

Keyes Road Over Wilder Brook Culvert Replacement

City Of Gardner

October 2026



**Tighe &
Bond**

53 Southampton Road
Westfield, MA 01085

Keyes Road Over Wilder Brook Culvert Replacement Project
City of Gardner
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CITY OF GARDNER
DEPARTMENT OF COMMUNITY DEVELOPMENT AND PLANNING

INVITATION TO BID

The City of Gardner, acting herein through the City of Gardner's Department of Community Development and Planning (DCDP), is soliciting bids for the construction of the Keyes Road Over Wilder Brook Culvert Replacement project, Bid Number: 2027-011, located on Keyes Road in Gardner, MA. Sealed general bids will be received by the City of Gardner, Purchasing Agent at 95 Pleasant Street, Room 217, Gardner Massachusetts 01440 until 1:00 p.m. local time on October 29, 2026 at which time and place said bids shall be publicly opened and read.

The bid openings will be recorded and then posted on the City of Gardner, MA YouTube page. A link will be emailed to all recorded holders on the morning of the bid opening. Bids submitted after this time will not be accepted.

Envelopes containing proposals should be clearly marked on the outside:

BID FOR KEYES ROAD OVER WILDER BROOK CULVERT REPLACEMENT
Bid Number 2027-011

The project includes furnishing all labor, equipment and materials required to complete the Keyes Road over Wilder Brook Culvert Replacement Project. The project includes, but is not limited to phased demolition of the existing 8' diameter CMP culvert, demolition of the existing road surface and sidewalk, bank stabilization and grading, dewatering, dredging, roadway grading, water main relocation, installation of a new 24-foot span 3-sided rigid frame bridge structure, installation of new HMA walkway and HMA berm, streambed restoration, roadway paving and other work, appurtenances, and incidental items as set forth in the contract documents.

All bids for this project are subject to the provisions of Massachusetts General Laws Chapter 30, Section 39M, as amended.

MassDOT prequalification of contractors with the class of work as Bridge – Construction for the project with an estimated value of \$1,930,000 will be required.

Bidding Documents may be obtained by registering on the City of Gardner website via the following link: <http://www.gardner-ma.gov/bids.aspx>. Hard copies may also be obtained for \$100.00 non-refundable printing charge from the City of Gardner Purchasing Department, 95 Pleasant Street, Gardner, Massachusetts 01440 between the hours of 8:00 a.m. and 4:30 p.m., Monday through Thursday and between the hours of 8:00 a.m. and 1:00 p.m. on Fridays, City recognized holidays excluded.

A voluntary pre-bid meeting will be held at the site on Wednesday, October 14, 2026 at 10:00 a.m. Attendees to meet at the project site near the corner of West Street and Keyes Road, Gardner, MA 01440.

Minimum Wage Rates as determined by the Commissioner of Department of Labor and Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27D, as

amended, and federal Davis-Bacon wage decisions apply to this project. It is the responsibility of the contractor, before bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people who may be employed for the proposed work under this contract. Bidders are required to comply with the greater of federal Davis-Bacon wage decisions or state minimum wage schedules as established by the Commissioner of Department of Labor and Workforce Development.

Bid security in the form of a bid bond, certified or cashier's check, payable to the City of Gardner, is required in a dollar amount of not less than five percent (5%) of the total bid amount. A performance bond and labor and materials bond for 100% of the total contract price, issued by a satisfactory surety company shall be required by the successful bidder.

The City of Gardner reserves the right to reject any and all bids, to accept proposals deemed to be in the best interest of the City, and to waive any informalities or irregularities in the bids received. Bids may not be withdrawn within 30 days of the bid opening.

CITY OF GARDNER

By: Joshua Cormier, Director of Purchasing

CITY OF GARDNER
DEPARTMENT OF COMMUNITY DEVELOPMENT AND PLANNING
INFORMATION FOR BIDDERS

1 Project Site

The Project is the Keyes Road Over Wilder Brook Culvert Replacement, located at Wilder Brook on Keyes Road, Gardner, Worcester County, Massachusetts.

2 Inspection of Site

By submitting a bid, the Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to the conformation and conditions of the ground; the immediate and adjacent environs; access and egress; local ordinances, policies and regulations; and the identification of any discrepancies in the contract documents affecting the contract bid price, all as a result of a pre-bid visit and careful review of the bid documents.

Any failure of the Contractor to take the actions described and acknowledged in this paragraph shall not relieve the Contractor from responsibility for properly estimating the difficulty and cost of successfully performing all work in accordance with the Contract Documents without additional cost to the City of Gardner Department of Community Development and Planning (hereinafter Owner, or City, or Awarding Authority).

The Owner assumes no responsibility for any conclusions or interpretations made by the Contractor based upon the information made available by the Owner.

3 Prequalification Statements

In accordance with the City of Gardner's requirements, prospective bidders must complete and submit a Qualification Statement for this project. Qualification forms are included in Section 00410.

Bidders must be pre-qualified by the Massachusetts Department of Transportation (MassDOT) Bridges – Construction category of work to bid on the above project. An award will not be made to a contractor who is not pre-qualified by MassDOT Highway Division prior to the opening of proposals.

4. Bid Deposit

All proposals must be accompanied by a bid deposit in the amount of five percent (5%) of the value of the bid, and shall be in the form of a bid bond, or a certified or cashier's check issued by a responsible bank or trust company, payable to the City of Gardner, in the name of which the Contract for work is executed. Bid bonds shall be (a) in a form satisfactory to the City, (b) with a surety company qualified to do business in the Commonwealth and satisfactory to the City, and (c) conditioned upon the faithful performance by the principal of the agreements contained in the bid. The bid deposit must be enclosed in the same envelope with the proposal.

Bid deposits will be returned to respective bidders within five (5) working days after proposals are opened; except those of the three (3) lowest responsible and eligible general bidders, which the City will hold until the successful bidder has executed the Contract. Thereafter, all remaining deposits, including that of the successful bidder, will be returned upon the expiration of the time prescribed for making an award. See applicable provisions of MGL c. 30 § 39M, which may apply.

5 Award of Contract

The Notice of Award of a Contract, after approval by the awarding authority, shall be within thirty (30) days, Saturdays, Sundays and legal holidays excluded, and shall be in written form signed by the DCDP Assistant Director. The notice shall bind the successful bidder to execute the Contract and furnish Performance and Payment bonds, and be responsible for liquidated damages provided in the General Conditions. The rights and obligations provided by the Contract shall become effective and binding upon the parties only upon formal execution. See applicable provisions of MGL c. 149 § 44A-H, and/or MGL c. 149 § 29, which may apply.

6. Time for Executing Contract and Liquidated Damages for Failure to Execute

The successful bidder shall execute and deliver to the Owner of the Contract, and all required Bonds and insurance certifications, within ten (10) days of receipt of Notice of Award. Failure or refusal of the successful bidder to execute and deliver the Contract and Bonds required within ten (10) days shall result in forfeiture of the bid deposit to the Owner as liquidated damages for such failure or refusal. The bid deposit shall become the property of the Owner for liquidated damages provided the amount of bid deposit does not exceed the difference between bid price and bid price of next lowest responsible bidder; and provided further that, in case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the general bidder, in the opinion of the Owner, said bid deposit shall be returned to such bidder.

7 Prices

In the event of discrepancy between the prices quoted in the proposal in words and those quoted in figures, the words shall control. The prices are to include the furnishing of all materials, plant, equipment, tools and other facilities, and the performance of all labor services necessary or proper for the completion of the work, including all delivery and/or freight costs FOB work site.

8. Sales Tax Exemption

The City of Gardner is exempt from State Sales Tax under the Sales Act, Chapter 14 of the Acts of 1966 and all amendments thereto. All purchases of supplies and materials in relation to the project are therefore exempt. This should be considered when forming contract prices. The City of Gardner Tax Exempt Number is E-046-001-389.

9. All Contracts Subject to Appropriation

The execution of a Contract is subject to adequate financial appropriation for the Project as advertised. The lack of adequate financial appropriation by the Owner, or granting agency, for the Project shall constitute grounds to reject all bids, or those bids which exceed the financial limitations imposed by the Owner.

10. Changes in Quantities of Work

- A. Site Conditions – MGL c. 30 § 39N is incorporated herein and made a part of this Contract to the extent required by law.
- B. Quantities – The City reserves the right to modify the scope of work including, but not limited to, estimated quantities, provided that the total price for all such modifications does not exceed 25% of the total Contract price, or as otherwise required by law.

The Contract shall be awarded to the lowest eligible and responsible bidder. The lowest bidder shall be the bidder with the lowest base bid plus a total of the alternates, if included in the project, selected by the Owner in the order presented.

11. Addenda

If it becomes necessary to revise any part of this Invitation to Bid or if additional data are necessary to enable an exact interpretation of provisions, such addenda will be provided to all bidders who have requested the bid documents. No addenda will be issued within the immediate three (3) business days prior to the bidding deadline. If an addendum is issued, all bidders shall acknowledge receipt of each addenda on their bid submission.

12. Questions During Bidding Period

Any questions during the bidding period as to the interpretation of the Invitation to Bid, form of proposal, form of Contract, plans, specifications or form of performance and payment bonds, must be received by the City not less than five (5) days prior to the date set for receipt of bids. Written inquiries should be directed to: The Department of Community Development and Planning, Manca Annex, 115 Pleasant Street, Room 201, Gardner, MA 01440. Attn: Jason Stevens, Director.

The Owner will forward, via certified mail, return receipt requested, via confirmed facsimile, or email to all prospective bidders at the address given by them, interpretations of all questions raised in accordance with this section, which in the Owner's opinion, require such interpretation. The Owner's response shall be issued not less than two days prior to the date set for receipt of bids. Oral representations shall not bind the Owner.

13. Competence

No Contract shall be awarded except to responsible, established bidders capable of performing the class of work contemplated. Before the awarding of the Contract, any bidder may be required to show that it has the necessary facilities, experience, ability and financial resources to perform the work in a satisfactory manner and within the time stipulated. The bidder may be required to furnish the Owner with statements as to its experience and financial status. The bidder agrees upon request of the Owner to furnish in confidence such information as will enable it to judge the financial responsibility of the bidder and any listed subcontractors.

SECTION 00300

GEOTECHNICAL DATA

PART 1 GENERAL

1.1 SUMMARY

- A. For the preparation of Bidding Documents, Engineer has relied upon the following reports and tests of subsurface and latent physical conditions of the site. The locations of all geotechnical explorations are shown on the Drawings.

1. Soil boring data (Sheet No. 11 of the Drawings)

- a. The subsurface data are not guaranteed as to accuracy or completeness, nor are they a part of the Contract Documents.
- b. Bidders are cautioned that the subsurface data have been utilized for general design purposes only. No explicit or implicit representation is made as to the nature of the materials which may be encountered below the surface of the ground.
- c. The making available of this subsurface data to Bidders is not intended to relieve them from their responsibility to familiarize themselves with the subsurface and other site conditions.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

J:\G\G0384 GARDNER\T60 - KEYES ROAD CULVERT REPLACEMENT\DESIGN\SPECIFICATIONS\DIVISION 0\00300 - GEOTECHNICAL DATA.DOCX

SECTION 00410

FORM FOR GENERAL BID

PROJECT IDENTIFICATION:

Keyes Road Over Wilder Brook Culvert Replacement

IFB 2027-011

TABLE OF ARTICLES

1. Bid Recipient
2. Bidder's Acknowledgements
3. Bidder's Representations
4. Bidder's Certifications
5. Basis of Bid
6. Time of Completion
7. Attachments to This Bid
8. Bid Submittal

ARTICLE 1 BID RECIPIENT

- 1.1 This Bid is submitted to:

City of Gardner

Purchasing Agent

95 Pleasant Street - Room 217

Gardner, Massachusetts 01440

- 1.2 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 BIDDER'S ACKNOWLEDGEMENTS

- 2.1 Bidder accepts all of the terms and conditions of the Advertisement for Bids and Instructions to Bidders, including without limitation, those dealing with the disposition of Bid deposit. The Bid will remain subject to acceptance for 30 days after the bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
- 2.2 The Work under this Contract shall be subject to the provisions of Chapter 30, Section 39M of the Massachusetts General Laws.

ARTICLE 3 BIDDER'S REPRESENTATIONS

3.1 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

- A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents and hereby acknowledges the receipt of all Addenda.
- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
- K. Bidder is aware that the estimated quantities on the Bid form are subject to Article 13.03 of the General Conditions (Section 00700).

ARTICLE 4 BIDDER'S CERTIFICATION

- 4.1 Bidder hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work, that all employees to be employed at the Site will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee, and that Bidder will comply fully with all laws and regulations applicable to awards made subject to MGL Chapter 30, Section 39M.
- 4.2 Bidder certifies that, under penalty of perjury, Bidder is not presently debarred from doing public construction work in the Commonwealth under the provisions of MGL Chapter 29, Section 29F or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder; and is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.
- 4.3 Bidder hereby certifies under the penalties of perjury, to the best of Bidder's knowledge and belief, that Bidder has filed all State tax returns and paid all State taxes required by law.
- 4.4 Bidder certifies under penalties of perjury that this Bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used herein the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.
- 4.5 Bidder certifies that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- 4.6 Bidder certifies that Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- 4.7 Bidder certifies that Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- 4.8 Bidder certifies that Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this paragraph:
- A. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - B. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of the Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - C. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - D. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 BASIS OF BID

- 5.1 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item Number	Item Name and Unit Bid Prices Written in Words and Figures	Estimated Quantity	Total Amount of Item (in figures)
101	Clearing and Grubbing, per acre, the price of: _____ (\$ _____)	x 0.3 A =	\$ _____
113.1	Demolition of Culvert No 1., per lump sum, the price of: _____ (\$ _____)	lump sum =	\$ _____
120.1	Unclassified Excavation, per cubic yard, the price of: _____ (\$ _____)	x 460 c.y. =	\$ _____
140	Bridge Excavation, per cubic yard, the price of: _____ (\$ _____)	x 900 c.y. =	\$ _____
144	Class B Rock Excavation, per cubic yard, the price of: _____ (\$ _____)	x 25 c.y. =	\$ _____
150	Ordinary Borrow, per cubic yard, the price of: _____ (\$ _____)	x 225 c.y. =	\$ _____
151	Gravel Borrow, per cubic yard, the price of: _____ (\$ _____)	x 300 c.y. =	\$ _____

151.2 Gravel Borrow for Backfilling Structures and Pipes, per cubic yard, the price of:

x 450 c.y. = \$ _____

(\$ _____)

170 Fine Grading and Compacting – Subgrade Area, per square yard, the price of:

x 900 s.y. = \$ _____

(\$ _____)

302.12 12-inch Ductile Iron Water Pipe (rubber gasket) per linear foot, the price of:

x 130 l.f. = \$ _____

(\$ _____)

345.61 6-inch Temporary Service Pipe, per lump sum, the price of:

lump sum = \$ _____

(\$ _____)

350.12 12-inch Gate and Gate Box, each, the price of:

x 2 each = \$ _____

(\$ _____)

373.12 12-Inch Water Pipe Insulation, per linear foot, the price of:

x 70 l.f. = \$ _____

(\$ _____)

376 Hydrant Assembly, each, the price of:

x 2 each = \$ _____

(\$ _____)

402	Dense Graded Crushed Stone for Sub-Base, per cubic yard, the price of:		
		x 100 c.y. =	\$
	(\$)		
415.2	Pavement Fine Milling, per square yard, the price of:		
		x 75 s.y. =	\$
	(\$)		
440	Calcium Chloride for Roadway Dust Control, per pound, the price of:		
		x 1350 lb =	\$
	(\$)		
450.23	Superpave Surface Course – 12.5 (SSC- 12.5), per ton, the price of:		
		x 100 ton =	\$
	(\$)		
450.32	Superpave Intermediate Course – 19.0 (SIC – 19.0), per ton, the price of:		
		x 150 ton =	\$
	(\$)		
452	Asphalt Emulsion for Tack Coat, per gallon, the price of:		
		x 60 gal =	\$
	(\$)		
453	HMA Joint Adhesive, per linear foot, the price of:		
		x 950 l.f. =	\$
	(\$)		
472	Temporary Asphalt Patching, per ton, the price of:		
		x 150 ton =	\$
	(\$)		

482.3 Sawcutting Asphalt Pavement, per linear foot, the price of:

_____ x 150 l.f. = \$ _____
(\$ _____)

509 Granite Transition Curb for Pedestrian Curb Ramps – Straight, per linear foot, the price of:

_____ x 20 l.f. = \$ _____
(\$ _____)

509.1 Granite Transition Curb for Pedestrian Curb Ramps – Curved, per linear foot, the price of:

_____ x 10 l.f. = \$ _____
(\$ _____)

570.2 Hot Mix Asphalt Curb – Type 2, per linear foot, the price of:

_____ x 170 l.f. = \$ _____
(\$ _____)

580 Curb Removed and Reset, per linear foot, the price of:

_____ x 30 l.f. = \$ _____
(\$ _____)

620.12 Guardrail TL-2 (Single Faced), per linear foot, the price of:

_____ X 175 l.f. = \$ _____
(\$ _____)

620.32 Guardrail – Curved TL-2 (Single Faced), per linear foot, the price of:

_____ x 175 l.f. = \$ _____
(\$ _____)

627.82	Guardrail Tangent End Treatment TL-2, each, the price of:		
	_____	x 4 each =	\$ _____
	(\$ _____)		
628.24	Transition to Bridge Rail, each, the price of:		
	_____	x 4 each =	\$ _____
	(\$ _____)		
702	Hot Mix Asphalt Sidewalk or Driveway, per ton, the price of:		
	_____	x 30 ton =	\$ _____
	(\$ _____)		
748	Mobilization, per lump sum, the price of:		
	_____	*lump sum =	\$ _____
	(\$ _____)		
	*not to exceed 3% of total bid amount		
751	Loam for Road Sides, per cubic yard, the price of:		
	_____	x 150 c.y. =	\$ _____
	(\$ _____)		
765	Seeding, per square yard, the price of:		
	_____	x 1000 s.y. =	\$ _____
	(\$ _____)		
767.121	Sediment Control Barrier, per linear foot, the price of:		
	_____	x 300 l.f. =	\$ _____
	(\$ _____)		
769	Pavement Milling Mulch Under Guardrail, per linear foot, the price of:		
	_____	x 350 l.f. =	\$ _____
	(\$ _____)		

816.81 Temporary Traffic Control Signal, per lump sum,
the price of:

lump sum = \$ _____

(\$ _____)

850 Traffic Controls for Construction Operations, per
lump sum, the price of:

lump sum = \$ _____

(\$ _____)

866.106 6-inch Reflectorized White Line (Thermoplastic),
per linear foot, the price of:

x 500 l.f. = \$ _____

(\$ _____)

866.112 12-inch Reflectorized White Line (Thermoplastic),
per linear foot, the price of:

x 200 l.f. = \$ _____

(\$ _____)

867.106 6-inch Reflectorized Yellow Line (Thermoplastic),
per linear foot, the price of:

x 500 l.f. = \$ _____

(\$ _____)

880. Traffic Police for Construction Operations, the
price of:

Thirty-Five Thousand Dollars and Zero Cents

Allowance = \$35,000.00

(\$35,000.00 _____)

953.1 Temporary Support of Excavation, per lump sum,
the price of:

lump sum = \$ _____

(\$ _____)

983.1 Riprap, per ton, the price of:

_____ x 325 ton = \$ _____
(\$ _____)

983.4 Streambed Material, per cubic yard, the price of:

_____ x 100 c.y. = \$ _____
(\$ _____)

991.1 Control of Water- Structure No G-01-025 (CD5),
per lump sum, the price of:

_____ lump sum = \$ _____
(\$ _____)

995.01 Bridge Structure – Bridge No G-01-025 (CD5),
each, the price of:

_____ x 1 each = \$ _____
(\$ _____)

998.1 Monthly Price Adjustment for HMA Mixtures, the
price of:

One Thousand Dollars and Zero Cents
_____ Allowance = \$ 1,000.00
(\$1,000.00 _____)

998.2 Monthly Price Adjustment for Diesel Fuel, the
price of:

One Thousand Dollars and Zero Cents
_____ Allowance = \$ 1,000.00
(\$1,000.00 _____)

998.3 Monthly Price Adjustment for Gasoline, the price
of:

One Thousand Dollars and Zero Cents
_____ Allowance = \$ 1,000.00
(\$1,000.00 _____)

998.4 Monthly Price Adjustment for Portland Cement,
the price of:

One Thousand Dollars and Zero Cents

(\$1,000.00)

Allowance = \$1,000.00

998.5 Utility Pole Relocation, allowance, the price of:

Twenty-Five Thousand Dollars and Zero Cents

(\$25,000.00)

allowance = \$25,000.00

TOTAL AMOUNT OF BID – Items 101 through 998.5

_____ dollars
(words)

(\$ _____)

(figures)

5.2 This Bid includes Addenda numbered _____.

ARTICLE 6 TIME OF COMPLETION

6.1 Bidder agrees that the Work will be substantially completed and ready for final payment in accordance with paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.2 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times as stated in the Agreement.

ARTICLE 7 ATTACHMENTS TO THIS BID

7.1 The following documents are attached to and made a condition of this Bid:

A. Bid deposit in the amount of _____ dollars (\$ _____),
consisting of a bid bond in the amount of five percent of the total amount of Bid

B. Evidence of authority to sign

C. List of Project References

D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids

E. Evidence of Bidder's qualifications in accordance with Article 3 of Section 00112 – Information for Bidders

F. City of Gardner Department of Community Development and Planning “Qualification Statement”

G. MBE/WBE participation forms

ARTICLE 8

G-0384-060 _10/6/26

00410-12

Form for General Bid

BID SUBMITTALBIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature] _____*[Printed name]* _____*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:

[Signature] _____*[Printed name]* _____

Title: _____

Submittal Date: _____

Address for giving notices:

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

Bidder's License No.: _____

*(where applicable)***END OF SECTION**\\TIGHEBOND.COM\DATA\DATA\PROJECTS\G\G0384 GARDNER\T60 - KEYES ROAD CULVERT REPLACEMENT\DESIGN\SPECIFICATIONS\DIVISION
0\00410 - FORM FOR GENERAL BID.DOCX

CITY OF GARDNER
DEPARTMENT OF COMMUNITY DEVELOPMENT AND PLANNING
“QUALIFICATION STATEMENT”

Submit this form with your bid. Answer all questions. Responses must be clear and comprehensive. If necessary, attach separate sheets for answers. The party who will submit the bid for the firm must sign this form. This statement must be notarized. Bidders may submit additional supporting information if they desire.

1. Name of Bidder.
2. Location of permanent main office.
3. When was the firm organized?
4. How many years have you been engaged in the contracting business under your present firm or trade name?
5. Describe the general character of work performed by your company.
6. List the contracts your firm has on hand stating for each contract: name and address of the client and name of the person supervision for the client; contract value; the start and stop dates.
7. List at least three (3) similar contracts recently completed by your firm, stating for each contract: name and address of client and name of person supervision for client; contract value; and the month and year completed.
8. Have you ever failed to complete any contract awarded to you? ☐ Yes ☐ No
If so, explain where and why.
9. Have you ever defaulted on a contract: ☐ Yes ☐ No
If so, explain where and why.
10. Describe your experience in construction work similar in nature and scope to this project.

11. Describe the background and experience of the principal members of your organization, including the officers.
12. Identify the employee who will be responsible for managing this project.
13. List the major equipment your firm has available for this contract.
14. Credit available:
15. Provide a bank reference (name and address of institution, name of supervising person for the bank)
16. Will you provide a detailed financial statement and furnish such other information as the City of Gardner, Department of Community Development and Planning may reasonably request?
☐ Yes ☐ No

The undersigned certifies under the law of perjury that the information provided in this Qualification Statement is true, complete and correct. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the City of Gardner, Department of Community Development and Planning to verify the information provided in this Qualification Statement.

By: _____ Date: _____

Type or print name and title: _____

COMMONWEALTH / STATE OF _____

_____ County, SS.

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identity, which was/were _____, to be the person whose name is signed on the preceding or attached document, and acknowledge to me that (he) (she) signed it voluntarily and for its stated purpose.

Notary Public
My Commission Expires:

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

BID

Bid Due Date:

Description (*Project Name— Include Location*):

BOND

Bond Number:

Date:

Penal sum _____ \$

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

SURETY

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By:

Signature

By:

Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest:

Signature

Attest:

Signature

Title

Title

Note: Addresses are to be used for giving any required notice.

Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

AGREEMENT

BY AND BETWEEN

THE CITY OF GARDNER

AND

CONTRACTOR

THIS AGREEMENT made this _____ day of _____, 2026, by and between the City of Gardner, located at 95 Pleasant Street, Gardner, MA 01440, hereinafter call the “Owner”, acting herein through the City of Gardner’s Department of Community Development and Planning, and _____, located at _____ hereinafter called the “Contractor”,

WITNESSETH, that the Owner and the Contractor, for the consideration hereafter named, agree as follows:

Article 1. SCOPE OF WORK:

The Contractor shall furnish all labor, tools, equipment and materials necessary to perform the Work required under the terms and conditions of the Contract Documents for the Keyes Road Over Wilder Brook Culvert Replacement.

Article 2. TIME OF COMPLETION:

The Contractor shall commence work under this Contract on the date specified in the written “Notice to Proceed” from the Owner and shall bring the work to Substantial Completion by November 30, 2027 and ready for final payment by December 31, 2027. Damages for delays in the performance of the Work shall be as specified within the General Conditions of the Contract Documents.

Article 3. THE CONTRACT SUM:

The Owner shall pay the Contractor in current funds for the performance of the Work, subject to additions and deductions by Change Order(s), the Contract Sum of \$_____.

Article 4. THE CONTRACT DOCUMENTS:

The following, together with this Agreement, form the Contract Documents and all are as fully a part of the Contract as if attached to this Agreement or repeated herein: Advertisement, Bidding Documents, Contract Forms, Conditions of the Contract, and Specifications as enumerated in the Table of Contents; the Drawings as enumerated in the List of Contract Drawings; Addenda; Modifications issued after execution of the Contract; and other documents enumerated under Section 2.6 of the General Conditions.

Terms used in this Agreement which are defined in the Conditions of the Contract, shall have the meanings designated in those Conditions.

By signing this Agreement, the Contractor certifies under the penalties of perjury that it has complied with all laws of the Commonwealth relating to taxes.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed as of the date first above written:

CONTRACTOR

CITY OF GARDNER

By: _____

By: _____
Michael J. Nicholson, Mayor

By: _____
Joshua L. Cormier, Purchasing Director

By: _____
Atty. Vincent Pusateri, II, City Solicitor

By: _____
Jason Stevens, Director of Community
Development and Planning

CERTIFIED AS TO AUTHORITY OF THE
MAYOR AND AVAILABILITY OF FUNDS
IN THE AMOUNT OF

By: _____
Karen Butler, City Auditor

(If a corporation, attach to each signed Contract a notarized copy of the corporate vote authorizing the signatory to sign this Contract, and the executed tax attestation.)

PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a

qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper

payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the

Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

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GENERAL CONDITIONS

1. Funding Source

The project to be constructed and pursuant to this Contract shall be financed with assistance from the Massachusetts Department of Transportation's Community Culvert Grant and is subject to all applicable federal, state and local regulations.

2. Definitions

- 2.1 Addenda - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings and Specifications, by additions, deletions, clarifications or corrections.
- 2.2 Bid - The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
- 2.3 Bidder - Any person, firm or corporation submitting a Bid for the Work.
- 2.4 Bonds - Bid, Performance and Payment Bonds, and other instruments of security, furnished by the Contractor and/or its Surety, in accordance with the Contract Documents.
- 2.5 Change Order - A written order to the Contractor executed by both parties authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.
- 2.6 Contract Documents - The Contract, including Advertisement for Bids, Agreement, Information to Bidders, Bid, Bid Bond, Form for General Bid, Agreement, Payment Bond, Performance Bond, Notice of Award, Notice to Proceed, written Change Orders, Plans, Specifications and Addenda.
- 2.7 Contract Price - The total moneys payable to the Contractor under the terms of conditions of the Contract Documents.
- 2.8 Contract Time - The number of calendar days stated in the Contract Documents for the completion of the Work.
- 2.9 Contractor - The person, firm or corporation with whom the Owner has executed the Agreement.
- 2.10 Drawings - The part of the Contract Documents which show the characteristics and scope of the work to be performed and which have been prepared or approved by the Engineer.

- 2.11 Engineer - The individual or firm authorized by the Owner to prepare and review the technical specifications and drawings which the Contractor shall follow in performing the Work.
- 2.12 Field Order - A written order effecting a change in the Work not involving an adjustment in the Contract Price, or an extension of the Contract Time, issued by the Engineer to the Contractor during construction.
- 2.13 Notice of Award - The written notice from the Owner to the successful Bidder of acceptance of the Bid.
- 2.14 Notice to Proceed - Written communication issued by the Owner to the Contractor authorizing it to proceed with the Work and establishing a date of commencement and completion of the Work.
- 2.15 Owner - A public or quasi-public body or authority, corporation, association, partnership, or individual with whom the Contractor has executed the Agreement, and for whom the Work is to be performed,
- 2.16 Plans - The Contract Drawings, or exact reproductions thereof, which show the scope, character, dimensions and details of the Work, and which have been prepared or approved by the Engineer.
- 2.17 Project - The undertaking to be performed as provided in the Contract Documents.
- 2.18 Project Representative - The duly authorized representative of the Owner.
- 2.19 Resident Project Engineer - The representative of the Owner who is assigned to the Project site or any part thereof and reports to Project Representative. Resident Project Engineer shall have no authority to bind the Owner to expend funds in excess of appropriated funds, or to modify the specifications, or to suspend or terminate the work.
- 2.20 Shop Drawings - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.
- 2.21 Specifications - A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.
- 2.22 Special Conditions or Provisions - Revisions or additions to the General Conditions, Supplemental General Conditions or Specifications applicable to an individual project.

- 2.23 Subcontractor - An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part or whole of the Work at the site.
- 2.24 Substantial Completion - That date as certified by the Engineer when the construction of the Project or a specified part thereof is sufficiently completed in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.
- 2.25 Supplemental General Conditions - Additions or modifications to these General Conditions supplying detailed information required for the project documents.
- 2.26 Supplier - Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.
- 2.27 Work - All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.

3. **Contract Plans and Specifications**

All plans, specifications and addenda, hereinafter enumerated or referenced in this contract, shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein set fully forth. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

4. **Additional Instructions and Detail Drawings**

The Owner may in its discretion provide the Contractor with additional instructions and detail drawings as necessary to carry out the work included in the contract, and the Contractor shall carry out the work in accordance with the same. The Contractor shall prepare for approval by the Engineer: (a) a schedule, fixing the dates at which special detail drawings will be required, such drawings, if any, to be furnished by the Engineer in accordance with said schedule, and (b) a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work.

5. **Shop or Setting Drawings**

The Contractor shall submit promptly to the Engineer three (3) copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid.

After examination of such drawings by the Engineer and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Engineer with three (3) corrected copies. The Contractor shall furnish additional copies as requested by the Engineer. Regardless of corrections made in or approval given to such drawings by the Engineer, the Contractor shall nevertheless be responsible for the accuracy of such drawings and for their conformity to the plans and specifications, unless Contractor notifies the Engineer in writing of any deviations at the time such drawings are furnished.

6. Materials, Services and Facilities

- 6.1 Except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature and all other services and facilities of every nature whatsoever necessary to execute, complete and deliver the work within the specified time.
- 6.2 Prior to installation, the Contractor shall furnish to the Engineer for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which Contractor contemplates installing, together with full information as to type, performance characteristics, and all other pertinent information as required.
- 6.3 Materials specified by reference to the number or symbol of a specific standard (such as A.S.T.M. Standard, a Federal Specification or other similar standard), shall comply with requirements of the most recent revision thereof and any amendment or supplement thereto in effect on the date of the Advertisement, except as limited to type, class or grade, or modified in such reference. The standards referred to, except as may be modified by the Contract Documents, shall have full force and effect as though printed therein.
- 6.4 When requested by the Engineer, the Contractor shall submit Certificates of Compliance from the manufacturer, certifying that the equipment materials comply with the requirements of the specifications or standards. Such certification shall be in the following form:

(sample - on manufacturer's letterhead)
CERTIFICATE OF COMPLIANCE
- (manufactured or fabricated materials) -

Date: _____, 20__

This certifies that _____
(description, kind of material, Model No., etc.)

Furnished to _____
(name of contractor, general or sub)

For use on _____
(project name)

In the amount of _____
(quantity represented)

Identified by _____

Shipped on _____, 20____, Delivered on _____, 20____

Shipped via _____
(method of shipment, Car No., Truck No.)

Meets the requirements of the pertinent project plans, special conditions and specifications of the subject project in all respects. Processing, product testing and inspection control of raw material are in conformance with all applicable specifications, drawings and/or standards of all articles furnished.

All records and documents pertinent to this Certificate and not submitted herewith shall be maintained available by the undersigned for a period of not less than three years from the date of the Certificate.

(name of manufacturer)

By: _____
(name and title of authorized signatory)

- 6.5 Any work necessary to be performed after regular working hours, on Sunday or Legal Holidays, shall be performed without additional expense to the Owner.

7. **Contractor's Title to Materials**

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that it has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

The Contractor shall obtain all necessary rights and licenses to allow the Owner to use the goods and services provided by this Agreement in full compliance with any and all copyright, patent rights or licenses, without requiring additional payment by the Owner.

8. **Title to Work**

The title to all work completed and in the course of construction and of all material on account of which any payment has been made shall be in the Owner.

9. **Inspection and Testing of Materials**

All materials and equipment used in the construction of the project shall be subject to inspection and testing by the Owner, or its designee, in accordance with accepted standards to establish conformance with specifications and suitability for uses intended. Nevertheless, said inspection and/or testing, or a lack thereof, shall not relieve the Contractor of its obligations under the terms and conditions of the Contract Documents.

10. Express Warranty

The Contractor guarantees to Owner that all materials incorporated into the work shall be new unless otherwise specified or agreed by the Parties. Contractor also guarantees that all work shall be done in a workmanlike manner, free from defects, and in conformance with any and all specifications contained in the Contract Documents.

The work performed by the Contractor shall conform to the high professional standard of care and practice customarily expected of those engaged in performing comparable work, the personnel furnishing said services shall be qualified and competent to perform adequately the services assigned to them and the recommendations, guidance and performance of such personnel shall reflect such standards of professional knowledge and judgment.

11. Maintenance and Guarantee

The Contractor guarantees that all work performed under this contract shall meet fully all requirements thereof as to quality of workmanship and of materials. The Contractor hereby agrees to make at its own expense any repairs or replacements made necessary by defects in materials or workmanship that become evident within one (1) year after the date of the final payment, and to restore to full compliance with the requirements set forth herein any part of the work constructed hereunder, which during said one (1) year period is found by the Owner to be deficient with the respect to any provisions of the specifications. The Contractor shall hold the Owner harmless from claims of any kind arising from damage due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written orders for same from the Owner. If the Contractor fails to make the repairs and replacements promptly, the Owner may do the work and the Contractor shall be liable to the owner for the full cost thereof.

12. "Or Equal" Clause

Whenever a material, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and, any materials, article or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design shall be considered equally acceptable provided the material, article or equipment so proposed is, in the opinion of the Engineer, of equal

substance and function. It shall not be purchased or installed by the Contractor without the Engineer's prior written approval. Notwithstanding any provision to the contrary, the requirements of MGL c. 30, sec. 39M(a) are hereby incorporated and made a part of this Agreement.

13. Surveys, Permits and Regulations

Unless otherwise expressly provided for in the specifications, the Owner shall furnish to the Contractor all surveys necessary for the execution of the work. The Owner, however, does not warrant or guarantee the accuracy or completeness of said surveys.

The Contractor shall procure and pay for all permits, licenses and approvals necessary for the execution of this contract, and shall comply with the provisions of 24 CFR 85.36(h)(1)-(3) and Massachusetts General Laws with respect to bonding and other insurance requirements.

The Contractor shall comply with all laws, ordinances, rules, orders and regulations relating to performance of the work, the protection of adjacent property and the maintenance of passageways, guard fences or other protective facilities.

14. Contractor's Obligations

The Contractor shall, in good and workmanlike manner, perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, as are necessary and/or proper to perform and complete all the work required by this Contract, within the time herein specified, in accordance with the provisions of this Contract and said specifications and in accordance with the plans and drawings covered by this Contract any and all supplemental plans and drawings, and in accordance with the directions of the Engineer as may be given from time to time during the progress of the work. Contractor shall furnish, erect, maintain and remove such facilities, equipment, material and temporary works as may be required.

The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of the Contract and specifications, and shall perform, carry on and complete the entire work to the satisfaction of the Engineer and the Owner.

15. Weather Conditions

In the event of temporary suspension of work, or during inclement weather, or whenever the Engineer with the Owner's approval shall direct, the Contractor shall, and shall cause its subcontractors to, protect carefully all work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any work or materials have been damaged or injured by reason of failure on the part of the Contractor or any of its subcontractors to so protect such work, said materials shall be removed and replaced at the expense of the Contractor.

16. Protection of Work and Property - Emergency

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this Contract, and shall at all times safely guard and protect its own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the Contract or by the Owner, or its duly authorized representatives.

In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor is allowed to act, without previous instructions from the Engineer, in a diligent manner to prevent said loss or injury. Contractor shall immediately notify the Engineer and Owner in writing thereafter, and shall promptly submit any resulting claim for extra work to the Engineer.

Where the Contractor has not taken action but has notified the Engineer of an emergency threatening loss or injury to persons or property, or damage to the work or any adjoining property, it shall act as instructed or authorized by the Engineer.

The amount of extra payment claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 20 below.

17. Inspection

The authorized representatives and agents of the Owner, the Commonwealth, including but not limited to its Department of Housing and Community Development (DHCD), and the federal Department of Housing and Urban Development shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials and other relevant data and records.

18. Reports, Records and Data

The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this Contract. All records shall be retained by the Contractor for a period of seven years from completion of the work.

All documents produced pursuant to this Agreement shall be the property of the Owner.

All information required from the Owner, or from others at the expense of the Owner, in the performance of this Agreement shall be and remain the property of the Owner. This includes, but is not limited to, all records, data files, computer records, work sheets, deliverable products (complete and incomplete) and all other types of information prepared or acquired by the Contractor in the performance of this Agreement. The requirements of MGL c. 30, sec. 39R are hereby incorporated and made a part of this Agreement.

19. Superintendence by Contractor

At the site of the work, the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor, and shall be acceptable to the Engineer and Owner, and shall be a person anticipated to be continued in that capacity for the duration of the Agreement. The requirements of MGL c. 30, ss. 39I and 39N are hereby incorporated and made a part of this Agreement.

20. Changes in Work

20.1 The Contractor shall make no changes in the work without prior written approval of the Owner, however, the Owner may at any time by written order, and without notice to any sureties, require the performance of such extra work or changes in the work as may be found necessary or desirable. Charges or credits for any such changes shall be determined by one or more, or a combination of, the following methods:

- (a) Unit bid prices previously approved.
- (b) An agreed lump sum.
- (c) The actual cost of-
 - 1. Labor, including foremen.
 - 2. Materials entering permanently into the work.
 - 3. The ownership or rental cost of construction plant and equipment during the time of use on the extra work.
 - 4. Power and consumable supplies for the operation of power equipment.
 - 5. Insurance.
 - 6. Wages to be paid.

To the cost under (c) there shall be added a fixed fee to be agreed upon but not to exceed fifteen percent (15 %) of the actual cost of work. The fee shall include the cost of supervision, overhead, bond, profit and any other general expenses.

20.2 The Engineer may authorize minor changes or alterations in the work which do not involve any extra cost or expense, and which are not inconsistent with the overall intent of the Contract Documents. If the Contractor determines that any such minor change or alteration so authorized by the Engineer entitles Contractor to an increase in the contract price, the Contractor shall be required to obtain prior written approval from the Owner as per paragraph 20.1 above.

21. Time for Completion and Liquidated Damages

It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion of the work to be done hereunder are ESSENTIAL CONDITIONS of this Contract; and it is further mutually understood and agreed that the work embraced in this Contract shall be commenced on a date to be specified in the "Notice to Proceed."

The Contractor shall prosecute the work regularly, diligently, without interruption and at such rate of progress as will ensure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the Contractor neglects, fails or refuses to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a partial consideration for the awarding of this Contract, to pay to the Owner the amount of \$1000.00, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the work.

The said amount of liquidated damages is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would sustain in such event and said amount shall be retained from time to time by the Owner from current periodic estimates.

It is further agreed that time is of the essence of each and every portion of this Contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; provided, further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

- (a) To any preference, priority or allocation order duly issued by the Government.
- (b) To unforeseeable cause beyond the control and without the fault of negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and severe weather.
- (c) To any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

Provided further, that the Contractor shall within ten (10) days from the beginning of such delay, notify the Owner, in writing, of the causes of the delay, and provide such additional information as the Owner may require, and the Owner shall ascertain the facts

and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

22. Correction of Work

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Engineer who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture and methods of construction for the purposes for which they are used. Should they fail to meet the Engineer's approval, they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at its own expense. Rejected materials shall immediately be removed from the site. If, in the opinion of the Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the payment to the Contractor hereunder shall be reduced by such amount as in the judgment of the Engineer shall be equitable.

23. Subsurface Conditions Found Different

Should the Contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the plans or indicated in the specifications, Contractor shall, prior to disturbing such conditions, immediately provide written notice to the Engineer of such conditions. The Engineer shall thereupon promptly investigate the conditions, and if it is determined that such conditions materially differ from those shown on the plans or indicated in the specifications, the Engineer will at once make such changes in the plans and/or specifications as may be necessary. Any increase or decrease of cost resulting from such changes shall be adjusted in the manner provided in Paragraph 20 of these General Conditions. Notwithstanding any provision to the contrary, the requirements of MGL. c. 30, sec. 39N are hereby incorporated and made a part of this Agreement.

24. Right of Owner to Terminate Contract

The Owner may terminate this Contract by providing the Contractor and the Surety with ten (10) days written notice specifying the reasons for termination, including but not limited to those set forth below:

- (a) Violation of any of the provisions of this Contract by the Contractor or any of its subcontractors.
- (b) A determination by the Owner that the Contractor has engaged in fraud, waste, mismanagement, misuse of funds, or criminal activity with any funds provided by

this Contract.

- (c) Failure of the Contractor, for any reason, to fulfill in a timely and proper manner its obligations under this Contract including, but not limited to, compliance with applicable federal, state or local laws or regulations, and such procedures or guidelines as established for the Massachusetts Community Development Block Grant by DHCD;

If the Owner terminates or suspends this Agreement for one or more of the reasons set forth in (a) through (c), the Contractor shall have a right only to payment for work performed and accepted prior to said termination or suspension, and shall have no right to recover indirect or consequential damages, including but not limited to lost profits.

In the event of any such termination, the Surety shall have the right to take over and perform the Contract. Provided, however, that if the Surety does not commence performance within ten (10) days from the date of the mailing of notice of termination to such Surety, the Owner may take over the work and prosecute the same to completion at the expense of the Contractor, and the Contractor and his Surety shall be liable to the Owner for any excess cost. If the Owner takes over the work, it may take possession of and utilize, at no cost, such equipment, material and temporary works as may be on the site.

Further, the Owner may terminate or suspend this Contract if local, state and/or federal funding are cancelled, revoked, reduced, suspended or terminated.

If the Owner determines that a continuation of work on the project would endanger the life, health, or safety of those working or living at or near the project site, or that immediate action is necessary to protect public funds and/or property, the Owner may suspend work or terminate this Agreement by providing written notice to the Contractor. Should the Owner terminate or suspend this Agreement for any of the reasons set forth herein, the Contractor shall have a right only to payment for work performed and accepted prior to said termination or suspension and shall have no right to recover indirect or consequential damages, including but not limited to lost profits.

25. Payments to Contractor

- 25.1 Payment to the Contractor shall be in accordance with the requirements MGL, c. 30, s. 39K, which is hereby incorporated and made a part of this Agreement.
- 25.2 In preparing estimates, the material delivered on the site and preparatory work done may be taken into consideration.
- 25.3 Payment shall be contingent upon the Contractor submitting any and all required certified payroll reports to the Owner.
- 25.4 Payments shall be made in accordance with Supplemental General Condition Article 15.

26. Indemnification

The Contractor hereby indemnifies and shall at all times save and hold harmless the City of Gardner, and its officers, attorneys, employees, and agents, from and against any and all claims (including workers' compensation and wage claims), demands, suits, actions, liabilities, damages, penalties, judgments, and costs and expenses, including without limitation the costs and expenses of litigation, of or by anyone that in any way is caused by, arises out of, or is occasioned by the performance, activities, operations, conducts, negligence, or omissions of the Contractor, or any of its subcontractors, or the agents or employees of either, regardless of whether or not they are caused in part by a party indemnified hereunder.

27. Substantial Completion, Final Completion, Acceptance and Final Payment

- 27.1 Substantial completion shall be that point at which the work has been completed to the extent that the Owner may occupy and make use of the project for which it was intended.

Upon receipt of written notice from the Contractor that the work is substantially complete, the Engineer will promptly make an inspection to determine whether the work is acceptable under the terms of the Contract and whether same is substantially complete. The Engineer will issue a dated certificate which states that the work is substantially complete and accepted under the terms and conditions of the Contract, and a punch list of all items to be completed or corrected. The entire balance due the Contractor, less two percent (2%) retainage plus a retention based on the Engineer's estimate of the fair value of the punch list items, and cost of completing or correcting such items, and the estimated value of claims made relating to the project, shall be due and payable.

The general guarantee period for the work substantially complete shall begin on the date certified by the Engineer.

- 27.2 Final completion shall be that point at which all work on the project has been completed, all defective work has been corrected, and clean-up of the site and any debris has been accomplished. Unless a certificate of substantial completion has issued, the general guarantee period shall begin upon certification by the Engineer of final completion. The entire balance due the Contractor, less the estimated value of claims made relating to the project to the extent allowed by law, shall be due and payable within 35 days of the Contractor's written acceptance of the final estimate as required by MGL c. 30, s. 39G.
- 27.3 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability by the Contractor. No payment, however, final or otherwise, shall operate to release the Contractor or its Sureties from any obligations under this Contract, the performance and payment bonds, or any express or implied warranties.

28. Insurance

The Contractor shall not commence work under this Contract until it has obtained and submitted proof to the Owner of all the insurance required under this paragraph and such insurance has been approved by the Owner. The form of proof shall be a Certificate furnished to the Owner no later than the time at which the Contractor executes the Contract.

(a) Workmen's Compensation Insurance:

The Contractor shall procure and shall maintain during the life of this Contract Workmen's Compensation Insurance as required by applicable federal, state or local law, for all of its employees and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees as required by law.

(b) Contractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance:

The Contractor shall procure and shall maintain during the contract term, occurrence basis Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the amount of \$1,000,000.

(c) Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance:

The Contractor shall either (1) require each of its Subcontractors to procure and to maintain, during its subcontract term, occurrence basis Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance in the amount of \$1,000,000, or (2) insure the activities of such subcontractors, in addition to its policy specified in subparagraph (b) hereof.

(d) Builder's Risk Insurance (Fire and Extended Coverage):

Until the project is completed and accepted by the Owner, the Contractor shall maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portion of the project for the benefit of the Owner, the Contractor, and Subcontractors as their interests may appear.

(e) Proof of Insurance:

The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate shall not be canceled or reduced, except after thirty (30) days written notice has been received by the Owner."

(f) Additional Insured and Certificate Holder

The Contractor shall have the “City of Gardner” named as an additional insured for this project on the policy, which shall be evidenced by the Certificate

submitted to the Owner. The Certificate holder shall read exactly as follows:

1. “Executive Director, Gardner Department of Community Development and Planning, 115 Pleasant St., Gardner, MA 01440
2. City of Gardner
95 Pleasant Street
Gardner, MA 01440
3. Tighe & Bond Designer Services, Inc.
53 Southampton Road
Westfield, MA 01085”

29. Contract Security, Performance and Payment Bonds

- 29.1 The Contractor shall furnish to the Owner, at the time of its execution of the Contract, a Performance Bond in an amount at least equal to one hundred percent (100 %) of the total contract price as security for the faithful performance of this Contract. Such bonds shall be in a form, and with a surety company approved by the Owner and authorized to do business in the Commonwealth of Massachusetts.
- 29.2 The Contractor shall furnish to the Owner, at the time of its execution of the Contract, a Payment Bond in an amount not less than one hundred percent (100 %) of the total contract price, as security for the payment of all persons performing labor on the project under this Contract, and furnishing materials in connection with this Contract. Such bond shall be in a form, and with a surety company approved by the Owner and authorized to do business in the Commonwealth of Massachusetts.
- 29.3 It is expressly understood and agreed that all sums retained or that may be retained by the City under any of the provisions of this Contract are solely for the benefit of the City and that the security required by MGL Ch. 149, sec. 29, as amended, is furnished exclusively by the bond accompanying the Contract.
- 29.4 Performance Bonds must remain in effect for at least TWO YEARS after final completion and acceptance of the project.
- 29.5 Failure to meet the bond requirements of this section shall be cause to terminate the Contract.

30. Assignments

The Contractor shall not assign or subcontract the whole or any part of this Contract or any moneys due or to become due hereunder without the prior written consent of the Owner. If the Contractor assigns all or any part of any moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that the right of any assignee in and to any moneys due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the work required by this Contract.

31. Engineer's Authority

The Engineer will give all orders and directions contemplated under this Contract and specifications relative to the execution of the work. The Engineer shall determine the amount, quality, acceptability and fitness of the several kinds of work and materials which are to be paid for under this Contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. If any dispute arises between the parties hereto relative to said Contract and/or specifications, the determination of the Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work related to said dispute. The Engineer does not have authority to bind the Owner to spend money in excess of the Contract Price, to suspend, terminate or stop the work.

The Engineer will decide the meaning and intent of any portion of the specifications and of any plans or drawings.

32. Use of Premises, Removal of Debris, Sanitary Conditions

The Contractor, at its own expense, shall: (1) take every precaution against injuries or damage to property; (2) store its apparatus, materials, supplies and equipment in such orderly fashion at the site as to not unduly interfere with the progress of its work or the work of other contractors; (3) place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work; (4) clean up frequently all refuse, rubbish, scrap materials and debris caused by its operations; (5) before final payment, remove all surplus material, falsework, temporary structures, including foundations thereof, plant of any description and debris of any nature resulting from its operations, and to put the site in neat, orderly condition; (6) effect all cutting, fitting or patching of its work required for conformance with the specifications and, except with consent of the Engineer, not cut or otherwise alter the work of any other contractor; and (7) maintain in a neat, sanitary condition such toilet accommodations for the use of its employees as may be necessary to comply with the State and local Boards of Health, or other bodies having jurisdiction over same.

33. Notice and Service Thereof

Any notice to either party from the other relating to this Agreement shall be in writing and posted, by certified mail, return receipt requested, to the party at the address noted below:

City

Contractor

Joshua Cormier, Assistant Director
Department of Community Development & Planning
Manca Annex, Room 201
115 Pleasant Street
Gardner, MA 01440

34. Subcontract

The Contractor shall insert in any and all subcontracts the Federal Labor Standards Provisions contained herein and such other clauses as the Department of Housing and Urban Development may, by instructions require.

35. Interest of Member of or Delegate to Congress

No member of or delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this Contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

36. Other Prohibited Interests

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract or any other contract pertaining to the project.

37. Suspension of Work

If the Owner is prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work shall be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay

with such determination to be set forth in writing. If the reason for said delay was not beyond the control of the Contractor, the Contractor shall have no right to damages, as set forth herein, or to an extension of time. Notwithstanding any provision to the contrary, the requirements of MGL c. 30, sec. 39O are hereby incorporated and made a part of this Agreement.

38. Access to Records

The Contractor shall maintain accounts and records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the Contract and such other records as may be deemed necessary by the Owner to ensure proper accounting for all project funds. These records shall be made available for audit purposes to the Owner or any authorized representative, and shall be retained for seven years after final audit.

39. Age Discrimination Act of 1975 (for contracts over \$2,000)

No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination from receiving Federal financial assistance. The Contractor shall comply with the provisions of the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.), prohibiting age discrimination in employment.

40. Non-Discrimination

The City of Gardner is an Equal Opportunity Employer. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, handicap, or national origin. The Contractor shall take affirmative action to ensure that applicants for employment and employees are treated without regard to their race, color, religion, sex, age, handicap, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth the provision of this non-discrimination clause. The Contractor shall state in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants shall receive consideration for employment without regard to race, color, religion, sex, age, handicap, or national origin. The Contractor shall incorporate the foregoing requirements of this paragraph in all contracts for work to be performed in accordance with this Contract, and shall require all of its subcontractors to incorporate such requirements in all subcontracts for program work. The City may cancel, terminate or suspend the Contract in whole or in part for any violation of this paragraph.

In the event of noncompliance by the Contractor with the nondiscrimination clauses of this Agreement or with any such rules, regulations, or orders of the Secretary of Labor,

the Contract may be canceled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contract or federally assisted construction contract procedures authorized in Executive Order 11246, or by rules, regulations, or orders of the Secretary of Labor, as otherwise provided by law.

41. Non Federal Labor-Standards Provisions

The following Massachusetts Labor-Standards Provisions, including the provisions concerning maximum hours of work, minimum rates of pay, and overtime compensation, with respect to the categories and classifications of employees hereinafter mentioned are included in this Contract pursuant to the requirements of applicable State or local laws. The inclusion of such provisions shall not be construed to relieve the Contractor or any Subcontractor from the pertinent requirements of any corresponding Federal Labor-Standards Provisions of this Contract.

42. Schedule of Salaries and Wages

The Contractor shall be responsible for complying with minimum wage rates and health and welfare fund contributions applicable to this Contract as determined by the Commonwealth of Massachusetts, Department of Labor and Workforce Development, Division of Occupational Safety, under the provisions of Massachusetts General Laws, Chapter 149, Sections 26 - 27D.

When both are applicable, the greater of Federal or State prevailing wages, which are attached in the Supplemental General Conditions, and incorporated herein by reference, shall be paid under this contract and reported by the submission of certified weekly payrolls to the Owner. The Contractor is responsible for compliance of this paragraph by its subcontractors.

The applicable federal and state prevailing wage rates are attached herein and incorporated by reference.

43. Labor Provisions

- 43.1 In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers by the Contractor and Subcontractors, preference shall first be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six months at the commencement of their employment, who are veterans as defined in clause forty-third of MGL c. 4, s. 7 and who are qualified to perform the work to which the employment relates; and secondly, to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, in accord with MGL c. 149, s. 26.

- 43.2 The minimum rates of wages to be paid mechanics and apprentices, chauffeurs, teamsters and laborers shall be set forth in the schedule of rates of wages determined by the Commissioner of Labor and Industry unless the Federal rates are higher.
- 43.3 In accordance with MGL c. 149, s 34A, the Contractor shall, before commencing performance of the contract, provide by insurance for the payment of compensation and the furnishing of other benefits under M. G. L. c. 152 to all persons to be employed under the contract, and the Contractor shall continue such insurance in full force and effect during the term of the contract. Sufficient proof of compliance with this section must be furnished at the time of execution of this contract. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. The attention of the Contractor is directed to that portion of M.G. L. c. 149, s. 34A which provides that whoever violates any of its provisions shall be punished by a fine of not more than one hundred dollars or by imprisonment for six months, or both; and, in addition, any Contractor who violates any provision of this section shall be prohibited from contracting, directly or indirectly, with the Commonwealth or any political subdivision thereof for the construction, alteration, demolition, maintenance or repair of, or addition to, any public works or public building for a period of two years from the date of conviction of said violation.
- 43.4 The Contractor shall pay to any reserve police officer employed by it the prevailing rate of wage paid to regular police officers, as required by MGL c. 149, s. 34B.

44. Environmental Requirements

The Contractor shall comply, where applicable, with: federal Executive Order 11988, Floodplain Management, May 24, 1977 (42 CFR 26951 et. seq.) particularly section 2 (a); the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et. seq.), as amended, particularly section 307 (c) and (d) (16 U.S.C. 1456 (c) and (d); the Safe Water Drinking Act of 1974 (42 U.S.C. 201, 300 (f) et seq., and 21 U.S.C. 349), as amended; the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) as amended, particularly section 7 (16 U.S.C. 1536; the Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.) as amended, particularly section 7 (b) and (c) (16 U.S.C. 1278 (b) and (c); the Clean Air Act (42 U.S.C. 7401 et seq.), as amended, particularly section 176 (c) and (d) (42 U.S.C. 7506 (c); and any corresponding provisions of State and local laws and regulations. The Contractor shall also comply, where applicable, with the National Environmental Policy Act of 1969, Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, Flood Disaster Protection Act of 1973, National Flood Insurance Act of 1968, and Protection of Wetlands Laws.

45. "Right To Know" Law

As per requirements established by the United States Department of Labor Occupational Safety and Health Administration and in compliance with MGL c. 111F, Right to Know Law, it is required that all Material Safety Data Sheets accompany each initial product

shipment where applicable, as well as a copy sent to the Grants Administrator, which will be forwarded to the Right-To-Know Coordinator for the City of Gardner.

46. Historic Preservation

The Contractor shall, in the performance of environmental assessments under the National Policy Act, and the Massachusetts Environmental Policy Act, comply with section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470), federal Executive Order 11593, and the Preservation of Archaeological and Historic Data Act of 1966 (17 U.S. C. 469 a- 1 et seq.), by (a) consulting with the State Historic Preservation Officer to identify properties listed in or eligible for inclusion in the National Register of Historic Places that are subject to adverse effects (see 36 CFR Part 800.8) by the proposed activity.

47. Compliance with Air and Water Acts (for contracts exceeding \$100,000)

By executing this Agreement, the Contractor hereby certifies and represents the following:

- A. No facility to be utilized in the performance of any nonexempt contract or subcontract, is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.
- B. Compliance with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
- C. Prompt notice shall be given to the Owner of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized, or to be utilized for the Contract, is under consideration to be listed on the EPA List of Violating Facilities.
- D. The criteria and requirements in paragraphs A through D of this section shall be included in every nonexempt subcontract, and the Contractor shall take such actions as the Government may direct as a means of enforcing such provisions.

48. Special Conditions Pertaining to Hazards, Safety Standards and Accident Prevention

Lead-Based Paint Hazards (applicable to contracts for construction or rehabilitation of residential structures)

The Owner will be responsible for the inspections and certification required under Section 35.14(f) thereof, and requirements of M.G.L. Ch.111, Sec. 190-191, and the regulations for Lead Poisoning.

49. Interest of Contractor and Employees

The Contractor covenants that it presently has no interest and shall not acquire any interest, direct or indirect, in the study area or any parcels therein or any other interest which would conflict in any manner or degree with the performance of its services hereunder. The Contractor further covenants that in the performance of this contract, no person having any such interest shall be employed. Further, the Contractor shall adhere to the provisions of the Hatch Act (5 U.S.C. 1501 et seq.) which limits political activities by employees whose principal employment is in connection with an activity which is financed in whole or in part by federal funds.

50. Statement of Management, CPA Statement (for contracts in excess of \$100,000)

For contracts in excess of \$100,000 the Contractor shall file a statement with the Owner assuring that its system of auditing controls ensures management accountability and protection of assets as required by MGL c. 30, sec. 39R(c).

For such contracts, the Contractor shall file with a Owner a signed statement from a Certified Public Accountant that said CPA has examined the Statement of Management and opines whether the representations of management are consistent with its system of controls and its financial statements as set forth in MGL c. 30, sec. 39R(c).

51. Severability

If any provision of this Agreement is held invalid, the remainder of the Agreement shall not be affected thereby, and all other parts of this Agreement shall nevertheless be in full force and effect.

52. Availability of Funds

The payments provided under this Agreement are subject to the continued availability of state funds for the Community Culvert Grant program and to the Owner's continued receipt of such funds.

53. Confidentiality

The Contractor shall protect the privacy of, and respect the confidentiality of information provided by, program participants, consistent with applicable federal and state regulations, and further shall comply with MGL c. 66, sec. 10, regarding access to public records.

54. MGL Chapter 30, Section 39P

The requirements of Massachusetts General Law, Chapter 30, Section 39P are hereby incorporated and made a part of this Agreement.

55. Compliance with Chapter 370 Acts of 1963

The contractor shall furnish all notices and shall do all work and be responsible for all requirements of Chapter 370 of the Acts of 1963, entitled "An Act Requiring a Contractor Making An Excavation In A Public Way to Give Notice Thereof to Public Utility Companies."

56. Foreign Corporations

Contractors and subcontractors incorporated outside of Massachusetts shall comply with MGL c. 30, sec. 39L and other applicable laws.

57. Construction

This Agreement shall be construed under the laws of the Commonwealth of Massachusetts.

58. Flood Disaster Protection

The owner of land subject to acquisition or improvement under this contract, and its successors or assigns, are hereby obligated to obtain and maintain, during ownership of the land which is the subject of this contract, such flood insurance as is required with respect to financial assistance for acquisition or construction purposed under section 102 (a) of the Flood Disaster Protection Act of 1973. This obligation is binding notwithstanding the fact that construction on the land which is the subject of this contract is not itself funding out of assistance provided under the Housing and Community Development Act of 1974, as amended.

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SUPPLEMENTAL GENERAL CONDITIONS

1. Scope of Work

The Scope of Work for the Project shall include, but not be limited to, any and all work described in the Contract Documents including the Invitation to Bid, Information for Bidders, printed form of Contract, General Conditions, Supplemental General Conditions, Special Conditions, Specifications, Plans and Drawings, together with any attachments or appendices, for the Keyes Road Over Wilder Brook Culvert Replacement.

2. Notice To Proceed & Pre-Construction Conference

A written Notice to Proceed shall be issued to the Contractor after receipt by the Owner of the following: (1) proof of required insurance, (2) verification that EEO poster has been posted in a conspicuous place at the job site, (3) posting of EEO Coordinator, federal wage decisions, and state prevailing wage rates in a conspicuous place at the job site, (4) Contractor's Certification Concerning Labor Standards and Prevailing Wage Requirements, and (5) Subcontractor's Certification Concerning Labor Standards and Prevailing Wage Requirements. No work shall be performed by the Contractor prior to receipt of the Notice to Proceed.

Prior to the start of construction, the Contractor, all subcontractors, the Engineer, and the Owner shall attend a pre-construction conference. The conference will serve to acquaint the participants with the general plan of contract administration and requirements under which the construction operation is to proceed, and will inform the Contractor, in detail, of the obligations imposed on it and its subcontractors by the Executive Orders concerning Equal Employment Opportunity and Davis-Bacon Act requirements and other federal and state labor standards requirements.

The Owner shall inform the Contractor of the date, time, and place of the pre-construction conference.

3. Schedule of Work

At the Pre-Construction Conference, the Contractor shall submit to the Owner and Engineer three copies of a bar chart with the schedule and sequence in which the construction work shall be prosecuted. No work shall commence until the Owner has approved, in writing, of the schedule and sequence of operations.

The Contractor shall be responsible for keeping public ways open and in a passable condition at all times, and for maintaining access at all times to all abutting properties.

4. Environmental Protection

The Contractor shall adhere to all federal, state and local regulations, including any orders of conditions which may be attached hereto. Additionally, the Contractor shall conform to the following:

A. Plant and Pest Control

Where applicable, all soil moving equipment that has operated in, or will operate in, regulated areas shall be subject to plant quarantine regulations. In general, these regulations require the thorough cleaning of soil from equipment before such equipment is moved from regulated areas to uninfested areas.

Complete information may be obtained from the Massachusetts Dept. of Agriculture, Plant Pest Control Division, 100 Cambridge St., Boston, MA (Tele: 617-727-3031); and for information concerning the interstate movement of soil moving equipment: U.S. Dept. of Agriculture, Plant Pest Control Division, 424 Trapelo Rd., Waltham, MA.

Premises must be certified as free from vermin by a licensed extermination professional prior to issuance of the demolition permit.

B. Prevention of Water Pollution

The Contractor shall take such precautions as may be necessary to avoid contaminating water in adjacent water courses, or water storage areas, whether natural or man-made. All earth work, movement of equipment, water control of excavations or foundation areas, and other operations likely to increase silting, shall be conducted so as to avoid pollution of such water courses or water storage areas.

The Contractor shall construct silt retention filters in any such area, which filters shall be removed upon completion of the work. Water used during performance of the Contract which has become contaminated with oil, bitumen, harmful or objectionable chemicals, sewage or other pollutants shall be discharged so as to avoid affecting nearby water.

Under no circumstances shall the Contractor discharge pollutants directly into any water course or water storage area. When water from adjacent natural water sources is used in the Contract work, intake methods shall be such as to avoid contaminating the source of supply.

C. Air Pollution and Dust Control

The Contractor shall conduct its operations in accordance with federal, state and local regulations governing air pollution.

The Contractor is hereby placed on notice that blowing dust from unstabilized earth areas of the work shall be considered a nuisance under its control. Contractor shall, by spraying with water or other approved means, dampen the soil to hold down the dust. During working hours and before leaving the Project site for the evening, weekends, or other extended period, the Contractor shall assess the moisture content of the soil and dampen same to the extent necessary to hold down the dust. While work is suspended, Contractor shall, if directed by the Engineer, return to the site to maintain dust control.

D. Permits

The Owner has obtained the following permits and approvals for the Project. The Contractor is required to comply with the permit provisions. Copies of permits are appended to this section.

1. Gardner Conservation Commission Order of Conditions
2. Massachusetts Department of Environmental Protection 401 Water Quality Certification

5. Cooperation of Contractor

The Contractor's attention is directed to the fact that other contractors under separate contracts may be entering upon the work site for the construction of other proposed amenities. The Contractor shall complete its work in cooperation with other contractors so as to cause the least interference with same, and shall have no claim for any delay which may be due to, or result from, said work of these contractors.

6. Record Drawings – As-Builts

The Contractor shall cooperate with the Engineer and shall prepare and maintain a set of drawings on which shall be recorded accurately, as the work progresses, the actual "as built" locations and dimensions of his work, indicating thereon all variations from the Contract Drawings. Prior to final acceptance of the work, all "as built" data shall be transferred to a complete set of reproducible record drawings in ink. This work shall be performed by the Contractor's Registered Land Surveyor with the cooperation of the Contractor as required. After review and approval by the Engineer of the record drawings shall be completed and delivered to the Owner.

7. Photographs

The Contractor shall be required to furnish five (5) views of before, during, and after photographs of the site conditions. The Contractor is encouraged to submit "during" photographs, with negatives that shall become the property of the City, along with each pay requisition to facilitate approvals.

8. Utilities

The Contractor shall obtain and shall pay for all licenses and permits that are required by the City or any other agencies that may be involved. The Contractor shall comply with all codes, regulations, and standards of the City.

"DIG SAFE", the City, and all private companies or agencies whose utilities are in the construction, shall be notified by the Contractor at least 72 hours prior to the start of any excavation. The Contractor shall be required to cooperate with the utility companies involved in order to assure completion of all work with the least amount of delay.

9. Provisions for Traffic/Police Details

The Contractor shall not obstruct or close any portion of a street without obtaining the necessary permits from the proper municipal authorities. If any street or private way shall be rendered unsafe by the Contractor operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the Owner.

Streets, roads, private ways, and walks shall be maintained passable by the Contractor at his expense. The Contractor shall assume full responsibility for the adequacy and safety of provisions made. He shall conduct his construction operations such that interference with the flow of traffic will be held to a minimum.

The Contractor shall cooperate in every possible way with the municipal authorities to maintain a flow of traffic through the site. The Contractor shall notify the Fire Department, Police Department, School Bus Company, and the Highway Department when any street is to be closed regardless of the length of time or time of day. The Contractor shall also be responsible for the arrangement of police details as required by the City. The Contractor will be compensated for payment of police detail costs, including applicable administrative fees in accordance with Section 01270 of these specifications.

All detours shall be signed and lighted as directed by the Engineer.

10. Abandonment of Project

If the Contractor abandons the work, or any portion of the work, or sublets without prior written consent by the Owner, or assigns any claim thereunder other than as herein required, or if at any time the Owner shall certify in writing that the rate of progress is inadequate, or that the work or any part thereof is unnecessarily or unreasonably delayed, or that the contractor has violated any of the provisions of this Contract, then the Owner, in its sole discretion may notify the contractor by written order, with a copy mailed to the Surety, to discontinue all work, or any part thereof. Thereupon the contractor shall discontinue such work or such part thereof as the Owner may designate. The Owner may complete the work, or such part thereof, and charge the entire expense of so completing to the Contractor. The Owner may take possession of any facilities, equipment, materials, temporary works, machinery, implements, and tools of every description as may be found at the location of said work. The Owner reserves the right at all times to demand the Contractor's Surety to complete the work in accordance with the performance bond.

Any costs under this article shall be deducted and paid by the Owner out of any funds then due, or to become due, the Contractor under this Agreement. In such accounting the Owner shall not be held to obtain the lowest figures for the work of completing the Contract or any part thereof, or insuring its proper completion but all sums actually paid thereof shall be charged to the contractor.

If the expenses so charged are less than the sum which would have been payable under this Contract if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference; and if such expenses shall exceed the said sum, the Contractor shall pay the amount of the excess to the Owner.

11. Contractor to Pay All Labor, Etc.

The Contractor shall pay for all labor performed or furnished, and for all material and equipment used or employed, for the performance of this Contract. The Contractor shall furnish the Owner, upon request, with evidence satisfactory to the Owner that all persons who have performed work or furnished supplies, materials and/or equipment under this Contract, and all other claims for damage of any kind caused by or arising from the construction of said work have been fully paid or satisfactorily secured. If satisfactory evidence is not furnished, the Owner may retain appropriate amounts from any amount due the Contractor sufficient to cover any such unpaid claims.

12. Laws and Regulations

The Contractor shall keep itself fully informed of all municipal, state and federal laws and regulations which may affect those engaged or employed in the work, or the materials used in the work, or in any way affecting the conduct of the work hereunder. Should any discrepancy or inconsistency be discovered in the Contract Documents in relation to any such law, ordinance, regulation, order or decree, the Contractor shall forthwith report the same to the Owner in writing. Contractor shall at all times observe and comply with, and shall cause all its agents and employees to comply with all such existing and future laws, ordinances, regulations, orders and decrees; and shall protect and indemnify the Owner and its officers and agents against any claim or liability arising from or based on the violations of any such law, ordinance, regulation, order or decree, whether by itself, its employees or its agents.

13. Provisions Required by Law Deemed Inserted

Any provision of law or clause required by law to be inserted in this Agreement shall be deemed to be inserted herein.

14. Payment Procedures, Retainage

The Contractor shall submit a monthly written request for payment to the Engineer which estimates the total amount of work complete and materials delivered through the date of such estimate. The Engineer shall review such request and make any adjustments to the estimated amounts therein as deemed appropriate for approval of and payment by the Owner within thirty-five (35) days from such approval.

The Owner shall retain five percent (5%) of such approved payment as partial security for the fulfillment of the Contract by the Contractor. In addition to the five percent (5%) retainage, additional amounts to cover any specific claims against the Contractor which have been identified may be withheld. The Owner reserves the right to verify that such payments are first applied to the payment of labor performed or employed, and materials supplied under the Contract. The requirements of MGL c. 30, §§ 39G and 39K are incorporated herein by reference.

Issuance of final payment and release of all retained funds shall be made in accordance with General Conditions Article 27.

15. Payment to Subcontractors

The Contractor shall comply with the following statutory provisions pursuant to MGL Chapter 149, Sections 44A to L, as applicable. For contracts awarded under MGL Chapter 30, Section 39M, subparagraphs (a) through (h) shall apply.

- A. Forthwith after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by the subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.
- B. Not later than the sixty-fifth (65th) day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding Authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.
- C. Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.
- D. If, within seventy (70) days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the subcontractor may demand direct payment of that balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth (70th) day after the subcontractor has substantially completed the subcontract work. Within ten (10) days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by

certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

- E. Within fifteen (15) days after receipt of the demand by the awarding authority, but in no event prior to the seventieth (70th) day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceeding barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.
- F. The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of the subparagraph (e) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by the decree of a court of competent jurisdiction.
- G. All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the general contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of such payment.
- H. The awarding authority shall deduct from payments to a general contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.
- I. If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not

receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by following the procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (d), (f), (g), and (h). MGL Ch. 30, sec. 39F.

16. Termination

Force Majeure. Neither party shall be liable to the other or deemed to be in breach under the Contract for any failure to perform, including, without limitation, a delay in rendering performance due to causes beyond its reasonable control such as an order, injunction, judgment, or determination of any Court of the United States or the Commonwealth of Massachusetts, an Act of God, war, civil disobedience, extraordinary weather conditions, labor disputes, or shortages, or fluctuation in electric power, heat, light, or air conditioning. Dates or time of performance shall be extended automatically to the extent of such delays, provided that the party whose performance is affected promptly notifies the other of the existence and nature of such delay.

Performance Dates. It is agreed, however, that since the performance dates of the Contract are important, continued failure to perform for periods aggregating sixty (60) days or more, even for causes beyond the control of the contractor, shall be deemed to render performance impossible and the City shall thereafter have the right to terminate the Contract in accordance with the provisions of the above.

Delay or Hindrance. The contractor shall have no damages for delay or hindrance. In the event of delay or hindrance not the fault of the contractor, an extension of time shall be the contractor's sole remedy.

Incomplete Performance. In the event of termination, the Contractor shall deliver to the Owner all finished work and documentation, complete and incomplete. The contractor shall be entitled to receive payment for any work performed and accepted under the Contract which was completed prior to the date of termination. In the event of termination the Contractor shall have no right to payment for lost profits or other consequential damages.

Termination for Convenience. Notwithstanding any other provision of the Contract, the City reserves the right at any time in its absolute discretion to suspend or terminate the Contract in whole or in part for its convenience upon written notice of the contractor. If any portion of the Contract so suspended is not recommenced by written notice of the City within the time period specified in the written notice of suspension, the suspended portion of the Contract shall thereupon be deemed terminated as to that portion for the convenience of the City in accordance with this provision. The City shall incur no liability by reason of such termination for convenience, except for the obligation to pay for work performed and accepted and for reimbursable expenses accrued through the date of termination less any offset or claim of the Owner. Such obligation shall not exceed the available appropriation. The contractor shall have

no right to recover other amounts, including but not limited to amounts for lost profits, or consequential damages.

Inadequate Funds. In the event that all or a portion of the project is postponed or terminated due to inadequate federal, state, or local funds, the provisions set forth in the above paragraph (Termination for Convenience) shall apply.

Termination Cause. If, after the notice of termination cause, it is determined that said cause was invalid, the termination shall be deemed to have been effected for the convenience of the City.

Any termination or suspension of the Agreement shall not impair the City's right to recover damages occasioned by the fault of the contractor. Any suspension shall not limit the right of the City to terminate this Agreement.



GARDNER CONSERVATION COMMISSION

August 26, 2022

Trevor Beauregard
95 Pleasant Street
Gardner, Ma 01440

Re: Order of Conditions
DEP File No. 160-0657
Keyes Road

Enclosed please find the Order of Conditions for the above referenced project.

The original signed copy of this document needs to be **recorded** at the **Worcester Registry of Deeds**.

Section G Recording Information (page 12 of 12 of the Order) must be **completed** and **returned** to the Conservation Commission after the Order of Conditions is recorded. Please note that **Standard Condition 10** requires a sign to be posted on site that includes the DEP Number.

Pre-Construction Special Condition 10 requires a complete copy of this Order, including its drawings, Special Conditions, and any amendments to be maintained at the work site whenever work is being performed. The Applicant shall assure that all contractors, subcontractors and other personnel performing work in the resource area are fully aware of the terms and conditions of the Order. A complete copy of this Order and the project plans shall be given to every contractor and subcontractor performing the work defined and described here.

In accordance with Pre-Construction Special Condition 11, the applicant shall install appropriate sedimentation and erosion control devices before the start of any site work (e.g. earth disturbance, clearing of vegetation, etc.).

Thank you for your application and please do not hesitate to contact us should you have any questions.

Sincerely,
On behalf of the
GARDNER CONSERVATION COMMISSION

Katie Guertin
Conservation Agent/Planner



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
160-0657
MassDEP File #

eDEP Transaction #
Gardner
City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



1. From: Gardner
Conservation Commission
2. This issuance is for (check one):
a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

Trevor Beauregard
a. First Name b. Last Name
Gardner Community Development and Planning
c. Organization
95 Pleasant Street
d. Mailing Address
Gardner Ma 01440
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):

a. First Name b. Last Name

c. Organization

d. Mailing Address

e. City/Town f. State g. Zip Code

5. Project Location:

Keyes Road Crossing over Wilder Brook Gardner
a. Street Address b. City/Town
Right of Way
c. Assessors Map/Plat Number d. Parcel/Lot Number
Latitude and Longitude, if known: 42.584594d m -
s 72.013531d m



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

a. County

b. Certificate Number (if registered land)

c. Book

d. Page

7. Dates: May 23, 2022 August 22, 2022 August 26, 2022
a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Keyes Road Wilder Brook Culvert Replacement Project

a. Plan Title

Tighe & Bond

b. Prepared By

March 2022

d. Final Revision Date

c. Signed and Stamped by

Varies-as noted

e. Scale

f. Additional Plan or Document Title

g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☒ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
d. ☒ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat
g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☐ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection
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WPA Form 5 – Order of Conditions

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B. Findings (cont.)

Denied because:

b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**

c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. ☒ Bank	280 a. linear feet	280 b. linear feet	280 c. linear feet	280 d. linear feet
5. ☒ Bordering Vegetated Wetland	100 a. square feet	100 b. square feet	100 c. square feet	100 d. square feet
6. ☒ Land Under Waterbodies and Waterways	1,660 a. square feet 0 e. c/y dredged	1,660 b. square feet 0 f. c/y dredged	3,160 c. square feet	3,160 d. square feet
7. ☒ Bordering Land Subject to Flooding	1,585 a. square feet	1,585 b. square feet	1,585 c. square feet	1,585 d. square feet
Cubic Feet Flood Storage	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet
8. ☐ Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet		
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. ☒ Riverfront Area	19,600 a. total sq. feet	19,600 b. total sq. feet		
Sq ft within 100 ft	19,600 c. square feet	19,600 d. square feet	19,600 e. square feet	19,600 f. square feet
Sq ft between 100-200 ft	0 g. square feet	0 h. square feet	0 i. square feet	0 j. square feet



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B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☐ Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. ☐ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☐ Coastal Beaches	a. square feet	b. square feet	c. ^{cu yd} nourishment	d. ^{cu yd} nourishment
14. ☐ Coastal Dunes	a. square feet	b. square feet	c. ^{cu yd} nourishment	d. ^{cu yd} nourishment
15. ☐ Coastal Banks	a. linear feet	b. linear feet		
16. ☐ Rocky Intertidal Shores	a. square feet	b. square feet		
17. ☐ Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. ☐ Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. ☐ Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. ☐ Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. ☐ Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



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B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BWV) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BWV

b. square feet of salt marsh

24. ☒ Stream Crossing(s):

0

1

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 8/26/25 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

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C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 160-0657 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
- (1) ☒ is subject to the Massachusetts Stormwater Standards
- (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
- ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
- iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

g) The responsible party shall:

1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.

i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.

j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.

l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

Project shall comply with all requirements/conditions by other agencies involved (DEP, DER, Mass DOT, Army Corp.)

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☐ Yes ☐ No
2. The _____ hereby finds (check one that applies):

Conservation Commission

- a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. ☐ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):



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E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

8-26-22
1. Date of Issuance

4
2. Number of Signers

Signature [Signature]
Signature [Signature]
Signature [Signature]
Signature [Signature]

Printed Name DONCKEN BURNS
Printed Name David Orwig
Printed Name Gregory P. Purns
Printed Name MICHAEL J. Hennings

Signature _____
Signature _____
Signature _____
Signature _____

Printed Name _____
Printed Name _____
Printed Name _____
Printed Name _____

☒ by hand delivery on
8-26-22
Date

☐ by certified mail, return receipt requested, on

Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



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G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for: Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

**Request for Departmental Action Fee
Transmittal Form**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

160-0657

Provided by DEP

A. Request Information

1. Location of Project

a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



B. Instructions

1. When the Departmental action request is for (check one):

☐ Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)

☐ Superseding Determination of Applicability – Fee: \$120

☐ Superseding Order of Resource Area Delineation – Fee: \$120



Massachusetts Department of Environmental Protection
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**Request for Departmental Action Fee
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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

160-0657

Provided by DEP

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <https://www.mass.gov/service-details/massdep-regional-offices-by-community>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Gardner Conservation Commission
DEP File #160-0657
Keyes Road

Summary of Project: *This filing requests Conservation Commission approval for a culvert and bridge replacement.*

This Notice of Intent is approved pursuant to the provisions of the Massachusetts Wetlands Protection Act and 310 CMR 10.00, and City of Gardner Wetlands Protection Ordinance, City Code Chapter 650, subject to the following **Special Conditions:**

Overall Special Conditions

1. After the expiration of the 10-day appeal period, and, if no request for appeal has been filed with the Massachusetts Department of Environmental Protection (DEP), this Order shall be recorded at the Worcester Registry of Deeds and proof of that recording shall be delivered to the Gardner Conservation Commission. No work shall begin until the Commission receives proof of the recording.
2. This Order shall apply to any successor in control or successor in interest of the property described in the Notice of Intent and accompanying plans. These obligations shall be expressed in covenants in all deeds to succeeding owners of any portions of the property.
3. The Commission shall be notified in writing of all transfers of title of any portion of the property that takes place prior to issuance of the Certificate of Compliance.
4. All proposed work shall be performed in accordance with the Notice of Intent dated May 2022 and the Plans dated May 2022.
5. The Conservation Commission, the Gardner Building Commissioner, consultants or conservation experts as agents of the Commission, and/or the Department of Environmental Protection reserve the right to enter and inspect the property at all reasonable times, until a Certificate of Compliance is issued and may acquire any information, measurements, photographs, observations, and/or materials, or may require the submittal of any data or information deemed necessary by the Commission for that evaluation. Further, work shall be halted on the site if the Commission, agent or DEP determines that any of the work is not in compliance with this Order of Conditions. Work shall not resume until the Commission is satisfied that the work will comply, and has so notified the applicant in writing.
6. The Commission reserves the right to amend this Order of Conditions after a legally advertised public hearing if plans or circumstances are changed or if new conditions or information so warrant.
7. Upon completion of this project, the applicant shall submit the following to the Conservation Commission to receive a Certificate of Compliance:
 - a. DEP WPA Form 8A Request for Certificate of Compliance or other signed,

Gardner Conservation Commission
DEP File #160-0657
Keyes Road

written request

- b. A written statement from the applicant certifying that the work has been conducted as shown on referenced plan(s) and documents, and as conditioned by the Commission.
 - c. A written statement from a registered professional engineer of the Commonwealth certifying that the work has been conducted as shown on referenced plan(s) and documents, and as conditioned by the Commission.
 - d. An as-built plan prepared by a registered professional engineer of the Commonwealth shall be submitted to the Commission if available or upon request by the Commission if needed for the purpose of confirming and documenting substantial compliance.
8. The Perpetual Conditions listed in the Order of Conditions shall continue in force beyond the Certificate of Compliance in perpetuity and shall be referred to in all future deeds to this property.

Pre-Construction Special Conditions

9. If there are any changes to the plans as submitted, the applicant shall have the responsibility to submit revised plans showing all changes to the Commission for review. This includes changes required by the Commission, other Town and/or State agencies as well as those introduced by the applicant. No work may start until the Commission has completed its review and notified the applicant in writing.
10. A complete copy of this Order, including its drawings, Special Conditions, and any amendments shall be maintained at the work site whenever work is being performed. The Applicant shall assure that all contractors, subcontractors and other personnel performing work in the resource area are fully aware of the terms and conditions of the Order. A complete copy of this Order and the project plans shall be given to every contractor and subcontractor performing the work defined and described here.

Erosion Controls

11. Before the start of any site work (e.g. earth disturbance, clearing of vegetation, etc.), appropriate sedimentation and erosion control devices shall be installed at the limit of work line.
12. On slopes of 25% (4:1) or less gradient, wire-reinforced silt fencing, staggered straw bales with a six-inch overlap or butted straw bales backed by silt fencing may be used.
13. Slopes greater than 25% (4:1) require butting double staked straw bales backed by a silt fence dug 6 inches into the ground.

Gardner Conservation Commission
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Keyes Road

14. All silt fencing will be dug 6 inches into the ground. Stakes will be spaced a maximum of 8 feet if wire reinforced fencing is used and a maximum of 6 feet if the fencing is not reinforced. All straw bales will be double staked into the ground. Straw bales shall be dry, tight, consistent dry stalk material (not green or alive) and free of seeds.
15. Prior to any work on site, the proposed limits of work shall be delineated with 5-foot high stakes spray painted bright orange placed every 25 feet with attached signs clearly displaying **"NO ACTIVITY BEYOND THIS POINT PER ORDER OF THE CONSERVATION COMMISSION"**, or otherwise delineated as approved by the Commission or their Agent. Such markers shall be checked and replaced as necessary and shall be maintained until all construction is complete. Workers shall be informed that no use of machinery, storage of machinery or materials, stockpiling of soil or construction activity is to occur beyond this line at any time.

During Construction Special Conditions

Erosion Control

16. The Conservation Commission reserves the right to impose additional conditions on portions of this project to mitigate any impacts which could result from site erosion, or any noticeable degradation of surface water quality discharging from the site.
17. Erosion control devices shall remain in place until such time stabilization of all areas that may impact resource areas is permanent.
18. The applicant shall remove the erosion control and sedimentation devices by the end of construction, before applying for the Certificate of Compliance.
19. An adequate stockpile of erosion control materials shall be on site at all times for emergency or routine replacement and shall include materials to repair silt fences, straw bales, stone rip-rap filter dikes or any other devices planned for use during construction.
20. Erosion control devices may be modified based on experience at the site. All such devices shall be inspected, cleaned, and/or replaced during construction and shall remain in place until such time stabilization of all areas that may impact resource areas is permanent. These devices shall be inspected to assure maximum control has been provided after any rainfall.
21. Any straw bales, wattles, or other erosion control measures that deteriorate during the activity period are to be replaced immediately. At the close of each construction day, and especially prior to weekends, the applicant shall assume responsibility for monitoring all erosion and sedimentation barriers to insure that all barriers are in place, secured, reinforced and properly maintained at day's end. In the event that an uncontrollable emergency occurs, such as a heavy rainstorm, causing erosion and sedimentation breakout, the applicant shall restore such barriers to the standards

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outlined in the Order. Erosion controls shall in place until revegetation takes place.

22. All erosion control measures shall remain in place and be maintained for the purpose for which they were installed until the area up-gradient is permanently stabilized.

Stabilization

23. After loaming and seeding, disturbed areas will be covered with hay mulch, erosion control blanket or netting or other suitable material in order to provide adequate surface protection until seed germination.
24. As soon as grading and/or construction in the buffer zone are completed, all disturbed areas must be permanently stabilized with vegetative cover. All disturbed areas, slopes and proposed landscape areas shall be loamed and seeded or stabilized through the use of mulch cover, erosion control blankets or other approved means. All disturbed areas shall be graded, loamed and seeded prior to November 1 of each year. No disturbed areas or stockpiled material will be left unprotected during the winter. If weather conditions do not allow permanent stabilization, then appropriate temporary stabilization measures shall be used until permanent stabilization can be achieved.
25. Subsequent to seeding, disturbed areas will be covered with hay mulch, erosion control blanket or netting or other suitable material in order to provide an adequate surface protection until seed germination. Preference should be given to erosion control netting with biodegradable stitching.
26. After erosion control devices are removed as permitted by the Conservation Commission, the areas covered by the erosion control measures shall be restored to match adjacent condition.
27. For riprap embankments, riprap material shall be clean and free of trash, tree stumps, roots and other deleterious material.
28. Temporary roadways shall be covered with crushed stone of uniform size or erosion control mats. Said stone shall be washed, graded and free of organic material.

Equipment and Storage

29. Motorized equipment, well drilling equipment, or any other machinery involved in the work shall be permitted in the buffer zone and/or wetlands only when actually engaged in that work and must be removed from the buffer zone and/or wetlands for overnight or weekend storage. No maintenance or refueling shall take place in the buffer zone and/or wetlands. This includes, but is not limited to fueling, lubricating and fluid replacement.
30. Equipment for fuel storage and refueling operations shall be located in an upland area greater than 100 feet from the limits of wetland areas.

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31. Under no conditions shall operation of equipment, storage materials, stockpiling of soil or other temporary site disturbance take place on the wetland side of the limit of work line.
32. All equipment used in this project shall be used from upland areas and shall not enter the wetlands at any time.

Other

33. There shall be no construction refuse buried within the 100-foot wetland buffer zone on the project site.
34. No work or activity including the cutting of vegetation shall take place in a wetland area or buffer zone other than that specifically allowed under this Order of Conditions.
35. Only clean fill shall be used on the site, i.e. clean granular materials free of organic matter, large stones, masonry, stumps, asphalt or waste material.
36. No trash dumpsters will be allowed within the 100-foot wetland buffer zone or banks during construction.
37. All utility poles shall be treated with a non-leaching wood preservative. The use of creosote is expressly prohibited. Use of a wood preservative other than CCA salts shall require prior written notification to the Commission five (5) days in advance of placement.

Stream Crossings

38. Plans and construction details of any temporary crossing shall be submitted to the Conservation Commission for approval prior to initiation of the work.
39. Stream crossing shall be done during low flow periods, normally July, August and early September. Great care shall be taken to prevent erosion and siltation during heavy rain during construction at any time of year.
40. Adequate and appropriate erosion controls shall be installed on the downstream side of the work site to protect water quality in the stream during construction.

Stormwater Management

41. There shall be no sedimentation into wetlands or water bodies from discharge pipes or surface runoff leaving the site.
42. The storm drainage system, detention basins, and compensatory storage areas shall be constructed and functioning as part of the initial project phase.

43. Immediately upon the installation of the headwalls and riprap and the construction of catch basins, drain inlets and any other drainage collection structures, erosion controls such as straw bales shall be set around the inlet to prevent sediment from entering the drainage system.

Well

44. The well drilling rig shall be placed on a bed of hay or similar material designed to catch any spilled pollutants. The bedding and the well tailings shall be removed from the buffer zone immediately upon completion of the drilling operation.
45. The area around the well shall be stabilized immediately after drilling is completed and permanently stabilized as soon as weather conditions permit.

Wetland Replication

46. The compensatory Bordering Vegetated Wetland shall be constructed prior to any filling of existing Bordering Vegetated Wetland and any work on the site.
47. The Conservation Commission shall be notified in writing at least 48 hours prior to the commencement of construction to enable the Commission to inspect the site flagging, erosion control, and other site preparation activities required by this Order. Erosion control device shall be installed between the existing wetlands and proposed replication area.
48. The proposed wetland replication area must meet the Performance Standards for Bordering Vegetated Wetlands (wet meadows, marshes, swamps and bogs), 310 CMR 10.55 (4)(b). Replication must be based on the best available information for such areas and must be supervised by a wetland specialist who shall be a professional with experience in wetland replication and a working knowledge of botany and hydrology. Such a person shall be retained at the applicant's expense to supervise and monitor construction of the wetland replication areas until the replication area meets the requirements of this Order of Conditions.
49. Wetland Regulation 310 CMR 10.55 (4)(b)(6) requires that at least 75% of the surface of the replacement area be reestablished with indigenous wetland plant species within two growing seasons. If monitoring data indicates that this objective cannot be met, a corrective plan of action shall be submitted to the Conservation Commission for approval, and implemented under the supervision of a wetland specialist.
50. Following construction of the replication area and prior to other work on the site, the wetland specialist shall certify to the Commission that the area has been constructed in compliance with this Order.
51. The Commission reserves the right to impose additional conditions on portions of this

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project to mitigate any impacts which could result from wetland alteration or replication activities.

Flood Storage

52. Compensatory flood storage shall be constructed prior to any filling of land subject to flooding.

Wildlife

53. Where erosion controls have been placed in areas between upland and vernal pools, exposed soils shall be stabilized, and silt fencing or other devices that could block migration of amphibians to and from the pools shall be removed, no later than March 1 if construction has been occurring during the winter, and no later than September 1 if construction has been occurring during the summer. If soils will not be stabilized by these dates, temporary stabilization measures shall be placed and sedimentation barriers shall be designed to provide a gradual slope or berm over which amphibians may pass. Erosion control devices shall not block passage between uplands and vernal pools between the dates of March 1 and June 1, nor between September 1 and October

Perpetual Special Conditions

54. No additional alterations of any kind within the wetlands and the buffer zone will be permitted without prior notification to and written approval of the Conservation Commission.
55. No herbicides or pesticides shall be used on this site within the 100-foot wetland buffer zone. This condition shall remain in force permanently and shall be recorded as such on the Certificate of Compliance.
56. Fertilization and liming of soils on this site shall not take place within the 100-foot wetland buffer zone unless otherwise authorized by the Commission upon a request for such activities being made in writing to the Commission specifying the type and method of fertilization or liming.
57. No de-icing chemicals shall be used where runoff / drainage will discharge into the wetlands without prior notice and approval of the Commission and unless the presence of properly maintained and functioning pre-treatment and treatment stormwater BMPs exist. This condition shall remain in perpetuity and shall be recorded as such on the Certificate of Compliance. No de-icing chemicals shall be used on any walk, drive, parking lot or private road except during severe ice storm. Any arrangement for snow removal shall so stipulate in a written agreement, snow and ice removal plan and/or Operation and Maintenance Plan. A copy of such agreement or plan shall be provided to and known by any snow removal contractors, staff, or other persons responsible for such activities and shall be stored on site at all times and made available to the Conservation Commission upon request.

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Keyes Road

58. There shall be no storage of chemicals, oil, fuel, fertilizers or other potentially hazardous material within the wetlands or within the 100-foot wetland buffer zone.
59. Upon completion of work, the limit of permitted permanent encroachment into the buffer zone shall be delineated with permanent features as follows:
As shown on the Plans dated N/A
Boulders
Stone Wall
Vegetative Boundary
Other _____

The applicant shall instruct all agents to explain these markers to buyers/lessees/landscapers and all persons taking over the property from the applicant.

60. The owner(s) of a subdivision road, commercial or industrial property containing roadways, driveways, or parking areas and containing a privately or individually owned stormwater system or structure, or any other property containing a privately owned stormwater structure or system, shall be responsible for any maintenance of or corrective measures deemed necessary for the drainage and stormwater system and all related infrastructure. This shall be a continuing condition.
61. The maintenance or repair of detention basins, supporting drainage systems, stormwater best management practices other than those in the public way shall be the responsibility of the applicant/property owner. The design capacity, stormwater management treatment capacity and structural integrity of these facilities must be maintained. The basins shall be kept free of any litter, refuse, or other extraneous matter.
62. In accordance with a plan submitted to and approved by the Conservation Commission, regular maintenance (and repair as needed) shall be performed by the applicant with reports to the Commission as specified in this plan. The Conservation Commission shall be notified in writing, when any maintenance functions that may impact the wetlands, such as, but not limited to, replacing backfill and repairing drains and terraces, are to be performed.
63. Water samples from the monitoring wells shall be taken and analyzed with results forwarded to the Commission and Health Department twice a year.



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Bethany Card
Secretary

Martin Suuberg
Commissioner

October 4, 2022

Trevor Beauregard
115 Pleasant Street
City Hall Annex – Room 201
Gardner, MA 01234

TRANSMITTAL # 22-WW08-0012 APP
DEP File # 160-0957
ACoE Project # Not Available

RE: 401 WATER QUALITY CERTIFICATIONS – BRP WW08

Keyes Road Bridge over Wilder Brook, Gardner, Massachusetts, Culvert replacement
WQC Transmittal Record No.: 22-WW08-0012 APP

AT: Gardner, MA – Keyes Road and Wilder Brook
Project Drainage Area – Miller's River

Dear Mr. Beauregard:

The Massachusetts Department of Environmental Protection (Department) has reviewed your application for the Water Quality Certification (401 WQC or Certification), as referenced above. In accordance with the provisions of Section 401 of the Federal Clean Water Act¹ as amended (33 U.S.C. §1251 et seq.), M.G.L. c. 21, §§ 26-53, and 314 CMR 9.00, MassDEP has been determined there is reasonable assurance the project or activity, as conditioned herein, will be conducted in a manner which will not violate applicable Surface Water Quality

¹ Culvert replacements and fill placed below the Ordinary High-Water mark of Waters of the United States within the Commonwealth are subject to jurisdiction under Section 404 of the Clean Water Act as administered by the United States Army Corps of Engineers. The project is subject to review under the "Self-Verification" category of the Massachusetts General Permits as the project meets the stream crossing standards and will result in less than 5,000 sf of impacts to LUW and BVW.

Standards at 314 CMR 4.00 *Massachusetts Surface Water Quality Standards* as implemented and supplemented, without limitation at 314 CMR 9.00.

The waters of Wilder Brook in Gardner are considered as Class B. Such waters are intended as “habitat for fish, other aquatic life and wildlife, and for primary and secondary contract recreation.” Anti-degradation provisions of these Standards require that “existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.”

Project Description: The project involves the replacement of a hydrologically undersized 8-foot corrugated metal culvert with a 24-foot precast concrete bridge frame span on Wilder Brook in Gardner, MA.² The stream crossing at Keyes Road provides sole access to and from the residential neighborhood south of Wilder Brook that is prone to frequent flooding. The existing deteriorated culvert is a top priority hazard in the City’s Municipal Vulnerability Preparedness Plan. The replacement span will conform to the Massachusetts Stream Crossing Standards, reduce flooding, and improve the stream ecosystem continuity.

Work associated with the culvert removal and replacement will result in approximately 220 cubic yards (cy) of dredging within Wilder Brook, impacts to 1,660 square feet (sf) of Land Under Water (LUW) resulting from coffer dams and dewatering work areas, and approximately 100 sf of impacts to BVW due to vegetation clearing and minor grading associated with the culvert removal and bridge construction. Dredging is limited to the area needed for foundation construction and streambed restoration.

Three alternatives for the culvert replacement design options were evaluated were based on hydraulic performance,³ structure lifespan, environmental impacts, and cost.⁴ The proposed design of a 24-foot precast concrete rigid frame clear span bridge was selected as the preferred alternative because it meets the Massachusetts Stream and River Crossing Standards, is economical, carries low life-cycle costs, is easy to erect, requires little maintenance, has optimal hydraulic capacity and matches well with the geometric constraints of the site.

Mitigation measures include: construction sequencing, use of temporary coffer dams at the upstream and downstream limits of work, creation of isolated and dry work areas to avoid work in open or flowing waters, water control sequencing to bypass the stream flows of Wilder Brook around the work area, and the use of erosion and sediment controls to address pollutant discharges from upland areas.⁵ In situ BVW restoration and the creation of 1,500 sf

² Plans entitled: CITY OF GARDNER, MASSACHUSETTS KEYES ROAD OVER WILDER BROOK CULVERT REPLACEMENT PROJECT NO: G0384-T060 MASSDOT BRIDGE NO. G-01-025, BIN NO. CD5. Dated: JUNE 2022. 24 Sheets (the “Plans”).

³ See Plans: Appendix B -Hydraulic design Report, Revised May 2022, signed, stamped, and dated May 17, 2022, by David L. Azinheira, PE.

⁴ See Plans: Appendix D – Alternatives Analysis dated March 7, 2022.

⁵ See Plans: Sheets 7-9 construction Details

of new LUW following completion of the project are also proposed. Streambed restoration will restore aquatic and riparian habitat connectivity and enhance riverine function.

Rare Species and Wildlife Habitat: The Massachusetts Natural Heritage Atlas 15th Edition (August 1, 2021) and Massachusetts Geographic information System (MassGIS) interactive mapping tool were consulted during the planning and design of this project. According to these resources, the project site and surrounding area not situated within the limits of mapped Priority Habitats of Rare Species or Estimated habitats of Rare Wildlife.

Due Diligence Review: A due diligence review of the project area was conducted using MassDEP's BWSC Searchable Site online program and other historical resources. Three (3) reportable releases were identified within the watershed of the Project Site, as delineated by USGS StreamStats. The review showed that nearby state-listed waste or release sites are unlikely to have had an environmental impact for one of the following reasons: The age of the release and distance of the release from Wilder Brook rendered detectable environmental impacts unlikely, a permanent solution had been achieved, the listed site release had been closed out with MassDEP or the release was remediated in accordance with the requirements of the Massachusetts Contingency Plan (MCP).⁶

Sediment Chemistry Results: Two sediment samples were collected within the Wilder Brook on April 21, 2022 and analyzed to determine sediment characteristics in accordance with 314 CMR 9.07. The analytical results were compared to MassDEP's *Interim Policy for Sampling, Analysis, Handling and Tracking Requirements for Dredged Sediment Reuse and Disposal (COMM-94-007)*. All results were either non-detect or below the Reportable Concentration ("RC") S-1 criteria of the Massachusetts Contingency Plan ("MCP"), and thus are eligible for general upland use and disposal or reuse at unlined landfills.⁷

Public Notice: The Permit Application public notice was published in the Gardner News on June 30, 2022. No comments were received by MassDEP during the 21-day public comment period pursuant to 314 CMR 9.05(3)(e), which ended on July 21, 2022.

Section 61 Findings: Pursuant to M.G.L. Chapter 30, Section 61 to 62H inclusive [the Massachusetts Environmental Policy Act (MEPA)], the project, as referenced in the Water Quality Certification Application, DEP Application #22-WW08-0012 APP, did not meet or exceed a related MEPA review threshold pursuant to 301 CMR 11.03. Therefore, MEPA review is not required.

Therefore, based on information currently in the record, MassDEP grants a 401 WQC for this project subject to the following conditions to maintain or attain water quality, to minimize any damage to the environment that may result from

⁶ 401 WQC Application – Appendix E describes historic release details.

⁷ Application – Appendix E: Summary of Sediment Analytical Data. Table E-1

the project, and to ensure compliance with appropriate provisions of state law. MassDEP certifies that there is reasonable assurance the project or activity, as conditioned herein, will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other appropriate requirements of state law.

1. The contractor shall take all steps necessary to assure that the proposed activities will be conducted in a manner that will avoid violations of the anti-degradation provisions of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, that protect all waters, including wetlands.
2. Prior to the start of work, or for any portion of the work thereafter, MassDEP shall be notified of any change(s) in the proposed project or plans that may affect waters or wetlands. MassDEP will determine whether the change(s) requires a revision to this Certification.
3. All work shall be performed in accordance with the following documents and plans:
 - Plans entitled: CITY OF GARDNER, MASSACHUSETTS KEYES ROAD OVER WILDER BROOK CULVERT REPLACEMENT PROJECT NO: G0384-T060 MASSDOT BRIDGE NO. G-01-025, BIN NO. CD5. Various scales and dated: JUNE 2022. 24 Sheets - Permit Set Not for Construction (the "Plans").
 - Keyes Road Over Wilder Brook Culvert Replacement Gardner, Massachusetts: Application for 401 Water Quality Certification Gardner Department of Community Development and Planning June 2022 with Appendices A-G.
4. MassDEP shall be notified, attention Michael Stroman Michael.stroman@mass.gov, one week prior to the start of in-water work so that MassDEP staff may inspect the work for compliance with the terms and conditions of this 401 WQC.
5. The term of the 401 WQC remains in effect for the same duration as the federal permit that requires it.
6. During the project period, there shall be no discharge or spillage of fuel, oil or other pollutants, including sediments, onto any part of the site. The applicant shall take all reasonable precautions to prevent the release of pollutants by negligence, accident or vandalism. Pursuant to 314 CMR 9.05(4), this condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.
7. No later than four weeks after issuance of this 401 WQC, the applicant shall submit a notification procedure outlining the reporting process to MassDEP for incidents relating to dredging activities that impact surrounding resource areas and habitats including, but not limited to, observed dead or distressed fish or other aquatic organisms,

observed oily sheen on the surface of the water, a sediment spill, a turbidity plume beyond the deployed Best Management Practices (BMPs), and a barge or equipment accident/spill. If at any time during implementation of the project such an incident occurs, the applicant shall immediately notify MassDEP and all site related activities impacting the water shall cease until the source of the problem is identified and adequate mitigating measures are deployed to the satisfaction of MassDEP. In accordance with 314 CMR 9.09(1), this condition is necessary to protect water quality because it ensures that the project proponent is using proper monitoring and construction practices that will maintain the integrity of the site hydrology and maintain the aquatic resource functions and values.

8. Future maintenance dredging is not authorized under this Certification. As provided by 314 CMR 9.09(1), this condition is necessary to protect the public health and restore and maintain the chemical, physical, and biological integrity of the water resources of the Commonwealth.
9. All stream channel work shall be conducted “in the dry”. At least 30 days prior to commencement of the project, a signed and stamped dewatering plan shall be submitted to MassDEP for review and written approval. The dewatering plan shall be substantially consistent with the representations provided the Plans and shall address both stream channel dewatering and dredge sediment dewatering. At a minimum, the dewatering plan shall include, but not be limited to, the location of the dewatering area, the type of containment, method of dewatering (i.e., mechanical or by gravity), method of collecting the dewatered effluent, and method of disposal. Pursuant to 314 CMR 9.07(1), this condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.
10. BMPs shall be deployed to minimize turbidity during temporary cofferdam construction. At a minimum, silt curtain shall be used to control turbidity at the surrounding areas. Turbidity near the construction areas should be monitored during before, during, and after cofferdam construction to ensure that existing water quality standards are maintained. Turbidity monitoring data should be kept on site and available for MassDEP review upon request. Pursuant to 314 CMR 9.07(1), this condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.
11. Flow to the downstream channel shall be maintained throughout construction of the project. with a pump up-stream of the coffer dam, through a discharge hose, and discharged into a filter bag down-stream of the coffer dam into a sediment trap. As provided by 314 CMR 9.09(1), this condition is necessary to protect the public health and restore and maintain the chemical, physical, and biological integrity of the water resources of the Commonwealth.

12. During dredging operations, measures should be made to avoid the potential spread of aquatic invasive species to other waterbodies. The dredged material shall be loaded directly into the sediment dewatering area. Appropriate invasive species decontamination protocols should be reviewed and applied, as required. All vehicles, equipment and tools that have direct contact with invasive species should be cleaned before leaving the project areas. Pursuant to 314 CMR 9.07(1), this condition is necessary to protect the public health, restore site hydrology, maintain the aquatic resource functions, and the protect the chemical, physical, and biological integrity of the water resources of the Commonwealth.
13. Upon completion of construction, the water management measures (i.e., coffer dam removal) shall be conducted in a manner to gradually reintroduce natural channel stream flow. By-pass pumping shall be maintained for approximately 50% of the stream discharge until approximately 50% of the stream discharge is flowing through the work area. Once 50% stream flow is established and contiguous through the work area, by-pass pumping around the work area may cease. Pursuant to 314 CMR 9.07(1), this condition is necessary to protect the public health, restore site hydrology, maintain the aquatic resource functions, and the protect the chemical, physical, and biological integrity of the water resources of the Commonwealth.
14. All equipment/machinery shall be stored above the Mean Annual High-Water Line (MAHWL) and outside any wetland resource areas when not in use. Pursuant to 314 CMR 9.06(1), this condition is necessary to avoid and minimize adverse construction impacts to wetlands and waters of the Commonwealth.
15. If oil and/or hazardous materials are identified during the implementation of this project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.00) must be made to the Department. If necessary, a Licensed Site Professional (LSP) shall be retained to determine if notification is required and if need be, to render appropriate opinions. The LSP shall evaluate whether risk reduction measures are necessary if contamination is present. Pursuant to 314 CMR 9.07(1), this condition ensures that any hazardous materials detected on the project site are promptly and properly mitigated in order to not degrade water quality.
16. If the sediment is to be transported off site, Best Management Practices (“BMPs”) shall be implemented during transportation of the dredged material to the licensed receiving facility. At a minimum, when transported upon public roadways, all dredged material shall have no free liquid as determined by the Paint Filter Test or other suitably analogous methodology acceptable to MassDEP, and a tarpaulin or other means shall be used to cover the dredged material during transport. Pursuant to 314 CMR 9.09(1), this condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.

17. If the sediment is to be transported off site, MassDEP shall be notified in writing of the name and location of the upland licensed facility accepting the dredged material for disposal or reuse as daily cover material. If the licensed facility is located out of state, documentation shall be provided to MassDEP that the dredged material disposal/reuse has been approved and will be accepted by the receiving state in accordance with 314 CMR 9.07(13)(b). The dredged material shall not be transported to the facility without concurrence of MassDEP. Pursuant to 314 CMR 9.07(1), this condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.
18. If the sediment is to be transported off site, a Material Shipping Record (“MSR”) shall be used to track the dredged material to the licensed upland facility. A fully executed copy of the MSR shall be provided to MassDEP within 30 days of final shipment to the reuse location or facility. Pursuant to 314 CMR 9.07(1), this condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.
19. Within 30 days of the completion of dredging, photographs of the affected areas depicting post-dredge conditions shall be taken and submitted to MassDEP. Pursuant to 314 CMR 9.07(1), this condition is necessary to ensure that construction practices have been implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.
20. This Certification does not relieve the applicant of the obligation to comply with other appropriate state or federal statutes or regulations. The Department shall be notified of any changes made to the project as described in previously submittals or changes resulting from subsequent Wetlands Protection Act Notice of Intent and Chapter 91 Waterways applications. Pursuant to 314 CMR 9.01(3), this condition is necessary to assure that any discharge from the project complies with the Massachusetts Surface Water Quality Standards, as provided in 314 CMR 4.00, to protect the public health and restore and maintain the chemical, physical, and biological integrity of the water resources of the Commonwealth.
21. All communications with the Department shall be directed to the attention of Michael Stroman at Michael.Stroman@mass.gov,

Failure to comply with this 401 WQC is grounds for enforcement, including civil and criminal penalties, under M.G.L. c. 21, § 42, 314 CMR 9.00, M.G.L. c. 21A, § 16, 310 CMR 5.00, or other possible actions/penalties as authorized by the General Laws of the Commonwealth.

This 401 WQC does not relieve the applicant of the obligation to comply with other appropriate state or federal statutes or regulations. Any changes made to the project as described in the previously submitted Permit Application or supplemental documents will require further notification to and, if an amendment is required, approval by MassDEP.

NOTICE OF APPEAL RIGHTS

Certain persons shall have a right to request an adjudicatory hearing concerning 401 WQCs by MassDEP when an application is required:

- a. the applicant or property owner;
- b. any person aggrieved by the decision who has submitted written comments during the public comment period;
- c. any ten persons of the Commonwealth pursuant to M.G.L. c. 30A where a group member has submitted written comments during the public comment period; or
- d. any governmental body or private organization with a mandate to protect the environment, which has submitted written comments during the public comment period.

Any person aggrieved, any ten persons of the Commonwealth, or a governmental body or private organization with a mandate to protect the environment may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activity and not apparent at the time of public notice. To request an adjudicatory hearing pursuant to M.G.L. c. 30A, § 10, a Notice of Claim must be made in writing, provided that the request is made by certified mail or hand delivery to MassDEP, with the appropriate filing fee specified within 310 CMR 4.10 along with a DEP Fee Transmittal Form within 21 days from the date of issuance of this Certificate.

Case Administrator
Department of Environmental Protection
One Winter Street, 2nd Floor
Boston, MA 02108

A copy of the request shall at the same time be sent by certified mail or hand delivery to the issuing office of the Wetlands and Waterways Program at:

Department of Environmental Protection
One Winter Street, 5th Floor
Boston, MA 02108

A Notice of Claim for Adjudicatory Hearing shall comply with MassDEP's Rules for Adjudicatory Proceedings, 310 CMR 1.01(6), and shall contain the following information pursuant to 314 CMR 9.10(3):

- a. the Combined Permit Transmittal Number;
- b. the complete name of the applicant and address of the project;

- c. the complete name, address, and fax and telephone numbers of the party filing the request, and, if represented by counsel or other representative, the name, fax and telephone numbers, and address of the attorney;
- d. if claiming to be a party aggrieved, the specific facts that demonstrate that the party satisfies the definition of “aggrieved person” found at 314 CMR 9.02;
- e. a clear and concise statement that an adjudicatory hearing is being requested;
- f. a clear and concise statement of (1) the facts which are grounds for the proceedings, (2) the objections to this Certificate, including specifically the manner in which it is alleged to be inconsistent with the MassDEP’s Water Quality Regulations, 314 CMR 9.00, and (3) the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written 401 WQC; and
- g. a statement that a copy of the request has been sent by certified mail or hand delivery to the applicant, the owner (if different from the applicant), the conservation commission of the city or town where the activity will occur, the Department of Conservation and Recreation (when the certificate concerns projects in Areas of Critical Environmental Concern), the public or private water supplier where the project is located (when the certificate concerns projects in Outstanding Resource Waters), and any other entity with responsibility for the resource where the project is located.

The hearing request along with a DEP Fee Transmittal Form and a valid check or money order payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
PO Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. MassDEP may waive the adjudicatory hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

Should you have any questions relative to this Combined 401 WQC, please contact Michael Stroman Michael.stroman@gmail.com.

Sincerely,

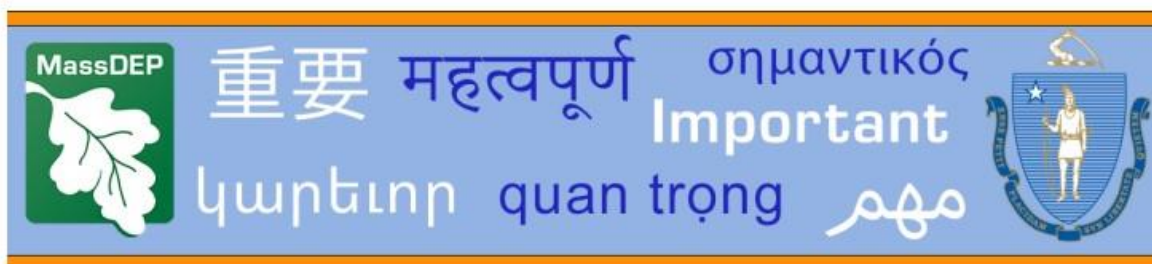
A handwritten signature in black ink, appearing to read 'Lisa Rhodes', is centered below the word 'Sincerely,'.

Lisa Rhodes
Wetlands Program Chief

ecc:

Greg Dumas, Chairman, gdumas@gardner-ma.gov
Trevor Beauregard, Gardner Redevelopment Authority tbeauregard@gardner-ma.gov
Emmett Lollis-Taylor, Tighe and Bond Consultants, Elollis-taylor@tighebond.com
Judith Schmitz, MassDEP Central Regional Office Judith.Schmitz@mass.gov
Paul Maniccia, U.S. Army Corps of Engineers paul.m.maniccia@usace.army.mil
Edward Reiner, USEPA. Reiner.edward@epa.gov
Todd Richards, DFW – Westborough todd.richards@mass.gov

Attachments: Communication for Non-English Speaking Parties document



Communication for Non-English-Speaking Parties

English

This document is important and should be translated immediately.
If you need this document translated, please contact MassDEP's Diversity Director at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido de inmediato. Si necesita este documento traducido, comuníquese con la Directora de Diversidad de MassDEP al número de teléfono que aparece más abajo.

Português Portuguese

Este é um documento importante e deve ser traduzido imediatamente. Se precisar de uma tradução deste documento, entre em contato com o Diretor de Diversidade da MassDEP nos números de telefone listados abaixo.

繁體中文 Chinese Traditional

本文件非常重要，應立即翻譯。如果您需要翻譯這份文件，請用下面列出的電話號碼聯絡 MassDEP 多元化負責人。

简体中文 Chinese Simplified

本文件非常重要，应立即翻译。如果您需要翻译这份文件，请用下面列出的电话号码与 MassDEP 的多元化主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradwi l imedyatman. Si ou bezwen dokiman sa a tradwi, tanpri kontakte Direktè Divèsite MassDEP la nan nimewo telefòn endike anba.

Việt Vietnamese

Tài liệu này rất quan trọng và cần được dịch ngay lập tức. Nếu quý vị cần dịch tài liệu này, xin liên lạc với Giám đốc Đa dạng của MassDEP theo các số điện thoại ghi dưới đây.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះគឺសំខាន់ហើយត្រូវបានបកប្រែភ្លាមៗ។ ប្រសិនបើអ្នកត្រូវការឱ្យគេបកប្រែឯកសារនេះ

សូមទាក់ទងមកនាយកដ្ឋានពិធីកម្មរបស់ MassDEP តាមលេខទូរស័ព្ទខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Kel dokumentu li é inportáti y debe ser traduzidu imidiamenti. Se bu meste di kel dokumentu traduzidu, pur favor kontakta Diretor di Diversidádi di MassDEP na numeru abaxu indikadu.

Contact **Glynis L. Bugg, Acting Diversity Director/Civil Rights** 857-262-0606
Massachusetts Department of Environmental Protection
One Winter Street, Boston MA 02108

TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>
(Version revised 7.22.2022) 310 CMR 1.03(5)(a)

Русский Russian

Это важный документ, и он должен быть безотлагательно переведен. Если вам нужен перевод данного документа, пожалуйста, свяжитесь с директором по вопросам многообразия (Diversity Director) компании MassDEP по указанному ниже телефону.

العربية Arabic

هذه الوثيقة مهمة ويجب ترجمتها على الفور. إذا كنت بحاجة إلى هذه الوثيقة مترجمة، يرجى الاتصال بمدير التنوع PMassDE على أرقام الهواتف المدرجة أدناه.

한국어 Korean

이 문서는 중요하고 즉시 번역해야 합니다. 이 문서의 번역이 필요하시다면, 아래의 전화 번호로 MassDEP의 다양성 담당 이사에 문의하시기 바랍니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է և պետք է անմիջապես թարգմանվի:
Եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանել, դիմեք MassDEP-ի բազմազանության տնօրենին ստորև նշված հեռախոսահամարով:

فارسی Farsi Persian

این سند مهم است و باید فوراً ترجمه شود.
اگر به ترجمه این سند نیاز دارید، لطفاً با مدیر بخش تنوع نژادی MassDEP به شماره تلفن ذکر شده در زیر تماس بگیرید.

Français French

Ce document est important et devrait être traduit immédiatement. Si vous avez besoin de ce document traduit, veuillez communiquer avec le directeur de la diversité MassDEP aux numéros de téléphone indiqués ci-dessous.

Deutsch German

Dieses Dokument ist wichtig und sollte sofort übersetzt werden. Sofern Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an den Diversity Director MassDEP unter der unten aufgeführten Telefonnummer.

Ελληνική Greek

Το παρόν έγγραφο είναι σημαντικό και θα πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του παρόντος εγγράφου, παρακαλούμε επικοινωνήστε με τον Διευθυντή Διαφορετικότητας του MassDEP στους αριθμούς τηλεφώνου που αναγράφονται παρακάτω.

Italiano Italian

Comunicazione per parti che non parlano inglese. Questo documento è importante e dovrebbe essere tradotto immediatamente. Se avete bisogno di questo documento tradotto, potete contattare il Direttore di Diversità di MassDEP al numero di telefono elencato di seguito.

Język Polski Polish

Dokument ten jest ważny i powinien zostać natychmiast przetłumaczony. Jeśli potrzebujesz przetłumaczonej wersji dokumentu, prosimy o kontakt z dyrektorem ds. różnorodności MassDEP pod jednym z numerów telefonu wymienionych poniżej.

हिन्दी Hindi

यह दस्तावेज़ महत्वपूर्ण है और इसका तुरंत अनुवाद किया जाना चाहिए. यदि आपको इस दस्तावेज़ का अनुवाद करने की आवश्यकता है, तो कृपया नीचे सूचीबद्ध टेलीफोन नंबरों पर मासडेपस डाइवर्सिटी के निदेशक से संपर्क करें.

Contact Glynis L. Bugg, Acting Diversity Director/Civil Rights 857-262-0606
Massachusetts Department of Environmental Protection
One Winter Street, Boston MA 02108

TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>
(Version revised 7.22.2022) 310 CMR 1.03(5)(a)



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

MAURA HEALEY
Governor
KIM DRISCOLL
Lt. Governor

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

LAUREN JONES
Secretary
MICHAEL FLANAGAN
Director

Awarding Authority:	Gardner	City/Town:	GARDNER
Wage Request No:	20260921194546	Job Location:	Keyes Rd, Gardner, MA
Description of Work:	Full demolition of an existing CMP culvert and existing road surface and sidewalk in the surrounding area. Installation of 24 foot span bridge structure with new walkway and road surfaces.		
Contract Number:	2027-011		

§§ 26-27D Construction Project

This Prevailing Wage Schedule establishes the minimum wage rates that employees on this public works construction project must be paid. The project's Wage Request Number is listed above and on all pages of this Schedule. This schedule applies **only** to this specific project.

Awarding Authority Responsibilities

- You must include this Prevailing Wage Schedule (PWS) or an appropriate reference to it in all advertisements and calls for bids.
- The PWS must be incorporated in its entirety into all contracts for this project (G.L. c. 149, § 27).
- The wage rates on this PWS will remain in effect for the duration of the project. **Exception:** You must request an updated schedule for any multi-year construction project no later than 2 weeks before the project's yearly anniversary date.
 - For CM AT RISK projects, the anniversary date is the earlier of the signing date of: (a) the GMP Amendment; or (b) the first amendment to permit procurement of construction services.
 - For all other construction projects, the anniversary date is the date the contract was signed by the Awarding Authority and the General Contractor.
- You must also request an updated PWS if you have not opened bids or selected a contractor within 90 days of the date of issuance on this PWS.
 - For CM AT RISK projects, the earlier of (a) the signing date of the GMP Amendment; or (b) the bid for the first construction scope of work must be within 90 days of the date of issuance on this Schedule.
- You must provide any updated PWS to all contractors working on the project, including general and sub-contractors.
- You must keep the contractors' weekly certified payroll records and Statements of Compliance on file for **3 years**.
- Awarding authorities have other prevailing wage responsibilities not listed above. Learn more at: [\[Prevailing wage: for awarding authorities | Mass.gov\]](#) and G.L. c. 149, §§ 26-27D.

Contractor Responsibilities

- You must pay all employees who perform construction work on this project at least the wage rate listed on this PWS. **Warning!** If you do not follow this requirement, you can face civil fines, criminal charges, or private lawsuits.
- You must post this PWS at the worksite where it can be easily seen. (G.L. c. 149, § 27)
- You must file weekly payroll reports and a Statement of Compliance with the awarding authority (**not** DLS). You can file payroll reports by mail or email and must keep them on file for 3 years. Each weekly payroll report must include each employee's name, address, occupational classification(s), hours worked, and wages paid. Find a sample report at: mass.gov/dols/pw.
- You cannot pay any employees at the apprentice rates listed on this PWS unless they are registered with the Massachusetts Division of Apprentice Standards (DAS). Qualifying apprentices must be paid at the applicable step rate and must carry their apprentice ID card during all work hours on the project. Apprentices **not** registered with DAS must be paid at the listed journeyworker's rate, even if they are registered with a different federal/state public agency or private entity. For every week in which apprentice rates are paid, a copy of each apprentice's apprentice ID card issued by DAS shall be attached to the certified payroll records.
- If you don't know what classification or rate applies to the work being performed, you must ask DLS; paying the wrong rate subjects you to enforcement.
- Please contact DLS if you have any questions about the Prevailing Wage Schedule: (617) 626-6953 or DLS.Feedback@mass.gov

Employees who are **not** paid the wage listed on the Prevailing Wage Schedule (PWS) may file a complaint with the Attorney General's Fair Labor

Division: www.mass.gov/ago/fld; (617) 727-3465.

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
(2 AXLE) DRIVER - EQUIPMENT	6/1/2026	\$41.95	\$16.17	\$21.78	\$0.00	\$0.00	\$79.90
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$41.95	\$16.17	\$23.52	\$0.00	\$0.00	\$81.64
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$41.95	\$16.77	\$23.52	\$0.00	\$0.00	\$82.24
(3 AXLE) DRIVER - EQUIPMENT	6/1/2026	\$42.02	\$16.17	\$21.78	\$0.00	\$0.00	\$79.97
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.02	\$16.17	\$23.52	\$0.00	\$0.00	\$81.71
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.02	\$16.77	\$23.52	\$0.00	\$0.00	\$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT	6/1/2026	\$42.14	\$16.17	\$21.78	\$0.00	\$0.00	\$80.09
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.14	\$16.17	\$23.52	\$0.00	\$0.00	\$81.83
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.14	\$16.77	\$23.52	\$0.00	\$0.00	\$82.43
ADS/SUBMERSIBLE PILOT	8/1/2024	\$117.16	\$10.08	\$11.62	\$12.67	\$0.00	\$151.53
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							
For apprentice rates see "Apprentice- PILE DRIVER"							
AIR TRACK OPERATOR	6/1/2026	\$42.41	\$10.90	\$9.75	\$9.11	\$0.00	\$72.17
LABORERS	12/1/2026	\$43.85	\$10.90	\$9.75	\$9.11	\$0.00	\$73.61
LABORERS - ZONE 2	6/1/2027	\$45.30	\$10.90	\$9.75	\$9.11	\$0.00	\$75.06
	12/1/2027	\$46.75	\$10.90	\$9.75	\$9.11	\$0.00	\$76.51
	6/1/2028	\$48.25	\$10.90	\$9.75	\$9.11	\$0.00	\$78.01
	12/1/2028	\$49.75	\$10.90	\$9.75	\$9.11	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
AIR TRACK OPERATOR (HEAVY & HIGHWAY)	6/1/2026	\$42.41	\$10.90	\$9.75	\$9.21	\$0.00	\$72.27
LABORERS	12/1/2026	\$43.85	\$10.90	\$9.75	\$9.21	\$0.00	\$73.71
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASBESTOS WORKER (PIPES & TANKS)	12/1/2025	\$44.80	\$14.50	\$4.30	\$6.75	\$0.00	\$70.35
HEAT & FROST INSULATORS LOCAL 6							
HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)							
ASPHALT RAKER	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
LABORERS - ZONE 2	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
ASPHALT RAKER (HEAVY & HIGHWAY)	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.21	\$0.00	\$71.77
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.21	\$0.00	\$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	6/1/2026	\$59.38	\$17.05	\$13.35	\$3.25	\$0.00	\$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.83	\$17.05	\$13.35	\$3.25	\$0.00	\$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER	6/1/2026	\$59.38	\$17.05	\$13.35	\$3.25	\$0.00	\$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.83	\$17.05	\$13.35	\$3.25	\$0.00	\$94.48
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

BARCO-TYPE JUMPING TAMPER	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
LABORERS - ZONE 2	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

BLOCK PAVER, RAMMER / CURB SETTER	6/1/2026	\$42.41	\$10.90	\$9.75	\$9.11	\$0.00	\$72.17
LABORERS	12/1/2026	\$43.85	\$10.90	\$9.75	\$9.11	\$0.00	\$73.61
LABORERS - ZONE 2	6/1/2027	\$45.30	\$10.90	\$9.75	\$9.11	\$0.00	\$75.06
	12/1/2027	\$46.75	\$10.90	\$9.75	\$9.11	\$0.00	\$76.51
	6/1/2028	\$48.25	\$10.90	\$9.75	\$9.11	\$0.00	\$78.01
	12/1/2028	\$49.75	\$10.90	\$9.75	\$9.11	\$0.00	\$79.51

For apprentice rates see "Apprentice- LABORER"

BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	6/1/2026	\$42.41	\$10.90	\$9.75	\$9.21	\$0.00	\$72.27
LABORERS	12/1/2026	\$43.85	\$10.90	\$9.75	\$9.21	\$0.00	\$73.71
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							

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

BOILER MAKER	1/1/2024	\$48.12	\$7.07	\$14.60	\$6.00	\$0.00	\$75.79
BOILERMAKERS LOCAL 29							
BOILERMAKERS LOCAL 29							

Apprentice: BOILER MAKER**Effective Date: 1/1/2024**

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

Apprentice to Journeyworker Ratio: 1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	8/1/2026	\$68.01	\$12.84	\$15.57	\$7.33	\$0.00	\$103.75
BRICKLAYERS LOCAL 3	2/1/2027	\$69.41	\$12.84	\$15.57	\$7.33	\$0.00	\$105.15
BRICKLAYERS LOCAL 3 (LOWELL)							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) Effective Date: 8/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.01	\$12.84	\$15.57	\$7.33	\$0.00	\$69.75
2	60.00	\$40.81	\$12.84	\$15.57	\$7.33	\$0.00	\$76.55
3	70.00	\$47.61	\$12.84	\$15.57	\$7.33	\$0.00	\$83.35
4	80.00	\$54.41	\$12.84	\$15.57	\$7.33	\$0.00	\$90.15
5	90.00	\$61.21	\$12.84	\$15.57	\$7.33	\$0.00	\$96.95
Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) Effective Date: 2/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.71	\$12.84	\$15.57	\$7.33	\$0.00	\$70.45
2	60.00	\$41.65	\$12.84	\$15.57	\$7.33	\$0.00	\$77.39
3	70.00	\$48.59	\$12.84	\$15.57	\$7.33	\$0.00	\$84.33
4	80.00	\$55.53	\$12.84	\$15.57	\$7.33	\$0.00	\$91.27
5	90.00	\$62.47	\$12.84	\$15.57	\$7.33	\$0.00	\$98.21
Apprentice to Journeyworker Ratio: 1:5							
BULLDOZER/GRADER/SCRAPER	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN	6/1/2026	\$50.40	\$10.90	\$9.75	\$9.80	\$0.00	\$80.85
LABORERS	12/1/2026	\$51.90	\$10.90	\$9.75	\$9.80	\$0.00	\$82.35
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER	6/1/2026	\$49.25	\$10.90	\$9.75	\$9.80	\$0.00	\$79.70
LABORERS	12/1/2026	\$50.75	\$10.90	\$9.75	\$9.80	\$0.00	\$81.20
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN	6/1/2026	\$49.58	\$10.90	\$9.75	\$9.80	\$0.00	\$80.03
LABORERS	12/1/2026	\$51.08	\$10.90	\$9.75	\$9.80	\$0.00	\$81.53
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
LABORERS - ZONE 2	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

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

Apprentice: CARPENTER							
Effective Date: 9/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$23.45	\$11.08	\$0.00	\$1.73	\$0.00	\$36.26
2	45.00	\$23.45	\$11.08	\$0.00	\$1.73	\$0.00	\$36.26
3	55.00	\$28.66	\$11.08	\$0.00	\$3.40	\$0.00	\$43.14
4	55.00	\$28.66	\$11.08	\$0.00	\$3.40	\$0.00	\$43.14
5	70.00	\$36.47	\$11.08	\$11.41	\$5.10	\$0.00	\$64.06
6	70.00	\$36.47	\$11.08	\$11.41	\$5.10	\$0.00	\$64.06
7	80.00	\$41.68	\$11.08	\$11.44	\$6.80	\$0.00	\$71.00
8	80.00	\$41.68	\$11.08	\$11.44	\$6.80	\$0.00	\$71.00

Apprentice: CARPENTER							
Effective Date: 3/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$24.01	\$11.08	\$0.00	\$1.73	\$0.00	\$36.82
2	45.00	\$24.01	\$11.08	\$0.00	\$1.73	\$0.00	\$36.82
3	55.00	\$29.34	\$11.08	\$0.00	\$3.40	\$0.00	\$43.82
4	55.00	\$29.34	\$11.08	\$0.00	\$3.40	\$0.00	\$43.82
5	70.00	\$37.35	\$11.08	\$11.41	\$5.10	\$0.00	\$64.94
6	70.00	\$37.35	\$11.08	\$11.41	\$5.10	\$0.00	\$64.94
7	80.00	\$42.68	\$11.08	\$11.44	\$6.80	\$0.00	\$72.00
8	80.00	\$42.68	\$11.08	\$11.44	\$6.80	\$0.00	\$72.00

Apprentice to Journeyworker Ratio: 1:5

CARPENTER WOOD FRAME	10/1/2025	\$27.37	\$7.38	\$4.47	\$1.00	\$0.00	\$40.22
CARPENTERS	10/1/2026	\$28.47	\$7.38	\$4.47	\$1.00	\$0.00	\$41.32
CARPENTERS-ZONE 3 (Wood Frame)							

All Aspects of New Wood Frame Work

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$16.42	\$7.38	\$0.00	\$0.00	\$0.00	\$23.80
2	60.00	\$16.42	\$7.38	\$0.00	\$0.00	\$0.00	\$23.80
3	65.00	\$17.79	\$7.38	\$0.00	\$1.00	\$0.00	\$26.17
4	70.00	\$19.16	\$7.38	\$0.00	\$1.00	\$0.00	\$27.54
5	75.00	\$20.53	\$7.38	\$3.80	\$1.00	\$0.00	\$32.71
6	80.00	\$21.90	\$7.38	\$3.80	\$1.00	\$0.00	\$34.08

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2025							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
7	85.00	\$23.26	\$7.38	\$3.80	\$1.00	\$0.00	\$35.44
8	90.00	\$24.63	\$7.38	\$3.80	\$1.00	\$0.00	\$36.81

Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$17.08	\$7.38	\$0.00	\$0.00	\$0.00	\$24.46
2	60.00	\$17.08	\$7.38	\$0.00	\$0.00	\$0.00	\$24.46
3	65.00	\$18.51	\$7.38	\$0.00	\$1.00	\$0.00	\$26.89
4	70.00	\$19.93	\$7.38	\$0.00	\$1.00	\$0.00	\$28.31
5	75.00	\$21.35	\$7.38	\$3.80	\$1.00	\$0.00	\$33.53
6	80.00	\$22.78	\$7.38	\$3.80	\$1.00	\$0.00	\$34.96
7	85.00	\$24.20	\$7.38	\$3.80	\$1.00	\$0.00	\$36.38
8	90.00	\$25.62	\$7.38	\$3.80	\$1.00	\$0.00	\$37.80

Apprentice to Journeyworker Ratio: 1:5

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

Apprentice: CEMENT MASONRY/PLASTERING							
Effective Date: 7/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$27.25	\$13.35	\$16.43	\$0.00	\$0.00	\$57.03
2	60.00	\$32.69	\$13.35	\$16.43	\$7.78	\$1.80	\$72.05
3	65.00	\$35.42	\$13.35	\$16.43	\$7.78	\$1.80	\$74.78
4	70.00	\$38.14	\$13.35	\$16.43	\$7.78	\$1.80	\$77.50
5	75.00	\$40.87	\$13.35	\$16.43	\$7.78	\$1.80	\$80.23
6	80.00	\$43.59	\$13.35	\$16.43	\$7.78	\$1.80	\$82.95
7	90.00	\$49.04	\$13.35	\$16.43	\$7.78	\$0.00	\$86.60

Apprentice: CEMENT MASONRY/PLASTERING							
Effective Date: 1/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$27.97	\$13.35	\$16.43	\$0.00	\$0.00	\$57.75
2	60.00	\$33.56	\$13.35	\$16.43	\$7.78	\$1.80	\$72.92

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CEMENT MASONRY/PLASTERING Effective Date: 1/1/2027							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
3	65.00	\$36.36	\$13.35	\$16.43	\$7.78	\$1.80	\$75.72
4	70.00	\$39.16	\$13.35	\$16.43	\$7.78	\$1.80	\$78.52
5	75.00	\$41.96	\$13.35	\$16.43	\$7.78	\$1.80	\$81.32
6	80.00	\$44.75	\$13.35	\$16.43	\$7.78	\$1.80	\$84.11
7	90.00	\$50.35	\$13.35	\$16.43	\$0.00	\$0.00	\$80.13
Apprentice to Journeyworker Ratio: 1:5							
CHAIN SAW OPERATOR	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
LABORERS - ZONE 2	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	6/1/2026	\$60.61	\$17.05	\$13.35	\$3.25	\$0.00	\$94.26
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$62.09	\$17.05	\$13.35	\$3.25	\$0.00	\$95.74
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
COMPRESSOR OPERATOR	6/1/2026	\$37.63	\$17.05	\$13.35	\$3.25	\$0.00	\$71.28
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$38.58	\$17.05	\$13.35	\$3.25	\$0.00	\$72.23
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DELEADER (BRIDGE)	1/1/2026	\$59.56	\$10.35	\$12.00	\$12.60	\$0.00	\$94.51
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							
Apprentice: DELEADER (BRIDGE) Effective Date: 1/1/2026							
		Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$29.78	\$10.35	\$0.00	\$0.00	\$0.00	\$40.13
2	55.00	\$32.76	\$10.35	\$0.00	\$6.93	\$0.00	\$50.04
3	60.00	\$35.74	\$10.35	\$0.00	\$7.56	\$0.00	\$53.65
4	65.00	\$38.71	\$10.35	\$0.00	\$8.19	\$0.00	\$57.25
5	70.00	\$41.69	\$10.35	\$12.00	\$8.82	\$0.00	\$72.86
6	75.00	\$44.67	\$10.35	\$12.00	\$9.45	\$0.00	\$76.47
7	80.00	\$47.65	\$10.35	\$12.00	\$10.08	\$0.00	\$80.08
8	90.00	\$53.60	\$10.35	\$12.00	\$11.34	\$0.00	\$87.29
Apprentice to Journeyworker Ratio: 1:1							
DEMO: ADZEMAN	6/1/2026	\$49.30	\$10.90	\$9.75	\$9.65	\$0.00	\$79.60

Construction

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DIVER	8/1/2024	\$78.11	\$10.08	\$11.62	\$12.67	\$0.00	\$112.48
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A \$69.83, 3A \$91.79,4A \$102.14 Total Rate							
DIVER TENDER	8/1/2024	\$51.97	\$10.08	\$11.62	\$12.67	\$0.00	\$86.34
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A \$54.20, 3A \$73.93,4A \$82.05 Total Rate							
DIVER TENDER (EFFLUENT)	8/1/2024	\$83.69	\$10.08	\$11.62	\$12.67	\$0.00	\$118.06
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							
For apprentice rates see "Apprentice- PILE DRIVER"							
DIVER/SLURRY (EFFLUENT)	8/1/2024	\$117.16	\$10.08	\$11.62	\$12.67	\$0.00	\$151.53
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							
For apprentice rates see "Apprentice- PILE DRIVER"							
DRAWBRIDGE OPERATOR (Construction)	7/1/2020	\$26.77	\$6.67	\$3.93	\$0.00	\$0.16	\$37.53
DRAWBRIDGE - SEIU LOCAL 888							
DRAWBRIDGE - SEIU LOCAL 888							
ELECTRICIAN	9/6/2026	\$49.38	\$15.96	\$14.57	\$5.43	\$0.00	\$85.34
ELECTRICIANS LOCAL 96							
ELECTRICIANS LOCAL 96							

Apprentice: ELECTRICIAN							
Effective Date: 9/6/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$19.75	\$15.96	\$0.59	\$0.00	\$0.00	\$36.30
2	45.00	\$22.22	\$15.96	\$0.67	\$0.00	\$0.00	\$38.85
3	48.00	\$23.70	\$15.96	\$13.80	\$2.61	\$0.00	\$56.07
4	55.00	\$27.16	\$15.96	\$13.90	\$2.99	\$0.00	\$60.01
5	65.00	\$32.10	\$15.96	\$14.05	\$3.53	\$0.00	\$65.64
6	80.00	\$39.50	\$15.96	\$14.28	\$4.35	\$0.00	\$74.09

Apprentice to Journeyworker Ratio: 2:3

ELEVATOR CONSTRUCTOR	1/1/2026	\$69.23	\$16.38	\$11.06	\$10.70	\$0.00	\$107.37
ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2027	\$72.23	\$16.48	\$11.16	\$11.00	\$0.00	\$110.87
ELEVATOR CONSTRUCTORS LOCAL 41							

Apprentice: ELEVATOR CONSTRUCTOR							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.62	\$16.38	\$0.00	\$0.00	\$0.00	\$51.00

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: ELEVATOR CONSTRUCTOR							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
2	55.00	\$38.08	\$16.38	\$11.06	\$10.70	\$0.00	\$76.22
3	65.00	\$45.00	\$16.38	\$11.06	\$10.70	\$0.00	\$83.14
4	70.00	\$48.46	\$16.38	\$11.06	\$10.70	\$0.00	\$86.60
5	80.00	\$55.38	\$16.38	\$11.06	\$10.70	\$0.00	\$93.52
Apprentice: ELEVATOR CONSTRUCTOR							
Effective Date: 1/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$36.12	\$16.48	\$0.00	\$0.00	\$0.00	\$52.60
2	55.00	\$39.73	\$16.48	\$11.16	\$11.00	\$0.00	\$78.37
3	65.00	\$46.95	\$16.48	\$11.16	\$11.00	\$0.00	\$85.59
4	70.00	\$50.56	\$16.48	\$11.16	\$11.00	\$0.00	\$89.20
5	80.00	\$57.78	\$16.48	\$11.16	\$11.00	\$0.00	\$96.42
Apprentice to Journeyworker Ratio: 1:1							
ELEVATOR CONSTRUCTOR HELPER	1/1/2026	\$48.46	\$16.38	\$11.06	\$10.70	\$0.00	\$86.60
ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2027	\$50.56	\$16.48	\$11.16	\$11.00	\$0.00	\$89.20
ELEVATOR CONSTRUCTORS LOCAL 41							
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.21	\$0.00	\$71.77
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.21	\$0.00	\$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY	5/1/2026	\$54.40	\$16.55	\$13.35	\$3.25	\$0.00	\$87.55
OPERATING ENGINEERS LOCAL 4	11/1/2026	\$55.69	\$16.55	\$13.35	\$3.25	\$0.00	\$88.84
OPERATING ENGINEERS LOCAL 4	5/1/2027	\$57.12	\$16.55	\$13.35	\$3.25	\$0.00	\$90.27
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY	5/1/2026	\$56.02	\$16.55	\$13.35	\$3.25	\$0.00	\$89.17
OPERATING ENGINEERS LOCAL 4	11/1/2026	\$57.32	\$16.55	\$13.35	\$3.25	\$0.00	\$90.47
OPERATING ENGINEERS LOCAL 4	5/1/2027	\$58.77	\$16.55	\$13.35	\$3.25	\$0.00	\$91.92
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY	5/1/2026	\$26.28	\$16.55	\$13.35	\$3.25	\$0.00	\$59.43
OPERATING ENGINEERS LOCAL 4	11/1/2026	\$27.04	\$16.55	\$13.35	\$3.25	\$0.00	\$60.19
OPERATING ENGINEERS LOCAL 4	5/1/2027	\$27.89	\$16.55	\$13.35	\$3.25	\$0.00	\$61.04
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIRE ALARM INSTALLER	9/6/2026	\$49.38	\$15.96	\$14.57	\$5.43	\$0.00	\$85.34
ELECTRICIANS LOCAL 96							
ELECTRICIANS LOCAL 96							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINT/COMMISSIONING ELECTRICIANS LOCAL 96	9/6/2026	\$49.38	\$15.96	\$14.57	\$5.43	\$0.00	\$85.34
ELECTRICIANS LOCAL 96							
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIREMAN (ASST. ENGINEER)	6/1/2026	\$47.55	\$17.05	\$13.35	\$3.25	\$0.00	\$81.20
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$48.73	\$17.05	\$13.35	\$3.25	\$0.00	\$82.38
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2026	\$29.21	\$10.90	\$9.75	\$9.21	\$0.00	\$59.07
LABORERS	12/1/2026	\$29.21	\$10.90	\$9.75	\$9.21	\$0.00	\$59.07
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FLOORCOVERER	3/1/2024	\$48.93	\$10.33	\$11.47	\$8.80	\$0.00	\$79.53
FLOORCOVERERS LOCAL 2168							
FLOORCOVERERS LOCAL 2168 ZONE II							

Apprentice: FLOORCOVERER**Effective Date: 3/1/2024**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.47	\$10.33	\$0.00	\$1.76	\$0.00	\$36.56
2	55.00	\$26.91	\$10.33	\$0.00	\$1.76	\$0.00	\$39.00
3	60.00	\$29.36	\$10.33	\$0.00	\$3.52	\$0.00	\$43.21
4	65.00	\$31.80	\$10.33	\$0.00	\$3.52	\$0.00	\$45.65
5	70.00	\$34.25	\$10.33	\$11.47	\$5.28	\$0.00	\$61.33
6	75.00	\$36.70	\$10.33	\$11.47	\$5.28	\$0.00	\$63.78
7	80.00	\$39.14	\$10.33	\$11.47	\$7.04	\$0.00	\$67.98
8	85.00	\$41.59	\$10.33	\$11.47	\$7.04	\$0.00	\$70.43

Apprentice Notes

Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.53	\$10.35	\$0.00	\$0.00	\$0.00	\$34.88
2	55.00	\$26.98	\$10.35	\$0.00	\$6.88	\$0.00	\$44.21
3	60.00	\$29.44	\$10.35	\$0.00	\$7.50	\$0.00	\$47.29
4	65.00	\$31.89	\$10.35	\$0.00	\$8.13	\$0.00	\$50.37
5	70.00	\$34.34	\$10.35	\$12.00	\$8.75	\$0.00	\$65.44
6	75.00	\$36.80	\$10.35	\$12.00	\$9.38	\$0.00	\$68.53
7	80.00	\$39.25	\$10.35	\$12.00	\$10.00	\$0.00	\$71.60
8	90.00	\$44.15	\$10.35	\$12.00	\$11.25	\$0.00	\$77.75

Apprentice to Journeyworker Ratio: 1:1

HOISTING ENGINEER/CRANES/GRADALLS	6/1/2026	\$59.38	\$17.05	\$13.35	\$3.25	\$0.00	\$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.83	\$17.05	\$13.35	\$3.25	\$0.00	\$94.48
OPERATING ENGINEERS LOCAL 4							

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS							
Effective Date: 6/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$32.66	\$0.00	\$0.00	\$0.00	\$0.00	\$32.66
2	60.00	\$35.63	\$17.05	\$13.35	\$3.25	\$0.00	\$69.28
3	65.00	\$38.60	\$17.05	\$13.35	\$3.25	\$0.00	\$72.25
4	70.00	\$41.57	\$17.05	\$13.35	\$3.25	\$0.00	\$75.22
5	75.00	\$44.54	\$17.05	\$13.35	\$3.25	\$0.00	\$78.19
6	80.00	\$47.50	\$17.05	\$13.35	\$3.25	\$0.00	\$81.15
7	85.00	\$50.47	\$17.05	\$13.35	\$3.25	\$0.00	\$84.12
8	90.00	\$53.44	\$17.05	\$13.35	\$3.25	\$0.00	\$87.09

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS							
Effective Date: 12/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$33.46	\$0.00	\$0.00	\$0.00	\$0.00	\$33.46
2	60.00	\$36.50	\$17.05	\$13.35	\$3.25	\$0.00	\$70.15
3	65.00	\$39.54	\$17.05	\$13.35	\$3.25	\$0.00	\$73.19
4	70.00	\$42.58	\$17.05	\$13.35	\$3.25	\$0.00	\$76.23
5	75.00	\$45.62	\$17.05	\$13.35	\$3.25	\$0.00	\$79.27
6	80.00	\$48.66	\$17.05	\$13.35	\$3.25	\$0.00	\$82.31
7	85.00	\$51.71	\$17.05	\$13.35	\$3.25	\$0.00	\$85.36
8	90.00	\$54.75	\$17.05	\$13.35	\$3.25	\$0.00	\$88.40

Apprentice to Journeyworker Ratio: 1:6

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
HVAC (DUCTWORK)	7/1/2026	\$43.48	\$13.24	\$11.01	\$9.92	\$2.13	\$79.78
SHEETMETAL WORKERS LOCAL 63	1/1/2027	\$43.48	\$13.54	\$11.01	\$11.12	\$2.13	\$81.28
SHEETMETAL WORKERS LOCAL 63	7/1/2027	\$44.98	\$13.54	\$11.01	\$11.12	\$2.13	\$82.78
	1/1/2028	\$46.48	\$13.54	\$11.01	\$11.12	\$2.13	\$84.28
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (ELECTRICAL CONTROLS)	9/6/2026	\$49.38	\$15.96	\$14.57	\$5.43	\$0.00	\$85.34
ELECTRICIANS LOCAL 96							
ELECTRICIANS LOCAL 96							
For apprentice rates see "Apprentice- ELECTRICIAN"							
HVAC (TESTING AND BALANCING - AIR)	7/1/2026	\$43.48	\$13.24	\$11.01	\$9.92	\$2.13	\$79.78
SHEETMETAL WORKERS LOCAL 63	1/1/2027	\$43.48	\$13.54	\$11.01	\$11.12	\$2.13	\$81.28
SHEETMETAL WORKERS LOCAL 63	7/1/2027	\$44.98	\$13.54	\$11.01	\$11.12	\$2.13	\$82.78
	1/1/2028	\$46.48	\$13.54	\$11.01	\$11.12	\$2.13	\$84.28
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (TESTING AND BALANCING -WATER)	3/1/2026	\$55.90	\$13.10	\$9.71	\$8.06	\$0.00	\$86.77
PLUMBERS LOCAL 4							
PLUMBERS LOCAL 4							
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HVAC MECHANIC	3/1/2026	\$55.90	\$13.10	\$9.71	\$8.06	\$0.00	\$86.77
PLUMBERS LOCAL 4							
PLUMBERS LOCAL 4							
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HYDRAULIC DRILLS	6/1/2026	\$42.41	\$10.90	\$9.75	\$9.11	\$0.00	\$72.17
LABORERS	12/1/2026	\$43.85	\$10.90	\$9.75	\$9.11	\$0.00	\$73.61
LABORERS - ZONE 2	6/1/2027	\$45.30	\$10.90	\$9.75	\$9.11	\$0.00	\$75.06
	12/1/2027	\$46.75	\$10.90	\$9.75	\$9.11	\$0.00	\$76.51
	6/1/2028	\$48.25	\$10.90	\$9.75	\$9.11	\$0.00	\$78.01
	12/1/2028	\$49.75	\$10.90	\$9.75	\$9.11	\$0.00	\$79.51
For apprentice rates see "Apprentice- LABORER"							
HYDRAULIC DRILLS (HEAVY & HIGHWAY)	6/1/2026	\$42.41	\$10.90	\$9.75	\$9.21	\$0.00	\$72.27
LABORERS	12/1/2026	\$43.85	\$10.90	\$9.75	\$9.21	\$0.00	\$73.71
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
INSULATOR (PIPES & TANKS)	9/1/2026	\$53.12	\$16.15	\$11.46	\$11.49	\$0.00	\$92.22
HEAT & FROST INSULATORS LOCAL 6							
HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)							

Apprentice: INSULATOR (PIPES & TANKS)**Effective Date: 9/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$26.56	\$16.15	\$11.21	\$5.75	\$0.00	\$59.67
2	60.00	\$31.87	\$16.15	\$11.26	\$6.89	\$0.00	\$66.17
3	70.00	\$37.18	\$16.15	\$11.31	\$8.04	\$0.00	\$72.68

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: INSULATOR (PIPES & TANKS) Effective Date: 9/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
4	80.00	\$42.50	\$16.15	\$11.36	\$9.19	\$0.00	\$79.20
Apprentice to Journeyworker Ratio: 1:4							
IRONWORKER/WELDER IRONWORKERS LOCAL 7 IRONWORKERS LOCAL 7 (WORCESTER AREA)	3/16/2026	\$58.35	\$9.25	\$12.75	\$15.00	\$0.00	\$95.35

Apprentice: IRONWORKER/WELDER Effective Date: 3/16/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	70.00	\$40.85	\$9.25	\$12.75	\$5.00	\$0.00	\$67.85
2	80.00	\$46.68	\$9.25	\$12.75	\$5.00	\$0.00	\$73.68
3	90.00	\$52.52	\$9.25	\$12.75	\$5.00	\$0.00	\$79.52
4	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
5	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
6	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Apprentice to Journeyworker Ratio: 1:4							

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

For apprentice rates see "Apprentice- LABORER"

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

Apprentice: LABORER Effective Date: 6/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.00	\$10.90	\$9.75	\$9.11	\$0.00	\$54.76
2	70.00	\$29.16	\$10.90	\$9.75	\$9.11	\$0.00	\$58.92
3	80.00	\$33.33	\$10.90	\$9.75	\$9.11	\$0.00	\$63.09

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: LABORER Effective Date: 6/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
4	90.00	\$37.49	\$10.90	\$9.75	\$9.11	\$0.00	\$67.25
Apprentice: LABORER Effective Date: 12/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.86	\$10.90	\$9.75	\$9.11	\$0.00	\$55.62
2	70.00	\$30.17	\$10.90	\$9.75	\$9.11	\$0.00	\$59.93
3	80.00	\$34.48	\$10.90	\$9.75	\$9.11	\$0.00	\$64.24
4	90.00	\$38.79	\$10.90	\$9.75	\$9.11	\$0.00	\$68.55
Apprentice to Journeyworker Ratio: 1:5							
LABORER (HEAVY & HIGHWAY)	6/1/2026	\$41.66	\$10.90	\$9.75	\$9.21	\$0.00	\$71.52
LABORERS	12/1/2026	\$43.10	\$10.90	\$9.75	\$9.21	\$0.00	\$72.96
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 6/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.00	\$10.90	\$9.75	\$9.21	\$0.00	\$54.86
2	70.00	\$29.16	\$10.90	\$9.75	\$9.21	\$0.00	\$59.02
3	80.00	\$33.33	\$10.90	\$9.75	\$9.21	\$0.00	\$63.19
4	90.00	\$37.49	\$10.90	\$9.75	\$9.10	\$0.00	\$67.24
Apprentice: LABORER (HEAVY & HIGHWAY) Effective Date: 12/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	\$25.86	\$10.90	\$9.75	\$9.21	\$0.00	\$55.72
2	70.00	\$30.17	\$10.90	\$9.75	\$9.21	\$0.00	\$60.03
3	80.00	\$34.48	\$10.90	\$9.75	\$9.21	\$0.00	\$64.34
4	90.00	\$38.79	\$10.90	\$9.75	\$9.21	\$0.00	\$68.65
Apprentice to Journeyworker Ratio: 1:5							
LABORER: CARPENTER TENDER	6/1/2026	\$41.66	\$10.90	\$9.75	\$9.11	\$0.00	\$71.42
LABORERS	12/1/2026	\$43.10	\$10.90	\$9.75	\$9.11	\$0.00	\$72.86
LABORERS - ZONE 2	6/1/2027	\$44.55	\$10.90	\$9.75	\$9.11	\$0.00	\$74.31
	12/1/2027	\$46.00	\$10.90	\$9.75	\$9.11	\$0.00	\$75.76
	6/1/2028	\$47.50	\$10.90	\$9.75	\$9.11	\$0.00	\$77.26

Construction

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS - ZONE 2	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

LASER BEAM OPERATOR (HEAVY & HIGHWAY)	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.21	\$0.00	\$71.77
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.21	\$0.00	\$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							

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

MARBLE & TILE FINISHERS	8/1/2026	\$53.84	\$12.84	\$15.57	\$5.78	\$0.00	\$88.03
BRICKLAYERS LOCAL 3	2/1/2027	\$54.96	\$12.84	\$15.57	\$5.78	\$0.00	\$89.15
BRICKLAYERS LOCAL 3 - MARBLE & TILE							

Apprentice: MARBLE & TILE FINISHERS**Effective Date: 8/1/2026**

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

Apprentice: MARBLE & TILE FINISHERS**Effective Date: 2/1/2027**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$27.48	\$12.84	\$15.57	\$5.78	\$0.00	\$61.67
2	60.00	\$32.98	\$12.84	\$15.57	\$5.78	\$0.00	\$67.17
3	70.00	\$38.47	\$12.84	\$15.57	\$5.78	\$0.00	\$72.66
4	80.00	\$43.97	\$12.84	\$15.57	\$5.78	\$0.00	\$78.16
5	90.00	\$49.46	\$12.84	\$15.57	\$5.78	\$0.00	\$83.65

Apprentice to Journeyworker Ratio: 1:5

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

Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH**Effective Date: 8/1/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$35.09	\$12.84	\$15.57	\$7.99	\$0.00	\$71.49
2	60.00	\$42.10	\$12.84	\$15.57	\$7.99	\$0.00	\$78.50
3	70.00	\$49.12	\$12.84	\$15.57	\$7.99	\$0.00	\$85.52

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH Effective Date: 8/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
4	80.00	\$56.14	\$12.84	\$15.57	\$7.99	\$0.00	\$92.54
5	90.00	\$63.15	\$12.84	\$15.57	\$7.99	\$0.00	\$99.55
Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH Effective Date: 2/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$35.79	\$12.84	\$15.57	\$7.99	\$0.00	\$72.19
2	60.00	\$42.94	\$12.84	\$15.57	\$7.99	\$0.00	\$79.34
3	70.00	\$50.10	\$12.84	\$15.57	\$7.99	\$0.00	\$86.50
4	80.00	\$57.26	\$12.84	\$15.57	\$7.99	\$0.00	\$93.66
5	90.00	\$64.41	\$12.84	\$15.57	\$7.99	\$0.00	\$100.81
Apprentice to Journeyworker Ratio: 1:5							
MECH. SWEEPER OPERATOR (ON CONST. SITES)	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANICS MAINTENANCE	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MILLWRIGHT (Zone 3)	1/5/2026	\$45.20	\$10.58	\$11.47	\$9.75	\$0.00	\$77.00
MILLWRIGHTS LOCAL 1121							
MILLWRIGHTS LOCAL 1121 - Zone 3							
Apprentice: MILLWRIGHT (Zone 3) Effective Date: 1/5/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	\$24.86	\$10.58	\$0.00	\$5.36	\$0.00	\$40.80
2	65.00	\$29.38	\$10.58	\$0.00	\$6.34	\$0.00	\$46.30
3	75.00	\$33.90	\$10.58	\$11.47	\$7.31	\$0.00	\$63.26
4	85.00	\$38.42	\$10.58	\$11.47	\$8.29	\$0.00	\$68.76
Apprentice Notes Step 1&2 Appr. indentured after 1/6/2020 receive no pension,							
Apprentice to Journeyworker Ratio: 1:4							
MORTAR MIXER	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
LABORERS - ZONE 2	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS)	6/1/2026	\$25.07	\$17.05	\$13.35	\$3.25	\$0.00	\$58.72
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$25.74	\$17.05	\$13.35	\$3.25	\$0.00	\$59.39
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS)	6/1/2026	\$31.17	\$17.05	\$13.35	\$3.25	\$0.00	\$64.82
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$31.97	\$17.05	\$13.35	\$3.25	\$0.00	\$65.62
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS)	1/1/2026	\$59.56	\$10.35	\$12.00	\$12.50	\$0.00	\$94.41
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER (BRIDGES/TANKS)**Effective Date: 1/1/2026**

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

Apprentice to Journeyworker Ratio: 1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	1/1/2026	\$50.46	\$10.35	\$12.00	\$12.60	\$0.00	\$85.41
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.							
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) ***Effective Date: 1/1/2026**

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$25.23	\$10.35	\$0.00	\$0.00	\$0.00	\$35.58
2	55.00	\$27.75	\$10.35	\$0.00	\$6.93	\$0.00	\$45.03
3	60.00	\$30.28	\$10.35	\$0.00	\$7.56	\$0.00	\$48.19
4	65.00	\$32.80	\$10.35	\$0.00	\$8.19	\$0.00	\$51.34
5	70.00	\$35.32	\$10.35	\$12.00	\$8.82	\$0.00	\$66.49
6	75.00	\$37.85	\$10.35	\$12.00	\$9.45	\$0.00	\$69.65
7	80.00	\$40.37	\$10.35	\$12.00	\$10.08	\$0.00	\$72.80
8	90.00	\$45.41	\$10.35	\$12.00	\$11.34	\$0.00	\$79.10

Apprentice to Journeyworker Ratio: 1:1

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

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.26	\$10.35	\$0.00	\$0.00	\$0.00	\$34.61
2	55.00	\$26.69	\$10.35	\$0.00	\$6.93	\$0.00	\$43.97
3	60.00	\$29.11	\$10.35	\$0.00	\$7.56	\$0.00	\$47.02
4	65.00	\$31.54	\$10.35	\$0.00	\$8.19	\$0.00	\$50.08
5	70.00	\$33.96	\$10.35	\$12.00	\$8.82	\$0.00	\$65.13
6	75.00	\$36.39	\$10.35	\$12.00	\$9.45	\$0.00	\$68.19
7	80.00	\$38.82	\$10.35	\$12.00	\$10.08	\$0.00	\$71.25
8	90.00	\$43.67	\$10.35	\$12.00	\$11.34	\$0.00	\$77.36

Apprentice to Journeyworker Ratio: 1:1

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

Apprentice: PAINTER / TAPER (BRUSH, NEW) *							
Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$24.53	\$10.35	\$0.00	\$0.00	\$0.00	\$34.88
2	55.00	\$26.98	\$10.35	\$0.00	\$6.93	\$0.00	\$44.26
3	60.00	\$29.44	\$10.35	\$0.00	\$7.56	\$0.00	\$47.35
4	65.00	\$31.89	\$10.35	\$0.00	\$8.19	\$0.00	\$50.43

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER / TAPER (BRUSH, NEW) * Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
5	70.00	\$34.34	\$10.35	\$12.00	\$8.82	\$0.00	\$65.51
6	75.00	\$36.80	\$10.35	\$12.00	\$9.45	\$0.00	\$68.60
7	80.00	\$39.25	\$10.35	\$12.00	\$10.08	\$0.00	\$71.68
8	90.00	\$44.15	\$10.35	\$12.00	\$11.34	\$0.00	\$77.84
Apprentice to Journeyworker Ratio: 1:1							
PAINTER / TAPER (BRUSH, REPAINT)	1/1/2026	\$47.12	\$10.35	\$12.00	\$12.60	\$0.00	\$82.07
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							
Apprentice: PAINTER / TAPER (BRUSH, REPAINT) Effective Date: 1/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$23.56	\$10.35	\$0.00	\$0.00	\$0.00	\$33.91
2	55.00	\$25.92	\$10.35	\$0.00	\$6.93	\$0.00	\$43.20
3	60.00	\$28.27	\$10.35	\$0.00	\$7.56	\$0.00	\$46.18
4	65.00	\$30.63	\$10.35	\$0.00	\$8.19	\$0.00	\$49.17
5	70.00	\$32.98	\$10.35	\$12.00	\$8.82	\$0.00	\$64.15
6	75.00	\$35.34	\$10.35	\$12.00	\$9.45	\$0.00	\$67.14
7	80.00	\$37.70	\$10.35	\$12.00	\$10.08	\$0.00	\$70.13
8	90.00	\$42.41	\$10.35	\$12.00	\$11.34	\$0.00	\$76.10
Apprentice to Journeyworker Ratio: 1:1							
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	6/1/2026	\$41.66	\$10.90	\$9.75	\$9.21	\$0.00	\$71.52
LABORERS	12/1/2026	\$43.10	\$10.90	\$9.75	\$9.21	\$0.00	\$72.96
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER	6/1/2026	\$41.78	\$16.17	\$21.78	\$0.00	\$0.00	\$79.73
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$41.78	\$16.17	\$23.52	\$0.00	\$0.00	\$81.47
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$41.78	\$16.77	\$23.52	\$0.00	\$0.00	\$82.07
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	8/1/2024	\$51.97	\$10.08	\$11.62	\$12.67	\$0.00	\$86.34
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							
For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER	8/1/2024	\$51.97	\$10.08	\$11.62	\$12.67	\$0.00	\$86.34
PILE DRIVER LOCAL 56							
PILE DRIVER LOCAL 56 (ZONE 2)							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PILE DRIVER							
Effective Date: 8/1/2024							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$23.39	\$10.08	\$0.00	\$2.53	\$0.00	\$36.00
2	55.00	\$28.58	\$10.08	\$0.00	\$5.07	\$0.00	\$43.73
3	70.00	\$36.38	\$10.08	\$11.62	\$7.60	\$0.00	\$65.68
4	80.00	\$41.58	\$10.08	\$11.62	\$10.14	\$0.00	\$73.42
Apprentice to Journeyworker Ratio: 1:5							
PIPELAYER	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
LABORERS - ZONE 2	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
PIPELAYER (HEAVY & HIGHWAY)	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.21	\$0.00	\$71.77
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.21	\$0.00	\$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
PLUMBER & PIPEFITTER	3/1/2026	\$55.90	\$13.10	\$9.71	\$8.06	\$0.00	\$86.77
PLUMBERS LOCAL 4							
PLUMBERS LOCAL 4							
Apprentice: PLUMBER & PIPEFITTER							
Effective Date: 3/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	\$22.36	\$13.10	\$0.00	\$0.00	\$0.00	\$35.46
2	50.00	\$27.95	\$13.10	\$0.00	\$0.00	\$0.00	\$41.05
3	60.00	\$33.54	\$13.10	\$0.00	\$0.00	\$0.00	\$46.64
4	70.00	\$39.13	\$13.10	\$0.00	\$8.06	\$0.00	\$60.29
5	80.00	\$44.72	\$13.10	\$0.00	\$8.06	\$0.00	\$65.88
Apprentice to Journeyworker Ratio: 1:3							
PNEUMATIC CONTROLS (TEMP.)	3/1/2026	\$55.90	\$13.10	\$9.71	\$8.06	\$0.00	\$86.77
PLUMBERS LOCAL 4							
PLUMBERS LOCAL 4							
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
PNEUMATIC DRILL/TOOL OPERATOR	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67
LABORERS	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
LABORERS - ZONE 2	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.21	\$0.00	\$71.77
LABORERS							
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWDERMAN & BLASTER	6/1/2026	\$42.66	\$10.90	\$9.75	\$9.11	\$0.00	\$72.42
LABORERS							
LABORERS - ZONE 2	12/1/2026	\$44.10	\$10.90	\$9.75	\$9.11	\$0.00	\$73.86
	6/1/2027	\$45.55	\$10.90	\$9.75	\$9.11	\$0.00	\$75.31
	12/1/2027	\$47.00	\$10.90	\$9.75	\$9.11	\$0.00	\$76.76
	6/1/2028	\$48.50	\$10.90	\$9.75	\$9.11	\$0.00	\$78.26
	12/1/2028	\$50.00	\$10.90	\$9.75	\$9.11	\$0.00	\$79.76
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	6/1/2026	\$42.66	\$10.90	\$9.75	\$9.21	\$0.00	\$72.52
LABORERS							
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$44.10	\$10.90	\$9.75	\$9.21	\$0.00	\$73.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWER SHOVEL/DERRICK/TRENCHING MACHINE	6/1/2026	\$59.38	\$17.05	\$13.35	\$3.25	\$0.00	\$93.03
OPERATING ENGINEERS LOCAL 4							
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.83	\$17.05	\$13.35	\$3.25	\$0.00	\$94.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE)	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4							
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	6/1/2026	\$37.63	\$17.05	\$13.35	\$3.25	\$0.00	\$71.28
OPERATING ENGINEERS LOCAL 4							
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$38.58	\$17.05	\$13.35	\$3.25	\$0.00	\$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER	2/2/2026	\$29.50	\$12.37	\$8.00	\$0.00	\$0.00	\$49.87
TEAMSTERS 170							
TEAMSTERS 170 -J.G.MacLellan (Lunenburg)	1/1/2027	\$30.00	\$12.37	\$8.00	\$0.00	\$0.00	\$50.37
RECLAIMERS	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4							
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
RIDE-ON MOTORIZED BUGGY OPERATOR	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67
LABORERS							
LABORERS - ZONE 2	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ROLLER/SPREADER/MULCHING MACHINE	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg)	8/1/2026	\$55.25	\$14.53	\$12.67	\$9.03	\$0.00	\$91.48
ROOFERS LOCAL 33	2/1/2027	\$57.00	\$14.53	\$12.67	\$9.03	\$0.00	\$93.23
ROOFERS LOCAL 33	8/1/2027	\$58.75	\$14.53	\$12.67	\$9.03	\$0.00	\$94.98
	2/1/2028	\$60.50	\$14.53	\$12.67	\$9.03	\$0.00	\$96.73
	8/1/2028	\$62.25	\$14.53	\$12.67	\$9.03	\$0.00	\$98.48
	2/1/2029	\$64.00	\$14.53	\$12.67	\$9.03	\$0.00	\$100.23
	8/1/2029	\$65.65	\$14.53	\$12.67	\$9.03	\$0.00	\$101.88
	2/1/2030	\$67.40	\$14.53	\$12.67	\$9.03	\$0.00	\$103.63

Apprentice: ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg)

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	\$0.00	\$14.53	\$6.34	\$0.00	\$0.00	\$20.87
2	0.00	\$0.00	\$14.53	\$12.67	\$9.03	\$0.00	\$36.23
3	0.00	\$0.00	\$14.53	\$12.67	\$9.03	\$0.00	\$36.23
4	0.00	\$0.00	\$14.53	\$12.67	\$9.03	\$0.00	\$36.23
5	0.00	\$0.00	\$14.53	\$12.67	\$9.03	\$0.00	\$36.23

Apprentice: ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg)

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	\$0.00	\$14.53	\$6.34	\$0.00	\$0.00	\$20.87
2	0.00	\$0.00	\$14.53	\$12.67	\$9.03	\$0.00	\$36.23
3	0.00	\$0.00	\$14.53	\$12.67	\$9.03	\$0.00	\$36.23
4	0.00	\$0.00	\$14.53	\$12.67	\$9.03	\$0.00	\$36.23
5	0.00	\$0.00	\$14.53	\$12.67	\$9.03	\$0.00	\$36.23

Apprentice Notes

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

Apprentice to Journeyworker Ratio: 1:5

ROOFER SLATE / TILE / PRECAST CONCRETE	8/1/2026	\$55.50	\$14.53	\$12.67	\$9.03	\$0.00	\$91.73
ROOFERS LOCAL 33	2/1/2027	\$57.25	\$14.53	\$12.67	\$9.03	\$0.00	\$93.48
ROOFERS LOCAL 33	8/1/2027	\$59.00	\$14.53	\$12.67	\$9.03	\$0.00	\$95.23
	2/1/2028	\$60.75	\$14.53	\$12.67	\$9.03	\$0.00	\$96.98
	8/1/2028	\$62.50	\$14.53	\$12.67	\$9.03	\$0.00	\$98.73
	2/1/2029	\$64.25	\$14.53	\$12.67	\$9.03	\$0.00	\$100.48
	8/1/2029	\$65.90	\$14.53	\$12.67	\$9.03	\$0.00	\$102.13
	2/1/2030	\$67.65	\$14.53	\$12.67	\$9.03	\$0.00	\$103.88

For apprentice rates see "Apprentice- ROOFER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
SHEETMETAL WORKER	7/1/2026	\$43.48	\$13.24	\$11.01	\$9.92	\$2.13	\$79.78
SHEETMETAL WORKERS LOCAL 63	1/1/2027	\$43.48	\$13.54	\$11.01	\$11.12	\$2.13	\$81.28
SHEETMETAL WORKERS LOCAL 63	7/1/2027	\$44.98	\$13.54	\$11.01	\$11.12	\$2.13	\$82.78
	1/1/2028	\$46.48	\$13.54	\$11.01	\$11.12	\$2.13	\$84.28

Apprentice: SHEETMETAL WORKER							
Effective Date: 7/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.57	\$5.96	\$4.95	\$0.00	\$0.85	\$31.33
2	50.00	\$21.74	\$6.62	\$5.51	\$0.00	\$0.94	\$34.81
3	55.00	\$23.91	\$7.28	\$9.91	\$0.00	\$1.15	\$42.25
4	60.00	\$26.09	\$7.94	\$9.91	\$0.00	\$1.23	\$45.17
5	65.00	\$28.26	\$8.60	\$9.91	\$0.00	\$1.31	\$48.08
6	70.00	\$30.44	\$9.27	\$9.91	\$0.00	\$1.39	\$51.01
7	75.00	\$32.61	\$9.93	\$9.91	\$0.00	\$1.47	\$53.92
8	80.00	\$34.78	\$10.59	\$9.91	\$9.92	\$1.78	\$66.98
9	85.00	\$36.96	\$11.25	\$9.91	\$9.92	\$1.86	\$69.90
10	90.00	\$39.13	\$11.92	\$9.91	\$9.92	\$1.94	\$72.82

Apprentice: SHEETMETAL WORKER							
Effective Date: 1/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	\$19.57	\$6.09	\$4.95	\$0.00	\$0.85	\$31.46
2	50.00	\$21.74	\$6.77	\$5.51	\$0.00	\$0.94	\$34.96
3	55.00	\$23.91	\$7.45	\$9.91	\$0.00	\$1.15	\$42.42
4	60.00	\$26.09	\$8.36	\$9.91	\$0.00	\$1.23	\$45.59
5	65.00	\$28.26	\$8.86	\$9.91	\$0.00	\$1.31	\$48.34
6	70.00	\$30.44	\$9.48	\$9.91	\$0.00	\$1.39	\$51.22
7	75.00	\$32.61	\$10.15	\$9.91	\$0.00	\$1.47	\$54.14
8	80.00	\$34.78	\$10.83	\$9.91	\$11.12	\$1.78	\$68.42
9	85.00	\$36.96	\$11.51	\$9.91	\$11.12	\$1.86	\$71.36
10	90.00	\$39.13	\$12.18	\$9.91	\$11.12	\$1.94	\$74.28

Apprentice to Journeyworker Ratio: 1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS	6/1/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$0.00	\$80.19
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$0.00	\$81.93
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$0.00	\$82.53
SPECIALIZED EARTH MOVING EQUIP > 35 TONS	6/1/2026	\$42.53	\$16.17	\$21.78	\$0.00	\$0.00	\$80.48
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.53	\$16.17	\$23.52	\$0.00	\$0.00	\$82.22
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.53	\$16.77	\$23.52	\$0.00	\$0.00	\$82.82
SPRINKLER FITTER	7/1/2026	\$56.54	\$13.60	\$7.45	\$9.41	\$0.00	\$87.00
SPRINKLER FITTERS LOCAL 669	10/1/2026	\$56.54	\$13.60	\$7.45	\$9.41	\$0.00	\$87.00
SPRINKLER FITTERS LOCAL 669	1/1/2027	\$56.54	\$14.55	\$7.50	\$9.41	\$0.00	\$88.00

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	4/1/2027	\$59.83	\$14.55	\$7.50	\$9.41	\$0.00	\$91.29
	7/1/2027	\$59.83	\$14.55	\$7.50	\$9.41	\$0.00	\$91.29
	10/1/2027	\$59.83	\$14.55	\$7.50	\$9.41	\$0.00	\$91.29
	1/1/2028	\$59.83	\$15.50	\$7.55	\$9.41	\$0.00	\$92.29

Apprentice: SPRINKLER FITTER

Effective Date: 7/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	43.00	\$28.36	\$9.64	\$0.00	\$0.00	\$0.00	\$38.00
2	48.00	\$31.66	\$9.64	\$0.00	\$0.00	\$0.00	\$41.30
3	52.00	\$34.29	\$13.60	\$7.45	\$1.15	\$0.00	\$56.49
4	56.00	\$36.93	\$13.60	\$7.45	\$1.15	\$0.00	\$59.13
5	59.00	\$38.91	\$13.60	\$7.45	\$1.40	\$0.00	\$61.36
6	64.00	\$42.21	\$13.60	\$7.45	\$1.40	\$0.00	\$64.66
7	68.00	\$44.85	\$13.60	\$7.45	\$1.40	\$0.00	\$67.30
8	72.00	\$47.48	\$13.60	\$7.45	\$1.40	\$0.00	\$69.93
9	76.00	\$50.12	\$13.60	\$7.45	\$1.40	\$0.00	\$72.57
10	80.00	\$52.76	\$13.60	\$7.45	\$1.40	\$0.00	\$75.21

Apprentice: SPRINKLER FITTER

Effective Date: 10/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	43.00	\$28.36	\$0.00	\$0.00	\$0.00	\$0.00	\$28.36
2	48.00	\$31.66	\$0.00	\$0.00	\$0.00	\$0.00	\$31.66
3	52.00	\$34.29	\$0.00	\$0.00	\$1.15	\$0.00	\$35.44
4	56.00	\$36.93	\$0.00	\$0.00	\$1.15	\$0.00	\$38.08
5	59.00	\$38.91	\$0.00	\$0.00	\$1.40	\$0.00	\$40.31
6	64.00	\$42.21	\$0.00	\$0.00	\$1.40	\$0.00	\$43.61
7	68.00	\$44.85	\$0.00	\$0.00	\$1.40	\$0.00	\$46.25
8	72.00	\$47.48	\$0.00	\$0.00	\$1.40	\$0.00	\$48.88
9	76.00	\$50.12	\$0.00	\$0.00	\$1.40	\$0.00	\$51.52
10	80.00	\$52.76	\$0.00	\$0.00	\$1.40	\$0.00	\$54.16

Apprentice to Journeyworker Ratio: 1:1

STEAM BOILER OPERATOR	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: TERRAZZO FINISHERS Effective Date: 8/1/2026							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$34.55	\$12.84	\$15.57	\$8.02	\$0.00	\$70.98
2	60.00	\$41.45	\$12.84	\$15.57	\$8.02	\$0.00	\$77.88
3	70.00	\$48.36	\$12.84	\$15.57	\$8.02	\$0.00	\$84.79
4	80.00	\$55.27	\$12.84	\$15.57	\$8.02	\$0.00	\$91.70
5	90.00	\$62.18	\$12.84	\$15.57	\$8.02	\$0.00	\$98.61
Apprentice: TERRAZZO FINISHERS Effective Date: 2/1/2027							
Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$35.25	\$12.84	\$15.57	\$8.02	\$0.00	\$71.68
2	60.00	\$42.29	\$12.84	\$15.57	\$8.02	\$0.00	\$78.72
3	70.00	\$49.34	\$12.84	\$15.57	\$8.02	\$0.00	\$85.77
4	80.00	\$56.39	\$12.84	\$15.57	\$8.02	\$0.00	\$92.82
5	90.00	\$63.44	\$12.84	\$15.57	\$8.02	\$0.00	\$99.87
Apprentice to Journeyworker Ratio: 1:5							
TEST BORING DRILLER	6/1/2026	\$53.25	\$10.90	\$9.75	\$9.80	\$0.00	\$83.70
LABORERS	12/1/2026	\$54.75	\$10.90	\$9.75	\$9.80	\$0.00	\$85.20
For apprentice rates see "Apprentice- LABORER"							
TEST BORING DRILLER HELPER	6/1/2026	\$49.37	\$10.90	\$9.75	\$9.80	\$0.00	\$79.82
LABORERS	12/1/2026	\$50.87	\$10.90	\$9.75	\$9.80	\$0.00	\$81.32
For apprentice rates see "Apprentice- LABORER"							
TEST BORING LABORER	6/1/2026	\$49.25	\$10.90	\$9.75	\$9.80	\$0.00	\$79.70
LABORERS	12/1/2026	\$50.75	\$10.90	\$9.75	\$9.80	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS/PORTABLE STEAM GENERATORS	6/1/2026	\$58.70	\$17.05	\$13.35	\$3.25	\$0.00	\$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.14	\$17.05	\$13.35	\$3.25	\$0.00	\$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT	6/1/2026	\$42.82	\$16.17	\$21.78	\$0.00	\$0.00	\$80.77
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	\$42.82	\$16.17	\$23.52	\$0.00	\$0.00	\$82.51
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	\$42.82	\$16.77	\$23.52	\$0.00	\$0.00	\$83.11
TUNNEL WORK - COMPRESSED AIR	6/1/2026	\$61.48	\$10.90	\$9.75	\$10.25	\$0.00	\$92.38
LABORERS	12/1/2026	\$62.98	\$10.90	\$9.75	\$10.25	\$0.00	\$93.88
LABORERS (COMPRESSED AIR)							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) LABORERS	6/1/2026	\$63.48	\$10.90	\$9.75	\$10.25	\$0.00	\$94.38
LABORERS (COMPRESSED AIR)	12/1/2026	\$64.98	\$10.90	\$9.75	\$10.25	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR LABORERS	6/1/2026	\$53.55	\$10.90	\$9.75	\$10.25	\$0.00	\$84.45
LABORERS (FREE AIR TUNNEL)	12/1/2026	\$55.05	\$10.90	\$9.75	\$10.25	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE) LABORERS	6/1/2026	\$55.55	\$10.90	\$9.75	\$10.25	\$0.00	\$86.45
LABORERS (FREE AIR TUNNEL)	12/1/2026	\$57.05	\$10.90	\$9.75	\$10.25	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL TEAMSTERS JOINT COUNCIL NO. 10	6/1/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$0.00	\$80.19
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/1/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$0.00	\$81.93
	1/1/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$0.00	\$82.53
VOICE-DATA-VIDEO TECHNICIAN ELECTRICIANS LOCAL 96 ELECTRICIANS LOCAL 96							
	9/6/2026	\$37.04	\$15.96	\$14.20	\$4.07	\$0.00	\$71.27

Apprentice: VOICE-DATA-VIDEO TECHNICIAN**Effective Date: 9/6/2026**

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	\$18.52	\$15.96	\$0.56	\$4.07	\$0.00	\$39.11
2	55.00	\$20.37	\$15.96	\$0.61	\$4.07	\$0.00	\$41.01
3	60.00	\$22.22	\$15.96	\$13.76	\$4.07	\$0.00	\$56.01
4	65.00	\$24.08	\$15.96	\$13.81	\$4.07	\$0.00	\$57.92
5	70.00	\$25.93	\$15.96	\$13.87	\$4.07	\$0.00	\$59.83
6	75.00	\$27.78	\$15.96	\$13.92	\$4.07	\$0.00	\$61.73
7	80.00	\$29.63	\$15.96	\$13.98	\$4.07	\$0.00	\$63.64
8	85.00	\$31.48	\$15.96	\$14.03	\$4.07	\$0.00	\$65.54

Apprentice to Journeyworker Ratio: 1:1

WAGON DRILL OPERATOR LABORERS	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.11	\$0.00	\$71.67
LABORERS - ZONE 2	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.11	\$0.00	\$73.11
	6/1/2027	\$44.80	\$10.90	\$9.75	\$9.11	\$0.00	\$74.56
	12/1/2027	\$46.25	\$10.90	\$9.75	\$9.11	\$0.00	\$76.01
	6/1/2028	\$47.75	\$10.90	\$9.75	\$9.11	\$0.00	\$77.51
	12/1/2028	\$49.25	\$10.90	\$9.75	\$9.11	\$0.00	\$79.01
For apprentice rates see "Apprentice- LABORER"							
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) LABORERS	6/1/2026	\$41.91	\$10.90	\$9.75	\$9.21	\$0.00	\$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	\$43.35	\$10.90	\$9.75	\$9.21	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
WASTE WATER PUMP OPERATOR	6/1/2026	\$59.38	\$17.05	\$13.35	\$3.25	\$0.00	\$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	\$60.83	\$17.05	\$13.35	\$3.25	\$0.00	\$94.48
OPERATING ENGINEERS LOCAL 4							

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

WATER METER INSTALLER	3/1/2026	\$55.90	\$13.10	\$9.71	\$8.06	\$0.00	\$86.77
PLUMBERS LOCAL 4							
PLUMBERS LOCAL 4							

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

Additional Apprentice Information

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

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

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

"General Decision Number: MA20260025 05/18/2026

State: Massachusetts

Construction Types: Highway

Counties: Massachusetts Counties of
Worcester

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

CARP0336-004 09/01/2025

	Rates	Fringes
CARPENTER (INCLUDES FORM WORK).....	\$ 50.10	31.45

ELEC0103-007 09/01/2025

	Rates	Fringes
ELECTRICIAN.....	\$ 66.17	37.08

ENGI0004-030 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR GROUP 2 BULLDOZER; GRADER/BLADE; ROLLER FOOTNOTE FOR POWER EQUIPMENT OPERATORS: A. PAID HOLIDAYS: NEW YEAR'S DAY, WASHINGTON'S BIRTHDAY, LABOR DAY, MEMORIAL DAY, INDEPENDENCE DAY, PATRIOT'S DAY, COLUMBUS DAY, VETERAN'S DAY, THANKSGIVING DAY, CHRISTMAS DAY.....	\$ 57.18	33.70
POWER EQUIPMENT OPERATOR GROUP 1 BACKHOE/EXCAVATOR/TRACKHOE; BOBCAT/SKID STEER/SKID LOADER; BROOM/SWEEPER; GRADALL; LOADER; PAVER (ASPHALT, AGGREGATE, AND CONCRETE); POST DRIVER (GUARDRAIL/FENCES) FOOTNOTE FOR POWER EQUIPMENT OPERATORS: A. PAID HOLIDAYS: NEW YEAR'S DAY, WASHINGTON'S BIRTHDAY, LABOR DAY, MEMORIAL DAY, INDEPENDENCE DAY, PATRIOT'S DAY, COLUMBUS DAY, VETERAN'S DAY, THANKSGIVING DAY, CHRISTMAS DAY.....	\$ 57.83	33.70

ENGI0004-031 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR: MILLING MACHINE FOOTNOTE FOR POWER EQUIPMENT OPERATORS: A. PAID HOLIDAYS: NEW YEAR'S DAY, WASHINGTON'S BIRTHDAY, LABOR DAY, MEMORIAL DAY, INDEPENDENCE DAY, PATRIOT'S DAY, COLUMBUS DAY, VETERAN'S DAY, THANKSGIVING DAY, CHRISTMAS DAY.....	\$ 57.83	33.70

IRON0007-028 09/16/2025

Rates	Fringes
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IRONWORKER, STRUCTURAL.....	\$ 57.57	37.67
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IRON0007-029 09/16/2025

	Rates	Fringes
IRONWORKER: ORNAMENTAL.....	\$ 57.57	37.67

LAB00039-003 06/01/2018

	Rates	Fringes
LABORER: COMMON OR GENERAL.....	\$ 33.25	22.92
LABORER: ASPHALT, INCLUDES RAKER, SHOVELER, SPREADER AND DISTRIBUTOR.....	\$ 33.50	22.92
LABORER (GUARDRAIL INSTALLATION).....	\$ 33.50	22.92

PAIN0035-023 07/01/2024

	Rates	Fringes
PAINTER: STEEL.....	\$ 56.76	36.00

SUMA2014-015 01/11/2017

	Rates	Fringes
TRUCK DRIVER: FLATBED TRUCK.....	\$ 48.53	0.00
TRUCK DRIVER: DUMP TRUCK.....	\$ 30.38	7.20
TRUCK DRIVER: CONCRETE TRUCK.....	\$ 33.69	15.79
TRAFFIC CONTROL: LABORER-CONES/ BARRICADES/BARRELS - SETTER/MOVER/SWEEPER.....	\$ 44.49	12.41
TRAFFIC CONTROL: FLAGGER.....	\$ 23.00	20.44
PILEDRIVERMAN.....	\$ 45.65	23.33
PAINTER: SPRAY (LINESTRIPING).....	\$ 48.00	0.00
OPERATOR: PILEDRIVER.....	\$ 44.46	16.94
OPERATOR: MECHANIC.....	\$ 48.14	17.02
OPERATOR: FORKLIFT.....	\$ 64.67	0.00
OPERATOR: CRANE.....	\$ 52.14	21.08
LABORER: LANDSCAPE.....	\$ 40.39	17.68
LABORER: CONCRETE SAW (HAND HELD/WALK BEHIND).....	\$ 41.78	18.37
IRONWORKER, REINFORCING.....	\$ 56.48	20.62
CEMENT MASON/CONCRETE FINISHER.....	\$ 56.70	21.08

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

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

Note: Executive Order 13658 generally applies to contracts subject

to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than **SU**, **UAVG**, **SA**, or **SC** denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The **SU** identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

SU wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The **SA** identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the **SA** identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested

party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION

"

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Work of the Contract is shown and described in Drawings and Project Manual entitled:

Keyes Road Over Wilder Brook Culvert Replacement

Department of Community Development and Planning

City of Gardner

October 2026

Tighe & Bond Designer Services, Inc.

Consulting Engineers

Westfield, Massachusetts

2. The Work includes the following major items:
 - a. Phased demolition of the existing 8' diameter corrugated metal pipe culvert
 - b. Temporary traffic signal
 - c. Demolition of existing road surface and sidewalk
 - d. Relocation of one utility pole
 - e. Temporary 6" C900 PVC water service bypass
 - f. Dewatering cofferdams and streambed dredging
 - g. Bank stabilization and grading
 - h. 12" ductile iron water main relocation
 - i. Installation of new hydrant assemblies
 - j. Installation of 24' span, 3-sided rigid frame precast bridge structure
 - k. Streambed restoration
 - l. Fine grading and compaction of road surface
 - m. HMA paving of road surface and sidewalk
 - n. Installation of new cement concrete pedestrian curb ramps

- o. Resetting of curbing, installation of new granite transition curbing, and installation of new HMA berm.
- p. Installation of new guardrails and end-treatments
- q. Loam and seed of disturbed areas

B. Related Requirements

- 1. Section 00800 - Supplementary Conditions

1.2 SUBMITTALS

A. Informational Submittals

- 1. Submit copies of permits or approvals required for the Work, prior to initiating the Work.

1.3 EXISTING SYSTEM DESCRIPTION

- A.** The existing culvert is a 96-inch diameter corrugated metal pipe estimated to be 50-70+ years old. The pipe was lined with concrete in 2006. The location of the existing culvert is shown on the Drawings.

1.4 PROJECT/SITE CONDITIONS

A. Permits

- 1. Obtain the permits and approvals listed below:
 - a. US EPA Dewatering General Permit
 - b. Permits and licenses of a temporary nature necessary to perform the Work.
 - c. Permits for disposal of construction wastes including disposal of cleared and grubbed materials.
 - d. Other permits or licenses required for the Contractor's operations or required elsewhere in the Contract Documents and not included herein.
- 2. Comply with the permits and approvals listed below:
 - a. City of Gardner Conservation Commission Order of Conditions. A copy of the Order of Conditions is included in Section 00800.
 - b. MADEP Section 401 Water Quality Certification. A copy of the Water Quality Certification is included in Section 00800.
 - c. Project has received Chapter 85 approval from MassDOT on March 17, 2023.
- 3. The Pre-Construction Notification (PCN) permit submitted to the Army Corps of Engineers is currently in review for the Keyes Road over Wilder Brook Culvert Replacement Project.

4. Obtain required time extensions to permits obtained by the Contractor, if construction authorized by permits has not been completed by the expiration date noted on these permits.
5. Permits may require that a representative of the permitting authority or the Owner be present on site during construction or given the opportunity to observe conditions prior to backfilling or otherwise proceeding with construction. Notify the Owner, Engineer, and the permitting authority prior to performing Work that is governed by the permit.
6. Obtain permits and approvals from appropriate jurisdictional agencies and property owners for use of premises not furnished by the Owner, and for all off-site areas.
7. Submit copies of permits prior to performance of Work authorized by permits.

B. Existing Conditions

1. Use of Premises and Off-site Work
 - a. The Work shall occur on the Owner's property and within the limits of Work shown on the Drawings.
 - b. Coordinate the location of staging with the Owner.
 - c. Obtain permits and approvals for use of any land and access thereto that is deemed necessary for the Work, where such land is not available for use by the Owner, including land for temporary construction facilities, access and egress, or for storage of materials. Confine apparatus and storage to such additional areas.
 - d. Obtain permits and written approvals from appropriate jurisdictional agencies for the use of premises not available for use by the Owner, including all offsite staging areas, borrow pits and waste areas. Submit copies of all permits and approvals to the Owner prior to using areas.
 - e. Provide for the disposal of waste materials off-site in accordance with all applicable laws.
 - f. Adhere to the limits of Work and traffic control plans as indicated, to minimize obstruction to traffic and inconvenience to the Owner, general public, and residents in the vicinity of the Work, and to protect people and property. Keep fire hydrants on or adjacent to the Work accessible to fire fighting equipment at all times.
 - g. Make temporary provisions for the use of sidewalks and maintain functioning gutters, stormwater systems, drainage ditches, and culverts.
 - h. Maintain public access to businesses and residences including driveways and parking lots at all times during the Work.

Part 2 PRODUCTS

2.1 MATERIALS FURNISHED BY OWNER

- A. The Owner will not furnish any materials, labor or equipment under this Contract.

PART 3 EXECUTION – NOT USED

END OF SECTION

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I\01110 - SUMMARY OF WORK.DOCX

SECTION 01140**WORK RESTRICTIONS****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Work Schedule
 - 2. Construction Constraints
 - 3. Available Work Area
 - 4. Site Usage Plan
- B. Related Requirements
 - 1. Section 01310– Coordination
 - 2. Section 01325 - Scheduling of Construction

1.2 SUBMITTALS

- A. Incorporate the requirements of this Section in the project schedule submitted under Section 01325.
- B. Action Submittals
 - 1. Submit site usage plan within 30 days of the Notice to Proceed.

1.3 WORK SCHEDULE

- A. Conduct the Work during daylight hours on Monday through Friday, and within the time between 7:00 a.m. and 5:00 p.m. No work is to be done on Owner's holidays, Saturdays, Sundays or outside of the work hours described above.
- B. Cutting of paved surfaces, excavation within any paved roadway, or pavement resurfacing activities is not allowed from November 15th to April 1st.
- C. All land clearing and grubbing, including tree and vegetation removal, is not allowed from April 1st to October 31st.

PART 2 PRODUCTS – NOT USED**PART 3 EXECUTION****3.1 AVAILABLE WORK AREA**

- A. Limits of construction are defined on the Drawings. No work will be permitted to be performed outside these boundaries.

3.2 SITE USAGE PLAN

- A. Submit a site usage plan showing all proposed staging areas, locations of all office and storage trailers, and material laydown areas. The site usage plan should be a drawing

showing the proposed locations and shall include on-site traffic modifications and temporary utilities as may be applicable. Submit plan to Owner for review. Modify plan per Owner comments.

END OF SECTION

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SECTION 01270**MEASUREMENT AND PAYMENT****1.1 DIVISION 0 AND DIVISION 1 WORK INCIDENTAL TO THE CONTRACT PRICE**

- A. No separate measurement or payment will be made for Work called for in Division 0 or Division 1 of the Specifications, unless specifically covered under the Bid items listed below. All costs associated with this Work will be considered incidental to the Contract Bid price.
- B. Division 2 of the Project Manual is supplemented with Divisions II and III of the MassDOT Highway Division Standard Specifications for Highways and Bridges dated 2026, as amended, and the Special provisions attached.
- C. Measurement and payment for Work is defined in the Standard Specifications and/or in the Special Provisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01310

COORDINATION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Project Management
2. General Coordination Procedures
3. Requests for Information (RFIs)
4. Project Meetings

B. Related Requirements

1. Section 01325 - Scheduling of Construction

C. Related Work Not Included

1. Operation of existing facilities will be performed by the Owner unless otherwise specified. The Owner will assist in arranging operation of any existing facilities or equipment required by the Contractor to connect to existing facilities, and the Contractor shall not operate existing valves or equipment. Only the Owner will operate Owner valves.

1.2 SUBMITTALS

A. Incorporate the requirements of this Section, as well as Work which may impact the existing system operation, or the operations of any adjacent utility, in the project schedule submitted under Section 01325.

B. Informational Submittals

1. Submit to the affected utility company, the Owner, and the Engineer, in writing, all requests for temporary shutdowns of facilities or interruption of operations. No shutdowns of the water system or interruptions to existing operations will be permitted except as outlined in this Section. Submit requests at least 2 weeks prior to the beginning of the Work requiring shutdown or interruption. No shutdown shall occur without the approval of the utility company or the Owner.
2. RFI Log
3. Coordination drawings
4. At the pre-construction conference, supply to the Owner the cell phone number of a responsible person who may be contacted during off-hours for emergencies 24 hours a day, seven days a week.
5. Prepare a contact list of phone numbers, including cell phone numbers, and emails for all Project personnel and submit to the Engineer within one week after the pre-

construction conference. Include Contractor, Owner, Engineer, and City personnel including police, fire, and ambulance.

6. Submit to the Owner and Engineer, in writing, all requests for valve operations at least 2 weeks prior to commencing operation.

1.3 PROJECT MANAGEMENT

- A. Retain a full-time Superintendent, satisfactory to the Owner and Engineer. The Superintendent shall not be changed except with the consent of the Owner and Engineer. The Superintendent shall be in full charge of the Work.
- B. Complete the Work in a continuous uninterrupted operation. Use sufficient personnel and adequate equipment to complete the Work within the Contract Time.

1.4 GENERAL COORDINATION PROCEDURES

- A. Do not interfere with the operation of the existing facilities.
- B. Perform all coordination necessary to complete the phased construction approach for the demolition and construction activities, including temporary bypass for water service.
- C. Coordinate with appropriate utility companies, as well as with the Owner, where the Work crosses or is adjacent to existing utilities.
- D. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Include the following:
 1. Project name
 2. Name and address of Contractor
 3. Name and address of Engineer
 4. RFI number including RFIs that were returned without action or withdrawn
 5. RFI description
 6. Date the RFI was submitted
 1. Date Engineer response was received
 7. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate
- E. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within seven days if Contractor disagrees with response.

1.5 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 1. Engineer will return without response those RFIs submitted to Engineer by other entities controlled by Contractor.

2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name
 2. Project number
 3. Date
 4. Name of Contractor
 5. Name of Engineer
 6. RFI number, numbered sequentially
 7. RFI subject
 8. Specification Section number and title and related paragraphs, as appropriate
 9. Drawing number and detail references, as appropriate
 10. Field dimensions and conditions, as appropriate
 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. Engineer's Action: Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal.

1.6 PROJECT MEETINGS

- A. Pre-Construction Conference
1. The Contractor shall be prepared to discuss the following subjects at the Pre-Construction Conference. Documentation for these items is required to be submitted within the time frames included in individual specification sections.
 - a. Project scheduling
 - b. Sequencing of critical path Work items
 - c. Shop Drawing procedures
 - d. Project changes and clarification procedures

- e. Use of sites, access to Work areas, office and storage areas, security and temporary facilities
- f. Contractor safety plan and representative
- g. Progress payments and procedures
- h. Required documentation
- i. Project personnel contact list

B. Progress Meetings

- 1. Progress meetings will be held every week and at other times as requested by the Owner or as required by the Progress of the Work.
- 2. The Contractor's Superintendent shall attend all progress meetings.
- 3. At a minimum, progress meetings will review Work progress, schedule, Shop Drawing submission schedule, Applications for Payment, and other matters needing discussion and resolution.
- 4. Review the schedule with all parties to be affected by upcoming work.
- 5. Review the monthly construction report required under Section 01325.

C. Attend monthly meetings with local Town agencies, including the Board of Public Works and Conservation Commission to discuss the progress of the Work and address any local concerns.

D. Attend monthly meetings with local residents and public and private utilities to discuss the progress of the Work and address any local concerns.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 GENERAL

- A. Notify DIGSAFE at 1-888-344-7233 at least 72 hours prior to any digging, trenching, rock removal, demolition, borings, backfill, grading, landscaping, or any other earth moving operations.

3.2 COORDINATION WITH THE OWNER'S OPERATIONS

- A. Notify the Owner and Engineer, in writing, a minimum of 1 week in advance of commencing Work on site. Work on site shall not occur until all permits are obtained.
- B. Notify the Owner and Engineer, in writing, a minimum of 1 week before commencing any work which may affect the Owner's operations.
- C. Perform all construction activities so as to avoid interference with operations of the facility and the work of others.
- D. Coordinate the following operations with the Owner and the Engineer:

1. Operation of existing valves. The opening and closing of existing valves will be performed by the Owner.
2. Refilling, disinfection, flushing and re-activation of the existing pipeline and new water mains.
3. Timing and duration of linestopping activities.
4. Closure of two-lane traffic and installation of temporary traffic signal for one-lane traffic during phased demolition/construction.

3.3 SEQUENCE OF CONSTRUCTION

- A. Constructing the proposed improvements while maintaining existing operations will require a specific sequence of construction. The Contractor will be allowed reasonable flexibility in scheduling the construction activities. Provide a detailed construction schedule as required in Section 01325.

3.4 SHUTDOWNS

- A. Water service shutdowns as a result of pipeline construction activities are not permitted, unless otherwise noted in this Section. Existing water mains owned by other utilities shall not be shut down unless authorized by the appropriate utility company and the Owner. Notify water system customers regarding interruptions in service at least one week in advance. Coordinate with the Owner regarding scheduling such notifications. An existing main shall not be shut off for more than 6 hours.
- B. Rescheduling or reactivation of any temporary shutdowns may be required if an emergency occurs in the distribution system, such as a major pipeline break or fire.
- C. Test all pipelines, valves and appurtenances and place in operating condition before the final tie-ins are made to connect new equipment to the existing facility.

END OF SECTION

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SECTION 01320**CONSTRUCTION PHOTOGRAPHS****PART 1 GENERAL****1.1 SUMMARY****A. Section Includes**

1. Photographs taken at specified intervals before, during, and after construction.

1.2 SUBMITTALS**A. Informational Submittals**

1. Submit electronic files of each photograph on a CD or USB flash drive.

1.3 QUALITY ASSURANCE**PART 2 PRODUCTS****2.1 CONSTRUCTION PHOTOGRAPHS**

- A. Electronic files shall be in .jpg format.

PART 3 EXECUTION**3.1 PRE-CONSTRUCTION PHOTOGRAPHY**

- A. Prior to the commencement of any Work under this Contract, take a minimum of 2 photographs at each location at 100 foot intervals along the entire length of the new pipelines. The photographs will serve as a record of the original conditions where construction activities will occur.
- B. The area to be photographed shall include, but not be limited to, the area within and adjacent to the proposed construction, including roadways, utilities, driveways, landscaping, trees, structures and buildings.
- C. Provide a minimum of 12 preconstruction photographs, or more as required to document the preconstruction condition of the Site and adjacent properties.

3.2 PROGRESS PHOTOGRAPHY

- A. Take construction photographs of active work areas at least every week throughout the life of the Contract. The photographs shall be indicative of the work that is currently in progress. A minimum of 3 photographs shall be taken at each scheduled interval at each location where Work is in progress.
- B. Take photographs of all relocated utility connections.

3.3 POST-CONSTRUCTION PHOTOGRAPHY

- A. Provide post construction photography after all Work has been completed at each location. The locations to be photographed and the number of photographs required shall be as specified in Paragraph 3.1 for the preconstruction photography.

END OF SECTION

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SECTION 01325**SCHEDULING OF CONSTRUCTION****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Progress Schedule
- B. Related Requirements
 - 1. Section 01140 - Work Restrictions
 - 2. Section 01310 - Coordination

1.2 REFERENCES

- A. The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry, an Associated General Contractors (AGC) of America publication.

1.3 PROGRESS SCHEDULE

- A. Network Analysis
 - 1. Prepare an electronic network analysis using the critical path method under concepts and methods outlined in the current edition of AGC's "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry."
- B. Graphically show the order and interdependence of activities, sequence of Work, how the start of a given activity depends on completion of preceding activities, and how completion of an activity may restrain the start of subsequent activities.
- C. The Work shall be planned by the Contractor and his Project field superintendent in coordination with all Subcontractors and Suppliers whose Work is shown on the Progress Schedule.
- D. Include, at a minimum, the following activities on the Progress Schedule:
 - 1. Project mobilization
 - 2. Submittal and approval of Shop Drawings
 - 3. Procurement of equipment and critical materials
 - 4. Installation of equipment and critical materials
 - 5. Fabrication of special equipment and material, and its installation and testing
 - 6. Final inspecting and testing
 - 7. Punchlist

8. Final cleanup
 9. Other activities that may be critical to the Progress Schedule
 10. All activities of the Owner and the Engineer which affect progress and/or affect required dates for completion of the Work
 11. Milestone completion dates
- E. Take into consideration Shop Drawing submittal and approval time, the delivery times of equipment and materials, Subcontractors' Work, availability and abilities of workmen, weather conditions, any restrictions in operations at the Work site, and all other items that may affect completion of the Work within the Contract Time and specified milestones.
- F. The Progress Schedule shall reflect the requirements and constraints outlined in Section 01310, Coordination.
- G. The Progress Schedule shall reflect Work restrictions outlined in Section 01140.
- H. Show information in such detail that duration times of activities will range from one to 15 days. The selection and number of activities shall be subject to the approval of the Owner and Engineer.
- I. The Progress Schedule should show preceding and following event numbers for each activity, description of each activity, and activity duration in calendar days.
- J. Submit the Progress Schedule on maximum sheet size 30-inches high by the width required.

1.4 SUBMITTALS

- A. Informational Submittals
1. Submit four prints of the preliminary Progress Schedule prepared in accordance with Article 2.05 of Section 00700 and the requirements of this section. Progress schedule must be submitted within 10 days after the Effective Date of the Agreement. Progress Schedule must be approved by the Owner and Engineer before the first progress payment will be made.
 2. Revised analyses - Within 10 days after receipt of the review comments, submit four prints of the Progress Schedule revised in accordance with those comments.
 3. Periodic reports - On the first progress meeting of each month, submit four prints of the updated Progress Schedule, as well as a report of construction activities in the prior month.
 4. Before initiating the Work, submit an estimated monthly rate of Contractor payments for the project. If the payment schedule deviates from the original projection, submit a revised rate of expenditure schedule.

1.5 PERIODIC REPORTS

- A. At the first scheduled progress meeting of each month, present four copies of a construction report which details the Work performed during the preceding period. The report shall include the following at a minimum:
1. Actual progress of Work. Update the Progress Schedule accordingly.
 2. The Progress Schedule, or revised Progress Schedule, should show the portions of the Progress Schedule impacted by the Work progress.
 3. Activities or portions of activities completed during the reporting period, and their total value as basis for Contractor's periodic request for payment. Payment made will be based on the total value of such activities completed or partially completed after verification by the Engineer.
 4. State the percentage of the Work actually completed and scheduled as of the report date, and the progress along the critical path in terms of days ahead of or behind the dates defined in the Progress Schedule.
 5. If the Work is behind the dates set forth in the Progress Schedule, also report progress along other paths with negative slack.
 6. Include a narrative which includes:
 - a. A description of problem areas, anticipated and current
 - b. Delaying factors and their impact
 - c. An explanation of corrective actions taken or proposed
 7. Show the date of latest revision.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. MassDOT Submittals
 - 2. Action Submittals
 - 3. Informational Submittals
 - 4. Electronic Submittal via Procore

1.2 DEFINITIONS

- A. Action Submittals – includes written and graphic information submitted by Contractor that requires Engineer's approval.
- B. Informational Submittals – includes information submitted by Contractor that does not require Engineer's approval. The Engineer will acknowledge receipt of such documents and provide comments when the submittals lack the detail required by the Contract Documents.

1.3 MASSDOT SUBMITTALS

- A. Chapter 85 Section 35 Review and Approval
 - 1. In accordance and compliance with the requirements of Chapter 85 Section 35 of the Massachusetts General Laws, the Contractor shall submit to the Massachusetts Department of Transportation all construction drawings and design calculations that shall be used to fabricate and construct the structure denoted on the plans for review and approval. This approval shall constitute the final approval as stipulated by Chapter 85 Section 35 of the Massachusetts General Laws.

1.4 ACTION SUBMITTALS

- A. Shop Drawings
 - 1. Shop Drawings as defined in the General Conditions, and as specified in individual work sections include, but are not necessarily limited to, custom-prepared data such as fabrication and erection/installation drawings, schedule information, piece part drawings, actual shop work manufacturing instructions, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certification, as applicable to the Work.
 - 2. Shop Drawings shall be of standardized sizes to enable the Owner to maintain a permanent record of the submissions. Approved standard size drawings shall be
 - a. 24 inches by 36 inches

- b. 22 inches by 34 inches
 - c. 11 inches by 17 inches
 - d. 8.5 inches by 11 inches
3. Submit Shop Drawings at the proper time to prevent delays in delivery of materials. Coordinate submittals for related or interdependent equipment.
 4. Advise the Engineer in writing of any deviations from the requirements of the Contract Documents.
 5. Check all Shop Drawings regarding measurements, size of members, materials, and details to determine if they conform to the Contract Documents. Shop Drawings found to be inaccurate, not in compliance, or otherwise in error shall be returned to the Subcontractors or Suppliers for correction before submission to the Engineer. Drawings that are current shall be marked with the date, name, and approval stamp of the Contractor.
 6. All details on Shop Drawings submitted for approval shall show clearly the relation of the various parts to the main members and lines of the structure, and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the Shop Drawings before being submitted for approval.
 7. Detailed installation drawings (sewers, equipment, piping, electrical conduits and controls, HVAC work, and plumbing, etc.) shall be drawn to scale and fully dimensioned.
 8. No material or equipment shall be purchased or fabricated until the required Shop Drawings have been submitted and approved. Materials and equipment and the work involved in their installation or incorporation into the Work shall then be as shown in and represented by the Shop Drawings.
 9. Until the necessary approval has been given, do not proceed with any portion of the work, the design or details of which are dependent upon the design or details of work, materials, equipment or other features for which approval is required.
 10. If submitted equipment requires modifications to the structures, piping, layout, or other details shown on the Drawings, details of the proposed modifications must also be submitted for approval. If such equipment and modifications are approved, perform all Work necessary to make such modifications at no additional cost to the Owner.
- B. Product Data: Product data as specified in individual Sections, include, but are not necessarily limited to, standard prepared data for manufactured products (catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational-range diagrams, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommended spare-parts listing, and printed product warranties, as applicable to the Work.

- C. Samples and color selection charts: Provide sample, when requested by individual Specification to establish conformance with the Specifications, and as necessary to define color, texture and pattern selections available.
- D. Product Substitutions: In accordance with Section 01630.
- E. Operation and Maintenance Manuals: In accordance with Section 01770.
- F. Schedule of Values: In accordance with Section 01295.
- G. Site Usage Plan: In accordance with Section 01140.

1.5 INFORMATIONAL SUBMITTALS

- A. Schedule of Submittals
 - 1. Submit a preliminary Schedule of Submittals within 10 days of the Effective Date of the Agreement.
- B. Schedule of Manufacturers and Suppliers
 - 1. Submit a schedule of manufacturers and Suppliers within 7 days after Notice to Proceed including the names and addresses of the manufacturers and Suppliers of materials and equipment to be incorporated into the Work.
- C. Schedule of Major Products
 - 1. Submit a schedule of major products within 30 days after Notice to Proceed including a complete list of major products proposed for use, with specification section number, name of manufacturer, trade name, and model number of each product.
- D. Product Listing and Manufacturers Qualifications
 - 1. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation and reference standards. Specifically identify the products, the anticipated schedule for delivery and storage, and the estimated value thereof for materials which the Contractor intends to request approval for off-site storage.
- E. Certificates of Compliance
 - 1. General:
 - a. Submit sworn certificates from the manufacturer or material supplier that the materials and fabrications provided under the Specification section conform with the Contract Documents.
 - b. Certificates shall be signed by an officer of the manufacturer's corporation and witnessed by a Notary Public.
 - 2. Welding: Submit in accordance with individual Specification sections.
 - 3. Installer: Prepare written statements on manufacturer's letterhead certifying that installer complies with requirements as specified in individual Specification sections.

4. Material Test: Prepared by qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
 5. Certificates of Successful Testing or Inspection: Submit when testing or inspection is required by Laws and Regulations or governing agency, or when specified in individual Specification sections.
 6. Manufacturer's Certificate of Compliance: In accordance with individual Specification sections.
- F. Application for Payment
1. Submit applications for payment in accordance with Section 01270, Measurement and Payment or Section 01290, Application and Certificate for Payment.
 2. Submit schedule of stored materials when requesting payment for materials not yet installed.
- G. Construction Photography and Videography: Provide preconstruction, progress, and post-construction photography and videography in accordance with Sections 01320 and 01321.
- H. Contract Closeout Submittals: In accordance with Section 01770 01 77 00.
- I. Contractor Design Data
1. Written and graphic information
 2. List of assumptions
 3. List of performance and design criteria
 4. Summary of loads or load diagram
 5. Calculations
 6. List of applicable codes and regulations
 7. Name and version of software
 8. Information requested in individual Specification section
- J. Manufacturer's Instructions: Written or published information that documents manufacturer's recommendations, guidelines, and procedures in accordance with individual Specification sections.
- K. Schedules: Submit construction progress schedules and schedule updates in accordance with Section 01325.
- L. Statement of Qualifications: Submit evidence of qualification, certification, or registration as required in Contract Documents to verify qualifications of professional land surveyor, engineer, materials testing laboratory, specialty subcontractor, trade, specialist, consultant, installer, and other professionals.
- M. Submittals Required by Laws, Regulations, and Governing Agencies

1. Submit promptly notifications, reports, certifications, payrolls, and other required information as may be required, directly to the applicable federal, state, or local governing agency or their representative.
 2. Transmit to Engineer for Owner's records, one copy of correspondence and transmittals (including enclosures and attachments) between Contractor and governing agency.
- N. Test and Inspection Reports
1. Submit test and inspection reports as required by individual Specification sections.
 2. Test and inspection reports shall contain signature of person responsible for test or report.
 3. Reports shall include identification of product and Specification, project name, date and time of test, type of test, location, test results, corrective action required if report indicates test is not in compliance with Contract Documents, interpretation of test results, and other information as required in individual Specification sections.
- O. Equipment Data: Submit information on equipment to be used in the performance of the Work as required by individual Specification sections.
- P. Testing and Start-up Data: Prepare and submit testing procedures proposed to perform testing required by individual Specification sections.
- Q. Vendor Training Plan: At least two weeks prior to scheduling training of Owner's personnel, submit lesson plans for vendor training in accordance with individual Specification section and manufacturer's Operations and Maintenance Manuals.
- R. Health & Safety Plans: When specified in individual Specification sections, prepare and submit a Health and Safety Plan modified or supplemented to include job-specific considerations.
- S. Submittals stamped by another Professional Engineer: When specified in individual Specification sections, prepare and submit calculations and/or drawings stamped by a Professional Engineer licensed in the State where the work is being performed.
- T. Coordination Drawings: When specified in individual Specification sections, prepare and submit drawings to show how multiple system and interdisciplinary work will be coordinated. Examples are conduit routing diagrams, duct layouts, utility coordination drawings, sprinkler plans etc.
- U. Work Plans: When specified in individual Specification sections, prepare and submit copies of all work plans needed to demonstrate to the Owner that Contractor has adequately thought-out the means and methods of construction and their interface with existing facilities.
- V. Erosion Control Plan: When specified in Contract Documents or required by local ordinances or regulations, prepare and submit copies of erosion control plans.
- W. Traffic Control Plan: When specified in Contract Documents or required by local ordinances or regulations, prepare and submit copies of traffic control plans.

- X. Shutdown Requests: Submit notification of any outages required (electrical, flow processes, etc.) as may be required to tie-in new work into existing facilities. Unless otherwise specified, provide outage requests a minimum of 7 days' notice shall be provided.
- Y. Equipment Data: When specified in other Specification sections, information on equipment used by the Contractor to complete the Work, such as compaction equipment and closed-circuit television inspection equipment.

1.6 PROCEDURES

A. Coordination

- 1. Prepare and submit documentation in advance of fabrication and product manufacturer, so that the installation will not be delayed, other related work can be properly coordinated, and there is adequate time for review and resubmission, if required.
- 2. Provide no less than 30 days for review of submittals from the time received by the Engineer. For submittals of major equipment that require more than 30 days to review, due to complexity and detail or those requiring review by multiple engineering disciplines, Engineer will notify Contractor of the circumstances and identify the anticipated date when the submittal will be returned.
- 3. Re-submittals will be subject to same review time.
- 4. No extension of time will be authorized due to failure to provide approvable submittals sufficiently in advance of the Work.

B. Review Shop Drawings, product data, and samples prior to submission and verify and determine:

- 1. Field measurements
- 2. Conformance with the Contract Documents. Advise the Engineer in writing of any deviations from the requirements of the Contract Documents.
- 3. Delete or strike out information that is not applicable to the Work.
- 4. PDF format electronic documents shall be "flattened." Submittals with electronic markups that are not part of the PDF document are not acceptable.
- 5. PDF format electronic documents shall be searchable. Scanned and unsearchable submittals are not acceptable.
- 6. Submittals longer than 20 pages shall be indexed.

C. Electronic submittal via Procore

- 1. Upload the electronic submittal files via Procore. Access to Procore will be provided by the Engineer. Files must be in .pdf format. The submittals will be returned in electronic .pdf format via Procore.

D. In addition to the electronic submission requirement, submit three hard copies of each submittal: two for Owner and one for Engineer's construction observer.

1. Samples – Provide one unless otherwise noted in the individual Specification section. Sample will be retained by Engineer in the field.
- E. Numbering: Submissions shall be accompanied by a transmittal form referencing the project name and applicable Specification section. Submittals shall be numbered sequentially, with the applicable Specification section and a hyphen preceding the number (*e.g.* Submittal number 11330-01). Resubmittals shall bear the same transmittal number with a revision letter commencing with "A" (*e.g.* Submittal number 11330-01-A).
- F. Provide a copy of the Submittal Certification Form (copy attached at the end of this section) which shall be attached to every copy of each submittal as required under Section 00700. Apply the Contractor's stamp and initials or signature certifying that the submission has been thoroughly reviewed for completeness, compliance with the Contract Documents, coordination with adjacent construction and dimensional compatibility. Items submitted without the stamp or that are incomplete will be returned by the Engineer for rework and resubmission.
- G. Provide a copy of the PE Certification Form (copy attached at the end of this section) which shall be attached to every copy of each submittal stamped by another Professional Engineer. Items submitted without the completed certification form will be returned by the Engineer for resubmission.
- H. Distribute copies of reviewed submittals along with the Engineer's transmittal to concerned parties with instructions to promptly report any inability to comply with the provisions or integrate the requirements with interfacing work.
- I. Submittal Content
 1. Each submitted piece of product literature shall include a clear reference to the specifications, drawings, or equipment tags that submittal is to cover.
 2. When manufacturer's product datasheets apply to a product series or include more than one option, clearly indicate and highlight applicable information and strike out any inapplicable content.
- J. Partial and Incomplete Submittals
 1. Shop Drawings shall be submitted as a complete package by Specification section, unless otherwise reviewed and approved by the Engineer. It is the intent that all information, materials, and samples associated with each Specification section be included as a single submittal for the Engineer's review.
 2. Engineer will return entire submittals if preliminary review deems it incomplete including:
 - a. Missing or incomplete Submittal Certification Form
 - b. Insufficient number of copies
 - c. Missing content
 3. Partial submittals may be considered, at Engineer's option, only when necessary to expedite the Project.

4. Partial submittals shall be clearly identified as such on the transmittal to identify missing components.
- K. Submittals not required by the Specification will be returned without review or action code.
- L. Resubmission
1. Make corrections and modifications required by the Engineer and resubmit until approved. The resubmission shall only include the items requiring a resubmission for approval. A resubmission of previously approved items without a request to resubmit those items will be returned without the Engineer's review.
 2. Clearly identify changes made to submittals and indicate other changes that have been made other than those requested by the Engineer.
 3. A maximum of two re-submissions of each shop drawing will be reviewed, checked and commented upon without charge to the Contractor (total of 3 submittals). Any additional submissions which are required by the Engineer to fulfill the stipulations of the Contract Documents will be charged to the Contractor as described in Section 00700.
- M. Distribution
1. Distribute approved Shop Drawings and approved product data to the Project Site and elsewhere as required to communicate the information to Suppliers, Subcontractors, and field personnel.

1.7 ENGINEER'S REVIEW

- A. The Engineer will review submittals for design, general methods of construction and detailing. The Engineer's review and approval of submittals shall not be construed as a complete check nor does it relieve the Contractor from responsibility for any departures or deviations from the requirements of the Contract Documents unless he has, in writing, called the Engineer's attention to such deviations at the time of submission. It will not extend to means, methods, technique, sequences, or procedures of construction (except where specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto.
- B. The Engineer's review of the submittals shall not relieve the Contractor from the responsibility for proper fitting of the Work, or the responsibility of furnishing any work required by the Contract Documents which may not be indicated on the submittals. The Contractor shall be solely responsible for any quantities shown on the submittals.
- C. If the Contractor considers any correction indicated on the submittals to constitute a change to the Contract Documents, the Contractor shall provide written notice to the Engineer at least 7 working days prior to release for manufacture.
- D. When the submittals have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.
- E. Action submittals as defined in paragraph 1.2 will be reviewed and returned under one of the following codes:

1. Approved (Action Code 1) is assigned when there are no notations or comments on the submittal. Equipment or materials may be released for manufacture, provided that it complies with requirements of the Contract Documents.
 2. Approved as Noted (Action Code 2) is assigned when there are notations or comments on the submittal, but the equipment or materials may still be released for manufacture. All notations and comments must be incorporated in the final product. Resubmission is not necessary.
 3. Revise and Resubmit (Action Code 3) is assigned when there are notations and comments requiring a resubmittal of the package. Work cannot proceed until the submittal is revised and resubmitted for review.
 4. Not Approved (Action Code 4) is assigned when the submittal contains non-specified items or does not meet the requirements of the Contract Documents. It may also be assigned when there is a significant amount of missing material required for the Engineer to perform a complete review. The entire package must be revised and resubmitted to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the requirements of the Contract Documents.
- F. Informational submittals, as defined in paragraph 1.2, do not require approval by the Engineer. Such submittals will be returned under one of the following codes:
1. Receipt Acknowledged (Action Code 5) is assigned when the submittal is provided for documentation purposes and is acknowledged as received. Comments may be noted using this action code.
 2. Revise and Resubmit – Informational Submittal (Action Code 6) is assigned when there are notations and comments requiring a resubmittal of the package.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

CERTIFICATION FORMS ON FOLLOWING PAGES

SUBMITTAL CERTIFICATION FORM

PROJECT: _____
ENGINEER: _____ ENGINEER'S PROJECT NO.: _____
CONTRACTOR: _____ CONTRACTOR'S PROJECT NO.: _____
TRANSMITTAL NO.: _____ SUBMITTAL NO.: _____
SPECIFICATION NO.: _____ DRAWING NO.: _____
DESCRIPTION: _____
MANUFACTURER: _____

The above referenced submittal has been reviewed by the undersigned and I/we certify that the materials and/or equipment meets or exceeds the project specification requirements; that field measurements, dimensions, quantities, specified performance criteria, installation requirements, materials, catalog numbers and related materials have been verified; that all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the work has been determined and verified; that review includes all information related to the contractor's sole responsibility for means, methods, techniques, sequences, and procedures of construction and safety; and item has been coordinated with the overall project with:

☐ NO DEVIATIONS

☐ A COMPLETE LIST OF DEVIATIONS AS FOLLOWS:

SUBMITTED BY: _____ DATE: _____

GENERAL CONTRACTOR'S STAMP

PE CERTIFICATION FORM

The undersigned hereby certifies that he/she is a Professional Engineer registered in the
**** Project State of XYZ **** and that he/she has been employed by

_____ to design
(Name of Contractor)

(Insert PE Responsibilities)

In accordance with Specification Section _____ for the

(Name of Project)

The undersigned further certifies that he/she has performed the said design in conformance with all applicable local, state and federal codes, rules and regulations; and, that his/her signature and PE stamp have been affixed to all calculations and drawings used in, and resulting from, the design.

The undersigned hereby agrees to make all original design drawings and calculations available to the

(Insert Name of Owner)

or Owner's representative within seven days following written request therefore by the Owner.

PE Name

Contractor's Name

Signature

Signature

Title

Title

Address

Address

END OF SECTION

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SECTION 01450**QUALITY CONTROL****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Quality assurance and control of the Work
 - 2. Testing and inspection services
 - 3. Cooperation with Owner's independent testing agency
 - 4. Product test reports
 - 5. Manufacturer's field service
- B. Related Requirements
 - 1. Section 01451 - Independent Testing Services
 - 2. Testing requirements are described in various Sections of the Project Manual.

1.2 SUBMITTALS

- A. Informational Submittals
 - 1. Product test reports

1.3 QUALITY ASSURANCE

- A. Monitor quality control over Suppliers, products, services, site conditions, and workmanship to produce Work of specified quality.
- B. Comply fully with manufacturer's instructions. Should these instructions conflict with the Specifications, request clarification from the Owner before proceeding.
- C. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or requirements indicate higher standards or more precise workmanship.

1.4 TESTING SERVICES FURNISHED BY CONTRACTOR

- A. Furnish all testing services required for materials and equipment proposed to be used in the Work, and quality control tests made in the field including:
 - 1. Concrete materials and mix designs
 - 2. Concrete in place
 - 3. Concrete rebar testing required by Massachusetts DOT
 - 4. Modified proctor analyses for all borrow materials used on the Project

5. Modified proctor analysis of all subgrade material to be compacted during surface preparation and fine grading and compaction work
 6. Sieve analyses for all borrow materials used on the Project
 7. Soil structure and nutrient analyses for all loam and topsoil used on the Project
 8. Compaction tests performed during trench backfilling and compaction, rough grading and site preparation, fine grading and compaction of roadway and sidewalk subgrades, and placement of roadway and sidewalk subbase materials
 9. Design of asphalt mixtures
 10. Asphalt in place
 11. Field welded joints
 12. All other tests and engineering data as required in the Contract Documents.
- B. Testing agencies must meet the requirements of Section 01451.
- C. An independent commercial testing laboratory, with current Massachusetts certification, shall perform all tests that require the services of a laboratory to determine compliance with the Contract Documents. Independent testing laboratory requirements are defined under Section 01451.
- D. Secure and deliver the required number of samples to the laboratory as required by the Contract Documents.
- E. Notify Owner and Engineer of time, location and material being sampled.
- F. Schedule necessary testing laboratory services.
- G. Furnish written reports of each test within 48 hours of completion of testing.
- H. Notify the Engineer 48 hours prior to operations requiring inspections and laboratory testing services so the Engineer may witness testing. All failed test areas shall be re-worked and re-tested until passing results are obtained.
- I. The Owner may hire its own independent testing laboratory for quality control tests made in the field or laboratory on materials and equipment during and after their incorporation in the Work. Cooperate with the Owner and independent testing laboratory and furnish samples of materials, design, mix, equipment, tools, storage, and assistance as requested.
- J. Re-work all failed test areas until passing results are obtained. All re-tests required as a result of the Contractor's failure to perform the work in accordance with the Contract Documents shall be at the Contractor's expense.

1.5 TESTING SERVICES FURNISHED BY THE OWNER

- A. The Owner will hire its own independent testing laboratory for quality control tests made in the field or laboratory on materials and equipment during and after their incorporation in the Work, including soils, concrete, masonry, and steel testing.
- B. Cooperate with the Owner and independent testing laboratory and furnish samples of materials, design, mix, equipment, tools, storage, and assistance as requested.

- C. Secure and deliver the required number of soil samples to the laboratory as required by the Contract Documents.
- D. Coordinate with the Owner to schedule necessary testing laboratory services.
- E. Notify the Engineer 48 hours prior to operations requiring inspections and laboratory testing services so the Owner can schedule the testing and the Engineer witness such.
- F. Re-work all failed test areas until passing results are obtained. All re-tests required as a result of the Contractor's failure to perform the work in accordance with the Contract Documents shall be at the Contractor's expense.

1.6 CODE COMPLIANCE TESTING

- A. Provide inspections and tests required by codes or ordinances, or by a legally constituted authority having jurisdiction over the Work.

1.7 PRODUCT TEST REPORTS

- A. Submit 2 copies of product test reports where required by the Contract Documents.

1.8 SUPPLIERS' FIELD SERVICE

- A. Provide qualified field service and installation personnel from material and equipment Suppliers to observe site conditions, installation techniques, quality of workmanship, equipment start-up, adjustment, and performance test where required by the Contract Documents. Observations are to be reported and incorporated in the Work procedures.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01451**INDEPENDENT TESTING SERVICES****PART 1 GENERAL****1.1 SUMMARY****A. Section Includes**

1. Independent testing services including geotechnical, concrete, grout and mortar, and welding inspection and testing
2. Testing laboratory services

B. Related Requirements

1. Section 01450 - Quality Control
2. MassDOT Special Provisions

1.2 REFERENCES**A. General**

1. ASTM E329 – Standard Specifications for Agencies Engaged in the Testing and/or Inspection of Materials used in Construction

B. Soil Testing

1. American Association of State Highway and Transportation Officials (AASHTO)

C. Concrete Testing

1. Cement and Concrete Reference Laboratory (CCRL)

1.3 SUBMITTALS**A. Informational Submittals**

1. Qualifications, experience, and certifications of each proposed testing service
2. Certificate of calibration for testing equipment
3. Inspection and test reports

1.4 QUALITY ASSURANCE**A. General**

1. Comply with the requirements of Section 01450, Quality Control, for testing and inspection requirements.
2. Testing services shall have the following general qualifications:
 - a. Minimum five years as a firm with the type of testing specified.

- b. Ability to provide timely field testing services to minimize the impact of the testing requirements on construction progress.
 - c. Certification to perform the specified services in the state in which the Work is to be performed.
- 3. Testing services proposed by the Contractor shall be subject to review by the Owner and Engineer. Any testing firm not acceptable to the Owner or Engineer will be rejected.
- B. All testing agencies and laboratories must meet the requirements of ASTM E329.
- C. Testing company shall have been in business for a minimum of the last 5 years providing applicable testing services.
- D. Testing equipment shall be calibrated at maximum 12 month intervals by devices of accuracy traceable to National Bureau of Standards. Submit copy of certificate of calibration made by accredited calibration agency.
- E. Testing shall be in accordance with applicable codes and regulations referenced in individual Specification Sections, and with selected standards of the American Society for Testing and Materials.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 TESTING SERVICES – GENERAL

- A. Provide testing services meeting the following:
 - 1. Provide qualified personnel promptly on notice.
 - 2. Perform inspections required by the Contract Documents. Sample and test materials and observe methods of construction to determine compliance with applicable standards and with the requirements of the Contract Documents.
 - 3. Take specimens and samples for testing, as required in individual Specification Sections. Provide all sampling equipment and deliver all specimens and Samples.
 - 4. Promptly notify the Owner and the Engineer of irregularities or deficiencies in the Work which are observed during performance of services.
 - 5. Promptly submit 2 copies of reports of inspections and tests to the Owner, and one copy to the Engineer including:
 - a. Date issued
 - b. Project title and number
 - c. Testing laboratory or agency name and address
 - d. Name and signature of inspector
 - e. Date of inspection or sampling
 - f. Record of temperature and weather

- g. Date of test
 - h. Identification of product and Specification Section
 - i. Location of Project
 - j. Type of inspection or test
 - k. Results of tests and observations regarding compliance with Contract Documents
 - B. Perform additional tests and services as required to assure compliance with the Contract Documents.
 - C. Obtain Owner's approval of testing laboratory before performing testing services.
 - D. Coordinate with testing laboratory.
- 3.2 GEOTECHNICAL TESTING
- A. Provide field testing and laboratory services for geotechnical soil testing required in Special Provisions
- 3.3 CONCRETE TESTING
- A. Provide qualified independent field and laboratory testing service to perform the concrete testing required in the Special Provisions of the specifications.
 - B. The concrete testing laboratory shall have been inspected by the CCRL within the past five years.
 - C. The testing laboratory shall be licensed by the Massachusetts.
 - D. Field testing technicians shall have a Grade 1 concrete field technician license as issued by the American Concrete Institute (ACI).
- 3.4 COORDINATION WITH TESTING LABORATORY
- A. Provide testing laboratory personnel access to site and manufacturer's operations.
 - B. Provide laboratory with representative samples of materials to be tested in required quantities.
 - C. Furnish labor and facilities:
 - 1. To provide access to Work to be tested.
 - 2. To facilitate inspections and tests.
 - 3. For laboratory's exclusive use for storage and curing of test samples.
 - 4. to provide forms for preparing concrete test beams and cylinders.
 - D. Notify laboratory sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests.
 - E. Arrange with laboratory and pay for additional inspections, samples, and tests required for Contractor's convenience.

END OF SECTION

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SECTION 01520**CONSTRUCTION FACILITIES****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Temporary sanitary and first-aid facilities

1.2 QUALITY ASSURANCE

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

1.3 TEMPORARY SANITARY AND FIRST AID FACILITIES

- A. Provide suitably enclosed chemical or self-contained toilets for the use of the labor force employed on the Work. Toilets shall be located near the Work sites and secluded from observation insofar as possible. Toilets shall be serviced weekly, kept clean and supplied throughout the course of the Work.
- B. Contractor shall enforce proper use of sanitary facilities.
- C. Provide a first aid station at the site.

PART 2 PRODUCTS – NOT USED**PART 3 EXECUTION – NOT USED****END OF SECTION**

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SECTION 01550**TRAFFIC REGULATION****PART 1 GENERAL****1.1 SUMMARY****A. Section Includes**

1. Traffic requirements
2. Traffic officers

1.2 PAYMENT PROCEDURES

1. Refer to Special Provisions for procedures relating to payment for the Work.
2. Schedule, document and pay for traffic officers if they are required. Contractor will be reimbursed for payment of traffic officers only after invoices have been paid.
3. Owner will deduct from monies due Contractor for the following abnormal and unreasonable expenses:
 - a. Contractor caused delays in the prosecution of work that result in hiring traffic officers for more hours than would have been required during normal prosecution of work.
 - b. Reconstruction and/or reinstallation of any portions of the work, as a result of improper initial installation or defective material, for which traffic officers are required.
 - c. Traffic officers required at a site where Contractor is not working or outside of Contractor's standard work day as a result of obstructions to traffic that remain in the traveled way.
 - d. All other incidents resulting from Contractor's operations requiring traffic officers that would not normally be encountered during the progress of a well-organized project employing proper construction methods.
 - e. When traffic officers are requested for the convenience of Contractor and are not otherwise considered necessary to the work.

1.3 REFERENCES

- A. Manual of Uniform Traffic Control Devices, U.S. Department of Transportation
- B. State of Massachusetts DOT Office of the State, Traffic Administration Regulations, latest revision

1.4 TRAFFIC REQUIREMENTS

- A. Adhere to all applicable Gardner, Massachusetts ordinances that relate to traffic control. Coordinate and meet with Town authorities to review applicable requirements and

develop a traffic control plan consistent with referenced documents for approval by the Town authorities.

- B. Arrange construction activity so that all streets shall remain open to at least one-way traffic during periods of actual work, and to unimpeded, two-way traffic during all other periods.
- C. Provide a traffic control plan to Engineer for approval showing traffic control signs, barrels, cones, traffic officers, including detour signs, meeting the approval of Engineer, Owner and local Police Departments in accordance with the Manual of Uniform Traffic Control Devices.
- D. Determine the location of each day's work and implement the approved traffic control plan. If the plan requires the use of traffic officers, notify the Police Department.
- E. Contractor shall have no claim of delay if he does not notify the Police Department of his scheduled location in time to arrange for traffic officers.
- F. Hand deliver written notice to individual houses affected by driveway and side road closings or detours a minimum 24 hours in advance. A recommended parking area outside the work limits shall be included in the notice.

1.5 TRAFFIC OFFICERS

- A. Uniformed traffic officers shall be required at locations deemed necessary by Owner, working in conjunction with local Police and Fire Departments, for the protection of the public.
- B. The Police Chief or his representative, in consultation with Owner's representative, will determine the number of officers required for the work.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01560**TEMPORARY BARRIERS****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Temporary Fencing System
- B. Related Requirements
 - 1. Section 01720, Field Engineering

1.2 SUBMITTALS

- A. Informational Submittals
 - 1. Submit information regarding the proposed temporary fencing system, including material of construction, plan layout, spacing of components, and anchorage.

1.3 TEMPORARY FENCING SYSTEM

- A. Provide temporary fencing system to protect the open trench while construction activities are not taking place. Fencing system shall be installed such that the fence system cannot be moved by hand.
- B. Do not move the fence system until the phase of proposed bridge structure has been completed, backfilled, and compacted.
- C. The Contractor will retain ownership of the temporary fencing system after the completion of the work.

PART 2 PRODUCTS – NOT USED**PART 3 EXECUTION****3.1 FENCE INSTALLATION**

- A. Install fence according to manufacturer's instructions at locations specified in Paragraphs 1.3 above.

END OF SECTION

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SECTION 01570**TEMPORARY CONTROLS****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Dust control
 - 2. Drainage and erosion control
 - 3. Haybales and siltation fence
 - 4. Erosion Control Barrier
 - 5. Mulch
- B. Related Requirements
 - 1. Special Provisions

1.2 SUBMITTALS

- A. Informational Submittals
 - 1. Materials proposed for use in dust control
 - 2. Haybales, siltation fence, and mulch

1.3 HAYBALES

- A. Haybales required for siltation control shall be wire tied bales of the type normally used for siltation or erosion control or construction projects.

1.4 FILTER FABRIC

- A. Filter fabric siltation fencing shall be a woven filter fabric having a weight of at least 2.5 ounces per square yard, a thickness of at least 17 mils, a coefficient of permeability of not less than 0.0009 centimeters per second and allows a water flow rate of a minimum 40 gallons per minute per square yard. The material shall have a high sediment filtration capacity, high slurry flow and minimum clogging characteristics. The material shall be equal to FW-300 as manufactured by Mirafi, Inc., Charlotte, North Carolina; Amoco 2130 by Nilex, Inc., Centennial, CO; MISF 180 by Mutual Industries, PA; or equal.

1.5 EROSION CONTROL BARRIER

- A. Straw wattles shall be dense 9" diameter tubes, made with certified noxious weed-free straw bound by netting of the type normally used for siltation or erosion control or construction projects.

1.6 MULCH

- A. Hay mulch shall consist of mowed cured grass, clover, alfalfa, timothy, oats, or wheat. No salt hay shall be used.

PART 2 EXECUTION

2.1 DUST CONTROL

- A. Control dust during the Work. Use a mechanical street sweeper daily.
- B. Prevent dust from becoming a nuisance or hazard. During construction, excavated material and open or stripped areas are to be policed and controlled to prevent spreading of the material.
- C. Control dust during the work on-site using calcium chloride and/or water.
- D. During the Work on-site, all paved road and driveway surfaces shall be scraped and broomed free of excavated materials on a daily basis. The surfaces shall be hosed down or otherwise treated to eliminate active or potential dust conditions and the natural road or wearing surface shall be exposed.
- E. Ensure that the existing equipment, facilities, and occupied space adjacent to or nearby areas of the work do not come in contact with dust or debris as a result of concrete demolition, excavation or surface preparation for coatings.
- F. Control dust by the construction of temporary wooden frame/polyethylene sheeting walls and covering enclosures separating adjacent or nearby areas and equipment from the Work site.
- G. Submit for approval materials proposed for use for dust control, prior to start of the Work.

2.2 DRAINAGE AND EROSION CONTROL

- A. Control erosion and siltation during the construction through mulching, haybales, siltation fencing, diversion and control of storm water run-off, ponding areas and similar methods.
- B. Provide and maintain sediment trapping systems.
- C. Discharge surface runoff from any disturbances to the site into silt containment basins. Utilize siltation prevention measures including haybale and geotextile fences before discharge to drainage systems.
- D. Install sediment trapping devices in catch basins located in existing paved areas with sediment trapping devices to minimize the transport of sediment through the subsurface stormwater collection system.

2.3 HAYBALES AND SILTATION FENCE

- A. Place and maintain both haybales and a staked filter fabric siltation fence along the entire length of the proposed construction between the area of construction and the brook or its surrounding wetlands where shown on the Drawings or required by permit.
- B. Install haybales by anchoring bales butted together to existing ground with at least 2 stakes per bale. The stake shall be a minimum of 1-inch square cross section and shall be long enough to penetrate 12 inches into the ground. Replace deteriorated haybales. Remove and dispose of the haybales following the successful growth of vegetation in the areas disturbed by the construction. Haybales shall not be removed until their removal is approved by the Engineer.

- C. Install a filter fabric siltation fence in addition to the staked haybales, prior to construction and remove after full surface restoration has been achieved. Install the siltation fence parallel and immediately adjacent to the haybales as shown on the Drawings. Install as follows:
 - 1. Hand shovel excavate a small trench on the upstream side of the desired fence line location.
 - 2. Unroll the siltation fence system, position the post in the back of the trench (downhill side), and hammer the post at least 1½ feet into the ground.
 - 3. Lay the bottom 6 inches of the fabric into the trench to prevent undermining by storm water run-off.
 - 4. Backfill the trench and compact.
- D. Perform work in accordance with City of Gardner Conservation Commission Order of Conditions.

2.4 RESTORATION

- A. Provide erosion control, seed and mulch and netting for surface restoration of areas disturbed during construction activities.
- B. Provide temporary stabilization of disturbed areas that remain inactive greater than 14 consecutive days to minimize erosion. Methods to minimize erosion may include but are not limited to:
 - 1. Spreading straw and/or providing temporary planting stabilization.
 - 2. Installing jute netting.
 - 3. Preparing surfaces to increase the runoff flow path, reduce the runoff flow velocity, or create small storage pockets to retain surface flows. Methods of accomplishing this include using mechanical devices such as track equipment or sheep's foot rollers.
- C. Restore the ground surface in brush and/or woodland areas by machine spreading of existing stripped surface soils (loam and humus), liming, fertilizing, seeding and mulching, as well as installing jute netting where required by steep slopes.
- D. Salvage existing loam and topsoil and stockpile this material for re-spreading where originally removed. On backfilling, grading shall be returned to preconstruction contours and the stockpile of loam shall be spread over areas disturbed during construction activities.
- E. Place mulch on seeded areas. Use jute netting on areas having a slope greater than 3 horizontal to 1 vertical, to anchor the mulch until a satisfactory growth is obtained. If seeding is not possible because of the time of the year, apply mulch and netting to stabilize the area until such time as seed can be sown.
- F. Provide grading, refertilizing, reseeding, remulching and/or netting to maintain the restored areas until the Work is accepted by the Owner.
- G. Seed shall be as specified under Special Provisions..

2.5 CLEANING

- A. Remove any sediment that builds up around the haybales or catchbasins.
- B. Clean sediment trapping devices periodically during the Work. Devices shall be cleaned on a weekly basis, or more frequently if the devices become clogged.
- C. Clean catch basins that collect sediment as a result of the Work.

END OF SECTION

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SECTION 01600**PRODUCT REQUIREMENTS****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Products and Materials
 - 2. Product Delivery Requirements
 - 3. Packaging, Handling and Storage Requirements
 - 4. Inspection of Offsite Work

1.2 QUALITY ASSURANCE

- A. Review all contract Drawings and Specifications with respect to specific system characteristics, applicability of materials and equipment for the intended purposes, sizes, orientation, and interface with other systems, both existing and proposed, and certify that the materials and equipment proposed will perform as specified prior to submitting shop drawings.
- B. Provide sworn certificates as to quality and quantity of materials where specified or requested by the Engineer.
- C. Obtain concurrence of the Engineer prior to processing, fabricating, or delivering material or equipment.

1.3 PRODUCTS AND MATERIALS

- A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by a single manufacturer unless specified otherwise.
- B. Use only new and first quality material in the Work. Material shall conform to the requirements of these Specifications and be approved by the Engineer. If, after trial, it is found that sources of supply that have been approved do not furnish a uniform product, or if the product from any source proves unacceptable at any time, the Contractor shall furnish approved materials from other approved sources.
- C. Immediately remove defective materials and equipment from the site, at no additional cost to the Owner. The Contractor may be required to furnish sworn certificates as to the quality and quantity of materials before materials are incorporated in the Work.
- D. Engineer has the right to approve the source of supply of all material prior to delivery.

1.4 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.

- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- D. Progressively deliver materials and equipment to the Site so there will be neither delay in progress of the Work nor an accumulation of material that is not to be used within a reasonable time.
- E. Deliver products to the Site in their manufacturer's original container, with labels intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. The Engineer may reject as non-complying such material and products that do not bear identification satisfactory to the Engineer as to the manufacturer, grade, quality, source, and other pertinent information.

1.5 PACKAGING, HANDLING AND STORAGE REQUIREMENTS

- A. Provide storage and handling of all materials and equipment required for the Work.
- B. Except as otherwise indicated in the Contract Documents, determine and comply with the manufacturer's recommendations on product storage, handling, and protection. Provide manufacturer's documentation on recommended storage procedures when requested by the Engineer.
- C. Properly store and protect all equipment immediately upon its arrival. All equipment shall be stored in a clean, dry, heated, secured, and insured indoor facility satisfactory to the Engineer. Equip drive motors with thermostatically controlled strip heaters. Outdoor storage with plastic, canvas, plywood or other cover will not be allowed except where specific approval for designated items not containing electrical components or bearings is obtained from the Engineer. This approval does not relieve the Contractor of responsibility for proper protection of materials.
- D. Familiarize workmen and subcontractors with hazards associated with materials, equipment, and chemicals specified herein and take all necessary safety precautions.
- E. Areas available on the construction site for storage of material and equipment shall be as shown on the Drawings or approved by the Owner.
- F. Materials and equipment to be incorporated in the Work shall be handled and stored by the manufacturer, fabricator, supplier, and Contractor before, during and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, theft, or damage of any kind to the material or equipment.
- G. Protect finished surfaces including floor surfaces, stairs, joints, and soffits of passageways from damage until accepted by the Engineer.
- H. Promptly remove materials from the site of the Work which have become damaged or are unfit for the use intended or specified. The Contractor will not be compensated for the damaged materials or their removal costs.
- I. Handle, haul, and distribute all materials and all surplus materials on the different portions of the Work, as necessary or required. Provide suitable and adequate storage

room for materials and equipment during the progress of the Work, and be responsible for the protection, loss of, or damage to materials and equipment furnished, until the final completion and acceptance of the Work.

- J. Storage and demurrage charges by transportation companies and vendors shall be borne by the Contractor.
- K. All materials and equipment to be incorporated in the Work shall be placed so as to not damage any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Keep materials and equipment neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to the Owner.
- L. No material or equipment will be permitted to be stored in any of the Owner's facilities, unless otherwise approved by the Engineer.
- M. Do not store material or equipment in any wetland or environmentally sensitive area. Stockpile sites shall be level, devoid of mature stands of natural vegetation, and removed from drainage facilities and features, wetlands, and stream corridors.
- N. Contractor shall be fully responsible for loss or damage to stored materials and equipment.
- O. No item judged rusty, corroded or otherwise damaged during storage will be accepted. Any electrical or instrumentation item determined by the Engineer to be damaged shall be removed from the Site and replaced by a completely new item in first class condition. Items not properly stored will not be considered for any partial payment.
- P. Provide protective and preventive maintenance during storage consisting of manually exercising equipment where required, inspecting mechanical surfaces for signs of corrosion or other damage, lubricating, applying any coatings as recommended by the equipment manufacturer as necessary for its protection and other precautions as necessary to assure proper protection of equipment stored.
- Q. Treat ferrous surfaces not receiving finish coats of paint with rust preventive coating, and protect non-ferrous metal work and devices with suitable wrappings.

1.6 INSPECTION OF OFFSITE WORK

- A. The Owner and Engineer will inspect Work performed away from the construction site during fabrication, manufacture, or testing, or before shipment. Give 2 weeks written notice regarding the place and time where such fabrication, manufacture, testing, or shipping will be done.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01630**PRODUCT SUBSTITUTION DURING CONSTRUCTION****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes
 - 1. Product substitution procedures

1.2 CONTRACTOR'S OPTIONS

- A. For materials or equipment (hereinafter products) specified only by performance or reference standard, select product meeting that standard, by any Supplier. To the maximum extent possible, provide products of the same generic kind from a single source.
- B. For products specified by naming several products or manufacturers, select any one of the products or Suppliers named, which fully complies with the Drawings and Specifications. Another "or-equal" product can also be considered by the Engineer if it complies with the provisions of Section 00700 . If a product proposed by the Contractor does not qualify as an "or-equal" item, then it can be considered as a proposed substitute item, and the Contractor must comply with the requirements of Section 00700.
- C. For products specified by naming products or manufacturers and followed by words indicating that no "or-equal" item or substitution is permitted, there is no option and no substitution will be allowed.
- D. Where more than one choice is available as a Contractor's option, select product that is compatible with other products already selected or specified.

1.3 SUBSTITUTIONS

- A. If in the Engineer's sole discretion a product proposed by the Contractor does not qualify as an "or-equal" item under the provisions of Section 00700, it can be considered a proposed substitute item. Submit information required under Section 00700 for proposed substitutes.
- B. The Engineer will consider written requests from the Contractor for substitutions within 30 days after the Notice to Proceed. After this period, requests will be considered only in case of unavailability of product or other conditions beyond control of the Contractor.
- C. Submit 5 copies of request for substitutions. Submit a separate request for each proposed substitution. In addition to the submittal requirements outlined in of Section 00700, include the following in each substitution request:
 - 1. For products or Suppliers:
 - a. Product identification, including Supplier & manufacturer's name and address.
 - b. Manufacturer's literature with product description, performance and test data, and reference standards.
 - c. Samples, if appropriate.

- d. Name and address of similar projects on which product was used, and date of installation.
- 2. For construction methods (if specified):
 - a. Detailed description of proposed method.
 - b. Drawings illustrating method.
- 3. Such other data as the Engineer may require to establish that the proposed substitution is equal to the product, Supplier or method specified.
- D. The substitution request shall include written certification and statements that are outlined in of Section 00700.
- E. A request constitutes a representation that Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 - 2. Will provide same or better guarantees, warranties or bonds for proposed substitution as for specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives all claims for additional costs or time extension which may subsequently become apparent.
 - 5. Will reimburse Owner for review or redesign services associated with re-approval by authorities having jurisdiction.
- F. A proposed substitution will not be accepted if:
 - 1. Acceptance will require changes in the design concept or a substantial revision of the Contract Documents.
 - 2. It will delay completion of the Work.
 - 3. It is intended or implied on a Shop Drawing and is not accompanied by a formal request for substitution from the Contractor.
- G. The Contractor is responsible for all costs relating to substitution requests.
- H. Approval of a substitution does not relieve the Contractor from the requirement for submission of Shop Drawings as set forth in the Contract Documents.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

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SECTION 01720**FIELD ENGINEERING****PART 1 GENERAL****1.1 SUMMARY****A. Section Includes**

1. Establishment of lines, benchmarks, and elevations required to layout and construct the Work
2. Property line survey and delineation

1.2 SUBMITTALS**A. Informational Submittals**

1. Submit the qualifications of the Registered Professional Engineer and/or Registered Land surveyor to be hired to perform various portions of the Work, as applicable.
2. Submit documentation verifying the accuracy of field engineering work.
3. Submit 4 copies of final record drawings of field engineering layouts and as-built survey.
4. Submit certificate signed by registered (licensed) engineer or surveyor certifying that elevations and locations of Work are in conformance with Contract Documents. Explain deviations.
5. Before starting any site work on any land takings and/or easements, the Contractor's surveyor shall submit a letter of certification stating that all land takings and/or easements have been laid out in accordance with the recorded land taking and/or easement plans. If any deviations or changes exist, these changes must be fully explained in the letter.

1.3 RECORDS

- A. Maintain a complete, accurate log of control and survey work as it progresses.**

1.4 QUALITY ASSURANCE

- A. Employ a qualified engineer, registered with the Massachusetts as a Professional Engineer or a competent surveyor, registered with the Massachusetts as a Land Surveyor, as required for the particular characteristics of the work being performed.**

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION****3.1 PROCEDURES**

- A. The Registered Professional Engineer or Land Surveyor provided shall establish and maintain lines, elevations and reference marks needed during the progress of the Work**

and shall re-establish stakes and marks placed by the Engineer that are lost or destroyed through the course of the Work. Verify such work by instrument or other appropriate means.

- B. The Engineer shall be permitted at all times to check the lines, elevations and reference marks, set by the Contractor, who shall correct any errors disclosed by such check. Such a check shall not be construed to be an approval of the Contractor's work and shall not relieve or diminish the responsibility of the Contractor for the accurate and satisfactory construction and completion of the entire Work.
- C. Make, check, and be responsible for measurements and dimensions necessary for the proper construction of and the prevention of misfittings in the Work.
- D. Furnish all protective stakes and temporary structures for marking and maintaining points and lines for the building of the Work, and give the Engineer such facilities and materials for verifying said lines and points as he may require.
- E. Revisions to the layout and elevations of the Work as defined by the Contract Documents shall be approved by the Engineer.
- F. Maintain and prepare final record drawings of field engineering layouts and as-built survey conducted after completion of the Work.
- G. Submit the pre-construction letter of certification as outlined in Part 1 above.
- H. Land takings and easements shall be permanently pinned upon completion of the proposed work.
- I. Conduct a property line survey and delineate the property in the field prior to commencing with grading work at the site.
- J. Set grade stakes on a 50 foot grid over the entire project area. This survey work shall be completed prior to beginning any construction.
- K. Use the new survey information to make adjustments, if necessary, to the final grading plan for the landfill. Changes to the final grading plan based on revised survey information shall be reviewed and approved by the Engineer.
- L. Furnish and set control staking. Rough stakes may be used to denote top and bottom of slopes, edge of refuse, centerline of ditches, etc.

END OF SECTION

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SECTION 01725**PRESERVATION AND RESTORATION OF PROJECT FEATURES****PART 1 GENERAL****1.1 SUMMARY****A. Section Includes**

1. Protection and replacement of trees, shrubs, signs, property markers, fences, and related project features.
2. Taking precautions, providing programs, and taking actions necessary to protect public and private property and facilities that are outside the demolition scope from damage.

1.2 DEFINITIONS**A. Underground Structures**

1. Underground structures are defined to include, but not be limited to, sewer, water, gas, and other piping, and manholes, chambers, electrical and signal conduits, tunnels and other existing subsurface work located within or adjacent to the limits of the Work.
2. Underground structures known to the Engineer are shown on the Drawings to the extent that locations are available. This information is shown for the assistance of the Contractor in accordance with the best information available, but is not guaranteed to be correct or complete. The Contractor shall be responsible for checking on the actual locations of water, sewer, gas electric and telephone service connection lines to avoid potential interferences.

B. Surface Structures

1. Surface structures are defined as existing buildings, structures and other facilities above the ground surface. Included with such structures are their foundations or any extension below the surface. Surface structures include, but are not limited to, buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks and all other facilities that are visible above the ground surface.

PART 2 PRODUCTS – NOT USED**PART 3 EXECUTION****3.1 REPAIR/RESTORATION**

- A. Trees, shrubs, and similar items shall not be removed except where indicated on the drawings or as necessary to access the required demolition work, as approved by the Engineer. Items to be removed shall be clearly marked as directed by the Engineer. If objects not to be removed are damaged or removed, they shall be repaired or replaced to their original condition.

- B. Trees and shrubs on private property, which are removed or damaged by the Contractor shall be replaced in kind.
- C. Signs, fences, property markers, walls, guard rails and other public or private property that are outside the demolition scope shall be replaced in kind if damaged. Supports and protective devices required shall be provided.
- D. Underground and Surface Structures
 - 1. In the event of damage, injury or loss to existing utilities and structures that were not indicated to be removed or abandoned, whether shown on the Drawings or not, make all reasonable efforts to facilitate repairs and to mitigate the impact of such events upon the utility or structure owner's normal operations. Restore the existing utility or structure to the condition required by the owner of the utility or structure or at least to the condition found immediately prior to the Work. In the event that the utility owner elects to make the repairs, provide all reasonable access and assistance, and reimburse the utility owner for the cost of repairs. If utility service is interrupted due to damage to facilities, alternate facilities shall be provided.
 - 2. All other existing surface facilities, including but not limited to, guard rails, posts, guard cables, signs, poles, markers and curbs which are temporarily removed to facilitate the Work shall be replaced and restored to their original condition at the Contractor's expense unless otherwise indicated in other sections of these specifications.
 - 3. Wherever water, sewer, gas or petroleum mains, electric or telephone lines, cables or other utilities and structures are encountered and may be in any way interfered with, inform the Engineer and the appropriate utility company. Cooperate with the Engineer and utility company in the protection, removal, relocation, and replacement of structures and facilities.
 - 4. Prior to proceeding with any demolition or construction, notify in writing owners of utilities and structures within the vicinity of the proposed Work.
 - 5. Work affecting water distribution systems, which will take fire hydrants out of service, must be coordinated with the local fire department. The Contractor shall be prepared to restore fire flows in the event of an emergency or to provide for temporary fire flow service in accordance with the requirements of the local fire department.
 - 6. Materials used for relocation or replacement of utilities and structures shall be of an equivalent material, type, class, grade and construction as the existing or as approved by the respective owners thereof, unless otherwise shown or specified.
 - 7. When any survey monument or property marker, whether of stone, concrete, wood or metal, is in the line of any trench or other demolition or construction work and may have to be removed, notify the Engineer in advance of removal. Under no circumstances shall any monument or marker be removed or disturbed by the Contractor or by any of his Subcontractors, employees or agents, without the permission of the Engineer. Monuments or markers removed or disturbed shall be reset by a land surveyor licensed in the State where the Work is located at the Contractor's expense. Should any monuments or markers be destroyed through

accident, neglect or as a result of the Work under this Contract, the Contractor shall, at his own expense, employ a land surveyor licensed in the State where the Work is located to re-establish the monument or marker.

3.2 PROTECTION

- A. The construction of certain portions of the project may require excavation within the root systems of trees. Roots with a diameter of 2 inches or more within the excavation shall not be cut. If necessary, excavation shall be made with small powered equipment or by hand to comply with this requirement. It may be necessary to excavate from more than one direction to avoid damage to the roots.
- B. The trunks of trees that are to remain and are within the swing radius of the excavating machine bucket when fully extended shall be wrapped with burlap and 2 inch by 4 inch protective wood slats (8 inch spacing maximum) wired around the circumference of the trees to protect them from damage.
- C. Tree limbs shall not be cut except upon written approval of the Owner and the Engineer. Tree limbs cut shall be painted with approved forestry paint manufactured specifically for that purpose.
- D. Underground and Surface Structures
 - 1. Sustain in their places and protect from direct or indirect injury underground and surface structures designated to remain within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure. Before proceeding with the work of sustaining and supporting such structure, satisfy the Engineer that the methods and procedures to be used have been approved by the party owning same.
 - 2. Pay utility service company charges related to the temporary support of utility poles if required to complete the Work.
 - 3. Assume risks associated with the presence of underground and surface structures within or adjacent to the limits of the Work. The Contractor shall be responsible for damage and expense for direct or indirect injury caused by his Work to any structure. Immediately repair damage caused by the Work to the satisfaction of the owner of the damaged structure.

END OF SECTION

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SECTION 01770**CLOSEOUT PROCEDURES****PART 1 GENERAL****1.1 SUMMARY****A. Section Includes**

1. Documentation required for the transfer of the completed Work to the Owner
2. Final Cleaning

1.2 SUBMITTALS**A. Closeout Submittals**

1. As-built drawings
2. Operation and maintenance manuals
3. Evidence of payment and release of liens
4. List of Subcontractors, service organizations, and principal vendors

1.3 SUBSTANTIAL COMPLETION

- A. Refer to General Conditions, for procedures relating to obtaining Substantial Completion. Refer to 00520, Agreement, for Contract Times.

1.4 PROJECT CLOSEOUT DOCUMENTS

- A. As-Built Drawings - Submit as-built drawings for review, approval, or comment. The as-built drawings shall show the completed work, including all deviations from the original Drawings. As-built drawings shall depict the location of all piping and valves installed under this Contract, as well as field changes. Take swing ties to all underground work from a minimum of two horizontal locations. Vertical dimensions to all below grade work shall also be obtained. All fittings, bends, valves and other appurtenances shall be shown. At a minimum, the following information shall be shown on the as-built drawings.

1. Ties to all buried fittings (including tees, crosses, bends, reducers, wyes, offsets, adapters, sleeves, caps, plugs), valves, services and structures from two horizontal measurements to permanent surface reference points, and depth below permanent grade. Permanent surface reference points are manholes, catch basins, power poles, and above-grade structures.
2. Ties to all surface structures (including manholes, catch basins, vaults, valve boxes, hydrants, curb stops, cleanouts, wet wells, outlets, etc.) from two horizontal measurements to permanent surface reference points. Re-station surface structures if stationed on Drawings.
3. Ties to other utility crossings, abandoned pipelines, and sewer service stubs, from two horizontal measurements to permanent surface reference points include depth below permanent grade and spacing between crossing utilities.

4. Invert and rim elevation of all gravity pipelines and structures including manholes, catch basins, below-grade structures, wet wells, septic tanks and distribution boxes as appropriate.
 5. Depth of ledge at changes in profile but not more than 25-foot intervals.
 6. Changes to pipe size and materials.
- B. Operation and Maintenance manuals - Provide four copies of operation and maintenance manuals for each type of equipment provided on the project. Manuals shall include as a minimum:
1. The Operations and Maintenance Manual Certification Form (copy attached at the end of this Section) which shall be attached to every copy of each Operations and Maintenance Manual submitted.
 2. Detailed service, maintenance and operation instructions for each item supplied
 3. Special maintenance requirements, along with special calibration and test procedures
 4. Operating instructions
 5. Preventative maintenance instructions
 6. Corrective-maintenance instructions
 7. Complete parts lists with stock numbers and name, address, and telephone number of the local supplier
- C. Provide warranties and bonds for items so listed in pertinent sections of the Project Manual.
- D. Provide evidence of compliance with requirements of governmental agencies having jurisdiction.
- E. As specified in Section 00700, provide evidence that all Work, materials and equipment will pass to Owner free and clear of any Liens or other title defects upon final payment. Such evidence may take the form of receipts or releases from all Subcontractors and Suppliers and an affidavit from Contractor as to the completeness of the receipts and releases as described in Section 00700.
- F. Provide list of Subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

1.5 FINAL PAYMENT

- A. Refer to 00700, General Conditions, for procedures relating to final inspection and payment.
- B. The Contract shall be considered complete and final payment made, only when:
1. All provisions of the Contract Documents have been strictly adhered to.

2. The project and premises have been left in good order, including removal of all temporary construction, Contractor-owned and extraneous materials.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 CLEANING

- A. Remove and entirely dispose of material or debris that has washed, flowed or has been placed in existing watercourses, ditches, gutters, drains, pipe, or structures, for work done under the Contract work limits. Leave ditches, channels, drains, pipes, structures, and watercourses in a clean and neat condition upon completion of the Work.
- B. Restore or replace any public or private property damaged or removed during the course of the Work. Property shall be returned to a condition at least equal to that existing immediately prior to the beginning of operations. Complete all highway or driveway, walk, and landscaping work using suitable materials, equipment and methods. Perform restoration of existing property, signs or structures promptly as work progresses; do not leave restoration work until the end of the Contract Time.

CERTIFICATION FORM ON FOLLOWING PAGE

O&M MANUAL CERTIFICATION FORM

PROJECT: _____
ENGINEER: _____ ENGINEER'S PROJECT NO.: _____
CONTRACTOR: _____ CONTRACTOR'S PROJECT NO.: _____

TRANSMITTAL NO.: _____ SHOP DRAWING NO.: _____
SPECIFICATION NO.: _____ DRAWING NO.: _____
DESCRIPTION: _____
MANUFACTURER: _____

The above referenced O&M manual has been reviewed by the undersigned and I/we certify that the manual is customized as needed for this project, and contains the following items, where applicable for the materials or equipment provided:

- | | |
|--|---|
| ☐ 3-ring binder with title on binder and binding edge | ☐ Complete parts list of equipment supplied |
| ☐ Electronic CD, when specified | ☐ Complete specifications/data on each item |
| ☐ Comprehensive index broken down into sections | ☐ Detailed maintenance & operations instructions |
| ☐ Dividers for sections and sub-sections | ☐ "As constructed" layout & schematic drawings |
| ☐ Warranties | ☐ Wiring diagrams |
| ☐ Troubleshooting information | ☐ Lubrication & maintenance schedules |
| ☐ Startup, operation & shutdown procedures | ☐ Equipment performance curves |
| ☐ Safety procedures | ☐ List of spare parts supplied and current cost |
| ☐ Manufacturer's contact information | ☐ Parts & service contact information |

SUBMITTED BY: _____ DATE: _____

GENERAL CONTRACTOR'S STAMP

END OF SECTION

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SPECIAL PROVISIONS

CITY OF GARDNER

DEPARTMENT OF COMMUNITY DEVELOPMENT AND PLANNING

CULVERT REPLACEMENT **KEYES ROAD OVER WILDER BROOK**

SCOPE OF WORK

All work under this Contract shall be done in conformance with the *2026 Standard Specifications for Highways and Bridges*, the *Construction Standard Details* in effect as of January 2026, the *1990 Standard Drawings for Signs and Supports*, the *2015 Overhead Signal Structure and Foundation Standard Drawings*, the *11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD)* and the *January 2026 Massachusetts Amendments to the MUTCD*, the *1968 Standard Drawings for Traffic Signals and Highway Lighting*, the latest edition of *The American Standard for Nursery Stock*, the Plans and these Special Provisions.

All Massachusetts Department of Transportation (MassDOT) documents can be found online at: <https://www.mass.gov/massdot-highway-division-manuals-and-publications>

DISPOSAL OF SURPLUS MATERIALS

Surplus material obtained from any type of excavation, and not needed for further use as determined by the Engineer shall become the property of the Contractor and shall be removed from the site during the construction period and disposed of legally. The removal and disposal of surplus material shall adhere to the regulations and requirements of local authorities governing the disposal of such materials, at no additional compensation. Suitable materials obtained from other work items shall be incorporated into the work as fill material at appropriate locations as determined by the Engineer. Suitable materials from other work items will not be measured for payment under appropriate fill items.

MATERIAL REMOVED AND STACKED

The Contractor shall carefully remove, transport and stack all material that, in the opinion of the Engineer or Owner is salvageable. The material shall be stacked at the Department of Public Works yard. The Contractor shall coordinate with the City of Gardner to schedule drop-off time.

DRAINAGE

It shall be the Contractor's responsibility to maintain drainage functioning properly in the areas under construction prior to the time when the final system is put into use. All pipes and structures within the limits of this Contract shall be left in a clean and operable condition at the completion of the work. All work shall be included under the relevant drainage items without additional compensation. Any adjustments made to new drainage structures will be included under the Contract unit price for each respective structure.

BORROW MATERIAL TESTING

In accordance with MassDOT requirements and the following:

Contractor shall provide representative samples of borrow materials taken from the source. Tag, label, and package the Samples as requested by Engineer. Provide access to the borrow site for field evaluation and inspection.

Provide sieve analysis (ASTM C136) from certified soils testing laboratory for all borrow materials. Take and test a sample, at no additional cost to the Owner for each 500 CY of borrow material placed. The Engineer reserves the right to require more frequent testing than that which is specified above should the borrow characteristics change.

Contractor shall provide modified proctor analysis (ASTM D1557) and soil classification (ASTM D2487) from certified soils testing laboratory for all borrow or backfill materials at the frequency specified above at no additional cost to the Owner.

COMPACTION TESTING

In accordance with MassDOT requirements and the following:

Contractor shall provide compaction test results (i.e. ASTM D6938 or ASTM D1556) at a frequency of one test for every 100 cubic yards of material backfilled or at a minimum of one test per lift. The Engineer will determine the locations and lifts to be tested. Additional compaction testing may be required when there is evidence of a change in the quality of moisture control or the effectiveness of compaction.

EROSION/SEDIMENTATION CONTROL

All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the Contractor or his/her designee shall inspect the erosion controls daily and shall remove accumulated sediments as needed. The Contractor shall immediately control any erosion problems that occur at the site and shall also immediately notify the Engineer who reserves the right to require additional erosion and/or damage prevention controls s/he may deem necessary.

DIVISION 0 AND DIVISION 1 WORK INCIDENTAL TO THE CONTRACT PRICE

As noted in Section 01270, no separate measurement or payment will be made for Work called for in Division 0 or Division 1 of the Project Manual, unless specifically covered under a Bid item in the Contract. All costs associated with this Work will be considered incidental to the Contract Bid price. This includes but not limited to testing, construction facilities, site security, and field engineering.

ITEM 113.1**DEMOLITION OF CULVERT NO. 1****LUMP SUM**

The work under this Item shall conform to the applicable provisions of Subsection 112 of the Standard Specifications and the following:

GENERAL

The work under this Item includes furnishing all labor, materials, equipment and tools necessary to perform the removal and satisfactory disposal of the entire existing structure as shown on the plans and/or as directed by the Engineer. All materials and debris shall become the property of the Contractor and shall be properly disposed of from the work site.

The existing structure is defined as all culvert elements at the crossing including, but not limited to corrugated metal pipes, stone headwalls, asphalt wearing surface, and any other miscellaneous material incidental to structure demolition.

The City does not guarantee or represent that the structure materials will actually coincide with any descriptions contained herein or represented on drawings. The Contractor must visit the culvert site prior to submitting bids to get familiar with the scope of work and culvert condition.

No additional compensation, other than the LUMP SUM price bid for this Item, shall be made if the materials or work provided is different than that inferred or described herein or shown in the drawings.

Demolition of the existing structure shall be performed in phases as shown on the Drawings to maintain traffic on the portion of the existing structure designated to remain in service. The Contractor shall plan and sequence demolition operations such that the portion of the existing structure remaining in service is continuously maintained in a stable and safe condition and is not damaged or undermined by demolition or construction activities. The Contractor shall provide all temporary supports, bracing, protection, and other measures necessary to maintain the structural integrity of the portion of the existing structure carrying traffic throughout each phase of construction.

The Contractor's demolition method shall take into account any utilities and drainage structures near the culvert. Work under this Item may not commence until the Engineer has given written approval. The Contractor shall be solely responsible for maintaining the stability of the existing structure at all times during the demolition and construction operations. Damage to portions of the existing structure designated to remain in service resulting from the Contractor's operations shall be repaired or replaced to the satisfaction of the Engineer at no additional cost to the Owner.

SUBMITTALS

The Contractor shall prepare and submit a plan indicating their proposed method of demolition including equipment, tools, devices, shielding design, etc. The demolition procedure and any necessary calculations and drawings shall bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts certifying that all existing structural members are suitably braced and supported throughout the demolition process. Work shall not commence until the Engineer has given written approval of the method of demolition.

CONSTRUCTION METHODS

During the prosecution of this work, the Engineer may reject the use of any method or equipment that causes undue vibration or possible damage to the surrounding area. The noise and dust created by demolition operations must be reduced to the maximum extent possible. Blasting will not be allowed without written permission from the City. The Contractor shall note that it is very unlikely that permission for blasting will be granted.

No demolition work shall be started until any and all utility companies involved have been notified (not less than seven (7) days prior to the start of demolition) and the Contractor has received approval from the Engineer as to the equipment, procedures and schedule of operation to be used during the demolition and reconstruction periods. The Contractor shall carry on his work concurrently and in conjunction with the utility companies involved at the project site, so as to provide for all possible cooperation toward the satisfactory completion of the work with a minimum of delay and inconvenience. The Contractor shall be responsible for protecting any existing utility lines during his operations. If any utilities are damaged due to the Contractor's negligence, the Contractor shall make repairs at his/her own expense.

The Contractor shall make adequate provisions to prevent any debris, tools or incidental items from falling into the waterway below or onto areas where vehicular or pedestrian traffic exist. Such provisions shall provide for the protection of traffic, private property and pedestrians from damage and injury during all phases of the demolition process.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Payment for this Item shall be at the contract lump sum bid price for Items 113.1, Demolition of Culvert No. 1, which price shall include all materials, tools, equipment, disposal and labor incidental thereto that is required to complete the work in a satisfactory manner.

<u>ITEM 302.12</u>	<u>12-INCH DUCTILE IRON WATER PIPE (RUBBER GASKET)</u>	<u>FOOT</u>
<u>ITEM 350.12</u>	<u>12-INCH GATE AND GATE BOX</u>	<u>EACH</u>
<u>ITEM 373.12</u>	<u>12-INCH WATER PIPE INSULATION</u>	<u>FOOT</u>

Work performed under these items shall conform to the relevant provisions of Section 300 and the following:

MATERIALS

Ductile Iron Pipe

Ductile iron pipe shall be designed in accordance with AWWA C150 and shall be manufactured in accordance with AWWA C151. Fittings and other materials referenced in this section shall conform to the latest edition of the references listed in Paragraph 1.2 of this section.

Unless otherwise indicated or specified in the Contract Documents, buried ductile iron pipe and fittings shall be Class 52 with push-on joints and a cement-mortar lining with a bituminous seal coat in accordance with applicable ANSI standards.

Unless otherwise indicated or specified, buried pipe shall have an exterior bituminous coating of coal-tar or asphalt base in accordance with AWWA C110, C151, or C153, as applicable.

Unless otherwise indicated or specified in the Contract Documents, buried fittings shall be ductile iron or gray iron with mechanical joints. Fittings from 8 through 16 inches shall be cement lined and tar coated.

Pipe Joints

Push-on-joints and mechanical joints shall conform to ANSI/AWWA C111/A21.11.

Flanged joints shall be assembled with bolts and nuts, bolt studs with nut on each end, or studs with nuts in tapped flanges. Bolts and nuts shall be manufactured in accordance with ASTM A325, Type 1, Grade 5, hot-dipped galvanized finish, heavy hex head, 120,000 psi minimum tensile strength with X-Heavy nuts. Nuts and bolts shall be provided with an anti-seize, thread lubricating compound.

Gaskets for flanged joints shall be full face, 1/8 inch red rubber. Ring gaskets shall be provided for piping 14 inches in diameter and larger.

Where indicated on the Drawings, provide restrained joints. Gaskets shall meet the material requirements of ANSI/AWWA A21.11/C111 for mechanical joint gaskets.

Restrained gasketed joints for rubber push-on joint pipe shall be Fast-Grip® by American Cast Iron Pipe Company, Field Lok 350® by US Pipe and Foundry Co., or equal. Contractor is to supply the Owner with four new gasket disassembly drive shims as a part of the project.

Water mains shall be a minimum of 8 inches in diameter.

Insulated Water Main Pipe

Insulated water main pipe shall be as follows:

Fero Therm, as manufactured by Thermacor Process, L.P.; 1670 Hicks Field Road East; Fort Worth, TX 76179-5248; (817) 847-7300; "Insul-Tek Ductile Iron System", as manufactured by Preinsulated Piping Systems, Inc.; Tricon Ductile Iron Pipe System, as manufactured by Tricon, Inc. or equal.

Insulation

Insulation shall be polyurethane foam either spray applied or injected with one shot into the annular space between carrier pipe and jacket, and shall be bonded to both.

Insulation shall be rigid, 90-95% closed cell polyurethane with a 2.0 to 3.0 pounds per cubic foot density per ASTM D1622 and ASTM D2856.

The coefficient of thermal conductivity (K-Factor) of 0.14 to 0.16 BTU/hr. in/sf/oF @ 73oF per ASTM C518, and also conforming to ASTM C591.

Maximum operating temperature shall not exceed 250°F.

Insulation thickness shall be 3 inches, giving the piping system a nominal overall outside diameter of 18 inches.

The unit weight per foot of the pre-insulated piping with HDPE jacket shall not be less than 16.01 pounds.

Pipe Gland Outer Casing

Outer casing jacketing material shall be high density polyethylene (HDPE). FRP, HDUP, and tape jacket will not be allowed.

The thickness of the HDPE jacket is 0.554 inches for 18 inch piping.

Black HDPE resin Type III, Grade P34 under ASTM D1248

Tensile yield strength of 3,300 psi per ASTM D638

Ultimate elongation of 850% per ASTM D638

Tangent flexural modulus of 175,000 psi per ASTM D790

Pipe Fittings

Fittings shall be ductile iron or gray iron.

Fittings less than or equal to 12 inches in size shall conform to ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 and shall have a 350 psi pressure rating.

Fittings greater than 12 inches in size shall conform to ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 and shall have the following pressure ratings:

Fittings greater than 12 inches and less than or equal to 24 inches - 350 psi

Fittings greater than 24 inches - 250 psi

Mechanical joint retainer glands shall be installed on all mechanical joints. Retainer glands shall be specifically designed to fit standard mechanical joint bells with corrosion resistant, high strength, low-alloy T-head bolts conforming to ANSI/AWWA A21.11/C-111 and ANSI/AWWA A21.53/C-153. Retainer glands shall be manufactured of ductile iron conforming to ASTM A536-80, grade 60-42-10. Wedges shall be of hardened ductile iron and require the same torque in all sizes. These devices shall have a minimum 250 psi pressure rating with a minimum safety factor of 2:1 and shall be EBAA IRON, Inc., Megalug® series 1100 or equal. Glands shall be listed with Underwriters Laboratories and/or approved by Factory Mutual.

Anchoring tees shall have main run ends as indicated on the Drawings or as required for the installation. The branch shall have a plain end with an integral gland and rotating mechanical joint gland to provide a restrained connection with the adjacent valve or fitting (typically used for hydrant branches).

Tapping sleeves and valves from 6 through 16 inches shall be two-piece cast-iron mechanical-joint heavy pattern, as manufactured by Clow or approved equal.

Couplings

Solid sleeves shall have long body type (12 inches min.) and mechanical joints with retainer glands.

Couplings and transitional couplings for pipe less than or equal to 12 inches in diameter shall consist of a long body cast iron sleeve and shall have gaskets suitable for the pipe being joined. The bolts and nuts shall be corrosion resistant high strength, low alloy steel such as Cor-Ten steel or an approved equal. Couplings shall be Romac style 501, Dresser style 153, Rockwell type 441, or equal. Transition couplings for pipe less than or equal to 12 inches in diameter shall be Dresser Style 162, Rockwell Type 441, Smith Blair Omni Style 442, or equal.

Couplings and transitional couplings for pipe greater than 12 inches in diameter shall consist of a steel sleeve with gaskets suitable for the pipe being joined. The bolts and nuts shall be corrosion resistant high strength, low alloy steel such as Cor-Ten steel or an approved equal. Couplings shall be Dresser Style 38, Smith Blair Style 311, Romac Style 400, or equal. Transition couplings for pipe greater than 12 inches in diameter shall be Dresser Style 62, Smith Blair Style 413, Romac Style TC400, or equal.

Provide couplings with an exterior epoxy coating.

Gaskets, Glands, Nuts, and Bolts

Gaskets, glands, nuts, bolts and accessories shall conform to ANSI/AWWA C111/A21.11 or C153/A21.53, as appropriate.

Gaskets shall be of plain tipped rubber, suitable for exposure to the liquid within the pipe.

Lubricants must be suitable for the type of fluid to be carried by the pipeline and shall be NSF approved for water service.

Glands shall be ductile or cast iron.

Bolts shall be high strength, low alloy.

Thrust Blocks/Anchor Blocks/Joint Restraints

Joint restraints shall be used at all bends, fittings, hydrants, valves and piping as specified in the paragraphs mentioned below and in accordance with restraint as indicated on the Drawings. Where indicated on the Drawings, provide restrained joints suitable for a 200-psi working pressure. Gaskets shall meet the material requirements of ANSI/AWWA A21.11/C111 for mechanical joint gaskets

Restrained joints for rubber-type push-on joint pipe shall be Lok-Ring® Joint by American Cast Iron Pipe Company, TR FLEX® by US Pipe and Foundry Co., Snap-Lok® by Griffin Pipe Products Co., or equal.

Mechanical joint retainer glands shall be installed on all mechanical joints, except where rodding is used. Retainer glands shall be specifically designed to fit standard mechanical joint bells with corrosion resistant, high strength, low-alloy T-head bolts conforming to ANSI/AWWA A21.11/C-111 and ANSI/AWWA A21.53/C-153. Retainer glands shall be manufactured of ductile iron conforming to ASTM A536-80 grade 60-42-10. Wedges shall be of hardened ductile iron and require the same torque in all sizes. These devices shall have a minimum 250 psi pressure rating with a minimum safety factor of 2:1 and shall be EBAA IRON, Inc., series 1100 or equal. Glands shall be listed with Underwriters Laboratories and/or approved by Factory Mutual.

Evidence of joint restraint materials shall be the manufacturer's certification or certified test results indicating conformance with the requirements of these Specifications.

Rods, clamps with washers, straps and other harnessing hardware shall be stainless steel type 304 or 316 and installed in accordance with the manufacturer's recommended installation procedures, as approved.

After each "locking" joint is assembled, the pipe shall be extended until the locking system "bottoms out" in order to avoid accumulated joint movement when the system is pressurized.

Retainer glands, such as Megalugs, shall be installed in accordance with the manufacturers' written instructions.

Thrust blocks and anchor blocks, shall be installed in addition to the above-mentioned joint restraints and shall be used behind bends, hydrants, tees, and dead ends, and at new mains tapped into existing mains. A minimum of 1/3 cubic yard of concrete shall be used for each thrust block. Minimum bearing area of thrust blocks shall be as indicated on the Drawings. Anchor block sizes shall be as shown on the Drawings. Felt roofing paper shall be placed to protect pipe joints. Concrete shall not be placed over bolts, nuts, or in a manner that prevents removal of joints.

Concrete for thrust blocks and anchor blocks shall have a minimum strength of 3,000 psi. All cement concrete must be from an approved ready-mix producer listed on the QCML. Transit mix concrete may be used subject to approval. Straps and anchors shall be cold-rolled steel, painted with bitumastic.

Test Connections

Install air release, test connections, and blow offs in the piping for pressure testing and disinfection at locations to be determined by the Contractor and approved by the Engineer.

Corporation cocks shall be in accordance with ANSI/AWWA C800 and shall be ¾ inch diameter with CC thread on inlet by iron pipe thread flare on outlet as manufactured by Mueller, Ford, McDonald or equal.

Copper tubing shall be annealed Type K soft tubing and shall conform to the requirements of ASTM B88.

Upon completion of testing and disinfection, remove the corporation cock and replace with a brass plug and the copper tubing removed. Field swab the brass plug for disinfection in accordance with AWWA C651.

Damaged/Defective Pipe

Defective pipe or fittings will be rejected for use on this project. Defective pipe is classified as follows:

- Damage to interior lining
- Insufficient lining thickness
- Pipe out of round
- Damaged pipe barrel area
- Damaged pipe bells or spigots
- Missing, misplaced or illegible marking and identification
- Outside pipe diameter exceeding allowable tolerance

If defective pipe is discovered after it has been installed, it shall be removed and replaced with sound pipe, at no additional cost to the Owner.

Valves General

Valves, hydrants, and appurtenances shall conform to the standards of the City of Gardner Department of Public Works, located in Section 00800.

Pressure and temperature ratings shall be as scheduled.

Valve sizes shall be the same size as the upstream pipe, unless otherwise indicated.

Provide accessories including bolts, nuts, glands, and gaskets.

Extended Stems - Where insulation is indicated or specified, provide extended stems arranged to receive insulation.

Valves shall have the same end connections as the pipeline in which it is installed

Provide 125# ANSI B16.1, ANSI/AWWA C115/21.15 standard flange drilling for valves with flanged ends inside buried structures. Provide 1/8 inch full-face red rubber gaskets at all flanged connections.

Buried valves shall have mechanical joint ends compatible with the piping systems in which they are installed in accordance with ANSI/AWWA C111/A21.11-85 and Mega-Lug type retainer glands. Provide mechanical joint accessories, including glands, SBR rubber gaskets, tee head bolts, and nuts with the valves. Provide stainless steel bolts and nuts.

Mechanical joint ends shall be compatible with ductile iron O.D. pipe.

Valves and appurtenances shall be of the size shown on the Contract Drawings.

Equipment of the same type shall be from one manufacturer, unless otherwise approved.

Valves, hydrants, and appurtenances shall have the name of the manufacturer, flow directional arrows, and the working pressure for which they are designed cast in raised letter upon some appropriate part of the body.

Valves for water distribution systems shall be certified to NSF 61 and NSF 372.

Bolts shall be 304 stainless steel with hex heads and hex nuts in accordance with ASTM A-307 and A-563, respectively.

Provide buried valves with standard valve box with tee-handle operator.

Gate Valve

Gate valves shall be mechanical-joint, resilient-wedge type suitable for underground service and shall comply with AWWA C509. Gate valves shall be cast iron or ductile iron.

Gate valves shall be designed to be bubble tight for 250 psig water working pressure with no leakage past the seat from either side of the disc, and shall be hydrostatically tested to 500 psig.

Gate valves shall be of the non-rising stem (N.R.S.) design.

Valves 12 inches and smaller shall be resilient-wedge gate valves set vertically (spur gearing).

Gate valves shall open left.

Buried gate valves shall be furnished with 2 inch square operating nuts.

Open-left valves shall have a yellow-painted operating nut.

Cast iron shall meet the specifications of ASTM A126, Class B. Castings shall be clean and sound without defects that will impair their service. No plugging or welding of such defects will be allowed. Ductile iron shall meet the standards of ASTM A536.

The resilient-seated disc wedge shall be of the resilient wedge fully supported type, either cast iron or ductile iron. Solid guide lugs shall travel within channels in the body of the valve. The disc and guide lugs shall be fully encapsulated in SBR (styrene butadiene rubber) or EPDM rubber. Disc wedges that are not 100% fully encapsulated shall not be acceptable. Provide guide caps of an acetal copolymer bearing material to protect the rubber-encapsulated solid guide lugs from abrasion for long life and ease of operation.

The seat shall be SBR or EPDM rubber, matching the disc encasement. The seating surface (rubber) shall be specially designed so as to provide a smooth waterway, without depressions or cavities, which might trap debris and interfere with tight closures.

The body, bonnet, and gate shall be cast/ductile iron, constructed in accordance with AWWA C509. The bonnet to body seal shall incorporate a flat neoprene gasket. Bonnet and body flanges shall be fully machined to assure proper sealing of the gasket.

Gate valve stems shall be stainless steel equivalent to AISI 420 and conforming to ASTM A276, and shall have a forged thrust collar. The thrust collar shall be factory lubricated, and the thrust collar and its lubrication shall be isolated by the O-rings from the waterway and from outside contamination, providing permanent lubrication for long-term ease of operation. An anti-friction thrust washer shall be provided above and below the thrust collar for ease of operation.

Gate valves shall have O-Ring sealed stems with one O-Ring located below the thrust collar and two O-Rings located above the thrust collar. The two O-Rings located above the thrust collar shall be replaceable with the valve still in service in the fully open position.

Coat internal and external exposed ferrous surfaces of the valve with a fusion-bonded, thermosetting powder epoxy coating suitable for potable water service conforming to AWWA C550. Coating shall be non-toxic and shall impart no taste to water. Coating thickness shall be nominal 10 mils. Gate valves for water distribution systems shall be certified to NSF 61.

Gate valves shall be American AVK resilient wedge, Clow resilient wedge, Waterous Series 500 resilient wedge, or approved equal.

Valve Boxes

Provide a valve box of the adjustable heavy pattern, constructed of cast iron and provided with a 5-1/2 inch cast-iron cover marked "WATER" for each buried valve.

Valve boxes shall be manufactured by Mueller Co., Bingham & Taylor, or approved equal.

Valve boxes shall be round, two-piece, sliding-type cast iron with a 48-inch bottom and 24-inch top. The upper section shall have a flange with sufficient bearing area to prevent settling. The bottom of the lower section shall be belled to enclose the valve operating nut. The barrel shall be 5-1/2 inches O.D. minimum.

Boxes shall be of lengths consistent with pipe depths. Boxes shall be adjustable, with a lap of at least 6 inches when in the most extended position.

Slot covers for easy removal.

Covers for valve boxes on water mains shall have the word "WATER" cast in the top.

Coat valve boxes with coal-tar pitch enamel or other approved coating.

Valve boxes shall be suitable for the size valve on which they are used, and the lower section shall be long enough for trench adjustment. Where an extension is required, provide an EZ Rise top extension marked "WATER" or a 12-inch EZ Slide riser.

Provide one tee-handled wrench for every four valves installed, unless additional wrenches are required due to variations in valve bury depth. Wrenches shall be field measured to accommodate the depth of bury and provide waist high operation.

SUBMITTALS

The Contractor shall submit to the Engineer for approval, a "Certificate of Compliance" for every component of the water system to be used in the project, showing that the manufacturers meet the above-mentioned requirements. Water system components shall not be delivered to the project site unless the Contractor has an approved "Certificate of Compliance" by the Engineer.

CLEANING PIPE AND FITTINGS

Clean and remove foreign matter from the interior of each pipe and fitting before placing in the trench. Remove pipe and fittings whose interior has been contaminated with oil, gasoline or kerosene and replace at no additional cost to the Owner. Remove pipe and fittings whose interior has been contaminated with any material which is a regulated drinking water contaminate or which damages the cement and replace at no additional cost to the Owner. Should foreign material or contaminants be observed in previously installed pipe, cease work until foreign material or contaminated pipe is decontaminated or removed.

Remove all lumps, blisters, and excess asphaltic coating from the bell and spigot ends of each pipe or fitting. The outside of the spigot and the inside of the bell shall be wire-brushed and wiped clean and be dry and free from oil and grease before the pipe or fitting is laid.

On all ductile iron pipe or fittings, the bell of the pipe and the spigot of the adjacent pipe or fitting shall be wire-brushed and cleaned of rust and dirt. The bell of the pipe or fitting and the spigot of the adjacent pipe shall then be lubricated with the joint lubricant furnished with the pipe, and used in accordance with the manufacturer's directions.

INSTALLATION

Water mains shall not be backfilled until the Director of Public Works or designee and the Engineer have inspected and approved the work. Provide 24-hour notice before inspection.

Where possible, water mains shall be looped. Provide a hydrant at the end of each proposed dead-end water main.

Pipe Alignment

Lay and maintain the pipe at the required lines and grades as shown on the Drawings. Fittings shall be at the locations indicated on the Drawings with joints centered, and spigots properly fitted. No deviation shall be made from the line and grade indicated on the Drawings, except with the approval of the Engineer.

Joint Openings and Deflection:

The maximum allowable joint openings and deflection for push-on joint pipe and restrained joint pipe shall be one-half the manufacturer's maximum allowable opening and deflection.

Line or Grade Conflicts with Other Structures:

Wherever obstructions not shown on the Drawings are encountered during the progress of the Work and interfere to such an extent that an alteration in the pipe layout is required, the Engineer will order a deviation from the line and grade at locations where obstructions such as culverts, ducts, wire and/or pipes are encountered. The pipe shall be laid over or under such obstacles with a minimum clearance of 6 inches. The Engineer reserves the right to make the decision to go over or under obstructions during construction.

Where underground conditions indicate a change of alignment or grade, such change shall be made only with the written consent of the Engineer.

Except at locations indicated on the Drawings by the profile, do not establish high points where air can accumulate.

Pipe Installation

Keep trenches dewatered while installing pipe until all required pipe joints have been made and the trench has been backfilled above the water table to a point where pipe uplift will not occur when the pipe is empty.

Carefully lower pipe and fittings into the trench piece by piece by means of a crane, ropes or other tools or equipment, in such a manner as to prevent damage to pipeline materials and protective coatings and linings. Under no circumstances shall pipeline materials be dropped or dumped into the trench.

Carefully inspect pipe and fittings for cleanliness and defects prior to placing them in the trench.

Install an approved water-main location system using wire, tape, or wedges in conjunction with all ductile-iron. Obtain Department of Public Works approval of the method before beginning work.

Install pipe with a minimum of 5 feet of cover, unless indicated otherwise on the Drawings or directed by the Engineer. Surround water mains with a minimum of 6 inches and a maximum of 12 inches of sand.

Prevent foreign material from entering the pipe while it is being placed in the line. During laying operations, no debris, tools, clothing or other materials shall be placed in the pipe.

When laying pipe, the spigot end shall be centered in the bell, the pipe forced home and the joint completely assembled. The pipe shall be adjusted to correct line and grade and secured in place with approved backfill material, properly tamped under and around the pipeline.

Keep water mains and services at least 10 feet from sewer piping and in a separate trench. Where site restrictions prevent this separation, provide at least 3 feet of horizontal separation and 18 inches of vertical separation, with the sewer below the water main, only with permission from the Director of Public Works or designee.

Water mains shall not be backfilled until the Director of Public Works or designee and the Engineer have inspected and approved the work. Provide 24-hour notice before inspection.

Where possible, water mains shall be looped. Provide a hydrant at the end of each proposed dead-end water main.

Cutting Pipe

Furnish pipe in full lengths. Cut ductile iron pipe without damage to the pipe or cement lining. The cutting shall be done to leave a smooth end at right angles to the axis of the pipe.

Cut ductile iron pipe either by the use of compression-type chain cutters which exert an even continuous force on the wall of the pipe or by power driven abrasive wheels.

On ductile iron pipe using rubber joints, the outside edge of the cut end must be tapered back approximately $\frac{1}{4}$ inch at an angle of about 30 degrees so as to provide for the proper assembly of this joint.

Restrained Joints, Mechanical Joints, and Thrust Blocks

Thrust blocks and restraining joint assemblies shall be installed in conformance with Drawings and/or the manufacturer's specifications and Section 301.60 I of the Standard Specifications.

THERE IS NO SEPARATE PAY ITEM FOR THRUST BLOCKS, AND JOINT RESTRAINTS. THE COST OF MATERIALS AND THE INSTALLATION SHALL BE AT THE CONTRACTOR'S EXPENSE.

Minimum depth of cover over the top of the water pipe shall be five (5) feet unless otherwise directed by the Engineer. Maximum depth of cover to the top of the water pipe shall be six (6) feet unless otherwise directed by the engineer or as indicated on the Drawings.

Prevent foreign material from entering the pipe while it is being placed in the line. During laying operations, no debris, tools, clothing or other materials shall be placed in the pipe.

When laying pipe, the spigot end shall be centered in the bell, the pipe forced home and the joint completely assembled. The pipe shall be adjusted to correct line and grade and secured in place with approved backfill material, properly tamped under and around the pipeline.

When laying the pipe, remove and replace fittings that do not allow a sufficient and uniform space for joints at no additional cost to the Owner.

Furnish pipe in full lengths. Cut ductile iron pipe without damage to the pipe or cement lining. The cutting shall be done to leave a smooth end at right angles to the axis of the pipe.

Cut ductile iron pipe either by the use of compression-type chain cutters which exert an even continuous force on the wall of the pipe or by power driven abrasive wheels.

On ductile iron pipe using rubber joints, the outside edge of the cut end must be tapered back approximately $\frac{1}{4}$ inch at an angle of about 30 degrees so as to provide for the proper assembly of this joint.

Wherever it is necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, to avoid obstructions or where long-radius curves are permitted, the maximum amount of deflection allowed shall not exceed that of what is included in AWWA C600 and shall be approved by the Engineer.

Push-on joints shall be made in accordance with the manufacturer's instructions. Install gaskets in the pipe bell after lowering the pipe into the trench for installation. Thoroughly clean the bell and spigot of dirt and tar blisters in the trench utilizing a wire brush or bristle brush. Insert rubber gasket in the groove of the bell end of the pipe beginning at the bottom of the bell and working to the top of the bell. Apply lubricant per the manufacturer's recommendations utilizing a paint brush to the pipe gasket and the pipe spigot to be joined. Place a clean rag under the joint to protect the joint from dirt caused by unintentional grounding of the pipe during jointing. Upon completion, remove the rags. Align the plain end of the pipe to be laid and insert in the bell of the pipe to which it is to be joined and push home with a jack or by other means. After joining the pipe use a metal feeler to make certain that the rubber gasket is correctly located.

All excavation regardless of depth, except for Class B Rock, necessary for the installation of water system shall be included in the unit price of the items mentioned above.

Install polyethylene encasement in accordance with AWWA C105. Allow a minimum of 1 foot of overlap at each joint and secure to pipe with compatible polyethylene adhesive tape at several locations along the barrel of the pipe. At each pipe connection, overlap the wrap and secure with a non-corrosive strap behind the pipe bell, and overlap with the new section of wrap and secure in place with a strap on the spigot end. Install wrap in accordance with Method "A" or "C" of AWWA C105 and encase all pipe, fittings, valves, and all other appurtenances.

Valve Installation

Refer to the Drawings and piping system specification Sections for specific valve applications and arrangements.

Locate valves for easy access and provide separate support where necessary.

Install valves and unions for each fixture and item of equipment arranged to allow equipment removal without system shutdown. Unions are not required on flanged devices.

Install valves in horizontal piping with stem at or above the center of the pipe.

Install valves in a position to allow full stem movement.

Install valves and actuators plumb in the vertical direction. At water-main intersections, provide three gate valves at tees and four gate valves at crosses.

Threaded Connections

Note the internal length of threads in valve ends and proximity of valve internal seat or wall to determine how far pipe should be threaded into valve.

Align threads at point of assembly.

Apply appropriate tape or thread compound to the external pipe threads (except where dry seal threading is specified).

Assemble joint, wrench tight. Wrench on valve shall be on the valve end into which the pipe is being threaded.

Flanged Connections

Align flange surfaces parallel.

Assemble joints by sequencing bolt tightening to make initial contact of flanges and gaskets as flat and parallel as possible. Use suitable lubricants on bolt threads. Tighten bolts gradually and uniformly with a torque wrench.

DEACTIVATION OF WATER MAINS

Excavate and remove sections of the existing water main as shown on the Drawings. Repairs and capping of the main shall be in accordance with the Drawings.

After the pipe has been capped, the top sections of all gate boxes shall be removed and stacked, the holes filled in with suitable backfill material and patched with bituminous concrete in the area of the gate box.

The deactivation of the water mains shall be done upon completion of:

Installation and successful testing of the new pipeline, including all hydrants and appurtenances, and Removal and reconnection of all building services from the existing pipelines to the new pipelines.

Approval for the deactivation of the water mains by the Engineer or Owner.

Surface repair methods shall meet the requirements of the applicable surface repair items.

DISINFECTION AND TESTING

General

The Contractor shall employ trained personnel aware of the need to carefully observe prescribed construction practices and disinfection procedures in order to prevent contamination to the distribution system.

The competent person(s) responsible for disinfection and bacteriological sampling shall be familiar with AWWA C651, Standards for Disinfecting Water Mains, and experienced with the Continuous Feed Method of disinfection. The Engineer shall approve disinfection procedures in advance, and disinfection shall be satisfactory to the City of Gardner Health Department.

Bacteriological sampling shall be made in full accordance with AWWA C651 and under the supervision of the Engineer.

An independent commercial laboratory certified by the Massachusetts Department of Environmental Protection to analyze public drinking water supplies shall analyze all bacteriological samples. Provide certified laboratory reports to the City Engineer before restoring or placing the system into service.

Water Main Pipe

Before being placed into service, all new water pipelines shall be chlorinated using the Continuous Feed Method specified in AWWA C651 – Section 4.4.3. The Engineer shall approve the procedure in advance.

The Contractor will determine the location of the chlorination and sampling points in the field. The Contractor shall install taps for chlorinating, sampling and expulsion of air and shall uncover, backfill and plug the taps as required.

Prior to disinfecting the water main, the main shall be completely filled to remove all air pockets and then flushed to remove particulate. The flushing velocity in the main shall not be less than 3.0 ft/s unless the Engineer and/or Owner determine that the conditions do not permit the required flow to be discharged to waste.

TABLE 1

Required Flow to Flush Pipelines (40 psi residual pressure in water main)*

Pipe Diameter (in)	Flow Required to Produce 2.5 (Approximate) Velocity in Main ft/s	Number of 2 ½ inch Hydrant Outlets
6	260 gpm	1
8	470 gpm	1
10	730 gpm	1
12	1,060 gpm	2
16	1,880 gpm	2

**AWWA C651, AWWA Standard for Disinfecting Water Mains*

At a point not more than 10 feet downstream from the beginning of the new main, water entering the new main shall receive a dose of chlorine fed at a constant rate such that the water will not have less than 25 mg/L (PPM) free chlorine throughout the entire section of pipe to be chlorinated.

TABLE 2

Chlorine Required to Produce 25-mg/L Concentration in 100 Feet of Pipe – By Diameter*

Pipe Diameter (in)	100 % Chlorine (Pounds)	1% Chlorine Solution (Gals.)
6	0.030	0.36
8	0.054	0.65
10	0.085	1.02
12	0.120	1.44
16	0.217	2.60

**AWWA C651, AWWA Standard for Disinfecting Water Mains*

The chlorinated water is to remain in the new pipeline for at least 24-hours. After a contact time of 24-hours there should be a free chlorine concentration of not less than 10 mg/L (PPM). During this period, proper precautions are to be taken to prevent this chlorinated water from flowing back into the existing system.

All valves and hydrants within the treated section shall be operated to ensure disinfection of the appurtenances.

The Tablet Method consisting of placing calcium hypochlorite granules or tablets in the water main as it is being installed and then filling the main with potable water and allowing it to set for a contact period is not acceptable.

The interior of all pipe, fittings and valves used in making a repair or tie-in shall be swabbed or sprayed with a one percent (1%) hypochlorite solution before they are installed.

Final Flushing

Following the chlorination period, all treated water shall be flushed from the lines at their extremities and replaced with water from the distribution system.

Flushing the main is to be accomplished at as high a velocity as possible consistent with the ability of the Contractor to collect the discharge water for proper disposal.

Dispose of all treated water flushed from the lines by discharging to the nearest sanitary sewer or by other means permitted by AWWA C651 and acceptable to the City of Gardner.

Flushing shall be done in strict conformance with all applicable local, state and federal regulations. No discharge of chlorinated water to any storm sewer or natural watercourse will be allowed.

Bacteriological analyses

After the 24-hour disinfection period and all chlorine solution has been thoroughly flushed, the bacteriological sampling and analysis of the replacement water may then be performed.

Bacteriological sampling shall be made by the Contractor's competent person(s) in full accordance with AWWA C651- Section 5, Bacteriological Tests and under the supervision of the Engineer.

Analysis shall be performed by an independent commercial laboratory certified by the Massachusetts Department of Environmental Protection to analyze public drinking water supplies. Provide all certified results to the City Engineer for review.

Two consecutive sets of acceptable samples, taken at least 16-hours apart are required prior to placing the main into service. Samples shall be collected every 1,200 ft of the new water main, plus one set from the end of the line and at least one from each branch greater than one pipe length. Failure of any one of the bacteriological test samples shall require rechlorination and retesting by the Contractor.

The line shall not be placed in service until the bacteriological requirements of AWWA C651 are met.

Hydrostatic Testing

The Contractor shall complete interim pressure testing of the pipelines prior to tapping for services. The Contractor shall pressure test again up to the closed curb stops after installing services and prior to final acceptance. Both pressure tests are required to pass.

For water mains, the pressure test shall not be conducted until the new main has been flushed clean, disinfected in accordance with Section 02501 and the chlorinated water properly disposed of. After acceptable completion of the water system disinfection, the Contractor may commence pressure testing of the new water main.

Pressure and leakage testing shall be performed by an independent AWWA-approved testing agency in the presence of the Director of Public Works or designee, in accordance with AWWA C600-87, Section 4, or the latest revision.

Test between valved-off sections not exceeding approximately 1,000 feet. Raise each test section to a minimum of 125 psi and maintain the pressure within 5 psi for at least 1 hour. Test pressure shall not exceed pipe or thrust-restraint design pressures.

Test pressure shall not vary during the duration of the test.

On pipelines where the elevation along the route of construction varies substantially, the Engineer reserves the right to valve off and test portions of the line.

On extensive construction jobs, the Engineer reserves the right to require the testing of individual portions of the line as construction proceeds rather than await completion of the entire project in order to undertake a pressure or leakage test.

Do not operate valves in either direction at differential pressure exceeding the rated valve working pressure. Use of a test pressure greater than the rated valve pressure can result in trapped test pressure between the gates of a double-disc gate valve. For tests at these pressures, the test setup should include a provision, independent of the valve, to reduce the line pressure to the rated valve pressure on completion of the test. The valve can then be opened enough to equalize the trapped pressure with the line pressure, or fully opened if desired.

Test pressure shall not exceed the rated pressure of the valves when the pressure boundary of the test section includes closed, resilient-seated gate valves or butterfly valves.

If cast-in-place thrust blocks are installed, no pipeline is to be placed under pressure or subjected to hydrostatic pressure until at least 5 days have elapsed after the concrete thrust blocks have been installed. If high early strength concrete is used in the concrete thrust blocks, the hydrostatic pressure can be applied to the main after 2 days have elapsed from time of construction of the thrust blocks.

The Contractor will be allowed to complete backfilling as hereinbefore specified, prior to undertaking the leakage and pressure tests. Backfilling prior to conducting tests will be at the option of the Contractor with the exception of intersections, driveways, crosswalks and other such locations where holding open the trench may adversely affect the public.

Pipelines may be subjected to hydrostatic pressure and inspected for leakage at any convenient time after the trench has been partially backfilled. Partial backfilling shall consist of filling along the center of the pipe length and leaving the joint open for inspection.

The Contractor shall complete interim pressure testing of the pipelines prior to tapping for services. The Contractor shall pressure test again up to the closed curb stops after installing services and prior to final acceptance. Both pressure tests are required to pass.

Operation of Existing Water System

Do not operate any valve or other control device on the existing water system for any purpose. Do not make any tap or cut-ins to the existing water system without the approval of the Engineer and unless an authorized representative of the Owner is present.

When the Contractor's operations require the adjustment of any hydrant, valves, or other control device on the existing system, the Owner will provide authorized personnel for the purpose of supervising the operation of these control devices. Provide the personnel for the operation of these devices.

Preparation

Conduct connections to the existing system under the Engineer's direction.

To allow for proper filling, venting, testing, etc., install any corporation stops and/or special fittings which may be required. All such installation will be subject to the Engineer's approval.

Foreign materials left in pipelines during installation often results in valve or hydrant seat leakage during pressure tests. Thorough flushing is recommended prior to a pressure test by partially opening and closing valves and hydrants several times under expected line pressure, with flow velocities adequate to flush foreign material out of the main, valves and hydrants.

Procedure

On completion of the pipeline or any valved section thereof, fill the pipeline with water and test. Draw water from the existing water system under the direction of the Engineer and the City of Gardner Department of Public Works.

The Contractor shall complete interim pressure testing of the pipelines prior to tapping for services. The Contractor shall pressure test again up to the curb stops after installing services and prior to final acceptance.

Before applying the specified test pressure, expel air completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, install corporation cocks at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, close the corporation cocks and apply the test pressure. At the conclusion of the pressure test, either remove and plug or leave in place the corporation cocks at the discretion of the Owner.

Slowly fill each valved section of pipe with water, and apply the specified test pressure as described in this section by means of a pump connected to the pipe in a manner satisfactory to the Engineer. Valves shall not be operated in either the opening or closing direction at differential pressures above the rated pressure. The system shall be stabilized at the test pressure before conducting the leakage test.

Examination Under Pressure

Examine exposed pipes, fittings, valves, hydrants, and joints carefully during the test.

Repair or replace any cracked or defective pipe, fittings, valves, hydrants, or joints that are discovered following the pressure tests with sound material and repeat the test until it is satisfactory to the Engineer.

Leakage Test

Leakage is defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof to maintain pressure after the pipe has been filled with water and the air has been expelled. Testing shall include all hydrants, hydrant branches, and services to the curb stop. Leakage shall not be measured by a drop in pressure in a test section over a period of time.

Allowable leakage shall not exceed the following limits: at 125 psi, 0.50 GPH for 6-inch pipe, 0.67 GPH for 8-inch pipe, 0.84 GPH for 10-inch pipe, and 1.01 GPH for 12-inch pipe; at 150 psi, 0.55, 0.74, 0.92, and 1.10 GPH, respectively; and at 175 psi, 0.59, 0.80, 0.99, and 1.19 GPH, respectively.

When hydrants are in the test section, the test shall be made against the closed main valve in the hydrant.

Acceptance of Installation - If any test of laid pipe discloses leakage, locate and make approved repairs as necessary until there is no leakage, at no additional cost to the Owner. Provide 24-hour notice for witnessing of leakage testing.

Visible leaks are to be repaired, regardless of the amount of leakage.

Before final sign-off, submit water ties on a 3-inch by 5-inch card and furnish the City of Gardner Engineering Department with reproducible as-built drawings prepared by a professional engineer for any extension of the water system.

METHOD OF MEASUREMENT

12-inch ductile iron water pipe will be measured for payment per foot, complete in place. All measurements shall be taken in the horizontal plane.

12-inch gate and gate boxes will be measured for payment per each, complete in place.

12-inch water pipe insulation will be measured for payment per foot, complete in place. All measurements shall be taken in the horizontal plane.

BASIS OF PAYMENT

12-inch ductile iron water pipe will be paid for at the contract unit price per foot, which price shall include all labor, testing, materials (including mechanical joints, thrust blocks, and permanent air vent), removal and disposal of existing water main and appurtenances, equipment, and incidental costs required to complete the work.

12-inch gate and gate boxes will be paid for at the contract unit price per each, which price shall include materials shown on the drawings and incidental materials, all labor, testing, equipment, and other incidental costs required to complete the work.

12-inch water pipe insulation will be paid for at the contract unit price per foot, which price shall include all labor, materials, surface preparation, equipment, and incidental costs required to complete the work.

No separate payment will be made for sawcutting, excavation regardless of depth (excluding rock), dewatering, connection to existing systems and services, pipe bedding, testing, replacing existing pipe damaged during construction, removal and disposal of existing pipe, or plugging abandoned pipe ends, but all costs in connection therewith shall be included in the Contract unit price bid.

Rock excavation shall be measured and paid for under Item 144. – Class B Rock Excavation.

ITEM 345.61**6 INCH TEMPORARY WATER MAIN****LUMP SUM**

The work under this Item shall conform to the relevant provisions of Section 301 of the Standard Specifications and the following:

The work shall include furnishing, installing, maintaining, and removing all materials, equipment, and incidentals required to provide 6-inch temporary service pipe that shall serve as a temporary water main during the proposed water main construction phase as required to provide continuous water service to all customers.

A recommended bypass sequence is included in the Drawings with the bypass plan. The bypass is anticipated to include two phases.

GENERAL

The Contractor shall maintain the temporary bypass piping in a safe and operative condition at all times (24 hours per day, 7 days per week) until removed. Temporary bypass piping shall only be removed after the permanent water main has been cleaned, chlorinated, tested, restored to normal service, and accepted by the City of Gardner Water Department.

Care shall be exercised throughout to avoid any possible contamination of mains, house services, or the temporary service pipe. The interior of temporary service pipe, temporary hoses, and any other connection pipe to convey water for potable use shall be chlorinated prior to its use in accordance with AWWA C651.

Operation of existing water system valves is to be performed by the City of Gardner Water Department.

Contractor is responsible for coordinating temporary bypass connection and disconnection with the City of Gardner Water Department and is not allowed to interrupt water service without permission from the Water Department. All proposed shut downs will require proper notification of the effected customers at least 48 hours in advance of shutdown.

The Contractor shall provide the name and number for a primary and secondary emergency contact who is available 24 hours a day, 7 days per week for the maintenance and operation of the temporary water main system.

Roadways, sidewalks, landscape features, and all surface treatments disturbed for bypass water main to be restored after temporary water systems are removed and new water main is in full service.

Temporary water main will only be allowed between May 1 and September 1, subject to Owner approval. Operation of temporary water main outside of this time frame will require additional insulation to protect the system from freezing. Submit a pipe insulation plan prior to operating the system outside of the stated time frame. Submission shall include sufficient evidence that insulation will prevent freezing.

MATERIAL

The temporary service pipe, connections and hose branches shall be of the highest quality and shall be fully adequate to withstand the pressures and all conditions of use. The pipe, fittings, and hoses shall be watertight, clean, in good condition and of materials that do not cause the water to have an objectionable taste or odor.

Pipe and fittings shall be C900 PVC pipe or equal.

All temporary service pipe connections to existing hydrants shall be provided with a tee with a valve for each nozzle connection, with provisions to allow direct connection by the Fire Department to the hydrant without removal of the temporary pipe.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

6 Inch Temporary Water Main will be paid for at the Contract lump sum price, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

The lump sum will be paid 50% upon successful establishment of the first phase of temporary water main and 50% upon successful removal of the temporary water main.

No separate payment shall be made for protection of the bypass piping, including trenching, plating, or sandbagging, site restoration, or for reconfigurations of the bypass system for phasing, but all costs in connection therewith shall be included in the Contract unit bid price.

ITEM 376.**HYDRANT ASSEMBLY****EACH**

The work to be done under this item shall conform to the relevant provisions of Section 300 of the Standard Specifications and the following:

GENERAL

Hydrants and appurtenances shall conform to the standards of the City of Gardner Department of Public Works, located in Section 00800.

Pressure and temperature ratings shall be as scheduled.

Valve sizes shall be the same size as the upstream pipe, unless otherwise indicated.

Extended Stems - Where insulation is indicated or specified, provide extended stems arranged to receive insulation.

Hydrants and appurtenances shall have the name of the manufacturer, flow directional arrows, and the working pressure for which they are designed cast in raised letter upon some appropriate part of the body.

SUBMITTALS

Submit complete Shop Drawings of all valves, valve boxes, hydrants and other material specified in this Section including but not limited to the following:

Product data including body material, pressure and temperature classification, end connection details, seating materials, trim material and arrangement, dimensions and required clearances, and installation instructions.

MATERIALS**Fire Hydrants**

The hydrant shall meet the requirements of AWWA Standard C-502, latest edition.

The hydrant operating nut shall open left.

Provide traffic model hydrant with breakaway feature.

Operating nut

Shall be D.I. or bronze.

Special operating nut No. 5-63, pentagon in shape.

Nozzles

Two 2-1/2 inch hose connections with National Standard Thread and a special steamer connection

One 3-1/2 inch pumper nozzle with National Standard Thread

Provide nozzle caps without chains and with the same size pentagon operator as specified above.

Hydrant shoe or base features

Ductile iron with 6 inch MJ inlet

5-1/4 inch valve opening with draining bronze seat and drain ports to allow water within the hydrant barrel to drain to the exterior. Hydrant bury length shall be 5 feet 6 inches.

Valve seat and sub-seat arrangement shall be bronze to bronze.

Bolts and Nuts

Bolt and nuts shall be stainless steel.

Protective coatings

Provide a minimum of 3 mils total dry film thickness for all paintings and coatings.

The internal components of the hydrant shall be fusion-epoxy coated.

Coat internal and external cast iron or ductile iron components with an approved bituminous sealer or a fusion bonded epoxy coating, 3 mils minimum.

Approved hydrants

AVK Nostalgic

Mueller Centurion

Clow Medallion

Or approved equal

The hydrants shall comply with all requirements of AWWA Standard C502 and the following requirements:

The hydrant shall be a compression type shut-off with valve opening against the pressure. A negligible loss of water shall occur with breakage of the hydrant, whether breakage occurs in the open position or the closed position.

The main valve seat shall be 5¼ inches in diameter.

The inlet connection shall be 6-inch mechanical joint furnished with gasket, gland and bolts.

Connecting pipe and pipe nipples between the main line tee and hydrant shall be 6 inch ductile iron, Class 52, conforming to the requirements of Section 02514.

6 inch hydrant valve and valve box shall conform to paragraphs 2.2 and 2.3.

Anchoring tees shall have main run ends as indicated on the Drawings or as required for the installation. The 6 inch branch shall have a plain end with an integral gland and rotating mechanical joint gland to provide a restrained connection for the valve. Rod the hydrant to the gate valve.

Minimum working pressure shall be 200 psi.

The hydrant tee shall be designed so that the hydrant valve can be securely attached to the main line.

Hydrant Paint

Thoroughly clean hydrants and paint with two shop or field coats in accordance with AWWA C502 and the instructions of the paint manufacturer.

Provide a factory-applied fusion-bonded epoxy coating. Coating color shall be the Owner's standard.

Alkyd gloss enamel shall be 801 DTM by Sherwin-Williams, 2H-Tneme by Tnemec, or equal. Reflective paint shall be Scotchlite #7211 by 3M.

The color of the hydrant above ground shall be high-visibility yellow to match the City of Gardner's standard color.

For hydrants on the high service transmission main, caps shall be painted red.

For hydrants on the low service transmission main, caps shall be painted yellow.

Additional Hydrant Components

Supply and install one metal hydrant flag for each hydrant installed.

Supply a minimum of 2 operating wrenches compatible with hydrants.

Supply a minimum of 2 repair kits compatible with the hydrants being supplied that includes all special tools required to maintain the hydrants (e.g., hose nozzle insertion tool, pumper nozzle insertion tool, hydrant disassembly wrench, etc.).

EXAMINATION

Examine valve interior through the end ports for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks used to prevent disc movement during shipping and handling.

Actuate valve through an open-close and close-open cycle. Examine functionally significant features, such as guides and seats made accessible by such actuation. Following examination, return the valve closure member to the shipping position.

Examine threads on both the valve and the mating pipe for form (i.e., out-or-round or local identification) and cleanliness.

Examine mating flange faces for conditions that might cause leakage. Check bolting for proper size, length, and material. Check gasket material for proper size, material composition suitable for service, and freedom from defects and damage.

Prior to valve installation, examine the piping for cleanliness, freedom from foreign materials, and proper alignment.

Replace defective valves with new valves.

INSTALLATION

Provide thrust blocks for all hydrants with bearing against the foot or bottom of the hydrant and against the vertical face of undisturbed soil behind the hydrant. The bearing areas of the thrust block on the soil shall be as shown on the Drawings.

Provide one cubic yard of washed $\frac{3}{4}$ inch stone around hydrant drains.

Hydrants shall be located as shown on the Drawings or as directed by the Engineer. Hydrant spacing shall not exceed 500 feet and shall conform to the requirements of the Director of Public Works and the Fire Chief.

Hydrant breakaway flanges shall be located no higher than 3 inches above-grade or lower than at-grade.

Support buried valves 6 inches and larger with a concrete pad.

Install gate valves in the vertical position.

Air test tapping sleeves prior to beginning tapping operations.

Existing valves and hydrants will be operated only by City of Gardner Department of Public Works personnel.

All newly installed hydrant and branch connections shall be subject to line pressure in an open trench to determine tightness of joints before backfilling, unless they are part of the overall pipeline pressure and leakage testing.

Install fire hydrants in accordance with the Drawings and the manufacturer's recommendation.

FIELD QUALITY CONTROL

After piping systems have been tested and put into service, but before final adjusting and balancing, inspect valves for leaks. Adjust or replace packing to stop leaks; replace valves if leak persists.

CLEANING

Clean mill scale, grease, and protective coatings from exterior of valves and prepare valves to receive finish painting or insulation.

FINAL ACCEPTANCE AND WARRANTY

Final acceptance of all equipment furnished under these Specifications will be withheld until after the installation and field testing by the Engineer. The manufacturer and the Contractor shall guarantee the equipment against defects of any kind for a period of one year after final testing and acceptance.

METHOD OF MEASUREMENT

Hydrant assemblies will be measured for payment by each, complete in place.

BASIS OF PAYMENT

Hydrant assemblies will be paid for at the Contract unit price per each, which price shall include hydrant, 6-inch ductile iron pipe, 6-inch gate valve, and gate box, anchor tee, thrust block, hydrant riser/stem, extensions as necessary, fittings, and connections, labor, materials as shown on the drawings, equipment, and incidental costs required to complete the work.

ITEM 767.121**SEDIMENT CONTROL BARRIER****FOOT**

The work under this item shall conform to the relevant provisions of Subsections 670, 751 and 767 of the Standard Specifications and shall include the furnishing and placement of a sediment control barrier. Sediment control barrier shall be installed prior to disturbing upslope soil.

The purpose of the sediment control barrier is to slow runoff velocity and filter suspended sediments from storm water flow. Sediment barrier may be used to contain stockpile sediments, to break slope length, and to slow or prevent upgradient water or water off road surfaces from flowing into a work zone. Contractor shall be responsible for ensuring that barriers fulfill the intent of adequately controlling siltation and runoff.

Twelve-inch diameter (after installation) compost filter tubes with biodegradable natural fabric (i.e., cotton, jute, burlap) are intended to be the primary sedimentation control barrier. Photo-biodegradable fabric shall not be used.

For small areas of disturbance with minimal slope and slope length, the Engineer may approve the following sediment control methods:

9-inch compost filter tubes

Straw bales which shall be trenched

No straw wattles may be used. Additional compost filter tubes (adding depth or height) shall be used at specific locations of concentrated flow such as at gully points, steep slopes, or identified failure points in the sediment capture line.

When required by permits, additional sediment barrier shall be stored on-site for emergency use and replacement for the duration of the contract.

Where shown on the plans or when required by permits, sedimentation fence shall be used in addition to compost filter tubes and straw bales and shall be compensated under that item.

Sediment control barriers shall be installed in the approximate location as shown on the plans and as required so that no excavated or disturbed soil can enter mitigation areas or adjacent wetlands or waterways. If necessary to accommodate field conditions and to maximize effectiveness, barrier locations may be shifted with approval from the Engineer. Barriers shall be in place prior to excavation work. No work shall take place outside the barriers.

MATERIALS AND CONSTRUCTION

Prior to initial placement of barriers, the Contractor and the Engineer shall review locations specified on the plans and adjust placement to ensure that the placement will provide maximum effectiveness.

Barriers shall be staked, trenched, and/or wedged as specified herein and according to the Manufacturer's instructions. Barriers shall be securely in contact with existing soil such that there is no flow beneath the barrier.

Compost Filter Tube

Compost material inside the filter tube shall meet M1.06.0, except for the following: no peat, manure or bio-solids shall be used; no kiln-dried wood or construction debris shall be allowed; material shall pass through a 2-inch sieve; and the C:N ratio shall be disregarded.

Outer tube fabric shall be made of 100% biodegradable materials (i.e., cotton, hemp or jute) and shall have a knitted mesh with openings that allow for sufficient water flow and effective sediment capture.

Tubes shall be tamped, but not trenched, to ensure good contact with soil. When reinforcement is necessary, tubes shall be stacked as shown on the detail plans.

Straw Bales

Straw bales shall be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

Bales should be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. All bales should be either wire-bound or string-tied. Straw bales should be installed so that bindings are oriented around the sides (rather than along the tops and bottoms) of the bales in order to prevent deterioration of the bindings.

The barrier should be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. The trench must be deep enough to remove all grass and other material which might allow underflow. After the bales are staked and chinked (filled by wedging), the excavated soil should be backfilled against the barrier. Backfill soil should conform to the ground level on the downhill side and should be built up to 4 inches against the uphill side of the barrier.

Each bale should be securely anchored by at least 2 stakes or re-bars driven through the bale. The first stake in each bale should be driven toward the previously laid bale to force the bales together. Stakes or re-bars should be driven deep enough into the ground to securely anchor the bales. For safety reasons, stakes should not extend above the bales but should be driven in flush with the top of the bale.

The gaps between the bales should be chinked (filled by wedging) with straw to prevent water from escaping between the bales. Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency. Wedging must be done carefully in order not to separate the bales.

When used in a swale, the barrier should be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

Sedimentation Fence

Materials and Installation shall be per Section 670.40 and 670.60 of the Standard Specifications and the following:

Sedimentation fence shall only be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

When used with compost filter tubes, the tube shall be placed on a minimum of 8 inches of folded fabric on the upslope side of the fence. Fabric does not need to be trenched.

When used with straw bales, an 8-inch deep and 4-inch wide trench or V-trench shall be dug on the upslope side of the fence line. One foot of fabric shall be placed in the bottom of the trench followed by backfilling with compacted earth or gravel. Stakes shall be on the down slope side of the trench and shall be spaced such that the fence remains vertical and effective.

Width of fabric shall be sufficient to provide a 36-inch high barrier after fabric is folded or trenched. Sagging fabric will require additional staking or other anchoring.

MAINTENANCE

Maintenance of the sediment control barrier shall be per Section 670.60 of the Standard Specifications or per the Stormwater Pollution Prevention Plan (SWPPP), whichever is more restrictive.

The contractor shall inspect the sediment barrier in accordance with relevant permits. At a minimum, barriers shall be inspected at least once every 7 calendar days and after a rain event resulting in 0.25 inches or more of rainfall. Contractor shall be responsible for ensuring that an effective barrier is in place and working effectively for all phases of the Contract.

Barriers that decompose such that they no longer provide the function required shall be repaired or replaced as directed. If the resulting berm of compost within the fabric tube is sufficiently intact (despite fabric decay) and continues to provide effective water and sediment control, barrier does not necessarily require replacement.

DISMANTLING & REMOVING

Barriers shall be dismantled and/or removed, as required, when construction work is complete and upslope areas have been permanently stabilized and after receiving permission to do so from the Engineer.

Regardless of site context, nonbiodegradable material and components of the sediment barriers, including photo-biodegradable fabric, plastic netting, nylon twine, and sedimentation fence, shall be removed and disposed off-site by the Contractor.

For naturalized areas, biodegradable, natural fabric and material may be left in place to decompose on-site. In urban, residential, or other locations where aesthetics is a concern, the following shall apply:

- Compost filter tube fabric shall be cut and removed, and compost shall be raked to blend evenly (as would be done with a soil amendment or mulch). No more than a 2-inch depth shall be left on soil substrate.
- Straw bales shall be removed and disposed off-site by the Contractor. Areas of trenching shall be raked smooth and disturbed soils stabilized with a seed mix matching adjacent seeding or existing grasses (i.e., lawn or native grass mix).
- Sedimentation fence, stakes, and other debris shall be removed and disposed off-site. Site shall be restored to a neat and clean condition.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 767.121 will be measured and paid for at the contract unit price per foot of sediment control barrier which price shall include all labor, equipment, materials, maintenance, dismantling, removal, restoration of soil, and all incidental costs required to complete the work.

Additional barrier, such as double or triple stacking of compost filter tubes, will be paid for per foot of tube installed.

Barriers that have been driven over or otherwise damaged by construction activities shall be repaired or replaced as directed by the Engineer at the Contractor's expense.

ITEM 816.81**TEMPORARY TRAFFIC CONTROL SIGNAL****LUMP SUM****GENERAL**

The temporary traffic control signal is a temporary system for controlling the flow of traffic in single lane two-way traffic locations and at residential driveways and shall be cancelled upon completion of the construction project. The system shall have no less than two (2) individual Portable Traffic Signals (PTS), and one (1) supplemental PTS linked together through either radio controlled or microwave communications to comprise the system. The temporary traffic control signal (TTCS) system shall comply with the requirements of the MUTCD and shall be installed and utilized as designated by this Special Provision, the MassDOT Standard Specifications for Highways and Bridges, the Plans, and the Engineer.

1. Portable Traffic Signals shall be trailer-mounted. Each trailer shall be self-contained and consist of two signal heads. One signal head shall be mounted on a mast arm capable of extending over the travel lane. The other signal head shall be mounted on a vertical upright.
2. The supplemental Portable Traffic Signal shall be trailer-mounted on a vertical upright.
3. The Contractor shall be responsible to install and maintain the PTS as required for this contract. The Contractor shall furnish the Engineer with names and phone numbers of persons to be contacted in case of a malfunction. The Contractor shall keep a signal log in the cabinet to track all maintenance work they complete on the PTS. This log shall be placed within a plastic cover and shall at least include the description of the trouble call, corrective action taken, date, time, and personnel who completed the work.
4. Any changes to the PTS location, signal timing and phasing shall be approved by Gardner DPW and the Engineer.

MATERIALS**PTS Trailer**

The trailer and all mounted equipment shall conform to the wind load requirements as described in the 2001 AASHTO Standard Specifications for Highway Signs, Luminaries and Traffic Signals 4th edition. The PTS trailer shall be equipped in such a manner as to provide legal transport on the public highway system. Each trailer shall be equipped to minimize overturning from wind and various terrain conditions when in the operating position. No additional ballast shall be used to meet the requirements of the AASHTO Standard Specifications. Each PTS trailer shall be equipped with four stabilizing/leveling jacks, one on each corner of the trailer. The PTS trailer shall have adequate structural integrity to facilitate lifting and placing the PTS trailer as required. Two people shall be able to maneuver the PTS when in the collapsed position and set-up the unit to its fully extended position.

Signal Heads/Display Requirements

PTS Signal Heads/Display Requirements

The PTS shall meet the physical display and operational requirements of conventional traffic signals as specified in Part IV of the current addition of the Manual on Uniform Traffic Control Devices (MUTCD). Signal Heads shall have three 12-inch LED indications, conforming to ITE Specification “Vehicle Traffic Control Signal Heads” and NEMA Standards TS1 and TS2. Signal heads shall be equipped with visors, which extend beyond the signal head a minimum of 10 inches. The signal heads shall have 5” louvered back plates and have the ability to rotate horizontally 180°. The overhead signal shall have a minimum clearance height of 16 feet measured from the bottom of the housing to the road surface. The top of the signal head shall not exceed 25.5 feet above the road surface. The lower signal head shall be mounted to a vertical upright at a minimum height of 8 feet measured from the bottom of the housing to the road surface.

PTS Pedestrian Display

The pedestrian signal system includes MUTCD-compliant indications intended for controlling pedestrian traffic. The pedestrian signal indications shall consist of a countdown pedestrian type display, APS pedestrian pushbutton, sign, and saddle. The pedestrian indications shall be furnished on a standalone cart. Communications shall be accomplished via a wireless radio link.

Operational Requirements

Each PTS system shall be equipped with an operating system having the following capabilities:

- A conflict monitoring system conforming to NEMA Standards.
- The capability of being operated in a fixed time, traffic actuated or manual control mode.
- Fixed time mode operation option must include the ability to provide a minimum of five automatic signal timing changes within a 24-hour period.
- The operating system shall have the ability to control a minimum of 7 traffic phases.
- Programmable green times from 3 second to 250 seconds and red times from 1 second to 250 seconds in 1 second increments shall be a required.
- The ability to facilitate minimum / maximum green time programming in the traffic actuation mode in a manner that will extend the green times in predetermined programmable segments as required.
- The operating system shall have the capability of facilitating standby modes of red, red flash and yellow flash mode.
- During manual operation, ensure the system provides a means of informing the operator of indications, such as a light on the back of each signal head that illuminates when the signal displays a red indication.
- The PTS shall have a temperature operating range of –30F to 120F.

Controller

The controller shall be an electronic unit housed in a weatherproof, rust resistant box, with a keyed lock and a light for night operation. The housing shall have a jack that will allow direct communication between the on-board controller and a computer. This controller shall have an LCD display screen that will allow the operator to review the status of the system.

The controller shall be capable of controlling a fully activated intersection and shall meet or exceed NEMA TS 2 Standards for fully activated traffic control units. The controller shall have internal communication capability with direct access to the data memory. The controller shall be capable of processing controller, intersection, and system detection data and provide all required intersection control functions.

CONSTRUCTION REQUIREMENTS

Actuation Requirements

The PTS system shall be actuated on the Groton School Road approaches. Acceptable traffic actuation systems include microwave motion sensors and video detection. Acceptable PTS systems shall have the capability of being operated with both a motion and true presence actuation system.

Power Requirements

PTS Power Requirements

The PTS shall operate at an optimal voltage of 12 VDC. The system shall obtain the electrical power necessary for operation from the battery system, a 12 VDC power source supplied by solar power. The charging system shall include 450 watts (minimum) of solar collection capability and an onboard battery charger capable of being used with a 110-volt power source. The system shall also include an onboard monitoring system capable of regulating and providing a visual display of the battery voltage and solar input. Batteries shall be capable of a minimum of 20 days of continuous operation at 22° C (72° F) without charging. **Utilizing a portable generator for a power source is prohibited.**

Communication Requirements

The communication between PTS units shall be Radio –Link, hardware interconnect or microwave communication system. If the hardwire communication is utilized the communication cable shall be deployed in a manner that will not intrude in the direct work area of the project or obstruct vehicular and pedestrian traffic. Communications must be effective up to a distance of at least 2500 feet. If the radio link communication option is utilized clear line of sight must be maintained between PTS units and the radio system shall conform to the applicable Federal Communication Commission requirements and all applicable state and local requirements.

Malfunction Requirements

The system shall be equipped with diagnostic capabilities in the event of a system default. The system shall have the capability of identifying the default, capable of recording the last 3 signal errors and shall include failure, power loss, low power and changes in programming. Upon detecting a malfunction, PTS system shall revert to a flashing red condition and the Contractor shall be notified by a reliable means approved by the Engineer. The PTS system repairs shall be the responsibility of the contractor and shall be rendered in a manner that will return the PTS to full operation condition in the most expeditious manner.

METHOD OF MEASUREMENT

Item 816.81, Temporary Traffic Control Signals will be measured as a Lump Sum. The Lump Sum shall consist of all PTS as described in this Special Provision.

BASIS OF PAYMENT

Compensation for Item 816.81 Temporary Traffic Control Signals will be paid for at the Lump Sum price complete in place. Payment shall include furnishing all labor, hardware, equipment, tools, incidentals, and any miscellaneous items necessary for installing, operating, maintaining, moving, relocating, and subsequent removal of the system during the phased construction. 50% of the payment will be authorized once the signal equipment is approved and Phase 1 of the traffic management plan is operational. The remaining 50% of the item will be paid once the temporary signal is deactivated and removed from the project site at the conclusion of staged construction requiring the temporary signal.

ITEM 850.**TRAFFIC CONTROLS FOR CONSTRUCTION
OPERATIONS****LUMP SUM**

Work under this item shall conform to the relevant provisions of Subsection 850 of the Standard Specifications and the following:

DESCRIPTION

The intent of work performed under this item is to ensure public safety and convenience for the duration of the Work. Nothing contained herein shall be construed as relieving the Contractor of any of his responsibilities for protection of persons and property under the terms of the Contract.

Temporary Traffic Control Devices

All devices used for temporary traffic control shall be in accordance with the latest Massachusetts Department of Transportation, Federal Highway Administration, and MUTCD standards and be deployed in accordance with the Temporary Traffic Control Plan included with the Drawings.

METHOD OF MEASUREMENT

Payment for this Item shall be at the contract LUMP SUM bid price for Item 850., Traffic Controls for Construction Operations, which price shall include all materials, tools, equipment, setup, removal, and labor incidental thereto that is required to complete the work in a satisfactory manner.

BASIS OF PAYMENT

This item will be paid in two parts, 50% payment after the initial traffic control devices have been installed and 50% payment after all work has been completed and the traffic control devices have been removed.

No separate payment will be made for furnishing, placement, relocation, or removal required for transitions between construction phases, of portable changeable message signs, signage, barricades, barrels, cones, temporary barrier, flaggers or any other apparatus or person used for traffic control, but all costs in connection therewith shall be included in the Contract unit bid price.

ITEM 880.**TRAFFIC POLICE FOR CONSTRUCTION
OPERATIONS****ALLOWANCE**

The Contractor shall furnish police services required to direct traffic on existing roadways where traffic is maintained.

The Contractor shall provide such police officers as may be deemed necessary by the City for the direction and control of all traffic traveling within and through the project area. The police officers shall be obtained from the City Police Department as applicable. The police officers shall be paid directly by the Contractor at the prevailing rate of wages established by the City.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Traffic police costs will be reimbursed at the actual invoice price received from the Police Department. Contractor will be reimbursed for payment of traffic officers only after invoices have been paid.

Owner will deduct from monies due Contractor for the following abnormal and unreasonable expenses:

1. Contractor caused delays in the prosecution of work that result in hiring traffic officers for more hours than would have been required during normal prosecution of work.
2. Reconstruction and/or reinstallation of any portions of the work, as a result of improper initial installation or defective material, for which traffic officers are required.
3. Traffic officers required at a site where Contractor is not working or outside of Contractor's standard work day as a result of obstructions to traffic that remain in the traveled way.
4. All other incidents resulting from Contractor's operations requiring traffic officers that would not normally be encountered during the progress of a well-organized project employing proper construction methods.
5. When traffic officers are requested for the convenience of Contractor and are not otherwise considered necessary to the work.

ITEM 953.1**TEMPORARY SUPPORT OF EXCAVATION****LUMP SUM**

Work under this item shall conform to the relevant provisions of Subsections 140 and 950 of the Standard Specifications and the following:

DESCRIPTION

The Contractor shall design, furnish, install, maintain, remove, and dispose of Temporary Support of Excavation system as required based upon the actual site conditions, for the maintenance of traffic and support of excavation and backfilling operations during the demolition of the existing structure and construction of the proposed roadway and bridge. The Temporary Support of Excavation system is to be installed at the locations shown on the Plans, and other locations required to facilitate completion of the work and should provide sufficient space to maintain the required right of way.

The Contractor shall select, design, install and remove the Temporary Support of Excavation system with consideration of existing nearby structures and facilities required to remain in place. The Temporary Support of Excavation system shall not damage or detrimentally disturb existing nearby structures or facilities required to remain in place or those in service.

Temporary Support of Excavation system may be used with or without tiebacks, soldier piling and lagging, braced excavation, or any other system as required, to satisfy the design criteria contained herein and must be capable of supporting all loads applied during all stages of construction. At all locations, the temporary excavation support shall extend longitudinally such that the maximum slope of the excavated surface does not exceed 1-vertical to 2-horizontal.

The Temporary Support of Excavation system shall account for excavation to at least 3 feet below the bottom of the footing. The Contractor may excavate to a lower elevation, but no additional payment will be made if the deeper excavation is made for the Contractor's convenience, or due to Contractor's construction means and methods. If unsuitable material is encountered and the excavation support system and excavation limits must be adjusted for removal of unsuitable materials, the cost of excavation support will be paid for at the contract unit price.

The Contractor shall note that any part of the support system that protrudes into the supporting soil below the bridge structure shall be cut off and left in place and no additional payment will be made for this part. Supporting soil shall be defined as all soil directly below the footing contained within a series of planes that originate at the perimeter of the bottom of the footing and project down and away from the footing at an angle of 45 degrees from the horizontal.

DESIGN

The Temporary Support of Excavation system at locations shown on the plans shall be designed by the Contractor. All earth support shall be designed in accordance with the 2nd Edition of AASHTO Guide Design Specifications for Bridge Temporary Works (2017) and MassDOT LRFD Bridge Manual and all interims published as of the bid opening date.

The Contractor is responsible for determining all geotechnical criteria associated with the Temporary Support of Excavation system including, but not limited to, lateral earth pressures and hydrostatic pressures. Additional lateral earth pressures due to surcharges caused by equipment operation and/or material storage near the top of the excavation shall be considered and incorporated into the designs. The minimum design live load is HS20 loading, but in no case shall this surcharge be less than 250 psf.

The maximum angle of internal friction of the soil used in design shall be 30 degrees, unless a greater value is justified by material testing by a licensed laboratory under the supervision of a Professional Geotechnical Engineer registered in the Commonwealth of Massachusetts. For active pressure calculation, friction between the soil and the wall element shall be neglected. For passive pressure calculation by the Coulomb method, the angle of wall friction shall be less than one-third the effective angle of internal friction of the soil. Maximum design stresses in structural components shall be in accordance with AASHTO Standard Specifications for Highway Bridges. The design shall provide for all anticipated load conditions that may occur during the entire construction period, with a minimum factor of safety of 1.50 under all conditions.

The Temporary Support of Excavation system shall be designed to limit movement of ground and structures adjacent to the Temporary Support of Excavation system as necessary such that damage or detrimental disturbance to existing nearby structures required to remain in place or those in service does not occur.

The Temporary Support of Excavation system shall be designed to withstand an additional 3 feet of excavation below proposed bottom of footing without redesign.

The Temporary Support of Excavation system shall be embedded at a depth below the bottom of excavation to minimize lateral and vertical earth movements and provide bottom stability. The toe of Temporary Support of Excavation systems shall not be less than 5 feet below the bottom of the excavation.

The Temporary Support of Excavation system shall be designed with due consideration to temporary dewatering requirements.

SUBMITTALS

Temporary Support of Excavation system designs and plans shall be prepared and stamped by a Professional Structural Engineer registered in the Commonwealth of Massachusetts. Prior to installation, the plans and calculations shall be submitted to the Engineer for review, acceptance, and as evidence that the requirements of these provisions have been fulfilled. Furnishing such plans and calculations shall not relieve the Contractor of sole responsibility for safety of the public, personnel, equipment, and structures, as well as successful project completion.

The design documents prepared by the Contractor shall show the horizontal and vertical extents of the earth support system, the sizes and dimensions of the components of the system (including temporary utility support devices, if applicable), the proposed method of bracing, construction notes, and any other necessary measures required to allow for the proposed construction. The Temporary Support of Excavation system shall not be installed until the Contractor's design has been reviewed and approved by the Engineer. Any work done or materials ordered for the work involved prior to acceptance of the design calculations, plans, and detailed drawings shall be at the Contractor's own risk.

MATERIAL

Steel sheeting shall conform to all applicable specifications of Subsection 950 and shall meet the material requirements of Materials Section M8.05.4 of the Standard Specifications; Structural steel shapes for soldier piles shall conform to Materials Section M8.05.1 of the Standard Specifications; and other structural steel components shall conform to Materials Section M8.05.0 of the Standard Specifications. All materials used for Temporary Excavation Support Systems shall be new (or used but in like-new condition), sound and free from strength-impairing defects and subject to the Engineer's approval. Any materials removed after the proposed construction is in place shall be salvaged to the Contractor.

Fabricated sections and corners shall be riveted or bolted and satisfactory for the use intended. Welded sections are not permitted.

High strength steel may be used at the Contractor's option at no additional cost to the Owner.

CONSTRUCTION METHODS

Sheeting shall be driven entirely outside the neat lines of the existing foundations and/or walls, as shown on the plans. Guide wales or other devices shall be used to ensure accurate driving and aligning of the piles.

Any portion of the Temporary Support of Excavation system that becomes tilted or damaged shall be repaired, or if in the opinion of the Engineer it cannot properly be adjusted, the Contractor shall replace it at no additional cost.

All welding and the preparations and assembly of material for welding shall conform to the MassDOT Standard Specifications for Highway and Bridges with all current supplemental specifications, the AASHTO Standard Specifications for Highway and Bridges and the AASHTO/AWS Bridge Welding Code ANSI/AASHTO/AWS D1.5 and interim revisions published by AASHTO as of the bid opening date.

The Contractor shall accurately locate all utility lines and structures to ensure that the proposed temporary excavation support systems will not interfere with any existing utilities and structures.

All damage to the facilities, structures, pavement or ground caused by the use of the Contractor's selected Excavation Support System shall be repaired to the satisfaction of the Engineer at no additional cost. Severe damage which directly affects the safety of the public shall be immediately repaired to the satisfaction of the Engineer. The operation shall be halted until a satisfactory prevention method is instituted.

Upon completion of the substructure improvements and sufficient backfilling to maintain the stability of the adjacent roadway, the Temporary Support of Excavation system shall be removed from the job site, except any part of the support system that protrudes into the supporting soil below the bridge structure. For portions of the Temporary Support of Excavation system not able to be removed, the Contractor may leave portions of the Temporary Support of Excavation system in place, provided approval of the Engineer is given and portions of the Temporary Support of Excavation system to remain in place will not impede construction or potential future uses.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Payment for this Item shall be at the contract lump sum bid price for Item 953.1, Temporary Support of Excavation, which price shall include all materials, tools, equipment, installation, staging, access, removal, storage, disposal, any field measurements required, and labor incidental thereto that is required to complete the work in a satisfactory manner.

ITEM 983.4**STREAMBED MATERIAL****CY**

Work under this item shall conform to the relevant provisions of Subsection 983 of the Standard Specifications and the following:

GENERAL

This work shall consist of excavating existing channel bottom material in areas where the channel bottom is to be disturbed and regraded to create a work area for the bridge, riprap placement, and cofferdam installation. This item shall also include the stockpiling and protecting of the excavated material on the Site, subsequent placement of the stockpiled material in the channel, providing supplemental material as needed, and the removal and proper disposal of all unused and unacceptable material.

MATERIALS

The material for this item shall consist of the existing naturally-formed rocks, cobbles, gravel, soils and clean natural sediments from within the channel (streambed material). Streambed material shall match the gradation and material properties of the in-situ material located within the banks and as specified on the plans. Existing streambed materials may be stockpiled and re-used for the final channel surface. Streambed material shall be placed in the locations shown and as detailed on the plans.

Material identified as Riffle Substrate on the drawings shall be constructed with Item 983.4 Streambed Material.

If supplemental streambed material is required to complete the work, the gradation of the existing material will be used to determine the suitability of the supplemental material, at the discretion of the Engineer.

Any material excavated from ledge (bedrock) formations or broken from larger boulders will not be accepted. Broken concrete will not be accepted.

SUBMITTALS

Obtain a sample of the existing streambed material and submit the lab tested gradation to the Engineer, prior to culvert bridge construction. Submit to the Engineer the material specification, along with the gradation, of any proposed supplemental material for review and approval.

CONSTRUCTION METHODS

The Contractor shall submit for the Engineer's approval a proposed location for stockpiling material. The proposed location shall be upland where disruption to the stream channel or impact to wetland areas caused by moving the excavated channel bottom material to and from the stockpile are minimized during the placement of material. The

Contractor shall prepare the area approved by the Engineer, suitable in size and location for stockpiling the existing channel bottom material.

The stockpile shall be located where it can remain undisturbed for the duration of the stream channel construction and shall be protected using sedimentation control measures as shown on the plans. The stockpile area shall be cleared and cleaned adequately to prevent mixing with underlying soil or other materials, including the use of a separation barrier such as: structural fabric, polyethylene sheeting, or similar. The stockpile area shall be adequately covered to protect the excavated channel bottom material from erosion by rain or other forces.

After clearing and grubbing, the Contractor will identify the limits of the exposed channel bottom material to be excavated under this item. The Contractor will identify the bottom limit of excavation, an amount up to but not exceeding 24 inches in depth, based upon visual inspection of the channel bottom material, unless otherwise specified in the Contract. After the limits of excavation have been determined and reviewed by the Engineer, the Contractor shall excavate the channel bottom material, separate from any other roadway, structure, channel or unsuitable material excavation in the area. After the channel bottom material, and approved supplemental streambed channel material if needed, has been placed in the stockpile area, no other excavated or off-Site material shall be placed in the stockpile.

The stockpiled channel bottom material shall be placed at the designated location(s) to the required thickness as shown on the plans, denoted on the permit application, or as directed by the Engineer. Equipment and placement techniques shall prevent integration with the surrounding material and shall keep the channel bottom material relatively homogenous. Channel material shall be placed in a manner that replicates the original condition of the channel prior to excavation.

The Contractor shall perform all containment, diversion, or other separation of the channel flow when placing the channel bottom material to minimize sediment transport downstream.

If the Engineer determines additional material is required to complete the work, the Contractor shall provide supplemental Streambed Material in compliance with the sieve analysis performed on the existing streambed materials, as identified in this Special Provision.

METHOD OF MEASUREMENT

Streambed material will be measured for payment by the cubic yard of streambed material installed, complete in place.

The Engineer will delineate the horizontal pay limit prior to the start of excavation. The vertical pay limit will be measured from the top of the existing channel bottom to the bottom of excavation required specifically for the stockpiling of channel bottom material.

Any material excavated beyond the approved horizontal pay limits or deeper than the depth of channel bottom material identified and approved by the Engineer will not be measured for payment under this item.

Streambed material washed in between voids of the dumped riprap will not be measured and shall be subsidiary.

BASIS OF PAYMENT

Payment for Item 983.4, Streambed Material, will be paid for at the Contract unit price per cubic yard, which price shall include all labor, materials, equipment, installation, testing, and incidental costs required to complete the work.

No additional compensation will be made for preparation of the stockpile area, excavation of channel bottom, hauling of materials, cleaning, sorting, proper disposal of unsuitable materials, supplementing with approved material, and protecting adjacent work (including but not limited to sedimentation controls and covering of excavated material).

This item shall also include the stockpiling and protection of the excavated material on the Site, subsequent placement of the suitable stockpiled material in the channel, and the removal and proper disposal of all unused and unsuitable material. Material may be deemed unsuitable by the Engineer or the Owner after observing the material in the stockpile.

ITEM 991.1 CONTROL OF WATER - STRUCTURE NO. G-01-025 (CD5) LUMP SUM

The work to be done under this Item shall conform to the relevant provisions of Subsection 140 of the Standard Specifications and the following:

DESCRIPTION

The work under this Item consists of operations that may be required for the control of water to construct the proposed bridge structure, wingwalls and slope revetment (riprap, crushed stone and geotextile fabric) in the dry as shown on the plans, as directed by the Engineer, and as specified herein.

As part of the work under this Item, it is the responsibility of the Contractor to determine the need and extent of cofferdams, sand bags, sedimentation basins, dewatering techniques, sedimentation controls, system maintenance, and etc. needed to control water and sediment at the site.

SUBMITTALS

Prior to the start of work, the Contractor shall submit a water control plan to the Engineer for approval. This shall include the actual process of executing the excavation operations, methods of dewatering and sedimentation controls.

The Contractor shall submit to the Engineer for approval, complete working drawings and related computations for the proposed water control system, with supporting data as necessary, in accordance with Subsection 5.02 of the Standard Specifications and these Special Provisions. These drawings shall be accompanied by design calculations. Both shall be certified by a Professional Engineer registered in the Commonwealth of Massachusetts. The Contractor shall evaluate the existing conditions, groundwater, water flow, and the related effects of the proposed temporary works and construction methods. The Contractor shall account for all loads and construction conditions necessary for construction of the water control system and proposed bridge construction while maintaining public safety and protecting completed work and all third party property from damage resulting from his operation. Plan must be reviewed and approved by MassDEP in accordance with the 401 WQC permit.

CONSTRUCTION METHODS

All structural concrete shall be placed in the dry. The Contractor shall follow the guidelines of this specification for which control of water is to be accomplished. However, except for payment, all work shall conform to the relevant requirements of Subsection 140.

Construction operations shall be conducted in such a manner as to minimize siltation and prevent contamination of the waterway.

Measures to control the discharge of pollutants into water resource areas shall include, but not be limited to the following:

- Rigorous management of construction operations involving potentially hazardous materials, such as, refueling and maintenance of construction equipment.
- Formulation of contingency plans to control accidental spillage from potentially hazardous materials.
- Siting of construction staging areas outside of the buffer zones on relatively flat ground.
- Scheduling of work within the resource areas to avoid periods of high flood (e.g., spring floods) and inclement weather.
- Installation and continuous maintenance of staked hay bales and filter fences to prevent sediment migration into adjacent downstream resource areas. Placement of erosion controls shall be as shown on the plans, as specified herein, or as directed by the Engineer, so as to accomplish maximum control of project related sediment mobilization. Additional erosion control measures shall be employed as necessary to prevent erosion and sedimentation of the streambed. These measures shall be maintained for the duration of the contract.
- All discharge resulting from dewatering activities shall be directed to temporary sedimentation/retention basins located as necessary to control turbidity. At no time shall said discharge be directly released into adjacent resource areas.

The Contractor shall provide temporary sheeting, water barriers, sandbags, filtering fabrics, silt fencing, sedimentation/retention basins and/or other effective procedures or structures together with all labor, materials, and equipment necessary for controlling water in the foundation and riprap areas. Such work shall be subject to the approval of the Engineer, but such approval will not relieve the Contractor of responsibility for the adequacy of construction, maintenance, operation and safety of the water control system.

Also included shall be all necessary permits that may be required in performing the work under this Item.

Upon completion of the work, all temporary sheeting, water barriers and/or sandbags, etc., shall be removed from the site.

BASIS OF PAYMENT

Item 991.1 will be paid at the contract LUMP SUM Price, which price shall include full compensation for all labor, tools, equipment, materials, installation, maintenance, and removal of any temporary water barriers such as temporary sheeting, concrete barriers, sandbags, or other diverting systems or material, all filter fences, sedimentation/retention basins, and all incidental work necessary to complete the work under this Item to construct proposed Bridge No. G-01-025 (CD5).

ITEM 995.01**BRIDGE STRUCTURE, BRIDGE NO. G-01-025 (CD5)****LUMP SUM**

The work under this Item shall conform to the applicable provisions of Subsection 995 of the Standard Specifications and the specific requirements stipulated below for the component parts of this Item. For those component parts where no specific requirement is stipulated, the Standard Specifications shall apply except for payment.

Work under this Item shall include all materials, equipment, tools, and labor required to construct the following: Bridge superstructure and substructure which includes, but not limited to: precast concrete frame, cast-in-place concrete pedestal footings, precast concrete wingwalls, cast-in-place concrete wingwall footings, cantilevered safety curb support corbels, cast-in-place headwalls, cast-in-place bridge barrier, and precast concrete guard transitions.

Any item shown on the drawings specified or implied, and not specifically included for payment under another Item shall be included for payment under this Item.

The work does not include any items listed separately in the proposal. Payment for materials shown on the Drawings as being part of this bridge structure or which may be incidental to its construction and are not specifically included for payment under another Item shall be considered incidental to the work performed under this Item and shall be included in the unit price of the component of which they are a part.

**PRECAST CONCRETE THREE-SIDED FRAME
PRECAST WINGWALLS
PRECAST HIGHWAY GUARDRAIL TRANSITION PIECES**

GENERAL

The work under this Heading consists of fabricating, transporting and installing a precast concrete rigid frame, precast wingwalls, and precast highway guardrail transition pieces and includes all necessary labor, materials, and equipment to complete the work as shown on the Plans. The Precast Concrete Bridge Elements shall meet the requirements of Section M4: Cement Concrete and Related Materials.

WARRANTY

Contractor shall provide a warranty that the precast concrete elements will not spall or show evidence of visible cracking resulting from inferior materials or workmanship for a period of five (5) years from the date of final acceptance of the project. Should any defect develop within this time due to any manufacturing or erection defect, the Contractor agrees to make all necessary repairs or replacements without charge to the Owner.

MATERIALS

Materials.

Materials shall conform to M4.09.1 and the following:

Cementitious Materials	M4.01.1
Mixing Water	M4.01.3
Mixers and Agitators	M4.02.4
Mixing and Delivery	M4.02.5
Cementitious, Grout, Mortar, and Concrete Products	M4.04.0
Non-Shrink Grout Products	M4.04.5
Controlled Low-Strength Material – Structural Non-Excavatable	M4.08.0
Self-Consolidating Concrete (SCC)	M4.06.6
Welded Steel Wire Fabric	M8.01.2
Mechanical Reinforcing Bar Splicer	M8.01.9
Preformed Compression Joint Seals (Bridges)	M9.14.1
Liquid Penetrant/Sealant	M9.15.0
Fly Ash	AASHTO M 295
Slag	AASHTO M 302
Lifting Devices	PCI MNL-116

Vertical Adjustment Assembly.

Vertical Adjustment Assembly details and material requirements shall be as shown on the plans. Alternate devices may be used provided that they are adjustable and can support the anticipated loads. The design of the leveling devices, with necessary calculations, shall be submitted to the Engineer of Record for approval.

Threaded Inserts.

Threaded inserts are permissible to facilitate forming the keyway pours. Threaded inserts shall be hot dip galvanized or made of stainless steel. The number of threaded inserts shall be minimized, and the inserts shall not come in contact with the reinforcing steel.

CONSTRUCTION METHODS – PLANT FABRICATION

Three-Sided Frames and Wingwalls

The Contractor shall submit design computations for the three-sided culvert elements, wingwall elements, and connection hardware to the Engineer for review and approval. The computations shall be prepared in accordance with the latest AASHTO LRFD Bridge Design Specifications, the MassDOT Bridge Manual (Hundredth Anniversary Edition), and the Plans using English units and HL-93 live loading. The design computations shall consider all Strength, Extreme Event and Service Limit States as are appropriate for each stage of fabrication, shipment, construction, and for the final in-service condition. Design computations and shop drawings shall be prepared and stamped by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts. The shop drawings shall be prepared and submitted in accordance with M4.09.2B.

The three-sided frame dimensions provided on the plans are shown to establish the size of the proposed opening. The width and thickness of each three-sided frame unit may vary depending upon the manufacturer's specifications provided that the opening size is maintained. The Contractor shall be responsible for modifying the dimensions of the three-sided frame elements to compensate for elastic shortening, shrinkage, grade corrections, and other phenomena that make in-process fabricating dimensions different from those shown on the drawings. Approval of the shop drawings shall not relieve the Contractor from responsibility for the correctness of the dimensions shown.

The Contractor shall design in accordance and compliance with the requirements of Chapter 85 Section 35 of the Massachusetts General Laws. After shop drawings are acknowledged by Engineer, the contractor shall submit to the Massachusetts Department of Transportation all construction drawings and design calculations that shall be used to fabricate and construct the structure denoted on the drawings for review and approval. This approval shall constitute the final approval as stipulated by Chapter 85 Section 35 of the Massachusetts General Laws. All work associated with obtaining final Chapter 85 approval shall be incidental to this item. Fabrication shall not begin until Chapter 85 Approval has been obtained and approved Drawings signed by MassDOT have been submitted to the Engineer. Engineer may reject Precast Concrete Bridge Elements that deviate from the approved drawings or are fabricated prior to receiving written approval of the shop drawings. The Contractor shall bear full responsibility and costs for all materials ordered or work performed prior to the approval of the shop drawings or written authorization from Engineer and/or Owner.

Joints.

The precast reinforced concrete three-sided frame culvert shall be produced with grout-filled keyways per the details on the plans, the manufacturer's recommendations, and as approved by the Engineer. Joints between precast sections shall be made mechanically connected and watertight using grout, and sheet membrane waterproofing as shown on the plans. The ends shall be manufactured such that when the sections are laid together they will make a continuous line of frames with a smooth interior surface free of appreciable irregularities, and in compliance with the permissible variations.

Marking.

The following information shall be clearly marked on the interior of each three-sided frame by indentation, waterproof paint, or other approved means:

- (a) Frame span and rise
- (b) Date of manufacture and lot number
- (c) Name and trademark of the manufacturer

Pre-Production Meeting.

The Contractor shall notify the Engineer to determine if a pre-production meeting will be required to review the specification, shop drawings, curing plan, schedule, and discuss any specific requirements. The meeting shall be held at least seven (7) days prior to the scheduled casting of any Precast Concrete Bridge Element or control section. The Contractor shall schedule the meeting, which shall include representatives of the Fabricator and Engineer.

Reinforcement.

The reinforcing bars shall be installed in accordance with Subsection 901.35, including tolerances for cover and horizontal spacing of bars. Components of mechanical reinforcing bar splicers shall be set with the tolerances shown on the plans. The reinforcing bars and mechanical reinforcing bar splicers shall be assembled into a rigid cage that will maintain its shape in the form and which will not allow individual reinforcing bars to move during the placement of concrete. This cage shall be secured in the form so that the clearances to all faces of the concrete, as shown on the plans, shall be maintained.

Where reinforcing bars are to protrude from one Precast Concrete Bridge Element in order to mate with reinforcing bar splicers in a second precast concrete element, the fabricator shall set the reinforcing bars and the reinforcing bar splicers with a template in order to ensure proper fit up within the tolerances specified on the plans.

Tolerances.

Fabrication shall comply with tolerances specified on the plans. Tolerances for steel reinforcement placement shall be in accordance with Subsection 901.35. In the absence of specifications on the plans, tolerances shall comply with the latest version of the PCI MNL 135, Precast Tolerance Manual.

Forms.

Concrete shall be cast in rigidly constructed forms, which will maintain the Precast Concrete Bridge Elements within specified tolerances to the shapes, lines and dimensions shown on the approved fabrication drawings. Forms shall be constructed from flat, smooth, non-absorbent material and shall be sufficiently tight to prevent the leakage of the plastic concrete. When wood forms are used, all faces in contact with the concrete shall be laminated or coated with a non-absorbent material. All worn or damaged forms, which cause irregularities on the concrete surface or damage to the concrete during form removal, shall be repaired or replaced before being reused. If threaded inserts are cast into the elements for support of formwork, the inserts shall be recessed a minimum of 1 inch and shall be plugged after use with a grout of the same color as that of the precast cement concrete.

CONSTRUCTION METHODS – FIELD CONSTRUCTION

General.

All of the Contractor's field personnel involved in the erection and assembly of the Precast Concrete Bridge Elements shall have knowledge of and follow the approved Erection Procedure and Quality Control Plan for Precast Concrete Bridge Element Assembly.

Prior to installation, the following documentation shall be reviewed and confirmed by the Engineer:

- (a) QC Compressive Strength Test Report Forms attaining Design Strength, f'_c for the Precast Concrete Bridge Element's representative subplot.
- (b) Certificate of Compliance generated by the Fabricator as described under the Fabricator Quality Control section.
- (c) QC Inspection Reports signed by the Quality Control Manager.

Field construction staff shall verify that the Resident Engineer has accepted all Precast Concrete Bridge Elements prior to installation.

Erection Procedure and Quality Control Plan for Precast Concrete Bridge Element Assembly.

Prior to the erection, the Contractor shall submit an Erection Procedure and a Quality Control Plan for Precast Concrete Bridge Element Assembly for approval by the Engineer. This submittal shall include computations and drawings for the transport, hoisting, erection and handling of the Precast Concrete Bridge Elements. The Erection Procedure and Quality Control Plan for Precast Concrete Bridge Element Assembly shall be prepared and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts with working knowledge of the Contractor's equipment, approved shop drawings, and materials to build the bridge. The Erection Procedure and Quality Control Plan for Precast Concrete Bridge Element Assembly shall, at a minimum, include the following:

Erection Procedure

The Erection Procedure shall be prepared to conform to the requirements of 960.61, Design, Fabrication and Erection and the applicable sections in Chapter 8 of the PCI Design Handbook (eighth edition) for handling, erection, and bracing requirements. At a minimum, the Erection Procedure shall provide:

- (a) Minimum concrete compressive strength for handling the Precast Concrete Bridge Elements.
- (b) Concrete stresses during handling, transport, and erection.
- (c) Crane capacities, pick radii, sling geometry, and lifting hardware.
- (d) Verification that the equipment can handle all pick loads and weights with the required factor of safety.
- (e) Evaluation of construction sequence and evaluation of any geometric conflicts in the lifting of the Precast Concrete Bridge Elements and setting them as shown on the plans.
- (f) Design of crane supports including verification of subgrade for support.
- (g) Location and design of all temporary bracing that will be required during erection.

Non-shrink grout and concrete materials, approved by the Engineer, shall be placed as shown on the plans. Fill joints, keyways, and voids, in strict accordance with the specifications and manufacturer's recommendations and instructions.

For footings and highway guardrail transitions, once these Precast Concrete Bridge Elements have been set to the correct horizontal and vertical alignment, the void between them and the supporting soil shall be filled with Controlled Low-Strength Material – Structural Non-Excavatable to the limits as shown on the plans. Add additional grout ports in the footings to facilitate the bedding process if required.

Joints shall be filled flush to the top with non-shrink grout, and any vertical misalignment between adjacent elements shall be feathered out on a slope of 1 to 12.

Curing of grout or concrete shall be performed in strict accordance with the specifications and manufacturer's recommendations. Filling shall not be completed in cold weather when either the ambient temperature or the precast member's temperature is below the manufacturer's recommendation. No localized heating of either the precast members or of the air surrounding the element will be permitted in an attempt to reach application temperatures.

If the joints or voids are not filled within five days after the Precast Bridge Elements are erected, the Contractor shall cover and protect the openings from weather and debris until they are filled.

Quality Control Plan for Precast Concrete Bridge Element Assembly

The Quality Control Plan for Precast Concrete Bridge Element Assembly is a document prepared and submitted by the Contractor prior to the start of work which requires the Contractor to identify and detail the sequence of construction in accordance with the project schedule and which clearly identifies all stages of field construction. The assembly procedures for the Precast Concrete Bridge Elements shall be submitted in PDF format on 24"x36" sheets. This document will be treated as a Construction Procedure and will be reviewed by the Engineer. The approval of this document will serve as a guideline for setting interim concrete and grout strengths and curing procedures to allow construction to proceed without waiting for the final in-service strengths to be achieved.

The following list details the minimum criteria that should be included in the Quality Control Plan for Precast Concrete Bridge Element Assembly:

- (a) A detailed schedule showing the sequence of operations that the Contractor will follow. The schedule shall include a timeline for installation of all major elements of the culvert accounting for the installation of temporary works and cure times of grouts or closure pour concrete and other selected materials.
- (b) Calculations that support the schedule outlined above should be included verifying that the selected materials have adequate interim strength to proceed from one step to another. Final material strengths are not normally required until the culvert is opened to vehicular traffic. The minimum factor of safety of two (2) will be required for the interim strength of grouts and closure pour concrete before construction is allowed to proceed to subsequent steps. The factor of safety is applied to the service loads that are supported by the elements and materials during various stages of construction. For example, if the Contractor calculates that the grout between the precast pier cap and pier wall requires a strength of 100 psi to support the dead load of the beams in the next step, a cylinder break of 200 psi will be required prior to allowing the pier cap to be loaded with the beams. The required strength of materials for subsequent construction stages shall also be calculated and the material strength verified.
- (c) The Contractor is responsible for determining the center of gravity for all elements. Special care shall be used for unusual elements that are not symmetric. These elements may require special lifting hardware to allow for installation in a plumb or flat position.
- (d) Plan of the work area, depicting items such as temporary earth support, utilities within the immediate vicinity of the work, drainage structures, etc. The Contractor shall coordinate the various subcontractors that will need to occupy the same area and shall ensure that there are no conflicts. For example, if the Contractor is having different Subcontractors prepare and submit plans for temporary earth support and demolition, and the earth support is required to be installed prior to the demolition, it shall be the Contractor's responsibility to ensure that the Quality Control Plan for Precast Concrete Bridge Element Assembly submission allows both operations to be performed without field modification.
- (e) Details of all equipment that shall be employed for the construction of the culvert.
- (f) Methods of providing temporary support of the elements. Include methods of adjusting and securing the element after placement.
- (g) Procedures for controlling the overall horizontal dimensions and the vertical elevations as each precast concrete bridge element is erected by using the tolerance limits of the joints as detailed on the plans.
- (h) Methods for curing grout.
- (i) Proposed methods for installing non-shrink grout and the sequence and equipment for the grouting operation.
- (j) Methods for sealing the keyways in preparation for filling with non-shrink grout, including the use of backer rods. The Contractor shall not assume that the backer rods will restrain the pressure from the grout in vertical grout joints. Provide additional forming to retain the backer rod.

Survey and Layout.

Working points, working lines, and benchmark elevations shall be established prior to placement of all elements. The Contractor is responsible for field survey as necessary to complete the work. The Engineer reserves the right to perform additional independent survey. If discrepancies are found, the Contractor may be required to verify previous survey data.

Preparation of Closure Pours and Grouted Keyways.

Immediately prior to erecting the Precast Concrete Bridge Elements, the closure pours and grouted keyways shall be cleaned at the job site of all dust, dirt, carbonation, laitance, and other potentially detrimental materials which may interfere with the bonding of the closure pour concrete or grout and precast concrete using a high-pressure water blast. Any exposed reinforcing steel in the precast concrete shall be protected from damage during the cleaning of the keyways. Damaged epoxy coating of steel reinforcement shall be repaired, and the reinforcing steel shall be cleaned as directed by the Engineer. The surfaces of the closure pours and grouted keyways shall be wetted so that the surfaces shall have a Saturated Surface Dry (SSD) condition for at least 24 hours prior to the placement of the closure pour concrete.

Erection.

The elements shall be placed in the sequence and according to the methods outlined in the Erection Procedure and Quality Control Plan for Precast Concrete Bridge Element Assembly. As the erection proceeds, the Contractor shall constantly monitor the assembly to ensure that the precast concrete bridge element is within proper horizontal and vertical location and tolerances prior to releasing it from the crane and setting the next unit. The Contractor may use shims to maintain proper setting tolerances.

The concrete elements shall be lifted only by the lifting devices, and the utmost care shall be taken to prevent distortion of the elements during handling, transportation or storage.

This approval will be contingent on the Contractor demonstrating by calculations, prepared by a Professional Engineer registered in Massachusetts, that the elements will not be damaged by the non-vertical lifting force and by documentation that the capacity of the lifting devices is adequate for the non-vertical lifting force.

After all Precast Concrete Bridge Elements have been placed, the actual overall dimensions of the structure both horizontal and vertical, as laid out shall not deviate from the nominal dimensions shown on the plans beyond a tolerance of +0 inches and -1 inches. Once the layout of Precast Concrete Bridge Elements has been accepted by the Engineer, the Contractor shall cut all lifting devices off below the surfaces of the elements.

Three-Sided Frames

Backfilling operations shall not begin until the following checks have been made:

- (a) The three-sided frame to footing key joints are grouted as shown on the plans;
- (b) The joints between exterior three-sided frame culvert elements and wingwall stems are complete as shown on the plans;
- (c) All joint seals are properly placed.

Backfill shall be paid for under separate items. The backfilling procedures shall be in accordance with Sections 120, 150, and 170 of the Standard Specifications and Supplemental Specifications modified as follows:

- (a) Fill shall be placed and compacted in layers not exceeding one foot in depth;
- (b) Dumping of fill shall not be allowed any nearer to the structure than 3.25 feet from a vertical plane extending from the back of the footing;
- (c) Backfill shall be placed as symmetrically as possible around the structure with differential depths of backfill on each side of the structure not exceeding 1.5 feet with respect to each other;
- (d) Compaction shall be achieved using hand compaction equipment for all fill within one foot of the structure;
- (e) The bare structure shall not be crossed by any equipment heavier than that specified by the frame manufacturer. All damage resulting from equipment damage shall be rectified to the satisfaction of the Engineer at no cost to the Owner;
- (f) Construction equipment will not be permitted atop an uncompleted structure;
- (g) Construction equipment whose weight exceeds the design capacity shall not be permitted atop the completed structure under any circumstances;
- (h) The use of vibratory rollers for compaction purposes will not be permitted.

A representative of the manufacturer shall be on site at the commencement of the installation, at no cost to the Owner, to assist the Contractor. The representative shall offer advisory assistance only and shall not supplant the Contractor's representative, or the Engineer.

Filling of Blockouts for Lifting Devices and Threaded inserts.

If the blockouts in the Precast Concrete Bridge Elements where the lifting devices were located will be exposed and visible after assembly is complete, the Contractor shall fill these blockouts with Mortar (M4.04.5).

After the formwork has been removed, all threaded inserts that have been cast into the precast concrete bridge deck for support of the formwork shall be filled with a grout of the same color as that of the precast concrete.

5000 PSI, 3/4 IN., HP CEMENT CONCRETE

The work under this heading shall conform to the applicable provisions of Subsection 901. and all material requirements contained in Subsection M4.06.1 of the Standard Specifications and the following:

This work shall consist of furnishing and installing 5000 psi, 3/4 in., HP cement concrete for the construction of the pedestal footings and headwalls as shown on the plans.

Precast construction may be substituted for cast-in-place concrete at no additional cost to the Owner. Contractor shall remain responsible for submitting stamped drawings and calculations, in addition to supporting documentation as described in the precast concrete bridge elements within this specification. Subsection 995.01 shall be used as reference for precast concrete fabrication and construction methods.

5000 PSI, 3/8 IN., HP CEMENT CONCRETE

The work under this heading shall conform to the applicable provisions of Subsection 901. and all material requirements contained in Subsection M4.06.1 of the Standard Specifications and the following:

This work shall consist of furnishing and installing 5000 psi, 3/8 in., HP cement concrete for the construction of CT-TL2 bridge rail as shown on the plans.

Precast construction may be substituted for cast-in-place concrete at no additional cost to the Owner. Contractor shall remain responsible for submitting stamped drawings and calculations, in addition to supporting documentation as described in the precast concrete bridge elements within this specification. Subsection 995.01 shall be used as reference for precast concrete fabrication and construction methods.

STEEL REINFORCEMENT FOR STRUCTURES – EPOXY COATED

The work under this heading shall conform to the applicable provisions of Subsection 901. and all material requirements contained in Subsection M8.01.7 of the Standard Specifications and the following:

This work shall consist of furnishing and installing steel reinforcement for structures for the construction of the pedestal footings, headwalls, and CT-TL2 bridge rail as shown on the plans.

DAMP-PROOFING

The work under this heading shall conform to the applicable provisions of Subsection 970. and all material requirements contained in Subsection M9.09.2 of the Standard Specifications and the following:

This work shall consist of furnishing and installing damp-proofing on all concrete faces to be backfilled against including, but not limited to the three-sided frame culvert legs, three-sided frame culvert top slab, and the back face of wingwalls as shown on the plans.

SHEET MEMBRANE WATERPROOFING

The work under this heading shall conform to the applicable provisions of Subsection 965., Subsection 966., and all material requirements contained in Subsection M9.08.2 of the Standard Specifications and the following:

This work shall consist of furnishing and installing sheet membrane waterproofing on all joints between individual three-sided frame culvert segments as shown on the plans.

SCHEDULE OF BASIS FOR PARTIAL PAYMENT

Within ten (10) days after the Notice to Proceed, the Contractor shall submit a schedule of unit prices for the major component Sub-Items that make up Item 995.01 as well as their total culvert structure Lump Sum cost for Bridge Structure No. G-01-025 (CD5). The culvert structure Lump Sum breakdown quantities provided below are estimated and not guaranteed. The total of all partial payments to the Contractor shall equal the Lump Sum contract price regardless of the accuracy of the quantities furnished by the Engineer for the individual culvert components. The cost of labor and materials for any Item not listed but required to complete the work shall be considered incidental to Item 995.01 and no further compensation will be allowed.

<u>Sub-Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
904.3	5000 psi, 3/4 in., 685 HP Cement Concrete	170	CY		
905.2	5000 psi, 3/8 in., 710 HP Cement Concrete	10	CY		
910.1	Steel Reinforcement for Structures – Epoxy Coated	25000	LB		
965.1	Sheet Membrane Waterproofing	400	SF		
970.	Damp-Proofing	1400	SF		
995.011	Precast Three-Sided Frame Culvert Segments	7	EA		
995.012	Precast Wingwalls	4	EA		
995.013	Precast Highway Guardrail Transitions	4	EA		
Total Cost of Item 995.01					
Total Cost of Item 995.01 in Words =					

The above schedule applies only to Bridge Structure No. G-01-025 (CD5). Payment for similar materials and construction at locations other than at this culvert structure shall not be included under this Item. Sub-Item numbering is presented for information only in coordination with MassDOT Standard Nomenclature.

ITEM 998.1**MONTHLY PRICE ADJUSTMENT
FOR HMA MIXTURES****ALLOWANCE**

This provision applies to all projects using greater than 100 tons of hot mix asphalt (HMA) mixtures containing liquid asphalt cement.

The Price Adjustment will be based on the variance in price for the liquid asphalt component only from the Base Price to the Period Price. It shall not include transportation or other charges. This Price Adjustment will occur on a monthly basis.

The Period Price of liquid asphalt for each monthly period will be determined by MassDOT 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. MassDOT will post this *Asphalt Weekly Monitor*. Poten and Partners has granted MassDOT the right to publish this specific asphalt price information sourced from the Asphalt Weekly Monitor.

The Base Price for liquid asphalt for this Project shall be \$712.50 per ton.

The Contract Price of the hot mix asphalt mixture will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be a separate payment item and 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 virgin liquid asphalt content in the mixture placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M3.11.03.

The Price Adjustment will be determined by multiplying the number of tons of hot mix asphalt mixtures placed during each monthly period times the liquid asphalt content percentage (5.5% for all mixes) times the variance in price between Base Price and Period Price of liquid asphalt.

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 an Owner approved extension of time.

<u>ITEM 998.2</u>	<u>MONTHLY PRICE ADJUSTMENT</u>	<u>ALLOWANCE</u>
	<u>FOR DIESEL FUEL</u>	
<u>ITEM 998.3</u>	<u>MONTHLY PRICE ADJUSTMENT</u>	<u>ALLOWANCE</u>
	<u>FOR GASOLINE</u>	

This provision applies to all projects which include excavation, borrow, and paving work.

The Price Adjustment will be based on the variance in price for the fuel component of various excavation, borrow, and paving items of work (see table below) only from the Base Price to the Period Price. This Price Adjustment will occur on a monthly basis.

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

The Base Price for diesel fuel for this Project shall be \$4.693 per gallon.

The Base Price for gasoline for this Project shall be \$3.341 per gallon.

The Contract Price of the various excavation, borrow, and paving items will be paid under the respective items in the Contract. The Price Adjustment, as herein provided, upwards or downwards, will be a separate payment item and 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 fuel component of various excavation, borrow, and paving items of work.

The Price adjustment will be determined by multiplying the number of cubic yards of various excavation, borrow, and paving items of work completed during each monthly period with fuel usage factors developed by the Highway Research Board in Circular 158, dated July 1974. The quantity of fuel used will then be multiplied by the variance in price from the Base Price to the Period Price for diesel and gasoline fuel.

Item 986.3 will be converted to cubic yards based on the average depth of excavation measured in the field by the Engineer.

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 an Owner approved extension of time.

ITEMS COVERED	FUEL FACTORS	
	Diesel	Gasoline
Excavation and Borrow Work: Items 120.1, 140., 144., 150., 151., 151.2 (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

ITEM 998.4**MONTHLY PRICE ADJUSTMENT
FOR PORTLAND CEMENT IN CONCRETE****ALLOWANCE**

This provision applies to all projects using greater than 100 cubic yards of Portland cement concrete containing Portland cement.

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. This Price Adjustment will occur on a monthly basis.

The Period Price of Portland cement for each monthly period will be determined by MassDOT 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 Base Price for Portland Cement for this Project shall be \$452.13 per ton.

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 a separate payment item and 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 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 an Owner approved extension of time.

ITEM 998.5**MONTHLY PRICE ADJUSTMENT
FOR STEEL****ALLOWANCE**

This provision applies to projects containing a price adjustment for structural steel and reinforcing steel as stipulated in the Advertisement for Bid. It applies to all structural steel as defined below and all reinforcing steel 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 structural steel material, consisting of rolled shapes, plate steel, sheet piling, pipe piles, steel castings and steel forgings, and unfabricated reinforcing steel bars.

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

The Base Price for structural steel and reinforcing steel for this Project shall be \$1.32 per pound.

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 fabricated reinforcing steel bars subject to a price adjustment by the index factor calculated as shown below under Example of a Period Price Calculation.

Price adjustments will not include 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 Engineer and found in the Advertisement for Bid.

The Base Price Date is the month and year in which the Owner opened bids for the project. This date is used to select the Base Price Index.

Period Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are variable prices calculated based on the purchase date of the steel using 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 Engineer 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. Bureau of Labor Statistics (BLS) 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 the Owner. 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.

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

END OF DOCUMENT

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