

TOWN OF BREWSTER, MASSACHUSETTS

CONTRACT DOCUMENTS
FOR

Millstone Road Reconstruction

(PROJECT)

June 2024
(DATE)

Town of Brewster
Brewster Town Hall
2198 Main Street
Brewster, MA 02631

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TOWN OF BREWSTER: INVITATION FOR BIDS

Sealed bids for furnishing the Reconstruction of Millstone Road which consists of roadway milling and resurfacing, full depth pavement reconstruction, drainage improvements and sidewalk construction along Millstone Road and related work will be received at the Office of the Town Manager, Brewster Town Hall, 2198 Main St., Brewster, MA 02631 until the time specified below at which time the bids will be publicly opened and read.

Specifications and bid forms may be obtained at the Office of the Town Manager, 2198 Main St. Brewster, MA. Monday through Friday between 8:30 a.m. and 4:00 p.m or on our website, <https://www.brewster-ma.gov/procurement-services>. Hard copy set of the Bidding Documents may be obtained for a deposit of Fifty Dollars (\$50.00) or Twenty-Five Dollars (\$25.00) for plans only in cash or check, made payable to the Town of Brewster. This deposit will be refunded to document holders of record who return the Bidding Documents to the Town in good condition within fourteen (14) days after the opening of Bids. All requests for mailing Bidding Documents shall be accompanied by a separate, non-refundable handling and mailing fee in the amount of Twenty-Five Dollars (\$25.00) in cash or a separate check made payable to the Town of Brewster. One (1) set of Bidding Documents will be furnished for the deposit and mailing fee stated.

Bids will be opened in the Office of the Town Manager on Tuesday July 30, 2024 at 11 a.m. Each Bid must be accompanied by a bid security consisting of a BID BOND, CASH, or, CERTIFIED CHECK issued by a responsible bank or trust company in the amount of 5% of the bid price.

Pre-Bid Conference and Site Visit will be held at the Cape Cod Sea Camps Bay Property, Administration Building located at 3057 Main St. Brewster MA., on Monday July 8, 2024 at 11:00 a.m. It is imperative that all prospective bidders have a representative in attendance.

A performance bond in an amount equal to 100 percent of the total amount of the contract price with a surety company qualified to do business in the Commonwealth of Massachusetts will be required for the faithful performance of the contract, as well as a labor and materials bond in an amount equal to 100 percent of the total contract price.

All bids for this project are subject to applicable public bidding laws of Massachusetts, including, but not limited to G.L. c.30, §39M.

Attention is directed to the minimum wage rates to be paid as determined by the Commissioner of Labor and Workforce Development and the weekly payroll record submittal requirements under the provisions of Massachusetts General Laws, Chapter 149, Section 26 through 27D inclusive.

Each prospective bidder proposing to bid on this project must be prequalified by the Massachusetts Department of Transportation (MassDOT) in accordance with 720 CR 5.00 "Prequalification of Contractors".

Selection of the contractor will be based upon bidder qualifications, including evidence of past performance in similar projects, and bid price. The contract will be awarded to the bidder deemed by the awarding authority to be the lowest responsible and eligible bidder.

The bidder agrees that its bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

The Town reserves the right to waive any informalities, to accept or reject, in whole or in part any or all bids, or take whatever other action may be deemed to be in the best interest of the Town.

The Town of Brewster

By: Peter Lombardi, Town Manager

SECTION 00100

INSTRUCTIONS TO BIDDERS

1. Receipt and Opening of Bids

The Town of Brewster, Massachusetts, herein called the Owner, acting by and through its Town Manager, will receive sealed Bids for the project known as the Millstone Road Reconstruction Project.

General bids shall be addressed to the Office of the Town Manager, Brewster Town Hall, 2198 Main St. Brewster, MA 02631 and endorsed "Bid for Millstone Road Reconstruction Project" (Project) will be received at the Office of the Town Manager until 11:00 a.m. prevailing time, on Tuesday July 30, 2024 at which time and place said bids will be publicly opened and read aloud.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. The bidder agrees that its bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids.

2. Location and Work to be Done

The Work consists of reconstruction of Millstone Road which consists of roadway milling and resurfacing, full depth pavement reconstruction, drainage improvements and sidewalk construction along Millstone Road and all work incidental thereto, in accordance with the Specifications and conceptual plans attached hereto.

Additional drawings showing details in accordance with which the Work is to be done may be furnished by addendum from time to time during the bidding period by the Owner or its Architect/Engineer and shall then become a part of the Contract Documents.

The Contractor shall furnish all labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, and all other things necessary to do all work required for the completion of each item of the Work and as herein specified.

The Work to be done and paid for under any item shall not be limited to the exact extent mentioned or described but shall include all incidental work necessary or customarily done for the completion of that item.

3. Preparation of Bid

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his address, and endorsed with the name of the project as specified in Receipt and

Opening of Bids, above. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in Receipt and Opening of Bids, above.

4. Bid Opening Procedure

The following list of requirements shall apply to each filed bid. Bids not meeting all the requirements for timeliness and security will be rejected; bids not meeting signature and addenda requirements will be rejected prior to checking of bid amounts.

Bids shall be filed at the place and before the time specified in Receipt and Opening of Bids, above.

Properly executed bid security shall be placed in a sealed envelope and shall be attached to the outside of the envelope containing the bid.

Bid signatures will be checked.

All addenda will be e-mailed or mailed to all prospective bidders. All bidders shall include with their bids the written acknowledgment form provided in Section 00300, FORM OF GENERAL BID.

The total dollar amount of each bid will be read, and the three apparent lowest bids will be selected for further consideration. These three apparent low bids will be read aloud for the benefit of the other bidders and the bid opening procedure will be closed. All those present at the bid opening may examine all bids after the bid opening and after the reading of the three apparent low bids.

5. Modification

Any bidder may modify his bid by written communication at any time prior to the scheduled closing time for receipt of bids. Any telegraphic communication must be received by the Owner prior to the closing time, and, provided further, the Owner must be satisfied that a written confirmation of the telegraphic modification over the signature of the bidder was mailed prior to the closing time. If written confirmation is not received within two days from the closing time, no consideration will be given to a telegraphic communication.

The communication shall not reveal the bid price but shall provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened.

6. Ability and Experience of Bidder

No award will be made to any bidder who cannot satisfy the Owner that he has sufficient ability and experience in this class of work and sufficient capital and plant to enable him to prosecute and complete the work successfully within the time named. The Owner's decision or judgment on these matters will be final, conclusive, and binding.

The Owner may make such investigations as it deems necessary, and the bidder shall furnish to the Owner, under oath if so required, all such information and data for this purpose as the Owner may request.

7. Conditions of Work

Each bidder must familiarize himself fully with the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

8. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications or other prebid documents will be made to any bidder orally. All information given to bidders other than by means of the plans, specifications, or by addenda, as described below, is given informally and shall not be used as the basis of a claim against the Owner.

Every request for such interpretation should be in writing addressed to Donna Kalinick, dkalinick@brewster-ma.gov, Town Hall, 2198 Main Street, Brewster, MA 02631, and to be given consideration must be received at least seven (7) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, when issued, will be e-mailed or mailed to all prospective bidders (at the respective address furnished by them for such purposes). Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

9. Security for Faithful Performance

Simultaneously with his delivery of the executed Contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor and materials under this contract. The surety on such bond or bonds shall be a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Owner. The bonds shall remain in force for one year after final acceptance of the work by the Owner, unless the Owner, in writing, releases the Contractor from the obligation sooner.

10. Power of Attorney

Attorneys-in-fact who sign Contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

11. Laws and Regulations

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances or bylaws, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the Contract the same as though written out in full.

12. Liquidated Damages for Failure to Enter into Contract

The successful bidder, upon his failure or refusal to execute and deliver the Contract and bonds required within 10 days after presentation thereof by the Owner, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bid, but the amount forfeited shall not exceed the difference between his/her bid price and the bid price of the next lowest responsible and eligible bidder. In case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the bidder, his/her bid deposit will be returned.

13. Obligation of Bidder

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect of his bid.

14. Information Not Guaranteed

All information given in the Contract Documents relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the Owner. All such information is furnished only for the information and convenience of bidders and is not guaranteed.

It is agreed and understood that the Owner does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures encountered during construction will be the same as those indicated in the Contract Documents. It is further agreed and understood that no bidder or Contractor shall use or be entitled to use any of the information made available to him or obtained in any examination made by him in any manner as a basis of or ground for any claim or demand against the Owner or the Architect/Engineer, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

15. Bid Security

Each bid and sub-bid must be accompanied by bid security in the form of a certified check, a bid bond, cash, or a treasurer's or cashier's check, payable to the Owner, in the amount of five (5) percent of the value of the bid. Such security of general bidders will

be returned to all except the three lowest responsible and eligible bidders within five days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids, and the remaining securities will be returned promptly after the Owner and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to the selected contractor within 30 days, Saturdays, Sundays and holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.

16. Right to Reject Bid

The Owner reserves the right to waive any informalities in bids and to reject any and all bids, should the Owner deem it to be in the public interest to do so.

The Owner may also reject bids which in its sole judgment are either incomplete, conditional, obscure or not responsive or which contain additions not called for, erasures not properly initialed, alterations, or similar irregularities.

17. Time for Completion

The successful general bidder must agree to commence work within ten (10) days of the date of the Notice to Proceed and to fully complete the project within the time limit stated in Section 00300, FORM OF GENERAL BID.

18. Comparison of Bids

Bids will be compared on the basis of prices set forth in the bid forms. In the event that there is a discrepancy between the lump sum or unit prices written in words and figures, the prices written in words will govern.

19. Award of Contract

The Contract will be awarded to "the lowest responsible and eligible bidder" pursuant to General Laws Chapter 30, Section 39M, as amended. Such a bidder shall possess the skill, ability and integrity necessary for the faithful performance of the work, shall be able to furnish labor that can work in harmony with all other elements of labor employed, or to be employed, in the work, and shall otherwise comply with all applicable provisions of law. Contract award shall be subject to availability of an appropriation for funding. This Contract is subject to adequate financial appropriations in accordance with General Laws, Chapter 44, Section 31C for the project advertised. No order to the CONTRACTOR for a change in or addition to the Work, whether in the form of a drawing, plan, detail, or any other written instruction shall be deemed to have been given until the Brewster Town Accountant has certified thereon that an appropriation in the amount of such order is available therefore, unless it is a change order which the CONTRACTOR is willing to perform without any increase in the contract price.

20. Statutes Regulating Competitive Bidding

Any bid which does not comply with the provisions of Massachusetts General Laws Chapter 30, Section 39M, as amended, need not be accepted and the Owner may reject every such bid.

21. Wage Rates

Prevailing Wage Rates as determined by the Commissioner of Department of Labor and Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Section 26 to 27G, as amended, apply to this project. It is the responsibility of the bidder, before bid opening, to request any additional information on Prevailing Wage Rates for those tradespeople who may be employed for the proposed work under this contract.

22. Contractor Records

The Contractor shall comply with the provisions of Massachusetts General Laws, Chapter 30, Section 39R concerning Contractor records.

23. INSURANCE

The Contractor shall carry and continuously maintain until completion of the Contract, insurance as specified in Agreement and in such form as shall protect him performing work covered by this Contract, and the Town of Brewster and its employees, agents and officials, from all claims an liability for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this Contract. The Town shall be named as an additional insured. The Contractor covenants and agrees to hold the Town and its employees, agents and officials harmless from loss or damage due to claims for bodily injury or death and/or property damage arising from, or in connection with, operations under this Contract.

25. PROJECT MANAGER

The Owner may utilize the services of a project manager, whose duties shall be as set forth in an Agreement for Project Manager Services.

SECTION 00300

FORM OF GENERAL BID

Bid of _____ (hereinafter called "Bidder")*

(____) a corporation, organized and existing under the laws of the state of

(____) a partnership

(____) a joint venture

(____) an individual
doing business as _____

To the City/Town of Brewster, Massachusetts (hereinafter called "Owner").

Gentlemen:

A) The undersigned Bidder, in compliance with your invitation for bids for the project known as Millstone Road Reconstruction having examined the plans and specifications and related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the contract documents and the plans and specifications within the time set forth below, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this bid is a part.

The Bidder hereby agrees to commence work on or before the date to be specified in written "Notice to Proceed" of the Owner. The work is expected to be substantially completed by December 31, 2025 with final completion no later than May 15, 2026. The Bidder further agrees to pay as liquidated damages the sum of (\$1,000.00) Dollars for each consecutive calendar day thereafter that the work is not complete as provided in the contract.

*Specify corporation, partnership or individual as applicable.

B) Bidder acknowledges receipt of and this bid includes the following addenda:

No. _____ Dated:

No. _____ Dated:

No. _____ Dated:

No. _____ Dated:

C) The Bidder agrees to perform the bid work described in the specifications and shown on the plans for the following contract price: \$_____.

Supplemental Form for General Bid - Base Bid



Supplemental Form for General Bid Base Bid

Project: Millstone Road Improvements

Location: Brewster, Massachusetts

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
101.	1.8	CLEARING AND GRUBBING at _____				
		A				
102.1	2,000	TREE TRIMMING at _____				
		FT				
102.511	63	TREE PROTECTION - ARMORING & PRUNING at _____				
		EA				
102.521	200	TREE AND PLANT PROTECTION FENCE at _____				
		FT				
103.	56	TREE REMOVED - DIAMETER UNDER 24 INCHES at _____				
		EA				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
120.1	9,500	UNCLASSIFIED EXCAVATION at _____ CY				
141.1	490	TEST PIT FOR EXPLORATION at _____ CY				
142.	2,050	CLASS B TRENCH EXCAVATION at _____ CY				
144.	50	CLASS B ROCK EXCAVATION at _____ CY				
145.	3	DRAINAGE STRUCTURE ABANDONED at _____ EA				
146.	28	DRAINAGE STRUCTURE REMOVED at _____ EA				
151.	7,100	GRAVEL BORROW at _____ CY				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
151.2	165	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES at _____ CY				
153.	20	CONTROL DENSITY FILL - EXCAVATABLE at _____ CY				
156.	50	CRUSHED STONE at _____ TON				
170.	19,000	FINE GRADING AND COMPACTING - SUBGRADE AREA at _____ SY				
201.	102	CATCH BASIN at _____ EA				
202.	12	MANHOLE at _____ EA				
204.	23	GUTTER INLET at _____ EA				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
205.	39	LEACHING BASIN at _____				
		EA				
205.1	145	LEACHING GALLEY at _____				
		EA				
220.	7	DRAINAGE STRUCTURE ADJUSTED at _____				
		EA				
220.2	20	DRAINAGE STRUCTURE REBUILT at _____				
		FT				
220.5	5	DRAINAGE STRUCTURE REMODELED at _____				
		EA				
222.3	190	FRAME AND GRATE (OR COVER) MUNICIPAL STANDARD at _____				
		EA				
223.2	15	FRAME AND GRATE (OR COVER) REMOVED AND DISCARDED at _____				
		EA				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
227.3	49	REMOVAL OF DRAINAGE STRUCTURE SEDIMENT at _____ CY				
227.31	150	REMOVAL OF DRAINAGE PIPE SEDIMENT at _____ FT				
238.10	170	10 INCH DUCTILE IRON PIPE at _____ FT				
252.12	2,100	12 INCH CORRUGATED PLASTIC PIPE at _____ FT				
302.06	50	6 INCH DUCTILE IRON WATER PIPE at _____ FT				
309.	1,680	DUCTILE IRON FITTINGS FOR WATER PIPE at _____ LB				
350.06	5	6 INCH GATE AND GATE BOX at _____ EA				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
358.	15	GATE BOX ADJUSTED at _____ EA				
376	5	HYDRANT at _____ EA				
376.4	5	HYDRANT REMOVED AND DISCARDED at _____ EA				
376.5	6	HYDRANT ADJUSTED at _____ EA				
381.3	39	SERVICE BOX ADJUSTED at _____ EA				
384.2	39	CURB STOP ADJUSTED at _____ EA				
390.	1	REMOVE AND RESET IRRIGATION at _____ LS				
402.	950	DENSE GRADED CRUSHED STONE FOR SUB-BASE at _____ CY				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
415.1	31,700	PAVEMENT STANDARD MILLING at _____ SY				
431.	3,800	HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE at _____ SY				
440.	55,900	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL at _____ LB				
443.	25	WATER FOR ROADWAY DUST CONTROL at _____ MGL				
450.23	4,100	SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) at _____ TON				
450.31	5,000	SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5) at _____ TON				
450.41	1,000	SUPERPAVE BASE COURSE - 25.0 (SBC - 25.0) at _____ TON				
450.52	300	SUPERPAVE LEVELING COURSE - 9.5 (SLC - 9.5) at _____ TON				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
451.	2,000	HMA FOR PATCHING at _____ TON				
452.	4,650	ASPHALT EMULSION FOR TACK COAT at _____ GAL				
453.	40,900	HMA JOINT ADHESIVE at _____ FT				
470.2	15,550	HOT MIX ASPHALT BERM - TYPE A MODIFIED at _____ FT				
472.	470	TEMPORARY ASPHALT PATCHING at _____ TON				
504.	6,300	GRANITE CURB TYPE VA4 - STRAIGHT at _____ FT				
504.1	200	GRANITE CURB TYPE VA4 - CURVED at _____ FT				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
509.	1,050	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT at _____				
		FT				
509.1	260	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - CURVED at _____				
		FT				
580.	10	CURB REMOVED AND RESET at _____				
		FT				
590.	20	CURB REMOVED AND STACKED at _____				
		FT				
656.1	100	8 FOOT VINYL FENCE at _____				
		FT				
670.	250	FENCE REMOVED AND RESET at _____				
		FT				
691.	40	BALANCE STONE WALL REMOVED AND REBUILT at _____				
		FT				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
697.1	180	SILT SACK at _____ EA				
701.2	360	CEMENT CONCRETE PEDESTRIAN CURB RAMP at _____ SY				
702.	1,550	HOT MIX ASPHALT SIDEWALK OR DRIVEWAY at _____ TON				
702.1	15	SHELL DRIVEWAY at _____ CY				
702.2	45	COBBLESTONE DRIVEWAY at _____ SY				
706.9	10	COBBLESTONES REMOVED & STACKED at _____ SY				
707.82	4	POST REMOVED AND DISCARDED at _____ EA				
709.	2	WETLAND MARKER POST at _____ EA				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
711.	17	BOUND REMOVED AND RESET at _____ EA				
715.	69	RURAL MAILBOX REMOVED AND RESET at _____ EA				
740.	15	ENGINEERS FIELD OFFICE AND EQUIPMENT (TYPE A) at _____ MO				
748.	1	MOBILIZATION at _____ LS				
751.	1,200	LOAM FOR ROADSIDES at _____ CY				
756.	1	NPDES STORMWATER POLLUTION PREVENTION PLAN at _____ LS				
765.	10,000	SEEDING at _____ SY				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
767.121	150	SEDIMENT CONTROL BARRIER at _____ FT				
772.039	23	ARBORVITAE - DEGROOTS SPIRE 5-6 FEET at _____ EA				
772.338	6	EASTERN RED CEDAR - 6-7 FEET at _____ EA				
776.524	2	MAPLE - RED - ARMSTRONG 2-2.5 INCH CALIPER at _____ EA				
777.828	3	SASSAFRAS - 1.5-2-INCH at _____ EA				
785.633	5	INKBERRY / #3 at _____ EA				
786.109	1	JUNIPER - COMMON / #2 at _____ EA				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
787.716	10	SPICEBUSH - 5-6 FEET at _____ EA				
789.333	13	BAYBERRY - NORTHERN / 2-3 FEET at _____ EA				
789.335	3	BAYBERRY - NORTHERN / 3-4 FEET B & B at _____ EA				
789.435	2	BEACH PLUM / 4-5 FEET B & B at _____ EA				
789.633	45	BLUEBERRY - HIGHBUSH / #1 at _____ EA				
793.445	19	ROSE - VIRGINIA / 18-24 INCH at _____ EA				
794.333	33	SUMAC SHRUB - FRAGRANT / 18-24" SPD at _____ EA				
794.343	8	SUMAC SHRUB - STAGHORN / 2-3 FEET at _____ EA				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
795.011	4	VIBURNUM - ARROWWOOD / 24-30 INCH at _____				
		EA				
795.157	4	WINTERBERRY / #3 at _____				
		EA				
796.231	135	SWITCH GRASS / 1 GAL. at _____				
		EA				
796.341	173	NORTHERN SEA OATS / 1 GAL. at _____				
		EA				
796.501	10,666	DAFFODIL / BULB at _____				
		EA				
804.3	210	3 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC - (UL) at _____				
		FT				
811.31	3	PULL BOX 12 X 12 INCHES - SD2.031 at _____				
		EA				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
824.211	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR) LOCATION NO. 1 at _____ LS				
824.212	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR) LOCATION NO. 2 at _____ LS				
824.213	1	RECTANGULAR RAPID FLASHING BEACON (SOLAR) LOCATION NO. 3 at _____ LS				
824.401	1	RECTANGULAR RAPID FLASHING BEACON (AC POWER) LOCATION NO. 1 at _____ LS				
832.	310	WARNING-REGULATORY AND ROUTE MARKER - ALUM. PANEL (TYPE A) at _____ SF				
847.1	50	SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL at _____ EA				
851.1	100	TRAFFIC CONES FOR TRAFFIC MANAGEMENT at _____ DAY				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
852.	700	SAFETY SIGNING FOR TRAFFIC MANAGEMENT at _____ SF				
852.11	75	TEMPORARY PEDESTRIAN BARRICADE at _____ FT				
853.1	5	PORTABLE BREAKAWAY BARRICADE TYPE III at _____ EA				
854.016	9,800	TEMPORARY PAVING MARKINGS - 6 INCH (PAINTED) at _____ FT				
854.036	9,800	TEMPORARY PAVING MARKINGS - 6 INCH (TAPE) at _____ FT				
854.6	45	TEMPORARY PORTABLE RUMBLE STRIP at _____ DAY				
856.12	340	PORTABLE CHANGEABLE MESSAGE SIGN at _____ DAY				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
859.	3,900	REFLECTORIZED DRUM at _____ DAY				
859.1	25	REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS at _____ DAY				
860.112	20	12 INCH REFLECTORIZED WHITE LINE (PAINTED) at _____ FT				
861.104	200	4 INCH REFLECTORIZED YELLOW LINE (PAINTED) at _____ FT				
864.	85	PAVEMENT ARROW REFLECTORIZED WHITE (PAINTED) at _____ SF				
864.04	105	PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC) at _____ SF				
865.2	1,200	PAVEMENT SURFACE COATING at _____ SF				
866.112	135	12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) at _____ FT				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
868.04	24,400	4 INCH REFLECTORIZED WHITE LINE (EPOXY) at _____ FT				
868.12	1,860	12 INCH REFLECTORIZED WHITE LINE (EPOXY) at _____ FT				
869.04	24,700	4 INCH REFLECTORIZED YELLOW LINE (EPOXY) at _____ FT				
874.01	76	STREET NAME SIGN - TOWN STANDARD at _____ EA				
874.2	7	TRAFFIC SIGN REMOVED AND RESET at _____ EA				
874.4	96	TRAFFIC SIGN REMOVED AND STACKED at _____ EA				
903.	2	3000 PSI, 1.5 INCH, 470 CEMENT CONCRETE at _____ CY				

Supplemental Form for General Bid - Base Bid

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
999.	1	CONSTRUCTION STAKING at _____ LS				
999.1	1	POLICE DETAILS at _____ ALL				

TOTAL BASE BID: _____

(Written in Words):

Supplemental Form for General Bid - Add Alternate 1



Supplemental Form for General Bid Add Alternate 1

Project: Millstone Road Improvements
Location: Brewster, Massachusetts

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
101.	0.3	CLEARING AND GRUBBING at _____				
		A				
103.	16	TREE REMOVED - DIAMETER UNDER 24 INCHES at _____				
		EA				
120.1	150	UNCLASSIFIED EXCAVATION at _____				
		CY				
151.	140	GRAVEL BORROW at _____				
		CY				
170.	470	FINE GRADING AND COMPACTING - SUBGRADE AREA at _____				
		SY				

Supplemental Form for General Bid - Add Alternate 1

Item Number	Quantity	Item with Unit Bid Price Written in Words	Unit Price		Amount	
			Dollars	Cents	Dollars	Cents
504.	180	GRANITE CURB TYPE VA4 - STRAIGHT at _____ FT				
509.	35	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT at _____ FT				
701.2	30	CEMENT CONCRETE PEDESTRIAN CURB RAMP at _____ SY				
702.	60	HOT MIX ASPHALT SIDEWALK OR DRIVEWAY at _____ TON				
751.	30	LOAM FOR ROADSIDES at _____ CY				
765.	250	SEEDING at _____ SY				

TOTAL ADD ALTERNATE 1: _____

(Written in Words):

The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

The Bidder understands that all bids for this project are subject to the applicable bidding laws of the Commonwealth of Massachusetts, including General Laws Chapter 149 and Chapter 30, Section 39M, as amended.

The Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of bids.

Within 10 days of receipt of the written notice of acceptance of this bid, the Bidder will execute the formal Agreement set forth in Section 00500 CONTRACT.

Bid security is attached in the sum of five percent (5%) of the total bid in accordance with the conditions of Section 00100 INSTRUCTIONS TO BIDDERS. The bid security may become the property of the Owner in the event the contract and bond are not executed within the time set forth above.

The selected Contractor shall furnish a performance bond and a payment bond in an amount at least equal to one hundred percent (100%) of the contract price in accordance with Section 00610 PERFORMANCE BOND, Section 00620 PAYMENT BOND, and as stipulated in the contract.

The undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all the requirements of the plans and specifications.

1. Have been in business under present name for ____ years.
2. The names and addresses of all persons interested in the bid (if made by a partnership or corporation) as principals, are as follows:

(attach supplementary list if necessary)

3. The bidder is requested to state below what work of a similar character to that included in the proposed contract he has done, and give references that will enable the Owner to judge his experience, skill and business standing (add supplementary page if necessary).

<u>Completion Date</u>	<u>Project Name</u>	<u>Contract Amount</u>	<u>Design Engineer</u>	<u>Reference Name</u>	<u>Telephone No.</u>
----------------------------	-------------------------	----------------------------	----------------------------	---------------------------	--------------------------

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

Bank reference _____
(Name)

(Bank)

(Address)

(Telephone No.)

Pursuant to G.L. c.62C, §49A, I certify hereby in writing, under penalties of perjury, that the within named Bidder/Contractor has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting of child support.

The undersigned Bidder hereby certifies under penalties of perjury, as follows: (1) that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite 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 (3) that all employees to be employed in the work subject to this bid 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.

The undersigned 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 in this paragraph the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

The undersigned bidder hereby certifies, under pains and penalties of perjury, that the foregoing bid is based upon the payment to laborers to be employed on the project of wages in an amount no less than the applicable prevailing wage rates established for the project by the Massachusetts Department of Labor and Workforce Development. The undersigned bidder agrees to indemnify the awarding authority for, from and against any loss, expense, damages, actions or claims, including any expense incurred in connection with any delay or stoppage of the project work arising out of or as a result of (1) the failure of the said bid to be based upon the payment of the said applicable prevailing wage rates or (2) the failure of the bidder, if selected as the contractor, to pay laborers employed on the project the said applicable prevailing wage rates.

Respectfully submitted:

Date: _____

By: _____
(Signature)

(Type Name of Bidder)

(Title)

(Business Address)

(City and State)

(Telephone Number)

**CERTIFICATIONS REQUIRED BY LAW
FOR PUBLIC CONSTRUCTION CONTRACTS**

You must COMPLETE and SIGN the following certifications. You must also print, at the bottom of this page, the name of the contractor for whom these certifications are submitted.

TAX COMPLIANCE

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I, the undersigned, authorized signatory for the below named contractor, do hereby certify under the pains and penalties of perjury that said contractor has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

NON-COLLUSION

The undersigned certifies under the 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 in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

PUBLIC CONTRACTOR DEBARMENT

The undersigned certifies under penalty of perjury that the below named contractor is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

OSHA TRAINING

Pursuant to G.L. c. 30, §39S, the Contractor hereby certifies under penalties of perjury as follows:

- (1) Contractor is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work;
- (2) All employees to be employed at the worksite 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 they shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and
- (3) All employees to be employed in the work subject to this contract 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.

COMPLETE AND SIGN BELOW:

Authorized Person's Signature

Date

Print Name & Title of Signatory

Name of Contractor

SECTION 00500

AGREEMENT

THIS AGREEMENT, made this _____ day of _____,
2024, by and between the party of the first part, the Town of Brewster, hereinafter called
"OWNER," acting herein through its Select Board, and the party of the second part,
_____ doing business as *(an individual) (a
partnership) (a joint venture) (a corporation) located in the *(City) (Town) of _____,
County of _____, and State of _____,
hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements
hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby
agrees with the OWNER to commence and complete the project described as follows:

hereinafter called the project, for the sum of _____
_____ Dollars
(\$_____) and all extra work in connection therewith, under the terms as stated in
the Contract Documents; and at his (its or their) own proper cost and expense to furnish all the
materials, supplies, machinery equipment, tools, superintendence, labor, insurance, and other
accessories and services necessary to complete the said project in accordance with the conditions
and prices stated in Section 00300 FORM OF GENERAL BID, Section 00700 GENERAL
CONDITIONS, Section 00750 SUPPLEMENTARY GENERAL CONDITIONS and Section
00800 SUPPLEMENTAL GENERAL CONDITIONS, the plans, which include all maps, plates,
blue prints, and the specifications and Contract Documents as prepared by the Owner.

*Strike out inapplicable term.

The CONTRACTOR hereby agrees to commence work under this Contract on or before the date to be specified in written "Notice to Proceed" of the Owner. The work is expected to be substantially completed by December 31, 2025 with final completion no later than May 15, 2026. The Bidder further agrees to pay as liquidated damages the sum of (\$1,000.00) Dollars for each consecutive calendar day thereafter that the work is not complete as provided in the contract.

The CONTRACTOR further agrees to pay as liquidated damages the sum of \$1,000.00. for each consecutive calendar day thereafter as provided in the Liquidated Damages Paragraph of Section 00700 GENERAL CONDITIONS.

The CONTRACTOR agrees not to discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age or national origin; and that it shall take affirmative actions to ensure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin. The Town of Brewster Encourages Participation in the MBE/WBE/VBE/SBVOBE programs and encourages bidders to meet the GOALS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES (MBE), WOMEN BUSINESS ENTERPRISES (WBE), AND VETERAN BUSINESS ENTERPRISES (VBE)/SERVICE-DISABLED VETERAN BUSINESS ENTERPRISES (SDVOBE), PURSUANT TO G.L. c. 7, § 61(n).

The CONTRACTOR agrees not to participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code of 1954, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in Section 00700 GENERAL CONDITIONS as amended by the supplementary general conditions, and to make payments on account thereof as provided in Section 00700 GENERAL CONDITIONS.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

AGREED:

Town of Brewster, Massachusetts
(Owner)

By _____

(Name)

Chair, Brewster Select Board
(Title)

(Contractor)

By _____

(Name)

(Title)

(Address)

(City and State)

Approved as to Form:

By: KP LAW
(Owner's Counsel)

In accordance with M.G.L. C.44, Section 31C, this is to certify that an appropriation in the amount of this contract is available therefor and that the Town Manager has been authorized to execute the contract and approve all requisitions and change orders.

By _____
Mimi Bernardo

Finance Director

CERTIFICATE OF VOTE
(to be filed if Contractor is a Corporation)

I, _____, hereby certify that I am the duly qualified
(Secretary of the Corporation)

and acting Secretary of _____ and I further certify that a meeting of the

(Name of Corporation)

Directors of said Company, duly called and held on _____, at which
(Date of Meeting)

all Directors were present and voting, the following vote was unanimously passed:

VOTED: To authorize and empower

Anyone acting singly, to execute Forms of General Bid, Contracts or Bonds on behalf of the Corporation.

I further certify that the above vote is still in effect and has not been changed or modified in any respect.

By: _____
(Secretary of Corporation)

A True Copy:

Attest: _____
(Notary Public)

My Commission Expires: _____
(Date)

**CERTIFICATIONS REQUIRED BY LAW
FOR PUBLIC CONSTRUCTION CONTRACTS**

You must COMPLETE and SIGN the following certifications. You must also print, at the bottom of this page, the name of the contractor for whom these certifications are submitted.

TAX COMPLIANCE

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I, the undersigned, authorized signatory for the below named contractor, do hereby certify under the pains and penalties of perjury that said contractor has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

NON-COLLUSION

The undersigned certifies under the 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 in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

PUBLIC CONTRACTOR DEBARMENT

The undersigned certifies under penalty of perjury that the below named contractor is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

OSHA TRAINING

Pursuant to G.L. c. 30, §39S, the Contractor hereby certifies under penalties of perjury as follows:

- (4) Contractor is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work;
- (5) All employees to be employed at the worksite 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 they shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and
- (6) All employees to be employed in the work subject to this contract 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.

COMPLETE AND SIGN BELOW:

Authorized Person's Signature

Date

Print Name & Title of Signatory

Name of Contractor

SECTION 00610

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Name of Contractor)

a _____ hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture or Individual)

_____ of _____, State of _____
(Surety) (City & State)

_____ hereinafter called the "Surety" and licensed by the State
Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are
held and firmly bound to the City/Town of _____, Massachusetts, hereinafter called
"Owner", in the penal sum of

_____ Dollars
(\$ _____) in lawful money of the United States, for the payment of which
sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and
successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered
into a certain contract with the Owner, dated the _____ day of _____,
20__ (the "Construction Contract"), for the construction described as follows: _____
_____.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties,
all the undertakings, covenants, terms, conditions, and agreements of the Construction Contract
during the original term thereof, and any extensions thereof which may be granted by the Owner,
with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under
the Construction Contract, and shall fully indemnify and save harmless the Owner from all costs
and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the
Owner all outlay and expense which the Owner may incur in making good any default, then this
obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the Surety's obligation under this Bond shall arise after (1)
the Owner has declared the Principal in default of the Construction Contract or any provision
thereof or (2) has declared that the Principal has failed, or is otherwise unable or unwilling, to
execute the work consistent with, and in conformance to, the Construction Contract (collectively
referred to as a "Contractor Default"). The determination of a Contractor Default shall be made
solely by the Owner. The Owner need not terminate the Construction Contract to declare a
Contractor Default or to invoke its rights under this Bond.

When the Surety's obligation under this Bond arises, the Surety, at its sole expense and at the consent and election of the Owner, shall promptly take one of the following steps: (1) arrange for the Principal to perform and complete the work of the Construction Contract; (2) arrange for a contractor other than the Principal to perform and complete the work of the Construction Contract; (3) reimburse the Owner, in a manner and at such time as the Owner shall decide, for all costs and expenses incurred by the Owner in performing and completing the work of the Construction Contract. Surety will keep Owner reasonably informed of the progress, status and results of any investigation of any claim of the Owner.

If the Surety does not proceed as provided in this Bond with due diligence and all deliberate speed, the Surety shall be deemed to be in default of this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner.

After the Surety's obligation under this Bond arises, the Surety is obligated, to the limit of the amounts of this Bond, for (1) the correction of defective work and completion of the Construction Contract; (2) additional design, professional services, and legal costs, including attorneys' fees, resulting from the Contractor Default or from the default of the Surety under this Bond; (3) any additional work beyond the Construction Contract made necessary by the Contractor Default or default of the Surety under this Bond; (4) indemnification obligation of the Principal, if any, as provided in the Construction Contract; and (5) liquidated damages as provided in the Construction Contract, or if none are so specified, actual and foreseeable consequential damages resulting from the Contractor Default or default of the Surety under this Bond.

Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction in the Commonwealth of Massachusetts.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Construction Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Construction Contract or to the work or to the specifications.

SECTION 00620

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____

_____ a _____
(Name of Contractor) (Corporation, Partnership, Joint Venture or Individual)

hereinafter called "Principal" and _____ of _____,
(Surety)

State of _____ hereinafter called the "Surety" and licensed by the State
(City and State)

Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the City/Town of _____, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars

(\$_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 20____, for the construction described as follows:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in ____ () counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20__.

ATTEST:

_____		_____
		Surety
_____	By	_____
		(Attorney-in-Fact)

		(Address-Zip Code)
_____ (SEAL)		
Witness as to Surety		

(Address-Zip Code)		

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

SECTION 00700

GENERAL CONDITIONS

Insert EJCDC No. C-700 (2007 edition)

3This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



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Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such

construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

- c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A

Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to

complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefore.
2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners,

employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
1. A Field Order;
 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions* – **SEE SUPPLEMENTAL CONDITIONS**

A. *Reports and Drawings:* The Supplementary Conditions identify:

- 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
- 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

- 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
- 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

- b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
 3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
 - D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
 - E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
 - F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner’s own forces or others in accordance with Article 7.
 - G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the

Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds - SEE SUPPLEMENTAL CONDITIONS

- ~~A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.~~
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance* - **SEE SUPPLEMENTAL CONDITIONS**

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance* - **SEE SUPPLEMENTAL CONDITIONS**

- ~~A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.~~

5.06 *Property Insurance* - **SEE SUPPLEMENTAL CONDITIONS**

- ~~A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:~~
- ~~1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;~~
 - ~~2. be written on a Builder's Risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;~~
 - ~~3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);~~
 - ~~4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;~~
 - ~~5. allow for partial utilization of the Work by Owner;~~
 - ~~6. include testing and startup; and~~

- ~~7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.~~
- ~~B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.~~
- ~~C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.~~
- ~~D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.~~
- ~~E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.~~

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the

Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or

equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *“Or-Equal” Items:* If in Engineer’s sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an “or-equal” item, in which case review and approval of the proposed item may, in Engineer’s sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

- 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
- 3) it has a proven record of performance and availability of responsive service.

b. Contractor certifies that, if approved and incorporated into the Work:

- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
- 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

a. If in Engineer’s sole discretion an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

- 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
- 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
- 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others* - **SEE SUPPLEMENTAL CONDITIONS**

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance

of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes* - **SEE SUPPLEMENTAL CONDITIONS**

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by

Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
 - b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible

with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that

is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;
2. recommendation by Engineer or payment by Owner of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
4. use or occupancy of the Work or any part thereof by Owner;
5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
6. any inspection, test, or approval by others; or
7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative* - **SEE SUPPLEMENTAL CONDITIONS**

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a

result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers'

compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:*
 1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

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- ~~b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;~~
- c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in

Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is

found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
 2. correct such defective Work; or
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to

an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor

that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 Final Completion Delayed

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

- A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will justify termination for cause:
 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
 - D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
 - E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
 - F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Controlling Law

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 Headings

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 00800

SUPPLEMENTAL CONDITIONS

Page

1. Supplementary General Conditions to EJCDC No. C-700, 2007 Edition
2. Prevailing Wage Rates
3. Insurance Requirements

Attachment A – Permits/Conditions of the Project

Attachment B- Prevailing Wage Rates

Attachment C- Notice of Award

Attachment D- Notice to Proceed

Attachment E- Form of Change Order

**AMENDING THE STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION
CONTRACT PREPARED BY ENGINEERS JOINT CONTRACT DOCUMENTS
COMMITTEE
(EJCDC NO. C-700, 2007 EDITION)**

(Sub) Paragraph

No.

- 2.01B Delete this paragraph and substitute the following:
- Before any Work at the Site is started, CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which OWNER or any additional insured may reasonably request) which CONTRACTOR is required to purchase and maintain in accordance with Article 5.
- 2.03 Delete the last sentence.
- 3.02A.1 Delete the phrase starting “shall mean” through the end of this sentence and substitute the following:
- shall mean the standard, specification, manual, code, or Laws or Regulations in effect and applicable at the time in question, except as may be otherwise specifically stated in the Contract Documents.
- 3.03A.3 Delete this paragraph and replace with the following:
- CONTRACTOR shall be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity or discrepancy if CONTRACTOR knew or reasonably should have known thereof.
- 4.01A Delete the last sentence.
- 4.01B Delete this subparagraph in its entirety.
- 4.03C.3 Delete this subparagraph in its entirety.
- 4.04B.2 Delete the phrase “or not shown or indicated with reasonable accuracy” following the word “indicated.” Delete the last sentence.
- 4.06C Add the following to the first sentence: “unless CONTRACTOR caused or contributed to such Hazardous Environmental Condition.”

- 4.06D Delete the last sentence.
- 4.06E Delete the last sentence.
- 4.06F Delete the second sentence.
- 4.06G Delete this subparagraph in its entirety.
- 4.06H Delete the last sentence.
- 5.03B Delete this subparagraph in its entirety.
- 5.04B.7 Insert the following new subparagraph:
7. “all coverage shall be written on an occurrence basis.
- 5.06A Delete this subparagraph in its entirety and substitute the following:
- Owner may, in its discretion, purchase and maintain property insurance upon the Work at the Site.
- 5.06B Delete this subparagraph in its entirety.
- 5.06D Delete this subparagraph in its entirety and substitute the following:
- The risk of loss within any identified deductible amount will be borne by CONTRACTOR, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser’s own expense.
- 5.07A Delete all text after the first sentence.
- 5.07B Delete this subparagraph in its entirety.
- 5.07C Delete this subparagraph in its entirety.
- 5.08 Delete this paragraph in its entirety.
- 5.09 Delete this paragraph in its entirety.
- 5.10 Delete this paragraph in its entirety and substitute the following:
- OWNER may occupy or use a portion of the Work prior to Substantial Completion.

- 6.05A Add the following to the second sentence “, and in accordance with G.L. c.30, §39M.”
- 6.06F Insert the following at the beginning of this subparagraph:
“Except as required by and indicated in the specifications and contract documents pursuant to G.L. c.149, §44F,”
- 6.07A Delete the second sentence.
- 6.09C Delete the last sentence.
- 6.13E Delete the text in parentheses at the end of the first sentence.
- 6.20A Delete the parenthetical phrase “(other than the Work itself).”
- 6.20.A Change the phrase “negligent act or omission” to “negligent or wrongful act or omission.”
- 7.01.A.2 Delete this subparagraph in its entirety.
- 7.01.B Delete the last sentence.
- 7.02 Delete this paragraph in its entirety.
- 8.02 Delete the phrase “to whom CONTRACTOR makes no reasonable objection.”
- 8.07 Delete this paragraph in its entirety.
- 8.09 Insert the following after the first sentence: “However, the OWNER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.”
- 9.02B Insert the following at the end of this subparagraph: “However, the ENGINEER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.”
- 9.03 Delete the last sentence.
- 9.04 Delete the last sentence.
- 9.08C Delete the final phrase “subject to the provisions of paragraph 10.05.”
- 9.09B Insert the following after the first sentence:

“However, the ENGINEER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.”

- 10.03A.3 Delete this subparagraph in its entirety.
- 11.01A.5 Delete subparagraphs a, b, d, e, f, g, and h.
- 11.02 Delete this paragraph in its entirety.
- 12.01B.3 Delete the last phrase “(determined as provided in paragraph 12.01.C).”
- 12.01C.2 Delete this subparagraph in its entirety.
- 12.03B Delete this subparagraph in its entirety.
- 12.03F Insert the following new subparagraph:
3. Delays caused by or within the control of the OWNER. In such event, the CONTRACTOR’S sole remedy shall be an extension of the Contract Time. Notwithstanding anything to the contrary in the Contract Documents, Contractor shall not be eligible for any increase in the Contract Price/Sum on account of any delay in the work, no matter by whom such delay is caused, and Contractor shall make no claim for such an increase, whether such claim is styled as a claim for delay damages, acceleration of work, loss of production, or otherwise.
- 13.01 Delete the word “Prompt” at the beginning of the subparagraph.
- 13.03F Delete the balance of this subparagraph after the words “CONTRACTOR’s expense.”
- 13.04D Delete this subparagraph in its entirety.
- 13.08 Delete the fourth sentence.
- 13.09C Delete the second sentence.
- 14.02A.1 Delete the first phrase prior to the words, “Contractor shall” and substitute in place thereof the following: “On a monthly basis and in accordance with G.L. c.30, §39G,”.
- 14.02A.3 Delete this subparagraph and substitute the following: “Retainage shall be in accordance with G.L. c.30, §39G.
- 14.02C Delete this subparagraph and substitute the following:

Payment shall be made in accordance with G.L. c.30, §39G.

14.02D.2 Delete the words “immediate” and “promptly”.

14.02D.3 Delete this subparagraph in its entirety.

14.04C Delete the third sentence and substitute the following:

“OWNER shall review the tentative certificate and make written objection to ENGINEER as to any provisions of the certificate or attached list.”

Delete the phrase “within 14 days after submission of the tentative certificate to OWNER” in the fourth sentence. Delete the phrase “within said 14 days” in the fifth sentence.

14.05 Delete the phrase “subject to the following conditions” at the end of the first sentence and delete subparagraphs 1 and 2 in their entirety.

14.07B.1 Delete the phrase “within ten days after receipt of the final Application for Payment,” in the first sentence.

14.07C Delete this subparagraph in its entirety and substitute the following:

Final payment shall be made in accordance with G.L. c.30, §39G.

14.09A.1 Delete this subparagraph in its entirety.

15.01 Delete this subparagraph in its entirety and substitute the following:

OWNER may suspend the work or any portion thereof in accordance with G.L. c.30, §39O.

15.03A Delete from subparagraph 1 the phrase “including fair and reasonable sums for overhead and profit on such Work;” and from subparagraph 2 the phrase “plus fair and reasonable sums for overhead and profit on such expenses”; and delete subparagraphs 3 and 4 in their entirety.

15.04B Delete the last sentence.

SUPPLEMENTAL CONDITIONS

§ SC 1.1 INTRODUCTION

The following provisions modify, change, delete from or add to Section 00500 Agreement. Where any Subsection of the Agreement is modified or any Article Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplemental Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

§ SC 2.1 PREVAILING WAGE

In accordance with General Laws Chapter 149, Section 26 through 27D, the Contractor is obligated to comply with the prevailing wage rates established by the Commissioner of the Department of Labor and Workforce Development for mechanics, apprentices, chauffeurs, teamsters and laborers employed on the Project. The schedule of applicable prevailing wage rates for the Project, together with a Certificate of Compliance therewith, are set forth in Attachment A herein.

§ SC 3.1 CONTRACTOR'S LIABILITY INSURANCE

In no case shall the limits of liability be less than the following:

- A. The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S operations under the Contract, whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable:
 - 1. Claims under Workers' Compensation, disability benefit and other similar employee benefit acts,
 - 2. Claims for damages because of bodily injury, occupational sickness or disease or death of his employees, and claims insured by usual personal injury liability coverage,
 - 3. Claims for damage because of bodily injury, sickness or disease, or death of any person other than employees, and claims insured by usual injury liability coverage, and
 - 4. Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefore.

- B. The insurance required by the above Subparagraph A shall be written for not less than the following minimum limits of liability:
 - 1. Workers' Compensation:
 - Statutory
 - Employers Liability:
 - \$1,000,000.00

 - 2. Comprehensive General Liability:
 - Each Person/Each Occurrence:
 - Bodily Injury
 - \$1,000,000.00/\$2,000,000.00
 - Each Occurrence/Aggregate:
 - Property Damage (X,C, & V Coverage)
 - \$1,000,000.00/\$2,000,000.00

 - 3. Comprehensive Automobile Liability:
 - Each Person/Each Occurrence

Bodily Injury/Property Damage, Combined Single Limit
\$1,000,000.00/\$2,000,000.00

5. Excess Liability on all of the above policies: (Umbrella Form)
\$2,000,000.00

6. The Comprehensive General Liability Insurance Policy (Broad Form) shall include coverage for Premises-Operations, Independent CONTRACTORS, Products Completed, Operations, and Contractual Liability Coverage to insure the CONTRACTOR'S assumed liability under Article 60. The policy shall be endorsed to insure against liability for damage to property by explosion, and for damage to underground pipes and utilities caused by digging with mechanical equipment (X,C, & U Coverage).

7. The Comprehensive Automobile Liability Insurance Policy shall be written to include Owned, Hired and Non-Owned Vehicles and it shall provide Extra Territorial Coverage.

C. The above insurance policies shall also be subject to the following requirements:

1. Certificates of insurance acceptable to the AWARDING AUTHORITY shall be addressed to and filed with the AWARDING AUTHORITY prior to commencement of the Work.

2. All premium costs shall be included in the CONTRACTOR'S bid.

3. All of the above insurance policies shall name the Town of Brewster as an additional insured.

SECTION 00850

Incorporation of Applicable Provisions of the
Massachusetts General Laws

Certain provisions of the Massachusetts General Laws are applicable to Construction contracts including, but not limited to, those contained in Chapter 30 and Chapter 149. All applicable provisions of the Massachusetts General Laws are incorporated into the Contract as if fully set forth herein and shall prevail over any conflicting provisions of the General or Supplemental Conditions.

SECTION 00900

SPECIFICATIONS

Millstone Road Reconstruction

PREPARED FOR

Town of Brewster
Department of Public Works
201 Run Hill Road, Brewster MA

PREPARED BY



101 Walnut Street
PO Box 9151
Watertown, MA 02472
617.924.1770

6/18/2024



SECTION 00900
SPECIFICATIONS

SCOPE OF WORK

The work under this Contract consists of drainage structure installation, roadway milling and resurfacing, full depth pavement reconstruction, HMA sidewalk and cement concrete pedestrian curb ramp construction along Millstone Road in the Town of Brewster between Route 6A and Route 137. New Rectangular Rapid Flashing Beacon Systems (RRFBs) are proposed at the midblock crossings near Lund Farm Way, Fern Lane, and the Cape Cod Rail Trail.

The work includes unclassified excavation, standard milling, hot mix asphalt overlay, full depth pavement reconstruction, sidewalk construction, drainage improvements, granite curb, pavement markings, signs, wall construction, landscaping, and other incidental work.

All work under this contract shall be done in conformance with the *2024 Standard Specifications for Highways and Bridges*, the *Supplemental Specifications* contained in this book, the *2017 Construction Standard Details*, the *Traffic Management Plans and Detail Drawings*, the *1990 Standard Drawings for Signs and Supports*; the 2015 Overhead Signal Structure and Foundation Standard Drawings, the *2009 Manual on Uniform Traffic Control Devices (MUTCD)* with Massachusetts Amendments; the *1968 Standard Drawings for Traffic Signals and Highway Lighting*; *The American Standard for Nursery Stock*; the Plans and these Special Provisions.

WORK SCHEDULE

The normal hours of operation shall be 7:00AM to 3:30PM unless otherwise approved by the Town.

No work that will disrupt travel on the existing roadways (lane closures, lane shifts, trenching, etc.) shall be done from 7:00AM to 7:30AM unless coordinated in advance with the Town.

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

Cape Cod moratorium work note: No work shall be allowed on any roadway between June 15th and Labor Day without prior written approval of the Engineer and Town.

AS-BUILT DRAWINGS

Full compensation for these plans shall be included in the prices bid for the various Contract items of work and no additional compensation will be allowed therefore.

CONTRACTOR LAYDOWN/STOCKYARD LOCATION

The Contractor laydown and stockyard location is at the Cape Cod Sea Camps/Town of Brewster property located at 3057 Main Street (Route 6A). The hours of access to the stockyard area shall be 6:30AM to 4:00PM unless otherwise approved by the Town.

The specific location available for use is shown here, located 330 feet east of the Millstone Road/Route 6A intersection –



TREE REMOVAL

The Contractor shall flag/stake the limit of clearing & grubbing and allow 48 hours for Town to review prior to start of clearing operations. The Contractor will adjust the clearing limits as directed by the Engineer and Town.

NEW DRIVEWAY CURB CUTS

The Contractor shall coordinate the location of all new driveway curb cuts with the property owner and the Town. A representative from DPW must be aware of the location prior to start of curb setting or driveway layout.

COOPERATION OF THE CONTRACTOR

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

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

Contractor will be required to meet with the Town Police and Resident Engineer (if available) to coordinate the temporary traffic control setup for the day.

Contractor shall develop all necessary temporary traffic control plans and detour plans as needed to complete the work. All drawings shall be submitted, in sufficient detail such that all maintenance of traffic, pedestrians, emergency and abutter access are properly addressed during construction, to the Town of Brewster for review and acceptance, as part of the shop drawing process. Contractor shall submit the documents for approval at least two weeks in advance of start of work. Information contained within the project plan set are suggested and do not get into contractor means and methods. These plans may be used as a guide to prepare the temporary traffic control plans.

PUBLIC SAFETY AND CONVENIENCE

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

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

NOTICE TO OWNERS OF UTILITIES

Written notice shall be given by the Contractor to all public service corporations or municipal and State officials owning or having charge of publicly or privately owned utilities at least one week in advance of the commencement of operations that will affect the utilities. The Contractor shall, at the same time, file a copy of such notice with the Town.

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

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

OTHER

Open Cape
PO Box 1145
Barnstable, MA 02630-2148

Gary Farrenkopf
gfarrenkopf@opencape.com

ELECTRIC

Eversource Electric "B"
50 Duchaine Blvd.
New Bedford, MA 01745

Brian Mello
brian.mello@eversource.com

TELEPHONE

Verizon
385 Myles Standish Blvd.
Taunton, MA 02780

Karen Mealey
Phone: (774) 409.3160
karen.m.mealey@verizon.com

WATER

Brewster Water Dept.
165 Commerce Park Road
Brewster, MA 02631

Paul Anderson
(508) 896.5454
panderson@brewster-ma.gov

GAS

National Grid Gas
40 Sylvan Road
Waltham, MA 02451

Melissa Owens
Phone: (781) 907.2845
Melissa.Owens@nationalgrid.com

CABLE

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

Tomi Fadipe
Phone: (781) 441.3864
oloruntomi.fadipe@eversource.com

DESIGN ENGINEER

VHB, Inc.
260 Arsenal Place #2
Watertown, MA 02472-4026

Stephen Rhoads
Project Manager
Phone: (617) 607.2723

The Contractor shall make his own investigation to assure that no damage to existing structures, drainage lines, traffic signal conduits, and other utilities will occur as a result of construction operations.

The Contractor shall notify "Mass. DIG SAFE" and procure a DIG SAFE number of each location prior to disturbing ground in any way.

"DIG-SAFE" Call Center: Telephone 1-888-344-7233

PROTECTION OF UTILITIES AND PROPERTY

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

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

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

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

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

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

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

The Contractor shall pay the Electric Company servicing the area for their services rendered for the connection of overhead and underground service connections.

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

TEMPORARY ACCESS

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

WORK DONE BY OTHERS

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

MATERIAL REMOVED AND STACKED

The Contractor shall carefully remove, transport and stack all material that, in the opinion of the Engineer, is salvageable. The material shall be stacked at the Town of Brewster Department of Public Works; 201 Run Hills Road, Brewster, MA 02631. The Contractor shall coordinate with the Town of Brewster to schedule drop-off time and location.

DRAINAGE

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

All existing pipes to be abandoned shall be plugged with brick masonry not less than 8 inches in thickness in conformance with the Standard Specifications, Section 201.62.

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

DRAINAGE STRUCTURES

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

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

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

SAWCUTS

Existing pavements to remain shall be sawcut at all openings for utility work, for new or reset curb and at all joints with proposed full-depth hot mix asphalt pavement, as shown on the plans and as directed by the Engineer. All sawcutting will be considered incidental to the respective items, and no additional payment will be made for sawcutting.

QUALIFIED ELECTRICIANS

Within 10 days after opening of bids, the low bidder shall submit a list of the Journeyman Electricians (Massachusetts License) who will perform the electrical work in this contract. Also, the low bidder shall submit copies of each Journeyman Electrician's and Master Electrician's current Massachusetts Licenses.

PROPERTY BOUNDS

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

ARCHITECTURAL ACCESS BOARD TOLERANCES

The Contractor is hereby notified that they are ultimately responsible for constructing all project elements in strict compliance with the current AAB/ADA rules, regulations and standards.

All construction elements in this project associated with sidewalks, walkways, wheelchair ramps and curb cuts are controlled by 521CMR – Rules and Regulations of the Architectural Access Board. The AAB Rules and Regulations specify maximum slopes and minimum dimensions required for construction acceptance. There is no tolerance allowed for slopes greater than the maximum slope nor for dimensions less than the minimum dimensions.

Contractors shall establish grade elevations at all wheelchair ramp locations, and shall set transition lengths according to the appropriate table in the Construction Standards (or to the details shown on the plans).

All wheelchair ramp joints and transition sections which define grade changes shall be formed, staked and checked prior to placing cement concrete. All grade changes are to be made at joints.

Detectable warning panels are considered incidental to Item 701.2 Cement Concrete Wheelchair Ramp and shall meet MassDOT Standard Detail E107.6.5.

RESTRICTED MATERIALS

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

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

ITEM 102.511**TREE PROTECTION – ARMORING & PRUNING****EACH**

The work under this item shall conform to the relevant provisions of Sections 771 and shall be for furnishing and installing temporary tree trunk protection and for limb pruning to prevent injury to the tree from construction equipment and activities.

Trunk armoring is for instances where construction activity (the use of heavy equipment) comes close enough to potentially damage the tree trunk or limbs. It is to be used where shown on the plans and as directed by the Engineer.

References

If requested, the Contractor shall provide to the Engineer one copy of the latest edition of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance: Part 1-Pruning and Part 5-Construction Management Standard. Provision of reference shall be incidental to this item.

Materials

Trunk armoring shall be such that it prevents damage to the trunk from construction equipment. Selected material shall be such that installation and removal will not damage the trunk.

Acceptable materials include 2x4 wood cladding with wire or metal strapping, or, for instances when duration of construction activities is less than three months, corrugated plastic pipe mounted with duct tape. Height of cladding shall be from base of tree (including root flare) to the bottom of the first branch or as recommended by the Arborist. Material and methods shall be approved by the Engineer.

Other materials or methods may be acceptable if approved by an Arborist.

Methods of Work

Prior to construction activities, the Engineer, the Contractor, the Town Tree Warden, and the Arborist, if specified, shall review trees noted on the plans to be protected. Final decision as to trees armored and/or pruned shall be per the Engineer.

Care shall be taken to avoid damage to the bark during installation and removal of armoring. Trunk armoring shall be replaced and maintained such that it is effective for as long as required and shall be removed immediately upon completion of work activities adjacent to trees.

Pruning of limbs shall conform to the techniques and standards of the most recent ANSI A300 standards.

Damages & Penalties

In the event that trees designated for protection under this item are damaged, including root damage from unapproved trespassing onto the root zone, the Contractor shall, at his own expense obtain a Certified Arborist.

ITEM 102.511 (Continued)

If, based on the recommendations of the Arborist, the Engineer determines that damages can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, and/or watering, the damage will be repaired as soon as possible within the appropriate season for such work and according to industry standards.

If the Engineer determines that damages are irreparable, the Contractor shall pay for the damages in the amount of \$500.00 per diameter inch at breast height (DBH) per tree.

Additionally, if the Engineer determines that the damages are such that the tree is sufficiently compromised as to pose a future safety hazard, the tree shall be removed. Tree removal will include clean up of all wood parts, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.511 will be measured and paid at the contract unit price per each. This will include full compensation for all labor, equipment, materials, and incidentals for the satisfactory completion of the work and the subsequent removal and satisfactory disposal of the protective materials upon completion of the contract.

In the event of tree damage, cost of Arborist services, of remediation measures, and/or tree removal will be borne by the Contractor.

Payment under this item will be scheduled throughout the length of contract:

- 40% of value shall be paid upon installation of trunk armoring and completion of pruning work, if required.
- 60% shall be paid at the end of construction operations that would damage the tree and after protection materials have been removed and properly disposed of by the Contractor. In the event of repairable damages, payment shall be made after the completion of remediation measures.

In the event of irreparable damage due to lack of proper protective measures being take there will be no compensation in addition to the \$500.00 per diameter inch penalty.

ITEM 102.521

TREE AND PLANT PROTECTION FENCE

FOOT

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

Work under this item consists of furnishing, installing, removing and resetting, maintaining fence in a vertical and effective position at all times, and final removal of temporary fence.

The purpose of the fence is to prevent damage to tree roots, tree trunks, soil, and all other vegetation within a delineated Tree and Plant Protection Zone (TPPZ) as shown on the plans, as directed by the Engineer, and as described herein.

Protection shall be for the duration of the construction activities unless otherwise directed.

Materials

Temporary Fence shall be such that it provides a minimum 48-inch tall barrier that remains vertical and effective (not sagging) for the duration of period required. Fence shall be plastic orange safety fence (recommended where high visibility is necessary), wooden snow fencing, or other approved material.

Per the Arborist or Engineer, additional posts, deeper post depths, and/or additional attachments will be used if the fabric or fence sags, leans or otherwise shows signs of failing to create a sufficient barrier to access.

References

If requested, the Contractor shall provide to the Engineer one copy of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1, Pruning and Part 5, Construction Management Standard. Provision of reference shall be incidental to this item.

Establishment of TPPZ

Fencing shall be used for construction areas, staging areas, and stockpile areas as shown on the plans and as directed by the Engineer to establish the Tree and Plant Protection Zone (TPPZ).

Fence shall be located as close to the work zone limit and as far from the trunk as possible to maximize the area to be protected. Fence shall run parallel and adjacent to construction activity to create a barrier between the work zone and the root zone or designated limit of plants and soils to be protected.

When construction activities surround (or have the potential to surround) trees or plants to be protected, a circular enclosure shall be used. In these instances, the TPPZ limit shall be the Drip Line of each tree or as close as possible to the Drip Line, and as shown on the plans and details. The Drip Line is defined as the limit of tree canopy.

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

to traverse the area to access adjacent areas of the project or use the area for lunch or any other work breaks.

Method of work

Fence shall be installed prior to any construction work or staging activities and shall be installed and maintained in a vertical and effective position at all times.

Fence shall be repositioned where and as necessary for optimum effectiveness. Repositioning shall be incidental to this item. Fence shall not be moved without prior approval by the Engineer.

The TPPZ shall be protected at all times from compaction of the soil; damage of any kind to trunks, bark, branches, leaves, and roots of all plants; and contamination of the soil with construction materials, debris, silt, fuels, oils, and any chemicals substance. In the event of spills, compaction or damage, the Contractor shall take corrective action immediately using methods approved by the Engineer in coordination with an Arborist.

After construction activities are completed, or when directed by the Engineer, fence, stakes, and other materials shall be removed and disposed off-site by the Contractor.

Required Work within the TPPZ

In the event that grading, trenching, utility work, or storage is unavoidable within the TPPZ, the Engineer shall be notified. Measures may be required for tree protection and preservations, including air spading, the use of six inch depth of wood chips or approved matting for root protection, pruning of branches, and/or trunk protection. These protection measures will be paid under applicable items.

Landscaping work specified within the TPPZ shall be accomplished by hand tools. Where hand work is not feasible, with permission of the Engineer, work shall be conducted with the smallest mechanized equipment necessary.

Tree and Plant Damages or Loss

If the TPPZ is intruded upon, at the discretion of the Engineer, the Contractor will be required to provide a more durable barrier (e.g., Jersey Barriers) to secure the area. Cost of furnishing and installing additional or more durable barrier shall be borne by the Contractor.

If the Contractor intrudes into a TPPZ without approval, soil will be considered compacted and tree root damage will be assumed. Action will be taken as specified below.

In the event that trees designated for protection under this item are damaged, including root damage from unapproved trespassing onto the root zone, the Contractor shall, at his own expense obtain a Certified Arborist.

If, based on the recommendations of the Arborist, the Engineer determines that damages can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, and/or watering, the damage will be repaired as soon as possible within the appropriate season for such work and according to industry standards.

If the Engineer determines that damages are irreparable, the Contractor shall pay for the damages in the amount of \$500.00 per diameter inch at breast height (DBH) per tree.

Additionally, if the Engineer determines that the damages are such that the tree is sufficiently compromised as to pose a future safety hazard, the tree shall be removed. Tree removal will include clean up of all wood parts, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil.

Shrubs will be replaced with a plant of similar species and equal size or the largest size plants reasonably available. The Engineer will approve the size and quality of the replacement plant. Replacement will include a minimum of one year of watering and care.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.521 will be measured and paid for payment by the foot of Tree and Plant Protection Fence, complete in place. This includes all labor, materials, equipment, maintenance, final removal and disposal of the protective materials, damages repair, and all incidental cost required to complete the work.

Payment of 40 percent of value will be made upon installation of Fence. The remaining 60 percent will be made when protection materials have been removed and disposed off-site.

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

In the event of irreparable damage due to lack of proper protective measures being take there will be no compensation in addition to the \$500.00 per diameter inch penalty.

<u>ITEM 201.</u>	<u>CATCH BASIN</u>	<u>EACH</u>
<u>ITEM 202.</u>	<u>MANHOLE</u>	<u>EACH</u>
<u>ITEM 204.</u>	<u>GUTTER INLET</u>	<u>EACH</u>

The work under these items shall consist of furnishing and installing catch basins, gutter inlets, and manholes at the locations shown in the Plans and shall conform to the relevant provisions of Section 201 of the Standard Specifications and the following:

Contractor shall submit shop drawings of proposed catch basins, gutter inlets & manholes to the Engineer for approval, prior to materials arriving at the site.

All proposed catch basins shall be constructed with a minimum 4-foot sump.

When utility conflicts are encountered alternate offset cones or flat top slabs designed to meet or exceed H-20 loading shall be used in place of the standard cone section at no additional cost. Cutting into the cone sections will not be allowed.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 201, Item 202 and Item 204 will be paid for at the Contract unit price per each, complete in place, regardless of depth. Contract unit price per each, shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for excavation, backfill, crushed stone, concrete collars, geotextile filter fabric but all costs in connection therewith shall be included in the unit prices bid per each. Frames and grates/covers will be paid for under Item 222.3.

ITEM 205.
ITEM 205.1

LEACHING BASIN
INFILTRATION CHAMBER

EACH
EACH

The work under these items shall consist of furnishing and installing subsurface leaching basins & infiltration chambers at the locations shown in the Plans and shall conform to the relevant provisions of Section 201 of the Standard Specifications and the following:

Contractor shall submit shop drawings of proposed leaching basins, infiltration chambers and filter fabric to the Engineer for approval, prior to materials arriving at the site.

Contractor shall install ¼” mesh galvanized wire screen, 23 gauge, completely around each leaching basin prior to backfilling with crushed stone to prevent crushed stone from entering leaching basins.

Contractor shall use filter fabric in leaching basins and infiltration chamber installations between crushed stone and granular soils. Filter fabric shall meet the requirements of Table III – Type III

Geotextile Fabric for Filtration/Drainage of Section M9.50.0 of the MassDOT Standard Specifications.

Filter fabric shall be furnished and installed at leaching basins and infiltration chambers, as shown on the construction plans and details. Fabric shall be stored and installed in accordance with manufacturer recommendations. Areas shall be smooth and free from rocks and other obstructions that may damage the fabric. Fabric shall be secured in place per manufacturer recommendations.

The Contractor shall furnish the Subsurface Infiltration Systems with the crushed stone storage dimensions as depicted in the Construction Detail sheets. Also included under these items are geotextile fabric, system chamber interconnections, PVC pipe for inspection ports, surface caps and concrete collars, excavation, backfill and all other incidentals required to construct these systems.

Subsurface Infiltration Systems shall be open-bottomed, arch shaped high density polyethylene or polypropylene chamber systems as manufactured by Stormtech, LLC, Wethersfield, CT; Cultec, Inc., Brookfield, CT; or HydroLogic Solutions, Inc., Occoquan, VA. Systems shall be sized to match the dimensions of the Stormtech SC-740 chamber. Cultet, Inc or HydroLogic Solutions, Inc chambers shall be of equivalent size to the Stormtech SC-740 chamber.

All subsurface infiltration systems installed for this project shall be from the same manufacturer. System units shall be designed to withstand HS-20 loads when installed in accordance with manufacturer’s instructions. Chambers shall incorporate a raised integral cap at the top of the arch in the center of each unit to be used as an optional inspection port or clean-out.

The Contractor shall submit shop drawings consisting of the storage capacity calculations, plans and details for each system. The Contractor shall not order the systems until the shop drawings have been approved. The shop drawings shall show each individual system layout as meeting storage and horizontal/vertical constraints and is suitable for installation. Non-conforming designs shall be rejected

and the Contractor shall resubmit revised shop drawings to achieve conformance with the Contract Documents.

The Contractor shall install each subsurface infiltration system at the location shown on the Plans in accordance with the approved shop drawings and manufacturer's written instructions.

CONSTRUCTION

For the long-term function of the leaching and infiltration systems, care shall be taken in these areas during construction in accordance with the following:

1. The systems shall not be used as a construction sediment basin without prior approval of the Engineer.
2. Stormwater runoff from exposed surfaces shall be directed away from the systems.
3. Construction equipment, vehicular traffic, parking of vehicles, and stockpiling of construction materials shall be outside of the system area.
4. Excavation for construction of the systems shall ensure that the soil at the bottom of the excavation is not compacted or smeared.
5. The perimeter of the systems shall be staked and flagged to prevent the use of the area for activities that might damage the infiltration ability of the system.

CLEANING AND REPAIR

After the areas contributing to the leaching and infiltration systems have been stabilized, the Contractor shall clean the system of all debris and obstructions. The systems shall be thoroughly flushed clean and the Contractor shall furnish all necessary hose, pumps, pipe and other equipment that may be required for this purpose. No debris shall be flushed into the systems or existing drains, storm recharge chambers, storm drains and/or streams.

FINAL INSPECTION

Upon completion of the work, and before final acceptance by the Engineer, the entire drainage system shall be subjected to a final inspection in the presence of the Engineer. The work shall not be considered as complete until all requirements for line, grade, cleanliness, and other requirements have been met.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 205.1 will be measured and paid for at the Contract unit price per each, complete in place. Item 205. will be paid for at the Contract unit price per each, complete in place, regardless of depth. The contract unit price per each for 205. and 205.1 shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for excavation, backfill, crushed stone, PVC pipe for inspection ports, inspection port caps, frames and covers, concrete collars, geotextile filter fabric but all costs in connection therewith shall be included in the unit price bid per each.

<u>ITEM 222.3</u>	<u>FRAME AND GRATE (OR COVER)</u> <u>MUNICIPAL STANDARD</u>	<u>EACH</u>
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The work performed under these items shall conform to the relevant provisions of Section 201 of the Standard Specifications and the following:

The work under Item 222.3 and shall also include the furnishing and placement of these frames and grates to the line and grade as shown on the plans, or as directed by the Engineer.

Frame and grates (or covers) shall be as approved by the DPW. Frames and grates (or covers) shall be H20 rated cast iron.

Shop Drawings for frame and grates or covers must be submitted to the Town for approval prior to ordering the casting.

Casting frames shall be set in a full mortar bed with bricks, a maximum of 8 inches thick. All cast shall be set in full concrete collar.

Item 222.3 Frame and Grate (Or Cover) Municipal Standard shall be paid for at the contract unit price bid per each and will include all labor, materials, tools, equipment and work necessary for the completion of the item.

<u>ITEM 302.06</u>	<u>6 INCH DUCTILE IRON WATER PIPE</u>	<u>FOOT</u>
<u>ITEM 309.</u>	<u>DUCTILE IRON FITTINGS FOR WATER PIPE</u>	<u>POUND</u>
<u>ITEM 350.06</u>	<u>6 INCH GATE AND GATE BOX</u>	<u>EACH</u>
<u>ITEM 376.</u>	<u>HYDRANT</u>	<u>EACH</u>
<u>ITEM 376.5</u>	<u>HYDRANT - ADJUSTED</u>	<u>EACH</u>
<u>ITEM 376.4</u>	<u>HYDRANT – REMOVED AND DISCARDED</u>	<u>EACH</u>

The work under these items shall conform to the relevant provisions of Section 300 of the Standard Specifications and the following:

The work shall include the furnishing and installation of all materials required to (1) Relocate the existing water pipes at any locations where the existing pipes are found to conflict with proposed drainage or utility construction; (2) to install new hydrants; (3) vertically adjust existing hydrants and (4) to construct water system alterations as shown on the plans.

Approval of Materials

The Contractor shall submit the names of the material suppliers, shop drawings and certificates of compliance to the Engineer for approval prior to ordering any materials.

Pipe and Fittings

6-inch pipe for hydrant relocations throughout the project limits shall be ductile iron, Class 52, conforming to ANSI A21.50/AWWA C150 and ANSI A21.51/AWWA C151.

Fittings for all pipe shall be ductile iron, Class 250 minimum, conforming to applicable ANSI, NEWWA, and AWWA specifications.

Ductile iron pipe and fittings shall have a cement mortar lining and bituminous seal coat on the inside and a coal tar enamel coat on the outside in accordance with ANSI A21.4 (AWWA C104) and ANSI A21.6 (AWWA C106), as amended, except that the cement mortar lining shall be 1/8-inch in thickness for pipe 2 inches to 12 inches in diameter. Bituminous seal coat shall be a product acceptable to the National Sanitation Foundation (NSF) for use in potable water and shall be so listed in the most current NSF summary of approved products under ANSI/NSF Standards 61.

Pipe shall be either the rubber-ring type push-on joint or standard restrained mechanical joint pipe, to be determined by the Town during the shop drawing review process.

Rubber gaskets for push-on and mechanical joints shall conform to ANSI A21.11/AWWA C111.

Pipe shall be supplied in lengths not exceeding 20 feet. Each pipe and fitting shall have markings in accordance with ANSI A21.10/AWWA C110, including manufacturer's identification, country material was made in, pressure rating, nominal diameter and degrees or fraction of circle (for bends).

Pipe and Fittings Installation

The Contractor shall make all necessary arrangements with the Town of Brewster Water and Fire Departments for the necessary shutdowns of service.

The Brewster Water Department may establish the time of shutdown to be within the normal daily low demand period.

Care shall be taken in loading, transporting, and unloading to prevent injury to the pipes, fittings or coatings. Pipe and fittings shall not be dropped. All pipe or fittings shall be examined before laying and no piece shall be installed which is found to be defective. Any damage to the pipe coatings shall be repaired as directed by the Engineer. Any pipe found to be defective, before or after laying, shall be satisfactorily removed and replaced with sound pipe at no additional cost to the Owner.

All pipe and fittings shall be installed in conformance with AWWA Standard Specifications C600 & C900, except as otherwise provided herein. All pipe and fittings shall be sound and clean before laying and shall be laid on a shaped bedding providing uniform, firm support over the entire length of each

section barrel. **BLOCKING WILL NOT BE PERMITTED.** The select bedding material shall be placed and tamped along the sides of the pipe to complete the bedding.

Pipe shall be laid with good alignment and at a uniform 5-foot depth to top of pipe below proposed grade except where extra depth is required to clear other utilities and to connect to existing pipes, valves or fittings. Joint deflection shall not exceed that recommended by the manufacturer. Additional fittings shall be furnished and installed as required to cross existing utilities. Solid sleeves shall be used only where approved by the Engineer.

When pipe laying is stopped for any length of time, including short periods, the open ends of the pipe and fittings shall be closed with a watertight plug or cap as approved by the Engineer.

Necessary pipe cutting shall be accomplished by power saw and shall leave a smooth cut at right angles to the axis of the pipe. Cut ends of pipe to be used with a push-on bell shall be beveled to conform to the manufactured spigot end. Cement lining shall be undamaged.

Push-on joints shall be made in strict accordance with the manufacturer's instructions. The rubber gasket shall be inserted in the groove of the bell end of the pipe, the joint surfaces cleaned and lubricated. The plain end of the pipe to be entered shall then be inserted in alignment with the bell of the pipe to which it is to be joined and pushed home with a jack or by other means. After jointing the pipe, a metal feeler shall be used to make certain that the rubber gasket is correctly located.

Mechanical joints shall be installed in accordance with the "Notes of Method of Installation" of ANSI A21.11 and the instructions of the manufacturer. The Contractor shall thoroughly clean the joint surfaces and rubber gasket with soapy water before tightening the bolts. Bolts shall be tight to the specified torques. Extension wrenches or pipe over handle or ordinary ratchet wrench shall not be used to secure greater leverage.

Valves

Gate valves shall be resilient wedge valves conforming to AWWA C509 and shall be rated for 200 psi minimum working pressure and shall be shell tested at a minimum of 400 psi. Valves shall be Underwriters Laboratory (UL) and Factory Mutual (FM) approved. Stuffing boxes shall be of the O-ring type. The operating nut shall be standard AWWA 2-inch square. Buried valves shall have mechanical joint ends conforming to AWWA C111. Exposed valves in vaults shall have flanged joints ends conforming to AWWA C111 unless shown as mechanical joints on plans.

All valves shall open left (counter clockwise) as required by the Brewster Water Department.

All valves shall be of the iron body type, bronze mounted, double disc parallel seal, non-rising stem type. All ferrous parts of the valves, except finished or bearing surfaces, shall be given two coats of asphalt varnish.

After the valves are assembled and tested, a third coat shall be applied on the exterior.

Valve shall be as manufactured by the Mueller Company, Decatur, Illinois, Darling Valve Co., Williamsport, Penn, or approved equal.

Valve Boxes

Valve boxes shall be two-section, cast iron, heavy pattern adjustable type, with cast iron cover. The upper sections shall have a bottom flange of sufficient bearing area to prevent settling. The bottom section shall enclose the valve stuffing box and operating nut. Boxes shall be of lengths adapted to 5-foot pipe cover or more and have a minimum of 6 inches of overlap in the most extended position. Covers shall have the word "WATER" cast in the top and shall be held in place with bronze bolts.

Couplings

Couplings shall be used to (1) repair split pipe or replace sections of damaged pipe; (2) install or cut-in hydrants or valves into a water main; (3) couple different pipe types; and (4) correct misaligned pipe ends. Couplings shall have a pressure rating of 250 psi or greater. Materials shall be manufactured in accordance with the following:

(1) Center and end rings: ASTM-A536

(2) Gaskets: ASTM D2000

(3) Bolts & Hex Nuts: AWWA C111

Couplings shall be epoxy-coated.

Pipe Insulation

Pipe insulation shall be installed when water main cannot be installed with at least 5 feet of cover. Pipe insulation shall be installed with waterproof jacket in accordance with MHD M11.0 and MHD Section 301.60. Insulation thickness shall be directed by the Engineer.

Hydrants

Hydrants shall be Mueller Centurion A423 or specific model as requested by the Brewster Water Department and shall conform to the "Standard" Specifications for Fire Hydrants for Ordinary Water Works Service," AWWA C502 and the following:

Hydrants shall be according to manufacturer's standard pattern of standard size and shall have one 4-1/2-inch pumper nozzle and two 2-1/2-inch hose nozzles.

Hydrant inlet connections shall have mechanical joints for 6-inch ductile iron pipes.

Hydrant valve opening shall have an area at least equal to the area of a 5-1/4-inch diameter circle and be obstructed only by the valve rod. Each hydrant shall be able to deliver 500 gallons per minute through its two 2-1/2-inch hose nozzles when opened together with a loss of not more than 2 psi in the hydrant.

Each hydrant shall be designed for installation in a trench that will provide 5 feet of cover. Hydrant extension shall be as manufactured by the company furnishing the hydrants and of a style appropriate for the hydrants as furnished.

Hydrants shall be hydrostatically tested as specified in AWWA C502.

All nozzle threads shall be American National Standard.

Hydrant operating nut shall be AWWA Standard pentagonal type measuring 2-1/2 inches point to flat.

Hydrants shall be equipped with "O" ring packing.

Each nozzle cap shall be provided with a Buna N rubber washer.

Hydrants shall be so arranged that the direction of outlets may be turned 90 degrees without interference with the drip mechanism and without the mechanism obstructing the discharge from any outlet.

A bronze or rustproof steel nut and check nut shall be provided to hold the main hydrant valve on its stem.

Hydrants shall open by turning an operating nut left (counterclockwise) as required by the Brewster Water Department and must be marked with an arrow and word "OPEN" to indicate the direction to turn stem to open hydrant.

All iron work to be set below ground shall be thoroughly cleaned and painted with two coats of asphalt varnish specified in AWWA C502, and iron work to be exposed above ground shall be shop painted with two coats of paint of quality and color conforming to the present Town standard.

Each hydrant shall be designed such that the hydrant valve closes with line pressure preventing loss of water and consequent flooding in the event of traffic damage.

Each hydrant shall be furnished with a steel chair holder, double steel hose cap chain, steel pumper cap chair and any other hooks or appurtenances required for proper use.

Hydrant Installation

Hydrants shall be set at the locations shown on the drawings, or as directed by the Engineer, and bedded on a firm foundation. A drainage pit 2 feet 6 inches in diameter shall be back-filled with crushed stone in conformance to M2.01.1 and satisfactorily compacted. Additional stone shall be brought up and around 6 inches over the drain ports. Each hydrant shall be set in true vertical alignment and properly braced. A concrete thrust block shall be placed between the back of the hydrant inlet and undisturbed soil at the end of the trench. Felt roofing paper shall be placed around hydrant elbow before placing concrete. Care shall be taken to insure that concrete does not plug the drain ports. Hydrant paint shall be touched up as required after installation.

Thrust Restraints

Thrust restraints shall be installed at all tees, bends, plugs, caps, tapping sleeves and other locations as directed by the Engineer in accordance with the dimensions and details shown on the plans.

Whenever water pipes can be placed against undisturbed earth, concrete thrust blocks may be installed. The back of thrust blocks shall be placed against undisturbed earth and the sides shall be formed. Felt roofing paper shall be placed to protect pipe joints. Concrete shall not be placed over bolts or nuts, or in a manner which prevents the removal of joints.

Concrete shall have a minimum strength Class of 3,000 psi.

Whenever water pipes are installed within fill sections, the Contractor shall use mechanical restrained joint pipe and wedge-type mechanical joint restraints rated for 350 psi.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

All couplings, pipe insulation necessary, and any miscellaneous parts required to complete the work shall be inclusive to the prices bid under items 302.06, 309, 350.06, 376 and 376.5.

ITEM 381.3
ITEM 384.2

SERVICE BOX ADJUSTED
CURB STOP ADJUSTED

EACH
EACH

Work under these Items shall conform to the relevant provisions of Section 300, the Town of Brewster Water Department, and the following:

The work under this Item shall include the furnishing of all labor, equipment and materials required to adjust existing curb stops and service boxes as shown on the Plans or as directed.

Service boxes adjusted shall be measured and paid for at the contract unit bid price each for Item 381.3. Curb stops adjusted shall be measured and paid for at the contract unit bid price each for Item 384.2.

ITEM 390.

REMOVE AND RESET IRRIGATION

LUMP SUM

The work under this item shall conform to the relevant provisions of Section 300 of the Standard Specifications and the following:

This work shall consist of the removal and resetting of existing irrigation line and any other related hardware for the existing irrigation system as required at #139 Millstone Road, #861 Millstone Road, #1033 Millstone Road or as directed by the Engineer. Existing tracer wire will be reset above the irrigation line in the same approximate location of the irrigation line after disturbance due to construction.

If any irrigation system elements are damaged during construction, the Contractor shall replace or repair the elements at no cost to the Town.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

The work under Item 348. Remove And Reset Irrigation Line will be measured and paid for at the Contract price lump sum, which price shall include all labor, material, equipment and incidental costs required to complete the work.

ITEM 470.2

HOT MIX ASPHALT BERM,
TYPE A - MODIFIED

FOOT

The work under this item shall conform to the relevant provisions of Section 470 of the Standard Specifications and the following:

Hot mix asphalt berm, type A - modified, shall be constructed by means of an approved extrusion machine in conformance with the dimensions and at the locations shown on the plans.

Prior to placing the HMA berm, the surface shall be swept clean and RS-1 asphalt emulsion shall be applied to the surface.

Hot mix asphalt berm, type A - modified will be measured for payment by the foot, complete in place, along the gutter line.

Hot mix asphalt berm, type A—modified, will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

<u>ITEM 504.</u>	<u>GRANITE CURB TYPE VA4 - STRAIGHT</u>	<u>FOOT</u>
<u>ITEM 504.1</u>	<u>GRANITE CURB TYPE VA4 - CURVED</u>	<u>FOOT</u>
<u>ITEM 509.</u>	<u>GRANITE TRANSITION CURB FOR</u>	<u>FOOT</u>
	<u>PEDESTRIAN CURB RAMPS - STRAIGHT</u>	
<u>ITEM 509.1</u>	<u>GRANITE TRANSITION CURB FOR</u>	<u>FOOT</u>
	<u>PEDESTRIAN CURB RAMPS - CURVED</u>	

The work under these items shall conform to the relevant provisions of Section 501 of the Standard Specifications and the following:

All proposed granite curbing shall be provided with a buzzed chamfer edge. The Contractor shall provide a shop drawing of the curbing for review and approval and shall provide a sample piece of straight curbing for the Town to review with the shop drawing.

<u>ITEM 590.</u>	<u>CURB REMOVED AND STACKED</u>	<u>FOOT</u>
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The work under this item shall conform to the relevant provisions of Section 501 of the Standard Specifications and the following:

Existing granite curbing / curb corners to be removed and not needed to be reset, shall be removed and stacked at the Town of Brewster Department of Public Works; 201 Run Hill Road, Brewster, MA 02631, unless, in the judgment of the Engineer, they are unsuitable for salvage. Unsuitable granite curbing shall become the property of the Contractor and shall be disposed of off the site at no additional cost to the Town.

Item 590. Curb Removed and Stacked will be measured and paid at the Contract unit price per foot, which shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for disposal, storage, transporting and handling of cubing to be removed, stacked and other incidental work, but all costs in connection therewith shall be included in the unit prices bid for this item.

<u>ITEM 656.1</u>	<u>8 FOOT WHITE VINYL FENCE</u>	<u>FOOT</u>
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The work under this item shall conform to the relevant provisions of Section 665 of the Standard Specifications and the following:

The work shall include the construction and installation of a 8 FOOT white vinyl fence. The vinyl fence shall be placed as shown on the Plans unless otherwise agreed to by the Property Owner and the Engineer.

The Property Owner shall be notified at least one (1) week prior to the removal of the existing fence and construction of the new fence.

Loam and seed at new post holes shall be carefully removed and replaced around the posts after backfilling. Loam and seed shall also be placed at existing post holes.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

8 foot white vinyl fence will be measured for payment, complete in place, by the foot along the top of the rail between posts.

8 foot white vinyl fence will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for excavation, backfill and necessary new materials, but all costs in connection therewith shall be included in the bid price per foot.

Loam will be paid for under Item 751.

Seed will be paid for under Item 765.

ITEM 670.

FENCE REMOVED AND RESET

FOOT

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

The work shall include the removal of existing abutting property fences and resetting of the fences along the proposed right-of-way lines or fence layout as directed by the Engineer.

The fence removal and resetting shall be accomplished before commencing any construction in the area and without delay between the removal and resetting operations.

Existing fence elements which, in the judgment of the Engineer, are unsuitable for reuse due to deterioration or due to damage caused by the Contractor's operations shall be replaced with new material of matching type and wood species.

Fence posts shall be installed plumb in excavated holes and the holes backfilled with suitable material and thoroughly compacted.

Lawn sod at new post holes shall be carefully removed and replaced around the posts after backfilling.

Reset fence shall be set at a uniform height matching the existing fences to remain and along the proposed road right-of-way lines, as shown on the plans and as directed by the Engineer. The fence shall be located with the face of rail on the proposed right-of-way lines and the posts on the abutting properties.

Wood fence removed and reset will be measured for payment complete in place by the foot along the top of the rail between existing posts to remain at the ends of each run of relocated fence.

Wood fence removed and reset will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

No separate payment will be made for excavation, backfill and necessary new materials, but all costs in connection therewith shall be included in the foot price bid.

ITEM 691. BALANCE STONE WALL REMOVED AND REBUILT FOOT

The work under this item shall conform to the relevant provisions of Section 690 of the Standard Specifications and the following:

The work shall include the removing and rebuilding of a dry stacked landscape stone wall as shown on the plans and as directed by the Engineer.

Item 691 will be measured for payment by the foot, complete in place.

Item 691 will be paid for at the Contract unit price bid per foot, which price shall include all labor, material, equipment and incidental costs required to complete the work.

No separate payment will be made for excavation, removal and handling of existing stones, gravel borrow base and gravel borrow backfill, but all costs in connection therewith shall be included in the unit price bid.

ITEM 697.1 SILT SACK EACH

Work under this item shall conform to the relevant provisions of Sections 227 and 670 of the Standard Specifications and the following:

The work under this item includes the furnishing, installation, maintenance and removal of a reusable fabric sack to be installed in drainage structures for the protection of wetlands and other resource areas and the prevention of silt and sediment from the construction site from entering the storm water collection system. Devices shall be ACF Environmental (800)-448-3636; Reed & Graham, Inc. Geosynthetics (888)-381-0800; The BMP Store (800)-644-9223; or approved equal.

Construction

Silt sacks shall be installed in retained existing and proposed catch basins and drop inlets within the project limits and as required by the Resident Engineer.

The silt sack shall be as manufactured to fit the opening of the drainage structure under regular flow conditions and shall be mounted under the grate. The insert shall be secured from the surface such that the grate can be removed without the insert discharging into the structure. The filter material shall be installed and maintained in accordance with the manufacturer's written literature and as directed by the Engineer.

Silt sacks shall remain in place until the placement of the pavement overlay or top course and the graded areas have become permanently stabilized by vegetative growth. All materials used for the filter fabric will become the property of the Contractor and shall be removed from the site.

The Contractor shall inspect the condition of silt sacks after each rainstorm and during major rain events. Silt sacks shall be cleaned periodically to remove and disposed of accumulated debris as required. Silt sacks, which become damaged during construction operations, shall be repaired or replaced immediately at no additional cost.

When emptying the silt sack, the contractor shall take all due care to prevent sediment from entering the structure. Any silt or other debris found in the drainage system at the end of construction shall be removed at the Contractors expense. The silt and sediment from the silt sack shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site and used in construction.

All curb openings shall be blocked to prevent stormwater from bypassing the device.

All debris accumulated in silt sacks shall be handled and disposed of as specified in Section 227 of the Standard Specifications

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 697. 1 Silt Sack will be measured and paid at the Contract unit price per each, complete in place, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for removal and disposal of the sediment from the insert, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 702.1

SHELL DRIVEWAY

CUBIC YARD

The work under this item shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following:

The work shall include the furnishing and placing of crushed shells upon a gravel base course as shown on the Drawings and as directed by the Engineer.

Gravel Borrow shall conform to Section M1.03.0 Type C.

Place, grade and compact the gravel base to a thickness of 4". Place, grade and compact the crushed shells to produce a minimum 3" thickness with a firm, uniform surface at the lines and grades shown on the plans and as directed by the Engineer.

Item 702.1 Shell Driveway will be measured for payment by the cubic yard, complete in place.

Item 702.1 Shell Driveway will be paid for at the Contract unit price bid per cubic yard, which price shall include all labor, material, equipment and incidental costs required to complete the work.

Gravel borrow will be paid for under Item 151.

ITEM 702.2

COBBLESTONE DRIVEWAY

SQUARE YARD

The work under this item shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following:

The work under this item includes furnishing and placing cobblestone pavement and a new setting bed at locations indicated on the plans or as directed by the Engineer.

Cobblestones blocks shall be granite, basically light grey in color, free from seams and other structural imperfections or flaws which would impair its structural integrity, and of a smooth splitting appearance. Natural color variations characteristic of the deposit from which the paving blocks are obtained will be permitted. Rubble pavement blocks shall be not less than 4 in. nor more than 12 in. in length, not less than 3.5 in. nor more than 4.5 in. in width and depth. Cobblestones shall be rectangular in shape with one good face. Opposite faces of cobblestones shall be approximately parallel and adjoining faces shall be approximately at right angles to each other. Blocks shall be dressed so that they may be laid with 1 in. to 1.5 in. joints.

Gravel Borrow shall conform to Section M1.03.0 Type C. Stone Dust shall conform to the following gradation:

<u>Sieve No.</u>	<u>Percent Passing</u>
No. 4	100
No. 50	90
No. 200	65

The proposed driveway area shall be excavated to proposed subgrade and fine graded and compacted under Item 170.

The gravel borrow and a 4-inch minimum thickness bed of stone dust shall be placed and compacted. The stone dust bed shall be excavated manually to bed the larger stones and additional stone dust material placed around the smaller stones as they are laid.

The cobblestones shall be set with the long axis of each stone vertical to the roadway surface and with each cobblestone touching another cobblestone.

The cobblestones shall be tamped with a mechanical plate compactor or other method approved by the Engineer.

After a sufficient area of pavement has been laid, the pavement surface shall be tested with a 10-foot straight edge laid parallel with the centerline and any variations exceeding 1/2-inch shall be corrected and brought to proper grade.

The cobblestones shall be swept with stone dust. The pavement surface shall be vibrated to insure compaction between the joints. Additional stone dust shall be uniformly distributed as necessary to fill all of the voids. The process shall be repeated for a maximum of five days until all joints are full.

Item 702.2 Cobblestone Driveway will be measured for payment by the square yard complete in place.

Item 702.2 Cobblestone Driveway will be paid for at the contract unit price per square yard, which price shall include all labor, material, equip-ment and incidental costs required to complete the work.

No separate payment will be made for excavation or stone dust, but all costs in connection therewith shall be included in the unit price bid.

Gravel borrow will be paid for under Item 151.

ITEM 706.9 COBBLESTONES REMOVED & STACKED SQUARE YARD

The work under this item shall conform to the relevant provisions of Section 701 of the Standard Specifications and the following:

This work shall consist of removing existing cobblestones and stacking them as directed by the Engineer.

Construction Methods

A trench of sufficient width and depth shall be excavated so that the present cobblestones can be removed without damage. Existing pavements shall be sawcut in accordance with the requirements of Subsection 482: Sawcutting as shown on the plans and as required by the Engineer.

Stacking

The Contractor shall accept and hold entire responsibility for the removal, handling, stacking at a location convenient for removal by owner, and protection of all cobblestones until their final removal as designated in accordance with the following:

Any cobblestones damaged through lack of protection or carelessness by the Contractor shall be replaced at their expense. The Contractor's responsibility will cease upon final acceptance of the work or 60 days from the time a certified notice, with copy to the Engineer, is sent by Contractor to owner of material that all material is available for removal.

Method of Measurement and Basis of Payment

The quantity of cobblestones measured will be the area actually removed and stacked measured in square yards.

Removing and stacking cobblestones will be paid for at the contract unit price per square yard.

ITEM 707.82 POST REMOVED AND DISCARDED EACH

The work under this item shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following:

RAM: 8 GB
 Hard disk: 500GB, 7200RPM
 Monitor: 24" LCD with Built-in speakers, 1600 x 1050 at 24 bit true color
 DVD-RW/CD-RW: Combo drive including DVD ± RW
 Network Adapter: 10/100 Mbit/s
 USB Ports: 6 USB 3.0 ports
 Mouse: Optical mouse with scroll, MS-Mouse compliant
 OS: Windows 8, Professional with all security updates
 Web Browser: Internet Explorer with all security updates
 Applications: Latest MS Office Professional with all security updates
 Latest Adobe Acrobat Professional with all security updates
 Latest Autodesk, AutoCAD LT
 Antivirus software with all current security updates maintained through the life of the contract.
 Flash drives: 2 - 32GB USB 3.0
 Internet access: High speed internet access with router.

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

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

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

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

A Digital Camera shall meet the following minimum criteria or better:

Resolution:	14 Megapixel
Optical Zoom:	5x
Waterproof:	to a depth of 33ft (10m)
Shockproof:	up to 6.6ft (2m)
Freezeproof:	14°F (-10°C)
Memory:	8 GB SD Card
USB Port:	USB 2.0 with PC cable
Screen:	2.7+ inch LCD with scratch-resistance and anti-reflectance
Battery Power:	2 rechargeable batteries and a battery charger
Carrying Case:	Rain-proof with shoulder strap

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

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

ITEM 756. NPDES STORM WATER POLLUTION PREVENTION PLAN LUMP SUM

This Item addresses the preparation and implementation of a Storm Water Pollution Prevention Plan required by the National Pollutant Discharge Elimination System (NPDES) and applicable Construction General Permit (CGP) issued by the U.S. Environmental Protection Agency (EPA).

Pursuant to the Federal Clean Water Act, construction activities which disturb one acre or more are required to apply to the EPA for coverage under the NPDES General Permit for Storm Water Discharges from Construction Activities. On February 16, 2012 (77 FR 12286), EPA issued the final NPDES Construction General Permit (CGP) for construction activity. The Contractor shall be fully responsible for compliance with the CGP. Should a fine or penalty be assessed against it, or the Town, as a result of a local, state, or federal enforcement action due to non-compliance with the CGP, the Contractor shall take full responsibility.

The NPDES CGP requires the submission of a Notice of Intent (NOI) to the EPA prior to the start of construction (defined as any activity which disturbs land, including clearing and grubbing). There is a fourteen (14) day review period commencing from the date on which EPA enters the Notice into their database. The Contractor is advised that, based on the review of the NOI, EPA may require additional information, including but not limited to, the submission of the Storm Water Pollution Prevention Plan (SWPPP) for review. Work may not commence on the project until final authorization has been granted by EPA. Any additional time required by EPA for review of submittals will not constitute a basis for claim of delay.

In addition, if the project discharges to an Outstanding Resource Water, vernal pool, or is within a coastal ACEC as identified by the Massachusetts Department of Environmental Protection (DEP), a separate notification to DEP is required. DEP may also require submission of the Storm Water Pollution Prevention

Plan for review and approval. Filing fees associated with the notification to DEP and, if required, the SWPPP filing to DEP shall be paid by the Contractor.

The CGP also requires the preparation and implementation of a SWPPP in accordance with the aforementioned statutes and regulations. The Plan will include the CGP conditions and detailed descriptions of controls of erosion and sedimentation to be implemented during construction. It is the responsibility of the Contractor to prepare the SWPPP to meet the requirements of the most recently issued CGP. The Contractor shall submit the Plan to the Engineer for approval at least four (4) weeks prior to any site activities. It is the responsibility of the Contractor to comply with the CGP conditions and the conditions of any state Wetlands Protection Act Order, Water Quality Certification, Corps of Engineers Section 404 Permit and other environmental permits applicable to the project and to include in the SWPPP the methods and means necessary to comply with applicable conditions of said permits (reference to Part 9.1.1 of the 2012 CGP).

It is the responsibility of the Contractor to complete the SWPPP in accordance with the EPA CGP, provide all information required, and obtain any and all certifications as required by the CGP. Any amendments to the SWPPP required by site conditions, schedule changes, revised work, construction methodologies, and the like are the responsibility of the Contractor. Amendments will require the approval of the Engineer prior to implementation.

Included in the CGP conditions is the requirement for inspection of all erosion controls and site conditions on a weekly basis as well as after each incidence of rainfall exceeding 0.25 inches in twenty-four hours. For multi-day storms, EPA requires that an inspection must be performed during or after the first day of the event and after the end of the event. The CGP requires that inspections be performed by a qualified individual. The Town requires proof of completion of a 4 hour minimum sedimentation and erosion control training class current to the latest CGP. This individual can be, but not limited to, someone that is either a certified inspector, certified professional, or certified storm water inspector. The documentation shall be included as an appendix in the SWPPP. The Engineer must approve the contractor's inspector. This individual shall be on-site during construction to perform these inspections. In addition, if the Engineer determines at any time that the inspector's performance is inadequate, the Contractor shall provide an alternate inspector. Written weekly inspection forms, storm event inspection forms, and Monthly Summary Reports must be completed and provided to the Engineer. Monthly Summary Reports must include a summary of construction activities undertaken during the reporting period, general site conditions, erosion control maintenance and corrective actions taken, the anticipated schedule of construction activities for the next reporting period, any SWPPP amendments, and representative photographs.

The Contractor is responsible for preparation of the Plan, all SWPPP certifications, inspections, reports and any and all corrective actions necessary to comply with the provisions of the CGP. Work associated with performance of inspections is not included under this Item. The Standard Specifications require adequate erosion control for the duration of the Contract. All Control measures must be properly selected, installed, and maintained in accordance with manufacturer

specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately or is no longer adequate, it is the responsibility of the Contractor to replace or modify the control for site conditions at no additional cost to the Department. Contractor must maintain all control measures and other protective measures in effective operating condition and shall consider replacement of erosion controls for each construction season.

This Item addresses acceptable completion of the SWPPP, any revisions/amendments required during construction, and preparation of monthly reports. In addition, any erosion controls beyond those specified in bid items elsewhere in this contract which are selected by the Contractor to facilitate and/or address the Contractor's schedule, methods and prosecution of the work shall be considered incidental to this item.

The Contractor is advised The CGP provides specific requirements for temporary and final stabilization. This shall be incorporated into the project schedule. The permit defines specific deadline requirements for Initial Stabilization ("immediately", i.e., no later than the end of the next work day following the day when earth-disturbing activities have temporarily or permanently ceased) and for Complete Stabilization Activities (no later than 14 calendar days after the initiation of stabilization). Stabilization criteria for vegetative and non-vegetative measures are provided in the CGP.

The CGP requires the submission of a Notice of Termination (NOT) from all operators when final stabilization has been achieved, as well as removal and proper disposal of all construction materials, waste and waste handling devices, removal of all equipment and construction vehicles, removal of all temporary stormwater controls, etc. . Approval of final stabilization by the Engineer and confirmation of submission of the NOT will be required prior to submission of the Resident Engineer's Final Estimate. The permittee is required to use EPA's electronic NOI system or "eNOI system" to prepare and submit NOT. The electronic NOT form can be found at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting> . If you are given approval by the EPA Regional Office to use a paper NOT, you must complete the form in Appendix K of the 2012 CGP.

Compensation

Payment for all work under this Item shall be made at the contract unit price, lump sum, which shall include all work detailed above, including Plan preparation, required revisions, revisions/addenda during construction, monthly reports and filing fees.

Payment of fifty (50) % of the contract price shall be made upon acceptance of the Stormwater Pollution Prevention plan. Payment of forty (40) % of the contract price shall be made in equal installments for implementation of the Stormwater Pollution Prevention plan. Payment of the final ten (10) % of the contract price shall be paid upon satisfactory submissions of a Notice of termination (NOT) when final stabilization has been achieved.

ITEM 767.121

SEDIMENT CONTROL BARRIER

FOOT

The work under this item shall conform to the relevant provisions of Subsections 670, 751 and 767 of the Standard Specifications and shall include the furnishing and placement of a sediment control barrier. Sediment control barrier shall be installed prior to disturbing upslope soil.

The purpose of the sediment control barrier is to slow runoff velocity and filter suspended sediments from storm water flow. Sediment barrier may be used to contain stockpile sediments, to break slope length, and to slow or prevent upgradient water or water off road surfaces from flowing into a work zone. Contractor shall be responsible for ensuring that barriers fulfill the intent of adequately controlling siltation and runoff.

Twelve-inch diameter (after installation) compost filter tubes with biodegradable natural fabric (i.e., cotton, jute, burlap) are intended to be the primary sedimentation control barrier. Photo-biodegradable fabric shall not be used.

For small areas of disturbance with minimal slope and slope length, the Engineer may approve the following sediment control methods:

- 9-inch compost filter tubes
- Straw bales which shall be trenched

No straw wattles may be used. Additional compost filter tubes (adding depth or height) shall be used at specific locations of concentrated flow such as at gully points, steep slopes, or identified failure points in the sediment capture line.

As required by the Order of Conditions permit, 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.

Sedimentation fence used in conjunction with compost filter will be measured and paid for separately under Standard Item 697, Sedimentation Fence.

<u>ITEM 772.039</u>	<u>ARBORVITAE – DEGROOTS SPIRE 5-6 FEET</u>	<u>EACH</u>
<u>ITEM 772.338</u>	<u>EASTERN RED CEDAR 6-7 FEET</u>	<u>EACH</u>
<u>ITEM 777.524</u>	<u>MAPLE – RED – ARMSTRONG 2-2.5 INCH CALIPER</u>	<u>EACH</u>
<u>ITEM 777.828</u>	<u>SASSAFRAS - 1.5-2-INCH</u>	<u>EACH</u>
<u>ITEM 785.633</u>	<u>INKBERRY / #3</u>	<u>EACH</u>
<u>ITEM 786.109</u>	<u>JUNIPER – COMMON / #2</u>	<u>EACH</u>
<u>ITEM 787.716</u>	<u>SPICEBUSH / 5-6 FEET</u>	<u>EACH</u>
<u>ITEM 789.333</u>	<u>BAYBERRY - NORTHERN / 2-3 FEET</u>	<u>EACH</u>
<u>ITEM 789.335</u>	<u>BAYBERRY - NORTHERN / 3-4 FEET B & B</u>	<u>EACH</u>
<u>ITEM 789.435</u>	<u>BEACH PLUM / 4-5 FEET B & B</u>	<u>EACH</u>
<u>ITEM 789.633</u>	<u>BLUEBERRY - Highbush / #1</u>	<u>EACH</u>
<u>ITEM 793.445</u>	<u>ROSE – VIRGINIA / 18-24 INCH</u>	<u>EACH</u>
<u>ITEM 794.333</u>	<u>SUMAC SHRUB – FRAGRANT / 18-24” SPD</u>	<u>EACH</u>
<u>ITEM 794.343</u>	<u>SUMAC SHRUB – STAGHORN / 2-2 FEET</u>	<u>EACH</u>
<u>ITEM 795.011</u>	<u>VIBURNUM – ARROWOOD / 24-30 INCH</u>	<u>EACH</u>
<u>ITEM 795.157</u>	<u>WINTERBERRY / #3</u>	<u>EACH</u>
<u>ITEM 796.231</u>	<u>SWITCH GRASS / 1 GAL</u>	<u>EACH</u>
<u>ITEM 796.341</u>	<u>NORTHERN SEA OATS / 1 GAL</u>	<u>EACH</u>
<u>ITEM 796.501</u>	<u>DAFFODIL / BULB</u>	<u>EACH</u>

The work under these items shall conform to the relevant provisions of the American Nursery Standards and Section 771 of the Standard Specifications and the following:

The work shall include furnishing and installing all plantings as shown on the Plans. The work shall include excavation of pits, furnishing and placing of planting mix, mulches, fertilizer and all other pertinent materials as described in Section 771 of the Standard Specification or as defined in the details.

The Contractor shall provide and install plant material of genus, species, variety, size and quantities in locations as directed on the plans or as directed by the Engineer.

DAFFODIL BULB PLANTING

Prepare bulb planting bed by application of fertilizers and pH-altering amendments per soil testing agency recommendations and thoroughly incorporate into the top 12 in. prior to planting bulbs.

Bulbs shall be planted at spacing indicated on the Drawings.

Bulbs shall be planted at a depth equal to 3 times the height of the bulb.

After bulbs are placed, cover halfway with planting soil, water thoroughly, then cover completely with planting soil and water again.

MAINTENANCE MANUAL

The contractor shall submit a written manual prepared for the Owner that outlines a schedule for proper maintenance of the plantings. This maintenance schedule shall include timing and methods for watering, fertilization, mulching, pruning, and other maintenance operations.

MATERIALS

Plant materials: Unless otherwise directed, plant sizes, species, and specific varieties shall be as shown on the plans. All plants shall be in conformance with Section 771 of the Supplemental Standard Specifications.

INSTALLATION

No planting shall be installed until after the completion of installation of all piping and conduit for irrigation and other utilities.

The limits of planting beds shall be laid out as indicated on the Drawings, and as approved in the field by the Engineer. Where the limits of planting beds are indicated as smoothly curving lines on the Drawings, the smoothly curved limits shall be field marked using marking paint for review.

The Contractor shall notify the Engineer a minimum of five (5) days in advance of anticipated dates of plant delivery and layout for inspection and approval.

Construction methods shall be per the MassDOT Standard Specification for planting. Warranty for all plants shall be at minimum two years from installation, but may extend to end of contract, whichever is later. Inspection and replacement of plantings as required shall occur at least twice. Interim inspection of planting shall occur in the early fall after spring plantings and in the early spring after fall plantings.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Measurement and payment for planting items listed shall be in accordance with Sections 771.80 and 771.81.

ITEM 804.3

3-INCH ELECTRICAL CONDUIT TYPE NM PLASTIC (UL)

FOOT

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

The work shall include the furnishing and installation of 3-inch non-metallic conduit for the RRFB system (Item 824.401) in accordance with the plans and as directed by the Engineer.

The conduit material shall be Schedule 80 polyvinyl chloride (PVC) plastic conduit.

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

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

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

Measurement and Payment

Item 804.03 will be measured and paid for at the Contract unit price per foot, which price shall include sawcutting, excavation, ordinary borrow, gravel borrow, control density fill, metallic warning tape, sand bedding, all labor, materials, equipment, and incidental costs required to complete the work.

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

**ITEM 824.211 RECTANGULAR RAPID FLASHING BEACON (SOLAR) LUMP SUM
LOCATION NO. 1**

**ITEM 824.212 RECTANGULAR RAPID FLASHING BEACON (SOLAR) LUMP SUM
LOCATION NO. 2**

**ITEM 824.213 RECTANGULAR RAPID FLASHING BEACON (SOLAR) LUMP SUM
LOCATION NO. 3**

Work under these items shall conform to the relevant provisions of Section 800 of the Standard Specifications, the 2009 Manual on Uniform Traffic Control Devices (MUTCD), and the following:

The work shall include the furnishing and installation of part or all of the following items: side-of- post mounted control cabinets; dual rectangular yellow LED beacons in NEMA enclosures; traffic signal posts with foundations; APS pedestrian push buttons; batteries; solar panels; wireless radios; all cable and wiring; ground rods, equipment grounding and bonding; signs; and all other equipment, materials and incidental costs necessary to provide complete, fully operational solar-powered, pedestrian actuated, rectangular rapid flashing beacon (RRFB) systems as specific herein and as shown on the plans. The locations are as follows:

- Millstone Road at Lund Farm Way (Item 824.211)
- Millstone Road at Fern Lane (Item 824.212)
- Route 6A at Millstone Road (tem 824.213)

A list of major items required at these locations are included on the plans.

Shop Drawings

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

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

The Design Consultant shall return the shop drawings within 15 days from the date of receipt from the Engineer.

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

Test Pits

Test pits to locate underground structures and utilities, shall be excavated only at the locations, dimensions and depths directed by the Engineer.

Equipment Bonding

Special purpose bonding wire shall be No. 8 AWG or larger conforming to the requirements of ASTM B-3.

Materials

Each of the RRFB systems shall, at a minimum, consist of the following items:

- (2) 15' Traffic signal posts with foundations;
- (2) APS pushbutton systems with R10-25 signs;
- (4) dual rectangular yellow LED beacons in NEMA enclosures;
- (2) 9"x12" R10-25 (PUSH BUTTON TO TURN ON WARNING LIGHTS) signs;
- (4) 30"x30" W11-2 signs;
- (2) 24"x12" W16-7pL (DIAGONAL ARROW) signs;
- (2) 24"x12" W16-7pR (DIAGONAL ARROW) signs;
- (2) SP-1 signs
- (2) solar panels;
- (2) NEMA Type 3R or higher enclosures to house:
 - Electrical components, including wiring and solid-state circuit boards;
 - On-board user interface;
 - Battery; and
 - Frequency hopping spread spectrum (or other alternate FCC approved) wireless activation unit with a minimum 150' range; and
- All mounting and supporting hardware and wiring necessary to complete a working system.

Any proprietary software required for the programming and/or operation of the system shall be included at no additional cost.

RRFB controller and LED beacons shall be listed on the MassDOT Qualified Traffic Control Equipment List.

The APS pushbutton systems shall be listed on the MassDOT Qualified Traffic Control Equipment List.

The RRFB housings shall be painted per Town standards.

The light intensity of the LED beacons during daytime conditions shall meet the minimum specifications for Class 1 yellow peak luminous intensity in the Society of Automotive Engineers (SAE) Standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated January 2005. An automatic signal dimming device shall be included to reduce the brilliance of the LED beacons during nighttime conditions.

A pilot light shall be integrated into the housing of the dual rectangular yellow LED beacons, facing pedestrians in the crosswalk, to provide confirmation that the RRFB is in operation.

All signs shall be MUTCD-compliant. R10-25 signs shall have a black border and legend on a white background. All sign sheeting materials shall be per Subsection 828.41.

R10-25 signs may be integrated into the APS pushbutton system as a single unit or mounted separately on Type A aluminum.

All other signs shall be Type A aluminum per Subsection 828.42.

The solar panels shall be affixed to an aluminum plate and bracket, adjustable at an angle of 45° to 60° and each assembly shall be mounted on top of the support and adjustment for maximum solar collection and optimal battery strength. The solar panel assemblies shall be rated for 90 mph wind conditions.

The batteries shall conform to Battery Council International specifications and have a capacity allowing up to 30 days of autonomy without sunlight and varying with ambient temperature and number of activations. The batteries shall be rated for a minimum lifespan of 3 years. Batteries shall be replaceable independently of other components.

The solar panels and battery shall have a minimum operating temperature range of -40° to 122°F (-40° to 50°C).

The Contractor shall provide shop drawings and calculations to confirm solar panel sizing and battery/solar energy storage will meet the functional requirements of the systems.

Components (i.e. signal posts beacon enclosures, housings) of the RRB systems shall be per MassDOT standards.

Functional Requirements

The RRFB systems shall remain dark until pedestrian actuation.

Upon actuation, all LED beacons shall activate and flash in a rapidly flashing sequence. Each sequence shall last 800 milliseconds and there shall be 75 sequences per minute. The sequence shall be the same for each pair of LED beacons in an enclosure and shall be as follows:

1. The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds.
2. Both RRFB indications shall be dark for approximately 50 milliseconds.
3. The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds.
4. Both RRFB indications shall be dark for approximately 50 milliseconds.
5. The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds.
6. Both RRFB indications shall be dark for approximately 50 milliseconds.
7. The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds.
8. Both RRFB indications shall be dark for approximately 50 milliseconds.
9. Both RRFB indications shall be illuminated for approximately 50 milliseconds.
10. Both RRFB indications shall be dark for approximately 50 milliseconds.
11. Both RRFB indications shall be illuminated for approximately 50 milliseconds.
12. Both RRFB indications shall be dark for approximately 250 milliseconds.

The flash rate of each individual RRFB indication, as applied over the full flashing sequence, shall not be between 5 and 30 flashes per second.

All RRFBs within the system shall commence and cease operation simultaneously.

The length of the flashing cycle upon actuation and the minimum allowable time between actuations shall be per the plans. These settings shall be user-programmable through the on-board user interface. No-fee wireless (Wi-Fi, Bluetooth®, etc.) may be used as an alternative programming method.

The flash cycle shall be immediately initiated each and every time as a result of a pedestrian pressing the APS pushbutton, including when pedestrians press the pushbutton while the RRFBs are already flashing and when pedestrians press the pushbutton immediately after the RRFBs have ceased flashing.

APS Pedestrian Push Buttons

Each APS pushbutton shall have a tactile arrow and locator tone. The tactile arrow shall be oriented to point in the direction of the crosswalk. The locator tone shall have a duration of 0.15 seconds or less and shall repeat at 1-second intervals. The locator tone shall be set 2 to 5 dBA above ambient sound, shall automatically adjust intensity, but cap at a maximum volume of 100 dBA. The tone shall be audible whenever the LED modules are not active.

Upon activation of the LED modules, a speech message shall state, “Yellow lights are flashing.” This message shall be stated twice. No vibrotactile or percussive indications shall be used.

A maximum mounting height of 42 inches above the finish sidewalk grade shall be used for pedestrian push buttons.

APS pushbuttons shall be accessible per AAB/CMR, without the use of extension brackets.

If a pushbutton is pressed before the minimum time between actuation intervals is met, a speech message shall state, “Wait,” and the locator tone shall resume until the LED modules activate.

The push button housings shall be painted per Town Standards.

Posts and Bases

Signal posts and bases shall be steel shafts with transformer bases. All posts and bases shall be painted per Town standard.

Post shall be of enough length to provide seven (7) feet between the finish grade and the bottom of the supplemental downward diagonal arrow sign (W16-7p).

Base foundations shall not obstruct a sidewalk or crosswalk so that passage by physically challenged persons is impaired. Location of base shall not block an ADA/AAB-compliant pedestrian access route.

Construction Methods

No work shall commence until the shop drawings for the RRFB system are approved.

Layout and design of the RRFB system shall conform to the plans.

The Contractor shall diagnose and replace any part of the pedestrian activated warning systems that are found to be defective in workmanship, material, or manner of functioning within six months of final acceptance by the Engineer. This requirement does not supersede the one-year warranty period on materials specified in Subsection 815.20.

System Documentation and Keys

The Contractor shall submit to the Town two (2) copies of the operating and maintenance instructions for all equipment installed.

Two sets of wiring diagrams with both internal and external wiring for the control cabinet and all accessories as actually used in the field shall be furnished to the Town by the Contractor. All actual and potential terminal strip connections shall be shown. All identification on the wiring diagrams shall be as installed, and all field labeling shall be consistent with the diagram.

The Contractor shall also supply two (2) sets of cabinet keys to the Town.

Property Bounds

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

Maintenance of Rectangular Rapid Flashing Beacon

It shall be the responsibility of the Contractor to provide all labor, equipment and material required for the total maintenance and repair of the proposed Rectangular Rapid Flashing Beacon systems equipment, including damage by automobile accidents until final completion and acceptance of the project, unless otherwise specified under Subsection 7.17 "Traffic Accommodation" of the Standard Specifications as amended, in which case Subsection 7.17 will govern.

These provisions will apply to the Rectangular Rapid Flashing Beacon location included as part of this construction Contract from the date of written notice given to the Engineer that the Contractor will work on or adjacent to the proposed Rectangular Rapid Flashing Beacon system until the date when the Town accepts the complete project. This written notice must be given

before the Contractor may proceed with any work on specified beacon locations. For the purpose of these Special Provisions, the phrase "Rectangular Rapid Flashing Beacon Equipment" is intended to include, but is not limited to, supporting structures, cabinet accessories and panels, wires, and all other ancillary electrical equipment used for traffic control.

Fine Tuning, Adjustment, and Testing Period

After the Contractor has finished installing the Rectangular Rapid Flashing Beacons and has set the beacon systems to operate as specified in the Contract documents, the fine tuning, adjusting and testing period shall begin.

The Contractor shall advise the Engineer, in writing, of the date of the beginning of the fine-tuning and testing period. This period shall not start until the work at the locations are complete. During this period, the Contractor, under the direction of the Engineer, shall make necessary adjustments and tests to insure safe and efficient operation of the equipment. This period shall last for more than 30 days and the Contract completion date has taken this testing period into consideration. No request for final acceptance will be considered until successful completion of the testing period.

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

Final Inspection and Acceptance

Upon successful completion of the 30-day testing period wherein the Rectangular Rapid Flashing Beacon installations has operated for 30 days without failure, the Contractor shall notify the Town. The Engineer will make a final inspection of the installations in the presence of the Engineer/the Town and the Contractor. An inspection check will be made to ensure that all equipment, materials, installations and operations are in accordance with the construction contract, plans and specifications.

Items to be checked will include, but not be limited to, beacon system operation, documents (wiring diagrams, as-built plans, instruction manuals, parts list, warranties, grounding test report, etc.), signs, pavement markings, and street hardware (posts, bases, housings, brackets, etc.).

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

Guarantee After Final Acceptance

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

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

Method of Measurement and Basis of Payment

Items 824.211, 824.212, and 824.213 will be measured and paid for at the Contract LUMP SUM prices, which prices shall include all labor, material, equipment and incidental costs required to complete the work.

Warning signs (i.e. W11-2, W16-7p, W16-9p, SP-1) mounted on the signal posts with the RRFB will be paid for separately under Item 832. Warning, Regulatory and Route Marker, Aluminum Panel (Type A).

ITEM 824.401**RECTANGULAR RAPID FLASHING BEACON
(AC POWER) LOCATION NO. 1****LUMP SUM**

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

The work shall include the furnishing and installation of part or all of the following items: side-of- post mounted control cabinet; signal posts and foundations; dual rectangular rapid flashing beacons; APS pedestrian push buttons; passive infrared detection system; service connection; all cable and wiring; ground rods, equipment grounding and bonding; and all other equipment, materials and incidental costs necessary to provide complete, fully operational, pedestrian actuated, rectangular rapid flashing beacon (RRFB) system as specific herein and as shown on the plans. The location is as follows:

- Millstone Road at Cape Cod Rail Trail

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

Shop Drawings

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

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

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

Existing Signal Equipment

Under this item the existing RRFB system shall be maintained in operation throughout the construction period unless otherwise directed by the Engineer.

Once construction is completed and the proposed RRFB system is in operation, the existing RRFB system shall be completely removed, stacked, and delivered to the Town's maintenance facility. The Contractor shall coordinate with the Engineer to schedule drop-off time a minimum of 48-hours in advance.

Service Connection

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

On the service connection include an Eversource approved polymer concrete electric handhole which shall be placed on a 6" layer of ¾" crushed stone in conformance with Section M2.01.4 of the Standard Specifications for drainage.

The respective utility company is responsible for making the connections from the respective riser to the overhead wires.

Test Pits

Test pits to locate underground structures and utilities, shall be excavated only at the locations, dimensions and depths directed by the Engineer.

Equipment Bonding

Special purpose bonding wire shall be No. 8 AWG or larger conforming to the requirements of ASTM B-3.

Materials

The RRFB system shall, at a minimum, consist of the following items, which shall be included in the lump sum bid items:

- (2) concrete foundations;
- (2) 15' traffic signal posts and pedestals;
- (2) APS pushbutton systems;
- (4) dual rectangular yellow LED beacons in NEMA enclosures;
- (4) 30"x30" W11-15 signs;
- (2) 24"x12" W16-7pL (DIAGONAL ARROW) signs;
- (2) 24"x12" W16-7pR (DIAGONAL ARROW) signs;
- (2) 9"x12" R10-25 (PUSH BUTTON TO TURN ON WARNING LIGHTS) signs;
- (2) 9"x12" SP-1 (WAIT FOR VEHICLES TO STOP BEFORE CROSSING) signs;
- Passive infrared activation system (4 bollards w/ foundations);
- (1) service connection;
- (1) NEMA Type 3R or higher enclosure to house:
 - Electrical components, including wiring and solid-state circuit boards;
 - On-board user interface;
- All mounting and supporting hardware and wiring necessary to complete a working system.

Any proprietary software required for the programming and/or operation of the system shall be included at no additional cost.

RRFB controller and LED beacons, APS pushbutton systems, and traffic signal posts and pedestals shall be listed on the MassDOT Qualified Traffic Control Equipment List.

The APS pushbutton systems shall be listed on the MassDOT Qualified Traffic Control Equipment List.

The RRFB housings shall be painted per Town standards.

The light intensity of the LED beacons during daytime conditions shall meet the minimum specifications for Class 1 yellow peak luminous intensity in the Society of Automotive Engineers (SAE) Standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated January 2005. An automatic signal dimming device shall be included to reduce the brilliance of the LED beacons during nighttime conditions.

A pilot light shall be integrated into the housing of the dual rectangular yellow LED beacons, facing pedestrians in the crosswalk, to provide confirmation that the RRFB is in operation.

All signs shall be MUTCD-compliant. R10-25 signs shall have a black border and legend on a white background. SP-1 signs shall have black border and legend on a yellow background. All sign sheeting materials shall be per Subsection 828.41.

R10-25 signs may be integrated into the APS pushbutton system as a single unit or mounted separately on Type A aluminum.

SP-1 signs shall be Type A aluminum per Subsection 828.42.

Functional Requirements

The RRFB systems shall remain dark until pedestrian actuation.

Upon actuation, all LED beacons shall activate and flash in a rapidly flashing sequence. Each sequence shall last 800 milliseconds and there shall be 75 sequences per minute. The sequence shall be the same for each pair of LED beacons in an enclosure and shall be as follows:

13. The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds.
14. Both RRFB indications shall be dark for approximately 50 milliseconds.
15. The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds.
16. Both RRFB indications shall be dark for approximately 50 milliseconds.
17. The RRFB indication on the left-hand side shall be illuminated for approximately 50 milliseconds.
18. Both RRFB indications shall be dark for approximately 50 milliseconds.
19. The RRFB indication on the right-hand side shall be illuminated for approximately 50 milliseconds.
20. Both RRFB indications shall be dark for approximately 50 milliseconds.
21. Both RRFB indications shall be illuminated for approximately 50 milliseconds.
22. Both RRFB indications shall be dark for approximately 50 milliseconds.
23. Both RRFB indications shall be illuminated for approximately 50 milliseconds.
24. Both RRFB indications shall be dark for approximately 250 milliseconds.

The flash rate of each individual RRFB indication, as applied over the full flashing sequence, shall not be between 5 and 30 flashes per second.

All RRFBs within the system shall commence and cease operation simultaneously.

The length of the flashing cycle upon actuation and the minimum allowable time between actuations shall be per the plans. These settings shall be user-programmable through the on-board user interface. No-fee wireless (Wi-Fi, Bluetooth®, etc.) may be used as an alternative programming method.

The flash cycle shall be immediately initiated each and every time as a result of a pedestrian pressing the APS pushbutton, including when pedestrians press the pushbutton while the RRFBs are already flashing and when pedestrians press the pushbutton immediately after the RRFBs have ceased flashing.

APS Pedestrian Push Buttons

Each APS pushbutton shall have a tactile arrow and locator tone. The tactile arrow shall be oriented to point in the direction of the crosswalk. The locator tone shall have a duration of 0.15 seconds or less and shall repeat at 1-second intervals. The locator tone shall be set 2 to 5 dBA above ambient sound, shall automatically adjust intensity, but cap at a maximum volume of 100 dBA. The tone shall be audible whenever the LED modules are not active.

Upon activation of the LED modules, a speech message shall state, "Yellow lights are flashing." This message shall be stated twice. No vibrotactile or percussive indications shall be used.

A maximum mounting height of 42 inches above the finish sidewalk grade shall be used for pedestrian push buttons.

If a pushbutton is pressed before the minimum time between actuation intervals is met, a speech message shall state, "Wait," and the locator tone shall resume until the LED modules activate.

The push button housings shall be painted per Town Standards.

A maximum mounting height of 42 inches above the finish sidewalk grade shall be used for pedestrian push buttons.

APS pushbuttons shall be accessible per AAB/CMR, without the use of extension brackets.

If a pushbutton is pressed before the minimum time between actuation intervals is met, a speech message shall state, "Wait," and the locator tone shall resume until the LED modules activate.

The push button housings shall be painted per Town Standards.

Passive Infrared Activation System

The Contractor shall supply and install fully automatic passive pedestrian detection system as specified herein and as shown on the plans. The units supplied shall base pedestrian detection on the interruption of an internally generated infrared beam. The optical beam sensors in each bollard shall automatically activate the RRFBs upon the interruption of the beam by a person/bicyclists entering between the bollards and attempting to cross the roadway (Note: the RRFBs shall flash simultaneously when activated). Activation of the system shall not occur when a person exits the roadway through the bollards.

The Contractor shall follow all manufacturer's written instructions/recommendations and requirements related to the install. The Contractor shall submit a list of personnel that will be involved in the installation and provide certification that the technician has received factory approved/authorized training.

The passive infrared activation system shall be installed by the Contractor in accordance with the manufacturer's recommended procedure for installation.

The control cabinet shall contain a circuit breaker connected to the incoming electric service rated at a level appropriate for the system supplied.

The control equipment shall be housed in the cabinet for the RRFB systems. The control units shall be capable of supporting such functions as duration of flashing RRFBs settings.

- Duration - This timer unit shall control the amount of time, in seconds, that the RRFBs are active after a valid pedestrian call has dropped. The Timer shall automatically reset upon deactivation. The timer shall be initially set to the timr noted on the plans.
- Lock-out – This timer unit shall control the amount of time between activation of the RRFBs via pedestrian/bicyclist calls. This time shall be initially set for 0 seconds.

Each bollard shall be approximately 42” high x 8” square and shall be constructed of aluminum. The bollards shall be manufactured by LaneLight Traffic Technologies, Inc. or an approved equivalent, and conforming to these special provisions. The unit shall be factory painted flat per Town standards.

Foundations for the bollards shall be per manufacturer’s recommendation for the units supplied.

The cabinet box documentation (box prints) shall show all wiring between the passive infrared activation system and the RRFBs.

Warranty – The supplier shall provide a five-year warranty on the passive infrared activation system.

Posts and Bases

Signal posts and bases shall be steel shafts with transformer bases. All posts and bases shall be painted per Town standard.

Post shall be of sufficient length to provide a distance of seven (7) feet between the finish grade and the bottom of the supplemental downward diagonal arrow sign (W16-7p).

Base foundations shall not obstruct a sidewalk or crosswalk so that passage by physically challenged persons is impaired. Location of base shall not block an ADA/AAB-compliant pedestrian access route.

Construction Methods

No work shall commence until the shop drawings for the RRFB systems are approved.

Layout and design of the RRFB systems shall conform to the plans.

The Contractor shall diagnose and replace any part of the pedestrian activated warning system that are found to be defective in workmanship, material, or manner of functioning within six months of final acceptance by the Engineer. This requirement does not supersede the one-year warranty period on materials specified in Subsection 815.20.

System Documentation and Keys

The Contractor shall submit to the Town two (2) copies of the operating and maintenance instructions for

all equipment installed.

Two sets of wiring diagrams with both internal and external wiring for the control cabinet and all accessories as actually used in the field shall be furnished to the Town by the Contractor. All actual and potential terminal strip connections shall be shown. All identification on the wiring diagrams shall be as installed, and all field labeling shall be consistent with the diagram.

The Contractor shall also supply two (2) sets of cabinet keys to the Town.

Property Bounds

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

Maintenance of Rectangular Rapid Flashing Beacon

It shall be the responsibility of the Contractor to provide all labor, equipment and material required for the total maintenance and repair of the proposed Rectangular Rapid Flashing Beacon systems equipment, including damage by automobile accidents until final completion and acceptance of the project, unless otherwise specified under Subsection 7.17 "Traffic Accommodation" of the Standard Specifications as amended, in which case Subsection 7.17 will govern.

These provisions will apply to the Rectangular Rapid Flashing Beacon location included as part of this construction Contract from the date of written notice given to the Engineer that the Contractor will work on or adjacent to the proposed Rectangular Rapid Flashing Beacon system until the date when the Town accepts the complete project. This written notice must be given before the Contractor may proceed with any work on specified beacon locations. For the purpose of these Special Provisions, the phrase "Rectangular Rapid Flashing Beacon Equipment" is intended to include, but is not limited to, supporting structures, cabinet accessories and panels, wires, and all other ancillary electrical equipment used for traffic control.

Fine Tuning, Adjustment, and Testing Period

After the Contractor has finished installing the Rectangular Rapid Flashing Beacons and has set the beacon systems to operate as specified in the Contract documents, the fine tuning, adjusting and testing period shall begin.

The Contractor shall advise the Engineer, in writing, of the date of the beginning of the fine-tuning and testing period. This period shall not start until the work at the locations are complete. During this period, the Contractor, under the direction of the Engineer, shall make necessary adjustments and tests to insure safe and efficient operation of the equipment. This period shall last for more than 30 days and the Contract completion date has taken this testing period into consideration. No request for final acceptance will be considered until successful completion of the testing period.

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

Final Inspection and Acceptance

Upon successful completion of the 30-day testing period wherein the Rectangular Rapid Flashing Beacon installations has operated for 30 days without failure, the Contractor shall notify the Town. The Engineer will make a final inspection of the installations in the presence of the Engineer/the Town and the Contractor. An inspection check will be made to ensure that all equipment, materials, installations and operations are in accordance with the construction contract, plans and specifications.

Items to be checked will include, but not be limited to, beacon system operation, documents (wiring diagrams, as-built plans, instruction manuals, parts list, warranties, grounding test report, etc.), signs, pavement markings, and street hardware (posts, bases, housings, brackets, etc.).

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

Guarantee After Final Acceptance

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

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

Method of Measurement and Basis of Payment

Item 824.401 will be measured and paid for at the Contract LUMP SUM price, which price shall include all labor, material, equipment and incidental costs required to complete the work.

Conduit will be paid for separately under Item 804.3, 3 Inch Electrical Conduit Type NM Plastic (UL).

Pull boxes will be paid for separately under Item 811.31, Pull Box 12 x 12 Inches – SD.031.

Warning signs (i.e. SP-1, W11-15, W16-7p) mounted on the signal posts with the RRFB will be paid for separately under Item 832. Warning, Regulatory and Route Marker, Aluminum Panel (Type A).

ITEM 852.11**TEMPORARY PEDESTRIAN BARRICADE****FOOT**

Work under this item consists of furnishing, deploying, maintaining in proper operating conditions, and removing temporary pedestrian barricades as part of a Temporary Pedestrian Access Route (TPAR) in order to guide pedestrians around a fully- or partially-closed sidewalk. These devices are intended to prevent pedestrians from entering the work area and to prevent pedestrians from inadvertently entering the vehicle travel lane by providing visual and physical separation between each space.

MATERIALS

The Temporary Pedestrian Barricade shall have a continuous bottom rail or edge no more than two (2) inches above the ground and eight (8) inches in height (minimum) to accommodate cane users, have a smooth and continuous hand railing along the top edge no less than 32 inches above the ground and not obstruct or project into the pedestrian path of travel. Barricade walls shall be nearly vertical and generally within the same plane.

If exposed to traffic, Temporary Pedestrian Barricades shall be crashworthy.

CONSTRUCTION METHODS

The Temporary Pedestrian Barricade shall be placed in an area that will provide pedestrians with a TPAR on a smooth, continuous hard surface for its entirety. The geometry and alignment of the facility shall meet the applicable requirements of the “Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities” and the Massachusetts Architectural Access Board.

The recommended width of the TPAR is 60 inches, but if constraints exist a minimum clear width of 48 inches shall be provided along its entirety. If a 60 inch width cannot be accommodated in full, a 60 inch by 60 inch passing space shall be provided every 200 feet or less along the TPAR. Turning areas shall be 60 inches by 60 inches minimum.

Lateral joints between any surfaces shall not exceed 0.5 inches. Lateral edges may be vertical up to 0.25 inches high and shall be beveled at 1V:2H between 0.25 inches and 0.5 inches.

The TPAR shall be kept clear of debris, snow, and ice and the Temporary Pedestrian Barricades and Temporary Pedestrian Curb Ramps shall not obstruct drainage.

Removal and/or resetting of Temporary Pedestrian Barricades shall be considered incidental.

BASIS OF PAYMENT

Payment for Temporary Pedestrian Barricades will be made at the contract price per foot installed in place, including all incidental items. This price shall include the cost of furnishing, installing, resetting, removal, and maintaining in good working condition for the duration of the project.

ITEM 859.1

**REFLECTORIZED DRUMS WITH SEQUENTIAL
FLASHING WARNING LIGHTS**

DAY

Work under this item consists of furnishing, installing, maintaining in proper operating conditions, and removing reflectorized drums, and any necessary ballast, equipped with sequential flashing warning lights.

Materials

Reflectorized drums shall be listed on the MassDOT Qualified Traffic Control Equipment List.

Reflective sheeting on drums shall meet or exceed ASTM D4956 Type VIII. All drums shall be maintained in a satisfactory manner including the removal of oils, dirt, and debris that may cause reduced retroreflectivity.

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

Empco-Lite LWCSO.
pi-Lit® Sequential Barricade-Style Lamp; or
Unipart Dorman SynchroGUIDE.

Sequential flashing warning lights shall be secured to reflectorized drums per the light manufacturer's specifications.

Construction Methods

The first ten (10) drums in any merging or shifting taper as designated in the Temporary Traffic Control Plan shall be equipped with sequential flashing warning lights. These lights shall be operating, at a minimum, between dusk and dawn when the taper is deployed.

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

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

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

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

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

ITEM 861.104 4 INCH REFLECTORIZED YELLOW LINE (PAINTED) FOOT

The work under this item shall conform to the relevant provisions of Section 860 of the Standard Specifications and the following:

All permanent pavement markings supplied under this item shall conform to the applicable MassDOT's standards for 6 Inch ReflectORIZED Yellow Line (Painted).

The work under these items shall consist of providing, installing, maintaining the 4-inch reflectORIZED yellow (painted) lines for the single yellow center lines on the Cape Cod Rail Trail near the roadway crossing.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 861.104 shall be measured and paid at the Contract unit price per foot, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 865.2**PAVEMENT SURFACE COATING****SQUARE FOOT**

The work under this Item shall be in accordance with Section 860 of Standard Specifications for Highways and Bridges and the following: The work under this Item shall include preparation of the paved surfaces in conjunction with the application of one or more courses of a polymer modified flexible cement surfacing material that may be used as a complete light, durable, skid resistant, composite wearing surface, or textured and colored on sections of pavement to simulate hand laid brick and/or conventional masonry where shown on the plans or as directed by the Engineer.

This work shall be for the proposed Cape Cod Rail Trail splitter islands and proposed crosswalks and for surface areas labeled as “stamped pavement” and “pvmnt surface coating” on the plans. The color shall be brick red, gray background, and the pattern shall be standard size brick arranged in a running bond, brick orientation.

Preparation

The areas to be surfaced with the specified material(s) must be structurally sound and may consist of either asphalt or cement concrete. When these material(s) are intended for application on a newly paved asphalt surface a curing period will be required to ensure that no concentration of oils are present. A suitable approved pavement heater may be employed to expedite curing when a delayed work schedule is not advisable.

Surface preparation will then be performed in the following general manner:

The pavement surface is to be thoroughly cleaned by approved methods removing all contaminants that may prevent proper adhesion of the new surfacing material(s). A suitable approved pavement heater shall be employed where surface oils, fuel and the like exist on the surface, to remove these incompatible materials. New bituminous concrete shall be added as necessary, thermally bonded to the pavement and compacted to achieve a density equal to the surrounding or adjacent pavement. No work shall be initiated until the surface condition conforms to manufacturer recommended standards for both structure and cleanliness.

All applications shall be installed in a neat and uniform manner by approved methods. The Contractor will be responsible for furnishing and placing a sufficient number of safety cones together with caution tape to adequately protect all work zones, and to insure the orderly flow of vehicular and pedestrian traffic.

Residues resulting from this element of the work shall be immediately removed from the jobsite(s) and must be disposed of in a proper manner. There will be no additional compensation for the disposal of excess or unused materials. Pavement sections where the surfacing work is incomplete must be left in a neat and clean condition, satisfactory to the Engineer at the end of each workday.

Installation

Contractor shall be responsible for the preparation, placement and patterning of the polymer modified flexible concrete surfacing material(s) for all applications according to the manufacturer's guidelines and subject to the approval of the Engineer. When required, this composite paving material shall be uniformly and homogeneously formulated with color stable pigments and surface textured to simulate hand laid brick and/or masonry.

A simulated mockup consisting of the color(s) and pattern(s) as selected by the Engineer and the Town, will be constructed, within a designated section of the overall work area, at least five working (5) days prior to the initiation of this phase of construction. The mockup site will be determined by the Engineer. Weather permitting and only with approval of the completed sample section, the work shall begin. The cost of the mockup shall be included in the unit price for this item and shall encompass a minimum surface area of 3'x3'.

A working knowledge of the specialized technology contained within these specifications is required. Only certified applicators may be employed for this work. In the event that this material and/or surfacing system constitutes, or is claimed to constitute proprietary technology subject to U.S. Patent protection, the Contractor will be required to furnish written evidence satisfactory to the Owner that he/she is an accredited, authorized and/or licensed installer of the patented material/process.

The installation phase of this work shall be performed in the following general manner:

Using manufacturer prescribed methods and equipment as described herein, the Contractor shall properly blend and mix the water, polymer modified cement, aggregate and pigments (color will be selected by the Town) to achieve the desired consistency. The polymer shall be an acrylic based material furnished in an aqueous emulsified state to prevent the loss of internal strength and bond which may result in cohesive and adhesive failure. The measuring and mixing operation shall be capable of producing a workable, consistent, homogeneous mixture for the intended application. Only then shall the Contractor apply the composite to the surface of a hardened, structurally sound bituminous concrete pavement as directed. Using specialized equipment and tools as necessary the desired ultra-thin composite mixture shall be sufficiently and uniformly applied to the surface. The finished material must be capable of being spread to a consistent build thickness of as little as .0625 inches per layer. Segregation of the mixed material shall be avoided. Should this condition present itself the material and/or application must be corrected immediately or replaced, as determined by the Engineer. When this newly constructed ultra-thin finish is applied over bituminous concrete it shall provide a flexible, fuel, skid and UV resistant surface, which results in a reduction of susceptibility to natural oxidation.

No material shall be applied when precipitation is present or imminent inclement weather will prevent proper curing. No material may be allowed to exceed the workability limitations of the composite mixture.

Hand applications will be utilized for smaller sections when a color distinction and/or surface pattern is required. Patterned applications intended to resemble masonry will be constructed in two (2) layers and colors in accordance with the design drawings or as otherwise directed by the Town. Finish patterns and colors may only be applied after the first course has adequately cured.

Once the newly finished surfaces have cured sufficiently, the application area may be opened to vehicular and/or pedestrian traffic. Any residue resulting from this work shall be removed and disposed of in a proper manner. The completed work area is to be left in a neat and clean condition, satisfactory to the Engineer.

The Contractor shall take reasonable precautions and steps during construction to prevent bodily harm or injury or damage to adjacent structures such as curbing, sidewalks, drainage, or water supply facilities. If during the execution of the work, the Contractor, through willfulness or carelessness, permits or causes any damage to public or private property, the cost of repair or replacement shall be the responsibility of the Contractor at no expense to the Town.

The Contractor shall maintain minimum eleven (11) foot vehicular travel lanes at all times during this operation unless otherwise approved.

MATERIALS

The composite material(s) used for this polymer modified thin surfacing system must support a documented performance history satisfactory to the Towns and DCR that is compatible with the functions and characteristics detailed within these specifications. This material must also be able to demonstrate long term adhesion, flexibility and abrasion resistance characteristics, scrub ability, as well as color stability, chemical and fuel resistance.

The Contractor will be required to furnish to the Engineer five (5) applications that have been placed on main thoroughfares, complete with contact information and locations using the material(s) as specified herein. The ultra-thin layer polymer composite(s) used on these projects must support a documented history of field performance and integrity for the type of work described herein for a minimum period of five (5) years. No waiver of this condition will be allowed.

The composite material shall be flexible with form stability which is compatible with existing bituminous pavements and be formulated using polymer modifications as necessary to suit local traffic and climate conditions. The specified polymer modified composite material(s) when mixed and cured in accordance with manufacturer's guidelines shall demonstrate the physical properties outlined in the following table.

MATERIAL PROPERTIES

<u>Physical Properties</u>	<u>Test Method</u>	<u>Minimum Test Value</u>
Compressive Strength	ASTM C 39	3,100 PSI
Solar Reflectivity Index	ASTM EI918 ASTM C 1549	>29
Shear Bond Adhesion	ASTM C 1583	>250 PSI
Skid Resistance (mixed)	ASTM E-274	>40
Tensile Strength	ASTM C 190	615 PSI (3.9 MPa)
Freeze-Thaw Scaling Resistance	ASTM C672-98	0

MATERIAL COMPONENTS

Water. The water used in mixing these composite(s) shall be of potable quality and free from soluble salts.

Chemical Admixtures/pigments. All chemical admixtures shall be introduced during the manufacturing process. Pigments may only be added on site to achieve a particular color quality or tint preference as directed.

Surface Sealer. A suitable approved surface sealer, if required, may be applied to the polymer modified composite(s) to provide additional protection in fueling areas, or to prevent surface efflorescence when colors are utilized.

Material Verification. Upon request the Contractor shall provide a Certificate of Analysis (COA) for the polymer emulsion, aggregate and aggregate dry blend verifying that the materials meet the specific requirements outlined herein.

Questionable product with just cause may be subjected to all of the specified testing procedures. All material testing will be conducted by a third party independent certified laboratory acceptable to the Engineer, and will be the financial responsibility of the Contractor. Samples failing in any test category will result in immediate rejection of the material from further consideration or use and may disqualify the contractor from this phase of the work.

Material(s) furnished pursuant to this work shall not be harmful to humans or the environment and must possess a Design for the Environment (DfE) as designated by the United States Environmental Protection Agency (EPA).

No payment will be rendered for any work until a manufacturer's certificate of compliance has been furnished by the Contractor. A Material Safety Data Sheet (MSDS) will also be required before any work is initiated.

EQUIPMENT

Contractor must have access to and be familiar with the specialized machinery and tools necessary to perform the procedures as outlined and contained within these technical specifications. These items shall include but not be limited to dedicated surfacing equipment designed exclusively for use in applying thin layer polymer modified composite(s), appropriate trucks, air compressors, miscellaneous dispensers, mixers, applicators, heaters, cutters and/or specialized tools etc.

To ensure optimum work site efficiency and project safety considerations, multiple crews may be required when hand applications or custom patterns as described previously are necessary.

MOBILIZATION

Construction of these flexible ultra-thin surfaces shall commence within twenty-four (24) hours of written notification to proceed as issued by the Contractor. Work shall commence within this timeframe without regard to the number of mobilizations that may be required by the Engineer to complete this work.

Due to the logistical complications inherent to this type of specialized construction, and given the general project size, scope, schedule and public safety concerns, the Contractor may not assume that a single mobilization will be sufficient to complete this entire phase of the work required in a safe and orderly fashion. No separate payment will be made for any additional mobilization or demobilization as may be necessary to complete the project.

GUARANTEE / WARRANTY

The Contractor shall warranty all applications from defects resulting from improper workmanship and faulty or inferior materials for a minimum period of three (3) years. All defective materials and/or substandard work will be corrected or replaced within the warranty period as directed by the Engineer.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 865.2 Pavement Surface Coating will be measured for payment by the Square Foot, completed in place.

Item 865.2 Pavement Surface Coating will be paid for at the Contract unit price per Square Foot, which price shall include all labor, materials, equipment, mobilization, expansion joint filler, mockup and incidental costs required to complete this work including ancillary preparation of the pavement. No payment deductions will be made for structures within the work area such as light foundations, pull boxes, manholes, catch basins or water covers.

ITEM 868.04 **4 INCH REFLECTORIZED** **FOOT**
WHITE LINE (EPOXY)

ITEM 868.12 **12 INCH REFLECTORIZED** **FOOT**
WHITE LINE (EPOXY)

ITEM 869.04 **4 INCH REFLECTORIZED** **FOOT**
YELLOW LINE (EPOXY)

Work under these items shall conform to the relevant provisions of Section 860 of the Standard Specifications and the following:

Work under these items shall include furnishing and installing white and yellow epoxy reflectorized pavement striping material that is sprayed onto the pavement. Following a surface application of glass beads and upon drying, the resultant marking is a reflectorized stripe of specified thickness and width, that is capable of resisting deformation by traffic.

Material Requirements

A. Regular-Dry Epoxy Suggested Suppliers

BRAND NAME	SUPPLIER/LOCATION
Epoplex LS50	Epoplex - Stonhard Inc. Maple Shade, NJ
Hotline TM 8212 (Part A White) Hotline TM 8213 (part A Yellow) Hotline TM 8214 (Part B Hardener or Converter)	Baltimore Paint and Chemical Co. Division of Sherwin- Williams Baltimore, MD Edison, NJ
Lumiline, Lumiline II	Accent Stripe, Inc. Orchard Park, NY
Poly-Carb Mark 5.3	Poly-Carb Inc. Solon, OH
Super Lifeline II, III	Linear Dynamics Ball Ground, GA
Thermopoxy Series 100 Part A (Series 101 White) Part A (Series 102 Yellow) Part B (Series 103)	Technical Coatings Corp. Alpharetta, GA

B. Epoxy Material

1. Composition

The epoxy resin composition shall be specifically formulated for use as a pavement marking material and for hot-spray application at elevated temperatures. The type and amounts of epoxy resins and curing agents shall be at the option of the manufacturer, providing the other composition and physical requirements of this specification are met.

The epoxy marking material shall be two-component (Part A and Part B), 100% solids type system formulated and designed to provide a simple volumetric mixing ratio (e.g. two volumes of Part A to one volume of Part B).

The epoxy marking material shall be supplied as either a regular-dry or a slow-dry material. Regular-dry may be used for all marking patterns. Slow-dry material is intended for marking hatchlines, edgelines, and other marking patterns located out of the general path of traffic.

All acceptances of uninstalled epoxy marking material shall expire six (6) months after the date of manufacture.

Part A of both white and yellow shall conform to the following requirements:

PERCENT BY WEIGHT OF PART A .

WHITE	Pigment - 18 Minimum, Titanium Dioxide (ASTM D476, Type II) Epoxy Resin - 75 to 82
YELLOW	Pigment - 18 Minimum, Titanium Dioxide (ASTM D476, Type II) 5 Minimum, Organic Yellow, Epoxy Resin – 73 to 77

The entire pigment composition shall consist of either titanium dioxide or titanium dioxide and organic yellow. No extender pigments are permitted. Yellow pigment shall be lead-free.

The epoxy content of the epoxy resin in Part A will be tested in accordance with ASTM D 1652 and calculated as the weight per epoxy equivalent (WPE) for both white and yellow. The epoxy content will be determined on a pigment free basis. The epoxy content (WPE) shall meet a target value provided by the manufacturer and approved by the Department. A ± 50 tolerance will be applied to the target value to establish the acceptance range.

The amine value of Part B shall be tested in accordance with ASTM D2074(2) to determine its total amine value. The total amine shall meet a target value provided by the manufacturer and approved by the Department. A ± 50 tolerance will be applied to the target value to establish the acceptance range. The manufacturer may specify an alternate test method for determining the amine value subject to the approval of the Engineer.

2. Physical Properties of Mixed Components (Part A and Part B).

Unless otherwise noted, all samples are to be prepared tested at an ambient temperature of $23 \pm 2^\circ\text{C}$.

a) Color.

Yellowness Index (ASTM D-1925).

- cure 72 hours after sample preparation
- Take yellow index reading, XYZ C/2°, following 72 hour cure and preceding QUV
- Maximum index before QUV: 8.0
- Place sample in QUV for 72 hours
- Maximum index after QUV: 20

Typical White Standard	Typical Yellow Standard
X78.5	X52.7
Y81.1	Y48.1
Z90.4	Z7.6
Y14.7	

b) Directional Reflectance

The white epoxy composition (without glass spheres) shall have a daylight directional reflectance of not less than 84% relative to a magnesium oxide standard when tested in accordance with ASTM E1347.

The yellow epoxy composition (without glass spheres) shall have a daylight directional reflectance of not less than 55 % relative to a magnesium oxide standard when tested in accordance with ASTM E 1347.

c) Drying Time (Laboratory)

When tested in accordance with ASTM D711 as modified below, regular-dry epoxy marking material shall reach a no-pick-up time in 30 minutes or less. Under these same test conditions, slow-dry epoxy marking material shall reach a no-pick-up time in 60 minutes or less. A Bird

Applicator or other suitable instrument shall be used to spread a nominal 15 ± 1 mil thick wet film. Reflective glass spheres shall be immediately dropped onto the epoxy film at a rate of 18 pounds per gallon.

d) **Drying Time (Field)**

When installed at 77°F at the specified wet film thickness and reflectorized with glass spheres, regular-dry and slow-dry epoxy markings shall reach a no-track condition in approximately 30 minutes, and 60 minutes, respectively.

Dry to "no-tracking" shall be considered as the condition where no visual deposition of the epoxy marking to the pavement surface is observed when viewed from a distance of 50 feet, after a passenger car is passed over the line.

e) **Hardness.**

The epoxy composition when tested in accordance with ASTM D2240 shall have a Shore D hardness of between 75 and 100. Samples shall be allowed to cure for not less than 72 hours nor more than 96 hours prior to testing.

f) **Infrared Spectrophotometer Analysis (ASTM D2621)**

Samples of Part A and Part B shall be analyzed by infrared spectrography. The spectrum of each component shall be a reasonable match to the spectrum of the original formulation accepted by the Town.

C. Reflective Glass Spheres

Reflective glass spheres for drop-on application shall conform to the following requirements:

The glass spheres shall be colorless, clean, transparent, free from milkiness or excessive air bubbles, and essentially clean from surface scarring or scratching. They shall be spherical in shape and at least 80 % of the glass beads shall be true spheres when tested in accordance with ASTM is D-1155, Procedure A. The refractive index of the spheres shall be a minimum of 1.5 as determined by the liquid immersion method at 77°F. The silica content of the glass spheres shall not be less than 60 % .The glass spheres shall have the following gradation when tested in accordance with ASTM D-1214.

DOUBLE DROP METHOD

TYPE I

Sieve Opening	%Retained
No. 10	0
No. 12	0-5
No. 14	5-20
No. 16	40-80
No. 18	10-40
No. 20	0-5
Pan	0-2

TYPE II

Sieve Opening	%Retained
No. 20	0-5
No. 30	5-20
No. 50	30-50
No. 80	0-5
No. 100	0-5
Pan	0-2

The glass spheres, Type I, shall be coated with a silane-type adherence coating to enhance embedding in and adherence to the applied binder film. The coated beads shall emit a yellow-green fluorescence when tested by the Danayl Chloride test procedure. The Type II glass spheres shall be treated with a moisture-proof coating. The beads shall show no tendency to adsorb moisture in storage and shall remain free of clusters and lumps. The beads shall flow freely from the dispensing equipment at any time when surface and atmospheric conditions are satisfactory for marking operations. The moisture-resistance of the glass spheres shall be determined on the basis of the following test:

Place one kilogram of spheres in a washed cotton bag having a thread count of approximately 52 per square inch (warp and woof) and immerse the bag in a container of water for 30 seconds. Remove the bag and force excess water from the sample by squeezing the bag. Suspend and allow to drain for two hours at room temperature ($73 \pm 2^{\circ}\text{F}$). Then mix the sample in the bag by shaking thoroughly. Pour the sample slowly into a clean, dry glass funnel having a stem 4 inches in length, with a 0.4 inch inside diameter stem entrance opening and a minimum exit opening of 0.25 inches. The entire sample shall flow freely through the funnel without stoppage. When first introduced into the funnel, if the spheres clog, it is permissible to lightly tap the funnel to initiate the flow.

Reflective glass spheres may be accepted at the job site on the basis of the manufacturer's certification, or they may be submitted to the Town for testing.

D. Packaging and Shipment

Epoxy pavement marking materials shall be shipped to the job site in strong, substantial containers. Individual containers shall be plainly marked with the following information:

1. Name of Product
2. Item Number
3. Lot Number
4. Batch Number
5. Test Number
6. Date of Manufacture
7. Date of Expiration of Acceptance (6 months from date of manufacture)

8. The Statement (as appropriate): "Part A - Contains Pigment and Epoxy Resin," or "Part B - Contains Catalyst"
9. Quantity
10. Mixing Proportions, Application Temperature and Instructions
11. Safety Information
12. Manufacturer's Name and Address

Reflective glass spheres shall be shipped in moisture resistant bags. Each bag shall be marked with the name and address of the manufacturer and the name and net weight of the material.

Equipment and Application Requirements

A. Striping Equipment

The equipment shall have a system capable of spraying the epoxy paint in the manufacturer's recommended proportions and be mounted on a truck of sufficient size and stability, and with an adequate power source to produce lines of uniform dimension and prevent application failure. It shall be capable of placing stripes on the left and right sides and of placing two intermittent lines simultaneously. It shall also be capable of applying glass beads at the rate of 25 pounds per gallon. All guns must be in full view of the operator at all times. The equipment shall be provided with a metering device to register the accumulated installed footage for each gun each day. Each vehicle shall include at least one operator who shall be a technical expert in equipment operations and epoxy application techniques.

Equipment shall have such a design that the pressure gauges for each proportioning pump are constantly visible to the operator at all times during its operation so that any fluctuation and pressure difference can be addressed immediately.

B. Surface Preparation

The pavement surface on which the epoxy paint material is placed shall be clean and dry. Existing traffic markings shall be removed by blasting or grinding. The curing compound on Portland cement concrete shall also be removed. Existing markings shall be removed so that at least 95% of the underlying pavement is visible. The abrasive material shall be removed from the pavement surface before the pavement is opened to uncontrolled traffic flow.

C. Application

1. Epoxy -
The epoxy paint markings shall have a thickness of 25 mils \pm 1mil, calculated without drop-on glass beads. All markings shall have uniform thickness with a uniform distribution of glass beads throughout the line width. The width of lines shall be as specified with a tolerance of 0.25 inch. Markings shall have sharp edges and cutoff at the ends.

2. Glass Beads -
The glass beads shall be applied by the double drop method, which requires that Type I and Type II reflective glass spheres be injected into or dropped onto the liquid epoxy marking. Each type shall be applied simultaneously, at a minimum rate of 10 to 13 pounds per gallon of resin with a minimum total application of 25 pounds per gallon. Type I beads shall be applied first, immediately followed by Type II beads. The beads shall adhere to the cured epoxy or all marking operations shall cease until corrections are made.
3. Temperature Limitations -
During marking operations, the pavement surface where the epoxy is to be placed shall have a minimum temperature of 40° F and the air temperature shall be at least 35° F. The pavement surface temperature, and the air temperature shall be determined at the start of each day of marking operation and at any time deemed necessary by the Engineer. The spraying temperatures shall be in accordance with the manufacturer's recommendations.
4. Application Rates -
Application rates will be checked by the Engineer at convenient intervals by comparing tallies of materials used to the length of lines placed. For initial application and occasionally during the course of work, the Engineer may also check application to a pre-weighed sheet specifically placed for test purposes. Drop-on spheres shall not be applied in this test.
5. Protecting Newly installed Markings -
Newly installed markings shall be protected from tracking during the setting period by one or more of the following methods:
 - a) Cone off wet lines from traffic
 - b) Use a convoy of moving vehicles to prevent traffic from crossing wet lines
 - c) Saturate lines with glass beads to prevent tracking.

Portable Spectrophotometer for Measuring Color Specification

A. Use

Perform objective color measurements of road signs, pavement markings, barricades, and other traffic safety devices for the purpose of acceptance, approval or maintenance.

B. Measurement Parameters

Geometry: The spectrophotometer shall have a measurement geometry of 45° circumferential (illumination) and 0° (observation).

Spectral Range: The instrument shall have a spectral range of 400 to 700 nm.

Spectral Interval: The instrument shall have a spectral interval output of 20 nm. The internal computation spectral interval shall be 5nm.

Photometric Range: The instrument shall have a photometric range of 0 to 100% with a resolution of 0.01.

Standards: The instrument shall conform to the following standards:

- DIN 5033, 5036, 6174
- ISO 7724
- ASTM D2244, E308, E313, E1164

C. Calibration

Calibration Standards: The instrument shall be supplied with one durable white traceable calibration standard. The instrument shall also be supplied with one black and one green durable calibration standards.

D. Construction

Basic Construction: The instrument shall be rigidly constructed to maintain a fixed geometry and must not contain any foldable or collapsible parts.

Illumination: the instrument shall utilize an LED lamp system for sample illumination.

This lamp system shall consist of 30 individual LED's. There shall be 3 LED's per color oriented at 120 degrees from each other to provide accurate light control and a larger sample port size.

The illumination system shall not raise the temperature of the sample being measured either during a single measurement or during multiple, repeated measurements.

Dimensions: The instrument's physical dimensions shall be 3,75 inches wide, 3.5 inches tall and 7 inches long. The instrument shall weigh 32 ounces.

Power Source: The instrument shall be powered by four AA size alkaline, NiCd or MH batteries. The instrument shall be capable of taking at least 5000 measurements on one set of fully charged batteries.

E. Use and Control

Display: The instrument shall use a 2.4 x 1.2 inch liquid crystal display, 126 x 64 pixels.

Illuminants: The instrument shall be able to measure samples with type A, C, D65, F2, F7, and F11 illuminants.

Observers: The instrument shall be able to measure samples with 2° and 10° observer.

Display Modes: The instrument shall be capable of operating in several different modes including:

- Absolute color data

- Pass/Fail
- Color difference
- Metamerism
- Spectral Curve

Color Systems: The instrument shall be capable of measuring and displaying color data with different color systems including:

- Yxy
- CIELab
- CEILCh/H
- Lab(h)
- FMC2
- XYZ
- RxRyRz

Indices: The instrument shall be capable of measuring and displaying different color indices including:

- YIE313
- YID1925
- WIE313
- CIE
- Berger
- Color Strength
- Opacity
- Metamerism MI

Color Differences: The instrument shall be able to measure and display color differences including:

- Delta E*
- Delta E(h)
- Delta E_{FMC2}
- Delta E₉₄
- Delta E_{CMC}

Data Storage: The instrument shall utilize internal, memory for storing measurement data. The instrument shall be capable of storing approximately 1000 samples. In addition, the instrument shall be capable of storing approximately 200 standards. A 15-year lithium battery shall independently power the data memory.

Data Output: The instrument shall be equipped with a data port to allow for data output directly to a printer or Windows™ applications.

F. Equipment

The instrument shall be equipped complete with a user's manual, batteries, carrying case, black calibration standard, white calibration standard, green calibration standard, sample area locator, PC interface cable with adapter, wrist strap, and a color theory guide.

One manufacturer of the above piece of equipment is BYK-Gardner Color Guide Portable Spectrophotometer Cat# 530160. The additional set of calibration standards may be obtained from Flint Trading, Inc., Thomasville, NC (Tel 336-475-6600).

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Items 868.04, 868.12, and 869.04 will measured and paid for at the respective Contract prices per foot, which prices shall include all labor, material, equipment and incidental costs required to complete the work.

ITEM 874.01
ITEM 874.2

STREET NAME SIGN – TOWN STANDARD
TRAFFIC SIGN REMOVED AND RESET

EACH
EACH

The work under these items shall conform to the relevant provisions of Section 828 of the Standard Specifications and the following:

The Contractor shall carefully remove and reset at new locations all existing signs, attachment hardware and sign support posts not included under other sign items as shown on the drawings and as directed by the Engineer.

Street name signs shall be installed as shown on the plans and as directed by the Engineer. Final location of street signs shall be as approved by the Town.

Signs, attachment hardware and sign support posts shall be satisfactorily stored and protected until reset in the proposed work.

Signs, attachment hardware and sign support posts lost, damaged or otherwise made unsuitable for reuse while being removed, transported, stored or reset shall be replaced with new materials at no additional cost to the Owner. New attachment hardware shall be furnished and installed as necessary to replace any missing or unusable existing hardware.

Included under Item 874.2 are Warning-Regulatory and Route Marker signs, and miscellaneous directional signs and decorative street name signs.

Method of Measurement and Basis of Payment

Street name sign – town standard & Traffic sign removed and reset will be measured for payment as a unit, complete in place.

Street name sign – town standard & Traffic sign removed and reset will be paid for at the respective Contract unit price per each, which prices shall include all labor, material, equipment and incidental costs required to complete the work.

ITEM 874.4**TRAFFIC SIGNS REMOVED AND STACKED****EACH**

The work under this item shall conform to the relevant provisions of Section 828 of the Standard Specifications and the following:

The work shall include the careful removal, transporting and stacking of signs, attached hardware and supports from locations shown on the plans and as directed by the Engineer.

The Contractor shall accept and hold entirely responsibility for the removal, handling and stacking at a location convenient for removal by the owner. Any signs and posts damaged or lost either directly or indirectly as a result of the Contractor's operations shall be replaced by the Contractor at no additional cost. The Contractor shall coordinate the removal of signs and posts with the Town by notifying the Town prior to and at the completion of the above work. Existing signs shall remain in place until proposed new signs are in place.

The signs shall be neatly stacked at the Brewster DPW Yard.

Measurement and Payment

Traffic Sign Removed and Stacked will be measured by number of signs stacked.

Traffic Sign Removed and Stacked will be paid for at the Contract unit price per each, which price shall include all labor, material, equipment and incidental costs required to complete the work.

ITEM 999.**CONSTRUCTION STAKING****LUMP SUM**

Under this item, the Contractor shall layout and set all lines, grades, and measurements necessary for construction of the work. The Engineer shall provide information on the baseline system and elevation control available.

All staking shall be directed and performed by qualified engineering or surveying personnel who are trained, experienced and skilled in construction layout of the type required under this Contract. The Contractor shall submit the qualifications of the survey personnel to the Owner for review and approval. The Owner reserves the right to reject any personnel which, in the Owner's judgment, are not adequately qualified. The Owner also reserves the right to evaluate the performance of the survey personnel during the course of the work and to require the replacement of any personnel whose work, in the judgment of the Owner, is unsatisfactory.

The Engineer may check the layout as established by the Contractor at any time as the work progresses. The Contractor shall be informed of the results of these checks, but the Engineer by doing so in no way relieves the Contractor of his responsibility for the accuracy of the layout work. The Contractor shall correct or replace any deficient layout and construction work which may be the result of inaccuracies in the Contractor's layout at no additional cost to the Owner.

The Contractor shall obtain accurate elevations of the existing pavements and compare them with the proposed elevations shown on the drawings to determine the extent and depth of milling and/or leveling course required within the proposed pavement overlay areas.

Construction staking will be paid for at the Contract lump sum price for Item 999, which price shall include all labor, material, equipment and incidental costs required to complete the work.

ITEM 999.1

POLICE DETAILS

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 either the Engineer or the Town for the direction and control of all traffic traveling within and through the project area. The police officers shall be obtained from the Town Police Department as applicable. The police officers shall be paid by the Contractor at the prevailing rate of wages established by the Town.

METHOD OF MEASUREMENT

Item 999.1 Police Details is measured by multiplying the number of hours estimated as necessary by the prevailing hourly rate of wages established for such services. The Contractor shall submit certified copies of itemized bills of services rendered for review and approval by the Engineer.

Payment

The quantity to be paid for under this item shall be the actual amount paid by the Contractor to provide satisfactory police services as stipulated and required. Any overhead costs shall be considered to be included in the prices bid for the other items of the Contract.

"ATTACHMENT A"

Permits/Conditions

501639v2/99999/0003

00850-3



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:
SE9-1958
MassDEP File #

eDEP Transaction #
Brewster
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: Brewster
Conservation Commission

2. This issuance is for (check one):
a. Order of Conditions b. Amended Order of Conditions

3. To: Applicant:
a. First Name Peter b. Last Name Lombardi

c. Organization Town of Brewster/Select Board

d. Mailing Address 2198 Main Street

e. City/Town Brewster f. State MA g. Zip Code 02631

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:
a. Street Address Millstone Road Layout b. City/Town Brewster

c. Assessors Map/Plat Number Multiple d. Parcel/Lot Number Multiple

Latitude and Longitude, if known: 41d46m16.77s 70d2m38.86s
d. Latitude e. Longitude



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

Provided by MassDEP:
SE9-1958
 MassDEP File # _____
 eDEP Transaction # _____
Brewster
 City/Town _____

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Barnstable
 a. County _____ b. Certificate Number (if registered land) _____
2026 _____ 320 _____
 c. Book _____ d. Page _____
7. Dates: 8/25/2023 _____ 9/12/2023 _____ 10/23/2023 _____
 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):
Plan and Profile of Millstone Road
 a. Plan Title _____
Vanasse Hangen Brustlin, Inc (VHB) _____ Stephen J. Rhoads, RPC _____
 b. Prepared By _____ c. Signed and Stamped by _____
9/14/2023 _____ Various on 8 Sheets _____
 d. Final Revision Date _____ e. Scale _____
Stormwater Management Memorandum Attachment C within NOI _____ 8/XX/20023 _____
 f. Additional Plan or Document Title _____ g. Date _____

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:
 Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:
- a. Public Water Supply b. Land Containing Shellfish c. Prevention of Pollution
 d. Private Water Supply e. Fisheries f. Protection of Wildlife Habitat
 g. Groundwater Supply h. Storm Damage Prevention i. Flood Control
2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

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



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

Provided by MassDEP:
 SE9-1958
 MassDEP File #
 eDEP Transaction #
 Brewster
 City/Town

B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
- 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) 0 a. linear feet

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

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	145* Isolated Veg Wetland	145* Isolated Veg Wetland	c. square feet	d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	a. square feet e. c/y dredged	b. square feet f. c/y dredged	c. square feet	d. square feet
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



Massachusetts Department of Environmental Protection
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SE9-1958
 MassDEP File # _____
 eDEP Transaction # _____
Brewster
 City/Town _____

B. Findings (cont.)

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

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	_____	_____	_____	_____
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	_____	_____	_____	_____
	a. square feet	b. square feet	c. nourishment	d. nourishment
			cu yd	cu yd
14. <input type="checkbox"/> Coastal Dunes	_____	_____	_____	_____
	a. square feet	b. square feet	c. nourishment	d. nourishment
			cu yd	cu yd
15. <input type="checkbox"/> Coastal Banks	_____	_____		
	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	_____	_____		
	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> 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. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	_____		
	a. square feet	b. square feet		
22. <input type="checkbox"/> Riverfront Area	_____	_____		
	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	_____	_____	_____	_____
	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	_____	_____	_____	_____
	g. square feet	h. square feet	i. square feet	j. square feet



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

Provided by MassDEP:
 SE9-1958
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B. Findings (cont.)

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

23. Restoration/Enhancement *:
- a. square feet of BVW _____ b. square feet of salt marsh _____
24. Stream Crossing(s):
- a. number of new stream crossings _____ b. number of replacement stream crossings _____

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or 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 10/23/2026 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



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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 SE9-1958 "
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):

See Special Conditions.

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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Bureau of Resource Protection - Wetlands

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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 Brewster Conservation Commission hereby finds (check one that applies):
 - a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

<u>Code of the Town of Brewster</u>	<u>172</u>
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:

<u>Code of the Town of Brewster</u>	<u>172</u>
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):

See Special Conditions.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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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.

1. Date of Issuance


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

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

2. Number of Signers

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

Brewster Conservation Commission

Signature 

Mike Tobin, Chair

Printed Name

Signature 

Casey Chatelain, Vice Chair

Printed Name

Signature

Bruce Evans

Printed Name

Signature 


Gary Kaser

Printed Name

Signature 

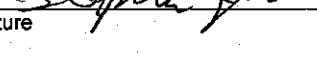
Kimberley Crocker Pearson

Printed Name

Signature 

Ron Slowek

Printed Name

Signature 

Steve McKenna

Printed Name

Signature

Printed Name

by hand delivery on

by certified mail, return receipt requested, on

DATE OCTOBER 23, 2023

Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

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

Provided by MassDEP:

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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.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
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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.

Brewster
Conservation Commission

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

To:
Brewster
Conservation Commission

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

Millstone Road Layout, Brewster, MA SE9-1958
Project Location MassDEP File Number

Has been recorded at the Registry of Deeds of:

Barnstable _____ _____
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**

DEP File Number:

**Request for Departmental Action Fee
Transmittal Form**

Provided by DEP

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

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
Bureau of Resource Protection - Wetlands

DEP File Number:

**Request for Departmental Action Fee
Transmittal Form**

Provided by DEP

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

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.

Addendum A to WPA Form 5 – Order of Conditions

Town of Brewster, Millstone Road Layout; Order of Conditions SE9-1958, Assessor's Multiple Map, Multiple Parcel

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
Massachusetts Wetlands Protection Act (M.G.L. C.131 S. 40)
And
Code of the Town of Brewster Chapter 172
Brewster Wetlands Protection By-law (BWP By-law)

Project Description: Road improvements including surfacing and stormwater drainage features and vegetated management within an isolated vegetated wetland as well as the 100-foot buffer zone to an isolated vegetated wetland and potential vernal pool.

Resource Area Identification:

The affected resource areas under the Massachusetts Wetlands Protection Act (M.G.L. Ch.131 §. 40) are Isolated Vegetated Wetland (310 CMR 10.55).

The affected resource areas under the Brewster Wetlands Protection By-law (Chapter 172) are Vegetated Wetland (Brewster Wetland Regulations 3.02).

Interests Protected by the Brewster Wetlands Protection By-law:

Wildlife
Groundwater Supply
Flood Control
Storm Damage Prevention
Prevention of Pollution
Historic Values
Aesthetics

Performance Standards Implicated by Proposed Project under Mass. Wetlands Protection Act and Wetland Regulations:

Bordering Vegetated Wetland, 310 CMR 10.55(4)

Local Performance Standards Implicated by Proposed Project under Brewster Wetlands Protection Bylaw and Wetlands Regulations:

Vegetated Wetland, 3.02(3) (4)

Findings under Massachusetts Wetlands Protection Act and Wetland Regulations

The Brewster Conservation Commission finds that the project can be conditioned to meet the performance standards set forth in the wetland regulations. See Special Conditions below.

Bordering Vegetated Wetlands, 310 CMR 10.55(4): Portions of the proposed project occur within an Isolated Vegetated Wetland and the 100 foot buffer zone to the Isolated Vegetated Wetland. The Commission finds that the proposed work can be conditioned so it will not alter or otherwise impair nor result in a loss of any portion of the Isolated Vegetated Wetland.

Findings under Brewster Wetlands Protection Bylaw and Wetlands Regulations

The Brewster Conservation Commission finds that the project can be conditioned to comply with the Brewster Wetlands Protection Bylaw and Regulations. See Special Conditions below.

Portions of the proposed work are within an Isolated Vegetated Wetland and the 50 and 100 foot buffer zones to the Isolated Vegetated Wetlands.

Section 3.02(3) of the Brewster Wetlands Protection Regulations requires a variance from the regulations granted pursuant to Section 5.01 of the regulations.

A variance may be granted only for the following reasons and upon the following conditions:

- a) *1) mitigating measures are proposed that will allow the project to be conditioned so that it contributes to the protection of the resource values identified in the Wetlands Bylaw; and*
- 2) the Conservation Commission finds no reasonable alternative for such a project within the proposed site; and*
- 3) there will be no adverse impact from the proposed project; or*
- b) *that the project is necessary to accommodate an overriding public interest or that it is necessary to avoid a decision that so restricts the use of property that it constitutes an unconstitutional taking without compensation.*

The Brewster Conservation Commission finds that mitigating measures have been proposed that will allow the project to be conditioned so that it contributes to the protection of the resource values identified in the Wetlands Bylaw. The mitigating measures include installation of conservation markers/monumentation to clearly identify the limit of work for field maintenance crew performing annual vegetative management (grubbing, clearing and pruning), drainage improvements, and erosion control measures.

Alternatives were addressed by Griffin Ryder, Brewster Department of Public Works Director and VHB staff during a public hearing on September 12, 2023. The Conservation Commission finds that the proposed project is a reasonable alternative.

The Brewster Conservation Commission finds that the project can be conditioned so there are no adverse impacts from the proposed project to the interests protected by the Brewster Wetlands Protection Bylaw.

The Brewster Conservation Commission finds that variance criteria b), *“that the project is necessary to accommodate an overriding public interest or that it is necessary to avoid a decision that so restricts the use of property that it constitutes an unconstitutional taking without compensation.”* does apply to this project.

For the above stated reasons, the Conservation Commission grants a variance to Sections 3.02(3) of the Brewster Wetlands Protection Bylaw Regulations.

Vegetated Wetlands, 3.02(3) (4):

Portions of the proposed work are located within an Isolated Vegetated Wetland and the 50 and 100 feet buffer zone to the Isolated Vegetated Wetland. The Conservation Commission finds that the project can be conditioned so it will not impair the vegetated wetlands' ability to perform any of the functions set forth in Section 3.02(1).

Special Conditions under the Mass. Wetlands Protection Act and Wetland Regulations and under the Brewster Wetlands Protection Bylaw and Wetlands Regulations:

The Brewster Conservation Commission hereby finds that the following additional conditions are necessary to comply with the performance standards set forth in the Mass. Wetlands Protection Act and Wetland Regulations and the Brewster Wetlands Protection Bylaw and Wetland Regulations.

The Conservation Commission orders that all work shall be performed in accordance with said additional 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.

A1. All local, state and federal approvals shall be obtained for this project before work can commence. Copies of all approvals shall be forwarded to the Brewster Conservation Commission.

A2. This permit is granted under Section 172-7 of the Brewster Wetlands Protection Bylaw, subject to the conditions imposed, for a period of three years from the issuance date of the original Order of Conditions. The Conservation Commission may issue one year extensions based on review of the site and other criteria. Requests for each extension shall be submitted in writing, no less than 30 days prior to the expiration date.

This Order of Conditions shall expire on October 23, 2026.

A3. The Agent or other employee, members of the Conservation Commission and officials of 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. Said persons may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation. This right of entry shall remain until such time as a Certificate of Compliance has been issued, recorded in the Registry of Deeds or Land Court, Barnstable County, and returned to the Conservation Department.

A4. This order shall apply to any successors and assigns in interest or control and any other person engaging in activity on the property identified in the Notice of Intent.

A5. Violation of any of these Conditions shall subject the violator and the landowner to a fine (of not more than \$300.00 per day) pursuant to Section 172-11 of the Town of Brewster Wetlands Protection By-law, until all violations have been corrected to the satisfaction of the Brewster Conservation Commission.

A6. All work shall be in accordance with the approved plans and documents referenced in A. General Information Item 8 of the WPA Form 5, Order of Conditions/SE9-1958. If any changes are made in the above-described plan(s) which may or will alter an area subject to protection under the Wetlands Protection Act and the Town of Brewster Wetlands Protection By-law, or any changes in activity subject to regulations under G.L. c. 131 §40, or the Town of Brewster local regulations occurs, the applicant shall inquire from this Commission in writing, prior to implementation in the field, whether the change(s) is significant enough to require an Amended Order of Conditions or the filing of a new Notice of Intent. Any errors in the plans or information submitted by the applicant shall be considered changes and the above procedures shall be followed.

A7. Prior to clearing, excavation, construction, an erosion control barrier (silt fence and staked straw wattles/haybales) shall be properly installed, as shown on the plan of record. This barrier shall constitute the limit of work. No work shall take place on the wetland side of the barrier. The siltation barrier shall be removed only after any threat of erosion no longer exists, and all disturbed areas are stabilized by vegetation or other means. Any siltation buildup on the upland side shall be removed. Any commencement of work activities prior to the proper installation of erosion controls and an inspection and approval by the Conservation Commission may result in a cease and desist action, and possible fines of up to \$300.00 per day for each day of violation.

A8. A supply of extra siltation barriers shall be stored on site for emergency use.

A9. After the siltation barrier has been set and a minimum of five (5) days before commencement of work, the owner shall notify the Conservation Department using the ***Owner affirmation of responsibility for work/request for site inspection...*** form, which shall be signed by the owner of the property as well as the contractor in charge of the work. The Commission's Agent will schedule an on-site meeting of the contractor(s) responsible, and the Conservation Agent, for an inspection of the erosion control barriers, and to ensure that the requirements of this Order are

understood. No work shall begin until after the on-site meeting.

At the on-site meeting, the contractor and the Conservation Agent will review access and work protocol.

During this on-site consultation, the Conservation Agent or Commissioner may require minor modifications to the approved site plan (relating to work/construction methodology) to the Order of Conditions. If so, said conditions will be provided in writing at the time of said on-site meeting.

A10. Also prior to commencement of work, a series of dated color photographs shall be taken of the entire resource area and buffer area, and siltation barrier, and shall include any erosion and revegetation area. A set of photographs shall be submitted to the Conservation Department for the applicant's permit file, with the notification form. These photos shall be labeled with the Assessor's Map and Parcel, and street address, date and general view description.

Another series of dated color photographs shall be taken of the resource area and buffer area when the work is completed, and fully revegetated and stable. These photographs shall be submitted to the Conservation office at the time a Certificate of Compliance is requested, and shall remain in the applicant's permit file. The photos shall be labeled with the Assessor's Map and Parcel, and street address, date and general view description.

A11. Heavy equipment or machinery is permitted for use in the construction of the road surfacing and stormwater features as well as the vegetative management. No heavy machinery is allowed beyond the designated siltation barrier/limit of work. Heavy equipment or machinery shall be operated within the roadway to the best extent practicable. Vegetation management within the footprint of the isolated vegetated wetlands shall be completed by machinery commonly used in the maintenance and upkeep of Brewster road layouts, hand or with hand tools following initial construction.

A12. Any debris, fill or excavated material on site shall be stockpiled away from designated wetlands. Unsuitable or excess excavated material shall be properly stabilized or removed from the buffer zone to the isolated vegetated wetland.

A13. Any leakage of oil, hydraulic fluid, fuel, or any other pollutant shall be cleaned up immediately, and the defective equipment responsible for said leakage shall be immediately repaired or taken off site. Maintain a spill prevention kit on site. In the case of any spills within the buffer zone to the isolated vegetated wetland, notify the Conservation Administrator within 24 hours.

A14. Mulch shall not be a substitute for groundcover or shrubs in jurisdictional areas.

A15. Pesticides, herbicides and fungicides shall be prohibited within 100 feet of any wetlands.

A16. Any disturbed slopes on site shall be revegetated with appropriately sized and spaced approved plant species* and stabilized with 100% biodegradable erosion control netting, which shall stay in place after final grading. Other disturbed areas shall be covered with four to six inches of organic topsoil which is free of weed seeds and debris, and planted with appropriately sized and spaced approved plant species*. All disturbed areas shall be completely revegetated during the first growing season after the permitted work is complete. *Approved plant species, size and spacing are those on the list of acceptable plantings of the Cape Cod Cooperative Extension (www.capecodextension.org). Turf lawn is prohibited within the 100 foot buffer zone to wetlands.

A17. Access for the construction of the road surfacing and stormwater features as well as the vegetative management shall be from the roadway referenced in the approved site plans and documents referenced in A. General Information Item 8 of the WPA Form 5, Order of Conditions/SE9-1958.

A18. If any dewatering or draw-down activities are necessary for the project, untreated water shall not be directly released into the Isolated Vegetated Wetland or Stormwater drainage system that discharges into the Isolated Vegetated Wetland. This requirement also applies to discharge of any and all construction generated runoff, whether released by gravity or pumped. Seek guidance from the Conservation Administrator within 24 hours upon discovery of any breach of Special Condition A18 or A32.

Annual Vegetation Management To Maintain Clear Vehicle and Pedestrian Passage

A19. Installation of in-ground irrigation systems shall be prohibited within 100 feet of any wetland resource areas. Temporary above ground irrigation systems may be used to establish mitigation plantings.

A20. Any fertilizers used within 100 feet of any wetland resources shall be listed by or comprised of organic ingredients consistent with the United States Department of Agriculture National Organic Program (NOP). Organic fertilizers shall be used in an appropriate manner for the conditions of the subject property, and applied in accordance to the manufacturer's specifications.

A21. Removal and cutting of vegetation shall be minimal and in accordance with the approved plans.

A22. All vegetation approved for removal shall be taken from the site to an appropriate upland location outside the 100-foot buffer zone.

A23. To protect wildlife, the initial removal of vegetation for vehicle and pedestrian passage within the Isolated Vegetated Wetland and buffer zone to the Isolated Vegetated Wetland from February 15 thru May 15, notify the Conservation Administrator for a field review and guidance on best practices including reporting. For ongoing maintenance including invasive species removal within the Isolated Vegetated Wetland and buffer zone to the Isolated Vegetated Wetland, vegetative management shall not occur from February 15 through May 15, annually.

A24. An on-site meeting with the Conservation Agent shall be required prior to the commencement of any vegetation removal activities.

A25. A written work notice/request for site inspection shall be submitted a minimum of five (5) days prior to each pruning or invasive management session.

A26. Any vegetation removal activities beyond that which the Brewster Conservation Commission or its Agent has approved, shall result in the issuance of an immediate cease and desist Enforcement Order, and complete mitigation/restoration of the site shall be required, voiding this Order of Conditions. The applicant/owners shall then reapply for further work.

Conservation Markers/Monumentation

A27. Prior to 1st annual vegetation management work/activities, the Conservation Markers/Monumentation shall be installed in the vicinity of WF-101 and WF-104 on secure posts a minimum of 4" X 4" 40" above grade with the conservation markers/monumentation facing Millstone Road for easy identification by field highway crew and the public.

A28. The Conservation Markers/Monumentation shall remain posted in perpetuity.

A29. Any damaged or decayed Conservation Markers/Monumentation or the associated posts shall be replaced within 30 days of discovery.

Road Resurfacing and Stormwater Improvements

A30. The construction and implementation of the road resurfacing and stormwater improvements shall follow the approved site plans and documents referenced in A. General Information Item 8

of the Order of Conditions/SE9-1958 as well as any subsequent permits including any Ch. 272 Stormwater Permitting requirements. See Special Conditions A1 and A6 above.

A31. To protect wildlife, the initial road resurfacing and stormwater management feature improvements within the Isolated Vegetated Wetland and buffer zone to the Isolated Vegetated Wetland from February 15 thru May 15, notify the Conservation Administrator for a field review and guidance on best practices including reporting. For ongoing maintenance within the Isolated Vegetated Wetland and buffer zone to the Isolated Vegetated Wetland, vegetative management shall not occur from February 15 through May 15, annually.

A32. The ongoing routine road surface and stormwater management feature maintenance shall follow the approved site plans and documents referenced in A. General Information Item 8 as well as any subsequent permits including any Ch. 272 Stormwater Permitting requirements. See Special Conditions A1 and A6 above.

A33. There shall be no untreated discharge into the isolated vegetated wetland. Any breach of Special Conditions A18 or A32 shall result in notification within 24 hours to the Conservation Administrator for guidance on best practices.

Extensions and Ongoing Conditions

A34. As this project has longevity and is a public benefit, please submit an Extension Order of Conditions 30 days in advance of the Expiration Date of these Order of Conditions/SE9-1958 or any subsequent Amended Order of Conditions or Extended Order of Conditions for Commission subsequent review, determination and ratification of up to a (3) three-year extension.

A35. As this project has longevity and is a public benefit, seek guidance from the Conservation Administrator about potential Commission approval for Ongoing Conditions ensuring that these Order of Conditions/SE9-1958 remain in perpetuity as per the Commission's subsequent review, determination, conditions and ratification.

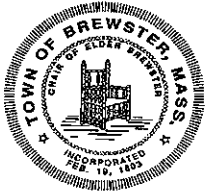
Project Completion/Certificate of Compliance

A36. A final report, which shall include any affect on the wetland resources shall be submitted following completion of the project and prior to a Request for Certificate of Compliance. A final series of dated color photographs shall be taken of the resource and buffer areas when the work is completed. These photographs shall be submitted to the Conservation office at the time a Certificate of Compliance is requested, and shall remain in the applicant's permit file. These photos shall be labeled with the Assessor's Map and Parcel, and street address, date and general view description.

A37. On completion of the entire project, the applicant or representative shall submit a written request for a Certificate of Compliance on WPA Form 8A - Request for Certificate of Compliance MA WP ACT. The plan of record contains the stamp of a Registered Professional Engineer (RPE). It is further required that a written statement by a RPE certifying substantial compliance with the plan and an "as-built" plan be included. If the "as built" plan shows any deviation from the approved plan, the PE/PLS, shall describe said deviation in the statement. This form shall be accompanied by payment of a non-refundable fee to the Town of Brewster. Without a Certificate of Compliance which has been recorded (at the Registry of Deeds or Land Court, whichever applies), an encumbrance shall remain on the property, and your filing will not be closed.

BARNSTABLE REGISTRY OF DEEDS

John F. Meade, Register



Town of Brewster
Stormwater Management Permit Form
Code Chapter 272

Permit Number	SWMP23-43
Property Address	Millstone Road
Map/ Parcel Information	Maps 85, 86, 97, 98, 99, 100, 101
Deed Reference	Deed Book 1291 Page 1139
Property Owner/ Applicant	Town of Brewster
Applicant c/o or mailing address	Brewster Department of Public Works, Griffin Ryder, Director 201 Run Hill Road, Brewster, MA 02631

Date of Vote/ Public Meeting date: 12/13/23

Permit Issuance Date: See Signature below

Type of Permit:

- Minor Stormwater Permit
- Major Stormwater Permit
- Stormwater Permit Amendment

Decision:

- Approved
- Approved with Conditions, Limitations or Restrictions
- Disapproved with Prejudice
- Disapproved without Prejudice
- Withdrawn without Prejudice

The stormwater permit application meets the applicable performance standards and submission requirements set out in the Town's Stormwater Management Regulations, including without limitation Section 6.2.B.7. ("Redevelopment") therein. A portion of the project route is within wetlands jurisdiction and an Order of Conditions has been issued authorizing the same.

Project Description: Millstone Road Improvement Project, consisting of multi-modal transportation, drainage, landscaping and safety improvements along the 2.5 mi +/- road corridor.

- Approval is subject to the continuing obligations set out in the following sections of the Brewster Stormwater Regulations: Sections 5.7 (Permit Duration), 5.8 (Project Changes), 5.9 (Certificate of Compliance), 6.1B (Construction controls), 7.2 (Inspections), and 8.5 (O&M Changes).
- A copy of this permit, along with the project's Operation and Maintenance (O&M) plan appended (Attachment D to the Stormwater Management Memorandum by VHB), shall be recorded at the Barnstable Registry of Deeds and provided to the Brewster Planning Office per Section 8.3 of the Brewster Stormwater Regulations.
- The stormwater management system shall be undertaken consistent with the Approved Plans referenced below, including the O&M plan.

Approved Plans List

- Stormwater Management Memorandum, including Appendix (Figures 1 & 2; Attachments A through F) prepared by VHB dated 10/31/23
- Millstone Road Plan Set (including profiles and details), prepared by VHB, dated October 2022, consisting of Sheets 1 through 123, with supplemental Sheet 76A (rain garden details- Spring Rock) submitted November 2023.

Signature page follows

SIGNATURES

Executed this 20 day of December, 2023

Stormwater Authority, Brewster Planning Board,
By:



Alexander Wentworth, Acting Chair

The Brewster Stormwater Management Bylaw and accompanying Regulations, Chapter 272 of the Brewster Code, do not contain a specific appeal process or appeal period for Stormwater Management Permits issued under said Bylaw.

Filed with:
TOWN CLERK: Colette Williams
DATE RECEIVED: December 20, 2023



ENC- Stormwater O&M Plan
cc: Brewster Building Dept.



Memorandum

Attachment D

Operation and Maintenance/Long-Term Pollution Prevention Plan



101 Walnut Street
PO Box 9151
Watertown, MA 02472-4026
P 617.924.1770

**Millstone Road Improvement Project
Stormwater Management System**

**Operation and Maintenance Plan (O&M)
and
Long Term Pollution Prevention Plan (LTPPP)**

October 2023

This Stormwater Management System Operation and Maintenance (O&M) Plan provides for the inspection and maintenance of structural Best Management Practices (BMPs) and for measures to prevent pollution associated with the Millstone Road Improvement Project in the Town of Brewster.

This document has been prepared in accordance with the requirements of the Stormwater Regulations included in the Massachusetts Wetlands Protection Act Regulations (310 CMR 10).

Responsible Party

The Town of Brewster will be responsible for the maintenance of the roadway facilities and associated stormwater management features, in accordance with Town standards.

Questions or concerns regarding maintenance activities may also be addressed to Town of Brewster:

Town of Brewster
201 Run Hill Road
Brewster, MA 02631
Phone: (508) 896-3212

Maintenance Measures

The stormwater management system covered by this Operation and Maintenance Plan consists of the following components:

- Catch Basins
- Gutter Inlets
- Leaching Basins
- Leaching Galleys
- Rain Garden

Maintenance of these components will be conducted in accordance with Town of Brewster standard maintenance practices, as noted in the attached Operation and Maintenance table summarizing the pertinent inspection and maintenance activities.

If inspection indicates the need for major repairs of structural surfaces, the inspector should contact the Town of Brewster to initiate procedures to effect repairs in accordance with Town of Brewster standard construction practices.

Practices for Long Term Pollution Prevention

In general, long term pollution prevention and related maintenance activities will be conducted consistent with Town of Brewster's NPDES Stormwater MS4 Permit.

For the facilities covered by this Operation and Maintenance Plan, long term pollution prevention includes the following measures:

Routine Inspection and Maintenance of Stormwater BMPs

The Town of Brewster will conduct inspection and maintenance of the stormwater management practices in accordance with the information in Table 1.

Spill Prevention and Response

In the event of a release of oil or hazardous materials such as fuels, oils, or chemical materials onto the ground or other areas that could reasonably be expected to discharge to surface or groundwater, reportable quantities will immediately be reported to the applicable Federal, State, and local agencies as required by law. Reportable quantities of chemical, fuels, or oils are established under the Clean Water Act and enforced through DEP.

Applicable containment and cleanup procedures will be performed immediately. Impacted material collected during the response must be removed promptly and disposed of in accordance with Federal, State, and local requirements. A licensed emergency response contractor may be required to assist in cleanup of releases depending on the amount of the release and the ability of the responsible party to perform the required response.

Snow and Ice Management

Snow and Ice Management shall be conducted according to standard Town of Brewster standard practices. Stockpiling and disposal of snow or ice removed from highways and streets located outside of a Zone II that contains sodium chloride, chemically treated abrasives or other chemicals used for snow and ice removal is prohibited within Zones I and II of the Town's Groundwater Protection District in accordance with the Town of Brewster Water Quality Protection Bylaw.

Prohibition of Illicit Discharges

The DEP Stormwater Management Standards prohibit illicit discharges to the storm water management system. Illicit discharges are discharges that do not entirely consist of stormwater, except for certain specified non-stormwater discharges.

Discharges from the following activities are not considered illicit discharges:

firefighting	foundation drains
water line flushing	footing drains
landscape irrigation	individual resident car washing
uncontaminated groundwater	flows from riparian habitats and wetlands
potable water sources	dechlorinated water from swimming pools
water used to clean residential buildings without detergents	water used for street washing
	air conditioning condensation

There are no known or proposed illicit connections associated with this project. If a potential illicit discharge to the facilities covered by this plan is detected (e.g., dry weather flows at any pipe outlet, evidence of contamination of surface water discharge by non-stormwater sources), the Town of Brewster shall be notified for assistance in determining the nature and source of the discharge, and for resolution through the Town's IDDE program.

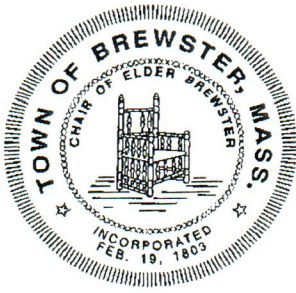
Table 1: Best Management Practices: Operation & Maintenance Measures

Best Management Practice	Sweep	Mow	Inspect	Clean	Repair
Street Sweeping	Annually	NA	NA	NA	NA
Catch Basins	NA	NA	Annually	ANI*	ANI
Gutter Inlets	NA	NA	Annually	ANI	ANI
Leaching Basins	NA	NA	Annually	ANI	ANI
Leaching Galleys	NA	NA	Annually	ANI	ANI
Rain Garden	NA	ANI	Annually	ANI	ANI

NA = Not Applicable

ANI = As needed based on inspection

* = Remove sediment when catch basin sump is 50% full



Town Of Brewster
Planning Board
2198 Main Street
Brewster, Massachusetts 02631-1898
(508) 896-3701 ext. 1133

January 25, 2024

Mr. Peter Lombardi
Town Manager
Town Hall, 2198 Main Street
Brewster, Massachusetts 02631

Re: Planning Board Case No. 2024-02
Joint Public Hearing under GL C. 87, Sec. 3 & C. 40, Sec 15C
Brewster Planning Board and Brewster Tree Warden
Associated Tree Work, Millstone Road Improvements Project

Dear Peter:

Please be advised that, at a duly-noticed joint public hearing held last night, Wednesday, January 24, 2024, the Planning Board voted unanimously, five members in favor, none opposed, to allow the above-referenced work, as proposed by the Town of Brewster c/o the Department of Public Works, to proceed without objection, subject to the following conditions, that the Town:

- 1) Continue the public outreach, planning and decision-making process for the tree work as described in the memorandum from Griffin Ryder, DPW Director, dated January 4, 2024, contained in the application package;
- 2) Submit revised plans to the Board seasonably to reflect changes in the tree work as the Project advances; and
- 3) Undertake the work in consideration of the bird nesting season to the maximum extent practicable.

The Board was impressed with and appreciated the clarity of the application and presentation. Further, the Board commends the Town for its "community-centered" approach to Project design and planning, including for the associated tree work.

Sincerely,

Alex Wentworth
Vice Chair
Brewster Planning Board

cc: File
Griffin Ryder, DPW Director
Josh Sargent, Brewster Tree Warden
Colette Williams, Brewster Town Clerk

“ATTACHMENT B”

Prevailing Wage Rates



MAURA HEALEY
Governor

KIM DRISCOLL
Lt. Governor

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

Prevailing Wage Rates

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: Town of Brewster
Contract Number: **City/Town:** BREWSTER
Description of Work: Roadway Milling, resurfacing, full depth pavement reconstruction and sidewalk construction
Job Location: along Millstone Road

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$38.95	\$15.07	\$18.67	\$0.00	\$72.69
	06/01/2024	\$39.95	\$15.07	\$18.67	\$0.00	\$73.69
	12/01/2024	\$39.95	\$15.07	\$20.17	\$0.00	\$75.19
	01/01/2025	\$39.95	\$15.57	\$20.17	\$0.00	\$75.69
	06/01/2025	\$40.95	\$15.57	\$20.17	\$0.00	\$76.69
	12/01/2025	\$40.95	\$15.57	\$21.78	\$0.00	\$78.30
	01/01/2026	\$40.95	\$16.17	\$21.78	\$0.00	\$78.90
	06/01/2026	\$41.95	\$16.17	\$21.78	\$0.00	\$79.90
	12/01/2026	\$41.95	\$16.17	\$23.52	\$0.00	\$81.64
	01/01/2027	\$41.95	\$16.77	\$23.52	\$0.00	\$82.24
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.02	\$15.07	\$18.67	\$0.00	\$72.76
	06/01/2024	\$40.02	\$15.07	\$18.67	\$0.00	\$73.76
	12/01/2024	\$40.02	\$15.07	\$20.17	\$0.00	\$75.26
	01/01/2025	\$40.02	\$15.57	\$20.17	\$0.00	\$75.76
	06/01/2025	\$41.02	\$15.57	\$20.17	\$0.00	\$76.76
	12/01/2025	\$41.02	\$15.57	\$21.78	\$0.00	\$78.37
	01/01/2026	\$41.02	\$16.17	\$21.78	\$0.00	\$78.97
	06/01/2026	\$42.02	\$16.17	\$21.78	\$0.00	\$79.97
	12/01/2026	\$42.02	\$16.17	\$23.52	\$0.00	\$81.71
	01/01/2027	\$42.02	\$16.77	\$23.52	\$0.00	\$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.14	\$15.07	\$18.67	\$0.00	\$72.88
	06/01/2024	\$40.14	\$15.07	\$18.67	\$0.00	\$73.88
	12/01/2024	\$40.14	\$15.07	\$20.17	\$0.00	\$75.38
	01/01/2025	\$40.14	\$15.57	\$20.17	\$0.00	\$75.88
	06/01/2025	\$41.14	\$15.57	\$20.17	\$0.00	\$76.88
	12/01/2025	\$41.14	\$15.57	\$21.78	\$0.00	\$78.49
	01/01/2026	\$41.14	\$16.17	\$21.78	\$0.00	\$79.09
	06/01/2026	\$42.14	\$16.17	\$21.78	\$0.00	\$80.09
	12/01/2026	\$42.14	\$16.17	\$23.52	\$0.00	\$81.83
	01/01/2027	\$42.14	\$16.77	\$23.52	\$0.00	\$82.43
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
	12/01/2026	\$46.92	\$9.65	\$17.14	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2023	\$40.80	\$14.50	\$11.05	\$0.00	\$66.35
	06/01/2024	\$41.80	\$14.50	\$11.05	\$0.00	\$67.35
	12/01/2024	\$42.80	\$14.50	\$11.05	\$0.00	\$68.35
	06/01/2025	\$43.80	\$14.50	\$11.05	\$0.00	\$69.35
	12/01/2025	\$44.80	\$14.50	\$11.05	\$0.00	\$70.35
ASPHALT RAKER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
	12/01/2026	\$46.92	\$9.65	\$17.14	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2024	\$48.12	\$7.07	\$20.60	\$0.00	\$75.79

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57
2	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57
3	70	\$33.68	\$7.07	\$14.23	\$0.00	\$54.98
4	75	\$36.09	\$7.07	\$15.24	\$0.00	\$58.40
5	80	\$38.50	\$7.07	\$16.25	\$0.00	\$61.82
6	85	\$40.90	\$7.07	\$17.28	\$0.00	\$65.25
7	90	\$43.31	\$7.07	\$18.28	\$0.00	\$68.66
8	95	\$45.71	\$7.07	\$19.32	\$0.00	\$72.10

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2024	\$62.40	\$11.49	\$23.59	\$0.00	\$97.48
BRICKLAYERS LOCAL 3 (NEW BEDFORD)	08/01/2024	\$64.50	\$11.49	\$23.59	\$0.00	\$99.58
	02/01/2025	\$65.80	\$11.49	\$23.59	\$0.00	\$100.88
	08/01/2025	\$67.95	\$11.49	\$23.59	\$0.00	\$103.03
	02/01/2026	\$69.30	\$11.49	\$23.59	\$0.00	\$104.38
	08/01/2026	\$71.50	\$11.49	\$23.59	\$0.00	\$106.58
	02/01/2027	\$72.90	\$11.49	\$23.59	\$0.00	\$107.98

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 New Bedford

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.20	\$11.49	\$23.59	\$0.00	\$66.28
2	60	\$37.44	\$11.49	\$23.59	\$0.00	\$72.52
3	70	\$43.68	\$11.49	\$23.59	\$0.00	\$78.76
4	80	\$49.92	\$11.49	\$23.59	\$0.00	\$85.00
5	90	\$56.16	\$11.49	\$23.59	\$0.00	\$91.24

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.25	\$11.49	\$23.59	\$0.00	\$67.33
2	60	\$38.70	\$11.49	\$23.59	\$0.00	\$73.78
3	70	\$45.15	\$11.49	\$23.59	\$0.00	\$80.23
4	80	\$51.60	\$11.49	\$23.59	\$0.00	\$86.68
5	90	\$58.05	\$11.49	\$23.59	\$0.00	\$93.13

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
<i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN	12/01/2023	\$45.48	\$9.65	\$18.22	\$0.00	\$73.35
<i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2024	\$46.96	\$9.65	\$18.22	\$0.00	\$74.83
	12/01/2024	\$48.43	\$9.65	\$18.22	\$0.00	\$76.30
	06/01/2025	\$49.93	\$9.65	\$18.22	\$0.00	\$77.80
	12/01/2025	\$51.43	\$9.65	\$18.22	\$0.00	\$79.30
	06/01/2026	\$52.98	\$9.65	\$18.22	\$0.00	\$80.85
	12/01/2026	\$54.48	\$9.65	\$18.22	\$0.00	\$82.35

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
<i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"						

CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						

CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	03/01/2024	\$47.12	\$9.83	\$19.97	\$0.00	\$76.92
	09/01/2024	\$48.37	\$9.83	\$19.97	\$0.00	\$78.17
	03/01/2025	\$49.62	\$9.83	\$19.97	\$0.00	\$79.42
	09/01/2025	\$50.87	\$9.83	\$19.97	\$0.00	\$80.67
	03/01/2026	\$52.12	\$9.83	\$19.97	\$0.00	\$81.92
	09/01/2026	\$53.37	\$9.83	\$19.97	\$0.00	\$83.17
	03/01/2027	\$54.62	\$9.83	\$19.97	\$0.00	\$84.42

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$21.20	\$9.83	\$1.73	\$0.00	\$32.76
2	45	\$21.20	\$9.83	\$1.73	\$0.00	\$32.76
3	55	\$25.92	\$9.83	\$3.40	\$0.00	\$39.15
4	55	\$25.92	\$9.83	\$3.40	\$0.00	\$39.15
5	70	\$32.98	\$9.83	\$16.51	\$0.00	\$59.32
6	70	\$32.98	\$9.83	\$16.51	\$0.00	\$59.32
7	80	\$37.70	\$9.83	\$18.24	\$0.00	\$65.77
8	80	\$37.70	\$9.83	\$18.24	\$0.00	\$65.77

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$21.77	\$9.83	\$1.73	\$0.00	\$33.33
2	45	\$21.77	\$9.83	\$1.73	\$0.00	\$33.33
3	55	\$26.60	\$9.83	\$3.40	\$0.00	\$39.83
4	55	\$26.60	\$9.83	\$3.40	\$0.00	\$39.83
5	70	\$33.86	\$9.83	\$16.51	\$0.00	\$60.20
6	70	\$33.86	\$9.83	\$16.51	\$0.00	\$60.20
7	80	\$38.70	\$9.83	\$18.24	\$0.00	\$66.77
8	80	\$38.70	\$9.83	\$18.24	\$0.00	\$66.77

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CARPENTER WOOD FRAME	10/01/2023	\$25.55	\$7.02	\$4.80	\$0.00	\$37.37
<i>CARPENTERS-ZONE 3 (Wood Frame)</i>	10/01/2024	\$26.65	\$7.02	\$4.80	\$0.00	\$38.47
	10/01/2025	\$27.75	\$7.02	\$4.80	\$0.00	\$39.57
	10/01/2026	\$28.85	\$7.02	\$4.80	\$0.00	\$40.67

All Aspects of New Wood Frame Work

Apprentice - CARPENTER (Wood Frame) - Zone 3

Effective Date - 10/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$15.33	\$7.02	\$0.00	\$0.00	\$22.35
2	60	\$15.33	\$7.02	\$0.00	\$0.00	\$22.35
3	65	\$16.61	\$7.02	\$1.00	\$0.00	\$24.63
4	70	\$17.89	\$7.02	\$1.00	\$0.00	\$25.91
5	75	\$19.16	\$7.02	\$4.80	\$0.00	\$30.98
6	80	\$20.44	\$7.02	\$4.80	\$0.00	\$32.26
7	85	\$21.72	\$7.02	\$4.80	\$0.00	\$33.54
8	90	\$23.00	\$7.02	\$4.80	\$0.00	\$34.82

Effective Date - 10/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$15.99	\$7.02	\$0.00	\$0.00	\$23.01
2	60	\$15.99	\$7.02	\$0.00	\$0.00	\$23.01
3	65	\$17.32	\$7.02	\$1.00	\$0.00	\$25.34
4	70	\$18.66	\$7.02	\$1.00	\$0.00	\$26.68
5	75	\$19.99	\$7.02	\$4.80	\$0.00	\$31.81
6	80	\$21.32	\$7.02	\$4.80	\$0.00	\$33.14
7	85	\$22.65	\$7.02	\$4.80	\$0.00	\$34.47
8	90	\$23.99	\$7.02	\$4.80	\$0.00	\$35.81

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
 Step 1&2 \$18.52/ 3&4 \$21.07/ 5&6 \$28.70/ 7&8 \$31.26

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	01/01/2024	\$49.33	\$13.00	\$23.57	\$1.30	\$87.20
<i>BRICKLAYERS LOCAL 3 (NEW BEDFORD)</i>						

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (New Bedford)

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.67	\$13.00	\$15.93	\$0.00	\$53.60
2	60	\$29.60	\$13.00	\$18.57	\$1.30	\$62.47
3	65	\$32.06	\$13.00	\$19.57	\$1.30	\$65.93
4	70	\$34.53	\$13.00	\$20.57	\$1.30	\$69.40
5	75	\$37.00	\$13.00	\$21.57	\$1.30	\$72.87
6	80	\$39.46	\$13.00	\$22.57	\$1.30	\$76.33
7	90	\$44.40	\$13.00	\$23.57	\$1.30	\$82.27

Notes:
Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
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For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$56.13	\$15.00	\$16.40	\$0.00	\$87.53
	06/01/2024	\$57.45	\$15.00	\$16.40	\$0.00	\$88.85
	12/01/2024	\$58.93	\$15.00	\$16.40	\$0.00	\$90.33
	06/01/2025	\$60.26	\$15.00	\$16.40	\$0.00	\$91.66
	12/01/2025	\$61.73	\$15.00	\$16.40	\$0.00	\$93.13
	06/01/2026	\$63.06	\$15.00	\$16.40	\$0.00	\$94.46
	12/01/2026	\$64.54	\$15.00	\$16.40	\$0.00	\$95.94

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$9.95	\$0.00	\$0.00	\$38.58
2	55	\$31.49	\$9.95	\$6.66	\$0.00	\$48.10
3	60	\$34.36	\$9.95	\$7.26	\$0.00	\$51.57
4	65	\$37.22	\$9.95	\$7.87	\$0.00	\$55.04
5	70	\$40.08	\$9.95	\$20.32	\$0.00	\$70.35
6	75	\$42.95	\$9.95	\$20.93	\$0.00	\$73.83
7	80	\$45.81	\$9.95	\$21.53	\$0.00	\$77.29
8	90	\$51.53	\$9.95	\$22.74	\$0.00	\$84.22

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 2	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
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For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 2	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
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For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS LABORERS - ZONE 2	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
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For apprentice rates see "Apprentice- LABORER"

DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 2	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
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For apprentice rates see "Apprentice- LABORER"

DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 2	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
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For apprentice rates see "Apprentice- LABORER"

DEMO: WRECKING LABORER LABORERS - ZONE 2	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
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For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$68.70	\$9.40	\$23.12	\$0.00	\$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$73.60	\$9.40	\$23.12	\$0.00	\$106.12
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) <i>DRAWBRIDGE - SEIU LOCAL 888</i>	07/01/2020	\$26.77	\$6.67	\$3.93	\$0.16	\$37.53
ELECTRICIAN <i>ELECTRICIANS LOCAL 223</i>	09/01/2023	\$47.87	\$11.75	\$16.86	\$0.00	\$76.48

Apprentice - ELECTRICIAN - Local 223

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.15	\$11.75	\$0.57	\$0.00	\$31.47
2	45	\$21.54	\$11.75	\$0.65	\$0.00	\$33.94
3	50	\$23.94	\$11.75	\$0.72	\$0.00	\$36.41
4	55	\$26.33	\$11.75	\$7.79	\$0.00	\$45.87
5	60	\$28.72	\$11.75	\$8.31	\$0.00	\$48.78
6	65	\$31.12	\$11.75	\$8.65	\$0.00	\$51.52
7	70	\$33.51	\$11.75	\$9.38	\$0.00	\$54.64
8	75	\$35.90	\$11.75	\$9.90	\$0.00	\$57.55

Notes:

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2022	\$65.62	\$16.03	\$20.21	\$0.00	\$101.86
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Apprentice - ELEVATOR CONSTRUCTOR - Local 4

Effective Date - 01/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.81	\$16.03	\$0.00	\$0.00	\$48.84
2	55	\$36.09	\$16.03	\$20.21	\$0.00	\$72.33
3	65	\$42.65	\$16.03	\$20.21	\$0.00	\$78.89
4	70	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
5	80	\$52.50	\$16.03	\$20.21	\$0.00	\$88.74

Notes:
Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio:1:1

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2022	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
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For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21

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

FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	05/01/2024	\$51.54	\$14.50	\$16.15	\$0.00	\$82.19
	11/01/2024	\$52.83	\$14.50	\$16.15	\$0.00	\$83.48
	05/01/2025	\$54.27	\$14.50	\$16.15	\$0.00	\$84.92
	11/01/2025	\$55.56	\$14.50	\$16.15	\$0.00	\$86.21
	05/01/2026	\$57.00	\$14.50	\$16.15	\$0.00	\$87.65
	11/01/2026	\$58.29	\$14.50	\$16.15	\$0.00	\$88.94
	05/01/2027	\$59.72	\$14.50	\$16.15	\$0.00	\$90.37

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	05/01/2024	\$53.12	\$14.50	\$16.15	\$0.00	\$83.77
	11/01/2024	\$54.42	\$14.50	\$16.15	\$0.00	\$85.07
	05/01/2025	\$55.87	\$14.50	\$16.15	\$0.00	\$86.52
	11/01/2025	\$57.17	\$14.50	\$16.15	\$0.00	\$87.82
	05/01/2026	\$58.62	\$14.50	\$16.15	\$0.00	\$89.27
	11/01/2026	\$59.92	\$14.50	\$16.15	\$0.00	\$90.57
	05/01/2027	\$61.37	\$14.50	\$16.15	\$0.00	\$92.02

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	05/01/2024	\$25.66	\$14.50	\$16.15	\$0.00	\$56.31
	11/01/2024	\$26.42	\$14.50	\$16.15	\$0.00	\$57.07
	05/01/2025	\$27.27	\$14.50	\$16.15	\$0.00	\$57.92
	11/01/2025	\$28.03	\$14.50	\$16.15	\$0.00	\$58.68
	05/01/2026	\$28.88	\$14.50	\$16.15	\$0.00	\$59.53
	11/01/2026	\$29.64	\$14.50	\$16.15	\$0.00	\$60.29
	05/01/2027	\$30.49	\$14.50	\$16.15	\$0.00	\$61.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 223</i>	09/01/2020	\$43.66	\$10.90	\$14.66	\$0.00	\$69.22
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE <i>LOCAL 223</i> / COMMISSIONING <i>ELECTRICIANS</i>	09/01/2020	\$36.86	\$10.90	\$12.45	\$0.00	\$60.21
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$44.47	\$15.00	\$16.40	\$0.00	\$75.87
	06/01/2024	\$45.53	\$15.00	\$16.40	\$0.00	\$76.93
	12/01/2024	\$46.71	\$15.00	\$16.40	\$0.00	\$78.11
	06/01/2025	\$47.77	\$15.00	\$16.40	\$0.00	\$79.17
	12/01/2025	\$48.94	\$15.00	\$16.40	\$0.00	\$80.34
	06/01/2026	\$50.00	\$15.00	\$16.40	\$0.00	\$81.40
12/01/2026	\$51.18	\$15.00	\$16.40	\$0.00	\$82.58	
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$25.48	\$9.65	\$17.14	\$0.00	\$52.27
	06/01/2024	\$26.51	\$9.65	\$17.14	\$0.00	\$53.30
	12/01/2024	\$26.51	\$9.65	\$17.14	\$0.00	\$53.30
	06/01/2025	\$27.59	\$9.65	\$17.14	\$0.00	\$54.38
	12/01/2025	\$27.59	\$9.65	\$17.14	\$0.00	\$54.38
	06/01/2026	\$28.71	\$9.65	\$17.14	\$0.00	\$55.50
12/01/2026	\$28.71	\$9.65	\$17.14	\$0.00	\$55.50	
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE II</i>	03/01/2024	\$49.47	\$8.83	\$20.27	\$0.00	\$78.57

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - FLOORCOVERER - Local 2168 Zone II

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.74	\$8.83	\$1.76	\$0.00	\$35.33
2	55	\$27.21	\$8.83	\$1.76	\$0.00	\$37.80
3	60	\$29.68	\$8.83	\$3.52	\$0.00	\$42.03
4	65	\$32.16	\$8.83	\$3.52	\$0.00	\$44.51
5	70	\$34.63	\$8.83	\$16.75	\$0.00	\$60.21
6	75	\$37.10	\$8.83	\$16.75	\$0.00	\$62.68
7	80	\$39.58	\$8.83	\$18.51	\$0.00	\$66.92
8	85	\$42.05	\$8.83	\$18.51	\$0.00	\$69.39

Notes: Steps are 750 hrs.
 % After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)
 Step 1&2 \$32.63/ 3&4 \$39.28/ 5&6 \$59.86/ 7&8 \$66.52

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 1333</i>	06/01/2020	\$39.18	\$10.80	\$10.45	\$0.00	\$60.43
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - GLAZIER - Local 1333

Effective Date - 06/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.59	\$10.80	\$1.80	\$0.00	\$32.19
2	56	\$22.04	\$10.80	\$1.80	\$0.00	\$34.64
3	63	\$24.49	\$10.80	\$2.45	\$0.00	\$37.74
4	69	\$26.94	\$10.80	\$2.45	\$0.00	\$40.19
5	75	\$29.39	\$10.80	\$3.15	\$0.00	\$43.34
6	81	\$31.83	\$10.80	\$3.15	\$0.00	\$45.78
7	88	\$34.28	\$10.80	\$10.45	\$0.00	\$55.53
8	94	\$36.73	\$10.80	\$10.45	\$0.00	\$57.98

Notes:

Apprentice to Journeyworker Ratio:1:3

HOISTING ENGINEER/CRANES/GRADALLS	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.27	\$15.00	\$0.00	\$0.00	\$45.27
2	60	\$33.02	\$15.00	\$16.40	\$0.00	\$64.42
3	65	\$35.77	\$15.00	\$16.40	\$0.00	\$67.17
4	70	\$38.52	\$15.00	\$16.40	\$0.00	\$69.92
5	75	\$41.27	\$15.00	\$16.40	\$0.00	\$72.67
6	80	\$44.02	\$15.00	\$16.40	\$0.00	\$75.42
7	85	\$46.78	\$15.00	\$16.40	\$0.00	\$78.18
8	90	\$49.53	\$15.00	\$16.40	\$0.00	\$80.93

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.98	\$15.00	\$0.00	\$0.00	\$45.98
2	60	\$33.80	\$15.00	\$16.40	\$0.00	\$65.20
3	65	\$36.61	\$15.00	\$16.40	\$0.00	\$68.01
4	70	\$39.43	\$15.00	\$16.40	\$0.00	\$70.83
5	75	\$42.25	\$15.00	\$16.40	\$0.00	\$73.65
6	80	\$45.06	\$15.00	\$16.40	\$0.00	\$76.46
7	85	\$47.88	\$15.00	\$16.40	\$0.00	\$79.28
8	90	\$50.70	\$15.00	\$16.40	\$0.00	\$82.10

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 - B	04/01/2024	\$41.08	\$14.59	\$19.04	\$2.24	\$76.95
	10/01/2024	\$42.33	\$14.59	\$19.04	\$2.24	\$78.20
	04/01/2025	\$43.83	\$14.59	\$19.04	\$2.24	\$79.70
	10/01/2025	\$45.08	\$14.59	\$19.04	\$2.24	\$80.95
	04/01/2026	\$46.58	\$14.59	\$19.04	\$2.24	\$82.45

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 223	09/01/2020	\$43.66	\$10.90	\$14.66	\$0.00	\$69.22
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For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 - B	04/01/2024	\$41.08	\$30.43	\$19.04	\$2.24	\$92.79
	10/01/2024	\$42.33	\$30.43	\$19.04	\$2.24	\$94.04
	04/01/2025	\$43.83	\$30.43	\$19.04	\$2.24	\$95.54
	10/01/2025	\$45.08	\$30.43	\$19.04	\$2.24	\$96.79
	04/01/2026	\$46.58	\$30.43	\$19.04	\$2.24	\$98.29

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING - WATER) PLUMBERS & PIPEFITTERS LOCAL 51	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC MECHANIC <i>PLUMBERS & PIPEFITTERS LOCAL 51</i>	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2023	\$53.50	\$14.75	\$19.61	\$0.00	\$87.86
	09/01/2024	\$56.92	\$14.75	\$19.61	\$0.00	\$91.28
	09/01/2025	\$60.34	\$14.75	\$19.61	\$0.00	\$94.70
	09/01/2026	\$63.76	\$14.75	\$19.61	\$0.00	\$98.12

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.75	\$14.75	\$14.32	\$0.00	\$55.82
2	60	\$32.10	\$14.75	\$15.37	\$0.00	\$62.22
3	70	\$37.45	\$14.75	\$16.43	\$0.00	\$68.63
4	80	\$42.80	\$14.75	\$17.49	\$0.00	\$75.04

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.46	\$14.75	\$14.32	\$0.00	\$57.53
2	60	\$34.15	\$14.75	\$15.37	\$0.00	\$64.27
3	70	\$39.84	\$14.75	\$16.43	\$0.00	\$71.02
4	80	\$45.54	\$14.75	\$17.49	\$0.00	\$77.78

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 37</i>	03/16/2021	\$42.46	\$7.70	\$17.10	\$0.00	\$67.26
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - IRONWORKER - Local 37

Effective Date - 03/16/2021

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	70	\$29.72	\$7.70	\$17.10	\$0.00	\$54.52
2	75	\$31.85	\$7.70	\$17.10	\$0.00	\$56.65
3	80	\$33.97	\$7.70	\$17.10	\$0.00	\$58.77
4	85	\$36.09	\$7.70	\$17.10	\$0.00	\$60.89
5	90	\$38.21	\$7.70	\$17.10	\$0.00	\$63.01
6	95	\$40.34	\$7.70	\$17.10	\$0.00	\$65.14

Notes:

Apprentice to Journeyworker Ratio:1:4

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 2	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
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For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 2	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
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Apprentice - LABORER - Zone 2

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.72	\$9.65	\$16.89	\$0.00	\$49.26
2	70	\$26.50	\$9.65	\$16.89	\$0.00	\$53.04
3	80	\$30.29	\$9.65	\$16.89	\$0.00	\$56.83
4	90	\$34.07	\$9.65	\$16.89	\$0.00	\$60.61

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
	06/01/2024	\$39.19	\$9.65	\$17.14	\$0.00	\$65.98
	12/01/2024	\$40.52	\$9.65	\$17.14	\$0.00	\$67.31
	06/01/2025	\$41.91	\$9.65	\$17.14	\$0.00	\$68.70
	12/01/2025	\$43.29	\$9.65	\$17.14	\$0.00	\$70.08
	06/01/2026	\$44.73	\$9.65	\$17.14	\$0.00	\$71.52
	12/01/2026	\$46.17	\$9.65	\$17.14	\$0.00	\$72.96

Apprentice - LABORER (Heavy & Highway) - Zone 2

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.72	\$9.65	\$17.14	\$0.00	\$49.51
2	70	\$26.50	\$9.65	\$17.14	\$0.00	\$53.29
3	80	\$30.29	\$9.65	\$17.14	\$0.00	\$57.08
4	90	\$34.07	\$9.65	\$17.14	\$0.00	\$60.86

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.51	\$9.65	\$17.14	\$0.00	\$50.30
2	70	\$27.43	\$9.65	\$17.14	\$0.00	\$54.22
3	80	\$31.35	\$9.65	\$17.14	\$0.00	\$58.14
4	90	\$35.27	\$9.65	\$17.14	\$0.00	\$62.06

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER LABORERS - ZONE 2	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
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For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER LABORERS - ZONE 2	12/01/2023	\$38.36	\$9.40	\$16.89	\$0.00	\$64.65
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For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS - ZONE 2	12/01/2023	\$37.95	\$9.65	\$17.20	\$0.00	\$64.80
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For apprentice rates see "Apprentice- LABORER"

LABORER: MASON TENDER LABORERS - ZONE 2	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
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For apprentice rates see "Apprentice- LABORER"

LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21

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

LABORER: MULTI-TRADE TENDER LABORERS - ZONE 2	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
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For apprentice rates see "Apprentice- LABORER"

LABORER: TREE REMOVER LABORERS - ZONE 2	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
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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 - ZONE 2	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2024	\$47.89	\$11.49	\$21.37	\$0.00	\$80.75
	08/01/2024	\$49.57	\$11.49	\$21.37	\$0.00	\$82.43
	02/01/2025	\$50.61	\$11.49	\$21.37	\$0.00	\$83.47
	08/01/2025	\$52.33	\$11.49	\$21.37	\$0.00	\$85.19
	02/01/2026	\$53.41	\$11.49	\$21.37	\$0.00	\$86.27
	08/01/2026	\$55.17	\$11.49	\$21.37	\$0.00	\$88.03
	02/01/2027	\$56.29	\$11.49	\$21.37	\$0.00	\$89.15

Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.95	\$11.49	\$21.37	\$0.00	\$56.81
2	60	\$28.73	\$11.49	\$21.37	\$0.00	\$61.59
3	70	\$33.52	\$11.49	\$21.37	\$0.00	\$66.38
4	80	\$38.31	\$11.49	\$21.37	\$0.00	\$71.17
5	90	\$43.10	\$11.49	\$21.37	\$0.00	\$75.96

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.79	\$11.49	\$21.37	\$0.00	\$57.65
2	60	\$29.74	\$11.49	\$21.37	\$0.00	\$62.60
3	70	\$34.70	\$11.49	\$21.37	\$0.00	\$67.56
4	80	\$39.66	\$11.49	\$21.37	\$0.00	\$72.52
5	90	\$44.61	\$11.49	\$21.37	\$0.00	\$77.47

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS, TILELAYERS & TERRAZZO MECH BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2024	\$62.42	\$11.49	\$23.56	\$0.00	\$97.47
	08/01/2024	\$64.52	\$11.49	\$23.56	\$0.00	\$99.57
	02/01/2025	\$65.82	\$11.49	\$23.56	\$0.00	\$100.87
	08/01/2025	\$67.97	\$11.49	\$23.56	\$0.00	\$103.02
	02/01/2026	\$69.32	\$11.49	\$23.56	\$0.00	\$104.37
	08/01/2026	\$71.52	\$11.49	\$23.56	\$0.00	\$106.57
	02/01/2027	\$72.92	\$11.49	\$23.56	\$0.00	\$107.97

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.21	\$11.49	\$23.56	\$0.00	\$66.26
2	60	\$37.45	\$11.49	\$23.56	\$0.00	\$72.50
3	70	\$43.69	\$11.49	\$23.56	\$0.00	\$78.74
4	80	\$49.94	\$11.49	\$23.56	\$0.00	\$84.99
5	90	\$56.18	\$11.49	\$23.56	\$0.00	\$91.23

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.26	\$11.49	\$23.56	\$0.00	\$67.31
2	60	\$38.71	\$11.49	\$23.56	\$0.00	\$73.76
3	70	\$45.16	\$11.49	\$23.56	\$0.00	\$80.21
4	80	\$51.62	\$11.49	\$23.56	\$0.00	\$86.67
5	90	\$58.07	\$11.49	\$23.56	\$0.00	\$93.12

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 2) <i>MILLWRIGHTS LOCAL 1121 - Zone 2</i>	01/01/2024	\$42.76	\$10.08	\$21.47	\$0.00	\$74.31
	01/06/2025	\$45.09	\$10.08	\$21.47	\$0.00	\$76.64
	01/05/2026	\$47.42	\$10.08	\$21.47	\$0.00	\$78.97

Apprentice - MILLWRIGHT - Local 1121 Zone 2

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$23.52	\$10.08	\$5.50	\$0.00	\$39.10
2	65	\$27.79	\$10.08	\$6.50	\$0.00	\$44.37
3	75	\$32.07	\$10.08	\$18.97	\$0.00	\$61.12
4	85	\$36.35	\$10.08	\$19.97	\$0.00	\$66.40

Effective Date - 01/06/2025

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$24.80	\$10.08	\$5.50	\$0.00	\$40.38
2	65	\$29.31	\$10.08	\$6.50	\$0.00	\$45.89
3	75	\$33.82	\$10.08	\$18.97	\$0.00	\$62.87
4	85	\$38.33	\$10.08	\$19.97	\$0.00	\$68.38

Notes: Step 1&2 Appr. indentured after 1/6/2020 receive no pension, but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66)
Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:4

MORTAR MIXER LABORERS - ZONE 2	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
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For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2023	\$24.41	\$15.00	\$16.40	\$0.00	\$55.81
	06/01/2024	\$25.01	\$15.00	\$16.40	\$0.00	\$56.41
	12/01/2024	\$25.67	\$15.00	\$16.40	\$0.00	\$57.07
	06/01/2025	\$26.27	\$15.00	\$16.40	\$0.00	\$57.67
	12/01/2025	\$26.93	\$15.00	\$16.40	\$0.00	\$58.33
	06/01/2026	\$27.52	\$15.00	\$16.40	\$0.00	\$58.92
	12/01/2026	\$28.19	\$15.00	\$16.40	\$0.00	\$59.59

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2023	\$29.86	\$15.00	\$16.40	\$0.00	\$61.26
	06/01/2024	\$30.58	\$15.00	\$16.40	\$0.00	\$61.98
	12/01/2024	\$31.38	\$15.00	\$16.40	\$0.00	\$62.78
	06/01/2025	\$32.10	\$15.00	\$16.40	\$0.00	\$63.50
	12/01/2025	\$32.90	\$15.00	\$16.40	\$0.00	\$64.30
	06/01/2026	\$33.62	\$15.00	\$16.40	\$0.00	\$65.02
	12/01/2026	\$34.42	\$15.00	\$16.40	\$0.00	\$65.82

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$9.95	\$0.00	\$0.00	\$38.58
2	55	\$31.49	\$9.95	\$6.66	\$0.00	\$48.10
3	60	\$34.36	\$9.95	\$7.26	\$0.00	\$51.57
4	65	\$37.22	\$9.95	\$7.87	\$0.00	\$55.04
5	70	\$40.08	\$9.95	\$20.32	\$0.00	\$70.35
6	75	\$42.95	\$9.95	\$20.93	\$0.00	\$73.83
7	80	\$45.81	\$9.95	\$21.53	\$0.00	\$77.29
8	90	\$51.53	\$9.95	\$22.74	\$0.00	\$84.22

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2024	\$46.96	\$9.95	\$23.95	\$0.00	\$80.86
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. <i>PAINTERS LOCAL 35 - ZONE 2</i>	07/01/2024	\$48.16	\$9.95	\$23.95	\$0.00	\$82.06
	01/01/2025	\$49.36	\$9.95	\$23.95	\$0.00	\$83.26

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.48	\$9.95	\$0.00	\$0.00	\$33.43
2	55	\$25.83	\$9.95	\$6.66	\$0.00	\$42.44
3	60	\$28.18	\$9.95	\$7.26	\$0.00	\$45.39
4	65	\$30.52	\$9.95	\$7.87	\$0.00	\$48.34
5	70	\$32.87	\$9.95	\$20.32	\$0.00	\$63.14
6	75	\$35.22	\$9.95	\$20.93	\$0.00	\$66.10
7	80	\$37.57	\$9.95	\$21.53	\$0.00	\$69.05
8	90	\$42.26	\$9.95	\$22.74	\$0.00	\$74.95

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.08	\$9.95	\$0.00	\$0.00	\$34.03
2	55	\$26.49	\$9.95	\$6.66	\$0.00	\$43.10
3	60	\$28.90	\$9.95	\$7.26	\$0.00	\$46.11
4	65	\$31.30	\$9.95	\$7.87	\$0.00	\$49.12
5	70	\$33.71	\$9.95	\$20.32	\$0.00	\$63.98
6	75	\$36.12	\$9.95	\$20.93	\$0.00	\$67.00
7	80	\$38.53	\$9.95	\$21.53	\$0.00	\$70.01
8	90	\$43.34	\$9.95	\$22.74	\$0.00	\$76.03

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2024	\$45.02	\$9.95	\$23.95	\$0.00	\$78.92
PAINTERS LOCAL 35 - ZONE 2	07/01/2024	\$46.22	\$9.95	\$23.95	\$0.00	\$80.12
	01/01/2025	\$47.42	\$9.95	\$23.95	\$0.00	\$81.32

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.51	\$9.95	\$0.00	\$0.00	\$32.46
2	55	\$24.76	\$9.95	\$6.66	\$0.00	\$41.37
3	60	\$27.01	\$9.95	\$7.26	\$0.00	\$44.22
4	65	\$29.26	\$9.95	\$7.87	\$0.00	\$47.08
5	70	\$31.51	\$9.95	\$20.32	\$0.00	\$61.78
6	75	\$33.77	\$9.95	\$20.93	\$0.00	\$64.65
7	80	\$36.02	\$9.95	\$21.53	\$0.00	\$67.50
8	90	\$40.52	\$9.95	\$22.74	\$0.00	\$73.21

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.11	\$9.95	\$0.00	\$0.00	\$33.06
2	55	\$25.42	\$9.95	\$6.66	\$0.00	\$42.03
3	60	\$27.73	\$9.95	\$7.26	\$0.00	\$44.94
4	65	\$30.04	\$9.95	\$7.87	\$0.00	\$47.86
5	70	\$32.35	\$9.95	\$20.32	\$0.00	\$62.62
6	75	\$34.67	\$9.95	\$20.93	\$0.00	\$65.55
7	80	\$36.98	\$9.95	\$21.53	\$0.00	\$68.46
8	90	\$41.60	\$9.95	\$22.74	\$0.00	\$74.29

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *	01/01/2024	\$45.56	\$9.95	\$23.95	\$0.00	\$79.46
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2	07/01/2024	\$46.76	\$9.95	\$23.95	\$0.00	\$80.66
	01/01/2025	\$47.96	\$9.95	\$23.95	\$0.00	\$81.86

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.78	\$9.95	\$0.00	\$0.00	\$32.73
2	55	\$25.06	\$9.95	\$6.66	\$0.00	\$41.67
3	60	\$27.34	\$9.95	\$7.26	\$0.00	\$44.55
4	65	\$29.61	\$9.95	\$7.87	\$0.00	\$47.43
5	70	\$31.89	\$9.95	\$20.32	\$0.00	\$62.16
6	75	\$34.17	\$9.95	\$20.93	\$0.00	\$65.05
7	80	\$36.45	\$9.95	\$21.53	\$0.00	\$67.93
8	90	\$41.00	\$9.95	\$22.74	\$0.00	\$73.69

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$9.95	\$0.00	\$0.00	\$33.33
2	55	\$25.72	\$9.95	\$6.66	\$0.00	\$42.33
3	60	\$28.06	\$9.95	\$7.26	\$0.00	\$45.27
4	65	\$30.39	\$9.95	\$7.87	\$0.00	\$48.21
5	70	\$32.73	\$9.95	\$20.32	\$0.00	\$63.00
6	75	\$35.07	\$9.95	\$20.93	\$0.00	\$65.95
7	80	\$37.41	\$9.95	\$21.53	\$0.00	\$68.89
8	90	\$42.08	\$9.95	\$22.74	\$0.00	\$74.77

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2024	\$43.62	\$9.95	\$23.95	\$0.00	\$77.52
PAINTERS LOCAL 35 - ZONE 2	07/01/2024	\$44.82	\$9.95	\$23.95	\$0.00	\$78.72
	01/01/2025	\$46.02	\$9.95	\$23.95	\$0.00	\$79.92

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.81	\$9.95	\$0.00	\$0.00	\$31.76
2	55	\$23.99	\$9.95	\$6.66	\$0.00	\$40.60
3	60	\$26.17	\$9.95	\$7.26	\$0.00	\$43.38
4	65	\$28.35	\$9.95	\$7.87	\$0.00	\$46.17
5	70	\$30.53	\$9.95	\$20.32	\$0.00	\$60.80
6	75	\$32.72	\$9.95	\$20.93	\$0.00	\$63.60
7	80	\$34.90	\$9.95	\$21.53	\$0.00	\$66.38
8	90	\$39.26	\$9.95	\$22.74	\$0.00	\$71.95

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.41	\$9.95	\$0.00	\$0.00	\$32.36
2	55	\$24.65	\$9.95	\$6.66	\$0.00	\$41.26
3	60	\$26.89	\$9.95	\$7.26	\$0.00	\$44.10
4	65	\$29.13	\$9.95	\$7.87	\$0.00	\$46.95
5	70	\$31.37	\$9.95	\$20.32	\$0.00	\$61.64
6	75	\$33.62	\$9.95	\$20.93	\$0.00	\$64.50
7	80	\$35.86	\$9.95	\$21.53	\$0.00	\$67.34
8	90	\$40.34	\$9.95	\$22.74	\$0.00	\$73.03

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	06/01/2024	\$39.19	\$9.65	\$17.14	\$0.00	\$65.98
	12/01/2024	\$40.52	\$9.65	\$17.14	\$0.00	\$67.31
	06/01/2025	\$41.91	\$9.65	\$17.14	\$0.00	\$68.70
	12/01/2025	\$43.29	\$9.65	\$17.14	\$0.00	\$70.08
	06/01/2026	\$44.73	\$9.65	\$17.14	\$0.00	\$71.52
	12/01/2026	\$46.17	\$9.65	\$17.14	\$0.00	\$72.96

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

PANEL & PICKUP TRUCKS DRIVER	01/01/2024	\$38.78	\$15.07	\$18.67	\$0.00	\$72.52
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	06/01/2024	\$39.78	\$15.07	\$18.67	\$0.00	\$73.52
	12/01/2024	\$39.78	\$15.07	\$20.17	\$0.00	\$75.02
	01/01/2025	\$39.78	\$15.57	\$20.17	\$0.00	\$75.52
	06/01/2025	\$40.78	\$15.57	\$20.17	\$0.00	\$76.52
	12/01/2025	\$40.78	\$15.57	\$21.78	\$0.00	\$78.13
	01/01/2026	\$40.78	\$16.17	\$21.78	\$0.00	\$78.73
	06/01/2026	\$41.78	\$16.17	\$21.78	\$0.00	\$79.73
	12/01/2026	\$41.78	\$16.17	\$23.52	\$0.00	\$81.47
	01/01/2027	\$41.78	\$16.77	\$23.52	\$0.00	\$82.07

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i> For apprentice rates see "Apprentice- PILE DRIVER"	08/01/2020	\$46.11	\$9.40	\$23.12	\$0.00	\$78.63
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$46.11	\$9.40	\$23.12	\$0.00	\$78.63

Apprentice - PILE DRIVER - Local 56 Zone 2

Effective Date - 08/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Notes: Apprentice wages shall be no less than the following Steps;
(Same as set in Zone 1)
1\$57.06/2\$61.96/3\$66.87/4\$69.32/5\$71.78/6\$71.78/7\$76.68/8\$76.68

Apprentice to Journeyworker Ratio:1:5

PIPELAYER <i>LABORERS - ZONE 2</i> For apprentice rates see "Apprentice- LABORER"	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
PIPELAYER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
	For apprentice rates see "Apprentice- LABORER (Heavy and Highway)					
PLUMBER & PIPEFITTER <i>PLUMBERS & PIPEFITTERS LOCAL 51</i>	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59

Apprentice - PLUMBER/PIPEFITTER - Local 51

Effective Date - 08/28/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$20.80	\$10.15	\$2.50	\$0.00	\$33.45
2	50	\$26.00	\$10.15	\$2.50	\$0.00	\$38.65
3	60	\$31.19	\$10.15	\$8.80	\$0.00	\$50.14
4	70	\$36.39	\$10.15	\$14.08	\$0.00	\$60.62
5	80	\$41.59	\$10.15	\$17.60	\$0.00	\$69.34

Effective Date - 08/26/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$21.90	\$10.15	\$2.50	\$0.00	\$34.55
2	50	\$27.37	\$10.15	\$2.50	\$0.00	\$40.02
3	60	\$32.84	\$10.15	\$8.80	\$0.00	\$51.79
4	70	\$38.32	\$10.15	\$14.08	\$0.00	\$62.55
5	80	\$43.79	\$10.15	\$17.60	\$0.00	\$71.54

Notes:
Steps 2000hrs. Prior 9/1/05; 40/40/45/50/55/60/65/75/80/85

Apprentice to Journeyworker Ratio:1:3

PNEUMATIC CONTROLS (TEMP.) <i>PLUMBERS & PIPEFITTERS LOCAL 51</i>	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
PNEUMATIC DRILL/TOOL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWDERMAN & BLASTER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.86	\$9.65	\$17.14	\$0.00	\$65.65
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$39.36	\$9.40	\$16.89	\$0.00	\$65.65
	06/01/2024	\$40.69	\$9.40	\$16.89	\$0.00	\$66.98
	12/01/2024	\$42.02	\$9.40	\$16.89	\$0.00	\$68.31
	06/01/2025	\$43.41	\$9.40	\$16.89	\$0.00	\$69.70
	12/01/2025	\$44.79	\$9.40	\$16.89	\$0.00	\$71.08
	06/01/2026	\$46.23	\$9.40	\$16.89	\$0.00	\$72.52
	12/01/2026	\$47.67	\$9.40	\$16.89	\$0.00	\$73.96

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 653 - Southeastern Concrete (Weymouth)</i>	08/01/2023	\$25.00	\$13.91	\$6.90	\$0.00	\$45.81
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>						
	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg) ROOFERS LOCAL 33	02/01/2024	\$50.03	\$12.78	\$21.45	\$0.00	\$84.26
	08/01/2024	\$51.53	\$12.78	\$21.45	\$0.00	\$85.76
	02/01/2025	\$52.78	\$12.78	\$21.45	\$0.00	\$87.01
	08/01/2025	\$54.28	\$12.78	\$21.45	\$0.00	\$88.51
	02/01/2026	\$55.53	\$12.78	\$21.45	\$0.00	\$89.76

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.02	\$12.78	\$6.21	\$0.00	\$44.01
2	60	\$30.02	\$12.78	\$21.45	\$0.00	\$64.25
3	65	\$32.52	\$12.78	\$21.45	\$0.00	\$66.75
4	75	\$37.52	\$12.78	\$21.45	\$0.00	\$71.75
5	85	\$42.53	\$12.78	\$21.45	\$0.00	\$76.76

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.77	\$12.78	\$6.21	\$0.00	\$44.76
2	60	\$30.92	\$12.78	\$21.45	\$0.00	\$65.15
3	65	\$33.49	\$12.78	\$21.45	\$0.00	\$67.72
4	75	\$38.65	\$12.78	\$21.45	\$0.00	\$72.88
5	85	\$43.80	\$12.78	\$21.45	\$0.00	\$78.03

Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1
 Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.
 (Hot Pitch Mechanics' receive \$1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 33	02/01/2024	\$50.28	\$12.78	\$21.45	\$0.00	\$84.51
	08/01/2024	\$51.78	\$12.78	\$21.45	\$0.00	\$86.01
	02/01/2025	\$53.03	\$12.78	\$21.45	\$0.00	\$87.26
	08/01/2025	\$54.53	\$12.78	\$21.45	\$0.00	\$88.76
	02/01/2026	\$55.78	\$12.78	\$21.45	\$0.00	\$90.01

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 - B	04/01/2024	\$41.08	\$14.59	\$19.04	\$2.24	\$76.95
	10/01/2024	\$42.33	\$14.59	\$19.04	\$2.24	\$78.20
	04/01/2025	\$43.83	\$14.59	\$19.04	\$2.24	\$79.70
	10/01/2025	\$45.08	\$14.59	\$19.04	\$2.24	\$80.95
	04/01/2026	\$46.58	\$14.59	\$19.04	\$2.24	\$82.45

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SHEET METAL WORKER - Local 17-B

Effective Date - 04/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.43	\$14.59	\$4.18	\$1.09	\$36.29
2	45	\$18.49	\$14.59	\$4.71	\$1.17	\$38.96
3	50	\$20.54	\$14.59	\$11.84	\$1.45	\$48.42
4	55	\$22.59	\$14.59	\$11.84	\$1.52	\$50.54
5	60	\$24.65	\$14.59	\$15.53	\$1.64	\$56.41
6	65	\$26.70	\$14.59	\$15.84	\$1.71	\$58.84
7	70	\$28.76	\$14.59	\$16.15	\$1.78	\$61.28
8	75	\$30.81	\$14.59	\$16.45	\$1.86	\$63.71
9	80	\$32.86	\$14.59	\$16.76	\$1.93	\$66.14
10	85	\$34.92	\$14.59	\$17.07	\$2.00	\$68.58

Effective Date - 10/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$16.93	\$14.59	\$4.18	\$1.09	\$36.79
2	45	\$19.05	\$14.59	\$4.71	\$1.17	\$39.52
3	50	\$21.17	\$14.59	\$11.84	\$1.45	\$49.05
4	55	\$23.28	\$14.59	\$11.84	\$1.52	\$51.23
5	60	\$25.40	\$14.59	\$15.53	\$1.64	\$57.16
6	65	\$27.51	\$14.59	\$15.84	\$1.71	\$59.65
7	70	\$29.63	\$14.59	\$16.15	\$1.78	\$62.15
8	75	\$31.75	\$14.59	\$16.45	\$1.86	\$64.65
9	80	\$33.86	\$14.59	\$16.76	\$1.93	\$67.14
10	85	\$35.98	\$14.59	\$17.07	\$2.00	\$69.64

Notes:

Apprentice to Journeyworker Ratio:1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	01/01/2024	\$39.24	\$15.07	\$18.67	\$0.00	\$72.98
	06/01/2024	\$40.24	\$15.07	\$18.67	\$0.00	\$73.98
	12/01/2024	\$40.24	\$15.07	\$20.17	\$0.00	\$75.48
	01/01/2025	\$40.24	\$15.57	\$20.17	\$0.00	\$75.98
	06/01/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$76.98
	12/01/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$78.59
	01/01/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$79.19
	06/01/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$80.19
	12/01/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$81.93
	01/01/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$82.53

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.53	\$15.07	\$18.67	\$0.00	\$73.27
	06/01/2024	\$40.53	\$15.07	\$18.67	\$0.00	\$74.27
	12/01/2024	\$40.53	\$15.07	\$20.17	\$0.00	\$75.77
	01/01/2025	\$40.53	\$15.57	\$20.17	\$0.00	\$76.27
	06/01/2025	\$41.53	\$15.57	\$20.17	\$0.00	\$77.27
	12/01/2025	\$41.53	\$15.57	\$21.78	\$0.00	\$78.88
	01/01/2026	\$41.53	\$16.17	\$21.78	\$0.00	\$79.48
	06/01/2026	\$42.53	\$16.17	\$21.78	\$0.00	\$80.48
	12/01/2026	\$42.53	\$16.17	\$23.52	\$0.00	\$82.22
	01/01/2027	\$42.53	\$16.77	\$23.52	\$0.00	\$82.82
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section B) Zone 2</i>	03/01/2024	\$62.14	\$11.51	\$23.30	\$0.00	\$96.95
	10/01/2024	\$63.76	\$11.51	\$23.30	\$0.00	\$98.57
	03/01/2025	\$65.38	\$11.51	\$23.30	\$0.00	\$100.19

Apprentice - SPRINKLER FITTER - Local 550 (Section B) Zone 2

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$21.75	\$11.51	\$12.90	\$0.00	\$46.16
2	40	\$24.86	\$11.51	\$13.70	\$0.00	\$50.07
3	45	\$27.96	\$11.51	\$14.50	\$0.00	\$53.97
4	50	\$31.07	\$11.51	\$15.30	\$0.00	\$57.88
5	55	\$34.18	\$11.51	\$16.10	\$0.00	\$61.79
6	60	\$37.28	\$11.51	\$16.90	\$0.00	\$65.69
7	65	\$40.39	\$11.51	\$17.70	\$0.00	\$69.60
8	70	\$43.50	\$11.51	\$18.50	\$0.00	\$73.51
9	75	\$46.61	\$11.51	\$19.30	\$0.00	\$77.42
10	80	\$49.71	\$11.51	\$20.10	\$0.00	\$81.32

Effective Date - 10/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$22.32	\$11.51	\$12.90	\$0.00	\$46.73
2	40	\$25.50	\$11.51	\$13.70	\$0.00	\$50.71
3	45	\$28.69	\$11.51	\$14.50	\$0.00	\$54.70
4	50	\$31.88	\$11.51	\$15.30	\$0.00	\$58.69
5	55	\$35.07	\$11.51	\$16.10	\$0.00	\$62.68
6	60	\$38.26	\$11.51	\$16.90	\$0.00	\$66.67
7	65	\$41.44	\$11.51	\$17.70	\$0.00	\$70.65
8	70	\$44.63	\$11.51	\$18.50	\$0.00	\$74.64
9	75	\$47.82	\$11.51	\$19.30	\$0.00	\$78.63
10	80	\$51.01	\$11.51	\$20.10	\$0.00	\$82.62

Notes: Apprentice entered prior 9/30/10:
40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 223</i>	09/01/2023	\$39.40	\$11.50	\$13.91	\$0.00	\$64.81
	09/01/2024	\$40.69	\$11.75	\$14.53	\$0.00	\$66.97

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 223

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Notes: See Electrician Apprentice Wages
Telecom Apprentice Wages shall be the same as the Electrician Apprentice Wages

Apprentice to Journeyworker Ratio:2:3***

TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2024	\$61.34	\$11.49	\$23.59	\$0.00	\$96.42
	08/01/2024	\$63.44	\$11.49	\$23.59	\$0.00	\$98.52
	02/01/2025	\$64.74	\$11.49	\$23.59	\$0.00	\$99.82
	08/01/2025	\$66.89	\$11.49	\$23.59	\$0.00	\$101.97
	02/01/2026	\$68.24	\$11.49	\$23.59	\$0.00	\$103.32
	08/01/2026	\$70.44	\$11.49	\$23.59	\$0.00	\$105.52
	02/01/2027	\$71.84	\$11.49	\$23.59	\$0.00	\$106.92

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.67	\$11.49	\$23.59	\$0.00	\$65.75
2	60	\$36.80	\$11.49	\$23.59	\$0.00	\$71.88
3	70	\$42.94	\$11.49	\$23.59	\$0.00	\$78.02
4	80	\$49.07	\$11.49	\$23.59	\$0.00	\$84.15
5	90	\$55.21	\$11.49	\$23.59	\$0.00	\$90.29

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.72	\$11.49	\$23.59	\$0.00	\$66.80
2	60	\$38.06	\$11.49	\$23.59	\$0.00	\$73.14
3	70	\$44.41	\$11.49	\$23.59	\$0.00	\$79.49
4	80	\$50.75	\$11.49	\$23.59	\$0.00	\$85.83
5	90	\$57.10	\$11.49	\$23.59	\$0.00	\$92.18

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$48.33	\$9.65	\$18.22	\$0.00	\$76.20
	06/01/2024	\$49.81	\$9.65	\$18.22	\$0.00	\$77.68
	12/01/2024	\$51.28	\$9.65	\$18.22	\$0.00	\$79.15
	06/01/2025	\$52.78	\$9.65	\$18.22	\$0.00	\$80.65
	12/01/2025	\$54.28	\$9.65	\$18.22	\$0.00	\$82.15
	06/01/2026	\$55.83	\$9.65	\$18.22	\$0.00	\$83.70
	12/01/2026	\$57.33	\$9.65	\$18.22	\$0.00	\$85.20

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.45	\$9.65	\$18.22	\$0.00	\$72.32
	06/01/2024	\$45.93	\$9.65	\$18.22	\$0.00	\$73.80
	12/01/2024	\$47.40	\$9.65	\$18.22	\$0.00	\$75.27
	06/01/2025	\$48.90	\$9.65	\$18.22	\$0.00	\$76.77
	12/01/2025	\$50.40	\$9.65	\$18.22	\$0.00	\$78.27
	06/01/2026	\$51.95	\$9.65	\$18.22	\$0.00	\$79.82
	12/01/2026	\$53.45	\$9.65	\$18.22	\$0.00	\$81.32

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.82	\$15.07	\$18.67	\$0.00	\$73.56
	06/01/2024	\$40.82	\$15.07	\$18.67	\$0.00	\$74.56
	12/01/2024	\$40.82	\$15.07	\$20.17	\$0.00	\$76.06
	01/01/2025	\$40.82	\$15.57	\$20.17	\$0.00	\$76.56
	06/01/2025	\$41.82	\$15.57	\$20.17	\$0.00	\$77.56
	12/01/2025	\$41.82	\$15.57	\$21.78	\$0.00	\$79.17
	01/01/2026	\$41.82	\$16.17	\$21.78	\$0.00	\$79.77
	06/01/2026	\$42.82	\$16.17	\$21.78	\$0.00	\$80.77
	12/01/2026	\$42.82	\$16.17	\$23.52	\$0.00	\$82.51
	01/01/2027	\$42.82	\$16.77	\$23.52	\$0.00	\$83.11
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$56.56	\$9.65	\$18.67	\$0.00	\$84.88
	06/01/2024	\$58.04	\$9.65	\$18.67	\$0.00	\$86.36
	12/01/2024	\$59.51	\$9.65	\$18.67	\$0.00	\$87.83
	06/01/2025	\$61.01	\$9.65	\$18.67	\$0.00	\$89.33
	12/01/2025	\$62.51	\$9.65	\$18.67	\$0.00	\$90.83
	06/01/2026	\$64.06	\$9.65	\$18.67	\$0.00	\$92.38
	12/01/2026	\$65.56	\$9.65	\$18.67	\$0.00	\$93.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$58.56	\$9.65	\$18.67	\$0.00	\$86.88
	06/01/2024	\$60.04	\$9.65	\$18.67	\$0.00	\$88.36
	12/01/2024	\$61.51	\$9.65	\$18.67	\$0.00	\$89.83
	06/01/2025	\$63.01	\$9.65	\$18.67	\$0.00	\$91.33
	12/01/2025	\$64.51	\$9.65	\$18.67	\$0.00	\$92.83
	06/01/2026	\$66.06	\$9.65	\$18.67	\$0.00	\$94.38
	12/01/2026	\$67.56	\$9.65	\$18.67	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$48.63	\$9.65	\$18.67	\$0.00	\$76.95
	06/01/2024	\$50.11	\$9.65	\$18.67	\$0.00	\$78.43
	12/01/2024	\$51.58	\$9.65	\$18.67	\$0.00	\$79.90
	06/01/2025	\$53.08	\$9.65	\$18.67	\$0.00	\$81.40
	12/01/2025	\$54.58	\$9.65	\$18.67	\$0.00	\$82.90
	06/01/2026	\$56.13	\$9.65	\$18.67	\$0.00	\$84.45
	12/01/2026	\$57.63	\$9.65	\$18.67	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$50.63	\$9.65	\$18.67	\$0.00	\$78.95
	06/01/2024	\$52.11	\$9.65	\$18.67	\$0.00	\$80.43
	12/01/2024	\$53.58	\$9.65	\$18.67	\$0.00	\$81.90
	06/01/2025	\$55.08	\$9.65	\$18.67	\$0.00	\$83.40
	12/01/2025	\$56.58	\$9.65	\$18.67	\$0.00	\$84.90
	06/01/2026	\$58.13	\$9.65	\$18.67	\$0.00	\$86.45
	12/01/2026	\$59.63	\$9.65	\$18.67	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.24	\$15.07	\$18.67	\$0.00	\$72.98
	06/01/2024	\$40.24	\$15.07	\$18.67	\$0.00	\$73.98
	12/01/2024	\$40.24	\$15.07	\$20.17	\$0.00	\$75.48
	01/01/2025	\$40.24	\$15.57	\$20.17	\$0.00	\$75.98
	06/01/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$76.98
	12/01/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$78.59
	01/01/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$79.19
	06/01/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$80.19
	12/01/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$81.93
	01/01/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$82.53
WAGON DRILL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY & HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & PIPEFITTERS LOCAL 51</i>	08/28/2023	\$51.99	\$10.15	\$19.95	\$0.00	\$82.09
	08/26/2024	\$54.74	\$10.15	\$19.95	\$0.00	\$84.84
	08/25/2025	\$57.49	\$10.15	\$19.95	\$0.00	\$87.59
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						

Additional Apprentices Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentices ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

** Multiple ratios are listed in the comment field.

*** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

"ATTACHMENT C"

NOTICE OF AWARD

To:

Project Description:

Town of Brewster

Peter Lombardi, Town Manager

The Owner has considered the Bid submitted by you for the above described work in response to its DOCUMENT 00020, INVITATION TO BID dated and DOCUMENT 00100, INSTRUCTIONS AND INFORMATION FOR BIDDERS. You are hereby notified that your Bid has been accepted in the amount of

You are required by DOCUMENT 00100, INSTRUCTIONS AND INFORMATION FOR BIDDERS to execute DOCUMENT 00500, FORM FOR AGREEMENT and furnish the required Contractor's Performance Bond, Payment Bond and Certificates of Insurance within ten (10) calendar days from the date of this Notice of Award. If you fail to execute said Agreement and to furnish said Bonds within ten (10) days from the date of this Notice of Award, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law. You are required to return an acknowledged copy of this Notice of Award to the Owner. Dated this **day** of _____ 2024

Owner: **Town of Brewster**
2198 Main Street
Brewster, MA 02631
By its **Town Manager**

Peter Lombardi

Acceptance of Notice:

Receipt of the above Notice of Award is hereby acknowledged by _____

this _____ day of _____, 2024

By: _____

(Authorized Signature)

Title: _____

END OF DOCUMENT

"ATTACHMENT D"

NOTICE TO PROCEED

To:

Date:

Title:

You are hereby notified to commence Work in accordance with the Agreement dated _____, on or before _____, and you are to complete the Work within _____ consecutive calendar days using no more than working days. The date of Completion of all Work is therefore _____.

Owner: **TOWN OF BREWSTER**
2198 Main Street
Brewster, MA 02631

By its: **TOWN MANAGER, Peter Lombardi**

Acceptance of Notice to Proceed:

Receipt of the above Notice to Proceed is hereby acknowledged by _____
_____, this _____ day of _____, _____

By: _____
(Authorized Signature)

Title: _____

"ATTACHMENT E"

TOWN OF BREWSTER

CHANGE ORDER FORM

Date: _____

Change Order Number: _____

Project: _____

Engineer: _____

Owner: Town of Brewster

Contractor: _____

Contract Date: _____

Description of Change:

These changes result in the following adjustment of the Contract Price:

Contract Price prior to this Change Order:

Contract Price due to this Change Order will (increase) (decrease) by:

The New Contract Price including this Change Order :

Authorized Signature
Engineer

Town Manager, Peter Lombardi

Authorized Signature
Contractor

Finance Director, Mimi Bernardo
Certification of Available Funds

