDER:

<u>Item number</u> if applicable	<u>Description of Activity</u> with notations such as Installation Only, Material Only, or Complete	<u>Quantity</u>	<u>Unit</u> <u>Price</u>	<u>Amount</u>
TOTAL AMOUNT:				

M/WBE COMPANY NAME:

M/WBE AUTHORIZED SIGNATURE:

NAME AND TITLE (PRINT):

TELEPHONE NUMBER:

FAX NUMBER:

*** END OF DOCUMENT ***

Rev'd 9/20/19

DOCUMENT B00846

M/WBE OR SDVOBE JOINT CHECK ARRANGEMENT APPROVAL FORM

*(to be submitted by Prime Contractor)*Contract No: 132949 Project No. 614087Location: DISTRICT 5 Bid Opening Date: _____Project Description: Scheduled and Emergency Substructure Repairs at Various Locations

We have received the attached request for the use of a joint check arrangement from _____, a M/WBE or SDVOBE on the above- referenced Contract and _____, a Material Supplier/Vendor for the subject Contract. The M/WBE or SDVOBE has complied with the requirements of Special Provision Document 00718. In particular, the M/WBE or SDVOBE 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 M/WBE or SDVOBE) for payment of sums due pursuant to invoices from the Supplier/Vendor and M/WBE or SDVOBE.

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 B00847

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 M/WBE or SDVOBE, 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 M/WBE or SDVOBE Venturer; (4) the commitment of management, supervisory and operative personnel employed by the M/WBE or SDVOBE 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, M/WBE or SDVOBE 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 ***