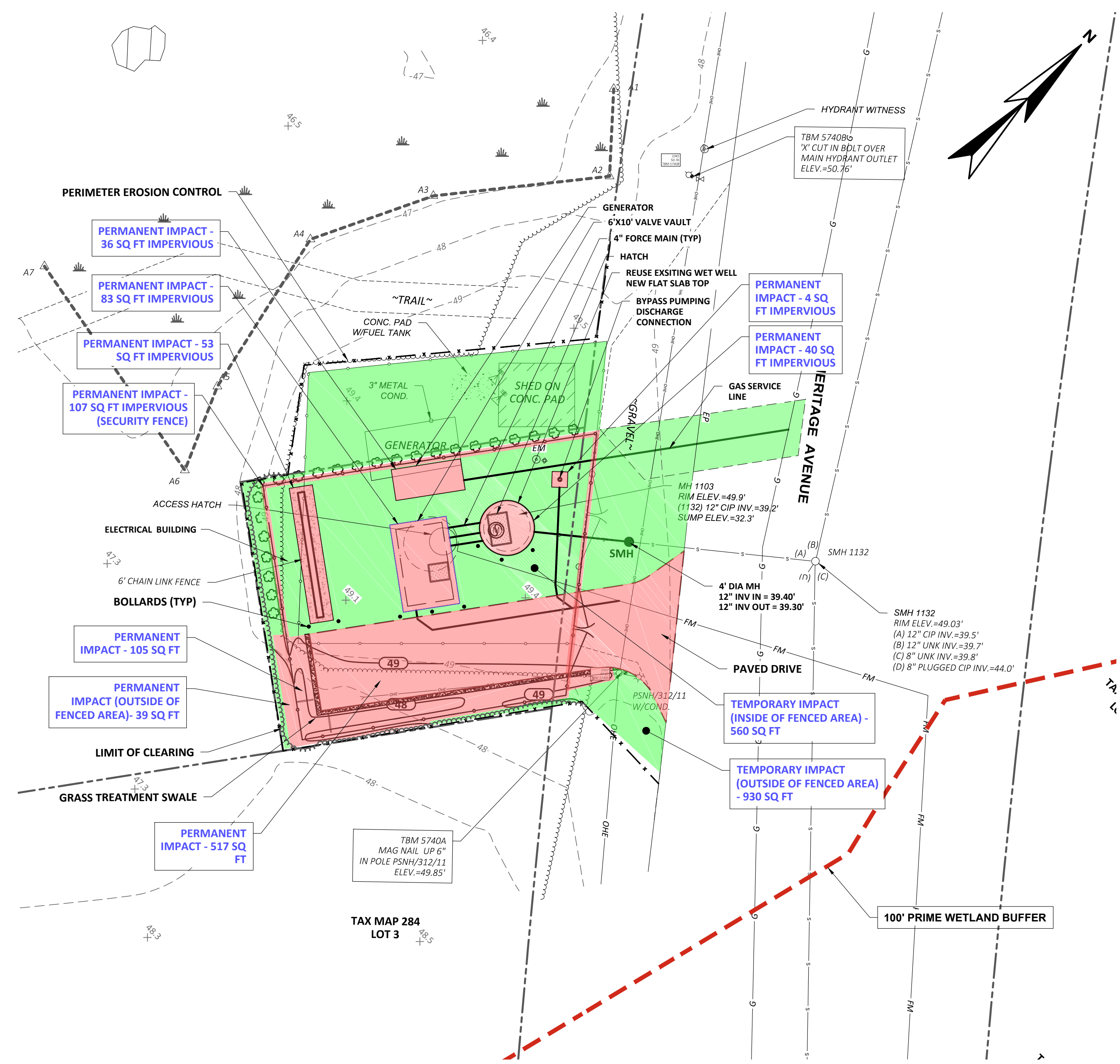


Heritage Avenue Pump Station Narrative

The City of Portsmouth, NH (City) owns, operates, and maintains the Heritage Avenue Pump Station, which is one of several City operated stations that are critical to the collection and treatment of the City's wastewater. The station is located on a fenced 1,300 square foot property on Heritage Avenue in Portsmouth. Heritage Avenue Pump Station was constructed in 1976 and is a "can" style station with constant speed pumps and piping located in a below grade steel structure adjacent to a separate, precast concrete 6-ft diameter wet well. Also located on the site are an above ground emergency generator within a fiberglass enclosure, diesel fuel tank, and pad-mounted 8-foot by 10-foot shed housing electrical gear, operator display, and pump controls.

The Heritage Avenue Pump Station and its equipment have reached the end of their useful life and warrant replacement. The City is planning to replace the Heritage Avenue Pump Station to improve pump station reliability, accessibility, and safety with the conversion from a dry pit to a submersible station. In addition, the project will demolish the existing diesel emergency generator with a new natural gas driven emergency generator at the City's request.

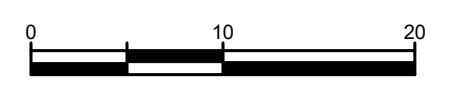
The proposed project includes 1,490 sq. ft. of temporary impacts to the 100 ft. Prime Wetland Buffer for demolition of the existing pump station, construction access, and trench pipe installation. An additional 984 sq. ft. of permanent impacts to the 100 ft. Prime Wetland Buffer for the construction of the electrical control cabinet, generator, wet well, valve vault, gravel drive, and perimeter fencing. No direct wetland impacts are proposed as a result of this project. A grass treatment swale and check dams are proposed to collect, treat, and convey stormwater. Temporary impact areas outside of the new fence will be restored using a native wetland seed mix. Additionally, native shrub plantings are proposed to between the new pump station and wetlands.



WETLANDS IMPACT FIGURE
SCALE: 1"=10'

LEGEND:

TEMPORARY PRIME WETLAND BUFFER IMPACT AREA	
PERMANENT PRIME WETLAND BUFFER IMPACT AREA	
PERIMETER EROSION CONTROL	
EDGE OF WETLANDS	
100' PRIME WETLAND BUFFER	



NOTES:

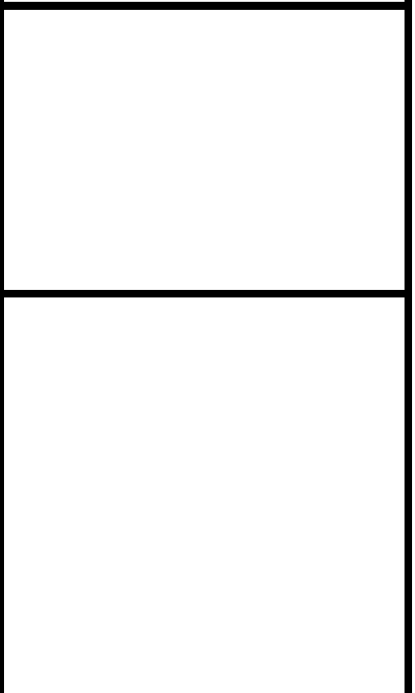
TEMPORARY IMPACTS TO WETLAND BUFFER: 1490 SQ FT
 PERMANENT IMPACTS TO WETLAND BUFFER: 984 SQ FT
 IMPERVIOUS AREA REMOVED: 220 SQ FT
 PROPOSED IMPERVIOUS AREA : 743 SF

JURISDICTIONAL WETLANDS DEPICTED WERE DELINEATED ON AUGUST 9, 2019 BY MARC JACOBS, NH, CERTIFIED WETLANDS SCIENTIST NUMBER 90. A DELINEATION REPORT IS ATTACHED FOR REFERENCE. SURVEY OF THE PROJECT AREA WAS COMPLETED BY DOUCET SURVEY INC.

- HORIZONTAL DATUM: NEW HAMPSHIRE STATE NAD 83
- VERTICAL DATUM: APPROXIMATE NAVD88 (GEOID12A)(±.2')
- UNITS: US SURVEY FEET
- FOR NOTES, LEGEND AND ABBREVIATIONS REFER TO DRAWING C-1.
- FORCE MAIN LOCATION BASED ON CITY'S GIS. LOCATION TO BE CONFIRMED VIA TEST PITS AS SHOWN.

NO	REVISIONS	APPD	DATE

PROJECT NO: 20105
 DESIGNED: CAD COORD: K.TURNER
 CAD: CHECKED: DATE:
 APPROVED: DATE:
 SUBMISSION: DATE:



WRIGHT-PIERCE
 603.430.3728 | www.wright-pierce.com
 230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

CITY OF PORTSMOUTH, NEW HAMPSHIRE
 HERITAGE AVENUE PUMP STATION
 REPLACEMENT

WETLANDS IMPACT FIGURE

EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE NEW HAMPSHIRE STORMWATER MANUAL BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, TERRAIN ALTERATION BUREAU, DATED DECEMBER 2008

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES REQUIRED ARE SHOWN ON THE DRAWINGS. PROVIDE SILT FENCE, STONE CHECK DAMS AND OTHER EROSION CONTROL MEASURES AS REQUIRED TO ADEQUATELY PREVENT SEDIMENT TRANSPORT AS NOTED IN THE BMP.

ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL AND THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, ENV-WQ 1500: ALTERATION OF TERRAIN, DECEMBER 2008

- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION, IN NO CASE AT MORE THAN 5 ACRES AT A TIME, WILL BE MAINTAINED IN AN UNTREATED OR UN-VEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
- TEMPORARY STORAGE OF STOCKPILED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION.
- EROSION CONTROL MEASURES SUCH AS SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) AND OUTLET PROTECTION (WHERE APPLICABLE) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OR EARTH MOVING OPERATIONS OF UPGRADIENT DRAINAGE AREAS.
- FUGITIVE DUST MUST BE CONTROLLED IN ACCORDANCE WITH NEW HAMPSHIRE STANDARDS.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE THIRD THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED AND/OR WILL NOT ERODE UNDER THE CONDITIONS OF A 10-YEAR STORM. STABILIZATION SHALL BE DEFINED AS ONE OF THE FOLLOWING:
 - 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 MATERIALS SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL NOT BE STEEPER THAN THREE HORIZONTAL TO ONE VERTICAL (3 TO 1) UNLESS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES. IF MOWING IS TO OCCUR, MAXIMUM SLOPE ANGLE SHALL BE THREE HORIZONTAL TO ONE VERTICAL (3 TO 1), ON SLOPES FOUR HORIZONTAL TO ONE VERTICAL (4 TO 1), FINAL PREPARATION SHOULD INCLUDE SURFACE ROUGHING.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND RE-GRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER. AT NO TIME SHALL THE INTEGRITY OF THE EROSION CONTROL FENCE BE IN DANGER DUE TO BUILD UP OF SEDIMENT.
- RE-VEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND RE-VEGETATED.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 2 BALES (70-90 LBS) PER 1,000 SQUARE FEET OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE.
- DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- SEED MIX SELECTION AND APPLICATION RATES WILL BE CONSISTENT WITH THE FOLLOWING TABLES AS REFERENCED FROM MINNICK, E.L. AND H.T. MARSHALL, STORMWATER MANAGEMENT AND EROSION CONTROL FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE, ROCKINGHAM COUNTY CONSERVATION DISTRICT, AUGUST 1992, AND TABLES 4-1 THROUGH 4-3 OF SECTION 3 IN THE NEW HAMPSHIRE STORMWATER MANUAL. NOTE: REED CANARY GRASS SHALL NOT BE USED.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE WORK AREA IS STABILIZED.
- WETLANDS (EXCEPT THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
- IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.
- FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.

EROSION CONTROL DURING WINTER CONSTRUCTION

- WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH MAY 1
- WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREAS SHOULD BE LIMITED TO WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY PRECIPITATION EVENT.
- ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3

LIME AND FERTILIZER SCHEDULE

SEEDING TYPE	SEED DATES	LIME RATE (TONE/ACRE)	FERTILIZER RATE/RATIO (TYPE) (LBS/1,000 SQ. FT.)
PERMANENT AND/OR TEMPORARY	MAY. 1 - SEPT. 15	3	600/ENGINEER APPROVED (N-P205-K20)

- NOTES:
- USE LOW PHOSPHATE FERTILIZER AT ALL TIMES AND SLOW RELEASE NITROGEN FERTILIZER WHEN BETWEEN 25 AND 250 FEET OF A SURFACE WATER BODY.
 - NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25 FEET OF THE SURFACE WATER.
 - APPLY LIMESTONE AT 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE.

TEMPORARY VEGETATION (TABLE 4-1)

ADDITIONAL TEMPORARY SEED MIXTURE (FOR PERIODS LESS THAN 12 MONTHS)

DATES	SEED	RATE
PRIOR TO MAY 15	OATS	80 LBS/ACRE
AUG. 15 - SEP. 15	ANNUAL RYE GRASS	40 LBS/ACRE
AUG. 15 - SEP. 15	WINTER RYE GRASS	112 LBS/ACRE
APR. 1 - JUN. 1 (AUG. 15 - SEP. 15)	PERENNIAL RYE GRASS	40 LBS/ACRE

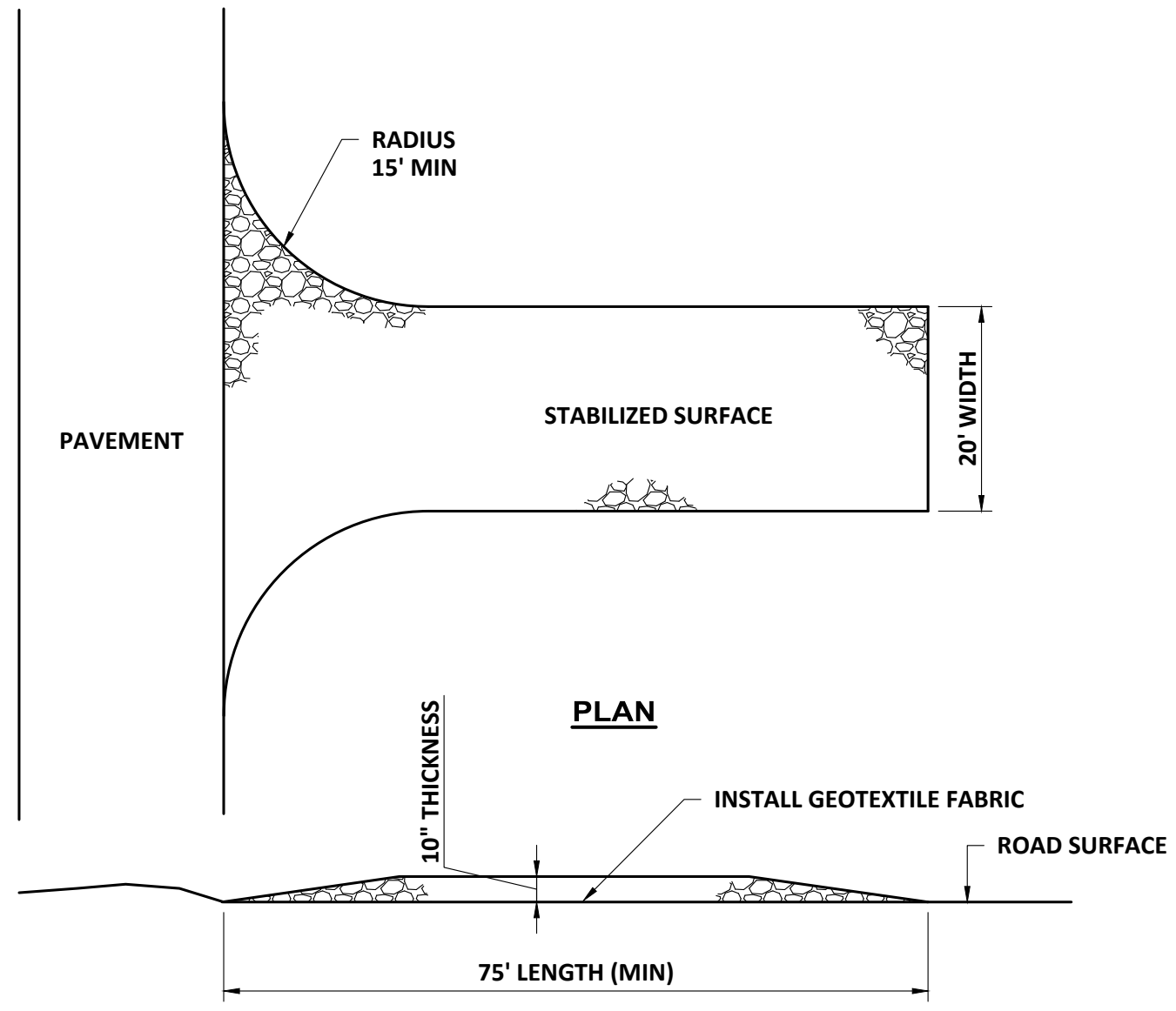
PERMANENT VEGETATION (TABLE 4-2)

USE	MIXTURE TABLES	SOIL DRAINAGE			
		I.	II.	III.	IV.
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXC.	GOOD
WATERWAYS, EMERGENCY SPILLWAYS AND OTHER CHANNELS WITH FLOWING WATER	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXC.	EXC.	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXC.	EXC.	FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF)	F	FAIR	EXC.	EXC.	
	G	FAIR	EXC.	EXC.	

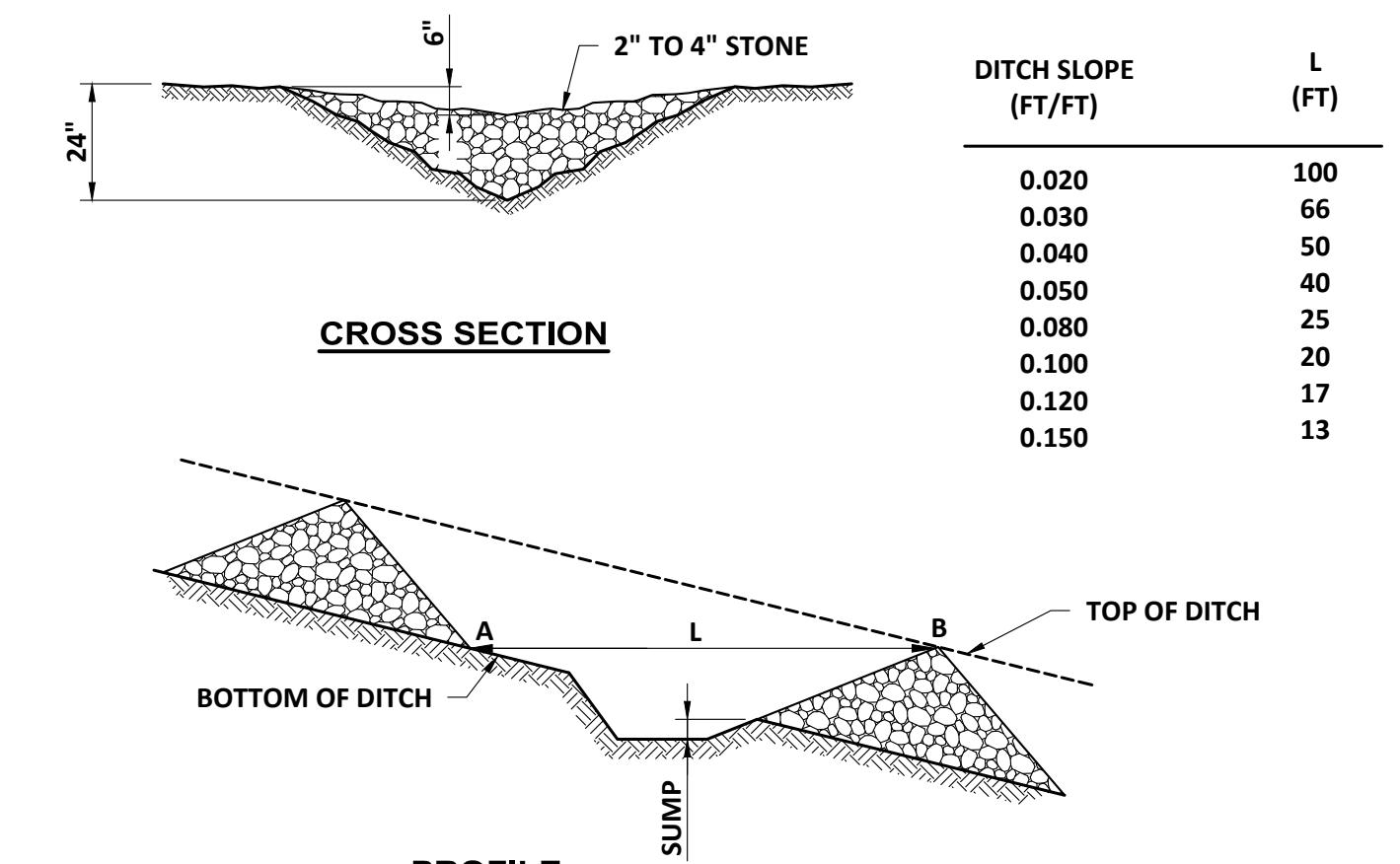
- NOTES:
- I. DROUGHTY
II. WELL DRAINED
III. MODERATELY WELL DRAINED
IV. POORLY DRAINED
 - EXC. = EXCELLENT
 - REFER TO TABLE 4-3 FOR SEED MIXTURE AND APPLICATION RATES

PERMANENT VEGETATION (TABLE 4-3)

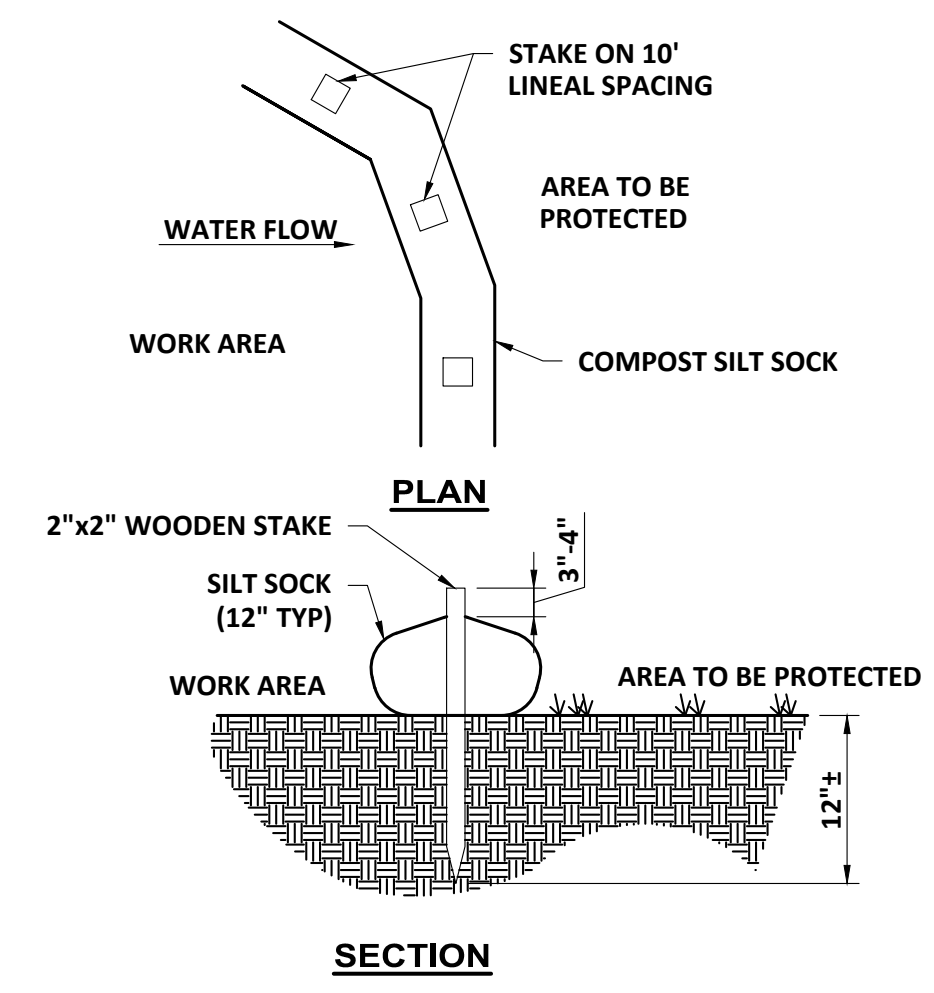
MIXTURE	SPECIES	RATE-POUNDS PER 1,000 SQ. FT. ACRE	
A	TALL FESCUE	20	0.45
	CREeping RED FESCUE	20	0.45
	REDTOP	2	0.05
	TOTAL	42	0.95
B	TALL FESCUE	15	0.35
	CREeping RED FESCUE	10	0.25
	CROWN VETCH/OR	15	0.35
	FLATPEA	30	0.75
	TOTAL	40 OR 55	0.95 OR 1.35
C	TALL FESCUE	20	0.45
	CREeping RED FESCUE	20	0.45
	BIRDSFOOT TREFOIL	8	0.2
	TOTAL	48	1.10
E	CREeping RED FESCUE	50	1.15
	KENTUCKY BLUEGRASS	50	1.15
	TOTAL	100	2.30
F	TALL FESCUE	150	3.60



STABILIZED CONSTRUCTION EXIT
SCALE: "NTS"

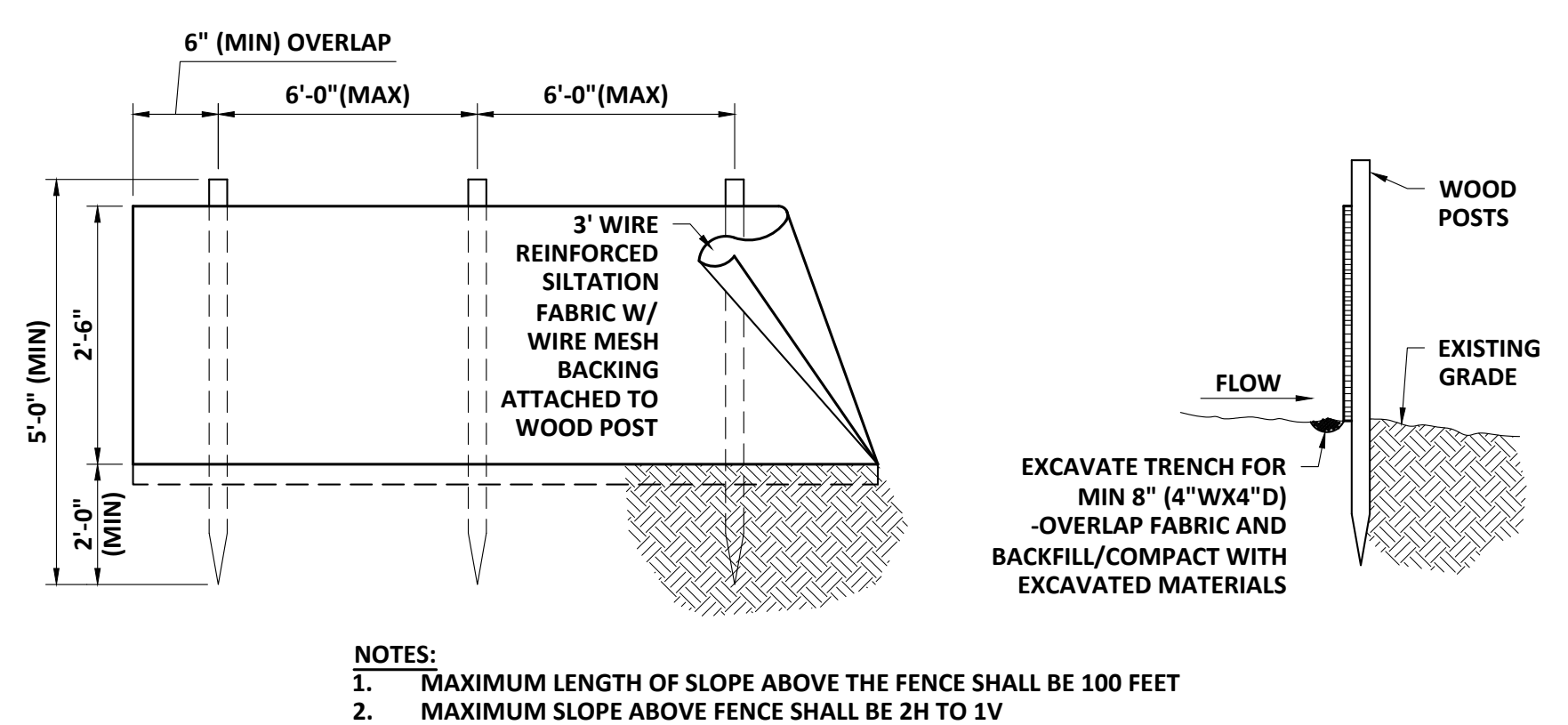


STONE CHECK DAM DETAIL
SCALE: "NTS"

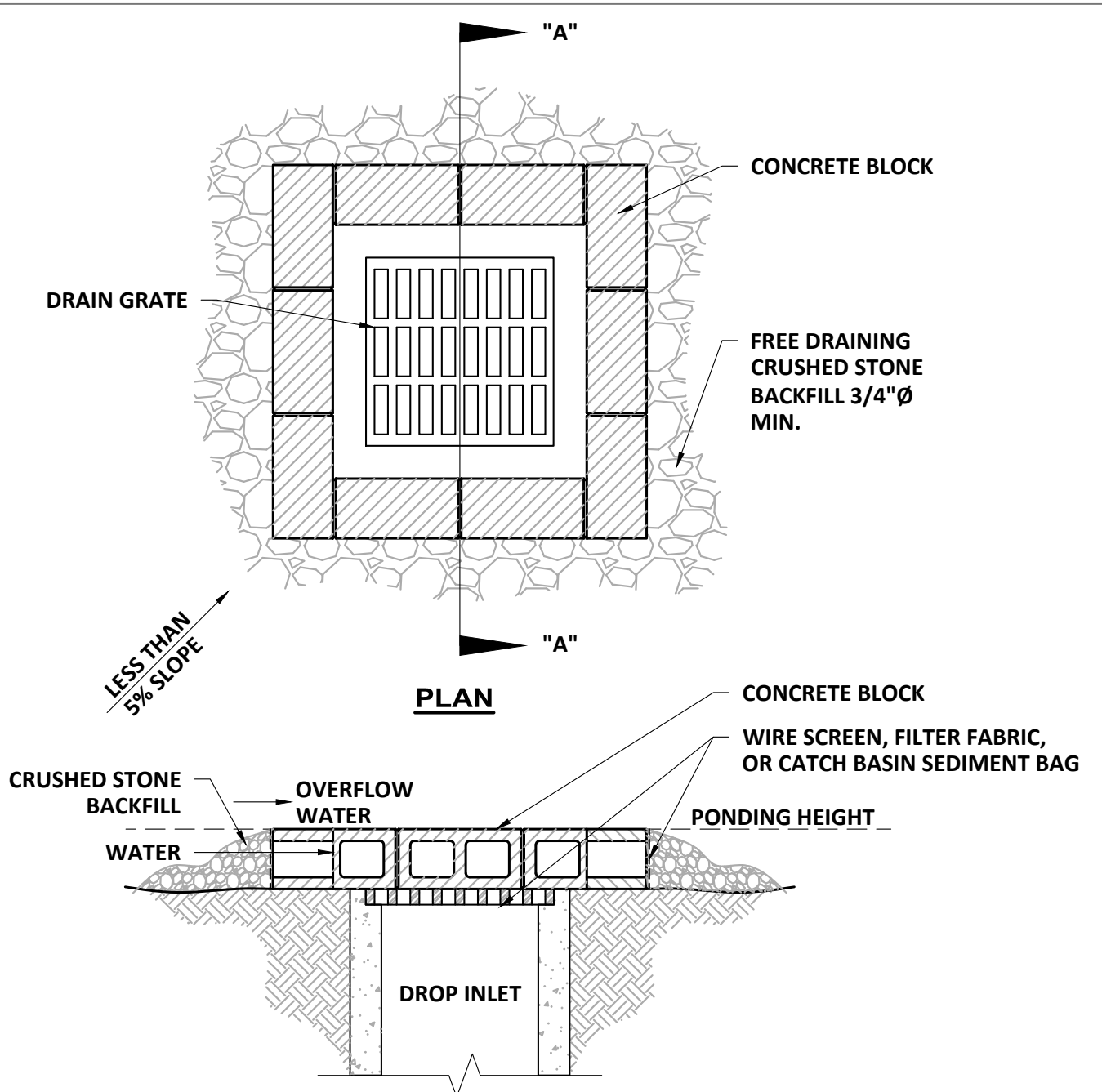


- NOTES:
- ALL MATERIAL TO MEET SPECIFICATIONS
 - SILT SOCK COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS
 - SILT SOCK DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER
 - COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

SILT SOCK INSTALLATION DETAIL
SCALE: "NTS"



SILT FENCE INSTALLATION DETAIL
SCALE: "NTS"



- NOTES:
- DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS (LESS THAN 3%).
 - EXCAVATE A BASIN OF SUFFICIENT SIZE ADJACENT TO THE DROP INLET.
 - THE TOP OF THE STRUCTURE, PONDING HEIGHT, MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
 - SILT BAGS MAY ALSO BE USED FOR CB GRATE INLET PROTECTION.

DROP INLET SEDIMENT BARRIER DETAIL
SCALE: "NTS"

NO	REVISIONS	APPD	DATE



PROJECT NO: 20105
 DESIGNED: CAD COORD: K.TURNER
 CAD: CHECKED: DATE: APPROVED: DATE: SUBMISSION: DATE:

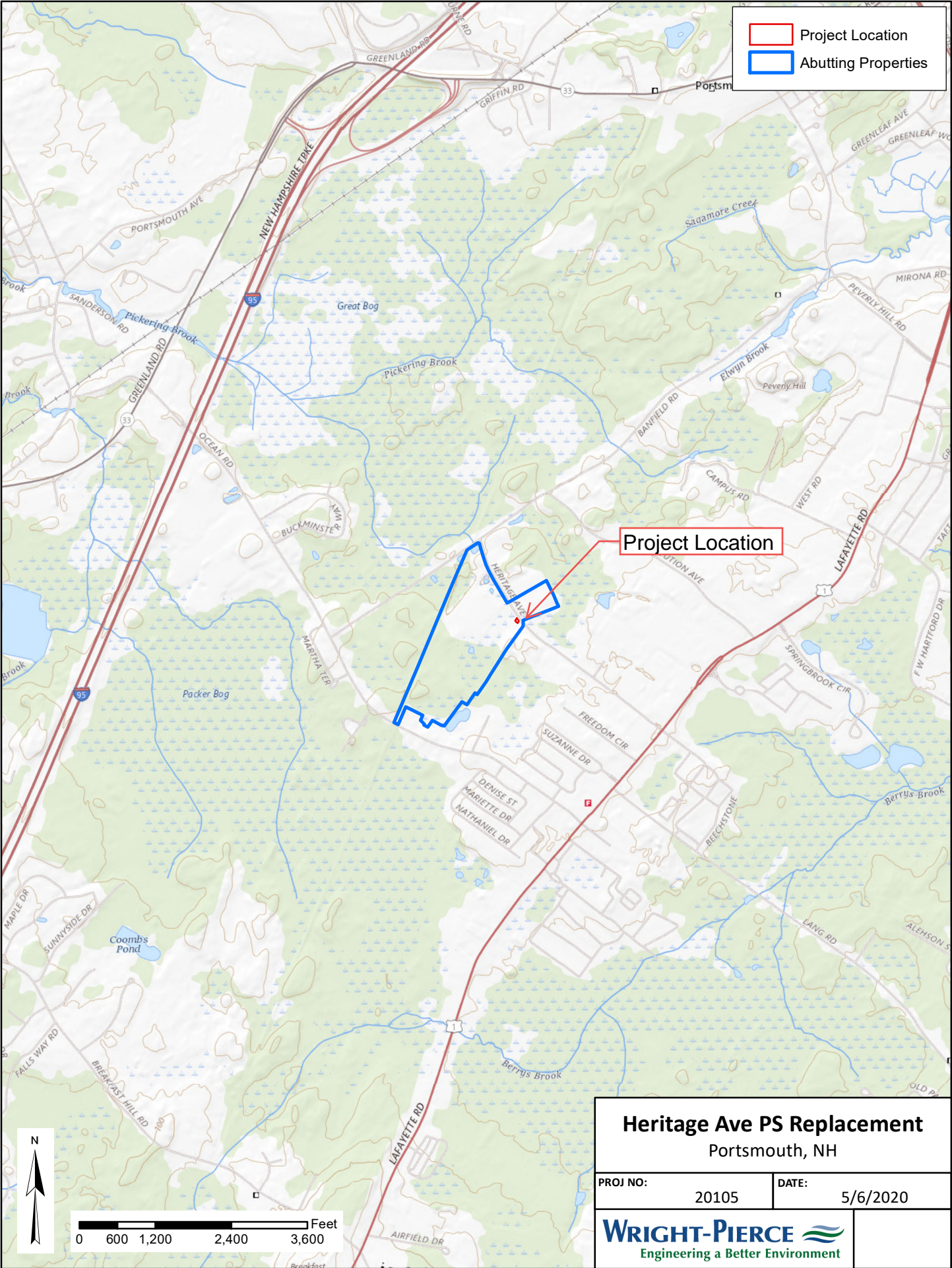
WRIGHT-PIERCE
 603.430.3728 | www.wright-pierce.com
 230 COMMERCE WAY, SUITE 302, PORTSMOUTH, NH 03801

CITY OF PORTSMOUTH, NEW HAMPSHIRE
 HERITAGE AVENUE PUMP STATION
 REPLACEMENT

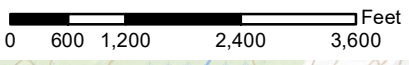
EROSION CONTROL NOTES AND DETAILS

DRAWING
C-4

	Project Location
	Abutting Properties



Project Location



Heritage Ave PS Replacement Portsmouth, NH

PROJ NO:	20105	DATE:	5/6/2020
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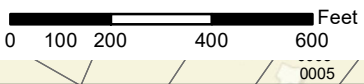
JDM W:\GIS_Development\Projects\NH\Portsmouth\20105_HeritageAvePS\IMXD\TaxMap-8x11.mxd



**Heritage Ave PS Replacement
Tax Map
Portsmouth, NH**

PROJ NO:	20105	DATE:	5/6/2020
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WRIGHT-PIERCE 
Engineering a Better Environment



New Hampshire Natural Heritage Bureau

NHB DataCheck Results Letter

To: Jacob Shactman, Wright-Pierce
230 Commerce Way
Suite 302
Portsmouth, NH 03801

From: NH Natural Heritage Bureau

Date: 4/12/2022 (valid until 4/12/2023)

Re: Review by NH Natural Heritage Bureau of request submitted 3/24/2022

Permits: GRANT APP - Portsmouth, NHDES - Wetland Permit by Notification (PBN)

NHB ID: NHB22-1139

Applicant: Jacob Shactman

Location: Portsmouth
329 Heritage Ave

Project

Description: The proposed Heritage Avenue Pump Station Upgrade will convert the existing station to a submersible type station to improve pump station reliability, accessibility, and safety. In addition, the project will replace the existing diesel emergency generator with a new natural gas driven emergency generator, along with the addition of a 512 sq ft gravel driveway to improve access to the pump station.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 2022-03-24 5:13:21 PM, and cannot be used for any other project.

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

New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: **NHB22-1139**

NHB22-1139



Construction Sequence

The proposed project is anticipated to begin construction in Spring 2023. A general sequence of construction activities is provided below. The final schedule will be determined by the City and contractor upon receipt of permit approvals.

General Schedule:

1. Contractor mobilizes to project area (Spring 2023).
2. Install applicable erosion and sedimentation control practices.
3. Furnish, install, and test temporary bypass pumping system and discharge pipelines.
4. Begin site demolition as shown on Site Demolition Plan (Drawing C-2).
5. Construct new pump station and associated mechanical/electrical appurtenances while maintaining wastewater pumping capabilities as shown on Site Modification Plan (Drawing C-2).
6. Construct gas service line and demonstrate operation of generator.
7. Take bypass pump offline and demonstrate proper operation of the new pump station .
8. Construct gravel drive and security fencing to provide permanent stabilized site access.
9. Restore disturbed areas with loam and seed.
10. Once the site is permanently stabilized, remove all temporary erosion control measures.

Photographs



Photograph 1: Existing Pump Station (Facing Southwest)



Photograph 2: Existing Pump Station (Facing West)



Photograph 3: Existing Pump Station (Facing South)



Photograph 4: Existing Pump Station (Facing Southwest)



Via email to: Rebecca.saucier@wright-pierce.com

January 10, 2020

Ms. Rebecca Saucier, P.E.
Wright-Pierce
230 Commerce Way, Suite 302
Portsmouth, NH 03801

RE: Sewer Pump Station
Heritage Avenue
Portsmouth, NH
WP # 20105

Dear Ms. Saucier,

The following preliminary remarks summarize observations made during a site inspection at the above-referenced location conducted on August 9, 2019 to identify and delineate wetlands and/or other resource areas. The approximate area-of-interest (AOI) is depicted below in Figure 1.

FIGURE 1



Certification Note

Jurisdictional wetlands within the AOI were delineated in August 2019 by Marc Jacobs, Certified Wetland Scientist number 090, according to the standards of the US Army Corps of Engineers - Wetlands Delineation Manual; the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region; the Code of Administrative Rules, NH Department of Environmental Services - Wetlands Bureau – Env-Wt 100-900 and Article 10 – Environmental Protection Standards of the City of Portsmouth, NH Zoning. Soils were evaluated utilizing the Field Indicators for Identifying Hydric Soils in New England, Version 4, April 2019 and the Field Indicators of Hydric Soils in the United States, Version 8, 2016. The indicator status of vegetation as hydrophytic was determined according to the U.S. Army Corps of Engineers - Northcentral and Northeast 2016 Regional Wetland Plant List. Copies of any site plans which depict the delineation that have been reviewed by the wetland scientist are individually stamped, signed and dated. This note has been customized for this project.

Jurisdictional freshwater wetlands were identified and the wetland-upland boundaries within the AOI were delineated in the field with solid color pink survey flags. Each flag bears a letter and number to assist in subsequent field location by survey instrument as well as to ascertain exact field position during any site visits when referencing site plans. The following flag sequence was used: A1-A7.

General Wetland Description

Wet flags A1-A5± appear to represent a man-made wetland-upland boundary located at the toe-of-fill which was presumably deposited for construction of the sewer pump station. (The pump station is situated entirely on filled soils.) The fill was not deposited recently (within the last year) but may have been placed after the wetlands law became effective in 1969. Additional investigations would be needed to establish the extent of fill or when the fill was placed. The wetland is bisected by a foot path located on the north side of the sewer pump station. The wetland does not constitute a vernal pool within the confines of the AOI.

Signs of wetland hydrology observed during site investigations suggest that intermittent stream flow enters the wetland near wetland flag A6. Any flow generally originates along Heritage Avenue and is conveyed in a northerly direction by a man-made ditch parallel to Heritage Avenue. Any flow then turns southerly and travels along the base of the east side of the existing fill pad described above and finally spreads out on the south side of the fill pad.

The ditch along Heritage Avenue was created primarily by excavation and, after leaving the ditch, any flow is confined by fill on the north side and adjacent natural topography on the south side where it flows adjacent to the existing sewer pump station. Any stream flow is constituted by storm water runoff originating from Heritage Avenue and the channel / stream does not drain other upgradient jurisdictional wetland areas. The channel / stream was observed to be in a no-flow condition during site investigations.

Wet flags A1-A7± identify wetlands having a substrate of poorly drained mineral soils (adjacent to the wetland-upland boundary) and which are classified as palustrine forested (PFO) according to the Cowardin system. The dominant tree species observed within the canopy includes red maple (*Acer rubrum*). The forested wetland gradually transitions to a palustrine scrub-shrub wetland having very poorly drained mineral soils which closely resemble Maybid series (*Typic Humaquepts*) silt loam soils.

State Jurisdiction

All wetlands and any banks are jurisdictional under NH RSA 482:A and the NH Code of Administrative Rules – Chapter Env-Wt 100-900. The NHDES does not require a buffer to freshwater wetlands, to the extent that any work in adjacent uplands does not cause indirect impacts, such as sedimentation, to areas under NHDES jurisdiction.

Shoreland Protection

There are no water bodies identified on the Comprehensive List of Water Bodies subject to RSA 483-B, the Shoreland Water Quality Protection Act, which are located within 250 feet of the AOI.

Prime Wetlands

The NHDES applies applicable rules and law to all municipally designated prime wetlands (and in certain municipalities all land within 100-feet of municipally designated prime wetlands). Prime wetlands are those wetlands with higher functions and values and receive additional protection under the law. Portsmouth has designated municipal prime wetlands which are recognized by NHDES. The subject wetland is identified as a prime wetland. Portsmouth prime wetlands receive a 100-foot state buffer.

Local Zoning

Chapter 10 of the Portsmouth Zoning Ordinance, specifically Article 10 – Environmental Protection Standards and Section 10.1010 – Wetland Protection, take jurisdiction over the following areas:

- Any inland wetland area greater than 10,000 square feet in size;
- Any vernal pool regardless of size;
- Any non-tidal perennial river or stream; and,
- Any tidal wetlands.

The zoning requires a buffer of all land within 100–feet of any jurisdictional area.

Permitted uses in wetlands and the wetland buffer include any use that does not involve the erection or construction of any structure or impervious surface and will not alter the natural surface configuration by the addition of fill or dredging.

Any use or activity not specifically permitted is prohibited unless authorized by the Portsmouth Planning Board by Conditional Use Permit (CUP) after review by the Portsmouth Conservation Commission. Regarding CUP applications, the following specific criteria for approval apply to public and private utilities within rights-of-way in wetlands and wetland buffers:

- The proposed construction is in the public interest;
- Design, construction and maintenance methods will utilize best management practices to minimize impact and will include restoration of sites as nearly as possible to the original grade;
- No alternative feasible route exists; and
- Alteration of natural vegetation will occur only to the extent necessary.

Wright-Pierce
Heritage Avenue
January 10, 2020

The zoning identifies performance standards for stormwater management and vegetation management, including fertilizer and herbicide application, within local jurisdiction. The zoning requires vegetation buffers within the overall 100-foot buffer.

The above represents a brief summary of the applicable local wetland zoning and state jurisdiction. We recommend that you consult this office, the Portsmouth Planning Department or the NHDES for further guidance before proceeding with any design, permitting or construction at this location.

Please contact the undersigned with any questions regarding the above-referenced information.

Cordially,



Marc Jacobs, CWS, PWS, CSS, CPESC

