Town of Rockport

Control #2027-009

INVITATION FOR BID

Town of Rockport
Long Beach Seawall FEMA Disaster Relief Project
No. 2027-009

Control #:	**2027-009**
Bids Due:	**1:00 p.m. on November 19, 2026** **at Town of Rockport, MA.** **Selectboard Office** **34 Broadway** **Rockport, MA. 01966**

Contact

David Smith, Senior Project Manager
GZA GeoEnvironmental, Inc.
(781) 278-4806
David.smith@gza.com

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Attachment A – Wage Rates
Attachment B – Long Beach Seawall FEMA Disaster Relief Project Contract Drawings
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1. Order of Conditions DEP File No. 62-0953
2. USACE Pre-Construction Notification NAE-2018-02317
3. MEPA Notice of Project Change EEA 15917

SECTION 00020
INVITATION FOR BIDS

Sealed bids for the **Long Beach Seawall FEMA Disaster Relief Project No. 2027-009** for the Town of Rockport, Rockport, Massachusetts will be received at Town of Rockport, Town Hall, Selectboard's Office, 34 Broadway, Rockport, MA. 01966 until **November 19, 2026, at 1:00pm**, and at that time the bids will be publicly opened and read aloud.

The Project involves the reconstruction of approximately 350 lineal feet of a 1930's section of concrete seawall, located between House No. 56 and House No. 70, the reconstruction of approximately 43 lineal feet of seawall, located at the western end of the existing seawall and the construction of concrete access stairs at Long Beach in Rockport, Ma.

All bids for this project are subject to applicable public bidding laws of Massachusetts, including G.L. c.30 Section 39M as amended.

Bids must be mailed or hand delivered to the above specified receiving address prior to the times specified hereunder. If mailed, bids shall be sent to the above specified receiving address in time for bid opening.

The successful bidder must furnish a performance and labor and materials (payment) bond in an amount equal to 100 percent of the total contract price.

Plans and Specifications may be obtained via email by contacting David Smith, Senior Project Manager, GZA GeoEnvironmental, Inc., at David.smith@gza.com on or after October 21, 2026, Monday through Friday between 8:00 a.m. and 5:00 p.m.

Each Bid must be accompanied by a bid security consisting of a BID BOND, CASH, or, CERTIFIED CHECK issued by a responsible bank or trust company in the amount of 5% of the bid price.

A non-mandatory pre-bid meeting at Long Beach, the eastern end of Rockport Road in Gloucester is scheduled for **November 5, 2026, at 1:00pm at the end of Rockport Road, in Gloucester, MA.**

Attention is directed to the minimum wage rates to be paid as determined by the Commissioner of Labor and Workforce Development and the weekly payroll record submittal requirements under the provisions of Massachusetts General Laws.

Selection of the contractor will be based upon bid price and bidder qualifications, including evidence of past performance in similar projects. The contract will be awarded to the bidder deemed by the awarding authority to be the lowest responsible and eligible bidder. The bidder agrees that its bid shall be good and may not be withdrawn for a period of 90 days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids.

The Town will reject general bids when required to do so by the above referenced General Laws. The Town reserves the right to waive any informality, to accept or reject, in whole or in part any or all bids, or take whatever other action may be deemed to be in the best interest of the Town.

The Town of Rockport is an equal opportunity employer.

Aaron Cilluffo
Director of Public Works
Rockport, Massachusetts

SECTION 00100
INSTRUCTIONS TO BIDDERS

1. Receipt and Opening of Bids

The Town of Rockport, Massachusetts, herein called the Owner or Awarding Authority, acting by and through its Department of Public Works, will receive sealed bids for the project known as **Long Beach Seawall FEMA Disaster Relief Project No. 2027-0009**.

This Project is subject to the public bidding statutes, G.L. c. 30, Section 39M

General bids similarly addressed to the Town of Rockport and endorsed **Long Beach Seawall FEMA Disaster Relief Project No. 2027-009** will be received at Town of Rockport, Town Hall, Selectboard's Office at 34 Broadway, Rockport, MA. 01966 until **November 19, 2026, at 1:00pm**, at which time and place said bids will be publicly opened and read aloud.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. The bidder agrees that its bid shall be good and may not be withdrawn for a period of 90 days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids.

2. Summary of Work

The work of this contract includes all labor, material and equipment necessary to perform the work as indicated in the contract documents and as specified herein including but not limited to:

1. The Contractor to provide the necessary furnishing of all labor, supervision, survey, materials, tools, and equipment, temporary shoring and protection of structures, temporary facilities, such as portable sanitary facilities, temporary fencing, erosion control, cover on excavation material, and all other incidental work necessary to complete the work as shown on the Contract Drawings, and as herein specified.

2. The Contractor is responsible for protection of existing structures, including the seasonal residential homes adjacent to the work.

3. The Contractor will have to perform the work in a manner that considers the tide cycle.

4. Procurement, delivery, and installations necessary for reconstruction of the Long Beach Seawall structure including demolition and removal of the existing wall segments, Site preparation, construction of the cast-in-place reinforced concrete seawall and footing, construction of concrete access stairs, protection of existing Site features, restoration of the topside of the wall and landside features, and resetting existing stone revetment. Additional drawings showing details in accordance with which the Work is to be done may be furnished by addendum from time to time during the bidding period by the Owner, or its advisor, and shall then become a part of the Contract Documents.

The Contractor shall furnish all labor, services, survey, supervision, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, and all other things necessary to do all work

required for the completion of each item of the Work and as herein specified. Contractor is responsible for any construction debris removal and cleanup on a daily basis.

Work on this project must meet the requirements of all applicable town, local and state codes, laws and ordinances, in addition to any technical societies referenced herein

The Work to be done and paid for under any item shall not be limited to the exact extent mentioned or described but shall include all incidental work necessary or customarily done for the completion of that item. It should be noted that due to the dynamic site conditions, the sand and stone elevation at the time of construction may be higher or lower than as depicted on the Project Drawings.

3. Preparation of Bid

All bids must be upon the blank form for bid annexed hereto, state the proposed price of each item of the Work, both in words and in figures, and be signed by the bidder with his business address and place of residence. **Bidders shall not remove and submit the bid pages separate from the volume of Contract Documents but shall submit their bids bound with the complete volume of attached Contract Documents, including all pages correctly assembled.**

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, their address, and endorsed with the name of the project as specified in Receipt and Opening of Bids, above. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in Receipt and Opening of Bids, above.

4. Bid Opening Procedure

The following list of requirements shall apply to each filed bid:

Bids shall be filed at the place and before the time specified in Receipt and Opening of Bids, above. Bids not meeting the requirements for timeliness will be rejected.

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

Bid signatures required in the bid as contained in Section 00300 Form of General Bid, which includes certifications required by law and a Certification of Vote for bidding Corporations, will be checked at time of bid opening. Bids not meeting the signature requirements may be rejected.

A signed certifications form; including non-collusion, tax attestation, and suspension and debarment statement form shall be submitted with the bid.

All addenda issued for this project will be sent by email to all prospective bidders that have been registered on the project's plan holders list. Acknowledgement of addenda is required by filling out the provided Paragraph B Addenda Acknowledgement within Section 00300 Form of General Bid. Bids that do not acknowledge any addenda that have been issued may be rejected.

The total dollar amount of each bid will be read. All those present at the bid opening may examine all bids after the bid opening.

5. Modification

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

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

6. Ability and Experience of Bidder

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

In order to ensure the highest level of quality with respect to this public facility, the successful bidder shall have a minimum of five (5) years of successful experience of waterfront projects of similar size and scope of work as this project as per the requirements of the project plans and specifications.

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

7. Conditions of Work

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

8. Addenda and Interpretations

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

Every request for such interpretation should be in writing addressed to Mr. David Smith, Senior Project Manager, GZA GeoEnvironmental, Inc., 144 Elm Street, Amesbury, MA. 01913, David.smith@gza.com and to be given consideration must be received **by November 12, 2026**. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, when issued, will be sent via email. Failure of any bidder to receive any

such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

9. Security for Faithful Performance

Simultaneously with his delivery of the executed Contract, the Contractor shall furnish a surety bond or bonds as security for faithful payment of all persons performing labor and materials under this contract as specified in Section 00700, GENERAL CONDITIONS included herein. The surety on such bond or bonds shall be a surety company qualified to do business under the laws of the Commonwealth of Massachusetts and satisfactory to the Owner. The bonds shall remain in force for one year after final acceptance of the work by the Owner, unless the Owner, in writing, releases the Contractor from the obligation sooner.

10. Power of Attorney

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

11. Laws and Regulations

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances or bylaws, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though written out in full. Attention is directed to Section 00850 and to other applicable sections of the Contract Documents.

12. Liquidated Damages for Failure to Enter into Contract

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

13. Obligation of Bidder

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

14. Information Not Guaranteed

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

It is agreed and understood that the Owner does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures encountered during construction will be the same as those indicated in the Contract Documents.

It is further agreed and understood that no bidder or Contractor shall use or be entitled to use any of the information made available to him or obtained in any examination made by him in any manner as a basis of or ground for any claim or demand against the Owner or the Architect/Engineer, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

15. Bid Security

Each bid must be accompanied by bid security in the form of a certified check, a bid bond, cash, or a treasurer's or cashier's check, payable to the Owner, in the amount of five (5) percent of the value of the bid. Such security of general bidders will be returned to all except the three lowest responsible and eligible bidders within five days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids, and the remaining securities will be returned promptly after the Owner and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to the selected contractor within 30 days, Saturdays, Sundays and holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.

16. Right to Reject Bid

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

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

17. Time for Completion

The successful general bidder must agree to commence work on or before the date to be specified in a written Notice to Proceed and to fully complete the project within the time limit stated in Section 00300, FORM OF GENERAL BID.

18. Comparison of Bids

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

19. Award of Contract

The Contract will be awarded to "the lowest responsible and eligible bidder" pursuant to General Laws Chapter 30, Section 39M, as amended. Such a bidder shall possess the skill, ability and integrity necessary for the faithful performance of the work, shall be able to furnish labor that can work in

harmony with all other elements of labor employed, or to be employed, in the work, and shall otherwise comply with all applicable provisions of law. Contract award shall be subject to availability of an appropriation for funding.

20. Statutes Regulating Competitive Bidding

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

21. Wage Rates

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

State schedules of Prevailing wage rates are included in the Supplemental General Conditions section of the Contract Documents as **Attachment A**.

22. Contractor Records

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

23. Insurance

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

24. Project Manager

In addition to a project Architect/Engineer, the Owner may utilize the services of a project manager, whose duties shall be as set forth in the Agreement for Project Manager Services.

END OF SECTION

SECTION 00300
FORM OF GENERAL BID

Bid of _____ (hereinafter called "Bidder")*

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

(___) a partnership

(___) a joint venture

(___) an individual doing business as _____

To the Town of Rockport, Massachusetts (hereinafter called "Owner").

A) The undersigned Bidder, in compliance with your invitation for bids for the project known **Long Beach Seawall FEMA Disaster Relief Project No. 2027-009,** having examined the plans and specifications and related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the contract documents and the plans and specifications within the time set forth below, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this bid is a part.

The Bidder hereby agrees to complete the Project and related work by **April 30, 2027**. The Bidder further agrees to pay as liquidated damages the sum of One Thousand and 00/100 ($ 1,000.00) Dollars for each consecutive calendar day thereafter that the work is not complete as provided in Section 00700 GENERAL CONDITIONS.

_____

*Specify corporation, partnership or individual name as applicable.

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

No. _____ Dated: _____

No. _____ Dated: _____

No. _____ Dated: _____

No. _____ Dated: _____

C) BID FORM – **Long Beach Seawall FEMA Disaster Relief Project No. 2027-009**

Long Beach Seawall FEMA Disaster Relief Project No. 2027-009, Bid Items:

ITEM NO.	BID ITEM NO.	APPROX. QUANTITY	ITEM OF WORK WITH UNIT PRICE IN WORDS	UNIT PRICE	TOTAL PRICE
1	02002-1	1 LS	Mobilization and Demobilization at_____ _____ Dollars & Cents/Lump Sum		
2	02100-1	1 LS	Demolition, Removal and Disposal at_____ _____ Dollars & Cents/Lump Sum		
3	02100-2	11 EA	Site Feature Removal and Restoration at_____ _____ Dollars & Cents/Each		
4	02170-1	1 LS	Temporary Shoring at_____ _____ Dollars & Cents/Lump Sum		

ITEM NO.	BID ITEM NO.	APPROX. QUANTITY	ITEM OF WORK WITH UNIT PRICE IN WORDS	UNIT PRICE	TOTAL PRICE
5	02200-1	1 LS	Excavation, Backfilling, and Compaction at _____ _____ Dollars & Cents/Lump Sum		
6	02300-1	393 LF	Remove and Reset Revetment Apron Stones at _____ _____ Dollars & Cents/Linear Foot		
7	02360-1	1 LS	Steel Sheeting at_____ _____ Dollars & Cents/Lump Sum		
8	03400-1	393 LF	Concrete Seawall at_____ _____ Dollars & Cents/Linear Foot		
9	03400-2	1 LS	Concrete Access Steps at_____ _____ Dollars & Cents/Lump Sum		

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ITEM NO.	BID ITEM NO.	APPROX. QUANTITY	ITEM OF WORK WITH UNIT PRICE IN WORDS	UNIT PRICE	TOTAL PRICE
10	03400-3	7 LF	Concrete Return Wall at_____ _____ Dollars & Cents/Linear Foot		
11	03400-4	393 LF	Weephole Drainage System at_____ _____ Dollars & Cents/Linear Foot		
12	05500-1	435 LF	Railings at_____ _____ Dollars & Cents/Linear Foot		
	TOTAL BID PRICE IN WORDS:			TOTAL BID PRICE: $	

Note: The Total Bid per Item is the Unit Price Bid per Item times the Quantity of Units for that Item. The unit prices shall govern in case of a mathematical discrepancy between the unit price in figures that is to be multiplied by the Approximate Quantity and the Total Bid amount in figures unless it is evident otherwise in comparison to other bids received. In the case of a conflict between the Total Bid number and the bid written in words, the bid written in words shall govern.

TOTAL BID (Items 1 through 12):

$_____ (Numeric)

TOTAL BID (Items 1 through 12):

$_____ Dollars (Written)

The undersigned also agrees that the quantities indicated are for Bid comparison purposes only and are not represented to be actual quantities for completion of the Work.

The undersigned also agrees that additional work, if any, will be performed and will be paid for in accordance with the Contract Documents.

The above prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, bonds, and incidentals required to complete the Work.

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

The undersigned hereby certifies under the penalties of perjury that this Bid is in all respects bona fide, fair, and made without collusion or fraud with any other person. As used in this section, the word "person" shall mean any natural person, joint venture, partnership, corporation, or other business or legal entity.

_____
Social Security Number
or Federal Identification Number

_____
Signature of Individual or Corporate Officer

_____

_____

_____
Name of Corporation
(if applicable)

_____
State of Incorporation

Corporate Seal Affix Below

Note: If the Bidder is a corporation, indicate state of incorporation under Name of Corporation, and affix corporate seal; if a partnership, give full names and residential addresses, if different from business address.

CERTIFICATE OF VOTE

(To be completed if Contractor is a Corporation, otherwise mark NA)

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

and acting Secretary of _____ and I further certify that a meeting of the
(Name of Corporation)

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

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

VOTED: To authorize and empower

_____

_____

_____

_____

_____

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

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

By:_____
(Secretary of Corporation)

A True Copy:

Attest:_____
(Notary Public)

My Commission Expires:_____
(Date)

NON-COLLUSION / TAX ATTESTATION / SUSPENSION & DEBARMENT STATEMENT

CERTIFICATIONS REQUIRED BY LAW

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

TAX COMPLIANCE

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

NON-COLLUSION

The undersigned certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person'' shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

SUSPENSION & DEBARMENT

The undersigned certifies under the penalties of perjury that they are not presently debarred or suspended or being investigated for potential debarment or suspension by the U.S. General Services Administration or any related state or federal body and that they are not otherwise disallowed from contracting with public agencies. A proof of this status may be requested at any point in the project term. As used in this subsection the word "person'' shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

COMPLETE AND SIGN BELOW:

_____ _____

Authorized Person's Signature Date

_____

Print Name & Title of Signatory

_____

Name of Bidder

Notice of Acceptance of bid by the Town should be mailed or otherwise delivered to the undersigned Bidder at the following address.

By:

_____
(Name)

_____
(Title)

_____
(Business Address)

_____
(City and State)

Date: _____

The undersigned agrees that, if they are selected as general contractor, they will within five (5) days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a payment bond from a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority in the sum of 100% of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price; provided, however, that if there is more than one surety company, the surety companies shall be jointly and severally liable.

The undersigned hereby certifies 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; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards made subject to section 44A.

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona-fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person'' shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated there under.

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

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 90 days, Saturdays, Sundays and legal holidays excluded, after the opening of bids.

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

The selected Contractor shall furnish a performance bond and payment bond in an amount at least equal to one hundred percent (100%) of the contract price in accordance with Section 00610 PERFORMANCE BOND and 00620 PAYMENT BOND, and as stipulated in Section 00700 GENERAL CONDITIONS.

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

1. Have been in business under present name for _____ years.

2. The names and addresses of all persons interested in the bid (if made by a partnership or corporation) as principals, are as follows:

_____

_____

_____

_____

_____

_____

(attach supplementary list if necessary)

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

Completion Date	Project Name	Contract Amount	Design Architect	Reference Name	Telephone No.
1.					
2.					
3.					
4.					
5.					
6.					

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

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

Respectfully submitted:

Date: _____

By: _____
(Signature)

_____
(Type Name of Bidder)

_____
(Title)

_____
(Business Address)

_____
(City and State)

_____
(Telephone Number)

SECTION 00500
SAMPLE AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20____, by and between the party of the first part, the Town of Rockport, hereinafter called "OWNER," acting herein through its Department of Public Works, and the party of the second part, _____ doing business as a corporation located in the City of _____, County of _____, and State of _____, hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the project described as follows: **Long Beach Seawall FEMA Disaster Relief Project No. 2027-009**, hereinafter called the Project, for the sum of _____ Dollars ($_____) and all extra work in connection therewith, under the terms as stated in the Contract Documents; and at their own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in Section 00300 FORM OF GENERAL BID, Section 00700 GENERAL CONDITIONS, and Section 00800 SUPPLEMENTAL GENERAL CONDITIONS, the plans, which include all maps, plates, blue prints, and the specifications and Contract Documents as prepared by the Owner.

The CONTRACTOR hereby agrees to commence work under this Contract on or before a date to be specified in a written "Notice to Proceed" from the OWNER.

The CONTRACTOR further agrees to substantially complete the project by **April 30, 2027**, specified in the written “Notice to Proceed” from the OWNER.

The CONTRACTOR further agrees to pay as liquidated damages the sum of $1,000.00 for each consecutive calendar day thereafter as provided in the Liquidated Damages Paragraph of Article 8 of Section 00700 GENERAL CONDITIONS.

The CONTRACTOR agrees not to discriminate against or exclude any person from participation herein on grounds of race, religion, color, sex, age or national origin; and that it shall take affirmative actions to ensure that applicants are employed, and that employees are treated during their employment, without regard to race, religion, color, sex, age, handicapped status, or national origin.

The CONTRACTOR agrees not to participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code of 1986, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in Section 00700 GENERAL CONDITIONS, and to make payments on account thereof as provided in Article 9 of Section 00700 GENERAL CONDITIONS.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in two (2) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

AGREED:

TOWN OF ROCKPORT, MASSACHUSETTS
(Owner)

By_____
Mr. Paul F. Murphy, Chair

CONTRACTOR

By_____
(Company)

_____
(Name)

_____
(Title)

_____
(Address)

_____
(City and State)

TOWN OF ROCKPORT, MASSACHUSETTS
(Owner)

By_____
Mr. Don Southard
Vice-Chair

By_____
Ms. Laura Evans
Board of Selectmen Member

By_____
Mr. Ross C. Brackett
Board of Selectmen Member

By_____
Ms. Dwight Valentine
Board of Selectmen Member

Approved as to Form:

By_____
(Owner's Counsel)

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

By_____
(Owner's Accountant)

SECTION 00610
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____,
(Name of Contractor)
a _____, hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture or Individual)

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

hereinafter called the "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the City/Town of _____, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

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

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

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

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

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

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

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

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

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

ATTEST:

_____
Principal

_____ By _____
(Principal Secretary)

_____

_____

_____
(Address-Zip Code)

_____ (SEAL)
Witness as to Principal
_____

_____
(Address-Zip Code)

ATTEST:

_____
Surety

_____ By _____
(Attorney-in-Fact)

_____

_____

(Address-Zip Code)

_____ (SEAL)

Witness as to Surety

_____

_____

(Address-Zip Code)

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

Long Beach Seawall FEMA Disaster Relief Project No. 2027-009

SECTION 00620
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____,
(Name of Contractor)
a _____, hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture or Individual)

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

hereinafter called the "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the City/Town of _____, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

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

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

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

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

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

ATTEST:

_____
Principal

_____ By _____
(Principal Secretary)

_____

_____

_____
(Address-Zip Code)

_____ (SEAL)
Witness as to Principal

_____

_____
(Address-Zip Code)

ATTEST:

_____
Surety

_____ By _____
(Attorney-in-Fact)

_____

_____
(Address-Zip Code)

_____ (SEAL)
Witness as to Surety

_____

_____
(Address-Zip Code)

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

Long Beach Seawall FEMA Disaster Relief Project No. 2027-009

SECTION 00700
GENERAL CONDITIONS

ARTICLE 1 - GENERAL PROVISIONS
ARTICLE 2 - ADMINISTRATION OF THE CONTRACT
ARTICLE 3 - OWNER
ARTICLE 4 - CONTRACTOR
ARTICLE 5 - SUBCONTRACTORS
ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
ARTICLE 7 - CHANGES IN THE WORK / CLAIMS FOR ADDITIONAL COSTS
ARTICLE 8 - TIME
ARTICLE 9 - PAYMENTS AND COMPLETION
ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY
ARTICLE 11 - INSURANCE AND BONDS
ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK
ARTICLE 13 - MISCELLANEOUS PROVISIONS
ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

ARTICLE 1 - GENERAL PROVISIONS

§ 1.1 DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Owner-Contractor Agreement, the Conditions of the Contract (General, Supplemental and other Conditions), the Drawings, the Specifications, all Addenda issued prior to, and all Modifications issued after execution of the Contract, and all applicable laws, ordinances and regulations. A Modification is (1) a written amendment to the contract signed by both parties, (2) a Change Order, (3) a written interpretation issued by the Owner or (4) a written order for a minor change in the Work issued pursuant to Paragraph 7.4. The Contract Documents include Bidding Documents such as the Advertisement or Invitation to Bid, the Instructions to Bidders, sample forms, the Contractor's Bid or portions of Addenda relating to any of these, or any other documents, specifically enumerated in the Owner-Contractor Agreement. In the event of a conflict among the Contract Documents, they shall be construed according to the following priorities: first – Modifications; second – Agreement; third – Addenda; fourth – General Conditions; fifth – specifications; sixth – Drawings.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. All Work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of this Contract unless it is specifically indicated in the Contract Documents that such Work is to be done by others. Should the Drawings or the Specifications disagree in themselves or with each other, the Contractor shall provide the better quality or greater quantity of Work unless otherwise directed by written addendum to the Contract.

§ 1.1.3 THE WORK

The Work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

§ 1.1.4 THE PROJECT

The project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.

§ 1.1.5 OR EQUAL

The use of the words "Or Equal" following the name of any manufacturer, vendor or proprietary product shall be understood to mean that articles or materials may be substituted which, in the opinion of the Owner, are equal in quality, durability, appearance, strength, design and performance to the articles or materials named or described and will perform adequately in providing a first-class facility.

When submitting shop drawing information on articles or materials which are being proposed as substitutes for specified items, the Contractor shall clearly identify them as such. If the articles or materials are accepted as equal to those on which dimensions on the drawings are based, any dimensional variance from those shown and/or specified shall be shown on the shop drawings prepared by the Contractor, illustrating the manner in which conformity to dimensions and design is to be obtained. All such drawings shall be subject to the approval of the Owner and the installation of the article shall not proceed without first obtaining said approval.

§ 1.2 EXECUTION, CORRELATION AND INTENT

§ 1.2.1 The Contract Documents shall be signed in not less than quadruplicate by the Owner and Contractor.

§1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

§1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by anyone shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results. Words and abbreviations which have well-known technical, or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

§1.2.4 Except as required by G.L. c. 149, §44F and the provisions of law governing filed sub-bids, the organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.5 Unless otherwise stated in the Contract Documents, words which have well-known technical, or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.6 All indications or notations which apply to one of a number of similar situations, materials or processes shall be deemed to apply to all such situations, materials or processes wherever they appear in the Work, except where a contrary result is clearly indicated by the Contract Documents.

§ 1.2.7 Where codes, standards, requirements and publications of public and private bodies are referred to in the Specifications, references shall be understood to be to the latest revision prior to the date of receiving bids, except where otherwise indicated.

§ 1.2.8 Where no explicit quality or standards for materials or workmanship are established for Work, such Work is to be of good quality for the intended use and consistent with the quality of the surrounding Work and of the construction of the Project generally.

§ 1.2.9 All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise indicated in the Contract Documents.

§ 1.2.10 Test boring or soil test information included with the Contract Documents or otherwise made available to the Contractor, if applicable, was obtained by the Owner for use by the Architect/Engineers in the design of the Project or Work. The Owner does not hold out such information to the Contractor as a completely accurate indication of subsurface conditions, and no claim for extra cost or extension of time resulting from a reliance by the Contractor on such information shall be allowed except as provided by Chapter 30, Section 39N of the General Laws of the Commonwealth of Massachusetts.

§ 1.2.11 Where the Work is to fit with existing conditions or work to be performed by others, the Contractor shall fully and completely join the Work with such conditions or work, to the satisfaction of the owner and/or the architect/engineer, unless otherwise specified.

§1.3 OWNERSHIP AND USE OF DOCUMENTS

§1.3.1 All Drawings, Specifications and copies thereof furnished by the Owner are and shall remain the Owner's property. They are to be used only with respect to this Project and are not to be used on any other

project without the prior written consent of the Owner. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Owner at the completion of the Work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of any reserved rights.

ARTICLE 2 - ADMINISTRATION OF THE CONTRACT

§ 2.1 OWNER'S REPRESENTATIVE

§ 2.1.1 The designated representative of the Owner ("Architect/Engineer") will administer the Contract and visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. However, the Architect/Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner may also retain a separate Project Manager, who shall work with the Architect/Engineer in the administration of the Contract

§2.1.2 The Architect/Engineer and Project Manager shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Owner may perform its functions under the Contract Documents.

§2.1.3 Based on his observations and an evaluation of the Contractor's Applications for Payment, the Architect/Engineer will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in Article 9.

§2.1.4 The Architect/Engineer will render information necessary for the proper execution or progress of the Work within twenty (20) days of any request by the contractor or in accordance with any time limit agreed upon.

§2.1.5 The Architect/Engineer will have authority to reject Work which does not conform to the Contract Documents. Whenever, in his opinion, he considers it necessary or advisable for the implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work in accordance with Section 13.5.2 whether or not such Work be then fabricated, installed or completed. Any such rejection of work shall not relieve the Contractor of the responsibility for maintaining protection of the Work and the Owner's property.

§2.1.6 The Architect/Engineer will review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. The approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 2.1.7 The Architect/Engineer will prepare Change Orders in accordance with Section 7.1 herein, and will have authority to order minor changes in the Work as provided in Section 7.3.

§ 2.1.8 The Architect/Engineer will conduct inspections to determine the date of Substantial Completion and Final Completion, will review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of Section 9.10.

ARTICLE 3 - OWNER

§ 3.1 DEFINITION

§ 3.1.1 The Owner is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number. The term Owner means the Owner or, as applicable, the Owner's authorized representative ("Architect/Engineer"), which for this Project shall be the Town of Rockport Public Works. The Owner may also retain a separate Project Manager, who shall work with the Architect/Engineer in the administration of the Contract. The form of agreement between the Owner and the Architect/Engineer and/or the Project Manager shall be made available to the Contractor upon request.

§ 3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 3.2.1 The Owner shall, at the written request of the Contractor, prior to commencement of the Work and thereafter, furnish to the Contractor reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract.

§ 3.2.3 The Owner shall furnish available surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. Except as otherwise stated in the Contract Documents, the Contractor shall be entitled to reasonably rely on the accuracy of information furnished by the Owner except to the extent that the Contractor's review thereof reveals, or in the exercise of reasonable diligence should have revealed, any inaccuracy or incompleteness therein. The Contractor shall exercise proper precautions relating to the safe performance of the Work.

§ 3.2.4 Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable promptness.

§ 3.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, two (2) copies of the Project Manual as are reasonably necessary for execution of the Work, all additional copies will be furnished upon request at the cost of reproduction.

§ 3.3 OWNER'S RIGHT TO STOP THE WORK

§ 3.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or persistently fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. The Contractor shall resume the Work after such stoppage promptly upon written notice to do so from the Owner.

§ 3.4 OWNER'S RIGHT TO CARRY OUT THE WORK

§ 3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect/Engineer's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 4 - CONTRACTOR

§ 4.1 GENERAL

§ 4.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 4.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 4.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Owner in the administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

§ 4.2 REVIEW OF CONTRACT DOCUMENTS BY CONTRACTOR

§ 4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Owner any error, inconsistency or omission he may discover. If the Contractor performs any construction activity it knows or reasonably should know involves a recognized error, inconsistency or omission in the Contract Documents without such notice to the Owner, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for such correction.

§ 4.2.2 Any claim by the Contractor or Subcontractors that, in submitting their respective bids, they did not include all items as shown in the Contract Documents, will be given no consideration for an adjustment of any kind. If any item is specified in a Section which would not normally furnish this item it shall be the responsibility of the Contractor to coordinate the situation with the Subcontractor, and if the item under consideration is not to be provided by the Subcontractor it shall be the responsibility of the Contractor to provide the work in question, without any additional cost to the Owner.

§ 4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 4.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention which shall not be less than such state of skill and attention generally rendered by the contracting profession for projects similar to the Project in scope, difficulty and location. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect/Engineer and shall not proceed with that portion of the Work without further written instructions from the Architect/Engineer.

§ 4.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors this obligation shall also extend to the presence on the Site of suppliers of materials or equipment, their employees, contractors, and agents engaged in the Work.

§ 4.3.3 The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Owner in its administration of the Contract, or by inspection, tests or approvals required or performed under Section 13.5 by persons other than the Contractor.

§ 4.3.4 The Contractor shall retain a registered professional engineer or registered land surveyor, acceptable to the Architect/Engineer, to establish the exterior lines and required structures to be erected, and to establish lines and grades for associated work to be performed. The engineer or surveyor shall certify the actual location of constructed elements of the Work.

§ 4.4 LABOR AND MATERIALS

§ 4.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 4.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 4.5 WARRANTY

§ 4.5.1 The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents and, promptly after written notification of non-conformance, shall be repaired or replaced by the Contractor with Work conforming to such requirements. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 4.5.2 The Contractor shall be responsible for determining that all materials furnished for the Work meet all requirements of the Contract Documents. The Owner may require the Contractor to produce reasonable evidence that a material meets such requirements, such as certified reports of past tests by qualified testing laboratories, reports of studies by qualified experts, or other evidence which, in the opinion of the Owner, would lead to a reasonable certainty that any material used, or proposed to be used, in the Work meets the requirements of the Contract Documents. All such data shall be furnished at the Contractor's expense.

§ 4.5.3 If the Contractor proposes to use a material which, while suitable for the intended use, deviates in any way from the detailed requirements of the Contract Documents, the Contractor shall inform the Owner in writing of the nature of such deviations at the time the material is submitted for approval.

§ 4.5.4 In informing the Owner of deviations or substitutions, the Contractor shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation will provide a quality of result at least equal to that otherwise attainable. If, in the opinion of the Owner, the evidence presented by the Contractor does not provide a sufficient basis for such reasonable certainty, the Owner may reject such substitution or deviation without further investigation.

§ 4.5.5 Any additional cost, or any loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the Contractor, notwithstanding approval or acceptance of such substitution by the Owner, unless such substitution was made at the written request or direction of the Owner.

§ 4.5.6 The warranty provided in this Section 4.5 shall be in addition to and not in limitation of any other warranty required by the Contract Documents or otherwise prescribed by law.

§ 4.5.7 The Contractor shall procure and deliver to the Owner, no later than the date claimed by the Contractor as the date of Substantial Completion, all special warranties required by the Contract Documents. Delivery by the Contractor shall constitute the Contractor's guarantee to the Owner that the warranty will be performed in accordance with its terms and conditions.

§ 4.5.8 The Contractor shall guarantee all Work for a period of one year after Date of Substantial Completion, or by the terms of any special guarantee required by the Contract Documents. The Contractor shall, upon written notice from the Owner, promptly correct defective Work or Work not in accordance with the Contract Documents.

§ 4.6 TAXES

§ 4.6.1 The Contractor shall pay applicable sales, consumer, use and similar taxes for the Work provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. The project is exempt from the Massachusetts Sales Tax to the extent permitted by G.L. c.64H, §6(f). The exemption number can be obtained from the Owner upon request.

§ 4.7 PERMITS, FEES AND NOTICES

§ 4.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for all permits and fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded.

§ 4.7.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work.

§ 4.7.3 If the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

§ 4.7.4 If the Contractor performs Work it knows or should know to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Architect/Engineer and Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 4.8 SUPERINTENDENT

§ 4.8.1 The Contractor shall employ a competent full time superintendent and necessary assistants who shall be in attendance at the Project site at all times during the progress of the Work. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be so confirmed on written request in each case. The Contractor shall remove the superintendent if requested to do so by the Owner and shall replace him with a competent person acceptable to the Owner.

§ 4.8.2 The Contractor shall coordinate and supervise the Work performed by Subcontractors to the end that the Work is carried out without conflict between trades and so that no trade, at any time, causes delay to the general progress of the Work. The Contractor and all Subcontractors shall at all times afford each trade, any separate contractor, or the Owner, every reasonable opportunity for the installation of Work and the storage of materials.

§ 4.8.3 The Contractor shall arrange for and attend job meetings with the Owner and such other persons as the Owner may from time to time wish to have present. The Contractor shall be represented by a principal,

project manager, general superintendent or other authorized main office representative, as well as by the Contractor's own superintendent. An authorized representative of any Subcontractor or Sub-subcontractor shall attend such meetings if the representative's presence is requested by the Architect/Engineer. Such representatives shall be empowered to make binding commitments on all matters to be discussed at such meetings, including costs, payments, change orders, time schedules and manpower. Any notices required under the Contract may be served on such representatives.

§ 4.9 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 4.9.1 The Contractor, within ten (10) calendar days after being awarded the Contract, shall prepare and submit for the Owner's information and approval a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised, subject to the Owner's approval, at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. The construction schedule shall be in such form and contain such information as the Owner requires. The construction schedule shall be resource loaded for the Contractor and all subcontractors, with each resource identified by name, description, unit of measure, and calendar assignment. For each class of work included in the Contractor's schedule of values, the construction schedule shall show the percentage of completion to be obtained and the total dollar value of the work to be completed as of the first of each month until Substantial Completion. All calculations shall be on the basis of work in place, but not including the value of materials delivered but not in place.

§ 4.10 DOCUMENTS AND SAMPLES AT THE SITE

§ 4.10.1 The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record field changes and selections made during construction, and one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect/Engineer and shall be delivered to the Architect/Engineer for submittal to the Owner upon completion of the Work.

§ 4.11 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 4.11.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 4.11.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 4.11.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 4.11.4 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 4.11.5 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. By approving and submitting Shop Drawings, Product Data, Samples, and similar submittals the Contractor

thereby represents that the Contractor has determined and verified all dimensions, quantities, field dimensions, relations to existing work, coordination with work to be installed later, coordination with information on previously accepted Shop Drawings, Product Data, Samples, or similar submittals and verification of compliance with all the requirements of the Contract Documents. The accuracy of all such information is the responsibility of the Contractor.

§ 4.11.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Owner's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Owner in writing of such deviation at the time of submittal and (1) the Owner has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Owner's approval thereof.

§ 4.12 USE OF SITE

§ 4.12.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 4.13 CUTTING AND PATCHING

§ 4.13.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

§ 4.13.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 4.14 CLEANING UP

§ 4.14.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

§ 4.14.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

§ 4.15 ACCESS TO WORK

§ 4.15.1 The Contractor shall at all times provide the Owner access to the Work in preparation and progress wherever located.

§ 4.16 ROYALTIES, PATENTS AND COPYRIGHTS

§ 4.16.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a

copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Owner.

§ 4.17 INDEMNIFICATION

§ 4.17.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and agents and employees from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work by the Contractor or Subcontractor(s). 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 Section 4.17.

§ 4.17.2 In claims against any person or entity indemnified under this Section 4.17 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 obligation under Section 4.17.1 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.

ARTICLE 5 - SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect/Engineer will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect/Engineer, after due investigation, has reasonable objection to any such proposed person or entity.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner has made reasonable and legally permissible and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner has no reasonable objection

§ 5.2.4 The Contractor shall not change a Subcontractor, person or entity previously selected if the Owner makes reasonable objection to such substitute.

§ 5.3 SUBCONTRACTUAL RELATIONS

§ 5.3.1 By appropriate agreement, written where legally required for validity, 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 these Documents, assumes toward the Owner and Architect/Engineer. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect/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, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. 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, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect/Engineer apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor.

§ 6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

ARTICLE 7 - CHANGES IN THE WORK / CLAIMS FOR ADDITIONAL COSTS

§ 7.1 CHANGE ORDER

§ 7.1.1 A Change Order is a written order to the Contractor signed by the Owner, issued after execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order.

§ 7.1.2 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents and applicable General Laws.

§ 7.1.3 Upon request of the Owner or the Architect/Engineer, the Contractor shall without cost to the Owner submit to the Architect/Engineer, in such form as the Architect/Engineer may require, an accurate written estimate of the cost of any proposed extra Work or change. The estimate shall indicate the quantity and unit cost of each item of materials, and the number of hours of work and hourly rate for each class of labor, as well as the description and amounts of all other costs chargeable under the terms of this Article. Unit labor costs for the installation of each item of materials shall be shown if required by the Architect/Engineer. The Contractor shall promptly revise and resubmit each estimate if the Architect/Engineer determines that it is not in compliance with the requirements of this Article, or that it contains errors of fact or mathematical errors. If required by the Architect/Engineer, in order to establish the exact cost of new Work added or of previously required Work omitted, the Contractor shall obtain and furnish to the Architect/Engineer bona fide proposals from recognized suppliers for furnishing any material included in such Work. Such estimates shall be furnished promptly so as to occasion no delay in the Work and shall be furnished at the Contractor's expense. The Contractor shall state in the estimate any extension of time required for the completion of the Work if the change or extra work is ordered.

§ 7.1.4 The cost or credit to the Owner resulting from a change in the Work shall be determined in one or more of the following ways:

1. by mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
2. by unit prices stated in the Contract Documents or subsequently agreed upon;
3. by cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
4. by the method provided in Section 7.1.5.

§ 7.1.5 If none of the methods set forth in Section 7.1.5.1, 7.1.5.2 or 7.1.5.3 is agreed upon, the Contractor, provided he receives a written order signed by the Owner, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Owner on the basis of the reasonable expenditures and savings of those performing the Work attributable to the change, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Section 7.1.5.2 and 7.1.5.3 above, the Contractor shall keep and present an itemized accounting together with appropriate supporting data for inclusion in a Change Order. Unless otherwise provided in the Contract Documents, cost shall be limited to the following: actual cost of materials, including sales tax and cost of delivery; labor, including social security, old age and unemployment insurance, and fringe benefits required

by agreement or custom; workers' or workmen's compensation insurance; bond premiums, and rental value of equipment and machinery. Pending final determination of cost to the Owner, payments on account shall be made on the Owner's Certificate for Payment. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in the Contract Sum will be the amount of the actual net cost. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any, with respect to that change.

§ 7.1.6 Unit prices shall be as stated in the Bid Form and the Contract shall include all costs of the Contractor to the Owner as listed in Section 7.1.5. No additional charges shall be allowed for these items under any circumstances.

§ 7.2 CONCEALED CONDITIONS

§ 7.2.1 Should concealed conditions encountered in the performance of the Work below the surface of the ground or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or should concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be encountered, the Contract Sum shall be equitably adjusted by Change Order upon claim by either party made within twenty days after the first observance of the conditions.

§ 7.3 MINOR CHANGES IN THE WORK

§ 7.3.1 The Owner will have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be affected by written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly, regardless of whether it objects to an absence of adjustment in the Contract Time or Contract Sum.

§ 7.4 CLAIMS FOR ADDITIONAL COSTS

§ 7.4.1 Definition. The word "Claim" shall mean a written demand by the Contractor for an increase in the Contract Time or the Contract Sum. The Contractor is responsible for substantiating its Claims. The word "Claim" shall not include claims by the Owner. The Owner may withhold from the Contractor the value of any claims against the Contractor in accordance with Massachusetts General Laws, including, but not limited to, Section 39K of Chapter 30.

§ 7.4.2 Time Limits on Claims. Contractor must initiate Claims within fourteen (14) calendar days after occurrence of the event giving rise to such Claim by written notice to the Architect/Engineer and the Owner. Such written notice must (1) be signed by the Contractor; (2) conspicuously identify on its face that the notice serves as a notice of claim; (3) explain in sufficient detail the basis of the Claim; (4) identify the date of the event giving rise to such Claim; and (5) state the exact dollar amount of the increase in the Contract Sum being requested, if any, and the number of days extension to the Contract Time sought, if any. This notice shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property. No such claim shall be valid unless so made.

§ 7.4.3 If the Contractor claims that additional cost is involved because of, but not limited to, (1) any written interpretation by the Owner, (2) any order by the Owner to stop the Work where the Contractor was not at fault, (3) any written order for a minor change in the Work issued or (4) failure of payment by the Owner, the Contractor shall make such claim as provided in this Section 7.4.

ARTICLE 8 - TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in a notice to proceed. If there is no notice to proceed, it shall be the date of the Owner-Contractor Agreement or such other date as may be established therein.

§ 8.1.3 The Date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Owner when construction is substantially complete, in accordance with the Contract Documents, other than only customary punch list items, the lack of or completion of which will not interfere with the Owner's use, so the Owner can lawfully occupy and utilize the Work or designated portion thereof for the use for which it is intended. The Date of Final Completion of the Work is the date on which the Owner issues its final Certificate for Payment in accordance with Section 9.10 hereof.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.

§ 8.2.2 The Contractor shall begin the Work on the date of commencement as defined in Section 8.1.2. He shall carry the Work forward expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time, and Final Completion thereafter in accordance with the provisions of the Contract Documents. If the Contractor fails to keep pace with the construction schedule prepared pursuant to Section 4.9, as measured by the certificates for payment issued by the Architect/Engineer, the Owner may require the Contractor, at the Contractor's sole cost, to accelerate the progress of the work by adding personnel or increasing the hours of work or by other means acceptable to the Owner.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor claims that he is delayed at any time in the progress of the Work by any act or neglect of the Owner or by any employee of the Owner, or by any separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unavoidable casualties, or any causes beyond the Contractor's or its Subcontractor's control, or by delay authorized by the Owner, then, provided such delay in no way results from the act or neglect of the Contractor or any of its Subcontractors, the Contract Time may be extended by Change Order for such reasonable time as the Owner may determine.

§ 8.3.2 Any claim for extension of time shall be made in writing to the Owner not more than seven (7) days after the commencement of the delay; otherwise it shall be waived. In the case of a continuing delay only one claim is necessary. The Contractor shall provide an estimate of the probable effect of such delay on the progress of the Work.

§ 8.3.3 If no agreement is made stating the dates upon which interpretations of the Contract Documents by the Architect/Engineer shall be furnished, then no claim for delay shall be allowed on account of failure to furnish such interpretation until fifteen days after written request is made for them, and not then unless such claim is reasonable.

§ 8.3.4 The Contractor hereby agrees that the Contractor shall have no claim for damages of any kind against the Owner on account of any delay in the commencement or performance of the Work and/or any hindrance, delay or suspension of any portion of the Work, whether such delay is caused by the Owner, or otherwise, except as and to the extent expressly provided under M.G.L. c.30, §39O in the case of written orders by the

Owner. The Contractor acknowledges that the Contractor's sole remedy for any such delay and/or suspension will be an extension of time as provided in this Article.

§ 8.4 LIQUIDATED DAMAGES

§ 8.4.1 It is expressly understood and agreed, by and between the Contractor and Owner, that the time for the completion of the Work described herein is a reasonable time for the completion of same, taking into consideration the average climatic range and usual industrial and/or residential conditions prevailing in this locality. If the said Contractor shall neglect, fail or refuse to substantially complete the Work within the times herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the Owner the amount specified in the Agreement not as a penalty but as liquidated damages for such breach of contract, for each and every calendar day that the Contractor shall be in default after the time stipulated for completing the Work. The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be deducted by the Owner from periodic payments.

ARTICLE 9 - PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

§ 9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect/Engineer a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect/Engineer may require. This schedule, unless objected to by the Architect/Engineer, in which case it shall be revised until acceptable to the Architect/Engineer shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 The Contractor shall submit to the Owner an itemized Application for Payment supported by such data substantiating the Contractor's right to payment as provided elsewhere in the Contract Documents for the period ending the last day of each month within the Contract period. The Application shall contain a separate line item or section for each subtrade category and a listing of the amount paid to each subcontractor as of the date of the Application

§ 9.3.1.2 Such applications may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments may be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site and, if approved in advance by the Owner, payments may similarly be made for materials or equipment suitably stored at some other location agreed upon in writing. Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest, including applicable insurance and transportation to the site for those materials and equipment stored off the site. The Contractor shall assume responsibility to protect all such materials from loss or damage at no cost to the Owner, until they are finally incorporated into the Work, whether or not they have been paid for by the Owner.

§ 9.3.3 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 9 as "liens"; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any other person performing Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect/Engineer will, within ten days after receipt of the Contractor's properly completed and supported Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect/Engineer determines is properly due, or notify the Contractor and Owner in writing of the Architect/Engineer's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment by the Architect/Engineer shall not be deemed to represent that he has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work or that he has reviewed the construction means, methods, techniques, sequences or procedures, or that he has made any examination to ascertain how or for what purpose the Contractor has used the moneys previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Owner shall withhold its Payment in whole or in part, to the extent necessary reasonably to protect itself. If the Owner is unable to make payment in the amount of the Application, he will notify the Contractor as provided in Section 9.4.1. If the Contractor and the Owner cannot agree on a revised amount, the Owner will issue a Certificate for Payment for the amount for which it determines is properly due. The Owner may also decline to make payment and the Architect/Engineer because of subsequently discovered evidence or subsequent observations, may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary in its opinion to the Owner from loss because of:

1. defective work not remedied,
2. third party claims filed or reasonable evidence indicating probable filing of such claims,
3. failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment,
4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum,
5. damage to the Owner or another Contractor,
6. reasonable evidence that the Work will not be completed within the Contract Time, or
7. material failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above grounds in Section 9.5.1 are removed, payment shall be made for amounts withheld because of them.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect/Engineer has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in General Laws Chapter 30, Section 39K, and the Contract Documents. The Owner reserves the right to a 5% general retainage from each progress payment, which retainage shall be released to the Contractor upon substantial completion, less amounts properly allocated to punch list work and potential claims of the Owner.

§ 9.6.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work.

§ 9.6.3 The Owner shall not have any obligation to pay or to see to the payment of any moneys to any Subcontractor except as may otherwise be required by law.

§ 9.6.4 No Certificate for a progress payment, nor any progress payment, nor any partial or entire use or occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

§ 9.6.5 Notwithstanding the provisions of Section 9.6 all progress payments shall be made in accordance with Chapter 30, Sections 39F and 39K (as appropriate) of the General Laws of the Commonwealth of Massachusetts, as amended.

§ 9.7 SUBSTANTIAL COMPLETION

§ 9.7.1 When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the Owner, is substantially complete as defined in Section 8.1.3, the Contractor shall prepare for submission to the Owner a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Owner on the basis of an inspection determines that the Work or designated portion thereof is substantially complete, he will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and the Contractor for their written acceptance of the responsibility assigned to them in such Certificate.

§ 9.7.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and Certification by the Architect/Engineer, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

§ 9.7.3 The Contractor shall complete and correct any incomplete or defective work within forty-five (45) calendar days from the date of Substantial Completion.

§ 9.8 PARTIAL OCCUPANCY OR USE

§ 9.8.1 The Contractor agrees to the use and occupancy of the Project or any portion thereof before Substantial Completion of the Work. The Owner will cooperate with the Contractor with respect to the completion of the Work by taking such reasonable steps as may be possible to avoid interference with the Contractor's Work provided that they do not interfere with the proper functioning of the facility. The Contractor shall not be responsible for wear and tear or damage resulting solely from temporary occupancy. Use and occupancy of any part of the Work prior to Substantial Completion shall not relieve the Contractor from maintaining the required payment and performance bonds and insurance required by this Contract.

§ 9.9 FINAL COMPLETION AND FINAL PAYMENT

§ 9.9.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect/Engineer will make such inspection and, when it finds the Work acceptable under the Contract Documents and the Contract fully performed, it will issue a final

Certificate for Payment stating that to the best of its knowledge, information and belief, and on the basis of its observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable.

§ 9.9.2 Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Owner (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been fully paid or otherwise satisfied, (2) consent of surety, if any, to final payment and (3), if required by the Owner, other data establishing payment or satisfaction of all such obligations, receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.9.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

§ 9.9.4 Notwithstanding anything in the Contract Documents to the contrary, final payment shall be made in accordance with the requirements of G.L. c.30, §39K, as amended.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

§ 10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take all reasonable precautions for safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

1. all employees on the Work and other persons who may be affected thereby;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
3. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy all damage or loss to any property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, any Subcontractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3., except damage or loss solely attributable to the acts or omissions of the Owner, the Engineer or anyone directly or indirectly employed by the Owner or Engineer, or by anyone for whose acts the Owner or Engineer may be liable, and not attributable to the acts or omissions of the Owner, the Engineer or anyone directly or indirectly employed by them, or by anyone for whose acts it may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to his obligation under Section 4.13.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect/Engineer.

§ 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

§10.2.8 The Contractor shall at all times protect excavations, trenches, buildings and materials from rain water, groundwater, waves, flooding, backup or leakage of sewers, drains and other piping, and from water of any other origin and shall remove promptly any accumulation of water. The Contractor shall provide and operate all pumps, piping and other equipment necessary to this end.

§ 10.2.9 The Contractor shall remove snow and ice which might result in damage or delay.

§ 10.2.10 During the progress of the Work and at all times prior to the date of Substantial Completion or occupancy of the Work by the Owner, whichever is earlier, the Contractor shall provide temporary heat, ventilation, and enclosure, adequate to permit the Work to proceed in a timely fashion, and to prevent damage to completed Work or Work in progress, or to materials stored on the premises.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 If the Contractor encounters or recognizes on the site any material known or reasonably believed to be hazardous, including but not limited to asbestos or polychlorinated biphenyl (PCB), the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Architect/Engineer in writing. The Contractor and the Owner shall cooperate in implementing measures to remove or contain said material and the Contractor shall comply with all directions of the Architect/Engineer in the implementation of such removal or containment.

§ 10.6 EMERGENCIES

§ 10.6.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 7 for Changes in the Work.

ARTICLE 11 - INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
4. claims for damages insured by usual personal injury liability coverage;
5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
6. claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
7. claims for bodily injury or property damage arising out of completed operations; and

§ 11.1.2 The insurance required by Section 11.1.1 shall include all major divisions of coverage, and shall be on a comprehensive general basis including Premises and Operations (including X-C-U), Owner's and Contractor's Protective, Products and Completed Operations, and Owned, Non-owned, and Hired Motor Vehicles. Such insurance shall be written for not less than any limits of liability required by law or those set forth in the Contract Documents, whichever is greater.

All insurance shall be written on an occurrence basis, unless the Owner approves in writing coverage on a claims-made basis. Coverage, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment. The Owner shall be added as an Additional Insured on all policies.

Coverage for such liability insurance shall be provided by a company or companies reasonably acceptable to the Owner and authorized to do business in Massachusetts. Contractor shall furnish to Owner written confirmation as to the insurance carrier's most current financial ratings when it submits certificates of insurance.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Section 9.10.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief. These certificates shall set forth evidence of all coverage required by Section 11.1.1 and 11.1.2. The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending limits of coverage.

§ 11.2 OWNER'S LIABILITY INSURANCE

§ 11.2.1 The Contractor shall procure and pay for an Owner's policy of Owner's protective liability insurance insuring the Owner and its officers, employees and agents against claims which may arise from operations under the Contract or relating thereto.

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 The Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. Coverage for such liability insurance shall be provided by a company or companies reasonably acceptable to the Owner and which have, and shall maintain throughout the pendency of this contract, a minimum financial rating of not less than A according to A.M. Best or AAA according to Moody's. Contractor shall furnish to Owner written confirmation as to the insurance carrier's most current financial ratings when it submits the Certificate of Insurance. Such insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the work and shall insure against the perils of fire and extended coverage and shall include "all risks" insurance for physical loss or damage including without duplication, theft, vandalism and malicious mischief. This insurance shall also cover portions of the Work stored off the site or in transit. If this insurance is written with stipulated amounts deductible, the Owner shall not be responsible for any difference between the payments made by the insurance carrier and the claim. The policy shall contain a provision that coverage afforded under policies will not be canceled or allowed to expire until at least 30 days' written notice has been given to the Owner. The Owner shall be named insured within the policy.

§ 11.3.2 The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.3 The Owner shall have the power to adjust and settle with its insurers any loss for which it has obtained insurance.

§ 11.3.4 Upon the occurrence of an insured loss, the Owner and the Contractor shall cooperate with each other and with each other's insurer in the submission of claims and related information and the distribution of any insurance proceeds. If after such a loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate change order.

§ 11.5 MINIMUM AMOUNT OF INSURANCE

§ 11.5.1 In no case shall the limits of liability for the insurance required by this section be less than specified in the Supplemental General Conditions.

§ 11.6 PERFORMANCE AND PAYMENT BOND

§ 11.6.1 The Contractor shall furnish a Performance and Payment Bond in an amount not less than one hundred percent (100%) of the Contract price as security for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract. The Performance and Payment Bond may be in one or in separate instruments in accordance with local law, and in a form acceptable to the Owner, and shall remain in effect through the one-year warranty period.

ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If any portion of the work should be covered contrary to the request of the Owner or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Owner, be uncovered for his observation and shall be replaced at the Contractor's expense.

§ 12.1.2 If any other portion of the Work has been covered which the Owner has not specifically requested to observe prior to being covered, the Owner may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it be found that this

condition was caused by the Owner or a separate contractor as provided in Article 6, in which event the Owner shall be responsible for the payment of such costs. The Contractor shall bear the cost of any loss, or damages to the owner resulting from such failure or defect.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 The Contractor shall promptly correct all Work rejected by the Owner as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including compensation for the Owner's additional services made necessary thereby.

§ 12.2.2 The Contractor shall provide a document to the Owner certifying that if within one year after the Date of Substantial Completion of the Work or designated portion thereof or within one year after acceptance by the Owner of designated equipment or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or requiring excessive service or maintenance or not in accordance with the Contract Documents, the Contractor shall correct it within seven (7) days after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such approval, which written acceptance shall specifically refer to such defect. This obligation shall survive termination of the Contract. The Owner shall give such notice reasonably promptly after discovery of the condition. The provisions of this paragraph are in addition to, and not in limitation of, the Owner's other rights and remedies hereunder and in law and equity.

§ 12.2.3 The Contractor shall remove from the site all portions of the Work which are defective or non-conforming and which have not been corrected under Sections 4.5.1, 12.2.1 and 12.2.2, unless removal is waived by the Owner in writing.

§ 12.2.4 If the Contractor fails to correct defective or nonconforming Work as provided in Sections 4.3.1, 12.2.1 and 12.2.2 the Owner may correct it in accordance with Section 3.4.

§ 12.2.5 If the Contractor does not proceed with the correction of defective or non-conforming Work within a reasonable time fixed by written notice from the Owner, the Owner may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner may upon ten additional days' written notice sell such Work at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for the Owner's additional services made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

§ 12.2.6 The Contractor shall bear the cost of making good all work of the Owner or separate contractors destroyed or damaged by such correction or removal.

§ 12.2.7 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Section 4.5 hereof. The establishment of the time period of one year after the Date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to his obligation other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

§ 12.3.1 If the Owner prefers to accept defective or nonconforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be affected whether or not final payment has been made.

ARTICLE 13 - MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

§ 13.1.1 The Contract shall be governed by the law of the Commonwealth of Massachusetts. All applicable provisions of Federal, state, and local laws, by-laws, rules, and regulations are incorporated into the Contract as if fully set forth herein.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and the Contractor each bind himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract or sublet it as a whole without the written consent of the Owner, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the previous written consent of the Owner.

§ 13.3 WRITTEN NOTICE

§ 13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner or Architect/Engineer shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Owner timely notice of its readiness so the Owner may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests or approvals conducted by public authorities which are normal and customary for the type of work required by the Contract. Unless otherwise provided, the Owner shall bear all costs of other inspections, tests or approvals. All testing methods, organizations, and personnel shall be approved by the Owner before the start of testing Work, without regard to what party will ultimately pay for such Work.

§ 13.5.2 If the Owner determines that any Work requires special inspection, testing, or approval which Section 13.5.1 does not include, it will instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as provided in Section 13.5.1. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the Owner's additional services made necessary by such failure; otherwise the Owner shall bear such costs, and an appropriate Change Order shall be issued.

§ 13.5.3 Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered by him to the Owner.

§ 13.5.4 The Contractor shall obtain and deliver promptly to the Architect/Engineer any occupancy permit and any certificates of final inspection of any part of the Contractor's work and operating permits for any work which may be required by law to permit full use and occupancy of the premises by the Owner. Receipt of such permits or certificates by the Architect/Engineer shall be a condition precedent to Substantial Completion of the Work.

§ 13.5.5 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 LIMITATION OF LIABILITY

§ 13.6.1 The Owner shall be liable, if ever, only to the extent of its interest in the Project; and no officer, director, partner, agent or employee of the Owner shall ever be personally or individually liable with respect to this Contract or the Work. Each Subcontract shall include the foregoing limitation, which shall be effective if the Owner ever succeeds to the Contractor's rights and obligations under a Subcontract.

§ 13.7 DEFENSE OF SUITS

§ 13.9.1 The Contractor shall be responsible for, and shall defend and pay all costs, attorneys' fees and liabilities, both direct and indirect, as a result of litigation arising out of this Contract.

§ 13.9.2 Neither final acceptance nor occupation of the premises by the Owner shall relieve the Contractor of responsibility for all claims for labor, materials, and equipment arising out of this Contract.

§ 13.9.3 The Contractor shall indemnify and hold harmless the Owner and the Architect/Engineer and their agents and employees from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from the performance of the work.

ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for the following reason:

1. because the Architect/Engineer has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment properly issued within the time stated in the Contract Documents

§ 14.1.2 If one of the above reason exists, the Contractor may, upon seven additional days written notice to the Owner and Architect/Engineer, terminate the Contract and recover from the Owner payment for the Work executed and for all materials or equipment not incorporated in the Work, but delivered and suitably stored at the site. The payment for materials or equipment stored at the site shall be conditioned upon submission by the Contractor of bills of sale or such other evidence as is satisfactory to the Owner to establish the Owner's title to such material or equipment or otherwise protect the Owner's interest.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may without prejudice to any other right or remedy deem this Contract terminated for cause if any of the following defaults shall occur and not be cured within ten (10) days after the giving of notice thereof by the Owner to the Contractor and any surety that has given bonds in connection with this Contract:

1. The Contractor has filed a petition, or a petition has been filed against the Contractor with its consent, under any federal or state law concerning bankruptcy, reorganization, insolvency or relief from creditors, or if such a petition is filed against the Contractor without its consent and is not dismissed within sixty (60) days; or if the Contractor is generally not paying its debts as they become due; or if the Contractor becomes insolvent; or if the Contractor consents to the appointment of a receiver, trustee, liquidator, custodian or the like of the Contractor or of all or any substantial portion of its assets and such appointment or possession is not terminated within sixty (60) days; or if the Contractor makes an assignment for the benefit of creditors;
2. The Contractor refuses or fails, except in cases for which extension of time is provided under this Contract's express terms, to supply enough properly skilled workers or proper materials to perform its obligations under this Contract, or the Architect/Engineer has determined that the rate of progress required for the timely completion of the Work is not being met;
3. The Contractor fails to make prompt payment to Subcontractors or for materials, equipment, or labor;
4. All or a part of the Work has been abandoned;
5. The Contractor has sublet or assigned all or any portion of the Work, the Contract, or claims thereunder, without the prior written consent of the Owner, except as expressly permitted in this Contract;
6. The Contractor has failed to comply with any applicable Laws, regulations or government orders;
7. The Contractor fails to maintain, or provide to the Owner evidence of the insurance or bonds required by this Contract, or
8. The Contractor has failed to prosecute the Work or any portion thereof to the standards required under this Contract or has otherwise breached any material provision of this Contract.

§ 14.2.2 The Owner shall give the Contractor and any surety notice of such termination for cause, but the giving of notice of such termination shall not be a condition precedent or subsequent to the termination's effectiveness. In the event of such termination, and without limiting any other available remedies, the Owner may, at its option:

1. hold the Contractor and its sureties liable in damages for a breach of Contract;
2. notify the Contractor to discontinue all work, or any part thereof, and the Contractor shall discontinue all work, or any part thereof, as the Owner may designate;
3. complete the Work, or any part thereof, and charge the expense of completing the Work or part thereof, to the Contractor;
4. require the surety or sureties to complete the Work and perform all of the Contractor's obligations under this Contract.

§ 14.2.3 If the Owner elects to complete all or any portion of the Work as specified in Section 14.2.2.3 above, it may take possession of all materials, equipment, tools, machinery, implements at or near the Site owned by the Contractor and finish the Work at the Contractor's expense by whatever means the Owner may deem expedient; and the Contractor shall cooperate at its expense in the orderly transfer of the same to a new contractor or to the Owner as directed by the Owner. In such case the Owner shall not make any further payments to the Contractor until the Work is completely finished. The Owner shall not be liable for any depreciation, loss or damage to said materials, machinery, implements or tools during said use and the Contractor shall be solely responsible for their removal from the site of the Work after the Owner has no further use for them. Unless so removed within fifteen days after notice to the Contractor to do so, they may

be sold at public auction, and the proceeds credited to the Contractor's account; or they may, at the option of the Owner, be stored at the Contractor's expense subject to a lien for the storage charges.

§ 14.2.4 Damages and expenses incurred under Section 14.2.2 above shall include, but not be limited to, costs for the design or extra engineering services and Project Manager services required, in the opinion of the Owner, to successfully inspect and administer the construction contract through final completion of the Work

§ 14.2.5 Expenses charged under Section 14.2.2 above may be deducted and paid by the Owner out of any moneys then due or to become due the Contractor under this Contract.

§ 14.2.6 All sum damages, and expenses incurred by the Owner to complete the Work shall be charged to the Contractor. In case the damages and expenses charged are less than the sum that would have been payable under this Contract if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference. In case such expenses shall exceed the said sum, the Contractor shall pay the amount of the excess to the Owner.

§ 14.3 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may terminate this Contract for convenience even though the Contractor is not in default by giving notice to the Contractor specifying in said notice the date of termination.

§ 14.3.1 In the event that the Contract is terminated pursuant to Section 14.1, the Contractor shall be reimbursed in accordance with the Contract Documents for all Work performed up to the termination date, and for all materials or equipment not incorporated in the Work, but delivered and suitably stored at the site. Payment for materials or equipment stored at the site shall be conditioned upon submission by the Contractor of bills of sale or such other evidence as is satisfactory to the Owner to establish the Owner's title to such material or equipment or otherwise protect the Owner's interest. The payment provided in this section shall be considered to fully compensate the Contractor for all claims and expenses and those of any consultants, Subcontractors, and suppliers, directly or indirectly attributable to the termination, including any claims for lost profits.

§ 14.3.2 Upon termination of this Contract for convenience as provided in Section 14.3.1 of this Article, the Contractor shall: (1) stop the Work; (2) stop placing orders and Subcontracts in connection with this Contract; (3) cancel all existing orders and Subcontracts; (4) surrender the site to the Owner in a safe condition; (5) transfer to the Owner all materials, supplies, work in process, appliances, facilities, equipment and machinery of this Contract, and all plans, Drawings, specifications and other information and documents used in connection with this Contract.

SECTION 00800
SUPPLEMENTAL GENERAL CONDITIONS

§ SC 1.1 INTRODUCTION

The following supplements modify, change, delete from or add to Section 00700 GENERAL CONDITIONS. Where and Subsection of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplemental General Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

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

The Insurance provisions of Article 11 of The General Conditions are amended by adding the following requirements:

The Contractor shall carry and continuously maintain until completion of the Contract, insurance as specified below and in such form as shall protect him performing work covered by this Contract, and the Owner and its employees, agents and officials, from all claims and liability for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this Contract. The Contractor covenants and agrees to hold the Owner and its employees, agents and officials harmless from loss or damage due to claims for personal injury and/or property damage arising from, or in connection with operations under this Contract. In regards to Comprehensive General Liability, the Contractor will designate the Town of Rockport as an additional insured (not merely as a certificate holder).

Except as otherwise stated, the amounts of such insurance shall be for each policy, not less than:

(A) For liability for bodily injury, including accidental death, $1,000,000 for any person and $1,000,000 on account of one occurrence and $2,000,000 Aggregate Limit.

(B) For liability for property damage $1,000,000 on account of any one occurrence and $2,000,000 Aggregate Limit. Extra-territorial clause shall be included.

1.) Workers' Compensation insurance as required by the General Laws of the Commonwealth of Massachusetts.

2.) Bodily Injury Premise-Operations, Contractor's Protective and Completed Operations Public Liability Insurance in the amounts required in (A) above.

3.) Property Damage Premises-Operations, Contractor's Protective and Completed Operations Public Liability Insurance in the amounts required in (B) above.

4.) Bodily Injury Liability Insurance covering the operation of all motor vehicles owned by the Contractor and vehicles not owned by the Contractor while such vehicles are being operated in connection with the prosecution of the work under this Contract, in the amounts required in (A) above.

5.) Property Damage Liability Insurance covering the operation of all motor vehicles owned by the Contractor and vehicles not owned by the Contractor while such vehicles are being operated in connection with prosecution of the work under this Contract, in the amounts required in (B) above.

6.) Contractual Liability Insurance covering the liability assumed by the Contractor in the amounts required under (A) and (B) above.

7.) Owner's Protective Insurance secured by the Contractor in behalf of the Owner which will directly protect the Owner and/or its employees, agents and officers from liability for bodily injuries, including accidental death, in the amounts required in (A) above, and for property damage in the amounts required in (B) above.

8.) Builder's Risk Property Insurance in an amount equal to the full value of the Work.

9.) Pollution Liability Insurance in an amount to be negotiated with the Owner.

10.) The Contractor shall also provide umbrella coverage in an amount not less than $5,000,000 each occurrence, $10,000,000 aggregate.

All policies shall be so written that the Owner will be notified of cancellation or restrictive amendment at least fifteen (15) days prior to the effective date of such cancellation or amendment. A certificate from the Contractor's Insurance Carrier showing at least the coverage and limits of liability specified above and expiration date shall be filed with the Owner before operations are begun.

Such certificates shall not merely name the types of policy provided but shall specifically refer to the Contract and shall state that such insurance is required by the Contract. The Contractor shall make no claims against the Owner or its officers for any injury to any of his officers or employees or for damage to his truck or equipment arising out of work contemplated by this Contract.

§ SC 2.1 PREVAILING WAGES

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

SECTION 00850
INCORPORATION OF APPLICABLE PROVISIONS OF THE MASSACHUSETTS GENERAL LAWS

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

SECTION 00900
TECHNICAL AND CONSTRUCTION SPECIFICATIONS

SECTION 01000

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. Work is as described on the Contract Drawings and Specifications herein, for the Long Beach Seawall FEMA Disaster Relief Project in Rockport, Massachusetts. The work includes, but is not limited to, all supervision, survey, labor, materials, tools and equipment, safety, quality control, and mobilization and demobilization necessary to perform the following:

1. Mobilization of equipment and materials to the site including preparation of the staging and stockpile area.
2. Furnish and install one DEP sign.
3. Pre-construction meeting and pre-construction photographs.
4. Install temporary measures to protect existing site features to remain in place during the work.
5. Install temporary pedestrian barriers including, but not limited to; fencing, signage, and/or concrete barriers.
6. Remove and store existing site features, including timber access stairs, to be restored in-kind, that are not protected in place.
7. Demolish, remove, and dispose of the existing seawall and unsuitable materials, and other construction materials not designated to remain.
8. Removal, stockpiling, and restoration of the existing rip-rap revetment.
9. Survey, supervision, design, installation, operation, maintenance, control of water, if required, and removal of temporary shoring needed to prevent undermining and damage to adjacent structures and scheduled to remain and to facilitate the project work.
10. Reconstruct 350 lineal feet of seawall located between Station 12+10 and 15+60 including preparation, rebar installation, forming, placing, finishing, curing concrete, railing installation, and installation of steel sheetpile scour protection.
11. Reconstruct 43 lineal feet of seawall and 7 lineal feet of return wall between Station 0+00 and 0+43 including preparation, rebar installation, forming, placing, finishing, curing concrete, railing installation, and installation of steel sheetpile scour protection.
12. Construction of cast-in-place concrete access steps including preparation, rebar installation, forming, placing, finishing, and curing concrete.
13. Management and disposal of all associated demolition and construction debris.
14. Protection and in-kind restoration of site features to remain.
15. Complete incidental site work, including, but not limited to excavation, restoration of existing grade, and restoration of contractor staging areas.

16. Complete site restoration, including, but not limited to, site clean-up, backfilling and re-grading, reset existing structures and site features, placement of up to 960 cubic yards of compatible beach sand, removal of excess materials, equipment, or construction related debris.

1.2 RELATED SECTIONS

02002 MOBILIZATION AND DEMOBILIZATION

02100 DEMOLITION, REMOVAL AND DISPOSAL

02170 TEMPORARY SHORING

02200 EXCAVATION, BACKFILLING, AND COMPACTION

02300 REVETMENT REMOVAL AND RESET

02360 STEEL SHEETING

03300 CAST-IN-PLACE CONCRETE

03400 SEAWALL AND STAIR CONSTRUCTION

05500 MISCELLANEOUS METALS

1.3 CONTRACTOR USE OF SITE AND ACCESS

A. All work and trucking shall occur from 7:00 AM to 5:00 PM, Monday through Friday. Weekend work may be allowed with the permission of the Town of Rockport (Town or Owner), at the Town's sole discretion. No work will be permitted on Holidays, except as approved or required by the Town.

B. Site usage by the Contractor is limited to the area necessary to accomplish the work within the limits of the beach extending up to and including the seawall. The Contractor will be responsible for the removal and replacement of any privately owned structures and landscaping required to be removed for the work to be performed. The Contractor shall submit a plan indicating necessary work limits to be approved by the Engineer prior to performing any onsite work.

C. Site access shall be from the end of Rockport Road and Fire Break #2. It is assumed land-based equipment will be used to perform the work. Material storage and staging is anticipated to occur at the end of Rockport Road, along Long Beach Road, and on the beach fronting the proposed reconstruction areas**.** The Contractor shall be responsible for coordination of material deliveries, staging/stockpiling of materials, and construction. The Contractor shall coordinate final site access and staging/stockpiling areas with the Engineer and the Town.

D. Construction activity shall be staged to minimize interference with the public travel ways and other adjacent areas. Access shall be maintained to any building, waterway or roadway that is connected to any work included in this contract.

E. No equipment or materials shall be staged on privately owned property along Rockport Road, or private structures to remain in, or adjacent to, the work or access areas.

F. The Contractor shall submit a storm plan that outlines provisions for relocation or securing equipment and materials in the event that a Nor'easter or significant coastal storm event is forecasted.

G. The Contractor shall minimize the disturbance to the existing shoreline, roadway, adjacent buildings, adjacent decks, walls, utilities, parking areas, walkways, and other miscellaneous site features.

H. The Contractor shall repair, at its own expense, any damage caused to public or private property; remove from the site all debris, excess materials, tools, and equipment; and shall leave the premises in a neat and orderly condition, to the satisfaction of the Engineer and the Town.

I. The Contractor shall restore site access locations and staging areas to their original pre-construction condition to the satisfaction of the Engineer and the Town.

J. The Contractor shall notify "Dig Safe" and local utilities and services as applicable prior to commencement of any work. The Contractor shall locate and protect existing services against damage for the duration of the work.

K. If the Contractor, in the course of work, uncovers or otherwise encounters any artifacts, whether historic or prehistoric, the Contractor shall notify the Engineer immediately and stop all work in that vicinity until directed by the Engineer.

L. If the Contractor, in the course of excavation, uncovers or otherwise encounters any suspected hazardous or unidentified substances, the Contractor shall notify the Engineer immediately and stop all work in that vicinity until directed by the Engineer.

M. The Contractor shall coordinate temporary roadway closures and temporary access limitations with the Engineer and the Town, as necessary. The Contractor shall obtain governing authority's written permission, when required, to close or obstruct streets, walks and adjacent facilities. Provide alternate routes around closed or obstructed traffic ways, when required by governing authorities.

1.4 DELIVERY OF MATERIAL AND EQUIPMENT

A. The Contractor shall determine appropriate route for delivery of materials and equipment to the project site. The Contractor shall verify with the governing agency, and conform to, restrictions and load limitations along proposed hauling routes. Contractor to submit documentation that the hauling route and method of delivery meet restrictions and load limits, as applicable. The Contractor shall coordinate equipment, staging, deliveries, and other site usage with the Town.

B. The Contractor shall unload materials in a manner that prevents damage to existing pavement, sidewalk, and all other site features.

1.5 CONSTRUCTION SCHEDULES AND SUBMITTALS

A. Unless otherwise specified, within ten (10) calendar days from the Notice to Proceed, the Contractor shall submit to the Engineer and the Town a complete schedule of values for all items that shall be paid for under this Contract. This schedule of values shall show all relative costs to the item as bid, such as the costs of material, labor, mobilization and demobilization, survey, supervision and all incidentals to the item.

B. The Contractor shall also provide a complete breakdown of all items that shall be paid for under this Contract, including Lump Sum items. This breakdown shall show all relative costs to the item as bid, such as the costs of material, labor, delivery, inspection, and all incidentals to the item.

C. The Contractor shall submit to the Engineer and the Town a schedule of proposed operations within ten (10) calendar days after the award of the contract. The Construction schedule shall be maintained on site for review during site meetings. If a major change is made to the schedule, the updated schedule shall be submitted to the Engineer and Town immediately. Should the Contractor find that they cannot maintain schedule as originally intended, the Contractor shall immediately submit a revised schedule without being requested to do so by the Town or Engineer.

D. Upon the Contractor's receipt, the Contractor shall submit to the Engineer any and all written permissions from the proper authorities, to close or obstruct streets, walks and adjacent facilities along with the plans for the approved alternate route(s) to be established.

E. The Contractor shall be required to coordinate delivery of materials under this contract with the Town and the Engineer. Contractor shall be required to provide periodic schedule updates for coordinating deliveries.

F. The Contractor shall submit a storm plan that outlines provisions for stabilizing the Site, relocation or securing equipment and materials in the event that a Nor'easter or significant storm event is forecasted.

G. The Contractor shall submit shop drawings and product data and information as required by sections of these Specifications and Contract Documents.

H. The Contractor shall submit temporary shoring means and methods, including design calculations prepared by a licensed Professional Engineer, registered in the Commonwealth of Massachusetts as specified in Section 02170, 1.4.

I. The Contractor shall submit to the Owner for approval, their plan for project survey control within seven (7) days of the notice to proceed and before actual work commences on the project site.

J. Contractor shall install a DEP sign showing "MA DEP File Number 062-0953" at the entrance to the site.

K. Contractor shall submit a temporary barrier, fencing and signage plan showing the limits for approval.

1.6 DATUM

A. A. Vertical datum used for this project is the North American Vertical Datum 1988 (NAVD88=0.0). A conversion between NAVD88 and Mean High Water (MHW) to the North American Vertical Datum of 1988 (NAVD88) is shown on the Drawings.

B. This project involves tidal work. Bidders are advised to consult the Tide Tables issued by National Oceanic and Atmospheric Administration (NOAA) and local weather forecasts to evaluate tidal and weather conditions affecting work. Tidal datum and relationships used for this project is based on 1983-2001 tidal epoch.

1.7 TECHNICAL SPECIFICATIONS/PUBLICATIONS

A. For all items within this Contract without specific technical specifications and/or publications denoted, and to supplement all conditions of this Contract above and beyond all references mentioned, refer to the Commonwealth of Massachusetts, Department of Transportation, Standard Specifications for Highways and Bridges, current edition, and all amendments; which is herein made part of this Contract in its entirety.

1.8 INSPECTIONS

A. The Town of Rockport will assign an inspector and/or resident engineer to this project on either a full-time or part-time basis, as required to observe the work under this Contract. The inspector or resident engineer shall be the Owner's Representative for this project, herein called the Engineer.

B. The Engineer must be notified at least 48 hours in advance of all material deliveries to arrange for the deliveries to be inspected as they arrive to the site.

C. All materials or equipment that are not suitable for use on this project and/or have been rejected by the Engineer shall be removed from the site immediately. The cost for removal of unsuitable and/or rejected materials shall be the responsibility of the Contractor.

D. The Engineer shall be permitted at all times to check the lines, grades, elevations, reference marks, batter boards, etc. set by the Contractor. Any errors or discrepancies in these items discovered by checks shall be corrected by the Contractor. Such checks shall not be construed to be an approval of the Contractor's work and shall not relieve or diminish in any way the responsibilities of the Contractor for the accurate and satisfactory completion of the entire work. The Contractor shall be available to assist the Engineer with these checks as needed.

1.9 PRE-CONSTRUCTION PHOTOGRAPHS

A. The Contractor shall, at its own expense, furnish the Engineer with digital color photographs and/or videos of the project. Photographs/videos shall be scheduled during such times and such periods of weather that reveal as many site features as possible. The photographs/videos shall be taken with a digital camera and electronic files of each shall be furnished to the Engineer.

B. The Contractor shall complete pre-construction photographs/videos of the project site, adjacent exterior private site features and dwellings, access and storage/staging areas and surroundings to document the pre-construction conditions and areas which may be impacted by construction activity.

C. The Contractor shall complete photographs/videos as work progresses. Photographs/videos shall be taken before commencing work, during each stage of operations, and after the completion of work.

1.10 QUALITY CONTROL AND WORKMANSHIP

A. Maintain quality control, equipment, services, site conditions, and workmanship, to produce work of specified quality.

B. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

C. Perform work by experienced persons qualified to produce workmanship of specified quality.

1.11 CONSTRUCTION FACILITIES

A. Provide and maintain temporary sanitary facilities as required.

B. Contractor shall provide on-site phone service, or other telephone facilities such that the Contractor can be reached at any time throughout the workday.

C. Contractor shall provide phone numbers for communication and emergency contact during off work hours.

1.12 PERMITS AND MITIGATION MEASURES

A. Environmental permits and/or licenses or statements of non-applicability, secured to date are included under Appendix C to these Contract Documents. It is the Contractor's responsibility to adhere to the conditions set forth in the permit documents.

B. It is the responsibility of the Contractor to obtain all other permits, inspections and all other requirements not issued within this Specification necessary to complete the work under this Contract; the cost of all fees associated with these permits, inspections and other requirements shall be borne by the Contractor.

C. The Contractor shall comply with all applicable local, state and federal requirements, as well as standard industry standards and practices, regarding materials, methods of work and disposal of excess and waste materials.

D. The Contractor shall provide DEP Wetland project signs in conformance with the Order of Conditions and maintain a copy of the Order of Conditions on site at all times.

1.13 SURVEY CONTROL

A. The Contractor shall locate, protect and maintain benchmarks, monuments, control points and project engineering reference points.

B. The Contractor shall provide, at its own expense, all materials and labor as may be required to establish and maintain all project control range lines, additional reference marks and line and grade stakes. The Contractor shall maintain the project control throughout the duration of the project, at the Contractor's own expense.

C. All work shall conform during its progress and on its completion to the lines and grades given by the Contract Documents and as specified herein. The work shall be done in a thoroughly substantial and workmanlike manner, in accordance with the Contract Drawings, these specifications, and as directed by the Engineer.

D. The Contractor shall make, check and be responsible for all measurements and dimensions necessary for proper construction.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

4.1 GENERAL

There shall be no separate measurement of quantities or payments for work covered by this Section.

Services, materials, sanitary facilities, fencing, barriers, signage and all other work associated with implementation of work, including removal and resetting site features, if necessary, specified in the

General Conditions, Special Conditions, General Requirements, or not included under Contract items shall be included for payment under Contract Item 02002-1, MOBILIZATION AND DEMOBILIZATION.

END OF SECTION

SECTION 02002

MOBILIZATION AND DEMOBILIZATION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Work under this section shall consist of the Contractor’s preparatory work and operations, including but not limited to; those necessary for the movement of personnel, equipment, supplies, and incidentals to and from the project site, including access, maintenance and restoration of the site and adjacent properties affected by the Contractor’s operations and for the establishment of the Contractor's supervisory facilities necessary for work on the project and all other work and operations which must be performed or for costs which must be incurred prior to beginning work. Access, temporary construction facilities, and submittal items shall be in accordance with the requirements of the applicable sections of the Contract and as shown on the Contract Drawings.

B. Work under this section shall include, but not be limited to, the following:

1. Mobilization of equipment and materials to the site including preparation of the staging and stockpile area.
2. Furnish and install one DEP sign.
3. Pre-construction meeting and pre-construction photographs.
4. Install temporary measures to protect existing site features to remain in place during the work.
5. Install temporary pedestrian barriers including, but not limited to; fencing, signage, and/or concrete barriers.
6. Remove and store existing site features, including timber access stairs, to be restored in-kind, that are not protected in place.
7. Demolish, remove, and dispose of the existing seawall and unsuitable materials, and other construction materials not designated to remain.
8. Removal, stockpiling, and restoration of the existing rip-rap revetment.
9. Survey, supervision, design, installation, operation, maintenance, control of water, if required, and removal of temporary shoring needed to prevent undermining and damage to adjacent structures and scheduled to remain and to facilitate the project work.
10. Reconstruct 350 lineal feet of seawall located between Station 12+10 and 15+60 including preparation, rebar installation, forming, placing, finishing, curing concrete, railing installation, and installation of steel sheetpile scour protection.
11. Reconstruct 43 lineal feet of seawall and 7 lineal feet of return wall between Station 0+00 and 0+43 including preparation, rebar installation, forming, placing, finishing, curing concrete, railing installation, and installation of steel sheetpile scour protection.
12. Construction of cast-in-place concrete access steps including preparation, rebar installation, forming, placing, finishing, and curing concrete.
13. Management and disposal of all associated demolition and construction debris.
14. Protection and in-kind restoration of site features to remain.

15. Complete incidental site work, including, but not limited to excavation, restoration of existing grade, and restoration of contractor staging areas.

16. Complete site restoration, including, but not limited to, site clean-up, backfilling and re-grading, reset existing structures and site features, placement of up to 960 cubic yards of compatible beach sand, removal of excess materials, equipment, or construction related debris.

C. The Contractor is advised to pay particular attention to weather forecasts for the area. The Contractor shall make provisions for contingencies to deal with inclement weather, the cost of which shall be incidental to other pay items. The Contractor may have to demobilize from the site on a temporary basis due to weather. Prior to leaving the site, the Contractor shall take such steps as are necessary to protect completed work and work in progress and to remove all equipment and materials from potentially affected areas. The Contractor shall be responsible for any loss or damage to work completed, work in progress, equipment, or material. The Contractor shall remobilize to the site at no additional cost to the Town. Remobilization shall include all effort required to restart the work.

1.2 RELATED SECTIONS

01000 GENERAL REQUIREMENTS

02100 DEMOLITION, REMOVAL AND DISPOSAL

02170 TEMPORARY SHORING

02200 EXCAVATION, BACKFILLING, AND COMPACTION

02300 REVETMENT REMOVAL AND RESET

02360 STEEL SHEETING

03300 CAST-IN-PLACE CONCRETE

03400 SEAWALL AND STAIR CONSTRUCTION

05500 MISCELLANEOUS METALS

PART 2 - PRODUCTS

2.1 Products will be as required and as specified in other sections.

PART 3 - EXECUTION

3.1 SUBMITTALS

A. Prior to start of work, the Contractor shall submit a schedule of the equipment the Contractor will employ in the performance of the work under this Contract. Submit copies of all applicable inspections and certifications for all equipment.

B. The Contractor shall submit a staging and access plan.

C. The Contractor shall submit temporary shoring means and methods, including design calculations prepared by a licensed Professional Engineer, registered in the Commonwealth of Massachusetts as specified in Section 02170, 1.4.

D. The Contractor shall submit a storm contingency plan that includes emergency preparedness details for the following:

1. Securing site materials and/or demobilization and removal of equipment, materials, and personnel from the site and staging area landward of the seawall. Equipment, materials, and personnel should be moved to a location outside of an area subject to impact from a coastal storm event.

2. Placement of temporary flood control measures such as sandbags, precast concrete blocks, or similar.

3. Construction related debris removal after the storm and disposal as directed by the Owner's representative.

4. Remobilization of all equipment, materials, and personnel to the site, including restoration of site access and staging areas as necessary.

E. Section 01000- General Requirements or under appropriate sections.

3.2 EQUIPMENT

A. The Contractor shall keep on the job sufficient equipment to meet the requirements of the work. The equipment shall be in satisfactory operating condition and be capable of safely and efficiently performing the work. The equipment shall be subject to inspection by the Engineer at all times.

B. Prior to commencement of work at the site, the Contractor shall make available to the Engineer for review, copies of all applicable inspections and certifications of 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. Each item of equipment shall have on board a spill kit and waste oil management plan which details the intended disposal method for waste oil.

C. Contractor shall demonstrate in a work plan that the above equipment is capable of lifting materials and demolition debris on and off the beach and performing the work to the limits as indicated on the Drawings.

D. Should equipment used not be capable of performing the work as intended, Contractor will provide alternative equipment that is capable of performing the work as intended at no extra cost to the Owner.

3.3 SITE PREPARATION, COORDINATION AND RESTORATION

A. Site usage by the Contractor is limited to the area necessary to accomplish the work within the limits of the beach extending up to and including the seawall. The Contractor will be responsible for the removal and replacement of any privately owned structures and landscaping required to be removed for the work to be performed. The Contractor shall submit a plan indicating necessary work limits to be approved by the Engineer prior to performing any onsite work.

B. Contractor shall provide site access as required for the transport of materials, personnel, and equipment to the project site.

C. Contractor shall remove all materials used for access and restore to pre-construction condition all access areas, material and equipment storage areas, and areas disturbed in and around the project site during construction.

D. Excess materials shall be removed from the site and become the property of the Contractor, unless otherwise directed by the Town. Excess imported material shall be measured and deducted from payment quantities under the appropriate items, as established by the Engineer.

E. Contractor shall provide measures to prevent materials from entering the Atlantic Ocean or any wetland resource areas.

F. Existing structures, including but not limited to; adjacent buildings, walls, utilities, roadways and parking areas, signage, etc. located in and around the work areas shall be protected during the course of work and/or removed and reset in existing locations after the completion of work, if necessary.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. MOBILIZATION AND DEMOBILIZATION shall be measured as a lump sum with the percentage of mobilization and demobilization complete measured by the Engineer, as indicated on the bid form.

B. Following completion of mobilization, the Contractor may invoice sixty percent (60%) of the lump sum bid price. Following satisfactory completion of all work, the Contractor may invoice the remaining forty percent (40%) of the lump sum bid price.

4.2 PAYMENT

A. MOBILIZATION AND DEMOBILIZATION for the work associated with the Contract shall be paid for under Contract Item 02002-1. Payment for work shall be per the percentage of mobilization and demobilization complete, which shall include mobilization and demobilization of all material, equipment including the Contractor's temporary facilities, site access, labor, transportation, survey, supervision, submittals and other incidental or appurtenant work required to complete mobilization and demobilization as shown on the Contract Drawings, as specified herein, and as directed by the Engineer.

B. No payment shall be made for any necessary temporary demobilization and remobilization due to inclement weather, as stated above.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT PRICE
02002-1	MOBILIZATION AND DEMOBILIZATION	LUMP SUM

END OF SECTION

SECTION 02100

DEMOLITION, REMOVAL AND DISPOSAL

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The Contractor shall furnish all labor, materials, tools, supervision, transportation, equipment, and services necessary for, and incidental to, the execution and completion of all demolition operations, as shown on the Drawings and as required to complete the work.

B. The work under this Section shall include, but is not limited to, demolition, removal, and legal disposal of the following items:

1. All demolition and construction related waste and debris, including excess materials that are otherwise unsuitable for reuse and not designated for salvage by the Owner.

2. Excavated material not suitable for reuse and not designated for salvage, as approved by the Owner and Engineer.

3. Existing damaged, deteriorated, and remnant concrete, timber, steel, and reinforcing members not intended for reuse, including demolition debris generated by the work.

4. Existing private structures including, but not limited to patios, walkways, curbing, edging, landscaping, vegetation, plantings, deck, etc. shall be documented, removed and reset in-kind.

C. All demolition and removal shall be accomplished in a neat, workmanlike manner, and at such time or times as is most suitable to the progress and proper coordination of the project.

D. The Contractor shall provide a neat interface between areas of removal and areas designated to remain. Any surface damaged during construction that is not within work areas shall be repaired by the Contractor at their own expense.

E. Items for Demolition and Removal shall be removed from the site and properly and legally disposed of.

1.2 RELATED SECTIONS

01000 GENERAL REQUIREMENTS

02002 MOBILIZATION AND DEMOBILIZATION

02170 TEMPORARY SHORING

02200 EXCAVATION, BACKFILLING, AND COMPACTION

02300 REVETMENT REMOVAL AND RESET

02360 STEEL SHEETING

03300 CAST-IN-PLACE CONCRETE

03400 SEAWALL AND STAIR CONSTRUCTION

1.3 SUBMITTALS

A. The Contractor shall submit a comprehensive Demolition and Removal Plan for Engineer's review within 30 days of Notice to Proceed, but prior to the start of demolition activity.

B. The Demolition and Removals Plan shall include details on demolition and removal procedures, methods and equipment for removals, sequence of operations, staging of equipment and materials, and schedule to perform the demolition and removals for the various elements to be removed.

C. The Demolition and Removals Plan shall include a description of planned erosion and sediment controls; marine resuspension controls; and debris handling, storage, segregation, and management.

D. The Demolition and Removals Plan shall include a separate section the identifies noise-, dust-, and vibration-generating activities and describes monitoring and mitigation measures that will be implemented.

E. The Demolition and Removals Plan shall include a narrative description of the Contractor's proposed method and procedures for managing and documenting the quantities for payment under the applicable Contract Items.

F. The Contractor shall submit to the Engineer certification documentation verifying that the disposal site is legal and authorized to accept the subject material.

1.4 REGULATORY REQUIREMENTS

A. Conform to applicable federal, State, and local codes for demolition of structures, safety and protection of adjacent structures, dust control, noise control, vibration control, vermin control, soil erosion and sedimentation control, and waste disposal.

B. Conform to the conditions associated with Site-specific permits obtained by the Owner including but not limited to; Rockport Conservation Commission Order of Conditions (OOC).

1.5 PROJECT CONDITIONS

A. Review historic plans and licenses, available logs, records of explorations, groundwater level data, and geotechnical and environmental testing results and other pertinent data for the site.

B. Contractor shall conform to applicable laws and regulations when hazardous or potentially hazardous materials or contaminated substances not previously identified are encountered. Contractor is directed not to disturb or attempt to remove any discovered hazardous or potentially hazardous materials or contaminated substances without first notifying the Town or Engineer. Immediately notify the Town or Engineer upon the discovery of such conditions.

C. Contractor shall be solely responsible for evaluating existing facilities and project area conditions and considering all factors that may affect the progress or performance of the work. Maintain existing site access as much as practical during demolition. Restore site access as necessary to provide adequate site ingress/egress during construction.

D. Contractor shall dispose or recycle all the demolition debris in accordance with all applicable laws and regulations and the requirements of the Contract Documents.

E. By submitting a Bid, the Contractor affirms that the site and all conditions affecting the work under this Section have been carefully examined. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation at the site. The Contractor shall protect adjacent property, public utilities and structures, and completed work, from damage associated with the waterfront removal and demolition. Damage due to removal and demolition shall be repaired by the Contractor at his own expense.

PART 2 - PRODUCTS

2.1 DEMOLITION EQUIPMENT

A. Hydraulically operated equipment with buckets, grapplers, masonry saws, vibratory hammers and/or shear equipment or Engineer-approved alternatives, including hand tools, shall be used to dismantle and remove the existing concrete and other debris and potential obstructions on-site.

B. Use of explosives, wrecking balls, or other demolition methods likely to generate excessive dust, noise, vibration, and other debris is not permitted.

2.2 SHEETING AND COVERINGS

A. If stockpiled, demolition debris shall be placed on a strong, durable, impermeable, flexible 60-80 mil minimum thickness HDPE sheeting or other Engineer-approved material.

B. Stockpiled demolition debris capable of becoming airborne or generating dust shall be covered with a strong, durable, impermeable, tear-resistant 6 mil minimum thickness polyethylene.

2.3 EROSION CONTROL

A. The Contractor shall provide erosion control and sediment control measures during the work in accordance with regulatory approvals for the work. Requirements include, but are not limited to:

1. The areas of construction shall remain in a stable condition at the close of each construction day. Erosion controls should be inspected and maintained or reinforced on a daily basis by the designated erosion control monitor.

2. All disturbed or exposed upland soil surfaces shall be temporarily stabilized with hay, straw, mulch, or any other protective covering and/or method approved by the Conservation Commission.

3. The Erosion Control Monitor shall act quickly to address any deterioration or failure of the erosion control barrier and/or address and remediate any erosion or sedimentation event. The Conservation Commission shall be notified forthwith of any such failure or event.

4. At no time shall sediments be deposited in a wetland or water body.

B. The Contractor shall provide erosion, sediment, debris, and dust control measures for excavated material that may be stockpiled for disposal or reuse.

C. Construction dumpsters shall be covered at the end of each day.

D. Provisions for containing the concrete spoils shall be outlined in Section 03300- Cast-in-Place Concrete.

E. No remnants of concrete stairs or wall sections shall remain on the beach or stone revetment.

PART 3 - EXECUTION

3.1 GENERAL

A. The Contractor shall maintain all demolished and excavated materials in an approved manner, in accordance with all environmental requirements for the project and to protect existing structures, facilities, wetland resource areas and the work.

B. Existing utility systems within and adjacent to the site shall remain in continuous service and shall be protected from damage during construction. Where interruption of a service is required, it shall be scheduled in advance and coordinated with the Town and the Engineer.

C. The Contractor shall make every effort to contain any debris that potentially could be deposited into the Atlantic Ocean, beach, or wetland resource areas. The Contractor shall immediately recover any debris that enters the Ocean or wetland resource area, and immediately notify the Engineer and Conservation Commission.

D. If encountered, Contractor shall take all necessary precautions to preclude any release of hazardous materials or hazardous wastes during demolition. If areas, either on or off site, are contaminated during work, the Contractor shall clean up and restore contaminated areas to the satisfaction of the Town at no additional cost to the Town.

E. Dust shall be strictly controlled in all areas requiring demolition. Contractor shall provide and employ dust control measures to mitigate the release of visible airborne particulate matter and/or fugitive dust beyond the limits of work generated from demolition and removal activities.

F. Owner or Engineer reserves the right to suspend work at any time, if necessary, due to dust generation which causes a safety or an air quality problem or which may cause contamination of adjacent areas. Contractor shall not be entitled to any additional compensation for suspension of work under such conditions.

G. Noise shall be controlled in all areas requiring demolition. Noise shall comply with local ordinances.

H. The Contractor shall follow procedures outlined in Rockport Conservation Commission’s Order of Conditions, and all other local, state and federal agency requirements.

I. No existing, natural, beach sediment material shall be removed from the beach except for minor amounts adhering to otherwise unsuitable materials that cannot reasonably be further separated by mechanical or manual means and are selected for removal and disposal. The Contractor shall, at minimum, mechanically separate existing beach sediment from any other material encountered during the course of the work to the satisfaction of the Engineer prior to relocating material from the beach. The Contractor shall restore beach sediment disturbed by this process as near to its location and condition of origin as practicable. Excess compatible beach sediment shall be distributed to the beach as shown on the drawings.

J. Stockpiled stone and sand shall be protected and maintained During the duration of work. If stockpiled stone and sand need to be supplemented during site restoration work, the Contractor shall provide

compatible materials to perform their work at no additional cost to the owner. No stone shall be left on the beach outside of the restoration limits.

3.2 PROTECTION OF EXISTING FEATURES

A. The Contractor shall take all necessary precautions to ensure that existing facilities, structures, utilities and other features within and adjacent to the site, and indicated to remain, are not damaged and remain operational during the demolition and removal work.

B. Features to remain that are damaged by the Contractor shall be restored at the Contractor's expense to the satisfaction of the Town and Engineer.

3.3 REMOVAL OF EXISTING MEMBERS

A. The Contractor shall remove all existing items designated for removal to lines and grades shown on the Drawings or as specified herein.

B. Items designated to be salvaged and re-used shall be removed and stored in a careful manner so as not to damage any items. Any material mishandled or damaged in any way shall be replaced at the Contractor's expense.

3.4 ANTICIPATED DEMOLITION SEQUENCE

A. The following describes the anticipated demolition sequence. The Contractor shall provide a detailed schedule and sequence for all demolition work for the proposed project.

1. Removal, storage, and protection of existing timber access stairs and steel pipe railing intended for reuse, if required.
2. Documentation and removal of private features.
3. Removal and temporary stockpile of existing revetment apron stone fronting proposed seawall reconstruction sections.
4. Installation of temporary shoring/support of excavation and sheeting.
5. Removal of existing concrete stairs and seawall sections and reinforcing members not intended for reuse.
6. Removal of unsuitable materials and construction related waste and debris.

3.5 DISPOSAL OF DEMOLITION DEBRIS

A. Material resulting from demolition, not scheduled to be reset or reused, shall become the property of the Contractor and shall be properly disposed of at the approved legal site at the Contractor's expense, unless otherwise indicated.

B. Hauling and proper disposal of materials shall be in accordance with all Federal, State and Local requirements.

C. Removals may include existing items designated to remain (or to be removed and reset), if the items are damaged or repair is otherwise impractical. Any existing feature scheduled to remain or to be

temporarily removed and reset shall be restored or replaced to match pre-construction conditions at the Contractor's expense.

3.6 REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS

A. The Contractor shall remove all existing items designated for demolition or removal to lines and grades shown on the Drawings or as specified herein.

B. Excavations and removals, if occurring in intertidal areas shall be performed during periods of low tide. No in-water work is allowed.

C. Unsuitable materials may consist of, but are not limited to fugitive concrete, buried remnants, wood, damaged geotextile fabric, and other building material debris; or other unclassified materials encountered during the work that do not meet the project requirements for reuse in the proposed work.

D. The Contractor shall manage existing stone disturbed by excavation and incorporate the existing stone into the adjacent stone slopes interlocking stones as tight as possible, at the conclusion of work to the maximum extent feasible, in accordance with this Specification and related sections.

E. The Contractor shall salvage all existing materials that are disturbed or displaced due to related construction activity and are suitable for reuse in the work. Items designated to be salvaged and reused or stored shall be removed and stored in a careful manner so as not to damage any items. Any such material mishandled or damaged in any way shall be replaced at the Contractor's expense.

F. The Contractor shall process, and separate materials proposed for off-site disposal by mechanical and manual means and to the extent practicable, as required, and as indicated by the Engineer. Loads of material prepared by the Contractor for measurement containing, based on the opinion of the Engineer, excessive proportions of beach sediments or stone, that can reasonably be separated by mechanical means will not be accepted. Existing compatible beach sediment shall not be removed from the beach.

G. Any depressions caused by the removal of stone, debris, or other buried unclassified material shall be filled with suitable granular fill to match surrounding existing grades.

H. Displaced soils shall be re-graded after removal of stone or debris to match surrounding existing grades as near to their location of origin as practicable, unless directed otherwise. No existing, natural, beach sediment material shall be removed from the beach.

3.7 DEMOLITION AND REMOVAL OF EXISTING CONCRETE STRUCTURES

A. The Contractor shall remove all existing items designated for removal to the lines and grades shown on the Drawings, as required to perform the proposed work, as specified herein, and as directed by the Engineer.

B. Concrete shall be cut, chipped, or otherwise removed from the concrete structures to the lines and grades as shown on the Drawings, as required to perform the proposed work, as specified herein, and as directed by the Engineer.

C. Concrete removal shall be carried to dimensions and conditions indicated by the Drawings, unless approved by the Engineer. The boundaries of the areas to be repaired shall be vertically sawcut or cut

at an approximately 90-degree angle to a depth of not less than 2 inches to avoid thin or feather edges in the finished surface.

D. Removals shall also include existing steel reinforcement, inserts, anchors, and other embedded materials that conflict with the proposed work or are otherwise unsuitable to remain in-place and other miscellaneous construction related waste and debris.

E. Shore and protect adjacent structures to remain.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. DEMOLITION, REMOVAL AND DISPOSAL shall be measured as a lump sum with the percentage of demolition complete measured by the Engineer, as indicated on the bid form.

B. Site features removal and restoration shall be measured as each, average unit cost for the eleven sites, for the entire landscape or hardscape structures fronting house numbers 2A-g, 4, 56, 58, 60, 62, 64, 66, 68, 70, 72, completion measured by the engineer.

4.2 PAYMENT

A. DEMOLITION, REMOVAL AND DISPOSAL work associated with the Contract shall be paid for under Contract Item 02100-1. Payment for work shall be per the percentage of demolition, removal and disposal complete, which shall include demolition, removal and disposal work, including all materials, equipment, labor, survey, transportation, supervision, submittals and other incidental or appurtenant work required to complete the demolition, removal and disposal as shown on the Contract Drawings, as specified herein, and as directed by the Engineer.

B. SITE FEATURES REMOVAL AND RESTORATION work associated with the Contract shall be paid for under Contract Item 02100-2. Payment for work shall be per the removal and restoration complete, which shall include documentation, removal and restoration work, including all materials, equipment, labor, survey, transportation, supervision, submittals and other incidental or appurtenant work required to complete the removal and restoration to match the pre-construction survey conditions, as specified herein, and as directed by the Engineer.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT PRICE
02100-1	DEMOLITION, REMOVAL AND DISPOSAL	LUMP SUM
02100-2	SITE FEATURES REMOVAL AND RESTORATION	EACH

END OF SECTION

SECTION 02170

TEMPORARY SHORING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to, survey, supervision, design, installation, operation, maintenance, control of water, if required, and removal of temporary shoring needed to prevent undermining and damage to adjacent structures scheduled to remain and to facilitate the project work to the limits as indicated on the Contract Drawings, and as specified herein.

B. The Contractor shall protect or restore existing site features that abut or are otherwise affected by the work and are not scheduled for removal or improvement.

1.2 RELATED SECTIONS

01000	GENERAL REQUIREMENTS
02100	DEMOLITION, REMOVAL AND DISPOSAL
02200	EXCAVATION, BACKFILLING, AND COMPACTION
02300	REVETMENT REMOVAL AND RESET
02360	STEEL SHEETING
03300	CAST-IN-PLACE CONCRETE
03400	SEAWALL AND STAIR CONSTRUCTION
05500	MISCELLANEOUS METALS

1.3 REFERENCES

A. References herein to any technical society, organization, group, or body are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable:

1. American Society for Testing and Materials (ASTM), latest edition
2. Commonwealth of Massachusetts, Department of Transportation, Standard Specifications for Highways and Bridges (latest edition) – Division II, Section 100, 200, 300 and 400, Division III
3. American Institute of Steel Construction (AISC), Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, latest edition.
4. Steel Structures Painting Manual: Surface Preparations Specifications (SSPC) Commercial Blast Cleaning, SSPC-SP-6-63.
5. American Welding Society (AWS) D1.1: Structural Welding Code - Steel
6. International Building Code (IBC), latest edition

7. Massachusetts State Building Code, latest edition

1.4 SUBMITTALS AND SAMPLES

A. Submit shop drawings, design calculations, and installation and removal procedures for temporary shoring to be used for support of excavation.

1. Shop drawings shall include all details, size, connections/welds, thickness, gauge, finish and type and grade of material for all items, information for the fabrication, handling, and installation. Drawings shall not be reproductions of Contract Drawings. Design drawings shall be prepared and stamped by a licensed Professional Engineer, registered in the Commonwealth of Massachusetts, and submitted for approval prior to installation.

2. Manufacturer's design calculations shall be stamped by a licensed Professional Engineer, registered in the Commonwealth of Massachusetts, verifying products' ability to withstand intended and anticipated design loads.

B. Qualifications: The Contractor’s Design Professional and the Contractor shall be experienced in the type of temporary support of excavation to be installed. The Contractor shall have sufficient personnel and equipment to successfully complete the program specified in accordance with the Contract Documents. Contractor superintendent shall have at least five years of experience with the temporary support of excavation method, and each shall have successfully completed at least three projects in the last five years of similar magnitude and complexity to that required for the program specified herein. The Contractor’s experienced superintendent shall be present at the Site at all times during temporary support of excavation installations.

C. Submit a description of the method and equipment to be used, as well as a detailed work sequence and schedule, including protection of adjacent structures, for approval by the Engineer, before work shall proceed. If the shoring system means and methods include impact or vibratory driving, submit manufacturer’s specifications of products and maintenance manuals for pile hammer and auxiliary equipment. Submittal shall include type, make, maximum rated energy, and rated energy per blow of hammer, weight of striking part of hammer, weight of drive cap, details, type and structural properties of hammer cushion and type of leads.

D. The Contractor shall submit a means and methods plan providing details on access, lifting, movement, handling, temporary staging and stockpiling of temporary shoring members and associated materials by Contractor as part of this Contract.

E. A complete installation log for temporary shoring members shall be submitted within five days of installation. Log shall include depth penetration, toe and cutoff elevations, date installed and other pertinent installation behavior.

1.5 UTILITIES AND PROTECTION

A. The Contractor shall locate and mark active underground utility lines before commencing work. Utility services to remain shall be protected from damage and shall be plotted on the Record Plans by the Contractor. Utilities which are not active shall be protected or properly removed as directed by the Engineer and the Owner. Existing utilities shall not be interrupted except when authorized in writing both by the Engineer and by authorities having jurisdiction.

B. Excavated areas shall be kept free from water, snow and ice during construction. Pumping operations shall be performed should surface rain or groundwater be encountered during construction.

1.6 SUBSURFACE DATA

A. Bidders are expected to examine the site, historic drawings, and the compiled record of investigations and then decide for themselves the character of materials to be encountered. No warranty, either expressed or implied, is made as to the accuracy of the subsurface information presented. Subsurface investigations have been made and the results included in the bid package. The data shown is for general information for the Bidders. Contractor shall perform additional subsurface excavations as required for their design and execution of work.

B. Variations in existing ground conditions shall not, under any conditions, constitute grounds for changes in Contract Price, or completion dates of this Contract.

C. Upon notification to the Owner, the Bidders will be allowed the right to make any subsurface explorations they deem necessary to satisfy themselves of the existing ground conditions.

1.7 QUALITY ASSURANCE

A. The Engineer shall have access to the work. The Contractor shall make available all materials and equipment necessary at all times for the purposes of inspection. The Contractor shall cooperate with and assist the Engineer's inspection.

B. Store and handle materials to avoid damage to the shoring elements. Bent or kinked shoring members which, in the opinion of the Engineer, cannot be straightened without damage shall be rejected.

C. The Contractor shall be responsible for all damage to the temporary support of excavation and associated elements until they are incorporated into the structure and the structure is accepted, except as specified otherwise in these Specifications.

D. Comply with all rules and regulations, laws and ordinances of the Commonwealth of Massachusetts, the Town of Rockport and all other authorities having jurisdiction. All labor, materials, equipment and services necessary to make work comply with such requirements shall be provided without additional cost to the Owner.

E. Use only certified AWS welders for all welding.

1.8 DELIVERY, HANDLING, AND STORAGE

A. The temporary shoring components will be procured and stockpiled at the project site in advance of the start of construction. All materials shall be handled with due care from the stockpiled location to the work limits and all work shall be protected in order to avoid damage or deterioration before, during, or after installation at the work locations.

B. Materials shall be handled and stored in a manner to prevent excessive bending stresses and damage to the shoring members. Store materials in orderly groups above grade. Block during storage to minimize possible distortion of members. Any member exhibiting variations beyond tolerance limits will be considered distorted and may not be used in the work. Keep steel free from excessive rust.

C. The Contractor shall store and handle shoring members to avoid damage to the members. Contractor shall protect shoring during handling, driving, and falsework construction.

D. The Contractor shall submit to the Owner a means and methods plan providing details on access, lifting, movement, handling, temporary staging and stockpiling of temporary shoring members and associated materials by Contractor as part of this Contract.

1.9 QUALIFICATIONS

A. All shoring shall be furnished and installed by a Contractor experienced in the type of shoring work specified. The Contractor shall have at least five (5) years of experience and at least five (5) successful installations of the same general type and class of installations. The superintendent proposed for the work shall have at least five (5) years of experience in shoring installation and shall be experienced in operations of this class and nature.

B. The Contractor's engineer shall be registered in the state in which the work is performed and shall have not less than ten (10) years of experience in temporary shoring design on similar projects.

C. Review by the Owner or Engineer does not relieve the Contractor from responsibility for the adequacy, safety, constructability, or performance of temporary works.

1.10 COORDINATION

A. Coordinate Work with that of other trades affecting or affected by the Work of this Section and cooperate with such trades to ensure the steady progress of the Work.

B. Visit the site to review all details of the Work and working conditions and to verify dimensions in the field. Notify the Engineer in writing of any discrepancy before performing any work.

C. Consult official records of existing utilities, both surface and subsurface, and their connection to be fully informed on all existing conditions and limitations as they apply to this work and its relation to other construction work. Locate existing utilities in the areas of work. If utilities are to remain in place, provide adequate means of protection during the Work.

D. Should uncharted or incorrectly charted piping or utilities be encountered during the Work, contact the Owner immediately. Cooperate with the Owner in keeping respective services and facilities in operation. Repair damaged utilities to the satisfaction of the Owner.

E. Do not interrupt existing utilities servicing facilities occupied and/or used by others.

F. The Contractor shall protect adjacent property, utilities, structures, dwellings and associated features, completed Work, and existing conditions to remain from damage associated with his operations. Barricade and protect open excavations as part of this work. Protect structures, utilities, dwellings, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by Contractor's operations. Damage resulting from Contractor's operations stall be repaired by the Contractor to the satisfaction of the Owner at no additional cost to the Owner.

PART 2 - MATERIALS

2.1 GENERAL

A. Provide materials that are new or in serviceable condition and suitable for the intended temporary shoring work.

B. Do not incorporate damaged, excessively worn, deformed, or excessively corroded materials for temporary shoring members.

PART 3 - EXECUTION

3.1 GENERAL

A. Plan, coordinate, and accomplish the installation of the temporary shoring members in accordance with the Specifications and as shown on the Contract Drawings.

B. The Contractor shall furnish and install temporary shoring for the construction of support of excavation, control of water, as appropriate, during the seawall construction work. The work shall consist of furnishing and placing temporary shoring members, walers, braces, coffers, dewatering, and all ancillary work that will be required to perform the work.

C. Shoring may utilize struts between landward shoring and seaward shoring to provide support.

D. Shoring shall be installed and withdrawn (where appropriate) in a manner that does not cause damage to existing structures or completed work. The Contractor is responsible for all such potential damage.

E. Locate, protect, support, and maintain all utilities within the limits of and adjacent to all temporary shoring work.

F. Shoring and bracing shall comply with OSHA requirements and local codes and authorities having jurisdiction.

G. Review Drawings for the adjacent structures as applicable. Construct the temporary shoring in accordance with the Drawings or approved Contractor submittal and preserve the integrity of the adjacent structures, while minimizing movements and loss of ground.

H. Contractor shall provide construction layout.

I. Contractor shall furnish all equipment, labor and supervision necessary to install temporary shoring in full-time operation and shall mobilize additional equipment, if necessary, to complete the work in accordance with the project schedule.

J. At all times, provide access and line of sight to settlement and deformation monitoring surveys throughout the course of the Work.

K. Coordinate shoring and bracing with the construction to be performed, including clearance for formwork of cast-in-place concrete structures.

L. Maintain shoring and bracing in excavations during all time periods when excavations are to be open. Extend shoring and bracing downward as excavation progresses.

M. All rocks, timber, debris or other obstructions which interfere with the installation of the temporary shoring, shall be penetrated, cored or removed by the Contractor, at no additional cost to the Owner. Such debris and obstructions shall be removed to facilitate the required work.

PART 4 - MEASUREMENT AND PAYMENT

4.1 GENERAL

A. Measurement for payment items covered by this Section shall be based on the percentage of work installed and complete to the lines, grades, and dimensions indicated on the Contract Drawings. Documentation of ordered quantities, which may differ from installed and complete quantities, may be used for reference and at the discretion of the Engineer, however such documentation will not be considered sufficient basis for measurement of payment items, unless specifically noted otherwise.

B. No separate measurement or payment will be made for fasteners, welds, metal fabrications, or connectors used to connect steel elements. Include all costs associated with these elements or any other work covered by this section under the corresponding payment items for which the work is required.

C. No separate measurement or payment will be made for excess materials provided or installed at the Contractor's sole discretion or for convenience.

D. The Contractor will be paid under the contract unit price per Lump Sum for payment Item 02170-1 TEMPORARY SHORING, which unit price shall include full compensation for all investigations, design, survey, supervision, materials, falsework, installation and removals, tools, equipment, labor, delivery, storage, repair, field modification, and incidental or appurtenant work required to procure and install the temporary shoring as indicated on the Contract Drawings, as specified herein, and as directed.

4.2 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT PRICE
02170-1	TEMPORARY SHORING	LUMP SUM

END OF SECTION

SECTION 02200

EXCAVATION, BACKFILLING AND COMPACTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to, excavation, shoring, subgrade preparation, placement, backfilling, and compacting of soil and crushed stone for all associated work and any incidental items, as indicated on the Contract Drawings and specified herein.

B. The Contractor shall protect or restore existing site features that abut the work scheduled to remain.

1.2 RELATED SECTIONS

01000 GENERAL REQUIREMENTS

02002 MOBILIZATION AND DEMOBILIZATION

02100 DEMOLITION, REMOVAL AND DISPOSAL

02170 TEMPORARY SHORING

02300 REVETMENT REMOVAL AND RESET

02360 STEEL SHEETING

03300 CAST-IN-PLACE CONCRETE

03400 SEAWALL AND STAIR CONSTRUCTION

1.3 REFERENCES

A. References herein to any technical society, organization, group, or body are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable:

1. American Society for Testing and Materials (ASTM), latest edition
2. Commonwealth of Massachusetts, Massachusetts Department of Transportation, Department, Standard Specifications for Highways and Bridges (latest edition) – Division II, Section 100, 200, 300 and 400, Division III
3. International Building Code (IBC), latest edition
4. Massachusetts State Building Code, latest edition

1.4 SUBMITTALS AND SAMPLES

A. Contractor shall submit documentation for the source for furnishing all supplemental fill material. It is the Contractor's responsibility to determine that the source selected can provide the quality and quantities needed at the rate needed to maintain the project schedule. If a source for fill material is not accepted for use by the Engineer, the Contractor shall propose other sources. Approval of submitted

samples, sources, or quarries shall not be construed as a waiver by the Engineer of the right to reject any material that does not comply with the requirements noted herein after.

B. Contractor shall submit documentation of sieve analysis for each type of proposed fill material to the Engineer for conformance with requirements specified herein.

C. Contractor shall record each delivery of supplemental fill material to the project. Quantity of fill materials shall be provided in units of cubic yard, unless otherwise directed.

D. Delivery slips for fill material shall be submitted to the Engineer and Owner for each delivery of fill to the site. The Contractor shall maintain a running tally of daily cubic yardage and cubic yardage to date. Updated quantity tally shall be submitted to the Engineer and Owner daily.

E. Contractor shall not order materials until the Engineer's review of submittals has been obtained.

F. Contractor shall submit product data for filter fabric material to be used.

1.5 UTILITIES AND PROTECTION

A. The Contractor shall locate and mark active underground utility lines before commencing work. Utility services to remain shall be protected from damage and shall be plotted on the Record Plans by the Contractor. Utilities which are not active shall be protected or properly removed as directed by the Engineer and the Owner. Existing utilities shall not be interrupted except when authorized in writing both by the Engineer and by authorities having jurisdiction. Contact and coordinate with the appropriate authority for utilities scheduled to be removed and reset.

B. Excavated areas shall be kept free from water, snow and ice during construction. Pumping operations shall be performed should surface rain, groundwater, or tidal water be encountered during construction. Sheeting, shoring and trench boxes shall be of proper strength and shall be placed where necessary to prevent caving, erosion or gullying of excavation sites. Pumping water shall be contained or filtered prior to placement on the beach.

PART 2 - PRODUCTS

2.1 FILL MATERIALS

A. It is anticipated that existing material will be used as backfill. In the event it is determined the backfill material is unsuitable; the Contractor shall provide suitable backfill material in accordance with the following:

1. Crushed Stone shall consist of angular fragments of hard, durable crushed rock, free from a detrimental quantity of thin, flat, elongated pieces or shall be durable crushed gravel stone obtained by artificial crushing of gravel boulders or fieldstone. The crushed stone shall be free from trash, ice, snow, tree stumps, roots, organic materials and other deleterious materials. Gradations shall conform to the following:

(Mass. Spec M2.01.2)

U.S. Sieve No.	Percent Passing by Weight
2"	100
1 ½	95-100

1”	35-70
¾”	0-25

Maximum size of stone shall be three inches (3”) largest dimension.

2. Dense-Graded Crushed Stone shall consist of clean, inert, hard, durable grains of quartz or other hard, durable rock, free from loam and clay, surface coatings, and deleterious materials. Gradation requirements shall conform to the following:

(Mass. Spec M2.01.7)

U.S. Sieve No.	Percent Passing by Weight
2”	100
1-½”	70-100
3/4"	50-85
#4	30-55
#50	8-24
#200	3-10

Maximum size of stone shall be two inches (2”) largest dimension.

3. Granular Fill shall be free from loam and clay, surface coatings, and deleterious materials. Granular Fill shall contain no stone greater than two-thirds (2/3) the loose lift thickness with a maximum stone size of twelve (12) inches in diameter and contain no more than thirty percent (30%) passing the #200 sieve. It shall have physical properties such that it can be readily spread and compacted during filling.

4. Compatible Beach Sand shall match the color of existing sediments as closely as possible, as approved by the Engineer. Sand material approved for use shall be clean, granular, free from roots or other organic material, trash and frozen material. Graduation requirements shall conform to the following:

U.S. Sieve No.	Percent Passing by Weight
⅜”	100
#4	95 – 100
#10	85 - 100
#20	60 – 95
#40	30 - 80
#60	10 - 35
#100	0 - 8
#200	0 - 3

2.2 FILTER FABRIC

A. Filter fabric (non-woven) shall non-biodegradable non-woven geotextile fabric resistant to naturally encountered chemicals, alkalines, and acids, as Mirafi 180N, or an approved equivalent.

2.3 USE OF MATERIALS

A. Use of materials shall be as described below and as shown on the plans. Further details can be found in the Contract Drawings. Combinations or layering of materials may be necessary in certain instances.

B. Granular Fill: granular fill for general grading, as backfill or fill.

C. Dense-graded Crushed Stone: Use as walkway surface.

D. Crushed Stone: Use in bottom of excavations to aid in construction dewatering and maintaining subgrade stability during wet conditions, backfill behind walls, and in confined areas. Crushed stone layers greater than 4 inches in thickness shall be wrapped in non-woven filter fabric (Mirafi 180N or equivalent).

E. Compatible Beach Sand shall be redistributed onto the beach, above the high tide line, at the conclusion of work.

F. Filter fabric (non-woven): Use between crushed stone and granular soils or where indicated on the Contract Drawings.

PART 3 - EXECUTION

3.1 GENERAL

A. Contractor shall maintain, and stockpile excavated and delivered fill material in a safe, approved manner in accordance with all environmental requirements for the project and to protect existing structures and work. See Section 01000- General Requirements for additional coordination requirements.

B. Contractor shall schedule work and deliveries to avoid impact to abutters and local traffic. The Contractor shall conform to all applicable federal, state, and local requirements regarding the handling, delivery and installation of fill material.

C. Contractor shall coordinate excavation and backfilling work during favorable weather conditions and at times when tidal water will not affect the work. No work shall be performed during storm conditions. Contractor to make provisions as necessary to control water during construction.

3.2 EXCAVATION

A. Contractor shall excavate the existing soils or fill to the dimensions and elevations shown on the Contract Drawings, or as necessary to install the various components of the work.

B. Contractor shall separate excavated materials as suitable and unsuitable for backfill, as approved by the Engineer. Unsuitable material shall be immediately removed from the site. All material removed from the site shall be disposed of legally. Suitable material taken from excavations shall be stockpiled for future backfilling within the staging areas as indicated on the Contract Drawings or as directed by the Engineer.

C. Contractor shall maintain project benchmarks for horizontal and vertical control of excavations and backfilling.

D. Suitable material for backfilling shall meet the requirements of the fill materials specified in these Contract Documents. Soils with significant fines content, organic material, deleterious or other objectionable material will not be allowed as backfill.

E. Excavated material shall not be deposited or piled to cause excessive settlement or endanger portions of any new or existing structures, such as surcharge loading of bulkheads or walls.

F. Unsuitable soil or materials found during excavation shall be removed, as determined in the field by the Engineer. The Engineer shall be present during excavation of unsuitable soil or materials to verify the volume of material removed. Grades will be restored with approved fill as directed by the Engineer.

G. Contractor shall take appropriate measures to shore the walls of the excavation when necessary, particularly when made within area subject to environmental conditions, or adjacent to features to remain. Excavations shall be in accordance with current OSHA standards.

H. Contractor shall protect any open excavation with poly tarp or approved geotextile fabric to avoid erosion of material.

3.3 INSPECTION

A. Contractor shall verify that stockpiled fill to be reused has been approved by the Engineer.

B. Before backfilling, the Contractor shall verify that drainage and utility installation has been inspected.

C. Prior to backfilling, the Contractor shall verify that areas to be backfilled are free of debris, snow, ice, or water, and that ground surfaces are not frozen.

3.4 PREPARATION

A. When necessary, compact subgrade surfaces to density requirements for fill or backfill material.

B. Cut out soft areas not readily capable of in-situ compaction. Backfill with crushed stone and compact to density equal to requirements for subsequent backfill material.

3.5 FILLING AND BACKFILLING

A. Suitable excavated material may be used for backfilling. Suitability of materials shall be determined by the Engineer. Such use of excavated materials may include stockpiling until needed.

B. All unsuitable material shall be removed from the site. The Contractor shall be wholly responsible for the disposal of such excavated material at an approved disposal area. Such disposal shall be in strict compliance with all Local and State rules, regulations, ordinances and laws which regulate and control its disposal.

C. Fill or backfill areas to the contours and elevations as shown on the Contract Drawings. Use unfrozen materials.

D. Backfill systematically, as early as possible, to allow maximum time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces.

E. Compact all materials by mechanical means. Employ a placement method so not to disturb or damage drainage pipes and utilities in trenches.

F. Maximum thickness of loose lift to be eight (8) inches unless approved by the Engineer.

G. Maintain optimum moisture content (+/- 2%) of backfill materials to attain required compaction density.

H. Backfill against foundation walls of other structures simultaneously on each side to limit lateral loading. Hand operated equipment shall be required next to wall.

I. Make changes in grade gradual. Blend slopes into level areas.

J. Place crushed stone in a manner that will avoid segregation of particles and will provide a smooth surface and will not damage the underlying filter fabric. Crushed stone shall not be dumped.

K. Place surplus backfill materials as directed by the Engineer. Leave stockpile areas completely free of excess fill materials.

L. Do not place, spread, or roll any fill material during unfavorable weather conditions. Do not resume operations until moisture content and fill density are satisfactory to the Engineer.

M. Where soil has been softened or eroded by flooding or placement during unfavorable weather, remove all damaged areas and recompact as specified for fill and compaction below, at no additional cost to the Town.

3.6 FIELD QUALITY CONTROL

A. Compaction testing shall be performed by the contractor in accordance with ANSI/ASTM D1557 and ANSI/ASTM D1556.

B. Granular Fill shall be compacted to 92% (minimum) of the Modified Proctor Test, ASTM D1557, Method C.

3.7 FILTER FABRIC (NON-WOVEN)

A. Filter fabric shall be installed in strict accordance with the manufacturer's specifications and recommendations and installed in a manner, location and configuration as indicated on the Contract Drawings.

B. The subgrade that receives filter fabric shall be free of obstructions, depressions and debris and shall be adequately prepared as specified herein.

C. Filter fabric shall be laid loosely in a manner that will provide a smooth surface free of wrinkles or creases. Sufficient slack shall be provided around irregularities to allow for readjustments.

D. A minimum 18-inch overlap shall be provided at all unsewn lap joints and 6-inch overlap shall be provided at sewn joints. Any incidental tears shall be patched with a minimum 3-foot overlay in all directions of the tear.

3.8 USE OF FILL MATERIALS

A. Use of materials shall be as described below and as shown on the plans. Further details can be found in the Contract Drawings. Combinations or layering of materials may be necessary in certain instances.

B. Crushed Stone: Use in bottom of excavations to aid in construction dewatering and maintaining subgrade stability during wet conditions, backfill behind walls, in confined areas, and as indicated on the Contract drawings. Crushed stone greater than 4 inches in thickness shall be wrapped in Non-Woven Filter Fabric (Mirafi 180N or equivalent).

C. Dense-Graded Crushed Stone: Use as pavement/concrete base course and walkway surface material.

D. Granular/Ordinary Fill: Use granular/ordinary fill for general grading, as backfill or fill in areas greater than 2 feet below pavement.

3.9 TOLERANCES

A. Top Surface of Backfilling: Plus or minus one (1) inch.

3.10 CLEANUP

A. At the end of all filling and grading operations and before acceptance of the work, the Contractor shall remove all debris, materials, rubbish, etc., from the site, disposing of them in a manner satisfactory to the Engineer. The premises shall be maintained clean, presentable and satisfactory.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. EXCAVATION, BACKFILLING, AND COMPACTION shall be measured as a lump sum with the percentage of excavation, backfilling, and compaction complete measured by the Engineer, as indicated on the bid form.

4.2 PAYMENT

A. EXCAVATION, BACKFILLING, AND COMPACTION for the work associated with the Contract shall be paid for under Contract Item 02200-1. Payment for excavation, backfilling, and compaction, under Item 02200-1 shall be per the percentage of excavation, backfilling, and compaction complete, which shall include excavation, backfill, and compaction of all material, labor, transportation, survey, supervision, submittals and other incidental or appurtenant work required to complete mobilization and demobilization as shown on the Contract Drawings, as specified herein, and as directed by the Engineer.

B. Payment for procurement and placement of 960 cubic yards of compatible beach material work, if required, shall be considered incidental to Item 02200-1.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT PRICE
02200-1	EXCAVATION, BACKFILLING, AND COMPACTION	LUMP SUM

END OF SECTION

SECTION 02300

REVETMENT REMOVAL AND RESET

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The Contractor shall provide all labor, equipment, materials, and tools necessary for, and incidental to, the reconstruction of the stone revetment apron, as shown on the Contract Drawings and as specified herein. The work under this Section shall include, but is not limited to, the following items:

1. Excavation, removal and stockpiling for reuse or disposal existing material within limits of proposed revetment limits as shown on the Contract Drawings.

2. Survey, layout, and measurement as required for revetment apron reconstruction work.

3. Prepare subgrade to the lines and grades shown on the Contract Drawings.

4. Remove, stockpile, and install existing suitable revetment armor and bedding materials encountered within the identified areas and dispose of unsuitable material.

5. Transition and blend revetment slopes into existing revetment beyond the repair limits as shown on the Contract Drawings and specified herein.

6. Restore site to pre-construction conditions.

B. The Contractor shall protect or restore existing site features that abut the work scheduled to remain.

C. All work shall be performed in accordance with all regulatory requirements within the limits specified herein and indicated by the Contract Drawings.

1.2 RELATED SECTIONS

01000 GENERAL REQUIREMENTS

02100 DEMOLITION, REMOVAL AND DISPOSAL

02170 TEMPORARY SHORING

02200 EXCAVATION, BACKFILLING, AND COMPACTION

02360 STEEL SHEETING

03300 CAST-IN-PLACE CONCRETE

03400 SEAWALL AND STAIR CONSTRUCTION

1.3 REFERENCES

A. References herein to any technical society, organization, group, or body are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable:

1. American Society for Testing and Materials (ASTM), latest edition

2. Commonwealth of Massachusetts, Department of Transportation, Standard Specifications for Highways and Bridges (latest edition)

3. International Building Code (IBC), latest edition

4. Massachusetts State Building Code, latest edition

1.4 SUBMITTALS AND SAMPLES

A. Contractor shall submit methods, procedures, equipment, and schedule to perform revetment removal and restoration as shown on the Contract Drawings and as required to complete the work.

PART 2 - PRODUCTS

2.1 EXISTING STONE

A. It is the explicit intent of the project to maximize the reuse of existing stone materials in the work to extent feasible. The contractor shall coordinate with the Engineer prior to removing existing stone from the site that is not suitable for reuse.

B. Existing stone shall be clean and adequately free from foreign matter. Any foreign matter adhering to the stone shall be removed prior to placement.

PART 3 - EXECUTION

3.1 GENERAL

A. Contractor shall maintain and stockpile stone material in a safe, approved manner in accordance with all environmental requirements for the project and to protect existing structures and work. See Section 01000- General Requirements for additional coordination requirements.

B. Contractor to transition reconstruction work to existing to blend and match, as defined, or as directed, to a minimum of ten feet each side of the work area.

C. Contractor shall coordinate excavation work during favorable weather conditions and at times when tidal water will not affect the work. No work shall be performed during storm conditions. Contractor to make provisions as necessary to control water during construction.

D. Contractor is responsible for resetting all revetment stones removed from the work area. No stones shall be left on the beach seaward of the reset limits as shown on the drawings.

3.2 REVETMENT STONE

A. Contractor shall remove existing material as necessary to construct the concrete and revetment apron to the lines and grades shown on the Contract Drawings. Material shall be stockpiled for reuse or disposal.

B. Contractor shall provide all necessary excavation to provide a suitable subgrade surface for the proposed stone revetments to pre-construction conditions. . There shall be no underwater excavation of material. The cost of excavation shall be included under this item. The excavated material, if suitable, shall be spread upon the beach at the face of the revetment to approximately natural grade. Unsuitable material shall be removed and disposed of.

C. Contractor shall excavate to subgrade to the limits indicated in the Contract Drawings, prior to placement of stone for revetment reconstructions.

D. Revetment stone shall be placed to the lines and grades indicated on the Contract Drawings and in such a manner as to produce a well graded mass of rock with the minimum practicable percentage of voids. Placement shall begin at the bottom of the area to be covered and continue up slope. Subsequent loads of material shall be placed against previously placed material in such a manner as to ensure a relatively homogenous mass.

E. Placing stone by dumping it at the top of the slope and pushing it down the slope will not be permitted. No equipment shall be operated directly on the completed revetment system.

F. Each stone shall be placed individually by equipment suitable for lifting, manipulating, and placing stone of the size specified. Each stone shall be selected with care as to size and shape and placed to obtain firm contact with the maximum number of adjacent stones in order to obtain the best possible interlocking. Contractor shall minimize the voids between placed armor stones by ensuring the suitable size and shape fit as tightly and maximizes the surface contact to adjoining stones to the maximum extent possible. Excessive voids between stones, filled with bedding stone, shall not be allowed. Stones shall be placed in a staggered pattern to prevent continuous joints in the surface. In no event shall small stones or wedges be used to position the armor stones. Rectangular stone shall be placed with its long axis perpendicular to the side slope.

G. The finished slope shall be free of objectionable pockets of small stones and clusters of larger stones.

H. Reconstruction of revetment areas shall be done in a manner so that the repaired area is securely tied into existing revetment sections. Existing armor stones outside repair limits shall be removed and reset if required to interlock new stones to existing. In areas where the repair area is adjacent to an un-repaired/damaged area the Contractor shall tie in or extend the revetment so that the end of the repaired area is stable and secure.

I. Contractor shall transition and blend reconstructed revetment slopes into existing revetment beyond the repair limits.

J. Any material displaced by any cause before acceptance of the work shall be replaced to the lines and grades as shown on the Contract Drawings, at no additional cost to the Town.

3.3 TOLERANCES

A. The top of the revetment shall be built to match the pre-construction stone revetment apron elevation. The toe stones shall be embedded below the existing grade following the design slope as shown on the Contract Drawings.

B. The face of the revetment is to be left rough with placing efforts concentrated on setting each stone firmly and well supported by underlying and adjacent stones. Obtaining a smooth slope face is neither necessary nor desirable and will not be permitted.

C. No individual stones shall project more than 12 inches outside the theoretical slope design line nor less than 6 inches inside the design line. Elevations of adjacent armor stones shall be within 12 inches of each other.

D. Stones placed beyond the specified limits, as herein extended, will not be paid for and may be required to be removed and reset at the expense of the Contractor.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. REMOVE AND RESET REVETMENT APRON STONES, Item 02300-1, shall be measured for payment by the lineal foot or percentage installed complete to the lines and grades as indicated on the Contract Drawings, as measured by the Engineer.

B. Reset revetment stones extending beyond the work limits used to for the transition to existing stone revetment stones to remain is considered incidental to Item 02300-1.

4.2 PAYMENT

A. REVETMENT REMOVAL AND RESET associated with the Contract shall be paid for under Contract Items 02300-1. Payment shall include full compensation for the reconstruction of revetment slope, including all materials, equipment, labor, survey, transportation, supervision, submittals and other incidental or appurtenant work required to complete the work under this item as indicated on the Contract Drawings, as specified herein, and as directed by the Engineer.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT PRICE
02300-1	REMOVE AND RESET REVETMENT APRON STONES	LINEAR FOOT

END OF SECTION

SECTION 02360

STEEL SHEETING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The Contractor shall provide all labor, equipment, materials, tools and accessories to complete the work in this section. This work includes, but is not necessarily limited to, procurement and installation of new steel sheet piling and other steel elements for support of excavation, control of water, as appropriate, and scour protection for the construction of the concrete seawall and associated footing to the limits as indicated on the Contract Drawings, and as specified herein.

B. It is anticipated, although not required, that the steel sheetpile support of excavation will be removed upon completion of the seawall construction to the top of footing and remain below as scour protection. The Contractor could propose another seaward support of excavation method, however the permanent scour protection on the seaward side of the seawall construction will be required.

C. The Contractor shall protect or restore existing site features that abut or are otherwise affected by the work and are not scheduled for removal or improvement.

1.2 RELATED SECTIONS

01000 GENERAL REQUIREMENTS
02100 DEMOLITION, REMOVAL AND DISPOSAL
02170 TEMPORARY SHORING
02200 EXCAVATION, BACKFILLING, AND COMPACTION
02300 REVETMENT REMOVAL AND RESET
03300 CAST-IN-PLACE CONCRETE
03400 SEAWALL AND STAIR CONSTRUCTION
05500 MISCELLANEOUS METALS

1.3 REFERENCES

A. References herein to any technical society, organization, group, or body are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable:

1. American Society for Testing and Materials (ASTM), latest edition
2. Commonwealth of Massachusetts, Department of Transportation, Standard Specifications for Highways and Bridges (latest edition) – Division II, Section 100, 200, 300 and 400, Division III
3. American Institute of Steel Construction (AISC), Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, latest edition.
4. Steel Structures Painting Manual: Surface Preparations Specifications (SSPC) Commercial Blast Cleaning, SSPC-SP-6-63.

5. American Welding Society (AWS) D1.1: Structural Welding Code - Steel
6. International Building Code (IBC), latest edition
7. Massachusetts State Building Code, latest edition

1.4 SUBMITTALS AND SAMPLES

A. Submit shop drawings, design calculations, and installation procedures for steel sheeting to be used for support of excavation.

1. Shop drawings shall include all details, size, connections/welds, thickness, gauge, finish and type and grade of material for all items, information for the fabrication, handling, and installation. Drawings shall not be reproductions of Contract Drawings. Design drawings shall be prepared and stamped by a licensed Professional Engineer, registered in the Commonwealth of Massachusetts, and submitted for approval prior to installation.
2. Manufacturer's design calculations shall be stamped by a licensed Professional Engineer, registered in the Commonwealth of Massachusetts, verifying products' ability to withstand design loads.

B. Qualifications: The Contractor’s Design Professional and the Contractor shall be experienced in the type of temporary support of excavation to be installed. The Contractor shall have sufficient personnel and equipment to successfully complete the program specified in accordance with the Contract Documents. Contractor superintendent shall have at least five years of experience with the temporary support of excavation method, and each shall have successfully completed at least three projects in the last five years of similar magnitude and complexity to that required for the program specified herein. The Contractor’s experienced superintendent shall be present at the Site at all times during temporary support of excavation installations.

C. Submit manufacturer’s specifications of products and maintenance manuals for pile hammer and auxiliary equipment. Submittal shall include type, make, maximum rated energy, and rated energy per blow of hammer, weight of striking part of hammer, weight of drive cap, details, type and structural properties of hammer cushion and type of leads.

D. Submit a description of the method and equipment to be used, as well as a detailed work sequence and schedule, for approval by the Engineer, before work shall proceed.

E. Pile driving submittals: A complete installation log for pilings within five days of installation. Log shall include depth of penetration, pile toe and cutoff elevations, date installed and other pertinent pile installation behavior.

F. Submit a detailed work sequence, schedule and methodology for all proposed work.

1.5 UTILITIES AND PROTECTION

A. The Contractor shall locate and mark active underground utility lines before commencing work. Utility services to remain shall be protected from damage and shall be plotted on the Record Plans by the Contractor. Utilities which are not active shall be protected or properly removed as directed by the Engineer and the Owner. Existing utilities shall not be interrupted except when authorized in writing both by the Engineer and by authorities having jurisdiction.

B. Excavated areas shall be kept free from water, snow and ice during construction. Pumping operations shall be performed should surface rain, groundwater, or tidal water be encountered during construction. Sheeting, shoring and trench boxes shall be of proper strength and shall be placed where necessary to prevent caving, erosion or gullying of excavation sites. Pumping water shall be contained or filtered prior to placement on the beach.

1.6 SUBSURFACE DATA

A. Bidders are expected to examine the site, historic drawings, and the compiled record of investigations and then decide for themselves the character of materials to be encountered. No warranty, either expressed or implied, is made as to the accuracy of the subsurface information presented. Subsurface investigations have been made and the results included in the bid package. The data shown is for general information for the Bidders. Contractor shall perform additional subsurface excavations as required for their design and execution of work.

B. Variations in existing ground conditions shall not, under any conditions, constitute grounds for changes in Contract Price, or completion dates of this Contract.

C. Upon notification to the Owner, the Bidders will be allowed the right to make any subsurface explorations they deem necessary to satisfy themselves of the existing ground conditions.

1.7 QUALITY ASSURANCE

A. The Engineer shall have access to the work. The Contractor shall make available all materials and equipment necessary at all times for the purposes of inspection. The Contractor shall cooperate with and assist the Engineer’s inspection.

B. Store and handle materials to avoid damage to the steel elements. Bent or kinked piles and other steel sections which, in the opinion of the Engineer, cannot be straightened without damage to the metal shall be rejected.

C. The Contractor shall be responsible for all damage to steel pilings and associated elements until they are incorporated into the structure and the structure is accepted, except as specified otherwise in these Specifications.

D. Comply with all rules regulations, laws and ordinances of the Commonwealth of Massachusetts, the Town of Rockport and all other authorities having jurisdiction. All labor, materials, equipment and services necessary to make work comply with such requirements shall be provided without additional cost to the Owner.

E. Use only certified AWS welders for all welding.

1.8 DELIVERY, HANDLING, AND STORAGE

A. The steel sheet pile components will be procured and stockpiled at the project site in advance of the start of construction. All materials shall be handled with due care from the stockpiled location to the work limits and all work shall be protected in order to avoid damage or deterioration before, during, or after installation at the work locations.

B. Materials shall be handled and stored in a manner to prevent excessive bending stresses and damage to the piles. Store materials in orderly groups above grade. Block during storage to minimize possible distortion of members. Any member exhibiting variations beyond tolerance limits will be considered distorted and may not be used in the work. Keep steel free from excessive rust.

C. The Contractor shall store and handle piles to avoid damage to the piles. Contractor shall protect piles during handling, driving, and falsework construction.

D. The Contractor shall submit to the Owner a means and methods plan providing details on access, lifting, movement, handling, temporary staging and stockpiling of steel sheetpiles and associated materials by Contractor as part of this Contract.

1.9 QUALIFICATIONS

A. All piling shall be furnished and installed by a Contractor experienced in the type of piling work specified. The Contractor shall have at least five (5) years of experience and at least five (5) successful installations of the same general type and class of piles. The superintendent proposed for the work shall have at least five (5) years of experience in pile driving and shall be experienced in piling operations of this class and nature.

B. The Contractor's engineer shall be registered in the state in which the work is performed and shall have not less than ten (10) years of experience in pile design on similar projects.

PART 2 - MATERIALS

2.1 STEEL SHEET PILING

A. The steel sheet piles for the repair of the seawall toe shall conform to ASTM A 572, grade 50.

B. Sheet pile sections shall be continuously interlocking-type with minimum structural characteristics of an NZ-14 sheet pile having a minimum thickness of 0.375 inches.

C. Quantity and lengths shall be as designed by the Contractor. Final scour protection length is a minimum of ten (10) feet.

D. No splices will be permitted within the toe sheeting.

E. Punching shear resistor (PSR) studs shall be welded to the sheet piles as shown in the Contract Drawings.

PART 3 - EXECUTION

3.1 GENERAL

A. Plan, coordinate, and accomplish the installation of the piles in accordance with the Specifications and as shown on the Contract Drawings.

B. The Contractor shall furnish and install steel sheeting for the construction of support of excavation, control of water, as appropriates, and scour protection during the seawall construction work. The work shall consist of furnishing and placing steel sheeting, temporary, walers, braces, coffers, dewatering, and all ancillary work that will be required to perform the work.

C. Steel sheeting may utilize struts between landward shoring and seaward sheets to provide support.

D. Sheet piles shall be installed and withdrawn (where appropriate) in a manner that does not cause damage to existing structures or completed work. The Contractor is responsible for all such potential damage. All piles shall be installed using equipment which will maintain the piles vertical when the hammer and leads are not in place.

E. Piles shall be installed in such a sequence and method that the alignment of previously installed piles is not affected.

F. Locate, protect, support, and maintain all utilities within the limits of and adjacent to all steel sheetpile work.

G. Steel sheetpile work shall comply with OSHA requirements and local codes and authorities having jurisdiction.

H. If departures from the Contract Drawings and Specifications are deemed necessary, reasons therefore shall be submitted to the Engineer for review. Accepted departures shall be made at no additional cost to the Owner.

I. All installation of sheeting shall be performed using either an impact hammer or vibratory hammers. Pile hammer shall be of sufficient size to install the sheet piling to the proposed toe elevations required.

J. Use driving methods which will not cause damage to nearby structures, adjacent concrete and stone seawalls, or to sheet pile being driven.

K. Coordinate steel sheetpile work with the seawall and footing construction to be performed.

L. Verify that site conditions will support driving equipment to provide adequate performance for the duration of sheet pile driving operations.

3.2 INSTALLATION OF PILING

A. Pile Installation Equipment:

1. Piles will be driven by approved vibratory or impact hammer.
2. The Contractor shall provide and maintain, in good operating condition, all equipment complete with supplemental equipment (hydraulic systems, hose, adapters, etc.) as recommended by the hammer manufacturer, as necessary for proper and efficient handling and installation of sheet piles.
3. Contractor shall maintain equipment in good condition and capable of continuous operation of the pile hammer at full rated speed and remove any equipment failing to meet these requirements, as determined by the Engineer, and replace with equipment acceptable to the Engineer.
4. The Contractor is responsible for providing a hammer capable of driving piles to the indicated tip elevation. The Engineer may require change in hammer if installation is not achieving proper depth, at no additional cost to the Owner.

5. Hammers shall at all times be operated at rates and energy outputs recommended by the manufacturer for the driving conditions encountered and as accepted by the Engineer.

B. Driving and Installation:

1. Contractor shall perform demolition and prepare area to the approval of the Engineer prior to driving piles. Contractor shall maintain alignment as indicated by the Drawings.

2. All pile driving shall be performed in the presence of the Engineer and suitable notice shall be given in advance of pile driving operations. Each pile shall be driven continuously without interruption to the required pile tip elevation.

3. Jetting will not be permitted.

4. Prior to setting, piles shall be clean and inspected for defects and proper interlock dimensions. Each pile shall have sufficient clearance in the interlock to slide under its own weight in the previously placed pile. All pile interlocks shall be gauged to verify that the thumbs of the interlocks are of the proper size to fit the corresponding interlock opening.

5. Deliver hammer blows on central axis of piles.

6. Protect pile head during driving. Provide full bearing on piles for distribution of hammer blow. Do not damage sheet piles during driving operations.

7. Sheet piles shall be driven in pairs in a stepped fashion to minimize adjacent sheets from jumping interlock connections.

8. Drive piles at the locations and to toe elevations shown on the Contract Drawings. Piles that are raised during driving of adjacent sheet piles shall be re-driven as required by the Engineer.

9. Avoid subjecting piles to excessive or undue stress. Any pile driven in the wrong position or damaged by reason of defects, or by driving, shall be withdrawn and replaced by a new pile. No payment shall be made for the unacceptable pile, and the Contractor shall be responsible for the actual replacement of the pile, at no additional cost to the Owner.

10. Piles shall be undamaged after driving. If piles are installed out of the specified tolerances, notify the Engineer immediately. No payment will be allowed for additional piles required by improper driving.

3.3 PILE CUTOFF

A. The Contractor shall trim the tops of piles excessively spread, mushroomed, or otherwise deformed during driving, at the Contractor’s sole expense.

B. After driving has been completed, the tops of the piles shall be cut square at the elevation shown on the Contract Drawings. Cutoffs shall be removed and disposed of off-site by the Contractor.

3.4 OBSTRUCTIONS

A. All rocks, timber, debris or other obstructions which interfere with driving of the piles, shall be penetrated, cored or removed by the Contractor, at no additional cost to the Owner. Such debris and obstructions shall be removed to facilitate the required work.

B. If an abrupt increase in driving resistance is encountered, the driving shall be stopped. If the pile has not been advanced to the indicated tip elevation at the time that driving is stopped, the Contractor shall notify the Engineer and shall, subject to the acceptance of the Engineer, extract the pile and attempt to clear the obstruction by spudding, probing or some other technique.

C. If the obstruction cannot be cleared by spudding, the Contractor shall core or drill through the obstruction or presplit the obstruction.

D. The Contractor shall, subject to the acceptance of the Engineer, select a method of coring or drilling compatible with material through which the hole is to be made. The hole shall be advanced by drilling and/or chopping inside a temporary steel liner or casing. Pilot holes may be advanced to determine the extent of obstruction but blasting in either the pilot holes or in the full diameter holes will not be permitted. Coring or drilling shall proceed only to the depth required to penetrate the obstruction.

E. All spoil shall be controlled to minimize disturbance to site conditions and hindrances to pile installation procedures and requirements.

F. Piles shall be installed to the full depth of the hole immediately after completion of each cored or drilled hole and the void around the pile shall be filled with Crushed Stone or Granular Fill. The fill shall extend from the bottom to top of the cored or drilled hole.

G. Details of the coring or drilling equipment and methods shall be submitted to the Engineer for review, at least two weeks prior to beginning the work.

H. Piles abandoned because of obstructions shall be pulled out at the discretion of the Engineer and the hole filled with sand or crushed stone.

3.5 DAMAGED AND MISPLACED PILES

A. Remove and replace any pile that is kinked, bent, or damaged because of internal defects or by improper handling or installation, or that is impaired for its intended use.

B. All work and cost associated with removal, disposal, and replacement, of damaged and misplaced piles; including but not limited pile material costs, shall be borne by the Contractor, at the Contractor’s sole expense.

3.6 INSPECTION AND MONITORING

A. Protect all existing structures, equipment, underground and above ground utilities from damage during pile driving operations.

1. Contractor is responsible for any and all damages to existing structures and utilities as a result of pile installation operation.

2. Contractor shall coordinate with the Owner and other agencies to locate existing utilities in the Work Area and shall report conflicts to the Owner and Engineer.

3. Repairs of damage to existing structures and utilities resulting from the Work shall be performed at the expense of the Contractor, at no cost to the Owner.

4. Field observation may be performed by the Engineer. The Contractor shall keep driving records and produce pile driving records and submit to the Engineer daily.

3.7 PILE DRIVING RECORDS

A. During the course of the Work, the Contractor shall prepare and maintain a complete record of pile installation, and at completion of pile work submit a copy of record drawings or an electronic file to the Owner and Engineer, which shall include the following data for each pile:

1. Project name and number and Name of Contractor
2. Pile location and number
3. Type of pile driving cap block or hammer cushion used, if any
4. Rate of operation of pile driving equipment
5. Pile dimensions
6. Elevation of pile bottom point
7. Elevation of butt before and after cut-off
8. Grade Elevation
9. Pile uplift and redriving, if performed
10. Type of pile
11. Date, time, total depth of penetration, rate of penetration, number of blows for every foot of penetration and number of blows for the last 12 inches of penetration (if impact hammers are used)
12. Hammer specifications
13. As-built location of piles as driven, with variations from plan locations indicated as well as inclinational and torsional variations, and as-built cut-off elevations. The Contractor as-built plans signed and sealed by Contractor's Professional Engineer and shall be provided prior to demobilization of the piling equipment to allow problems to be corrected (i.e. additional piles to be driven, piles to be re-driven) without the need for a remobilization.
14. Variations in plumbness
15. Any unusual phenomena encountered in driving piles
16. At the completion of pile work, submit a report containing copies of records and drawings.

3.8 ACCURACY AND TOLERANCES

1. Piles shall be installed with a variation of not more than 1 inch horizontal in 48 inches vertical and shall not vary from the design position shown by more than 3 inches after installation.
2. Pulling piles into alignment or position, or alteration of alignment indicated on the Drawings shall not be permitted without approval of the Engineer.
3. Contractor shall use templates or other suitable methods to ensure the required degree of accuracy.
4. All tolerances specified herein refer to elements after installation.
5. Top of finished pile shall be installed or cut off to specified elevation within 0.5 inches.
6. Cap shall be installed level and true to lines and grades indicated on the Contract Drawings.

3.9 DEFECTIVE WORK

1. The following shall be grounds for rejection and replaced at no additional cost to the Owner:
   a. Any damaged parts.
   b. Any parts improperly installed in the work.
   c. Otherwise not according to Contract Documents.

3.10 CLEANUP

A. At the end of all sheet piling installation operations and before acceptance of the work, the Contractor shall remove all debris, materials, rubbish, etc., from the site, disposing of them in a manner satisfactory to the Engineer. The premises shall be maintained clean, presentable and satisfactory.

PART 4 - MEASUREMENT AND PAYMENT

4.1 GENERAL

A. Measurement for payment items covered by this Section shall be based on the percentage of work installed and complete to the lines, grades, and dimensions indicated on the Contract Drawings. Documentation of ordered quantities, which may differ from installed and complete quantities, may be used for reference and at the discretion of the Engineer, however such documentation will not be considered sufficient basis for measurement of payment items, unless specifically noted otherwise.

B. No separate measurement or payment will be made for fasteners, welds, metal fabrications, or connectors used to connect steel elements. Include all costs associated with these elements or any other work covered by this section under the corresponding payment items for which the work is required.

C. No separate measurement or payment will be made for excess materials provided or installed at the Contractor's sole discretion or for convenience.

D. Payment for Steel Sheeting will be limited to the permanent sheeting at the toe of the seawall. Sheeting used for temporary support of excavation and/or water control, etc. shall be paid for under Item 02170-1, Temporary Shoring.

E. The Contractor will be paid under the contract unit price per Lump Sum for payment Item 02360, STEEL SHEETING, which unit price shall include full compensation for all investigations, design, survey, supervision, materials, falsework, tools, equipment, labor, delivery, storage, repair, field modification, and incidental or appurtenant work required to procure and install the permanent steel sheetpile sections as indicated on the Contract Drawings, as specified herein, and as directed.

4.2 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT PRICE
02360-1	STEEL SHEETING	LUMP SUM

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Work covered under this section consists of providing all survey, supervision, labor, material, tools and equipment, and services necessary for, and incidental to, the construction of concrete and cementitious elements associated with the proposed project, as indicated below, as shown on the Contract Drawings and as required to complete the work. This work includes but is not limited to, the following:

1. Preparation, forming, pouring, finishing, and curing cast-in-place concrete footing, seawall, and stairs.
2. Concrete reinforcement and accessories.
3. Providing all materials and equipment necessary to prevent concrete spillage onto the adjacent beach.
4. Restoration of the site to pre-construction conditions.

B. All work shall be performed in accordance with all regulatory requirements within the limits specified herein and indicated by the Contract Drawings.

1.2 REFERENCES

A. References herein to any technical society, organization, group, or body are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable:

1. American Concrete Institute (ACI), latest edition: PRC 207.1-21, SP-15; 211; 301; 304; 305; 306; 308; 309; 311;315; 318
2. American Society for Testing and Materials (ASTM), latest edition: A185; A615; A706; A767; C31; C33; C39; C94; C143; C150; C231; C260; C494; C989
3. American Welding Society (AWS), latest edition: D1.4
4. International Building Code (IBC), latest edition
5. Massachusetts State Building Code, latest edition
6. American Association of State Highway and Transportation Officials (AASHTO)

1.3 RELATED SECTIONS

01000 GENERAL REQUIREMENTS
02002 MOBILIZATION AND DEMOBILIZATION
02100 DEMOLITION, REMOVAL AND DISPOSAL
02170 TEMPORARY SHORING

02200 EXCAVATION, BACKFILLING, AND COMPACTION

02300 REVETMENT REMOVAL AND RESET

02360 STEEL SHEETING

03400 SEAWALL AND STAIR CONSTRUCTION

05500 MISCELLANEOUS METALS

1.4 SUBMITTALS AND SAMPLES

A. Procedures and Equipment. The Contractor shall submit methods, procedures, and equipment for placing concrete at locations indicated on the Contract Drawings.

B. Concrete Mixture Design: At least 30 days prior to concrete placement, submit proportions for the concrete mixture(s) that meets the properties specified and is suitable for the job conditions. Submit a complete list of materials including type; brand; source and amount of cement, fly ash, pozzolans, silica fume, ground slag, aggregate and admixtures; and applicable reference specifications. Submit additional data regarding concrete aggregate if the source of aggregate changes. Include copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified. The mixture shall be prepared by an accredited laboratory experienced in this field and under the direction of a licensed/registered civil engineer, who shall sign all reports and designs. The submittal shall clearly indicate where each mixture will be used.

C. Material Test Reports: For the following, submit from a qualified testing agency, indicating compliance with requirements:

1. Aggregates. Submit test results for aggregate quality in accordance with ASTM C33, gradation curves, and combined gradation curve for grading proposed for use in the work and used in the mixture qualification. Submit test results confirming the potential for alkali-silica reaction are within allowable limits in accordance with ASTM C1260.

2. Cement: Submit mill test report with the concrete mixture design submittal. Mill test reports shall be no more than 6 months old.

3. Material Test Certification: For each of the following, signed by manufacturers:

   a. Cementitious materials: fly ash, ground granulated blast-furnace slag, silica fume. Test results shall be no more than 6 months old.

   b. Admixtures.

   c. Steel reinforcement and accessories.

   d. Bonding agents.

   e. Repair materials.

D. Concrete Shop Drawings

1. Steel Reinforcement Shop Drawing: Provide drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, supports for concrete reinforcement, and concrete cover. Indicate proposed methods for splicing reinforcing.

2. Formwork Shop Drawings: Provide formwork drawings showing details of formwork including, but not limited to joints, supports, studding and shoring, and sequence of form and shoring removal. Design, fabricate, erect, support, brace and maintain formwork so that it is capable of supporting without failure all vertical and lateral loads that may reasonably be anticipated to be applied to the formwork. Formwork shop drawings shall be prepared by or under the supervision of a qualified professional engineer.

E. Concrete Placement: Submit description of proposed placement procedures and technical literature for equipment and methods proposed for use in placing concrete. Include pumping or conveying equipment including type, size and materials for pipe, valve characteristics, and the maximum length and height concrete will be pumped. No adjustments shall be made to the mix design to facilitate pumping or placement without the acceptance of Engineer. Submit technical literature for equipment and methods proposed for vibrating and compacting concrete.

F. Concrete Finish - At location acceptable to the Engineer and Owner, demonstrate methods used for construction, including forming and finishing conditions required for the project using materials, workmanship, joint treatment, form ties, patching techniques, and curing methods to be used throughout the project

G. Submit batch tickets for each load of concrete delivered to the project site.

H. Submit qualification data for Concrete Supplier and Contractor's Independent Testing Agency.

I. Test Reports. Submit results for field test completed on fresh concrete and compressive strength tests complete on hardened concrete. Test shall be submitted to the Engineer no later than 1 day of Contractor receipt of reports.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. Field Testing Technician and Testing Agency Qualifications: An independent testing agency shall be provided by the Contractor and approved by the Owner.

1. Work on concrete shall be performed by an ACI Concrete Field Testing Technician Grade 1 or Grade 2 qualified in accordance with ACI SP-299 or equivalent. Equivalent certification programs shall include requirements for written and performance examination as stipulated in ACI SP-299.

2. Testing agencies that perform testing services on reinforcing steel shall meet the requirement of ASTM E 329.

3. Testing agencies that perform testing serviced on concrete materials shall meet the requirements of ASTM C 1077.

C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.

D. Welding: Qualify procedures and personnel according to AWS D1.4, "Structural Welding Code Reinforcing Steel".

E. All products shall be installed in accordance with the manufacturer's recommendations.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Cast-in-Place Concrete

1. Follow ACI 301, PRC 207.1-21, ACE 304R, and ASTM A 934 requirements and recommendations. Do not deliver concrete until forms, reinforcement, embedded items, and chamfer strips are in place and ready for concrete placement. Store reinforcement of different sizes and shapes in separate piles or racks raised above the ground. Protect materials from contaminants such as grease, oil and dirt. Ensure materials can be accurately identified after bundles are broken and tags removed.

1.7 TESTS

A. All testing shall be conducted by the Contractor at the Contractor's expense.

B. Testing results shall immediately be sent to the Engineer upon receipt by the Contractor from the testing firm.

C. Testing Agency Qualifications. An independent sampling and testing agency shall be provided by the Contractor. Submit qualifications of proposed concrete testing agency and technicians.

1. Field Testing Technicians: ACI Concrete Field Testing Technician Grade I qualified in accordance with ACI SP-2.

2. Laboratory Testing Technicians: ACI Concrete Strength Testing Technician and Laboratory Testing Technician, Grade I or II qualified in accordance with ACI SP-2.

D. Tests of cement and aggregates will be performed to ensure conformance with the requirements stated herein, and under provisions of the General Conditions.

E. Submit proposed mix designs using ¾-inch, and ⅜-inch aggregate mix to the Engineer for review prior to commencement of concreting operations.

F. Testing firm will perform slump tests in accordance with ASTM C143.

G. Testing firm shall make and cure concrete test cylinders in accordance with ASTM C31 and perform laboratory compressive strength tests in accordance with ASTM C39.

H. One set of four concrete test cylinders will be taken for every 25 cubic yards, or as otherwise directed by the Engineer.

I. One slump test will be taken for every concrete truck, or as otherwise directed by the Engineer.

J. Air entrainment tests shall be performed in accordance with ASTM C231 or ASTM C173.

PART 2 - MATERIALS

2.1 CONCRETE MATERIALS

A. Cementitious Material:

1. Portland Cement. ASTM C595 Type IL.
2. Ground Granulated Blast-Furnace Slag, ASTM C989, Grade 120.

B. Aggregate:

1. Provide from one source of supply to ensure uniformity in color, size, and shape unless otherwise accepted by the Engineer.
2. Do not use aggregates containing soluble salts or other substances such as iron sulphides, pyrite, marcasite or ochre, which can cause stains on exposed concrete surfaces.

C. Fine Aggregate:

1. Optional grading in ASTM C33 shall apply.
2. Restriction on reactive material in ASTM C33 shall apply.
3. Use clean, sharp, natural sand. Do not use dune sand, or manufactured sand from a crushing operation.

D. Coarse Aggregate:

1. Use Size Number 67 for mixes having a maximum coarse aggregate size of ¾ inch.
2. Class designation is 3S per ASTM C33.
3. Use crushed stone processed from natural rock or stone or washed gravel – either natural or crushed. Do not use pit of bank run gravel.
4. Maximum aggregate size shall be 3/4 inches, except in areas designated by Engineer requiring or 3/8-inch aggregate.

E. Water: potable

2.2 ADMIXTURES

A. Source: Provide all admixtures used in the concrete mix from the same manufacturer.

B. Admixtures performance: Provides dense, durable concrete resistant to chemical attack, wear, rebar corrosion, freeze/thaw attack, cracking, and segregation. All admixtures used shall be compatible. All admixtures shall be free of chlorides and other corrosive chemicals.

C. Air Entrainment: ASTM C260.

D. Water reducing agent: “Sonotard WR” by Sonneborn Building Products, “WRDA” by W.R. Grace & Company, “Pozzolith 100” by Master Builders Company or equal as approved by the Engineer and conforming with ASTM C 494 Type A.

E. Air-entraining agent: “Aerolith” by Sonneborn Building Products, “Darex” by W.R. Grace & Company, “MB-VR” by Master Builders Company or equal as approved by the Engineer and conforming with ASTM C 260. To be used to obtain percent air-entrainment specified unless obtained by cement used.

F. High Early Agent: “Pozzolith 122-HE” by Master Builders Company or equal as approved by the Engineer and conforming to ASTM C 494 Type C and E.

G. Penetrating sealer shall be Sikagard 70, 1W as manufactured by Sika Corporation, Lyndhurst, NJ or approved equal.

2.3 BONDING AGENT

A. Bonding agent shall be Sika Armatec 110 EPOCEM or approved equal.

2.4 CORROSION INHIBITOR

A. Corrosion inhibitor shall be Sika Armatec 110 EPOCEM or approved equal.

2.5 CONCRETE MIX

A. Mix concrete in accordance with ASTM C94.

B. Provide concrete of the following characteristics:

1.	Compressive Strength (7 days): (unless otherwise specified)	4,000 psi
2.	Compressive Strength (28 days): (unless otherwise specified)	5,000 psi
3.	Aggregate Size (maximum) for 3/4” mix:	1” largest dimension
4.	Aggregate Size (maximum) for 3/8” mix:	½” largest dimension
5.	Aggregate Size (minimum):	25% passing #50 sieve
6.	Air entrainment:	5% to 8%
7.	Maximum Total Water to Cementitious Material Ratio (W/C):	0.45 (max)
8.	Slump:	3 to 6 inches
9.	Minimum Cementitious Material Content:	585 lbs. per cubic yard

C. Use accelerating admixtures in cold weather only when approved by Engineer. Use of admixtures will not relax cold weather placement requirements.

D. Add air entraining agent to concrete mix.

E. Use water-reducing admixtures in strict compliance with the manufacturer's directions. Admixtures to increase cement dispersion, or to provide increased workability for low-slump concrete, may be used at the Contractor's option subject to the Engineer's approval.

F. If pumping process is utilized to convey concrete, established concrete mixtures may require increased proportion of cement and fine aggregate and a decreased proportion of coarse aggregate, but these mixtures may not be altered more than:

Cement	plus 20 lbs. per cubic yard
Fine Aggregate	plus 50 lbs. per cubic yard
Coarse Aggregate	minus 50 lbs. per cubic yard

G. Should approved concrete mix provide excess air bubbles in vertical faces, Engineer may request mix redesign utilizing fly ash or other admixtures.

2.6 CONCRETE REINFORCEMENT

A. Reinforcing steel shall conform to ASTM Specification A 615, Grade 60; Epoxy coated, ASTM A775. Do not use uncoated reinforcing steel. Reinforcing steel shall be supplied in the shape and length required for the project without modification in the field.

B. If the number of bars is shown on the drawings, the number given shall govern over the spacing.

C. Splicing of bars and details not covered herein shall be in accordance with the recommendations of "Manual of Standard Practice for Detailing Reinforced Concrete Structures ACI 315."

D. Obtain Engineer's approval of all splices not shown on the Drawings.

E. Tie wire shall be 16-1/2 gauge or heavier zinc or plastic-coated wire.

2.7 FORMWORK

A. Bar supports shall be Class 1 plastic coated wire bar supports or plastic bar supports.

B. Formwork shall be sufficiently strong and stiff to prevent deflection during concrete placement.

C. Structurally design forms to meet applicable safety regulations, OSHA regulations and other codes.

D. Finished concrete tolerances shall be minus ¼ inch and plus ½ inch from the dimensions shown.

E. All concrete edges shall have a formed ¾-inch chamfer, unless otherwise indicated.

F. Forms shall be left in place a minimum of 3 days after concrete placement.

G. Form ties shall have conical or spherical type inserts such that no metal is left within 1 inch of the concrete surface when tie ends are removed. Patch form holes with no-shrink grout.

H. Form ties shall not be in contact with reinforcing steel. Maintain a minimum ½-inch clearance between reinforcing steel and form ties.

I. Construction joints shall be formed with a keyway sufficient to transfer concrete shear capacity. Forming detail shall be subject to approval by the Engineer prior to placing any concrete.

2.8 MATERIALS FOR CURING CONCRETE

1. Impervious Sheeting. ASTM C171; waterproof paper, clear or white polyethylene sheeting, or white burlap-polyethylene sheeting.
2. Pervious Sheeting. AASHTO M 182 Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.
3. Liquid curing compound. ASTM C309, white-pigmented, Type 2, Class B

2.9 DOWELS

A. ASTM A615, Grade 60, epoxy coated steel.

2.10 MORTAR, EPOXY ADHESIVE

A. Repair mortar (pre-blended) for troweled application shall be SikaTop®-123 Plus system or approved equivalent.

B. Repair mortar for formed application shall be Sikacrete-211 SCC Plus or approved equivalent.

C. Cementitious grout shall be high-strength, non-shrink, non-metallic, cement-based grout conforming to ASTM C1107 and suitable for the saltwater/marine environment.

D. Epoxy adhesive shall be a two-component system, suitable for the marine environment. Hilti HIT RE-500 or approved equivalent.

2.11 EPOXY RESIN FOR CRACK REPAIRS

A. Epoxy resin for repair of concrete cracks not greater ¼" wide shall be Sikadur®-35 Hi-Mod LV, or approved equivalent. For pressure injection of cracks, use only with compatible port and crack seal products. Epoxy resin shall be handled and installed in accordance with the manufacturer's recommendations.

2.12 EXPANSION JOINTS

A. Expansion joint filler material shall be a non-extruding and resilient bituminous type, preformed, 5/8" thick unless indicated otherwise.

B. Backer-rod shall be closed cell foam sized and installed per the manufacturer's recommendation based on gap width.

C. Apply elastomeric joint sealant per the manufacturer's recommendations.

2.13 ELASTOMERIC JOINT SEALANT

A. Elastomeric joint sealant shall be SikaFlex®-1A or approved equivalent. Color shall be white or gray, as approved by the Owner.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare and clean previously placed concrete by cleaning with potable water and steel brush in preparation for new concrete.

B. At locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels, and use approved epoxy adhesive in accordance with the manufacturer's recommendations.

C. Treat existing steel reinforcing to remain with approved corrosion inhibitor product in accordance with the manufacturer's recommendations.

3.2 PLACING CONCRETE

A. Notify Engineer minimum of 48 hours prior to commencement of concreting operations.

B. Do not place concrete until soil bottoms, inserts, embedded parts and other work to be built into the concrete have been inspected and approved by the Engineer and by all trades concerned.

C. Before concrete placement, all reinforcement, anchors, and dowels shall be cleaned with pressurized potable water, to the satisfaction of Engineer. Water, dirt and debris shall be removed from within the area in which concrete is to be placed.

D. Convey concrete from the mixer to the place of final deposit as rapidly as practicable by methods, which will prevent separation or loss of ingredients, and in a manner, which will assure that the required quality of the concrete is retained.

E. Deposit, deliver, and place concrete so that the time lapse between batching and placement shall not exceed 90 minutes. Concrete shall not be allowed a free fall of over 4 feet. Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to rehandling or flowing.

F. Concrete placement shall be consolidated using vibration equipment, or other method, in accordance with ACI 309R, and as approved by the Engineer. Contractor shall ensure concrete placement fronting and underneath the existing seawall fills the entire void.

G. Mass Concrete: Concrete shall have an initial placement temperature less than 65 degrees Fahrenheit. Temperature may be achieved by cooling the aggregate, by chilling or fogging, or other suitable and acceptable means that will not significantly alter the moisture content of the aggregate within the stockpile.

H. Concrete Temperature: ASTM C 1064/C 1065M; one test hourly when air temperature is 40 degrees F (4.4 degrees C) and below and when 80 degrees F (27 degrees C) and above.

I. Place Concrete in accordance with ACI 301.

J. Hot Weather Placement: ACI 305.

K. Cold Weather Placement: ACI 306.

L. Ensure reinforcement, inserts, embedded parts, formed joints and expansion joints are not disturbed during concrete placement.

3.3 FINISHES AND EXPOSED SURFACES

A. All concrete shall be screeded to the established elevations, then steel troweled to the finish lines on the drawings with allowable tolerance not exceeding 1/8 inch in any direction where treated with a 10-foot long straightedge. Finishes shall be trowel, float, or broom as indicated on the Contract Drawings.

B. Honeycombing on any exposed surface shall be patched with non-shrink grout to the approval of the Engineer.

C. If the above requirements are not met, the Contractor shall, at its own expense, correct the conditions, as directed by the Engineer, using materials and methods approved by the Engineer.

3.4 PATCHING

A. Patch imperfections as directed by the Engineer.

3.5 DEFECTIVE CONCRETE

A. Modify or replace concrete not conforming to required levels and lines, details and elevations.

B. Repair or replace concrete not properly placed or of the specified type.

3.6 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed in accordance with this specification.

3.7 CURING AND PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Forms shall remain in place for a minimum of 5 days or as approved by the Engineer.

C. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

D. In lieu of moist curing for 5 days, Contractor shall provide curing agent (penetrating sealer) to concrete immediately following removal of forms.

PART 4 - MEASUREMENT AND PAYMENT

4.1 GENERAL

A. No separate measurement or payment will be made for work associated with this section. Include all costs for work within this section under Items, 03400-1, 03400-2, 03400-3, and 03400-4, under Section 03400 Seawall and Stair Construction.

END OF SECTION

SECTION 03400

SEAWALL AND STAIR CONSTRUCTION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work covered by this section consists of providing all survey, supervision, labor, material, tools and equipment and services necessary for, and incidental to, the seawall and stair construction as shown on the Contract Drawings and as required to complete the work. This work includes but is not limited to, the following:

1. Reconstruct 350 lineal feet of seawall and associated footing located between Station 12+10 and 15+60 including preparation, rebar installation, and forming.
2. Reconstruct 43 lineal feet of seawall and 7 lineal feet of return wall and associated footings between Station 0+00 and 0+43 including preparation, rebar installation, and forming.
3. Construction of cast-in-place concrete access steps including preparation, rebar installation, and forming.

B. All work shall be performed in accordance with all regulatory requirements within the limits specified herein and indicated by the Drawings.

1.2 RELATED SECTIONS

01000 GENERAL REQUIREMENTS
02002 MOBILIZATION AND DEMOBILIZATION
02100 DEMOLITION, REMOVAL AND DISPOSAL
02170 TEMPORARY SHORING
02200 EXCAVATION, BACKFILLING, AND COMPACTION
02300 REVETMENT REMOVAL AND RESET
02360 STEEL SHEETING
03300 CAST-IN-PLACE CONCRETE
05500 MISCELLANEOUS METALS

1.3 REFERENCES

A. References herein to any technical society, organization, group, or body are made in accordance with the following abbreviations and, unless otherwise noted or specified, all work under this Section shall conform to the latest edition as applicable:

1. American Concrete Institute (ACI), latest edition: PRC 207.1-21, SP-15; 211; 301; 304; 305; 306; 308; 309; 311; 315; 318
2. American Association of State Highway and Transportation Officials (AASHTO) M85 Standard Specification for Portland Cement

3. American National Standards Institute (ANSI) Accredited Standards Committee (ASC) H35 Aluminum and Aluminum Alloys, latest edition
4. American Society for Testing and Materials (ASTM), latest edition
5. American Welding Society (AWS) D.1 Structural Welding Code-Steel, latest edition
6. Commonwealth of Massachusetts, Department of Transportation, Standard Specifications for Highways and Bridges, current edition, and all amendments
7. International Building Code (IBC), latest edition
8. Massachusetts State Building Code, latest edition

1.4 SUBMITTALS AND SAMPLES

A. Submit methods, procedures, equipment, and schedule to perform wall construction and stair construction as shown on the Contract Drawings and as required to complete the work. Procedure shall include description and shop drawings of temporary support of excavations, falsework, and methods to protect adjacent structures, utilities, work areas, beach, shoreline, and other areas to remain during the course of work.

B. Submit wall tie-in detail drawings and procedures showing proposed limits of excavations and removals, limits of work, equipment locations, proposed work and restoration details, and schedule to perform work.

C. Submit product data for weep holes.

D. Submittals for concrete and cementitious materials as indicated in Section 03300-Cast-in-Place Concrete.

E. Submittals for crushed stone and filter fabric shall be in accordance with Section 02200- Excavation, Backfill, and Compaction.

PART 2 - PRODUCTS

2.1 WEEP HOLES

A. Weep hole pipe shall be PVC type schedule 40 and meet the requirements of AWWA C900 “Polyvinylchloride (PVC) plastic pipe (SDR-PR).

2.2 CONCRETE MATERIALS

A. New concrete shall be in accordance with Section 03300- Cast-in-Place Concrete.

2.3 CRUSHED STONE AND FILTER FABRIC

A. Crushed stone fill and filter fabric shall be in accordance with Section 02200- Excavation, Backfill, and Compaction.

B. EPOXY ADHESIVE

C. Epoxy adhesive shall be a two-component system, suitable for marine environment. Hilti HIT RE-500 or approved equivalent.

2.4 STEEL REINFORCEMENT

A. ASTM A615, Grade 60, epoxy coated steel, minimum size and dimensions as indicated in Contract Drawings.

PART 3 - EXECUTION

3.1 GENERAL

A. Contractor shall coordinate applicable work during favorable weather conditions and at times when tidal water will not affect the work. No work shall be performed during storm conditions. Contractor to make provisions to protect new mortar, concrete, epoxy adhesive, and other cementitious materials during installation and curing.

B. Contractor shall establish construction control markers clearly visible and understandable to the workers placing the materials. As a minimum, these control markers shall delineate the horizontal limits and finished elevations of individual courses.

C. Contractor shall maintain and stockpile materials in a safe, approved manner in accordance with all applicable environmental requirements and to protect existing structures and work.

D. Contractor shall utilize temporary fabric, sheeting, or similar containment material to collect any loose debris and materials. Contractor shall remove the containment material and debris daily.

3.2 INSPECTION

A. Work shall be reviewed and approved by the Engineer prior to backfilling, covering, and Contractor demobilization.

3.3 EXCAVATION

A. The Contractor shall excavate the existing seawall and soil to the dimensions and elevations as shown on the Contract Drawings or as directed by the Engineer. Excavation areas shall be kept within the Project Limits as shown on the Contract Drawings.

B. The Contractor shall excavate the minimum amount of soil or stone so as to perform the work as shown on the Contract Drawings.

C. The Contractor shall only remove section of the existing seawall that can be replaced in a timely manner as to minimize erosion and loss of backfill materials and maintain the alignment of the existing seawall.

D. Excavation, backfilling, and compaction shall be in accordance with Section 02200.

3.4 SEAWALL AND STAIR CONSTRUCTION

A. The Contractor shall reconstruct the seawall and stair structures, to the limits and dimensions shown on the Contract Drawings, and as described herein. Construction of the seawall shall maintain existing alignment and limits of the existing structure as indicated by the Contract Drawings.

B. Concrete placement shall be in accordance with Section 03300- Cast-in-Place Concrete.

C. Provide epoxy coated steel reinforcing as shown in the Contract Drawings, as indicated herein, and in accordance with Section 03300- Cast-in-Place Concrete.

D. Temporary support of excavations or falsework shall be utilized to provide protection to adjacent structures, utilities, work areas, vegetation, beach, shoreline, and other areas to remain during the course of work.

3.5 WEEP HOLES

A. Weepholes shall be constructed to the lines, grades, elevations, and dimensions shown on the Contract Drawings and as directed by the Engineer.

B. Weephole installation shall include an adjacent drainage field built to the lines and grades as shown on the Contract Drawings. Drainage field shall be continuous over construction area. Filter fabric and crushed stone (filter stone) shall be installed as specified within this section.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. CONCRETE SEAWALL CONSTRUCTION, item 03400-1, shall be measured for payment by the linear foot or percentage complete for the wall reconstruction to the lines and grades as indicated on the Contract Drawings, and as measured by the Engineer.

1. Proposed concrete footing shall be considered incidental to 03400-1.

B. CONCRETE ACCESS STEPS, including item 03400-2, shall be measured for payment by the lump sum or percentage complete for the furnishing and installation concrete stairs installed complete to the lines and grades as indicated on the Contract Drawings, and as measured by the Engineer.

C. CONCRETE RETURN WALL, including item 03400-3, shall be measured for payment by the by the linear foot or percentage complete for the wall reconstruction to the lines and grades as indicated on the Contract Drawings, and as measured by the Engineer.

1. Proposed concrete footing shall be considered incidental to 03400-3.

D. WEEPHOLE DRAINAGE SYSTEM, including item 03400-4, shall be measured for payment by the linear foot or percentage complete for the weephole installation as indicated on the Contract Drawings, and as measured by the Engineer.

4.2 PAYMENT

A. CONCRETE SEAWALL CONSTRUCTION shall be paid for under Contract Item 03400-1 for the contract unit price per Linear Foot. Payment shall include full compensation for preparation, rebar installation, and forming, and all materials, equipment, falsework, labor, survey, supervision, transportation, submittals and incidental or appurtenant work required to perform the wall construction as indicated on the Contract Drawings, as specified herein, and as directed by the Engineer.

1. Concrete footing shall be considered incidental to Item 03400-1. Payment shall include full compensation for materials, equipment, installation, and submittals.

B. CONCRETE ACCESS STEPS CONSTRUCTION shall be paid for under Contract Item 03400-2 for the contract unit price for Lump Sum. Payment shall include full compensation for preparation, rebar installation, and forming, and all materials, equipment, falsework, labor, survey, supervision, transportation, submittals and incidental or appurtenant work required to perform the wall construction as indicated on the Contract Drawings, as specified herein, and as directed by the Engineer.

C. CONCRETE RETURN WALL CONSTRUCTION shall be paid for under Contract Item 03400-3 for the contract unit price per Linear Foot. Payment shall include full compensation for preparation, rebar installation, and forming, and all materials, equipment, falsework, labor, survey, supervision, transportation, submittals and incidental or appurtenant work required to perform the wall construction as indicated on the Contract Drawings, as specified herein, and as directed by the Engineer.

1. Concrete footing shall be considered incidental to Item 03400-3. Payment shall include full compensation for materials, equipment, installation, and submittals.

D. WEEPHOLE DRAINAGE SYSTEM shall be paid for under Contract Item 03400-4 for the contract unit price per Linear Foot. Payment shall include full compensation for installation and all materials, equipment, falsework, labor, survey, supervision, transportation, submittals and incidental or appurtenant work required to perform the wall construction as indicated on the Contract Drawings, as specified herein, and as directed by the Engineer.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT PRICE
03400-1	CONCRETE SEAWALL	LINEAR FOOT
03400-2	CONCRETE ACCESS STEPS	LUMP SUM
03400-3	CONCRETE RETURN WALL	LINEAR FOOT
03400-4	WEEPHOLE DRAINAGE SYSTEM	LINEAR FOOT

END OF SECTION

SECTION 05500

MISCELLANEOUS METALS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Work under this section shall consist of shop-fabricated ferrous metal items, galvanized or primed and painted, including, bolts, plates, brackets, channels, angles, and all other miscellaneous metal fabrications shown on the Drawings.

B. Provide all equipment and materials, and do all work necessary to construct the railing including but not limited to, the following items, as indicated on the Drawings and as specified herein: Cleaning and preparation of the concrete surface to receive the new railings:

1. Survey, layout and measurement as required to install the new railings.
2. Concrete drilling and/or coring necessary to install the new railings.
3. Furnishing and installing the new railings as indicated on the Drawings and as specified herein.
4. Field modifications and repairs necessary to complete the work.
5. Railings to match existing

1.2 RELATED SECTIONS

01000 GENERAL REQUIREMENTS
02002 MOBILIZATION AND DEMOBILIZATION
02170 TEMPORARY SHORING
02360 STEEL SHEETING
03300 CAST-IN-PLACE CONCRETE
03400 SEAWALL AND STAIR CONSTRUCTION
05500 MISCELLANEOUS METALS

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. A 36 Standard Specification for Carbon Structural Steel.
2. A 123 Standard Specification for Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strip.
3. A 153 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
4. A 193 Standard Specification for Alloy-Steel and Stainless-Steel Bolting Materials for High-Temperature Service
5. A 276 Standard Specification for Stainless Steel Bars and Shapes.
6. A 307 Standard Specification for Carbon Steel Bolts and Studs.

7. A 325 Standard Specification for Structural Bolts, Steel, Heat Treated.
8. A 385 Standard Specification for High-Quality Zinc Coatings (Hot-Dip).
9. A 386 Standard Specification for Zinc-Coating (Hot-Dip) on Assembled Steel Products.
10. A 501 Standard Specification for Hot-Formed Welded and Seamless Carbon Structural Tubing
11. A 563 Standard Specification for Carbon and Alloy Steel Nuts
12. F 1083 Standard Specification for Pipe, Steel, Hot-Dipped, Zinc Coated (Galvanized) Welded for Fence Structures.

B. American Welding Society (AWS): D1.1 Structural Welding Code-Steel

C. International Building Code, latest edition

D. Massachusetts Building Code, latest edition

E. Steel Structures Painting Council (SSPC): Steel Structures Painting Manual

1.4 SUBMITTALS AND SAMPLES

A. Shop Drawings: Submit shop drawings of all rail and attachment fabrications to Engineer for approval, showing sizes and thickness of all members, types of materials, methods of connection and assembly, complete dimensions, clearances, anchorage, shop paint and protective coatings, and other pertinent details of fabrication and installation.

1. Indicate profiles, sizes, connection attachments, reinforcing, anchorage, openings, size and type of fasteners, and any accessories.
2. Include elevations, applicable details, and field dimensions.
3. Indicate welded connections using standard AWS welding symbols. Indicate net weld lengths.

B. Samples: Submit duplicate samples of all materials to be furnished under this Section in size and form requested by Engineer.

C. Do not order materials or begin fabrication until Engineer’s approval of submittals has been obtained.

D. Furnish to the Contractor, with a copy to the Engineers, a certified statement that the shop-applied galvanizing and finishes conform to these Specifications including compliance with application thickness and adhesion.

E. The Contractor shall submit shop drawings for any steel fabrication, including reinforcing, fixing/splice plates and bracing.

F. The Contractor shall indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners and accessories.

G. The Contractor shall indicate welded connections using standard AWS welding symbols. The Contractor shall indicate net weld lengths.

1.5 QUALITY ASSURANCE

A. Manufacture's Qualifications: Firm that has produced types of railings systems similar to the proposed railing systems required for not less than ten years, with not less than five similar projects that have been in successful use for not less than five years.

B. Installer Qualifications: Minimum of two years' experience in successful installation of similar type railing systems specified or trained by a manufacturer.

1.6 PROJECT CONDITIONS

A. Field Measurements: Contractor to check actual dimensions by field methods prior to fabrication. Indicate recorded measurements on approved Shop Drawings. Coordinate fabrication and delivery schedule with construction progress to avoid delays.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Steel Sections: ASTM A36.

B. Steel pipe shall be seamless galvanized steel pipe conforming to ASTM A 53, Schedule 80.

C. Bolts, Nuts, and Washers and Screws: ASTM A 153, A 307, A 563. All machine bolts and lag screws to be hot-dipped galvanized. Washers shall be cast-iron ogee, malleable iron, or plate or cut washers, as shown on the Contract Documents. Provide bolts with washers under nut and head. Nails shall be galvanized spikes with ring shanks. Plates shall be ASTM A 36, minimum.

D. Anchor Bolts shall be carbon steel threaded rod, hot-dipped galvanized, in accordance with ASTM A 193 Grade B7.

E. Welding Materials: AWS D1.1; type required for ferrous materials being welded.

F. Touch up Primer for Galvanized Surfaces shall be in accordance with ASTM A 780.

G. Hexagon nuts, bolts, and washers to be in accordance with ASTM A 307 and A 563.

2.2 FABRICATION

A. The Contractor shall verify dimensions in the field and of related products and materials prior to submission of shop drawings.

B. The Contractor shall fabricate items with joints tightly fitted and secured.

C. The Contractor shall grind exposed welds flush and smooth with adjacent finished surface. The Contractor shall ease exposed edges to small uniform radius.

D. The Contractor shall make exposed joints butt tight, flush, hairline, or as indicated.

E. The Contractor shall supply components required for anchorage of metal fabrications. The Contractor shall fabricate anchorage and related components of same material and finish as metal fabrication, except where specifically noted otherwise.

F. Specially fabricated plates or washers may be required as necessary.

G. Live loads shall be in accordance with the Massachusetts State Building Code. Member sizes shall be of sufficient capacity to resist the forces applied in conformance with the MSBC.

2.3 FINISH

A. The Contractor shall clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

B. Hot-dip galvanize all steel items according to ASTM A 123 or A 153, unless otherwise noted. The Contractor shall galvanize ferrous metal items to minimum 2.0 oz/sq ft zinc coating.

C. Electrolytic Isolation: Isolate dissimilar metals from each other with heavy coating of bituminous paint on contact surfaces in addition to shop coat specified above. Do not permit the bituminous paint in any way to remain on surfaces that are to be exposed or are to receive sealant.

PART 3 - EXECUTION

3.1 PREPARATION

A. Materials shall be carefully handled and stored under cover in a manner to prevent deformation and damage to the materials and to shop finishes, and to prevent rusting and the accumulation of foreign matter on the metal work. All such work shall be repaired and cleaned prior to erection.

B. Clean and prepare the concrete surface to receive the new railings.

C. Remove and dispose of waste materials in accordance with Section 02100- Demolition, Removal and Disposal.

3.2 INSTALLATION

A. Work shall be erected square, plumb, and true, accurately fitted, and with tight joints and intersections. All anchors, inserts, and other members to be set into concrete shall be furnished loose by this trade to be built into concrete and masonry by those trades as the work progresses.

B. Fit sections accurately together.

C. Set railing system accurately in location, alignment, and elevation, measured from established lines and levels and free from rack. Do not cut or abrade surfaces of railing components.

D. Rail fence, railing, and edging shall be rigidly braced and secured to surrounding construction, and shall be tight and free of rattle, vibration, or noticeable deflection after installation.

E. Drill and/or core bolt holes in the concrete to the required depths to facilitate the installation of threaded rods and epoxy adhesive. Apply epoxy adhesive in accordance with the manufacturer’s instructions and recommendations.

F. Apply elastomeric sealant suitable for marine environments around edges of railing base plates in accordance with the manufacturer's instructions and recommendations.

G. Electrolytic Isolation: Isolate dissimilar metals from each other with heavy coating of bituminous paint on contact surfaces in addition to shop coat specified above. Do not permit the bituminous paint in any way to remain on surfaces that are to be exposed or are to receive sealant.

H. The Contractor shall perform field welding in accordance with AWS D1.1.

I. After installation, the Contractor shall touch-up field welds, scratched or damaged surfaces in accordance to manufacturer's recommendations.

J. Contractor shall field treat damaged galvanized finish and exposed threaded surface with two coats of zinc rich paint conforming to ASTM A780, and in accordance with manufacturer's requirements.

3.3 TOLERANCES

A. All tolerances specified herein refer to railing after installation has been completed.

B. The new railing shall not deviate from the proposed horizontal alignment by more than 1 inch in any direction.

C. The new railing shall not deviate from vertical more than ¼-inch in any direction and over the full height of the railing measured from the adjacent existing grade.

D. The top of the new railing shall not deviate from the design height by more than ½-inch at any location and relative variation in height shall not exceed ⅛-inch along the railing length when treated with a 10-foot-long straight edge.

3.4 DEFECTIVE WORK

A. Any item installed in an unsafe manner, not to industry standards, not in accordance with Contract Documents or to the satisfaction of the Engineer and Owner.

B. Defective work will be repaired or replaced to the satisfaction of the Engineer, at no additional cost to the Owner.

PART 4 - MEASUREMENT AND PAYMENT

4.1 GENERAL MEASUREMENT

A. RAILINGS, item 05500-1, shall be measured for payment by the lineal foot or percentage installed complete to the locations as indicated on the Contract Drawings, as measured by the Engineer.

4.2 PAYMENT

A. RAILINGS associated with the Contract shall be paid for under Contract Items 05500-1. Payment shall include full compensation for the removal and replacement of the railings, including all materials, equipment, labor, survey, transportation, supervision, submittals and other incidental or appurtenant

work required to complete the work under this item as indicated on the Contract Drawings, as specified herein, and as directed by the Engineer.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT PRICE
05500-1	RAILINGS	LINEAR FOOT

END OF SECTION

ATTACHMENT A – PREVAILING WAGE RATES

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

MAURA HEALEY
Governor
KIM DRISCOLL
Lt. Governor

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

LAUREN JONES
Secretary
MICHAEL FLANAGAN
Director

Awarding Authority:	Rockport	**City/Town:**	ROCKPORT
Wage Request No:	20261014184131	**Job Location:**	Long Beach, Rockport, MA
Description of Work:	Reconstruction of approximately 350 linear feet of seawall and the reconstruction of access stairs and a return wall at the western end of the beach		
Contract Number:	2027-009		

§§ 26-27D Construction Project

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

Awarding Authority Responsibilities

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

Contractor Responsibilities

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

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

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

Construction

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
LABORERS	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
LABORERS - ZONE 2	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
LABORERS	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
BOILER MAKER	1/1/2024	$48.12	$7.07	$14.60	$6.00	$0.00	$75.79
BOILERMAKERS LOCAL 29							
BOILERMAKERS LOCAL 29							

Apprentice: BOILER MAKER

Effective Date: 1/1/2024

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

Apprentice to Journeyworker Ratio: 1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	8/1/2026	$70.15	$12.84	$15.57	$8.02	$0.00	$106.58
BRICKLAYERS LOCAL 3	2/1/2027	$71.55	$12.84	$15.57	$8.02	$0.00	$107.98
BRICKLAYERS LOCAL 3 (LYNN)							

Construction

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

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

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.08	$12.84	$15.57	$8.02	$0.00	$71.51
2	60.00	$42.09	$12.84	$15.57	$8.02	$0.00	$78.52
3	70.00	$49.11	$12.84	$15.57	$8.02	$0.00	$85.54
4	80.00	$56.12	$12.84	$15.57	$8.02	$0.00	$92.55
5	90.00	$63.14	$12.84	$15.57	$8.02	$0.00	$99.57

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

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.78	$12.84	$15.57	$8.02	$0.00	$72.21
2	60.00	$42.93	$12.84	$15.57	$8.02	$0.00	$79.36
3	70.00	$50.09	$12.84	$15.57	$8.02	$0.00	$86.52
4	80.00	$57.24	$12.84	$15.57	$8.02	$0.00	$93.67
5	90.00	$64.40	$12.84	$15.57	$8.02	$0.00	$100.83

Apprentice to Journeyworker Ratio: 1:5

BULLDOZER/GRADER/SCRAPER	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN	6/1/2026	$50.40	$10.90	$9.75	$9.80	$0.00	$80.85
LABORERS	12/1/2026	$51.90	$10.90	$9.75	$9.80	$0.00	$82.35
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER	6/1/2026	$49.25	$10.90	$9.75	$9.80	$0.00	$79.70
LABORERS	12/1/2026	$50.75	$10.90	$9.75	$9.80	$0.00	$81.20
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN	6/1/2026	$49.58	$10.90	$9.75	$9.80	$0.00	$80.03
LABORERS	12/1/2026	$51.08	$10.90	$9.75	$9.80	$0.00	$81.53
LABORERS - FOUNDATION AND MARINE							
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

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

Apprentice: CARPENTER

Effective Date: 9/1/2026

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

Apprentice: CARPENTER

Effective Date: 3/1/2027

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

Apprentice to Journeyworker Ratio: 1:5

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CARPENTER WOOD FRAME CARPENTERS CARPENTERS-ZONE 3 (Wood Frame)	10/1/2026	$28.14	$7.66	$4.47	$1.00	$0.00	$41.27

All Aspects of New Wood Frame Work

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$16.88	$7.66	$0.00	$0.00	$0.00	$24.54
2	60.00	$16.88	$7.66	$0.00	$0.00	$0.00	$24.54
3	65.00	$18.29	$7.66	$0.00	$0.00	$0.00	$25.95
4	70.00	$19.70	$7.66	$0.00	$0.00	$0.00	$27.36
5	75.00	$21.11	$7.66	$4.47	$0.00	$0.00	$33.24
6	80.00	$22.51	$7.66	$4.47	$0.00	$0.00	$34.64

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CARPENTER WOOD FRAME							
Effective Date: 10/1/2026							
Step / Percent		**Apprentice Base Wage**					
7 / 85.00		$23.92	$7.66	$4.47	$0.00	$0.00	$36.05
8 / 90.00		$25.33	$7.66	$4.47	$0.00	$0.00	$37.46
Apprentice to Journeyworker Ratio: 1:5							
CEMENT MASONRY/PLASTERING	7/1/2026	$54.49	$13.35	$16.43	$7.78	$1.80	$93.85
PLASTERERS AND CEMENT MASONS LOCAL 534	1/1/2027	$55.94	$13.35	$16.43	$7.78	$1.80	$95.30
Plasterers and Cement Masons - Zone 1	7/1/2027	$57.29	$13.35	$16.43	$7.78	$1.80	$96.65
	1/1/2028	$58.64	$13.35	$16.43	$7.78	$1.80	$98.00
Apprentice: CEMENT MASONRY/PLASTERING							
Effective Date: 7/1/2026							
Step / Percent		**Apprentice Base Wage**					
1 / 50.00		$27.25	$13.35	$16.43	$0.00	$0.00	$57.03
2 / 60.00		$32.69	$13.35	$16.43	$7.78	$1.80	$72.05
3 / 65.00		$35.42	$13.35	$16.43	$7.78	$1.80	$74.78
4 / 70.00		$38.14	$13.35	$16.43	$7.78	$1.80	$77.50
5 / 75.00		$40.87	$13.35	$16.43	$7.78	$1.80	$80.23
6 / 80.00		$43.59	$13.35	$16.43	$7.78	$1.80	$82.95
7 / 90.00		$49.04	$13.35	$16.43	$7.78	$0.00	$86.60
Apprentice: CEMENT MASONRY/PLASTERING							
Effective Date: 1/1/2027							
Step / Percent		**Apprentice Base Wage**					
1 / 50.00		$27.97	$13.35	$16.43	$0.00	$0.00	$57.75
2 / 60.00		$33.56	$13.35	$16.43	$7.78	$1.80	$72.92
3 / 65.00		$36.36	$13.35	$16.43	$7.78	$1.80	$75.72
4 / 70.00		$39.16	$13.35	$16.43	$7.78	$1.80	$78.52
5 / 75.00		$41.96	$13.35	$16.43	$7.78	$1.80	$81.32
6 / 80.00		$44.75	$13.35	$16.43	$7.78	$1.80	$84.11
7 / 90.00		$50.35	$13.35	$16.43	$0.00	$0.00	$80.13
Apprentice to Journeyworker Ratio: 1:5							
CHAIN SAW OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	6/1/2026	$60.61	$17.05	$13.35	$3.25	$0.00	$94.26
OPERATING ENGINEERS LOCAL 4	12/1/2026	$62.09	$17.05	$13.35	$3.25	$0.00	$95.74
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
COMPRESSOR OPERATOR	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DELEADER (BRIDGE)	1/1/2026	$59.56	$10.35	$12.00	$12.60	$0.00	$94.51
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: DELEADER (BRIDGE)

Effective Date: 1/1/2026

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

Apprentice to Journeyworker Ratio: 1:1

DEMO: ADZEMAN	6/1/2026	$49.30	$10.90	$9.75	$9.65	$0.00	$79.60
LABORERS	12/7/2026	$50.80	$10.90	$9.75	$9.65	$0.00	$81.10
LABORERS - ZONE 2	6/7/2027	$52.40	$10.90	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.00	$10.90	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.68	$10.90	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.35	$10.90	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR	6/1/2026	$50.30	$10.90	$9.75	$9.65	$0.00	$80.60
LABORERS	12/7/2026	$51.80	$10.90	$9.75	$9.65	$0.00	$82.10
LABORERS - ZONE 2	6/7/2027	$53.40	$10.90	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.00	$10.90	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.68	$10.90	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.35	$10.90	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BURNERS	6/1/2026	$50.05	$10.90	$9.75	$9.65	$0.00	$80.35
LABORERS	12/7/2026	$51.55	$10.90	$9.75	$9.65	$0.00	$81.85
LABORERS - ZONE 2	6/7/2027	$53.15	$10.90	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$54.75	$10.90	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.43	$10.90	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.10	$10.90	$9.75	$9.65	$0.00	$88.40

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
DEMO: CONCRETE CUTTER/SAWYER LABORERS LABORERS - ZONE 2	6/1/2026	$50.30	$10.90	$9.75	$9.65	$0.00	$80.60
	12/7/2026	$51.80	$10.90	$9.75	$9.65	$0.00	$82.10
	6/7/2027	$53.40	$10.90	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.00	$10.90	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.68	$10.90	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.35	$10.90	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$50.05	$10.90	$9.75	$9.65	$0.00	$80.35
	12/7/2026	$51.55	$10.90	$9.75	$9.65	$0.00	$81.85
	6/7/2027	$53.15	$10.90	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$54.75	$10.90	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.43	$10.90	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.10	$10.90	$9.75	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS LABORERS - ZONE 2	6/1/2026	$49.30	$10.90	$9.75	$9.65	$0.00	$79.60
	12/7/2026	$50.80	$10.90	$9.75	$9.65	$0.00	$81.10
	6/7/2027	$52.40	$10.90	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.00	$10.90	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.68	$10.90	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.35	$10.90	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$78.11	$10.08	$11.62	$10.04	$0.00	$109.85
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A $69.83, 3A $91.79,4A $102.14 Total Rate							
DIVER TENDER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A $54.20, 3A $73.93,4A $82.05 Total Rate							
DIVER TENDER (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$83.69	$10.08	$11.62	$12.67	$0.00	$118.06
For apprentice rates see "Apprentice- PILE DRIVER"							
DIVER/SLURRY (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53
For apprentice rates see "Apprentice- PILE DRIVER"							
DRAWBRIDGE OPERATOR (Construction) DRAWBRIDGE - SEIU LOCAL 888	7/1/2020	$26.77	$6.67	$3.93	$0.00	$0.16	$37.53

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DRAWBRIDGE - SEIU LOCAL 888							
ELECTRICIAN	9/1/2026	$68.78	$13.00	$14.69	$9.00	$0.00	$105.47
ELECTRICIANS LOCAL 103	3/1/2027	$69.97	$13.00	$14.73	$9.00	$0.00	$106.70
ELECTRICIANS LOCAL 103	9/1/2027	$71.88	$13.00	$14.79	$9.00	$0.00	$108.67
	3/1/2028	$73.08	$13.00	$14.82	$9.00	$0.00	$109.90

Apprentice: ELECTRICIAN

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$27.51	$13.00	$0.83	$0.00	$0.00	$41.34
2	40.00	$27.51	$13.00	$0.83	$0.00	$0.00	$41.34
3	45.00	$30.95	$13.00	$13.56	$4.05	$0.00	$61.56
4	45.00	$30.95	$13.00	$13.56	$4.05	$0.00	$61.56
5	50.00	$34.39	$13.00	$13.66	$4.50	$0.00	$65.55
6	55.00	$37.83	$13.00	$13.76	$4.95	$0.00	$69.54
7	60.00	$41.27	$13.00	$13.87	$5.40	$0.00	$73.54
8	65.00	$44.71	$13.00	$13.97	$5.85	$0.00	$77.53
9	70.00	$48.15	$13.00	$14.07	$6.30	$0.00	$81.52
10	75.00	$51.59	$13.00	$14.18	$6.75	$0.00	$85.52

Apprentice: ELECTRICIAN

Effective Date: 3/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$27.99	$13.00	$0.84	$0.00	$0.00	$41.83
2	40.00	$27.99	$13.00	$0.84	$0.00	$0.00	$41.83
3	45.00	$31.49	$13.00	$13.57	$4.05	$0.00	$62.11
4	45.00	$31.49	$13.00	$13.57	$4.05	$0.00	$62.11
5	50.00	$34.99	$13.00	$13.68	$4.50	$0.00	$66.17
6	55.00	$38.48	$13.00	$13.78	$4.95	$0.00	$70.21
7	60.00	$41.98	$13.00	$13.89	$5.40	$0.00	$74.27
8	65.00	$45.48	$13.00	$13.99	$5.85	$0.00	$78.32
9	70.00	$48.98	$13.00	$14.10	$6.30	$0.00	$82.38
10	75.00	$52.48	$13.00	$14.20	$6.75	$0.00	$86.43

Apprentice Notes

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Apprentice to Journeyworker Ratio: 2:3

ELEVATOR CONSTRUCTOR	1/1/2026	$77.26	$16.38	$11.06	$10.70	$0.00	$115.40
ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2027	$80.55	$16.48	$11.16	$11.00	$0.00	$119.19
ELEVATOR CONSTRUCTORS LOCAL 4							

Construction

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

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$38.63	$0.00	$0.00	$0.00	$0.00	$38.63
2	55.00	$42.49	$16.38	$11.06	$10.70	$0.00	$80.63
3	65.00	$50.22	$16.38	$11.06	$10.70	$0.00	$88.36
4	70.00	$54.08	$16.38	$11.06	$10.70	$0.00	$92.22
5	80.00	$61.81	$16.38	$11.06	$10.70	$0.00	$99.95

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$40.28	$0.00	$0.00	$0.00	$0.00	$40.28
2	55.00	$44.30	$16.48	$11.16	$11.00	$0.00	$82.94
3	65.00	$52.36	$16.48	$11.16	$11.00	$0.00	$91.00
4	70.00	$56.39	$16.48	$11.16	$11.00	$0.00	$95.03
5	80.00	$64.44	$16.48	$11.16	$11.00	$0.00	$103.08

Apprentice to Journeyworker Ratio: 1:1

ELEVATOR CONSTRUCTOR HELPER ELEVATOR CONSTRUCTORS LOCAL 4 ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2026 1/1/2027	$54.08 $56.39	$16.38 $16.48	$11.06 $11.16	$10.07 $11.00	$0.00 $0.00	$91.59 $95.03
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026 12/1/2026	$41.91 $43.35	$10.90 $10.90	$9.75 $9.75	$9.21 $9.21	$0.00 $0.00	$71.77 $73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	5/1/2026 11/1/2026 5/1/2027	$54.40 $55.69 $57.12	$16.55 $16.55 $16.55	$13.35 $13.35 $13.35	$3.25 $3.25 $3.25	$0.00 $0.00 $0.00	$87.55 $88.84 $90.27
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	5/1/2026 11/1/2026 5/1/2027	$56.02 $57.32 $58.77	$16.55 $16.55 $16.55	$13.35 $13.35 $13.35	$3.25 $3.25 $3.25	$0.00 $0.00 $0.00	$89.17 $90.47 $91.92
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	5/1/2026 11/1/2026 5/1/2027	$26.28 $27.04 $27.89	$16.55 $16.55 $16.55	$13.35 $13.35 $13.35	$3.25 $3.25 $3.25	$0.00 $0.00 $0.00	$59.43 $60.19 $61.04
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIRE ALARM INSTALLER	9/1/2026	$68.78	$13.00	$14.69	$9.00	$0.00	$105.47

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ELECTRICIANS LOCAL 103	3/1/2027	$69.97	$13.00	$14.73	$9.00	$0.00	$106.70
ELECTRICIANS LOCAL 103	9/1/2027	$71.88	$13.00	$14.79	$9.00	$0.00	$108.67
	3/1/2028	$73.08	$13.00	$14.82	$9.00	$0.00	$109.90
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINTENANCE	9/1/2026	$55.02	$13.00	$14.28	$7.20	$0.00	$89.50
/ COMMISSIONING	3/1/2027	$55.98	$13.00	$14.31	$7.20	$0.00	$90.49
ELECTRICIANS LOCAL 103	9/1/2027	$57.50	$13.00	$14.36	$7.20	$0.00	$92.06
ELECTRICIANS LOCAL 103	3/1/2028	$58.46	$13.00	$14.38	$7.20	$0.00	$93.04
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN (ASST. ENGINEER)	6/1/2026	$47.55	$17.05	$13.35	$3.25	$0.00	$81.20
OPERATING ENGINEERS LOCAL 4	12/1/2026	$48.73	$17.05	$13.35	$3.25	$0.00	$82.38
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2026	$29.21	$10.90	$9.75	$9.21	$0.00	$59.07
LABORERS	12/1/2026	$29.21	$10.90	$9.75	$9.21	$0.00	$59.07
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
FLOORCOVERER	9/1/2026	$60.74	$10.33	$11.47	$8.80	$0.00	$91.34
FLOORCOVERERS LOCAL 2168	3/1/2027	$62.24	$10.33	$11.47	$8.80	$0.00	$92.84
FLOORCOVERERS LOCAL 2168 ZONE I							

Apprentice: FLOORCOVERER

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$27.33	$10.33	$0.00	$1.76	$0.00	$39.42
2	45.00	$27.33	$10.33	$0.00	$1.76	$0.00	$39.42
3	55.00	$33.41	$10.33	$0.00	$3.52	$0.00	$47.26
4	55.00	$33.41	$10.33	$0.00	$3.52	$0.00	$47.26
5	70.00	$42.52	$10.33	$11.47	$5.28	$0.00	$69.60
6	70.00	$42.52	$10.33	$11.47	$5.28	$0.00	$69.60
7	80.00	$48.59	$10.33	$11.47	$7.04	$0.00	$77.43
8	80.00	$48.59	$10.33	$11.47	$7.04	$0.00	$77.43

Apprentice: FLOORCOVERER

Effective Date: 3/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$28.01	$10.33	$0.00	$1.76	$0.00	$40.10
2	45.00	$28.01	$10.33	$0.00	$1.76	$0.00	$40.10
3	55.00	$34.23	$10.33	$0.00	$3.52	$0.00	$48.08
4	55.00	$34.23	$10.33	$0.00	$3.52	$0.00	$48.08
5	70.00	$43.57	$10.33	$11.47	$5.28	$0.00	$70.65
6	70.00	$43.57	$10.33	$11.47	$5.28	$0.00	$70.65
7	80.00	$49.79	$10.33	$11.47	$7.04	$0.00	$78.63

Construction

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

Apprentice: FLOORCOVERER

Effective Date: 3/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
8	80.00	$49.79	$10.33	$11.47	$7.04	$0.00	$78.63

Apprentice Notes

Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

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

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

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.53	$10.35	$0.00	$0.00	$0.00	$34.88
2	55.00	$26.98	$10.35	$0.00	$6.88	$0.00	$44.21
3	60.00	$29.44	$10.35	$0.00	$7.50	$0.00	$47.29
4	65.00	$31.89	$10.35	$0.00	$8.13	$0.00	$50.37
5	70.00	$34.34	$10.35	$12.00	$8.75	$0.00	$65.44
6	75.00	$36.80	$10.35	$12.00	$9.38	$0.00	$68.53
7	80.00	$39.25	$10.35	$12.00	$10.00	$0.00	$71.60
8	90.00	$44.15	$10.35	$12.00	$11.25	$0.00	$77.75

Apprentice to Journeyworker Ratio: 1:1

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

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 6/1/2026

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

Construction

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

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 6/1/2026

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

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 12/1/2026

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

Apprentice to Journeyworker Ratio: 1:6

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103 ELECTRICIANS LOCAL 103	9/1/2026	$68.78	$13.00	$14.69	$9.00	$0.00	$105.47
	3/1/2027	$69.97	$13.00	$14.73	$9.00	$0.00	$106.70
	9/1/2027	$71.88	$13.00	$14.79	$9.00	$0.00	$108.67
	3/1/2028	$73.08	$13.00	$14.82	$9.00	$0.00	$109.90
For apprentice rates see "Apprentice- ELECTRICIAN"							
HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (TESTING AND BALANCING -WATER) PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537	9/1/2026	$71.71	$14.20	$14.25	$10.00	$0.00	$110.16
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
HVAC MECHANIC PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537	9/1/2026	$71.71	$14.20	$14.25	$10.00	$0.00	$110.16
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HYDRAULIC DRILLS LABORERS LABORERS - ZONE 2	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
HYDRAULIC DRILLS (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	9/1/2026	$59.02	$16.15	$11.46	$11.49	$0.00	$98.12

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$29.51	$16.15	$11.21	$5.75	$0.00	$62.62
2	60.00	$35.41	$16.15	$11.26	$6.89	$0.00	$69.71
3	70.00	$41.31	$16.15	$11.31	$8.04	$0.00	$76.81
4	80.00	$47.22	$16.15	$11.36	$9.19	$0.00	$83.92

Apprentice to Journeyworker Ratio: 1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 7 IRONWORKERS LOCAL 7 (LAWRENCE AREA)	3/16/2026	$54.24	$9.25	$12.75	$15.00	$0.00	$91.24

Apprentice: IRONWORKER/WELDER

Effective Date: 3/16/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	70.00	$37.97	$9.25	$0.00	$5.00	$0.00	$52.22
2	80.00	$43.39	$9.25	$12.75	$5.00	$0.00	$70.39
3	90.00	$48.82	$9.25	$12.75	$5.00	$0.00	$75.82
4	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
5	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
6	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Apprentice to Journeyworker Ratio: 1:4

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
JACKHAMMER & PAVING BREAKER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76

Apprentice: LABORER

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.00	$10.90	$9.75	$9.11	$0.00	$54.76
2	70.00	$29.16	$10.90	$9.75	$9.11	$0.00	$58.92
3	80.00	$33.33	$10.90	$9.75	$9.11	$0.00	$63.09
4	90.00	$37.49	$10.90	$9.75	$9.11	$0.00	$67.25

Apprentice: LABORER

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.86	$10.90	$9.75	$9.11	$0.00	$55.62
2	70.00	$30.17	$10.90	$9.75	$9.11	$0.00	$59.93
3	80.00	$34.48	$10.90	$9.75	$9.11	$0.00	$64.24
4	90.00	$38.79	$10.90	$9.75	$9.11	$0.00	$68.55

Apprentice to Journeyworker Ratio: 1:5

LABORER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.66	$10.90	$9.75	$9.21	$0.00	$71.52
	12/1/2026	$43.10	$10.90	$9.75	$9.21	$0.00	$72.96

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.00	$10.90	$9.75	$9.21	$0.00	$54.86
2	70.00	$29.16	$10.90	$9.75	$9.21	$0.00	$59.02
3	80.00	$33.33	$10.90	$9.75	$9.21	$0.00	$63.19
4	90.00	$37.49	$10.90	$9.75	$9.10	$0.00	$67.24

Construction

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

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.86	$10.90	$9.75	$9.21	$0.00	$55.72
2	70.00	$30.17	$10.90	$9.75	$9.21	$0.00	$60.03
3	80.00	$34.48	$10.90	$9.75	$9.21	$0.00	$64.34
4	90.00	$38.79	$10.90	$9.75	$9.21	$0.00	$68.65

Apprentice to Journeyworker Ratio: 1:5

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORER: CARPENTER TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: CEMENT FINISHER TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS LABORERS - ZONE 2	6/1/2026	$41.75	$10.90	$9.75	$9.65	$0.00	$72.05
	12/7/2026	$43.19	$10.90	$9.75	$9.65	$0.00	$73.49
	6/7/2027	$44.64	$10.90	$9.75	$9.65	$0.00	$74.94
	12/6/2027	$46.09	$10.90	$9.75	$9.65	$0.00	$76.39
	6/5/2028	$47.59	$10.90	$9.75	$9.65	$0.00	$77.89
	12/4/2028	$49.09	$10.90	$9.75	$9.65	$0.00	$79.39
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
LABORER: MULTI-TRADE TENDER	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS LABORERS - ZONE 2	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	8/1/2026	$53.84	$12.84	$15.57	$5.78	$0.00	$88.03
	2/1/2027	$54.96	$12.84	$15.57	$5.78	$0.00	$89.15

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 8/1/2026

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

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$27.48	$12.84	$15.57	$5.78	$0.00	$61.67

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
MARBLE MASONS,TILELAYERS & TERRAZZO MECH BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	8/1/2026	$70.17	$12.84	$15.57	$7.99	$0.00	$106.57
	2/1/2027	$71.57	$12.84	$15.57	$7.99	$0.00	$107.97

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2027

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

Apprentice to Journeyworker Ratio: 1:5

Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.09	$12.84	$15.57	$7.99	$0.00	$71.49
2	60.00	$42.10	$12.84	$15.57	$7.99	$0.00	$78.50
3	70.00	$49.12	$12.84	$15.57	$7.99	$0.00	$85.52
4	80.00	$56.14	$12.84	$15.57	$7.99	$0.00	$92.54
5	90.00	$63.15	$12.84	$15.57	$7.99	$0.00	$99.55

Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.79	$12.84	$15.57	$7.99	$0.00	$72.19
2	60.00	$42.94	$12.84	$15.57	$7.99	$0.00	$79.34
3	70.00	$50.10	$12.84	$15.57	$7.99	$0.00	$86.50
4	80.00	$57.26	$12.84	$15.57	$7.99	$0.00	$93.66
5	90.00	$64.41	$12.84	$15.57	$7.99	$0.00	$100.81

Apprentice to Journeyworker Ratio: 1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 2) MILLWRIGHTS LOCAL 1121	1/5/2026	$46.86	$10.58	$11.47	$10.00	$0.00	$78.91

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
MILLWRIGHTS LOCAL 1121 - Zone 2							

Apprentice: MILLWRIGHT (Zone 2)

Effective Date: 1/5/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$25.77	$10.58	$0.00	$5.50	$0.00	$41.85
2	65.00	$30.46	$10.58	$0.00	$6.50	$0.00	$47.54
3	75.00	$35.15	$10.58	$11.47	$7.50	$0.00	$64.70
4	85.00	$39.83	$10.58	$11.47	$8.50	$0.00	$70.38

Apprentice Notes

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

Apprentice to Journeyworker Ratio: 1:4

MORTAR MIXER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$25.07	$17.05	$13.35	$3.25	$0.00	$58.72
	12/1/2026	$25.74	$17.05	$13.35	$3.25	$0.00	$59.39
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$31.17	$17.05	$13.35	$3.25	$0.00	$64.82
	12/1/2026	$31.97	$17.05	$13.35	$3.25	$0.00	$65.62
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$59.56	$10.35	$12.00	$12.50	$0.00	$94.41

Apprentice: PAINTER (BRIDGES/TANKS)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$29.78	$10.35	$0.00	$0.00	$0.00	$40.13
2	55.00	$32.76	$10.35	$0.00	$6.93	$0.00	$50.04

Construction

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

Apprentice: PAINTER (BRIDGES/TANKS)

Effective Date: 1/1/2026

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

Apprentice to Journeyworker Ratio: 1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	1/1/2026	$50.46	$10.35	$12.00	$12.60	$0.00	$85.41

* If 30% or more of surfaces to be painted are new construction,
NEW paint rate shall be used.
PAINTERS LOCAL 35
PAINTERS LOCAL 35 - ZONE 2

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$25.23	$10.35	$0.00	$0.00	$0.00	$35.58
2	55.00	$27.75	$10.35	$0.00	$6.93	$0.00	$45.03
3	60.00	$30.28	$10.35	$0.00	$7.56	$0.00	$48.19
4	65.00	$32.80	$10.35	$0.00	$8.19	$0.00	$51.34
5	70.00	$35.32	$10.35	$12.00	$8.82	$0.00	$66.49
6	75.00	$37.85	$10.35	$12.00	$9.45	$0.00	$69.65
7	80.00	$40.37	$10.35	$12.00	$10.08	$0.00	$72.80
8	90.00	$45.41	$10.35	$12.00	$11.34	$0.00	$79.10

Apprentice to Journeyworker Ratio: 1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	1/1/2026	$48.52	$10.35	$12.00	$12.60	$0.00	$83.47

PAINTERS LOCAL 35
PAINTERS LOCAL 35 - ZONE 2

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.26	$10.35	$0.00	$0.00	$0.00	$34.61
2	55.00	$26.69	$10.35	$0.00	$6.93	$0.00	$43.97
3	60.00	$29.11	$10.35	$0.00	$7.56	$0.00	$47.02
4	65.00	$31.54	$10.35	$0.00	$8.19	$0.00	$50.08
5	70.00	$33.96	$10.35	$12.00	$8.82	$0.00	$65.13
6	75.00	$36.39	$10.35	$12.00	$9.45	$0.00	$68.19

Construction

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

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
7	80.00	$38.82	$10.35	$12.00	$10.08	$0.00	$71.25
8	90.00	$43.67	$10.35	$12.00	$11.34	$0.00	$77.36

Apprentice to Journeyworker Ratio: 1:1

PAINTER / TAPER (BRUSH, NEW) *	1/1/2026	$49.06	$10.35	$12.00	$12.60	$0.00	$84.01

* If 30% or more of surfaces to be painted are new construction,
NEW paint rate shall be used.
PAINTERS LOCAL 35
PAINTERS LOCAL 35 - ZONE 2

Apprentice: PAINTER / TAPER (BRUSH, NEW) *

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.53	$10.35	$0.00	$0.00	$0.00	$34.88
2	55.00	$26.98	$10.35	$0.00	$6.93	$0.00	$44.26
3	60.00	$29.44	$10.35	$0.00	$7.56	$0.00	$47.35
4	65.00	$31.89	$10.35	$0.00	$8.19	$0.00	$50.43
5	70.00	$34.34	$10.35	$12.00	$8.82	$0.00	$65.51
6	75.00	$36.80	$10.35	$12.00	$9.45	$0.00	$68.60
7	80.00	$39.25	$10.35	$12.00	$10.08	$0.00	$71.68
8	90.00	$44.15	$10.35	$12.00	$11.34	$0.00	$77.84

Apprentice to Journeyworker Ratio: 1:1

PAINTER / TAPER (BRUSH, REPAINT)	1/1/2026	$47.12	$10.35	$12.00	$12.60	$0.00	$82.07

PAINTERS LOCAL 35
PAINTERS LOCAL 35 - ZONE 2

Apprentice: PAINTER / TAPER (BRUSH, REPAINT)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$23.56	$10.35	$0.00	$0.00	$0.00	$33.91
2	55.00	$25.92	$10.35	$0.00	$6.93	$0.00	$43.20
3	60.00	$28.27	$10.35	$0.00	$7.56	$0.00	$46.18
4	65.00	$30.63	$10.35	$0.00	$8.19	$0.00	$49.17
5	70.00	$32.98	$10.35	$12.00	$8.82	$0.00	$64.15
6	75.00	$35.34	$10.35	$12.00	$9.45	$0.00	$67.14
7	80.00	$37.70	$10.35	$12.00	$10.08	$0.00	$70.13
8	90.00	$42.41	$10.35	$12.00	$11.34	$0.00	$76.10

Apprentice to Journeyworker Ratio: 1:1

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.66	$10.90	$9.75	$9.21	$0.00	$71.52
	12/1/2026	$43.10	$10.90	$9.75	$9.21	$0.00	$72.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$41.78	$16.17	$21.78	$0.00	$0.00	$79.73
	12/1/2026	$41.78	$16.17	$23.52	$0.00	$0.00	$81.47
	1/1/2027	$41.78	$16.77	$23.52	$0.00	$0.00	$82.07
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16

Apprentice: PILE DRIVER

Effective Date: 8/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$25.11	$10.08	$0.00	$2.53	$0.00	$37.72
2	55.00	$30.68	$10.08	$0.00	$5.07	$0.00	$45.83
3	70.00	$39.05	$10.08	$11.62	$7.60	$0.00	$68.35
4	80.00	$44.63	$10.08	$11.62	$10.14	$0.00	$76.47

Apprentice to Journeyworker Ratio: 1:5

PIPEFITTER & STEAMFITTER PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537	9/1/2026	$71.71	$14.20	$14.25	$10.00	$0.00	$110.16

Apprentice: PIPEFITTER & STEAMFITTER

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$28.68	$14.20	$14.25	$10.00	$0.00	$67.13
2	45.00	$32.27	$14.20	$14.25	$10.00	$0.00	$70.72
3	60.00	$43.03	$14.20	$14.25	$10.00	$0.00	$81.48
4	70.00	$50.20	$14.20	$14.25	$10.00	$0.00	$88.65
5	80.00	$57.37	$14.20	$14.25	$10.00	$0.00	$95.82

Apprentice to Journeyworker Ratio: 1:3

PIPELAYER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
PIPELAYER (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
PLUMBERS & GASFITTERS	8/31/2026	$73.94	$15.32	$12.61	$8.50	$0.00	$110.37
PLUMBERS & GASFITTERS LOCAL 12	3/1/2027	$75.84	$15.32	$12.61	$8.50	$0.00	$112.27
PLUMBERS & GASFITTERS LOCAL 12	8/30/2027	$77.74	$15.32	$12.61	$8.50	$0.00	$114.17
	2/28/2028	$79.69	$15.32	$12.61	$8.50	$0.00	$116.12
	9/4/2028	$81.64	$15.32	$12.61	$8.50	$0.00	$118.07
	3/5/2029	$83.59	$15.32	$12.61	$8.50	$0.00	$120.02
	9/3/2029	$85.54	$15.32	$12.61	$8.50	$0.00	$121.97
	3/4/2030	$87.49	$15.32	$12.61	$8.50	$0.00	$123.92

Apprentice: PLUMBERS & GASFITTERS

Effective Date: 8/31/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	$25.90	$15.32	$4.61	$2.98	$0.00	$48.81
2	40.00	$29.60	$15.32	$5.22	$3.40	$0.00	$53.54
3	55.00	$40.70	$15.32	$7.07	$4.68	$0.00	$67.77
4	65.00	$48.10	$15.32	$8.30	$5.53	$0.00	$77.25
5	75.00	$55.50	$15.32	$9.53	$6.38	$0.00	$86.73

Apprentice: PLUMBERS & GASFITTERS

Effective Date: 3/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	$26.55	$15.32	$4.61	$2.98	$0.00	$49.46
2	40.00	$30.35	$15.32	$5.22	$3.40	$0.00	$54.29
3	55.00	$41.75	$15.32	$7.07	$4.68	$0.00	$68.82
4	65.00	$49.30	$15.32	$8.30	$5.53	$0.00	$78.45
5	75.00	$56.90	$15.32	$9.53	$6.68	$0.00	$88.43

Apprentice to Journeyworker Ratio: 1:2

PNEUMATIC CONTROLS (TEMP.) PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537	9/1/2026	$71.71	$14.20	$14.25	$10.00	$0.00	$110.16
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
PNEUMATIC DRILL/TOOL OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS LABORERS - ZONE 2	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWDERMAN & BLASTER	6/1/2026	$42.66	$10.90	$9.75	$9.11	$0.00	$72.42
LABORERS LABORERS - ZONE 2	12/1/2026	$44.10	$10.90	$9.75	$9.11	$0.00	$73.86
	6/1/2027	$45.55	$10.90	$9.75	$9.11	$0.00	$75.31
	12/1/2027	$47.00	$10.90	$9.75	$9.11	$0.00	$76.76
	6/1/2028	$48.50	$10.90	$9.75	$9.11	$0.00	$78.26
	12/1/2028	$50.00	$10.90	$9.75	$9.11	$0.00	$79.76
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	6/1/2026	$42.66	$10.90	$9.75	$9.21	$0.00	$72.52
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$44.10	$10.90	$9.75	$9.21	$0.00	$73.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWER SHOVEL/DERRICK/TRENCHING MACHINE	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE)	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER	5/1/2026	$30.50	$12.00	$7.00	$0.00	$0.00	$49.50
TEAMSTERS 42 - J.G. MacLeallan (Wakefield) TEAMSTERS 42 - J.G. MacLeallan (Wakefield)							
RECLAIMERS	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
RIDE-ON MOTORIZED BUGGY OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS LABORERS - ZONE 2	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

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

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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

Apprentice: ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)

Effective Date: 8/1/2026

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

Apprentice: ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)

Effective Date: 2/1/2027

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

Apprentice Notes

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

Apprentice to Journeyworker Ratio: 1:5

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

For apprentice rates see "Apprentice- ROOFER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09

Apprentice: SHEETMETAL WORKER

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	42.00	$26.43	$14.91	$6.19	$0.00	$0.00	$47.53
2	42.00	$26.43	$14.91	$6.19	$0.00	$0.00	$47.53
3	47.00	$29.58	$14.91	$10.93	$1.25	$1.62	$58.29
4	47.00	$29.58	$14.91	$10.93	$1.25	$1.62	$58.29
5	52.00	$32.72	$14.91	$11.66	$1.50	$1.74	$62.53
6	52.00	$32.72	$14.91	$11.66	$1.75	$1.75	$62.79
7	60.00	$37.76	$14.91	$12.84	$2.00	$1.93	$69.44
8	65.00	$40.90	$14.91	$13.58	$2.25	$2.04	$73.68
9	75.00	$47.20	$14.91	$15.06	$2.75	$2.28	$82.20
10	85.00	$53.49	$14.91	$16.53	$2.75	$2.49	$90.17

Apprentice to Journeyworker Ratio: 1:4

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.24	$16.17	$21.78	$0.00	$0.00	$80.19
	12/1/2026	$42.24	$16.17	$23.52	$0.00	$0.00	$81.93
	1/1/2027	$42.24	$16.77	$23.52	$0.00	$0.00	$82.53
SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.53	$16.17	$21.78	$0.00	$0.00	$80.48
	12/1/2026	$42.53	$16.17	$23.52	$0.00	$0.00	$82.22
	1/1/2027	$42.53	$16.77	$23.52	$0.00	$0.00	$82.82
SPRINKLER FITTER SPRINKLER FITTERS LOCAL 550 SPRINKLER FITTERS LOCAL 550 - (Section B) Zone 2	10/1/2026	$66.29	$13.55	$7.45	$20.30	$0.00	$107.59
	1/1/2027	$66.29	$14.80	$7.50	$19.00	$0.00	$107.59

Apprentice: SPRINKLER FITTER

Effective Date: 10/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	$23.20	$13.55	$12.06	$2.50	$0.00	$51.31
2	0.00	$26.52	$13.55	$13.07	$2.50	$0.00	$55.64
3	0.00	$29.83	$13.55	$14.09	$2.50	$0.00	$59.97
4	0.00	$33.15	$13.55	$15.11	$2.50	$0.00	$64.31
5	0.00	$36.46	$13.55	$16.11	$2.50	$0.00	$68.62
6	0.00	$39.77	$13.55	$15.63	$4.00	$0.00	$72.95
7	0.00	$43.09	$13.55	$16.64	$4.00	$0.00	$77.28
8	0.00	$46.40	$13.55	$17.66	$4.00	$0.00	$81.61
9	0.00	$49.72	$13.55	$18.67	$4.00	$0.00	$85.94
10	0.00	$53.03	$13.55	$19.69	$4.00	$0.00	$90.27

Construction

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

Apprentice: SPRINKLER FITTER

Effective Date: 1/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	$23.20	$14.80	$11.65	$2.50	$0.00	$52.15
2	0.00	$26.52	$14.80	$12.60	$2.50	$0.00	$56.42
3	0.00	$29.83	$14.80	$13.55	$2.50	$0.00	$60.68
4	0.00	$33.15	$14.80	$14.51	$2.50	$0.00	$64.96
5	0.00	$36.46	$14.80	$15.45	$2.50	$0.00	$69.21
6	0.00	$39.77	$14.80	$14.90	$4.00	$0.00	$73.47
7	0.00	$43.09	$14.80	$15.85	$4.00	$0.00	$77.74
8	0.00	$46.40	$14.80	$16.80	$4.00	$0.00	$82.00
9	0.00	$49.72	$14.80	$17.75	$4.00	$0.00	$86.27
10	0.00	$53.03	$14.80	$18.70	$4.00	$0.00	$90.53

Apprentice Notes

Apprentice entered prior 9/30/10:

Apprentice to Journeyworker Ratio: 1:3

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

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

TELECOMMUNICATION TECHNICIAN	9/1/2026	$55.02	$13.00	$14.28	$7.20	$0.00	$89.50
TELECOMMUNICATION TECHNICIAN	3/1/2027	$55.98	$13.00	$14.31	$7.20	$0.00	$90.49
ELECTRICIANS LOCAL 103	9/1/2027	$57.50	$13.00	$14.36	$7.20	$0.00	$92.06
ELECTRICIANS LOCAL 103	3/1/2028	$58.46	$13.00	$14.38	$7.20	$0.00	$93.04

For apprentice rates and ratios see "Apprentice- ELECTRICIAN"

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$24.76	$13.00	$0.74	$0.00	$0.00	$38.50
2	45.00	$24.76	$13.00	$0.74	$0.00	$0.00	$38.50
3	50.00	$27.51	$13.00	$13.46	$3.60	$0.00	$57.57
4	50.00	$27.51	$13.00	$13.46	$3.60	$0.00	$57.57
5	55.00	$30.26	$13.00	$13.54	$3.96	$0.00	$60.76
6	60.00	$33.01	$13.00	$13.62	$4.32	$0.00	$63.95
7	65.00	$35.76	$13.00	$13.70	$4.68	$0.00	$67.14

Construction

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

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
8	70.00	$38.51	$13.00	$13.79	$5.04	$0.00	$70.34
9	75.00	$41.27	$13.00	$13.87	$5.40	$0.00	$73.54
10	80.00	$44.02	$13.00	$13.96	$5.76	$0.00	$76.74

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 3/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$25.19	$13.00	$0.76	$0.00	$0.00	$38.95
2	45.00	$25.19	$13.00	$0.76	$0.00	$0.00	$38.95
3	50.00	$27.99	$13.00	$13.47	$3.60	$0.00	$58.06
4	50.00	$27.99	$13.00	$13.47	$3.60	$0.00	$58.06
5	55.00	$30.79	$13.00	$13.55	$3.96	$0.00	$61.30
6	60.00	$33.59	$13.00	$13.64	$4.32	$0.00	$64.55
7	65.00	$36.39	$13.00	$13.72	$4.68	$0.00	$67.79
8	70.00	$39.19	$13.00	$13.81	$5.04	$0.00	$71.04
9	75.00	$41.99	$13.00	$13.89	$5.40	$0.00	$74.28
10	80.00	$44.78	$13.00	$13.97	$5.76	$0.00	$77.51

Apprentice to Journeyworker Ratio: 1:1

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

Apprentice: TERRAZZO FINISHERS

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$34.55	$12.84	$15.57	$8.02	$0.00	$70.98
2	60.00	$41.45	$12.84	$15.57	$8.02	$0.00	$77.88
3	70.00	$48.36	$12.84	$15.57	$8.02	$0.00	$84.79
4	80.00	$55.27	$12.84	$15.57	$8.02	$0.00	$91.70
5	90.00	$62.18	$12.84	$15.57	$8.02	$0.00	$98.61

Apprentice: TERRAZZO FINISHERS

Effective Date: 2/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.25	$12.84	$15.57	$8.02	$0.00	$71.68
2	60.00	$42.29	$12.84	$15.57	$8.02	$0.00	$78.72

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: TERRAZZO FINISHERS							
Effective Date: 2/1/2027							
Step / Percent		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
3 / 70.00		$49.34	$12.84	$15.57	$8.02	$0.00	$85.77
4 / 80.00		$56.39	$12.84	$15.57	$8.02	$0.00	$92.82
5 / 90.00		$63.44	$12.84	$15.57	$8.02	$0.00	$99.87
Apprentice to Journeyworker Ratio: 1:5							
TEST BORING DRILLER	6/1/2026	$53.25	$10.90	$9.75	$9.80	$0.00	$83.70
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$54.75	$10.90	$9.75	$9.80	$0.00	$85.20
For apprentice rates see "Apprentice- LABORER"							
TEST BORING DRILLER HELPER	6/1/2026	$49.37	$10.90	$9.75	$9.80	$0.00	$79.82
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$50.87	$10.90	$9.75	$9.80	$0.00	$81.32
For apprentice rates see "Apprentice- LABORER"							
TEST BORING LABORER	6/1/2026	$49.25	$10.90	$9.75	$9.80	$0.00	$79.70
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$50.75	$10.90	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS/PORTABLE STEAM GENERATORS	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT	6/1/2026	$42.82	$16.17	$21.78	$0.00	$0.00	$80.77
TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/1/2026	$42.82	$16.17	$23.52	$0.00	$0.00	$82.51
	1/1/2027	$42.82	$16.77	$23.52	$0.00	$0.00	$83.11
TUNNEL WORK - COMPRESSED AIR	6/1/2026	$61.48	$10.90	$9.75	$10.25	$0.00	$92.38
LABORERS LABORERS (COMPRESSED AIR)	12/1/2026	$62.98	$10.90	$9.75	$10.25	$0.00	$93.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	6/1/2026	$63.48	$10.90	$9.75	$10.25	$0.00	$94.38
LABORERS LABORERS (COMPRESSED AIR)	12/1/2026	$64.98	$10.90	$9.75	$10.25	$0.00	$95.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR	6/1/2026	$53.55	$10.90	$9.75	$10.25	$0.00	$84.45
LABORERS LABORERS (FREE AIR TUNNEL)	12/1/2026	$55.05	$10.90	$9.75	$10.25	$0.00	$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE)	6/1/2026	$55.55	$10.90	$9.75	$10.25	$0.00	$86.45
LABORERS LABORERS (FREE AIR TUNNEL)	12/1/2026	$57.05	$10.90	$9.75	$10.25	$0.00	$87.95
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
VAC-HAUL	6/1/2026	$42.24	$16.17	$21.78	$0.00	$0.00	$80.19
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	$42.24	$16.17	$23.52	$0.00	$0.00	$81.93
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	$42.24	$16.77	$23.52	$0.00	$0.00	$82.53
WAGON DRILL OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
WAGON DRILL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
WASTE WATER PUMP OPERATOR	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
WATER METER INSTALLER	8/31/2026	$73.94	$15.32	$12.61	$8.50	$0.00	$110.37
PLUMBERS & GASFITTERS LOCAL 12	3/1/2027	$75.84	$15.32	$12.61	$8.50	$0.00	$112.27
PLUMBERS & GASFITTERS LOCAL 12	8/30/2027	$77.74	$15.32	$12.61	$8.50	$0.00	$114.17
	2/2/2028	$79.69	$15.32	$12.61	$8.50	$0.00	$116.12
	9/4/2028	$81.64	$15.32	$12.61	$8.50	$0.00	$118.07
	3/5/2029	$83.59	$15.32	$12.61	$8.50	$0.00	$120.02
	9/3/2029	$85.54	$15.32	$12.61	$8.50	$0.00	$121.97
	3/4/2030	$87.49	$15.32	$12.61	$8.50	$0.00	$123.92
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"							

Additional Apprentice Information

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

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

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

Attachment B – Long Beach Seawall FEMA Disaster Relief Project Contract Drawings

LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT

PROJECT NO. 73018

EVENT NO. 4372DR-MA

PREPARED FOR:

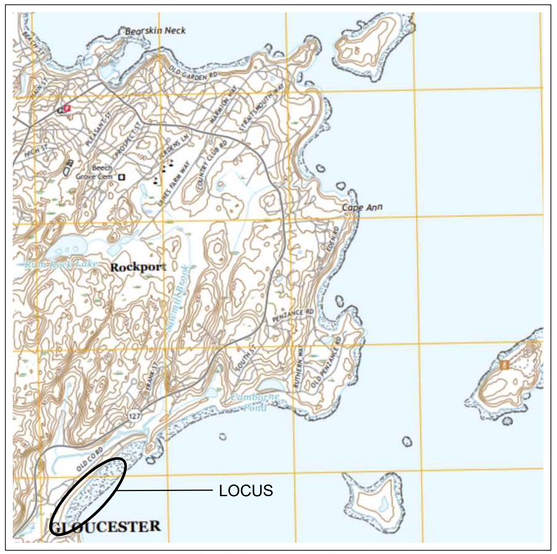
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PREPARED BY:

GZA GEOENVIRONMENTAL, INC.
144 ELM STREET
AMESBURY, MA 01913

INDEX OF DRAWINGS:

SHEET 1	COVER SHEET AND NOTES
SHEET 2	KEY PLAN - EXISTING CONDITIONS PLAN
SHEET 3	EXISTING CONDITIONS PLAN AND SECTIONS
SHEET 4	PROPOSED RECONSTRUCTION PLAN AND SECTION
SHEET 5	PROPOSED DETAILS
SHEET 6	TEMPORARY STAGING AND EROSION CONTROL PLAN



PROJECT LOCUS MAP

SOURCE: USGS TOPOGRAPHIC QUADRANGLES
NOT TO SCALE

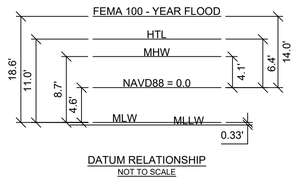


PROJECT AERIAL IMAGE

SOURCE: TOWN OF ROCKPORT
DEPARTMENT OF PUBLIC WORKS, GIS DIVISION
NOT TO SCALE

MATERIAL SPECIFICATIONS:
MATERIAL AND PRODUCT REQUIREMENTS, WHERE REFERENCED AS MHD, THE REQUIREMENTS REFERS TO THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988, OR LATEST EDITION.

CONCRETE:	28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI		
	1-1/2" MAXIMUM AGGREGATE SIZE		
	AIR CONTENT 5.0% - 7.0%		
CEMENT:	ASTM C575, TYPE IL		
REINFORCING STEEL:	GRADE 60 - ASTM A615		
	EPOXY COATED - ASTM A775		
DOWELS:	GRADE 60 - ASTM A615		
	EPOXY COATED - ASTM A775		
EPOXY ADHESIVE:	TWO-COMPONENT EPOXY ADHESIVE, SUITABLE FOR MARINE ENVIRONMENT (HILTI-RE 500 V3, OR APPROVED EQUIVALENT)		
ELASTOMERIC SEALANT:	NON-SAG, ELASTOMERIC, SILICONE SEALANT, SUITABLE FOR MARINE ENVIRONMENT, COLOR TO BE CLEAR OR TRANSPARENT (SIKASIL-N PLUS, OR APPROVED EQUIVALENT) - ASTM C920		
PERMANENT STEEL SHEETPILES:	GRADE 50 -ASTM A572, MINIMUM STRUCTURAL CHARACTERISTICS OF AN NZ-14		
RAILING PIPE:	SCHEDULE 80 STEEL HOT-DIPPED GALVANIZED - ASTM A53		
FILTER FABRIC:	NON-BIODEGRADABLE NEEDLE-PUNCHED NON-WOVEN GEOTEXTILE FILTER FABRIC RESISTANT TO NATURALLY ENCOUNTERED CHEMICALS, ALKALIS, AND ACIDS (MIRAFI 180N, OR APPROVED EQUIVALENT)		
CRUSHED STONE (1-½ IN.): (MHD SPEC. M2.01.1)	SIEVE NO.	SIZE (MM)	PERCENT PASSING
	2"	50.8	100
	1-½"	38.1	95-100
	1"	25.4	35-70
	¾"	19.1	0-25



DATUM RELATIONSHIP
NOT TO SCALE

PROJECT DESCRIPTION:

1. THE PROJECT INVOLVES THE RECONSTRUCTION OF APPROXIMATELY 350 LINEAL FEET OF A 1930'S SECTION OF SEAWALL (STATION 12+10 TO 15+60) AND THE RECONSTRUCTION OF APPROXIMATELY 43 LINEAL FEET OF SEAWALL WITH NEW CONCRETE ACCESS STAIRWAY, LOCATED AT THE WESTERN END (STATION 0+00) IN CLOSE PROXIMITY TO SEASONAL RESIDENTIAL STRUCTURES. THE PROJECT ALSO INCLUDES POST-CONSTRUCTION AND SITE RESTORATION.
2. THE PROJECT WORK INCLUDES ALL WORK REQUIRED TO COMPLETE THE PROJECT INCLUDING LABOR, MATERIALS, TRANSPORTATION, SITE MOBILIZATION, SITE PREPARATION, PROTECTION OF EXISTING STRUCTURES, CONSTRUCTION, EROSION AND SEDIMENT CONTROLS, SITE SURVEY, DEMOBILIZATION AND SITE RESTORATION, PROVISION OF ALL REQUIRED SUBMITTALS, SHOP DRAWINGS, ETC., AND PREPARATION AND SUBMITTAL OF AS-BUILT CONSTRUCTION DRAWINGS.

REFERENCE NOTES:

1. TOPOGRAPHIC SURVEY AND SURVEY CONTROL LOCATION PERFORMED BY GZA GEOENVIRONMENTAL, INC. ON NOVEMBER 21 AND 22, 2019 AND FEBRUARY 24, 2022. UPDATED TOPOGRAPHIC SURVEY PERFORMED BY GZA GEOENVIRONMENTAL, INC. ON JANUARY 15, 2026. SURVEY CONTROL LOCATIONS USING REAL-TIME KINEMATIC DIFFERENTIAL GLOBAL POSITIONING SYSTEM UNIT (RTK DGPS). BEACH LEVEL SUBJECT TO FLUCUATIONS.
2. SITE BENCHMARK IS A MAG NAIL SET INTO THE PAVEMENT AT THE END OF LONG BEACH (OLD COUNTY) ROAD, BENCHMARK EL. +10.8 FEET NAVD88.
3. PROJECT DATUM: MA STATE PLANE COORDINATE SYSTEM, NAD83 IN US SURVEY FEET (HORIZONTAL); NAVD88 IN FEET (VERTICAL).
4. AERIAL IMAGERY SUPPLIED BY THE TOWN OF ROCKPORT.
5. PROPERTY LINES ARE APPROXIMATE AND WERE DELINEATED USING AVAILABLE LAYERS FROM MASSGIS'S ONLINE MAPPING TOOL.
6. THE LOCATIONS OF EXISTING BUILDING FOOTPRINTS WERE APPROXIMATELY DETERMINED BY USING AVAILABLE AERIAL PHOTOGRAPHY AND LIMITED SITE SURVEY.
7. THE LOCATIONS OF UTILITIES ARE APPROXIMATE; SOME UTILITIES MAY NOT BE SHOWN ON THE PLAN. UTILITY LINES SHOWN WERE SUPPLIED BY THE TOWN OF ROCKPORT. ACCESSIBLE AND VISIBLE UTILITIES WERE APPROXIMATELY DETERMINED USING AN RTK DGPS UNIT AND TOTAL STATION SURVEY UNIT BY GZA GEOENVIRONMENTAL, INC.
8. THE SUBJECT PROPERTY IS LOCATED IN THE TOWN OF ROCKPORT "RESIDENTIAL A" (RA) ZONING DISTRICT.
9. THE PROJECT AREA IS LOCATED WITHIN THE COASTAL AREA MANAGEMENT ZONE. THE PROJECT IS ALSO LOCATED WITHIN THE FEMA FLOOD HAZARD ZONE VE (BFE=EL. 14 FEET NAVD88).
10. FEMA FLOOD HAZARD ZONES WERE DELINEATED USING FEMA'S DIGITAL NATIONAL FLOOD HAZARD LAYER (NFHL) WHICH INCORPORATES ALL FLOOD INSURANCE RATE MAP (FIRM) DATABASES PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AND MAP REVISIONS.
11. APPROPRIATE CHAPTER 91 JURISDICTION LIMITS WERE DELINEATED USING AVAILABLE LAYERS FROM MASSGIS'S ONLINE MAPPING TOOL.
12. THE LOCATIONS OF RESOURCE AREAS WERE APPROXIMATELY DETERMINED FROM EXISTING TOPOGRAPHIC SURVEY AND THE WETLAND PROTECTION ACT DEFINITIONS.
13. TIDE DATUMS WERE DEVELOPED BASED ON THE NOAA ROCKPORT HARBOR, MA TIDE STATION (8441551) AND CORRECTED FOR THE PROJECT SITE USING THE NOAA/NOS SOFTWARE VDATUM 4.0. THE CORRECTED TIDE DATUMS USED FOR THE PROJECT ARE SUMMARIZED BELOW:
    - 13.A. MEAN HIGHER HIGH WATER (MHHW): 4.5 FT-NAVD88
    - 13.B. MEAN HIGH WATER (MHW): 4.1 FT-NAVD88
    - 13.C. MEAN TIDE LEVEL (MTL: -0.3 FT-NAVD88
    - 13.D. MEAN LOW WATER (MLW): -4.6 FT-NAVD88
    - 13.E. MEAN LOWER LOW WATER (MLLW): -4.9 FT-NAVD88
14. REFERENCED STANDARDS: REFERENCES HEREIN TO ANY TECHNICAL SOCIETY, ORGANIZATION, GROUP OR BODY ARE MADE IN ACCORDANCE WITH THE FOLLOWING ABBREVIATIONS AND, UNLESS OTHERWISE NOTED OR SPECIFIED, ALL WORK UNDER THIS SECTION SHALL CONFORM TO THE LATEST EDITION AS APPLICABLE:
    - 14.A. ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS
    - 14.B. COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988, OR LATEST EDITION

GENERAL REQUIREMENTS FOR CONSTRUCTION:

1. CONSTRUCTION WORK WILL BE OBSERVED BY THE ENGINEER DURING CONSTRUCTION.
2. CONSTRUCTION SCHEDULE LIMITATIONS: NO WORK SHALL BE PERFORMED AT ANY TIME DURING THE PERIOD FROM JUNE 15 TO SEPTEMBER 15.
3. CONTRACTOR SHALL NOTIFY DIGSAFE PRIOR TO THE START OF WORK AS REQUIRED BY STATE AND LOCAL REGULATIONS AND IN ACCORDANCE WITH GOOD INDUSTRY PRACTICE.
4. EXISTING UTILITIES MAY NOT BE ADEQUATELY DEFINED BY DIGSAFE; THEREFORE, THE CONTRACTOR SHALL LOCATE THE EXISTING UTILITIES WITHIN THE LIMITS OF ALL EXCAVATION PRIOR TO THE START OF ANY EXCAVATION ACTIVITIES USING A QUALIFIED UTILITY LOCATING COMPANY.
5. AT THE COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL RESTORE ANY AREAS DISTURBED AS A RESULT OF CONSTRUCTION.
6. CONTRACTOR SHALL REMOVE AND DISPOSE ALL UNQUALIFIED MATERIALS, CONSTRUCTION DEBRIS, OR OTHER MATERIALS DETERMINED TO BE INADEQUATE FROM THE SITE AT NO COST TO THE OWNER.
7. CONTRACTOR SHALL PROVIDE AND MAINTAIN THE PROPER EQUIPMENT TO DELIVER, UNLOAD, AND INSTALL THE MATERIALS TO THEIR FINAL LOCATION.
8. IMPORTED AND EXCAVATED MATERIALS SHALL BE STORED IN SEGREGATED LOCATIONS TO ASSURE NO MIXING WITH FINE GRADATION NATIVE SAND. PROTECT THE STOCKPILES FROM SLOUGHING OR MOVEMENT AND FROM STORMWATER RUNOFF TO ADJACENT AREAS.
9. ALL FILL MATERIALS SHALL BE PLACED AND GRADED TO THE LIMITS AND GRADES SHOWN ON THE DRAWINGS.
10. PARAMETERS OF ROUGH FINISH, INCLUDING MAXIMUM AND MINIMUM ELEVATION DIFFERENCES, TO BE ESTABLISHED BETWEEN THE PROJECT ENGINEER AND CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
11. TIDAL DATA IS PER NOAA AVERAGES BASED ON THE 1983-2001 TIDAL EPOCH AND NOT GUARANTEED TO REPRESENT CONDITIONS WHICH MAY OCCUR DURING CONSTRUCTION. ACTUAL WATER LEVELS WILL VARY FROM LEVELS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN ESTIMATES OF WATER LEVELS WHICH MAY OCCUR DURING CONSTRUCTION. CONTRACTOR SHALL BE PREPARED TO WORK WITHIN THE TIDAL CYCLE TO AVOID INUNDATION OF THE WORK AREA DURING CONSTRUCTION.
12. FILL MATERIALS:
    - 12.A. ALL FILL MATERIALS SHALL BE FREE OF CONTAMINANTS, ARTIFICIAL MATERIALS AND OTHER DELETERIOUS MATERIALS.
    - 12.B. FILL MATERIALS SHALL BE FROM A SOURCE APPROVED BY THE ENGINEER AND OWNER PRIOR TO THE START OF CONSTRUCTION.
    - 12.C. SPECIFICATIONS FOR MATERIALS ARE PRESENTED HEREIN.

CONSTRUCTION SEQUENCE:

1. THE CONSTRUCTION SEQUENCE SHALL BE ESTABLISHED BY THE CONTRACTOR. IN GENERAL, THE EXPECTED SEQUENCE IS AS FOLLOWS:
    - 1.A. SITE MOBILIZATION AND PREPARATION;
    - 1.B. ESTABLISHMENT OF SITE SURVEY CONTROLS;
    - 1.C. PRE-CONSTRUCTION SURVEYS;
    - 1.D. UTILITY CLEARANCES;
    - 1.E. INSTALLATION OF EROSION AND SEDIMENTATION MEASURES;
    - 1.F. REMOVE AND PROTECT PRIVATE SITE FEATURES;
    - 1.G. INSTALLATION OF TEMPORARY SUPPORT OF EXCAVATION MEASURES INCLUDING LANDWARD SUPPORT OF EXCAVATION BETWEEN THE SEAWALL REPLACEMENT AND EXISTING SEASONAL RESIDENTIAL STRUCTURES AND PERMANENT STEEL SHEETPILES AT PROPOSED WALL TOE;
    - 1.H. EXCAVATION AND REMOVAL OF EXISTING SEAWALL SECTIONS;
    - 1.I. SUBGRADE AND SUBBASE PREPARATION;
    - 1.J. INSTALLATION OF NEW REINFORCED CAST-IN-PLACE CONCRETE FOOTINGS;
    - 1.K. INSTALLATION OF NEW REINFORCED CAST-IN-PLACE CONCRETE SEAWALL SECTIONS AND PERMANENT STAIRWAY AT WEST END;
    - 1.L. RESTORE BEACH AND STONE APRON;
    - 1.M. BACKFILLING, REMOVAL OF TEMPORARY SUPPORT OF EXCAVATION MEASURES, AND RESTORATION OF THE DISTURBED AREAS;
    - 1.K. INSTALL RAILINGS;
    - 1.L. RESTORE SITE FEATURES;
    - 1.M. REMOVAL OF EROSION AND SEDIMENTATION CONTROL MEASURES;
    - 1.N. DEMOBILIZATION AND SITE RESTORATION; AND
    - 1.O. SUBMITTAL OF AS-BUILT DRAWINGS.

EROSION CONTROL GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL.
2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PERIODICALLY MAINTAINED ON A REGULAR BASIS DURING CONSTRUCTION, AND PROMPTLY FOLLOWING STORMS OR PERIODS OF RAINFALL.

NO.	ISSUE/DESCRIPTION	BY	DATE
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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

COVER SHEET AND NOTES

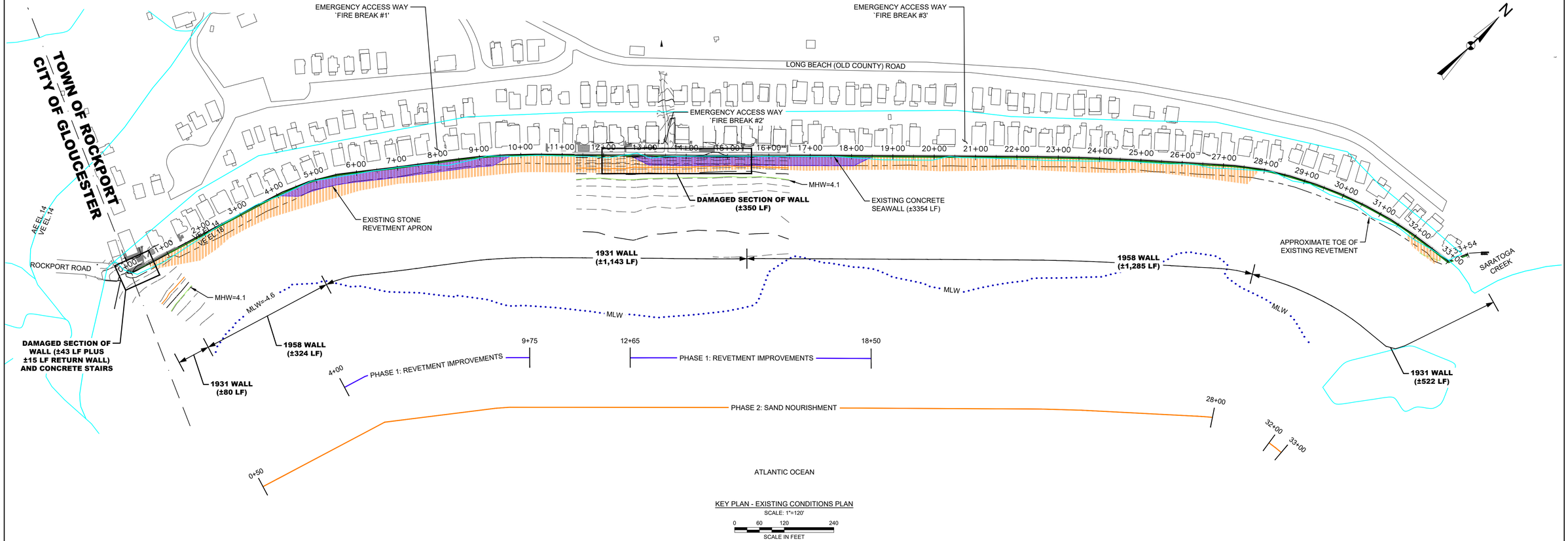
PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 1
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS SHOWN	
DATE: OCT 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 1 OF 6

© 2019 – GZA GeoEnvironmental, Inc. G:\ZA–u\18\173700's\18.0173734.04 Long Beach Seawall Repairs 2025\Figures\CAD\COVER SHEET.dwg [Sheet 1–COVER] October 20, 2026 – 4:24pm Isabel.Gleckner

© 2019 – GZA GeoEnvironmental, Inc. GZA–J:\18\173700's\18.0173734.04 Long Beach Seawall Repairs 2025\Figures\CAD\Long Beach Seawall Improvements FEMA 4372DR 2026.dwg [Sheet 2–KEY PLAN] October 20, 2026 – 11:20am Isabel.Gleckner



KEY PLAN - EXISTING CONDITIONS PLAN
SCALE: 1"=120'

0 60 120 240
SCALE IN FEET

LEGEND

- EXISTING SEAWALL
- APPROX. TOE OF EXISTING STONE REVETMENT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- FEMA ZONE LIMITS
- EXISTING HIGH TIDE LEVEL
- EXISTING MEAN HIGH WATER (MHW)
- EXISTING MEAN LOW WATER (MLW)
- PHASE 1: REVETMENT IMPROVEMENTS (COMPLETED JANUARY-FEBRUARY 2019)
- PHASE 2: SAND NOURISHMENT (COMPLETED OCTOBER-NOVEMBER 2019)

NO.	ISSUE/DESCRIPTION	BY	DATE
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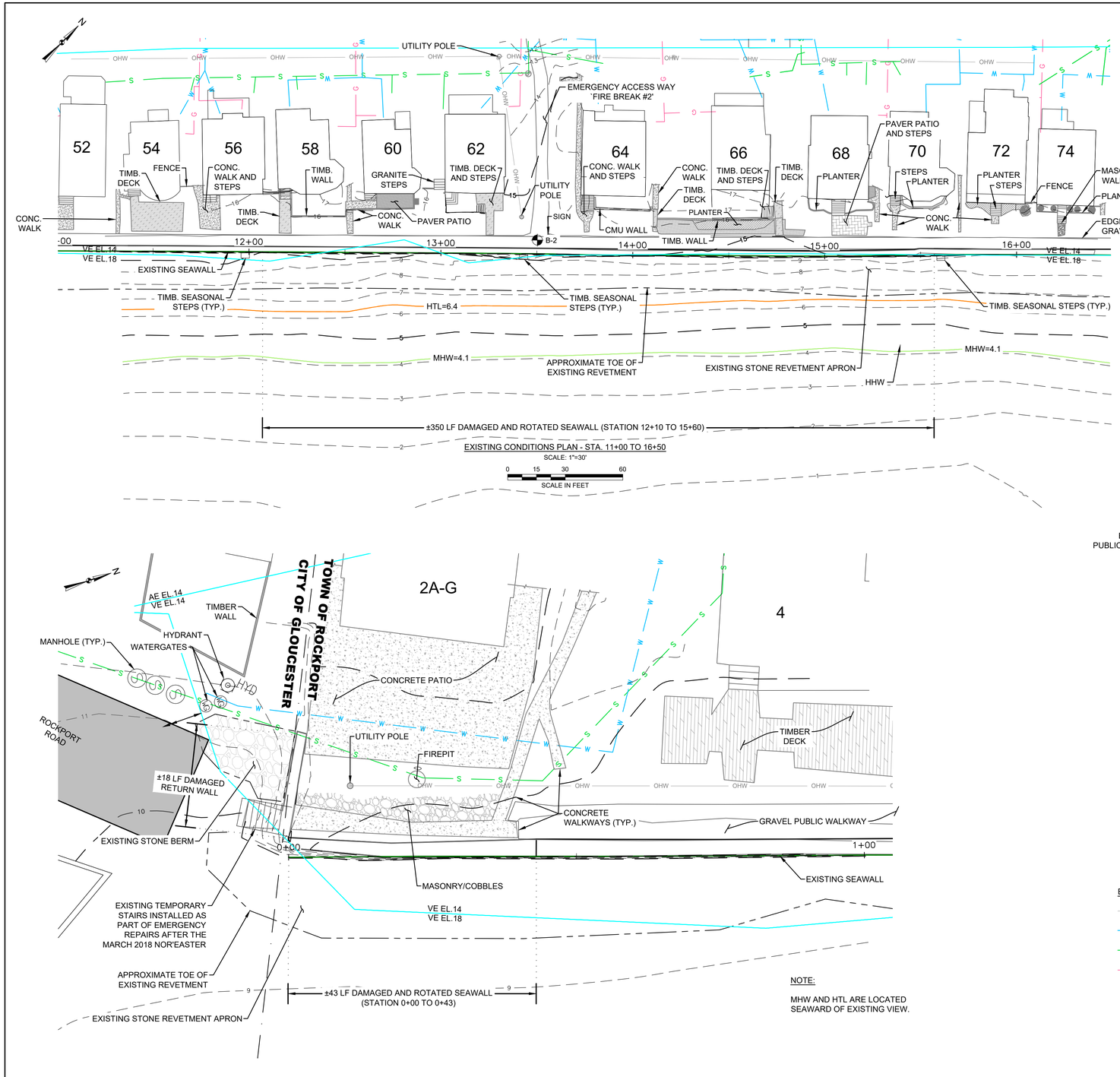
LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

KEY PLAN - EXISTING CONDITIONS PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 2
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: OCT 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 2 OF 6

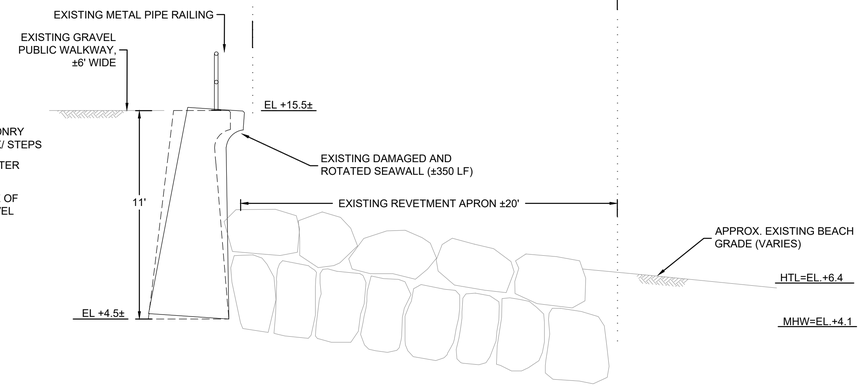


EXISTING CONDITIONS PLAN - STA. 11+00 TO 16+50

SCALE: 1"=30'

0 15 30 60

SCALE IN FEET



EXISTING WALL SECTION - STA. 14+00 (TYPICAL SEAWALL DAMAGE)

SCALE: 1"=4'

0 2 4 8

SCALE IN FEET

NOTE:

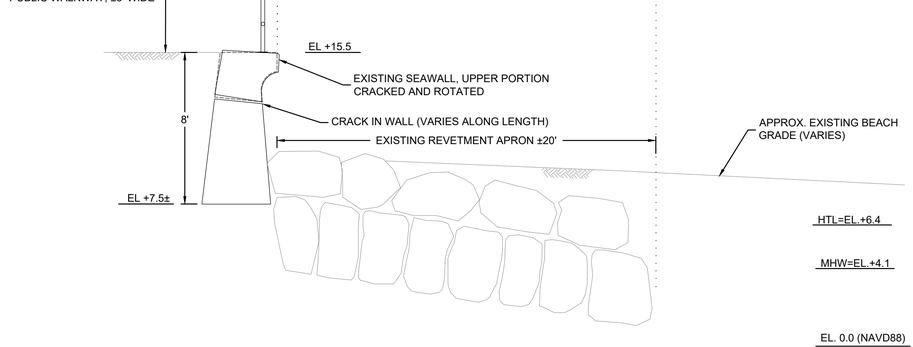
MHW AND HTL ARE LOCATED SEAWARD OF EXISTING VIEW.

EXISTING CONDITIONS PLAN - WESTERN END STA. 0+00 TO 1+00

SCALE: 1"=10'

0 5 10 20

SCALE IN FEET



EXISTING WALL SECTION - STA. 0+25 (TYPICAL SEAWALL DAMAGE)

SCALE: 1"=4'

0 2 4 8

SCALE IN FEET

EXISTING UTILITY LEGEND

OHW	EXISTING OVERHEAD LINES
W W	EXISTING WATER LINES
S S	EXISTING SEWER LINES
G	EXISTING GAS LINES
S	EXISTING SEWER MANHOLE
WG	EXISTING WATER GATE
HYD	EXISTING HYDRANT
B-2	APPROXIMATE LOCATION OF BORING OBSERVED BY GZA ON MARCH 30, 2011

NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED FOR BIDDING	IMG	OCTOBER 2026

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

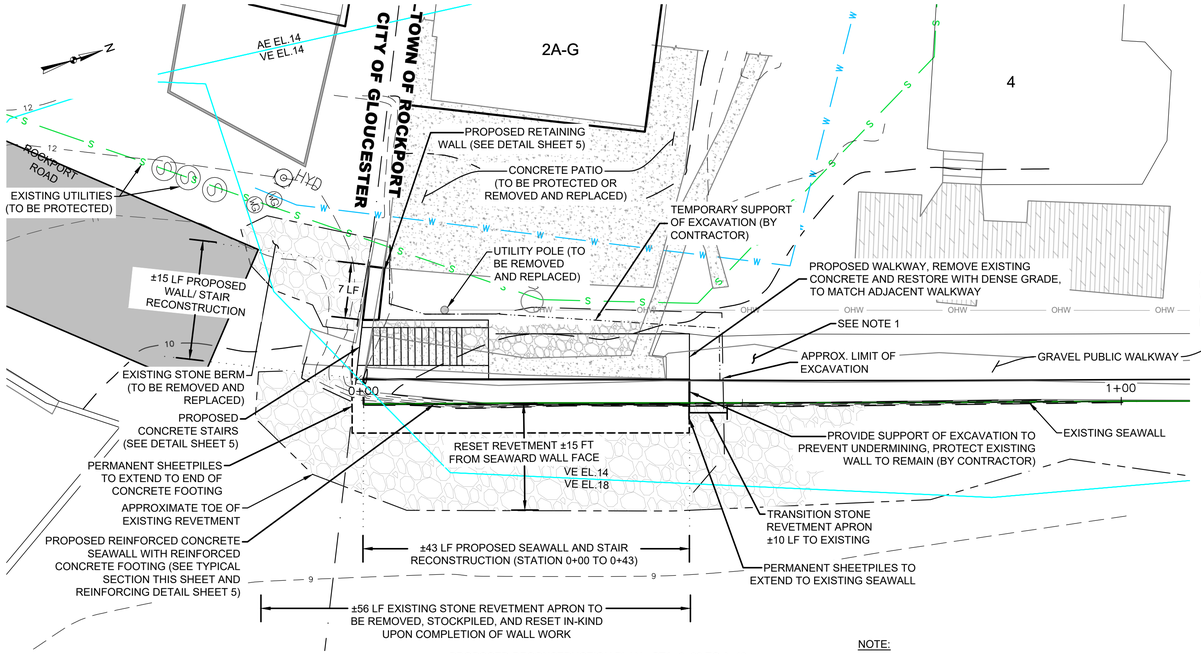
EXISTING CONDITIONS PLAN AND SECTIONS

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 3
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: OCT 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 3 OF 6

© 2019 – GZA GeoEnvironmental, Inc. GZA–J:\18\173700's\18.0173734.04 Long Beach Seawall Repairs 2025\Figures\CAD\Long Beach Seawall Improvements FEMA 4372DR 2026.dwg [Sheet 3–EX PLAN & SECT] October 20, 2026 – 11:22am Isobel.Gleckner



PROPOSED RECONSTRUCTION PLAN - STA. 0+00 TO 0+43

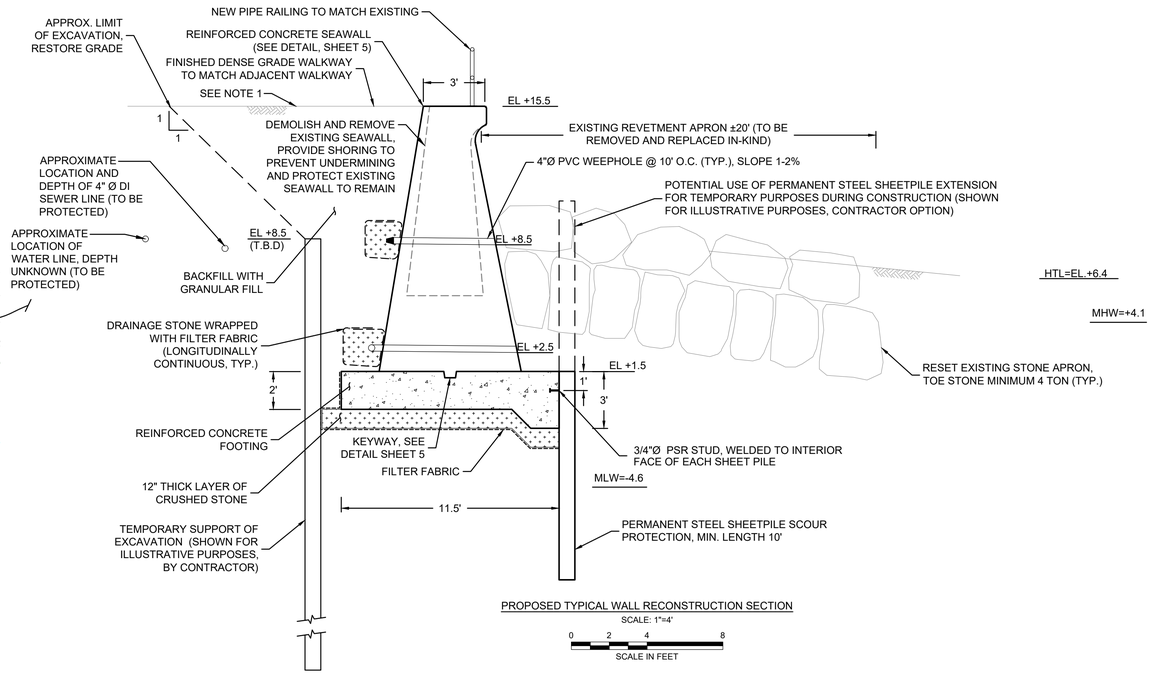
SCALE: 1"=10'

0 5 10 20

SCALE IN FEET

NOTE:

MHW AND HTL ARE LOCATED SEAWARD OF EXISTING VIEW.

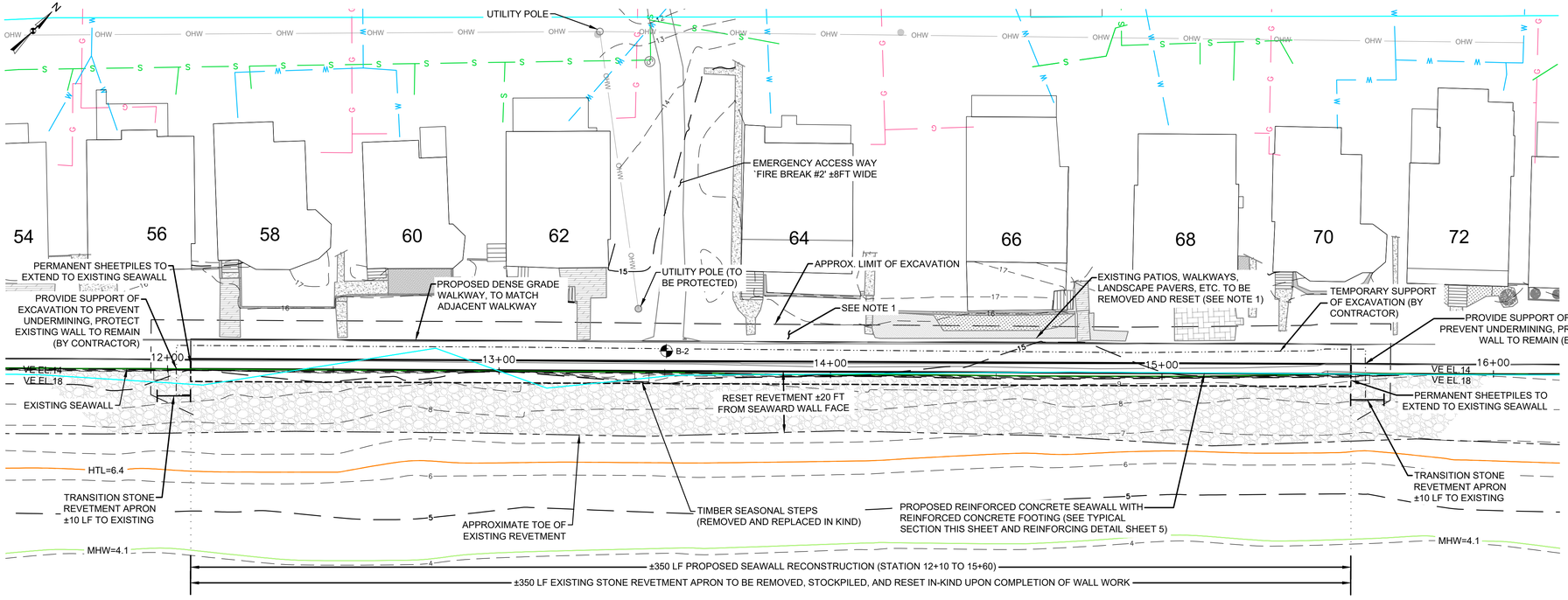


PROPOSED TYPICAL WALL RECONSTRUCTION SECTION

SCALE: 1"=4'

0 2 4 8

SCALE IN FEET



PROPOSED RECONSTRUCTION PLAN - STA. 12+10 TO 15+60

SCALE: 1"=20'

0 10 20 40

SCALE IN FEET

NOTES:

1. SITE FEATURES INCLUDING, BUT NOT LIMITED TO, RESIDENTIAL WALKWAYS, PATIOS, DECKS, STAIRS, AND PLANTERS TO BE REMOVED AND RESTORED IN-KIND TO PRE-CONSTRUCTION CONDITIONS TO FACILITATE THE PROPOSED SEAWALL RECONSTRUCTION.

NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED FOR BIDDING	IMG	OCTOBER 2026

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

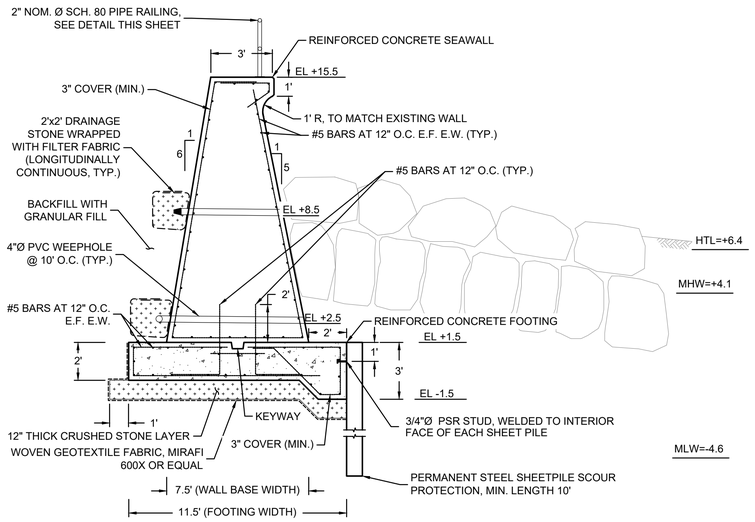
PROPOSED RECONSTRUCTION PLAN AND SECTION

PREPARED BY:
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Engineers and Scientists
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PREPARED FOR:
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34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 4
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: OCT 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 4 OF 6

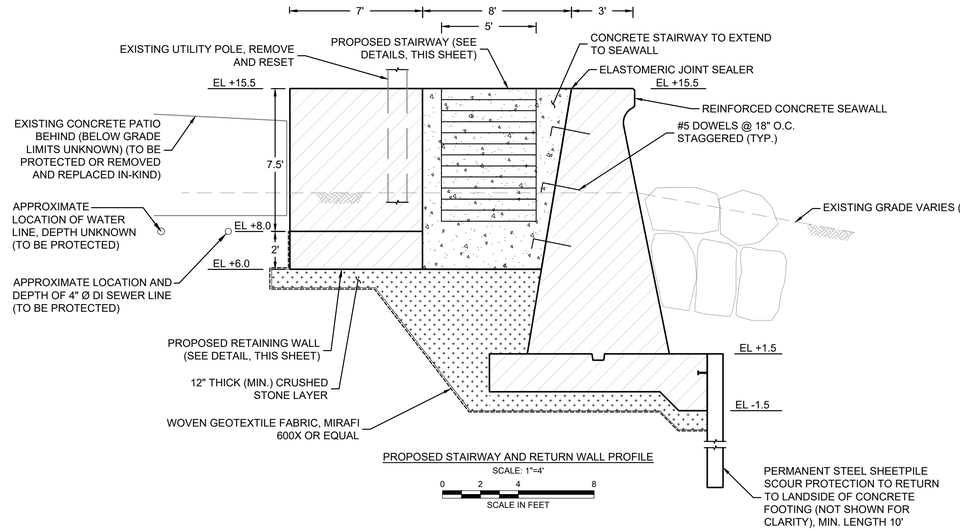
© 2019 – GZA GeoEnvironmental, Inc. G:\ZA—u\18\173700's\18.0173734.04 Long Beach Seawall Repairs 2025\Figures\CAD\Long Beach Seawall Improvements FEMA 4372DR 2026.dwg [Sheet 4--PR PLAN & SECT] October 21, 2026 – 9:34am Isabel.Gleckner



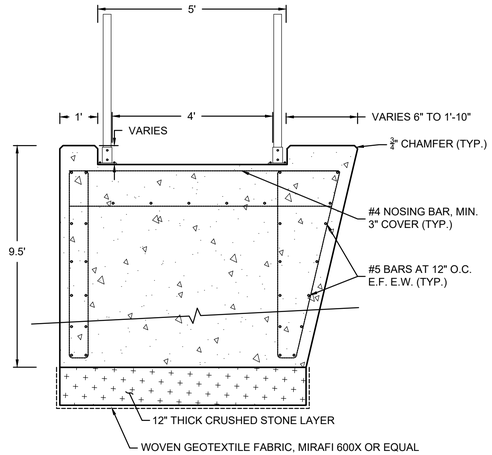
TYPICAL PROPOSED SEAWALL REINFORCING
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET

WALL RECONSTRUCTION NOTES:

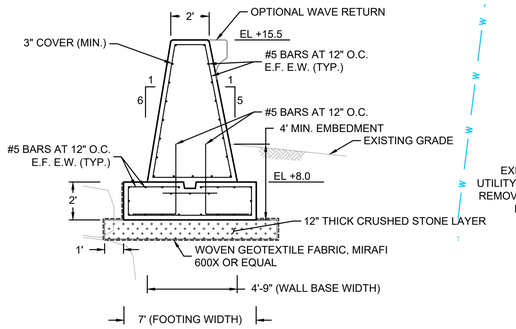
1. ALL REINFORCING BARS ARE TO BE A MINIMUM 3" CLEAR FROM FACE OF CONCRETE.
2. PROVIDE TOOLED CONSTRUCTION JOINTS NO MORE THAN 25' APART.
3. PROVIDE THREE EXPANSION JOINTS IN 350 FT WALL SECTION, EVENLY SPACED.



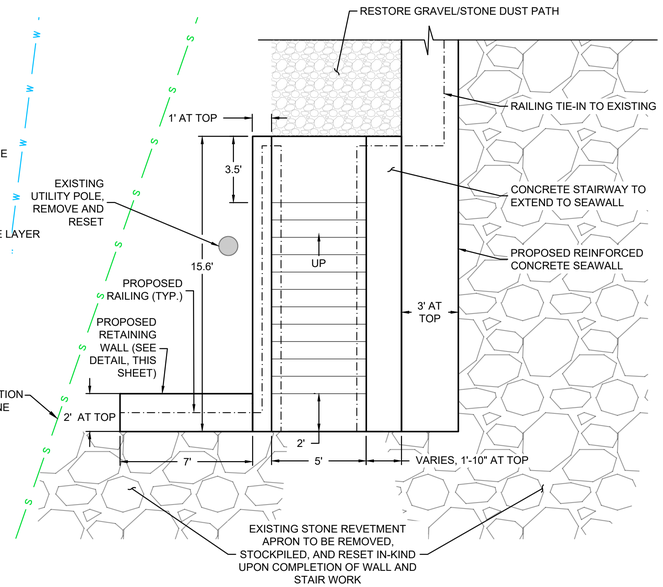
PROPOSED STAIRWAY AND RETURN WALL PROFILE
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



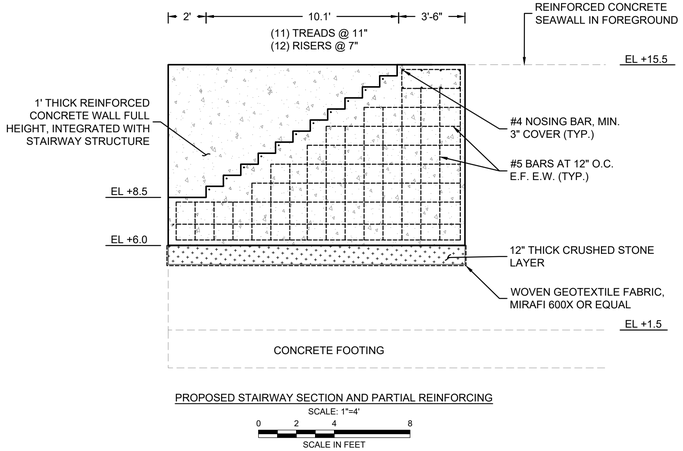
PROPOSED STAIRWAY CROSS SECTION
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET



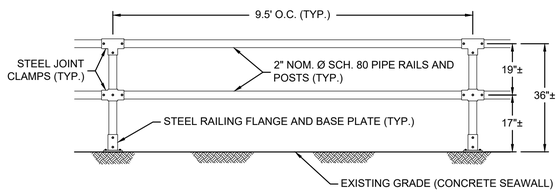
TYPICAL RETAINING WALL REINFORCING DETAIL
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



PROPOSED STAIRWAY AND RETURN WALL PLAN
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



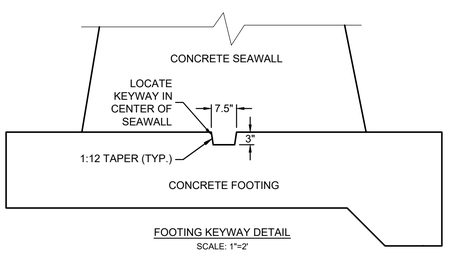
PROPOSED STAIRWAY SECTION AND PARTIAL REINFORCING
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



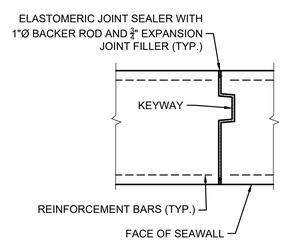
TYPICAL PROPOSED RAILING DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET

RAILING NOTES:

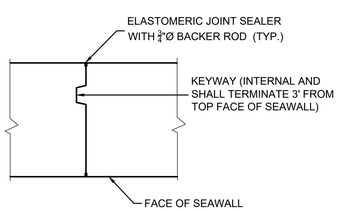
1. PROPOSED RAILINGS SHALL MATCH EXISTING AND TIE-IN TO EXISTING RAILINGS TO REMAIN.
2. DIMENSIONS FROM EXISTING GRADE TO TOP AND MID-RAILS OF THE NEW RAILING SHALL MATCH THE EXISTING RAILING. FIELD VERIFY ALL DIMENSIONS.



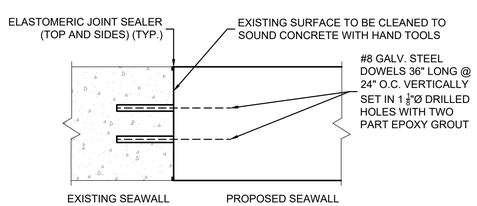
FOOTING KEYWAY DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET



EXPANSION JOINT DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET



CONSTRUCTION JOINT DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET



SEAWALL TIE-IN DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED FOR BIDDING	IMG	OCTOBER 2026

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

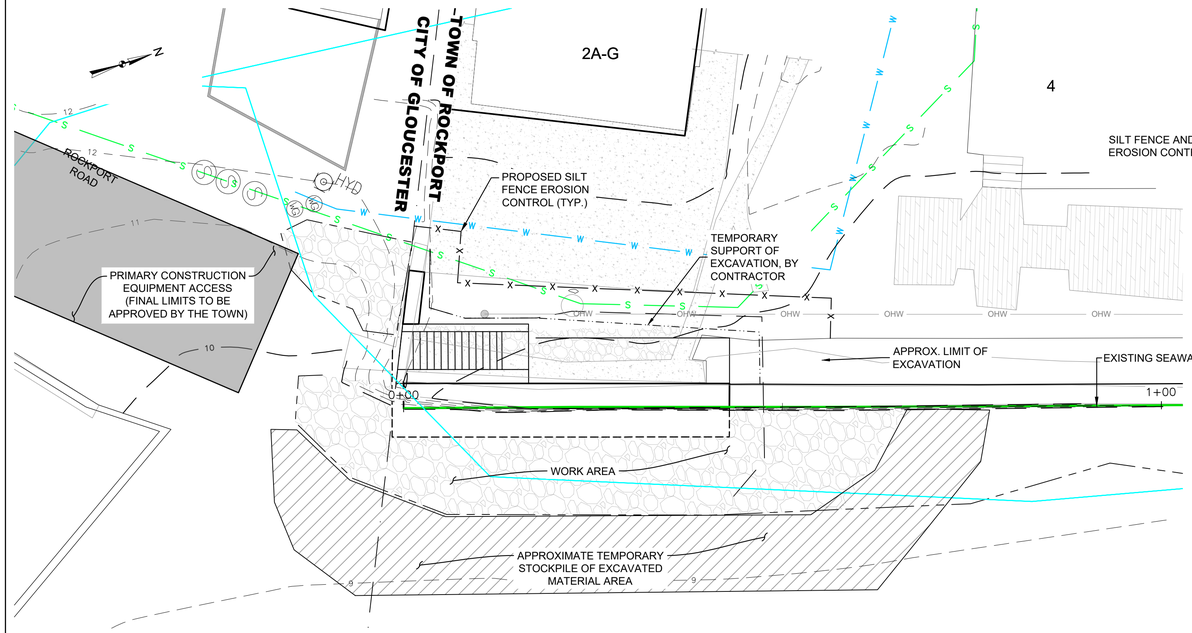
PROPOSED DETAILS

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 5
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: OCT 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 5 OF 6

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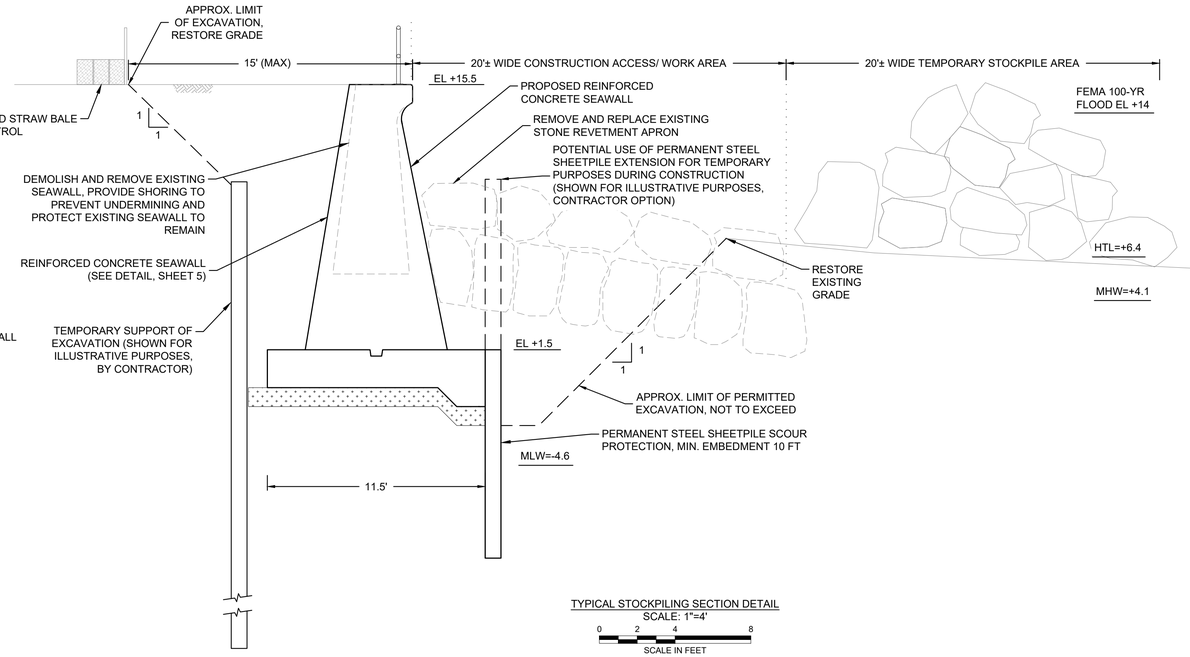
TYPICAL PHASED STAGING AND STOCKPILING PLAN - STA. 0+00 TO 0+43

SCALE: 1"=10'

0 5 10 20

SCALE IN FEET

NOTE:
MHW AND HTL ARE LOCATED SEAWARD OF EXISTING VIEW.

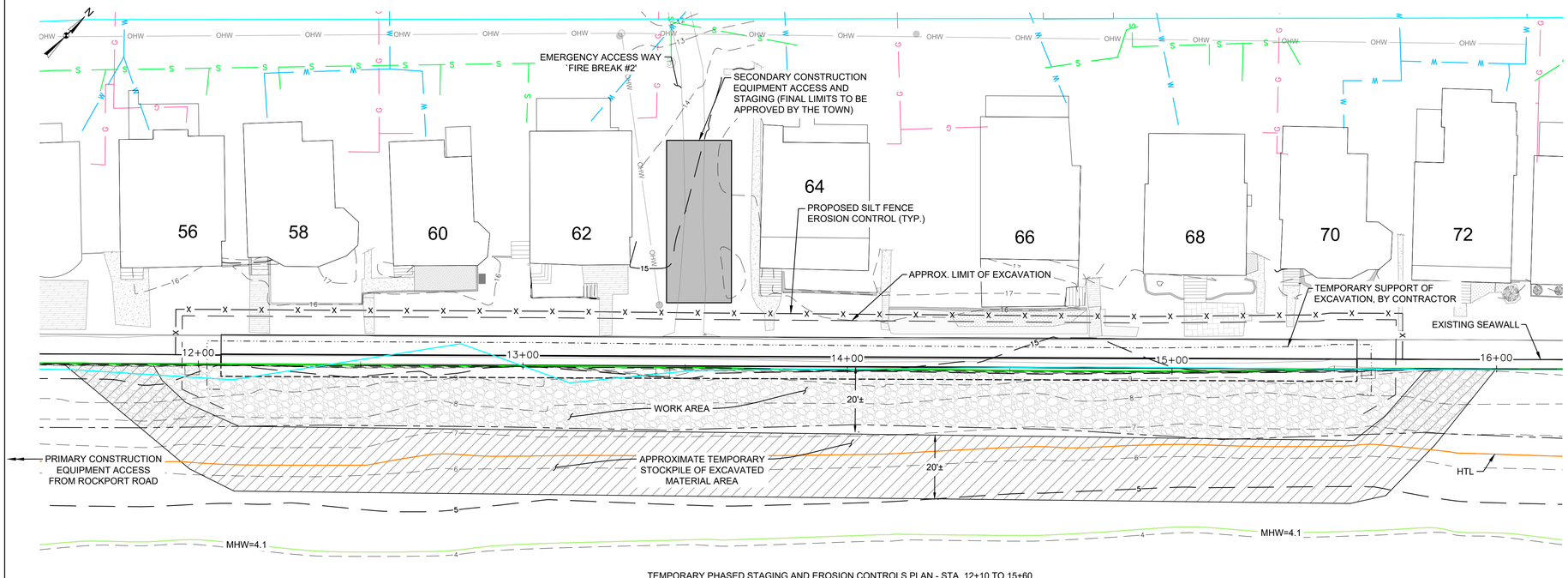


TYPICAL STOCKPILING SECTION DETAIL

SCALE: 1"=4'

0 2 4 8

SCALE IN FEET



TEMPORARY PHASED STAGING AND EROSION CONTROLS PLAN - STA. 12+10 TO 15+60

SCALE: 1"=20'

0 10 20 40

SCALE IN FEET

STAGING AND STOCKPILING NOTES:

1. EXCAVATED MATERIAL CONSISTING OF REVETMENT STONE, BEACH SAND, AND OTHER GRANULAR MATERIAL IS TO BE TEMPORARILY STOCKPILED ALONG THE BEACH SEAWARD OF THE PROPOSED WORK.
2. STOCKPILED MATERIAL MAY BE USED TO ACT AS A TEMPORARY BUFFER AGAINST WAVES AND TIDAL WATERS DURING THE CONSTRUCTION WORK, CONTRACTOR TO MAINTAIN.
3. SUITABLE EXCAVATED MATERIAL WILL BE USED TO BACKFILL EXCAVATIONS AND RESTORE THE AREA TO PRE-CONSTRUCTION CONDITIONS.
4. APPROXIMATELY 960 CY OF ADDITIONAL MATERIAL TO BE GENERATED BY INCREASE IN BELOW-GRADE SEAWALL GEOMETRY. SUITABLE MATERIAL SHALL BE REDISTRIBUTED ON BEACH FOLLOWING CONSTRUCTION.
5. THE BEACH SHALL BE ACCESSED VIA ROCKPORT ROAD DAILY, ALL EQUIPMENT SHALL BE LIMITED TO THE AREA LANDWARD OF THE TEMPORARY STOCKPILE BERM DURING WORK.

EROSION CONTROL NOTES:

1. ALONG THE LANDWARD SIDE OF THE SEAWALL, EROSION CONTROLS SHALL BE INSTALLED BETWEEN THE LIMITS OF WORK AND DWELLINGS.
2. EROSION CONTROLS SHALL ALSO ACT AS A LIMIT OF DISTURBANCE, AND NO ALTERATION SHALL TAKE PLACE BEYOND IT.
3. EROSION CONTROLS SHALL BE INSPECTED DURING WORK AND MAINTAINED IN GOOD REPAIR.
4. EROSION CONTROLS SHALL REMAIN IN PROPER FUNCTIONING CONDITION UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.

NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED FOR BIDDING	IMG	OCTOBER 2026

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

TEMPORARY STAGING AND EROSION CONTROL PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 6
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: OCT 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 6 OF 6

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Attachment C – Permit Documents

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

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

Provided by MassDEP:
062-0953
MassDEP File #

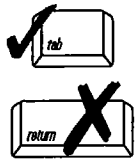
eDEP Transaction #

Rockport
City/Town

A. General Information

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

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



1. From: Rockport
Conservation Commission

2. This issuance is for (check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

Mitchell — a. First Name
Vieira — b. Last Name
Town of Rockport — c. Organization
Town Hall, 34 Broadway — d. Mailing Address
Rockport — e. City/Town
MA — f. State
01966 — g. Zip Code

4. Property Owner (if different from applicant):

a. First Name
b. Last Name
Town of Rockport — c. Organization
Select Board, 34 Broadway — d. Mailing Address
Rockport — e. City/Town
MA — f. State
01966 — g. Zip Code

5. Project Location:

Long Beach — a. Street Address
Rockport — b. City/Town
25 — c. Assessors Map/Plat Number
25 — d. Parcel/Lot Number

Latitude and Longitude, if known: 42d629782m s — d. Latitude; 70d617579m s — e. Longitude

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

Provided by MassDEP: 062-0953
MassDEP File #

eDEP Transaction #

Rockport
City/Town

A. General Information (cont.)

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

Essex South
a. County

b. Certificate Number (if registered land)

c. Book

d. Page

7. Dates: 5.15.26 a. Date Notice of Intent Filed; 6.3.26 b. Date Public Hearing Closed; 6.11.26 c. Date of Issuance

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

Long Beach FEMA Disaster Relief Project
a. Plan Title

GZA GeoEnvironmental, Inc.
b. Prepared By

Anders B. Bjamgard
c. Signed and Stamped by

April 2026
d. Final Revision Date

As shown
e. Scale

See Attachment to Order of Conditions
f. Additional Plan or Document Title

g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

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

a. ☐ Public Water Supply b. ☒ Land Containing Shellfish c. ☒ Prevention of Pollution

d. ☐ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat

g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

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

Approved subject to:

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

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

Provided by MassDEP:
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Rockport
City/Town

B. Findings (cont.)

Denied because:

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

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

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

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

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

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

Provided by MassDEP:
062-0953
MassDEP File #

eDEP Transaction #

Rockport
City/Town

B. Findings (cont.)

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

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☐ Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. ☒ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☒ Coastal Beaches	+\-24,980 SF temp	+\-24,980 SF temp	cu yd c. nourishment	cu yd d. nourishment
14. ☒ Coastal Dunes	See Attachment	See Attachment	cu yd c. nourishment	cu yd d. nourishment
15. ☐ Coastal Banks	a. linear feet	b. linear feet		
16. ☐ Rocky Intertidal Shores	a. square feet	b. square feet		
17. ☐ Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. ☐ Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. ☐ Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. ☐ Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. ☒ Land Subject to Coastal Storm Flowage	See Attachment	See Attachment		
22. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

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

Provided by MassDEP:
062-0953
MassDEP File #

eDEP Transaction #

Rockport
City/Town

B. Findings (cont.)

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

23. ☐ Restoration/Enhancement *:

a. square feet of BVW | b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings | b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

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

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

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C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.

10. A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

    "Massachusetts Department of Environmental Protection" [or, "MassDEP"]

    "File Number 062-0953 "

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.

12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.

13. The work shall conform to the plans and special conditions referenced in this order.

14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.

15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.

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

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

19. The work associated with this Order (the "Project")
    (1) ☐ is subject to the Massachusetts Stormwater Standards
    (2) ☒ is NOT subject to the Massachusetts Stormwater Standards

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

    a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

    b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
    i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
    ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
    iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

See Attachment to Orders of Conditions

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

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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The Rockport (Conservation Commission) hereby finds (check one that applies):

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

   _____ (1. Municipal Ordinance or Bylaw) _____ (2. Citation)

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

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

   Rockport Wetlands Protection Bylaw (1. Municipal Ordinance or Bylaw) _____ (2. Citation)

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

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

   See Attachment to Order of Conditions

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E. Signatures

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

6.11.26
1. Date of Issuance

Please indicate the number of members who will sign this form.
This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

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

Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name

☐ by hand delivery on

Date

☐ by certified mail, return receipt requested, on

Date

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F. Appeals

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

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

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

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G. Recording Information

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

Rockport
Conservation Commission

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

To:

Rockport
Conservation Commission

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

Long Beach Seawall
Project Location

062-0953
MassDEP File Number

Has been recorded at the Registry of Deeds of:

Essex South
County

Book

Page

for: Town of Rockport
Property Owner

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

Book

Page

In accordance with the Order of Conditions issued on:

6.11.26
Date

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

Instrument Number

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

Document Number

Signature of Applicant

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

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

DEP File Number:

Provided by DEP

A. Request Information

1. Location of Project

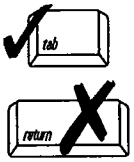
a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

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



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

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

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

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

B. Instructions

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

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

☐ Superseding Determination of Applicability – Fee: $120

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

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

DEP File Number:

Provided by DEP

B. Instructions (cont.)

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

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see https://www.mass.gov/service-details/massdep-regional-offices-by-community).

4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Attachment to Order of Conditions
Findings and Conditions

The applicant, **Mitchell Vieira, Town Administrator, on behalf of the Rockport Select Board, submitted a Notice of Intent (NOI) to the Rockport Conservation Commission for the proposed reconstruction of damaged portions of the Long Beach seawall on Coastal Bank and within 100 ft. of Coastal Bank, within Barrier Beach and Coastal Dune and within portions of Land Subject to Coastal Storm Flowage.** The proposed work is subject to review under the Commonwealth of Massachusetts Wetlands Protection Act (*the Act*), WPA Regulations (310 CMR 10.00) and the Rockport Code of By-laws, Chapter 14. Environmental Protection and Public Health, Section A: Wetlands (*the By-law)* and its regulations. A public hearing was opened on June 3, 2026 and attended by the applicant and his representative from GVA GeoEnvironmental, Inc. The public hearing was closed on June 3, 2026 at which time the Commission voted unanimously to approve the proposed project with the following Findings and Conditions.

Wetland resource areas subject to protection under *the Act* for this project include:

- Coastal Beaches;
- Coastal Dunes;
- Barrier Beach;
- Bordering Vegetated Wetlands;
- Land Subject to Coastal Storm Flowage

Wetland resource areas subject to protection under *the By-law* for this project include:

- Coastal Wetlands;
- Beaches;
- Dunes;
- Lands within 100 ft. or the above cited resource areas; and;
- Lands subject to Coastal Storm Flowage

Final approved Plans and other documents:

1. Long Beach Seawall FEMA Disaster Relief Project, Project No. 73018 (4272DR-MA), Rockport, Massachusetts, Cover Sheet and Notes (Figure 1, Sheet No. 1 of 6). Prepared for: Town of Rockport, 34 Broadway, Rockport, Massachusetts 01966. Prepared by: GZA GeoEnvironmental, Inc., Engineers and Scientists. Signed/stamped by: Anders B. Bjarngard (CE). Scale: As noted. Dated: April 2026.
2. Long Beach Seawall FEMA Disaster Relief Project, Project No. 73018 (4272DR-MA), Rockport, Massachusetts, Key Plan – Existing Conditions Plan (Figure 2, Sheet No. 2 of 6). Prepared for: Town of Rockport, 34 Broadway, Rockport, Massachusetts 01966. Prepared by: GZA

GeoEnvironmental, Inc., Engineers and Scientists. Signed/stamped by: Anders B. Bjarngard (CE). Scale: As noted. Dated: April 2026.

3. Long Beach Seawall FEMA Disaster Relief Project, Project No. 73018 (4272DR-MA), Rockport, Massachusetts, Key Plan – Existing Conditions Plan and Sections (Figure 3, Sheet No. 3 of 6). Prepared for: Town of Rockport, 34 Broadway, Rockport, Massachusetts 01966. Prepared by: GZA GeoEnvironmental, Inc., Engineers and Scientists. Signed/stamped by: Anders B. Bjarngard (CE). Scale: As noted. Dated: April 2026.
4. Long Beach Seawall FEMA Disaster Relief Project, Project No. 73018 (4272DR-MA), Rockport, Massachusetts, Proposed Reconstruction Plan and Section (Figure 4, Sheet No. 4 of 6). Prepared for: Town of Rockport, 34 Broadway, Rockport, Massachusetts 01966. Prepared by: GZA GeoEnvironmental, Inc., Engineers and Scientists. Signed/stamped by: Anders B. Bjarngard (CE). Scale: As noted. Dated: April 2026.
5. Long Beach Seawall FEMA Disaster Relief Project, Project No. 73018 (4272DR-MA), Rockport, Massachusetts, Proposed Details (Figure 5, Sheet No. 5 of 6). Prepared for: Town of Rockport, 34 Broadway, Rockport, Massachusetts 01966. Prepared by: GZA GeoEnvironmental, Inc., Engineers and Scientists. Signed/stamped by: Anders B. Bjarngard (CE). Scale: As noted. Dated: April 2026.
6. Long Beach Seawall FEMA Disaster Relief Project, Project No. 73018 (4272DR-MA), Rockport, Massachusetts, Temporary Staging and Erosion Control Plan (Figure 6, Sheet No. 6 of 6). Prepared for: Town of Rockport, 34 Broadway, Rockport, Massachusetts 01966. Prepared by: GZA GeoEnvironmental, Inc., Engineers and Scientists. Signed/stamped by: Anders B. Bjarngard (CE). Scale: As noted. Dated: April 2026.
7. Certificate of the Secretary of Energy and Environmental Affairs on the Notice of Project Change. Project Name: Long Beach Seawall FEMA Disaster Relief Project. Project Municipality: Rockport. Project Watershed: North Coastal. EEA Number: 15917. Project Proponent: Town of Rockport Department of Public Works. Date Noticed in Monitor: November 23, 2022. Date: December 23, 2022.
8. Smith, David., GZA GeoEnvironmental Inc. May 20, 2026. Notice of Intent Application Response to DEP Comments, Long Beach Seawall FEMA Disaster Relief Project. FEMA Project No. 73018 (4372DR-MA). Long Beach, Rockport, Massachusetts 01966.
9. Massachusetts Coastal Infrastructure Programmatic Environmental Assessment Compliance checklist, Long Beach Seawall Project, Rockport, Essex County, Massachusetts. PA-01-MA-4372-PW-00319. February 21, 2023.

Coastal Resource Area of Impacts (NOI Section B – Findings)

	Permanent Impact	Description	Temporary Impact	Description
Land Subject to Coastal Storm Flowage	±1,644 SF	Seawall Width Extension Beyond the Existing Seawall Limits (Seaside Only)	±33,980 SF	Seaward Excavation Area, Construction Access, and Material Stockpiling
Coastal Beach	±960CY	Suitable displaced sand will be redistributed	±24,980 SF	Seaward Material Stockpiling, Construction Access
Coastal Dune	±2,980 SF	Seawall Width Extension Beyond Existing Seawall Limits (Landside and Seaside)	±12,200 SF	Landward and Seaward Excavation Area, Construction Access, and Equipment Staging
Barrier Beach	±2,980 SF	Seawall Width Extension Beyond Existing Seawall Limits (Landside and Seaside)	±37,180 SF	Landward and Seaward Excavation Area, Construction Access, Material Stockpiling, and Equipment Staging

Site Description

The Long Beach Seawall extends approximately 3,350 lineal feet from the end of Rockport Road in Gloucester to the northeastern end of the beach near Cape. The existing shore protection structures consist of a concrete seawall with a wave return face and a top width of 3 feet. The seawall is fronted by a stone revetment, which is one-stone thick and extends approximately 22 feet seaward from the seawall. The revetment stones are approximately 6 feet by 3 feet by 3 feet on average. A walkway backs the seawall and provides public access along the landside of the wall. Sinkholes have repeatedly been observed behind the seawall and the walkway has settled and heaved on multiple occasions, likely due to undermining of the seawall. Numerous homes are located behind the seawall. The seawall and stone revetment are fronted by a sandy beach.

Based upon available records, the concrete seawall was originally constructed by the Commonwealth of Massachusetts in 1931. In March of 1958, an excessive high tide and a several-day nor'easter eroded sand from the base of the seawall causing sections of it to

topple. Succeeding high tides eroded the sand in front of the backshore houses. The damaged seawall sections were reconstructed. An approximate 22-foot wide stone apron was installed along the base of the wall as part of the repair project. Subsequent storms in 1976, 1985, and 1991 damaged the wall and eroded the fill behind it. More recent storm damage will be discussed below.

There are three FEMA Zones located at the Project Site. There is a velocity zone (VE) at elevation 18 NAVD88 fronting the seawall. There is another VE zone at elevation 14 NAVD88 that encompasses the top of the wall and approximately the first row of houses on Long Beach Road. An AE zone extends landward from the edge of the VE 14 zone.

The Massachusetts Coastal Infrastructure Inventory and Assessment Project (MCIIAP) report dated July 2013 for the Town of Rockport, the Long Beach Seawall was assigned a Condition Rating of C - Fair and a Priority Rating of IV - High Priority. A Condition Rating of C – Fair is typically assigned to a structure that is described as follows:

"Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life."

A Priority Rating of IV – High Priority is typically assigned to a structure which protects "high value inshore structures with potential for infrastructure damage and/or moderate density residential dwellings." Repairs to these structures should be considered in the near future.

Several studies, condition assessments and evaluations have been done at the site over the years. More recently, a condition survey of the seawall was performed in May of 2011 by GZA which provided a more detailed assessment of the condition of the seawall at that time. The report determined that the condition of the remaining portions of the 1931 wall was poor, and the 1959 reconstructed wall was generally fair.

In March of 2018, a series of nor'easters caused extensive erosion and additional damage to the beach and seawall. Sections of both the 1931 and 1959 wall were undermined and evidence of wall movement was observed. In addition, the southern end of the seawall undermined, and access stairs failed and settled nearly one foot. Extensive settlement and soil erosion occurred along the landside of the wall and the public access stairs were destroyed. To stabilize the damaged portion of wall, minimize further movement, and provide safe access to the public, the Town performed emergency repairs including repair of the south end of the wall and stairs and buttressing sections of the damaged 1931 wall

with stone on the seaward side. This work was performed under Emergency Certificate No. 18-01 and No. 18-04.

On May 15 and 21, 2018, GZA performed a limited topographic survey of the existing beach and seawall, as well as an inspection of the existing conditions of the wall and revetment. The topographic survey included the location of existing site features such as the existing walkway, seawall, stone slope revetment and beach elevations extending seaward of MLW. The seawall inspection included photographic documentation of the entire length of the wall.

To address the storm damage and provide for an interim method of stabilizing the existing structures until long- term repairs could be performed, the Town performed two phases of work at the Site between February and November of 2019. The first phase involved the procurement, transportation and placement of approximately 2,500 tons of revetment stone just seaward of the existing reinforced concrete seawall between approximate Station 4+00 and Station 9+75 and between Station 13+00 and Station 18+50. The second phase involved the procurement, transportation and placement of approximately 8,000 cubic yards of sand just seaward, and partially on top of the newly placed revetment stone and extending up to the existing reinforced concrete seawall in areas where the existing stone revetment has lowered/settled. Phase I was authorized by Order of Conditions No. 62-0786. Phase II was authorized by Order of Conditions No. 062-0802.

In January 2026, upon acceptance of a recently funded contract, GZA performed an updated topographic survey. The topographic survey included the walkway, seawall, utilities, lawns, building corners, patios, and walkways. The topographic survey also included taking field notes, sketches, photographic and video documentation of the site.

Project Description

The project involves the reconstruction of approximately 350 lineal feet of a 1930's section of seawall, located between House No. 56 and House No. 70 (station 12+10 to 15+60), the reconstruction of approximately 43 lineal feet of seawall plus approximately 15 lineal feet of return wall and concrete access steps, located at the western end of the existing seawall (station 0+00 to 0+43), and the incidental in-kind removal and replacement of landside features, stone revetment, and seasonal timber steps to facilitate the wall reconstruction work.

The seawall reconstruction is considered a FEMA funded storm damage repair project. The reconstructed seawall sections will consist of new reinforced cast-in-place below-grade concrete footings a minimum 2 feet in thickness and extending approximately 2 feet beyond the face of the seawall. Permanent steel sheet piles along the seaward face of the footing will increase scour protection, and a reinforced cast-in- place concrete wall with a

base that extends 4 feet below the existing wall. The reconstructed seawall will have two rows of drainage weepholes with crushed stone drainage layers on the landside of the wall. The concrete footing will be set on a 12-inch-thick layer of crushed stone wrapped in filter fabric directly over a prepared subgrade surface. The seawall sections will exist primarily within the existing wall footprint, except for a footing and a slightly larger profile below grade. The top of the walls will have metal pipe railings to tie in and match the existing railings at the site. The top of the reconstructed seawall will match the elevation of the existing seawall. Landside of the walls will have a 6-foot-wide restored stone dust public walkway to match existing conditions. The cast-in-place concrete stairs will be integrated into the existing walkway, parallel to the wall alignment. It will be approximately 5 feet wide with 11-inch treads and 7-inch risers. The return wall will be reinforced cast-in-place concrete with a total height of 7.5 feet plus 2 feet for the footing. The top of the reconstructed return wall will match the elevation of the existing seawall. The exposed height of the return wall will be approximately 5.5 feet. The length of the return wall is 7 linear feet.

It is anticipated that there will be temporary construction impacts to resource areas both landward and seaward of the wall resulting from the project. The stone apron will be removed during construction and reset to the existing pre-construction conditions. Adjacent site features to remain will be protected throughout the duration of construction work. Areas temporarily disturbed by construction activities will be restored to pre-construction conditions at the completion of the project.

RESOURCE AREAS

The work will be performed using the best available measures to minimize the adverse impacts to the resource areas defined under the Massachusetts Wetlands Protection Act (WPA) and the Rockport Wetlands Protection By-Law Rules and Regulations. The following paragraphs will list and define the resource areas impacted by this project and describe measures to avoid and minimize potential adverse impacts. The work is the reconstruction of an existing structure, as such, the impact areas identified are beyond the existing structure footprint. The enlarged footprint is a result of increased environmental loading conditions and applicable design requirements. The increased areas occur below grade. The following Tables include a summary of resource area impacts of the project.

Land Subject to Coastal Storm Flowage (310 CMR 10.04)

Land Subject to Coastal Storm Flowage is defined as, "land subject to any inundation caused by coastal storms up to and include that caused by the 100-year storm, surge of record or storm of record, whichever is greater." Much of the work is within Land Subject to Coastal Storm Flowage (LSCSF) resource area, between the Mean High Water (MHW) at elevation 4.1 NAVD88 and the FEMA 100-year flood elevation for zone. The 100-year flood zone fronting the wall is at elevation 18 NAVD88; the 100-year flood zone at landward of the wall is at elevation 14. The work within the Land Subject to Coastal Storm Flowage (LSCSF) resource area includes the removal and replacement of existing

damaged seawall sections with new concrete seawall. The work will permanently alter approximately 1,644 square feet of LSCSF resource area which includes the seawall extension area beyond the existing seawall, below grade, on the seaward side. The work will also temporarily alter approximately 16,000 square feet with procedures such as excavation, temporary stockpiling and staging of material and equipment. An additional 16,980 square feet would be temporarily impacted for construction access. The work will not significantly impact the land's ability to buffer storm waves. The site will be restored to pre-construction conditions after the completion of work. There are no additional specific performance standards for LSCSF resource area provided under the WPA.

Coastal Beach (310 CMR 10.27)

Coastal Beach is defined as, "unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of saltwater and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bank line or the seaward edge of existing man-made structures, when these structures replace one of the above lives, whichever is closest to the ocean."

The Coastal Beach resource area at the site extends from Mean Low Water (MLW) at elevation -4.6 NAVD88 to the seaward edge of the existing stone revetment. The work will temporarily alter 8,000 square feet with construction procedures such as excavation, temporary stockpiling and staging of material and equipment. An additional 16,980 square feet would be temporarily impacted for construction access. Specifically, excavated material consisting of existing revetment stone, beach sand, and other granular material is anticipated to be stockpiled within the Coastal Beach resource area. The stockpiled material will act as a temporary buffer against waves and tidal waters during the construction work. Up to 960CY of excess excavated sand, that is deemed suitable, will be placed on the beach landward of the high tide line; incompatible excavated material will be removed. The sand will contribute to the beach's littoral system. The site will be restored to pre-construction conditions after the completion of work.

In accordance with 310 CMR 10.27, when a coastal beach is determined to be significant to storm damage prevention, flood control, or protection of wildlife habitat, 310 CMR 10.27(3) through (7) shall apply. When a tidal flat is determined to be significant to marine fisheries or the protection of wildlife habitat, 310 CMR 10.27(6) shall apply. The following lists these items and provides a discussion as to how the project does comply with the performance standards.

Coastal Dune (310 CMR 10.28)

Coastal Dune is defined as, "any natural hill, mound, or ridge of sediment landward of a coastal beach deposited by wind action or storm over-wash. Coastal Dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control." The Coastal Dune resource area at the site consists of the

developed area of Long Beach including the seawall, revetment, houses, patios, paths and parking areas. The existing seawall and stone revetment are considered armoring of the Coastal Dune. The work within the Coastal Dune resource area includes the removal and replacement of existing damaged sections with new concrete seawall. The work will permanently alter approximately 2,980 square feet of Coastal Dune resource area which includes the seawall extension area beyond the existing seawall limits, below grade. The work will also temporarily alter approximately 12,200 square feet with construction procedures such as excavation, stockpiling and staging of material and equipment. The work will not significantly impact the land's ability to buffer coastal storms and flooding. The site will be restored to pre-construction conditions after the completion of work.

In accordance with 310 CMR 10.28, when a coastal dune is determined to be significant to storm damage prevention, flood control or the protection of wildlife habitat, 310 CMR 10.28(3) through (6) shall apply. The following table lists these items and provides a discussion as to how the project does comply with the performance standards.

Barrier Beach (310 CMR 10.29)

Barrier Beach is defined as, "a narrow low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish, or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends."

Long Beach is a Barrier Beach and the site has been assigned the unit codes "Rp-4" and "Rp-5" as part of the Massachusetts Barrier Beach Inventory Project (MBBTF, 1994). The developed area of Long Beach including the seawall, houses, patios, paths and parking areas still performs the critical protective functions of Barrier Beach and Coastal Dune resource areas. As such, the Barrier Beach areas must be maintained to protect against coastal storms.

All of the work is within the Barrier Beach resource area including the removal and replacement of existing damaged seawall sections with new concrete seawall. The work will permanently alter approximately 2,980 square feet of Barrier Beach resource area and temporarily alter approximately 20,200 square feet with construction procedures such as excavation, stockpiling and staging of material and equipment.
An additional 16,980 square feet would be temporarily impacted for construction access. The work will not significantly alter the land's ability to buffer coastal storms and flooding. The sand displaced by the reconstructed wall will remain on the beach to aid the beach's buffering ability. The site will be restored to pre- construction conditions after the completion of work.

In accordance with 310 CMR 10.29, when a barrier beach is determined to be significant to storm damage prevention, flood control, marine fisheries or protection of wildlife habitat. 310 CMR 10.27(3) through (6) (coastal beaches) and 10.28(3) through (5) (coastal

dunes) shall apply. Refer to Table 2 for coastal beach performance standards and Table 3 for coastal dune performance standards.

100-Foot Buffer Zone

Buffer Zone is defined as "100-ft area horizontally (on a true lateral) landward of approved delineation of applicable wetland resource areas." Work within the 100-foot Buffer Zone (to the existing seawall) consists of the landward half of the seawall width extension beyond the limits of the existing seawall and excavation and stockpiling to facilitate the construction. The work will permanently alter approximately 1,336 square feet of buffer zone area which includes the seawall extension area beyond the existing seawall, below grade, on the landward side.

The work will also temporarily alter approximately 4,200 square feet with construction procedures such as excavation and stockpiling of material. The work will improve public health and safety by reconstructing and stabilizing the seawall system and will increase public infrastructure resiliency against coastal storms and flooding. The buffer zone will be restored to pre-construction conditions at the completion of the project.

50-Foot No-Build Zone

Per the Rockport Wetlands By-Laws, the 50-Foot No-Build Zone is defined as "the 50-foot horizontally landward of a wetland in which there shall be no building of any structures." Work within the 50-foot No-Build Zone consists of construction procedures such as stockpiling and staging of material and equipment. The work will temporarily alter approximately 500 square feet with potions of the construction procedures such as stockpiling and staging of material and equipment. The Town will be requesting a waiver to perform work within the 50-foot No-Build Zone.

25-Foot No-Disturb Zone

Per the Rockport Wetlands By-Laws, the 25-Foot No-Disturb Zone is defined as "the area that is a natural protective barrier of land that extends 25 feet horizontally landward of a wetland."

Work within the 25-foot No-Disturb Zone consists of the landward half of the seawall width extension beyond the limits of the existing seawall and excavation and stockpiling to facilitate the construction. The work will permanently alter approximately 1,336 square feet of buffer zone area which includes the seawall extension area beyond the existing seawall, below grade, on the landward side. The work will also temporarily alter approximately 3,200 square feet with construction procedures such as excavation and stockpiling of material. The Town will be requesting a waiver to perform work within the 25-foot No-Disturb Zone.

Construction Procedures

The general construction process will consist of site mobilization and preparation,

establishment of site survey controls, installation of erosion and sedimentation measures, installation of temporary support of excavation measures including temporary steel sheet piles, excavation and temporary stockpiling of materials, removal of existing seawall sections, subgrade and subbase preparation, installation of new reinforced cast-in-place concrete footings and permanent steel sheet piles at the wall toe, installation of new reinforced cast-in-place concrete seawall sections, backfilling, removal of temporary support of excavation measures, and restoration of the disturbed areas (seaward along the beach and landward between the seawall and seasonal dwellings), removal of erosion and sedimentation controls, and demobilization and site restoration. Existing Site features and utilities will be protected throughout construction.

The work will be accessed from Rockport Road at the southwestern end of Long Beach. The Town of Rockport and the City of Gloucester have an established agreement that allows the Town to access the beach from this area on a regular, as-needed basis. Additionally, the work may also be accessed from the emergency access way named Fire Break #2, located off Long Beach (Old County) Road.

The work will be performed along the beach and on limited areas landward of the existing wall. It is likely that most of the staging and stockpiling will be located at the end of Rockport Road where it meets up with the beach. Additionally, excavated material is expected to be temporarily stockpiled along the beach seaward of the excavation area. The stockpiled material is expected to consist of existing revetment stone, beach sand, and other granular material. The stockpiled material will act as a temporary buffer against waves and tidal waters during the construction work. This condition will be similar to the conditions performed during the construction of the 1950s seawall. Upon completion of the work, suitable excavated material will be used to backfill excavations and restore the area to pre-construction conditions.

Waiver of the "No-Disturb" Zone and/or "No-Build" Zone Requirements

A waiver from the 25' No-Disturb Zone and the 50' No-Build Zone requirements of the Bylaw regulations was requested by the applicant and discussed extensively during the public hearing process. The Conservation Commission determined the project will likely have no adverse impact on the coastal resources. The Commission believes that this project serves to protect the values of the By-law. The Commission also finds that there are no reasonable alternatives that would allow the activity to proceed in compliance with the regulations, and avoidance, minimization and mitigation have been employed to the maximum extent feasible. Therefore, the Commission grants the waiver.

FINDINGS *Review under the Act and the By-law

The Commission is concerned with protecting the following interests under *the Act:* Protection of public and private water supply, protection of ground water supply, flood control, storm damage prevention, prevention of pollution, protection of fisheries, and

protection of wildlife habitat. Applicable performance standards under *the Act* include but are not limited to:

1) No adverse effect due to wave action on the movement of sediment from the coastal bank to coastal beaches or land subject to tidal action;
2) No adverse effect on the stability of the coastal bank;
3) No impairment to the physical stability of the inland bank;
4) No impairment to groundwater and surface water quality;
5) No impairment to the capacity of the inland bank/water body to provide important wildlife habitat functions;
6) No destruction of, or otherwise impairment to any portion of the BVW.

The By-law is intended to protect additional resource areas, for additional values, with additional standards and procedures stricter than those of *the Act* and Regulations thereunder. The Commission is concerned with protecting the following resource area values due to activities deemed to have a significant or cumulative effect upon them: Protection of public or private water supply, groundwater, flood control, erosion and sedimentation control, storm damage prevention including coastal storm flowage, water quality, water pollution control, fisheries, wildlife habitat, and recreation values deemed important to the community. The proposed project may result in the following alterations to Rockport Protected Wetlands, as defined in *the By-law*:

1) Removal, excavation, or dredging of soil, sand, gravel, or aggregate materials of any kind;
2) Drainage, or other disturbance of water level or water table;
3) Dumping, discharging, or filling with any material which may degrade water quality;
4) Placing of fill, or removal of material, which would alter elevation;
5) Driving of piles, erection, or repair of buildings, or structures or any kind;
6) Destruction of plant life including cutting of trees;
7) Any activities, changes, or work which may cause or tend to contribute to pollution of any body of water or ground water;
8) Incremental activities, which have, or may have, a cumulative adverse impact on the resource areas protected by this bylaw.

In Conclusion
The Conservation Commission is concerned about significant impacts to the Barrier Beach Coastal Beach, Coastal Bank, Coastal Dune and Land Subject to Coastal Storm Flowage. The Commission finds that the proposal protects the interests of *the Act* and *the By-law*. **Therefore, the Commission *approves* the project as amended as presented in the final amended Plans and other documents.**

PLEASE NOTE: the delineation of the wetlands associated with this project is valid for only three (3) years from the date of delineation. You may be required to re-delineate these wetlands for any other project on this lot beyond the three (3) years.

CONDITIONS

Pre-Construction

21) **This Order of Conditions shall not relieve the applicant or any other person of the necessity of complying with all other applicable federal, state and local statutes, ordinances, bylaws or regulations.**

22) **Following the expiration of the 10-business day appeal period, this Order shall be recorded at the appropriate Registry of Deeds. The form provided at the end of this Order shall be completed and stamped by the Registry of Deeds and returned to the Commission before any work may commence on the site.**

23) A weather proof sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words, **"MA DEP File #62-0953".**

24) **Prior to any work on the site, the applicant shall clearly mark the boundary of the property with stakes and flags.** This demarcation is meant to acknowledge the precise boundary lines are with the neighbors' properties shall stay in place throughout construction and until the issuance of the Certificate of Compliance. Stakes shall be replace if they become dislodged.

25) **Prior to any work on the site, the applicant shall clearly mark the limit of work with visible fencing (and not within any wetland resource area).** Workers shall be informed that no activity shall take place beyond the limit of work. This demarcation shall stay in place throughout construction and until the issuance of the Certificate of Compliance. Limit of work fencing shall be replaced if it gets blown down and/or is no longer visible.

26) **This project shall not cause an increase in run-off onto adjacent properties, either during construction or when completed.** Appropriate measures shall be taken to prevent washout of silt or the creation of pollution on neighboring properties, into the town stormwater drainage system, or into a wetlands resource area. Sediment controls devices shall be installed as proposed on the approved plan(s).

27) **The Applicant shall schedule a site meeting with their representative and Commission (or its Agent) *prior* to the commencement of any work,** with the exception of the placement of sediment control devices, in order to review the Order of Conditions together on site. Notice shall be given the Commission or it Agent in writing at least **five (5) business days prior** to the site meeting. At that meeting, the Commission (or its Agent) shall verify the limits of work, erosion control placement and discuss construction methods to be employed.

28) **The Agent or members of the Conservation Commission shall have the right to enter and inspect the premises at reasonable hours** to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Commission for that evaluation.

29) Prior to commencing any work, the applicant shall submit the following information in writing to the Conservation Office: (1) the names, addresses, and day and night numbers of the project supervisor/manager and their alternates who will be responsible for ensuring on-site compliance with this Order of Conditions (Order); and (2) a signed statement by the general contractor that he/she has received, read and understands the Order and that he/she and his/her sub-contractors agree to fully comply with the Order

30) There shall be no alteration of pre-construction grades within areas of jurisdiction as part of this project except for what is clearly depicted on the approved plan and specifically approved in this Order of Conditions.

31) The applicant shall notify the Conservation Commission, in writing, a minimum of 2-business days prior to the commencement of work.

32) The applicant is responsible for submitting copies of all Final Approved Plans and other Documents listed under General Information #8, WPA Form 5 (*The Order of Conditions)* to all other Town Departments that have received aforementioned Plans or other Documents during their respective permitting process. This is to ensure that all Departments have up-to-date and accurate information.

33) This Order is based on the Rockport Wetlands By-law (Rockport Code of Bylaws, Chapter 14. Environmental Protection and Public Health, A. Wetlands) and its Rules and Regulation, and the Massachusetts Wetlands Protection Act (c. 131 s. 40) and its Regulations (310 CMR 10.00).

34) **The applicant shall designate an 'Environmental Monitor'** such as a Registered Professional Engineer or Professional Wetland Scientist, who has relevant experience in wetland impact / assessment and erosion / sedimentation control measures to oversee any emergency placement of controls and regular inspection or replacement of sedimentation control device. The name and phone number of the Environmental Monitor must be provided to the RCC in the event that this person has to be contacted, due to an emergency at this site, during any 24-hour period, including weekends. **This person shall be given the authority to stop construction should there be unlawful entry into the wetland resources areas and / or for erosion controls purposes.** The Environmental Monitor will be required to inspect all such devices and oversee cleaning and the proper disposal of waste products. Cleaning shall include removal of any entrapped silt. **The Environmental Monitor**

shall conduct site inspections on site for compliance with this Order at a minimum of once per week and during or immediately after rainstorms of 0.5 inches or more.

35) **The Environmental Monitor shall submit a written report with photographs to the RCC following each site visit,** or otherwise arranged by the RCC in which construction activities occurs on site and for as long thereafter as grounds remains exposed. The Environmental Monitor must certify that, to the best of his / her knowledge and belief based on a careful site inspection, all work is being performed in compliance with this Order of Conditions. The **Environmental Monitor must visually inspect all sedimentation / erosion control measures** and assume responsibility for their **maintenance on a weekly basis** and that they are functioning as intended. In addition, all wetland resources areas must be visually inspected for siltation, turbidity, and / or other water quality impacts. The reports shall include what work is anticipated to be complete over the next reporting period (this will update the construction sequence); current conditions of the erosion controls; description of any erosion or sedimentation repair and / or replacement; and describe any erosion problems and mitigation measures implemented. Such reports shall continue until the applicant has requested a less frequent reporting schedule or an end of to the reports, which has been approved in writing by the Conservation Commission or its Agent.

During Construction

36) The construction vehicles shall be parked as far from the coastal bank and BVW as possible at the end of each construction day.

37) This permit shall be made part of all construction-related documents for this project.

38) **A copy of this Order as well as the Plans referenced in General Condition #13 shall be available on site while activities regulated by this Order are being performed.**

39) **Contractors employed to work within areas subject to jurisdiction of the Wetlands Protection Act (WPA) and/or the Rockport Wetlands By-law shall be provided a copy of this Order.**

40) The areas of construction shall remain in a stable condition at the close of each construction day. Sediment controls should be inspected and maintained or reinforced on a daily basis by the designated Sediment Control Monitor.

41) The Applicant or Sediment Control Monitor shall act quickly to address any deterioration or failure of the sediment control barrier and/or to address and remediate any erosion or sedimentation event. **The Commission shall be notified immediately of any such failure or event.**

42) **All disturbed or exposed upland soil surfaces shall be temporarily stabilized** with hay, straw, mulch or any other protective covering and/or method approved by the Conservation Commission.

43) Any unanticipated impact, preventable or otherwise, shall be remediated to the fullest extent to restore the impacted area to its pre-impact condition or to a better condition. **Any unanticipated impacts shall be reported to the Rockport Conservation Commission immediately** and a plan developed in conjunction with the Conservation Commission or Conservation Agent and implemented forthwith to remediate those impacts.

44) **The Commission reserves the right to impose additional conditions** on portions of the project to mitigate any impacts which could result from site erosion, or any noticeable degradation of surface water quality discharging from the site and to temporarily halt the project until adequate measures have been taken.

45) All construction vehicles and devices shall be refueled, re-oiled and otherwise maintained greater than 100 feet from the coastal bank. There shall be no release of fuel, oil, or other pollutant onto the ground surface, groundwater, surface water, and/or into the atmosphere. In the event of such release, the Conservation Commission shall immediately be notified of the release including, amount of release, time of release, location of release and the Massachusetts Department of Environmental Protection (MADEP) reportable quantity for the released material.

46) **No waste products, grubbed stumps, slash, construction materials, yard debris, etc. shall be stock piled or disposed of within areas subject to jurisdiction of the Wetlands Protection Act (WPA) or Rockport Wetlands By-law.**

47) All construction dumpsters shall be covered when not in use and at the end of each day.

48) No Blasting shall take place for this project without the prior approval of the Commission.

49) No trenching is approved under this Order of Conditions.

50) Before any changes, additions or omissions are made to the approved Plans above, the applicant shall inquire in writing whether the change is significant enough to require the filing of an Amended or new Notice of Intent.

51) **In conjunction with the transfer of interest, control, or title of any part of the site, the Applicant shall submit to the Commission a statement signed by the**

person receiving said part that states that he or she has received a copy of this Order and copies of Documents (site plans, other plans, etc. that govern work) and agrees to comply with the Order and assume responsibility to finish any outstanding work before expiration of the Order.

Post Construction

52) The work is not considered complete until the site includes all structures, grading, landscaping, drainage equipment, and all other details shown on the approved site plan and included in all documents filed with the Commission.

53) Upon completion of the project, **all disturbed upland areas shall be permanently stabilized with native, non-invasive vegetation or a native grass seed mix appropriate for coastal areas** with sufficient compatible topsoil to ensure long-term stabilization of disturbed areas.

54) **Within sixty (60) days of the completion of the project, the applicant shall Request for a Certificate of Compliance, WPA Form 8A to the Commission.** The request for a Certificate of Compliance shall be submitted by Certified Mail or hand delivered and shall be accompanied by, but not limited to,

a. **A written report**, signed and stamped by a Massachusetts Registered Professional Engineer or Land Surveyor stating that the work was done in accordance with the approved plan(s) and Order of Conditions. If the completed work differs from that in the original plan(s) and conditions, the report must specify how the project differs.

b. An "As-Built" plan signed and stamped by a Massachusetts Registered Professional Engineer or Land Surveyor.

c. A signed and stamped "As-Built" plan **with monuments and/or plaques shown on it** shall be recorded at the Registry of Deeds with the Certificate of Compliance.

Perpetual Conditions

62) No adverse impacts to surrounding resources or properties shall occur.

End of Conditions

Appendix
Approved Plans and Relevant Documents
MADEP 062-0953

LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT

PROJECT NO. 73018
EVENT NO. 4372DR-MA
JANUARY 2026

PREPARED FOR:

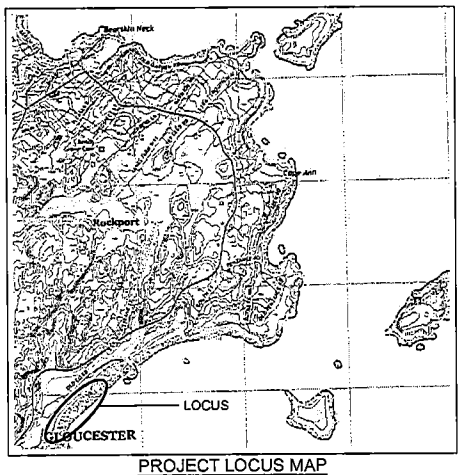
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PREPARED BY:

GZA GEOENVIRONMENTAL, INC.
144 ELM STREET
AMESBURY, MA 01913

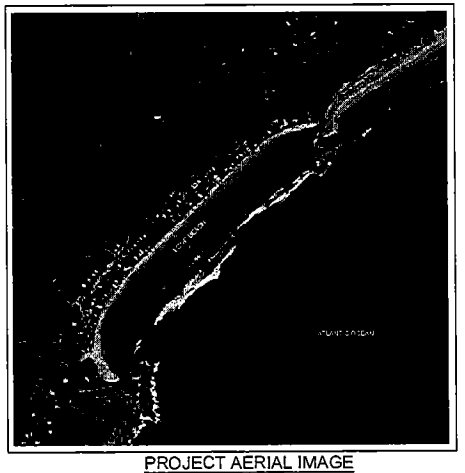
INDEX OF DRAWINGS:

SHEET 1	COVER SHEET AND NOTES
SHEET 2	KEY PLAN - EXISTING CONDITIONS PLAN
SHEET 3	EXISTING CONDITIONS PLAN AND SECTIONS
SHEET 4	PROPOSED RECONSTRUCTION PLAN AND SECTION
SHEET 5	PROPOSED DETAILS
SHEET 6	TEMPORARY STAGING AND EROSION CONTROL PLAN



PROJECT LOCUS MAP

SOURCE: USGS TOPOGRAPHIC QUADRANGLES
NOT TO SCALE



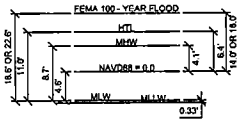
PROJECT AERIAL IMAGE

SOURCE: TOWN OF ROCKPORT
DEPARTMENT OF PUBLIC WORKS, GIS DIVISION
NOT TO SCALE

MATERIAL SPECIFICATIONS:
MATERIAL AND PRODUCT REQUIREMENTS, WHERE REFERENCED AS MHD, THE REQUIREMENTS REFERS TO THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988, OR LATEST EDITION.

CONCRETE:	28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI 1-1/2" MAXIMUM AGGREGATE SIZE AIR CONTENT 5.0% - 7.0%
CEMENT:	PORTLAND CEMENT, ASTM C150, TYPE II
REINFORCING STEEL:	GRADE 60 - ASTM A615 EPOXY COATED - ASTM A775
DOWELS:	GRADE 60 - ASTM A615 EPOXY COATED - ASTM A775
EPOXY ADHESIVE:	TWO-COMPONENT EPOXY ADHESIVE, SUITABLE FOR MARINE ENVIRONMENT (HILTI-RE 500 V3, OR APPROVED EQUIVALENT)
ELASTOMERIC SEALANT:	NON-SAG, ELASTOMERIC, SILICONE SEALANT, SUITABLE FOR MARINE ENVIRONMENT, COLOR TO BE CLEAR OR TRANSPARENT (SIKASIL-N PLUS, OR APPROVED EQUIVALENT) - ASTM C920
STEEL SHEETPILES:	GRADE 50 - ASTM A572
RAILING PIPE:	SCHEDULE 80 STEEL HOT-DIPPED GALVANIZED - ASTM A53
FILTER FABRIC:	NON-BIODEGRADABLE NEEDLE-PUNCHED NON-WOVEN GEOTEXTILE FILTER FABRIC RESISTANT TO NATURALLY ENCOUNTERED CHEMICALS, ALKALIS, AND ACIDS (MIRAFI 180N, OR APPROVED EQUIVALENT)
WOVEN GEOTEXTILE:	NON-BIODEGRADABLE WOVEN GEOTEXTILE FABRIC RESISTANT TO NATURALLY ENCOUNTERED CHEMICALS, ALKALIS, AND ACIDS (MIRAFI 600X, OR APPROVED EQUIVALENT)

CRUSHED STONE (1-½ IN.): (MHD SPEC. M2.01.1)	SIEVE NO.	SIZE (MM)	PERCENT PASSING
	2"	50.8	100
	1-½"	38.1	95-100
	1"	25.4	35-70
	¾"	19.1	0-25



DATUM RELATIONSHIP
NOT TO SCALE

ANDRE D. BLANCHARD
CIVIL
No. 36766
REGISTERED
PROFESSIONAL ENGINEER

PERMITTING ONLY
NOT FOR CONSTRUCTION

PROJECT DESCRIPTION:
1. THE PROJECT INVOLVES THE RECONSTRUCTION OF APPROXIMATELY 350 LINEAL FEET OF A 1930'S SECTION OF SCAWALL (STATION 12+10 TO 15+60) AND THE RECONSTRUCTION OF APPROXIMATELY 43 LINEAL FEET OF SEAWALL WITH NEW CONCRETE ACCESS STAIRWAY, LOCATED AT THE WESTERN END (STATION 0+00 TO 0+43). THE PROJECT ALSO INCLUDES POST-CONSTRUCTION AND SITE RESTORATION.
2. THE PROJECT WORK INCLUDES ALL WORK REQUIRED TO COMPLETE THE PROJECT INCLUDING LABOR, MATERIALS, TRANSPORTATION, SITE MOBILIZATION, SITE PREPARATION, CONSTRUCTION, EROSION AND SEDIMENT CONTROLS, SITE SURVEY, DEMOBILIZATION AND SITE RESTORATION, PROVISION OF ALL REQUIRED SUBMITTALS. SHOP DRAWINGS, ETC., AND PREPARATION AND SUBMITTAL OF AS-BUILT CONSTRUCTION DRAWINGS.

REFERENCE NOTES:
1. TOPOGRAPHIC SURVEY AND SURVEY CONTROL LOCATION PERFORMED BY GZA GEOENVIRONMENTAL, INC. ON NOVEMBER 21 AND 22, 2019 AND FEBRUARY 24, 2022. UPDATED TOPOGRAPHIC SURVEY PERFORMED BY GZA GEOENVIRONMENTAL, INC. ON JANUARY 15, 2026. SURVEY CONTROL LOCATIONS USING REAL-TIME KINEMATIC DIFFERENTIAL GLOBAL POSITIONING SYSTEM UNIT (RTK DGPS).
2. SITE BENCHMARK IS A MAG NAIL SET INTO THE PAVEMENT AT THE END OF LONG BEACH (OLD COUNTY) ROAD. BENCHMARK EL. +10.8 FEET NAVD88.
3. PROJECT DATUM: MA STATE PLANE COORDINATE SYSTEM, NAD83 IN US SURVEY FEET (HORIZONTAL); NAVD88 IN FEET (VERTICAL).
4. AERIAL IMAGERY SUPPLIED BY THE TOWN OF ROCKPORT.
5. PROPERTY LINES ARE APPROXIMATE AND WERE DELINEATED USING AVAILABLE LAYERS FROM MASSGIS'S ONLINE MAPPING TOOL.
6. THE LOCATIONS OF EXISTING BUILDING FOOTPRINTS WERE APPROXIMATELY DETERMINED BY USING AVAILABLE AERIAL PHOTOGRAPHY.
7. THE LOCATIONS OF UTILITIES ARE APPROXIMATE; SOME UTILITIES MAY NOT BE SHOWN ON THE PLAN. UTILITY LINES SHOWN WERE SUPPLIED BY THE TOWN OF ROCKPORT. ACCESSIBLE AND VISIBLE UTILITIES WERE APPROXIMATELY DETERMINED USING AN RTK DGPS UNIT AND TOTAL STATION SURVEY UNIT BY GZA GEOENVIRONMENTAL, INC.
8. THE SUBJECT PROPERTY IS LOCATED IN THE TOWN OF ROCKPORT "RESIDENTIAL A" (RA) ZONING DISTRICT.
9. THE PROJECT AREA IS LOCATED WITHIN THE COASTAL ARCA MANAGEMENT ZONE. THE PROJECT IS ALSO LOCATED WITHIN THE FEMA FLOOD HAZARD ZONE VE (BFE=EL. 14 FEET AND 18 FEET NAVD88).
10. FEMA FLOOD HAZARD ZONES WERE DELINEATED USING FEMA'S DIGITAL NATIONAL FLOOD HAZARD LAYER (NFHL) WHICH INCORPORATES ALL FLOOD INSURANCE RATE MAP (FIRM) DATABASES PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AND MAP REVISIONS.
11. APPROPRIATE CHAPTER 91 JURISDICTION LIMITS WERE DELINEATED USING AVAILABLE LAYERS FROM MASSGIS'S ONLINE MAPPING TOOL.
12. THE LOCATIONS OF RESOURCE AREAS WERE APPROXIMATELY DETERMINED FROM EXISTING TOPOGRAPHIC SURVEY AND THE WETLAND PROTECTION ACT DEFINITIONS.
13. TIDE DATUMS WERE DEVELOPED BASED ON THE NOAA ROCKPORT NARBOR, MA TIDE STATION (8441551) AND CORRECTED FOR THE PROJECT SITE USING THE NOAA/NOS SOFTWARE VDATUM 4.0. THE CORREETED TIDE DATUMS USED FOR THE PROJECT ARE SUMMARIZED BELOW:
   - 13.A. MEAN HIGHER HIGH WATER (MHHW): 4.5 FT-NAVD88
   - 13.B. MEAN HIGH WATER (MHW): 4.1 FT-NAVD88
   - 13.C. MCAN TIDE LEVEL (MTL: -0.3 FT-NAVD88
   - 13.D. MCAN LOW WATER (MLW): -4.6 FT-NAVD88
   - 13.E. MCAN LOWER LOW WATER (MLLW): -4.9 FT-NAVD88
14. REFERENCED STANDARDS: REFERENCES HEREIN TO ANY TECHNICAL SOCIETY, ORGANIZATION, GROUP OR BODY ARE MADE IN ACCORDANCE WITH THE FOLLOWING ABBREVIATIONS AND, UNLESS OTHERWISE NOTED OR SPECIFIED, ALL WORK UNDER THIS SECTION SHALL CONFORM TO THE LATEST EDITION AS APPLICABLE:
   - 14.A. ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS
   - 14.B. COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988, OR LATEST EDITION

GENERAL REQUIREMENTS FOR CONSTRUCTION:
1. CONSTRUCTION WORK WILL BE OBSERVED BY THE ENGINEER DURING CONSTRUCTION.
2. CONSTRUCTION SCHEDULE LIMITATIONS: NO WORK SHALL BE PERFORMED AT ANY TIME DURING THE PERIOD FROM JUNE 15 TO SEPTEMBER 15.
3. CONTRACTOR SHALL NOTIFY DIGSAFE PRIOR TO THE START OF WORK AS REQUIRED BY STATE AND LOCAL REGULATIONS AND IN ACCORDANCE WITH GOOD INDUSTRY PRACTICE.
4. EXISTING UTILITIES MAY NOT BE ADEQUATELY DEFINED BY DIGSAFE; THEREFORE, THE CONTRACTOR SHALL LOCATE THE EXISTING UTILITIES WITHIN THE LIMITS OF ALL EXCAVATION PRIOR TO THE START OF ANY EXCAVATION ACTIVITIES USING A QUAUFIED UTILITY LOCATING COMPANY.
5. AT THE COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL RESTORE ANY AREAS DISTURBED AS A RESULT OF CONSTRUCTION.
6. CONTRACTOR SHALL REMOVE AND DISPOSE ALL UNQUALIFIED MATERIALS, CONSTRUCTION DEBRIS, OR OTHER MATERIALS DETERMINED TO BE INADEQUATE FROM THE SITE AT NO COST TO THE OWNER.
7. CONTRACTOR SHALL PROVIDE AND MAINTAIN THE PROPER EQUIPMENT TO DELIVER, UNLOAD, AND INSTALL THE MATERIALS TO THEIR FINAL LOCATION.
8. IMPORTED AND EXCAVATED MATERIALS SHALL BE STORED IN SEGREGATED LOCATIONS TO ASSURE NO MIXING WITH FINE GRADATION NATIVE SAND. PROTECT THE STOCKPILES FROM SLOUGHING OR MOVEMENT AND FROM STORMWATER RUNOFF TO ADJACENT AREAS.
9. ALL FILL MATERIALS SHALL BE PLACED AND GRADED TO THE LIMITS AND GRADES SHOWN ON THE DRAWINGS.
10. PARAMETERS OF ROUGH FINISH, INCLUDING MAXIMUM AND MINIMUM ELEVATION DIFFERENCES, TO BE ESTABLISHED BETWEEN THE PROJECT ENGINEER AND CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
11. CONTRACTOR SHALL BE PREPARED TO WORK WITHIN THE TIDAL CYCLE TO AVOID INUNDATION OF THE WORK ARCA DURING CONSTRUCTION.
12. FILL MATERIALS:
   - 12.A. ALL FILL MATERIALS SHALL BE FREE OF CONTAMINANTS, ARTIFICIAL MATERIALS AND OTHER DELETERIOUS MATERIALS.
   - 12.B. FILL MATERIALS SHALL BE FROM A SOURCE APPROVED BY THE ENGINEER AND OWNER PRIOR TO THE START OF CONSTRUCTION.
   - 12.C. SPECIFICATIONS FOR MATERIALS ARE PRESENTED HEREIN.

CONSTRUCTION SEQUENCE:
1. THE CONSTRUCTION SEQUENCE SHALL BE ESTABUSHED BY THE CONTRACTOR. IN GENERAL, THE EXPECTED SEQUENCE IS AS FOLLOWS:
   - 1.A. SITE MOBILIZATION AND PREPARATION;
   - 1.B. ESTABLISHMENT OF SITE SURVEY CONTROLS;
   - 1.C. UTILITY CLEARANCES;
   - 1.D. INSTALLATION OF EROSION AND SEDIMENTATION MEASURES;
   - 1.E. INSTALLATION OF TEMPORARY SUPPORT OF EXCAVATION MEASURES INCLUDING TEMPORARY STEEL SHEETPILES;
   - 1.F. EXCAVATION AND REMOVAL OF EXISTING SCAWALL SECTIONS;
   - 1.G. SUBGRADE AND SUBBASE PREPARATION;
   - 1.H. INSTALLATION OF NEW REINFORCED CAST-IN-PLACE CONCRETE FOOTINGS AND PERMANENT STEEL SHEETPILES AT PROPOSED WALL TOE;
   - 1.I. INSTALLATION OF NEW REINFORCED CAST-IN-PLACE CONCRETE SEAWALL SECTIONS AND PERMANENT STAIRWAY AT WEST END;
   - 1.J. BACKFILLING, REMOVAL OF TEMPORARY SUPPORT OF EXCAVATION MEASURES, AND RESTORATION OF THE DISTURBED AREAS;
   - 1.K. REMOVAL OF EROSION AND SEDIMENTATION CONTROL MEASURES;
   - 1.L. DEMOBILIZATION AND SITE RESTORATION; AND
   - 1.M. SUBMITTAL OF AS-BUILT DRAWINGS.

EROSION CONTROL GENERAL NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL.
2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PERIODICALLY MAINTAINED ON A REGULAR BASIS DURING CONSTRUCTION, AND PROMPTLY FOLLOWING STORMS OR PERIODS OF RAINFALL.

NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED FOR NOI COMMENTS	DAS	MAY 2026

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

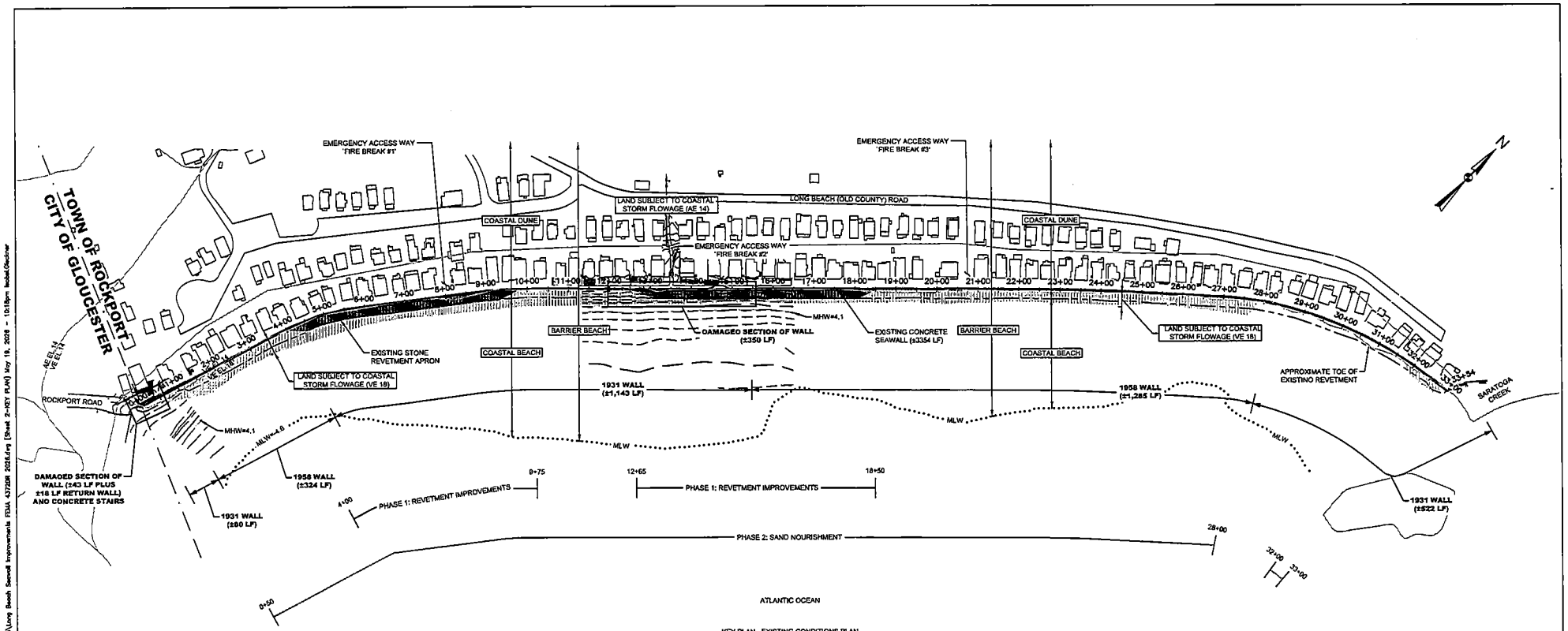
COVER SHEET AND NOTES

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: TOWN OF ROCKPORT, 34 BROADWAY, ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 1
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS SHOWN	
DATE: MAY 2026	PROJECT NO. 18.0173734.04	REVISION NO. -	SHEET NO. 1 OF 6

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KEY PLAN - EXISTING CONDITIONS PLAN
SCALE: 1"=120'
0 60 120 240
SCALE IN FEET

LEGEND

- EXISTING SEAWALL
- APPROX. TOE OF EXISTING STONE REVETMENT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- FEMA ZONE LIMITS
- EXISTING HIGH TIDE LEVEL
- EXISTING MEAN HIGH WATER (MHW)
- EXISTING MEAN LOW WATER (MLW)
- PHASE 1: REVETMENT IMPROVEMENTS (COMPLETED JANUARY-FEBRUARY 2019)
- PHASE 2: SAND NOURISHMENT (COMPLETED OCTOBER-NOVEMBER 2019)

ANDERS G. ELARDARD CIVIL No. 39766 REGISTERED PROFESSIONAL ENGINEER
4/17/26

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

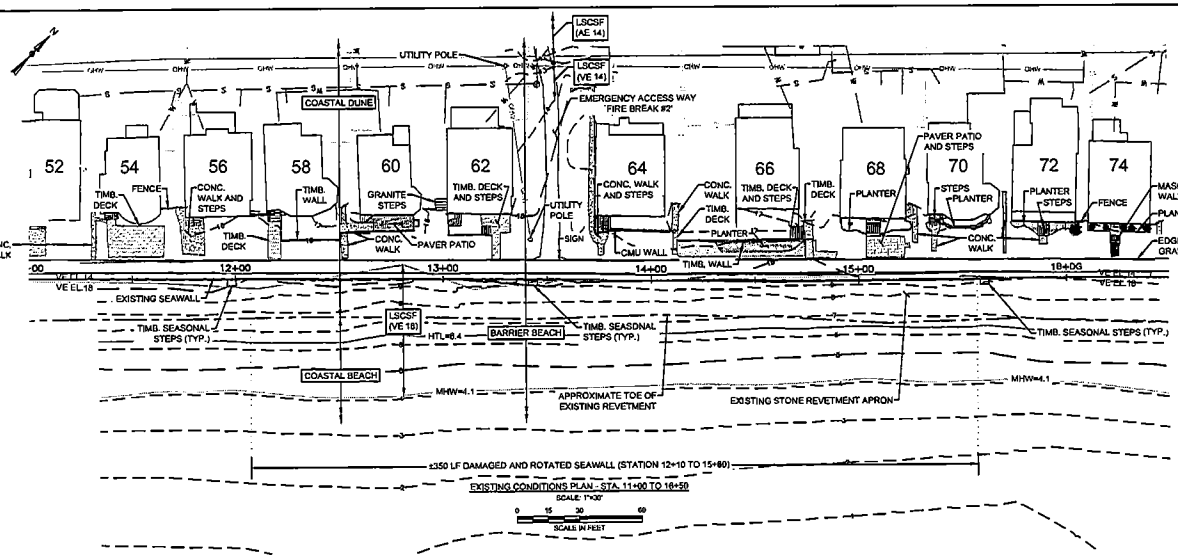
KEY PLAN - EXISTING CONDITIONS PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
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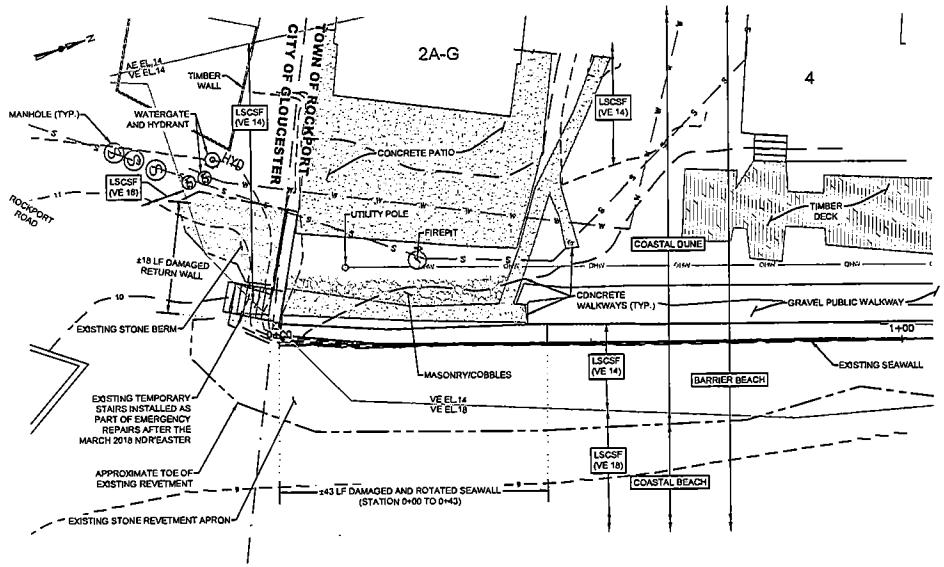
PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 2
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: MAY 2026	PROJECT NO. 18.0173734.04	REVISION NO. -	SHEET NO. 2 OF 6

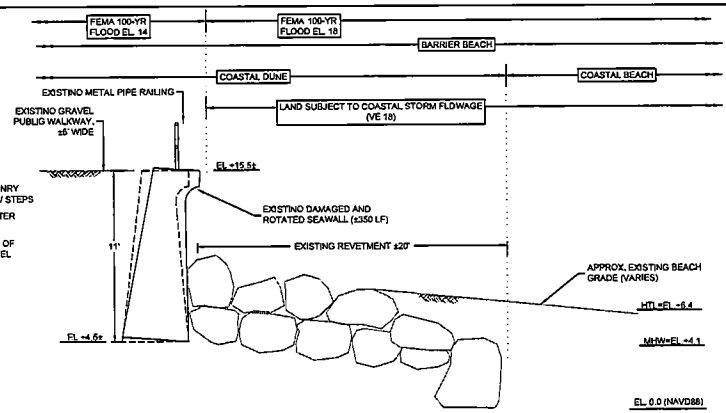
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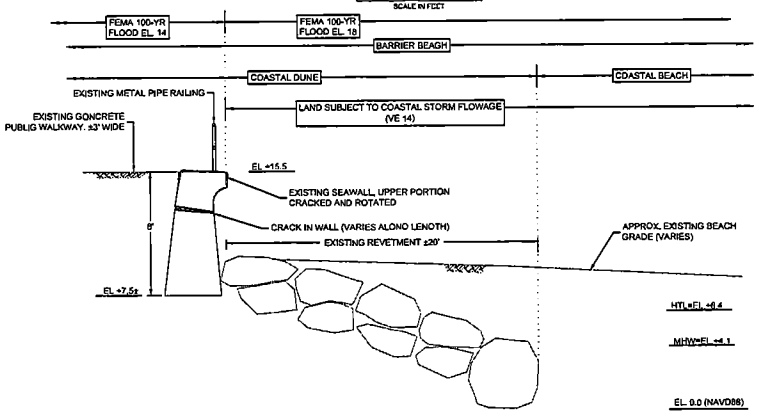
EXISTING CONDITIONS PLAN - STA. 11+00 TO 16+50
SCALE: 1"=30'
0 15 30 60
SCALE IN FEET



EXISTING CONDITIONS PLAN - WESTERN END STA. 0+00 TO 1+00
SCALE: 1"=10'
0 5 10 20
SCALE IN FEET



EXISTING WALL SECTION - STA. 14+00 (TYPICAL SEAWALL DAMAGE)
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



EXISTING WALL SECTION - STA. 0+25 (TYPICAL SEAWALL DAMAGE)
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET

EXISTING UTILITY LEGEND

- OHW — EXISTING OVERHEAD LINES
- W — EXISTING WATER LINES
- S — EXISTING SEWER LINES
- EXISTING GAS LINES
- EXISTING SEWER MANHOLE
- EXISTING WATER GATE
- HYD EXISTING HYDRANT

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NO.	ISSUE/DESCRIPTION	BY	DATE
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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

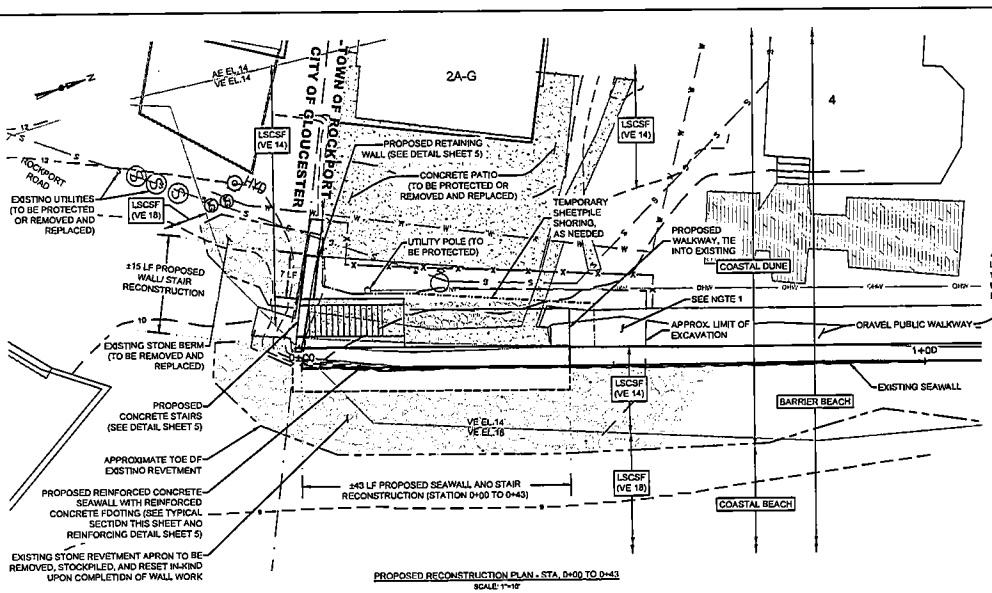
EXISTING CONDITIONS PLAN AND SECTIONS

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

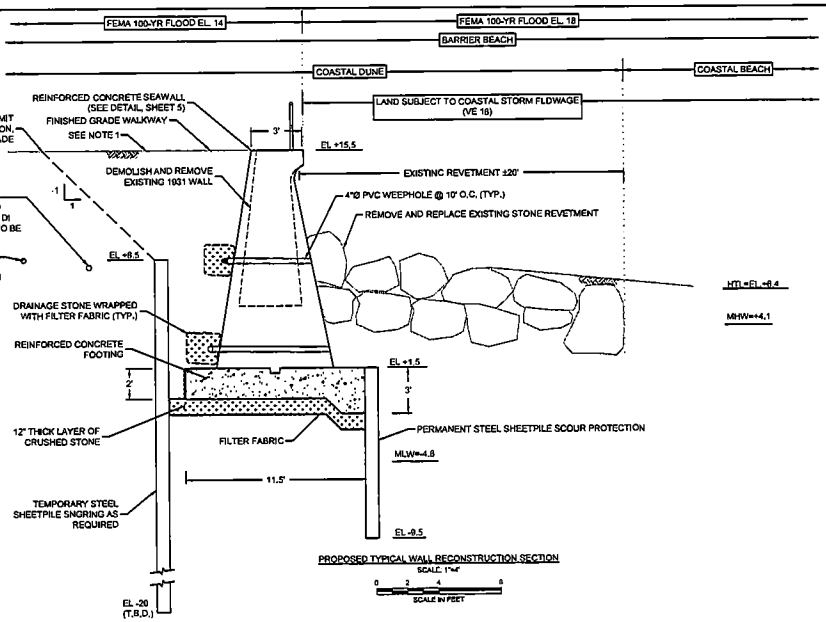
PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01960

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 3
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: MAY 2026	PROJECT NO. 18.0173734.04	REVISION NO. -	SHEET NO. 3 OF 6

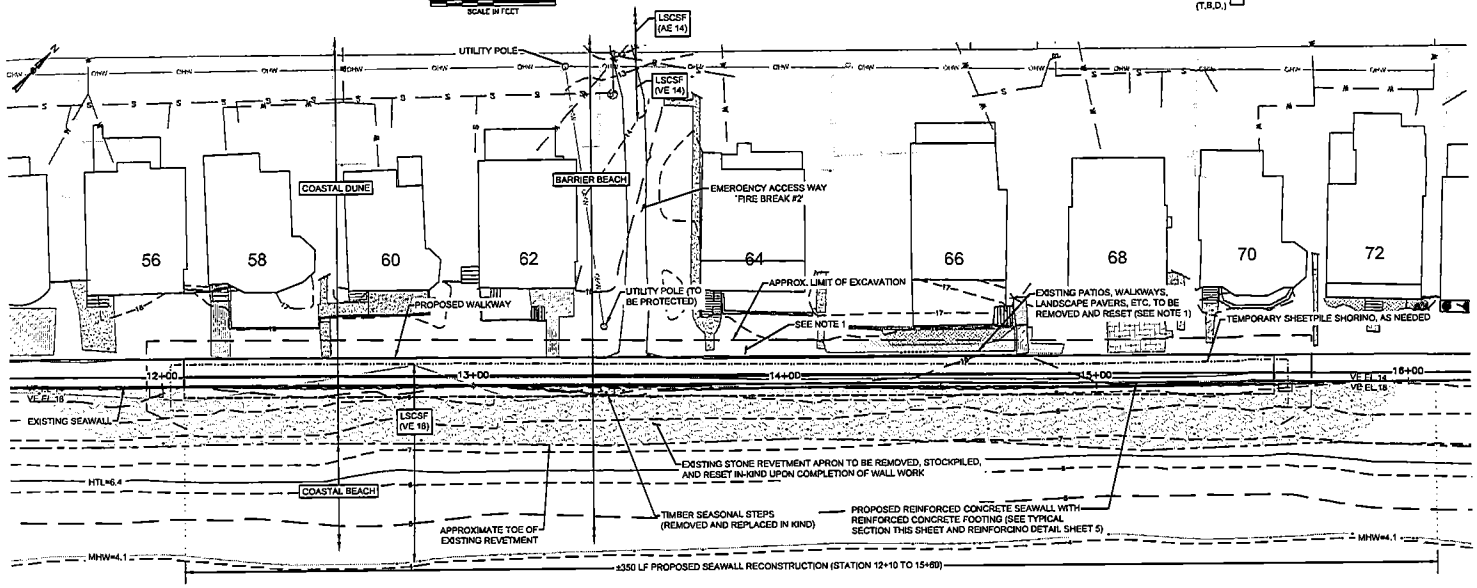
© 2026 - GZA GeoEnvironmental, Inc. G:\Projects\18\0173734.04 Long Beach Seawall Repairs 2025\Figures\CAD\Long Beach Seawall Improvements FEMA 4372DR 2025.dwg [Sheet 3-EX PLAN & SECT] May 19, 2026 - 10:19pm Isabel.Beckner



PROPOSED RECONSTRUCTION PLAN - STA. 0+00 TO 0+43
SCALE: 1"=10'
0 5 10 20
SCALE IN FEET



PROPOSED TYPICAL WALL RECONSTRUCTION SECTION
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



PROPOSED RECONSTRUCTION PLAN - STA. 12+10 TO 15+60
SCALE: 1"=20'
0 10 20 40
SCALE IN FEET

NOTES:

1. SITE FEATURES INCLUDIND, BUT NOT LIMITED TO, RESIDENTIAL WALKWAYS, PATIOS, DECKS, STAIRS, AND PLANTERS TO BE REMOVED AND RESTORED IN-KIND TO PRE-CONSTRUCTION CONDITIONS TO FACILITATE THE PROPOSED SEAWALL RECONSTRUCTION.

COMMONWEALTH OF MASSACHUSETTS
ANDERS D. BJARKLAND
CIVIL
No. 39795
REGISTERED PROFESSIONAL ENGINEER
4/17/26

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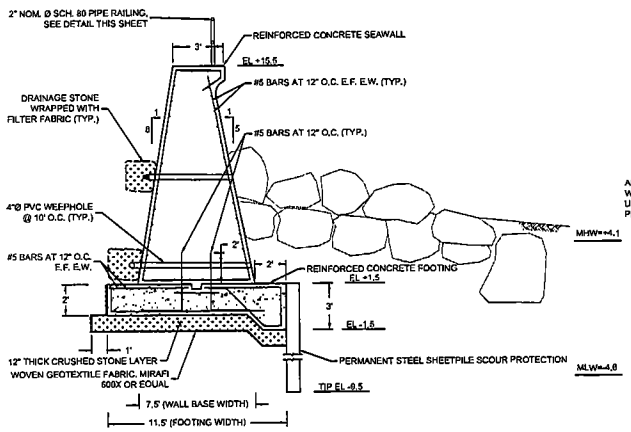
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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

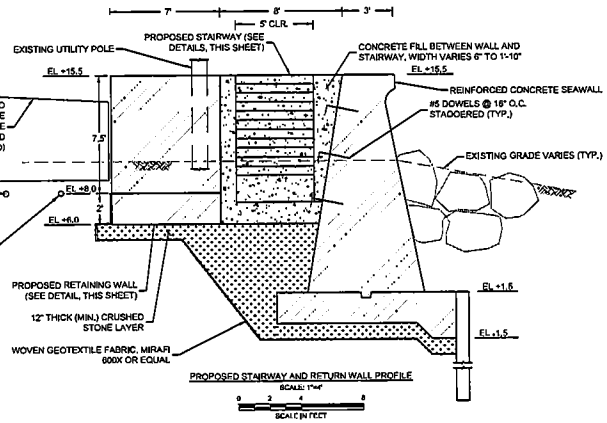
PROPOSED RECONSTRUCTION PLAN AND SECTION

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		TOWN OF ROCKPORT 34 BROADWAY ROCKPORT, MASSACHUSETTS 01966	
PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 4
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: MAY 2026	PROJECT NO. 18.0173734.04	REVISION NO. -	SHEET NO. 4 OF 6

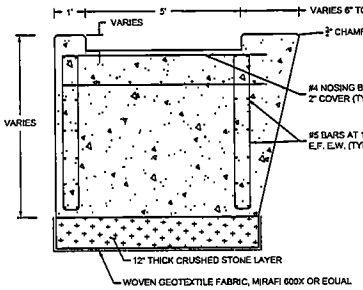
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TYPICAL PROPOSED SEAWALL REINFORCING
SCALE: 1"=4'
SCALE IN FEET



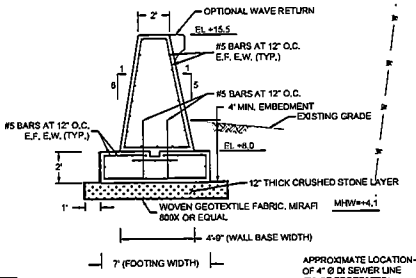
PROPOSED STAIRWAY AND RETURN WALL PROFILE
SCALE: 1"=4'
SCALE IN FEET



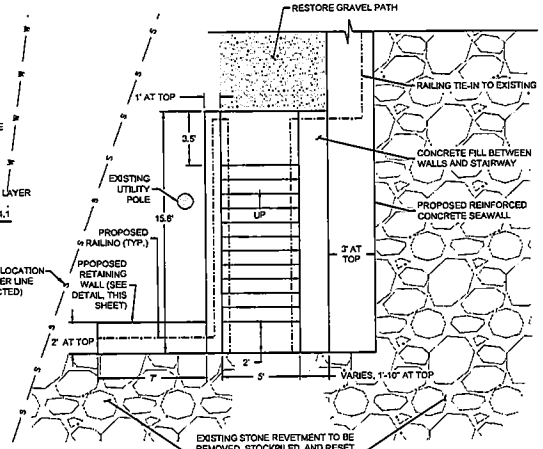
PROPOSED STAIRWAY CROSS SECTION
SCALE: 1"=2'
SCALE IN FEET

WALL RECONSTRUCTION NOTES:

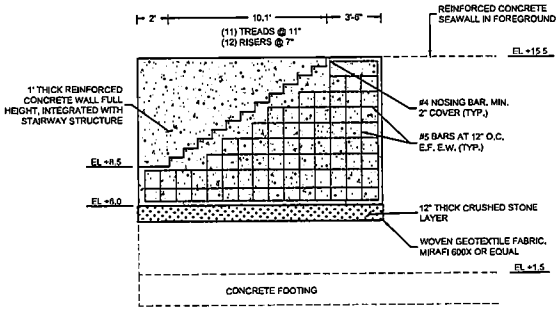
1. ALL REINFORCING BARS ARE TO BE A MINIMUM 3" CLEAR FROM FACE OF CONCRETE WHERE CONCRETE IS EXPOSED TO EARTH, EXCEPT WHERE OTHERWISE NOTED.
2. PROVIDE TOOLED CONSTRUCTION JOINTS NO MORE THAN 25' APART.
3. PROVIDE EXPANSION JOINTS NO MORE THAN 100' APART.



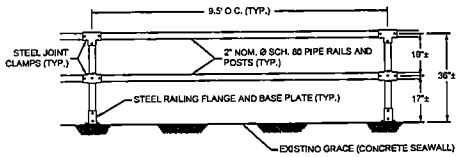
TYPICAL RETAINING WALL REINFORCING DETAIL
SCALE: 1"=4'
SCALE IN FEET



PROPOSED STAIRWAY AND RETURN WALL PLAN
SCALE: 1"=4'
SCALE IN FEET



PROPOSED STAIRWAY SECTION AND PARTIAL REINFORCING
SCALE: 1"=4'
SCALE IN FEET

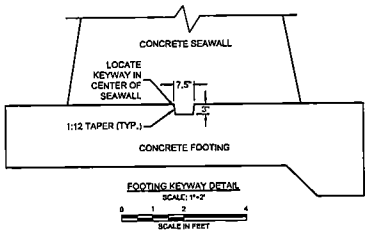


TYPICAL PROPOSED RAILING DETAIL
SCALE: 1"=2'
SCALE IN FEET

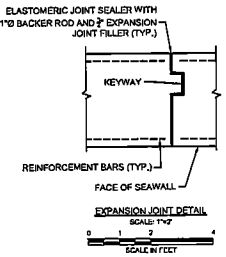
RAILING NOTES:

1. PROPOSED RAILINGS SHALL TIE-IN TO EXISTING RAILINGS TO REMAIN.
2. DIMENSIONS FROM EXISTING GRADE TO TOP AND MID-RAILS OF THE NEW RAILING SHALL MATCH THE EXISTING RAILING, FIELD VERIFY ALL DIMENSIONS.

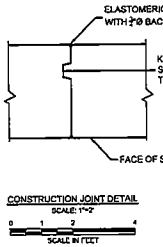
PERMITTING ONLY
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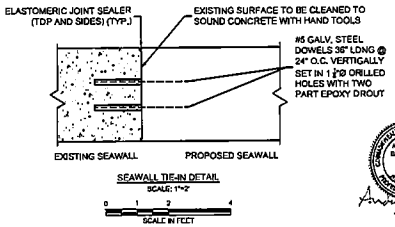
FOOTING KEYWAY DETAIL
SCALE: 1"=2'
SCALE IN FEET



EXPANSION JOINT DETAIL
SCALE: 1"=2'
SCALE IN FEET



CONSTRUCTION JOINT DETAIL
SCALE: 1"=2'
SCALE IN FEET



SEAWALL TIE-IN DETAIL
SCALE: 1"=2'
SCALE IN FEET

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

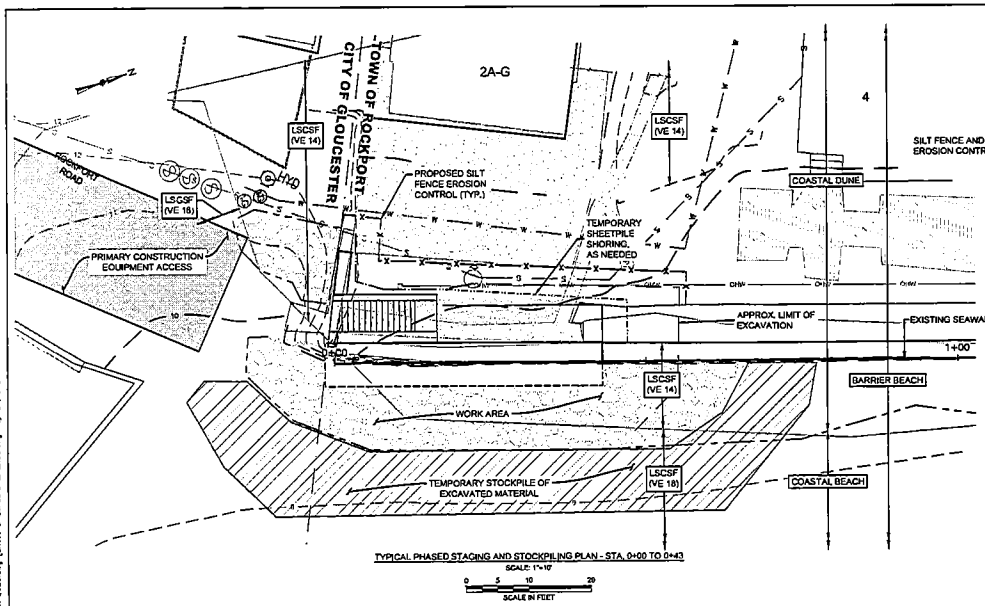
PROPOSED DETAILS

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

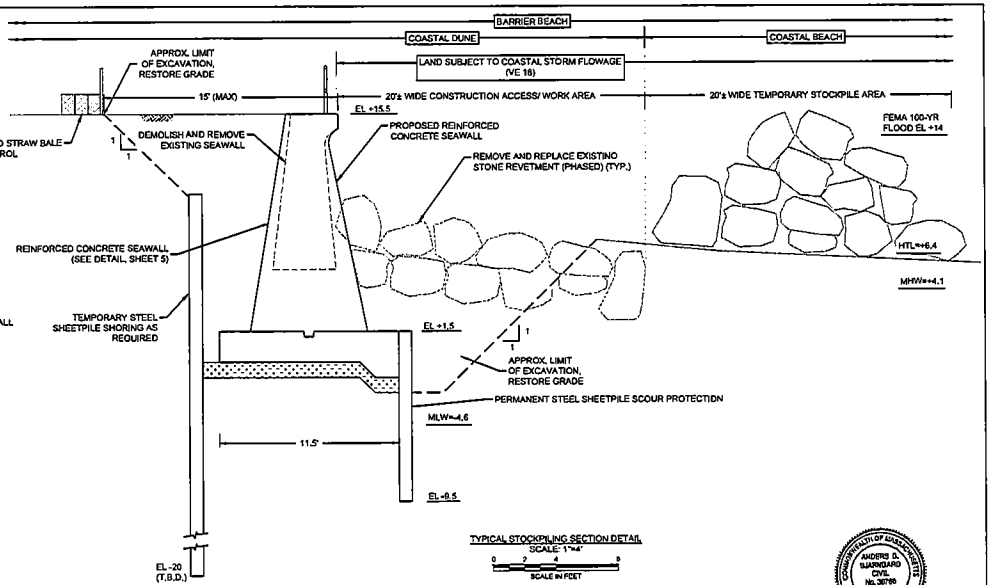
PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 5
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: MAY 2026	PROJECT NO. 18.0173734.04	REVISION NO. -	SHEET NO. 5 OF 6

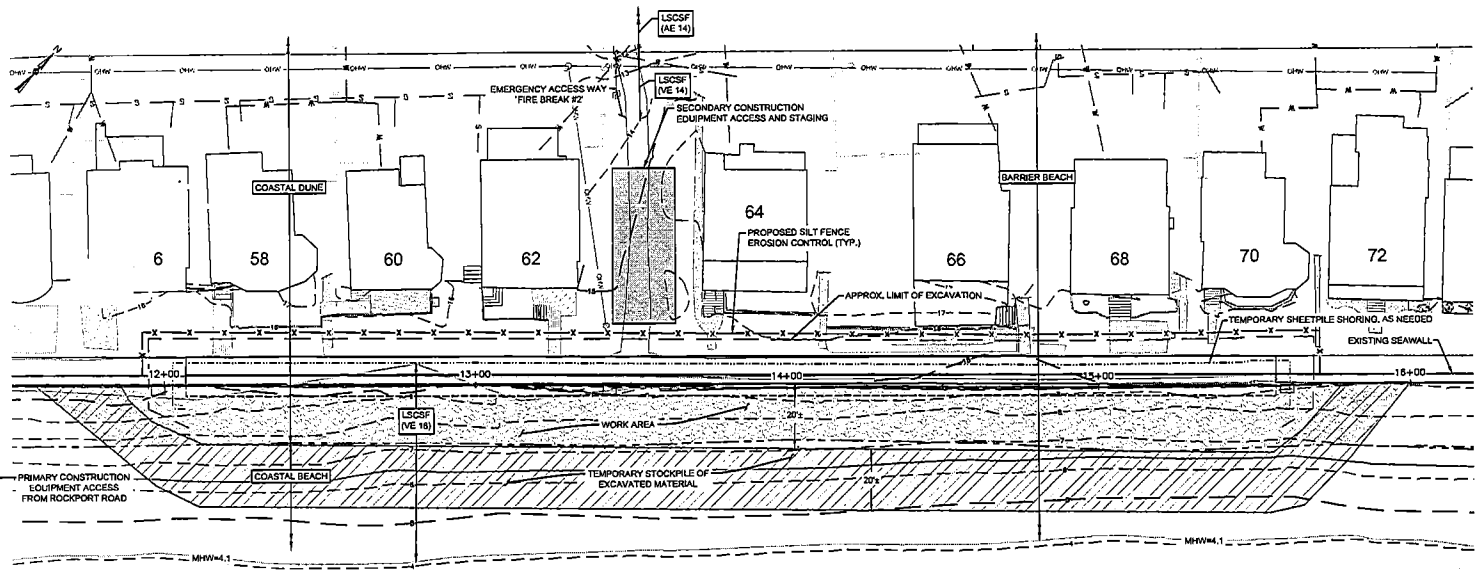
© 2026 - GZA GeoEnvironmental, Inc. G:\Projects\Long Beach Seawall Repairs 2025\Figures\CAD\Long Beach Seawall Improvements FEMA 4372DR 2026.dwg [Sheet 5-PR DETAILS] May 19, 2026 - 10:21pm Michael.Belcher



TYPICAL PHASED STAGING AND STOCKPILING PLAN - STA. 0+00 TO 0+43
SCALE: 1"=10'
SCALE IN FEET



TYPICAL STOCKPILING SECTION DETAIL
SCALE: 1"=4'
SCALE IN FEET



TEMPORARY PHASED STAGING AND EROSION CONTROLS PLAN - STA. 12+10 TO 15+80
SCALE: 1"=20'
SCALE IN FEET

PERMITTING ONLY
NOT FOR CONSTRUCTION

STAGING AND STOCKPILING NOTES:

1. EXCAVATED MATERIAL CONSISTINO OF REVETMENT STONE, BEACH SAND, AND OTHER GRANULAR MATERIAL IS TO BE TEMPORARILY STOCKPILED ALONO THE BEACH SEAWARD OF THE PROPOSED WORK.
2. STOCKPILED MATERIAL IS TO ACT AS A TEMPORARY BUFFER AGAINST WAVES AND TIDAL WATERS DURING THE CONSTRUCTION WORK.
3. SUITABLE EXCAVATED MATERIAL WILL BE USED TO BACKFILL EXCAVATIONS AND RESTORE THE AREA TO PRE-CONSTRUCTION CONDITIONS.
4. THE BEACH SHALL BE ACCESSED VIA ROCKPORT ROAD. ALL EDUIPMENT SHALL BE LIMITED TO THE AREA LANDWARD OF THE TEMPDRARY STOCKPILE BERM.

EROSION CONTROL NOTES:

1. ALONO THE LANDWARD SIDE OF THE SEAWALL, EROSION CONTROLS SHALL BE INSTALLED BETWEEN THE LIMITS OF WORK AND DWELLINGS.
2. EROSION CONTROLS SHALL ALSO ACT AS A LIMIT OF DISTURBANCE, AND NO ALTERATION SHALL TAKE PLACE BEYOND IT.
3. EROSION CONTROLS SHALL BE INSPECTED DURING WORK AND MAINTAINED IN COOD REPAIR.
4. EROSION CONTROLS SHALL REMAIN IN PROPER FUNCTIONING CONDITION UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

TEMPORARY STAGING AND EROSION CONTROL PLAN

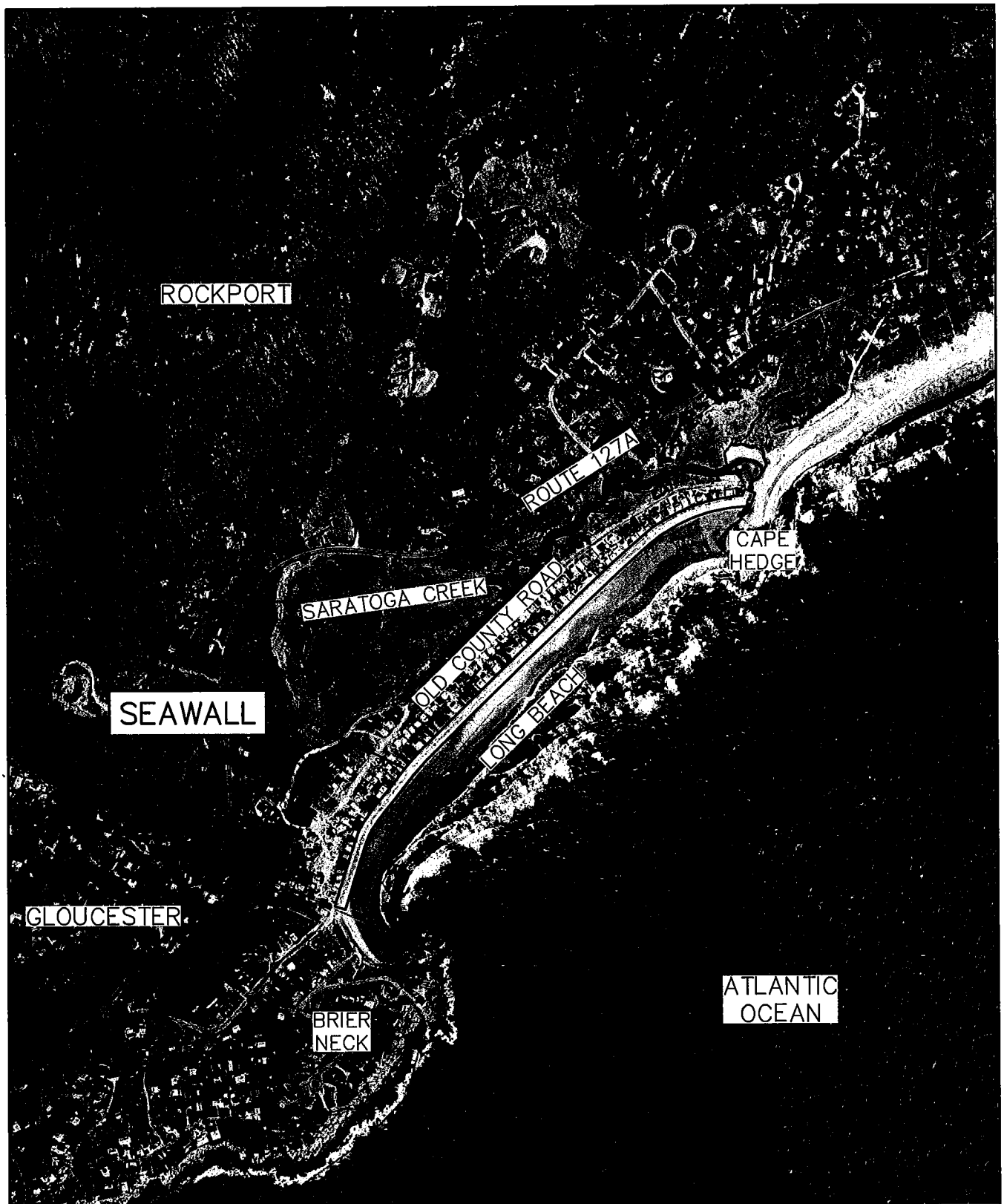
PREPARED BY:
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Engineers and Scientists
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PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR:	DAS	REVIEWED BY:	ABB	CHECKED BY:	DAS
DESIGNED BY:	DAS	DRAWN BY:	LFT	SCALE:	AS NOTED
DATE:	MAY 2026	PROJECT NO.	18.0173734.04	REVISION NO.	-

FIGURE 6
SHEET NO. 5 OF 6

© 2019 - GZA GeoEnvironmental, Inc. G:\A-A\173700's\18.0173734.04 Long Beach Seawall Repairs 2024\Figures\CAD\Long Beach Seawall Improvements FEMA 437208 2026.dwg [Sheet 6-STAGING & EROSION] May 20, 2026 - 5:48pm lmckellar



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SOURCE NOTES:
DIGITAL AERIAL ORTHOPHOTOGRAPHY AND TOWN LIMITS SHOWN BASED ON PUBLISHED ELECTRONIC DATA FILES OBTAINED FROM THE OFFICE OF GEOGRAPHIC INFORMATION (MassGIS), COMMONWEALTH OF MASSACHUSETTS INFORMATION TECHNOLOGY DIVISION INFORMATION DATABASE.

LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT

GZA
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N.T.S.

APRIL 2026

SHEET NO. 1

National Flood Hazard Layer FIRMette

FEMA



Basemap Imagery Source; USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- SPECIAL FLOOD HAZARD AREAS
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- OTHER AREAS
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- GENERAL STRUCTURES
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- OTHER FEATURES
  - 20.2 Cross Sections with 1% Annual Chance
  - 17.5 Water Surface Elevation
  - Coastal Transect
  - 513 Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- MAP PANELS
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/15/2026 at 3:20 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NO.	ISSUE/DESCRIPTION	BY	DATE

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LONG BEACH SEAWALL
FEMA DISASTER RELIEF PROJECT
ROCKPORT, MASSACHUSETTS

FEMA MAP

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
ROCKPORT, MA

PROJ MGR: DAS	REVIEWED BY: PJW	CHECKED BY: ABB	FIGURE 2
DESIGNED BY: DAS	DRAWN BY: RKT	SCALE: AS NOTED	
DATE: APRIL 2026	PROJECT NO. 18.0173734.04	REVISION NO.	SHEET NO. 2 OF 2

The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

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December 23, 2022

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME	: Long Beach Seawall FEMA Disaster Relief Project[1]
PROJECT MUNICIPALITY	: Rockport
PROJECT WATERSHED	: North Coastal
EEA NUMBER	: 15917
PROJECT PROPONENT	: Town of Rockport Department of Public Works
DATE NOTICED IN MONITOR	: November 23, 2022

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62L) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) submitted for this project and hereby determine that it **does not require** an Environmental Impact Report (EIR).

Original Project Description

As described in the Environmental Notification Form (ENF) reviewed in 2018 and the NPC, in the Original Project, the Town of Rockport (Town) initially proposed placement of ±8,000 cubic yards (cy) of beach nourishment sand along portions along portions of the existing beach (and on top of a stone revetment) fronting the 3,354-linear feet (lf) seawall at Long Beach in Rockport. In March 2018, a series of nor'easters caused extensive erosion and additional damage to Long Beach and the seawall. Sections of the seawall constructed in 1931 and 1959 (central portion of the wall) were undermined and evidence of wall movement and failure were observed. In addition, the western end of the seawall was undermined, extensive settlement and soil erosion occurred along the landside of the wall, and the public access stairs were destroyed. Interim stabilization of the seawall was proposed to occur in two phases and was intended to mitigate short-term undermining of the seawall, buffer storm waves, and supplement the sediment supply at the site. Improvements would protect public infrastructure and sensitive resource areas and improve the resiliency of existing structures.

[1] Previously known as "Long Beach Seawall Stabilization Improvements Project"

Phase 1 included emergency stabilization of portions of the seawall that were undermined and damaged following the March 2018 nor'easters. The Town repaired the south end of the seawall, buttressed sections of the 1931 seawall with stone on the seaward side within the existing footprint and replaced portions of the sidewalk along the top of the seawall. Phase 1 was approved by the Rockport Conservation Commission (RCC) through an Emergency Certification issued on March 19, 2018, and the Massachusetts Department of Environmental Protection (MassDEP) through a Minor Modification of an existing Chapter 91 (c. 91) License on September 11, 2018. Remaining elements of Phase 1 (permitted through emergency authorizations) would include additional placement of 2,500 tons of revetment stone within the existing footprint and was proposed to commence before the 2018-19 winter storm season began. As stated in the Certificate on the ENF, Phase 1 activities were not subject to MEPA review because they did not require Agency Action, as defined pursuant to 301 CMR 11.00. As noted, this phase was limited to emergency work to stabilize seawall portions undermined by storms, and not intended to address longer term, more permanent measures.

Phase 2 of the Original Project as described above was proposed to include beach nourishment activities proposed in the spring of 2019. This phase was proposed as a short-term solution that would lead to more comprehensive resiliency solutions for the beach. Prior to the 2018 nor'easters, the Long Beach seawall was assigned a Condition Rating of C (Fair) and a Priority Rating of IV (High Priority) by the Massachusetts Coastal Infrastructure and Assessment Project report (July 2013). Other assessments have been performed at the site including a detailed assessment in May 2011 which determined that portions of the 1931 and 1959 seawall were in poor and fair condition, respectively.

As noted in the Certificate on the ENF, the Town indicated during review of the Original Project that it was evaluating more comprehensive alternatives to address long-term erosion and provide storm damage protection, including partial and full reconstruction of the seawall. Evaluation of comprehensive alternatives was proposed to respond to the effects of climate change, such as sea level rise and more powerful storms. The Town is participating in the Municipal Vulnerability Preparedness (MVP) Program which provides support for municipalities to begin the process of planning for climate change resiliency and implementing priority projects. This NPC filing proposes further measures to provide longer-term resiliency solutions.

A Certificate on the ENF was issued on October 26, 2018, which determined that the project did not require an EIR.

Project Change Description

According to the NPC, the intent of the stone revetment and sand nourishment work described in the ENF was to provide interim seawall stabilization while more long-term comprehensive alternatives could be evaluated. This project change is proposed as a continuation of the seawall stabilization and improvements to repair damage incurred by the 2018 northeast storms. It includes the reconstruction of ±350 linear feet (lf) of a 1930s section of seawall, reconstruction of ±43 lf of the 1959 seawall with an 18 lf landward return located at the western end of the existing seawall, and replacement of an existing emergency repair precast concrete access stairway with a permanent reinforced concrete stairway. Reconstructed walls are proposed to consist of new reinforced cast-in-place concrete footings with a minimum of 2 feet in thickness and extending ±2 feet beyond the face of the seawall, permanent steel sheet piles embedded into the footing at the seaward side for increased scour protection, and reinforced cast-in-place concrete walls that extend 4 feet below the existing walls. The proposed concrete footing will be founded on a 12-inch-thick layer of crushed stone wrapped in filter fabric. The top of the

proposed walls will have metal pipe railings to tie in and match the existing railings at the site. The landside of the walls will have a 6-foot-wide, cast-in-place concrete sidewalk to replace the existing stone dust public walkway.

Project Area

Long Beach is a Barrier Beach that includes a 3,354-lf concrete seawall, associated stone revetment and sandy beach along the shoreline of the Atlantic Ocean. The shoreline extends northeast from Brier Neck in Gloucester to Cape Hedge in Rockport. Long Beach is a pocket beach which does not have an active sediment source to the littoral system due to the headlands at each end of the beach. The majority of the 29-acre project area is located in Rockport. The seawall protects ±154 houses, Old County and Long Beach Roads, ±30 acres of Coastal Dune, tidal Salt Marsh, and Saratoga Creek which opens up to the ocean at the easterly end of the seawall. It also protects Town infrastructure including sidewalk, leased lots, water and sewer utilities and private infrastructure including electric and gas utilities.

The concrete seawall includes a wave return face. The top of the seawall is three feet wide. It is fronted by a stone revetment (one-stone thick) that extends ±22 feet seaward. The seawall and revetment are fronted by a sandy beach. A concrete walkway along the top of the seawall provides public access. Observed deficiencies include sinkholes behind the seawall and settling/heaving of the walkway. The seawall was originally constructed by the Commonwealth in 1931. Sections of the seawall that were damaged by storms in 1958 were reconstructed in 1959 and include the 22-foot stone apron along the base of the wall. Subsequent storms damaged the seawall and eroded fill behind it.

Wetland resource areas in the project area include Barrier Beach, Coastal Beach, Coastal Bank, Land Under Ocean (LUO), and Land Subject to Coastal Storm Flowage (LSCSF). According to the Federal Emergency Management Agency's (FEMA) National Flood Insurance Rate Map (FIRM) (Panel No. 25009C0338G effective July 16, 2014), portions of the project area are located within the VE Zone with a Base Flood Elevation (BFE) of 14 feet North American Vertical Datum of 1988 (NAVD88). The Mean High Water (MHW) line is located at 4.1 feet NAVD88. The project is not located within a designated geographic area of Environmental Justice Populations.[2]

Environmental Impacts and Mitigation

Environmental impacts associated with the Original Project included alteration of 3,125 lf of Coastal Bank and 3.5 acres of Barrier Beach, which was identified to include 2.0 acres of Coastal Beach and 1.5 acres of LSCSF. Measures to avoid, minimize and mitigate environmental impacts included use of construction period best management practices (BMPs) including sedimentation and erosion controls.

Environmental impacts associated with the NPC activities include additional alteration of LSCSF (±1,644 square feet (sf) permanent and ±16,000 sf temporary), Coastal Beach (8,000 sf temporary), Coastal Dune (±2,980 sf permanent and ±12,200 sf temporary), and Barrier Beach (±2,980 sf permanent and ±20,200 sf temporary). Up to 960 cy of excavated compatible sand displaced by the reconstruction of the seawall will be placed on the beach. The NPC identifies construction period BMPs to minimize coastal resource area impacts, including sedimentation and erosion controls.

[2] "Environmental Justice Population" is defined in M.G.L. c. 30, § 62 under four categories: Minority, Income, English Isolation, and a combined category of Minority and Income.

Jurisdiction and Permitting

The Original Project underwent MEPA review and required preparation of an ENF pursuant to 301 CMR 11.03(3)(b)(1)(a), 301 CMR 11.03(3)(b)(1)(e) [3], and 301 CMR 11.03(3)(b)(1)(f)[2] because it required Agency Actions and was anticipated to result in, respectively, alteration of Barrier Beach and Coastal Bank; new fill or structure or expansion of existing fill or structure in a velocity zone; and alteration of one-half or more acres of wetlands (Barrier Beach, Coastal Beach, and LSCSF). The Original Project required a c. 91 License and a Section 401 Water Quality Certification (WQC) from the Massachusetts Department of Environmental Protection (MassDEP). The project was subject to Federal Consistency Review by the Massachusetts Office of Coastal Zone Management (CZM).

According to the NPC, the Original Project (beach nourishment) received an Order of Conditions (OOC) from the RCC, which was issued on March 29, 2019; a combined 401 WQC/c. 91 Waterways Permit[4], which was issued on June 10, 2019; and authorization by the Army Corps of Engineers (ACOE), which was issued on April 4, 2019. The beach nourishment work was completed in November 2019 and was issued a Certificate of Compliance from the RCC (February 13, 2020).

The project change disclosed in this NPC independently exceeds review thresholds at 301 CMR 11.03(3)(b)(1)(a), 301 CMR 11.03(3)(b)(1)(e), and 301 CMR 11.03(3)(b)(6) because it will result in, respectively, alteration of Barrier Beach; expansion of fill or structure in a velocity zone; and expansion of an existing solid fill structure of 1,000 or more square feet. The project change will require a 401 WQC and a c. 91 Minor Project Modification from MassDEP, an Order of Conditions from the RCC (or, on appeal only, a Superseding Order of Conditions from MassDEP), and a General Permit Amendment from the ACOE. The project will be partially funded by FEMA.

Because the Town may seek Financial Assistance in the form of Coastal Resiliency Grants, MEPA jurisdiction is broad and extends to those aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Review of the NPC

The NPC describes existing and proposed conditions and contains detailed site plans and cross-sections. It describes changes to the Original Project, provides estimates of impacts associated with the project change, and describes measures to avoid, minimize and mitigate Damage to the Environment. The Town provided supplemental information to the MEPA Office on December 16, 2022, to respond to comments from CZM. For purposes of clarity, all supplemental materials are included in references to the "NPC" unless otherwise indicated.

Alternatives Analysis

The Original Project (beach nourishment) was considered a short-term solution until the Town developed a long-term solution which could include reconstruction of the seawall and a more extensive beach nourishment program. The ENF included evaluation of several alternatives including: No Action; Full Length Revetment Reconstruction; and Partial Revetment Reconstruction and Sand Nourishment (ENF Preferred Alternative).

[3] This threshold was not identified in the ENF.
[4] According to an email from David Smith, GZA on behalf of the Town to the MEPA Office on December 20, 2022.

With respect to the seawall reconstruction work proposed in the NPC, the Proponent analyzed a No Action Alternative, Sand Nourishment/Stone Revetment, In-kind Repairs, and In-kind Repairs Plus Mitigation (NPC Preferred Alternative). The No Build Alternative would maintain existing conditions. According to the NPC, the site and existing seawall have experienced additional damage; sections of the 1931 and 1959 walls were undermined and evidence of wall movement was observed. In addition, the southern end of the seawall was undermined, and access stairs failed and settled nearly one foot. Extensive settlement and soil erosion occurred along the landside of the wall and the public access stairs were destroyed. The area is likely to experience additional scour and erosion and additional sections of seawall may fail, potentially compromising landside dwellings, utilities, and public walkways. Therefore, this alternative was dismissed.

The Sand Nourishment/Stone Revetment Alternative would add additional sand to the beach area and additional revetment stones along the seaward side of the seawall. According to the NPC, the Town recently performed both repair/stabilization options along the face of most of the existing seawall. Stone revetment repairs/improvements were performed, and limited sand beach nourishment was provided in 2019. This alternative was intended to provide an interim method of stabilizing existing structures until long-term repairs could be performed. Any additional revetment and beach nourishment would again act as temporary stabilization to the existing seawall; however, the NPC indicates that the Town is seeking more long-term solutions to address the aged and damaged seawalls.

The In-Kind Repairs Alternative would provide immediate relief to damaged seawalls and existing scour and erosion areas by replacing the damaged seawalls with new cast-in-place concrete seawalls within the same footprint as the existing seawall and the same dimensions. According to the NPC, although this alternative would provide more effective long-term seawall stabilization and protection to the landside features, it was dismissed because it would likely be at risk to damage caused by coastal storms. As described below, the Preferred Alternatively similarly seeks to replace structures in kind but adds components to fortify the structures to improve resiliency to future storm events.

The NPC Preferred Alternative (in-kind repairs plus additional fortifying measures) would provide immediate relief to damaged seawalls and existing scour and erosion areas by replacing damaged seawalls with new cast-in-place concrete seawalls and would provide the additional benefit of an increased wall depth with steel sheeting scour protection, increased footing width, and permanent cast-in-place concrete stairways with solid parapet walls. While these additional measures modestly increase wetland impacts, they were viewed to be essential to fortifying the structures to improve resiliency when compared to the In-Kind Repairs Alternative. The Preferred Alternative was therefore selected because it provides the greatest long-term stabilization and protection, while minimizing wetland impacts to the greatest extent practicable.

Wetlands, Waterways, and Water Quality

The project change will result in permanent and temporary impacts to coastal wetland resource areas including LSCSF, Coastal Beach, Coastal Dune and Barrier Beach. The RCC will review the project change to determine its consistency with the Wetlands Protection Act (WPA), the Wetlands Regulations (310 CMR 10.00), and associated performance standards, including stormwater management standards (SMS). MassDEP will also review the project change to determine its consistency with the 401 WQC (314 CMR 9.00) and c. 91 regulations (310 CMR 9.00) (Minor Modification).

The NPC describes the project change's consistency with performance standards for each impacted resource area. Proposed work will temporarily alter 8,000 sf of Coastal Beach associated with construction (i.e., excavation, temporary stockpiling, and staging of material and equipment). Specifically, excavated material consisting of existing revetment stone, beach sand, and other granular material is proposed to be stockpiled within the Coastal Beach. Up to 960 cy of excavated compatible sand displaced by the reconstruction of the seawall will be placed on the beach. Proposed work will permanently alter ±2,980 sf of Coastal Dune within the seawall extension area beyond the existing seawall limits, and temporarily alter ±12,200 sf of Coastal Dune for construction. Proposed work will permanently alter ±2,980 sf and temporarily alter ±20,200 sf of Barrier Beach.

According to CZM comments, the entire site is within both LSCSF and barrier beach, but total impact areas for these resource areas differ in the NPC. Supplemental information from the Town maintains that LSCSF is the area below the FEMA 100-year storm (elevation 14 feet NAVD88) and that Barrier Beach includes areas behind and landward of the seawall that is located above the LSCSF. The Town should ensure that permitting documents accurately reflect the total permanent and temporary impacts to all coastal resource areas resulting from the project change.

Adaptation and Resiliency

Comments from CZM reference the Long Beach Sediment Transport Study Final Report (2014), prepared on behalf of the Town, in which two nourishment scenarios were modeled for Long Beach: 50,000 cy (five-to-six-year design life) and 100,000 cy (more than ten-year design life). The Town placed 8,000 cy of nourishment as an interim measure as part of the Original Project to provide some additional protection while a longer-term solution was developed, with the expectation that additional nourishment may be needed in the future. CZM comments note that although this volume of sediment did add to the beach system to improve its overall ability to provide some storm damage protection, the significantly reduced volume would not have met the goals established in the 2014 study.

The NPC maintains that the project change will benefit Coastal Beach with proposed placement of up to 960 cy of suitable granular material or excavated sand displaced from under the seawall during the reconstruction on the beach as beach nourishment. CZM comments note that because this sand is already part of the barrier beach system, it should not be considered nourishment and will not improve the existing storm damage prevention function of the beach. Supplemental information from the Town clarifies that the ±960 cy of suitable excavated sand/granular material is excess excavated material located up to 5 to 6 feet below grade that will be replaced with the reconstructed seawall and footing. The Town asserts that, although very minimal, the material will be added to the beach at the work locations to help support the system.

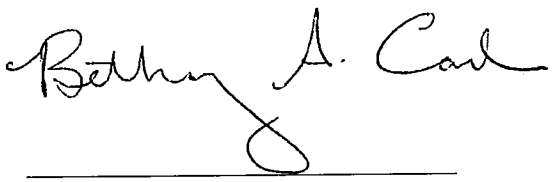
According to CZM comments, the repaired seawall will continue to have an impact on the fronting Coastal Beach by exacerbating sediment erosion. Additional nourishment as recommended in the 2014 final report should be pursued for this location to improve the longer-term resilience of the beach and mitigate the ongoing impacts of the seawall. The Town should work with CZM to develop a Coastal Resilience Grant proposal to support this important resiliency step. Supplemental information acknowledges that additional sand nourishment would benefit the site and the Town will consult with CZM to consider options for future nourishment. However, the Town expresses funding concerns regarding the ±$2M to $4M cost to provide between 50,000 cy and 100,000 cy of sand, even with likely partial grant funding (with a cost-share match of 25%).

Excavated material will be temporarily stockpiled along the beach seaward of the existing seawall and proposed work will be performed within one tidal cycle to avoid inundation of the work area. According to CZM comments, it is unlikely that materials stockpiled seaward of the work area will be adequate to provide the necessary protection against waves and tidal waters during construction work and question completion of entire sections of wall within one tidal cycle given the proximity of the limits of work to mean high water and the extent of the work. Permitting documents should describe how the work area will be managed to remain dry during tidal cycles without the use of coffer dams or similar structures. Supplemental information indicates the stockpiled material will provide some limited protection to work areas from daily tidal effects and provides a cost-effective location for excavated materials that avoids removal, transport, stockpiling at an offsite location, and transporting back to the site for material reuse. Seawall reconstruction work will be performed in stages, with only limited portions of the existing seawall being removed and replaced at a time. Seawall replacement will involve placement of steel sheetpile sections on the landward and seaward side of the wall footing to provide support of excavation during wall construction, a form for pouring the concrete footing, and protection to the work from tidal effects and daily tidal inundation. Potential water seepage to the work locations will be managed by pumping methods to remove the water. Tides will need to be examined to determine when it is most favorable to perform the work in the dry, such as during concrete pouring.

Supplemental information clarifies that the proposed walkway substrate will be stone dust to match the current existing stone dust pathway. The walkway was originally concrete but was mostly removed and changed to stone dust by the Town after the 2018 storm events. The Town should ensure that permitting documents reflect the stone dust substrate for the walkway, which is recommended by CZM, instead of concrete, which will exacerbate storm damage to the dwellings and barrier beach areas behind it during coastal storms that overtop the wall.

Conclusion

The NPC has sufficiently described the nature and general elements of the project for the purposes of MEPA review and described measures to avoid, minimize and mitigate the project's environmental impacts. Comments from Agencies do not request additional MEPA review. Accordingly, I find that an EIR is not required for this project change.



December 23, 2023
Date

Bethany A. Card

Comments Received:

12/08/2022 Massachusetts Division of Marine Fisheries (DMF)
12/13/2022 Massachusetts Office of Coastal Zone Management (CZM)

BAC/PPP/ppp

Patel, Purvi (EEA)

From: Schenck, Forest (FWE)
Sent: Thursday, December 8, 2022 10:54 AM
To: Patel, Purvi (EEA)
Subject: MA DMF Comment: EEA#15917, NPC, Long Beach Seawall Reconstruction, Rockport

Hi Purvi,

MA DMF has reviewed the NPC for the proposed Long Beach Seawall Reconstruction in Rockport, MA EEA#15917. Based on the scope of the work as currently proposed, MA DMF has no marine fisheries resource recommendations at this time. Please contact me if you have any questions about our review.

Thank you,

Forest Schenck, Ph.D.
Environmental Analyst
MA Division of Marine Fisheries
30 Emerson Avenue
Gloucester, MA 01930
Forest.Schenck@Mass.gov
978-855-6054 (cell)
Pronouns: he, him, his

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
OFFICE OF COASTAL ZONE MANAGEMENT
100 Cambridge Street, Suite 900, Boston, MA 02114

MEMORANDUM

TO: Bethany A. Card, Secretary, EEA
ATTN: Purvi Patel, MEPA Office
FROM: Lisa Berry Engler, Director, CZM
DATE: December 13, 2022
RE: EEA-15917, Long Beach Seawall; Rockport

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Notice of Project Change (NPC), noticed in the *Environmental Monitor* dated November 23, 2022, and offers the following comments.

Project Description

The project change includes the reconstruction of approximately 350 linear feet (lf) of a 1930's section of seawall, the reconstruction of approximately 43 lf of the 1959 seawall with an 18 lf landward return located at the western end of the existing seawall, and the replacement of an existing emergency repair precast concrete access stairway with a permanent reinforced concrete stairway. The reconstructed walls are proposed to consist of new reinforced cast-in-place concrete footings with a minimum of 2 feet in thickness and extending approximately 2 feet beyond the face of the seawall, permanent steel sheet piles embedded into the footing at the seaward side for increased scour protection, and reinforced cast-in-place concrete walls that extend 4 feet below the existing walls. The proposed concrete footing will be founded on a 12-inch-thick layer of crushed stone wrapped in filter fabric. The top of the proposed walls will have metal pipe railings to tie in and match the existing railings at the site. The landside of the walls will have a 6-foot-wide, cast-in-place concrete sidewalk to replace the existing stone dust public walkway. The Town of Rockport previously filed an Environmental Notification Form (ENF) for the Long Beach Seawall Stabilization Improvements Project and received an ENF Certificate on October 26, 2018. The project associated with the ENF filing consisted of the placement of approximately 8,000 cubic yards (cy) of beach nourishment sand along portions of the existing beach fronting the seawall at Long Beach. The proposed work requiring this NPC is the continuation of the seawall stabilization and improvements to repair damage incurred by the 2018 northeast storms. The NPC states that the proposed work is within land subject to coastal storm flowage (LSCSF) resource area and the FEMA zone VE elevation 14 NAVD88, and that the work will permanently alter approximately 1,644 square feet (sf) and temporarily alter approximately 16,000 sf of LSCSF. The proposed work will temporarily alter 8,000 sf of coastal beach with construction procedures such as excavation, temporary stockpiling, and staging of material and equipment. Specifically, excavated material consisting of existing revetment stone, beach sand, and other granular material is proposed to be stockpiled within the coastal beach resource area. Up to 960 cy of excavated compatible sand displaced by the reconstruction of the seawall will be placed on the beach. The work will permanently alter approximately 2,980 sf of coastal dune resource area within the seawall extension area beyond the existing seawall limits, and temporarily alter approximately 12,200 sf of coastal dune through construction procedures such as excavation, stockpiling, and staging of material and equipment. The proposed work will permanently alter approximately 2,980 sf and temporarily alter approximately 20,200 sf of barrier beach resource area.

Project Comments

The NPC states that the impact on the area from a series of northeast storms in 2018 caused extensive erosion and damage to the beach and seawall, undermining the center portion of the wall, and causing movement of the wall in some locations. In addition, the western end of the seawall was undermined, extensive settlement and soil erosion occurred along the landside of the wall, and the public access stairs were destroyed. To stabilize the damaged portion of the wall, minimize further movement, and provide safe access to the public, the Town then performed work under an emergency authorization, including repairing the west end of the wall and stairs and buttressing sections of the damaged 1931 wall with stone on the seaward side. The Town of Rockport then filed an ENF for the placement of approximately 8,000 cy of beach nourishment sand along portions of the existing beach fronting the seawall. According to the NPC, the intent of the stone revetment and sand nourishment work was to provide interim seawall stabilization while more long-term comprehensive alternatives could be evaluated. Before the filing of the ENF in 2018, the Town had contracted with a coastal engineering firm to conduct a study regarding shore protection alternatives along Long Beach. The final report associated with that study, the Long Beach Sediment Transport Study Final Report (2014), included modeling results from two nourishment scenarios for Long Beach: 50,000 cy with a design life of five to six years and 100,000 cy with a design life of more than ten years. The placement of the 8,000 cy of nourishment was chosen as an interim measure to provide some additional protection while a longer-term approach was developed, with the expectation that additional nourishment may be needed in the future. Although this volume of sediment did add to the beach system to improve the overall ability of the beach to provide some storm damage protection, the significantly reduced volume would not have met the goals established in the 2014 study. The NPC states that the proposed project has beneficial permanent impacts on the coastal beach resource area because of the up to 960 cy of suitable granular material or excavated sand displaced from under the seawall during the reconstruction that is proposed for placement on the beach as beach nourishment. Because this sand is already part of the barrier beach system, it should not be considered nourishment, and will not improve the existing storm damage prevention function of the beach.

The repaired seawall will continue to have an impact on the fronting coastal beach by exacerbating sediment erosion. To improve the longer-term resilience of the beach and mitigate the ongoing impacts of the seawall, additional nourishment as recommended in the 2018 final report should be pursued for this location. CZM staff is available to work with the Town to develop a Coastal Resilience Grant proposal to support this important resiliency step.

According to the NPC, excavated material will be temporarily stockpiled along the beach seaward of the existing seawall and the proposed work will be performed within one tidal cycle to avoid inundation of the work area. Although the NPC also states that stockpiled material will act as a temporary buffer against waves and tidal waters during the construction work it is not likely that the materials stockpiled seaward of the work area will be adequate to provide the necessary protection of the work area. In addition, completing entire sections of the wall within one tidal cycle in this location is unlikely given the proximity of the limits of work to mean high water and the extent of the work to be performed. Permitting documents should describe how the work area will be managed to remain dry during tidal cycles without the use of coffer dams or similar structures.

The NPC provides conflicting descriptions of the proposed walkway substrate, stating both that the stone dust walkway behind the wall will be replaced in kind, and that it will be replaced with

a concrete walkway. Stone dust is recommended rather than concrete, as concrete will exacerbate storm damage to the dwellings and barrier beach areas behind it during coastal storms that overtop the wall. Permitting documents should clarify materials proposed for the walkway.

The entire site is within both LSCSF and barrier beach, but the total impact areas for these resource areas differ in the NPC. The permitting documents should address this discrepancy and accurately reflect the total permanent and temporary impacts to all coastal resource areas resulting from the proposed project.

Federal Consistency Review

The proposed project may be subject to CZM federal consistency review, and if so, must be found to be consistent with CZM's enforceable program policies. For further information on this process, please contact Robert Boeri, Project Review Coordinator, at robert.boeri@mass.gov, or visit the CZM website at https://www.mass.gov/federal-consistency-review-program.

LE/kg/rh

cc: Kathryn Glenn, Rebecca Haney, CZM
Rachel Freed, Jill Provencal, DEP NERO
John Lopez, Rockport Conservation Agent



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www.gza.com

May 20, 2026
File No. 18.0173734.04

Rockport Conservation Commission (RCC)
Rockport Town Hall
34 Broadway
Rockport, MA 01966

Re: Notice of Intent Application Response to DEP Comments
Long Beach Seawall FEMA Disaster Relief Project
FEMA Project No. 73018 (4372DR-MA)
Long Beach, Rockport, Massachusetts 01966

Dear Reviewers:

In response to the DEP comment regarding the identification of a Coastal Bank, we note that prior permitting and agency coordination for this Site have established that a Coastal Bank is not present. For the Long Beach Seawall Stabilization Improvements Project, EEA No. 15917, the Massachusetts Office of Coastal Zone Management (CZM) and the Executive Office of Energy and Environmental Affairs (EEA) have stated that the seawall and revetment do not qualify as a Coastal Bank under 310 CMR 10.00. As stated by Kathryn Glenn: *"The ENF identifies the seawall and revetment as coastal bank. Long Beach is designated as a barrier beach in the MA Barrier Beach Inventory Project, DEP Wetlands data layer, and it meets the definition of a barrier beach under the Wetlands Protection Act Regulations. The barrier beach consists of coastal beach and coastal dune, with the revetment and seawall armoring the coastal dune. As coastal bank is defined in the Wetlands Protection Act regulations as a landform, the seawall and revetment are not considered a coastal bank. CZM recommends that this delineation is revised in the permit applications."* The EEA reiterated CZM's comment; Matthew Beaton, Secretary of EEA stated: *"Because Long Beach is designated as a Barrier Beach in the Massachusetts Barrier Beach Inventory Project and meets the definition of one pursuant to 310 CMR 10.00, CZM recommends that the delineation of seawall/revetment as Coastal Bank, as described in the ENF, be revised in permit applications. The Barrier Beach consists of Coastal Beach and Coastal Dune, with the seawall/revetment armoring the Coastal Dune. CZM comments indicate that the seawall and revetment are not considered Coastal Bank pursuant to 310 CMR 10.00."* Based on this regulatory guidance, we have not delineated Coastal Bank at the site. Accordingly, the buffer to Coastal Bank is not applicable. References to buffer zones have been removed from the drawing and impact area tables to avoid confusion where such buffers are not applicable.

In response to the remaining comment, the plan set and supporting materials have been revised to improve clarity and consistency regarding regulated resource areas. The limits of Land Subject to Coastal Storm Flowage (LSCSF), including VE and AE Zones, are now clearly delineated and labeled on all relevant plan sheets. The impact area table, below, has also been updated to include an additional 1,000 square feet of temporary impact associated with equipment access and staging within LSCSF at the end of Rockport Road.

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Resource Area	Permanent Impact	Description	Temporary Impact	Description
Land Subject to Coastal Storm Flowage	±1,644 SF	Seawall Width Extension Beyond the Existing Seawall Limits (Seaside Only)	±33,980 SF	Seaward Excavation Area, Construction Access, and Material Stockpiling
Coastal Beach	±960CY	Suitable displaced sand will be redistributed	±24,980 SF	Seaward Material Stockpiling, Construction Access
Coastal Dune	±2,980 SF	Seawall Width Extension Beyond Existing Seawall Limits (Landside and Seaside)	±12,200 SF	Landward and Seaward Excavation Area, Construction Access, and Equipment Staging
Barrier Beach[1]	±2,980 SF	Seawall Width Extension Beyond Existing Seawall Limits (Landside and Seaside)	±37,180 SF	Landward and Seaward Excavation Area, Construction Access, Material Stockpiling, and Equipment Staging

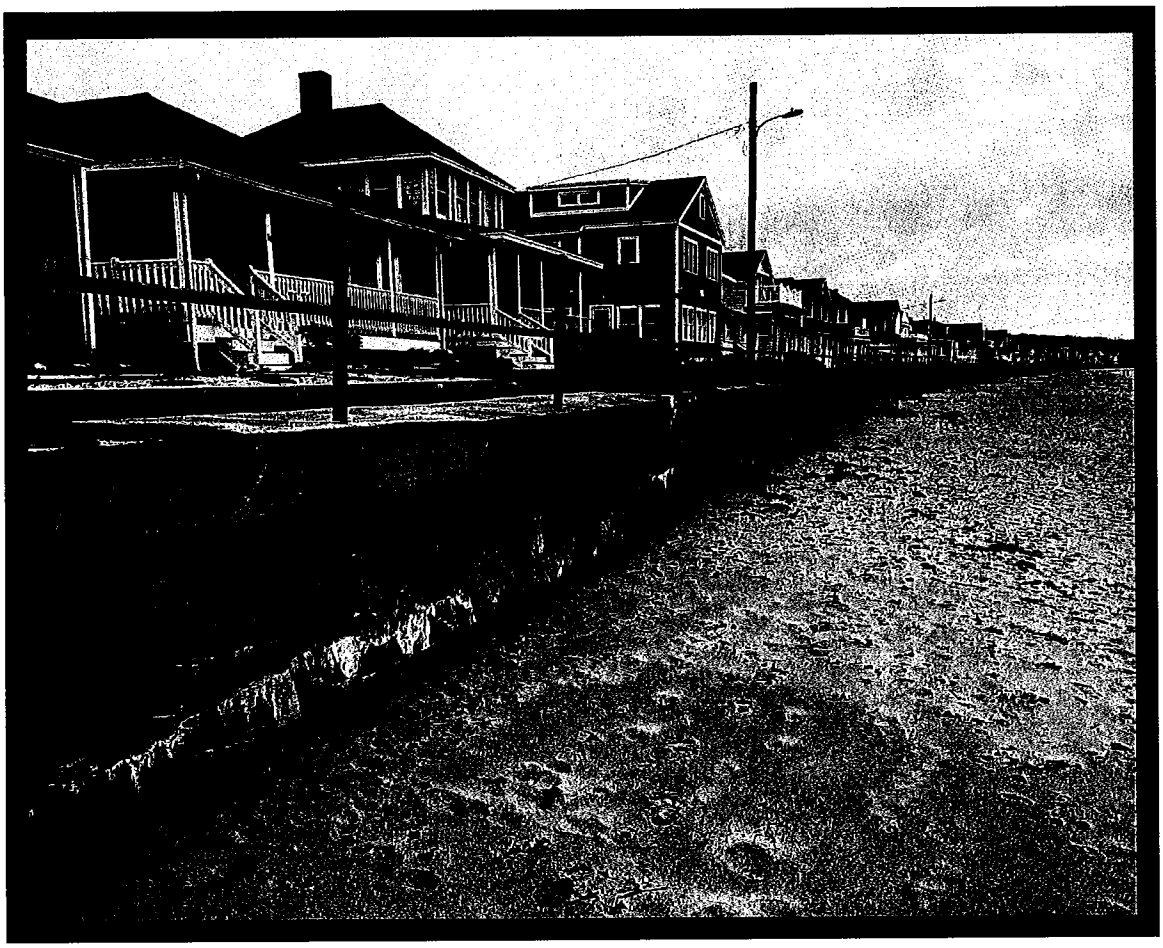
[1]Coastal Beach and Coastal Dune areas are within Barrier Beach.

These revisions are intended to provide a clearer depiction of jurisdictional areas and project impacts for review. We look forward to meeting with the Commission to discuss the proposed project. Should you have questions or comments regarding this submittal, or if additional information is required, please contact our office at (781) 278-4806.

Very truly yours,
GZA GEOENVIRONMENTAL, INC.

David A. Smith
Senior Project Manager

Enclosed: Revised Plan Set
CC: Robert Craig (Town of Rockport); Jenna Pirrotta (MassDEP Northeast Regional Office)



Massachusetts Coastal Infrastructure Programmatic Environmental Assessment Compliance Checklist

Long Beach Seawall Project

Rockport, Essex County, Massachusetts

PA-01-MA-4372-PW-00319

February 21, 2023

FEMA

U.S. Department of Homeland Security
Federal Emergency Management Agency, Region 1
99 High Street, Sixth Floor
Boston, MA 02110

PREPARED BY

Christian Paske, Environmental Protection Specialist

Eric Kuns, Sr. Environmental Protection Specialist

I. Project Information

Coastal Flood and Erosion Mitigation Projects in Massachusetts	**Date:** February 13, 2023
Assessment under the Coastal Flood and Erosion Mitigation Projects Programmatic Environmental Assessment (PEA) and Finding of No Significant Impact (FONSI) **This form is designed to help FEMA review each project to determine if it should be covered by this PEA or whether another level of evaluation would be more suitable, including an SEA, a stand-alone EA, or an environmental impact statement. Project Proponents may also complete this form and submit to FEMA using the address at the end of this checklist.*	
Disaster Description and Date: DR4372MA -Severe Winter Storm and Flooding – March 2 through 3, 2018	
Project Name and Project Number: Rockport Long Beach Sewall Project - PA-01-MA-4372-PW-00319	
Name and Contact Information of Person Completing this Form: Christian Paske, christian.paske@fema.dhs.gov, (202) 704-1027	

Describe Purpose and Need for Action:

The purpose of the project is to repair sections of the existing seawall at Long Beach which were damaged during the March 2018 nor'easter (Winter Storm Riley). There are 149 cottages and accessory buildings located landward of the seawall. Flooding from normal high tides and storm surge occurs regularly in this area. The project will substantially restore damaged sections of the seawall to pre-disaster condition and will include hazard mitigation measures by increasing the depth of the seawall by approximately 3-ft below grade, adding a concrete footer, and adding subsurface sheet-piling for scour protection.

Action(s) Proposed:

Hard Engineering Designs

- ☐ Revetments
- ☒ Bulkheads and Seawalls
- ☐ Levees/Berms
- ☐ Groins
- ☐ Wave Attenuators

Bioengineering Measures

- ☐ Bank Regrading/Stabilization
- ☐ Beach/Dune Restoration
- ☐ Marsh and Wetlands Creation, Restoration, or Enhancement

Other proposed activities not included above:

Describe the No Action Alternative:

The No Action Alternative would be no FEMA funding for the repair of the existing seawall. Since the proposed action is the repair of the seawall to substantially pre-disaster conditions, the applicant would need to pursue other funding, self-fund the repairs, or the seawall would remain in a damaged state and continue to degrade.

Describe the Proposed Action:

The proposed action is to rebuild 350 linear feet of the approximately 3,300 linear foot existing seawall at Long Beach in Rockport, MA. Hazard Mitigation measures would be included in the repairs to increase the depth and width of the reinforced concrete seawall and provide a reinforced concrete footing with sheet piling for scour protection. Additionally, concrete access stairs at the southern end of the seawall would be relocated within Town boundaries, approximately 10-feet north of their current location. Reconstruction and upgrades like those above would be completed on 43 linear feet of seawall adjacent to the stairs. One set of seasonal wooden access stairs would be replaced in-kind.

Describe Public/Agency Involvement to Date (if any):

- NHPA consultations were sent to the Massachusetts SHPO on July 31, 2020, and THPOs of the Wampanoag (Aquinnah) and Mashpee Wampanoag on August 5, 2020. The MA SHPO concurred with FEMA's finding of "No Historic Properties Affected" on August 6, 2020. No response was received from the THPOs.
- Essential Fish Habitat (EFH) consultation was submitted to National Marine Fisheries Service (NMFS) on November 2, 2020. NMFS responded on November 30, 2020, with conservation measures. Reinitiated consultation with NMFS on November 7, 2020. NMFS replied on November 8, 2022, that provided the scope of work remained the same, the previous conservation recommendations remained applicable.
- Initial Public Notice (IPN) for EO11988/11990 published on January 13, 2021, in the Gloucester Daily Times as part of STATEX level project review – Elevated to EA based upon public comment.
- IPN for EO11988/11990 as well as notice of FEMA's preparation of an EA published on September 30, 2022, in the Gloucester Daily Times – No comments received within 15 days of publication.
- Coordination between FEMA and MA Office of Coastal Zone Management initiated October 31, 2022.
- Request for Technical Assistance for marine ESA species sent to NMFS on November 15, 2022. NMFS responded on November 15, 2022, stating that there would be limited, if any overlap with the project area and ESA-listed marine species. FEMA should consider a No Effect determination.

List Required Permits, Approvals, or Authorizations and Status of Each:

- MEPA – Notice of Project Change submitted – Comments due December 13, 2022.
- USACE – CWA Section 404, RHA Section 10 – No coordination with the Corps currently. Coordination is expected to occur in Phase 2 permitting efforts.
- Conservation Commission - Wetlands Protection Act (WPA) Order of Conditions – GZA reached out to the new Rockport Conservation Commission agent and verbally informed the agent of this ongoing project. Coordination is expected to occur in Phase 2 permitting efforts.
- MA DEP – CWA Section 401 Water Quality Certification – status unknown
- MA DEP – Chapter 91 License – No coordination with the MADEP Waterways Regulation Program and the 401 Water Quality Certificate Program currently. Coordination is expected to occur in Phase 2 permitting efforts.
- US EPA – CWA Section 402 NPDES Construction Permit – No coordination with the USEPA currently. Coordination, if required, is expected to occur in Phase 2 permitting efforts.
- Authorization from the local floodplain administrator – Status unknown
- MA CZM – Coastal Consistency Determination – Massachusetts Coastal Zone Management (MACZM) provide review comments during the public comment period associated with the Notice of Project Change (NPC) filing to the Massachusetts Environmental Policy Act (MEPA). Comments have been addressed in a Response to Comments letter submitted to MEPA.

II. Analysis of Environmental Consequences

For each resource, confirm that the potential effects of the proposed project are described in the PEA and that mitigation measures described in the PEA will be applied to the project. Review the Additional Impacts Questionnaire (Section III) and document any additional impacts and proposed mitigation for those additional impacts. Determine whether the combination of potential effects described in the PEA and any additional impacts would result in significant impacts after mitigation measures are applied. Review the thresholds found in Table 6.1 of the PEA and determine whether the PEA would apply. If there are additional impacts related to a particular resource, a Supplemental EA (SEA) may still need to be prepared even if the PEA thresholds are not exceeded. An SEA may focus on only the resource(s) with the additional impacts.

Resource	**Document Project Effects and Mitigation that Conform with PEA**	**Document Additional Impacts** **See Section III. Additional Impact Questionnaire*	**Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)**	**Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?**	**Does PEA Coverage Apply? (Yes/No)**
Geology, Topography, and Soils	**Minor** short-term effects to soils and topography due to construction activities. **Minor** long-term beneficial effects to soils and topography behind the seawall would be expected due to continued protection of areas landward of the seawall along the length of Long Beach. The presence of the seawall likely exacerbates beach erosion; however, the beach exhibits less erosion than much of the MA coastline due to the protection offered by outcroppings at either end.	**None** – No additional impacts to geology, topography, or soils are anticipated. Although the beach is located between bedrock outcroppings, the proposed project, which is the repair of a 300-ft and a 43-ft segment of existing seawall, is not located in an area that would affect bedrock outcroppings. There are no soils protected by the Farmland Policy Protection Act in the project area.	Based on engineering plans, the following erosion control measures will be implemented: **1.** Along the landward side of the seawall, erosion controls shall be installed between the limits of work and dwellings. **2.** Erosion controls shall also act as a limit of disturbance, and no alteration shall take place beyond it. **3.** Erosion controls shall be inspected during work and maintained in good repair. **4.** Erosion controls shall remain in proper functioning condition until all disturbed areas have been stabilized.	Yes	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Air Quality	**Negligible** short-term adverse effects on air-quality due to the use of construction equipment during construction. Emissions would be expected to be below de minimis thresholds. **Negligible** long-term adverse effects on air quality due to the use of construction equipment use needed for possible long-term maintenance of the seawall and beach.	**None** – Although the project would result in the extended use of construction equipment, the project location is listed as an attainment area (Sussex County, MA) in the September 30, 2022 EPA Greenbook. Emissions resulting in long-term maintenance of the seawall and beach would be expected to be de minimis.	As discussed in the PEA all construction equipment would be required to meet current EPA emissions standards (EPA 2016a). Actions to reduce emissions would be implemented such as minimizing engine idling and using equipment in good working condition. No additional air conditions would be required.	Yes	Yes
Climate Change	**Negligible** short-term and temporary effects from greenhouse gas emissions from construction vehicles and equipment. **Minor** long-term beneficial effects would be expected from the project by increasing the community's resilience to climate change.	**None** – Any reoccurring emissions resulting in continued seawall maintenance would be temporary and not a new source of emissions. The project would not be expected to exceed the 25,000 metric tons of greenhouse gases per year threshold for further recommended analysis during project construction.	No additional mitigation necessary due to negligible adverse effects.	N/A	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Water Quality	**Minor** short-term adverse effects to water quality due to construction would be anticipated from the proposed project. These could include construction related pollutants, turbidity, and sedimentation. Erosion controls incorporated into the project design as well as permit conditions would be expected to minimize these impacts. **Minor** long-term beneficial effects to water quality due to erosion control provided by the proposed project would be expected despite the possibility of hard engineering to alter downdrift erosion. Pre-construction grades would be maintained; therefore; no net gain in fill or loss of waters of the US would occur.	**None** – The Long Beach area is not a listed Category 5 impaired water. There are no sole source aquifers in the project area. According to engineering plans, although much of the seawall is located below the high tide line (HTL), work below mean high water (MHW) will be temporary and consist of placing excavated material seaward of the construction area. The area will be restored following construction.	No additional water quality conditions beyond those provided in the PEA which include: 1. Before construction begins, the Project Proponent must obtain any required Clean Water Act Section 404 and 401 permits from USACE and Mass DEP, respectively, and comply with all terms and conditions of the issued permits. 2. Before construction begins, the Project Proponent must obtain any required Clean Water Act Section 402 NPDES permits from the EPA and comply with all terms and conditions of the issued permit. 3. Before construction begins, the Project Proponent must file a Notice of Intent with the local Conservation Commission in accordance with the Massachusetts Wetlands Protection Act.	Yes	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Floodplains	**Minor** short-term adverse effects to the floodplain would be anticipated due to construction related changes to topography. Excavated materials would be placed seaward of the construction area to act as a buffer against waves and tidal waters which would have a temporary adverse impact on the floodplain due to changes in grade; however, the site will be restored to its previous grade and condition following construction. **Moderate** long-term beneficial effects to occupants of the floodplain would be provided by the project due to the continued reduction in flood hazards offered by the seawall. The project would maintain pre-disaster grades and topography, as all hazard mitigation measures incorporated into the project would occur below grade. These mitigation measures are also anticipated to increase flood hazard resiliency without affecting floodplain topography. Flood hazards due to storm surge and flooding from the saltmarsh would remain; however, the no action alternative would expose infrastructure in the area to greater risk.	**None** – There are no anticipated adverse effects to the floodplain that could not be mitigated. The seawall height would be maintained at pre-disaster levels and grades will be restored following construction.	No additional conditions beyond that included in the PEA would be required. The PEA condition is as follows: 1. Before construction begins, the Project Proponent must obtain approval from the local permitting official responsible for any floodplain development to demonstrate that the Proposed Action is consistent with the criteria of the NFIP (44 C.F.R. part 59 et seq.) or any more restrictive federal, state, or local floodplain management standards (44 C.F.R. 9.11(d)(6)) and comply with all terms and conditions of the issued permit.	Yes	Yes

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Wetlands	There are no EO11990 defined wetlands within the project area and saltmarsh located to the northwest of the project area would not be affected by construction activities. Short-term effects to the wetlands in the vicinity of the project would be **none**. **Minor** long-term beneficial effects to wetland habitat could be expected from the proposed project due to the protection from storm surge related sedimentation and landward migration of the shoreline offered by the seawall.	**None** – Although the project is located between the ocean and a saltmarsh (Cowardin Classification - E2EM1Pd). The project repairs an existing facility, and no additional separation of the wetland and the ocean would occur. The saltmarsh maintains connectivity with the ocean via the Saratoga Creek, the outlet of which is located at the north end of Long Beach and would not be affected by the proposed action.	No mitigation necessary since project is not in nor will it affect a wetland.	N/A	Yes
Wild and Scenic Rivers	The closest wild and scenic rivers to the proposed project area are the Sudbury, Assabet, and Concord Rivers, all approximately 33 miles to the west and the Lamprey River approximately 36 miles to the northwest. Effects of the project on Wild and Scenic Rivers are anticipated to be **none**.	**None** – There are no Wild and Scenic Rivers in the project area	No mitigation necessary since project is not in nor will it affect Wild and Scenic Rivers.	N/A	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Navigation	**Negligible** short-term adverse effect to navigation would be anticipated due to the proposed action. According to engineering plans, a minimal portion of the excavated materials placed seaward of the construction area would be located below MHW. These materials would be removed following construction, and the site would be restored. Construction equipment would access the site from the Rockport Road and an emergency accessway between residences on Old County Road. The use of barges is not anticipated. **Negligible** long-term beneficial effects to navigation could be anticipated as a result of the project since the seawall could control erosion and sediment that could enter shipping lanes.	**None** – The proposed action is anticipated to have negligible effects on navigation.	No additional conditions beyond that included in the PEA would be required. The PEA condition is as follows: 1. Before construction begins, the Project Proponent must obtain any required River and Harbors Act Section 10 Permit from USACE and comply with all terms and conditions of the issued permit.	Yes	Yes

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Coastal Zone Management Act	The entire project site is within both Land Subject to Coastal Storm Flowage and designated Barrier Beach. Construction will have temporary minor impacts to the coastal zone. Post construction, the repaired seawall will maintain the status quo and continue to have an impact on the fronting Coastal Beach by exacerbating sediment erosion.	None.	No additional mitigation would be required for Coastal Zone Management beyond the conditions included in the PEA. PEA conditions for CZMA include the following: 1. Before construction begins, the Project Proponent must coordinate with the Massachusetts Office of Coastal Zone Management and obtain a favorable Coastal Zone Consistency Determination. The Project Proponent must comply with all terms and conditions of the issued Coastal Consistency Determination. 2. Before construction begins, the Project Proponent must obtain a Mass DEP Chapter 91 Waterway License and comply with all terms and conditions of the issued permit.	Yes	Yes

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Coastal Barrier Resource Act	The project is not within a designated Coastal Barrier Resource Act System Unit. The closest Coastal Barrier Resource System Unit is the Good Harbor Beach/Milk Island Unit (C01A) portions of which are located approximately 2,800 feet to the southwest and 5,350 feet to the east. Effects of the project on CBRS units are anticipated to be **none**.	**None** – The proposed action would not affect the CBRS Unit in the area.	No mitigation necessary since project is not in nor will it affect any CBRS units.	N/A	Yes
Vegetation	There is no native terrestrial vegetation in the area of the proposed action. The area of construction will be limited to the concrete seawall, revetment, and adjacent areas which consist of open beach, and residential property features (residential walkways, patios, decks, stairs, and planters). According to data from Mass Mapper and Massachusetts Ocean Resource Information System (MORIS), there are no mapped eelgrass or other seagrass beds in the waters adjacent to the project area. Short-term effects of the proposed project on vegetation are expected to be **none**. Long-term **minor** beneficial effects could occur as a result of the proposed project due to the protection provided by the seawall to vegetation in the saltmarsh behind the Long Beach dune.	**None** – The proposed action would have minimal effect on terrestrial, emergent, or aquatic vegetation.	No mitigation necessary since project is not in nor will it affect vegetation.	N/A	Yes

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Fish and Wildlife	**Minor** short-term adverse impacts to aquatic wildlife could be expected during construction activities due to potential increases in turbidity; however, erosion controls incorporated into project design would minimize these impacts. Additionally, all driving of sheet piling would occur above MHW or behind the temporary berm of excavated materials placed to separate construction activities from tidal waters; therefore, minimal acoustic effects are anticipated. **Minor** short-term adverse impacts to terrestrial wildlife would be expected during construction activities due to increased noise and use of equipment; however, the land around the project area is developed to a level these impacts would be expected to be minimal. **Minor** long-term beneficial effects to aquatic wildlife would be expected as a result of the continued protection and erosion control provide by the seawall which would reduce frequency of disturbance and turbidity locally. **Minor** long-term effects to terrestrial wildlife are anticipated from the project since the seawall may help to protect habitat behind Long Beach dune from storm surge.	**None** - The closest Area of Critical Environmental Concern, Great Marsh, is approximately 4.5 miles west of the proposed action site. There are no known Bald Eagles nests in or near the proposed action area. There is little to no vegetation that would constitute migratory bird nesting habitat within the project area, so no effects on migratory birds are anticipated. There are no designated Massachusetts Natural Heritage & Endangered Species Program (NHESP) Priority or Estimated Habitats of Rare Species or BioMap2 Core Habitats in or near the project area	No additional mitigation required beyond measures incorporated into project design.	Yes	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Invasive Species	**Minor** short-term adverse effects are possible as a result of ground disturbance involved in construction and the possible spread of aquatic invasive species by equipment; however, construction specifications require the project area to restored following construction. Additionally, compliance with permit conditions and the use of BMPs outlined in the PEA would minimize adverse effects. **Minor** long-term adverse effects are possible due to the continued presence of hardened infrastructure allowing for the potential establishment of invasive species; however, these effects could be offset by a decreased frequency of ground disturbance caused by storm surge and coastal flooding.	**None** – The proposed action is the repair of an existing seawall in a developed area. There would be no removal of native species.	No mitigation measures beyond the BMPs discussed in the PEA would be required.	Yes	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Threatened and Endangered Species	According to a USFWS official species list for the proposed action area, terrestrial endangered or threatened species that may be present in the project area include the northern long-eared bat and roseate tern. According to the NMFS Section 7 Mapper, ESA-protected marine species that could be present in or around the project area include Atlantic sturgeon, short-nose sturgeon, green sea turtle, Kemp's ridley sea turtle, leatherback sea turtle, loggerhead sea turtle, North Atlantic right whale, and fin whale The project will have no effect on northern long eared bat, as no tree removal is expected; no effect on roseate tern as no nesting habitat is in or around the project area; no effect on sea turtles as they are migrating/foraging in the region and there are no mapped SAV beds in the area; and no effect on whales, as noise producing activities (sheet-pile driving) will either occur above MHW or will in the dry due to the placement of the temporary berm. Silt producing activities would be mitigated by conservation recommendations provided by NMFS as part of EFH consultation, so no effect is expected on sturgeons. Effects on threatened and endangered species are expected to be **none**.	**None** – There would little overlap between the proposed project area and ESA listed species habitat.	Effects mitigation would be accomplished through conservation recommendations provided by NMFS as part of EFH consultation which would also protect ESA-listed species. Based on technical assistance provided by NMFS, there would little overlap with the project area and ESA-listed marine species. FEMA has made a No effect determination for both terrestrial and marine ESA-listed species.	Yes	Yes

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Essential Fish Habitat	FEMA made a determination of "Adverse Effect on EFH is not Substantial" and submitted a consultation to NMFS on November 2, 2020. NMFS provided conservation recommendations. Given, the passage of time between the initial consultation and the preparation of an EA, FEMA reengaged with NMFS on 11/7/2022 to confirm the continued applicability of the provided conservation recommendations to the project and effects determination. On 11/8/2022, NMFS replied that all previous conservation recommendations remained applicable. **Minor** short-term adverse effects to EFH would be anticipated due to construction related disturbance and potential water quality impacts. Effects would be temporary and minimized by NMFS provided conservation recommendations that would become conditions of the grant. **Minor** long-term beneficial effects to EFH would be expected from reduced frequency of disturbance provided by the proposed action. The site would be restored following construction activities and no new habitat conversion would be expected.	**None** – Project specific EFH consultation has been completed and adverse effects to EFH would not be substantial.	NMFS has provided conservation recommendations that will be accepted by FEMA and will become conditions of the grant. These include: 1. Excavation and silt producing work should be conducted when the tide is waterward of the work area. 2. All work should be stabilized prior to tidewaters reaching disturbed sediments to prevent turbidity issues. 3. All erosion controls should be removed in their entirety upon project completion.	Yes	Yes

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Cultural Resources	FEMA made a determination of "No Historic Properties Affected" and submitted these findings to the MA SHPO and THPOs of the Wampanoag (Aquinnah) and Mashpee Wampanoag Tribes on July 31, 2020, and August 5, 2020, respectively. The SHPO concurred with the determination on August 6, 2020. No comment was received from the THPOS. Impacts to historic properties are expected to be **none**.	**None** – A finding of "No Historic Properties Affected" was made by FEMA	Conditions included in the NHPA consultations submitted to SHPO and THPOs on July 31, 2020, and August 5, 2020, respectively included requirements pertaining to the discovery of artifacts, human remains, and the use of borrow sources. Full text of these conditions can be found within the consultations. No additional cultural resources conditions are required.	Yes	Yes

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Land Use and Zoning	**Minor** short-term effects to land use due to reduced access to the beach from construction activities could be expected from the proposed action. There would be no short-term effects to planning as a result of the proposed project, as repair of the seawall would maintain current residential land use on the dune. Short-term effects to planning would be **none.** **Moderate** - long-term effects to land use and planning would be expected due to the proposed action. The current seawall protects 149 cottages and accessory buildings that would be at increased risk of severe damage or destruction if the current seawall is not maintained. Long-term land use in the Long Beach area would be expected to change significantly without the proposed repairs to the seawall. Continued beach nourishment would be expected to continue to maintain the public beach.	**None** – The proposed project would not require changes to the current land use of the long beach area. The project would allow for the continuation of the current land use	Periodic beach nourishment would be expected to be necessary to maintain the public beach.	Yes	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Noise	**Minor** short-term adverse effect to noise levels would be expected due to construction activities associated with the proposed project. Based on project design specifications, no construction may occur between June 15 and September 15 of any year. This avoids much of the time of year when beach goes would be present and some (but not all) of the time the cottages at Long Beach can be occupied. There is no local noise ordinance pertaining to construction. Effects would be temporary and localized.	**None** – Although the project would require the use of sheet-piling (both temporary and permanent) the use of a vibratory hammer is expected. This would result in less effect on noise levels than impact pile driving.		N/A	Yes
Traffic and Transportation	**Negligible** short-term adverse effects to traffic and transportation are expected; there will be no road closures. **Moderate** long-term beneficial effects are expected to traffic and transportation due to the continued protection offered by the seawall.	**None** – Although the eventual loss of Old County Road would be expected without the protection offered by the seawall, no changes to current traffic patterns would be expected due to the proposed project.	Design and construction specifications state no construction may occur between June 15 and September 15 of any year.	Yes	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Public services and Utilities	No short-term effects resulting from construction activities. There is one light pole that will be removed and reset, without an interruption in service. **Moderate** long-term beneficial effects to public services and utilities are expected due to the proposed project, as the protection offered by the seawall would continue to protect utilities in the Long Beach area.	None.	N/A.	N/A	Yes
Public Health and Safety	None to negligible effects on Public Health and Safety because the cottages are not occupied in the winter which is the highest risk time for severe storms and flooding. All disasters in the last 15 years have been in January, February and March, during which time, cottage occupancy is not allowed and water service is shut off to the properties.	None.	N/A	N/A	Yes.

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Environmental Justice	**Negligible** short-term adverse effects to EJ populations could occur due to the movement of construction equipment and materials through EJ communities in the region due to temporary construction activities. There are no EJ communities within or near the direct proximity to the proposed project. Long-term effects to EJ communities based on the proposed action would be **none**.	**None** – The closest EJ community to the proposed project is located approximately 1.4-miles to the southwest. Due to limited major thoroughfares in the area, it is likely that equipment and materials would be transported through these areas; however, these effects would be negligible and not have disproportionate effects on these communities. There are no communities that exceed the 80th percentile for any EJ Indexes within a 1-mile buffer of the proposed project area.	None – There would be no disproportionate adverse effects.	N/A	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts *See Section III. Additional Impact Questionnaire	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation or Consultation Reduce Effects to a Less than Significant Level?	Does PEA Coverage Apply? (Yes/No)
Hazardous Materials	**Minor** short-term adverse effects to hazardous materials could occur from construction activities resulting from the potential release of unknown contaminated materials or oil, fuel, and lubricants from construction equipment. The use of BMPs during construction activities would minimize these effects. **Negligible** long-term adverse effects could occur from the down-shore transport of unknown contaminated materials; however, the continued protection offered by seawall would prevent the release of potentially contaminated materials.	**None** – There are no CERCLA, Brownfield, TRI, or active RCRA Hazardous Waste sites in or near the proposed project area. Additionally, there are no MA DEP listed ALU sites in or around the project area.	No mitigation beyond those listed in the PEA are necessary.	Yes	Yes

III. Additional Potential Effects Questionnaire

Additional effects may include 1) exceedance of thresholds described in this questionnaire and/or 2) effects not covered by the PEA and don't exceed thresholds. The questions below are designed to help identify any potential additional effects. If the answer to a given question is 'Yes', additional impacts may occur and should be described in an attachment and summarized in Section II.

If additional impacts not fully described in the PEA may occur, then an SEA, an EA, or an EIS might need to be prepared. An SEA may be a brief document focusing on only the specific additional impact(s) identified.

Geology, Topography, and Soils

Would the proposed project impact a shoreline with exposed bedrock?

Long beach is located between two bedrock outcroppings, Brier Neck to the south and Cape Hedge to the north; however, the project would not occur in areas where effects to these outcroppings are expected to occur. Additionally, based on engineering designs, neither temporary nor permanent sheet-piling is anticipated to reach bedrock.

Would the proposed project have an adverse effect on soils protected by the Farmland Policy Protection Act?

According to the US Department of Agriculture's (USDA's) Web Soil Survey, there is no prime farmland in the project area. Additionally, according to US Census mapping, the project and surrounding areas are located within the Boston Urbanized Area. No conversion of farmland would occur per Title 7 Code of Federal Regulations Part 658.2(a).

Would the proposed project cause downdrift erosion or deposition of sediments across jurisdictional boundaries?[1]

No, based on a 2014 Sediment Transport Study, sediment transport at Long Beach is inconsistent from year to year. Some years sediment transport trends to the south and other years sediment transport trends to the north. It is not expected the seawall causes transport to favor a consistent direction.

Air Quality

Would the proposed project result in new long-term source(s) of air emissions?

The project would not result in a new long-term source of emissions. There may be additional de minimis emissions in the long-term due to the use of construction equipment for maintenance; however, all these emissions would be temporary.

Is the proposed project in a nonattainment or maintenance area using the latest EPA Greenbook status?

No, Sussex County is listed in the EPA Greenbook (Updated 9/30/0222) as an attainment area.

Would the proposed project involve many truck trips or a long duration of heavy equipment operation?

Yes, but consistent with other construction projects of scale.

[1] Cross-jurisdictional impacts from downdrift erosion may occur in cases where a jurisdictional boundary is located downstream from the proposed project area at a distance of less than four times the length of the proposed shore-parallel structure (if a seawall, bulkhead, or revetment) or five times the length of a proposed shore-perpendicular structure (if a groin, jetty, or breakwater).

If yes to both, a determination on whether the proposed project would exceed *de minimis* thresholds should be performed.[2]

Although there would be extended use of construction equipment, the project is listed as an attainment area in the September 30, 2022 EPA Greenbook.

Climate

Would the proposed project result in new long-term source(s) of greenhouse gas emissions?

No, any reoccurring emissions resulting from continued seawall maintenance would be temporary and not a new source of emissions.

Would the project release more than 25,000 metric tons of greenhouse gases per year?[3]

The project would not be expected to exceed this threshold.

Water Quality

Would the proposed project cause or contribute to long-term impacts on water quality?

Not anticipated. The project repairs an existing facility, and the site will be restored following construction.

Would the proposed project impact water quality in such a way that TMDLs would be exceeded?

The Long Beach area is not a listed Category 5 water; therefore, it is not subject to Total Maximum Daily Load (TMDL) requirements.

Would the proposed project require compensatory mitigation under Clean Water Act Section 404 regulations?

No, compensatory mitigation is not anticipated.

Is the proposed project over any designated sole source aquifer?

No, according to the EPA's Sole Source Aquifer mapper, the project area is not located above a sole source aquifer, nor would it affect a sole source aquifer.

If yes, what potential effects to the aquifer would occur from the project?

N/A

Floodplains

Would the proposed project adversely affect floodplains as determined through the 8-step process?

Adverse impacts on the floodplain that could not be mitigated are not anticipated.

If yes, would state and federal regulatory agencies likely require compensatory mitigation for those adverse effects?

Not anticipated.

Would the proposed project adversely impact floodplain outside of the project area?

Not anticipated.

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[2] The prescribed *de minimis* annual rates are less than 50 tons of volatile organic compounds (VOCs), 100 tons of nitrogen oxides (NOX) (O3 precursors), and 100 tons of PM2.5, SO2, or NOX (PM2.5 and precursors).

[3] For example, a project that would involve many truck trips or a long duration of heavy equipment operation may approach air emissions thresholds.

Wetlands

Would the proposed project adversely affect wetlands as determined through the 8-step process?

No, wetlands are not present within the proposed construction area, and the proposed action would not adversely affect wetlands in the vicinity of the project. The proposed project may have minor beneficial effects on the nearby wetland in the long-term as result of protection from sedimentation during storm surge.

If yes, would state and federal regulatory agencies likely require compensatory mitigation for those adverse effects?

N/A

Would the proposed protect indirectly impact wetlands through the separation of tidal wetlands from oceanic and tidal influence?

Although the project is located between the ocean and a saltmarsh (Cowardin Classification - E2EM1Pd). The project repairs an existing facility, and no additional separation of the wetland and the ocean would occur. The saltmarsh maintains connectivity with the ocean via the Saratoga Creek, the outlet of which is located at the north end of Long Beach and would not be affected by the proposed action.

Would the proposed project result in the loss of downdrift wetlands?

No.

Wild and Scenic Rivers

Would the proposed project have a potential effect on water quality or water resources, visual and scenic resources, and/or vegetation, fish, and wildlife habitats within a Wild and Scenic Rivers area?

No, there are no Wild and Scenic Rivers in the project area.

Navigation thresholds

Would the proposed project have long-term impacts on navigation other than those associated with breakwaters, groins, or jetties?[4]

No, all work below MHW would be temporary in nature.

Would a structure be placed in or immediately adjacent to a navigation channel that could interfere with navigation?

No, none of the work would interfere with a navigation channel.

Coastal Resources

Would the proposed project have a permanent adverse effect on coastal resources inconsistent with MA CZM policies?

No, the project will be conditioned upon MA CZM approval. The MEPA certificate recommended that additional nourishment as recommended in the 2014 final report should be pursued for this location to improve the longer-term resilience of the beach and mitigate the ongoing impacts of the seawall.

[4] A project may have additional adverse effects on navigation if project activities or structures would obstruct navigation channels or navigational aids, even in the short term.

Would the proposed project have an adverse effect on Coastal Barrier Resource Systems or Otherwise Protected Areas?

No, the project would not affect any CBRS units.

Vegetation

Would the proposed project have an adverse effect such that it would reduce populations levels of native species or sufficient habitat would not remain to maintain the viability of all vegetation species in the project area?

No, due to development, there is little to no native vegetation in the construction or staging areas. According to information from Mass Mapper and MORIS, there are no known eelgrass or other seagrass beds in the waters near the project area.

Fish and Wildlife

Would the proposed project have an adverse effect such that it would reduce populations levels of native species or sufficient habitat would not remain to maintain the viability of all fish and wildlife species in the project area?

No, the project would restore an existing seawall and no long-term habitat conversion would occur.

Would the proposed project affect Bald Eagle nesting areas or winter roosts?

No.

Would vegetation be removed during the migratory bird nesting/breeding season?

No – no suitable nesting habitat exists within the project area.

Threatened and Endangered Species

Would the determination of effect under Section 7 of the Endangered Species Act be "may affect, likely to adversely affect?"

No effect is expected for all ESA-listed species. Based on technical assistance provided by NMFS, there is little overlap between the project area and possible species occurrences.

Cultural Resources

Has FEMA made, or is it expected to make, an Adverse Effect determination that would be resolved through state-specific Programmatic Agreement Treatment Measures or a memorandum of understanding with the SHPO, THPO, or other consulting parties?

No, FEMA determined that "No Historic Properties Affected" for this project.

Land Use and Zoning

Is the proposed project or location inconsistent with existing land use policies and plans?

No, current residential properties in the area of Long Beach would remain residential.

Would the project result in effects such that a community would need to revise its land use plan (e.g., revise the zoning to increase setbacks to account for downdrift erosion)?

No, the proposed project will allow the community to maintain its residential structures in the Long Beach area.

Noise

Would the proposed project generate new long-term source(s) of noise?

No, the proposed project would maintain an existing seawall. Periodic construction noise may occur due to equipment use for maintenance and beach nourishment.

Would the proposed project require pile driving?

Both temporary and permanent sheet piling will be installed. Per SOW and RFI response (RFI generated by CRC during first round review) sheet-piling will be installed via vibratory hammer.

If yes, are the piles being driven with an impact or vibratory hammer; and would the noise impacts be more than moderate after mitigation measures are employed?

Use of a vibratory hammer is expected. Installation methodology would be expected to keep effects below moderate.

Traffic and Transportation

Would the proposed project have long-term impact(s) on traffic and transportation?

No, Although the eventual loss of Old County Road could be expected without the protection offered by the seawall, no changes to current traffic patterns would be expected due to the proposed project.

Public Services and Utilities

Would the proposed project have long-term impact(s) on public services and utilities, including a permanent loss or major rerouting of utilities?

No, there are no utilities within the proposed excavation limits of the project area. No utilities are expected to be impacted.

Public Health and Safety

Would the proposed project have long-term adverse effects on public health and safety, such as a permanent source of emissions or permanent reduction of water quality?

No.

Environmental Justice

Is there an environmental justice population in or adjacent to the proposed project area and would there be adverse impacts on those populations such that outreach and coordination to resolve potential adverse impacts would be required?

No, there are no EJ communities in the project area or that would be disproportionately affected by the proposed action.

Hazardous Materials

Would the proposed project involve the release of hazardous materials?

No, not anticipated.

Has a phase I or II environmental site assessment indicated that contamination exceeding reporting levels is present in or near the project area and further action is warranted?

No, no known contaminated sites (CERCLA, Brownfield, or TRIs) or MA DEP Activity & Use Limitation (AUL) sites in or around the project area.

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW ENGLAND DISTRICT
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CONCORD MA 01742

September 9, 2026

Regulatory File No. NAE-2018-02317
Regulatory Division

Aaron Cilluffo
Town of Rockport
34 Broadway
Rockport, MA 01966
Via email: acilluffo@rockportma.gov

Dear Aaron Cilluffo,

The U.S. Army Corps of Engineers (Corps) has reviewed your request to discharge dredged or fill material into waters of the U.S. to facilitate the reconstruction of a seawall.

The proposed work is located in the Atlantic Ocean at Long Beach in Rockport, Massachusetts at latitude 42.630250° and longitude -70.616920°. The proposed regulated activity(ies) associated with this project are detailed on the attached drawings titled “LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT” on 6 sheets dated “AUGUST 2026” and are described below.

Project Description

The Town of Rockport proposes to temporarily discharge of 25 cubic yards of fill material within 4,995 square feet (0.115 acres) of waters of the United States below the High Tide Line (HTL) to facilitate maintenance and reconstruction of the Long Beach seawall. Although the permanent seawall is situated landward of the HTL, construction access and working space within the intertidal zone are required to execute the work. This will be accomplished by creating a temporary berm of excavated native sand and revetment stone seaward of the work area, which will establish a protective wave barrier and enable construction to proceed in the dry during low-tide cycles. Upon completion of the seawall construction, this berm will be removed and the intertidal area restored to pre-construction contours and conditions.

Based on the information provided, the Corps has verified that the proposed actions are authorized under Nationwide Permit (NWP) 33, Temporary Construction, Access, and Dewatering pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C. § 1344).

Special Conditions

In addition, this verification is subject to the following special conditions.

1. Excavation and silt producing work must be conducted when the tide is waterward of the work area.

2. All work must be stabilized prior to tidewaters reaching disturbed sediments to prevent turbidity issues.

3. All erosion controls must be removed in their entirety upon project completion.

4. When the temporary berm is no longer required to facilitate seawall construction activities, it must be removed in its entirety and the affected areas returned to pre-construction elevations.

You are also required to complete and return the enclosed Compliance Certification form within 30 days of completing your project. Please email the completed documents to the representative identified in the last paragraph of this letter.

A change in location or project plans may require re-evaluation of your project. Proposed changes should be coordinated with this office prior to construction. Failure to comply with all terms and conditions of these permits (NWP) invalidate this authorization and could result in a violation of Section 301 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. You must also obtain all local, state, Tribal, and other Federal permits that apply to this project.

Water Quality Certification (WQC) and Coastal Zone Management Act (CZM)

The Commonwealth of Massachusetts issued a conditioned WQC decision for NWP 33, Temporary Construction, Access, and Dewatering (enclosed). You must comply with the conditions specified in the WQC decision for this NWP authorization to be valid.

Permit Expiration

The verification is valid until March 15, 2031, unless the NWP is modified, reissued, or revoked prior to that date. If the authorized work under the NWP has not been completed by that date and you have commenced or are under contract to commence this activity before March 15, 2031, you will have until March 15, 2032, to complete the activity under the enclosed terms and conditions of this NWP.

Contact Information

If you have any questions, please contact Katelyn Rainville at 978-318-8677, or by email at katelyn.m.rainville@usace.army.mil.

In order to better serve you, please complete the Customer Service Survey located at: https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,



Craig Jarnot
Chief, Massachusetts Section
Regulatory Division

Enclosures:
Project Plans, Compliance Certification, NWP 33, Temporary Construction, Access, and Dewatering and General/Regional Conditions, Section 401 Water Quality Certification, Coastal Zone Consistency Concurrence

cc (w/enclosures):
David Smith, GZA GeoEnvironmental, Inc., david.smith@gza.com
U.S. EPA, Region 1; R1_CWA404_REG@epa.gov
Alexa Cacacie, NOAA NMFS; alexa.cacacie@noaa.gov
Sean Duffey, Coastal Zone Management, Boston, MA, sean.duffey@mass.gov
Patrice Bordonaro, Coastal Zone Management, Boston, MA, patrice.bordonaro@mass.gov

LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT

PROJECT NO. 73018

EVENT NO. 4372DR-MA

PREPARED FOR:

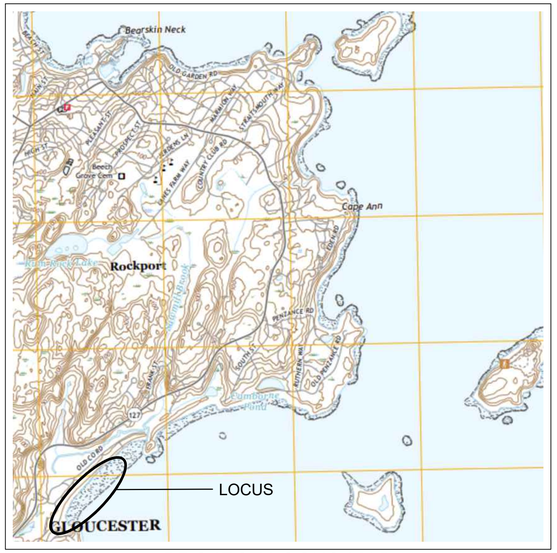
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PREPARED BY:

GZA GEOENVIRONMENTAL, INC.
144 ELM STREET
AMESBURY, MA 01913

INDEX OF DRAWINGS:

SHEET 1	COVER SHEET AND NOTES
SHEET 2	KEY PLAN - EXISTING CONDITIONS PLAN
SHEET 3	EXISTING CONDITIONS PLAN AND SECTIONS
SHEET 4	PROPOSED RECONSTRUCTION PLAN AND SECTION
SHEET 5	PROPOSED DETAILS
SHEET 6	TEMPORARY STAGING AND EROSION CONTROL PLAN



PROJECT LOCUS MAP

SOURCE: USGS TOPOGRAPHIC QUADRANGLES
NOT TO SCALE



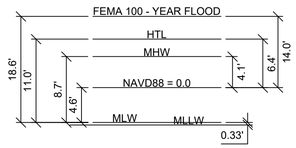
PROJECT AERIAL IMAGE

SOURCE: TOWN OF ROCKPORT
DEPARTMENT OF PUBLIC WORKS, GIS DIVISION
NOT TO SCALE

MATERIAL SPECIFICATIONS:
MATERIAL AND PRODUCT REQUIREMENTS, WHERE REFERENCED AS MHD, THE REQUIREMENTS REFERS TO THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988, OR LATEST EDITION.

CONCRETE:	28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI
	1-1/2" MAXIMUM AGGREGATE SIZE
	AIR CONTENT 5.0% - 7.0%
CEMENT:	PORTLAND CEMENT, ASTM C150, TYPE II
REINFORCING STEEL:	GRADE 60 - ASTM A615
	EPOXY COATED - ASTM A775
DOWELS:	GRADE 60 - ASTM A615
	EPOXY COATED - ASTM A775
EPOXY ADHESIVE:	TWO-COMPONENT EPOXY ADHESIVE, SUITABLE FOR MARINE ENVIRONMENT (HILTI-RE 500 V3, OR APPROVED EQUIVALENT)
ELASTOMERIC SEALANT:	NON-SAG, ELASTOMERIC, SILICONE SEALANT, SUITABLE FOR MARINE ENVIRONMENT, COLOR TO BE CLEAR OR TRANSPARENT (SIKASIL-N PLUS, OR APPROVED EQUIVALENT) - ASTM C920
STEEL SHEETPILES:	GRADE 50 - ASTM A572
RAILING PIPE:	SCHEDULE 80 STEEL HOT-DIPPED GALVANIZED - ASTM A53
FILTER FABRIC:	NON-BIODEGRADABLE NEEDLE-PUNCHED NON-WOVEN GEOTEXTILE FILTER FABRIC RESISTANT TO NATURALLY ENCOUNTERED CHEMICALS, ALKALIS, AND ACIDS (MIRAFI 180N, OR APPROVED EQUIVALENT)
WOVEN GEOTEXTILE:	NON-BIODEGRADABLE WOVEN GEOTEXTILE FABRIC RESISTANT TO NATURALLY ENCOUNTERED CHEMICALS, ALKALIS, AND ACIDS (MIRAFI 600X, OR APPROVED EQUIVALENT)

CRUSHED STONE (1-½ IN.): (MHD SPEC. M2.01.1)	SIEVE NO.	SIZE (MM)	PERCENT PASSING
	2"	50.8	100
	1-½"	38.1	95-100
	1"	25.4	35-70
	¾"	19.1	0-25



DATUM RELATIONSHIP
NOT TO SCALE

PERMITTING ONLY
NOT FOR CONSTRUCTION

PROJECT DESCRIPTION:

1. THE PROJECT INVOLVES THE RECONSTRUCTION OF APPROXIMATELY 350 LINEAL FEET OF A 1930'S SECTION OF SEAWALL (STATION 12+10 TO 15+60) AND THE RECONSTRUCTION OF APPROXIMATELY 43 LINEAL FEET OF SEAWALL WITH NEW CONCRETE ACCESS STAIRWAY, LOCATED AT THE WESTERN END (STATION 0+00 TO 0+43). THE PROJECT ALSO INCLUDES POST-CONSTRUCTION AND SITE RESTORATION.
2. THE PROJECT WORK INCLUDES ALL WORK REQUIRED TO COMPLETE THE PROJECT INCLUDING LABOR, MATERIALS, TRANSPORTATION, SITE MOBILIZATION, SITE PREPARATION, CONSTRUCTION, EROSION AND SEDIMENT CONTROLS, SITE SURVEY, DEMOBILIZATION AND SITE RESTORATION, PROVISION OF ALL REQUIRED SUBMITTALS, SHOP DRAWINGS, ETC., AND PREPARATION AND SUBMITTAL OF AS-BUILT CONSTRUCTION DRAWINGS.

REFERENCE NOTES:

1. TOPOGRAPHIC SURVEY AND SURVEY CONTROL LOCATION PERFORMED BY GZA GEOENVIRONMENTAL, INC. ON NOVEMBER 21 AND 22, 2019 AND FEBRUARY 24, 2022. UPDATED TOPOGRAPHIC SURVEY PERFORMED BY GZA GEOENVIRONMENTAL, INC. ON JANUARY 15, 2026. SURVEY CONTROL LOCATIONS USING REAL-TIME KINEMATIC DIFFERENTIAL GLOBAL POSITIONING SYSTEM UNIT (RTK DGPS).
2. SITE BENCHMARK IS A MAG NAIL SET INTO THE PAVEMENT AT THE END OF LONG BEACH (OLD COUNTY) ROAD, BENCHMARK EL. +10.8 FEET NAVD88.
3. PROJECT DATUM: MA STATE PLANE COORDINATE SYSTEM, NAD83 IN US SURVEY FEET (HORIZONTAL); NAVD88 IN FEET (VERTICAL).
4. AERIAL IMAGERY SUPPLIED BY THE TOWN OF ROCKPORT.
5. PROPERTY LINES ARE APPROXIMATE AND WERE DELINEATED USING AVAILABLE LAYERS FROM MASSGIS'S ONLINE MAPPING TOOL.
6. THE LOCATIONS OF EXISTING BUILDING FOOTPRINTS WERE APPROXIMATELY DETERMINED BY USING AVAILABLE AERIAL PHOTOGRAPHY.
7. THE LOCATIONS OF UTILITIES ARE APPROXIMATE; SOME UTILITIES MAY NOT BE SHOWN ON THE PLAN. UTILITY LINES SHOWN WERE SUPPLIED BY THE TOWN OF ROCKPORT. ACCESSIBLE AND VISIBLE UTILITIES WERE APPROXIMATELY DETERMINED USING AN RTK DGPS UNIT AND TOTAL STATION SURVEY UNIT BY GZA GEOENVIRONMENTAL, INC.
8. THE SUBJECT PROPERTY IS LOCATED IN THE TOWN OF ROCKPORT "RESIDENTIAL A" (RA) ZONING DISTRICT.
9. THE PROJECT AREA IS LOCATED WITHIN THE COASTAL AREA MANAGEMENT ZONE. THE PROJECT IS ALSO LOCATED WITHIN THE FEMA FLOOD HAZARD ZONE VE (BFE=EL. 14 FEET NAVD88).
10. FEMA FLOOD HAZARD ZONES WERE DELINEATED USING FEMA'S DIGITAL NATIONAL FLOOD HAZARD LAYER (NFHL) WHICH INCORPORATES ALL FLOOD INSURANCE RATE MAP (FIRM) DATABASES PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AND MAP REVISIONS.
11. APPROPRIATE CHAPTER 91 JURISDICTION LIMITS WERE DELINEATED USING AVAILABLE LAYERS FROM MASSGIS'S ONLINE MAPPING TOOL.
12. THE LOCATIONS OF RESOURCE AREAS WERE APPROXIMATELY DETERMINED FROM EXISTING TOPOGRAPHIC SURVEY AND THE WETLAND PROTECTION ACT DEFINITIONS.
13. TIDE DATUMS WERE DEVELOPED BASED ON THE NOAA ROCKPORT HARBOR, MA TIDE STATION (8441551) AND CORRECTED FOR THE PROJECT SITE USING THE NOAA/NOS SOFTWARE VDATUM 4.0. THE CORRECTED TIDE DATUMS USED FOR THE PROJECT ARE SUMMARIZED BELOW:
    - 13.A. MEAN HIGHER HIGH WATER (MHHW): 4.5 FT-NAVD88
    - 13.B. MEAN HIGH WATER (MHW): 4.1 FT-NAVD88
    - 13.C. MEAN TIDE LEVEL (MTL: -0.3 FT-NAVD88
    - 13.D. MEAN LOW WATER (MLW): -4.6 FT-NAVD88
    - 13.E. MEAN LOWER LOW WATER (MLLW): -4.9 FT-NAVD88
14. REFERENCED STANDARDS: REFERENCES HEREIN TO ANY TECHNICAL SOCIETY, ORGANIZATION, GROUP OR BODY ARE MADE IN ACCORDANCE WITH THE FOLLOWING ABBREVIATIONS AND, UNLESS OTHERWISE NOTED OR SPECIFIED, ALL WORK UNDER THIS SECTION SHALL CONFORM TO THE LATEST EDITION AS APPLICABLE:
    - 14.A. ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS
    - 14.B. COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988, OR LATEST EDITION

GENERAL REQUIREMENTS FOR CONSTRUCTION:

1. CONSTRUCTION WORK WILL BE OBSERVED BY THE ENGINEER DURING CONSTRUCTION.
2. CONSTRUCTION SCHEDULE LIMITATIONS: NO WORK SHALL BE PERFORMED AT ANY TIME DURING THE PERIOD FROM JUNE 15 TO SEPTEMBER 15.
3. CONTRACTOR SHALL NOTIFY DIGSAFE PRIOR TO THE START OF WORK AS REQUIRED BY STATE AND LOCAL REGULATIONS AND IN ACCORDANCE WITH GOOD INDUSTRY PRACTICE.
4. EXISTING UTILITIES MAY NOT BE ADEQUATELY DEFINED BY DIGSAFE; THEREFORE, THE CONTRACTOR SHALL LOCATE THE EXISTING UTILITIES WITHIN THE LIMITS OF ALL EXCAVATION PRIOR TO THE START OF ANY EXCAVATION ACTIVITIES USING A QUALIFIED UTILITY LOCATING COMPANY.
5. AT THE COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL RESTORE ANY AREAS DISTURBED AS A RESULT OF CONSTRUCTION.
6. CONTRACTOR SHALL REMOVE AND DISPOSE ALL UNQUALIFIED MATERIALS, CONSTRUCTION DEBRIS, OR OTHER MATERIALS DETERMINED TO BE INADEQUATE FROM THE SITE AT NO COST TO THE OWNER.
7. CONTRACTOR SHALL PROVIDE AND MAINTAIN THE PROPER EQUIPMENT TO DELIVER, UNLOAD, AND INSTALL THE MATERIALS TO THEIR FINAL LOCATION.
8. IMPORTED AND EXCAVATED MATERIALS SHALL BE STORED IN SEGREGATED LOCATIONS TO ASSURE NO MIXING WITH FINE GRADATION NATIVE SAND. PROTECT THE STOCKPILES FROM SLOUGHING OR MOVEMENT AND FROM STORMWATER RUNOFF TO ADJACENT AREAS.
9. ALL FILL MATERIALS SHALL BE PLACED AND GRADED TO THE LIMITS AND GRADES SHOWN ON THE DRAWINGS.
10. PARAMETERS OF ROUGH FINISH, INCLUDING MAXIMUM AND MINIMUM ELEVATION DIFFERENCES, TO BE ESTABLISHED BETWEEN THE PROJECT ENGINEER AND CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
11. CONTRACTOR SHALL BE PREPARED TO WORK WITHIN THE TIDAL CYCLE TO AVOID INUNDATION OF THE WORK AREA DURING CONSTRUCTION.
12. FILL MATERIALS:
    - 12.A. ALL FILL MATERIALS SHALL BE FREE OF CONTAMINANTS, ARTIFICIAL MATERIALS AND OTHER DELETERIOUS MATERIALS.
    - 12.B. FILL MATERIALS SHALL BE FROM A SOURCE APPROVED BY THE ENGINEER AND OWNER PRIOR TO THE START OF CONSTRUCTION.
    - 12.C. SPECIFICATIONS FOR MATERIALS ARE PRESENTED HEREIN.

CONSTRUCTION SEQUENCE:

1. THE CONSTRUCTION SEQUENCE SHALL BE ESTABLISHED BY THE CONTRACTOR. IN GENERAL, THE EXPECTED SEQUENCE IS AS FOLLOWS:
    - 1.A. SITE MOBILIZATION AND PREPARATION;
    - 1.B. ESTABLISHMENT OF SITE SURVEY CONTROLS;
    - 1.C. UTILITY CLEARANCES;
    - 1.D. INSTALLATION OF EROSION AND SEDIMENTATION MEASURES;
    - 1.E. INSTALLATION OF TEMPORARY SUPPORT OF EXCAVATION MEASURES INCLUDING TEMPORARY STEEL SHEETPILES;
    - 1.F. EXCAVATION AND REMOVAL OF EXISTING SEAWALL SECTIONS;
    - 1.G. SUBGRADE AND SUBBASE PREPARATION;
    - 1.H. INSTALLATION OF NEW REINFORCED CAST-IN-PLACE CONCRETE FOOTINGS AND PERMANENT STEEL SHEETPILES AT PROPOSED WALL TOE;
    - 1.I. INSTALLATION OF NEW REINFORCED CAST-IN-PLACE CONCRETE SEAWALL SECTIONS AND PERMANENT STAIRWAY AT WEST END;
    - 1.J. BACKFILLING, REMOVAL OF TEMPORARY SUPPORT OF EXCAVATION MEASURES, AND RESTORATION OF THE DISTURBED AREAS;
    - 1.K. REMOVAL OF EROSION AND SEDIMENTATION CONTROL MEASURES;
    - 1.L. DEMOBILIZATION AND SITE RESTORATION; AND
    - 1.M. SUBMITTAL OF AS-BUILT DRAWINGS.

EROSION CONTROL GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL.
2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PERIODICALLY MAINTAINED ON A REGULAR BASIS DURING CONSTRUCTION, AND PROMPTLY FOLLOWING STORMS OR PERIODS OF RAINFALL.

NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED IN RESPONSE TO USACE COMMENTS	IMG	AUGUST 2026

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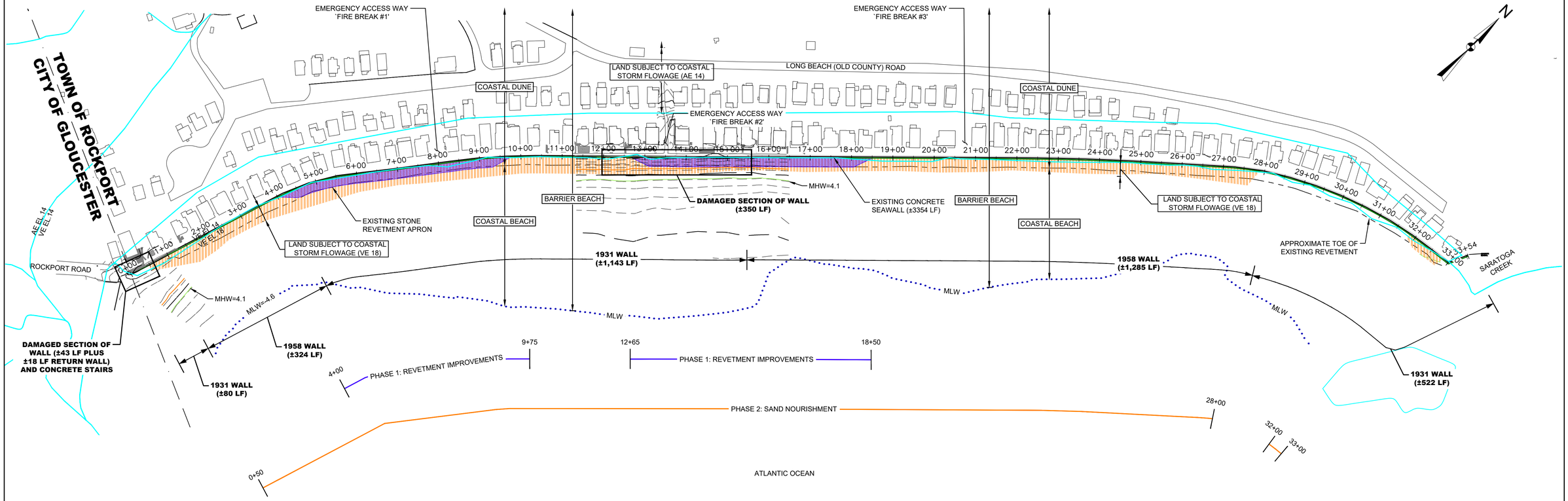
LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

COVER SHEET AND NOTES

PREPARED BY:		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		TOWN OF ROCKPORT 34 BROADWAY ROCKPORT, MASSACHUSETTS 01966	
PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 1
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS SHOWN	
DATE: AUG 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 1 OF 6

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© 2019 – GZA GeoEnvironmental, Inc. GZA–J:\18\173700's\18.0173734.04 Long Beach Seawall Repairs 2025\Figures\CAD\Long Beach Seawall Improvements FEMA 4372DR 2026.dwg [Sheet 2–KEY PLAN] August 03, 2026 – 9:22am Isabel.Gleckner



KEY PLAN - EXISTING CONDITIONS PLAN
SCALE: 1"=120'

0 60 120 240
SCALE IN FEET

LEGEND

- EXISTING SEAWALL
- APPROX. TOE OF EXISTING STONE REVETMENT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- FEMA ZONE LIMITS
- EXISTING HIGH TIDE LEVEL
- EXISTING MEAN HIGH WATER (MHW)
- EXISTING MEAN LOW WATER (MLW)
- CHAPTER 91 JURISDICTION, HISTORIC HIGH WATER (HHW)
- PHASE 1: REVETMENT IMPROVEMENTS (COMPLETED JANUARY-FEBRUARY 2019)
- PHASE 2: SAND NOURISHMENT (COMPLETED OCTOBER-NOVEMBER 2019)

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NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED IN RESPONSE TO USACE COMMENTS	IMG	AUGUST 2026

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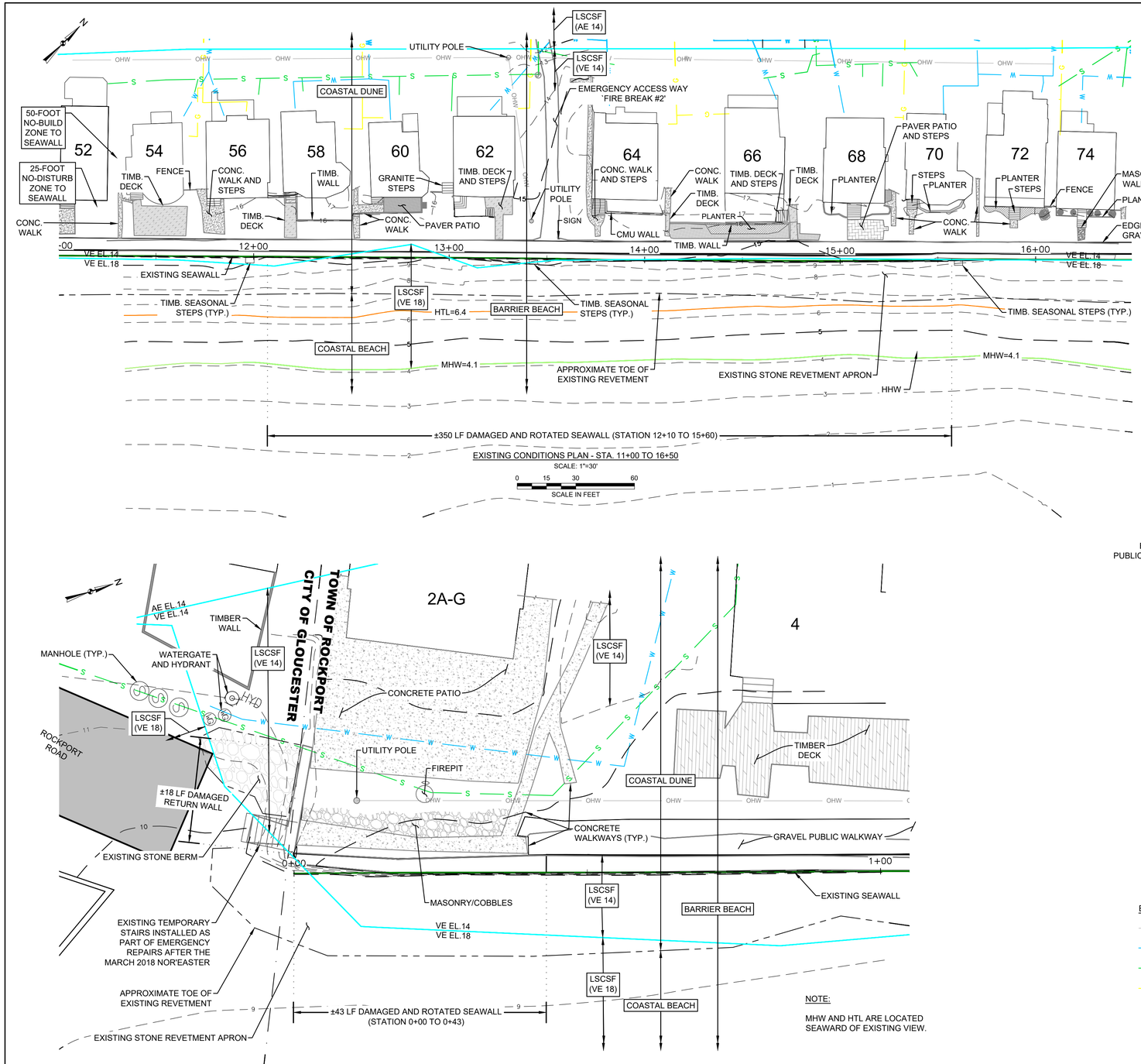
LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

KEY PLAN - EXISTING CONDITIONS PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 2
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: AUG 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 2 OF 6



EXISTING CONDITIONS PLAN - STA. 11+00 TO 16+50

SCALE: 1"=30'

0 15 30 60

SCALE IN FEET

NOTE:

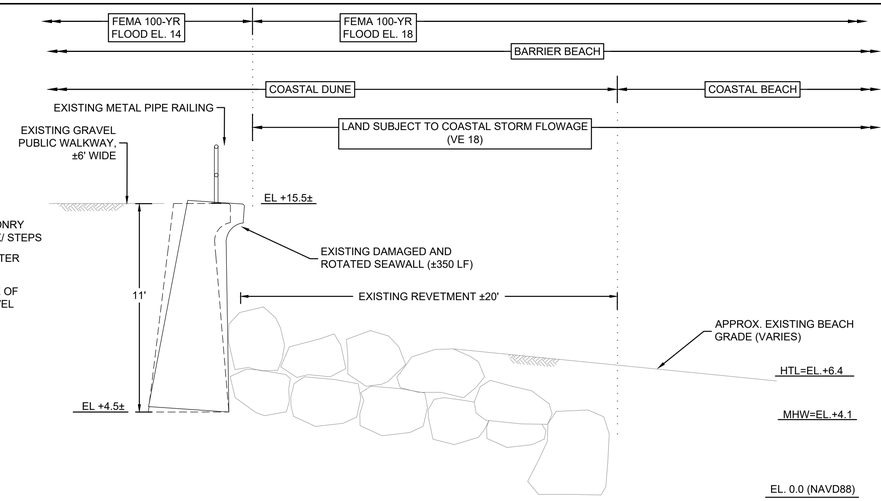
MHW AND HTL ARE LOCATED SEAWARD OF EXISTING VIEW.

EXISTING CONDITIONS PLAN - WESTERN END STA. 0+00 TO 1+00

SCALE: 1"=10'

0 5 10 20

SCALE IN FEET

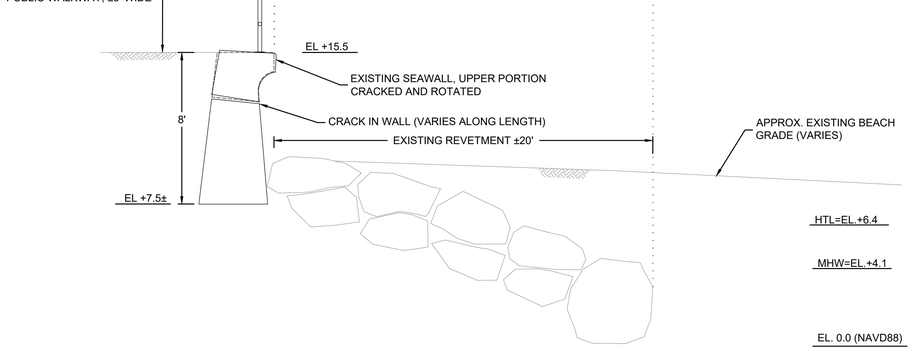


EXISTING WALL SECTION - STA. 14+00 (TYPICAL SEAWALL DAMAGE)

SCALE: 1"=4'

0 2 4 8

SCALE IN FEET



EXISTING WALL SECTION - STA. 0+25 (TYPICAL SEAWALL DAMAGE)

SCALE: 1"=4'

0 2 4 8

SCALE IN FEET

EXISTING UTILITY LEGEND

- OHW — EXISTING OVERHEAD LINES
- W — EXISTING WATER LINES
- S — EXISTING SEWER LINES
- G — EXISTING GAS LINES
- S — EXISTING SEWER MANHOLE
- WG — EXISTING WATER GATE
- HYD — EXISTING HYDRANT

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

EXISTING CONDITIONS PLAN AND SECTIONS

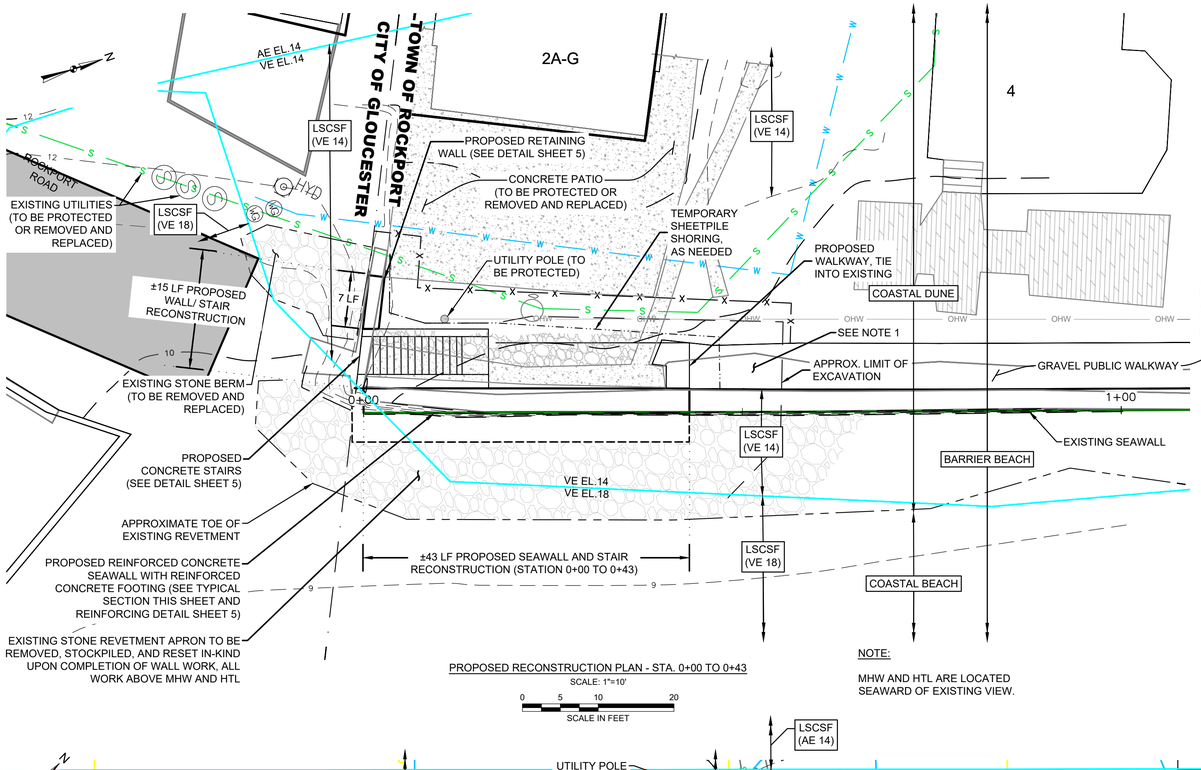
PREPARED BY:
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PREPARED FOR:
TOWN OF ROCKPORT
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ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 3
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: AUG 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 3 OF 6

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PROPOSED RECONSTRUCTION PLAN - STA. 0+00 TO 0+43

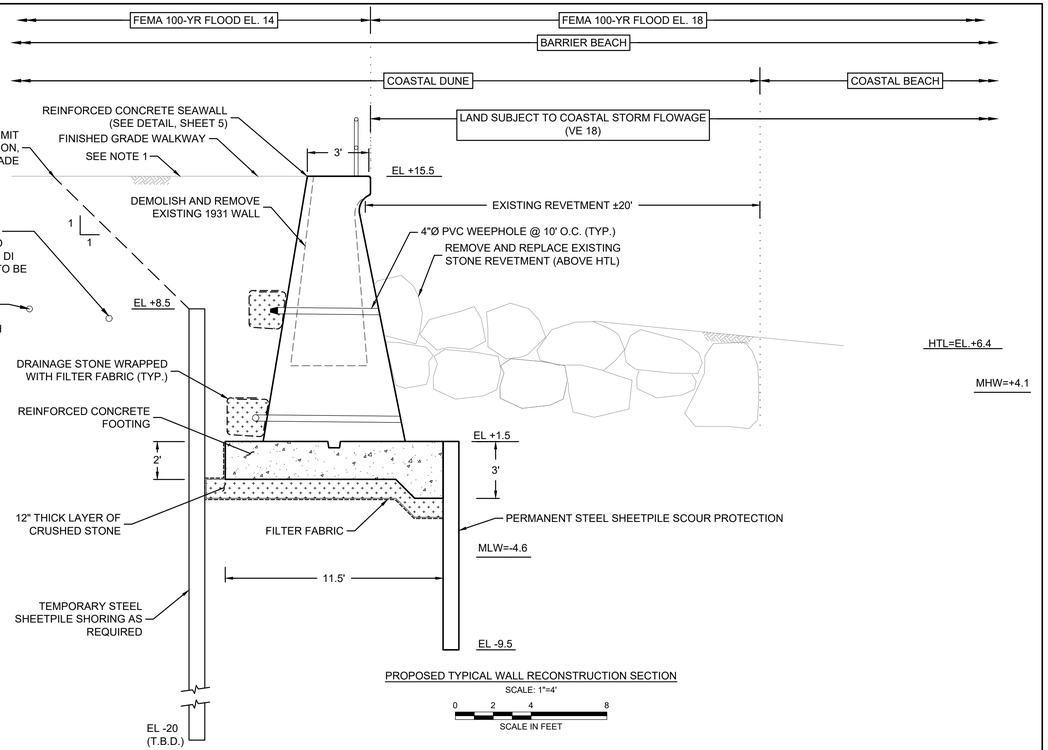
SCALE: 1"=10'

0 5 10 20

SCALE IN FEET

NOTE:

MHW AND HTL ARE LOCATED SEAWARD OF EXISTING VIEW.

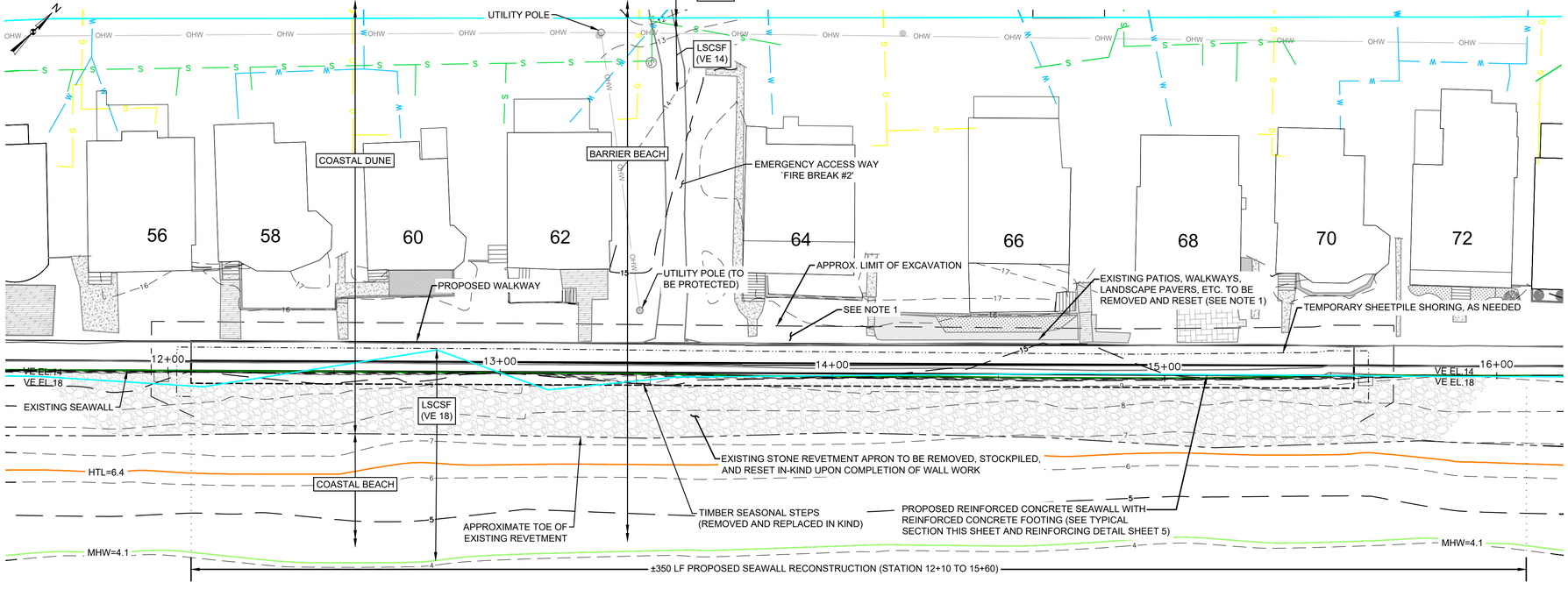


PROPOSED TYPICAL WALL RECONSTRUCTION SECTION

SCALE: 1"=4'

0 2 4 8

SCALE IN FEET



PROPOSED RECONSTRUCTION PLAN - STA. 12+10 TO 15+60

SCALE: 1"=20'

0 10 20 40

SCALE IN FEET

NOTES:

1. SITE FEATURES INCLUDING, BUT NOT LIMITED TO, RESIDENTIAL WALKWAYS, PATIOS, DECKS, STAIRS, AND PLANTERS TO BE REMOVED AND RESTORED IN-KIND TO PRE-CONSTRUCTION CONDITIONS TO FACILITATE THE PROPOSED SEAWALL RECONSTRUCTION.

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NOT FOR CONSTRUCTION

NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED IN RESPONSE TO USACE COMMENTS	IMG	AUGUST 2026

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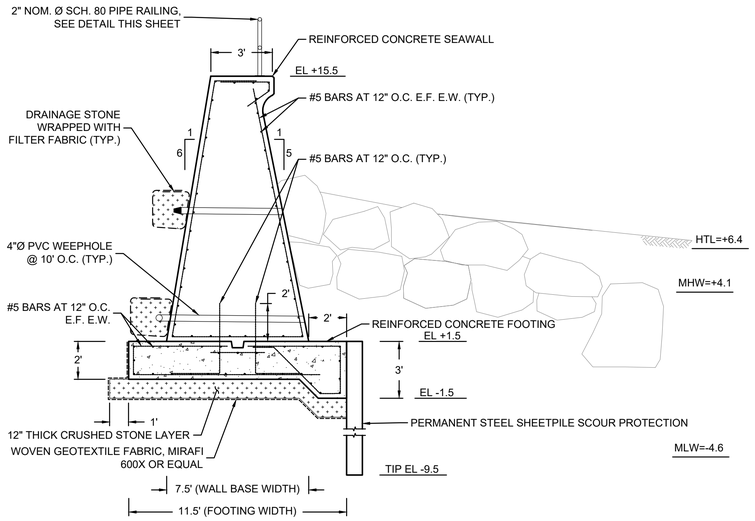
LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

PROPOSED RECONSTRUCTION PLAN AND SECTION

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

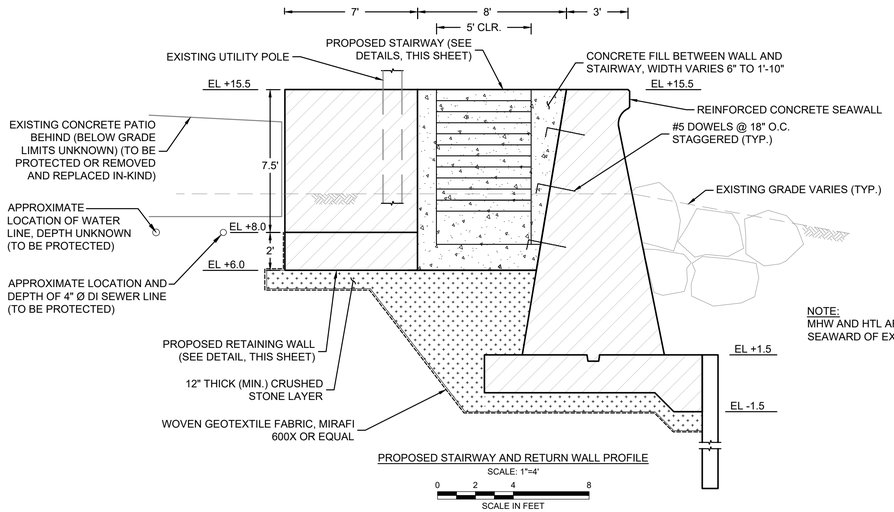
PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 4
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: AUG 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 4 OF 6



TYPICAL PROPOSED SEAWALL REINFORCING
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET

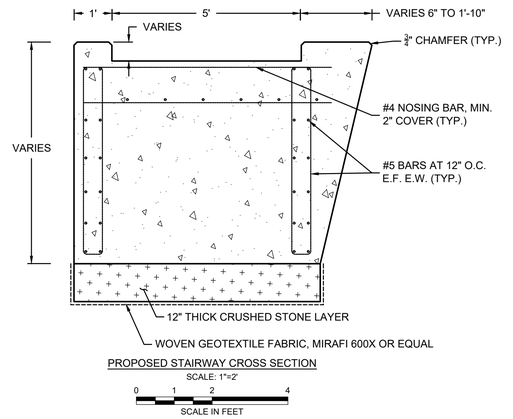
WALL RECONSTRUCTION NOTES:

1. ALL REINFORCING BARS ARE TO BE A MINIMUM 3" CLEAR FROM FACE OF CONCRETE WHERE CONCRETE IS EXPOSED TO EARTH, EXCEPT WHERE OTHERWISE NOTED.
2. PROVIDE TOOLED CONSTRUCTION JOINTS NO MORE THAN 25' APART.
3. PROVIDE EXPANSION JOINTS NO MORE THAN 100' APART.

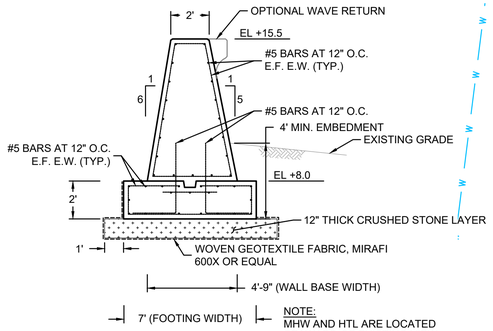


NOTE:
MHW AND HTL ARE LOCATED SEAWARD OF EXISTING VIEW.

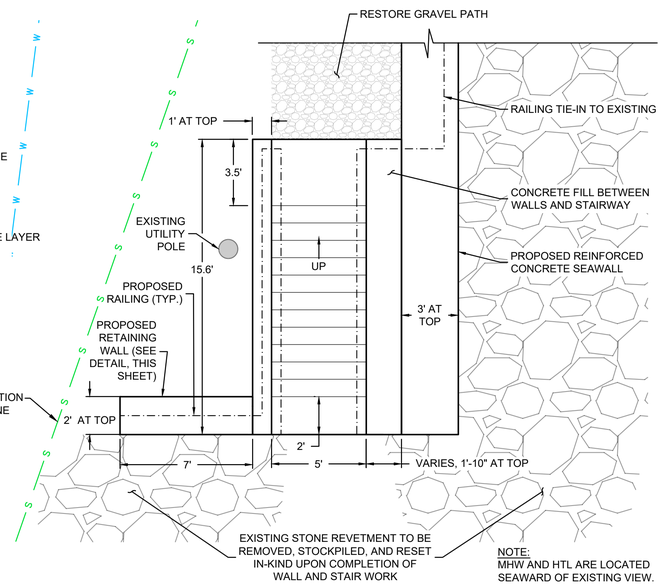
PROPOSED STAIRWAY AND RETURN WALL PROFILE
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



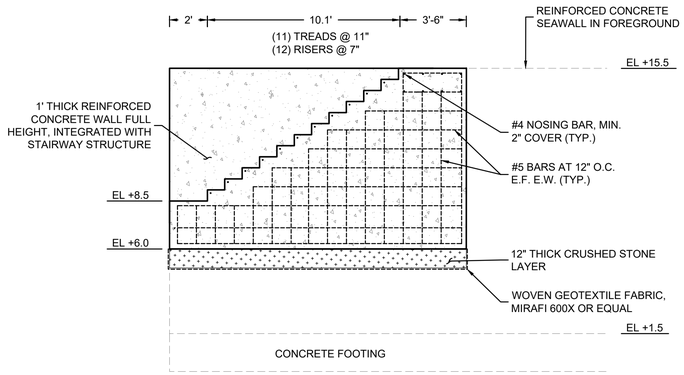
PROPOSED STAIRWAY CROSS SECTION
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET



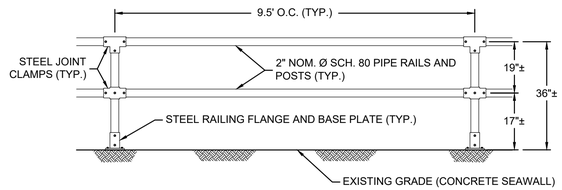
TYPICAL RETAINING WALL REINFORCING DETAIL
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



PROPOSED STAIRWAY AND RETURN WALL PLAN
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



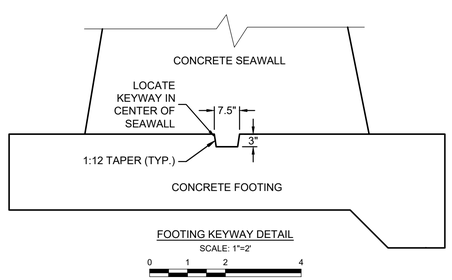
PROPOSED STAIRWAY SECTION AND PARTIAL REINFORCING
SCALE: 1"=4'
0 2 4 8
SCALE IN FEET



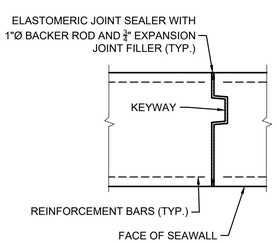
TYPICAL PROPOSED RAILING DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET

RAILING NOTES:

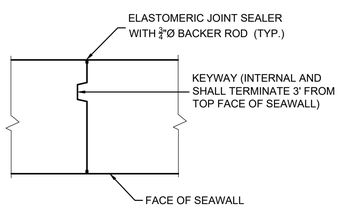
1. PROPOSED RAILINGS SHALL TIE-IN TO EXISTING RAILINGS TO REMAIN.
2. DIMENSIONS FROM EXISTING GRADE TO TOP AND MID-RAILS OF THE NEW RAILING SHALL MATCH THE EXISTING RAILING. FIELD VERIFY ALL DIMENSIONS.



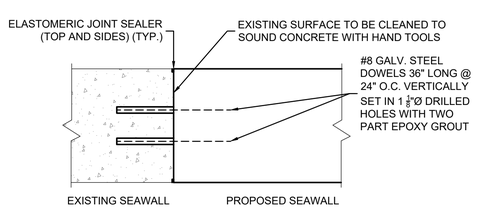
FOOTING KEYWAY DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET



EXPANSION JOINT DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET



CONSTRUCTION JOINT DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET



SEAWALL TIE-IN DETAIL
SCALE: 1"=2'
0 1 2 4
SCALE IN FEET

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

PROPOSED DETAILS

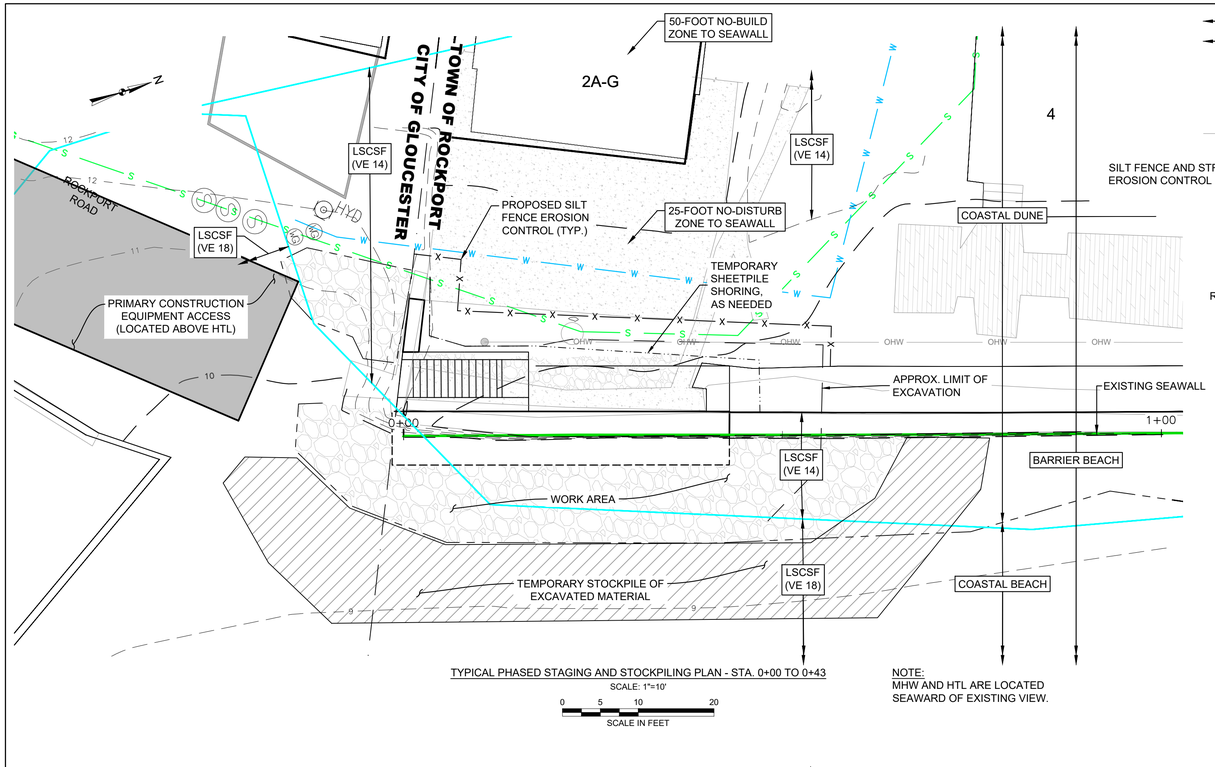
PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR:	DAS	REVIEWED BY:	ABB	CHECKED BY: DAS
DESIGNED BY:	DAS	DRAWN BY:	LFT	SCALE: AS NOTED
DATE:	AUG 2026	PROJECT NO.	18.0173734.04	REVISION NO. 1

FIGURE 5
SHEET NO. 5 OF 6

© 2019 – GZA GeoEnvironmental, Inc. GZA–U:\18\173700's\18.0173734.04 Long Beach Seawall Repairs 2025\Figures\CAD\Long Beach Seawall Improvements FEMA 4372DR 2026.dwg [Sheet 5--PR DETAILS] August 03, 2026 – 11:13am Isabel.Gleckner



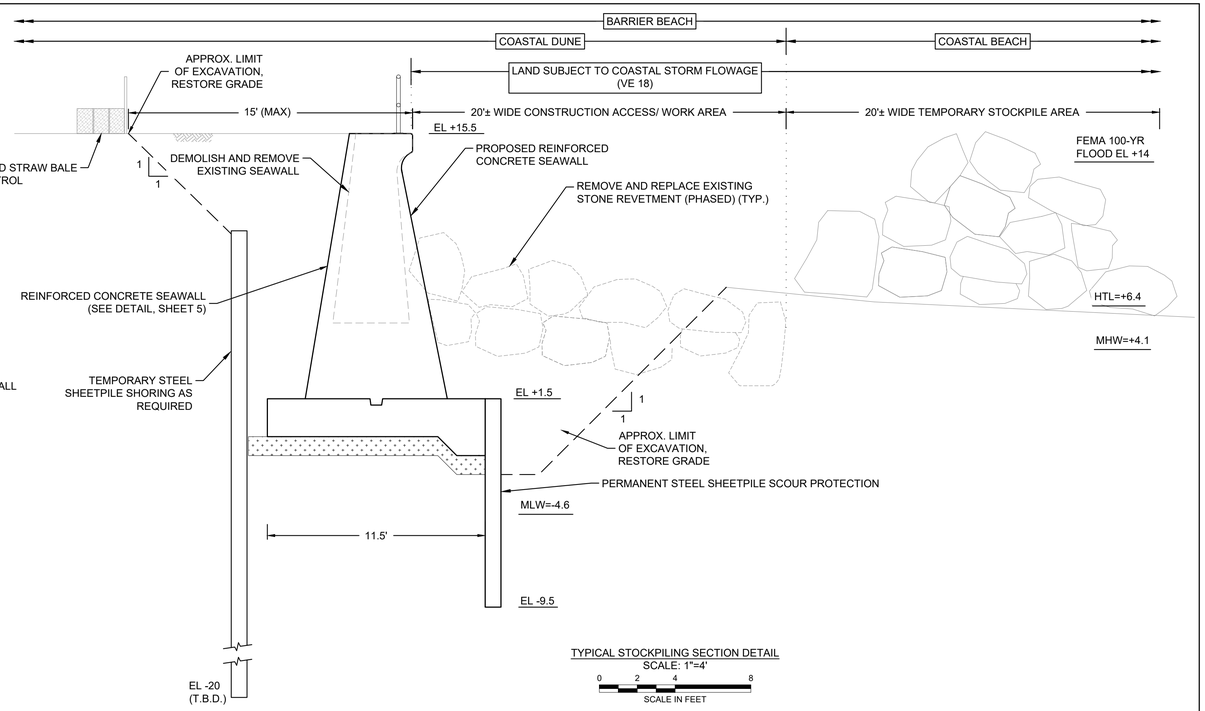
TYPICAL PHASED STAGING AND STOCKPILING PLAN - STA. 0+00 TO 0+43

SCALE: 1"=10'

0 5 10 20

SCALE IN FEET

NOTE:
MHW AND HTL ARE LOCATED SEAWARD OF EXISTING VIEW.

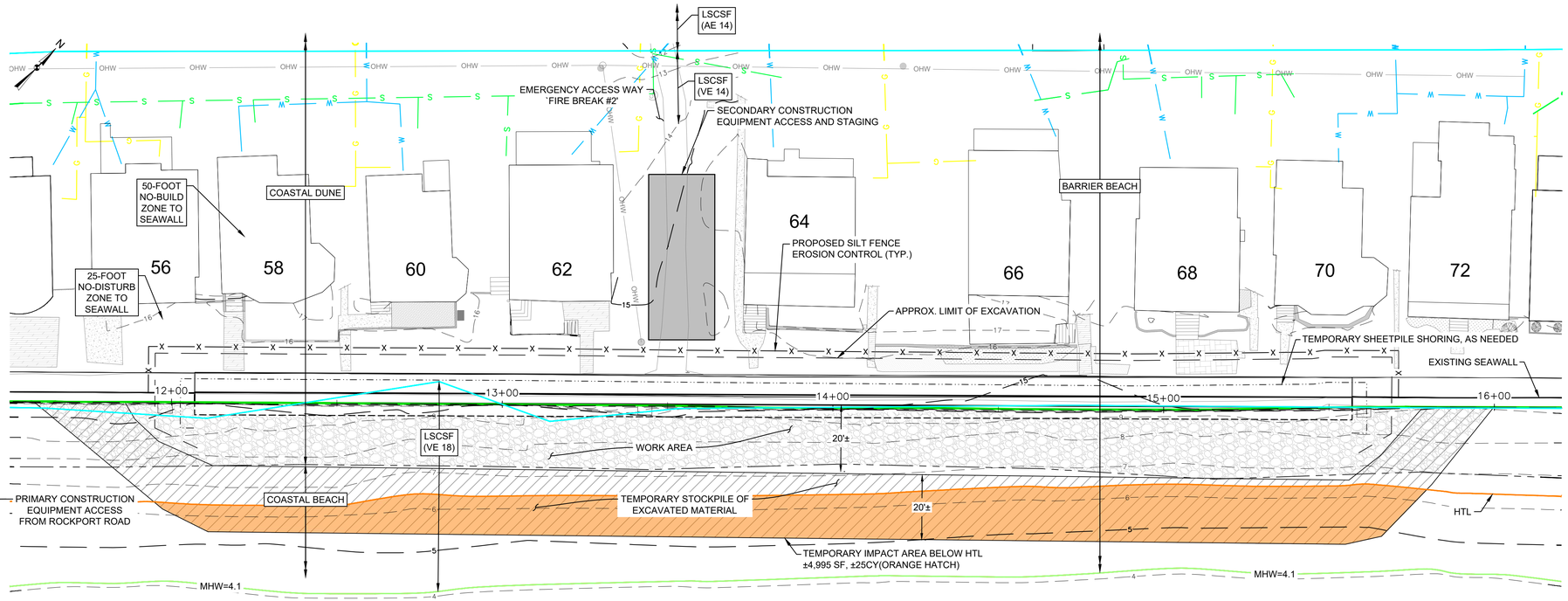


TYPICAL STOCKPILING SECTION DETAIL

SCALE: 1"=4'

0 2 4 8

SCALE IN FEET



TEMPORARY PHASED STAGING AND EROSION CONTROLS PLAN - STA. 12+10 TO 15+60

SCALE: 1"=20'

0 10 20 40

SCALE IN FEET

STAGING AND STOCKPILING NOTES:

1. EXCAVATED MATERIAL CONSISTING OF REVETMENT STONE, BEACH SAND, AND OTHER GRANULAR MATERIAL IS TO BE TEMPORARILY STOCKPILED ALONG THE BEACH SEAWARD OF THE PROPOSED WORK.
2. STOCKPILED MATERIAL IS TO ACT AS A TEMPORARY BUFFER AGAINST WAVES AND TIDAL WATERS DURING THE CONSTRUCTION WORK.
3. SUITABLE EXCAVATED MATERIAL WILL BE USED TO BACKFILL EXCAVATIONS AND RESTORE THE AREA TO PRE-CONSTRUCTION CONDITIONS.
4. THE BEACH SHALL BE ACCESSED VIA ROCKPORT ROAD. ALL EQUIPMENT SHALL BE LIMITED TO THE AREA LANDWARD OF THE TEMPORARY STOCKPILE BERM.

EROSION CONTROL NOTES:

1. ALONG THE LANDWARD SIDE OF THE SEAWALL, EROSION CONTROLS SHALL BE INSTALLED BETWEEN THE LIMITS OF WORK AND DWELLINGS.
2. EROSION CONTROLS SHALL ALSO ACT AS A LIMIT OF DISTURBANCE, AND NO ALTERATION SHALL TAKE PLACE BEYOND IT.
3. EROSION CONTROLS SHALL BE INSPECTED DURING WORK AND MAINTAINED IN GOOD REPAIR.
4. EROSION CONTROLS SHALL REMAIN IN PROPER FUNCTIONING CONDITION UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.

NO.	ISSUE/DESCRIPTION	BY	DATE
1	ISSUED IN RESPONSE TO USACE COMMENTS	IMG	AUGUST 2026

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LONG BEACH SEAWALL FEMA DISASTER RELIEF PROJECT
PROJECT NO. 73018 (4372DR-MA)
ROCKPORT, MASSACHUSETTS

TEMPORARY STAGING AND EROSION CONTROL PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
TOWN OF ROCKPORT
34 BROADWAY
ROCKPORT, MASSACHUSETTS 01966

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: DAS	FIGURE 6
DESIGNED BY: DAS	DRAWN BY: LFT	SCALE: AS NOTED	
DATE: AUG 2026	PROJECT NO. 18.0173734.04	REVISION NO. 1	SHEET NO. 6 OF 6

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U.S. Army Corps of Engineers (USACE)

CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0003 Expires 2027-10-31

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0003, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PURPOSE: This form is used by recipients of U.S. Army Corps of Engineer Regulatory permits to certify compliance with the permit terms and conditions.

Your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, New England District, Regulatory Office.

The certification can be submitted by email at cenae-r-ma@usace.army.mil or by mail at the below address:

U.S. Army Corps of Engineers
New England District Office
Street Address: 696 Virginia Road
City: Concord State: Massachusetts Zip Code: 01742-2751

COMPLETED BY THE CORPS

Corps Action Number: NAE-2018-02317

Permit Type: General Permit

General Permit Number and Name (*if applicable*): Nationwide Permit (NWP) 33, Temporary Construction, Access, and Dewatering

Name of Permittee: Aaron Cilluffo

Project Name: Town of Rockport, MA

Project Location (*physical address*): Long Beach
Rockport, Massachusetts

PERMITTEE'S CERTIFICATION

Date Work Started: _____

Date Work Completed: _____

Enclose photographs showing the completed project (*if available*).

I _____ hereby certify that the work authorized by the above referenced permit has been completed in accordance with all of the permit terms and conditions, and that any required compensatory mitigation has been completed in accordance with the permit conditions.

Name	Date	Signature

33. Temporary Construction, Access, and Dewatering.

Temporary structures, work, and discharges of dredged or fill material, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the Corps of Engineers or the U.S. Coast Guard. This NWP also authorizes temporary structures, work, and discharges of dredged or fill material, including cofferdams, necessary for construction activities not otherwise subject to the Corps or U.S. Coast Guard permit requirements. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. The use of dredged material may be allowed if the district engineer determines that it will not cause more than minimal adverse environmental effects. Following completion of construction, temporary fill must be entirely removed to an area that has no waters of the United States, dredged material must be returned to its original location, and the affected areas must be restored to preconstruction elevations. The affected areas must also be revegetated, as appropriate. This permit does not authorize the use of cofferdams to dewater wetlands or other aquatic areas to change their use. Structures left in place after construction is completed require a separate section 10 permit if located in navigable waters of the United States. (See 33 CFR part 322.)

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the activity is conducted in navigable waters of the United States (i.e., section 10 waters) (see general condition 32). The pre-construction notification must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions. (Authorities: Sections 10 and 404)

2026 Nationwide Permits General Conditions

1. Navigation
a) No activity may cause more than a minimal adverse effect on navigation.

b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

NAE Note: *Compliance with this condition can be achieved by ensuring no unreasonable interference with navigation by the existence or use of any activity authorized by any Nationwide Permit (NWP), and no attempt made by a permittee to prevent the full and free use by the public of all navigable waters at or adjacent to any activity authorized by any NWP.*

2. Aquatic Life Movements
No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

NAE Note: *Compliance with this condition may be achieved by ensuring that during in-stream work, the low flow channel/thalweg remains unobstructed during periods of low flow, except when it is necessary to perform the authorized work. Additionally, for work in tidal waters, in-stream controls should be installed in such a manner that do not obstruct fish passage.*

3. Spawning Areas
Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (*e.g.,* through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas
Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds
No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

Maine Note: *Contact the Maine Department of Marine Resource (ME DMR) for further conservation measures if a proposed activity would result in excess turbidity (i.e., dredging) and is located within 100 feet of ME DMR shellfish areas. Reference material can be found at: https://dmr-maine.opendata.arcgis.com/datasets/mainedmr-molluscan-shellfish-2010/explore?location=43.733484%2C-69.767928%2C10.43 and https://mgs-maine.opendata.arcgis.com/datasets/maine-coastal-marine-geologic-environments/explore.*

6. Suitable Material
No activity may use unsuitable material (*e.g.,* trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes
No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects from Impoundments
If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows
To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows, including tidal flows. The activity must not restrict or impede the passage of normal or high flows including tidal flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (*e.g.,* stream restoration or relocation activities).

10. Fills Within 100-year Floodplains
The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

Massachusetts Note: *For activities located within the Commonwealth of Massachusetts, activities may be required to comply with the Bordering Lands Subject to Flooding provisions of the Commonwealth's Wetland Protection Act. Applicants should contact Massachusetts Department of Environmental Protection to determine whether this provision applies to their proposed activity/ies.*

11. Equipment
Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

If mats are used to minimize soil disturbance, the affected areas must be returned to pre-construction elevations, and revegetated as appropriate. In circumstances where the use of mats has caused significant soil compaction efforts using techniques (*e.g.,* soil reaeration techniques) to break up the compaction should be employed to return the soil to a pre-construction state prior to returning to pre-construction elevations.

NAE Notes: *(1) Compliance with this condition may be achieved through the implementation of best management practices outline in NAE's "Construction Mat Best Management Practices" document available at https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Permit-Resources/.*

(2) Compliance with this condition may be achieved by ensuring that construction equipment such as barges in tidal waters always provide adequate clearance above the substrate to avoid impacts to SAS during all tides.

(3) Compliance with this condition may be achieved by ensuring that construction equipment that would cross or access streams utilizes temporary bridges, spans, construction mats, culverts, or cofferdams to minimize disturbance to the waterway.

12. Soil Erosion and Sediment Controls
Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

NAE Note: *Compliance with this condition may be achieved by ensuring that all discharge points back into waters of the U.S., including wetlands use appropriate energy dissipaters and erosion and sedimentation control BMPs. Controls that are biodegradable can be left in place, but should be removed if they are not biodegradable.*

Temporary controls should be removed upon completion of work, but not before all exposed soil and other fills and any work waterward of the OHWM are permanently stabilized. Once permanently stabilized, temporary controls should be removed as soon as possible. Sediment and debris collected by these controls should be removed and placed at an upland location and in a manner that will prevent its later erosion into a waterway or wetland.

Massachusetts Note: *In Massachusetts, compliance with this condition may be achieved by ensuring, as applicable, that all activities are compliant with the State of Massachusetts' Stormwater Management Standards at 314 CMR 9.06(6)(a)-(f) and the State of Massachusetts' Stormwater Handbook.*

13. Removal of Temporary Structures and Fills
Temporary structures must be removed to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

NAE Note: *Compliance with this general condition may be achieved by underlying temporary fills with geotextile fabric which may help to facilitate the restoration to pre-construction elevations.*

14. Proper Maintenance
Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

NAE Note: *Compliance with this general condition may be achieved by the complete removal, cutting, and/or driving to three feet below the substrate of* d*erelict, degraded, or abandoned piles and sheet piles located in navigable waters of the U.S., except for those inside existing work footprints for piers to prevent interference with navigation. Existing creosote piles that are affected by project activities may be completely removed if practicable. In areas of fine-grained substrates, piles may be removed by the direct, vibratory or clamshell pull method to minimize sedimentation, and turbidity impacts and prevent interference with navigation from cut piles. Removed piles should be disposed of in an upland location landward of MHW or OHW and not in wetlands, tidal wetlands, their substrate, or mudflats.*

15. Single and Complete Project
The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers
a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the

appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or Study River (*e.g.*, National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

NAE Note: *See also: Regional Condition C, Additional PCN Requirement (Wild and Scenic Rivers).*

17. Tribal Rights
No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species
a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation.

b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective Federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (*e.g.*, an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal permittee should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this

general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their web pages at http://www.fws.gov/ or http:// www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

NAE Note: *For information on how to comply with General Condition 18, please visit our website at https://www.nae.usace.army.mil/missions/regulatory/endangered-species-act/.*

Maine Note: *Federal agencies should refer to "Multiple Federal Agency & Lead Federal Agency Best Practices" when a Corps permit is required, which can be found on the Corps' webpage at: www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Maine-General-Permit. (This is a pending document and will be published on our website when completed.)*

19. Migratory Birds and Bald and Golden Eagles

The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties

a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district

engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective Federal agency is responsible for fulfilling its obligation to comply with section 106.

c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

d) Where the non-federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and so notified the Corps, the non-federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects on historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

NAE Note: *The following link to the Corps' website provides SHPO and THPO contact information and additional procedures to expedite Corps regulatory review regarding the NHPA. Please contact the appropriate SHPO and/or THPO based on the geographic location of the regulated activity: https://www.nae.usace.army.mil/Missions/Regulatory/Historic-and-Tribal-Resources/.*

21. Discovery of Previously Unknown Remains and Artifacts
Permittees that discover any previously unknown historic, cultural or archaeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters
Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57, and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation

The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (*i.e.*, on site).

b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (*e.g.*, conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (*e.g.*, riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the

NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another Federal agency holds an easement, the district engineer will coordinate with that Federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

6) Compensatory mitigation requirements (*e.g.*, resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or

scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

NAE Note: *Applicants are encouraged to utilize the Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS) in order to determine which in-lieu fee programs and/or mitigation banks have a sufficient amount of appropriate and available credits which they may propose to use to offset their proposed activity's unavoidable impacts to waters of the U.S., including wetlands. RIBITS is available at https://ribits.ops.usace.army.mil/ords/f?p=107:2::::::. See also: Regional Condition I, Compensatory Mitigation.*

24. Safety of Impoundment Structures
To ensure that all impoundment structures are safely designed, the district engineer may require non-federal applicants to demonstrate that the structures comply with established state or Federal dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality
a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed activity which may result in any discharge from a point source into waters of the United States must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed activity which may result in any discharge from a point source into waters of the United States in order for the activity to be authorized by an NWP.

b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed activity which may result in any discharge from a point source into waters of the United States is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge into waters of the United States, the permittee must submit a copy of the certification to the district engineer. The discharge into waters of the United States is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied (*i.e.,* by the issuance of a water quality certification or a waiver and completion of the Section 401(a)(2) process).

c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

NAE Note: *For information concerning how to apply to EPA for a Water Quality Certification for activities located within Tribal lands or within lands of exclusive Federal jurisdiction, please see: https://www.epa.gov/cwa-401/resources-when-epa-acts-certifying-authority-under-section-401 and/or contact: R1CWA401@epa.gov.*

Connecticut Note: *For information concerning how to apply to CTDEEP for a Water Quality Certification, please see: https://portal.ct.gov/deep/permits-and-licenses/factsheets-inland-water/401-water-quality-certification-fact-sheet.*

Maine Note: *For information concerning how to apply to LUPC or MEDEP for a Water Quality Certification, please see: https://www.maine.gov/dep/water/wd/wqc/.*

Massachusetts Note: *For information concerning how to apply to MassDEP for a Water Quality Certification, please see: https://www.mass.gov/lists/wetlands-permitting-forms.*

New Hampshire Note: *For information concerning how to apply to NHDES for a Water Quality Certification, please see: https://www.des.nh.gov/water/rivers-and-lakes/water-quality-certification.*

Rhode Island Note: *For information concerning how to apply to RIDEM for a Water Quality Certification, please see: https://dem.ri.gov/sites/g/files/xkgbur861/files/2025-06/wqcheck.pdf.*

Vermont Note: *For information concerning how to apply to VTDEC for a Water Quality Certification, please see: https://dec.vermont.gov/act250/watershed/business-support/water-quality-certification-section-401.*

26. Coastal Zone Management

In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

NAE Note: *If an individual state coastal zone management consistency concurrence is required, applicants should submit a consistency certification to the state (see 15 CFR 930.31(d)) at the same time as the PCN is submitted to the Corps, or shortly thereafter.*

Connecticut Note: *For information concerning how to apply to CTDEEP for a coastal zone management consistency certification, please see: https://portal.ct.gov/deep/coastal-resources/coastal-permitting/coastal-consistency.*

Maine Note: *For information concerning how to apply to the Maine Office of Community Affairs for a coastal zone management consistency certification, please see: https://www.maine.gov/dmr/programs/maine-coastal-program/federal-consistency-review.*

Massachusetts Note: *For information concerning how to apply to Mass CZM for a coastal zone management consistency certification, please see: https://www.mass.gov/federal-consistency-review-program.*

New Hampshire Note: *For information concerning how to apply to NHDES for a coastal zone management consistency certification, please see: https://www.des.nh.gov/water/coastal-waters/federal-consistency.*

Rhode Island Note: *For information concerning how to apply to CRMC for projects within the coastal zone, please see: https://www.crmc.ri.gov/applicationforms.html and https://www.crmc.ri.gov/regulations/fed_consistency.pdf.*

27. Regional and Case-by-Case Conditions
The activity must comply with any regional conditions that may have been added by the division engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits
The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

a) The total acreage of loss of waters of the United States for a single and complete project cannot exceed the acreage limit of the NWP with the highest specified acreage limit when multiple NWPs are used to authorize an activity.

b) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States for that single and complete project cannot exceed that specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14 (which has an acreage limit of 1/3-acre in tidal waters), with associated bank stabilization authorized by NWP 13 (which does not have a specified acreage limit), the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

c) If two or more of the NWPs used to authorize the single and complete project have specified acreage limits, the acreage loss of waters of the United States authorized by each of those NWPs cannot exceed the specified acreage limits of each of those NWPs. For example, if a commercial development is constructed under NWP 39 (which has a 1/2-acre limit), and the single and complete project

includes the filling of a ditch authorized by NWP 46 (which has a 1-acre limit), the maximum acreage loss of waters of the United States for the construction of the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States caused by the combination of the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications

If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____

(Transferee)

_____

(Date)

30. Compliance Certification

Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The successful completion of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States
If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

NAE Note: *Refer to the New England District's Section 408 Program webpage that can be found at: https://www.nae.usace.army.mil/Missions/Section-408/. See also: Regional Condition B, Additional PCN Requirement (Federal Projects).*

32. Pre-Construction Notification
a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential

to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

b) Contents of the Pre-Construction Notification: The PCN must be in writing and include the following information:

1) Name, address and telephone numbers of the prospective permittee;

2) Location of the proposed activity;

3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (*e.g.,* a conceptual plan), but do not need to be detailed engineering plans);

5) The PCN must include a delineation of waters, wetlands, and other special aquatic sites on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate. For NWP 27 activities that require PCNs because of other general conditions or regional conditions imposed by division engineers, see Note 2 of that NWP;

NAE Note: *To comply with the above GC 32(5), the following methodologies should be utilized:*

(a) Wetlands should be delineated in accordance with the Corps Wetlands Delineation Manual and the most recent Northcentral/Northeast Regional Supplement. Wetland delineation and jurisdiction information can be found at: www.nae.usace.army.mil/missions/regulatory/jurisdiction-and-wetlands and https://www.usace.army.mil/Media/Announcements/Article/4262089/1-august-2025-us-army-corps-of-engineers-enhances-aquatic-resource-delineation/*.*

(b) Refer to the "Best Practices for Jurisdictional Determinations and Wetland Delineations," which can be found on the Corps webpage at: https://www.nae.usace.army.mil/missions/regulatory/state-general-permits/maine-general-permit/. (This is a pending document and will be published on our website when completed.)

(c) The ordinary high water mark should be delineated (on both sides) when streams, rivers, non-tidal open waters are present on the project site. Ordinary high water mark guidance can be found in RGL 05-05 (https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll9/id/1253). For complex, atypical, or problematic sites see: https://www.erdc.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training/.

(d) Vegetated shallows should be delineated when present on the project site. Vegetated shallow survey guidance and maps can be found on the Corps webpage at: https://www.nae.usace.army.mil/Missions/Regulatory/Jurisdiction-and-Wetlands/.

(e) All Essential Fish Habitat should be delineated when present on the project site. EFH survey guidance can be found in the current EFH programmatic, which can be found on the Corps webpage at https://www.nae.usace.army.mil/Missions/Regulatory/Essential-Fish-Habitat/.

6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the compensatory mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

c) Form of Pre-Construction Notification: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for:

(i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States;

(ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and

(iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

Maine Note: *The Corps will additionally coordinate with the State of Maine on all activities that require a waiver.*

(3) When agency coordination is required, the district engineer will immediately provide (*e.g.,* via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

Regional Conditions

The U.S. Army Corps of Engineers (Corps) New England District Regulatory Division issues the following Regional Conditions (RCs) to ensure that activities authorized by the 2026 Nationwide Permits (NWPs) in the New England states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont will not cause more than minimal adverse environmental impacts, both individually and cumulatively. Before the New England District will verify an activity under one or more NWPs, the activity must be demonstrated to comply with the applicable NWP terms and all applicable NWP General Conditions (GCs) and RCs. Prior to commencement of a "non-notifying" activity (i.e., activities authorized by NWPs which do not require submission of a pre-construction notification [PCN]), the proponent (i.e., the person and/or the entity performing the work) is responsible for ensuring the activity meets all applicable:

- Terms of the NWP
- GCs
- RCs
- State Water Quality Certification, if applicable
- State Coastal Zone Consistency, if applicable

PCN Summary Table. The following activities may require a PCN regardless of the terms of the applicable NWP. Please read the applicable RCs to determine if a PCN is required.

Applicable to All New England States	
Exceedance of loss thresholds within streams, tidal/non-tidal wetlands, tidal submerged aquatic vegetation, mudflats, and intertidal areas	See RC A
Located within, or within the vicinity of a Federal Project	See RC B
Located within, or within the vicinity of a Wild and Scenic River	See RC C
Involving discharges of temporary fill material	See RC D
Involving slip lining	See RC E
Involving stream crossings	See RC F
Located within Essential Fish Habitat	See RC J
Applicable to Specific New England States	
Activities within Time-of-Year Restrictions	See RCs N, O, S, U, V, W
Located within the Saint John and Saint Croix River basins (Maine)	See RC P
Authorized by NWP 48, Commercial Shellfish Mariculture Activities and within the State of Maine > 5 acres	See RC Q
Located within Important or Rare Resources within the State of Maine	See RC R
Discharges of fill >10 cubic yards in Lake Champlain and Lake Memphremagog and/or their adjacent wetlands (Vermont)	See RC X

Regional Conditions

The following RCs apply to all applicable NWPs in **all New England States** (unless otherwise specified):

A. Additional PCN Requirement (Specific Resources): A PCN is required for any proposed activities that would result in the loss of waters of the U.S. that exceed the listed thresholds to the following aquatic resources if a PCN is not already required by the NWP.

Aquatic Resource	**Threshold**
Non-tidal Wetlands	4,356 square feet (1/10-acre)
Tidal and Non-Tidal Stream	200 linear feet or 3/100-acre (whichever is less)
Tidal Wetland	500 square feet
Tidal Submerged Aquatic Vegetation (SAV)	25 square feet
Mudflat	1,000 square feet
Intertidal	1,000 square feet

B. Additional PCN Requirement (Federal Projects): A PCN is required for any proposed activities that would involve the temporary or permanent occupation of, or alteration of, a federal project (including, but not limited to, a levee, dike, floodwall, channel, anchorage, breakwater, seawall, bulkhead, jetty, wharf, pier, or other work built or maintained but not necessarily owned by the United States). This includes all structures and work in, over, or under a Corps' federal navigation project (FNP) or in the FNP's buffer zone. The buffer zone is an area that extends from the horizontal limits of the FNP to a distance three times the FNP's authorized depth.

The activity may also require review and approval by the Corps pursuant to 33 USC 408 (Section 408 Permission). The applicant may reach out to the points of contact listed here: https://www.nae.usace.army.mil/Missions/Section-408/ and https://www.nan.usace.army.mil/Missions/Regulatory/Section-408/ (for activities located within the Lake Champlain watershed) and consult the National Channel Framework mapper: https://experience.arcgis.com/experience/b413139f18c046009ebcf62abea941dd/page/Map/. For activities which require a Section 408 permission, verification under an NWP will not be issued prior to the decision the Section 408 permission requires. Any structure or work constructed in an FNP, or its buffer zone shall be subject to removal at the owner's expense prior to any future Corps dredging or hydrographic surveys.

Applicants should contact the Corps Real Estate Division (https://www.nae.usace.army.mil/Missions/Real-Estate-Division/) at (978) 318-8585 for work that would occur on or would potentially affect a Corps property (or properties) and/or Corps-controlled easements. Work may not commence on Corps properties and/or Corps-controlled easements until they have received any required

Corps real estate documents demonstrating site-specific permission to perform work.

A PCN is not required if an applicant has previously obtained a Section 408 permission for their proposed activities, or a determination from the Corps that a Section 408 permission is not required for their proposed activities, and the proposed activities qualify for a non-notifying NWP.

C. Additional PCN Requirement (Wild and Scenic Rivers): A PCN is required under NWP GC 16, Wild and Scenic Rivers, and for: 1) any proposed activities that would be located in and within 1/4-mile up- or downstream of a Wild and Scenic River (WSR) segment, or in tributaries within 1/4-mile of a WSR segment; 2) any proposed activities that would be located in wetlands within 1/4-mile of a WSR segment; and 3) any proposed activities that have the potential to alter free-flowing characteristics in a WSR segment. Applicants should utilize http://www.rivers.gov/ for the most up-to-date WSR designations.

   Note: Applicants may coordinate with the Federal agency that has direct management responsibility of the WSR segment or tributary their proposed activity would be within 1/4-mile of prior to submitting a PCN to the Corps. This regional condition does not require a PCN to be submitted if that Federal agency determines that the proposed activity would not adversely affect the subject WSR.

D. Additional PCN Requirement (Temporary Fills): A PCN is required for any proposed activities that would involve the discharge of temporary fill (33 CFR 323.2(e) and (f)) greater than 1/10-acre to be left in place in non-tidal wetlands for more than one growing season. The growing season is generally defined as April 1 to September 30 (See the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* for more information about determining growing season. https://www.nae.usace.army.mil/Missions/Regulatory/Jurisdiction-and-Wetlands/Wetland-Delineation-Manual/).

   Note 1: The Corps will determine on a case-by-case basis, after evaluating site-specific and activity-specific circumstances whether temporary construction mats proposed for use are considered as temporary fill.

   Note 2: For linear projects, crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization (33 CFR 330.2(i)). Therefore, each crossing of a water of the U.S., including wetlands could have up to 1/10-acre of temporary fill without requiring the submittal of a PCN. *Applicants should be aware that the definition of what constitutes a single and complete project per state regulations may differ from the Corps' definition. Applicants should consult with the state in order to determine state requirements. *

E. Additional PCN Requirement (Slip Lining): A PCN is required for any proposed activity that involves slip lining a stream crossing that is not currently meeting the stream crossing BMPs found in Regional Condition F (e.g., slip lining and invert-lining).

F. Additional PCN Requirement (Stream Crossing Standards): A PCN is required for any proposed stream crossing activities that cannot comply with the below "Stream Crossing Best Management Practices (BMPs)" unless the district engineer provides the applicant written verification removing the below requirements.

1. The width of the crossing shall be greater than or equal to 1.2 times the bank full width.
2. The crossing shall be embedded greater than or equal to 2 feet and/or at least 25 percent of the conveyance's height.
3. The crossing shall be constructed with a natural bottom substrate, as applicable.
4. The crossing shall match the gradient (i.e., slope) of the natural stream channel profile.
5. The crossing shall meet an openness ratio of greater than 0.82 feet.

Regardless of whether a proposed crossing can implement the above BMPs, the applicant should first coordinate with the appropriate state office to obtain required or recommended alternate stream crossing BMPs, prior to submitting a PCN to the Corps. If a stream crossing is designed to meet the standards required or recommended by the appropriate state agency for which the proposed activity is located within, those standards can serve in-lieu of these BMPs and submittal of a PCN is not required.

Note: Below are links to the stream crossing standards/guidelines for those New England states that have published such standards/guidelines. Applicants are highly encouraged to contact their state for additional information regarding those requirements and/or recommendations, as state requirements may be more stringent than the above listed BMPs.

Connecticut: CTDEEP Inland Fisheries Division Habitat Conservation and Enhancement Program's Stream Crossing Guidelines (https://portal.ct.gov/-/media/DEEP/fishing/restoration/StreamCrossingGuidelinespdf.pdf)

Maine: Maine Interagency Stream Crossing Guidelines: (https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Maine-General-Permit/) and CoastWise (https://www.maine.gov/dmr/sites/maine.gov.dmr/files/inline-files/CoastWiseManualJuly2023_updated.pdf)

Massachusetts: Massachusetts River and Stream Crossing Standards as implemented through 314 CMR 9.06(2)(b).

(https://www.mass.gov/doc/massachusetts-river-and-stream-crossing-standards/download)

New Hampshire: New Hampshire RSA 482-A (https://www.gc.nh.gov/rsa/html/L/482-A/482-A-mrg.htm)

Rhode Island: Regardless of whether a proposed crossing can meet the above BMP's, all wetland and watercourse crossings in Rhode Island are evaluated on a site-by-site basis that account for on-site environmental characteristics by the state. For freshwater crossings, please contact them using the following link: https://dem.ri.gov/environmental-protection-bureau/customer-and-technical-assistance/pre-application-meetings. If a proposed crossing is within the coastal zone and under the jurisdiction of CRMC, please contact them using the following link: https://www.crmc.ri.gov/contact.html.

Vermont: *Vermont Stream Alteration Rule and General Permit* available at https://dec.vermont.gov/watershed/rivers/river-management#rules.

G. Aquaculture: Applicants proposing new aquaculture operations or modifications of existing aquaculture operations are required to coordinate with the appropriate U.S. Coast Guard (USCG) Sector for siting review, Navigation Risk Assessment (NRA), and navigation risk mitigation needs.

1. Coordination with the USCG can be completed by contacting via email:

   Sector Northern New England: (Maine, New Hampshire, Vermont, and Northeastern New York, Lake Champlain) D01-SMB-SecNNE-Waterways@uscg.mil

   Sector Boston: (New Hampshire border southward to Plymouth, Massachusetts) D01-SMB-SECBOSWaterways@uscg.mil

   Sector Southeastern New England: (Rhode Island and Southeastern Massachusetts, Cape Cod, and Islands) SENEWWM@uscg.mil

   Sector Long Island Sound: (New York to Connecticut border at Port Chester, Connecticut to Rhode Island border at Watch Hill) SECLISSPWMarineEvent@uscg.mil

   Sector New York: (Sandy Hook, New Jersey north through Port of New York/New Jersey, Hudson River to Whitehall, NY (south of Lake Champlain) D01-SMB-SecNY-Waterways@uscg.mil

   The applicant shall provide the following information to facilitate completion of the NRA: applicant name/company affiliation, license/lease type (commercial, research, shellfish, kelp, new or modified), nautical chart, detailed drawing with

dimensions, time of year, potential lighting/marking, types/materials of structures in water, planned anchoring, cultivation techniques (number of weekly/monthly visits, vessel tending/type), and any other significant information.

If the applicant receives a medium or high-risk assessment, they shall coordinate with the Corps and apply safety risk mitigations. The USCG will refer the project to the Corps unless the Corps makes the determination that it may proceed.

Any safety lights and signals prescribed by the USCG, through regulations or otherwise, must be installed and maintained at the permittee's expense. For required permitting, the applicant shall contact USCG First District Private Aid Program Manager through D01-SMB-D01PrivateAtoN@uscg.mil. Only actual AtoNs are permitted; floats, balls, markers, mooring balls and 'highflier flags' are not considered Aids to Navigation (AtoN). See: http://www.usharbormaster.com.

Applicants shall notify NOAA's National Ocean Service (NOS) Nautical Data Branch Office of Coast Survey to initiate chart and Coast Pilot corrections. See: https://nauticalcharts.noaa.gov/. Applicants must also notify NOAA on removal. See Note 2.

2. For marine safety information during construction or other significant periods, applicants may use the First District's Marine Safety Information form and email to: D01-SMB-LNM@uscg.mil.

Note 1: If a PCN is required, applicants shall include documentation of all required coordination with their PCN.

Note 2: For nautical chart and coast pilot updates, activities owners should use the status report form at https://nauticalcharts.noaa.gov/charts/docs/charts-updates/USACE+Permit+Status+Report.pdf. For aquaculture activities owners should use: https://nauticalcharts.noaa.gov/charts/docs/charts-updates/Artificial+Reef+Aquaculture+Status+Report.pdf to notify the Office of Coast Survey of the project completion. The form should be emailed to ocs.ndb@noaa.gov and should include a copy of as-built drawings.

H. Hydrology: Permanent wetland crossings shall be constructed in such a manner as to prevent excessive ponding or drying on either side of the authorized crossing after completion of the work. Measures shall be taken to maintain the existing hydrology. Such measures may include road cross drains such as culverts that are appropriately sized and placed at intervals to maintain the existing hydrology of the contiguous wetland.

I. Compensatory Mitigation: In addition to the requirements of NWP GC 23, Mitigation, compensatory mitigation requirements for unavoidable impacts to waters of the U.S. will be evaluated in accordance with the latest version of the *New England District Compensatory Mitigation Standard Operating Procedures* (https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/).

J. Essential Fish Habitat: Essential Fish Habitat (EFH) is defined as those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity (16 U.S.C. 1802).

The following NWPs have been determined to result in no more than minimal adverse effects, provided the permittee complies with all terms and conditions of the NWP as applicable to the activity, including all activity thresholds and activity-specific Conservation Recommendations (CRs) identified in the current EFH and Fish and Wildlife Coordination Act (FWCA) Programmatic Consultation (https://www.nae.usace.army.mil/Missions/Regulatory/Essential-Fish-Habitat/). The National Marine Fisheries Service (NMFS) has granted General Concurrence (50 CFR 600.920(g)) for the below listed NWPs, and these activities do not require activity-specific EFH consultation.

Nationwide Permit	Authorized Activities with General Concurrence
NWPs: 1, 4, 5, 6, 9, 10, 11, 15, 16, 19, 20, 27, 28, 32, 35, & 41	All authorized activities
NWP 3	Parts (a) and (c) (i.e., non-notifying)
NWP 12	Section 404 only activities that do not result in the loss of greater than 1/10-acre and is not a new pipeline greater than 250 miles (i.e., non-notifying)
NWP 13	Activities less than 500 linear feet in length with a discharge of less than one (1) cubic yard per running foot below the ordinary high water mark or high tide line, and no discharges into special aquatic sites (i.e., non-notifying)
NWP 14	Activities less than 1/10-acre with no discharges into special aquatic sites (i.e., non-notifying)
NWP 18	Activities that discharge less than ten (10) cubic yards of fill material below the plane of the ordinary high water mark or high tide line with no discharges into special aquatic sites (i.e., non-notifying)
NWP 22	Activities associated with vessels that are not listed or eligible for listing on the National Register of Historic Places and not located within special aquatic sites (i.e., non-notifying)
NWP 23	Activities not identified as notifying within Regulatory Guidance Letter 05-07 (i.e., non-notifying)
NWP 33	Section 404 only activities (i.e., non-notifying)
NWP 36	Activities that discharge less than 50 cubic yards of fill material and are less than 20 feet wide (i.e., non-notifying)

NWP 43	Activities that do not involve the expansion or construction of a new stormwater management facility (i.e., non-notifying)
NWP 48	Activities that are not the installation of a new operation and do not directly affect greater than 1/2-acre of submerged aquatic vegetation (i.e., non-notifying)
NWPs: 51 & 60	Activities that do not result in the loss of greater than 1/10-acre (i.e., non-notifying)
NWP 54	Maintenance activities (i.e., non-notifying)
NWPs: 57 & 58	Section 404 only activities that do not result in the loss of greater than 1/10-acre (i.e., non-notifying)

For non-federal applicants whose proposed activities would be located within EFH and that do not require a PCN per the language of the NWP or per any other general or regional condition (i.e., non-notifying), the applicant shall review the current EFH and FWCA Programmatic Consultation (https://www.nae.usace.army.mil/Missions/Regulatory/Essential-Fish-Habitat/) to ensure their proposed activity complies with all applicable CRs.

1. A PCN is required for any proposed project that would exceed the activity thresholds that are included within the current EFH and FWCA Programmatic Consultation. Any proposed project that exceeds an activity threshold requires preliminary coordination/project-specific consultation.

2. For all activities that do not exceed the activity-based thresholds included within the current EFH and FWCA Programmatic Consultation, the project proponent shall implement the activity-specific applicable CRs. If the applicable CRs cannot be implemented, a PCN must be submitted to the Corps, and work may not commence until the Corps verifies the project under the applicable NWP(s).

Federal applicants should follow their own procedures for compliance with the Magnuson-Stevens Fishery Conservation and Management Act and Fish and Wildlife Coordination Act.

Note 1: For activities proposed for authorization by an NWP that requires the submittal of a PCN, applicants are encouraged to review the current EFH and FWCA Programmatic Consultation and design their proposed activities with the activity-based thresholds and incorporate applicable CRs.

Note 2: Applicants can utilize the NMFS EFH mapper to determine if their proposed activities are located within EFH: https://www.habitat.noaa.gov/apps/efhmapper/. Applicants can also utilize the current EFH and FWCA Programmatic Consultation (https://www.nae.usace.army.mil/Missions/Regulatory/Essential-Fish-Habitat/) for guidance on non-tidal waterbodies with diadromous fish.

K. Invasive Species: The introduction, spread, or the increased risk of invasion of invasive plant or animal species on the project site, into new or disturbed areas, or into areas adjacent to the project site caused by the site work shall be avoided. Native, non-invasive vegetation must be used unless otherwise authorized by the Corps, and shall not contain any species listed in Appendix K ("Invasive and Other Unacceptable Plant Species") of the current *New England District Compensatory Mitigation Standard Operating Procedures* located at: https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/. Equipment shall be thoroughly cleaned before and after project construction to prevent the spread of invasive species. This includes, but is not limited to, tire treads and construction mats. Information about how to avoid the spread of invasive species can be found at: https://www.nae.usace.army.mil/Missions/Regulatory/Invasive-Species.

L. NWP Documentation On-Site: The permittee shall ensure that a copy of their verification letter (for notifying NWPs only) and applicable NWP with all applicable GCs and RCs are at the worksite whenever work is being performed, and that all personnel performing work are fully aware of its terms and conditions.

M. Abandonment: If the permittee decides to abandon the activity authorized by an NWP, unless such abandonment is merely the transfer of property to another party, the permittee may be required to restore the area to the satisfaction of the Corps.

State-Specific Regional Conditions

The following RCs apply to all applicable NWPs in the **State of Connecticut**:

N. Regional Condition N is reserved for the state of Connecticut.

The following RCs apply to all applicable NWPs in the **State of Maine**:

O. Regional Condition O is reserved for the state of Maine.
P. Regional Condition P is reserved for the state of Maine.
Q. Regional Condition Q is reserved for the state of Maine.
R. Regional Condition R is reserved for the state of Maine.

The following RCs apply to all applicable NWPs in the **Commonwealth of Massachusetts**:

S. Additional PCN Requirement (Time-of-Year Windows and Restrictions): A PCN is required for any proposed activity located in waters of the U.S. (excluding wetlands) that does not comply with the following time-of-year (TOY) restrictions, unless the Massachusetts Division of Marine Fisheries (MA DMF) provides alternate TOY restrictions. The TOY restrictions stated in Appendix B of the MA DMF Technical Report TR-47* can apply instead if they are provided for a specific waterbody where the activity is proposed. Additionally, if MA DMF provides project-specific TOY restrictions those may also apply in lieu of the TOY restrictions listed below.

	TOY Work Restriction	TOY Work Window
Non-Tidal Waters	October 1 to June 30	July 1 to September 30
Tidal Waters and Diadromous Fish Migratory Habitat**	January 15 to November 15	November 16 to January 14

*Massachusetts Department of Marine Fisheries (MA DMF) Technical Report, TR-47, available at: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/

**Information regarding diadromous fish migratory habitat can be obtained from the following GIS website maintained by the Commonwealth of Massachusetts: https://www.mass.gov/info-details/massgis-data-diadromous-fish.

For proposed activities that require a PCN, applicants should first coordinate with the MA DMF to obtain TOY windows and/or restrictions for their activity. Applicants should include documentation of this coordination when submitting their PCN.

Any proposed activity located in waters of the U.S. (excluding wetlands) shall be completed entirely "in-the-dry" or be isolated from active flows/the water column using temporary measures (i.e., cofferdams, sandbags, flume pipes, etc.) to the maximum extent practicable. The term "in-the-dry" means work that is done under dry conditions, e.g., work behind cofferdams or when the stream or tide is waterward of the work.

T. Underwater Archaeological Resources: Under Massachusetts General Law Ch. 6, s.'s 179-180, and Ch. 91, s. 63, the Board of Underwater Archaeological Resources (BUAR) has statutory jurisdiction within state waters and is the sole trustee of the Commonwealth's underwater heritage, charged within the responsibility of encouraging the discovery and reporting, as well as the preservation and protection of underwater archaeological resources. Underwater archaeological resources located within the waters of the Commonwealth of Massachusetts are property of the Commonwealth, which holds title to these resources and retains regulatory authority over their use. Under Massachusetts General Law, no person, organization or corporation may "remove, displace, damage, or destroy" any underwater archaeological resources located within the Commonwealth's submerged lands except through consultation with the BUAR and in conformity with the permits it issues. https://www.mass.gov/orgs/board-of-underwater-archaeological-resources.

The following RCs apply to all applicable NWPs in the **State of New Hampshire**:

U. Regional Condition U is reserved for the state of New Hampshire.

The following Regional Conditions apply to all applicable NWPs in the **State of Rhode Island**:

V. Regional Condition V is reserved for the state of Rhode Island.

The following Regional Conditions apply to all applicable NWPs in the **State of Vermont**:

W. Regional Condition W is reserved for the state of Vermont.
X. Regional Condition X is reserved for the state of Vermont.

REGION 1
BOSTON, MA 02109

December 18, 2025

Ms. Tammy Turley
Chief, Regulatory Division
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742

Subject: Tribal Nations and Lands of Exclusive Federal Jurisdiction Water Quality Certification for the proposed 2026 Nationwide Permits

Dear Ms. Turley,

On June 18, 2025, EPA Region 1 received a request for water quality certification of the U.S. Army Corps of Engineers' (Corps) proposed 2026 Nationwide Permits (NWPs) that may result in a discharge in waters of the United States within the Boundaries of an Indian Country or lands of exclusive federal jurisdiction (LEFJ) that are surrounded by the states of Maine, Massachusetts, Rhode Island, and Connecticut. In that notification, the Corps requested that EPA issue a Clean Water Act (CWA) Section 401 water quality certification for the NWPs.

CWA section 401(a)(1) requires applicants for Federal permits and licenses that may result in discharges into waters of the United States to obtain certification that the discharge will comply with applicable provisions of the CWA, including sections 301, 302, 303, 306 and 307. The enclosed CWA section 401 water quality certification decision applies to Tribal Lands and LEFJ in relevant respects where EPA is the certifying authority.[1] EPA reviewed the draft NWPs and applicable conditions and has determined that any discharge from activities authorized by the proposed NWPs as certified will comply with water quality requirements, as defined at 40 CFR 121.1(n), subject to the applicable enclosed conditions pursuant to Section 401(d). For the water quality certification decision on NWP 45 on behalf of Federally recognized Tribes in Maine and LEFJ in Maine, EPA denies water quality certification. For work that proposes activities authorized under NWP 45 that may occur on Tribal lands in Maine or on LEFJ in Maine, an individual water quality certification will be required.

[1] 33 U.S.C. 1341(a)(1). Please contact EPA Region 1 for current information regarding the jurisdictions where this 401 certification decision applies at R1cwa401@epa.gov.

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs

Department of Environmental Protection

Address: 100 Cambridge Street, Suite 900, Boston MA 02114 | **Phone**: 617-292-5500

Maura T. Healey	**Kim Driscoll**	**Rebecca Tepper**	**Bonnie Heiple**
Governor	Lieutenant Governor	Secretary	Commissioner

December 17, 2025

Tammy Turley (via email: tammy.r.turley@usace.army.mil)
Chief, Regulatory Division
U.S. Army Corps of Engineers New England District
696 Virginia Road Concord, Massachusetts 01742-2751

Re: **Section 401 WATER QUALITY GENERAL CERTIFICATION**
Department of the Army
Nationwide Permits for Massachusetts
Effective: **Upon issuance of the 2026 NWPs**
Expires: **Upon expiration of the 2026 NWPs**

Dear Ms. Turley,

The Massachusetts Department of Environmental Protection (MassDEP) has reviewed your June 18, 2025 request for the Commonwealth of Massachusetts to issue a Section 401 Water Quality Certification (WQC) of the Department of the Army Nationwide Permits (NWPs), herein termed the "General NWP Certification." In accordance with the provisions of Section 401 of the Federal Clean Water Act, 33 U.S.C. § 1341, the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and the Massachusetts 401 WQC regulations at 314 CMR 9.00, the Department has determined there is reasonable assurance the activities covered by the NWPs **that are certified herein** will be conducted in a manner which will comply with the Massachusetts Surface Water Quality Standards (314 CMR 4.00) and other applicable water quality-related requirements of state law, if carried out in accordance with this General NWP Certification and the provisions of the NWPs, including the Regional Conditions imposed by the USACE New England District.

I. Coverage of the General NWP Certification

This WQC conditionally certifies all activities authorized by USACE in NWPs 1, 3-7, 9-20, 22-23, 27-29, 31-46, 48, 51-55, 57-59, and A so long as the activity is described in 314 CMR 9.03 and is not an activity described in 314 CMR 9.04, and so long as the activity meets all other requirements, terms and conditions of 314 CMR 9.03 and of this WQC. Additionally, emergency activities authorized by one or more of these NWPs are certified if they meet the requirements of 314 CMR 9.12. Applicants must review this General NWP Certification and the current version of 314 CMR 9.03 and 314 CMR

9.04 as of the date of this letter (provided in the Appendix) prior to determining certification status. All other activities that are not described in 314 CMR 9.03 or are described in 314 CMR 9.04, unless they are authorized under 314 CMR 9.12, require an individual WQC application and issuance of an individual WQC from MassDEP.

Project proponents should note that most tidal impacts authorized by NWPs are likely not certified pursuant to this WQC and will require an individual application.

II. Clarifications for Evaluating Applicability of this General NWP Certification

1. **All NWPs** - Extent of MassDEP jurisdiction:

   MassDEP has jurisdiction under CWA § 401 and 40 C.F.R. Part 121 to evaluate water-quality related impacts from the activity subject to the NWPs on all Waters of the Commonwealth. Waters of the Commonwealth are defined at 314 CMR 9.02 to include all rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and ground waters. Surface Waters are defined at 314 CMR 9.02 to include all Waters of the Commonwealth other than ground waters. Bordering vegetated wetlands are also defined in 314 CMR 9.02. "Land Under Water," as used in 314 CMR 9.00, includes the bottom of, or land under, the surface of the ocean or any estuary, creek, river, stream, pond, or lake. All impacts to Land Under Water including creek, river, and stream impacts are quantified as square feet in Massachusetts. Where thresholds of applicability are determined in 314 CMR 9.03 or 9.04 according to specified Surface Water (including wetland) types, those shall be based on the applicable Surface Waters affected by the activity, not solely the federally jurisdictional subset of those waters.
   In consideration of whether a proposed activity qualifies for coverage under this WQC, "activity" means the proposed project, scheme or plan of action resulting in the discharge of dredged or fill material authorized by the NWP. In determining thresholds for and conducting evaluations of applications, the entirety of the activity, including likely future expansions, shall be considered and not separate phases or segments thereof. The definition of "Single and Complete Project" in 314 CMR 9.02 does not differentiate between linear and non-linear projects; therefore, a linear project considered multiple projects by the USACE will likely be considered one activity by MassDEP. The activity includes temporary and permanent, direct and indirect, and cumulative impacts from the construction and ongoing operation of a project. The calculation of square footage shall include the total of the applicable areas proposed to be lost from the impacts of the activity, without reduction for replication or restoration.

2. **All NWPs** - Salt Marsh and Outstanding Resource Waters: Activities with a discharge of dredged or fill material in a salt marsh (except for Ecological Restoration projects per 314 CMR 9.03(8)), and activities with dredging or a discharge of dredged or fill

material in an Outstanding Resource Water, require an individual WQC application. *See* 914 CMR 9.04(2) and (8).

3. **All NWPs** - Dredging: Dredging as defined in 314 CMR 9.02 includes the removal or repositioning of sediment or other material from below the mean high tide line for coastal waters and below the high water mark for inland waters (not including wetlands). Dredging of 100 cubic yards or greater will trigger an individual WQC application as identified in 314 CMR 9.04(12). Dredging less than 100 cubic yards does not require an individual application, as identified in 314 CMR 9.03(3) provided all of the requirements of this WQC are met, including all of the requirements of 314 CMR 9.03.

4. **NWP 27 -- Aquatic Habitat Restoration, Enhancement and Establishment and NWP A -- Activities to Improve Passage of Fish and Other Aquatic Organisms**: Activities that comply with the provisions of 314 CMR 9.03(8) are certified under this WQC. Note that only Ecological Restoration projects that meet the eligibility criteria pursuant to 310 CMR 10.13, comply with requirements of 310 CMR 10.11 and 10.12, and receive a Restoration Order of Conditions (OOC) pursuant to 310 CMR 10.14 are certified under this WQC. Projects that involve dredging or dredged material disposal as described in 314 CMR 9.04(12) require an individual WQC application. Ecological Restoration Limited projects that receive an OOC under the provisions of 310 CMR 10.24(8) or 10.53(4) are not certified under this WQC and require an individual WQC application.

5. **NWP 40 – Agricultural Activities, and NWP 48 – Commercial Shellfish Mariculture Activities**: Agriculture and aquaculture activities described in 314 CMR 9.03(4) (*i.e.*, normal maintenance or improvement of land in agricultural or aquacultural use) do not require an individual WQC pursuant to 314 CMR 9.04(4) because, in accordance with 314 CMR 9.03(4), the provisions of 314 CMR 9.04 do not apply. However, activities described in 314 CMR 9.04(10) (*i.e.*, agricultural limited projects per 310 CMR 10.53(5), which include but are not limited to projects for the support of existing agricultural production such as the construction or expansion of new ponds or reservoirs) and other agriculture and aquaculture activities that do not meet the respective definitions in 310 CMR 10.04 of normal maintenance or improvement of land in agricultural or aquacultural use must apply for an individual WQC provided the activities result in the discharge of dredged or fill material, or the dredging of 100 cubic yards or more.

6. **Activities Exempt from M.G.L. c. 131, § 40 (WPA):** In accordance with 314 CMR 9.04(4), these activities are not certified by this WQC unless otherwise described in these conditions, and proponents of such activities must apply for an individual WQC pursuant to 314 CMR 9.00. Included in this category of exempt projects is utility maintenance, including any associated construction mats.

III. NWP-Specific Conditions

The activities authorized by this WQC are subject to the following NWP-Specific Conditions:

1. **NWP 5 Scientific Measurement Devices, NWP 6 Survey Activities**: Activities certified by this General NWP Certification shall be temporary in nature and necessary for planning and design purposes such as the installation of monitoring wells, exploratory borings, sediment sampling, and surveying. Pursuant to 314 CMR 9.03(6) and 314 CMR 9.09(1)(d), this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters.

2. **NWP 10 Mooring Buoys**: Pursuant to 310 CMR 9.07(2) of the Waterways (Chapter 91) Regulations, mooring activities must be authorized by a valid Annual Permit for Moorings, Floats and Rafts (Section 10A permit) issued by the municipal harbormaster or other municipal official. Pursuant to 310 CMR 9.07(2) and 314 CMR 9.09(1)(d), this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters.

3. **Activities Addressing an Emergency Situation, Including But Not Limited To Those Authorized Under NWPs 3, 31, and 37**: Activities addressing emergency situations that meet the requirements of 314 CMR 9.12 are certified under the General NWP Certification. 314 CMR 9.12 supersedes 314 CMR 9.03 and 314 CMR 9.04 such that there are no activity type, location, or impact thresholds that prevent the abatement of an emergency following compliance with 314 CMR 9.12. Pursuant to 310 CMR 10.06, 314 CMR 9.09(1)(d) and 9.12, this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters and maintain water quality.

IV. General Conditions

The activities authorized by this WQC are subject to the following general conditions:

1. Each activity described in 314 CMR 9.03 must comply with the respective requirements in 314 CMR 9.03 for that activity. Pursuant to 310 CMR 10.00, 314 CMR 9.03, 9.06(2), and 9.09(1)(d), this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters and maintain water quality.

2. This General NWP Certification shall be valid until such time as the Department of the Army NWPs expire or are modified, suspended, revoked, or reissued. Pursuant to 33 U.S.C. 1341 of the federal Clean Water Act, this condition is necessary to comply with federal law. In the event that MassDEP promulgates a revision to 314

CMR 9.00 that modifies the criteria referenced herein, MassDEP will seek agreement with the USACE pursuant to 40 C.F.R. § 121.10 to modify this General NWP Certification to align with the revised regulation.

3. The Department reserves the right to amend, modify, suspend, revoke, or reissue this WQC if the NWPs are amended, modified, suspended, revoked, or reissued. The activities authorized by this WQC shall be conducted in a manner that assures compliance with the anti-degradation provisions of the Massachusetts Surface Water Quality Standards at 314 CMR 4.00. Pursuant to 314 CMR 9.06(2), 9.09(1)(d) and 314 CMR 4.00, this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters and that activities will not violate surface water quality standards.

4. This WQC does not derogate from any present or future property rights or other rights or powers of the Commonwealth of Massachusetts and does not convey property rights in real estate or material, or any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state, or local laws and regulations pertinent to the property or activity affected hereby. Pursuant to 314 CMR 9.09(1)(d), this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters and to comply with state law.

5. MassDEP reserves the right to inspect any project or activity conducted, permitted, or otherwise authorized by this WQC and their impacts on Waters of the Commonwealth, as defined at 314 CMR 4.02, at any time to monitor compliance with the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, the regulations at 314 CMR 9.00, and this WQC. Pursuant to 314 CMR 4.00, 314 CMR 9.09(1)(d), and 9.11, this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters, to maintain water quality, and to comply with state law.

6. The permittee is responsible for compliance with the terms and conditions of this WQC. Failure to comply with the terms and conditions of this WQC is grounds for enforcement by MassDEP including, without limitation, the assessment of civil, administrative, or criminal penalties pursuant to M.G.L. c. 21, §§ 42 and 44, M.G.L c. 21, § 16A, 310 CMR 5.00, M.G.L. c. 131, § 40, 310 CMR 10.08, and 314 CMR 9.11 or other possible actions/penalties as authorized by the General Laws of the Commonwealth. Pursuant to M.G.L. c. 21, §§ 42 and 44, M.G.L c. 21, § 16A, 310 CMR 5.00, M.G.L. c. 131, § 40, 310 CMR 10.08, and 314 CMR 9.09(1)(d) and 9.11, this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters, to maintain water quality, and to comply with state law.

7. Stormwater discharges to Waters of the Commonwealth, including wetlands during the construction period must comply with the requirements of 314 CMR 9.06(6) and must not cause a violation of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00. If applicable, the permittee shall file a Stormwater Pollution Prevention Plan (SWPPP) required by the EPA National Pollution Discharge Elimination System (NPDES) Construction General Permit (CGP)[1] and provide MassDEP a copy of the filed SWPPP. Pursuant to 314 CMR 4.00, 314 CMR 9.06(6) and 9.09(1)(d), this condition is necessary to minimize turbidity and sediment caused by construction activities and to ensure that water quality is not degraded, and that biology of the waters are not negatively impacted by potential discharges.

8. Any activity authorized by this WQC shall not result in any increase in turbidity to Surface Waters including wetlands either during normal or significant rainfall events. Excessive turbidity in wetlands or flowing water within, or in the vicinity of the project site shall be presumed to have unacceptable adverse impacts on Surface Waters including wetlands. Pursuant to 314 CMR 9.06 and 9.09(1)(d), this condition is necessary to minimize turbidity and sediment caused by construction activities and to ensure that water quality is not degraded, and that biology of the waters are not negatively impacted by potential discharges.

9. Refueling, washing, or other maintenance of vehicles and construction equipment, and storage of hazardous materials shall not take place within Surface Waters including wetlands. Pursuant to 314 CMR 9.06 and 9.09(1)(d), this condition is necessary to minimize turbidity and sediment caused by construction activities and to ensure that water quality is not degraded, and that biology of the waters is not negatively impacted by potential discharges.

10. Any fill used in Surface Waters, including wetlands shall comply with all relevant provisions of the WPA, the Wetlands Protection Regulations, 310 CMR 10.00, M.G.L. c. 21E, and the regulations promulgated pursuant thereto at 310 CMR 40.0000. Without limitation, fill shall not contain any trash, refuse, rubbish, or debris, including, but not limited to lumber, plaster, construction materials, wire, lath, paper, cardboard, pipe, tires, ashes, metal, plastic, motor vehicles, or parts of any of the foregoing, hazardous waste, hazardous materials, or oil. Pursuant to M.G.L. c. 21E, M.G.L. c. 131, § 40, 310 CMR 10.00, 314 CMR 9.06(2) and 9.09(1)(d), and 310 CMR 40.0000, this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters, to maintain water quality, and to ensure compliance with state law.

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[1] - The CGP is applicable to construction activities that disturb one acre or more, or if they disturb less than one acre but the land is a part of a larger common plan of development that disturbs one or more acres of land total.

11. The activities authorized herein shall not commence until the permittee has obtained final approval pursuant to Section 404 of the Federal Clean Water Act from the Army Corps of Engineers, as applicable. Pursuant to 33 U.S.C. 1341, 314 CMR 9.06(2) and 9.09(1)(d) and (e), this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters, to maintain water quality, and to ensure compliance with state and federal law.

12. Upon final stabilization of disturbed surfaces, all temporary erosion controls shall be removed and disposed of in a legal manner and shall not be disposed of in Surface Waters including wetlands. Pursuant to 314 CMR 9.06 and 9.09(1)(d), this condition is necessary to minimize turbidity and sediment caused by construction activities and to ensure that water quality is not degraded, and that biology of the waters are not negatively impacted by potential discharges.

13. This WQC does not relax, vary, or waive requirements under the Surface Water Discharge/NPDES Municipal Separate Storm Sewer System (MS4) General Permit and the EPA-issued NPDES Construction General Permit. In the event of a conflict between requirements of this WQC and the referenced general permits, the permittee shall follow the more stringent requirement. Pursuant to 33 U.S.C. 1342, M.G.L. c. 21, §§ 26-53, 314 CMR 9.06(2) and 9.09(1)(d), this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters, to maintain water quality, and to ensure compliance with state and federal law.

14. This WQC does not relieve the permittee of the obligation to comply with all other applicable state and federal law. Any changes made to the permittee's project or activity must be reevaluated for eligibility under this WQC. Pursuant to 310 CMR 9.06(2) and 9.09(1)(d), this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters, to maintain water quality, and to ensure compliance with state and federal law.

15. The permittee shall comply with General Conditions 1-32 of the NWPs and the Regional Conditions (which include any State-specific Conditions). Pursuant to 310 CMR 9.06(2), this condition is necessary to ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters, to maintain water quality, and to ensure compliance with federal law.

Notification of Appeal Rights

The following persons shall have a right to request an adjudicatory hearing concerning this certification:

1. Any person aggrieved by the decision who has submitted written comments during the public comment period;

2. Any ten (10) persons of the Commonwealth pursuant to M.G.L. c. 30A where a group member has submitted written comments during the public comment period; and

3. Any governmental body or private organization with a mandate to protect the environment, which has submitted written comments during the public comment period.

Any person aggrieved, any ten persons of the Commonwealth, or a governmental body or private organization with a mandate to protect the environment may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activities proposed for coverage and not apparent at the time of public notice. To request an adjudicatory hearing pursuant to M.G.L. c. 30A, § 10, and 310 CMR 1.01, a Notice of Claim must be made in writing, provided that the request is made by certified mail or hand delivery to the Department, with the appropriate filing fee specified within 310 CMR 4.06, along with a Department Fee Transmittal Form, within 21 days from the date of issuance of this WQC and addressed to:

Case Administrator
Department of Environmental Protection
100 Cambridge Street, Suite 900
Boston, MA 02114.

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

Department of Environmental Protection
100 Cambridge Street, Suite 900
Boston, MA 02114.

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

a. the 401 Certification Transmittal Number and DEP Wetland Protection Act File Number;
b. the complete name of the applicant and address of the project;
c. the complete name, address, and fax and telephone numbers of the party filing the request and, if represented by counselor other representative, the name, fax and telephone numbers, and address of the attorney;
d. if claiming to be a party aggrieved, the specific facts that demonstrate that the party satisfies the definition of “aggrieved person” found at 314 CMR 9.02;

e. a clear and concise statement that an adjudicatory hearing is being requested; and
f. a clear and concise statement of (1) the facts which are grounds for the proceedings, (2) the objections to the Certification, including specifically the manner in which it is alleged to be inconsistent with the Department's Water Quality Certification Regulations, 314 CMR 9.00, and (3) the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written Certification.

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

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
P.O. Box 4062
Boston, MA 02211

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

If you have questions on this decision, please contact Lisa Rhodes at Lisa.Rhodes@mass.gov.

Sincerely,



Tim Jones, Director
Division of Wetlands and Waterways

Appendix – 314 CMR 9.03 and 9.04

Cc Sean Duffy, MA Office of Coastal Zone Management (sean.duffey@mass.gov)
CC EPA, Nate Marganson (margason.nathan@epa.gov)

Appendix

Sections 9.03 and 9.04

Excerpted from 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*

9.03: Activities Not Requiring an Application

The Department certifies the activities identified in 314 CMR 9.03(1) through (8) and therefore they do not require an individual 401 Water Quality Certification application provided the specified conditions are met. For activities meeting these specified conditions, the Final Order of Conditions or final Restoration Order of Conditions issued pursuant to 310 CMR 10.00: Wetlands Protection, as applicable, serves as the Water Quality Certification for the project.

(1) Less than 5000 Sq. Ft. with an Order of Conditions. Activities conducted in compliance with the Wetlands Protection Act and receiving a Final Order of Conditions which meets all applicable performance standards under 310 CMR 10.00: Wetlands Protection provided that:

(a) the Final Order of Conditions permits work that results in the loss of up to 5,000 square feet cumulatively of bordering and isolated vegetated wetlands and land under water. Both bordering and isolated vegetated wetlands must be delineated on the plans contained in the Notice of Intent and described on a form prescribed by the Department; and

(b) the Final Order of Conditions includes conditions requiring at least 1:1 replacement of bordering vegetated wetlands under 310 CMR 10.55(4)(b);

(c) if applicable, the activity conforms to the stream crossing provisions of 310 CMR 10.24(10) and 10.53(8); and

(d) the proposed work is not subject to 314 CMR 9.04.

(2) Beach Nourishment. Beach nourishment activities with a Final Order of Conditions issued under M.G.L. c. 131, § 40.

(3) Dredging Less than 100 C.Y. Dredging and dredged material disposal of less than 100 cubic yards, provided that a Final Order of Conditions has been issued and the proposed work is not subject to 314 CMR 9.04 and the work is not subject to an individual 404 permit by the Corps of Engineers. Dredged sediment generated from such activities shall be managed in accordance with the provisions of 314 CMR 9.07(9) through (11) and may be

used for beach nourishment activities or reuse within the shoreline under a Final Order of Conditions issued under M.G.L. c. 131, § 40.

(4) Agriculture or Aquaculture Exempt under M.G.L. c. 131, § 40 (the Wetlands Protection Act). Normal maintenance and improvement of land in agricultural or aquacultural use that is exempt from the Wetlands Protection Act, as defined and performed in accordance with 310 CMR 10.04: Definitions: Agriculture including the alternatives analysis, as applicable, performed by the USDA Natural Resources Conservation Service (formerly Soil Conservation Service) or 310 CMR 10.04: Definitions: Agriculture. The provisions of 314 CMR 9.04 do not apply.

(5) Less than 5000 Sq. Ft. of Isolated Vegetated Wetlands. Any activity in an area not subject to jurisdiction of the Wetlands Protection Act which is subject to 33 U.S.C. 1251 (i.e., isolated vegetated wetlands) which will result in the loss of up to 5000 square feet cumulatively of bordering and isolated vegetated wetlands and land under water, provided there is no discharge of dredged or fill material to any Rare Species Habitat or to any Outstanding Resource Water.

(6) Planning and Design Activities. Activities that are temporary in nature, have negligible impacts, and are necessary for planning and design purposes such as the installation of monitoring wells, exploratory borings, sediment sampling, and surveying. The applicant shall notify the Department and conservation commission at least ten days prior to commencing the activity. Notification is not required if a valid, unexpired Final Negative Determination of Applicability has been issued for the work as described 310 CMR 10.05(3)(b). Notification shall include a description of the activity, the location of the proposed activity and measures to be taken to avoid or minimize impacts. The site shall be substantially restored to its condition prior to the activity.

The Department will notify the persons to whom an Order of Conditions is issued not later than ten business days of its receipt by the Department that based on the information available to the Department the criteria of 314 CMR 9.03 have not been met. If the impacts to resource areas, as defined in the Massachusetts Wetland Protection Act and the Federal Clean Water Act, or the project size increases from the description filed with the Notice of Intent, or there are any inaccuracies therein, the applicant must notify the Department in writing and request a determination that the criteria of 314 CMR 9.03 have been met before the activity begins.

(7) Test Projects. A Test Project authorized by and conducted in accordance with a final Order of Conditions provided that the project: does not require an individual Section 404 permit from the U.S. Army Corps of Engineers; is not located in Outstanding Resource Waters; and does not exceed any of the impact thresholds set forth in 314 CMR 9.03(1), (3), and (5).

The Department will notify the persons to whom an Order of Conditions is issued not later than ten business days of its receipt by the Department if, based on the information available to the Department, the project is not exempt from the requirement to submit an

individual 401 Water Quality Certification application pursuant to 314 CMR 9.03(7). If the applicant discovers that the project or its impacts on Resource Areas and waters of the United States within the Commonwealth differ from the project and impacts presented in the Notice of Intent, the applicant shall notify the Department in writing within 72 hours of such discovery and request a written determination from the Department as to whether the project is exempt from the requirement to submit an individual 401 Water Quality Certification pursuant to 314 CMR 9.03(7). In that event, the applicant shall not commence the project until s/he obtains a written determination from the Department that the project is exempt from the requirement to obtain an individual 401 Water Quality Certification pursuant to 314 CMR 9.03(7) or an individual 401 Water Quality Certification authorizing the project.

(8) Ecological Restoration Project. Discharge of dredged or fill material in association with an Ecological Restoration Project provided that the discharge of dredged or fill material is in compliance with a valid final Restoration Order of Conditions issued pursuant to 310 CMR 10.11: Actions Required Before Submitting a Notice of Intent for an Ecological Restoration Project through 310 CMR 10.14: Restoration Order of Conditions followed by a Certificate of Compliance, unless the project involves dredging or dredged material disposal as described in 314 CMR 9.04(12). Ecological Restoration Projects that include the activities described in 314 CMR 9.04(12) require a 401 Water Quality Certification application pursuant to 314 CMR 9.04.

9.04: Activities Requiring an Application

The activities identified in 314 CMR 9.04(1) through (13) require a 401 Water Quality Certification application and are subject to the Criteria for Evaluation of Applications for the Discharge of Dredged or Fill Material in 314 CMR 9.06 and/or 9.07:

(1) More than 5000 Sq. Ft. Any activity in an area subject to 310 CMR 10.00: Wetlands Protection which is also subject to 33 U.S.C. 1251, et seq. and will result in the loss of more than 5000 square feet cumulatively of bordering and isolated vegetated wetlands and land under water, except for an Ecological Restoration Project not requiring a Water Quality Certification application pursuant to 314 CMR 9.03(8).

(2) Outstanding Resource Waters. Dredging in, or any activity resulting in any discharge of dredged or fill material to any Outstanding Resource Water.

(3) Real Estate Subdivision - Any discharge of dredged or fill material associated with the creation of a real estate subdivision, unless there is a valid, unexpired Final Order of Conditions, followed by a Certificate of Compliance, and a recorded deed restriction providing notice to subsequent purchasers limiting the amount of fill for the single and complete project to less than 5000 square feet cumulatively of bordering and/or isolated vegetated wetlands and land under water and the discharge is not to an Outstanding Resource Water. Real estate subdivisions include divisions where approval is required and where approval is not required under the Subdivision Control Law, M.G.L. c. 41, §§ 81K through 81GG. Discharges of dredged or fill material to create the real estate subdivision

include but are not limited to discharges resulting from the construction of roads, drainage, sidewalks, sewer systems, buildings, septic systems, wells, and accessory structures.

(4) Activities Exempt under M.G.L. c. 131, § 40. Any activity not subject to M.G.L. c. 131, § 40 and which is subject to 33 U.S.C. 1251 and will result in any discharge of dredged or fill material to bordering vegetated wetlands or land under water.

(5) Routine Maintenance. Routine maintenance of existing channels, such as mosquito control projects or road drainage maintenance, that will result in the annual loss of more than 5000 square feet cumulatively of bordering and isolated vegetated wetland and land under water will be evaluated under the criteria of 314 CMR 9.06. A single application may be submitted and a single certification may be issued for repeated routine maintenance activities on an annual or multi-year basis not to exceed five years.

(6) More than 5000 Sq. Ft. of Isolated Vegetated Wetlands. Any activity in an area not subject to jurisdiction of M.G.L. c. 131, § 40 but which is subject to 33 U.S.C. 1251 (i.e., isolated vegetated wetlands) and which will result in the loss of more than 5000 square feet cumulatively of bordering and isolated vegetated wetlands and land under water.

(7) Rare Species Habitat in Isolated Vegetated Wetlands. Any activity resulting in the discharge of dredged or fill material to an isolated vegetated wetland that has been identified as Rare Species Habitat.

(8) Salt Marsh. Any activity resulting in the discharge of dredged or fill material in any salt marsh, except for an Ecological Restoration Project not requiring a Water Quality Certification application pursuant to 314 CMR 9.03(8).

(9) Individual 404 Permit. Any activity subject to an individual Section 404 permit by the Corps of Engineers, except for an Ecological Restoration Project not requiring a Water Quality Certification application pursuant to 314 CMR 9.03(8).

(10) Agricultural Limited Project. Agricultural work, not exempt under M.G.L. c. 131, § 40, referenced in and performed in accordance with 310 CMR 10.53(5). Provided the activity does not result in any discharge of dredged or fill material to an Outstanding Resource Water, such work will be presumed to meet the criteria of 314 CMR 9.06 where a comparable alternatives analysis is performed or approved by the USDA Natural Resources Conservation Service and included in the Notice of Intent.

(11) Discretionary Authority. Any activity where the Department invokes discretionary authority to require an application based on cumulative effects of multiphased activities, cumulative effects of dredging, or from the discharge of dredged or fill material to bordering or isolated vegetated wetlands or land under water, or other impacts which may jeopardize water quality. The Department will issue a written notice of and statement of reasons for its determination to invoke this discretionary authority not later than ten business days after its receipt of an Order of Conditions.

(12) Dredging 100 Cubic Yards or More. Any dredging or dredged material re-use or disposal of 100 cubic yards or greater.

(13) Any activity not listed in 314 CMR 9.03 or 9.04 is an activity requiring an application subject to the requirements of 314 CMR 9.05 and 9.06 through 9.13 as applicable.

The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Office of Coastal Zone Management
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www.Mass.gov/CZM | (617) 626-1200

Maura T. Healey, *Governor* | Kimberley Driscoll, *Lieutenant Governor* | Rebecca L. Tepper, *Secretary* | Alison Brizius, *Director*

December 18, 2025

Ms. Tammy Turley
U.S. Army Corps of Engineers New England District
Regulatory Division
696 Virginia Road
Concord, MA 01742-2751

RE: Nationwide Permits Reissuance for Proposed Implementation in Massachusetts, Maine, Rhode Island, Connecticut, Vermont, and New Hampshire

Dear Ms. Turley,

The Massachusetts Office of Coastal Zone Management (CZM) has reviewed the proposed adoption of the Nationwide Permits (NWPs) for the U.S. Army Corps of Engineers (USACE) Section 10 and Section 404 authorizations and issues this conditional concurrence.

NWPs are issued by USACE to authorize categories of activities under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 that have no more than minimal individual and cumulative adverse environmental effects. The NWPs are proposed to replace the Massachusetts General Permits (MA GPs) currently used to authorize Section 10 and/or Section 404 activities. Under Section 307 of the Coastal Zone Management Act (CZMA), 15 CFR § 930.31, USACE filed for federal consistency certification with CZM on June 18, 2025, initiating a 60-day federal consistency review. To align with the reasonable period of time allotted for the review and issuance of the Section 401 Water Quality Certificate (401 WQC) by the Massachusetts Department of Environmental Protection (MassDEP), CZM requested, and USACE accepted an extension of the CZM federal consistency review period, resulting in a decision due date of December 18, 2025. Throughout the review process, CZM met regularly with USACE and MassDEP to discuss the NWPs and conformance with state regulation and policy.

In conducting its federal consistency review of the NWPs, CZM considered the text of the NWPs, the nature and extent of differences between the NWPs and the current MA GPs, and CZM's experience with review of projects authorized pursuant to the most recent and prior versions of the MA GPs. The current MA GPs took effect in June 2023 and established review thresholds and conditions that project proponents must abide by to comply with USACE authorization, MassDEP 401 WQC regulations, and the Massachusetts Coastal Program Enforceable Policies.

CZM concurred that projects eligible for Self-Verification under the MA GPs are consistent with the Massachusetts Coastal Program Enforceable Policies, but review of projects requiring PCN under the MA GPs is needed to ensure consistency with the Massachusetts Coastal Program Enforceable Policies. Based on review of the text of the NWPs, a comparison of the NWPs to the MA GPs, and our experience in reviewing applications for projects eligible for PCN under the MA GPs, CZM has determined that the terms of certain NWPs will allow some projects to proceed in Massachusetts with lower levels of review than is currently required under the MA GPs. Further, some projects eligible for authorization under the NWPs may be inconsistent with one or more Massachusetts Coastal Program Enforceable Policies. As a result, CZM has determined that the conditions provided in this conditional concurrence are necessary to ensure that projects authorized by USACE under the NWPs are consistent with the Massachusetts Coastal Program Enforceable Policies.

I. CZM Conditional Concurrence with NWPs

CZM concurs with the NWPs on the following conditions:

- **A.** Any Section 10 and/or Section 404 applicant (including any person eligible for non-reporting status) proposing work subject to any listed NWP that exceeds any review threshold set out in section II shall notify CZM pursuant to section III.
- **B.** CZM will review each notification to determine whether individual review is warranted and reserves the right to take individual review of any project exceeding these thresholds where such project is inconsistent with one or more of the Massachusetts Coastal Program Enforceable Policies, such that individual review is warranted.

These conditions apply to any application for work, regardless of whether that work is eligible for non-reporting status under the relevant NWP(s).

II. Review Thresholds

Proponents applying for authorization under the NWPs for projects in the Massachusetts coastal zone that exceed the following thresholds must submit the information provided in section III to CZM in order for CZM to determine if the project warrants federal consistency review**.**

A. Thresholds Applicable to all NWPs

1. **NWP PCN Requirements:** Any project in the coastal zone that triggers the submission of a PCN under the NWPs.
2. **Salt Marsh or Tidal Vegetated Shallows:** Any project wholly or partially located in saltmarsh or tidal vegetated shallows.
3. **Tide Gates:** Any project proposing a new tide gate.

B. Thresholds Applicable to Specific NWPs

1. **NWP 3 (Maintenance)**
   a. The combined permanent and temporary impacts extending beyond the original footprint are ≥5,000 square feet in tidal waters.

b. The combined permanent and temporary impacts extending beyond the original footprint are ≥1,000 square feet in mudflats and/or natural rocky habitat.
c. The removal of sediment outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) that is ≥200 linear feet.

2. **NWP 4 (Fish and Wildlife Harvesting, Enhancement, Attraction)**
   a. Any project that includes artificial reefs or new, or expansions of, impoundments and semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster with an impounded area >½ acre.

3. **NWP 5 (Scientific Measurement Devices)**
   a. Any aspect of the project will be located in mudflats.
   b. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
   c. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.

4. **NWP 6 (Survey Activities)**
   a. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
   b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.
   c. Exploratory trenching in tidal waters. "Exploratory trenching" means mechanical land or underwater clearing of the upper soil profile to expose bedrock or substrate for the purpose of mapping or sampling the exposed material.

5. **NWP 7 (Outfall Structures and Associated Intake Structures)**
   a. Any project applying for authorization under NWP 7.

6. **NWP 8 (Oil and Gas Structures on the Outer Continental Shelf)**
   a. Any project applying for authorization under NWP 8.

7. **NWP 10 (Mooring Buoys)**
   a. Any aspect of the project will be located in mudflats or natural rocky habitat.

8. **NWP 12 (Oil or Natural Gas Pipeline Activities)**
   a. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
   b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.

c. The project involves unconfined work or silt-producing activities in streams with diadromous fish.

9. **NWP 13 (Bank Stabilization)**
   a. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
   b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.
   c. Activities in tidal waters that are ≥200 linear feet.
   d. Any project including stream channelization or relocation activities.
   e. Any project including breakwaters, groins, or jetties.

10. **NWP 14 (Linear Transportation Projects)**
    a. Any aspect of the project will be located in tidal waters.
    b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.

11. **NWP 17 (Hydropower Projects)**
    a. Any project applying for authorization under NWP 17.

12. **NWP 18 (Minor Discharges)**
    a. Any discharge associated with beach nourishment.

13. **NWP 19 (Minor Dredging)**
    a. Any dredging considered to be improvement dredging per the Massachusetts 401 Water Quality Certification Regulations at 310 CMR 9.02.

14. **NWP 20 (Response Operations for Oil or Hazardous Substances)**
    a. Any aspect of the project will be located in mudflats or natural rocky habitat.
    b. Temporary impacts are ≥1,000 square feet in tidal waters for spill response training exercises.

15. **NWP 23 (Categorical Exclusions)**
    a. Any project applying for authorization under NWP 23.

16. **NWP 27 (Aquatic Ecosystem Restoration, Enhancement, and Establishment Activities)**
    a. In tidal waters excluding tidal vegetated shallows, the combined permanent and temporary impacts are ≥5,000 square feet.
    b. Eelgrass (vegetated shallows) planting and transplanting ≥100 square feet in tidal waters.

c. Runneling projects with the purpose of restoring saltmarsh by removing excess water that ponds on the saltmarsh surface.
d. The project proposes permanent water impoundments, dam removal, or fish ladders.
e. The conversion of: (a) a stream or natural wetlands to another aquatic habitat type (e.g., stream to wetland or vice versa, wetland to pond, etc.) or uplands, (b) one wetland type to another.
f. Any project that includes activities associated with stream channelization, relocation, or artificial reefs.

17. NWP 31 (Maintenance of Existing Flood Control Facilities)

a. Any project applying for authorization under NWP 31.

18. NWP 32 (Completed Enforcement Actions)

a. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.

19. NWP 33 (Temporary Construction, Access, and Dewatering)

a. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.

20. NWP 34 (Cranberry Production Activities)

a. Any project applying for authorization under NWP 34.

21. NWP 35 Maintenance Dredging of Existing Basins

a. Any project applying for authorization under NWP 35.

22. NWP 36 (Boat Ramps)

a. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.

23. NWP 37 (Emergency Watershed Protection and Rehabilitation)

a. Any project applying for authorization under NWP 37, except in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur.

24. NWP 45 Repair of Uplands Damaged by Discrete Events

a. Any project applying for authorization under NWP 45.

25. NWP 48 (Commercial Shellfish Mariculture Activities)

a. Discharges of fill material associated with aquaculture ≥5,000 square feet
b. Research, educational, commercial-viability, or experimental aquaculture gear activities ≥1,000 square feet.
c. Activities in water depths ≥10 feet mean low lower water (MLLW).
d. In tidal waters, expansions of existing lease sites that exceed 2 acres for the entire site (e.g., a 1-acre lease site increasing to a 2-acre lease site does not require notification to CZM).
e. The project includes new, or expansions of, impoundments and semi-impoundments of tidal and non-tidal waters for the culture or holding of motile species such as lobster with an impounded area >½ acre.
f. The project includes the cultivation of a nonindigenous species, unless that species has been previously cultivated in the waterbody.
g. The project includes the cultivation of an aquatic nuisance species.
h. The project includes stockpiles, staging areas, or the deposition of shell material back into tidal and non-tidal waters as waste.

26. NWP 54 (Living Shorelines)

a. The combined permanent and temporary impacts extending beyond the original footprint are ≥5,000 square feet in tidal waters.
b. The combined permanent and temporary impacts extending beyond the original footprint ≥1,000 square feet in mudflats and/or natural rocky habitat.
c. The activity is ≥1,000 linear feet along the bank (≥2,000 linear feet along both banks).
d. The activity is ≥30 feet channelward of mean low water in tidal waters
e. The project includes upland reclamation activities.
f. The project includes stream channelization or relocation activities.
g. The project includes breakwaters, groins, jetties, or artificial reefs.

27. NWP 55 (Seaweed Mariculture Activities)

a. Any project applying for authorization under NWP 55.

28. NWP 57 (Electric Utility Line and Telecommunications Activities)

a. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.

29. NWP 58 (Utility Line Activities for Water and Other Substances)

a. The combined permanent and temporary impacts are ≥5,000 square feet in tidal waters.
b. The combined permanent and temporary impacts are ≥1,000 square feet in mudflats and/or natural rocky habitat.

30. NWP A. Activities to Improve Passage of Fish and Other Aquatic Organisms

a. Any project applying for authorization under NWP A.

III. Notification for Projects Exceeding a Threshold

A Section 10 and/or Section 404 applicant proposing work that exceeds any threshold set out in this conditional concurrence must notify CZM of their proposed project as provided in this section.

Notification shall be provided via email to the CZM Federal Consistency General Inbox (czm.fedcon@mass.gov). Notification to CZM may be made at any time but shall be made no later than the date when the applicant submits to USACE for Section 10/404 approval. CZM will determine whether the notification is complete within 7 days and will provide a response within 14 days after a determination that the notification is complete, or such other time as CZM may agree with the applicant. The response will indicate that: (i) federal consistency review is not required; (ii) federal consistency review is required; or (iii) that additional consultation is required to determine whether federal consistency review will be required. Where additional consultation is required, CZM will work with the applicant to reach a final resolution within a reasonable time. A CZM determination that federal consistency review is not required (or completion of federal consistency review, as applicable) is required prior to the start of work.

Projects that require notification to CZM shall include at least the following information:

1. A description of the proposed project, including resource area delineations, preferably illustrated with map(s) and site plan(s) depicting both existing and proposed conditions, and an analysis and quantification of the temporary and permanent impacts of the project on the resource areas.
2. A copy of the Section 10/404 application.
3. The Massachusetts Environmental Policy Act (MEPA) number, if applicable.
4. A copy of the Section 401 permit or permit application, if applicable.
5. A copy of the Chapter 91 Waterways license or application, if applicable. Additionally, any previous authorizations for the project or structures on the project site should be provided.
6. A description of the proposed activities associated with the project, the coastal effects, and any information relied upon by the applicant to develop project design and permit applications. Maps, diagrams, and technical data may be submitted when a written description alone will not adequately describe the proposed project.
7. A copy of the latest design plans developed for the project.
8. Any other information that CZM may require to determine if federal consistency review is required.

CZM will determine whether the proposed work requires federal consistency review on the basis of the information provided and any other information that CZM determines is relevant. In the event that CZM initiates federal consistency review for a project, it will notify the proponent by email at the address used for the submission.

If USACE does not agree with these conditions, then pursuant to 15 CFR 930.4, the conditional concurrence automatically becomes an objection. In the event of an objection, USACE may consider using the dispute resolution mechanisms described in 15 CFR 930.44.

Thank you for your cooperation with CZM.

Sincerely,



Alison Brizius

Director

cc: Christine Jacek, USACE
Katelyn Rainville, USACE
Roberta Budnick, USACE
Tyler Soleau, CZM
Sean Duffey, CZM
Lisa Rhodes, MassDEP
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December 23, 2022

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME	: Long Beach Seawall FEMA Disaster Relief Project[1]
PROJECT MUNICIPALITY	: Rockport
PROJECT WATERSHED	: North Coastal
EEA NUMBER	: 15917
PROJECT PROPONENT	: Town of Rockport Department of Public Works
DATE NOTICED IN MONITOR	: November 23, 2022

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62L) and Section 11.10 of the MEPA regulations (301 CMR 11.00), I have reviewed the Notice of Project Change (NPC) submitted for this project and hereby determine that it **does not require** an Environmental Impact Report (EIR).

Original Project Description

As described in the Environmental Notification Form (ENF) reviewed in 2018 and the NPC, in the Original Project, the Town of Rockport (Town) initially proposed placement of ±8,000 cubic yards (cy) of beach nourishment sand along portions along portions of the existing beach (and on top of a stone revetment) fronting the 3,354-linear feet (lf) seawall at Long Beach in Rockport. In March 2018, a series of nor'easters caused extensive erosion and additional damage to Long Beach and the seawall. Sections of the seawall constructed in 1931 and 1959 (central portion of the wall) were undermined and evidence of wall movement and failure were observed. In addition, the western end of the seawall was undermined, extensive settlement and soil erosion occurred along the landside of the wall, and the public access stairs were destroyed. Interim stabilization of the seawall was proposed to occur in two phases and was intended to mitigate short-term undermining of the seawall, buffer storm waves, and supplement the sediment supply at the site. Improvements would protect public infrastructure and sensitive resource areas and improve the resiliency of existing structures.

[1] Previously known as "Long Beach Seawall Stabilization Improvements Project"

Phase 1 included emergency stabilization of portions of the seawall that were undermined and damaged following the March 2018 nor'easters. The Town repaired the south end of the seawall, buttressed sections of the 1931 seawall with stone on the seaward side within the existing footprint and replaced portions of the sidewalk along the top of the seawall. Phase 1 was approved by the Rockport Conservation Commission (RCC) through an Emergency Certification issued on March 19, 2018, and the Massachusetts Department of Environmental Protection (MassDEP) through a Minor Modification of an existing Chapter 91 (c. 91) License on September 11, 2018. Remaining elements of Phase 1 (permitted through emergency authorizations) would include additional placement of 2,500 tons of revetment stone within the existing footprint and was proposed to commence before the 2018-19 winter storm season began. As stated in the Certificate on the ENF, Phase 1 activities were not subject to MEPA review because they did not require Agency Action, as defined pursuant to 301 CMR 11.00. As noted, this phase was limited to emergency work to stabilize seawall portions undermined by storms, and not intended to address longer term, more permanent measures.

Phase 2 of the Original Project as described above was proposed to include beach nourishment activities proposed in the spring of 2019. This phase was proposed as a short-term solution that would lead to more comprehensive resiliency solutions for the beach. Prior to the 2018 nor'easters, the Long Beach seawall was assigned a Condition Rating of C (Fair) and a Priority Rating of IV (High Priority) by the Massachusetts Coastal Infrastructure and Assessment Project report (July 2013). Other assessments have been performed at the site including a detailed assessment in May 2011 which determined that portions of the 1931 and 1959 seawall were in poor and fair condition, respectively.

As noted in the Certificate on the ENF, the Town indicated during review of the Original Project that it was evaluating more comprehensive alternatives to address long-term erosion and provide storm damage protection, including partial and full reconstruction of the seawall. Evaluation of comprehensive alternatives was proposed to respond to the effects of climate change, such as sea level rise and more powerful storms. The Town is participating in the Municipal Vulnerability Preparedness (MVP) Program which provides support for municipalities to begin the process of planning for climate change resiliency and implementing priority projects. This NPC filing proposes further measures to provide longer-term resiliency solutions.

A Certificate on the ENF was issued on October 26, 2018, which determined that the project did not require an EIR.

Project Change Description

According to the NPC, the intent of the stone revetment and sand nourishment work described in the ENF was to provide interim seawall stabilization while more long-term comprehensive alternatives could be evaluated. This project change is proposed as a continuation of the seawall stabilization and improvements to repair damage incurred by the 2018 northeast storms. It includes the reconstruction of ±350 linear feet (lf) of a 1930s section of seawall, reconstruction of ±43 lf of the 1959 seawall with an 18 lf landward return located at the western end of the existing seawall, and replacement of an existing emergency repair precast concrete access stairway with a permanent reinforced concrete stairway. Reconstructed walls are proposed to consist of new reinforced cast-in-place concrete footings with a minimum of 2 feet in thickness and extending ±2 feet beyond the face of the seawall, permanent steel sheet piles embedded into the footing at the seaward side for increased scour protection, and reinforced cast-in-place concrete walls that extend 4 feet below the existing walls. The proposed concrete footing will be founded on a 12-inch-thick layer of crushed stone wrapped in filter fabric. The top of the

proposed walls will have metal pipe railings to tie in and match the existing railings at the site. The landside of the walls will have a 6-foot-wide, cast-in-place concrete sidewalk to replace the existing stone dust public walkway.

Project Area

Long Beach is a Barrier Beach that includes a 3,354-lf concrete seawall, associated stone revetment and sandy beach along the shoreline of the Atlantic Ocean. The shoreline extends northeast from Brier Neck in Gloucester to Cape Hedge in Rockport. Long Beach is a pocket beach which does not have an active sediment source to the littoral system due to the headlands at each end of the beach. The majority of the 29-acre project area is located in Rockport. The seawall protects ±154 houses, Old County and Long Beach Roads, ±30 acres of Coastal Dune, tidal Salt Marsh, and Saratoga Creek which opens up to the ocean at the easterly end of the seawall. It also protects Town infrastructure including sidewalk, leased lots, water and sewer utilities and private infrastructure including electric and gas utilities.

The concrete seawall includes a wave return face. The top of the seawall is three feet wide. It is fronted by a stone revetment (one-stone thick) that extends ±22 feet seaward. The seawall and revetment are fronted by a sandy beach. A concrete walkway along the top of the seawall provides public access. Observed deficiencies include sinkholes behind the seawall and settling/heaving of the walkway. The seawall was originally constructed by the Commonwealth in 1931. Sections of the seawall that were damaged by storms in 1958 were reconstructed in 1959 and include the 22-foot stone apron along the base of the wall. Subsequent storms damaged the seawall and eroded fill behind it.

Wetland resource areas in the project area include Barrier Beach, Coastal Beach, Coastal Bank, Land Under Ocean (LUO), and Land Subject to Coastal Storm Flowage (LSCSF). According to the Federal Emergency Management Agency's (FEMA) National Flood Insurance Rate Map (FIRM) (Panel No. 25009C0338G effective July 16, 2014), portions of the project area are located within the VE Zone with a Base Flood Elevation (BFE) of 14 feet North American Vertical Datum of 1988 (NAVD88). The Mean High Water (MHW) line is located at 4.1 feet NAVD88. The project is not located within a designated geographic area of Environmental Justice Populations.[2]

Environmental Impacts and Mitigation

Environmental impacts associated with the Original Project included alteration of 3,125 lf of Coastal Bank and 3.5 acres of Barrier Beach, which was identified to include 2.0 acres of Coastal Beach and 1.5 acres of LSCSF. Measures to avoid, minimize and mitigate environmental impacts included use of construction period best management practices (BMPs) including sedimentation and erosion controls.

Environmental impacts associated with the NPC activities include additional alteration of LSCSF (±1,644 square feet (sf) permanent and ±16,000 sf temporary), Coastal Beach (8,000 sf temporary), Coastal Dune (±2,980 sf permanent and ±12,200 sf temporary), and Barrier Beach (±2,980 sf permanent and ±20,200 sf temporary). Up to 960 cy of excavated compatible sand displaced by the reconstruction of the seawall will be placed on the beach. The NPC identifies construction period BMPs to minimize coastal resource area impacts, including sedimentation and erosion controls.

[2] "Environmental Justice Population" is defined in M.G.L. c. 30, § 62 under four categories: Minority, Income, English Isolation, and a combined category of Minority and Income.

Jurisdiction and Permitting

The Original Project underwent MEPA review and required preparation of an ENF pursuant to 301 CMR 11.03(3)(b)(1)(a), 301 CMR 11.03(3)(b)(1)(e) [3], and 301 CMR 11.03(3)(b)(1)(f)[2] because it required Agency Actions and was anticipated to result in, respectively, alteration of Barrier Beach and Coastal Bank; new fill or structure or expansion of existing fill or structure in a velocity zone; and alteration of one-half or more acres of wetlands (Barrier Beach, Coastal Beach, and LSCSF). The Original Project required a c. 91 License and a Section 401 Water Quality Certification (WQC) from the Massachusetts Department of Environmental Protection (MassDEP). The project was subject to Federal Consistency Review by the Massachusetts Office of Coastal Zone Management (CZM).

According to the NPC, the Original Project (beach nourishment) received an Order of Conditions (OOC) from the RCC, which was issued on March 29, 2019; a combined 401 WQC/c. 91 Waterways Permit[4], which was issued on June 10, 2019; and authorization by the Army Corps of Engineers (ACOE), which was issued on April 4, 2019. The beach nourishment work was completed in November 2019 and was issued a Certificate of Compliance from the RCC (February 13, 2020).

The project change disclosed in this NPC independently exceeds review thresholds at 301 CMR 11.03(3)(b)(1)(a), 301 CMR 11.03(3)(b)(1)(e), and 301 CMR 11.03(3)(b)(6) because it will result in, respectively, alteration of Barrier Beach; expansion of fill or structure in a velocity zone; and expansion of an existing solid fill structure of 1,000 or more square feet. The project change will require a 401 WQC and a c. 91 Minor Project Modification from MassDEP, an Order of Conditions from the RCC (or, on appeal only, a Superseding Order of Conditions from MassDEP), and a General Permit Amendment from the ACOE. The project will be partially funded by FEMA.

Because the Town may seek Financial Assistance in the form of Coastal Resiliency Grants, MEPA jurisdiction is broad and extends to those aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Review of the NPC

The NPC describes existing and proposed conditions and contains detailed site plans and cross-sections. It describes changes to the Original Project, provides estimates of impacts associated with the project change, and describes measures to avoid, minimize and mitigate Damage to the Environment. The Town provided supplemental information to the MEPA Office on December 16, 2022, to respond to comments from CZM. For purposes of clarity, all supplemental materials are included in references to the "NPC" unless otherwise indicated.

Alternatives Analysis

The Original Project (beach nourishment) was considered a short-term solution until the Town developed a long-term solution which could include reconstruction of the seawall and a more extensive beach nourishment program. The ENF included evaluation of several alternatives including: No Action; Full Length Revetment Reconstruction; and Partial Revetment Reconstruction and Sand Nourishment (ENF Preferred Alternative).

[3] This threshold was not identified in the ENF.
[4] According to an email from David Smith, GZA on behalf of the Town to the MEPA Office on December 20, 2022.

With respect to the seawall reconstruction work proposed in the NPC, the Proponent analyzed a No Action Alternative, Sand Nourishment/Stone Revetment, In-kind Repairs, and In-kind Repairs Plus Mitigation (NPC Preferred Alternative). The No Build Alternative would maintain existing conditions. According to the NPC, the site and existing seawall have experienced additional damage; sections of the 1931 and 1959 walls were undermined and evidence of wall movement was observed. In addition, the southern end of the seawall was undermined, and access stairs failed and settled nearly one foot. Extensive settlement and soil erosion occurred along the landside of the wall and the public access stairs were destroyed. The area is likely to experience additional scour and erosion and additional sections of seawall may fail, potentially compromising landside dwellings, utilities, and public walkways. Therefore, this alternative was dismissed.

The Sand Nourishment/Stone Revetment Alternative would add additional sand to the beach area and additional revetment stones along the seaward side of the seawall. According to the NPC, the Town recently performed both repair/stabilization options along the face of most of the existing seawall. Stone revetment repairs/improvements were performed, and limited sand beach nourishment was provided in 2019. This alternative was intended to provide an interim method of stabilizing existing structures until long-term repairs could be performed. Any additional revetment and beach nourishment would again act as temporary stabilization to the existing seawall; however, the NPC indicates that the Town is seeking more long-term solutions to address the aged and damaged seawalls.

The In-Kind Repairs Alternative would provide immediate relief to damaged seawalls and existing scour and erosion areas by replacing the damaged seawalls with new cast-in-place concrete seawalls within the same footprint as the existing seawall and the same dimensions. According to the NPC, although this alternative would provide more effective long-term seawall stabilization and protection to the landside features, it was dismissed because it would likely be at risk to damage caused by coastal storms. As described below, the Preferred Alternatively similarly seeks to replace structures in kind but adds components to fortify the structures to improve resiliency to future storm events.

The NPC Preferred Alternative (in-kind repairs plus additional fortifying measures) would provide immediate relief to damaged seawalls and existing scour and erosion areas by replacing damaged seawalls with new cast-in-place concrete seawalls and would provide the additional benefit of an increased wall depth with steel sheeting scour protection, increased footing width, and permanent cast-in-place concrete stairways with solid parapet walls. While these additional measures modestly increase wetland impacts, they were viewed to be essential to fortifying the structures to improve resiliency when compared to the In-Kind Repairs Alternative. The Preferred Alternative was therefore selected because it provides the greatest long-term stabilization and protection, while minimizing wetland impacts to the greatest extent practicable.

Wetlands, Waterways, and Water Quality

The project change will result in permanent and temporary impacts to coastal wetland resource areas including LSCSF, Coastal Beach, Coastal Dune and Barrier Beach. The RCC will review the project change to determine its consistency with the Wetlands Protection Act (WPA), the Wetlands Regulations (310 CMR 10.00), and associated performance standards, including stormwater management standards (SMS). MassDEP will also review the project change to determine its consistency with the 401 WQC (314 CMR 9.00) and c. 91 regulations (310 CMR 9.00) (Minor Modification).

The NPC describes the project change's consistency with performance standards for each impacted resource area. Proposed work will temporarily alter 8,000 sf of Coastal Beach associated with construction (i.e., excavation, temporary stockpiling, and staging of material and equipment). Specifically, excavated material consisting of existing revetment stone, beach sand, and other granular material is proposed to be stockpiled within the Coastal Beach. Up to 960 cy of excavated compatible sand displaced by the reconstruction of the seawall will be placed on the beach. Proposed work will permanently alter ±2,980 sf of Coastal Dune within the seawall extension area beyond the existing seawall limits, and temporarily alter ±12,200 sf of Coastal Dune for construction. Proposed work will permanently alter ±2,980 sf and temporarily alter ±20,200 sf of Barrier Beach.

According to CZM comments, the entire site is within both LSCSF and barrier beach, but total impact areas for these resource areas differ in the NPC. Supplemental information from the Town maintains that LSCSF is the area below the FEMA 100-year storm (elevation 14 feet NAVD88) and that Barrier Beach includes areas behind and landward of the seawall that is located above the LSCSF. The Town should ensure that permitting documents accurately reflect the total permanent and temporary impacts to all coastal resource areas resulting from the project change.

Adaptation and Resiliency

Comments from CZM reference the Long Beach Sediment Transport Study Final Report (2014), prepared on behalf of the Town, in which two nourishment scenarios were modeled for Long Beach: 50,000 cy (five-to-six-year design life) and 100,000 cy (more than ten-year design life). The Town placed 8,000 cy of nourishment as an interim measure as part of the Original Project to provide some additional protection while a longer-term solution was developed, with the expectation that additional nourishment may be needed in the future. CZM comments note that although this volume of sediment did add to the beach system to improve its overall ability to provide some storm damage protection, the significantly reduced volume would not have met the goals established in the 2014 study.

The NPC maintains that the project change will benefit Coastal Beach with proposed placement of up to 960 cy of suitable granular material or excavated sand displaced from under the seawall during the reconstruction on the beach as beach nourishment. CZM comments note that because this sand is already part of the barrier beach system, it should not be considered nourishment and will not improve the existing storm damage prevention function of the beach. Supplemental information from the Town clarifies that the ±960 cy of suitable excavated sand/granular material is excess excavated material located up to 5 to 6 feet below grade that will be replaced with the reconstructed seawall and footing. The Town asserts that, although very minimal, the material will be added to the beach at the work locations to help support the system.

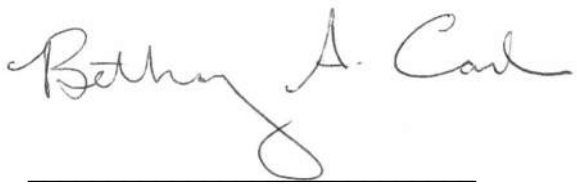
According to CZM comments, the repaired seawall will continue to have an impact on the fronting Coastal Beach by exacerbating sediment erosion. Additional nourishment as recommended in the 2014 final report should be pursued for this location to improve the longer-term resilience of the beach and mitigate the ongoing impacts of the seawall. The Town should work with CZM to develop a Coastal Resilience Grant proposal to support this important resiliency step. Supplemental information acknowledges that additional sand nourishment would benefit the site and the Town will consult with CZM to consider options for future nourishment. However, the Town expresses funding concerns regarding the ±$2M to $4M cost to provide between 50,000 cy and 100,000 cy of sand, even with likely partial grant funding (with a cost-share match of 25%).

Excavated material will be temporarily stockpiled along the beach seaward of the existing seawall and proposed work will be performed within one tidal cycle to avoid inundation of the work area. According to CZM comments, it is unlikely that materials stockpiled seaward of the work area will be adequate to provide the necessary protection against waves and tidal waters during construction work and question completion of entire sections of wall within one tidal cycle given the proximity of the limits of work to mean high water and the extent of the work. Permitting documents should describe how the work area will be managed to remain dry during tidal cycles without the use of coffer dams or similar structures. Supplemental information indicates the stockpiled material will provide some limited protection to work areas from daily tidal effects and provides a cost-effective location for excavated materials that avoids removal, transport, stockpiling at an offsite location, and transporting back to the site for material reuse. Seawall reconstruction work will be performed in stages, with only limited portions of the existing seawall being removed and replaced at a time. Seawall replacement will involve placement of steel sheetpile sections on the landward and seaward side of the wall footing to provide support of excavation during wall construction, a form for pouring the concrete footing, and protection to the work from tidal effects and daily tidal inundation. Potential water seepage to the work locations will be managed by pumping methods to remove the water. Tides will need to be examined to determine when it is most favorable to perform the work in the dry, such as during concrete pouring.

Supplemental information clarifies that the proposed walkway substrate will be stone dust to match the current existing stone dust pathway. The walkway was originally concrete but was mostly removed and changed to stone dust by the Town after the 2018 storm events. The Town should ensure that permitting documents reflect the stone dust substrate for the walkway, which is recommended by CZM, instead of concrete, which will exacerbate storm damage to the dwellings and barrier beach areas behind it during coastal storms that overtop the wall.

Conclusion

The NPC has sufficiently described the nature and general elements of the project for the purposes of MEPA review and described measures to avoid, minimize and mitigate the project's environmental impacts. Comments from Agencies do not request additional MEPA review. Accordingly, I find that an EIR is not required for this project change.



December 23, 2023
Date

Bethany A. Card

Comments Received:

12/08/2022 Massachusetts Division of Marine Fisheries (DMF)
12/13/2022 Massachusetts Office of Coastal Zone Management (CZM)

BAC/PPP/ppp

Patel, Purvi (EEA)

From: Schenck, Forest (FWE)
Sent: Thursday, December 8, 2022 10:54 AM
To: Patel, Purvi (EEA)
Subject: MA DMF Comment: EEA#15917, NPC, Long Beach Seawall Reconstruction, Rockport

Hi Purvi,

MA DMF has reviewed the NPC for the proposed Long Beach Seawall Reconstruction in Rockport, MA EEA#15917. Based on the scope of the work as currently proposed, MA DMF has no marine fisheries resource recommendations at this time. Please contact me if you have any questions about our review.

Thank you,

Forest Schenck, Ph.D.
Environmental Analyst
MA Division of Marine Fisheries
30 Emerson Avenue
Gloucester, MA 01930
Forest.Schenck@Mass.gov
978-855-6054 (cell)
Pronouns: he, him, his

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
OFFICE OF COASTAL ZONE MANAGEMENT
100 Cambridge Street, Suite 900, Boston, MA 02114

MEMORANDUM

TO:	Bethany A. Card, Secretary, EEA
ATTN:	Purvi Patel, MEPA Office
FROM:	Lisa Berry Engler, Director, CZM
DATE:	December 13, 2022
RE:	EEA-15917, Long Beach Seawall; Rockport

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Notice of Project Change (NPC), noticed in the *Environmental Monitor* dated November 23, 2022, and offers the following comments.

Project Description

The project change includes the reconstruction of approximately 350 linear feet (lf) of a 1930's section of seawall, the reconstruction of approximately 43 lf of the 1959 seawall with an 18 lf landward return located at the western end of the existing seawall, and the replacement of an existing emergency repair precast concrete access stairway with a permanent reinforced concrete stairway. The reconstructed walls are proposed to consist of new reinforced cast-in-place concrete footings with a minimum of 2 feet in thickness and extending approximately 2 feet beyond the face of the seawall, permanent steel sheet piles embedded into the footing at the seaward side for increased scour protection, and reinforced cast-in-place concrete walls that extend 4 feet below the existing walls. The proposed concrete footing will be founded on a 12-inch-thick layer of crushed stone wrapped in filter fabric. The top of the proposed walls will have metal pipe railings to tie in and match the existing railings at the site. The landside of the walls will have a 6-foot-wide, cast-in-place concrete sidewalk to replace the existing stone dust public walkway. The Town of Rockport previously filed an Environmental Notification Form (ENF) for the Long Beach Seawall Stabilization Improvements Project and received an ENF Certificate on October 26, 2018. The project associated with the ENF filing consisted of the placement of approximately 8,000 cubic yards (cy) of beach nourishment sand along portions of the existing beach fronting the seawall at Long Beach. The proposed work requiring this NPC is the continuation of the seawall stabilization and improvements to repair damage incurred by the 2018 northeast storms. The NPC states that the proposed work is within land subject to coastal storm flowage (LSCSF) resource area and the FEMA zone VE elevation 14 NAVD88, and that the work will permanently alter approximately 1,644 square feet (sf) and temporarily alter approximately 16,000 sf of LSCSF. The proposed work will temporarily alter 8,000 sf of coastal beach with construction procedures such as excavation, temporary stockpiling, and staging of material and equipment. Specifically, excavated material consisting of existing revetment stone, beach sand, and other granular material is proposed to be stockpiled within the coastal beach resource area. Up to 960 cy of excavated compatible sand displaced by the reconstruction of the seawall will be placed on the beach. The work will permanently alter approximately 2,980 sf of coastal dune resource area within the seawall extension area beyond the existing seawall limits, and temporarily alter approximately 12,200 sf of coastal dune through construction procedures such as excavation, stockpiling, and staging of material and equipment. The proposed work will permanently alter approximately 2,980 sf and temporarily alter approximately 20,200 sf of barrier beach resource area.

Project Comments

The NPC states that the impact on the area from a series of northeast storms in 2018 caused extensive erosion and damage to the beach and seawall, undermining the center portion of the wall, and causing movement of the wall in some locations. In addition, the western end of the seawall was undermined, extensive settlement and soil erosion occurred along the landside of the wall, and the public access stairs were destroyed. To stabilize the damaged portion of the wall, minimize further movement, and provide safe access to the public, the Town then performed work under an emergency authorization, including repairing the west end of the wall and stairs and buttressing sections of the damaged 1931 wall with stone on the seaward side. The Town of Rockport then filed an ENF for the placement of approximately 8,000 cy of beach nourishment sand along portions of the existing beach fronting the seawall. According to the NPC, the intent of the stone revetment and sand nourishment work was to provide interim seawall stabilization while more long-term comprehensive alternatives could be evaluated. Before the filing of the ENF in 2018, the Town had contracted with a coastal engineering firm to conduct a study regarding shore protection alternatives along Long Beach. The final report associated with that study, the Long Beach Sediment Transport Study Final Report (2014), included modeling results from two nourishment scenarios for Long Beach: 50,000 cy with a design life of five to six years and 100,000 cy with a design life of more than ten years. The placement of the 8,000 cy of nourishment was chosen as an interim measure to provide some additional protection while a longer-term approach was developed, with the expectation that additional nourishment may be needed in the future. Although this volume of sediment did add to the beach system to improve the overall ability of the beach to provide some storm damage protection, the significantly reduced volume would not have met the goals established in the 2014 study. The NPC states that the proposed project has beneficial permanent impacts on the coastal beach resource area because of the up to 960 cy of suitable granular material or excavated sand displaced from under the seawall during the reconstruction that is proposed for placement on the beach as beach nourishment. Because this sand is already part of the barrier beach system, it should not be considered nourishment, and will not improve the existing storm damage prevention function of the beach.

The repaired seawall will continue to have an impact on the fronting coastal beach by exacerbating sediment erosion. To improve the longer-term resilience of the beach and mitigate the ongoing impacts of the seawall, additional nourishment as recommended in the 2018 final report should be pursued for this location. CZM staff is available to work with the Town to develop a Coastal Resilience Grant proposal to support this important resiliency step.

According to the NPC, excavated material will be temporarily stockpiled along the beach seaward of the existing seawall and the proposed work will be performed within one tidal cycle to avoid inundation of the work area. Although the NPC also states that stockpiled material will act as a temporary buffer against waves and tidal waters during the construction work it is not likely that the materials stockpiled seaward of the work area will be adequate to provide the necessary protection of the work area. In addition, completing entire sections of the wall within one tidal cycle in this location is unlikely given the proximity of the limits of work to mean high water and the extent of the work to be performed. Permitting documents should describe how the work area will be managed to remain dry during tidal cycles without the use of coffer dams or similar structures.

The NPC provides conflicting descriptions of the proposed walkway substrate, stating both that the stone dust walkway behind the wall will be replaced in kind, and that it will be replaced with

a concrete walkway. Stone dust is recommended rather than concrete, as concrete will exacerbate storm damage to the dwellings and barrier beach areas behind it during coastal storms that overtop the wall. Permitting documents should clarify materials proposed for the walkway.

The entire site is within both LSCSF and barrier beach, but the total impact areas for these resource areas differ in the NPC. The permitting documents should address this discrepancy and accurately reflect the total permanent and temporary impacts to all coastal resource areas resulting from the proposed project.

Federal Consistency Review

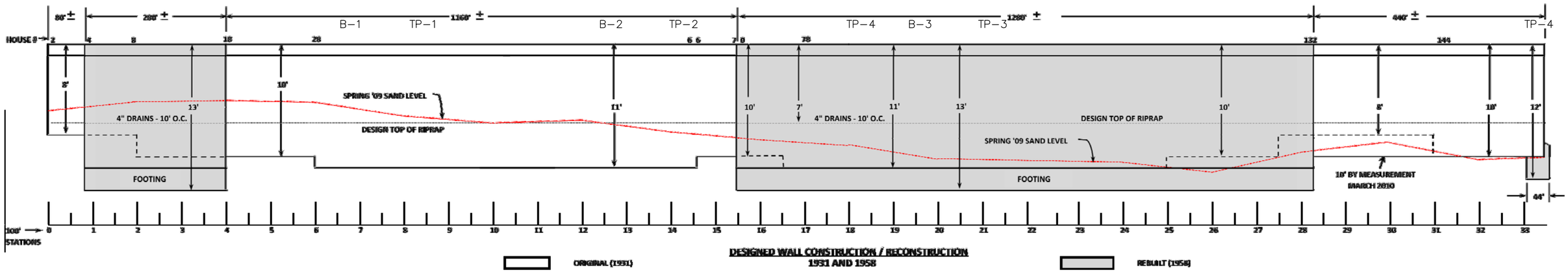
The proposed project may be subject to CZM federal consistency review, and if so, must be found to be consistent with CZM's enforceable program policies. For further information on this process, please contact Robert Boeri, Project Review Coordinator, at robert.boeri@mass.gov, or visit the CZM website at https://www.mass.gov/federal-consistency-review-program.

LE/kg/rh

cc: Kathryn Glenn, Rebecca Haney, CZM
Rachel Freed, Jill Provencal, DEP NERO
John Lopez, Rockport Conservation Agent

Attachment D – Subsurface Information





DESIGNED WALL CONSTRUCTION / RECONSTRUCTION 1931 AND 1958

BORING	APPROX. STA	APPROX HOUSE #
B-1	08+00	38
B-2	13+50	62
B-3	20+50	92

TEST PIT	APPROX. STA	APPROX HOUSE #
TP-1	08+75	40
TP-2	13+50	F.R. 2
TP-3	20+50	F.R. 3
TP-4*	18+75	88
TP-5	32+50	150-152

* TO BE FIELD LOCATED TO CORRESPOND TO A WEEPHOLE IN THE SEAWALL.

NOTE:
LOCATIONS OF SUBSURFACE INVESTIGATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD TO MINIMIZE DISTURBANCE TO ADJACENT LANDSCAPING.

LEGEND

GZA TEST PIT

GZA BORING

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APPROVED:

NO.	ISSUE/DESCRIPTION	BY	DATE
3			
2			
1	REVISED BORING AND TP LOCATIONS	MLS	3/18/2011

LONG BEACH SEAWALL REHABILITATION
ROCKPORT, MASSACHUSETTS

WORKING LAYOUT-SUBSURFACE INVESTIGATION

PREPARED BY: Vine Associates, A Division of GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: TOWN OF ROCKPORT

PROJ MGR:	REVIEWED BY:	CHECKED BY:	FIGURE
CWC			1
DESIGNED BY: CWC	DRAWN BY: MLS	SCALE: AS SHOWN	
DATE 3/8/2011	PROJECT NO.	REVISION NO.	

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TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Town of Rockport
Long Beach Seawall
Rockport, Massachusetts

BORING NO.: B-0 (Sta 01 + 40)
SHEET: 1 of 2
PROJECT NO: 18.0170880.00
REVIEWED BY:

Drilling Co.: New Hampshire Boring
Foreman: Dave
Logged By: Matthew L. Steele

Type of Rig: Dietrich
Rig Model: D-50
Drilling Method:

Boring Location: See Plan
Ground Surface Elev. (ft.): 20.5
Final Boring Depth (ft.): 26
Date Start - Finish: 3/31/2011 - 3/31/2011

H. Datum:
V. Datum: MLLW

Auger/Casing Type: Safety Sliding
I.D./O.D.:
Hammer Weight (lb.): 140 lbs
Hammer Fall (in.): 30"
Other: 4" Casing / 4" Tricone Rollerbit

Sampler Type: Split Spoon
I.D./O.D (in.): 1-3/8"/2"
Sampler Hmr Wt: 140 lb
Sampler Hmr Fall: 30"
Other:

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft) / Description / Elev. (ft)	Equipment Installed
		S-1	0-2	24	18	2 18 50 18	68	S-1A: Top 8": Medium dense, light brown, fine to coarse SAND, trace Silt.	1 2		FILL 2' — 18.5'	No Equipment Installed
5								S-1B: Bottom 10": Medium dense, brown, fine to coarse SAND, little fine to coarse Gravel, trace Silt.	3 4 5		NATIVE FILL	
								S-1C: Cuttings from drill show concrete.				
10		S-2	9-11	24	10	23 25 24 22	49	S-2A: Top 7": Dense, light gray, fine to medium SAND, trace Silt.			10' — 10.5'	
								S-2B: Bottom 3": Dense, brown, fine SAND, trace Silt.	6			
15		S-3	14-16	24	10	15 21 25 30	46	S-3: Dense, light brown, fine SAND, trace Silt.			MARINE SANDS	
20		S-4	19-21	24	16	13 32 40 44	72	S-4A: Top 8": Dense, light brown, fine SAND, trace Silt.				
								S-4B: Bottom 8": Very dense, gray, fine SAND, trace Organics (Shells), trace (-) Silt.	7			
25		S-5	24-26	24	14	34 50 57 85	R	S-5A: Top 6": Very dense, gray, fine SAND, trace Organics (Shells), trace (-) Silt.	8		26' -5.5'	
								S-5B: Middle 2": Very dense, gray, medium to coarse SAND, trace Silt.				
30								S-5C: Bottom 6": Very dense, gray, fine to medium SAND,				

REMARKS

1. Began boring at 1120.
2. Hit something (rock) at 12 to 18 inches to cause high blow count.
3. Drill through rock at bottom of casing, lost drill water.
4. Unable to drive casing, pulled and moved 3 feet down station.
5. Again unable to drive casing, pulled and moved 3 feet down station.
6. Upon driller recommendation, drilled open-hole (no casing) to save time.
7. Driller notes change in drill rate indicating harder material.
8. Bottom of hole at 26 feet 1515.

Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: B-0 (Sta 01 + 40)

18.0170880.00 LONG BEACH SEAWALL_ROCKPORT_MA.GPJ; STANDARD BORING W/EQUIP NO SAMPL# 2PG; 5/18/2011

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Town of Rockport
Long Beach Seawall
Rockport, Massachusetts

BORING NO.: B-0 (Sta 01 + 40)
SHEET: 2 of 2
PROJECT NO: 18.0170880.00
REVIEWED BY:

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (per 6 in.)	Sample SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft)	Stratum Description	Stratum Elev. (ft)	Equipment Installed
								trace Organics (Shells), trace Silt.						
								Bottom of boring at 26 feet.						
35														
40														
45														
50														
55														
60														
65														

REMARKS

Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: B-0 (Sta 01 + 40)

18.0170880.00 LONG BEACH SEAWALL_ROCKPORT_MA.GPJ; STANDARD BORING W/EQUIP NO SAMPL# 2PG; 5/18/2011

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Town of Rockport
Long Beach Seawall
Rockport, Massachusetts

BORING NO.: B-1 (08 + 08)
SHEET: 1 of 1
PROJECT NO: 18.0170880.00
REVIEWED BY:

Drilling Co.: New Hampshire Boring
Foreman: Dave
Logged By: Matthew L. Steele

Type of Rig: Dietrich
Rig Model: D-50
Drilling Method:

Boring Location: See Plan
Ground Surface Elev. (ft.): 20.5
Final Boring Depth (ft.): 26
Date Start - Finish: 3/31/2011 - 3/31/2011

H. Datum:
V. Datum: MLLW

Auger/Casing Type: Safety Sliding
I.D./O.D.:
Hammer Weight (lb.): 140 lbs
Hammer Fall (in.): 30"
Other: 4" Casing / 4" Tricone Rollerbit

Sampler Type: Split Spoon
I.D./O.D (in.): 1-3/8"/2"
Sampler Hmr Wt: 140 lb
Sampler Hmr Fall: 30"
Other:

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft)	Stratum Description	Stratum Elev. (ft)	Equipment Installed
		S-1	0-2	24	10	8 24 15 20	39	S-1A: Top 3" Topsoil: Loose, brown, fine to coarse SAND, little Roots, trace Silt. S-1B: Bottom 7": Dense, brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	1		0.5'	TOPSOIL	20.0'	No Equipment Installed
											2'	FILL	18.5'	
5		S-2	4-6	24	0	11 7 5 4	12	S-2:						
		S-3	6-8	24	0/12	5 5 8 11	13	S-3B: Medium dense, brown, fine to coarse SAND, some fine to coarse Gravel, trace (-) Silt.	2 3			NATIVE FILL		
10		S-4	9-11	24	6	16 19 18 21	37	S-4A: Top 4": Drill wash. S-4B: Bottom 2": Dense, light brown, fine to coarse SAND, little fine Gravel, trace Silt.	4		10'		10.5'	
		S-5	11-13	24	18	19 17 17 23	34	S-5A: Top 9": Drill wash. S-5B: Bottom 9": Dense, light brown, fine SAND, trace Silt.						
15		S-6	14-16	24	18	10 11 17 19	28	S-6: Medium dense, light brown, fine SAND, trace (-) Silt.				MARINE SANDS		
20		S-7	19-21	24	10	7 12 26 35	38	S-7A: Top 5": Medium dense, light brown, fine SAND, trace Silt. S-7B: Bottom 5": Dense, gray, fine SAND, trace Silt, trace Organics (Shells).						
25		S-8	24-26	24	8	38 58 70 95	R	S-8: Very dense, gray, fine SAND, trace fine Gravel, trace Organics (Shells), trace Silt.	5 6		26'		-5.5'	
								Bottom of boring at 26 feet.						
30														

REMARKS

1. Began drilling at 0815, 3/3/11.
2. Drove spoon thru previous spoon hole.
3. Drove 3-inch spoon to 8 feet to get sample.
4. No samples of drill wash taken.
5. Increased blows to drive casing from 19 to 24 feet.
6. Due to high blow count, finished boring at 1006 at 26 feet.

Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: B-1 (08 + 08)

18.0170880.00 LONG BEACH SEAWALL_ROCKPORT_MA.GPJ; STANDARD BORING W/EQUIP NO SAMPL# 2PG; 5/18/2011

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Town of Rockport
Long Beach Seawall
Rockport, Massachusetts

BORING NO.: B-2 (13 + 65)
SHEET: 1 of 1
PROJECT NO: 18.0170880.00
REVIEWED BY:

Drilling Co.: New Hampshire Boring
Foreman: Dave
Logged By: Matthew L. Steele

Type of Rig: Dietrich
Rig Model: D-50
Drilling Method:

Boring Location: See Plan
Ground Surface Elev. (ft.): 20.5
Final Boring Depth (ft.): 31
Date Start - Finish: 3/30/2011 - 3/30/2011

H. Datum:
V. Datum: MLLW

Auger/Casing Type: Safety Sliding
I.D./O.D.:
Hammer Weight (lb.): 140 lbs
Hammer Fall (in.): 30"
Other: 4" Casing / 4" Tricone Rollerbit

Sampler Type: Split Spoon
I.D./O.D (in.): 1-3/8"/2"
Sampler Hmr Wt: 140 lb
Sampler Hmr Fall: 30"
Other:

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft)	Stratum Description	Stratum Elev. (ft)	Equipment Installed
		S-1	0-2	24	18	3 6 9 10	15	S-1A: Top 3" Topsoil: Dark brown, fine to coarse SAND, little Roots, trace Silt.	1 2		0.5'	TOPSOIL	20.0'	No Equipment Installed
								S-1B: Bottom 15": Medium dense, gray, fine SAND, trace Silt.			2'	FILL	18.5'	
5		S-2	4-6	24	6	4 2 2 3	4	S-2: Loose, gray, fine SAND, trace Silt.				NATIVE FILL		
		S-3	6-8	24	12	2 2 2 2	4	S-3: Loose, gray, fine to coarse SAND, trace Silt, trace fine Gravel.	3		8'		12.5'	
10		S-4	9-11	24	8	8 7 8 12	15	S-4A: Top 6": Medium dense, gray, fine to coarse SAND, trace (-) Silt.						
		S-5	11-13	24	18	20 20 22 23	42	S-4B: Bottom 2": Medium dense, brown, fine to coarse SAND, trace Organics (Wood Fibers).	3					
15		S-6	14-16	24	6	8 15 16 18	31	S-5A: Top 10": Dense, gray, fine to medium SAND, trace Silt.						
								S-5B: Bottom 8": Dense, light brown, fine to medium SAND, trace Organics (Shells), trace Silt.				MARINE SANDS		
20		S-7	19-21	24	8	7 10 15 23	25	S-6: Medium dense, gray, fine SAND, trace Silt.	4					
								S-7: Medium dense, gray, fine SAND, trace Silt.	5					
25		S-8	24-26	24	0	13 15 15 34	30	S-8: No Recovery.						
		S-9	26-28	24	8	8		S-9: Medium dense, dark gray, fine to medium SAND, trace Silt.	6					
30		S-10	29-31	24	12	23 31 28 38	59	S-10: Dense, dark gray, fine SAND, trace Silt.			31'		-10.5'	
								Bottom of boring at 31 feet.						
35														

REMARKS

1. Drillers lost drill water.
2. Began drilling at 1234.
3. Drove spoon in previous hole.
4. Increased blows to drive casing.
5. No sample in S-8 spoon, drillers recommended driving S-9 with 300 lb hammer, ± 8 blows for 24 inches.
6. Bottom of hole at 31 feet at 1425.

Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: B-2 (13 + 65)

18.0170880.00 LONG BEACH SEAWALL_ROCKPORT_MA.GPJ; STANDARD BORING W/EQUIP NO SAMPL# 2PG; 5/18/2011

TEST BORING LOG

GZA GeoEnvironmental, Inc.
Engineers and Scientists

Town of Rockport
Long Beach Seawall
Rockport, Massachusetts

BORING NO.: B-3 (20 + 75)
SHEET: 1 of 1
PROJECT NO: 18.0170880.00
REVIEWED BY:

Drilling Co.: New Hampshire Boring
Foreman: Dave
Logged By: Matthew L. Steele

Type of Rig: Dietrich
Rig Model: D-50
Drilling Method:

Boring Location: See Plan
Ground Surface Elev. (ft.): 20.5
Final Boring Depth (ft.): 31
Date Start - Finish: 3/30/2011 - 3/30/2011

H. Datum:
V. Datum: MLLW

Auger/Casing Type: Safety Sliding
I.D./O.D.:
Hammer Weight (lb.): 140 lbs
Hammer Fall (in.): 30"
Other: 4" Casing / 4" Tricone Rollerbit

Sampler Type: Split Spoon
I.D./O.D (in.): 1-3/8"/2"
Sampler Hmr Wt: 140 lb
Sampler Hmr Fall: 30"
Other:

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Stratum Depth (ft)	Stratum Description	Stratum Elev. (ft)	Equipment Installed
		S-1	0-2	24	16	4 13 17 16	30	Topsoil 6": No Recovery S-1: Medium dense, brown, fine to coarse SAND, trace Roots, trace Silt.	0 1 2		0.5'	TOPSOIL	20.0'	No Equipment Installed
												FILL		
5		S-2	5-7	24	6	17 14 9 11	23	S-2A: Top 3": Medium dense, brown, fine to coarse SAND, trace Silt. S-2B: Bottom 3": Medium dense, brown, fine SAND, little Silt.	3		5'		15.5'	
10		S-3	9-11	24	5	12 14 9 10	23	S-3: Drill wash.				NATIVE FILL		
		S-4	11-13	24	9	13 13 12 16	25	S-4A: Top 4": Medium dense, brown, fine to medium SAND, little Gravel, trace Silt.	4		14'		6.5'	
15		S-5	14-16	24	10	29 40 39 38	79	S-4B: Bottom 5": Medium dense, brown, fine SAND, trace Silt. S-5: Very dense, gray, fine SAND, trace (-) Silt.						
20		S-6	19-21	24	8	10 16 17 25	33	S-6: Dense, dark gray, fine SAND, trace Silt.				MARINE SANDS		
									5					
25		S-7	24-26	24	10	12 17 24 46	41	S-7: Dense, dark gray, fine SAND, trace Silt.	6 7					
30		S-8	29-31	24	10	26 37 62 60	99	S-8: Very dense, dark gray, fine SAND, trace Silt.	8 9		31'		-10.5'	
								Bottom of boring at 31 feet.						
35														

REMARKS

0. Began boring at 0810.
1. S-1 blow counts with 300 lb hammer.
2. Lost water in hole.
3. Casing hitting rock, drilled until clear for sample.
4. Consecutive spoon down previous hole, tapped ± 1.5 feet down.
5. Driller notes change to harder drilling.
6. Casing hit hard material, stopped to wash out and drill 27 feet.
7. Drill water turned brown at 29 feet.
8. Rock fragment at top of sample spoon.
9. Bottom of hole at 1125 at 31 feet.

Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: B-3 (20 + 75)

18.0170880.00 LONG BEACH SEAWALL_ROCKPORT_MA.GPJ; STANDARD BORING W/EQUIP NO SAMPL# 2PG; 5/18/2011

Attachment E – Historic Plans

ROCKPORT

GLOUCESTER

TOWN LINE

ROADWAY

B.M. TOP OF BOUND ELEV. 15.60

LONG BEACH

LINE OF PROPOSED WALL OR BULKHEAD

MEAN HIGH WATER

BOARD WALK

PC. 3+85 R=344±

PT. 5+78±

PC. 8+32 R=1468±

PT. 10+32±

PC. 22+68 R=4062±

PT. 24+82±

PC. 27+90 R=796±

PT. 31+70±

PLAN
SCALE 1"=50'

A

LOCATION PLAN
SCALE 1:30000

CAPE ANN
GLOUCESTER
LOCUS
ATLANTIC OCEAN

TOP OF WALL

200'-0" 400'-0" 860'-0"

BOTTOM OF WALL
ELEV. 10.00

200'-0" 840'-0" 250'-0" 65'-0"

BOTTOM OF WALL
ELEV. 10.00

285'-0" 250'-0"

BOTTOM OF WALL
ELEV. 10.00

PROFILES ON LINE OF WALL OR BULKHEAD

SCALES { HORIZONTAL 1"=50
VERTICAL 1"=5'

—NOTE—

FIGURES ARE IN FEET AND TENTHS AND SHOW ELEVATIONS ABOVE THE PLANE OF MEAN LOW WATER.

PROPOSED SHORE PROTECTION AT LONG BEACH ROCKPORT

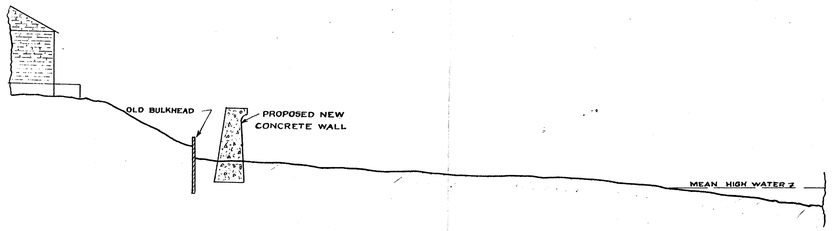
PLAN AND PROFILE

DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS

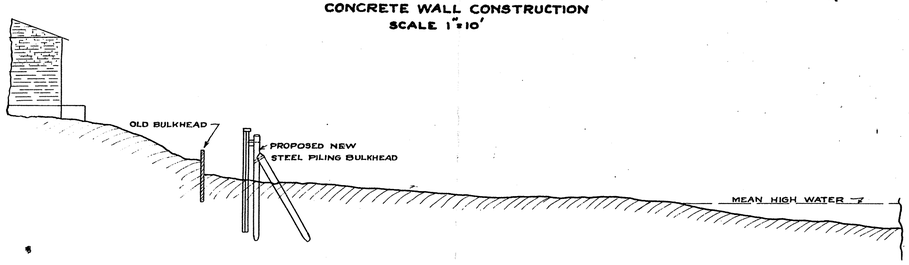
Francis L. Fellow
DISTRICT WATERWAYS ENGINEER

SCALES AS SHOWN JULY 1931

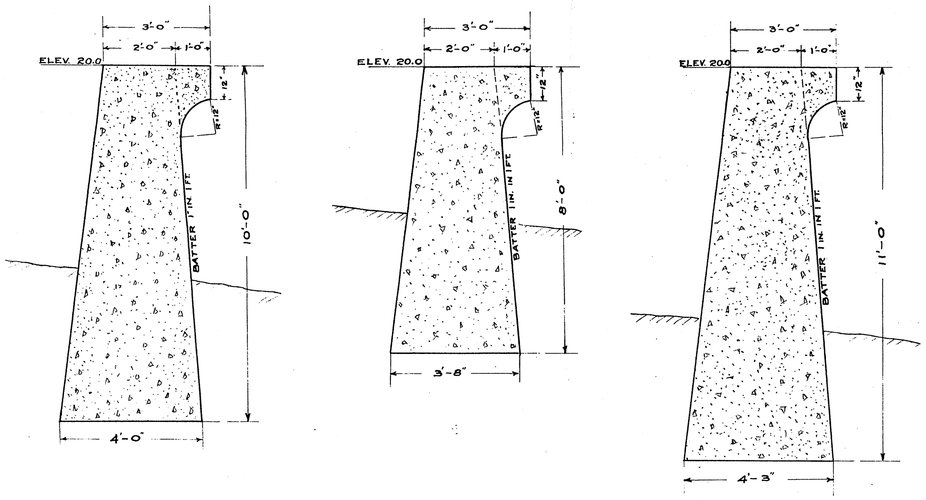
CONTRACT NO. 282
ACC. NO. 01087



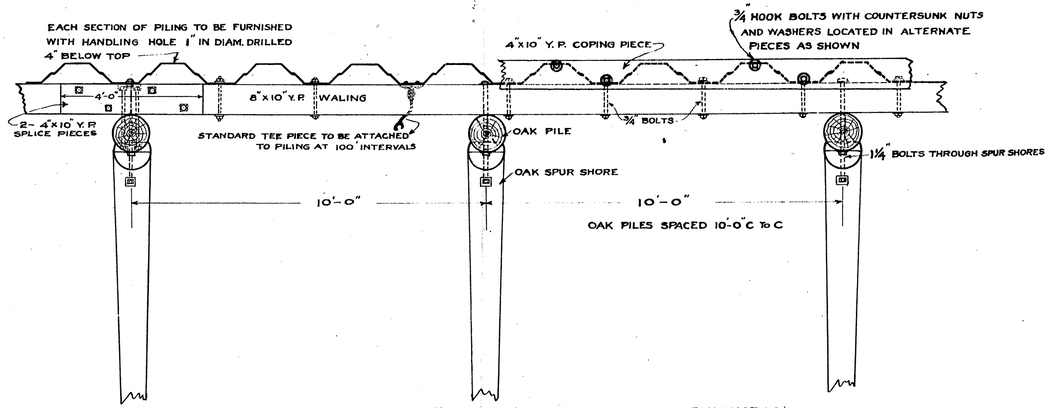
TYPICAL CROSS SECTION OF BEACH
CONCRETE WALL CONSTRUCTION
SCALE 1"=10'



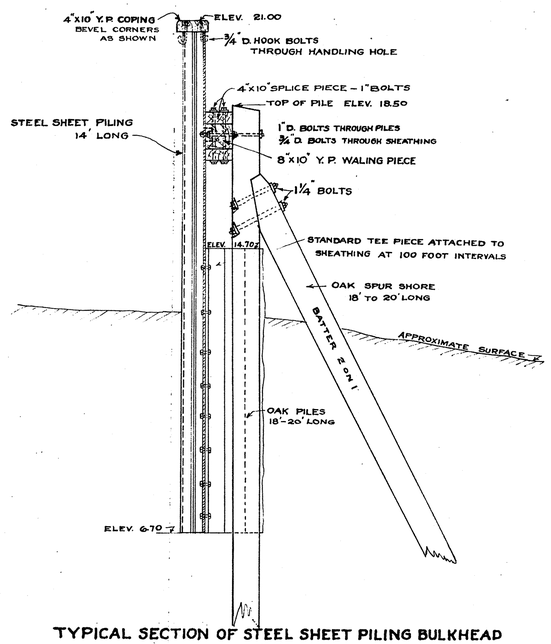
TYPICAL CROSS SECTION OF BEACH
STEEL PILING BULKHEAD CONSTRUCTION
SCALE 1"=10'



TYPICAL SECTIONS OF CONCRETE WALL
SCALE 1/2" = 1'



DETAIL PLAN OF PROPOSED STEEL PILING BULKHEAD
SCALE 1/2" = 1'



TYPICAL SECTION OF STEEL SHEET PILING BULKHEAD
SCALE 1/2" = 1'

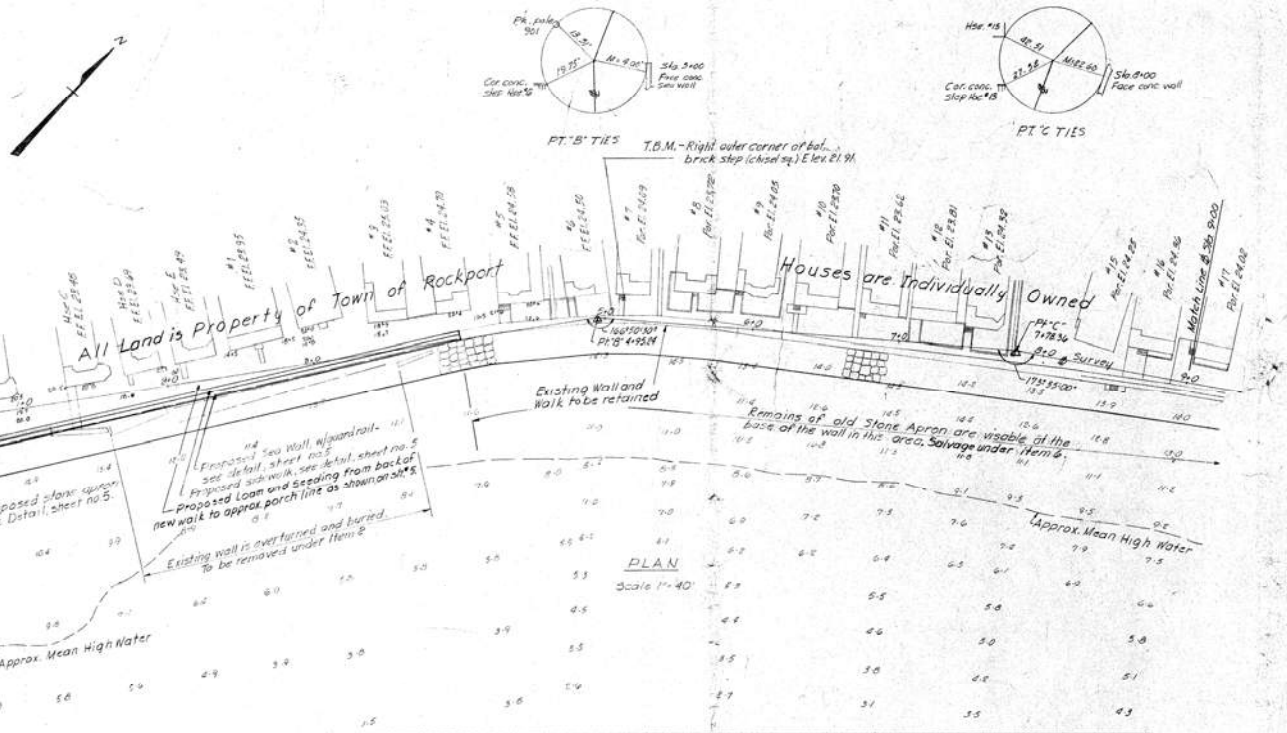
PROPOSED SHORE PROTECTION
AT
LONG BEACH
ROCKPORT
DETAILS

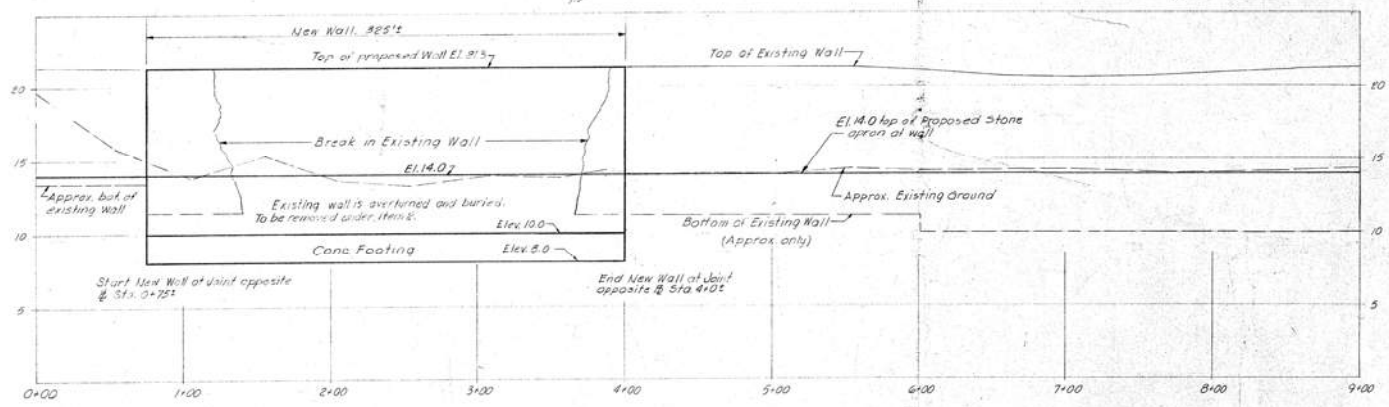
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS

Francis L. Tellew
DISTRICT WATERWAYS ENGINEER.

SCALES AS SHOWN JULY 1931

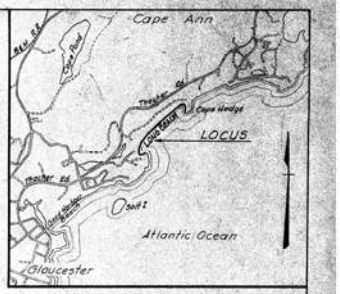
CONTRACT NO. 282
ACC. NO. 01087





Elevation of Sea Wall, using ℄ Stationing

Scale Hor. 1"=40'
Vert. 1"=5'



LOCATION PLAN

Scale 1"=1½ Mile

GENERAL NOTES

1. Reference: Transit Books no's 806, 807, 811 and 812.
2. Datum is mean low water.
3. Sequence of work to be generally as follows:
   a. Remove old wall and construct temporary revetment at locations of proposed new wall.
   b. Remove short sections of temporary revetment, construct proposed concrete wall, and place permanent stone apron. The intent is to provide immediate and nearly continuous protection for the houses along the beach.
   c. Stone apron at existing wall to be retained may be placed at anytime after "a" above.
4. Stone found in place at the site is to be recovered and placed in accordance the specifications under Item 6. Stone visable at the site when surveyed is shown on the plans; however, all stone found in place is to be salvaged under Item 6, whether shown on the plans or not.
5. Joints are to be spaced at not over 35 feet, with alternate joints expansion joints. Spacing shall be even throughout each of the two lengths of proposed wall.

PROPOSED SEA WALL AND REVETMENT
LONG BEACH
ROCKPORT, MASS.
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS

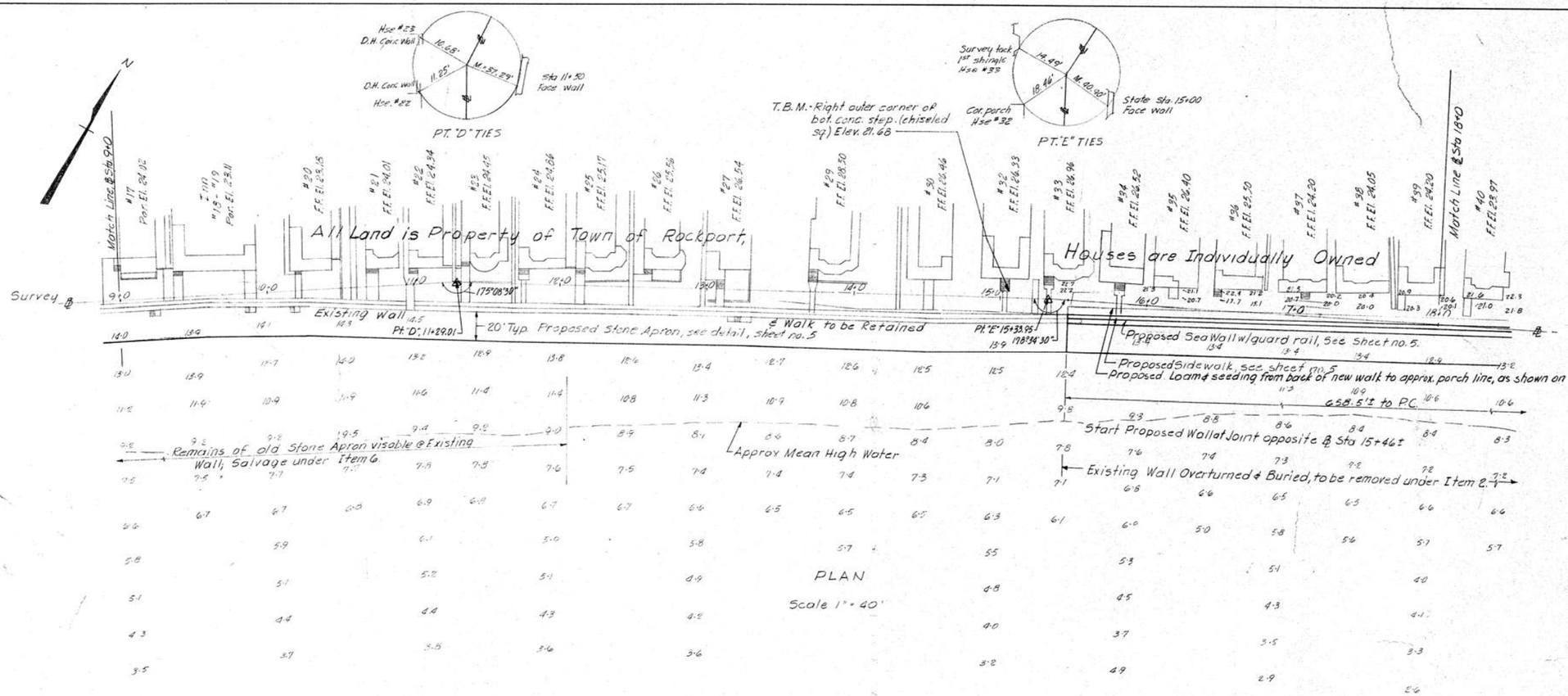
PLAN AND ELEVATION
STA. 0+00 TO STA. 9+00

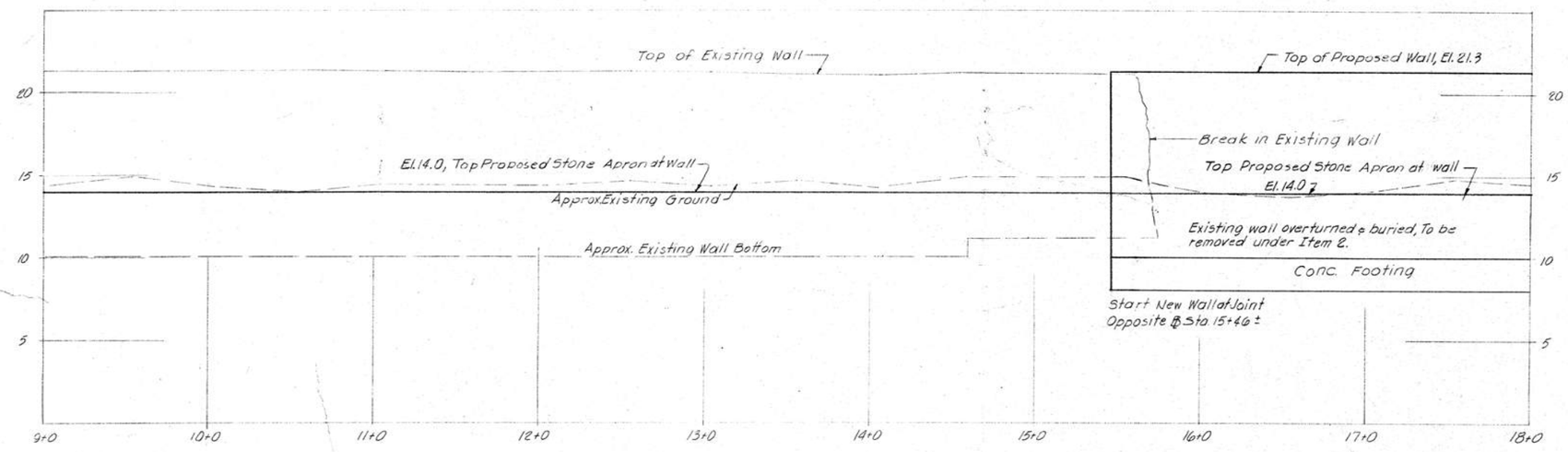
SHEET NO. 1 OF 5

GREEN ENGINEERING AFFILIATES, INC.
ENGINEERS BOSTON

DESIGNED: H.D.H. SCALE: AS SHOWN
DRAWN: C.B., A.P. DATE: SEPTEMBER 1958
CHECKED: H.D.H. CONTRACT NO. 1959

CHIEF WATERWAYS ENGINEER
ACC. 03913-A





Elevation of Sea Wall using ℄ Stationing

Scale Hor. 1" = 40'
Vert. 1" = 4

PROPOSED SEA WALL AND REVETMENT
LONG BEACH
ROCKPORT, MASS.
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS

PLAN AND ELEVATION
STA. 9+00 TO STA. 18+00

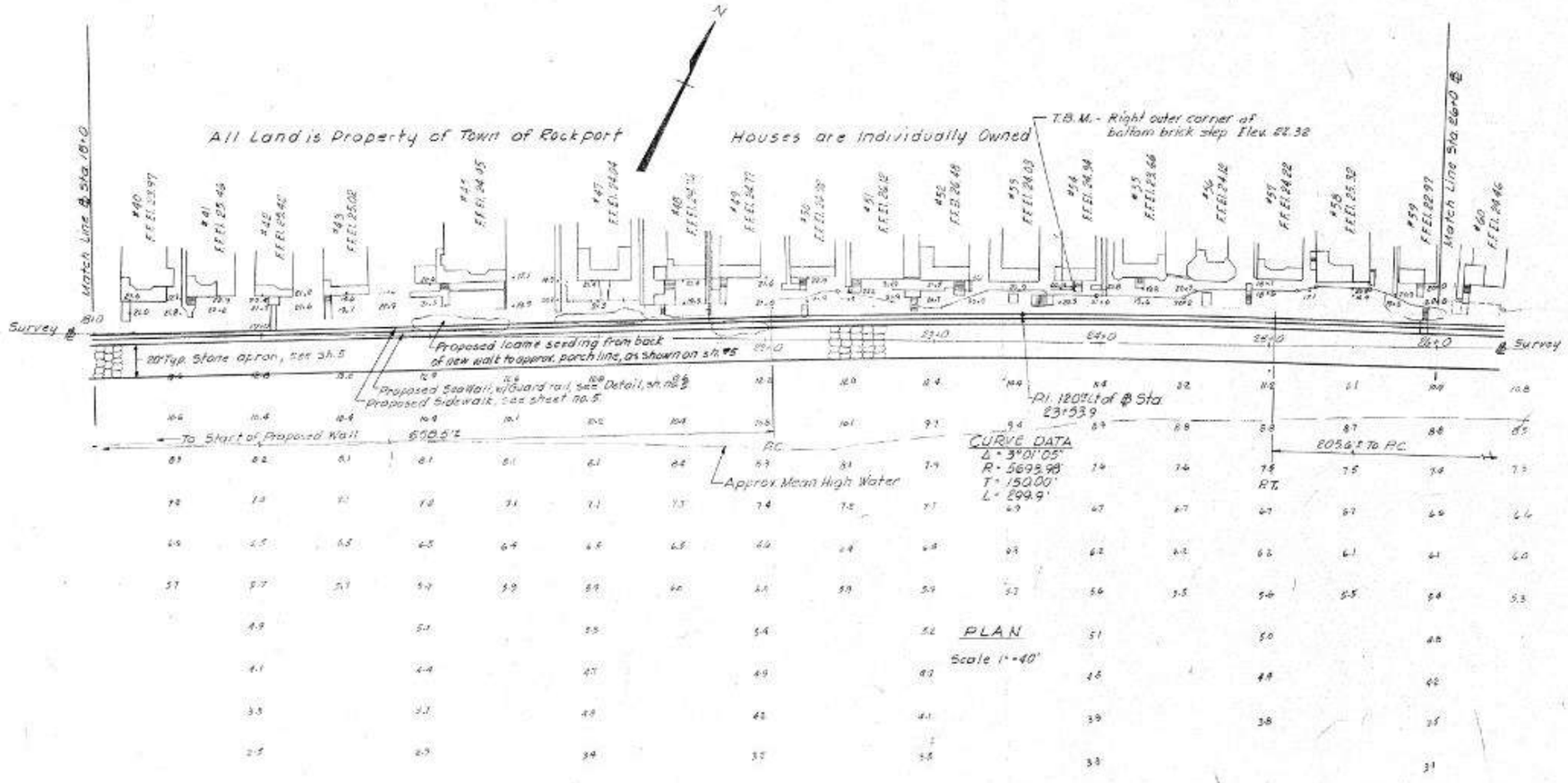
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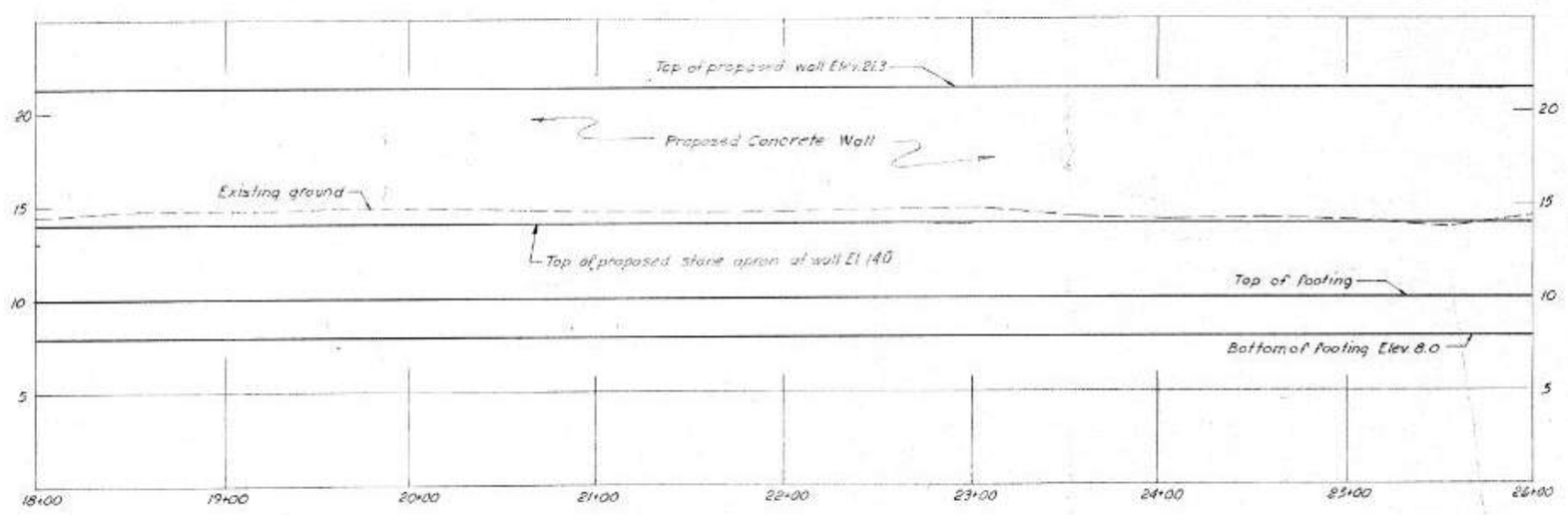
GREEN ENGINEERING AFFILIATES, INC.
ENGINEERS BOSTON

DESIGNED: HDH
DRAWN: AP-CB
CHECKED: HDH

SCALE: AS SHOWN
DATE: SEPTEMBER 1958
CONTRACT NO. 1959

CHIEF WATERWAYS ENGINEER
ACC. 03913-B


All Land is Property of Town of Rockport
Houses are Individually Owned
T.B.M. - Right outer corner of bottom brick step Elev. 22.32
Match Line Sta 18+0
Match Line Sta 26+0
Survey
20' Typ. Stone apron, see Sh. 5
Proposed loame seeding from back of new wall to approx. porch line, as shown on sh. #5
Proposed Seawall, w/Guard rail, see Detail, sh no. 8
Proposed Sidewalk, see sheet no. 5
To Start of Proposed Wall 600.6'±
P.C.
Approx. Mean High Water
Pt. 120'±Lt of ℄ Sta 23+53.9
CURVE DATA
Δ = 3°01'05"
R = 5695.98'
T = 150.00'
L = 299.9'
P.T.
205.6'± To P.C.
PLAN
Scale 1"=40'



Elevation of Sea Wall, using ℄ Stationing
Scale Hor. 1"=40'
Vert. 1"=4'

PROPOSED SEA WALL AND REVETMENT
LONG BEACH
ROCKPORT, MASS.
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS

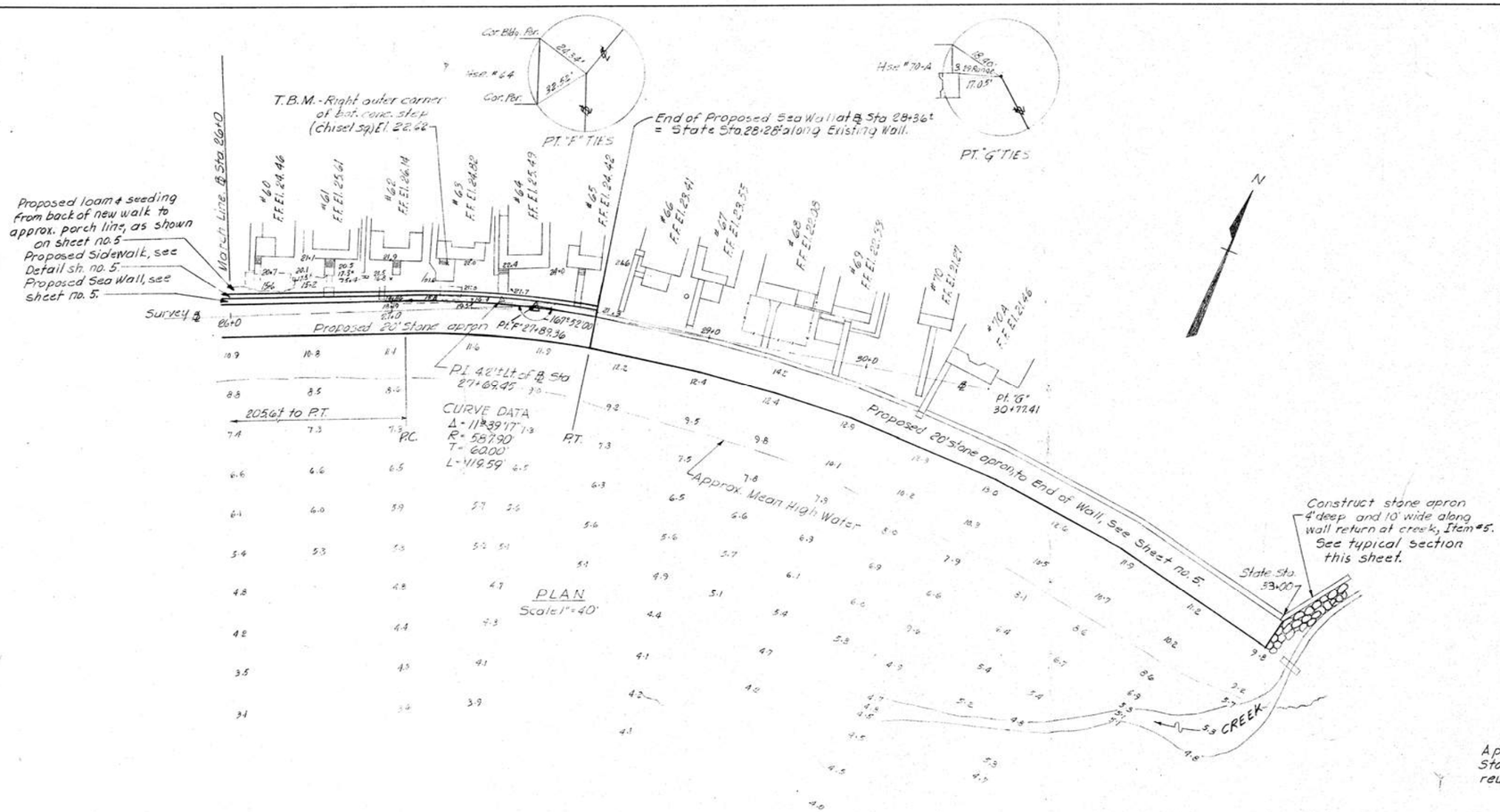
PLAN AND ELEVATION
STA. 18+00 TO STA. 26+00

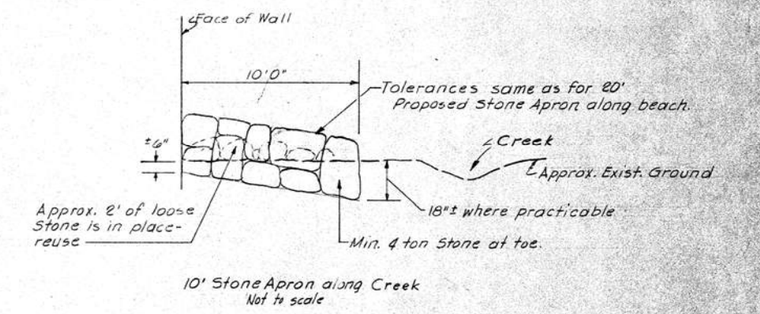
SHEET NO. 3 of 5

GREEN ENGINEERING AFFILIATES, INC.
ENGINEERS BOSTON

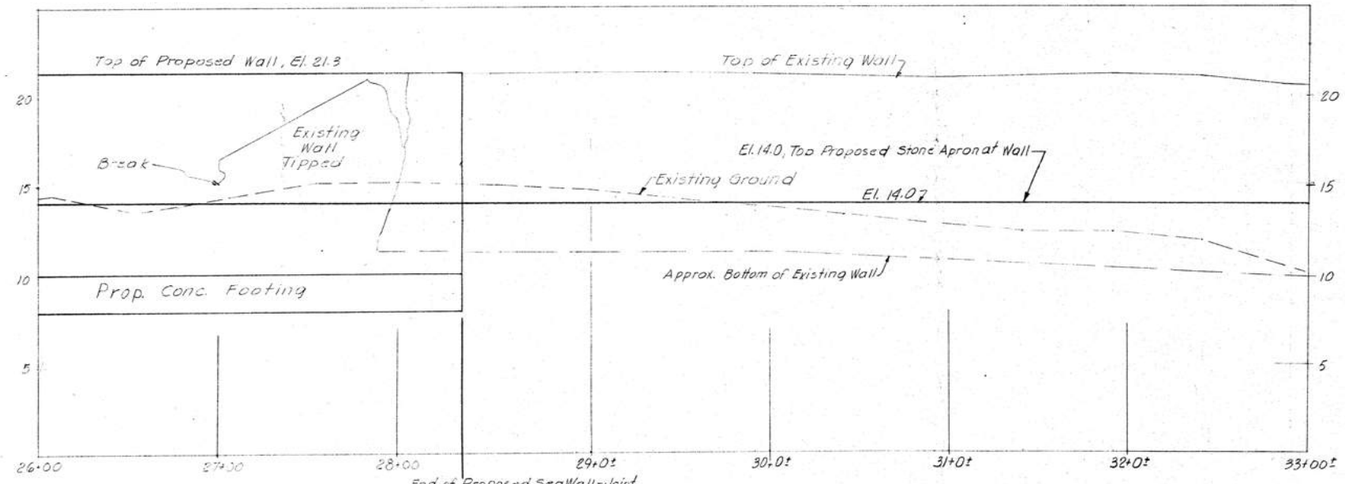
DESIGNED: H.D.H. | SCALE: AS SHOWN
DRAWN: C.L.B. | DATE: SEPTEMBER 1958
CHECKED: H.D.H. | CONTRACT NO. 1959

CHIEF WATERWAYS ENGINEER
ACC. 03913-C





10' Stone Apron along Creek
Not to scale



Elevation of Sea Wall, using ℄ Stationing

Elevation of Existing Sea Wall using State Stationing

Scale Hor. 1" = 40'
Vert. 1" = 4'

PROPOSED SEA WALL AND REVETMENT
LONG BEACH
ROCKPORT, MASS.
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS

PLAN AND ELEVATION
STA. 26+00 TO STA. 33+00±

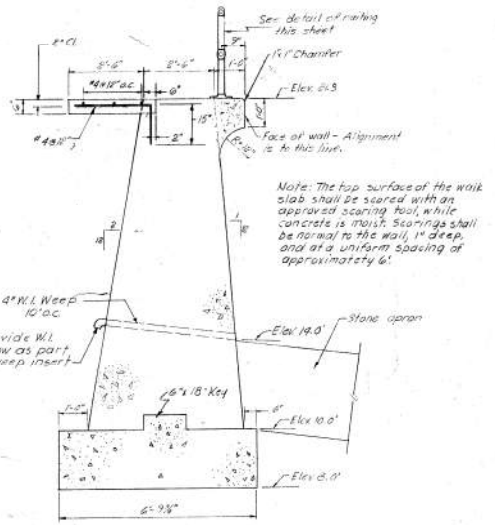
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GREEN ENGINEERING AFFILIATES, INC.
ENGINEERS BOSTON

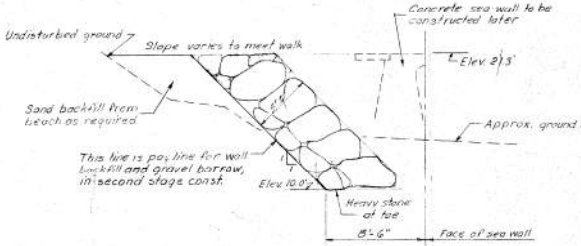
DESIGNED: HDH
DRAWN: ALP
CHECKED: HDH

SCALE: AS SHOWN
DATE: SEPTEMBER 1958
CONTRACT NO. 1959

CHIEF WATERWAYS ENGINEER
ACC: 03913-D

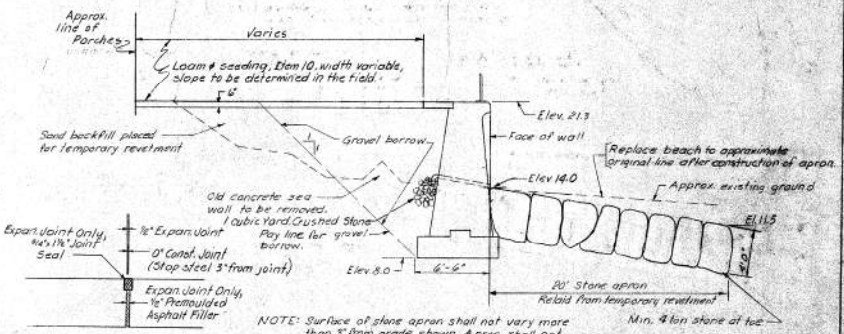


CONCRETE SEA WALL AND WALK
No Scale



NOTES:
1. Removal of the existing wall and construction of this revetment shall be done as the First Stage of the project. The revetment shall later be removed in short sections to allow wall construction. Stone shall then be relaid to form the apron at the wall.
2. Remove all existing concrete sea wall and walk within limits of proposed new concrete wall.
3. Use not over 3 cubic yards of stone per foot. Stone is to be placed to the approximate lines shown. Sufficient care shall be exercised in placing to produce a stable, reasonably dense revetment.

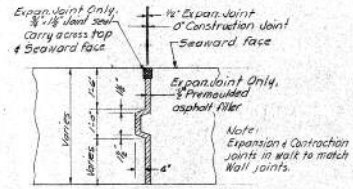
TEMPORARY STONE REVETMENT
1ST STAGE CONSTRUCTION
Scale 1"=5'-0"



NOTE: Surface of stone apron shall not vary more than 3" from grade shown. Apron shall not vary from plan thickness by more than 6".

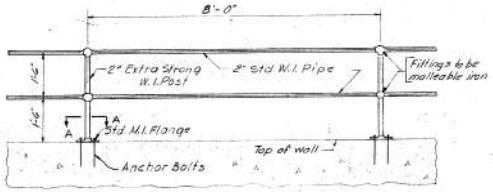
TYPICAL WALK JOINT
NO SCALE

CONCRETE SEA WALL
2ND STAGE CONSTRUCTION
No Scale

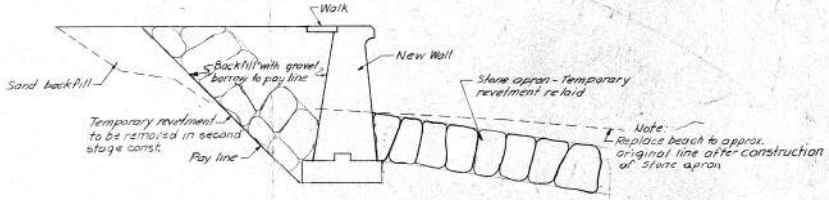


Note: Joint sealer to be "Para-plastic" as manufactured by Servicised Products Co, or approved equal.

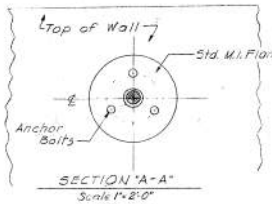
TYPICAL CONSTRUCTION AND EXPANSION JOINT DETAILS
No. Scale



ELEVATION
Not to Scale



SCHEMATIC SECTION AT NEW WALL
Scale 1"=5'-0"

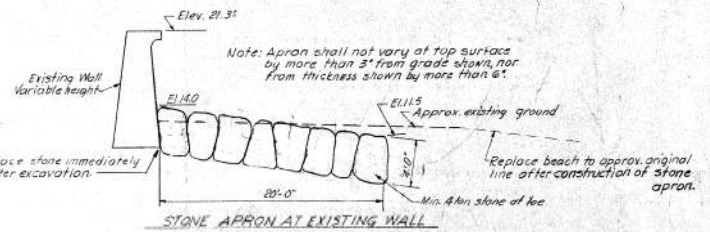


SECTION "A-A"
Scale 1"=2'-0"

NOTE: Anchor Bolts in Conc. to be ¾" round, imbedded at least 9" in concrete.

NOTES:
1 Where used on a curve, all pipe railing to be curved true to line before erection.
2 All pipe to be wrought iron, and bear the manufacturer's trade mark.
3 For painting of all pipe railing and fittings, see specifications.
4 Provide for expansion in pipe rail at each expansion joint in new wall.

PIPE RAIL DETAIL



STONE APRON AT EXISTING WALL
Scale 1"=5'-0"

PROPOSED SEA WALL AND REVETMENT
LONG BEACH
ROCKPORT, MASS.
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS

SECTIONS AND DETAILS

SHEET NO. 5 OF 5

GREEN ENGINEERING AFFILIATES, INC.
ENGINEERS BOSTON

DESIGNED: HDH
DRAWN: A.L.P
CHECKED: HDH
SCALE: AS SHOWN
DATE: SEPTEMBER 1958
CONTRACT NO. 1959
CHIEF WATERWAYS ENGINEER
ACE. 03918-E