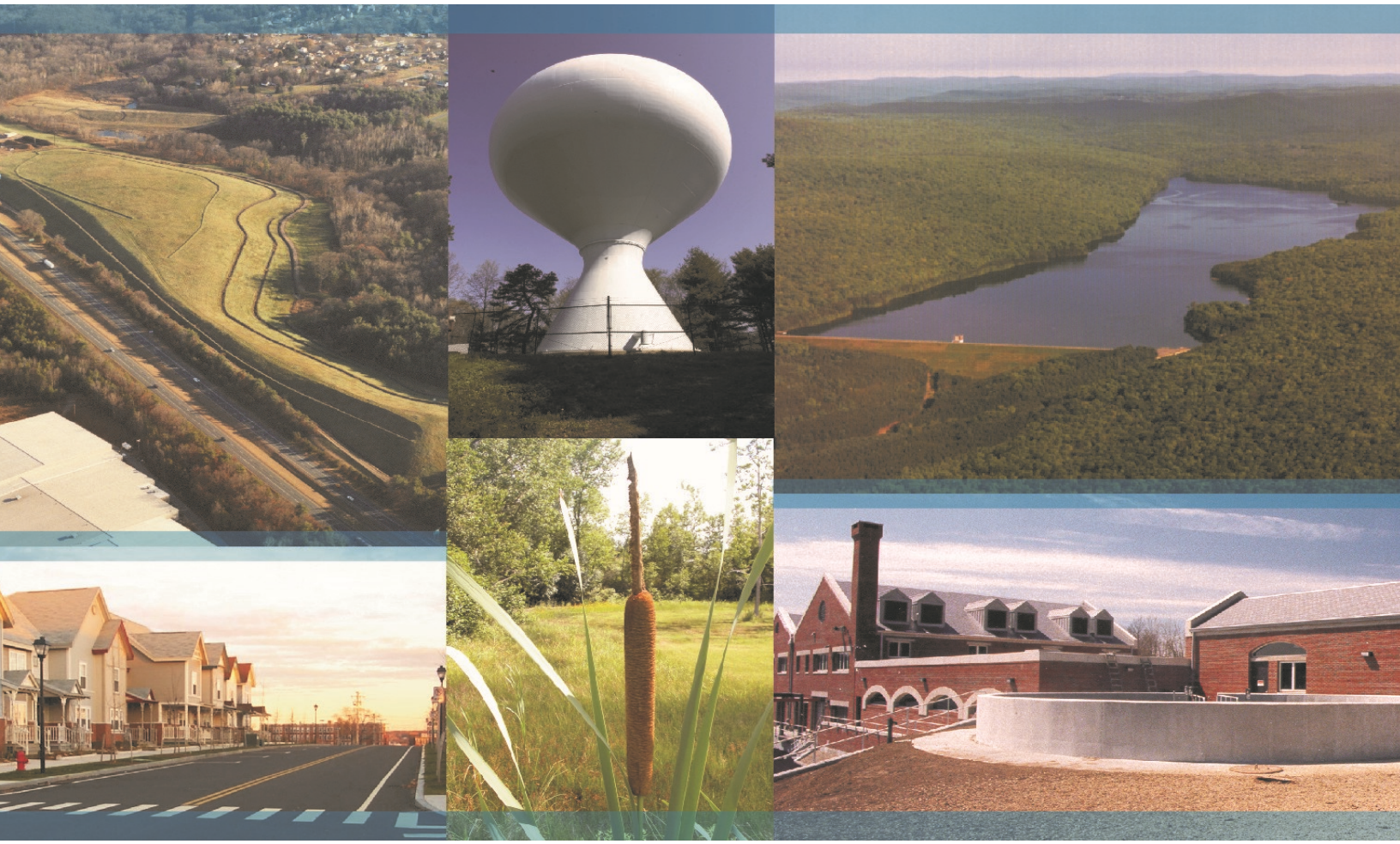

Portsmouth Regional Hospital
Satellite Parking Lot
Borthwick Avenue
Portsmouth, New Hampshire

Wetland Impact Permit Application

Prepared For:

Portsmouth Regional Hospital
333 Borthwick Avenue
Portsmouth, NH 03801

June 16, 2022

P-0616-005
June 16, 2022

NH Department of Environmental Services
Wetlands Bureau
29 Hazen Drive
PO Box 95
Concord, NH 03302-0095

Re: **Minor Impact Permit Application**
Portsmouth Regional Hospital Satellite Parking Lot
Borthwick Avenue
Portsmouth, New Hampshire

Dear NHDES Analyst:

Tighe & Bond is pleased to submit this Minor Impact Permit application package on behalf of Portsmouth Regional Hospital and HCA Healthcare Inc. for a proposed 501 paved satellite parking lot project to support the existing Hospital facility.

The proposed project is located at the northeast corner of the intersection of Borthwick Avenue and Eileen Dondero Foley Avenue in Portsmouth, New Hampshire. The parcel is identified as Tax Map 234, Lot 7-4A.

Jurisdictional Wetlands

Methods

Jurisdictional wetlands delineated at the project site on September 17, 2021 by Jeremy Degler (CWS #301, PWS #2809) of Tighe & Bond. Wetland criteria used included the following:

- U.S. Army *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* (January 1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (January 2012).

Wetlands were classified based on *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979). Functional analysis of the wetlands was based on *The Highway Methodology Workbook Supplement—Wetland Functions and Values: A Descriptive Approach*, (NAEEP-360-1-30a, US Army Corps of Engineers, New England Division, September 1999), except that the Ecological Integrity function was based on the *Method for Inventorying and Evaluating Freshwater Wetlands in New Hampshire* (UNH Cooperative Extension, 2015).

Wetland Description and Functions

A total of five (5) wetland areas were delineated within 100± feet of Lot 7-4A. A detailed description of each jurisdictional area can be found in the Wetland Delineation Technical Memorandum within this submission, and a brief overview of those wetlands with proposed impacts are presented below.

There are no State Designated Rivers located within a quarter mile of the project area.

This application has been concurrently submitted and is being reviewed by City and State agencies. This application has not been submitted to federal agencies. Several updates to this

plan have been created from various comments received through the City's technical review process.

Wetland Functions

Two (2) of the five wetlands delineated within the property are being proposed to be partially impacted by this project (Wetlands 2 and 5).

Wetland 2 is a small (approximately 4,460 square feet) hydrologically isolated scrub-shrub wetland (PSS1E) located within a small clearing in an area with signs of significant past disturbances. This wetland exhibits low Ecological Integrity (New Hampshire Method average score of 4.4), has a small watershed, and does not retain any standing water. While the low grade, hydric soils, and dense vegetation could potentially support some minimal flood storage, groundwater recharge, or nutrient trapping/retention, the low quality, invasive species, small size, and landscape position of Wetland 2 leave it providing no real function or value to the surrounding landscape.

Wetland 5 is a larger (approximately 9,200 square feet) hydrologically isolated scrub-shrub wetland (PSS1E) located within an electric utility right-of-way with signs of significant past disturbances. Wetland 5 exhibits low Ecological Integrity (New Hampshire Method average score of 3.6). The low grade, location, and hydric soils appear to support a minimal amount of flood storage during extremely heavy precipitation. However, the low quality, invasive species, small size, and lack of vegetative diversity of Wetland 5 leave it providing no substantial or principal function or value to the surrounding landscape.

Additional information is provided on the attached Wetland Determination Data Forms and Functional Assessment Worksheets.

Proposed Activities

The proposed project will create a satellite parking area necessary to support the Portsmouth Regional Hospital's existing facility and to allow for future growth in patient care. The existing hospital is located at 333 Borthwick Avenue and is across the street from the proposed project parcel. The proposed project includes the construction of a new 501 space parking lot and will include associated site improvements such as lighting, landscaping, and stormwater management. Stormwater management will include underground detention and infiltration systems, and four (4) proprietary flow through treatment filtration devices for purposes of protecting water quality of stormwater runoff associated with these improvements.

Avoidance & Minimization Measures

The parking expansion will result in approximately 1,400 square feet of impact to Wetland 2 and approximately 7,320 square feet of impact to Wetland 3. However, given the location of existing facilities and available constructable area for expanding parking, and limited available land, this is the only practicable option for a parking expansion. Actual impacts to wetland functions will be negligible due to the overall lack of function or value, low quality, and presence of invasive species. What minimal function is present in the wetlands to be impacted (flood storage) will be offset with engineered solutions which will provide higher function and value than the existing conditions.

Other adjacent parcels to the Hospital facility are not practicable for this use as it would require larger impacts to wetland areas than what is proposed at this location.

Rare Species

A rare species review was completed by the NH Natural Heritage Bureau (NHB) on May 4, 2022 (NHB22-1544), and it was determined that although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, the NHB does not expect that it will be impacted by the proposed project.

Supplements

The following supporting documents can be found appended to this submittal:

- Appendix A – Application and Attachments
  - Wetland Application
  - Avoidance and Minimization Checklist
  - Attachment A
  - Copy of Fee
  - Residential, Commercial, and Industrial Development Worksheet
  - Wetlands Functional Assessment Worksheets
  - Wetland Determination Data Forms
- Appendix B – Environmental Reports
  - ACOE Appendix B
  - IPaC Species List
  - IPaC Consistency Letter
  - NHB File #22-1544
  - Request for Project Review by NHDHR
- Appendix C –Maps and Figures
  - USGS Location Map
  - Tax Map
  - Wetland Delineation Technical Memorandum
  - Wetland Photograph Log
  - Construction Sequence
  - Owner's Letter of Authorization
- Appendix D – Abutter Information
  - Abutters List
  - Abutter Notice
- Appendix E – Site Plans

We trust the enclosed information addresses the requirements for a Wetland Application – Minor Impact. If you have any questions or require any additional information, please feel free to contact me.

Sincerely,
TIGHE & BOND, INC.

Alexander Sellar, PE
Project Engineer

Patrick M. Crimmins, PE
Vice President

Enclosures
Copy: Portsmouth Regional Hospital
Portsmouth City Clerk
Portsmouth Conservation Commission
Portsmouth Planning Board

J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Report_Evaluation\Applications\Wetland\Individual\0.2 - Cover Letter-.docx

Tighe&Bond

APPENDIX A

STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

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

APPLICANT'S NAME: **Portsmouth Regional Hospital** **TOWN NAME:** Portsmouth

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?	☒ Yes ☐ No
Does the property contain a PRA? If yes, provide the following information:	☐ Yes ☒ No
• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.	☐ Yes ☒ No

• Protected species or habitat?
  ○ If yes, species or habitat name(s):
  ○ NHB Project ID #: NHB22-1544
	☐ Yes ☒ No

• Bog?	☐ Yes ☒ No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	☐ Yes ☒ No
• Designated prime wetland or duly-established 100-foot buffer?	☐ Yes ☒ No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	☐ Yes ☒ No
Is the property within a Designated River corridor? If yes, provide the following information: • Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year:	☐ Yes ☒ No

For dredging projects, is the subject property contaminated? • If yes, list contaminant:	☐ Yes ☒ No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	☒ Yes ☐ No
For stream crossing projects, provide watershed size (see WPPT or Stream Stats): n/a	

SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))

Provide a **brief** description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.

The existing Portsmouth Regional Hospital building is operating with 783 parking spaces, which the facility has outgrown and is 32% less than the minimum required by local zoning. The proposed project includes the construction of a new 501 space satellite parking lot across the street from the existing hospital. This additional parking is necessary to support Portsmouth Regional Hospital's existing facility and to allow for future growth in patient care.

The project proposes 8,720 sf of permanent impacts to on site wetlands.

SECTION 3 - PROJECT LOCATION

Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: TBD - Borthwick Avenue

TOWN/CITY: Portsmouth

TAX MAP/BLOCK/LOT/UNIT: Map 234 Lot 7-4A

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME:
☐ N/A

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): ° North
° West

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: Portsmouth Regional Hospital		
MAILING ADDRESS: 333 Borthwick Avenue		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: Matthew.Larkin@hcahealthcare.com		
FAX:	PHONE: 603 436 5110	

ELECTRONIC COMMUNICATION: By initialing here: , I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))

☐ N/A

LAST NAME, FIRST NAME, M.I.: Patrick M Crimmins		
COMPANY NAME: Tighe & Bond		
MAILING ADDRESS: 177 Corporate Drive		
TOWN/CITY: Portsmouth	STATE: NH	ZIP CODE: 03801
EMAIL ADDRESS: pmcrimmins@tighebond.com		
FAX:	PHONE: 603 433 8818	

ELECTRONIC COMMUNICATION: By initialing here PMC, I hereby authorize NHDES to communicate all matters relative to this application electronically.

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.

☒ Same as applicant

NAME: Portsmouth Regional Hospital is a subsidiary of HCA Healthcare Inc.		
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):

The resource-specific criteria in Env-Wt 600, 700, and 900 do not apply to this project as there will be no coastal or tidal impacts, no prime wetlands are present within the project area, and there will be no stream crossings associated with this project. This project does not qualify for a project-type exception under Env-Wt 407.04.

This project is not located within a Priority Resource Area and there will be no fill in public waters to make land.

Jeremy Degler, CWB, CWS, PWS, of Tighe & Bond delineated wetlands within the project parcel on September 17, 2021 utilizing the criteria specified in Env-Wt 406.01.

The wetland impact is necessary to accommodate the parking needed for the existing Hospital facility. Small pocket wetlands are impacted, though the project does not propose to impact the larger wetland complex and its 100 ft buffer. There is no practical alternative that would have less adverse impact of the area per Env-Wt 313.03.

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/rivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.

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

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

JURISDICTIONAL AREA		PERMANENT			TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
Wetlands	Forested Wetland			☐			☐
	Scrub-shrub Wetland	8720		☐			☐
	Emergent Wetland			☐			☐
	Wet Meadow			☐			☐
	Vernal Pool			☐			☐
	Designated Prime Wetland			☐			☐
	Duly-established 100-foot Prime Wetland Buffer			☐			☐
Surface Water	Intermittent / Ephemeral Stream			☐			☐
	Perennial Stream or River			☐			☐
	Lake / Pond			☐			☐
	Docking - Lake / Pond			☐			☐
	Docking - River			☐			☐
Banks	Bank - Intermittent Stream			☐			☐
	Bank - Perennial Stream / River			☐			☐
	Bank / Shoreline - Lake / Pond			☐			☐
Tidal	Tidal Waters			☐			☐
	Tidal Marsh			☐			☐
	Sand Dune			☐			☐
	Undeveloped Tidal Buffer Zone (TBZ)			☐			☐
	Previously-developed TBZ			☐			☐
	Docking - Tidal Water			☐			☐
TOTAL		8720					

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

☐ **MINIMUM IMPACT FEE**: Flat fee of $400.

☐ **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).

☒ **MINOR OR MAJOR IMPACT FEE:** Calculate using the table below:

Permanent and temporary (non-docking):	8720 SF	× $0.40 =	$	3,488
Seasonal docking structure:	SF	× $2.00 =	$	
Permanent docking structure:	SF	× $4.00 =	$	
Projects proposing shoreline structures (including docks) add $400 =			$	
Total =			$	3,488

The application fee for minor or major impact is the above calculated total or $400, whichever is greater = $ 3,488

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: PMC	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: PMC PMC	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: PMC	The signer understands that: • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: 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. • The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641. • The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact forestry SPN projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.
Initials: PMC	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): See Owner's/Agent Letter of Authorization (App. C)	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:
SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY: Patrick M. Crimmins	DATE:

SECTION 16 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))	
As required by RSA 482-A:3, I(a)(1), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.	
TOWN/CITY CLERK SIGNATURE:	PRINT NAME LEGIBLY:
TOWN/CITY:	DATE:

DIRECTIONS FOR TOWN/CITY CLERK:
Per RSA 482-A:3, I(a)(1)

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

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

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.: Portsmouth Regional Hospital c/o Matthew Larkin	
PROJECT STREET ADDRESS: TBD - Borthwick Avenue	PROJECT TOWN: Portsmouth
TAX MAP/LOT NUMBER: Map 234 Lot 7-4A	

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.	☐ Yes ☒ No

If you answered "no" to this question, describe the purpose of the "non-access" project type you have proposed:

The primary purpose of this project is to create a satellite parking lot to support to the adjacent Hospital facility. The proposed parking lot was designed in a way to entirely avoid impacts to the larger, high-quality wetland complex within the site and minimize impacts to the maximum extent practical to the remaining smaller wetland areas.

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.	☐ Check ☒ 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.	☒ Check ☐ 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.	☒ Check ☐ 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.	☒ Check ☐ 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.	☒ Check ☐ 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.	☒ Check ☐ 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.	☒ Check ☐ 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.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	☐ Check ☒ N/A
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	☒ Check ☐ 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.	☒ Check ☐ N/A
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	☐ Check ☒ N/A

A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	☐ Check ☒ N/A
Env-Wt 500 Env-Wt 600 Env-Wt 900	Wetland and stream crossings include features that accommodate aquatic organism and wildlife passage.	☐ Check ☒ N/A
Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	☐ Check ☒ 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.	☐ Check ☒ 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.	☐ Check ☒ 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.	☐ Check ☒ 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.	☐ Check ☒ 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.	☐ Check ☒ 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.	☐ Check ☒ 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.	☐ Check ☒ N/A

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: **Portsmouth Regional Hospital** **TOWN NAME:** Portsmouth

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 NEEDED PARKING LOT WILL RESULT IN 8,720 SF OF WETLAND IMPACT, FILLING PORTIONS OF 2 SMALL WETLANDS WITHIN THE PROJECT LIMITS. THE LAYOUT OF THE PROPOSED PARKING FIELD WAS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE THUS AVOIDING IMPACTS TO THE LARGER WETLAND COMPLEX AND IT'S BUFFER WITHIN THE SITE PARCEL'S BOUNDS. FURTHER THE PROJECT PROPOSES APPROXIMATELY 19,000 SF OF NATIVE BUFFER PLANTINGS TO ENHANCE THE LARGER WETLAND'S FUNCTIONS AND VALUES.

TO MINIMIZE ENVIRONMENTAL IMPACTS TO THE MAXIMUM EXTENT PRACTICABLE, THIS PROJECT INCLUDES STORMWATER TREATMENT FOR THE PROPOSED IMPERVIOUS AREAS WHICH WILL OFFSET ANY LOSS OF FUNCTION OR VALUE.

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

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

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

The project maintains continuity between adjacent wetlands by maintaining stormwater flow patterns that are relatively consistent with the existing condition. For example, the project proposes to extend an existing culvert through the work limit and discharge into the same wetland complex as the existing condition without restrictions. Further, the project primarily captures and directs stormwater flow to discharge to the same location as the existing condition.

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.

The impacted wetland areas do not meet the criteria of an exemplary natural community or vernal pool. It is not comprised of protected species and habitat, documented fisheries, or habitat and reproduction areas for species of concern.

The affected wetlands appear to be highly disturbed from previous construction activities. One affected wetland is fed from a previously constructed culvert pipe beneath a roadway and another was created due to poor grading from utility work associated with the easement that runs through the site.

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.

There will be no impact on public commerce, navigation, and recreation as a result of the proposed project.

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.

n/a

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

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

n/a

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

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

The proposed project will not impact the quality of surface water or groundwater. The increased stormwater load created by the new impervious surfaces proposed as part of this project will be fully treated in accordance with the NHDES Env-Wq 1500 Alteration of Terrain regulations.

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.

n/a

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

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

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

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

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

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

PART II: FUNCTIONAL ASSESSMENT
REQUIREMENTS Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).
FUNCTIONAL ASSESSMENT METHOD USED: USACE Highway Methodology, NH Method (for Ecological Integrity)
NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: JEREMY DEGLER (NH CWS #301)
DATE OF ASSESSMENT: 9/17/2021 & 11/22/2021
Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT: ☒
For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable: ☒ Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

Verify check at https://echecks.com/verify

Memo

TD Bank, NA

Dollars

Three thousand, four hundred eighty-eight and 00/100

PAY TO THE ORDER OF NH DES - Wetlands Bure... 3788

$ 3,488.00

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Void after 90 days

Date 06/02/2022

5933

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Tighe & Bond, Inc.
53 Southampton Road
Westfield, MA 01085

Cut along this line

Check appears upside down intentionally

How to use this check

Need help? Visit eChecks.com or call 877-333-6964

Step 1 **Print the check**	Step 2 **Validate it printed correctly**	Step 3 **Deposit like normal**
✓ **Any printer works** ✓ **Black or color ink** ✓ **Basic white paper**	✓ **Correct if bank numbers are:** Centered in white space Parallel to edge of the page Clearly printed in dark black ink ✗ **Reprint if bank numbers are:** Cut off, skewed, or off-center Smudged or wrinkled Too light to read	1. **Cut on the dotted line above** 2. **Endorse the back** 3. **Deposit like normal:** In-person at a bank or credit union Using an ATM Via smartphone mobile deposit With an office check scanner

Does your financial institution have questions about this check?

- This check was printed from an authorized check record. It is not a Check 21 Image Replacement Document.
- To confirm this check was issued by the account holder and details (pay to, amount, routing/account number) remain unmodified, the item's authenticity can be verified using the Deluxe Inc. Check Verification service at https://echecks.com/verify.

Questions? Visit **eChecks.com** or call 877-333-6964

For your records

Issued date: 2022-06-02
Check number: 5933
From: Tighe & Bond, Inc.
Amount: $3488.00
Payable to: NH DES - Wetlands Bureau ...
Delivery email: asellar@tighebond.com
Memo: None
Documents: Yes - see Remittance below
Delivery message: Hi, attached is your Tighe & Bon d electronic check. Any questions please email AP@ tighebond.com.

RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECT-SPECIFIC WORKSHEET FOR STANDARD APPLICATION

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482/ Env-Wt 524

APPLICANT LAST NAME, FIRST NAME, M.I.: Portsmouth Regional Hospital

This worksheet summarizes the criteria and requirements for a Standard Permit for "Residential, Commercial, and Industrial Development", one of the 18 specific project types in Chapter Env-Wt 500. In addition to the project-specific criteria and requirements on this worksheet, all Standard Dredge and Fill Applications must meet the criteria and requirements listed in the Standard Dredge and Fill Application form (NHDES-W-06-012).

SECTION 1 - APPLICABILITY (Env-Wt 509.02(b); Env-Wt 524.01)

The information in this worksheet applies to residential, commercial, and industrial development projects, including associated roadways, in non-tidal wetlands.

Do **not** use this worksheet if the project is located in a coastal (tidal) area.

SECTION 2 - APPROVAL CRITERIA FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECTS (Env-Wt 524.02)

An application for a residential, commercial or industrial development project must meet the following criteria:

☒ The project must meet the applicable criteria established in Env-Wt 300;

☐ An off-site alternatives analysis is conducted for any project that will result in more than one acre of permanent wetland impacts;

☒ The project avoids and minimizes impacts to wetlands, watercourses, and sensitive and valuable wetlands in accordance with Env-Wt 313.03;

☒ The project complies with the design criteria specified in Env-Wt 524.04 and the construction criteria specified in Env-Wt 524.05; and

☐ Compensatory mitigation is provided for any new residential, commercial, or industrial development in a Priority Resource Area.

SECTION 3 - APPLICATION REQUIREMENTS FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECTS (Env-Wt 524.03)

☐ For all projects requiring subdivision approval, a plan prepared and stamped by a land surveyor licensed in the State of New Hampshire pursuant to RSA 310-A showing existing and proposed topography and the location of all proposed lot lines;

☐ For all projects requiring subdivision approval, the following clearly delineated on the plan required above: the boundaries of all wetlands and surface waters and the footprint of all proposed impacts;

☐ For minor and major projects requiring subdivision approval, wetlands classifications clearly indicated in accordance with Env-Wt 400 on the plan required above; and

☐ For a project that is associated with one or more phases of a multi-phase subdivision, a project impact plan that also shows all wetlands on remaining property proposed for future phases of development.

Please note that permits for subdivisions of 4 or more lots shall not be effective until the permittee records the permit with the appropriate registry of deeds and a copy of the registered permit has been received by the department.

An application for a residential, commercial or industrial development project must include the following information:

☐ If the project includes components that are subject to multiple project-specific requirements in Chapter Env-Wt 500, a narrative statement and plan that describes how each project-specific component meets the requirements of the applicable part in Chapter Env-Wt 500 and how the project as a whole impacts jurisdictional areas.

SECTION 4 - DESIGN REQUIREMENTS FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECTS (Env-Wt 524.04)

In addition to meeting the applicable design requirements established in Env-Wt 300, a residential, commercial, or industrial development project must be designed to meet the following criteria:

☒ The project complies with all applicable requirements of Env-Wt 400, Env-Wt 700, Env-Wt 800, Env-Wt 900, and other applicable project-specific criteria in Chapter Env-Wt 500;

☒ The project does not use wetlands or surface waters to serve as stormwater or water quality treatment to mitigate impacts;

☒ The project provides setbacks and water quality protection measures sufficient to protect private and public drinking water supplies, source water protection areas, and fisheries;

☒ The project maintains or restores hydrologic connections to maintain flows necessary to preserve adjacent wetland and riparian functions;

☒ The project maintains existing fishery spawning, feeding, or cover habitat and fish passage necessary to maintain fishery or habitat or populations; and

☒ The project maintains existing wetland-dependent wildlife habitat and its associated migratory pathways, reproductive sites, and associated wetland complex or wetland community system.

SECTION 5 - CONSTRUCTION REQUIREMENTS FOR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT PROJECTS (Env-Wt 525.05)

In addition to meeting all applicable construction standards specified in Env-Wt 307 and other applicable project-specific standards in Chapter Env-Wt 500, the following requirements apply to residential, commercial, or industrial development projects:

☒ A construction notice shall be filed with the department at least 48 hours prior to commencing work; and

☒ All work shall be conducted in accordance with the approved plan.

SECTION 6 - CLASSIFICATION OF RESIDENTIAL AND COMMERCIAL OR INDUSTRIAL DEVELOPMENT PROJECTS (Env-Wt 524.06)

Residential and commercial or industrial development projects shall be classified under Env-Wt 407 and as follows:

(a) A project shall be a minimum impact project only if:

(1) All stream-crossing components of the project meet the requirements for minimum impact classification specified in Env-Wt 903;

(2) All other components of the project meet the requirements for minimum impact classification specified in Env-Wt 407 and this chapter;

(3) The project is not part of a new subdivision of 4 or more lots; and

(4) The project does not meet the criteria listed in (d) below.

(b) A project shall be an expedited minimum impact project only if:

(1) It is a minimum impact project to construct a new subdivision of 3 lots or less;

(2) The applicant has attended a pre-design submission meeting with the department at least 7 days prior to application submission and included department feedback in the design plan; and

(3) The project does not meet the criteria listed in (d) below.

(c) A project shall be a minor impact project if the project does not meet the criteria listed in (d) below and if any of the following apply:

(1) Any single stream-crossing component of the project meets the requirements for minor impact classification specified in Env-Wt 903;

(2) The project is part of a new subdivision of 4 or more lots;

(3) Any single component of the project meets the requirements for minor impact classification specified in Env-Wt 407, Env-Wt 903, or Chapter Env-Wt 500; or

(4) No component of the project meets the requirements for major impact classification specified in Env-Wt 407, Env-Wt 903, or Chapter Env-Wt 500.

(d) A project shall be a major impact project if:

(1) The project exceeds the minor impact criteria;

(2) The project requires mitigation or meets the requirements for major impact classification specified in Env-Wt 407, Env-Wt 903, or any other associated project classification that is part of the overall project; or

(3) The project is elevated based on an aggregation undertaken by a developer or is part of a series of developments under Env-Wt 400.

WETLANDS FUNCTIONAL ASSESSMENT WORKSHEET

Water Division/Land Resource Management
Wetlands Bureau

Check the Status of your Application

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

APPLICANT LAST NAME, FIRST NAME, M.I.: Portsmouth Regional Hospital c/o Matthew Larkin

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

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

SECTION 1 - LOCATION (USACE HIGHWAY METHODOLOGY)	
ADJACENT LAND USE: Forested undeveloped, paved roadway (Borthwick Avenue), residential	
CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT? ☐ Yes ☒ No	
DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT (in feet): Approximately 25	
SECTION 2 - DELINEATION (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
CERTIFIED WETLAND SCIENTIST (if in a non-tidal area) or QUALIFIED COASTAL PROFESSIONAL (if in a tidal area) who prepared this assessment: Jeremy Degler (NH CWS #301)	
DATE(S) OF SITE VISIT(S): 9/17/2021, 11/22/2021	DELINEATION PER ENV-WT 406 COMPLETED? ☒ Yes ☐ No
CONFIRM THAT THE EVALUATION IS BASED ON: ☒ Office and ☒ Field examination.	
METHOD USED FOR FUNCTIONAL ASSESSMENT (check one and fill in blank if "other"): ☒ USACE Highway Methodology. ☒ Other scientifically supported method (enter name/ title): NH Method (for Ecological Integrity)	

SECTION 3 - WETLAND RESOURCE SUMMARY (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
WETLAND ID: Wetland 2	LOCATION: (LAT/ LONG) 43.067359/-70.783336
WETLAND AREA: Approximately 4,460 square feet (SF)	DOMINANT WETLAND SYSTEMS PRESENT: Scrub-shrub
HOW MANY TRIBUTARIES CONTRIBUTE TO THE WETLAND? None	COWARDIN CLASS: PSS1E
IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM? ☒ Yes ☐ No if not, where does the wetland lie in the drainage basin?	IS THE WETLAND PART OF: ☒ A wildlife corridor or ☐ A habitat island? IS THE WETLAND HUMAN-MADE? ☐ Yes ☒ No
IS THE WETLAND IN A 100-YEAR FLOODPLAIN? ☐ Yes ☒ No	ARE VERNAL POOLS PRESENT? ☐ Yes ☒ No (If yes, complete the Vernal Pool Table)
ARE ANY WETLANDS PART OF A STREAM OR OPEN-WATER SYSTEM? ☐ Yes ☒ No	ARE ANY PUBLIC OR PRIVATE WELLS DOWNSTREAM/ DOWNGRADIENT? ☐ Yes ☒ No
PROPOSED WETLAND IMPACT TYPE: Parking lot	PROPOSED WETLAND IMPACT AREA: Approx. 1,400 SF

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

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

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

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

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	☐ Yes ☒ No	Average Ecological Integrity Score = 4.4 (1, 5, 10, 1, 5, 1, 5, 1, 5, 10)	☐ Yes ☒ No	Ecological Integrity (from NHM)
2	☐ Yes ☒ No	9	☐ Yes ☒ No	Education Potential
3	☐ Yes ☒ No	1	☐ Yes ☒ No	Fish & Aquatic Life
4	☐ Yes ☒ No	3, 5, 7, 9, 18	☐ Yes ☒ No	Flood Storage
5	☐ Yes ☒ No	2, 4, 5, 15	☐ Yes ☒ No	Groundwater (Recharge Only)
6	☐ Yes ☒ No	Highest ranked habitat in NH & region plus supporting landscape. Priority habitat block, conservation land	☐ Yes ☒ No	Noteworthiness (RTE)
7	☐ Yes ☒ No	5, 6, 7, 8, 9	☐ Yes ☒ No	Nutrient Trapping/Retention
8	☐ Yes ☒ No	1, 2, 7, 12	☐ Yes ☒ No	Production Export
9	☐ Yes ☒ No	6, 9, 12	☐ Yes ☒ No	Scenic Quality
10	☐ Yes ☒ No	2 (road salt), 4, 7, 9	☐ Yes ☒ No	Sediment Trapping
11	☐ Yes ☒ No	N/A	☐ Yes ☒ No	Shoreline Anchoring
12	☐ Yes ☒ No	2, 8, 13, 17	☐ Yes ☒ No	Uniqueness/Heritage
13	☐ Yes ☒ No	10, 12	☐ Yes ☒ No	Wetland-Based Recreation
14	☐ Yes ☒ No	3, 7, 8, 13, 19	☐ Yes ☒ No	Wetland-Dependent Wildlife

SECTION 5 - VERNAL POOL SUMMARY (Env-Wt 311.10)

Delineations of vernal pools shall be based on the characteristics listed in the definition of "vernal pool" in Env-Wt 104.44. To assist in the delineation, individuals may use either of the following references:

- *Identifying and Documenting Vernal Pools in New Hampshire 3rd Ed.*, 2016, published by the New Hampshire Fish and Game Department; or
- The USACE *Vernal Pool Assessment* draft guidance dated 9-10-2013 and form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

All vernal pool ID numbers are to be displayed and located on the wetland delineation of the subject property.

"Important Notes" are to include documented reproductive and wildlife values, landscape context, and relationship to other vernal pools/wetlands.

Note: For projects seeking federal approval from the USACE, please attach a completed copy of The USACE "Vernal Pool Assessment" form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

VERNAL POOL ID NUMBER	DATE(S) OBSERVED	PRIMARY INDICATORS PRESENT (LIST)	SECONDARY INDICATORS PRESENT (LIST)	LENGTH OF HYDROPERIOD	IMPORTANT NOTES
1	N/A	N/A	N/A	N/A	No vernal pools associated with this wetland.
2					
3					
4					
5					

SECTION 6 - STREAM RESOURCES SUMMARY

DESCRIPTION OF STREAM: N/A	STREAM TYPE (ROSGEN): N/A
HAVE FISHERIES BEEN DOCUMENTED? ☐ Yes ☒ No	DOES THE STREAM SYSTEM APPEAR STABLE? ☐ Yes ☐ No
OTHER KEY ON-SITE FUNCTIONS OF NOTE: N/A	

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

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	☐ Yes ☐ No	N/A	☐ Yes ☐ No	No streams associated with this wetland.
2	☐ Yes ☐ No		☐ Yes ☐ No	
3	☐ Yes ☐ No		☐ Yes ☐ No	
4	☐ Yes ☐ No		☐ Yes ☐ No	
5	☐ Yes ☐ No		☐ Yes ☐ No	
6	☐ Yes ☐ No		☐ Yes ☐ No	
7	☐ Yes ☐ No		☐ Yes ☐ No	
8	☐ Yes ☐ No		☐ Yes ☐ No	
9	☐ Yes ☐ No		☐ Yes ☐ No	
10	☐ Yes ☐ No		☐ Yes ☐ No	
11	☐ Yes ☐ No		☐ Yes ☐ No	
12	☐ Yes ☐ No		☐ Yes ☐ No	
13	☐ Yes ☐ No		☐ Yes ☐ No	
14	☐ Yes ☐ No		☐ Yes ☐ No	

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

☒ Wildlife and vegetation diversity/abundance list.

☒ Photograph of wetland.

☒ Wetland delineation plans showing wetlands, vernal pools, and streams in relation to the impact area and surrounding landscape. Wetland IDs, vernal pool IDs, and stream IDs must be indicated on the plans.

☐ For projects in tidal areas only: additional information required by Env-Wt 603.03/603.04. Please refer to the Coastal Area Worksheet (NHDES-W-06-079) for more information.

WETLANDS FUNCTIONAL ASSESSMENT WORKSHEET

Water Division/Land Resource Management
Wetlands Bureau

Check the Status of your Application

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

APPLICANT LAST NAME, FIRST NAME, M.I.: Portsmouth Regional Hospital c/o Matthew Larkin

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

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

SECTION 1 - LOCATION (USACE HIGHWAY METHODOLOGY)	
ADJACENT LAND USE: Forested undeveloped, paved roadway (Borthwick Avenue), commercial, electric substation	
CONTIGUOUS UNDEVELOPED BUFFER ZONE PRESENT? ☐ Yes ☒ No	
DISTANCE TO NEAREST ROADWAY OR OTHER DEVELOPMENT (in feet): Approximately 15	
SECTION 2 - DELINEATION (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
CERTIFIED WETLAND SCIENTIST (if in a non-tidal area) or QUALIFIED COASTAL PROFESSIONAL (if in a tidal area) who prepared this assessment: Jeremy Degler (NH CWS #301)	
DATE(S) OF SITE VISIT(S): 9/17/2021, 11/22/2021	DELINEATION PER ENV-WT 406 COMPLETED? ☒ Yes ☐ No
CONFIRM THAT THE EVALUATION IS BASED ON: ☒ Office and ☒ Field examination.	
METHOD USED FOR FUNCTIONAL ASSESSMENT (check one and fill in blank if "other"): ☒ USACE Highway Methodology. ☒ Other scientifically supported method (enter name/ title): NH Method (for Ecological Integrity)	

SECTION 3 - WETLAND RESOURCE SUMMARY (USACE HIGHWAY METHODOLOGY; Env-Wt 311.10)	
WETLAND ID: Wetland 5	LOCATION: (LAT/ LONG) 43.066164/-70.785497
WETLAND AREA: Approximately 9,200 square feet (SF)	DOMINANT WETLAND SYSTEMS PRESENT: Scrub-shrub
HOW MANY TRIBUTARIES CONTRIBUTE TO THE WETLAND? None	COWARDIN CLASS: PSS1E
IS THE WETLAND A SEPARATE HYDRAULIC SYSTEM? ☒ Yes ☐ No if not, where does the wetland lie in the drainage basin?	IS THE WETLAND PART OF: ☒ A wildlife corridor or ☐ A habitat island? IS THE WETLAND HUMAN-MADE? ☐ Yes ☒ No
IS THE WETLAND IN A 100-YEAR FLOODPLAIN? ☐ Yes ☒ No	ARE VERNAL POOLS PRESENT? ☐ Yes ☒ No (If yes, complete the Vernal Pool Table)
ARE ANY WETLANDS PART OF A STREAM OR OPEN-WATER SYSTEM? ☐ Yes ☒ No	ARE ANY PUBLIC OR PRIVATE WELLS DOWNSTREAM/ DOWNGRADIENT? ☐ Yes ☒ No
PROPOSED WETLAND IMPACT TYPE: Parking lot	PROPOSED WETLAND IMPACT AREA: Approx. 7,320 SF

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

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

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

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

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE (Reference #)	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	☐ Yes ☒ No	Average Ecological Integrity Score = 3.6 (1, 1, 10, 1, 1, 1, 5, 1, 5, 10)	☐ Yes ☒ No	Ecological Integrity (from NHM)
2	☐ Yes ☒ No	9	☐ Yes ☒ No	Education Potential
3	☐ Yes ☒ No	1	☐ Yes ☒ No	Fish & Aquatic Life
4	☒ Yes ☐ No	3, 5, 6, 7, 8, 9, 18	☐ Yes ☒ No	Flood Storage
5	☐ Yes ☒ No	2, 5, 15	☐ Yes ☒ No	Groundwater (Recharge Only)
6	☐ Yes ☒ No	Highest ranked habitat in NH & region plus supporting landscape. Priority habitat block, conservation land	☐ Yes ☒ No	Noteworthiness (RTE)
7	☐ Yes ☒ No	5, 6, 7, 8, 9	☐ Yes ☒ No	Nutrient Trapping/Retention
8	☐ Yes ☒ No	2, 7	☐ Yes ☒ No	Production Export
9	☐ Yes ☒ No	6, 9	☐ Yes ☒ No	Scenic Quality
10	☐ Yes ☒ No	2 (road salt), 4, 7, 9	☐ Yes ☒ No	Sediment Trapping
11	☐ Yes ☒ No	N/A	☐ Yes ☒ No	Shoreline Anchoring
12	☐ Yes ☒ No	2, 8, 13, 17	☐ Yes ☒ No	Uniqueness/Heritage
13	☐ Yes ☒ No	10, 12	☐ Yes ☒ No	Wetland-Based Recreation
14	☐ Yes ☒ No	3, 7, 8, 13, 19	☐ Yes ☒ No	Wetland-Dependent Wildlife

SECTION 5 - VERNAL POOL SUMMARY (Env-Wt 311.10)

Delineations of vernal pools shall be based on the characteristics listed in the definition of "vernal pool" in Env-Wt 104.44. To assist in the delineation, individuals may use either of the following references:

- *Identifying and Documenting Vernal Pools in New Hampshire 3rd Ed.*, 2016, published by the New Hampshire Fish and Game Department; or
- The USACE *Vernal Pool Assessment* draft guidance dated 9-10-2013 and form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

All vernal pool ID numbers are to be displayed and located on the wetland delineation of the subject property.

"Important Notes" are to include documented reproductive and wildlife values, landscape context, and relationship to other vernal pools/wetlands.

Note: For projects seeking federal approval from the USACE, please attach a completed copy of The USACE "Vernal Pool Assessment" form dated 9-6-2016, Appendix L of the USACE New England District *Compensatory Mitigation Guidance*.

VERNAL POOL ID NUMBER	DATE(S) OBSERVED	PRIMARY INDICATORS PRESENT (LIST)	SECONDARY INDICATORS PRESENT (LIST)	LENGTH OF HYDROPERIOD	IMPORTANT NOTES
1	N/A	N/A	N/A	N/A	No vernal pools associated with this wetland.
2					
3					
4					
5					

SECTION 6 - STREAM RESOURCES SUMMARY

DESCRIPTION OF STREAM: N/A	STREAM TYPE (ROSGEN): N/A
HAVE FISHERIES BEEN DOCUMENTED? ☐ Yes ☒ No	DOES THE STREAM SYSTEM APPEAR STABLE? ☐ Yes ☐ No
OTHER KEY ON-SITE FUNCTIONS OF NOTE: N/A	

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

FUNCTIONS/ VALUES	SUITABILITY (Y/N)	RATIONALE	PRINCIPAL FUNCTION/VALUE? (Y/N)	IMPORTANT NOTES
1	☐ Yes ☐ No	N/A	☐ Yes ☐ No	No streams associated with this wetland.
2	☐ Yes ☐ No		☐ Yes ☐ No	
3	☐ Yes ☐ No		☐ Yes ☐ No	
4	☐ Yes ☐ No		☐ Yes ☐ No	
5	☐ Yes ☐ No		☐ Yes ☐ No	
6	☐ Yes ☐ No		☐ Yes ☐ No	
7	☐ Yes ☐ No		☐ Yes ☐ No	
8	☐ Yes ☐ No		☐ Yes ☐ No	
9	☐ Yes ☐ No		☐ Yes ☐ No	
10	☐ Yes ☐ No		☐ Yes ☐ No	
11	☐ Yes ☐ No		☐ Yes ☐ No	
12	☐ Yes ☐ No		☐ Yes ☐ No	
13	☐ Yes ☐ No		☐ Yes ☐ No	
14	☐ Yes ☐ No		☐ Yes ☐ No	

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

☒ Wildlife and vegetation diversity/abundance list.

☒ Photograph of wetland.

☒ Wetland delineation plans showing wetlands, vernal pools, and streams in relation to the impact area and surrounding landscape. Wetland IDs, vernal pool IDs, and stream IDs must be indicated on the plans.

☐ For projects in tidal areas only: additional information required by Env-Wt 603.03/603.04. Please refer to the Coastal Area Worksheet (NHDES-W-06-079) for more information.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Portsmouth Regional Hospital Satellite Parking City/County: Portsmouth / Rockingham Sampling Date: 09/17/2021

Applicant/Owner: Portsmouth Regional Hospital c/o Matthew Larkin State: NH Sampling Point: W2

Investigator(s): Jeremy Degler, Leonard Lord (both CWS) Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Basin Local relief (concave, convex, none): Concave Slope %: 0-10

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.067359 Long: -70.783336 Datum: NAD 83

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8 to 15 percent slopes, rocky (140C) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This is a small, hydrologically isolated wetland located within a small clearing. Data point was taken between wetland flags 2A-1 and 2A-5.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Multiple wetland hydrology indicators were observed during the site investigation.

VEGETATION – Use scientific names of plants. Sampling Point: W2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Rosa multiflora*	25	Yes	FACU
2. *Celastrus orbiculatus*	15	Yes	UPL
3.			
4.			
5.			
6.			
7.			
	40	=Total Cover	
Herb Stratum (Plot size:)			
1. *Lythrum salicaria*	10	Yes	OBL
2. *Solidago rugosa*	10	Yes	FAC
3. *Toxicodendron radicans*	10	Yes	FAC
4. *Euthamia graminifolia*	10	Yes	FAC
5. *Symphyotrichum novae-angliae*	10	Yes	FACW
6. *Bidens spp.*	10	Yes	FACW
7. *Equisetum arvense*	10	Yes	FAC
8. *Onoclea sensibilis*	10	Yes	FACW
9. *Impatiens capensis*	10	Yes	FACW
10. *Juncus effusus*	5	No	OBL
11. *Ranunculus repens*	5	No	FAC
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 81.8% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	40	x 2 =	80
FAC species	45	x 3 =	135
FACU species	25	x 4 =	100
UPL species	15	x 5 =	75
Column Totals:	140 (A)		405 (B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation is dominant and prevalent.

SOIL

Sampling Point: W2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Muck	
10-18	5YR 5/1	90	7.5YR 7/8	10	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Multiple hydric soil indicators were observed during the site investigation.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Portsmouth Regional Hospital Satellite Parking City/County: Portsmouth / Rockingham Sampling Date: 09/17/2021

Applicant/Owner: Portsmouth Regional Hospital c/o Matthew Larkin State: NH Sampling Point: W5

Investigator(s): Jeremy Degler, Leonard Lord (both CWS) Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Basin Local relief (concave, convex, none): Concave Slope %: 0-10

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.066164 Long: -70.785497 Datum: NAD 83

Soil Map Unit Name: Chatfield-Hollis-Canton complex, 8 to 15 percent slopes, rocky (140C) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This is a hydrologically isolated wetland located within an electric utility right-of-way, near the intersection of two roadways. Data point was taken between wetland flags 5A-9 and 5A-18.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ____ High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Multiple wetland hydrology indicators were observed during the site investigation.

VEGETATION – Use scientific names of plants. Sampling Point: W5

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Cornus sericea*	45	Yes	FACW
2. *Rosa multiflora*	10	No	FACU
3.			
4.			
5.			
6.			
7.			
	55 =Total Cover		
Herb Stratum (Plot size:)			
1. *Lythrum salicaria*	35	Yes	OBL
2. *Solidago rugosa*	30	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	45	x 2 =	90
FAC species	30	x 3 =	90
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	120 (A)		255 (B)

Prevalence Index = B/A = 2.13

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation is dominant and prevalent.

SOIL

Sampling Point: W5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					Muck	
12-21	5YR 5/1	90	2.5Y 4/2	10	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Multiple hydric soil indicators were observed during the site investigation.

Tighe&Bond

APPENDIX B

US Army Corps of Engineers ®
New England District

New Hampshire General Permits (GPs)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps 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 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	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 SAS, special wetlands. 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://www2.des.state.nh.us/nhb_datacheck/. The book Natural Community Systems of New Hampshire also contains specific information about the natural communities found in NH.		x
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	N/A	
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.)	N/A	
2.5 The overall project site is more than 40 acres?		x
2.6 What is the area of the previously filled wetlands?	N/A	
2.7 What is the area of the proposed fill in wetlands?	8,720 sf	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?	2.5%	
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://www2.des.state.nh.us/nhb_datacheck/ USFWS IPAC website: https://ecos.fws.gov/ipac/location/index		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: • 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 21?	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?		x
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	N/A	
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (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 11 GC 8(d) of the GP document**	x	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.
** If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

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
http://www.fws.gov/newengland

In Reply Refer To: May 25, 2022
Project Code: 2022-0047365
Project Name: PRH Satellite Parking Lot

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:

Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

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. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

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 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. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat Update - Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines 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 Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. 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/service/section-7-consultations

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) 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. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

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:

https://www.fws.gov/program/migratory-bird-permit

https://www.fws.gov/library/collections/bald-and-golden-eagle-management

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

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: 2022-0047365
Event Code: None
Project Name: PRH Satellite Parking Lot
Project Type: New Constr - Above Ground
Project Description: Proposed approximately 500 parking space parking lot to support the adjacent Hospital
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.066493300000005,-70.78435220450498,14z

Counties: Rockingham 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 Fisheries[1], 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 *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* 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.

IPaC User Contact Information

Agency: Tighe & Bond Inc.
Name: Alexander Sellar
Address: 177 Corporate Drive
City: Portsmouth
State: NH
Zip: 03801
Email asellar@tighebond.com
Phone: 6034338818

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
http://www.fws.gov/newengland

In Reply Refer To: May 25, 2022
Project code: 2022-0047365
Project Name: PRH Satellite Parking Lot

Subject: Consistency letter for the 'PRH Satellite Parking Lot' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Alexander Sellar:

The U.S. Fish and Wildlife Service (Service) received on May 25, 2022 your effects determination for the 'PRH Satellite Parking Lot' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

---

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

PRH Satellite Parking Lot

2. Description

The following description was provided for the project 'PRH Satellite Parking Lot':

> Proposed approximately 500 parking space parking lot to support the adjacent Hospital

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.066493300000005,-70.78435220450498,14z

Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule
This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   No

2. Will your activity purposefully **Take** northern long-eared bats?

   No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered
   No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.

   Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

6. Will the action involve Tree Removal?

   Yes

7. Will the action only remove hazardous trees for the protection of human life or property?

   No

8. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

   No

9. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

   No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type ‘0’ in questions 1-3.

1. Estimated total acres of forest conversion:

3.6

2. If known, estimated acres of forest conversion from April 1 to October 31

.

3. If known, estimated acres of forest conversion from June 1 to July 31

.

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type ‘0’ in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type ‘0’ in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type ‘0’ in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency: Tighe & Bond Inc.
Name: Alexander Sellar
Address: 177 Corporate Drive
City: Portsmouth
State: NH
Zip: 03801
Email asellar@tighebond.com
Phone: 6034338818

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

To: Alex Sellar, Tighe and Bond Engineers
177 Corporate Drive

Portsmouth, NH 03801

From: NH Natural Heritage Bureau
Date: 5/4/2022 (valid until 5/4/2023)
Re: Review by NH Natural Heritage Bureau of request submitted 4/27/2022
Permits: NHDES - Alteration of Terrain Permit, NHDES - Wetland Standard Dredge & Fill - Minor

NHB ID: **NHB22-1544** **Applicant:** Alex Sellar

Location: Portsmouth
Borthwick Ave

Project Description: This project includes the construction of a satellite parking lot to support the adjacent Portsmouth Regional Hospital. The parking lot will create approximately 500 parking spaces and will include additional improvements such as, landscaping, site lighting, EV charging, and stormwater management.

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 4/27/2022 2:05:34 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.

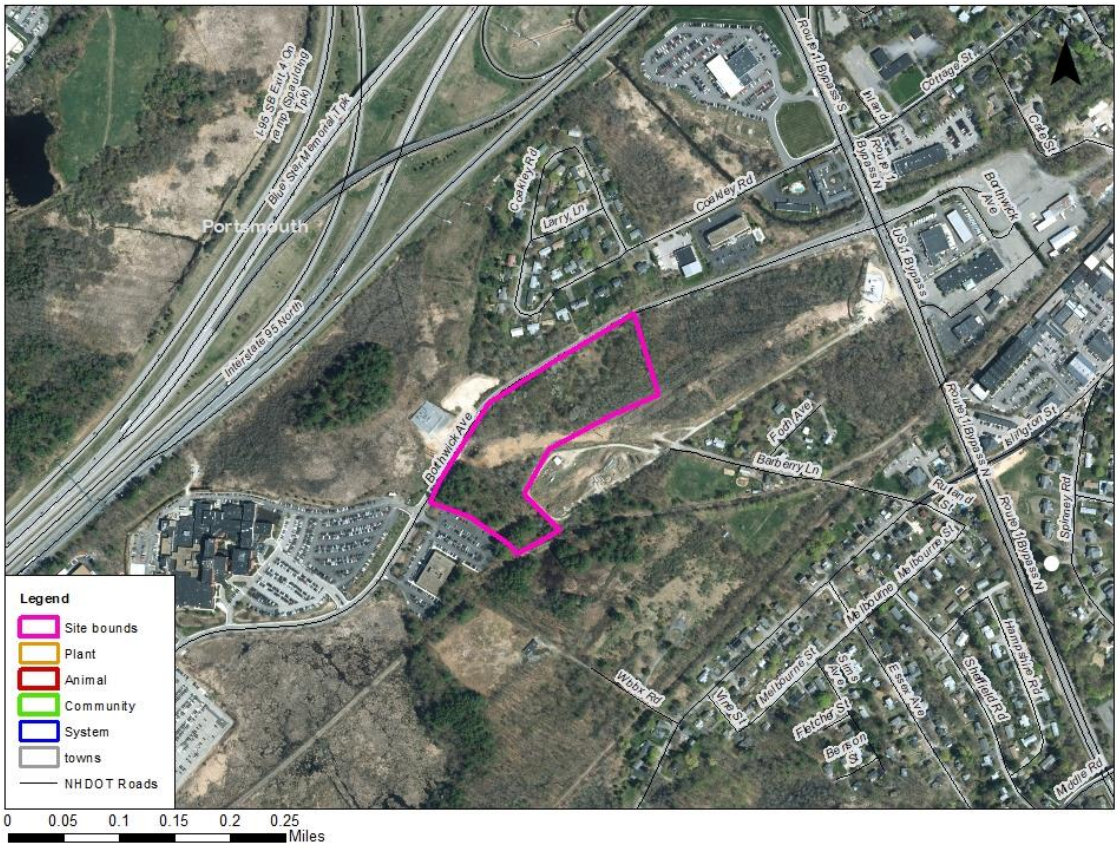
Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: **NHB22-1544**

NHB22-1544



Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attention: Review & Compliance
19 Pillsbury Street, Concord, NH 03301-3570

RECEIVED MAY 26 2022

DHR Use Only	
R&C #	13902
Log In Date	5/26/22
Response Date	6/1/22
Sent Date	6/2/22

Request for Project Review by the New Hampshire Division of Historical Resources

☒ This is a new submittal
☐ This is additional information relating to DHR Review & Compliance (R&C) #:

GENERAL PROJECT INFORMATION

Project Title Portsmouth Regional Hospital Satellite Parking Lot

Project Location Borthwick Avenue

City/Town Portsmouth Tax Map 234 Lot # 7-4A

NH State Plane - Feet Geographic Coordinates: Easting 1219781 Northing 207578.75

(See RPR Instructions and R&C FAQs for guidance.)

Lead Federal Agency and Contact *(if applicable)* N/a
(Agency providing funds, licenses, or permits)
Permit Type and Permit or Job Reference #

State Agency and Contact *(if applicable)* NHDES Wetlands Bureau

Permit Type and Permit or Job Reference # standard dredge/fill

APPLICANT INFORMATION

Applicant Name Portsmouth Regional Hospital c/o Matthew Larkin

Mailing Address 333 Borthwick Avenue Phone Number 603 436 5110

City Portsmouth State NH Zip 03801 Email Matthew.Larkin@hcahealthcare.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Alex Sellar

Mailing Address 177 Corporate Drive Phone Number 6034338818

City Portsmouth State NH Zip 03801 Email asellar@tighebond.com

This form is updated periodically. Please download the current form at www.nh.gov/nhdhr/review. *Please refer to the Request for Project Review Instructions for direction on completing this form.* Submit one copy of this project review form for each project for which review is requested. Please include a self-addressed stamped envelope. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, additional information will be needed to complete the Section 106 review. All items and supporting documentation submitted with a review request, including photographs and publications, will be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process and the DHR's role in it, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at marika.s.labash@dncr.nh.gov or 603.271.3558.

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

Project Boundaries and Description

- ☒ Attach the Project Mapping ***using EMMIT or relevant portion of a 7.5' USGS Map.*** *(See RPR Instructions and R&C FAQs for guidance.)*
- ☒ Attach a detailed narrative description of the proposed project.
- ☒ Attach a site plan. The site plan should include the project boundaries and areas of proposed excavation.
- ☒ Attach photos of the project area (overview of project location and area adjacent to project location, and specific areas of proposed impacts and disturbances.) *(Informative photo captions are requested.)*
- ☒ A DHR records search must be conducted to identify properties within or adjacent to the project area. Provide records search results via EMMIT or in **Table 1**. *(Blank table forms are available on the DHR website.)* Please note, using EMMIT Guest View for an RPR records search does not provide the necessary information needed for DHR review.
  EMMIT or in-house records search conducted on / / .

Architecture

Are there any buildings, structures (bridges, walls, culverts, etc.) objects, districts or landscapes within the project area? ☒ Yes ☐ No
If no, skip to Archaeology section. If yes, submit all of the following information:

Approximate age(s): unknown

- ☒ Photographs of ***each*** resource or streetscape located within the project area, with captions, along with a mapped photo key. (Digital photographs are accepted. All photographs must be clear, crisp and focused.)
- ☐ If the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures, provide additional photographs showing detailed project work locations. (i.e. Detail photo of windows if window replacement is proposed.)

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☒ Yes ☐ No
If yes, submit all of the following information:

- ☒ Description of current and previous land use and disturbances.
- ☒ Available information concerning known or suspected archaeological resources within the project area (such as cellar holes, wells, foundations, dams, etc.)

Please note that for many projects an architectural and/or archaeological survey or other additional information may be needed to complete the Section 106 process.

DHR Comment/Finding Recommendation *This Space for Division of Historical Resources Use Only*

☐ Insufficient information to initiate review. ☐ Additional information is needed in order to complete review.

☐ No Potential to cause Effects ☑ No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect

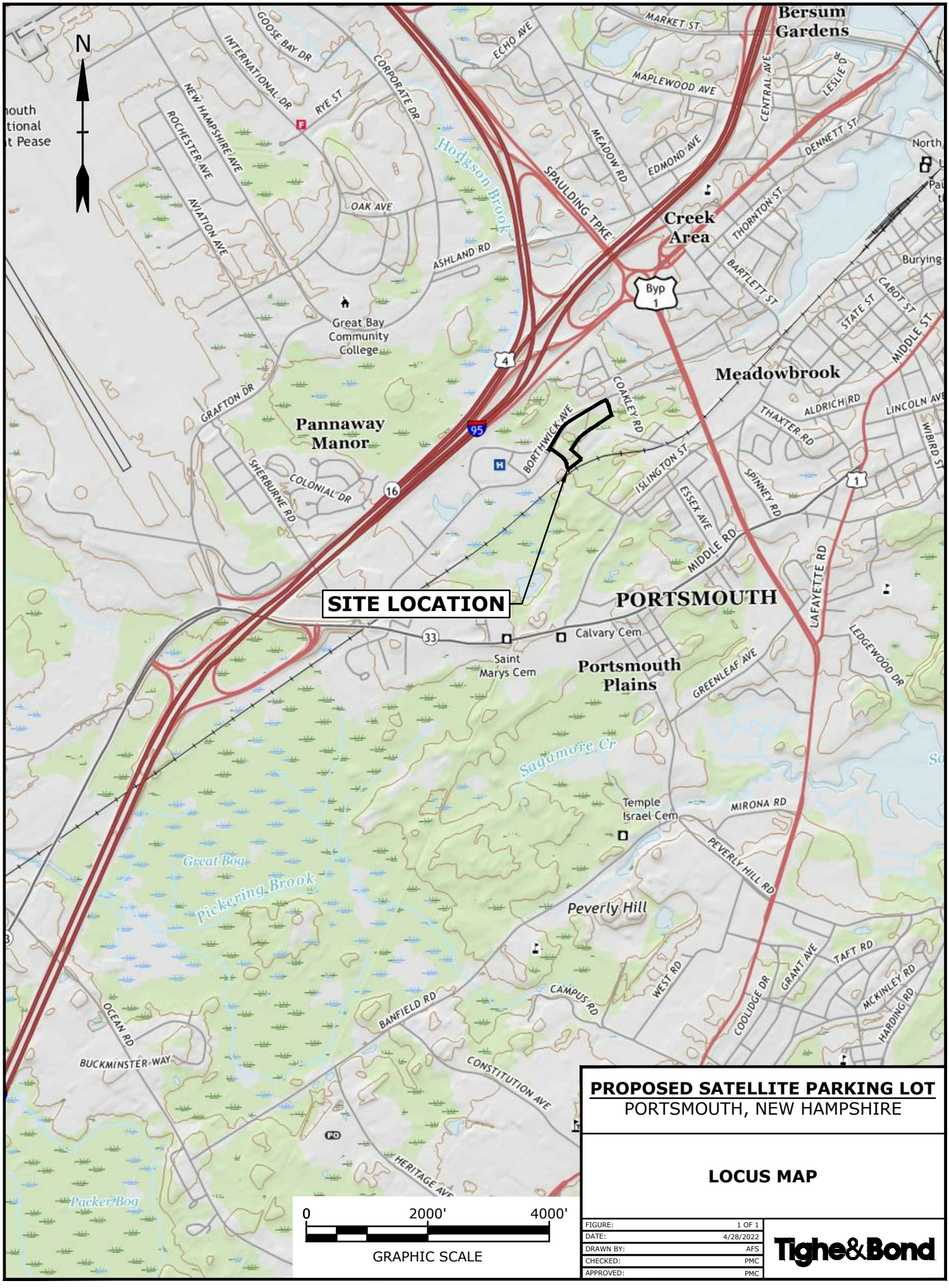
Comments: _____

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized Signature: Nadine Miller, DSHPO Date: 6/1/22

Tighe&Bond

APPENDIX C



PROPOSED SATELLITE PARKING LOT
PORTSMOUTH, NEW HAMPSHIRE

LOCUS MAP

FIGURE:	1 OF 1
DATE:	4/28/2022
DRAWN BY:	AFS
CHECKED:	PMC
APPROVED:	PMC

Tighe&Bond

Abutter:
Tax Map 234, Lot 7-5A
90 Coakley Road
Mitchell Joseph R 94 TR
Mitchell Ruth V 94 TR
50 Fox PT Rd
Newington, NH 03801
Book 3409, Page 2525

Abutter:
Tax Map 234, Lot 7-5B
92 Coakley Road
Johnson Paul R
Johnson Breegan
92 Coakley Road
Portsmouth, NH 03801
Book 5638, Page 2084

Abutter:
Tax Map 234, Lot 7-5C
94 Coakley Road
Howard Stephen A
94 Coakley Road
Portsmouth, NH 03801
Book 3399, Page 0661

Abutter:
Tax Map 234, Lot 7-3
445 Borthwick Avenue
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801
Book 4211, Page 1155

Project Location:
Tax Map 234, Lot 7-4A
Address to be determined
HCA Realty Inc c/o Ducharme
McMillen & Assoc - HCA NH
PO Box 80610, Indianapolis, IN 46280
Book 4400, Page 2048

Abutter:
Tax Map 240, Lot 2-2
330 Borthwick Avenue
HCA Realty Inc c/o Ducharme
McMillen & Assoc - HCA NH
PO Box 80610, Indianapolis,
IN 46280
Book 8556, Page 1756

Abutter:
Tax Map 234, Lot 7-7
Borthwick Avenue
Public Service Co of NH
PO Box 270
Hartford, CT 06141
Book 5548, Page 0738

Abutter:
Tax Map 165, Lot 14
Address "Bartlett"
Boston and Maine Corp
Iron Horse PK High St.,
No Billerica, MA 01862
Book 0, Page 0

Abutter:
Tax Map 234, Lot 1
139 Barberry Lane
Northern Utilities Inc
Accounts Payable
6 Liberty Ln West,
Hampton, NH 03842
Book 0, Page 0

Abutter:
Tax Map 234, Lot 2
Barberry Lane
Public Service Co of NH
PO Box 270
Hartford, CT 06141
Book 5548, Page 0738

Partial Legend

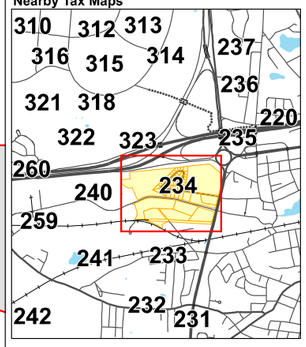
See the cover sheet for the complete legend.

- 7-5A — Lot or lot-unit number
- 2.56 ac — Parcel area in acres (ac) or square feet (sf)
- 25 — Address number
- 233-137 — Parcel number from a neighboring map
- 68' — Parcel line dimension
- SIMS AVE — Street name
- Parcel/Parcel boundary
- Parcel/ROW boundary
- Water boundary
- Structure (1994 data)
- Parcel covered by this map
- Parcel from a neighboring map (see other map for current status)

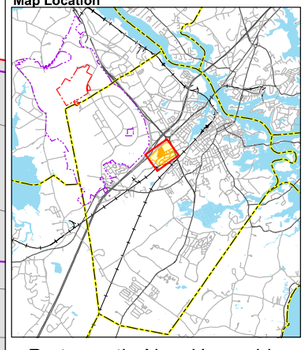
0 50 100 200 300 Feet
0 20 40 80 Meters

This map is for assessment purposes only. It is not intended for legal description or conveyance.
Parcels are mapped as of April 1.
Building footprints are 2006 data and may not represent current structures.
Streets appearing on this map may be paper (unbuilt) streets.
Lot numbers take precedence over address numbers. Address numbers shown on this map may not represent posted or legal addresses.

Nearby Tax Maps



Map Location



Portsmouth, New Hampshire
2021

Tax Map 234

Portsmouth Regional Hospital
Proposed Parking Expansion Project - Wetland Delineation
Borthwick Avenue, Portsmouth, New Hampshire

TO: Patrick Crimmins

FROM: Jeremy Degler, CWB, CWS, PWS

DATE: October 14, 2021

On September 17, 2021, Tighe & Bond conducted wetland delineations within 100± feet of Lot 7-4A (approximately 9.1 acres, Tax Map 234) located directly south of Borthwick Avenue and northeast of Portsmouth Regional Hospital in Portsmouth, NH. The hospital is proposing to construct a new satellite parking lot within this parcel (up to 480 spaces), which potentially includes a bus shelter, site lighting, security cameras, and stormwater management.

Methods

Wetland delineations were completed in accordance with the procedures outlined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1 (January 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (January 2012). Wetland classifications were made following *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979). Sequentially numbered plastic flagging was used to demarcate wetland boundaries for a surveyor to locate at a later date.

Jurisdictional Area Descriptions

A total of five (5) wetland areas were delineated within 100± feet of Lot 7-4A (Photographs 1-8, attached). Below is a description of each jurisdictional area.

Wetland Area 1

Wetland Area 1 is the large system (Photographs No. 1-4) primarily located within and to the north of the electric utility right-of-way which cuts through the subject property before changing direction and running along the southern property boundary line. The wetland boundary was marked in the field with wetland flags 1A-1 to 1A-28 and 1B-1 to 1B-16. The eastern portion of this wetland system extends north to Borthwick Avenue. This area contains poorly drained marine sediment soils with a histic epipedon (10YR 2/1, 3/1) situated over a depleted matrix (5YR 5/1) with redoximorphic features (7.5YR 7/8). The wetland hydrology indicators observed at the time of the site visit were standing surface water, a high water table, soil saturation, iron deposits, water-stained leaves, oxidized rhizospheres on living roots, drainage patterns, and microtopographic relief. The hydrophytic plant community was dominated by American elm (*Ulmus americana*), red maple (*Acer rubrum*), white ash (*Fraxinus americana*), honeysuckle (*Lonicera* spp.), sensitive fern (*Onoclea sensibilis*), poison ivy (*Toxicodendron radicans*), purple loosestrife (*Lythrum salicaria*), arrowleaf tearthumb (*Persicaria sagittata*), winterberry (*Ilex verticillata*), highbush blueberry (*Vaccinium corymbosum*), red osier dogwood (*Cornus sericea*), green bulrush (*Scirpus atrovirens*), white turtlehead (*Chelone glabra*), New England aster (*Symphyotrichum novae-angliae*), various sedges (*Carex* spp.), and soft rush (*Juncus effusus*). This wetland is classified as palustrine

emergent, persistent, and seasonally flooded/saturated (PEM1E) with scattered areas better classified as palustrine scrub-shrub, broad-leaved deciduous, and seasonally flooded/ saturated (PSS1E), and the northern areas (including flagging series 1B) and edges best classified as palustrine forested, broad-leaved deciduous, and seasonally flooded/saturated (PFO1E).

Wetland Area 2

Wetland Area 2 is hydrologically isolated from and lies north of Wetland 1 and approximately 30 feet to the south of Borthwick Avenue (Photograph No. 5). This wetland is fed from a culvert which flows from the north beneath the roadway. The wetland boundary was marked in the field with wetland flags 2A-1 to 2A-10. This wetland is dominated by the same poorly drained marine sediment soils with a histic epipedon (10YR 2/1, 3/1) situated over a depleted matrix (5YR 5/1) with redoximorphic features (7.5YR 7/8), and the wetland hydrology indicators observed at the time of the site visit included soil saturation, water-stained leaves, and microtopographic relief. The plant community was dominated by multiflora rose (*Rosa multiflora*), poison ivy, purple loosestrife, roughstem goldenrod (*Solidago rugosa*), grass-leaved goldenrod (*Euthamia graminifolia*), New England aster, beggarticks (*Bidens* spp.), horsetail (*Equisetum* sp.), sensitive fern, jewelweed (*Impatiens capensis*), soft rush, creeping buttercup (*Ranunculus repens*), and oriental bittersweet (*Celastrus orbiculatus*). This wetland is classified as palustrine emergent, persistent, and seasonally flooded/saturated (PEM1E).

Wetland Area 3

Wetland Area 3 is manmade and lies between the active and inactive Boston & Maine railroad beds, located south of the fenced Unitil property (Photograph No. 6). The wetland boundary was marked in the field with wetland flags 3A-1 to 3A-7. This area contains poorly drained mucky (hemic, 10YR 2/1) organic soils situated over a gravel/riprap restrictive layer. The wetland hydrology indicators observed at the time of the site visit were deep surface water, a high water table, soil saturation, water marks, iron and drift deposits, water-stained leaves, oxidized rhizospheres on living roots, drainage patterns, geomorphic position, and microtopographic relief. The plant community was dominated by red maple, American elm, flowering dogwood (*Cornus florida*), highbush blueberry, winterberry, honeysuckle, red oak (*Quercus rubra*), Virginia creeper, poison ivy, jewelweed, soft rush, and horsetail. This wetland is classified as palustrine forested, broad-leaved deciduous, and seasonally flooded (PFO1C).

Wetland Area 4

Wetland Area 4 is partially manmade and lies north of the inactive Boston & Maine railroad bed, located southwest of the fenced Unitil property (Photograph No. 7). The wetland boundary was marked in the field with wetland flags 4A-1 to 4A-11. This area contains the same poorly drained mucky (hemic, 10YR 2/1) organic soils as Wetland Area 3, also situated over a gravel/riprap restrictive layer. The wetland hydrology indicators observed at the time of the site visit were deep surface water, a high water table, soil saturation, water marks, iron and drift deposits, water-stained leaves, oxidized rhizospheres on living roots, drainage patterns, geomorphic position, and microtopographic relief. The plant community was dominated by red maple, white ash, red oak, staghorn sumac (*Rhus typhina*), honeysuckle, winterberry, highbush blueberry, witch hazel (*Hamamelis virginiana*), jewelweed, multiflora rose, narrowleaf cattail (*Typha angustifolia*), Virginia creeper, oriental bittersweet, poison ivy, green bulrush, and horsetail. This wetland is classified as palustrine forested, broad-leaved deciduous, and seasonally flooded (PFO1C).

Wetland Area 5

Wetland Area 5 appears to be manmade and is located south of Borthwick Avenue at the intersection of Eileen Dondero Foley Avenue. Wetland 5 is hydrologically isolated from other delineated wetland resource areas (Photograph No. 8). The wetland boundary was marked in the field with wetland flags 5A-1 to 5A-20. This wetland is dominated by the same poorly drained marine sediment soils with a histic epipedon (10YR 3/2) situated over a depleted matrix (5YR 5/1) with redoximorphic features (2.5Y 4/2), and the wetland hydrology indicators observed at the time of the site visit included pockets of standing water, soil saturation, water-stained leaves, and microtopographic relief. The plant community was dominated by multiflora rose, purple loosestrife, roughstem goldenrod and red osier dogwood. This wetland is classified as palustrine scrub/shrub, persistent, and seasonally flooded/saturated (PSS1E).

Conclusions

Five (5) wetland areas were delineated within 100± feet of the existing stormwater retention pond. These areas are subject to federal, state, and local jurisdiction. According to the City of Portsmouth Zoning Regulations (10.1014.12), all created wetlands (Wetlands 3 and 4) are considered wetlands and would need to be permitted as such.

\\tighebond.com\data\data\projects\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Wetlands\PRH Parking Expansion - Delineation Report - Draft.docx

Photographic Log

Client: Portsmouth Regional Hospital **Job Number:** P0616-005

Site: Proposed Parking Expansion Project, Borthwick Avenue, Portsmouth, New Hampshire

Photograph No.: 1	**Date:** 09/17/2021	**Direction Taken:** South
Description: Overview of the southwestern portion of Wetland 1 (PEM/SS1E), located within and along the edge of the utility right-of-way south of Borthwick Avenue and northeast of Barberry Lane.		

Photograph No.: 2	**Date:** 09/17/2021	**Direction Taken:** South
Description: Overview of the forested western portion of Wetland 1 (PFO1E), located north of the utility right-of-way and south of Borthwick Avenue. This portion was flagged in the field as series 1B.		

Photographic Log

Client: Portsmouth Regional Hospital **Job Number:** P0616-005

Site: Proposed Parking Expansion Project, Borthwick Avenue, Portsmouth, New Hampshire

Photograph No.: 3	**Date:** 09/17/2021	**Direction Taken:** Southeast
Description: Overview of the southeastern portion of Wetland 1 (PSS/FO1E), located within and along the edge of the utility right-of-way south of Borthwick Avenue and north of Barberry Lane.		

Photograph No.: 4	**Date:** 09/17/2021	**Direction Taken:** South
Description: Overview of the northeastern portion of Wetland 1 (PSS/FO1E), located north of the utility right-of-way. A roadside ditch along Borthwick Avenue drains into this portion of Wetland 1.		

Photograph No.: 5	**Date:** 09/17/2021	**Direction Taken:** Southwest
Description: Overview of Wetland 2 (PEM1E), which lies north of and is hydrologically isolated from Wetland 1, and approximately 30 feet south of Borthwick Avenue. This wetland is fed via culvert.		

Photograph No.: 6	**Date:** 09/17/2021	**Direction Taken:** Southwest
Description: Overview of Wetland 3 (PFO1C), which lies between the active and inactive Boston & Maine railroad beds, south of the fenced Unitil property.		

Photographic Log

Client: Portsmouth Regional Hospital **Job Number:** P0616-005

Site: Proposed Parking Expansion Project, Borthwick Avenue, Portsmouth, New Hampshire

Photograph No.: 7	**Date:** 09/17/2021	**Direction Taken:** Northeast
Description: Overview of Wetland 4 (PFO1C), which lies north of the inactive Boston & Maine railroad bed, southwest of the fenced Unitil property.		

Portsmouth Regional Hospital Satellite Parking Lot Construction Sequence

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. FILE A CONSTRUCTION NOTICE WITH THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.
2. CUT AND CLEAR TREES.
3. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
    - NEW CONSTRUCTION
    - DEVELOPMENT OF BORROW PIT AREAS
    - DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE
    - FLOOD PLAIN EXCAVATION WORK
    - STREAM CHANNEL MODIFICATIONS
    - CONTROL OF DUST
    - CONSTRUCTION OF ACCESS AND HAUL ROAD
    - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
    - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
4. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
5. CLEAR AND DISPOSE OF DEBRIS.
6. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
7. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
9. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
10. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
11. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
12. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
13. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
14. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

Owner's/Agent Letter of Authorization

This letter is to Authorize Tighe & Bond, Inc. (Civil Engineer), to represent and submit on behalf of Portsmouth Regional Hospital (Applicant), applications and materials in all site design and permitting matters for the proposed project at the east corner between Borthwick Ave and Eileen Dondero Foley Ave. This project includes the construction of a satellite parking lot, and associated site and stormwater improvements. This authorization shall relate to those activities that are required for local, state, and federal permitting for the above project and include and required signatures for those applications.

Signature	DEAN M. CARUCCI Print Name	3.16.22 Date
Witness	MATTHEW P. LARKIN Print Name	3.16.2022 Date

Tighe&Bond

APPENDIX D

Abutters List
Portsmouth Regional Hospital Satellite Parking Lot
Portsmouth, New Hampshire

PROJECT LOCATION	**MAP #**	**LOT #**
Borthwick Avenue Portsmouth, NH 03801	234	7-4A

ABUTTERS	**MAP #**	**LOT #**
330 Borthwick Avenue HCA Realty Inc c/o Ducharme McMillen & Assoc – HCA NH PO Box 80610 Indianapolis, IN 46280	240	2-2
Bartlett Boston and Maine Corp Iron Horse PK High St. No Billerica, MA 01862	165	14
139 Barberry Lane Northern Utilities Inc Accouts Payable 6 Liberty Ln West Hampton, NH 03842	234	1
Barberry Lane Public Service Co of NH PO Box 270 Hartford, CT 06141	234	2
Bortwick Avenue Public Service Co of NH PO Box 270 Hartford, CT 06141	234	7-7
94 Coakley Road Howard Stephen A 94 Coakley Road Portsmouth, NH 03801	234	7-5C
92 Coakley Road Johnson Paul R, Johnson Breegan 92 Coakley Road Portsmouth, NH 03801	234	7-5B
90 Coakley Road Mitchell Joseph R 94 TR, Mitchell Ruth V 94 TR 50 Fox PT Rd Newington, NH 03801	234	7-5A

445 Borthwick Avenue City of Portsmouth 1 Junkins Avenue Portsmouth, NH 03801	234	7-3
OWNER HCA Realty Inc c/o Ducharme McMillen & Assoc – HCA NH PO Box 80610 Indianapolis, IN 46280	234	7-4A

APPLICANT
Portsmouth Regional Hospital (subsidiary of HCA Healthcare Inc.)

ENGINEER
Tighe & Bond, Inc.
177 Corporate Drive
Portsmouth, NH 03801

(7.1_Abutters list.docx)

PUBLIC NOTICE

NOTICE OF INTENT TO FILE

Please take notice that Portsmouth Regional Hospital (subsidiary to HCA Healthcare Inc.) is intending to file a Wetland Application – Standard Dredge and Fill Wetlands Permit Application with the New Hampshire Department of Environmental Services for a proposed satellite parking lot to be constructed at the parcel identified as Lot 7-4A on Map 234 at the northeast corner of Borthwick Avenue and Eileen Dondero Foley Avenue in Portsmouth, New Hampshire.

The proposed project consists of the construction of an approximately 501 space parking lot with associated site improvements. This additional parking is to support Portsmouth Regional Hospital's existing facility and to allow for future growth in patient care.

The proposed condition will result in 8,720 square feet of permanent wetland impacts to on site wetlands.

Plans and details of this application are on file, for your review, at the City of Portsmouth Clerk's Office, 1 Junkins Avenue, Portsmouth, New Hampshire (8:00am - 4:30pm) or at the NHDES Wetlands Bureau, 29 Hazen Drive, Concord, New Hampshire (8:00am - 4:00pm).

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City, State, ZIP+4®: PORTSMOUTH, NH 03801

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HARTFORD, CT 06141

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Tighe&Bond

APPENDIX E

PROPOSED SATELLITE PARKING LOT

PORTSMOUTH, NEW HAMPSHIRE

BORTHWICK AVENUE & EILEEN DONDERO FOLEY AVENUE

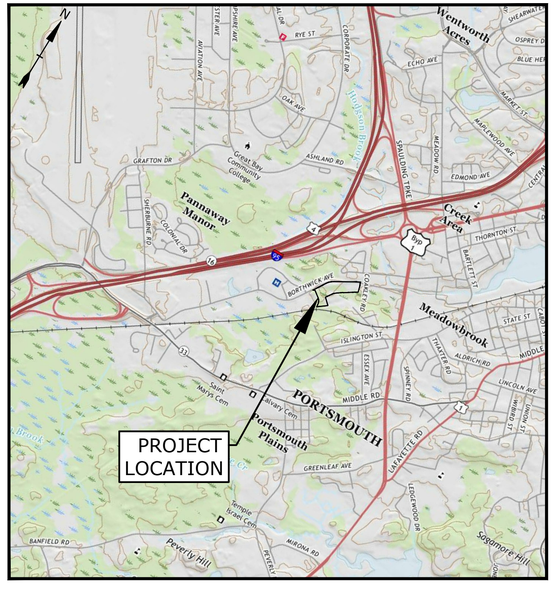
PERMIT DRAWINGS

MARCH 22, 2022

LAST REVISED MAY 23, 2022

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	05/23/2022
1 OF 2	EXISTING CONDITIONS PLAN	03/22/2022
2 OF 2	EXISTING CONDITIONS PLAN	03/22/2022
G-101	GENERAL NOTES, ABBREVIATIONS, & LEGEND SHEET	05/23/2022
C-101	DEMOLITION PLAN	05/23/2022
C-102	OVERALL PARKING PLAN	05/23/2022
C-102.1	SITE PLAN	05/23/2022
C-103	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	05/23/2022
C-104	UTILITY PLAN	05/23/2022
C-105	LANDSCAPE PLAN	05/23/2022
C-106	PHOTOMETRICS PLAN	05/23/2022
C-501	EROSION CONTROL NOTES & DETAILS SHEET	05/23/2022
C-502	DETAILS SHEET	05/23/2022
C-503	DETAILS SHEET	05/23/2022
C-504	DETAILS SHEET	05/23/2022
C-505	DETAILS SHEET	05/23/2022
C-506	DETAILS SHEET	05/23/2022
C-507	DETAILS SHEET	05/23/2022
C-508	DETAILS SHEET	05/23/2022
C-509	DETAILS SHEET	05/23/2022
C-510	DETAILS SHEET	05/23/2022

LIST OF PERMITS		
FEDERAL	STATUS	DATE
CONSTRUCTION GENERAL PERMIT (CGP) & NOI		
LOCAL		
SITE PLAN REVIEW PERMIT		
ZONING BOARD OF ADJUSTMENT - SPECIAL EXCEPTION & VARIANCE	APPROVED	2/23/2022
STATE		
NHDES STANDARD DREDGE AND FILL WETLAND IMPACT PERMIT		
NHDES ALTERATION OF TERRAIN		



LOCATION MAP
SCALE: 1" = 2,000'

CONSTRUCTION NOTES:
1. THE CONTRACTOR SHALL NOT RELY ON SCALED DIMENSIONS AND SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A REQUIRED DIMENSION IS NOT PROVIDED ON THE PLANS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, AND FOR SITE CONDITIONS THROUGHOUT CONSTRUCTION. NEITHER THE PLANS NOR THE SEAL OF THE ENGINEER AFFIXED HEREON EXTEND TO OR INCLUDE SYSTEMS REQUIRED FOR THE SAFETY OF THE CONTRACTOR, THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND IMPLEMENTING SAFETY PROCEDURES AND SYSTEMS AS REQUIRED BY THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND ANY STATE OR LOCAL SAFETY REGULATIONS.
3. TIGHE & BOND. ASSUMES NO RESPONSIBILITY FOR ANY ISSUES LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION OF TIGHE & BOND.

PREPARED BY:
Tighe&Bond
177 Corporate Drive
Portsmouth, NH 03801
(603) 433-8818

BRADLEE MEZQUITA, PE
STATE OF NEW HAMPSHIRE – BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER

PATRICK M. CRIMMINS, PE
STATE OF NEW HAMPSHIRE – PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER 5-23-22

APPLICANT:
Portsmouth Regional Hospital
333 Borthwick Avenue
Portsmouth, NH 03801

OWNER:
HCA Realty Inc.
c/o Ducharme Mcmillen & Assoc - HCA NH
PO Box 80610
Indianapolis, IN 46280

SURVEY CONSULTANT:
DOUCET SURVEY LLC
Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

811 DigSafe MA-ME-NH-RI-VT

COMPLETE SET 21 SHEETS

Last Save Date: May 17, 2022 4:48 PM By: ASELLAR
Plot Date: Monday, May 23, 2022 4:49 PM By: Alexander Seller
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Drawings, Figures\AutoCAD\Sheet\P0616-005_CS.dwg Layout Tab: CS

NOTES:

1. REFERENCE: TAX MAP 234, LOT 7-4A
BORTHWICK AVENUE EXTENSION
PORTSMOUTH, NEW HAMPSHIRE
D.S. PROJECT NO. 2826

2. TOTAL PARCEL AREA: 395,745 SQ. FT. OR 9.09 AC.

3. OWNER OF RECORD: HCA REALTY INC.
C/O DUCHARME MCMILLEN & ASSOC. – HCA NH
PO BOX 80610
INDIANAPOLIS, IN 46280
R.C.R.D BOOK 4400 PAGE 2048, BOOK 4639 PAGE 2128.

4. TOPOGRAPHY SHOWN HEREON IS BASED ON A COMBINATION OF AERIAL MAPPING BY EASTERN TOPOGRAPHICS IN 5/03 AND CONVENTIONAL SURVEY BY DOUCET SURVEY, SEE NOTE 5. EXCEPT FOR THE NOTED AREA, NO ADDITIONAL UPDATES WERE DONE TO THE AERIAL TOPOGRAPHY FROM 2003.

5. FIELD SURVEY PERFORMED BY DOUCET SURVEY AT VARIOUS TIMES BETWEEN 2003 & 2021.

6. JURISDICTIONAL WETLANDS DELINEATED BY TIGHE & BOND, DURING MONTH YEAR IN ACCORDANCE WITH 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 AND THE INTERIM REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION (OCTOBER, 2009).

7. FLOOD HAZARD ZONE: "X", PER FIRM MAP #33015C0260F, DATED 1/29/2021.

8. HORIZONTAL DATUM IS BASED ON NH STATE PLANE COORDINATE SYSTEM. AS ESTABLISHED BY JAMES VERRA & ASSOCIATES IN MAY 2003.

9. VERTICAL DATUM IS BASED ON NGVD 29.

10. THE PARCEL IS SUBJECT TO, AND/OR IN BENEFIT OF THE FOLLOWING EASEMENTS, RESTRICTIONS, ETC.
    A. SUBJECT TO AN ELECTRIC EASEMENT GRANTED BY SAN ANTONIO ET AL TO NH ELECTRIC CO, SEE R.C.R.D. BOOK 1230, PAGE 222.
    B. SUBJECT TO A GAS LINE EASEMENT RESERVED BY NORTHERN UTILITIES, INC., SEE R.C.R.D. BK. 4392 PG. 110
    C. SUBJECT TO AN ACCESS AND UTILITY EASEMENT RESERVED BY ISLINGTON WOODS, LLC, SEE R.C.R.D. BOOK 4639 PAGE 2128.
    D. SUBJECT TO THE RIGHTS OF THE CITY OF PORTSMOUTH TO CONSTRUCT & MAINTAIN A SEWER LINE, SEE R.C.R.D. BOOK 4685, PAGE 553.
    E. SUBJECT TO AN "AGREEMENT REGARDING PROHIBITED USES", SEE R.C.R.D. BOK. 4400 PG. 2051.
    F. ALL OTHER RIGHTS OR EASEMENTS OF RECORD OR OTHERWISE. THIS PLAN DOES NOT REPRESENT A TITLE EXAMINATION, AND NONE WAS PROVIDED.

11. PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 2' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND DOUCET SURVEY, INC. WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER.

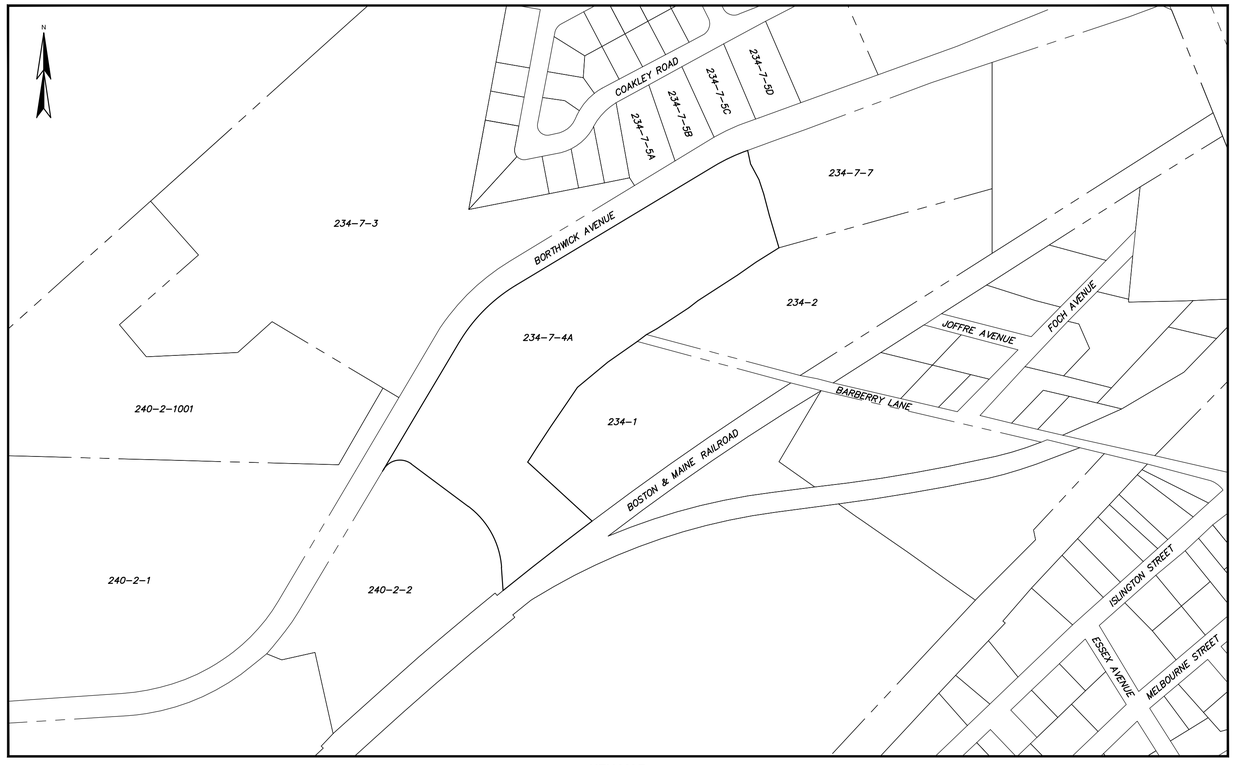
12. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVED PHYSICAL EVIDENCE AND PAINT MARKS FOUND ON-SITE.

13. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING; THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC.

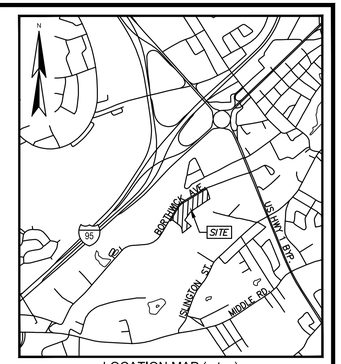
14. ALL UNDERGROUND UTILITIES (ELECTRIC, GAS, TEL. WATER, SEWER DRAIN SERVICES) ARE SHOWN IN SCHEMATIC FASHION, THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.

REFERENCE PLANS:

1. "LOT LINE REVISION PLAN FOR PORTSMOUTH HOSPITAL OFFICE BUILDING ASSOCIATION, ISLINGTON WOODS, LLC AND HCA REALTY, INC. (TAX MAP 234, LOTS 7-4A & 7-4B) (TAX MAP 240, LOT 2-2) BORTHWICK AVENUE EXTENSION PORTSMOUTH, NEW HAMPSHIRE" DATED 1/13/06 BY DOUCET SURVEY, INC., R.C.R.D. PLAN D-33642.
2. "SUBDIVISION & LOT LINE REVISION PLAN BETWEEN NORTHERN UTILITIES, INC. AND ISLINGTON WOODS, LLC," BY DOUCET SURVEY, INC., DATED FEBRUARY 25, 2004, R.C.R.D. PLAN D-31871.
3. "GAS LINE AS-BUILT EASEMENT AND CONSERVATION EASEMENT PLAN," BY KIMBALL CHASE COMPANY, INC. DATED 10/31/85, R.C.R.D. PLAN D-15830.
4. "PLAT OF PROPERTY AND IMPROVEMENTS FOR HCA REALTY, INC.," BY CESP, INC. DATED DECEMBER 12, 1986, R.C.R.D. PLAN D-15831.
5. "EASEMENT PLAN FOR ISLINGTON WOODS, LLC AND BOSTON & MAINE CORPORATION BETWEEN ISLINGTON ST. & BORTHWICK AVE. EXT. (TAX MAP 223 LOT 113 & TAX MAP 234 LOT 7-4B) PORTSMOUTH, NEW HAMPSHIRE" DATED 10/20/2005 BY DOUCET SURVEY, INC., R.C.R.D. PLAN D-33500.
6. "LOT LINE REVISION PLAN LAND OF SEARAY REALTY, LLC TAX AMP 234 LOTS 2, 3, & 7-7 US ROUTE 1 BY-PASS & BARBERRY LANE PORTSMOUTH, NEW HAMPSHIRE. DATED 3/12/2014 BY DOUCET SURVEY, INC., R.C.R.D. PLAN D-38435.
7. "SUBDIVISION & EASEMENT PLAN LAND OF BORTHWICK FOREST, LLC (TAX MAP 241, LOT 25) AND SHOWING LAND OF HCA REALTY, INC. (TAX MAP 234, LOT 7-4A) (TAX MAP 240 LOT 2-2102) BORTHWICK AVE. & ISLINGTON ST. PORTSMOUTH, NH" DATED 11/12/2019 BY DOUCET SURVEY, INC., R.C.R.D. PLAN D-42049



KEY MAP



LOCATION MAP (n.t.s.)

LEGEND: AERIAL DATA

BUILDINGS	UTILITY POLE
STRUCTURE	U.P.? UTILITY POLE OBSCURED
TREELINE	HYDRANT
TRAIL/WALK	MEDIUM LONE TREE
DRIVEWAY	SMALL LONE TREE
DRIVEWAY OBSCURED	SIGN
CURBING	POST
PAVED ROAD	SIGN
PAVED ROAD OBSCURED	
GRAVEL ROAD	
DRAINAGE OBSCURED	
FENCE OBSCURED	
FENCE	
PIPELINE	
PILE LIMIT	
STONE WALL	
DITCH	
TRAIL/WALK OBSCURED	
HEADWALL	
CONCRETE	
RAILROAD	
RAILROAD OBSCURED	

LEGEND

LOT LINE	SIGN
APPROXIMATE ABUTTERS LOT LINE	SIGN (TWO POSTS)
EXISTING EASEMENT LINE	DRILL HOLE FOUND
STONE WALL	IRON PIPE/ROD FOUND
REMNANT STONE WALL	FIRE HYDRANT
OHW OVERHEAD WIRE	WATER GATE VALVE
SS SEWER LINE	IRRIGATION CONTROL VALVE
SD DRAIN LINE	GAS GATE VALVE
CULVERT	CATCH BASIN
G GAS LINE	DRAIN MANHOLE
100 MAJOR CONTOUR LINE (SEE NOTE 5)	F.E.S FLARED END SECTION
98 MINOR CONTOUR LINE (SEE NOTE 5)	SEWER MANHOLE
TREE LINE	HAND HOLE
EDGE OF WETLAND (SEE NOTE 6)	DECIDUOUS TREE
EDGE OF WETLAND AS PROVIDED BY CLIENT (NOT SURVEY LOCATED)	MAST ARM
WETLAND AREA	RAIL ROAD SIGNAL
CONCRETE	D.H.F. DRILL HOLE FOUND
RIP RAP	EP EDGE OF PAVEMENT
LANDSCAPED AREA	EOG EDGE OF GRAVEL
LEDGE OUTCROP	VGC VERTICAL GRANITE CURB
XW REFERENCED WATER LINE	SWL SINGLE WHITE LINE
UTILITY POLE	DYL DOUBLE YELLOW LINE
UTILITY POLE & GUY WIRE	EM ELECTRIC METER
UTILITY POLE W/LIGHT	

200 0 200 400
SCALE: 1 INCH = 200 FT.

EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
OF
TAX MAP 234 LOT 7-4A
BORTHWICK AVENUE EXTENSION
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
1	3/22/22	UPDATE WETLANDS PER CLIENT	SVM

DRAWN BY:	W.D.C.	DATE:	OCTOBER 2021
CHECKED BY:	S.V.M.	DRAWING NO.	2826B
JOB NO.	2826	SHEET	1 OF 2

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR
NO. 916
STEVEN V. MICHAUD
SIGNATURE

DOUCET SURVEY LLC
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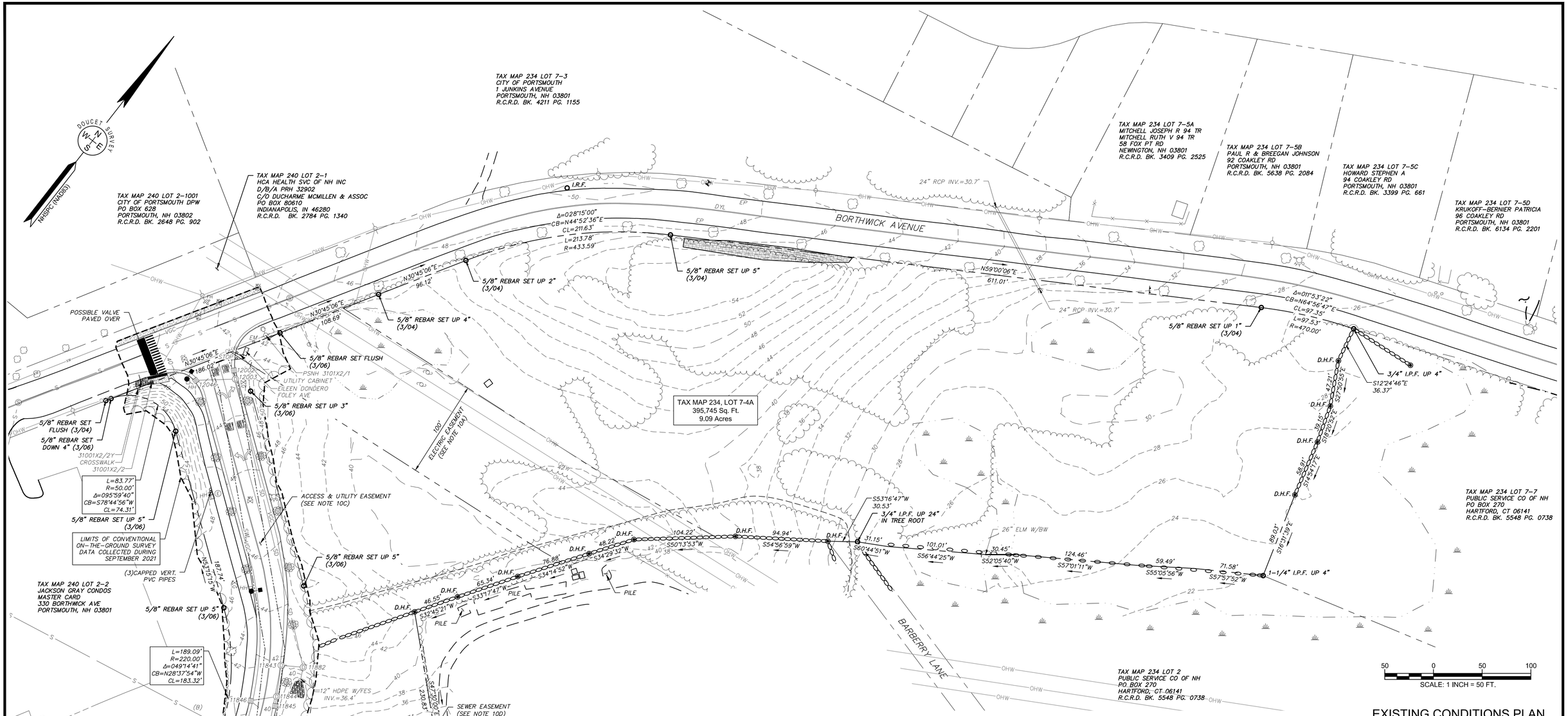

DRAINAGE STRUCTURES		SEWER STRUCTURES
DMH 11843	DMH 11882	SMH 11847
RIM ELEV.=41.6'	RIM ELEV.=43.8'	RIM ELEV.=39.1'
(11844) 12" HDPE INV.=36.6'	(12003) 12" HDPE INV.=36.5'	(11848) 8" PVC DROP CATCH INV.=27.3'
(11882) 12" HDPE INV.=36.4'	(11843) 12" HDPE INV.=36.4'	(A) 18" PVC INV.=15.3'
	(OUTFALL) 12" HDPE INV.=36.5'	(B) 18" PVC INV.=15.2'
DMH 11844		
RIM ELEV.=40.4'	CB 12002	SMH 11848
(11846)12" HDPE INV.=36.9	RIM ELEV.=42.6'	RIM ELEV.=36.4'
(11845) 12" HDPE INV.=36.7'	(12003, CAPPED UNABLE TO MEASURE)	(A) 8" PVC INV.=27.8'
(11843) 12" HDPE INV.=36.8'	WATER ELEV.=37.7'	(11847) 8" PVC INV.=27.7'
	SUMP ELEV.=34.2'	
CB 11845		
RIM ELEV.=40.1'	DMH 12003	
(11844, CAPPED UNABLE TO MEASURE)	RIM ELEV.=42.8'	
WATER ELEV.=37.1'	(12046) 12" HDPE INV.=37.9'	
SUMP ELEV.=32.9'	(12002) 12" HDPE INV.=37.9'	
	(11882) 12" HDPE INV.=37.9'	
CB 11846		
RIM ELEV.=40'	CB 12046	
(11844, CAPPED UNABLE TO MEASURE)	RIM ELEV.=41.6'	
WATER ELEV.=37.2'	(12003, CAPPED UNABLE TO MEASURE)	
SUMP ELEV.=33'	WATER ELEV.=38.2'	
	SUMP ELEV.=34'	

EXISTING CONDITIONS PLAN
FOR
TIGHE & BOND
OF
TAX MAP 234 LOT 7-4A
BORTHWICK AVENUE EXTENSION
PORTSMOUTH, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY
1	3/22/22	UPDATE WETLANDS PER CLIENT	SVM

DRAWN BY:	W.D.C.	DATE:	OCTOBER 2021
CHECKED BY:	S.V.M.	DRAWING NO.	2826B
JOB NO.	2826	SHEET	2 OF 2

STATE OF NEW HAMPSHIRE
No. 916
STEVEN V. MICHAUD
LICENSED LAND SURVEYOR
SIGNATURE

DOUCET SURVEY LLC
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2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-4060
10 Storer Street (Riverview Suite) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

GENERAL NOTES:

1. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
3. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
4. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES AND COMPLY WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
6. THE CONTRACTOR SHALL OBTAIN AND PAY FOR AND COMPLY WITH ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
7. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
9. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
11. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
12. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

DEMOLITION NOTES:

1. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
2. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
3. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
4. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
7. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER THE UTILITY COMPANY AND CITY OF PORTSMOUTH STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
9. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
10. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
11. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
12. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
13. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
14. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
15. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.

SITE NOTES:

1. PAVEMENT MARKINGS SHALL BE INSTALLED AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, FIRE LANES, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES. ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE PAVEMENT MARKINGS. ALL THERMOPLASTIC PAVEMENT MARKINGS INCLUDING LEGENDS, ARROWS, CROSSWALKS AND STOP BARS SHALL MEET THE REQUIREMENTS OF AASHTO M249. ALL PAINTED PAVEMENT MARKINGS INCLUDING CENTERLINES, LANE LINES AND PAINTED MEDIANS SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F".
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PAVEMENT MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE, WHITE THERMOPLASTIC AND CONFORM TO CURRENT MUTCD STANDARDS.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL WORK WITHIN THE CITY OF PORTSMOUTH RIGHT OF WAY IS SUBJECT TO REVIEW AND APPROVAL BY THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM STRUCTURAL ENGINEER AND/OR WALL MANUFACTURER. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER. RETAINING WALL SHALL BE SEGMENTAL BLOCK WALL SYSTEM AS OUTLINED IN THE DETAILS.
10. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
11. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
12. THE APPLICANT SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE POLICE AND RADIO CONFIGURATION. IF THE SITE SURVEY INDICATES IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY.
13. ALL TREES PLANTED ARE TO BE INSTALLED UNDER THE SUPERVISION OF THE CITY OF PORTSMOUTH DPW USING STANDARD INSTALLATION METHODS.
14. THE APPLICANT SHALL PREPARE A CONSTRUCTION MITIGATION AND MANAGEMENT PLAN (CMMP) FOR REVIEW AND APPROVAL BY THE CITY'S LEGAL AND PLANNING DEPARTMENTS.

SITE RECORDING NOTES:

1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
2. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESSED APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
3. THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE USED AS SUCH.

GRADING AND DRAINAGE NOTES:

1. COMPACTION REQUIREMENTS:

BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.

2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL) OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.
3. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
4. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
5. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
6. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS AND NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
7. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.

EROSION CONTROL NOTES:

1. SEE SHEET C-501 FOR GENERAL EROSION CONTROL NOTES AND DETAILS.

UTILITY NOTES:

1. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
   - NATURAL GAS - UNITIL
   - WATER - CITY OF PORTSMOUTH
   - SEWER - CITY OF PORTSMOUTH
   - ELECTRIC - EVERSOURCE
   - COMMUNICATIONS - FAIRPOINT AND COMCAST
2. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
3. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
4. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE APPLICABLE UTILITY COMPANIES.
5. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
6. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
7. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
8. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
9. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER.

LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS IN QUANTITIES AS SHOWN ON THIS PLAN. NO SUBSTITUTIONS WILL BE PERMITTED UNLESS APPROVED BY OWNER. ALL PLANTS SHALL BE NURSERY GROWN.
2. ALL PLANTS SHALL BE NURSERY GROWN AND PLANTS AND WORKMANSHIP SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS, INCLUDING BUT NOT LIMITED TO SIZE, HEALTH, SHAPE, ETC., AND SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO ARRIVAL ON-SITE AND AFTER PLANTING.
3. PLANT STOCK SHALL BE GROWN WITHIN THE HARDINESS ZONES 4 THRU 7 ESTABLISHED BY THE PLANT HARDINESS ZONE MAP, MISCELLANEOUS PUBLICATIONS NO. 814, AGRICULTURAL RESEARCH SERVICE, UNITED STATES DEPARTMENT AGRICULTURE, LATEST REVISION.
4. PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE PRIOR TO DIGGING.
5. THE NUMBER OF EACH INDIVIDUAL PLANT TYPE AND SIZE PROVIDED IN THE PLANT LIST OR ON THE PLAN IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. IF A DISCREPANCY EXISTS BETWEEN THE NUMBER OF PLANTS ON THE LABEL AND THE NUMBER OF SYMBOLS SHOWN ON THE DRAWINGS, THE GREATER NUMBER SHALL APPLY.
6. NO SUBSTITUTION OF PLANT MATERIALS WILL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL LOCATE, VERIFY AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTING AND UTILITIES SHALL IMMEDIATELY BE REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED, SHALL RECEIVE 6" OF LOAM AND SEED. NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
9. THREE INCHES (3") OF NON-COMBUSTIBLE MULCH IS TO BE USED AROUND THE TREE AND SHRUB PLANTING AS SPECIFIED IN THE DETAILS. WHERE MULCH IS TO BE USED IN A CURBED ISLAND THE MULCH SHALL MEET THE TOP INSIDE EDGE OF THE CURB. ALL OTHER AREAS SHALL RECEIVE 6" INCHES OF LOAM AND SEED.
10. SEE PLANTING DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
11. TREE STAKES SHALL REMAIN IN PLACE FOR NO LESS THAN 6 MONTHS AND NO MORE THAN 1 YEAR.
12. PLANTING SHALL BE COMPLETED FROM APRIL 15TH THROUGH OCTOBER 1ST. NO PLANTING DURING JULY AND AUGUST UNLESS SPECIAL PROVISIONS ARE MADE FOR DROUGHT.
13. TREES SHALL BE PRUNED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI A300 'TREES, SHRUBS AND OTHER WOOD PLANT MAINTENANCE STANDARD PRACTICES.
14. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN, IF NECESSARY DURING THE FIRST GROWING SEASON. LANDSCAPE CONTRACTOR SHALL COORDINATE WATERING SCHEDULE WITH OWNER DURING THE ONE (1) YEAR GUARANTEE PERIOD.
15. EXISTING TREES AND SHRUBS SHOWN ON THE PLAN ARE TO REMAIN UNDISTURBED. ALL EXISTING TREES AND SHRUBS SHOWN TO REMAIN ARE TO BE PROTECTED WITH A 4-FOOT SNOW FENCE PLACED AT THE DRIP LINE OF THE BRANCHES OR AT 8 FEET MINIMUM FROM THE TREE TRUNK. ANY EXISTING TREE OR SHRUB SHOWN TO REMAIN, WHICH IS REMOVED DURING CONSTRUCTION, SHALL BE REPLACED BY A TREE OF COMPARABLE SIZE AND SPECIES TREE OR SHRUB.
16. THE CONTRACTOR SHALL GUARANTEE ALL PLANTINGS TO BE IN GOOD HEALTHY, FLOURISHING AND ACCEPTABLE CONDITION FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF ACCEPTANCE OF SUBSTANTIAL COMPLETION. ALL GRASSES, TREES AND SHRUBS THAT, IN THE OPINION OF THE LANDSCAPE ARCHITECT, SHOW LESS THAN 80% HEALTHY GROWTH AT THE END OF ONE YEAR PERIOD SHALL BE REPLACED BY THE CONTRACTOR.
17. UPON EXPIRATION OF THE CONTRACTOR'S ONE YEAR GUARANTEE PERIOD, THE OWNER SHALL BE RESPONSIBLE FOR LANDSCAPE MAINTENANCE INCLUDING WATERING DURING PERIODS OF DROUGHT
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL THE FORMAL ACCEPTANCE OF ALL THE PLANTINGS.
19. PRE-PURCHASE PLANT MATERIAL AND ARRANGE FOR DELIVERY TO MEET PROJECT SCHEDULE AS REQUIRED IT MAY BE NECESSARY TO PRE-DIG CERTAIN SPECIES WELL IN ADVANCE OF ACTUAL PLANTING DATES.

EXISTING CONDITIONS PLAN NOTES:

1. EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY BY DOUCET SURVEY, DATED OCTOBER 2021.
2. WETLAND DELINEATION BY TIGHE & BOND, ON SEPTEMBER 17, 2021, AND FIELD LOCATED BY DOUCET SURVEY.

REFERENCE PLANS:

1. SEE EXISTING CONDITIONS PLAN, BY DOUCET SURVEY.

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
AC	ACRES
ADA	AMERICANS WITH DISABILITIES ACT
AGGR	AGGREGATE
AOT	ALTERATION OF TERRIAN
BLDG	BUILDING
BMP(S)	BEST MANAGEMENT PRACTICE(S)
BOC	BOTTOM OF CURB
BOW	BOTTOM OF WALL
CB	CATCH BASIN
CCB	CAPE COD BERM
CMP	CORRUGATED METAL PIPE
CONST	CONSTRUCT
COORD	COORDINATE
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DMH	DRAINAGE MANHOLE
DH	DOGHOUSE
DWG	DRAWING
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FES	FLARED END SECTION
FF	FINISHED FLOOR
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HMP	HOT MIX PAVEMENT
HW	HEADWALL
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
L	LENGTH
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
NCSS	NATIONAL COOPERATIVE SURVEY
NHDES	NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
NRCC	NORTHEAST REGIONAL CLIMATE CENTER
NRCS	NATURAL RESOURCES CONSERVATION SERVICE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PAD	PROPOSED AREA DRAIN
PC	POINT OF CURVATURE
PCB	PROPOSED CATCH BASIN
PDMH	PROPOSED DRAINAGE MANHOLE
PI	POINT OF INTERSECTION
POS	PROPOSED OUTLET STRUCTURE
PROP	PROPOSED
PSMH	PROPOSED SEWER MANHOLE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PYD	PROPOSED YARD DRAIN
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RL	ROOF LEADER
ROW	RIGHT OF WAY
SF	SQUARE FEET
SSSNNE	SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND
STD	STANDARD
TBR	TO BE REMOVED
TOC	TOP OF CURB
TOW	TOP OF WALL
TYP	TYPICAL
UD	UNDERDRAIN
USCS	UNIFIED SOIL CLASSIFICATION SYSTEM
USDA	UNITED STATES DEPARTMENT OF AGRICULTURE
W	WIDTH
W/	WITH
YD	YARD DARIN

LEGEND

EXISTING LOT LINE
PROPOSED LEASE LINE
APPROXIMATE LIMIT OF WORK
APPROXIMATE LIMIT OF SAWCUT
EXISTING RIGHT-OF-WAY LINE
EXISTING CHAIN LINK FENCE
PROPOSED FENCE
EXISTING OVERHEAD WIRE
EXISTING SEWER LINE
PROPOSED SEWER LINE
EXISTING DRAIN LINE
PROPOSED DRAIN LINE
PROPOSED DRAIN LINE
EXISTING GAS LINE
PROPOSED GAS LINE
EXISTING TELEPHONE LINE
PROPOSED COMMUNICATIONS LINE
PROPOSED ELECTRIC LINE
PROPOSED ELECTRIC & COMMUNICATIONS LINE
EXISTING WATER LINE
PROPOSED WATER LINE
EXISTING MAJOR CONTOUR LINE
EXISTING MINOR CONTOUR LINE
PROPOSED CONTOUR LINE
EXISTING TREE LINE
PROPOSED TREE LINE
EXISTING SHRUB LINE
PROPOSED SHRUB LINE
EXISTING EDGE OF WETLAND
EXISTING WETLAND AREA
WETLAND BUFFER
EXISTING CONCRETE
PROPOSED CONCRETE
EXISTING CRUSHED STONE
EXISTING PAVEMENT/CONCRETE TO BE REMOVED
PROPOSED STANDARD DUTY PAVEMENT SECTION
PROPOSED HEAVY DUTY PAVEMENT SECTION
PROPOSED BITUMINOUS SIDEWALK
PROPOSED SNOW STORAGE AREA
PROPOSED BUFFER ENHANCEMENT AREA
APPROXIMATE LIMIT OF WORK
APPROXIMATE LIMIT OF SAWCUT
PROPOSED SILT SOCK
EXISTING UTILITY POLE
EXISTING UTILITY POLE & GUY WIRE
EXISTING UTILITY POLE W/LIGHT
EXISTING UTILITY POLE STUMP
PROPOSED LIGHT POLE BASE
EXISTING SIGN
PROPOSED SIGN
EXISTING IRON PIPE/ROD FOUND
EXISTING POST
EXISTING BOLLARD
PROPOSED BOLLARD
EXISTING FIRE HYDRANT
PROPOSED FIRE HYDRANT
WATER GATE VALVE
PROPOSED WATER GATE VALVE
EXISTING GAS GATE VALVE
EXISTING GAS REGULATOR
EXISTING VENT PIPE
EXISTING TELEPHONE BOX
EXISTING UTILITY BOX
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
EXISTING DRAIN MANHOLE
PROPOSED DRAIN MANHOLE
EXISTING ELECTRIC MANHOLE
EXISTING SEWER MANHOLE
EXISTING DECIDUOUS TREE
PROPOSED LANDSCAPING
EXISTING TREE STUMP
BORING LOCATION
TEST PIT LOCATION
EXISTING SURVEYED SPOT GRADE
APPROX EXISTING SPOT GRADE
PROPOSED SPOT GRADE
CONCRETE
THRESHOLD ELEVATION
VERTICAL GRANITE CURB
SLOPED BITUMINOUS BERM
SINGLE WHITE LINE
DOUBLE YELLOW LINE

Tighe&Bond

BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

PATRICK M. CRIMMINS No. 15378 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

SCALE IN FEET
0 50' 100'
GRAPHIC SCALE

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

PROJECT NO:	P0616-001
DATE:	3/22/22
FILE:	P0616-005_C-DSGN.DWG
DRAWN BY:	CML
CHECKED:	PMC
APPROVED:	BLM

GENERAL NOTES, ABBREVIATIONS, AND LEGEND SHEET

SCALE: AS SHOWN

G-101

Last Save Date: May 17, 2022, 4:18 PM By: ASELLAR
Print Date: Monday, May 23, 2022, 2:16 PM By: Alexander Sellar
T&B File Location: J:\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 RRH Parking Expansion\Drawings, Figures\AutoCAD\Sheet\P0616-005_C-DSGN.DWG Layout Tab: G-101

Tighe&Bond

DOUCET SURVEY
GRID (NAD83)

TAX MAP 234 LOT 7-3
CITY OF PORTSMOUTH
1 JUNKINS AVENUE
PORTSMOUTH, NH 03801
R.C.R.D. BK. 4211 PG. 1155

TAX MAP 240 LOT 2-1
HCA HEALTH SVC OF NH INC
D/B/A PRH 32902
C/O DUCHARME MCMILLEN & ASSOC
PO BOX 80610
INDIANAPOLIS, IN 46280
R.C.R.D. BK. 2784 PG. 1340

TAX MAP 240 LOT 2-1001
CITY OF PORTSMOUTH DPW
PO BOX 628
PORTSMOUTH, NH 03802
R.C.R.D. BK. 2648 PG. 902

TAX MAP 240 LOT 2-2
JACKSON GRAY CONDOS
MASTER CARD
330 BORTHWICK AVE
PORTSMOUTH, NH 03801

TAX MAP 234 LOT 7-5A
MITCHELL JOSEPH R 94 TR
MITCHELL RUTH V 94 TR
58 FOX PT RD
NEWINGTON, NH 03801
R.C.R.D. BK. 3409 PG. 2525

TAX MAP 234 LOT 7-5B
PAUL R & BREEGAN JOHNSON
92 COAKLEY RD
PORTSMOUTH, NH 03801
R.C.R.D. BK. 5638 PG. 2084

TAX MAP 234 LOT 7-5C
HOWARD STEPHEN A
94 COAKLEY RD
PORTSMOUTH, NH 03801
R.C.R.D. BK. 3399 PG. 661

TAX MAP 234 LOT 7-7
PUBLIC SERVICE CO OF NH
PO BOX 270
HARTFORD, CT 06141
R.C.R.D. BK. 5548 PG. 0738

TAX MAP 234 LOT 2
PUBLIC SERVICE CO OF NH
PO BOX 270
HARTFORD, CT 06141
R.C.R.D. BK. 5548 PG. 0738

TAX MAP 234, LOT 7-4A
395,745 Sq. Ft.
9.09 Acres

BORTHWICK AVENUE
BARBERRY LANE
BOSTON & MAINE RAILROAD

PROTECT EXISTING TREES WITHIN RIGHT OF WAY(TYP)
APPROXIMATE LIMIT OF WORK (TYP)
EXISTING TREE TO BE REMOVED (COORDINATE WITH THE CITY'S TREES AND GREENERY COMMITTEE)
APPROXIMATE LIMIT OF SAWCUT (TYP)
EXISTING HYDRANT TO BE REMOVED AND SALVAGED (COORDINATE WITH THE CITY)
PORTION OF EXISTING 24" RCP TO BE REMOVED
BEGIN SILT SOCK
APPROXIMATE AREA OF TREE CLEARING (TYP)
CONSTRUCT SILT SOCK
100' WETLAND BUFFER
50' WETLAND BUFFER
25' WETLAND BUFFER
PROPOSED LIMIT OF CLEARING (TYP)
END SILT SOCK
ACCESS & UTILITY EASEMENT (SEE NOTE 10C)
ELECTRIC EASEMENT (SEE NOTE 10A)
SEWER EASEMENT (SEE NOTE 10D)
GAS LINE EASEMENT (SEE NOTE 10B)
LIMITS OF CONVENTIONAL ON-THE-GROUND SURVEY DATA COLLECTED DURING SEPTEMBER 2021

POSSIBLE VALVE PAVED OVER
5/8" REBAR SET FLUSH (3/04)
5/8" REBAR SET DOWN 4" (3/06)
3100X2/2Y CROSSWALK 3100X2/2
5/8" REBAR SET UP 5" (3/06)
(3)CAPPED VERT. PVC PIPES
5/8" REBAR SET UP 5" (3/06)
5/8" REBAR SET UP 2" (3/04)
5/8" REBAR SET UP 4" (3/04)
5/8" REBAR SET FLUSH (3/06)
DSNH 3101X2/1
UTILITY CABINET
EILEEN DONDERO FOLEY AVE
5/8" REBAR SET UP 5" (3/06)
5/8" REBAR SET UP 5" (3/04)
5/8" REBAR SET UP 1" (3/04)
5/8" REBAR SET UP 3" W/ID CAP DOUCET SURVEY LLS
5/8" REBAR SET UP 6" (3/06)
GAS LINE MARKER
12" HDPE W/FES INV.=33.2'
12" HDPE W/FES INV.=33.5'
12" HDPE W/FES INV.=36.4'
12" HDPE W/FES INV.=32.8'
12" CIP INV.=31.6'
12" CIP INV.=30.4'
12" CIP INV.=30.2'
24" RCP INV.=30.7'
5/8" REBAR SET UP 3" (3/06)
UTILITY ROOM
3/4" I.P.F. UP 24" IN TREE
26" ELM W/SW
1-1/4" I.P.F. UP 4"
3/4" I.P.F.
D.H.F.
PILE
RXR
TRAIL

SCALE IN FEET
0 50' 100'
GRAPHIC SCALE

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
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CHECKED:	PMC
APPROVED:	BLM

DEMOLITION PLAN

SCALE: AS SHOWN

C-101

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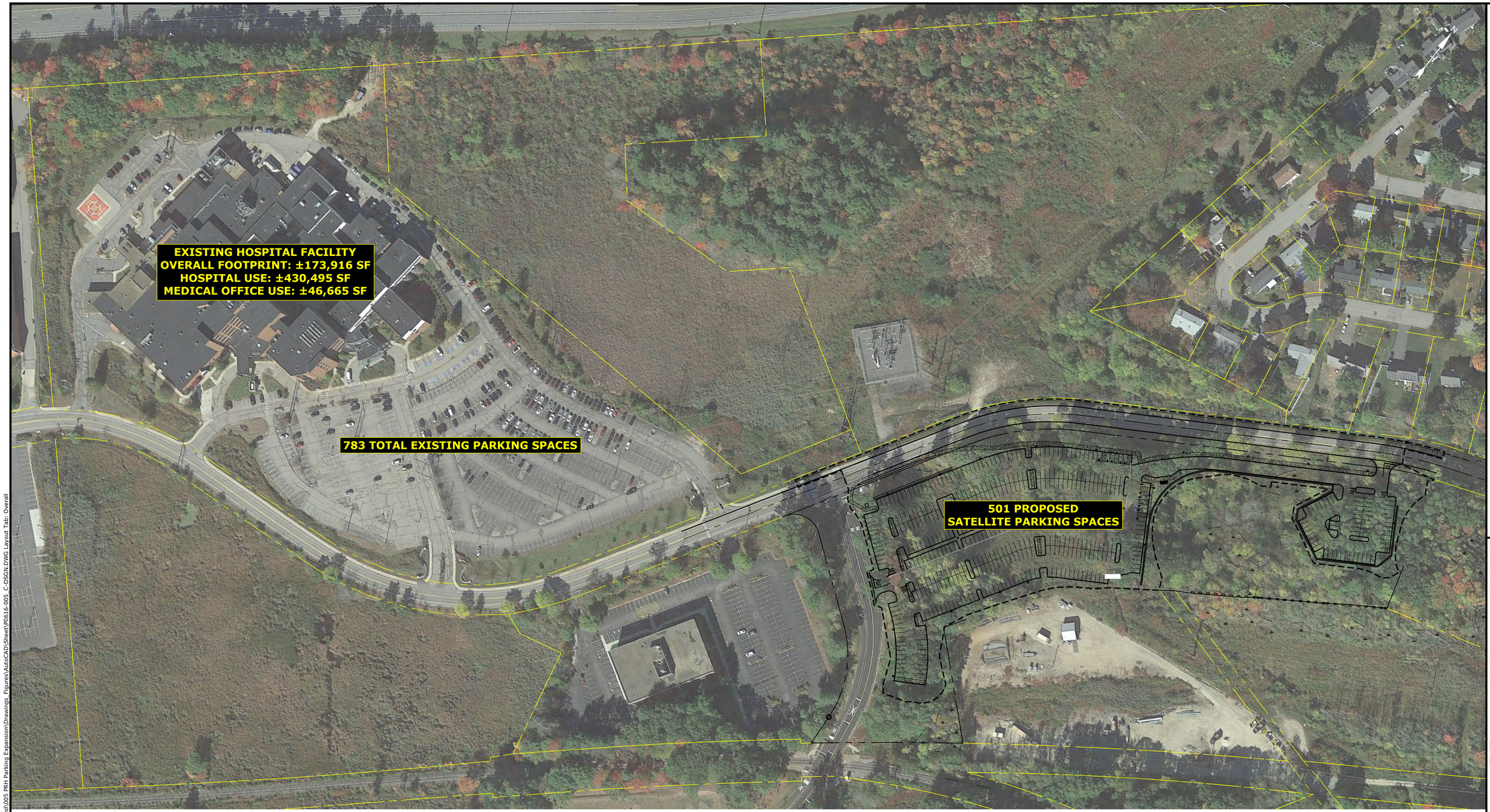

PARKING REQUIREMENTS:	REQUIRED	PROPOSED
PARKING STALL LAYOUT:		
• STANDARD 90°	8.5' X 19'	8.5' X 19'
DRIVE AISLE WIDTH:		
• 90° (2-WAY TRAFFIC)	24 FT	24 FT
MINIMUM SETBACKS:		
• FRONT:	50 FT	35.4 FT (1)
PARKING SPACE REQUIREMENTS:		
MEDICAL OFFICE:		
1 SPACE / 250 GFA		
= ±46,665 SF / 250 SF/SPACE =	187 SPACES	
HOSPITAL:		
PER PARKING DEMAND ANALYSIS(2)	965 SPACES	
MINIMUM PARKING:	1,152 SPACES	
		783 EXISTING SPACES
MAXIMUM PARKING(3):	1,382 SPACES	501 PROPOSED SPACES(4)
		1,284 TOTAL SPACES
ACCESSIBLE PARKING REQUIREMENTS:		
PROPOSED SATELLITE PARKING LOT	11 SPACES	11 SPACES

(1) - A VARIANCE WAS GRANTED BY THE ZONING BOARD OF ADJUSTMENT ON FEBRUARY 23, 2022 FROM SECTION 10.113.41 TO ALLOW A 35 FOOT FRONT SETBACK FOR A PARKING LOT WHERE 50 FEET IS REQUIRED
(2) - PARKING DEMAND BASED ON GFA OF THE EXISTING HOSPITAL (±430,495 SF)
(3) - MAXIMUM PARKING EQUALS 120% OF MINIMUM
(4) - INCLUDING 11 ADA SPACES IN THE SATELLITE PARKING LOT PER ADA STANDARDS SECTION 208

Tighe&Bond

STATE OF NEW HAMPSHIRE
BRADLEE MEZQUITA
No. 08830
LICENSED
PROFESSIONAL ENGINEER
5/23/22

STATE OF NEW HAMPSHIRE
PATRICK M. CRIMMINS
No. 16378
LICENSED
PROFESSIONAL ENGINEER
5/23/22

SCALE IN FEET
0 100' 200'
GRAPHIC SCALE

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

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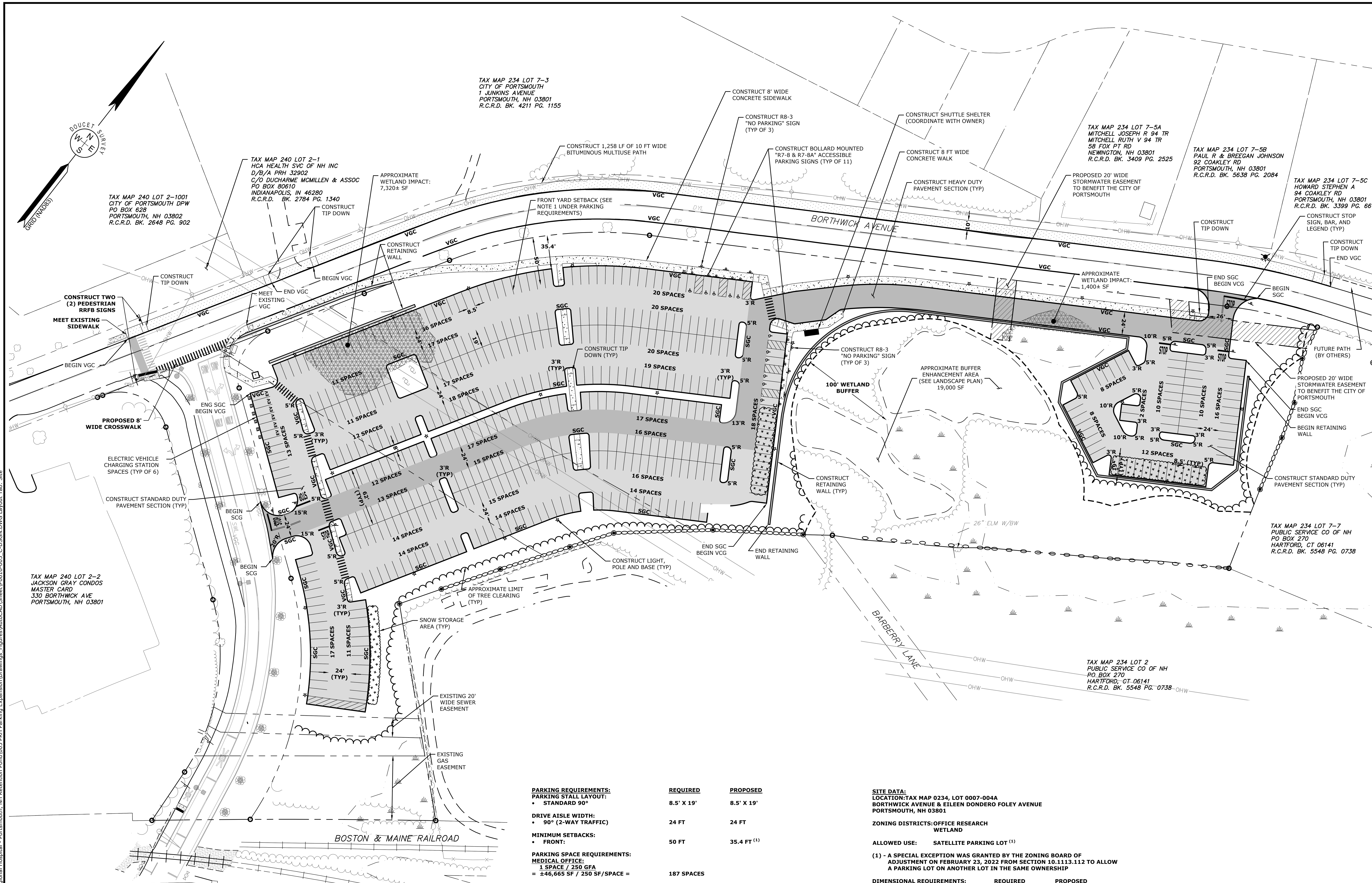
CHECKED:	PMC
APPROVED:	BLM

OVERALL PARKING PLAN

SCALE: AS SHOWN

C-102

Last Save Date: May 17, 2022 4:19 PM By: ASELLAR
Plot Date: Tuesday, May 17, 2022 4:19 PM By: Alexander Sellar
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Drawings, Figures\AutoCAD\Sheet\P0616-005_C-DSGN.DWG Layout Tab: Overall



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= ±46,665 SF / 250 SF/SPACE =	187 SPACES	
HOSPITAL:		
PER PARKING DEMAND ANALYSIS(2)	965 SPACES	
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(3) - MAXIMUM PARKING EQUALS 120% OF MINIMUM
(4) - INCLUDING 11 ADA SPACES IN THE SATELLITE PARKING LOT PER ADA STANDARDS SECTION 208

SITE DATA:
LOCATION: TAX MAP 0234, LOT 0007-004A
BORTHWICK AVENUE & EILEEN DONDERO FOLEY AVENUE
PORTSMOUTH, NH 03801

ZONING DISTRICTS: OFFICE RESEARCH
WETLAND

ALLOWED USE: SATELLITE PARKING LOT (1)

(1) - A SPECIAL EXCEPTION WAS GRANTED BY THE ZONING BOARD OF ADJUSTMENT ON FEBRUARY 23, 2022 FROM SECTION 10.1113.112 TO ALLOW A PARKING LOT ON ANOTHER LOT IN THE SAME OWNERSHIP

DIMENSIONAL REQUIREMENTS:	REQUIRED	PROPOSED
MINIMUM LOT AREA:	3 ACRES	±9.09 ACRES
MINIMUM STREET FRONTAGE:	300 FT	±1,313 FT
MINIMUM SETBACKS:		
• FRONT:	50 FT	N/A
• SIDE:	75 FT	N/A
• REAR:	50 FT	N/A
MAXIMUM BUILDING HEIGHT:	30 FT	N/A
MAXIMUM BUILDING COVERAGE:	30%	0 %
MINIMUM OPEN SPACE:	25%	±56.5%

Tighe&Bond

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

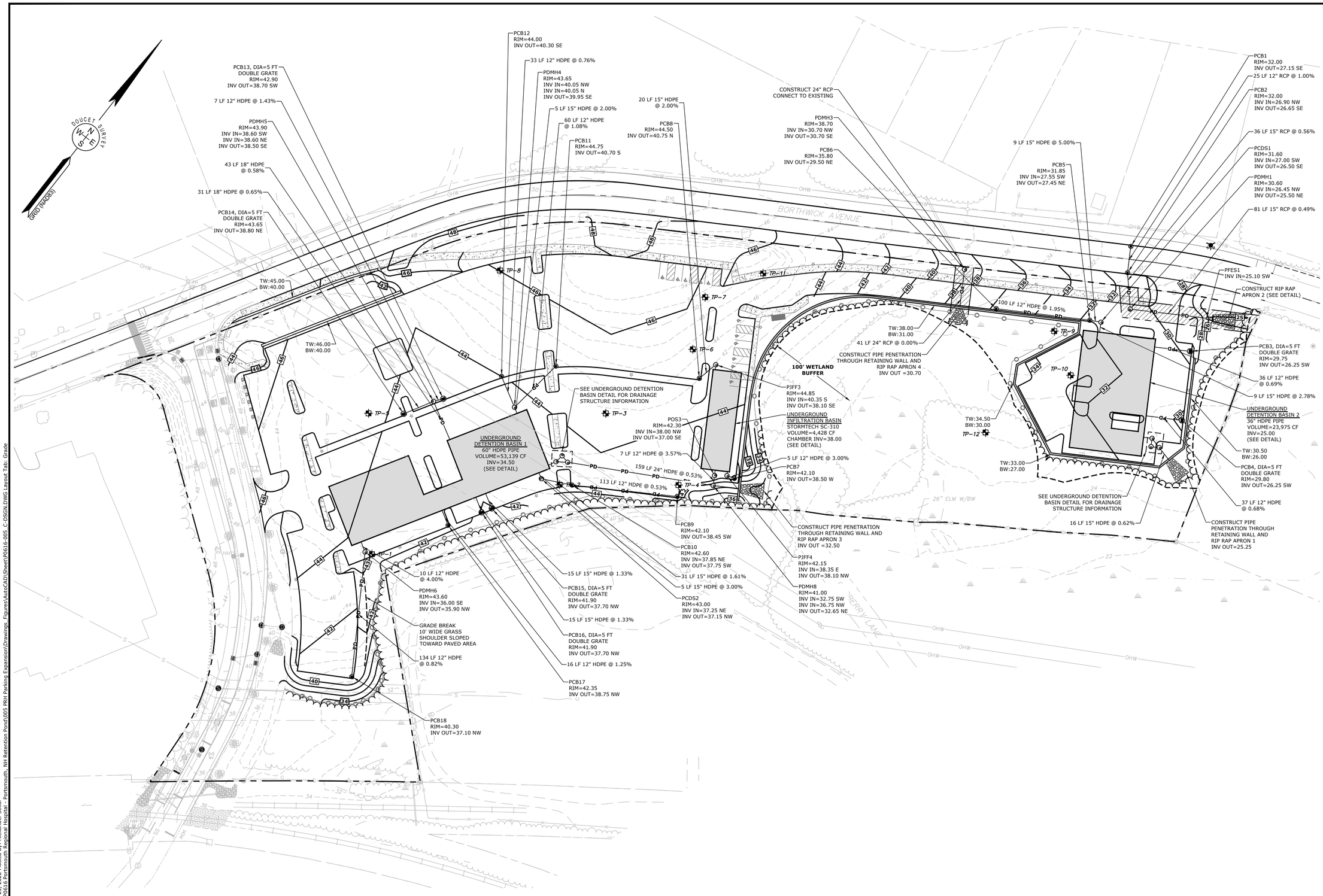
MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

PROJECT NO:	P0616-001
DATE:	3/22/22
FILE:	P0616-005_C-DSGN.DWG
DRAWN BY:	CML/AFS/MKF
CHECKED:	PMC
APPROVED:	BLM

SITE PLAN

SCALE: AS SHOWN

C-102.1



Tighe&Bond

BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

PATRICK M. CRIMMINS No. 15378 CERTIFIED WETLAND SCIENTIST STATE OF NEW HAMPSHIRE 5/23/22

SCALE IN FEET
0 50' 100'
GRAPHIC SCALE

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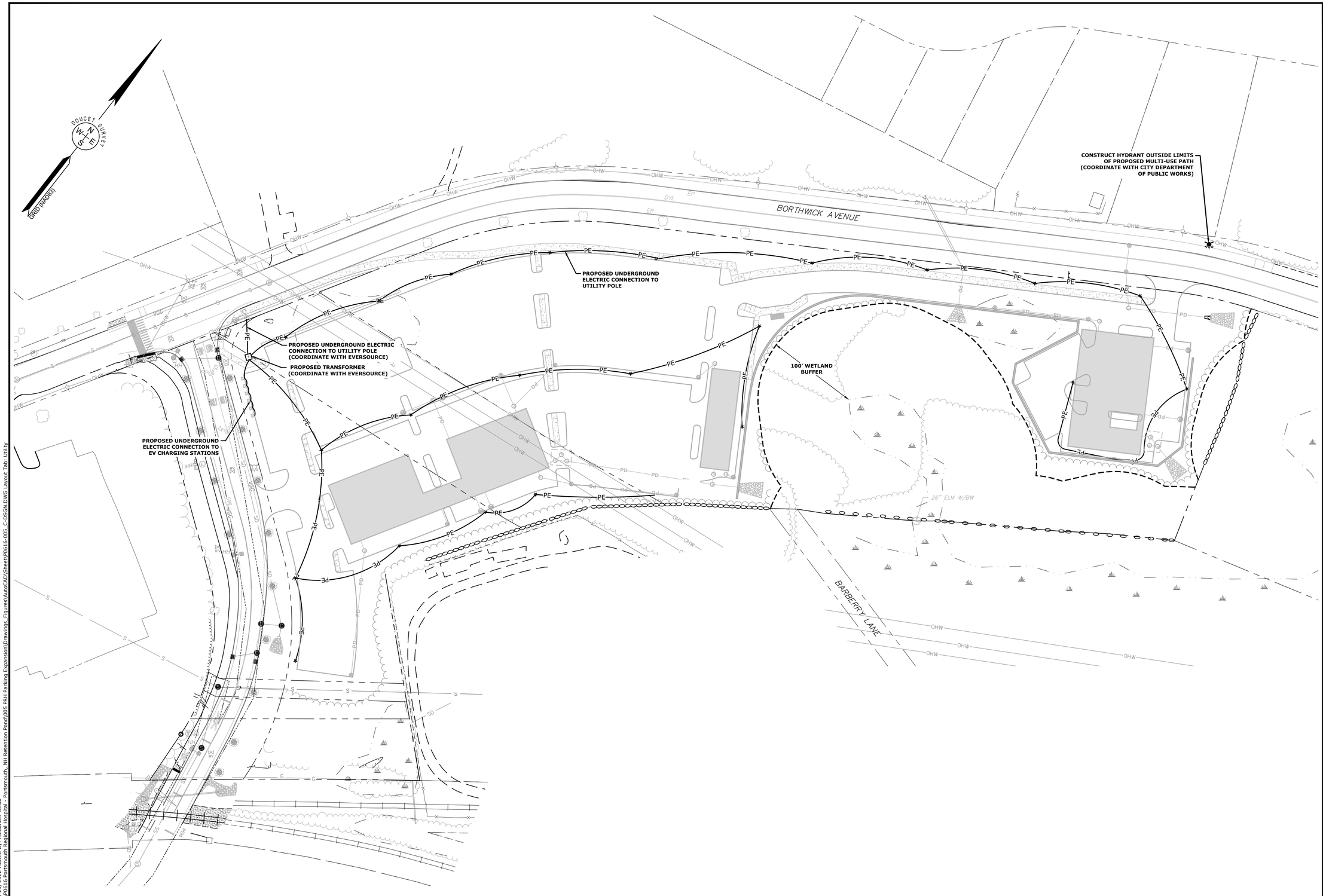
GRADING, DRAINAGE, & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103

Last Save Date: May 17, 2022 4:19 PM By: ASELLAR
Plot Date: May 17, 2022 4:19 PM By: Alexander Sellar
T&B File Location: J:\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Drawings, Figures\AutoCAD\Sheet\P0616-005_C-DSGN.DWG Layout Tab: Grade



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BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

SCALE IN FEET
0 50' 100'
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UTILITY PLAN

SCALE: AS SHOWN

C-104

Last Save Date: May 17, 2022 4:19 PM By: ASELLAR
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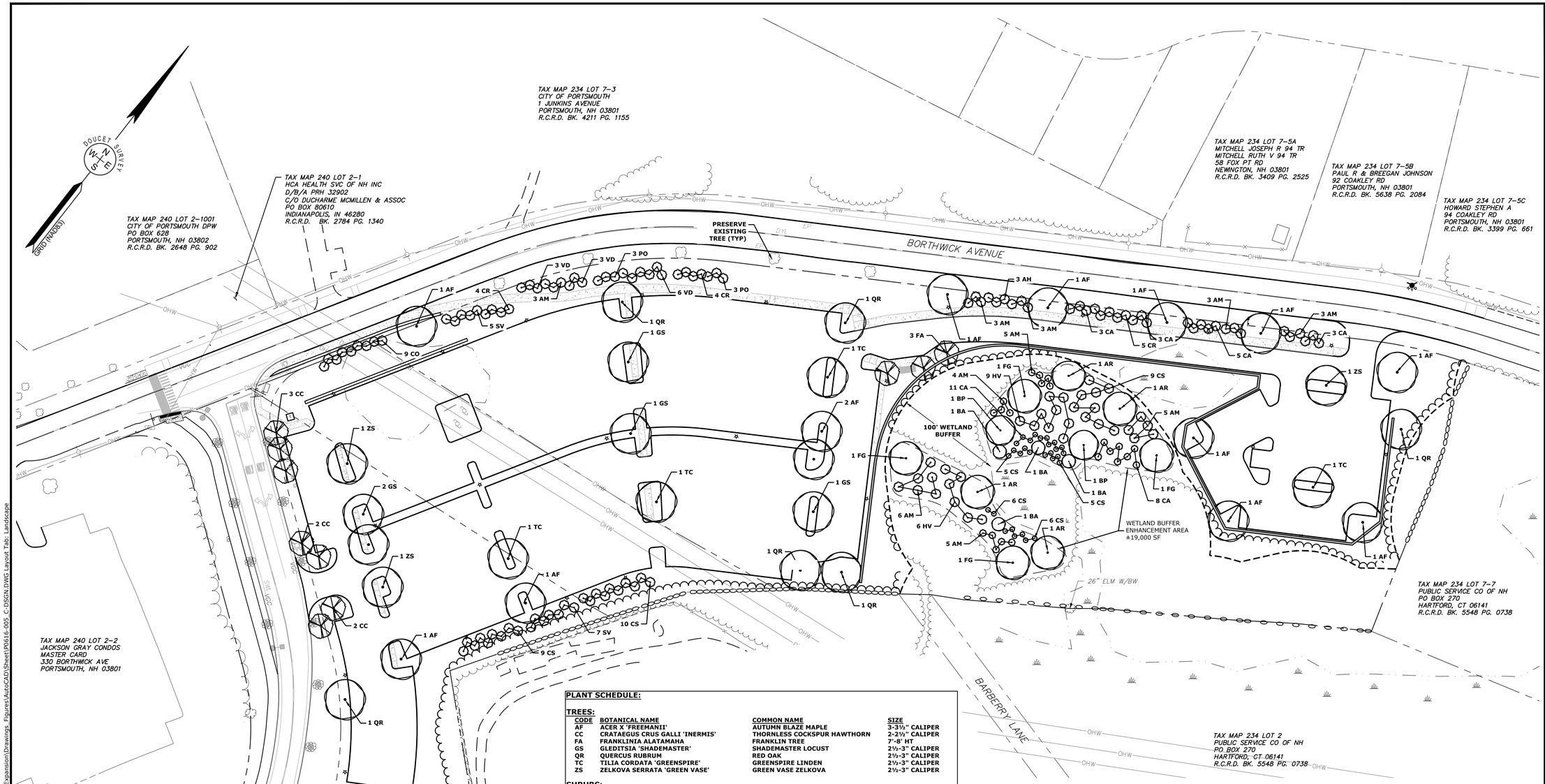
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Drawings, Figures\AutoCAD\Sheet\P0616-005_C-DSGN.DWG Layout Tab: Utility



PLANT SCHEDULE:

TREES:

CODE	BOTANICAL NAME	COMMON NAME	SIZE
AF	ACER X 'FREEMANII'	AUTUMN BLAZE MAPLE	3-3½" CALIPER
CC	CRATAEGUS CRUS GALLI 'INERMIS'	THORNLESS COCKSPUR HAWTHORN	2-2½" CALIPER
FA	FRANKLINIA ALATAMAHA	FRANKLIN TREE	7'-8' HT
GS	GLEDITSIA 'SHADEMASTER'	SHADEMASTER LOCUST	2½-3" CALIPER
QR	QUERCUS RUBRUM	RED OAK	2½-3" CALIPER
TC	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	2½-3" CALIPER
ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2½-3" CALIPER

SHRUBS:

CODE	BOTANICAL NAME	COMMON NAME	SIZE
AH	CORYLUS AMERICANA	AMERICAN HAZELNUT	5 GAL
AM	ARONIA MELANOCARPA	BLACK CHOKEBERRY	5 GAL
CA	CLETHRA ALNIFOLIA	SUMMER SWEET	5 GAL
CO	CEPHALANTHUS OCCIDENTALIS	BUTTON BUSH	5 GAL
CR	CORNUS RACEMOSA	GRAY DOGWOOD	5 GAL
CS	CORNUS SERICEA 'CARDINAL'	RED TWIG DOGWOOD	5 GAL
PO	PHYSOCARPUS OPULIFOLIUS 'DIABLO'	DIABLO NINEBARK	5 GAL
SV	SYRINGA VULGARIS	COMMON LILAC	5 GAL
VD	VIBURNUM DENTATUM	ARROWWOOD	5 GAL

WETLAND BUFFER ENHANCEMENT PLANTING SCHEDULE:

TREES:

CODE	BOTANICAL NAME	COMMON NAME	SIZE
AR	ACER RUBRUM	RED MAPLE	2-3" CALIPER
FG	FAGUS GRANDIFOLIA	AMERICAN BEECH	2-3" CALIPER
BA	BETULA ALLAGHANIENSIS	YELLOW BIRCH	2-3" CALIPER
BP	BETULA POPULIFOLIA	GREY BIRCH	2-3" CALIPER

SHRUBS:

CODE	BOTANICAL NAME	COMMON NAME	SIZE
AM	ARONIA MELANOCARPA	BLACK CHOKEBERRY	5 GAL
CA	CLETHRA ALNIFOLIA	SUMMER SWEET	5 GAL
CS	CORNUS SERICEA 'CARDINAL'	RED TWIG DOGWOOD	5 GAL
HV	HAMAMELIS VIRGINIANA	WITCH HAZEL	5 GAL

HERBACEOUS SEED MIX

NEW ENGLAND WETLANDS PLANTS - NEW ENGLAND WILDLIFE MIX (OR APPROVED EQUAL)

THE NEW ENGLAND WILDFLOWER MIX PROVIDES A SELECTION OF NATIVE WILDFLOWERS AND GRASSES TO ENSURE THAT A VARIETY OF SPECIES WILL SURVIVE IN CONDITIONS FROM DRY TO MOIST. IT IS AN APPROPRIATE SEED MIX FOR ROADSIDES, COMMERCIAL LANDSCAPING, PARKS, GOLF COURSES, INDUSTRIAL SITES AND AREAS UNDERGOING ECOLOGICAL RESTORATION. THE MIX CAN BE APPLIED BY HYDRO-SEEDING (NO TACKIFIERS), BY MECHANICAL SPREADER, OR BY HAND. LIGHTLY RAKE OR ROLL AFTER SOWING TO INCREASE SEED TO SOIL CONTACT. APPLY ON A CLEAN, WEED FREE SEED BED. BEST RESULTS ARE OBTAINED WITH A SPRING OR LATE FALL DORMANT SEEDING.

APPLICATION RATE: 23 LBS/ACRE | 1900 SQ FT/LB

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LANDSCAPE PLAN

SCALE: AS SHOWN

C-105

Last Save Date: May 17, 2022 4:19 PM By: ASELLAR
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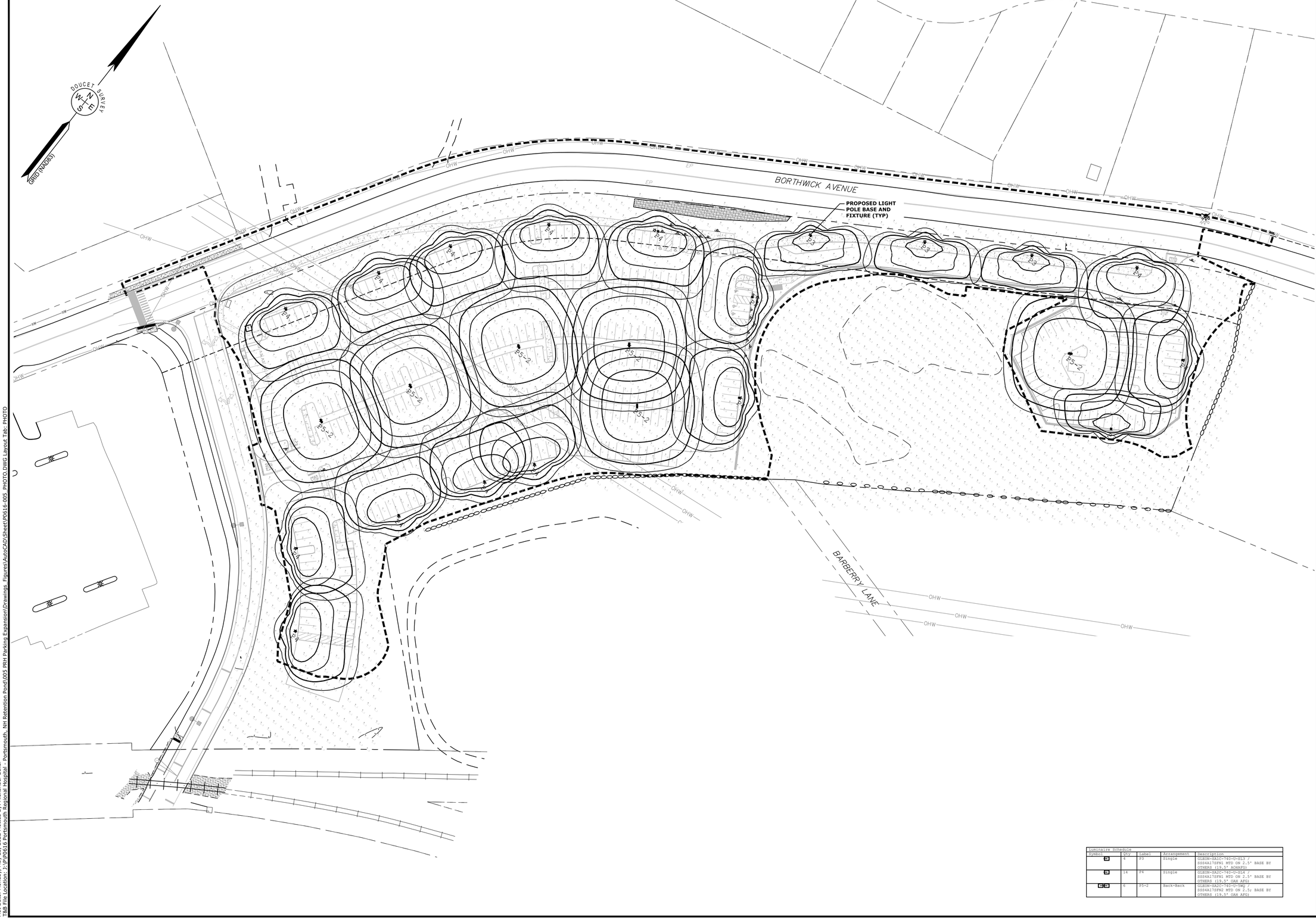

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	4	P3	Single	GLEON-SA1C-740-U-SC3 / SSS4A178FN1 MTD ON 2.5' BASE BY OTHERS (19.5' AOBAFG)
	14	P4	Single	GLEON-SA2C-740-U-SI4 / SSS4A178FN1 MTD ON 2.5' BASE BY OTHERS (19.5' OAH AFG)
	6	P5-2	Back-Back	GLEON-SA2C-740-U-SMQ / SSS4A178FN2 MTD ON 2.5; BASE BY OTHERS (19.5' OAH AFG)

Tighe&Bond

SCALE IN FEET
0 50' 100'
GRAPHIC SCALE

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CHECKED:	PMC
APPROVED:	BLM

PHOTOMETRICS PLAN

SCALE: AS SHOWN

C-106

Last Save Date: May 17, 2022 4:50 PM By: ASELLAR
Plot Date/Time: May 23, 2022 2:49 PM By: Alexander Sellar
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Drawings, Figures\AutoCAD\Sheet\P0616-005_PHOTO.DWG Layout Tab: PHOTO

GENERAL PROJECT INFORMATION

PROJECT OWNER: PORTSMOUTH REGIONAL HOSPITAL
333 BORTHWICK AVENUE
PORTSMOUTH, NH

PROJECT NAME: PROPOSED SATELLITE PARKING LOT

PROJECT ADDRESS: BORTHWICK AVENUE
PORTSMOUTH, NH

PROJECT MAP / LOT: MAP 234 / LOT 7-4A

PROJECT LATITUDE: 43°-03'-56.5"N

PROJECT LONGITUDE: 70°-47'-07.21"W

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A 520 SPOT SATELLITE PARKING LOT TO SERVICE THE EXISTING PORTSMOUTH REGIONAL HOSPITAL. THE WORK IS ANTICIPATED TO START IN FALL 2022, AND BE COMPLETED BY FALL 2023.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 6.24 ACRES.

SOIL CHARACTERISTICS

USCS SITE SPECIFIC SOIL SURVEY CONDUCTED BY TIGHE & BOND INC., ON NOVEMBER 18 & 19, 2021 THE SOILS ON SITE CONSIST OF WOODBRIDGE, BOXFROD,SCITICO, PAXTON, HOLLIS, CHATFIELD AND SCIO SOILS WHICH RANGE FROM WELL DRAINED TO POORLY DRAINED SOILS WITH HYDROLOGIC SOIL GROUP RATING(S) OF B & C.

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA OVERLAND FLOW TO AN UNNAMED WETLAND AND ULTIMATELY FLOWS TO THE PISCATAQUA RIVER.

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. CUT AND CLEAR TREES.
2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
   - NEW CONSTRUCTION
   - DEVELOPMENT OF BORROW PIT AREAS
   - DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE
   - FLOOD PLAIN EXCAVATION WORK
   - STREAM CHANNEL MODIFICATIONS
   - CONTROL OF DUST
   - CONSTRUCTION OF ACCESS AND HAUL ROAD
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR AND DISPOSE OF DEBRIS.
5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
6. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
9. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
10. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
11. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALES, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

STABILIZATION:

1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.;
   E. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.
2. WINTER STABILIZATION PRACTICES:
   A. 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;
   B. 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;
   C. AFTER OCTOBER 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, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   A. TEMPORARY SEEDING;
   B. MULCHING.
4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

DUST CONTROL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS INCLUDING BUT NOT LIMITED TO BORTHWICK AVENUE AND ELLEN DONDERO FOLEY AVENUE.

STOCKPILES:

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:

1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:

1. TEMPORARY GRASS COVER:
   A. SEEDBED PREPARATION:
      a. APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE;
   B. SEEDING:
      a. UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE;
      b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED;
      c. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING;
   C. MAINTENANCE:
      a. TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).
2. PERMANENT MEASURES AND PLANTINGS:
   A. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
   B. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
   C. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
   D. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
   E. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
   F. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
   G. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
   H. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE

   IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.
3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
   A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA:

1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
   B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
   C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
   D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

1. FIRE-FIGHTING ACTIVITIES;
2. FIRE HYDRANT FLUSHING;
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
4. WATER USED TO CONTROL DUST;
5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING;
12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:

1. WASTE MATERIAL:
   A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
   A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
   A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

SPILL PREVENTION:

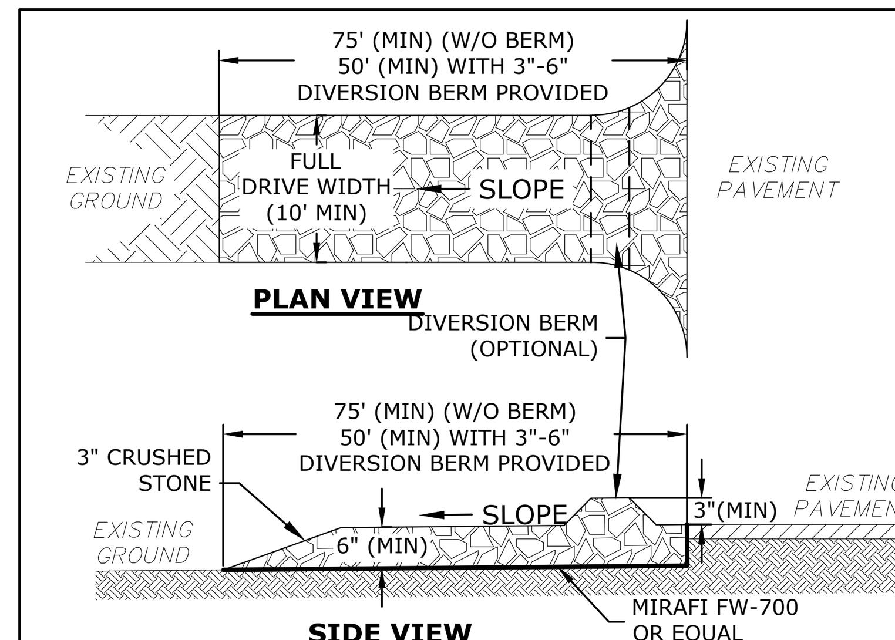
1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
      a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
      b. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;
      c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
      d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
      e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
      f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
      g. THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      c. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
      a. PETROLEUM PRODUCTS:
      i. ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
      ii. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
      iii. SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
      iv. INSPECT FUEL STORAGE AREAS WEEKLY;
      v. WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS;
      vi. COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
      vii. SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
      viii. THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
         (1) EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED;
         (2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS;
         (3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS;
         (4) USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES;
         (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
      ix. FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, OR ITS SUCCESSOR DOCUMENT. HTTPS://WWW.DES.NH.GOV/ORGANIZATION/COMMISSIONER/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF
      b. FERTILIZERS:
      i. FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
      ii. ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
      iii. STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
      c. PAINTS:
      i. ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
      ii. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
      iii. EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
      a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
      b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE;
      c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
      d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
      e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
      f. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
   E. VEHICLE FUELING AND MAINTENANCE PRACTICE:
      a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPMENT/VEHICLE FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
      b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY;
      c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
      d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
      e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
      f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

1. THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A SWPPP. THE SWPPP SHALL BE PREPARED BY THE ENGINEER. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.
2. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:
   A. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE ENGINEER AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
   B. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
   C. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
   D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

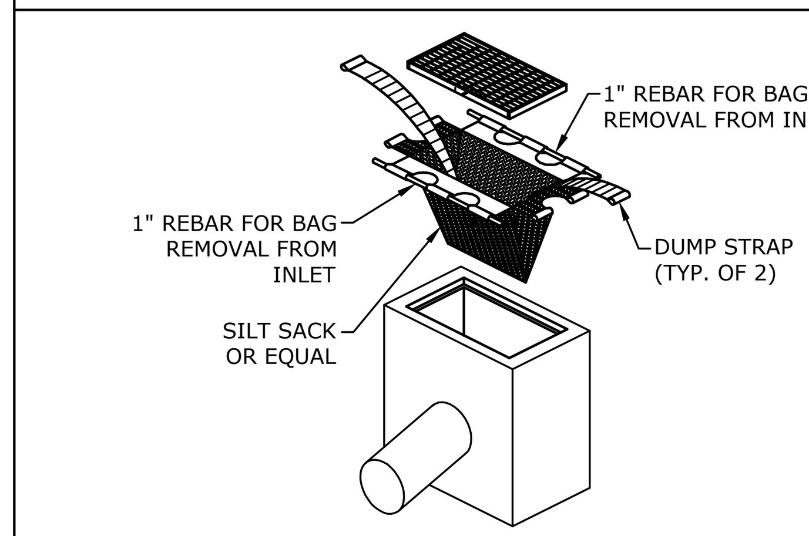
BLASTING NOTES:

1. CONTRACTOR SHALL CONTACT THE NHDES PRIOR TO COMMENCING ANY BLASTING ACTIVITIES
2. FOR ANY PROJECT FOR WHICH BLASTING OF BEDROCK IS ANTICIPATED, THE APPLICANT SHALL SUBMIT:
   A. A BLASTING PLAN THAT IDENTIFIES:
      a. WHERE THE BLASTING ACTIVITIES ARE ANTICIPATED TO OCCUR;
      b. THE ESTIMATED QUANTITY OF BLAST ROCK IN CUBIC YARDS; AND
      c. SITE-SPECIFIC BLASTING BEST MANAGEMENT PRACTICES.
3. IF MORE THAN 5000 CUBIC YARDS OF BLAST ROCK WILL BE GENERATED AND THERE ARE ONE OR MORE PUBLIC DRINKING WATER WELLS WITHIN 2000 FEET OF THE BLASTING ACTIVITIES, A PLAN TO MONITOR GROUNDWATER TO DETECT ANY CONTAMINATION IN SUFFICIENT TIME TO PROTECT THE WATER SUPPLY WELLS SHALL BE PROVIDED TO THE NHDES. THE GROUNDWATER MONITORING PLAN SHALL INCLUDE:
   A. MONITORING FOR NITRATE AND NITRITE EITHER IN THE DRINKING WATER SUPPLY WELLS OR IN OTHER WELLS THAT ARE REPRESENTATIVE OF THE DRINKING WATER SUPPLY WELLS IN THE AREA:
      a. THE GROUNDWATER SAMPLING PROGRAM MUST BE IMPLEMENTED ONCE APPROVED BY THE NHDES.
   B. THE FOLLOWING BEST MANAGEMENT PROCEDURES FOR BLASTING SHALL BE COMPLIED WITH:
      a. LOADING PRACTICES - THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:
      i. DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER. THE LOGS SHALL INDICATE DEPTHS AND LENGTHS OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER WEAK ZONES ENCOUNTERED AS WELL AS GROUNDWATER CONDITIONS;
      ii. EXPLOSIVE PRODUCTS SHALL BE MANAGED ON-SITE SO THAT THEY ARE EITHER USED IN THE BOREHOLE, RETURNED TO THE DELIVERY VEHICLE, OR PLACED IN SECURE CONTAINERS FOR OFF-SITE DISPOSAL;
      iii. SPILLAGE AROUND THE BOREHOLE SHALL EITHER BE PLACED IN THE BOREHOLE OR CLEANED UP AND RETURNED TO AN APPROPRIATE VEHICLE FOR HANDLING OR PLACEMENT IN SECURED CONTAINERS FOR OFF-SITE DISPOSAL;
      iv. LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND SHALL NOT BE LEFT IN THE BLASTHOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT DETONATION SHOULD BE POSTPONED;
      v. LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE ENVIRONMENT;
      vi. EXPLOSIVES SHALL BE LOADED TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION. INDUSTRY ACCEPTED LOADING PRACTICES FOR PRIMING, STEMMING, DECKING AND COLUMN RISE NEED TO BE ATTENDED TO.
      b. EXPLOSIVE SELECTION - THE FOLLOWING BMPS SHALL BE FOLLOWED TO REDUCE THE POTENTIAL FOR GROUNDWATER CONTAMINATION WHEN EXPLOSIVES ARE USED:
      i. EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST EXECUTION;
      ii. EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT TO MINIMIZE THE POTENTIAL FOR HAZARDOUS EFFECT OF THE PRODUCT UPON GROUNDWATER
      c. PREVENTION OF MISFIRES. APPROPRIATE PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED TO PREVENT MISFIRES.
      d. MUCK PILES MANAGEMENT - MUCK PILES (THE BLASTED PIECES OF ROCK) AND ROCK PILES SHALL BE MANAGED IN A MANNER TO REDUCE THE POTENTIAL FOR CONTAMINATION BY IMPLEMENTING THE FOLLOWING MEASURES:
      i. REMOVE THE MUCK PILE FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE;
      ii. MANAGE THE INTERACTION OF BLASTED ROCK PILES AND STORMWATER TO PREVENT CONTAMINATION OF WATER SUPPLY WELLS OR SURFACE WATER.
   C. SPILL PREVENTION AND SPILL MITIGATION MEASURES SHALL BE IMPLEMENTED TO PREVENT THE RELEASE OF FUEL AND OTHER RELATED SUBSTANCES TO THE ENVIRONMENT DURING BLASTING OPERATIONS. THE MEASURES TO PREVENT SUCH RELEASES SHALL BE DETAILED IN THE GROUNDWATER MONITORING REPORT AND COMPLY WITH THE MEASURES AND BEST MANAGEMENT PRACTICES LISTED ON THIS SHEET.



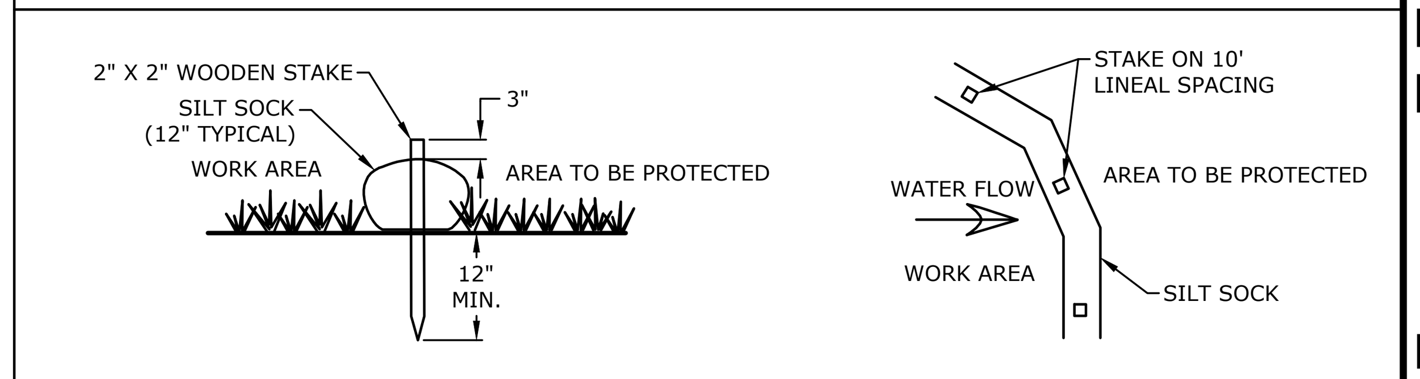
NOTES:
1. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

STABILIZED CONSTRUCTION EXIT
NO SCALE



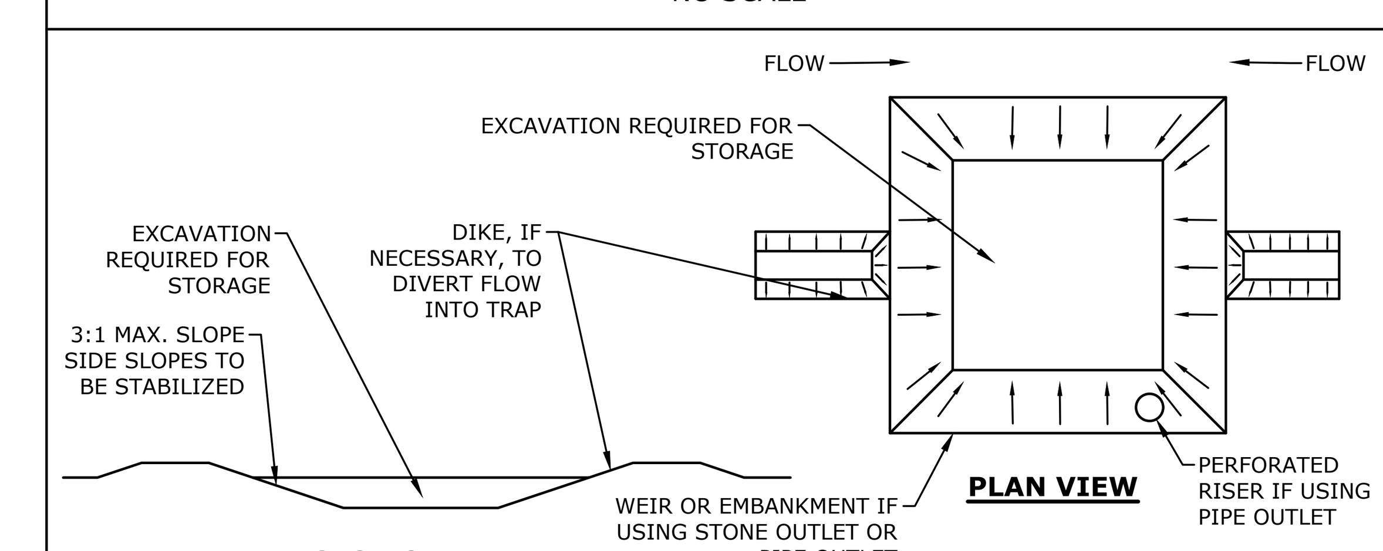
NOTES:
1. INLET PROTECTION BARRIER SHALL BE SILT SACK BY ACF ENVIRONMENTAL OR APPROVED EQUAL.
2. INLET PROTECTION BARRIER SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASINS LOCATED WITHIN THE LIMIT OF WORK.
3. SILT SACK SHALL BE INSPECTED REGULARLY AND MAINTAIN IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

INLET PROTECTION BARRIER
NO SCALE



NOTES:
1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL.
2. SILT SOCK SHALL BE FILLED WITH FILTERMEDIA BY FILTREXX OR APPROVED EQUAL.
3. WHERE TWO SILT SOCKS ARE JOINED, A MINIMUM OF 2 FEET OF OVERLAP SHALL BE MAINTAINED.
4. SILT SOCKS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

SILT SOCK
NO SCALE



NOTES:
1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.
2. THE MAXIMUM CONTRIBUTING AREA TO A SINGLE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. TRAP OUTLET SHALL BE MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP.
5. TRAP SHALL DISCHARGE TO A STABILIZED AREA.
6. TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.
8. SEDIMENT TRAPS MUST BE USED AS NEEDED TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.

SEDIMENT TRAP
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER – 5-23-22

STATE OF NEW HAMPSHIRE – PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – 5-23-22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

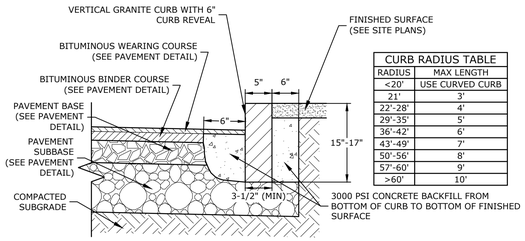
PROJECT NO:	P0616-001
DATE:	3/22/22
FILE:	P0616-005_C-DETAILS.DWG
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

EROSION CONTROL NOTES & DETAILS SHEET

SCALE: AS SHOWN

C-501

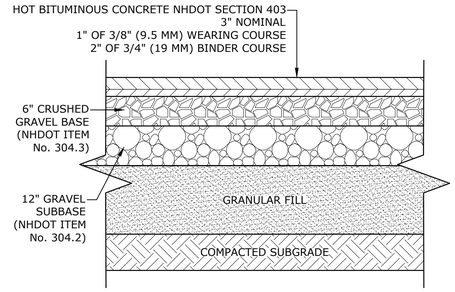
Last Save Date: May 17, 2022 4:27 PM By: ASELLAR
Plot Date: Monday, May 23, 2022 Plotted By: Alexander Sellar
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Drawings_Figures\AutoCAD\Sheet\P0616-005_C-Details.DWG Layout Tab: C-501



CURB RADIUS TABLE	
RADIUS	MAX LENGTH
<20'	USE CURVED CURB
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
>60'	10'

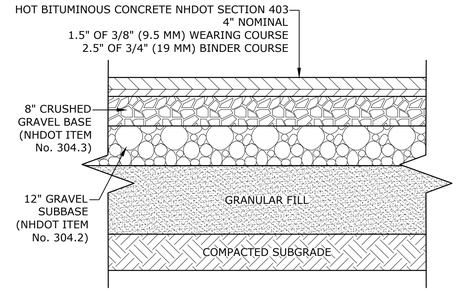
NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
7. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

VERTICAL GRANITE CURB
NO SCALE



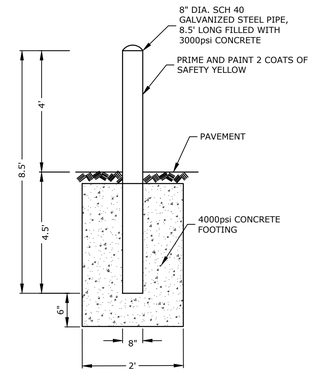
NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.
5. CONTRACTOR SHALL CONFIRM THIS PAVEMENT SECTION WITH THE PROJECT'S GEOTECHINCAL ENGINEEER PRIOR TO CONSTRUCTION.

STANDARD DUTY PARKING LOT PAVEMENT SECTION
NO SCALE

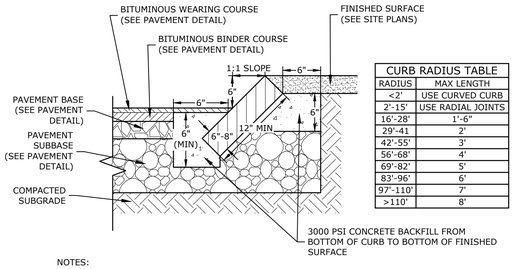


NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.
5. CONTRACTOR SHALL CONFIRM THIS PAVEMENT SECTION WITH THE PROJECT'S GEOTECHINCAL ENGINEEER PRIOR TO CONSTRUCTION.

HEAVY DUTY PARKING LOT PAVEMENT SECTION
NO SCALE



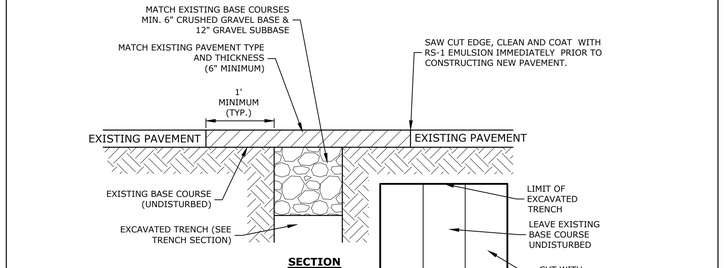
TYPICAL BOLLARD
NO SCALE



CURB RADIUS TABLE	
RADIUS	MAX LENGTH
<2'	USE CURVED CURB
2'-15'	USE RADIAL JOINTS
16'-28'	1'-6"
29'-41	2'
42'-55'	3'
56'-68'	4'
69'-82'	5'
83'-96'	6'
97'-110'	7'
>110'	8'

NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF SLOPED GRANITE CURB (SGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

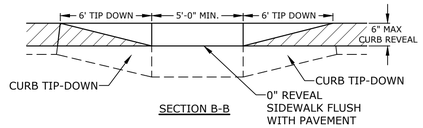
SLOPED GRANITE CURB
NO SCALE



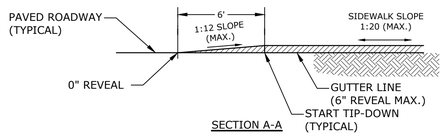
NOTE:
1. COORDINATE AND OBTAIN APPROVAL FOR ALL TRENCHING AND PATCHING WITHIN CITY RIGHT OF WAY WITH CITY OF ___ DPW PRIOR TO COMMENCING WORK.

ROADWAY TRENCH PATCH
NO SCALE

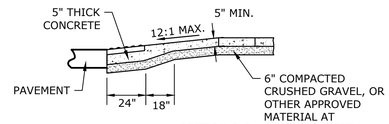
NHDOT ITEM No. 304.3 (CRUSHED GRAVEL)	
SIEVE SIZE	% PASSING
3"	100
2"	95-100
1"	55-85
#4	27-52
#200	0-12



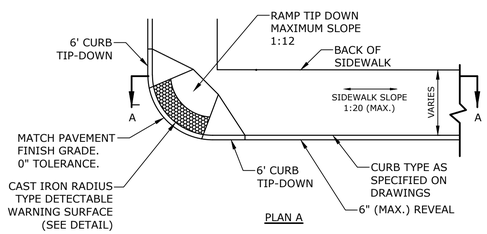
SECTION B-B



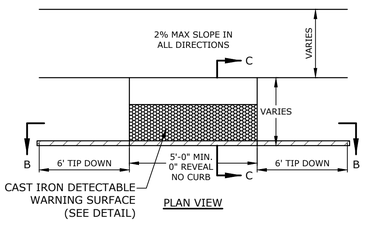
SECTION A-A



SECTION C-C



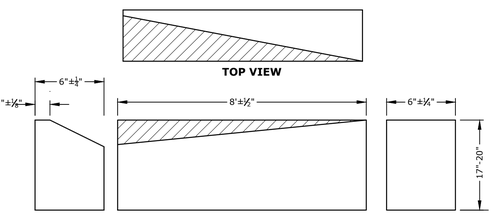
PLAN A



PLAN VIEW

NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
2. A 6" COMPACTED CRUSHED GRAVEL BASE (NHDOT ITEM No. 304.3) SHALL BE PROVIDED BENEATH RAMPS.
3. DETECTABLE WARNING PANEL SHALL BE CAST IRON SET IN CONCRETE (SEE DETAIL.)
4. PROVIDE DETECTABLE WARNING SURFACES ANYTIME THAT A CURB RAMP, BLENDED TRANSITION, OR LANDING CONNECTS TO A STREET.
5. LOCATE THE DETECTABLE WARNING SURFACES AT THE BACK OF THE CURB ALONG THE EDGE OF THE LANDING.
6. THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1, THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
7. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMPS SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 2 FT. FROM THE ROADWAY CURBLINE.
8. THE BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING, EXCLUSIVE OF THE FLARED SIDES, SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS.
9. DETECTABLE WARNING PANELS SHALL BE A MINIMUM OF 2 FEET IN DEPTH. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.
10. THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST VISUALLY WITH THE SURROUNDING SURFACES (EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT).

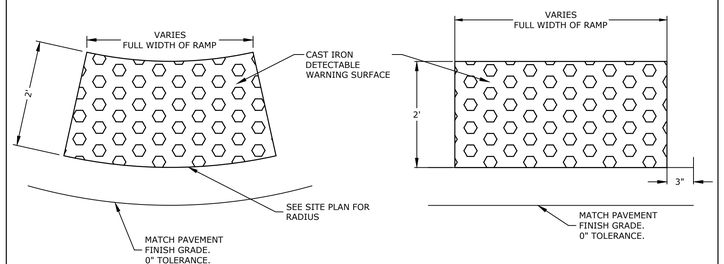
TIP DOWN RAMP
NO SCALE



TRANSITION SECTION
GRANITE SLOPE CURB TO VERTICAL GRANITE CURB

NOTES:
1. THE INTENT OF THIS ITEM IS TO PROVIDE A SMOOTH TRANSITION BETWEEN STRAIGHT GRANITE CURB AND SLOPE CURB WITHOUT REQUIRING FIELD CHIPPING DURING INSTALLATION. THE SLOPE CURB MAY REQUIRE ADJUSTMENTS TO MEET THE TRANSITION PIECE HEIGHT. TRANSITION SLOPE CURB TO STANDARD REVEAL AS QUICKLY AS POSSIBLE TO PROVIDE FOR THIS SMOOTH TRANSITION.

CURB TRANSITION
NO SCALE



NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE 2' X 3' CAST IRON PANEL SET IN CONCRETE.
2. DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

CAST IRON DETECTABLE WARNING SURFACE
NO SCALE

Tighe&Bond

BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

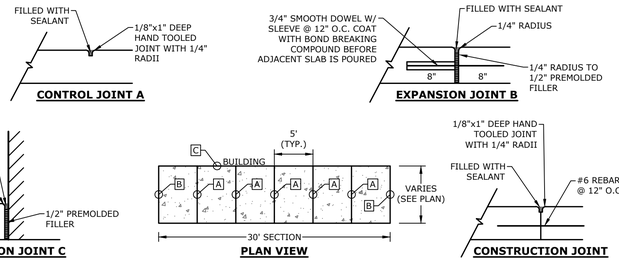
PROJECT NO:	P0616-001
DATE:	3/22/22
FILE:	P0616-005_C-DETAILS.DWG
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

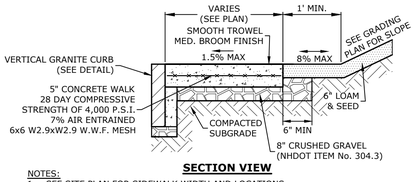
DETAILS SHEET

SCALE: AS SHOWN

C-502

Last Save Date: May 17, 2022 4:27 PM By: ASELLAR
Plot Date: May 17, 2022 4:27 PM By: Alexander Sellar
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Drawings, Figures\AutoCAD\Sheet\P0616-005_C-Details.DWG Layout Tab: C-502



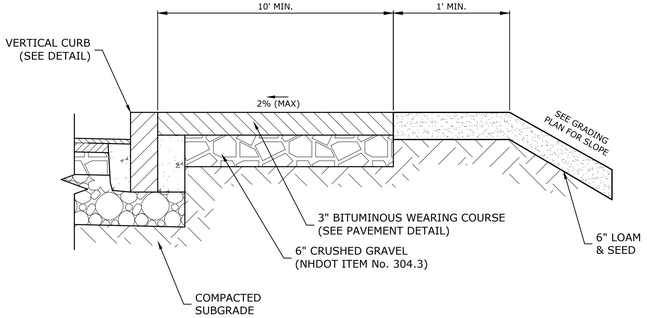


SECTION VIEW

NOTES:
1. SEE SITE PLAN FOR SIDEWALK WIDTH AND LOCATIONS.
2. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR WALK AND SIDE SLOPE GRADES.
3. ISOLATION JOINTS ADJACENT TO BUILDING SHALL BE COORDINATED WITH BUILDING DRAWINGS.

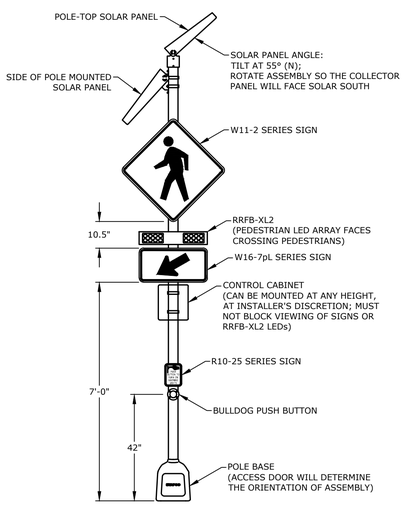
CONCRETE SIDEWALK WITH GRANITE CURB

NO SCALE



MULTI-USE PATH

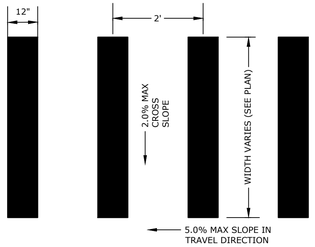
NO SCALE



NOTES:
1. THE POLE AND HOUSING EQUIPMENT SHALL BE THE COLOR BLACK
2. THE POLE DIAMETER SHALL BE 3.5 INCHES

RECTANGULAR RAPID FLASHING BEACON (RRFB)

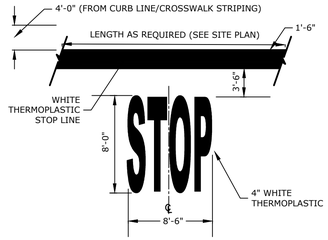
NO SCALE



NOTE:
STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

CROSS WALK STRIPING

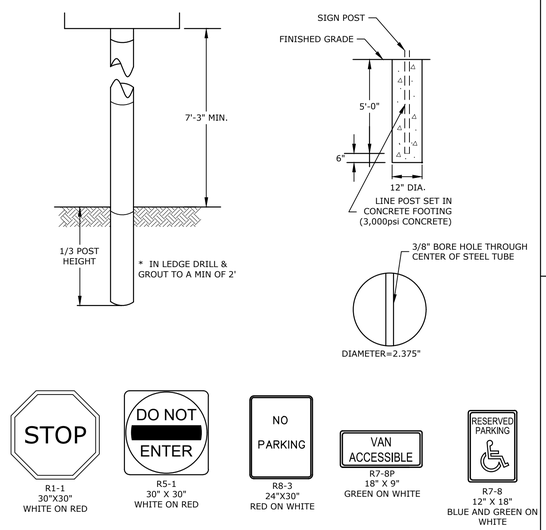
NO SCALE



NOTE:
1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
2. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR & LEGEND

NO SCALE

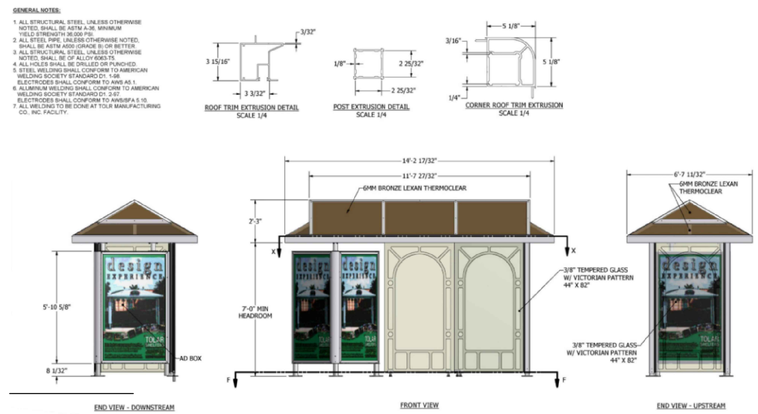


NOTES:
ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
POST: SCHEDULE 40 GALVANIZED STEEL PIPE (OUTSIDE DIA. = 2.375").
FINISH: POST TO BE POWDER COATED GLOSS BLACK
LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER (AS REQUIRED)
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070-1080)

SIGN LEGEND & POST

NO SCALE

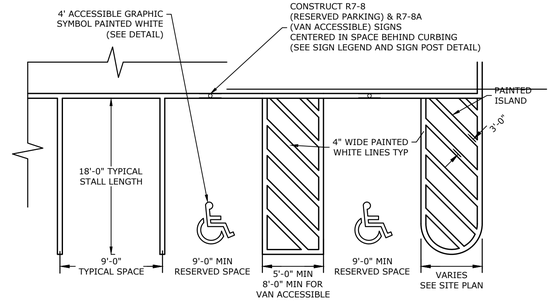
GENERAL NOTES:
1. ALL STRUCTURAL STEEL, UNLESS OTHERWISE NOTED, SHALL BE ASTM A-36, MINIMUM YIELD STRENGTH 36,000 PSI.
2. ALL PIPE, UNLESS OTHERWISE NOTED, SHALL BE ASTM A500 GRADE B OR BETTER.
3. ALL STRUCTURAL STEEL, UNLESS OTHERWISE NOTED, SHALL BE OF ALLOY 6063-T5.
4. ALL HOLES SHALL BE DRILLED OR PUNCHED.
5. STEEL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STANDARD D1.1-96.
6. ALUMINUM SHALL CONFORM TO ASTM B26 AS 1.
6. ALUMINUM WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY STANDARD D1. 2-97.
ELECTRODES SHALL CONFORM TO AWS/SFA 5.10.
7. ALL WELDING TO BE DONE AT TOUR MANUFACTURING CO., INC. FACILITY.



NOTE:
1. DETAIL SHOWN HEREIN IS ATYPICAL FOR PERMITTING PURPOSED.
2. FINAL BUSH SHELTER TO BE SELECTED BY OWNER PRIOR TO CONSTRUCTION.

TYPICAL BUS SHELTER

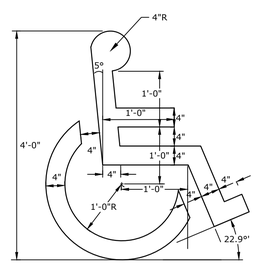
NO SCALE



NOTE:
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
3. FINISH PAVEMENT GRADES AT ALL HANDICAP ACCESSIBLE STALLS AND PAINTED ACCESS AISLES SHALL NOT EXCEED 2% IN ANY DIRECTION.

PARKING SPACE STRIPING

NO SCALE



NOTES:
1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

ACCESSIBLE SYMBOL

NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE — BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER — 5/23/22

STATE OF NEW HAMPSHIRE — PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER — 5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

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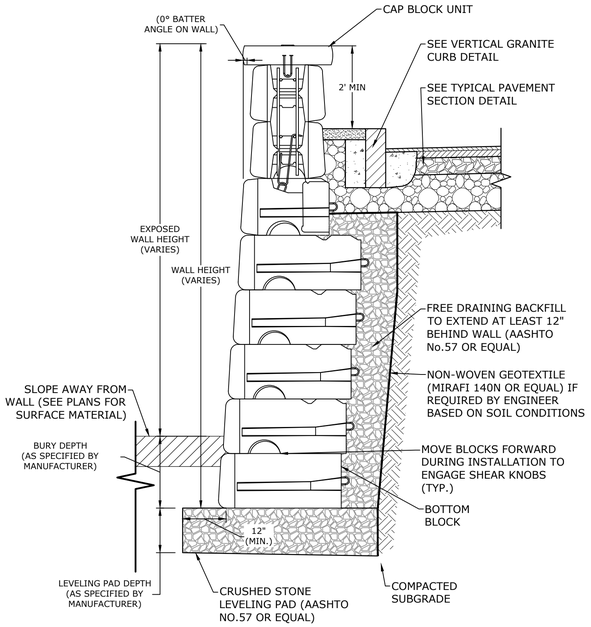
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

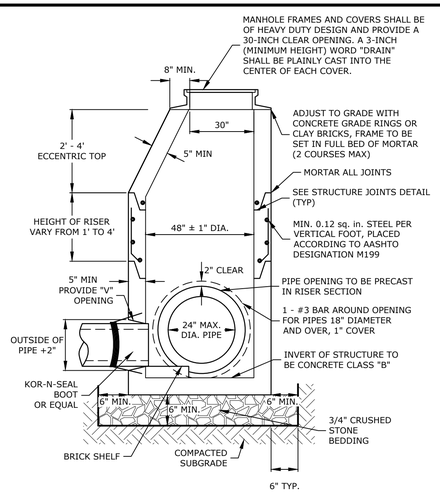
SCALE: AS SHOWN

C-503



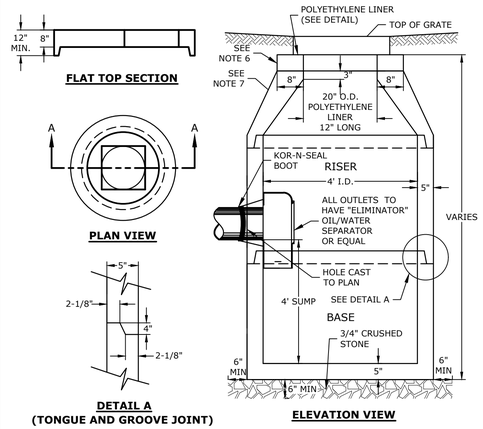
NOTES:
1. RETAINING WALL SHALL BE BY REDI ROCK LEDGESTONE OR APPROVED EQUAL.
2. THE CONTRACTOR SHALL SUBMIT DESIGN AND CALCULATIONS FOR THE RETAINING WALL THAT SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. CALCULATIONS SHALL INCLUDE A GLOBAL STABILITY ANALYSIS.
3. MINIMUM DESIGN PARARMETERS:
   - GLOBAL STABILITY FACTOR OF SAFETY = 1.3
   - OVERTURNING FACTOR OF SAFETY = 2.0
   - SLIDING FACTOR OF SAFETY = 1.5
   - GEOGRID PULLOUT FACTOR OF SAFETY = 1.5
   - SEISMIC FACTOR OF SAFETY = 1.1
4. WALL DESIGNS SHALL CONSIDER EFFECTS OF SLOPE, TRAFFIC LOADS, BUILDING LOADS, GUARDRAIL AND/OR FENCING AS REQUIRED.
5. WALL DESIGN ENGINEER SHALL CONSIDER HEIGHT AND SPECIFY GUARDRAIL WHERE REQUIRED
6. ALL INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION MANUAL AND THE WALL DESIGN ENGINEER'S DESIGN PLANS AND SPECIFICATIONS.
7. THE WALL DESIGN ENGINEER SHALL COMPLETE SUFFICIENT INSPECTIONS DURING CONSTRUCTION TO CERTIFY WORK IS COMPLETED IN ACCORDANCE WITH DESIGN.
8. CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS OF WALL WITH WALL DESIGNER'S CERTIFICATION TO OWNER.
9. CONTRACTOR SHALL DIRECT SURFACE RUNOFF AWAY FROM THE WALL DURING CONSTRUCTION.
10. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT OR OTHER SURFACE TREATMENT SHALL BE INSTALLED IN THE AREA OF THE WALL IMMEDIATELY AFTER THE WALL IS COMPLETE OR OTHER MEASURES SHALL BE TAKEN TO PROTECT THE WALL FROM RUNOFF.
11. CONTRACTOR SHALL SUPPLY SAMPLE TO THE OWNER FOR APPROVAL PRIOR TO WALL CONSTRUCTION.

TYPICAL EXTENDED BLOCK RETAINING WALL SECTION
NO SCALE



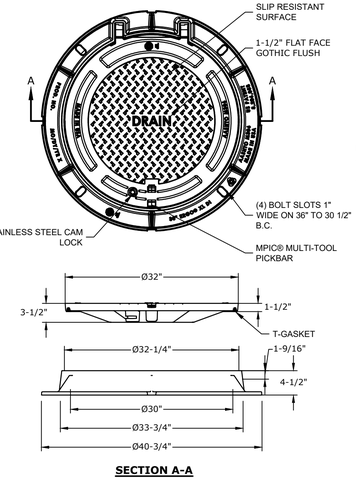
NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

4' DIAMETER DRAIN MANHOLE
NO SCALE



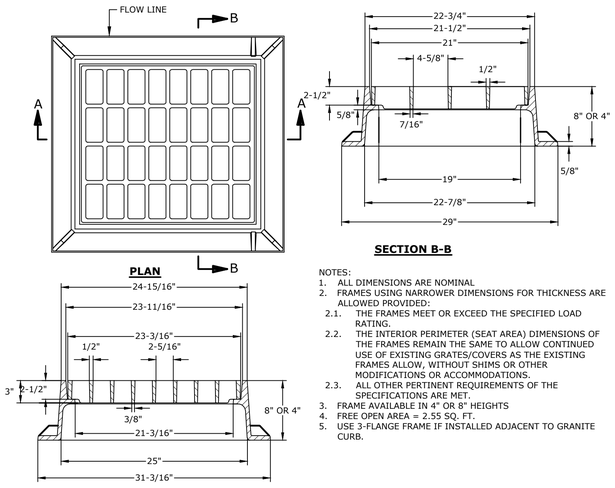
NOTES:
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
7. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
8. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
11. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
12. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

4' DIAMETER CATCH BASIN
NO SCALE



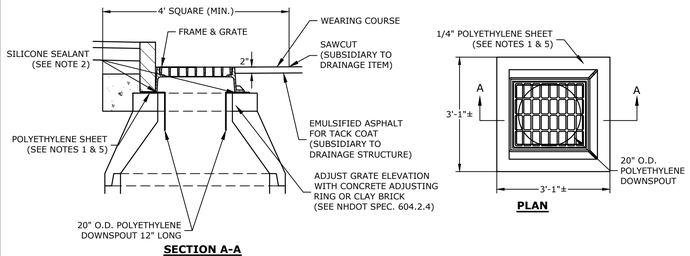
NOTES:
1. MANHOLE FRAME AND COVER SHALL BE 32" HINGED ERGO XL BY EJ CO.
2. ALL DIMENSIONS ARE NOMINAL.
3. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
   A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
   B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
   C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
4. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN HE CENTER OF THE COVER.

DRAIN MANHOLE FRAME & COVER
NO SCALE



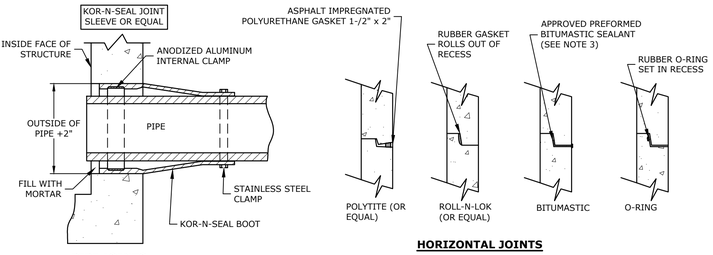
NOTES:
1. ALL DIMENSIONS ARE NOMINAL
2. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
   2.1. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
   2.2. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
   2.3. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
3. FRAME AVAILABLE IN 4" OR 8" HEIGHTS
4. FREE OPEN AREA = 2.55 SQ. FT.
5. USE 3-FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB.

CATCH BASIN FRAME & GRATE
NO SCALE



NOTES:
1. POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
2. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT (SUBSIDIARY TO ITEM 604.0007) BETWEEN FRAME AND POLYETHYLENE SHEET.
3. PLACE CLASS AA CONCRETE TO 2" BELOW THE TOP OF THE GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE).
4. USE ON DRAINAGE STRUCTURES 4' MIN. DIAMETER ONLY.
5. TRIM POLYETHYLENE SHEET A MAXIMUM OF 4" OUTSIDE THE FLANGE ON THE FRAME FOR THE CATCH BASIN BEFORE PLACING CONCRETE (EXCEPT AS SHOWN WHEN USED WITH 3-FLANGE FRAME AND CURB).
6. THE CENTER OF THE GRATE & FRAME MAY BE SHIFTED A MAXIMUM OF 6" FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.
7. PLACED ONLY IN DRAINAGE STRUCTURES IN PAVEMENT.
8. SEE NHDOT DR-04, "DI-DB, UNDERDRAIN FLUSHING BASIN AND POLYETHYLENE LINER DETAILS", FOR ADDITIONAL INFORMATION.
9. CATCHBASINS WITHIN CITY RIGHT OF WAY SHALL HAVE A POLYETHYLENE LINER

POLYETHYLENE LINER
NO SCALE



NOTES:
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF PORTSMOUTH DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARD.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

STRUCTURE JOINTS
NO SCALE

Tighe&Bond

BRADLEE MEZQUITA No. 08530 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
5/23/22

PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

PROJECT NO:	P0616-001
DATE:	3/22/22
FILE:	P0616-005_C-DETAILS.DWG
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

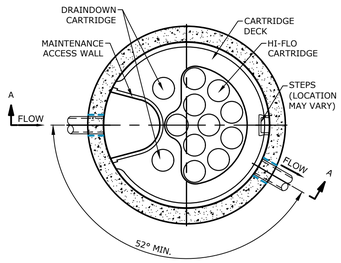
DETAILS SHEET

SCALE: AS SHOWN

C-504

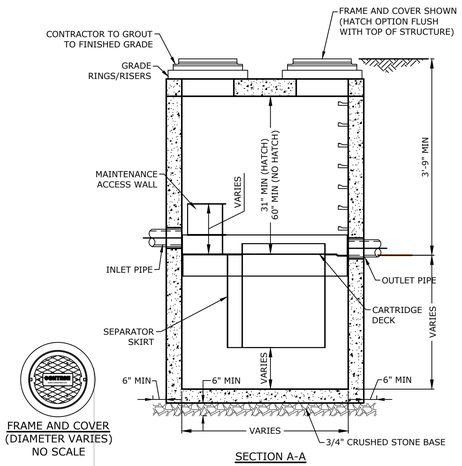
Last Save Date: May 17, 2022 4:27 PM By: ASELLAR
Plot Date: May 17, 2022 4:27 PM By: Alexander Sellar
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 PRH Parking Expansion\Drawings, Figures\AutoCAD\Sheet\P0616-005_C-Details.DWG Layout Tab: C-504

UNIT MODEL SCHEDULE	
PJFF1	4-1-1
PJFF2	4-2-1
PJFF3	4-1-1
PJFF4	4-1-1



PLAN VIEW

Contech Jellyfish Filter System Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**
Inspect vault for sediment build up, static water, plugged media and bypass condition	One (1) time annually and after any rainfall event exceeding 2.5" in a 24-hr period	Maintenance required for any of the following: - >4" of sediment on the vault floor - >1/4" of sediment on top of the cartridge - .4" of static water above the cartridge bottom more than 24 hours after a rain event - If pore space between media is absent. - If vault is in bypass condition during an average rainfall event.
Replace Cartridges	As required by inspection, 1–5 years.	- Remove filter cartridges per manufacturer methods. - Vacuum sediment from vault. - Install new cartridges per manufacturer methods



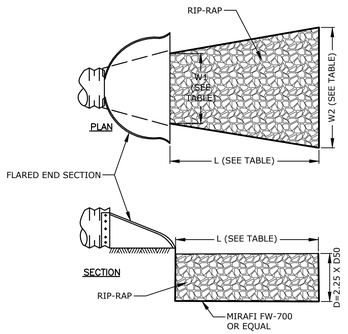
FRAME AND COVER (DIAMETER VARIES)
NO SCALE

SECTION A-A

GENERAL NOTES:
1. TREATMENT UNIT SHALL BE CONTECH JELLYFISH FILTER UNIT OR APPROVED EQUAL.
2. CONTECH TO PROVIDE FINAL DIMENSIONS BASED ON APPROVED FLOWS AND ALL MATERIALS UNLESS NOTED OTHERWISE.
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOADING REQUIREMENTS. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. CONTRACTOR SHALL PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
B. CONTRACTOR SHALL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
C. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (866) 740-3318.

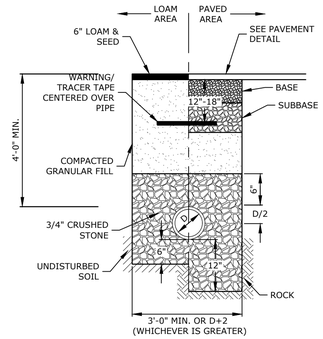
PROPOSED CIRCULAR JELLYFISH FILTER (JFF) UNIT
NO SCALE



FIELD ELEVATIONS					
	WIDTH OF APRON (W_1, FT)	WIDTH OF APRON (W_2, FT)	LENGTH OF APRON (L, FT)	MEDIAN DIAMETER (FT)	MINIMUM DEPTH (FT)
RRA 1	6	20	14	0.50	1.13
RRA 2	6	30	24	0.50	1.13
RRA 3	6	21	15	0.50	1.13
RRA 4	6	22	16	0.50	1.13

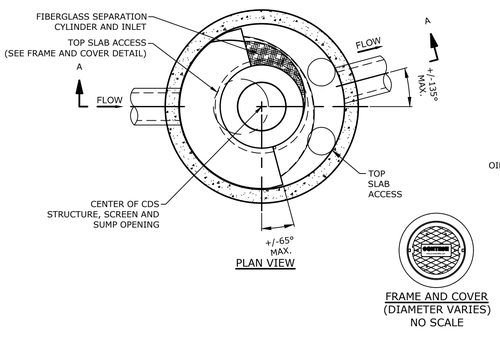
NOTES:
1. STONE SIZE AND MAT DIMENSIONS DETAILED ON PLANS.
2. STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. FLAT OR ROUND ROCKS ARE NOT ACCEPTABLE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.
3. THE STONE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE SPECIFIED. A WELL-GRADED MIXTURE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE.

RIP-RAP APRON DETAIL
NO SCALE

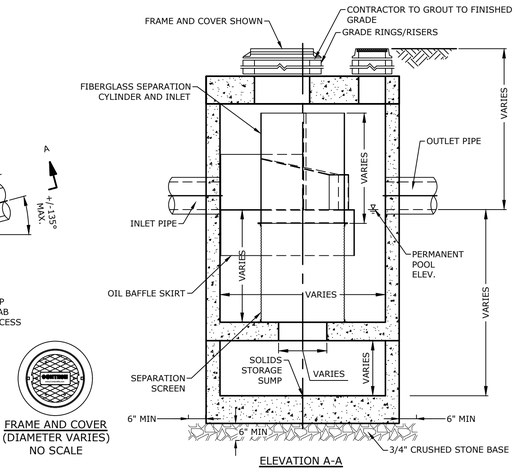


NOTE:
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.

STORM DRAIN TRENCH
NO SCALE



PLAN VIEW



FRAME AND COVER (DIAMETER VARIES)
NO SCALE

ELEVATION A-A

GENERAL NOTES:
1. PRE-TREATMENT UNIT SHALL BE CONTECH CONTINUOUS DEFLECTIVE SEPARATION (CDS) UNIT OR APPROVED EQUAL.
2. CONTECH TO PROVIDE FINAL DIMENSIONS BASED ON APPROVED FLOWS AND ALL MATERIALS UNLESS NOTED OTHERWISE.
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
4. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING.
5. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES:
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE CONSIDERED BY THE CONTRACTOR PRIOR TO INSTALLATION.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN ON GRADING PLAN.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

UNIT MODEL SCHEDULE	
PCDS1	1515-3
PCDS2	1515-3

PROPOSED CONTINUOUS DEFLECTIVE SEPARATION (CDS) UNIT
NO SCALE

Tighe&Bond

BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

PROJECT NO:	P0616-001
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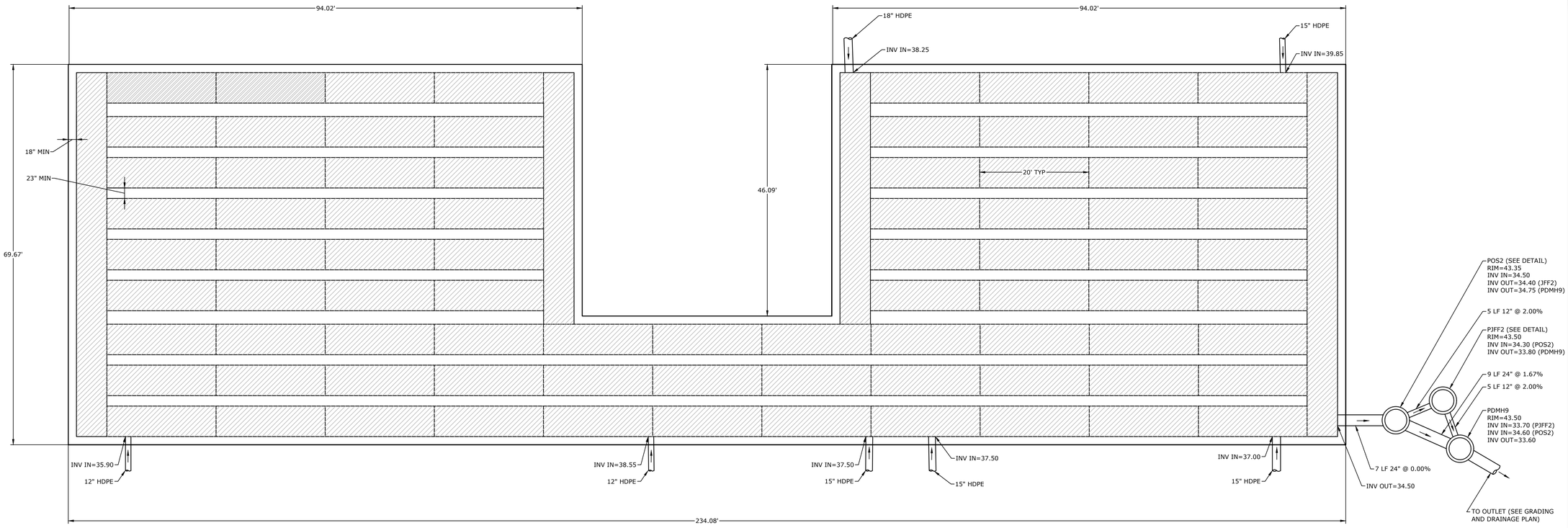
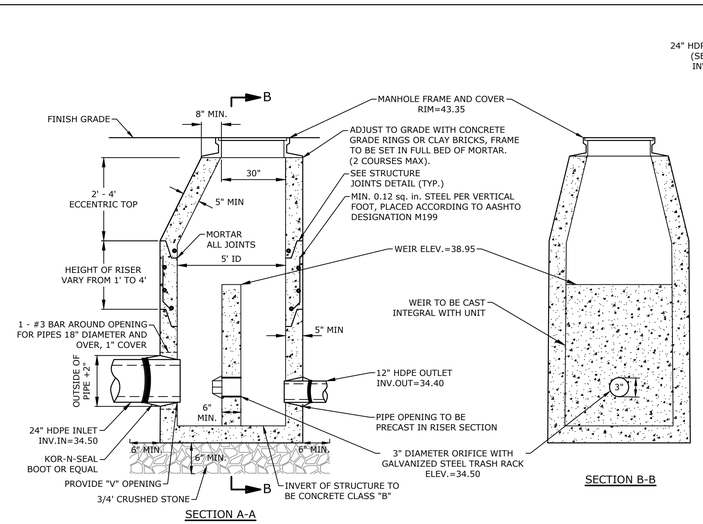
FILE:	P0616-005_C-DETAILS.DWG
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

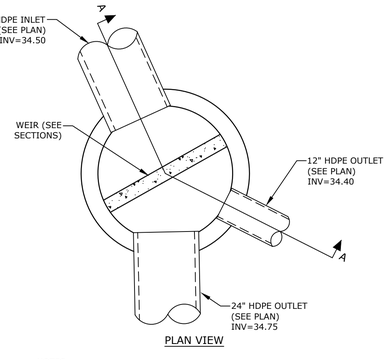
SCALE: AS SHOWN

C-505





SECTION A-A

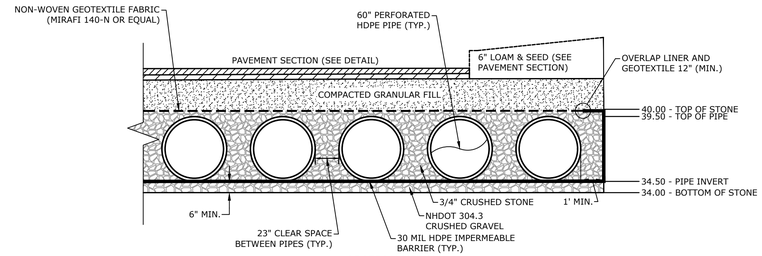


PLAN VIEW

SECTION B-B

NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.
11. SEE DRAINAGE MANHOLE DETAIL FOR MORE INFORMATION (CORE HOLE SIZE, MINIMUM FLOOR AND WALL THICKNESS, ETC.)

OUTLET STRUCTURE (POS2)
NO SCALE



SECTION VIEW

Underground Infiltration/Detention System Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**
Monitor inlet and outlet structures for sediment accumulation	Two (2) times annually	- Trash, debris and sediment to be removed - Any required maintenance shall be addressed
Deep Sump Catch Basins	Two (2) times annually	- Removal of sediment as warranted by inspection - No less than once annually
Monitor detention system for sediment accumulation	Two (2) times annually	- Trash, debris and sediment to be removed - Any required maintenance shall be addressed

NOTE:
1. THE UNDERGROUND INFILTRATION BASIN (UIB) SYSTEM SHALL BE HIGH DENSITY POLYETHYLENE PIPE DESIGNED FOR H-20 LOADING. CONTRACTOR TO SUBMIT PIPE SPECIFICATIONS AND FINAL MANUFACTURES DESIGN TO ENGINEER FOR REVIEW AND APPROVAL.
2. THE CONTRACTOR SHALL SUBMIT PLANS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
3. THE DESIGN ENGINEER SHALL PROVIDE SUFFICIENT INSPECTION TO CERTIFY THAT THE SYSTEM HAS BEEN INSTALLED PER THE PROPOSED DESIGN PLAN.
4. THE DESIGN SHALL REQUIRE INSPECTION PORTS/COVERS SUCH THAT SYSTEM CAN BE CLEANED BY VACUUM TRUCK WITH A MINIMUM OF ONE IN EACH CORNER. (FINAL LOCATIONS TO BE COORDINATED PRIOR TO CONSTRUCTION)

60" HDPE UNDERGROUND DETENTION BASIN (UDB-1) DETAIL
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE
BRADLEE MEZQUITA
No. 08830
LICENSED PROFESSIONAL ENGINEER
5/23/22

STATE OF NEW HAMPSHIRE
PATRICK M. CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

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PROJECT NO:	P0616-001
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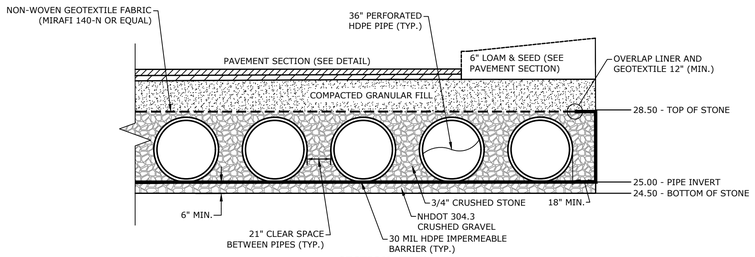
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

SCALE: AS SHOWN

C-506

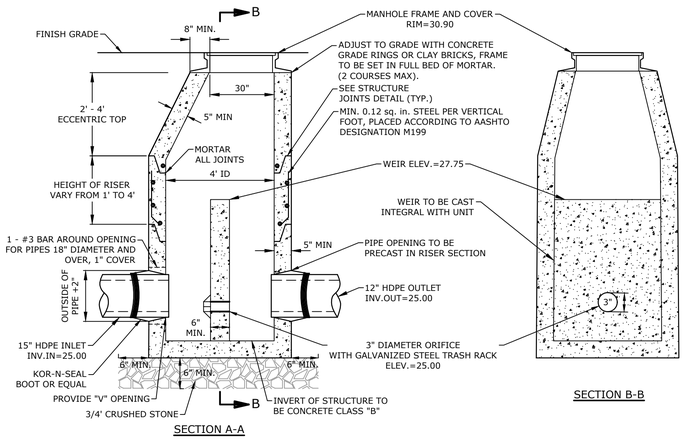
Last Save Date: May 17, 2022, 4:27 PM By: ASELLAR
Plot Date: May 17, 2022, 4:28 PM By: Alexander Sellar
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 RRH Parking Expansion\Drawings_Figures\AutoCAD\Sheet\P0616-005_C-Details.DWG Layout Tab: C-506

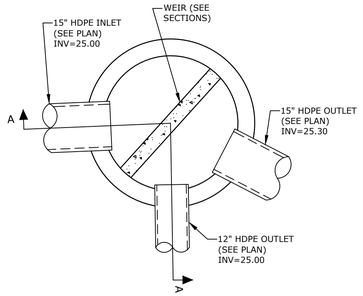


SECTION VIEW

Underground Infiltration/Detention System Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**
Monitor inlet and outlet structures for sediment accumulation	Two (2) times annually	- Trash, debris and sediment to be removed - Any required maintenance shall be addressed
Deep Sump Catch Basins	Two (2) times annually	- Removal of sediment as warranted by inspection - No less than once annually
Monitor detention system for sediment accumulation	Two (2) times annually	- Trash, debris and sediment to be removed - Any required maintenance shall be addressed

NOTE:
1. THE UNDERGROUND INFILTRATION BASIN (UIB) SYSTEM SHALL BE HIGH DENSITY POLYETHYLENE PIPE DESIGNED FOR H-20 LOADING. CONTRACTOR TO SUBMIT PIPE SPECIFICATIONS AND FINAL MANUFACTURES DESIGN TO ENGINEER FOR REVIEW AND APPROVAL.
2. THE CONTRACTOR SHALL SUBMIT PLANS STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
3. THE DESIGN ENGINEER SHALL PROVIDE SUFFICIENT INSPECTION TO CERTIFY THAT THE SYSTEM HAS BEEN INSTALLED PER THE PROPOSED DESIGN PLAN.
4. THE DESIGN SHALL REQUIRE INSPECTION PORTS/COVERS SUCH THAT SYSTEM CAN BE CLEANED BY VACUUM TRUCK WITH A MINIMUM OF ONE IN EACH CORNER. (FINAL LOCATIONS TO BE COORDINATED PRIOR TO CONSTRUCTION)

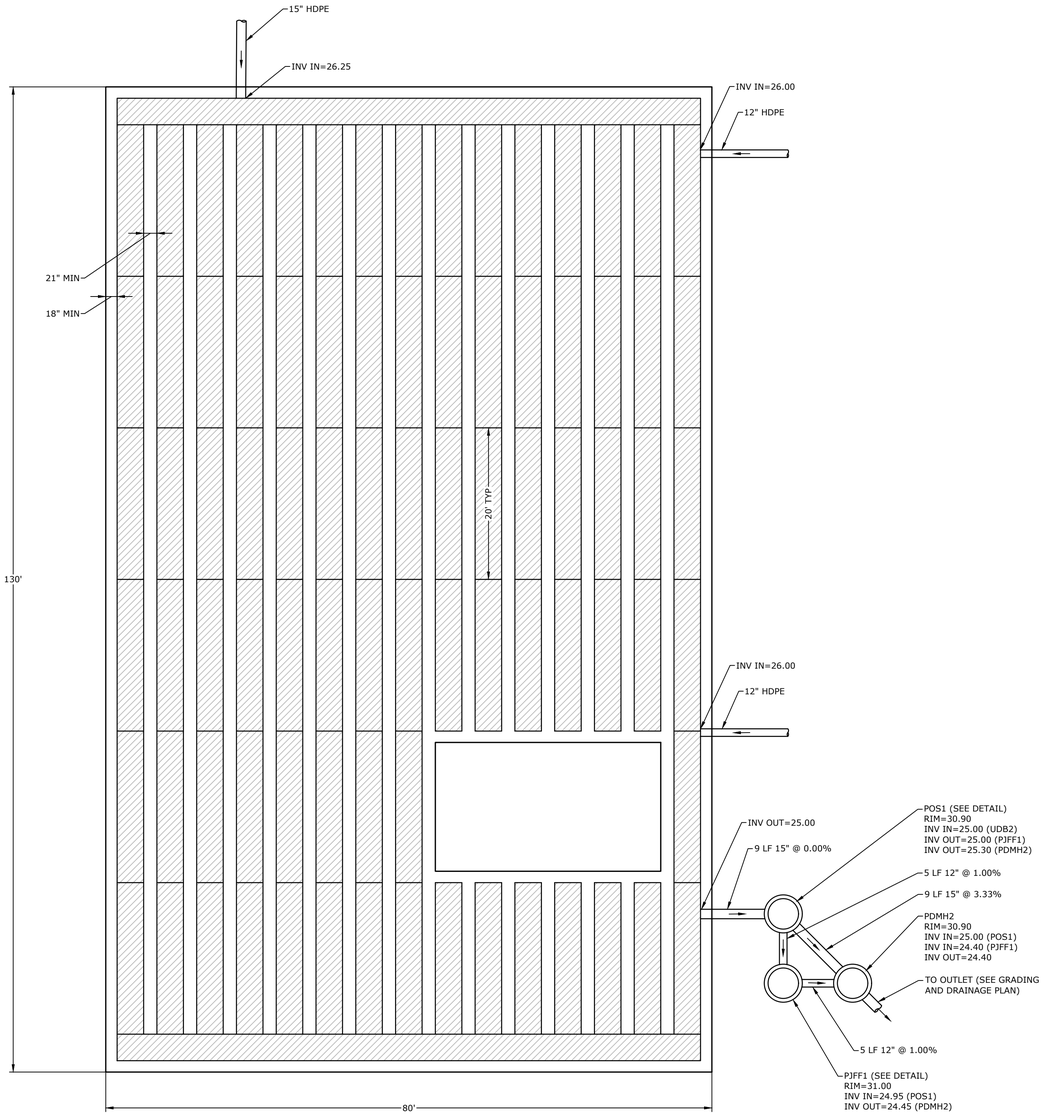




PLAN VIEW

NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.
11. SEE DRAINAGE MANHOLE DETAIL FOR MORE INFORMATION (CORE HOLE SIZE, MINIMUM FLOOR AND WALL THICKNESS, ETC.)

OUTLET STRUCTURE (POS1)
NO SCALE



36" HDPE UNDERGROUND DETENTION BASIN 2 (UDB-2) DETAIL
NO SCALE

Tighe&Bond

BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
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B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

PROJECT NO:	P0616-001
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FILE:	P0616-005_C-DETAILS.DWG
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

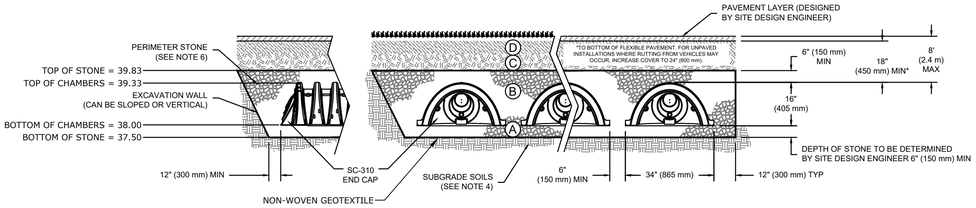
SCALE: AS SHOWN

C-507

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2 3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

1. SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740, SC-310, OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.^]
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".^]
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
7. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   - 7.1. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
   - 7.2. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
   - 7.3. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

NOTES FOR CONSTRUCTION EQUIPMENT^]

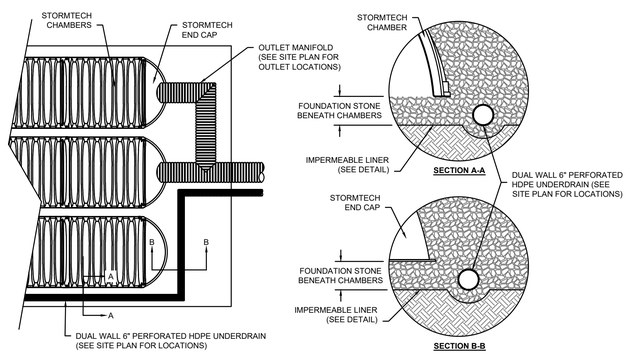
1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".^]
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".^]
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

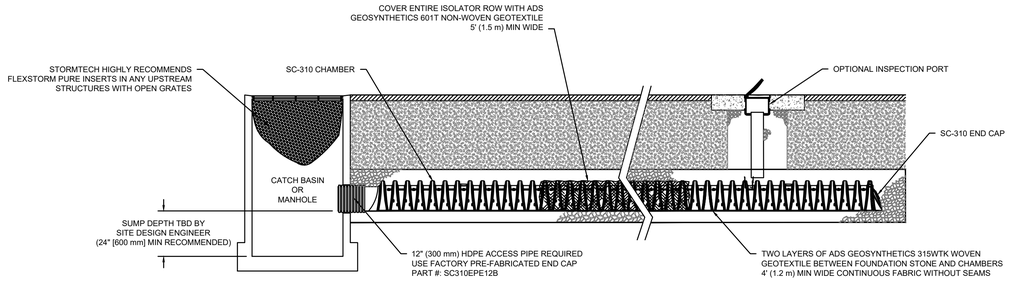
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.^]
2. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-780 CONSTRUCTION GUIDE".^]
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.^] STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.^]
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.^]
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.^]
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.^]
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).^]
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.^]
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.



UNDERDRAIN DETAIL
NTS



SC-310 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE/OPEN COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

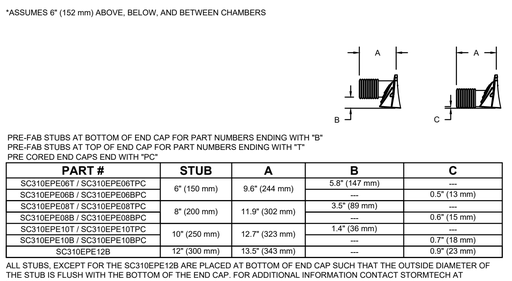
STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

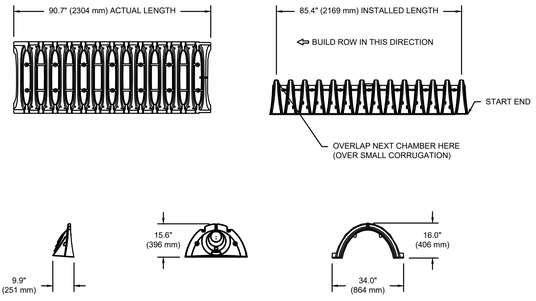
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



* THE PART# **2712AG6IPKIT** CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

SC-310 6" INSPECTION PORT DETAIL
NTS

SC-310 TECHNICAL SPECIFICATION
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	31.0 CUBIC FEET	(0.88 m³)
WEIGHT	35.0 lbs.	(16.8 kg)

*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	---
SC310EPE06B / SC310EPE06BPC			---	0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.9" (302 mm)	3.5" (89 mm)	---
SC310EPE08B / SC310EPE08BPC			---	0.6" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	---
SC310EPE10B / SC310EPE10BPC			---	0.7" (18 mm)
SC310EPE12B	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)

ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC310EPE12B THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

Tighe&Bond

BRADLEE MEZQUITA No. 08830 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

PATRICK M. CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

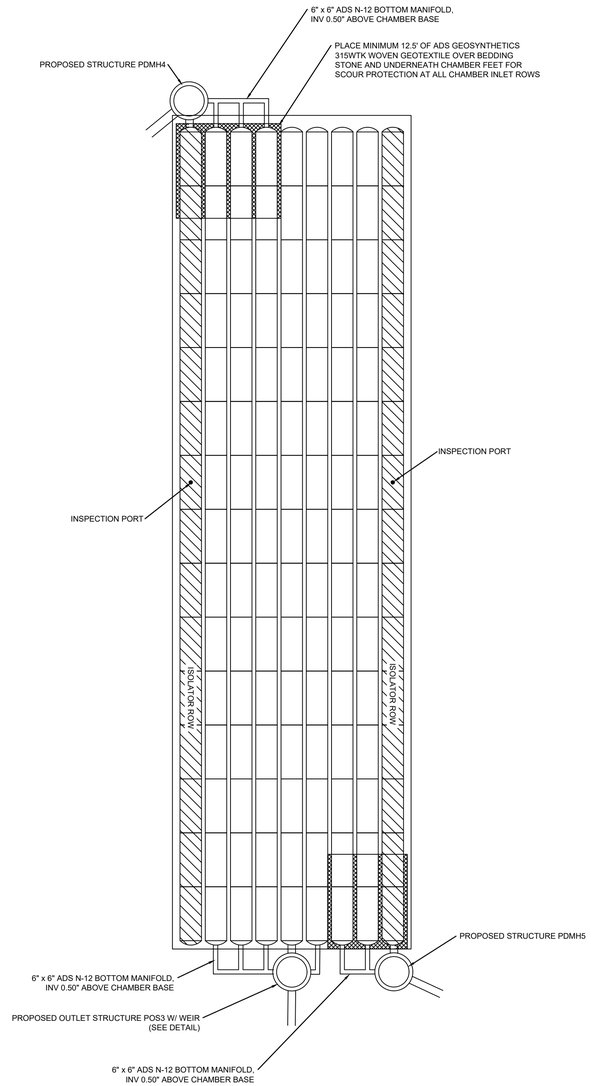
MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

PROJECT NO:	P0616-001
DATE:	3/22/22
FILE:	P0616-005_C-DETAILS.DWG
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

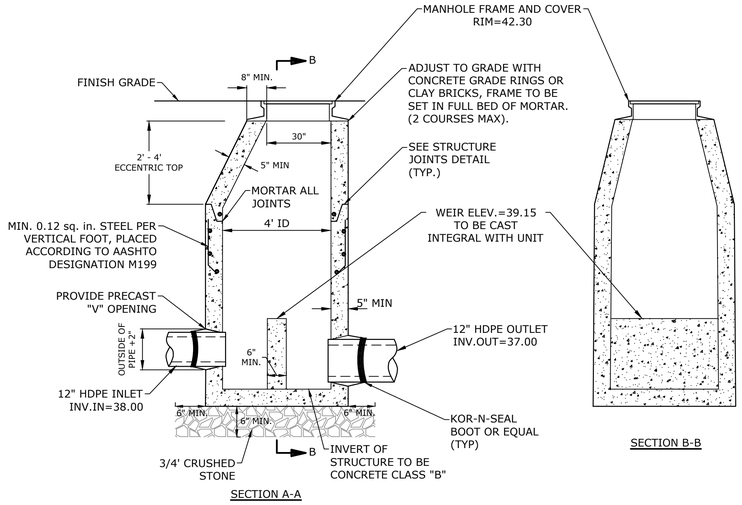
SCALE: AS SHOWN

C-508

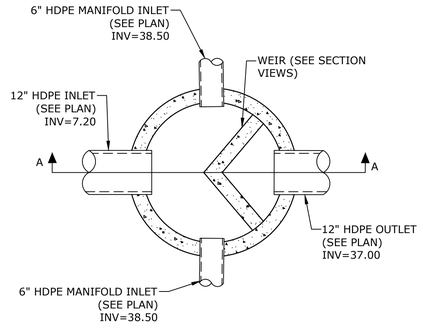


UNDERGROUND DETENTION LAYOUT
(135) STORMTECH SC-310 CHAMBERS
(18) STORMTECH SC-310 END CAPS
INSTALLED WITH 6" COVER STONE, 6" BASE STONE, 40% STONE VOID
INSTALLED SYSTEM VOLUME: 4,428 CF
AREA OF SYSTEM: 3,465 **FT²**
PERIMETER OF SYSTEM: 283 **FT**

UNDERGROUND INFILTRATION BASIN
STORMTECH SC-310 CHAMBER LAYOUT
NO SCALE



NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.
11. SEE DRAINAGE MANHOLE DETAIL FOR MORE INFORMATION (CORE HOLE SIZE, MINIMUM FLOOR AND WALL THICKNESS, ETC.)



PLAN VIEW

OUTLET STRUCTURE DETAIL (POS3)
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE
BRADLEE MEZQUITA
No. 08830
LICENSED PROFESSIONAL ENGINEER
5/23/22

STATE OF NEW HAMPSHIRE
PATRICK M. CRIMMINS
No. 12378
LICENSED PROFESSIONAL ENGINEER
5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

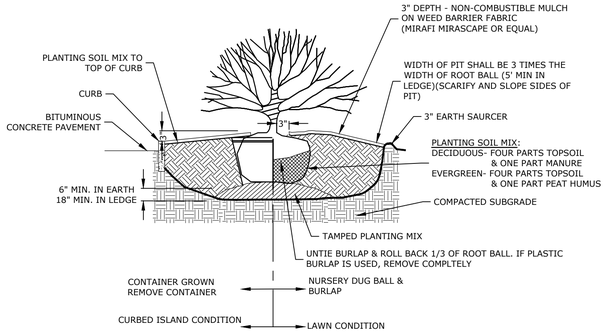
PROJECT NO:	P0616-001
DATE:	3/22/22
FILE:	P0616-005_C-DETAILS.DWG
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

SCALE: AS SHOWN

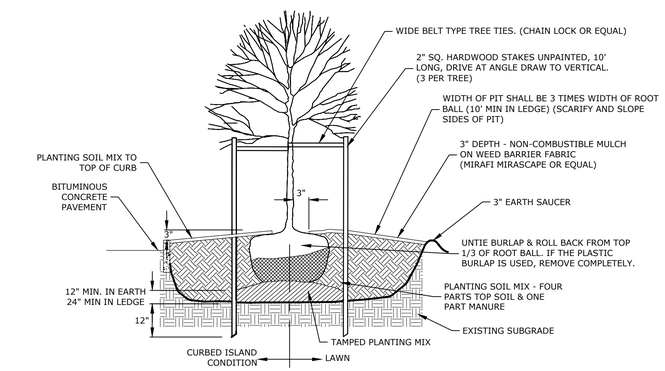
C-509

Last Save Date: May 17, 2022 4:27 PM By: ASELLAR
Plot Date: Tuesday, May 23, 2022 Plotted By: Alexander Sellar
T&B File Location: J:\P\P0616 Portsmouth Regional Hospital - Portsmouth, NH Retention Pond\005 RRH Parking Expansion\Drawings_ Figures\AutoCAD\Sheet\P0616-005_C-Details.DWG Layout Tab: C-509



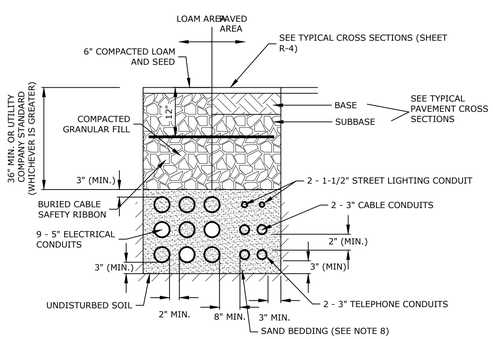
NOTES:
1. PLANT AT SAME DEPTH AS PREVIOUSLY PLANTED, OR WITHIN 2" ABOVE.

SHRUB PLANTING
NO SCALE



NOTES:
1. PLANT AT SAME DEPTH AS PREVIOUSLY PLANTED, OR WITHIN 2" ABOVE.

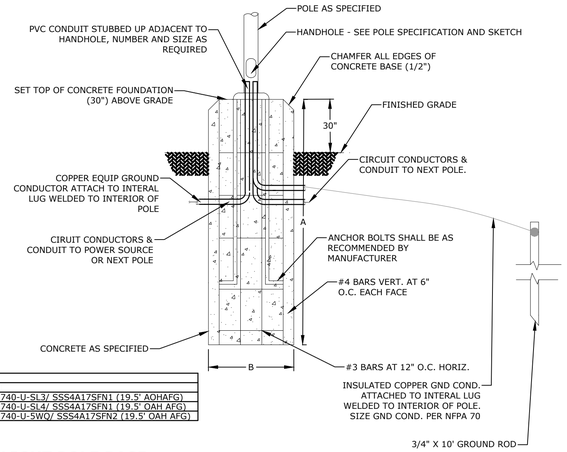
DECIDUOUS TREE PLANTING
NO SCALE



NOTES:
1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.
8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

TYPICAL ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE

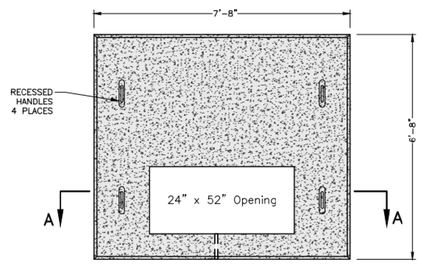
NOTES:
1. ALL LIGHT POLES, LUMINAIRES, AND WIRE TO BE FURNISHED AND INSTALLED BY THE POWER COMPANY. UNLESS OTHERWISE DIRECTED.
2. ANCHOR BOLTS, GROUND ROD & GROUND WIRE TO BE FURNISHED BY THE POWER COMPANY AND INSTALLED BY THE CONTRACTOR, UNLESS OTHERWISE DIRECTED.
3. BOLT CIRCLE DIAMETER SHALL BE VERIFIED WITH THE POWER COMPANY.
4. ALL BASES SHALL BE LOCATED 10'-0" (TO CENTER) FROM FACE OF CURB OR EDGE OF PAVED SHOULDER, UNLESS OTHERWISE NOTED.
5. REINFORCEMENT SHALL CONFORM TO SECTION 544 OF THE STANDARD SPECIFICATIONS.
6. ANY ANCHOR BOLTS DAMAGED DURING INSTALLATION SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER.
7. UPON INSTALLATION, ANCHOR BOLT THREADS SHALL BE CLEANED WITH A WIRE BRUSH.
8. TERRAIN SURROUNDING BASE MUST BE GRADED AS SHOWN IN DETAIL "A" TO PREVENT IMPACTING VEHICLES FORM SNAGGING ON BASE.



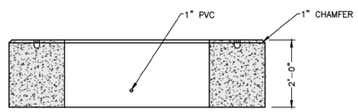
LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	DESCRIPTION
■	3	P3	SINGLE	GLEON-SA1C-740-U-SL3/ SSS4A17SFN1 (19.5' AOHAFG)
■■	15	P4	SINGLE	GLEON-SA2C-740-U-SL4/ SSS4A17SFN1 (19.5' OAH AFG)
■■	5	P5-2	BACK-BACK	GLEON-SA2C-740-U-SWQ/ SSS4A17SFN2 (19.5' OAH AFG)

LIGHT POLE BASE
NO SCALE



PLAN



SECTION A–A

NOTES:
1. DIMENSIONS SHOWN REPRESENT TYPICAL REQUIREMENTS. MANHOLE LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED WITH EVERSOURCE PRIOR TO CONSTRUCTION
2. CONCRETE MINIMUM STRENGTH - 4,000 PSI @ 28 DAYS
3. STEEL REINFORCEMENT - ASTM A615, GRADE 60
4. PAD MEETS OR EXCEEDS EVERSOURCE SPECIFICATIONS

3-PHASE TRANSFORMER PAD
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE — BRADLEE MEZQUITA No. 08830 — LICENSED PROFESSIONAL ENGINEER — 5/23/22

STATE OF NEW HAMPSHIRE — PATRICK M. CRIMMINS No. 12378 — LICENSED PROFESSIONAL ENGINEER — 5/23/22

Proposed Satellite Parking Lot

Portsmouth Regional Hospital

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
D	05/23/2022	AOT SUBMISSION
C	05/12/2022	TAC RESUBMISSION 2
B	04/21/2022	TAC RESUBMISSION
A	03/22/2022	TAC SUBMISSION

PROJECT NO:	P0616-001
DATE:	3/22/22
FILE:	P0616-005_C-DETAILS.DWG
DRAWN BY:	MKF
CHECKED:	PMC
APPROVED:	BLM

DETAILS SHEET

SCALE: AS SHOWN

C-510