

**Bridge 076/080 – US Route 3 and NH Route 25 Over  
The Pemigewasset River  
Ashland/Bridgewater Town Line**

**NH Department of Transportation (NHDOT)  
Federal Project Number: X-A003(003)  
NHDOT Project Number: 24904**

**New Hampshire Department of  
Environmental Services**

**Wetlands Bureau Permit Application**

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Hoyle, Tanner Project Number: 19.092595.08



Prepared By:



April 2024

April 19, 2024

D.E.S. Wetlands Bureau  
P.O. Box 95  
Concord, NH 03302-0095

Re: Wetlands Permit Application  
NHDOT Ashland-Bridgewater #24904  
Bridge 076/080 – US Route 3 and NH Route 25 over the Pemigewasset River  
Ashland/Bridgewater Town Line  
Hoyle, Tanner Project No. 19.092595.08

Dear Sir/Madam:

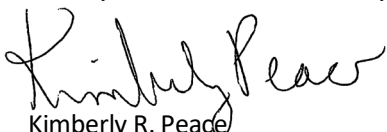
The NH Department of Transportation (NHDOT) is proposing a preservation/rehabilitation project for Bridge #076/080 carrying US Route 3 and NH Route 25 over the Pemigewasset River at the Ashland/Bridgewater Town Line. The goals for this project are to address the bridge deficiencies and extend its service life for an additional 20 years and until such time when replacement is needed, and funding becomes available.

Bridge preservation and rehabilitation measures will include truss span pavement, membrane removal and grid deck replacement, trestle span pavement and membrane replacement, trestle span concrete deck modification and repairs, expansion joint replacement, bridge rail replacement, bridge approach rail replacement, scupper repair/modification and substructure concrete repairs. Roadway approach work will be limited to 192' on the west approach and 285' on the east approach. The Contractor will need to construct a temporary work trestle to access the river pier to complete the repair work.

There will be permanent and temporary resource impacts as a result of the project. All temporary and permanent impacts to the banks will be restored using humus, seed mix and tackifiers upon work completion. A filing fee of \$8,976.40 is included with the package. The current schedule is to commence construction in the spring of 2025 and be completed within two construction seasons.

If you require any additional information, please feel free to contact me at your convenience.

Very truly yours,  
**HOYLE, TANNER & ASSOCIATES, INC.**



Kimberly R. Peace  
Senior Environmental Coordinator

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# STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division/Land Resources Management  
Wetlands Bureau

[Check the Status of your Application](#)



**RSA/Rule:** RSA 482-A/Env-Wt 100-900

**APPLICANT'S NAME:** NH Department of Transportation / David L. Scott, PE      **TOWN NAME:** Ashland/Bridgewater

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

A person may request a waiver of the requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interest of the public or the environment but is still in compliance with RSA 482-A. A person may also request a waiver of the standards for existing dwellings over water pursuant to RSA 482-A:26, III(b). For more information, please consult the [Waiver Request Form](#).

<b>SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))</b>	
Please use the <a href="#">Wetland Permit Planning Tool (WPPT)</a> , the Natural Heritage Bureau (NHB) <a href="#">DataCheck Tool</a> , the <a href="#">Aquatic Restoration Mapper</a> , or other sources to assist in identifying key features such as: <a href="#">priority resource areas (PRAs)</a> , <a href="#">protected species or habitats</a> , coastal areas, designated rivers, or designated prime wetlands.	
Has the required planning been completed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does the property contain a PRA? If yes, provide the following information:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> <li>• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&amp;G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.</li> </ul>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> <li>• Protected species or habitat?                             <ul style="list-style-type: none"> <li>○ If yes, species or habitat name(s):</li> <li>○ NHB Project ID #: NHB23-2745</li> </ul> </li> </ul>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
• Bog?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
• Designated prime wetland or duly-established 100-foot buffer?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is the property within a Designated River corridor? If yes, provide the following information:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> <li>• Name of Local River Management Advisory Committee (LAC): Pemigewasset River Local Advisory Committee</li> </ul>	



• A copy of the application was sent to the LAC on Month: <input type="text"/> Day: <input type="text"/> Year: <input type="text"/>		
For dredging projects, is the subject property contaminated? • If yes, list contaminant: <input type="text"/>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For stream crossing projects, provide watershed size (see <a href="#">WPPT</a> or Stream Stats): 635 sq miles/406,522 Acres		
<b>SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))</b>		
Provide a <b>brief</b> description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.		
<p>The NH Department of Transportation (NHDOT) is proposing a preservation/rehabilitation project for Bridge #076/080 carrying US Route 3 and NH Route 25 over the Pemigewasset River at the Ashland/Bridgewater Town Line. The goals for this project are to address the bridge deficiencies and extend its service life for an additional 20 years and until such time when replacement is needed, and funding becomes available.</p> <p>Bridge preservation and rehabilitation measures will include truss span pavement, membrane removal and grid deck replacement, trestle span pavement and membrane replacement, trestle span concrete deck modification and repairs, expansion joint replacement, bridge rail replacement, bridge approach rail replacement, scupper repair/modification and substructure concrete repairs. Roadway approach work will be limited to 192' on the west approach and 285' on the east approach. The Contractor will need to construct a temporary work trestle to access the river pier to complete the repair work.</p> <p>The proposed project would result in a total of 20,444 square feet and 142 linear feet of temporary wetland impact and 1,997 square feet and 70 linear feet of permanent wetland impact. Temporary impacts are associated with space for the installation of water diversion structures, installation of a trestle and cofferdams to access the bridge center pier in the river for performing repairs, and other erosion control best management practices. Permanent impacts are associated with vegetation clearing and excavation in the bank to allow for the contractor to install a trestle to access the center pier of the bridge and for support towers to allow for work on the substructure.</p>		
<b>SECTION 3 - PROJECT LOCATION</b>		
Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.		
ADDRESS: Bridge #076/080 carrying US Route 3 and NH Route 25		
TOWN/CITY: Ashland/Bridgewater Town Line		
TAX MAP/BLOCK/LOT/UNIT: Adjacent to Ashland Map 213, Lots 1 & 2 and Bridgewater Map 202 Lots 10 & 14		
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Pemigewasset River <input type="checkbox"/> N/A		
(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places):      43.70894° North / -71.65428° West		
<b>SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))</b>		
If the applicant is a trust or a company, then complete with the trust or company information.		
NAME: NH Department of Transportation / David L. Scott, PE		
MAILING ADDRESS: P.O. Box 483, 7 Hazen Drive		
TOWN/CITY: Concord	STATE: NH	ZIP CODE: 03302
EMAIL ADDRESS: <a href="mailto:david.l.scott@dot.nh.gov">david.l.scott@dot.nh.gov</a>		

FAX: (603) 271-2759		PHONE: (603) 271-2731	
ELECTRONIC COMMUNICATION: By initialing here:- <u>DLS</u> , I hereby authorize NHDES to communicate all matters relative to this application electronically.			
<b>SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))</b>			
<input type="checkbox"/> N/A			
LAST NAME, FIRST NAME, M.I.: Peace, Kimberly R.			
COMPANY NAME: Hoyle, Tanner & Associates, Inc.			
MAILING ADDRESS: 150 Dow Street			
TOWN/CITY: Manchester		STATE: NH	ZIP CODE: 03101
EMAIL ADDRESS: kpeace@hoyletanner.com			
FAX: 603-669-4168		PHONE: (603) 460-5205	
ELECTRONIC COMMUNICATION: By initialing here <u>KRP</u> , I hereby authorize NHDES to communicate all matters relative to this application electronically.			
<b>SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))</b>			
If the owner is a trust or a company, then complete with the trust or company information.			
<input checked="" type="checkbox"/> Same as applicant			
NAME: [REDACTED]			
MAILING ADDRESS: [REDACTED]			
TOWN/CITY: [REDACTED]		STATE: [REDACTED]	ZIP CODE: [REDACTED]
EMAIL ADDRESS: [REDACTED]			
FAX: [REDACTED]		PHONE: [REDACTED]	
ELECTRONIC COMMUNICATION: By initialing here [REDACTED], I hereby authorize NHDES to communicate all matters relative to this application electronically.			
<b>SECTION 7 - RESOURCE-SPECIFIC CRITERIA ESTABLISHED IN Env-Wt 400, Env-Wt 500, Env-Wt 600, Env-Wt 700, OR Env-Wt 900 HAVE BEEN MET (Env-Wt 313.01(a)(3))</b>			
Describe how the resource-specific criteria have been met for each chapter listed above (please attach information about stream crossings, coastal resources, prime wetlands, or non-tidal wetlands and surface waters):			
In accordance with Env-Wt 400 the jurisdictional areas within the project limits have been delineated by Joanne Theriault, NH Certified Wetland Scientist #305. A copy of the Wetland Delineation Report is included with this application. The jurisdictional areas are referenced on the included wetland impact plan.			
The project has been designed in accordance with, Env-Wt 904.01, Env-Wt 904.02, and Env-Wt 904.09 to address structure/stream crossing impacts and Env-W5 514 to address bank stabilization. Project-specific information is contained within this permit application.			
<b>SECTION 8 - AVOIDANCE AND MINIMIZATION</b>			
The Avoidance and Minimization Checklist is attached to this permit application.			

**SECTION 9 - MITIGATION REQUIREMENT (Env-Wt 311.02)**  
 If unavoidable jurisdictional impacts require mitigation, a mitigation [pre-application meeting](#) must occur at least 30 days but not more than 90 days prior to submitting this Standard Dredge and Fill Permit Application.

Mitigation Pre-Application Meeting Date: Month: 10 Day: 18 Year: 2023  
 N/A - Mitigation is not required

**SECTION 10 - THE PROJECT MEETS COMPENSATORY MITIGATION REQUIREMENTS (Env-Wt 313.01(a)(1)c)**

Confirm that you have submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent unavoidable impacts that will remain after avoidance and minimization techniques have been exercised to the maximum extent practicable:  I confirm submittal.

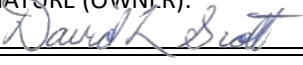
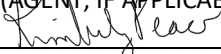
N/A - Per Env-Wt 313.04(a)(1), (3) and (7) mitigation is not required for the proposed project because: there will be no permanent impact to a PRA, the total permanent impacts to freshwater nontidal wetlands are less than 10,000 sf, the total new permanent bank and channel impacts are less than 200 lf, and the project is the modification of a Tier 3 stream crossing that is being rehabilitated pursuant to Env-Wt 904.09.

**SECTION 11 - IMPACT AREA (Env-Wt 311.04(g))**

For each jurisdictional area that will be/has been impacted, provide square feet (SF) and, if applicable, linear feet (LF) of impact, and note whether the impact is after-the-fact (ATF; i.e., work was started or completed without a permit).  
 For intermittent and ephemeral streams, the linear footage of impact is measured along the thread of the channel. *Please note, installation of a stream crossing in an ephemeral stream may be undertaken without a permit per Rule Env-Wt 309.02(d), however other dredge or fill impacts should be included below.*  
 For perennial streams/ivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.  
 Permanent impacts are impacts that will remain after the project is complete (e.g., changes in grade or surface materials).  
 Temporary impacts are impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland			<input type="checkbox"/>	259		<input type="checkbox"/>
	Scrub-shrub Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Emergent Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Wet Meadow			<input type="checkbox"/>			<input type="checkbox"/>
	Vernal Pool			<input type="checkbox"/>			<input type="checkbox"/>
	Designated Prime Wetland			<input type="checkbox"/>			<input type="checkbox"/>
	Duly-established 100-foot Prime Wetland Buffer			<input type="checkbox"/>			<input type="checkbox"/>
Surface Water	Intermittent / Ephemeral Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Perennial Stream or River			<input type="checkbox"/>	20,185	142	<input type="checkbox"/>
	Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
	Docking - River			<input type="checkbox"/>			<input type="checkbox"/>
Banks	Bank - Intermittent Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Bank - Perennial Stream / River	1,997	70	<input type="checkbox"/>			<input type="checkbox"/>
	Bank / Shoreline - Lake / Pond			<input type="checkbox"/>			<input type="checkbox"/>
Tidal	Tidal Waters			<input type="checkbox"/>			<input type="checkbox"/>
	Tidal Marsh			<input type="checkbox"/>			<input type="checkbox"/>
	Sand Dune			<input type="checkbox"/>			<input type="checkbox"/>
	Undeveloped Tidal Buffer Zone (TBZ)			<input type="checkbox"/>			<input type="checkbox"/>

Previously-developed TBZ			<input type="checkbox"/>			<input type="checkbox"/>
Docking - Tidal Water			<input type="checkbox"/>			<input type="checkbox"/>
<b>TOTAL</b>	<b>1,997</b>	<b>70</b>		<b>20,444</b>	<b>142</b>	
<b>SECTION 12 - APPLICATION FEE (RSA 482-A:3, I)</b>						
<input type="checkbox"/> <b>MINIMUM IMPACT FEE:</b> Flat fee of \$400.						
<input type="checkbox"/> <b>NON-ENFORCEMENT RELATED, PUBLICLY-FUNDED AND SUPERVISED RESTORATION PROJECTS, REGARDLESS OF IMPACT CLASSIFICATION:</b> Flat fee of \$400 (refer to RSA 482-A:3, 1(c) for restrictions).						
<input checked="" type="checkbox"/> <b>MINOR OR MAJOR IMPACT FEE:</b> Calculate using the table below:						
Permanent and temporary (non-docking):		22,441 SF		× \$0.40 =	\$ 8,976.40	
Seasonal docking structure:		SF		× \$2.00 =	\$	
Permanent docking structure:		SF		× \$4.00 =	\$	
Projects proposing shoreline structures (including docks) add \$400 =					\$	
					Total =	\$ 8,976.40
<b>The application fee for minor or major impact is the above calculated total or \$400, whichever is greater = \$ 8,976.40</b>						
<b>SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)</b>						
Indicate the project classification.						
<input type="checkbox"/> Minimum Impact Project		<input type="checkbox"/> Minor Project		<input checked="" type="checkbox"/> Major Project		
<b>SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)</b>						
<b>Initial each box below to certify:</b>						
Initials: <i>DLS</i>	To the best of the signer's knowledge and belief, all required notifications have been provided.					
Initials: <i>DLS</i>	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.					
Initials: <i>DLS</i>	The signer understands that: <ul style="list-style-type: none"> <li>The submission of false, incomplete, or misleading information constitutes grounds for NHDES to:                         <ol style="list-style-type: none"> <li>Deny the application.</li> <li>Revoke any approval that is granted based on the information.</li> <li>If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1.</li> </ol> </li> </ul>					
Initials: N/A	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.					

SECTION 15 - REQUIRED SIGNATURES (Env-Wt 311.04(d); Env-Wt 311.11)		
SIGNATURE (OWNER): 	PRINT NAME LEGIBLY: David L. Scott	DATE: 4/30/2024
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER): _____	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE): 	PRINT NAME LEGIBLY: Kimberly Peace	DATE: 4/19/2024
SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))		
As required by RSA 482-A:3, I(a)(1), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.		
TOWN/CITY CLERK SIGNATURE: _____	PRINT NAME LEGIBLY: <b>Please refer to Env-Wt 311.05(a)(14) &amp; RSA 482-A:31(a)(I). The four town copies have sent via certified mail and filed directly with the towns of Ashland and Bridgewater in accordance with the above rule and regulation.</b>	
TOWN/CITY:	DATE:	

**DIRECTIONS FOR TOWN/CITY CLERK:**

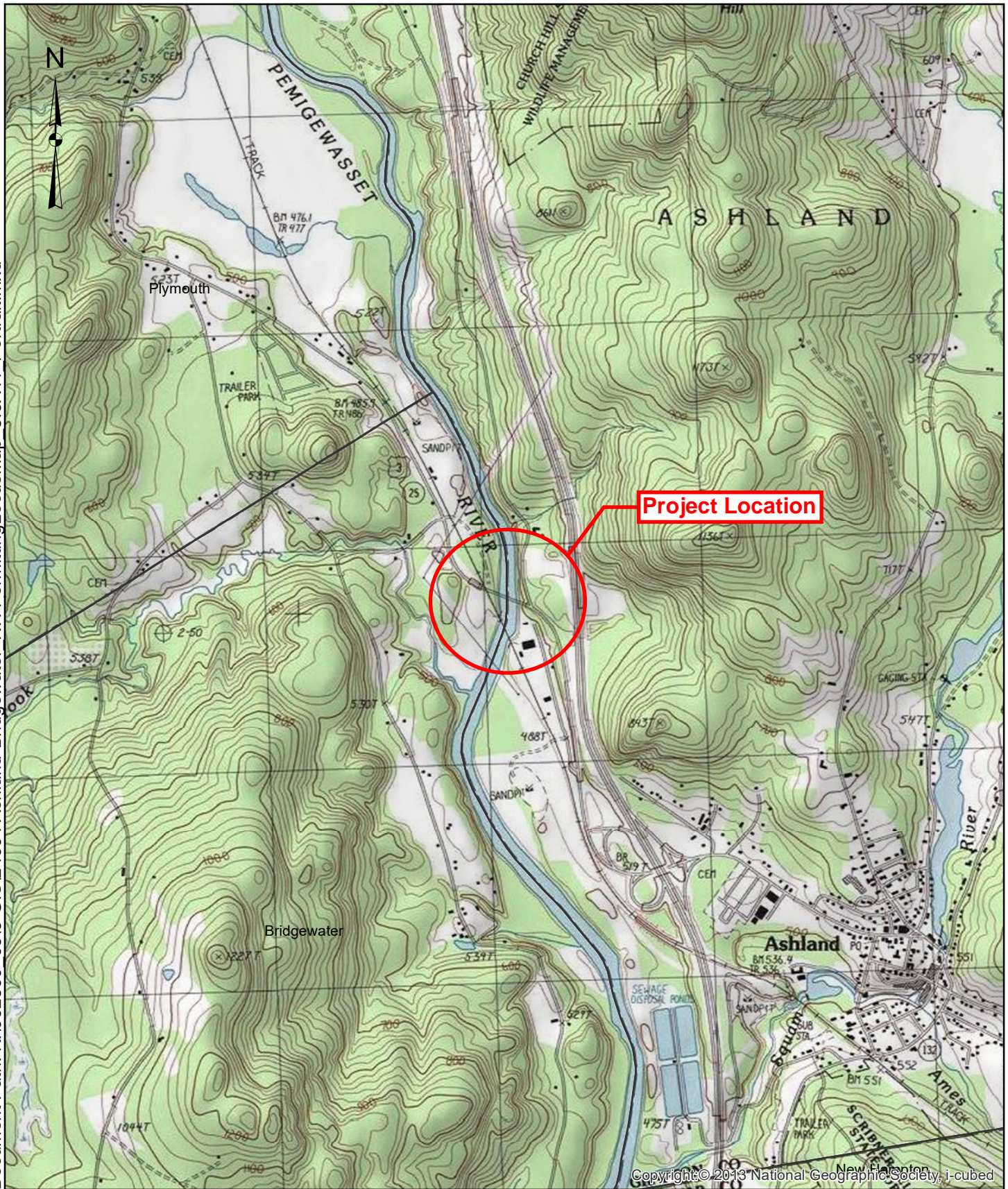
Per RSA 482-A:3, I(a)(1)


1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board.
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

**DIRECTIONS FOR APPLICANT:**

Submit the original permit application form bearing the signature of the Town/City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery at the address at the bottom of this page. Make check or money order payable to "Treasurer – State of NH".





		150 Dow Street Manchester, NH 03101-1227 Tel 603-669-8555 Fax 603-669-4168 Web Page www.hoyletanner.com	ASHLAND-BRIDGEWATER BRIDGE REHABILITATION US ROUTE 3/NH ROUTE 25 OVER THE PEMIGEWASSET RIVER ASHLAND AND BRIDGEWATER, NH
DR. BY jtheriault	DATE 2/25/2020	SCALE 1 inch = 2,000 feet	PROJECT LOCATION MAP





**STANDARD DREDGE AND FILL  
WETLANDS PERMIT APPLICATION  
ATTACHMENT A: MINOR AND MAJOR PROJECTS**



Water Division/Land Resources Management  
Wetlands Bureau

[Check the Status of your Application](#)

**RSA/ Rule:** RSA 482-A/ Env-Wt 311.10; Env-Wt 313.01(a)(1); Env-Wt 313.03

**APPLICANT'S NAME:** NH Department of Transportation / David L. Scott, PE      **TOWN NAME:** Ashland/Bridgewater

Attachment A is required for *all minor and major projects*, and must be completed *in addition* to the [Avoidance and Minimization Narrative](#) or [Checklist](#) that is required by Env-Wt 307.11.

For projects involving construction or modification of non-tidal shoreline structures over areas of surface waters having an absence of wetland vegetation, only Sections I.X through I.XV are required to be completed.

**PART I: AVOIDANCE AND MINIMIZATION**

In accordance with Env-Wt 313.03(a), the Department shall not approve any alteration of any jurisdictional area unless the applicant demonstrates that the potential impacts to jurisdictional areas have been avoided to the maximum extent practicable and that any unavoidable impacts have been minimized, as described in the [Wetlands Best Management Practice Techniques For Avoidance and Minimization](#).

**SECTION I.I - ALTERNATIVES (Env-Wt 313.03(b)(1))**

Describe how there is no practicable alternative that would have a less adverse impact on the area and environments under the Department's jurisdiction.

Streambed and bank impacts have been minimized to the extent practicable while meeting the project purpose and need of preserving and rehabilitating the bridge. As a part of this project concrete repairs are necessary on the river pier. The Contractor will need to construct a temporary work trestle to access the river pier to complete the repair work. A trestle was chosen as opposed to the installation of a causeway to reduce impacts to the bed and bank of the river. Permanent impacts include excavation in the bank to allow for the trestle to be constructed. Upon project completion all piles will be removed, and the bed and bank will be restored. There will be no permanent change in the grade of the banks.

**SECTION I.II - MARSHES (Env-Wt 313.03(b)(2))**

Describe how the project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented to provide sources of nutrients for finfish, crustacean, shellfish, and wildlife of significant value.

N/A – this project is not located within tidal waters or marshes.

**SECTION I.III - HYDROLOGIC CONNECTION (Env-Wt 313.03(b)(3))**

Describe how the project maintains hydrologic connections between adjacent wetland or stream systems.

Installation of the trestle will not have an effect on hydrologic connections between adjacent wetland or stream systems. The span of the river at the bridge is approximately 280' and the installation of the trestle will have a negligible effect on hydraulic connection.

[irm@des.nh.gov](mailto:irm@des.nh.gov) or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

[www.des.nh.gov](http://www.des.nh.gov)

**SECTION I.IV - JURISDICTIONAL IMPACTS (Env-Wt 313.03(b)(4))**

Describe how the project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern, or any combination thereof.

Impacts to the jurisdictional bank and bed of Pemigewasset River are necessary to access the pier for necessary repairs for the protection of the bridge, but these impacts have been minimized to the extent practicable. There are no exemplary natural communities, vernal pools, protected species or protected habitat, or documented fisheries. The NHDES Wetlands Permit Planning Tool shows the proposed project area is not predicted or cold-water fisheries habitat. Temporary impact areas that include soil disturbance and vegetation removal will be restored to the pre-existing conditions.

**SECTION I.V - PUBLIC COMMERCE, NAVIGATION, OR RECREATION (Env-Wt 313.03(b)(5))**

Describe how the project avoids and minimizes impacts that eliminate, depreciate or obstruct public commerce, navigation, or recreation.

The proposed preservation/rehabilitation project will have a positive effect on public commerce. The project will enhance roadway safety to the traveling public by extending service life of the bridge for an additional 20 years and until such time when replacement is needed and funding becomes available.

The project will have no impact on navigation or recreation. The Pemigewasset River is navigable by recreational watercraft but in 2020 the Coast Guard determined that they would waive navigability on this bridge and will not have any requirements in terms of repair or replacement.

**SECTION I.VI - FLOODPLAIN WETLANDS (Env-Wt 313.03(b)(6))**

Describe how the project avoids and minimizes impacts to floodplain wetlands that provide flood storage.

A wetland delineation report (attached) prepared for the project indicates there is little floodplain wetland development present within the project area due to the steep banks. The proposed project will temporarily impact a single floodplain wetland that will be restored upon completion.

**SECTION I.VII - RIVERINE FORESTED WETLAND SYSTEMS AND SCRUB-SHRUB – MARSH COMPLEXES (Env-Wt 313.03(b)(7))**

Describe how the project avoids and minimizes impacts to natural riverine forested wetland systems and scrub-shrub – marsh complexes of high ecological integrity.

N/A

**SECTION I.VIII - DRINKING WATER SUPPLY AND GROUNDWATER AQUIFER LEVELS (Env-Wt 313.03(b)(8))**

Describe how the project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

N/A

**SECTION I.IX - STREAM CHANNELS (Env-Wt 313.03(b)(9))**

Describe how the project avoids and minimizes adverse impacts to stream channels and the ability of such channels to handle runoff of waters.

There will be no adverse impacts to stream channel and the ability of the channel to handle runoff of waters. Impacts to the Pemigewasset River channel will be mostly temporary and are necessary to access the pier for repairs. There will be no change in grade of the banks and once construction is complete the channel and banks will be restored.

**SECTION I.X - SHORELINE STRUCTURES - CONSTRUCTION SURFACE AREA (Env-Wt 313.03(c)(1))**

Describe how the project has been designed to use the minimum construction surface area over surface waters necessary to meet the stated purpose of the structures.

N/A – No shoreline structures are proposed.

**SECTION I.XI - SHORELINE STRUCTURES - LEAST INTRUSIVE UPON PUBLIC TRUST (Env-Wt 313.03(c)(2))**

Describe how the type of construction proposed is the least intrusive upon the public trust that will ensure safe docking on the frontage.

N/A – No shoreline structures are proposed.

**SECTION I.XII - SHORELINE STRUCTURES – ABUTTING PROPERTIES (Env-Wt 313.03(c)(3))**

Describe how the structures have been designed to avoid and minimize impacts on ability of abutting owners to use and enjoy their properties.

N/A – No shoreline structures are proposed.

**SECTION I.XIII - SHORELINE STRUCTURES – COMMERCE AND RECREATION (Env-Wt 313.03(c)(4))**

Describe how the structures have been designed to avoid and minimize impacts to the public’s right to navigation, passage, and use of the resource for commerce and recreation.

N/A – No shoreline structures are proposed.

**SECTION I.XIV - SHORELINE STRUCTURES – WATER QUALITY, AQUATIC VEGETATION, WILDLIFE AND FINFISH HABITAT (Env-Wt 313.03(c)(5))**

Describe how the structures have been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.

N/A – No shoreline structures are proposed.

**SECTION I.XV - SHORELINE STRUCTURES – VEGETATION REMOVAL, ACCESS POINTS, AND SHORELINE STABILITY (Env-Wt 313.03(c)(6))**

Describe how the structures have been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.

N/A – No shoreline structures are proposed.

**PART II: FUNCTIONAL ASSESSMENT**

**REQUIREMENTS**

Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).

**FUNCTIONAL ASSESSMENT METHOD USED:**

Hoyle, Tanner & Associates, Inc. has prepared a functional assessment using the NHDES Functional Assessment Worksheet (NHDES-W-06-049). A summary narrative of the assessment results is part of the Wetland Delineation Report included with this application.

**NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT:** Joanne Theriault, CWS #305

**DATE OF ASSESSMENT:** October 19, 2022

Check this box to confirm that the application includes a **NARRATIVE ON FUNCTIONAL ASSESSMENT:**



For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the **RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED**. Check this box to confirm that the application includes this information, if applicable:



Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

**NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES**  
**WETLAND PERMIT APPLICATION**  
for  
**Bridge 076/080 – US Route 3 and NH Route 25 Over The Pemigewasset River**  
**Ashland/Bridgewater Town Line**  
**Supplemental Narrative**

The following information is offered as a supplement to the information provided in the Wetland Permit Application and Plans.

**Purpose and Need:**

The purpose of the project is to maintain safety and protect the traveling public by addressing the condition of the bridge and bridge rail capacity deficiencies and to extend its service life. The need is based on the degraded condition of the existing structure.

**Resources:**

Hoyle, Tanner & Associates, Inc. (Hoyle Tanner) completed the wetland and streams delineation as well as functions and values assessment for NHDOT's Bridge No. 076/080 Preservation/Rehabilitation Project. Wetlands were delineated in accordance with Env-Wt 406.01; Hoyle Tanner's methodology is described in the included Wetland Delineation Report. Hoyle Tanner describes the Pemigewasset River in the vicinity of the US Route 3 crossing is R3UB1H (Riverine, Upper Perennial Flow Regime, Unconsolidated Bottom, Gravel/Cobble Substrate, Permanently Flooded). An intermittent stream was noted and delineated from North Ashland Road to the Pemigewasset River upstream of the crossing. This stream was dry at the time of survey but has severely eroded and steeply sloping banks, indicating flashy flows at times of snowmelt and high precipitation events. One wetland was delineated downstream of the bridge above the eastern bank. The wetland is classified as PFO1E (Palustrine, Forested, Broad-Leaf Deciduous Vegetation, Seasonally Flooded/Saturated). A summary narrative of the Functions and Values Assessment is part of the Wetland Delineation Report included with this application.

**Explanation as to methods, timing, and manner as to how the project will meet applicable standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7))**

Env-Wt 307.02 (US Army Corps of Engineers (USACE) Conditions). Appendix B is attached to this permit application. NHDOT seeks and requests to receive review and approval by the Army Corps of Engineers through their General Permit and via submittal of this State wetlands permit application to NHDES.

Env-Wt 307.03 (Protection of Water Quality Required). The contractor shall be responsible for implementing Erosion and Sediment control measures in accordance with the "New Hampshire Stormwater Manual, Volume 3 Erosion and Sediment Controls during Construction" by NHDES. Erosion and siltation control measures will be installed by the Contractor prior to start of any work and will be maintained during the duration of the construction activities. It is the Contractor's responsibility to not cause violations of surface water quality standards. Upon completion of the project, the project will cause no adverse effects on the quality or quantity of surface or groundwater entering or exiting the project site.

Env-Wt 307.04 (Protection of Fisheries and Breeding Areas Required). There are no predicted or identified cold water fisheries associated with the Pemigewasset River in this location.

Env-Wt 307.05 (Protection Against Invasive Species Required) Hoyle Tanner performed a Wetland Delineation of the project area and noted the following: "Invasive species were noted in the project area.

Oriental bittersweet (*Celastrus orbiculatus*) was common on and above the banks of the Pemigewasset River, particularly above the eastern bank just south of the crossing. Stems and small populations of Japanese knotweed (*Reynoutria japonica*) and burning bush (*Euonymus alatus*) were also noted on and above the eastern bank." The contractor will be responsible for preparing and implementing an Invasive Species Control and Management Plan that is compliant with the NHDOT manual Best Management Practices for the Control of Invasive and Noxious Plant Species.

Env-Wt 307.06 (Protection of Rare, Threatened or Endangered Species and Critical Habitat) The NH Natural Heritage Bureau was contacted regarding the proposed project (see attached letter NHB23-1025, dated 09/14/2024). The database check determined that there are no recorded occurrences for sensitive species near the project area. A copy of the DataCheck Report is included with this application.

An official Federally-listed species list was obtained from the US Fish and Wildlife Service (USFWS) using the Information for Planning and Conservation (IPAC) online tool. The list includes the Federally-endangered Northern Long Eared Bat (*Myotis septentrionalis*; NLEB), proposed endangered Tricolored Bat (*Perimyotis subflavus*), and the Monarch Butterfly (*Danaus plexippus*) as a candidate species. A copy of the species list is included with this permit application.

USF&W has reviewed the effects of the proposed project on NLEB. In a letter dated July 5, 2023, USF&W determined that the Project may rely on the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) and determined the project will have no effect on the endangered northern long-eared bat (*Myotis septentrionalis*). If the Proposed Action is not modified, no consultation is required for these two species. A copy of the letter is included with this permit application.

The USFWS has proposed to list the Tricolored Bat as endangered under the Endangered Species Act. A final determination about listing the Tricolored Bat is anticipated in the summer of 2024. If the Tricolored Bat is listed as endangered, the project includes suitable Tricolored Bat habitat, and the project tree clearing would not be completed prior to the effective listing date, consultation with USFWS will be required for any proposed impacts to Tricolored Bat habitat. Avoidance and minimization measures may need to be incorporated into the project for the Tricolored Bat if it is listed under the Endangered Species Act. To reduce the chance of impacting the Tricolored Bat, the project may complete tree clearing during the winter when the Tricolored Bat is hibernating and would not be present in the suitable summer habitat in the project area.

Env-Wt 307.07 (Consistency Required with Shoreland Water Quality Protection Act). The Pemigewasset River is a NHDES Designated River and is subject to the Shoreland Water Quality Protection Act (SWQPA) (NH RSA 483-B). A Shoreland Permit will be applied for the project.

Env-Wt 307.11 (Filling Activity Conditions). All fill material shall conform to the requirements listed in Env-Wt 307.11.

Env-Wt 307.12 (Restoring Temporary Impacts: Site Stabilization) Upon completion of the project all temporary impact areas will be restored per the requirements listed in Env-Wt 307.12.

Env-Wt 307.13 (Property Line Setbacks): Access under the bridge and for the river pier rehabilitation work is shown on the plans provided in this application. Should land outside of these areas be used, easements will be obtained prior to construction. The NHDOT has coordinated access needs with the Town of



Bridgewater, and they have agreed to grant access. Access on the easterly side of the river will be from private land through a NHDOT ROW under the bridge. NHDOT will coordinate with this property owner to gain access and an easement will be obtained. The NHDOT requests that obtaining any necessary easements be made a condition of the permit.

Env-Wt 307.15 (Use of Heavy Equipment in Wetlands) In order to construct the proposed project, heavy equipment will need to traverse the stream banks and over the Pemigewasset River. An access trestle will be established from the western bank and temporary stone fill (riprap) to stabilize soils and for the prevention of erosion will be installed on the bank. Fills shall be limited to the wetland impact areas shown on the attached project plans. Temporary access routes will be restored to pre-construction condition at the conclusion of the proposed project and the stone fill (riprap) will be removed.

Env-Wt 307.16 (Adherence to Approved Plans Required) All work shall be in accordance with the plans prepared by Hoyle Tanner and approved by NHDES.

Env-Wt 307.18 (Reports) The contractor will be responsible for preparing a Storm Water Pollution Prevention Plan. This plan will be submitted to NHDES for approval prior to the contractor working within jurisdictional resources.

**Statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h))**

A copy of this wetland permit application was submitted by the NHDOT to the Towns of Ashland and Bridgewater for distribution to the respective Conservation Commissions concurrent with submittal of the application to NHDES.

**Stream Crossings (Env-Wt 900)**

Since the proposed bridge rehabilitation project is located on a watercourse where the contributing watershed exceeds 640 acres and the bridge is considered a tier 3 stream crossing, the stream crossing standards as outlined in New Hampshire Administrative Rule Env-Wt 900 must be addressed.

**Env-Wt 904.01: General Design Considerations**

*(a) All stream crossings, whether over tidal or non-tidal waters, shall be designed and constructed so as to:*

*(1) Not be a barrier to sediment transport;*

The proposed bridge rehabilitation activities will maintain the existing hydrology of the stream crossing, ensuring that the project will not be a barrier to sediment transport.

*(2) Not restrict high flows and maintain existing low flows;*

The rehabilitated bridge will maintain the existing hydraulic capacity of the stream crossing. The pier repairs will have no impact on the hydrology of the watercourse or surrounding features.

*(3) Not obstruct or otherwise substantially disrupt the movement of aquatic organisms indigenous to the waterbody beyond the actual duration of construction;*

The rehabilitated bridge structure will maintain the existing movement of aquatic life. The limited and mostly temporary riverbed and bank impacts will not permanently impact aquatic organism passage.

*(4) Not cause an increase in the frequency of flooding or overtopping of banks;*

The proposed project is located within the floodway and 100-year floodplain of Pemigewasset River; however, the hydraulic capacity of the stream crossing will be maintained. There will be no increase in the frequency of flooding or overtopping of banks as a result of this project.

*(5) Maintain or enhance geomorphic compatibility by:*

- a. Minimizing the potential for inlet obstruction by sediment, wood, or debris; and*
- b. Preserving the natural alignment of the stream channel;*

The current geomorphic compatibility of the bridge will be maintained. The potential for sediment, wood, or debris obstruction post-construction will not exceed that of the existing structure. The existing channel alignment of Pemigewasset River will be preserved, as no realignment is included in the project design.

*(6) Preserve watercourse connectivity where it currently exists;*

No significant disruptions in overall hydrological connectivity currently exists at this crossing. The rehabilitated bridge structure will have the same footprint as the existing structure, thus maintaining and preserving the existing watercourse connectivity.

*(7) Restore watercourse connectivity where:*

- a. Connectivity previously was disrupted as a result of human activity(ies); and*
- b. Restoration of connectivity will benefit aquatic organisms upstream or downstream of the crossing, or both;*

Not applicable.

*(8) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and*

The temporary installation of riprap over geotextile fill in the bank areas necessary for the installation of the temporary trestle will prevent erosion and aggradation of the bank during construction. As there are no changes to the stream crossing structure, there will be no changes to the existing conditions in regard to erosion, aggradation, or scouring upstream or downstream of the crossing.

*(9) Not cause water quality degradation.*

The rehabilitated bridge structure will not cause water quality degradation. Best Management Practices and ESC measures will be utilized as noted and shown on the attached plans.

*(b) For stream crossings over tidal waters, the stream crossing shall be designed to:*

- (1) Match the velocity, depth, cross-sectional area, and substrate of the natural stream; and*
- (2) Be of sufficient size to not restrict bi-directional tidal flow over the natural tide range above, below, and through the crossing.*

Not applicable.

### **Env-Wt 904.05: Tier 3 Stream Crossings**

*(a) Subject to (b), below, a tier 3 stream crossing shall be a crossing located:*

*(1) On a watercourse where the contributing watershed is 640 acres or greater;*

*(2) Within a designated river corridor, unless:*

*a. The crossing would be a tier 1 stream based on the contributing watershed size; or*

*b. The structure does not create a direct surface water connection to the designated river as depicted on the national hydrography dataset as found on GRANIT;*

*(3) Within a 100-year flood plain;*

*(4) In a jurisdictional area having any protected species or habitat; or*

*(5) In a prime wetlands or within a duly-established 100-foot buffer, unless a waiver has been granted pursuant to RSA 482-A:11, IV(b) and Env-Wt 706.*

The watershed of the Pemigewasset River, which crosses under Bridge No. 076/080 located on the Ashland-Bridgewater town line, is approximately 406,552 acres in size (or 635 square miles). Refer to the Watershed Map included in this application. The stream crossing is also located within the 100-year floodplain of the Pemigewasset River. Therefore, this stream crossing is classified as a Tier 3 stream.

*(b) The applicant for a project in which a stream crossing is categorized as tier 3 based solely on being in a 100-year floodplain may request that the crossing be categorized as a tier 1 or tier 2 stream crossing, as applicable based on watershed size, if the impacts to the floodplain are specifically mitigated in accordance with Env-Wt 800.*

Not applicable.

*(c) If an applicant for a project in which a stream crossing is categorized as tier 3 based solely in a jurisdictional area having any protected species or habitat may request that the crossing be categorized as tier 1 or tier 2 based on watershed size, provided:*

*(1) The applicant consults with NHB to determine whether any protected plant species or habitat would be impacted;*

*(2) The applicant consults with NHF&G to determine whether any protected species or habitat is impacted; and*

*(3) The NHB, NHF&G, or both, as applicable, recommend(s) such a downgrade to the department in writing.*

Not applicable.

*(d) A tier 3 stream crossing shall be a span structure or an open-bottomed culvert with stream simulation, not a closed-bottom culvert or pipe arch.*

The bridge structure is, and will continue to be, an open-bottomed span structure.

*(e) The applicant shall use an alternative design by submitting a request as specified in Env-Wt 904.10.*

Not applicable.

*(f) Compensatory mitigation shall not be required for:*

*(1) Any new tier 3 stream crossing that:*

*a. Meets the general design criteria in Env-Wt 904.01 and the tier-specific criteria of Env-Wt 904.07;*

- b. Is self-mitigating; and*
- c. Improves aquatic organism passage, connectivity, and hydraulics; or*
- (2) Any replacement of a crossing that met all applicable requirements when originally installed but is in a location that results in the crossing being classified as tier 3 under these rules, provided the proposed stream crossing meets the requirements of Env-Wt 904.09.*

Not applicable.

*(g) Plans for a tier 3 stream crossing shall be dated and bear the signature of the professional engineer who prepared or had responsibility for and approved them, as required by RSA 310-A:18.*

Refer to the Wetland Impact Plans that have been dated and signed by a licensed NH professional engineer.

#### **Env-Wt 904.09: Repair, Rehabilitation, or Replacement of Tier 3 and Tier 4 Existing Legal Crossings**

*(a) The repair, rehabilitation, or replacement of tier 3 stream crossings shall be limited to existing legal crossings where the tier classification is based only on the size of the contributing watershed.*

The stream crossing is classified as tier 3 due to the size of the contributing watershed, but also because it is located within the 100-year floodplain of Pemigewasset River.

*(b) Rehabilitation of a culvert or other closed-bottom stream crossing structure pursuant to this section may be accomplished by concrete repair, slip lining, cured-in place lining, or concrete invert lining, or any combination thereof, except that slip lining shall not occur more than once.*

Not applicable.

*(c) A project shall qualify under this section only if a professional engineer certifies, and provides supporting analyses to show, that:*

- (1) The existing crossing does not have a history of causing or contributing to flooding that damages the crossing or other human infrastructure or protected species habitat; and*

The existing crossing does not have a history of causing or contributing to damaging flooding events.

*(2) The proposed stream crossing will:*

- a. Meet the general criteria specified in Env-Wt 904.01;*

Refer to the previous description for additional information regarding the proposed project's compliance with the general criteria specified in Env-Wt 904.01.

- b. Maintain or enhance the hydraulic capacity of the stream crossing;*

The project is preservation/rehabilitation of an existing structure that will maintain the hydraulic capacity of the stream crossing.

- c. Maintain or enhance the capacity of the crossing to accommodate aquatic organism passage;*

The capacity of the stream crossing to accommodate aquatic organism passage will be maintained. The bridge opening will not be narrowed and will remain an open bottom structure.

*d. Maintain or enhance the connectivity of the stream reaches upstream or downstream of the crossing; and*

The connectivity of the stream reaches upstream and downstream of the crossing will be maintained. The limited scope of work proposed within jurisdictional areas will not negatively impact stream connectivity.

*e. Not cause or contribute to the increase in the frequency of flooding or overtopping of the banks upstream or downstream of the crossing.*

The proposed rehabilitation activities will not cause or contribute to the increase in the frequency of flooding or overtopping of the banks upstream or downstream of the crossing. The hydraulic capacity of the rehabilitated bridge will remain the same as the existing structure.

*(d) Repair, rehabilitation, or replacement of a tier 4 stream crossing shall comply with Env-Wt 904.07(d).*

Not applicable.

#### **Bank Stabilization (Env-Wt 514)**

The proposed project will have temporary impacts to the west bank of the Pemigewasset River as shown in the photo below. The bank will be regraded and stabilized using humus, seed mix and tackifiers upon project completion. A post construction report will be submitted within 60 days of construction completion showing successful establishment of vegetation and bank stabilization. The functions of the bank will remain largely unchanged upon project completion.



#### **Pre-application Coordination**

Pre-application coordination with NHDES included attendance at two NHDOT Natural Resource Agency Meetings on February 19, 2020, and October 18, 2023. Copies of the meeting minutes are included with this permit application. The proposed preservation/rehabilitation project elements were discussed, and avoidance and minimization efforts were incorporated into the project design as much as practicable.

## Temporary Trestle & Truss Temporary Support System

Due to the location of the river pier that requires rehabilitation it is not feasible to avoid impacting the river channel. The NHDOT is proposing a trestle in this location as the piles that will support the trestle have a smaller footprint than a causeway and will result in minimization of impacts to the river. Details regarding the temporary trestle and truss temporary support system construction are as follows:

- It is anticipated the trestle will be installed in the Spring of 2025 when in-water work is allowed. The trestle piles and superstructure will be left in the river during the winter shutdown period, and it is anticipated it will be in place for two construction seasons. A Waiver of Env-Wt 307.11 to allow for the piles to be left in place for more than one growing season is included in this application.
- The contractor will determine the elevation of the trestle based on their means and methods for accessing and repairing the river pier. The temporary trestle will be an open multi-span structure with pile bents having an assumed spacing of 30 feet. Construction access notes on the plans indicate the access road and trestle limits, shown on the plans, are based on a 35-foot wide road with a maximum grade of 9% and 1.5H:1V side slopes with a 35 foot wide trestle with a maximum grade of 5% and providing 6" of freeboard above the approximate high water elevation. There is no FEMA flood information available for this site, therefore, the OHW elevation was used for establishing the trestle impact limits.
- Piles will be installed and removed one at a time to minimize turbidity. Natural buffer/perimeter control is identified on the wetland impact plan to control turbidity. The exact type/system used will be selected by the contractor since turbidity curtains may not be feasible based on actual water depths at the time of trestle construction.
- It is anticipated the truss temporary support system will be installed in the Spring of 2025 when in-water work is allowed. The length of time the system will be left in the river is dependent on when the pier repairs are completed. Once the pier repairs are completed the support system will be removed from the river.
- Cofferdams required for access to, installation of the truss temporary support system, and construction of the river pier repairs will be selected by the Contractor based on their means and methods. Water diversion structures such as a sandbag dike or portable dam system in lieu of steel sheeted cofferdams are possible and will limit impacts to the riverbed. The Contractor is required to submit a cofferdam plan and supporting design calculations. It is anticipated the Contractor will chose one of the following two options:
  - Excavate natural riverbed material within the cofferdam limits identified on the wetland impact plans and stockpile the material for the purpose of restoring the riverbed. Geotextile fabric and clean stone fill will then be placed on the riverbed to construct the truss temporary shoring foundations and towers. Upon completion of pier repairs, the truss temporary shoring, clean stone fill and geotextile fabric will be removed, and the stockpiled material will be placed in the excavated areas to restore riverbed to the pre-construction condition. All angular clean stone fill will be removed from within the cofferdam limits.
  - Place geotextile fabric and clean stone fill on riverbed within the cofferdam limits identified on the wetland impact plans and construct truss temporary shoring foundations and towers. Upon completion of pier repairs, the truss temporary shoring, clean stone fill and geotextile fabric will be removed to restore riverbed to the pre-construction conditions. All angular clean stone fill will be removed from within the cofferdam limits.



## **Mitigation**

Per Env-Wt 313.04(a)(1), (3) and (7) mitigation is not required for the proposed project because: there will be no permanent impact to a PRA, the total permanent impacts to freshwater nontidal wetlands are less than 10,000 sf, the total new permanent bank and channel impacts are less than 200 lf, and the project is the modification of a Tier 3 stream crossing that is being rehabilitated pursuant to Env-Wt 904.09. No compensatory mitigation is being proposed for the project.



# AVOIDANCE AND MINIMIZATION CHECKLIST

## Water Division/Land Resources Management Wetlands Bureau



[Check the Status of your Application](#)

**RSA/Rule:** RSA 482-A/ Env-Wt 311.07(c)

This checklist can be used in lieu of the written narrative required by Env-Wt 311.07(a) to demonstrate compliance with requirements for Avoidance and Minimization (A/M), pursuant to RSA 482-A:1 and Env-Wt 311.07(c).

For the construction or modification of non-tidal shoreline structures over areas of surface waters without wetland vegetation, complete only Sections 1, 2, and 4 (or the applicable sections in [Attachment A: Minor and Major Projects \(NHDES-W-06-013\)](#)).

The following definitions and abbreviations apply to this worksheet:

- “A/M BMPs” stands for [Wetlands Best Management Practice Techniques for Avoidance and Minimization](#) dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).
- “Practicable” means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

SECTION 1 - CONTACT/LOCATION INFORMATION		
APPLICANT LAST NAME, FIRST NAME, M.I.: NH Department of Transportation / David L. Scott. PE		
PROJECT STREET ADDRESS: Bridge #076/080 carrying US Route 3 and NH Route 25	PROJECT TOWN: Ashland/Bridgewater Town Line	
TAX MAP/LOT NUMBER: Adjacent to Ashland Map 213, Lots 1 & 2 and Bridgewater Map 202 Lots 10 & 14		
SECTION 2 - PRIMARY PURPOSE OF THE PROJECT		
Env-Wt 311.07(b)(1)	Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If you answered “no” to this question, describe the purpose of the “non-access” project type you have proposed:  The purpose of the project is to maintain safety and protect the traveling public by addressing bridge rail deficiencies and bridge preservation/rehabilitation measures to extend the service life of the bridge for an additional 20 years and until such time when a replacement is needed.		
SECTION 3 - A/M PROJECT DESIGN TECHNIQUES		
Check the appropriate boxes below in order to demonstrate that these items have been considered in the planning of the project. Use N/A (not applicable) for each technique that is not applicable to your project.		
Env-Wt 311.07(b)(2)	For any project that proposes new permanent impacts of more than one acre or that proposes new permanent impacts to a Priority Resource Area (PRA), or both, whether any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, could be used to achieve the project’s purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A

[irm@des.nh.gov](mailto:irm@des.nh.gov) or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

[www.des.nh.gov](http://www.des.nh.gov)

Env-Wt 311.07(b)(3)	Whether alternative designs or techniques, such as different layouts, construction sequencing, or alternative technologies could be used to avoid impacts to jurisdictional areas or their functions and values.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(1) Env-Wt 311.10(c)(2)	The results of the functional assessment required by Env-Wt 311.03(b)(10) were used to select the location and design for the proposed project that has the least impact to wetland functions.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(3)	Where impacts to wetland functions are unavoidable, the proposed impacts are limited to the wetlands with the least valuable functions on the site while avoiding and minimizing impacts to the wetlands with the highest and most valuable functions.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 313.01(c)(1) Env-Wt 313.01(c)(2) Env-Wt 313.03(b)(1)	No practicable alternative would reduce adverse impact on the area and environments under the department's jurisdiction and the project will not cause random or unnecessary destruction of wetlands.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 313.01(c)(3)	The project would not cause or contribute to the significant degradation of waters of the state or the loss of any PRAs.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 313.03(b)(3) Env-Wt 904.07(c)(8)	The project maintains hydrologic connectivity between adjacent wetlands or stream systems.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 311.10 A/M BMPs	Buildings and/or access are positioned away from high function wetlands or surface waters to avoid impact.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
A/M BMPs	The width of access roads or driveways is reduced to avoid and minimize impacts. Pullouts are incorporated in the design as needed.	<input checked="" type="checkbox"/> Check <input type="checkbox"/> N/A
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 500 Env-Wt 600 Env-Wt 900	Wetland and stream crossings include features that accommodate aquatic organism and wildlife passage.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A

Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
A/M BMPs	Disturbed areas are used for crossings wherever practicable, including existing roadways, paths, or trails upgraded with new culverts or bridges.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
<b>SECTION 4 - NON-TIDAL SHORELINE STRUCTURES</b>		
Env-Wt 313.03(c)(1)	The non-tidal shoreline structure has been designed to use the minimum construction surface area over surfaces waters necessary to meet the stated purpose of the structure.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(2)	The type of construction proposed for the non-tidal shoreline structure is the least intrusive upon the public trust that will ensure safe navigation and docking on the frontage.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(3)	The non-tidal shoreline structure has been designed to avoid and minimize impacts on the ability of abutting owners to use and enjoy their properties.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(4)	The non-tidal shoreline structure has been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(5)	The non-tidal shoreline structure has been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A
Env-Wt 313.03(c)(6)	The non-tidal shoreline structure has been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.	<input type="checkbox"/> Check <input checked="" type="checkbox"/> N/A

**Natural Resources Agency Coordination  
Meeting Minutes**

Note: The meeting minutes have been modified to only include the applicable project.

## BUREAU OF ENVIRONMENT CONFERENCE REPORT

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting

**DATE OF CONFERENCE:** February 19, 2020

**LOCATION OF CONFERENCE:** John O. Morton Building

**ATTENDED BY:**

**NHDOT**

Matt Urban  
Sarah Large  
Ron Crickard  
Andrew O’Sullivan  
Kerry Ryan  
Meli Dube  
Chris Carucci  
Maggie Baldwin  
Jason Abdulla  
Arin Mills  
Tobey Reynolds  
Phil Brogan  
Loretta Doughty  
Bill Saffian  
John Butler  
Mike Mozer

**ACOE**

Rick Kristoff

**EPA**

Jeannie Brochi

**Federal Highway  
Administration**

Jaimie Sikora

**NHDES**

Lori Sommer  
Karl Benedict  
Liz Sibson (intern)

**NH Fish & Game**

Carol Henderson

**Consultants/Public  
Participants**

Kimberly Peace  
Josif Bicja  
Joanne Theriault  
Matt Lundsted  
Steve Halloran  
Ben Lundsted  
Taylor Vasquez  
Nick Sceggell  
Jennifer Doyle-Breen  
Todd Dwyer  
Pankaj Saharia  
John Wilson  
Vicki Chase  
Kim Smith

**The Nature Conservancy**

Pete Steckler

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:** *(minutes on subsequent pages)*

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*(When viewing these minutes online, click on a project to zoom to the minutes for that project.)*



**NOTES ON CONFERENCE:****Meeting Minutes**

Finalized the December 18, 2019 meeting minutes and the January 15, 2020 meeting minutes.

**Ashland-Bridgewater, #24904 (X-A003(003))**

K. Peace and J. Bicja gave an overview of the proposed bridge rehabilitation project. The bridge was constructed in 1937, rehabilitated in 1987, and currently has an overall National Bridge Inspection Standard Condition Rating of 5 (fair). The proposed rehabilitation will include bridge rail replacement, trestle span partial deck replacement, truss span deck replacement, expansion joint replacement, abutment and pier repairs, and possibly deck drainage modification. A conceptual plan depicting potential impact areas for construction access was shown and discussed. It is expected that the contractor will construct a trestle on the upstream (north) side of the bridge from the west riverbank. The trestle will be accessed from the John Jenness Road and previously disturbed areas where the prior bridge was located. The trestle is needed to gain access to the river pier to repair it.

K. Peace summarized the natural resource concerns:

- Wetlands delineated, permit will be required for bank access impacts and installation of temporary trestle to access pier for above-water repair.
- Shoreland permit may be required.
- Federally Listed Species: Northern Long-Eared Bat (NLEB), Small-Whorled Pogonia (SWP)
  - NLEB – Assess bridge per NHDOT standard practices for larger sized structures
  - SWP – Evaluate site for potential habitat, coordinate with USFWS on the need for surveys
- Contamination – asbestos, lead paint potential, proximity to remediation sites and LRS
- Essential Fish Habitat- Hoyle Tanner will contact Mike Johnson at NOAA Fisheries to determine if an assessment is needed

To begin project discussion, C. Henderson asked how the project would be planned to minimize contamination from lead or asbestos in the water? J. Bicja responded that potential for contamination to the river is minimal based on the current scope of work, but the contractor will provide methods to prevent any localized minimal construction debris from impacting the river, including netting as needed. B. Saffian noted that he doesn't think there will be ACM concerns.

L. Sommer asked if the road would be shut down during construction. J. Bicja stated that the project will be phased, with one lane closed at a time while traffic uses the other lane for travel, and B. Saffian added that there will be temporary traffic signals placed on each end of the bridge. A detour will not be required.

L. Sommer requested additional information about proposed fill on the riverbank. K. Peace described the existing steeply dropping bank. Temporary fill would be required for construction equipment to gain access to the trestle. L. Sommer requested confirmation that the fill areas on the bank would not be left as rip-rap armored slopes. K. Benedict stated that the fill and any temporary bank armoring will be considered temporary impacts if a Restoration Plan is submitted with the project's wetland permit application, showing how the bank will be restored to its pre-construction condition. M. Dube clarified that the requested Restoration Plan could also include a plan for returning riverbed impacts from the temporary trestle to their original condition; she then asked for confirmation that as currently proposed, these impacts could all be considered temporary for the purposes of the wetland permit application. K. Benedict asked if a cofferdam would be used, and J. Bicja stated that all proposed pier repairs would be above water, eliminating the need for a cofferdam. K. Benedict then confirmed M. Dube's statement that the project impacts, as currently described, could all be considered temporary.

L. Sommer and K. Benedict added details about the required Restoration Plan. The plan should include monitoring for 3 years post-construction, detail restoration methods for all shoreland areas, and also include a description of all proposed plantings.

K. Peace asked if it would be acceptable to leave steel piles from the proposed temporary trestle in the riverbed and cutting them off below the mudline. K. Benedict warned against this, saying that the substrate of the Pemigewasset River is quite sandy in this location and could easily erode away and expose remaining steel piles. K. Benedict stated that if steel piles need to remain, their buried depth should be carefully considered. B. Saffian stated that the only reason DOT would want to leave them in place and cut off at the streambed is if the vibration during removal may negatively impact the piers and that this will be evaluated during design.

K. Benedict suggested the use of previously cleared lands in the vicinity of the project to minimize vegetation clearing necessary in the shoreland area.

K. Peace asked if reconfiguration of scuppers on the bridge deck would affect water quality. K. Benedict confirmed that there will be no new impervious surface, then stated that scupper reconfiguration would not be considered a change from the existing condition and would not be considered to have water quality impacts.

M. Dube discussed the current DOT operating procedure of allowing contractors to detail their own access plans. When the wetland permit application is submitted, these details for the proposed trestle will not yet be available. K. Benedict confirmed that showing conservative stream/bank impact boundaries for the access structure will be sufficient for wetland permitting.

R. Kristoff asked if the Coast Guard has been contacted about this work. K. Peace responded that a determination of navigability will be necessary.

J. Brochi asked how nearby remediation sites will be addressed. K. Peace stated that the known sites are within 1,000' but not immediately adjacent to the proposed project. Although no impacts are expected, any potential issues will be addressed during the NEPA process.

K. Benedict asked how long the proposed trestle access structure would be in place, and J. Bicja replied that it would most likely be needed for two construction seasons. K. Benedict indicated that it may be necessary to request a waiver if the current limit for temporary impacts is one calendar year. The waiver request should include a statement that impacts to jurisdictional resources would be greater if the temporary trestle were removed between the construction seasons.

K. Benedict suggested assessing the feasibility of substituting a barge for the proposed trestle.

*This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.*

**Bedford, #42268 (X-A004(797))**

Chris Carucci described the project, a proposed culvert rehabilitation on the pipe carrying Bowman Brook under NH Route 101 and Boynton Street. The project is a federally funded culvert rehabilitation project. The proposed advertising date is August 18, 2020, with construction anticipated in summer of 2021. The culvert carries Bowman Brook under NH Route 101 and Boynton Street just east of the intersection of the two roads with NH Route 114. The crossing is a Tier 3 and has a drainage area of 3.94 square miles.

Note: The meeting minutes have been modified to only include the applicable project.

**BUREAU OF ENVIRONMENT  
CONFERENCE REPORT**

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting

**DATE OF CONFERENCE:** October 18, 2023

**LOCATION OF CONFERENCE:** Virtual meeting held via Zoom

**ATTENDED BY:**

**NHDOT**

Matt Urban  
Andrew O’Sullivan  
Mark Hemmerlein  
Joshua Brown  
Jon Evans  
Rebecca Martin  
Meli Dube  
David Scott  
James Commerford  
Levi Byers  
Kerry Ryan  
Leah Savage  
Arin Mills

**ACOE**

Mike Hicks

**USCG**

Gary Croot

**EPA**

Jean Brochi

**NHDES**

Karl Benedict  
Maryann Tilton  
Seta Detzel  
Emily Nichols

**NHB**

Absent

**NH Fish & Game**

Kevin Newton  
Mike Dionne

**Federal Highway**

Jamie Sikora

**US Fish & Wildlife**

Absent

**The Nature Conservancy**

Absent

**NH Transportation &  
Wildlife Workgroup**

Absent

**Consultants/ Public  
Participants**

Kimberly Peace  
Deb Coon  
Josif Bicja  
Christopher Fournier  
Tucker Gordon  
Katy Lewis  
Trevor Ricker  
Jordan Pike

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:** *(minutes on subsequent pages)*

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## **Finalize Meeting Minutes**

Finalized and approved the September 20, 2023 meeting minutes.

### **Ashland-Bridgewater, 24904 (X-A003(003)):**

The NH Department of Transportation (NHDOT) is proposing a preservation/rehabilitation project for Bridge #076/080 carrying US Route 3 and NH Route 25 over the Pemigewasset River at the Ashland/Bridgewater Town Line. The goals for this project are to address safety and structural deficiencies and extend its service life for an additional 20 years and until such time when replacement is needed, and funding becomes available.

Bridge preservation and rehabilitation measures will include truss span pavement and membrane removal, grid deck replacement, trestle span pavement and membrane replacement, trestle span concrete deck modification and repairs, expansion joint replacement, bridge rail replacement, bridge approach rail replacement, scupper repair/modification, substructure concrete repairs and paint touchup repairs. Roadway approach work will be limited to approximately 200' on each approach.

Construction access for substructure work will be provided from previously disturbed areas from Siding Road and the southeast quadrant. The Contractor will need to construct a temporary work trestle to access the river pier to complete the repair work. The river pier is in poor condition with areas of significant concrete spalling, cracking, and delamination. There is exposed reinforcing steel which exhibits heavy rusting with laminar corrosion and section loss. The river pier is in need of repair work in order to keep the bridge in service and also extend its service life.

Kimberly Peace (KP) (Hoyle Tanner) provided an overview and update of the project that was previously presented in 2020 during the NEPA phase of the project and now is in the design and permitting phase. The purpose of the meeting was to receive input from NHDES with regard to wetland impacts, permitting and mitigation for the project.

As a part of the repair project, it will be necessary to reuse mostly previously disturbed areas for contractor access and install a trestle in the Pemigewasset River. It was proposed that the project could be permitted as a minimum impact permit meeting the requirements of Env-Wq 903.01 (e)(3).

The meeting was then opened for comments and discussion.

Karl Benedict (KB) (NHDES) acknowledged that the Pemigewasset LAC was notified in 2020 and that it is good to note they will receive a copy of the permit application once submitted to NHDES. He stated it's been a while since they have seen the project and LAC's can have turnover.

KB asked what is proposed for dewatering from within the sheet pile cofferdam in the river and how will that be handled? Josif Bicja (JB) (Hoyle Tanner) stated the contractor will need to build a cofferdam system to construct the shoring towers at conceptual locations as shown on the plan.

The shoring towers are needed to support the trusses during construction. It is expected that dewatering will be minimal, but if needed will be in accordance with regulations. The contractor will prepare a SWPPP and ESC plan and submit it to the NHDOT Bureau of Construction (Construction) for review and approval.

KB stated the project is not a minimum impact project. It does not meet Env-Wt 903.01 (e)(3) due to the trestle and cofferdam and the 19,000+/- sf of impacts. Env-Wt 903.01 is for stream crossing structure specifically and impacts to the structure. He stated once you get to the bed of river, and given the amount of impact proposed, the project then becomes a major impact project. Andy O'Sullivan (NHDOT Bureau of Environment) (AO) stated he understands the project falls within Chapter 900 of the Wetland Rule and is a Project Type Exception per Chapter 400. AO asked what triggered the project to fall into a major category?

KB stated structural repairs can be addressed under Chapter 900 but it is exceeded when you add a trestle or cofferdam or impacts to the river. A trestle doesn't fall into Chapter 900. KP asked for confirmation that a trestle doesn't fall into Chapter 900 and KB confirmed.

AO asked how do we permit the trestle if it's not under the Chapter 900 rules? KB stated to still use the Chapter 900 rules relative to the structure, but in this case if there are additional impacts, Chapter 500 would apply for bank stabilization, 514 specifically, and then the bed of the river which would be Chapter 400 for square foot limitations of project classification. KB stated there are three different impact areas on this project. KB further stated NHDES has reviewed a number of these types of projects and have come to the same conclusion.

AO thanked KB and stated for clarification the project will be permitted under Chapter 900 and will classify the project as major based on the impacts. The project will be permitted as a repair and KB stated he agreed. KP asked if bank stabilization still had to be addressed under Chapter 500 if the impacts are temporary and noted that there will not be any added structure (riprap) to the bank itself. KP explained there will be piles installed as shown within the bank between OWH to TOB, final location to be determined by the contractor means and methods. AO stated not much was being done in the bank in terms of bank stabilization. It will be noted in the application that the bank will be restored to pre-existing condition and the piles will be removed. KB stated DES expects the site will be restored to the pre-existing condition. However, with the contractor working in the area he expects that some sort of slope stabilization will need to occur. JB stated the bank will need vegetation removal and earth movement but there will be no change to the slope. KB summarized that the grade must remain the same to be a temporary bank impact and that a replanting plan should be submitted with the application to address Chapter 500.

Maryann Tilton (MT) (NHDES) stated this is a Tier 3 river and working in the riverbed, so she agrees with KB that this is a major impact project and his comments about bank stabilization are important. MT also pointed out with the new rules that have gone into effect on Friday, ground photos and preliminary functional assessments are now a part of pre-application meetings. In terms of this project vegetation removal could have an effect on the bank resource functions. KP stated there is a functional assessment of the river and the bank in the wetland delineation report that will be included in the application. AO stated that the four square areas shown on the plan near the pier will be set in the river and the area in this location is fairly shallow. Work will be done above the stream to complete pier repairs.

Seta Detzel (SD) (NHDES) asked for more information regarding the temporary fill and what that consists of, plans for removal, and the duration it will be in place. AO confirmed with KP the area shown as permanent impact in gray on the plan is for the purpose of providing enough room for the contractor to perform the work and is conservative. The temporary impacts shown are essentially the pile locations that will support the trestle. SD asked if the area would be contained with a turbidity curtain for the pile driving portion? JB stated some sort of turbidity barrier/method is expected to be implemented by the contractor. SD then asked how long the trestle would be in place for the repairs and JB stated two construction seasons. SD stated per Env-Wt 307.11, she believes the pilings would be considered fill in the bed and are considered temporary fill as long as it is in place for only one growing season. Typically, this is seen as matting in wetlands, and she has not seen this rule applied to pilings. She stated this needs to be considered by NHDES. MT stated when more than one growing season is affected then the impacts are considered permanent and then need to be considered in terms of mitigation. AO stated the DOT has a previously coordinated with NHDES for projects proposing trestles and they areas shown for installation of the piles are not typically considered permanent. KP suggested a waiver could be submitted to address Env-Wt 307.11.

AO stated that trestles are more difficult to build as opposed to causeways, but DOT proposes trestles where feasible because it is less impact to the river as the pilings do not add up to a lot of square footage. The trade-off between the expense of building a trestle should result in identifying the impacts as temporary so that mitigation is not needed. The DOT likes to take the approach that these are temporary and would ask for a waiver of Env-Wt 307.11 to call the area temporary. NHDES will discuss internally to address any inconsistencies with how to permit trestle piles.

SD also asked for confirmation of restoration on the banks and there will be no grading on the bank or substantial vegetation removal. KP stated there is no intention to grade the banks however vegetation removal will occur as necessary for access. JB stated there will be vegetation removal in the northwest bank. The design team is currently evaluating the extents of ground disturbance in this area. JB stated disturbed areas will be restored to pre-existing conditions. SD asked for linear footage of bank disturbance, KP stated 51 feet. SD stated from what she is hearing there will be no mitigation if impacts are classified as temporary, with no grading and a restoration plan. SD suggested that the area shown as permanent on the figure for discussion should be reassessed to be called temporary. AO confirmed the area will be reassessed. JB discussed the area and the work that would be performed in this location for pier repairs as it relates to the impacts to the bed of the river. JB also noted there may need to be some reshaping or leveling out of the river bottom to allow construction of temporary support towers for the steel trusses. The thought was it might be beneficial to show this area as permanent but everything that is placed in the river as a support system will be removed. SD stated reshaping of the bed would be a permanent impact and KB confirmed this statement. SD again stated the importance of refining the permanent impact areas for purposes understanding thresholds and if mitigation will be required.

Jon Evans (JE) asked if grading is done and truss support towers placed, then when work was done and the truss support towers are removed and the bed material is pushed back into place, wouldn't that be temporary? AO stated re-grading back to the existing conditions with a

restoration plan, then the impact would be temporary. AO suggested that only the areas where the truss support towers would be placed could be called permanent. SD stated that 200 lf of permanent impact (bank, channel, bank) is the threshold and if that is triggered then DES will ask for mitigation. SD agrees that the areas in the riverbed for support pilings would be a permanent impact and depending on the square footage could potentially trigger mitigation as well but would defer to USACE. Pilings for the trestle require clarification in terms of duration and whether they would be eligible for a waiver to be considered temporary.

JE stated that perimeter control around the trestle area in this location is not feasible due to water flow and therefore is not something that would be proposed. JB asked about the use of a turbidity curtain, how will this be handled. KB suggested coordinating with watershed program for a mixing zone. KB also stated there should be some sort of BMP prior to requesting a mixing zone. Mark Hemmerlein (MH) (NHDOT) stated this will be discussed with NHDOT construction. A plan will be developed and included in the application.

Mike Dionne (MD) NHFG stated no listed species, no cold water fisheries and therefore he has no comments.

Kevin Newton (KN) NHFG stated that the Pemigewasset River is a robust habitat for wood turtles. Even though there are no records that came up on the DataCheck please keep an eye out for them and if wood turtles are seen at the project location, please advise NHFG so they can be added to their records.

Mike Hicks (MHi) USACE stated they have to look at the piers and the pilings on a case-by-case basis and they may or may not be jurisdictional depending on the footprint. Anything over 5,000 sf will require mitigation.

MHi asked about historic resources, KP stated this was done during NEPA, no effect determination. MHi asked about the US Coast Guard, KP stated received a determination of non-navigable. MHi noted EFH and ESA appear to be wrapped up. MHi asked if the Pemigewasset River was Wild and Scenic and KP stated it is not.

MHi stated it appears to be a minimal project but would need to see plans. The project may not require mitigation from USACE perspective. KP asked MHi if he would like to have a set of plans prior to submitting the application to NHDES and MHi stated yes. KP will send the plans to MHi for review.

Jeannie Brochi (JBr) EPA stated that she agrees with the comments about mitigation. She also wanted to ask about the comment “remediated sites will not be disturbed” and asked for explanation as to how it was determined they will not be impacted. KP stated during NEPA remediation sites were reviewed utilizing NHDES OneStop and while there were sites within 1000’ there are no sites within the footprint of the project. As the design is refined, we will ensure that those sites will not be affected.

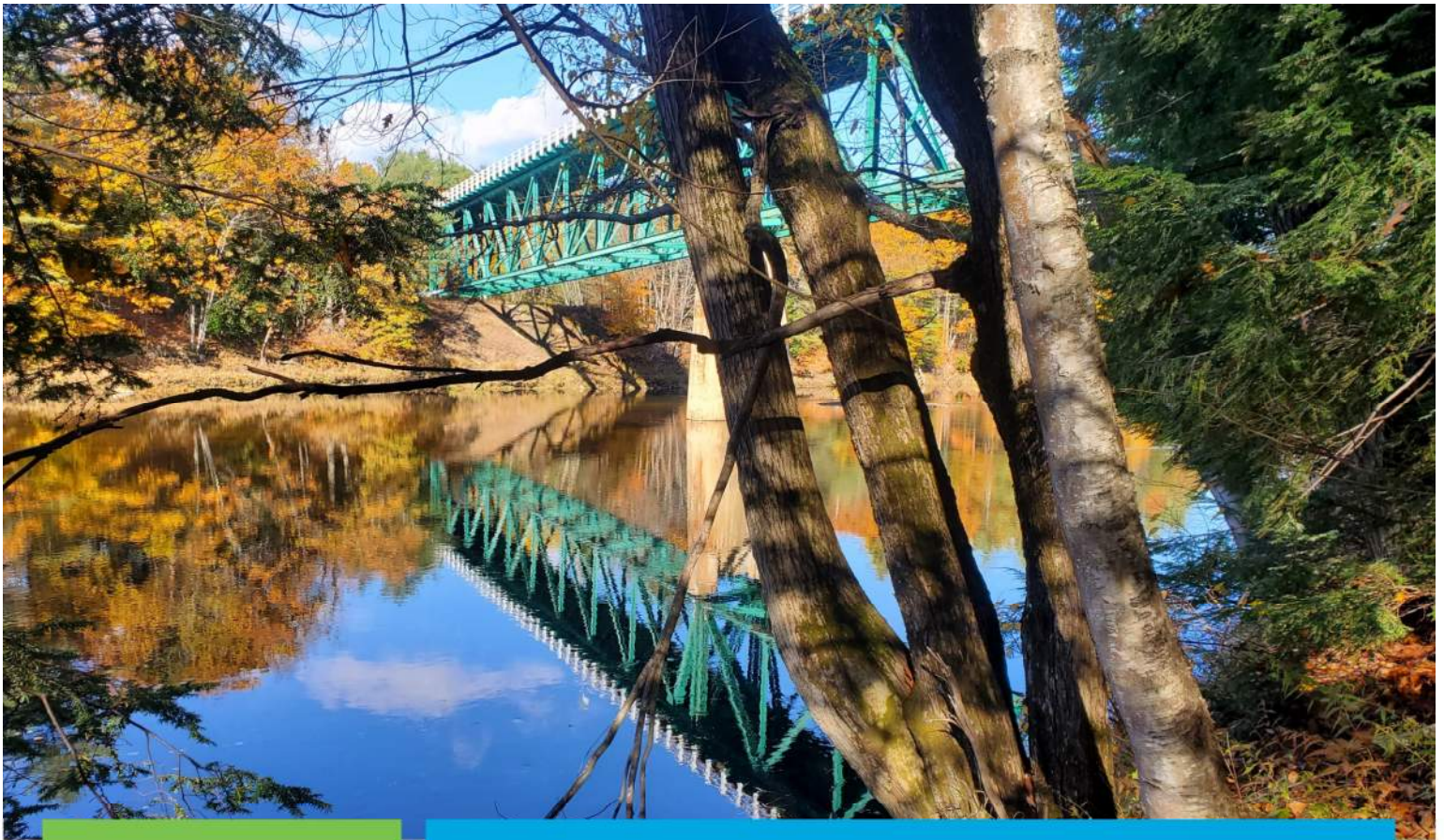
Gary Croot (GC) USCG stated the Pemigewasset River is navigable but in 2020 the Coast Guard determined that they would waive jurisdictional on this bridge and will not have any

requirements in terms of repair or replacement. GC stated for clarification purposes the Pemigewasset River is considered navigable up to Lincoln.

Jamie Sikora (JS) FHWA acknowledged that NEPA was completed in 2020 under a programmatic agreement for CE approvals and deferred to the DOT to determine the need for completing a re-evaluation and processing a new environmental commitments memo. JE stated it is not expected that a formal re-evaluation will be necessary and are only updating elements as required. JS stated he deferred to the Department on to what level the re-evaluation would be and could be as simple as a note placed in the file.



**Wetland Delineation Report, Functional  
Assessment & Site Photos**



# Wetland Delineation Report

NH Department of Environmental Services, Wetlands Bureau

Rehabilitation of US Route 3 Bridge over the Pemigewasset River  
Ashland and Bridgewater, NH

Prepared for:  
NH Department of Transportation  
7 Hazen Drive  
Concord, NH 03301



**August 2023**

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**WETLAND DELINEATION REPORT**  
**Rehabilitation of US Route 3 Bridge over the Pemigewasset River**

**Hoyle Tanner Project Number: 19.092595.08**

**August 2023**

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Appendix C: Wetland Functions & Values Assessment

## **1. Introduction**

This report has been prepared by Hoyle, Tanner & Associates, Inc. (Hoyle Tanner) to document field conditions at the US Route 3 bridge over the Pemigewasset River on the town line between Ashland and Bridgewater, NH. The field investigation was performed on October 19, 2022, by Joanne Theriault, NH Certified Wetland Scientist #305. Hoyle Tanner was contracted by the NH Department of Transportation to perform this investigation in addition to permitting and engineering services to rehabilitate the bridge.

The report documents delineations of wetland resources under the jurisdiction of the NH Department of Environmental Services (NHDES) Wetland Bureau and the US Army Corps of Engineers (USACE) including wetland boundaries, stream ordinary high water (OHW), and stream top-of-bank (TOB). The site was also evaluated for the presence of potential vernal pool habitat and invasive plant populations within the project boundary. Stream crossing data was collected to the extent possible to enable preparation of an NHDES Wetland Permit Application.

## **2. Site Overview**

The project site is located on US Route 3, a well-travelled road that extends roughly north to south through the state of New Hampshire and provides access to an industrial district and Interstate 93 in the vicinity of the project area. The regional land use is forested with commercial and industrial development bordering US Route 3, Interstate 93, and the Pemigewasset River. Nearby crossroads include North Ashland Road on the Ashland side, which extends northeastward after its junction with the north side of US Route 3 just to the southeast of the Pemigewasset River crossing. John Jenness Road intersects with US Route 3 on the Bridgewater side approximately 800' north of the crossing and extends westward (see attached Project Location Map).

The Pemigewasset River flows perennially north to south through the greater project area. It originates at Profile Lake in Franconia, NH, and flows southward through the White Mountains. The Pemigewasset River then combines with the Winnepesaukee River in Franklin, NH, to form the Merrimack River.

Review of existing available information resulted in the following regarding this wetland:

The stream crossing is not a Priority Resource Area (PRA) as identified on the NHDES Wetland Permit Planning Tool (WPPT) and defined by the NHDES Wetland Rules Env-Wt 100-900.

The Pemigewasset River is a Designated River, as determined by the NHDES Rivers Management and Protection Program (RMPP) and identified on the NHDES WPPT. Impacts within ¼ mile of the river will require consultation with the Pemigewasset River Local Advisory Committee.

The stream crossing is located within the 250-ft protected Shoreland as defined by the Shoreland Water Quality Protection Act (RSA 483-B) and its associated rules, Env-Wq 1400. Impacts within the protected Shoreland may require additional permitting.

The stream crossing is located partially within an area identified on the NH Wildlife Action Plan (WAP) as Highest Ranked Habitat in Biological Region (Appendix B) and is also a mapped Wildlife Riparian Corridor.

The project area includes no Prime Wetlands as determined by the Towns of Ashland and Bridgewater and identified on the NHDES WPPT.

## Wetland Delineation Report

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH

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The NH Natural Heritage Bureau (NHB) Datacheck Tool shows that there are no records of state-listed species in the vicinity of the project area.

### 3. Methods

Hoyle Tanner performed the wetland delineation of the Ashland-Bridgewater site according to the criteria described in the US Army Corps of Engineers Wetlands Delineation Manual (USACE 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northeast and Northcentral Region (USACE 2012). Stream top-of-bank delineations were determined based on observation of a break in slope at the upper limit of the stream's adjacent transitional slope per NH Wetland Rules Env-Wt 102.5. Delineations of the stream's ordinary high water mark was based on the observation of physical shoreline characteristics as described in NH RSA 483-B:4, XI-e. Wetlands and surface waters on the site were classified using Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979).

Stream crossing assessment/classification data was collected at the site using the NHDOT Stream Crossing Assessment Worksheet (revised April 2022). Elevations were measured with a Leica Zeno GPS Unit; however, water flow and depth in the Pemigewasset River made it impossible to traverse the stream on foot, so stream profile data were not collected, and substrate percentages were estimated from the bank. The data collected is sufficient to partially complete the NHDES Stream Crossing Worksheet (NHDES-W-06-071) for existing crossings.

### 4. Results

Field conditions on the day of the site investigation included a temperature of 45° F, partly cloudy skies, and negligible wind. No major precipitation events occurred in the two weeks preceding the survey, and surface/ground water levels were typical for New England in fall.

The project area includes high banks and a forested riparian buffer upstream and downstream of the crossing. Steep, bare slopes have been created with sandy fill directly below the footprint of the bridge. The forested buffer is dominated variably by red oak (*Quercus rubra*), Eastern hemlock (*Tsuga canadensis*), and white pine (*Pinus strobus*).

#### 4.1 Wetlands and Streams

Defined banks contain the Pemigewasset River on both sides of the bridge. OHW was identified by observing accumulated leaf debris and streambed substrate, vegetation transition and the upper extent of flow-related erosion. Steep and towering banks above the OHW support a tree stratum composed primarily of Eastern hemlock (*Tsuga canadensis*), red oak (*Quercus rubra*), white pine (*Pinus strobus*). The lower strata are composed primarily of meadowsweet (*Spiraea alba*), aster (*Aster* sp.), goldenrod (*Solidago* sp.), wild strawberry (*Fragaria vesca*), bracken fern (*Pteridium aquilinum*), low bush blueberry (*Vaccinium angustifolium*), and Indian cucumber-root (*Medeola virginiana*). The classification of the Pemigewasset River in the vicinity of the US Route 3 crossing is R3UB1H (Riverine, Upper Perennial Flow Regime, Unconsolidated Bottom, Gravel/Cobble Substrate, Permanently Flooded).

## Wetland Delineation Report

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH

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Little floodplain wetland development is present within the project area due to the steep banks; however, one wetland (Field ID: Wetland 1) was delineated downstream of the bridge above the eastern bank. Wetland 1 is a drainage channel running from an unmaintained path to a partially collapsed culvert inlet. The area contains hydric soils and likely has some ephemeral flow collecting floodwaters after precipitation events. Vegetation in Wetland 1 is sparse with some small oriental bittersweet vines, red maple (*Acer rubrum*) seedlings/saplings and sedges (*Carex* sp.) on the ground. No trees are rooted within Wetland 1, but it is located in a forested setting. The classification of Wetland 1 is PFO1E (Palustrine, Forested, Broad-Leaf Deciduous Vegetation, Seasonally Flooded/Saturated).

An intermittent stream (Field ID: Stream 1) was noted and delineated from North Ashland Road to the Pemigewasset River upstream of the crossing. The stream has defined banks, the tops of which are in the same lateral location as the Stream 1's OHW. Stream 1 was dry at the time of survey but has severely eroded and steeply sloping banks, indicating flashy flows at times of snowmelt and high precipitation events. The understory is sparse with occasional cinnamon ferns (*Osmunda cinnamomea*), and the upper canopy of the forest in the vicinity of the stream consists primarily of Eastern hemlock, American beech (*Fagus grandifolia*), and American elm (*Ulmus americana*). The classification of Stream 1 is R4SB2/7J (Riverine, Intermittent, Streambed, Rubble/Vegetated Substrate, Intermittently Flooded).

### 4.2 Wetland Functions and Values

The Pemigewasset River, Wetland 1 and Stream 1 have been assessed for their functions and values in the vicinity of the US Route 3 crossing (Appendix C). The Pemigewasset River is a significant resource in the state of NH, providing economic value, wildlife habitat, and serving vast watershed areas from the White Mountains to Franklin, NH; however, in the vicinity of the project area, the river flows through an area of high disturbance with altered, eroded banks, and a towering roadbed overhead. The Pemigewasset River in its entirety is suitable for numerous functions and values but primarily serves to receive floodwaters in the vicinity of the US Route 3 crossing.

Wetland 1 and Stream 1 are limited in size and have ephemeral and intermittent hydrologic regimes, respectively. Both contain notably sparse vegetation and are also created and/or altered as a result of human disturbance. The steep banks and significant quantities of fill used to build footings for the Route 3 bridge likely affect interaction between Wetland 1 and Stream 1 with the underlying water table. As a result, they principally serve to receive and transport stormwater and floodwater during times of snowmelt and precipitation.

### 4.3 Vernal Pool Habitat

No vernal pool habitat was observed at the site.

### 4.4 Invasive Species

Invasive species were noted in the project area. Oriental bittersweet (*Celastrus orbiculatus*) was common on and above the banks of the Pemigewasset River, particularly above the eastern bank just south of the crossing. Stems and small populations of Japanese knotweed (*Reynoutria japonica*) and burning bush (*Euonymus alatus*) were also noted on and above the eastern bank. Populations and individual stems of invasive species were flagged in the field and located with a GPS Unit.

## **5. Literature Cited**

1. Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center.
2. New England Hydric Soils Technical Committee (NEHSTC). 2019 Version 4, Field Indicators for Identifying Hydric Soils in New England. New England Interstate Water Pollution Control Commission, Lowell, MA
3. US Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetlands Delineation Manual. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss. Technical Report Y-87-1. 207 p.
4. U.S. Army Corps of Engineers New England Region. 1995. The Highway Methodology Workbook Supplement: Wetland Functions and Values, A Descriptive Approach. NAEEP-360-1-30a.
5. U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.



Appendix A: Project Location Map



# Project Location Map

US Route 3 over the Pemigewasset River  
Ashland and Bridgewater, NH

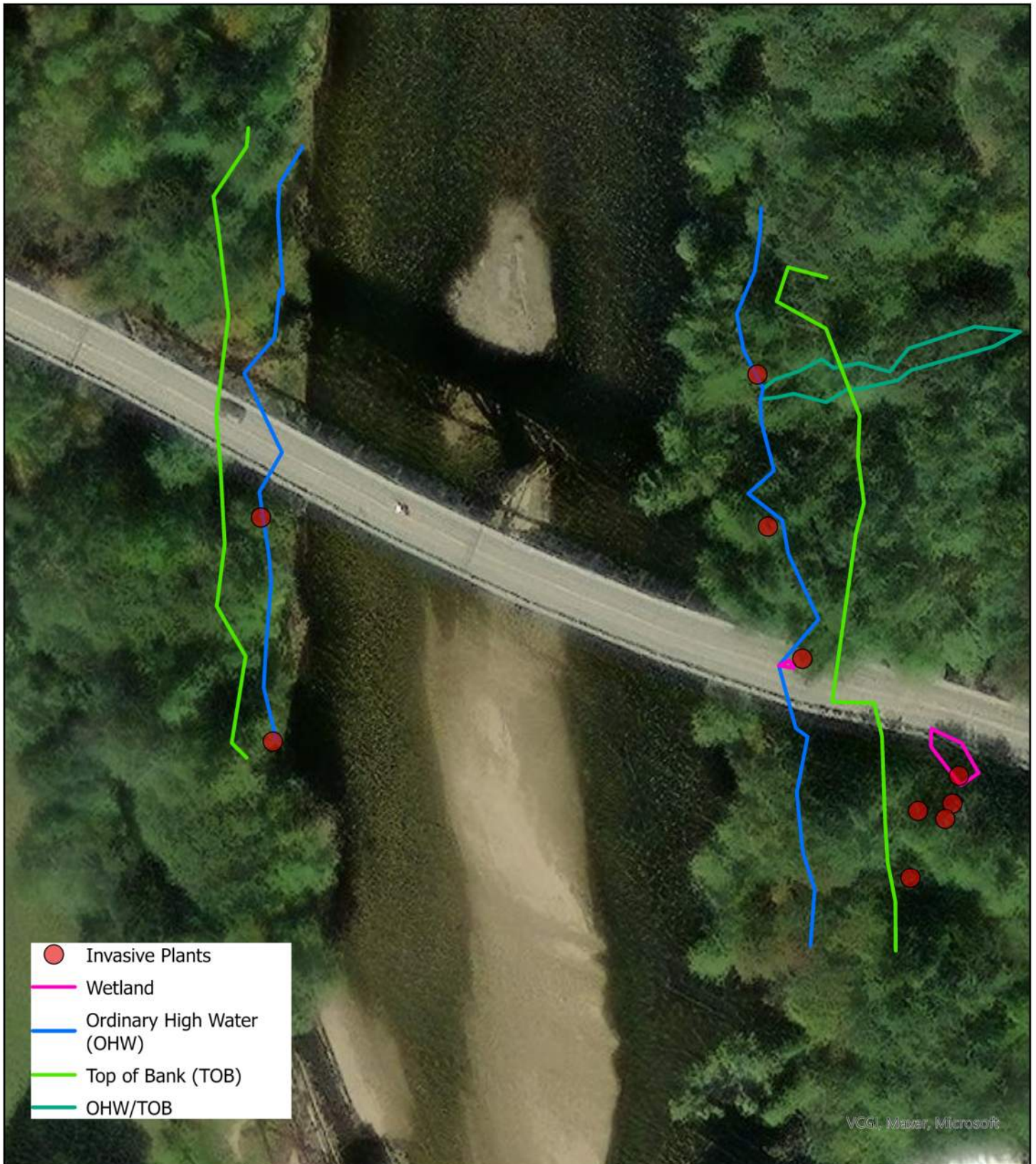
Project Location

Google Earth

1000 ft







VGGI, Maxar, Microsoft

- Invasive Plants
- Wetland
- Ordinary High Water (OHW)
- Top of Bank (TOB)
- OHW/TOB



150 Dow Street  
 Manchester, NH 03101  
<http://www.hoyletanner.com>

**Bridge Rehabilitation Project  
 US Route 3 over the Pemigewasset River  
 Ashland and Bridgewater, NH**

**Project Location Map**

*Last updated on Wednesday, August 23, 2023 by jiberiant*



**SCALE**  
 1 inch = 75 feet

## Appendix B: Project Photographs





Photo 1 – Downstream of Bridge East Bank Facing Upstream – 10/19/2022



Photo 2 – Stream 1 Downstream of Terminus at North Ashland Road Facing Southeast – 10/19/2022





Photo 3 – Stream 1 Downstream of Terminus at North Ashland Road Facing West– 10/19/2022



Photo 4 – Upstream of Bridge East Bank Facing Upstream – 10/19/2022





Photo 5 – Upstream of Bridge East Bank Facing Downstream – 10/19/2022



Photo 6 – Upstream of Bridge from West Bank Facing Across River – 10/19/2022





Photo 7 – Downstream of Bridge View Down West Bank Facing Downstream – 10/19/2022

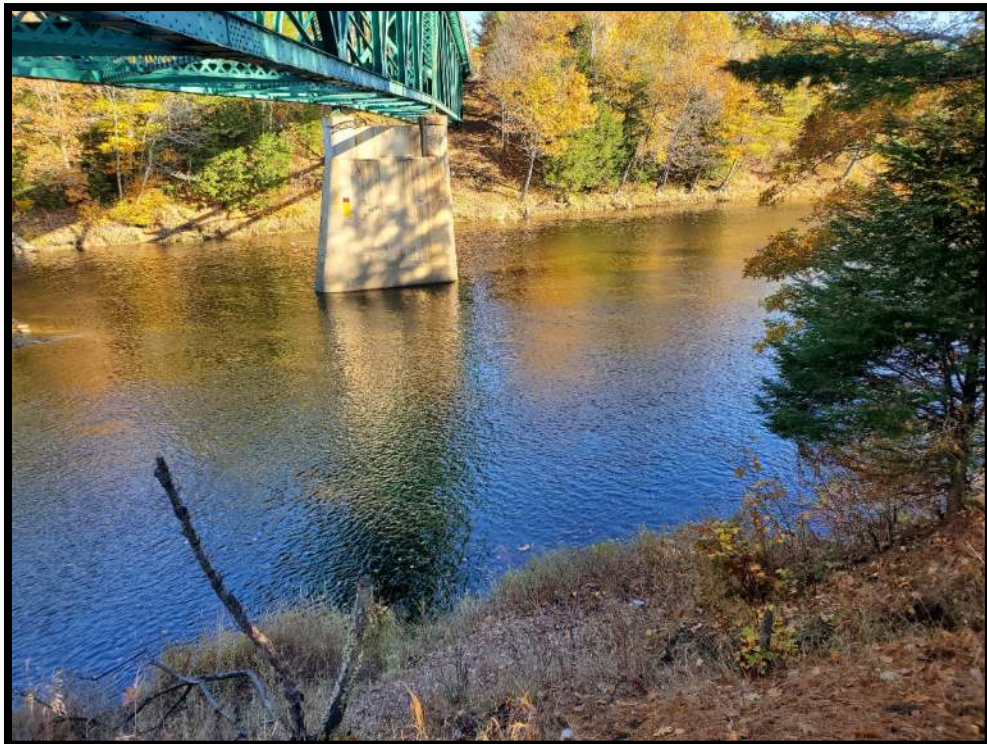


Photo 8 – Downstream of Bridge West Bank Facing Across River– 10/19/2022





Photo 9– Downstream of Bridge View Up West Bank Facing Upstream – 10/19/2022



Photo 10 – Wetland 1 with Ephemeral Drainage Facing Northwest – 10/19/2022

## Appendix C: Wetland Functions and Values Assessment

## Wetland Delineation Report

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH



# WETLANDS FUNCTIONAL ASSESSMENT WORKSHEET

Water Division/Land Resource Management  
Wetlands Bureau

[Check the Status of your Application](#)



**RSA/Rule:** RSA 482-A / Env-Wt 311.03(b)(10); Env-Wt 311.10

**APPLICANT LAST NAME, FIRST NAME, M.I.:** NH Department of Transportation

As required by Env-Wt 311.03(b)(10), an application for a standard permit for minor and major projects must include a functional assessment of all wetlands on the project site as specified in Env-Wt 311.10. This worksheet will help you compile data for the functional assessment needed to meet federal (US Army Corps of Engineers (USACE); if applicable) and NHDES requirements. Additional requirements are needed for projects in tidal area; please refer to the [Coastal Area Worksheet \(NHDES-W-06-079\)](#) for more information.

Both a desktop review and a field examination are needed to accurately determine surrounding land use, hydrology, hydroperiod, hydric soils, vegetation, structural complexity of wetland classes, hydrologic connections between wetlands or stream systems or wetland complex, position in the landscape, and physical characteristics of wetlands and associated surface waters. The results of the evaluation are to be used to select the location of the proposed project having the least impact to wetland functions and values (Env-Wt 311.10). This worksheet can be used in conjunction with the [Avoidance and Minimization Written Narrative \(NHDES-W-06-089\)](#) and the [Avoidance and Minimization Checklist \(NHDES-W-06-050\)](#) to address Env-Wt 313.03 (Avoidance and Minimization). If more than one wetland/ stream resource is identified, multiple worksheets can be attached to the application. All wetland, vernal pools, and stream identification (ID) numbers are to be displayed and located on the wetlands delineation of the subject property.

### 6. SECTION 1 - LOCATION (USACE HIGHWAY METHODOLOGY)

ADJACENT LAND USE: **Residential/Industrial**

CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT?  Yes  No

DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT (in feet): **<25' to US Route 3**

### 7. SECTION 2 - DELINEATION (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)

CERTIFIED WETLAND SCIENTIST (if in a non-tidal area) or QUALIFIED COASTAL PROFESSIONAL (if in a tidal area) who prepared this assessment: **Joanne Theriault, CWS #305**

DATE(S) OF SITE VISIT(S): **10/19/2022**

DELINEATION PER ENV-WT 406 COMPLETED?  Yes  No

CONFIRM THAT THE EVALUATION IS BASED ON:

Office and

Field examination.

METHOD USED FOR FUNCTIONAL ASSESSMENT (check one and fill in blank if "other"):

USACE Highway Methodology.

Other scientifically supported method (enter name/ title):

## Wetland Delineation Report

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH

8. SECTION 3 - WETLAND RESOURCE SUMMARY (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
WETLAND ID: <b>Wetland 1</b>	LOCATION: (LAT/ LONG) <b>43.709148/-71.653717</b>
WETLAND AREA: <b>388 SF</b>	DOMINANT WETLAND SYSTEMS PRESENT: <b>Perennial Stream</b>
HOW MANY TRIBUTARIES CONTRIBUTE TO THE WETLAND? <b>None</b>	COWARDIN CLASS: <b>PFO1E</b>
IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No if not, where does the wetland lie in the drainage basin? <b>Low - just above large perennial stream</b>	IS THE WETLAND PART OF: <input type="checkbox"/> A wildlife corridor or <input checked="" type="checkbox"/> A habitat island? IS THE WETLAND HUMAN-MADE? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IS THE WETLAND IN A 100-YEAR FLOODPLAIN? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ARE VERNAL POOLS PRESENT? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If yes, complete the Vernal Pool Table)
ARE ANY WETLANDS PART OF A STREAM OR OPEN-WATER SYSTEM? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ARE ANY PUBLIC OR PRIVATE WELLS DOWNSTREAM/ DOWNGRADIENT? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
PROPOSED WETLAND IMPACT TYPE: <b>Bridge Rehabilitation</b>	PROPOSED WETLAND IMPACT AREA: <b>TBD – See Wetland Impact Plans</b>

## 9. SECTION 4 - WETLANDS FUNCTIONS AND VALUES (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)

The following table can be used to compile data on wetlands functions and values. The reference numbers indicated in the “Functions/ Values” column refer to the following functions and values:

1. Ecological Integrity (from RSA 482-A:2, XI)
2. Educational Potential (from USACE Highway Methodology: Educational/Scientific Value)
3. Fish & Aquatic Life Habitat (from USACE Highway Methodology: Fish & Shellfish Habitat)
4. Flood Storage (from USACE Highway Methodology: Floodflow Alteration)
5. Groundwater Recharge (from USACE Highway Methodology: Groundwater Recharge/Discharge)
6. Noteworthiness (from USACE Highway Methodology: Threatened or Endangered Species Habitat)
7. Nutrient Trapping/Retention & Transformation (from USACE Highway Methodology: Nutrient Removal)
8. Production Export (Nutrient) (from USACE Highway Methodology)
9. Scenic Quality (from USACE Highway Methodology: Visual Quality/Aesthetics)
10. Sediment Trapping (from USACE Highway Methodology: Sediment /Toxicant Retention)
11. Shoreline Anchoring (from USACE Highway Methodology: Sediment/Shoreline Stabilization)
12. Uniqueness/Heritage (from USACE Highway Methodology)
13. Wetland-based Recreation (from USACE Highway Methodology: Recreation)
14. Wetland-dependent Wildlife Habitat (from USACE Highway Methodology: Wildlife Habitat)

First, determine if a wetland is suitable for a particular function and value (“Suitability” column) and indicate the rationale behind your determination (“Rationale” column). Please use the rationale reference numbers listed in Appendix A of USACE *The Highway Methodology Workbook Supplement*. Second, indicate which functions and values are principal (“Principal Function/value?” column). As described in *The Highway Methodology Workbook Supplement*, “functions and values can be principal if they are an important physical component of a wetland ecosystem (function only) and/or are considered of special value to society, from a local, regional, and/or national perspective”.



## Wetland Delineation Report

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH

“Important Notes” are to include characteristics the evaluator used to determine the principal function and value of the wetland.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9,11	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 is not suitable for this function.
3	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 does not contain enough water to support fish populations independently.
4	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3,4,5,7,8,9,11,13,15	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wetland 1 has limited size but serves this function principally regardless.
5	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2,5,7,9,15	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 likely has limited interaction with groundwater but is primarily saturated by floodwaters
6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 is not known to contain state or federally-listed species.
7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4,10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Adjacent land use likely results in excess nutrients, but the size and water regime of WL1 do not indicate that this is a principal function.
8	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1	<input type="checkbox"/> Yes <input type="checkbox"/> No	Wetland 1 is not suitable for production export due to its ephemeral nature and lack of vegetative density/diversity.
9	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 is not suitable for this value.
10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,2,6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Adjacent land use likely results in excess sediment and toxicants, but the water regime of Wetland 1 does not indicate that this is a principal function.
11	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2,3,4,5	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 does not provide this function principally.



**Wetland Delineation Report**

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH

12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2,8,11,22,31	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 contains lacks aesthetic characteristics and unique features required to be suitable for this function.
13	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 has little recreational potential due to its hydrology, size and location.
14	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Wetland 1 lacks food sources, and vegetative structural diversity

**10. SECTION 5 - VERNAL POOL SUMMARY (Env-Wt 311.10) – N/A NO VERNAL POOLS ON SITE**

**11. SECTION 6 - STREAM RESOURCES SUMMARY**

DESCRIPTION OF STREAM: <b>The Pemigewasset River (The Pemi) flows perennially north to south through the greater project area. It originates at Profile Lake in Franconia, NH, and flows southward through the White Mountains. It then combines with the Winnepesaukee River in Franklin, NH, to form the Merrimack River.</b>	STREAM TYPE (ROSGEN): <b>TBD</b>
HAVE FISHERIES BEEN DOCUMENTED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No – <b>Not within the project site.</b>	DOES THE STREAM SYSTEM APPEAR STABLE? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

OTHER KEY ON-SITE FUNCTIONS OF NOTE: **N/A**

The following table can be used to compile data on stream resources. “Important Notes” are to include characteristics the evaluator used to determine principal function and value of each stream. The functions and values reference number are defined in Section 4.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi is close to development, has eroded banks, and has riparian areas dominated by invasive species.
2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9,11	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi is not suitable for this function within the project area.
3	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1,2,3,4,5,6,7,8,9,10,12,14,15,17	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Pemi provides this function principally
4	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1,4,5,7,8,9,10,11,12,13,17	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi has the opportunity, size, and capacity to provide this function principally.
5	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1,2,7,15	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi does not serve this function principally at the project site

**Wetland Delineation Report**

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH

6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi is not known to contain state or federally-listed species within the project area.
7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,4,5,10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi does not serve this function principally on its own.
8	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1,4,6,10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi is suitable for production export through fish occurrence, but it does not appear to be providing this function principally in the vicinity of the proposed project.
9	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2,12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi does not have this value principally on its own within the project area.
10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,2,5,6,8,10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi does not serve this function principally on its own.
11	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1,2,3,4,6,8,9,11	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	This is a principal function of the Pemi's floodplain wetlands outside the project area but not of the stream itself.
12	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2,3,8,11,14,17,22,27,31	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi contains some of the aesthetic characteristics for this value but lacks many of the unique features required to serve the value principally.
13	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2,7,9,12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi provides fishing opportunity but lacks suitable access within the project area with extremely high, steep banks.
14	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5,6,7,8,12,17,19,20,21	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Pemi provides suitable wildlife habitat, its steep and eroded banks in the vicinity of the project bank eliminate access opportunities.

**Wetland Delineation Report**

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH

DESCRIPTION OF STREAM: <b>Stream 1 is an intermittent stream flowing from North Ashland Road to the Pemigewasset River upstream of the Route 3 crossing. The stream has defined and severely eroded banks and steeply sloping banks, indicating flashy flows at times of snowmelt and high precipitation events.</b>	STREAM TYPE (ROSGEN): <b>TBD</b>
HAVE FISHERIES BEEN DOCUMENTED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	DOES THE STREAM SYSTEM APPEAR STABLE? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

OTHER KEY ON-SITE FUNCTIONS OF NOTE: **N/A**

The following table can be used to compile data on stream resources. "Important Notes" are to include characteristics the evaluator used to determine principal function and value of each stream. The functions and values reference number are defined in Section 4.

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9,11	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 is not suitable for this function.
3	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,2,15,16,17	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 is not suitable for this function due to its intermittent flow regime
4	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4,5,7,8,9,11,13	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Stream 1 has the opportunity, size, and capacity to provide this function principally.
5	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1,2,7,15	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 does not serve this function principally at the project site
6	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 is not known to contain state or federally-listed species.
7	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4,10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Adjacent land use likely results in excess nutrients, but Stream 1 lacks the size, substrate, and hydroperiod to serve this function principally.
8	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 is not suitable for production export due to its intermittent nature and lack of vegetative density/diversity.
9	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 is not suitable for this value.
10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,2,6,10	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Adjacent land use likely results in excess sediment and toxicants, but Stream 1 lacks the

**Wetland Delineation Report**

Rehabilitation of US Route 3 Bridge over the Pemigewasset River – Ashland and Bridgewater, NH

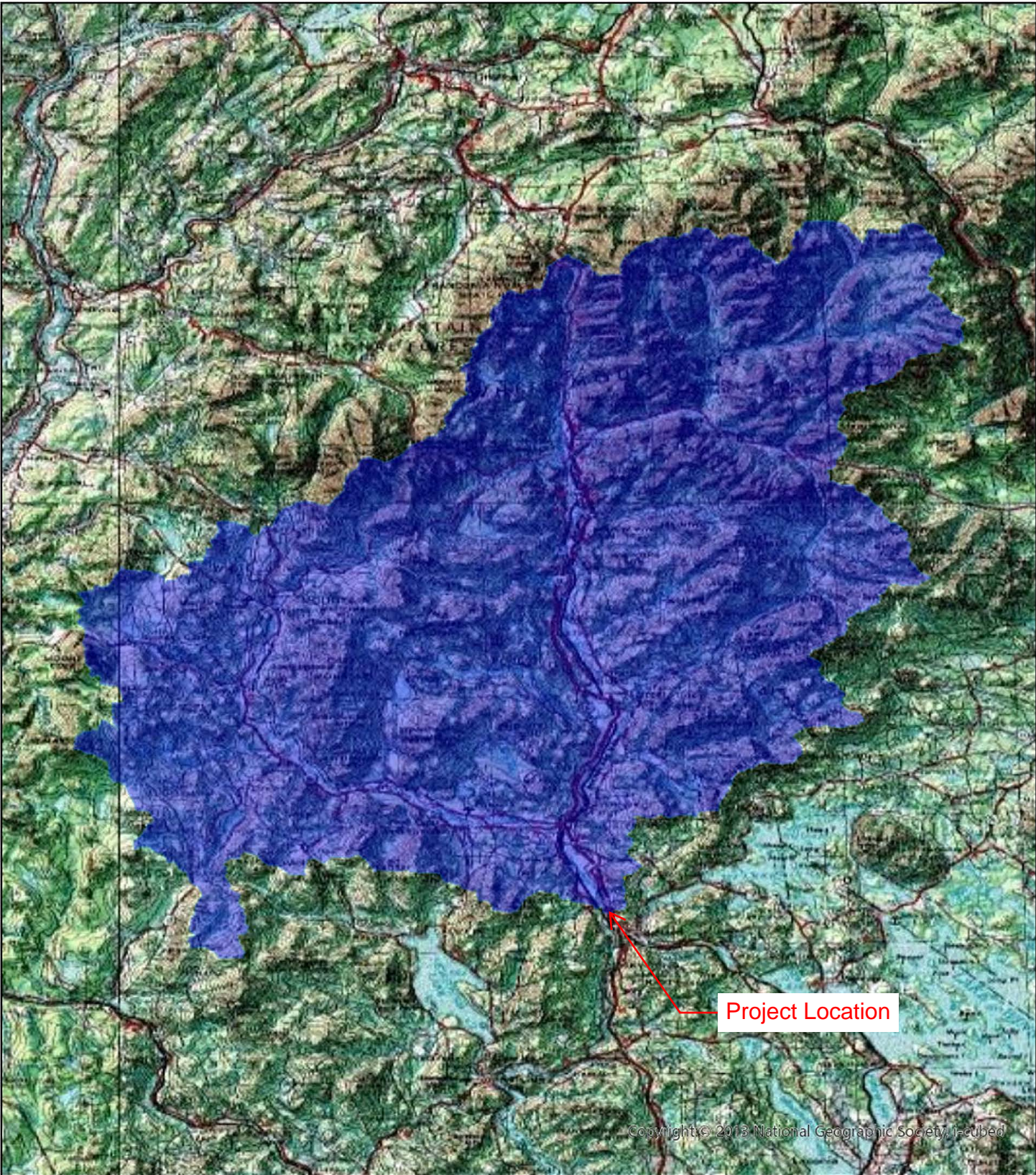
				size, substrate, and hydroperiod to serve this function principally.
11	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,2,3,4,8,9	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 does not serves this function principally.
12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2,8,11,22,31	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 contains lacks aesthetic characteristics and unique features required to be suitable for this function.
13	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9,12	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 has little recreational potential due to its hydrology, size and location.
14	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7,20	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Stream 1 lacks food sources, vegetative structural diversity and deepwater habitat.

**12. SECTION 7 - ATTACHMENTS (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)**

- Wildlife and vegetation diversity/abundance list. – See **Wetland Delineation Report Vegetation Descriptions**
- Photograph of wetland. – See **Appendix B**
- Wetland delineation plans showing wetlands, vernal pools, and streams in relation to the impact area and surrounding landscape. Wetland IDs, vernal pool IDs, and stream IDs must be indicated on the plans.
- For projects in tidal areas only: additional information required by Env-Wt 603.03/603.04. Please refer to the [Coastal Area Worksheet \(NHDES-W-06-079\)](#) for more information. – **N/A**

# **USGS Watershed Boundary Map**





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150 Dow Street  
Manchester, NH 03101  
<http://www.hoyletanner.com>

**Bridge #076/080 US Route 3 & NH Route 25  
over the Pemigewasset River  
Ashland/Bridgewater, NH**

**Pemigewasset River Watershed Area  
635 Sq Miles (406,522 AC) / Tier 3  
Shape File Obtained From USGS StreamStats**

*Last updated on Tuesday, September 19, 2023 by doon*



**SCALE**  
1 inch = 35,686 feet





**WETLANDS RULE WAIVER OR  
DWELLING OVER WATER WAIVER  
REQUEST FORM**  
WATER DIVISION/LAND RESOURCES MANAGEMENT  
WETLANDS BUREAU



RSA/Rule: RSA 482-A/ Env-Wt 204

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

A person may request a waiver to requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interests of the public or the environment. A person may also request a waiver of standard for existing dwellings over water pursuant to RSA 482-A:26, III (b).

**SECTION 1 - PROJECT LOCATION INFORMATION (Env-Wt 204.03(c))**

ADDRESS: Bridge #076/080 carrying US Route 3 and NH Route 25	TOWN/CITY: Ashland/Bridgewater Town Line	STATE: NH	ZIP CODE:
TAX MAP/LOT NUMBER: Adjacent to Ashland Map 213, Lots 1 & 2 and Bridgewater Map 202 Lots 10 & 14			

**SECTION 2 - WAIVER REQUESTOR INFORMATION (Env-Wt 204.03(a))**

LAST NAME, FIRST NAME, M.I.: NH Department of Transportation / David L. Scott, PE			
MAILING ADDRESS: P.O. Box 483, 7 Hazen Drive			
TOWN/CITY: Concord		STATE: NH	ZIP CODE: 03302
EMAIL ADDRESS (if available): <a href="mailto:david.l.scott@dot.nh.gov">david.l.scott@dot.nh.gov</a>		DAYTIME PHONE NUMBER: (603) 271-2731	
or if not FAX NUMBER:			

**SECTION 3 - APPLICANT INFORMATION (Env-Wt 204.03(b))**

If request is being made on behalf of someone else, include the following information regarding the person being represented. If requestor is the applicant, check the following box and proceed to Section 4.

Requestor is the applicant.

LAST NAME, FIRST NAME, M.I.:			
MAILING ADDRESS:			
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL ADDRESS (if available):		DAYTIME PHONE NUMBER:	
or if not FAX NUMBER:			



**SECTION 4 - WAIVER INFORMATION**

**SECTION 4A - WAIVER TO RULE Env-Wt 100-900**

N/A - If you are not requesting a rule waiver, check this box and proceed to Section 4b

Provide the number of the specific section of each rule for which a waiver is sought (Env-Wt 204.03(d)):  
 Env-Wt 311.07 (h)(1)

Due to the extensive work required for the rehabilitation/preservation project, a temporary trestle and piles will be required that will need to be in place for two growing seasons. Removing and reinstalling the trestle would result in an economic hardship and additional impacts to the riverbed. The trestle and pilings are temporary and will be fully removed once construction is complete. Additionally, the NHDOT has chosen the trestle approach as opposed to a causeway to limit the impact to the river.

If applicable, provide a complete explanation of the alternative that is proposed to be substituted for the requirement in Env-Wt, including written documentation or data, or both, to support the alternative (Env-Wt 204.03(g)):

**SECTION 4B – DWELLING OVER WATERS WAIVER UNDER RSA 482-A:26, III(b).**

N/A - If you are not requesting a standard waiver, check this box and proceed to Section 5)

Identify the specific standard to which a waiver is being requested (Env-Wt 204.03(e)): RSA 482-A:

Provide a complete explanation of why a waiver is being requested, including a complete explanation of how the statutory criteria of RSA 482-A:26, III(b) will be met (Env-Wt 204.03(f)(2)):

**SECTION 5 - ADDITIONAL WAIVER INFORMATION (Env-Wt 204.03(h); Env-Wt 204.03(i))**  
 (applicable to Waivers of Rules *and* Standards under RSA 482-A:26, III(b))

Indicate whether the waiver is needed for a limited duration and, if so, an estimate of when the waiver will no longer be needed (Env-Wt 204.03(h)):

Not Applicable

Provide a complete explanation of why the applicant believes that having the waiver granted will meet the criteria in Env-Wt 204.05 or 204.06, as applicable (Env-Wt 204.03(i)):

Granting the waiver will not result in an avoidable adverse impact on the environment or natural resources of the state, including but not limited to jurisdictional areas and protected species or habitat, public health or public safety. Nor will there be an impact on abutting properties that is more significant than that which would result from complying with the rule. Granting of the waiver will be a benefit to the river by resulting in a disturbance only once as opposed to the installation and removal of the trestle twice to accommodate the construction schedule.

**SECTION 6 - REQUIRED CERTIFICATIONS (Env-Wt 204.04)**

**Initial each box and sign below to certify:**

Initials:	The information provided is true, complete, and not misleading to the knowledge and belief of the signer.
Initials:	The signer understands that any waiver granted based on false, incomplete, or misleading information shall be subject to revocation; and

**SECTION 7 - REQUESTOR SIGNATURE (Env-Wt 204.04)**

SIGNATURE (APPLICANT): *	PRINT NAME LEGIBLY: David L. Scott, PE	DATE:
SIGNATURE (REQUESTOR):	PRINT NAME LEGIBLY:	DATE:

\*In lieu of an applicant signature, you may include a separate signed and dated authorization for the requestor to act on the person's behalf in connection with the request.

# **Natural Heritage Bureau (NHB) Review**

## New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

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**To:** Deb Coon, Hoyle Tanner & Associates, Inc.  
150 Dow Street  
Manchester, NH 03101

**From:** NH Natural Heritage Bureau

**Date:** 9/14/2023 (This letter is valid through 9/14/2024)

**Re:** Review by NH Natural Heritage Bureau of request dated 9/14/2023

**Permit Types:** Shoreland Standard Permit  
Wetland Standard Dredge & Fill - Minor  
General Permit

**NHB ID:** NHB23-2745

**Applicant:** Deb Coon, Hoyle Tanner & Associates, Inc.

**Location:** Ashland  
Tax Map: N/A, Tax Lot: N/A  
Address: US Route 3

**Proj. Description:** Proposed rehabilitation of Bridge #076/080 carrying US Route 3 over the Pemigewasset River at the Ashland/Bridgewater town line. The project was previously reviewed under the File Number NHB19-3137 for the Applicant Melilotus Dube and NHB22-3204 for the Applicant Joanne Joanne Theriault.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

# New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

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## MAP OF PROJECT BOUNDARIES FOR: NHB23-2745



# **US Fish and Wildlife (USF&W) IPaC Results & Correspondence**



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:

04/18/2024 11:34:24 UTC

Project Code: 2023-0100988

Project Name: Ashland-Bridgewater 24904 - Rehabilitation of US Route 3/NH Route 25 over the Pemigewasset River

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))



(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](https://www.fws.gov/partner/council-conservation-migratory-birds).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New England Ecological Services Field Office**

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

## PROJECT SUMMARY

Project Code: 2023-0100988

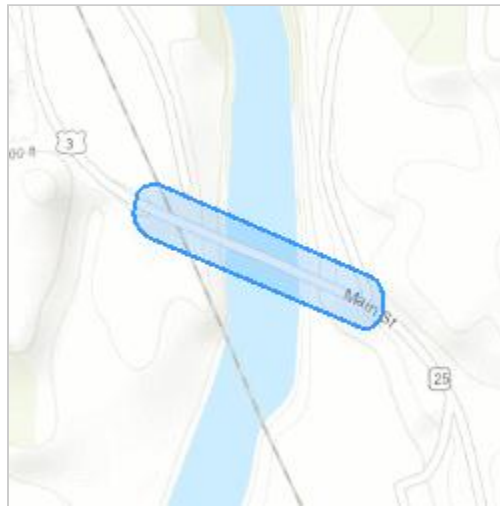
Project Name: Ashland-Bridgewater 24904 - Rehabilitation of US Route 3/NH Route 25 over the Pemigewasset River

Project Type: Bridge - Maintenance

Project Description: The proposed project involves rehabilitation of Bridge 076/080 carrying US Route 3/NH Route 25 over the Pemigewasset River in the Towns of Ashland and Bridgewater. The work would include replacement of the existing pavement and membrane, partial to full depth deck repair on the approach spans and full deck replacement on the main span, bridge and approach guardrail replacement, expansion joint replacement, abutment and pier repairs and superstructure repairs or replacement. A widening alternative is being considered but is unlikely. The work will require staging in the river and/or on the banks.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.70904411999629,-71.6543354338907,14z>



Counties: Grafton County, New Hampshire

## ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

**MAMMALS**

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

**INSECTS**

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

**CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.



## **IPAC USER CONTACT INFORMATION**

Agency: Hoyle, Tanner & Associates, Inc.

Name: Deb Coon

Address: 150 Dow Street

City: Manchester

State: NH

Zip: 03101

Email: dcoon@hoyletanner.com

Phone: 6034605154

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Federal Highway Administration



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:

July 05, 2023

Project code: 2023-0100988

Project Name: Ashland-Bridgewater 24904 - Rehabilitation of US Route 3/NH Route 25 over the Pemigewasset River

Subject: Consistency letter for the 'Ashland-Bridgewater 24904 - Rehabilitation of US Route 3/NH Route 25 over the Pemigewasset River' project under the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (NLEB).

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated July 05, 2023 to verify that the **Ashland-Bridgewater 24904 - Rehabilitation of US Route 3/NH Route 25 over the Pemigewasset River** (Proposed Action) may rely on the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action will have no effect on the endangered Indiana bat (*Myotis sodalis*) or the endangered northern long-eared bat (*Myotis septentrionalis*). If the Proposed Action is not modified, **no consultation is required for these two species**. If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA section 7(a)(2) may be required.

**For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities:** If your initial bridge/culvert or structure assessments failed to detect Indiana bats and/or NLEB use or occupancy, yet later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of the incident. In these

instances, potential incidental take of Indiana bats and/or NLEBs may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency accordingly.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate
-

## **PROJECT DESCRIPTION**

The following project name and description was collected in IPaC as part of the endangered species review process.

### **NAME**

Ashland-Bridgewater 24904 - Rehabilitation of US Route 3/NH Route 25 over the Pemigewasset River

### **DESCRIPTION**

The proposed project involves rehabilitation of Bridge 076/080 carrying US Route 3/NH Route 25 over the Pemigewasset River in the Towns of Ashland and Bridgewater. The work would include replacement of the existing pavement and membrane, partial to full depth deck repair on the approach spans and full deck replacement on the main span, bridge and approach guardrail replacement, expansion joint replacement, abutment and pier repairs and superstructure repairs or replacement. A widening alternative is being considered but is unlikely. The work will require staging in the river and/or on the banks.

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The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.70904411999629,-71.6543354338907,14z>





## DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the endangered Indiana bat and/or the endangered northern long-eared bat.

Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for these two species.

## QUALIFICATION INTERVIEW

1. Is the project within the range of the Indiana bat<sup>[1]</sup>?

[1] See [Indiana bat species profile](#)

**Automatically answered**

No

2. Is the project within the range of the northern long-eared bat<sup>[1]</sup>?

[1] See [northern long-eared bat species profile](#)

**Automatically answered**

Yes

3. [Semantic] Does your proposed action intersect an area where Indiana bats and northern long-eared bats are not likely to occur?

**Automatically answered**

Yes

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## **DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING NLEB OR INDIANA BAT**

This key was last updated in IPaC on June 14, 2023. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the endangered **northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion \(dated March 23, 2023\) for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

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## **IPAC USER CONTACT INFORMATION**

Agency: Hoyle, Tanner & Associates, Inc.

Name: Deb Coon

Address: 150 Dow Street

City: Manchester

State: NH

Zip: 03101

Email: dcoon@hoyletanner.com

Phone: 6034605154

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Federal Highway Administration

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**Section 106  
No Adverse Effect Memo**



**Victoria F. Sheehan**  
*Commissioner*

**THE STATE OF NEW HAMPSHIRE**  
**DEPARTMENT OF TRANSPORTATION**



**RECEIVED**  
**BUREAU OF ENVIRONMENT**  
**MAY 05 2020**  
**NH DEPARTMENT**  
**OF TRANSPORTATION**

**William Cass, P.E.**  
*Assistant Commissioner*

**Ashland-Bridgewater**  
**X-A003(003)**  
**24904**  
RPR 11592

**No Adverse Effect Memo**

In order to assist the Federal Highway Administration (FHWA) in complying with Section 106 of the National Historic Preservation Act of 1966 and its amendments, The New Hampshire Department of Transportation (NHDOT), in consultation with the New Hampshire Division of Historical Resources (SHPO), has reviewed this undertaking according to the standards and procedures detailed in the 2018 Programmatic Agreement regarding the Federal-Aid Highway Program in New Hampshire.

Project Description

The project consists of preservation/rehabilitation project for Bridge #076/080 carrying US Route 3 and NH Route 25 over the Pemigewasset River at the Ashland/Bridgewater Town Line to address the condition of the bridge and bridge rail capacity deficiencies and to extend the bridge's service life.

The proposed action would replace the trestle approach and truss span bridge decks, replace damaged and leaking expansion joints, and replace the substandard bridge railing with new 4-bar steel bridge railing to improve roadside safety. Pier and abutment concrete repairs would also be performed.

The Area of Potential Effect (APE) includes the footprint of the existing bridge and associated NHDOT Right-of-Way, construction access roads along John Jenness Road from the northwest, and an existing wooded path from the southeast. A temporary trestle will be constructed from the Pemigewasset River western bank for construction access to the existing river pier.

Identification

**Above-Ground**

- Bridge 076/080
  - NHDHR Inventory # ASH0032,
  - National Register Eligible.
  - Metal Deck Truss Structure,
  - Constructed 1938
  - Rehabilitated 1987 – replacement of deck, bridge posts and rails, exterior lines of stringers
- Boston, Concord and Montreal Railroad Historic District
  - NHDHR Inventory # ZMT-BCMR, ZMT-BMCP
- Northern Pass Lakes Region
  - NHDHR Inventory # ZMT-NPLR



- Morrison Homestead/Still Maple Farm
  - NHDHR Inventory # BRW0001
  - Determined Not Eligible for National Register 11/23/2016

### **Archaeology**

- Area of Potential Effect considered archaeologically sensitive based on topography, setting, and proximity to previously recorded sites.

### **Public Consultation**

- Public Officials Meeting – 9/16/2019
- Public Informational Meeting – 12/4/2019
- RPR Reviewed by NHDOT Cultural Resources Staff – 3/4/2020
- RPR Reviewed by NHDHR – 3/23/2020

### **Determination of Effect**

- Bridge 076/080
  - There would be no adverse effect to the bridge with the proposed undertaking.
  - Proposed action would have no effect on the historical integrity of the floor system. The deck replacement consists of removing the old 1987 concrete deck and laying a new concrete deck. The 1987 bridge rail and approach rail would also be replaced.
  - The pier and abutment repairs would be done with similar concrete.
- Boston, Concord and Montreal Railroad District
  - There would be no adverse effect to the railroad district
  - Bridge 076/080 is not a contributing resource to the railroad historic district.
  - Construction vehicles would need to traverse the district for access to the bridge, but any ground alteration needed to cross the railroad bed would be temporary in nature and returned to pre-construction conditions.
- Northern Pass Lakes Region/Morrison Homestead
  - There would be no direct or indirect impacts to these resources. The resulting finding is No Historic Properties Affected.
- Archaeological Resources
  - Due the potential for archaeological resources, there would be No Adverse Effect with the following conditions:
  - Construction access routes would be limited to existing, previously disturbed paths and roads.
  - Project construction would include no excavation below ground level. Access would require some fill on banks, but all filled areas will be restored to their pre-construction condition.
  - Vegetation clearing would be necessary for construction access routes, but stumping and underground grubbing would be avoided to leave any subterranean resources intact.
  - Compression impacts from construction vehicles would not adversely affect archaeological resources if vehicles gain access on previously disturbed routes and that access is temporary in nature only during the construction of the project.

Based on a review pursuant to 36 CFR 800.4, NHDOT has determined that no historic or archaeological resources in the project area would be adversely affected and that no further survey work is needed.

The result of identification and evaluation for the proposed contract is a finding of: **No Adverse Effect.**

<b>Section 4(f)</b> (to be completed by FHWA)	<i>There Will Be:</i>	<input checked="" type="checkbox"/> <b>No 4(f);</b>	<input type="checkbox"/> <b>Programmatic 4(f);</b>	<input type="checkbox"/> <b>Full 4 (f); or</b>
	<input type="checkbox"/> <b>A finding of <i>de minimis</i> 4(f) impact as stated:</b> In addition, with NHDHR concurrence of no adverse effect for the above undertaking, and in accordance with 23 CFR 774.3, FHWA intends to, and by signature below, does make a finding of <i>de minimis</i> impact. NHDHR's signature represents concurrence with both the no adverse effect determination and the <i>de minimis</i> findings. Parties to the Section 106 process have been consulted and their concerns have been taken into account. Therefore, the requirements of Section 4(f) have been satisfied.			

In accordance with the Advisory Council's regulations, we will continue to consult, as appropriate, as this project proceeds.



4/16/2020

Jill Edelmann  
Cultural Resources Manager

Date

Concurred with by the NH State Historic Preservation Officer:



4/27/2020

Nadine Miller  
Deputy State Historic Preservation Officer  
NH Division of Historical Resources

Date

c.c. David Trubey, NHDHR      Melilotus Dube, DOT  
 Jamie Sikora, FHWA      Bill Saffian, DOT



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

**Appendix B  
New Hampshire General Permits  
Required Information and USACE Section 404 Checklist**

**USACE Section 404 Checklist**

1. Attach any explanations to this checklist. Lack of information could delay a USACE permit determination.
2. All references to “work” include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 3 for information on single and complete projects.
4. Contact USACE at (978) 318-8832 with any questions.
5. The information requested below is generally required in the NHDES Wetland Application. See page 61 for NHDES references and Admin Rules as they relate to the information below.

<b>1. Impaired Waters</b>	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See the following to determine if there is an impaired water in the vicinity of your work area. * <a href="https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/">https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/</a> <a href="https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment">https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment</a> <a href="https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx">https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx</a>	X	
<b>2. Wetlands</b>	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to tidal SAS, prime wetlands, or priority resource areas? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at <a href="https://www4.des.state.nh.us/NHB-DataCheck/">https://www4.des.state.nh.us/NHB-DataCheck/</a> .	X	
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?	N/A	
2.7 What is the area of the proposed fill in wetlands?	0 SF	
2.8 What % of the overall project site will be previously and proposed filled wetlands?	N/A	
<b>3. Wildlife</b>	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: <a href="https://www4.des.state.nh.us/NHB-DataCheck/">https://www4.des.state.nh.us/NHB-DataCheck/</a> . USFWS IPAC website: <a href="https://ipac.ecosphere.fws.gov/">https://ipac.ecosphere.fws.gov/</a>	X	

3.2 Would work occur in any area identified as either “Highest Ranked Habitat in N.H.” or “Highest Ranked Habitat in Ecological Region”? (These areas are colored magenta and green, respectively, on NH Fish and Game’s map, “2010 Highest Ranked Wildlife Habitat by Ecological Condition.”) Map information can be found at: <ul style="list-style-type: none"> <li>• PDF: <a href="https://wildlife.state.nh.us/wildlife/wap-high-rank.html">https://wildlife.state.nh.us/wildlife/wap-high-rank.html</a>.</li> <li>• Data Mapper: <a href="http://www.granit.unh.edu">www.granit.unh.edu</a>.</li> <li>• GIS: <a href="http://www.granit.unh.edu/data/downloadfreedata/category/databycategory.html">www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</a>.</li> </ul>	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 31?	X	
<b>4. Flooding/Floodplain Values</b>	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	X	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		X
<b>5. Historic/Archaeological Resources</b>		
For a minimum, minor or major impact project - a copy of the RPR Form ( <a href="http://www.nh.gov/nhdhr/review">www.nh.gov/nhdhr/review</a> ) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 37 GC 14(d) of the GP document**	X	
<b>6. Minimal Impact Determination (for projects that exceed 1 acre of permanent impact)</b>	Yes	No
Projects with greater than 1 acre of permanent impact must include the following: <ul style="list-style-type: none"> <li>• Functional assessment for aquatic resources in the project area.</li> <li>• On and off-site alternative analysis.</li> <li>• Provide additional information and description for how the below criteria are met.</li> </ul>		
6.1 Will there be complete loss of aquatic resources on site?		
6.2 Have the impacts to the aquatic resources been avoided and minimized to the greatest extent practicable?		
6.3 Will all aquatic resource function be lost?		
6.4 Does the aquatic resource (s) have regional significance (watershed or ecoregion)?		
6.5 Is there an on-site alternative with less impact?		
6.6 Is there an off-site alternative with less impact?		
6.7 Will there be a loss to a resource dependent species?		
6.8 Are indirect impacts greater than 1 acre within and adjacent to the project area?		
6.9 Does the proposed mitigation replace aquatic resource function for direct, indirect, and cumulative impacts?		

\*Although this checklist utilizes state information, its submittal to USACE is a federal requirement.

\*\* If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

**U.S. Army Corps of Engineers  
New Hampshire Programmatic General Permit (PGP)  
Required Information and USACE Section 404 Checklist  
NHDOT Bridge # 076/080 US Route 3 and NH Route 25 Over The Pemigewasset River  
Ashland/Bridgewater Town Line**

**Explanations for Checklist Answers**

- 1.1 According to the 2020/2022, 305(b)/303(d) list, the Pemigewasset River is marginally impaired for fish consumption due to mercury. The proposed project will not add to these impairments.
- 2.1 The project is proposed to preserve and rehabilitate an existing stream crossing. The stream and some associated wetlands will be affected by the project.
- 2.2 There will be temporary impacts to e Tier 3 floodplain wetland. This wetland will be restored upon project completion.
- 2.4 Riparian buffers will be affected by the project as required to gain construction access to the existing bridge; however, these impacts have been minimized to the extent practicable. Bank impact areas that include soil disturbance and vegetation removal will be restored.
- 3.1 The NH Natural Heritage Bureau was contacted regarding the proposed project (see attached letter NHB23-1025, dated 09/14/2024). The database check determined that there are no recorded occurrences for sensitive species near the project area.

An official Federally-listed species list was obtained from the US Fish and Wildlife Service (USFWS) using the Information for Planning and Conservation (IPAC) online tool. The list includes the Federally-endangered Northern Long Eared Bat (*Myotis septentrionalis*; NLEB), proposed endangered Tricolored Bat (*Perimyotis subflavus*), and the Monarch Butterfly (*Danaus plexippus*) as a candidate species. A copy of the species list is included with this permit application.

USF&W has reviewed the effects of the proposed project on NLEB. In a letter dated July 5, 2023, USF&W determined that the Project may rely on the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.) and determined the project will have no effect on the endangered northern long-eared bat (*Myotis septentrionalis*). If the Proposed Action is not modified, no consultation is required for these two species. A copy of the letter is included with this permit application.

The USFWS has proposed to list the Tricolored Bat as endangered under the Endangered Species Act. A final determination about listing the Tricolored Bat is anticipated in the summer of 2024. If the Tricolored Bat is listed as endangered, the project includes suitable Tricolored Bat habitat, and the project tree clearing would not be completed prior to the effective listing date, consultation with USFWS will be required for any proposed impacts to Tricolored Bat habitat. Avoidance and minimization measures may need to be incorporated into the project for the Tricolored Bat if it is listed under the Endangered Species Act. To reduce the chance of impacting the Tricolored Bat, the project may complete tree clearing during the winter when the Tricolored Bat is hibernating and would not be present in the suitable summer habitat in the project area.

- 3.2 The project is located in an area identified as Highest Ranked Habitat in the New Hampshire Wildlife Action Plan (WAP). The project will not permanently alter the natural resources in the project area and will not affect this determination.



- 4.1 The bridge preservation/rehabilitation project is located within the 100-year floodplain of the Pemigewasset River but will not result in a loss of flood storage. The proposed project includes installation of a riprap on the northwest bank resist erosion on the streambank during construction. Effective stabilization will improve the Pemigewasset River's ability to handle runoff waters by preventing downstream sedimentation that would be caused by bank erosion during construction.
  
5. A Request for Project Review was submitted in March 2020 to the New Hampshire Division of Historic Resources (NHDHR). A response was received indicating that NHDHR had concerns regarding areas of archaeological sensitivity and potential impacts to the historic bridge and railroad. Additional consultation with NHDHR occurred and a No Adverse Effect Memo was executed and received on May 5, 2020. A copy of the determination is included with this permit application.

# **Construction Sequence**

**NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES**  
**WETLAND PERMIT APPLICATION**  
**for**  
**NHDOT Bridge # 076/080 US Route 3 and NH Route 25 Over The Pemigewasset River**  
**Ashland/Bridgewater Town Line**  
**Proposed Construction Sequence**

Phase 1A

1. Install traffic control, temporary pavement markings and portable concrete barrier for traffic control for phases 1A and 1B construction and shift traffic to phase 1 diversion.
2. Install access for bridge construction roads, a temporary trestle and/or construction barges and cofferdams. Install temporary deck support system in center bay along entire length of truss spans. Existing topsoil soil shall be removed, stockpiled, and reused with existing seed stock to promote vegetation that currently exists.
3. Remove the truss spans existing bridge deck pavement, membrane, expansion joints, bridge rail, concrete curb, scuppers, concrete filled steel grid deck and, rail post diaphragms.
4. Remove river pier (pier 7) loose, peeling and flaking cementitious coating and inspect for deteriorated concrete.
5. Install temporary truss support system at pier 7 and support north trusses.
6. Remove pier 7 deteriorated concrete and inspect exposed reinforcement for corrosion.
7. Replace pier 7 deteriorated reinforcement, perform concrete repairs and release north truss temporary support.
8. Perform required structural steel repairs, install truss span steel grid decking, expansion joint and place concrete.

Phase 1B

1. Perform truss approach span superstructure and substructure rehabilitation and repairs.
2. Pave bridge approaches.
3. Remove phase 1A and 1B traffic control, temporary pavement markings and portable concrete barrier for and shift westbound traffic into traffic lane.
4. Utilizing daily lane closures, place plant mix surface treatment (ac), paver shim on the bridge and approach eastbound (phase 1 diversion) traffic lane.
5. Utilizing daily lane closures, install pavement markings for the winter shutdown period as shown on these plans or as directed by the contract administrator.

Phase 2A

1. Install traffic control, temporary pavement markings and portable concrete barrier for traffic control for phases 2A and 2B construction and shift traffic to phase 2 diversion.
2. Remove the truss spans existing bridge deck pavement, membrane, expansion joints, bridge rail, concrete curb, scuppers, concrete filled steel grid deck and, rail post diaphragms.
3. Remove pier 7 loose, peeling and flaking cementitious coating and inspect for deteriorated concrete.
4. Install temporary truss support system at pier 7 and support south trusses.
5. Remove pier 7 deteriorated concrete and inspect exposed reinforcement for corrosion.
6. Replace pier 7 deteriorated reinforcement, perform concrete repairs and release south truss temporary support.

7. Power wash pier 7 concrete. Apply water repellent (silane/siloxane).
8. Perform required structural steel repairs, install truss span steel grid decking, expansion joint and place concrete.

#### Phase 2B

1. Perform truss approach span superstructure and substructure rehabilitation and repairs.
2. Remove access for bridge construction roads, trestles and/or construction barges and cofferdams. Remove temporary deck support system in center bay along entire length of truss spans.
3. Restore steamed to existing condition and match grade using existing material which was shifted prior to installation upon removal of the temporary truss support system.
4. Stabilize banks using humus, seed mix and tackifiers. A post construction report shall be submitted within 60 days of construction completion showing successful establishment of vegetation and bank stabilization.
5. Install trestle span barrier membrane and hot bituminous pavement.
6. Pave bridge approaches and make profile adjustments.
7. Remove traffic control, temporary pavement markings and portable concrete barrier for traffic control for phases 2A and 2B construction, install final pavement markings and open bridge for traffic in both lanes.

Construction barges and/or a temporary trestle and cofferdams will remain in place for approximately 24 months, until the bridge rehabilitation and river pier repairs are completed, and they are no longer required by the contractor's means and methods to complete the rehabilitation construction.

# **Turbidity Mixing Zone Designation**

## **TURBIDITY MIXING ZONE DESIGNATION**

When implementing this mixing zone, turbidity in the Pemigewasset River, as needed for in-water work and construction discharges, shall be monitored, and controlled as follows to meet New Hampshire Surface Water Quality Standards Env-Wq 1703.11. Such mixing zones shall meet the criteria in New Hampshire Surface Water Quality Standards Env-Wq 1707.02.

### **1. Consistency with Env-Wq 1707.02 Criteria for Approval of Mixing Zones:**

The NHDES may only approve a mixing zone if it:

- (a) *Meets the criteria in Env-Wq 1703.03(c)(1);*  
Adherence to this procedure, environmental commitments made for this project, the contract documents, as applicable, and all necessary environmental permits ensures that the criteria of this rule are met. Any potential impacts shall be limited to a short duration, and low intensity. Additional detail may be found in the **Compliance Summary** section (9) below.
- (b) *Does not interfere with biological communities or populations of indigenous species;*  
Adherence to this procedure, environmental commitments made for this project, the contract documents, as applicable, and all necessary environmental permits ensures that the criteria of this rule are met. Any potential impacts shall be limited to a short duration, and low intensity. Additional detail may be found in the **Compliance Summary** section (9) below.
- (c) *Does not result in the accumulation of pollutant s in the sediment or biota,*  
Adherence to this procedure, environmental commitments made for this project, the contract documents, as applicable, and all necessary environmental permits ensures that the criteria of this rule are met. Additional detail may be found in the **Compliance Summary** section (9) below.
- (d) *Allows a zone of passage for swimming and drifting organisms,*  
Adherence to this procedure, environmental commitments made for this project, the contract documents, as applicable, and all necessary environmental permits ensures that the criteria of this rule are met. Any potential impacts shall be limited to a short duration, and low intensity. Additional detail may be found in the **General Conditions** section (2), and **Compliance Summary** section (9) below.
- (e) *Does not interfere with existing and designated uses of the surface water,*  
Adherence to this procedure, environmental commitments made for this project, the contract documents, as applicable, and all necessary environmental permits ensures that the criteria of this rule are met. Additional detail may be found in the **Compliance Summary** section (9) below.
- (f) *Does not impinge upon spawning grounds or nursery areas, or both, of any indigenous aquatic species,*  
Adherence to this procedure, environmental commitments made for this project, the contract documents, as applicable, and all necessary environmental permits ensures that the criteria of this rule are met. Additional detail may be found in the **General Conditions** section (2), and **Compliance Summary** section (9) below.



- (g) *Does not result in the mortality of any plants, animals, humans, or aquatic life within the mixing zone,*  
Adherence to this procedure, environmental commitments made for this project, the contract documents, as applicable, and all necessary environmental permits ensures that the criteria of this rule are met. Additional detail may be found in the **General Conditions** section (2), and **Compliance Summary** section (9) below.
- (h) *Does not exceed the chronic toxicity value of 1.0 TUc at the mixing zone boundary; and*  
This criterion is not applicable to this mixing zone, which is only designated for short term, low intensity turbidity.
- (i) *Does not result in an overlap with another mixing zone.*  
This mixing zone does not overlap with another mixing zone.

## 2. General Conditions:

- a. All proposed monitoring for turbidity in the waterbody during in-water work, as needed, shall be completed by a qualified Contractor approved by NHDOT and shall be conducted in accordance with the specifications below.
- b. All turbidity monitoring measurements, and visual monitoring (with photo documentation) shall be conducted as described in sections below.
- c. With NHDOT approval, turbidity measurements using turbidity meters or probes do not need to be made if the Contractor believes that it would be unsafe for personnel to collect turbidity measurements due to conditions such as high-water velocity and/or icy conditions. In these instances, NHDES shall be notified consistent with the **Notification** section (8) below.
- d. At the discretion of NHDOT, the use of this mixing zone may be suspended and/or started on an as needed basis. NHDES shall be notified consistent with the **Notification** section (8) below.
- e. The proposed mixing zone area will extend from the discharge location to Monitoring Station DS-3 as shown in the figure below in Section 3. All in-water work will be conducted in discrete work zones that will not cause a visible turbid plume that would span the entire width of the channel at any given time. A zone of passage from the discharge location to Monitoring Station DS-3 shall be maintained by implementing the monitoring program described in Section 3 below and implementing the **Required Actions to Control Turbidity** section (4) below.

## 3. Monitoring Stations and Monitoring Frequency:

Markers (buoys or similar devices) shall be set up in the waterbody at the locations, and monitored, as described below:

- a. **Upstream – Background (UP-1):** A marker designating the background station shall be placed in the waterbody just upstream of the work site in an area not disturbed by the construction activity. The purpose of this station is to provide baseline/background turbidity information. Visual observations with photo-documentation and in-water turbidity measurements shall be taken as follows, each day that in-water work is conducted under this mixing zone, and/or when any construction activity is undertaken that could potentially result in increased in-water turbidity:
  - i. Daily prior to the commence of in-water work.

- ii. Midday while in-water work is being performed; and
  - iii. Daily at the conclusion of in-water work.
- b. **Downstream 1 (DS-1)<sup>1</sup>:** A marker shall be placed 75 feet downstream from the work site in the channel. Aquatic organism passage will be assessed at this location. During construction activities that could potentially result in increased in-water turbidity, visual monitoring shall take place every hour.
- c. **Downstream 2 (DS-2):** A marker shall be placed 150 feet downstream from the work site in the channel. During construction activities that could potentially result in increased in-water turbidity, monitoring for turbidity shall be conducted as follows:
  - i. Visual Monitoring shall take place every hour.
  - ii. Turbidity measurements shall be taken hourly if there is visible turbidity.
- d. **Downstream 3 (DS-3):** A marker shall be placed 300 feet downstream from the work site. The purpose of this station is to designate the end of the mixing zone and determine compliance with turbidity-related surface water quality standards. At this location, there shall be no visible turbidity, or turbidity measurements in any part of the channel shall not exceed 10 NTUs above the measured background at UP-1. During construction activities that could potentially result in increased in-water turbidity, monitoring for turbidity shall be conducted as follows:
  - i. Visual monitoring with photo-documentation shall take place every hour.
  - ii. Turbidity measurements shall be taken hourly if there is visible turbidity.
  - iii. If there is visible turbidity at DS-2, visual monitoring with photo-documentation and turbidity measurements shall be taken every hour at DS-3 for a minimum of 2 hours after visible turbidity is observed at DS-2.

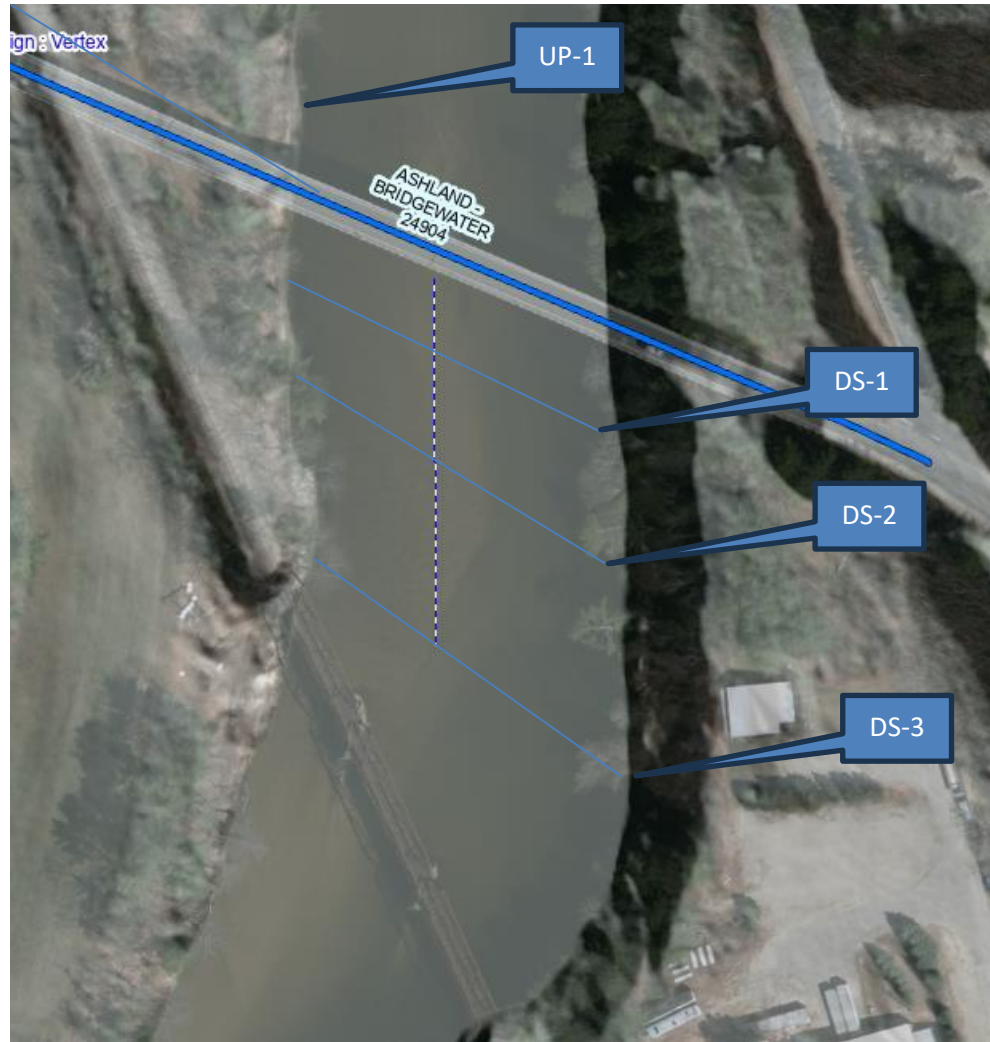
#### 4. Required Actions to Control Turbidity:

- a. **DS-1:** If turbidity is visible in more than  $\frac{1}{4}$  of the channel at this station, work shall be assessed immediately to determine the cause of the increased turbidity, and corrective actions shall be taken to limit visible turbidity to no more than  $\frac{1}{4}$  of the channel. It is assumed that if turbidity is visible in more than  $\frac{1}{4}$  of the channel, the turbid discharge could be impacting aquatic organism passage.
- b. **DS-2:** If turbidity is visible in any part of the channel at this station, a turbidity measurement shall be taken. If turbidity is greater than 25 NTUs above background, work shall be assessed immediately to determine the cause of the increased turbidity, and corrective actions shall be taken. It is assumed that if there is visible turbidity at this station, there is a high potential that turbidity will not meet the turbidity water quality standard at DS-3.
- c. **DS-3:** If turbidity is visible in any part of the channel at this compliance station, a turbidity measurement shall be taken within the turbid plume. If the turbidity measurement is greater than 10 NTUs above the background measurement at UP-1, work shall be stopped and assessed immediately to determine the cause of the

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<sup>1</sup> In some instances, the establishment of a monitoring location for aquatic organism passage (DS-1) may not be applicable due to the nature of the waterbody (e.g. narrow, shallow, or slow-moving watercourse). In these instances, monitoring station DS-1 may be eliminated from the mixing zone, in which case DS-2 would be renamed DS-1, etc. It is still assumed that aquatic organism passage would not be affected provided that the provisions of this mixing zone are implemented, including the general conditions, and corrective actions as outlined herein, and turbidity levels in the discharge are typical for the type of work.

increased turbidity, and corrective actions shall be taken to bring turbidity levels to no more than 10 NTUs above the background measurement at UP-1. A description of the corrective action(s) shall be included in a monitoring report. The report shall be provided to NHDES consistent with the **Notification** section (8) below.



#### 5. Meter Monitoring Protocols:

Field measurements of turbidity using turbidity meters shall comply with the following:

- a. Monitoring frequency at each location shall comply with item 2 above.
- b. Results for in water measurements, calibration and QA/QC shall be recorded on field data sheets, as well as the date, time, location, and the names of those conducting the monitoring.
- c. Sampling Procedures for Hand-held Meters
  - i. Rinse the sampling container three times with water from the waterbody.
  - ii. Submerge the sampling container a minimum of an arm's length upstream and allow the container to fill. Collect samples approximately one foot below the surface or at mid-depth (whichever is less) by placing a finger or thumb over the container opening, submersing the container to the appropriate depth, and

- then removing your finger or thumb from the container opening and allowing the container to fill.
- iii. Do not collect any water immediately adjacent to legs or boots.
  - iv. Ensure that any introduced air bubbles are removed prior to analysis.
  - v. Immediately cap the sample container, measure in the field using a turbidity meter and record results on the field data sheet.
- d. Sampling Procedures Using Dataloggers (Optional):
- i. Dataloggers can be used instead of hand-held meters to automatically collect the majority of near-continuous (i.e., every 15 minutes) turbidity measurements.
  - ii. Dataloggers shall be calibrated according to manufacturer's instructions, with results recorded on the field data sheet.
  - iii. On the same day that dataloggers are deployed as well as prior to and on the same day that dataloggers are retrieved, hand-held turbidity measurements shall be made in the water next to the datalogger for comparison to datalogger results.
  - iv. Dataloggers shall be retrieved, data downloaded, recalibrated, and redeployed at least once every 2 weeks.
  - v. If dataloggers are used, hand-held turbidity meter measurements shall also be taken at least twice per day as a back-up in case the datalogger malfunctions and/or the data (which is downloaded at least once every 2 weeks) is later found to be invalid.
- e. Quality Control and Quality Assurance
- i. Turbidity meters shall have an accuracy of + 2% for readings below 100 NTUs and + 3% for readings above 100 NTUs, and a resolution of  $\pm 0.1$  NTU. Prior to monitoring, meter specifications shall be provided to NHDOT for approval.
  - ii. Hand-held meters shall be recalibrated daily with results recorded on the field data sheet.
  - iii. Duplicate samples shall be taken for every 10th sample with results and identification of the duplicate sample clearly identified and recorded on the field data sheet. If the relative difference<sup>2</sup> between the duplicate measurement and the original measurement exceeds 10%, recalibrate the turbidity meter and re-measure turbidity.
  - iv. Blank samples shall be taken every 10<sup>th</sup> sample and recorded on the field data sheet. Blank samples shall be taken by filling a sample container with

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$$RPD = \frac{|x_1 - x_2|}{\frac{x_1 + x_2}{2}} \times 100\%$$

2

2

The relative percent difference (RPD) is equal to the following:

where  $x_1$  is the original sample concentration and  
 $x_2$  is the replicate sample concentration

deionized water and measuring the turbidity immediately following measurement of the 10<sup>th</sup> sample.

**6. Visual Monitoring with Photo Documentation Protocols:**

Visual monitoring for turbidity and photo documentation shall comply with the following:

- a. Visual monitoring results shall be recorded on field data sheets. Field data sheets for visual monitoring shall include the names of the individual conducting the observations, the date, time, location, and result (i.e., visual turbidity or no visual turbidity) of each observation, and the date/time when work was ordered to be stopped and the date/time when work was allowed to resume.
- b. Photos of each station shall be taken during each observation. Each photo shall include the date, time, and location.
- c. Photos must be taken from a location and angle that will clearly show visible turbidity should it occur. Use of drones for this purpose is allowed. Prior to construction, the Contractor shall provide photos of each monitoring location to NHDOT for approval proving that the proposed method to photograph conditions in-water will clearly show visible turbidity should it occur.

**7. Documentation, Notification and Reporting:**

- a. The Contractor shall maintain electronic copies of all field data sheets, datalogger data in MS Excel format (if dataloggers are used) and photos (with date, time, and location) and submit them to NHDOT and/or NHDES within 48 hours of receiving a request.
- b. Reports that include the results from the previous week shall be transmitted to NHDOT by Tuesday of the following week. The weekly reports shall include the following:
  - i. If turbidity data was not collected, an explanation as to why and when it wasn't collected with supporting information (i.e., gage information showing high flows, photos showing ice build-up, etc.).
  - ii. A summary of any data that was collected that did not meet the QA/QC requirements.
  - iii. Turbidity meter results including the date, time, and location.
  - iv. The dates, times, locations, and associated photos.
  - v. The dates and times when work was stopped due to exceedances of any of the criteria above.
  - vi. The dates, times, associated photos at each location and turbidity meter results, when work was allowed to resume.
  - vii. The dates, times, and nature of corrective actions.
  - viii. If dataloggers are used and retrieved the previous week, an MS Excel plot showing all datalogger results with NTUs on the y-axis and time/date on the x-axis.

**8. Notification:**

- a. NHDOT shall be notified **immediately** when turbidity measurements at the downstream mixing zone compliance station D3-3 indicate that an exceedance of the surface water quality standard for turbidity has occurred.

- b. NHDES shall be notified **within 24 hours** when it is determined that monitoring cannot be conducted due to unsafe conditions.
- c. If use of this mixing zone has been suspended due to no work that could reasonably cause turbid conditions, or not yet started, NHDES shall be notified **within 24 hours** of the start or resumption of use of this mixing zone.
- d. NHDES shall be notified **within 24 hours** if a failure is discovered in maintaining a zone of passage during in-water work in accordance with General Condition 2e.
- e. Notifications relating to a non-compliance event (identified in Section 8a and 8d above) shall include:
  - i. A description of the exceedance,
  - ii. The probable cause of the exceedance,
  - iii. Corrective actions that were taken, or that will be taken, to address the exceedance, and
  - iv. An estimate of the amount of time needed until the exceedance is corrected, if not already corrected.
- f. Notifications shall be submitted to the NHDES Watershed Management Bureau, Judith E. Sears Houston, at [judith.e.houston@des.nh.gov](mailto:judith.e.houston@des.nh.gov), or (603) 271-2983.

#### 9. Compliance Summary:

- a. At the mixing zone compliance station DS-3, water quality standards for turbidity shall be met. If turbidity exceeds water quality standards (no more than 10 NTU above background), work shall be stopped, and corrective actions undertaken.
- b. Examples of corrective actions that may be taken by the Contractor, with approval of NHDOT include, but are not limited to:
  - i. Work stoppage until turbidity at the end of the mixing zone DS-3 returns to a compliant measurement,
  - ii. Stabilizing any un-stabilized soil,
  - iii. Modification of construction procedures,
  - iv. Evaluation and correction of water quality control measures,
  - v. Evaluation and correction of erosion and sediment controls (Stormwater Control Measures (SCM)),
  - vi. Enhanced SCM deployment; and/or
  - vii. Use of other SCMs.
- c. Expected in-water measurements of between 50 NTU and 10 NTU above background fall within a range of toxicity that is not acutely toxic to aquatic organisms, meaning that short durations of exposure are not detrimentally harmful.
- d. According to the EPA, “*All species of fish and other aquatic life must tolerate a range of dissolved solids concentrations in order to survive under natural conditions... Major increases in stream suspended solids (25 ppm [7 NTU] turbidity upstream versus 390 ppm [114 NTU] downstream) caused smothering of bottom invertebrates, reducing organism density to only 7.3 per square foot versus 25.5 per square foot upstream (Tebo, 1955)...*” *Quality Criteria for Water 1986, EPA, Publication 440/5-86-001, May 1, 1986 p270* (<https://www.epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf>).
- e. NOAA reports here: [Section 7 Effect Analysis: Turbidity in the Greater Atlantic Region | NOAA Fisheries](#) that, “*Studies of the effects of turbid water on fish suggest*

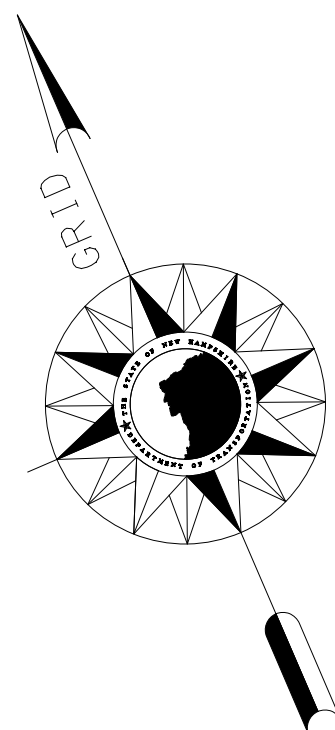
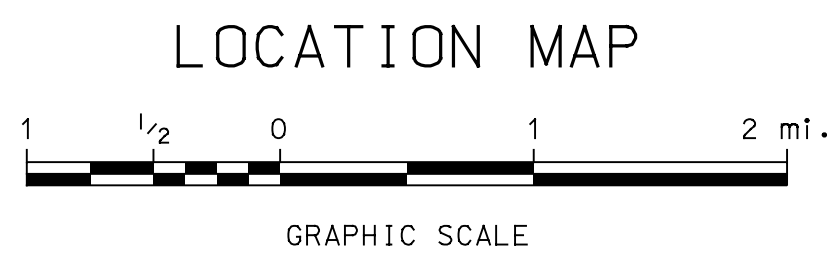
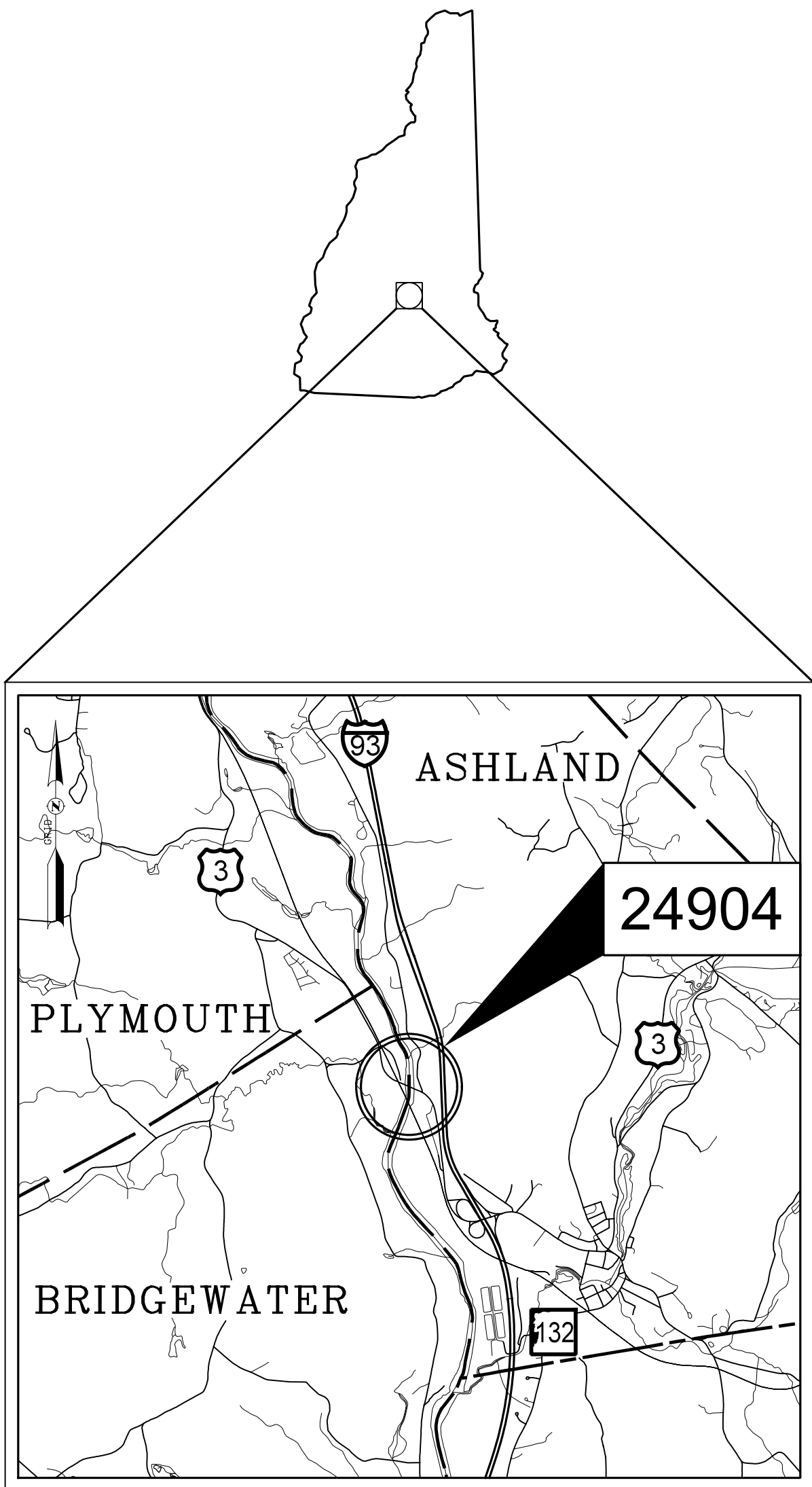


*that concentrations of suspended sediment can reach thousands of milligrams per liter [1,000 mg/L = 292 NTU] before an acute toxic reaction is expected (Burton 1993)”*

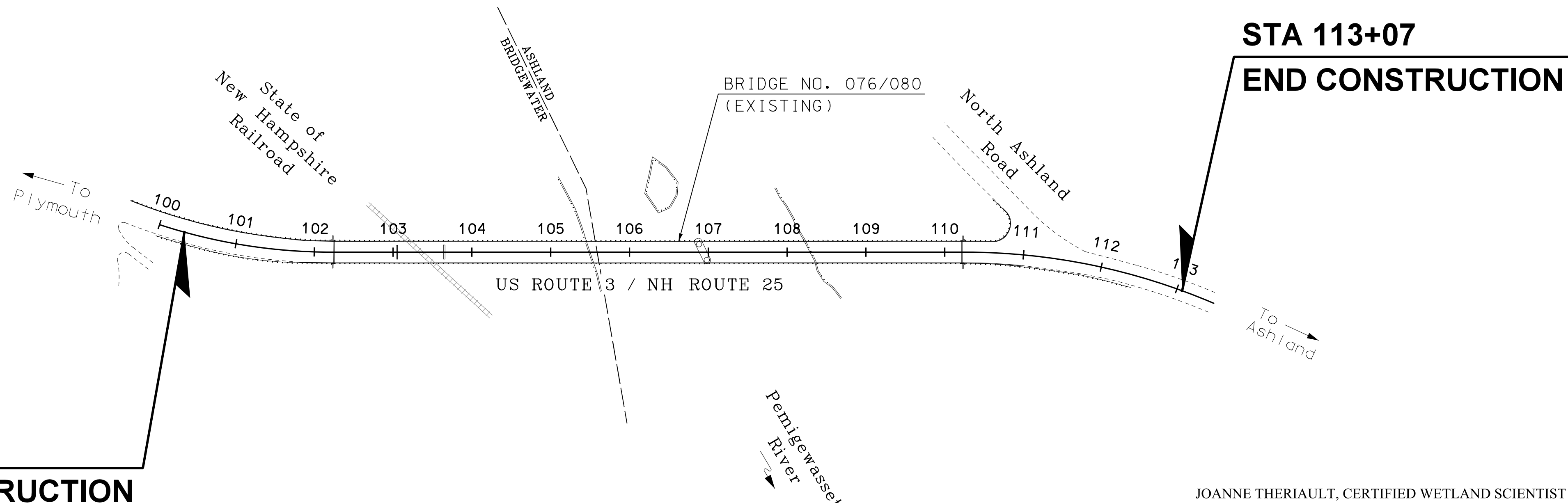
- f. The use of short duration construction turbidity mixing zones is limited to:
  - i. Daily, only when needed,
  - ii. Suspension at the completion of each day of work; and
  - iii. Used only during active construction discharges and associated in-water construction operations.

# **Project Plans**

**STATE OF NEW HAMPSHIRE**  
**DEPARTMENT OF TRANSPORTATION**  
**WETLANDS PLANS**  
**FEDERAL AID PROJECT**  
**X-A003(003)**  
**N.H. PROJECT NO. 24904**  
**US ROUTE 3 / NH ROUTE 25**  
**OVER THE PEMIGEWASSET RIVER AND NH RAILROAD**



**STA 100+33**  
**BEGIN CONSTRUCTION**



**STA 113+07**  
**END CONSTRUCTION**

**TOWNS OF ASHLAND & BRIDGEWATER**  
**COUNTY OF GRAFTON**

SCALE: 1" = 100'

FOR CONSTRUCTION AND ALIGNMENT DETAILS -  
SEE CONSTRUCTION PLANS



JOANNE THERIAULT, CERTIFIED WETLAND SCIENTIST #305, OF HOYLE, TANNER & ASSOCIATES, INC. OF MANCHESTER, NH, PERFORMED THE WETLAND MAPPING ON OCTOBER 19, 2022 ACCORDING TO THE STANDARDS OF THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012, US ARMY CORPS OF ENGINEERS.

DRAWN BY TAG DATE 01/2024  
 CHECKED BY EGW DATE 01/2024  
 4/19/2024 11:37:00 AM 24904.FSW.dgn

INDEX OF SHEETS

1	FRONT SHEET
2-3	STANDARD SYMBOLS SHEETS
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6	WETLAND IMPACTS PLAN
7-8	EROSION CONTROL PLANS

	THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION			
	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	X-A003(003)	24904	1	8

# GENERAL

EDGE OF PAVEMENT TRAVELED WAY	PROPOSED ROADWAY	existing roadway	(pavement removed outside slope lines)
DRIVEWAYS		(label surface type)	
BUILDINGS		(label house or type of building)	(building to be removed)
FOUNDATION		(label type)	
LEACH FIELD		leach field	
BRIDGE CROSSINGS	STREAM	OVERPASS	
STEPS AND WALK		(label type)	
INTERMITTENT WATER COURSE			
SHORE LINE	river/stream	pond (label name of water body)	
POTENTIAL WET AREA SYMBOL			
BRUSH OR WOODS LINE			
TREES (PLANS)	(deciduous)	(coniferous)	(stump)
TREE OR STUMP (CROSS-SECTIONS)	(show station, circumference in feet & type)		
HEDGE		(label type)	
MONITORING WELL		mon	
WELL		W	
FLAG POLE		fp	

ORIGINAL GROUND (TYPICALS)	
ROCK OUTCROP	
ROCK LINE (TYPICALS & SECTIONS ONLY)	
GUARDRAIL (label type)	existing bgr PROPOSED cgr
JERSEY BARRIER	
CURB (LABEL TYPE)	
STONE WALL	
RETAINING WALL (LABEL TYPE)	(points toward retained ground)
FENCE (LABEL TYPE)	
SIGNS	(single post) (double post)
GAS PUMP	gp
FUEL TANK (ABOVE GROUND)	ft (label size & type)
STORAGE TANK FILLER CAP	fc
SEPTIC TANK	S
GRAVE	gr
MAILBOX	mb
VENT PIPE	vp
SATELLITE DISH ANTENNA	da
PHONE	ph
GROUND LIGHT/LAMP POST	gl lp
BORING LOCATION	B
TEST PIT	TP
INTERSTATE NUMBERED HIGHWAY	293
UNITED STATES NUMBERED HIGHWAY	3
STATE NUMBERED HIGHWAY	102

# SHORELAND - WETLAND

WETLAND DESIGNATION AND TYPE	
DELINEATED WETLAND	DW
ORDINARY HIGH WATER	OHW
TOP OF BANK	T O B
TOP OF BANK & ORDINARY HIGH WATER	T O B O H W
NORMAL HIGH WATER	N H W
WIDTH AT BANK FULL	W B F
PRIME WETLAND	P W E T
PRIME WETLAND 100' BUFFER	P W E T 100
NON-JURISDICTIONAL DRAINAGE AREA	N J D A
COWARDIN DISTINCTION LINE	C D L
TIDAL BUFFER ZONE	T B Z
DEVELOPED TIDAL BUFFER ZONE	D T B Z
HIGHEST OBSERVABLE TIDE LINE	H O T L
MEAN HIGH WATER	M H W
MEAN LOW WATER	M L W
VERNAL POOL	V P
SPECIAL AQUATIC SITE	S A S
REFERENCE LINE	R E F
WATER FRONT BUFFER	W B 50
NATURAL WOODLAND BUFFER	N W B 150
PROTECTED SHORELAND	P S 250
INVASIVE SPECIES LABEL	I.S. I
INVASIVE SPECIES	I.S. II

# FLOODPLAIN / FLOODWAY

500 YEAR FLOODPLAIN BOUNDARY	F P 500
100 YEAR FLOODPLAIN BOUNDARY	F P 100
FLOODWAY	F W

# ENGINEERING

CONSTRUCTION BASELINE	
PC, PT, POT (ON CONST BASELINE)	
PI (IN CONSTRUCTION BASELINES)	
INTERSECTION OR EQUATION OF TWO LINES	
ORIGINAL GROUND LINE (PROFILES AND CROSS-SECTIONS)	
PROFILE GRADE LINE (PROFILES AND CROSS-SECTIONS)	
CLEARING LINE	
SLOPE LINE	
SLOPE LINE (FILL)	
SLOPE LINE (CUT)	
PROFILES AND CROSS SECTIONS:	
ORIGINAL GROUND ELEVATION (LEFT)	72.5
FINISHED GRADE ELEVATION (RIGHT)	79.14

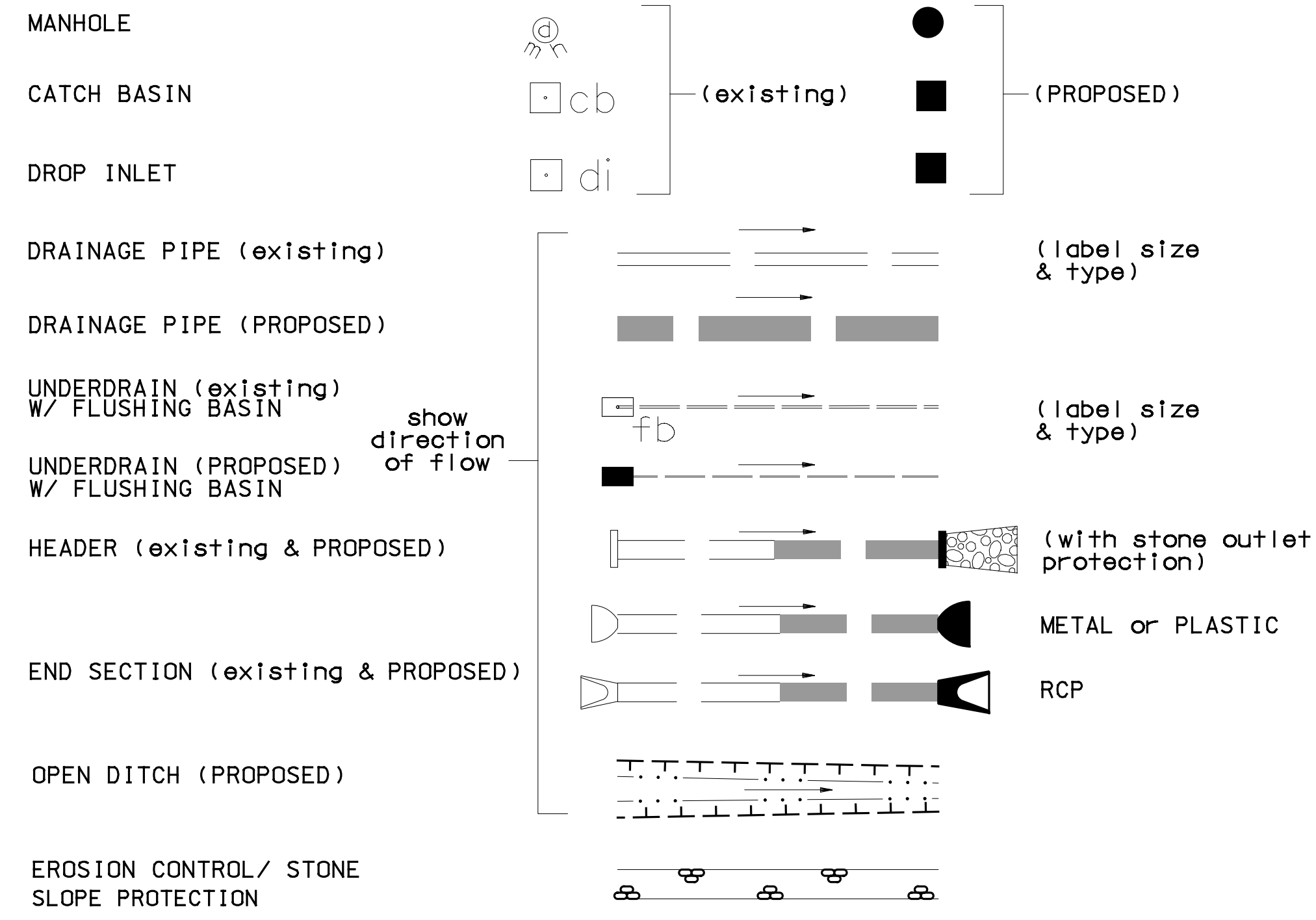
STATE OF NEW HAMPSHIRE  
ASHLAND & BRIDGEWATER  
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

**STANDARD SYMBOLS**

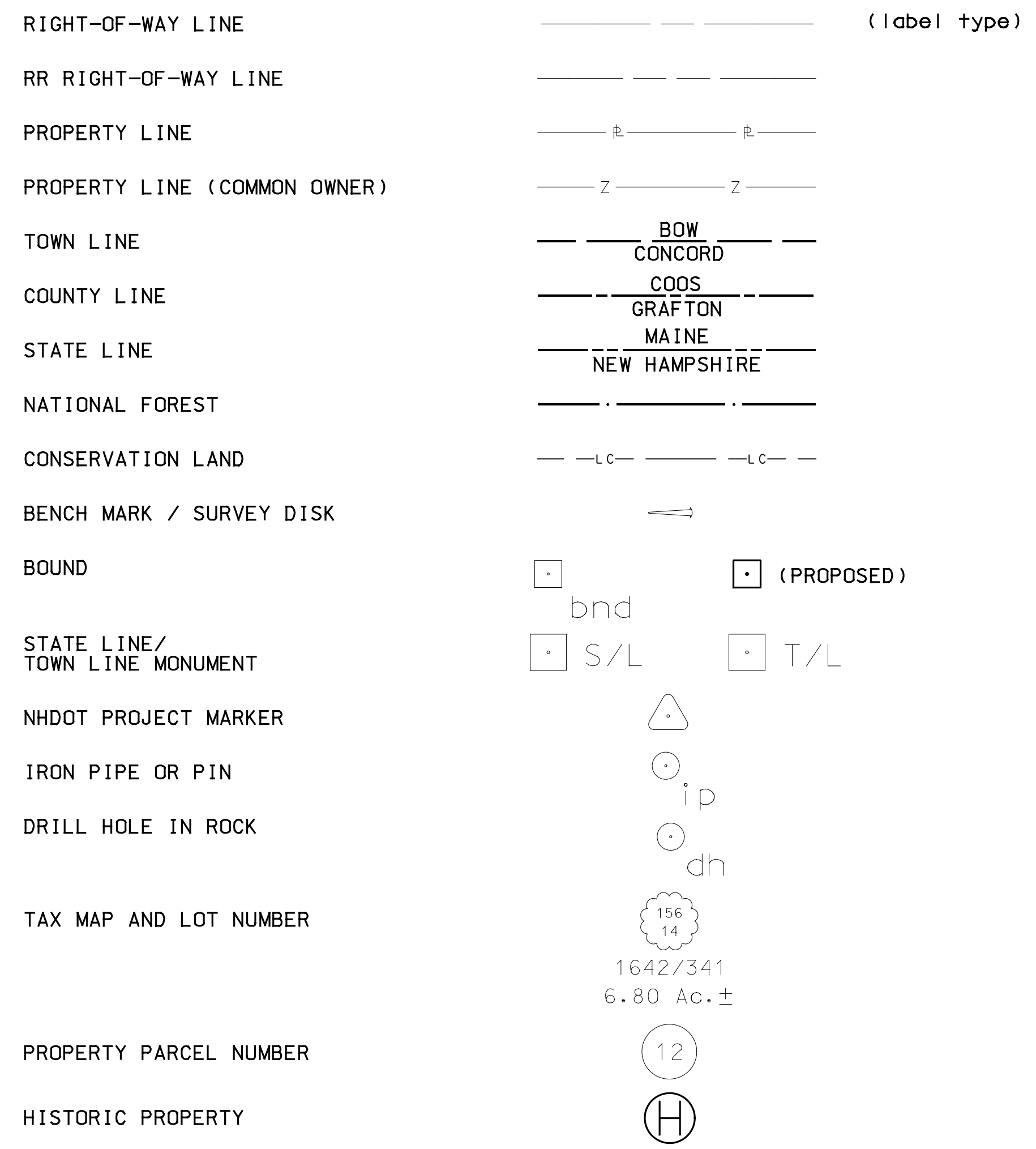
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
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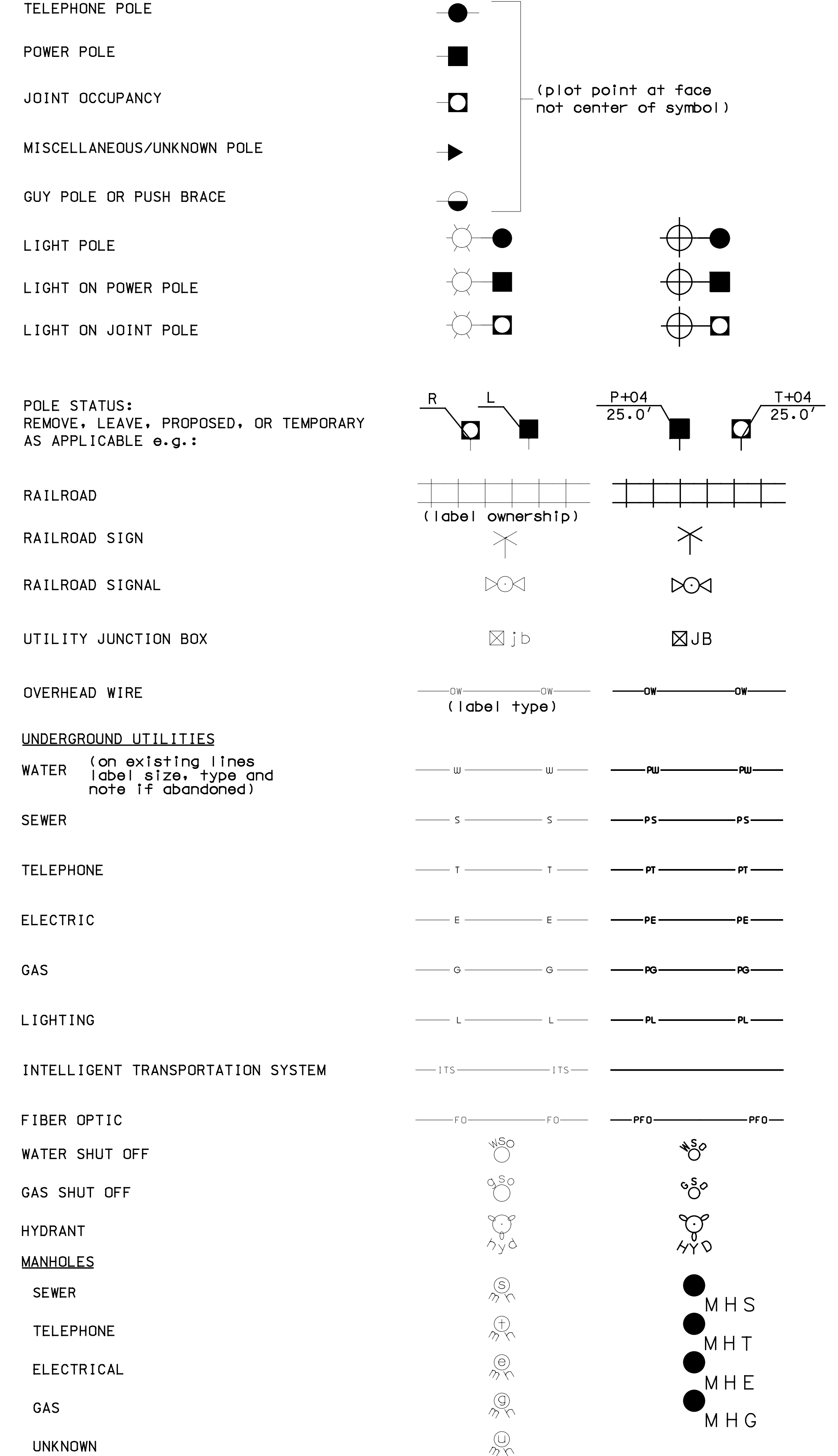
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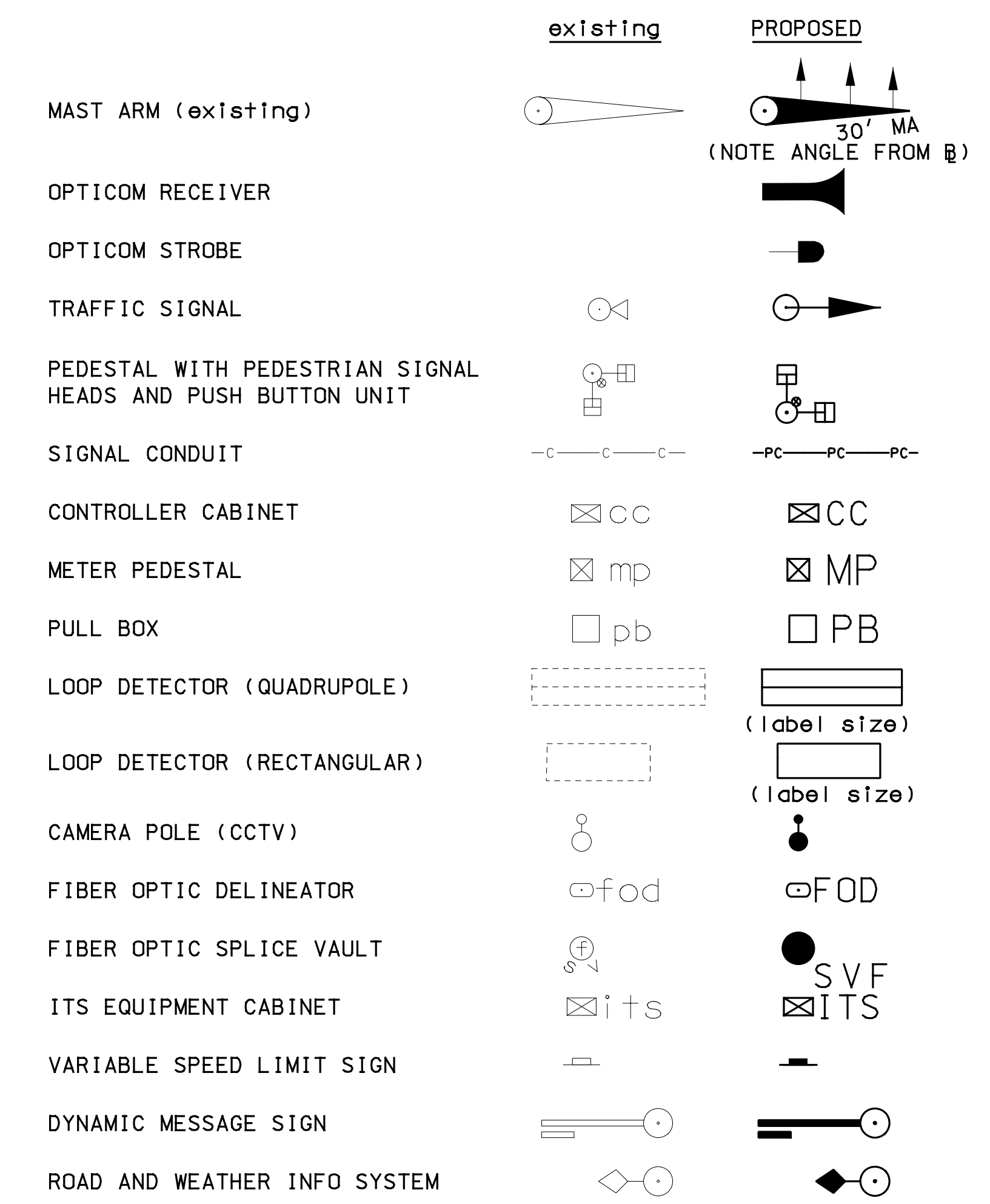
## BOUNDARIES / RIGHT-OF-WAY



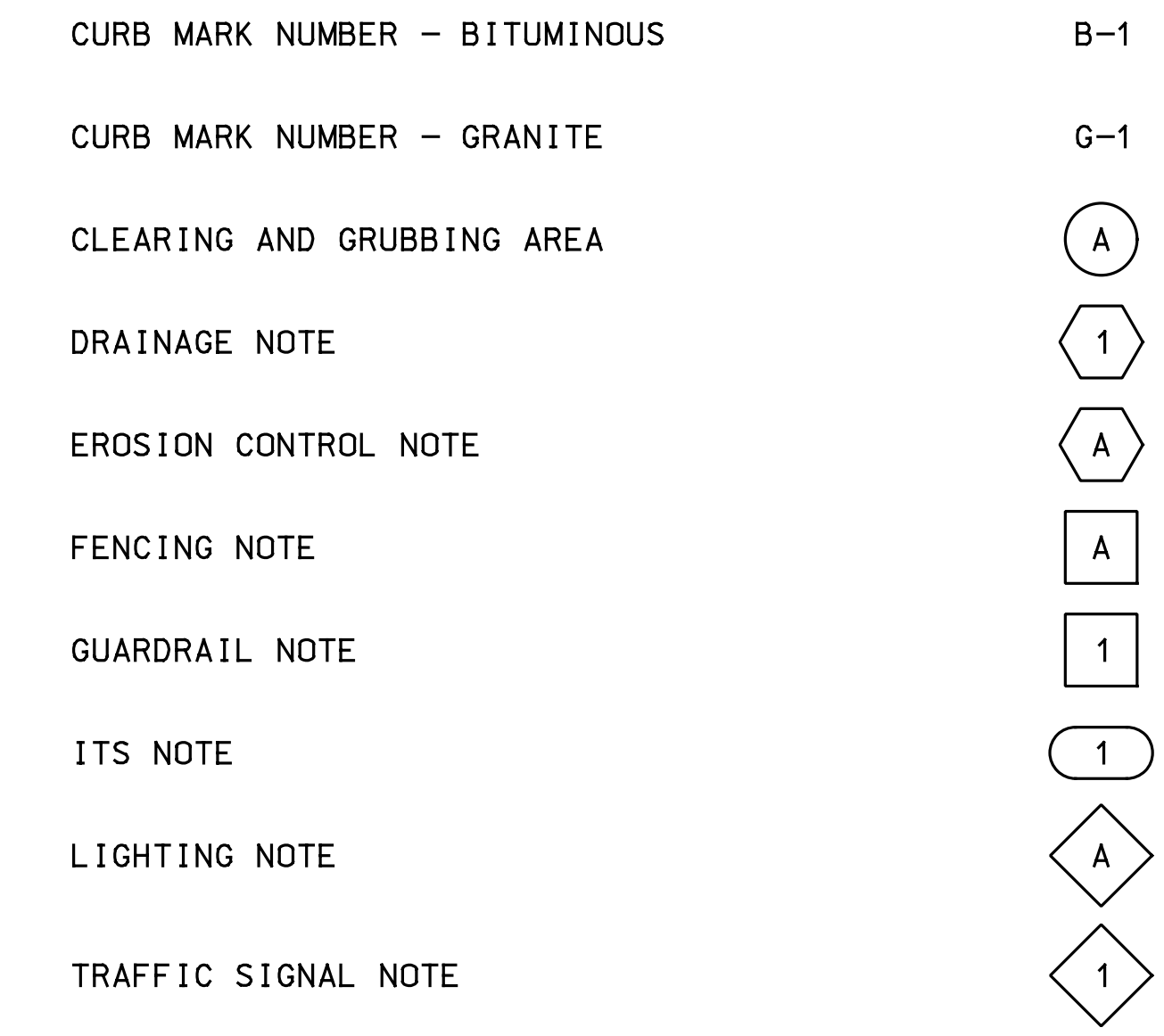
## UTILITIES



## TRAFFIC SIGNALS / ITS



## CONSTRUCTION NOTES



STATE OF NEW HAMPSHIRE  
ASHLAND & BRIDGEWATER  
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

**STANDARD SYMBOLS**

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-1-2016	24904s+dsymb1_2	24904	3	8

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**GENERAL WETLAND IMPACT NOTES**

- PERFORM ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY AND EASEMENTS, UNLESS OTHERWISE SHOWN ON THE PLANS OR AS ORDERED BY THE CONTRACT ADMINISTRATOR.
- THE LOCATIONS OF TEMPORARY ACCESS ROADS, TRESTLE, BARGE, COFFERDAM LIMITS AND TEMPORARY TRUSS SUPPORT SYSTEM CONSTRUCTION ARE APPROXIMATE AND WILL BE DESIGNED BY THE CONTRACTOR. ALL IMPACTS SHALL BE WITHIN THE LIMITS OF POTENTIAL TEMPORARY AND PERMANENT IMPACTS DELINEATED ON THE PLAN.
- PERMANENT IMPACTS FOR CONSTRUCTION ACCESS TRESTLES WILL BE LIMITED TO WESTERN BANK VEGETATION AND SOIL REMOVAL AND TRESTLE PILES INSTALLED ON THE BANK. WESTERN BANK VEGETATION AND SOIL REMOVAL IMPACTS FOR CONSTRUCTING THE ACCESS ROAD AND TRESTLE TO SUIT CONTRACTOR MEANS AND METHODS FOR ACCESSING PIER 7 IS ESTIMATED TO BE 1997 SF AND 70 LF. SEE ACCESS FOR BRIDGE CONSTRUCTION NOTE 8 AND RESTORATION PLAN NOTE 2 FOR ADDITIONAL INFORMATION.
- TEMPORARY IMPACTS FOR CONSTRUCTION ACCESS TRESTLES WILL BE LIMITED TO TRESTLE PILES INSTALLED INTO THE RIVERBED. RIVERBED IMPACT AREAS FOR PILES SUPPORTING ACCESS TRESTLES ARE ESTIMATED ASSUMING FIVE 2'-6" DIAMETER PIPE PILES EVERY 30' AND FACTORED BY TWO ALLOWING FOR CONTRACTOR FLEXIBILITY. ESTIMATED TRESTLE PILE IMPACT AREA IS APPROXIMATELY 350 SF.
- TEMPORARY IMPACTS FOR CONSTRUCTION ACCESS BARGES ARE ESTIMATED ASSUMING FOUR 2'-0" DIAMETER SPUDS PER BARGE. 3.14 SF/SPUD \* 4 SPUDS/BARGE \* 3 RE-ANCHORS/BARGE \* 1 BARGE AND FACTORED BY TWO ALLOWING FOR CONTRACTOR FLEXIBILITY. ESTIMATED CONSTRUCTION BARGE IMPACT AREA IS APPROXIMATELY 80 SF.
- COFFERDAMS REQUIRED TO SUIT THE CONTRACTOR'S MEANS AND METHODS FOR ACCESS TO AND CONSTRUCTION OF PIER 7 CONCRETE REPAIRS SHALL BE DESIGNED BY THE CONTRACTOR. ESTIMATED COFFERDAM IMPACT AREA IS APPROXIMATELY 6572 SF. SEE ACCESS FOR BRIDGE CONSTRUCTION NOTE 4 FOR ADDITIONAL INFORMATION.
- A TEMPORARY SUPPORT SYSTEM IS REQUIRED TO SUPPORT THE EXISTING TRUSSES DURING PIER 7 CONCRETE REPAIR OPERATIONS TO MAINTAIN THE STRUCTURAL INTEGRITY. TEMPORARY IMPACTS FOR THE TRUSS SUPPORT SYSTEM ARE ESTIMATED ASSUMING FOUR 15' X 15' SHORING TOWERS SUPPORTED ON THE RIVERBED. ESTIMATED TEMPORARY TRUSS SUPPORT SYSTEM IMPACT AREA IS APPROXIMATELY 900 SF.
- AFTER COMPLETION OF PIER 7 AND OTHER BRIDGE MAINTENANCE AND REPAIR WORK, REMOVE ALL COFFERDAMS, WORK TRESTLES, BARGES, WORK PLATFORMS, TEMPORARY TRUSS SHORING STRUCTURES AND CONSTRUCTION ACCESS ROADS AND RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS. RESTORATION OF DISTURBED AREAS BEYOND THE LIMITS AS SHOWN ON THESE PLANS TO SUIT THE CONTRACTOR'S MEANS AND METHODS SHALL BE AS DIRECTED BY THE CONTRACT ADMINISTRATOR. REFER TO RESTORATION PLAN NOTES FOR ADDITIONAL INFORMATION.

**TEMPORARY TRUSS SUPPORT SYSTEM NOTES**

- A TEMPORARY SUPPORT SYSTEM IS REQUIRED TO SUPPORT THE EXISTING TRUSSES DURING PIER 7 BEARING PEDESTAL CONCRETE REPAIR OPERATIONS TO MAINTAIN THE STRUCTURAL INTEGRITY.
- THE CONTRACTOR SHALL SUBMIT PLANS SHOWING TEMPORARY TRUSS SUPPORT SYSTEM ERECTION AND REMOVAL PROCEDURES IN ACCORDANCE WITH SECTION 105.02.
- TEMPORARY TRUSS SUPPORT SYSTEM SHALL BE SUPPORTED ON THE RIVERBED OR MAY BE INCORPORATED INTO THE ACCESS FOR BRIDGE CONSTRUCTION WORK TRESTLES. SEE ACCESS FOR BRIDGE CONSTRUCTION NOTES ON THIS SHEET FOR ADDITIONAL INFORMATION.
- ATTACHMENT OF THE TEMPORARY TRUSS SUPPORT SYSTEM TO THE EXISTING BRIDGE SHALL BE APPROVED BY THE CONTRACT ADMINISTRATOR. WELDING TO THE EXISTING BRIDGE WILL NOT BE PERMITTED.
- PROVIDE SHIMS BETWEEN THE TRUSS MEMBERS AND TEMPORARY SUPPORT SYSTEM TO EVENLY DISTRIBUTE FORCES.

**ACCESS FOR BRIDGE CONSTRUCTION NOTES**

- ACCESS FOR BRIDGE CONSTRUCTION, SHALL CONSIST OF THE DESIGN, CONSTRUCTION, MAINTENANCE AND REMOVAL OF ANY TEMPORARY ACCESS ROADS, WORK TRESTLES, BARGES AND WORK PLATFORMS NECESSARY TO COMPLETE THE REHABILITATION WORK BY THE CONTRACTOR. CONTRACTOR MAY UTILIZE THE EXISTING TRUSS MEMBERS AND ANCHORAGE INTO PIER 7 TO SUPPORT WORK PLATFORM SYSTEMS. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
- ANY CLEARING FOR CONSTRUCTION OF THE TEMPORARY ACCESS SHALL BE INCLUDED IN ACCESS FOR BRIDGE CONSTRUCTION.
- THE TEMPORARY WORK TRESTLES ARE ASSUMED TO BE OPEN MULTI-SPAN STRUCTURES WITH PILE BENTS SPACED AT 30 FEET. TEMPORARY WORK TRESTLES AND/OR BARGES SHALL NOT EXTEND BEYOND THE "TRESTLE LIMITS" IDENTIFIED IN THESE AND THE CONSTRUCTION PLANS. FOR PROPOSED TEMPORARY WORK TRESTLES AND/OR BARGES EXTENDING BEYOND THE IDENTIFIED "TRESTLE LIMITS", THE CONTRACTOR SHALL PREPARE AND SUBMIT A PERMIT AMENDMENT REQUEST, DETAILING THE ANTICIPATED DREDGE AND FILL IMPACTS AS WELL AS THE MEANS AND METHODS OF CONSTRUCTING WORK TRESTLE AND/OR BARGES TO THE NHDES WETLANDS BUREAU. NO IMPACTS ASSOCIATED WITH THE CONTRACTOR PROPOSED WORK TRESTLE AND/OR BARGES SHALL OCCUR WITHIN THE JURISDICTION OF THE NHDES WETLANDS BUREAU UNTIL THE PERMIT AMENDMENT HAS BEEN OBTAINED.
- COFFERDAMS REQUIRED TO SUIT THE CONTRACTOR'S MEANS AND METHODS FOR ACCESS TO AND CONSTRUCTION OF PIER 7 CONCRETE REPAIRS SHALL BE DESIGNED BY THE CONTRACTOR. IT MAY BE POSSIBLE TO USE A WATER DIVERSION STRUCTURE SUCH AS A SANDBAG DIKE OR PORTABLE DAM SYSTEM IN LIEU OF A SHEETED COFFERDAM AS A MEANS OF CONTROLLING WATER FOR PIER 7 ACCESS. IF A WATER DIVERSION STRUCTURE IS USED IT WILL BE PAID AS A COFFERDAM. THE CONTRACTOR SHALL SUBMIT A COFFERDAM PLAN AND SUPPORTING DESIGN CALCULATIONS, PREPARED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NH, TO THE DEPARTMENT FOR REVIEW AND DOCUMENTATION FOUR WEEKS PRIOR TO COMMENCEMENT OF THE WORK.
- TEMPORARY ACCESS ROAD SLOPE IMPACTS, WORK TRESTLES, BARGES, WORK PLATFORMS, COFFERDAMS AND TRUSS SHORING SHALL REMAIN WITHIN THE WETLAND IMPACT AREAS SHOWN IN THE WETLAND PERMIT.
- A GEOTEXTILE FABRIC SHALL BE PLACED UNDER ALL TEMPORARY FILLS TO MINIMIZE THE DISRUPTION OF NATIVE SOILS, VEGETATION AND RIVERBED.
- WHERE NECESSARY TO SUIT CONTRACTOR MEANS AND METHODS FOR PIER 7 ACCESS AND INSTALLATION OF THE COFFERDAM, TRUSS TEMPORARY SUPPORT SYSTEM AND ITS FOUNDATION, CONTRACTOR MAY:
  - EXCAVATE NATURAL RIVERBED MATERIAL WITHIN THE COFFERDAM LIMITS IDENTIFIED IN THESE AND THE CONSTRUCTION PLANS (SEE WETLAND IMPACT NOTE 7 FOR ADDITIONAL INFORMATION) AND STOCK PILE FOR RESTORING THE RIVERBED. PLACE GEOTEXTILE FABRIC AND CLEAN STONE FILL ON RIVERBED AND CONSTRUCT TRUSS TEMPORARY SHORING FOUNDATIONS AND TOWERS. UPON COMPLETION OF PIER 7 REPAIRS, REMOVE TRUSS TEMPORARY SHORING, CLEAN STONE FILL AND GEOTEXTILE FABRIC AND RESTORE RIVERBED PRE-CONSTRUCTION CONDITIONS USING STOCKPILED NATURAL RIVERBED EXCAVATE MATERIAL.
  - PLACE GEOTEXTILE FABRIC AND CLEAN STONE FILL ON RIVERBED WITHIN THE COFFERDAM LIMITS IDENTIFIED IN THESE AND THE CONSTRUCTION PLANS AND CONSTRUCT TRUSS TEMPORARY SHORING FOUNDATIONS AND TOWERS. UPON COMPLETION OF PIER 7 REPAIRS, REMOVE TRUSS TEMPORARY SHORING, CLEAN STONE FILL AND GEOTEXTILE FABRIC TO RESTORE RIVERBED PRE-CONSTRUCTION CONDITIONS. ALL ANGULAR CLEAN STONE FILL SHALL BE REMOVED FROM WITHIN THE COFFERDAM LIMITS.
- ACCESS ROAD AND TRESTLE LIMITS SHOWN ON THE CONSTRUCTION ACCESS PLAN ARE BASED ON A 35' WIDE ROAD, 5% MAXIMUM TRESTLE PROFILE GRADE, 9% MAXIMUM ACCESS ROAD PROFILE GRADE, AND 1.5H:1V SIDE SLOPES AND PROVIDING 6" OF FREEBOARD ABOVE APPROXIMATE ORDINARY HIGH WATER ELEVATION. THE CONTRACTOR MUST REMAIN WITHIN THE EXISTING RIGHT-OF-WAY AND PROJECT EASEMENTS, AND IMPACTS TO WETLANDS ARE RESTRICTED TO WHAT IS SHOWN. WORK OUTSIDE THE LIMITS SHOWN MAY REQUIRE ADDITIONAL PERMITS AND/OR ROW COORDINATION, WHICH IS THE RESPONSIBILITY OF THE CONTRACTOR; ADDITIONAL COSTS ASSOCIATED WITH THESE EFFORTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- AFTER COMPLETION OF THE BRIDGE REHABILITATION WORK, REMOVE ALL CONSTRUCTION ACCESS ROAD, WORK TRESTLES AND COFFERDAMS AND RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS AS DIRECTED BY THE CONTRACT ADMINISTRATOR. REFER TO RESTORATION PLAN NOTES FOR ADDITIONAL INFORMATION.



<b>STATE OF NEW HAMPSHIRE</b>									
<b>DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN</b>									
TOWN	ASHLAND & BRIDGEWATER		BRIDGE NO.	076/080		STATE PROJECT	24904		
LOCATION	US ROUTE 3/NH ROUTE 25 OVER THE PEMIGEWASSET RIVER AND NH RAILROAD								
<b>PROJECT NOTES (1 OF 2)</b>									BRIDGE SHEET
									- OF -
									FILE NUMBER
									TOTAL SHEETS
REVISIONS AFTER PROPOSAL			BY	DATE	CHECKED	BY	DATE		
			DESIGNED	ANS	10/23	CHECKED	EGW	10/23	
			DRAWN	TAG	10/23	CHECKED	EGW	10/23	
			QUANTITIES			CHECKED			
			ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS	
			REV. DATE				4	8	



**CONCEPTUAL CONSTRUCTION SEQUENCE NOTES**

**PHASE 1A**

1. INSTALL TRAFFIC CONTROL, TEMPORARY PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL FOR PHASES 1A AND 1B CONSTRUCTION AND SHIFT TRAFFIC TO PHASE 1 DIVERSION.
2. INSTALL ACCESS FOR BRIDGE CONSTRUCTION AND TEMPORARY DECK SUPPORT SYSTEM IN CENTER BAY ALONG ENTIRE LENGTH OF TRUSS SPANS.
3. REMOVE THE TRUSS SPANS EXISTING BRIDGE DECK PAVEMENT, MEMBRANE, EXPANSION JOINTS, BRIDGE RAIL, CONCRETE CURB, SCUPPERS, CONCRETE FILLED STEEL GRID DECK AND, RAIL POST DIAPHRAGMS.
4. REMOVE PIER 7 LOOSE, PEELING AND FLAKING CEMENTITIOUS COATING AND JOINTLY INSPECT FOR DETERIORATED CONCRETE WITH THE CONTRACT ADMINISTRATOR.
5. INSTALL TEMPORARY TRUSS SUPPORT SYSTEM AT PIER 7 AND SUPPORT NORTH TRUSSES AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
6. REMOVE PIER 7 DETERIORATED CONCRETE AND INSPECT EXPOSED REINFORCEMENT FOR CORROSION JOINTLY WITH THE CONTRACT ADMINISTRATOR.
7. REPLACE PIER 7 DETERIORATED REINFORCEMENT, PERFORM CONCRETE REPAIRS AND RELEASE NORTH TRUSS TEMPORARY SUPPORT AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
8. JOINTLY INSPECT TRUSS SPAN EXISTING STRUCTURAL STEEL FOR STRUCTURAL DEFICIENCIES WITH CONTRACT ADMINISTRATOR. PERFORM STRUCTURAL STEEL REPAIRS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
9. INSTALL SHEAR CONNECTORS ON TRUSS SPAN STRINGERS AND FLOOR BEAMS.
10. INSTALL STEEL GRID DECK AND REINFORCING STEEL.
11. INSTALL EXPANSION JOINT AT PIER 7.
12. PLACE STEEL GRID DECK CONCRETE AND INTEGRAL CONCRETE OVERPOUR TO THE LIMITS SHOWN ON THE PLANS.

**PHASE 1B**

1. REMOVE THE TRESTLE SPANS EXISTING BRIDGE DECK PAVEMENT, MEMBRANE, BRIDGE RAIL, CONCRETE CURB, SCUPPERS, CONCRETE DECK, TO THE LIMITS SHOWN ON THE PLANS, AND RAIL POST DIAPHRAGMS.
2. JOINTLY INSPECT AND SOUND THE REMAINING TRESTLE SPAN DECK CONCRETE TO DETERMINE AREAS REQUIRING PARTIAL AND FULL DEPTH REPAIRS. REMOVE DETERIORATED DECK CONCRETE, INSPECT EXPOSED REINFORCEMENT FOR CORROSION, INSTALL GALVANIC CORROSION PROTECTION SYSTEM AND PERFORM DECK REPAIRS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
3. JOINTLY INSPECT TRESTLE SPAN EXISTING STRUCTURAL STEEL FOR STRUCTURAL DEFICIENCIES WITH CONTRACT ADMINISTRATOR. PERFORM STRUCTURAL STEEL REPAIRS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
4. CONSTRUCT ABUTMENT MODIFICATIONS AND REPAIRS.
5. CONSTRUCT TRESTLE SPAN DECK MODIFICATIONS, INSTALL REINFORCING STEEL AND PLACE DECK CONCRETE TO THE LIMITS SHOWN ON THE PLANS.
6. INSTALL EXPANSION JOINTS AT BENTS 6 AND 8 AND COMPLETE TRUSS AND TRESTLE SPAN DECK CONCRETE PLACEMENT THE LIMITS SHOWN ON THE PLANS.
7. CONSTRUCT CONCRETE TRUSS AND TRESTLE SPAN BRUSH CURBS AND INSTALL BRIDGE AND APPROACH RAIL.
8. INSTALL TRESTLE SPAN BARRIER MEMBRANE AND HOT BITUMINOUS PAVEMENT.
9. PAVE BRIDGE APPROACHES AND MAKE PROFILE ADJUSTMENTS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
10. REMOVE PHASE 1A AND 1B TRAFFIC CONTROL, TEMPORARY PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIER FOR AND SHIFT SOUTHBOUND TRAFFIC INTO TRAFFIC LANE.
11. UTILIZING DAILY LANE CLOSURES, INSTALL ITEM 411.3, PLANT MIX SURFACE TREATMENT (AC), PAVER SHIM ON BRIDGE AND APPROACH NORTHBOUND (PHASE 1 DIVERSION) TRAFFIC LANE. AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
12. UTILIZING DAILY LANE CLOSURES, INSTALL PAVEMENT MARKINGS FOR THE WINTER SHUTDOWN PERIOD AS SHOWN ON THE TRAFFIC CONTROL PLAN PHASE 1 SHEET OR AS DIRECTED BY THE CONTRACT ADMINISTRATOR.

**PHASE 2A**

1. INSTALL TRAFFIC CONTROL, TEMPORARY PAVEMENT MARKINGS AS SHOWN ON THE TRAFFIC CONTROL PLAN PHASE 2 SHEETS OR AS DIRECTED BY THE CONTRACT ADMINISTRATOR AND PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL FOR PHASES 2A AND 2B CONSTRUCTION AND SHIFT TRAFFIC TO PHASE 2 DIVERSION.
2. REMOVE THE TRUSS SPANS EXISTING BRIDGE DECK PAVEMENT, MEMBRANE, EXPANSION JOINTS, BRIDGE RAIL, CONCRETE CURB, SCUPPERS, CONCRETE FILLED STEEL GRID DECK AND, RAIL POST DIAPHRAGMS.
3. REMOVE PIER 7 LOOSE, PEELING AND FLAKING CEMENTITIOUS COATING AND JOINTLY INSPECT FOR DETERIORATED CONCRETE WITH THE CONTRACT ADMINISTRATOR.
4. INSTALL TEMPORARY TRUSS SUPPORT SYSTEM AT PIER 7 AND SUPPORT SOUTH TRUSSES AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
5. REMOVE PIER 7 DETERIORATED CONCRETE AND INSPECT EXPOSED REINFORCEMENT FOR CORROSION JOINTLY WITH THE CONTRACT ADMINISTRATOR.
6. REPLACE PIER 7 DETERIORATED REINFORCEMENT, PERFORM CONCRETE REPAIRS AND RELEASE SOUTH TRUSS TEMPORARY SUPPORT AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
7. POWER WASH PIER 7 CONCRETE. APPLY WATER REPELLENT (SILANE/SILOXANE) AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
8. JOINTLY INSPECT TRUSS SPAN EXISTING STRUCTURAL STEEL FOR STRUCTURAL DEFICIENCIES WITH CONTRACT ADMINISTRATOR. PERFORM STRUCTURAL STEEL REPAIRS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
9. INSTALL SHEAR CONNECTORS ON TRUSS SPAN STRINGERS AND FLOOR BEAMS.
10. INSTALL STEEL GRID DECK AND REINFORCING STEEL.
11. INSTALL EXPANSION JOINT AT PIER 7.
12. PLACE STEEL GRID DECK CONCRETE AND INTEGRAL CONCRETE OVERPOUR TO THE LIMITS SHOWN ON THE PLANS.

**PHASE 2B**

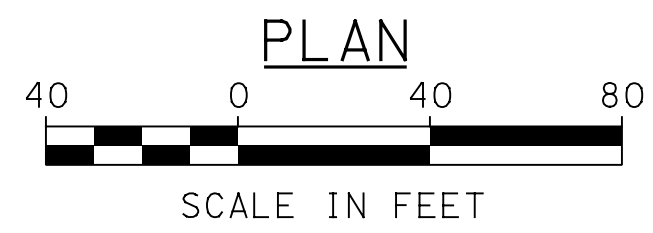
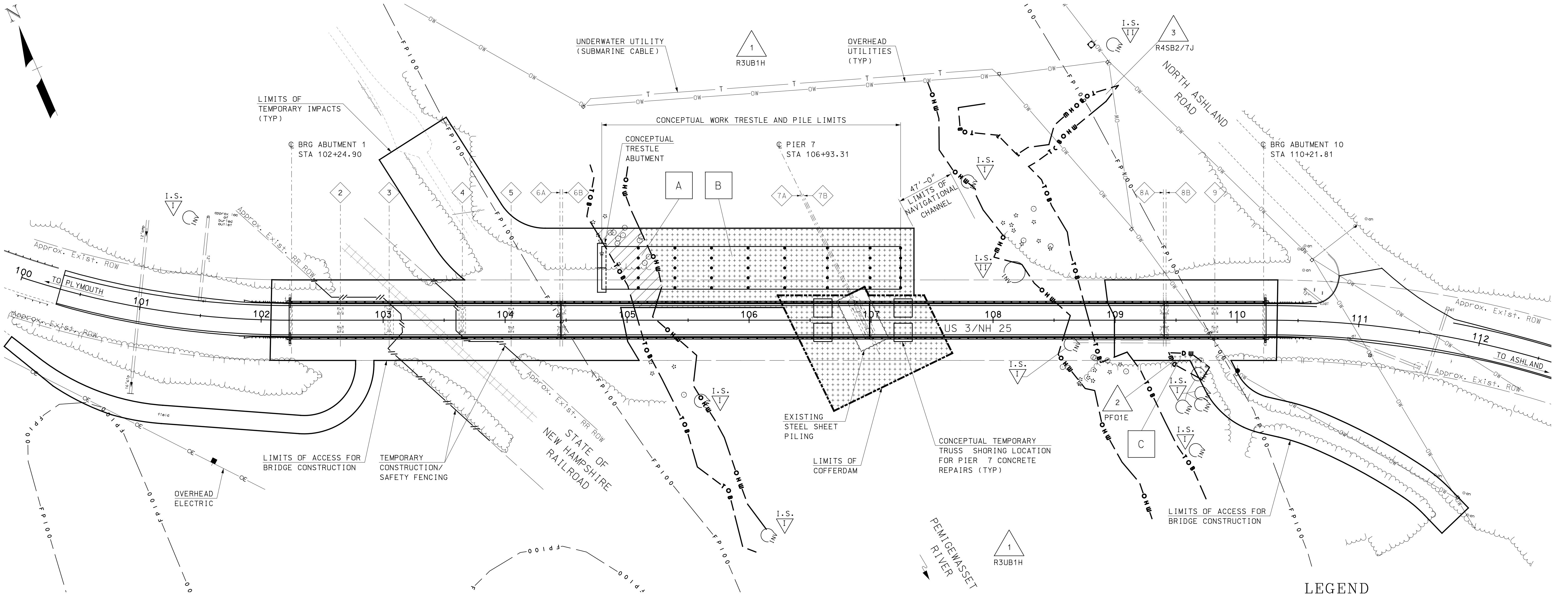
1. REMOVE THE TRESTLE SPANS EXISTING BRIDGE DECK PAVEMENT, MEMBRANE, BRIDGE RAIL, CONCRETE CURB, SCUPPERS, CONCRETE DECK TO THE LIMITS SHOWN ON THE PLANS AND RAIL POST DIAPHRAGMS.
2. JOINTLY INSPECT AND SOUND THE TRESTLE DECK TO REMAIN TO DETERMINE AREAS REQUIRING PARTIAL AND FULL DEPTH REPAIRS. REMOVE DETERIORATED DECK CONCRETE, INSPECT EXPOSED REINFORCEMENT FOR CORROSION, INSTALL GALVANIC CORROSION PROTECTION SYSTEM AND PERFORM DECK REPAIRS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
3. JOINTLY INSPECT TRESTLE SPAN EXISTING STRUCTURAL STEEL FOR STRUCTURAL DEFICIENCIES WITH CONTRACT ADMINISTRATOR. PERFORM STRUCTURAL STEEL REPAIRS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
4. CONSTRUCT ABUTMENT MODIFICATIONS AND REPAIRS.
5. CONSTRUCT TRESTLE SPAN DECK MODIFICATIONS, INSTALL REINFORCING STEEL AND PLACE DECK CONCRETE TO THE LIMITS SHOWN ON THE PLANS.
6. INSTALL EXPANSION JOINTS AT BENTS 6 AND 8 AND COMPLETE TRUSS AND TRESTLE SPAN DECK CONCRETE PLACEMENT THE LIMITS SHOWN ON THE PLANS.
7. CONSTRUCT CONCRETE TRUSS AND TRESTLE SPAN BRUSH CURBS AND INSTALL BRIDGE AND APPROACH RAIL.
8. JOINTLY INSPECT BENTS 2 THROUGH 6, 8 AND 9 EXISTING STEEL COLUMNS FOR STRUCTURAL DEFICIENCIES WITH CONTRACT ADMINISTRATOR. PERFORM COLUMN STEEL REPAIRS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
9. JOINTLY INSPECT AND SOUND BENTS 2 THROUGH 6, 8 AND 9 CONCRETE TO DETERMINE AREAS REQUIRING REPAIRS. REMOVE DETERIORATED BENT CONCRETE, INSPECT EXPOSED REINFORCEMENT FOR CORROSION, INSTALL GALVANIC CORROSION PROTECTION SYSTEM AND PERFORM CONCRETE REPAIRS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
10. POWER WASH ABUTMENTS, WINGS, BACKWALLS, BENTS AND BRIDGE SEATS. APPLY WATER REPELLENT (SILANE/SILOXANE) AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
11. REMOVE ACCESS FOR BRIDGE CONSTRUCTION, TEMPORARY TRUSS SUPPORT SYSTEM AND TEMPORARY DECK SUPPORT SYSTEM IN CENTER BAY ALONG ENTIRE LENGTH OF TRUSS SPANS. REFER TO RESTORATION PLAN NOTES FOR ADDITIONAL INFORMATION.
12. INSTALL TRESTLE SPAN BARRIER MEMBRANE AND HOT BITUMINOUS PAVEMENT.
13. PAVE BRIDGE APPROACHES AND MAKE PROFILE ADJUSTMENTS AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
14. REMOVE TRAFFIC CONTROL, TEMPORARY PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL FOR PHASES 2A AND 2B CONSTRUCTION, INSTALL FINAL PAVEMENT MARKINGS AND OPEN BRIDGE FOR TRAFFIC IN BOTH LANES.

**RESTORATION PLAN NOTES**

1. RESTORE STREAMBED TO EXISTING CONDITION AND MATCH GRADE USING EXISTING MATERIAL WHICH WAS SHIFTED PRIOR TO INSTALLATION UPON REMOVAL OF THE TEMPORARY TRUSS SUPPORT SYSTEM.
2. BANKS SHALL BE STABILIZED USING HUMUS, SEED MIX AND TACKIFIERS. A POST CONSTRUCTION REPORT SHALL BE SUBMITTED WITHIN 60 DAYS OF CONSTRUCTION COMPLETION SHOWING SUCCESSFUL ESTABLISHMENT OF VEGETATION AND BANK STABILIZATION. EXISTING TOPSOIL SHALL BE REMOVED, STOCKPILED AND REUSED WITH EXISTING SEED STOCK TO PROMOTE VEGETATION THAT CURRENTLY EXISTS.



<b>STATE OF NEW HAMPSHIRE</b>									
<b>DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN</b>									
TOWN	ASHLAND & BRIDGEWATER			BRIDGE NO.	076/080		STATE PROJECT	24904	
LOCATION	US ROUTE 3/NH ROUTE 25 OVER THE PEMIGEWASSET RIVER AND NH RAILROAD								
<b>PROJECT NOTES (2 OF 2)</b>									BRIDGE SHEET
									- OF -
REVISIONS AFTER PROPOSAL			BY	DATE	BY	DATE	FILE NUMBER		
			DESIGNED	ANS	10/23	CHECKED	EGW	10/23	
			DRAWN	TAG		CHECKED	EGW	10/23	
			QUANTITIES			CHECKED			
			ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS	
			REV. DATE				5	8	



BENT CENTERLINE STATIONS					
NUMBER	STATION	NUMBER	STATION	NUMBER	STATION
2	102+64.90	6A	104+44.90	8A	109+39.56
3	103+04.90	6B	104+47.15	8B	109+41.81
4	103+64.90	7A	106+92.02	9	109+81.81
5	104+04.90	7B	106+94.68		

WETLAND IMPACT SUMMARY											
Wetland Number	Wetland Class	Location Identifier	WOTUS (Y/N)	AREA IMPACTS							
				PERMANENT				TEMPORARY			
				NHWB Jurisdiction		NHWB & ACOE Jurisdiction		SF	LF	SF	LF
1	R3UB1H	B	N	1997	70					20185	142
2	PFO1E	C	N							259	
<b>TOTALS:</b>				<b>1997</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>20444</b>	<b>142</b>		
Permanent Impacts:				1997	SF						
Temporary Impacts:				20444	SF						
Total Impacts:				22441	SF						

WETLAND CLASSIFICATION CODES	
R3UB1H	RIVERINE, UPPER PERENNIAL, UNCONSOLIDATED BOTTOM, GRAVEL/COBBLE, PERMANENTLY FLOODED
PFO1E	PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED/SATURATED
R4SB2/TJ	RIVERINE, INTERMITTENT, STREAMBED, RUBBLE/VEGETATED, INTERMITTENTLY FLOODED

**LEGEND**

TYPE OF WETLAND IMPACT	SHADING/HATCHING	#	WETLAND DESIGNATION NUMBER
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)	[Diagonal Hatching]	#	WETLAND IMPACT LOCATION
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Solid Grey]	---TOB---	TOP OF BANK
TEMPORARY IMPACTS	[Cross-hatching]	---OHW---	ORDINARY HIGH WATER
		---D-W---	DELINEATED WETLANDS
		---F P 1 0 0---	100 YEAR FLOOD PLAIN BOUNDARY
		---COFFERDAM---	COFFERDAM
		◇ #	BENT CENTERLINE
		•	CONCEPTUAL TRESTLE PILE LOCATION

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN ASHLAND & BRIDGEWATER		BRIDGE NO. 076/080		STATE PROJECT 24904					
LOCATION US ROUTE 3/NH ROUTE 25 OVER THE PEMIGEWASSET RIVER AND NH RAILROAD									
WETLAND IMPACTS PLAN								BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY	DATE	BY	DATE	- OF -	
DESIGNED				ANS	10/23	CHECKED	EGW	10/23	FILE NUMBER
DRAWN				TAG	10/23	CHECKED	EGW	10/23	
QUANTITIES				CHECKED					
ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS			
REV. DATE				6		8			





## EROSION CONTROL NOTES AND STRATEGIES

1. Erosion Control/Stormwater Control Selection, Sequencing and Maintenance
  - 1.1. Comply with RSA 485-A:17 Terrain Alteration.
  - 1.2. Install and maintain all erosion control/stormwater controls in accordance with the New Hampshire Stormwater Management Manual, Volume 3, Erosion and Sediment Controls During Construction, December 2008 (BMP Manual), available from the NH Department of Environmental Services (NHDES).
  - 1.3. Install erosion control/stormwater control measures prior to the start of work and in accordance with the manufacturer's recommendations.
  - 1.4. Select erosion control/stormwater control measures based on the size and nature of the project and physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to jurisdictional areas.
  - 1.5. Install perimeter controls prior to earth disturbing activities.
  - 1.6. Install stormwater treatment ponds and drainage swales before rough grading the site.
  - 1.7. Clean, replace, and augment stormwater control measures and infiltration basins as necessary to prevent sedimentation beyond project limits throughout the project duration.
  - 1.8. Inspect erosion and sediment control measures in accordance with Section 645 of the specifications, weekly, and within 24 hours (during normal work hours), of any storm event greater than 0.25 inches of rain in a 24-hour period.
  - 1.9. Contain stockpiles with temporary perimeter controls. Protect inactive soil stockpiles with soil stabilization measures (temporary erosion control seed mix and mulch, soil binder) or cover them with anchored tarps. If the stockpile is to remain undisturbed for more than 14 days, mulch the stockpile.
  - 1.10. Maintain temporary erosion and stormwater control measures in place until the area has been permanently stabilized.
  - 1.11. An area is considered stable if one of the following has occurred:
    - Base course gravels have been installed in areas to be paved;
    - A minimum of 85% vegetative growth has been established;
    - A minimum of 3" of non-erosive material such as stone or rip-rap has been installed;
    - Temporary slope stabilization has been properly installed (see Table 1).
  - 1.12. Direct runoff to temporary practices until permanent stormwater infrastructure is constructed and stabilized.
  - 1.13. Use temporary mulching, permanent mulching, temporary vegetative cover, and permanent vegetative cover to reduce the need for dust control. Use mechanical sweepers on paved surfaces where necessary to prevent dust buildup. Apply water, or other dust inhibiting agents or tackifiers.
  - 1.14. Plan activities to account for sensitive site conditions
    - Sequence construction to limit the duration and area of exposed soils.
    - Clearly flag areas to be protected in the field and provide construction barrier to prevent trafficking outside of work areas.
    - Protect and maximize existing native vegetation and natural forest buffers between construction activities and sensitive areas.
    - When work is undertaken in a flowing watercourse, implement stream flow diversion methods prior to any excavation or filling activity.
  - 1.15. Utilize storm drain inlet protection to prevent sediment from entering a storm drainage system prior to the permanent stabilization of the contributing disturbed area.
  - 1.16. Use care to ensure that sediments do not enter any existing catch basins during construction. Place temporary inlet protection at inlets in areas of soil disturbance that are subject to sedimentation.
  - 1.17. Construct, stabilize, and maintain temporary and permanent ditches in a manner that will minimize scour. Direct temporary and permanent ditches to drain to sediment basins or stormwater collection areas.
  - 1.18. Supplement channel protection measures with perimeter control measures when ditch lines occur at the bottom of long fill slopes. Install the perimeter controls on the fill slope to minimize the potential for fill slope sediment deposits in the ditch line.
  - 1.19. Divert sediment laden water away from drainage inlet structures to the extent possible.
  - 1.20. Install sediment barriers and sediment traps at drainage inlets to prevent sediment from entering the drainage system.
  - 1.21. Clean catch basins, drainage pipes, and culverts if significant sediment is deposited.
  - 1.22. Construct and stabilize dewatering infiltration basins prior to any excavation that may require dewatering.
  - 1.23. Place and stabilize temporary sediment basins or traps at locations where concentrated flow (channels and pipes) discharge to the surrounding environment from areas of unstabilized earth disturbing activities.
  - 1.24. Stabilize, to appropriate anticipated velocities, conveyance channels or pumping systems needed to convey construction stormwater to basins and discharge locations prior to use.
  - 1.25. Size temporary sediment basins to contain the 2-year, 24 hour storm event.
  - 1.26. Size temporary sediment traps to contain 3,600 cubic feet of storage for each acre of drainage area.
  - 1.27. Construct detention basins to accommodate the 2-year, 24-hour storm event.

2. Construction Planning
  - 2.1. Divert off site runoff or clean water away from the construction activities to reduce the volume that needs to be treated on site.
  - 2.2. Divert storm runoff from upslope drainage areas away from disturbed areas, slopes and around active work areas to a stabilized outlet location.
  - 2.3. Construct impermeable barriers, as necessary, to collect or divert concentrated flows from work or disturbed areas.
  - 2.4. Locate staging areas and stockpiles outside of wetlands jurisdiction.
  - 2.5. Do not store, maintain, or repair mobile heavy equipment in wetlands, unless equipment cannot be practicably removed and secondary containment is provided.
  - 2.6. Provide a water truck to control excessive dust, at the discretion of the Contract Administrator.

3. Site Stabilization
  - 3.1. Stabilize all areas of unstabilized soil as soon as practicable, but no later than 45 days after initial disturbance.
  - 3.2. Limit unstabilized soil to a maximum of 5 acres unless documentation is provided that demonstrates that cuts and fills are such that 5 acres is unreasonable.
  - 3.3. Use erosion control seed mix in all inactive construction areas that will not be permanently seeded within two weeks of disturbance and prior to September 15th of any given year in order to achieve vegetative stabilization prior to the end of the growing season.
  - 3.4. Apply, and reapply as necessary, soil tackifiers in accordance with the manufacturer's specifications to minimize soil and mulch loss until permanent vegetation is established.
  - 3.5. Stabilize basins, ditches and swales prior to directing runoff to them.
  - 3.6. Stabilize roadway and parking areas within 72 hours of achieving finished grade.
  - 3.7. Stabilize cut and fill slopes within 72 hours of achieving finished grade.
  - 3.8. When temporarily stabilizing soils and slopes, utilize the techniques outlined in Table 1.
  - 3.9. Stabilize all areas that can be stabilized prior to opening up new areas to construction activities.
  - 3.10. Utilize Table 1 when selecting temporary soil stabilization measures.
  - 3.11. Divert off-site water through the project in an appropriate manner so as not to disturb the upstream or downstream soils, vegetation or hydrology beyond the permitted area.
  - 3.12. Install and maintain construction exits anywhere traffic leaves a construction site onto a public right-of-way.
  - 3.13. Sweep all construction related debris and soil from the adjacent paved roadways, as necessary.

4. Slope Protection
  - 4.1. Intercept and divert storm runoff from upslope drainage areas away from unprotected and newly established areas and slopes to a stabilized outlet or conveyance.
  - 4.2. Consider how groundwater seepage on cut slopes may impact slope stability and incorporate appropriate measures to minimize erosion.
  - 4.3. Convey storm water down the slope in a stabilized channel or slope drain.
  - 4.4. The outer face of the fill slope should be in a loose, ruffled condition prior to turf establishment.
5. Winter Construction
  - 5.1. To minimize erosion and sedimentation impacts, limit the extent and duration of winter excavation and earthwork activities. The maximum amount of disturbed earth shall not exceed a total of 5 acres from May 1st through October 15th, or exceed one acre during winter months, unless the contractor demonstrates to the Department that the additional area of disturbance is necessary to meet the contractor's Critical Path Method (CPM) schedule, and the contractor has adequate resources available to ensure that environmental requirements will be met.
  - 5.2. Construction performed any time between October 15th and May 1st of any year is considered winter construction. During winter construction:
    - Stabilize all proposed vegetation areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, in accordance with Table 1.
    - Stabilize all ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, in accordance with Table 1.
    - Protect incomplete road surfaces, where base course gravels have not been installed, and where work has stopped for the season after October 15th, in accordance with Table 1.
    - Unless a winter construction plan has been approved by NHDOT, conduct winter excavation and earthwork such that no more than 1 acre of the project is without stabilization at any one time.
6. Wildlife Protection Measures
  - 6.1. Report all observations of threatened and endangered species on the project site to the Department's Bureau of Environment by phone at 603-271-3226 or by email at Bureau16@dot.nh.gov, indicating in the subject line the project name, number, and that a threatened/endangered species was found.
  - 6.2. Photograph the observed species and nearby elements of habitat or areas of land disturbance and provide them to the Department's Bureau of Environment at the above email address.
  - 6.3. In the event that a threatened or endangered species is observed on the project during work, the species shall not be disturbed, handled, or harmed prior to receiving direction from the Bureau of Environment.
  - 6.4. Utilize wildlife friendly erosion control methods when:
    - Erosion control blankets are used,
    - A protected species or habitat is documented,
    - The proposed work is in or adjacent to a priority resource area, and/or when specifically requested by NHB or NHFG

GUIDANCE ON SELECTING TEMPORARY SOIL STABILIZATION MEASURES  
TABLE 1

APPLICATION AREAS	DRY MULCH METHODS				HYDRAULICALLY APPLIED MULCHES <sup>2</sup>				ROLLED EROSION CONTROL BLANKETS <sup>3</sup>			
	HMT	WC	SG	CB	HM	SMM	BFM	FRM	SNSB	DNSB	DNSCB	DNCB
SLOPES <sup>5</sup> /64												
STEEPER THAN 2:1	NO	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES
2:1 SLOPE	YES <sup>1</sup>	YES <sup>1</sup>	YES	YES	NO	NO	YES	YES	NO	YES	YES	YES
3:1 SLOPE	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	NO
4:1 SLOPE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
WINTER STABILIZATION	4T/AC	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES
CHANNELS												
LOW FLOW CHANNELS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
HIGH FLOW CHANNELS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES

ABBREV.	STABILIZATION MEASURE	ABBREV.	STABILIZATION MEASURE	ABBREV.	STABILIZATION MEASURE
HMT	HAY MULCH & TACK	HM	HYDRAULIC MULCH	SNSB	SINGLE NET STRAW BLANKET
WC	WOOD CHIPS	SMM	STABILIZED MULCH MATRIX	DNSB	DOUBLE NET STRAW BLANKET
SG	STUMP GRINDINGS	BFM	BONDED FIBER MATRIX	DNSCB	2 NET STRAW-COCONUT BLANKET
CB	COMPOST BLANKET	FRM	FIBER REINFORCED MEDIUM	DNCB	2 NET COCONUT BLANKET

**NOTES:**

1. All slope stabilization options assume a slope length = 10 times the horizontal distance component of the slope, in feet.
2. Do not apply products containing polyacrylamide (PAM) directly to, or within 100 feet of any surface water without NHDES approval.
3. Install all methods in Table 1 per the manufacturer's<sup>5</sup> recommendation for time of year and steepness of slope.

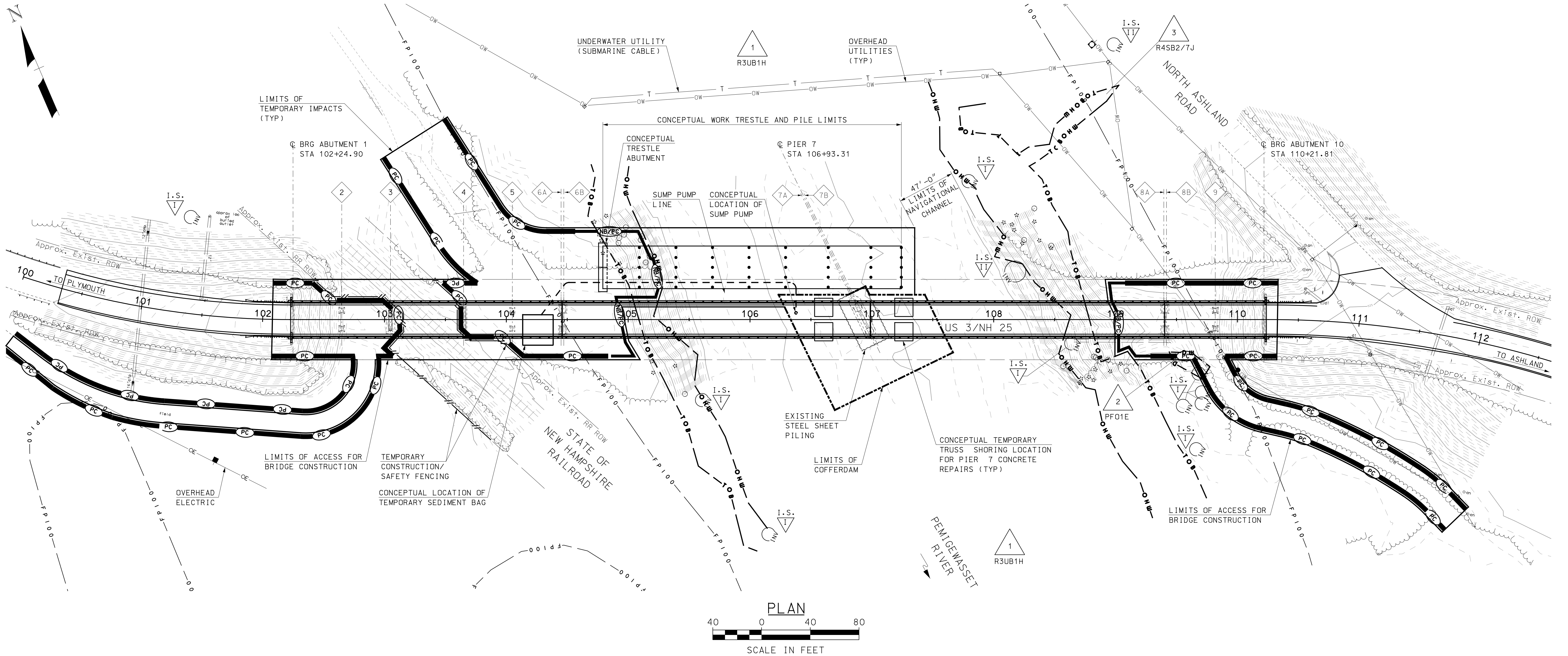
REVISION DATE  
02-29-2024

HT PROJECT NO.	MODEL	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
19.092595.08	24904Erostrat	24904erosstrat	24904	7	8

STATE OF NEW HAMPSHIRE  
ASHLAND & BRIDGEWATER  
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

*EROSION CONTROL PLANS (1 OF 2)*





BENT CENTERLINE STATIONS					
NUMBER	STATION	NUMBER	STATION	NUMBER	STATION
2	102+64.90	6A	104+44.90	8A	109+39.56
3	103+04.90	6B	104+47.15	8B	109+41.81
4	103+64.90	7A	106+92.02	9	109+81.81
5	104+04.90	7B	106+94.68		

EROSION CONTROL PLAN LEGEND	
	PERIMETER CONTROL SILT FENCE EROSION CONTROL MIX BERM EROSION CONTROL MIX SOX TURBIDITY CURTAIN SHEET PILE COFFER DAM
	NATURAL BUFFER/PERIMETER CONTROL SILT FENCE EROSION CONTROL MIX BERM EROSION CONTROL MIX SOX TURBIDITY CURTAIN SHEET PILE COFFER DAM

- NOTES**
- REFER TO SHEET 4 FOR ACCESS FOR BRIDGE CONSTRUCTION AND TEMPORARY TRUSS SUPPORT SYSTEM NOTES.
  - REFER TO SHEET 5 FOR CONCEPTUAL CONSTRUCTION SEQUENCE AND RESTORATION PLAN NOTES.
  - REFER TO SHEET 7 FOR EROSION CONTROL NOTES AND STRATEGIES.
  - PERIMETER CONTROL SHALL NOT BE PLACED OUTSIDE OF THE LIMITS OF ACCESS FOR BRIDGE CONSTRUCTION AND IS ONLY DEPICTED OUTSIDE OF THE LIMITS OF ACCESS FOR BRIDGE CONSTRUCTION FOR CLARITY.

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN					
TOWN	ASHLAND & BRIDGEWATER	BRIDGE NO.	076/080	STATE PROJECT	24904
LOCATION US ROUTE 3/NH ROUTE 25 OVER THE PEMIGEWASSET RIVER AND NH RAILROAD					
EROSION CONTROL PLANS (2 OF 2)					BRIDGE SHEET
REVISIONS AFTER PROPOSAL		BY	DATE	BY	DATE
		DESIGNED	ANS 10/23	CHECKED	EGW 10/23
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		QUANTITIES		CHECKED	
ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
REV. DATE				8	8

