

TOWN OF WEYMOUTH – LOVELL FIELD PEDESTRIAN BRIDGE PROJECT
(CONTRACT # IFB-2024-PLANNING-0020)
Weymouth, Massachusetts
Bid Documents
April 24, 2024

APPENDICES

APPENDIX A – CONSTRUCTION DRAWINGS

APPENDIX B – MA DEP SUPERSEDING ORDER OF CONDITIONS

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APPENDIX A

CONSTRUCTION DRAWINGS
LOVELL FIELD PEDESTRIAN BRIDGE PROJECT

APPENDIX B

MA DEP SUPERCEDING ORDER
OF CONDITIONS



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner



MAY 24 2021

Patricia Pries
15 Woodbine Road
Weymouth, Massachusetts 02189

RE: Weymouth - Wetlands
File No. SE 81 - 1261
Superseding Order of
Conditions

Dear Ms. Pries:

Following an in-depth review of the above-referenced file, and in accordance with Massachusetts General Laws, Chapter 131, §40, the Department of Environmental Protection has issued the enclosed Superseding Order of Conditions (SOC). The enclosed Order permits the proposed construction of a bridge over Herring Brook to provide pedestrian access between Commercial Street and Lovell Field. The project falls within the Buffer Zone to Bank (310 CMR 10.54) and within the Riverfront Area (310 CMR 10.58) associated with Herring Brook.

The Department notes that in accordance with 310 CMR 10.58(6)(i), structures and activities subject to a M.G.L. c. 91 waterways license or permit are exempted from the requirements for the Riverfront Area, provided the structure or activity that is subject to jurisdiction obtains a license, permit, or authorization under 310 CMR 9.00: Waterways. The enclosed SOC requires the project proponent to apply for and complete the C.91 licensing process, prior to the commencement of construction.

The Department has determined that the project site is significant to the statutory interests of protection of fisheries, groundwater supply, and wildlife habitat, prevention of storm damage and pollution, and flood control. In addition, the Department has determined that there are no practicable and substantially equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c.131 § 40 and that the work, including proposed mitigation, will have no significant adverse impact on the Riverfront Area to protect the interests identified in M.G.L. c. 131 § 40.

Should there be additional proceedings in this matter, the Department reserves the right to raise additional issues and present further evidence as may be appropriate.

If you have any questions concerning this Order, please do not hesitate to contact Greg DeCesare at (508) 946-2762, or by e-mail at Gregory.DeCesare@mass.gov.

Very truly yours,



Daniel F. Gilmore, Chief
Wetlands and Waterways Program
Bureau of Water Resources

DFG/gjd .

Enclosure

cc: Weymouth Conservation Commission

Robert Luongo, Director
Planning & Community Development
Town of Weymouth
Town Hall, 75 Middle Street
Weymouth, MA 02189
CERTIFIED MAIL # 7019 2280 0002 2137 1489

Brad Chase
Massachusetts Division of Marine Fisheries
836 S Rodney French Blvd.
New Bedford, MA 02744



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

MassDEP File #
SE 81 - 1261

A. General Information

1. From: Massachusetts Department of Environmental Protection
Issuing Authority

2. This issuance is for (check one):
 a. Superseding Order of Conditions
 b. Amended Superseding Order of Conditions

3. To: Applicant:

Robert Luongo
 a. First Name b. Last Name
Director of Planning & Community Development, Town of Weymouth
 c. Organization
Town Hall, 75 Middle Street
 d. Mailing Address Line 1
Weymouth MA 02189
 e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):

a. First Name b. Last Name

 c. Organization

 d. Mailing Address Line 1

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

5. Project Location:

"0" Commercial Street Weymouth
 a. Street Address b. City/Town
23-253-26, 19-253-26, and 23-253-37
 c. Assessors Map/Plat Number

 d. Parcel/Lot Number

Latitude and Longitude, if known:

42.2175 70.922640
 e. Latitude f. Longitude



WPA Form 5 – Superseding Order of Conditions
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 Bureau of Water Resources – Wetlands
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A. General Information (cont'd)

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

Norfolk

a. County

6066 & 2916

c. Book

b. Certificate (if registered land)

347 & 161

d. Page

7. Dates: October 10, 2020 January 28, 2021 November 24, 2020
 a. Date NOI Filed b. Date of Site Visit c. Date of Issuance of Local Order

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

Lovell Field Pedestrian Bridge

1. Notice of Intent, Bridge and Sidewalk Profile
2. Notice of Intent Plan, Details
3. Notice of Intent Plan, Site Access and Staging
4. Notice of Intent Plan, Area of Disturbance
5. Notice of Intent Plan, Planting Plan

a. Plan Titles

Town of Weymouth Department of Public Works

b. Prepared By

November 10, 2020 as stamped "RECEIVED" by the Weymouth Conservation Commission

d. Final Revision Date

Lovel Field Pedestrian Bridge, Bridge Summary, Sheets 1 - 4

f. Additional Plan or Document Title

James E. McGrath

c. Signed and Stamped By

1" = 20' and otherwise as noted on plan sheets

e. Scale

Contech Engineering

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, the Department finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act. Check all that apply:

- | | | |
|---|--|---|
| a. <input type="checkbox"/> Public Water Supply | b. <input checked="" type="checkbox"/> Land Containing Shellfish | c. <input checked="" type="checkbox"/> Prevention of Pollution |
| d. <input type="checkbox"/> Private Water Supply | e. <input checked="" type="checkbox"/> Fisheries | f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat |
| g. <input checked="" type="checkbox"/> Groundwater Supply | h. <input checked="" type="checkbox"/> Storm Damage Prevention | i. <input checked="" type="checkbox"/> Flood Control |

2. This Department hereby finds the project, as proposed, is (check one):

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. The Department 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.



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 these interests, 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.**

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

- 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and wetland boundary (if available) _____ a. linear feet

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
6. <input type="checkbox"/> 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. <input type="checkbox"/> Bordering Land Subject to Flooding	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
Cubic Feet Flood Storage	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
Cubic Feet Flood Storage	_____ c. cubic feet	_____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet
9. <input checked="" type="checkbox"/> Riverfront area	13,606	13,606		
Sq feet within 100 feet	10,768	10,768		
Sq feet between 100-200 feet	2,838	2,838		
	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet



B. Findings (cont.0)

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

10. Designated Port Areas - Indicate size under Land Under the Ocean, below

Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
------------------------	-------------------------	-------------------------	--------------------------

11. Land Under the Ocean

_____	_____
a. square feet	b. square feet
_____	_____
c. c/y dredged	d. c/y dredged

12. Barrier Beaches - Indicate size under Coastal Beaches and/or Coastal Dunes below.

13. Coastal Beaches

_____	_____	_____	_____
a. square feet	b. square feet	c. c/y nourish.	d. c/y

14. Coastal Dunes

_____	_____	_____	_____
a. square feet	b. square feet	c. c/y nourish.	d. c/y

15. Coastal Banks

_____	_____
a. linear feet	b. linear feet

16. Rocky Intertidal Shores

_____	_____
a. square feet	b. square feet

17. Salt Marshes

_____	_____	_____	_____
a. square feet	b. square feet	c. square feet	d. square feet

18. Land Under Salt Ponds

_____	_____
a. square feet	b. square feet

_____	_____
c. c/y dredged	d. c/y dredged

19. Land Containing Shellfish

_____	_____	_____	_____
a. square feet	b. square feet	c. square feet	d. square feet

20. Fish Runs - Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above

_____	_____
a. c/y dredged	b. c/y dredged

21. Land Subject to Coastal Storm Flowage

_____	_____
a. square feet	b. square feet



C. General Conditions Under Massachusetts Wetlands Protection Act

(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.
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.
6. If this Order constitutes an Amended Superseding Order of Conditions, this Amended Superseding Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Superseding 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.
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 Department on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MA DEP"]

"File Number SE 81 - 1261 "



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

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

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 DEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Department of Environmental Protection.
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 Department 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.
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 Department.
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 Department, 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.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. **The work associated with this Order (the "Project") is (1) is not (2) 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.



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

- 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;
 - 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 19(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 BMPs 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, and 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 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(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.



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.

Brief Project Description: construction of a pedestrian bridge

See pages 12 & 13 for additional Special Conditions numbered 1 through 15.

D. Findings Under Municipal Wetlands Bylaw or Ordinance

To the extent that the Order is based on a municipal bylaw or ordinance, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no jurisdiction to supersede the local by-law order.

E. Issuance

This Order is valid for three years from the date of issuance, unless otherwise specified as a special condition pursuant to General Conditions 4 or 6.

Issued by: **Massachusetts Department of Environmental Protection:**

Signature:

Daniel F. Gilmore, Chief, Wetlands and Waterways Program, Bureau of Water Resources

This Order is issued to the applicant by Certified Mail.

MAY 24 2021

Date

Certified Mail # 7019 2280 0002 2137 1489



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

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F. Recording Information

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 Page 10 of this form shall be submitted to the Department.

Massachusetts Department of Environmental Protection – Southeast Region
 Issuing Authority

To: Massachusetts Department of Environmental Protection – Southeast Region
 Issuing Authority

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

"0" Commercial Street - Weymouth
 Project Address – Street & Town

SE 81 -1261
 DEP File Number

Has been recorded at the Registry of Deeds of:

Norfolk
 County

Book

Page

For: Property Owner

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

Book

Page

In accordance with the Order of Conditions issued on:

Date

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

Instrument Number

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

Document Number

Signature of Applicant

DFG/gjd



G. Appeal Rights and Time Limits

The applicant, the landowner, any person aggrieved by the Superseding Order, Determination or other Reviewable Decision as defined at 310 CMR 10.04, who previously participated in the proceedings leading to this Reviewable Decision, the conservation commission, or any ten (10) residents of the city or town where the land is located if at least one resident was previously a participant in the permit proceeding, are hereby notified of their right to appeal this Reviewable Decision pursuant to M.G.L. c.30A, § 10, provided the request is made by certified mail or hand delivery to the Department, along with the appropriate filing fee and a MassDEP Fee Transmittal Form within ten (10) business days of the date of issuance of this Superseding Order or Determination, and addressed to:

Case Administrator
Office of Appeals and Dispute Resolution
Department of Environmental Protection
One Winter Street, 2nd Floor
Boston, MA 02108

A copy of the request (hereinafter also referred to as Appeal Notice) shall at the same time be sent by certified mail or hand delivery to the Conservation Commission, the applicant, the person that requested the Superseding Order or Determination, and the issuing office of the MassDEP at:

MassDEP
20 Riverside Drive
Lakeville, MA 02347

In the event that a ten resident group requested the Superseding Order or Determination, the Appeal Notice shall be served on the designated representative of the ten resident group, whose name and contact information is included in this Reviewable Decision (when relevant).

Contents of Appeal Notice

An Appeal Notice shall comply with the Department's Rules for Adjudicatory Proceedings, 310 CMR 1.01(6) and 310 CMR 10.05(7)(j), and shall contain the following information:

- (a) the MassDEP Wetlands File Number, name of the applicant, landowner if different from applicant, and address of the project;
- (b) the complete name, mailing address, email address, and fax and telephone numbers of the party filing the Appeal Notice; if represented by consultant or counsel, the name, fax and telephone numbers, email address, and mailing address of the representative; if a ten residents group, the same information for the group's designated representative;
- (c) if the Appeal Notice is filed by a ten (10) resident group, then a demonstration of participation by at least one resident in the previous proceedings that led to this Reviewable Decision;
- (d) if the Appeal Notice is filed by an aggrieved person, then a demonstration of participation in the previous proceeding that lead to this Reviewable Decision and sufficient written facts to demonstrate status as a person aggrieved;
- (e) the names, telephone and fax numbers, email addresses, and mailing addresses of all other interested parties, if known;



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

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- (f) a clear and concise statement of the alleged errors contained in the Department's decision and how each alleged error is inconsistent with 310 CMR 10.00 and does not contribute to the protection of the interests identified in the Wetlands Protection Act, M.G.L. c.131, § 40, including reference to the statutory or regulatory provisions that the party filing the Appeal Notice alleges has been violated by the Department's Decision, and the relief sought, including any specific desired changes to the Department's decision;
- (g) a copy of the Department's Reviewable Decision that is being appealed and a copy of the underlying Conservation Commission decision if the Reviewable Decision affirms the Conservation Commission decision;
- (h) a statement that a copy of the request has been sent by certified mail or hand delivery to the applicant and the conservation commission; and
- (i) if asserting a matter that is Major and Complex, as defined at 310 CMR 10.04, a statement requesting that the Presiding Officer make a designation of Major and Complex, with specific reasons supporting the request.

Filing Fee and Address

A copy of the Appeal Notice along with a MassDEP 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, Massachusetts 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, 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.



Special Conditions for Superseding Order of Conditions for DEP File # SE 81 - 1261

1. The project engineer and contractor(s) are to be provided with a copy of this Order of Conditions, as well as the plan(s) of record and supporting documents. The Order and plans shall be kept available on site during all phases of construction.
2. All work shall be performed in accordance with the said conditions and the Notice of Intent for the above-referenced file number. To the extent that the conditions modify or differ from the plans, specifications or other proposals submitted with the Notice of Intent, the conditions shall control.
3. Prior to commencement of construction, the project proponent must apply for and complete the C.91 licensing process.
4. As proposed by the applicant, riparian and buffer zone mitigation/enhancement plantings shall be completed to further protect the interests of the Wetlands Protection Act.
5. It shall be the responsibility of the applicant, and/or any successor(s) in title to ensure that the mitigation/enhancement areas remain free of non-native, invasive plant species such as common reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*) to the extent practicable.
6. An erosion control barrier shall be placed parallel to Herring Brook, on both sides of the river, as referenced on the Notice of Intent, Bridge and Sidewalk plan of record. Additional erosion control barriers shall be installed as follows;
 - a. on the east side of the river, along the limit-of-work line where it falls within the 100-foot Inner Riparian Area. Erosion controls shall abut the erosion control barrier running parallel to the brook and shall not extend further towards the brook. Orange construction fencing shall be installed along the limit of work within the 100 and 200-foot Riverfront area to mark the work area more visibly,
 - b. surrounding the "Staging Area" as shown on the Notice of Intent, Site Access and Staging Plan. An opening is allowed at the northern end of the Staging Area to allow for equipment access to and from the Area. If erosion is observed in the area of opening, the erosion control barrier shall be extended across it and only opened as necessary to allow access,
 - c. as needed to contain disturbed soils during the grading of the berm by the Lovell field walkway.
7. On the west side of the river (Lovell parcel), orange construction fencing shall be installed along the limit of work and staging areas.
8. All erosion control barriers shall be installed prior to the commencement of any other activity. All accumulated sediment shall be removed prior to removal of the barriers. The erosion control barrier shall remain in place and properly maintained until a Certificate of Compliance is issued from this office.
9. Any tears, rips, breaks, or collapse of the erosion control barrier shall be repaired immediately (i.e., in no more than 24 hours).



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

MassDEP File #

SE 81 - 1261

Special Conditions for Superseding Order of Conditions for DEP File # SE 81 - 1261

10. Any building supplies, debris, fill, soils excavated during construction, or other materials shall be stockpiled away from designated wetland resource areas, and at the Staging Area to prevent such materials from entering the wetland resource areas. A ring of staked hay bales, siltation fencing or the equivalent shall be placed around any soils stockpiled within one hundred feet of a wetland resource area.
11. No excavation or activities causing silt, vibration or disturbance within the river shall occur during time-of-year (TOY) restriction periods to protect diadromous fisheries such as smelt, river herring, and eels. The TOY restriction periods shall be from March 1st through June 15th and from July 15th through November 15th.
12. Except for trees located within the limits of the pedestrian walkway on the east side of the river, any vegetation removed shall not be grubbed or stumped.
13. All disturbed or exposed soil surfaces covered in the Notice of Intent and this Order of Conditions, shall be temporarily stabilized with hay, straw, mulch or any other protective covering and/or method approved by the U.S. Department of Agriculture Natural Resource Conservation Service within twenty-four (24) hours of disturbance or exposure in order to prevent erosion from taking place.
14. All areas disturbed during construction shall be revegetated with appropriate fast growing erosion control species or local indigenous plants within thirty (30) days of final on-site grading.
15. Upon completion of the project, a Certificate of Compliance shall be requested in accordance with General Condition No. 12, and under the provisions of 310 CMR 10.05 (9)(d). An "AS-BUILT" plan and a statement from a Registered Professional Engineer certifying compliance with the conditions of this Order shall accompany the request for a Certificate of Compliance.



Massachusetts Department of Environmental Protection
Adjudicatory Hearing Fee Transmittal Form

IMPORTANT! This form is intended for fee transmittal only. The contents of a request for an adjudicatory appeal (Notice of Claim) are established at 310 CMR 1.01(6) and the substantive statutes and regulations governing the Department's action.

A. Person/Party Making Request

1. Name and address of person or party making request:

Name - If appropriate, name group representative _____
 Street Address _____
 City _____ State _____ Zip Code _____

2. Project Information:

Street Address _____
 City _____ State _____ Zip Code _____
 DEP File or ID Number _____ \$ Amount of filing fee attached _____
 Email Address _____

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



B. Applicant (if applicable)

1. Name and address of applicant:

Name - If appropriate, name group representative _____
 Street Address _____
 City _____ State _____ Zip Code _____
 Email Address _____

C. Instructions

1. Send this form and check or money order of \$100.00 payable to the Commonwealth of Massachusetts to the MassDEP Lockbox at:

Department of Environmental Protection
 P.O. Box 4062
 Boston, MA 02211

2. Send a copy of this form and a copy of the check or money order with the Request for Adjudicatory Appeal (Notice of Claim) to:

Case Administrator
 Office of Appeals and Dispute Resolution
 One Winter Street
 Boston, MA 02108

APPENDIX C

TOWN OF WEYMOUTH CONSERVATION COMMISSION
ORDER OF CONDITIONS

*Town of Weymouth
Massachusetts*

Andrew Hultin
Conservation Administrator
781-340-5007

Conservation Commission members:
John Reilly, Chairman
Frank Singleton, Vice-Chairman
Scott Dowd, Clerk
George Loring
Alexander Donovan



Robert L. Hedlund
Mayor

Robert J. Luongo, Director
Planning and Community Development

75 Middle Street
Weymouth, MA 02189

www.weymouth.ma.us

January 9, 2023

Robert Luongo
Town of Weymouth Planning Director

RE: Minor Modification, Lovell Field Pedestrian Bridge
DEP File #81-1261

Dear Mr. Luongo:

This letter is to document that the Weymouth Conservation Commission, at its meeting on December 19, 2023, voted to approve the minor modification request for the Lovell Field Pedestrian Bridge, Order of Conditions 81-1261 issued on 11-24-2020. This request is to replace the proposed elevated boardwalk leading to the bridge on the Lovell Field side with a pervious pavement walkway on an earthen berm. This plan revision is shown on the plan titled Lovell Field Pedestrian Bridge Project, General Site Layout and Profile, prepared by Kimley Horn and dated December 6th 2023. The proposed revision does not change impacts to resource areas.

All conditions in the original order, including the requirement to keep a portion of the existing berm, shall remain. The earthen berm and walkway shall be kept to the same width as the proposed boardwalk to the extent practicable.

Sincerely,

A handwritten signature in black ink, appearing to read 'A. Hultin', is written over a light blue horizontal line.

Andrew Hultin
Weymouth Conservation Administrator



Extension Permit for Orders of Conditions

Weymouth Wetlands Protection Ordinance
Chapter 7, Section 301

A. General Information

Applicant:

Robert Luongo, Town of Weymouth

Name

75 Middle St

Mailing Address

Weymouth

MA

02189

City/Town

State

Zip Code

Property Owner (if different):

Name

Mailing Address

City/Town

State

Zip Code

B. Authorization

The Order of Conditions (or Extension Permit) issued to the applicant or property owner listed above on:

Date: 11/24/2020

For work at:

"0" Commercial Street (3 parcels)

Weymouth

Street Address

City/Town

23-253-26, 19-253-25, and 23-253-37

Assessors Map/Plat Number

Parcel/Lot Number

Recorded at the Registry of Deeds for:

Norfolk

6066, 2916

347, 161

County

Book

Page

Certificate (if registered land)

Is hereby extended until:

11/24/2026

Date

Date the Order was last extended (if applicable)

Extension Permit for Order of Conditions

Weymouth Wetlands Protection Ordinance

Chapter 7, Section 301

This Extension Permit must be signed by a majority of the Conservation Commission and a copy sent to the applicant.

Issued by: Town of Weymouth Conservation Commission

01/09/2024

Date of Issuance

Signatures:

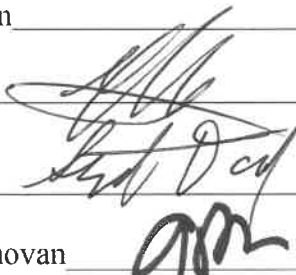
John Reilly _____

Frank Singleton _____

George Loring _____

Scott Dowd _____

Alexander Donovan _____

Handwritten signatures in black ink. The signature for George Loring is a cursive 'GL'. The signature for Scott Dowd is a cursive 'S Dowd'. The signature for Alexander Donovan is a cursive 'AD'.



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:
 81-1261
 MassDEP File # _____
 eDEP Transaction # _____
 Weymouth
 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: Weymouth
 Conservation Commission

2. This issuance is for (check one):
 a. Order of Conditions b. Amended Order of Conditions

3. To: Applicant:
 Robert Luongo
 a. First Name b. Last Name
 Town of Weymouth
 c. Organization
 Town Hall, 75 Middle Street
 d. Mailing Address
 Weymouth MA 02189
 e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):

 a. First Name b. Last Name

 c. Organization

 d. Mailing Address

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

5. Project Location:
"0" Commercial Street (3 parcels) Weymouth
 a. Street Address b. City/Town
23-253-26, 19-253-25, and 23-253-37
 c. Assessors Map/Plat Number d. Parcel/Lot Number
 Latitude and Longitude, if known:
 d. Latitude e. Longitude

APPLICANT: Town of Weymouth
LOCATION: Lovell Field Pedestrian Bridge
DEP FILE #: 81-1261

PROPERTY LOCATION AND OWNERSHIP

	Conservation Parcel (east side)	Small Town Parcel (east side)	Lovell Field Parcel (west side)
Location address	"0" Commercial St	"0" Commercial St	"0" Commercial St
Map-Block- Lot	19-253-25	23-253-37	23-253-26
Owner	Town of Weymouth	Town of Weymouth	Town of Weymouth
Recording Information	N/A	Book 6066 Page 347	Book 2916 Page 161

Final Approved Plans and Other Documents
DEP File #81-1261
Lovell Field Pedestrian Bridge, Commercial Street
Weymouth, MA

1. Notice of Intent, Lovell Field Pedestrian Bridge Project. Prepared by Lucas Environmental LLC, for Town of Weymouth. Dated October 09, 2020. WPA Form 3 revisions dated November 10, 2020.
2. Stormwater Report, Lovell Field Pedestrian Bridge Project. Dated October 23, 2020. Includes stormwater checklist (signed and stamped by Megan E. Buczynski, PE), stormwater narrative, drainage calculations.
3. Project Plans. Lovell Field Pedestrian Bridge. Prepared by Town of Weymouth Department of Public Works. Dated October 9, 2020, revised November 10, 2020. Signed and stamped by Jim McGrath (except (e) below).
 - a. Bridge and Sidewalk Profile. Scale: 1" = 20'.
 - b. Notice of Intent Plan, Details.
 - c. Notice of Intent Plan, Site Access and Staging. Scale: 1" = 60'
 - d. Notice of Intent Plan, Areas of Disturbance. Scale: 1" = 30'
 - e. Notice of Intent, Planting Plan
4. Lovell Field Pedestrian Bridge, Bridge Summary. Prepared by Contech Engineering Solutions LLC. November 9, 2020.



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:
 81-1261
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 Weymouth
 City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
 Norfolk
 a. County _____ b. Certificate Number (if registered land) _____
 See attached list
 c. Book _____ d. Page _____
7. Dates: 10/09/2020 11/17/2020 11/24/2020
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
 See attached list (1 pg)
 a. Plan Title _____
 b. Prepared By _____ c. Signed and Stamped by _____
 d. Final Revision Date _____ e. Scale _____
 f. Additional Plan or Document Title _____ g. Date _____

B. Findings (SEE ATTACHED "ADDITIONAL FINDINGS", 3 pgs)

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.

APPLICANT: Town of Weymouth
LOCATION: Lovell Field Pedestrian Bridge
DEP FILE #: 81-1261

Additional Findings

- a) The Lovell Field Pedestrian Bridge Project is proposed to improve access between Lovell Field and overflow parking at the MBTA parking lot, located across Herring Brook. The project is also intended to serve as the part of the Back River Trail that connects the MBTA parking lot to Lovell Field and lower Jackson Square.
- b) Portions of this project will occur within the locally-regulated 25-Foot No Disturb Zone, the 100-foot Inner Riparian Area, and the 200-foot Outer Riparian Area of Herring Brook (a perennial river). The Conservation Commission has granted a waiver of the buffer zone setback requirements (Part IX) of the Weymouth local Wetlands Protection Regulations.
- c) This Project has been approved as a limited project under 310 CMR 10.53(3)(j) (construction of an elevated footbridge) and 10.53(6) (construction of a footpath in riverfront area). Limited Projects are required to meet the applicable performance standards of the Wetlands Protection Act only to the extent practicable, provided that there are no adverse effects on the habitat of rare species.
- d) The approved project entails the installation of a 130' bridge across the Herring Brook, supported by abutments located just beyond the earthen embankments on either side of the Brook. These bridge abutments are located above the 100-year flood plain. On the west side, an elevated boardwalk will connect the bridge to the Lovell Field walkway. On the east side, a pervious walkway will connect the bridge to the Commercial Street sidewalk.
- e) This project is located in a highly sensitive area. In particular, the bridge will span over the Herring Brook, which is part of the Back River Area of Critical Environmental Concern (ACEC). Herring Brook is a migratory fishway for river herring (*Alosa pseudoharengus* and *Alosa aestivalis*) and American eel (*Anguilla rostrata*), which traverse the system of fish ladders to Whitman's Pond. Rainbow smelt (*Osmerus mordax*) spawn in the river adjacent to the site. Other diadromous species utilizing Herring Brook for various life stages and behaviors include white perch (*Morone Americana*) and Atlantic tomcod (*Microgadus tomcod*). Various migratory bird species also feed in this stretch of Herring brook including Osprey (*Pandion haliaetus*), Black Crowned Night Heron (*Nycticorax nycticorax*) and Great Blue Heron (*Ardea Herodias*). Walkways leading to the bridge will also cross wooded Conservation Land on the east side and a restored buffer zone on the west side (a condition of the Lovell Field Order of Conditions, DEP File #81-1184).
- f) All work is to be conducted above the 10-year flood level identified as the boundary of the Area of Critical Environmental Concern in the 1982 designation papers. Town staff held a consultation with MEPA on July 8, 2020. MEPA staff consulted with the ACEC program and the town received a written response from

APPLICANT: Town of Weymouth
LOCATION: Lovell Field Pedestrian Bridge
DEP FILE #: 81-1261

MEPA on July 27, 2020 stated that “the proposed work appears to be located outside of and will not impact the ACEC” and that “MEPA review does not appear to be required.”

- g) During the Public Hearing, the Conservation Commission received comments from the Back River Watershed Association, Herring Wardens and citizens concerned with the impacts of this project on the herring run and overall ecology of Herring Brook. These concerns included: the shadow of the bridge disrupting inward migration of the herring; removal of tree canopy; migration of plastic athletic field infill pellets into the resource area; artificial lights shining into the river; increased trash in the resource area; cutting into the berm that was constructed to prevent the migration of infill pellets into the resource area; impacts to the restored riverfront area (west side); and impacts to wooded Conservation Land (east side).

These concerns were addressed with alterations to the project plans including: a reduction in the number of trees cut from 50 to 14; extension of the bridge to locate bridge abutments farther from the river embankments; installation of grating along the walkway from the athletic field to capture infill pellets; solid decking and kickboards on the bridge to prevent infill pellets from escaping into the river; reducing rather than eliminating the constructed berm adjacent to the field; lighting that would not shine on the river; and the placement of trash receptacles and signage along the walkway.

- h) An alternatives analysis was conducted as required under the 310 CMR 10.58(4)(c) for new development in the riverfront area. Four alternatives for this project were reviewed and ultimately dismissed. These alternatives included;
1. No build alternative- The no build alternative does not meet the needs and goals of the project, and does not provide a safe access to Lovell Field.
 2. A path along the east side embankment- This alternative was dismissed due to the additional vegetation clearing, length of new walkway and safety concerns.
 3. Bridge crossing at the MBTA outfall- This alternative was dismissed due to conflicts with existing utilities and difficulties with grading.
 4. Bridge crossing at the existing MBTA Commuter Rail abutments- This alternative was dismissed due to additional licensing with the MBTA, ADA accessibility issues, and the significantly longer walk to the fields.
- i) The Conservation Commission, at its November 17, 2020 meeting, approved the project on a 3 to 2 vote. The dissenting votes were due to concerns that the project would negatively impact the inward migration of river herring.

APPLICANT: Town of Weymouth
LOCATION: Lovell Field Pedestrian Bridge
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- j) This project will also serve as a component of the Back River Trail. The Back River Trail master plan (2005) called for a section of trail along the east bank of the Herring River and a potential river crossing at the MBTA commuter rail abutment. The Conservation Commission expects that the river crossing and pathway approved in this Order of Conditions will become the Back River Trail connection through the Conservation parcel (Map 19, Block 253, Lot 25) and that the Town of Weymouth will not make further requests to construct river crossings or extensive pathways through the Conservation parcel.

- k) This Order of Conditions requires mitigation measures to reduce the impacts of the project and to improve the town's stewardship of Herring Brook, including additional baffles and grates for the herring run fishway, and removal of sediments from a critical herring resting pool.

[End of Additional Findings]



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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Weymouth
 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. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
6. <input type="checkbox"/> 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. <input type="checkbox"/> Bordering Land Subject to Flooding	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
Cubic Feet Flood Storage	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
Cubic Feet Flood Storage	_____ c. cubic feet	_____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet
9. <input type="checkbox"/> Riverfront Area	_____ a. total sq. feet	_____ b. total sq. feet		
Sq ft within 100 ft	_____ c. square feet	_____ d. square feet	_____ e. square feet	_____ f. square feet
Sq ft between 100-200 ft	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet



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B. Findings (cont.)

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

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	_____	_____	_____ cu yd	_____ cu yd
	a. square feet	b. square feet	c. nourishment	d. nourishment
14. <input type="checkbox"/> Coastal Dunes	_____	_____	_____ cu yd	_____ cu yd
	a. square feet	b. square feet	c. nourishment	d. nourishment
15. <input type="checkbox"/> Coastal Banks	_____	_____		
	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	_____	_____		
	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
20. <input checked="" type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	_____	_____		
	a. c/y dredged	b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	_____		
	a. square feet	b. square feet		
22. <input checked="" type="checkbox"/> Riverfront Area	13, 606	13, 606		
	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	10, 768	10, 768		
	c. square feet	d. square feet	_____	_____
Sq ft between 100-200 ft	2, 838	2, 838	e. square feet	f. square feet
	g. square feet	h. square feet	_____	_____
			i. square feet	j. square feet



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B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (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):

1

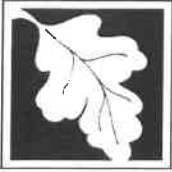
a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

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



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

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Provided by MassDEP:

81-1261

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Weymouth

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

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

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 81-1261 "
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.



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

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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):

Condition #s 22 - 70

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 Weymouth 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:

Town of Weymouth Code of Ordinances, Chapter 7, Section 301	
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):

Conditions #s 21 - #70

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LOCATION: Lovell Field Pedestrian Bridge
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General Conditions

21. The Commission's actions on this project are taken under the Weymouth Code of Ordinances Chapter 7, subject to compliance with the conditions and limitations imposed herein, and any work authorized hereafter shall be completed within three (3) years from the date of issuance of this Order. Any request for extension of this Order shall be made, in writing, not less than thirty (30) days before the expiration of this Order. An appeal of an Order issued under Weymouth Code of Ordinances Chapter 7, Section 301 may be taken in Superior Court.
22. No work may begin until the Commission has received certification from the Registry of Deeds or the Land Court or both, as appropriate, that this Order has been recorded in the line of title of the property.
23. A copy of this Order shall be kept on the work site at all times during construction. The applicant is responsible for providing a copy to all contractors and subcontractors, informing them of its requirements, and for assuring that they comply with those requirements.
24. These Conditions are intended solely as a permit to perform work within areas of the Commission's jurisdiction, and nothing contained herein shall be construed as pre-empting or precluding any other bylaw, ordinance or local regulation.
25. Members and agents of the Commission have the right to enter and inspect the property, as per M.G.L. Ch. 131, §40, and Weymouth Town Code of Ordinances, Chapter 7, in order to evaluate and enforce compliance with this Order. The applicant shall submit data or information that the Commission deems necessary for that evaluation.
26. This Order shall apply to all successors in interest, successors in control, and successors in title.
27. If this Order of Conditions differs from the approved plans or other final documents, the Order of Conditions shall prevail unless the Conservation Commission specifically directs otherwise.
28. Before making any change in the project as designed and specified in the plans listed above, the applicant shall inquire of the Commission, in writing, whether the change is so substantial as to require the filing of a new Notice, may be permitted as an amendment to this Order, or may be carried out under these Conditions as issued.
29. The Commission reserves the right to impose additional conditions or require the submission of additional information as necessary to protect the interests of the State and Local Wetland Protection Act.

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Pre-Construction Conditions

30. All required local, state and federal permits shall be obtained before construction begins.
31. If construction drawings are prepared for the project that differ from the set of plans approved by the Commission under this Order, the applicant shall provide the Commission with the drawings and a description of changes within the Commission's jurisdiction. If changes are proposed from the approved plans cited by this Order, the applicant shall notify the Commission and shall follow the procedures as described in Condition #28.
32. Prior to the start of work, the Applicant or Contractor shall provide the Commission with the name, business phone number, email address, and mailing address of the person responsible for ensuring on-site compliance with this Order, and his or her alternate. This person shall be the Environmental Monitor for the site and shall be given the authority to stop construction for erosion control or other environmental purposes.
33. Prior to the start of work, the applicant shall submit a construction sequence and anticipated schedule for major project elements (e.g., tree clearing, geotechnical borings, walkways, bridge abutment construction, bridge installation, riverfront restoration, mitigation elements).
34. The location of erosion controls and limit-of-work fencing shall be staked out for review by Conservation staff prior to installation. Erosion controls and limit-of-work fencing shall be installed prior to construction or excavation. Controls shall be installed in accordance with the "Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas" (Mass. DEP, March 1997). Unless otherwise directed by Conservation staff, erosion control wattle or compost sock shall be at least 12" in diameter. Erosion control barriers and limit-of-work fencing shall be installed as follows:
 - a. A line of erosion controls shall be installed parallel to Herring Brook, on both sides of the river between the proposed bridge abutments and the river, as shown on the approved plans.
 - b. On the east side of the river (Conservation parcel), erosion controls shall be installed along the limit-of-work line where it falls within the 100-foot Inner Riparian Area. Erosion controls shall not extend below the erosion control barrier running parallel to the river. Orange construction fencing shall be installed along the limit of work within the 100 and 200-foot Riverfront area to more visibly mark the work area.
 - c. On the west side of the river (Lovell parcel), orange construction fencing shall be installed along the limit of work and staging areas. Erosion

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controls shall be installed as needed to contain disturbed soils during the grading of the berm by the Lovell field walkway.

35. After installation of the erosion control measures and marking of trees to be removed, and prior to any other work, **the applicant and/or the project manager shall meet on the site with the Conservation Administrator to review erosion control measures, tree removal and the Order of Conditions issued for this project.** If onsite review shows that slight adjustments in layout will be beneficial to preserve desirable trees, Conservation staff may approve such minor adjustments.
36. Prior to the start of construction, trees and shrubs that must be removed from the limit of work/staging area on the west side of the river shall be transplanted to revegetate the unauthorized pathway in the riverfront restoration area. The quantity, species and size of plants removed shall be documented so that equivalent plantings can be installed in the area following construction, as per condition #57.

Construction-Related Conditions

37. The Conservation Commission shall be notified 48 hours prior to the start of active work at the site, including cutting of trees and geotechnical borings. Conservation shall be provided with a copy of the geotechnical report or other relevant recommendations or details regarding the construction of the bridge footings.
38. Wetland flagging shall remain in place until the project has been completed and the Certificate of Compliance issued.
39. The erosion control barrier shall be maintained for the duration of the project; repairs and replacement shall be made as needed to assure its proper functioning. The barrier shall be inspected by the applicant or his/her representative at least weekly and after every runoff-producing precipitation event. Accumulated sediments shall be removed as soon as possible from the front of the erosion controls; in no instances shall sediments be allowed to accumulate above one-half the height of the barrier. The Conservation Commission reserves the right to require additional erosion control protection measures as needed to protect the resource area until the site is permanently stabilized.
40. An adequate stockpile of erosion control materials shall be on site at all times for emergency or routine replacement and shall include materials to replace or repair perimeter erosion controls and to stabilize embankments (jute netting).
41. Workers at the site shall be instructed on the purpose and proper functioning of the erosion control barriers. No excavation shall be conducted and no heavy machinery shall be permitted beyond the erosion control barriers. Erosion control

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barriers shall be removed after work is completed on all portions of the project and all bare ground has been stabilized.

42. No excavation or activities causing vibration or disturbance close to the river shall occur during the time-of-year restriction (TOY) for the inward migration of river herring. The TOY period shall be presumed to be March 15th through June 30th, unless otherwise approved based on the conclusions of the Weymouth Herring Warden. Activities covered under this TOY include geotechnical borings within the Inner Riparian Area, excavation for the bridge abutments, construction of the bridge abutments, installation of the bridge, and cutting of vegetation within the 25-foot no-disturb area adjacent to the river.
43. The Notice of Intent plans call for the removal of 14 trees larger than 6” in diameter. Except for trees located within the limits of the pedestrian walkway on the east side of the river, trees removed shall not be grubbed or stumped.
44. As shown on the NOI plans, the constructed berm between Lovell Field and the restoration area shall be lowered for installation of the proposed boardwalk, but shall not be completely removed.
45. Soils at the site are heavily impacted by historic fill. If historic fill materials such as bricks, concrete, asphalt, furnace clinkers or slag are excavated, these materials shall be disposed of offsite and shall not be reused as project fill.
46. The project shall have no adverse impacts on the stability of the river embankment. No heavy equipment is allowed below the embankment. Disturbance of the embankment shall be kept to a minimum. Any vegetation cut below the embankment shall not be stumped or grubbed. Staked jute netting shall be used to stabilize disturbed areas below the top of the embankment. If disturbed areas are within a vegetated area, a slope seed mix shall be added prior to the jute netting. If shrubs or trees are removed from below the embankment, the Conservation Commission reserves the right to require replacement tree/shrub planting on the embankment as part of the mitigation planting plan.
47. The pedestrian bridge and boardwalk decking shall be designed and constructed to prevent turf field infill pellets from escaping into the river or buffer areas. The bridge and boardwalk shall be solid construction (no gaps between boards) and shall have a side “kickboard.” Decking boards and kickboards shall be repaired and replaced as needed over time to ensure that infill pellets do not escape into the river or restoration area. **This Condition is ongoing and will not end with the issuance of a Certificate of Compliance.**
48. Open grating shall be installed along the ramps at the approaches to the boardwalk to collect infill pellets from players’ cleats. Signage shall be placed at the ramps instructing players to knock pellets into the grating. Long-term operation and maintenance shall include cleaning out pellets collected and replacing signage as needed. **This Condition is ongoing and will not end with**

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the issuance of a Certificate of Compliance.

49. The lighting design for the pedestrian bridge and pathways shall be reviewed and approved by Conservation staff prior to installation. The Conservation Commission's intent is to avoid any direct lighting into the river and to reduce to the maximum extent feasible the lighting of the vegetated buffer along the riverbank, which is a prime nighttime feeding area for herons and other predators during the spring migration of adult river herring. Lighting on the bridge shall be designed such that it will not shed any direct light into the river and shall be at the lowest level feasible for safe passage. On the pathways, lights shall be focused on the pathway and a few feet beyond as needed for safety. **This Condition is ongoing and will not end with the issuance of a Certificate of Compliance.**
50. Adequate trash receptacles shall be placed on either side of the pedestrian bridge and shall be cleaned out regularly as part of routine operation and maintenance. **This Condition is ongoing and will not end with the issuance of a Certificate of Compliance.**
51. If dewatering is necessary during construction, the Conservation Administrator shall be notified including the procedures and locations proposed. Dewatering shall be conducted in a manner that prevents discharge of turbid water to wetland resource areas. Unless otherwise directed by the Commission or its Administrator, excess water shall be pumped to a filter bag, lined haybale corral, sedimentation basin and/or sedimentation tank, located in an upland area at least 50 feet from the wetland line.
52. There shall be no stockpiling of soil or other erodible materials within 50 feet of the wetland line. Stockpiles shall be protected by tarps or erosion controls.
53. If unforeseen problems occur during construction which may affect the statutory interest of the Wetlands Protection Act or the Town of Weymouth's Wetlands Protection Ordinance, upon discovery by either the Conservation Commission, its agent, or the applicant, the Commission shall immediately be notified, and an immediate meeting shall be held between the Commission or its agent, the applicant, and other concerned parties to determine the correct measures to be employed. The applicant shall then act to correct the problems using the corrective measures agreed upon. Subsequent to resolution, the activity, resulting actions and timeframes shall be documented in writing.
54. As soon as possible during construction, all disturbed upland areas shall be brought to final finished grade and either (a) loamed and seeded in accordance with USDA Soil Conservation Service Guidelines for permanent stabilization, or (b) stabilized in another way approved by the Conservation Commission. Bare ground that cannot be permanently stabilized within 30 days shall be stabilized by temporary measures acceptable to the Commission.

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55. Servicing of equipment (including, but not limited to, fueling, changing, adding or applying lubricants or hydraulic fluids) as well as overnight storage of equipment shall be done as far as possible, but in no case closer than 50 feet, to the wetland line. Such equipment must be maintained to prevent leakage or discharge of pollutants. Spill containment equipment shall be maintained on site.
56. Erosion control blankets shall be used on newly created slopes that are equal to or steeper than a 3:1 slope. Physical controls (such as rip-rap slopes) shall be used for slopes equal to or steeper than a 2:1 slope.

Restoration/Mitigation

57. Following construction, the limit of work/staging area on the west side of the river shall be restored by planting the equivalence of the trees and shrubs removed prior to construction. The area shall be seeded with an upland seed mix (New England Roadside Matrix Upland Seed Mix, by New England Wetland Plants, or approved equivalent).
58. A plan for restoration of disturbed areas on the Conservation parcel shall be submitted for review and approval by the Conservation Commission or its Administrator. The goal of the plan shall be to replace trees and shrubs removed from the Conservation parcel with appropriate native species and to restore areas where grading and other project disturbances occurred. Planting of trees and shrubs on both sides of the river embankment shall be incorporated into the plan if trees or shrubs were removed from the embankment for placement of the bridge. A seed mix appropriate to the area shall also be included in the planting plan. It is the Commission's intention that this work be conducted as soon as possible following construction.
59. Restoration planting areas on the east and west sides of the brook shall be monitored for two calendar years, during which time invasive plant species shall be removed and plant specimens replaced as needed. A first-year and second-year monitoring report, with observations and recommendations, shall be provided to the Commission (electronic and hard copy).
60. Additional mitigation for this project, to be coordinated with the Conservation Commission and/or its staff, shall include:
 - a. The placement of educational signage at the field/along walkways to educate users about the Herring Run and the Back River Trail, and to instruct athletes to stomp cleats to remove pellets into the grating at the boardwalk approaches.
 - b. Limited removal of surface debris from the Conservation parcel as agreed to by the applicant and the Conservation Commission or its staff. This condition is meant to address debris at the surface that can be removed

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readily; it is not meant to require large-scale removal of dumped fill piles or other material that will be costly and difficult to remove.

- c. Purchase of baffles for the herring run fish ladders, to be coordinated with Conservation staff and the Herring Warden.
 - d. Purchase and installation of grates to be installed over accessible areas of the Iron Hill fish ladder.
 - e. Removal of sediments from the “Middle Pool” herring resting pool (located at the intersection of Water and Commercial Streets) prior to March 1, 2021. Work to be conducted under the direction of Conservation staff and the Weymouth Herring Warden.
61. The town shall take the following steps to come into compliance with the Order of Conditions for the Lovell Field athletic field project (DEP File #81-1184):
- a. Athletic field lighting at Lovell Field shall be shielded/redirected to avoid spilling light into the riverfront restoration area (condition #66);
 - b. Perimeter erosion controls installed for that project shall be removed (condition #54);
 - c. Monitoring reports shall be submitted, invasive plant species shall be managed, and replanting shall be conducted as needed to meet restoration goals (condition #68); and
 - d. The unauthorized path through the restoration area shall be restored with appropriate seed mix, shrubs and trees (as per condition #36 of this Order).

Post-Construction Conditions

62. Once the bridge is in use, routine operation and maintenance activities shall include: inspecting the riverfront area and removing trash following games; removing infill pellets from the grating at the boardwalk; ensuring that bridge and boardwalk decking and kickboards are intact and butted firmly to prevent escape of infill pellets; and checking that night lighting is operating as per these Order of Conditions. **This Condition is ongoing and will not end with the issuance of a Certificate of Compliance.**
63. The Conservation Commission reserves the right to require future measures, such as fencing or netting above/around the pedestrian bridge, if it determines that additional measures are needed to prevent trash from entering the river. **This Condition is ongoing and will not end with the issuance of a Certificate of Compliance.**

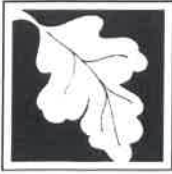
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64. By approving the proposed pedestrian bridge, and concluding that the preferred alternative is less damaging than the alternative crossings or pathways presented in the Notice of Intent, the Commission expects that the river crossing and pathways approved herein will become the Back River Trail connection through the Conservation parcel (Map 19, Block 253, Lot 25) and that the Town of Weymouth will not make further requests to construct river crossings or extensive pathways through the Conservation parcel.
65. Upon completion of the project, the applicant shall request a Certificate of Compliance. The applicant may request a Partial Certificate of Compliance upon completion of any discrete phase of the project. All Conditions in the Order must be complied with prior to the issuance of a Final Certificate of Compliance. The request shall be accompanied by the following items:
 - a. A written statement by a professional engineer or land surveyor registered in the Commonwealth of Massachusetts certifying compliance with the Notice of Intent, the approved plans, and this Order of Conditions and setting forth what deviations exist, if any;
 - b. Two sets and one electronic copy of an as-built site plan prepared by a registered land surveyor or a registered professional engineer showing those activities for which the Certificate of Compliance is sought. The as-built plan shall include a plan and profile view of the final bridge structure and abutments, and shall show the boardwalk, pedestrian walkways, final contours within the limit of work, and location of wetland flags.
66. There shall be no underground storage of fuel or other hazardous substance within the Riverfront Area or within 100 feet of a Bordering Vegetated Wetland. **This Condition is ongoing and will not end with the issuance of a Certificate of Compliance.**
67. No rock salt (sodium chloride) or other deicing chemical shall be used within the Riverfront Area or within 100 feet of a Bordering Vegetated Wetland. **This Condition is ongoing and will not end with the issuance of a Certificate of Compliance.**
68. Except as approved by the Commission for use within buffer restoration areas to control invasive plants, no herbicides or pesticides shall be used within the Riverfront Area or within 100 feet of a Bordering Vegetated Wetland. Within these areas, only low-nitrogen or low-phosphorus fertilizers will be allowed and shall be used in moderation. **This condition is ongoing and will not end with the issuance of a Certificate of Compliance.**
69. No dumping of any debris or leaves and grass clippings into wetland resource areas or the buffer restoration area shall be allowed. **This Order is ongoing and will not end with the issuance of a Certificate of Compliance.**

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70. Under no circumstances shall snow be dumped or deposited into any wetland area, buffer restoration area, or stormwater management feature. **This is a continuing condition and shall not expire with the issuance of a Certificate of Compliance.**

[End of special 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.

11/24/2020

1. Date of Issuance


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

3

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.

	Thomas Tanner
Signature	Printed Name
Signature	John Reilly
Signature	Printed Name
Signature	Scott Dowd
Signature	Printed Name
Signature	George Loring
Signature	Printed Name
Signature	Frank Singleton
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name

by hand delivery on
 November 24, 2020
 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.

Conservation Commission

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

To:

Conservation Commission

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

Project Location

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for: Property Owner

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

Book

Page

In accordance with the Order of Conditions issued on:

Date

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

Instrument Number

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

Document Number

Signature of Applicant



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

DEP File Number:
81-1261

**Request for Departmental Action Fee
Transmittal Form**

Provided by DEP

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

A. Request Information

1. Location of Project

"0" Commercial St

a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

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

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

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

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

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



B. Instructions

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

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

Superseding Determination of Applicability – Fee: \$120

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



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee
Transmittal Form

DEP File Number:

81-1261
 Provided by DEP

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

B. Instructions (cont.)

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

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

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

APPENDIX D

MA DEP CHAPTER 91 LICENSE



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Kathleen A. Theoharides
Secretary

Karyn E. Polito
Lieutenant Governor

Martin Suuberg
Commissioner

February 24, 2022

Town of Weymouth
c/o Lucas Environmental, LLC
Attn: Thomas Liddy
500A Washington Street
Quincy, MA 02169

RE: ISSUANCE OF CHAPTER 91 WATERWAYS LICENSE
Waterways License Application No. W21-6040, License No. 15483
Town of Weymouth, Herring Brook, Pedestrian Bridge at Lovell Field, 0 Commercial St.

Dear Sir or Madam,

The Department of Environmental Protection hereby issues the above-referenced Waterways License, enclosed, authorizing you to perform certain activities pursuant to M.G.L. c. 91, the Public Waterfront Act and its regulations 310 CMR 9.00. Any change in use or alteration of any structure or fill not authorized by this license may render this license void.

This License is not final until all administrative appeal periods from this License have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed. The appeal period is for twenty-one (21) days. No work shall be undertaken until the License has become final and 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

RECORDING OF THE LICENSE

This License must be recorded at the Registry of Deeds or, if registered land, with the Land Registration Office within sixty (60) days from the date of license issuance. In the case of recorded land, the License shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the project is located. In the case of the registered land, the License shall be noted on the Land Court Certificate of Title of the owner of the land upon which the project is located. **Failure to record this license within sixty (60) days of the date of issuance will render this license void pursuant to 310 CMR 9.18.**

A Waterways License Recordation Notice Form has been enclosed for your use in notifying the Department of the recording information for this License. **Failure to notify the Department of the recording of this license is a violation of 310 CMR 9.00 and is subject to enforcement action by the Department.**

REQUEST CERTIFICATE OF COMPLIANCE

Pursuant to 310 CMR 9.19, once the proposed project is completed you must file a Request for a Certificate of Compliance form, BRP WW05, within sixty (60) days of completion but in no event later than five (5) years from the License's issuance date. The license for any project for which such a request is not filed and certificate issued may be revoked pursuant to 310 CMR 9.26.

NOTICE OF APPEAL RIGHTS

Who has the right to appeal?

The following persons shall have the right to an adjudicatory hearing concerning this decision by the Department to grant or deny a license or permit, in accordance with 310 CMR 9.17(1): (a) an applicant who has demonstrated property rights in the lands in question, or which is a public agency; (b) any person aggrieved by the decision of the Department to grant a license or permit who has submitted written comments within the public comment period; (c) ten (10) residents of the Commonwealth who, pursuant to M.G.L. c. 30A, § 10A, have submitted comments within the public comment period with at least 5 of the 10 residents residing in the municipality(s) in which the license or permitted activity is located. The appeal shall clearly and specifically state the facts and grounds for the appeal and the relief sought, and each appealing resident shall file an affidavit stating the intent to be part of the group and to be represented by its authorized representative; (d) the municipal official in the affected municipality who has submitted written comments within the public comment period; and (e) CZM, for any project identified in 310 CMR 9.13(2) (a) for CZM participation or, in an Ocean Sanctuary, if it has filed a notice of participation within the public comment period.

How can I request an adjudicatory hearing?

A person requesting an adjudicatory hearing must submit a "Notice of Claim" to the Department, with a copy of the MassDEP Transmittal Form and including the detail specified below, within twenty-one (21) days of the date of issuance of this decision. The MassDEP Fee Transmittal Form is available at the following website: <http://www.mass.gov/eea/docs/dep/service/adr/adjherfm.doc>. The Notice of Claim must be made in writing and sent by certified mail or hand delivery to:

Case Administrator
MassDEP
One Winter Street, 2nd Floor
Boston, MA 02108

A copy of the complete Notice of Claim must be sent at the same time by certified mail or hand delivery to: (1) the applicant, (2) the municipal official of the city or town where the project is located, and (3) the issuing office of the MassDEP, which in this case is located at:

MassDEP Waterways Regulation Program
20 Riverside Drive
Lakeville, MA 02347

The MassDEP Fee Transmittal Form and a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100) must be mailed to:

Mass. Department of Environmental Protection
Commonwealth Master Lockbox
P.O. Box 4062
Boston, Massachusetts 02211

What information must be included in the hearing request?

Pursuant to 310 CMR 9.17(3), any Notice of Claim requesting an adjudicatory hearing must include the following information:

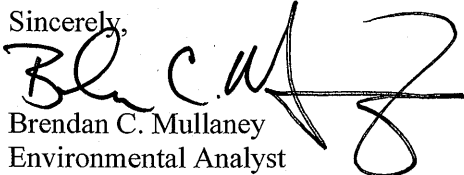
- (a) the MassDEP Waterways Application File Number;
- (b) the complete name, address, fax number and telephone number of the applicant;
- (c) the address of the project;
- (d) the complete name, address, fax number, and telephone number of the party filing the request and, if represented by counsel, the name, address, fax number, and phone number of the attorney;
- (e) if claiming to be a person aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found in 310 CMR 9.02;
- (f) a clear statement that a formal adjudicatory hearing is being requested;
- (g) a clear statement of the facts which are the grounds for the proceedings, the specific objections to the MassDEP's written decision, and the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written decision; and
- (h) a statement that a copy of the request has been sent to: the applicant and the municipal official of the city or town where the project is located.

Dismissal of request

The request for appeal will be dismissed if the filing fee is not paid, unless the appellant is exempt or is 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.

Please feel free to contact David Hill of the Wetlands and Waterways Program, (508) 946-2730 or david.hill@mass.gov, if you have any questions pertaining to the Chapter 91 License.

Sincerely,


Brendan C. Mullaney
Environmental Analyst
Wetlands and Waterways Program

cc: w/enc. Daniel J. Padien, Waterways Program Chief, DEP Boston
Office of Coastal Zone Management
Weymouth Harbormaster
Weymouth Conservation Commission
Town of Weymouth, Attn: Robert Luongo

David E. Hill
Department of Environmental Protection
Wetlands & Waterways Program
20 Riverside Drive
Lakeville, MA 02347

RE: Waterways Application No. W21-6040, License No. 15483
Herring Brook, Weymouth, Norfolk County

Dear Mr. Hill:

This is to notify you that the above referenced Waterways license was recorded with the appropriate Registry of Deeds / Land Court for this project location and to provide your office with the following recordation information.

Date of Recordation: _____

County Registry of Deeds: _____

Book number _____ and page number(s) _____

Land Court: _____

Land Court Lot # _____ Plan # _____

Certificate Document Number _____

We will notify your office in writing of the date the authorized work or change in use is completed.

Sincerely,

_____, Chapter 91 Waterways Licensee

**LICENSE VOID
IF NOT RECORDED
WITHIN 60 DAYS
OF ISSUANCE**

The Commonwealth of Massachusetts



No. 15483

Whereas, Town of Weymouth

of -- Weymouth -- in the County of -- Norfolk -- and Commonwealth aforesaid, has applied to the Department of Environmental Protection for license to -- construct and maintain a pedestrian bridge --

and has submitted plans of the same; and whereas due notice of said application, ~~and of the time and place fixed for a hearing thereon,~~ has been given, as required by law, to the -- Mayor and Town Council -- of the -- Town of Weymouth. --

NOW, said Department, having heard all parties desiring to be heard, and having fully considered said application, hereby, subject to the approval of the Governor, authorizes and licenses the said

-- Town of Weymouth --, subject to the provisions of the ninety-first chapter of the General Laws, and of all laws which are or may be in force applicable thereto, to -- construct and maintain a pedestrian bridge --

over the waters of -- Herring Brook -- at -- Lovell Field, 0 Commercial Street -- in the -- Town of Weymouth -- and in accordance with the locations shown and details indicated on the accompanying DEP License Plan No. 15483 (4 sheets).

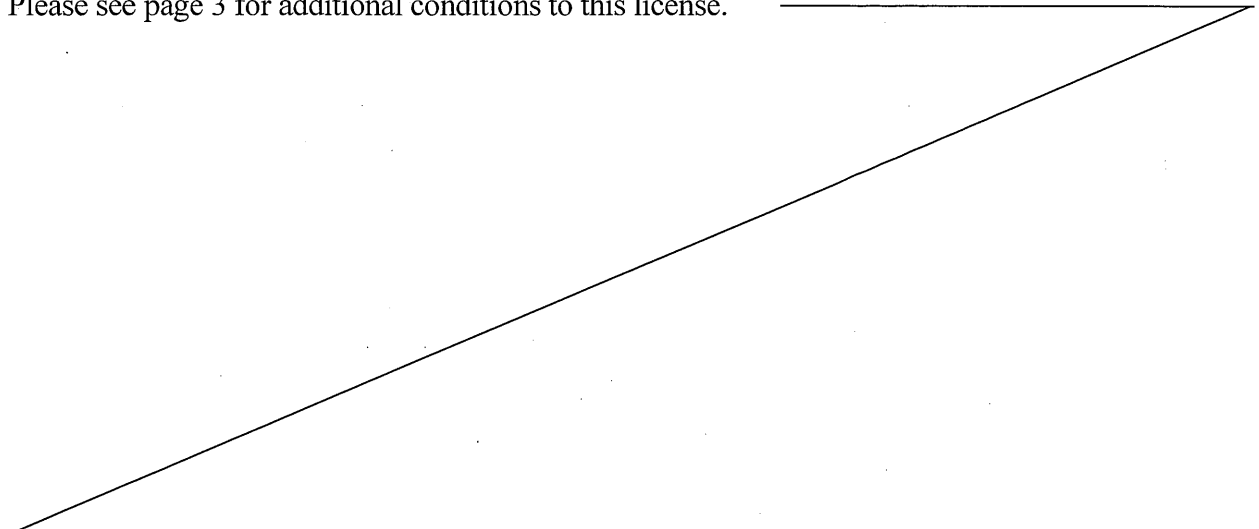
The structures hereby authorized shall be limited to the following use(s): public access to waterfront open space for passive recreational purposes.

This license is issued for an unlimited term in accordance with 310 CMR 9.15(1)(c).

Special Waterways Conditions:

1. In accordance with any license condition, easement, or other public right of lateral passage that exists in the area of the subject property lying between the high and low water marks, the Licensee shall allow the public in the exercise of such rights to pass freely over or around all structures within such intertidal area. Nothing in this condition shall be construed as preventing the Licensee from excluding the public from portions of said structure(s) or property not intended for lateral passage.
2. All work authorized herein shall be completed within five (5) years of the date of license issuance. Said construction period may be extended by the Department for one or more one year periods without public notice, provided that the Applicant submits to the Department, thirty (30) days prior to the expiration of said construction period, a written request to extend the period and provides an adequate justification for said extension.
3. Within sixty (60) days of completion of the licensed project, the Licensee shall request, in writing, that the Department issue a Certificate of Compliance in accordance with 310 CMR 9.19. The request shall be accompanied by a certification by a registered professional engineer licensed in the Commonwealth that the project was completed in accordance with the License.

Please see page 3 for additional conditions to this license.



Duplicate of said plan, number 15483 is on file in the office of said Department, and original of said plan accompanies this License, and is to be referred to as a part hereof.

STANDARD WATERWAYS LICENSE CONDITIONS

1. Acceptance of this Waterways License shall constitute an agreement by the Licensee to conform with all terms and conditions stated herein.
2. This License is granted upon the express condition that any and all other applicable authorizations necessitated due to the provisions hereof shall be secured by the Licensee prior to the commencement of any activity or use authorized pursuant to this License.
3. Any change in use or any substantial structural alteration of any structure or fill authorized herein shall require the issuance by the Department of a new Waterways License in accordance with the provisions and procedures established in Chapter 91 of the Massachusetts General Laws. Any unauthorized substantial change in use or unauthorized substantial structural alteration of any structure or fill authorized herein shall render this Waterways License void.
4. This Waterways License shall be revocable by the Department for noncompliance with the terms and conditions set forth herein. This license may be revoked after the Department has given written notice of the alleged noncompliance to the Licensee and those persons who have filed a written request for such notice with the Department and afforded them a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render this Waterways License void and the Commonwealth may proceed to remove or cause removal of any structure or fill authorized herein at the expense of the Licensee, its successors and assigns as an unauthorized and unlawful structure and/or fill.
5. The structures and/or fill authorized herein shall be maintained in good repair and in accordance with the terms and conditions stated herein and the details indicated on the accompanying license plans.
6. Nothing in this Waterways License shall be construed as authorizing encroachment in, on or over property not owned or controlled by the Licensee, except with the written consent of the owner or owners thereof.
7. This Waterways License is granted subject to all applicable Federal, State, County, and Municipal laws, ordinances and regulations including but not limited to a valid final Order of Conditions issued pursuant to the Wetlands Protection Act, G.L. Chapter 131, s.40.
8. This Waterways License is granted upon the express condition that the use of the structures and/or fill authorized hereby shall be in strict conformance with all applicable requirements and authorizations of the MassDEP.
9. This License authorizes structure(s) and/or fill on:

 Private Tidelands. In accordance with the public easement that exists by law on private tidelands, the licensee shall allow the public to use and to pass freely upon the area of the subject property lying between the high and low water marks, for the purposes of fishing, fowling, navigation, and the natural derivatives thereof.

 X Commonwealth Tidelands. The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, upon lands lying seaward of the low water mark. Said lands are held in trust by the Commonwealth for the benefit of the public.

 a Great Pond of the Commonwealth. The Licensee shall not restrict the public's right to use and to pass freely upon lands lying seaward of the high water mark for any lawful purpose.

 Navigable River and Streams. The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, in the waterway.

No restriction on the exercise of these public rights shall be imposed unless otherwise expressly provided in this license.

10. Unless otherwise expressly provided by this license, the licensee shall not limit the hours of availability of any areas of the subject property designated for public passage, nor place any gates, fences, or other structures on such areas in a manner that would impede or discourage the free flow of pedestrian movement thereon.

The amount of tide-water displaced by the work hereby authorized has been ascertained by said Department, and compensation thereof has been made by the said -- Town of Weymouth -- by paying into the Treasury of the Commonwealth -- zero dollars and zero cents (\$ 0.00) -- for each cubic yard so displaced, being the amount hereby assessed by said Department.

Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying plan are recorded within 60 days from the date hereof, in the Registry of Deeds for the County of Norfolk.

IN WITNESS WHEREAS, said Department of Environmental Protection have hereunto set their hands this 24th day of February in the year two thousand twenty-two.

for Program Chief Blair C. [Signature]

Department of Environmental Protection

Commissioner [Signature]

THE COMMONWEALTH OF MASSACHUSETTS

This license is approved in consideration of the payment into the treasury of the Commonwealth by the said -- Town of Weymouth --

of the further sum of -- zero dollars and zero cents (\$ 0.00) --

the amount determined by the Governor as a just and equitable charge for rights and privileges hereby granted in the land of the Commonwealth.

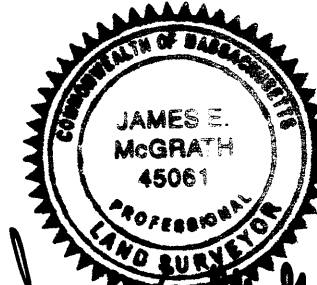
BOSTON,

Approved by the Governor.

Charles D. Baker

Governor

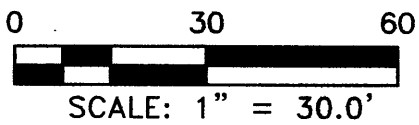
I CERTIFY THAT THIS PLAN,
AS PREPARED, CONFORMS TO THE
RULES AND REGULATIONS OF THE
REGISTRY OF DEEDS



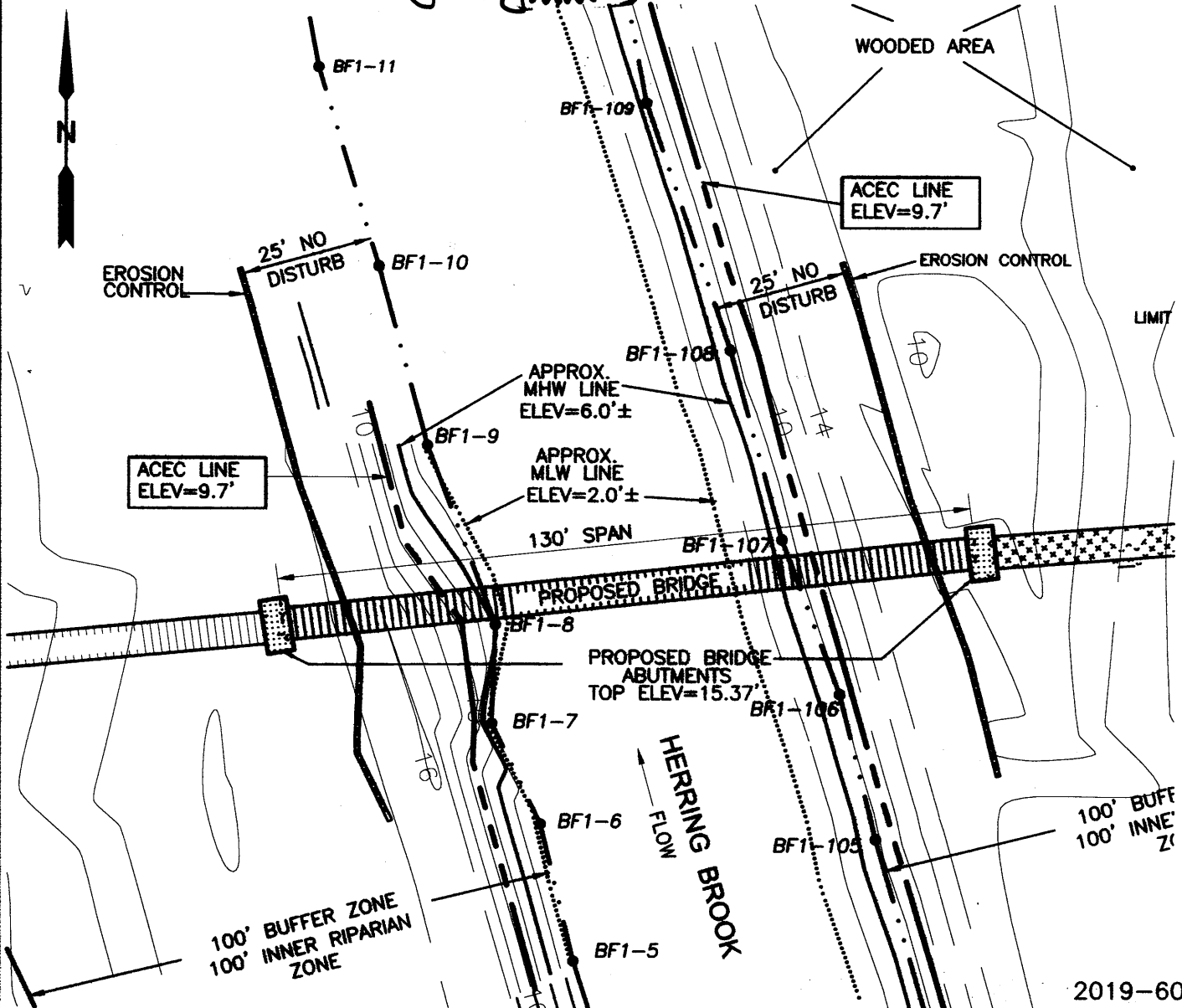
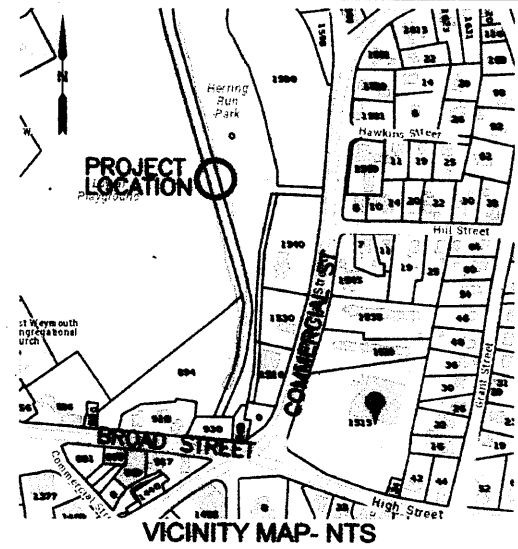
James E. McGrath

GENERAL NOTES:

1. VERTICAL DATUM: NAVD88.
2. ALL WORK TO BE PERFORMED OUTSIDE OF ACEC DESIGNATION.
3. ALL PROPOSED WORK TO BE OUTSIDE OF FEMA FLOOD HAZARD AREAS SHOWN OF FIRM PANEL 25021C0233E DATED 7-17-2012.
4. NO IN-WATER WORK IS PROPOSED.
5. APPROXIMATE MEAN WATER ELEVATIONS BASED ON FIELD SURVEY.



James J. Donohue



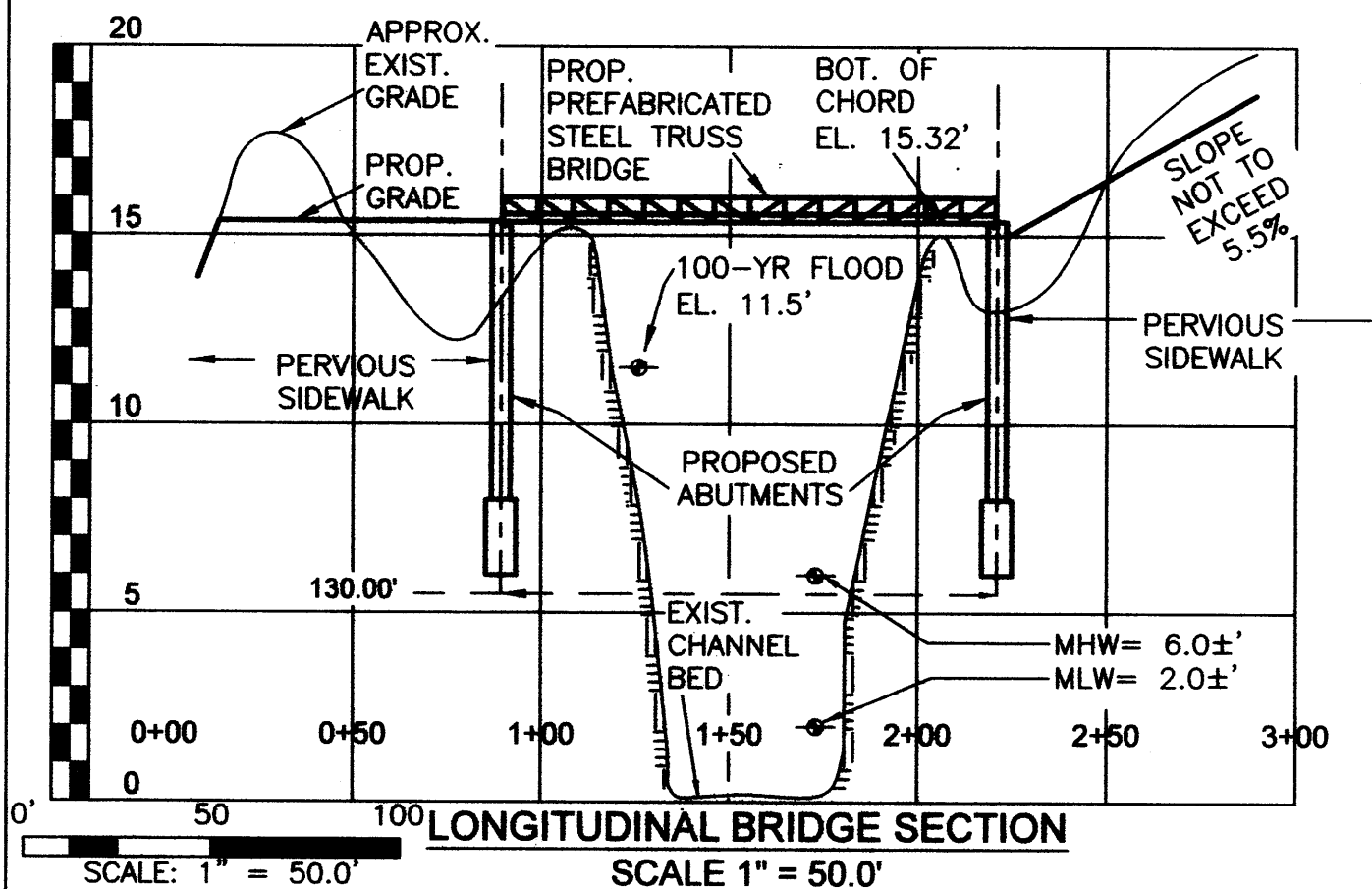
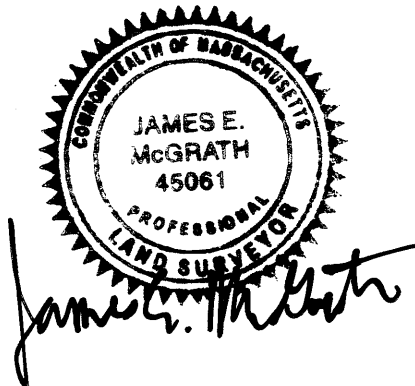
2019-60

**PLANS ACCOMPANYING PETITION OF
TOWN OF WEYMOUTH, MA
PEDESTRIAN BRIDGE OVER HERRING
BROOK**
PREPARED BY WEYMOUTH PUBLIC WORKS
JULY 16, 2021
THIS PLAN IS FOR PERMITTING PROCESSES ONLY.
SHEET 1 OF 4

LICENSE PLAN NO. 15483
Approved by Department of Environmental Protection
of Massachusetts
[Signature] 2/24/2022
[Signature]

W21-6040

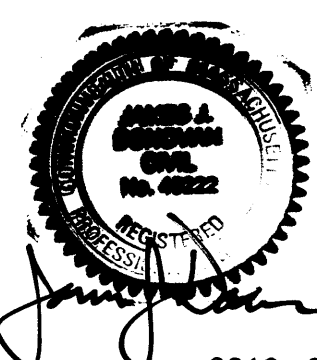
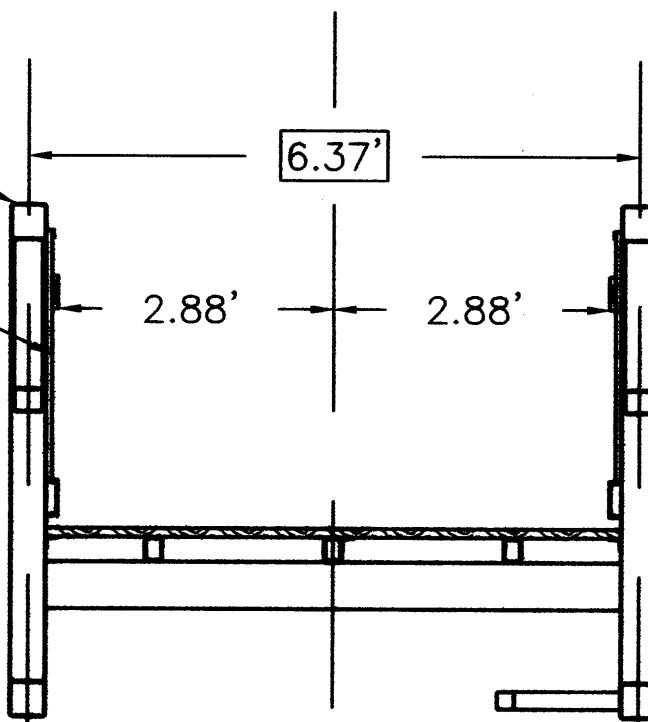
I CERTIFY THAT THIS PLAN,
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REGISTRY OF DEEDS



PROP.
PREFABRICATED
STEEL TRUSS

PROP.
PEDESTRIAN
BRIDGE
RAIL

NOTES:
SEE SHEET 1
FOR GENERAL
NOTES



2019-60

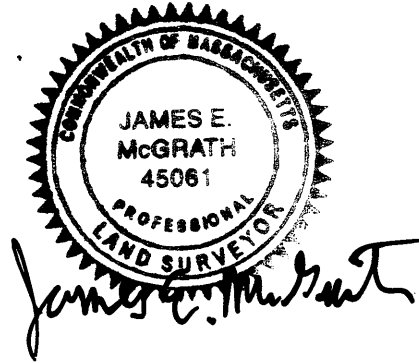
PLANS ACCOMPANYING PETITION OF
TOWN OF WEYMOUTH, MA
PEDESTRIAN BRIDGE OVER HERRING
BROOK

PREPARED BY WEYMOUTH PUBLIC WORKS
JULY 16, 2021

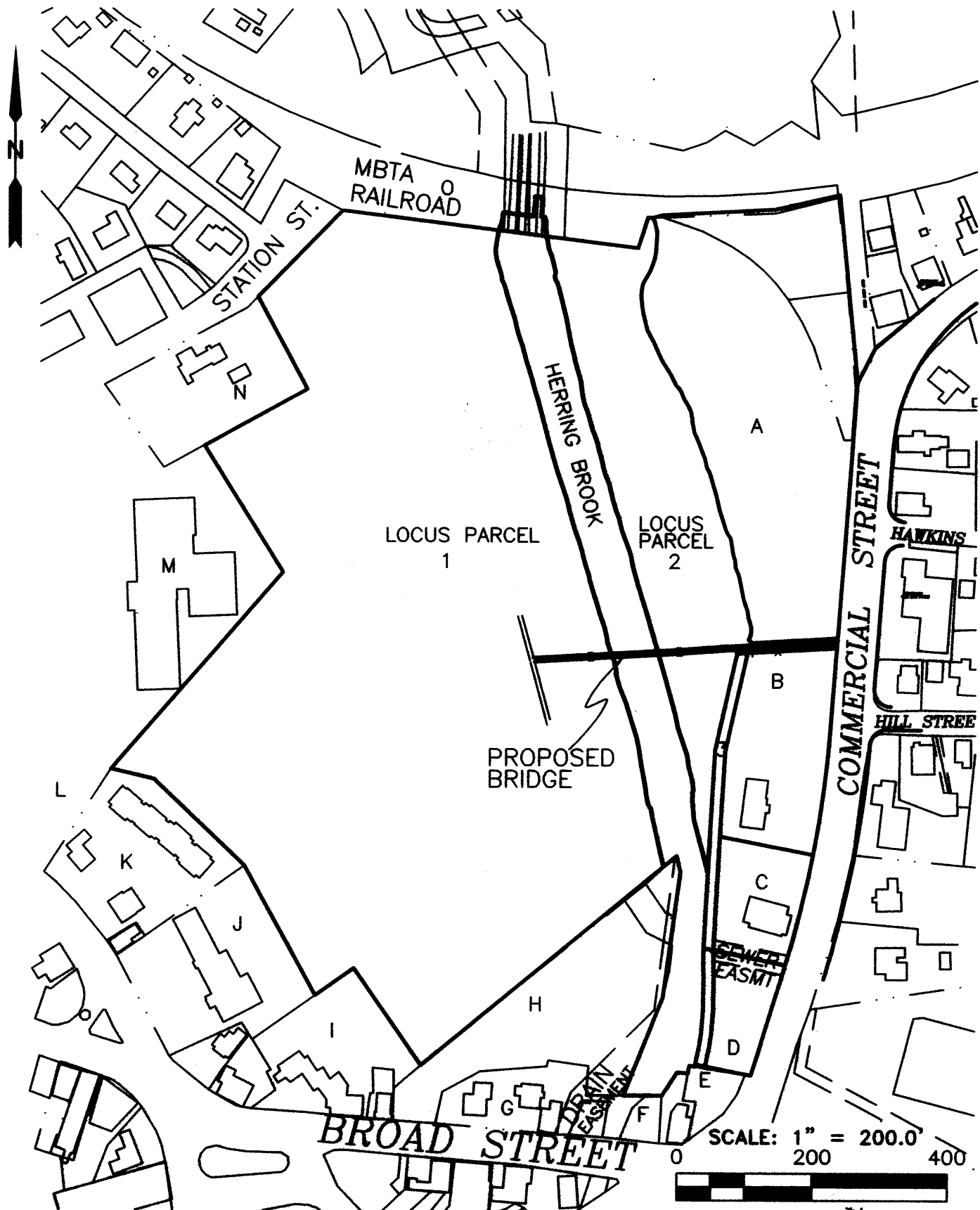
THIS PLAN IS FOR PERMITTING PROCESSES ONLY.
SHEET 2 OF 4

LICENSE PLAN NO. 15483
Approved by Department of Environmental Protection
Date: 2/24/2022

I CERTIFY THAT THIS PLAN,
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REGISTRY OF DEEDS



PROPERTY PLAN

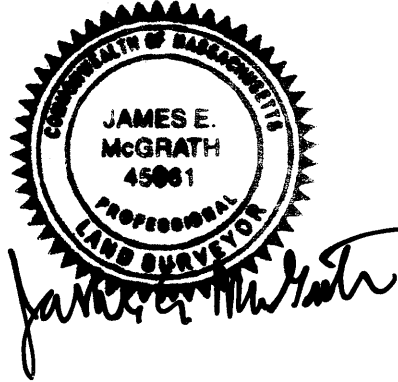


PLANS ACCOMPANYING PETITION OF
TOWN OF WEYMOUTH, MA
PEDESTRIAN BRIDGE OVER HERRING
BROOK
PREPARED BY WEYMOUTH PUBLIC WORKS
JULY 16, 2021
THIS PLAN IS FOR PERMITTING PROCESSES ONLY.
SHEET 3 OF 4

LICENSE PLAN NO. 15483
Approved by Department of Environmental Protection
Date:

2/24/2022

I CERTIFY THAT THIS PLAN,
AS PREPARED, CONFORMS TO THE
RULES AND REGULATIONS OF THE
REGISTRY OF DEEDS



SCHEDULE OF ABUTTERS:

- A 19-158-3 1580 COMMERCIAL ST., WEYMOUTH, MA 02189
MBTA C/O PETER SLEEPER, PO BOX 455, ARLINGTON, MA 02474
- B 19-253-35 1540 COMMERCIAL ST., WEYMOUTH, MA 02189
JOHN P. BELLAS, 9 INDEPENDENCE LN., HINGHAM, MA 02043
- C 23-253-24 1530 COMMERCIAL ST., WEYMOUTH, MA 02189
STOKES FAMILY REV. TRUST, 74 PUTNAM ST., WEYMOUTH, MA 02189
- D 23-253-23 1516 COMMERCIAL ST., WEYMOUTH, MA 02189,
SUSAN CLARK & KATHLEEN BAILEY, 142 HERITAGE, LN., WEYMOUTH, MA
02189
- E 23-253-22 0 COMMERCIAL STREET, WEYMOUTH, MA 02189
TOWN OF WEYMOUTH, 75 MIDDLE ST., WEYMOUTH, MA 02189
- F 23-253-21 948 BROAD STREET, WEYMOUTH, MA 02189
DESPINA & NICHOLAS PAPACHRISTOS, 66 IRON HILL ST., WEYMOUTH, MA
02189
- G 23-253-17 948 BROAD ST., WEYMOUTH, MA 02189
JAMES J. PICA, PO BOX 890124-003
- H 23-253-27 894 BROAD STREET, WEYMOUTH, MA 02189
TOWN OF WEYMOUTH PARK DEPT., 75 MIDDLE ST., WEYMOUTH, MA 02189
- I 23-253-14 684 BROAD ST., WEYMOUTH, MA 02189
CHAPELS INC. C/O RUSSELL PECK, PO BOX 692243, QUINCY, MA 02269
- J 23-253-11 1320 COMMERCIAL ST., WEYMOUTH, MA 02189
CONGREGATIONAL CHURCH C/O MICHAEL G. FULLER, TREASURER
- K 23-253-9 1284 COMMERCIAL ST., WEYMOUTH, MA 02189
JACKSON PLACE CONDOMINIUM
- L 23-253-7 1282 COMMERCIAL ST., WEYMOUTH, MA 02189
BONFIGLIOLI LLC, 536 HANCOCK ST., QUINCY, MA 02170
- M 19-253-53 1250 COMMERCIAL ST., WEYMOUTH, MA 02189
TOWN OF WEYMOUTH SCHOOL DEPT., 75 MIDDLE ST, WEYMOUTH, MA 02189
- N 19-253-29 41 STATION ST., WEYMOUTH, MA 02189
RITA M. BACON, 31 STATION ST., WEYMOUTH, MA 02189
- O 19-158-10 0 STATION ST., WEYMOUTH, MA 02189
MBTA 10 PARK PLAZA, ROOM 5720, BOSTON, MA 02116
- 1 23-253-26 0 COMMERCIAL ST, WEYMOUTH, MA 02189
TOWN OF WEYMOUTH PARK DEPT., 75 MIDDLE ST., WEYMOUTH, MA 02189
- 2 19-253-25 0 COMMERCIAL ST., WEYMOUTH, MA 02189
TOWN OF WEYMOUTH CONSERVATION, 75 MIDDLE ST., WEYMOUTH, MA 02189
- 3 23-253-37 0 COMMERCIAL ST., WEYMOUTH, MA 02189
TOWN OF WEYMOUTH, 75 MIDDLE ST., WEYMOUTH, MA 02189

2019-60

**PLANS ACCOMPANYING PETITION OF
TOWN OF WEYMOUTH, MA
PEDESTRIAN BRIDGE OVER HERRING
BROOK**
PREPARED BY WEYMOUTH PUBLIC WORKS
JULY 16, 2021
THIS PLAN IS FOR PERMITTING PROCESSES ONLY.
SHEET 4 OF 4

LICENSE PLAN NO. 15483
Approved by Department of Environmental Protection
Date:

2/24/2022

APPENDIX E

GEI GEOTECHNICAL ENGINEERING REPORT



Consulting
Engineers and
Scientists

May 3, 2023
Project 2300649

Mr. William J. Scully, P.E.
Kimley-Horn and Associates, Inc.
404 Wyman Street, Suite 385
Waltham, MA 02451

Dear Mr. Scully:

Re: **Results of Subsurface Investigations and Geotechnical Recommendations
Lovell Field Pedestrian Bridge
Weymouth, Massachusetts**

This letter report presents the results of a subsurface investigation and our geotechnical recommendations for design and construction of the proposed new pedestrian bridge that will be constructed over Herring Brook on the east side of Lovell Field in Weymouth, Massachusetts.

Scope of Work

Our scope of work consisted of the following:

- Engaged a drilling subcontractor to perform three borings.
- Reviewed the results of the borings and developed soil properties for geotechnical analyses.
- Prepared this letter presenting the results of the borings and our geotechnical recommendations for the design and construction of the pedestrian bridge.

Project Design Basis

Our recommendations conform to the American Association of State Highway and Transportation Officials (AASHTO) "LRFD Bridge Design Specifications, Ninth Edition, 2020" (AASHTO Bridge Specifications), "2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2nd Edition" with 2012, 2014, and 2015 Interim Revisions (AASHTO Seismic Guide), and the MassDOT "LRFD Bridge Manual, 2013 Edition, revised 2020" (MassDOT Bridge Manual).

Site and Project Description

The site is located on Herring Brook which runs roughly north/south between Lovell Field on the west and Commercial Street on the east, in Weymouth Massachusetts (Figs. 1 and 2).

We understand that the Town of Weymouth is planning to install a pedestrian bridge over Herring Brook that will connect existing parking areas along Commercial Street to the perimeter walking paths around Lovell Field. The proposed bridge will be about 120 feet long. The abutments for the proposed bridge will be located about 35 to 40 feet back from the edge of Herring Brook to reduce construction impacts to the brook. The project will include gravel paths leading to the bridge from Commercial Street and a raised 100-foot-long boardwalk on the Lovell Field side of the bridge. Preliminary plans for the bridge are shown in the notice of intent drawings, included in Appendix C.

Elevation Datum

Elevations in this report are in feet and are referenced to the Town of Weymouth (T.O.W) Datum. According to the notice of intent drawings, T.O.W. Datum is 6.63 ft lower than the 1988 North American Vertical Datum (NAVD 1988). El. 6.63 T.O.W = El. 0.00 NAVD.

Site Geology

The U.S.G.S. surficial geology map of the Weymouth quadrangle (Stone, B. and a DiGiacom-Cohen, M., 2018) indicates the soils in the project area consist mainly of coarse deposits of sand and gravel underlain by glacial till. The coarse deposits are described as well sorted to poorly sorted deposits of gravel, sand, and gravel and sand, with varying amounts of fines. The layer is also reported to contain cobbles and boulders.

Exploration Program

Northern Drill Service, Inc. of Northborough, Massachusetts advanced three borings, GEI-101 to GEI-103, on February 21, 2023. A GEI field engineer observed and logged the drilling. The boring locations are shown in Fig. 2. The boring logs are provided in Appendix A.

GEI-101 and GEI-102 were drilled near each of the proposed bridge abutments and they were advanced to depths of 31 feet and 26 feet, respectively. GEI-103 was drilled at the location of the proposed boardwalk and it was advanced to a depth of 12 feet. The borings were advanced using flush-jointed casing and rotary-wash drilling techniques. Standard Penetration Tests (SPTs) were performed and split-spoon samples were collected at two- to five-foot intervals. In GEI-101 and GEI-102, continuous SPT sampling was performed through the top 10 to 16 feet and at 5-foot intervals thereafter. In GEI-103, continuous sampling was performed to the termination depth of the boring. After the borings were completed, the holes were backfilled with drill cuttings and Sakrete all-purpose gravel.

SPTs were performed with an automatic hammer. The hammer efficiency was assumed to be 80%, resulting in a hammer energy correction factor of $80\%/60\% = 1.33$.

The Town of Weymouth constructed a gravel path to provide access for the drill rig to GEI-101.

Subsurface Conditions

The subsurface conditions encountered in the borings are described below in order of increasing depth. Soil conditions are known only at the sampling locations and may vary significantly at other locations.

SPT N-values reported below (N_{60} values) are corrected for hammer energy and are, therefore, 1.33 times higher than the uncorrected values shown in the boring logs.

Fill: A layer of brown to black, fine to coarse sand with varying amounts of gravel and silt was encountered in borings GEI-101 and GEI-103 to depths of 10.7 feet and 8 feet, respectively. Fill was not encountered in GEI-102. In GEI-101 the fill layer contained some manmade debris, and we understand from Town of Weymouth employees that there might have been a small former landfill in this general area. The upper four feet of fill in GEI-101 consisted of the temporary fill placed by Town of Weymouth shortly before drilling to create a stable platform for the drill rig. Therefore, the depth to the bottom of the fill layer from the surrounding ground surface in GEI-101 was about 6.7 feet. In GEI-103, part of the fill layer appears to consist of the berm that is present on the east side of Lovell field. The SPT N-values corrected for hammer energy (N_{60}) in this layer ranged from 1 to 36 blows per foot (bpf) with typical values between 7 to 16 bpf, indicating a loose to medium dense soil.

Sand and Gravel: A sand and gravel layer was encountered below the fill in GEI-101 and GEI-103, and at the ground surface in GEI-102. All the borings terminated in this layer. This layer consisted of fine to coarse gravel and fine to coarse sand with up to 20% fines. The average N_{60} value in this layer was 32 bpf, indicating dense soil.

Groundwater Levels

Depth to groundwater was measured in the three borings at the completion of drilling as shown below:

Boring	Approx. Ground Surface El.	Measured Depth to Groundwater, ft	Approx. Groundwater Elevation
GEI-101	24	8.7	15.3
GEI-102	20	9.2	10.8
GEI-103	22	8.0	14

The borings were drilled with water, and it is possible that this measurement does not reflect the equalized groundwater level. The groundwater level measurements represent conditions at the times and locations indicated. Significantly different groundwater levels may occur at other times and locations.

Geotechnical Recommendations

Soil Properties

Recommended soil properties for design are presented in Table 1. We selected these values based on published correlations to SPT N-values, our review of the soil descriptions, and our engineering judgment. Calculations supporting these recommendations are presented in Appendix B.

Foundation Design

Bridge Abutments

We recommend that the new bridge abutments be supported on spread footings bearing on the dense Sand and Gravel layer or on compacted Gravel Borrow for Bridge Foundations or Crushed Stone for Bridge Foundations. Any fill or unsuitable soils below the abutment footings should be removed and replaced with Gravel Borrow backfill (MassDOT Standard Specification No. M1.03 Type b).

For the design of the abutment foundations, we recommend using the factored bearing resistance versus effective footing width curves, in Fig. 3. These curves were calculated assuming an embedment of 4 feet. The bearing resistance factors used to calculate the curves are presented in Table 2. Calculations supporting these recommendations are presented in Appendix B.

Based on the geotechnical conditions, we estimate that total and differential settlements of shallow foundations will be less than 1 inch, if bearing pressures are below the Service Limit curve in Fig. 3. We anticipate most of this settlement will occur during construction.

The bottoms of footings should extend a minimum 4 feet below the lowest final exterior grade for frost protection. Footings should be at least 3 feet wide.

To reduce the potential for pore pressures to build up behind the new abutments, we recommend that these structures be backfilled with Gravel Borrow (M1.03 Type b) and that the final design include weep holes.

Boardwalk

Loose soils were encountered to a depth of approximately 6 feet in GEI-103, with denser soil below. We recommend that the following options be considered for support of the boardwalk.

- Shallow piers (such as sonotubes or precast piers) or spread footings bearing in the fill at a depth of 4 feet below the ground surface. Allowable bearing pressures depend on the diameter or width of the pier as follows.

Pier or Footing Width or Diameter	Allowable Bearing Pressure for Piers or Footings 4 ft Deep
1.5 ft	1 kip per sq. ft
2.0 ft	1.33 kips per sq. ft
3.0 ft or larger	2 kips per sq. ft

- Helical piles bearing in the natural sand and gravel layer at approximately 8 feet below the ground surface. The helical piles should be designed and constructed in accordance with Section 1810.3 of the current edition of the Massachusetts State Building Code (which incorporates the 2015 International Building Code).

Helical piles are manufactured by several suppliers in a number of sizes and configurations used for different soil conditions and design loads. Generally, the specialty helical pile contractor designs the piles and submits the proposed design to the owner for review and approval.

The contractor is responsible for providing a design that will satisfy a performance requirement based on the installation torque resistance and the depths limitations mentioned above. Field verification of helical pile capacity is typically performed by measuring the torque resistance during installation. Empirical correlations are used to relate the torque resistance to ultimate bearing capacity. The empirical data indicate that the relationship between torque and bearing capacity varies with the pile shaft diameter, so the required torque resistance is different for different pile designs. We recommend that the required torque resistance be determined using the following correlation (Perko, 2009):

$$Q_u = \frac{22T}{d^{0.92}}$$

Where,

Q_u = Ultimate bearing capacity (lbs)

T = torque resistance (ft-lbs)

d = pile shaft diameter or diameter of a circle circumscribed around a square shaft (inch)

We recommend that helical piles be designed by a Massachusetts-registered Professional Engineer in accordance with Section 1810.3.3.1.9 of the Building Code.

We also recommend that the following items be noted on the construction drawings:

- Provide hot-dip galvanizing on all surfaces of the piles.
- Install the helical piles in accordance with Section 1810.4.11 of the Building Code.
- Maintain an installation tolerance of 1 inch for plan location and 5 degrees for verticality.

- Monitor the torque using equipment that has been calibrated within the previous 12 months.
- Maintain an adequate crowd force, sufficient that the pile advances into the ground a distance of at least 80 percent of the blade pitch per revolution during normal advancement.

Lateral Earth Pressures and Sliding Resistance

Lateral earth pressures on the pedestrian bridge abutments should be calculated using the soil properties in Table 1. When evaluating sliding along the base of the abutment footings, we recommend that a nominal (ultimate) coefficient of friction of 0.75 be used for cast-in-place footings on dense native soils, Gravel Borrow, and crushed stone. Applicable Resistance Factors for evaluating sliding are provided in Table 2.

Earth pressures should be applied as shown on Figs. 3.11.5.3 1 and C3.11.5.3 1 of the AASHTO Bridge Specifications. Design of abutments should also include a live load surcharge, in accordance with AASHTO 3.11.6.4.

The passive resistance provided by any soils in front of constructed abutments should be ignored.

Seismic Design Information

We understand that the proposed pedestrian bridge is considered non-critical and non-essential. The soil conditions classify as Site Class D (calculations presented in Appendix B). Site coefficients for peak ground acceleration [F_{PGA}], short-period range [F_A], and long-period range [F_V] are 1.6, 1.6, and 2.4.

Based on the maps in the AASHTO Seismic Guide, we recommend the following parameters for seismic design based on a 7 percent probability of exceedance in 75 years (approximately 1,000-year return period):

- Horizontal Peak Ground Coefficient (PGA) = 0.090
- Horizontal Response Spectral Coefficient (period = 0.2 sec) (S_s) = 0.180
- Horizontal Response Spectral Coefficient (period = 1.0 sec) (S_1) = 0.040

Application of the above site coefficients results in the following recommended coefficients for development of design response spectra:

- Response Spectral Acceleration, $A_s = 0.144$
- Design Spectral Acceleration Coefficient at 0.2 second period, $S_{DS} = 0.288$
- Design Spectral Acceleration Coefficient at 1.0 second period, $S_{D1} = 0.096$

This site falls into Seismic Design Category (SDC) A, based on the 1-second-period design spectral acceleration. Subsection 3.4.4 of the 2020 MassDOT LRFD Bridge Manual contains the design requirements for bridges classified as SDC A.

We did not check liquefaction potential, because the AAHSTO Seismic Guide (Section 6.8) states that liquefaction potential need not be evaluated for sites in SDC A. However, it is our opinion that liquefaction potential is not a concern for this project.

Construction Considerations

Preparation of Subgrade for Shallow Foundations

At foundation locations bearing on soil, unsuitable soils and soils that do not become firm under proof compaction should be removed and replaced with compacted Gravel Borrow for Bridge Foundations or Crushed Stone for Bridge Foundations to create a competent bearing surface. If Crushed Stone is used, a geotextile should be placed between the Crushed Stone and the soil below and to the sides of the Crushed Stone.

Prior to foundation construction on soil, the foundation subgrade should be compacted with at least 4 passes of a smooth-wheel vibratory compactor weighing at least 10,000 lbs. In confined areas, compact with a vibratory plate compactor that weighs at least 200 lbs. and imparts an impact load of at least 2.5 tons.

Where footing subgrades are at or near the groundwater level, static compaction may be recommended by the Field Engineer in lieu of vibratory compaction.

Concrete for footings on soil may be placed directly on the soil subgrade. Bearing surfaces should be free of standing water, frost, and loose soil before placement of reinforcing steel and concrete. Areas of the subgrade disturbed by traffic, frost, or surface water should be re-compacted. We recommend that a qualified Geotechnical Engineer evaluate the soil subgrades of shallow foundations prior to placement of footings and fill.

Excavations and Dewatering

All excavations should be made in accordance with OSHA standards. Any necessary excavation support system should be designed by a Massachusetts-registered professional engineer experienced in excavation support and dewatering system design. The engineer should be engaged by the contractor and submit the designs for review before installation. The specifications should require the contractor to maintain the groundwater level a minimum of 2 feet below the bottom of the excavation at all times.

Excavations may extend below the brook level, and it may be necessary to dewater by means of wellpoints or a dewatering well to maintain a dewatered excavation. In any case, surface water should be diverted away from excavations. Discharging into waterways or storm sewers may require permits.

Backfilling

Soil placed as fill should be free of frost. Gravel Borrow backfill behind abutments and wingwalls should extend at least 1 foot outside the back of the structure, as shown in Drawing No. 3.6.13 of the MassDOT LRFD Bridge Design Manual. Ordinary Borrow can be used to backfill outside of this area.

Fill for the walkway, behind the abutments, and backfill of excavations for utilities, should be placed and compacted in accordance with the current MassDOT Standard Specifications for Highway and Bridges Section 150. However, we recommend that compaction in areas too small for a smooth wheel vibratory compactor, or within 5 feet of walls, be performed using a vibratory walk-behind roller or plate compactor (weighing at least 200 lbs. imparting an impact load of at least 2.5 tons), with soil placed in maximum 6-inch loose lifts.

Reuse of Existing Soils

Based on the soils encountered in the borings, some of the existing on-site granular soils may meet the requirements for Ordinary Borrow. Suitability for reuse can be confirmed by testing samples to evaluate if the soil in question meets the MassDOT requirements for Ordinary Borrow. The Contractor should be aware that materials that are not free draining may be difficult to compact in wet weather.

Limitations

This letter report was prepared for the exclusive use of Kimley-Horn and Associates, Inc. Our recommendations are based on the project information provided to us at the time of this report and may require modification if there are any changes in the nature, design, or location of the proposed structures. We cannot accept responsibility for designs based on our recommendations unless we are engaged to review the final plans and specifications to determine whether any changes in the project affect the validity of our recommendations and whether our recommendations have been properly implemented in the design.


The recommendations in this letter report are based in part on the data obtained from the subsurface explorations. The nature and extent of variations between these explorations may not become evident until construction. If variations from the anticipated conditions are encountered, it may be necessary to revise the recommendations in this report. We, therefore, recommend that GEI be engaged to make site visits during construction to: a) check that the subsurface conditions exposed during construction are in general conformance with our design assumptions and b) ascertain that, in general, the work is being performed in compliance with the contract documents.

Our professional services for this project have been performed in accordance with generally accepted engineering practices; no warranty, express or implied, is made.

Please contact Steve Sarandis (ssarandis@geiconsultants.com or 781-264-8905) if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.



Stephen Sarandis
Project Manager

Michael Paster, P.E.
In-House Reviewer

MHC/SJS/MP;jm

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Attachments:

- Table 1 – Soil Properties
- Table 2 – Resistance Factors
- Figure 1 – Site Location Map
- Figure 2 – Subsurface Exploration Plan
- Figure 3 – Factored Bearing Resistance vs. Effective Footing Width
- Appendix A – Boring Logs
- Appendix B – Geotechnical Calculations
- Appendix C – Notice of Intent Drawings

Tables

Table 1. Soil Properties
Lovell Field Pedestrian Bridge
Weymouth, Massachusetts

Layer/Soil Type	Unit Weight, γ (pcf) ⁽¹⁾	Friction Angle, ϕ (deg)	Earth Pressure Coefficients ^(1,2)
Existing Fill	120/125	30	Ka=0.30 Ko=0.50 Kp=4.9 ⁽³⁾
Sand/Silty Sand and Gravel	125/130	34	Ka=0.26 Ko=0.44 Kp=6.3 ⁽³⁾
Gravel Borrow	125/130	35	Ka=0.25 Ko=0.43 Kp=6.9 ⁽³⁾
Gravel Borrow for Bridge Foundations	130/135	37	Ka=0.23 Ko=0.40 Kp=8.3 ⁽³⁾
Retained Backfill (Ordinary Borrow)	120/130	32	Ka=0.28 Ko=0.47

Notes:

1. Above/below groundwater table.
2. Recommended earth pressure coefficients are associated with horizontal backfill in front and behind the walls with vertical back faces, and are in accordance with the recommendations of Section 3.1.6 of the MassDOT LRFD Bridge Design Manual. Section 3.1.6 provides guidelines on how to use the earth pressure coefficients in design.
3. Seismic earth pressure coefficients are not included because the site is classified under Seismic Design Category A, and seismic design is not necessary per the MassDOT LRFD Bridge Design Manual.
4. Passive pressure coefficients are intended for use in Support of Excavation design only.

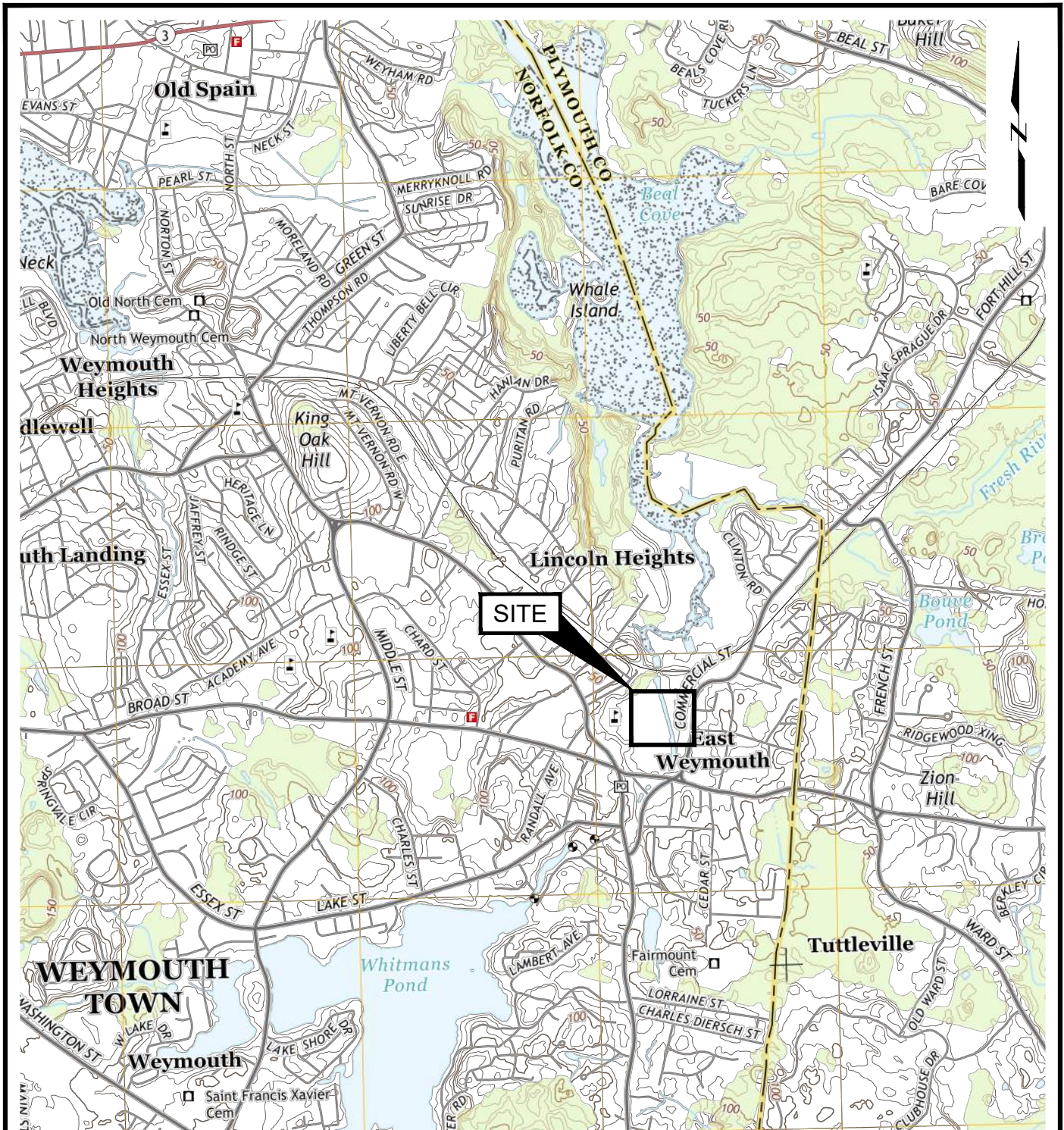
Table 2. Resistance Factors
Lovell Field Pedestrian Bridge
Weymouth, Massachusetts

Load Case	Strength Limit State ⁽²⁾	Service Limit State ⁽³⁾	Extreme Limit State ⁽⁴⁾
<i>Cast-in-Place Cantilever Abutments</i>			
Bearing resistance of shallow foundations	0.45	1.0	1.0
Sliding (Cast-in-place concrete)	0.8	1.0	1.0

General Notes:


1. Resistance factors above were obtained from the AASHTO LRFD Bridge Design Specifications (AASHTO).
2. The strength limit state resistance factors for bearing and sliding of shallow foundations were obtained from AASHTO Table 10.5.5.2.2-1 and Table 11.5.7-1.
3. Both AASHTO Sections 10.5.5.1 and 11.5.7-1 indicate that a resistance factor of 1.0 should be used for bearing resistance and sliding at the Service Limit State.
4. AASHTO Sections 10.5.5.3 and 11.5.8 provide resistance factors for the Extreme Limit State.

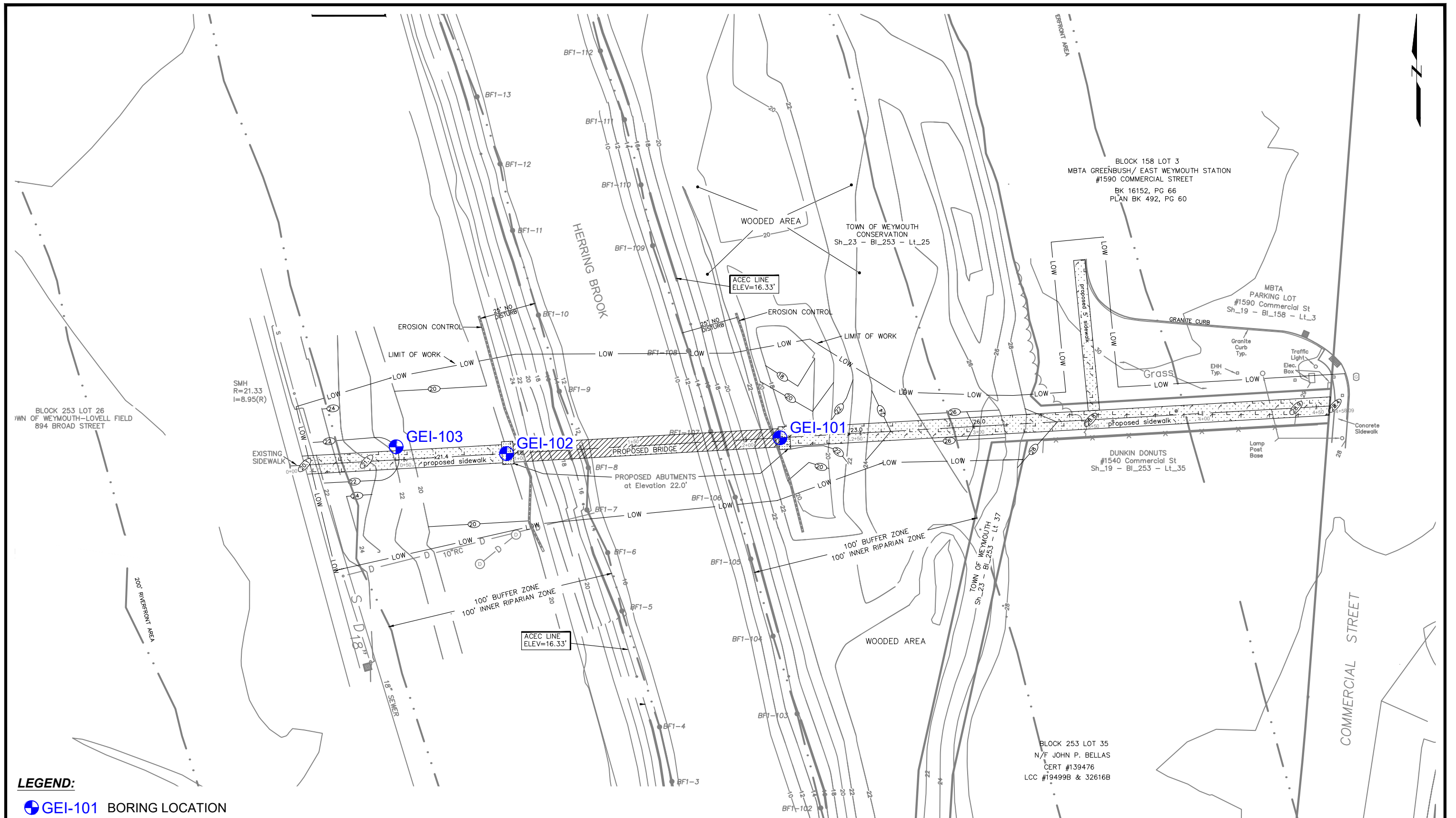
Figures



This image is from U.S.G.S Topographic 7.5-Minute Series.
 Weymouth Quadrangle, 2011.
 Datum is North American Vertical Datum of 1988 (NAVD88).
 Contour Interval is 10 Feet.



<p>Lovell Field Pedestrian Bridge Weymouth, Massachusetts</p>		<p>SITE LOCATION MAP</p>
<p>Kimley-Horn and Associates, Inc. Waltham, Massachusetts</p>	<p>Project 2300649</p>	<p>May 2023 Fig. 1</p>

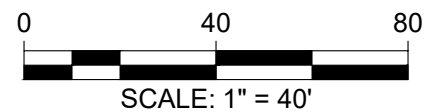


LEGEND:

GEI-101 BORING LOCATION

NOTES:

- FIGURE BASED ON FILE TITLED "Lovell Pedestrian-2019-60-SEPT 22-2022_AcAD2010" PROVIDED BY KIMLEY-HORN ON 4/12/2023.
- ELEVATIONS ARE REFERENCED TO TOWN OF WEYMOUTH (T.O.W) DATUM. 6.63 EL. T.O.W. = EL. 0.00 NAVD 88.



Lovell Field Pedestrian Bridge
Weymouth, Massachusetts, State

Kimley-Horn and Associates, Inc.
Waltham, Massachusetts

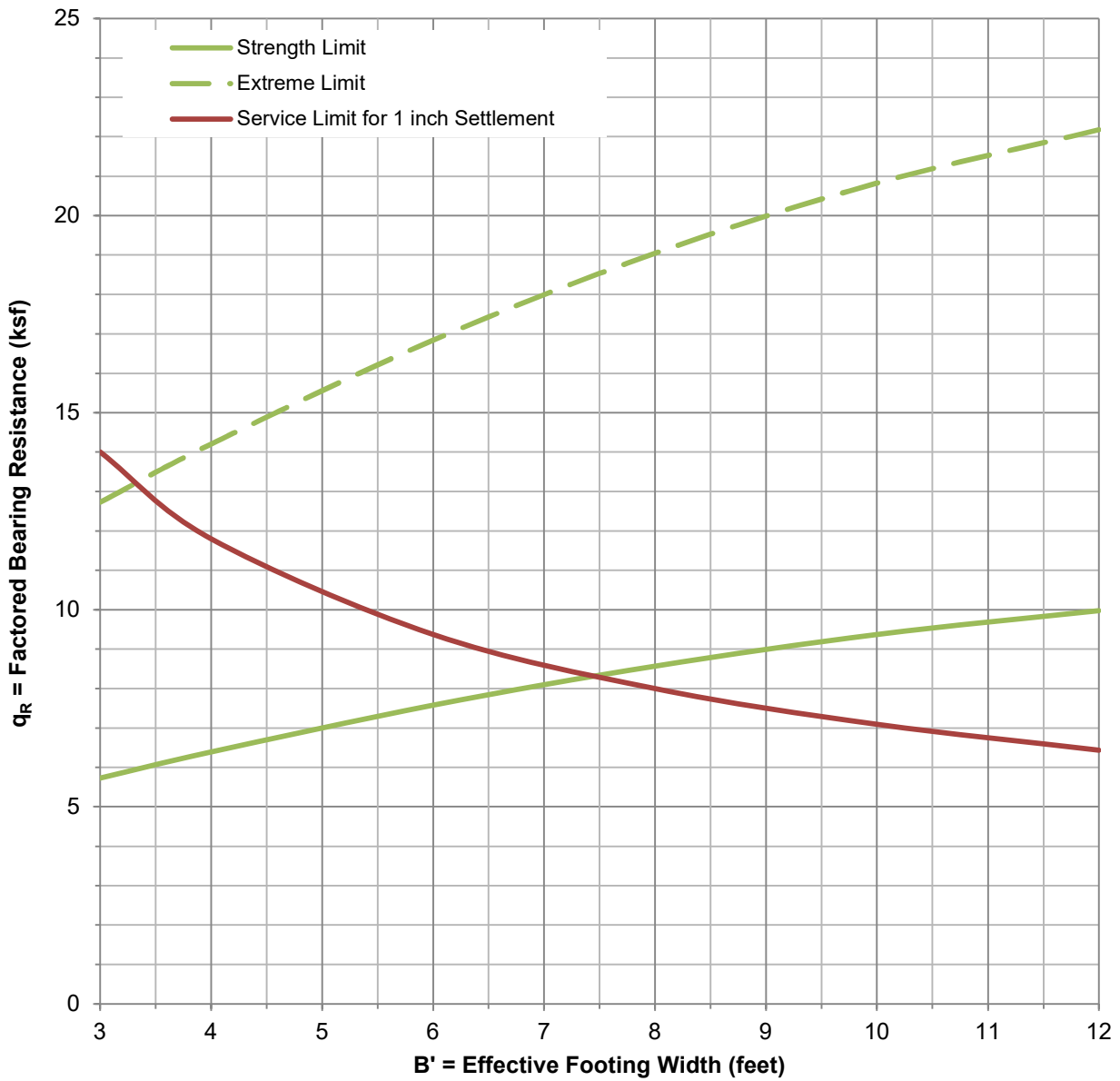


EXPLORATION LOCATION PLAN

Project 2300649

May 2023

Fig. 2



Notes:

1. The above resistances are based on methods provided in the 2020 AASHTO LRFD Bridge Specifications.
2. In the calculations, a footing length of 10 feet for the proposed abutments and a bearing elevation of El. 12.5 (Town of Weymouth Datum, ft) were, based on the drawing titled "Notice of Intent, Bridge and Sidewalk Profile".
3. The resistances above are based on a 4-ft embedment and level ground (i.e., no sloping ground).
4. Groundwater was conservatively assumed to be at ground surface.
5. The Strength Limit values above are based on a resistance factor of 0.45.
6. The Extreme Limit values above are based on a resistance factor of 1.0.
7. The Service Limit resistance curve can be referenced to evaluate settlement associated with net increase in loading.

Lovell Field Pedestrian Bridge
Weymouth, Massachusetts

Kimley-Horn and Associates, Inc.
Waltham, Massachusetts



Project No. 2300649

FACTORED BEARING RESISTANCE
VS. EFFECTIVE FOOTING WIDTH
PROPOSED BRIDGE ABUTMENTS

May 2023

Fig. 3

Appendix A

Boring Logs

BORING INFORMATION

NORTHING: _____ EASTING: _____ STATION: _____ OFFSET: _____
 GROUND SURFACE EL. (ft): 24 DATE START/END: 2/21/2023 - 2/21/2023
 VERT./HORIZ. DATUMS: Town of Weymouth Datum/ DRILLING COMPANY: Northern Drill Service, Inc.
 TOTAL DEPTH (ft): 31.0 DRILLER NAME: J. Bierholm
 LOGGED BY: M. Cramer RIG TYPE: Mobile Drill B-48

BORING

GEI-101

PAGE 1 of 2

DRILLING INFORMATION

HAMMER TYPE: Automatic CASING I.D./O.D.: 4 inch / 4.5 inch CORE BARREL TYPE: _____
 AUGER I.D./O.D.: NA / NA DRILL ROD O.D.: NM CORE BARREL I.D./O.D.: NA / NA
 DRILLING METHOD: Driven casing and washed with rotary tooling.
 WATER LEVEL DEPTHS (ft): 8.7 2/21/2023

ABBREVIATIONS: Pen. = Penetration Length S = Split Spoon Sample Qp = Pocket Penetrometer Strength NA, NM = Not Applicable, Not Measured
 Rec. = Recovery Length C = Core Sample Sv = Pocket Torvane Shear Strength Blows per 6 in.: 140-lb hammer falling
 RQD = Rock Quality Designation U = Undisturbed Sample LL = Liquid Limit 30 inches to drive a 2-inch-O.D.
 = Length of Sound Cores > 4 in / Pen., % SC = Sonic Core PI = Plasticity Index split spoon sampler.
 WOR = Weight of Rods DP = Direct Push Sample PID = Photoionization Detector
 WOH = Weight of Hammer HSA = Hollow-Stem Auger I.D./O.D. = Inside Diameter/Outside Diameter

Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		Sample No.	Depth (ft)	Pen./Rec. (in)	Blows per 6 in. or RQD			
						Start advancing 4-inch-ID casing.		Temporary fill placed shortly prior to drilling from 0 to 4 ft to create a stable platform for the drill rig. Not sampled 0 to 4 ft.
20	5	S1	4 to 6	24/6	6-4-6-3		FILL	S1: SILTY SAND WITH GRAVEL (SM); ~60% fine to coarse sand, ~20% nonplastic fines, ~20% fine gravel, brown, wet.
		S2	6 to 8	24/4	3-1-1-2			S2: NARROWLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~60% mostly coarse sand, ~30% fine gravel, ~10% nonplastic fines, brown, wet.
		S3	8 to 10	24/7	7-4-4-4			S3: SILTY SAND WITH GRAVEL (SM); ~60% fine to medium sand, ~20% fine gravel, ~20% nonplastic fines, brown, wet. Slight NAPL-like odor. Ceramic shards in sample. Fill likely due to former landfill.
	10	S4	10 to 12	24/12	8-12-15-27		SAND AND GRAVEL	S4(0-8"): SILTY SAND WITH GRAVEL (SM); Similar to S3.
		S5	12 to 14	24/11	13-12-10-9			S4(8-12"): WIDELY GRADED GRAVEL WITH SAND (GW); ~70% fine to coarse gravel, ~25% fine sand, ~5% fines, brown, wet. S5: WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~50% fine to coarse sand, ~40% fine to coarse gravel, ~10% nonplastic fines, brown, wet.
	15	S6	14 to 16	24/10	8-13-12-10			S6: WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); Similar to S5 except gravel is more angular.
						Rig chatter at 16 ft		
	20	S7	19 to 21	24/5	7-13-10-12			S7: WIDELY GRADED GRAVEL WITH SAND (GW); ~70% fine to coarse gravel, ~25% fine to coarse sand, ~5% nonplastic fines, brown, wet. 1 piece coarse gravel in spoon tip.

NOTES: GEI-101 is located in a former landfill area.

PROJECT NAME: Lovell Field Pedestrian Bridge

CITY/STATE: Weymouth, Massachusetts

GEI PROJECT NUMBER: 2300649



GEI WOBURN STD 7-S-O-N-E-LAYER NAME LOVELL FIELD PED BRIDGE BORING LOGS.GPJ 5/2/23

NORTHING: _____ EASTING: _____ STATION: _____ OFFSET: _____
 GROUND SURFACE EL. (ft): 24 DATE START/END: 2/21/2023 - 2/21/2023
 VERT./HORIZ. DATUMS: Town of Weymouth Datum/ DRILLING COMPANY: Northern Drill Service, Inc.

**BORING
 GEI-101**
 PAGE 2 of 2

Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD			
25	24 to 26	S8	24 to 26	24/12	10-10-11-14	Advanced 4-inch-ID casing to 29 ft	S8: WIDELY GRADED GRAVEL (GW); ~95% fine to coarse subangular to angular gravel, ~5% coarse sand, gray, wet.	
30	29 to 31	S9	29 to 31	24/5	8-10-7-8		SAND AND GRAVEL	S9: SILTY SAND WITH GRAVEL (SM); ~50% fine to coarse sand, ~30% fine to coarse gravel, ~20% nonplastic fines, brown, wet.
-10	35							Terminated borehole at 31 ft. Borehole backfilled with soil cuttings and gravel.
40								
-20	45							
50								
-30	55							

GEI WOBURN STD 7-S-O-N-E-LAYER NAME LOVELL FIELD PED BRIDGE BORING LOGS.GPJ 5/2/23

NOTES: GEI-101 is located in a former landfill area.

PROJECT NAME: Lovell Field Pedestrian Bridge

CITY/STATE: Weymouth, Massachusetts

GEI PROJECT NUMBER: 2300649



BORING INFORMATION

NORTHING: _____ EASTING: _____ STATION: _____ OFFSET: _____
 GROUND SURFACE EL. (ft): 20 DATE START/END: 2/21/2023 - 2/21/2023
 VERT./HORIZ. DATUMS: Town of Weymouth Datum/ DRILLING COMPANY: Northern Drill Service, Inc.
 TOTAL DEPTH (ft): 26.0 DRILLER NAME: J. Bierholm
 LOGGED BY: M. Cramer RIG TYPE: Mobile Drill B-48

BORING

GEI-102

PAGE 1 of 2

DRILLING INFORMATION

HAMMER TYPE: Automatic CASING I.D./O.D.: 4 inch / 4.5 inch CORE BARREL TYPE: _____
 AUGER I.D./O.D.: NA / NA DRILL ROD O.D.: NM CORE BARREL I.D./O.D.: NA / NA
 DRILLING METHOD: Driven casing and washed with rotary tooling.
 WATER LEVEL DEPTHS (ft): 9.2 2/21/2023

ABBREVIATIONS: Pen. = Penetration Length S = Split Spoon Sample Qp = Pocket Penetrometer Strength NA, NM = Not Applicable, Not Measured
 Rec. = Recovery Length C = Core Sample Sv = Pocket Torvane Shear Strength Blows per 6 in.: 140-lb hammer falling
 RQD = Rock Quality Designation U = Undisturbed Sample LL = Liquid Limit 30 inches to drive a 2-inch-O.D.
 = Length of Sound Cores > 4 in / Pen., % SC = Sonic Core PI = Plasticity Index split spoon sampler.
 WOR = Weight of Rods DP = Direct Push Sample PID = Photoionization Detector
 WOH = Weight of Hammer HSA = Hollow-Stem Auger I.D./O.D. = Inside Diameter/Outside Diameter

Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD			
		S1	0 to 2	24/11	2-2-3-5		SAND AND GRAVEL	S1: SILTY SAND WITH GRAVEL (SM); ~50% fine to coarse sand, ~30% nonplastic fines, ~20% fine to coarse gravel, brown, moist.
		S2	2 to 4	24/7	5-4-2-3	Start advancing 4-inch-ID casing after S2.		S2: SILTY SAND WITH GRAVEL (SM); ~50% fine to coarse sand, ~30% mostly fine gravel, ~20% nonplastic fines, brown, moist.
	5	S3	4 to 6	24/6	8-5-3-4			S3: SILTY SAND WITH GRAVEL (SM); Similar to S2.
		S4	6 to 8	24/10	9-8-14-12			S4: SILTY SAND WITH GRAVEL (SM); ~60% fine sand, ~20% fine gravel, ~20% nonplastic fines, black, moist.
	10	S5	8 to 10	24/7	13-14-20-16			S5: SILTY SAND WITH GRAVEL (SM); ~50% fine to coarse sand, ~30% fine to coarse gravel, ~20% nonplastic fines, brown, wet.
	15	S6	14 to 16	24/13	17-28-43-17	Rig chatter from 14-16 ft. Advanced 4-inch-ID casing to 14 ft. Telescoped 3-inch-ID casing after S6.		S6: SILTY SAND WITH GRAVEL (SM); ~70% fine to coarse sand, ~15% nonplastic fines, ~15% fine gravel, gray, wet.
	20	S7	19 to 21	24/11	15-13-14-10			S7: WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~45% fine to coarse sand, ~45% fine to coarse gravel, ~10% nonplastic fines, brownish gray, wet.

NOTES:

PROJECT NAME: Lovell Field Pedestrian Bridge

CITY/STATE: Weymouth, Massachusetts

GEI PROJECT NUMBER: 2300649



GEI WOBURN STD 7-S-O-N-E-LAYER NAME LOVELL FIELD PED BRIDGE BORING LOGS.GPJ 5/2/23

NORTHING: _____ EASTING: _____ STATION: _____ OFFSET: _____
 GROUND SURFACE EL. (ft): 20 DATE START/END: 2/21/2023 - 2/21/2023
 VERT./HORIZ. DATUMS: Town of Weymouth Datum/ DRILLING COMPANY: Northern Drill Service, Inc.

**BORING
 GEI-102**
 PAGE 2 of 2

Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD			
25	24 to 26	S8	24/10	9-12-17-16	Advanced 3-inch-ID casing to 24 ft.		S8: WIDELY GRADED GRAVEL WITH SILT AND SAND (GW-GM); ~60% fine to coarse gravel, ~30% fine to coarse sand, ~10% nonplastic fines, brownish gray, wet.	
							Terminated borehole at 26 ft. Borehole backfilled with soil cuttings.	
-10	30							
	35							
-20	40							
	45							
-30	50							
	55							

GEI WOBURN STD 7-S-O-N-E-LAYER NAME LOVELL FIELD PED BRIDGE BORING LOGS.GPJ 5/2/23

NOTES:

PROJECT NAME: Lovell Field Pedestrian Bridge
 CITY/STATE: Weymouth, Massachusetts
 GEI PROJECT NUMBER: 2300649



BORING INFORMATION

NORTHING: _____ EASTING: _____ STATION: _____ OFFSET: _____
 GROUND SURFACE EL. (ft): 22 DATE START/END: 2/21/2023 - 2/21/2023
 VERT./HORIZ. DATUMS: Town of Weymouth Datum/ DRILLING COMPANY: Northern Drill Service, Inc.
 TOTAL DEPTH (ft): 12.0 DRILLER NAME: J. Bierholm
 LOGGED BY: M. Cramer RIG TYPE: Mobile Drill B-48

BORING

GEI-103

PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic CASING I.D./O.D.: 4 inch / 4.5 inch CORE BARREL TYPE: _____
 AUGER I.D./O.D.: NA / NA DRILL ROD O.D.: NM CORE BARREL I.D./O.D.: NA / NA
 DRILLING METHOD: Driven casing and washed with rotary tooling.
 WATER LEVEL DEPTHS (ft): 8.0 2/21/2023

ABBREVIATIONS: Pen. = Penetration Length S = Split Spoon Sample Qp = Pocket Penetrometer Strength NA, NM = Not Applicable, Not Measured
 Rec. = Recovery Length C = Core Sample Sv = Pocket Torvane Shear Strength Blows per 6 in.: 140-lb hammer falling
 RQD = Rock Quality Designation U = Undisturbed Sample LL = Liquid Limit 30 inches to drive a 2-inch-O.D.
 = Length of Sound Cores > 4 in / Pen., % SC = Sonic Core PI = Plasticity Index split spoon sampler.
 WOR = Weight of Rods DP = Direct Push Sample PID = Photoionization Detector
 WOH = Weight of Hammer HSA = Hollow-Stem Auger I.D./O.D. = Inside Diameter/Outside Diameter

Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD			
20 5 10 10 15 20 0		S1	0 to 2	24/6	1-2-5-8		FILL	S1: SILTY SAND (SM); ~50% fine sand, ~40% nonplastic fines, ~10% coarse gravel, dark brown, dry. Roots and grass observed in sample.
		S2	2 to 4	24/0	6-3-2-1	Description from 2 to 4 ft from soil recovered inside casing after pushing down casing and pulling casing back up. Start advancing 4-inch-ID casing after S2.		S2: NO RECOVERY Soil cuttings 2 to 4 ft (inside casing): SILTY SAND WITH GRAVEL (SM); ~60% fine to coarse sand, ~20% nonplastic fines, ~20% fine to coarse gravel, brown, moist.
		S3	4 to 6	24/9	1/24"			S3: SILTY SAND WITH GRAVEL (SM); ~60% fine to coarse sand, ~25% fine to coarse gravel, ~15% nonplastic fines, brown, moist. Wood observed in sample.
		S4	6 to 8	24/14	3-3-5-7	S4: SILTY SAND (SM); ~60% fine sand, ~40% nonplastic fines, wood, brown and black, moist.		
		S5	8 to 10	24/9	8-12-11-13	Advanced 4-inch-ID casing to 10 ft.	SAND AND GRAVEL	S5: WIDELY GRADED GRAVEL WITH SILT AND SAND (SW-SM); ~60% fine to coarse gravel, ~30% fine to coarse sand, ~10% nonplastic fines, brown, wet.
		S6	10 to 12	24/9	17-13-15-12			S6: WIDELY GRADED GRAVEL WITH SILT AND SAND (GW-GM); ~50% fine to coarse gravel, ~40% fine to coarse sand, ~10% nonplastic fines, brown, wet.
							Terminated borehole at 12 ft.. Borehole backfilled with gravel.	

NOTES: The natural soil beneath the berm and te soccer fields was excavated and replaced for the construction of the fields.

PROJECT NAME: Lovell Field Pedestrian Bridge

CITY/STATE: Weymouth, Massachusetts

GEI PROJECT NUMBER: 2300649



GEI WOBURN STD 7-S-O-N-E-LAYER NAME LOVELL FIELD PED BRIDGE BORING LOGS.GPJ 5/2/23

Appendix B

Geotechnical Calculations

- Surficial Geology
- SPT N-value Corrections
- Recommended Soil Properties
- Earth Pressure Coefficients
- Bearing Resistance
- Site Class Evaluation

Surficial Geology

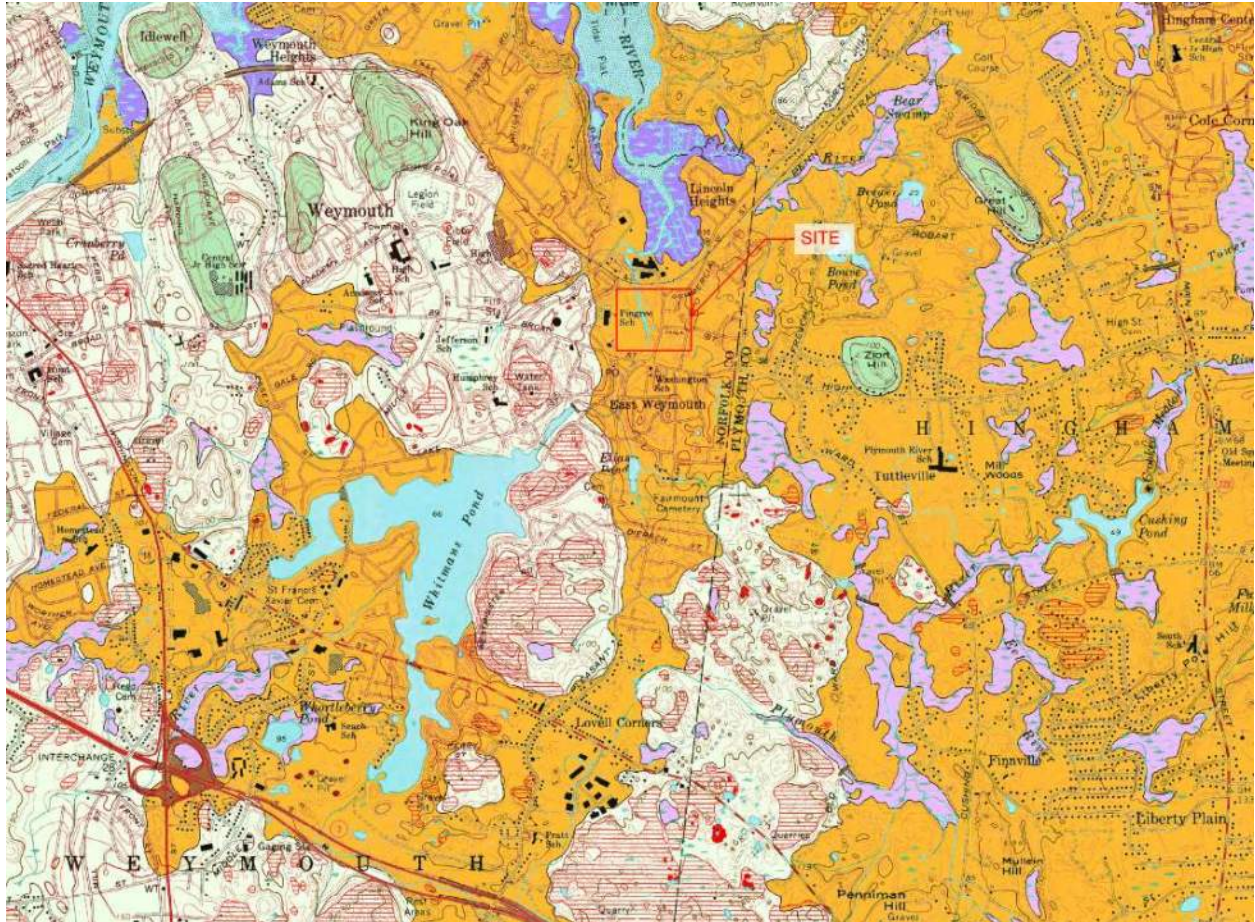
Surficial Geology

Lovell Field Pedestrian Bridge

Weymouth, Massachusetts

Project No.: 2300649

Client: Kimley-Horn and Associates, Inc.



Coarse deposits consist of *gravel deposits*, *sand and gravel deposits*, and *sand deposits*, not differentiated in this report. *Gravel deposits* are composed of at least 50 percent gravel-size clasts; cobbles and boulders predominate; minor amounts of sand occur within gravel beds, and sand comprises a few separate layers. Gravel layers generally are poorly sorted, and bedding commonly is distorted and faulted due to postdepositional collapse related to melting of ice. *Sand and gravel deposits* occur as mixtures of gravel and sand within individual layers and as layers of sand alternating with layers of gravel. Sand and gravel layers generally range between 25 and 50 percent gravel particles and between 50 and 75 percent sand particles. Layers are well sorted to poorly sorted; bedding may be distorted and faulted due to postdepositional collapse. *Sand deposits* are composed mainly of very coarse to fine sand, commonly in well-sorted layers. Coarser layers may contain up to 25 percent gravel particles, generally granules and pebbles; finer layers may contain some very fine sand, silt, and clay

SPT N-Value Corrections



Client: Kimley Horn and Associates, Inc.
Project: Lovell Field Pedestrian Bridge
Project No.: 2300649
Subject: Corrected Blow Counts

Prepared By: M. H-Cabal
Date: March 14, 2023
Checked By: R. Oulal
Date: April 11, 2023

Summary of Corrected Blow Counts by Layer

FILL

Boring	No.	N ₆₀			N ₁₆₀		
	Values	Avg.	Max.	Min.	Avg.	Max.	Min.
GEI-101	4	16	36	3	19	42	3
GEI-102	0	--	--	--	--	--	--
GEI-103	4	7	11	0	11	18	0

Average N₆₀: 12 Average N₁₆₀: 15

SAND AND GRAVEL

Boring	No.	N ₆₀			N ₁₆₀		
	Values	Avg.	Max.	Min.	Avg.	Max.	Min.
GEI-101	5	29	33	23	31	37	22
GEI-102	8	34	95	7	39	100	13
GEI-103	2	34	37	31	41	44	38

Average N₆₀: 32 Average N₁₆₀: 37



Client: Kimley Horn and Associates, Inc.
Project: Lovell Field Pedestrian Bridge
Project Number: 2300649
Subject: Corrected Blow Counts

Prepared By: M. H-Cabal
Date: 3/14/2023
Checked By: R. Oulal
Date: April 11, 2023

References: 1) American Association of State Highway and Transportation Officials (AASHTO) "AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020"

Equations:	Ref. 1 Eqn. No.	Equation
	10.4.6.2.4-2	$N_{60} = (ER / 60\%) * N$ where: N_{60} = SPT blow count corrected for hammer efficiency (blows/ft) ER = hammer efficiency expressed as percent of theoretical free fall energy N = Uncorrected SPT blow count (blows/ft)
	10.4.6.2.4-3	$N1_{60} = C_N * N_{60}$ where: $N1_{60}$ = SPT blow count corrected for overburden and hammer efficiency (blows/ft) $C_N = 0.77 * \log_{10}(40/\sigma'_v)$ [$C_N < 2.0$] σ'_v = vertical effective stress (ksf)

Assumptions:
 Groun Surface El.: 24 ft From Boring Location Plan
 Depth to Groundwater: 8.7 ft From Boring Logs
 Average Total Unit Weight of Soil: 120 pcf Assumed

Boring: GEI-101				Corrected Blow Counts				Overburden Correction					Hammer Efficiency Correction Automatic Hammer		
Depth (ft)	El. (ft)	Layer Name	N	N ₆₀	N1 ₆₀	Avg. N ₆₀	Avg. N1 ₆₀	σ _v (psf) ³	u (psf)	σ' _v (psf)	σ' _v (ksf)	C _N	Rig Type	ER (%)	C _E
5.0	19.0	Fill	10	13	19	16	19	600	0	600	0.600	1.40	Mobile Drill B-48	80	1.33
7.0	17.0	Fill	2	3	3			840	0	840	0.840	1.29	Mobile Drill B-48	80	1.33
9.0	15.0	Fill	8	11	13			1,080	19	1,061	1.061	1.21	Mobile Drill B-48	80	1.33
11.0	13.0	Fill	27	36	42			1,320	144	1,176	1.176	1.18	Mobile Drill B-48	80	1.33
13.0	11.0	Sand and Gravel	22	29	34	29	31	1,560	268	1,292	1.292	1.15	Mobile Drill B-48	80	1.33
15.0	9.0	Sand and Gravel	25	33	37			1,800	393	1,407	1.407	1.12	Mobile Drill B-48	80	1.33
20.0	4.0	Sand and Gravel	23	31	32			2,400	705	1,695	1.695	1.06	Mobile Drill B-48	80	1.33
25.0	-1.0	Sand and Gravel	21	28	28			3,000	1,017	1,983	1.983	1.00	Mobile Drill B-48	80	1.33
30.0	-6.0	Sand and Gravel	17	23	22			3,600	1,329	2,271	2.271	0.96	Mobile Drill B-48	80	1.33

Notes:

- For N₆₀ and N1₆₀ values greater than 100 blows/ft, we input the value 100 blows/ft.
- N-Values from SPT's that encountered refusal prior to a penetration of 12 inches were not included in the averages.



Client: Kimley Horn and Associates, Inc.
Project: Lovell Field Pedestrian Bridge
Project Number: 2300649
Subject: Corrected Blow Counts

Prepared By: M. H-Cabal
Date: 3/14/2023
Checked By: R. Oulal
Date: April 11, 2023

References: 1) American Association of State Highway and Transportation Officials (AASHTO) "AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020"

Equations:	Ref. 1 Eqn. No.	Equation
	10.4.6.2.4-2	$N_{60} = (ER / 60\%) * N$ where: N_{60} = SPT blow count corrected for hammer efficiency (blows/ft) ER = hammer efficiency expressed as percent of theoretical free fall energy N = Uncorrected SPT blow count (blows/ft)
	10.4.6.2.4-3	$N_{160} = C_N * N_{60}$ where: N_{160} = SPT blow count corrected for overburden and hammer efficiency (blows/ft) $C_N = 0.77 * \log_{10}(40/\sigma'_v)$ [$C_N < 2.0$] σ'_v = vertical effective stress (ksf)

Assumptions:
 Groun Surface El.: 20 ft From Boring Location Plan
 Depth to Groundwater: 9.2 ft From Boring Logs
 Average Total Unit Weight of Soil: 120 pcf Assumed

Boring: GEI-102				Corrected Blow Counts				Overburden Correction					Hammer Efficiency Correction Automatic Hammer		
Depth (ft)	El. (ft)	Layer Name	N	N ₆₀	N ₁₆₀	Avg. N ₆₀	Avg. N ₁₆₀	σ _v (psf) ³	u (psf)	σ' _v (psf)	σ' _v (ksf)	C _N	Rig Type	ER (%)	C _E
1.0	19.0	Silty Sand with Gravel	5	7	13	34	39	120	0	120	0.120	1.94	Mobile Drill B-48	80	1.33
3.0	17.0	Silty Sand with Gravel	6	8	13			360	0	360	0.360	1.58	Mobile Drill B-48	80	1.33
5.0	15.0	Silty Sand with Gravel	8	11	15			600	0	600	0.600	1.40	Mobile Drill B-48	80	1.33
7.0	13.0	Silty Sand with Gravel	22	29	38			840	0	840	0.840	1.29	Mobile Drill B-48	80	1.33
9.0	11.0	Silty Sand with Gravel	34	45	55			1,080	0	1,080	1.080	1.21	Mobile Drill B-48	80	1.33
15.0	5.0	Silty Sand with Gravel	71	95	100			1,800	362	1,438	1.438	1.11	Mobile Drill B-48	80	1.33
20.0	0.0	Silty Sand with Gravel	27	36	38			2,400	674	1,726	1.726	1.05	Mobile Drill B-48	80	1.33
25.0	-5.0	Silty Sand with Gravel	29	39	39			3,000	986	2,014	2.014	1.00	Mobile Drill B-48	80	1.33

Notes:

- For N₆₀ and N₁₆₀ values greater than 100 blows/ft, we input the value 100 blows/ft.
- N-Values from SPT's that encountered refusal prior to a penetration of 12 inches were not included in the averages.



Client: Kimley Horn and Associates, Inc.
Project: Lovell Field Pedestrian Bridge
Project Number: 2300649
Subject: Corrected Blow Counts

Prepared By: M. H-Cabal
Date: 3/14/2023
Checked By: R. Oulal
Date: April 11, 2023

References: 1) American Association of State Highway and Transportation Officials (AASHTO) "AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020"

Equations:	Ref. 1 Eqn. No.	Equation	
	10.4.6.2.4-2	$N_{60} = (ER / 60\%) * N$	where: N_{60} = SPT blow count corrected for hammer efficiency (blows/ft) ER = hammer efficiency expressed as percent of theoretical free fall energy N = Uncorrected SPT blow count (blows/ft)
	10.4.6.2.4-3	$N1_{60} = C_N * N_{60}$	where: $N1_{60}$ = SPT blow count corrected for overburden and hammer efficiency (blows/ft) $C_N = 0.77 * \log_{10}(40/\sigma'_v)$ [$C_N < 2.0$] σ'_v = vertical effective stress (ksf)

Assumptions:
 Groun Surface El.: 22 ft From Boring Location Plan
 Depth to Groundwater: 8.0 ft From Boring Logs
 Average Total Unit Weight of Soil: 120 pcf Assumed

Boring: GEI-103				Corrected Blow Counts				Overburden Correction					Hammer Efficiency Correction Automatic Hammer		
Depth (ft)	El. (ft)	Layer Name	N	N_{60}	$N1_{60}$	Avg. N_{60}	Avg. $N1_{60}$	σ_v (psf) ³	u (psf)	σ'_v (psf)	σ'_v (ksf)	C_N	Rig Type	ER (%)	C_E
1.0	21.0	Fill	7	9	18	7	11	120	0	120	0.120	1.94	Mobile Drill B-48	80	1.33
3.0	19.0	Fill	5	7	11			360	0	360	0.360	1.58	Mobile Drill B-48	80	1.33
5.0	17.0	Fill	0	0	0			600	0	600	0.600	1.40	Mobile Drill B-48	80	1.33
7.0	15.0	Fill	8	11	14			840	0	840	0.840	1.29	Mobile Drill B-48	80	1.33
9.0	13.0	Gravel with Sand	23	31	38	34	41	1,080	62	1,018	1.018	1.23	Mobile Drill B-48	80	1.33
11.0	11.0	Gravel with Sand	28	37	44			1,320	187	1,133	1.133	1.19	Mobile Drill B-48	80	1.33

- Notes:**
- For N_{60} and $N1_{60}$ values greater than 100 blows/ft, we input the value 100 blows/ft.
 - N-Values from SPT's that encountered refusal prior to a penetration of 12 inches were not included in the averages.

Recommended Soil Properties



Client: Kimley Horn and Associates
Project: Lovell Field Pedestrian Bridge
Weymouth
Project No.: 2300649

Prepared By: M. H-Cabal
Date: 03/14/2023
Checked By: R. Oulal
Date: 04/11/2023

Recommended Soil Properties

Purpose:

The purpose of this evaluation is to select representative soil properties for the proposed pedestrian bridge in the Lovell Field in Weymouth, Massachusetts. The soil properties will be used in our engineering analyses.

Approach:

We selected values for unit weight and angle of internal friction of soils. Values were selected for the general soil layers observed in the borings and for proposed fills to be used during construction.

Unit Weight

We selected a saturated (total) unit weight in pounds per cubic foot (pcf). The buoyant unit weight can then be determined by subtracting the unit weight of water (62.4 pcf).

Angle of Internal Friction

We selected an angle of internal friction (ϕ) in degrees. We used Mohr-Coulomb drained properties for each soil.

Subsurface Investigation and SPT Correlations for Observed Soil Layers:

We reviewed Standard Penetration Test (SPT) N-Values collected during our subsurface investigation. We estimated angles of internal friction for the soils above based on N-Values corrected for overburden and hammer efficiency ($N_{1,60}$). All SPTs were performed using an automatic hammer. We assumed an efficiency of 80 percent based on published data on automatic hammers.

A summary of corrected N-Values based on general soil type is shown below. Our N-Value correction calculations are attached. We did not include refusals due to cobbles or boulders, and we limited the uncorrected (field) N-value to a maximum of 120 blows per foot, which MassDOT considers "practical refusal".

Soil Layer	Average N_{60}	Average $N_{1,60}$
Fill	12	15
Sand/Silty Sand and Gravel	32	37



Client: Kimley Horn and Associates
Project: Lovell Field Pedestrian Bridge
Weymouth
Project No.: 2300649

Prepared By: M. H-Cabal
Date: 03/14/2023
Checked By: R. Oulal
Date: 04/11/2023

Results:

We selected the following soil properties for each layer/soil type based on the references provided in the following pages and our engineering judgment.

Layer/Soil Type	Total Unit Weight, γ (pcf) ¹	Friction Angle, ϕ (deg)
Existing Fill	120/125	30
Sand/Silty Sand and Gravel	125/130	34
Gravel Borrow	125/130	35
Gravel Borrow for Bridge Foundations	130/135	37
Retained Backfill (Ordinary Borrow)	120/130	32

Notes:

1. If above the water table, use the lower unit weight to represent moist conditions; if below the water table, use the higher unit weight to represent saturated conditions.



Client: Kimley Horn and Associates
Project: Lovell Field Pedestrian Bridge
 Weymouth
Project No.: 2300649

Prepared By: M. H-Cabal
Date: 03/14/2023
Checked By: R. Oulal
Date: 04/11/2023

References:

AASHTO LRFD Bridge Design Specifications, Seventh Edition, 2014.

Terzaghi, K., Peck, R.B., 1968. Soil Mechanics in Engineering Practice, 2nd Edition, John Wiley & Sons, New York.

Caltrans Geotechnical Manual, March 2014.

NAVFAC Design Manual 7.01 Soil Mechanics, Naval Facilities Engineering Command, September 1986.

AASHTO LRFD Bridge Design Specifications, Seventh Edition, 2014

Table 10.4.6.2.4-1 recommends using the following correlation to select friction angles of granular soils:

Table 10.4.6.2.4-1—Correlation of SPT N_{60} Values to Drained Friction Angle of Granular Soils (modified after Bowles, 1977)

N_{60}	ϕ_f
<4	25–30
4	27–32
10	30–35
30	35–40
50	38–43

Soil Mechanics in Engineering Practice

Karl Terzaghi and Ralph Peck compiled various parameters of soils into the tables below:

Table 6.3
 Porosity, Void Ratio, and Unit Weight of Typical Soils in Natural State

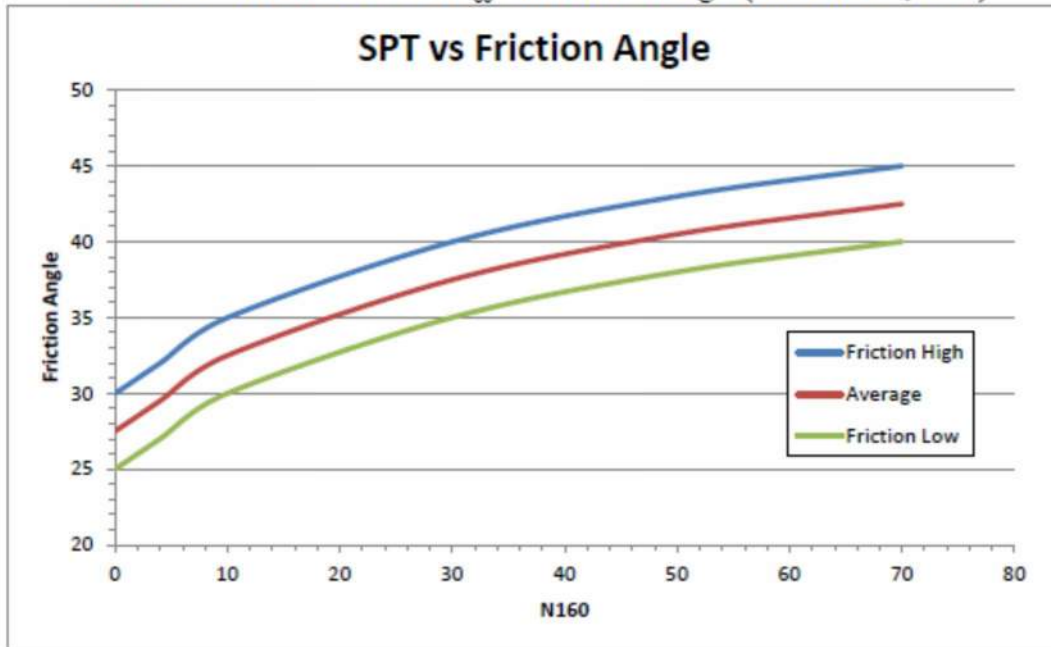
Description	Porosity, n (%)	Void ratio, e	Water content, w (%)	Unit weight			
				γ_d	γ	γ_d	γ
1. Uniform sand, loose	46	0.85	32	1.43	1.89	99	118
2. Uniform sand, dense	34	0.51	19	1.75	2.09	109	130
3. Mixed-grained sand, loose	40	0.67	25	1.59	1.99	99	124
4. Mixed-grained sand, dense	30	0.43	16	1.86	2.16	118	135
5. Glacial till, very mixed-grained	20	0.25	9	2.12	2.32	132	145
6. Soft glacial clay	55	1.2	45	-	1.77	-	110
7. Stiff glacial clay	37	0.6	22	-	2.07	-	129
8. Soft slightly organic clay	66	1.9	70	-	1.58	-	98
9. Soft very organic clay	75	3.0	110	-	1.43	-	89
10. Soft bentonite	84	5.2	194	-	1.27	-	80

Table 17.1
 Representative Values of ϕ for Sands and Silts

Material	Degrees	
	Loose	Dense
Sand, round grains, uniform	27-30	34
Sand, angular grains, well graded	33	45
Sandy gravels	35	50
Silty sand	27-33	30-34
Inorganic silt	27-30	30-35

w = water content when saturated, in per cent of dry weight.
 γ_d = unit weight in dry state.
 γ = unit weight in saturated state.

Chart 1: Correlation of SPT N_{160} with Friction Angle (after Bowles, 1977)



Choose the friction angle (expressed to the nearest degree) based upon the soil type, particle size(s), and rounding or angularity. Experience should be used to select specific values within the ranges. In general, finer materials or materials with significant (about 30+ %) silt-sized material will fall in the lower portion of the range. Coarser materials with less than 5% fines will fall in the upper portion of the range. The extreme range of phi angles for any N_{160} is five degrees, so the adjustment factors for particle size and roundness should be only a degree or two. The following bullets provide help in determining which value to select for a given N_{160} and soil type:

- Use the maximum value for GW
- Use the average for GM and SP
- Use the minimum for SC
- Use the minimum + 0.5 for ML
- Use the average +1 for SW
- Use the average -1 for GC
- Use the Maximum -1 for GP

Values may also be increased with increasing grain size and/or particle angularity, and decreased with decreasing grain size and/or increasing roundness. For example, an SP with $N_{160} = 30$ could be assigned phi angles of 37, 38 or 39 degrees for fine, medium and coarse grain sizes respectively.



Client: Kimley Horn and Associates
Project: Lovell Field Pedestrian Bridge
 Weymouth
Project No.: 2300649

Prepared By: M. H-Cabal
Date: 03/14/2023
Checked By: R. Oulal
Date: 04/11/2023

NAVFAC Design Manual 7.01 Soil Mechanics

TABLE 6
 Typical Values of Soil Index Properties

	Particle Size and Gradation				Voide(1)					Unit Weight(2) (lb./cu.ft.)						
	Approximate Size Range (mm)		Approx. D ₁₀ (mm)	Approx. Range Uniform Coefficient C _u	Void Ratio			Porosity (%)		Dry Weight			Wet Weight		Submerged Weight	
	D _{max}	D _{min}			e _{max} loose	e _{cr}	e _{min} dense	n _{max} loose	n _{min} dense	Min loose	100% Mod. AASHTO	Max dense	Min loose	Max dense	Min loose	Max dense
GRANULAR MATERIALS																
Uniform Materials																
a. Equal spheres (theoretical values)	-	-	-	1.0	0.92	-	0.35	47.6	26	-	-	-	-	-	-	-
b. Standard Ottawa SAND	0.84	0.59	0.67	1.1	0.80	0.75	0.50	44	33	92	-	110	93	131	57	69
c. Clean, uniform SAND (fine or medium)	-	-	-	1.2 to 2.0	1.0	0.80	0.40	50	29	83	115	118	84	136	52	73
d. Uniform, inorganic SILT	0.05	0.005	0.012	1.2 to 2.0	1.1	-	0.40	52	29	80	-	118	81	136	51	73
Well-graded Materials																
a. Silty SAND	2.0	0.005	0.02	5 to 10	0.90	-	0.30	47	23	87	122	127	88	142	54	79
b. Clean, fine to coarse SAND	2.0	0.05	0.09	4 to 6	0.95	0.70	0.20	49	17	85	132	138	86	148	53	86
c. Micaceous SAND	-	-	-	-	1.2	-	0.40	55	29	76	-	120	77	138	48	76
d. Silty SAND & GRAVEL	100	0.005	0.02	15 to 300	0.85	-	0.14	46	12	89	-	146 ⁽³⁾	90	155 ⁽³⁾	56	92
MIXED SOILS																
Sandy or Silty CLAY	2.0	0.001	0.003	10 to 30	1.8	-	0.25	64	20	60	130	135	100	147	38	85
Skip-graded Silty CLAY with stones or r _h fragments	250	0.001	-	-	1.0	-	0.20	50	17	84	-	140	115	151	53	89
Well-graded GRAVEL, SAND, SILT & CLAY mixture	250	0.001	0.002	25 to 1000	0.70	-	0.13	41	11	100	140	148 ⁽⁴⁾	125	156 ⁽⁴⁾	62	94
CLAY SOILS																
CLAY (30% - 50% clay sizes)	0.05	0.5μ	0.001	-	2.4	-	0.50	71	33	50	105	112	94	133	31	71
Colloidal CLAY (<0.002 mm; 50%)	0.01	10Å	-	-	12	-	0.60	92	37	13	90	106	71	128	8	66
ORGANIC SOILS																
Organic SILT	-	-	-	-	3.0	-	0.55	75	35	40	-	110	87	131	25	69
Organic CLAY (30% - 50% clay sizes)	-	-	-	-	4.4	-	0.70	81	41	30	-	100	81	125	18	62

Representative Range of Dry Unit Weights
 (after FHWA-HI-97-021)

Rock Type	Unit Weight Range (kcf)
Shale	0.140 - 0.159
Sandstone	0.108 - 0.172
Limestone	0.121 - 0.178
Schist	0.159 - 0.185
Gneiss	0.159 - 0.185
Granite	0.153 - 0.185
Basalt	0.127 - 0.191

1. Dry unit weights are for moderately weathered to unweathered rock.
2. Wide range in unit weights for shale, sandstone, and limestone represents effect of variations in porosity, cementation, grain size, etc.
3. Specimens with unit weights falling outside these ranges may be encountered.

Bearing Resistance



Purpose: Calculate lateral earth pressure coefficients

Reference: American Association of State Highway and Transportation Officials (AASHTO)
 "AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020"

Equations: See attached

Calculations:

	Existing Fill	Sand/Silty Sand and Gravel	Retained Backfill (Ordinary Borrow)	Gravel Borrow for Bidge Foundations	Gravel Borrow
Effective Friction Angle of Soil, ϕ'_f (deg)	30	34	32	37	35
Friction Angle Between Fill and Wall, δ (deg)	15.0	17.0	16.0	18.5	17.5
Angle of Fill to the Horizontal, β (deg)	0	0	0	0	0
Angle of Back Face of Wall to the Horizontal, θ (deg)	90	90	90	90	90
At-Rest Lateral Earth Pressure Coefficient, k_o (Eq. 3.11.5.2-1)	0.50	0.44	0.47	0.40	0.43
Γ (Eq. 3.11.5.3-2)	2.58	2.80	2.69	2.97	2.86
Active Lateral Earth Pressure Coefficient, k_a (Eq. 3.11.5.3-1)	0.30	0.26	0.28	0.23	0.25
$-\delta/\phi_f$	-0.5	-0.5	-0.5	-0.5	-0.5
β/ϕ_f	0.0	0.0	0.0	0.0	0.0
Coefficient of Passive Pressure for $\beta/\phi_f = 0$ and $-\delta/\phi_f = -0.5$, k_p (Figure 3.11.5.4-2)	6.5	9.2	7.8	13.0	10.3
Reduction Factor of k_p , R (Figure 3.11.5.4-2)	0.746	0.688	0.717	0.641	0.674
Coefficient of Passive Pressure, k_p	4.85	6.33	5.59	8.33	6.94

Reference: American Association of State Highway and Transportation Officials (AASHTO)
 "AASHTO LRFD Bridge Design Specifications, Ninth Edition, 2020"

Equations: **At-Rest Lateral Earth Pressure Coefficient, k_o**

3.11.5.2—At-Rest Lateral Earth Pressure Coefficient, k_o

For normally consolidated soils, vertical wall, and level ground, the coefficient of at-rest lateral earth pressure may be taken as:

$$k_o = 1 - \sin \phi'_f \quad (3.11.5.2-1)$$

where:

ϕ'_f = effective friction angle of soil
 k_o = coefficient of at-rest lateral earth pressure

Active Lateral Earth Pressure Coefficient, k_a

3.11.5.3—Active Lateral Earth Pressure Coefficient, k_a

Values for the coefficient of active lateral earth pressure may be taken as:

$$k_a = \frac{\sin^2(\theta + \phi'_f)}{\Gamma [\sin^2 \theta \sin(\theta - \delta)]} \quad (3.11.5.3-1)$$

in which:

$$\Gamma = \left[1 + \frac{\sin(\phi'_f + \delta) \sin(\phi'_f - \beta)}{\sin(\theta - \delta) \sin(\theta + \beta)} \right]^2 \quad (3.11.5.3-2)$$

where:

δ = friction angle between fill and wall taken as specified in [Table 3.11.5.3-1](#) (degrees)
 β = angle of fill to the horizontal as shown in [Figure 3.11.5.3-1](#) (degrees)
 θ = angle of back face of wall to the horizontal as shown in [Figure 3.11.5.3-1](#) (degrees)
 ϕ'_f = effective angle of internal friction (degrees)

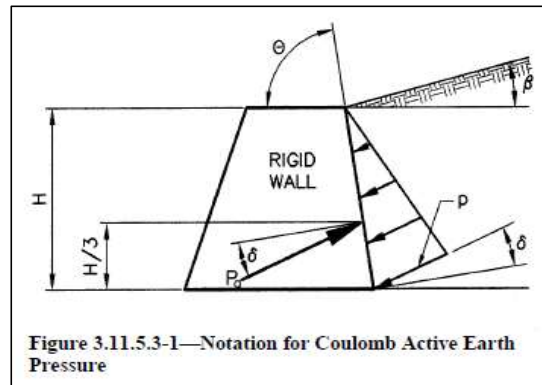


Figure 3.11.5.3-1—Notation for Coulomb Active Earth Pressure

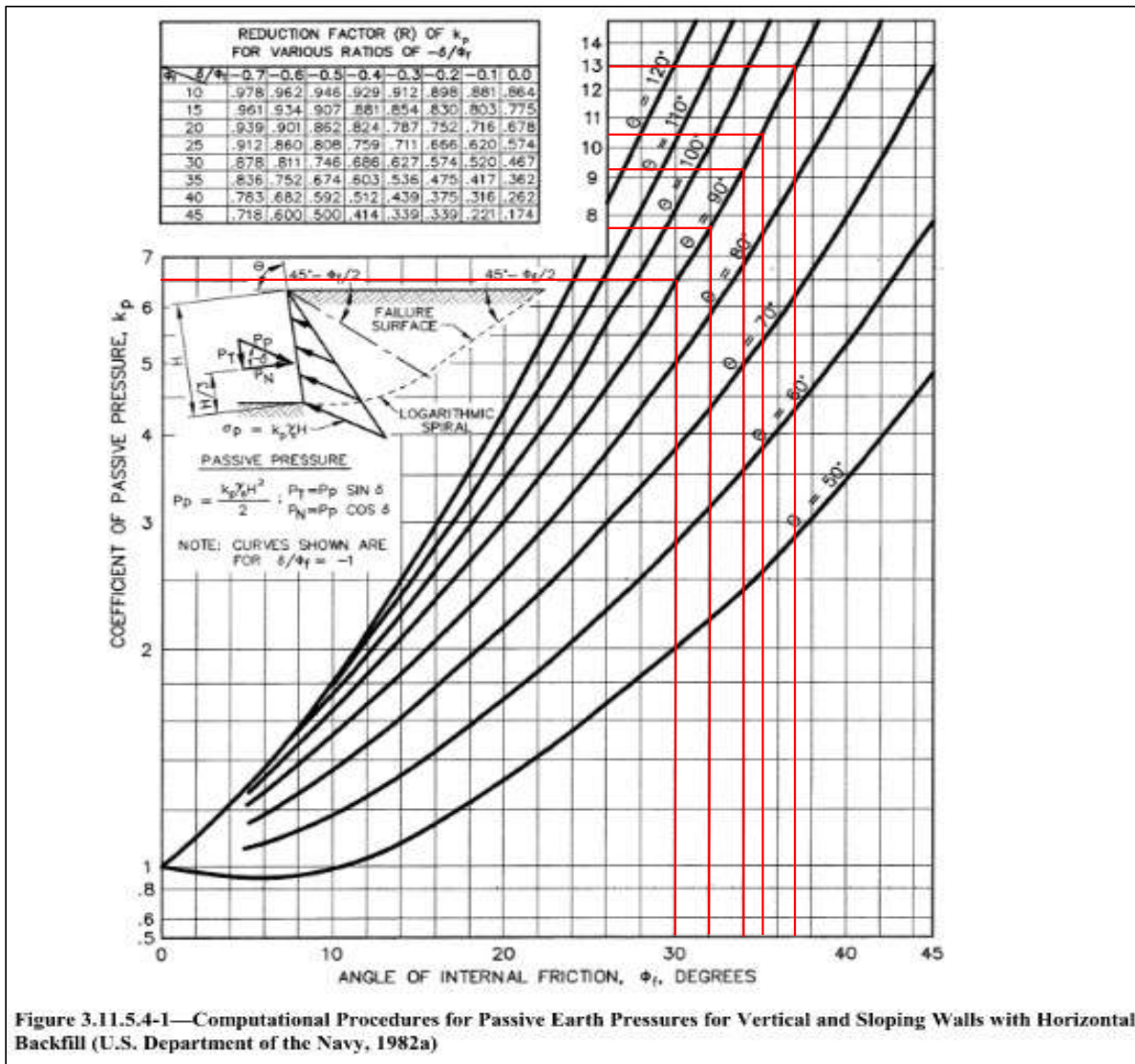
Table C3.11.5.3-1—Friction Angle for Dissimilar Materials (U.S. Department of the Navy, 1982a)

Interface Materials	Friction Angle, δ (degrees)	Coefficient of Friction, $\tan \delta$ (dim.)
Mass concrete on the following foundation materials:		
• Clean sound rock	35	0.70
• Clean gravel, gravel-sand mixtures, coarse sand	29 to 31	0.55 to 0.60
• Clean fine to medium sand, silty medium to coarse sand, silty or clayey gravel	24 to 29	0.45 to 0.55
• Clean fine sand, silty or clayey fine to medium sand	19 to 24	0.34 to 0.45
• Fine sandy silt, nonplastic silt	17 to 19	0.31 to 0.34
• Very stiff and hard residual or preconsolidated clay	22 to 26	0.40 to 0.49
• Medium stiff and stiff clay and silty clay	17 to 19	0.31 to 0.34
Masonry on foundation materials has same friction factors.		
Steel sheet piles against the following soils:		
• Clean gravel, gravel-sand mixtures, well-graded rock fill with spalls	22	0.40
• Clean sand, silty sand-gravel mixture, single-size hard rock fill	17	0.31
• Silty sand, gravel or sand mixed with silt or clay	14	0.25
• Fine sandy silt, nonplastic silt	11	0.19
Formed or precast concrete or concrete sheet piling against the following soils:		
• Clean gravel, gravel-sand mixture, well-graded rock fill with spalls	22 to 26	0.40 to 0.49
• Clean sand, silty sand-gravel mixture, single-size hard rock fill	17 to 22	0.31 to 0.40
• Silty sand, gravel or sand mixed with silt or clay	17	0.31
• Fine sandy silt, nonplastic silt	14	0.25
Various structural materials:		
• Masonry on masonry, igneous and metamorphic rocks:		
o dressed soft rock on dressed soft rock	35	0.70
o dressed hard rock on dressed soft rock	33	0.65
o dressed hard rock on dressed hard rock	29	0.55
• Masonry on wood in direction of cross grain	26	0.49
• Steel on steel at sheet pile interlocks	17	0.31

Passive Lateral Earth Pressure Coefficient, k_p

3.11.5.4—Passive Lateral Earth Pressure Coefficient, k_p

For noncohesive soils, values of the coefficient of passive lateral earth pressure may be taken from Figure 3.11.5.4-1 for the case of a sloping or vertical wall with a horizontal backfill or from Figure 3.11.5.4-2 for the case of a vertical wall and sloping backfill. For conditions that deviate from those described in Figures 3.11.5.4-1 and 3.11.5.4-2, the passive pressure may be calculated by using a trial procedure based on wedge theory, e.g., see Terzaghi et al. (1996). When wedge theory is used, the limiting value of the wall friction angle should not be taken larger than one-half the angle of internal friction, ϕ_f .



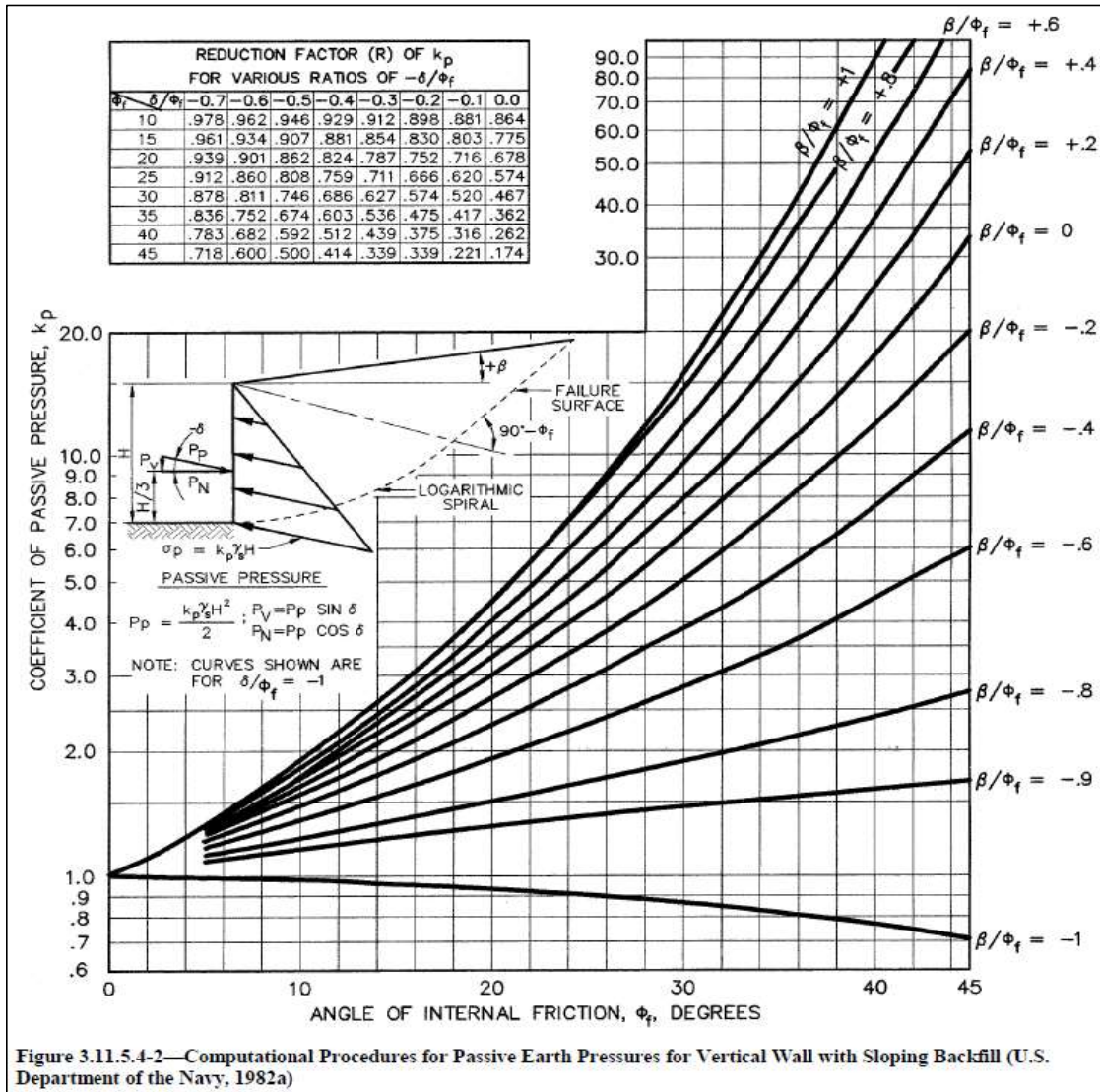


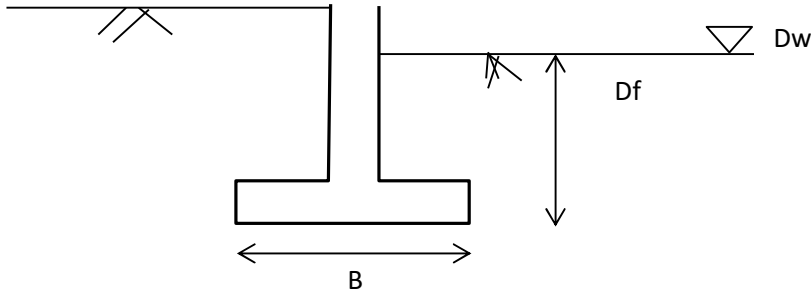
Figure 3.11.5.4-2—Computational Procedures for Passive Earth Pressures for Vertical Wall with Sloping Backfill (U.S. Department of the Navy, 1982a)

Lateral Earth Pressures



FACTORED BEARING RESISTANCE CALCULATIONS: LOVELL FIELD PEDESTRIAN BRIDGE - Abutments

Note: All references are to AASHTO LRFD Bridge Design Specifications, unless otherwise noted. See attached sheets with applicable table and equation references.



RESISTANCE FACTORS

Strength Limit	0.45
Extreme I Limit	1.0
Service Limit	1.0

BEARING SOIL PROPERTIES/SUBSURFACE INFORMATION

Bearing Soil Type	Sand/Silty Sand and Gravel	
Unit Weight of Bearing Soil (γ)	pcf	130
Cohesion of Bearing Soil (c)	psf	0
Friction Angle of bearing Soil (ϕ')	°	34
Es, Modulus of Elasticity	ksi	5
ν , poissons ratio		0.3
Depth to Groundwater, Dw	ft	0.0
Conservatively assumed at ground surface.		
Bearing Capacity Factor (N_c)		42.2
Bearing Capacity Factor (N_q)		29.4
Bearing Capacity Factor (N_γ)		41.1

FOOTING GEOMETRY

Bottom of Footing Elevation (T.O.W*)	ft	12.5	* T.O.W = Town of Weymouth Datum = NAVD88+6.63' Based on file titled "Notice of Intent, Bridge and Sidewalk Profile"
Minimum Footing Depth (D_f)	ft	4.0	Assumed
Footing Length (L)	ft	10.0	Based on file titled "Notice of Intent, Bridge and Sidewalk Profile"

Effective Width, B' ($B' = B - 2e$)	ft	3.0	4.0	6.0	8.0	10.0	12.0
Effective Length, $L' = L$	ft	10.0	10.0	10.0	10.0	10.0	10.0
L'/B'		3.3	2.5	1.7	1.3	1.0	0.8
D_f/B'		1.3	1.0	0.7	0.5	0.4	0.3
A'	sf	30.0	40.0	60.0	80.0	100.0	120.0
β_z		1.16	1.13	1.10	1.08	1.08	1.07



BEARING RESISTANCE EQUATION FACTORS/COEFFICIENTS

Effective Width, B' ($B' = B - 2e$)	ft	3.0	4.0	6.0	8.0	10.0	12.0
N_{cm}		51.0	53.9	59.8	65.7	71.6	77.5
Shape Correction Factor (s_c)		1.21	1.28	1.42	1.56	1.70	1.84
Load Inclination Factor (i_c)		1.0	1.0	1.0	1.0	1.0	1.0
N_{qm}		35.4	37.4	41.4	45.3	49.3	53.3
Shape Correction Factor (s_q)		1.20	1.27	1.40	1.54	1.67	1.81
Load Inclination Factor (i_q)		1.0	1.0	1.0	1.0	1.0	1.0
Depth Correction Factor (d_q)		1.0	1.0	1.0	1.0	1.0	1.0
N_{vm}		36.1	34.5	31.2	27.9	24.6	21.4
Shape Correction Factor (s_v)		0.88	0.84	0.76	0.68	0.60	0.52
Load Inclination Factor (i_v)		1.0	1.0	1.0	1.0	1.0	1.0
Groundwater Coefficient, C_{wq}		0.50	0.50	0.50	0.50	0.50	0.50
Groundwater Coefficient, C_{wy}		0.50	0.50	0.50	0.50	0.50	0.50

CALCULATED BEARING RESISTANCES

Nominal Bearing Resistance (q_n , ksf)	12.7	14.2	16.8	19.0	20.8	22.2
Strength Limit Factored Bearing Resistance: q_R (ksf)	5.7	6.4	7.6	8.6	9.4	10.0
Extreme Limit Factored Bearing Resistance: q_R (ksf)	12.7	14.2	16.8	19.0	20.8	22.2
Service Limit Bearing, q_o, for 1 inch (Factored)	14.0	11.8	9.4	8.0	7.1	6.4



Table 10.4.6.2.4-1—Correlation of SPT N_{160} Values to Drained Friction Angle of Granular Soils (modified after Bowles, 1977)

N_{160}	ϕ_r
<4	25-30
4	27-32
10	30-35
30	35-40
50	38-43

Table 10.6.3.1.2a-1—Bearing Capacity Factors N_c (Prandtl, 1921), N_q (Reissner, 1924), and N_γ (Vesic, 1975)

ϕ_r	N_c	N_q	N_γ	ϕ_r	N_c	N_q	N_γ
0	5.14	1.0	0.0	23	18.1	8.7	8.2
1	5.4	1.1	0.1	24	19.3	9.6	9.4
2	5.6	1.2	0.2	25	20.7	10.7	10.9
3	5.9	1.3	0.2	26	22.3	11.9	12.5
4	6.2	1.4	0.3	27	23.9	13.2	14.5
5	6.5	1.6	0.5	28	25.8	14.7	16.7
6	6.8	1.7	0.6	29	27.9	16.4	19.3
7	7.2	1.9	0.7	30	30.1	18.4	22.4
8	7.5	2.1	0.9	31	32.7	20.6	26.0
9	7.9	2.3	1.0	32	35.5	23.2	30.2
10	8.4	2.5	1.2	33	38.6	26.1	35.2
11	8.8	2.7	1.4	34	42.2	29.4	41.1
12	9.3	3.0	1.7	35	46.1	33.3	48.0
13	9.8	3.3	2.0	36	50.6	37.8	56.3
14	10.4	3.6	2.3	37	55.6	42.9	66.2
15	11.0	3.9	2.7	38	61.4	48.9	78.0
16	11.6	4.3	3.1	39	67.9	56.0	92.3
17	12.3	4.8	3.5	40	75.3	64.2	109.4
18	13.1	5.3	4.1	41	83.9	73.9	130.2
19	13.9	5.8	4.7	42	93.7	85.4	155.6
20	14.8	6.4	5.4	43	105.1	99.0	186.5
21	15.8	7.1	6.2	44	118.4	115.3	224.6
22	16.9	7.8	7.1	45	133.9	134.9	271.8

Table C10.4.6.3-1—Elastic Constants of Various Soils (modified after U.S. Department of the Navy, 1982; Bowles, 1988)

Soil Type	Typical Range of Young's Modulus Values, E_s (ksi)	Poisson's Ratio, ν (dim)
Clay:		
Soft sensitive	0.347-2.08	0.4-0.5 (undrained)
Medium stiff	2.08-6.94	
Very stiff	6.94-13.89	
Loess	2.08-8.33	0.1-0.3
Silt	0.278-2.78	0.3-0.35
Fine Sand:		
Loose	1.11-1.67	0.25
Medium dense	1.67-2.78	
Dense	2.78-4.17	
Sand:		
Loose	1.39-4.17	0.20-0.36
Medium dense	4.17-6.94	0.30-0.40
Dense	6.94-11.11	
Gravel:		
Loose	4.17-11.11	0.20-0.35
Medium dense	11.11-13.89	0.30-0.40
Dense	13.89-27.78	
Estimating E_s from SPT N Value		
Soil Type	E_s (ksi)	
Silts, sandy silts, slightly cohesive mixtures	0.056 N_{160}	
Clean fine to medium sands and slightly silty sands	0.097 N_{160}	
Coarse sands and sands with little gravel	0.139 N_{160}	
Sandy gravel and gravels	0.167 N_{160}	
Estimating E_s from q_c (static cone resistance)		
Sandy soils	0.028 q_c	

Table 10.6.3.1.2a-2—Coefficients C_{wg} and C_{wy} for Various Groundwater Depths

D_w	C_{wg}	C_{wy}
0.0	0.5	0.5
D_f	1.0	0.5
$>1.5B + D_f$	1.0	1.0

Where the position of groundwater is at a depth less than 1.5 times the footing width below the footing base, the bearing resistance is affected. The highest anticipated groundwater level should be used in design.

Table 10.6.3.1.2a-3—Shape Correction Factors s_c , s_γ , s_q

Factor	Friction Angle	Cohesion Term (s_c)	Unit Weight Term (s_γ)	Surcharge Term (s_q)
Shape Factors s_c, s_γ, s_q	$\phi_f = 0$	$1 + \left(\frac{B}{5L}\right)$	1.0	1.0
	$\phi_f > 0$	$1 + \left(\frac{B}{L}\right)\left(\frac{N_c}{N_c}\right)$	$1 - 0.4\left(\frac{B}{L}\right)$	$1 + \left(\frac{B}{L} \tan \phi_f\right)$

$$d_q = 1 + 2 \tan \phi_f (1 - \sin \phi_f)^2 \arctan \left(\frac{D_f}{B} \right) \quad (10.6.3.1.2a-10)$$

where:

d_q = depth correction factor to account for the shearing resistance along the failure surface passing through cohesionless material above the bearing elevation(dim)

ϕ_f = angle of internal friction of soil (degrees)

D_f = footing embedment depth (ft)

B = footing width (ft)

Arctan (D_f/B) is in radians.

The depth correction factor should be used only when the soils above the footing bearing elevation are as competent as the soils beneath the footing level; otherwise, the depth correction factor should be taken as 1.0. The depth correction factor, d_q , shall not exceed 1.4.

The parent information from which Table 10.6.3.1.2a-4 was developed covered the indicated range of friction angle, ϕ_f . Information beyond the range indicated is not available at this time.

Elastic Half-Space Method (AASHTO 8th Ed.)

$$s_e = \frac{q_o (1 - \nu^2) \sqrt{A'}}{144 E_s \beta_z} \quad (10.6.2.4.2-1)$$

where:

q_o = applied vertical stress (ksf)

A' = effective area of footing (ft²)

E_s = Young's modulus of soil taken as specified in Article 10.4.6.3 if direct measurements of E_s are not available from the results of in situ or laboratory tests (ksi)

Table 10.6.2.4.2-1—Elastic Shape and Rigidity Factors, EPRI (1983)

L/B	Flexible, β_z (average)	β_z Rigid
Circular	1.04	1.13
1	1.06	1.08
2	1.09	1.10
3	1.13	1.15
5	1.22	1.24
10	1.41	1.41



Table 10.5.5.2.2-1—Resistance Factors for Geotechnical Resistance of Shallow Foundations at the Strength Limit State

Method/Soil/Condition		Resistance Factor	
Bearing Resistance	ϕ_b	Theoretical method (Munfakh et al., 2001), in clay	0.50
		Theoretical method (Munfakh et al., 2001), in sand, using <i>CPT</i>	0.50
		Theoretical method (Munfakh et al., 2001), in sand, using <i>SPT</i>	0.45
		Semi-empirical methods (Meyerhof, 1957), all soils	0.45
		Footings on rock	0.45
		Plate Load Test	0.55
Sliding	ϕ_r	Precast concrete placed on sand	0.90
		Cast-in-Place Concrete on sand	0.80
		Cast-in-Place or precast Concrete on Clay	0.85
		Soil on soil	0.90
	ϕ_{ep}	Passive earth pressure component of sliding resistance	0.50

10.5.5—Resistance Factors

10.5.5.1—Service Limit States

Resistance factors for the service limit states shall be taken as 1.0, except as provided for overall stability in Article 11.6.2.3.

A resistance factor of 1.0 shall be used to assess the ability of the foundation to meet the specified deflection criteria after scour due to the design flood.

10.5.5.3—Extreme Limit States

10.5.5.3.1—General

Design of foundations at extreme limit states shall be consistent with the expectation that structure collapse is prevented and that life safety is protected.

10.5.5.3.2—Scour

The provisions of [Articles 2.6.4.4.2](#) and [3.7.5](#) shall apply to the changed foundation conditions resulting from scour. Resistance factors at the strength limit state shall be taken as specified herein. Resistance factors at the extreme event shall be taken as 1.0 except that for uplift resistance of piles and shafts, the resistance factor shall be taken as 0.80 or less.

The foundation shall resist not only the loads applied from the structure but also any debris loads occurring during the flood event.

10.5.5.3.3—Other Extreme Limit States

Resistance factors for extreme limit state, including the design of foundations to resist earthquake, ice, vehicle or vessel impact loads, shall be taken as 1.0. For uplift resistance of piles and shafts, the resistance factor shall be taken as 0.80 or less.

C10.5.5.3.2

The specified resistance factors should be used provided that the method used to compute the nominal resistance does not exhibit bias that is unconservative. See Paikowsky et al. (2004) regarding bias values for pile resistance prediction methods.

Design for scour is discussed in Hannigan et al. (2005).

C10.5.5.3.3

The difference between compression skin friction and tension skin friction should be taken into account through the resistance factor, to be consistent with how this is done for the strength limit state (see [Article 10.5.5.2.3](#)).



Table 11.5.7-1—Strength Limit State Resistance Factors for Permanent Retaining Walls

Wall-Type and Condition		Resistance Factor
Nongravity Cantilevered and Anchored Walls		
Axial compressive resistance of vertical elements		Article 10.5 applies
Passive resistance of vertical elements		0.75
Pullout resistance of anchors ⁽¹⁾	• Cohesionless (granular) soils	0.65 ⁽¹⁾
	• Cohesive soils	0.70 ⁽¹⁾
	• Rock	0.50 ⁽¹⁾
Pullout resistance of anchors ⁽²⁾	• Where proof tests are conducted	1.0 ⁽²⁾
Tensile resistance of anchor tendon	• Mild steel (e.g., ASTM A615 bars)	0.90 ⁽³⁾
	• High-strength steel (e.g., ASTM A722 bars)	0.80 ⁽³⁾
Overall stability, soil failure		Article 11.6.3.7 applies
Flexural capacity of vertical elements		0.90
Mechanically Stabilized Earth Walls, Gravity Walls, and Semigravity Walls		
Bearing resistance	• Gravity and semigravity walls	0.55
	• MSE walls	0.65
Sliding		1.0
Tensile resistance of metallic reinforcement and connectors	Strip reinforcements ⁽⁴⁾	0.75
	Grid reinforcements ⁽⁴⁾⁽⁵⁾	0.65
Tensile resistance of geosynthetic reinforcement and connectors	• Geotextile and geogrid reinforcements	0.80
	• Geostrip reinforcements	0.55
Pullout resistance of metallic reinforcement	• Steel strip reinforcements	0.90
	• Steel grid reinforcements	0.90
Pullout resistance of geosynthetic reinforcement	• Geotextiles and geogrids	0.70
	• Geostrip reinforcements	0.70
Service Limit, for soil failure using stiffness method		1.0
Overall and compound stability, soil failure		Article 11.6.3.7 applies
Prefabricated Modular Walls		
Bearing		Article 10.5 applies
Sliding		Article 10.5 applies
Passive resistance		Article 10.5 applies
Overall stability, soil failure		Article 11.6.3.7 applies

11.5.7—Resistance Factors—Service and Strength

Resistance factors for the service limit states shall be taken as 1.0.

For the strength limit state, the resistance factors provided in [Table 11.5.7-1](#) shall be used for wall design, unless region-specific values or substantial successful experience is available to justify higher values. Resistance factors for geotechnical design of foundations that may be needed for wall support, unless specifically identified in [Table 11.5.7-1](#), are as specified in [Tables 10.5.5.2.2-1, 10.5.5.2.3-1, and 10.5.5.2.4-1](#).

If methods other than those prescribed in these Specifications are used to estimate resistance, the resistance factors chosen shall provide the same reliability as those given in [Tables 10.5.5.2.2-1, 10.5.5.2.3-1, 10.5.5.2.4-1, and Table 11.5.7-1](#).

11.5.8—Resistance Factors—Extreme Event Limit State

Unless otherwise specified, all resistance factors shall be taken as 1.0 when investigating the extreme event limit state.

For overall stability of the retaining wall when earthquake loading is included, a resistance factor, ϕ , of 0.9 shall be used. For bearing resistance, a resistance factor of 0.8 shall be used for gravity and semigravity walls and 0.9 for MSE walls.

For tensile resistance of metallic reinforcement and connectors, when earthquake loading is included, the following resistance factors shall be used:

- Strip reinforcements, $\phi = 1.0$
- Grid reinforcement, $\phi = 0.85$



**Project: Lovell Field Pedestrian Bridge
Weymouth, MA
GEI Project No.: 2300649**

By: M. H-Cabal
Date: 3/20/2023
Checked By: R. Oulal
Date: 4/11/2023

Soil Nail Walls ⁽⁶⁾		
Lateral sliding		1.00
Overall and Compound stability, soil failure		[Article 11.6.3.7] applies
Tensile resistance of nail tendon	Mild steel bars (Grade 75)	0.75
	High resistance bars (Grades 95 and 150)	0.65
Pullout resistance of nail		0.65
Facing flexure	Initial and final facing	0.90
Facing punching shear	Initial and final facing	0.90
Tensile resistance of headed stud	A307 steel bolt ⁽⁷⁾	0.70
	A325 steel bolt	0.80

Table 11.5.7-1 Notes 4 and 5 also apply to these resistance factors for metallic reinforcements.

For tensile and pullout resistance of geosynthetic reinforcement and connectors, a resistance factor, ϕ , of 1.0 shall be used.

For pullout resistance of metallic reinforcement, a resistance factor, ϕ , of 1.20 shall be used.

- (1) Apply to presumptive ultimate unit bond stresses for preliminary design only in [Article C11.9.4.2]
- (2) Apply where proof test(s) are conducted on every production anchor to a load of 1.0 or greater times the factored load on the anchor.
- (3) Apply to maximum proof test load for the anchor. For mild steel, apply resistance factor to F_y . For high-strength steel, apply the resistance factor to guaranteed ultimate tensile strength.
- (4) Apply to gross cross-section less sacrificial area. For sections with holes, reduce gross area in accordance with [Article 6.8.3] and apply to net section less sacrificial area.
- (5) Applies to grid reinforcements connected to a rigid facing element, e.g., a concrete panel or block. For grid reinforcements connected to a flexible facing mat or which are continuous with the facing mat, use the resistance factor for strip reinforcements.
- (6) Additional, special cases of limit states, as well as corresponding resistance factors, for soil nail walls are presented in FHWA-NHI-14-007/FHWA GEC 7 (Lazarte et al. 2015).
- (7) Equivalent to AWS D1.1 Type B studs, with $f_y = 60$ ksi.

Site Class Evaluation



Seismic Site Class Evaluation - Lovell Field Pedestrian Bridge

Purpose: Evaluate seismic design criteria in accordance with 2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design with 2012 through 2015 Interim Revisions and MassDOT 2020 LRFD Bridge Manual. Evaluate borings GEI-101 to GEI-103 based on N_{60} values (Assuming $CE=1.33$ for automatic hammer).

Layer	GEI-101		
	N_i	Layer (D_i)	D_i/N_i
1	13	6	0.46
2	3	2	0.67
3	11	2	0.18
4	36	2	0.06
5	29	2	0.07
6	33	4	0.12
7	31	5	0.16
8	28	5	0.18
9	23	72	3.13
$\Sigma =$		100	5.0
		\bar{N}	20

Layer	GEI-102		
	N_i	Layer (D_i)	D_i/N_i
1	7	2	0.29
2	8	2	0.25
3	11	2	0.18
4	29	2	0.07
5	45	5	0.11
6	95	5	0.05
7	36	5	0.14
8	39	77	1.97
$\Sigma =$		100	3.1
		\bar{N}	33

Layer	GEI-103		
	N_i	Layer (D_i)	D_i/N_i
1	9	2	0.22
2	7	2	0.29
3	0	2	0
4	11	2	0.18
5	31	2	0.06
6	37	2	0.05
$\Sigma =$		12	0.8
		\bar{N}	15

$$\bar{N} = \frac{\sum d_i}{\sum d_i/N_i} = 22$$

From AASHTO Eq. 3.4.2.2-2

**From AASHTO Table 3.4.2.1-1
 Site Class D**



Site Seismic Coefficients

Horizontal Peak Ground Acceleration,	PGA =	0.070	AASHTO Fig. 3.10.2.1-1
Horizontal Response Spectral Acceleration (0.2 sec),	$S_s =$	0.140	AASHTO Fig. 3.10.2.1-2
Horizontal Response Spectral Acceleration (1 sec),	$S_1 =$	0.040	AASHTO Fig. 3.10.2.1-3
	$F_{PGA} =$	1.6	AASHTO Table 3.4.2.3-1
	$F_A =$	1.6	AASHTO Table 3.4.2.3-1
	$F_V =$	2.4	AASHTO Table 3.4.2.3-2

Design Response Spectra

Acceleration Coefficient,	$A_s = PGA \times F_{PGA}$	$A_s =$	0.112	AASHTO Eq. 3.4.1-1
Design Spectral Acceleration (0.2 sec),	$S_{DS} = S_s \times F_A$	$S_{DS} =$	0.224	AASHTO Eq. 3.4.1-2
Design Spectral Acceleration (1 sec),	$S_{D1} = S_1 \times F_V$	$S_{D1} =$	0.096	AASHTO Eq. 3.4.1-3

**From AASHTO Table 3.5-1
SDC A**



2011 AASHTO Guide Specifications for LRFD Seismic Bridge Design:

Table 3.4.2.1-1—Site Class Definitions

Site Class	Soil Type and Profile
A	Hard rock with measured shear wave velocity, $\bar{v}_s > 5000$ ft/sec
B	Rock with $2500 \text{ ft/sec} < \bar{v}_s < 5000 \text{ ft/sec}$
C	Very dense soil and soil rock with $1200 \text{ ft/sec} < \bar{v}_s < 2500 \text{ ft/sec}$, or with either $\bar{N} > 50$ blows/ft or $\bar{s}_u > 2.0$ ksf
D	Stiff soil with $600 \text{ ft/sec} < \bar{v}_s < 1200 \text{ ft/sec}$, or with either $15 \text{ blows/ft} < \bar{N} < 50 \text{ blows/ft}$ or $1.0 \text{ ksf} < \bar{s}_u < 2.0 \text{ ksf}$
E	Soil profile with $\bar{v}_s < 600 \text{ ft/sec}$, or with either $\bar{N} < 15 \text{ blows/ft}$ or $\bar{s}_u < 1.0 \text{ ksf}$, or any profile with more than 10 ft of soft clay defined as soil with $PI > 20$, $w > 40\%$, and $\bar{s}_u < 0.5 \text{ ksf}$
F	Soils requiring site-specific ground motion response evaluations, such as: <ul style="list-style-type: none"> • Peats or highly organic clays ($H > 10$ ft of peat or highly organic clay, where H = thickness of soil) • Very high plasticity clays ($H > 25$ ft with $PI > 75$) • Very thick soft/medium stiff clays ($H > 120$ ft)

Exceptions:

Where the soil properties are not known in sufficient detail to determine the site class, a site investigation shall be undertaken sufficient to determine the site class. Site Class E or F should not be assumed unless the authority having jurisdiction determines that Site Class E or F could be present at the site or in the event that Site Class E or F is established by geotechnical data.

where:

\bar{v}_s = average shear wave velocity for the upper 100 ft of the soil profile as defined in [Article 3.4.2.2](#)

\bar{N} = average standard penetration test (SPT) blow count (blows/ft) (ASTM D 1586) for the upper 100 ft of the soil profile as defined in [Article 3.4.2.2](#)

\bar{s}_u = average undrained shear strength in ksf (ASTM D 2166 or D 2850) for the upper 100 ft of the soil profile as defined in [Article 3.4.2.2](#)

PI = plasticity index (ASTM D 4318)

w = moisture content (ASTM D 2216)



Table 3.4.2.3-1—Values of F_{pga} and F_a as a Function of Site Class and Mapped Peak Ground Acceleration or Short-Period Spectral Acceleration Coefficient

Site Class	Mapped Peak Ground Acceleration or Spectral Response Acceleration Coefficient at Short Periods				
	$PGA \leq 0.10$ $S_s \leq 0.25$	$PGA = 0.20$ $S_s = 0.50$	$PGA = 0.30$ $S_s = 0.75$	$PGA = 0.40$ $S_s = 1.00$	$PGA \geq 0.50$ $S_s \geq 1.25$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	a	a	a	a	a

Note: Use straight line interpolation for intermediate values of PGA and S_s , where PGA is the peak ground acceleration and S_s is the spectral acceleration coefficient at 0.2 sec obtained from the ground motion maps.

^a Site-specific response geotechnical investigation and dynamic site response analyses should be considered (Article 3.4.3).

Table 3.4.2.3-2—Values of F_v as a Function of Site Class and Mapped 1-sec Period Spectral Acceleration Coefficient

Site Class	Mapped Spectral Response Acceleration Coefficient at 1-sec Periods				
	$S_1 \leq 0.1$	$S_1 = 0.2$	$S_1 = 0.3$	$S_1 = 0.4$	$S_1 \geq 0.5$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	a	a	a	a	a

Note: Use straight line interpolation for intermediate values of S_1 , where S_1 is the spectral acceleration coefficient at 1.0 sec obtained from the ground motion maps.

^a Site-specific response geotechnical investigation and dynamic site response analyses should be considered (Article 3.4.3).

Table 3.5-1—Partitions for Seismic Design Categories A, B, C, and D

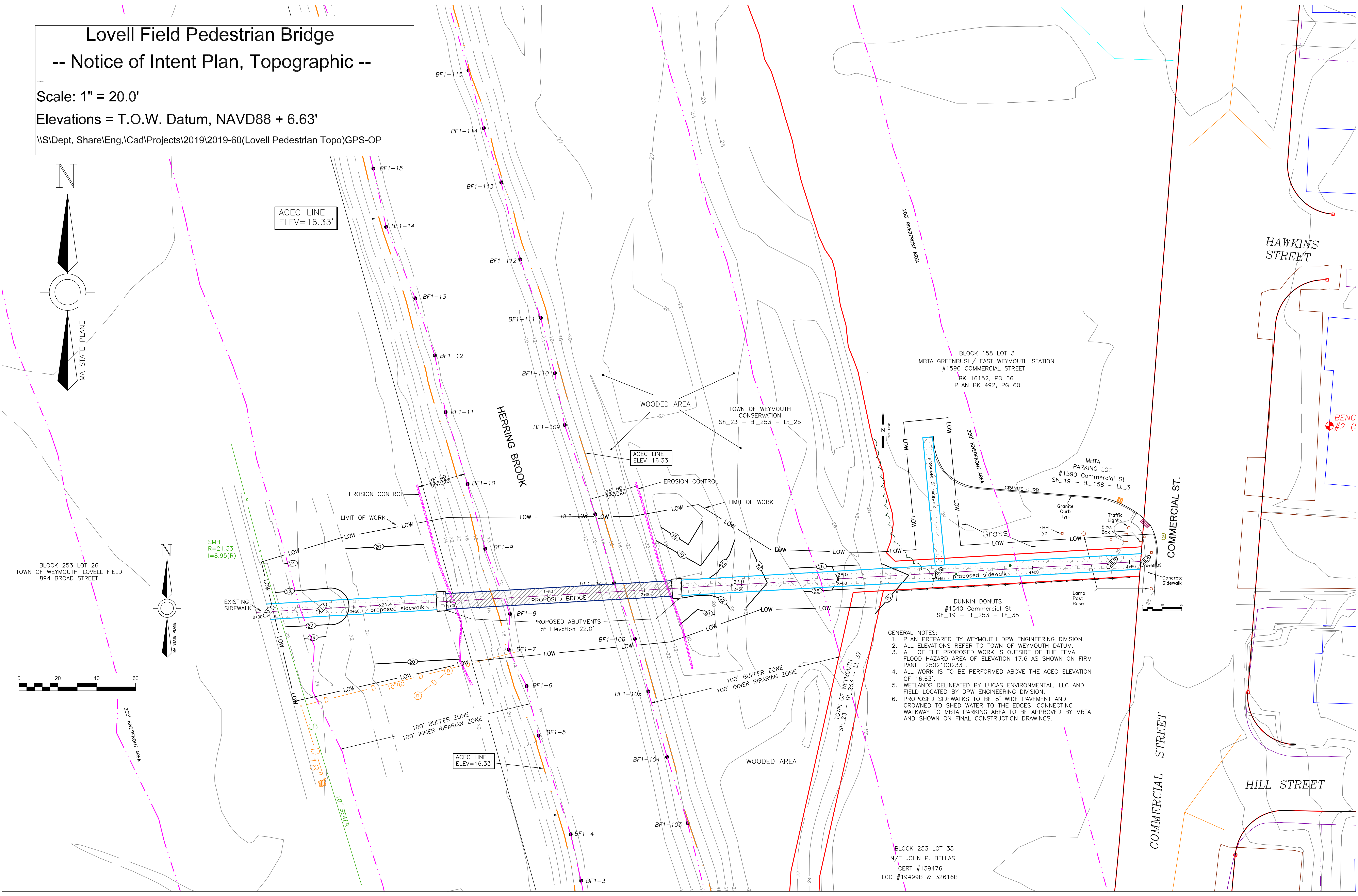
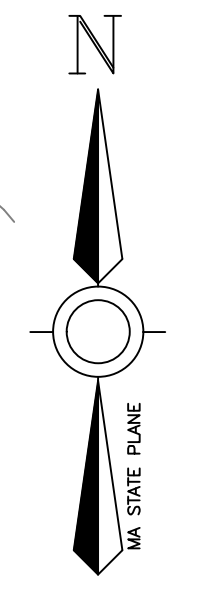
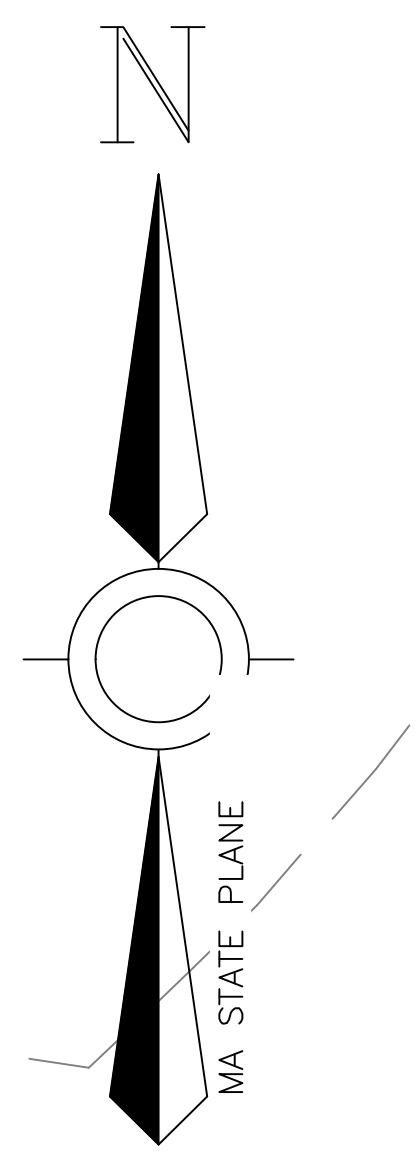
Value of $S_{D1} = F_v S_1$	SDC
$S_{D1} < 0.15$	A
$0.15 \leq S_{D1} < 0.30$	B
$0.30 \leq S_{D1} < 0.50$	C
$0.50 \leq S_{D1}$	D

Appendix C

Notice of Intent Drawings

Lovell Field Pedestrian Bridge
-- Notice of Intent Plan, Topographic --

Scale: 1" = 20.0'
 Elevations = T.O.W. Datum, NAVD88 + 6.63'
 \\S\Dept. Share\Eng.\Cad\Projects\2019\2019-60(Lovell Pedestrian Topo)GPS-OP



BLOCK 253 LOT 26
 TOWN OF WEYMOUTH-LOVELL FIELD
 894 BROAD STREET

SMH
 R=21.33
 I=8.95(R)

ACEC LINE
 ELEV=16.33'

ACEC LINE
 ELEV=16.33'

ACEC LINE
 ELEV=16.33'

- GENERAL NOTES:
1. PLAN PREPARED BY WEYMOUTH DPW ENGINEERING DIVISION.
 2. ALL ELEVATIONS REFER TO TOWN OF WEYMOUTH DATUM.
 3. ALL OF THE PROPOSED WORK IS OUTSIDE OF THE FEMA FLOOD HAZARD AREA OF ELEVATION 17.6 AS SHOWN ON FIRM PANEL 25021C0233E.
 4. ALL WORK IS TO BE PERFORMED ABOVE THE ACEC ELEVATION OF 16.63'.
 5. WETLANDS DELINEATED BY LUCAS ENVIRONMENTAL, LLC AND FIELD LOCATED BY DPW ENGINEERING DIVISION.
 6. PROPOSED SIDEWALKS TO BE 8' WIDE PAVEMENT AND CROWNED TO SHED WATER TO THE EDGES. CONNECTING WALKWAY TO MBTA PARKING AREA TO BE APPROVED BY MBTA AND SHOWN ON FINAL CONSTRUCTION DRAWINGS.

BLOCK 253 LOT 35
 N/F JOHN P. BELLAS
 CERT #139476
 LCC #19499B & 32616B

BLOCK 158 LOT 3
 MBTA GREENBUSH/ EAST WEYMOUTH STATION
 #1590 COMMERCIAL STREET
 BK 16152, PG 66
 PLAN BK 492, PG 60

MBTA PARKING LOT
 #1590 Commercial St
 Sh_19 - Bl_158 - Lt_3

DUNKIN DONUTS
 #1540 Commercial St
 Sh_19 - Bl_253 - Lt_35

HAWKINS STREET

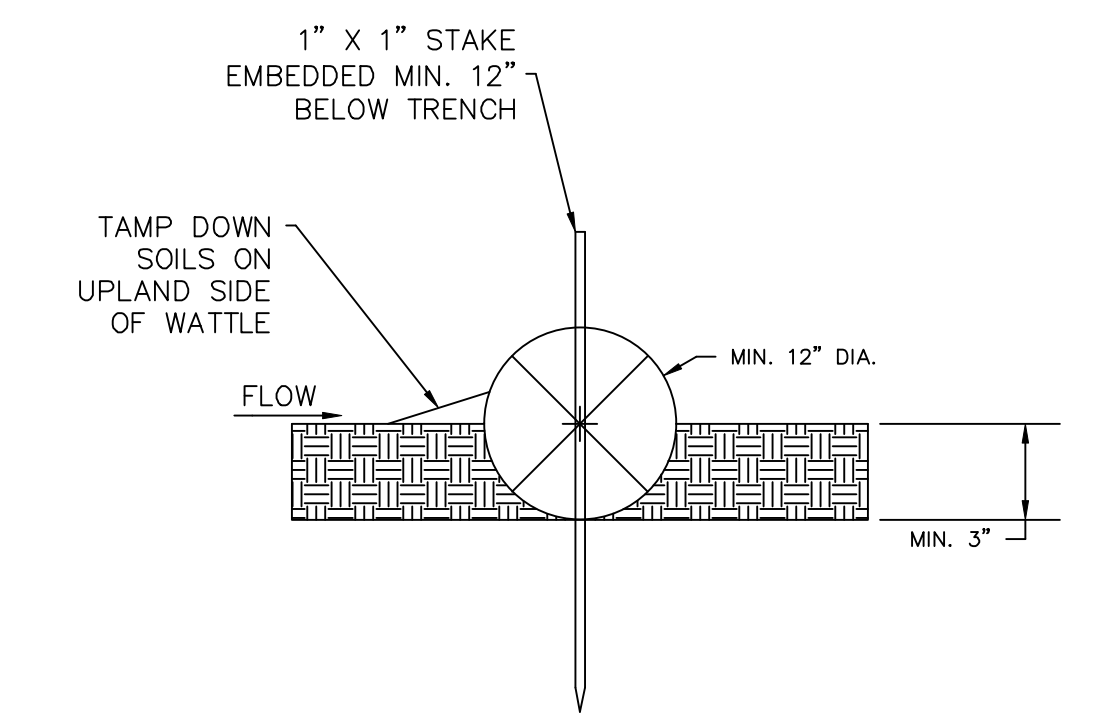
COMMERCIAL ST.

COMMERCIAL STREET

HILL STREET

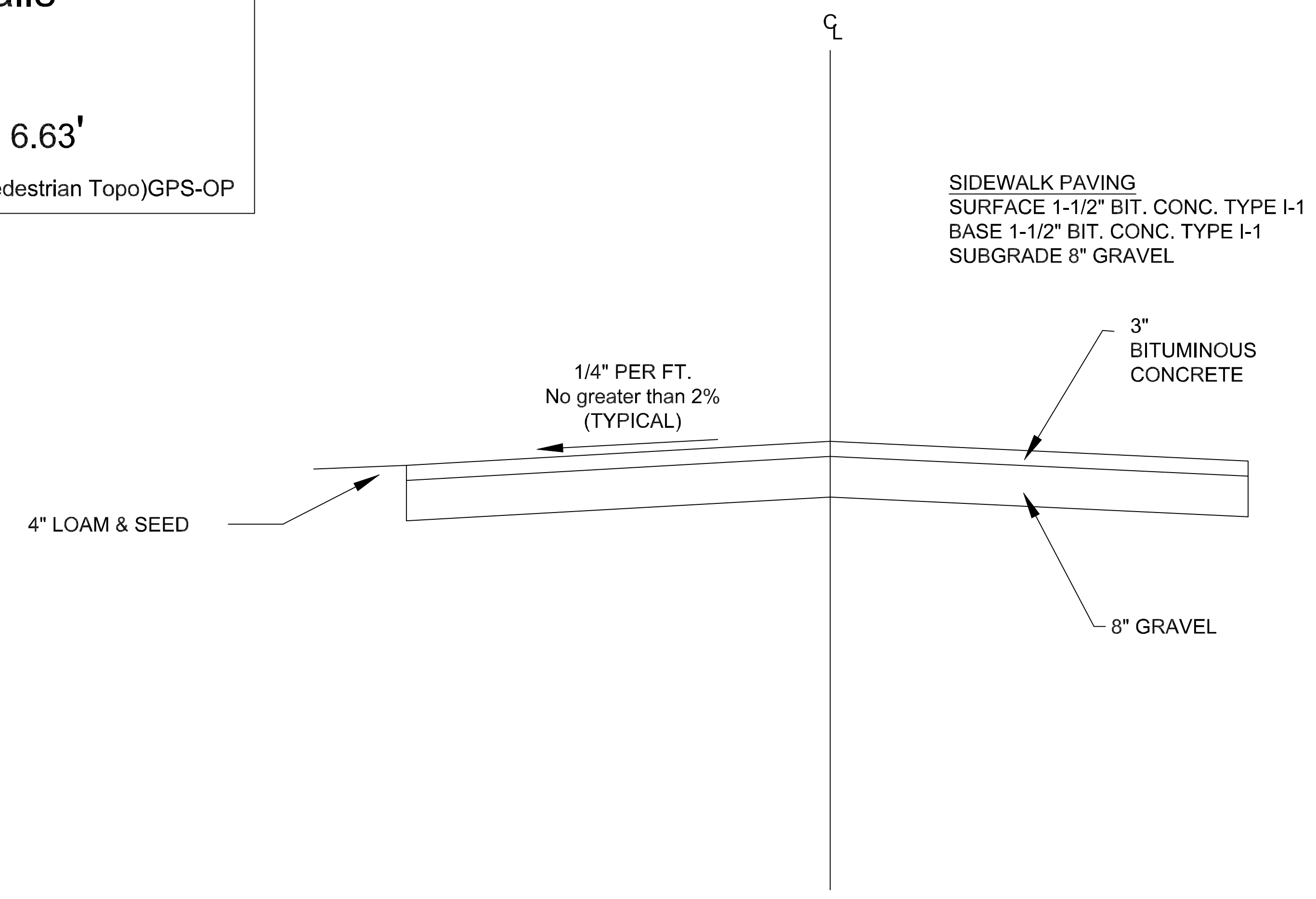
BENCH #2 (S)

Lovell Field Pedestrian Bridge
-- Notice of Intent Plan, Details --
 Scale: N.T.S.
 Elevations = T.O.W. Datum, NAVD88 + 6.63'
 \\S\Dept. Share\Eng.\Cad\Projects\2019\2019-60(Lovell Pedestrian Topo)GPS-OP

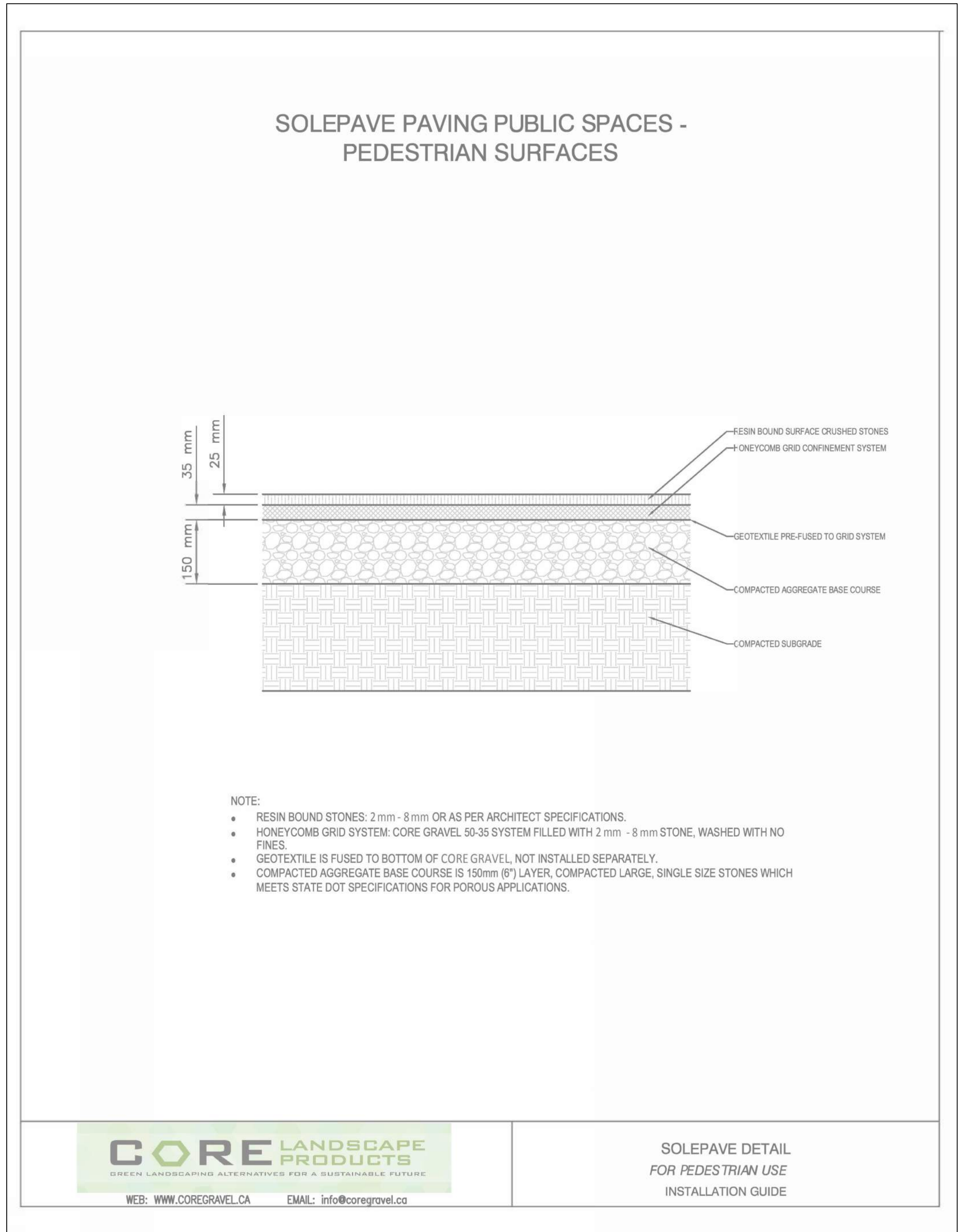


STRAW WATTLE DETAIL
 SCALE: NTS

- NOTES:
1. WATTLES SHALL BE FILLED WITH STRAW OR COMPOST.
 2. WATTLES SHALL BE INSTALLED IN LOCATIONS AS SHOWN ON SHEET C-2.
 3. SPACE STAKES 4'0" APART MAX.
 4. WATTLES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. TRENCHES SHALL BE DRESSED WITH LOAM AND SEEDED AFTER REMOVAL OF WATTLES.



SIDEWALK CROSS SECTION
 N.T.S.



CORE LANDSCAPE PRODUCTS
 GREEN LANDSCAPING ALTERNATIVES FOR A SUSTAINABLE FUTURE
 WEB: WWW.COREGRAVEL.CA EMAIL: info@coregravel.ca

SOLEPAVE DETAIL
 FOR PEDESTRIAN USE
 INSTALLATION GUIDE

Solepave™ Bonded Gravel
<https://www.coregravel.ca/core-foundations/solepave/specifications/>

N.T.S.

Lovell Field Pedestrian Bridge

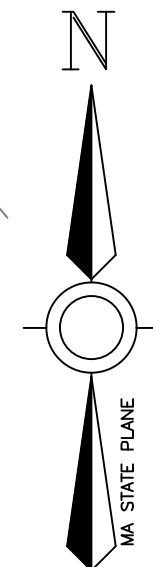
-- Notice of Intent, Bridge & Sidewalk Profile --

Scale: 1" = 20.0'

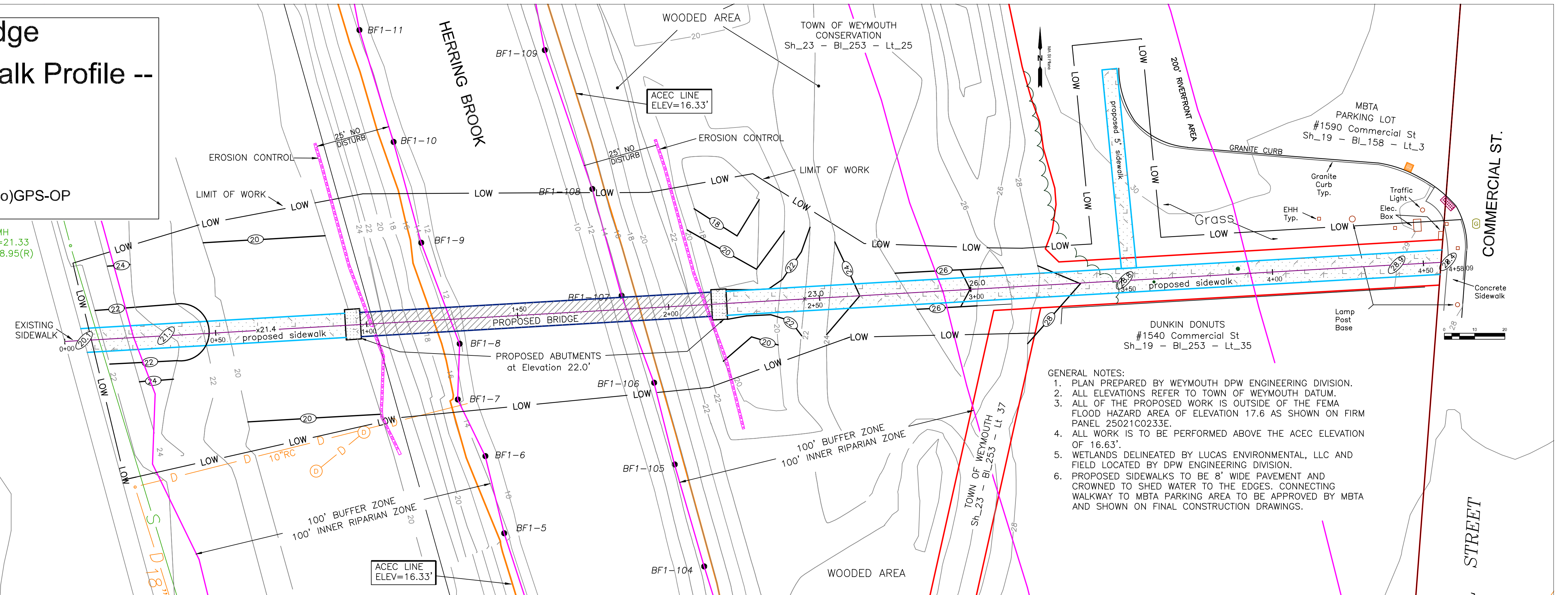
Elevations = T.O.W. Datum, NAVD88 + 6.63'

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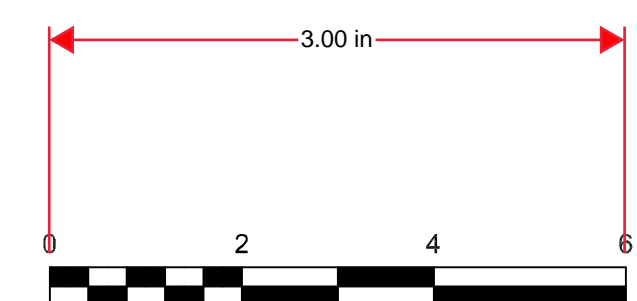
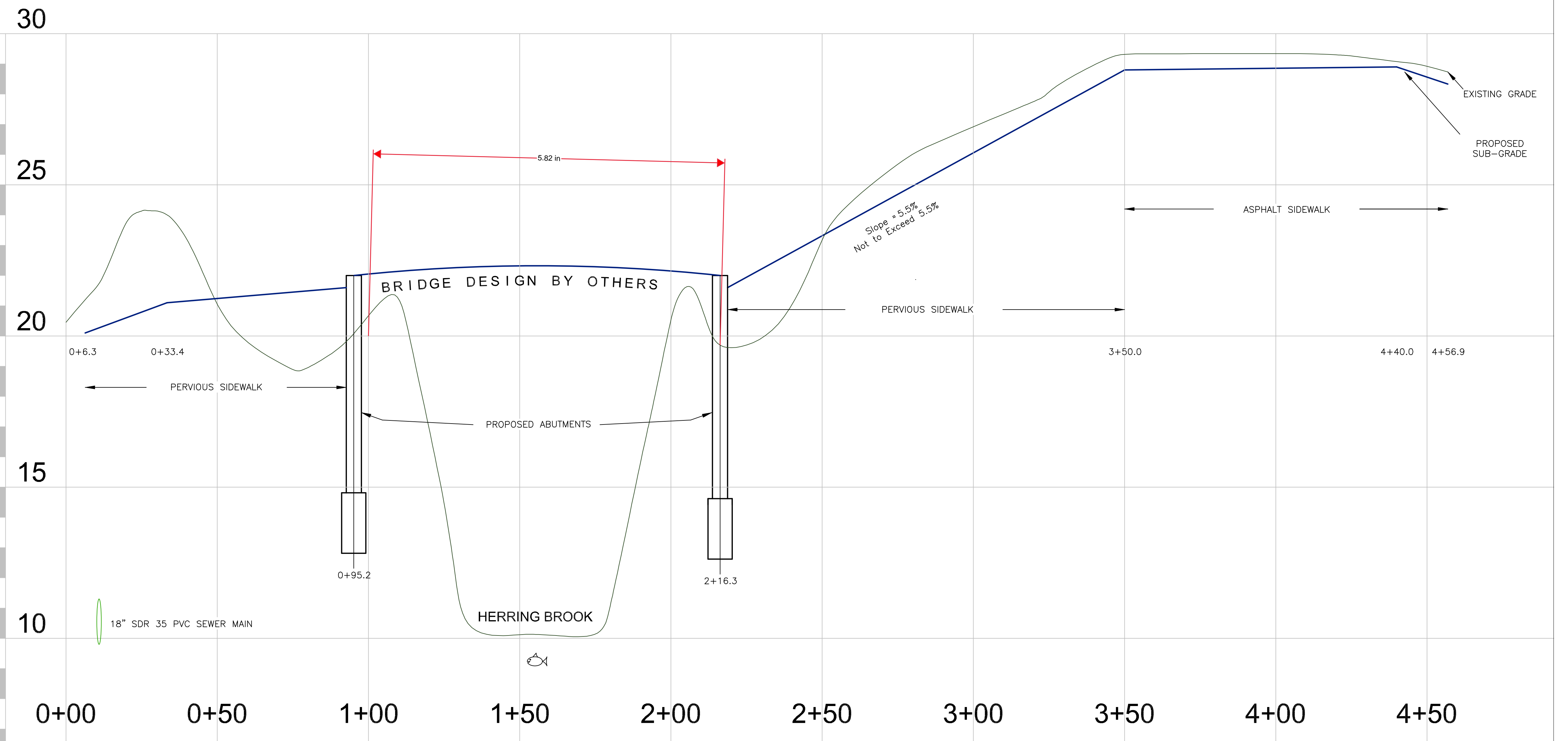
BLOCK 253 LOT 26
TOWN OF WEYMOUTH-LOVELL FIELD
894 BROAD STREET



SMH
R=21.33
I=8.95(R)



- GENERAL NOTES:
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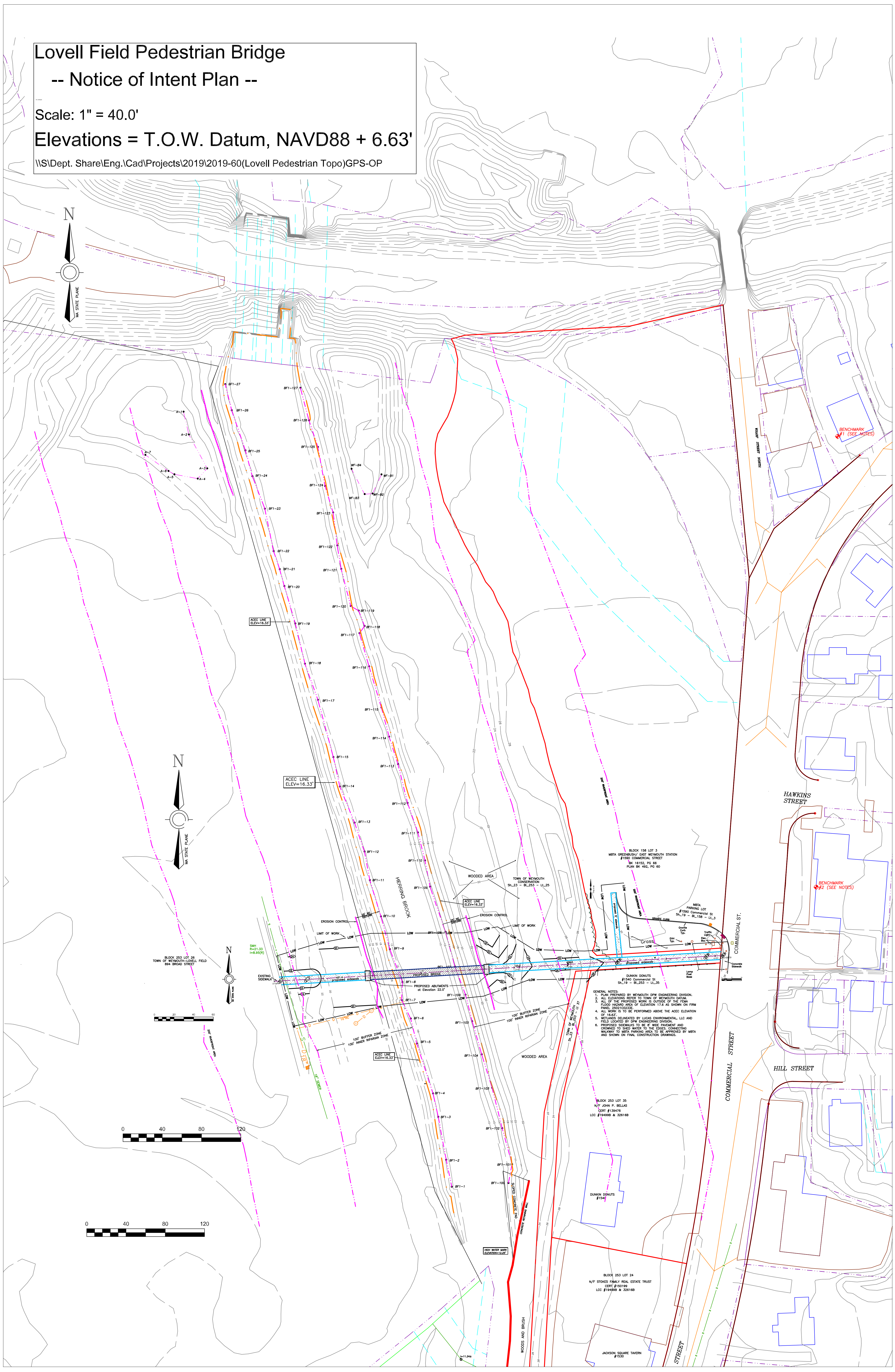
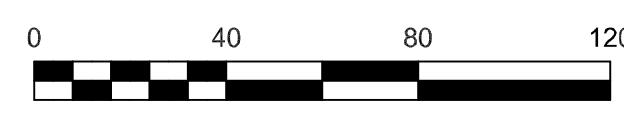
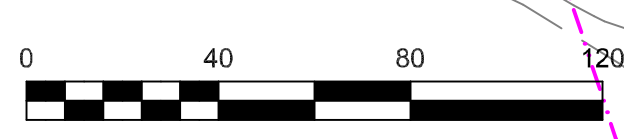
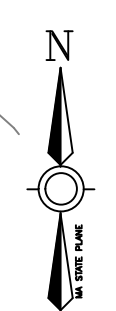
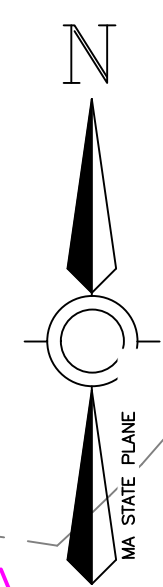
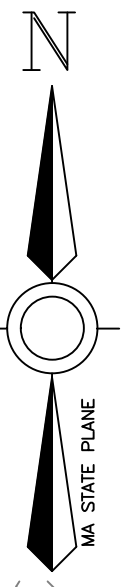


Vertical Scale 1" = 2.0'



Horizontal Scale 1" = 20.0'

Lovell Field Pedestrian Bridge
-- Notice of Intent Plan --
 Scale: 1" = 40.0'
 Elevations = T.O.W. Datum, NAVD88 + 6.63'
 \\S\Dept. Share\Eng.\Cad\Projects\2019\2019-60(Lovell Pedestrian Topo)GPS-OP



BLOCK 253 LOT 35
 N/P JOHN P. BELLAS
 CERT #134918
 LOC #194998 & 326168

BLOCK 253 LOT 24
 N/P STOKES FAMILY REAL ESTATE TRUST
 CERT #150199
 LOC #194998 & 326168

BLOCK 158 LOT 3
 METRA GREENBUSH/ EAST WENMOUTH STATION
 #1590 COMMERCIAL STREET
 BK 16152, PG 46
 PLAN BK 492, PG 60

MEGA PARKING LOT
 #1590 COMMERCIAL ST
 SH-19 - BL-108 - LL-3

DUNKIN DONUTS
 #1540 COMMERCIAL ST
 SH-19 - BL-203 - LL-35

JACKSON SQUARE TAVERN
 #1530

BENCHMARK #1 (SEE NOTES)

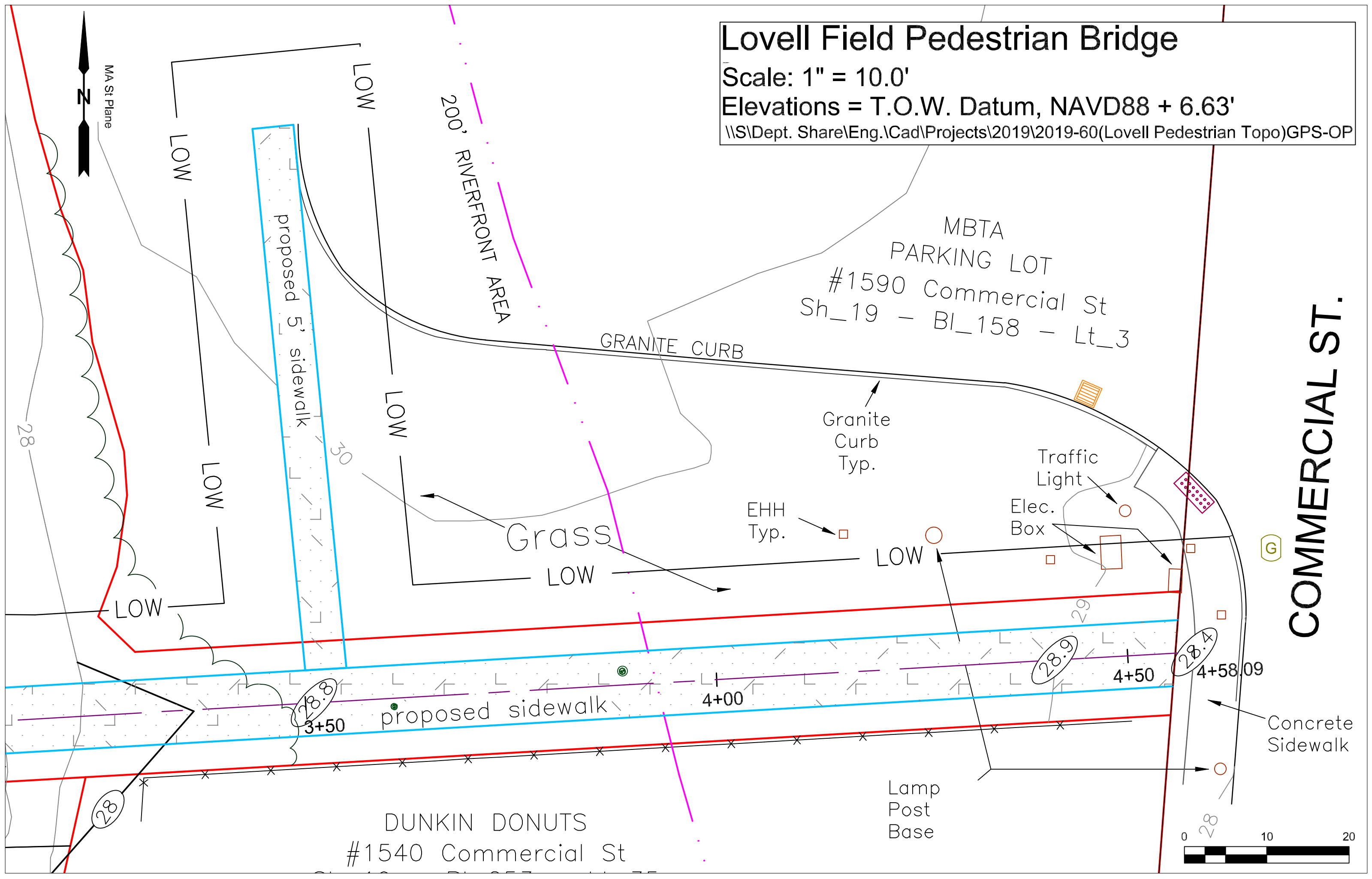
BENCHMARK #2 (SEE NOTES)

Lovell Field Pedestrian Bridge

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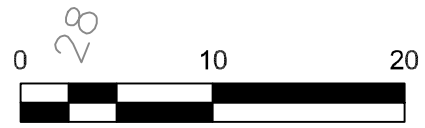
Elevations = T.O.W. Datum, NAVD88 + 6.63'

\\S\Dept. Share\Eng.\Cad\Projects\2019\2019-60(Lovell Pedestrian Topo)GPS-OP



COMMERCIAL ST.

G

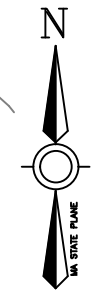
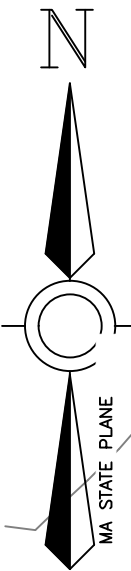


Lovell Field Pedestrian Bridge

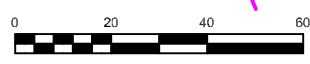
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\\S\Dept. Share\Eng.\Cad\Projects\2019\2019-60(Lovell Pedestrian Topo)GPS-OP



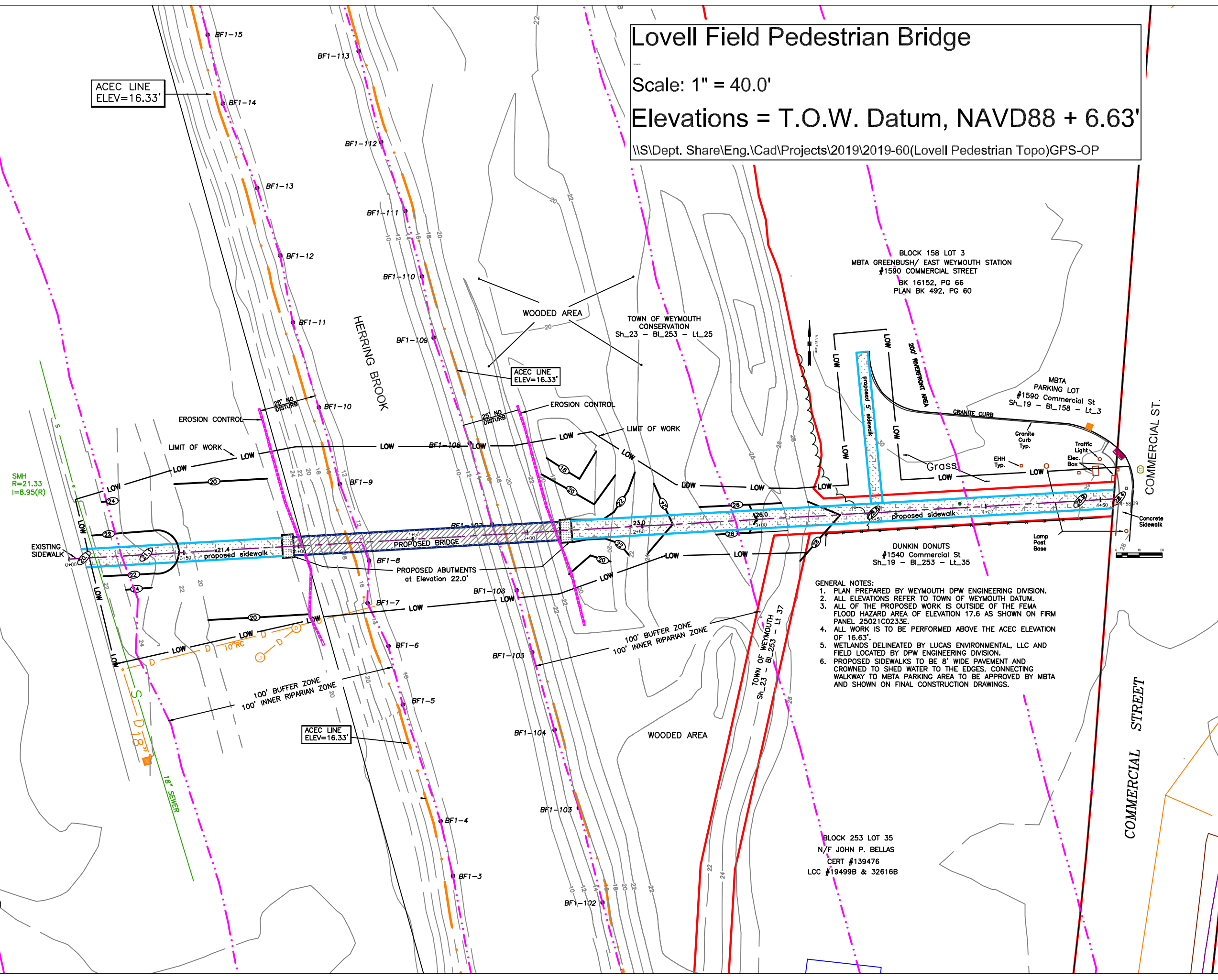
BLOCK 253 LOT 26
TOWN OF WEYMOUTH-LOVELL FIELD
894 BROAD STREET



ACEC LINE
ELEV=16.33'

ACEC LINE
ELEV=16.33'

ACEC LINE
ELEV=16.33'



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BLOCK 253 LOT 35
N/F JOHN P. BELLAS
CERT #139476
LCC #19499B & 32616B

APPENDIX F

WAGE RATE REQUIREMENTS

APPENDIX G

STATE WAGE RATES



MAURA HEALEY
Governor

KIM DRISCOLL
Lt. Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Prevailing Wage Rates

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

LAUREN JONES
Secretary

MICHAEL FLANAGAN
Director

Awarding Authority: Town of Weymouth

Contract Number:

City/Town: WEYMOUTH

Description of Work: The project consists of the construction and placement of a prefabricated 130-foot span pedestrian bridge over the Herring Run Brook in Weymouth, Massachusetts.

Job Location: 1250 COMMERCIAL ST (LOVELL FIELD)

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- **The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor.** For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The annual update requirement is not applicable to 27F "rental of equipment" contracts. **The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.**
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.05	\$14.41	\$18.67	\$0.00	\$73.13
	06/01/2024	\$41.05	\$14.41	\$18.67	\$0.00	\$74.13
	08/01/2024	\$41.05	\$14.91	\$18.67	\$0.00	\$74.63
	12/01/2024	\$41.05	\$14.91	\$20.17	\$0.00	\$76.13
	06/01/2025	\$42.05	\$14.91	\$20.17	\$0.00	\$77.13
	08/01/2025	\$42.05	\$15.41	\$20.17	\$0.00	\$77.63
	12/01/2025	\$42.05	\$15.41	\$21.78	\$0.00	\$79.24
	06/01/2026	\$43.05	\$15.41	\$21.78	\$0.00	\$80.24
	08/01/2026	\$43.05	\$15.91	\$21.78	\$0.00	\$80.74
	12/01/2026	\$43.05	\$15.91	\$23.52	\$0.00	\$82.48
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.12	\$14.41	\$18.67	\$0.00	\$73.20
	06/01/2024	\$40.88	\$14.41	\$18.67	\$0.00	\$73.96
	08/01/2024	\$40.88	\$14.91	\$18.67	\$0.00	\$74.46
	12/01/2024	\$40.88	\$14.91	\$20.17	\$0.00	\$75.96
	06/01/2025	\$41.12	\$14.91	\$20.17	\$0.00	\$76.20
	08/01/2025	\$41.12	\$15.41	\$20.17	\$0.00	\$76.70
	12/01/2025	\$41.12	\$15.41	\$21.78	\$0.00	\$78.31
	06/01/2026	\$43.12	\$15.41	\$21.78	\$0.00	\$80.31
	08/01/2026	\$43.12	\$15.91	\$21.78	\$0.00	\$80.81
	12/01/2026	\$43.12	\$15.91	\$23.52	\$0.00	\$82.55
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.24	\$14.41	\$18.67	\$0.00	\$73.32
	06/01/2024	\$41.24	\$14.41	\$18.67	\$0.00	\$74.32
	08/01/2024	\$41.24	\$14.91	\$18.67	\$0.00	\$74.82
	12/01/2024	\$41.24	\$14.91	\$20.17	\$0.00	\$76.32
	06/01/2025	\$42.24	\$14.91	\$20.17	\$0.00	\$77.32
	08/01/2025	\$42.24	\$15.41	\$20.17	\$0.00	\$77.82
	12/01/2025	\$42.24	\$15.41	\$21.78	\$0.00	\$79.43
	06/01/2026	\$43.24	\$15.41	\$21.78	\$0.00	\$80.43
	08/01/2026	\$43.24	\$15.91	\$21.78	\$0.00	\$80.93
	12/01/2026	\$43.24	\$15.91	\$23.52	\$0.00	\$82.67
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
	06/01/2024	\$46.56	\$9.65	\$18.07	\$0.00	\$74.28
	12/01/2024	\$48.03	\$9.65	\$18.07	\$0.00	\$75.75
	06/01/2025	\$49.53	\$9.65	\$18.07	\$0.00	\$77.25
	12/01/2025	\$51.03	\$9.65	\$18.07	\$0.00	\$78.75
	06/01/2026	\$52.58	\$9.65	\$18.07	\$0.00	\$80.30
	12/01/2026	\$54.08	\$9.65	\$18.07	\$0.00	\$81.80
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	12/01/2023	\$40.80	\$14.50	\$11.05	\$0.00	\$66.35
	06/01/2024	\$41.80	\$14.50	\$11.05	\$0.00	\$67.35
	12/01/2024	\$42.80	\$14.50	\$11.05	\$0.00	\$68.35
	06/01/2025	\$43.80	\$14.50	\$11.05	\$0.00	\$69.35
	12/01/2025	\$44.80	\$14.50	\$11.05	\$0.00	\$70.35
ASPHALT RAKER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 1</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
	06/01/2024	\$46.56	\$9.65	\$18.07	\$0.00	\$74.28
	12/01/2024	\$48.03	\$9.65	\$18.07	\$0.00	\$75.75
	06/01/2025	\$49.53	\$9.65	\$18.07	\$0.00	\$77.25
	12/01/2025	\$51.03	\$9.65	\$18.07	\$0.00	\$78.75
	06/01/2026	\$52.58	\$9.65	\$18.07	\$0.00	\$80.30
	12/01/2026	\$54.08	\$9.65	\$18.07	\$0.00	\$81.80
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2024	\$48.12	\$7.07	\$20.60	\$0.00	\$75.79

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57
2	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57
3	70	\$33.68	\$7.07	\$14.23	\$0.00	\$54.98
4	75	\$36.09	\$7.07	\$15.24	\$0.00	\$58.40
5	80	\$38.50	\$7.07	\$16.25	\$0.00	\$61.82
6	85	\$40.90	\$7.07	\$17.28	\$0.00	\$65.25
7	90	\$43.31	\$7.07	\$18.28	\$0.00	\$68.66
8	95	\$45.71	\$7.07	\$19.32	\$0.00	\$72.10

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2024	\$62.40	\$11.49	\$23.59	\$0.00	\$97.48
BRICKLAYERS LOCAL 3 (QUINCY)	08/01/2024	\$64.50	\$11.49	\$23.59	\$0.00	\$99.58
	02/01/2025	\$65.80	\$11.49	\$23.59	\$0.00	\$100.88
	08/01/2025	\$67.95	\$11.49	\$23.59	\$0.00	\$103.03
	02/01/2026	\$69.30	\$11.49	\$23.59	\$0.00	\$104.38
	08/01/2026	\$71.50	\$11.49	\$23.59	\$0.00	\$106.58
	02/01/2027	\$72.90	\$11.49	\$23.59	\$0.00	\$107.98

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Quincy

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.20	\$11.49	\$23.59	\$0.00	\$66.28
2	60	\$37.44	\$11.49	\$23.59	\$0.00	\$72.52
3	70	\$43.68	\$11.49	\$23.59	\$0.00	\$78.76
4	80	\$49.92	\$11.49	\$23.59	\$0.00	\$85.00
5	90	\$56.16	\$11.49	\$23.59	\$0.00	\$91.24

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.25	\$11.49	\$23.59	\$0.00	\$67.33
2	60	\$38.70	\$11.49	\$23.59	\$0.00	\$73.78
3	70	\$45.15	\$11.49	\$23.59	\$0.00	\$80.23
4	80	\$51.60	\$11.49	\$23.59	\$0.00	\$86.68
5	90	\$58.05	\$11.49	\$23.59	\$0.00	\$93.13

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
<i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN	12/01/2023	\$45.48	\$9.65	\$18.22	\$0.00	\$73.35
<i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2024	\$46.96	\$9.65	\$18.22	\$0.00	\$74.83
	12/01/2024	\$48.43	\$9.65	\$18.22	\$0.00	\$76.30
	06/01/2025	\$49.93	\$9.65	\$18.22	\$0.00	\$77.80
	12/01/2025	\$51.43	\$9.65	\$18.22	\$0.00	\$79.30
	06/01/2026	\$52.98	\$9.65	\$18.22	\$0.00	\$80.85
	12/01/2026	\$54.48	\$9.65	\$18.22	\$0.00	\$82.35

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
<i>LABORERS - FOUNDATION AND MARINE</i>	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
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For apprentice rates see "Apprentice- LABORER"

CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	03/01/2024	\$47.12	\$9.83	\$19.97	\$0.00	\$76.92
	09/01/2024	\$48.37	\$9.83	\$19.97	\$0.00	\$78.17
	03/01/2025	\$49.62	\$9.83	\$19.97	\$0.00	\$79.42
	09/01/2025	\$50.87	\$9.83	\$19.97	\$0.00	\$80.67
	03/01/2026	\$52.12	\$9.83	\$19.97	\$0.00	\$81.92
	09/01/2026	\$53.37	\$9.83	\$19.97	\$0.00	\$83.17
	03/01/2027	\$54.62	\$9.83	\$19.97	\$0.00	\$84.42

Apprentice - CARPENTER - Zone 2 Eastern MA

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$21.20	\$9.83	\$1.73	\$0.00	\$32.76
2	45	\$21.20	\$9.83	\$1.73	\$0.00	\$32.76
3	55	\$25.92	\$9.83	\$3.40	\$0.00	\$39.15
4	55	\$25.92	\$9.83	\$3.40	\$0.00	\$39.15
5	70	\$32.98	\$9.83	\$16.51	\$0.00	\$59.32
6	70	\$32.98	\$9.83	\$16.51	\$0.00	\$59.32
7	80	\$37.70	\$9.83	\$18.24	\$0.00	\$65.77
8	80	\$37.70	\$9.83	\$18.24	\$0.00	\$65.77

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$21.77	\$9.83	\$1.73	\$0.00	\$33.33
2	45	\$21.77	\$9.83	\$1.73	\$0.00	\$33.33
3	55	\$26.60	\$9.83	\$3.40	\$0.00	\$39.83
4	55	\$26.60	\$9.83	\$3.40	\$0.00	\$39.83
5	70	\$33.86	\$9.83	\$16.51	\$0.00	\$60.20
6	70	\$33.86	\$9.83	\$16.51	\$0.00	\$60.20
7	80	\$38.70	\$9.83	\$18.24	\$0.00	\$66.77
8	80	\$38.70	\$9.83	\$18.24	\$0.00	\$66.77

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CARPENTER WOOD FRAME <i>CARPENTERS -ZONE 2 (Wood Frame)</i>	10/01/2023	\$30.61	\$7.02	\$6.47	\$0.00	\$44.10
	10/01/2024	\$31.91	\$7.02	\$6.47	\$0.00	\$45.40
	10/01/2025	\$33.21	\$7.02	\$6.47	\$0.00	\$46.70
	10/01/2026	\$34.51	\$7.02	\$6.47	\$0.00	\$48.00

All Aspects of New Wood Frame Work

Apprentice - CARPENTER (Wood Frame) - Zone 2

Effective Date - 10/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.31	\$7.02	\$0.00	\$0.00	\$22.33
2	50	\$15.31	\$7.02	\$0.00	\$0.00	\$22.33
3	55	\$16.84	\$7.02	\$2.00	\$0.00	\$25.86
4	55	\$16.84	\$7.02	\$2.00	\$0.00	\$25.86
5	70	\$21.43	\$7.02	\$6.47	\$0.00	\$34.92
6	70	\$21.43	\$7.02	\$6.47	\$0.00	\$34.92
7	80	\$24.49	\$7.02	\$6.47	\$0.00	\$37.98
8	80	\$24.49	\$7.02	\$6.47	\$0.00	\$37.98

Effective Date - 10/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.96	\$7.02	\$0.00	\$0.00	\$22.98
2	50	\$15.96	\$7.02	\$0.00	\$0.00	\$22.98
3	55	\$17.55	\$7.02	\$2.00	\$0.00	\$26.57
4	55	\$17.55	\$7.02	\$2.00	\$0.00	\$26.57
5	70	\$22.34	\$7.02	\$6.47	\$0.00	\$35.83
6	70	\$22.34	\$7.02	\$6.47	\$0.00	\$35.83
7	80	\$25.53	\$7.02	\$6.47	\$0.00	\$39.02
8	80	\$25.53	\$7.02	\$6.47	\$0.00	\$39.02

Notes:

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING <i>BRICKLAYERS LOCAL 3 (QUINCY)</i>	01/01/2024	\$49.33	\$13.00	\$23.57	\$1.30	\$87.20
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Apprentice - CEMENT MASONRY/PLASTERING - Eastern Mass (Quincy)

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.67	\$13.00	\$15.93	\$0.00	\$53.60
2	60	\$29.60	\$13.00	\$18.57	\$1.30	\$62.47
3	65	\$32.06	\$13.00	\$19.57	\$1.30	\$65.93
4	70	\$34.53	\$13.00	\$20.57	\$1.30	\$69.40
5	75	\$37.00	\$13.00	\$21.57	\$1.30	\$72.87
6	80	\$39.46	\$13.00	\$22.57	\$1.30	\$76.33
7	90	\$44.40	\$13.00	\$23.57	\$1.30	\$82.27

Notes:
Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
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For apprentice rates see "Apprentice- LABORER"

CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$56.13	\$15.00	\$16.40	\$0.00	\$87.53
	06/01/2024	\$57.45	\$15.00	\$16.40	\$0.00	\$88.85
	12/01/2024	\$58.93	\$15.00	\$16.40	\$0.00	\$90.33
	06/01/2025	\$60.26	\$15.00	\$16.40	\$0.00	\$91.66
	12/01/2025	\$61.73	\$15.00	\$16.40	\$0.00	\$93.13
	06/01/2026	\$63.06	\$15.00	\$16.40	\$0.00	\$94.46
	12/01/2026	\$64.54	\$15.00	\$16.40	\$0.00	\$95.94

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$9.95	\$0.00	\$0.00	\$38.58
2	55	\$31.49	\$9.95	\$6.66	\$0.00	\$48.10
3	60	\$34.36	\$9.95	\$7.26	\$0.00	\$51.57
4	65	\$37.22	\$9.95	\$7.87	\$0.00	\$55.04
5	70	\$40.08	\$9.95	\$20.32	\$0.00	\$70.35
6	75	\$42.95	\$9.95	\$20.93	\$0.00	\$73.83
7	80	\$45.81	\$9.95	\$21.53	\$0.00	\$77.29
8	90	\$51.53	\$9.95	\$22.74	\$0.00	\$84.22

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 1	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
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For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 1	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
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For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS LABORERS - ZONE 1	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
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For apprentice rates see "Apprentice- LABORER"

DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 1	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
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For apprentice rates see "Apprentice- LABORER"

DEMO: JACKHAMMER OPERATOR LABORERS - ZONE 1	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
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For apprentice rates see "Apprentice- LABORER"

DEMO: WRECKING LABORER LABORERS - ZONE 1	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
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For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$68.70	\$9.40	\$23.12	\$0.00	\$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$73.60	\$9.40	\$23.12	\$0.00	\$106.12
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) <i>DRAWBRIDGE - SEIU LOCAL 888</i>	07/01/2020	\$26.77	\$6.67	\$3.93	\$0.16	\$37.53
ELECTRICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2024	\$61.86	\$13.00	\$22.21	\$0.00	\$97.07
	09/01/2024	\$63.78	\$13.00	\$22.26	\$0.00	\$99.04
	03/01/2025	\$64.98	\$13.00	\$22.30	\$0.00	\$100.28
	09/01/2025	\$66.89	\$13.00	\$22.36	\$0.00	\$102.25
	03/01/2026	\$68.09	\$13.00	\$22.39	\$0.00	\$103.48
	09/01/2026	\$70.00	\$13.00	\$22.45	\$0.00	\$105.45
	03/01/2027	\$71.19	\$13.00	\$22.49	\$0.00	\$106.68
	09/01/2027	\$73.11	\$13.00	\$22.54	\$0.00	\$108.65
	03/01/2028	\$74.31	\$13.00	\$22.58	\$0.00	\$109.89

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - ELECTRICIAN - Local 103

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$24.74	\$13.00	\$0.74	\$0.00	\$38.48
2	40	\$24.74	\$13.00	\$0.74	\$0.00	\$38.48
3	45	\$27.84	\$13.00	\$16.67	\$0.00	\$57.51
4	45	\$27.84	\$13.00	\$16.67	\$0.00	\$57.51
5	50	\$30.93	\$13.00	\$17.17	\$0.00	\$61.10
6	55	\$34.02	\$13.00	\$17.67	\$0.00	\$64.69
7	60	\$37.12	\$13.00	\$18.17	\$0.00	\$68.29
8	65	\$40.21	\$13.00	\$18.68	\$0.00	\$71.89
9	70	\$43.30	\$13.00	\$19.18	\$0.00	\$75.48
10	75	\$46.40	\$13.00	\$19.69	\$0.00	\$79.09

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$25.51	\$13.00	\$0.77	\$0.00	\$39.28
2	40	\$25.51	\$13.00	\$0.77	\$0.00	\$39.28
3	45	\$28.70	\$13.00	\$16.69	\$0.00	\$58.39
4	45	\$28.70	\$13.00	\$16.69	\$0.00	\$58.39
5	50	\$31.89	\$13.00	\$17.20	\$0.00	\$62.09
6	55	\$35.08	\$13.00	\$17.70	\$0.00	\$65.78
7	60	\$38.27	\$13.00	\$18.21	\$0.00	\$69.48
8	65	\$41.46	\$13.00	\$18.71	\$0.00	\$73.17
9	70	\$44.65	\$13.00	\$19.22	\$0.00	\$76.87
10	75	\$47.84	\$13.00	\$19.74	\$0.00	\$80.58

Notes :
 App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR	01/01/2022	\$65.62	\$16.03	\$20.21	\$0.00	\$101.86
ELEVATOR CONSTRUCTORS LOCAL 4						

Apprentice - ELEVATOR CONSTRUCTOR - Local 4

Effective Date - 01/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.81	\$16.03	\$0.00	\$0.00	\$48.84
2	55	\$36.09	\$16.03	\$20.21	\$0.00	\$72.33
3	65	\$42.65	\$16.03	\$20.21	\$0.00	\$78.89
4	70	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
5	80	\$52.50	\$16.03	\$20.21	\$0.00	\$88.74

Notes:
Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio:1:1

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 4</i>	01/01/2022	\$45.93	\$16.03	\$20.21	\$0.00	\$82.17
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For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30

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

FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$50.30	\$14.50	\$16.15	\$0.00	\$80.95
	05/01/2024	\$51.54	\$14.50	\$16.15	\$0.00	\$82.19
	11/01/2024	\$52.83	\$14.50	\$16.15	\$0.00	\$83.48
	05/01/2025	\$54.27	\$14.50	\$16.15	\$0.00	\$84.92
	11/01/2025	\$55.56	\$14.50	\$16.15	\$0.00	\$86.21
	05/01/2026	\$57.00	\$14.50	\$16.15	\$0.00	\$87.65
	11/01/2026	\$58.29	\$14.50	\$16.15	\$0.00	\$88.94
	05/01/2027	\$59.72	\$14.50	\$16.15	\$0.00	\$90.37

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$51.87	\$14.50	\$16.15	\$0.00	\$82.52
	05/01/2024	\$53.12	\$14.50	\$16.15	\$0.00	\$83.77
	11/01/2024	\$54.42	\$14.50	\$16.15	\$0.00	\$85.07
	05/01/2025	\$55.87	\$14.50	\$16.15	\$0.00	\$86.52
	11/01/2025	\$57.17	\$14.50	\$16.15	\$0.00	\$87.82
	05/01/2026	\$58.62	\$14.50	\$16.15	\$0.00	\$89.27
	11/01/2026	\$59.92	\$14.50	\$16.15	\$0.00	\$90.57
	05/01/2027	\$61.37	\$14.50	\$16.15	\$0.00	\$92.02

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$24.93	\$14.50	\$16.15	\$0.00	\$55.58
	05/01/2024	\$25.66	\$14.50	\$16.15	\$0.00	\$56.31
	11/01/2024	\$26.42	\$14.50	\$16.15	\$0.00	\$57.07
	05/01/2025	\$27.27	\$14.50	\$16.15	\$0.00	\$57.92
	11/01/2025	\$28.03	\$14.50	\$16.15	\$0.00	\$58.68
	05/01/2026	\$28.88	\$14.50	\$16.15	\$0.00	\$59.53
	11/01/2026	\$29.64	\$14.50	\$16.15	\$0.00	\$60.29
	05/01/2027	\$30.49	\$14.50	\$16.15	\$0.00	\$61.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 103</i>	03/01/2024	\$61.86	\$13.00	\$22.21	\$0.00	\$97.07
	09/01/2024	\$63.78	\$13.00	\$22.26	\$0.00	\$99.04
	03/01/2025	\$64.98	\$13.00	\$22.30	\$0.00	\$100.28
	09/01/2025	\$66.89	\$13.00	\$22.36	\$0.00	\$102.25
	03/01/2026	\$68.09	\$13.00	\$22.39	\$0.00	\$103.48
	09/01/2026	\$70.00	\$13.00	\$22.45	\$0.00	\$105.45
	03/01/2027	\$71.19	\$13.00	\$22.49	\$0.00	\$106.68
	09/01/2027	\$73.11	\$13.00	\$22.54	\$0.00	\$108.65
	03/01/2028	\$74.31	\$13.00	\$22.58	\$0.00	\$109.89
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS LOCAL 103</i>	03/01/2024	\$49.49	\$13.00	\$20.19	\$0.00	\$82.68
	09/01/2024	\$51.02	\$13.00	\$20.24	\$0.00	\$84.26
	03/01/2025	\$51.98	\$13.00	\$20.27	\$0.00	\$85.25
	09/01/2025	\$53.51	\$13.00	\$20.32	\$0.00	\$86.83
	03/01/2026	\$54.47	\$13.00	\$20.34	\$0.00	\$87.81
	09/01/2026	\$56.00	\$13.00	\$20.39	\$0.00	\$89.39
	03/01/2027	\$56.95	\$13.00	\$20.42	\$0.00	\$90.37
	09/01/2027	\$58.49	\$13.00	\$20.46	\$0.00	\$91.95
03/01/2028	\$59.45	\$13.00	\$20.49	\$0.00	\$92.94	
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$44.47	\$15.00	\$16.40	\$0.00	\$75.87
	06/01/2024	\$45.53	\$15.00	\$16.40	\$0.00	\$76.93
	12/01/2024	\$46.71	\$15.00	\$16.40	\$0.00	\$78.11
	06/01/2025	\$47.77	\$15.00	\$16.40	\$0.00	\$79.17
	12/01/2025	\$48.94	\$15.00	\$16.40	\$0.00	\$80.34
	06/01/2026	\$50.00	\$15.00	\$16.40	\$0.00	\$81.40
	12/01/2026	\$51.18	\$15.00	\$16.40	\$0.00	\$82.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$25.48	\$9.65	\$18.07	\$0.00	\$53.20
	06/01/2024	\$26.51	\$9.65	\$18.07	\$0.00	\$54.23
	12/01/2024	\$26.51	\$9.65	\$18.07	\$0.00	\$54.23
	06/01/2025	\$27.59	\$9.65	\$18.07	\$0.00	\$55.31
	12/01/2025	\$27.59	\$9.65	\$18.07	\$0.00	\$55.31
	06/01/2026	\$28.71	\$9.65	\$18.07	\$0.00	\$56.43
	12/01/2026	\$28.71	\$9.65	\$18.07	\$0.00	\$56.43
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FLOORCOVERER	03/01/2024	\$54.73	\$8.83	\$20.27	\$0.00	\$83.83
<i>FLOORCOVERERS LOCAL 2168 ZONE I</i>	09/01/2024	\$56.23	\$8.83	\$20.27	\$0.00	\$85.33
	03/01/2025	\$57.73	\$8.83	\$20.27	\$0.00	\$86.83
	09/01/2025	\$59.23	\$8.83	\$20.27	\$0.00	\$88.33
	03/01/2026	\$60.73	\$8.83	\$20.27	\$0.00	\$89.83
	09/01/2026	\$62.23	\$8.83	\$20.27	\$0.00	\$91.33
	03/01/2027	\$63.73	\$8.83	\$20.27	\$0.00	\$92.83

Apprentice - FLOORCOVERER - Local 2168 Zone I

Effective Date - 03/01/2024

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

Effective Date - 09/01/2024

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

Notes: Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
<i>OPERATING ENGINEERS LOCAL 4</i>	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 2)</i>	01/01/2024	\$45.56	\$9.95	\$23.95	\$0.00	\$79.46
	07/01/2024	\$46.76	\$9.95	\$23.95	\$0.00	\$80.66
	01/01/2025	\$47.96	\$9.95	\$23.95	\$0.00	\$81.86

Apprentice - GLAZIER - Local 35 Zone 2

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.78	\$9.95	\$0.00	\$0.00	\$32.73
2	55	\$25.06	\$9.95	\$6.66	\$0.00	\$41.67
3	60	\$27.34	\$9.95	\$7.26	\$0.00	\$44.55
4	65	\$29.61	\$9.95	\$7.87	\$0.00	\$47.43
5	70	\$31.89	\$9.95	\$20.32	\$0.00	\$62.16
6	75	\$34.17	\$9.95	\$20.93	\$0.00	\$65.05
7	80	\$36.45	\$9.95	\$21.53	\$0.00	\$67.93
8	90	\$41.00	\$9.95	\$22.74	\$0.00	\$73.69

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$9.95	\$0.00	\$0.00	\$33.33
2	55	\$25.72	\$9.95	\$6.66	\$0.00	\$42.33
3	60	\$28.06	\$9.95	\$7.26	\$0.00	\$45.27
4	65	\$30.39	\$9.95	\$7.87	\$0.00	\$48.21
5	70	\$32.73	\$9.95	\$20.32	\$0.00	\$63.00
6	75	\$35.07	\$9.95	\$20.93	\$0.00	\$65.95
7	80	\$37.41	\$9.95	\$21.53	\$0.00	\$68.89
8	90	\$42.08	\$9.95	\$22.74	\$0.00	\$74.77

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.27	\$15.00	\$0.00	\$0.00	\$45.27
2	60	\$33.02	\$15.00	\$16.40	\$0.00	\$64.42
3	65	\$35.77	\$15.00	\$16.40	\$0.00	\$67.17
4	70	\$38.52	\$15.00	\$16.40	\$0.00	\$69.92
5	75	\$41.27	\$15.00	\$16.40	\$0.00	\$72.67
6	80	\$44.02	\$15.00	\$16.40	\$0.00	\$75.42
7	85	\$46.78	\$15.00	\$16.40	\$0.00	\$78.18
8	90	\$49.53	\$15.00	\$16.40	\$0.00	\$80.93

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.98	\$15.00	\$0.00	\$0.00	\$45.98
2	60	\$33.80	\$15.00	\$16.40	\$0.00	\$65.20
3	65	\$36.61	\$15.00	\$16.40	\$0.00	\$68.01
4	70	\$39.43	\$15.00	\$16.40	\$0.00	\$70.83
5	75	\$42.25	\$15.00	\$16.40	\$0.00	\$73.65
6	80	\$45.06	\$15.00	\$16.40	\$0.00	\$76.46
7	85	\$47.88	\$15.00	\$16.40	\$0.00	\$79.28
8	90	\$50.70	\$15.00	\$16.40	\$0.00	\$82.10

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK)	02/01/2024	\$57.22	\$14.59	\$27.50	\$2.98	\$102.29
SHEETMETAL WORKERS LOCAL 17 - A	08/01/2024	\$58.97	\$14.59	\$27.50	\$2.98	\$104.04
	02/01/2025	\$60.72	\$14.59	\$27.50	\$2.98	\$105.79
	08/01/2025	\$62.57	\$14.59	\$27.50	\$2.98	\$107.64
	02/01/2026	\$64.52	\$14.59	\$27.50	\$2.98	\$109.59

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS)	03/01/2024	\$61.86	\$13.00	\$22.21	\$0.00	\$97.07
ELECTRICIANS LOCAL 103	09/01/2024	\$63.78	\$13.00	\$22.26	\$0.00	\$99.04
	03/01/2025	\$64.98	\$13.00	\$22.30	\$0.00	\$100.28
	09/01/2025	\$66.89	\$13.00	\$22.36	\$0.00	\$102.25
	03/01/2026	\$68.09	\$13.00	\$22.39	\$0.00	\$103.48
	09/01/2026	\$70.00	\$13.00	\$22.45	\$0.00	\$105.45
	03/01/2027	\$71.19	\$13.00	\$22.49	\$0.00	\$106.68
	09/01/2027	\$73.11	\$13.00	\$22.54	\$0.00	\$108.65
	03/01/2028	\$74.31	\$13.00	\$22.58	\$0.00	\$109.89

For apprentice rates see "Apprentice- ELECTRICIAN"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 17 - A</i>	02/01/2024	\$57.22	\$14.59	\$27.50	\$2.98	\$102.29
	08/01/2024	\$58.97	\$14.59	\$27.50	\$2.98	\$104.04
	02/01/2025	\$60.72	\$14.59	\$27.50	\$2.98	\$105.79
	08/01/2025	\$62.57	\$14.59	\$27.50	\$2.98	\$107.64
	02/01/2026	\$64.52	\$14.59	\$27.50	\$2.98	\$109.59
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) <i>PIPEFITTERS LOCAL 537</i>	03/01/2024	\$65.28	\$12.70	\$21.80	\$0.00	\$99.78
	09/01/2024	\$67.08	\$12.70	\$21.80	\$0.00	\$101.58
	03/01/2025	\$68.88	\$12.70	\$21.80	\$0.00	\$103.38
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PIPEFITTERS LOCAL 537</i>	03/01/2024	\$65.28	\$12.70	\$21.80	\$0.00	\$99.78
	09/01/2024	\$67.08	\$12.70	\$21.80	\$0.00	\$101.58
	03/01/2025	\$68.88	\$12.70	\$21.80	\$0.00	\$103.38
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 1</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
For apprentice rates see "Apprentice- LABORER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$45.08	\$9.65	\$18.07	\$0.00	\$72.80
	06/01/2024	\$46.56	\$9.65	\$18.07	\$0.00	\$74.28
	12/01/2024	\$48.03	\$9.65	\$18.07	\$0.00	\$75.75
	06/01/2025	\$49.53	\$9.65	\$18.07	\$0.00	\$77.25
	12/01/2025	\$51.03	\$9.65	\$18.07	\$0.00	\$78.75
	06/01/2026	\$52.58	\$9.65	\$18.07	\$0.00	\$80.30
	12/01/2026	\$54.08	\$9.65	\$18.07	\$0.00	\$81.80
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (BOSTON)</i>	09/01/2023	\$53.50	\$14.75	\$19.61	\$0.00	\$87.86
	09/01/2024	\$56.92	\$14.75	\$19.61	\$0.00	\$91.28
	09/01/2025	\$60.34	\$14.75	\$19.61	\$0.00	\$94.70
	09/01/2026	\$63.76	\$14.75	\$19.61	\$0.00	\$98.12

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.75	\$14.75	\$14.32	\$0.00	\$55.82
2	60	\$32.10	\$14.75	\$15.37	\$0.00	\$62.22
3	70	\$37.45	\$14.75	\$16.43	\$0.00	\$68.63
4	80	\$42.80	\$14.75	\$17.49	\$0.00	\$75.04

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.46	\$14.75	\$14.32	\$0.00	\$57.53
2	60	\$34.15	\$14.75	\$15.37	\$0.00	\$64.27
3	70	\$39.84	\$14.75	\$16.43	\$0.00	\$71.02
4	80	\$45.54	\$14.75	\$17.49	\$0.00	\$77.78

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER <i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i>	03/16/2024	\$53.97	\$8.35	\$26.70	\$0.00	\$89.02
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Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 03/16/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$32.38	\$8.35	\$26.70	\$0.00	\$67.43
2	70	\$37.78	\$8.35	\$26.70	\$0.00	\$72.83
3	75	\$40.48	\$8.35	\$26.70	\$0.00	\$75.53
4	80	\$43.18	\$8.35	\$26.70	\$0.00	\$78.23
5	85	\$45.87	\$8.35	\$26.70	\$0.00	\$80.92
6	90	\$48.57	\$8.35	\$26.70	\$0.00	\$83.62

Notes:

Apprentice to Journeyworker Ratio:1:4

JACKHAMMER & PAVING BREAKER OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
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For apprentice rates see "Apprentice- LABORER"

LABORER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
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Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER - Zone 1

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.60	\$9.65	\$18.07	\$0.00	\$54.32
2	70	\$31.03	\$9.65	\$18.07	\$0.00	\$58.75
3	80	\$35.46	\$9.65	\$18.07	\$0.00	\$63.18
4	90	\$39.90	\$9.65	\$18.07	\$0.00	\$67.62

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER (HEAVY & HIGHWAY)	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2024	\$45.81	\$9.65	\$18.07	\$0.00	\$73.53
	12/01/2024	\$47.28	\$9.65	\$18.07	\$0.00	\$75.00
	06/01/2025	\$48.78	\$9.65	\$18.07	\$0.00	\$76.50
	12/01/2025	\$50.28	\$9.65	\$18.07	\$0.00	\$78.00
	06/01/2026	\$51.83	\$9.65	\$18.07	\$0.00	\$79.55
	12/01/2026	\$53.33	\$9.65	\$18.07	\$0.00	\$81.05

Apprentice - LABORER (Heavy & Highway) - Zone 1

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$26.60	\$9.65	\$18.07	\$0.00	\$54.32
2	70	\$31.03	\$9.65	\$18.07	\$0.00	\$58.75
3	80	\$35.46	\$9.65	\$18.07	\$0.00	\$63.18
4	90	\$39.90	\$9.65	\$18.07	\$0.00	\$67.62

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$27.49	\$9.65	\$18.07	\$0.00	\$55.21
2	70	\$32.07	\$9.65	\$18.07	\$0.00	\$59.79
3	80	\$36.65	\$9.65	\$18.07	\$0.00	\$64.37
4	90	\$41.23	\$9.65	\$18.07	\$0.00	\$68.95

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
LABORERS - ZONE 1						

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
LABORERS - ZONE 1						

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 1</i>	06/01/2023	\$43.83	\$9.40	\$17.82	\$0.00	\$71.05
	06/01/2024	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
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 <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE & TILE</i>	02/01/2024	\$47.89	\$11.49	\$21.37	\$0.00	\$80.75
	08/01/2024	\$49.57	\$11.49	\$21.37	\$0.00	\$82.43
	02/01/2025	\$50.61	\$11.49	\$21.37	\$0.00	\$83.47
	08/01/2025	\$52.33	\$11.49	\$21.37	\$0.00	\$85.19
	02/01/2026	\$53.41	\$11.49	\$21.37	\$0.00	\$86.27
	08/01/2026	\$55.17	\$11.49	\$21.37	\$0.00	\$88.03
	02/01/2027	\$56.29	\$11.49	\$21.37	\$0.00	\$89.15

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.95	\$11.49	\$21.37	\$0.00	\$56.81
2	60	\$28.73	\$11.49	\$21.37	\$0.00	\$61.59
3	70	\$33.52	\$11.49	\$21.37	\$0.00	\$66.38
4	80	\$38.31	\$11.49	\$21.37	\$0.00	\$71.17
5	90	\$43.10	\$11.49	\$21.37	\$0.00	\$75.96

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.79	\$11.49	\$21.37	\$0.00	\$57.65
2	60	\$29.74	\$11.49	\$21.37	\$0.00	\$62.60
3	70	\$34.70	\$11.49	\$21.37	\$0.00	\$67.56
4	80	\$39.66	\$11.49	\$21.37	\$0.00	\$72.52
5	90	\$44.61	\$11.49	\$21.37	\$0.00	\$77.47

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS, TILELAYERS & TERRAZZO MECH	02/01/2024	\$62.42	\$11.49	\$23.56	\$0.00	\$97.47
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2024	\$64.52	\$11.49	\$23.56	\$0.00	\$99.57
	02/01/2025	\$65.82	\$11.49	\$23.56	\$0.00	\$100.87
	08/01/2025	\$67.97	\$11.49	\$23.56	\$0.00	\$103.02
	02/01/2026	\$69.32	\$11.49	\$23.56	\$0.00	\$104.37
	08/01/2026	\$71.52	\$11.49	\$23.56	\$0.00	\$106.57
	02/01/2027	\$72.92	\$11.49	\$23.56	\$0.00	\$107.97

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.21	\$11.49	\$23.56	\$0.00	\$66.26
2	60	\$37.45	\$11.49	\$23.56	\$0.00	\$72.50
3	70	\$43.69	\$11.49	\$23.56	\$0.00	\$78.74
4	80	\$49.94	\$11.49	\$23.56	\$0.00	\$84.99
5	90	\$56.18	\$11.49	\$23.56	\$0.00	\$91.23

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$32.26	\$11.49	\$23.56	\$0.00	\$67.31
2	60	\$38.71	\$11.49	\$23.56	\$0.00	\$73.76
3	70	\$45.16	\$11.49	\$23.56	\$0.00	\$80.21
4	80	\$51.62	\$11.49	\$23.56	\$0.00	\$86.67
5	90	\$58.07	\$11.49	\$23.56	\$0.00	\$93.12

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 1) <i>MILLWRIGHTS LOCAL 1121 - Zone 1</i>	01/01/2024	\$48.03	\$10.08	\$21.72	\$0.00	\$79.83
	01/06/2025	\$50.53	\$10.08	\$21.72	\$0.00	\$82.33
	01/05/2026	\$53.03	\$10.08	\$21.72	\$0.00	\$84.83

Apprentice - MILLWRIGHT - Local 1121 Zone 1

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$26.42	\$10.08	\$5.64	\$0.00	\$42.14
2	65	\$31.22	\$10.08	\$6.66	\$0.00	\$47.96
3	75	\$36.02	\$10.08	\$19.16	\$0.00	\$65.26
4	85	\$40.83	\$10.08	\$20.18	\$0.00	\$71.09

Effective Date - 01/06/2025

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$27.79	\$10.08	\$5.64	\$0.00	\$43.51
2	65	\$32.84	\$10.08	\$6.66	\$0.00	\$49.58
3	75	\$37.90	\$10.08	\$19.16	\$0.00	\$67.14
4	85	\$42.95	\$10.08	\$20.18	\$0.00	\$73.21

Notes: Step 1&2 Appr. indentured after 1/6/2020 receive no pension, but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66)
Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:4

MORTAR MIXER <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
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For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$24.41	\$15.00	\$16.40	\$0.00	\$55.81
	06/01/2024	\$25.01	\$15.00	\$16.40	\$0.00	\$56.41
	12/01/2024	\$25.67	\$15.00	\$16.40	\$0.00	\$57.07
	06/01/2025	\$26.27	\$15.00	\$16.40	\$0.00	\$57.67
	12/01/2025	\$26.93	\$15.00	\$16.40	\$0.00	\$58.33
	06/01/2026	\$27.52	\$15.00	\$16.40	\$0.00	\$58.92
	12/01/2026	\$28.19	\$15.00	\$16.40	\$0.00	\$59.59

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$29.86	\$15.00	\$16.40	\$0.00	\$61.26
	06/01/2024	\$30.58	\$15.00	\$16.40	\$0.00	\$61.98
	12/01/2024	\$31.38	\$15.00	\$16.40	\$0.00	\$62.78
	06/01/2025	\$32.10	\$15.00	\$16.40	\$0.00	\$63.50
	12/01/2025	\$32.90	\$15.00	\$16.40	\$0.00	\$64.30
	06/01/2026	\$33.62	\$15.00	\$16.40	\$0.00	\$65.02
	12/01/2026	\$34.42	\$15.00	\$16.40	\$0.00	\$65.82

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$9.95	\$0.00	\$0.00	\$38.58
2	55	\$31.49	\$9.95	\$6.66	\$0.00	\$48.10
3	60	\$34.36	\$9.95	\$7.26	\$0.00	\$51.57
4	65	\$37.22	\$9.95	\$7.87	\$0.00	\$55.04
5	70	\$40.08	\$9.95	\$20.32	\$0.00	\$70.35
6	75	\$42.95	\$9.95	\$20.93	\$0.00	\$73.83
7	80	\$45.81	\$9.95	\$21.53	\$0.00	\$77.29
8	90	\$51.53	\$9.95	\$22.74	\$0.00	\$84.22

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2024	\$46.96	\$9.95	\$23.95	\$0.00	\$80.86
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. <i>PAINTERS LOCAL 35 - ZONE 2</i>	07/01/2024	\$48.16	\$9.95	\$23.95	\$0.00	\$82.06
	01/01/2025	\$49.36	\$9.95	\$23.95	\$0.00	\$83.26

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.48	\$9.95	\$0.00	\$0.00	\$33.43
2	55	\$25.83	\$9.95	\$6.66	\$0.00	\$42.44
3	60	\$28.18	\$9.95	\$7.26	\$0.00	\$45.39
4	65	\$30.52	\$9.95	\$7.87	\$0.00	\$48.34
5	70	\$32.87	\$9.95	\$20.32	\$0.00	\$63.14
6	75	\$35.22	\$9.95	\$20.93	\$0.00	\$66.10
7	80	\$37.57	\$9.95	\$21.53	\$0.00	\$69.05
8	90	\$42.26	\$9.95	\$22.74	\$0.00	\$74.95

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.08	\$9.95	\$0.00	\$0.00	\$34.03
2	55	\$26.49	\$9.95	\$6.66	\$0.00	\$43.10
3	60	\$28.90	\$9.95	\$7.26	\$0.00	\$46.11
4	65	\$31.30	\$9.95	\$7.87	\$0.00	\$49.12
5	70	\$33.71	\$9.95	\$20.32	\$0.00	\$63.98
6	75	\$36.12	\$9.95	\$20.93	\$0.00	\$67.00
7	80	\$38.53	\$9.95	\$21.53	\$0.00	\$70.01
8	90	\$43.34	\$9.95	\$22.74	\$0.00	\$76.03

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2024	\$45.02	\$9.95	\$23.95	\$0.00	\$78.92
PAINTERS LOCAL 35 - ZONE 2	07/01/2024	\$46.22	\$9.95	\$23.95	\$0.00	\$80.12
	01/01/2025	\$47.42	\$9.95	\$23.95	\$0.00	\$81.32

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.51	\$9.95	\$0.00	\$0.00	\$32.46
2	55	\$24.76	\$9.95	\$6.66	\$0.00	\$41.37
3	60	\$27.01	\$9.95	\$7.26	\$0.00	\$44.22
4	65	\$29.26	\$9.95	\$7.87	\$0.00	\$47.08
5	70	\$31.51	\$9.95	\$20.32	\$0.00	\$61.78
6	75	\$33.77	\$9.95	\$20.93	\$0.00	\$64.65
7	80	\$36.02	\$9.95	\$21.53	\$0.00	\$67.50
8	90	\$40.52	\$9.95	\$22.74	\$0.00	\$73.21

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.11	\$9.95	\$0.00	\$0.00	\$33.06
2	55	\$25.42	\$9.95	\$6.66	\$0.00	\$42.03
3	60	\$27.73	\$9.95	\$7.26	\$0.00	\$44.94
4	65	\$30.04	\$9.95	\$7.87	\$0.00	\$47.86
5	70	\$32.35	\$9.95	\$20.32	\$0.00	\$62.62
6	75	\$34.67	\$9.95	\$20.93	\$0.00	\$65.55
7	80	\$36.98	\$9.95	\$21.53	\$0.00	\$68.46
8	90	\$41.60	\$9.95	\$22.74	\$0.00	\$74.29

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *	01/01/2024	\$45.56	\$9.95	\$23.95	\$0.00	\$79.46
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. <i>PAINTERS LOCAL 35 - ZONE 2</i>	07/01/2024	\$46.76	\$9.95	\$23.95	\$0.00	\$80.66
	01/01/2025	\$47.96	\$9.95	\$23.95	\$0.00	\$81.86

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.78	\$9.95	\$0.00	\$0.00	\$32.73
2	55	\$25.06	\$9.95	\$6.66	\$0.00	\$41.67
3	60	\$27.34	\$9.95	\$7.26	\$0.00	\$44.55
4	65	\$29.61	\$9.95	\$7.87	\$0.00	\$47.43
5	70	\$31.89	\$9.95	\$20.32	\$0.00	\$62.16
6	75	\$34.17	\$9.95	\$20.93	\$0.00	\$65.05
7	80	\$36.45	\$9.95	\$21.53	\$0.00	\$67.93
8	90	\$41.00	\$9.95	\$22.74	\$0.00	\$73.69

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$9.95	\$0.00	\$0.00	\$33.33
2	55	\$25.72	\$9.95	\$6.66	\$0.00	\$42.33
3	60	\$28.06	\$9.95	\$7.26	\$0.00	\$45.27
4	65	\$30.39	\$9.95	\$7.87	\$0.00	\$48.21
5	70	\$32.73	\$9.95	\$20.32	\$0.00	\$63.00
6	75	\$35.07	\$9.95	\$20.93	\$0.00	\$65.95
7	80	\$37.41	\$9.95	\$21.53	\$0.00	\$68.89
8	90	\$42.08	\$9.95	\$22.74	\$0.00	\$74.77

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2024	\$43.62	\$9.95	\$23.95	\$0.00	\$77.52
PAINTERS LOCAL 35 - ZONE 2	07/01/2024	\$44.82	\$9.95	\$23.95	\$0.00	\$78.72
	01/01/2025	\$46.02	\$9.95	\$23.95	\$0.00	\$79.92

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.81	\$9.95	\$0.00	\$0.00	\$31.76
2	55	\$23.99	\$9.95	\$6.66	\$0.00	\$40.60
3	60	\$26.17	\$9.95	\$7.26	\$0.00	\$43.38
4	65	\$28.35	\$9.95	\$7.87	\$0.00	\$46.17
5	70	\$30.53	\$9.95	\$20.32	\$0.00	\$60.80
6	75	\$32.72	\$9.95	\$20.93	\$0.00	\$63.60
7	80	\$34.90	\$9.95	\$21.53	\$0.00	\$66.38
8	90	\$39.26	\$9.95	\$22.74	\$0.00	\$71.95

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.41	\$9.95	\$0.00	\$0.00	\$32.36
2	55	\$24.65	\$9.95	\$6.66	\$0.00	\$41.26
3	60	\$26.89	\$9.95	\$7.26	\$0.00	\$44.10
4	65	\$29.13	\$9.95	\$7.87	\$0.00	\$46.95
5	70	\$31.37	\$9.95	\$20.32	\$0.00	\$61.64
6	75	\$33.62	\$9.95	\$20.93	\$0.00	\$64.50
7	80	\$35.86	\$9.95	\$21.53	\$0.00	\$67.34
8	90	\$40.34	\$9.95	\$22.74	\$0.00	\$73.03

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	12/01/2023	\$44.33	\$9.65	\$18.07	\$0.00	\$72.05
LABORERS - ZONE 1 (HEAVY & HIGHWAY)	06/01/2024	\$45.81	\$9.65	\$18.07	\$0.00	\$73.53
	12/01/2024	\$47.28	\$9.65	\$18.07	\$0.00	\$75.00
	06/01/2025	\$48.78	\$9.65	\$18.07	\$0.00	\$76.50
	12/01/2025	\$50.28	\$9.65	\$18.07	\$0.00	\$78.00
	06/01/2026	\$51.83	\$9.65	\$18.07	\$0.00	\$79.55
	12/01/2026	\$53.33	\$9.65	\$18.07	\$0.00	\$81.05

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

PANEL & PICKUP TRUCKS DRIVER	12/01/2023	\$39.88	\$14.41	\$18.67	\$0.00	\$72.96
TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	06/01/2024	\$40.88	\$14.41	\$18.67	\$0.00	\$73.96
	08/01/2024	\$40.88	\$14.91	\$18.67	\$0.00	\$74.46
	12/01/2024	\$40.88	\$14.91	\$20.17	\$0.00	\$75.96
	06/01/2025	\$41.88	\$14.91	\$20.17	\$0.00	\$76.96
	08/01/2025	\$41.88	\$15.41	\$20.17	\$0.00	\$77.46
	12/01/2025	\$41.88	\$15.41	\$21.78	\$0.00	\$79.07
	06/01/2026	\$42.88	\$15.41	\$21.78	\$0.00	\$80.07
	08/01/2026	\$42.88	\$15.91	\$21.78	\$0.00	\$80.57
	12/01/2026	\$42.88	\$15.91	\$23.52	\$0.00	\$82.31

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 1)</i> For apprentice rates see "Apprentice- PILE DRIVER"	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 1)</i>	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59

Apprentice - PILE DRIVER - Local 56 Zone 1

Effective Date - 08/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.54	\$9.40	\$23.12	\$0.00	\$57.06
2	60	\$29.44	\$9.40	\$23.12	\$0.00	\$61.96
3	70	\$34.35	\$9.40	\$23.12	\$0.00	\$66.87
4	75	\$36.80	\$9.40	\$23.12	\$0.00	\$69.32
5	80	\$39.26	\$9.40	\$23.12	\$0.00	\$71.78
6	80	\$39.26	\$9.40	\$23.12	\$0.00	\$71.78
7	90	\$44.16	\$9.40	\$23.12	\$0.00	\$76.68
8	90	\$44.16	\$9.40	\$23.12	\$0.00	\$76.68

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$34.01/ 3&4 \$41.46/ 5&6 \$62.80/ 7&8 \$69.25

Apprentice to Journeyworker Ratio:1:5

PIPEFITTER & STEAMFITTER <i>PIPEFITTERS LOCAL 537</i>	03/01/2024	\$65.28	\$12.70	\$21.80	\$0.00	\$99.78
	09/01/2024	\$67.08	\$12.70	\$21.80	\$0.00	\$101.58
	03/01/2025	\$68.88	\$12.70	\$21.80	\$0.00	\$103.38

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PIPEFITTER - Local 537

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$26.11	\$12.70	\$9.05	\$0.00	\$47.86
2	45	\$29.38	\$12.70	\$21.80	\$0.00	\$63.88
3	60	\$39.17	\$12.70	\$21.80	\$0.00	\$73.67
4	70	\$45.70	\$12.70	\$21.80	\$0.00	\$80.20
5	80	\$52.22	\$12.70	\$21.80	\$0.00	\$86.72

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$26.83	\$12.70	\$9.05	\$0.00	\$48.58
2	45	\$30.19	\$12.70	\$21.80	\$0.00	\$64.69
3	60	\$40.25	\$12.70	\$21.80	\$0.00	\$74.75
4	70	\$46.96	\$12.70	\$21.80	\$0.00	\$81.46
5	80	\$53.66	\$12.70	\$21.80	\$0.00	\$88.16

Notes:

** 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.
 Refrig/AC Mechanic **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)

Apprentice to Journeyworker Ratio:**

PIPELAYER LABORERS - ZONE 1	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
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For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY) LABORERS - ZONE 1 (HEAVY & HIGHWAY)	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30

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

PLUMBERS & GASFITTERS PLUMBERS & GASFITTERS LOCAL 12	03/03/2024	\$67.74	\$14.32	\$19.11	\$0.00	\$101.17
	09/01/2024	\$69.54	\$14.32	\$19.11	\$0.00	\$102.97
	03/02/2025	\$71.34	\$14.32	\$19.11	\$0.00	\$104.77

Apprentice - PLUMBER/GASFITTER - Local 12

Effective Date - 03/03/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$23.71	\$14.32	\$6.88	\$0.00	\$44.91
2	40	\$27.10	\$14.32	\$7.82	\$0.00	\$49.24
3	55	\$37.26	\$14.32	\$10.65	\$0.00	\$62.23
4	65	\$44.03	\$14.32	\$12.53	\$0.00	\$70.88
5	75	\$50.81	\$14.32	\$14.41	\$0.00	\$79.54

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$24.34	\$14.32	\$6.88	\$0.00	\$45.54
2	40	\$27.82	\$14.32	\$7.82	\$0.00	\$49.96
3	55	\$38.25	\$14.32	\$10.65	\$0.00	\$63.22
4	65	\$45.20	\$14.32	\$12.53	\$0.00	\$72.05
5	75	\$52.16	\$14.32	\$14.41	\$0.00	\$80.89

Notes:
 ** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
 Step4 with lic\$69.00, Step5 with lic\$76.87

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.) <i>PIPEFITTERS LOCAL 537</i>	03/01/2024	\$65.28	\$12.70	\$21.80	\$0.00	\$99.78
	09/01/2024	\$67.08	\$12.70	\$21.80	\$0.00	\$101.58
	03/01/2025	\$68.88	\$12.70	\$21.80	\$0.00	\$103.38

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

PNEUMATIC DRILL/TOOL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
	12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30

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

POWDERMAN & BLASTER <i>LABORERS - ZONE 1</i>	12/01/2023	\$45.33	\$9.65	\$18.07	\$0.00	\$73.05
	12/01/2023	\$45.33	\$9.65	\$18.07	\$0.00	\$73.05
	06/01/2024	\$46.81	\$9.65	\$18.07	\$0.00	\$74.53
	12/01/2024	\$48.28	\$9.65	\$18.07	\$0.00	\$76.00
	06/01/2025	\$49.78	\$9.65	\$18.07	\$0.00	\$77.50
	12/01/2025	\$51.28	\$9.65	\$18.07	\$0.00	\$79.00
	06/01/2026	\$52.83	\$9.65	\$18.07	\$0.00	\$80.55
	12/01/2026	\$54.33	\$9.65	\$18.07	\$0.00	\$82.05

For apprentice rates see "Apprentice- LABORER"

POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$45.33	\$9.65	\$18.07	\$0.00	\$73.05
	12/01/2023	\$45.33	\$9.65	\$18.07	\$0.00	\$73.05
	06/01/2024	\$46.81	\$9.65	\$18.07	\$0.00	\$74.53
	12/01/2024	\$48.28	\$9.65	\$18.07	\$0.00	\$76.00
	06/01/2025	\$49.78	\$9.65	\$18.07	\$0.00	\$77.50
	12/01/2025	\$51.28	\$9.65	\$18.07	\$0.00	\$79.00
	06/01/2026	\$52.83	\$9.65	\$18.07	\$0.00	\$80.55
	12/01/2026	\$54.33	\$9.65	\$18.07	\$0.00	\$82.05

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 653 - Southeastern Concrete (Weymouth)</i>	08/01/2023	\$25.00	\$13.91	\$6.90	\$0.00	\$45.81
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>						
	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROOFER (Inc.Roofer Waterproofing &Roofer Damproofg) ROOFERS LOCAL 33	02/01/2024	\$50.03	\$12.78	\$21.45	\$0.00	\$84.26
	08/01/2024	\$51.53	\$12.78	\$21.45	\$0.00	\$85.76
	02/01/2025	\$52.78	\$12.78	\$21.45	\$0.00	\$87.01
	08/01/2025	\$54.28	\$12.78	\$21.45	\$0.00	\$88.51
	02/01/2026	\$55.53	\$12.78	\$21.45	\$0.00	\$89.76

Apprentice - ROOFER - Local 33

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.02	\$12.78	\$6.21	\$0.00	\$44.01
2	60	\$30.02	\$12.78	\$21.45	\$0.00	\$64.25
3	65	\$32.52	\$12.78	\$21.45	\$0.00	\$66.75
4	75	\$37.52	\$12.78	\$21.45	\$0.00	\$71.75
5	85	\$42.53	\$12.78	\$21.45	\$0.00	\$76.76

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.77	\$12.78	\$6.21	\$0.00	\$44.76
2	60	\$30.92	\$12.78	\$21.45	\$0.00	\$65.15
3	65	\$33.49	\$12.78	\$21.45	\$0.00	\$67.72
4	75	\$38.65	\$12.78	\$21.45	\$0.00	\$72.88
5	85	\$43.80	\$12.78	\$21.45	\$0.00	\$78.03

Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1
 Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.
 (Hot Pitch Mechanics' receive \$1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 33	02/01/2024	\$50.28	\$12.78	\$21.45	\$0.00	\$84.51
	08/01/2024	\$51.78	\$12.78	\$21.45	\$0.00	\$86.01
	02/01/2025	\$53.03	\$12.78	\$21.45	\$0.00	\$87.26
	08/01/2025	\$54.53	\$12.78	\$21.45	\$0.00	\$88.76
	02/01/2026	\$55.78	\$12.78	\$21.45	\$0.00	\$90.01

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 - A	02/01/2024	\$57.22	\$14.59	\$27.50	\$2.98	\$102.29
	08/01/2024	\$58.97	\$14.59	\$27.50	\$2.98	\$104.04
	02/01/2025	\$60.72	\$14.59	\$27.50	\$2.98	\$105.79
	08/01/2025	\$62.57	\$14.59	\$27.50	\$2.98	\$107.64
	02/01/2026	\$64.52	\$14.59	\$27.50	\$2.98	\$109.59

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - SHEET METAL WORKER - Local 17-A

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	42	\$24.03	\$14.59	\$6.13	\$0.00	\$44.75
2	42	\$24.03	\$14.59	\$6.13	\$0.00	\$44.75
3	47	\$26.89	\$14.59	\$12.11	\$1.61	\$55.20
4	47	\$26.89	\$14.59	\$12.11	\$1.61	\$55.20
5	52	\$29.75	\$14.59	\$13.09	\$1.72	\$59.15
6	52	\$29.75	\$14.59	\$13.34	\$1.73	\$59.41
7	60	\$34.33	\$14.59	\$14.75	\$1.91	\$65.58
8	65	\$37.19	\$14.59	\$15.73	\$2.03	\$69.54
9	75	\$42.92	\$14.59	\$17.69	\$2.26	\$77.46
10	85	\$48.64	\$14.59	\$19.15	\$2.47	\$84.85

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	42	\$24.77	\$14.59	\$6.13	\$0.00	\$45.49
2	42	\$24.77	\$14.59	\$6.13	\$0.00	\$45.49
3	47	\$27.72	\$14.59	\$12.11	\$1.63	\$56.05
4	47	\$27.72	\$14.59	\$12.11	\$1.63	\$56.05
5	52	\$30.66	\$14.59	\$13.09	\$1.75	\$60.09
6	52	\$30.66	\$14.59	\$13.34	\$1.76	\$60.35
7	60	\$35.38	\$14.59	\$14.75	\$1.94	\$66.66
8	65	\$38.33	\$14.59	\$15.73	\$2.06	\$70.71
9	75	\$44.23	\$14.59	\$17.69	\$2.30	\$78.81
10	85	\$50.12	\$14.59	\$19.15	\$2.52	\$86.38

Notes:
Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 ZONE A	12/01/2023	\$40.34	\$14.41	\$18.67	\$0.00	\$73.42
	06/01/2024	\$41.34	\$14.41	\$18.67	\$0.00	\$74.42
	08/01/2024	\$41.34	\$14.91	\$18.67	\$0.00	\$74.92
	12/01/2024	\$41.34	\$14.91	\$20.17	\$0.00	\$76.42
	06/01/2025	\$42.34	\$14.91	\$20.17	\$0.00	\$77.42
	08/01/2025	\$42.34	\$15.41	\$20.17	\$0.00	\$77.92
	12/01/2025	\$42.34	\$15.41	\$21.78	\$0.00	\$79.53
	06/01/2026	\$43.34	\$15.41	\$21.78	\$0.00	\$80.53
	08/01/2026	\$43.34	\$15.91	\$21.78	\$0.00	\$81.03
	12/01/2026	\$43.34	\$15.91	\$23.52	\$0.00	\$82.77

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.63	\$14.41	\$18.67	\$0.00	\$73.71
	06/01/2024	\$41.63	\$14.41	\$18.67	\$0.00	\$74.71
	08/01/2024	\$41.63	\$14.91	\$18.67	\$0.00	\$75.21
	12/01/2024	\$41.63	\$14.91	\$20.17	\$0.00	\$76.71
	06/01/2025	\$42.63	\$14.91	\$20.17	\$0.00	\$77.71
	08/01/2025	\$42.63	\$15.41	\$20.17	\$0.00	\$78.21
	12/01/2025	\$42.63	\$15.41	\$21.78	\$0.00	\$79.82
	06/01/2026	\$43.63	\$15.41	\$21.78	\$0.00	\$80.82
	08/01/2026	\$43.63	\$15.91	\$21.78	\$0.00	\$81.32
	12/01/2026	\$43.63	\$15.91	\$23.52	\$0.00	\$83.06
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1</i>	03/01/2024	\$69.75	\$10.90	\$23.20	\$0.00	\$103.85
	10/01/2024	\$71.55	\$10.90	\$23.20	\$0.00	\$105.65
	03/01/2025	\$73.35	\$10.90	\$23.20	\$0.00	\$107.45

Apprentice - SPRINKLER FITTER - Local 550 (Section A) Zone 1

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$24.41	\$10.90	\$12.80	\$0.00	\$48.11
2	40	\$27.90	\$10.90	\$13.60	\$0.00	\$52.40
3	45	\$31.39	\$10.90	\$14.40	\$0.00	\$56.69
4	50	\$34.88	\$10.90	\$15.20	\$0.00	\$60.98
5	55	\$38.36	\$10.90	\$16.00	\$0.00	\$65.26
6	60	\$41.85	\$10.90	\$16.80	\$0.00	\$69.55
7	65	\$45.34	\$10.90	\$17.60	\$0.00	\$73.84
8	70	\$48.83	\$10.90	\$18.40	\$0.00	\$78.13
9	75	\$52.31	\$10.90	\$19.20	\$0.00	\$82.41
10	80	\$55.80	\$10.90	\$20.00	\$0.00	\$86.70

Effective Date - 10/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	\$25.04	\$10.90	\$12.80	\$0.00	\$48.74
2	40	\$28.62	\$10.90	\$13.60	\$0.00	\$53.12
3	45	\$32.20	\$10.90	\$14.40	\$0.00	\$57.50
4	50	\$35.78	\$10.90	\$15.20	\$0.00	\$61.88
5	55	\$39.35	\$10.90	\$16.00	\$0.00	\$66.25
6	60	\$42.93	\$10.90	\$16.80	\$0.00	\$70.63
7	65	\$46.51	\$10.90	\$17.60	\$0.00	\$75.01
8	70	\$50.09	\$10.90	\$18.40	\$0.00	\$79.39
9	75	\$53.66	\$10.90	\$19.20	\$0.00	\$83.76
10	80	\$57.24	\$10.90	\$20.00	\$0.00	\$88.14

Notes: Apprentice entered prior 9/30/10:
40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 103</i>	03/01/2024	\$49.49	\$13.00	\$20.19	\$0.00	\$82.68
	09/01/2024	\$51.02	\$13.00	\$20.24	\$0.00	\$84.26
	03/01/2025	\$51.98	\$13.00	\$20.27	\$0.00	\$85.25
	09/01/2025	\$53.51	\$13.00	\$20.32	\$0.00	\$86.83
	03/01/2026	\$54.47	\$13.00	\$20.34	\$0.00	\$87.81
	09/01/2026	\$56.00	\$13.00	\$20.39	\$0.00	\$89.39
	03/01/2027	\$56.95	\$13.00	\$20.42	\$0.00	\$90.37
	09/01/2027	\$58.49	\$13.00	\$20.46	\$0.00	\$91.95
	03/01/2028	\$59.45	\$13.00	\$20.49	\$0.00	\$92.94

Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$22.27	\$13.00	\$0.67	\$0.00	\$35.94
2	45	\$22.27	\$13.00	\$0.67	\$0.00	\$35.94
3	50	\$24.75	\$13.00	\$16.16	\$0.00	\$53.91
4	50	\$24.75	\$13.00	\$16.16	\$0.00	\$53.91
5	55	\$27.22	\$13.00	\$16.57	\$0.00	\$56.79
6	60	\$29.69	\$13.00	\$16.97	\$0.00	\$59.66
7	65	\$32.17	\$13.00	\$17.38	\$0.00	\$62.55
8	70	\$34.64	\$13.00	\$17.78	\$0.00	\$65.42
9	75	\$37.12	\$13.00	\$18.18	\$0.00	\$68.30
10	80	\$39.59	\$13.00	\$18.58	\$0.00	\$71.17

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$22.96	\$13.00	\$0.69	\$0.00	\$36.65
2	45	\$22.96	\$13.00	\$0.69	\$0.00	\$36.65
3	50	\$25.51	\$13.00	\$16.16	\$0.00	\$54.67
4	50	\$25.51	\$13.00	\$16.16	\$0.00	\$54.67
5	55	\$28.06	\$13.00	\$16.57	\$0.00	\$57.63
6	60	\$30.61	\$13.00	\$16.97	\$0.00	\$60.58
7	65	\$33.16	\$13.00	\$17.38	\$0.00	\$63.54
8	70	\$35.71	\$13.00	\$17.78	\$0.00	\$66.49
9	75	\$38.27	\$13.00	\$18.18	\$0.00	\$69.45
10	80	\$40.82	\$13.00	\$18.58	\$0.00	\$72.40

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS	02/01/2024	\$61.34	\$11.49	\$23.59	\$0.00	\$96.42
BRICKLAYERS LOCAL 3 - MARBLE & TILE	08/01/2024	\$63.44	\$11.49	\$23.59	\$0.00	\$98.52
	02/01/2025	\$64.74	\$11.49	\$23.59	\$0.00	\$99.82
	08/01/2025	\$66.89	\$11.49	\$23.59	\$0.00	\$101.97
	02/01/2026	\$68.24	\$11.49	\$23.59	\$0.00	\$103.32
	08/01/2026	\$70.44	\$11.49	\$23.59	\$0.00	\$105.52
	02/01/2027	\$71.84	\$11.49	\$23.59	\$0.00	\$106.92

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.67	\$11.49	\$23.59	\$0.00	\$65.75
2	60	\$36.80	\$11.49	\$23.59	\$0.00	\$71.88
3	70	\$42.94	\$11.49	\$23.59	\$0.00	\$78.02
4	80	\$49.07	\$11.49	\$23.59	\$0.00	\$84.15
5	90	\$55.21	\$11.49	\$23.59	\$0.00	\$90.29

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.72	\$11.49	\$23.59	\$0.00	\$66.80
2	60	\$38.06	\$11.49	\$23.59	\$0.00	\$73.14
3	70	\$44.41	\$11.49	\$23.59	\$0.00	\$79.49
4	80	\$50.75	\$11.49	\$23.59	\$0.00	\$85.83
5	90	\$57.10	\$11.49	\$23.59	\$0.00	\$92.18

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$48.33	\$9.65	\$18.22	\$0.00	\$76.20
	06/01/2024	\$49.81	\$9.65	\$18.22	\$0.00	\$77.68
	12/01/2024	\$51.28	\$9.65	\$18.22	\$0.00	\$79.15
	06/01/2025	\$52.78	\$9.65	\$18.22	\$0.00	\$80.65
	12/01/2025	\$54.28	\$9.65	\$18.22	\$0.00	\$82.15
	06/01/2026	\$55.83	\$9.65	\$18.22	\$0.00	\$83.70
	12/01/2026	\$57.33	\$9.65	\$18.22	\$0.00	\$85.20

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.45	\$9.65	\$18.22	\$0.00	\$72.32
	06/01/2024	\$45.93	\$9.65	\$18.22	\$0.00	\$73.80
	12/01/2024	\$47.40	\$9.65	\$18.22	\$0.00	\$75.27
	06/01/2025	\$48.90	\$9.65	\$18.22	\$0.00	\$76.77
	12/01/2025	\$50.40	\$9.65	\$18.22	\$0.00	\$78.27
	06/01/2026	\$51.95	\$9.65	\$18.22	\$0.00	\$79.82
	12/01/2026	\$53.45	\$9.65	\$18.22	\$0.00	\$81.32

For apprentice rates see "Apprentice- LABORER"

TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.92	\$14.41	\$18.67	\$0.00	\$74.00
	06/01/2024	\$41.92	\$14.41	\$18.67	\$0.00	\$75.00
	08/01/2024	\$41.92	\$14.91	\$18.67	\$0.00	\$75.50
	12/01/2024	\$41.92	\$14.91	\$20.17	\$0.00	\$77.00
	06/01/2025	\$42.92	\$14.91	\$20.17	\$0.00	\$78.00
	08/01/2025	\$42.92	\$15.41	\$20.17	\$0.00	\$78.50
	12/01/2025	\$42.92	\$15.41	\$21.78	\$0.00	\$80.11
	06/01/2026	\$43.92	\$15.41	\$21.78	\$0.00	\$81.11
	08/01/2026	\$43.92	\$15.91	\$21.78	\$0.00	\$81.61
	12/01/2026	\$43.92	\$15.91	\$23.52	\$0.00	\$83.35
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$56.56	\$9.65	\$18.67	\$0.00	\$84.88
	06/01/2024	\$58.04	\$9.65	\$18.67	\$0.00	\$86.36
	12/01/2024	\$59.51	\$9.65	\$18.67	\$0.00	\$87.83
	06/01/2025	\$61.01	\$9.65	\$18.67	\$0.00	\$89.33
	12/01/2025	\$62.51	\$9.65	\$18.67	\$0.00	\$90.83
	06/01/2026	\$64.06	\$9.65	\$18.67	\$0.00	\$92.38
	12/01/2026	\$65.56	\$9.65	\$18.67	\$0.00	\$93.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$58.56	\$9.65	\$18.67	\$0.00	\$86.88
	06/01/2024	\$60.04	\$9.65	\$18.67	\$0.00	\$88.36
	12/01/2024	\$61.51	\$9.65	\$18.67	\$0.00	\$89.83
	06/01/2025	\$63.01	\$9.65	\$18.67	\$0.00	\$91.33
	12/01/2025	\$64.51	\$9.65	\$18.67	\$0.00	\$92.83
	06/01/2026	\$66.06	\$9.65	\$18.67	\$0.00	\$94.38
	12/01/2026	\$67.56	\$9.65	\$18.67	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$48.63	\$9.65	\$18.67	\$0.00	\$76.95
	06/01/2024	\$50.11	\$9.65	\$18.67	\$0.00	\$78.43
	12/01/2024	\$51.58	\$9.65	\$18.67	\$0.00	\$79.90
	06/01/2025	\$53.08	\$9.65	\$18.67	\$0.00	\$81.40
	12/01/2025	\$54.58	\$9.65	\$18.67	\$0.00	\$82.90
	06/01/2026	\$56.13	\$9.65	\$18.67	\$0.00	\$84.45
	12/01/2026	\$57.63	\$9.65	\$18.67	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$50.63	\$9.65	\$18.67	\$0.00	\$78.95
	06/01/2024	\$52.11	\$9.65	\$18.67	\$0.00	\$80.43
	12/01/2024	\$53.58	\$9.65	\$18.67	\$0.00	\$81.90
	06/01/2025	\$55.08	\$9.65	\$18.67	\$0.00	\$83.40
	12/01/2025	\$56.58	\$9.65	\$18.67	\$0.00	\$84.90
	06/01/2026	\$58.13	\$9.65	\$18.67	\$0.00	\$86.45
	12/01/2026	\$59.63	\$9.65	\$18.67	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE A</i>	12/01/2023	\$40.34	\$14.41	\$18.67	\$0.00	\$73.42
	06/01/2024	\$41.34	\$14.41	\$18.67	\$0.00	\$74.42
	08/01/2024	\$41.34	\$14.91	\$18.67	\$0.00	\$74.92
	12/01/2024	\$41.34	\$14.91	\$20.17	\$0.00	\$76.42
	06/01/2025	\$42.34	\$14.91	\$20.17	\$0.00	\$77.42
	08/01/2025	\$42.34	\$15.41	\$20.17	\$0.00	\$77.92
	12/01/2025	\$42.34	\$15.41	\$21.78	\$0.00	\$79.53
	06/01/2026	\$43.34	\$15.41	\$21.78	\$0.00	\$80.53
	08/01/2026	\$43.34	\$15.91	\$21.78	\$0.00	\$81.03
	12/01/2026	\$43.34	\$15.91	\$23.52	\$0.00	\$82.77
WAGON DRILL OPERATOR <i>LABORERS - ZONE 1</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
For apprentice rates see "Apprentice- LABORER"						
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 1 (HEAVY & HIGHWAY)</i>	12/01/2023	\$44.58	\$9.65	\$18.07	\$0.00	\$72.30
	06/01/2024	\$46.06	\$9.65	\$18.07	\$0.00	\$73.78
	12/01/2024	\$47.53	\$9.65	\$18.07	\$0.00	\$75.25
	06/01/2025	\$49.03	\$9.65	\$18.07	\$0.00	\$76.75
	12/01/2025	\$50.53	\$9.65	\$18.07	\$0.00	\$78.25
	06/01/2026	\$52.08	\$9.65	\$18.07	\$0.00	\$79.80
12/01/2026	\$53.58	\$9.65	\$18.07	\$0.00	\$81.30	
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WASTE WATER PUMP OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68	
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS & GASFITTERS LOCAL 12</i>	03/03/2024	\$67.74	\$14.32	\$19.11	\$0.00	\$101.17
	09/01/2024	\$69.54	\$14.32	\$19.11	\$0.00	\$102.97
	03/02/2025	\$71.34	\$14.32	\$19.11	\$0.00	\$104.77
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						

Additional Apprentices Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentices ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

** Multiple ratios are listed in the comment field.

*** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

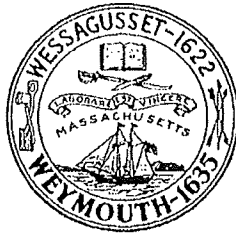
**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

APPENDIX H

TOWN OF WEYMOUTH
MBE/WBE ENTERPRISE PROGRAM

APPENDIX I

ACH DIRECT DEPOSIT FORM



AUTHORIZATION AGREEMENT FOR ACH CREDIT TRANSACTIONS

Authorization is hereby granted to the **Town of Weymouth, Massachusetts**, herein called **Town of**

Weymouth, by _____ (Company/Individual Name) to initiate ACH credit transaction entries to our depository account designated below at the depository financial institution named below, hereinafter called DFI. Authorization is also granted to **Town of Weymouth** to initiate, only if required, debit entry adjustments to our depository account at the named DFI in the event a corresponding credit entry by **Town of Weymouth** was made in error. Acknowledgement is further made that the **Town of Weymouth's** origination of all ACH transactions to our account designated below must comply with the provisions of U.S. law and NACHA Operating Rules and Regulations.

Depository Financial Institution Name (DFI)

Bank Routing Number (DFI)

Address

City/State

Zip

Designated Depository Account Title

Depository Account Number

Depository Account Type: ___ Checking ___ Savings

This authority is to remain in full force and effect until the **Town of Weymouth** has received written notification from _____ of its termination in such time and manner as to afford the **Town of Weymouth** and the above named DFI a reasonable opportunity to act on such written notification.

Authorizing Party Name/Title (print/type)

Signature of Authorizing Party

Date

Primary Company Contact Phone Number: (____) _____

Tax identification number: _____

E-mail Address (for ACH detail notification): _____

OR

Fax Number (for ACH detail notification): (____) _____

Please note:

- All written credit authorizations must provide that the Receiver may revoke the authorization only by notifying the Originator (**Town of Weymouth**) in the manner specified in the authorization.
- Single entry reversals do not require authorization by the receiver.

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