Maine Turnpike Authority
2360 Congress Street
Portland, Maine 04102

September 14, 2018

Mr. Robert Green, Project Manager
MaineDEP
312 Canco Road
Portland, Maine 044103

Re: Permit Application
Stroudwater Bridge Improvements, I-95 Mile Marker 46.7

Dear Bob:

As we have discussed, please find enclosed the Permit By Rule application for the above referenced project. Included with this cover letter are:

- A Completed PBR application form; and
- Supporting narratives, attachments, maps, plan, photographs and appendices.

Thank you for your attention to MTA's application. Please do not hesitate to contact me at 482-8348 or at rnorwood@maineturnpike.com with any questions that you may have regarding this project.

Sincerely,

Maine Turnpike Authority
Ralph Norwood IV, P.E.
Project Manger

Stroudwater River Bridge Improvement Project, Mile Marker 46.7

Maine Department of Environmental Protection
Bureau of Land and Water Quality

Permit by Rule Permit Application

PBR Permit Section 11 State Transportation Facilities

September 2018

Maine Turnpike Authority
2360 Congress Street
Portland, ME 04102

Prepared By:

HNTB Corporation
340 County Road, Suite 6-C
Westbrook, ME 04092

04/06/2017

DEPARTMENT OF ENVIRONMENTAL PROTECTION
PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Natural Resouces Protection Act- Permit by Rule Standards, Chapter 305)

PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Maine Turnpike Authority, Ralph Norwood, IV	**Name:**	
Mailing Address:	2360 Congress Street	**Mailing Address:**	
Town:	Portland	**Town:**	
State and Zip Code:	ME, 04103	**State and Zip Code:**	
Daytime Phone #:	207-482-8348	**Daytime Phone #:**	
Email Address:	RNorwood@maineturnpike.com	**Email Address:**	

PROJECT INFORMATION

Part of a larger project? (check one):	☐ Yes ■ No	**After the Fact? (check one):**	☐ Yes ■ No	**Project involves work below mean low water? (check one):**	☐ Yes ■ No	**Name of waterbody:**	Stroudwater River
Project Town:	Portland	**Project Location (Address):**	Stroudwater River Bridge, Mile Marker 46.7 Maine Turnpike			**Map & Lot Number:**	238 X001
Brief Project Description:	See Attached Project Description						
Brief Directions to Site:	I-95, Mile Marker 46.7, MTA Bridges No. 0344 Northbound and No. 1484 Southbound.						

PERMIT BY RULE (PBR) SECTIONS (Check at least one): I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. **I and my agents, if any, have read and will comply with all of the standards in the Sections checked below.**

- ☐ **Sec. (2) Act. Adj. to Protected Natural Res.**
- ☐ **Sec. (3) Intake Pipes**
- ☐ **Sec. (4) Replacement of Structures**
- ☐ **Sec. (5) REPEALED**
- ☐ **Sec. (6) Movement of Rocks or Vegetation**
- ☐ **Sec. (7) Outfall Pipes**
- ☐ **Sec. (8) Shoreline stabilization**
- ☐ **Sec. (9) Utility Crossing**
- ☐ **Sec.(10) Stream Crossing**
- ■ **Sec. (11) State Transportation Facil.**
- ☐ **Sec. (12) Restoration of Natural Areas**
- ☐ **Sec. (13) F&W Creation/Enhance/Water Quality Improvement**
- ☐ **Sec. (14) REPEALED**
- ☐ **Sec. (15) Public Boat Ramps**
- ☐ **Sec. (16) Coastal Sand Dune Projects**
- ☐ **Sec. (17) Transfers/Permit Extension**
- ☐ **Sec. (18) Maintenance Dredging**
- ☐ **Sec. (19) Activities in/on/over significant vernal pool habitat**
- ☐ **Sec. (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird feeding & roosting areas**

NOTE: Municipal permits *may* also be required. Contact your local code enforcement office for more information. Federal permits may be required for stream crossings and for projects involving wetland fill. Contact the Army Corps of Engineers at the Maine Project Office for more information.

NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS

- ■ ***Attach* all required submissions for the PBR Section(s) checked above. The required submissions for each PBR Section are outlined in Chapter 305 and may differ depending on the Section you are submitting under.**
- ■ ***Attach* a check for the correct fee made payable to: "Treasurer, State of Maine".The current fee for NRPA PBR Notifications can be found at the Department's website: http://www.maine.gov/dep/feesched.pdf**
- ■ ***Attach* a location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).**
- ☐ ***Attach Proof of Legal Name* if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x) Individuals and municipalities are not required to provide any proof of identity.**

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules.

I also understand that this PBR becomes effective 14 calendar days after receipt by the Department *unless the Department approves or denies the PBR prior to that date.*

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

Signature of Agent or Applicant:	Ralph Norwood IV	**Date:**	9-13-18

Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below**. The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP
17 STATE HOUSE STATION
AUGUSTA, ME 04333-0017
(207)287-7688

PORTLAND DEP
312 CANCO ROAD
PORTLAND, ME 04103
(207)822-6300

BANGOR DEP
106 HOGAN ROAD
BANGOR, ME 04401
(207)941-4570

PRESQUE ISLE DEP
1235 CENTRAL DRIVE
PRESQUE ISLE, ME 04769
(207)764-0477

OFFICE USE ONLY	Ck.#		Staff	Staff	
PBR #	FP	Date	Acc. Date	Def. Date	After Photos

List of Attachments

ATTACHMENT A

PROJECT DESCRIPTION

Stroudwater River Bridge Improvement Project, Mile Marker 46.7
Permit by Rule Application
September 2018

Project Description

The Maine Turnpike Authority's (MTA) Stroudwater River Bridges are twin structures constructed in 1956 and carry the northbound and southbound lanes of the Turnpike over the Stroudwater River at Mile Marker 46.7 (Bridge No. 0344 Northbound and Bridge No. 1484 Southbound). Both bridges feature six lines of continuous steel girders composite with a concrete deck overlain by a bituminous wearing surface. The four spans of the bridges are configured with 66'-6" end spans and 83'6" interior spans. The substructure unit (abutments and hammerhead piers) are founded on H-piles driven to bedrock. Each of the bridges has two twelve-foot-wide lanes, a four-foot right shoulder, and a ten-foot right shoulder.

In 1992, the bridge decks were replaced and the steel bridge railings were removed. As part of the rehabilitation, a six girder was added to each bridge. The decks, abutments, and piers were widened to provide improved shoulder widths. Bridge repairs were also performed in 2014 to address repairs to bridge joints, abutments bearings, and pavement.

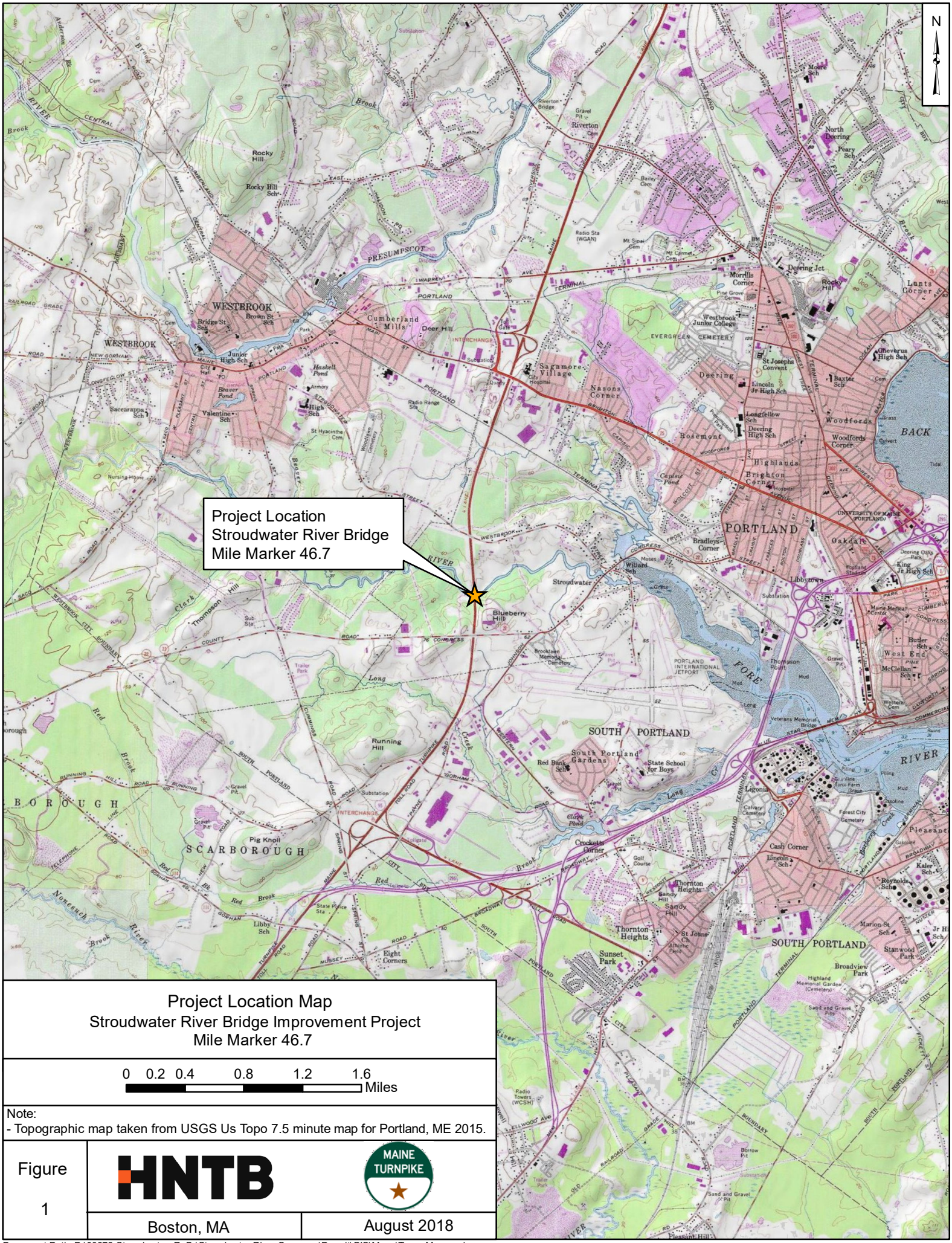
The purpose of the project is to extend the service life of the existing bridges, address areas of deterioration, modernize the structure, and promote safety of travelers and MTA workers. The planned improvements to the bridges include backwall reconstruction to address areas of weakened concrete, replacement of the bridge deck and substandard bridge rail system, increase the roadway cross slope on the bridges to improve surface drainage, girder strengthening to improve load carrying capacity, and abutment and pier concrete repairs. The bridges will also be expanded to allow for the maintenance of two lanes of traffic on each bridge during construction, to provide a safer work zones for maintenance, and to be consistent with anticipated future corridor mobility needs. This project has been programmed, funded and developed as a distinct item of capital work in the MTA's financial and asset management plans.

Avoidance of wetland impacts are not possible due to the need to expand the approach to the bridge and because the wetlands are located immediately adjacent to the existing road and bridge. Impacts to the stream channel are likewise unavoidable due to the need to improve and expand the piers to support the expansion of the bridges, repair of slope stabilizing rip rap and to install cofferdams to facilitate work on the supporting piers in the dry. Minimization efforts focused primarily on the use of guardrail with 2H:1V fill slopes to minimize encroachment on the nearby wetlands and water bodies. The project will utilize erosion and sedimentation controls to minimize the impact to wetlands and the controls will be in accordance with the Maine DOT Erosion & Sedimentation standards as specified in the Permit by Rule Section 11 standards (see Appendix G for Erosion Control Plan). Approximately 19,790 square feet of permanent wetland and stream impacts are anticipated from the proposed project. An additional 10,225 square feet of temporary wetland and stream impacts are anticipated. Some of the temporary impacts are associated with the installation of the cofferdams, as the cofferdam will be along the edge of the pier installation.

Note that two wetlands of special significance (W-12, which contains a stream and W-13, which contains more than 20,000 sq. ft. aquatic or emergent vegetation) occur within the project area that will be affected by both permanent and temporary impacts. The affected waterbody, Stroudwater River, is not listed as a special status waterway.

ATTACHMENT B

U.S.G.S TOPOGRAPHIC MAP & SITE OVERVIEW MAP



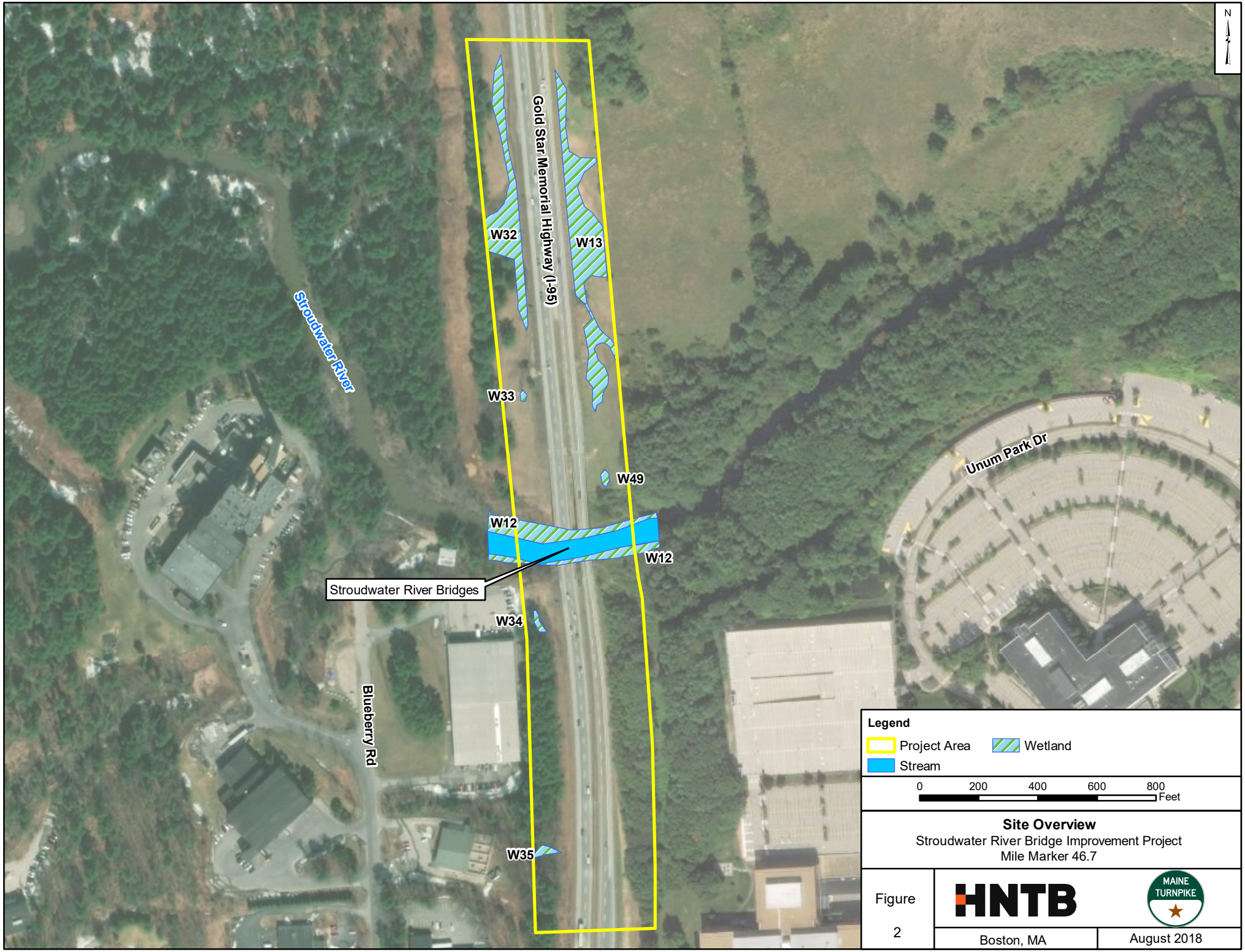
Project Location Map
Stroudwater River Bridge Improvement Project
Mile Marker 46.7

0 0.2 0.4 0.8 1.2 1.6 Miles

Note:
- Topographic map taken from USGS Us Topo 7.5 minute map for Portland, ME 2015.

Figure 1	HNTB / MAINE TURNPIKE	
	Boston, MA	August 2018

Document Path: P:\63272-Stroudwater_R_Br\Stroudwater River Overpass\Permit\GIS\Maps\Topo_Map.mxd



Site Overview
Stroudwater River Bridge Improvement Project
Mile Marker 46.7

Figure	HNTB	MAINE TURNPIKE
2	Boston, MA	August 2018

Document Path: P:\63272-Stroudwater_R_Br\Stroudwater River Overpass\Permit\GIS\Maps\Site_Overview.mxd

ATTACHMENT C

PROJECT PHOTOGRAPHS

Figure 1 - Southbound Bridge Elevation, Looking South

Figure 2 - Southbound Bridge Top of Deck, Looking North

Figure 3 - Southbound Bridge Southern Pier Elevation, Looking South

Figure 4 – Footpath at South Abutment

Figure 5 – North Abutment Elevation

Figure 6 – Stroudwater River with Piers

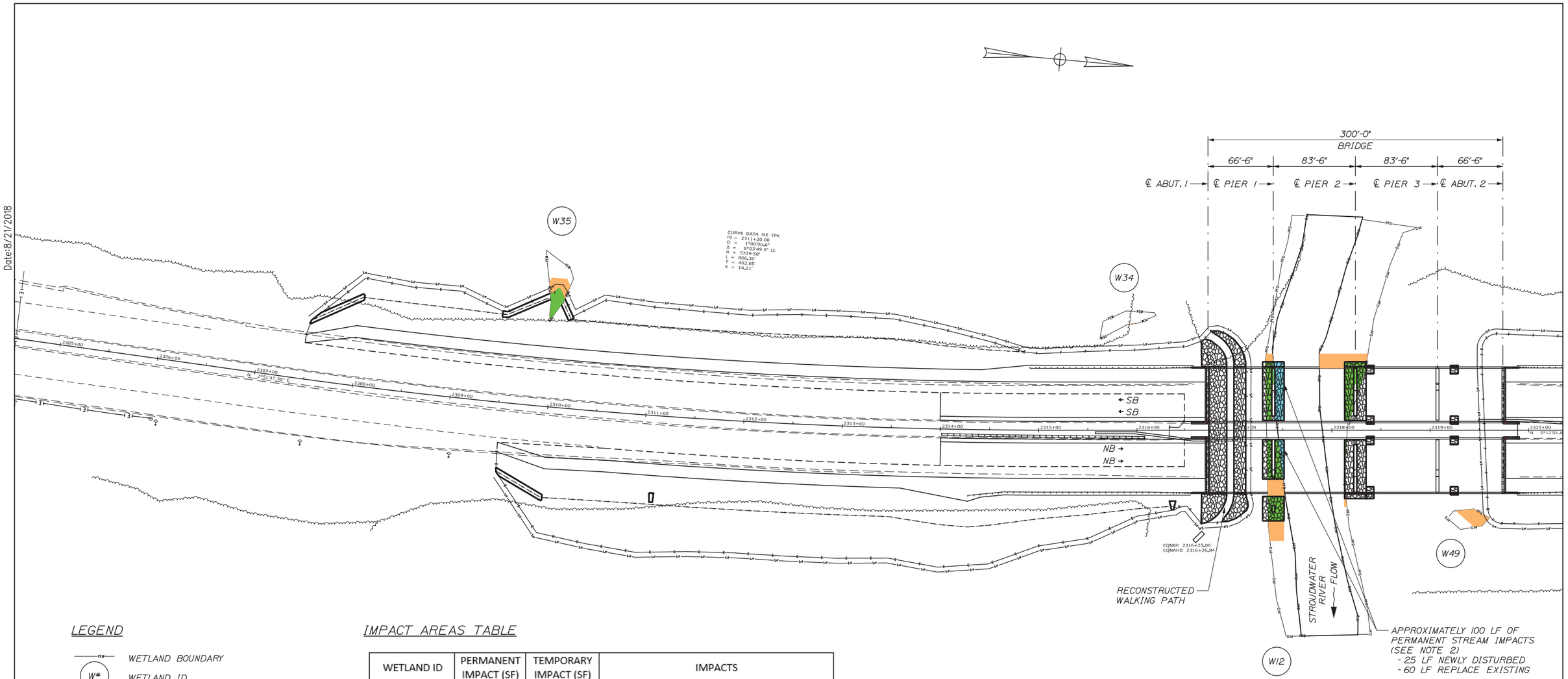
Figure 7 – Southern Approach

Figure 8 – Northern Approach

ATTACHMENT D

SUMMARY OF WETLAND IMPACTS

Date:8/21/2018



LEGEND

- WETLAND BOUNDARY
- W# — WETLAND ID
- PROPOSED RIPRAP
- PERMANENT WETLAND IMPACT
- TEMPORARY WETLAND IMPACT
- PERMANENT STREAM IMPACTS
- TEMPORARY STREAM IMPACTS

IMPACT AREAS TABLE

WETLAND ID	PERMANENT IMPACT (SF)	TEMPORARY IMPACT (SF)	IMPACTS
W-12*	2,150	1,300	FILL, TEMPORARY COFFERDAM INSTALLATION & DEWATERING
W-13*	10,900	5,050	FILL
W-32	5,700	2,900	FILL
W-33	50	250	FILL
W-34	0	0	NONE
W-35	280	275	FILL
W-49	0	350	FILL
TOTAL IMPACT	19,080	10,125	
STROUDWATER RIVER	710	100	FILL

AREAS SHOWN ARE PROJECT TOTALS (SHEET 1 & SHEET 2 COMBINED)
* INDICATES THE WETLAND IS DESIGNATED AS A WETLAND OF SPECIAL SIGNIFICANCE

NOTES:

1. THE SPECIFIC WETLAND FUNCTIONS ARE DEFINED IN THE ATTACHED MEMO.
2. THE PROPOSED PIER WORK WILL INCLUDE WIDENING THE EXISTING PIERS BY APPROXIMATELY 16'-0". THE EXISTING PIER SECTIONS WILL REMAIN. ADDITIONALLY, THE PROPOSED RIPRAP IN SOME INSTANCES REPLACES EXISTING FAILED RIPRAP. REFER TO THE ATTACHED PHOTOS FOR MORE INFORMATION.
3. THE CONTRACTOR WILL BE REQUIRED BY PROJECT SPECIFICATIONS TO AVOID STREAM IMPACTS DURING CONSTRUCTION. THEREFORE ONLY A SMALL AMOUNT OF TEMPORARY STREAM IMPACTS ARE ANTICIPATED TO FACILITATE PIER REPAIRS AND CONSTRUCTION.

Filename: 001_Wetland Graphic 1.dgn

Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	06\2018	Checked	JRH	06\2018
Drawn	SLS	06\2018	In Charge of	RAL	06\2018

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

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

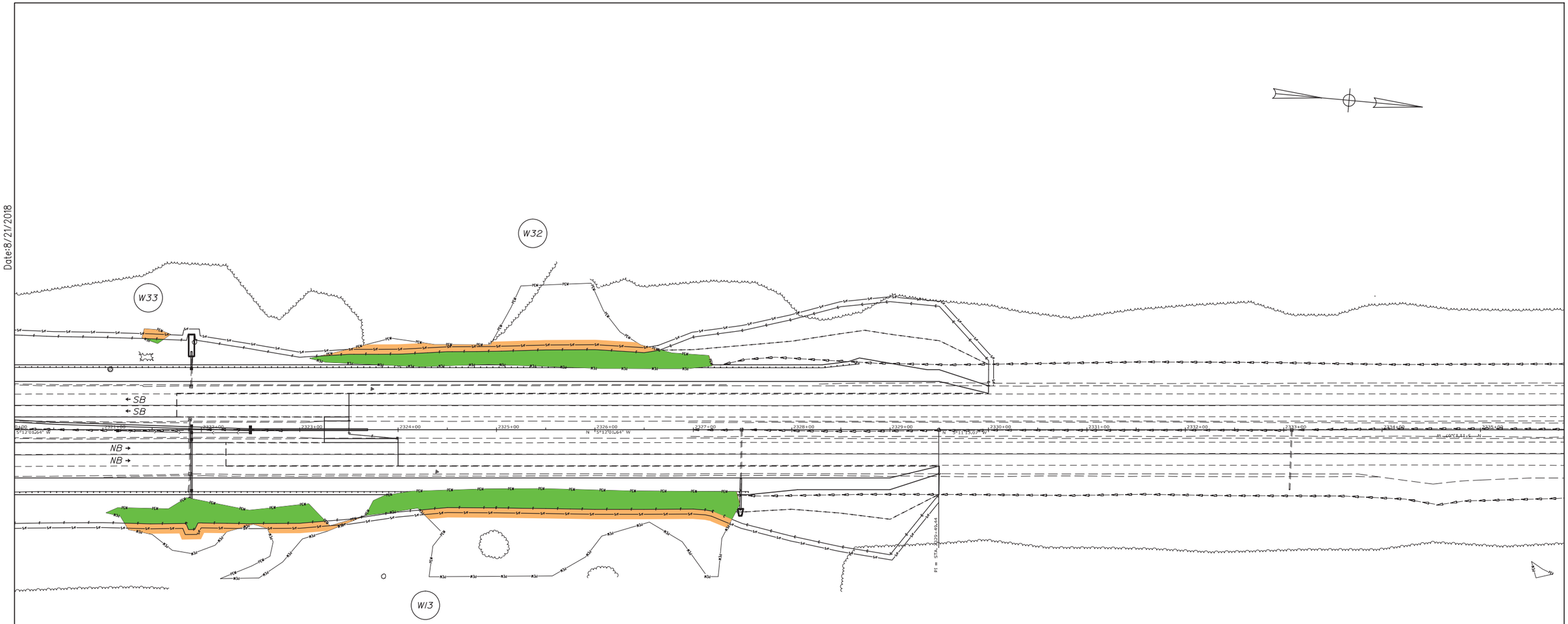
BRIDGE IMPROVEMENTS
STROUDWATER RIVER OVERPASS

WETLAND GRAPHIC 1

SHEET NUMBER:

CONTRACT:2019.16

Date:8/21/2018



LEGEND

- WETLAND BOUNDARY
- W# WETLAND ID
- PROPOSED RIPRAP
- PERMANENT WETLAND IMPACT
- TEMPORARY WETLAND IMPACT
- PERMANENT STREAM IMPACTS
- TEMPORARY STREAM IMPACTS

Filename: 002_Wetland Graphic II.dgn

Scale: 50 0 50 100 Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Tim R. Cote, P.E.

	By	Date		By	Date
Designed	CDH	06\2018	Checked	JRH	06\2018
Drawn	SLS	06\2018	In Charge of	RAL	06\2018

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

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE IMPROVEMENTS STROUDWATER RIVER OVERPASS

WETLAND GRAPHIC II

CONTRACT:2019.16

SHEET NUMBER: 2 OF 2

ATTACHMENT E

WETLAND FUNCTIONAL ASSESSMENT

WETLAND FUNCTIONAL ASSESSMENT

A wetland functional assessment was performed concurrent to the wetland delineation effort and in accordance with the *Wetlands Functions and Values: A Descriptive Approach* described in *The Highway Methodology Workbook Supplement* (USACE 2015). This descriptive approach to wetland evaluation uses a series of questions relating to the qualitative characteristics of a wetland to determine if a wetland effectively provides up to 13 key functions (8 each) and values (5 each) as described below.

Factors relating to overall functions and values of the project area wetlands include: degraded conditions due to sand/sediment/trash input from the adjacent roadway and past site disturbances; lack of undisturbed buffer along much of wetland boundary; incised waterbody channels which allows water to pass through quickly; proximity to a major highway, roads, and commercial/residential development; isolated areas; small size; and fast water flow through the features during normal conditions.

In addition, Stroudwater River was visually evaluated and rated for three general functional categories including Biological Condition (diversity and quality of the biological community), Geochemical Condition (temperature, oxygen content etc.), and Geomorphology (natural stream structure).

Table 1. Functions and Values Provided by Wetlands in the Stroudwater River Bridge Project Area.

Wetland ID	Groundwater Recharge Discharge	Floodflow Alteration	Fish and Shellfish Habitat	Sediment-Toxicant Retention	Nutrient Removal-Retention-Transformation	Production Export	Sediment-Shoreline Stabilization	Wildlife Habitat	Recreational	Educational-Scientific Value	Uniqueness-Heritage	Visual	Rare, Threatened and Endangered Species
W-12	X	X	X	X	-	-	X	X	-	-	-	-	-
W-13	-	-	-	X	-	-	-	X	-	-	-	-	-
W-32	-	-	-	X	-	-	-	X	-	-	-	-	-
W-33	-	-	-	-	-	-	-	X	-	-	-	-	-
W-34	-	-	-	-	-	-	-	X	-	-	-	-	-
W-35	-	-	-	-	-	-	-	X	-	-	-	-	-
W-49	-	-	-	-	-	-	-	X	-	-	-	-	-
Stroudwater River	Biological – low due to turbid conditions and previous disturbance history; Physiochemical – low due to turbid, warm and likely low oxygen conditions, Geomorphology – Low to Moderate – Mostly natural channel conditions												

Key: - not provided, X – the function or value is present. Gray shading indicates the variable was the primary function or value offered by the wetland.

Note that the Stroudwater River near the bridge is characterized as a low gradient channel with well-defined bed and bank bordered primarily by upland shrub vegetation. Areas of steep slope containing rip rap and a small terrace containing invasive *Phragmites australis* occur immediately beneath the bridge.

ATTACHMENT F

MAINE DEPARTMENT OF INLAND FISHERIES & WILDLIFE CORRESPONDENCE

HNTB Corporation
The HNTB Companies
Engineers Architects Planners

31 St. James Avenue, Suite 300
Boston, MA 02116

Telephone (617) 542-6900
www.hntb.com

July 17, 2018

John Perry
Maine Department of Inland Fisheries and Wildlife
41 State House Station
284 State Street
Augusta, ME 04333-0041

Re: Maine Turnpike Authority, Stroudwater River Bridge Widening Project, Mile Marker 46.7

Dear Mr. Perry:

We are writing to notify the Maine Department of Inland Fisheries and Wildlife of the Maine Turnpike Authority's intent to make repairs to the Stroudwater River Bridge in Portland, Maine and to widen the bridge to be consistent with anticipated future corridor needs. The Maine Turnpike Authority seeks the Maine Department of Inland Fisheries and Wildlife review of the proposal in advance of filing permit applications (see attached locus map and preliminary project plans).

The purpose of the project is to extend the service life of the existing bridge, address areas of deterioration, modernize the structure and promote safety of travelers for the Stroudwater River Bridges on the Maine Turnpike. The planned improvements to the bridge include backwall reconstruction to address areas of weakened concrete, replacement of the bridge deck and substandard bridge rail system, increase the roadway cross slope on the bridge to improve surface drainage, girder strengthening to improve load carrying capacity, and abutment and pier concrete repairs. The bridges will also be widened to allow for the maintenance of lanes of traffic on each bridge during construction, to provide a safer work zones for maintenance, and to be updated for anticipated future corridor mobility needs.

We are writing to request information on the presence of state threatened or endangered species or critical or other sensitive habitats at the project site (see attached map). We greatly appreciate your assistance in this matter. Please feel free to call me at (617) 532-2220 if you should have any questions on this matter.

Best regards,

Marissa Simpson, WPIT
Environmental Scientist
msimpson@hntb.com

Copy to: Ralph Norwood, MTA, Timothy Cote, HNTB, Paul Myers, HNTB

PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK
COMMISSIONER

August 10, 2018

Marissa Simpson
HNTB
31 St. James Avenue, Suite 300
Boston, MA 02116

RE: Information Request - MTA Stroudwater Bridge Widening, Portland

Dear Marissa:

Per your request, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *MTA Stroudwater Bridge Widening Project* in Portland. For purposes of this review, we are assuming that some components of the project will involve instream work.

Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be affected by your project. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats that would be directly affected by your project.

Fisheries Habitat

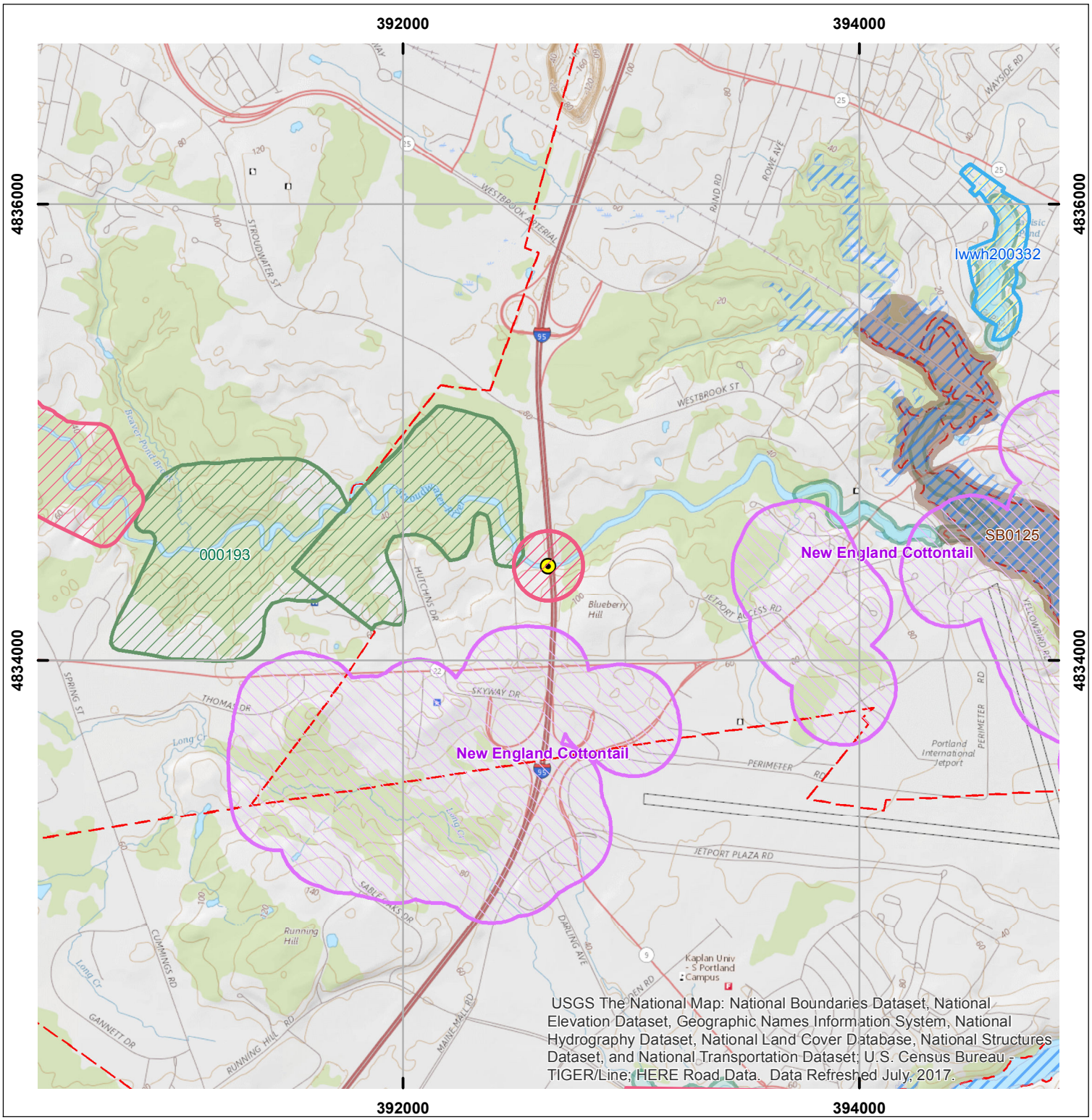
Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

John Perry
Environmental Review Coordinator



Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: Portland, MTA Stroudwater Bridge Widening (Version 1)

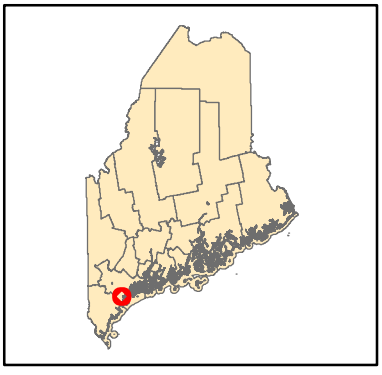
Maine Department of Inland Fisheries and Wildlife

0 0.125 0.25 0.5 0.75 1 Miles

Projection: UTM, NAD83, Zone 19N

Date: 8/7/2018

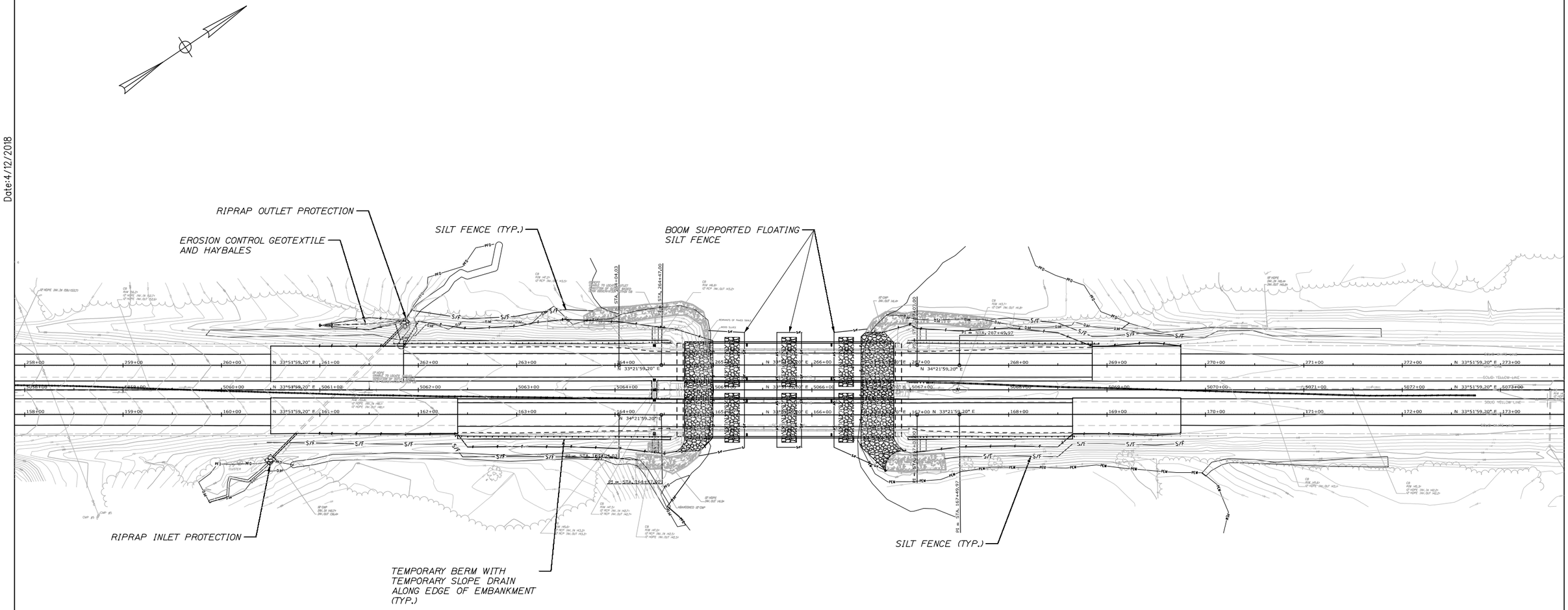
- ProjectPoints
- ProjectSearchAreas
- Deer Winter Area
- Shorebird Areas
- Inland Waterfowl/Wading Bird
- Tidal Waterfowl/Wading Bird
- ETSc Environmental Review Polygons
- Special Concern-occupied habitats(100ft buffer)



ATTACHMENT G

EROSION & SEDIMENT CONTROL PLAN

Date:4/12/2018



Filename: 001_ErosionControlPlan.dgn

Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Craig R. Morin, P.E.

	By	Date		By	Date
Designed	EDD	04\18	Checked	CDH	04\18
Drawn	EDD	04\18	In Charge of	RAL	04\18

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

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

BRIDGE REHABILITATION COBBOSSEECONTEE STREAM OVERPASS

EROSION CONTROL PLAN

SHEET NUMBER: GP-01

CONTRACT:2018.15

1OF 1

SUPPLEMENTAL SPECIFICATION

SECTION 656

TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

Section 656 of the Standard Specifications is deleted in its entirety and replaced with the following:

656.01 Description

This work shall consist of providing temporary erosion and water pollution control during construction in accordance with these Specifications, standard details, Best Management Practices, or as otherwise directed.

The Contractor shall certify in writing to the Resident that an On-Site Responsible Party (OSRP) has been trained and is knowledgeable in erosion and sediment control (ECS) through the MaineDEP's Non-Point Source Training Center, or an equivalent program, or is licensed in the State of Maine as a Professional Engineer, Landscape Architect or Soil Scientist. Proof of certification for the OSRP, and any other Contractor employees charged with conducting ESC inspections, must be submitted to the Authority's Environmental Coordinator prior to starting work.

The Project will be performed in accordance with the MaineDOT Best Management Practices (BMP) latest issue. The Contractor shall fully comply with all erosion and sedimentation control requirements outlined in the BMP's or contained herein. Non-compliance with these requirements as determined by the Resident shall result in a financial penalty of $1,000 per day, per violation. Any fines assessed to the Maine Turnpike Authority as a result of the Contractor's non-compliance shall be paid by the Contractor. If the Contractor fails to pay, the cost of the fine will be deducted from monies due, or which may become due, to the Contractor under this Contract.

In the event of conflict between these Specifications and other erosion and pollution control laws, rules or regulations of other Federal, State and local agencies, the more restrictive law, rules or regulations shall apply.

The standards as described below shall be met on the Project:

Water Pollution Control Requirements

(a) General

1. The Contractor must comply with the applicable Federal, State and local laws and regulations relating to prevention and abatement of water pollution.
2. Except as allowed by an approved permit or otherwise authorized by the Authority in writing, pollutants containing construction debris including excavated material, aggregate, residue from cleaning, sandblasting or painting, cement mixtures,

chemicals, fuels, lubricants, bitumens, raw sewage, wood chips, and other debris shall not be discharged into water bodies, wetlands or natural or manmade channels leading thereto and such materials shall not be located alongside water bodies, wetlands, or such channels such that it will be washed away by high water runoff. Furthermore, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in the areas of the site draining to an infiltration area, unless these portions of the site (where storage and handling of these materials) are isolated using dikes, berms, sumps and other forms of secondary containment that prevent discharge to groundwater.

3. Temporary winter stabilization must be used between November 1st and April 15th or outside of said time period if the ground is frozen or snow covered. Temporary winter stabilization involves, at a minimum, covering all disturbed soils and seeded ground that is not Acceptable Work with an approved method. Use of these methods for over-winter temporary erosion control will be paid for under the appropriate Erosion Control items included in the Contract.
4. Construction operations in water bodies or wetlands shall be restricted to the construction limits shown on the Plans and to those areas that must be entered for the construction of temporary or permanent structures, except as allowed by approved permit or otherwise authorized by the Authority in writing. Mechanized equipment shall not be operated in water bodies or wetlands except as allowed by approved permit or otherwise authorized by the Authority in writing.
5. Upon completion of the work, water bodies or wetlands shall be promptly cleared of all falsework, piling, debris or other obstructions caused by the construction operations, except as allowed by approved permit or otherwise authorized by the Authority in writing.

(b) Earthwork

If earthwork disturbance is part of the Project scope:

1. Erosion control blanket shall be installed in the bottom of all ditches except where a stone lining is planned. Seed shall be applied prior to the placement of the blanket.
2. Permanent slope stabilization measures shall be applied within one (1) week of the last soil disturbance. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well-established. If necessary, areas must be reworked and restabilized if germination is sparse, plant coverage is spotty, or topsoil erosion is evident.
3. Dust control items, other than those under Standard Specification Section 637, Dust Control, if applicable, shall be included in the plan.

Construction Requirements

1. All temporary erosion control devices shall be in place and approved by the Resident prior to any operations resulting in disturbed area. Prior to construction, the Contractor shall properly install sediment barriers (e.g., silt fence) at the edge of any downgradient disturbed area and adjacent to any drainage channels within the distrubed area
2. The Contractor is responsible for all temporary drainage and erosion control measures. The Contractor shall review his construction operations and staging to determine if additional erosion control measures are required. The Resident may also request additional erosion control measures. The cost for all erosion control devices necessary, due solely to the Contractor's construction operations and not shown on the Plans, shall be borne solely by the Contractor.
3. Inspections shall be conducted (1) at least once a week as well as before and after a storm event and prior to completing permanent stabilization measures; and (2) by a person knowledgeable of erosion and stormwater control, including the standards and conditions in the permit if applicable.
4. The Contractor shall maintain all measures in effective operating condition until areas are permanently stabilized. If BMPs need to be modified (i.e., corrective action, additional BMPs installed, etc.), implementation must be completed within seven (7) calendar days and prior to any storm event.
5. Temporary erosion control measures shall be maintained until the site is permanently stabilized with vegetation or other permanent control measures.
6. The Contractor will immediately take appropriate measures to prevent erosion or sedimentation from occurring or to correct any existing problems regardless of the time of year.
7. During periods of approved suspension, the Contractor shall inspect and maintain temporary and permanent erosion and sedimentation controls.
8. Work in wetlands is prohibited except to the minimum extent necessary for completion of the work as detailed on the Plans. Excavated and other material shall not be stockpiled in wetlands. Haybales, silt fence or other suitable barriers shall be used, where necessary, to prevent sedimentation from eroding materials.
9. Disturbance of natural resources beyond the construction limits shown on the Plans is not allowed.
10. Existing ditches shall be maintained until the new ditches are stabilized. Stone check dams shall be placed in existing ditches prior to construction as to prevent the release of sedimentation. Stone check dams shall be installed at the outlets of all existing and proposed ditches adjacent to all stream and wetlands.
11. For proposed ditches, stabilize the outlet first and build from the bottom up. Only excavate what can be stabilized or protected by the end of the work day.
12. Before permitting permanent channels to carry water, they shall be stabilized. This may require the installation of temporary erosion control BMP’s or temporarily diverting flows.
13. All cross culvert outlets shall be armored before the end of the work day.
14. The Contractor’s operation may require the placement of temporary pipes and fill over a ditch line to provide access to the work area. The Resident shall approve the size of

the pipe. The placement and removal of the temporary access shall not be measured for payment and shall be incidental to the Excavation item.

15. Bare earth slopes shall be roughened to dissipate sheet flow. This shall be accomplished by "tracking" the slope perpendicular to the centerline. This work will not be measured separately for payment, but shall be incidental to the Excavation item.
16. Uncured concrete shall not be placed directly into the water body. Concrete may be placed in forms and shall cure at least one (1) week prior to form removal. No washing of tools, forms, etc. shall occur in or adjacent to the water body or wetland.
17. The Contractor shall contain all demolition debris (including debris from wearing surface removal, sawcut slurry, dust, etc.) and shall not allow it to discharge to any resource. Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source. The Contractor shall dispose of debris in accordance with Maine Solid Waste Law, Title 38 M.R.S.A., Section 1301 et. seq.
18. No wheeled or tracked equipment shall be operated in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may NOT cross streams.
19. The Contractor shall not remove rocks from below the normal high water line of any wetland, great pond, river, stream or brook, except to the extent necessary for completion of the work and as allowed by environmental permits.

Spill Prevention Control and Countermeasure (SPCC) Plan

Any areas where petroleum products, oils or non-petroleum hazardous materials are handled or stored will require a Spill Prevention Control and Countermeasure (SPCC) Plan. These materials may not be stored or handled in areas of the site draining to an infiltration area. The Plan will be submitted to the Resident before construction begins. In addition to petroleum products and hazardous materials, controls must be used to prevent additional pollutants (i.e., fertilizers, pesticides, salt/brine, litter, construction demolition debris, etc.) from being discharged from materials on-site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation. The Plan shall provide the following information at a minimum:

1. The name and emergency response numbers (telephone number, cellular phone and pager numbers, if applicable) of the Contractor's representative responsible for spill prevention and response;

2. Description of handling or storage location noting setbacks from water bodies where relevant. Significant sand and gravel aquifers and other sensitive resources, including infiltration areas, must be avoided wherever possible;

3. Description of storage and containment facilities, such as dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater or surface water;

4. Description of equipment and/or materials used to prevent discharges (including sorbent materials);

5. Preventative measures to minimize the possibility of a spill; and,

6. Contingency plan if spill should occur.

The approved plan must be posted at the Project site. All personnel working in the area are required to read and be familiar with the plan.

There shall be no separate payment for preparation of a SPCC Plan acceptable to the Resident and preparation shall be incidental to the work.

Notification of Authority of Hazardous Material Spills

In addition to MaineDEP reporting requirements for spills greater than five (5) gallons, the Contractor shall notify the on-site Resident Inspector. The on-site Resident Inspector shall notify the Maine Turnpike Radio Room at 207-871-7701. When the on-site Resident Inspector is not available, the Contractor shall notify the Maine Turnpike Radio Room directly at 207-871-7701.

In addition to MaineDEP reporting requirements for all spills where any stream or water body is threatened, the Contractor shall notify the on-site Resident Inspector. The on-site Resident Inspector shall notify the Maine Turnpike Radio Room at 207-871-7701. When the on-site Resident Inspector is not available, the Contractor shall notify the Maine Turnpike Radio Room directly at 207-871-7701.

These notification procedures shall be incorporated into the Spill Prevention Control and Countermeasure (SPCC) Plan.

Responsibility for Control and Cleanup of Hazardous Material Spills

The Contractor shall be responsible to control spills and properly cleanup, containerize, and dispose of petroleum and/or other hazardous material waste that results from the actions and/or equipment of the Contractor or his employees, subcontractors and suppliers. Chemicals, exposed to stormwater must be prevented from becoming a pollutant source.

The Contractor shall also be responsible for all direct and indirect costs associated with the control of spills and proper cleanup, containerization, and disposal of petroleum and/or other hazardous material waste that results from the actions and/or equipment of the Contractor or his employees, subcontractors and suppliers.

656.02 Temporary Erosion and Sedimentation Control Devices - Materials

The Contractor shall install and maintain all temporary erosion and sedimentation control materials in accordance with the manufacturer's recommendations or the latest BMP’s.

1. Baled hay shall be bales at approximately 14 by 18 by 30 inches, or an equivalent, securely tied to form a firm bale.
2. Flexible drainage pipe shall consist of collapsible neoprene pipe, a minimum of 12 inches in diameter or equal.
3. Silt Fence

    (a) Posts - Either hardwood posts or steel posts shall be used. Hardwood posts shall be straight, at least 18 inches longer than the height of the silt fence and at least one inch by one inch.

    Staples shall be of No. 9 wire.

    Steel posts shall be at least 18 inches longer than the height of the silt fence and have the means provided for fastening wire to the fence.

    (b) Wire Support Fence - If required, wire support fence shall be at least two inches higher than the height of the silt fence. Horizontal and vertical wires shall be spaced no more than six inches apart. The top and bottom wires shall be at least 10 gauge; all other wires at least 12 gauge.

    (c) Fabric - The woven geotextile fabric and components shall be made from polypropylene, polyester, polymide or other chemically stable material and be resistant to ultraviolet radiation degradation for at least 12 months of installation. Silt retention capacity shall be no less than 75 percent. The fabric shall have a Mullen burst test of no less than 260 pounds per square inch with a maximum average sieve opening size of No. 20 to No. 60. Roll width of the fabric shall be no less than six inches wider than the height of the fence, except fabric for boom supported floating silt fence which shall be no less than two feet wider than the design width.

    (d) Flotation Devices – Boom supported floating silt fence shall consist of suitable, flexible plastic or synthetic rubber barrier supported on the top (or floated on the top using six inch "minimum" Styrofoam logs) and sides, and weighted or anchored on the bottom to form a continuous vertical barrier to contain within the designated area(s), silt and clay-size particles suspended or carried by water. The flotation boom and weighing devices for boom supported floating silt fence shall be sufficient to hold the fence in an approximately vertical position.

656.03 Temporary Erosion and Sedimentation Control Devices - General

Temporary Erosion Checks - Temporary erosion checks shall be constructed in ditches and at other locations designated. Checks shall be in accordance with the Standard Detail unless otherwise directed.

Baled hay shall be used in other areas as necessary to inhibit soil erosion.

During winter construction, November 1st through April 15th, all areas being constructed within 75 feet of a protected natural resource shall be protected with a double row of silt fence.

Sediment deposits behind haybales and silt fence shall be removed when the depth of sediment reaches 50 percent of the erosion control device height.

The Contractor is also required to have on-site, at all times, 25 percent additional Contract quantities of silt fence for use as backup devices.

656.04 Temporary Erosion and Sedimentation Control Devices – Construction Requirements

1. Erosion Control Filter Berm

   The Contractor may opt to furnish and install an erosion control filter berm in lieu of silt fence. The erosion control filter berm shall be a water permeable windrow of a composted bark mix to remove suspended soil particles from water moving off the site. Erosion control filter berm shall be considered an erosion control device. The material and specific application shall be submitted to the Resident for approval.

   The erosion control berm shall be placed uncompacted, in a windrow in locations approved by the Resident. The cross section of the berm shall be four feet wide at the base and 1-1/2 feet high at the center. The erosion control filter berm shall be removed when no longer required, as determined by the Resident, and shall be distributed over an adjacent area.

2. Temporary Berms

   When designated, temporary barriers shall be constructed along the edge of the embankment. The barriers shall be of embankment earth material, gravel or sand as available and shaped approximately as shown in the Standard Details. The barriers shall be compacted with the wheels of construction equipment. When placed on pavement, the berms shall be constructed of asphalt grindings or other non-erodible soil material as approved by the Resident, and shaped as shown in the Standard Details.

   At designated intervals, temporary slope drains shall be constructed with a crescent shaped barrier placed at each slope drain to direct the water into the inlet pipe.

3. Temporary Slope Drains

   Collapsible pipe with corrugated metal pipe inlet shall be placed down the embankment slopes at designated locations and in accordance with the Best Management Practices. At the outlet end of the drain, dumped stone shall be placed to prevent scoring unless otherwise directed.

4. Silt Fence

The silt fence shall be installed downhill of disturbed slopes as shown on the Plans or as approved. The Contractor shall have the option to provide a reinforced filter fabric or an un-reinforced filter fabric attached to a wire fence.

The fence posts shall be spaced as specified by the Resident, however, not to exceed a maximum of eight feet [2.5 m] apart when either type of silt fence is used and be driven a minimum of 18 inches [450 mm] into the ground.

The geotextile fabric shall be secured to the post or fence by suitable staples, tie wire or hog rings in such a manner as to prevent tearing and sagging of the fabric. The bottom flap of the geotextile fabric shall be entrenched into the ground a minimum depth of six inches [150 mm] to prevent water from flowing under the fence. The geotextile shall be spliced together only at support posts with a minimum six inches [150 mm] overlap and secure post connection which prevents leakage of silt. The top of the geotextile shall be installed with a reinforced top end section.

The Contractor shall maintain the silt fence in a functional condition at all times. All deficiencies shall be immediately corrected by the Contractor. The Contractor shall make a daily inspection of silt fences in areas where construction activity causes drainage runoff, to ensure that the silt fences are properly located for effectiveness. Where deficiencies exist, additional silt fences shall be installed as approved or otherwise directed.

Sediment deposits shall be removed when sediments reach 50 percent of the height of the device. All sediment deposits remaining in place after the device is no longer required shall be graded to conform to the existing ground, seeded and mulched immediately.

Geotextile fabric which has decomposed or has become ineffective and is still needed shall be replaced with material equal to the original design.

5. Boom Supported Floating Silt Fence

Prior to starting any work within the river, the Contractor shall furnish and install a boom supported floating silt fence to completely surround the work area as shown on the Plans or as approved by the Resident. The boom supported floating silt fence shall remain in place a minimum of 48-hours after the completion of the work. The Contractor shall then remove the boom supported floating silt fence from the river.

The silt fence fabric shall be securely attached to the flotation boom with a continuous weight placed the entire length of the fence to maintain the fence in a vertical submerged position from the surface of the water to the design depth.

Anchor's shall be placed at the ends of the fence, and intermediate locations if

necessary, to hold the fence securely in place.

6. Temporary Mulch

Temporary stabilization with mulch or other non-erodable cover is required on all exposed soils that will not be worked for more than 7 days. Areas within 75 feet of a wetland or waterbody shall be stabilized within 48 hours of the initial disturbance of the soil or prior to any storm event, whichever comes first.

The Contractor is responsible for applying temporary mulch as necessary, in accordance with the latest edition of the BMP's, to minimize soil erosion prior to the application of the final slope treatment.

Temporary mulch applied during the winter months of November 1st through April 15th shall be applied at twice the standard temporary stabilization rate or 150 lbs. per 1,000 square feet or three tons/acre. Mulch shall not be spread on top of snow and shall be anchored with mulch netting on slopes steeper than eight percent unless erosion control blankets or erosion control mix is being used on the slopes.

The Contractor shall review his construction operations and staging to determine how much temporary mulching is required.

656.05 Temporary Erosion and Sedimentation Control Devices - Maintenance

The erosion control devices will be cleaned, repaired or replaced as necessary. All deficiencies shall be corrected immediately by the Contractor.

656.06 Temporary Erosion and Sedimentation Control Devices - Removing and Disposing

When disturbed areas have been permanently stabilized, temporary erosion control devices, including stone check dams, shall be removed. However, erosion control mix filter berms may be spread out, seeded and left to decompose. Areas disturbed during the removal of the erosion control devices shall be repaired and properly stabilized.

When removed, such devices may be reused in other locations provided they are in good condition and suitable to perform the erosion control for which they are intended. Reused devices, if approved, will be measured for payment.

656.07 Erosion Control Compliance Officer

The Contractor shall designate an Erosion Control Compliance Officer (CECCO) on this Project who shall be a "DEP Certified Contractor" or have had equivalent training approved by the Authority. The Contractor shall provide the Resident with the name of the CECCO and any phone numbers or pager numbers that can be used to contact the person in case of emergency.

Before commencing any work that could disturb soils or impact water quality, the CECCO must field review the Project with the Resident's ECCO (RECCO).

656.08 Inspection and Recordkeeping

The CECCO shall accompany the RECCO in the inspection of all erosion control devices. An inspection log shall be maintained by the Resident for the duration of the Project. The log will include daily on-site precipitation and air temperature as well as the performance, failure and/or any corrective action for all erosion and sedimentation controls in place. The log will be updated at least weekly and after all significant storm runoff or flood events. The log shall be signed by the RECCO and the CECCO after each inspection.

Failure to comply with the erosion and sedimentation control requirements herein or as directed by the RECCO within 24-hours after the violation is noted in the inspection log, will result in the $1,000 per day per violation penalty until the violation is corrected to the satisfaction of the Resident.

656.09 Method of Measurement

Baled hay will be measured for payment by the number of bales or bags satisfactorily placed.

Temporary berms and temporary slope drains will be measured for payment by the linear foot measured parallel with the flow line including the pipe inlet.

Temporary silt fence will be measured by the linear foot along the gradient of the fence, end post to end post.

Boom supported floating silt fence will be measured by the linear foot.

Erosion control filter berm shall be measured by the linear foot.

The quantity of additional haybales and silt fence material required herein will be measured for payment only when and if they are actually put to use as additional measures on the Project as approved by the Resident. Haybales and silt fence material used for maintenance or replacement of existing devices will not be measured for payment.

The removal of silt and other material from behind the erosion control devices will not be measured separately for payment, but shall be incidental to the Erosion Control items.

Temporary Mulch – See Section 619 Mulch.

656.10 Basis of Payment

The accepted quantity of baled hay or sandbags will be paid for at the Contract unit price each for each bale or bag which price shall be full compensation for furnishing and placing the bales or sandbags, for furnishing and driving the stakes for baled hay, for maintaining the bales, stakes or

sandbags, and for the removing and disposing of the bales, stakes or sandbags when no longer needed.

The accepted quantity of temporary berms will be paid for at the Contract unit price per linear foot of berm which price shall be full compensation for furnishing, placing and compacting material, for maintaining and for removing the berm when no longer needed.

There will be no separate payment for excavation in the construction of temporary erosion control items under this Section and all necessary excavation shall be incidental to the work.

The accepted quantity of dumped stone will be paid for at the Contract unit price per cubic yard which price shall be full compensation for furnishing the stone, transporting, placing and shaping. Payment for removal or for covering will be made under Item 629.05, Hand Labor, and the appropriate Equipment Rental items.

The accepted quantity of temporary silt fence and boom supported floating silt fence will be paid for at the Contract unit price per linear foot complete in place. Payment shall be full compensation for furnishing, installing, maintaining, anchoring, replacing deteriorated geotextile and clogged geotextile when required and for removing and disposing of the fence when no longer needed.

The accepted quantity of erosion control filter berm will be paid for at the Contract unit price per linear foot under Item 656.632, 30 Inch Temporary Silt Fence, which price shall be full compensation for furnishing, placing, maintaining, and removing the erosion control filter berm.

Cost of seeding and mulching the area after removal of the temporary silt fence will be paid for at the Contract unit prices for Item 618, Seeding, and Item 619, Mulch.

Temporary Mulch – See Section 619 Mulch.

Payment will be made under:

Pay Item		Pay Unit
656.50	Baled Hay, in place	Each
656.60	Temporary Berms	Linear Foot
656.62	Temporary Slope Drains	Linear Foot
656.632	30 inch Temporary Silt Fence	Linear Foot
656.64	Boom Supported Floating Silt Fence	Linear Foot