

**MASSACHUSETTS CLEAN ENERGY CENTER
INVITATION FOR BID: New Bedford Marine Commerce Terminal
Drainage and Grading Maintenance**

New Bedford, Massachusetts

CONTRACT NO. MACEC-FY24-01

June 11, 2024

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**FOR
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**Massachusetts Clean Energy Center
4 Wright Street
New Bedford MA**

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New Bedford Marine Commerce Terminal: Drainage and Grading
Maintenance
New Bedford, Massachusetts
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Request for Proposals:
New Bedford Marine Commerce Terminal: Drainage and
Grading Maintenance

June 11, 2024

Proposals Due: Not later than 5:00 PM July 2, 2024

All proposals must be submitted electronically as described in
Section I. of this Request for Proposals

I. SUMMARY & GENERAL REQUIREMENTS

The Massachusetts Clean Energy Technology Center (“MassCEC” or “Owner”) seeks proposals from qualified contractors (“Bidders”) for Contract No. MACEC-FY24-01, New Bedford Marine Commerce Terminal: Drainage and Grading Maintenance Project, a project on its New Bedford Marine Commerce Terminal located at 4 Wright Street, New Bedford, Massachusetts (the “Terminal”), which is a multi-purpose marine cargo facility comprised of a pile-supported marginal wharf over a steel cellular cofferdam bulkhead system.

The Scope of Work (as defined in Attachment 1) shall consist of several activities relating to the maintenance of stormwater management systems such as: removing silt from the surface of infiltration trenches, grading drive access ways to slope towards drainage trenches, and cleaning of a catch basin; and the Terminal wearing surface such as: installing crushed stone for heavy vehicle traffic access way and installation of an anti-tracking pad. All work is at the Terminal and is to be performed in the Summer of 2024 (the “Project”).

NOTE: The Terminal is fully occupied by a lessee and all work shall be coordinated with MassCEC to minimize disruptions to their onsite activities. Bidders shall assume all work will be performed outside of normal working hours between the hours of **7 PM and 6 AM seven (7) days per week**. The availability of work to occur during the daytime on weekends is subject to authorization by the lessee and MassCEC.

Contractors shall be aware that the current lessee of the Terminal, Vineyard Wind, has a Project Labor Agreement (PLA) in place with the Southeastern Massachusetts Building Trades Council.

Bidders hereby certify as part of their Bid submission that they are able to furnish labor that will work to the extent required, with all other resources and elements of labor employed or to be employed on the Work.

This Contract is subject to prevailing wage rates applicable in the Commonwealth of Massachusetts as well as all other applicable labor laws. The current Prevailing Wage schedule is included in the enclosed Contract Documents.

Each Bid must be accompanied by bid security in the amount of five percent (5%) of the value of the total Bid, in the form of (a) Cash, (b) Cashier’s or Treasurer’s Check issued by a responsible bank or trust company, or (c) Bid Bond (i) submitted on the form included with the Bidding Documents, (ii) issued by a surety company qualified to do business in the Commonwealth and satisfactory to MassCEC and (iii) conditioned upon the faithful performance by the principal of the agreements contained in the bid.

The successful Bidder shall be required to furnish a Performance Bond, and a Labor and Materials Payment Bond. Each bond shall be written with a penal sum in the amount of the Contract Price. Payment and Performance Bonds shall be submitted on the form included with the Bidding Documents and shall be written by a qualified surety company licensed by the Commonwealth of Massachusetts

Division of Insurance and whose name appears on United States Treasury Department Circular 570. Refer to the Instructions for Bidders for further information.

MassCEC reserves the right to reject any or all Bids, to waive informalities, to advertise for new Bids or proceed to do the Work otherwise, or take any other action as may be deemed to be in the best interests of MassCEC.

II. ABOUT MASSCEC

MassCEC is a quasi-state economic development agency dedicated to accelerating the growth of the clean energy sector across the Commonwealth to spur job creation, deliver statewide environmental benefits and to secure long-term economic growth for the people of Massachusetts. MassCEC works to increase the adoption of clean energy while driving down costs and delivering financial, environmental, and economic development benefits to energy users and utility customers across the state.

MassCEC's mission is to accelerate the clean energy and climate solution innovation that is critical to meeting the Commonwealth's climate goals, advancing Massachusetts' position as an international climate leader while growing the state's clean energy economy. MassCEC is committed to creating a diverse, equitable, and inclusive organization where everyone is welcomed, supported, respected, and valued. We are committed to incorporating principles of diversity, equity, inclusion, and environmental justice in all aspects of our work in order to promote the equitable distribution of the health and economic benefits of clean energy and support a diverse and inclusive clean energy industry. MassCEC strives to lead and innovate in equitable clean energy and climate solutions.

III. PROJECT GOALS AND DESCRIPTION

The objective of the Project is to perform maintenance to the relevant site for its continued use as a staging area for the assembly of wind turbines.

IV. ELIGIBILITY

Qualified contractors with experience in projects involving earthwork, soil grading and compaction, drainage, and related site work comparable in size and scope to this Project as described in the Contract Documents in Attachment 1.

V. ESTIMATED TIMELINE

Release RFP	June 11, 2024
Non-Mandatory Site Visit	June 17, 2024 at 10:00AM
Questions due to MassCEC	June 21, 2024 at 5:00PM
Questions answered	June 25, 2024
Bid Proposals due to MassCEC	July 2, 2024 at 5:00 PM
Notification of Award	July 10, 2024
Notice to Proceed	July 17, 2024

Work Completed	September 20, 2024
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VI. SCOPE OF WORK

See attached Contract Documents in Attachment 1.

VII. HOW TO APPLY

Bidding Documents (Plans and Specifications) and Addendums may be obtained from MassCEC's web portal at <https://www.masscec.com/program/request-proposals-new-bedford-marine-commerce-terminal-drainage-and-grading-maintenance> .

There will be a non-mandatory pre-bid meeting at the Project site on June 17, 2024, at 10 AM. Bidders will meet at the Project site, at the address below:

4 Wright Street
New Bedford, Massachusetts

Bidders are encouraged to submit to Tim Griffin, Terminal Director, any requests for clarifications of the Bidding Documents in writing not later than 5:00 PM on June 21, 2024. All requests shall be submitted in writing via email to: Tim Griffin via email: NBMCT_OPS@MassCEC.com . Verbal requests for clarifications or interpretations of the Bidding Documents will **not** be taken or given consideration. Responses to requests for interpretation of the Bidding Documents shall be included in Addenda in a question and answer format, in accordance with the timeline indicated in the enclosed Request for Proposals.

Proposals shall be submitted electronically to MassCEC's Terminal Director, Tim Griffin, via email: NBMCT_OPS@MassCEC.com no later than: July 2, 2024 at 5:00 PM.

See attached Authorized Applicant's Signature and Acceptance Form in Attachment 2.

See attached Contract Documents in Attachment 1, in particular Section 00200, Instructions to Bidders.

Under no circumstances will MassCEC accept responses past the Bid Proposal Due Date.

No bidder may withdraw its bid for a period of thirty (30) work days after the Bid Proposal Due Date.

VIII. SELECTION CRITERIA

MassCEC is an independent authority and is not a political subdivision of the Commonwealth of Massachusetts, and thus this project is not subject to G.L. c. 30, section 39M. MassCEC will award the Project to the bidder MassCEC deems most advantageous on the combined basis of price, quality and schedule, qualifications of the bidder and its team, and quality of plan for executing the work, even if the selected bid is not the lowest bid received. MassCEC reserves the right to interview a short list of bidders following receipt of bids. In connection with such interviews, MassCEC reserves the right to

request that the shortlisted bidders submit such additional information as MassCEC shall require in order to evaluate such bids.

MassCEC has provided the attached Contract Documents in a format similar to an invitation for bid solely for the ease of use, familiarity and convenience of potential Bidders, and references to bids and “Bidders” throughout this RFP are solely for the Bidder’s convenience.

IX. CONTACT INFORMATION FOR QUESTIONS

Tim Griffin, Terminal Director
Massachusetts Clean Energy Center
NBMCT_OPS@MassCEC.com

X. GENERAL REQUEST FOR PROPOSALS CONDITIONS

NOTICE OF PUBLIC DISCLOSURE

As a public entity, MassCEC is subject to Massachusetts’ Public Records Law, codified at Chapter 66 of the Massachusetts General Laws. Thus, any documentary material, data, or other information received by MassCEC from a Bidder is a public record subject to disclosure. Bidders shall not send MassCEC any confidential or sensitive information in response to this RFP. If confidential information is submitted as part of the application and not clearly marked as confidential, such information may be made publicly available by MassCEC without further notice to the Bidder.

DISCLAIMER, REJECTION OF PROPOSALS & WAIVER AUTHORITY

This RFP does not commit MassCEC to award any funds, or pay any costs incurred in preparing a proposal. MassCEC reserves the right to accept or reject any or all proposals received in its sole discretion, waive minor irregularities in submittal requirements, modify the anticipated timeline, request modification of the proposals, negotiate with all qualified Bidders, cancel or modify the RFP in part or in its entirety, or change the application guidelines, when it is in its best interests.

This RFP has been posted publicly on MassCEC’s web portal for the solicitation of proposals and all documents related to this procurement such as addenda and responses to bidder questions will be posted at the same address described above. MassCEC accepts no liability and will provide no accommodation to Bidders who submit a proposal based on an out-of-date RFP document.

MassCEC reserves the right to consider as unqualified to do the work required by the Contract Documents any Bidder who does not habitually perform the primary portions of that work with its own forces.

MassCEC also reserves the right to not award the contract to any Bidder who, at the time of the award, is ineligible for such contract under the provisions of any applicable regulations issued by the Secretary of Labor, United States Department of Labor, or is not qualified under applicable state and local laws and regulations.

CONTRACT REQUIREMENTS

Upon MassCEC's authorization to proceed with the proposal, MassCEC and the awarded Bidder(s) will execute a contract, substantially in the form of the Agreement Between Owner and Contractor included in Attachment 1, which will set forth the respective roles and responsibilities of the parties.

The Contractor, its subcontractors and all other personnel working at the Project site will be required to comply with specific Terminal security requirements and procedures. Your attention is directed to 01010 Summary of Work, "Section 1.6 Security" of Division 01 of the Project Specifications (included at Attachment 1), which summarizes those requirements and procedures.

ATTACHMENT 1: CONTRACT DOCUMENTS

[See attached]

ATTACHMENT 2: AUTHORIZED APPLICANT'S SIGNATURE AND ACCEPTANCE FORM

**New Bedford Marine Commerce Terminal
Drainage and Grading Maintenance Project Request for Proposals (the "RFP")**

The undersigned is a duly authorized representative of the Bidder named below. The undersigned has read and understands the RFP requirements and acknowledges and confirms that the Bidder and each member of its team has read and understands the RFP Requirements. The undersigned acknowledges and agrees that all of the terms and conditions of the RFP are mandatory.

The undersigned and each Bidder and each member of its team acknowledges and agrees that (i) all materials submitted as part of the application are subject to disclosure under the Massachusetts Public Records Law, as explained in the RFP; (ii) that the Massachusetts Clean Energy Technology Center ("MassCEC") has no obligation, and retains the sole discretion to fund or choose not to fund the application set forth herein; and (iii) that MassCEC's receipt of the application does not imply any promise of funding at any time.

The undersigned and each member of the Bidder's team understands that, if the bid is selected by MassCEC pursuant to this RFP, the Bidder will execute and deliver an agreement to be provided by MassCEC that shall set forth the terms and conditions, together the respective roles and responsibilities of the Bidder, and each member of its team, and MassCEC, with respect to the project described in the RFP.

I certify that the statements made in this bid, including all attachments and exhibits, are true and correct.

Bidder: _____

(Printed Name of Bidder)

By: _____

(Signature of Bidder or Authorized Representative)

Title: _____

Date: _____

SECTION 00100

NOTICE TO BIDDERS

Sealed Bids for Massachusetts Clean Energy Technology Center ("MassCEC") Contract No. MACEC-FY24-01, New Bedford Marine Commerce Terminal Drainage and Grading Maintenance, will be received electronically in writing not later than 5:00 PM on July 2, 2024. All requests shall be submitted via email to: Tim Griffin Terminal Director via email: NBMCT_OPS@MassCEC.com.

The Work includes; The Project is composed of work at 4 Wright Street, which abuts the Terminal, and at the Terminal.

At 4 Wright Street, the scope of work generally includes several activities relating to the maintenance of stormwater management systems such as: removing silt from the surface of infiltration trenches, grading drive access ways to slope towards drainage trenches, and cleaning of a catch basin; and the Terminal wearing surface such as: installing crushed stone for heavy vehicle traffic access way and installation of an anti-tracking pad.

The work will occur at the Marine Commerce Terminal in New Bedford, MA, a multi-purpose marine cargo facility comprised of a pile-supported marginal wharf over a steel cellular cofferdam bulkhead system.

Bidding Documents (Plans and Specifications) and Addendums may be obtained from MassCEC's web portal at <https://www.masscec.com/program/request-proposals-new-bedford-marine-commerce-terminal-drainage-and-grading-maintenance>. All interested parties are required to be registered for this project such that they will receive corresponding communications including, but not limited to, addenda, responses to bidder questions or revisions to the project plans and specifications.

MassCEC is an independent authority and is not a political subdivision of the Commonwealth of Massachusetts. MassCEC will award the Project to the bidder MassCEC deems most advantageous on the combined basis of price, quality and schedule, qualifications of the bidder and its team, and quality of plan for executing the work, even if the selected bid is not the lowest bid received. MassCEC reserves the right to interview a short list of bidders following receipt of bids. In connection with such interviews, MassCEC reserves the right to request that the shortlisted bidders submit such additional information as MassCEC shall require in order to evaluate such bids.

Non-mandatory pre-bid site visit will be held on June 17th at 10 AM. Bidders will meet at the Project site, at 4 Wright Street New Bedford, Massachusetts.

Bidders are encouraged to submit to Tim Griffin, Terminal Director, any requests for clarifications of the Bidding Documents in writing not later than 5:00 PM on July 2, 2024. All requests shall be submitted in writing via email to: Tim Griffin, NBMCT_OPS@MassCEC.com. Verbal requests for clarifications or interpretations of the Bidding Documents will not be taken or given consideration. Responses to requests for interpretation of the Bidding Documents shall be included in Addenda in a question and answer format, in accordance with the timeline indicated in the enclosed Request for Proposals.

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Bidders will be required to certify as part of their Bids that they are able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the Work.

This Contract is subject to prevailing wage rates applicable in the Commonwealth of Massachusetts as well as all other applicable labor laws. The current Prevailing Wage schedule is included in the enclosed Contract Documents.

Bidders shall submit a Bid Guaranty in the amount of five percent (5%) of the value of the Bid, in the form of a Bid Bond. Bid Bonds shall be submitted on the form included with the Bidding Documents and shall be written by a surety authorized to do business in the Commonwealth of Massachusetts.

The successful Bidder shall be required to furnish a Performance Bond, and a Labor and Materials Payment Bond. Each bond shall be written with a penal sum in the amount of the Contract Price. Payment and Performance Bonds shall be submitted on the form included with the Bidding Documents and shall be written by a surety authorized to do business in the Commonwealth of Massachusetts.

MassCEC reserves the right to reject any or all Bids, to waive informalities, to advertise for new Bids or proceed to do the Work otherwise, or take any other action as may be deemed to be in the best interests of MassCEC.

-- END OF SECTION --

SECTION 00200

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - INTERPRETATION OF BASIC ESTIMATED QUANTITIES

- 1.1 Bids will be compared based on the estimated quantities of work to be done, as shown on the Bid Form.
- A. Quantities in the Bid Form are approximate and are provided for purposes of bid comparison only. The Massachusetts Clean Energy Technology Center ("MassCEC") does not expressly or by implication agree that actual quantities will correspond there with, but reserves the right to increase or decrease the amount of any class or portion of the Work, as may be deemed necessary or expedient by MassCEC.
- 1.2 Bidders shall submit their Bids upon the following express condition, which shall apply to and become part of every Bid received.
- A. An increase or decrease in the estimated quantity for any item shall not be regarded as cause for an increase or decrease in the applicable Contract Price, nor in the time allowed for the completion of the Work, except as may otherwise be provided in the Contract Documents.
- B. If the Work is let on the basis of a lump sum contract or if the Work includes lump sum items, the Bidders must obtain and be responsible for the data upon which the Bidders base their bid. **The Bidders shall not be entitled to any additional compensation in case the quantities of work actually done to fulfill the Contract and complete the Work are different from the Bidders' estimated quantities.**

ARTICLE 2 - EXAMINATION OF BIDDING DOCUMENTS AND SITE OF WORK

- 2.1 Before submitting a Bid, each prospective Bidder shall do the following:
- A. Examine the Bidding Documents thoroughly.
- B. Visit and inspect the site to become familiar with observable conditions that may in any manner affect cost, progress, or performance of the Work. Bidders shall satisfy themselves as to the condition under which the work is to be performed and gain complete knowledge of the scope of the work. No allowances shall subsequently be made for any extra expense incurred by a Bidder due to failure to make such examination and to include the required materials and labor in its Bid. Bidders shall be responsible for having examined the premises before submitting the Bid for the work and to have knowledge as to the existing conditions under which the work is to be accomplished.
- C. Familiarize themselves with Federal, state, and local laws,

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ordinances, rules, and regulations that may in any manner affect cost, progress, or performance of the Work.

- D. Study and correlate information thus determined with the Bidding Documents.
- 2.2 By submitting a Bid, each Bidder represents that they have complied with every requirement of this Article and the following Article (Article 3, Data Report - 80 Wright Street and Main Terminal Grading and Drainage and that the Bidding Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work. The "Data Report - 80 Wright Street and Main Terminal Grading and Drainage" will be provided to Bidders as an addendum to the Bidding Documents.
- 2.3 A Non-mandatory pre-bid conference and an inspection tour will be held by MassCEC at dates, times and locations as specified in the Notice to Bidders.
- 2.4 In addition to visiting the site for the purposes as specified above, Bidders shall visit the site to ascertain pertinent local conditions readily determined by inspection and inquiry, such as the location, accessibility, traffic conditions and general character of the site, labor conditions, the character and extent of existing work within or adjacent thereto, and any other work being performed.
- 2.5 Statements as to the condition under which the Work is to be performed, including Plans, surveys, measurements, dimensions, calculations, estimates, borings, etc., are made solely to furnish a basis for comparison of bids, and MassCEC does not guarantee or represent that they are correct. The Bidders must satisfy themselves by their own investigation and research regarding all conditions affecting the Work to be done and labor and material needed, and make its bid in sole reliance thereon. Bidders must familiarize themselves with the location and site of the Work. All necessary information shall be verified in the field before fabrication of new products/material. No claim for extra cost will be allowed by MassCEC because of the successful Bidder's unfamiliarity with site conditions.

ARTICLE 3 - DATA REPORT - 80 WRIGHT STREET AND MAIN TERMINAL GRADING AND DRAINAGE

NOT USED

SEE ATTACHMENTS TO 00800 SUPPLEMENTARY CONDITIONS

ARTICLE 4 - PREPARATION OF BIDS

4.1 Bid Prices

- A. Bidders shall submit their bids on the Bid Form provided with the Bidding Documents. Bidders shall submit their Bid Forms, Bid Guaranty and all other documents required for submission to Tim Griffin, Terminal Director, via email at: NBMCT_OPS@MassCEC.com. Bidding Documents (Plans and Specifications) may be obtained from MassCEC's web portal at <https://www.masscec.com/program/request-proposals-new-bedford-marine-commerce-terminal-drainage-and->

[grading-maintenance](#). Addendums will also be posted on the same web portal above. The Bid Form with the Schedule of Bid Prices, the Bid Guaranty, the forms specified in Section 00400 - certifications, and documents constitute the Bid.

1. All blank spaces for Bid prices in the Schedule of Bid Prices shall be filled in with a unit price or a lump sum as applicable to the item.
 2. The total amount of the Bid shall be obtained by adding the dollar amounts of the individual Bid items as shown in the Schedule of Bid Prices.
- B. All words and figures shall be in black or blue ink or be type-written. Bid prices of each item in the Schedule of Bid Prices shall be stated in written words and numbers.
1. In case of conflict between written words and numbers, the written words shall govern.
 2. In the event that there is an error in the computed totals based upon the unit prices and estimated quantities, the unit prices shall govern.
 3. If erasures or changes appear in the Bid Form or the Schedule of Bid Prices; each erasure or change shall be initialed and dated by the individual signing the Bid Form.
- C. The price for any item, unless otherwise noted or specified, shall include full compensation for all products/materials equipment, tools, labor, testing and incidental work necessary to complete the item to the satisfaction of the Engineer. Prices, without exception, shall be net, not subject to discount, and shall include all royalties and costs arising from patents, trademarks and copyrights in any way involved in the Work.
- D. The Schedule of Bid Prices included in the Bid Form will be used for the indicating of the Bid price information specified above.

4.2 Non-Collusion

- A. Bidders shall certify that to the Bidder's best knowledge, they have not, either directly or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free and competitive bidding in connection with the Bid.

4.3 Addenda

- A. Bidders shall acknowledge receipt of Addenda by writing in the numbers and date of the Addenda received in the Bid Form. Failure to acknowledge receipt of Addenda shall render a Bid non-responsive.

4.4 Signatures

- A. Bids shall be signed by electronic signature, as applicable, in

the proper place provided as follows.

1. If the Bid is made by an individual, that person's name and mailing address shall be stated.
2. If the Bid is made by a firm, partnership, limited liability company or corporation it shall be signed by a person having such legal authority from such firm, partnership or corporation and the person so signing the Bid shall give his own name and title, if any, in addition to the name and address of the firm, partnership or corporation. If the Bid is made by a firm or partnership, the names and addresses of the individual members shall be given.
3. If the Bid is made by a firm, partnership, limited liability company or corporation, the name of the state under the laws of which the business entity was chartered or organized, and the names and titles of the president, treasurer and secretary or clerk of the corporation shall be given.
4. If the Bid is made by two or more individuals, partnerships, limited liability companies or corporations, or any combination thereof, each party joining to make the Bid shall submit, attach to and make a part of the Bid, information and signatures in compliance with the foregoing provisions applicable to an individual, firm, partnership or corporation. In addition, if any members of the joint venture are a corporation, an attested copy of the vote of the corporation authorizing such joint venture shall be attached to the Bid.

ARTICLE 5 - DELIVERY OF BIDS

- 5.1 Prior to the deadline set for receiving Bids, Bidders shall submit their bids on the Bid Form provided with the Bidding Documents. Bidders shall submit their Bid Forms, Bid Guaranty and all other documents required for submission in writing to Tim Griffin, Terminal Director at: NBMCT_OPS@MassCEC.com. Bids received after the stated time for the Bid opening will not be accepted by MassCEC and will be returned to the Bidder unopened.

ARTICLE 6 - BID GUARANTY REQUIRED

- 6.1 In order to insure the faithful fulfillment of its term, each Bid shall be accompanied by a Bid Guaranty. The Bid Guaranty shall be in the amount as stated in the Notice to Bidders in the form of an acceptable bid bond issued by a surety or insurance company authorized to do business in the Commonwealth of Massachusetts and satisfactory to MassCEC.

ARTICLE 7 - WITHDRAWAL OF BIDS

- 7.1 A Bidder may withdraw its Bid provided the request is in writing and is

in the hands of MassCEC prior to the deadline for receipt of Bids.

ARTICLE 8 - NO PUBLIC OPENING OF BIDS

8.1 Bids will not be publicly opened. MassCEC will review and evaluate Bids according to the criteria and timelines set forth as provided in the RFP.

ARTICLE 9 - REJECTION OF BIDS

9.1 Bids that are incomplete, conditional or obscure, or that contain additions/deletions not called for, erasures, alterations or irregularities of any kind or in which errors occur, or that contain abnormally high or abnormally low prices for any class or item of work may be rejected.

9.2 More than one Bid from the same Bidder, whether or not the same name or different names appear on the signature page, will not be considered. Reasonable proof for believing that a Bidder is interested in more than one Bid for the Work contemplated will cause the rejection of all Bids made by the Bidder directly or indirectly.

9.3 Any or all Bids may be rejected if there is reason for believing that collusion exists among Bidders.

9.4 Bidders are advised that the Bid Form's Schedule of Bid Prices shall include a Bid price for each of the items listed in the Schedule of Bid Prices. The omission of a Bid price for any of the items is cause for rejection of all Bid prices in the Bid and the Bid itself.

9.5 No contract will be awarded except to Bidders capable of performing the class of work contemplated. Before the award of the Contract, any bidder may be required by MassCEC to submit information in writing, in such form as MassCEC may require, showing that the Bidder has the skill, ability and integrity necessary to the faithful performance of the Work, and that the Bidder is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the Work.

ARTICLE 10 - DISQUALIFICATION OF BIDDERS

10.1 Bidders whose Bids have been rejected because of evidence of collusion will not be considered in future Bids for the same work and such Bidders may be disqualified from bidding on future work.

ARTICLE 11 - MATERIAL GUARANTY

11.1 Bidders may be required to furnish, at no additional cost to MassCEC, a complete statement of the origin, composition and manufacture of any or all products/materials proposed to be used in the construction of the Work, together with samples that may be subject to testing as determined by MassCEC to determine the quality and fitness of the products/materials.

ARTICLE 12 - CONSIDERATION OF BIDS

- 12.1 MassCEC reserves the right to reject any or all Bids, to waive informalities, to advertise for new Bids, or proceed to do the Work as may be deemed to be in the best interests of MassCEC.

ARTICLE 13 - AWARD OF CONTRACT

- 13.1 Subject to the reservations set forth in these Instructions to Bidders and applicable law, MassCEC shall award the Contract to the bidder MassCEC deems most advantageous on the combined basis of price, quality and schedule, qualifications of the bidder and its team, and quality of plan for executing the work, even if the selected bid is not the lowest bid received. MassCEC reserves the right to interview a short list of bidders following receipt of bids. In connection with such interviews, MassCEC reserves the right to request that the shortlisted bidders submit such additional information as MassCEC shall require in order to evaluate such bids.
- 13.2 The successful Bidder will be notified in writing that their Bid has been accepted and that the Contract has been awarded.
- 13.3 The award of the Contract is predicated upon the availability of funds for the Project. The Contract will not be awarded if funds are not available to MassCEC for the Project.
- 13.4 MassCEC shall issue its Notice of Award of the Contract within fourteen (14) days after the deadline for submission of bids.

ARTICLE 14 - CANCELLATION OF AWARD

- 14.1 MassCEC reserves the right, to be exercised in its sole discretion, to cancel the award of the Contract at any time before the execution of the said Contract by all parties thereto. In the event that MassCEC exercises this right, it shall have no liability for any costs or damages incurred by any Bidder and alleged to arise out of or related to such cancellation.

ARTICLE 15 - RETURN OF BID GUARANTY

- 15.1 The Bid Guaranty in the form specified in Article 6 will be returned within seven (7) calendar days following the deadline for submission of Bids, except for the Bid Guaranty of any Bidders "shortlisted" by MassCEC or, as the case may be, the single Bidder MassCEC has selected for award of the Contract.
- 15.2 The Bid Guaranties of any shortlisted Bidders or (as the case may be) of the Bidder MassCEC selects for award will be retained by MassCEC until execution of the Contract.
- 15.3 If after ninety (90) days from the opening of the Bids the Contract is not awarded by MassCEC, any or all of the shortlisted Bidders (if applicable) may request in writing that their Bid Guaranty be returned. Bidders whose Bid Guaranties are returned will not be considered for the awarding of the Contract.

ARTICLE 16 - PAYMENT AND PERFORMANCE BONDS REQUIRED

- 16.1 The successful Bidder shall provide a Performance Bond with a penal sum in the full amount of the Contract Price.
- 16.2 The successful Bidder shall provide Labor and Materials Payment Bond with a penal sum in the full amount of the Contract Price.
- A. The Labor and Materials Payment Bond shall remain in force until the validity of all claims is determined and if valid, are paid by the successful Bidder or its surety.
- 16.3 The name of the agency or agent writing these bonds shall be identified with or on the bond.
- A. The bonds shall be written on a form substantially similar to the form enclosed with the RFP, or otherwise acceptable to MassCEC in its sole discretion, and furnished by a surety authorized to do business in the Commonwealth of Massachusetts.
- B. All modifications, extensions of time, extra work and other changes authorized under the Contract Documents may be made without obtaining the consent of the surety.

ARTICLE 17 - EXECUTION OF THE CONTRACT

- 17.1 The successful Bidder shall execute and deliver the Contract and furnish the required payment and performance bonds, and applicable certificates of insurance to MassCEC within 7 calendar days after the Notice of Award.
- 17.2 The Contract shall be in writing and shall be executed in the number of copies required by MassCEC.
- 17.3 One fully executed copy of the Contract will be delivered to the Contractor.

ARTICLE 18 - FAILURE TO EXECUTE CONTRACT

- 18.1 Should the successful Bidder fail to execute the Contract and furnish payment and performance bonds and certificates of insurance within the time stipulated, MassCEC may at its option, determine that the Bidder has abandoned the Contract and thereupon the Notice of Award shall be null and void and the Bid Guaranty accompanying the Bid will be retained and collected by MassCEC not as a penalty but as liquidated damages to compensate MassCEC for all additional costs and damages incurred by MassCEC due to the failure of the Bidder to execute the Contract as required by the Bidding Documents.

ARTICLE 19 - INTERPRETATION OF BIDDING DOCUMENTS

- 19.1 Bidders shall submit requests for interpretation of the Bidding Documents in writing no later than 5:00 PM on June 21, 2024. All requests shall be submitted in writing to Tim Griffin, Terminal Director, via email at: NBMCT_OPS@MassCEC.com. Verbal requests for interpretation of the Bidding Documents will not be taken or given consideration. Responses to requests for interpretation of the Bidding Documents will be addressed individually and included in Addenda in a question and answer format.

19.2 Obvious discrepancies in Bidding Documents that are not addressed by a Bidder in accordance with the above procedure will be construed against the successful Bidder should a dispute arise.

19.3 Addenda will be sent by email with return receipt requested to all persons or entities that obtained Bidding Documents. All addenda so issued will become part of the Bidding Documents. Additionally, addenda may be handed out at the pre-bid meeting, at which time each representative of each Bidder in attendance will be required to sign a list indicating they received the addenda.

ARTICLE 20 - MASSACHUSETTS SALES AND USE TAX LAW OF 1967

20.1 The attention of the Bidders is directed to the Massachusetts Sales Tax, Chapter 64H, Section 6 and the Massachusetts Use Tax, Chapter 64I, Section 7, which states that these taxes are not applicable to the sales of construction materials and supplies incorporated, consumed, employed or expended in construction projects of the Commonwealth, any political subdivision thereof or any of their respective agencies, including MassCEC. This exemption is also applicable to rental charges for construction vehicles, equipment, and machinery rented, specifically for use on the site of MassCEC's construction projects. Bidders are directed to exclude any allowance for Sales or Use Tax from their Bid Form as said tax would relate to the foregoing specific categories.

ARTICLE 21 - NOT USED- EQUAL EMPLOYMENT OPPORTUNITY

21.1 Bidders shall comply with all Equal Employment Opportunity (EEO) requirements of the Contract Documents.

ARTICLE 22 - PRE-BID CONFERENCE AND INSPECTION TOUR

22.1 Non-mandatory pre-bid conference will be held by MassCEC on June 17, 2024 at the project site, 4 Wright Street, New Bedford, Massachusetts.

ARTICLE 23 - CERTIFICATION PERTAINING TO INELIGIBLE CONTRACTORS

23.1 Bidders are advised that the Certification Pertaining to Ineligible Contractors included in the Bid Form must be completed in its entirety and submitted with the Bid.

23.2 Failure to comply fully and submit the required Certification may render the Bid non-responsive.

ARTICLE 24 - BIDDER STATUS IDENTIFICATION

24.1 The Bidder's attention is directed to the Bid Form and information to be furnished regarding status identification (Corporation, Partnership, Individual, Individual Doing Business Under a Firm Name and Joint Venture).

24.2 Bidders are advised that the applicable section regarding status identification shall be complete in its entirety.

24.3 Failure to comply fully and submit the required status identification information may render the Bid non-responsive.

ARTICLE 25 - NON-COLLUSION AFFIDAVIT

25.1 Bidders are advised that the Non-Collusion Affidavit included in the Bid Form shall be completed in its entirety and submitted with the Bid.

25.2 Failure to comply fully and submit the required affidavit may render the Bid non-responsive.

ARTICLE 26 - RIGHT-TO-KNOW LAW CERTIFICATION

26.1 Bidders are advised that the Right-to-Know Law Certification included in the Bid Form shall be completed in its entirety and submitted with the Bid.

26.2 Failure to comply fully and submit the required Certification may render the Bid non-responsive.

ARTICLE 27 - CERTIFICATION OF DUMPING FACILITIES

27.1 Bidders are advised that the Certification of Dumping Facilities included in the Bid Form shall be completed in its entirety and submitted with the Bid.

27.2 Failure to comply fully and submit the required Certification may render the Bid non-responsive.

ARTICLE 28 - CERTIFICATION OF EXAMINATION OF AVAILABLE SUBSURFACE DATA

28.1 Refer to Technical Specifications for additional information.

ARTICLE 29 - CERTIFICATION OF CONSTRUCTION EQUIPMENT STANDARD COMPLIANCE

29.1 Bidders are advised that the Certification of Construction Equipment Standard Compliance included in the Bid Form shall be completed in its entirety and submitted with the Bid.

29.2 Failure to comply fully and submit the required Certification may render the Bid non-responsive.

ARTICLE 30 - INFORMATION TO BE PROVIDED BY BIDDERS

30.1 Along with their Bids, all Bidders shall submit to MassCEC a list of references. The list of references shall include the following:

A. Business References

1. Submit three (3) business references. The business references shall include the following information:

a. Name

b. Title

- c. Company name
- d. Company address
- e. Telephone number
- f. Relationship to Bidder

B. Project References and Project Contacts

1. Submit three (3) project references with their respective project contacts. The projects shall have been completed within the last five (5) years and shall have been of a similar type of work, scope and construction contract dollar value. The contacts shall have been involved in the project as part of the Owner's project team and have knowledge of the overall project.

a. The project references shall include the following information:

- i. Name of Owner
- ii. Address of Owner
- iii. Name of project
- iv. Address of project
- v. Type of project
- vi. Construction contract dollar value
- vii. Start and end dates of the Work
- viii. Summary of change orders (number and total change in project cost), for each contract and a brief explanation of the basis of each change order that resulted in a change of 1% or greater in the Total Contract Price for the project.

b. The project contacts shall include the following information:

- i. Name of contact
- ii. Title
- iii. Project responsibility
- iv. Address of contact
- v. Telephone number

C. Qualifications and Experience

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

1. Provide written references for at least two (2) earthwork/sitework/grading and drainage projects completed in the past (5) years similar in size and scope to the 80 Wright Street and Main Terminal Grading and Drainage Project.
23. Provide written documentation regarding your company's environmental compliance on previous projects. Provide a summary of fines for violation of environmental permit conditions, and/or commendations for exceeding permit conditions.
34. Provide written documentation regarding your company's Health and Safety program, and your company's EMR index for the past five (5) years. Provide a summary of OSHA recordable incidences.
45. Provide documentation regarding your company's management, labor resources and equipment/fleet capabilities. Identify the specific resources that will be dedicated to this project, and their specific experience.
5. Provide a narrative of your implementation plan to comply with the project schedule. Describe your planning efforts for contingencies.
6. Bidders must clearly demonstrate within their proposal the capability to successfully complete all technical aspects of the Work.
7. Provide any additional information regarding your company's resources and capabilities which are pertinent to this solicitation.

-- END OF SECTION --

SECTION 00400

BID FORM

Note: This Bid Form must be submitted (along with Section 01000 - Bidding Schedule of the technical specifications) as part of Bidder's proposal.

BIDDER'S COMPANY NAME: _____

CONTRACT NO.: _____

The undersigned Bidder hereby declares that it has carefully examined the Bidding Documents and also the sites upon which the Project Work is to be performed.

The undersigned proposes to furnish all labor, products/materials, testing and equipment required for Massachusetts Clean Energy Center Contract No. MACEC-FY24-01, New Bedford Marine Commerce Terminal Drainage and Grading Maintenance, for the Massachusetts Clean Energy Center ("MassCEC") in accordance with the Bidding Documents for (as applicable) the unit price, lump sum and allowance prices specified in the Schedule of Bid Prices, subject to additions and deductions according to the terms of the Bidding Documents.

Accompanying this Bid Form is a Bid Guaranty in the amount of five percent (5%) of the total Bid Price that shall become the property of MassCEC if the undersigned fails to execute the Contract following receipt of MassCEC's Notice of Award and to furnish such bonds, certificates and other documents as may be required by the Bidding documents.

The undersigned also hereby declares that it is the only Bidder interested in this Bid; that it is made without any connection with any other Bidder making any Bid for the same Work; that no person acting for, or employed by, MassCEC is directly or indirectly interested in this Bid, or in any contract which may be made under it, or in expected profits to arise therefrom; and it is made without directly or indirectly influencing or attempting to influence any other person or corporation to bid or to refrain from bidding or to influence the Bid of any other person or corporation and that this Bid is made in good faith, without collusion or connection with any person bidding for the same work; and that this Bid is made with distinct reference and relation to the Bidding Documents prepared for this project and herein mentioned. The undersigned declares that in regard to the conditions affecting the work to be done and the labor and materials to be provided, this Bid is based solely on its own investigation and research and not in reliance upon any plans, surveys, measurements, dimensions, calculations, estimates or representations of any employee, officer, or agent of the MassCEC.

If the Bidder is a foreign corporation it agrees, in case this Bid is accepted, to comply with the applicable provisions of Massachusetts General Laws, Chapter 156D, before the time for execution of the Contract occurs.

The undersigned Bidder proposes and agrees that within seven (7) days of MassCEC's Notice of Award stating that the Bid has been accepted by the MassCEC, the Bidder shall execute the Contract and furnish a Performance Bond and also

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

a Labor and Materials Payment Bond each with a penal sum in the full amount of the Contract Price, substantially similar to the forms of bonds included in the Bid Documents.

The undersigned agrees to commence Work within seven (7) days from the date of the mailing of the executed Contract to the Contractor unless otherwise directed in writing by MassCEC; and it shall complete the entire Work, fully and acceptably, in accordance with the schedule presented in Section 01025, "Measurement and Payment", of the technical specifications.

The undersigned covenants that it has not employed or retained any company or person (other than a full time bona fide employee working for the Contractor) to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person (other than such an employee) any gift, fee, contribution, percentage, or brokerage fee contingent upon or resulting from the award of this Contract.

The Bidder warrants, represents and agrees that during the time this Contract is in effect, neither it nor any affiliated company, as hereinafter defined, shall 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 engages in conduct declared to be unlawful by Section 2 of Chapter 151E, Massachusetts General Laws. If there shall be a breach in the warranty representation and agreement contained in this paragraph, then without limiting such other rights as it may have, MassCEC shall be entitled to rescind this Contract. As used herein, an affiliated company shall be any business entity of which at least fifty-one percent (51%) of the ownership interests are directly or indirectly owned by the Bidder or by a person or persons or business entity or entities directly or indirectly owning at least fifty-one percent (51%) of the ownership interests of the Bidder, or which directly or indirectly owns at least fifty-one percent (51%) of the ownership interest of the Bidder.

This Bid includes the following ADDENDA:

(Bidders shall list additional ADDENDA by number and date as necessary.)

The following representative: _____ attended the mandatory pre-bid meeting on the following date _____.

The TOTAL ESTIMATED BASE BID PRICE based upon the Schedule of Base Bid Prices is:

_____ Dollars

** Total Amount of Base Bid in Words

\$ _____

** Total Amount of Base Bid in Figures

(Name and Address of Bidder)

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

USE BLACK INK OR TYPEWRITER IN COMPLETION OF BID FORM, THE SCHEDULE OF BID PRICES, AFFIDAVIT AND CERTIFICATIONS.

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

SCHEDULE OF BID PRICES (BASE BID ITEMS)

THE SCHEDULE OF THE BASE BID ITEMS IS AS FOLLOWS:

Base Bid Item No.	Description	Estimated Quantity*	Unit	Unit Price	Estimated Amount
0001	Mobilization and Demobilization	1	L.S.	\$ _____	\$ _____
0002A	Infiltration Trench Maintenance (1,385 total LF)	77	CY	\$ _____	\$ _____
0002B	Crushed Stone Access Way (350 ft x 24ft)	78	CY	\$ _____	\$ _____
0003	Access Travel way Implementation at Southern Heavy Lift Border (695 total LF)	57	CY	\$ _____	\$ _____
0004	Sinkhole Filling	1	L.S.	\$ _____	\$ _____
0005	Storm Drain Cleaning	1	EA	\$ _____	\$ _____
0006	Anti-Tracking Pad	1	L.S.	\$ _____	\$ _____
TOTAL BASE BID ITEMS:	\$ _____				
TOTAL BASE BID ITEMS IN WORDS:					

* Estimated Quantities are listed for bid comparison purposes only. Bidders' unit prices listed herein are assumed to include all costs of labor, materials, and equipment necessary to complete the full scope of work required by the Contract Documents for the corresponding Bid Item, even where actual quantities differ substantially from the estimated quantities listed herein.

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

SCHEDULE OF OPTIONAL BID PRICES (OPTIONAL BID ITEMS)

THE SCHEDULE OF THE OPTIONAL BID PRICES IS AS FOLLOWS**:

Optional Bid Item No.	Description	Estimated Quantity*	Unit	Unit Price	Estimated Amount
Opt. 1C	Limited Grading at Blade Storage Racks	550	CY	\$ _____	\$ _____
TOTAL OPTIONAL BID ITEMS:	\$ _____				
TOTAL OPTIONAL BID ITEMS IN WORDS:					

Notes:

** The Owner reserves the right to not select any of the optional bid items or to select a combination of one or more optional bid items in any order. The low bid shall be determined based on the arithmetic sum of the base bid and any option bid items selected by the Owner.

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

The Bidder agrees that it shall be a condition of its Bid, and shall be made a condition of each subcontract entered into pursuant to the Bid, that the Bidder and any of its subcontractors shall not require any laborer or mechanic employed in performance of the Work to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to his health or safety, as determined under construction safety and health standards (Title 29, Code of Federal Regulations, Part 1518, published in the Federal Register on April 17, 1971) promulgated by the United States Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act, (83 Stat. 96).

The undersigned hereby certifies that it is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the Work.

The Bidder certifies herein, under penalty of perjury, that the information contained within its bid is accurate and complete.

Full name and address of the individual or concern submitting this Bid:

Date: _____, 20 _____

Name of Bidder: _____

Signed: _____

Title: _____

Address: _____

NOTICE: The Bid Form should be signed in ink by a person having proper legal authority, and the person's title should be given, such as "owner" in the case of an individual, "partner" in the case of a general partnership, "president", "treasurer" or other authorized officer in the case of a Corporation.

NOTE: BIDDERS MUST SET FORTH, ACCURATE AND COMPLETE INFORMATION AS REQUIRED BY THIS SOLICITATION. FAILURE TO DO SO MAY RENDER THE OFFER NON-RESPONSIVE OR UNACCEPTABLE.

BIDDER STATUS IDENTIFICATION

NOTE: IF THE BIDDER IS A CORPORATION, INDICATE STATE OF INCORPORATION; IF A PARTNERSHIP, GIVE FULL NAMES AND ADDRESSES OF ALL PARTNERS; IF AN INDIVIDUAL, GIVE RESIDENTIAL ADDRESS IF DIFFERENT FROM BUSINESS ADDRESS; AND IF JOINT VENTURES, GIVE NAMES AND ADDRESSES OF ALL FIRMS OF THE JOINT VENTURE.

If a CORPORATION:

Incorporated in what State: _____

President: _____

Treasurer: _____

Secretary: _____

If a PARTNERSHIP (Name all Partners):

Name of Partner: _____

Residence: _____

Name of Partner: _____

Residence: _____

If an INDIVIDUAL:

Name: _____

Residence: _____

If an INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME:

Name of Firm: _____

Name of Individual: _____

Business Address: _____

Residence: _____

If a JOINT VENTURE:

Name of Venture: _____

Business Address: _____

Name of Firm or Corporation: _____

Address: _____

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Name of Firm or Corporation: _____

Address: _____

Name of Firm or Corporation: _____

Address: _____

Name of Firm or Corporation: _____

Address: _____

If any of the joint ventures is a corporation, a copy of the vote of the corporation authorizing the joint venture should be attached hereto.

The proposed Surety on the bond to be given is:

Name: _____

Home office Address: _____

Massachusetts Address (If Different): _____

CERTIFICATION PERTAINING TO INELIGIBLE CONTRACTORS

Date: _____, 20 _____

A. The _____
(Name and Address of Bidder)

hereby certifies that it is not included on the Commonwealth of Massachusetts - EOAF/DCPO - List of Debarred or Suspended Contractors, or the Concerns on Debarment List from the Massachusetts Attorney General's Fair Labor and Business Practices Division.

(Signature of Authorized Representative of Bidder)

(Title)

OR

B. The _____
(Name and Address of Bidder)

hereby Certifies that it is included on the Commonwealth of Massachusetts - EOAF/DCPO - List of Debarred or Suspended Contractors, or the Concerns on Debarment List from the Massachusetts Attorney General's Fair Labor and Business Practices Division.

(Signature of Authorized Representative of Bidder)

(Title)

NOTE: A BIDDER WILL NOT BE ELIGIBLE FOR AWARD OF A CONTRACT UNDER THIS NOTICE TO BIDDERS BIDS UNLESS SUCH BIDDER HAS SUBMITTED AS A PART OF ITS BID THE FOLLOWING CERTIFICATION PERTAINING TO INELIGIBLE CONTRACTORS WHICH WILL BE DEEMED A PART OF THE RESULTING CONTRACT.

CERTIFICATION PERTAINING TO UNDOCUMENTED WORKERS

As evidenced by the signature of the Bidders authorized representative below, the Bidder certifies under the pains and penalties of perjury that the Bidder shall not knowingly use undocumented workers in connection with the performance of any MassCEC contract; that pursuant to federal and state requirements, the Bidder shall verify the immigration status of all workers assigned to such contracts without engaging in unlawful discrimination; and that the Bidder shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker(s). The Bidder understands and agrees that breach of any of these terms during the period of each contract may be regarded as a material breach, subjecting the Bidder to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

Bidder Authorized Signature

Printed Name

Date

Title _____ Telephone: _____

Email: _____

NON-COLLUSION AND TAX COMPLIANCE FORM

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity or group of individuals.

Signature of individual submitting bid

Name of business/organization

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. c. 62C, §49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes reporting of employees and contractors, and withholding and remitting child support.

Signature of person submitting bid

Name of business

RIGHT-TO-KNOW LAW CERTIFICATION

The Bidder hereby certifies that, if awarded this Contract, he will fully comply with the Massachusetts Right-to-Know Law, c. 470 of the Acts of 1983, (the Act.). In addition, he shall:

1. Obtain a Material Safety Data Sheet, (MSDS), for all substances or mixtures of substances which appear on the Massachusetts Substance List that he or any of his subcontractors brings to or uses on the work site and will keep a copy of that MSDS on the work site of this Contract.
2. Label each container of a substance or mixture of substances on the Massachusetts Substance List as required in §7 of the Act.
3. Provide the same training and non-technical instruction that he is required to provide under §15 of the Act to all Massachusetts Clean Energy Technology Center representatives and their authorized representatives who are exposed to the substance or to the mixture of substances. Training shall include instruction on the nature and effects of any substance or mixture of substances listed on the Massachusetts Substance List which the Bidder or any of his subcontractors brings to or uses on the work site. Training and non-technical instruction shall be provided to all Massachusetts Clean Energy Technology Center representatives and their authorized representatives, at no additional cost to the MassCEC.
4. Provide to the Massachusetts Clean Energy Technology Center representatives and their authorized representatives on the work site the same protective equipment that the Bidder or any of his subcontractors provides to his employees. Equipment shall be provided to all Massachusetts Clean Energy Technology Center representatives and their authorized representatives, at no additional cost to the MassCEC.

Date: _____ , 20 _____

Signature of Authorized Representative of Bidder

Name and Address of Bidder

NOTE: A BIDDER WILL NOT BE ELIGIBLE FOR AWARD OF ANY CONTRACT UNDER THIS INVITATION FOR BIDS UNLESS SUCH BIDDER HAS SUBMITTED AS PART OF ITS BID THE FOLLOWING CERTIFICATION WHICH WILL BE DEEMED A PART OF THE RESULTING CONTRACT.

OSHA CERTIFICATION REQUIREMENT

I, _____, as _____, of the
(Print Name) (Position with the entity submitting bid)
joint venture/corporation/partnership or other legal entity submitting this bid
for a project, do hereby certify that any and all employees found on my worksite
for this project have, or will have by the start of their work on the project,
successfully completed a course in construction safety and health approved by
the United States Occupational Safety and Health Administration that was at
least 10 hours in duration.

A copy of the OSHA completion cards for each employee must be submitted to the
Massachusetts Clean Energy Technology Center before work on this project is to
begin and must be supplemented as new employees are hired or contracted to work
on this project.

_____, as
Signature
_____, of
Position
_____, on
Company/Corporation/Joint Venture/Partnership/Etc.

Date

CERTIFICATION OF CONSTRUCTION EQUIPMENT STANDARD COMPLIANCE

The, _____
(Name and Address of Bidder)
hereby certifies that all diesel construction equipment used in this Contract
has emission control devices installed, such as oxidation catalysts or
particulate filters on the exhaust system side of the diesel combustion engine
equipment.

Date: _____, 20 _____

Signature of Authorized Representative of Bidder

Name and Address of Bidder

END OF SECTION

SECTION 00430

BID BOND

BID BOND

KNOW ALL MEN BY THESE PRESENTS: that _____

(Insert Full Name and Address and Legal Title of Contractor)
as Principal, hereinafter called Contractor, and _____

(Insert Full Name and Address or Legal Title of Surety)

a corporation duly organized under the laws of the State of _____
as Surety, hereinafter called Surety, are held and firmly bound unto the Massachusetts Clean
Energy Technology Center as Obligee, hereinafter called MassCEC, in the amount of _____

_____ Dollars (\$ _____)

for the payment of which sum well and truly to be made, the said Contractor and the said
Surety, bind themselves, their heirs, executors, administrators, successors and assigns, jointly
and severally, firmly by these presents.

WHEREAS, Contractor has submitted a bid to the MassCEC for Contract No. _____

MACEC-FY24-01

(Insert Contract No. and Full Name, Address and Description of the Project)

NOW, THEREFORE, if the MassCEC shall accept the Bid of the Contractor and the Contractor
shall enter into a Contract with the MassCEC in accordance with the terms of such Bid, and give
such bonds or bonds as may be specified in the bidding or Contract Documents with good and
sufficient surety for the faithful performance of such Contract and for the prompt payment of
labor and material furnished in the prosecution thereof, or in the event of the failure of the
Contractor to enter such Contract and give such bond or bonds, if the Contractor shall pay to
the MassCEC the difference not to exceed the penalty hereof between the amount specified in
said Bid and such larger amount for which the MassCEC may in good faith contract with another
party to perform the Work covered by said Bid, then this obligation shall be null and void,
otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____, 20 ____ .

WITNESS:

PRINCIPAL:

(Title)

(Seal)

WITNESS:

SURETY:

* _____

(Title)

(Seal)

* Attach hereto proof of authority of officers or agents to sign the bond.

END OF SECTION

SECTION 00525

AGREEMENT - CORPORATION FORM

FORM OF AGREEMENT

THIS AGREEMENT, entered into this __ day of _____, 20 __, between the Massachusetts Clean Energy Technology Center ("MassCEC") and _____ ("Contractor"). MassCEC and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 – THE WORK

1.01 The Contractor agrees to furnish all equipment, machinery, tools and labor, to furnish and deliver all materials required to be furnished and delivered in and about the improvement and to do and perform all work under Contract No. **MACEC-FY24-01** for construction of the project known as the New Bedford Marine Commerce Terminal Drainage and Grading Maintenance. The Work shall be performed in strict conformity with the Contract Documents as herein defined.

ARTICLE 2 – THE PROJECT

2.01 The Project, for which the Work to be performed under the Contract Documents may be the whole or only a part, is the New Bedford Marine Commerce Terminal Drainage and Grading Maintenance.

ARTICLE 3 – THE ENGINEER

3.01 The Project has been designed by John McAllister, McAllister Marine Engineering LLC, 16 Hoxie Avenue, Charlestown, RI 02813, who shall assume all duties, responsibilities, and have all rights and authority assigned to the Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – THE CONTRACT TIME

4.01 The Contractor shall commence the Work in accordance with Article 6.02 of the General Conditions. The Contractor shall Substantially Complete the Work within sixty (60) days from the Notice to Proceed, subject to adjustments to the Contract Time in accordance with the Contract Documents.

ARTICLE 5 – THE CONTRACT PRICE

5.01 MassCEC shall pay Contract for completion of the Work in accordance with the

Contract Documents the lump sum of _____ (\$_____).

ARTICLE 6 – THE CONTRACT DOCUMENTS

6.01 The Contract Documents consist of the following:

1. Notice to Bidders
2. Instructions to Bidders
3. Bid Form
4. Bid Bond
5. Agreement
6. Performance Bond
7. General Conditions
8. Supplementary Conditions

6.02 The order of precedence of the Contract Documents is set forth in Article 9 of the General Conditions.

ARTICLE 7– OWNER’S AND CONTRACTOR’S REPRESENTATIVES

7.01 The Owner’s Representative is:

7.02 The Contractor’s representative is:

IN WITNESS WHEREOF, MassCEC and Contractor have entered into this Agreement under seal as of the day and year first written above.

MASSACHUSETTS CLEAN ENERGY
TECHNOLOGY CENTER

CONTRACTOR

By: NAME, TITLE

By: NAME, TITLE

Date

Date

VOTE OF CORPORATION AUTHORIZING EXECUTION OF CONTRACT

At a meeting of the Board of Directors of _____ duly called and held on _____ at which a quorum was present and acting throughout, the following vote was duly adopted.

VOTED: That _____ of the corporation be and hereby is authorized to sign the contract and deliver in the name and on behalf of corporation a contract with:

MASSACHUSETTS CLEAN ENERGY TECHNOLOGY CENTER

For performing services, all in such form and on such terms and conditions as he/she, by the execution thereof, shall deem proper.

A true copy:

(Affix Corporate Seal)

Clerk of the Corporation

END OF SECTION

SECTION 00610

PERFORMANCE BOND

PERFORMANCE BOND

**SECTION 00610
PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS, that we
_____, as Contractor, of
_____, and _____, hereinafter
called the "Surety," are held and firmly bound unto the Massachusetts Clean Energy
Technology Center, hereinafter called the "Owner," and to such persons, firms and
corporations which may furnish materials for or perform labor on the Work, construction,
or improvements contemplated in the Agreement hereinafter mentioned, or which may
have any suits or claims for injury or damage to persons or property resulting from or
arising out of the Work done under this Agreement in the penal sum of Dollars
(\$ _____) (lawful money of the United States of
America) for the payment whereof the Contractor and the Surety or Sureties bind
themselves and their heirs, executors, administrators, successors and assigns, jointly
and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, WHEREAS THE Contractor has
by means of a written agreement dated on the _____ day of _____,
2022 (the Agreement) entered into a written contract with the Owner for the 80 Wright Street
and Main Terminal Grading and Drainage project, and related work and other incidentals (the
Project) for the sum of approximately _____ Dollars (\$_____).

NOW, THEREFORE, the condition of this obligation is such that if the Contractor shall
faithfully perform the Agreement on its part and during the life of any guarantee or warranty,
including warranty for defective materials and workmanship required under this Agreement, and
satisfy all claims and demands incurred for the same, including without limitation any claim for
liquidated damages for delay; and shall fully indemnify and save harmless the Owner from all
cost and damage which may suffer by reason of failure to do so, and shall fully reimburse and
repay the Owner all outlay and expense which the Owner may incur in making good any such
fault, and shall promptly make payment to all persons supplying labor or materials for use in the
prosecution of the Work provided for in said Agreement; and shall indemnify and save harmless
the said Owner, its officers, agents, employees, and directors from any and all suits or claims for
injury or damage to persons or property resulting from or arising out of work done under this
Agreement, including without limitation reasonable attorney's fees and expenses incurred in any
proceeding to enforce Owner rights under this Bond, then this obligation shall be null and void;
otherwise it shall remain in full force and effect.

PROVIDED, HOWEVER, THAT (except as to the Owner) no suit, action, or proceeding,
by reason of any default whatever shall be brought on this Bond after two years from
the day on which the final payment under the Agreement falls due.

AND PROVIDED, that any alterations which may be made in the terms of the Agreement or in the Work to be done under it, or any assignment, transfer, or subletting of any part of the Work, or the giving by the Owner of any extension of time for the performance of the Agreement or any other forbearance on the part of either the Owner or the Contractor to the other, shall not in any way release the Contractor and the Surety or Sureties, either or any of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety or Sureties of any such alterations, assignments, transfer, subletting, extension or forbearance being hereby waived.

AND PROVIDED FURTHER, the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Agreement, the Work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement, the Work, or to the Specifications.

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

IN WITNESS WHEREOF, said Contractor and Surety have hereunto set their respective names this _____ day of _____, 2022.

WITNESSES/ATTESTATION:

(Contractor Name) [Seal]
PRINCIPAL

Name:

Title:

(Surety Name) [Seal]
SURETY

Name:

Title: _____
Attorney-in-fact

[NOTARY REQUIRED]

POWER OF ATTORNEY

Any attorney-in-fact who signs Contract Bonds must file with each Bond a certified copy of his or her power of attorney to sign said Bonds.

NOTE: The date of the BOND must not be before the date of the Agreement. If Contractor is a Partnership, all partners should execute Bonds.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Rhode Island.

****END OF SECTION****

SECTION 00700

GENERAL CONDITIONS

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GENERAL CONDITIONS

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Exhibit B – Change Order Form

Exhibit C – Project Schedule

GENERAL CONDITIONS

ARTICLE 1 - DEFINITION OF TERMS

1.01 DEFINITION OF TERMS

- A. Wherever in the Bid or Contract Documents the following terms, or pronouns in place of them, are used, the intent and meaning shall be as follows:
1. Acceptance: Formal written acceptance by MassCEC of the completed Work.
 2. Addenda: Written interpretation of and/or revisions to the Bid Documents issued by MassCEC prior to opening of Bids.
 3. Alteration: A change or substitution in the form, character, or detail of the Work done or to be done within the original scope of the Contract.
 4. Award: Award by MassCEC of a Contract
 5. Bid: Offer of the Bidder for the Work when submitted on the prescribed Bid Form, properly signed, dated, and guaranteed, and which includes the Schedule of Bid Prices.
 6. Bid Bond: The Bidder's Bond accompanying the Bid submitted by the Bidder, as a guaranty that the Bidder will enter into a Contract with MassCEC for the performance of the Work and furnish acceptable bonds and insurance if the Contract is awarded to the Bidder.
 7. Bid Documents: Documents provided by MassCEC for the purpose of soliciting Bids for the Work. Bid Documents will include, as applicable, Notice to Bidders, Instructions to Bidders, Contract Specifications, Contract Drawings, Geotechnical Data Reports, and Addenda.
 8. Bid Form: Form(s) issued by MassCEC for the submittal of a Bid for a specific project and includes the Schedule of Bid Prices, certifications, affidavits and other forms.
 9. Bidder: An individual, firm, partnership, corporation, or combination thereof, submitting a Bid for the Work on the prescribed Bid Form.
 10. Change Order: A document executed and issued to the Contractor by MassCEC amending the Contract.
 11. Commonwealth: Commonwealth of Massachusetts
 12. Contract: The written agreement executed by MassCEC and the Contractor, setting forth the obligations of the Parties thereunder.
 13. Contract Administrator: The Massachusetts Clean Energy Technology

Center designee.

14. Contract Bonds:
 - a. Performance Bond: A bond executed by the Contractor and the Contractor's Sureties in the full amount of the Contract to ensure the faithful performance of the Contract.
 - b. Labor and Materials Payment Bond: A bond executed by the Contractor and the Contractor's Sureties in the full amount of the Contract to ensure the payment of labor, materials, and rental of equipment.
15. Contract Documents: The Owner-Contract Agreement, Contract Specifications and Contract Drawings with revisions made during the Bid period by Addenda, and information included in the Bid accepted by MassCEC and all authorized changes to the Contract issued subsequent to the execution of the Contract.
16. Contract Drawings (Drawings): Plans, profiles, typical cross sections, general cross sections, elevations, and details referenced in the Contract Documents, or Addenda thereto, and shop drawings approved by the Engineer, all of which show locations, character, dimensions, and details of the Work.
17. Contract Item: A specifically described unit of work for which a price is provided in the Contract.
18. Contract Price: The sum payable by MassCEC to the Contractor for completion of the Work in accordance with the Contract Documents as stated in the Form of Agreement subject to adjustment under the terms of the Contract Documents.
19. Contract Specifications: A set of documents issued by MassCEC for the intended Work which includes the Bid Form, Contract Forms, Contract Bonds, General Conditions, Supplementary Conditions, technical provisions including Divisions 1 through 16, and other requirements, forms and exhibits identified therein.
20. Contract Time: Number of calendar days allowed or specified date(s) for completion of the Contract.
21. Contract Unit Price: Price for portions of the Work to be performed on the basis of unit prices as set forth in the Bid Form.
22. Contract Lump Sum Price: Price for portions of the Work to be performed on a lump sum basis as set forth in the Bid Form.
23. Contractor: The individual, firm, partnership, corporation, or combination thereof, private, municipal or public, including joint ventures, which, as an independent contractor, has entered into a Contract with MassCEC, as

Party or Parties of the Second Part, and who is referred to throughout the Contact Documents by singular number.

24. Days: Every day shown on the Calendar, Saturdays, Sundays and holidays included.
25. Director: Executive Director of The Massachusetts Clean Energy Technology Center.
26. Engineer: The Massachusetts Clean Energy Technology Center designee acting with the authority of the Owner, within the scope of the particular duties entrusted to this person, as outlined within the Contract Documents. Also referred to as the "Owner's Representative" in the Contract Documents.
27. Engineer's Estimate of Quantities: List of quantities of work estimated to be performed as contained in the Schedule of Bid Prices in the Bid Form.
28. Extra Work: Work which is not included in the Contract as awarded, but found to be necessary for the satisfactory completion of the Contract within its intended scope; and bears a reasonable subsidiary relation to the full execution of the Work originally described in the Contract.
29. Extra Work Order: An order in writing issued by the Engineer to the Contractor prior to performing the Extra Work, setting forth the Extra Work to be done, the basis of payment and time adjustments, if any. Following the issuance of an Extra Work Order, a Change Order will be executed to amend the Contract Documents.
30. Form of Agreement: The written agreement executed by MassCEC and the Contractor, setting forth the obligations of the Parties thereunder.
31. General Terms: Wherever the words "required," "determined," "directed," "specified," "authorized," "ordered," "given," "designated," "considered necessary," "deemed necessary," "permitted," "reserved," "suspended," "established," "approval," "approved," "disapproved," "acceptable," "unacceptable," "suitable," "accepted," "satisfactory," "unsatisfactory," "sufficient," "insufficient," "rejected," "condemned," or words with like import are used, they shall be understood to imply "by the Engineer" or "to the Engineer," unless the context clearly indicated a different meaning.
32. Indicated: A term meaning as shown on the Contract Drawings (Drawings), as described in the Specifications, or as required by other Contract Documents.
33. Instructions to Bidders: Explanation of procedures to be followed in preparing and submitting Bids.
34. MassCEC: The Massachusetts Clean Energy Technology Center. Also referred to as the "Owner".

35. Notice to Bidders: Advertisement for Bids for a specific Contract. Notice to Bidders will indicate time and place for submitting Bids, location of the Work, a brief description of the Work to be provided, and bid security required.
36. Notice to Proceed: Written notice from MassCEC to the Contractor to proceed with the Work.
37. Owner: The Massachusetts Clean Energy Technology Center or MassCEC.
38. Owner's Representative: The Massachusetts Clean Energy Technology Center designee acting with the authority of the Owner, within the scope of the particular duties entrusted to this person, as outlined within the Contract Documents. Also referred to as the "Engineer".
39. Project: The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
40. Provide: In reference to Work to be performed by the Contractor, "provide" means furnish, install, and (as applicable) test complete in place.
41. Reference Utility Standards: Drawings and specifications, published by municipalities, utility companies, railroads and other responsible agencies/entities which are included or referenced in the Contract Documents.
42. Specifications: Directions, provisions, and requirements contained in the Contract Specifications.
43. Subcontractor: The individual, firm, partnership, corporation, vendor, supplier, or combination thereof to whom the Contractor, with written approval of MassCEC, sublets any part of the Contract.
44. Substantial Completion: The term Substantial Completion, as applied to all or a part of the Work, shall mean either that the Work required by the Contract Documents has been completed except for Work having a Contract price of less than 1 percent of the then adjusted total Contract Price, or substantially all of the Work has been completed and is being or is ready to be used/occupied for its intended purpose, by MassCEC or an operating contractor except for minor incomplete or unsatisfactory Work items that do not materially impair the usefulness of the Work required by the Contract Documents.
45. Supplementary Conditions: Supplements and additions to the General Conditions.
46. Surety: Corporate body bound with and for the Contractor for the full and complete performance of the Contract and for the payment of all legal

debts pertaining to the Work, and who executed the Contract Bonds.

47. Value Engineering: The systematic application of recognized techniques which identify the function of a product or service, and provide the necessary function or service reliably at lower overall cost.
48. Work: All the construction, materials, equipment, and contractual requirements as specified, shown, or indicated in the Contract Documents, including all alterations, amendments, or extensions thereto made by authorized changes.
49. Shop Drawings: Supplementary drawings or similar data which the Contractor is required to submit to the Engineer for approval, including but not necessarily limited to erection, falsework, and formwork drawings; dewatering; bending diagrams and bar schedules for reinforcing steel; calculations; and manufacturers' catalog information and data.

END OF ARTICLE 1

ARTICLE 2 - SCOPE OF WORK

2.01 INTENT OF THE CONTRACT

- A. Intent of the Contract is to provide all items necessary for the proper completion of the Work. Items omitted from the Contract shall be included within the scope of the Work if they are required by applicable law, regulation, or code, if they are reasonably inferable from the intent of the Agreement or if they are necessary to produce the intended results. The Contractor shall complete the Work to the satisfaction of the Engineer at the prices set forth and agreed upon. Where portions of the Work are described in general terms, but not in complete detail, the best general practice shall be followed. Only materials and workmanship of best standard quality shall be used. The Contractor shall, unless otherwise specified, furnish all labor, superintendence, materials, tools, equipment and incidentals necessary to complete the Work in a proper, thorough, and workmanlike manner.
- B. The Contractor shall remove all obstructions from within the limits of work; and shall do such additional, extra, and incidental work as may be considered necessary to complete the Work in a substantial and acceptable manner and within the time specified; and when it is so completed, shall leave the Work in a neat and finished condition.

All Work shall be done and furnished strictly pursuant to, and in conformity with the Contract Documents, and also, in accordance with the directions of the Engineer as given from time to time during the progress of the Work pursuant to the terms of the Contract Documents.

The Work shall include grading and drainage work, where indicated outside the limits of the Work, and other miscellaneous work as shown in the Contract Documents and as directed.

- C. In the event that the Contractor discovers any apparent error or discrepancy in the Contract Documents, the Contractor shall call immediately upon the Engineer for its interpretation, and such interpretation or decision shall be final.
- D. No action or failure to act by the Owner shall constitute a waiver of any right or duty afforded to it under this Agreement, nor shall any such action or failure to act constitute an approval of or acquiescence to any breach under this Agreement except as may be explicitly agreed to in writing by the Owner. The Contractor is not entitled to rely on waivers, consents, approvals or instruments received directly or indirectly from the Owner unless said waivers, consents, approvals or instructions are given in writing.

2.02 CHANGES IN THE WORK

- A. MassCEC reserves the right at any time during the progress of the Work to make alterations to, deviations from, additions to, and deletions from the Contract Documents. Such changes shall not invalidate the Contract nor release the Surety. The Contractor agrees to accept the Work as changed, the same as if it

had been a part of the original Contract. Such changes will be authorized in writing by the Engineer.

- B. Wherever an alteration, deviation, addition, or deletion involves a change in the nature of design or in the type of construction which increases or decreases the cost of performance of the Work or requires the Contractor to furnish materials or provide work of a kind not susceptible of classification for payment under any of the items scheduled in the Bid, MassCEC and the Contractor may enter into a Change Order covering the Work to be done and the manner and method of payment therefore.
- C. Changes to the Contract Price or the Contract Time shall only be effective upon execution of a Change Order by the Owner.
- D. Where Contractor seeks additional compensation or time for claimed changes to the work, Contractor must submit a proposed Change Order in accordance with Section 5.19.
- E. Payment for approved Change Orders shall be made in accordance with Article 7.04.

2.03 EXTRA WORK

- A. The Contractor shall do any work not herein provided for when and as ordered in writing by the Engineer (via an Extra Work Order), such written order to contain particular preference to this Article and to designate the Work to be done as Extra Work.
- B. Unless specifically noted in the Extra Work Order, Extra Work will not extend the time of completion of the Contract as stipulated in Article 6.08.A.6.
- C. Determination of the Engineer will be final upon all questions concerning the amount and value of Extra Work, except as provided in Article 5.19.
- D. Payment for Extra Work will be in accordance with Article 7.04.
- E. Where all terms of the Extra Work including scope and cost are mutually agreed upon, a Change Order will be issued reflecting such terms. Otherwise, disputed Extra Work Order will be subject to Contractor Claims, if properly made in accordance with Article 5.19.

2.04 VALUE ENGINEERING - CONTRACTOR COST REDUCTION PROPOSALS

- A. This Article defines the conditions and requirements that apply to Value Engineering Cost Reduction Proposals (VECRP) that are initiated, developed and submitted by the Contractor to change the Contract Documents. The purpose of a VECRP is to encourage the Contractor to submit recommended changes to the requirements specified in the Contract Documents, based on the Contractor's experience and knowledge of alternative cost reducing means,

methods, materials and technologies.

Value Engineering is the systematic application of recognized techniques that identify the function of a product or service, establish a value for that function, and provides the necessary function reliability at the lowest practical life-cycle cost.

A VECRP submitted under the Contract shall require a change to the Contract Documents. As described in paragraph D, the incentive to the Contractor provided under this Article is to share the net savings resulting from acceptance of a VECRP on the basis of 50 percent for the Contractor and 50 percent for MassCEC. In order to be considered for acceptance under this Article, each VECRP shall:

1. Be identified by the Contractor as a VECRP at the time of submittal to the Engineer as submitted pursuant to this Article.
2. Yield a net savings as defined in paragraph D, in excess of \$10,000.
3. Maintain the specified items' required functions as to service life, reliability, economy of operation, ease of maintenance, and necessary standardized features and appearance.
4. Shall not require an unacceptable extension of Contract Time(s) or Contract Milestone(s).

B. A VECRP the Contractor submits shall be in sufficient detail to clearly define the proposed change. The Contractor's failure to provide material of the type, detail and in a format acceptable to the Engineer, and necessary to facilitate the Engineer's review, will be sufficient cause for rejection of the VECRP. Information provided by the Contractor shall include, but not be limited to, the following:

1. A description of the difference between the existing Contract requirements and the proposed Contract requirements, and the comparative advantages and disadvantages of each.
2. Contract requirements recommended to be changed if the VECRP is accepted.
3. A detailed estimate of the amount of anticipated gross savings resulting from, and the Contractor's costs incurred in, implementing and developing the VECRP, as defined in paragraph D.
4. Changes in the Contract Time(s) or Contract Milestone(s) that will result from acceptance of the VECRP.
5. A statement of the time by which the VECRP must be accepted so as to obtain the maximum price reduction, noting any effect upon Contract Time(s) or Contract Milestone(s).

- C. The Engineer may accept or reject part or all of a VECRP by giving the Contractor written notice thereof. However, approval of the VECRP does not occur until a modification in the form of a Change Order incorporating the VECRP is issued by MassCEC. Until such Change Order is issued, the Contractor shall remain obligated to perform the Work in accordance with the terms of the Contract Documents. The VECRP will be processed expeditiously. MassCEC shall not be held liable for any delay in acting upon a VECRP submitted pursuant to this Article. The decision of the Engineer as to acceptance of a VECRP shall be final.

The Contractor has the right to withdraw part or all of a VECRP at any time prior to acceptance by the Engineer. The withdrawal of a VECRP by the Contractor shall be made in writing to the Engineer. The Contractor shall state the period of time from the date of submittal of the VECRP that the VECRP shall remain valid. Revision of this validity period shall be allowed only by mutual agreement of the Contractor, MassCEC and the Engineer. If the Contractor desires to withdraw the VECRP prior to the expiration of the validity period, the Contractor shall be liable for the costs incurred by MassCEC in reviewing the VECRP. The cost incurred by MassCEC will be recovered by the issuance of a Change Order to reimburse MassCEC from monies due the Contractor and payable to the Contractor as shown on the monthly payment application.

If the Contractor withdraws the VECRP, MassCEC reserves the right to proceed with the VECRP or any portion of the VECRP as a normal change and the Contractor waives any and all rights to share in net savings hereunder. For purposes of this provision, expiration of the time established by the Contractor for approval shall be considered as withdrawal by the Contractor if MassCEC requests an extension of that time and the Contractor does not provide a written extension.

- D. When a VECRP submitted pursuant to this Article is accepted by the Engineer the following will occur:
1. A Change Order, covering an equitable adjustment in the Contract Price and modifications to other affected provisions of the Contract will be issued.
 2. Any net savings in the cost of the VECRP to MassCEC, as determined by the Engineer, resulting from the VECRP will be shared between the Contractor and MassCEC on the basis of 50 percent for the Contractor and 50 percent for MassCEC.
 3. Net savings in the cost of the VECRP will be determined by deducting from the estimated gross savings:
 - a. The Contractor's costs of developing the proposal for the accepted VECRP.
 - b. MassCEC's estimated additional costs incurred by processing and accepting the VECRP that includes, but is not limited to, anticipated increased costs to MassCEC on other contracts and

anticipated follow-on increased costs to MassCEC.

Estimated gross savings is the difference between the cost of implementing the requirements of the VECRP and the accepted changes. Gross savings shall include the Contractor's labor, material, equipment, overhead, profit and bonds. The Contractor's cost shall include additional costs including, but not limited to, amounts attributable to a subcontractor, such as preparation of design documents, incurred in developing and implementing the VECRP. MassCEC's costs will include, but not be limited to, additional costs incurred by the Engineer and its subconsultants or subcontractors in processing, reviewing and incorporating the VECRP into the Contract, all anticipated increased costs to MassCEC on other contracts and anticipated follow-on increased costs to MassCEC. MassCEC's costs may also include, but not be limited to, implementation, inspection, related items and MassCEC furnished material. The Contractor's share in the net savings to the Contract shall be effected by a change in the Contract Price that shall be reduced by the amount of MassCEC's share of the net savings and MassCEC's costs.

Upon review of the VECRP, MassCEC and the Engineer may determine that the VECRP has sufficient merit that requires further development in order to permit a final approval or disapproval. In such instances MassCEC may request that the Contractor provide further development and/or design information. MassCEC, at its sole discretion, may decide to share in up to one-half of the Contractor's reasonable and actual development costs, but only for costs expressly preapproved by MassCEC in writing, incurred to provide the additional development and/or design information. If the VECRP is approved, such development costs shall be included in the net savings calculation. If the VECRP is not approved by MassCEC, MassCEC will not require reimbursement for the share of development and/or design information costs it incurred.

Approval of the VECRP does not occur until a modification to the Contract Documents incorporating the VECRP is issued by MassCEC in the form of a Change Order. The estimated net savings determination, conditions placed on the VECRP by MassCEC, or the VECRP design or any other aspect of the VECRP may be changed at any time prior to approval, without obligation of MassCEC. If additional design development or additional time or cost impact analysis will be required after approval, the VECRP shall be included in the Contract Documents by Change Order and it shall include statements identifying that the estimated net savings and the final design is subject to adjustment. If changes are required during the final design development that impact the estimated net savings, the net savings calculation shall be reviewed and adjusted. Increases to the net savings will be shared equally between MassCEC and the Contractor. Decreases in the net savings will also be shared equally, except the Contractor's share of decreased net savings will be limited to its share of the initially estimated total net savings.

4. The Contractor is entitled to share in VECRP savings only to the full extent provided for in this Article. The Contractor does not share in

savings on follow-on contracts or in savings other than those of the VECRP, except to the extent such savings may decrease follow-on costs to MassCEC. For purposes of sharing under paragraph D.1, the term VECRP shall not include Change Orders to or other modifications to the Contract Documents, executed subsequent to acceptance of the particular VECRP, by which MassCEC increases the quantity of any item or adds any item of work.

- E. The Contractor shall use its best efforts to include VECRP arrangements in subcontracts, which in the Contractor's judgement, appears to offer sufficient VECRP potential.
- F. A VECRP identical to one submitted under any other contract, by this Contractor or any other contractor may be submitted under this Contract.
- G. The Contractor may restrict MassCEC's right to use any portion of the Contractor's VECRP by marking it with the following statement:

This data furnished pursuant to Article 2.04 of the General Conditions of Contract No. MACEC-FY24-01 may not be duplicated, used or disclosed, except as required by the Massachusetts Public Records Law, in whole or in part, for any purpose except for evaluation, unless the VECRP is accepted by MassCEC. This restriction does not limit MassCEC's right to use information contained in this data if it is or has been obtained, or is otherwise available, from the Contractor or from another source, without limitations. When this VECRP is accepted by MassCEC, MassCEC will have the right to duplicate, use, and disclose any data in any manner and for any purpose whatsoever, and have others do so whether under this or any other MassCEC contract.

2.05 INCREASED OR DECREASED CONTRACT QUANTITIES

- A. When the accepted quantities of unit price Work vary from the quantities in the Bid Form, the Contractor shall accept as payment in full, so far as Contract Items are concerned, payment at the original Contract Unit Prices for the accepted quantities of Work done. An adjustment in any Contract Unit Price, as determined by the Engineer, will be made by means of a Change Order to credit MassCEC with any reduction in cost or to compensate the Contractor for any increase in cost resulting from such change in quantity only when the accepted quantities of work vary by an amount equal to or greater than plus 25 percent or minus 25 percent from the quantities in the Bid Form.
- B. The Engineer may order omitted from the Work any items or portions of Work. Such omission shall not operate as a waiver of any conditions of the Contract nor invalidate any of the provisions thereof, nor shall the Contractor have any claim for lost profit on any part of the Work not performed. Also, see Article 7.05
- C. Except as specified herein, no allowance will be made for any increased expenses, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly or indirectly from such increased or decreased quantities or from unbalanced allocation, among the

Contract Items of overhead expenses on the part of the Contractor and subsequent loss of expected reimbursement therefore, or from any other cause.

2.06 RIGHTS IN THE USE OF MATERIALS FOUND ON THE WORK

- A. The Contractor, with prior written approval of the Engineer, may take suitable ledge, gravel, sand, loam, clay, or other material from within the location lines of the Contract and use it on the same Contract for other purposes than for forming embankments. If such use necessitates securing additional material for forming embankments, the Contractor shall replace, at no additional expense to MassCEC, material of at least similar quality. The Contractor shall not excavate or remove any material that is not within the excavation as indicated by the Contract Documents without written approval. Excavated material suitable for use shall not be wasted, unless otherwise directed.

2.07 ARCHEOLOGICAL AND PALEONTOLOGICAL SALVAGE

- A. The Contractor's attention is directed to the United States Department of Transportation, Federal Highway Administration, Federal Aid Highway Program Manual, Volume 7, Chapter 7, Section 4, subject "Archaeological and Paleontological Salvage", incorporating Policy and Procedure Memorandum 20-7, dated March 31, 1979, and to the Commonwealth of Massachusetts, Acts of 1973, Chapter 1155.
- B. In compliance with these procedures and legislation, the Contractor shall exercise special care during his operations to avoid injury to underground prehistoric and historic archaeological remains or paleontological remains. Should any archaeological or paleontological remains be encountered during any phase of construction, the Contractor shall immediately suspend all work in the area and shall notify the Engineer. The Engineer shall immediately notify the State Archaeologist and the Massachusetts Historical Commission. All construction work in that area will be temporarily delayed while the State Archaeologist and representatives of Massachusetts Historical Commission inspect the site to determine the importance of the discovery. Areas of prehistorical, historical, or paleontological significance shall be carefully protected in accordance with the above referenced manual and shall not be disturbed by the Contractor until so directed by the Engineer.
- C. Contractor shall receive no extra compensation for such special care, unless said compensation is authorized in writing by the Engineer as provided for in Article 7.04. Material from such areas shall be carefully protected, and if necessary to remove specimens, the Contractor shall do so only at the Engineer's direction, and after an authorized agent has witnessed or otherwise referenced their locations.

2.08 WARRANTY OF WORK

- A. Neither final acceptance, final payment nor any provision in the Contract Documents nor partial or entire operation or occupancy of the Work by MassCEC shall constitute an acceptance of the Work not done in accordance with the Contract Documents or relieve the Contractor of liability with respect to any

express warranties or responsibility for faulty materials or workmanship.

- B. Except where longer periods of warranty are specified for certain items, the Contractor warrants all Work done under the Contract to be free from faulty materials and workmanship for a period of one (1) year from MassCEC's final acceptance of the Work and for such longer times for specific parts of the work as may be required by the Contract Documents or applicable law.
- C. Upon receipt of written notification from MassCEC during the warranty period described in Article 2.08B, the Contractor, at its sole cost, shall immediately correct or cause to be corrected all defective or improperly performed Work. If repairs or replacement are not started within ten (10) days from the date of notification and prosecuted to completion, MassCEC reserves the right to employ others to complete the Work. The Contractor agrees, upon demand, to pay MassCEC all amounts that it expends for such repairs or replacements.
- D. All defective Work repaired or replaced by the Contractor pursuant to Article 2.08 shall carry the same warranty period as the original Work starting with the date of acceptable replacement or repair.
- E. The warranty in this Section 2.08 shall not be exclusive and shall be in addition to all warranties and remedies otherwise available at law and equity.

2.09 CHANGED CONDITIONS

- A. If during the progress of the Work, the Contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those indicated in the Contract Documents either the Contractor or MassCEC may request an equitable adjustment in the Contract Price of the Contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a Contractor, or upon its own initiative, MassCEC will make an investigation of such physical conditions, and, if they differ substantially or materially from those indicated in the Contract Documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents and are of such a nature as to cause an increase or decrease in the cost of performance of the Work or a change in the construction methods required for the performance of the Work which results in an increase or decrease in the cost of the Work, MassCEC will make an equitable adjustment in the Contract Price and the Contract will be modified in writing accordingly.
 - 1. Filing, investigation, and settlement of all claims made under said Chapter and Section shall be as follows:
 - a. The Contractor shall promptly, and before such conditions are disturbed, notify the Engineer in writing describing in full detail the subsurface or latent physical conditions at the site where it is

maintained, that conditions differ substantially or materially from those conditions indicated in the Contract Documents. The Engineer will promptly investigate the conditions and will promptly submit a written report of its findings and determinations to the Contractor, and if it is found that such conditions as have been described in detail by the Contractor do exist and in fact do so differ materially or substantially, an equitable adjustment will be made and the Contract modified in writing accordingly. No such claim of the Contractor will be allowed unless the Contractor has given the detailed notice specified, nor shall it be allowed if such conditions are disturbed prior to their investigation by the Engineer.

- b. No adjustment or allowance of any kind except as provided in Article 6.08 will be made to the Contractor due to delay or suspension of the Work or any portion thereof where the actual subsurface or latent physical conditions encountered at the site differ substantially and materially from those indicated in the Contract Documents.
 - c. No claim will be approved and no adjustment or allowance made when encountering subsurface or latent physical conditions at the site that differ substantially and materially from those indicated in the Contract Documents unless such conditions were in existence at the time of the Award of the Contract.
 - d. Any dispute concerning a question of changed conditions under this Article that is not disposed of by agreement shall be decided by the Engineer. The decision of the Engineer shall be final.
 - e. If as provided in "a" of this Subsection an equitable adjustment is to be made or contemplated, the Contractor shall submit promptly in writing to the Engineer an itemized statement of the details and amount of work together with his estimated costs for the same and the Engineer shall require the Contractor to keep actual costs and certify the same to MassCEC in writing.
- B. If the Contractor and MassCEC fail to agree on an equitable adjustment to be made under this Article, then the Contractor shall accept as full payment for the Work in dispute an amount determined in accordance with Article 7.03.B.

2.10 INTENTIONALLY OMITTED

2.11 COMMUNITY RELATIONS

- A. The Contractor shall establish and maintain a continuing liaison with persons residing or doing business in the vicinity of the Project site, for the purpose of minimizing inconveniences resulting from construction, and shall appoint a representative, acceptable to the Engineer, for community relations. The representative shall have the authority to act directly, or through the Contractor's approved Superintendent, regarding all valid requests or complaints. Information

as to their disposition by the Contractor shall be furnished to the Engineer. The name and telephone number of the Contractor's community relations representative shall be furnished to those residents or business owners in the community who might reasonably be expected to be affected by the construction.

2.12 REMOVAL AND DISPOSAL OF STRUCTURES AND OBSTRUCTIONS

- A. Existing structures found within the limits of the Work, which are to be replaced or rendered useless by new construction, shall be removed by the Contractor at its own expense whether or not indicated on the Plans as existing unless otherwise provided in the Contract Documents. When such structures are situated so as not to interfere with the Work, the removal shall not be undertaken until the new replacement structures are ready for use or until the Engineer shall permit.

All material in existing structures requiring removal shall be removed as directed by the Engineer.

Unless otherwise provided, the material from any existing structures may be used temporarily by Contractor during construction. All discarded material, rubbish, or debris shall be removed from the Work area and MassCEC's property and properly disposed of (according to all laws, ordinances, regulations, orders and decrees) at the Contractor's expense. No foreign material or debris, except as directed within the Contract, shall be permitted to enter a waterway or drainage system.

2.13 FINAL CLEANING UP

- A. Upon completion of the Work and before acceptance and final payment, the Contractor shall remove, at its own expense, from the Work area, from adjoining property, and from the Contractor's staging areas on MassCEC's property, all temporary structures and all surplus material and rubbish which may have accumulated during the prosecution of the Work, and shall leave the Work in a neat and orderly condition. The Contractor shall insure that neither soil nor ground water have become contaminated from its activities. In the event of a "release to the environment", the Contractor shall ensure that appropriate notifications to the Engineer and the Massachusetts Department of Environmental Protection and other agencies with jurisdiction are made aware immediately and that all appropriate and required remedial actions are undertaken by the Contractor at its expense.

No equipment shall be left at the site of the Work or in the vicinity of the Work without the written permission of the Engineer.

END OF ARTICLE 2

ARTICLE 3 - CONTROL OF WORK

3.01 AUTHORITY OF THE ENGINEER

- A. The Engineer will decide all questions relating to interpretation of the Contract Documents, and may alter, adjust, and approve same when necessary; all questions relating to quality, quantity, value, and acceptability of materials to be furnished and work provided or to be provided; all questions relating to progress of the Work and need for and manner of correcting same, and also the need for and time frames of delay and suspensions; all questions relating to the need for and terms of Extra Work; all questions relating to the supervision, control and director of Work on the site and the use thereof; and all questions as to the acceptable fulfillment of the Contract by the Contractor.
- B. Attention of the Contractor is directed to the following limitations on the scope of the duties entrusted to the Engineer.
 - 1. Engineer will not supervise, direct, control or have authority over or be responsible for the Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the Contractor to comply with laws and regulations applicable to the furnishing or performance of the Work. Engineer will not be responsible for the Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

3.02 CONTRACT DRAWINGS

- A. Contract Drawings showing the general arrangement and such details as necessary to give a comprehensive idea of the construction contemplated will be furnished by MassCEC. As work progresses, the Contract Drawings may be supplemented by the Engineer as required to amplify or control the Work. The Contractor shall perform the work required by such supplements without additional compensation, except as provided by the Contract Documents.
- B. Approved drawings, details, profiles and sections on file in the office of the Engineer will show the location, details, and dimensions of the Work contemplated, and all Work shall be in strict conformity therewith and with the Specifications.

Supplemental, detail, and working drawings as required in the Specifications and furnished by the Contractor shall upon approval become a part of the complete Drawings. Such approval of supplemental, detail, and working drawings, however, shall not operate to relieve the Contractor of any of its responsibilities under the Contract Documents for the satisfactory completion of the Work, nor for the accuracy of the dimensions, details or quantities.

The detail drawings shall be of the same size as the original contract drawings, with margins and titles conforming thereto. When submitting detail drawings for approval, complete sets of prints as directed shall be furnished to the Engineer who will return at least one set either approved, rejected, or with corrections marked thereon. Finally, the Contractor shall furnish the Engineer with complete

sets of prints as directed of the corrected and approved detail drawings. No changes shall be made in the approved drawings without the written consent of the Engineer.

The tracings of all detail drawings, on ink on not less than .003 in. single matted Mylar, shall be delivered to the Engineer upon completion of the Work and shall become the property of MassCEC.

The Contract Price shall include the cost of furnishing all working drawings and the Contractor will be allowed no extra compensation therefore.

Any work done or materials furnished by the Contractor prior to the approval of the working drawings shall be at its own risk. The words "approved as noted" or words of similar import placed by the Engineer on a contract or shop drawing submittal mean that all items and details of the drawing submitted are fully approved with the exception of those items or details that are specifically marked for further action. The withholding of an unqualified approval by the Engineer with respect to any contract drawing or shop drawing in its entirety shall under no circumstances constitute a basis for delay in arranging for and proceeding with the manufacturing, fabricating, delivering and installing, in accordance with the Contract Documents, of those items or details on such drawing which have been approved as aforesaid.

- C. The Contractor shall maintain at the site, a set of Contract Drawings on which to record the as-built conditions. These As-Built Drawings shall be updated on a daily basis, as the Work progresses, showing what was actually constructed, the dimensions and grades of all Work, located horizontally and vertically to the nearest 0.1 of a foot, indicating thereon all exposed features uncovered during the Work and all other construction Work items completed under this Contract. The Contractor shall require the Subcontractors to participate daily in the As-Built Drawing updates, which shall show all Work, as it was built or discovered, including the Work of all Subcontractors. As-Built Drawings of hidden features shall be based upon measurements taken by the Contractor before covering them. These As-Built Drawings shall be kept current and available for review by the Engineer and MassCEC at all times.

The Contractor shall forward a copy of the current As-Built Drawings with each payment requisition to the Engineer. At the sole discretion of MassCEC, Contractor's application for payment may either be withheld or modified unless accompanied by complete and updated As-Built Drawings. At a minimum, for underground utilities (uncovered, existing or installed) the As-Built Drawings shall show the type of feature, material, size, elevation (top and/or flow line) and horizontal position by the project datum (northing, easting and elevation) at every change in direction and minimally every 50 feet.

- D. Prior to final acceptance and payment by MassCEC, the Contractor must submit to the Engineer final As-Built Drawings. Each As-Built Drawing must include the Contractor's certification that the drawing completely and accurately represents the as-built conditions. The Consultant shall then update the As-Built Drawings to provide 4-mil Mylar drawings and electronic AutoCAD files, along with scanned 200 dpi TIFF files of As-Built Mylar Drawings.

Each As-Built Mylar Drawing must include the Contractor's certification that the drawing completely and accurately represents the as-built conditions. The Contractor's certification shall state: "This Drawing reflects As-Built Conditions as certified by (insert contractor's name)." The Engineer will then deliver to MassCEC the certified As-Built Drawings.

3.03 CONFORMITY WITH CONTRACT DOCUMENTS

- A. No willful and substantial deviation from Contract Documents shall be made unless directed in writing by the Engineer duly authorized by MassCEC to approve such deviation. Such deviation may be authorized by a written order of the Engineer authorized to approve such deviation, and that within 30 days thereafter such written order shall be confirmed by a certificate of MassCEC.
- B. All Work provided and all materials furnished shall be in conformity with the lines, grades, cross sections, dimensions, details, gradations, physical, and chemical characteristics of materials and other specific requirements of the Contract.
- C. Where definite tolerances are specified in the Contract, such tolerances shall fix the limits of conformity. Where tolerances are not specified in the Contract Documents, the Engineer will determine the limits of conformity in each individual case and such determination shall be final and conclusive and mutually accepted by all parties.
- D. If materials or the finished product in which the materials are used are not within conformity with the Contract Documents, but acceptable work has been produced, the Engineer will make a determination whether the work shall be accepted and remain in place. The Engineer will document the basis of acceptance by Contract modification that will provide for an appropriate adjustment in the Contract Price for such work or materials as he deems necessary to conform to his determination based on engineering judgment, and in accordance with current construction practices.
- E. If the Engineer finds the materials, or the finished product in which the materials are used or the Work provided, are not in conformity with the Contract Documents and have resulted in an inferior or unsatisfactory product, the Work or materials shall be removed and replaced or otherwise corrected by the Contractor, at no additional cost to MassCEC.
- F. Deviations from the Contract Drawings and approved shop or working drawings that may be required by the need of the Work, will be determined and authorized by the Engineer in writing.
- G. The Contractor shall, without extra cost, make necessary modifications to prevent conflicts with the existing work of others or as necessary to insure a proper installation. This may require the preparation of composite drawings that are drawn to suitable scale and that show the necessary work to be done.

3.04 COORDINATION OF CONTRACT DRAWINGS AND CONTRACT SPECIFICATIONS

- A. Contract Drawings, Contract Specifications and all other Contract Documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. The Contract Documents are intended to be complementary and to describe and provide for a complete Work. In the event of any discrepancy between a Drawing and figures written thereon, the figures, unless obviously incorrect, are to govern over scaled dimensions. Contract Drawings will govern over Contract Specifications. Where Work is to be accepted by a municipality, utility company, railroad or responsible agency/entity the Reference Utility Standards that apply to their materials and workmanship will govern.
- B. The Contractor shall take no advantage of any apparent error or omission in the Contract Documents. The Contractor shall provide immediate written notice to the Engineer of any errors or omissions in the Contract Documents. The Engineer will then make such corrections and interpretations as may be deemed necessary to fulfill the intent of the Contract Documents.

3.05 COOPERATION BY CONTRACTOR

- A. The Contractor will be given an electronic copy of the Contract Documents. The Contractor shall have 1 copy of the Contract Documents on the work site and available for reference at all times during the prosecution of the Work.
 - 1. Additional copies of the Contract Documents beyond the stated number may be requested by the Contractor and will be furnished by MassCEC at the expense of the Contractor.
- B. Prior to starting Work the Contractor shall designate in writing the name, title, qualifications, and experience of its proposed representative (job superintendent) who, upon approval by MassCEC, shall have complete authority to represent and to act for the Contractor. A facsimile of the authorized representative's signature shall be furnished to the Engineer. The authorized representative or a substitute acceptable to the Engineer shall be present at the work site at all times while work is actually in progress on the Project. Arrangements for responsible supervision acceptable to the Engineer shall be made for emergency work that may be required during periods when Work is suspended. The Contractor shall notify the Engineer, in writing, of any proposed change of his representative, and shall provide identical information for approval of the new representative.
 - 1. The job superintendent shall have the following minimum qualifications and experience:
 - a. A Commonwealth of Massachusetts, Department of Public Safety, License for Construction Supervisor without any restrictions.
 - b. A minimum of 10 years of related construction experience.

The requirements for a licensed construction supervisor and the number of years of related construction may be waived or modified only by the Executive Director of MassCEC.

- C. The Contractor shall ensure that the materials and workmanship are in accordance with the Contract Documents. The Contractor shall preserve baseline monuments, benchmarks, and other controls for the Work.
- D. The Contractor shall perform the Work under the direction of the Engineer such that representatives of utility owners, state, or municipal departments may enter on the work site without interference to make changes in their facilities which may be affected by the Work. The Contractor shall have no claim for, or because of any delay that may be due to or result from work of utility owners, state or municipal departments. No allowance of any kind will be made except as provided in Article 6.08. Nothing contained herein shall be construed to hold the Contractor responsible for any acts or omissions by such utility owners, state or municipal departments, or their contractors.
- E. The Contractor shall maintain and staff an office near the Project site from the time of commencement of the Work under this Contract until such time as the Work has been completed and finally accepted. The Contractor's office staff shall include a job superintendent solely for the Work to be performed under this Contract who shall be headquartered in the proximate area of the Project site within 30 days after the execution of the Contract.
- F. The Contractor shall confine its equipment, the storage of materials and the operation of his workmen to limits shown on the Contract Documents, established by law, ordinances, permits or directions of the Engineer. The Contractor shall not unreasonably encumber the project site with his materials. All flammable or combustible materials shall be properly stored using OSHA approved containers to prevent, by effective measures, fire.
- G. This Contract is expected to be proceeding concurrently with others in the vicinity and within the limit of the Contract. The Contractor shall cooperate fully with the other contractors in expediting the work of all. The Contractor shall secure and anchor the work and avoid damage to the work of the other contractors.

3.06 ADJACENT CONTRACTS

- A. MassCEC reserves the right at any time to contract for and perform other or additional work on or near the Work covered by the Contract Documents. The intent of this Article is to provide for the cooperation of contractors where MassCEC deems it expedient or necessary and in the best interest of MassCEC to let separate contracts for the performance of other work on or near the location of the Work being performed under the Contract Documents, but it is not intended to indicate an intention on the part of MassCEC to let separate contracts for work within the scope of or necessary for the successful completion of the Work.
- B. When separate contracts are let within the limits of any one project (either prior to award of Contract, as specified in the Bid, or as specified above), each contractor shall conduct its work so as not to interfere with or hinder the progress or

completion of the work being performed by other contractors.

1. Contractors working within the same area shall cooperate with each other as directed and shall coordinate work schedules through the Engineer to minimize conflicts.
- C. Each contractor involved shall assume all liability, financial or otherwise, in connection with its contract and shall protect and save harmless MassCEC from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced because of the presence and operations of other contractors working within the limits of the same project. No allowance of any kind will be made except as provided in Article 6.08.
1. Work beyond the limits of the Project site that is reasonably related to or inferred from the Work required by the Contractor that is due to the work of adjacent contractors within the limits of the project shall be performed by the Contractor, at no additional cost to MassCEC.
- D. The Contractor shall arrange the Work and shall place and dispose of the materials being used so as not to interfere with the operations of other contractors within the limits of the Project site. The Contractor shall join the work with that of others in an acceptable manner and perform the Work in proper sequence to that of others.
- E. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless MassCEC from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor to the extent said claim is based on or arises out of an act or omission of the Contractor in the performance of the Work.

3.07 LINE AND GRADE

- A. The Contractor will be responsible to provide benchmark and basic control points on or near the construction site for the primary vertical and horizontal control as shown in the Contract Documents. The Contractor shall be required to set all base lines and grade stakes from these basic control points and benchmarks. The Contractor shall employ a surveyor or engineer registered in the Commonwealth of Massachusetts for this purpose. The Contractor shall be responsible for the preservation of these control points and if they are destroyed or disturbed the Contractor shall replace them, at no additional cost to MassCEC. The Contractor shall also establish field ties to the critical points of the base line in order that these can be reproduced after the subgrade work is complete. Information on the field ties shall be submitted to the Engineer. Monuments, stakes, and marks set by MassCEC shall be preserved by the Contractor. If such monuments, stakes, or marks are destroyed or damaged, they may be replaced by MassCEC. The Contractor will be charged the cost of replacing monuments, stakes, or marks destroyed or damaged by reason of its operations. The replacement cost will be deducted from amounts otherwise due and payable to the Contractor for the Work.

- B. The Contractor shall proceed from the controls established by MassCEC to make all surveys and layouts necessary to conform all of the work to the requirements of the Contract Documents; shall provide qualified engineering and other personnel for the purpose; and shall be solely responsible for the accuracy of the line and grade features of his Work.
- C. MassCEC will make such checks, as necessary, of the control work established by the Contractor as the Work progresses. The Contractor will be informed of results of such checks, but MassCEC by so doing will in no way relieve the Contractor of responsibility for accuracy of the Contract control. The Contractor shall provide such assistance, at no cost to MassCEC, as may be required for checking purposes when requested by MassCEC.
- D. The Contractor shall notify MassCEC a reasonable time in advance of his needs, of the time and place the Contractor plans to provide the Work for which such primary control will be needed. MassCEC will furnish the Contractor with such primary lines, grades, and elevations as it deems necessary by such time so as not to delay the Contractor's operations. MassCEC, however, will not be held responsible for any delay resulting from lack of such information if the Contractor fails to notify MassCEC sufficiently in advance of the Contractor's needs.

3.08 AUTHORITY AND DUTIES OF ENGINEER'S ASSISTANTS

- A. The Engineer may appoint assistants and representatives. The assistants and representatives are authorized to inspect work and materials, to give directions pertaining to the Work or to the safety and convenience of the public, to approve or reject materials and to make measurements of quantities.
- B. In case of any dispute arising between the Contractor and the Engineer's assistants, as to materials furnished or the manner of providing work, the Engineer's assistants are authorized to reject materials or to suspend work until the dispute is referred to and decided by the Engineer.
- C. The Engineer's assistants are not authorized to revoke, alter, enlarge, relax, or release any requirements of these Specifications nor to issue instructions contrary to the Contract Drawings and Specifications.
- D. The Engineer's assistants will not act as foremen or perform other duties for the Contractor.
- E. MassCEC will not accept responsibility whatsoever for Extra Work performed for which there is no specific proper written authorization.

3.09 INSPECTION OF WORK

- A. All materials and each part or detail of the Work shall be subject to inspection by the Engineer. The Engineer shall at all times have access to the Work and be furnished with information and assistance by the Contractor as required, at no additional cost to MassCEC, to make a complete and detailed inspection.

- B. The Contractor, if requested by the Engineer, shall before acceptance of the Work, remove or uncover such portions of the finished work as directed. After examination, the Contractor shall restore said work to the standard required by the Contract Documents. Should work exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as Extra Work. Should work exposed or examined prove unacceptable, the uncovering or removing and the replacing of the covering or making good of the parts removed, will be at no additional cost to MassCEC.
- C. The Engineer may order that any Work done or materials used not in conformance with the requirements of the Contract Documents be removed and replaced, at no additional cost to MassCEC.
- D. The Contractor shall furnish written information to the Engineer stating the original sources of supply of all materials manufactured away from the Work site. This information shall be furnished at least two weeks (or as otherwise required by the Engineer) in advance of the incorporation in the Work of such materials.
- E. When any unit of government or political subdivision is to pay a portion of the cost of the Work, its respective representatives shall have the right to inspect the Work. Such inspection shall in no sense make any unit of government or political subdivision a party to this Contract, and shall in no way interfere with the rights of either party hereunder.
- F. Inspection of Work shall not relieve the Contractor of any of his obligations to fulfill the requirements of the Contract Documents.
- G. Failure to reject any defective work or materials shall not in any way prevent later rejection when such defect is discovered, nor obligate MassCEC to make final acceptance.
- H. The Contractor shall give prior notice to the Engineer when work on the various items is to be performed by him or his subcontractors. If work is suspended on any item, prior notice shall be given to the Engineer before resumption of such work. Except in the case of an unforeseen emergency, neither the Contractor nor any subcontractor shall perform any Work requiring inspection at hours other than during the normal work day without prior approval of the Engineer.

3.10 REMOVAL OF DEFECTIVE OR UNAUTHORIZED WORK

- A. The Contractor shall immediately repair, remove and replace, at no cost to MassCEC, any Work found to be defective notwithstanding that such Work has previously been inspected and approved or estimated for payment.
- B. Work performed beyond the lines and grades shown on the Contract Documents or established by the Engineer, and Extra Work done without written authorization, will be considered unauthorized Work and the Contractor will receive no compensation therefor. If required by the Engineer, unauthorized Work shall be remedied, removed, or replaced, at no additional cost to MassCEC.

- C. Upon failure of the Contractor to remedy, remove, or replace defective or unauthorized Work, or to comply promptly with any requirement of the Engineer made under this Article, MassCEC may cause defective or unauthorized work to be remedied, removed, or replaced by others and deduct the costs thereof from any monies due or to become due the Contractor.

3.11 SUBSTANTIAL COMPLETION AND FINAL ACCEPTANCE

- A. Upon Substantial Completion of the Work, the Contractor shall present to MassCEC and the Engineer its written certification that the Work has been Substantially Completed. Within twenty-one (21) days thereafter, the Engineer shall inspect the Work and present to the Contractor either a written declaration that the Work has been Substantially Completed or an itemized list of incomplete or unsatisfactory Work items that must be completed or corrected before the Work can be deemed Substantially Completed. The Engineer may include with such list a notice setting forth a reasonable time, which shall not in any event be prior to the Contract completion date, within which the Contractor must achieve Substantial Completion of the Work. If MassCEC fails to respond, by presentation of a written declaration or itemized list within the 21 day period set forth herein, the Work shall be effectively deemed to have been Substantially Completed.
- B. Following the inspection described in Article 3.11A, if the Engineer determines that the Work is not Substantially Complete, and provides to the Contractor an itemized list of incomplete or unsatisfactory Work that must be completed or corrected before Substantial Completion, the Contractor shall immediately commence and continue to complete and correct those items of the Work within the time specified by the Engineer, MassCEC may, without further notice and without in any way affecting the Contract, make such other arrangements as may be considered necessary to insure satisfactory completion of the Contract. The cost of completing such Work will be deducted from any money due or which may become due to the Contractor under the Contract.
- C. Along with the written declaration that the Work is Substantially Complete (or within fifteen (15) days of the effective declaration of Substantial Completion), MassCEC shall present to the Contractor a list of incomplete and defective Work that must be completed or corrected before final acceptance of the Work. The list containing all items of incomplete and defective Work shall be known as the Punch List. MassCEC, with the assistance of the Engineer shall assign a reasonable value to the items on the Punch List based on the estimated cost to MassCEC to complete or correct such items. Unless otherwise agreed by the MassCEC and the Contractor, the Contractor shall complete all items of Work on the Punch List within fifteen (15) days of MassCEC's declaration of Substantial Completion. If the Contractor fails or neglects to complete the Punch List in such time, MassCEC may provide written notice of such failure or neglect to the Contractor. If the Contractor fails to commence and continue to perform the Punch List work within seven (7) days of such written notice, MassCEC may complete the Punch List itself or through separate contractors at the Contractor's expense.

- D. Also, see Article 5.24.
- E. Also, see Article 7.09.

END OF ARTICLE 3

ARTICLE 4 - CONTROL OF MATERIALS

4.01 TRADE NAMES AND ALTERNATIVES

- A. An item equal to that named or described in the Contract Documents may be furnished by the Contractor, and the naming of any commercial name, trademark, or other identification shall not be construed to exclude any item or manufacturer not mentioned by name or as limiting competition, but shall establish a standard of equality only. An item will be considered equal to the item so named or described if all of the following requirements are met:
1. It is at least equal in quality, durability, appearance, strength, safety, reliability, operability, maintainability, and design.
 2. It will perform at least equally the function imposed by the general design for the Work being contracted for.
 3. It conforms substantially, even with deviations, to the detailed requirements for the item specified.
- B. For each item of material the specifications shall provide for either a minimum of three brands of material or a description of material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said named or described materials.
- C. Burden of proof as to the quality and suitability of alternatives shall be upon the Contractor. The Contractor shall furnish, in writing, all information necessary as required by the Engineer, at no additional cost to MassCEC. Requests for review of alternative materials will not be accepted by the Engineer from anyone other than the Contractor. The Engineer will be the sole judge as to the quality and suitability of alternative materials and the Engineer's decision will be final.
- D. Information furnished shall state whether or not acceptance of the alternative material for use in the Work will require a change in the Contract Documents to adapt the design to the alternative and whether or not incorporation or use of the alternative in connection with the Work is subject to payment of any license fee or royalty. MassCEC does not pay license fees and royalties. Where use of an alternative material involves redesign of or changes to other parts of the Work, the cost and the time required to effect such redesign or changes will be considered in evaluating the suitability of the alternative material and the Contractor shall pay charges incurred by MassCEC for such redesign or change.
- E. No tests nor action relating to the approval of alternative materials will be made until the request for substitution is made in writing by the Contractor accompanied by complete data as to the equality of the materials proposed. Such request shall be made in ample time to permit approval without delaying the Work, but such requests need not be made less than 30 days after receipt of Notice to Proceed.
- F. Whenever classification, rating, or other certification by a body, such as Underwriters Laboratories, Inc. (UL), or National Electrical Manufacturers

Association (NEMA) is a part of the specification for any material, proposals for use of alternative materials shall be accompanied by reports from the listed or equivalent independent testing laboratory indicating compliance with specification requirements.

- G. The Contractor shall pay costs of testing required to prove equality of the material proposed.
- H. Approval of an alternative material shall be only for the characteristics or use named in such approval, and shall not be used to change or modify any Contract requirement, or to establish a basis for subsequent approval for material to be used on any other phase of the Work.

4.02 CERTIFICATE OF COMPLIANCE

- A. The use of certain products/materials on the basis of a notarized Certificate of Compliance may be allowed under the following conditions:

Before such products/materials are incorporated into the Work, the Contractor shall submit to the Engineer, for approval, copies of the manufacturer's or supplier's statement for each kind of such product/material furnished. The statement shall contain the following information:

- 1. Contract to which the product/material is consigned.
- 2. Name of the Contractor to which the product/material is supplied.
- 3. Kind of product/material supplied.
- 4. Quantity of product/material represented by the certificate.
- 5. Means of identifying the consignment including, but not limited to, labeling, marking or seal number.
- 6. Date and method of shipment.
- 7. Statement to the effect that the product/material has been tested and found in conformity with the pertinent parts of the Contract.
- 8. Results of all required tests including the chemical analysis in the case of metal; or in lieu of furnishing the results a statement that the results of all required tests pertinent to the certificate and not submitted shall be maintained and available by the undersigned for a period of not less than 3 years from date of final acceptance.
- 9. Signature of a person having legal authority to bind the manufacturer or supplier.

- B. If the Contractor has new products/materials purchased for use on a previous MassCEC contract which have never been used and which comply with the Contract Documents, these products/materials may be furnished and installed in

the Work provided the Contractor submits his own sworn statement certifying that such products/materials were purchased for use on a previous contract (name and identifying such contact) and that Certificates of Compliance were furnished for such products/materials on the previous contract, to which reference can be made.

1. Costs involved in furnishing the certificates shall be borne by the Contractor.
2. Products/materials used on the basis of a Certificate of Compliance may be sampled and tested at any time. The fact that a product/material is used on the basis of a Certificate of Compliance shall not relieve the Contractor of responsibility for incorporating products/materials in the Work which conforms to the requirements of the Contract Documents and Specifications any such products/materials not conforming to such requirements will be subject to rejection, whether in place or not.
3. The Engineer reserves the right to refuse to permit the use of products/materials on the basis of a Certificate of Compliance alone.

4.03 MassCEC FURNISHED MATERIALS

- A. Materials furnished by MassCEC will be available at locations designated in Supplementary Conditions or, if not so designated, they will be delivered to the Work site or such other place as the parties may agree. MassCEC furnished materials shall be stored and transported to the place of use by the Contractor at the Contractor's expense, including all necessary loading and unloading. The Contractor's costs of storing, handling, and installing MassCEC furnished material are included in the Contract Price.
- B. Contractor shall be responsible for all materials furnished by MassCEC, and shall pay all demurrage and storage charges as a result of the Contractor's failure to take delivery of MassCEC furnished material. The Contractor shall be liable to MassCEC for the cost of replacing or repairing MassCEC furnished material lost or damaged from any cause whatsoever after receipt by the Contractor. Such costs will be deducted from any amounts due or to become due the Contractor, except those amounts covered under insurance policies furnished by MassCEC. In the event that such amounts are covered by an insurance policy furnished by MassCEC, the Contractor shall be responsible for paying any deductible.
- C. Also, see Article 3.06.

4.04 DEFECTIVE MATERIALS

- A. Contractor furnished materials not conforming to the requirements of the Contract Documents will be rejected, whether in place or not. Rejected material shall be removed immediately from the site of the Work unless otherwise permitted by the Engineer. No rejected material, the defects of which have been subsequently corrected, shall be used in the Work unless approved in writing by the Engineer. If the Contractor fails to comply promptly with a request by the

Engineer, made under the provisions of this Article, the Engineer may cause the removal and replacement of rejected material and the cost thereof will be deducted from any moneys due or to become due the Contractor.

4.05 ASBESTOS MATERIALS

- A. The Contractor shall not furnish or install asbestos or materials containing asbestos under this Contract.

4.06 BANNED MATERIALS

- A. Lead Paint
 - 1. The Contractor shall not furnish or apply lead containing paint on surfaces within the limits of the Contract.
 - a. A lead containing paint is defined by the Consumer Product Safety Commissions's Lead Containing Paint Poisoning Prevention Act of 1979 as any coating whose dried film contains greater than 0.06 percent by weight of lead.

4.07 IDENTIFICATION OF MATERIAL AND EQUIPMENT

- A. No materials manufactured or produced by convict labor shall be used on Work financed, either wholly or in part, with federal funds.
- B. The source of supply of each material shall be approved in writing by the Engineer before delivery is started. Materials furnished by the Contractor which do not conform to the Contract Documents at the time of incorporation into the Work shall not be deemed acceptable simply because they were obtained from a source of supply that had been approved by the Engineer.
- C. The Contractor shall furnish all materials required for the Work specified in the Contract Documents, and said materials shall meet the requirements of the Specifications for the kind of work involving their use.
- D. Only new and first quality materials, conforming to the requirements of the Contract Documents and approved by the Engineer, shall be used in the Work. If it is found that approved sources of supply do not furnish a uniform product, or if the product from any source proves unacceptable at any time, the Contractor shall furnish material from other approved sources approved by the Engineer.
- E. The Contractor shall give a preference in the purchase of supplies and materials, other considerations being equal, in favor, first, of supplies and materials manufactured and sold within the Commonwealth, and second, of supplies and materials manufactured and sold within the United States.
- F. The Contractor may be required to furnish sworn certificates as to quality and quantity of material before said materials are incorporated in the Work.
- G. All electrical, mechanical and HVAC equipment shall be properly identified

including manufacturer's name plates, serial number, model, capacity, size, etc. as appropriate for the equipment. Contractor shall also furnish the manufacturer's operating instructions and preventive maintenance manual and recommendations.

- H. Where products or materials are specified by the manufacturers' name, or catalog reference, the words "or approved equal" shall be understood to follow. An item shall be considered equal to the item so named or described if: (1) It is at least equal in quality, durability, appearance, strength, and design; (2) It performs at least equal to the function imposed by the general design for the work; and (3) It conforms substantially, even with deviations, to the detailed requirements for the item as indicated by the Specifications. The Contractor's proposal however, shall be based on the use of any products or material specified, and where two or more products or materials are specified, the choice of these shall be optional with the Contractor.
- I. All materials, services, equipment, and workmanship furnished shall be guaranteed for a period of one year after the date of acceptance unless otherwise specified elsewhere in the Contract Documents. All Work rejected must be redone at the Contractor's expense.

4.08 DELIVERY AND STORAGE OF MATERIALS

- A. Materials and equipment shall be delivered to the site so that there will be neither delay in the progress of the Work nor an accumulation of material that is not to be used within a reasonable time. Stockpiling of materials and storage of any construction equipment shall be as far away from the edge of any body of water as is practical, however, in any case, it should not be within one hundred (100) feet of wetlands or the edge of any body of water.
- B. Materials shall be stored at the expense of the Contractor so as to insure the preservation of their quality and fitness for the Work. When considered necessary by the Engineer, they shall be placed on wooden platforms or other hard clean surfaces, and not on the ground, and shall be placed under cover when directed. The ground and ground water shall be protected by the Contractor in order to avoid contamination, the Contractor's expense, to the satisfaction of the Engineer. Stored materials shall be located to facilitate prompt inspection.

END OF ARTICLE 4

ARTICLE 5 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

5.01 LAWS TO BE OBSERVED

- A. The Contractor shall keep fully informed concerning all requirements of law, including all state and federal laws, county and municipal ordinances, and regulations which in any manner affect those engaged or employed in the Work, or the materials used, in the Work, or such orders and decrees of bodies or tribunals having jurisdiction or authority over the same. The Contractor shall at all times observe and comply with, and shall cause all agents and employees to observe and comply with, all such existing and future laws, ordinances, regulations, orders and decrees. The Contractor shall protect, indemnify and hold harmless MassCEC and the Engineer, and all of their officers, agents, and employees against all claims and liabilities arising from or based on the violation of any such requirement of law whether by the Contractor, his employees, agents, or subcontractors. If any discrepancy or inconsistency is discovered in the Contract Documents in relation to any such requirements of law, the Contractor shall immediately report the facts to the Engineer in writing. The Contract shall be governed by the laws of the Commonwealth.
- B. The Contractor, if a foreign corporation (a corporation established, organized, or chartered under laws other than those of the Commonwealth) shall comply with the provisions of Chapter 156D of the General Laws as amended. The Contractor shall file with MassCEC a certificate of the State Secretary stating that such corporation has complied with Chapter 156D and the date of such compliance.
- C. Other out-of-state business organizations, such as individual proprietorship, partnership and joint ventures, shall appoint an agent in this Commonwealth for the service of legal process and furnish a copy of such appointment to the State Secretary prior to the issuance of a contract by MassCEC.
- D. Work shall be in accordance with the Massachusetts State Building Code.
1. The Contractor shall protect and indemnify MassCEC and its representatives against any claim or liability arising from or based on the violation of any law, ordinance, safety code, regulation, order or decree whether caused by the Contractor, its employees or its subcontractors employed on the Project.
 2. Such laws, ordinances, codes, regulations, orders, or decrees may restrict and limit the Contractor's working hours or use of certain types of equipment on the Project. The Contractor acknowledges and agrees that it is familiar with such restrictions and limitations which shall not be the grounds for an increase in the Contract Price.
 3. The Contractor shall give all necessary notices, obtain all permits as required and pay all government taxes, fees, and other costs in connection with the Work. The Contractor shall file all necessary drawings, prepare all documents, and obtain all necessary approvals of

all governmental departments that have jurisdiction. The Contractor shall obtain all required Certificates of Inspection prior to acceptance and final payment for the Work. Compensation for conforming to all provisions of this Article, except as may be provided otherwise in Supplementary Conditions, is included in the Contract Price.

- E. Without limiting the Contractor's responsibility for ascertaining and complying with all applicable laws, ordinances, regulations, orders, and decrees, the Contractor's attention is called particularly to the requirements stated in the Sections of Division 1, General Requirements, specifying the general requirements for furnishing, installing and operating temporary controls during construction.
- F. The Contractor shall comply with the following legal requirements for any and all employees to be employed in the Project who are required to be listed in the certified payroll reports for the Project: 1) Federal Department of Homeland Security Requirements in hiring such employees including, but not limited, to the faithful completion of the Federal Department of Homeland Security Form I-9 process by Contractor; 2) proper classification of individuals employed on the project; 3) all laws concerning workers' compensation insurance coverage, unemployment insurance, social security taxes, and income taxes; and 4) all laws concerning hospitalization and medical benefits that meet the minimum requirements of the connector board established in chapter 176Q of the General Laws. The Contractor shall execute a Workforce Certification form with the execution of its contract. The Contractor shall require each of its subcontractors and sub subcontractors to execute and provide to Contractor such Workforce Certification form with the execution of each subcontract, and Contractor shall immediately provide a copy to the Owner. Contractor acknowledges that with the weekly workforce reports that must be submitted on a weekly basis, in the form and format required by the Owner, including but not limited to, by electronic reporting, Contractor and all of its subcontractors are required to certify that the Form I-9 process was faithfully completed and that all other legal requirements related to its workforce referenced above were followed for all employees listed on each certified payroll report when submitted. The Contractor and all of its subcontractors must: comply with the legal requirements of this section; must not knowingly use undocumented workers in connection with the performance of this contract; pursuant to federal requirements must verify the immigration status of all workers assigned to the contract without engaging in unlawful discrimination; and must not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker. Breach of any of the terms of the Workforce Certification legal requirements during the period of the Contract may be regarded as a material breach, subjecting the Contractor and its subcontractors to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination. Contractor must require each of its subcontractors to execute and provide to Contractor a Workforce Certification form with the execution of each subcontract, and Contractor must require each subcontractor to forward a copy of each such Workforce Certification to the Construction Manager for filing with the Owner.
- G. The Contractor shall comply with M.G.L. c. 149, § 26- 27H. The prevailing wage schedule is found in Exhibit A to this Agreement, listing the prevailing minimum

wage rates that must be paid to all workers employed in the Work. The Owner is not responsible for any errors, omissions, or misprints in the said schedule. Such Schedule shall continue to be the minimum rate wages payable to workers employed in the Work throughout the term of this Contract, subject to the exceptions provided in M.G.L c.149, § 26-27H. The Contractor shall not have any claim for extra compensation from the Owner if the actual wages paid to workers employed in the Work exceeds the rates listed on the schedule or as otherwise provided by law. The Contractor shall cause a copy of said Schedule to be kept in a conspicuous place at the Site during the term of the Contract. If reserve police officers are employed by the Contractor, they shall be paid the prevailing wage of regular police officers. (See M.G.L c.149, § 34B) Mass General Laws c. 149, section 27 as amended on August 8, 2008 requires annual updates to prevailing wage schedules for all public construction projects lasting longer than one year. The Contractor is required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The Contractor and all subcontractors are required to anticipate such annual updated prevailing wage schedules and neither the Contractor nor any subcontractors shall be entitled to claim additional compensation for base contract work due to updated prevailing wage schedules.

- H. The Contractor shall comply and shall cause its Subcontractors to comply with Massachusetts General Law c. 149, § 27B, which requires that a true and accurate record be kept of all persons employed on the project for which the prevailing wage rates have been provided. The Contractor and all Subcontractors shall keep these records and preserve them for a period of three years from the date of completion of the Contract. Such records shall be open to inspection by any authorized representative of the Owner at any reasonable time, and as often as may be necessary. The Contractor shall, and shall cause its Subcontractors to, submit weekly copies of their weekly payroll records to THE Owner. In addition, the Contractor and each Subcontractor shall furnish to the Executive Department of Labor within fifteen days after completion of its portion of the Work a signed statement in the form required by the Owner.
- I. If the Director of the Department of Labor and Workforce Development has established a Schedule of wage rates to be paid to the operators of trucks, vehicles or equipment for the Work, the Contractor shall be obligated to pay such operators at least the minimum wage rate contained on such Schedule. (See M.G.L. c.149, § 26-27H).
- J. The Contractor shall comply with, and shall cause its Subcontractors to comply with M.G.L. c. 149, § 148 which requires the weekly or biweekly payment of employees within six days of the end of the pay period during which wages were earned if employed for five or six days of a calendar week, and within other periods of time under certain circumstances as set forth therein.
- K. The use by the Contractor of trucks or other motor vehicles hired from either common or contract motor carriers in the course of performance of this Contract is subject to such minimum rates and charges, and rules and regulations as may from time to time be promulgated by the Department of Public Utilities of the Commonwealth of Massachusetts or other agency of the State of Federal government which may be authorized by law to set rates or otherwise regulate

the use of such vehicles. The Contractor expressly assumes the risk of any additional expense that may arise by reason of any change in such minimum rates and charges, and rules and regulations, and shall be entitled to no additional compensation or reimbursement by reason thereof.

- L. Northern Ireland - M.G.L. c. 7 § 22C. Pursuant to G.L. c. 7 § 22C for state agencies, state authorities, the House of Representatives or the state Senate, the Contractor certifies that it does not employ ten or more employees in an office or other facility in Northern Ireland and if the Contractor employs ten or more employees in an office or other facility located in Northern Ireland the Contractor certifies that it does not discriminate in employment, compensation, or the terms, conditions and privileges of employment on account of religious or political belief; and it promotes religious tolerance within the work place, and the eradication of any manifestations of religious and other illegal discrimination; and the Contractor is not engaged in the manufacture, distribution or sale of firearms, munitions, including rubber or plastic bullets, tear gas, armored vehicles or military aircraft for use or deployment in any activity in Northern Ireland.

5.02 PERMITS AND LICENSES

- A. The Contractor shall give all notices necessary and due in connection with the lawful prosecution of the Work, shall procure all permits and licenses from Federal, State and local authorities as MassCEC may deem necessary or appropriate and shall pay all expenses, charges, and fees in connection therewith. No work shall be undertaken or materials ordered without obtaining such permits, licenses and approvals. Proof of acceptance by the above authorities shall be submitted by the Contractor to MassCEC upon completion of the Work. Originals of these documents shall be submitted to MassCEC for permanent retention, with a copy of each available at the project site.
- B. Permits and licenses shall be in the name of MassCEC.

5.03 MOTOR VEHICLES

- A. Motor vehicles (except vehicles used solely for transporting employees to and from the Work site) used wholly or in part within the Commonwealth by the Contractor or a subcontractor, or by a person directly or indirectly employed by them in the execution of the Contract, shall be registered in the Commonwealth and bear Massachusetts registration plates.
- B. Motor vehicles used solely for transporting employees to and from the Contract location shall be registered as required under Chapter 90, Section 3, of the General Laws of the Commonwealth, as amended.
- C. A vehicle shall not be driven on any way, as defined in Section 1 of Chapter 90 of the General Laws of the Commonwealth, unless it is constructed or loaded so as to prevent any of its load from dropping, shifting, leaking, or otherwise escaping therefrom, except that sand may be dropped for the purpose of securing traction,

or water or other substance may be sprinkled on such a way in cleaning or maintaining the same. (Chapter 85, Section 30, of the General Laws of the Commonwealth as amended.)

- D. All diesel construction equipment shall have emission control devices installed, such as oxidation catalysts or particulate filters on the exhaust system side of the diesel combustion engine equipment.

5.04 INSURANCE REQUIREMENTS

- A. The Contractor shall purchase and maintain, and shall cause any subcontractor to purchase and maintain in amounts not less than the Minimum Insurance Limits set forth below during all times that the Contractor is performing the Work, including any Work performed prior to the date hereof, and for a minimum period equal to the greater of the period under which a claim can be asserted under the applicable statutes of limitations and repose, or three (3) years following the latest of completion of Work or expiration or termination of this Agreement:
 - i. Commercial General Liability Insurance for personal injury, bodily injury and property damage with limits not less than \$1,000,000 per occurrence, \$2,000,000 aggregate per project; \$2,000,000 products completed operation; \$1,000,000 personal and advertisement injury covering Bodily Injury, Property Damage, Personal Injury, and Completed Operations. . .

Commercial General Liability insurance written on an Occurrence form issued on the most recent edition of the ICO CG 00 01 form with terms and conditions acceptable to Owner. Such policy shall include Blanket contractual liability insurance covering all liabilities assumed under the Contract Documents, including, but not limited to, the Contractor’s obligations under all indemnity provisions of the Contract Documents and shall not be subject to any exclusion or limitation for liability resulting from “your work” as defined by the ISO CG form. Such policy shall be endorsed to have the General Aggregate on a per project basis and include Owner and other entities otherwise defined as an Additional Insured. Products and Completed Operations insurance shall be maintained for a minimum period equal to the period under which a claim can be asserted under the applicable statutes of limitations and/or repose.

- C. Automobile Liability Insurance
 - 1. Commercial Automobile Liability in the amount of \$1,000,000 per occurrence Covering Bodily Injury and Property Damage.

Commercial Automobile Liability insurance coverage is required for Owned, Non-owned, or Hired Vehicles if vehicles are used in the provision of services under this Agreement. Loading and unloading of any motor vehicle must be covered.

For Transporters of Hazardous Materials (whether Contractor or Subcontractor), if vehicles are used for transporting hazardous materials, Contractor’s Automobile Liability insurance, or the insurance carried by Contractor’s hazardous waste transporter shall meet, at minimum limits of

\$5,000,000 "each accident" – Combined Single Limit for Property Damage and Bodily Injury. Such policy shall be endorsed to provide pollution liability broadened coverage (endorsement CA 99 48) and also include an MCS-90 endorsement

- D. The Contractor shall carry Worker's Compensation Insurance, including Employers Liability Insurance as provided by Chapter 152, as amended, of the General Laws of the Commonwealth covering all work performed by him under the Contract. The Worker's Compensation Liability insurance shall be compliant with the jurisdiction in which the accident occurs, the jurisdiction in which any employee resides and any other states which may claim jurisdiction and in amounts not less than those required by law and Employer's Liability insurance in an amount not less than \$1,000,000 bodily injury by accident – each accident, \$1,000,000 bodily injury by disease – each employee, and \$1,000,000 bodily injury by disease - policy limit, or such greater amounts as may be required by Contractor's umbrella or excess liability policy in order to affect such coverage.

Such insurance shall be endorsed to include Longshore and Harbor Workers' Compensation Act Coverage and Jones Act Coverage, if applicable, and shall cover all operations of Contractor. Such insurance shall be endorsed to include Other States Coverage and to include a Waiver of Our Right to Recover from Others Endorsement in favor of the Owner.

- E. The Contractor shall carry Umbrella Excess Liability Coverage with limits of not less than \$10,000,000 per occurrence, covering all work performed by him under this Contract in excess of Commercial General Liability, Auto Liability and Employer's Liability. The Contractor must provide follow form coverage for each of the underlying policies and each of the policies which fall under the umbrella must be listed on the Certificate of Insurance.
- F. The Contractor shall carry Professional Liability with limits of not less than \$1,000,000 per claim and in the aggregate. (including contractual liability coverage).
- G. The Contractor's shall carry Pollution Liability with limits of not less than \$15,000,000 per incident/Aggregate. The Contractor and any and all subcontractor(s) shall maintain such policy to cover any sudden and gradual pollution incidents that may arise out of, under, or in connection with this Agreement including any and all Work and/or Services to be performed by or on behalf of Contractor, including but not limited to: (a) bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death; (b) property damage including physical injury or destruction of tangible property including resulting loss of use thereof, clean-up costs, and the loss of use of tangible property that has not be physically injured or destroyed; and (c) defense including costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensation damages. There should be no exclusions or coverage restrictions related to asbestos, lead paint, silica or mold/fungus/legionella. Such policy shall be continuously maintained as to completed operations coverage with respect to liability arising out of the Work or services for a minimum period of not less than the greater of three (3) years after

final completion of the Work or services or the greater time under which a claim may be properly asserted under the applicable statute of limitations or repose and shall include coverage for loss of, damage to, or loss of use of property directly or indirectly arising out of the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, any liquid or gas, waste materials or other irritants, contaminants or pollutants, into or upon the project, any other land, the atmosphere, or any water course or body of water (collectively, a "Release"), whether such Release is gradual or sudden and accidental.

If Contractor's work includes the treatment, storage, and disposal of contaminants, then in addition to the CPL requirement above, the policy shall also include enhancements for Pollution Legal Liability, Transportation Pollution Liability, and Owned/Non-Owned Disposal Site. If treatment, storage or disposal of contaminants does not apply to the scope of work of Contractor, then Contractor would only be required to evidence a Contractor's Pollution Liability (CPL) policy.

Should coverage(s) be written on a claims-made form, the retroactive date shall be no later than the effective date of this Agreement and Contractor and/or its subcontractors shall maintain coverage continuously for the duration of this Agreement and for at least three (3) years after Final Completion or applicable state statute of repose. In the event the Contractor is unable to secure and/or maintain any or all of this Pollution Liability coverage, the Contractor agrees to indemnify and hold the Owner's Insured Parties harmless against any and all liability resulting from any coverage deficiency that is out of compliance with this insurance requirement.

H. The Contractor shall carry property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the replacement cost of the Project, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis with a deductible not exceeding \$5,000. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.2 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

1. Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss. The Owner's property insurance will not cover hoists, tools, or other equipment belonging to the Contractor or any Subcontractor.

2. The Contractor shall be responsible for the deductible portion of all losses covered by its property insurance, not to exceed a deductible amount of \$5,000.
 3. The Contractor's property insurance will cover portions of the Work stored off-site and in transit, with sub limits of \$100,000.
 4. Upon request, the Contractor will furnish the Owner a certificate evidencing the Contractor's property insurance. Property insurance for losses to materials or equipment stored off-site or in transit in excess of the coverage provided by the Contractor's property policy shall be procured by the Contractor at its cost. The Contractor and Subcontractors waive all rights they may have against the Owner for damage to tools, equipment, materials, supplies, temporary structures or other property owned or rented by the Contractor or Subcontractors which is not to be incorporated in the Work, and any policies of insurance covering the Contractor's or Subcontractors' own tools, equipment, facilities and other property against loss by physical damage shall include provisions or endorsements providing that the underwriters waive their rights of subrogation against the Owner.
 5. In lieu of the Contractor providing Property Insurance, Owner may elect to provide Property Insurance substantially in conformance with the terms and conditions of this Section.
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- I. Contractor shall provide a Payment and Performance Bond and/or Lien Prevention Bond upon request by Owner.
 - J. The required insurance coverages hereinbefore specified shall be placed with insurance companies licensed by the Massachusetts Division of Insurance to do business in the Commonwealth of Massachusetts and having a Best's rating of A or better, shall be taken out before the Contract is commenced and be kept in full force and effect throughout the term of the Contract, shall be primary to and non-contributory to any coverages maintained by MassCEC, and shall require that MassCEC be given at least 30 days advance written notice in the event of any cancellation or materially adverse change in coverage. All such required insurance, with the possible exception of Pollution Liability Insurance, shall be written on an occurrence basis form, as opposed to a claims-made basis form. MassCEC shall be named as an additional insured under the Commercial General Liability, Automobile Liability, Umbrella, Pollution Liability, and Builder's Risk Insurance Policies. The standard for the AI Form shall be ISO CG20 10 ed. 10/01 or its equivalent. The Workers' Compensation, Automobile Liability Insurance, Commercial General Liability, and Employers' Liability Insurance Policies shall include a waiver of subrogation in favor of MassCEC. All such insurance as is required of the Contractor shall be provided by or in behalf of all subcontractors to cover their operations performed. The Contractor shall be held responsible for any modifications, deviations or omissions in the compliance with these requirements by the subcontractors. At the inception date of the Contract

and throughout the term of the Contract, MassCEC shall be provided with certificates of insurance evidencing that such insurance policies are in place and provide coverage as required. The following statement affirming that coverage completely complies with contract requirements shall be included in the special items section of the certificate or in an attached special items addendum page:

The aforementioned insurance coverages completely comply with Article 5.04, Insurance Requirements, paragraphs A through J, inclusive, of Massachusetts Clean Energy Technology Center Contract No. MACEC-FY24-01

- K. In the event it is determined during excavation or construction that an asbestos condition does exist, a licensed asbestos specialist shall be employed by the Contractor to perform the asbestos containment and abatement work. Prior to asbestos containment and abatement work, the Contractor shall, through the licensed asbestos specialists, obtain insurance in amounts and types specified by MassCEC, naming MassCEC as an additional insured as its interest appears under this Contract. Payment for this work will be made in accordance with Article 7.04.

- L. BEFORE COMMENCING PERFORMANCE OF THE WORK AND PRIOR TO THE RENEWAL OF EACH RESPECTIVE POLICY, CONTRACTOR SHALL FURNISH CERTIFICATES OF INSURANCE EVIDENCING INSURANCE COVERAGE AS REQUIRED HEREIN, TOGETHER WITH EVIDENCE THAT ALL PREMIUMS FOR SUCH INSURANCE HAVE BEEN PAID TO THE OWNER AND THE OWNER'S PROJECT REPRESENTATIVE. Contractor must provide thirty (30) days written notice of cancellation, non-renewal, material changes to Owner and all other such entities as may be reasonably requested. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage. A waiver of subrogation endorsement in favor of Owner and Additional Insureds shall be attached to all policies required herein with the exclusion of professional liability, and the Certificate of Insurance shall reflect that such waivers of subrogation are in place. A copy of the additional insured coverage endorsement must be attached to the Certificate of Insurance. The Certificate of Insurance shall show Owner as the Certificate Holder and shall be delivered to Owner ten (10) days prior to commencement of the Work. Prior to expiration of such required insurance, and otherwise as requested by Owner, renewal certificates and endorsements will be provided to Owner, at no expense to Owner, until such insurance is no longer required pursuant to the terms of the Agreement. At the Owner's request, the Contractor shall furnish redacted copies of the insurance policies including all endorsements required to provide the coverage set forth in the Contract Documents.

- M. Additional Insureds. The policies of insurance required hereunder shall be endorsed to name the Owner and such and other such entities hereafter as may be reasonably requested by Owner, as additional insureds (hereinafter "Additional Insureds") on the Comprehensive General Liability, Automobile

Liability, umbrella and/or excess policies. Owner requires a copy of the Additional Insured endorsement. Said Additional Insured coverage shall be primary insurance as respects the Additional Insureds and any insurance maintained by the Additional Insureds shall be excess or contingent and shall not contribute with it. The Contractor shall waive all rights and shall cause its Subcontractors of all tiers to waive all rights against the Additional Insureds, Owner and its officers, directors, employees and those for whom they are liable, for any damage or loss to the extent covered by insurance (except professional liability insurance), and to the extent of actual recovery of insurance proceeds. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity has an insurable interest in the property damaged. In the event that the Contractor maintain limits greater than set forth herein, Owner and the Additional Insureds shall be included therein as additional insureds to the fullest extent of all such insurance in accordance with all terms and provisions herein. Any language with respect to 'the limitation of coverage to the limits required' must be removed.

- N. Deductibles. Maximum deductible on any policy required herein shall not exceed \$25,000 per occurrence, incident or event, unless otherwise approved in writing by Owner. Owner and Additional Insureds will not be responsible for any deductible or self-insured retention amounts and the same will in no event be deemed a cost of the Work. The Contractor's deductible or self-insurance retentions applicable to any insurance required to be provided by the Contractor must be listed below or on the certificates of insurance required herein:

Amount of Deductible or Self-Insured Retention:[Insert: Amount or "N/A"]

The Contractor shall be completely responsible for the proper care and protection of the Work. The Contractor shall be responsible, for all at fault losses within the deductible specified above, and the Contractor shall promptly, and in any event so as not to delay the progress of the Work, replace any damaged property or reimburse the Owner for any damaged property to the extent the loss or damage to such property is within the deductible

5.05 PATENTED DEVICES, MATERIAL AND PROCESSES

- A. The Contractor shall indemnify and save harmless MassCEC and all persons acting for or on behalf of MassCEC from all claims and liability of any nature or kind, and all damages, cost and expenses, including attorney's fees, arising from or occasioned by an infringement or alleged infringement of any patents or patent rights on any invention, process, material, equipment, article, apparatus, or any part thereof, furnished and installed by the Contractor, or arising from or occasioned by the use of manufacture thereof, including their use by MassCEC. In case such materials, equipment, devices, or processes are held to constitute an infringement and their use enjoined, the Contractor, at his expense, shall:

1. Secure for MassCEC the right to continue using said materials,

equipment, devices, or processes by suspension of the injunction or by procuring a license or licenses; or

2. Replace such materials, equipment, devices, or processes with non-infringing materials, equipment, devices, or processes; or
3. Modify them so that they become non-infringing, or remove the enjoined materials, equipment, devices, or processes and refund the sums paid therefore without prejudice to any other rights of MassCEC or the Engineer.

5.06 RESTORATION OF SURFACES OPENED BY PERMIT

- A. Contractor shall not allow any party to make an opening in a street or highway for any purpose except upon the direction of the Engineer and the presentation of a duly authorized permit or other instrument. The holder of such a permit or instrument shall be considered in the same class as a contractor on an adjacent contract and the provisions of Articles 3.05 and 3.06 shall apply.

5.07 SANITARY PROVISIONS, PUBLIC SAFETY, AND TRAFFIC MANAGEMENT

- A. The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of its employees as may be necessary to comply with the requirements of the Department of Public Health, local health officials or of other authorities having jurisdiction.
- B. The Contractor shall be responsible for the maintenance of traffic over, through, or around the Work included in its Contract with the maximum of safety and practicable convenience to such traffic during the life of the Contract, and whether or not work thereon has been suspended temporarily. The Contractor shall take all precautions for preventing injuries to persons or damage to property in or about the Work. If the Contractor constructs temporary bridges or provides temporary crossings of streams, its responsibility for accidents shall include the roadway approaches as well as the structures of such crossings.

The Work shall be carried on in such a manner as to provide safe passage at all times for public travel and with least obstruction to traffic. The Contractor shall provide and maintain at its own expense (except as otherwise provided herein) in a safe and passable condition, such temporary by-passes and temporary bridges as may be necessary to accommodate traffic. Roads shall be closed to travel only as directed by the Engineer. The Contractor shall so carry on its work that travel will not be obstructed. The Contractor shall at all times so conduct the Work that the abutters shall have reasonable access to their property as directed by the Engineer. When it is necessary to leave materials and equipment upon the site of the Work or in the vicinity thereof, they shall be placed so as to cause the least possible obstruction to pedestrians and other travel.

- C. The Contractor shall, at its own expense, provide, place, and erect all barricades and warning signs, and furnish and keep lighted all lights that are necessary in

the opinion of the Engineer to protect the Work from traffic, pedestrians and animals and to assure public convenience and safety. The Contractor shall also furnish at its own expense a sufficient number of watchmen at all times to protect the Work.

The Contractor shall also provide adequate lighting, warning signs, and barricades to protect airline operations from any hazards created by the construction during working and non-working hours.

- D. When, in the opinion of the Engineer, it is necessary that uniformed police be used to protect and control pedestrian traffic, to direct vehicular traffic during construction and to keep the traffic off any part of the work, or to protect the public safety, the Contractor will obtain a police detail for this purpose.

All customary expenses for uniformed police required for the protection and control of pedestrian and vehicular traffic during construction, or to provide protection of the health and safety of persons or property from routine and anticipated construction activities, shall be assumed by the Contractor.

All expenses for uniformed police required for the protection of persons and property arising out of activities not ordinarily encountered by the Contractor during construction, including, but not limited to, labor difficulties, crowd control, etc., shall be at the sole cost of the Contractor.

5.08 INTENTIONALLY OMITTED

5.09 USE OF EXPLOSIVES

- A. Explosives, when necessary for use in the Work, shall not be brought within the Contract limits or onto property under the jurisdiction of MassCEC, without the prior approval of MassCEC.
- B. Explosives shall be stored safely under lock and key. The storage places shall be marked conspicuously DANGEROUS - EXPLOSIVES and be in the care of a competent watchman at all times. Storage, handling, and use of explosives shall conform to the regulations of the Massachusetts Department of Public Safety, federal regulations and local ordinances relating thereto.
- C. The Contractor shall be responsible for all damages resulting from the use of explosives. The Contractor shall exercise care not to endanger life and property, including new Work. When directed, the number and size of the charges shall be reduced. Flagmen shall be provided, when directed, to warn and keep traffic from the danger area. All persons within the danger area shall be warned and given time to withdraw.
- D. Prior to start of the blasting, the Contractor shall give at least a 48 hour notice and a schedule of his operations thereof to the operating official, company, or companies leasing, owning, or responsible for pipes, conduits, poles, wires, railroad tracks, or any other public or private utility which may be endangered by the blasting in order that a representative of said owner or lessee may be present at the site. The Contractor shall take proper precautions to prevent injury to said

properties during all blasting operations.

5.10 PROTECTION AND RESTORATION OF PROPERTY

- A. Compensation for conforming to all provisions of this Article, unless compensation is authorized in writing by the Engineer, as specified in Article 2.03, or as may be provided otherwise in the Supplementary Conditions, shall be considered as included in the Contract Price and no additional compensation will be allowed therefor.
- B. Prior to commencing Work, the Contractor shall record the existing condition of abutting property. The Contractor shall obtain the necessary permission for entry and cause a detailed examination to be made of such abutting property as the Contractor deems necessary, as required in the Supplementary Conditions, or as directed by the Engineer. The Contractor shall invite MassCEC, in writing by certified mail with return receipt, to be present during the examination. A representative of MassCEC shall also be invited. A complete report of the existing conditions, including photographs and video tapes, if required, shall be made in triplicate, and signed by the Contractor. One copy shall be delivered to the owner, one to MassCEC, and one shall be retained by the Contractor. If at any time thereafter a claim for damages or alleged damages is filed by the owner or tenant, the Contractor shall make further detailed examinations. A representative of MassCEC shall be invited to attend. All facts as to changes between the then existing conditions of said property and those which existing at time of the original examination shall be noted and recorded in triplicate. One copy of this report shall be delivered to the owner, one to MassCEC, and one shall be retained by the Contractor.
 - 1. In the event that the Contractor cannot obtain from the owner of such abutting property permission to enter upon the property for such examination, the Contractor shall immediately notify MassCEC.
 - 2. For these detailed examinations, the Contractor shall employ an independent person who has had previous experience in examining or surveying the conditions of the property and who shall be approved by MassCEC.
- C. The Contractor shall confine his movements and operations insofar as possible to the area within the limits of the Work, and the area outside the limits of the Work shall not be disturbed except as directed.
- D. The Contractor shall, at no additional cost to MassCEC, preserve and protect from injury all property either public or private along and adjacent to the proposed Work. The Contractor shall be responsible for and shall repair, at no additional cost to MassCEC, any and all damage and injury thereto, arising out of or in consequence of any act or omission, neglect or misconduct in the execution of the Work, or in consequence of the non-execution thereof by the Contractor or his employees or subcontractors in the performance of the Work covered by the Contract prior to completion and acceptance thereof. The Contractor shall be solely responsible for any trespass upon adjacent property or injury thereto, resulting from or in connection with his operations. The Contractor shall be liable

for any claims that may be made on account of the felling of trees or the deposit of debris of any kind upon private property. Special care shall be exercised during blasting operations to avoid injury to underground structures and utilities.

- E. Although the Contract Documents may indicate the approximate location of existing subsurface utilities in the vicinity of the Work, accuracy and completeness of the information is not guaranteed by MassCEC. Before commencing any work or operations that may endanger or damage subsurface structures, the Contractor shall carefully locate all such structures and conduct his operations in such manner as to avoid damage thereto. When necessary, the Contractor shall cooperate with representatives of public service and utility companies in order to avoid damage to their structures by furnishing and erecting suitable supports, props, shoring, or other means of protection. The Contractor shall not interrupt live services until new services have been provided. All abandoned services shall be plugged or otherwise made safe and secure.
- F. If the Contractor desires to temporarily relocate a utility, other than those contemplated by MassCEC, he shall make the necessary arrangement with the appropriate utility company and make reimbursement for the cost thereof, at no additional cost to MassCEC.
- G. Access to fire hydrants and fire alarm boxes shall be maintained by the Contractor throughout the prosecution of the Work. Hydrants, alarm boxes, and standpipe connections shall be kept clear of obstructions and kept visible at all times. If visibility cannot be maintained, the Contractor shall provide clearly visible signs and lights showing the locations of fire hydrants, fire alarm boxes, or standpipe connections. Utility companies and municipal agencies having facilities within the limits of the Work shall have access to their facilities at all times for inspection and repair.
- H. All equipment used by the Contractor which could create potential fire hazard such as steam-generating or steam-operated machinery, heaters, gas generators, and the like shall be equipped with spark arresters and/or other safety devices and utmost precaution will be exercised by the Contractor in the use of such equipment.
- I. Land monuments and property marks shall be carefully protected by the Contractor and if necessary to remove the same, he shall do so only at the Engineer's direction and after a registered land surveyor has witnessed or otherwise referenced their location. If land monuments and/or property marks are removed by the Contractor, they shall be replaced by a registered land surveyor.
 - 1. All costs associated with the removal, witnessing and replacement of land monuments and/or property marks shall be borne by the Contractor, at no additional cost to MassCEC.
- J. The Contractor shall protect and preserve natural surroundings and roadside growth either within or adjacent to the project site from damage or injury due to these operations. The Contractor shall not, except by written permission of the Engineer, remove, destroy, or trim roadside trees or shrubs. Trees or landscape

features carelessly scarred or damaged by the Contractor's operations shall be removed and replaced or neatly trimmed and restored to their original condition as required by the Engineer. The Contractor shall be responsible for all damage to roadside growth due to his operations and shall, without compensation, satisfactorily repair or replace all such damaged growth. Scars on trees shall be painted as soon as possible with an approved tree paint.

- K. The Contractor shall protect existing structures, shall provide lights and fences and take all other precautions that may be necessary to protect life and property, at no additional cost to MassCEC. The Contractor shall carry on all operations and use equipment of such types that noise resulting from construction operations will be kept to a minimum. Barriers and bridges shall be provided for the protection and use of the public and for the protection of the Work as necessary. The Contractor shall provide and maintain access for occupant and customer entrance to and exit from all adjacent buildings and property at all times. All temporary facilities required for the general protection of the public and the Work shall be subject to approval of MassCEC.
- L. Written notice shall be given by the Contractor to all utility owners or officials and to all others concerned with or having charge of public or private owned utilities, of his intention to commence operations affecting such utilities at least 1 week in advance of the beginning of such operations. The Contractor shall at the same time file a copy of said notices with the Engineer.
- M. The Contractor shall confine its operations to the actual work sites, access routes, and storage areas designated by MassCEC or the Engineer. The Contractor shall have sole responsibility for providing all materials, equipment, or tools and any storage required will be at the Contractor's own risk. MassCEC will not assume responsibility for any loss of materials, equipment, or tools stored on its property.
- N. All roads and haul routes used by the Contractor shall be maintained and kept clean during the course of the work. Any damage to existing surfaces, caused by the Contractors operations shall be repaired and the areas involved restored to their previous condition, without cost to MassCEC.
- O. The Contractor is responsible for controlling dust at all times during this Contract, including all work shifts, non-working hours, weekends, and holidays. Fugitive dust shall be controlled through wetting, sweeping, and other suppression techniques. Contractor shall maintain on-site water trucks. Trucks hauling materials shall be covered.
- P. Designated wash-down areas shall be established by the Contractor on site for the control of dust tracking from vehicles leaving the site. All trucks or other vehicles leaving the site shall be hosed and washed clean of mud clinging to the wheels.
- Q. The Contractor shall ascertain boundaries of site within which Work must be confined and agree to said limits with MassCEC prior to starting any Work.

5.11 PROTECTION OF PUBLIC LANDS

- A. In the execution of any Work within or adjacent to any state or national forest, park, or other public or private lands, the Contractor shall comply with all of the regulations of the appropriate authorities having jurisdiction over such forest, park, or lands. The Contractor shall keep the areas in his construction operations in an orderly condition and properly dispose of all refuse and discarded materials.
- B. The Contractor shall obtain construction permits that may be required for Contract operations, not a part of the Contract, in accordance with the requirements of the regulations of the appropriate authorities.
- C. The Contractor shall take all reasonable precautions to prevent and suppress open fires in any area involved in his construction operations or occupied by him as a result of such operations. The Contractor shall cooperate with the proper authorities of the state and federal governments in reporting, preventing, and suppressing any open forest fires.

5.12 PROTECTION OF FENCES

- A. By constructing temporary fences, or by other adequate means, the Contractor shall restrain stock from leaving the lands wherein they are confined or from trespassing which would be made possible by, or which might result from, the removal or destruction of existing fences or the carrying out of any part of the Work under the Contract. The Contractor shall be responsible for all loss, injury, or damage that may result from the Contractor's failure to restrain stock as above provided. Compensation for erecting and maintaining temporary fences and for otherwise providing for the restraint of stock shall be considered as included in the prices for the various Contract Items and no additional compensation will be allowed therefor.
- B. If the Contractor is ordered by the Engineer to construct new right-of-way fences or to move and reconstruct existing fences, such Work shall be paid for at the unit price bid for same, or as Extra Work.
- C. The Contractor shall use care to avoid damaging existing fences. The Contractor shall repair or replace, at no additional cost to MassCEC, and to the satisfaction of the Engineer, all fences that are in any way damaged by Contract operations.
- D. Tearing down and removal of fences occurring within the right-of-way limits shall be considered to be a part of the clearing and grubbing work as set forth in the Contract Specifications, and payment therefor included in the payment for clearing and grubbing.

5.13 SAFEGUARDING OF EXCAVATIONS

- A. Contractor shall provide safeguards and protections around and in the vicinity of excavations necessary to prevent and avoid the occurrence of damage, loss, injury, and death to property, animals, and persons because of such excavations.

Liability for any such damage, loss, injury, or death shall rest with the Contractor.

5.14 DISPOSAL OF MATERIALS OUTSIDE THE WORK SITE

- A. Unless otherwise specified in the Contract Specifications, the Contractor shall make his own arrangement for disposing of waste and excess materials outside the work site, at no additional cost to MassCEC.
- B. Prior to disposing of material outside the Work site, the Contractor shall obtain written permission from the owner on whose property the disposal is to be made. The Contractor shall file with the Engineer the permit, or a certified copy thereof, together with a written release from the property owner absolving MassCEC from any and all responsibility with the disposal of material on said property.
- C. Unless otherwise provided in the Contract Specifications, full compensation for all costs involved in disposing of materials as above specified, including all costs of hauling, shall be considered as included in the price paid for the Contract Item involving such materials and no additional compensation will be allowed therefor.
- D. In the disposal of excavated material, and other waste and excess materials, the Contractor shall adhere to all applicable laws of the Commonwealth of Massachusetts and to municipal and local ordinances and regulations. All routes to be used by the Contractor for hauling excavated and other materials shall be approved in advance by applicable agencies having jurisdiction. Excess excavated material stockpiled at the site after the demands of this Contract have been fulfilled shall be removed from the site by the Contractor and legally disposed of off-site. The Contractor shall restore the site to its original condition, prior to stockpiling, subject to direction by the Engineer, at no additional cost to MassCEC.

5.15 SAFETY AND FIRST AID REQUIREMENTS

- A. The Contractor shall adhere to all precautions necessary to the safety and health of the workmen in accordance with provision of Federal Regulation 29 CFR Parts 1926.58 and 1910.1001, and Massachusetts Regulations 453 CMR 6.00.
- B. The Contractor's safety program shall be submitted in writing to the Engineer for review within five (5) days after receipt of a Notice of Award. The proposed safety program shall include the name, experience, and qualifications of the Contractor's proposed safety representative. No work at the job site shall begin until the Engineer has reviewed the Contractor's safety program and safety representative. Implementation and enforcement of the safety program for the forces of the Contractor and all subcontractors shall be the responsibility of the Contractor.
- C. The Contractor's full-time safety representative shall have a thorough knowledge of construction safety and OSHA regulations. If, in the opinion of the Engineer, the Contractor's safety representative is not effective in carrying out the duties assigned and as described below, the Engineer may request, in writing, that the Contractor replace the safety representative.

- D. The duties of the safety representative shall include maintenance of the Contractor's safety program, enforcement of safe practices, and the use of safety equipment and personal protection equipment, and other such activities as may be required by OSHA to maintain job safety and accident prevention. The safety representative shall not be changed, terminated, nor reassigned without the written approval of the Engineer.
- E. The Contractor shall not require any laborer or mechanic employed in performance of the Contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to health or safety, as determined under construction safety and health standards (Title 29, Code of Federal Regulations, Part 1518, Published in the Federal Register on April 17, 1971) promulgated by the United States Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (83 Stat. 96). The Contractor shall ensure that the language set forth in this Article 5.15E is included in all agreements between the Contractor and any of its Subcontractors.
- F. MassCEC may stop any work that it considers to be unsafe, in its sole discretion.

5.16 INDEMNIFICATION

- A. To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless MassCEC and all its managers, officers, directors, representatives, agents, and employees from and against claims, damages, losses and expenses, including but not limited to attorneys' fees and court costs, (a) arising out of or resulting from performance of the Work, including but not limited to claims for damage, loss, or expense attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder; (b) any claims, damages, losses and expenses caused by or alleged to be caused by a breach of any duty owed by the Contractor to the Owner under this agreement, or (c) citations, fines, penalties, assessments, or other levies made against the Owner as a result of the Contractor's failure to observe any applicable law, regulations or applicable permits, including any failure of the Contractor to comply with the terms and conditions of the Contract Documents, and, including further without limitation any breach of the warranties set forth herein. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this provision.
- B. The Contractor shall be held responsible for, and shall indemnify and hold MassCEC harmless from and against, any and all claims for damage to underground structures and utilities arising out of the operations of the Contractor or any of its Subcontractors.
- C. In claims against any person or entity indemnified under this Article 5.16 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligations under Article 5.16 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the

Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts regardless of any provisions of the applicable workers' compensation laws, and in particular regardless of the exclusive remedy and/or employees' immunity provisions of those laws, all of which are hereby expressly waived.

- D. These provisions of Section 5.16 shall survive the termination of this Agreement and shall apply to Liabilities to the extent not paid to Owner by insurance carried by Contractor or by project-specific professional liability or wrap-up insurance covering the Project, if any, and shall not be limited by the amount of types of damages, compensation or benefits payable by the Contractor under workers' compensation. The Owner shall have no indemnity obligation, whatsoever, to the Contractor.

5.17 CLAIMS AGAINST CONTRACTOR FOR PAYMENT OF LABOR AND MATERIALS

- A. The Contractor shall be responsible for prompt payment for all services, labor, equipment, and materials furnished by or through the Contractor for purposes of the Contract.
 - 1. Forthwith after the Contractor receives payment for a periodic estimate, the Contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the Contractor.
 - 2. Owner has the right to pay Subcontractors directly in the event Contractor has failed to make timely payment, and in such event Owner will offset any such Subcontractor payments against amounts otherwise owed to Contractor.
 - 2.

5.18 PAYMENT OF TAXES

- A. The Contract Price paid for the Work shall include full compensation for all taxes which the Contractor is required to pay whether imposed by federal, state, or local government, including, without being limited to, federal excise tax.
 - 1. Fines and penalties, including interest, are the responsibility of the Contractor and all costs associated therewith shall be borne by the Contractor, at no additional cost to MassCEC.
- B. The Massachusetts Sales Tax, Chapter 64H, Section 6 and the Massachusetts Use Tax, Chapter 64I, Section 7, states that these taxes are not applicable to the sales of construction materials and supplies incorporated, consumed, employed or expended in construction projects of MassCEC. This exemption is also applicable to rental charges for construction vehicles, equipment, and machinery rented, specifically for use on the site of MassCEC's construction projects. Bidders are directed to exclude any allowance for Sales or Use Tax from their

Bid Form as said tax would relate to the foregoing specific categories.

5.19 CLAIMS OF CONTRACTOR FOR COMPENSATION

- A. No person or corporation, other than the Contractor, now has any interest hereunder, and no claim shall be made or be valid; and neither MassCEC nor any member, agent, or employee thereof, shall be liable for, or be held to pay, any money except as provided in Articles 2.02, 2.03, 2.04, 2.05, 7.02 and the Agreement.
- B. Contractor shall notify Owner in detail in writing of any and all claims within ten (10) calendar days of the occurrence of any event, circumstance or condition which Contractor claims as the basis for an increase in the Contract Price or the time for performance or both, or such claim shall be waived. In addition, any claim for concealed or unforeseen conditions shall be made before such condition is disturbed and while it can still be viewed by the Owner. Such written statement shall contain a description of the nature of the work provided or damage sustained; and the Contractor, shall on or before the fifteenth day of the month succeeding that in which such work is performed or damage sustained file with the Engineer an itemized statement of the details and amount of such work or damage. Unless such statement shall be made as required, the claim for compensation shall be forfeited, waived and invalidated, and the Contractor shall not be entitled to payment due to any such work or damage. Such notice by the Contractor and the keeping of costs by the Engineer shall not in any way be construed as proving the validity of the claim. The provisions of this paragraph shall not apply to changes in quantities as provided under Article 2.05, to Extra Work ordered by the Engineer in writing, but shall otherwise apply to claims for an increase in the Contract price or time for completion that Contractor alleges are due to changes in the work for which it is not responsible and which are not part of an Extra Work Order.
- C. On the basis of information provided in writing by the Contractor's employees, servants, or agents, the Contractor shall certify, in writing, that the work for which it is claiming payment, other than as provided for in the Contract Documents, is work actually performed, and the costs as shown are the amounts legally due for providing such work for which payment is claimed.
- D. The Engineer will determine all questions as to the amount and value of such work, and the fact and extent of such damage and will notify the Contractor in writing of this determination.
- E. Acceptance by the Contractor of the final payment made under the provisions of Article 7.09 shall operate as and shall be a release to MassCEC and every member, agent, and employee thereof, from all claim and liability to the Contractor for anything done or furnished for, or relating to, the Work, or for any act or neglect of MassCEC or of any person relating to or affecting the Work except the claim against MassCEC for the remainder, if any there be, of the amounts kept or retained as provided in Article 5.17. For claims for extensions of time, see Article 6.08.
- F. No payment, final or otherwise, shall operate to release the Contractor or his

sureties from any obligations under this Contract or the Performance Bond.

5.20 OPENING PORTIONS OF CONTRACT FOR OPERATION OR OCCUPANCY

- A. Any portion of the Work which is in acceptable condition for operation or occupancy may be opened for operation or occupancy as directed in writing by MassCEC, but such operation or occupancy shall not be construed as an acceptance of the Work or part thereof, nor shall it act as a waiver of any of the provisions of the Contract Documents; provided, however, that on such portions of the Work as are opened for such use, the Contractor shall not be required to assume any expense entailed in maintaining that portion of the Work opened for operation or occupancy. MassCEC will be responsible for maintenance and any damage to the Work caused solely by the operation or occupancy of any portion of the Work which has been opened to operations or occupancy as stipulated above, and it may order the Contractor to repair or replace such damage, whereupon the Contractor shall make such repairs at Contract Unit Prices so far as the same are applicable, or as Extra Work under the provisions of Article 2.03, if there are no applicable items in the Contract.
- B. If the Contractor is dilatory in completing shoulders, drainage structures or other similar items of the Work, the Engineer may order all or a portion of the Work open to traffic, but in such event the Contractor shall not be relieved of his liability and responsibility during the period the Work is so opened prior to final acceptance. The Contractor shall conduct the remainder of his construction operations so as to cause the least obstruction to traffic. Additional costs incurred by the Contractor in conducting the remainder of his operations due to his being dilatory with parts of the Work shall be assumed by the Contractor, at no additional cost to MassCEC.

5.21 CONTRACTOR'S RESPONSIBILITY FOR THE WORK

- A. Until final written acceptance of the Work, the Contractor shall have the charge and care of the Work. The Contractor shall take every necessary precaution against injury or damage to the Work by action of the elements, or from any other cause, whether arising from the execution of the non-execution of the Work, and especially when blasting is to be done.
- B. Except as provided in Article 2.09, the Contractor shall bear all losses resulting from or due to the amount or the character of the Work or because the nature of the land in or on which the Work is done is different from that which was estimated or expected, or due to bad weather or other causes.
- C. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the Work occasioned by any cause before its completion and final acceptance, including damage to the Work due to war, whether or not declared, civil war, insurrection, rebellion or revolution, or to any act or condition incident to any of the foregoing, to "Acts of God" (limited to hurricane, tornado, cyclone and earthquake as classified by the United States Weather Bureau for the particular locality and for the particular season of the year, and in addition thereto, damages resulting directly from flooding from any of

the aforementioned "Acts of God"). The Contractor shall bear the expense of injuries and damages to the Work caused by its acts or omissions, or the acts or omissions of those for whom the Contractor is responsible. In any case in which the estimate for replacing such Work or repairing such damage caused by war, whether or not declared, civil war, insurrection, rebellion or revolution, or to any act or condition incident to the foregoing, or an "Act of God" combined with any previously authorized Extra Work results in a change of such magnitude as to be incompatible with competitive bid status, MassCEC reserves the right to terminate the Contract and to call for new bids and award a new Contract for such Work. In the event a Contract is terminated for such reason, MassCEC will pay the Contractor such sum as may be due for Work performed up to the date of the "Act of God," or of damage directly due to war, whether or not declared, civil war, insurrection, rebellion or revolution, or to any act or condition incident to any of the foregoing and will also take over and pay for any material stored at the site of the Work provided said material was intended to be and could have been incorporated into the Work; MassCEC will also take over and pay for any material which was being especially fabricated for incorporation into the Work, provided, however, that as a condition precedent to MassCEC's liability for such material, the Contractor is legally liable therefore and the material was intended to be and could have been incorporated in the Work.

- D. Issuance of an estimate of any part of the Work done will not be construed as final acceptance of any Work completed up to that time.
- E. Should the Contractor fail to take prompt action whenever conditions make it necessary, MassCEC will make emergency repairs or cause the same to be made, with the stipulation that the costs for such repairs shall be charged against the Contractor and deducted from money due the Contractor.
- F. In case of suspension of Work from any cause whatever, the Contractor shall be responsible for the Contract and shall take such precautions as may be necessary to prevent damage to the Work, provide suitable drainage, and shall erect any necessary temporary structures, signs, or other facilities, at no additional cost to MassCEC. The Contractor shall also maintain in an acceptable growing condition all living material in newly established plantings, seedings, and soddings furnished under the Work, and take adequate precautions to protect new tree growth and other important vegetative growth against injury.
- G. The Contractor shall reimburse MassCEC for all expenses, losses or damages, as determined by the Engineer, incurred by or in consequence of any defect, act, omission or mistake of the Contractor or any Subcontractor.
- H. The Contractor will be held responsible for any and all claims for damage to underground structures such as water or gas mains, pipes, conduits, manholes, or catch basins, due to the Contractor's operation or to the operations of any of its Subcontractors.
- I. The Contractor shall not discontinue the service of water, electricity, steam, gas or any other utility, without first obtaining the approval in writing of the Engineer

and the manager of the facility where the Work is being performed, and the Contractor shall cause the resumption of said service at the earliest practicable time. Approval of the Engineer shall not be necessary in case of an emergency, but the Contractor shall notify the Engineer of any discontinuance and resumption of service.

5.22 CONFLICT OF INTEREST

- A. It is understood and agreed that no gift, loan, or other thing of value has been or shall be given to any employee, agent, or officer of MassCEC in connection with the award or performance of the Contract. Also no employment shall be given to and no renting, leasing, or purchasing of equipment, supplies, or materials shall be arranged or made with or through any employee, agent, or office of MassCEC by the Contractor.
- B. No board member, officer or employee of MassCEC, officer or employee of any independent authority, political subdivision of the Commonwealth of Massachusetts, officer, employee or elected official or any city, county, or town authority within the Commonwealth of Massachusetts, during his/her tenure and for 1 year thereafter shall have any interest, direct or indirect, in this Contract or the proceeds thereof.
- C. No member of or delegate to the Congress of the United States shall be admitted to any share or part of this Contract or to any benefit arising therefrom.

5.23 PERSONAL LIABILITY OF MASSCEC OFFICIALS

- A. In carrying out any of the provisions of the Contract Documents, or in exercising any power or authority granted to them by or within the scope of the Contract, there shall be no liability upon the Executive Director of MassCEC, Engineer, or their authorized representatives, either personally or as officials of MassCEC, it being understood that in all such matters they act solely as agents and representatives of MassCEC.

5.24 NO WAIVER OF LEGAL RIGHTS

- A. MassCEC shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the Work and payment therefor, from showing the true amount and character of the Work provided and materials furnished by the Contractor, nor from showing that any such measurement, estimate, or certificate is untrue or is incorrectly made, nor that the Work or materials do not in fact conform to the Contract. MassCEC shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor or the Contractor's Surety, or both, such damage as it may sustain by reason of the Contractor's failure to comply with the terms of the Contract Documents. Neither the acceptance by MassCEC, or any representative of MassCEC, nor any payment for or acceptance of the whole or any part of the Work, nor any extension of time, nor any possession taken by MassCEC, shall operate as a waiver of any portion of the Contract Documents or of any power herein reserved, or of any right to damages. A waiver of any breach of the

Contract shall not be held to be a waiver of any other or subsequent breach. Any remedy provided in the Contract Documents shall be taken and construed as cumulative, that is, in addition to each and every other remedy herein provided; and MassCEC shall also be entitled as of right to writ of injunction against any breach of any of the provisions of the Contract Documents.

5.25 LABOR, LODGING, BOARD, MAXIMUM HOURS OF EMPLOYMENT, KEEPING OF PAYROLL RECORDS

- A. No laborer, workman, mechanic, foreman, or inspector working within this Commonwealth, in the employ of the Contractor, subcontractor, or other person doing or contracting to do the whole or a part of the Work contemplated by the Contract, shall be required or permitted to work more than 8 hours in any one day or more than 48 hours in any one week, or more than six days in any one week, except in cases of emergency. MassCEC or the Contractor or any subcontractor may employ laborers, workmen, mechanics, foremen, and inspectors for more than 8 hours in any day in the work to be done or under the Contract when, in the opinion of the Director of the Department of Labor and Workforce Development, public necessity so requires.
- B. Upon request of the Engineer or the Massachusetts Department of Labor and Industries, the Contractor shall furnish certified copies of any or all payrolls for the Contract, showing the name, address, and occupational classification of each employee on said Works, and the hours worked by, and the wages paid to each such employee. Such payroll shall also include the rates paid for rented trucks or rental equipment of any kind used on the Work. This requirement shall also apply to the work of any subcontractor, having a subcontract for any of the Work performed on the Contract. Such records shall be kept in such manner as the Director of the Department of Labor and Workforce Development shall prescribe, and shall be open to inspection by MassCEC or the Engineer or any authorized representative of the Department of Labor and Workforce Development at any reasonable time and as often as may be necessary.
- C. The Contractor and all its Subcontractors shall keep true and accurate registers of all mechanics, teamsters, chauffeurs, and laborers employed thereon, showing the name, address, and occupational classification of each employee on the Work, the hours worked by, and the wages paid to each such employee, and shall furnish each week to the Engineer a true statement of the same covering the previous week.
- D. The Contractor and all of its Subcontractors shall comply with Federal Department of Homeland Security Requirements in hiring any and all "Employees" to be employed on the Work who are required to be listed in the certified payroll reports required to be submitted under this Contract. Such compliance shall include, but not be limited to, the faithful completion of the Federal Department of Homeland Security Form I-9 process by the Contractor and all of his/her Subcontractors for each of its/their Employees.

5.26 EQUAL OPPORTUNITY CLAUSE

During the performance of the Contract, the Contractor agrees as follows:

- A. The Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, religion, sex, or national origin. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- B. The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants shall receive consideration for employment, without regard to race, creed, color, religion, sex, or national origin.
- C. The Contractor shall send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- D. To the extent it is applicable to the Work, the Contractor shall comply with all provisions of Executive Order 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- E. If required to do so, the Contractor shall furnish all information and reports required by Executive Order 11246 of September 24, 1965, as amended, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts of investigation to ascertain compliance with such rules, regulations, and orders.
- F. In the event of the Contractor's noncompliance with the nondiscrimination clauses of the Contract Documents or with any of the said rules, regulations, or orders, the Contract may be cancelled, terminated, or suspended in whole or in part; and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, as amended, or by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
- G. The Contractor shall include the portion of the sentence immediately preceding paragraph "A" and the provisions of paragraphs "A" through "G" in every subcontract or purchase order unless exempted by rules, regulations, or orders

of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, as amended, so that such provision shall be binding upon each subcontractor or vendor. The Contractor shall take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

- H. Applicable Massachusetts and Federal Anti-Discrimination Requirements are contained in the Supplementary Conditions.

5.27 RECORDS AND AUDITING

- A. The words defined below shall have the meaning stated whenever they appear in this subsection:

1. "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract.
2. "Contract" means any contract awarded or executed.
3. "Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.
4. "Independent Certified Public Accountant" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of this person's residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.
5. "Audit", when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.
6. "Accountant's Report", when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he/she has made and sets forth his/her opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include as a part thereof a signed statement by the

responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the Contractor.

7. "Management", when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the Contractor.
8. Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

B. The following requirements shall apply: :

1. The Contractor shall make, and keep for at least 6 years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the Contractor, and
2. Until the expiration of 6 years after final payment, the awarding authority, and the office of inspector general shall have the right to examine any books, documents, papers or records of the Contractor or his/her subcontractors that directly pertain to, and involve transactions relating to, the Contractor or his/her subcontractors, and
3. If the agreement is a contract as defined herein, the Contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his/her description the date of the change and reasons therefore, and shall accompany said description with a letter from the Contractor's independent certified public accounting approving or otherwise commenting on the changes, and
4. If the agreement is a contract as defined herein, the Contractor has filed a statement of management on internal accounting controls as set forth in paragraph "C" below prior to the execution of the contract, and
5. If the agreement is a contract as defined herein, the Contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph "D" below.

C. Every Contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the Contractor and its subsidiaries reasonably assures that:

1. Transactions are executed in accordance with management's general and specific authorization.
2. Transactions are recorded as necessary:

- a. To permit preparation of financial statements in conformity with generally accepted accounting principles, and
 - b. To maintain accountability for assets;
3. Access to assets is permitted only in accordance with management's general or specific authorization; and
 4. The recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Every Contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he/she has examined the statement of management on internal accounting controls, and expressing an opinion as to

5. Whether the representation of management in response to this paragraph and paragraph "B" above are consistent with the result of management's evaluation of the system of internal accounting controls; and
 6. Whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.
- D. Contractor shall annually file with the awarding authority during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report.
- E.

Note: The record retention aspects of this subsection apply to all contracts awarded by MassCEC regardless of value. The requirements relative to the internal auditing and management controls, including the filing of an annual statement, apply to contracts awarded with a value greater than \$100,000.

END OF ARTICLE 5

ARTICLE 6 - PROSECUTION AND PROGRESS

6.01 SUBLETTING OR ASSIGNMENT OF CONTRACT

- A. The Contractor shall continuously attend to the faithful prosecution of the Work, shall keep the same under its personal control, and shall not assign by power of attorney or otherwise, or sublet, the Work or any part thereof without the previous written consent of MassCEC and shall not, either legally or equitably, assign any of the money payable under the Contract, or its claim thereto, unless by and with the like consent of MassCEC. The Contractor's failure to obtain the previous written consent of MassCEC shall constitute a waiver of payment for the Work or any part thereof that may be furnished without such previous written consent. The Contractor shall be responsible for the acts and omissions of its subcontractors, if any, and of all persons directly or indirectly employed by the Contractor or its subcontractors in connection with the Work.
- B. The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of the Contractor's right, title, or interest therein, without written consent of MassCEC. If consent is given, the Contractor shall be permitted to sublet a portion thereof, but shall provide with the Contractor's own organization, Work amounting to not less than 30 (thirty) percent of the original total Contract amount. No subcontracts, or transfer of contract, shall in any case release the Contractor from liability under the Contract and bonds.
- C. Consent to sublet any part of the Work shall not be construed to be an approval of the said subcontract or of any of its terms, but shall operate only as an approval of the making of a subcontract between the Contractor and subcontractor.
- D. A subcontractor (vendor, or supplier) will be recognized only in the capacity of an employee or agent of the Contractor, and the subcontractor's removal may be required as in the case of an employee.
- E. As soon as practicable after execution of the Contract, the Contractor shall submit to MassCEC applications for approval of subcontractors for any part of the Work it is proposed to subcontract. In addition to stating the name and address of the proposed subcontractor, each application shall give the items, or any portions thereof, proposed to be sublet by item number and description, and the total value of the Work proposed to be sublet based on the primary Contract Unit Prices where established, or, where not established, on the approved breakdown estimate of a lump sum price required under Article 7.06 and not on the amount of the subcontract. The application shall also show pertinent information in order to enable MassCEC to ascertain whether the proposed subcontractor is reliable and able to perform the work.
- F. The Contractor shall direct the attention of subcontractors to the requirements of:
 - 1. Article 5.04 regarding insurance requirements, the minimum wage rates as determined by the Division of Occupational Safety of the Department of Labor and Workforce Development, and the provisions of Articles 5.25

and 5.26.

2. Chapter 156D of the General Laws of the Commonwealth requires foreign corporations to appoint the Secretary of the Commonwealth as an attorney for service of process, and requires foreign corporations to file certain documents with the Secretary of State which will permit them to do business in Massachusetts.
- G. The Contractor shall direct the attention of subcontractors and all suppliers of material to the requirements of Article 3.09.
- H. By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Engineer. Each subcontract agreement shall preserve and protect the rights of the Owner and Engineer under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with sub-Subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed sub-Subcontractors.

6.02 PROSECUTION OF WORK/CONTRACT TIME/LIQUIDATED DAMAGES

- A. Notice to Proceed/Contract Time. Following the Contractor's execution of the Contract, MassCEC shall issue a written Notice to Proceed with the Work. Alternatively, MassCEC may issue a Partial Notice to Proceed, applicable to a portion of the Work as may be required to accommodate the completion of precedent work performed by others. The Contractor shall commence and continue performance of the Work within seven (7) days of its receipt of MassCEC's written Notice to Proceed with the Work unless otherwise ordered in writing by MassCEC. The Contractor shall achieve Substantial Completion of the Work within 60 days of MassCEC's Notice to Proceed.
- B. Liquidated Damages(NOT USED)

6.03 REMOVAL OR DEMOLITION OF BUILDINGS AND LAND TAKINGS

- A. When the removal or demolition of buildings within the Work limits is done under other and separate contracts, the provisions of Article 3.06 shall apply. MassCEC will not be held liable for any expense to the Contractor due to any delay or interference with his Work, due to removal or demolition of the buildings, or due to any failure to remove or demolish any buildings, or due to the

necessary land takings.

- B. No allowance of any kind will be made except as provided in Article 6.08.

6.04 LIMITATIONS OF OPERATIONS

- A. The Contractor shall conduct the Work at all times in such a manner and in such sequence as will assure the least interference with vehicular, marine, and pedestrian traffic, operations of railroads, and occupant and consumer entrance to and exit from adjacent buildings and property. The Contractor shall have due regard to the location of detours and to the provisions for handling traffic. The Contractor shall not open up work to the prejudice or detriment of work already started.
- B. Public ways shall be maintained clean and clear of spillage from trucks hauling concrete, excavated material, fill, and other construction materials to and from the construction site. Demolition materials, excavation, and other materials hauled to and from the site shall be contained in enclosed vehicles that will prevent spillage onto streets.
 - 1. The Contractor shall make maximum effort to minimize the amount of traffic to and from the site, which may include scheduling of deliveries, maximizing loads per delivery or other measures as may be required to avoid public nuisance.
 - 2. Maintain the existing pedestrian crosswalks and pedestrian sidewalk circulation.
- C. MassCEC reserves the right to limit the prosecution of the Work to such points and in such order as the Engineer may direct.

6.05 CHARACTER OF WORKMEN, METHODS AND EQUIPMENT

- A. The Contractor shall at all times employ sufficient labor and equipment to prosecute the several classes of work to full completion in the manner and time required by the Contract Documents.
- B. The Contractor shall provide all cutting, fitting, and patching of the work that may be required to make its several parts fit together properly, and shall not endanger any work by cutting, excavating, or otherwise altering the work in any part thereof.
- C. The Contractor shall employ only competent persons and subcontractors to do the Work. In addition, the Contractor shall hire persons, who, in the opinion of the Engineer are well qualified to direct, advise or perform certain specialized types of work as described in the Specifications.
- D. All workmen shall have sufficient skill and experience to perform the Work assigned to them. Workmen engaged in special work or skilled work shall have

sufficient experience in such work and in the operations of the equipment required to perform all work properly and satisfactorily.

- E. Any person employed by the Contractor or by any subcontractor who, in the Engineer's judgment, does not perform the work in a proper and skilled manner or is intemperate or disorderly or otherwise unsatisfactory or not employed in accordance with the provisions of Article 5.25, shall at the written request of MassCEC or the Engineer, be removed by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the Work without the approval of the Engineer.
- F. Should the Contractor fail to take the necessary action to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the Work, the Engineer may suspend the Work by written notice until such orders are complied with.
- G. The Contractor shall employ engineers registered in the Commonwealth of Massachusetts, qualified superintendents, foremen, and other supervisory employees to plan all construction operations and to represent the Contractor at all of the several parts of the Work and they shall be present at all times while the Work entrusted to them is in progress and shall be informed thoroughly regarding the Work.
- H. All equipment used on the Work shall be of sufficient size and in such mechanical condition as to meet the requirements of the Work and to produce Work in accordance with the Contract Documents. Equipment used on any portion of the Work shall be such that no injury to city streets, highways, or adjacent property will result from its use.
- I. When methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the Contract, the Contractor may use any methods or equipment that demonstrate to the satisfaction of the Engineer the ability to accomplish the Work in conformity with the requirements of the Contract.
- J. When the Contract Documents specify the means, methods and equipment by which the construction shall be performed, such means, methods and equipment shall be used unless otherwise authorized in writing by the Engineer. If the Contractor desires to use a method or type of equipment other than that specified, such approval should be requested in writing from the Engineer. The request shall include a full description of the means, methods and equipment proposed to be used as an explanation of the reasons for desiring to make the change. If written approval is given, it will be on the condition that the Contractor shall be fully responsible for producing construction work in conformity with the Contract requirements. If after trial use of the substituted methods or equipment, the Engineer determines that the Work produced does not meet Contract Documents, the Contractor shall discontinue the use of the substitute means, methods or equipment and shall complete the remaining construction with the specified methods and equipment. The Contractor shall remove the deficient Work and replace it with Work of specified quality, or take such other corrective action as the Engineer may direct. No changes will be made in basis of payment

for the construction items involved nor in Contract Time as a result of authorizing a change in methods or equipment under these provisions.

- K. In the employment of labor, the Contractor and his/her Subcontractors shall give preference to qualified individuals who are citizens of the United States, Citizens of the Commonwealth of Massachusetts, and Citizens of the City of New Bedford.
- L. All equipment furnished by the Contractor shall be maintained in good condition and shall be subject to the approval of the Engineer prior to and during its use in connection with the Work.
- M. The Contractor shall submit each week to the Engineer, on a form approved by the Engineer, a listing of all equipment (other than small tools) used in or charged to the Work during the previous week, including equipment rented by the Contractor from others, which listing shall include the following information as to each piece of equipment:
 - 1. Identification thereof by the number assigned and by the firm name appearing on the equipment;
 - 2. Designation of the equipment's capacity and weight (and, when deemed applicable by the Engineer, such other information, e.g. size, number of wheels, etc., as may be helpful in defining the equipment's reasonable rental rate);
 - 3. Hours used on the Contract, and hours idle;
 - 4. Hours down for repairs or for maintenance;
 - 5. Whether it was rented from others or is owned by the Contractor or a Subcontractor, and, if rented, from whom.

6.06 DELAY AND SUSPENSION OF WORK

- A. The Engineer has the authority to delay the commencement of the Work and delay or suspend any portion thereof, for such period or periods as it may be deemed necessary, because of conditions beyond the control of MassCEC or the Contractor, for the failure of the Contractor to correct conditions unsafe for the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for causes and conditions considered unsuitable for the prosecution of the Work; for acts of third persons not a party to the Contract; or for any other cause, condition, or reason deemed to be in the public interest.
- B. Upon receipt of written order of the Engineer, the Contractor shall immediately delay the commencement of the Work or delay or suspend any portion thereof in accordance with said order. Work shall not be suspended or delayed without prior written approval or order of the Engineer. The work shall be resumed when conditions warrant or deficiencies have been corrected and the conditions of the Contract satisfied as ordered or approved in writing by the Engineer. The Contractor's attention is also directed to the requirements of Article 5.21 and the

public safety and convenience requirements of Sections of Division 1, General Requirements, that shall govern during any period of temporary or partial suspension of work.

6.07 CLAIM FOR DELAY OR SUSPENSION OF WORK

- A. The Contractor shall have no claim for damages of any kind due to any delay in commencement of the Work or any delay or suspension of any portion thereof, except as hereinafter provided.

- B. If the Contractor is delayed at any time in the progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by area-wide labor disputes not directed expressly at Contractor or any Subcontractor, fire, unusual delay in deliveries, unavoidable casualties, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, and provided that the Contractor has given timely notice of such delay in accordance with the requirements of the Contract Documents, then the Contract Time shall be extended by Change Order or Construction Change Directive for such reasonable time not to exceed the period of delay so caused, net of any delay caused by or attributable to the acts or omissions of the Contractor, any Subcontractor or others for whom they are responsible.

.1 The Contractor acknowledges and agrees that (a) no adjustments to the Contract Time shall be made unless the events described above shall have the effect of actually delaying completion of components of the Work on the critical path indicated in the Schedule and (b) adjustments to any Milestone Dates and/or the Contract Time will be permitted in connection with any such delay only to the extent such delay (i) is not caused, or could not have been avoided, by the Contractor, (ii) could not be limited or avoided by the Contractor's timely notice to the Owner of the delay, (iii) has an impact of at least one (1) day and (iv) has no concurrent or contributing cause for which the Contractor would not be entitled to an extension of the Contract Time.

2. Notwithstanding anything to the contrary, the Contractor shall not be entitled to any extension in the Contract Time for delays in receiving required licenses, permits, inspections or approvals unless the Owner is required to provide or obtain such licenses, permits, inspections or approvals. Any extension of the Contract Time shall be granted only to the extent that the effect of such delay cannot be (or could not have been) avoided or mitigated by the exercise of all reasonable precautions, efforts and measures (including planning, scheduling and rescheduling), whether before or after the occurrence of the cause of delay. No extension of the Contract Times shall be granted for delays affecting portions of the Work that are not critical activities or not on the critical path of the latest Project Schedule.

3. Subject to the following sentence, no extension shall be granted for any delay (a) which, in whole or in part, results from or arises out of the breach or negligence of the Contractor or of those for whom the Contractor is responsible, or (b) for which the Contractor is not entitled to an extension of the Contract

Times hereunder. In the event the Contractor is responsible for a delay that does not entitle it to an extension of the Contract Times but which is concurrent with another delay that entitles the Contractor to an extension thereof (“Concurrent Delay”), the Contractor shall be entitled to an extension of the Contract Times but no increase to the Contract Sum during any such period of concurrency. Any extension of the Contract Times allowed hereunder shall be net of any contingency or “float” time included in the Project Schedule.

4. The Contractor hereby agrees that the Contractor shall have no claim for increase in the Contract Sum or additional direct or indirect costs or damages of any kind against the Owner or the Architect/Engineer on account of any delay in the commencement of the Work and/or any hindrance, delay, loss of productivity, or suspension of any portion of the Work (“Delay”), whether such Delay is caused in whole or in part by the Owner, the Architect/Engineer, or otherwise. The Contractor acknowledges that the Contractor’s sole remedy for any such Delay will be an extension of time as provided in this Section.

.5 Notwithstanding any provision in this Agreement or the Contract Documents to the contrary, Contractor shall not be entitled to any extension of time because of the impacts of COVID-19 pandemic known or knowable as of the Date of Commencement of the Work, seasonal variations in temperature, humidity or precipitation, which conditions shall be wholly at the risk of the Contractor, whether occurring within the time originally scheduled for completion or within the period of any extension granted. There shall be no increase in the Contract Sum on account of any additional costs of operations or conditions resulting therefrom.

C. If the Owner determines that the rate of progress of the Work has been delayed and it appears that the Work or any portion thereof will not progress to completion in accordance with the Project schedule, the Owner shall have the right, but not the obligation, to require the Contractor to take all necessary action to recover or to prevent such delay. In the event that any such delay does not otherwise entitle the Contractor to an extension of the Contract Time, all costs associated with this recovery action shall be borne by the Contractor. In the event that any such delay entitles the Contractor to an extension of the Contract Time, the Owner shall reimburse it for all costs associated with this recovery action upon approval of a valid Claim submitted by the Contractor pursuant to this Agreement.

6.08 DETERMINATION AND EXTENSION OF CONTRACT TIME FOR COMPLETION

A. The Contractor shall complete, entirely, and in an acceptable manner, the Work required under the Contract within the time stated in the Contract Documents, except that the Contract Time for completion shall be adjusted as follows:

1. If the Contract is not awarded as contemplated by the Instructions to Bidders, then the number of days allowed for the completion of the Work

will be computed from the date of mailing of the executed Contract to the Contractor or the date on which the Contractor was directed to commence Work whichever is later. If the Contract specifies a specific calendar date for completion and the Contract is not awarded as contemplated by the Instructions to Bidders, then the Contractor will be entitled to an extension of time equivalent to the number of days elapsed from 60 days (45 days if Federal funds are involved) after the opening of bids up to and including the day of mailing of the executed Contract by MassCEC or the date on which the Contractor was directed to commence Work whichever is later.

2. In case commencement of Work is delayed or any part thereof is delayed or suspended by MassCEC (except for unsuitable weather, winter months, or reasons caused by the fault or neglect of the Contractor), the Contractor will be granted an extension of time in which to complete the Work or any portion of the Work required under the Contract equivalent to the duration of the delay less a reasonable period of time within which the Contractor could have done necessary preliminary work.
3. When delay occurs due to reasonable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to "Acts of God," war, whether or not declared, civil war, insurrection, rebellion or revolution, or to any act or condition incident to any of the foregoing, acts of the Government, acts of the state or any political subdivision thereof, acts of other contracting parties over whose acts the Contractor has no control, fires, floods, epidemics, abnormal tides, (not including spring tides), severe coastal storms accompanied by high winds or abnormal tides, abnormal time of winter freezing or spring thawing, use of beaches and recreational facilities for recreational purposes during the summer season, strikes except those caused by improper acts or omissions of the Contractor, extraordinary delays in delivery of materials caused by strikes, lockouts, wrecks, freight embargoes, the time for completion of the Work shall be extended as determined by the Engineer to be equitable.
4. An "Act of God" as used in this Article is understood to imply an earthquake, flood, cyclone, or other cataclysmic phenomenon of nature beyond the power of the Contractor to foresee or make preparation in defense of. A rain, windstorm or other natural phenomenon of normal intensity, based on United States Weather Bureau reports, for the particular locality and for the particular season of the year in which the Work is being prosecuted, shall not be construed as an "Act of God" and no extension of time will be granted for delays resulting therefrom. Within the scope of acts of the Government, consideration will be given to properly documented evidence that the Contractor has been delayed in obtaining any material or class of labor because of any assignment of preference ratings by the Federal Government or its agencies to other contracts.
5. In case the Work is delayed by public or private utility owners or municipal departments, see Article 3.05.

6. Each Extra Work Order or Change Order as issued will include a statement of additional time, if any, that is agreed upon by the Contractor and the Engineer required for the completion of the Contract by reason of this Extra Work Order or Change Order, and no other time allowance due to the performance of the Work covered by such Extra Work Order or Change Order will be allowed.
 7. Contractor shall not be entitled to any extension of time because of the impacts of the COVID-19 pandemic.
- B. An extension of time will not be granted for any delay or any suspension of the Work due to the fault of the Contractor, nor if a written request for an extension of time on account of delay due to any of the causes described in this Article 6.08 is not filed within fifteen (15) days of the date of the commencement of the delay nor if the request is based on any claim that the Contract period as originally established was inadequate.
- C. The probable slow-down or curtailment of Work during inclement weather and winter months has been taken into consideration in determining the total time required to complete the Contract; hence no extension of time will be allowed due to this reason.
1. No extension of time will be allowed for winter conditions and weather conditions, except as described in Article 6.08.A.3.

6.09 FAILURE TO COMPLETE WORK ON TIME

- A. Permitting the Contractor to continue and finish the Work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, shall not operate as a waiver on the part of MassCEC of any of its rights under the Contract.

6.10 TERMINATION OF CONTRACT

- A. Should Contractor at any time: (i) fail to supply the labor, materials, equipment, supervision and other things required of it in sufficient quantity to perform the Work with the skill, conformity, promptness, and diligence required hereunder, (ii) cause stoppage or unreasonable delay of or interference with the Work, (iii) become insolvent, or (iv) materially fail in the performance or observance of any of the covenants, conditions, or other terms of this Contract, then in any such event, each of which shall constitute a default hereunder by the Contractor, MassCEC shall, after giving Contractor notice of default and 24 hours within which to cure, have the right to remedy the default by terminating the Contractor and/or completing the Work or any portion of the Work. Contractor shall be liable for all damages to MassCEC caused by such default.
- B. If a termination by MassCEC for default under Section 6.10A is determined to be

unjustified then such a termination shall be deemed a termination for convenience pursuant to Section 6.11.

- C. In the event of termination, whether of this Contract or of an Assignment, the Contractor shall promptly deliver to the Owner all documents, work papers, studies, calculations, computer programs, data, drawings, plans, specifications and other tangible work product or materials pertaining to the Work performed under this Contract or Assignment, as applicable to the time of termination, and shall assist the Owner in the orderly transition of the work. Thereupon the Owner shall pay to the Contractor any unpaid and undisputed balance owing for Work rendered prior to the date of termination. Any termination of this Contract shall not affect or impair the right of the Owner to recover damages occasioned by any default of the Contractor or to set off such damages against amounts otherwise owed to the Contractor
- D. If the Contractor shall be adjudged bankrupt, or make a general assignment for the benefit of creditors, or if a receiver shall be appointed of the Contractor's property, or if the work to be done under the Contract shall be abandoned, or if the Contract or any part thereof shall be sublet without the previous written consent of MassCEC, or if the Contract or any claim thereunder shall be assigned by the Contractor otherwise than as herein specified, or at any time the Engineer certifies in writing to MassCEC that the Work, or any part thereof, is unnecessarily or unreasonably delayed, or that the Contractor has violated any of the provisions of the Contract, MassCEC may, by written notice, instruct the Contractor to discontinue the Work, or any part thereof, and thereupon the Contractor shall discontinue such Work or such part thereof, as MassCEC may designate, and MassCEC will require the Surety or Sureties to complete the Contract.
- E.. If the Engineer determines that the rate of progress as reflected by the Contractor's CPM schedule submitted and approved in accordance with the requirements specified in the Sections of Division 1, General Requirements, is not satisfactory, MassCEC, instead of notifying the Contractor to discontinue the Work or any part thereof, may notify the Contractor from time to time to increase the force, equipment, and plant, or any of them, employed on the whole or any part of the Work, stating the amount of increase required; and unless the Contractor shall, within five (5) days after such notice, increase such force, equipment, and plant to the extent required therein, and maintain and employ the same from day to day until the completion of the Work or such part thereof or until the conditions as to the rate of progress shall, in the Engineer's judgment, be fulfilled; or unless the Contractor submits and receives approval of a revised CPM indicating the Work being completed on time, MassCEC may employ and direct the labors of such additional force, equipment, and plant as may, in the Engineer's judgment, be necessary to insure the completion of the Work or such part thereof within the time specified, or at the earliest possible date thereafter, and charge the expense thereof to the Contractor. Neither the notice from MassCEC to the Contractor, to increase the force, equipment, or plant, nor the employment of additional force, equipment, or plant by MassCEC shall be held to prevent a subsequent notice from MassCEC to the Contractor to discontinue Work under the provisions of the preceding portion of this Article.

- F. MassCEC may exercise the rights under this paragraph to rectify adverse conditions described in Article 3.10 and Article 4.04, and/or notify the Contractor's surety to take the necessary appropriate action to remedy the situation.
- G. All expenses incurred by MassCEC in exercising its rights under this Article may be deducted from any amounts then due or to become due the Contractor under the Contract Documents. If MassCEC's expenses are less than the sum which would have been payable under the Contract Documents, the Contractor will be entitled to receive the difference; and in case such expenses shall exceed the said sum, the Contractor shall pay the amount of the excess to MassCEC upon completion of the Work without further demand being made therefor.

6.11 TERMINATION FOR CONVENIENCE

- A. If MassCEC determines that it is in the public interest to do so, MassCEC may notify the Contractor to discontinue all work, or any part thereof. Such notice shall be given to the Contractor in writing and thereupon the Contractor shall discontinue such work, or such part thereof, as MassCEC may designate.
- B. If MassCEC notifies the Contractor to discontinue all work, or any part thereof, MassCEC shall pay and the Contractor shall accept, as full payment for all work done and materials provided, the following sums:
 - 1. For all completed items of work that the Contract provides are payable by unit prices.
 - a. The original Contract Unit Prices.
 - 2. For all work on partially completed items.
 - a. A sum agreed to by the Contractor and the Engineer; or
 - b. The sum of items i through vi.
 - i. The actual cost for direct labor, materials (less salvage value, if any) and use of equipment plus 10 percent of this total for overhead; and
 - ii. The actual cost for Worker's Compensation and Employer's Liability Insurance, Health, Welfare and Pension Benefits, Social Security Deduction, and Employment Security Benefits; and
 - iii. Six percent of the total of i and ii for profit; and
 - iv. The estimated proportionate cost of surety bonds; and
 - v. The actual cost to the Contractor for work performed by a subcontractor plus 10 percent of such cost.

- vi. No allowance will be made for general superintendence and the use of small tools and manual equipment.
3. For costs of settlement as:
- a. Reasonable and necessary accounting, legal, clerical and other costs of work discontinuance; and reasonable and necessary storage, transportation and other costs incurred for the preservation, protection or disposition of the discontinued work.
 - b. When requested by MassCEC, the Contractor shall furnish itemized statements of the cost of the work performed and shall give MassCEC access to all accounts, bills and vouchers relating thereto and unless the Contractor, when requested, shall furnish such itemized statements and access to all accounts, bills and vouchers, he shall not be entitled to payment for the work for which such information is sought by MassCEC.
 - c. The Contractor shall not be paid and the Contractor shall not have any claims for loss of anticipated profits (on this or any other Project), for loss of expected reimbursement or for any increased expenses resulting directly or indirectly from the discontinuance of any or all work or from unbalanced allocations, among the Contract items, of overhead expense on the part of the Bidder and subsequent loss of expected reimbursement therefore or for any other cause.
 - d. The Contractor shall incorporate the provisions of this Article and provisions in its Contracts with each of its subcontractors.

6.12 MUTUAL WAIVER OF CONSEQUENTIAL DAMAGES

- A. MassCEC and the Contractor waive claims against each other for consequential damages arising out of or relating to the performance of the Work. This mutual waiver includes damages incurred by MassCEC for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons, and damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with the Contract Documents. Nothing contained in this Paragraph 6.12A shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

END OF ARTICLE 6

ARTICLE 7 - MEASUREMENT AND PAYMENT

7.01 MEASUREMENT OF QUANTITIES

- A. Quantities of various items of work that are payable as unit prices pursuant to the Contract Documents shall be determined, for purposes of payment, by the Engineer and by the Contractor. Measurements will be made according to United States standard units of measurement.
- B. Upon completion of the Work and before final payment is made the Engineer will make final measurements to determine quantities of various items of work performed as the basis for final settlement. Measurements will be made according to United States standard units of measurement.
- C. Method of measurement and computations to be used in determination of quantities of material furnished and of work provided under the Contract will be those methods generally recognized as conforming to good engineering practice.
- D. The Contractor shall provide assistance to the Engineer, as requested by the Engineer, for the purpose of the measurement of quantities, at no additional cost to MassCEC.
- E. Where Work done under modification to the Contract is to be paid for by units of length, area, or volume, only the net amount of work actually done, as it shall appear in the finished Work, and measured as hereinafter specified, shall be paid for, local customs to the contrary notwithstanding.
- F. All materials, which are specified for measurement by weight, shall be weighed on standard scales furnished by and at the expense of the Contractor. Such scales shall be sealed at the expense of the Contractor as often as is necessary to insure their accuracy. A sworn weigher as provided under Section 85, Chapter 41 of the General Laws of the Commonwealth of Massachusetts shall weigh all materials required to be weighed as above provided. If materials are shipped by rail or truck, the car weights or quarry weights may be accepted, but scales shall be used as above, if so directed.
- G. This Section shall not apply to items of Work performed pursuant to a lump sum bid price that was derived from estimated quantities of such items indicated in the Bid Form for bid comparison purposes only, as set forth in the Bid Form.

7.02 SCOPE OF PAYMENTS

- A. Owner shall pay to Contractor for the satisfactory performance and completion of the Work and all the duties, obligations and responsibilities of Contractor under this Contract, the compensation as set forth above as the Contract Price which shall be deemed to include all Contractor's costs, overhead and profit for the performance of the Work. The Contract Price shall be full compensation for all Work provided by Contractor and is conclusively presumed to cover all costs, expenses or damages arising out of the nature of the Work.
- B. For all lump sum payment items, the Contract Price includes payment for all

actual quantities of materials encountered by Contractor on the Project regardless of whether those quantities vary substantially from the estimated quantities used in the RFP/Bid Form and Contractor's Proposal, which were for bid comparison purposes only. Contractor is presumed to have accounted for the possibility and potential magnitude of any such quantity variation in preparing its Proposal, and the Contract Price for lump sum items of work calculated based on estimated unit quantities shall not be changed or modified on account thereof.

- C. **No Compensation for Cost Escalation.** Notwithstanding anything in this Agreement or the Contract Documents to the contrary, Contractor shall have no right to additional compensation for labor or material escalation or costs related to market volatility, the potential for which is deemed to have been fully accounted for in Contractor's Proposal and the agreed Contract Price set forth above in this Agreement. Costs for labor or material escalation (including but not limited to building materials, products and supplies required to be furnished under this Agreement, and equipment rental costs), whether due to the COVID-19 Pandemic, unusual market forces, or any other cause, shall be at the risk of the Contractor. Contractor shall include a provision to the same effect in all agreements with its subcontractors.
- D. Prior to submission of the first Progress Payment, the Contractor shall deliver to the Owner, for review and approval, a detailed breakdown of the Contract Price showing a Schedule of Values for the various parts of the Work, including any reimbursable expenses agreed to by the Owner. Once accepted, this Schedule of Values will be used as a basis for payment of the Contractor's monthly requisition. The Owner will accept the Schedule of Values if it is prepared with sufficient detail to serve as the basis for progress payments and is supported by such data necessary to substantiate its accuracy as Owner may reasonably require.
- E. Payment of any current estimate or any retainage percentage shall in no way constitute an acknowledgement of the acceptance of the Work or in no way or degree prejudice or affect the obligation of the Contractor, at his own cost and expense, to repair, correct, renew or replace any defects and imperfections in the construction of, or in the strength of, or quality of materials used in or about the construction of the Work under Contract and its appurtenances, as well as damages due or attributable to such defects; which defects, imperfections or damages shall have been discovered on or before the expiration of the guaranty period specified in Article 2.08. The Engineer shall be the sole judge of such defects, imperfections, or damages and the Contractor shall be responsible for the cost to correct the same. Also, see Article 5.24.
- F.. If the requirements of the Measurement and Payment Part or Article in the Contract Specifications relating to any price in the Schedule of Bid Items requires that said price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the Contract Specifications.
- G. Except as specifically provided otherwise, no separate payment will be made for

any work in fulfillment of the requirements specified in the Sections of Division 1, General Requirements, and all costs thereof shall be included in the various prices bid or the pay items shown in the Schedule of Bid Items.

7.03 UNIT PRICE ITEMS – COMPENSATION FOR ALTERED QUANTITIES

- A. When the accepted quantities of Work (that is payable by Unit Price and not on a lump sum basis pursuant to the Contract Documents) vary from the estimated quantities set forth in the Contract, and whether or not there have been any changes to the Contract Documents, the Contractor shall accept as payment in full, so far as Contract items are concern, payment at the original Unit Price for the accepted quantities of work done. No allowance or other adjustment except as provided in Article 2.05 shall be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the Contract items of overhead expense on the part of the Contractor and subsequent loss of expected reimbursements therefor or from any other cause except the said payment for the actual quantity done at the original Contract Unit Price.
- B. Alteration of the Contract Documents or of the character of work involving Extra Work Orders as provided in Article 2.02 and 2.03 will be paid for at the prices for such items set forth therein. If prices cannot be agreed upon, the Contractor shall proceed with the performance of the work on a force account basis in accordance with the Article 7.04.B.
- C. This section shall not apply to items of work that are payable on a lump sum basis, whether or not their bid price was calculated based on estimated quantities listed in the Bid Form for bid comparison purposes.

7.04 PAYMENT FOR CHANGED OR EXTRA WORK

- A. Payment for work for which there is a Contract Unit Price:
 - 1. Where the Contract provides that the work is payable by specified Unit Price and the Engineer orders Extra Work for work of the same kind as other work contained in the Contract and it is provided under similar physical conditions, the Contractor shall accept full and final payment at the Contract Unit Prices for the accepted quantities of Extra Work done.
 - 2. No allowance will be made for any increased expenses or any damages incurred by the Contractor on account of the changes in quantities except as may otherwise be set forth in the Contract Documents.
- B. Work performed will be paid for based on expended labor, equipment, and materials plus overhead and profit, neither of which are to exceed the amounts specified in paragraph C below.
- C. Work performed will be paid for in an amount equal to the following:
 - 1. Unless Owner and Contractor agree upon unit prices or a lump sum

change in the Contract Price, the Contract Price shall be adjusted by the net amount of any direct savings and actual direct additional costs plus overhead and profit to Contractor of no more than a total of 10% as described in Section 2.02(D). If the changes, in the opinion of the Engineer, are of sufficient magnitude as to require additional time to complete the Contract, such time adjustment may be made in accordance with the provisions of Article 6.08.

2. For Extra Work or Change Orders where the work is self-performed by Contractor, it shall be entitled to a total mark-up for overhead and profit of 10% of its actual cost for the performance of such extra work. For extra work or Change Order work that is not self-performed by Contractor, it shall be entitled to a total mark-up for overhead and profit of 5% of the actual cost for the performance of such Change Orders. Subcontractors shall be entitled to a mark-up on Change Orders of 10% for overhead and profit for self-performed work and 5% for non- self-performed work. In no circumstances shall the mark-ups by the Contractor and all of the Subcontractors and vendors exceed 20% in the aggregate.
3. No allowance shall be made for general superintendence and the use of small tools, incidental items and manual equipment.

The Contractor shall only be entitled to additional compensation for changed work if the Owner has ordered such changes in writing prior to the commencement of the changed work by the Contractor.

Requests for a Change Order shall be made on the Change Order Request Form agreed to by the parties and attached hereto in Exhibit B (if any). Likewise, agreed upon changes shall be reflected on Change Order Forms agreed to by the parties and attached hereto in Exhibit B (if any).

The Contractor shall furnish such information as to the cost of such Extra or changed work as the Engineer may request. The Contractor shall also, upon request by the Engineer, give the Engineer access to and copies of accounts, bills and vouchers relating to such work (all of which shall be kept in a manner satisfactory to the Engineer), and if the Contractor shall not do so, it shall not be entitled to payment for any items of such work concerning which the Engineer's request has not been granted.

Prior to the commencement of such work, the Contractor shall submit to the Engineer a written certificate showing the rates or percentages of all assessments against wages paid by the Contractor, including Federal Social Security and state unemployment compensation assessments, insurance, health and welfare payments and other assessments which the Contractor actually pays as an employer pursuant to contractual obligation upon the basis of such wages. The determination of the Engineer shall be final upon all questions as to the amount or value of extra work.

7.05 OMITTED ITEMS

- A. Should any item or items of the Work be determined unnecessary for the proper completion of the Work, MassCEC may, upon written notice to the Contractor, eliminate such item or items from the Contract and allowance will not be made for such items so eliminated in making final payment to the Contractor, except for such actual Work as shall be done and materials purchased, including the cost of moving in and out the special equipment necessary for Work on the eliminated item or items, prior to notification of the elimination of such item or items. The amount of the credit to MassCEC shall be determined in a similar manner as described in Article 7.04.

7.06 PARTIAL PAYMENTS

- A. Monthly, the Engineer will make an estimate in writing of the total amount of the work done to the date of such estimate and the value thereof, including advance payments on products/materials stored or on hand but not yet incorporated in the Work which may be made as provided in Article 7.07. MassCEC will retain the following from these payments:
 - 1. Five percent of the approved amount of the payment to secure satisfactory performance of the Contract Work.
 - 2. An amount sufficient to cover claims it has against the Contractor.
 - 3. An amount sufficient to cover all demands for direct payment filed by subcontractors.
 - 4. Five percent of the value of all items to be planted in the ground.

MassCEC will pay monthly to the Contractor while carrying on the Work the balance not retained as hereinbefore provided. No such estimates or payment shall be required to be made when, in the Engineer's judgement, the Work is not proceeding in accordance with the provisions of the Contract, or when in the Engineer's judgement the total value of the Work done since the last estimate amounts to less than \$500.00.

- B. MassCEC may, at its option, after 50 percent of the Work has been completed and (1) if the Work is proceeding in accordance with the approved CPM Construction schedule submitted under the requirements specified in the Sections of Division 1, General Requirements, and (2) is being performed in accordance with the Contract Documents, not retain the 5 percent to secure satisfactory performance of the Contract Work as provided in Article 7.06.A on any subsequent payments. However, if MassCEC does not retain these monies, it will reimpose this 5 percent retainage on all subsequent payments should the Contractor fail to maintain progress in accordance with the Contract and approved schedule or fail to execute the Work as required by the Contract Documents. Retainages withheld under Articles 7.06.A.2 and 7.06.A.3 will remain in effect throughout the Contract Work period as detailed therein. Retainage withheld under Article 7.06.A.4 for plantings will be retained until Final Acceptance (see Article 7.09).

- C. Partial payments will be made on lump sum contracts and on lump sum items of a contract if the Contractor requests partial payment of such an item, in accordance with a schedule of the quantities and unit prices for the major components of a lump sum contract or of the lump sum items of a contract to be submitted by the Contractor and approved by the Engineer prior to making partial payments for such contract or for such items.
 - 1. For lump sum contracts, this schedule of major components shall approximate the activities shown on the CPM Construction Plan required under the Sections of Division 1, General Requirements.
 - 2. Each component part shall be considered as including all its concomitant parts so that the total cost listed for the components is the contract cost for the item.
 - 3. Approval of the schedule by the Engineer shall not be considered as a guarantee to the Contractor that the quantities shown on the schedule are the approximate quantities actually included in the lump sum item.
 - 4. The schedule is only for the purpose of estimating partial payments and it shall not affect the Contract terms in any way.
- D. The Contractor shall certify in writing by means of a Certification of Work that the work for which payment is included in the estimate in question has in fact been done. The Certification of Work form shall be developed by the Contractor and approved by the Engineer. The Certification of Work form shall be completed and signed by an authorized representative of the Contractor and it shall be submitted to MassCEC with each payment request.
- E. Whenever the Work is substantially complete, MassCEC may, if it considers the amount retained to be in excess of the amount adequate for its protection, at its discretion, release to the Contractor all or a portion of such excess amount and may cause the Contractor to be paid such portion of the retainage as it deems prudent.
- F. When the first partial payment estimate is prepared, the Contractor shall submit to the Engineer a cash drawdown forecast indicating the estimated amount of each partial payment by month, projected through completion of the project. The Contractor shall, with each succeeding partial payment estimate, submit updated cash drawdown forecasts to the Engineer. The forecast is for the purpose of estimating cash requirements.
- G. The Contractor shall develop a Statement of Payment to Subcontractor Form and the Engineer shall approve the form. The Statement of Payment to Subcontractor Form shall be completed and signed by an authorized representative of the Contractor and it shall be submitted to MassCEC with each payment request.

7.07 PAYMENT FOR PRODUCTS/MATERIALS STORED ON OR OFF SITE

- A. When requested in writing by the Contractor allowance may be made on partial payments for certain products/materials stored at the Work site, but not incorporated in the Work, subject to the following terms and conditions:
1. Upon presentation to the Engineer by the Contractor of copies of paid invoices, advance payments may be made for acceptable reinforcing steel, structural steel, piles, pipe, guard rail, precast concrete items, costly machinery items and other similar non-perishable products/materials purchased expressly for the Work and delivered to and stored in the approved storage places at the site, but which products/materials are not considered as installed, erected or complete in place under the terms of the Contract and for which partial payment would not otherwise be made until such items were installed, erected or complete in place.
 2. The amount to be included in the estimate will be the value of the products/materials as shown on the certified copies of paid invoices including transportation and handling costs. However, the Engineer may limit payment for such products/materials when payment is based upon a standard unit of measure. When Contract payments are made on the basis of estimated quantities, payment for products/materials stored or on hand may be limited to an amount not to exceed the value of ninety percent (90%) of the estimated quantity.
 3. Before any advance on products/materials is made as hereinbefore provided, MassCEC will require, as security for the incorporation of the products/materials in the Work, documents from the Contractor transferring to MassCEC the absolute legal title to such products/materials.
 4. However, the transfer of title and the partial payment for such products/materials shall not in itself constitute acceptance of same nor void the right to reject products/materials subsequently found unsatisfactory as provided in Article 4.04, nor in any way relieve the Contractor of his responsibility for satisfactorily furnishing and installing/placing the products/materials in the Work in accordance with the terms of the Contract.
 5. In the event any of such products/materials subsequently becomes lost, stolen, impaired or damaged the monetary value of the lost, stolen, impaired or damaged products/materials as may have been paid for in a current estimate will be deducted from the next estimate and no further payment will be made therefor until such products/materials have been satisfactorily replaced with products/materials conforming to the Contract Documents.
 6. If it is impossible due to lack of area on the site or other valid reason, the Contractor may request in writing permission from the Engineer to store products/materials off the site and still have the products/materials paid for as products/materials on hand and the Engineer may approve payment. However, no advance payment for products/materials stored off the site will be made until written approval of the Engineer has been

given. This request will state the reason(s) for the request, location of the storage area(s), and shall also state the methods that will be employed to insure that the products/materials are properly protected and the products/materials will be used on the Contract that the request is made for. The amount to be included in the estimate for products/materials stored off site will be limited to eighty percent (80%) of the value of the products/materials as shown by the certified copies of paid invoices including transportation and handling costs.

7. In the case of property not owned or controlled by MassCEC, the Contractor shall also lease, or procure a lease, free from encumbrances to MassCEC, such lease to be in a form approved by MassCEC and to contain provisions for the protection and indemnification by the Contractor of MassCEC, its employees and agents, against all claims by reason of such lease or by reason of anything done or permitted in or upon the leased site(s). The Contractor shall also take such steps as MassCEC may require for the purpose of security and assuring to MassCEC the control of such products/materials, particularly the right to enter upon the property, take possession of such products/materials and use the same.
 - a. No advance payment for products/materials stored or on hand, but not incorporated in the Work, will be made in an estimate when the value therefore amounts to less than \$10,000 per Contract Bid Item and represents the value of at least fifty percent (50%) of the estimated quantity involved as shown on the Schedule of Bid Items or as determined by the Engineer.
 - b. Deductions at rates and in amounts that are equal to the advance payments will be made under the appropriate Contract Pay Items in estimates as the products/materials are incorporated in the Work.

7.08 SEMI-FINAL ESTIMATE

- A. A semi-final estimate may be made, at the discretion of MassCEC, under the following conditions:
 1. If, after final inspection has been made, there are any payments or Extra Work items that are still in dispute between the Contractor and MassCEC, either as to the quantity or value of Work provided thereunder, such items or claims may be excluded from the final estimate, and payment for such disputed items may be deferred until such time as agreement has been reached between the Contractor and MassCEC or until such claim has been adjudicated. In such case, a semi-final estimate shall be prepared within a period of sixty-five (65) days after Substantial Completion of the Work covering the value of Work provided and retained percentage on items of the Contract that are not in dispute and with disputed items or claims excluded but subject to deduction and retention of a sum sufficient to satisfy any and all outstanding claims or liens that have been duly filed by subcontractors and materialmen against the Contractor, or to cover amount of such claims or liens that may have been paid by MassCEC

directly to others for the Contractor's account , and subject to deduction and retention from such payment any other amounts to be deducted and retained in accordance with the terms of the Contract Documents.

2. In the event the Work has been Substantially Completed and the Work has been opened for operation or occupancy as directed in writing by MassCEC, but final acceptance of the Work is subject to delay because of minor uncompleted items which do not impair the usefulness of the Contract, a semi-final estimate shall also be prepared within a like period of sixty-five (65) days after the Work has been Substantially Completed and opened for operation or occupancy. Such semi-final estimate shall include an estimate of the value of all Work provided in accordance with the terms of the Contract Documents, including the amount of retained percentage withheld by MassCEC from previous periodic payments, but excluding (a) the same deductions and retainage sufficient to cover subcontractors' and materialmens' claims and other amounts to be deducted and retained in accordance with the terms of the Contract Documents as provided by the first paragraph of this Article; (b) an amount equal to the estimated value of the work remaining to be performed; and (c) any items or claims for Extra Work, or parts thereof, that may be in dispute; and payment for such excluded items or portions thereof, may be deferred until such remaining Work has been satisfactorily completed, or in the case of disputed items or claims until such time as agreement has been reached thereon or such claims have been adjudicated.

7.09 FINAL ACCEPTANCE AND FINAL PAYMENT

- A. When all of the Work covered by the Contract has been completed including those items of Work set forth on the Punch List (see Article 3.11), MassCEC will inform the Contractor in writing of the date of such final acceptance.
- B. The Engineer shall, as soon as practicable after the satisfactory completion of the Work including the Punch List, make a final estimate of the amount of Work done thereunder and the value of such Work. Within sixty-five (65) days from and after the date the Work has been accepted by the Engineer, MassCEC will forward to the Contractor a copy of the final estimate or semi-final estimate, which will include an agreement form for the Contractor's acceptance. This estimate will be the balance due the Contractor minus a one percent retention for final completion, amounts to cover any outstanding claims, any amounts estimated to cover incomplete or unsatisfactory work, and the sum of all demands for direct payment made by subcontractors. After such acceptance has been filed with the Engineer, payments of the estimate will be made, so found to be due thereunder after deducting therefrom all previous payments and all amounts to be kept and all amounts to be retained under the provisions of the Contract. All prior partial estimates and payments will be subject to correction in the final estimate and payment. If within six (6) months from the date the final estimate is forwarded to the Contractor, the Contractor has not filed a valid, as determined by the Engineer, written reason(s) for not accepting the final estimate, the final estimate will be considered acceptable to the Contractor and payment of final estimate made.

- C. Acceptance by the Contractor of the final payment shall operate as and will be a release to MassCEC and every member, agent and employee thereof, from all claims and liability to the Contractor for anything done or furnished for, or relating to, the Work, or for any act or neglect of MassCEC or of any person relating to or affecting the Work, except the claim against MassCEC for the remainder if any there be, of the amounts kept or retained to satisfy liens or claims pending against the Contractor.

END OF ARTICLE 7

ARTICLE 8 – DISPUTE RESOLUTION

8.01 CHOICE OF LAW; REFERRAL OF DISPUTES TO SENIOR MANAGEMENT

A.

A. This Agreement is to be construed in accordance with the laws of the State of Massachusetts without regard to its conflict of interest rules. This Agreement is intended to incorporate by reference all applicable provisions of law which by law are required to be incorporated into this Agreement.

B. The Owner and the Contractor agree that as a condition precedent to either party's right to demand dispute resolution in accordance with Section 17. E., first, for all disputes under this Agreement, responsible persons selected by each party will meet together and use good faith efforts (including exchange of all necessary documentation) to resolve the dispute(s) between them within ten (10) days of the written request of either party ("Senior Management Negotiations").

8.02 MEDIATION

A. The parties further agree that, any claim, dispute or other matter arising out of or related to this Agreement, subject to but not resolved by Senior Management Negotiations, shall be subject to non-binding mediation, at the sole discretion of Owner as described in Section 17.D.

B. Owner and Contractor further agree that, as a condition precedent to instituting legal action against each other, and where Owner in its sole discretion agrees to proceed with non-binding mediation pursuant to Section 17.C., they shall participate in such mediation in Boston, Massachusetts. The party filing the mediation demand shall be responsible for all costs and fees of the mediation. This mediation condition precedent to litigation provision may be waived in the sole discretion of Owner.

8.03 VENUE; WAIVER OF JURY TRIAL

All disputes arising out of or in connection with this Agreement shall be brought in the Massachusetts Superior Court in Bristol County, Massachusetts, or in federal court in Boston, Massachusetts. Owner and Contractor agree to expressly waive their rights to a trial by jury regarding any disputes arising out of this Agreement as the disputes would, in most instances, be too complex for presentation to a jury and would be best served by a jury-waived proceeding.

8.04 WORK UNDER PROTEST

Pending final resolution of any dispute between the parties, including disputes over the scope or payment for proposed but unapproved Change Orders or Extra Work, the Contractor shall proceed diligently with the performance and completion of the Work (including Extra Work directed by the Owner) and the Owner shall continue to make payment of undisputed amounts in accordance with the provisions of this Agreement. Contractor's failure to comply with this "work under protest" requirement shall constitute a material breach of this Agreement.

ARTICLE 9 ENTIRE AGREEMENT; PRIORITY OF CONTRACT DOCUMENTS

9.01 This Agreement, including all Exhibits, represents the entire and integrated agreement between the Owner and the Contractor with respect to the subject matter hereof and supersedes all prior negotiations, representations, proposals or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both the Owner and Contractor. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor.

9.02 In the event of conflicts or discrepancies among the provisions of this Agreement and any other Contract Documents, the documents shall be interpreted on the basis of the following priorities: (1) Executed Change Orders/Modifications - later date to take precedence; (2) Addenda (if any) – later date to take precedence; (3) Supplemental Conditions, if any; (4) General Conditions; (5) Plans and Specifications; (6) Instructions to Bidders; (7) Contractor’s Proposal; (8) Request for Proposals.

END OF SECTION

EXHIBIT B

CHANGE ORDER FORM
CHANGE ORDER

CHANGE ORDER NO. _____
DATE: _____

The Contract shall change as described below (include reference to or attach specific exhibits necessary to describe the agreed-upon Change):

CONTRACT PRICE. The aggregate of the change in Contract Price by this Change Order is a net [ADDITION/DELETION] of \$ _____:

The original Contract Price was	\$ _____
The net change by previously approved Change Orders	\$ _____
The Contract Sum prior to this Change Order	\$ _____
The Contract Sum will be [increased/decreased] by this Change Order in the amount of	\$ _____
The new Contract Price including this Change Order will be	\$ _____

Breakdown of Change Order:

Materials	\$ _____
Labor	\$ _____
Equipment	\$ _____
Administration	\$ _____
Subtotal	\$ _____
Overhead and Profit	\$ _____
TOTAL	\$ _____

CONTRACT TIME. The Contract Time for completion will be [increased/decreased] by [X] days as follows:

New Date for Substantial Completion: _____
New Date for Final Completion: _____

It is hereby mutually agreed upon the execution of this agreement that the sums and change in Contract Time provided herein are complete, whole, fair and reasonable, and that the Contractor hereby releases the Owner from any additional claims, demands, liabilities or added compensation or time arising from, growing out of or in any way connected with the work, as described herein, of this Change Order. All other terms and conditions or provisions of this contract shall remain in full force and effect and shall be

binding on the parties of this contract.

APPROVED by **OWNER**

RECOMMENDED by the **ENGINEER**

By:
Title:

By:
Title:

Date:

Date:

AGREED by the **CONTRACTOR:**

By:
Title:

Date:

SECTION 00800

SUPPLEMENTARY CONDITIONS

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SUPPLEMENTARY CONDITIONS

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SUPPLEMENTARY CONDITIONS

GENERAL

- A. Further supplementing the General Conditions, the following Supplementary Conditions will apply.
- B. References to Article Numbers in the following Supplementary Conditions unless otherwise stated are to the General Conditions. In case of conflict between these Supplementary Conditions and the General Conditions, these Supplementary Conditions will take precedence and shall govern.
- C. The Supplementary Conditions are included herein to augment the General Conditions, with additional requirements/information that is applicable to the Work.
- D. The enforcement of the requirements of any of the following Supplementary Conditions shall not be construed as waiving any of the rights of MassCEC contained elsewhere in the Contract Documents.

ARTICLE 1 - DEFINITION OF TERMS

1.01 DEFINITION OF TERMS

- A. Add the following terms to the list of definitions:
 - 26.a. Design Engineer of the New Bedford Marine Commerce Terminal Drainage and Grading Maintenance Project is John McAllister Marine Engineering, LLC and its subcontractors: Civil & Environmental Consultants, Inc.
 - 26.b. Consultant: A Consultant has been retained by MassCEC as engineering consultant during the construction of New Bedford Marine Commerce Terminal Drainage and Grading Maintenance Project. The Consultant is [INSERT NAME AND ADDRESS]and its subcontractors: [INSERT NAME AND ADDRESS].
 - 26.c. Owner's Representative: The Massachusetts Clean Energy Technology Center designee acting on behalf of MassCEC as owner representative for New Bedford Marine Commerce Terminal Drainage and Grading Maintenance Project is Foth Infrastructure & Environment, LLC. 15 Creek Road, Marion, MA 02738 and ts subcontractors.

ARTICLE 2 - SCOPE OF WORK

2.01 - INTENT OF THE CONTRACT

- A. The intent of the Work is to complete the construction of the New Bedford Marine Commerce Terminal Drainage and Grading Maintenance project.

2.02 - CHANGES IN THE WORK

- A. Unless a different form is otherwise specified in the General Conditions, AIA Form G701, Change Order, will be used by MassCEC for Change Orders.

ARTICLE 3 - CONTROL OF WORK

3.06 - ADJACENT CONTRACTS

- A. Listing of Adjacent Construction Contracts and Contracts Requiring Coordination

1. The Contractor's attention is drawn to adjacent construction contracts that may be on going simultaneously with the Work. These ongoing Contracts are as follows.

<u>Contract Name and Number</u>	<u>Description</u>
-------------------------------------	--------------------

None at this time.

2. In addition to the above contracts, MassCEC may put out for bid while the Work is being performed, other contracts to be coordinated with this Contract, including but not limited to, the following:

<u>Contract Name and Number</u>	<u>Description</u>
-------------------------------------	--------------------

None at this time.

- B. The Contractor shall attend weekly coordination meetings with the contractors of the adjacent contracts and contracts requiring coordination. The weekly coordination meetings will be held in conjunction with the weekly construction meeting(s). The purpose of these meetings is to inform each contractor of the upcoming work by other contractors and to coordinate the overall maintenance and protection of pedestrian and vehicular traffic in the project area(s). The content of these meetings will include the following:

1. An overview of the progress of each contract and the anticipated major items of work to occur in the upcoming months.
2. Maintenance of pedestrian and vehicular traffic, including existing and proposed lane closing and detours, hauling routes, and other related issues.
3. Other items of concern to the contractors, MassCEC, and other interested parties.

ARTICLE 5 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

5.10 - PROTECTION AND RESTORATION OF PROPERTY

A. Add the following new subparagraph to paragraph K:

1. The written notice to be served to utility owners or officials and to all others concerned with or having charge of public or private owned utilities shall include, but not be limited to, the following:

UTILITIES, DIGSAFE	1-800-344-7233
	<u>1-800-DIGSAFE</u>

TELECOMMUNICATIONS

Verizon
1116 Shawmut Avenue, 2nd Floor
New Bedford, MA 02746

EVERSOURCE (Electric and Gas)
180 Macarthur Dr.
New Bedford, MA 02740

WATER – SEWER - HIGHWAYS

City of New Bedford
Department of Public Infrastructure
1105 Shawmut Avenue
New Bedford, MA 02746

BUILDING DEPARTMENT

City of New Bedford
Department of Inspectional Services
133 William Street, Room 308
New Bedford, MA 02746

The Contractor is responsible to repair any utilities that are damaged as a result of its activities (negligent or otherwise) within four (4) hours of the damage occurring, or within a period as determined by, or otherwise negotiated with, MassCEC and/or the City of New Bedford. Should MassCEC and/or the City of New Bedford deem it necessary to repair

the damaged utility – either because the Contractor cannot or will not respond and/or otherwise repair the damage within the allotted or determined time frame, or because the City of New Bedford and/or MassCEC represents either a safety or environmental hazard and/or represents an emergency condition – the City of New Bedford and/or MassCEC may act to repair the damage utilizing either its own personnel and equipment or an independent Contractor of the City of New Bedford's or MassCEC's choosing. Should MassCEC and/or the City of New Bedford find it necessary to take such action to repair or otherwise respond to the damage incident (including overseeing or inspecting the Contractor's investigation and repair), the Contract shall reimburse the City of New Bedford and/or MassCEC for an amount not less than two times (2x) the City of New Bedford's and/or MassCEC's cost (including the cost of City labor, equipment, subcontractors, and any other direct costs associated with the incident).

- B. Add the following new paragraphs:
- R. The Engineer reserves the right, at no additional cost to MassCEC, to direct the Contractor to modify construction means and methods, that in the opinion of the Engineer indicate a significant risk of damage to adjacent structures, utilities, roadways, and other facilities.
 - S. The Contractor shall assure that no exits from adjacent buildings are obstructed, that appropriate safety barriers are established to prevent access, and that work areas are kept neat, clean and safe.
 - T. The Contractor shall not load or permit any part of the structure to be loaded with a weight that will endanger its safety.
 - U. All surrounding work including, but not limited to, fixtures, sewers, drains, water pipes, telephone lines, signal lines, gas pipes, electrical conduit and utilities that are to remain in place shall be carefully protected and, if disturbed or damaged, shall be repaired or replaced as directed by the Engineer, at no additional cost to MassCEC.
 - V. Existing (exposed or concealed) sewers, drains, water and gas pipes, signal, telephone and electric conduits and wires, or similar utilities of every description which are disturbed or damaged due to the performance of the Work of the Contractor shall be repaired or replaced to original conditions, at no additional cost to MassCEC.
 - W. Any damage which occurs to structures, walls, ceilings, floors, furnishings or items as a result of the Contractor's work shall be repaired as directed by the Engineer, at no additional cost to MassCEC.

5.18 - PAYMENT OF TAXES

- A. Add the following new paragraph:
- C. The MassCEC's Sales Tax Exemption Number is 263-851-659.

5.28 – PERFORMANCE STANDARDS

- A. Add the following new article:

5.28 PERFORMANCE STANDARDS

- A. The Contractor shall comply with the Performance Standards (attached to Section 00800) for this project and other restrictions and requirements placed on the Work.
- B. Attention if directed to the Activity Use Limitation (AUL) and shall comply with all requirements including a soil management plan for excavations below three (3) feet.

ARTICLE 7 - MEASUREMENT AND PAYMENT

7.06 - PARTIAL PAYMENTS

- A. Add the following new paragraphs.
 - H. AIA Form G702, Application and Certification for Payment will be used by MassCEC for payment application and certification of work.
 - I. Field notes, bills of lading, photographs, and other supporting field documentation slides and videotapes shall be submitted with each payment application.
 - 1. The Engineer will review the contractor's survey records (pre- & post-dredge) as-built drawings for completeness to date and the procedures being used to show changes.
 - 2. If the field notes, bills of lading, photographs, and other supporting field documentation are not submitted with the payment application, the Engineer will not approve the payment application and MassCEC will not approve and process the payment application for payment.
 - 3. The requirement for the submittal of the field notes, bills of lading, photographs, and other supporting field documentation may be waived by MassCEC, at its discretion, on a monthly basis.

EQUAL EMPLOYMENT OPPORTUNITY (EEO)

In connection with the performance of the Work, the Contractor shall be solely responsible for complying with all applicable state and federal laws, rules and regulations regarding equal employment opportunity, non-discrimination and affirmative action including, but not limited to, M.G.L. c. 151B, M.G.L. c. 7, § 40N, Commonwealth of Massachusetts Executive Orders 74, 116, 237, 246 and 524, United States Executive Order No. 11246 and all associated laws, rules and regulations.

I. Equal Opportunity and Non-Discrimination

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

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

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

The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Massachusetts Commission Against Discrimination setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (Massachusetts General Laws Chapter 151B).

II. Severability

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

III. Contractor's Certification

A bidder for a state construction contract or state assisted construction contract will not be eligible for award of the contract unless such bidder has submitted to the administering agency the following certification, which will be incorporated into the resulting contract:

CONTRACTOR'S CERTIFICATION

_____ certifies that they:
(Contractor Name)

1. Will not discriminate in their employment practices;
2. Intend to use the following listed construction trades in the work under the contract

and _____;

- 3. Are in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices; and
- 4. Agree to comply with all provisions contained herein.

(Signature of authorized representative of Contractor) Date

(Printed name of authorized representative of Contractor)

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

END OF SECTION

DEPARTMENT OF LABOR STANDARDS
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: Massachusetts Clean Energy Center
Contract Number: MACEC-FY24-01 **City/Town:** NEW BEDFORD
Description of Work: Service and repair of stormwater management systems and the Terminal wearing surface.
Job Location: 4 Wright St

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 WORKER (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)</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	\$56.03	\$15.30	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.48	\$15.30	\$16.40	\$0.00	\$89.18
	06/01/2025	\$58.78	\$15.30	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.23	\$15.30	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.53	\$15.30	\$16.40	\$0.00	\$93.23
	12/01/2026	\$62.98	\$15.30	\$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	\$56.03	\$15.30	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.48	\$15.30	\$16.40	\$0.00	\$89.18
	06/01/2025	\$58.78	\$15.30	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.23	\$15.30	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.53	\$15.30	\$16.40	\$0.00	\$93.23
	12/01/2026	\$62.98	\$15.30	\$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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$57.15	\$15.30	\$16.40	\$0.00	\$88.85
	12/01/2024	\$58.63	\$15.30	\$16.40	\$0.00	\$90.33
	06/01/2025	\$59.96	\$15.30	\$16.40	\$0.00	\$91.66
	12/01/2025	\$61.43	\$15.30	\$16.40	\$0.00	\$93.13
	06/01/2026	\$62.76	\$15.30	\$16.40	\$0.00	\$94.46
	12/01/2026	\$64.24	\$15.30	\$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	\$36.17	\$15.30	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.12	\$15.30	\$16.40	\$0.00	\$68.82
	06/01/2025	\$37.97	\$15.30	\$16.40	\$0.00	\$69.67
	12/01/2025	\$38.92	\$15.30	\$16.40	\$0.00	\$70.62
	06/01/2026	\$39.78	\$15.30	\$16.40	\$0.00	\$71.48
	12/01/2026	\$40.73	\$15.30	\$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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$45.23	\$15.30	\$16.40	\$0.00	\$76.93
	12/01/2024	\$46.41	\$15.30	\$16.40	\$0.00	\$78.11
	06/01/2025	\$47.47	\$15.30	\$16.40	\$0.00	\$79.17
	12/01/2025	\$48.64	\$15.30	\$16.40	\$0.00	\$80.34
	06/01/2026	\$49.70	\$15.30	\$16.40	\$0.00	\$81.40
12/01/2026	\$50.88	\$15.30	\$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 I</i>	03/01/2024	\$54.73	\$8.83	\$20.27	\$0.00	\$83.83
	09/01/2024	\$56.23	\$8.83	\$20.27	\$0.00	\$85.33
	03/01/2025	\$57.73	\$8.83	\$20.27	\$0.00	\$86.83
	09/01/2025	\$59.23	\$8.83	\$20.27	\$0.00	\$88.33
	03/01/2026	\$60.73	\$8.83	\$20.27	\$0.00	\$89.83
	09/01/2026	\$62.23	\$8.83	\$20.27	\$0.00	\$91.33
	03/01/2027	\$63.73	\$8.83	\$20.27	\$0.00	\$92.83

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - FLOORCOVERER - Local 2168 Zone I

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$24.63	\$8.83	\$1.76	\$0.00	\$35.22
2	45	\$24.63	\$8.83	\$1.76	\$0.00	\$35.22
3	55	\$30.10	\$8.83	\$3.52	\$0.00	\$42.45
4	55	\$30.10	\$8.83	\$3.52	\$0.00	\$42.45
5	70	\$38.31	\$8.83	\$16.75	\$0.00	\$63.89
6	70	\$38.31	\$8.83	\$16.75	\$0.00	\$63.89
7	80	\$43.78	\$8.83	\$18.51	\$0.00	\$71.12
8	80	\$43.78	\$8.83	\$18.51	\$0.00	\$71.12

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$25.30	\$8.83	\$1.76	\$0.00	\$35.89
2	45	\$25.30	\$8.83	\$1.76	\$0.00	\$35.89
3	55	\$30.93	\$8.83	\$3.52	\$0.00	\$43.28
4	55	\$30.93	\$8.83	\$3.52	\$0.00	\$43.28
5	70	\$39.36	\$8.83	\$16.75	\$0.00	\$64.94
6	70	\$39.36	\$8.83	\$16.75	\$0.00	\$64.94
7	80	\$44.98	\$8.83	\$18.51	\$0.00	\$72.32
8	80	\$44.98	\$8.83	\$18.51	\$0.00	\$72.32

Notes: Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
<i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2024	\$56.03	\$15.30	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.48	\$15.30	\$16.40	\$0.00	\$89.18
	06/01/2025	\$58.78	\$15.30	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.23	\$15.30	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.53	\$15.30	\$16.40	\$0.00	\$93.23
	12/01/2026	\$62.98	\$15.30	\$16.40	\$0.00	\$94.68

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GENERATOR/LIGHTING PLANT/HEATERS	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
<i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2024	\$36.17	\$15.30	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.12	\$15.30	\$16.40	\$0.00	\$68.82
	06/01/2025	\$37.97	\$15.30	\$16.40	\$0.00	\$69.67
	12/01/2025	\$38.92	\$15.30	\$16.40	\$0.00	\$70.62
	06/01/2026	\$39.78	\$15.30	\$16.40	\$0.00	\$71.48
	12/01/2026	\$40.73	\$15.30	\$16.40	\$0.00	\$72.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	06/01/2020	\$39.18	\$10.80	\$10.45	\$0.00	\$60.43
<i>GLAZIERS LOCAL 1333</i>						

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	\$56.03	\$15.30	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.48	\$15.30	\$16.40	\$0.00	\$89.18
	06/01/2025	\$58.78	\$15.30	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.23	\$15.30	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.53	\$15.30	\$16.40	\$0.00	\$93.23
	12/01/2026	\$62.98	\$15.30	\$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	\$15.30	\$0.00	\$0.00	\$45.57
2	60	\$33.02	\$15.30	\$16.40	\$0.00	\$64.72
3	65	\$35.77	\$15.30	\$16.40	\$0.00	\$67.47
4	70	\$38.52	\$15.30	\$16.40	\$0.00	\$70.22
5	75	\$41.27	\$15.30	\$16.40	\$0.00	\$72.97
6	80	\$44.02	\$15.30	\$16.40	\$0.00	\$75.72
7	85	\$46.78	\$15.30	\$16.40	\$0.00	\$78.48
8	90	\$49.53	\$15.30	\$16.40	\$0.00	\$81.23

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.82	\$15.30	\$0.00	\$0.00	\$46.12
2	60	\$33.62	\$15.30	\$16.40	\$0.00	\$65.32
3	65	\$36.42	\$15.30	\$16.40	\$0.00	\$68.12
4	70	\$39.22	\$15.30	\$16.40	\$0.00	\$70.92
5	75	\$42.02	\$15.30	\$16.40	\$0.00	\$73.72
6	80	\$44.82	\$15.30	\$16.40	\$0.00	\$76.52
7	85	\$47.63	\$15.30	\$16.40	\$0.00	\$79.33
8	90	\$50.43	\$15.30	\$16.40	\$0.00	\$82.13

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 (SOUTHERN MASS)</i>	09/01/2023	\$48.15	\$14.75	\$19.61	\$0.00	\$82.51
	09/01/2024	\$51.23	\$14.75	\$19.61	\$0.00	\$85.59
	09/01/2025	\$54.31	\$14.75	\$19.61	\$0.00	\$88.67
	09/01/2026	\$57.38	\$14.75	\$19.61	\$0.00	\$91.74

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Southern MA

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.08	\$14.75	\$14.32	\$0.00	\$53.15
2	60	\$28.89	\$14.75	\$15.37	\$0.00	\$59.01
3	70	\$33.71	\$14.75	\$16.43	\$0.00	\$64.89
4	80	\$38.52	\$14.75	\$17.49	\$0.00	\$70.76

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.62	\$14.75	\$14.32	\$0.00	\$54.69
2	60	\$30.74	\$14.75	\$15.37	\$0.00	\$60.86
3	70	\$35.86	\$14.75	\$16.43	\$0.00	\$67.04
4	80	\$40.98	\$14.75	\$17.49	\$0.00	\$73.22

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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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 <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"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$24.41	\$15.00	\$16.40	\$0.00	\$55.81
	06/01/2024	\$24.71	\$15.30	\$16.40	\$0.00	\$56.41
	12/01/2024	\$25.37	\$15.30	\$16.40	\$0.00	\$57.07
	06/01/2025	\$25.97	\$15.30	\$16.40	\$0.00	\$57.67
	12/01/2025	\$26.63	\$15.30	\$16.40	\$0.00	\$58.33
	06/01/2026	\$27.22	\$15.30	\$16.40	\$0.00	\$58.92
	12/01/2026	\$27.89	\$15.30	\$16.40	\$0.00	\$59.59

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$29.86	\$15.00	\$16.40	\$0.00	\$61.26
	06/01/2024	\$30.28	\$15.30	\$16.40	\$0.00	\$61.98
	12/01/2024	\$31.08	\$15.30	\$16.40	\$0.00	\$62.78
	06/01/2025	\$31.80	\$15.30	\$16.40	\$0.00	\$63.50
	12/01/2025	\$32.60	\$15.30	\$16.40	\$0.00	\$64.30
	06/01/2026	\$33.32	\$15.30	\$16.40	\$0.00	\$65.02
	12/01/2026	\$34.12	\$15.30	\$16.40	\$0.00	\$65.82

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$56.03	\$15.30	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.48	\$15.30	\$16.40	\$0.00	\$89.18
	06/01/2025	\$58.78	\$15.30	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.23	\$15.30	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.53	\$15.30	\$16.40	\$0.00	\$93.23
	12/01/2026	\$62.98	\$15.30	\$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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$36.17	\$15.30	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.12	\$15.30	\$16.40	\$0.00	\$68.82
	06/01/2025	\$37.97	\$15.30	\$16.40	\$0.00	\$69.67
	12/01/2025	\$38.92	\$15.30	\$16.40	\$0.00	\$70.62
	06/01/2026	\$39.78	\$15.30	\$16.40	\$0.00	\$71.48
	12/01/2026	\$40.73	\$15.30	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 170 - Dauphinais (Bellingham)</i>	01/01/2024	\$27.00	\$10.76	\$5.45	\$0.00	\$43.21
	12/01/2024	\$27.60	\$11.26	\$6.15	\$0.00	\$45.01
	01/01/2025	\$27.60	\$11.26	\$6.15	\$0.00	\$45.01
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$55.41	\$15.30	\$16.40	\$0.00	\$87.11
	12/01/2024	\$56.85	\$15.30	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.13	\$15.30	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.57	\$15.30	\$16.40	\$0.00	\$91.27
	06/01/2026	\$60.85	\$15.30	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.29	\$15.30	\$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	\$56.03	\$15.30	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.48	\$15.30	\$16.40	\$0.00	\$89.18
	06/01/2025	\$58.78	\$15.30	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.23	\$15.30	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.53	\$15.30	\$16.40	\$0.00	\$93.23
	12/01/2026	\$62.98	\$15.30	\$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.

FINAL DETERMINATION FOR THE
SOUTH TERMINAL PROJECT, USEPA
(WEB LINK)

<https://semspub.epa.gov/work/01/525556.pdf>

STATE ENHANCED REMEDY –
PERFORMANCE STANDARDS (WEB
LINK)

<https://www.epa.gov/new-bedford-harbor/new-bedford-harbor-cleanup-plans-technical-documents-and-environmental-data>

Draft Activity and Use Limitation (AUL):
Main Terminal

Form 1075

NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Names: RIST Property (former RIST, LLC) RTN 4-23736
DMF Parcel 1, RTN 4-24296
DMF Parcel 2, RTN 4-15490
Riverfront Parcel

This Notice of Activity and Use Limitation ("Notice") is made as of this _____ day of _____, 2021, by The Massachusetts Clean Energy Technology Center, with a mailing address of 63 Franklin Street, 3rd Floor Boston, Massachusetts, 02110 and The City of New Bedford Massachusetts, with a mailing address of 133 Williams Street, New Bedford, Massachusetts 02740 together with his/her/its/their successors and assigns (collectively "Owners").

WITNESSETH:

WHEREAS, the Massachusetts Clean Energy Technology Center is the owner in fee simple of certain parcels of land depicted as:

Parcel Name: RIST Property (former RIST, LLC), RTN 4-23736
Address: North of Blackmer Street
Parcel ID/Size: Map 31 Parcel 288 / 7.75 acres

And, WHEREAS, the City of New Bedford, Massachusetts is the owner in fee simple of certain parcels of land, under lease to the Massachusetts Clean Energy Technology Center, and depicted as:

Parcel Name: DMF Parcel 1, RTN 4-24296
Address: North of 16 Blackmer Street
Parcel ID/Size: Map 25A, Parcel 53 / 1.2 acres

Parcel Name: DMF Parcel 2, RTN 4-15490
Address: 16 Blackmer Street
Parcel ID/Size: Map 25A, Parcel 49 / 2.2 acres

Parcel Name: Riverfront Parcel
Address: SE Blackmer Street
Parcel ID/Size: Map 25A, Parcel 48 / 9.227 acres
Area of Parcel Subject to AUL: 6.32 acres

WHEREAS, said four parcels of land, which are more particularly bounded and described in **Exhibit A**, attached hereto and made a part hereof ("Property"), are subject to this Notice of Activity and Use Limitation.

WHEREAS, the Properties together comprise all of a disposal site as the result of releases of oil and/or hazardous material. **Exhibit B** is a sketch plan showing the relationship of the Properties subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Properties and to the extent such boundaries have been established. **Exhibit B** is attached hereto and made a part hereof; and,

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or (b) the restriction of certain activities occurring in, on, through, over or under the Properties. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to the Activity and Use Limitation Opinion which is attached hereto as **Exhibit C** and made a part hereof;

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in this Notice of Activity and Use Limitation are as follows:

1. Activities and Uses Consistent with Maintaining No Significant Risk Conditions. The following Activities and Uses are consistent with maintaining a Permanent Solution and a condition of No Significant Risk and, as such, may occur on the Properties pursuant to 310 CMR 40.0000:
 - (i) Commercial and industrial activities and uses which do not involve the disturbance of soil located greater than 3 feet below the ground surface within the AUL area within the RIST property, DMF Parcel 1 and DMF Parcel 2 and Riverfront Parcel properties described above, as long as the Obligations and Conditions specified herein are followed;
 - (ii) Any non-residential uses of all of the Properties, including those that are currently conducted, in which a child's presence (other than incidental) is not likely;
 - (iii) Short-term (6 months or less) underground utility and/or construction activities which are likely to disturb soil as described in Paragraph 1(i), provided that such activities are conducted in accordance with the soil management provisions of the Massachusetts Contingency Plan (MCP) cited at 310 CMR 40.0030 and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;
 - (iv) Construction or excavation activities are allowed, except as prohibited in Paragraph 2 (ii);
 - (v) Such other activities or uses which, in the Opinion of a Massachusetts Licensed Site Professional ("LSP"), shall present no greater risk of harm to human health, safety, public welfare or the environment than the activities and uses set forth in this paragraph; and,
 - (vi) Other activities or uses of the Properties not identified in Paragraph 2 as Activities and Uses Inconsistent with the AUL.

2. Activities and Uses Inconsistent Maintaining No Significant Risk Conditions. The following Activities and Uses are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk pursuant to 310 CMR 40.0000, and, as such, may not occur on the Properties:

- (i) Use of the Properties (all) as a residence or for growing fruits or vegetables for human consumption, as a school, daycare, nursery, recreational area (such as a park or athletic field), and/or any other use in which a child's presence (other than incidental) is likely;
- (ii) Any long-term (greater than 6 months) activity at the Properties that is reasonably likely to result in an excavation greater than 3 feet below grade within the RIST property, DMF Parcel 1, DMF Parcel 2 and Riverfront Parcel properties and excavation of soil at or below the ground surface within the Shuster Bulkhead Parcel, relocation or removal of contaminated soil, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations (i) and (ii), set forth below; and,
- (iii) Any excavation activity which may disturb the soil located at a depth greater than 3 feet below ground surface within the AUL area associated with the RIST property, DMF Parcel 1, DMF Parcel 2 and Riverfront Parcel properties without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (i) and (ii) of this Notice.

3. Obligations and Conditions. The following obligations and/or conditions are necessary and shall be undertaken and/or maintained at the Properties to maintain a Permanent Solution and a condition of No Significant Risk:

- (i) Any long-term (greater than 6 months) activity at or use of the Properties that is reasonably likely to result in the excavation, relocation, or removal of contaminated soil requires preparation and implementation of a Health and Safety Plan under the guidance of an LSP. At a minimum, the Health and Safety Plan must inform underground utility workers and other workers who may come into contact with soil in the AUL area of (1) the nature and hazards of the contaminants identified in the soil, (2) potential exposure routes, (3) measures to prevent exposure, (4) protective clothing requirements, and (5) any other health and safety measures appropriate for the activity or use;
- (ii) Any long-term (greater than 6 months) activity at or use of the Properties that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a written Soil Management Plan under the guidance of an LSP. At a minimum, the Soil Management Plan must (1) describe the soil excavation and stockpile storage methods that will be used to prevent accidental exposure to the excavated soil, including indirect exposure via surface water runoff or fugitive dust emissions, (2) contain procedures to limit access to the excavated soil and the excavation area by Property workers not covered by the Health and Safety Plan, children, Property abutters, or accidental trespassers, (3) contain procedures for characterizing, transporting and recycling/disposing excavated soil, and (4) provide for the restoration of the excavated area as soon as practicable; and,
- (iii) Any soil removed from the Properties must be characterized and disposed of in accordance with federal, state and local regulations, including the MCP, 310 CMR 40.0000.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Properties which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a Licensed Site Professional who shall render an Opinion,

in accordance with 310 CMR 40.1080, as to whether the proposed changes are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Permanent or Temporary Solution. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a Licensed Site Professional in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of No Significant Risk. If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a Licensed Site Professional in accordance with 310 CMR 40.1080, the owner or operator of the Properties subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.
6. Incorporation into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Properties or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned Licensed Site Professional, and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office(s).

WITNESS the execution hereof under seal this _____ day of _____, 20_____.

Name
Title
Massachusetts Clean Energy Technology Center

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 20_____

On this ____ day of _____, 2019, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)

(as attorney in fact for _____, the principal)
(as _____ for Massachusetts Clean Energy Technology Center (a) (the)
_____)
_____) (official signature and seal of notary)

WITNESS the execution hereof under seal this _____ day of _____, 20_____.

Name
Title
City of New Bedford

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 20_____

On this ____ day of _____, 2019, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)

The undersigned Licensed Site Professional hereby certifies that in his Opinion this Notice of Activity and Use Limitation is consistent with a Permanent Solution and maintaining a condition of No Significant Risk.

Date: _____

David B. Sherman
Licensed Site Professional

(Licensed Site Professional SEAL)

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 20__

On this ____ day of _____, 2019, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

(official signature and seal of notary)

Upon recording, return to:

Apex Companies, LLC.
58H Connecticut Avenue
South Windsor, CT 06074

Activity and Use Limitation (AUL): Former
Hall Radio Tower Site

13



2019 00022060

Bk: 12943 Pg: 240 Pg: 1 of 13 BE
Doc: NOTICE 09/27/2019 01:44

NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000
Disposal Site Name: New Bedford Radio, Inc. (Hall Comm.)
DEP Release Tracking No.: 4-25350

This Notice of Activity and Use Limitation ("Notice") is made as of this 16th day of September 2019, by The Massachusetts Clean Energy Center, with a mailing address of 63 Franklin Street, 3rd Floor Boston, New Bedford, Massachusetts, 02110, and Hall Communications, Inc. with a mailing address of 1996 Auction Road, Manheim, Pennsylvania, 17545 together with his/her/its/their successors and assigns (each an "Owner", and collectively "Owners").

WITNESSETH:

WHEREAS, the Massachusetts Clean Energy Center is the owner in fee simple of a certain parcel of land depicted as "Lot 1" on a that certain *Plan of Land, MacArthur Boulevard, Assessor's Map 31 Lot 234, New Bedford, Massachusetts*, dated March 18, 2015 (with revisions through July 13, 2016), and prepared by Thompson Farland with certification date August 8, 2016, and recorded in the Bristol County Registry of Deeds in Plan Book 174, Page 73 (the "Survey"), and Hall Communications, Inc. is the owner in fee simple of a certain parcel of land depicted as "Lot 2" on the Survey. Said "Lot 1" and said "Lot 2", having been created in a subdivision of land owned by Hall Communications, Inc. for the purpose of the sale of Lot 1 to the Massachusetts Clean Energy Center, and for Hall Communications, Inc. to retain Lot 2. For title information see deed recorded with the Bristol County Registry of Deeds in Book 11982, page 152.

WHEREAS, said parcels of land, which are more particularly bounded and described in **Exhibit A**, attached hereto and made a part hereof ("Property"), are subject to this Notice.

WHEREAS, the Property comprises all of a disposal site (the "AUL Area") as the result of releases of oil and/or hazardous material. **Exhibit B**, which is attached hereto and made a part hereof, is a copy of the Survey showing the Property subject to this Notice; and

WHEREAS, one or more response actions have been selected for the AUL Area in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 *et seq.* ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil at the Property, and/or (b) the restriction of certain activities occurring in, on, through, over or under the Property. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to this Notice, are set forth in the Activity and Use Limitation Opinion, which is attached hereto as **Exhibit C** and made a part hereof;

NOW, THEREFORE, notice is hereby given that the activity and use limitations ("AULs") for the Property are as follows:

1. Activities and Uses Consistent with Maintaining No Significant Risk Conditions. The following Activities and Uses are consistent with maintaining a Permanent Solution and a condition of No Significant Risk and, as such, may occur on the Property pursuant to the MCP:

- (i) Commercial and industrial activities and uses which do not involve the disturbance of soil located greater than 3 feet below the ground surface within Lot 1 and

APEX COMPANIES LLC
ATTN: DAVID SHELMAN
58 H. CONNECTICUT AVE
SOUTH WINDSOR, CT 06074

disturbance of soil at or below the ground surface within Lot 2, as long as the Obligations and Conditions specified herein are followed;

- (ii) Any non-residential uses of the Property (both Lot 1 and Lot 2), including those that are currently conducted, in which a child's presence (other than incidental) is not likely;
- (iii) Short-term (6 months or less) underground utility and/or construction activities which are likely to disturb soil more than permitted in Paragraph 1(i), provided that such activities are conducted in accordance with the soil management provisions of the MCP cited at 310 CMR 40.0030 and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;
- (iv) Construction or excavation activities are allowed, except as prohibited in Paragraph 2 (ii);
- (v) Such other activities or uses which, in the Opinion of a Massachusetts Licensed Site Professional ("LSP"), shall present no greater risk of harm to human health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph 1; and
- (vi) Other activities or uses of the Property not identified in Paragraph 2 as Activities and Uses Inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk.

2. Activities and Uses Inconsistent with Maintaining No Significant Risk Conditions. The following Activities and Uses are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk pursuant to the MCP, and, as such, may not occur on the Property:

- (i) Use of the Property (Lot 1 and Lot 2) as a residence, for growing fruits or vegetables for human consumption, as a school, daycare, nursery, recreational area (such as a park or athletic field), and/or for any other use in which a child's presence (other than incidental) is likely;
- (ii) Any long-term (greater than 6 months) activity at the Property that is reasonably likely to result in the excavation greater than 3 feet below grade in Lot 1 and at or below surface grade in Lot 2, relocation or removal of the contaminated soil, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations set forth in paragraph 3 (i) and (ii) of this Notice; and
- (iii) Any excavation activity which may disturb the soil located at a depth greater than 3 feet below ground surface within Lot 1 and at or below surface grade in Lot 2, without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations set forth in paragraph 3 (i) and (ii) of this Notice.

3. Obligations and Conditions. The following obligations and/or conditions are necessary and shall be undertaken and/or maintained at the Property by the Owner of either Lot 1 or Lot 2, or both, as applicable, to maintain a Permanent Solution and a condition of No Significant Risk:

- (i) Any long-term (greater than 6 months) activity at or use of either Lot 1 or Lot 2 of the Property that is reasonably likely to result in the excavation, relocation, or removal of contaminated soil requires preparation and implementation of a Health and Safety Plan under the guidance of an LSP. At a minimum, the Health and Safety Plan must

inform underground utility workers and other workers who may come into contact with soil in the AUL Area of (1) the nature and hazards of the contaminants identified in the soil, (2) potential exposure routes, (3) measures to prevent exposure, (4) protective clothing requirements, and (5) any other health and safety measures appropriate for the activity or use;

- (ii) Any long-term (greater than 6 months) activity at or use of either Lot 1 or Lot 2 of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a written Soil Management Plan under the guidance of an LSP. At a minimum, the Soil Management Plan must (1) describe the soil excavation and stockpile storage methods that will be used to prevent accidental exposure to the excavated soil, including indirect exposure via surface water runoff or fugitive dust emissions, (2) contain procedures to limit access to the excavated soil and the excavation area by Property workers not covered by the Health and Safety Plan, children, Property abutters, or accidental trespassers, (3) contain procedures for characterizing, transporting and recycling/disposing excavated soil, and (4) provide for the restoration of the excavated area as soon as practicable; and
- (iii) Any soil removed from either Lot 1 or Lot 2 of the Property must be characterized and disposed of in accordance with federal, state and local regulations, including the MCP.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a LSP who shall render an Opinion, in accordance with 310 CMR 40.1080, as to whether the proposed changes are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Permanent or Temporary Solution. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a LSP in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of No Significant Risk. If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a LSP in accordance with 310 CMR 40.1080, the Owner of either Lot 1 or Lot 2 within the Property subject to this Notice at the time that the applicable activities, uses and/or exposures change on that particular Lot, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owners hereby authorize and consent to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office(s).

WITNESS the execution hereof under seal this 8th day of August, 2019.

By: [Signature]
Name: Jennifer Duloisio
as: CFO
of Massachusetts Clean Energy Center

WITNESS the execution hereof under seal this 23rd day of August, 2019.

By: [Signature]
Janet P. Hamm, CPA, CGMA
as CFO of Hall Communications, Inc.

COMMONWEALTH OF MASSACHUSETTS

Suffolk County, ss

August 8, 2019

On this 8 day of August, 2019, before me, the undersigned notary public, personally appeared Jennifer Duloisio, proved to me through satisfactory evidence of identification, which were person known to me, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose as CFO for the Massachusetts Clean Energy Technology Center, an independent public instrumentality of the Commonwealth of Massachusetts.

[Signature]



STATE OF FLORIDA

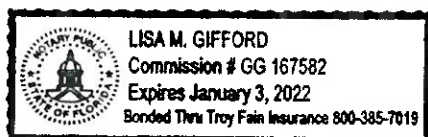
County of Polk, ss

August 23, 2019

On this 23 day of August, 2019, before me, the undersigned notary public, personally appeared Janet P. Hamm, proved to me through satisfactory evidence of identification, which were Known to me, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as CFO of Hall Communications, Inc., a Delaware corporation.

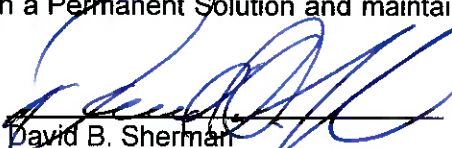
[Signature]

(official signature and seal of notary)



The undersigned Licensed Site Professional hereby certifies that in his Opinion this Notice of Activity and Use Limitation is consistent with a Permanent Solution and maintaining a condition of No Significant Risk.

Date: 9/16/2019


David B. Sherman
Licensed Site Professional



(Licensed Site Professional SEAL)

COMMONWEALTH OF MASSACHUSETTS

_____, ss

September 16, 2019

On this 16 day of September, 2019, before me, the undersigned notary public, personally appeared David Sherman, proved to me through satisfactory evidence of identification, which were person known to me, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he)(she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)
China Starks (official signature and seal of notary)



Upon recording, return to:

Apex Companies, LLC.
58H Connecticut Avenue
South Windsor, CT 06074

Exhibit A

Metes and Bounds Description of Parcel of Land Containing Area Subject to AUL

A certain parcel of land situated on the southeasterly side of Macarthur Drive in New Bedford, Massachusetts, being shown as Lots 1 and 2 on a plan entitled "Plan of Land, Macarthur Boulevard, Assessors Map 31 Lot 234, New Bedford, Massachusetts, Prepared for Apex Companies, LLC, revised July 13, 2016" prepared by Thompson Farland, Inc, being further bounded and described as follows:

Beginning at a point on the southeasterly side of Macarthur Drive, said point being the northeasterly corner of land now or formerly belonging to Carlos and Conceicao Rafael and the northwesterly corner of the herein describer parcel;

Thence running along said Macarthur Drive by a curve deflecting to the left, having a radius of 155.00 feet and an arc length of 182.67 feet to a corner and land now or formerly belonging to C P Brodeur, Inc;

Thence turning and running by said C P Brodeur, Inc land, S11°43'37"E, 148.08 feet to a corner;

Thence turning and running still by said C P Brodeur, Inc land and land now or formerly belong to R C P Realty LLC and Dennis Saluti "Trustee", Michael St. Ours "Trustee", N75°39'17"E, 440.37 feet to a corner and land now or formerly belonging to Rist LLC;

Thence turning and running along said Rist LLC land, S14°20'43"E, 389.25 feet to a corner and land now or formerly belonging to Fargo Realty Trust;

Thence turning and running along said Fargo Realty Trust land and land now or formerly belonging to DeCosta Realty Trust, S76°40'51"W, 504.23 feet to a corner and land now or formerly belonging to Gregory G. White and David R. Belzer, Trustees;

Thence turning and running along said Gregory G.White and David R. Belzer, Trustees land and land now or formerly belonging to Carlos and Conceicao Rafael, N07°51'03"W, 314.29 feet to a corner;

Thence running still by said Rafael land, N46°24'07"W, 81.49 feet to a point of curvature;

Thence running still by said Rafael land by a curve deflecting to the left, having a radius of 20.00 feet and an arc length of 27.37 feet to Macarthur Drive and the point of beginning.

Said Lots 1 (MassCEC; Map 31 Lot 234) and Lot 2 (Hall Communications, Inc.; Map 31 Lot 234) contain a total area of 4.40 Acres more or less.

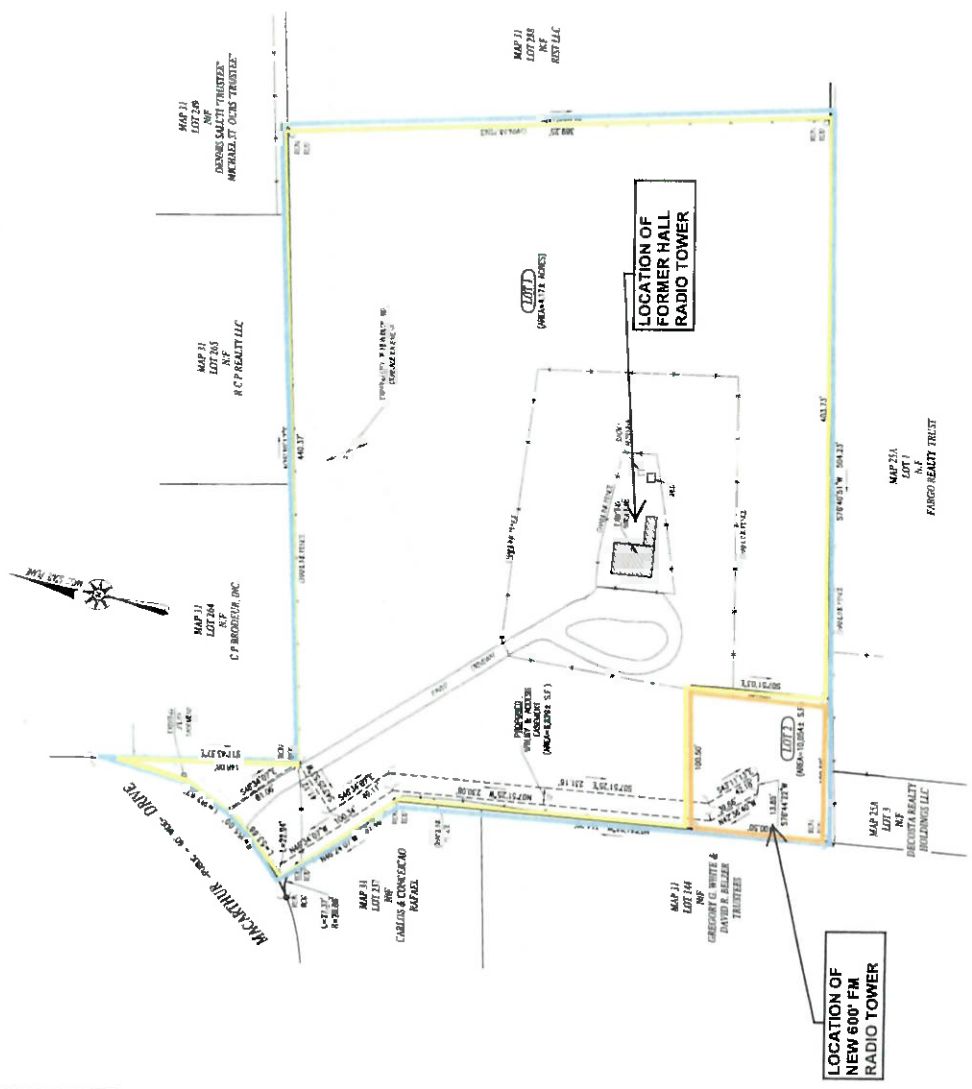


LOCUS MAP SCALE: 1" = 2,000' ±

ZONING DATA	
DISTRICT	WATERFRONT INDUSTRIAL
LOT AREA	8.57
FRONT YIELD	0.37
FRONT SETBACK	18 FT
SIDE SETBACK	18 FT
REAR SETBACK	48 FT

*REAR SETBACK LEAVES 20 FEET FOR STRUCTURES OVER 3 STORES

EXHIBIT B - Activity & Use Limitation



LEGEND

- DISPOSAL SITE BOUNDARY (RTN 4-253550)
- AREA SUBJECT TO AUL (LOT 1)
- AREA SUBJECT TO AUL (LOT 2)



- NOTES:**
- THE PURPOSE OF THIS PLAN IS TO SUBMIT EXISTING AND PROPOSED DEVELOPMENT TO BEHIND LOT 2.
 - BOUNDARY AND SETBACK SURVEY PERFORMED BY THE SURVEYOR ON 07/15/2014.
 - THE CITY OF NEW BEDFORD'S DRAINAGE ENGINEER HAS REVIEWED THIS PLAN AND THE PROPOSED UTILITY AND ACCESS EASEMENT WILL NOT AFFECT DRAINAGE.

REVISIONS

NO.	DATE	DESCRIPTION
1	07/15/14	ISSUE FOR PERMIT
2	07/15/14	ISSUE FOR PERMIT
3	07/15/14	ISSUE FOR PERMIT

THOMPSON FARLAND
PROFESSIONAL ENGINEERS // LAND SURVEYORS
www.thompsonfarland.com

(MAIL OFFICE) 385 COUNTY STREET, NEW BEDFORD, MASSACHUSETTS 01905
184 HIGH STREET, SUITE 502, BOSTON, MA 02210

PREPARED BY: JAC COMPTON, L.L.C.
DATE: MARCH 16, 2015

SCALE: 1" = 40'

JOB NO. 10-540

LATEST PERMITS: JULY 15, 2015

FOR REGISTRY USE ONLY

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFIDENCE WITH THE RULES AND REGULATIONS OF THE REGISTERED PROFESSIONAL ENGINEERS OF MASSACHUSETTS.

THOMAS J. FARLAND, P.E.
DATE: 7/15/2014

NEW BEDFORD PLANNING BOARD
APPROVAL UNDER THE SUBSTITUTION CONTROL LAW NOT REQUIRED

DESIGNED BY: _____
CHECKED BY: _____
DATE: _____

RECORD OWNER:
C/O HALL COMMUNICATIONS, INC.
75 DARTMOUTH STREET, SUITE 402
NEW BEDFORD, MASSACHUSETTS 01905

PLAN REFERENCES:
PLAN BOOK 137 PAGE 74
PLAN BOOK 137 PAGE 75
PLAN BOOK 39 PAGE 71

PLAN OF LAND
MACARTHUR BOULEVARD
ASSESSORS MAP 31 LOT 234
NEW BEDFORD, MASSACHUSETTS

ACTIVITY AND USE LIMITATION OPINION

RTN 4-25350

1.0 Introduction

This Licensed Site Professional (LSP) Opinion for the Notice of Activity and Use Limitation (AUL) was prepared by David B. Sherman (LSP No. 8904) on behalf of the Massachusetts Clean Energy Center (MassCEC) and N B Radio, Inc. c/o Hall Communications, for release conditions at the parcel of land located at ES R S Front Street, in New Bedford, Bristol County, Massachusetts (the Property). The MassDEP has assigned Release Tracking Number (RTN) 4-25350 to this site. The Disposal Site is comprised of 2 lots (Lot 1 and Lot 2). Lot 1 is currently owned by the MassCEC and Lot 2 is currently owned by Hall Communications and is also the location of the new radio tower. This LSP Opinion was prepared in accordance with 310 CMR 40.1074 and (1) explains why implementation of the AUL is appropriate to maintain a level of No Significant Risk at the Property (as defined in the AUL), (2) describes activities and uses prohibited in the area of the Property to be subject to the AUL, (3) identifies permitted activities and uses in the AUL area, and (4) identifies conditions or obligations for the AUL area in order to maintain a level of No Significant Risk.

The referenced parcel is part of the New Bedford Marine Commerce Terminal (Terminal) project constructed under the direction of the USEPA, by virtue of a State Enhanced Remedy provision (dated July 1, 2013) of the New Bedford Harbor Superfund Site Record of Decision, and the Final Determination for the South Terminal Project, dated November 16, 2012 and its subsequent modifications. While crafting the Final Determination, EPA:

- reviewed historic data associated with previous uses of some of the properties involved in the project;
- reviewed historic environmental investigations conducted to date on some of the properties involved in the project;
- directed the Commonwealth to conduct environmental investigations on certain properties associated with the project;
- requested proposals for environmental remediation on certain properties associated with the project, and reviewed and accepted those proposals;
- requested commitments from the MassCEC with regard to future maintenance of the existing, 3-foot engineered environmental cap on certain properties associated with the project.

EPA directly regulated the environmental investigations and proposed remediation for the New Bedford Marine Commerce Terminal project as completed by the Massachusetts Clean Energy Center (MassCEC). EPA also had an active role in regulating the investigations and proposed remediation for the project, and some aspects of the 21E/MCP process were reviewed and regulated by EPA. Additionally, various elements of MassCEC's appropriate response actions were listed in the Final Determination. The MassDEP provided an Adequately Regulated Determination for the Marine Commerce Terminal Project in a letter dated July 1, 2013, under 310 CMR 40.0110 of the Massachusetts Contingency Plan.

2.0 Property Background

Multiple environmental investigations on the property have identified elevated levels of polychlorinated biphenyls, metals (lead and cadmium) and polycyclic aromatic hydrocarbons (PAHs) in soil, likely attributed to the presence of historic urban fill emplaced along the New Bedford waterfront area. As the

northeastern portion of the site was found to contain the most elevated concentrations of contaminants in soil, an environmental engineered cap consisting of 3 feet of imported, clean engineered fill was placed over the entire footprint to Lot 1 with the upper twelve-inches comprised of an engineered dense aggregate substrate. Based on the presence of substantially lower contaminant concentrations and federal restrictions regarding the height of the new radio tower located on Lot 2, this portion of the property did not receive the 3 feet of imported clean engineered fill. The construction activity was completed as detailed in the Release Abatement Measure Plan submitted to the MassDEP in October 20, 2014.

The Terminal project involved the construction of a multi-purpose facility designed to support the construction, assembly and deployment of offshore wind projects, as well as handle bulk, break-bulk, container and large specialty marine cargo. The Terminal is a 26-acre property that was designed to serve as a staging area for various cargoes associated with the Terminal operations. From 2013 to 2015 the entire Terminal property was remediated and backfilled with a minimum of 3 feet of clean imported engineered fill. The fill material for preparing the subgrade beneath the site was either generated during the associated Terminal channel dredging or imported fill from landside aggregate facilities. The fill material was placed in lifts and compacted to bring the final grade of the Terminal property to existing street level. An eight-foot tall security fence has been installed around the perimeter of the main Terminal property. Extensive site assessment activities and remedial actions involving localized soil excavation and removal have been conducted on the property to characterize and abate impacts to underlying subsurface media. These areas were subsequently backfilled and capped with clean materials.

The Property is relatively square in shape with maximum dimensions of 390 feet by 420 feet, encompassing an area of approximately 4.40 acres. The Property is bordered by Seatrade International to the west, North Coast Seafood to the south, the former RIST, LLC parcel to the east and C.P. Brodeur, Inc. to the north. This parcel was recently subdivided in accordance with the ANR plan dated March 18, 2015. Lot 1 of Parcel A is currently owned by the Massachusetts Clean Energy Center (MassCEC). Lot 2 of Parcel A is currently owned by NB Radio, Inc.

Current site features and parcel descriptions are depicted on **Exhibit B** to this AUL.

2.1 Disposal Site Description

Parcel Name:	Former Hall Radio Tower - RTN 4-25350
Address:	ES R S Front Street
Parcel ID/Size:	Book 1536 Page 1120/ 4.40 acres (total)
Current Owner:	MassCEC Lot 1, NB Radio, Inc. Lot 2
Date Reported:	October 1, 2014
MCP Status:	Permanent Solution with Conditions

This property is currently a portion of the New Bedford Marine Commerce Terminal and is situated between Potomska Street to the north and South Front Street to the west. During subsurface investigations conducted between October 2014 and May 2016, concentrations of polychlorinated biphenyls, lead, cadmium and select PAH compounds were identified above reportable concentrations. The majority of this impact was found in the northeastern portion of Lot 1. Soil impacts in this area were excavated and

removed and 3 feet of clean, imported engineered fill was placed throughout the entire foot print of Lot 1 as an engineered environmental cap. The AUL area encompasses the entire site (Lot 1 and Lot 2) to prevent exposure to the soils.

In addition to the subsurface investigations and Release Abatement Measure (RAM) activities conducted between October 2014 and August 2016, additional remedial activities were completed over the entire New Bedford Marine Commerce Terminal Property. The remedial (RAM) activities completed at this subject property included:

- Removal of 1,876 tons of PCB, metals, total petroleum hydrocarbons and PAH impacted soil to out of state landfills under a Hazardous Waste Manifest to the Heritage Environmental Services in Roachdale, Indiana facilities;
- In accordance with the EPA's Final Determination for the South Terminal Project, soils containing concentrations of PCBs up to 50ppm were allowed to be left in place and capped as described below;
- General grading of the Disposal Site; and
- Construction of an environmental engineered cap over Lot 1 consisting of 3 feet of clean, imported engineered fill, the upper twelve-inches of which was comprised of a mixed, dense aggregate engineered layer.

3.0 Summary of the Risk Characterization

A Method 3 Risk Characterization has been prepared by Apex in anticipation of regulatory (MCP) site closure. The results of the risk characterization are the basis for the decision regarding the Permanent Solution with Conditions (PSC) for the release at the Site pursuant to 310 CMR 40.1000. A summary of the Risk Characterization is presented below.

The contaminants of concern identified at the site included, polychlorinated biphenyls (PCBs); certain polyaromatic hydrocarbons (PAHs) and certain metals (lead and cadmium).

The Terminal Property is currently a marine cargo facility that acts as a storage and staging area for marine vessels and cargo operations. Under foreseeable future conditions, receptors reasonably likely to be present on site include workers, security personnel, escorted visitors, vessel crews, trespassers, landscapers, utility workers, and construction workers. Lot 2, currently owned by Hall Communications, is occupied by a new, 600-foot tall radio tower used for transmission services for FM broadcasting. The Method 3 Risk Characterization determined that "No Significant Risk" of harm to human health exists at the Site for each receptor type considered in the risk characterization based on current and foreseeable uses. It also determined that "No Significant Risk" of harm to safety, public welfare and the environment exists at all portions of the Site. As a result of the risk characterization, an AUL is required to limit residential, and certain other construction uses of the property. In addition, due to the presence of elevated concentrations of compounds of concern in soil, the AUL includes requirements for soil management if soil intrusive work is planned to be conducted. The property is included in its entirety (Lot 1 and Lot 2) within the Disposal Site Boundary for RTN 4-25350.

4.0 Use of the AUL to Maintain a Level of No Significant Risk

As described in the Risk Characterization, a condition of No Significant Risk to human health, safety, public welfare and the environment currently exists at the Site. However, this conclusion is based on the assumption that the Property will not be used for residential purposes or for the growing of fruits or

vegetables for human consumption. This restriction is extended to limit the use of the Property as a school, daycare, nursery, recreational area (such as a park or athletic field) and/or any other use in which a child's presence is likely to be more than incidental. All other reasonably foreseeable site uses were considered. In addition, because residual contamination is present at the site, this AUL will also provide appropriate notice to future Site users to exercise appropriate caution when encountering or handling soil, and ensure that unnecessary exposures do not occur and that contaminated soils are managed appropriately.

5.0 Acceptable Activities and Uses

The AUL Opinion provides that a condition of No Significant Risk to health, safety, or public welfare exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) as long as any of the following activities and uses occur on the Property:

- (i) Commercial and industrial activities and uses which do not involve the disturbance of soil located greater than 3 feet below the ground surface within the entire footprint of Lot 1 and at or below surface grade within the entire footprint of Lot 2, as long as the Obligations and Conditions specified herein are followed;
- (ii) Any non-residential uses of the Property, including those that are currently conducted, in which a child's presence (other than incidental) is not likely;
- (iii) Short-term (6 months or less) underground utility and/or construction activities which are likely to disturb soil, provided that such activities are conducted in accordance with the soil management provisions of the Massachusetts Contingency Plan (MCP) cited at 310 CMR 40.0030 and all applicable worker health and safety practices pursuant to 310 CMR 40.0018;
- (iv) Construction or excavation activities are allowed, except as prohibited in Paragraph 6 (ii);
- (v) Such other activities or uses which, in the Opinion of a Massachusetts Licensed Site Professional ("LSP"), shall present no greater risk of harm to human health, safety, public welfare or the environment than the activities and uses set forth in this paragraph; and
- (vi) Other activities or uses of the Property not identified in Paragraph 6 as Activities and Uses Inconsistent with the AUL.

6.0 Restricted Activities and Uses

Activities and uses that are inconsistent with the objectives of this Notice of AUL, and that, if implemented at the Site, may result in a significant risk of harm to human health, safety, or public welfare, are as follows:

- (i) Use of the Property as a residence or for growing fruits or vegetables for human consumption, as a school, daycare, nursery, recreational area (such as a park or athletic field), and/or any other use in which a child's presence (other than incidental) is likely;
- (ii) Any long-term (greater than 6 months) activity at the Property that is reasonably likely to result in the excavation greater than 3 feet below grade within the entire footprint of Lot 1 or excavation at or below surface grade within the entire footprint of Lot 2, relocation or removal of the contaminated soil, unless such activity is first evaluated by an LSP who renders an Opinion stating that such activity is consistent

with maintaining a condition of No Significant Risk and that such activity is conducted in accordance with Obligations (1) and (2), set forth below; and

- (iii) Any excavation activity which may disturb the soil located at a depth greater than 3 feet below ground surface within the entire footprint of Lot 1 and/or disturbance of soil located at or below surface grade within the entire footprint of Lot 2 AUL area, without prior development and implementation of a Soil Management Plan and a Health and Safety Plan in accordance with Obligations (i) and (ii) of this Notice.

7.0 Obligations for the AUL Area

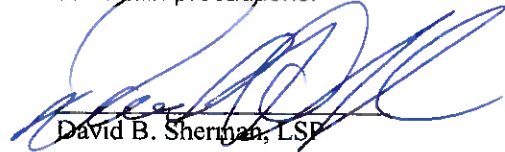
If applicable, obligations and/or conditions to be undertaken and/or maintained at the Site to maintain a condition of No Significant Risk, as set forth in the AUL Opinion, shall include the following:

1. Any long-term (greater than 6 months) activity at or use of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a **Health and Safety Plan** under the guidance of an LSP. At a minimum, the Health and Safety Plan must inform underground utility workers and other workers who may come into contact with soil in the AUL area of (1) the nature and hazards of the contaminants identified in the soil, (2) potential exposure routes, (3) measures to prevent exposure, (4) protective clothing requirements, and (5) any other health and safety measures appropriate for the activity or use;
2. Any long-term (greater than 6 months) activity at or use of the Property that is reasonably likely to result in the excavation, relocation, or removal of the contaminated soil requires preparation and implementation of a written **Soil Management Plan** under the guidance of an LSP. At a minimum, the Soil Management Plan must (1) describe the soil excavation and stockpile storage methods that will be used to prevent accidental exposure to the excavated soil, including indirect exposure via surface water runoff or fugitive dust emissions, (2) contain procedures to limit access to the excavated soil and the excavation area by Property workers not covered by the Health and Safety Plan, children, Property abutters, or accidental trespassers, (3) contain procedures for characterizing, transporting and recycling/disposing excavated soil, and (4) provide for the restoration of the excavated area as soon as practicable; and
3. Any soil removed from the Property, other than the clean overburden and backfill, must be characterized and disposed of in accordance with federal, state and local regulations, including the MCP 310 CMR 40.0000.
4. The engineered environmental cap constructed within the entire footprint of Lot 1 must be regularly inspected, maintained, repaired and/or replaced with a comparable cap to prevent future exposure to underlying contaminated soil immediately following the completion of any activity that involves its removal and/or disturbance.
5. The engineered environmental cap constructed over Lot 1 shall consist of at least 3 feet of clean engineered fill material such as Dense Graded Aggregate or an engineer and LSP approved equal, or 6 inches of pavement or a building.

8.0 Summary and Conclusions

This LSP Opinion has been prepared for implementation of a Notice of AUL for a release at the ES R S Front Street Property, (Registry of Deeds Book 1536, Page 1120) in New Bedford, Bristol County, Massachusetts. A Method 3 Risk Characterization indicates that restrictions on activities and uses of this Property are required to maintain a condition of No Significant Risk to human health, safety or public welfare. In general, use of the Property for residential purposes, growing fruits or vegetables for human consumption, or any other use in which a child 's presence (other than incidental) is likely, are to be limited as set forth in Section 6.0. In addition, activities and uses that may result in the excavation, relocation, or removal of contaminated soil at the Property may be permitted with certain precautions.

Date: 9/16/2019



David B. Sherman, LSP

LSP Seal:



SECTION 01000

BIDDING SCHEDULE

NOTE: SECTION 01000 - BIDDING SCHEDULE MUST BE SUBMITTED
(ALONG WITH DIVISION 00 - SECTION 00400 - BID FORM) VIA EMAIL to Tim Griffin
email: NBMCT_OPS@MassCEC.com

PART 1 GENERAL

1.1 INSTRUCTIONS

The bidder shall submit the following information as listed below:

1. Complete all information to be provided by bidders as described in Section 00200 INSTRUCTIONS TO BIDDERS.
2. Submit all forms included in Section 00400 BID FORM.
3. Provide the additional information requested below.

1.2 ADDITIONAL INFORMATION

The following information is to be submitted with the bid (see also Section 00200 INSTRUCTION TO BIDDERS):

- A. Contractor Qualifications and Experience as per Article 32 of Section 00200 Instructions to Bidders:
 1. Experience summary of firm including details of representative projects specifically including preparation and installation of similar specified products in a similarly situated facility including the total number and type along with overall construction cost and date of completion. Provide any other ancillary information relative to overall firm qualifications specific to the work contemplated within this project.
 2. Qualifications of personnel assigned to this project, if awarded to your company.
 3. All other qualification and experience information required in Section 00200, with written references.

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

The "Work" or "work" that is required by this Contract is set forth in the following documents:

A. Technical specifications titled:

NEW BEDFORD MARINE COMMERCE TERMINAL: DRAINAGE AND GRADING MAINTENANCE: CONTRACT NO. MACEC-FY24-01

B. Contract Drawings titled:

- 1 OF 6 C
- 2 OF 6 EL-1
- 3 OF 6 PG-1
- 4 OF 6 PG-2
- 5 OF 6 PG-3
- 6 OF 6 XC-1

Bid addenda shall take precedence over specifications and Contract Drawings. Contract Drawings shall take precedence over specifications, except where noted in the Contract Drawings.

The Contractor shall furnish all supervision, plant, labor, equipment, appliances and materials, and carry out all operations, including monitoring and other field engineering, as necessary to accomplish the Work, complete. The Contractor shall perform the Work in strict accordance with these specifications and the contract drawings, and subject to the terms and conditions of the Contract and all applicable permits, certifications, codes and regulations and in accordance with the schedules for completion set forth herein.

1.1.1 General Description of the Work

The general description below is given to indicate the approximate scope of this project only. It does not limit the work required under the project drawings and specifications. For reference, the word "Site" shall mean the Marine Commerce Terminal, in New Bedford, MA.

The Work of this project consists of several activities associated with maintenance of stormwater management systems and the Terminal wearing surface. The activities are to be performed in the Summer of 2024.

More specifically, the project involves several activities relating to the maintenance of stormwater management systems such as: removing silt from the surface of infiltration trenches, grading drive access ways to slope towards drainage trenches, and cleaning of a catch basin; and the Terminal wearing surface such as: installing crushed stone for heavy vehicle traffic access way and installation of an anti-tracking pad. All work is at the Terminal and is to be performed in the Summer of 2024 (the "Project"). A more detailed breakdown of individual tasks can be found in 01025 MEASUREMENT AND PAYMENT.

1.1.2 Quantity Determination and Breakdown

A quantity breakdown of estimated volumes of material is estimated and included in Section 004100 BID FORM. This breakdown is furnished to show the approximate distribution of material to be used only and shall not otherwise be used to calculate payment.

1.2 SUBMITTALS

The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES:

Progress Schedule:

The Contractor shall, within five (5) days after receipt of notice to proceed or as otherwise determined by the Owner's Representative, submit for approval a progress schedule. If changes are authorized that result in contract time changes, the Contractor shall submit a modified chart for approval by the Owner's Representative.

1.3 PROJECT/SITE CONDITIONS

1.3.1 Physical Data

Data and information furnished or referred to below is for the Contractor's information. Neither the Owner nor the Engineer shall be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

- A. Site Conditions: The indications of physical conditions on the drawings and in the specifications are the result of limited site investigations and surveys. The conditions represented prevailed at the time the investigations and surveys were made. Before commencing work at the Site, the Contractor shall verify the conditions indicated on the existing conditions plan, drawings and in the specifications and perform all other surveys as needed or as required in the contract documents.
- B. Weather Conditions: The monthly normal mean temperature and the monthly normal mean precipitation for the site may be obtained by the Contractor from the nearest U.S. National Weather Service Office.
- C. Transportation: The Contractor shall make his own investigation on the use of municipal, State and Federal highways, roads, bridges, railroads and water transport. Absent Contractor's objection, all such infrastructure shall be deemed sufficient to accomplish the work as set forth herein.

1.4 SEQUENCING AND SCHEDULING

1.4.1 Mandatory Schedule Milestone

A Project schedule must be prepared and submitted by the Contractor with the bid. The following Mandatory Schedule Milestone must be included in the overall schedule.

- A. Substantial Completion 60 days from notice to proceed.

1.4.2 Hours of Operations

The Contractor will be allowed to perform operations from 7 PM to 6 AM, seven (7) days per week, including holidays. The Contractor may request written permission from the Owner and Lessee to expand these operations. Refer to other sections of these specifications for environmental requirements and for temporary suspension of the work, if required.

1.4.3 Organization at the Site

1.4.3.1 General

The Contractor shall employ ample personnel and sufficient equipment to accomplish the Work within the timeframes specified herein.

1.4.3.2 Work Limits

The work shall be restricted to the areas as shown on the contract drawings.

1.5 COORDINATION

Numerous businesses and government agencies have activities within or near the project area. The Contractor is required to coordinate its activities with the appropriate authorities and affected parties.

NOTE: The Terminal is fully occupied by a lessee and all Work shall be coordinated with MassCEC to minimize disruptions to their onsite activities. Bidders shall assume all work will be performed outside of normal working hours between the hours of 7 PM and 6 AM seven (7) days per week. The availability of work to occur during the daytime on weekends is subject to authorization by the lessee and MassCEC.

In addition, the Owner's representative will coordinate with the City of New Bedford's Conservation Agent, and the contractor will comply with any requirements from the Conservation Agent.

The Owner may, from time to time, contract with an outside firm to conduct work on the site that is outside of the scope of this Project. The Owner will give the Contractor at least 48 hours notice prior to the arrival of any firm hired to conduct work at the site. The Contractor shall coordinate its activities as appropriate. Coordination of its activities with an outside firm shall not be a basis for a change in price or schedule for the Work.

1.6 SECURITY

1.6.1 Equipment Security

The Contractor will be responsible for security of plant and equipment while that equipment is onsite. This includes 24-hour security for all equipment, The security measures required include:

- A. Lighting must also meet OSHA requirements for safe working conditions and safe egress;
- B. At all times, the Contractor is responsible to ensure that public access to the site and related equipment is precluded, except for authorized personnel.

1.6.2 Electronic Security

The Contractor shall implement and maintain such security measures and programs so as to protect its own electronic data and that of Owner's and Owner's Representative or Engineer during the course of the Project. Upon receipt of Owner's written request, the Contractor shall provide the Owner and the Engineer or Owner's Representative with a complete written description of its information technology systems including any and all security measures that it employs in the operation and maintenance of such systems. The Contractor, upon receipt of Owner's written request, shall provide reasonable access to its information technology systems to allow Owner's staff, consultants, agents or designees the opportunity to inspect and audit the Contractor's systems.

1.6.3 Site Access

The Contractor shall comply with the Terminal's Facility Security Officer and its operations in accordance with the Marine Commerce Terminal Facility Security Plan approved by the United States Coast Guard. Additional access requirements include Vineyard Wind and GE Vernova site inductions. Links for the inductions will be provided to the Contractor after receipt of Notice to Proceed. Transportation Worker Identification Credential (TWIC) are required for unescorted access to the Terminal. Individuals with a TWIC can escort up to five (5) individuals' side by side.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUBMITTALS

The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES:

1.2 LUMP SUM PAYMENT ITEMS

Payment items for the Work for which contract lump sum payments will be made are listed in Section 00400 BID FORM and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full and final compensation for furnishing all supervision, plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.3 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in Section 00400 BID FORM and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all supervision, plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items.

1.4 BIDDING SCHEDULE: BASE BID ITEMS

Payment Items for the work of this contract on which the contract progress payments will be based are listed in Section 00400 BID FORM and are described below. All costs for items of work, which are not specifically mentioned to be included in a particular Bidding Schedule payment item, shall be included in the listed item most closely associated with the work involved.

1.4.1 Base Bid Item No. 0001, "Mobilization and Demobilization"

A. Mobilization and demobilization will be measured as the lump sum to include compensation for project preparations, procurement and assembly off all equipment, materials, supplies and labor and bonds required for the prosecution of the work not otherwise included in other pay items and upon completion of the work as specified and directed, the clean-up of the work areas, removal of equipment, materials and supplies from the work area. Payment will be made for

costs associated with mobilization and demobilization for operations including all incidental work described in the specifications and contract documents. Mobilization shall include the completion of pre-construction submittals, placement and transportation of all equipment to the site, support equipment purchases of materials needed for construction, temporary facilities, and construction of environmental controls.

Demobilization shall include complete restoration of all areas disturbed by the Contractor's operations to their pre-construction conditions, submittal of a complete set of record "as-built" drawings and removal of all equipment and temporary construction facilities from the site.

- B. 60% of the lump sum price for mobilization/demobilization unit will be paid to the Contractor upon completion of his mobilization. 30% will be paid upon completion of demobilization and the remaining 10% will be paid upon submission of accepted As-Built drawings for the project. Payment for this item will be limited to 5% of the Total Contract Price or the Sub-Total of the Base Bid Items, whichever is lower. In the event that the Owner considers the lump sum price for the bid item does not bear a reasonable relationship to the cost of the work in this contract, the Owner may require the Contractor to produce cost data to justify the price bid to the satisfaction of the Owner. If the Contractor fails to substantiate the price bid, then payment will be made for actual mobilization and demobilization costs as determined by the Owner. Payment for this item will be considered full compensation for all labor, materials, off-site disposal, and other fees, equipment, supervision, and supplies required for the work. Payment for this item shall be made on the percentage of lump sum of work completed, as determined by the Engineer.
- C. Payment for this item shall include all costs in connection to all preparatory actions associated with work designated on plans including but not limited to: obtaining any necessary permits and approvals not already in place for the work specified in accordance with the Contract, full reimbursement for the premiums actually paid for performance and payment bonds, all costs connected with the mobilization of the Contractor's equipment, coordination, submittals; materials and equipment furnished for this project moving the Contractor's equipment to the site; accomplishing the work required by the Permits with respect to protection of the environment; and the coordination with the regulatory agencies.
- D. If for any other reason, the Contractor must shut down and remove his equipment from the site, then remobilize, Owners will not be responsible for payment of additional costs associated with such work. Demobilization shall include general preparation for transfer of equipment to its home base, removal of equipment, and environmental restoration as required from construction, earthwork, and utility construction.

E. Unit of measure: Lump Sum

1.4.2 Base Bid Item No. 0002A, "Infiltration Trench Maintenance"

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

- A. Within the Main Terminal property as shown on plans: The contract price per cubic yard for this item shall include Infiltration trench Maintenance.
- B. This item includes all onsite work not covered within another Base Bid Item. Costs include, but are not limited to:

- 1. Excavation of the existing stone infiltration trenches within the target area to a minimum of 6", or to the end of the siltation, as determined by the field engineer. Excavation to be limited to the stone trench, and every effort to be made to avoid excavation of surrounding dense graded aggregate.
- 2. Excavated crushed stone shall be removed. Initial volume of stone shall be placed within sinkhole at 4 Wright Street (see Task 3 below) and the remainder stockpiled on the neighboring 18 Wright Street Parcel within a sedimentation control set up.
- 3. Stockpiling may require the removal of existing chain link fabric and replacement with temporary fencing.
- 4. Excavated drainage trench areas will be backfilled with double washed 1-1/2" crushed stone.

C. Unit of measure: Cubic Yard (C.Y.).

1.4.3 Base Bid Item No. 0002B, "Crushed Stone Access Way"

- A. Within the Main Terminal as shown on plans: The contract price per cubic yard for this item shall include Construction of the crushed stone access way in an area of approximately 350 ft long x 24 ft wide.
- B. This item includes all onsite work not covered within another Base Bid Item. Costs include, but are not limited to:

- 1. Roller compact the area of proposed roadway and then lay down Mirafi HP270 geotextile fabric that extends behind the width of the roadway. Where seams are required the fabric shall overlap a minimum of 12 inches.
- 2. Place a minimum of 3 inches of ¾" crushed bluestone to a width of 24 ft over the geotextile. Stone shall be blended down to meet surrounding grades on all sides.

C. Unit of measure: Cubic Yard (C.Y.).

1.4.4 Optional Bid Item No. 0002C, "Limited grading"

- A. Within the Main Terminal as shown on plans: The contract price per cubic yard for this item shall include performing micro-grading to create mini-catchment areas.
- B. This item includes all onsite work not covered within another Base Bid Item. Costs include, but are not limited to:

- 1. Placement of dense graded aggregate, meeting material specification of MassDOT M2.01.7 to the grades shown on the contract drawings.
- 2. Dense graded aggregate shall be heavy roller compacted with a 10-ton drum weight.

C. Unit of measure: Cubic Yard (C.Y.).

1.4.5 Base Bid Item No. 0003, "Access Travel way Implementation along southern heavy lift border"

- A. Within the Main Terminal as shown on plans: The contract price per cubic yard for this item shall include implementing travel way along southern heavy lift border to create more positive drainage in the area.
- B. This item includes all onsite work not covered within another Base Bid Item. Costs include, but are not limited to:
 - 1. Mobilization to the site with all of the equipment, materials and personnel necessary to perform the work needed.
 - 2. Once the work is sufficient dry, grade and compact in place existing 12 foot wide area along the timber border that delineates the edge of the heavy lift area.
 - 3. Place woven geotextile Mirafi HP270 in place of the proposed roadway over the recently compact work area.
 - 4. Place 3/4" double washed crushed stone over the filter fabric up to the surrounding grades, superelevated from north to south.
 - 5. Excavate out crushed stone swale trenches in between existing office trailers, with micro grading to the south.
- C. Unit of measure: Cubic Yard (C.Y.).

1.4.6 Base Bid Item No. 0004, "Sinkhole filling"

- A. Within the Main Terminal as shown on plans: The contract price shall be lump sum for this item shall include all cost of the Sinkhole filling.
- B. This item includes all onsite work not covered within another Base Bid Item. Costs include, but are not limited to:
 - 1. Mobilization to the site with all of the equipment, materials and personnel necessary to perform the work needed.
 - 2. Saw cut asphalt minimum of one foot around perimeter of exposed sinkhole such that there is no remaining undermining of the asphalt.
 - 3. Place the crushed stone that was excavated in Task 1 into the sinkhole that has formed along the Shuster bulkhead at 4 Wright Street.
 - 4. Stone shall be placed and graded to minimize voids and bring stone to meet grades with surrounding asphalt.
- C. Unit of measure: Lump Sum (L.S.).

1.4.7 Base Bid Item No. 0005, "Storm Drain Cleaning"

- A. Within the Main Terminal as shown on plans: The contract price per Each item shall include all cost of the Storm Drain Cleaning.
- B. This item includes all onsite work not covered within another Base Bid Item. Costs include, but are not limited to:

NEW BEDFORD MARINE COMMERCE TERMINAL DRAINAGE AND GRADING MAINTENANCE

1. Where possible, work upstream to downstream if catch basins are tributary to the same system.
2. Clean sediment and trash off grate and/or inlet (if one exists).
3. Determine the most appropriate equipment and method for cleaning each catch basin/ drain manhole, either items i, ii, or iii below.
 - i. Manually use a shovel to remove accumulated sediments.
 - ii. Use a bucket loader/clamshell to remove accumulated sediments.
 - iii. Use a high-pressure washer to clean any remaining material out of manhole while capturing the slurry with a vacuum.
 - iv. If necessary, after the manhole is clean, use the jetter of the vacuum truck to clean downstream pipe and pull back sediment that might have entered downstream pipe.
 - v. Record the total volume of debris removed from the manhole.

C. Dispose of catch basin cleanings in accordance with DEP policies including 310 CMR 19.00: Solid Waste Management Facility Regulations, refer to Management of Catch Basin Cleanings found at the following link: <https://www.mass.gov/doc/catch-basin-cleanings-management-guidelines/download>

D. Unit of measure: EA (Each).

1.4.8 Base Bid Item No. 0006, "Anti Tracking Pad"

A. Within the Main property as shown on plans: The contract price shall be lump sum for this item shall include all cost of the Anti Tracking Pad.

B. This item includes all onsite work not covered within another Base Bid Item. Costs include, but are not limited to:

1. Mobilization to the site with all the equipment, materials and personnel necessary to perform the work needed.
2. Construct an Anti-Tracking Pad to mitigate soil and sediment tracked off site as shown on the project plans.

A. Unit of measure: Lump Sum (L.S.).

PRODUCTS (NOT USED)

EXECUTION (NOT USED)

-- End of Section --

SECTION 01050

FIELD ENGINEERING

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Engineering Services

The Contractor shall provide and pay for field engineering services required for the project, including:

- A. Survey work required in execution of this project, including land surveys, except for surveys performed by the Owner's Representative as indicated in these specifications.
- B. Civil, geotechnical, structural or other professional engineering services specified, or required to execute Contractor's construction methods.

1.1.2 Existing Control Points

The Owner's Representative will identify existing control points as required.

1.1.3 Survey Datum

Some of the contract drawings refer to National Geodetic Vertical Datum (NGVD) and some contract drawings refer to Mean Lower Low Water (MLLW). The elevation of some benchmarks within the harbor will be in NGVD 29 and some benchmarks will be in NAVD 88. In all cases, the Contractor shall determine the elevation of any datum or benchmark in NAVD 88, and shall convert that elevation to Mean Lower Low Water (MLLW). The Contractor shall (and the Owner will) then base all elevations when performing land surveys in MLLW.

1.2 SUBMITTALS

The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES:

Field Data:

Submit sufficient field data electronically and at a minimum include either (1) X, Y, and Z ASCII files containing Easting, Northing, and true Elevations and any field survey notes specific to the collection of and the QA/QC of field data acquired.

Survey Data:

Submit all quality control survey data and plots As built Plots shall be submitted no more than 7 days after completion of field work.

Survey Personnel:

Furnish a complete listing of the personnel who will perform the survey work required by the contract. The listing shall include a brief summary of the land and/or hydrographic survey experience of each person. The list shall be submitted prior to the preconstruction conference.

Survey Plans:

Submit survey plans specified below. Field surveys shall not begin until these plans are approved.

1.3 EXAMINATION

1.3.1 Examination of Site and Verification of Conditions

- A. Before starting operations, the Contractor shall examine site to become acquainted with conditions to be encountered.
- B. The Contractor shall verify exact locations of all above and below ground and submerged utilities including sewers, water mains, gas mains, telephone/communications lines, above or below ground and submerged electrical wires, other utilities, conduits and structures which may interfere with work.

1.3.2 Utility Company Contacts

The names area utility companies are included in Section 00800 Supplementary Conditions. Additional utility companies, appurtenances, and municipal and private utilities may be present in the work areas. It is the Contractor's sole responsibility to conduct its own due diligence concerning the presence of utilities within the work area, and to protect all utilities from damage (of any kind) as a result of any of the Contractor's activities. The Contractor is responsible to contact Digsafe prior to the start of any on site work of any kind and to implement all necessary and appropriate safeguards to prevent damage or disturbance to buried utilities and appurtenances.

1.4 EASEMENTS AND RIGHTS-OF-WAY

- A. Easements and rights-of-way reasonably necessary for performance of the work, unless otherwise specified herein, will be provided by the Owner.
- B. The Contractor shall confine construction operations within limits indicated on drawings and/or within limits of approved easements or public ways.
- C. The Contractor shall place construction tools, equipment, materials and supplies, so as to cause least possible damage to property and interference with traffic.

1.5 LAYOUT OF WORK

- A. The Owner's Representative will furnish one control point to the Contractor. The Contractor must supply additional control points

as may be required in the performance of the Work. The Contractor shall ensure that all additional control points are tied into at least three known fixed points and located within the Contractor's survey book.

- B. From these control points the Contractor shall lay out the work by establishing all lines and grades at the site necessary to control the work and shall be responsible for all measurements that may be required for the execution of the work as prescribed in the specifications and/or shown on the contract drawings. The Contractor shall place and establish such stakes and markers as may be necessary for control and guidance of his operations. All survey data shall be recorded in accordance with standard and approved methods. All field notes, sketches, recordings and computations made by the Contractor shall be available at all times during the progress of the work for ready examination by the Owner's Representative.
- C. The Contractor shall furnish, at his own expense, all such stakes, spikes, steel pins, templates, platforms, equipment, tools and material and all labor as may be required in laying out any part of the work from the control point established by the Owner. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other markers established by him until authorized to remove them. If the control point(s) established at the site by the Owner are destroyed by or through the activities of the Contractor (prior to their authorized removal), said point shall be replaced by the Owner or the Owner's Representative. The expense of replacement will be deducted from any amount due or which may become due the Contractor. The Owner's Representative may require work be suspended at any time when horizontal and vertical control points established at the site by the Contractor are not reasonably adequate to permit checking the work. Such suspension will be withdrawn upon proper replacement of the control points.

1.6 CONTRACTOR SURVEYS

1.6.1 Personnel

The Contractor survey work to be performed under this contract shall be accomplished by, reviewed and approved by survey personnel familiar with and having personal experience with land and surveys, as appropriate.

1.6.2 Survey Plans

Prior to the start of any work at the site, the Contractor shall prepare a plan describing the survey method(s) to be used:

1. to complete the layout and sequencing of the work
2. to conduct the progress surveys
3. to conduct the quality control surveys

1.6.3 Quality Control Surveys

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The Contractor shall examine their work by conducting surveys whenever progress payments are requested by the Contractor, upon completion of separable portions of the work, and upon completion of the entire work. The Contractor shall prepare survey maps based on the results of these surveys. These maps shall be used, by the Contractor, to satisfy himself of the effectiveness of his operations.

The Contractor shall forward a copy of such survey (or electronic data representative of the soundings collected during these surveys) to the Owners' Representative. Submit sufficient field data electronically and at a minimum include either (1) X, Y, and Z ASCII files containing Easting, Northing, and true Elevations and any field survey notes specific to the collection of and the QA/QC of field data acquired. The files shall be positioned on state plane coordinates, NAD83 Massachusetts Mainland Zone 2001 and vertical datum referenced to New Bedford / Fairhaven Harbor MLLW.

1.6.4 Method of Surveying

1.6.4.1 Land Survey Elevations

To assure that the method of surveying is acceptable, the Contractor shall submit a detailed survey plan setting out the proposed method of surveying. Elevations shall be referenced to Mean Lower Low Water (MLLW) and shall be performed with survey equipment having a vertical accuracy of +/- 0.10 foot.

Control points used for the surveys shall be occupied and proven by checking reference angles in the field.

The Contractor will be required to submit to the Owner's Representative sufficient field data, including X, Y, and Z locations in a usable format, so that the Contractor's submitted survey plot may be reproduced by the Owner by referring only to this field data.

After completion of the Contractor's survey, the results will be plotted and reviewed by the Contractor to ensure that all work was completed in accordance with contract requirements and submitted to the Owner's Representative on a CD-ROM, DVD-ROM or by electronic transfer in digital ASCII format. If deficiencies are noted, a re-survey of the area after correction of deficiencies will be required to assure that correction has been achieved. Upon completion of the project, sufficient surveys will have been performed and plots submitted to assure that the proper grade has been achieved throughout the entire project.

Submission of all Contractor quality control survey data, including plots, is required prior to performance of final examination and acceptance surveys by the Owner. The results of quality control survey should be utilized by the Contractor to ensure that work was performed in accordance with contract requirements. Final acceptance by the Owner's Representative will be in accordance with SECTION 01025 MEASUREMENT AND PAYMENT of these specifications.

1.7 FINAL EXAMINATION AND ACCEPTANCE

1.7.1 Final Examination

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As soon as practicable after the completion of the entire Work, or completion of pre-approved acceptance sections and after examination by the Contractor of the entire work area, the work will be thoroughly examined by the Owner's Representative. Examinations by the Owner's Representative will be made at the expense of the Owner.

Should any survey positions or elevations be found to not meet the final positions or elevations noted on the contract drawings within areas above or below Mean Lower Low Water by this examination, the Contractor shall remove the misplaced works, restore the area to pre-installation conditions, and install the works in the specified location, at no additional fee, as directed by the Owner's Representative.

The Contractor or his authorized representative will be notified when positions and elevations are to be taken. One individual will be allowed to accompany the survey party during the final examination survey(s). When the area is found to be satisfactorily cleared, it will be accepted finally. Should more than one final examination survey of an area be required, the cost of all additional surveys of that area will be deducted from amounts due or to become due the Contractor. These survey costs will be based upon a rate of \$7,000.00 per day for each day in which the Owner's Representative is engaged in conducting surveys, and/or is en route to or from the site, or held at or near the site for such operations.

1.7.2 Final Acceptance

Final acceptance of the whole or any part of the Work, and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud, or obvious error.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 01300

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

This section specifies the general methods and requirements of submissions applicable to the following work-related submittals.

1. Product Data
2. Planning Documents
3. Equipment Specifications
4. Progress Schedules
5. Construction Photographs

Detailed submittal requirements are specified in the technical specifications section.

1.3 SUBMITTALS

Submittal Register:

The Contractor shall provide a complete list of all submittals included in the technical specifications for use as a submittal register to track the dates for submission, comment, resubmission and final acceptance of the project submittals.

1.4 CONTRACTOR'S RESPONSIBILITIES

The Contractor shall review product data, including those by subcontractors, prior to submission to determine and verify the following.

1. Field measurements
2. Field construction criteria
3. Catalog numbers and similar data
4. Conformance with the Specifications

- A. Each submittal shall have affixed to it the following Certification Statement including the Contractor's Company name and signed by the Contractor. Certification Statement: "By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data, and I have checked and coordinated each item with other applicable approved submittals and all Contract requirements." Submittals and product data sheets 11-in X 17-in and smaller shall be bound together in an orderly fashion and bear the above Certification

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Statement on the cover sheet. The cover sheet shall fully describe the packaged data and include a listing of all items within the package. Provide to the Owner's Representative a copy of each submittal transmittal form for product data and samples at the time of submittal of said product data and samples to the Owner's Representative.

1. Submittals received "WITHOUT" Certification Statement shall not be reviewed.
- B. If a submittal shows any deviation from the requirements of the Contract Documents, the Contractor shall make specific mention of the deviations in the Transmittal Form furnished by the Owner's Representative and provide a description of the deviations in a letter attached to the submittal.
- C. The review and acceptance of samples or product data by the Owner's Representative shall not relieve the Contractor from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor and the Owner's Representative will not have responsibility therefore.
- D. No portion of the work requiring a submittal shall be started nor shall any materials be fabricated, placed or installed prior to the acceptance or qualified acceptance of such item. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to accepted submittals and data shall be at the Contractor's risk. The Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.
- E. Project work, materials, fabrication, and installation shall conform with approved applicable samples and product data.
 1. Manufacturer's printed installation instructions, a part of product data submitted to the Owner's Representative will not be reviewed and are for informational purposes only.

1.5 SUBMISSION REQUIREMENTS

Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the Work or in the work of any other contractor.

- A. All complete submittals shall be submitted sufficiently in advance of construction requirements to provide no less than five (5) days, excluding Saturdays, Sundays and legal holidays for review from the time received at the Owner's Representative's reviewing office. For submittals of major equipment, that require more than five (5) days to review, due to its sheer complexity and amount of detail and also requiring review by more than one engineering discipline, a letter will be sent by the Owner's Representative or his/her designee to the Contractor informing him/her of the circumstances and the date it is expected the submittal will be returned to the Contractor.

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1.5.1 Number of submittals required

- A. Shop Drawings: Unless otherwise stated in the respective Specifications Sections, submit three (3) copies.
- B. Product Data: Unless otherwise stated in the respective Specifications submit three (3) copies.

1.5.2 Submittal Content

- A. The date of submission and the dates of any previous submissions.
- B. The Project title and number.
- C. Contractor identification.
- D. The names of:
 - 1. Contractor
 - 2. Supplier
 - 3. Manufacturer
- E. Identification of the product, with the specification section number, page and paragraph(s)
- F. Field dimensions, clearly identified as such.
- G. Relation to adjacent or critical features of the Work or materials.
- H. Applicable standards, such as ASTM or Federal Specification numbers.
- I. Identification of deviations from Contract Documents.
- J. Identification of revisions on resubmittals.
- K. An 8-in. X 3-in blank space for Contractor and Owner's Representative stamps.
- L. Each shipment of drawings shall be accompanied by a transmittal form furnished by the Owner's Representative giving a list of the drawing numbers and the names mentioned above.

1.6 REVIEW OF SHOP DRAWINGS, PRODUCT DATA, WORKING DRAWINGS AND SAMPLES

- A. The Owner's Representative's review is for general conformance with the design concept and contract drawings. Markings or comments shall not be construed as relieving the Contractor from compliance with the contract plans and specifications or from departures therefrom. The Contractor remains responsible for details and accuracy, for coordinating the work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner.
- B. The review of shop drawings, data, and samples will be general.

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They shall not be construed:

1. as permitting any departure from the Contract requirements,
 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials,
 3. as approving departures from details furnished by the Owner's Representative, except as otherwise provided herein.
- C. If the shop drawings, data or samples as submitted describe variations and show a departure from the Contract requirement which the Owner's Representative finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Owner's Representative may return the reviewed drawings without noting an exception.
- D. One (maximum) copy of shop drawings or product data will be returned to the Contractor.
- E. Submittals will be returned to the Contractor under one of the action codes indicated and defined on the transmittal form furnished by the Owner's Representative.
- F. Resubmittals will be handled in the same manner as first submittals. The Contractor shall direct specific attention, in writing, on the letter of transmittal and on resubmitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the Owner's Representative, on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the Contractor. The Contractor shall make corrections to any work done because of this type revision that is not in accordance to the Contract Documents as may be required by the Owner's Representative.
- G. Partial submittals may not be reviewed. The Owner's Representative will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the Contractor, and will be considered "Rejected" until resubmitted. The Owner's Representative may at his option provide a list or mark the submittal directing the Contractor to the areas that are incomplete.
- H. If the Contractor considers any correction indicated on the shop drawings to constitute a change to the Contract Documents the Contractor shall give written notice thereof to the Owner's Representative at least seven working days prior to release for manufacture.
- I. When the shop drawings have been completed to the satisfaction of the Owner's Representative, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Owner's Representative.

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1.7 GENERAL PROCEDURES FOR SUBMITTALS

1.7.1 Coordination of Submittal Times

Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work sections of the Specifications so that the installation will not be delayed by processing times including disapproval resubmittal (if required), coordination with other submittals, inspection, testing (off-site and on-site), purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the Work.

1.8 CERTIFICATION FORMS

If specified in other sections of these Specifications, the Contractor shall submit the applicable certification form for each item required, and in the form attached to this section completely filled in and stamped.

1.9 PRECONSTRUCTION SUBMITTALS

At a minimum, the following submittals shall be provided in sufficient time to support the scheduled date for mobilization:

- A. Certificates of insurance.
- B. Surety bonds.
- C. List of proposed subcontractors.
- D. List of proposed products and equipment. This includes, but is not limited to, the detailed requirements and items including, but not limited to materials and methods as set forth in the project plans and specifications.
- E. Construction progress schedule.
- F. Submittal register.
- G. All planning documents referenced in other sections, including, but not limited to:
 - 1. Field Data, Survey Data, Survey Personnel, and Survey Plans as described in Section 01050 FIELD ENGINEERING
 - 2. Detailed Construction Progress Schedule as described in Section 01310 CONSTRUCTION PROGRESS SCHEDULES
 - 3. Environmental Protection Plan as described in Section 01355 ENVIRONMENTAL PROTECTION
 - 4. Equipment including applicable inspections and certification as described in Section 01600 PLANT AND EQUIPMENT
 - 5. Health and Safety Plan as described in Section 01900 GENERAL SAFETY REQUIREMENTS

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-- End of Section --

SECTION 01310

CONSTRUCTION PROGRESS SCHEDULES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division I Specification Sections, apply to this section.

1.2 SUMMARY

- A. Contractor shall prepare and submit to Owner's Representative for review and approval within fifteen (15) days after the date of execution of the Contract the following:
 - 1. A practicable and feasible schedule, on a bar-chart form in Microsoft Project or similar format, showing the order in which the Contractor proposes to carry on the salient components of the Work, the dollar value of each respective component of the Work, the dates on which the Contractor will start each, and the contemplated dates for completing the same, and a projection of each month's pay requisition, such schedule to be prepared in a manner prescribed by the Engineer based on money values of the various items of Work;
 - 2. The scheduling of the Work shall be by the Critical Path Method at the expense of the Contractor; and
 - 3. A written chronological statement of the order in which the Contractor proposes to perform the salient components of the Work, indicating in detail the date of starting work on each such component and the contemplated completion date for each.

The above bar-chart schedule and chronological statement shall be compatible in all respects, and shall be consistent with all Contract requirements. It will be reviewed for reasonableness and conformity with the Contract and upon approval by the Engineer will be used to evaluate general job progress and to forecast periodic pay estimate requirements. The Engineer shall designate the salient components of the Work to appear on such schedule and statement.

No physical construction work shall be performed on the Work site until the above schedule and statement have been submitted in proper form and have been approved by the Engineer, and MassCEC shall not be liable for any delays or increased costs to the Contractor resulting from the Contractor's failure to meet this requirement. Prompt review will be made of any proposed schedule and chronological statement submitted by the Contractor. Prior to the Engineer's approval thereof, the Contractor may commence all aspects of the Work other than physical construction work at

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the site, including but not limited to the placing of material orders, preparation of shop drawings, making of field survey layouts, assembly of equipment, and other work in preparation for the commencement of physical construction at the site.

- B. If in the opinion of the Engineer, the Contractor's operations have been or will be materially affected by changes in the Plans or in the amount of Work, or if the Contractor's performance has materially failed to conform to the approved schedule and chronological statement, the Contractor shall, upon request by the Engineer, submit to the Engineer within ten (10) days after such request, for his/her approval, a revised schedule and chronological statement of the types specified above, which shall indicate how the Contractor proposes to prosecute the balance of the Work.

Approval of any such schedule or chronological statement by the Engineer shall not be construed as releasing the Contractor from any of its responsibilities or obligations under the Contract. Such approval shall be a condition precedent to the processing and payment of any monthly pay estimate.

- C. Hours of operation are as noted in Section 01010 of the Contract Documents.

1.3 FORM OF SCHEDULES

1.3.1 Prepare schedules in form of a horizontal bar chart.

- A. Provide separate horizontal bar for each trade or operation.
- B. Horizontal time Scale: Identify first work date of each week.
- C. Scale and spacing to allow space for notations and future revisions.

1.3.2 Format of Listings: Chronological order of start of each item of work.

1.3.3 Identification of Listings: By work area.

1.4 CONTENT OF SCHEDULES

1.4.1 Construction Progress Schedule

- A. Show complete sequence of construction by activity.
- B. Show dates for beginning and completion of each major element of construction and installation dates for major equipment items. Elements shall include, but not be limited to, the following:
 - 1. Receipt of submittal data from supplier/manufacturer submitted to Owner's Representative, review and return to supplier/manufacturer. Review of Contractor submittals by Owner's Representative. Allowance for revision of submittals by Contractor to address concerns of Owner's Representative.

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2. Material and equipment order, manufacturer, delivery and installation, and checkout.
 3. Each mobilization or demobilization event.
 4. Installation of site security measures.
 5. 25, 50, 75 and 100 percent complete of Mandatory Schedule Milestones as specified in Section 01010 SUMMARY OF WORK.
 6. Subcontractors items of work.
 7. Final cleanup.
 8. Allowance for inclement weather.
 9. Allowance to address punch list items from Owner's Representative or Owner.
- C. Show projected percentage of completion for each item as of first day of each month.

1.5 SCHEDULE REVISIONS

Every 15 days Contractor shall revise construction schedule to reflect changes in progress of work and to indicate progress of each activity at date of submittal.

Changes occurring since previous submittal of schedule shall be indicated including:

- A. Changes in scope.
- B. Activities modified since previous submittal.
- C. Revised projections of progress and completion.
- D. Other identifiable changes.

Provide a narrative report as needed to define:

- A. Problem areas, anticipated delays, and impact on schedule.
- B. Corrective action recommended and its effect.
- C. Effect of changes on schedules of other affected parties.

1.6 SUBMITTAL REQUIREMENTS

For initial submittal of construction schedule and subsequent revisions thereof, furnish three (3) copies of schedule to Owner's Representative.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below are incorporated into these Technical Specifications by reference. The publications are referred to in the text by basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328	Definitions
40 CFR 68	Chemical Accident Prevention Provisions
40 CFR 129	Toxic Pollutant Effluent Standards
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
49 CFR 171 - 178	Hazardous Materials Regulations

1.2 DEFINITIONS

1.2.1 Environmental Pollution

Environmental pollution is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of environmental pollution and habitat disruption that may occur to the environment during the Work. The control of environmental pollution requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of Hazardous Wastes as defined by MassDEP regulation 310 CMR 30. These waste streams could consist of

material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents and sediment admixtures. Reasonable efforts should be made to re-use these materials for other applications on other projects if possible, before the Contractor determines that partially consumed materials are waste and must be disposed of as hazardous waste. Materials determined to be hazardous waste must be managed in accordance with MADEP regulations at 310 CMR 30.0000; including requirements for storage, transport, disposal, and obtaining a Generator Identification Number.

1.2.4 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.2.5 Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Refer to the definition of Wetlands in MADEP regulations at 310 CMR 10.

1.3 ENVIRONMENTAL PROTECTION REQUIREMENTS

1.3.1 General

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.3.2 Performance Standards

This section supplements the Contractor's responsibility to the extent that the Owner has already obtained approval under the State Enhanced Remedy (SER) through the New Bedford Harbor Superfund remedy. The Contractor shall comply with the terms and conditions of the Performance Standards and the included Performance Standards that are applicable to the work. Such applicable terms and conditions and are specified in the various sections of these specifications and on the contract drawings. The above referenced documents shall not be relied on for contract requirements. In the event that a discrepancy is discovered between the reference documents and these specifications or the contract drawings, the contractor shall notify the Owner's Representative for clarification. The Owner's Representative will rely on requirements and conditions of the Performance Standards to resolve perceived conflicts.

1.3.3 USEPA Final Determination

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This section supplements the Contractor's responsibility to the extent that the Owner has already obtained approval under the State Enhanced Remedy (SER) through the New Bedford Harbor Superfund remedy. The Contractor shall comply with the terms and conditions of the USEPA Final Determination associated with this project. The Final Determination titled, "Final Determination for the South Terminal Project, USEPA" is attached to Section 00800 SUPPLEMENTARY CONDITIONS, for the Contractor's review. Available information associated with the permitting application with USEPA, the USEPA Draft Determination, and USEPA Final Determination process may be located at the following website:

- o <https://semspub.epa.gov/work/01/525556.pdf>

Additional information is contained within the EPA New Bedford Harbor Superfund Site website: <http://www.epa.gov/nbh>

In the event that a discrepancy is discovered between the Final Determination and these specifications or the contract drawings, the contractor shall notify the Owner's Representative for clarification. The Owner's Representative will rely on requirements and conditions of the Final Determination to resolve perceived conflicts.

As part of the Final Determination, USEPA has required the production of certain plans that will guide and constrain the actions of the Owner's Representative and the Contractor. These plans include, but are not limited to: an Air Monitoring Plan, a Stormwater Pollution Prevention Plan, an Emergency Response/Spill Prevention Plan, a Construction Management Plan, and a Phase IV Work Plan. Final plans have been prepared and have been submitted to EPA, and are attached to Section 00800 SUPPLEMENTARY CONDITIONS. If the final versions of these plans conflict with the Final Determination, the Final Determination shall be paramount.

1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

1.5 SUBMITTALS

The following shall be submitted in accordance with Section 1300 SUBMITTAL PROCEDURES:

Preconstruction Submittals:

Environmental Protection Plan:

The Environmental Protection Plan shall include the following plans as further described herein:

Spill Control Plan
Contaminant Prevention Plan

1.6 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Owner's Representative. The purpose of the

Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during the Work. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Owner's Representative for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

1.6.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.6.2 Contents

The Environmental Protection Plan shall include, but shall not be limited to, the following:

- A. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.
- B. Name(s) and qualifications of person(s) responsible for managing waste to be removed from the site, if applicable.
- C. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.
- D. Description of the Contractor's environmental protection personnel training program.
- E. Work area plan showing the proposed activity in each portion of the site and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.
- F. The Spill Control Plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations (such as 310 CMR 40.0000, The Massachusetts Contingency Plan). Any spill above a reportable quantity should be reported to MassDEP at (888) 304-1133. The proper

notifications need to comply with 310 CMR 40. This plan shall include as a minimum:

1. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Owner's Representative in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.
 2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.
 3. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.
 4. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
 5. The methods and procedures to be used for expeditious contaminant cleanup.
- K. A Contaminant Prevention Plan that identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. A copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the Contaminant Prevention Plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated. The Contaminant Prevention Plan should be coordinated with the Dredge Material Management Work Plan included in Section 02482 DREDGING.

1.7 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Owner's Representative and may require an extended review, processing, and approval time. The Owner's Representative reserves the right to disapprove alternate methods, even if they are more cost effective, if the Owner's Representative determines that the proposed alternate method will have an adverse environmental impact.

1.8 NOTIFICATION

The Owner's Representative will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, project Performance Standards, EPA Final Determination, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Owner's Representative of the proposed corrective action and take such action when approved by the Owner's Representative. The Owner's Representative may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Owner's Representative may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall be responsible for complying with all environmental regulations required by Federal, State, Regional, and local environmental laws and regulations.

3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the work area.

The following additional specific erosion control measures (in addition to those measures shown on the Contract Drawings) shall be performed as needed by the Contractor to control erosion and sedimentation from exposed areas and from

- Stockpiles left bare for more than 7 days shall be treated with air dried wood chips, mulch consisting of certified weed free straw or seeded with perennial fescue-grass.
- In addition, areas identified by the Owner's Representative as requiring treatment to control erosion and sedimentation controls shall be treated with air dried wood chips, mulch consisting of certified weed free straw or seeded with perennial fescue-grass.

The Contractor shall immediately comply with any order from the Engineer for the installation of additional erosion/sediment/turbidity controls to protect resource areas beyond what is shown on the plans if field conditions or the Engineer's judgment dictate that additional protection is necessary.

3.2.1 Contractor Facilities and Work Areas

The Contractor shall propose locations for field offices, staging areas, stockpile storage, and temporary buildings for approval by the Owner/Owner's Representative. Temporary movement or relocation of Contractor facilities shall be made only when approved by the Owner's Representative.

3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation. All water areas affected by construction activities shall be monitored by the Contractor. For construction activities immediately adjacent to impaired surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading to that surface water as required by the Clean Water Act.

3.3.1 Wetlands

The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands. The Contractor shall be responsible for the protection of wetlands in accordance with applicable regulations. Authorization to enter specific wetlands identified shall not relieve the Contractor from any obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.

3.4 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain the work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. The Contractor must have sufficient, competent equipment available to accomplish these tasks. The Contractor shall implement particulate control measures whenever a particulate nuisance or hazard occurs. The Contractor shall comply with all State and local visibility regulations. Refer to MADEP regulations at 310 CMR 7.00.

3.4.2 Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a nuisance or health hazard and shall be in compliance with State regulations at 310 CMR 7.02 and/or more stringent local ordinances.

3.4.3 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall comply with the provisions of the Commonwealth of Massachusetts rules and policy DAQC 90-01 "Allowable Sound Emissions." The Contractor shall also comply with City of New Bedford noise regulations and requirements. Sound measurements at the property line shall not exceed 90 dBA. The Contractor shall implement measures to mitigate noise pollution if the Contractor exceeds this standard and shall consider, at a minimum, the following mitigation measures to reduce site noise:

- Staging of site works to maximize use of the existing site features/facilities as acoustic barriers where possible.
- Noise and vibration awareness training for all site staff including subcontractors as part of general site induction and tailgate talk activities.
- Strict adherence to approved works times. In the event that out of hours delivery activities are required.
- Works shall be scheduled, where practical, to avoid simultaneous noisy activities occurring on site.
- Vehicles shall not be left turned on or idling at the site for longer than minimum amount of time required completing site activities.
- Should the above-listed activities prove ineffective, the Contractor shall halt work until the Contractor is able to propose an effective solution to control site noise.

3.4.4 Additional Dust, Odor and Noise Control

If, in the opinion of the Owner's Representative, the dust, odor and noise control measures are inadequate or insufficient to meet the intent of the specification, the Contractor shall be requested to implement additional measures to control dust, odor and noise at no additional cost to the Owner. Refer to MADEP regulations at 310 CMR 7.09. Action levels for airborne particulates, airborne PCBs, airborne asbestos and lead are listed in the table below, the Contractor shall implement best management practices onsite to minimize the potential for exceedances of air quality standards onsite. Actions to control impacts to air shall not be cause for additional compensation to the Contractor. The air quality standards are as follows:

New Bedford Marine Commerce Terminal Drainage and Grading Maintenance

Constituent	Air Quality Standard	Required Action
Airborne Particulates (PM ₁₀)	Any visible dust emissions from Work activities.	Implement corrective measures to control dust (e.g., water sprays).
Airborne Particulates (PM ₁₀) - (5-minute average TEOM data or equivalent)	Not to Exceed 75 ug/m ³	Increase application of dust controls
Airborne Particulates (PM ₁₀) - (5-minute average TEOM data or equivalent)	Not to Exceed 150 ug/m ³	Halt Work and Notify Owner's Representative and EPA
Airborne Particulates (PM ₁₀) - 10 Hour Time Weighted Average	Not to Exceed 100 ug/m ³	Halt Work and Notify Owner's Representative and EPA
Airborne PCBs	Not to Exceed 0.10 ug/m ³	Halt Work and Notify Owner's Representative and EPA
Airborne Asbestos	Not to Exceed 0.1 fiber/cubic centimeter	Halt Work and Notify Owner's Representative and EPA
Lead	Not to Exceed 50 ug/m ³	Halt Work and Notify Owner's Representative and EPA

Should the levels in the table above be exceeded, the Contractor shall immediately suspend all Work (except where noted in the table above), and implement whatever control measures are necessary to abate the condition. If the levels exceeded indicate a threshold that requires the halt of work, the Contractor shall halt work immediately and prepare and submit a Corrective Action Plan to the Owner's Representative for review and approval. The Owner's Representative shall submit the Corrective Action Plan to EPA for review and approval. Work shall not resume until EPA has approved the Correction Active Plan and until the plan has been implemented by the Contractor. Delays associated with the halt of work, preparation of a Corrective Action Plan, or review by EPA shall not be cause for a change in cost or schedule for the Work.

3.4.5 Diesel Exhaust

Any stationary emergency or standby engine installed at the site shall comply with the requirements of 310 CMR 7.02(8)(i) and 310 CMR 7.26(40) and

(44) as applicable. Any engine that is mobile in nature shall comply with federal standards with regards to limitation on the sulfur content of fuel. Construction equipment used for this project shall comply with federal off road diesel emission standards including the use of ultra low sulfur diesel fuel (15 ppm sulfur content) in all diesel engine powered equipment. All equipment shall meet the Tier 1-3 emission standards for off-road diesel equipment and to the extent practicable; all diesel powered equipment shall meet the Tier 4 emission standards (the final deadline for which is 2015), per 40 CFR Part 89.

Contractors are encouraged to use diesel oxidation catalyst retro-fitted vehicles and equipment, and project are directed to MassDEP for retrofitting guidance. Diesel-powered equipment shall be fitted with after-engine emissions controls such as oxidation catalysts or particulate filters.

The Contractor shall not cause, suffer, allow or permit visible emissions including smoke from any marine vessel, spark-ignited internal combustion engine or non-stationary diesel engine as per 310 CMR 7.06.

To the extent any activities may include Groundwater/ Soil venting systems, Conveyors and dry material storage silos, and rock crushing/processing as part of the construction or reconstruction of the site, they shall comply with the requirements of 310 CMR 7.03.

3.5 MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.5.1 Solid Waste

Solid waste shall be managed in accordance with applicable regulations. Debris generated during dredging operations shall be handled in accordance with the Contractor's debris management plan described in Section 02482 DREDGING.

3.5.2 Contractor Management of Hazardous Waste/Excess Hazardous Materials and Spill Response

3.5.2.1 Contractor Management of Hazardous Waste/Excess Hazardous Materials

Hazardous wastes are defined by applicable MADEP regulations at 310 CMR 30.0000 and more stringent local regulations, if any. Hazardous materials are defined in M.G.L. Chapter 21E and 49 CFR 171 - 178. The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during performance of the work. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take appropriate precautionary measures to prevent accidental spillage. The Contractor shall be responsible for storing, describing, packaging, labeling, marking, and placarding hazardous waste and hazardous material in accordance with all appropriate, relevant and applicable Federal, State, and local laws and regulations. The Contractor shall transport Contractor generated hazardous waste off Government property within thirty days in accordance with MADEP

regulations at 310 CMR 30.0000 and Department of Transportation laws and regulations.

3.5.2.2 Contractor Response to a Spill or Release of Hazardous Materials

A spill or release of hazardous or toxic materials resulting from Contractor activities shall be immediately reported to the Owner's Representative. Appropriate regulatory authorities shall be notified in a timely fashion in accordance with MADEP regulations at 310 CMR 40.0000. All associated cleanup activities and cleanup costs due to such spills shall be the Contractor's responsibility. The Contractor shall coordinate the disposition of hazardous materials unearthed as a result of the dredging activity that can be attributed to prior disposal activities by a third party(ies) with the Owner's Representative. The Contractor shall provide to the Owner's Representative three quotes for the disposal of such hazardous materials for consideration of payment as a changed condition. All cleanup activities shall be conducted in conformance with the Massachusetts Contingency Plan regulations at 310 CMR 40.0000 as administered by MADEP.

3.5.3 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations.

3.6 RECYCLING AND WASTE MINIMIZATION

The Contractor shall participate in State and local government sponsored recycling programs. The Contractor is further encouraged to minimize solid waste generation throughout the duration of the project.

3.7 BIOLOGICAL RESOURCES

The Contractor shall make every reasonable effort to minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

3.8 PREVIOUSLY USED EQUIPMENT

The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil or sediment residuals, egg deposits from plant pests, noxious weeds, and plant seeds.

3.9 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control, and in accordance with the provisions contained in Section 00700 General Conditions and in Section 00800 Supplementary Conditions. The Contractor shall conduct environmental

protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.10 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for Construction ("Construction Areas" shall be defined as any area used by the Contractor) to their pre-construction condition. The Contractor shall, unless otherwise instructed in writing by the Owner's Representative, obliterate all signs of temporary construction facilities such as work areas, structures, construction trailers, staging areas, stockpiles of excess or waste materials, and all other vestiges of construction prior to final acceptance of the work.

-- End Of Section --

SECTION 01451

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 329 (2011a) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Owner's Representative for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest-level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Owner's Representative, and shall be responsible for all construction and construction related activities at the site.

3.2 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, the Contractor shall meet with the Owner's Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Owners' Quality Assurance. Minutes of the meeting shall be prepared by the Owner's Representative and signed by both the Contractor and the Owner's Representative. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the quality control system or procedures which may require corrective action by the Contractor.

3.3 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the Contractor for each definable feature of work as follows:

3.3.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- A. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Owner's Representative until final acceptance of the work.
- B. A review of the contract drawings.
- C. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- D. Review of provisions that have been made to provide required control inspection and testing.
- E. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- F. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- G. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- H. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- I. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Owner's Representative.
- J. Discussion of the initial control phase.
- K. The Owner shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall include a meeting attended by the superintendent, and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes

prepared by the Contractor and attached to the Contractor's daily report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.3.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- A. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- B. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- C. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards.
- D. Resolve all differences.
- E. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- F. The Owner's Representative shall be notified at least 48 hours in advance of beginning the initial phase.
- G. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.3.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the Contractor's daily report. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.3.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.4 COMPLETION INSPECTION

3.4.1 Pre-Final Inspection

The Owner will perform the pre-final inspection to verify that the work is complete. An Owner Pre-Final Punch List may be developed as a result of this inspection. The Contractor shall ensure that all items on this list have been corrected before notifying the Owner, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.4.2 Final Acceptance Inspection

The Contractor's superintendent or other primary management person, and the Owner's Representative's shall be in attendance at the final acceptance inspection. Additional Owner personnel may also be in attendance.

3.5 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- A. Contractor/subcontractor and their area of responsibility.
- B. Operating plant/equipment with hours worked, idle, or down for repair.
- C. Work performed each day, giving location, description, and by whom.
- D. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- E. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- F. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
- G. Offsite surveillance activities, including actions taken.
- H. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- I. Instructions given/received and conflicts in plans and/or specifications.
- J. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any

delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Owner daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the Contractor. The report from the Contractor shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.6 NOTIFICATION OF NONCOMPLIANCE

The Owner's Representative will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Owner's Representative may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End Of Section --

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Site Plan

The Contractor shall propose a location for temporary construction facilities, Contractor's temporary project field office, staging areas, areas for staging materials, areas for staging debris, as necessary, or staging of equipment for the review and approval by the Owner/Owner's Representative. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

1.1.2 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display identification as approved and directed by the Owner's Representative. Prescribed identification shall immediately be delivered to the Owner's Representative for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

1.2 AVAILABILITY AND USE OF UTILITY SERVICES

1.2.1 Temporary Electrical Service

The Contractor, at its expense and in a manner satisfactory to the Owner's Representative, shall provide and maintain necessary temporary connections, distribution lines and disconnects, and other equipment to provide temporary electrical service for site needs. The Contractor shall coordinate with the Owner and the New Bedford electrical inspector to obtain, operate, meter, and pay for, the necessary electrical connection and permits. All electrical work shall conform to applicable federal, state and local electrical code requirements.

1.2.2 Sanitation

The Contractor shall provide and maintain within the construction area minimum field-type sanitary facilities approved by the Owner's Representative.

At its discretion, the Contractor may, at its expense and in a manner satisfactory to the Owner's Representative, provide and maintain necessary temporary connections, distribution lines and disconnects, and other equipment to provide temporary sanitary service for site needs. The Contractor shall coordinate with the New Bedford Department of Public Infrastructure to obtain, operate, and pay for, the necessary sanitary

connection and permits. All sanitary work shall conform to applicable federal, state and local requirements.

1.2.3 Telephone/Internet

The Contractor shall make arrangements and pay all costs for telephone and internet facilities desired for Contractor's own operations.

1.2.4 Project Lighting

MassCEC's Marine Commerce Terminal is equipped with high-mast lighting on the upland of the site. MassCEC shall enable nighttime high-mast lighting at Contractor's request and pro-rata expense. Contractor shall provide, at Contractor's sole expense, all other lighting needs.

1.2.5 Water Service

At its discretion, the Contractor may, at its expense and in a manner satisfactory to the Owner's Representative, provide and maintain necessary temporary connections, distribution lines and disconnects, and other equipment to provide temporary water service for site needs. The Contractor shall coordinate with the Owner to obtain, operate, and pay for, the necessary water connection and permits. All water work shall conform to applicable federal, state and local requirements.

1.3 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

1.3.1 Bulletin Board

Upon beginning of work, the Contractor shall provide a bulletin board for displaying all applicable postings as required by Federal, State and local regulations. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Owner's Representative. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

1.3.2 Project and Safety Signs

The Contractor will be required to construct a project sign to be displayed on any temporary structures. The sign shall contain three logos (Owner, Owner's Representative and Contractor) of a maximum of three colors each. The specific wording and layout of the sign will be provided by the Owner's Representative at the time of award. The sign shall be erected within 15 days after receipt of the notice to proceed. Upon completion of the project, any signs shall be removed from the site.

The Contractor is responsible to provide sufficient safety signage at the entrance to the site in accordance with MA State Highway and other applicable regulations. Safety and other signs shall be provided as required to support the Contractor's work on the site.

1.4 SECURITY PROVISIONS

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall establish fencing around land-based portions of work associated with the project, and shall maintain adequate security measures to prevent unauthorized entry. The Contractor shall be responsible for the security of its own equipment; in addition, the Contractor shall notify the appropriate law enforcement agency requesting periodic security checks of the temporary project field office.

1.5 COMMUNICATION

Whenever the Contractor has the individual elements of its vehicles and/or equipment so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. One such device shall be made available for use by the Owner's Representative.

1.6 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away twice daily or more frequently, if requested by the Owner. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

1.7 RESTORATION OF PROJECT AREA

Areas used by the Contractor for the storage of equipment or material, debris handling, sediment offloading, dewatering or other use, shall be restored to the original or better condition.

-- End of Section --

SECTION 01570

TRAFFIC REGULATION

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. The Contractor shall furnish, install, operate and maintain equipment, services and personnel with traffic control and protective devices, as required by the agencies responsible for the roads to expedite vehicular traffic flow on haul roads, at site entrances, on-site access roads and parking areas.
- B. Prior to performing any work on public roads or thoroughfares, the Contractor shall obtain a permit from the City of New Bedford. The Contractor shall perform all work in accordance with the obtained permits. The Contractor is responsible for maintaining traffic control with police officers, signs, etc., as required by the permit.
- C. The Contractor shall notify all property owners at least 48 hours in advance of any work which will interfere with access to their residence or place of business.
- D. No road shall be closed to traffic without the prior consent of the Owner's Representative, the agency responsible for the road and the local police department.
- E. Traffic control including, but not restricted to, signing and devices shall be provided for all openings in roads in accordance with standards described in the latest edition of the Massachusetts Department of Highways Manual on Uniform Traffic Control Devices.
- F. If roads are disturbed during construction, the Contractor shall restore the road base and surface to the satisfaction of the City of New Bedford.

1.2 TRAFFIC SIGNALS AND SIGNS

- A. The Contractor shall provide and operate traffic control and directional signals required to direct and maintain an orderly flow of traffic in all areas under the Contractor's control, or affected by the operations.
- B. The Contractor shall provide and operate traffic control and directional signals. Mounted on barricades or standard posts at the following locations:
 - 1. Each change of direction of a roadway and each crossroads.
 - 2. Detours.
 - 3. Parking areas.
- C. Existing permanent traffic control signing and devices, including guard rails, shall not be removed without the prior consent of

the agency responsible for the road.

1.3 FLAGMEN

- A. The Contractor shall provide qualified and suitably equipped flagmen when construction operations encroach on traffic lanes, as required for regulation of traffic.

1.4 FLARES AND LIGHTS

- A. The Contractor shall provide flares and lights during periods of low visibility to clearly delineate traffic lanes and to guide traffic and for use by flagmen in directing traffic.
- B. The Contractor shall provide illumination of critical traffic and parking areas.

1.5 CONSTRUCTION PARKING CONTROL

- A. The Contractor shall control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, any utility's operations or construction operations.
- B. The Contractor shall monitor parking of construction personnel's private vehicles, maintain free vehicular access to and through parking areas and prohibit parking on or adjacent to access roads or in non-designated areas.

1.6 HAUL ROUTES

- A. The Contractor shall consult with governing authorities to establish those public thoroughfares which will be used as site access and haul routes.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- END OF SECTION --

SECTION 01600

PLANT AND EQUIPMENT

PART 1 GENERAL

1.1 SUBMITTALS

The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES:

Plant and Equipment

Submit a schedule of the plant and equipment, which hereby includes all vehicles, vessels, plant(s), equipment, the Contractor intends to employ in the performance of the work of this contract. See Section 01000 Bidding Schedule where this schedule is required as part of the Bid Form. Changes proposed by the Contractor to the plant and equipment schedule considered for award of the bid are subject to the approval of the Owner's Representative.

1.2 PLANT AND EQUIPMENT

1.2.1 Sufficient Capacity

The Contractor shall keep on the job sufficient plant and equipment to meet the requirements of the work and to meet the schedule milestones. The plant and equipment shall be in satisfactory operating condition and be capable of safely and efficiently performing the work. The plant and equipment shall be subject to inspection by the Owner's Representative at all times.

1.2.2 Minimum Capacity

The plant and equipment listed on the Plant and Equipment Schedule submitted with the Contractor's bid is the minimum which the Contractor shall place and keep on the job unless otherwise determined by the Owner's Representative. The listing of plant and equipment is not to be construed as an agreement on the part of the Owner that the equipment is adequate to perform the required work.

1.2.3 Reduction in Capacity

No reduction in the capacity of the plant and equipment employed on the work shall be made except by written permission of the Owner's Representative. The measure of the capacity of the plant and equipment shall be its actual performance on the work covered by this contract.

1.2.4 Inspections and Certifications

Prior to commencement of work at the site, the Contractor shall submit to the Owner's Representative for review, copies of all applicable inspections and certifications of plant and equipment as required by Federal, State and local laws and regulations. Such inspections and certifications shall be current and maintained in force for the duration of this contract. The Contractor shall have on land a fuel and waste oil management plan which

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details the method for protecting fuel and waste oil from unintended releases, including secondary containment structures, and also details intended disposal method for waste oil and fuel. All equipment used in the prosecution of the work that uses fuel, oil or hydraulic fluid shall be inspected daily for leakage.

1.3 LICENSE REQUIREMENTS

Not Used

1.4 PERMIT REQUIREMENTS

The Contractor's plant and equipment employed on the work shall meet the requirements of all applicable permits, certifications, and performance standards issued for the project as specified in these specifications.

1.5 HEIGHT LIMITATIONS

Height limitations for equipment shall conform to the FAA requirements for the various areas of the project. The Contractor is responsible for coordinating these height limitations prior to commencing with the work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End Of Section --

SECTION 01900

GENERAL SAFETY REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1926 Safety and Health Regulations for Construction

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2011) National Electrical Code

NFPA 241 (2009) Standard for Safeguarding Construction, Alteration, and Demolition Operations

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

NIOSH Pub No. 85-115 (1985) Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities

1.2 REGULATORY REQUIREMENTS

Work performed under this contract shall comply with OSHA requirements in 29 CFR 1910 and 29 CFR 1926 (especially OSHA's Hazardous Waste Operations and Emergency Response Standard 29 CFR 1926.65/29 CFR 1910.120, state specific OSHA requirements (where applicable), and in accordance with the provisions contained in Section 00700 General Conditions and in Section 00800 Supplementary Conditions. Matters of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply.

The Marine Commerce Terminal is in and adjacent to the U.S. EPA New Bedford Harbor Superfund Site, which is under active remediation. At a minimum, all work must be completed under the direction of a 40-Hour OSHA Hazardous Waste Operations (29 CFR 1910.120) trained individual. All personnel coming in contact with sediment or soil contaminated with hazardous materials shall have, or obtain, similar OSHA training.

1.3 SUBMITTAL

Submit the following for acceptance by the Owner's Representative. Follow the administrative procedures for making submittals as specified in Section 01300 SUBMITTAL PROCEDURES.

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1.3.1 Statements - Health and Safety Plan meeting the criteria of 29 CFR 1926.65/29 CFR 1910.120 (OSHA's Hazardous Waste Operations and Emergency Response Standard), and also including:

A. Site Specific Accident Prevention Plan.

B. Phased Job Activity Hazard Analysis.

C. Machinery Inspection Certification:

Submit certifications that earth moving equipment, cranes, trucks, vehicles, machinery, floating plant and other mechanized equipment is in safe operating condition.

D. Modification to Equipment:

Submit manufacturer's written approval of modifications or additions to vehicles, machinery, floating plant, or hoisting equipment. Owner acceptance of submittal must be attained before such equipment can be brought on the job site.

E. Safety Meeting Report:

Submit safety meeting reports detailing the subjects discussed at safety meetings within three days after each meeting.

1.3.2 Accident Prevention Plan Submittal

Submit a plan outlining Contractor proposals for accident prevention.

A. List all major definable features of work to be completed under this contract.

B. Accident Reporting

1. All accidents shall be investigated and a report prepared that outlines basic causes and proposed actions to prevent future occurrence.

C. Submit an "Activity Hazard Analysis" for each definable feature of the work identified in paragraph A above. Submit each "Activity Hazard Analysis" a minimum of 15 days prior to the start of that phase of work. A major phase of work is defined as an operation involving a type of work presenting hazards not experienced in previous operations or where a new subcontractor or work crew is to perform. The analysis shall define all activities to be performed and identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. The activity hazard analyses shall be continuously reviewed with the quality control definable features of work and when appropriate, modified to address changing site conditions or operations.

D. Severe Weather Plan: The Contractor shall submit a Severe Weather Plan describing the actions to be taken to protect persons,

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equipment, hazardous materials, and property and prevent the spread of hazardous materials into surface water in the event of severe weather warnings or extreme sea conditions. Submit the plan as an attachment to the Accident Prevention Plan, for review and acceptance. This plan shall include but not be limited to the following:

1. The types of storms anticipated (Winter storm, Hurricane, Tornado)
2. The time intervals before storms when action will be taken and the details of the actions to be taken.
3. List of the equipment to be used on the project and its ability to handle adverse weather.
4. Distance from the work area to a safe place and the time required to move the equipment.
5. Method of securing equipment.
7. Methods of securing equipment not moved.
8. Plan of evacuation to include immediate reaction plans to be taken for all storm occurrences, particularly sudden storms.
9. A statement that full time monitoring of the NOAA marine weather broadcasts and other local commercial weather forecasting services will be the Contractor's primary source of information in the decision process to implement action under the severe weather plan.

1.4 UNFORESEEN HAZARDOUS MATERIAL

If unanticipated hazardous materials are encountered during construction operations that may be dangerous to human health upon disturbance, stop that portion of work and notify the Owner's Representative immediately.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 WEEKLY SAFETY MEETINGS

Prior to the start of construction and at least once a month, the Contractor shall conduct a safety meeting for all supervisors and foremen. Additionally, prior to the start of construction and at least once per day, the foremen of the Contractor shall conduct a safety meeting for all workers. After each safety meeting, a safety meeting report shall be completed. A copy of a suggested weekly safety meeting form is attached at the end of this section.

-- End of Section --

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WEEKLY SAFETY MEETING

Date Held _____
Time _____

SUBJECT: CONTRACT NO. _____ - WEEKLY SAFETY MEETING

CONTRACTOR _____ PERSONNEL PRESENT
Contr. Sub.

Date and Time Held: _____

Conducted By: _____

All persons attending the meeting must sign the bottom or back of this form.

Subjects discussed (Note, delete, or add)

Accident Prevention Plan ___ Individual Protective Equipment ___

Prevention of Falls ___ Back Injury/Safe Lifting Techniques ___

Fire Prevention ___ Sanitation, First Aid, Waste Disposal ___

Tripping Hazards ___ Clean-up - trash, nails in lumber ___

Staging, Ladders, Concrete Forms, Safety Nets ___

Hand Tools, Power Tools, Machinery, Chain Saws ___

Equipment Inspection & Maintenance (Zero Defects) ___

Hoisting Equipment, Winch and Crane Safety ___

Ropes. Hooks, Chains and Slings ___

Vehicle Operation Safety ___

Electrical Grounding, Temporary Wiring, GFCI ___

Lockouts/Safe clearance procedures

(electrical, pressure, moving parts)

Welding, Cutting ___ Excavation Hazard/Rescue ___

Loose Rock/Steep Slopes ___ Explosives ___

Water Safety ___ Boat Safety ___

HAZMAT, Toxic hazards, MSDS, respiratory, ventilation ___

Other Items of concern specific to this contract:

Warning on hypodermic needles that may be present in the water ___

Contractor Signature _____

SECTION 02110

CLEARING AND GRUBBING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Clearing
- B. Grubbing
- C. Site Preparation
- D. Disposal of Waste Materials

1.2 RELATED SECTIONS

- A. Additional requirements relative to specifications of unsuitable materials are provided in Section 02200 EARTHWORK

1.3 PREPARATION

- A. Examine the site thoroughly and determine the existing conditions and difficulty of work to be performed.

1.4 PROTECTION

- A. Locate, protect and support existing utilities which may be encountered during the course of the work and which are not designated for relocation or removal.
- B. Locate, protect and support trees and underbrush which are outside of the construction area and are therefore designated for preservation.
- C. Protect benchmarks, baseline monuments, and survey control points from disturbance or destruction.
- D. Use qualified surveyors to immediately replace any such point disturbed or destroyed.
- E. Accomplish work to avoid damage to the site and existing site appurtenances not designated for removal.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 CLEARING

- A. Clear debris, rubble, and materials unsuitable for reuse. Crush rubble, rock, or concrete for reuse at site, if feasible, as stipulated within Section 02200 EARTHWORK. Dispose of debris offsite.

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- B. Clear cut trees, brush and shrubs as necessary to complete the work as shown on the Contract Documents. Contractor shall not clear trees, brush or shrubs that are outside of the work area and are therefore designated for preservation. As necessary, chip brush, shrubs and tree debris or otherwise set aside for offsite disposal.
- C. Cut up, chip or otherwise set aside snags, brush, grass, floatable material, weeds, rubbish, roots, and other objectionable vegetation growth.
- D. Contractor shall identify any and all overhead electric lines prior to the start of construction and determine appropriate safe distances that must be maintained during construction. Contractor shall abide by those safe distances during tree felling or other operations at the site. Contractor shall not damage or come into contact with any existing electric transmission line during tree felling or other operations.

3.2 GRUBBING

- A. Grub only in Work Areas, as noted on the Contract Documents, as necessary to complete the Work. Additional grubbing may be authorized, if requested by Contractor.
- B. Remove and dispose of all stumps and large roots, and other objectionable buried and/or decayed vegetative matter within the Work Areas as necessary to complete the Work. Note that stumps and other material removed from below ground may be impacted with PCB contamination and will need to be treated and disposed of as such by the Contractor.
- C. Protect topsoil from contamination from other materials.

3.3 SITE PREPARATION (NOT USED)

3.4 STOCKPILING

- A. Keep stockpiles of materials from clearing and grubbing activities clear of active Work Areas.

3.5 DISPOSAL

- A. Trees, grass, floatable material, weeds, rubbish, snags, roots, brush, trash, unsuitable construction debris, unstable material, topsoil and other vegetation and material generated during clearing and grubbing operations shall be taken off-site and disposed of in accordance with local and state regulations.

-- END OF SECTION --

SECTION 02111

EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL

PART 1

1.1 SCOPE

GENERAL

- A. This section details proper handling, stockpiling, excavation, and grading procedures to be undertaken upon generation of contaminated material in upland areas. Soil contamination exist onsite within site material generally located greater than 3 feet below existing grade. The Contractor is not anticipated to encounter this material. The Contractor shall assume that any site material (see Section 02200 and Part 1.1C of this Section) is contaminated, and shall handle such site material accordingly. This includes tree stumps and other debris removed from below grade.
- B. The Owner's Representative may direct the Contractor to segregate contaminated materials during the course of the Work, including soils deemed to be geotechnically unsuitable for reuse but may also be contaminated. A plan of action for final disposition of such soils will be developed by the Owners Representative.
- C. The Contractor is directed to utilize materials from utility or other excavation activities as compacted site backfill material, if possible prior to ground improvement options. Contractor shall note that, due to potential long-term human health risks, site soils may not be reused within three feet of final grade.

1.2 RELATED SECTIONS

- A. Requirements relative to sediment dewatering and stockpiling.
- B. Additional requirements relative excavation, backfilling and fill materials are specified in Section 02200 - EARTHWORK.

1.3 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 5434

(2009) Standard Guide for Field Logging of Subsurface Explorations of Soil and Rocks

CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 302

40 CFR 761

29 CFR 1910.120

Designation, Reportable Quantities, and Notification

POLYCHLORINATED BIPHENYLS (PCBs) MANUFACTURING, PROCESSING,
DISTRIBUTION IN COMMERCE, AND USE PROHIBITIONS

Occupational Safety and Health Standards, Hazardous Waste Operations and
Emergency Response

CODE OF MASSACOUSSETTS REGULATIONS (CMR)

310 CMR 40.0000 Massachusetts Contingency Plan

- B. Compliance with PCB regulations at 40 CFR Part 761 shall be required during all phases of work involving PCB-contaminated soils and/or sediments, including, but not limited to:
 - 1. 40 CFR 761, Subpart C - Marking of PCBs and PCB Items
 - 2. 40 CFR 761.65 - Storage for Disposal
 - 3. 40 CFR 761.79 - Decontamination Standards and Procedures
 - 4. 40 CFR 761.180 - Records and Monitoring
 - 5. 40 CFR 761, Subpart K - PCB Waste Disposal Records and Reports

1.4 SUBMITTALS

- A. Excavation and Handling Work Plan - The Contractor shall submit to the Owner's Representative an Excavation and Handling Work Plan that will include the following:
- B.
 - 1. Documentation that the Contractor will utilize appropriately trained staff to excavate potentially contaminated materials if encountered on site and that the staff is informed of procedures to be followed to protect the Health and Safety of all on-site workers as it relates to possible contaminated materials to be handled. Documentation must show that workers involved in these activities have completed Health and Safety Training per

Occupational Safety and Health Administration (OSHA) Regulation 29 CFR 1910.120, as appropriate. The Contractor is entirely responsible for the Health and Safety of his own employees and subcontractors.

2. Locations and methods, including drainage, for on-site stockpiling of excavated potentially contaminated soils as specified in this Section. Describe methods to keep different classification of material segregated during processing operations.
3. Procedure for decontamination of tools and equipment.
4. Methodology for on-site soil tracking, including methodology to ensure cross contamination does not occur.

1.5 RESPONSIBILITY OF THE CONTRACTOR

- A. The Contractor is responsible for adhering to regulations, Specifications, and recognized standard practices related to the management of contaminated and potentially contaminated material during excavation and re-use activities. The Owner and Owner's Representative will not be responsible at any time for the Contractor's violation of pertinent State or Federal regulations or endangerment of laborers, passers-by or any others.
- R. The Owner will not be held negligent or liable for any inadequacies or deficiencies in the Contractor's site-specific worker health and safety plan or for any oversight or inadequacies in the Contractor's implementation of the safety plan.
- C. Provide labor, materials and equipment necessary to complete the work including:
 1. Excavation, backfilling, on-site transportation, stockpiling, and maintenance of excavated material.
 2. The Contractor is responsible for all construction, protection and maintenance of soil stockpiles from excavation through chemical testing and on-site re-use. Contractor shall stockpile material only in areas designated by the Owner.
 3. The Contractor is responsible for providing all documentation to track potentially contaminated material from the time of excavation until it is re-used onsite.
 4. The Contractor shall backfill excavations with suitable materials in accordance with Section 02200 - EARTHWORK to the limits and elevations shown in the Contract Drawings.

1.6 REGULATORY REQUIREMENTS

A. Permits and Licenses

The Contractor shall obtain required federal, state, and local

permits for excavation and storage of contaminated material. Permits shall be obtained at no additional cost to the Owner.

During removal and reuse of site materials, the Owner's Representative may identify material that is unsuitable for reuse due to geotechnical reasons (i.e. "geotechnically unsuitable, or because the material is excess and cannot be reused at the site. That material shall be separated from other stockpiled material (but shall not be removed physically from the site), and be assumed by the Contractor to be hazardous, until and unless analytical results indicate otherwise. The Owner's Representative shall prepare and submit a Sampling and Analysis Plan to EPA for their approval, and then shall collect sufficient samples (as approved by EPA) to fully characterize this material, before the Owner's Representative shall develop a plan to reuse or dispose of the material. If PCB concentrations in the soils are determined to be greater than one (1) mg/kg, but less than fifty (50) mg/kg, EPA approval shall be required prior to disposal of these soils offsite. The Contractor shall not dispose of this material offsite until such time as the material has been fully characterized in compliance with EPA regulations and EPA approval has been received; notwithstanding these characterization requirements by EPA, the Contractor shall comply with 40 CFR 761.65(a)(9) and shall not allow PCB containing soil stockpiled onsite to remain onsite for longer than 180 days. If the concentration of PCBs in these soils is greater than or equal to fifty (50) mg/kg, the soils will need to be disposed of in accordance with 40 CFR 761.61(c). The Contractor shall take into account the possible length of time associated with the Owner's Representative completing this task when situating the stockpile associated with the geotechnically unsuitable or excess material. Delays in the Contractor's operations associated with time needed to complete these tasks shall not be a basis of any change in the cost of the work or a change in the Contract Time for the work. Costs for characterization and preparation of the Sampling and Analysis plan will be borne by the Owner.

1.7 SCHEDULING

- A. The Contractor shall notify the Owner's Representative prior to the start of excavation of contaminated materials or when excavations may near three feet below grade.

PART 2 PRODUCTS

2.1 BACKFILL MATERIAL

- A. Approved backfill materials are specified in Section 02200 - EARTHWORK and shall be placed to the limits and elevations as shown in the Contract Drawings.

2.2 SPILL RESPONSE MATERIALS

- A. The Contractor shall provide spill response materials including, but not limited to the following: containers, adsorbents,

shovels, and personal protective equipment. Spill response materials/wastes are being handled or transported. Appropriate spill response materials shall be available at all times to respond to a leak of fuel or other hazardous material from Contractor's vehicles or other mechanical devices. Spill response materials shall be compatible with the type of materials and contaminants being handled.

2.3 POLYETHYLENE BARRIER

- A. Polyethylene barrier for use in protecting stockpiles from spreading contamination or for protecting truck bodies shall be minimum 6-mil (0.006 inches) thick. At least two (2) layers of polyethylene shall be used beneath stockpiles of impacted materials to protect the ground surface. At least one (1) layer of black, 6-mil polyethylene will be used to cover stockpiles of impacted material at all times except when modifying stockpiles. Notwithstanding these stockpile requirements (as well as the requirements of Part 3.5 of this Section), the Contractor shall ensure compliance with storage requirements for PCB impacted soil as outlined within 40 CFR 761.65(c) (9).

PART 3 EXECUTION

3.1 EXISTING STRUCTURES AND UTILITIES

- A. No excavation shall be performed until site utilities have been field located. The Contractor shall take the necessary precautions to ensure no damage occurs to existing structures and utilities. Damage to existing structures and utilities resulting from the Contractor's operations shall be repaired at no additional cost to the Owner. Utilities encountered that were not previously shown or otherwise located shall not be disturbed without written approval from the Owner's Representative.

3.2 CONTAMINATED MATERIAL REMOVAL

- A. Excavation

Excavation shall be performed in a manner that will limit the potential for contaminated material to be mixed with uncontaminated material. A log of the materials and any visible signs of contamination encountered during excavation shall be maintained for each area of excavation.

- B. Dewatering and Discharge of Dewatering Effluent

Contractor shall follow all pertinent local, State, and Federal Regulations for dewatering techniques, upland storage, and treatment of dewatering liquids.

3.3 BACKFILLING

- A. If an excavated area is determined to contain contaminated material, prior to backfilling the Contractor shall provide

access to the bottom and side walls of excavations for pre-subgrade and side walls. Results shall be made available to the Contractor 14-days after sample collection. Backfilling may not commence prior to written approval of the Owner's Representative based on confirmatory sample test data.

- B. It is the Contractor's Responsibility to protect the subgrade prior to backfilling. Additional excavation and backfilling requirements are specified in Section 02200 - EARTHWORK.

3.4 SOIL TRACKING

- A. For upland soils identified as exhibiting olfactory or visual evidence of potential contamination, provide soil tracking system to track all excavated soils between excavation and final disposition.

1. Soil tracking system shall include identification of the source of material (area, depth, date of excavation, etc.). The system shall be designed by the Contractor and shall be submitted to the Owner's Representative for review and acceptance. The system should include daily log sheets for tracking all soils from excavation through final disposition.
2. Provide to the Owner's Representative on a daily basis, copies of field records documenting the location of stockpiled material, and stockpile identification data. This documentation shall be provided on a daily basis when stockpiles are present on-site.

3.5 CONTAMINATED MATERIAL STORAGE

- A. The Contractor is responsible for the construction, protection and maintenance of temporary stockpiles and through the final re-use of those stockpiles by the Contractor.

1. Stockpile areas will be graded such that storm water runoff is diverted from stockpiled soils: berms (i.e., hay bales, silt fencing, gravel) as specified in the Contract Drawings will be placed around the perimeter of the area to prevent contact of runoff with contaminated soils.
2. The area will be blocked off to minimize worker and passersby contact with stockpiled soils. The area will be visibly marked with appropriate warning signs of potential hazards.
3. For soils identified by the Owner as contaminated, or for potentially contaminated soils, the first lift of stockpiled soil materials will be placed on a minimum of two layers of six-mil-thick (0.006") or one layer of 20-mil-thick (0.020") polyethylene barrier o.

4. The size of the individual stockpiles will be limited such that no individual stockpile is larger than 500 cubic yards. Total dimensions and locations of the stockpile areas will be at the discretion and approval of the Owner's Representative.
- B. The transfer of soil materials from the excavation to the stockpile areas will be conducted by the Contractor in such a manner as to prevent the spread of contaminated or potentially contaminated materials across the site and to minimize the mixing of soils from different areas of the excavation in different stockpiles.
- C. The Contractor will place stockpiled soils within a designated stockpile area, graded to shed water, and shall cover the stockpiled soils prior to inclement weather and at the end of each work day with a minimum six-mil-thick (0.006") black polyethylene cover overlapped and weighted to form a continuous waterproof barrier over the soil. The cover will be maintained by the Contractor throughout the stockpile period to prevent water from entering the soils and to prevent blowing dust. The cover will be suitably weighted to prevent the soil from being exposed by wind.
- D. Excavation and soil handling will be performed in a manner which limits mixing of soils with different levels and types of contamination to the highest degree possible. Final disposition of soil which is contaminated as a result of the Contractor's careless or unauthorized procedures for excavation or soil handling and stockpiling will be at his own expense. All stockpiles will be located within the Project limits.
- E. Water-tight roll-off units may be used to temporarily store contaminated material. An impermeable cover shall be placed over the units to prevent precipitation from contacting the stored material.
- F. For soil to be disposed of by others, the soil may not be stockpiled longer than allowed by federal, state or local law or regulations.
- G. The Contractor is responsible for the construction, protection and maintenance of temporary stockpiles. Stockpiles shall not contain solid waste material.

3.6 SPILLS

- A. In the event of a spill or release of a hazardous substance (as designated in 40 CFR 302), pollutant, contaminant, or oil (as governed by the Oil Pollution Act (OPA), 33 U.S.C. 2701 et seq.), or a Release of oil or hazardous material as defined under 310 CMR 40.0000 (The Massachusetts Contingency Plan, or MCP) the Contractor shall notify the Owner's Representative immediately. If the spill exceeds the reporting threshold, the Contractor shall follow the pre-established procedures for immediate reporting and containment. Immediate containment actions shall be taken to minimize the effect of any spill or leak. Cleanup shall

be in accordance with applicable federal, state, and local regulations. As directed by the Owner's Representative, additional sampling and testing shall be performed to verify spills have been cleaned up. Spill cleanup and testing shall be done at no additional cost to the Owner or the Owner's Representative.

3.7 DISPOSAL REQUIREMENTS

- A. Offsite disposal of contaminated material is not anticipated for this project. A course of action including disposal options, if necessary, will be developed by the Owner's Representative if contaminated material is identified.

-- END OF SECTION --

Section 02200

EARTHWORK

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The work covered by this specification consists of furnishing all plant, labor, equipment and materials and performing all operations in connection with clearing, grubbing, pulling of stumps, excavation, subgrade preparation, and placement and compaction of fill materials required for site development.
- B. If soil mixing / tilling is performed, the work includes removal of the existing copper radials associated with the currently existing broadcasting tower. Contractor is to excavate, remove, decontaminate, and properly dispose of the copper cables prior to commencement of the soil mixing operations.
- C. In addition to regular and typical dust suppression procedures, the contractor is advised that dust suppression during the soil mixing / tilling process is paramount and the owner will continuously monitor dust levels at various locations throughout the site to document and comply with dust level limits during construction.
- D. Refer to Project Drawings for final grades.

1.2 BACKGROUND

- A. The Contract Documents indicate earthwork related to the re-grading of a portion of the Main Terminal. Material descriptions, source, gradation, and testing requirements are described on the Contract Drawings for all earthwork related work.

1.3 CODES AND STANDARDS

- A. ASTM D422-63 (R90) Standard Test Method for Particle-Size Analysis of Soils
- B. ASTM D1556-92 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
- C. ASTM D1557-91 Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft (2700 kN-m/m))
- D. ASTM D2216-92 Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock
- E. ASTM D2922-91 Standard Test Methods for Density of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
- F. ASTM D3017-88 Standard Test Method for Water Content of Soil and

Rock in Place by Nuclear Methods (Shallow Depth)

- G. ASTM D4318-93 Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- H. ASTM D4643-93 Standard Test Method for Determination of Water (Moisture) Content of Soil by the Microwave Oven Method

1.4 SUBMITTALS

- A. Testing of Off-Site Sources - Submit gradation and moisture-density compaction laboratory test reports on each type of off-site fill material to be used for backfilling. Perform gradation test for soil and crushed stone materials in accordance with the standards described on the Contract Drawings.

The following additional tests shall be performed on a sample of material from each off-site source from which the material is derived: VOCs, SVOCs, TPH, PCBs and total and TCLP RCRA 8 metals. Results of Contractor testing from each source of material shall be made available to the Owner's Representative for approval one week prior to its use. Off-site materials shall meet the Massachusetts Department of Environmental Protection RCS2 criteria. Contractor shall not bring material on site until approval is given.

- B. Contractor shall note the characterization procedure for geotechnically unsuitable material contained within Section 02111, Part 1.6B.
- C. Earthwork Operation and Sequence Plan
 - 1. Submit an earthwork plan outlining types of equipment, daily volumes, and grading, excavation, subgrade preparation, proof compacting, backfilling, and compaction sequence to the Owner's Representative for review at least 10 working days prior to commencement of construction. The earthwork operations plan shall be coordinated with the work of other trades as necessary to complete the earthwork. Owner will not allow the work to start without a satisfactorily detailed Earthwork and Sequence Plan.

1.5 DEFINITIONS

- A. SOURCE shall mean those areas from which any material brought to the site is derived. All material brought to the site shall be certified in writing as clean and free from environmental contaminants. The sources and test results shall meet with the approval of the Owner's Representative before any material is delivered to the project. The following tests shall be performed on a sample of material from each source from which the material is derived: Sieve Analysis, VOCs, SVOCs, TPH, PCBs and total and TCLP RCRA 8 metals.
- B. UPPER EXISTING MATERIAL shall mean existing fill material on site.
- C. ORGANIC MATERIAL shall mean fibrous mats of roots, decaying

vegetation, organic silt, peat, garbage and sanitary wastes.

- D. UNSTABLE MATERIAL shall mean organic debris, frozen materials, topsoil, and organic silts.
- E. SUITABLE CONSTRUCTION DEBRIS shall mean on-site concrete, brick, or asphalt debris, processed to be less than 6 inches in size that is suitable for compaction when mixed with granular material.
- F. UNSUITABLE CONSTRUCTION DEBRIS shall mean on-site organic debris such as wood, stumps, organic material, roofing debris, or other miscellaneous debris that is unsuitable for compaction when mixed with granular material.
- G. TRENCH AND CULVERT EXCAVATION shall consist of the excavation of all culverts, utility trenches, infiltration trenches, pipelines, and other minor structures including but not limited to leaching basins, catch basins, field inlets, manholes and drop inlets.

1.6 RELATED WORK SPECIFIED ELSEWHERE

- B. Additional requirements relative to site preparation are specified in Section 02110 CLEARING & GRUBBING.
- C. Additional requirements relative to erosion control and prevention of sedimentation are contained in Section 01355 ENVIRONMENTAL PROTECTION.
- D. Additional requirements relative to on-site soils are contained in Section 02111 EXCAVATION AND HANDLING OF CONTAMINATED MATERIALS.

1.7 PREPARATION

- A. Examine the site thoroughly and determine the existing conditions and difficulty of work to be performed.
- B. Before commencing earthwork operations, determine that preparatory work has been completed.
- C. Perform field surveys required to accomplish the work.

1.8 DEGREE OF COMPACTION

- A. Expressed as a percentage of the maximum dry density obtained by the test procedure presented in ASTM D1557 Modified Proctor Test.
- B. Abbreviated in this Specification as a percent of laboratory maximum dry density.

1.9 FIELD QUALITY CONTROL

- C. Quality control compaction testing of material placed during construction will be provided by the Owner's Representative. The Owner's Representative shall be notified 48 hours prior to any excavation, fill, backfill, or compaction operations.

- 1. Permit the Owner's Representative to observe all subgrades for

each layer of fill or backfill. Additional fill or backfill shall not be placed unless the Owner's Representative has approved the subgrade and/or previous layer of fill.

2. When required or requested by the Owner's Representative, the Contractor shall provide field elevations of the compacted subgrade or fill layer.
- D. Compacted materials that are below specified density shall be re-compacted at no additional expense to the Owner.
- E. The Contractor shall bear the cost of removal of all unsuitable material placed without approval by the Owner's Representative that fail to conform to the specifications.

PART 2 PRODUCTS

2.1 SAND-GRAVEL FILL

SAND-GRAVEL FILL shall consist of hard, durable sand and gravel, and shall be free from ice and snow, roots, sod, rubbish, and other deleterious or organic matter. It shall conform to the following gradation requirements: SEE CONTRACT DRAWINGS

2.2 GRANULAR FILL

GRANULAR FILL shall be free from ice and snow, roots, sod, rubbish, and other deleterious or organic matter. It shall conform to the following gradation requirements: SEE CONTRACT DRAWINGS

2.3 DENSE GRADED AGGREGATE

DENSE GRADED AGGREGATE shall meet M2.01.7 in the Massachusetts Highway Department, Standard Specifications for Highways and Bridges, and shall conform to the gradation requirements: SEE CONTRACT DRAWINGS

2.4 CRUSHED STONE

CRUSHED STONE (also called out "double washed stone" and "crushed rock") shall consist of one or the other of the following material:

1. Durable crushed rock consisting of the granular fragments obtained by breaking and crushing solid or shattered natural rock, and free from a detrimental quantity of thin, flat, elongated*, or other objectionable pieces.

* Thin or elongated pieces are defined as follows: Thin stones shall be considered to be such stones whose average width exceeds four (4) times their average thickness. Elongated stones shall be considered to be such stones whose average length is in excess four (4) times their average width.

2. Durable crushed gravel stone obtained by artificial crushing of cobbles, boulders, or field stone with a minimum diameter before crushing of 8 inches.

3. The crushed stone shall be reasonably free from clay, loam or deleterious material and not more than 1.0% of satisfactory material passing a No. 200 sieve will be allowed to adhere to the crushed stone.
4. Crushed stone shall be uniformly blended according to the following grading requirements: SEE CONTRACT DRAWINGS

2.5 COMMON FILL

Common fill shall consist of sand, silt, gravel, or similar materials free from trash, topsoil, organic or compressible material, roots and vegetation. Stones, rock, brick, and concrete fragments not exceeding 6 inches in their largest dimension are acceptable provided they are not nested when placed for compaction, and can be readily spread and compacted during filling. Common fill may be acceptable for use as Granular Fill at the discretion of the Owner's Representative, provided it can be placed and properly compacted.

2.6 FILTER FABRIC

- A. Non-woven filter fabric shall be Mirafi HP270 or approved equal, as specified on the drawings.

PART 3 EXECUTION

3.1 PROTECTION

- A. Contact all utility companies and property owners which might have installations in the area to determine location of all utilities and structures.
- B. Locate and mark existing drainage culvert located within the drainage easement shown on the contract drawings. Locate and mark the existing electrical conduit shown on the contract drawings. Protect above and below grade utilities which are to remain.
- C. Protect plant life, trees, lawns, and other features remaining as a portion of final landscaping.
- D. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavation equipment and vehicular traffic.
- E. Implement temporary erosion control measures such as silt fencing, hay bales, sediment traps, etc. as required to minimize the effects of erosion and sedimentation in excavations. Refer to Section 01355 ENVIRONMENTAL PROTECTION for additional requirements.

3.2 GRUBBING

- A. Pull all stumps within the site boundary. All stumps shall be removed to a minimum of 2 feet below the existing ground surface.
- B. Detailed requirements for clearing, grubbing, and disposal of stumps

are contained in Section 02110 - CLEARING AND GRUBBING

3.3 EXCAVATIONS

- A. Work shall be scheduled so the deepest elements are completed first when undermining of shallower elements could occur.
- B. Excavation cut shall be sloped sufficiently to prevent material from sliding into the excavation and to comply with local, state and Federal codes and regulations. Sheeting and bracing shall be placed as dictated by conditions.
- C. The bottom of excavations shall be protected from frost action and surface drainage. Frozen material shall be removed and replaced with granular fill or concrete. Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F.
- D. All rock surfaces shall be level and cleaned of loose materials.
- E. Slope side of excavations to comply with OSHA requirements and local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible either because of space restrictions, stability of material excavated, or where shoring and bracing is more economical than sloping. Shoring and bracing shall be designed by a Professional Engineer, Registered in the Commonwealth of Massachusetts. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

3.3 DISPOSAL

- A. Remove all unsuitable and organic materials (as determined by the Owner's Representative) from the property and dispose offsite as required by local, State and Federal codes, rules and regulations. Remove existing foundations, demolition debris, abandoned utility piping, slabs, pavements, and other debris encountered in areas of construction. Dispose of excess or unsuitable material as part of the Contract price.

3.4 DRAINAGE

- A. Direct surface water away from excavations, existing buildings, roadways and construction sites to prevent erosion and undermining of foundations.
- B. Provide diversion ditches, dikes and grading and maintain as required during construction.
- C. Protect excavated slopes and backfill surfaces to prevent erosion and sloughing.
- D. Perform excavation so that the site and the area immediately surrounding the site shall be continually and effectively drained.

3.5 DUST SUPPRESSION

- A. Owner's Representative shall determine if dust generated at the site is significant enough to require dust suppression.

- B. Dust suppression shall require application of water by Contractor, notwithstanding requirements of the Air Monitoring Plan attached to Section 08000 and erosion and sedimentation requirements of Section 00200. Contractor shall at all times keep machinery, and a sufficient supply of water onsite to suppress dust generated at the site, as necessary.
- C. Contractor shall suppress dust as necessary throughout construction, and until vegetation or other surface treatments have been established, if necessary.
- D. Uniformly apply water to surface, subgrade or layer of soil material requiring dust suppression.

3.6 SITE SUBGRADE PREPARATION

- A. Proof rolling
 - 1. Clear and grub wood and brush vegetation in accordance with Specification Section 02110.
 - 2. Any soft or weak spots that are identified during the proof rolling process shall be overexcavated and replaced with compacted "Granular Fill".

3.7 COMPACTION

- A. Heavily surface compact subgrade with a minimum of 6 passes of a vibratory roller having a drum weight of at least 10,000 pounds and a dynamic force of at least 20,000 pounds prior to placing fill.
- B. Soft areas shall be excavated and filled with compacted granular fill.
- C. Subgrade shall be uniform throughout. There shall not be hard spots or soft spots.
- D. Prevent free water from appearing on surface during or subsequent to compaction operations.
- E. Soil material too wet to permit compaction to specified density shall be excavated and spread for drainage and air drying, or shall be scarified in-place and air dried. All temporarily excavated material shall be placed on-site and compacted after it has been dried to a workable moisture content.

3.8 FILLING AND BACKFILLING

- A. Fill material placement shall begin after approval of the subgrade by the Owner's Representative. Approval of the subgrade is anticipated compaction.
- B. Place "Granular Fill" as backfill.
- C. Place satisfactory materials in horizontal layers not exceeding 12 inches in loose thickness where self-propelled or towed mechanical compaction equipment is used, or 9 inch loose lift thickness when hand-operated compactors are used.

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- D. Place and compact fill and backfill to indicated finish grade within a tolerance of one foot horizontally and 1 inch vertically.
- E. Do not place successive layers of earth fill material until the compaction requirements of the previous layer have been met and have been documented.
- F. Maintain positive drainage on the surface of unfinished earth fills. Blade the unfinished surfaces smooth to a crown at the conclusion of each day's work.
- G. Uniformly grade the finished earth fill surfaces such that they are smooth, compacted, and free from irregular surface changes.
- H. Unless otherwise noted compact fill and backfill material to a minimum of 95 percent of the maximum dry density per ASTM D 1557 Modified Proctor.
- I. Moisture control:
 - 1. Where subgrade or layer of soil material must be moisture-conditioned before compaction, uniformly apply water to surface of subgrade or layer of soil material as needed to obtain optimum moisture content.
 - 2. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
- J. The Contractor shall use extra care when compacting adjacent to walls. Where walls are buried on both sides, backfill and compaction shall proceed on both sides of the wall so that the difference in top of fill level on either side of the wall shall not exceed two feet (2 ft.) at any stage of construction. Where backfill of a buried wall is only on one side, only hand-operated roller or plate compactor shall be used within a lateral distance of five feet (5 ft.) of back of wall.
- K. In freezing weather, a layer of fill shall not be left in an uncompacted state at the close of a day's operations. Prior to terminating operations for the day, the final layer of fill, after compaction, shall be rolled with a smooth-wheeled roller to eliminate ridges of soil left by tractors, trucks and compaction equipment.
- L. The Contractor shall not place a layer of compacted fill on snow, ice or soil that was permitted to freeze prior to compaction. Removal of these unsatisfactory materials will be required as directed by the Owner.
- M. Once the Contractor has completed filling to subgrade elevation in accordance with Contract Drawings, and prior to placement of Dense Graded Aggregate, the contractor shall provide an as-built survey (stamped by a Massachusetts Professional Land Surveyor [MA PLS]) of the sub-grade surface. The as-built plan shall be based on spot grades obtained on a grid spacing no greater than 50'x50', and shall show said spot grades and topographical lines.

2.11 MAINTENANCE

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- A. Protect newly graded areas from traffic and erosion, and keep free of trash and debris. Repair and reestablish grades in settled, eroded and rutted areas to specified tolerances.
- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, remove to sound material, reshape and compact to required density prior to further construction.

2.12 EROSION CONTROL

- A. Protect disturbed areas from erosion.

3.13 DAMAGE

- A. Any damage resulting from excavation, backfill and compaction shall be repaired by the Contractor to the satisfaction of the Owner's Representative and at the Contractor's expense.

-- END OF SECTION 02200 -

SECTION 02222

EXCAVATION, TRENCHING, AND
BACKFILLING FOR UTILITY SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Excavating trenches for buried utilities.
- B. Backfilling and compaction of trenches.

1.2 RELATED SECTIONS

- A. Additional requirements for earthwork activities are specified in Section 02200 EARTHWORK.

1.3 CODES AND STANDARDS

- A. ASTM D422-63(R90) Standard Test Method for Particle-Size Analysis of Soils
- B. ASTM D1557-91 Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft (2700 kN-m/m))
- C. ASTM D2922-91 Standard Test Methods for Density of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
- D. ASTM D3017-88 Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

1.4 DEFINITIONS

- A. Degree of Compaction:
 - 1. Expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D1557.
 - 2. Abbreviated in this Section as a percent of laboratory maximum density.

1.5 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. Protect and support existing structures and utilities where adjacent excavation is likely to cause damage or settlement.
- B. Immediately report to Engineer any sewers, water lines, electric power, telephone conduits or cables, or any other utility lines not indicated on the drawings that are encountered during excavation.

PART 2 PRODUCTS

2.1 MATERIAL

- A. Bedding and backfill material above the installed utility shall meet the requirements of Sand-Gravel Fill as specified in Section 02200 EARTHWORK unless approved otherwise by engineer.

2.2 PLASTIC MARKING TAPE

A. Plastic Marking Tape:

- 1. Acid and alkali-resistant polyethylene film.
- 2. Provide tape type specifically manufactured for marking and locating underground utilities.
- 3. Provide tape with the metallic core encased in a protective jacket or with other means to protect it from corrosion.

PART 3 EXECUTION

3.1 EXCAVATION

A. General:

- 1. Perform work in accordance with OSHA requirements.
- 2. Perform excavation of trenches to the lines and grades indicated on drawings.
- 3. During excavation, stockpile material satisfactory of backfilling in an orderly manner at a distance no closer than 2 feet.
- 4. Provide grading that will prevent surface water from flowing into the excavation.
- 5. Remove water accumulating in the excavation as necessary to maintain the stability of the bottom and sides of the excavation.
- 6. Place and compact backfill material in unauthorized over-excavations in accordance with Section 02200 EARTHWORK.

B. Trench Excavation:

- 1. Trench width and profile below the top of the buried commodity:
 - i. Conform to the buried commodity manufacturer's recommendations.
 - ii. Where manufacturer recommendations are not

available, follow the guidelines on the Project Drawings.

2. Give special attention to trench side slopes that may be adversely affected by weather or moisture content.
- C. Bottom Preparation:
1. Accurately grade the bottoms of trenches to provide uniform bearing and support of the bottom quadrant of each section of the pipe.
 2. Excavate bell holes to the required size at each joint or coupling to eliminate point bearing.
 3. Remove stones of 3 inches or greater in any dimension or as recommended by the pipe or cable manufacturer, whichever is smaller, to avoid point bearing.
- D. Removal of Unyielding Material: Where unyielding material is encountered in the bottom of the trench, remove material 4 inches below the required grade and replace with suitable materials.
- E. Removal of Unsuitable Construction Debris and Unstable Material: Where unsuitable construction debris or unstable material, as specified in Section 02200 EARTHWORK, is encountered in the bottom of the trench, remove material to the directed depth and replace to the proper grade with approved backfill material.

3.2 PLASTIC MARKING TAPE

- A. Install plastic marking tape directly above the top of pipe.

3.3 TESTING AND INSPECTION

- A. Visually inspect pipe joints for displacement or improper fit of the gasket material.
- B. Follow pipe and gasket manufacturer's recommendations for rejection due to non-watertightness of the joint.
- C. Remove and re-install defective sections of the pipe with rejected joints.
- D. The Contractor shall contact the Owner's Representative when the pipe bedding is prepared. The Contractor shall grant the Owner's Representative 12 hours to conduct testing to determine the relative degree of compaction of trench backfill materials. The Owner's Representative will conduct soil density tests to determine the relative degree of compaction for pipe bedding and trench backfill materials. Contractor shall re-compact any soil that does not meet the minimum soil density. Soil density testing

frequency will, at a minimum, be as follows:

1. One test each 100 linear feet of trench backfill placed and compacted, or
2. One test for each 250 cubic yards of trench backfill placed and compacted
3. Not less than one test for each shift.
4. Additional testing may be conducted at the Owner's Representative's discretion.

3.4 PROTECTION FROM EROSION

- A. Implement temporary erosion control measures (i.e. silt fencing, hay bale sediment traps, etc.) to minimize the effects of erosion and sedimentation.
- B. Utility trenches should be protected from stormwater run-on during construction activities.
- C. Utility trenches, particularly drainage and infiltration trenches shall be protected during all construction activities. Trenches shall be protected from construction vehicle traffic, run-on, sedimentation and stormwater infiltration until the project has been accepted by the Owner. Any sedimentation or impact from any of these activities shall be remedied by the contractor at no expense to the Owner. No dewatering discharge shall be allowed to be directed into the infiltration trenches.

-- END OF SECTION --

SECTION 02223

TRANSPORTATION AND DISPOSAL

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Contractor shall properly transport and dispose of all items, including solid hazardous and nonhazardous wastes removed from the site, to appropriate disposal facilities. Contractor shall characterize both all wastes prior to offsite disposal as noted within Section 02111, Part 3.7, in order to determine if they are hazardous or non-hazardous. This includes wastes designated for disposal by the Owner's Representative as well as the wastes generated by Contractor. Contractor shall be responsible, and will be held accountable, for assuring that all sampling, analysis, transportation, and disposal requirements of the receiving facility and federal, state, and local governments are complied with and properly documented.

1.2 SUBMITTALS

- A. All final versions of weight slips, material shipping records, completed bills of lading, or hazardous waste manifests for material generated at the site and transported and disposed of offsite.

1.3 PERMITS AND REGULATIONS

- A. Contractor shall comply with all federal, state, and local regulations regarding transportation and disposal of hazardous and nonhazardous material. These include, but are not limited to:
 - 1. Trucks used for transportation of hazardous material for disposal off site shall be permitted pursuant to 310 CMR 30.0000.
 - 2. Vehicle operator possession of a commercial driver's license with hazardous materials endorsement (if applicable).
 - 3. Registration of vehicle as a hazardous waste carrier (if applicable).
 - 4. Utilization of shipping papers, bills of lading, and/or hazardous waste manifest (40 CFR 262.20).
 - 5. Proper marking and placarding of vehicles.
 - 6. Placement of emergency response procedures and emergency telephone numbers in vehicle, and operator familiarity with emergency response procedures.

7. Compliance with load height and weight regulations.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. All equipment supplied shall be in good working condition. Equipment and machinery delivered to the site, including haul trucks that have visible oil or hydraulic fluid leaks, will not be allowed on site until satisfactorily repaired. Contractor is responsible for the cleanup of any oil or hydraulic fluid spills at Contractor's expense.
- B. Contractor shall not allow soil/sediment to be tracked off site at any time during the Project. Contractor shall wash trucks before they leave the site. Visible soil tracks on streets will not be allowed. Contractor shall take sufficient precautions to prevent loose soils from adhering to tire treads, wheel wells, etc. Any loose soil spread shall be cleaned up.
- C. Contractor shall not allow fugitive dust emissions to be generated from trucks containing soil/sediment when leaving the site or at any time offsite. Contractor shall provide covers, such as a tarpaulin or other means, for the trucks to prevent the generation of dust prior to their arrival at the ultimate reuse or disposal location.

PART 3 EXECUTION

3.1 TRANSPORTATION

- A. All waste disposal facilities used by the Contractor shall be submitted to the Owner's Representative for approval. Contractor shall not use any disposal facility that does not have the Owner's Representative's approval. Prior to shipment of wastes off the site, Contractor shall confirm with the Owner's Representative by written communication from the designated Transportation, Storage, or Disposal Facility (TSDF) that it is authorized, has the capacity, and will provide or assure that the ultimate disposal method is followed for the particular hazardous waste on the manifest. Additionally, Contractor shall confirm by written communication from the designated transporter(s) that they are authorized to deliver the manifested waste to the designated TSDF or Solid Waste Management Facility (SWMF).
- B. Any transported materials must be covered to prevent the loss of material and to prevent the generation of dust.

3.2 ANTI-TRACKING PAD

An Anti-Tracking Pad shall be constructed by the Contractor so that soil/sediment is not tracked off site. Details of the Anti-Tracking Pad are provided in the Project Drawings. The pad shall be constructed with a layer of filter fabric per Section 02260 FILTER FABRIC above the existing grade and a minimum 6-inch thick layer of 1 ½-inch crushed stone. The pad shall be graded so that water is directed away from the pad.

3.3 MANIFESTING AND DOCUMENTATION

- A. Contractor shall complete all required manifest forms and Bill of Lading forms for proper transportation and disposal of materials off site. Contractor shall present the documents for proper signatory by the Owner. Contractor shall promptly provide Owner's Representative copies of all final bills of lading, manifests, Certificates of Disposal, and/or papers involved in shipping of material off of the site, as well as any weight tickets or receipts for delivery of materials to the site, or delivery to a disposal facility.

-- END OF SECTION --

SECTION 02260

FILTER FABRIC

PART 1 GENERAL REQUIREMENTS

1.1 Scope

The following describes parameters for the manufacture, supply, and installation of filter fabric.

1.2 Qualifications

The filter fabric manufacturer shall have successfully manufactured 5,000,000 square feet of filter fabric.

1.3 Submittals

The Contractor shall provide the following information to the Owner's Representative:

- A. Method of Placement Plan
- B. List of material properties.
- C. Quality control certificate for the filter fabric, upon request.

PART 2 PRODUCTS AND MATERIAL SPECIFICATIONS

2.1 Materials

A. Filter Fabric

Non-woven filter fabric as identified on Contract Drawings or approved equal and shall meet the criteria of Part 2.3 below. Woven filter fabric shall be Mirafi HP270 or approved equal and shall meet the criteria of Part 2.3 below.

2.2 Manufacturer's Quality Control Testing

The filter fabric shall be tested by its manufacturer once every 100,000 square feet except for AOS and permittivity, which shall be tested once every 500,000 square feet and UV stability, which shall be per manufacturer historical data.

Any rolls not meeting the requirements of the specification shall be rejected. The manufacturer shall prepare a quality control report to be submitted to the project engineer upon request.

2.3 Additional Filter Fabric Criteria

- A. The filter fabric shall meet the minimum physical requirements listed in Table No. 3 of these Specifications. Consultation with the manufacturer is recommended.

- B. The filter fabric must be permitted to function properly by allowing relief of hydrostatic pressure; therefore fine soil particles shall not be allowed to clog the filter fabric.
- C. The filter fabric shall consist of a long-chain synthetic polymer composed of at least 85 percent by weight of propylene, ethylene, ester, or amide, and shall contain stabilizers and/or inhibitors added to the base plastic, if necessary, to make the filaments resistant to deterioration due to ultraviolet and heat exposure. The edges of the filter fabric shall be finished to prevent the outer fiber from pulling away from the filter fabric.
- D. The Contractor shall furnish the Engineer, in duplicate, manufacturer's certified test results showing actual test values obtained when the physical properties are tested for compliance with the specifications.
- E. During all periods of shipment and storage, the filter fabric shall be protected from direct sunlight, ultraviolet rays and temperatures greater than 140 degrees Fahrenheit. To the extent possible, the fabric shall be maintained wrapped in its protective covering. The filter fabric shall not be exposed to sunlight, ultraviolet rays until the installation process begins.

TABLE 3. PHYSICAL REQUIREMENTS

Physical Property	Test Procedure	Minimum Value
Grab Tensile Strength (Unaged Filter Fabric)	AFTM D4632	200 Lbs. (in any principal direction)
Breaking Elongation (Unaged Filter Fabric)	ASTM D4632	50% max. (in any principal direction)
Burst Strength	ASTM D3786	400 p.s.i
Puncture Strength	ASTM D4833	115 lbs.
A.O.S., U.S. Std. Sieve	ASTM D4751	see Design Manual
% Open Area	CWO-22125-86	See Design Manual
Permittivity	ASTM D4491	See Design Manual

- F. Final acceptance of the filtration filter fabric by the Engineer shall be dependent upon the filter fabric performance when tested in accordance with ASTM D5101, Standard Test Method for Measuring the Soil-Geotextile System Clogging by the Gradient Ratio test or the Hydraulic Conductivity Ratio test. Soil characteristics such as grain size distribution and plasticity shall be determined for every 200,000 square feet of filter fabric installed or for each source of borrow material used during construction. Significant differences in soil characteristics shall require further performance testing by either the Gradient Ratio or the Hydraulic Conductivity Ratio tests at the discretion of the Engineer. The locations for which the material to be tested is extracted shall be approved by the Engineer. The Contractor shall provide the site-specific soil and modified proctor curves for the site-soil, at his own expense,

to the manufacturer. Also, the contractor shall be responsible for the performance of the test by a certified independent laboratory experienced in performing such test. The test shall be performed under the actual field soil conditions or as otherwise required by the Engineer.

G. At the time of installation, the filter fabric shall be rejected if it has been removed from its protective cover for over 72 hours or has defects, tears, punctures, flow deterioration, or damage incurred during manufacture, transportation or storage. With the acceptance of the Engineer, placing a filter fabric patch over the damaged area prior to placing the mats shall repair a torn or punctured section of fabric. The patch shall be large enough to overlap a minimum of three (3) feet in all directions.

H. In the event pre-assembled panels of fabric are required, the panels of filter fabric shall be sewn together at the manufacturer or another approved location.

PART 3 EXECUTION AND FILTER FABRIC INSTALLATION

3.1 Transportation and On-site Storage

The filter fabric rolls shall be wrapped in a plastic cover. The rolls shall be shipped to the job site in a manner not to damage the rolls.

3.2 Method of Placement

The Contractor shall submit to the Owner's Representative a plan describing a suitable method of placement for filter fabric. The subgrade shall be free of foreign and organic material, sharp objects, or debris of any kind, which could potentially damage the filter fabric. On side slopes, the rolls shall be deployed in the general direction of the maximum slope. The deployment equipment shall not damage the underlying subgrade. Filter fabric shall be properly secured. An extra layer of filter fabric may be required at the intersection of any two side slopes to cover the area where the panels are staggered. Contractor shall submit a proposed method for installing and securing filter fabric where it is placed within tidal or sub-tidal locations.

3.3 Field Seaming

On slopes, the spacing of ties across the roll end shall be 6 inches. The upper filter fabric flaps of the adjacent panels shall be heat-bonded or sewn on all sides in accordance with the project specification.

3.4 Cover Material

The filter fabric shall be covered as soon as possible. The covering operation shall not damage filter fabric. The cover soil material shall be free of foreign and organic material, sharp objects, or debris of any kind, which could potentially damage the filter fabric. No construction equipment or machinery shall operate directly on the filter fabric. The use of lightweight machinery (i.e., generator, etc.) with low ground pressure is allowed.

3.5 Repairs

All panels shall be inspected for damage. Any damaged area shall be repaired by a patch of the same material extending one foot beyond the edges of the damaged area.

-- END OF SECTION --

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SECTION 312000

EARTH MOVING

PART 1 -

PART 2 - GENERAL

2.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract apply to this section.

2.2 SUMMARY

A. Section Includes:

1. Excavating and filling for rough grading the Site.
2. Preparing subgrades for work zone, perimeter landscaped areas, sidewalk, and associated areas.
3. Subbase course for concrete sidewalk and former driveway area.
4. Subbase course for asphalt paving.
5. Excavating and backfilling trenches for utilities and pits for buried utility structures.

B. Related Requirements:

1. Section 329200 "Turf and Grasses" for finish grading in turf and grass areas, including preparing and placing planting soil for turf areas.
2. Section 329300 "Plants" for finish grading in planting areas and tree and shrub pit excavation and planting.

2.3 UNIT PRICES

A. See section 01025 Measurement and Payment.

2.4 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

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- B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions.
 - 2. Bulk Excavation: Excavation more than 10 feet in width and more than 50 feet in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.
- G. Fill: Soil materials used to raise existing grades.
- H. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 2 CY for bulk excavation that cannot be removed by rock-excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
 - 1. Equipment for Footing, Trench, and Pit Excavation: Late-model, track-mounted hydraulic excavator; equipped with a 42" maximum-width, short-tip-radius rock bucket; rated at not less than 138 BHP flywheel power with bucket-curling force of not less than 28,700 lbf (128 kN) and stick-crowd force of not less than 18,400 lbf (82 kN) with extra-long reach boom.
 - 2. Equipment for Bulk Excavation: Late-model, track-mounted loader; rated at not less than 230-hp (172-kW) flywheel power and developing a minimum of 47,992-lbf (213.3-kN) breakout force with a general-purpose bare bucket.
- I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

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- J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- K. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

2.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct pre-excavation conference at 4 Wright Street, New Bedford.
 - l. Review methods and procedures related to earthmoving, including, but not limited to, the following:
 - a. Personnel and equipment needed to make progress and avoid delays.
 - b. Coordination of Work with utility locator service.
 - c. Coordination of Work and equipment movement with the locations of tree- and plant-protection zones.
 - d. Field quality control.

2.6 ACTION SUBMITTALS

- A. Product Data: For each type of the following manufactured products required:
 - l. Geotextiles.
- B. Samples for Verification: For the following products, in sizes indicated below:
 - l. Geotextile: 12 by 12 inches (300 by 300 mm).

2.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Material Test Reports: For each [**on-site**] [**and**] [**borrow**] soil material proposed for fill and backfill as follows:
 - l. Classification according to ASTM D2487.
 - 2. Laboratory compaction curve according to [**ASTM D698**] [**ASTM D1557**].

2.8 QUALITY ASSURANCE

- C. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E329 and ASTM D3740 for testing indicated.

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2.8 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth-moving operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify Dig Safe a minimum of 72 hours prior to the start of construction for area where Project is located before beginning earth-moving operations.
- C. Do not commence earth-moving operations until temporary site fencing and erosion- and sedimentation-control measures specified on the Plans are in place.

PART 3 - PRODUCTS

3.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: Soils utilized for all phases of this project must meet the specifications noted on the plans, Geotechnical Report, or City of New Bedford DPI specifications.
- C. Unsatisfactory Soils: Soil Classification [**Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D2487**] [**Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7 according to AASHTO M 145**], or a combination of these groups.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
- E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 95 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.

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- F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
- G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- H. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch (37.5-mm) sieve and zero to 5 percent passing a No. 8 (2.36-mm) sieve.
- I. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and zero to 5 percent passing a No. 4 (4.75-mm) sieve.
- J. Sand: ASTM C33/C33M; fine aggregate.

3.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Geotextile fabric shall be as specified in 02260 Filter Fabric and/or as specified on the Contract Plans.

PART 4 - EXECUTION

4.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth-moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

4.2 DEWATERING

- A. Provide dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of ground water and permit excavation and construction to proceed on dry, stable subgrades.

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- B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- C. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
- D. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others.

4.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

4.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 - 2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 6 inches beneath pipe in trenches and the greater of 24 inches wider than pipe or 42 inches wide.
- B. Classified Excavation: Excavate to subgrade elevations. Material to be excavated will be classified as earth and rock. Do not excavate rock until it has been classified and cross sectioned by Architect. The Contract Sum will be adjusted for rock excavation according to unit prices included in the Contract Documents. Changes in the Contract Time may be authorized for rock excavation.
 - 1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; and soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.

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2. Rock excavation includes removal and disposal of rock. Remove rock to lines and subgrade elevations indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 6 inches beneath pipe in trenches and the greater of 24 inches wider than pipe or 42 inches wide.

4.5 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 2 inches. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

Retain "Excavations at Edges of Tree- and Plant-Protection Zones" Paragraph below if required.

- B. Excavations at Edges of Tree- and Plant-Protection Zones:

1. Excavate by hand or with an air spade to indicated lines, cross sections, elevations, and subgrades. If excavating by hand, use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.

4.6 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

4.7 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.

- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit unless otherwise indicated.

1. Clearance: As indicated on the Contract Plans.

- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

1. For pipes and conduit less than 6 inches (150 mm) in nominal diameter, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.

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2. For pipes and conduit 6 inches (150 mm) or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe or conduit circumference. Fill depressions with tamped sand backfill.
3. For flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support conduit on an undisturbed subgrade.
4. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

4.8 SUBGRADE INSPECTION

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed
- C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

4.9 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

4.10 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 1. Surveying locations of underground utilities for Record Documents.
 2. Testing and inspecting underground utilities.
 3. Removing trash and debris.
 4. Removing temporary shoring, bracing, and sheeting.
 5. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

4.11 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.

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- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Trenches under Roadways: Backfilling of trenches in the public way shall be completed in accordance with City of New Bedford DPI standards.
- D. Backfill voids with satisfactory soil while removing shoring and bracing.
- E. Initial Backfill:
 - 1. Soil Backfill: Place and compact initial backfill of subbase material, free of particles larger than 1 inch in any dimension, to a height of 12 inches (300 mm) over the pipe or conduit or as specified by DPI standards.
 - a. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- F. Final Backfill:
 - 1. Soil Backfill: Place and compact final backfill of satisfactory soil to final subgrade elevation.
 - 2. Controlled Low-Strength Material: Place final backfill of controlled low-strength material to final subgrade elevation.

4.12 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

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4.13

4.14 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified density.

4.15 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 6 inches in loose depth for material compacted by heavy compaction equipment and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Compact soil materials to not less than the following percentages of maximum dry unit weight according to [ASTM D698] [ASTM D1557]:
 - 1. Under walkways, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil to 95 percent.
 - 2. Under turf or unpaved areas, scarify and recompact to standards specified in the Geotechnical Report.
 - 3. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.

4.16 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

4.17 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

- A. Place subbase course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:

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1. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight.

4.18 FIELD QUALITY CONTROL

- A. Special Inspections: Owner and Contractor will engage a qualified special inspector to perform the following special inspections:
 1. Determine prior to placement of fill that site has been prepared in compliance with requirements.
 2. Determine that fill material classification and maximum lift thickness comply with requirements.
 3. Determine, during placement and compaction, that in-place density of compacted fill complies with requirements.
- B. Testing Agency: Owner and Contractor will engage a qualified geotechnical engineering testing agency to perform tests and inspections. Owner's testing agency may visit the site to spot check results submitted by the Contractor's agency.
- C. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

4.19 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

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4.20 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

-- END OF SECTION --

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SECTION 334100

STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Pipe and fittings.
 - 2. Nonpressure transition couplings.
 - 3. Manholes.
 - 4. Pipe outlets.
 - 5. Cleanouts

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings:
 - 1. Manholes: Include plans, elevations, sections, details, frames, and covers.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Show pipe sizes, locations, and elevations. Show other piping in same trench and clearances from storm drainage system piping. Indicate interface and spatial relationship between manholes, piping, and proximate structures.
- B. Field quality-control reports.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect pipe, pipe fittings, and seals from dirt and damage.
- B. Handle manholes according to manufacturer's written rigging instructions.

1.6 PROJECT CONDITIONS

- A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:

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1. Notify Construction Manager no fewer than two days in advance of proposed interruption of service.
2. Do not proceed with interruption of service without Construction Manager's written permission.

PART 2 - PRODUCTS

2.1 PE PIPE AND FITTINGS

- A. Corrugated PE Drainage Pipe and Fittings NPS 3 to NPS 10: AASHTO M 252M, Type S, with smooth waterway for coupling joints.
 1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with tube and fittings.
 2. Soiltight Couplings: AASHTO M 252M, corrugated, matching tube and fittings.
- B. Corrugated PE Pipe and Fittings NPS 12 to NPS 60: AASHTO M 294M, Type S, with smooth waterway for coupling joints.
 1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.
 2. Soiltight Couplings: AASHTO M 294M, corrugated, matching pipe and fittings.

2.2 NONPRESSURE TRANSITION COUPLINGS

- A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground nonpressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.
- B. Sleeve Materials:
 1. For Concrete Pipes: ASTM C 443, rubber.
 2. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.
- C. Unshielded, Flexible Couplings:
 1. Basis-of-Design Product: Subject to compliance with requirements of the City of New Bedford or comparable product by one of the following:
 - a. Dallas Specialty & Mfg. Co.
 - b. Fernco Inc.
 - c. Logan Clay Pipe.
 - d. Mission Rubber Company; a division of MCP Industries, Inc.
 - e. NDS Inc.
 - f. Plastic Oddities; a division of Diverse Corporate Technologies, Inc.

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2. Description: Elastomeric sleeve with stainless-steel shear ring and corrosion-resistant-metal tension band and tightening mechanism on each end.

D. Shielded, Flexible Couplings:

1. Basis-of-Design Product: Subject to compliance with requirements of the City of New Bedford or comparable product by one of the following:
 - a. Cascade Waterworks Mfg.
 - b. Dallas Specialty & Mfg. Co.
 - c. Mission Rubber Company; a division of MCP Industries, Inc.
2. Description: ASTM C 1460, elastomeric or rubber sleeve with full-length, corrosion-resistant outer shield and corrosion-resistant-metal tension band and tightening mechanism on each end.

E. Ring-Type, Flexible Couplings:

1. Basis-of-Design Product: Subject to compliance with requirements of the City of New Bedford or comparable product by one of the following:
 - a. Fernco Inc.
 - b. Logan Clay Pipe.
 - c. Mission Rubber Company; a division of MCP Industries, Inc.
2. Description: Elastomeric compression seal with dimensions to fit inside bell of larger pipe and for spigot of smaller pipe to fit inside ring.

2.3 MANHOLES

A. Standard Precast Concrete Manholes:

1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
2. Diameter: 48 inches minimum.
3. Ballast: Increase thickness of precast concrete sections or add concrete to base section as required to prevent flotation.
4. Base Section: 6-inch minimum thickness for floor slab and 5-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
5. Riser Sections: 5-inch minimum thickness, and lengths to provide depth indicated.
6. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type and top of cone of size that matches grade rings.
7. Joint Sealant: ASTM C 990, bitumen or butyl rubber.
8. Resilient Pipe Connectors: ASTM C 923, cast or fitted into manhole walls, for each pipe connection.
9. Steps: 1/2-inch steel aluminum, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12-

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inch intervals. Omit steps if total depth from floor of manhole to finished grade is less than 60 inches.

10. Grade Rings: Reinforced-concrete rings, 6- to 9-inch total thickness, to match diameter of manhole frame and cover, and height as required to adjust manhole frame and cover to indicated elevation and slope.

B. Manhole Frames and Covers:

1. Description: Meeting City of New Bedford Standard.
2. Material: ASTM A 536, Grade 60-40-18 ductile iron unless otherwise indicated.

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Section 02200 "Earthwork."

3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.
- F. Install gravity-flow, nonpressure drainage piping according to the following:
 1. Install piping pitched down in direction of flow.
 2. Install piping with 36-inch minimum cover.
 3. Install ductile-iron piping and special fittings according to AWWA C600 or AWWA M41.
 4. Install reinforced-concrete piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."

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3.3 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, nonpressure drainage piping according to the following:
 - 1. Join reinforced-concrete sewer piping according to ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
 - 2. Join dissimilar pipe materials with nonpressure-type flexible couplings.

3.4 CHECK VALVE INSTALLATION

- A. Install duckbill-type check valves in piping where indicated according to manufacturer's recommendations.

3.5 MANHOLE INSTALLATION

- A. General: Install manholes, complete with appurtenances and accessories indicated.
- B. Install precast concrete manhole sections with sealants according to ASTM C 891.
- C. Where specific manhole construction is not indicated, follow manhole manufacturer's written instructions.
- D. Set tops 3 inches above finished grade unless otherwise indicated.

3.6 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

- A. Abandoned Piping: Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough to withstand hydrostatic and earth pressures that may result after ends of abandoned piping have been closed. Use either procedure below:
 - 1. Close open ends of piping with at least 8-inch-thick, brick masonry bulkheads.
 - 2. Close open ends of piping with threaded metal caps, plastic plugs, or other acceptable methods suitable for size and type of material being closed. Do not use wood plugs.
- B. Abandoned Manholes and Structures: Excavate around manholes and structures as required and use one procedure below:
 - 1. Remove manhole or structure and close open ends of remaining piping.
- C. Backfill to grade according to Section 02200 "Earthwork and Section 02222 "Excavation, Trenching, Backfilling for Utility Systems"

3.7 IDENTIFICATION

- A. Materials and their installation are specified in Section 02200 Earthwork and Section 02222 "Excavation, Trenching, Backfilling for Utility Systems." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.

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1. Use detectable warning tape over nonferrous piping and over edges of underground structures.

3.8 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
 1. Submit separate reports for each system inspection.
 2. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
 - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
 - d. Infiltration: Water leakage into piping.
 - e. Exfiltration: Water leakage from or around piping.
 3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
 4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
 1. Do not enclose, cover, or put into service before inspection and approval.
 2. Test completed piping systems according to requirements of authorities having jurisdiction.
 3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
 4. Submit separate report for each test.
 5. Gravity-Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
 - a. Exception: Piping with soiltight joints unless required by authorities having jurisdiction.
 - b. Option: Test plastic piping according to ASTM F 1417.
 - c. Option: Test concrete piping according to ASTM C 924.
- C. Infiltration and storm utility systems shall be protected from stormwater runoff and run-on until the site has been stabilized.
 1. Dewatering into the utility trenches will not be allowed.
 2. Any sedimentation from runoff or run on activities will be corrected by the Contractor.

3.9 CLEANING

- A. Clean interior of piping of dirt and superfluous materials. Flush with potable water.

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-- END OF SECTION --