

MAINE TURNPIKE AUTHORITY

ADDENDUM NO. 1

CONTRACT 2018.19

BRIDGE REPLACEMENT

CUMMINGS ROAD UNDERPASS

MILE 44.6

The bid opening date is Tuesday 10/16/2018 at 11:00 am.

The following changes are made to the Proposal, Specifications and Plans.

GENERAL

Addendum No. 2, if necessary, is scheduled to be issued on October 12, 2018 (Friday). All questions regarding Contract 2018.19 should be submitted by the 5:00 pm on October 10, 2018 (Wednesday) to be answered in this addendum. Questions received after that time may not be answered. All questions and inquiries regarding proposed material substitutions shall be in writing and shall be directed to Nate Carll, Purchasing Manager, of the Maine Turnpike Authority. Fax No. (207) 871-7739. Email ncarll@maineturnpike.com

The geotechnical report associated with this project has been posted on the Maine Turnpike Authority's website.

PROPOSAL

Proposal Sheets P-2, P-3 and P-12 are deleted and replaced with P-2 (Revised 10/3/2018), P-3 (Revised 10/3/2018) and P-12 (Revised 10/3/2018) attached hereto. The revisions to these proposal sheets are to revise the quantity of leveling sand, aggregate subbase course gravel and flaggers.

SPECIFICATIONS

- Page SP-14 Special Provision Section 107.4.6 Prosecution of Work, the second bullet shall be deleted and replaced with the following: Steel H-pile and/or sheet pile driving shall not occur between the hours of 9:00 PM – 7:00 AM. H-pile driving will not be allowed within 10 feet of traffic.
- Page SP-117 Special Provision Section 652 Maintenance of Traffic, Specific Project Maintenance of Traffic Requirements, Cummings Road Traffic Control Requirements, the first paragraph shall be deleted and is replaced with the following:

Maintenance of traffic plans have been developed for the work on the Cummings Road bridge and approach roadways. Two lanes of traffic (one lane in each direction) shall be maintained at all times with the exception of the 7:00 PM and 7:00 AM Sunday through Thursday nights. During this overnight period, traffic may be reduced to a single lane of alternating one-way traffic. In addition, for installation of temporary earth support system(s) along Cummings Rd and paving operations, traffic may be reduced to a single lane of alternating one-way traffic between 9:00 AM and 3:00 PM Monday through Friday.

PLANS

Plan Sheet EQ-01, sheet 2 Estimated Quantities, is being reissued for revisions to Items 203.45 Leveling Sand, 304.10 Aggregate Subbase Course Gravel and 652.38 Flaggers.

Plan Sheets TYP-02, sheet 6 Geofoam Special Details and GT-01 and GT-02, sheets 64 and 65 Geofoam Longitudinal Profiles, are reissued to clarify and include a depiction of longitudinal extents of the concrete distribution slab.

Plan Sheets S-03 through S-11, sheets 78 through 86 Boring Logs are reissued with improved quality.

QUESTIONS

The following are questions asked at the pre-bid meeting held on October 2, 2018 or submitted to the Maine Turnpike Authority in writing. Answers to the questions are noted. Bidders shall utilize this information in preparing their bid.

Question 1: Page 6 shows a 4” thick concrete distribution slab and refers to Sheets GT-01 and GT-02 but doesn’t define the longitudinal limits of the slab. Can you clarify the longitudinal limits?

Answer: The concrete distribution slab shall generally be installed above the top layer of geofoam blocks within the paved width of the embankment and extend longitudinally 6” beyond the edge of geofoam. Plan Sheets Typ-02, GT-01 and GT-02 are reissued with this Addendum for additional clarity.

Question 2: Will the MTA allow 20% RAP in pavement?

Answer: Special Provision 403, Complementary Note C, “A Maximum of 15% RAP may be used” is not applicable to any mix incorporated on the project.

Question 3: Is the intention to do all earthwork and pavement at night? Are there windows of time where paving can be completed during the day?

Answer: The lane closure window on Cummings Road will be opened to allow a single lane of alternating traffic during the hours of 9AM to 3PM Monday through Friday. Special Provision Section 652 is updated with this Addendum.

Question 4: Plans state that preaugering for wick drain installation may be necessary. Are there any specific requirements?

Answer: Preaugering for installation of Prefabricated Vertical Drains (PVD) (wick drains) may be required if the ground is frozen and Contractor's equipment doesn't allow installation of wick drains through frozen ground. Specific requirements related to depth of frost at the time of PVD installation are not included within this contract and are solely dependent on the contractor's means and methods. Preaugering, if necessary, will not be paid for separately, but is included in the cost of the Prefabricated Vertical Drains

Question 5: Do we have to worry about frozen material during placement of the surcharge?

Answer: Per Note 7 on Sheet GT-10, "Borrow, sand, and/or subbase material placed as part of the surcharge, and will subsequently be left in place to for the roadway embankment, shall be placed in accordance with Specifications sections 200 and 300 as applicable". Specific requirements for installation of preload borrow material that will be removed from the project site are not made within the bid documents.

Question 6: With the proposed phasing and prohibition of crane loads on the surcharge per Special Provision 107.4.7, is the intent that sheeting installation happens after the surcharge is removed? Sheeting needs to be in place for geofoam to be installed.

Answer: Temporary earth support systems may be installed prior to installation of the surcharge or after removal of the surcharge to facilitate construction of the remaining portions of the embankment, including installation of geofoam. Daytime lane closures on Cummings Road are allowed on weekends with approval of the Resident and weekday, daytime lane closures on Cummings Road are allowed per this Addendum to allow more opportunities for installation.

ATTACHMENTS

- Proposal Sheets P-2 (Revised 10/3/2018), P-3 (Revised 10/3/2018) and P-12 (Revised 10/3/2018) (3 pages)
- USACOE Maine General Permit (13 pages)
- Pre-Bid Agenda (6 pages)
- Pre-Bid Sign-In Sheet (1 page)
- Revised Plan Sheets (13 Sheets)

Notes: The above items shall be considered as part of the bid submittal.

The total number of pages included with this addendum is Forty (40).

All bidders are requested to acknowledge the receipt of the Addendum No. 1 by signing below and faxing this sheet to Nathaniel Carll, Purchasing Department, Maine Turnpike Authority at 207-871-7739. Bidders are also required to acknowledge receipt of this Addendum No. 1 on Page P-14 of the bid package.

Business Name

Print Name and Title

Signature

Date
October 3, 2018

Very truly yours,

MAINE TURNPIKE AUTHORITY

Nathaniel Carll
Purchasing Department
Maine Turnpike Authority

**SCHEDULE OF BID PRICES
CONTRACT NO. 2018.19
Bridge Replacement
Cummings Road Underpass**

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
201.11	Clearing	Acre	2				
202.19	Removing Existing Bridge (Structural Steel = 112 Tons, Concrete = 580 CY)	Lump Sum	1				
202.202	Removing Pavement Surface	Square Yard	1,120				
203.20	Common Excavation	Cubic Yard	18,600				
203.24	Common Borrow	Cubic Yard	10,000				
203.25	Granular Borrow	Cubic Yard	1,500				
203.43	Geofoam Lightweight Fill	Cubic Yard	5,400				
203.45	Leveling Sand	Cubic Yard	1,450				
203.46	Sand Drainage Blanket	Cubic Yard	3,800				
206.082	Structural Earth Excavation - Major Structures, Plan Quantity	Cubic Yard	600				
206.10	Structural Earth Excavation - Piers	Cubic Yard	690				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
BROUGHT FORWARD:							
209.29	Prefabricated Vertical Drains	Linear Foot	183,000				
304.10	Aggregate Subbase Course - Gravel	Cubic Yard	4,900				
304.14	Aggregate Base Course - Type A	Cubic Yard	800				
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	Ton	950				
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	Ton	1,160				
403.2084	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)	Ton	40				
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size	Ton	30				
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Course)	Ton	570				
409.15	Bituminous Tack Coat, Applied	Gallon	590				
419.30	Sawing Bituminous Pavement	Linear Foot	990				
501.231	Dynamic Loading Test	Each	4				
501.54	Steel H-beam Piles 117 lb/ft, delivered	Linear Foot	11,300				

CARRIED FORWARD:

Item No	Item Description	Units	Approx. Quantities	Unit Prices in Numbers		Bid Amount in Numbers	
				Dollars	Cents	Dollars	Cents
BROUGHT FORWARD:							
652.30	Flashing Arrow	Each	2				
652.312	Type III Barricades	Each	18				
652.33	Drum	Each	170				
652.34	Cone	Each	80				
652.35	Construction Signs	Square Foot	1,200				
652.361	Maintenance of Traffic Control Devices	Lump Sum	1				
652.38	Flaggers	Hour	1,400				
652.41	Portable-Changeable Message Sign	Each	3				
652.45	Truck Mounted Attenuator	Calendar Day	130				
652.452	Automated Trailer Mounted Speed Limit Sign	Each	2				
656.50	Baled Hay, in place	Each	25				
656.60	Temporary Berms	Linear Foot	2,100				

CARRIED FORWARD:



REPLY TO ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

MAINE GENERAL PERMIT (GP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

RALPH NORWOOD IV
MAINE TURNPIKE AUTHORITY
2360 CONGRESS STREET
PORTLAND, MAINE 04102

CORPS PERMIT # NAE-2018-01709
CORPS GP ID# 18-482
STATE ID# PBR

DESCRIPTION OF WORK:

Place temporary and permanent fill in freshwater wetlands off Cummings Road and the Maine Turnpike at South Portland, Maine in order to reconstruct the existing deteriorated Cummings Road overpass over the Maine Turnpike and its approaches. The project will result in approximately 6,890 s.f. of permanent and 8,014 s.f. of temporary wetland impact. This work is shown on the attached plans entitled "Cummings Road Bridge Underpass Replacement Project, South Portland, Maine" in one sheet dated "7/17/2017" and "BRIDGE REPLACEMENT, CUMMINGS ROAD UNDERPASS" in nine sheets dated "7/18".

LAT/LONG COORDINATES : 43.628470° N -70.348378° W USGS QUAD: PORTLAND WEST, ME

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP). Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 38 of the GP (page 16) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 13, 2020. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 13, 2021.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.

II. STATE ACTIONS: PENDING [X], ISSUED [], DENIED [] DATE _____

APPLICATION TYPE: PBR: X, TIER 1: _____, TIER 2: _____, TIER 3: _____, LURC: _____, DMR LEASE: _____, NA: _____

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 7/20/18 LEVEL OF REVIEW: CATEGORY 1: _____ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 _____, 404 X, 10/404 _____, 103 _____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA_NO _____, USF&WS_NO _____, NMFS_NO _____

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

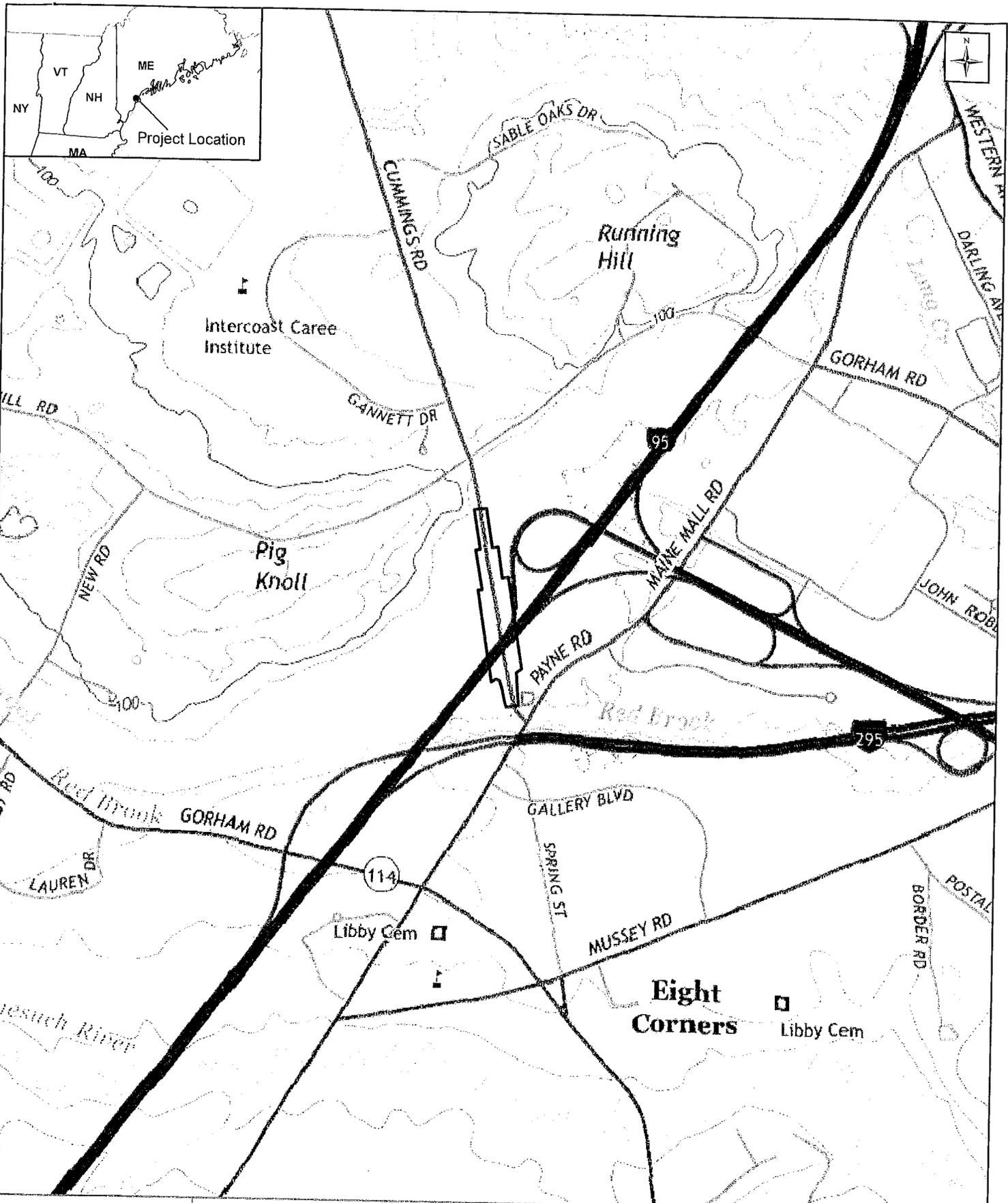
Jay L. Clement
JAY L. CLEMENT
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

Jay L. Clement 9/24/18
FRANK J. DEL GIUDICE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION



**PLEASE NOTE THE FOLLOWING CONDITIONS FOR
DEPARTMENT OF THE ARMY
GENERAL PERMIT
NO. NAE-2018-01709**

1. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).
2. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.
3. Adequate sedimentation and erosion control devices, such as geotextile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.
4. All exposed soils resulting from the construction will be promptly seeded and mulched in order to achieve vegetative stabilization.
5. All areas of temporary fill shall be restored to their original contour and character upon completion of the work.
6. All tree cutting shall occur between October 16 and April 19 of any year to the maximum extent practicable and no tree cutting shall occur between June 1 and July 31 of any year in order to minimize potential impacts to federally listed northern long-eared bats.



Prepared For: **HNTB**

Prepared By:  **NewEarth**
ECOLOGICAL CONSULTING, LLC

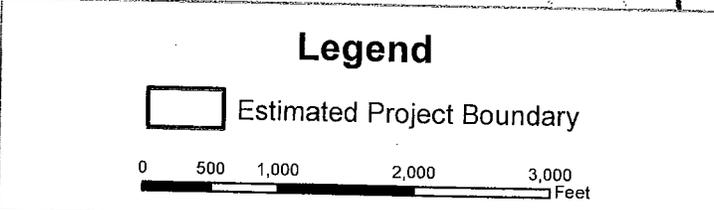
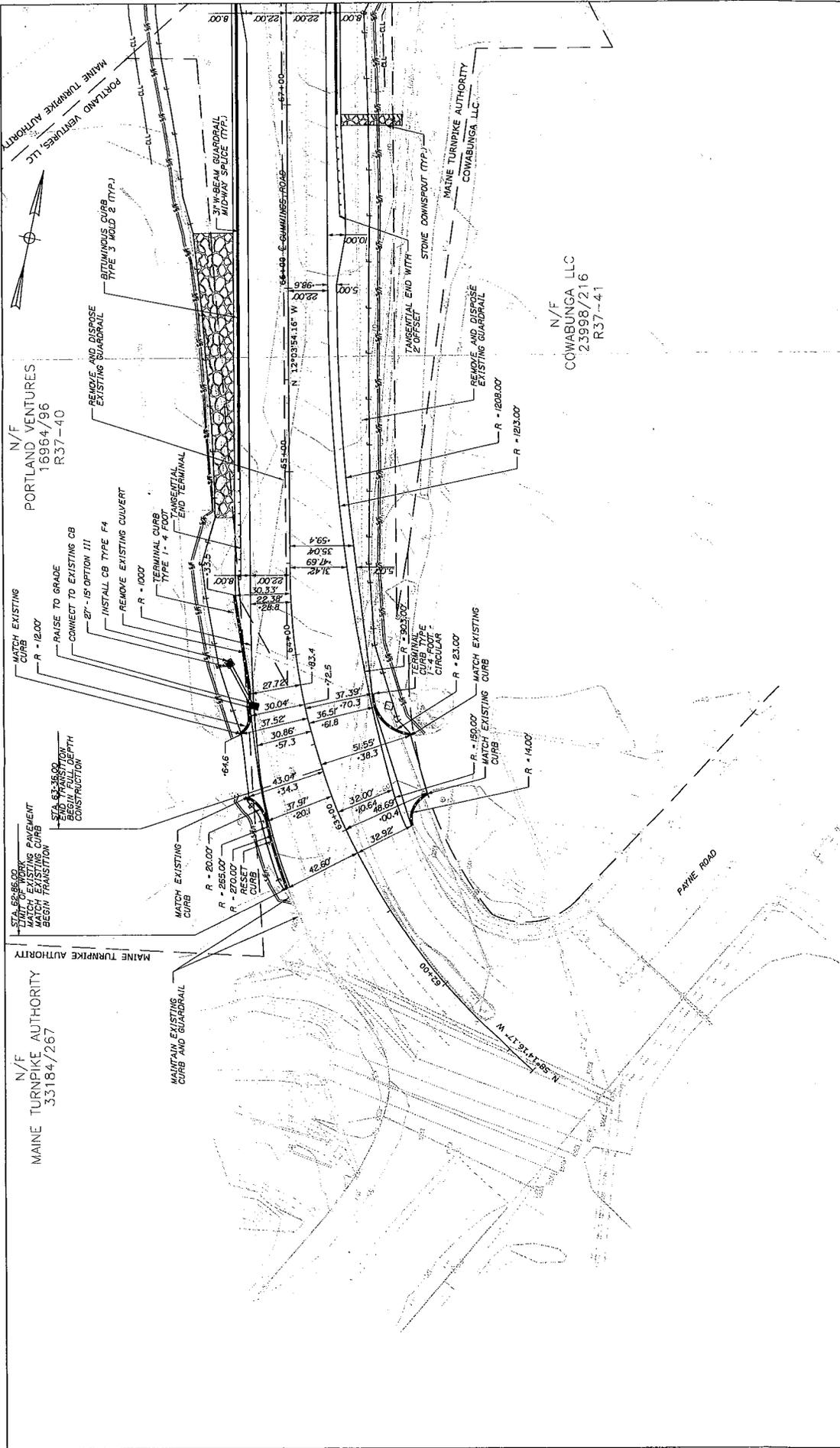


Figure 1. Site Location and Topography
Cummings Road Bridge Underpass Replacement Project
South Portland, Maine

43.628470; -70.348378 Portland West-



N/F
 PORTLAND VENTURES
 16964/96
 R37-40

N/F
 MAINE TURNPIKE AUTHORITY
 33184/267

N/F
 COWABUNGA LLC
 23998/216
 R37-41

Scale: 25' = 1" (Scale of Feet)

Designed by: _____

No.	By	Date

CONSULTANT PROJECT MANAGER: Tim Cole, P.E.

By	Date
WSK	07/18
WSK	07/18

Drawn: WSK
 Checked: WSK
 In Charge of: RAL

HTNB
 HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5955
 FAX (207) 228-0909

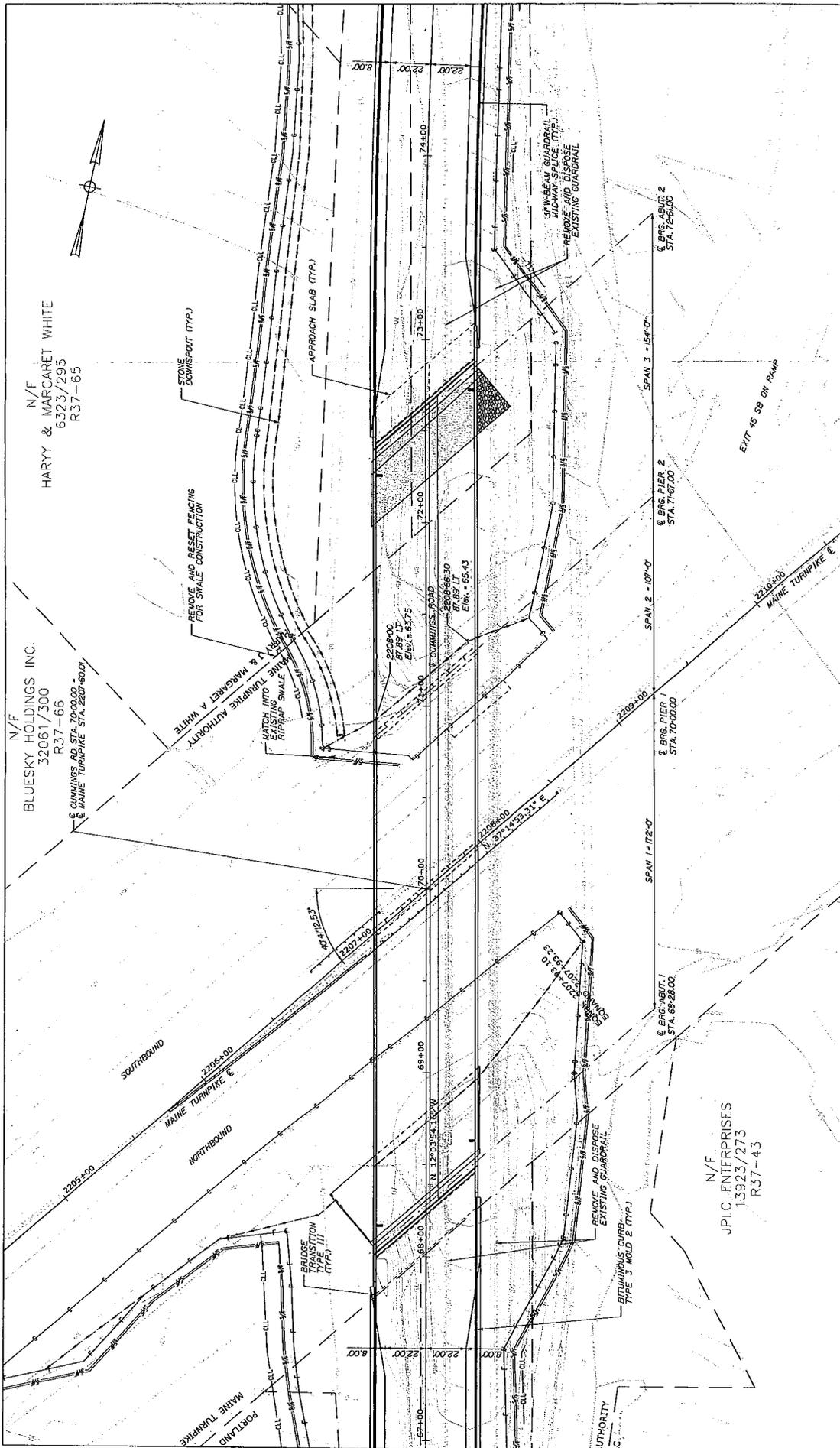
MAINE TURNPIKE AUTHORITY

THE GOLD STAR
 MEMORIAL HIGHWAY

BRIDGE REPLACEMENT
 CUMMINGS ROAD UNDERPASS
 PLAN 1

CONTRACT: 2018.09
 SHEET NUMBER: PL-01
 17 OF 101

Date: 7/3/2018



Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date

Designed by: JPLC ENTERPRISES 13923/273 R37-43

CONSULTANT PROJECT MANAGER: Tim Cole, P.E.
 Designed: LSK 07/18 In. Charge of: RAL 07/18
 By: LSK 07/18 Checked: LSK 07/18 Date: 07/18

NTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 FAX (207) 228-6909

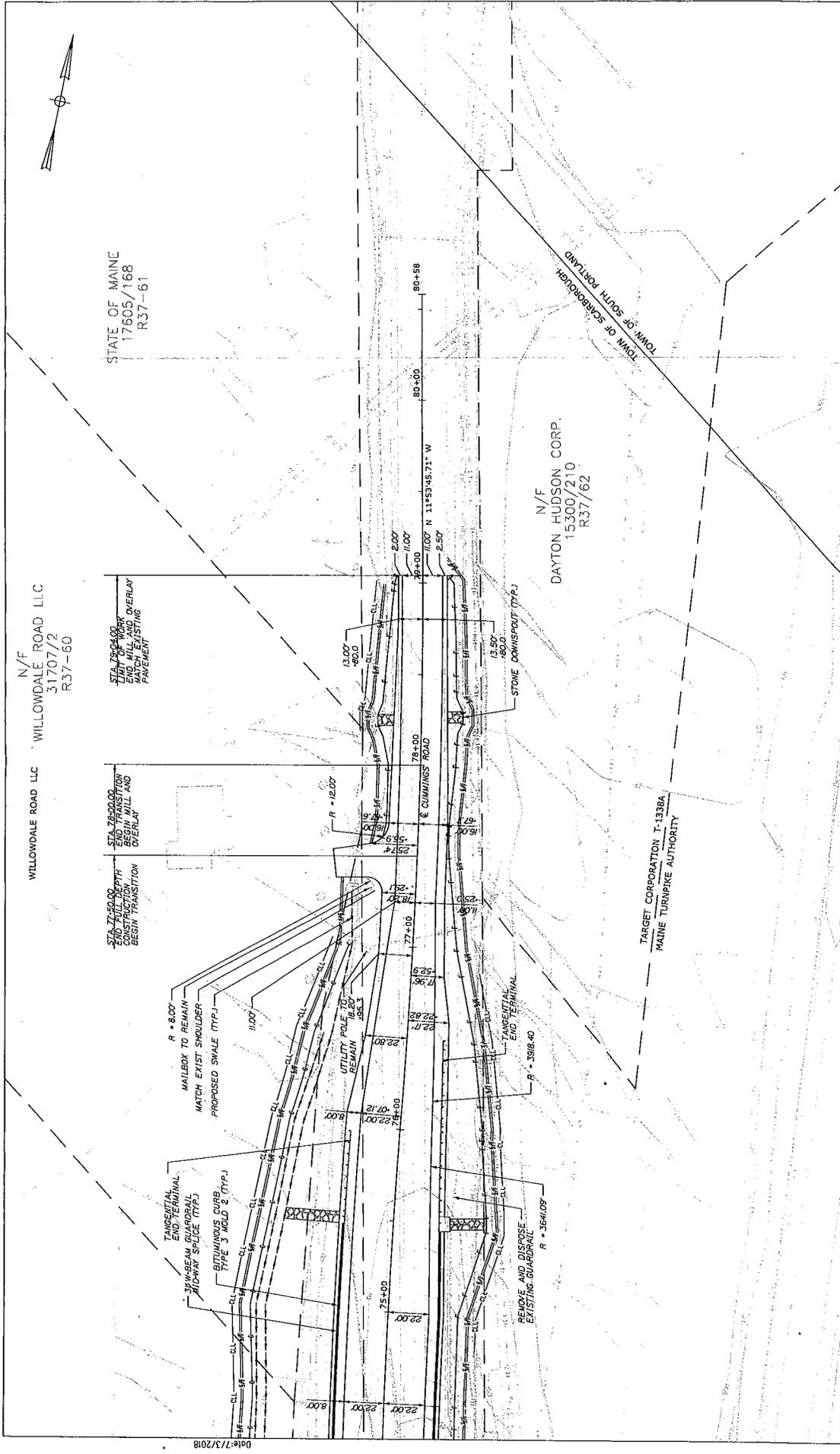
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPLACEMENT
 CUMMINGS ROAD UNDERPASS
 PLAN 2

SHEET NUMBER: PL-02
 18 OF 01



Scale: 25 0 25 50
 Scale of Feet

No.	Revision	By	Date

Designed by: _____
 Checked by: _____
 In Charge of: RAL 07/18

CONSULTANT PROJECT MANAGER: Tim Coles, P.E.
 Designed: LSK 07/18
 Checked: LSK 07/18
 In Charge of: RAL 07/18

HNTB

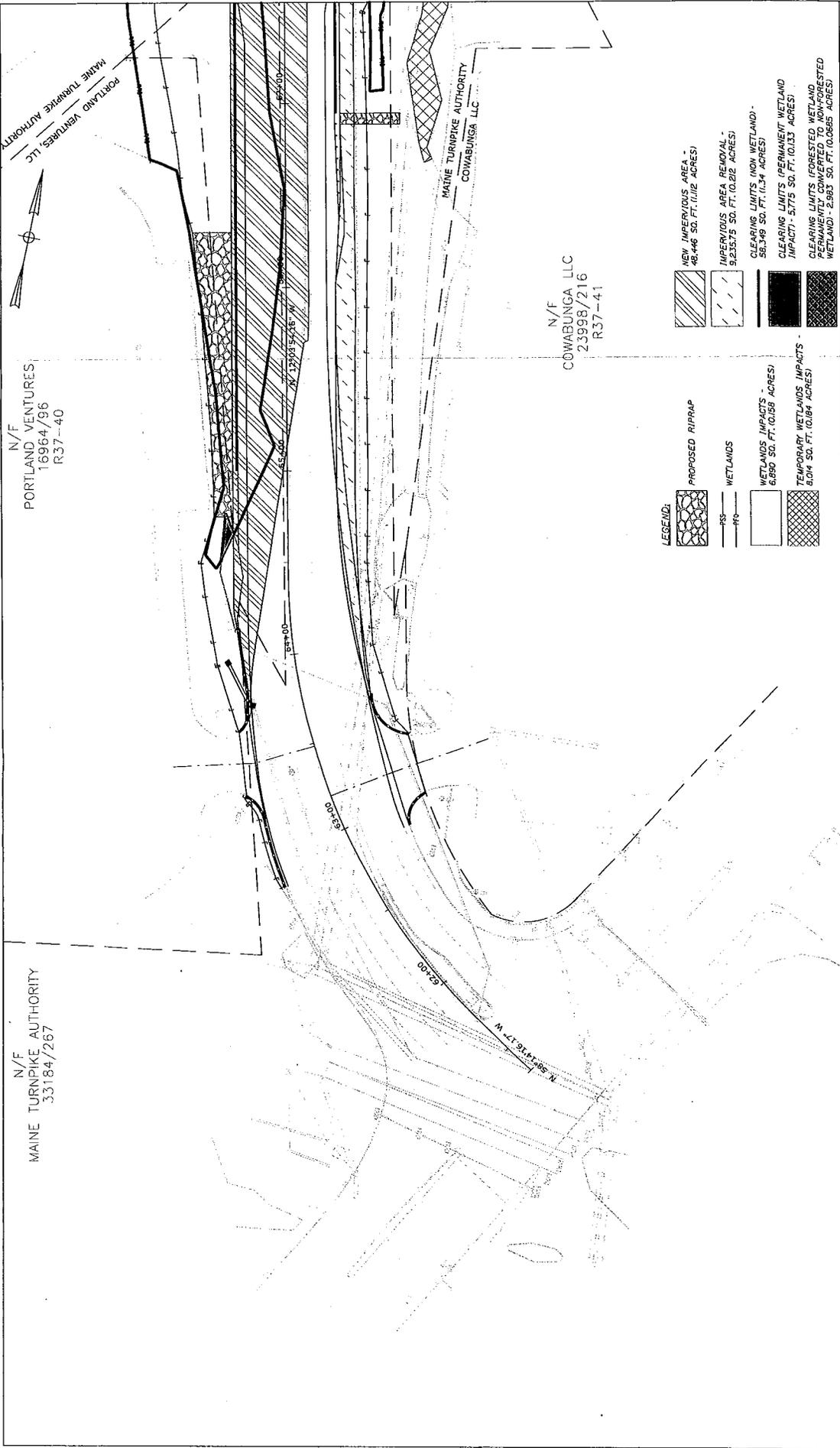
HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 FAX: (207) 228-0003

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

THE GOLD STAR MEMORIAL HIGHWAY

BRIDGE REPLACEMENT
 CUMMINGS ROAD UNDERPASS
 PLAN 3

CONTRACT: 2019.09
 SHEET NUMBER: PL-03
 19 OF 101



N/F
PORTLAND VENTURES
16964/96
R37-40

N/F
MAINE TURNPIKE AUTHORITY
33184/267

N/F
COWABUNGA LLC
23998/216
R37-41

- LEGEND:**
- PROPOSED RIPRAP
 - WETLANDS
 - WETLANDS IMPACTS - 6,590 SQ. FT. (0.155 ACRES)
 - TEMPORARY WETLANDS IMPACTS - 8,014 SQ. FT. (0.184 ACRES)
 - NEW IMPERVIOUS AREA - 48,446 SQ. FT. (1.112 ACRES)
 - IMPERVIOUS AREA REMOVAL - 9,235.75 SQ. FT. (0.212 ACRES)
 - CLEARING LIMITS (NON WETLAND) - 58,348 SQ. FT. (1.34 ACRES)
 - CLEARING LIMITS (PERMANENT WETLAND IMPACT) - 5,775 SQ. FT. (0.133 ACRES)
 - CLEARING LIMITS (FORESTED WETLAND PERMANENTLY CONVERTED TO NON-FORESTED WETLAND) - 2,983 SQ. FT. (0.0685 ACRES)

Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date

Designed by:

By	Date	By	Date
SK	07/18	LZD	07/18
SK	07/18	in Charon of	RAL
SK	07/18	in Charon of	RAL

HNTB

CONSULTANT PROJECT MANAGER: Tim Cole, P.E.

By	Date	By	Date
SK	07/18	LZD	07/18
SK	07/18	in Charon of	RAL
SK	07/18	in Charon of	RAL

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 728-0909

MAINE TURNPIKE AUTHORITY

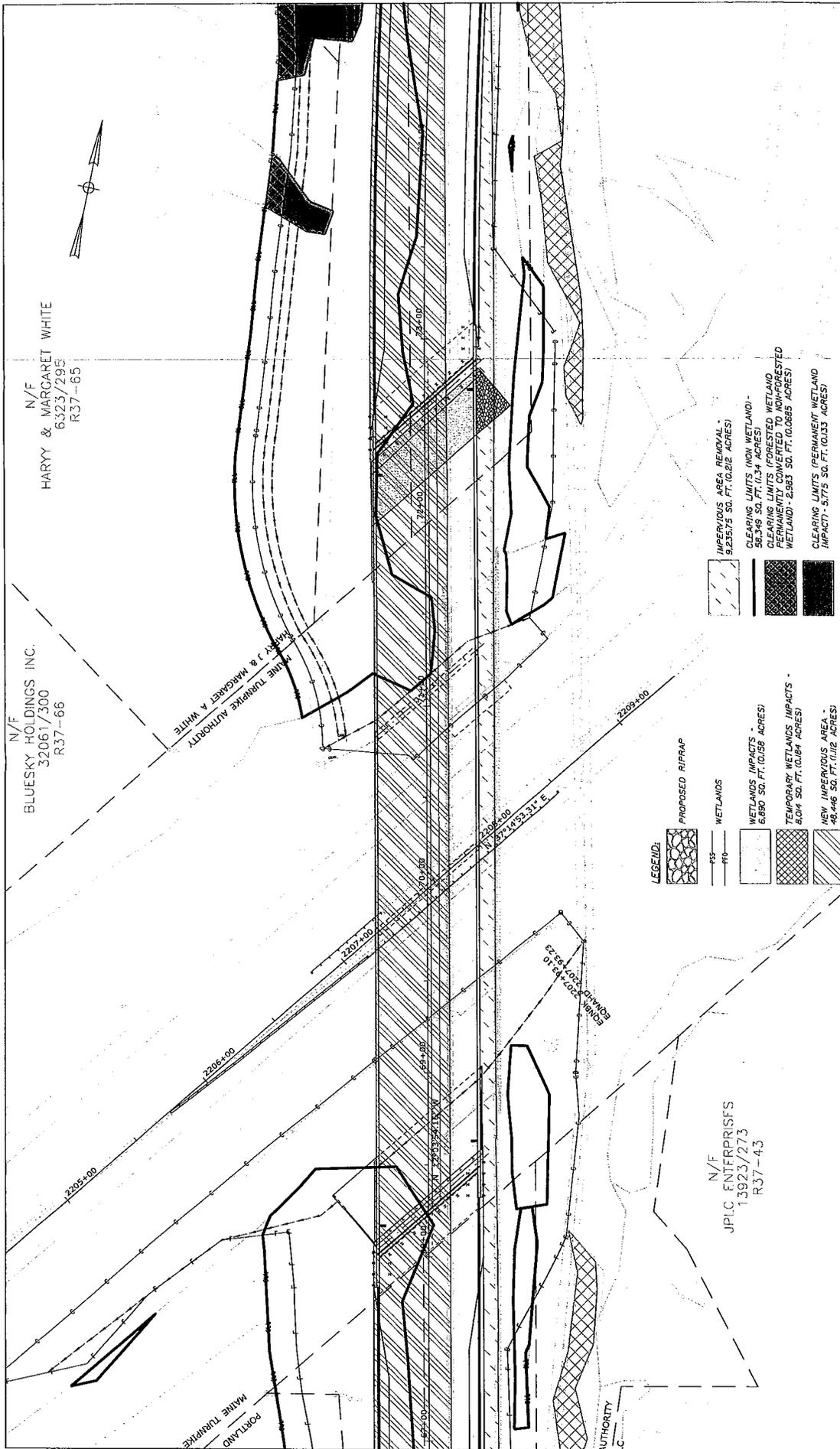
THE GOLD STAR MEMORIAL HIGHWAY

BRIDGE REPLACEMENT
CUMMINGS ROAD UNDERPASS
ENVIRONMENTAL IMPACTS PLAN 1

CONTRACT: 2018.09

SHEET NUMBER: EP-01

1 OF 3



Scale: 25 0 25 50
Scale of Feet

No.	Revision	By	Date

Designed by: _____
 CONSULTANT PROJECT MANAGER: Tim. Coia, P.E.
 By: LSK Date: 07/18
 Checked: LSK Date: 07/18
 Drawn: LSK Date: 07/18
 In Charge of: RAL Date: 07/18

HNTB

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 744-6000
 FAX (207) 728-0809

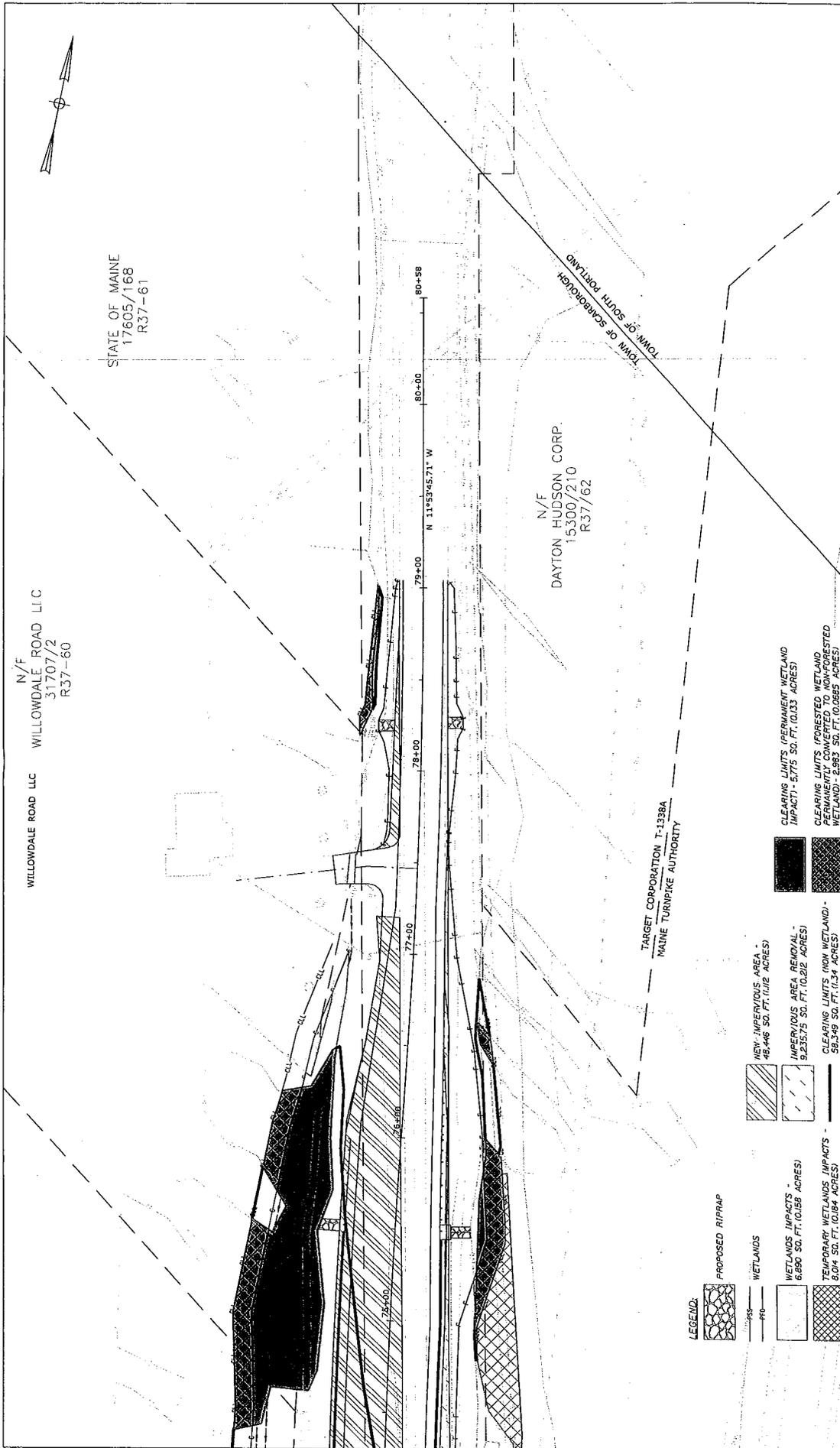
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

BRIDGE REPLACEMENT
 CUMMINGS ROAD UNDERPASS
 ENVIRONMENTAL IMPACTS PLAN 2

CONTRACT: 2018.09
 SHEET NUMBER: EP-02
 2 OF 3

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.



WILLOWDALE ROAD LLC
N/F
WILLOWDALE ROAD LLC
31707/2
R37-60

STATE OF MAINE
17605/168
R37-61

DAYTON HUDSON CORP.
N/F
15300/210
R37/62

TOWN OF SCARBOROUGH
SOUTH PORTLAND

TARGET CORPORATION T-1328A
MAINE TURNPIKE AUTHORITY

THE GOLD STAR
MEMORIAL HIGHWAY

MAINE
TURNPIKE

HNTB CORPORATION
340 College Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 728-0909

VTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPLACEMENT
CUMMINGS ROAD UNDERPASS
ENVIRONMENTAL IMPACTS PLAN 3

SHEET NUMBER: EP-03
3 OF 3

CONTRACT: 2018.09

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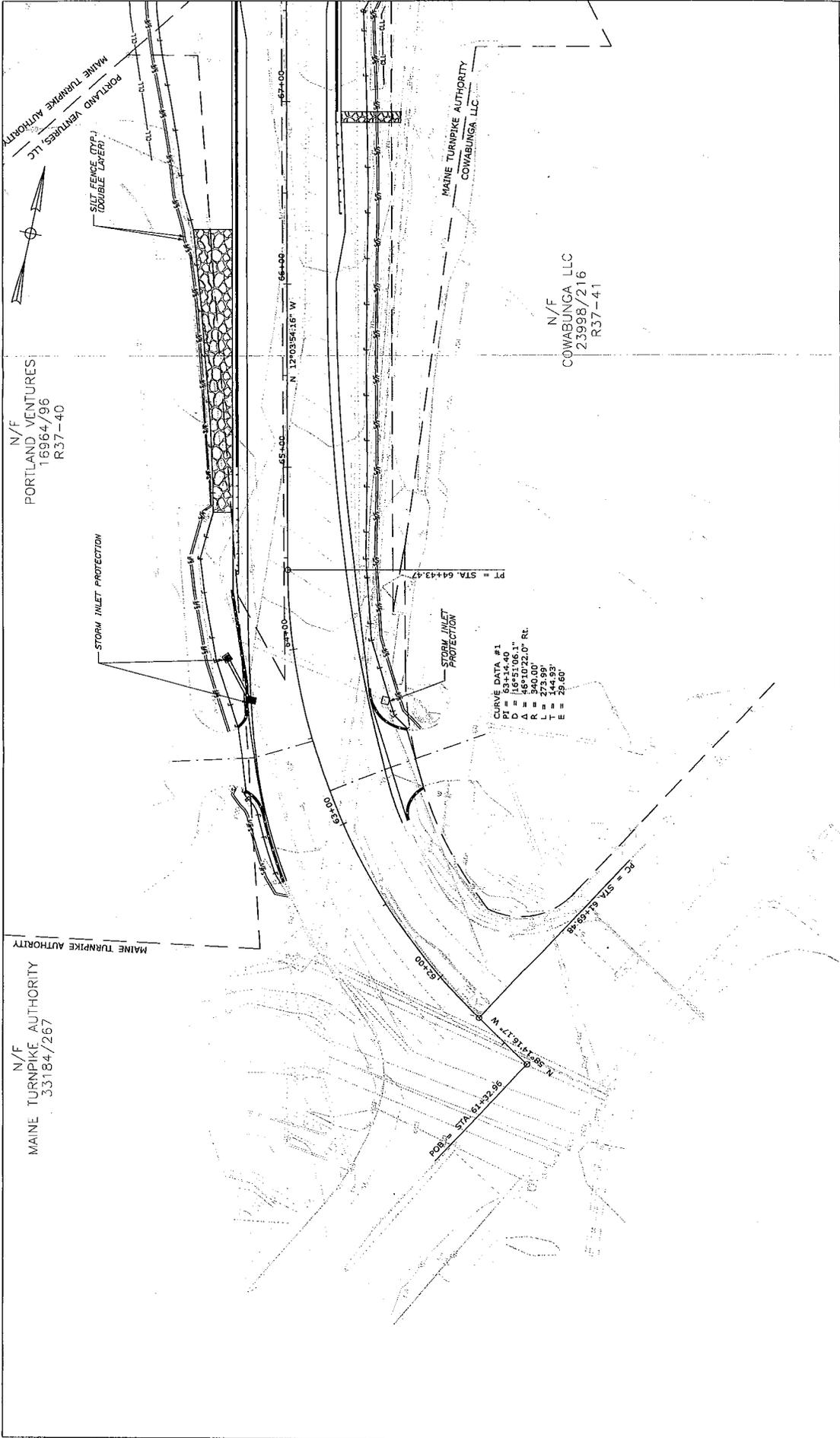
LEGEND:

- PROPOSED RIPRAP
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- WETLANDS IMPACTS - 6,890 SQ. FT. (0.158 ACRES)
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- IMPERVIOUS AREA REMOVAL - 9,235,75 SQ. FT. (0.212 ACRES)
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- CLEARING LIMITS (FORESTED WETLAND PERMANENTLY CONVERTED TO NON-FORESTED WETLAND) - 2,893 SQ. FT. (0.0665 ACRES)

Designed by: _____

No.	By	Date	Checked	Date	In Charge of
1	LSK	07/18	LSK	07/18	LSK
2					
3					
4					
5					

CONSULTANT PROJECT MANAGER: Tim Cote, P.E.



N/F
PORTLAND VENTURES
16964/96
R37-40

N/F
MAINE TURNPIKE AUTHORITY
33184/267

N/F
COWABUNGA LLC
23988/216
R37-41

BRIDGE REPLACEMENT
CUMMINGS ROAD UNDERPASS
EROSION CONTROL PLAN 1

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

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Westborough, MA 01581
TEL (508) 774-5152
FAX (508) 228-0909

Scale: 25 0 25 50
Scale of Feet

Designed by: HNTB

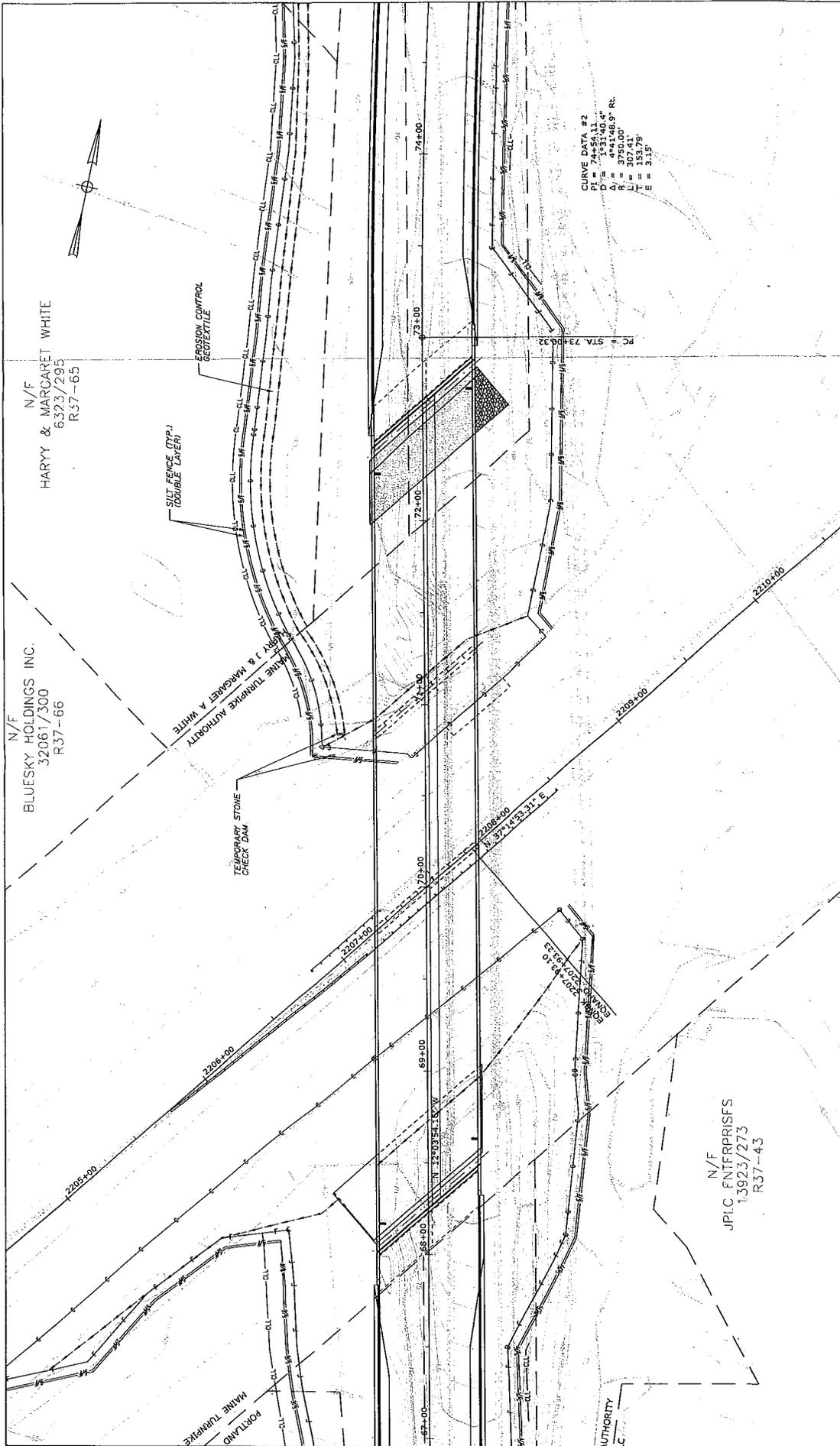
No.	Revision	By	Date

Design	By	Date	Checked	By	Date
Designed	USK	07/18	Checked	LZD	07/18
Drawn	USK	07/18	In Charge of	RAL	07/18

CONSULTANT PROJECT MANAGER: Tim Cote, P.E.

SHEET NUMBER: ER-01
XX OF 01

CONTRACT: 2018.09



BRIDGE REPLACEMENT
 CUMMINGS ROAD UNDERPASS
 EROSION CONTROL PLAN 2

**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.
 CONTRACT: 2018.09
 SHEET NUMBER: ER-02
 XX OF 101

HNTB CORPORATION
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 FAX: (207) 228-0909

HNTB

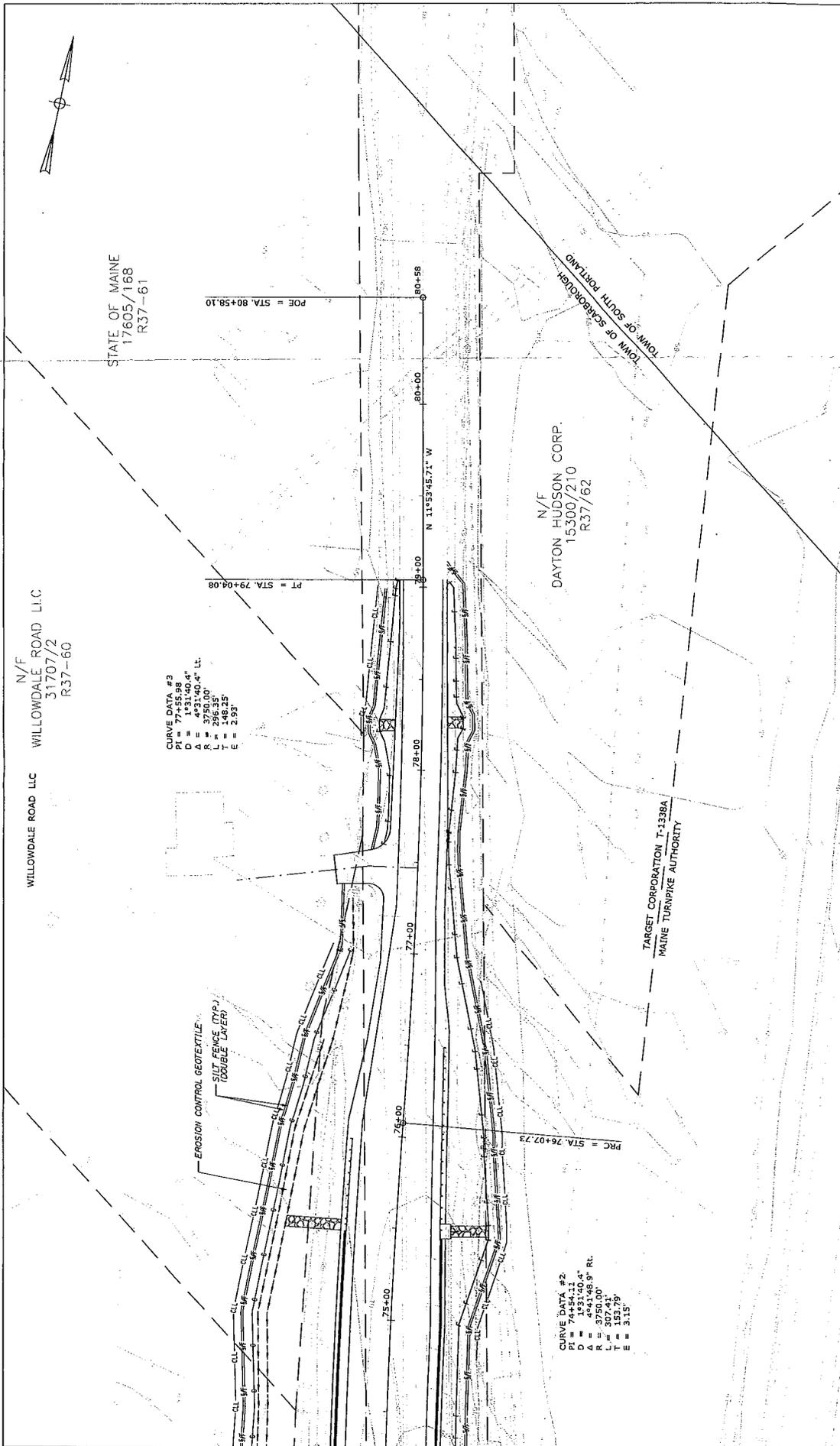
Designed by:

Scale: 25' = 1" (Scale of Feet)
 0 25 50

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Tim Cote, P.E.	By	Date
Designed	LSK	07/18
Checked	LZD	07/18
In Charge of	RAL	07/18
Drawn	LSK	07/18

File Name: D:\XX-ErosionControl_02.dgn Date: 7/13/2018



CURVE DATA #3
 PI = 77+55.98
 D = 4331.40 ft.
 R = 3750.00
 L = 296.35
 E = 2.92

CURVE DATA #2
 PI = 74+54.11
 D = 163140.4
 R = 1318.9
 L = 307.41
 T = 153.79
 E = 3.15

WILLOWDALE ROAD LLC
 N/F
 WILLOWDALE ROAD LLC
 31707/2
 R37-60

STATE OF MAINE
 17605/168
 R37-61

N/F
 DAYTON HUDSON CORP.
 15300/210
 R37/62

TARGET CORPORATION T-1338A
 MAINE TURNPIKE AUTHORITY

Scale: 25' = 1" 0 25 50
Scale of Feet

No.	Revision	By	Date

Designed by: _____

CONSULTANT PROJECT MANAGER: Tim Cole, P.E.

	By	Date	
Designed	LSK	07/18	Checked
Drawn	LSK	07/18	In Charge of

HNTB

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5165
 FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

BRIDGE REPLACEMENT
 CUMMINGS ROAD UNDERPASS
 EROSION CONTROL PLAN 3

CONTRACT: 2018-09

SHEET NUMBER: ER-03
 XX OF 101

Date: 7/3/2018

Filename: 0XX_ErosionControl_03.dgn



**US Army Corps
of Engineers**®
New England District

**GENERAL PERMIT
WORK-START NOTIFICATION FORM**
(Minimum Notice: Two weeks before work begins)

 * MAIL TO: U.S. Army Corps of Engineers, New England District *
 * Permits and Enforcement Branch *
 * Regulatory Division *
 * 696 Virginia Road *
 * Concord, Massachusetts 01742-2751 *

Corps of Engineers Permit No. NAE-2018-01709 was issued to the Maine Turnpike Authority on _____ . This work is located in freshwater wetlands off Cummings Road and the Maine Turnpike at South Portland, Maine. The permit authorized the permittee to place temporary and permanent fill in freshwater wetlands in order to reconstruct the existing deteriorated Cummings Road overpass over the Maine Turnpike and its approaches. The project will result in approximately 6,890 s.f. of permanent and 8,014 s.f. of temporary wetland impact.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

Telephone Numbers: (____) _____ (____) _____

Proposed Work Dates: **Start:** _____ **Finish:** _____

Permittee/Agent Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

Date Permit Issued: _____ **Date Permit Expires:** _____

FOR USE BY THE CORPS OF ENGINEERS

PM: Clement **Submittals Required:** No

Inspection Recommendation: Inspect as convenient

MAINE TURNPIKE AUTHORITY

Pre-Bid Conference

CONTRACT 2018.19

BRIDGE REPLACEMENT
CUMMINGS ROAD UNDERPASS
MILE 44.6

October 2, 2018, 10:00 A.M.

1) Location:

The general limits of work are as shown on the Contract Plans at Mile 44.6.

2) General Description:

The work consists of replacing the Cummings Road Bridge over the Maine Turnpike in the Town of Scarborough, Maine. The work includes phased construction of a new three span steel girder bridge, demolition of the existing bridge, ground improvements, construction of lightweight fill approach embankments, maintenance of traffic through the project site, and all other work incidental thereto in accordance with the Plans and Specifications.

3) Bid:

a) Opening: October 16, 2018 at 11:00 A.M. at MTA Headquarters 2360 Congress Street, Portland.

b) All bid and contractual questions shall be directed to Nate Carll. Phone No.: (207) 482-8115. E-Mail: ncarll@maineturnpike.com.

c) All questions on plans and specifications shall be in writing and shall be directed to Nate Carll, Purchasing Manager, of the Maine Turnpike Authority. Fax No. (207) 871-7739. Email ncarll@maineturnpike.com

4) Notification:

a) Contractor shall notify and obtain approval from the Authority prior to visiting the Project sites for field inspection. The contact person is Mr. Steve Tartre at startre@maineturnpike.com

5) Contract Specifications

a) The Specifications are divided into three parts: Part I, Supplemental Specifications, Part II, Special Provisions, and Part III Appendices.

b) The Maine Turnpike Supplemental Specifications are additions and alterations to the 2014 Maine Department of Transportation Standard Specifications and are available on MTA's website.

6) Maine Department of Labor – Fair Hourly Wages (Special Provision 104.3.8)

a) Contract includes “Heavy & Bridge” and “Highway & Earth” wage rates.

- 7) Utility Coordination (Special Provision 104.4.6)
- a) Five aerial facilities are present along the east side of Cummings Road: CMP, Consolidated Communications, MCI World Communications, FirstLight, and Charter Communications. These services will be relocated permanently on new poles west of the proposed bridge by the respective utility companies during the fall of 2019.
 - b) An underground waterline owned by Portland Water District crosses the Turnpike east of Cummings Road and more or less parallels the existing northeast toe of slope. Relocation of this facility is not planned.
- 8) Cooperation With Other Contractors (Special Provision 104.4.7):
- A. MTA Contract 2016.08 – Interchange 44 Barrier Toll Plaza ORT Conversion, MM 44.3
 - B. MTA Contract 2018.02 – Rand Road Intersection Improvements, MM 47.3
 - C. MTA Contract 2018.13 – Guide Sign Modifications, Phase III Maine Turnpike Exits 32, 36, 42, 44 and 45. Mile 16.9 to 50.5.
 - D. MTA Contract 2019.01 – Scarborough/South Portland/Portland Mainline Pavement Rehabilitation, MM 42 – 44.3 and Exit 44 NB Ramp Improvements
 - E. MTA Contract 2019.08 – Scarborough/South Portland/Portland Median Safety Improvements, MM 43 – 49
 - F. MTA Contract 2019.09 – MCRR Overpass Bridge Widening and Rehabilitation, MM 47.9
 - G. MTA Contract 2019.13 – Exit 45 Interchange Reconstruction Pre-Load, MM 44.9
 - H. MTA Contract 2019.16 – Stroudwater River Overpass Bridge Widening and Rehabilitation, MM 46.7
 - I. MTA Contract 2020.XX – Exit 45 Interchange Reconstruction, MM 44.9
 - J. MTA Contract 2020.XX – Saco/Scarborough Mainline Pavement Rehabilitation, MM 35.5 – 42.0
 - K. MTA Contract 2020.XX – Mainline Widening and Median Safety Improvements, MM 44 – 49.3
- 9) Lead Paint (Special Provision 105.2.4.2)
- a) The Contractor shall presume that the existing Cummings Road bridge contains lead based paint. Paint samples were not taken on this structure, therefore a Lead Determination Report is not available. The Contractor shall institute every precaution when working with materials coated with lead based paints.
- 10) Permit Requirements (Special Provision 105.8.2)
- a) The Project is being constructed under the Maine Department of Environmental Protection (DEP) Natural Resources Protection Act Permit by Rule regulations, Section 11 – State Transportation Facilities, updated June 8, 2012. A copy of the Section 11 – State Transportation Facilities Permit by Rule regulations are attached in Appendix A.

- b) The Project is being permitted under Section 404 of the Clean Water Act, through the US Army Corps of Engineers Programmatic General Permit, Category II. Final permit authorization was granted on September 24, 2018 . A Contract Addendum will be issued acknowledging receipt of the permit and providing the actual US Army Corps of Engineer’s permit conditions
- c) Maine Pollutant Discharge Elimination System (MPDES) General Permit for Stormwater Discharge from Construction Activity shall be followed.
- d) Limit of Disturbance Plan shall be submitted prior to any disturbance.
- e) The project is within an MS4 Area and the Contractor will be required to follow and sign the MS4 Awareness plan provided in Appendix C of the special provisions.

11) Construction Schedule/Substantial Completion:

- a) October 18, 2018 – Contract Award Date
- b) April 6, 2019 – Complete installation of wick drains and placement of ground improvement surcharge embankments.
- c) November 20, 2020 – Construction of the proposed Cummings Road Underpass bridge shall be substantially complete.
- d) June 25, 2021 – Contract Completion Date

12) Prosecution of Work (107.4.6) & Limits of Operations (Special Provision 107.4.7)

- a) Surface pavement, curbing, and guardrail within the Cummings Road approach roadways shall not be placed until May 15, 2021 to allow for expected settlement.
- b) Steel H-pile and/or sheet pile driving shall not occur between the hours of 8:00 PM – 6:00 AM. H-pile driving will not be allowed within 10 feet of traffic.
- c) The installation of wick drains and placement of ground improvement surcharge embankments shall be complete on or before April 6, 2019 and shall remain in place for a minimum of four months.
- d) The longitudinal closure placement in the bridge deck shall be cast and cured for a minimum of 24 hours without traffic on the bridge.
- e) Due to the presence of marine deposits, material stockpiles exceeding 25 cubic yards will not be permitted on the project site to minimize the potential for slope instability. To the extent practical, the Contractor shall spread materials delivered for embankment construction as they arrive on site.
- f) Except as required for construction of the embankment surcharge, the Contractor will not be permitted to operate any cranes, heavy equipment or vehicles with a gross weight exceeding 5 tons on surcharged embankments. This restriction will be lifted following removal of the embankment surcharge.
- g) No permanent staging areas are allowed adjacent to the Exit 45 SB On-Ramp.
- h) Temporary lane shifts, lane closures, and shoulder closures along the Turnpike shall only be used during periods of activity. During periods of inactivity planned to last longer than one month, the

Contractor shall shift or relocate temporary barrier and other maintenance of traffic devices to reestablish normal traffic conditions.

- i) Turnpike median lane shifts, lane closures, and shoulder closures will not be allowed between December 1 and February 28.

13) Specific Contract Items

- a) Earthwork Summary and Preload Sequence (Plan Sheet 3)
- b) Section 203 – Excavation and Embankment (Geofoam Lightweight Fill)
 - i) This work shall include furnishing all qualifications, shop drawings, material and equipment, placing and providing approved field quality control personnel to oversee and certify the installation of the Geofoam Lightweight Fill as shown on the approved shop drawings. Geofoam is referred to in this Specification as expanded polystyrene (EPS).
- c) Geofoam Lightweight Fill will be paid for at the Contract unit price per cubic yard which shall be full compensation for furnishing all qualifications, on-site supervision from supplier, shop drawings, labor, materials, equipment, dewatering and incidentals necessary to complete the work.
- d) Section 203 – Excavation and Embankment (Sand Drainage Blanket)
 - i) Placed beneath the surcharge material and prior to installing prefabricated vertical drains.
 - ii) The material may remain in-place, including beneath geofoam in-lieu of leveling sand.
- e) Section 209 – Wick Drains (Prefabricated Vertical Drains)
 - i) Pre-auguring for installation through frozen ground may be necessary; incidental to Item.
- f) Section 511 – Cofferdams (Temporary Earth Support Systems)
 - i) Paid as one lump sum for any/all support systems used on the project, including systems required to be left in-place.
 - ii) Conceptually shown on the Plans – contractor to locate and design as necessary.
 - iii) Removal limitations exist near geofoam – refer to Plan Sheet 9 (MOT-03).
- g) Section 526 – Concrete Barrier (Temporary Concrete Barrier, Anchored)
 - i) Thru-bolting prohibited
- h) Section 639 – Instrumentation (Geotechnical)
 - i) Installation to be performed by the contractor; readings to be taken by the Authority.

i) Section 646 – Settlement Platforms (Geotechnical)

- i) Installation to be performed by the contractor; survey after installation to be performed by the Authority.

j) Section 652 – Maintenance of Traffic

- i) Cummings Road temporary lane closure windows are 7:00PM to 7:00AM, Sunday through Thursday nights. Additional closure windows and allowances with Resident approval.
- ii) Cummings Road temporary lane closure windows near the Payne Road intersection are: All lanes at all legs of the intersection shall be maintained at all times with the exception of between 9:00 p.m. and 6:00 a.m. Sunday through Thursday nights. During this overnight period, southbound Cummings Rd traffic may be reduced from four lanes to two lanes provided right and left turn movements onto Payne Rd are maintained.
- iii) If approved by the Resident, Cummings Road may be reduced to a single lane of alternating one-way traffic on Saturdays and Sunday from 7 a.m. until 7 p.m. with the exception of weekends between Thanksgiving and Christmas.
- iv) A single weekend closure of Cummings Road, with an off-site detour for the purpose of placing and curing the bridge deck closure joint, is permitted as defined in Subsection 107.4.6 Prosecution of Work.
- v) In addition, with approval by the Resident, Cummings Road between STA 64+50 and 77+00 may be closed to traffic from 10:00 p.m. until 5:30 a.m. to accommodate specific construction operations that promote safety of the traveling public, reduce traffic impacts along the Turnpike, and/or provide a better final product.
- vi) Maine Turnpike temporary lane closures times are included in tables in the SP's. In general daytime lane closures are not permitted.
- vii) The Automated Speed Limit Sign Special Provision has been revised and the Contractor shall fill out the price in the bid form. Automated Trailer Mounted Speed Limit Signs shall only be used when a work zone speed limit is in place during temporary lane closures. The Contractor shall manage the utilization and operation of the Automated Trailer Mounted Speed Limit Signs and if at least one is not used when work zone speed limits are in place then it will be considered a Traffic Control Plan violation and result in a reduction of payment as outlined in Section 652.
- viii) When a pay item for a Truck Mounted Attenuator (TMA) is included in the contract at least one TMA will be required on the project and its use will be required. The Truck Mounted Attenuator shall be utilized in lane closures and other construction operations where workers are exposed to traffic and not protected by other positive means. The Contractor shall manage the utilization and operation of the TMA and if at least one is not used as described above then it will be considered a Traffic Control Plan violation and result in a reduction of payment as outlined in Section 652.

14) Anticipated Addendum Items (To be issued following pre-bid meeting):

- a) Updated Special Provision language in Section 105.8.2 regarding the recently received ACOE permit.
- b) Piezometer readings in SP 646 (SP-107, paragraph 5 vs Plan sheet73, note 2)

15) Questions

Contract 2018.19
 Cummings Road Underpass
 Bridge Replacement



SIGN-IN SHEET
 Please Print

PRE-BID MEETING

October 2, 2018

Name	Company and/or Address	Phone	E-Mail
JOSH CHAND	HNTB	228-0883	jchand@hntb.com
Nate Carll	MTA	482-8115	n.carll@maineturnpike.com
LORI DRISCOLL	HNTB	228-0884	ldriscoll@hntb.com
Jim Wentworth	Reed Reed	319-8530	jwentworth@reed-reed.com
Steve Tarbre	MTA	831-5874	sttarbre@maineturnpike.com
Matt Callahan	Glidden	850-9899	Mattgliddenpaving.com
ART BURGESS	Pratt & Sons, Inc.	345-3311	art@prattandsons.net
JOHN HART	R.T. Grandin and Sons	854-1147	estimators@grandinconstruction.com
Loren Blair	Blair Pike Industries	240-9247	LBlair@pikeindustries.com
JAKE ADAMS	SWADAMSE CPM CONSTRUCTORS	837-5381	
Scott Warshel	CPM CONSTRUCTORS MTA	482-8121	swarshel@maineturnpike.com

Date:10/13/2018

ITEM NO.	ITEM DESCRIPTION	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
201.11	Clearing	AC	2		2
202.19	Removing Existing Bridge (Structural Steel = 112 Tons, Concrete = 580 CY)	LS		1	1
202.202	Removing Pavement Surface	SY	1120		1,120
203.20	Common Excavation	CY	18,600		18,600
203.24	Common Borrow	CY	10,000		10,000
203.25	Granular Borrow	CY	850	650	1,500
203.43	Geofoam Lightweight Fill	CY	5,400		5,400
203.45	Leveling Sand	CY	1,450		1,450
203.46	Sand Drainage Blanket	CY	3,800		3,800
206.082	Structural Earth Excavation - Major Structures, Plan Quantity	CY		600	600
206.10	Structural Earth Excavation - Piers	CY		690	690
209.29	Prefabricated Vertical Drains	LF	183,000		183,000
304.10	Aggregate Subbase Course - Gravel	CY	4,900		4,900
304.14	Aggregate Base Course - Type A	CY	800		800
403.207	Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	TON	950		950
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	TON	760	400	1,160
403.2084	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)	TON	40		40
403.212	Hot Mix Asphalt, 4.75 mm Nominal Maximum Size	TON	30		30
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Course)	TON	570		570
409.15	Bituminous Tack Coat, Applied	GAL	430	160	590
419.30	Sawing Bituminous Pavement	LF	990		990
501.231	Dynamic Loading Test	EA		4	4
501.54	Steel H-beam Piles 117 lb/ft, delivered	LF		11,300	11,300
501.541	Steel H-beam Piles 117 lb/ft, in place	LF		10,600	10,600
501.90	Pile Tips	EA		112	112
501.91	Pile Splices	EA		336	336
501.92	Pile Driving Equipment Mobilization	LS		1	1
502.219	Structural Concrete, Abutments and Retaining Walls (635 CY)	LS		1	1
502.239	Structural Concrete, Piers (593 CY)	LS		1	1
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges (737 CY)	LS		1	1
502.264	Structural Concrete, Parapet (102 CY)	LS		1	1
502.31	Structural Concrete Approach Slab (107 CY)	LS		1	1
502.452	Structural Concrete Distribution Slab (350 CY)	LS		1	1
503.14	Epoxy-Coated Reinforcing Steel, Fabricated and Delivered	LB		479,900	479,900
503.15	Epoxy-Coated Reinforcing Steel, Placing	LB		479,900	479,900
503.17	Mechanical/Welded Splice	EA		330	330
504.702	Structural steel fabricated and delivered, welded (1190000 LB)	LS		1	1
504.71	Structural steel erection (1190000 LB)	LS		1	1
505.08	Shear Connectors (8176 EA)	LS		1	1
506.9104	Thermal Spray Coating (Shop Applied)	LS		1	1
507.091	Aluminum Bridge Railing, 1 Bar (882 LF)	LS		1	1
508.14	High Performance Waterproofing Membrane (2700 SY)	LS		1	1
511.091	Temporary Earth Support Systems	LS		1	1
513.09	Slope Protection - Portland Cement Concrete	SY		400	400

ITEM NO.	ITEM DESCRIPTION	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
513.22	Crushed Stone Slope Protection	SY		320	320
514.06	Curing Box for Concrete Cylinders	EA		1	1
515.202	Clear Protective Coating for Concrete Surfaces	SY		1,800	1,800
520.21	Expansion Device - Gland Seal (150 LF)	EA		2	2
523.52	Bearing Installation	EA		28	28
523.5401	Laminated Elastomeric Bearings, Fixed	EA		7	7
523.5402	Laminated Elastomeric Bearings, Expansion	EA		21	21
524.40	Protective Shielding - Steel Girders	SY		2,050	2,050
526.304	Temporary Concrete Barrier, Anchored (440 LF)	LS		1	1
526.306	Temporary Concrete Barrier, Type I - Supplied by Authority (2,860 LF)	LS	1		1
527.341	Work Zone Crash Cushions - TL-3	UN	2		2
527.342	Work Zone Crash Cushions - TL-2	UN	2		2
603.169	15 Inch Culvert Pipe Option III	LF	20		20
604.184	Rebuild Catch Basin to Grade - Type II	EA	1		1
604.301	Special Catch Basin - Bioscape Vault Basin	EA	1		1
604.302	Special Catch Basin - Standard Offline Basin	EA	2		2
605.10	6 inch Underdrain Outlet	LF	20		20
606.13	31" W-Beam Guardrail - Mid-Way Splice (7" Steel Post, 8" Offset Blocks, Single Faced)	LF	970		970
606.1306	31" W-Beam Guardrail - Mid-Way Splice Tangential Terminal (31" Height)	EA	2		2
606.1351	Terminal End - Anchored End - 31" W-Beam Guardrail	EA	2		2
606.1723	Bridge Transition Type III	EA	4		4
606.178	Guardrail Beam	LF	820		820
606.24	Guardrail Type 3d - Single Rail	LF	50		50
606.278	Terminal End - Anchored End	EA	2		2
606.352	ReflectORIZED Beam Guardrail Delineator	EA	7		7
606.356	Underdrain Delineator Post	EA	2		2
606.3561	Delineator Post - Remove and Reset	EA	9		9
606.3605	Guardrail - Remove, Modify and Reset Single Rail	LF	390		390
606.3606	Guardrail - Remove, Modify and Reset Double Rail	LF	220		220
606.47	Single Wood Post	EA	1		1
606.48	Single Galvanized Steel Post	EA	96		96
607.17	Chain Link Fence - 6 foot	LF	690		690
607.23	Chain Link Fence Gate	EA	2		2
607.32	Bracing Assembly Type I - Metal Posts	EA	6		6
607.33	Bracing Assembly Type II - Metal Posts	EA	8		8
609.11	Vertical Curb Type 1	LF	62		62
609.12	Vertical Curb Type 1 - Circular	LF	43		43
609.15	Slope Curb Type 1	LF		950	950
609.234	Terminal Curb Type 1 - 4 foot	EA	1		1
609.2341	Terminal Curb Type 1 - 4 foot - Circular	EA	1		1
609.31	Curb Type 3	LF	950		950
609.38	Reset Curb Type 1	LF	80		80
610.08	Plain Riprap	CY	250		250
610.181	Temporary Stone Check Dam	CY	2		2
613.319	Erosion Control Blanket	SY	6,150		6,150

ITEM NO.	ITEM DESCRIPTION	UNIT	CIVIL QUANTITY	BRIDGE QUANTITY	TOTAL QUANTITY
615.07	Loam	CY	1,200		1,200
618.13	Seeding Method Number 1	UN	9		9
618.14	Seeding Method Number 2	UN	87		87
619.1201	Mulch, Plan Quantity	UN	96		96
619.1202	Temporary Mulch	LS	1		1
620.58	Erosion Control Geotextile	SY	140		140
620.70	HDPE Geomembrane	SY	4,950		4,950
626.33	30 Inch Foundation, 8 feet or less Foundation	EA	2		2
627.712	White or Yellow Pavement Marking Line	LF	10,700		10,700
627.73	Temporary 6 Inch Pavement Marking Tape	LF	1,300		1,300
627.75	White or Yellow Pavement & Curb Marking	SF	130		130
627.77	Removing Existing Pavement Marking	SF	9,600		9,600
627.78	Temporary Pavement Marking Line, White or Yellow	LF	22,100		22,100
627.812	Temporary Raised Pavement Markers	EA	2,600		2,600
629.05	Hand Labor, Straight Time	HR	60		60
631.10	Air Compressor (including operator)	HR	20		20
631.11	Air Tool (including operator)	HR	40		40
631.12	All Purpose Excavator (including operator)	HR	10		10
631.171	Truck - small (including operator)	HR	35		35
631.172	Truck - large (including operator)	HR	35		35
631.22	Front end loader (Including Operator)	HR	35		35
631.32	Culvert Cleaner (including Operator)	HR	10		10
631.36	Foreman	HR	20		20
639.18	Field Office, Type A	EA	1		1
639.26	Instrumentation - Geotechnical	LS	1		1
645.272	Regulatory, Warning and Bridge Number Signs, Type I - Supplied by Authority	EA	2		2
645.292	Regulatory, Warning, Confirmation and Route Marker Assembly Signs Type II	EA	2		2
645.503	Remove and Reset Bridge Mounted Guide Sign to Ground Mounted	LS	1		1
645.504	Remove and Reset Mainline Sign	LS	1		1
646.091	Settlement Platforms	LS	1		1
652.30	Flashing Arrow	EA	2		2
652.312	Type III Barricades	EA	18		18
652.33	Drum	EA	170		170
652.34	Cone	EA	80		80
652.35	Construction Signs	SF	1,200		1,200
652.361	Maintenance of Traffic Control Devices	LS	1		1
652.38	Flaggers	HR	1,400		1,400
652.41	Portable-Changeable Message Sign	EA	3		3
652.45	Truck Mounted Attenuator	CD	130		130
652.452	Automated Trailer Mounted Speed Limit Sign	EA	2		2
656.50	Baled Hay, in place	EA	25		25
656.60	Temporary Berms	LF	2,100		2,100
656.62	Temporary Slope Drains	LF	200		200
656.632	30 inch Temporary Silt Fence	LF	6,000		6,000
659.10	Mobilization	LS	1		1

Filename: 002_Quantity_Sheet.dgn

Scale:			
No.	Revision	By	Date
1	QUANTITY CHANGES	LZD	10/18

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Tim Cote, P.E.					
	By	Date		By	Date
Designed	LSK	08\18	Checked	LZD	08\18
Drawn	LSK	08\18	In Charge of	RAL	08\18

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 228-0909



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

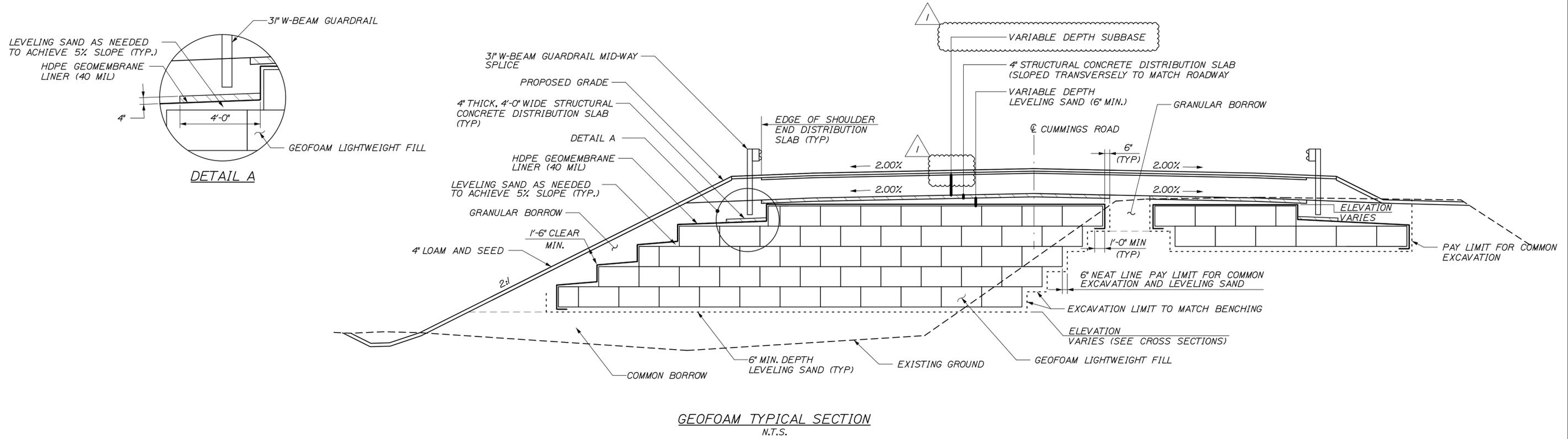
**BRIDGE REPLACEMENT
CUMMINGS ROAD UNDERPASS**

ESTIMATED QUANTITIES

SHEET NUMBER: EQ-01

CONTRACT: 2018.19

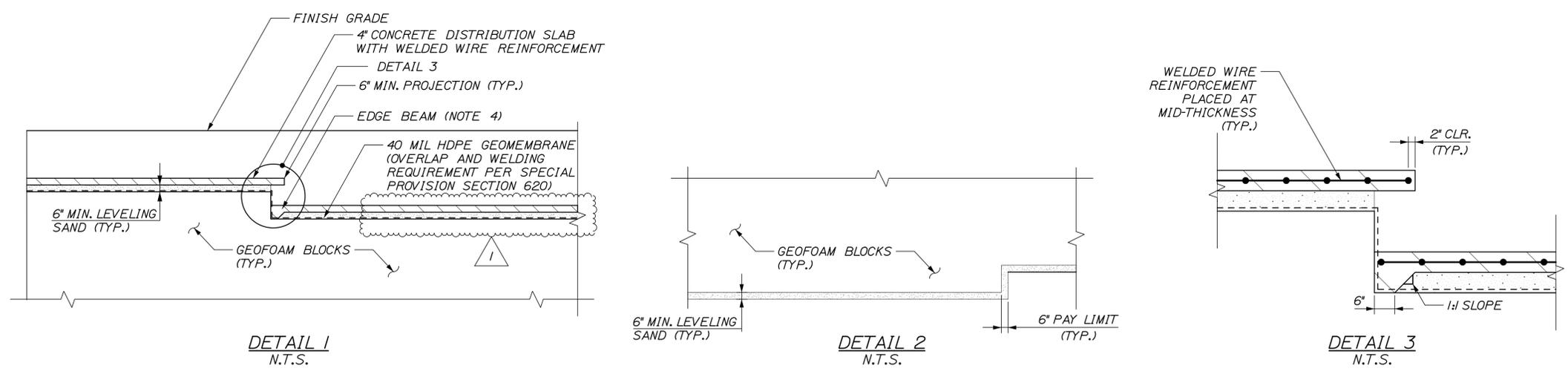
Date: 10/3/2018



GEOFOAM TYPICAL SECTION
N.T.S.

GEOFOAM NOTES:

- GEOFOAM LIGHTWEIGHT FILL SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS.
- WELDED WIRE REINFORCEMENT SHALL BE INCIDENTAL TO PAY ITEM 502.452, STRUCTURAL CONCRETE DISTRIBUTION SLAB.
- STRUCTURAL WELDED WIRE REINFORCEMENT SHALL BE UNCOATED 6x6-W5.5xW5.5.
- EDGE BEAMS SHALL BE FORMED AT ALL LONGITUDINAL STEPS IN GEOFOAM EMBANKMENT AND WHERE THE CONCRETE DISTRIBUTION SLAB ABUTS CONCRETE WINGWALLS AND ABUTMENTS.



LONGITUDINAL DETAILS
(SEE SHEET GT-01 AND GT-02 FOR DETAIL LOCATION)

Filename: 006_Geofoam_SpecialDetails.dgn

Scale:		Designed by:	
No.	Revision	By	Date
1	SUBBASE DEPTH CLARIFICATION	JKO	10/18

HNTB

HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

CONSULTANT PROJECT MANAGER: Tim Cote, P.E.

By	Date	By	Date
Designed	BAM 08\18	Checked	JKO 08\18
Drawn	EDD 08\18	In Charge of	RAL 08\18

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

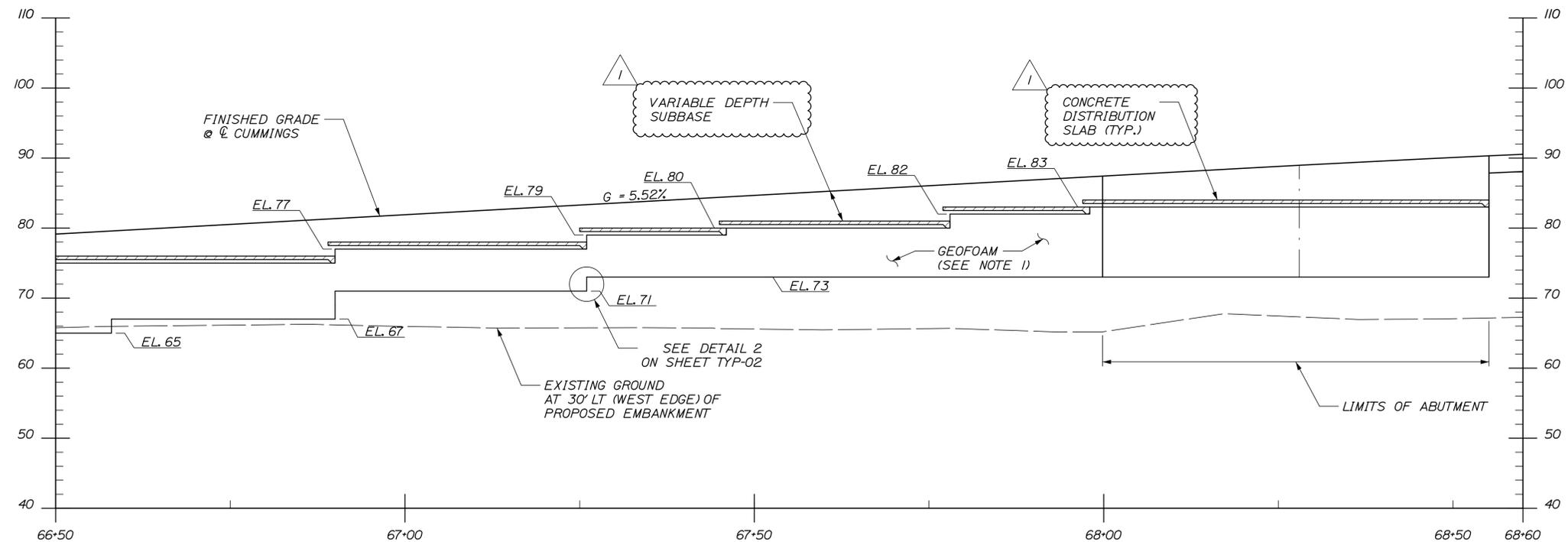
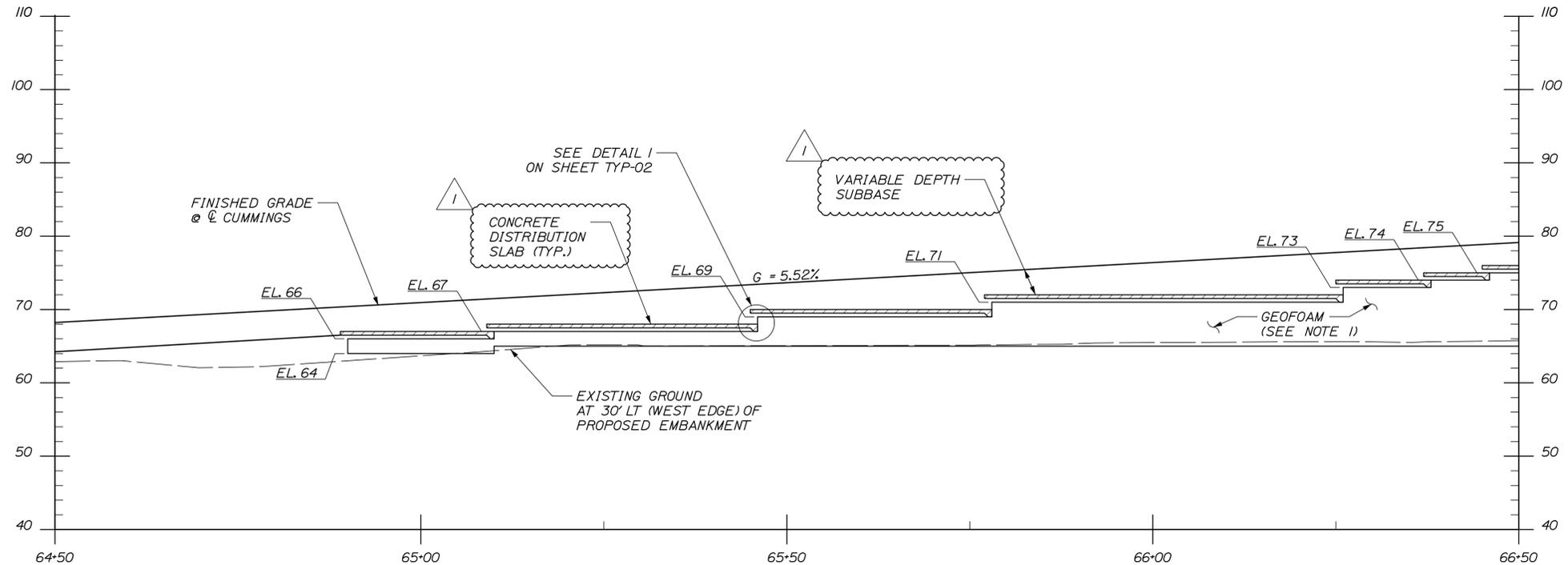
BRIDGE REPLACEMENT
CUMMINGS ROAD UNDERPASS
GEOFOAM SPECIAL DETAILS

SHEET NUMBER: TYP-02

CONTRACT: 2018.19

6 OF 135

Date: 10/13/2018



GEOFOAM LONGITUDINAL PROFILE
SOUTH EMBANKMENT

NOTES:

- GEOFOAM ELEVATIONS SHOWN DEPICT THE HIGHEST AND LOWEST ELEVATIONS AT WHICH GEOFOAM IS TO BE PLACED FOR THE GIVEN STATIONING. THE TRANSVERSE OFFSET AT WHICH THE HIGHEST AND LOWEST ELEVATIONS OF GEOFOAM OCCURS VARIES. FOR REPRESENTATION OF TRANSVERSE LIMITS, REFER TO GEOFOAM LAYOUT DRAWINGS GT-03 THROUGH GT-08.
- FOR GEOFOAM TYPICAL SECTION SEE SHEET TYP-02.

Filename: 064_GeofoamProfile_01.dgn



Designed by:



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**THE GOLD STAR
MEMORIAL HIGHWAY**

BRIDGE REPLACEMENT
CUMMINGS ROAD UNDERPASS
GEOFOAM LONGITUDINAL PROFILE

CONSULTANT PROJECT MANAGER: Tim Cote, P.E.

	By	Date	By	Date	
Designed	JDZ	08\18	Checked	BAM	08\18
Drawn	LSK	08\18	In Charge of	RAL	08\18

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

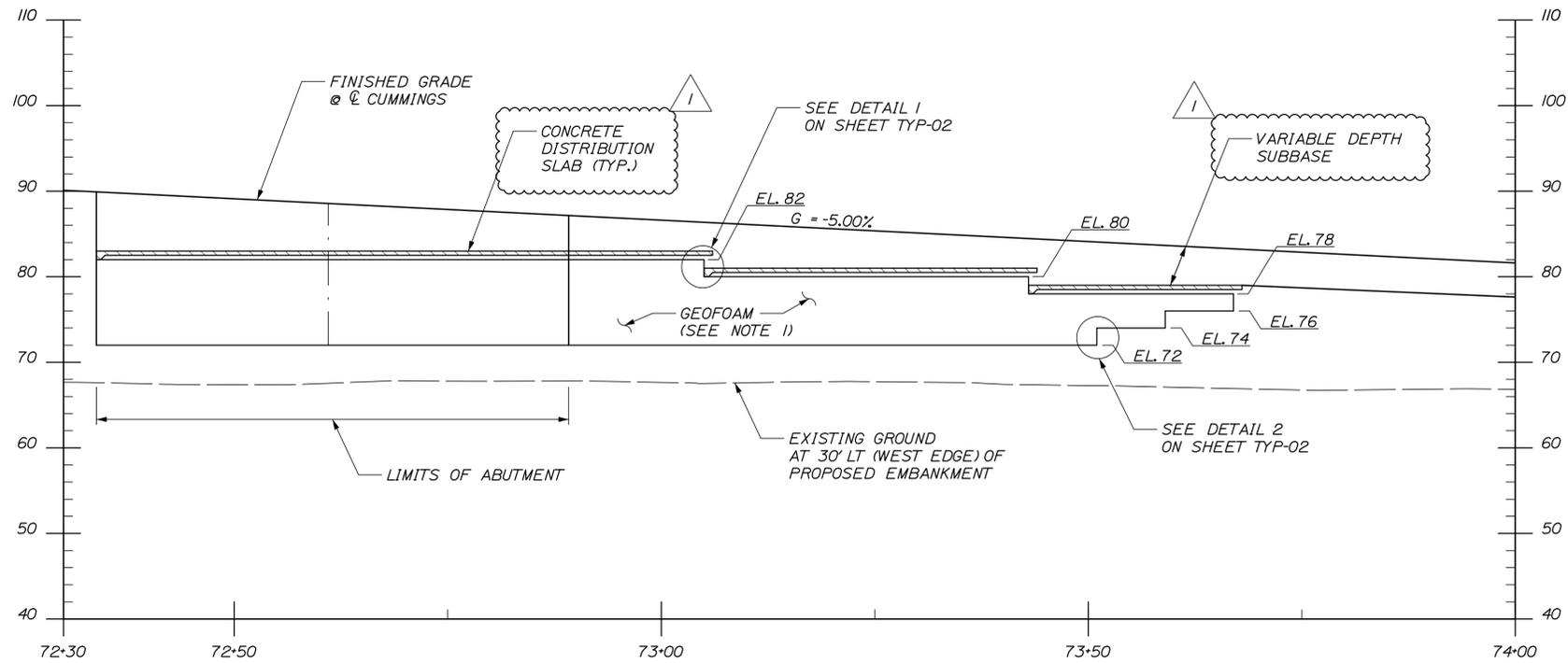
CONTRACT: 2018.19

SHEET NUMBER: GT-01

64 OF 135

Page 30 of 40

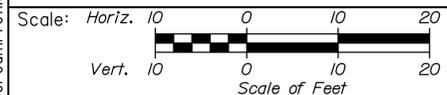
Date: 10/13/2018



GEOFOAM LONGITUDINAL PROFILE
NORTH EMBANKMENT

- NOTES:
1. GEOFOAM ELEVATIONS SHOWN DEPICT THE HIGHEST AND LOWEST ELEVATIONS AT WHICH GEOFOAM IS TO BE PLACED FOR THE GIVEN STATIONING. THE TRANSVERSE OFFSET AT WHICH THE HIGHEST AND LOWEST ELEVATIONS OF GEOFOAM OCCURS VARIES. FOR REPRESENTATION OF TRANSVERSE LIMITS, REFER TO GEOFOAM LAYOUT DRAWINGS GT-03 THROUGH GT-08.
 2. FOR GEOFOAM TYPICAL SECTION SEE SHEET TYP-02.

Filename: 065_GeofoamProfile_02.dgn



Designed by:



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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE REPLACEMENT
CUMMINGS ROAD UNDERPASS
GEOFOAM LONGITUDINAL PROFILE

No.	Revision	By	Date
1	CLARIFY CONCRETE DIST. SLAB	JKO	10/18

CONSULTANT PROJECT MANAGER: Tim Cote, P.E.

	By	Date	Checked	By	Date
Designed	JDZ	08\18		BAM	08\18
Drawn	LSK	08\18	In Charge of	RAL	08\18

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

CONTRACT: 2018.19

SHEET NUMBER: GT-02

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Date: 10/13/2018

Filename: 079_Boring_Logs_2.dgn

PROJECT: Cummings Road Bridge over MeTPK		Boring No.: BB-CUM-103	
LOCATION: Scarborough, Maine		Proj. No.: 17-013	
Driller: New England Boring Contractors	Elevation (ft): 85.5 ft (estd)	Core Barrel: NQ2	
Operator: Eric / Share	Date: 10/13/2018	Sampler: 485 split-spoon	
Logged By: Schoneveld	Rig Type: Mobile DHI B-53 (rubber track)	Hammer Wt/Fall: 140 lbs/30 in (auto hammer)	
Date Start/Finish: 8/14/17, 0245, 8/16/17, 0245	Drilling Method: cased wash boring	Hammer Type: auto	
Boring Location: 68+55, 20 ft RT	Casing ID/DOD: HW to 55.0' NW to 97.2'	Hammer Efficiency: 0.677	
Auger ID/DOD: SSA to 10'	Water Level: 23.0 ft (end, open)		
RESULTS SAMPLING AND TESTING:	ADDITIONAL DEFINITIONS:	LABORATORY TEST RESULTS:	
U-1 Split Spoon Sample	WCH = weight of solids, hammer	AD(1) - 100% soil classification	
U-2 Unconsolidated Split Spoon Sample attempt	N ₆₀ = N value corrected for hammer efficiency	AD(2) - percent fines, %FC = water content (%)	
U-3 Thin Wall Tube Sample	CS = cone strength	CS(1) - 1-D consolidation test	
U-4 Unconsolidated Thin Wall Tube Sample attempt	S _u = undrained shear strength (psf)	CS(2) - 1-D consolidation test	
V-1 Vane Shear Test	R _u = vane shear strength (psf)	U-1 Unconsolidated undrained triaxial test	
V-2 Hollow Core Shear Test	R _u = vane shear strength (psf)	U-2 Consolidated undrained triaxial test	
M-1 Unconsolidated Mohr Shear Test attempt	UC = unconfined compressive strength (psi)	UC(1) - unconfined compressive strength (psi)	
M-2 Consolidated Mohr Shear Test attempt	UC(2) = peak compressive strength of core	UC(2) = peak compressive strength of core	

Down (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft)	Blow (ft) (SPT)	Blow (ft) (SPT) (adj)	N ₆₀	CS (psi)	CS (psi) (adj)	U-1 (psi)	U-2 (psi)	V-1 (psi)	V-2 (psi)	M-1 (psi)	M-2 (psi)	Lab. Testing Results
0															
10	2418	1.5-3.0	25.2-24.32	45	35.775										
15	2419	5.5-7.0	18.32-17.37	70	19.903										
20	2419	10.5-12.0	15.28-14.69	60	30.203										
25	2414	15.5-17.0	24.32-19.32	67	15.583										
30	2414	20.5-22.0	17.28-16.83	54	40.60										
35															
40															
45															
50	2414	25.5-27.0	3.2-2.74	10	13.34										
55															
60	240	30.5-32.0	3.3-3.3	6	4.77										
65															
70	2419	35.5-37.0	3.3-3.1	6	4.77										
75															
80	241	40.5-42.0	10"	0	0										
85															
90	2410	45.5-47.0	3.1-1"	0	0										
95															
100	2410	50.5-52.0	3.1-1"	0	0										
105															
110															
115															
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190															
195															
200															

PROJECT: Cummings Road Bridge over MeTPK		Boring No.: BB-CUM-103	
LOCATION: Scarborough, Maine		Proj. No.: 17-013	
Driller: New England Boring Contractors	Elevation (ft): 85.5 ft (estd)	Core Barrel: NQ2	
Operator: Eric / Share	Date: 10/13/2018	Sampler: 485 split-spoon	
Logged By: Schoneveld	Rig Type: Mobile DHI B-53 (rubber track)	Hammer Wt/Fall: 140 lbs/30 in (auto hammer)	
Date Start/Finish: 8/14/17, 0245, 8/16/17, 0245	Drilling Method: cased wash boring	Hammer Type: auto	
Boring Location: 68+55, 20 ft RT	Casing ID/DOD: HW to 55.0' NW to 97.2'	Hammer Efficiency: 0.677	
Auger ID/DOD: SSA to 10'	Water Level: 23.0 ft (end, open)		
RESULTS SAMPLING AND TESTING:	ADDITIONAL DEFINITIONS:	LABORATORY TEST RESULTS:	
U-1 Split Spoon Sample	WCH = weight of solids, hammer	AD(1) - 100% soil classification	
U-2 Unconsolidated Split Spoon Sample attempt	N ₆₀ = N value corrected for hammer efficiency	AD(2) - percent fines, %FC = water content (%)	
U-3 Thin Wall Tube Sample	CS = cone strength	CS(1) - 1-D consolidation test	
U-4 Unconsolidated Thin Wall Tube Sample attempt	S _u = undrained shear strength (psf)	CS(2) - 1-D consolidation test	
V-1 Vane Shear Test	R _u = vane shear strength (psf)	U-1 Unconsolidated undrained triaxial test	
V-2 Hollow Core Shear Test	R _u = vane shear strength (psf)	U-2 Consolidated undrained triaxial test	
M-1 Unconsolidated Mohr Shear Test attempt	UC = unconfined compressive strength (psi)	UC(1) - unconfined compressive strength (psi)	
M-2 Consolidated Mohr Shear Test attempt	UC(2) = peak compressive strength of core	UC(2) = peak compressive strength of core	

Down (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft)	Blow (ft) (SPT)	Blow (ft) (SPT) (adj)	N ₆₀	CS (psi)	CS (psi) (adj)	U-1 (psi)	U-2 (psi)	V-1 (psi)	V-2 (psi)	M-1 (psi)	M-2 (psi)	Lab. Testing Results
0															
10	2418	1.5-3.0	25.2-24.32	45	35.775										
15	2419	5.5-7.0	18.32-17.37	70	19.903										
20	2419	10.5-12.0	15.28-14.69	60	30.203										
25	2414	15.5-17.0	24.32-19.32	67	15.583										
30	2414	20.5-22.0	17.28-16.83	54	40.60										
35															
40															
45															
50	2410	45.5-47.0	3.1-1"	0	0										
55															
60	240	30.5-32.0	3.3-3.3	6	4.77										
65															
70	2419	35.5-37.0	3.3-3.1	6	4.77										
75															
80	241	40.5-42.0	10"	0	0										
85															
90	2410	45.5-47.0	3.1-1"	0	0										
95															
100	2410	50.5-52.0	3.1-1"	0	0										
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200															

PROJECT: Cummings Road Bridge over MeTPK		Boring No.: BB-CUM-103	
LOCATION: Scarborough, Maine		Proj. No.: 17-013	
Driller: New England Boring Contractors	Elevation (ft): 85.5 ft (estd)	Core Barrel: NQ2	
Operator: Eric / Share	Date: 10/13/2018	Sampler: 485 split-spoon	
Logged By: Schoneveld	Rig Type: Mobile DHI B-53 (rubber track)	Hammer Wt/Fall: 140 lbs/30 in (auto hammer)	
Date Start/Finish: 8/14/17, 0245, 8/16/17, 0245	Drilling Method: cased wash boring	Hammer Type: auto	
Boring Location: 68+55, 20 ft RT	Casing ID/DOD: HW to 55.0' NW to 97.2'	Hammer Efficiency: 0.677	
Auger ID/DOD: SSA to 10'	Water Level: 23.0 ft (end, open)		
RESULTS SAMPLING AND TESTING:	ADDITIONAL DEFINITIONS:	LABORATORY TEST RESULTS:	
U-1 Split Spoon Sample	WCH = weight of solids, hammer	AD(1) - 100% soil classification	
U-2 Unconsolidated Split Spoon Sample attempt	N ₆₀ = N value corrected for hammer efficiency	AD(2) - percent fines, %FC = water content (%)	
U-3 Thin Wall Tube Sample	CS = cone strength	CS(1) - 1-D consolidation test	
U-4 Unconsolidated Thin Wall Tube Sample attempt	S _u = undrained shear strength (psf)	CS(2) - 1-D consolidation test	
V-1 Vane Shear Test	R _u = vane shear strength (psf)	U-1 Unconsolidated undrained triaxial test	
V-2 Hollow Core Shear Test	R _u = vane shear strength (psf)	U-2 Consolidated undrained triaxial test	
M-1 Unconsolidated Mohr Shear Test attempt	UC = unconfined compressive strength (psi)	UC(1) - unconfined compressive strength (psi)	
M-2 Consolidated Mohr Shear Test attempt	UC(2) = peak compressive strength of core	UC(2) = peak compressive strength of core	

Down (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft)	Blow (ft) (SPT)	Blow (ft) (SPT) (adj)	N ₆₀	CS (psi)	CS (psi) (adj)	U-1 (psi)	U-2 (psi)	V-1 (psi)	V-2 (psi)	M-1 (psi)	M-2 (psi)	Lab. Testing Results
0															
10	2418	1.5-3.0	25.2-24.32	45	35.775										
15	2419	5.5-7.0	18.32-17.37	70	19.903										
20	2419	10.5-12.0	15.28-14.69	60	30.203					</					

Date: 10/13/2018

PROJECT: Cummings Road Bridge over MeTPK		Boring No.: BB-CUM-105	
LOCATION: Scarborough, Maine		Proj. No.: 17-013	
Driller: New England Boring Contractors	Elevation (ft.): 67 ft (est'd)	Core Barrel: std. split-spoon	
Operator: Schaefer / Tibus	Date: NAD98	Sampler: std. split-spoon	
Logged By: Schonwald	Rig Type: Mobile Drill B-51 (track)	Hammer Wt./Fall: 140 lbs/30 in	
Date Start/Finish: 6/19/17 - 12/15 - 6/21/17 - 0955	Drilling Method: cased wash boring	Hammer Type: cone & cathead	
Boring Location: 72+10.47 R/LT	Casing ID/DI: HW to 70.0'	Hammer Efficiency: 0.80	
Auger ID/DI: SSA to 5'	Water Level: 4.2' (overnight)		

IN-SITU SAMPLING AND TESTING		ADDITIONAL DEFINITIONS		LABORATORY TEST RESULTS	
U-1 Split Spoon Sample	Nonrecorded - N value	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
U-2 Unconsolidated Split Spoon Sample attempt	Neg. - N value converted to hammer efficiency	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
U-3 Thin Wall Tube Sample	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
U-4 Unconsolidated Thin Wall Tube Sample attempt	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
V-1 Vane Shear Test	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
M-1 Unconsolidated Mini Van Shear Test attempt	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
M-2 Unconsolidated Mini Van Shear Test attempt	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification

Sample Information		Visual Description and Remarks		Lab Testing Results		
Depth (ft.)	Sample No.	Pen (ft/c) (ft)	Sample Depth (ft)	Blow (ft) (ft)	Strength (lb/ft ²) (ft)	Notes
10	249	2.5 - 4.3	2.2-10	9	9	
15	246	5.5 - 7.0	6-10.7	21	21	
20	249	10.5 - 12.0	2.4-4	8	8	
25	249	15.5 - 17.0	3.3-5	5	5	
30	248	20.5 - 22.0	11.4-6	10	10	
35						
40						
45						
50						
55						
57						

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 5
Boring No.: BB-CUM-105

Page 22, 10/13/2017

PROJECT: Cummings Road Bridge over MeTPK		Boring No.: BB-CUM-105	
LOCATION: Scarborough, Maine		Proj. No.: 17-013	
Driller: New England Boring Contractors	Elevation (ft.): 67 ft (est'd)	Core Barrel: std. split-spoon	
Operator: Schaefer / Tibus	Date: NAD98	Sampler: std. split-spoon	
Logged By: Schonwald	Rig Type: Mobile Drill B-51 (track)	Hammer Wt./Fall: 140 lbs/30 in	
Date Start/Finish: 6/19/17 - 12/15 - 6/21/17 - 0955	Drilling Method: cased wash boring	Hammer Type: cone & cathead	
Boring Location: 72+10.47 R/LT	Casing ID/DI: HW to 70.0'	Hammer Efficiency: 0.80	
Auger ID/DI: SSA to 5'	Water Level: 4.2' (overnight)		

IN-SITU SAMPLING AND TESTING		ADDITIONAL DEFINITIONS		LABORATORY TEST RESULTS	
U-1 Split Spoon Sample	Nonrecorded - N value	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
U-2 Unconsolidated Split Spoon Sample attempt	Neg. - N value converted to hammer efficiency	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
U-3 Thin Wall Tube Sample	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
U-4 Unconsolidated Thin Wall Tube Sample attempt	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
V-1 Vane Shear Test	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
M-1 Unconsolidated Mini Van Shear Test attempt	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification
M-2 Unconsolidated Mini Van Shear Test attempt	Not recorded	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification	WCH - weight of solids, hammer	ADSD - 4000 psi soil classification

Sample Information		Visual Description and Remarks		Lab Testing Results		
Depth (ft.)	Sample No.	Pen (ft/c) (ft)	Sample Depth (ft)	Blow (ft) (ft)	Strength (lb/ft ²) (ft)	Notes
45	249	20.5 - 27.0	1-1.4	7	7	
50	249	30.5 - 32.0	1.1-1.4	1	1	
55						
60	249	35.5 - 37.0	3.3-5.1	3	3	
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Date: 10/13/2018

Boring Log for BB-CUM-202, Page 7. Includes project details, sample information, and visual descriptions of soil layers.

Boring Log for BB-CUM-202, Page 8. Includes project details, sample information, and visual descriptions of soil layers.

Boring Log for BB-CUM-202, Page 9. Includes project details, sample information, and visual descriptions of soil layers.

Boring Log for BB-CUM-202, Page 10. Includes project details, sample information, and visual descriptions of soil layers.

Boring Log for BB-CUM-203, Page 11. Includes project details, sample information, and visual descriptions of soil layers.

Boring Log for BB-CUM-203, Page 12. Includes project details, sample information, and visual descriptions of soil layers.

Boring Log for BB-CUM-203, Page 13. Includes project details, sample information, and visual descriptions of soil layers.

Boring Log for BB-CUM-203, Page 14. Includes project details, sample information, and visual descriptions of soil layers.

Filename: 084_Boring_Logs 7.dgn

Scale and Revision table with columns for No., Revision, By, and Date.

Designed by: HNTB CORPORATION, CONSULTANT PROJECT MANAGER: Tim Cote, P.E. Table with columns for By, Date, and roles.

HNTB CORPORATION, 340 County Road, Suite 6-C Westbrook, ME 04092, TEL (207) 774-5155, FAX (207) 228-0909

MAINE TURNPIKE logo and THE GOLD STAR MEMORIAL HIGHWAY text.

BRIDGE REPLACEMENT CUMMINGS ROAD UNDERPASS BORING LOGS VII SHEET NUMBER: S-09 CONTRACT: 2018-19 Page 84 of 135

