



Bedford Toll Plaza AET Conversion F.E. Everett Turnpike

NH Standard Dredge & Fill Application



Prepared By:



Bedford-Merrimack
16100

March 2024

Toll Plaza AET Conversion
NHDES Standard Dredge & Fill Permit Application
March 2024

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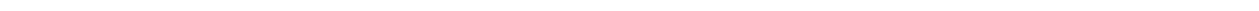
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NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

NHDES Standard Dredge and Fill Wetlands Permit Application Form



STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division / Land Resources Management
[Check the Status of your Application](#)



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

APPLICANT'S NAME: NH Dept of Transportation **TOWN NAME:** Bedford

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](#).

SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))
Please use the [Wetland Permit Planning Tool \(WPPT\)](#), the Natural Heritage Bureau (NHB) [DataCheck Tool](#), the [Aquatic Restoration Mapper](#), or other sources to assist in identifying key features such as: [Priority Resource Areas \(PRAs\)](#), [protected species or habitats](#), coastal areas, designated rivers, or designated prime wetlands.

Has the required planning been completed?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Does the property contain a PRA? If yes, provide the following information: <ul style="list-style-type: none"> • Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHFG) 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. <div style="font-size: small; margin-left: 20px;">bird-foot violet, wild lupine, Blanding's turtle, eastern hognose snake, New England cottontail, northern black racer, spotted turtle, wood turtle</div> • Protected species or habitat? <ul style="list-style-type: none"> <input type="radio"/> If yes, species or habitat name(s): <input type="radio"/> NHB Project ID #: NHB23-1850 • Bog? • Floodplain wetland contiguous to a tier 3 or higher watercourse? • Designated prime wetland or duly-established 100-foot buffer? • Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone? 	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No
Is the property within a Designated River corridor? If yes, provide the following information: <ul style="list-style-type: none"> • Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year: 	<input type="radio"/> Yes <input checked="" type="radio"/> No

For dredging projects, is the subject property contaminated? • If yes, list contaminant:	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	<input type="radio"/> Yes <input checked="" type="radio"/> No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats): NA	
SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))	
Provide a description of the project and the purpose of the project, the need for the proposed impacts to jurisdictional areas, an outline-of the scope of work to be performed, and whether impacts are temporary or permanent.	
<p>The project involves the construction of an All Electronic Tolling (AET) facility to replace the existing conventional cash and E-ZPass toll plaza along the F.E. Everett Turnpike in Bedford, NH. This project was originally proposed in 2016, at which time conversion to Open Road Tolling was proposed. The 2016 project was never constructed and All Electronic Tolling is now proposed, which will result in a reduced project footprint. The project will entail roadway transition from 6 lanes in each direction to 3 lanes in each direction, construction of full span toll gantry 1500' to the north of the existing toll plaza, installation of full span or cantilever overhead signs and ground mounted signs, removal of existing toll plaza and buildings, installation of concrete median barrier, and associated drainage work. The project also includes construction of maintenance ramps at Exit 12 for authorized winter maintenance and emergency vehicles. The reduction in pavement width resulting from the reduction in lanes will range between 25' and 122' depending on location.</p> <p>The primary purpose of the project is to replace the existing conventional cash and E-ZPass toll plaza with an All Electronic Tolling (AET) facility.</p> <p>The project will result in approximately 1409 sf of permanent impacts and 1711 sf of temporary impacts to palustrine forested wetland (PFO). Portions of this PFO have palustrine scrub-shrub characteristics.</p> <p>Total tree clearing is anticipated to be approximately 0.3 acres. The project does not involve any work on stream crossings.</p>	
SECTION 3 - PROJECT LOCATION	
Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.	
ADDRESS: F. E. Everett Turnpike Bedford Toll Plaza	
TOWN/CITY: Bedford	
TAX MAP/BLOCK/LOT/UNIT: ROW	
US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: <input checked="" type="checkbox"/> N/A	
(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): 42.92270, -71.46648	

SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))		
If the applicant is a trust or a company, then complete with the trust or company information.		
NAME: New Hampshire Department of Transportation, Attn: John Corcoran		
MAILING ADDRESS: 7 Hazen Drive		
TOWN/CITY: Concord	STATE: NH	ZIP CODE: 03301
EMAIL ADDRESS: JCorcoran@dot.state.nh.us		
FAX:	PHONE: (603) 485-3806	
ELECTRONIC COMMUNICATION: By initialing here, I hereby authorize NHDES to communicate all matters relative to this application electronically. JC		
SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))		
<input type="checkbox"/> N/A		
LAST NAME, FIRST NAME, M.I.: Perron, Christine		
COMPANY NAME: McFarland-Johnson, Inc.		
MAILING ADDRESS: 53 Regional Drive		
TOWN/CITY: Concord	STATE: NH	ZIP CODE: 03301
EMAIL ADDRESS: cperron@mjinc.com		
FAX:	PHONE: 603-225-2978	
ELECTRONIC COMMUNICATION: By initialing here, I hereby authorize NHDES to communicate all matters relative to this application electronically. CJP		
SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(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:		
MAILING ADDRESS:		
TOWN/CITY:	STATE:	ZIP CODE:
EMAIL ADDRESS:		
FAX:	PHONE:	
ELECTRONIC COMMUNICATION: By initialing here, I hereby authorize NHDES to communicate all matters relative to this application electronically.		

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))

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):

Env-Wt 400: Wetland boundaries and the ordinary high water/top-of-bank of water courses located within the project corridor were delineated in August 2023. Wetlands and surface waters have been classified using the USFWS (Cowardin et al.) Wetland Classification System. There is a Priority Resource Area (PRA) associated with the floodplain of Pointers Club Brook. This PRA is not within the impact area. Based on the resource classifications and proposed permanent and temporary impacts to wetlands, the proposed project is classified as a minor impact project.

Env-Wt 500: The proposed project falls under Env-Wt 527 Public Highways. The proposed project has been designed in accordance with the criteria specified in Env-Wt 527.04 and is consistent with RSA 482-A:1, 483, 483-B, 485-A, and 212-A. The purpose of the proposed project is to improve safety and efficiencies at the Bedford Toll Plaza on the F. E. Everett Turnpike by converting from a traditional toll facility to All Electronic Tolling (AET). AET facilities help maintain a consistent speed on the roadway, allowing for more vehicles to use the roadway; they process more vehicles than cash collection tollbooths and allow cars and trucks to move more efficiently through toll plazas. AET facilities also reduce the overall noise and emissions associated with a toll barrier by reducing the volume of traffic decelerating and accelerating as well as tractor-trailer braking.

Env-Wt 600: N/A - No Coastal or tidal wetlands

Env-Wt 700: N/A - No Designated Prime Wetlands within 100 feet of the proposed project

Env-Wt 900: N/A - The project does not involve stream crossings

SECTION 8 - AVOIDANCE AND MINIMIZATION

Impacts within wetland jurisdiction must be avoided to the maximum extent practicable (Env-Wt 313.03(a)).* Any project with unavoidable jurisdictional impacts must then be minimized as described in the [Wetlands Best Management Practice Techniques For Avoidance and Minimization](#) and the [Wetlands Permitting: Avoidance, Minimization and Mitigation fact sheet](#). For minor or major projects, a functional assessment of all wetlands on the project site is required (Env-Wt 311.03(b)(10)).*

Please refer to the application checklist to ensure you have attached all documents related to avoidance and minimization, as well as functional assessment (where applicable). Use the [Avoidance and Minimization Checklist](#), the [Avoidance and Minimization Narrative](#), or your own avoidance and minimization narrative.

**See Env-Wt 311.03(b)(6) and Env-Wt 311.03(b)(10) for shoreline structure exemptions.*

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: Day: Year:

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 – Compensatory mitigation is not required

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 (PERM.) impacts are impacts that will remain after the project is complete (e.g., changes in grade or surface materials).

Temporary (TEMP.) impacts are impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.

JURISDICTIONAL AREA		PERM. SF	PERM. LF	PERM. ATF	TEMP. SF	TEMP. LF	TEMP. ATF
Wetlands	Forested Wetland	1409		<input type="checkbox"/>	1711		<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	Intermittent / Ephemeral Stream			<input type="checkbox"/>			<input type="checkbox"/>
	Perennial Stream or River			<input type="checkbox"/>			<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			<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"/>
TOTAL		1409			1711		

SECTION 12 - APPLICATION FEE (RSA 482-A:3, I)

<input type="checkbox"/> MINIMUM IMPACT FEE: Flat fee of \$400.
<input type="checkbox"/> NON-ENFORCEMENT RELATED, PUBLICLY-FUNDED AND SUPERVISED RESTORATION PROJECTS, REGARDLESS OF IMPACT CLASSIFICATION: Flat fee of \$400 (refer to RSA 482-A:3, 1(c) for restrictions).
<input checked="" type="checkbox"/> MINOR OR MAJOR IMPACT FEE: Calculate using the table below:
Permanent and temporary (non-docking): 3,120 SF × \$0.40 = \$ 1248
Seasonal docking structure: SF × \$2.00 = \$
Permanent docking structure: SF × \$4.00 = \$
Projects proposing shoreline structures (including docks) add \$400 = \$
Total = \$
<i>The application fee for minor or major impact is the above calculated total or \$400, whichever is greater = \$ 1248</i>

SECTION 13 - PROJECT CLASSIFICATION (Env-Wt 306.05)

Indicate the project classification.

Minimum Impact Project

Minor Project

Major Project

SECTION 14 - REQUIRED CERTIFICATIONS (Env-Wt 311.11)

Initial each box below to certify:

Initials: <i>SBN</i>	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: <i>SBN</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>SBN</i>	<p>The signer understands that:</p> <ul style="list-style-type: none"> • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: <ol style="list-style-type: none"> 1. Deny the application. 2. Revoke any approval that is granted based on the information. 3. 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.
Initials: <i>SBN</i>	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): <i>Sam Newsom</i>	PRINT NAME LEGIBLY: Sam Newsom	DATE: 4/1/24
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY: Sam Newsom	DATE: 4/1/24
SIGNATURE (AGENT, IF APPLICABLE): <i>Christine Perron</i>	PRINT NAME LEGIBLY: Christine Perron	DATE: 3/26/2024

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: <small>Exempt per RSA 482-A:3, I(a)(1)</small>	PRINT NAME LEGIBLY: n/a
TOWN/CITY: Bedford	DATE: n/a

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:

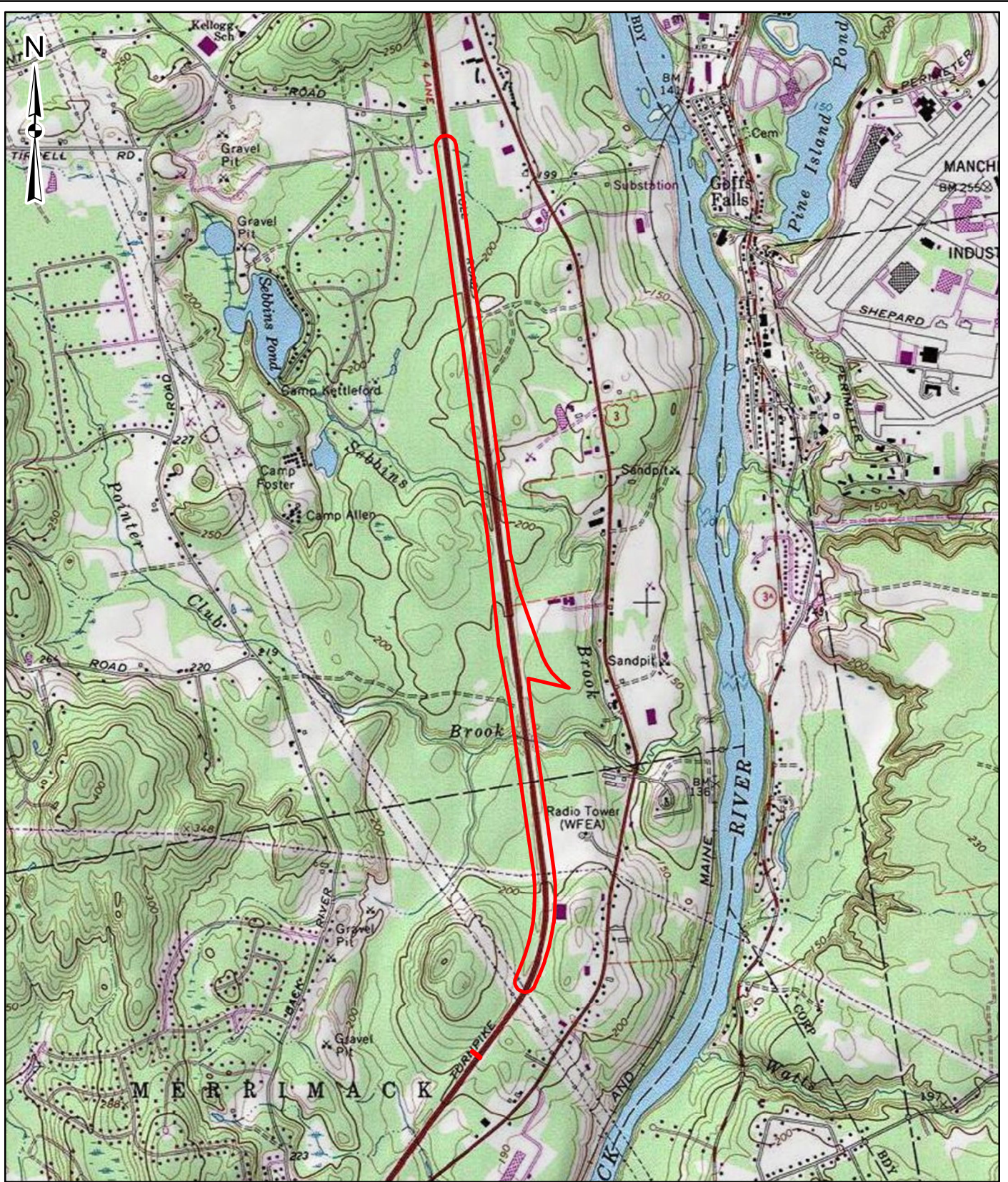
Submit the original permit application form bearing the signature of the Town/City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery at the address at the bottom of this page. Make check or money order payable to "Treasurer – State of NH".

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

Location Map

J:\18845.00 HNTB Bedford Toll Plaza\Draw\GIS\2023 Wetland Delineation\HNTB Bedford Toll - USGS Location Map.mxd

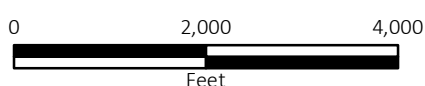


 Bedford-Merrimack 16100 Study Area



NHDOT BEDFORD-MERRIMACK 16100 TOLL PLAZA AET CONVERSION

USGS LOCATION MAP



SCALE : 1" = 2,000'	DATE : DECEMBER 2023	FIGURE : 1
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NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

Attachment A: Minor and Major Projects



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 **TOWN NAME:** Bedford

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.

THE F.E. EVERETT TURNPIKE WAS ORIGINALLY CONSTRUCTED IN THE 1950S AND 1960S AND HAS BEEN LOCATED ON THE EXISTING ALIGNMENT SINCE THAT TIME. THE PROPOSED PROJECT IS NEEDED TO ADDRESS CONCERNS RELATED TO INCREASED TRAFFIC CONGESTION. DUE TO THE LOCATION OF THE EXISTING HIGHWAY AND ASSOCIATED INFRASTRUCTURE, THERE ARE LIMITED ALTERNATIVES FOR THE PROPOSED TOLL PLAZA CONVERSION. IMPACTS TO JURISDICTIONAL RESOURCE AREAS INCLUDING WETLANDS, STREAMS, AND BANKS HAVE BEEN AVOIDED AND MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. THERE IS NO PRACTICABLE ALTERNATIVE THAT WOULD HAVE LESS ADVERSE IMPACT ON THE WETLANDS. THE WORK AS PROPOSED WILL REQUIRE TEMPORARY IMPACTS TO WETLANDS FOR THE PLACEMENT OF SILT FENCE AND/OR EROSION CONTROL. PERMANENT IMPACTS WILL RESULT FROM CONSTRUCTION OF OVERHEAD SIGNAGE AND GUARDRAILS.

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 - The proposed project does not involve any impacts to tidal or non-tidal 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.

Hydrologic connections between adjacent wetlands will be maintained. Pointer Club Brook flows through the project area south of Exit 13 and falls within 200 feet of the southern end of proposed work. Sebbins Brook, another delineated stream, lies just north of Exit 13 and falls within 200 feet of proposed work. No impacts are proposed to streams, and appropriate erosion and sediment controls will be in place during construction to protect nearby resources.

Wetland impacts are located along the edge of a large wetland complex adjacent to the existing roadway toe-of-slope and previously disturbed areas. The proposed impacts are not anticipated to alter the hydrologic connections between the existing wetlands and surface waters.

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.

Wetland impacts have been avoided and minimized to the maximum extent practicable.

According to the NHB review, there are no exemplary natural communities in the project area. No vernal pools are present. Coordination with NHFG and NHB regarding protected species, habitat, and fisheries has been conducted. No impacts are proposed to surface waters, and there are no fisheries concerns. Additional measures will be implemented to avoid and minimize impacts to species of concern identified in the vicinity of the proposed project area. These measures are described in the Supplemental Narrative included with this submittal.

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 project is not anticipated to eliminate, depreciate, or obstruct public commerce, navigation, or recreation. Impacts to wetland resource areas are in close proximity to the existing roadway and are entirely located within the existing right-of-way. No impact is proposed for surface waters. The proposed toll plaza conversion will reduce traffic congestion and decrease noise and emissions, improving public commerce and navigation along the F.E. Everett Turnpike travel corridor.

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.

There is a floodplain wetland within the project area but this area will not be impacted.

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.

There are no natural riverine forested wetland systems or scrub-shrub marsh complexes located within the proposed project impacts. Impacts to these resource area types are not proposed.

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.

Best management practices for soil erosion and sediment control will be implemented throughout the duration of the project to protect water quality. The selected contractor will be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) to further reduce water quality impacts.

The proposed project is not anticipated to impact on groundwater aquifer levels.

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.

Best management practices for soil erosion and sediment control will be implemented throughout the duration of the project, in order to protect water quality. The selected contractor will also be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) to further reduce water quality impacts.

No impact to stream channels anticipated.

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 - The proposed project does not involve the construction of shoreline structures over surface waters.

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 - The proposed project does not involve the construction of shoreline structures over surface waters. .

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 - The proposed project does not involve the construction of shoreline structures over surface waters.

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 - The proposed project does not involve the construction of shoreline structures over surface waters.

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 - The proposed project does not involve the construction of shoreline structures over surface waters.

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 - The proposed project does not involve the construction of shoreline structures over surface waters.

PART II: FUNCTIONAL ASSESSMENT
<p>REQUIREMENTS</p> <p>Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).</p>
<p>FUNCTIONAL ASSESSMENT METHOD USED:</p> <p>US Army Corps of Engineers New England District Highway Methodology Workbook Supplement, 1999 Edition</p>
<p>NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: CHRISTINE J. PERRON, CWS</p>
<p>DATE OF ASSESSMENT: 06/28/2-23 AND 08/24/2023</p>
<p>Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT:</p> <p><input checked="" type="checkbox"/></p>
<p>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:</p> <p><input checked="" type="checkbox"/></p> <p>Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.</p>

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

Supplemental Narrative

NHDES MINOR IMPACT WETLANDS PERMIT APPLICATION

NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

BEDFORD-MERRIMACK, 16100

TOLL PLAZA AET CONVERSION

BEDFORD, NEW HAMPSHIRE

SUPPLEMENTAL NARRATIVE

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1.0 Introduction

The proposed project involves the construction of a new All Electronic Tolling (AET) facility to replace the existing conventional cash and E-ZPass toll plaza along the F. E. Everett Turnpike in Bedford, NH (Figure 1).

1.1 Purpose and Need

The purpose of the project is to improve safety and efficiencies at the Bedford Toll Plaza on the F. E. Everett Turnpike by converting from a traditional toll facility to AET. AET facilities help maintain a consistent speed on the roadway, allowing for more vehicles to use the roadway; they process more vehicles than cash collection tollbooths and allow cars and trucks to move more efficiently through toll plazas. AET facilities also reduce the overall noise associated with a toll barrier by reducing the volume of traffic braking and accelerating. Vehicle emissions and fumes will decrease due to a reduction in the number of vehicles braking and accelerating at the barrier.

2.0 Existing Conditions

The F.E. Everett Turnpike was originally constructed in the 1950s and 1960s and has been located on the existing alignment since that time. Originally constructed in 1989, the Bedford Toll Plaza was expanded in 2005 to accommodate E-ZPass infrastructure.

A wetlands and surface waters delineation was completed by McFarland-Johnson, Inc. in June, July and August of 2023. The only impacted jurisdictional resource in the project area is a palustrine forested wetland in the northern portion of the project area, to the east of the highway. Wetland W17 originates at the toe-of-slope of the turnpike and extends east beyond the study area. It is a palustrine forested wetland with portions exhibiting palustrine scrub-shrub characteristics. Dominant species include woody tree and shrub species such as red maple (*Acer rubrum*), red oak (*Quercus rubra*), highbush blueberry (*Vaccinium corymbosum*), black huckleberry (*Gaylussacia baccata*), witch hazel (*Hamamelis virginiana*) and winterberry (*Ilex verticillata*). Two streams were delineated within the project area. According to the NHDES Wetlands Permit Planning Tool (WPPT), a floodplain Priority Resource Area is associated with Pointers Club Brook, to the south of the project area. This PRA is not in the vicinity of the proposed impact area.

The proposed project was submitted to and reviewed by the New Hampshire Natural Heritage Bureau (NHB) via the online NHB DataCheck Tool. According to the NHB DataCheck Results Letter dated June 29, 2023 (NHB23-1850, see attached), bird-foot violet (*Viola pedata* var. *pedata*), wild lupine (*Lupinus perennis* ssp. *perennis*), Blanding's turtle (*Emydoidea blandingii*), eastern hognose snake (*Heterodon platirhinos*), New England cottontail (*Sylvilagus transitionalis*), northern black racer (*Coluber constrictor constrictor*), spotted turtle (*Clemmys guttata*), and wood turtle (*Glyptemys insculpta*) have historically been documented in the vicinity of the project area.

A survey for bird-foot violet and wild lupine was conducted by McFarland-Johnson in the study area in July and August 2023. No bird-foot violet or wild lupine were found. See attached correspondence with NHB.

The United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) planning tool was accessed on January 4, 2024 to determine if federally listed species have the potential to occur in the project area. An Official Species List was generated for the proposed project area (see attached USFWS Official Species List). According to the USFWS Official Species List, the proposed project is located within the range of the federally endangered northern long-eared bat (*Myotis septentrionalis*), and the monarch butterfly (*Danaus plexippus*), a candidate species currently undergoing review for potential listing. The tree clearing required to construct the project will be carried out during the non-active season for bats (November 1 through April 14). The work as proposed was reviewed with the USFWS and it was confirmed that the project will not adversely affect the northern long-eared bat. As a candidate species, the monarch butterfly does not require consultation.

The New Hampshire Fish and Game Department (NHFG) developed the New Hampshire Wildlife Action Plan (WAP), which includes ranked habitat tiers that identify the highest quality habitats across the state. The NHFG created the WAP habitat tiers based on NHFG biological data, landscape data, and human influence/disturbance information. Habitats are separated into three ranking tiers including, 1) Highest Ranked Habitat in the State, 2) Highest Ranked Habitat in the Biological Region, and 3) Supporting Landscapes.

According to the 2020 WAP mapping, there are Highest Ranked Habitats in the Biological Region, and Supporting Landscapes in the vicinity of the proposed project. The project itself falls within Supporting Landscape. Impacts on wildlife from the proposed action will be temporary and short-term in nature. The proposed action is not anticipated to result in any changes to terrestrial wildlife or aquatic organism passage or connectivity.

3.0 Proposed Project

The following sections describe the proposed work, resource area impacts, avoidance and minimization measures, and additional components of the project.

The project involves the construction of a new All Electronic Tolling (AET) facility to replace the existing conventional cash and E-ZPass toll plaza along the F.E. Everett Turnpike. The Bedford Toll Plaza on the F.E. Everett Turnpike is located near the interchange with Ray Wieczorek Drive, just west of the Merrimack River and Manchester Airport Bedford, NH. This project was originally proposed in 2016, at which time conversion to Open Road Tolling was proposed. The 2016 project was never constructed and AET is now proposed. AET is a booth-less, cashless tolling system that allows vehicles to travel through a tolling area at the full speed limit. There are no toll attendants and vehicle information is captured electronically via an E-ZPass transponder or a license plate photograph with equipment located on an overhead gantry.

The new AET facility will result in a reduced roadway footprint. The conversion to AET eliminates the need for toll booths, allowing for a reduction in lanes from 6 lanes in each direction to 3 lanes in each direction. This will result in a substantial reduction of roadway width. The full span toll gantry will be constructed 1500' to the north of the existing toll plaza. The project will also require the installation of full span or cantilever overhead signs and ground mounted signs. Additional work will include removal of the existing

toll plaza and buildings, installation of concrete median barrier, and associated drainage work. New maintenance ramps will be constructed at Exit 12 to provide access to authorized winter maintenance and emergency vehicles. All proposed work will remain within the existing right-of-way of the F.E. Everett Turnpike. The work as proposed is not expected to result in any substantial changes to existing vegetative screening along the turnpike. The only clearing that is proposed will be along the maintenance ramps and sign foundations. Excavation for new catch basins and overhead sign foundations will be required.

3.2 Wetland and Surface Water Impacts

3.2.1 Wetlands

The work as proposed will require 1,711 sf of temporary impacts to wetland W17 for the placement of silt fence and/or erosion control. Permanent impacts (1,409 sf) to W17 will result from construction of overhead signage and guardrails.

No vernal pools were identified in the vicinity of the proposed project.

No surface waters were identified within the area of disturbance.

3.4 Avoidance and Minimization Measures

Appropriate erosion and sedimentation control measures will be utilized during construction.

The project was reviewed by NH Fish & Game and recommended avoidance and minimization measures were provided. The measures are listed in the enclosed correspondence as well as the construction sequence. These measures will be included in contract documents and implemented during construction to avoid and minimize impacts to sensitive species.

3.5 Water Quality / Stormwater Treatment

Section 303(d) of the Clean Water Act requires each state to submit a list of impaired waters to the US EPA every two years to identify surface waters that are impaired by pollutants, not expected to meet water quality standards within a reasonable time, and require the development of a Total Maximum Daily Load (TMDL) study. This list is prepared by NHDES as outlined in the Draft Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology. According to the NHDES 303(d) list (most recent available), the Merrimack River (NHRIV700060804-11; NHRIV700060803-14-02) is listed as impaired by Aluminum and *Escherichia coli*. Additionally, Patten Brook (NHRIV700060803-12), to the north of the project area, is listed as impaired by Aluminum and *Escherichia coli*. Muddy Pond and Sebbins Pond (NHLAK700060804-02), west of the project area, are both listed as impaired by chlorophyll-a, cyanobacteria hepatotoxic microcystins, and total phosphorus. A small unnamed pond to the west (NHLAK700060804-03-01) is listed as impaired by chlorophyll-a and total phosphorus.

The conversion to AET will result in a smaller overall roadway footprint. Existing paved areas in the project total 26.1 acres. After construction, total impervious will be 19.9, resulting in a decrease in paved area of 6.2 acres. Additionally, the project is not anticipated to alter drainage patterns or discharge points. The proposed project is not expected to result in an adverse impact on water quality and will not cause or contribute to surface water impairments.

4.0 Mitigation

Based on discussion and comments received from the New Hampshire Department of Environmental Services (NHDES) staff at the February 21, 2024 NHDOT Natural Resource Agency Coordination Meeting, proposed impacts are well below mitigation thresholds, and mitigation is not required.

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

NHDES Avoidance and Minimization Checklist



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		
PROJECT STREET ADDRESS: F. E. Everett Turnpike	PROJECT TOWN: Bedford	
TAX MAP/LOT NUMBER: ROW		
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
<p>If you answered “no” to this question, describe the purpose of the “non-access” project type you have proposed:</p> <p>The purpose of the project is to replace the existing conventional cash and E-ZPass toll plaza with an All Electronic Tolling (AET) toll facility.</p>		

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

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
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 checked="" type="checkbox"/> Check <input 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

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

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
SECTION 4 - NON-TIDAL SHORELINE STRUCTURES		
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

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

Natural Resource Agency Coordination Meeting Minutes

**BUREAU OF ENVIRONMENT
CONFERENCE REPORT**

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: February 21, 2024

LOCATION OF CONFERENCE: Virtual meeting held via Zoom

ATTENDED BY:

NHDOT

Andrew O’Sullivan
Joshua Brown
Jon Evans
Mark Hemmerlein
Rebecca Martin
Sam Fifield
Arin Mills
Christopher Turgeon
Kerry Ryan
Dana Lacasse
Desislava Pomeroy
Ross Wood
Kirk Stenersen
Frank Linnenbringer

ACOE

Absent

USCG

Gary Croot

EPA

Absent

NHDES

Karl Benedict
Seta Detzel
Emily Nichols
Mary Ann Tilton
Amanda Barker-Jobin

NHB

Absent

NH Fish & Game

Mike Dionne
Kevin Newton
Kevin Sullivan

Federal Highway

Jamie Sikora

US Fish & Wildlife

Absent

The Nature Conservancy

Absent

**NH Transportation &
Wildlife Workgroup**

Absent

**Consultants/ Public
Participants**

Christine Perron
Cory Helmick
Tucker Gordon
Katy Lewis

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

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Finalize Meeting Minutes

Finalized and approved the January 17, 2024 meeting minutes.

Bedford-Merrimack, 16100 (Non-Fed):

Christine Perron provided an overview of the project, which involves the construction of a new All Electronic Tolling (AET) facility to replace the existing conventional cash and E-Z Pass toll plaza along the F.E. Everett Turnpike in Bedford. The new facility will accommodate highway speed tolling with no cash option. AET is a booth-less, cashless tolling system that allows vehicles to travel through a tolling area at the full speed limit. There are no toll attendants and vehicle information is captured electronically via an E-Z Pass transponder or a license plate photograph with equipment located on an overhead gantry.

The Bedford Toll Plaza on the FE Everett Turnpike is located near the interchange with Ray Wieczorek Drive, just west of the Merrimack River and Manchester Airport. The Bedford 16100 project was originally reviewed at this meeting in 2016, but at that time conversion of the toll plaza to Open Road Tolling was proposed. The 2016 project was never constructed and All Electronic Tolling is now proposed.

Cory Helmick provided an overview of proposed work. The Open Road Tolling project that was originally proposed was a hybrid between traditional tolling and electronic tolling, with some lanes providing a toll booth for vehicles paying cash. The conversion to All Electronic Tolling eliminates the need for toll booths, allowing for a reduction in lanes from 6 lanes in each direction to just 3 lanes in each direction. This will result in a substantial reduction of roadway width. The full span toll gantry will be constructed 1500' to the north of the existing toll plaza. The project will also require the installation of full span or cantilever overhead signs and ground mounted signs. Additional work will include removal of the existing toll plaza and buildings, installation of concrete median barrier, and associated drainage work. New maintenance ramps will be constructed at Exit 12 to provide access to authorized winter maintenance and emergency vehicles.

The project is currently scheduled to advertise in July 2024, with the NHDES Standard Dredge & Fill permit application to be submitted in March 2024.

C. Perron reviewed anticipated wetland impacts and other resources in the project area. A wetland delineation was completed in 2023. There are only two areas where the project will result in wetland impacts, shown here in red at the north end of the project. Both impact areas are the result of proposed grading and guardrail associated with the installation of overhead sign structures. Impact area A is located at the edge of a forested wetland, totaling 184 SF of permanent impact and 235 SF of temporary impact. Impact area B is also along the edge of a forested wetland, totaling 1409 SF of permanent impact and 1711 SF of temporary impact. Impacts from the project will total 1593 SF permanent and 1946 temporary. There will be no work on stream crossings and no impacts to priority resource areas. Based on the proposed impacts, the project will require a NHDES Standard Dredge & Fill Permit and will be classified as a minor impact due to total impacts exceeding 3,000 SF.

Other resources in the project area include suitable roosting habitat for northern long-eared bat. The project will require about 0.3 acres of tree clearing, which will take place during the inactive season for bats. Consultation with USFWS has been completed with the Army Corps as the lead federal agency, with concurrence that the project is not likely to adversely affect the northern long-eared bat.

The Natural Heritage Bureau review included plant and wildlife records in the vicinity of the project. A plant survey was completed in the project area in August 2023 for bird-foot violet and wild lupine and neither species was found. Consultation with NH Fish & Game regarding wildlife species has been initiated and appropriate avoidance and minimization measures will be implemented during construction

The conversion to All Electronic Tolling will result in a smaller overall roadway footprint. Existing paved areas in the project total 26.1 acres. After construction, total impervious will be 19.9, resulting in a decrease in paved area of 6.2 acres.

The following is a summary of questions and comments from attendees:

Karl Benedict confirmed that the project would be classified as minor impact due to the combined temporary and permanent impacts exceeding 3,000 SF. He asked that the permit application include a description of how impacts are limited to the edge of wetlands and impacts were minimized.

Mary Ann Tilton had no comments.

Seta Detzel noted that the proposed impacts are well below mitigation thresholds.

Mike Dionne had no comments.

Kevin Newton noted that winter tree clearing would also benefit the turtle species in the area of the project. He would review the consultation materials that were submitted and respond with comments.

Gary Croot stated that he had no comments since there is no Coast Guard jurisdiction in the project area.

Bridgewater, 2020-M324-2 (Non-Fed):

Arin described this project was previously presented at the September 20, 2023 Natural Resource meeting and is being presented again based on some design changes as a result of geotechnical borings received after the 2023 meeting. The project will replace a culvert that conveys Great Brook under River Road (state road) in Bridgewater. Great Brook flows approximately 3 miles from its headwaters to the crossing, and further flows approximately 0.2 miles downstream to convergence with Pemigewasset River (Pemi). The project area, and the area surrounding Great Brook, is rural and primarily undeveloped. River Road is a Tier 4 (Local Connector state road) with average daily traffic of 90 vehicles per day. Photos were shown of the project area, both upstream and downstream of the crossing.

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

Wetland Functions & Values Forms

Wetland Function-Value Evaluation Form

Total area of wetland _____ Human made? _____ Is wetland part of a wildlife corridor? _____ or a "habitat island"? _____

Adjacent land use _____ Distance to nearest roadway or other development _____

Dominant wetland systems present _____ Contiguous undeveloped buffer zone present _____

Is the wetland a separate hydraulic system? _____ If not, where does the wetland lie in the drainage basin? _____

How many tributaries contribute to the wetland? _____ Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. _____

Latitude _____ Longitude _____

Prepared by: _____ Date _____

Wetland Impact:
Type _____ Area _____

Evaluation based on:
Office _____ Field _____

Corps manual wetland delineation completed? Y _____ N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge				
 Floodflow Alteration				
 Fish and Shellfish Habitat				
 Sediment/Toxicant Retention				
 Nutrient Removal				
 Production Export				
 Sediment/Shoreline Stabilization				
 Wildlife Habitat				
 Recreation				
 Educational/Scientific Value				
 Uniqueness/Heritage				
 Visual Quality/Aesthetics				
ES Endangered Species Habitat				
Other				

Notes:

* Refer to backup list of numbered considerations.

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

NHB DataCheck Results Letter



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

To: Claire Hilsinger
125 Nagog Park
Acton, MA 01720
chilsinger@mjinc.com

From: NHB Review
NH Natural Heritage Bureau
Main Contact: Ashley Litwinenko - nhbreview@dncr.nh.gov

cc: NHFG Review

Date: 06/29/2023 (valid until 06/29/2024)

Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game

Permits: NHDES - Wetland Standard Dredge & Fill - Major, USACE - General Permit, USCEQ - Federal: NEPA Review

NHB ID: NHB23-1850

Town: Bedford/Merrimack, NH
Location: F.E. Everett Turnpike, Bedford Toll Plaza

Project Description: This project involves the construction of new All Electronic Tolling (AET) toll facility to replace the existing conventional cash and E-ZPass toll plaza along the F.E. Everett Turnpike in Bedford, NH. This will include: Construction of new AET facility, demolition of the existing toll plazas including canopy, islands, tunnel and reconstruction of the roadway in the vicinity of the existing plazas; construction of three AET lanes in both directions; adjustment of pavement approach roadway and in the direct vicinity of the plaza to accommodate the new facility, installation of concrete barrier to separate northbound and southbound traffic in the vicinity of the AET facility, construction of a new pavement profile and crown line in project area.

Next Steps for Applicant:

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: Please send NHB proposed plans and indicate what if any impacts are proposed outside of the existing paved roadway.

NHFG Comments: Please refer to NHFG consultation requirements below.

NHB Consultation

If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing nhbreview@dncr.nh.gov.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.

NH Fish and Game Department Consultation

If this NHB DataCheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB DataCheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to <https://wildlife.state.nh.us/wildlife/environmental-review.html>. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB DataCheck results letter number and "Fis 1004 consultation request" in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email NHFGreview@wildlife.nh.gov, and include the NHB DataCheck results letter number and "review request" in the email subject line.

Contact NH Fish & Game at (603) 271-0467 with questions.



NHB DataCheck Results Letter

NH Natural Heritage Bureau

Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

NHB Database Records:

The following record(s) have been documented in the vicinity of the proposed project. Please see the map and detailed information about the record(s) on the following pages.

Plant species	State ¹	Federal	Notes
bird-foot violet (<i>Viola pedata</i> var. <i>pedata</i>)	T	--	
wild lupine (<i>Lupinus perennis</i> ssp. <i>perennis</i>)	T	--	
Vertebrate species	State ¹	Federal	Notes
Blanding's Turtle (<i>Emydoidea blandingii</i>)*	E	--	Contact the NH Fish & Game Dept (see below).
Eastern Hognose Snake (<i>Heterodon platirhinos</i>)	E	--	Contact the NH Fish & Game Dept (see above).
New England Cottontail (<i>Sylvilagus transitionalis</i>)	E	--	Contact the NH Fish & Game Dept (see above).
Northern Black Racer (<i>Coluber constrictor constrictor</i>)	T	--	Contact the NH Fish & Game Dept (see above).
Spotted Turtle (<i>Clemmys guttata</i>)	T	--	Contact the NH Fish & Game Dept (see below).
Wood Turtle (<i>Glyptemys insculpta</i>)	SC	--	Contact the NH Fish & Game Dept (see below).

¹Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list.

An asterisk (*) indicates that the most recent report for that occurrence was 20 or more years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section above.

Disclaimer: NHB's database can only tell you of known occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.

However, many areas have never been surveyed, or have only been surveyed for certain species. NHB recommends surveys to determine what species/natural communities are present onsite.

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

NHB Correspondence

Christine J. Perron

From: DNCR: NHB Review <nhbreview@dncr.nh.gov>
Sent: Tuesday, September 12, 2023 1:38 PM
To: Claire Hilsinger
Cc: Christine J. Perron
Subject: RE: Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) Plant Surveys - COMPLETE

Hi Claire,

Thank you for providing NHB with these survey results for the Bedford Toll Plaza (NHDOT 16100, NHB23-1850).

As there were no **wild lupine**, or **bird-foot violet** located in any permanent or temporary impact areas containing suitable habitat, NHB has no further concerns regarding this proposed project.

Please contact NHB if there are any changes to proposed work activities, or if you have any questions.

Best,

Ashley Litwinenko
Environmental Reviewer
Natural Heritage Bureau (NHB)
Division of Forests & Lands - DNCR
172 Pembroke Rd., Concord, NH 03301
Phone: 603-271-2834
[Datacheck Tool](#)
[NHB Botany Information](#)

From: Claire Hilsinger <CHilsinger@mjinc.com>
Sent: Tuesday, September 12, 2023 1:28 PM
To: DNCR: NHB Review <nhbreview@dncr.nh.gov>
Cc: Christine J. Perron <CPerron@mjinc.com>
Subject: RE: Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) Plant Surveys - COMPLETE

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Hello Ashley.

The bird-foot violet (BFV) and wild lupine survey for the Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) took place on July 25, August 22 and August 24th. I walked roughly parallel transects less than 40 feet apart, covering the entire study area (see attachment), spending extra time and effort within suitable BFV and lupine habitat. Suitable habitat included dry sandy upland areas with sparse herbaceous vegetation and open canopy. Herbaceous species in these habitats included mosses, lowbush blueberry, sweet everlasting, blue curls, hawkweed, gray goldenrod, little bluestem grass, yarrow, and lichens. This was common habitat that abutted the woods parallel to the highway.

I did not find any bird-foot violet or wild lupine in the study area.

Please reach out with any questions or concerns.

Thank you,

Claire Hilsinger



Claire Hilsinger | Environmental Analyst

📞 978-692-0522

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From: Christine J. Perron <CPerron@mjinc.com>

Sent: Wednesday, July 5, 2023 12:53 PM

To: 'DNCR: NHB Review' <nhbreview@dncr.nh.gov>; Claire Hilsinger <CHilsinger@mjinc.com>

Subject: RE: Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) Plant Surveys

Sounds good Ashley – thanks for your quick response!



Christine J. Perron, CWS | Regional Environmental Manager

📞 603-931-3327

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From: DNCR: NHB Review <nhbreview@dncr.nh.gov>

Sent: Wednesday, July 5, 2023 12:22 PM

To: Christine J. Perron <CPerron@mjinc.com>; Claire Hilsinger <CHilsinger@mjinc.com>

Subject: RE: Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) Plant Surveys

Hi Christine,

Thanks for reaching out regarding the upcoming plant surveys for Bedford Toll Plaza (NHB23-1850).

This is a great question; I do recommend surveying the slightly overlapping areas again during the 2023 rare plant surveys as the last surveys were completed more than a year ago.

Best,

Ashley Litwinenko
Environmental Reviewer
Natural Heritage Bureau (NHB)
Division of Forests & Lands - DNCR
172 Pembroke Rd., Concord, NH 03301
Phone: 603-271-2834
[Datacheck Tool](#)
[NHB Botany information](#)

Vacation Notice – OFF 7/24 – 7/28

Follow-up on Environmental Review related emails will be delayed during that time, please email NHBReview@dncr.nh.gov prior to that week if a follow-up review is time sensitive. NHB DataCheck Letters will still be distributed, and NHB DataCheck Tool assistance will be available during this time. Thank you for your understanding.

From: Christine J. Perron <CPerron@mjinc.com>
Sent: Wednesday, July 5, 2023 11:34 AM
To: DNCR: NHB Review <nhbreview@dncr.nh.gov>; Claire Hilsinger <CHilsinger@mjinc.com>
Subject: RE: Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) Plant Surveys

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Hi Ashley,

The Bedford 16100 project area overlaps slightly with the areas we've surveyed for the Everett Turnpike widening project – I added the previously surveyed areas to the attached figure. The area at the southern end of the 16100 project was surveyed in 2021 and the area at the northern end in 2019. Do you think it's necessary to survey those areas again this summer, or can we just focus on the non-overlapping portion of the 16100 project?

Thanks!
Christine



Christine J. Perron, CWS | Regional Environmental Manager

📞 603-931-3327

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From: DNCR: NHB Review <nhbreview@dncr.nh.gov>
Sent: Friday, June 30, 2023 12:27 PM
To: Claire Hilsinger <CHilsinger@mjinc.com>
Cc: Christine J. Perron <CPerron@mjinc.com>
Subject: RE: Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) Plant Surveys

Hi Claire,

Thank you for providing this thorough description of work activities for the Bedford Toll Plaza (NHDOT Project 16100). As there is potentially suitable habitat for both rare plant species listed on the DataCheck Letter, it would be best to survey within all impact areas of the project.

NHB Recommends rare plant surveys for **bird-foot violet** (*Viola pedata* var. *pedata*) and **wild lupine** (*Lupinus perennis* ssp. *perennis*) in all permanent and temporary impact areas with focus on suitable habitat for the species.

I know you are very familiar with bird-foot violet surveys from the NHDOT contracts going on in the area, but if you would like any additional information regarding either species, please let me know I'd be happy to provide that.

Please contact NHB with results when surveys are complete. If either rare plant species is located, please document plants with GPS, shapefiles, diagnostic photos, and one of the reporting forms posted on our website at: <https://www.nh.gov/nhdfi/reports/rare-plant-list.htm>

Hope you have a great weekend!

Thanks,

Ashley Litwinenko
Environmental Reviewer
Natural Heritage Bureau (NHB)
Division of Forests & Lands - DNCR
172 Pembroke Rd., Concord, NH 03301
Phone: 603-271-2834
[Datacheck Tool](#)
[NHB Botany information](#)

Vacation Notice – OFF 7/24 – 7/28

Follow-up on Environmental Review related emails will be delayed during that time, please email NHBReview@dncr.nh.gov prior to that week if a follow-up review is time sensitive. NHB DataCheck Letters will still be distributed, and NHB DataCheck Tool assistance will be available during this time. Thank you for your understanding.

From: Claire Hilsinger <CHilsinger@mjinc.com>
Sent: Friday, June 30, 2023 11:42 AM
To: Litwinenko, Ashley <Ashley.M.Litwinenko@dncr.nh.gov>
Cc: Christine J. Perron <CPerron@mjinc.com>
Subject: Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) Plant Surveys

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Hello Ashley.

This email is regarding the replacement of the Bedford Toll Plaza (NHDOT Project 16100, NHB23-1850) and potential plant surveys associated with it. (See attachment for study area.)

This project involves the construction of a new All Electronic Tolling (AET) facility to replace the existing conventional cash and E-ZPass toll plaza along the F.E. Everett Turnpike in Bedford, NH. The new facility will accommodate highway speed tolling with no cash option, referred herein as AET. Work will include the following:

- Construction of new AET facility.
- Demolition of the existing toll plaza including canopy, islands, tunnel and reconstruction of the roadway in the vicinity of the existing plaza.
- Construction of three AET lanes in both directions.
- Adjust pavement approach roadway in both directions and in the direct vicinity of the plaza to accommodate the new facility.
- Installation of concrete median barrier to separate northbound and southbound traffic in the vicinity of the AET facility.
- Construction of a new pavement profile and crown line in the area of the project limits especially in the area of the existing Toll Plaza.
- Installation of full span or cantilever overhead sign structures and ground mounted signs (which may use existing or new structures) to support signing associated with AET.
- Installation of full span toll gantry over the AET lanes.

In general, the overall footprint of permanently disturbed area will not be expanded. However, there is potential for temporary disturbance along the edge of pavement during construction. There will also be new overhead sign structures that result in small areas of permanent impacts.

The project is currently scheduled for advertising in Spring 2024, with construction starting by Fall 2024.

The latest NHB review (see attachment) finds that two state threatened plant species have been documented in the vicinity of the proposed project. These are bird-foot violet (*Viola pedata* var. *pedata*) and wild lupine (*Lupinus perennis* ssp. *perennis*). Since these species are listed as potentially occurring in the area, do you think a bird-foot violet and wild lupine survey should be completed in this vicinity? There could be potentially suitable habitat in the vicinity. Attached also is a figure of known bird-foot violet populations from our 2021 survey.

Thank you for your input,
Claire



Claire Hilsinger | Environmental Analyst

📞 978-692-0522

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NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

USFWS Official Species List



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:
Project Code: 2024-0032606
Project Name: Bedford-Merrimack 16100

January 04, 2024

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 \(fws.gov\)](#).

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: 2024-0032606
Project Name: Bedford-Merrimack 16100
Project Type: Road/Hwy - Maintenance/Modification
Project Description: This project involves the construction of a new All Electronic Tolling (AET) facility to replace the existing conventional cash and E-ZPass toll plaza along the F.E. Everett Turnpike in Bedford. The new facility will accommodate highway speed tolling with no cash option. The project will entail roadway transition to 3 lanes in each direction (reduction in width at the plaza would be from 25' to 122'), construction of full span toll gantry to the north of the existing toll plaza between 600' to 1700', installation of full span or cantilever overhead signs and ground mounted signs, removal of existing toll plaza and buildings, installation of concrete median barrier, and associated drainage work.

Overall, the project will result in a reduction in the footprint of the turnpike. Wetland impacts are anticipated to be approximately 1,591 sq ft of permanent impacts, resulting from grading required for overhead signage, and 986 sq ft of temporary impacts. Total tree clearing is anticipated to be approximately 0.3 acres. The project does not involve any work on stream crossings.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.9179491,-71.46568834524547,14z>



Counties: Hillsborough County, New Hampshire

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 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 Fisheries¹, 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: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	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: McFarland Johnson
Name: Christine Perron
Address: 53 Regional Drive
City: Concord
State: NH
Zip: 03301
Email: cperron@mjinc.com
Phone: 6032252978

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

NHFG Correspondence

Claire Hilsinger

From: Christine J. Perron
Sent: Wednesday, March 6, 2024 3:59 PM
To: Claire Hilsinger
Subject: FW: NHB23-1850 NHDOT Bedford-Merrimack 16100 NHFG Recommendations
Attachments: Spotted_Blandings Flyer_2024.pdf; racer flyer_2022.pdf; Wood Turtle Flyer_2020.pdf; NEC Contractor Flyer_2020.pdf; Hognose Flyer_Feb2023.pdf



CHRISTINE J. PERRON, CWS
REGIONAL ENVIRONMENTAL MANAGER

603-225-2978

CPERRON@MJINC.COM

WWW.MJINC.COM

From: Newton, Kevin <Kevin.M.Newton@wildlife.nh.gov>
Sent: Wednesday, March 6, 2024 3:42 PM
To: Christine J. Perron <CPerron@mjinc.com>
Cc: Martin, Rebecca <Rebecca.A.Martin@dot.nh.gov>; Benedict, Karl <Karl.D.Benedict@des.nh.gov>; FGC: NHFG review <NHFGreview@wildlife.nh.gov>
Subject: NHB23-1850 NHDOT Bedford-Merrimack 16100 NHFG Recommendations

You don't often get email from kevin.m.newton@wildlife.nh.gov. [Learn why this is important](#)

Good afternoon,

New Hampshire Fish and Game has completed review of materials submitted for consultation for NHB23-1850, NHDOT Bedford-Merrimack 16100, prepared by NHDOT and McFarland-Johnson, Inc. The proposed project is the construction of a new all electronic tolling facility to replace the existing conventional E-Zpass toll along the F.E Everett Turnpike in Bedford. The project will entail roadway transition to 3 lanes in each direction, installation of full span toll gantry, installation of full span or cantilever overhead signs and ground mounted signs, removal of existing toll plaza and buildings, and installation of concrete median barrier and associated drainage work.

Applications associated with this review:

- NHDES – Wetland Standard Dredge and Fill – Minimum

Based on the NHB datacheck results letter and the information provided in the submission, we request the following recommended permit conditions. **THESE RECOMMENDED PERMIT CONDITIONS ARE APPLICABLE TO ALL STATE PERMITS LISTED ABOVE.**

- Please include recommended permit conditions in final plan sheets plans as written below (updated highlighted text as applicable) and provide to NHDES and cc NHFG for final review. Permit reviewers will adopt/include NHFG permit conditions in the permit if approved.

[New Hampshire Fish and Game – Recommended Permit Conditions NHB23-2889](#)

1. Blanding's Turtle (State endangered), Eastern Hognose Snake (State endangered), New England Cottontail (State endangered) Northern Black Racer (State threatened), and Spotted Turtle (State endangered) occur within the vicinity of the project area.
2. Rare species information (e.g. identification, observation and reporting of observations, when to contact NHFG immediately and NHFG contact information) shall be communicated during the project's preconstruction meeting prior to work and rare species flyers shall be included on the project's bulletin board. The rare species commitments shall be included in the project's Summary of Environmental Issues and the rare species flyers shall be included in the project's contract. Additionally, rare species information shall be communicated when weekly project progress meetings are held on site.
3. Observations of Northern Black Racers in the months of April-May and September-October may indicate the potential for a den site on or near the project site. Observations of this species during this timeframe shall be reported immediately to the New Hampshire Fish and Game Department Nongame and Endangered Wildlife Environmental Review Program. Please contact Melissa Winters (603-479-1129) or Brendan Clifford (603-944-0885). Observations of this species outside of this timeframe can follow general reporting guidance. Please include photograph with text if feasible.
4. Observations of Eastern Hognose Snake shall be reported immediately to NHFG wildlife biologists Melissa Winters (603-479-1129) or Brendan Clifford (603-944-0885). Immediate reporting of observations is critical as NHFG biologists will need to collect data on the individual.
5. Turtles and snakes may be attracted to disturbed ground during nesting season. Turtle nesting season occurs approximately May 15th – June 30th. All turtle species nests are protected by NH laws. If a nest is observed or suspected, operators shall contact Melissa Winters (603-479-1129) or Josh Megyesy (978-578-0802) at NHFG immediately for further consultation. The nest or suspected nest shall be marked (surrounding roped off or cone buffer deployed) and avoided; this shall be communicated to all personnel onsite. Site activities shall not occur in the area surrounding the nest or suspected nest until further guidance is provided by NHFG.
6. Silt fence shall be buried along the west side of the southbound lane to reduce the potential for rare turtles and snakes to nest in disturbed areas.
7. All manufactured erosion and sediment control products, with the exception of turf reinforcement mats, utilized for, but not limited to, slope protection, runoff diversion, slope interruption, perimeter control, inlet protection, check dams, and sediment traps shall not contain plastic, or multifilament or monofilament polypropylene netting or mesh with an opening size of greater than 1/8 inches.
8. All observations of threatened or endangered species on the project site shall be reported to the NHFG nongame and endangered wildlife environmental review program by phone at 603-271-2461 and by email at NHFGreview@wildlife.nh.gov, with the email subject line containing the NHB DataCheck tool results letter assigned number, the project name, and the term Wildlife Species Observation.
9. Photographs of the observed species and nearby elements of habitat or areas of land disturbance shall be provided to NHFG in digital format at the above email address for verification, as feasible.
10. In the event a threatened or endangered species is observed on the project site during the term of the permit, the species shall not be disturbed, handled, or harmed in any way prior to consultation with NHFG and implementation of corrective actions recommended by NHFG.
 - a. Site operators shall be allowed to relocate wildlife encountered if discovered within the active work zone if in direct harm from project activities. Wildlife shall be relocated in close proximity to the capture location but outside of the work zone and in the direction the individual was heading. NHFG shall be contacted immediately if this action occurs.
11. NH Fish and Game, including its employees and authorized agents, shall have access to the property during the term of the permit (for...). The NHDOT's Contract Administrator or Environmental Coordinator, (INSERT NAME OF ENVIRONMENTAL COORDINATOR AND PHONE NUMBER), for the project shall be contacted in advance to coordinate safe access to the site. In case of the need for emergency site access, contact Kevin Nyhan at 603-271-3226.

Additional Recommendations:

1. Wood Turtle (State species of special concern) occur within the vicinity of the project area. All operators and personnel working on or entering the site shall be made aware of the potential presence of these species and shall be provided flyers that help to identify these species, along with NHFG contact information.

NHFG has completed our review of materials submitted for consultation under FIS 1004. No further coordination with NHFG is requested, and the final recommendations have been transmitted to the applicable permitting agency. Questions or concerns on NHFG recommendations must follow FIS 1004.12. Note that NHFG recommendations may be withdrawn pursuant to FIS 1004.

Sincerely,

Kevin Newton
Wildlife Biologist
NH Fish and Game Department
Wildlife Division
11 Hazen Drive, Concord NH 03301
Phone: 603-271- 5860

Kevin Newton
Wildlife Biologist
NH Fish and Game Department
Wildlife Division
11 Hazen Drive, Concord NH 03301
Phone: 603-271- 5860

New Hampshire Fish and Game requirements for environmental review consultation can be found at: https://gencourt.state.nh.us/rules/state_agencies/fis1000.html. ALL requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent hardcopy by mail. **The NHB datacheck results letter number needs to be included in the email subject line to read as "NHBxx-xxxx_Project Name_FIS 1004 Consultation Submittal"**.

The requirements for consultation (Fis 1004) shall not apply to the following: statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule. Review requests for these projects or other project types should be submitted to NHFGreview@wildlife.nh.gov or can be sent hardcopy by mail – email or mail subject line for these review requests should read "NHBxx-xxxx_Project Name_ Env. Review Request".

Please provide shapefiles/KMZ/KMLs of the project site (and relevant features if applicable) with your submittal. Review statements provided in the NHB Datacheck Results letter for additional guidance.

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

USFWS NLEB Consistency Letter



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087

<https://www.fws.gov/office/new-england-ecological-services>

January 19, 2024

Rebecca Martin
NH Department of Transportation
Bureau of Environment
7 Hazen Dr.
Concord, NH 03302

RE: Construction of the Bedford-Merrimack 16100 Project, Bedford, NH
(Project Code 2024-0032606)

Dear Rebecca Martin:

This responds to your request, dated January 11, 2024, and received in our office on the same date, for our concurrence with your determination that the New Hampshire Department of Transportation's (NHDOT) proposed construction of the Bedford-Merrimack 16100 Project (Project) may affect, but is not likely to adversely affect, the federally endangered northern long-eared bat (*Myotis septentrionalis*). Your request and our response are made pursuant to section 7 of the Endangered Species Act of 1973, as amended (87 Stat. 884, as amended; 16 U.S.C 1531, et seq.) (ESA). We understand the NHDOT is acting as a non-Federal representative of the Federal Highway Administration (FHWA) for the purpose of consultation under section 7.

Based on our knowledge, expertise, and review of the information and analysis included with your consultation request, we concur with your determination because any effects from the proposed action on the subject species would be insignificant and/or discountable.

Further consultation under section 7 of the ESA is not required at this time. If any of the criteria at 50 CFR 402.16(a) are met, reinitiation of consultation is required, and the NHDOT should contact us immediately and suspend activities that may affect those species until the appropriate level of consultation is completed with our office. Thank you for your cooperation, and please contact Maria Tur of this office at 603-568-4871 or maria_tur@fws.gov if you have questions or need further assistance.

Rebecca Martin
January 19, 2024

2

Sincerely yours,

Audrey Mayer
Supervisor
New England Field Office

cc: david_simmons@fws.gov
rebecca.a.martin@dot.nh.gov
jonathan.a.evans@dot.nh.gov
michael.c.hicks@usace.army.mil

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

Section 106 Effect Memo



Victoria F. Sheehan
Commissioner

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



William Cass, P.E.
Assistant Commissioner

RECEIVED
JAN 27 2017

BEDFORD-MERRIMACK
16100
RPR 8143

AMENDED 2.20.2024

No Historic Properties Affected Memo

Pursuant to the NH Division of Historic Resources response to the Request for Project Review on October 20, 2016 and additional consultation, and to comply with RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NH Division of Historical Resources and the NH Department of Transportation have coordinated the identification and evaluation of cultural resources with plans to convert the F.E. Everett Turnpike toll plaza in the town of Bedford into an Open Road Tolling (ORT) facility and make changes to Exit 12 in Merrimack to include ramps for authorized winter maintenance and emergency vehicles. All work for the project is anticipated to be contained within the Turnpike right-of-way.

Archaeological review, identifying disturbed areas, included a 2003 Phase IA archaeological reconnaissance, a Phase II study in 2005, and a recent windshield survey and archival investigation. Architectural reviews included a 2008 Historic District Area form for the Frederic E. Everett Highway (MLT-FEEH) and an Individual Inventory Form for a 1962 ranch house residence at 8 Priscilla Lane (MER0104). Both were determined not eligible for listing on the National Register of Historic Places.

Based on these reviews, we have determined that there are no historic or archeological resources present in the project area and that no further survey work is needed.

We will continue to consult, as appropriate, as this project proceeds.

Jill Edelman 1/26/2017
Jill Edelman Date
Cultural Resources Manager

Concurred with by the NH State Historic Preservation Officer:

Elizabeth H. Muzzey 1-30-17
Elizabeth H. Muzzey Date
State Historic Preservation Officer
NH Division of Historical Resources

c.c. Jonathan Evans, NHDOT
Chris St. Louis, NHDHR

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Bedford-Merrimack
16100
RPR 8143

2.20.2024 UPDATE: No Historic Properties Affected Memo

Pursuant to the NH Division of Historic Resources response to the Request for Project Review on October 20, 2016 and December 12, 2023, and additional consultation, and to comply with RSA 227-C:9, *Directive/or Cooperation in the Protection of Historic Resources*, the NH Division of Historical Resources and the NH Department of Transportation have coordinated the identification and evaluation of cultural resources with plans to convert the F .E. Everett Turnpike toll plaza in the town of Bedford and make changes to Exit 12 in Merrimack to include ramps for authorized winter maintenance and emergency vehicles. All work for the project is anticipated to be contained within the Turnpike right-of-way.

This project was originally reviewed in 2016, at which time conversion to Open Road Tolling was proposed. The 2016 project was never constructed, and **All Electronic Tolling is now proposed, which will result in a reduced project footprint.**

Archaeological review, identifying disturbed areas, included a 2003 Phase IA archaeological reconnaissance, a Phase II study in 2005, and a recent windshield survey and archival investigation. Architectural reviews included a 2008 Historic District Area form for the Frederic E. Everett Highway (MLT-FEEH) and an Individual Inventory Form for a 1962 ranch house residence at 8 Priscilla Lane (MER0104). Both were determined not eligible for listing on the National Register of Historic Places.

Based on these reviews, we have determined that there are no historic or archeological resources present in the project area and that no further survey work is needed.

This project amendment does not change the No Historic Properties Affected finding for the project. Submitted by Sheila Charles.

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

NH GP Appendix B – Corps Secondary Impacts Checklist and Supplemental Narrative




**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.

1. Impaired Waters	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. * https://nhdes-surface-water-quality-assessment-site-nhdes.hub.arcgis.com/ https://www.des.nh.gov/water/rivers-and-lakes/water-quality-assessment https://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx	X	
2. Wetlands	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 https://www4.des.state.nh.us/NHB-DataCheck/ .		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	NA	
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?		
2.6 What is the area of the previously filled wetlands?	 unknown	
2.7 What is the area of the proposed fill in wetlands?	1409 sf	
2.8 What % of the overall project sire will be previously and proposed filled wetlands?	unknown	
3. Wildlife	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: https://www4.des.state.nh.us/NHB-DataCheck/ . USFWS IPAC website: https://ipac.ecosphere.fws.gov/	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"> • PDF: https://wildlife.state.nh.us/wildlife/wap-high-rank.html. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html. 		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?	N/A	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	<input checked="" type="checkbox"/>	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	<input checked="" type="checkbox"/>	X
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the RPR Form (www.nh.gov/nhdhr/review) 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	
6. Minimal Impact Determination (for projects that exceed 1 acre of permanent impact)	Yes	No
Projects with greater than 1 acre of permanent impact must include the following: <ul style="list-style-type: none"> • Functional assessment for aquatic resources in the project area. • On and off-site alternative analysis. • Provide additional information and description for how the below criteria are met. 		NA
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.

**New Hampshire Department of Transportation
Bedford-Merrimack 16100 Toll Plaza AET Conversion**

ACOE Appendix B Supplemental Narrative

1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water?

Section 303(d) of the Clean Water Act requires each state to submit a list of impaired waters to the US EPA every two years to identify surface waters that are impaired by pollutants, not expected to meet water quality standards within a reasonable time, and require the development of a Total Maximum Daily Load (TMDL) study. This list is prepared by NHDES as outlined in the Draft Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology. According to the NHDES 303(d) list (most recent available), the Merrimack River (NHRIV700060804-11; NHRIV700060803-14-02) is listed as impaired by Aluminum and *Escherichia coli*. Additionally, Patten Brook (NHRIV700060803-12), to the north of the project area, is listed as impaired by Aluminum and *Escherichia coli*. Muddy Pond and Sebbins Pond (NHLAK700060804-02), west of the project area, are both listed as impaired by chlorophyll-a, cyanobacteria hepatotoxic microcystins, and total phosphorus. A small unnamed pond to the west (NHLAK700060804-03-01) is listed as impaired by chlorophyll-a and total phosphorus

The project is expected to result in a net decrease in impervious surface of 6.2 acres, and is not anticipated to alter drainage patterns or discharge points. The proposed project is not expected to result in an adverse impact on water quality and will not cause or contribute to surface water impairments.

2.1 Are there streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?

Pointer Club Brook flows through the project area south of Exit 13 and falls within 200 feet of the southern end of proposed work. Sebbins Brook lies just north of Exit 13 and falls within 200 feet of proposed work. No impacts are proposed to streams, and appropriate erosion and sediment controls will be in place during construction to protect nearby resources.

2.5 Is the overall project site more than 40 acres?

The overall study area is 95 acres, but the proposed wetland impact area is .07 acres, including permanent and temporary impacts.

2.7 What is the area of the proposed fill in wetlands?

The area of proposed fill in wetlands is 1409 square feet (0.03 acres). This is the proposed area of permanent impact to wetlands, due to construction of overhead signage and guardrails.

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?

The proposed project was submitted to and reviewed by the New Hampshire Natural Heritage Bureau (NHB) via the online NHB DataCheck Tool. According to the NHB DataCheck Results Letter (NHB23-1850) dated June 29, 2023, bird-foot violet (*Viola pedata* var. *pedata*), wild lupine (*Lupinus perennis* ssp. *perennis*), Blanding's turtle (*Emydoidea blandingii*), eastern hognose snake (*Heterodon platirhinos*), New England cottontail (*Sylvilagus transitionalis*), northern black racer (*Coluber constrictor constrictor*),

**New Hampshire Department of Transportation
Bedford-Merrimack 16100 Toll Plaza AET Conversion**

ACOE Appendix B Supplemental Narrative

spotted turtle (*Clemmys guttata*), and wood turtle (*Glyptemys insculpta*) have historically been documented in the vicinity of the project area.

A survey for bird-foot violet and wild lupine was conducted in the study area by McFarland-Johnson in July and August 2023. No bird-foot violet or wild lupine were found.

The United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) planning tool was accessed on January 4, 2024 to determine if federally listed species have the potential to occur in the project area. An Official Species List was generated for the proposed project area (see attached USFWS Official Species List). According USFWS Official Species List, the proposed project is located within the range of the federally endangered northern long-eared bat (*Myotis septentrionalis*), and the monarch butterfly (*Danaus plexippus*), a candidate species currently undergoing review for potential listing. Total tree clearing is anticipated to be approximately 0.3 acres, and area will be cut during the non-active season for bats. Consultation was carried out with the USFWS and it was confirmed that the project would not adversely affect northern long-eared bat. The proposed project area includes some potential monarch habitat, but the project would not permanently change that habitat and no monarch conservation measures are included in the project at this time. Following construction, roadside areas would continue to provide potential habitat for monarch butterfly.

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"?

There are "Highest Ranked Habitats in the Ecological Region" nearby, but the project itself falls within "Supporting Landscape". Impacts on wildlife from the proposed action will be temporary and short-term in nature. The proposed action is not anticipated to result in any changes to terrestrial wildlife or aquatic organism passage or connectivity.

4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?

Pointer Club Brook flows through the project area; there is 100-year floodplain associated with the brook, but there is no impact expected within this area. The project will not result in a loss of flood storage.

5. Historic/Archaeological Resources

The Request for Project Review (RPR) was sent to NH DHR. The project was originally proposed in 2016, at which time conversion to Open Road Tolling was proposed. The 2016 project was never constructed, and All Electronic Tolling is now proposed, which will result in a reduced project footprint. Based on the reviews conducted, it was determined that there are no historic or archaeological resources present in the project area and the project will result in No Historic Properties Affected under Section 106.

6. Minimal Impact Determination

This project will not have greater than one acre of impact.

NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

Photographs



Photo 1: Impact area of W17, PFO portion



Photo 2: Impact area of W17, PSS portion



Photo 3: Impact area of W17, facing east, PFO portion

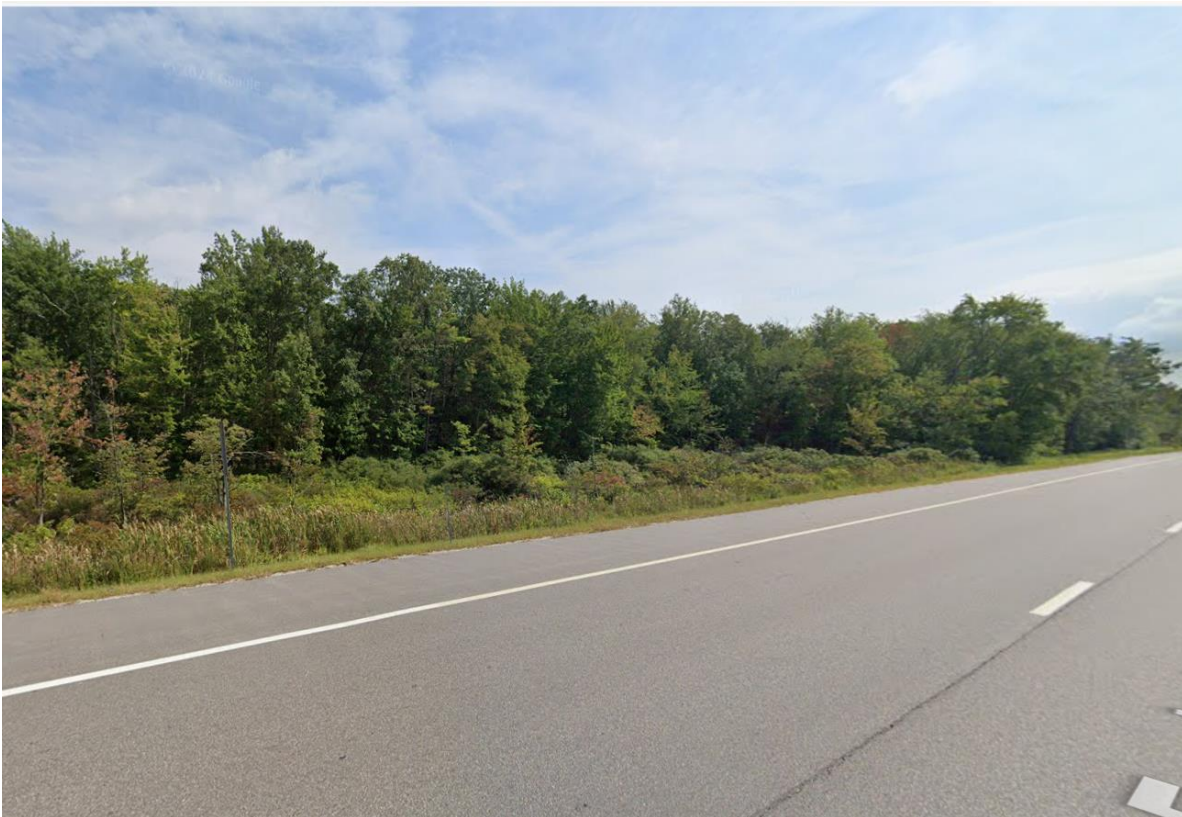


Photo 4: Impact area of W17, facing southeast, PFO and PSS portion



Photo 5: Impact area of W17, facing northeast, PSS portion

Construction Sequence

**STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION
NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION**

**BEDFORD-MERRIMACK 16100
TOLL PLAZA AET CONVERSION**

Anticipated Construction Sequence

Notes:

- The project is anticipated to advertise July, 2024.
- The start of construction is anticipated to be in December 2025. Construction will be phased with traffic being maintained in the northbound and southbound directions. Final paving and minor slope work (seeding/final grading) are expected to be completed in Fall 2027.
- Tree clearing will be completed between November 1 and April 1.
- The following sequence is preliminary and likely order of construction but the exact means and methods will ultimately be decided by the selected contractor.
- The maintenance ramp construction and associated intersection work at Bedford Road (Exit 12) will occur independently of the construction sequence below with minimal impacts to traffic. The Contractor may choose to complete this work at any time within construction periods below.

Construction Sequence:

- 1.) Install appropriate perimeter controls for soil erosion and sediment control (December 2024)
- 2.) Install temporary barrier and signalization for Construction Phase 1A (January 2025)
- 3.) Construct temporary widening (January - April 2025)
- 4.) Restripe and install temporary barrier for Phase 1B, swap traffic to temporary roadways (April 2025)
- 5.) Construct concrete roadway and in pavement tolling equipment (April - July 2025)
- 6.) Restripe and install temporary barrier for construction Phase 1C (July 2025)
- 7.) Remove temporary widening, relocate Exit 13 SB Off Ramp gore, construct AET gantry, toll shelter building and access road. (July 2025 - March 2026)

- 8.) Remove concrete barrier and restripe the roadway to the final configuration from the AET gantry to the northern limit of work. (March 2026)
- 9.) Complete testing of the AET tolling system and begin collecting revenue from the AET toll. (March – May 2026)
- 10.) Install temporary concrete barrier around existing toll plaza and remove canopy and select toll bumper islands. (Phase 2A) (May 2026 – July 2026)
- 11.) Restripe and install concrete barrier for Phase 2B. (July 2026)
- 12.) Reconstruct middle portion of roadway, demo middle portion of toll plaza, and install median drainage. (July – November 2026)
- 13.) Restripe and place concrete barrier for Phase 2C construction, swap SB traffic to new layout. (November 2026)
- 14.) Reconstruct SB portion of roadway, demo remaining SB toll plaza, remove Exit 13 SB On Ramp concrete island, and install drainage. (November 2026 – March 2027)
- 15.) Restripe and place concrete barrier for Phase 2D construction, swap SB traffic to new layout. (March 2027)
- 16.) Install median concrete barrier, and pave final wearing course and stripe to final condition the SB roadway. (April – May 2027)
- 17.) Restripe and place concrete barrier for Phase 2E construction, swap NB traffic to new layout. (May 2027)
- 18.) Reconstruct NB side of roadway, demo NB toll plaza and toll administrative building, and install drainage. (May 2027 – September 2027)
- 19.) Remove all traffic control devices, and pave and stripe to final condition the NB roadway (September – October 2027)
- 20.) Complete punch list items and remove perimeter controls for soil erosion and sediment control (October 2027)

The following permit recommendations from New Hampshire Fish and Game Department (NHFG) will be included in contract documents and implemented during construction:

1. Blanding’s Turtle (State endangered), Eastern Hognose Snake (State endangered), New England Cottontail (State endangered) Northern Black Racer (State threatened), and Spotted Turtle (State endangered) occur within the vicinity of the project area.
2. Rare species information (e.g. identification, observation and reporting of observations, when to contact NHFG immediately and NHFG contact information) shall be communicated during the

project's preconstruction meeting prior to work and rare species flyers shall be included on the project's bulletin board. The rare species commitments shall be included in the project's Summary of Environmental Issues and the rare species flyers shall be included in the project's contract. Additionally, rare species information shall be communicated when weekly project progress meetings are held on site.

3. Observations of Northern Black Racers in the months of April-May and September-October may indicate the potential for a den site on or near the project site. Observations of this species during this timeframe shall be reported immediately to the New Hampshire Fish and Game Department Nongame and Endangered Wildlife Environmental Review Program. Please contact Melissa Winters (603-479-1129) or Brendan Clifford (603-944-0885). Observations of this species outside of this timeframe can follow general reporting guidance. Please include photograph with text if feasible.
4. Observations of Eastern Hognose Snake shall be reported immediately to NHFG wildlife biologists Melissa Winters (603-479-1129) or Brendan Clifford (603-944-0885). Immediate reporting of observations is critical as NHFG biologists will need to collect data on the individual.
5. Turtles and snakes may be attracted to disturbed ground during nesting season. Turtle nesting season occurs approximately May 15th – June 30th. All turtle species nests are protected by NH laws. If a nest is observed or suspected, operators shall contact Melissa Winters (603-479-1129) or Josh Megyesy (978-578-0802) at NHFG immediately for further consultation. The nest or suspected nest shall be marked (surrounding roped off or cone buffer deployed) and avoided; this shall be communicated to all personnel onsite. Site activities shall not occur in the area surrounding the nest or suspected nest until further guidance is provided by NHFG.
6. Silt fence shall be buried along the west side of the southbound lane to reduce the potential for rare turtles and snakes to nest in disturbed areas.
7. All manufactured erosion and sediment control products, with the exception of turf reinforcement mats, utilized for, but not limited to, slope protection, runoff diversion, slope interruption, perimeter control, inlet protection, check dams, and sediment traps shall not contain plastic, or multifilament or monofilament polypropylene netting or mesh with an opening size of greater than 1/8 inches.
8. All observations of threatened or endangered species on the project site shall be reported to the NHFG nongame and endangered wildlife environmental review program by phone at 603-271-2461 and by email at NHFGreview@wildlife.nh.gov, with the email subject line containing the NHB DataCheck tool results letter assigned number, the project name, and the term Wildlife Species Observation.
9. Photographs of the observed species and nearby elements of habitat or areas of land disturbance shall be provided to NHFG in digital format at the above email address for verification, as feasible.
10. In the event a threatened or endangered species is observed on the project site during the term of the permit, the species shall not be disturbed, handled, or harmed in any way prior to consultation with NHFG and implementation of corrective actions recommended by NHFG.
 - a. Site operators shall be allowed to relocate wildlife encountered if discovered within the active work zone if in direct harm from project activities. Wildlife shall be relocated in close proximity to the capture location but outside of the work zone and in the direction the individual was heading. NHFG shall be contacted immediately if this action occurs.

11. NHFG, including its employees and authorized agents, shall have access to the property during the term of the permit. The NHDOT's Environmental Coordinator for the project, Darrel Elliot (603) 419-9822, shall be contacted in advance to coordinate safe access to the site. In case of the need for emergency site access, contact Kevin Nyhan at 603-271-3226.

Additional Recommendations:

1. Wood Turtle (State species of special concern) occur within the vicinity of the project area. All operators and personnel working on or entering the site shall be made aware of the potential presence of these species and shall be provided flyers that help to identify these species, along with NHFG contact information.

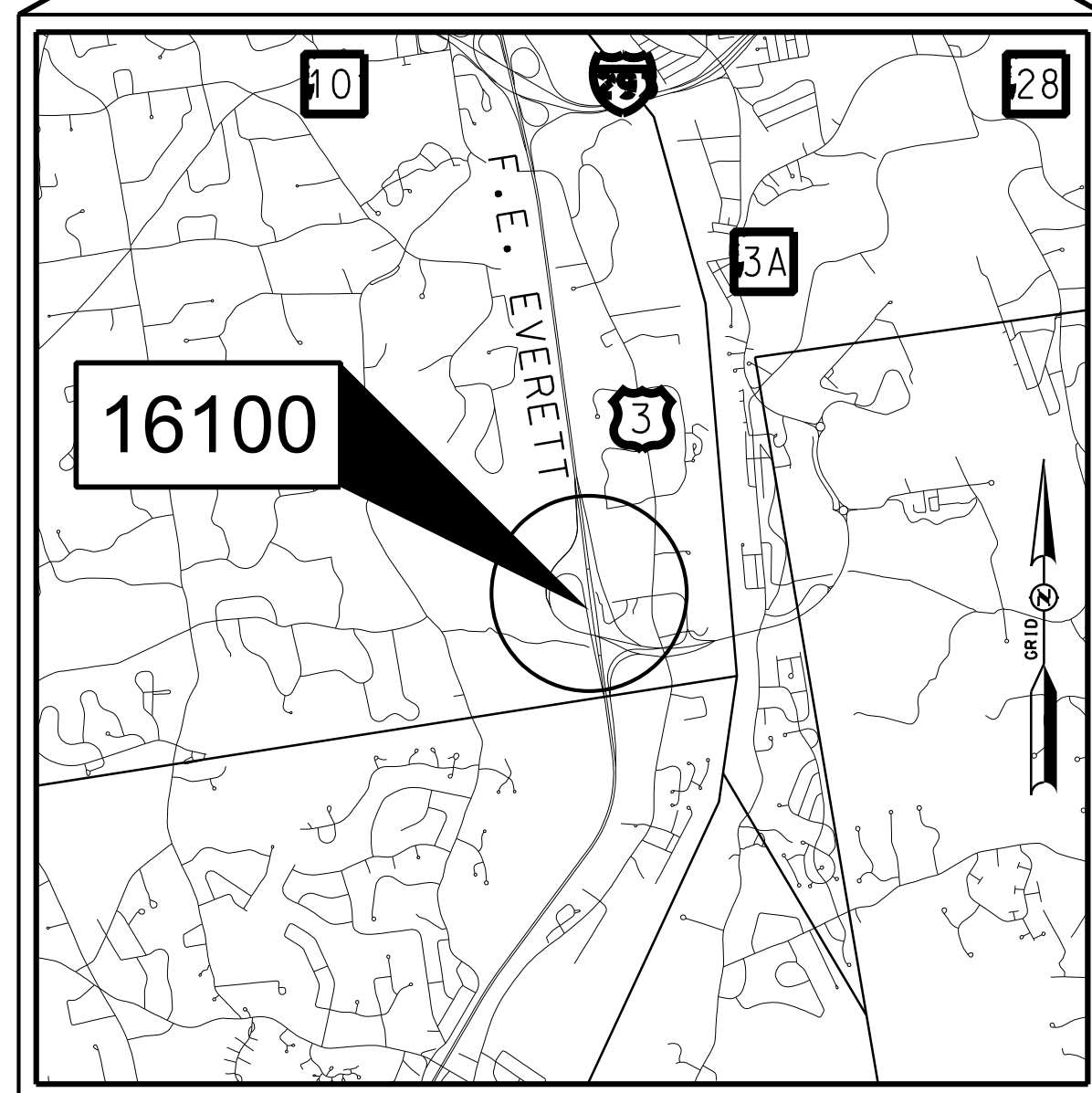
NH Dredge & Fill Permit Application

BEDFORD-MERRIMACK 16100

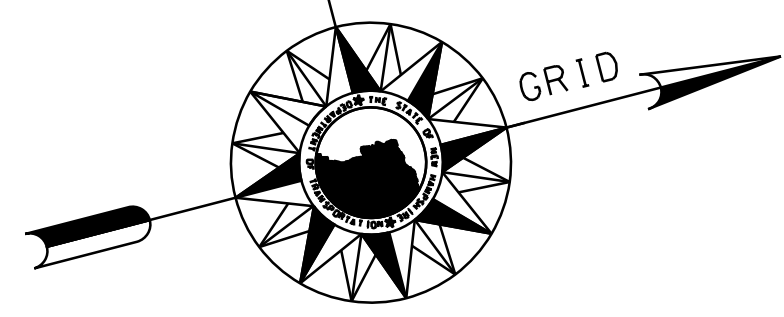
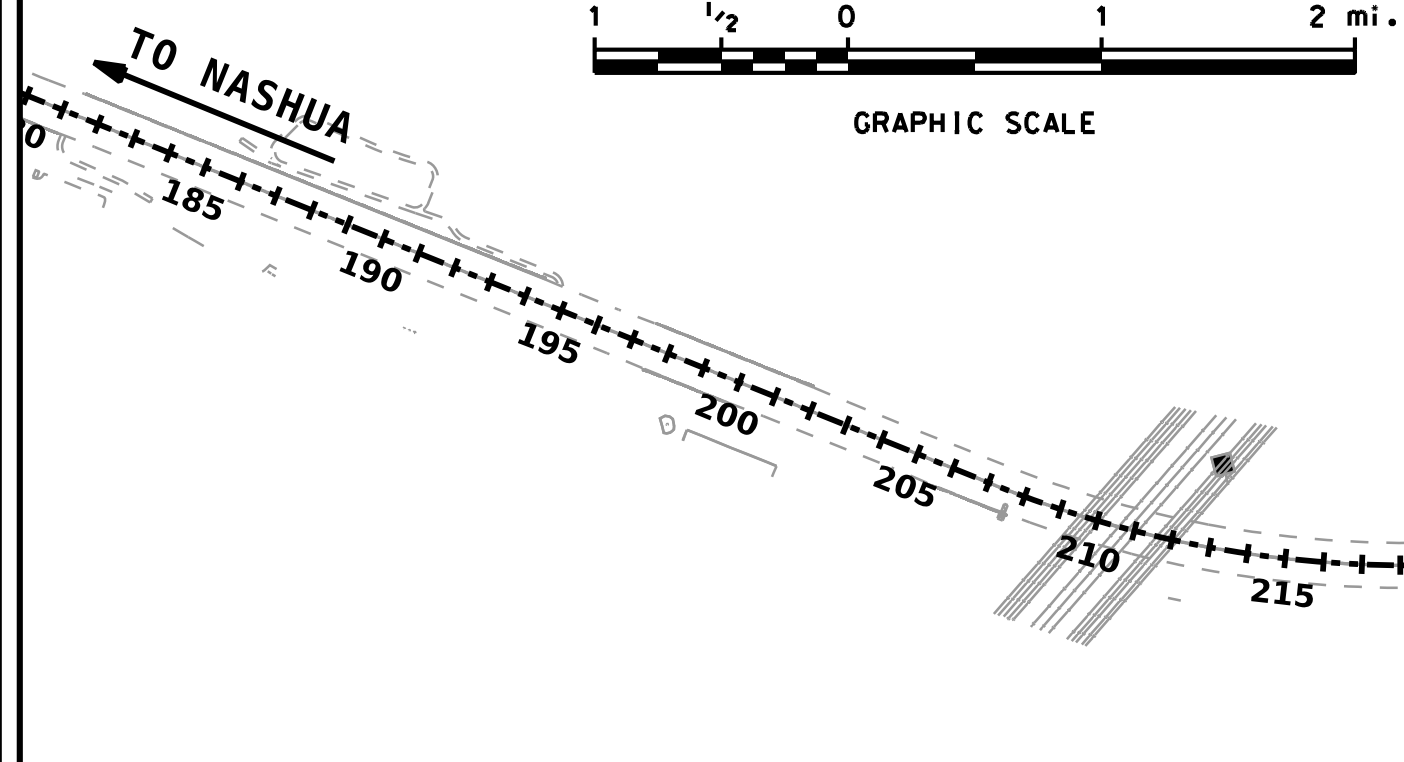
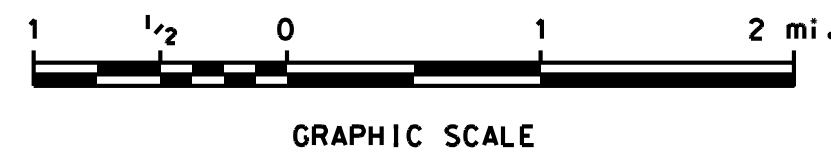
Wetland Impact Plan and Erosion Control Set

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
WETLAND IMPACT PLANS

N.H. PROJECT NO. 16100
F.E. EVERETT TURNPIKE
ALL ELECTRONIC TOLLING (AET)
AT BEDFORD TOLL PLAZA



LOCATION MAP



STA. 243+50, SB
BEGIN APPROACH

STA. 243+60, SB
BEGIN CONSTRUCTION

STRUCTURE NO. 195/085

STA. 247+50, NB
BEGIN CONSTRUCTION

STA. 279+50, NB
END CONSTRUCTION

STA. 288+00 NB
END APPROACH

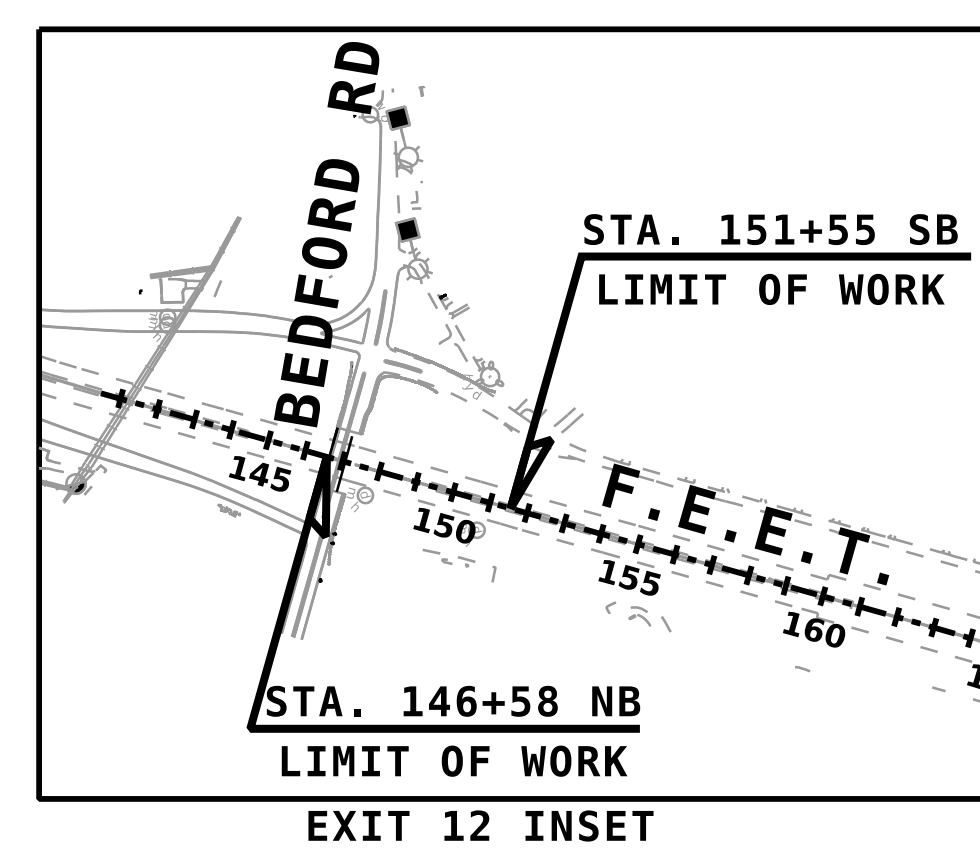
STA. 287+38, SB
END CONSTRUCTION

STA. 310+00, SB
END APPROACH

M.A.A.R.

F.E. EVERETT TURNPIKE

IMPACT AREA
SEE SHEET 5



TOWN OF BEDFORD
COUNTY OF MERRIMACK

SCALE: 1" = 500'



WETLANDS AND SURFACE WATERS WERE DELINEATED BY MCFARLAND JOHNSON ON JUNE 28, JUNE 29, JULY 12, JULY 20, AUGUST 17, AND AUGUST 24, 2023 IN ACCORDANCE WITH THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND THE REGIONAL SUPPLEMENT, NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.

ROADWAY PLANS PREPARED BY:

HNTB
HNTB CORPORATION
The HNTB Companies
Engineers Architects Planners
6 Loudon Road
Suite 306
Concord, NH 03301
(603) 931-3340

NHDOT THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL:

DIRECTOR OF PROJECT DEVELOPMENT DATE

APPROVED:

ASSISTANT COMMISSIONER AND CHIEF ENGINEER DATE

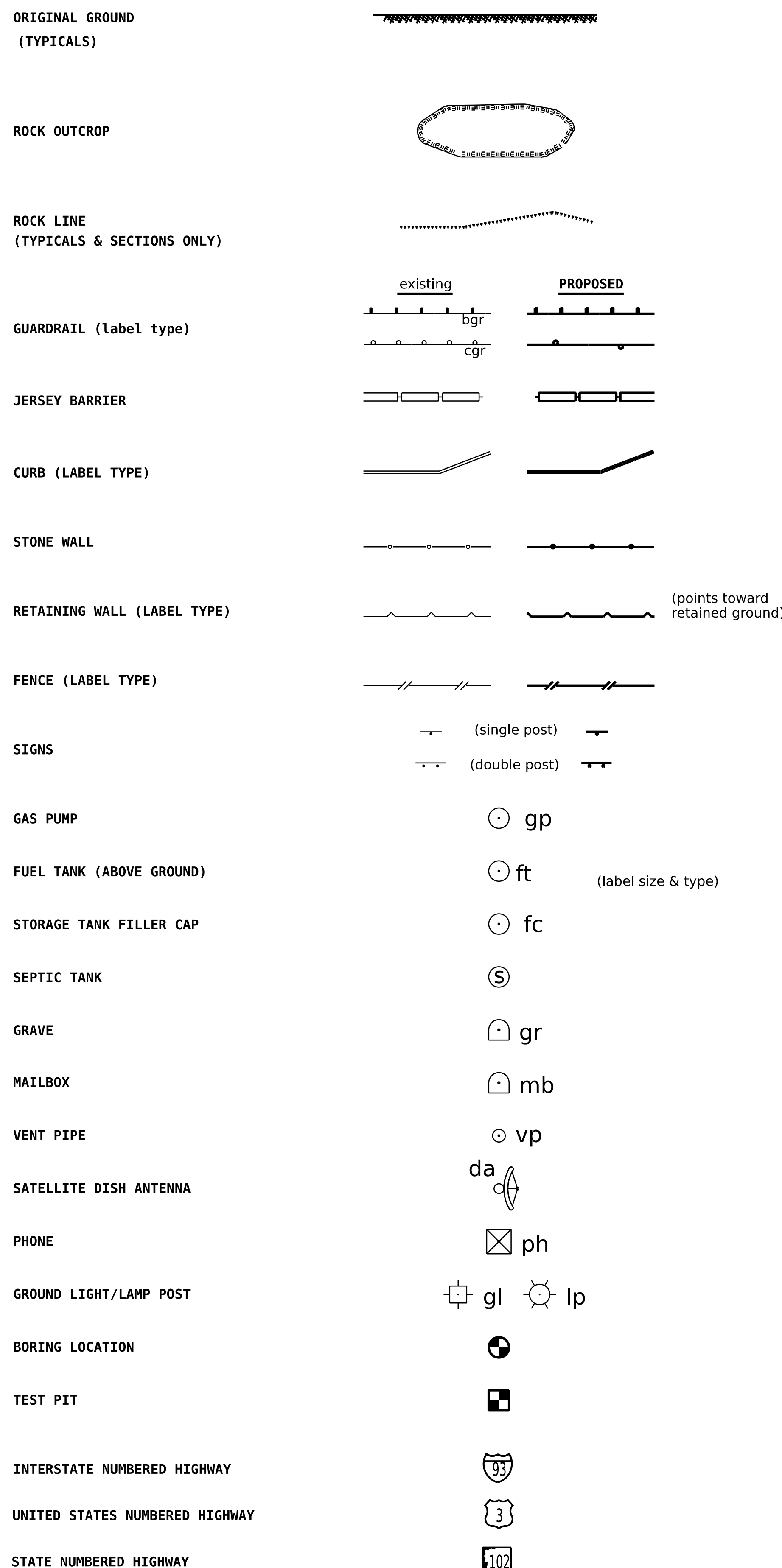
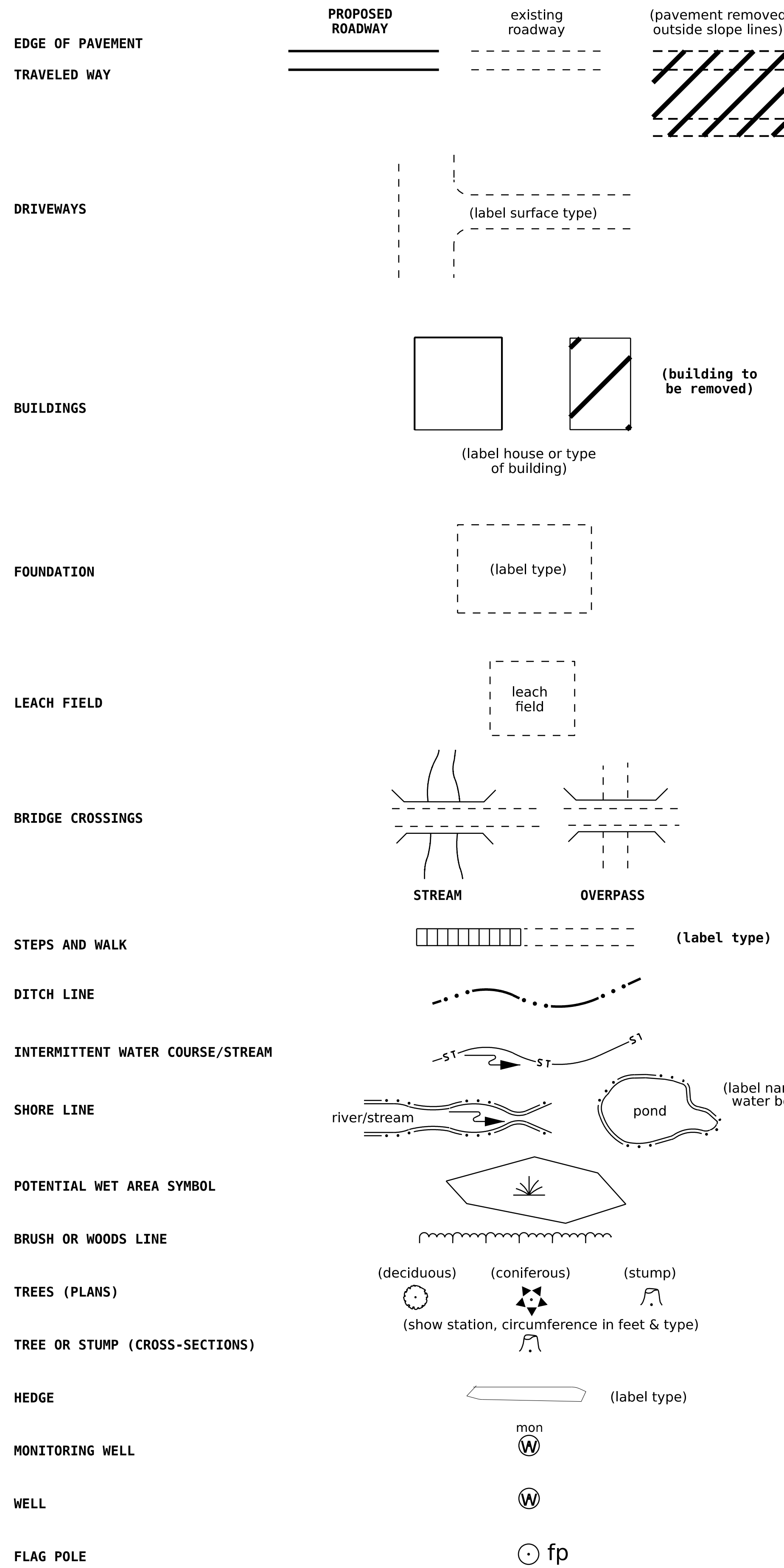
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DRAWN BY: CDM
CHECKED BY: RMW

INDEX OF SHEETS

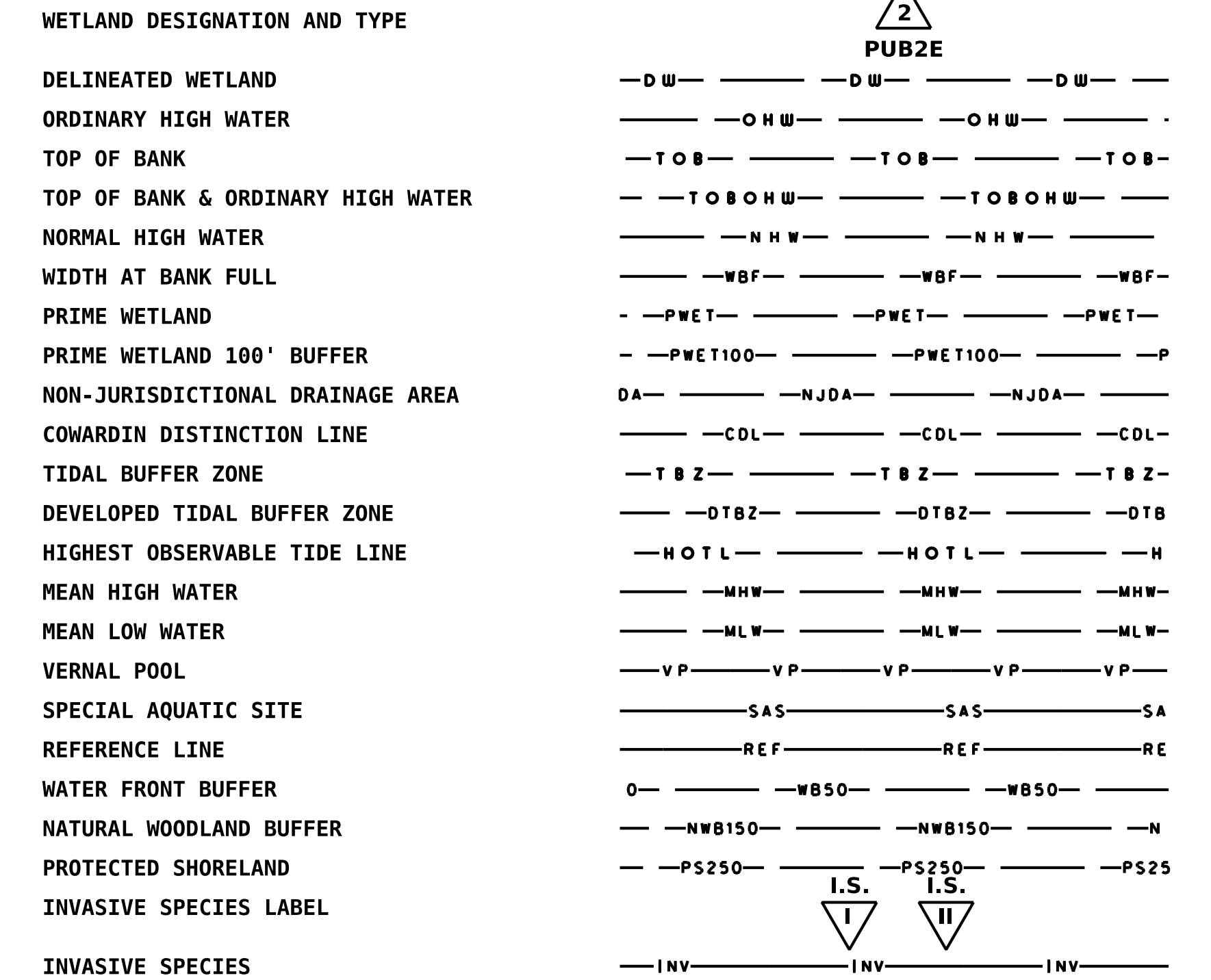
SHEET NO.	DESCRIPTION
1	TITLE PAGE
2-3	STANDARD SYMBOLS
4	WETLAND IMPACT SUMMARY
5	WETLAND IMPACT PLANS
6	EROSION CONTROL STRATEGIES
7-16	EROSION CONTROL PLANS

DRAWING NAME	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
16100fsw		16100	1	16

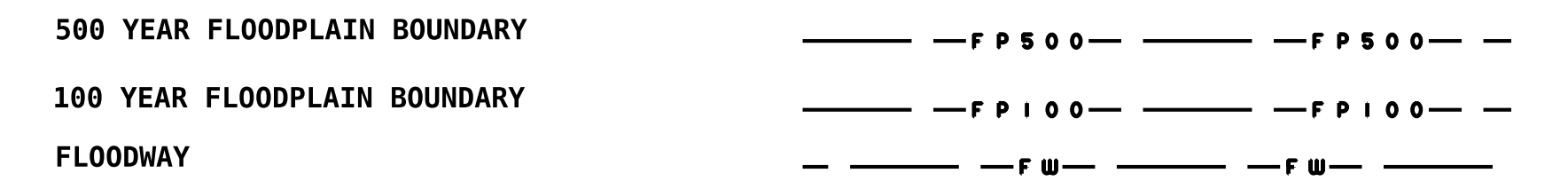
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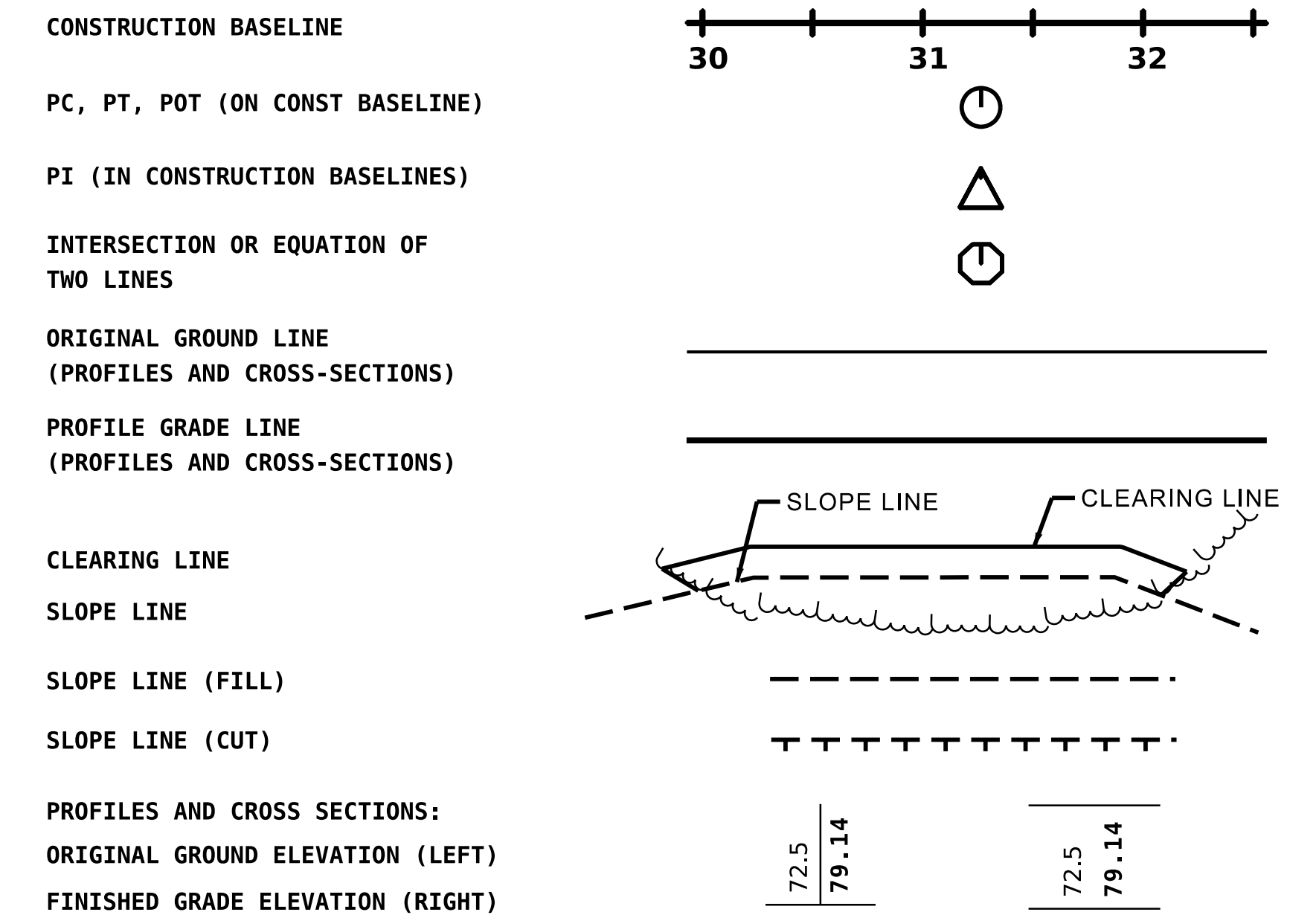
SHORELAND - WETLAND



FLOODPLAIN / FLOODWAY

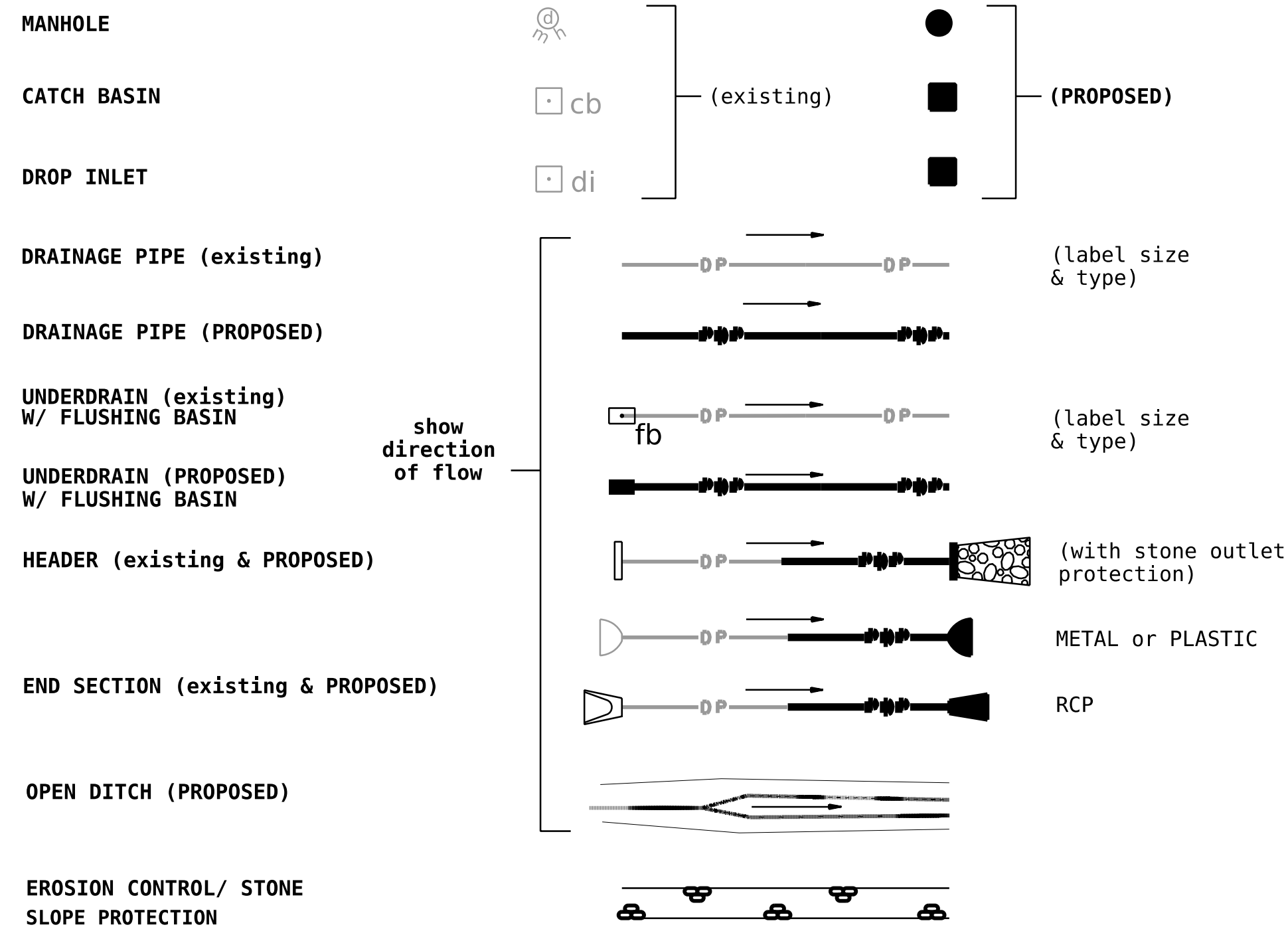


ENGINEERING

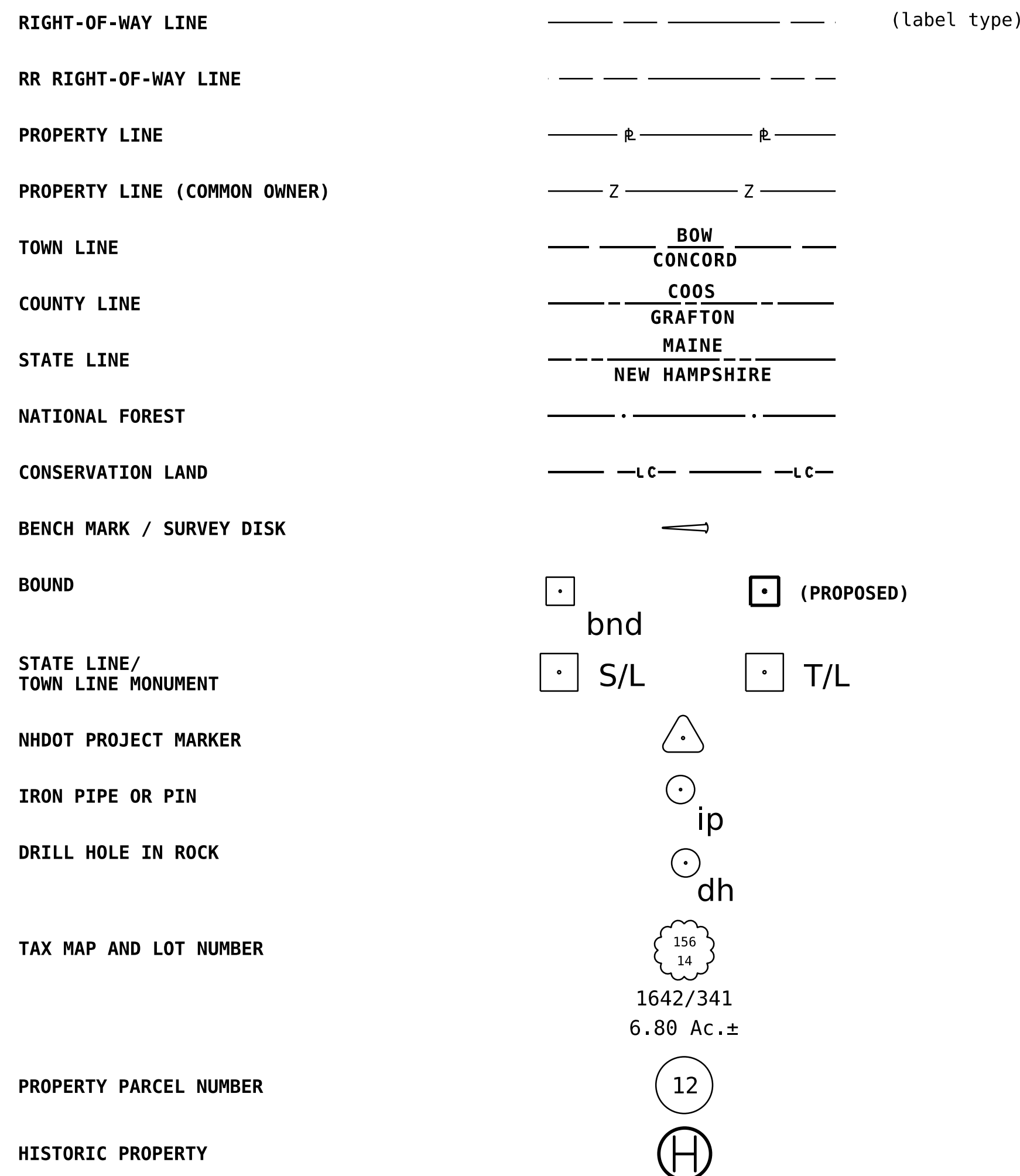


STATE OF NEW HAMPSHIRE
BEDFORD
 DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN
STANDARD SYMBOLS

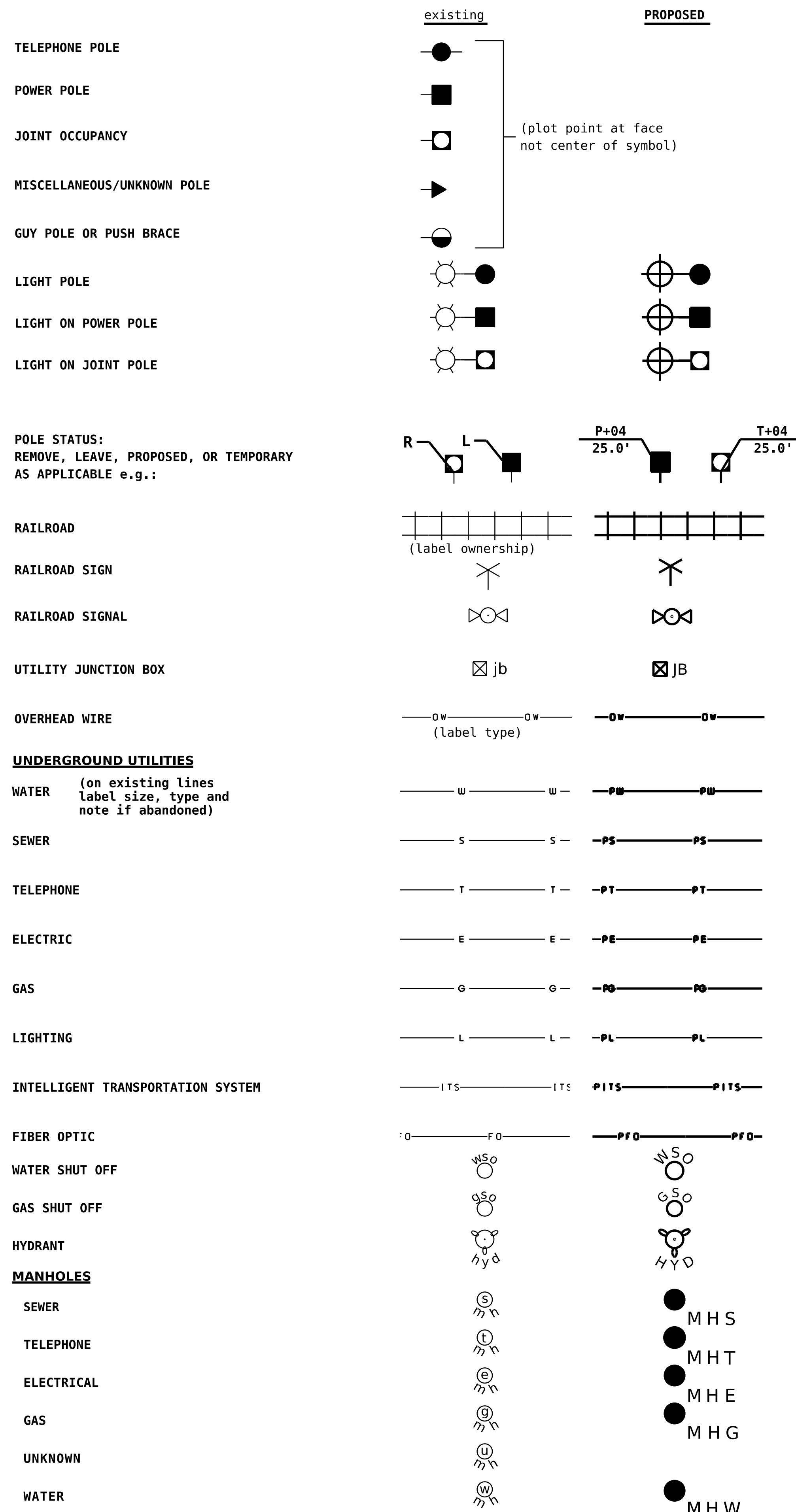
DRAINAGE



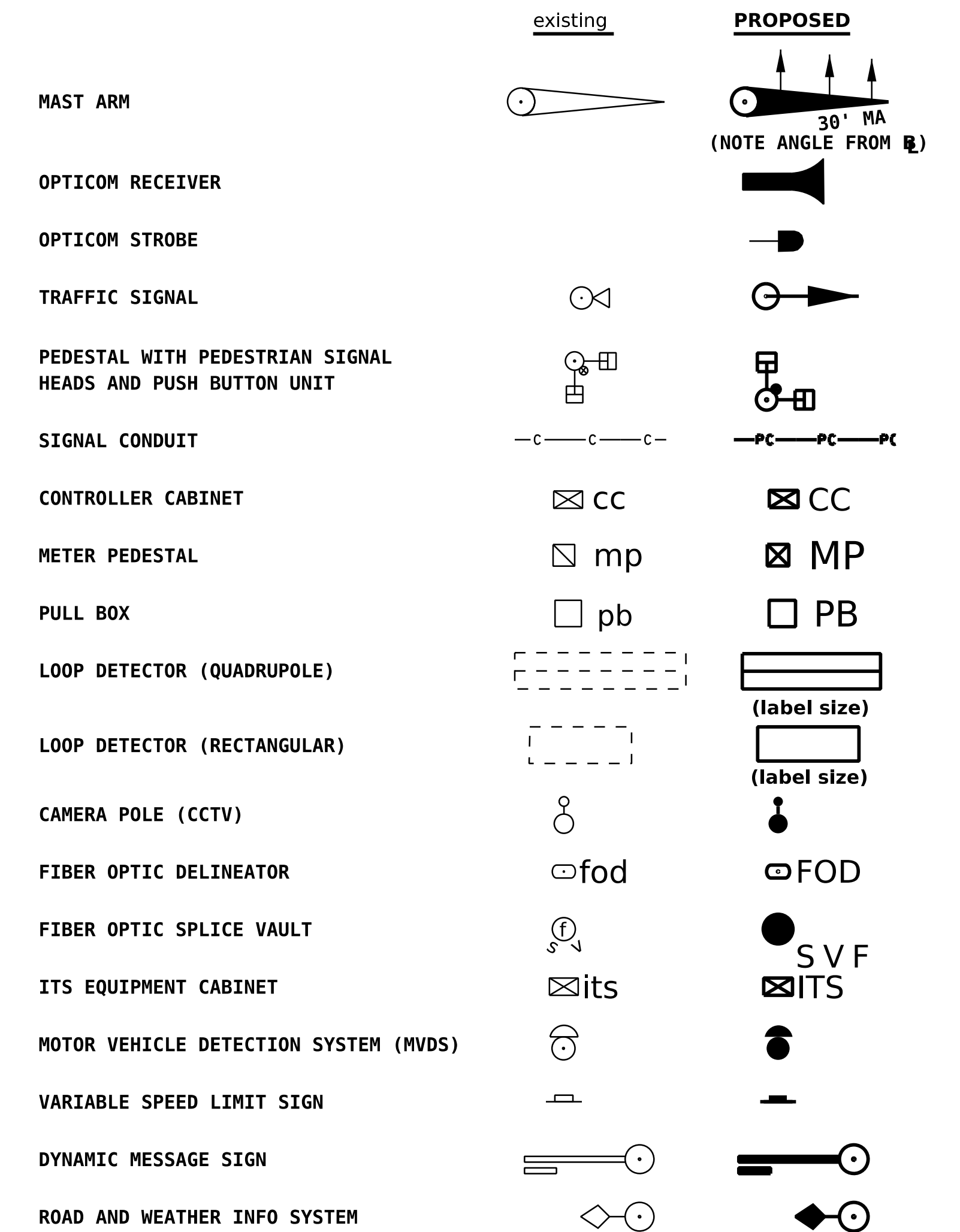
BOUNDARIES / RIGHT-OF-WAY



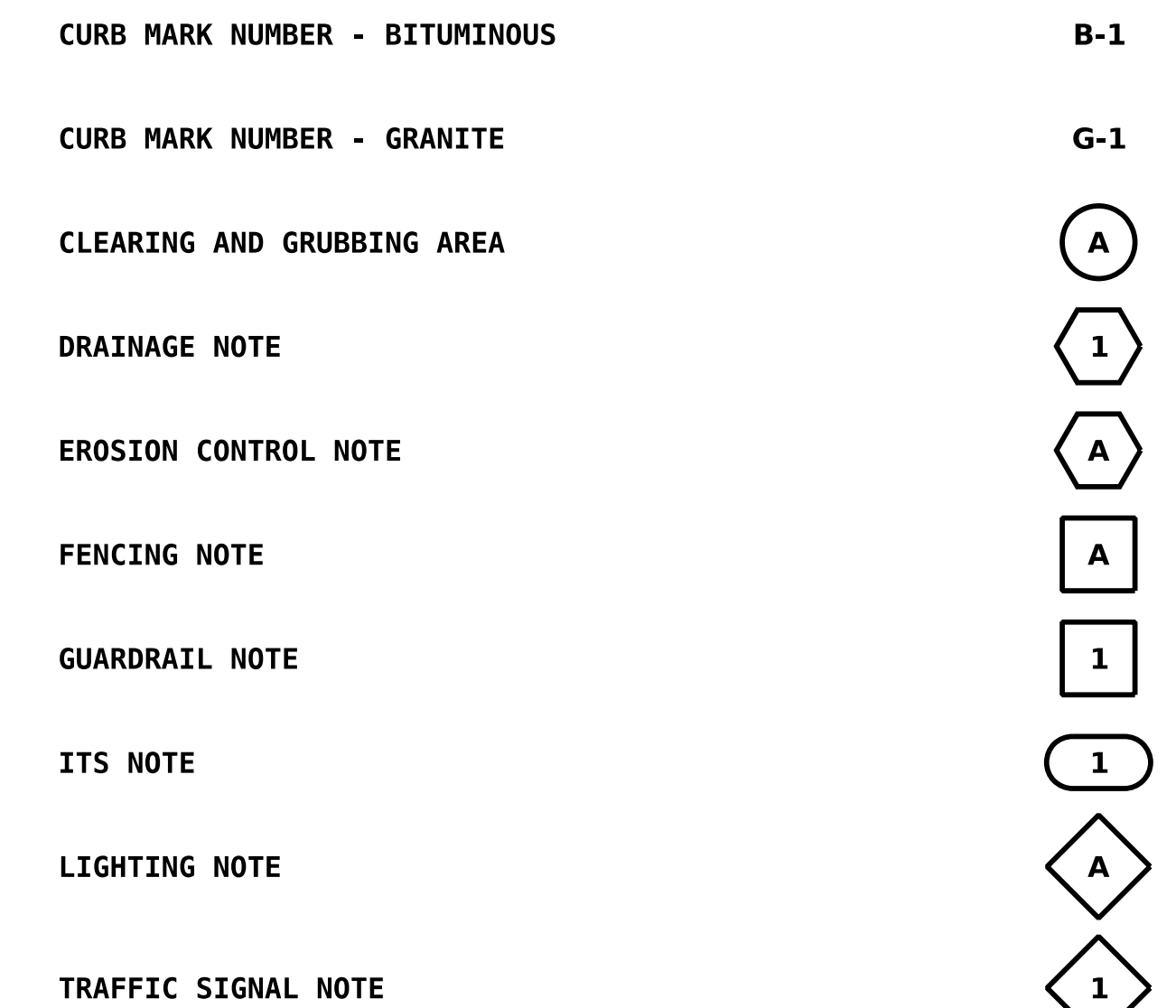
UTILITIES



TRAFFIC SIGNALS / ITS

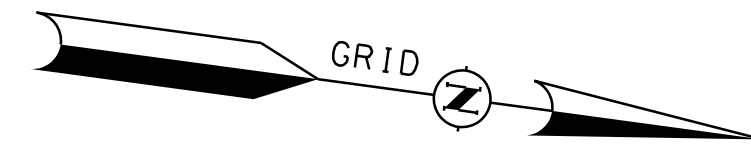
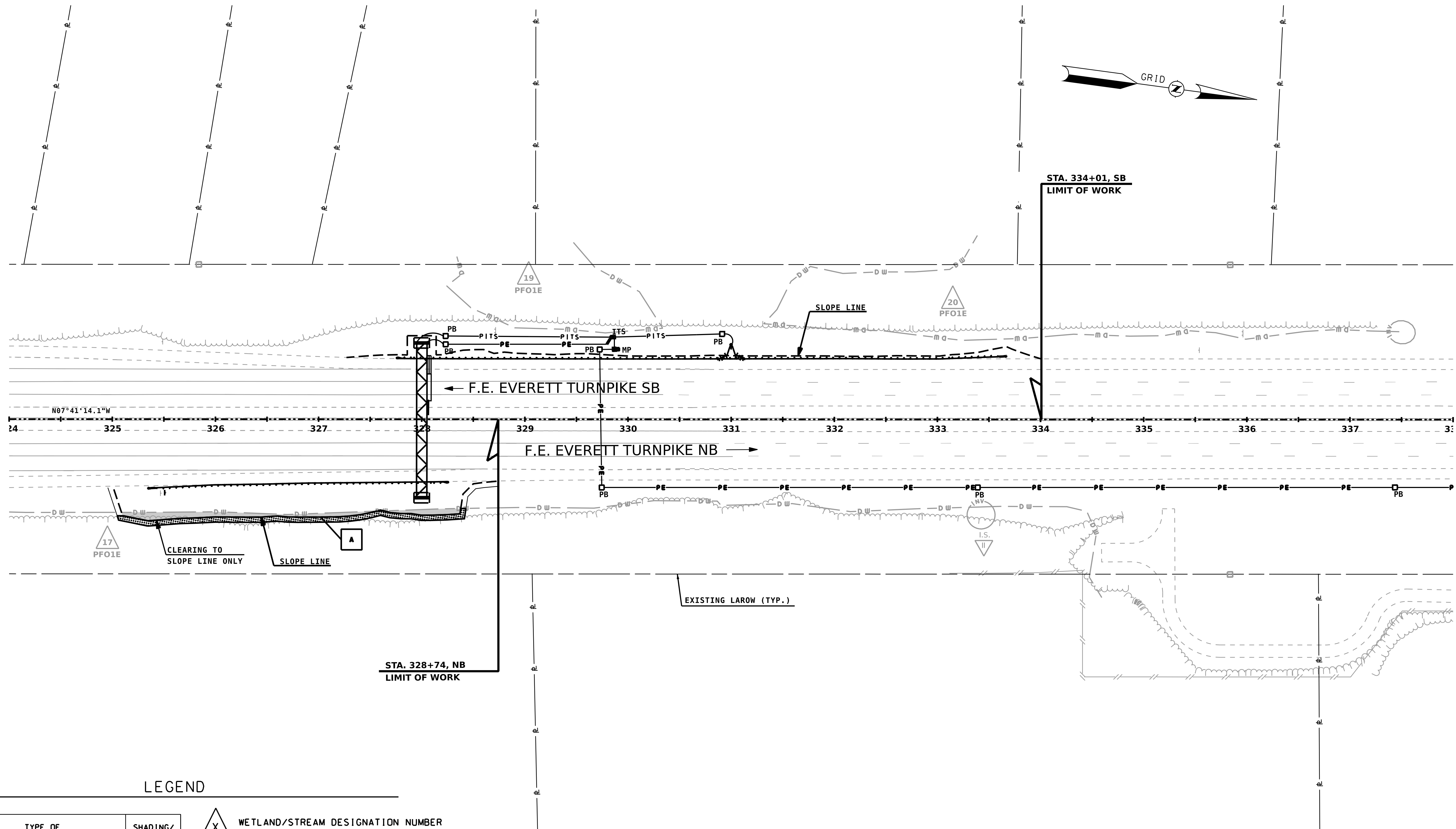


CONSTRUCTION NOTES



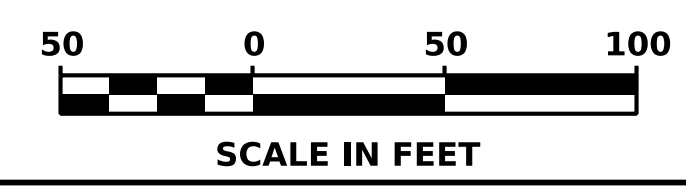
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BEDFORD				
DEPARTMENT OF TRANSPORTATION		BUREAU OF HIGHWAY DESIGN		
STANDARD SYMBOLS				
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
07-31-2023	16100stdsyml-2	16100	3	16

SDR PROCESSED	DATE	03/24	REVISIONS AFTER PROPOSAL
NEW DESIGN	DATE	03/24	STATION
SHEET CHECKED	DATE	03/24	DESCRIPTION
AS BUILT DETAILS	DATE		



LEGEND

TYPE OF WETLAND IMPACT	SHADING/HATCHING	WETLAND/STREAM DESIGNATION NUMBER
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)		WETLAND IMPACT LOCATION
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS TEMPORARY IMPACTS		



STATE OF NEW HAMPSHIRE				
BEDFORD				
DEPARTMENT OF TRANSPORTATION		BUREAU OF HIGHWAY DESIGN		
WETLAND IMPACT PLAN				
MODEL	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Wet_01	16100-WetPlans	16100	5	16

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 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 NHF&G

GUIDANCE ON SELECTING TEMPORARY SOIL STABILIZATION MEASURES
TABLE 1

APPLICATION AREAS	DRY MULCH METHODS				HYDRAULICALLY APPLIED MULCHES ²				ROLLED EROSION CONTROL BLANKETS ³			
	HMT	WC	SG	CB	HM	SMM	BFM	FRM	SNSB	DNSB	DNSCB	DNCB
SLOPES ¹												
STEEPER THAN 2:1	NO	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	YES
2:1 SLOPE	YES ¹	YES ¹	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 recommendation for time of year and steepness of slope.

STATE OF NEW HAMPSHIRE
BEDFORD

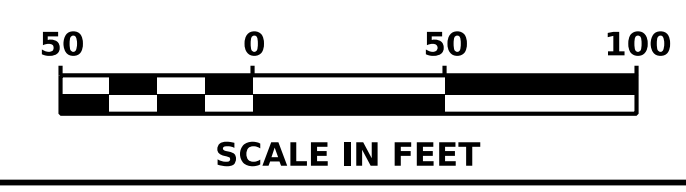
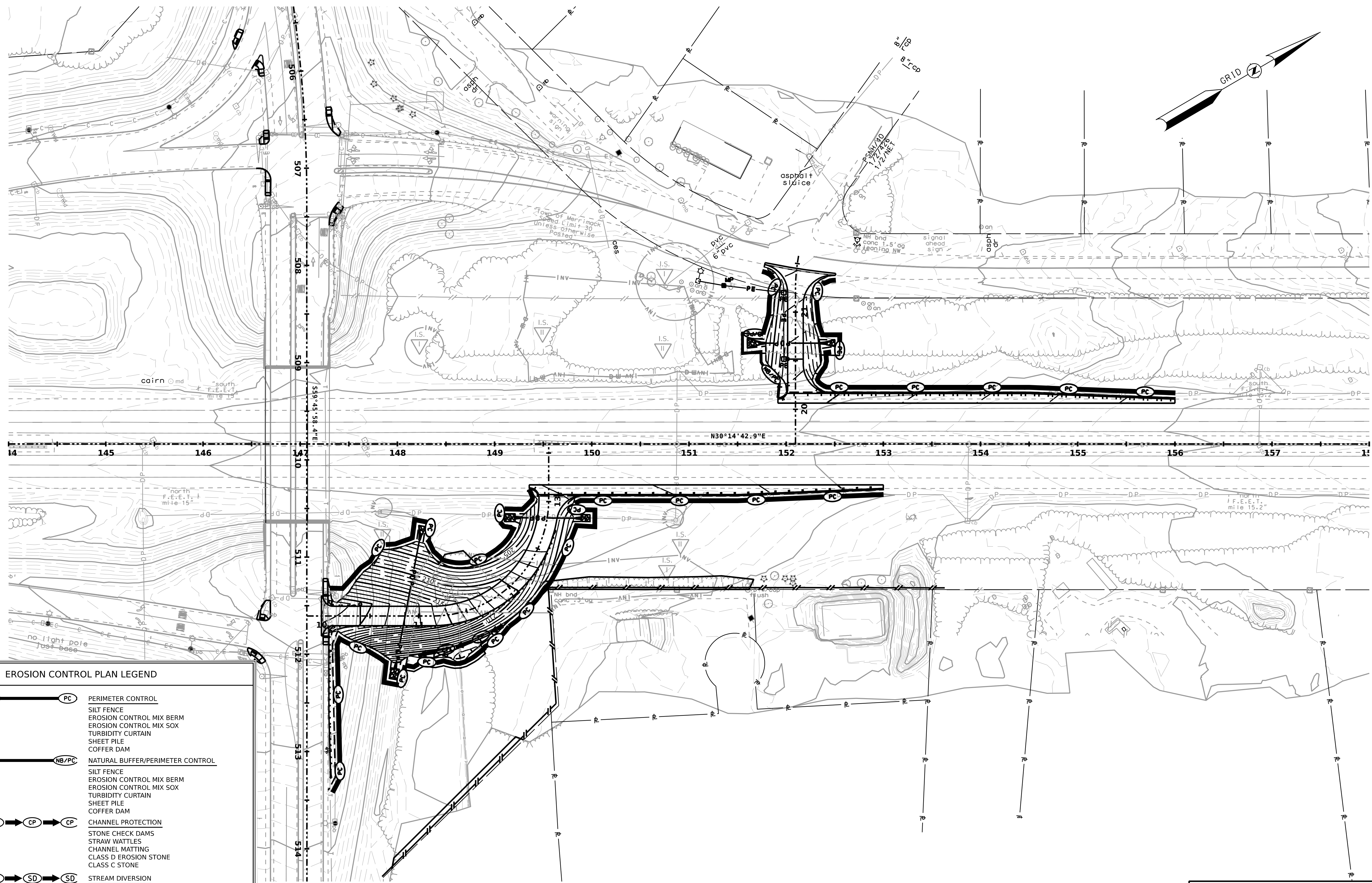
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

EROSION CONTROL STRATEGIES

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
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NEW DESIGN	DATE	03/24	STATION
SHEET CHECKED	DATE	03/24	STATION
AS BUILT DETAILS	DATE		STATION

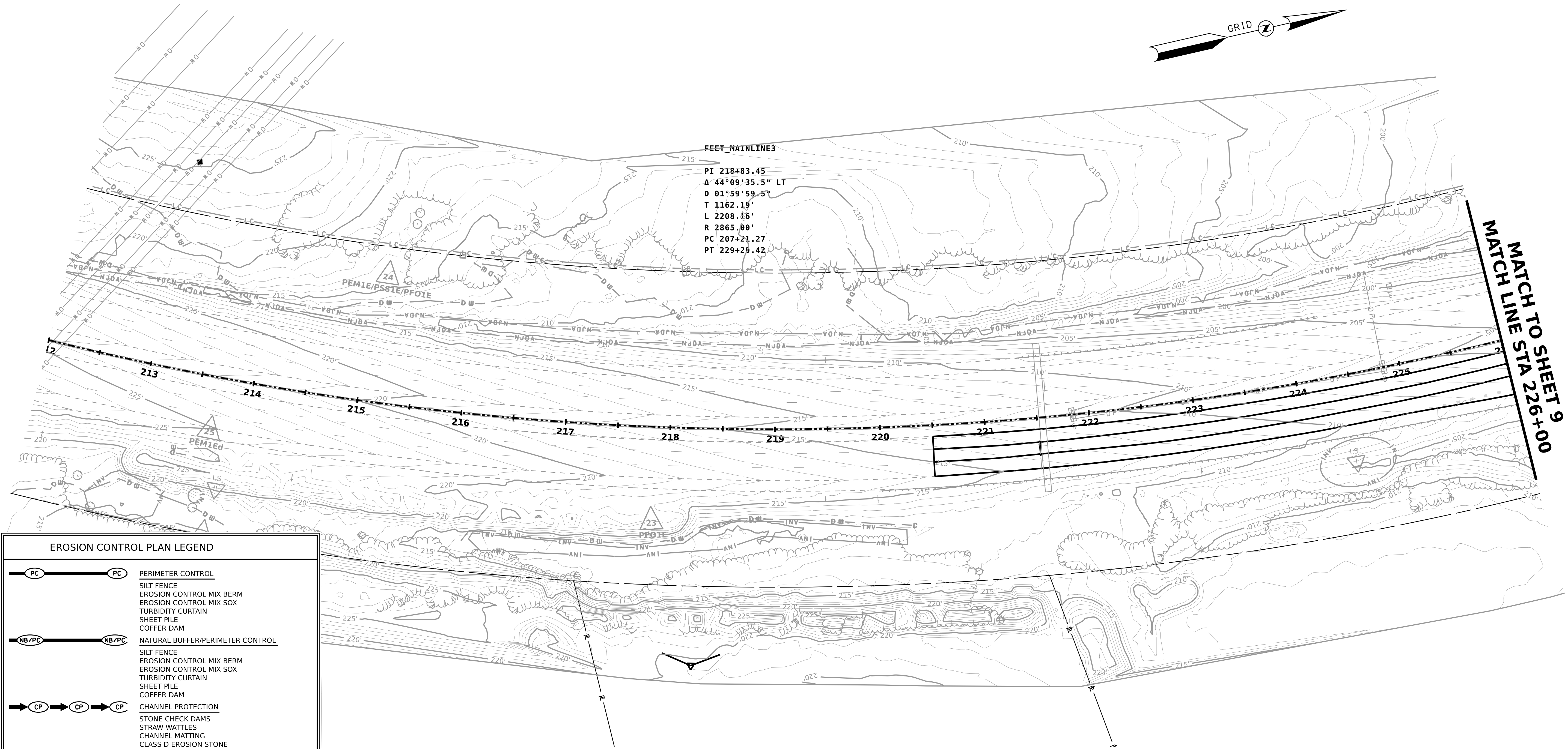
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	NATURAL BUFFER/PERIMETER CONTROL SILT FENCE EROSION CONTROL MIX BERM EROSION CONTROL MIX SOX TURBIDITY CURTAIN SHEET PILE COFFER DAM
	CHANNEL PROTECTION STONE CHECK DAMS STRAW WATTLES CHANNEL MATTING CLASS D EROSION STONE CLASS C STONE
	STREAM DIVERSION SEE ATTACHED PLAN FOR DETAILS
	UNIMPACTED RIVERINE SURFACE WATERS NO WORK AND/OR IMPACT
	ROUTINE ROADWAY QUALIFYING ACTIVITY USE SPECIFIED CONTROL MEASURE FROM MANUAL



HNTB

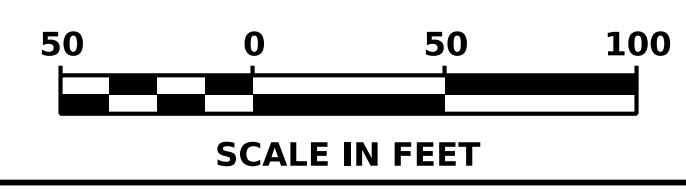
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DEPARTMENT OF TRANSPORTATION		BUREAU OF HIGHWAY DESIGN		
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SDR PROCESSED	DATE	DATE	DATE	DATE	AS BUILT DETAILS
NEW DESIGN	HNTB DESIGN TEAM	R. HANF			
SHEET CHECKED	DATE	03/24	DATE	03/24	
REVISIONS AFTER PROPOSAL	STATION		STATION		DESCRIPTION



FEET MAINLINES
 PI 218+83.45
 Δ 44°09'35.5" LT
 D 01°59'59.5"
 T 1162.19'
 L 2208.16'
 R 2865.00'
 PC 207+21.27
 PT 229+29.42

EROSION CONTROL PLAN LEGEND	
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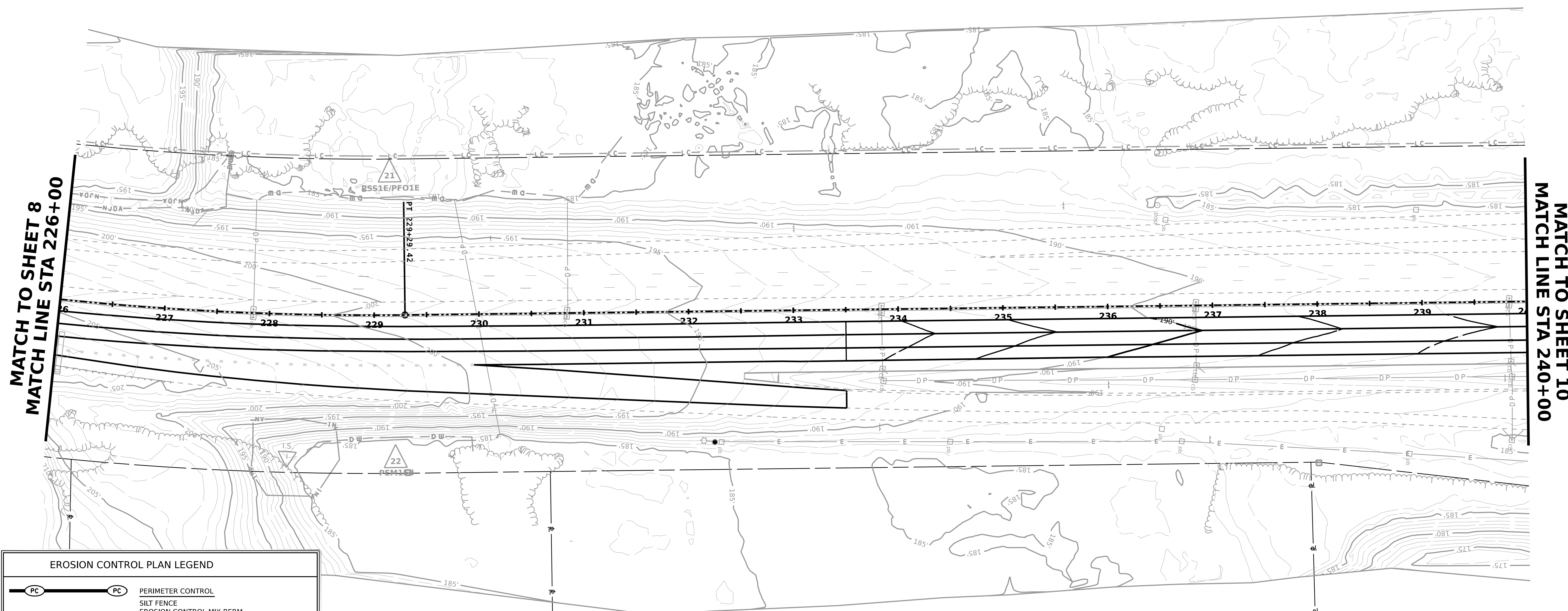
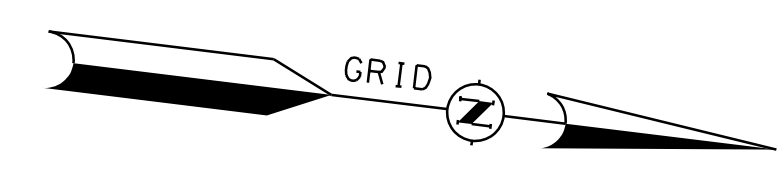


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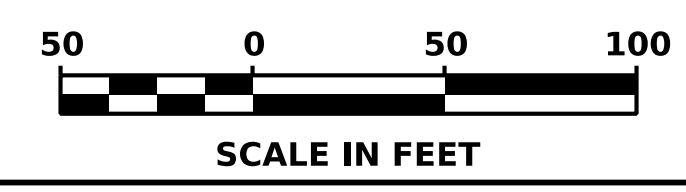
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MATCH LINE STA 226+00

SDR PROCESSED	DATE	03/24	REVISIONS AFTER PROPOSAL	STATION	DESCRIPTION
NEW DESIGN	DATE	03/24			
SHEET CHECKED	DATE	03/24			
AS BUILT DETAILS	DATE				



EROSION CONTROL PLAN LEGEND	
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STATE OF NEW HAMPSHIRE
BEDFORD
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

EROSION CONTROL PLANS

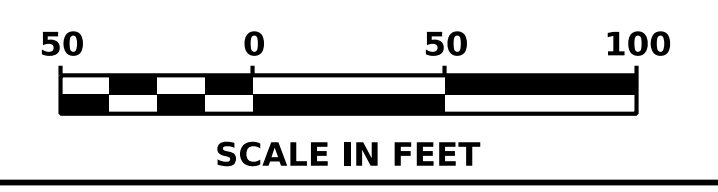
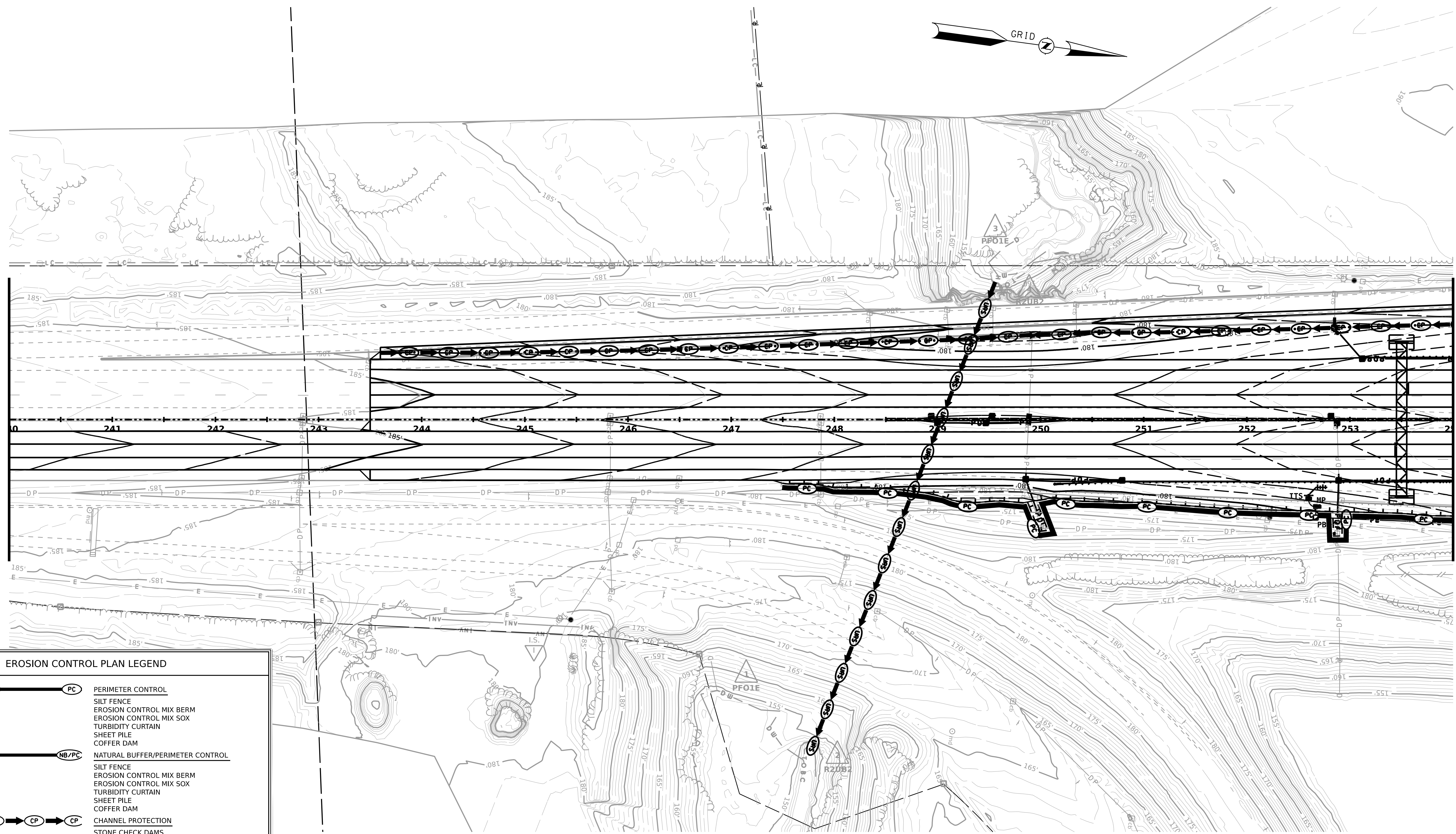
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NEW DESIGN	DATE	03/24		
SHEET CHECKED	DATE	03/24		
AS BUILT DETAILS	DATE			

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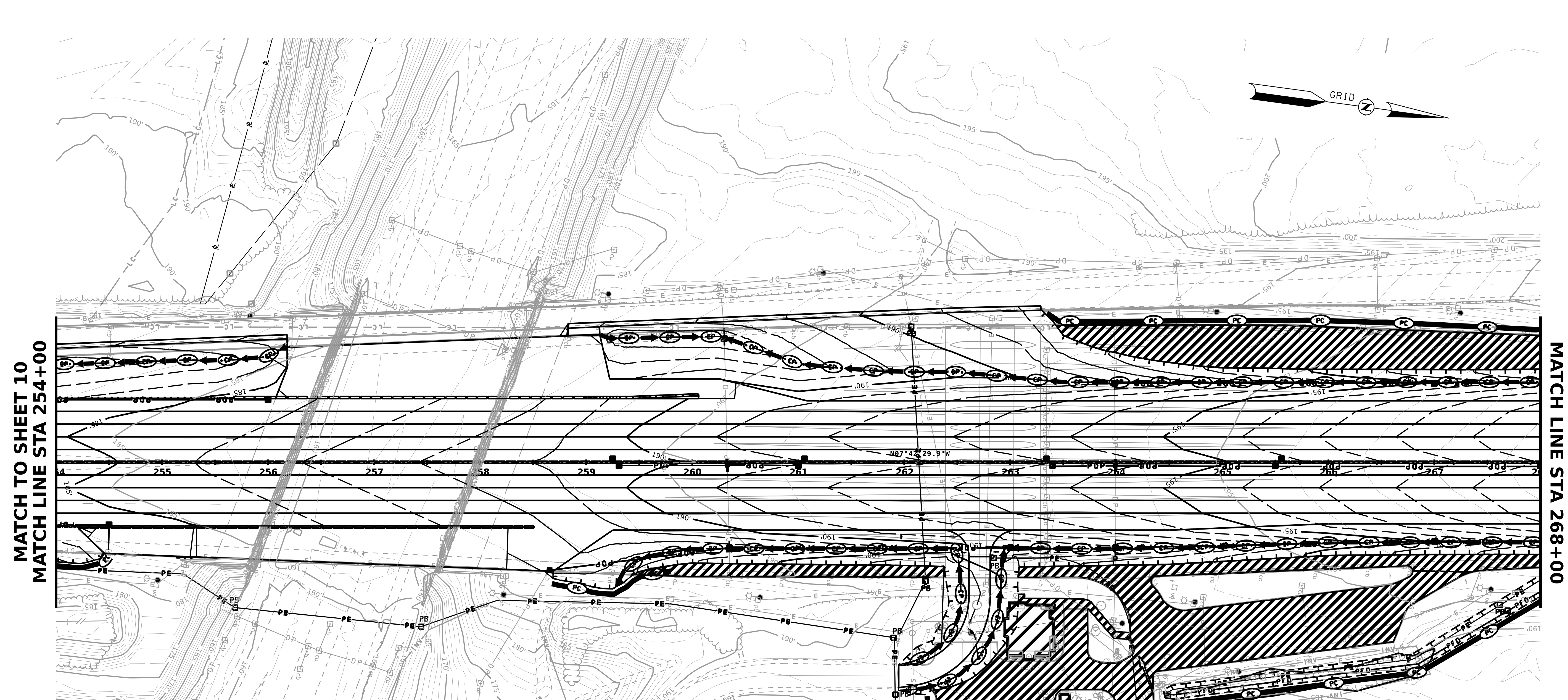
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STATE OF NEW HAMPSHIRE BEDFORD				
DEPARTMENT OF TRANSPORTATION		BUREAU OF HIGHWAY DESIGN		
EROSION CONTROL PLANS				
MODEL	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
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SDR PROCESSED	DATE	03/24	REVISIONS AFTER PROPOSAL	STATION	
NEW DESIGN	DATE	03/24			
SHEET CHECKED	DATE	03/24			
AS BUILT DETAILS	DATE				



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MATCH LINE STA 268+00

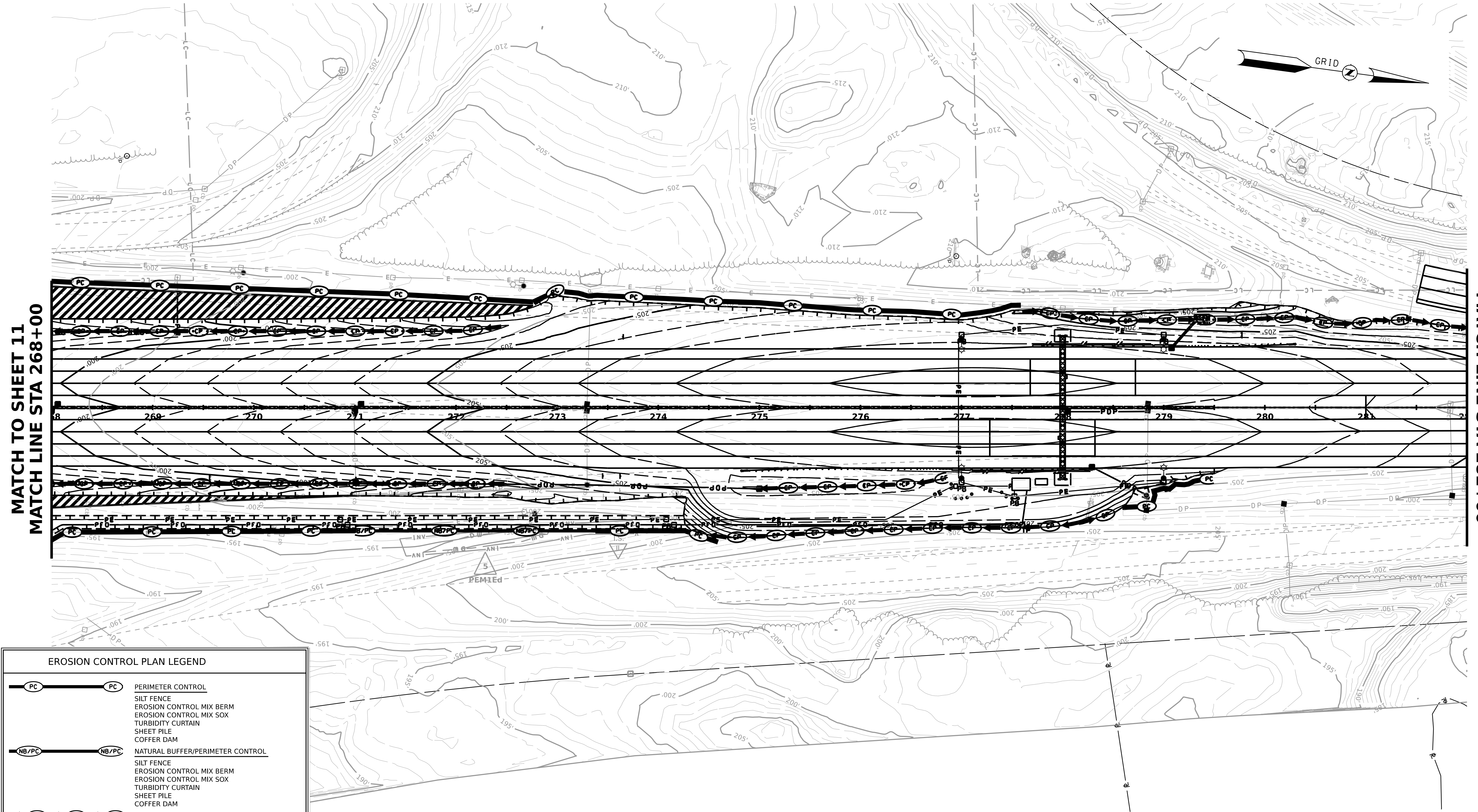
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	STREAM DIVERSION
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	ROUTINE ROADWAY QUALIFYING ACTIVITY



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STATE OF NEW HAMPSHIRE BEDFORD				
DEPARTMENT OF TRANSPORTATION		BUREAU OF HIGHWAY DESIGN		
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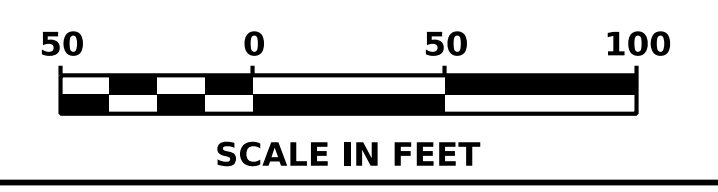
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SHEET CHECKED	DATE	03/24			
AS BUILT DETAILS	DATE				



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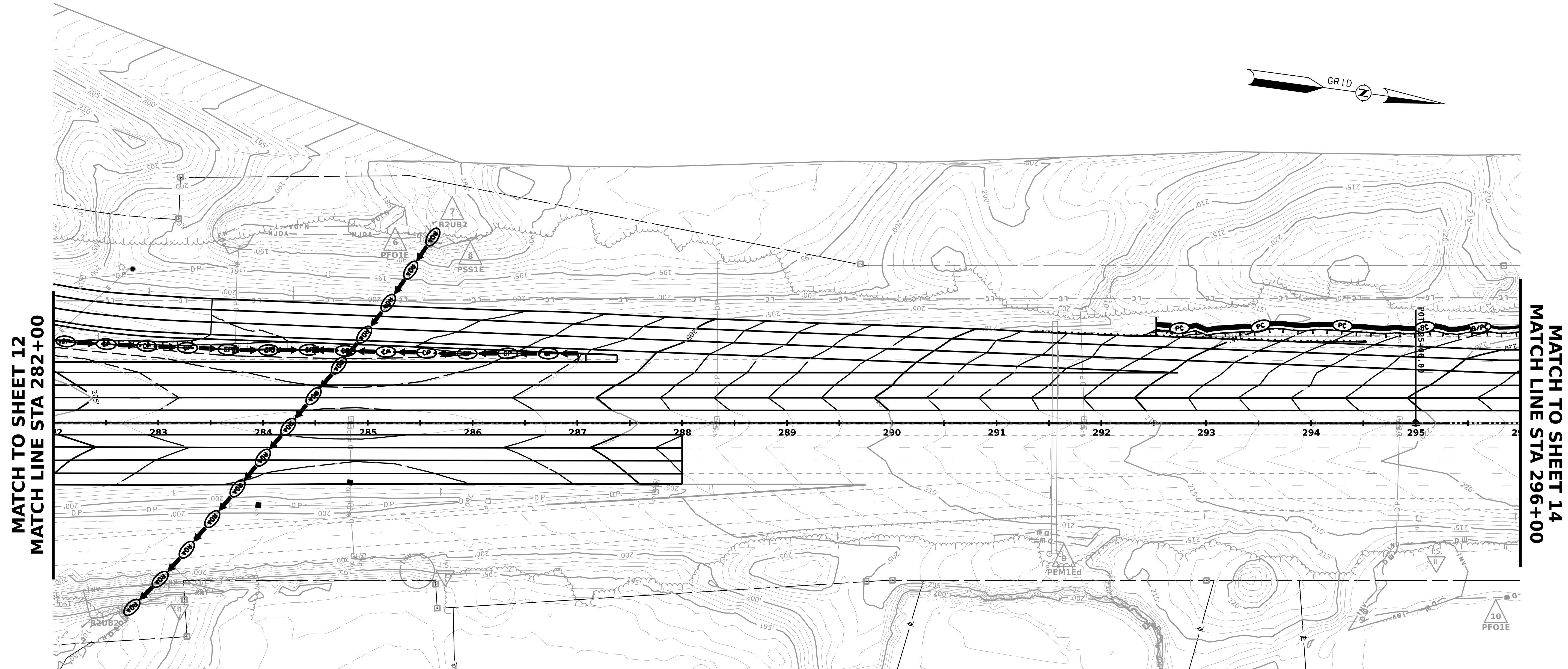
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	ROUTINE ROADWAY QUALIFYING ACTIVITY USE SPECIFIED CONTROL MEASURE FROM MANUAL



STATE OF NEW HAMPSHIRE BEDFORD				
DEPARTMENT OF TRANSPORTATION		BUREAU OF HIGHWAY DESIGN		
EROSION CONTROL PLANS				
MODEL	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
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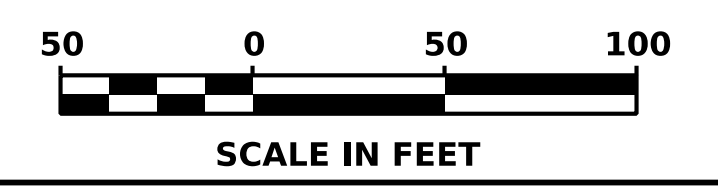
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SHEET CHECKED	DATE	03/24			
AS BUILT DETAILS	DATE				



MATCH TO SHEET 12
MATCH LINE STA 282+00

MATCH TO SHEET 14
MATCH LINE STA 296+00

EROSION CONTROL PLAN LEGEND	
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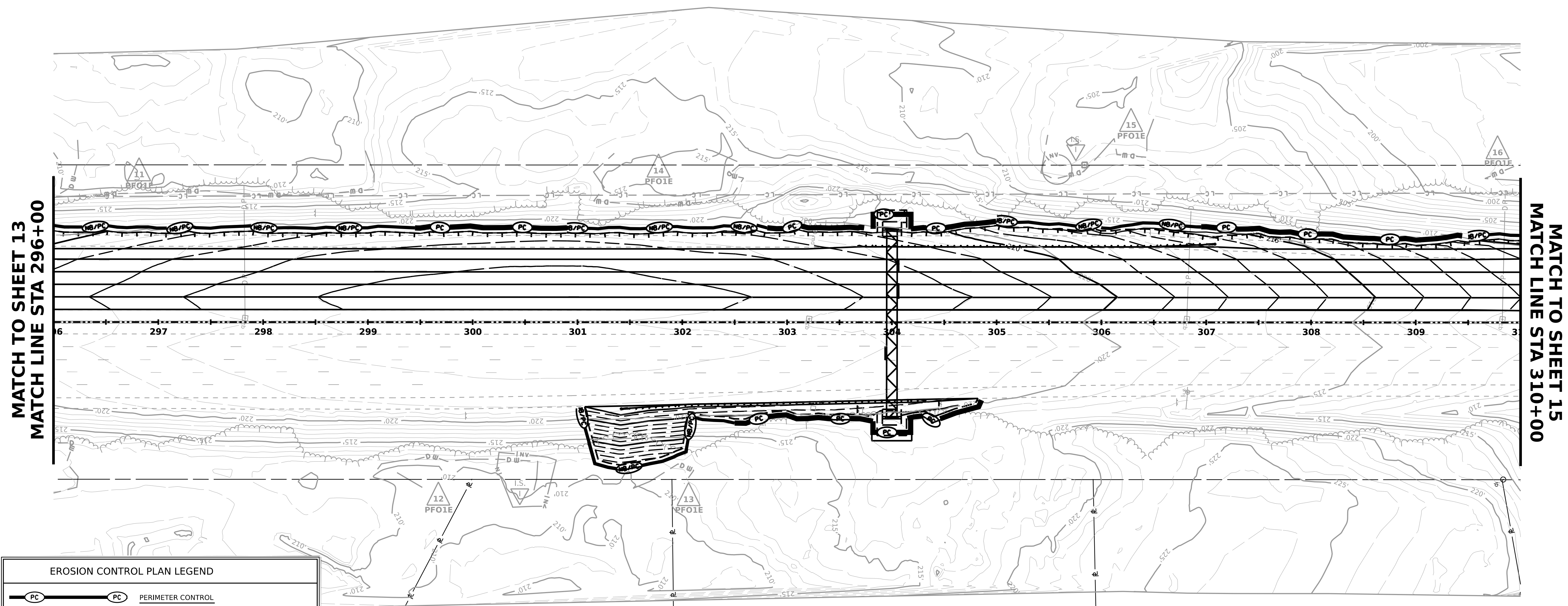
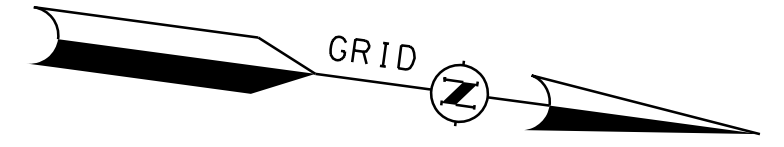
HNTB

STATE OF NEW HAMPSHIRE
BEDFORD
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

EROSION CONTROL PLANS

MODEL	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
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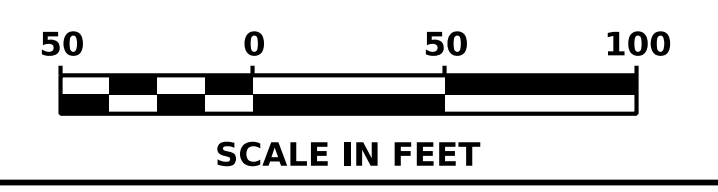
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NEW DESIGN	DATE	03/24			
SHEET CHECKED	DATE	03/24			
AS BUILT DETAILS	DATE				



MATCH TO SHEET 13
MATCH LINE STA 296+00

MATCH TO SHEET 15
MATCH LINE STA 310+00

EROSION CONTROL PLAN LEGEND	
	PERIMETER CONTROL
	NATURAL BUFFER/PERIMETER CONTROL
	CHANNEL PROTECTION
	STREAM DIVERSION
	UNIMPACTED RIVERINE SURFACE WATERS
	ROUTINE ROADWAY QUALIFYING ACTIVITY

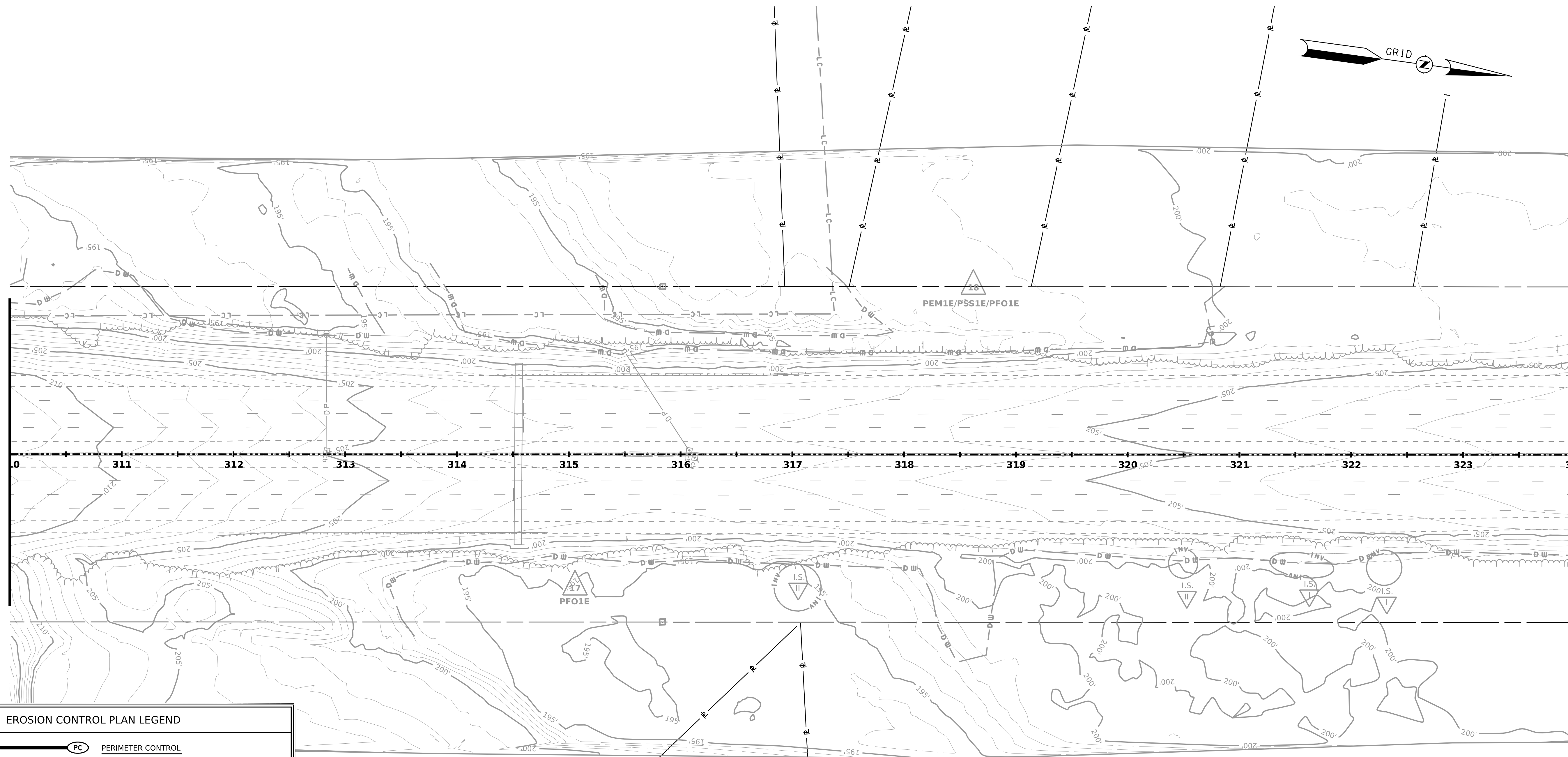


STATE OF NEW HAMPSHIRE BEDFORD				
DEPARTMENT OF TRANSPORTATION		BUREAU OF HIGHWAY DESIGN		
EROSION CONTROL PLANS				
MODEL	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Ero_08	16100-EroPlans	16100	14	16

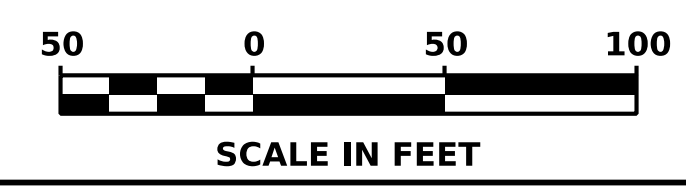
SDR PROCESSED	DATE	DATE	DATE	DATE	DATE
NEW DESIGN	HNTB DESIGN TEAM	R. HANF			
SHEET CHECKED					
AS BUILT DETAILS					
REVISIONS AFTER PROPOSAL	STATION	STATION	DATE	NUMBER	DESCRIPTION

MATCH TO SHEET 14
MATCH LINE STA 310+00

MATCH TO SHEET 16
MATCH LINE STA 324+00



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
	CHANNEL PROTECTION STONE CHECK DAMS STRAW WATTLES CHANNEL MATTING CLASS D EROSION STONE CLASS C STONE
	STREAM DIVERSION SEE ATTACHED PLAN FOR DETAILS
	UNIMPACTED RIVERINE SURFACE WATERS NO WORK AND/OR IMPACT
	ROUTINE ROADWAY QUALIFYING ACTIVITY USE SPECIFIED CONTROL MEASURE FROM MANUAL

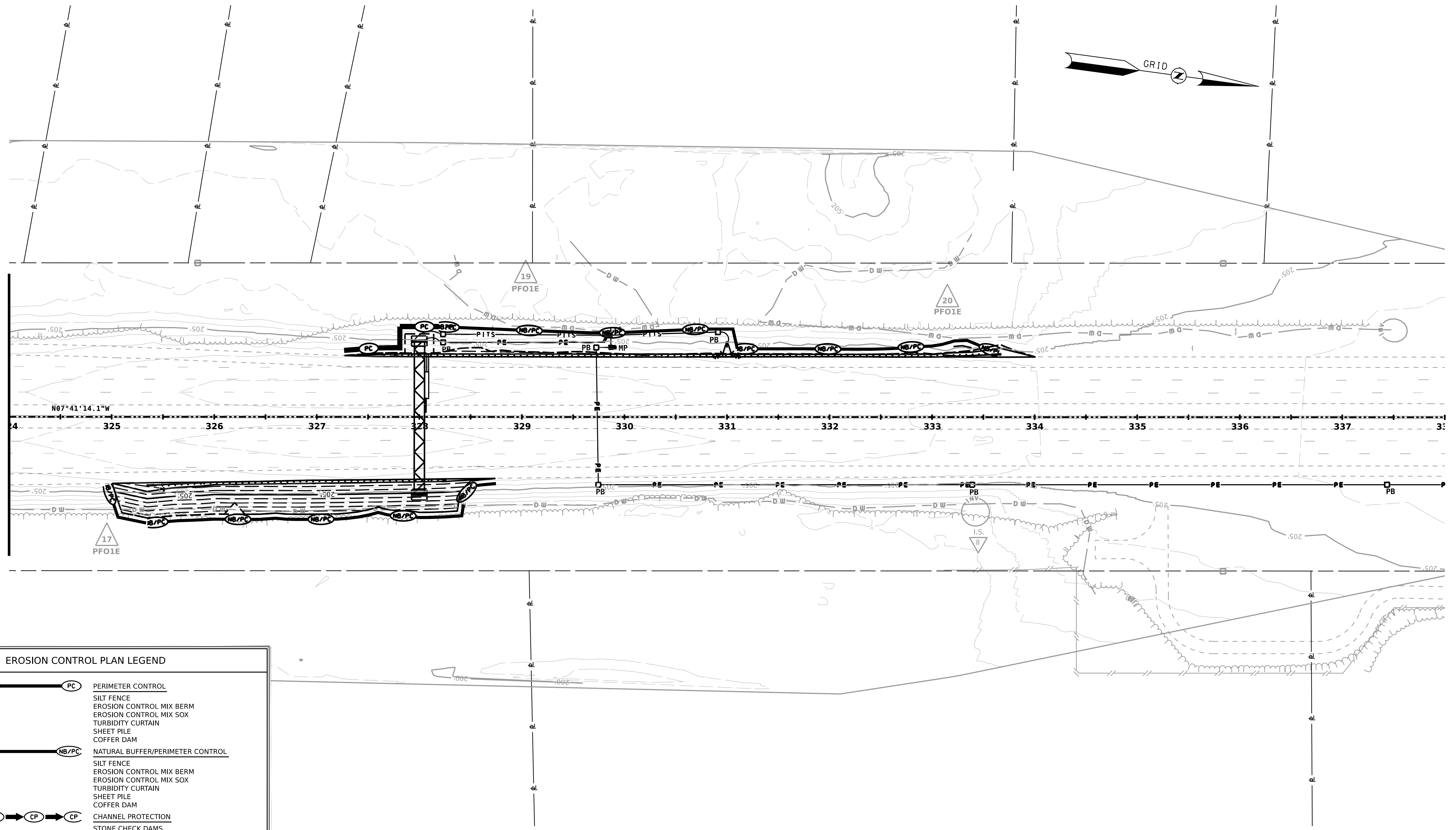


HNTB

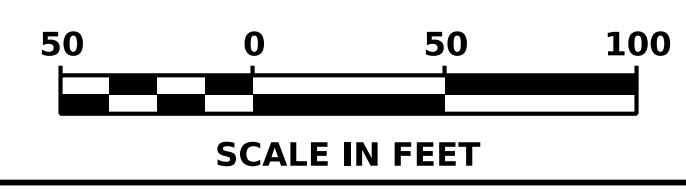
STATE OF NEW HAMPSHIRE BEDFORD				
DEPARTMENT OF TRANSPORTATION		BUREAU OF HIGHWAY DESIGN		
EROSION CONTROL PLANS				
MODEL	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Ero_09	16100-EroPlans	16100	15	16

SDR PROCESSED	DATE	03/24	REVISIONS AFTER PROPOSAL
NEW DESIGN	DATE	03/24	STATION
SHEET CHECKED	DATE	03/24	DESCRIPTION
AS BUILT DETAILS	DATE		

MATCH TO SHEET 15
MATCH LINE STA 324+00



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
	CHANNEL PROTECTION STONE CHECK DAMS STRAW WATTLES CHANNEL MATTING CLASS D EROSION STONE CLASS C STONE
	STREAM DIVERSION SEE ATTACHED PLAN FOR DETAILS
	UNIMPACTED RIVERINE SURFACE WATERS NO WORK AND/OR IMPACT
	ROUTINE ROADWAY QUALIFYING ACTIVITY USE SPECIFIED CONTROL MEASURE FROM MANUAL



HNTB

STATE OF NEW HAMPSHIRE
BEDFORD
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

EROSION CONTROL PLANS

MODEL	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
Ero_10	16100-EroPlans	16100	16	16