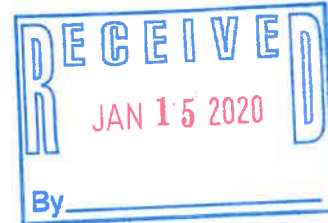




**AMBIT ENGINEERING, INC.** CIVIL ENGINEERS AND LAND SURVEYORS  
200 Griffin Road, Unit 3, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

14 January, 2020

Wetland Inspector  
New Hampshire Department of Environmental Services  
Wetlands Bureau  
29 Hazen Drive / P.O. Box 95  
Concord, New Hampshire 03302



**Re: NHDES Major Impact Wetland Permit Application  
Tax Map 207, Lot 3  
363 New Castle Ave  
Portsmouth, New Hampshire**

Dear Wetland Inspector:

This letter transmits a New Hampshire Department of Environmental Services (NHDES) Major Impact Wetland Permit Application request to permit 340 sq. ft. of permanent impact to tidal wetland, and 24 sq. ft. of permanent impact to previously developed 100' TBZ for the construction of a tidal docking structure; which will consist of a 4' x 6' accessway, a 4' x 20' fixed wooden pier, a 3' x 20' aluminum gangway, and a 10' x 20' float (overall structure length 50') providing two slips on 77+/- feet of frontage along the Piscataqua River. The project also proposes an additional 1,201 sq. ft. of permanent impact to tidal wetlands, and 750 sq. ft. of permanent impact to previously developed 100' TBZ for shoreline stabilization with the replacement of an existing stone revetment and a buffer planting area.

Attached to this application you will find a "NH DES Dock Permit Plan-C2" which depicts the existing lot, jurisdictional areas, abutting parcels, existing structures, proposed work, and permanent impact areas.

Per Env-Wt 306.05, Certified Wetland Scientist Steve Riker from Ambit Engineering, Inc. classified all jurisdictional areas and identified the predominant functions off all relevant resources. The Highest Observable Tide Line marks the reference line for the 100' TBZ, as well the beginning of Tidal Wetland on the attached plan set. Attached to this application is a Wetland Functions and Values Assessment and Coastal Vulnerability Assessment summarizing these functions; as this project is subject to the requirements of Env-Wt 603.04 and Env-Wt 603.05.

The proposed structure will be constructed on pilings within the tidal wetland further reducing permanent impacts to the tidal wetland resource. The project will have no impact on the functions and values of the adjacent tidal wetland. The docking structure has been designed to allow the adjacent tidal resource to maintain its current functions and values. The docking structure will not contribute to additional storm water or pollution. It is anticipated that there will be no affect on any fish and wildlife species that currently use the site for food, cover, and/or habitat. The tidal docking structure will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement. The float and gangway will be temporary docking structures and will be removed during winter months as to not interfere with ice floe. The proposal also provides float stops to keep the float a minimum of 24" inches off the mud at low tide.

The docking structure has been designed to provide recreational boating access utilizing the natural grade of the dock location. There is no grading of the shoreline required to construct the dock. There will be no construction activity that will disturb the area adjacent to the use. All work will be performed from a crane barge at low tide. Piles to be driven are at or above the Mean Low Water (MLLW) line and there is no need for erosion control. There will be no water in this location during pile driving and therefore no temporary disturbance associated with construction. The barge floats into position and the piles are driven by the crane equipped with a vibratory hammer. This method eliminates any contact of construction equipment with the protected resource. Portions of the docking structure are pre-fabricated off site and transported to the site via crane barge.

The construction sequence for the proposed structure are as follows:

- Mobilization of a crane barge, push boat, work skiff, materials and prefabricated components such as the gangway and float to the site via the Piscataqua River.
- Mobilization of equipment trucks to the site.
- The barge will be positioned alongside the proposed location of the new dock and waterward of any emergent vegetation to minimize impacts.
- Installation of the sub structure will be performed from a crane barge or skiff to reduce the amount of foot traffic in the intertidal area.
- All work will be performed at low tide to minimize sedimentation.
- Pilings will be mechanically driven by a crane eliminating any excavation for installation of the pilings. Piling are driven to refusal.
- Pilings are cut and beam caps are installed and the super structure of the pier is built. Materials are lifted from the barge and set into position by the crane.
- Once the pier is complete, the gangway and float are brought into position and installed.

The stone revetment for shoreline stabilization is needed to provide protection from tidal action and wave energy, and also provide a structural foundation for the landward slope. The revetment will consist of a top layer of 12-18" minus erosion stone; on top of a base course of crushed stone located directly landward, and a geotextile fabric which allows water to pass through, yet keeps the fine grained material in place, critical to long term stability. This revetment is essential for shoreline stabilization, as it will provide a structural foundation for the landward slope. (see Revetment Sections and Grading on Sheet D2).

The construction sequence for the stone revetment is as follows:

- Existing rip rap debris will be removed and disposed of off site.
- The embankment will be reshaped.
- The toe of the embankment will be excavated and reshaped.
- Non-woven geotextile filter fabric will be installed.

- The area will be covered with 6" of crushed stone.
- The 12-18" minus erosion stone will be installed.

Access to repair the stone revetment will be achieved from the uplands on the subject lot located directly adjacent to the work area. Construction equipment and materials will be mobilized to the site via New Castle Ave. It is anticipated that this work will be done at the same; and in coordination with the revetment re-construction at 379 New Castle Avenue (the property directly to the east), a NH DES permit for which is also being applied for.

The project represents the alternative with the least adverse impacts to areas and environments while allowing reasonable use of the property.

Per Env-Wt 603.02(b), attached to this application you will find a plan set which depicts the existing lot, jurisdictional areas, all natural resources in the area, abutting parcels, existing structures, proposed structures, and temporary impact areas. Also included in this application are maps created in accordance with Env-Wt 603.03 and Env-Wt 603.05.

In order to complete the application package for this project, the DES Wetlands Bureau rules in Chapter Env-Wt 306.05 (a)(2) has been evaluated and addressed below.

(2) a. Contains any documented occurrences of protected species or habitat for such species, using the NHB DataCheck tool;

**Attached to this application are the results of the NHB review and it was determined that, although there was an NHB record present in the vicinity, it is not expected that it will be impacted by the proposed project.**

(2) b. Is a bog;

**Utilizing the NH DES WPPT, the subject property is not a bog, nor does it contain any portion of a bog.**

(2) c. Is a floodplain wetland contiguous to a tier 3 or higher watercourse;

**Utilizing the NH DES WPPT, the subject property does not contain a floodplain wetland contiguous to a tier 3 or higher watercourse.**

(2) d. Does the property contain a designated prime wetlands or a duly established 100-foot buffer; or

**The property does not contain a prime wetland or duly established 100 foot buffer.**

(2) e. Does the property contain a sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone;

**The property does not contain a sand dune or undeveloped tidal buffer zone. The property does contain a tidal wetland and tidal waters.**

The DES Wetlands Bureau rules in Chapter Env-Wt 306.05 (a)(4) and (a)(7) has been evaluated and addressed below.

(4) a. Is the subject property within LAC jurisdiction;

**The property does not fall within an area of LAC jurisdiction.**

(4) b. Does the subject property fall within or contain any areas that are subject to time of year restrictions under Env-Wt 307;

**The property does not fall within or contain any areas that are subject to time of year restrictions.**

(7) Does the project have potential to impact impaired waters, class A waters, or outstanding resource waters;

**I do not believe the nature of the proposed project has the potential to impact an impaired water. The proposed project will serve to improve the water quality of the stormwater on site, and also improve groundwater quality associated with the site.**

The DES Wetlands Bureau rules in Chapter Env-Wt 603.02 (e) & (f) have been evaluated and addressed below.

(e)(1) The project meets the standard conditions in Env-Wt 307;

**The project meets the standard conditions in Env-Wt 307 as the proposed docking structure and revetment meets the standards of Env-Wq 1000, RSA 483-B and Env-Wq 1400. Sediment and erosion controls will also be used and maintained during the proposed construction ensuring protection of water quality on the site. Since the construction will be conducted during low tide conditions, it is not anticipated that there will be any impacts to fish or shellfish. Under Env-Wt 306.05 (a)(2)a. a NHB review has been performed to ensure there are no impacts to protected species or habitats of such species. The protection of Prime Wetlands or Duly-Established 100 foot buffers does not apply as none exist on or adjacent to the subject lot.**

(e)(2) The project meets the approval criteria in Env-Wt 313.01;

**The project meets the approval criteria in Env-Wt 313.01 as the project requires a functional assessment (attached), meets the avoidance and minimization requirements specified in Env-Wt 313.03, does not require compensatory mitigation, meets applicable conditions specified in Env-Wt 307 (above), meets project specific criteria listed in Env-Wt 600 (above), and the project is located entirely within the boundary of the applicants property.**

(f)(1) The project design narrative as described in Env-Wt 603.06;

**The project design narrative is provided above.**

(f)(2) Design plans that meet the requirements of Env-Wt 603.07;

**The design plans meet the above standard.**

(f)(3) The water depth supporting information required by Env-Wt 603.08;

**The design plans provide water depth information.**

(f)(4) A statement regarding impact on navigation and passage required by Env-Wt 603.09.

**The Permit Plan Set will be provided to the Pease Development Authority, Division of Ports and Harbors, for formal review and comment by the Harbormaster. That documentation will be provided to NH DES upon receipt.**

Please contact me if you have any questions or concerns regarding this application.

Respectfully submitted,

A handwritten signature in black ink, consisting of the letters 'S' and 'R' in a stylized, cursive font. The 'S' is large and loops around the 'R'.

Steven D. Riker, CWS  
NH Certified Wetland Scientist/Permitting Specialist  
Ambit Engineering, Inc.

13 November, 2019

**To Whom It May Concern:**

**RE: State of New Hampshire Department of Environmental Services  
Application for proposed docking structure within the previously developed 100'  
Tidal Buffer Zone and jurisdictional wetlands for Sarah J Mason Living Trust of  
363 New Castle Ave, Portsmouth, NH 03801**

This letter is to inform the State of New Hampshire DES and the City of Portsmouth in accordance with State Law that the following entities:

Riverside Marine Construction, Inc.  
Ambit Engineering, Inc.

Are individually authorized to represent us as our agents in the approval process.

Please feel free to call me if there is any question regarding this authorization.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sarah J Mason".

*Sarah J Mason Living Trust  
Sarah J Mason Trustee  
363 New Castle Ave  
Portsmouth, NH 03801*



**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:** Sarah J. Mason Living Trust

|                               |                               |                               |            |
|-------------------------------|-------------------------------|-------------------------------|------------|
| Administrative<br>Use<br>Only | Administrative<br>Use<br>Only | Administrative<br>Use<br>Only | File No.:  |
|                               |                               |                               | Check No.: |
|                               |                               |                               | Amount:    |
|                               |                               |                               | Initials:  |

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

**SECTION 1 - CONCURRENT PROCESSING OF RELATED SHORELAND/WETLANDS PERMIT APPLICATIONS (Env-Wt 313.05)**

If the applicant is not requesting concurrent processing, please proceed to Section 2.

Is the proposed project eligible for the optional concurrent processing of related shoreland/wetlands permit applications (Env-Wt 313.05(d))? If the project is not eligible, proceed to Section 2 (the files will not be processed concurrently).  Yes  No

By signing this form and initialing this section, the applicant is requesting concurrent processing of related shoreland/wetlands permit applications and understands that concurrently filing the applications with a request to process the applications together constitutes:

- A waiver by the applicant of the shorter time frame, if application processing timelines are different for each permit program under the 2 statutes and their implementing rules; and Initials: \_\_\_\_\_
- An agreement by the applicant that any request for additional information by the department under either or both statutes shall affect the review timeframe of both applications being processed together. Initials: \_\_\_\_\_

**SECTION 2 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05)**

Please use the Wetland Permit Planning Tool (WPPT) or any other database or source to assist in identifying key features such as: priority resource areas (PRA), protected species or habitat, coastal area, or designated river, or designated prime wetlands.

**Step 1:** A certified wetland scientist must delineate and classify all wetlands and identify the predominant resource functions of each wetland, unless the exceptions listed in Env-Wt 306.05(a)(1) are met (Env-Wt 306.05(a)(1)).

**Step 2:** Determine whether the subject property is or contains a PRA by answering the following questions (Env-Wt 306.05(a)(2)):

- 1. Does the property contain any documented occurrences of protected species or habitat for such species? Please use the Natural Heritage Bureau (NHB) DataCheck Tool to make this determination.  Yes  No
- 2. Is the property a bog? Please use the WPPT "Peatland" layer (under the PRA module) for general location of bogs or any other database or source.  Yes  No
- 3. Is the property a floodplain wetland contiguous to a tier 3 or higher watercourse? Please use the WPPT "Floodplain Wetlands Adjacent to Tier 3 Streams" layer (under PRA module) or any other database or source.  Yes  No
- 4. Is the property a designated prime wetland or a duly-established 100-foot buffer? Please use the WPPT "Prime Wetlands" layers (under PRA module) or any other database or source.  Yes  No
- 5. Is the property a sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone? Please use the WPPT "Coastal" layers module and PRA module or any other database or source.  Yes  No

**Step 3:** For projects that are subject to Env-Wt 600, please attach the Coastal Functional Assessment (Env-Wt 603.04) and Vulnerability Assessment (Env-Wt 603.05) and conduct the data screening required by Env-Wt 603.03.

**Step 4:** Determine whether the following apply to the subject property (Env-Wt 306.05(a)(4); RSA 482-A:3, l(d)(2)):

- 1. Is the property within a Local River Management Advisory Committee (LAC) jurisdiction?
  - If yes, please provide the following information:
    - The project is within ¼ mile of:  Yes  No
    - A copy of the application was sent to the LAC on Month:  Day:  Year:  .  
 N/A (Env-Wt 311.01(e))
- 2. Is the property within or contains any areas that are subject to time of year restrictions under Env-Wt 307?  Yes  No

**Step 5:** For stream crossing projects: what is the size of the watershed (Env-Wt 306.05(a)(5))?

N/A

**Step 6:** For dredge projects: is the subject property contaminated (Env-Wt 306.05(a)(6))?  Yes  No

N/A

**Step 7:** Does the project have the potential to impact any of the following (Env-Wt 306.05(a)(7)):

- N/A
- 1. Impaired waters?  Yes  No
- 2. Class A waters?  Yes  No
- 3. Outstanding resource waters?  Yes  No

**SECTION 3 - 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" in the space provided below.

The project proposes 340 sq. ft. of permanent impact to tidal wetland, and 24 sq. ft. of permanent impact to previously developed 100' TBZ for the construction of a tidal docking structure; which will consist of a 4' x 6' accessway, a 4' x 20' fixed wooden pier, a 3' x 20' aluminum gangway, and a 10' x 20' float (overall structure length 50') providing two slips on 77+/- feet of frontage along the Piscataqua River. The project also proposes an additional 1,201 sq. ft. of permanent impact to tidal wetlands, and 750 sq. ft. of permanent impact to previously developed 100' TBZ for shoreline stabilization with the replacement of an existing stone revetment and a buffer planting area.



|   |  |  |                     |
|---|--|--|---------------------|
| <b>SECTION 4 - PROJECT LOCATION</b>   |  |  |                     |
| Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.  |  |  |                     |
| ADDRESS: 363 New Castle Avenue  |  | TOWN/CITY: Portsmouth                                |                     |
| TAX MAP/BLOCK/LOT/UNIT: Map 207, Lot 3  |  |  |                     |
| UNITED STATES GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Piscataqua River<br><input type="checkbox"/> N/A  |  |  |                     |
| LATITUDE (D.ddddd): X:1,230,420.3615° North (Optional)  |  | LONGITUDE (D.ddddd): Y:209,493.2900° West (Optional) |                     |
| <b>SECTION 5 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))</b>   |  |  |                     |
| If the applicant is a trust or a company, then the name of the trust or company should be written as the applicant's name.                                |  |  |                     |
| NAME: Sarah J. Mason Living Trust   |  |  |                     |
| MAILING ADDRESS: 363 New Castle Avenue  |  |  |                     |
| TOWN/CITY: Portsmouth   |  | STATE: NH  | ZIP CODE: 03801     |
| EMAIL ADDRESS: cathellmason@yahoo.com   |  | FAX:   | PHONE: 919-632-5450 |
| ELECTRONIC COMMUNICATION: By initialing here: _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.     |  |  |                     |
| <b>SECTION 6 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))</b>  |  |  |                     |
| <input type="checkbox"/> N/A  |  |  |                     |
| LAST NAME, FIRST NAME, M.I.: Riker, Steven, D.     Ambit Engineering, Inc.  |  |  |                     |
| COMPANY NAME: Ambit Engineering, Inc.   |  | MAILING ADDRESS: 200 Griffin Road                    |                     |
| TOWN/CITY: Portsmouth   |  | STATE: NH  | ZIP CODE: 03801     |
| EMAIL ADDRESS: sdr@ambitengineering.com   |  | FAX:   | PHONE: 603-430-9282 |
| ELECTRONIC COMMUNICATION: By initialing here <u>SR</u> , I hereby authorize NHDES to communicate all matters relative to this application electronically. |  |  |                     |
| <b>SECTION 7 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))</b>  |  |  |                     |
| If the owner is a trust or a company, then the name of the trust or company should be written as the owner's name.  |  |  |                     |
| <input type="checkbox"/> Same as applicant  |  |  |                     |
| NAME:   |  |  |                     |
| MAILING ADDRESS:  |  |  |                     |
| TOWN/CITY:  |  | STATE:   | ZIP CODE:           |
| EMAIL ADDRESS:  |  | FAX:   | PHONE:              |

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

**SECTION 8 - 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 (please attach information about stream crossings, coastal resources, prime wetlands, or non-tidal wetlands and surface waters).  
Please see attached narrative.

**SECTION 9 - AVOIDANCE AND MINIMIZATION**

Impacts within wetland jurisdiction must be avoided to the maximum extent practicable (Env-Wt 313.03(a)). If all impacts cannot be avoided, a functional assessment is required for minor and major projects (Env-Wt 311.03(b)(10)). Any project with unavoidable jurisdictional impacts must then be minimized as described in the [Wetlands Best Management Practice Techniques For Avoidance and Minimization](#). Please refer to the application checklist to ensure that you have attached all documents related to avoidance and minimization, as well as functional assessment (where applicable).

**SECTION 10 - 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 11 - THE PROJECT MEETS COMPENSATORY MITIGATION REQUIREMENTS (Env-Wt 313.01(a)(1)c).**

Have you submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent impacts that will remain after avoidance and minimization demonstration?

Yes  No

N/A - Mitigation is not required

**SECTION 12 - 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 required permitting).

For intermittent streams, the linear footage of impact is measured along the thread of the channel.

For perennial streams/ivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.

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

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

| JURISDICTIONAL AREA                            | PERMANENT    |          | TEMPORARY |                              |
|--|--------------|----------|-----------|------------------------------|
|  | SF           | LF       | SF        | LF                           |
| Forested Wetland                               |              |          |           | <input type="checkbox"/> ATF |
| Scrub-shrub Wetland                            |              |          |           | <input type="checkbox"/> ATF |
| Emergent Wetland                               |              |          |           | <input type="checkbox"/> ATF |
| Wet Meadow                                     |              |          |           | <input type="checkbox"/> ATF |
| Intermittent Stream                            | /            |          | /         | <input type="checkbox"/> ATF |
| Perennial Stream or River                      | /            |          | /         | <input type="checkbox"/> ATF |
| Lake / Pond                                    | /            |          | /         | <input type="checkbox"/> ATF |
| Bank - Intermittent Stream                     | /            |          | /         | <input type="checkbox"/> ATF |
| Bank - Perennial Stream / River                | /            |          | /         | <input type="checkbox"/> ATF |
| Bank/shoreline - Lake / Pond                   | /            |          | /         | <input type="checkbox"/> ATF |
| Tidal Waters                                   | 1,201        | /        | /         | <input type="checkbox"/> ATF |
| Tidal Marsh                                    |              |          |           | <input type="checkbox"/> ATF |
| Sand Dune                                      |              |          |           | <input type="checkbox"/> ATF |
| Designated Prime Wetland                       |              |          |           | <input type="checkbox"/> ATF |
| Duly-established 100-foot Prime Wetland Buffer |              |          |           | <input type="checkbox"/> ATF |
| Undeveloped Tidal Buffer Zone (TBZ)            |              |          |           | <input type="checkbox"/> ATF |
| Previously-developed TBZ                       | 774          |          |           | <input type="checkbox"/> ATF |
| Docking - Lake / Pond                          |              |          |           | <input type="checkbox"/> ATF |
| Docking - River                                |              |          |           | <input type="checkbox"/> ATF |
| Docking - Tidal Water                          | 340          |          |           | <input type="checkbox"/> ATF |
| Vernal Pool                                    |              |          |           | <input type="checkbox"/> ATF |
| <b>TOTAL</b>                                   | <b>2,315</b> | <b>/</b> | <b>/</b>  |                              |

**SECTION 13 - 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): | 1,975 SF | × \$0.40 = | \$ 790.00 |
|--|----------|------------|-----------|

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

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

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

|   |            |             |
|---|------------|-------------|
| Seasonal docking structure: 260 SF                                    | × \$2.00 = | \$ 520.00   |
| Permanent docking structure: 80 SF                                    | × \$4.00 = | \$ 320.00   |
| Projects proposing shoreline structures (including docks) add \$400 = |            | \$ 400.00   |
| Total =   |            | \$ 2,030.00 |

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

**SECTION 14 - PROJECT CLASSIFICATION (Env-Wt 306.05)**

Indicate the project classification.

|   |  |   |
|---|--|---|
| <input type="checkbox"/> Minimum Impact Project | <input type="checkbox"/> Minor Project | <input checked="" type="checkbox"/> Major Project |
|---|--|---|

**SECTION 15 - ALL APPLICABLE CONDITIONS IN Env-Wt 307 HAVE BEEN MET (Env-Wt 311.04(j); Env-Wt 313.01(a)(2)).**

Check all conditions applicable to your project below. Please ensure that your plan design and access, construction sequence, and timing appropriately meet applicable conditions below:

|   |   |   |   |
|---|---|---|---|
| <input checked="" type="checkbox"/> Env-Wt 307.02 | US Army Corps of Engineers (USACE) Conditions                                 | <input type="checkbox"/> Env-Wt 307.11            | Filling Activity Conditions                     |
| <input checked="" type="checkbox"/> Env-Wt 307.03 | Protection of Water Quality Required  | <input checked="" type="checkbox"/> Env-Wt 307.12 | Restoring Temporary Impacts: Site Stabilization |
| <input type="checkbox"/> Env-Wt 307.04            | Protection of Fisheries and Breeding Areas Required                           | <input checked="" type="checkbox"/> Env-Wt 307.13 | Property Line Setbacks                          |
| <input type="checkbox"/> Env-Wt 307.05            | Protection Against Invasive Species Required                                  | <input type="checkbox"/> Env-Wt 307.14            | Rock Removal                                    |
| <input type="checkbox"/> Env-Wt 307.06            | Protection of Rare, Threatened or Endangered Species and Critical Habitat     | <input type="checkbox"/> Env-Wt 307.15            | Use of Heavy Equipment in Wetlands              |
| <input type="checkbox"/> Env-Wt 307.07            | Consistency Required with Shoreland Water Quality Protection Act              | <input checked="" type="checkbox"/> Env-Wt 307.16 | Adherence to Approved Plans Required            |
| <input type="checkbox"/> Env-Wt 307.08            | Protection of Designated Prime Wetlands and Duly-Established 100-Foot Buffers | <input type="checkbox"/> Env-Wt 307.17            | Unpermitted Activities                          |
| <input checked="" type="checkbox"/> Env-Wt 307.09 | Shoreline Structures  | <input type="checkbox"/> Env-Wt 307.18            | Reports   |
| <input type="checkbox"/> Env-Wt 307.10            | Dredging Activity Conditions  |   |   |

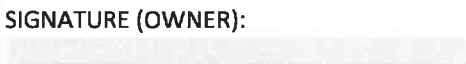
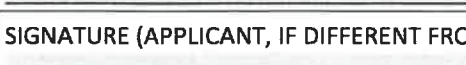



Provide an explanation as to methods, timing, and manner as to how your project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)):  
 Please see attached narrative.

**SECTION 16 - REQUIRED CERTIFICATIONS ( Env-Wt 311.11)**

**Initial each box below to certify:**

|                               |  |
|-------------------------------|--|
| <b>Initials:</b><br><i>SR</i> | To the best of the signer's knowledge and belief, all required notifications have been provided.   |
| <b>Initials:</b><br><i>SR</i> | The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.   |
| <b>Initials:</b><br><i>SR</i> | <p>The signer understands that:</p> <ul style="list-style-type: none"> <li>• The submission of false, incomplete, or misleading information constitutes grounds for NHDES to:                             <ol style="list-style-type: none"> <li>1. Deny the application.</li> <li>2. Revoke any approval that is granted based on the information. And</li> <li>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.</li> </ol> </li> <li>• The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.</li> <li>• 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 trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.</li> </ul> |
| <b>Initials:</b><br><i>SR</i> | If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.  |

**SECTION 17 - REQUIRED SIGNATURE (Env-Wt 311.04(d); Env-Wt 311.11)**

|   |   |  |
|---|---|--|
| SIGNATURE (OWNER):<br>                              | PRINT NAME LEGIBLY:<br>Steven D. Riker  | DATE:<br>1/9/2020  |
| SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):<br> | PRINT NAME LEGIBLY:<br> | DATE:<br> |
| SIGNATURE (AGENT, IF APPLICABLE):<br>               | PRINT NAME LEGIBLY:<br>Steven D. Riker  | DATE:<br>1/9/2020  |

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

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

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

| <b>SECTION 18 - TOWN / CITY CLERK SIGNATURE (Env-Wt 311.04(f))</b>   |  |
|--|--|
| 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: <i>Kelli L. Barnatey</i>  | PRINT NAME LEGIBLY: <i>Kelli L. Barnatey</i> |
| TOWN/CITY: <i>PORTSMOUTH</i>   | DATE: <i>1-15-2020</i>                       |

**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. And
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 single, 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.

**APPLICATION CHECKLIST**

(Items identified with an asterisk (\*) are required only for Minor and Major Projects)

- The completed, dated, signed and certified application (Env-Wt 311.03(b)(1)).
- Correct fee as determined in RSA 482-A:3, I(b) or (c), subject to any cap established by RSA 482-A:3, X (Env-Wt 311.03(b)(2)).
- USACE "Appendix B, New Hampshire General Permits (GPs), Required Information and Corps Secondary Impacts Checklist" and its required attachments (Env-Wt 307.02).
- The results of actions required by Env-Wt 311.01 as part of an application preparation for a standard permit (Env-Wt 311.03(b)(3)).
- Project plans described in Env-Wt 311.05 (Env-Wt 311.03(b)(4)).
- Maps, or electronic shape files and meta data, and other attachments specified in Env-Wt 311.06 (Env-Wt 311.03(b)(5)).
- Explanation as to methods, timing, and manner as to how the project will meet standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7)).
- If applicable, the information regarding proposed compensatory mitigation specified in Env-Wt 311.08 and Chapter Env-Wt 800 – Mitigation Worksheet, unless not required under Env-Wt 313.04 (Env-Wt 311.03(b)(8); Env-Wt 311.08; Env-Wt 313.04).
- Any additional information specific to the type of resource as specified in Env-Wt 311.09 (Env-Wt 311.03(b)(9); Env-Wt 311.04(j)).
- Project specific information required by Env-Wt 500, Env-Wt 600, and Env-Wt 900 (Env-Wt 311.03(b)(11)).
- A list containing the name, mailing address and tax map/lot number of each abutter to the subject property (Env-Wt 311.03(b)(12)).
- Copies of certified postal receipts or other proof of receipt of the notices that are required by RSA 482-A:3, I(d) (Env-Wt 311.03(b)(13)).
- Project design considerations required by Env-Wt 313 (Env-Wt 311.04(j)).

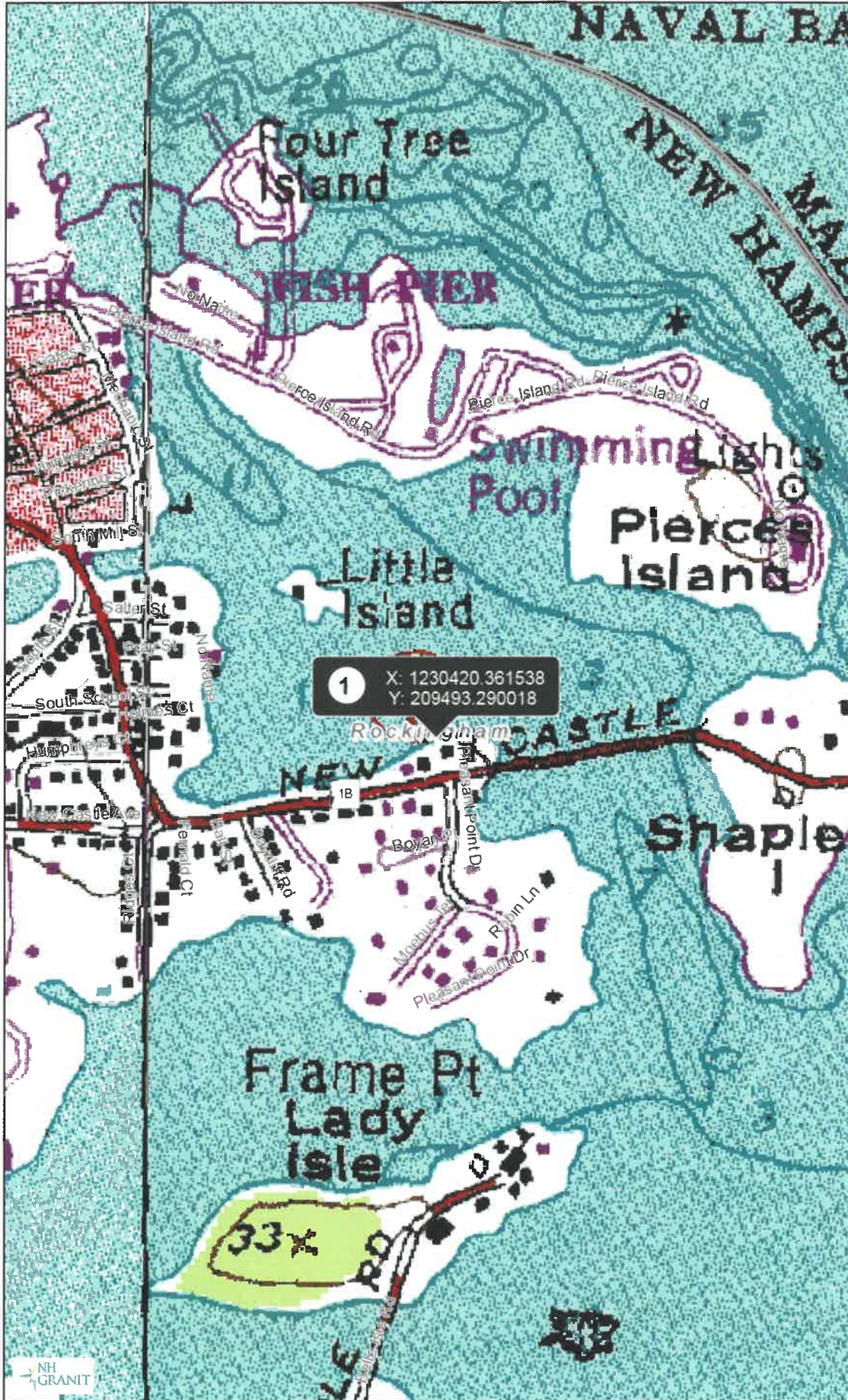
[irm@des.nh.gov](mailto:irm@des.nh.gov) or (603) 271-2147

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

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

- Town tax map showing the subject property, the location of the project on the property, and the location of properties of abutters with each lot labeled with the name and mailing address of the abutter (Env-Wt 311.06(a)).
  - Dated and labeled color photographs that:
    - (1) Clearly depict:
      - a. All jurisdictional areas, including but not limited to portions of wetland, shoreline, or surface water where impacts have or are proposed to occur. And
      - b. All existing shoreline structures. And
    - (2) Are mounted or printed no more than 2 per sheet on 8.5 x 11 inch sheets (Env-Wt 311.06(b)).
  - A copy of the appropriate USGS map or updated data based on LiDAR at a scale of one inch equals 24,000 feet showing the location of the subject property and proposed project (Env-Wt 311.06(c)).
  - A narrative that describes the work sequence, including pre-construction through post-construction, and the relative timing and progression of all work (Env-Wt 311.06(d)).
  - For all coastal projects, include a copy of the recorded deed with book and page numbers for the property (Env-Wt 311.06(e)).
- 
- If the applicant is not the owner in fee of the subject property, documentation of the applicant's legal interest in the subject property, provided that for utility projects in a utility corridor, such documentation may comprise a list that:
    - (1) Identifies the county registry of deeds and book and page numbers of all of the easements or other recorded instruments that provide the necessary legal interest. And
    - (2) Has been certified as complete and accurate by a knowledgeable representative of the applicant (Env-Wt 311.06(f)).
  - The NHB memo containing the NHB identification number and results and recommendations from NHB as well as any written follow-up communications such as additional memos or email communications with either NHB or New Hampshire Fish and Game Department (NHF&G) (Env-Wt 311.06(g)).
  - A statement of whether the applicant has received comments from the local conservation commission and, if so, how the applicant has addressed the comments (Env-Wt 311.06(h)).
  - For projects in LAC jurisdiction, a statement of whether the applicant has received comments from the LAC and, if so, how the applicant has addressed the comments (Env-Wt 311.06(i)).
  - If the applicant is also seeking to be covered by the state general permits, a statement of whether comments have been received from any federal agency and, if so, how the applicant has addressed the comments (Env-Wt 311.06(j)).
  - For after-the-fact applications: information required by Env-Wt 311.12 (Env-Wt 311.12).
  - [Coastal Resource Worksheet](#) for coastal projects as required under Env-Wt 600.
  - Prime Wetlands information required under Env-Wt 700.
  - [Stream Crossing Worksheet](#) required by Env-Wt 900.
  - [Avoidance and Minimization Written Narrative](#), [Avoidance and Minimization Checklist](#), or your own avoidance and minimization narrative (Env-Wt 311.07).
  - \* [Attachment A: Minor and Major Projects](#) (Env-Wt 311.10).
  - \* [Functional Assessment](#) (Env-Wt 311.10).

# Map by NH GRANIT



## Legend

- State
- County
- City/Town
- Coastal 2017 1-foot RGB

**1** X: 1230420.361538  
Y: 209493.290018

Map Scale

1: 6,494

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Map Generated: 11/25/2019



## Notes

USGS Map







**ABUTTER'S LIST**

JN 2129.02

**Client: Sarah J. Mason Living Trust**

**Project Address: 363 New Castle Avenue, Portsmouth, NH 03801**

| <b>MAP</b> | <b>LOT</b> | <b>NAME(S)</b>               | <b>PO BOX</b> | <b>STREET ADDRESS</b> | <b>CITY/STATE/ZIP</b> |
|------------|------------|------------------------------|---------------|-----------------------|-----------------------|
| 207        | 4          | Todd & Jan Peters            |               | 379 New Castle Avenue | Portsmouth, NH 03801  |
| 207        | 2          | Thomas P. & Kimberly S. Lyng |               | 333 New Castle Avenue | Portsmouth, NH 03801  |

December 10, 2019

Todd Peters  
379 New Castle Ave  
Portsmouth, NH 03801

**RE: New Hampshire Wetland Application for the installation of a docking structure and shoreline stabilization for Sarah J Mason Living Trust, Sarah J. Mason Trustee, 363 New Castle Ave, Portsmouth, NH.**

Dear Property Owner,

Under NH RSA 482-A, this letter is to inform you in accordance with State Law that a Wetlands Permit will be filed with the New Hampshire Department of Environmental Services (DES) Wetlands Bureau for a permit to **impact jurisdictional wetlands and the previously developed 100' Tidal Buffer Zone for the installation of a tidal docking structure and shoreline stabilization**, on behalf of your abutter, **Sarah J. Mason Living Trust, Sarah J. Mason Trustee.**

This letter is sent to inform you as an abutter to the above-referenced property (according to local Municipal records) that **Sarah J. Mason** proposes a project that requires construction in the previously developed tidal buffer zone, and jurisdictional wetland areas.

Plans are on file at this office, and once the application is filed, plans that show the proposed project and wetland and other jurisdictional impacts will be available for viewing during normal business hours at the office of the **Portsmouth** clerk, **Portsmouth City offices**, or once received by DES, at the offices of the DES Wetlands Bureau, (8 a.m. to 4 p.m.) (603) 271-2147. It is suggested that you call ahead to the appropriate office to ensure the application is available for review.

Please feel free to call if you have any questions or comments.

Sincerely,

Sean P. Moriarty  
Wetland Scientist – Project Manager

**CERTIFIED MAIL/Return Receipt Requested**

December 10, 2019

Thomas P. and Kimberly S. Lyng  
333 New Castle Ave  
Portsmouth, NH 03801

**RE: New Hampshire Wetland Application for the installation of a docking structure and shoreline stabilization for Sarah J Mason Living Trust, Sarah J. Mason Trustee, 363 New Castle Ave, Portsmouth, NH.**

Dear Property Owner,

Under NH RSA 482-A, this letter is to inform you in accordance with State Law that a Wetlands Permit will be filed with the New Hampshire Department of Environmental Services (DES) Wetlands Bureau for a permit to **impact jurisdictional wetlands and the previously developed 100' Tidal Buffer Zone for the installation of a tidal docking structure and shoreline stabilization**, on behalf of your abutter, **Sarah J. Mason Living Trust, Sarah J. Mason Trustee.**

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Plans are on file at this office, and once the application is filed, plans that show the proposed project and wetland and other jurisdictional impacts will be available for viewing during normal business hours at the office of the **Portsmouth** clerk, **Portsmouth City offices**, or once received by DES, at the offices of the DES Wetlands Bureau, (8 a.m. to 4 p.m.) (603) 271-2147. It is suggested that you call ahead to the appropriate office to ensure the application is available for review.

Please feel free to call if you have any questions or comments.

Sincerely,

Sean P. Moriarty  
Wetland Scientist – Project Manager

**CERTIFIED MAIL/Return Receipt Requested**

7018 3090 0001 5813 5540

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| <input type="checkbox"/> Return Receipt (hardcopy) \$ _____   |   |
| <input type="checkbox"/> Return Receipt (electronic) \$ _____   |   |
| <input type="checkbox"/> Certified Mail Restricted Delivery \$ _____  |   |
| <input type="checkbox"/> Adult Signature Required \$ _____  |   |
| <input type="checkbox"/> Adult Signature Restricted Delivery \$ _____   |   |
| Postage<br>\$ _____   |   |
| <b>Total Postage and Fees</b><br>\$ _____   |   |
| Sent To<br><b>LYNG</b><br>Street and Apt. No., or PO Box No.<br><b>333 NEW CASTLE AVE</b><br>City, State, ZIP+4®<br><b>PORTSMOUTH, NH 03801</b> |   |


PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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|--|---|
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| <b>Extra Services &amp; Fees (check box, add fee as appropriate)</b>   |   |
| <input type="checkbox"/> Return Receipt (hardcopy) \$ _____  |   |
| <input type="checkbox"/> Return Receipt (electronic) \$ _____  |   |
| <input type="checkbox"/> Certified Mail Restricted Delivery \$ _____   |   |
| <input type="checkbox"/> Adult Signature Required \$ _____   |   |
| <input type="checkbox"/> Adult Signature Restricted Delivery \$ _____  |   |
| Postage<br>\$ _____  |   |
| <b>Total Postage and Fees</b><br>\$ _____  |   |
| Sent To<br><b>TODD PETERS</b><br>Street and Apt. No., or PO Box No.<br><b>379 NEW CASTLE AVE</b><br>City, State, ZIP+4®<br><b>PORTSMOUTH, NH 03801</b> |   |

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

# Map by NH GRANIT



1

X: 1230410.94745  
Y: 209489.15551

## Legend

■ 2017

## Map Scale

1: 3,247

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Map Generated: 11/26/2019



## Notes

Eelgrass 2017



# Map by NH GRANIT



1 X: 1230410.94745  
Y: 209489.15551

## Legend

### Current Shellfish Beds

- Blue Mussel
- Oyster
- Razor Clam
- Softshell Clam
- Surf Clam

Map Scale

1: 3,247



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Map Generated: 11/26/2019

## Notes

Current Shellfish Beds



# Map by NH GRANIT



## Legend

### Highest Ranked Wildlife Habitat

- Not Top Ranked
- Highest Ranked Habitat in NH
- Highest Ranked Habitat in Region
- Supporting Landscape

## Map Scale

1: 3,247



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Map Generated: 11/26/2019

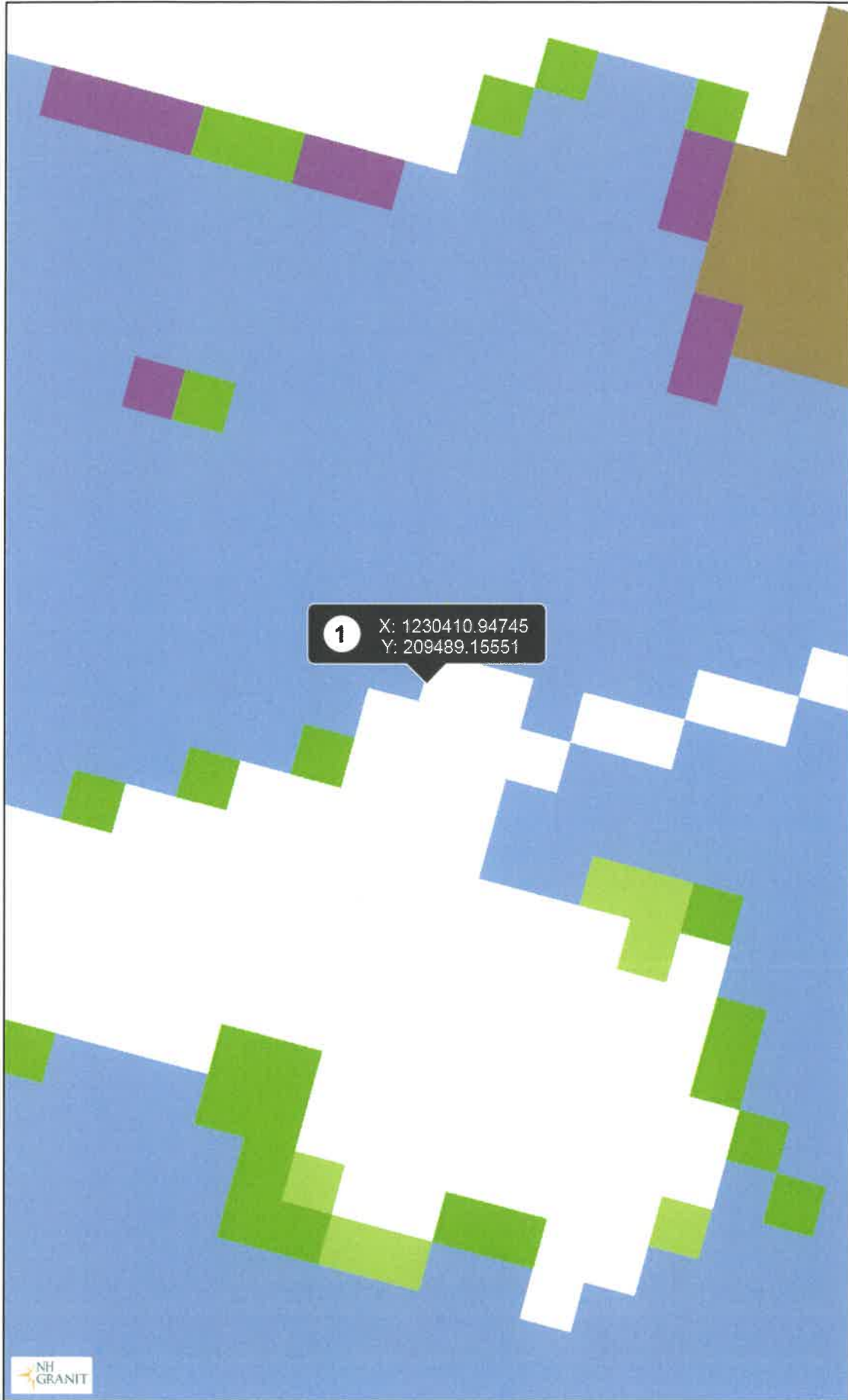
## Notes

Highest Ranked Wildlife Habitat





# Map by NH GRANIT



## Legend

### Wildlife Habitat Land Cover

- Alpine
- Appalachian oak-pine
- Cliff and Talus
- Coastal island
- Dune
- Floodplain forest
- Grassland
- Hemlock-hardwood-pine
- High-elevation spruce-fir
- Lowland spruce-fir
- NLCD Developed or barren
- Northern hardwood-conifer
- Northern swamp
- Open water
- Peatland
- Pine barren
- Rocky ridge
- Salt marsh
- Temperate swamp
- Wet meadow/shrub wetland

1

X: 1230410.94745  
Y: 209489.15551

## Map Scale

1: 3,247



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Map Generated: 11/26/2019

## Notes

Wildlife Habitat Land Cover



**EFH Data Notice:** Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional Fishery Management Councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office  
Atlantic Highly Migratory Species Management Division

### Query Results



















Degrees, Minutes, Seconds: Latitude = 43°4'16" N, Longitude = 71°15'20" W  
Decimal Degrees: Latitude = 43.07, Longitude = -70.74




























The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.







### \*\*\* WARNING \*\*\*

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

### EFH

| Show  | Link  | Data Caveats  | Species/Management Unit | Lifestage(s) Found at Location   | Management Council | FMP  |
|---|---|---|-------------------------|----------------------------------|--------------------|--|
|  |  |  | Atlantic Sea Scallop    | ALL                              | New England        | Amendment 14 to the Atlantic Sea Scallop FMP   |
|  |  |  | Atlantic Wolffish       | ALL                              | New England        | Amendment 14 to the Northeast Multispecies FMP |
|  |  |  | Winter Flounder         | Eggs<br>Juvenile<br>Larvae/Adult | New England        | Amendment 14 to the Northeast Multispecies FMP |
|  |  |  | Little Skate            | Juvenile<br>Adult                | New England        | Amendment 2 to the Northeast Skate Complex FMP |
|  |  |  | Atlantic Herring        | Juvenile<br>Adult<br>Larvae      | New England        | Amendment 3 to the Atlantic Herring FMP        |
|  |  |  | Atlantic Cod            |                                  | New England        | Amendment 14 to the                            |

| Show  | Link  | Data Caveats  | Species/Management Unit | Lifestage(s) Found at Location      | Management Council | FMP  |
|---|---|---|-------------------------|-------------------------------------|--------------------|--|
|   |   |   |                         | Larvae<br>Adult<br>Eggs             |                    | Northeast Multispecies FMP                         |
|    |    |    | Pollock                 | Juvenile<br>Eggs<br>Larvae          | New England        | Amendment 14 to the Northeast Multispecies FMP     |
|    |    |    | Red Hake                | Adult<br>Eggs/Larvae/Juvenile       | New England        | Amendment 14 to the Northeast Multispecies FMP     |
|    |    |    | Windowpane Flounder     | Adult<br>Larvae<br>Eggs<br>Juvenile | New England        | Amendment 14 to the Northeast Multispecies FMP     |
|    |    |    | Winter Skate            | Juvenile                            | New England        | Amendment 2 to the Northeast Skate Complex FMP     |
|  |  |  | Smooth Skate            | Juvenile                            | New England        | Amendment 2 to the Northeast Skate Complex FMP     |
|  |  |  | White Hake              | Adult<br>Eggs<br>Juvenile           | New England        | Amendment 14 to the Northeast Multispecies FMP     |
|  |  |  | Thorny Skate            | Juvenile                            | New England        | Amendment 2 to the Northeast Skate Complex FMP     |
|  |  |  | Bluefin Tuna            | Adult                               | Secretarial        | Amendment 10 to the 2006 Consolidated HMS FMP: EFH |
|  |  |  | Atlantic Mackerel       | Eggs<br>Larvae<br>Juvenile          | Mid-Atlantic       | Atlantic Mackerel, Squid, &                        |

| Show  | Link  | Data Caveats  | Species/Management Unit | Lifestage(s) Found at Location | Management Council | FMP   |
|---|---|---|-------------------------|--------------------------------|--------------------|---|
|   |   |   |                         |                                |                    | Butterfish Amendment 11                             |
|  |  |  | Bluefish                | Adult<br>Juvenile              | Mid-Atlantic       | Bluefish  |
|  |  |  | Atlantic Butterfish     | Adult                          | Mid-Atlantic       | Atlantic Mackerel, Squid, & Butterfish Amendment 11 |

### HAPCs

| Show  | Link  | Data Caveats  | HAPC Name                | Management Council |
|---|---|---|--------------------------|--------------------|
|  |  |  | Inshore 20m Juvenile Cod | NEFMC              |

### EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

**Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data. \*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

#### Mid-Atlantic Council HAPCs,

No spatial data for summer flounder SAV HAPC.



NEW HAMPSHIRE NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER

---

**To:** John Chagnon, Ambit Engineering, Inc.  
200 Griffin Road  
Unit 3  
Portsmouth, NH 03801

**From:** NH Natural Heritage Bureau

**Date:** 12/4/2019 (valid for one year from this date)

**Re:** Review by NH Natural Heritage Bureau of request submitted 11/27/2019

**NHB File ID:** NHB19-3842

**Applicant:** John Chagnon

**Location:** Portsmouth  
Tax Maps: Tax Map 207, Lot 3

**Project Description:** The project proposes the installation of a docking structure and repair/expansion of an existing stone revetment for shoreline stabilization.

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 11/27/2019, and cannot be used for any other project.



NEW HAMPSHIRE NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER

MAP OF PROJECT BOUNDARIES FOR: **NHB19-3842**

**NHB19-3842**



NH DES-Wetlands Bureau Application  
Sarah J. Mason Living Trust  
Application for Tidal Docking Structure and Shoreline Stabilization.

**SITE PHOTOGRAPHS**  
Portsmouth, NH

Site Photograph #1

November 2019



Site Photograph #2

December 2019



Site Photograph #3

December 2019



Site Photograph #4

December 2019





Site Photograph #5

December 2019



Site Photograph #6

November 2019



# **Wetland Functions and Values Assessment**

**Prepared for:**

**Sarah J. Mason Living Trust  
363 New Castle Ave  
Portsmouth, New Hampshire 03801**

**Prepared By:**

**Ambit Engineering, Inc  
200 Griffin, Unit 3  
Portsmouth, New Hampshire 03801**



**Date: January 13, 2020**

**TABLE OF CONTENTS**

**Introduction.....Page 1**

**Methods.....Page 1**

**Functions and Values Assessment.....Page 2**

**Proposed Impacts.....Page 4**

**Summary and Conclusions.....Page 4**

**APPENDICES**

- Appendix A Wetland Function-Value Evaluation Form
- Appendix B Photo Log
- Appendix C NH Natural Heritage Bureau Letter

## INTRODUCTION

The applicant is proposing the replacement of an existing docking structure and existing stone revetment at 363 New Castle Avenue, Portsmouth, New Hampshire. The project site is identified on Portsmouth Tax Map 207 as Lot 3, and is approximately 7,896 sq. ft. in size. As currently designed, the proposed project would require impacts to tidal wetlands and the 100' previously developed Tidal Buffer Zone (TBZ).

The purpose of this report is to present the existing functions and values of the tidal wetlands and to assess any impacts the proposed project may have on their ability to continue to perform these functions and values. The tidal wetlands being impacted were assessed with consideration to their association with the Piscataqua River and the larger marine ecosystem, and was not limited to the tidal wetlands immediately on-site.

## METHODS

### DATA COLLECTION

The tidal wetlands associated with this project area were identified and characterized through field surveys and review of existing information. Ambit Engineering, Inc. (Ambit) conducted site visits in November and December of 2019 to characterize the tidal wetlands and collect the necessary information to complete a functions and values assessment. In addition, Ambit contacted the New Hampshire Natural Heritage Bureau (NHB) regarding existing information of documented rare species or natural communities within the vicinity of the project site.

### WETLAND FUNCTIONS AND VALUES ASSESSMENT

Ambit assessed the ability of the tidal wetlands to provide certain functions and values and analyzed the potential affects the proposed project may have on their ability to continue to provide those functions and values. Wetland functions and values were assessed using the *Highway Methodology Workbook, Wetland Functions and Values: A Descriptive Approach*.<sup>1</sup> This method bases function and value determinations on the presence or absence of specific criteria for each of the 13 wetland functions and values (see definitions below). These criteria are assessed through direct field observations and a review of existing resource maps and databases. As part of the evaluation, the most important functions and values associated with the on-site wetlands are identified. In addition, the ecological integrity of the wetlands is evaluated based on the existing levels of disturbance and the overall significance of the wetlands within the local watershed.

#### ° Groundwater Interchange (Recharge/Discharge)

*This function considers the potential for the project area wetlands to serve as groundwater recharge and/or discharge areas. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.*

#### ° Floodwater Alteration (Storage and Desynchronization)

*This function considers the effectiveness of the wetlands in reducing flood damage by attenuating floodwaters for prolonged periods following precipitation and snow melt events.*

#### ° Fish and Shellfish Habitat

*This function considers the effectiveness of seasonally or permanently flooded areas within the subject wetlands for their ability to provide fish and shellfish habitat.*

#### ° Sediment/Toxicant Retention

*This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland to function as a trap for sediments, toxicants, or pathogens, and is generally related to factors such as the type of soils, the density of vegetation, and the position in the landscape.*

#### ° Nutrient Removal/Retention/Transformation

*This wetland function relates to the effectiveness of the wetland to prevent or reduce the adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.*

---

<sup>1</sup> U.S. Army Corps of Engineers. 1999. *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach*. U.S. Army Corps of Engineers. New England Division. 32pp. NAEEP-360-1-30a.

° **Production Export (Nutrient)**

*This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms.*

° **Sediment/Shoreline Stabilization**

*This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion, primarily through the presence of persistent, well-rooted vegetation.*

° **Wildlife Habitat**

*This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.*

° **Recreation (Consumptive and Non-Consumptive)**

*This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities.*

° **Educational/Scientific Value**

*This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.*

° **Uniqueness/Heritage**

*This value relates to the effectiveness of the wetland or its associated water bodies to provide certain special values such as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.*

° **Visual Quality/Aesthetics**

*This value relates to the visual and aesthetic qualities of the wetland.*

° **Endangered Species Habitat**

*This value considers the suitability of the wetland to support threatened or endangered species.*

## **FUNCTIONS AND VALUES ASSESSMENT**

Results of the wetland functions and values assessment are presented below. This assessment includes a discussion of potential changes to existing wetland functions and values that may occur as a result of the proposed project:

### **Groundwater Interchange (Recharge/Discharge)**

Because there is no identified sand and gravel aquifer underlying the project area, and the wetlands are not underlain by sands or gravel, it is unlikely that significant groundwater recharge is occurring within the tidal wetlands.

### **Floodwater Alteration (Storage and Desynchronization)**

The tidal wetlands and the Piscataqua River receive floodwaters from the surrounding watershed and connected waterways; therefore, is considered a principal function considering the large size of the combined waterways.

### **Fish and Shellfish Habitat**

The tidal wetland does provide fish and shellfish habitat, is associated with the Piscataqua River and the Atlantic Ocean; therefore, is considered a principal function.

### **Sediment/Toxicant Retention**

The tidal wetland (on site) lacks dense vegetation and a significant source of sediments or toxicants, limiting its ability to provide this function.

### **Nutrient Removal/Retention/Transformation**

The tidal wetland (on site) lacks dense vegetation and a significant source of nutrients, limiting its ability to provide this function.

**Production Export (Nutrient)**

Production export is a wetland function that typically occurs in the form of nutrient or biomass transport via watercourses, foraging by wildlife species, and removal of timber and other natural products. Because the tidal wetland provides fish and wildlife habitat, commercial and recreational fisheries opportunities, and nutrients are transferred over several trophic levels in the marine ecosystem, this is considered a principal function.

**Sediment/Shoreline Stabilization**

Due to the tidal nature and wave action of this wetland; sediment/shoreline stabilization is considered a principal function. Part of this project is to replace an existing stone revetment while adding a vegetative component (see Buffer Planting Plan on Sheet D1) to stabilize the shoreline resulting in a more structurally stable design.

**Wildlife Habitat**

The greater tidal wetland and Piscataqua River provide a variety of coastal and marine habitat, therefore would be considered a principal function.

**Recreation (Consumptive and Non-Consumptive)**

The greater tidal wetland and Piscataqua River provide a variety of consumptive and non-consumptive recreational opportunities including hunting, fishing and bird watching; therefore, would be considered a principal function.

**Education/Scientific Value**

The tidal wetland and Piscataqua River are part of a larger marine ecosystem with multiple areas of public access making this a principal value.

**Uniqueness/Heritage**

The tidal wetland and Piscataqua River are unique to the seacoast area. Additionally, there are pre and post-colonial historical components associated with the Piscataqua river and the surrounding areas making this a principal value.

**Visual Quality/Aesthetics**

The Piscataqua River provides aesthetically pleasing coastal views that are viewable from surrounding uplands as well as from the water, making this a principal function.

**Endangered Species Habitat**

No threatened or endangered species, species of special concern, or their associated habitats were observed on the project site. However, an online inquiry with the NHB resulted in an unspecified occurrence of a sensitive species or natural community near the project area. NHB determined that it is not expected that the project will have any negative impacts on the species or communities of record (see Appendix C). Because there is no specific endangered species habitat in the immediate project area, this is not considered a function.

**PROPOSED IMPACTS**

This report is accompanying a New Hampshire Department of Environmental Services (NHDES) Major Impact Wetland Permit Application request to permit 340 sq. ft. of permanent impact to tidal wetland, and 24 sq. ft. of permanent impact to previously developed 100' TBZ for the construction of a tidal docking structure; which will consist of a 4' x 6' accessway, a 4' x 20' fixed wooden pier, a 3' x 20' aluminum gangway, and a 10' x 20' float (overall structure length 50') providing two slips on 77+/- feet of frontage along the Piscataqua River. The project also proposes an additional 1,201 sq. ft. of permanent impact to tidal wetlands, and 750 sq. ft. of permanent impact to previously developed 100' TBZ for shoreline stabilization with the replacement of an existing stone revetment and a buffer planting area.

## SUMMARY AND CONCLUSIONS

The jurisdictional tidal wetland is part of a large marine system and provides nine principal functions and values when evaluated as a whole. These functions and values include: floodflow alteration, fish and shellfish habitat, production export, sediment/shoreline stabilization, wildlife habitat, recreation, education/scientific value, uniqueness/heritage, and visual quality aesthetics. While the entire marine system provides these principal functions and values, the proposed impacts associated with the dock replacement will not have any affect on its ability to continue to provide them. Additionally, the revetment replacement will increase shoreline stability.

The proposed impacts have been minimized to the greatest extent practicable, while allowing reasonable use of the property. The proposed docking structure will be constructed on pilings within the tidal wetland further reducing permanent impacts. The docking structure will not contribute to additional storm water or pollution. It is anticipated that there will be no effect on any fish or wildlife species that currently use the site for food, cover, and/or habitat. The tidal docking structure will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement. The float and gangway will be temporary docking structures and will be removed during winter months as to not interfere with ice floe. The proposal also provides float stops to keep the float a minimum of 24" inches off the mud at low tide.

The docking structure has been designed to provide recreational boating access utilizing the natural grade of the dock location. There is no grading of the shoreline required to construct the dock. There will be no construction activity that will disturb the area adjacent to the use. All work will be performed from a crane barge at low tide. Piles to be driven are at or above the Mean Low Low Water line and there is no need for erosion control. There will be no water in this location during pile driving and therefore no temporary disturbance associated with construction. The barge floats into position and the piles are driven by the crane equipped with a vibratory hammer. This method eliminates any contact of construction equipment with the protected resource. Portions of the docking structure are pre-fabricated off site and transported to the site via crane barge.

The stone revetment for shoreline stabilization is needed to provide protection from tidal action and wave energy, and also provide a structural foundation for the landward slope. The revetment will consist of a top layer of 12-18" minus erosion stone; on top of a 6" thick base course of crushed stone located directly landward, and a geotextile fabric which allows water to pass through, yet keeps the fine grained material in place, critical to long term stability. This revetment is essential for shoreline stabilization, as it will provide a structural foundation for the landward slope, and includes a 6' buffer planting area consisting of 45 native plantings (see Sheet D1 for details) to enhance the upslope buffer and improve the living shoreline conditions. The construction of the new stone revetment will take place entirely within the existing footprint, and is the least impacting alternative to adequately stabilize the shoreline and prevent erosion into tidal waters.

Based on our assessment of the current functions and values, the proposed tidal docking structure, the proposed revetment, and the construction methodology; it is our belief that the proposed project will have no significant impact on the tidal wetlands or greater marine systems ability to continue to provide their functions and values.













## **APPENDIX A**

### **WETLAND FUNCTION - VALUE EVALUATION FORM**



# Wetland Function – Value Evaluation Form

|  |   |
|--|---|
| <b>Wetland Description:</b> Wetland A is a tidal wetland associated with the Piscataqua River. | <b>File number:</b> 2129.02                                 |
|  | <b>Wetland identifier:</b> Wetland A                        |
|  | <b>Latitude:</b> X:1,230,420.36 <b>Longitude:</b> Y:209,493 |
|  | <b>Preparer(s):</b> Ambit Engineering, Inc.                 |
|  | <b>200 Griffin Road</b>                                     |
|  | <b>Date:</b> December 23, 2019                              |

| Function/Value  | Capability |   | Summary   | Principal Yes/No |
|---|------------|---|---|------------------|
|   | Y          | N |   |                  |
|  Groundwater Recharge/Discharge    |            | X | This wetland does not possess the characteristics needed to provide this function as there are no identified underlying sand or gravel aquifers.  | —                |
|  Floodwater Alteration             | X          |   | The tidal wetland and Piscataqua River do receive floodwater from the surrounding watershed and connected waterways; therefore, this would be considered a principal function.  | Y                |
|  Fish and Shellfish Habitat        | X          |   | The tidal wetland and Piscataqua River are part of a larger coastal marine system and provide both fish and shellfish habitat. This is considered a Principal Function.   | Y                |
|  Sediment/Toxicant Retention       |            | X | The immediate tidal wetlands lack of dense vegetation, lack of a source, and low water retention time limit its ability to provide this function.   | —                |
|  Nutrient Removal                  |            | X | The immediate tidal wetlands lack of dense vegetation, lack of a source, and low water retention time limit its ability to provide this function.   | —                |
|  Production Export                 | X          |   | Because the tidal wetland provides fish and wildlife habitat, commercial and recreational fishing opportunities, and nutrients are transferred over several trophic levels in the marine ecosystem, this is considered a principal function.  | Y                |
|  Sediment/Shoreline Stabilization | X          |   | Due to the tidal nature and wave action of this wetland, sediment/shoreline stabilization is considered a principal function. Part of this project is to replace an existing revetment to stabilize the shoreline with a more structurally stable design.   | Y                |
|  Wildlife Habitat                | X          |   | The greater tidal wetland and Piscataqua River provides a variety of coastal and marine habitat, therefore would be considered a principal function.  | Y                |
|  Recreation                      | X          |   | The adjacent tidal wetland provides a variety of consumptive and non-consumptive recreational opportunities including hunting, fishing and bird watching; therefore, would be considered a principal function.  | Y                |
|  Education/Scientific Value      | X          |   | The tidal wetland and Piscataqua River are part of a larger marine ecosystem with multiple areas of public access making this a principal value.  | Y                |
|  Uniqueness/Heritage             | X          |   | The tidal wetland and Piscataqua River are unique to the seacoast area. Additionally, there are pre and post-colonial historical components associated with the Piscataqua river and the surrounding areas making this a principal value.   | Y                |
|  Visual Quality/Aesthetics       | X          |   | The Piscataqua River provides aesthetically pleasing coastal views that are seeable from surrounding uplands as well as from the water, making this a principal function.   | Y                |
| <b>ES</b> Endangered Species Habitat  |            | X | No threatened or endangered species, species of special concern, or their associated habitats were observed on the property. An online inquiry with the NH Natural Heritage Bureau resulted in an unspecified occurrence of a sensitive species near the project area; however, they determined that it is not expected that the project will have negative impacts on them. (Appendix D) | —                |
| Other   |            |   |   |                  |

Notes:

\* Attach list of considerations.

## **APPENDIX B**

### **PHOTO LOG**

NH DES-Wetlands Bureau Application  
Sarah J. Mason Living Trust  
Application for Tidal Docking Structure and Shoreline Stabilization.

SITE PHOTOGRAPHS  
Portsmouth, NH

Site Photograph #1

November 2019



Site Photograph #2

December 2019



Site Photograph #3

December 2019



Site Photograph #4

December 2019



Site Photograph #5

December 2019



Site Photograph #6

November 2019



## **APPENDIX C**

### **NEW HAMPSHIRE NATURAL HERITAGE BUREAU CORRESPONDENCE**



NEW HAMPSHIRE NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER

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**To:** John Chagnon, Ambit Engineering, Inc.  
200 Griffin Road  
Unit 3  
Portsmouth, NH 03801

**From:** NH Natural Heritage Bureau

**Date:** 12/4/2019 (valid for one year from this date)

**Re:** Review by NH Natural Heritage Bureau of request submitted 11/27/2019

**NHB File ID:** NHB19-3842

**Applicant:** John Chagnon

**Location:** Portsmouth  
Tax Maps: Tax Map 207, Lot 3

**Project**

**Description:** The project proposes the installation of a docking structure and repair/expansion of an existing stone revetment for shoreline stabilization.

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 11/27/2019, and cannot be used for any other project.



NEW HAMPSHIRE NATURAL HERITAGE BUREAU  
NHB DATA CHECK RESULTS LETTER

MAP OF PROJECT BOUNDARIES FOR: NHB19-3842

**NHB19-3842**





# **Coastal Vulnerability Assessment**

**Prepared for:**

**Sarah J. Mason Living Trust  
363 New Castle Ave.  
Portsmouth, New Hampshire 03801**

**Prepared By:**

**Ambit Engineering, Inc  
200 Griffin, Unit 3  
Portsmouth, New Hampshire 03801**



**AMBIT ENGINEERING, INC.**

**Civil Engineers & Land Surveyors**

## **Introduction**

This Coastal Vulnerability Assessment (CVA) is being provided in support of a New Hampshire Department of Environmental Services (NHDES) Wetland Permit Application for the construction of a tidal docking structure and reconstruction of the existing stone revetment at 379 New Castle Ave. in Portsmouth, NH (herein referred to as “project site”). The project site is a residential lot located on the north side of New Castle Ave and adjacent to the Piscataqua River with one occupied residential dwelling. The surrounding land use is residential with similar docking structures and revetments.

## **Methods**

On November 8, 2019, Qualified Coastal Professionals from Ambit Engineering, Inc. conducted a site visit to evaluate coastal characteristics of the project site, as well as the functions and values of the tidal wetland area (see attached Coastal Functions and Values assessment. This CVA was completed utilizing the NH Coastal Flood Risk Science and Technical Advisory Panel (2019). New Hampshire Coastal Flood Risk Summary Part: Guidance for Using Scientific Projections. Report Published by the University of New Hampshire (herein referred to as Guidance Document).

### **Part 1.1 – Project Type**

This project proposes the construction of a tidal docking structure and stone revetment on the residential lot adjacent to the Piscataqua River. The purpose for the docking structure is to provide the applicant with recreational boating access to the Piscataqua River. The purpose of the reconstruction of the existing stone revetment is to provide an improved, long-term shoreline stabilization. For more details regarding proposed docking structure and stone revetment dimensions and construction sequences; please refer to the NH DES Wetlands Bureau Application Letter to the Wetlands Inspector, and attached NHDES Permit Plan – C1 and Detail Sheet D1 and Detail Sheet-D2.

### **Part 1.2 – Project Location**

The project location is 363 New Castle Ave, Portsmouth, NH, Tax Map 207, Lot 3 and consists of 7,896 sq. ft. of residential upland and +/- 77’ of shoreline frontage along the Piscataqua River. The project consists of a 4’ x 6’ accessway, a 4’ x 20’ fixed wooden pier; a 3’ x 20’ aluminum gangway, and a 10’ x 20’ float. The proposed stone revetment is located along the shoreline, both above and below the Highest Observable Tide Line (HOTL). Access to the project site will be from New Castle Ave. for the staging of equipment, and the Piscataqua River for the staging of the barge to be used for dock and piling installation.

### **Part 1.3 – Timeline for Desired Useful Life**

The desired useful life for this project is considered to be 2100 (50-100 years) due to the fact that it is a proposed docking structure and stone revetment which both have a life expectancy of approximately 50-75 years.

## **2.1 – Project Risk Tolerance**

The proposed project is considered to have a high risk tolerance considering both the proposed docking structure and stone revetment have a relatively low cost, are relatively easy to modify, propose little to no implications on public function and/or safety; and both have relatively low

sensitivity to inundation, as they are designed to withstand inundation within fluctuating tidal conditions including storm surge.

### 2.2 – Risk Tolerance of Important Access and Service Areas

The risk tolerance of surrounding access and service areas is not applicable to this project, as the project occurs on a residential, private lot and is intended for private use; primary access of which would be from the residence.

### 3.1 – Relative Sea Level Rise Scenario (RSLs)

Based on Table 3 in the Guidance Document (see table below), the RSLs for this project (based on the previously determined high risk tolerance) is considered to be on the lower magnitude, and higher probability. The following table depicts the probable sea level rise from 2000 through 2150.

**Table 3 from the Guidance Document:**

| Risk Tolerance         | High  | Medium                | Low                              | Extremely Low                         |
|------------------------|---|-----------------------|----------------------------------|---------------------------------------|
| <b>Example Project</b> | Walking Trail<br>*Docking structure<br>& Stone Revetment  | Local Road<br>Culvert | Wastewater<br>Treatment Facility | Hospital                              |
| <b>Timeframe</b>       | Manage to the following sea level rise (ft*)<br><i>Compared to the sea level in the year 2000</i> |                       |                                  |                                       |
|                        | Lower magnitude<br>Higher probability   | ←—————→               |                                  | Higher magnitude<br>Lower probability |
| 2030                   | 0.7   | 0.9                   | 1.0                              | 1.1                                   |
| 2050                   | 1.3   | 1.6                   | 2.0                              | 2.3                                   |
| 2100                   | 2.9   | 3.8                   | 5.3                              | 6.2                                   |
| 2150                   | 4.6   | 6.4                   | 9.9                              | 11.7                                  |

\*Added by Ambit Engineering, Inc. based on the application of the Guidance Document towards our project.

### 3.2 – RSLR Impacts to the Project Evaluation

Please see the attached Figure 1 – Projected SLR’s; which depicts the project site and relevant Highest Observable Tide Line (HOTL), MHHW, and the projected SLR’s for the years 2030, 2050, 2100 and 2150. Relative to surrounding topography and considering the High Risk Tolerance of this project; it is not expected the projected RSLR for this project needs to be a strong consideration.

### 3.3 – Other Factors

Other factors were evaluated in conjunction with RSLR including surface water levels, groundwater levels, and current velocities which will increase with sediment erosion and deposition, which will also change. The projects position in the landscape was also considered relative to other infrastructure. The closest surface water to the project site is the adjacent Piscataqua River, projections of RSLR of which have already been depicted and discussed. There are no known groundwater sources on the project site. There are no current restrictions on the project site or associated with the proposed project, so any increases in current associated with RSLR will have no more affect on this project site than it will on surrounding properties adjacent to the Piscataqua River.

#### **4.1 – RSLR and Coastal Storms**

Due to the project site location being immediately adjacent to the Piscataqua River, it is anticipated that RSLR and storm surge on the proposed project site will be comparable to adjacent properties with similar docking structures and revetments. Considering the high risk tolerance of this project, it is not anticipated that this project has a significant level of vulnerability to RSLR and coastal storms relative to similar projects on adjacent properties.

#### **4.2 – Other Factors**

Other factors such as surface water levels, groundwater levels, wind and current velocities have been considered. Considering the high risk tolerance of this project, it is not anticipated that this project has a significant level of vulnerability to RSLR and coastal storms.

Attached to this application you will find a “NH DES Permit Plan-C1” which depicts the existing lot, jurisdictional areas, abutting parcels, existing structures, proposed work, and permanent impact areas.

#### **5.1 – Projected RSL-Induced Groundwater Rise**

Based on the Sea-Level Rise Mapper, there is no projected groundwater rise associated with RSLR on the project site.

#### **5.2 – Projected Groundwater Depth at the Project Location**

Based on knowledge of the site and soil morphology of the site, groundwater depth (Estimated Seasonal High Water Table) is between 20-30” below the soil surface.

#### **6.1 – Best Available Precipitation Estimates**

Please see the attached Extreme Precipitation Tables from the Northeast Regional Climate Center.

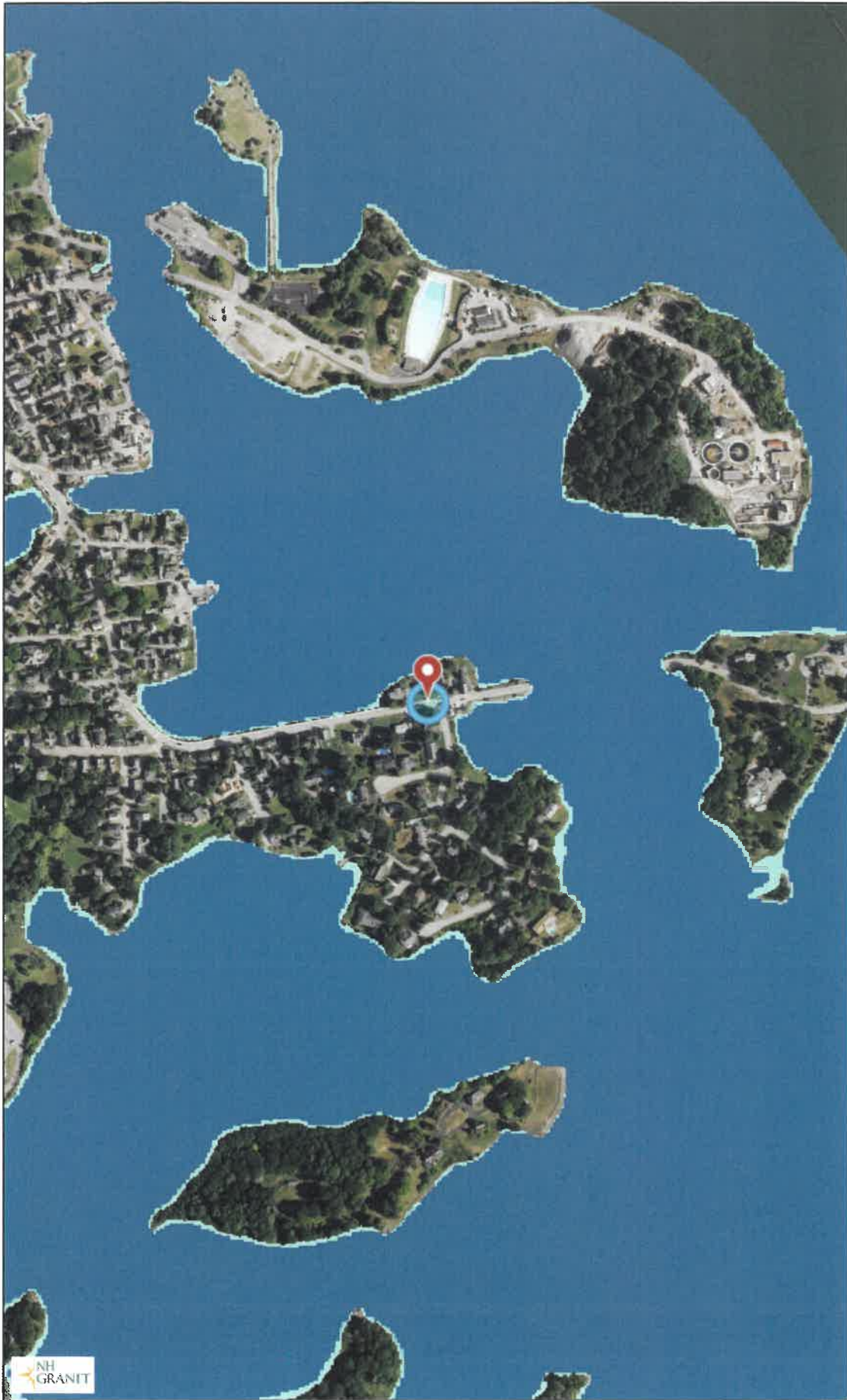
#### **7.1 – Cumulative Coastal Flood Risk to the Project**

Based on the high risk tolerance of this project combined with all other factors including RSLR, coastal storms, RSLR-induced groundwater rise, extreme precipitation and/or freshwater flooding occurring together; this project is not considered to be at high risk from coastal flooding.

#### **7.2 – Possible Actions to Mitigate Coastal Flood Risk**

Given the high risk tolerance of the proposed project, it is not anticipated that it is necessary to mitigate for coastal flood risk beyond what has already been incorporated into the design plan for both the docking structure and revetment. The NOAA intermediate sea level rise scenario through 2070 is 1.87’ (See Note 5 on Sheet D2), and the proposed revetment has been designed to account for this projection.

# Map by NH GRANIT



## Legend

MHHW + 1-ft SLR

0 - 2

2 - 4

4 - 6

6 - 8

8 - 10

Coastal 2017 1-foot RGB

Map Scale

1: 6,494

© NH GRANIT, [www.granit.unh.edu](http://www.granit.unh.edu)

Map Generated: 12/26/2019



## Notes

One Foot Sea Level Rise.



# Map by NH GRANIT



## Legend

### MHHW + 2-ft SLR

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 +

Coastal 2017 1-foot RGB

## Map Scale

1: 6,494



© NH GRANIT, [www.granit.unh.edu](http://www.granit.unh.edu)

Map Generated: 12/26/2019

## Notes

Two Foot Sea Level Rise.



# Map by NH GRANIT



## Legend

### MHHW + 2-ft SLR

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 +

### MHHW + 4-ft SLR

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 +

Coastal 2017 1-foot RGB

## Map Scale

1: 6,494



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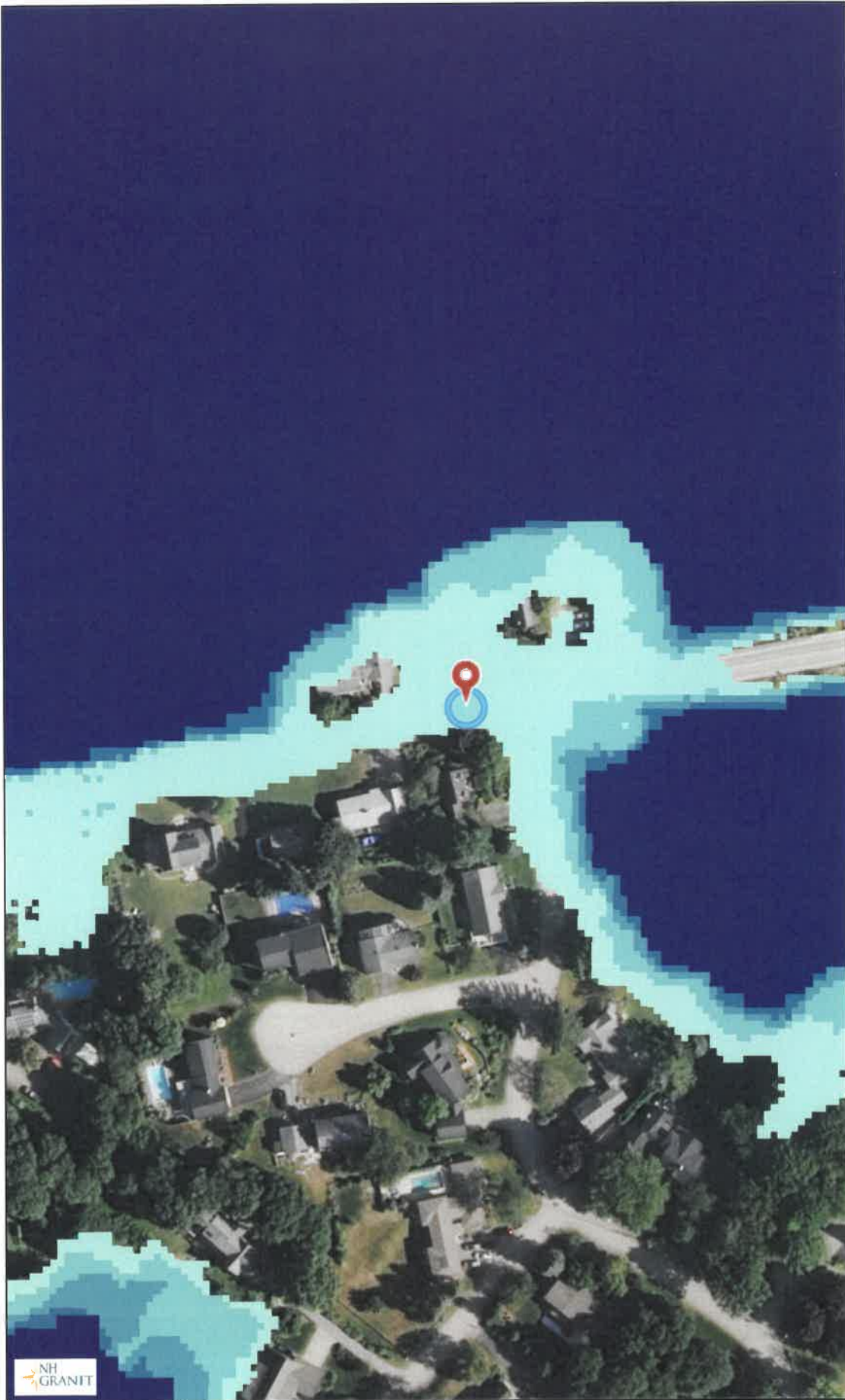
Map Generated: 12/26/2019

## Notes

Four Foot Sea Level Rise.



# Map by NH GRANIT



## Legend

MHHW + 6-ft SLR

0 - 2

2 - 4

4 - 6

6 - 8

8 - 10

10 +

Coastal 2017 1-foot RGB

Map Scale

1: 1,624

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Map Generated: 12/26/2019



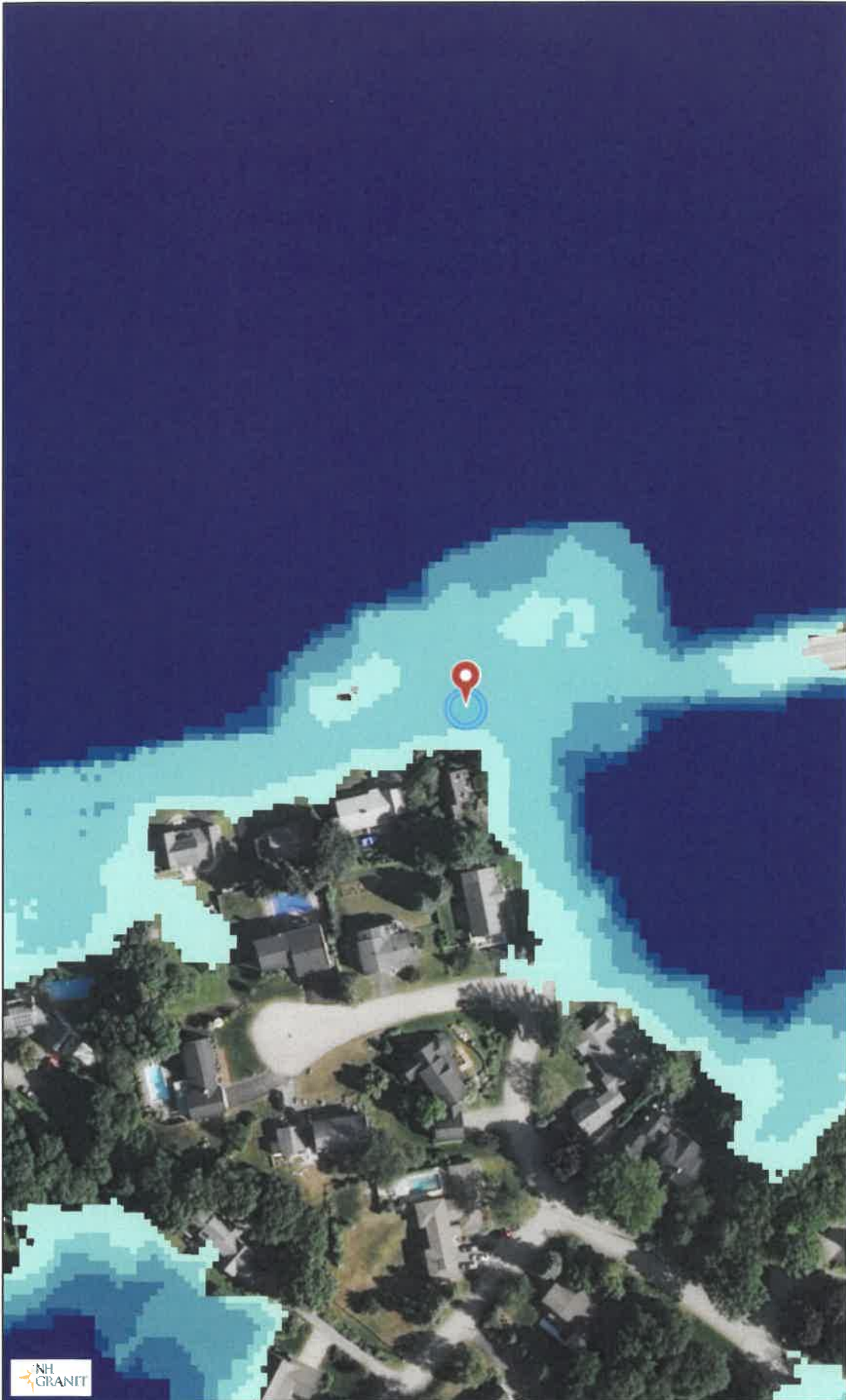
## Notes

Six Foot Sea Level Rise.





# Map by NH GRANIT



## Legend

MHHW + 8-ft SLR

0 - 2

2 - 4

4 - 6

6 - 8

8 - 10

10 +

Coastal 2017 1-foot RGB

Map Scale

1: 1,624

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## Notes

Eight Foot Sea Level Rise.





AVOIDANCE AND MINIMIZATION  
WRITTEN NARRATIVE  
Water Division/Land Resources Management  
Wetlands Bureau  
[Check the Status of your Application](#)



**RSA/ Rule:** RSA 482-A/ Env-Wt 311.04(j); Env-Wt 311.07; Env-Wt 313.01(a)(1),b; Env-Wt 313.01(c)

**APPLICANT LAST NAME, FIRST NAME, M.I.:** Sarah J. Mason Living Trust

An applicant for a standard permit shall submit with the permit application a written narrative that explains how all impacts to functions and values of all jurisdictional areas have been avoided and minimized to the maximum extent practicable. This attachment can be used to guide this narrative (attach additional pages if needed). Alternatively, the applicant may attach a completed Avoidance and Minimization Checklist (NHDES-W-06-050) to the permit application.

**SECTION 1 - WATER ACCESS STRUCTURES (Env-Wt 311.07(b)(1))**

Is the primary purpose of the proposed project to construct a water access structure?

Yes. A component of the project is to construct a new docking structure for recreational boating access.

**SECTION 2 - BUILDABLE LOT (Env-Wt 311.07(b)(1))**

Does the proposed project require access through wetlands to reach a buildable lot or portion thereof?

No. This is not applicable.

**SECTION 3 - AVAILABLE PROPERTY (Env-Wt 311.07(b)(2))**

For any project that proposes permanent impacts of more than one acre or that proposes permanent impacts to a PRA, or both, are any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, that 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?

Since the proposal includes the replacement/repair of an existing stone revement, this is not applicable.

**SECTION 4 - ALTERNATIVES (Env-Wt 311.07(b)(3))**

Could alternative designs or techniques, such as different layouts, different construction sequencing, or alternative technologies be used to avoid impacts to jurisdictional areas or their functions and values on the subject property or on other property that is reasonably available to the applicant as described in the *Wetlands Best Management Practice Techniques for Avoidance and Minimization*?

The project proposes 340 sq. ft. of permanent impact to tidal wetland, and 24 sq. ft. of permanent impact to previously developed 100' TBZ for the construction of a tidal docking structure; which will consist of a 4' x 6' accessway, a 4' x 20' fixed wooden pier, a 3' x 20' aluminum gangway, and a 10' x 20' float (overall structure length 50') providing two slips on 77+/- feet of frontage along the Piscataqua River. The project also proposes an additional 1,201 sq. ft. of permanent impact to tidal wetlands, and 750 sq. ft. of permanent impact to the previously developed 100' TBZ for shoreline stabilization with the replacement of an existing stone revetment and addition of a buffer planting area. Given that the docking structure requires water access, and the rip rap along the shoreline currently exists, alternative designs are extremely limited. The proposed dock will provide the owners with a structure that provides safe recreational boating access. The proposed shoreline stabilization replaces an existing rip rap shoreline with a combination of rip rap and a living shoreline component.

**SECTION 5 - CONFORMANCE WITH Env-Wt 311.10(c) (Env-Wt 311.07(b)(4))**

How does the project conform to Env-Wt 311.10(c)? Please note that for a minimum impact project, the applicant may replace this explanation with a certification signed by a certified wetland scientist that the project is located and designed to minimize impacts to wetlands functions and values.

The proposed docking structure will be constructed on pilings within the tidal wetland further reducing permanent impacts to the tidal wetland resource. The docking structure has been designed to allow the adjacent tidal resource to maintain its current functions and values. The tidal docking structure will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement. The proposed shoreline stabilization reduces the amount (sq. ft.) of rip rap along the shoreline under proposed conditions, and also provides a living shoreline component. As a result, The project will have no impact on the functions and values of the adjacent tidal wetland.



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

## Appendix B

### **Regional General Permits (GPs) Required Information and Corps Secondary Impacts Checklist**

In order for the Corps of Engineers to properly evaluate your application, applicants must submit the following information along with the New Hampshire DES Wetlands Bureau application or permit notification forms. Some projects may require more information. For a more comprehensive checklist, go to [www.nae.usace.army.mil/regulatory](http://www.nae.usace.army.mil/regulatory), “Forms/Publications” and then “Application and Plan Guideline Checklist.” Check with the Corps at (978) 318-8832 for project-specific requirements. For your convenience, this Appendix B is also attached to the State of New Hampshire DES Wetlands Bureau application and Permit by Notification forms.

#### **All Projects:**

- Corps application form ([ENG Form 4345](#)) as appropriate.
- Photographs of wetland/waterway to be impacted.
- Purpose of the project.
- Legible, reproducible black and white (no color) plans no larger than 11”x17” with bar scale. Provide locus map and plan views of the entire property.
- Typical cross-section views of all wetland and waterway fill areas and wetland replication areas.
- In navigable waters, show mean low water (MLW) and mean high water (MHW) elevations. Show the high tide line (HTL) elevations when fill is involved. In other waters, show ordinary high water (OHW) elevation.
- On each plan, show the following for the project:
- Vertical datum and the NAVD 1988 equivalent with the vertical units as U.S. feet. Don’t use local datum. In coastal waters this may be mean higher high water (MHHW), mean high water (MHW), mean low water (MLW), mean lower low water (MLLW) or other tidal datum with the vertical units as U.S. feet. MLLW and MHHW are preferred. Provide the correction factor detailing how the vertical datum (e.g., MLLW) was derived using the latest National Tidal Datum Epoch for that area, typically 1983-2001.
- Horizontal state plane coordinates in U.S. survey feet based on the Traverse Mercator Grid system for the State of New Hampshire (Zone 2800) NAD 83.
- Show project limits with existing and proposed conditions.
- Limits of any Federal Navigation Project in the vicinity of the project area and horizontal State Plane Coordinates in U.S. survey feet for the limits of the proposed work closest to the Federal Navigation Project;
- Volume, type, and source of fill material to be discharged into waters and wetlands, including the area(s) (in square feet or acres) of fill in wetlands, below the ordinary high water in inland waters and below the high tide line in coastal waters.
- Delineation of all waterways and wetlands on the project site,;
- Use Federal delineation methods and include Corps wetland delineation data sheets. See GC 2 and [www.nero.noaa.gov/hcd](http://www.nero.noaa.gov/hcd) for eelgrass survey guidance.
- GP 3, Moorings, contains eelgrass survey requirements for the placement of moorings.
- For activities involving discharges of dredged or fill material into waters of the U.S., include a statement describing how impacts to waters of the U.S. are to be avoided and minimized, and either a statement describing how impacts to waters of the U.S. are to be compensated for (or a conceptual or detailed mitigation plan) or a statement explaining why compensatory mitigation should not be required for the proposed impacts. Please contact the Corps for guidance.



**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.

| <b>1. Impaired Waters</b>   | Yes           | No  |
|---|---------------|-----|
| 1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See <a href="http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm">http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm</a> to determine if there is an impaired water in the vicinity of your work area.*  | X             |     |
| <b>2. Wetlands</b>  | Yes           | No  |
| 2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?  | X             |     |
| 2.2 Are there proposed impacts to 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 <a href="https://www2.des.state.nh.us/nhb_datacheck/">https://www2.des.state.nh.us/nhb_datacheck/</a> . The book <a href="#">Natural Community Systems of New Hampshire</a> 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.)  |               | X   |
| 2.5 The overall project site is more than 40 acres?   |               | X   |
| 2.6 What is the area of the previously filled wetlands?   | Unknown       |     |
| 2.7 What is the area of the proposed fill in wetlands?  | 1,201 sq. ft. |     |
| 2.8 What is the % of previously and proposed fill in wetlands to the overall project site?  | Unknown       |     |
| <b>3. Wildlife</b>  | Yes           | No  |
| 3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: <a href="https://www2.des.state.nh.us/nhb_datacheck/">https://www2.des.state.nh.us/nhb_datacheck/</a> USFWS IPAC website: <a href="https://ecos.fws.gov/ipac/location/index">https://ecos.fws.gov/ipac/location/index</a> | X             |     |

|   |     |     |
|---|-----|-----|
| 3.2 Would work occur in any area identified as either “Highest Ranked Habitat in N.H.” or “Highest Ranked Habitat in Ecological Region”? (These areas are colored magenta and green, respectively, on NH Fish and Game’s map, “2010 Highest Ranked Wildlife Habitat by Ecological Condition.”) Map information can be found at:<br><ul style="list-style-type: none"> <li>• PDF: <a href="http://www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm">www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm</a>.</li> <li>• Data Mapper: <a href="http://www.granit.unh.edu">www.granit.unh.edu</a>.</li> <li>• GIS: <a href="http://www.granit.unh.edu/data/downloadfreedata/category/databycategory.html">www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</a>.</li> </ul> |     | X   |
| 3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?  |     | X   |
| 3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?   |     | X   |
| 3.5 Are stream crossings designed in accordance with the GC 21?   |     | N/A |
| <b>4. Flooding/Floodplain Values</b>  | Yes | No  |
| 4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?  | X   |     |
| 4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?   | X   |     |
| <b>5. Historic/Archaeological Resources</b>   |     |     |
| For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form ( <a href="http://www.nh.gov/nhdhr/review">www.nh.gov/nhdhr/review</a> ) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 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.



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 LAST NAME, FIRST NAME, M.I.:** Sarah J. Mason Living Trust

Attachment A can be used to satisfy some of the additional requirements for minor and major projects regarding avoidance and minimization, as well as functional assessment.

**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 PROJECT PROPOSES THE CONSTRUCTION OF A TIDAL DOCKING STRUCTURE AND THE REPLACEMENT/REPAIR OF AN EXISTING STONE REVETMENT. GIVEN THAT THE DOCKING STRUCTURE REQUIRES WATER ACCESS, AND THE RIP RAP ALONG THE SHORELINE CURRENTLY EXISTS, ALTERNATIVE DESIGNS ARE EXTREMELY LIMITED. THE PROPOSED DOCK WILL PROVIDE THE OWNERS WITH A STRUCTURE THAT PROVIDES SAFE RECREATIONAL BOATING ACCESS. THE PROPOSED SHORELINE STABILIZATION REPLACES AN EXISTING RIP RAP SHORELINE WITH A COMBINATION OF RIP RAP AND A LIVING SHORELINE COMPONENT. THE PROPOSED SHORELINE STABILIZATION REDUCES THE AMOUNT (SQ. FT.) OF RIP RAP ALONG THE SHORELINE UNDER PROPOSED CONDITIONS, AND ALSO PROVIDES A LIVING SHORELINE COMPONENT.

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

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

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

**SECTION I.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, crustacea, shellfish and wildlife of significant value.

The project does not propose any impacts to tidal marshes or non-tidal marshes.

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

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

The proposed docking structure will be constructed on pilings within the tidal wetland further reducing permanent impacts to the tidal wetland resource. Since the docking structure will be constructed on piles, the structure will not impede tidal flow or alter hydrology, it will not deter use by wildlife species that currently use the wetland area, and it will not impede any migrational fish movement. The proposed shoreline stabilization replaces an existing stone rip rap slope, but also provides a living shoreline component.



**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 project does not propose any impacts to exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern.

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

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

The proposed tidal docking structure has been designed to not impede recreation, public commerce, and navigation. The docking structure does not extend into any federal or local navigation channel and maintains the required 20 foot setbacks from boundary lines extended over water.

**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.

The project does not propose any impacts to floodplain wetlands.

**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.

The project does not propose impacts to riverine forested wetland systems and scrub shrub marsh complexes.

**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.

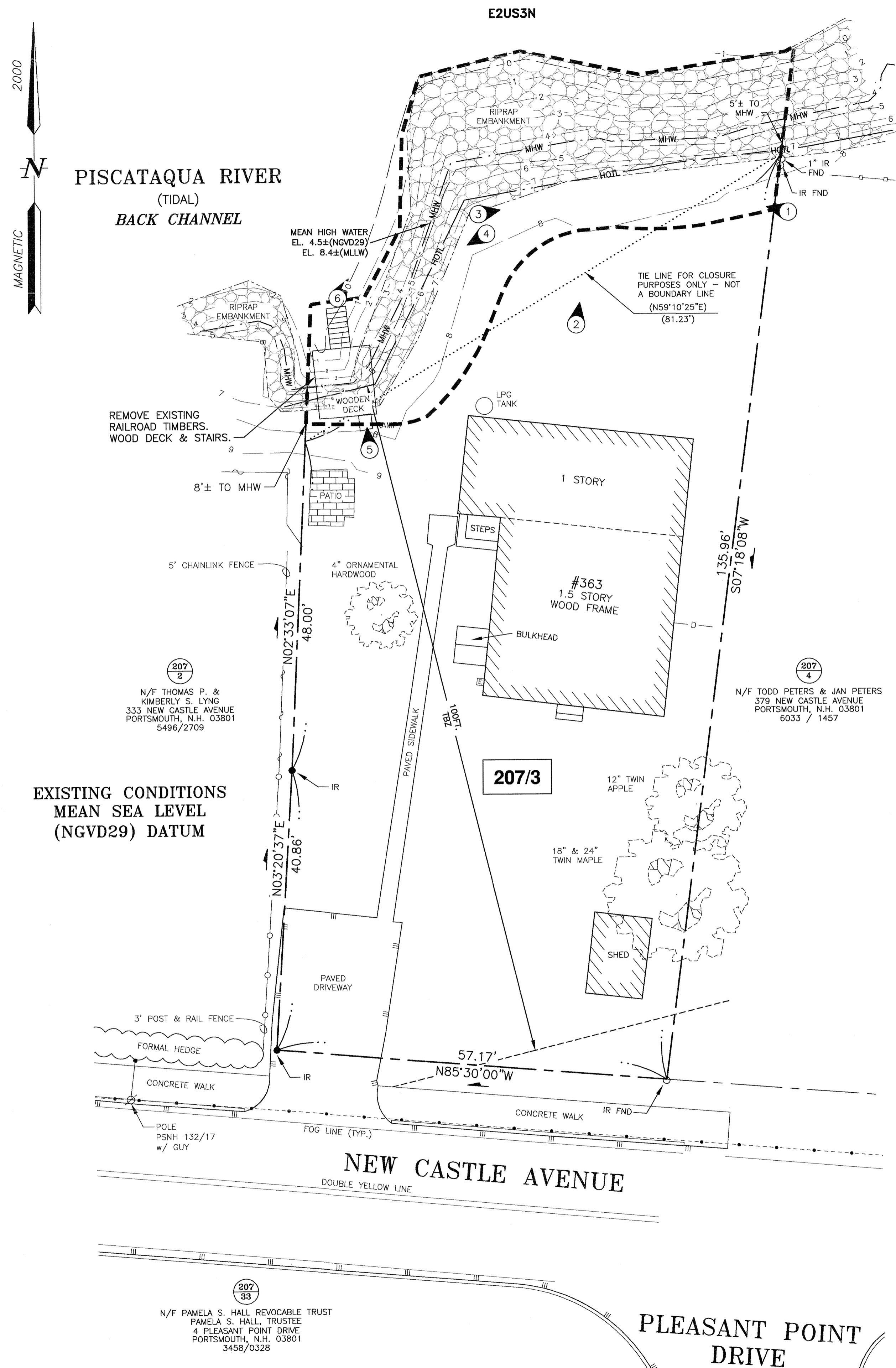
The wetland resources associated with the project site are not hydrologically connected to a groundwater aquifer or drinking water supply.

**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.

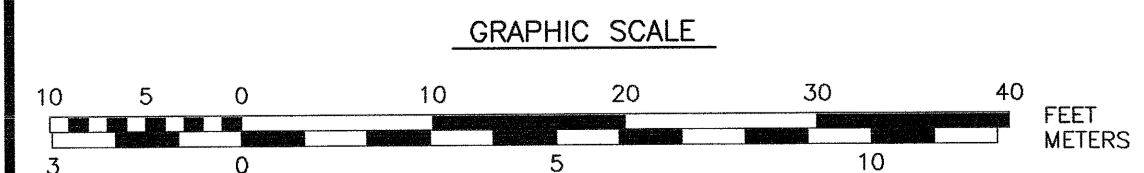
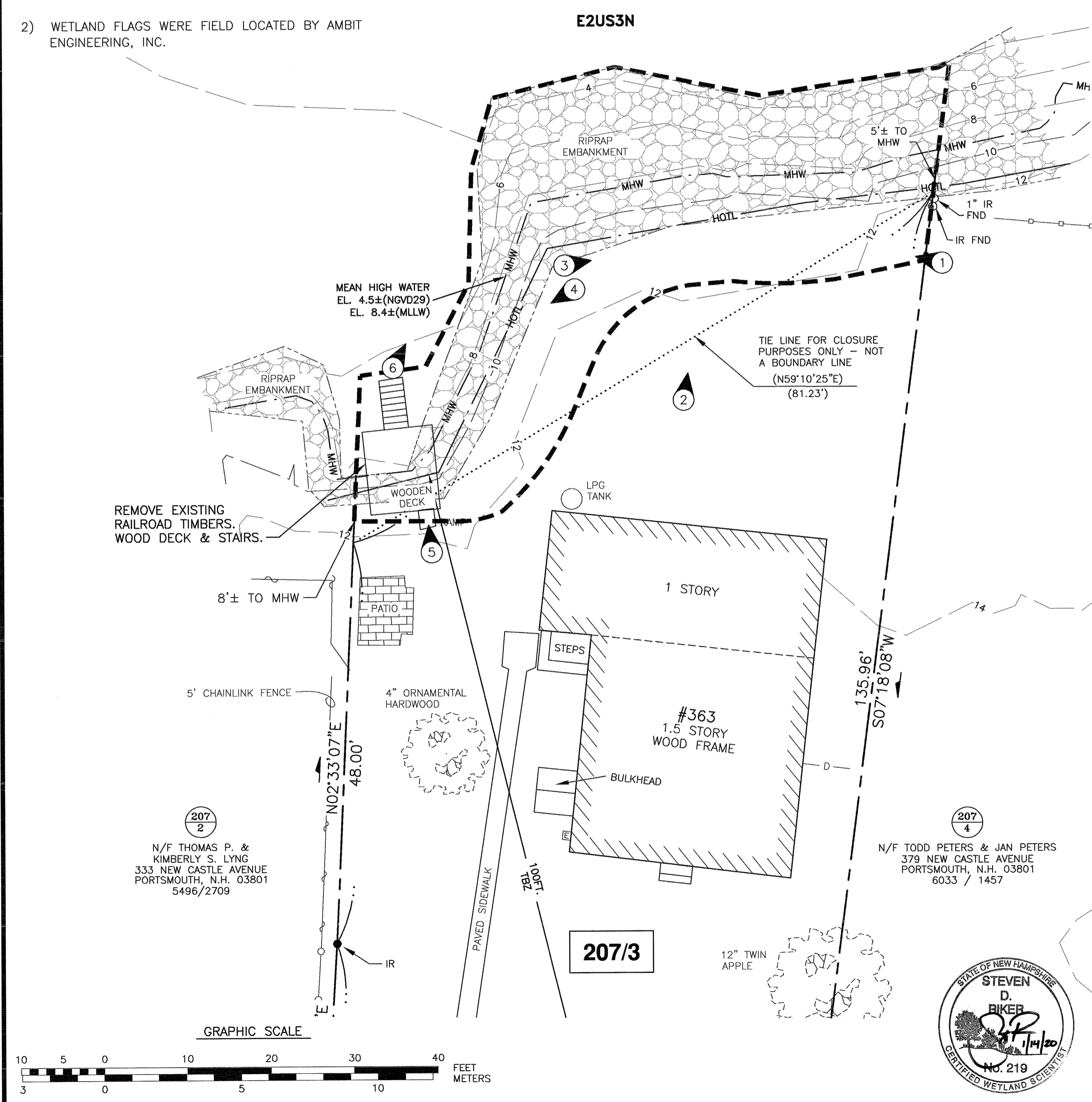
The project does not propose any impacts to stream channels.

| <b>PART II: FUNCTIONAL ASSESSMENT</b>  |
|--|
| <p><b>REQUIREMENTS</b><br/>                     Ensure that project meets requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).</p>   |
| <p><b>FUNCTIONAL ASSESSMENT METHOD USED:</b><br/>                     Wetland functions and values were assessed using the Highway Methodology Workbook, Wetland Functions and Values: A Descriptive Approach. U.S. Army Corps of Engineers. 1999. The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach. U.S. Army Corps of Engineers. New England Division. 32pp. NAEPP-360-1-30a.</p>   |
| <p><b>NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT:</b> STEVEN D. RIKER, CWS</p>   |
| <p><b>DATE OF ASSESSMENT:</b> NOVEMBER &amp; DECEMBER 2019</p>   |
| <p>Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT: <input checked="" type="checkbox"/></p>   |
| <p>For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable: <input checked="" type="checkbox"/></p> <p>Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.</p> |



**WETLAND NOTES:**

- 1) HIGHEST OBSERVABLE TIDE LINE DELINEATED BY STEVEN D. RIKER, CWS ON 9/27/2019 IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
  - A) U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JAN. 1987), AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012.
  - B) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 8.2, USDA-NRCS, 2018 AND (FOR DISTURBED SITES) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, VERSION 4. NEWPCC WETLANDS WORK GROUP (2019).
  - C) NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1). USFWS (MAY 1988).
  - D) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. USFW MANUAL FWS/OBS-79/31 (1997).
  - E) "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE" (1997). NEW HAMPSHIRE FISH AND GAME DEPARTMENT.
- 2) WETLAND FLAGS WERE FIELD LOCATED BY AMBIT ENGINEERING, INC.



**PISCATAQUA RIVER  
(TIDAL)  
BACK CHANNEL**

**EXISTING CONDITIONS  
MEAN LOWER LOW WATER (MLLW) DATUM**

**AMBIT ENGINEERING, INC.**  
Civil Engineers & Land Surveyors  
200 Griffin Road - Unit 3  
Portsmouth, N.H. 03801-7114  
Tel (603) 430-9282  
Fax (603) 436-2315

**RIVERSIDE & PICKERING**  
MARINE CONTRACTORS

**NOTES:**

- 1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 207 AS LOT 3.
- 2) OWNERS OF RECORD:  
SARAH J. MASON LIVING TRUST  
SARAH J. MASON TRUSTEE  
363 NEW CASTLE AVENUE  
PORTSMOUTH, NH 03801  
5941 / 1052  
D-37556
- 3) PARCEL IS IN A FLOOD HAZARD ZONES X AND AE (EL. 9) AS SHOWN ON FIRM PANEL 33015C0278E. EFFECTIVE MAY 17, 2005.
- 4) EXISTING LOT AREA:  
7,896 S.F.±  
0.1813 AC±
- 5) THE PURPOSE OF THIS PLAN SET IS TO SHOW THE EXISTING CONDITIONS, PROPOSED REVETMENT REPAIRS AND PROPOSED DOCKING STRUCTURE ON MAP 207, LOT 3.
- 6) VERTICAL DATUM SHOWN ARE MEAN SEA LEVEL NGVD29 & MEAN LOWER LOW WATER. NGVD29 USED FOR REVETMENT REPAIR AND FLOOD PROTECTION, AS CURRENT FIRM IS REFERENCED TO NGVD29. MEAN LOWER LOW WATER (MLLW) IS USED FOR DOCKING STRUCTURE. MEAN LOWER LOW WATER BEING REFERENCED TO NOAA STATION 8419870 SEAVEY ISLAND, PORTSMOUTH HARBOR. MLLW BEING 3.84 FEET LOWER THAN 0.0 NGVD29. BASIS OF VERTICAL DATUM IS RM 4 ON HISTORIC FIRM.
- 7) SEE SHEET C2 FOR LOCUS MAP.

**LEGEND:**

- N/F NOW OR FORMERLY
- RP RECORD OF PROBATE
- RCRD ROCKINGHAM COUNTY REGISTRY OF DEEDS MAP 11 / LOT 21
- RR SPK FND RAILROAD SPIKE FOUND/SET
- IR FND IRON ROD FOUND/SET
- IP FND IRON PIPE FOUND/SET
- DH FND DRILL HOLE FOUND/SET
- OVERHEAD ELECTRIC/WIRES
- HOTL HIGHEST OBSERVABLE TIDE LINE
- EDGE OF PAVEMENT
- PHOTO LOCATION

**PROPOSED REVETMENT  
REPAIRS & NEW DOCK  
MASON RESIDENCE  
363 NEW CASTLE AVENUE  
PORTSMOUTH, N.H.**

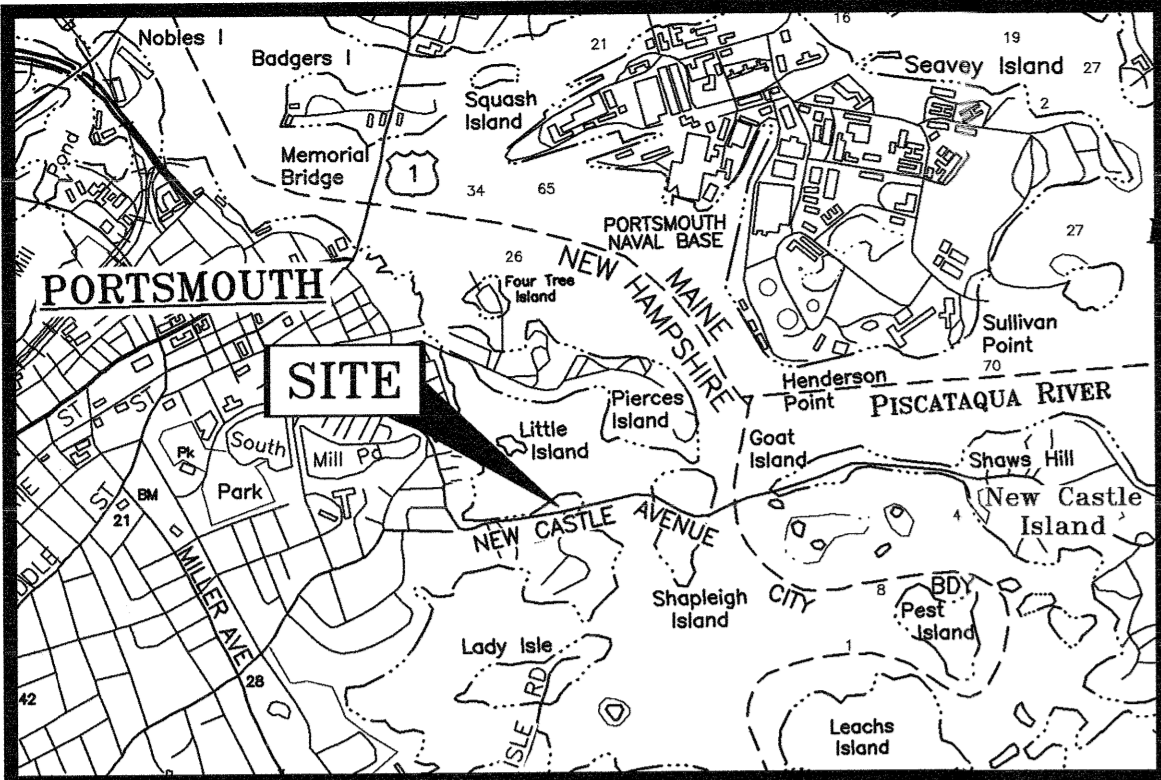
| NO. | DESCRIPTION         | DATE    |
|-----|---------------------|---------|
| 1   | ISSUED FOR APPROVAL | 1/14/20 |
| 0   | ISSUED FOR COMMENT  | 12/3/19 |

REVISIONS

SCALE: 1" = 10' DECEMBER 2019

**EXISTING CONDITIONS  
PLAN**

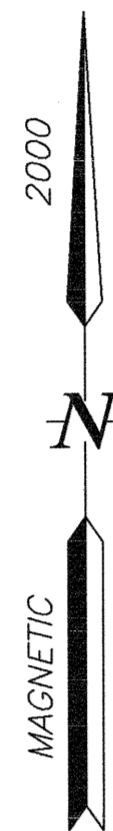
C1



LOCATION MAP SCALE: 1" = 2000'

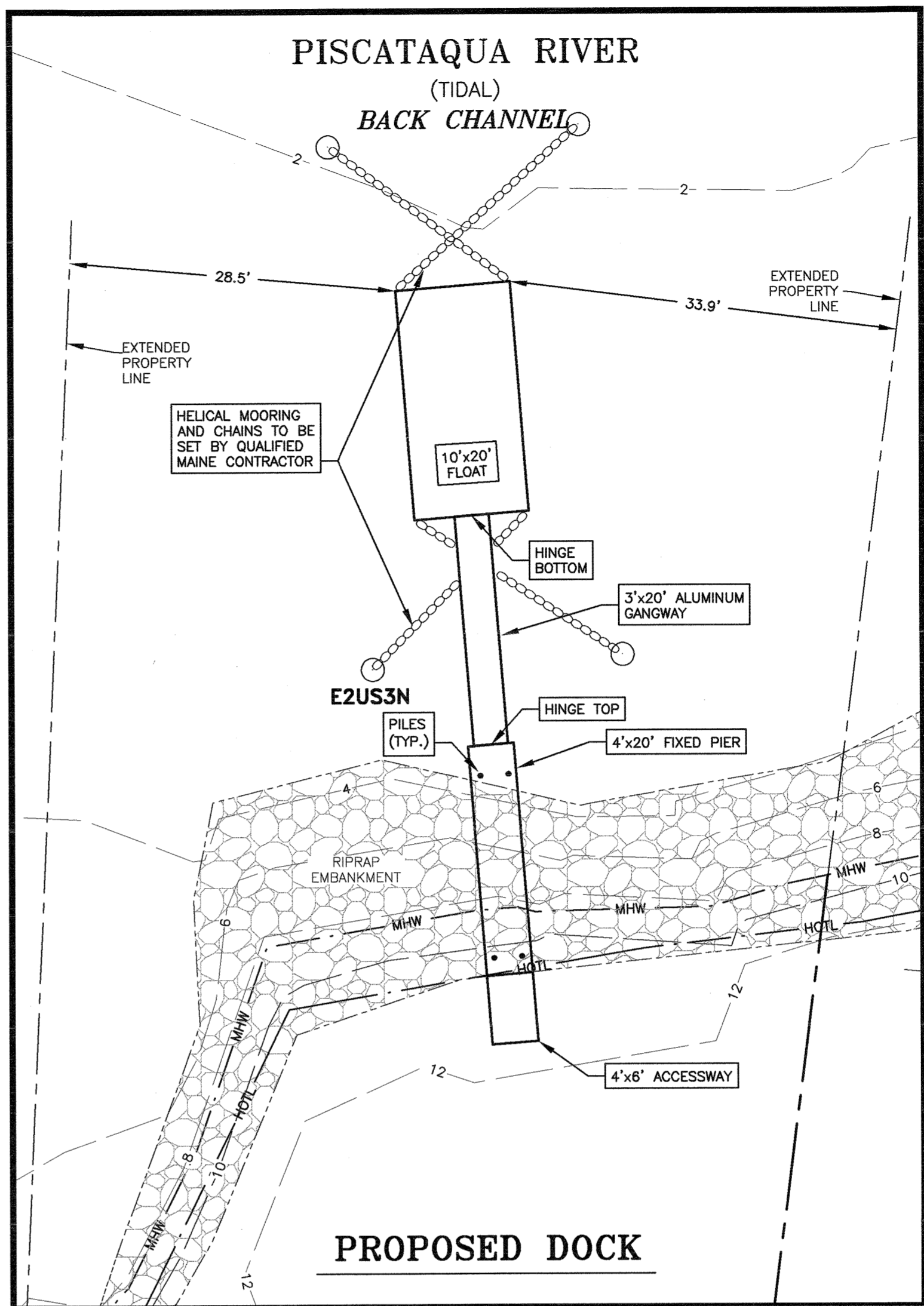
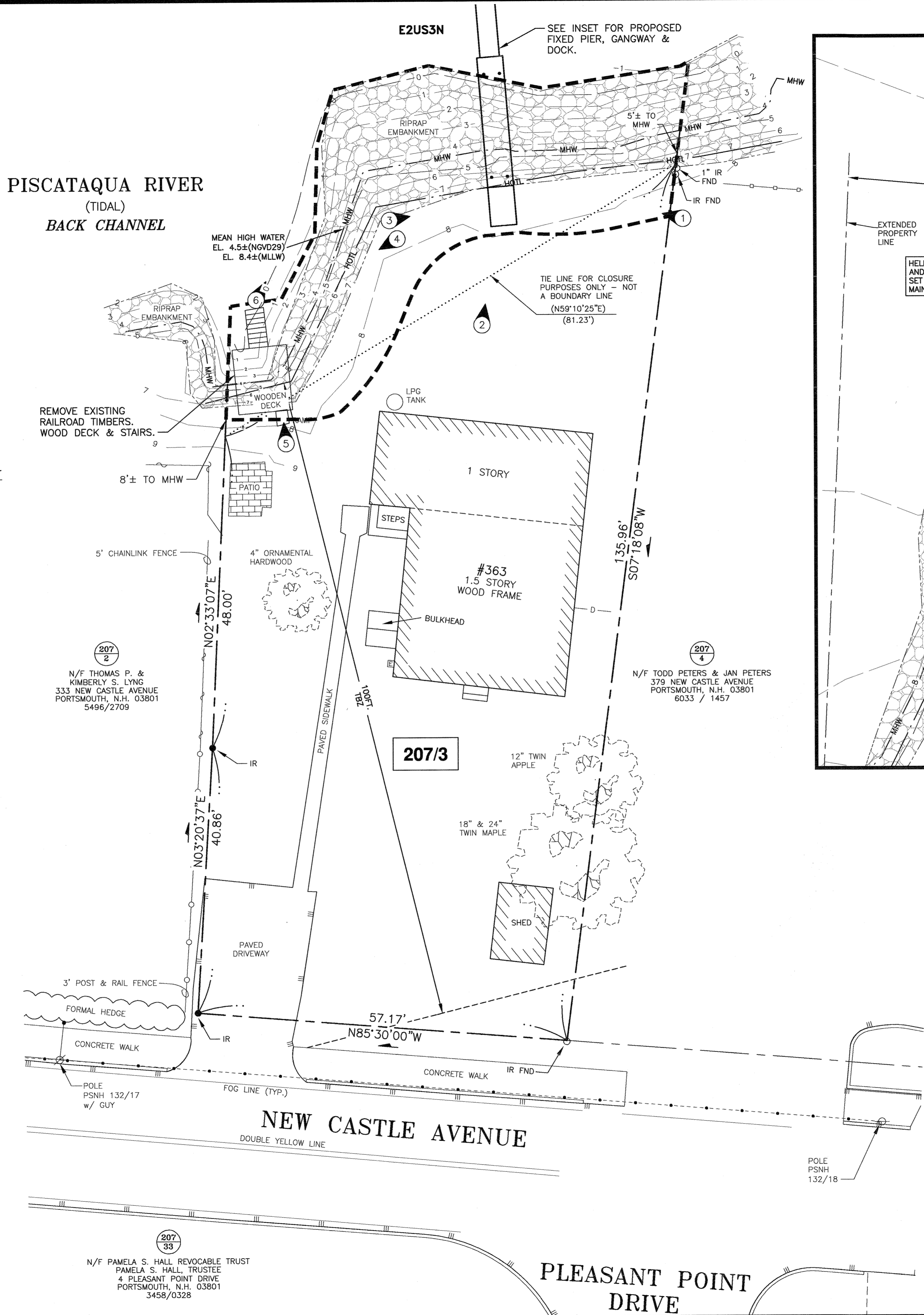
**LEGEND:**

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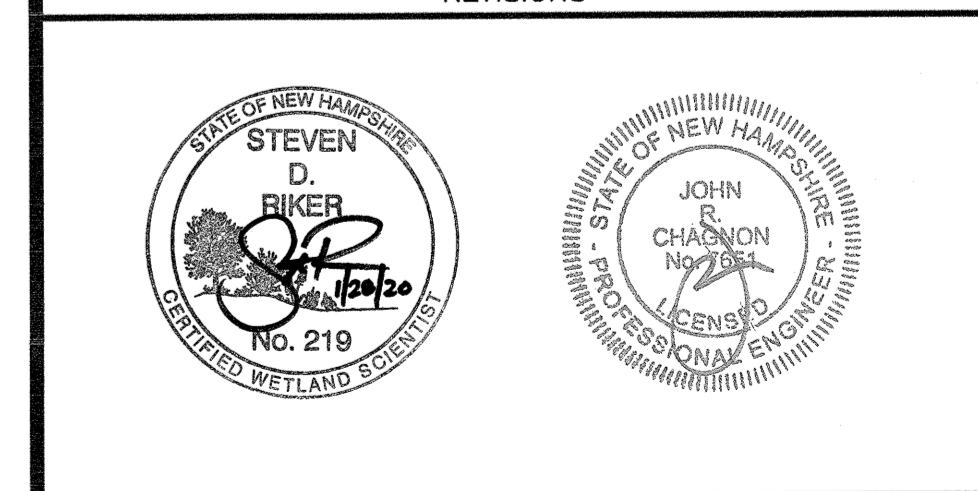
**AMBIT ENGINEERING, INC.**  
Civil Engineers & Land Surveyors  
200 Griffin Road - Unit 3  
Portsmouth, N.H. 03801-7114  
Tel (603) 430-9282  
Fax (603) 436-2315



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SARAH J. MASON LIVING TRUST  
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**PROPOSED REVETMENT REPAIRS & NEW DOCK MASON RESIDENCE**  
363 NEW CASTLE AVENUE  
PORTSMOUTH, N.H.

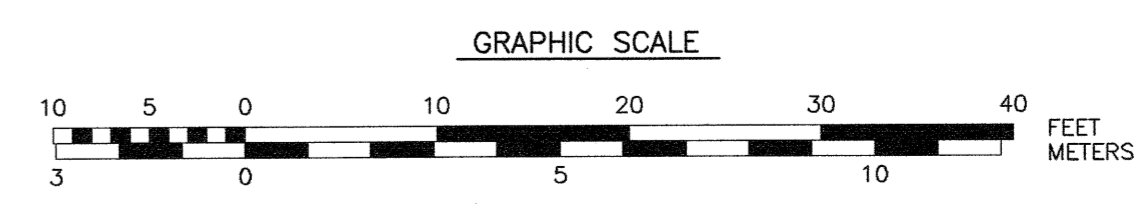
| NO. | DESCRIPTION        | DATE    |
|-----|--------------------|---------|
| 1   | ROTATED DOCK       | 1/16/20 |
| 0   | ISSUED FOR COMMENT | 12/3/19 |



SCALE: 1" = 10' DECEMBER 2019

**DOCK & REVETMENT PERMIT PLAN**

**C2**





**AMBIT ENGINEERING, INC.**  
Civil Engineers & Land Surveyors  
200 Griffin Road - Unit 3  
Portsmouth, N.H. 03801-7114  
Tel (603) 430-9282  
Fax (603) 436-2315

### SEQUENCE OF CONSTRUCTION

- 1) MOBILIZATION OF A CRANE BARGE, PUSH BOAT, WORK SKIFF, MATERIALS AND PREFABRICATED COMPONENTS SUCH AS THE GANGWAY AND FLOAT TO THE SITE VIA APPROVED ACCESS.
- 2) MOBILIZATION OF EQUIPMENT TRUCKS TO THE SITE.
- 3) THE BARGE WILL BE POSITIONED ALONGSIDE THE PROPOSED LOCATION OF THE NEW DOCK AND WATERWARD OF ANY EMERGENT VEGETATION TO MINIMIZE IMPACTS
- 4) INSTALLATION OF THE SUB STRUCTURE WILL BE PERFORMED FROM A CRANE BARGE OR SKIFF TO REDUCE THE AMOUNT OF FOOT TRAFFIC IN THE INTERTIDAL AREA.
- 5) ALL WORK WILL BE PERFORMED AT LOW TIDE TO MINIMIZE SEDIMENTATION.
- 6) PILING WILL BE MECHANICALLY DRIVEN BY A CRANE ELIMINATING ANY EXCAVATION FOR INSTALLATION OF THE PILING. PILING ARE DRIVEN TO REFUSAL.
- 7) PILING ARE CUT AND BEAM CAPS ARE INSTALLED AND THE SUPER STRUCTURE OF THE PIER IS BUILT. MATERIALS ARE LIFTED FROM THE BARGE AND SET INTO POSITION BY THE CRANE.
- 8) ONCE THE PIER IS COMPLETE, THE GANGWAY AND FLOAT ARE BROUGHT INTO POSITION AND INSTALLED.

### DISCHARGES, AVOIDANCE, MINIMIZATION AND MITIGATION

DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE U.S. AND ANY SECONDARY IMPACTS SHALL BE AVOIDED AND MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. PERMITTEES MAY ONLY FILL THOSE JURISDICTIONAL WETLANDS AND WATERWAYS THAT THE CORP AND NHDES AUTHORIZES TO BE FILLED AND IMPACT THOSE AREAS THAT THE CORPS AND NHDES AUTHORIZES AS SECONDARY IMPACTS. IF NOT SPECIFICALLY AUTHORIZED BY USACOE AND AND NHDES, ANY UNAUTHORIZED FILL OR SECONDARY IMPACT TO WETLANDS MAY BE CONSIDERED AS A VIOLATION OF THE CWA.

UNLESS SPECIFICALLY AUTHORIZED USACOE AND AND NHDES, NO WORK SHALL DRAIN A WATER OF THE U.S. BY PROVIDING A CONDUIT FOR WATER ON OR BELOW THE SURFACE.

### HEAVY EQUIPMENT IN FRESH WATER WETLANDS

HEAVY EQUIPMENT OTHER THAN FIXED EQUIPMENT (DRILL RIGS, FIXED CRANES, ETC.) WORKING IN WETLANDS SHALL NOT BE STORED, MAINTAINED OR REPAIRED IN WETLANDS, UNLESS IT IS LESS ENVIRONMENTALLY DAMAGING OTHERWISE, AND AS MUCH AS POSSIBLE SHALL NOT BE OPERATED WITHIN THE INTERTIDAL ZONE. WHERE CONSTRUCTION REQUIRES HEAVY EQUIPMENT OPERATION IN WETLANDS, THE EQUIPMENT SHALL EITHER HAVE LOW GROUND PRESSURE (<3 PSI), OR SHALL NOT BE LOCATED DIRECTLY ON WETLAND SOILS AND VEGETATION; IT SHALL BE PLACED ON SWAMP MATS THAT ARE ADEQUATE TO SUPPORT THE EQUIPMENT IN SUCH A WAY AS TO MINIMIZE DISTURBANCE OF WETLAND SOIL AND VEGETATION. SWAMP MATS ARE TO BE PLACED IN THE WETLAND FROM THE UPLAND OR FROM EQUIPMENT POSITIONED ON SWAMP MATS IF WORKING WITHIN A WETLAND. DRAGGING SWAMP MATS INTO POSITION IS PROHIBITED. OTHER SUPPORT STRUCTURES THAT ARE LESS IMPACTING AND ARE CAPABLE OF SAFELY SUPPORTING EQUIPMENT MAY BE USED WITH WRITTEN CORPS AND NHDES AUTHORIZATION. SIMILARLY, NOT USING MATS DURING FROZEN, DRY OR OTHER CONDITIONS MAY BE ALLOWED WITH WRITTEN CORPS AND NHDES AUTHORIZATION. AN ADEQUATE SUPPLY OF SPILL CONTAINMENT EQUIPMENT SHALL BE MAINTAINED ON SITE. CORDUROY ROADS AND SWAMP/CONSTRUCTION MATS ARE CONSIDERED AS FILL WHETHER THEY'RE INSTALLED TEMPORARILY OR PERMANENTLY.

### TIME OF YEAR WORK WINDOW AND NOISE RESTRICTIONS

- PILES INSTALLED IN-THE-DRY DURING LOW WATER OR IN-WATER BETWEEN NOV. 8TH - APR. 9TH, OR MUST BE DRILLED AND PINNED TO LEDGE, OR
  - VIBRATORY HAMMERS USED TO INSTALL ANY SIZE AND QUANTITY OF WOOD, CONCRETE OR STEEL PILES, OR
  - IMPACT HAMMERS LIMITED TO ONE HAMMER AND <50 PILES INSTALLED/DAY WITH THE FOLLOWING: WOOD PILES OF ANY SIZE, CONCRETE PILES ≤18-INCHES DIAMETER, STEEL PILES 12-INCHES DIAMETER IF THE HAMMER IS ≤3000 LBS. AND A WOOD CUSHION IS USED BETWEEN THE HAMMER AND STEEL PILE.
- FOR II-IV ABOVE:
- IN-WATER NOISE LEVELS SHALL NOT >187dB SEL RE  $L_{pA}$  OR 206dB PEAK RE  $L_{pA}$  AT A DISTANCE >10M FROM THE PILE BEING INSTALLED, AND
  - IN-WATER NOISE LEVELS >155dB PEAK RE  $L_{pA}$  SHALL NOT EXCEED 12 CONSECUTIVE HOURS ON ANY GIVEN DAY AND A 12 HOUR RECOVERY PERIOD (I.E., IN-WATER NOISE BELOW 155dB PEAK RE  $L_{pA}$ ) MUST BE PROVIDED BETWEEN WORK DAYS.

### WORK SITE RESTORATION

- UPON COMPLETION OF CONSTRUCTION, ALL DISTURBED WETLAND AREAS SHALL BE PROPERLY STABILIZED. ANY SEED MIX SHALL CONTAIN ONLY PLANT SPECIES NATIVE TO NEW ENGLAND.
- THE INTRODUCTION OR SPREAD OF INVASIVE PLANT SPECIES IN DISTURBED AREAS IS PROHIBITED.
- IN AREAS OF AUTHORIZED TEMPORARY DISTURBANCE, IF TREES ARE CUT THEY SHALL BE CUT AT GROUND LEVEL AND NOT UPROOTED IN ORDER TO PREVENT DISRUPTION TO THE WETLAND SOIL STRUCTURE AND TO ALLOW STUMP SPROUTS TO REVEGETATE THE WORK AREA, UNLESS OTHERWISE AUTHORIZED.
- WETLAND AREAS WHERE PERMANENT DISTURBANCE IS NOT AUTHORIZED SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND ELEVATION, WHICH UNDER NO CIRCUMSTANCES SHALL BE HIGHER THAN THE PRE-CONSTRUCTION ELEVATION. ORIGINAL CONDITION MEANS CAREFUL PROTECTION AND/OR REMOVAL OF EXISTING SOIL AND VEGETATION, AND REPLACEMENT BACK TO THE ORIGINAL LOCATION SUCH THAT THE ORIGINAL SOIL LAYERING AND VEGETATION SCHEMES ARE APPROXIMATELY THE SAME, UNLESS AUTHORIZED.

### SEDIMENTATION AND EROSION CONTROL

ADEQUATE SEDIMENTATION AND EROSION CONTROL MANAGEMENT MEASURES, PRACTICES AND DEVICES, SUCH AS PHASED CONSTRUCTION, VEGETATED FILTER STRIPS, GEOTEXTILE SILT FENCES, STORMWATER DETENTION AND INFILTRATION SYSTEMS, SEDIMENT DETENTION BASINS, OR OTHER DEVICES SHALL BE INSTALLED AND PROPERLY MAINTAINED TO REDUCE EROSION AND RETAIN SEDIMENT ON-SITE DURING AND AFTER CONSTRUCTION. THEY SHALL BE CAPABLE OF PREVENTING EROSION, OF COLLECTING SEDIMENT, SUSPENDED AND FLOATING MATERIALS, AND OF FILTERING FINE SEDIMENT. THE DISTURBED AREAS SHALL BE STABILIZED AND THESE DEVICES SHALL BE REMOVED UPON COMPLETION OF WORK. THE SEDIMENT COLLECTED BY THESE DEVICES SHALL BE REMOVED AND PLACED AT AN UPLAND LOCATION, IN A MANNER THAT WILL PREVENT ITS LATER EROSION INTO A WATERWAY OR WETLAND. ALL EXPOSED SOIL AND OTHER FILLS SHALL BE PERMANENTLY STABILIZED AT THE EARLIEST PRACTICABLE DATE.

### SPAWNING AREAS

DISCHARGES OF DREDGED OR FILL MATERIAL, AND/OR SUSPENDED SEDIMENT PRODUCING ACTIVITIES IN FISH AND SHELLFISH SPAWNING OR NURSERY AREAS, OR AMPHIBIAN AND MIGRATORY BIRD BREEDING AREAS, DURING SPAWNING OR BREEDING SEASONS SHALL BE AVOIDED. IMPACTS TO THESE AREAS SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE DURING ALL TIMES OF THE YEAR. INFORMATION ON SPAWNING HABITAT FOR SPECIES MANAGED UNDER THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (I.E., EFH FOR SPAWNING ADULTS) CAN BE OBTAINED FROM THE NMFS WEBSITE AT: [WWW.NERO.NOAA.GOV/HCD](http://WWW.NERO.NOAA.GOV/HCD).

### STORAGE OF SEASONAL STRUCTURES

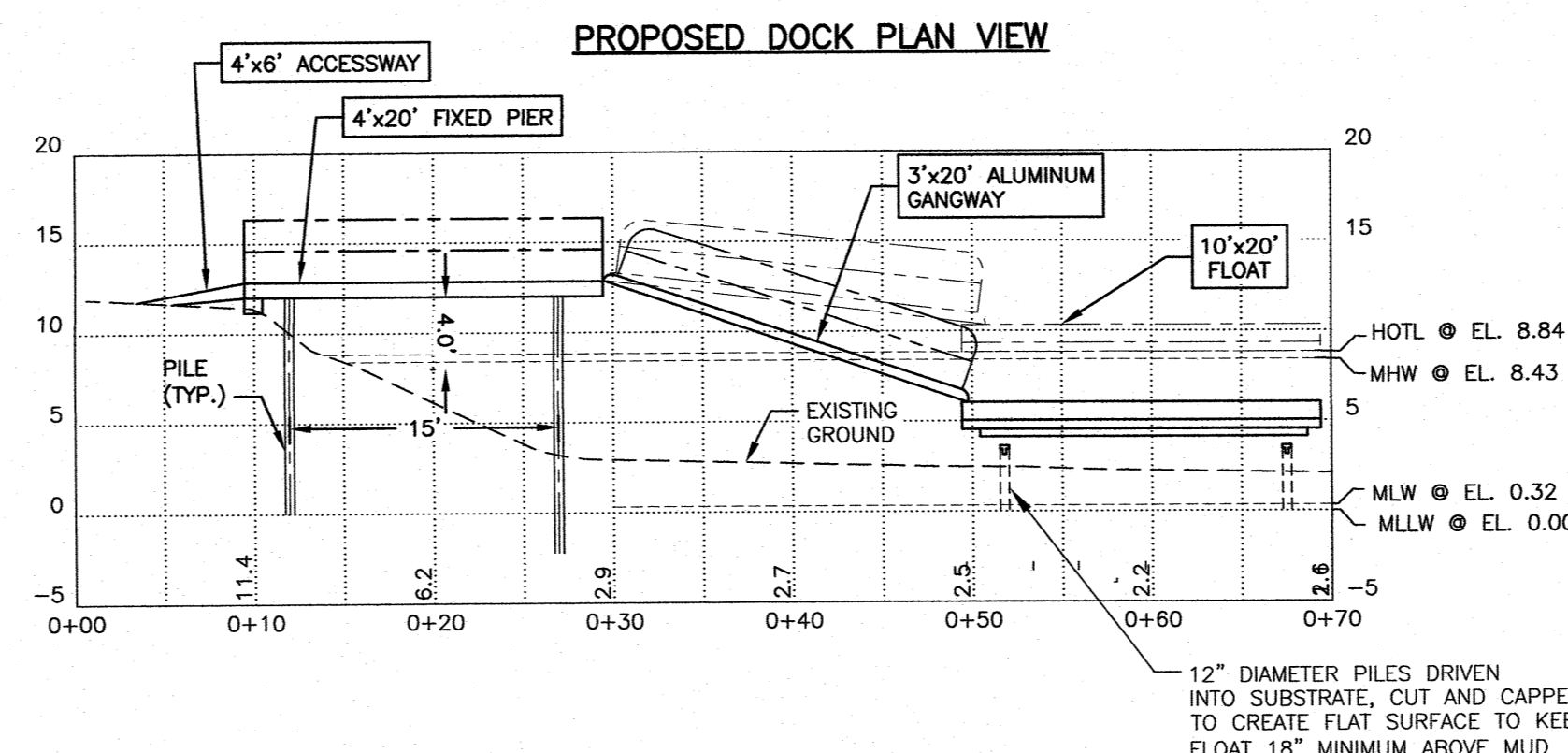
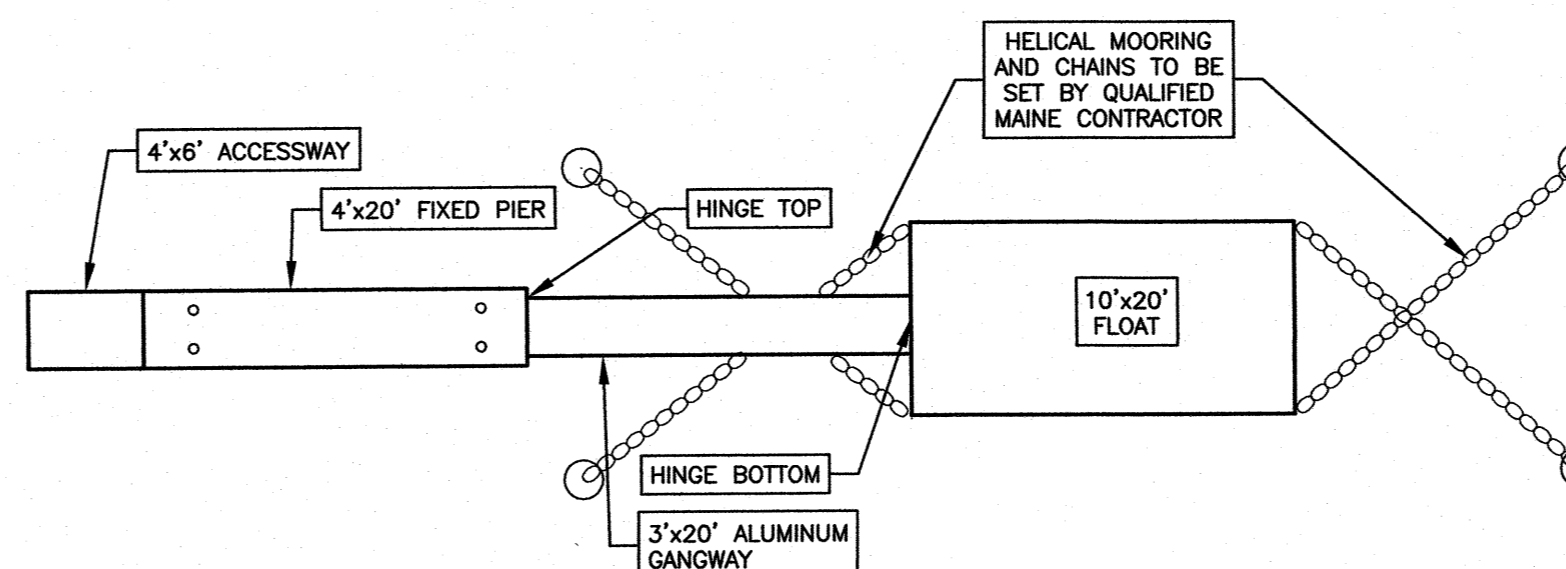
COASTAL STRUCTURES SUCH AS PIER SECTIONS, FLOATS, ETC., THAT ARE REMOVED FROM THE WATERWAY FOR A PORTION OF THE YEAR (OFTEN REFERRED TO AS SEASONAL STRUCTURES) SHALL BE STORED IN AN UPLAND LOCATION, LOCATED ABOVE HIGHEST OBSERVABLE TIDE LINE (HOTL) AND NOT IN TIDAL WETLANDS. THESE SEASONAL STRUCTURES MAY BE STORED ON THE FIXED, PILE-SUPPORTED PORTION OF THE STRUCTURE THAT IS SEAWARD OF HOTL. THIS IS INTENDED TO PREVENT STRUCTURES FROM BEING STORED ON THE MARSH SUBSTRATE AND THE SUBSTRATE SEAWARD OF MHW.

### ENVIRONMENTAL FUNCTIONS AND VALUES

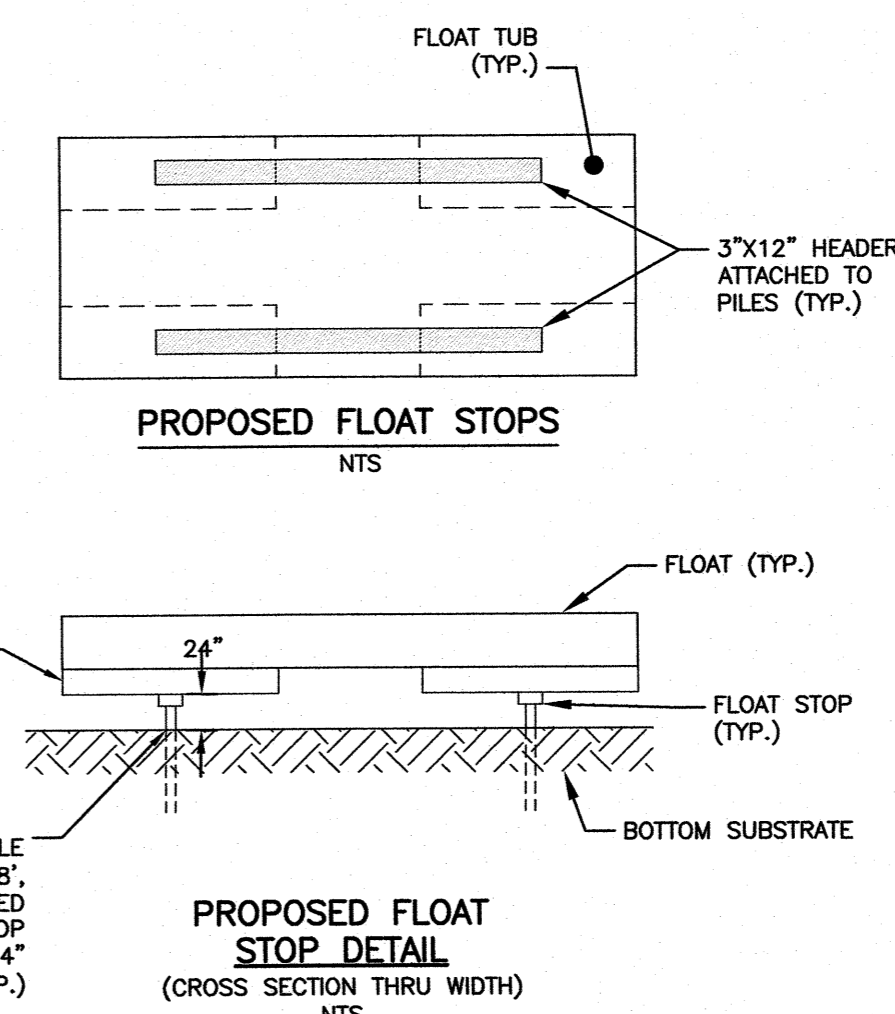
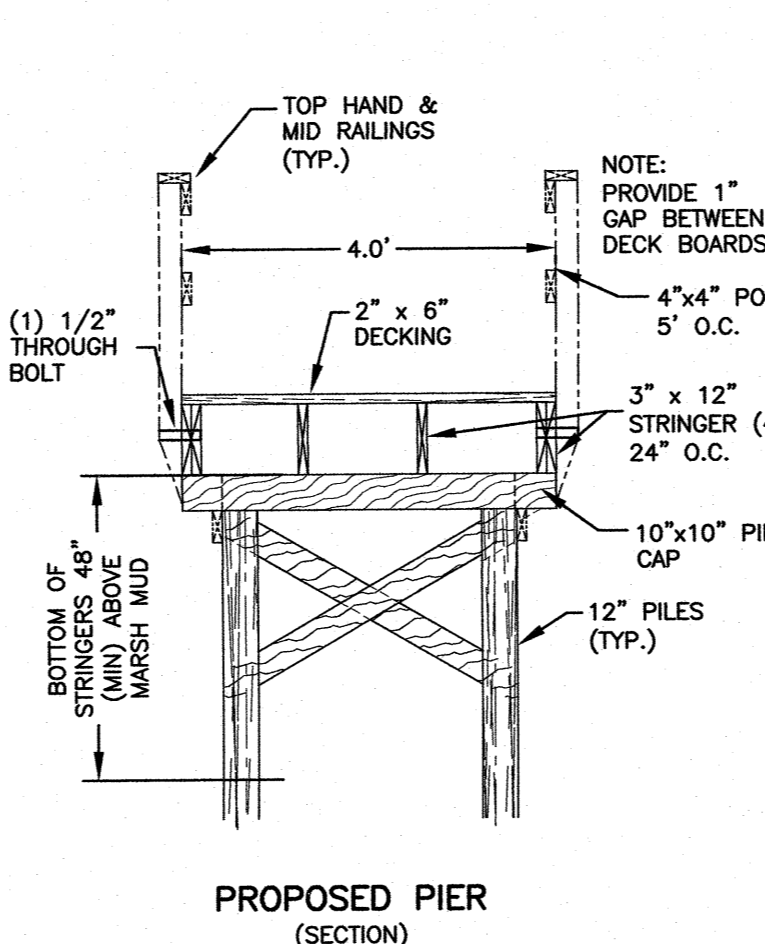
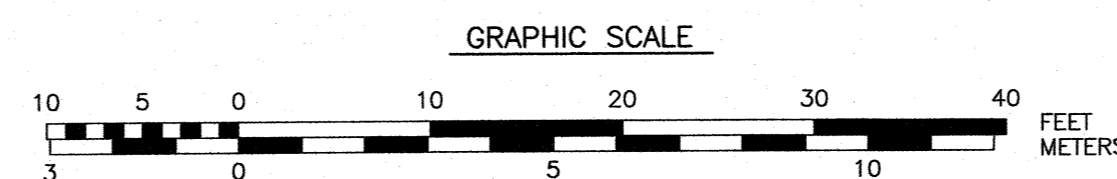
THE PERMITTEE SHALL MAKE EVERY REASONABLE EFFORT TO 1) CARRY OUT THE CONSTRUCTION OR OPERATION OF THE WORK AUTHORIZED BY USACOE AND NHDES HEREIN IN A MANNER THAT MINIMIZES ADVERSE IMPACTS ON FISH, WILDLIFE AND NATURAL ENVIRONMENTAL VALUES, AND 2) PROHIBIT THE ESTABLISHMENT OR SPREAD OF PLANT SPECIES IDENTIFIED AS NON-NATIVE INVASIVE SPECIES BY ANY FEDERAL OR STATE AGENCY. SEE THE SECTION ON INVASIVE SPECIES AT [HTTP://WWW.NAE.USACE.ARMY.MIL/REGULATORY/](http://WWW.NAE.USACE.ARMY.MIL/REGULATORY/) FOR CONTROL METHODS.

### INSPECTIONS

THE PERMITTEE SHALL ALLOW THE CORPS AND NHDES TO MAKE PERIODIC INSPECTIONS AT ANY TIME DEEMED NECESSARY IN ORDER TO ENSURE THAT THE WORK IS BEING OR HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT. THE CORPS AND NHDES MAY ALSO REQUIRE POST-CONSTRUCTION ENGINEERING DRAWINGS FOR COMPLETED WORK, AND POST-DREDGING SURVEY DRAWINGS FOR ANY DREDGING WORK.



PROPOSED DOCK ELEVATION  
PROPOSED PIER, GANGWAY & FLOAT w/ PILES



### NOTES:

- 1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
- 2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
- 3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES, MARCH 1991.
- 4) VERTICAL DATUM MEAN LOWER LOW WATER (MLLW). BASIS OF VERTICAL DATUM IS RM4 ON HISTORIC FIRM. REDUCTION FROM NGVD29 TO MLLW BASED ON NOAA STATION 8419870-SEAVEY ISLAND, PORTSMOUTH HARBOR, WITH MLLW BEING 3.84 FEET LOWER THAN 0.0 NGVD29.
- 5) NUMBER OF PILES TO BE DRIVEN FOR DOCKING STRUCTURE NOT TO EXCEED 8 AS DEPICTED ON PROPOSED DOCK ELEVATION. ALSO NOTE TIME OF YEAR AND NOISE RESTRICTIONS FOR DRIVING OF PILES.

## PROPOSED REVETMENT REPAIRS & NEW DOCK MASON RESIDENCE 363 NEW CASTLE AVENUE PORTSMOUTH, N.H.

| NO. | DESCRIPTION        | DATE    |
|-----|--------------------|---------|
| 1   | ROTATED FLOAT      | 1/16/20 |
| 0   | ISSUED FOR COMMENT | 12/3/19 |

REVISIONS

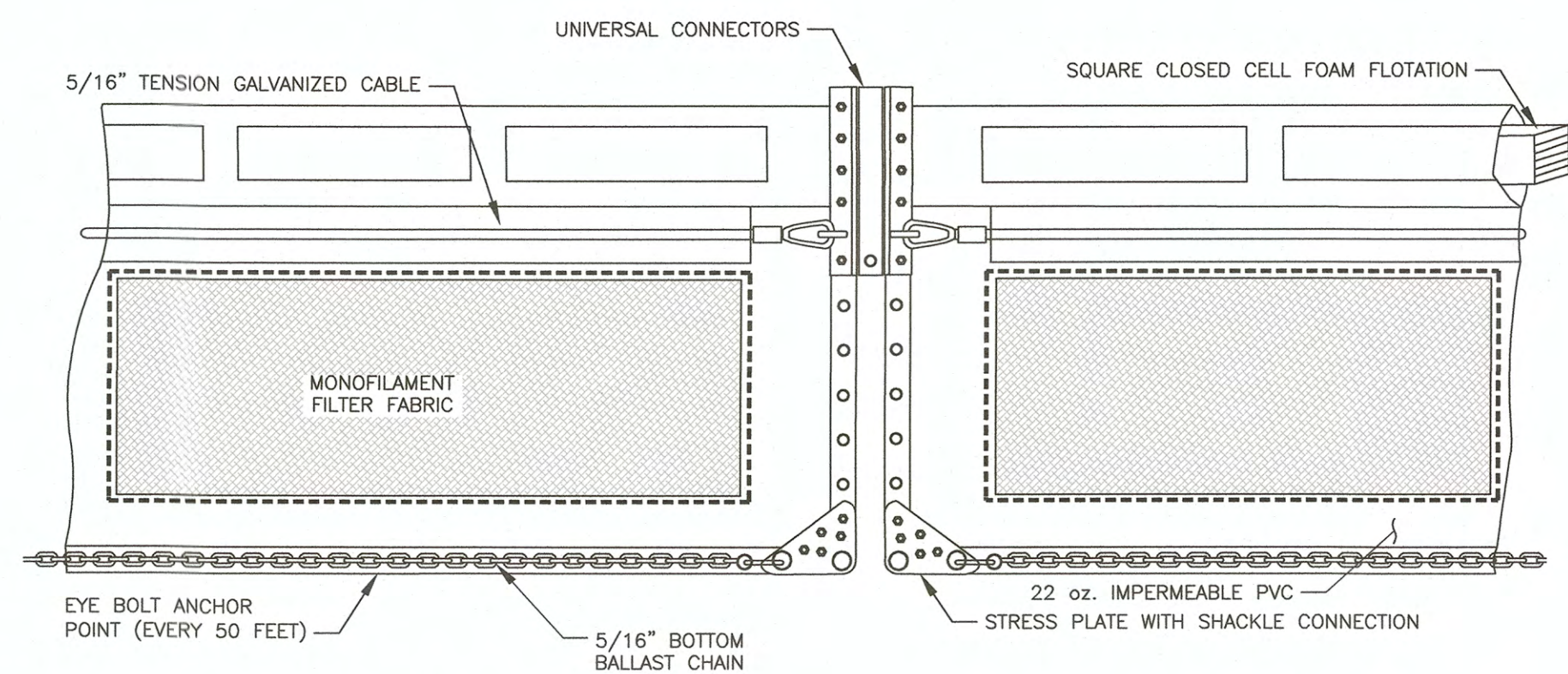
SCALE: 1"=10' NOVEMBER 2019

## DOCK DETAILS D1

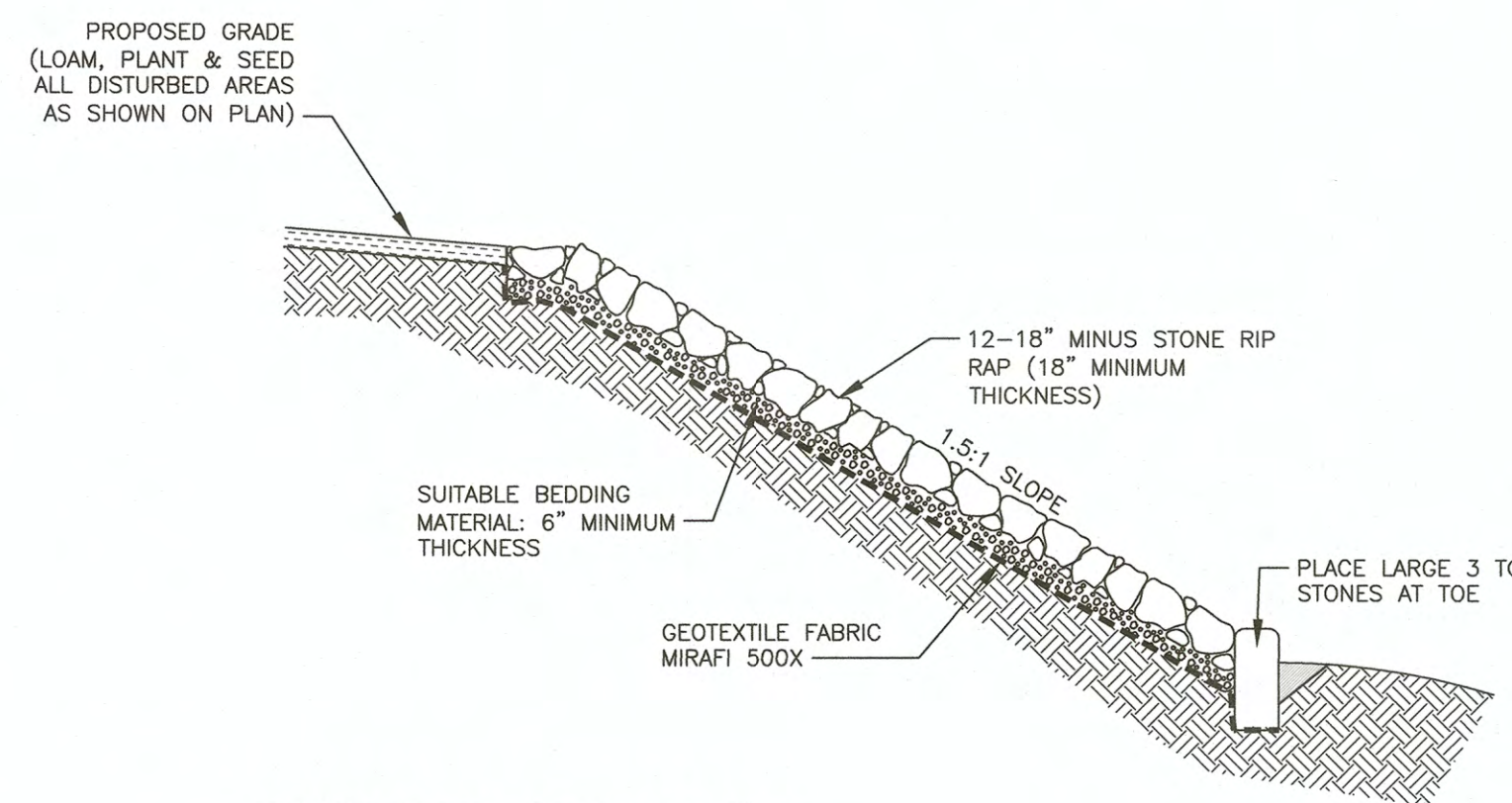


**NOTES:**

- 1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
- 2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
- 3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).
- 4) DATUM: MEAN SEA LEVEL - NAVD88 FROM GPS OBSERVATIONS ( $\pm 0.1'$ )
- 5) ACCORDING TO THE GLOBAL AND REGIONAL SEA LEVEL RISE SCENARIOS FOR THE UNITED STATES, NOAA TECHNICAL REPORT NOS CO-OPS 083, JANUARY 2017, THE GLOBAL MEAN SEA LEVEL RISE, INTERMEDIATE SCENARIO, IS PREDICTING .57 METERS (1.87) THROUGH THE YEAR 2070.



**A TURBIDITY CURTAIN DETAIL**  
D2 NTS

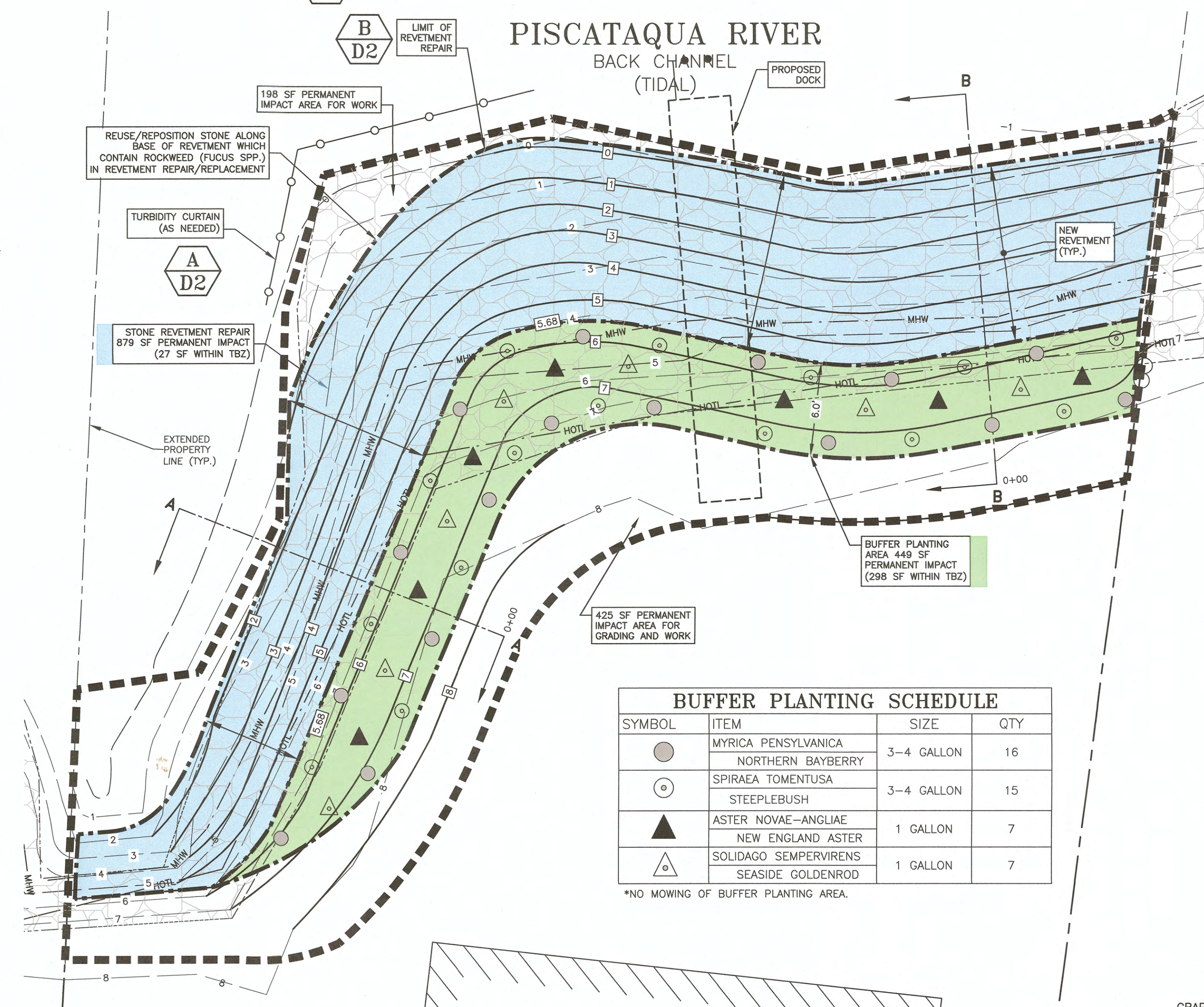
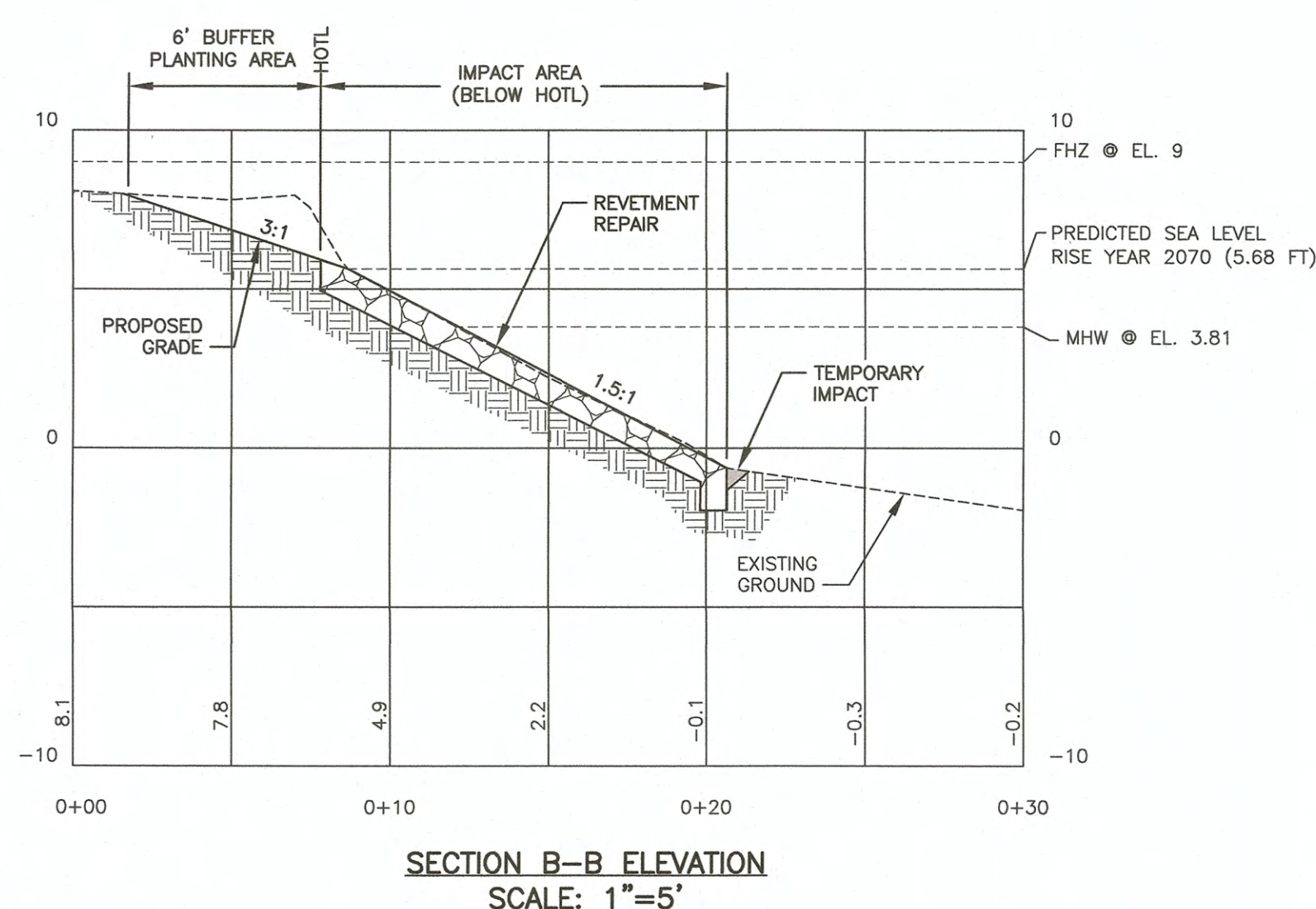
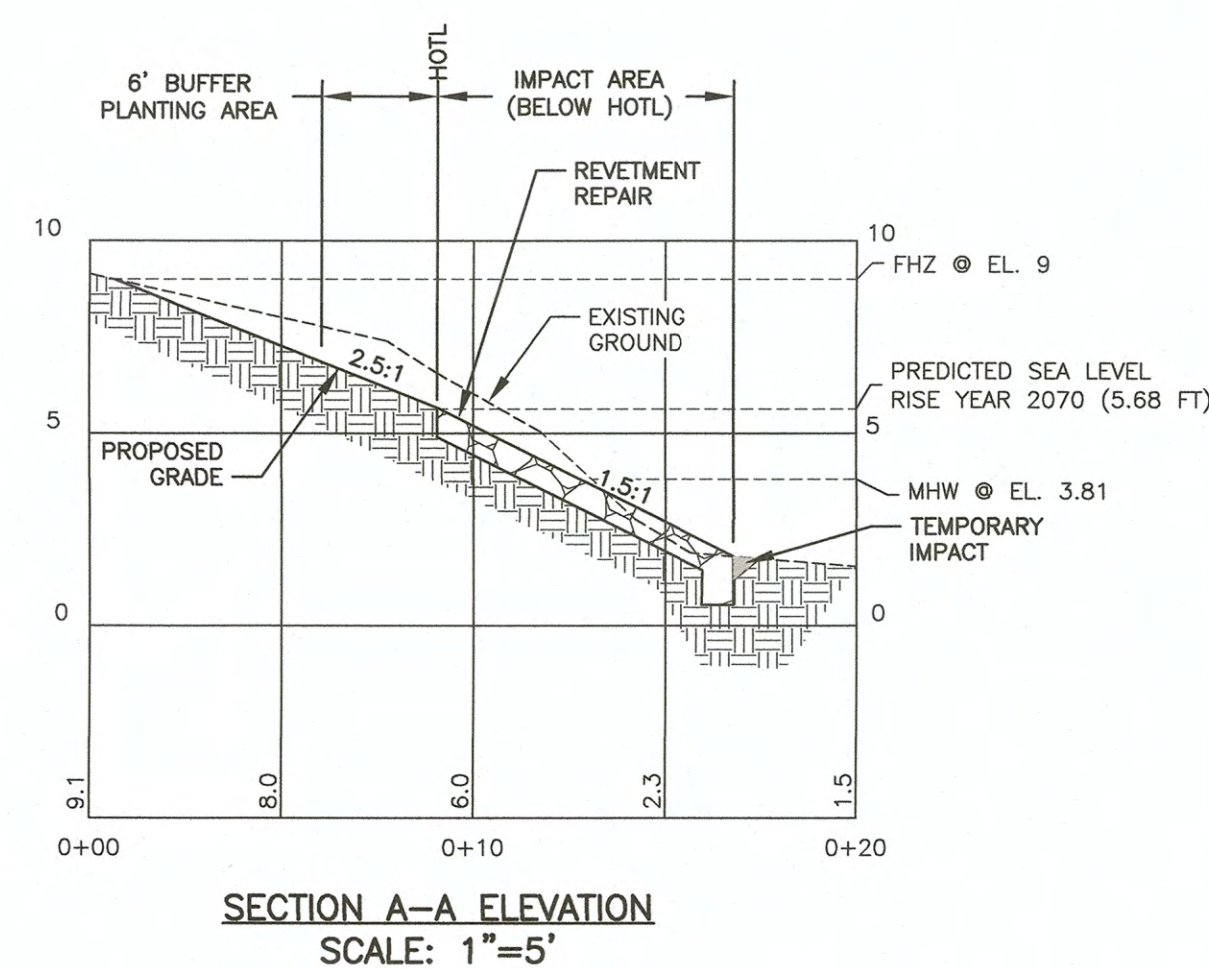


**CONSTRUCTION SPECIFICATIONS:**

- 1) PLACE STONES IMMEDIATELY FOLLOWING REMOVAL. LAY STONES INDIVIDUALLY UPWARD FROM THE TOE WITH LARGER STONES AT THE TOE. FILL VOIDS WITH SPALLS. FINISHED SURFACE TO BE REASONABLY UNIFORM IN APPEARANCE, AND APPROXIMATELY PARALLEL TO AND WITHIN 6" OF THE LINES AND GRADES SHOWN OR ORDERED.

STONE SHALL BE PLACED TO PREVENT DISPLACEMENT OF THE UNDERLYING MATERIALS. HAND PLACEMENT MAY BE REQUIRED TO PREVENT DAMAGE TO ANY ADJACENT AREAS. STONES SHALL BE ANGULAR OR SUBANGULAR. THE STONES SHOULD BE SHAPED SO THAT THE LEAST DIMENSION OF THE STONE FRAGMENT IS NOT LESS THAN ONE THIRD OF THE GREATEST DIMENSION OF THE FRAGMENT. FLAT ROCKS SHALL NOT BE USED. VOIDS IN THE REVETMENT SHOULD BE FILLED WITH SPALLS AND SMALLER ROCKS.

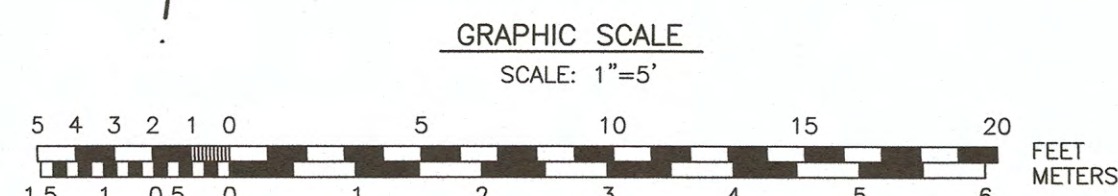
**B REVETMENT REPAIR DETAIL**  
D2 NTS



| BUFFER PLANTING SCHEDULE |                       |            |     |
|--------------------------|-----------------------|------------|-----|
| SYMBOL                   | ITEM                  | SIZE       | QTY |
| ●                        | MYRICA PENNSYLVANICA  | 3-4 GALLON | 16  |
| ○                        | NORTHERN BAYBERRY     | 3-4 GALLON | 15  |
| ○                        | SPIRAEA TOMENTOSA     | 3-4 GALLON | 15  |
| ○                        | STEEPLEBUSH           | 3-4 GALLON | 15  |
| ▲                        | ASTER NOVAE-ANGLIAE   | 1 GALLON   | 7   |
| ▲                        | NEW ENGLAND ASTER     | 1 GALLON   | 7   |
| △                        | SOLIDAGO SEMPERVIRENS | 1 GALLON   | 7   |
| △                        | SEASIDE GOLDENROD     | 1 GALLON   | 7   |

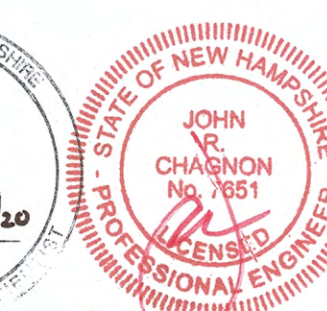
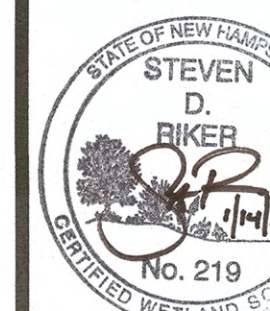
\*NO MOWING OF BUFFER PLANTING AREA.

**PROPOSED GRADING**  
SCALE: 1"= 5'



**PROPOSED REVETMENT REPAIRS & NEW DOCK MASON RESIDENCE**  
363 NEW CASTLE AVENUE  
PORTSMOUTH, N.H.

| NO. | DESCRIPTION        | DATE    |
|-----|--------------------|---------|
| 0   | ISSUED FOR COMMENT | 12/3/19 |



SCALE: AS SHOWN DECEMBER 2019

REVETMENT DETAILS

**D2**