



Town of Brunswick, Maine
STAFF REVIEW COMMITTEE
85 Union Street
Brunswick, ME 04011

**STAFF REVIEW COMMITTEE AGENDA
BRUNSWICK TOWN HALL
85 UNION STREET
Wednesday, September 9, 2020, 10:00 A.M.**

THIS MEETING IS BEING CONDUCTED VIA ELECTRONIC DEVICES WITH STAFF REVIEW COMMITTEE MEMBERS PARTICIPATING FROM REMOTE LOCATIONS.

THERE IS NO OPPORTUNITY FOR THE PUBLIC TO VIEW THIS MEETING IN PERSON.

THE PUBLIC MAY PROVIDE COMMENT VIA EMAIL (mpanfil@brunswickme.org) PRIOR TO THE MEETING OR THEY MAY PROVIDE LIVE COMMENT VIA TELEPHONE AT:

+1 929 205 6099; MEETING ID: 826 4392 9108; PASSWORD: DXac1z

- 1. Case #20-039 Blyberg Shoreline Stabilization:** The Staff Review Committee will review and make a recommendation to the Planning Board on a **Sketch/Final Plan Major Development Review** application submitted by Atlantic Environmental LLC on behalf of Carol Blyberg Trust to stabilize an eroding shoreline with riprap and vegetation at 15 Monument Lane (Map MP-1, Lot 9) located within the **Rural Protection 1 (RP1) zoning district and the SPO-RP (2 Acre 20% Steep Slope), SPO-RP (Bluff, Highly unstable), SPO-RP (FEMA 100 Flood, Tidal-River) and SPO-FPO (Special Flood Hazard Area) overlay zones.**
- 2. Case #20-040 Butler Shoreline Stabilization:** The Staff Review Committee will review and make a recommendation to the Planning Board on a **Sketch/Final Plan Major Development Review** application submitted by Atlantic Environmental LLC on behalf of Katherine Butler to stabilize an eroding shoreline with riprap and vegetation at 19 Monument Lane (Map MP-1, Lot 8) located within the **Rural Protection 1 (RP1) zoning district and the SPO-RP (2 Acre 20% Steep Slope), SPO-RP (Bluff, Highly unstable), SPO-RP (FEMA 100 Flood, Tidal-River) and SPO-FPO (Special Flood Hazard Area) overlay zones.**
- 3. Other Business**
- 4. Adjourn**

This agenda is mailed to owners of property within 200 feet of proposed development sites. In cases where Committee action is pending this agenda serves as notice of same. In cases where the Committee's role is to advise the Planning Board, this agenda is mailed as a courtesy along with notice of the Planning Board meeting. The Staff Review Committee meeting is open to the public. All are invited to attend and participate. For further information call the Brunswick Department of Planning and Development (725-6660).



135 River Road • Woolwich, ME 04579
207-837-2199 • tim@atlanticenviromaine.com
www.atlanticenviromaine.com

August 19, 2020

Mr. Jared Woolston
Planning & Development
Town of Brunswick
85 Union Street
Brunswick, ME 04011

Re: Request for Development Review on behalf of the Carol Blyberg Trust located at 15 Monument Lane in Brunswick, Maine.

Dear Mr. Woolston,

On behalf of Peter Blyberg, Trustee of the Carol Blyberg Trust, Atlantic Environmental, LLC (AE) is pleased to submit an application for Development Review by the Planning Board to stabilize an eroding shoreline with riprap and vegetation. This letter is intended to summarize the project and includes request for waivers in accordance with Subsection 5.2.9.M of the Town of Brunswick Zoning Ordinance.

Property Description

The Carol Blyberg Trust owns property located at 15 Monument and identified as Lot #9 on the Town of Brunswick's Tax Map #MP-1. The project site is approximately 0.32 acres and is located in the Rural Protection 1 (RP1) zoning district and the SPO-RP (2% Acres 20% Steep Slope), SPO-RP (Bluff, Highly Unstable), SPO-RP (FEMA 100 Flood, Tidal – River) and SPO-FPO (Special Flood Hazard Area) overlay zones. The site is currently developed with a residential structure and associated development. There is currently an existing set of four (4) foot wide by thirty (30) foot long access stairs that provide access to the coastal wetland. The shoreline is exhibiting moderate to more severe erosion mainly due to wave action along the base of the slope and surface water runoff at the top of the slope. Given that the residential structure is located at the top of the bank, the Applicant proposes to stabilize the shoreline with riprap and plantings.

Project Description

The proposed project consists of stabilizing the shoreline by placing riprap that consists of approximately two (2) to four (4) feet in diameter stones along the shoreline in areas demonstrating erosion. The riprap will begin along the westerly property line and extend to the existing stairs. The lower six (6) feet of the stairs will be replaced with stones. The riprap will

Environmental Consultants, Wetland Scientists, Specializing in Federal, State and Local Permitting, Expert Witness

continue along the easterly side of the stairs for a total of thirty -five (35) feet. Filter fabric will be placed below the existing grade and the riprap will extend three (3) feet below the Highest Annual Tide (HAT). The bottom row of riprap will be pinned to ledge or buried in a trench and in order to minimize impacts to the coastal wetland, the riprap will be constructed with a 1H: 1V slope. In order to address erosion occurring above this area, the Applicant intends to plant native vegetation along the slope face and install a vegetated berm at the top of the slope to improve the vegetative cover and absorb excess runoff. Information including amount of filling and earthmoving, existing buffer conditions, areas of disturbance, and the proposed revegetation plan are included in the attached application materials. This project is being conducted in coordination with the abutting property owner, Katherine Butler located at 19 Monument Lane (Tax Map #MP-1, Lot #8) who is proposing to stabilize their shoreline.

Request for Waivers

Given the scope and scale of the project, AE respectfully requests the following submission requirements are waived.

- Fiscal Capacity, Performance Guarantee
- A survey submitted by a professional surveyor – The project is being conducted in coordination with the abutter to the west. In addition, the riprap terminates at a sufficient distance from the abutter to the east. A survey is not needed in this case to establish line or boundary of property given that abutter consents can be secured if necessary.
- Medium Intensity Soil Survey – The Applicant has included a Custom Soil Resource Report for the Project Location from the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture.
- Storm water management plan

The Applicant has received approval from the Army Corps of Engineers (ACOE) and a copy of that permit is included with the attached application materials. The Applicant anticipates receiving approval from the Maine Department of Environmental Protection (MDEP) by mid-September and a copy of the permit will be forwarded to the Town upon receipt. Thank you in advance for your consideration of this Application. If you require any additional information or clarifications, please feel free to contact me at 207 - 837 - 2199 or by email at tim@atlanticenviromaine.com.

Sincerely,
Atlantic Environmental LLC.



Timothy A. Forrester, Owner

**DEVELOPMENT REVIEW
APPLICATION**

1. Development Review application type (refer to **Appendix D**):

<input type="checkbox"/>	Minor Development Review
<input checked="" type="checkbox"/>	Major Development Review: Sketch Plan
<input checked="" type="checkbox"/>	Major Development Review: Final Plan
<input type="checkbox"/>	Major Development Review: Streamlined Final Plan

2. Project Name: Blyberg Shoreline Stabilization

3. Project Applicant

Name: Carol Blyberg Trust c/o Peter Blyberg
Address: 9 Larrabee Farm Road
Brunswick, ME 04011
Phone Number: see Authorized Rep. Phone Number
Email: Peter@blyberg.net

4. Project Owner (if different than applicant)

Name: _____
Address: _____

Phone Number: _____
Email: _____

5. Authorized Representative

Name: Atlantic Environmental, LLC c/o Tim Forrester
Address: 135 River Road
Woolwich, ME 04579
Phone Number: (207) 837 - 2199
Email: tim@atlanticensviromaine.com

6. List of Design Consultants. Indicate the registration number, address and phone number, email for any additional project engineers, surveyors, architects, landscape architects or planners:

1. _____
2. _____
3. _____

7. Physical location of property: 15 Monument Lane

8. Lot Size: 0.32 acres

9. Zoning District: RP-1

SPO-RP (2 acre 20% Steep Slope), SPO-RP (Bluff - Highly Unstable, SPO-RP

10. Overlay Zoning District(s): (FEMA 100 Flood [Tidal - River], SPO - FPO - Special Flood Hazard Area

11. Indicate the interest of the applicant in the property and abutting property. For example, is the applicant the owner of the property and abutting property? If not, who owns the property subject to this application?

The Applicant (Peter Blyberg) is a trustee of the Carol Blyberg Trust who is the owner of property located at 15 Monument Lane. The Applicant is intending to construct the proposed project in coordination with the abutting property owned by Katherine Butler (Lot #8, Map #MP-1)

12. Assessor's Tax Map MP-1 Lot Number 9 of subject property.

13. Brief description of proposed use/subdivision: The property is a residential property.

14. Describe specific physical improvements to be done: The Applicant proposes to stabilize the shoreline with riprap and plantings. Specifically, the riprap will extend along approximately thirty-five (35) feet of their shoreline. The proposed riprap will extend three (3) feet below the HAT and constructed with a 1H: 1V slope. Plantings will be placed along the face of the slope and at the top of the bank. The lower six (6) feet of the existing access stairs will be replaced with stone.

Owner Signature:

Applicant Signature (if different):



DEVELOPMENT REVIEW APPLICATION REQUIREMENTS

The submission requirements contained in **Appendix D** of the Brunswick Zoning Ordinance (attached in checklist format for each application category) shall apply to all Minor Development, Major Development, and Streamlined Major Development Review unless a waiver is granted. Proposed development applications shall be submitted to the Director of Planning and Development.

For each item listed in Appendix D the applicant shall either submit the requested information or request a waiver from the information requirement pursuant to Subsection 5.2.9.M of the Zoning Ordinance.

FLOOD HAZARD DEVELOPMENT PERMIT FOR MINOR DEVELOPMENT BRUNSWICK, MAINE

(For Development not considered a Substantial Improvement)

This Flood Hazard Development Permit allows minor development as provided in Chapter 5.2.5 of the Brunswick Zoning Ordinance, for development in a Special Flood Hazard Area as defined in said ordinance. Development authorized by this permit must be adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, be constructed with materials resistant to flood damage and be constructed by methods and practices that minimize flood damage. This permit is issued based on documentation that the information provided in the Flood Hazard Development Permit Application is in compliance with the Floodplain Management Ordinance.

Tax Map # MP-1 Lot # 9

Project Description: The Applicant proposes to stabilize the shoreline with riprap and plantings

In addition, the lower six (6) feet of access stairs will be replaced with stone.

The permittee understands and agrees that:

- The permit is issued on the representations made herein and on the application for permit;
- The permit may be revoked because of any breach of representation;
- Once a permit is revoked, all work shall cease until the permit is re-issued or a new permit is issued;
- The permit will not grant any right or privilege to erect any structure or use any premises described for any purposes or in any manner prohibited by the ordinances, codes, or regulations of the Town of Brunswick;
- The permittee hereby gives consent to the Code Enforcement Official to enter and inspect activity covered under the provisions of Brunswick Zoning Ordinance; and,
- The permit form will be posed in a conspicuous place on the premises in plain view.

Issued by: _____ Date: _____
(Signature of Codes Enforcement Official)

Permit # _____



135 River Road • Woolwich, ME 04579
207-837-2199 • tim@atlanticensviromaine.com
www.atlanticensviromaine.com

May 1, 2020

To whom it may concern:

By this letter, I authorize Atlantic Environmental LLC to act on my behalf as my Agent for the preparation and submission of all federal, state, and local town or city permit applications and relevant documents and correspondence related to the stabilization of the shoreline at 15 Monument Lane in Brunswick, Maine. This authorization includes attending meetings and site visits, appearing before all boards, commissions, and/or committees, and providing other services as required for completing the aforementioned tasks.

Thank you for the opportunity to work with you on this project. Should you have any additional questions, please do not hesitate to contact me at 207-837-2199 or via email at tim@atlanticensviromaine.com.

PETER A. BLYBERG
Print Name Trustee of the Casel & Blyberg Trust

[Handwritten Signature]
Signature

16 May 2020
Date

Sincerely,
Atlantic Environmental LLC.

[Handwritten Signature: Timothy A. Forrester]

Timothy A. Forrester, Owner

REQUIREMENTS FOR FINAL PLAN, STREAMLINED REVIEW & MINOR REVIEW APPLICATION SUBMITTAL

Please mark box with one of the following:
“W” (Waiver); **“P”** (Pending); **“X”** (Submitted) or **“N/A”** (Not applicable)

		Final Plan	Streamlined	Minor
General	Application form and fee			
	Name of development			
	Existing zoning district and overlay designations			
	Location map			
	Names of current owner(s) of subject parcel and abutting parcels			
	Names of engineer and surveyor; and professional registration numbers of those who prepared the plan			
	Location of features, natural and artificial, such as water bodies, wetlands, streams, important habitats, vegetation, railroads, ditches and buildings			
	Documentation of Right, Title and Interest			
	Drafts of legal documents appropriate to the application, including: deeds, easements, conservation easements, deed restrictions or covenants, home/property owners association declarations and by-laws, and such other agreements or documents as are necessary to show the manner in which common areas will be owned, maintained, and protected			
	Draft performance guarantee or conditional agreement			
Survey, Topography, & Existing Conditions	Scale, date, north point, and area			
	A survey submitted (stamped for final plan submittal) by a professional surveyor with a current license by the State of Maine Board of Licensure for Professional Surveyors			
	Boundaries of all lots and tracts with accurate distances and bearings, locations of all permanent monuments property identified as existing or proposed			
	Existing easements associated with the development			
Survey, Topography, & Existing Conditions	Location of existing utilities; water, sewer, electrical lines, and profiles of underground facilities			
	Existing location, size, profile and cross section of sanitary sewers; description, plan and location of other means of sewage disposal with evidence of soil suitability			
	Topography with contour intervals of not more than two (2) feet			
	A Medium Intensity Soil Survey, available from the Cumberland County Soil and water Conservation District,. The Planning Board may require a Class A (high intensity) Soil Survey, prepared in accordance with the standards of the Maine Association of Professional Soil Scientists, if issues of water quality, wetlands or other natural constraints are noted.			
	Existing locations of sidewalks			
	A delineation of wetlands, floodplains, important habitats, and other environmentally sensitive areas			
Approximate locations of dedicated public open space, areas protected by conservation easements and recreation areas				

REQUIREMENTS FOR FINAL PLAN, STREAMLINED REVIEW & MINOR REVIEW APPLICATION SUBMITTAL

Please mark box with one of the following:
“W” (Waiver); “P” (Pending); “X” (Submitted) or “N/A” (Not applicable)

		Final Plan	Streamlined	Minor
Infrastructure - Proposed	Name, location, width of paving and rights-of-way, profile, cross-section dimensions, curve radii of existing and proposed streets; profiles of center-lines of proposed streets, at a horizontal scale of one (1) inch = 50 feet and vertical scale of one (1) = five (5) feet, with all evaluations referred to in U.S.G.S. datum			
	Proposed easements associated with the development			
	Kind, location, profile and cross-section of all proposed drainage facilities, both within and connections to the proposed development, and a storm-water management plan in accordance with Section			
	Location of proposed utilities; water, sewer, electrical lines, and profiles of underground facilities. Tentative locations of private wells.			
	Proposed location, size, profile and cross section of sanitary sewers; description, plan and location of other means of sewage disposal with evidence of soil suitability			
	Proposed locations, widths and profiles of sidewalks			
	Locations and dimensions of proposed vehicular and bicycle parking areas, including proposed shared parking arrangement if applicable.			
Infrastructure - Proposed	Grading, erosion control, and landscaping plan; proposed finished grades, slopes, swells, and ground cover or other means of stabilization			
	Storm water management plan for the proposed project prepared by a professional engineer			
	The size and proposed location of water supply and sewage disposal systems			
	Where a septic system is to be used, evidence of soil suitability			
	A statement from the General Manager of the Brunswick Sewer District as to conditions under which the Sewer District will provide public sewer and approval of the proposed sanitary sewer infrastructure			
	A statement from the Fire Chief recommending the number, size and location of hydrants, available pressure levels, road layout and street and project name, and any other fire protection measures to be taken			
	A statement from the General Manager of the Brunswick and Topsham Water District as to conditions under which public water will be provided and approval of the proposed water distribution infrastructure			
Proposed Development Plan	Lighting plan showing details of all proposed lighting and the location of that lighting in relation to the site			
	Reference to special conditions stipulated by the Review Authority			
	Proposed ownership and approximate location and dimensions of open spaces for conservation and recreation. Dedicated public open specs, areas protected by conservation easements, and existing and proposed open spaces or recreation areas and potential connectivity to adjoining open space.			
	When applicable, a table indicating the maximum number of lots permitted based upon the applicable dimensional requirements, the number of lots proposed, and the number of lots permitted to be further subdivided.			
	Building envelopes showing acceptable locations for principal and accessory structures, setbacks and impervious coverage			

REQUIREMENTS FOR FINAL PLAN, STREAMLINED REVIEW & MINOR REVIEW APPLICATION SUBMITTAL

Please mark box with one of the following:
“W” (Waiver); **“P”** (Pending); **“X”** (Submitted) or **“N/A”** (Not applicable)

		Final Plan	Streamlined	Minor
Proposed Development Plan	Disclosure of any required permits or, if a permit has already been granted, a copy of that permit			
	A statement from the General Manager of the Brunswick and Topsham Water District regarding the proposed development if located within an Aquifer Protection Zone			
	A plan of all new construction, expansion and/or redevelopment of existing facilities, including type, size, footprint, floor layout, setback, elevation of first floor slab, storage and loading areas			
	An elevation view of all sides of each building proposed indicating height, color, bulk, surface treatment, signage and other features as may be required by specific design standards			
	A circulation plan describing all pedestrian and vehicle traffic flow on surrounding road systems			
	A site landscaping plan indicating grade change, vegetation to be preserved, new plantings used to stabilize areas of cut and fill, screening, the size, locations and purpose and type of vegetation			
	Number of lots if a subdivision			
	A plan showing all ten (10) inch caliper trees to be removed as a result of the development proposal			
	All applicable materials necessary for the Review Authority to review the proposal in accordance with the criteria of Chapter 5.			
	Any additional studies required by the Review Authority			



200 foot Abutters List Report

Brunswick, ME
August 18, 2020

Subject Property:

Parcel Number: MP1-9
CAMA Number: MP1-9
Property Address: 15 MONUMENT LN

Mailing Address: BLYBERG, CAROL G TRUSTEE OF THE
CAROL G BLYBERG TRUST
9 LARRABEE FARM RD
BRUNSWICK, ME 04011

Abutters:

Parcel Number: MP1-1
CAMA Number: MP1-1
Property Address: 0 MONUMENT LN

Mailing Address: SEA POINT LAND CO C/O ANDREA
MACNAUGHTON
7 FREDON MARKSBORO RD
NEWTON, NJ 07860

Parcel Number: MP1-10
CAMA Number: MP1-10
Property Address: 11 MONUMENT LN

Mailing Address: VON SCHACK, WESLEY & KELLY J S
TRUSTEES OF THE VON SCHACK REV
TRUST
PO BOX 222820
CARMEL, CA 93922

Parcel Number: MP1-11
CAMA Number: MP1-11-1
Property Address: 39 EAST MARGINAL RD

Mailing Address: SEA POINT LAND CO C/O ANDREA
MACNAUGHTON
7 FREDON MARKSBORO RD
NEWTON, NJ 07860

Parcel Number: MP1-11
CAMA Number: MP1-11-2
Property Address: 38 WEST MARGINAL RD

Mailing Address: GILBERT HARRISON DOCK FUND C/O
DANA SMITH ETAL
953 MERE PT RD
BRUNSWICK, ME 04011

Parcel Number: MP1-2
CAMA Number: MP1-2
Property Address: 0 MERE PT RD

Mailing Address: MAINE, STATE OF CONSERVATION
DIVISION
#22 STATE HOUSE STATION
AUGUSTA, ME 04333

Parcel Number: MP1-3
CAMA Number: MP1-3
Property Address: 33 MONUMENT LN

Mailing Address: BENNITT, FRED Y TRUSTEE 3/4 INT &
BENNITT, SUE R & FRED Y JT 1/2 INT
3051 EDELWEISS CT
MARS, PA 16046

Parcel Number: MP1-3B
CAMA Number: MP1-3B
Property Address: 0 MONUMENT LN

Mailing Address: SALLICK, RICHARD & LUCY CO-
TRUSTEES OF RICHARD & LUCY
SALLICK REV TR 1/2 INT EA
77 LONG LOTS RD
WESTPORT, CT 06880

Parcel Number: MP1-6
CAMA Number: MP1-6
Property Address: 25 MONUMENT LN

Mailing Address: LOEBS, STEPHEN F & SUSAN M
3 PARTRIDGE RD #118
TOPSHAM, ME 04086

Parcel Number: MP1-7
CAMA Number: MP1-7
Property Address: 23 MONUMENT LN

Mailing Address: BUTLER, ELIZABETH R & KATHERINE E,
& BUTLER, EDWARD E, JR, JT
18 PHIPPANY WAY
BRUNSWICK, ME 04011



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200 foot Abutters List Report

Brunswick, ME
August 18, 2020

Parcel Number: MP1-8
CAMA Number: MP1-8
Property Address: 19 MONUMENT LN

Mailing Address: BUTLER, KATHERINE E
8 BUNGANUC LANDING RD
BRUNSWICK, ME 04011



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8/18/2020

Page 2 of 2

36971
WARRANTY DEED

PETER A. BLYBERG and **CAROL G. BLYBERG**, husband and wife, both having a mailing address of Box 496, Blue Hill ME 04614, for consideration paid, grant to **CAROL G. BLYBERG**, Trustee of the **CAROL G. BLYBERG** Trust dated May 3, 1994, having a mailing address of Box 496, Blue Hill ME 04614, with **WARRANTY COVENANTS**, a certain lot or parcel of land, together with any improvements thereon, situated in Brunswick, Cumberland County, Maine, bounded and described in a deed from Richard W. Robinson and Nancy S. Robinson to Peter A. Blyberg and Carol G. Blyberg, dated September 4, 1981 and recorded with the Cumberland County Maine Registry of Deeds in Book 4862, Page 206, as follows:

"A certain lot or parcel of land, with buildings thereon, situated in Brunswick, County of Cumberland and State of Maine, at Sea Point, at the southwesterly extremity of Mere Point, and bound and described as follows:

Beginning at the northeast corner of Lot No. 4 formerly belonging to S. L. Forsaith at an iron bolt driven into the ground; thence by the south line of the street, South 40° 39' East ninety-three and three tenths (93.3) feet to an iron bolt driven into the ground; thence South 46° West, one hundred fifty and three tenths (150.3) feet to the bank of Maquoit Bay; thence westerly by the line of the bank of said Forsaith lot; and thence by the easterly line of the Forsaith lot, North 46° East, seventy-five (75) feet to the point of beginning, containing about 10, 492 square feet; together with any and all easements, respecting, ways, parks, groves and shore privileges, that may be appurtenant to said lot; also the right to enter upon the cottage lot formerly of Samuel L. Forsaith, being Lot No. 4 above referred to, to make, maintain and keep in good working order sanitary connections from the cottage on the land above described to and with the septic tank of said Forsaith on said Lot No. 4; also the right to use said tank for sanitary purposes in common with the owners and occupants of the cottage formerly of said Forsaith, upon condition, however, that the Grantees herein, their heirs and assigns, shall at all times keep said connection in good sanitary condition and bear one-half of the cost of the maintenance and replacement of said tank. The granted premises are subject to the following conditions: That said lot and the erections thereon shall never be used by the Grantees, their heirs and assigns, for keeping or maintaining a hotel, boarding house, saloon or place of public entertainment, except by written license from Sea Point Land Company and that the Grantees shall not sell or convey the granted premises, or any part thereof, without written

consent from said Sea Point Land Company. Said premises are subject also to certain rights as set forth in the deed of Frederic W. Brown to said Samuel L. Forsaith dated March 18, A.D. 1922 and recorded in the Registry of Deeds for said County of Cumberland Book 1096, Page 435, to which deed with its record reference is hereby made for a further setting forth of such rights."

Being the same premises conveyed to the Grantors herein by deed of Paul R. Copeland, Jr. et al dated July 14, 1979 and recorded in the Cumberland County Registry of Deeds in Book 4458, Page 228."

The Grantors have hereunto set their hands and seals this 20th day of

May, 1994.

[Signature]
PETER A. BLYBERG

[Signature]
CAROL G. BLYBERG

STATE OF MAINE
Cumberland, ss.

May 20, 1994

Personally appeared before me the above named PETER A. BLYBERG and acknowledged the foregoing instrument to be his free act and deed.

[Signature]
Notary Public/Attorney at Law

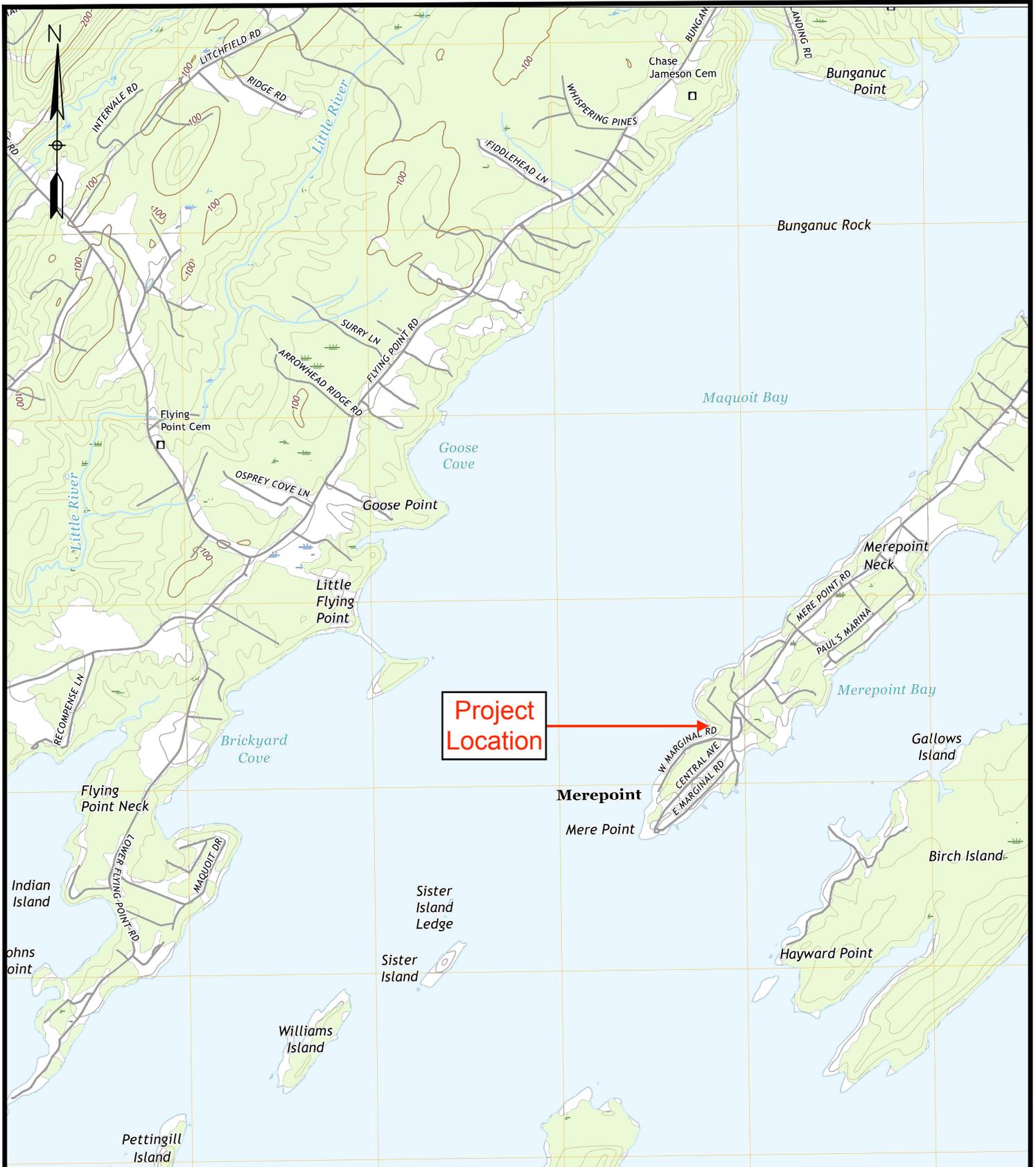
MARY LOU LANE
NOTARY PUBLIC, MAINE
MY COMMISSION EXPIRES NOV. 1, 2000
Type or print name of official

SE

RECEIVED
RECORDED REGISTRY OF DEEDS
94 JUN 16 PM 3:01
CUMBERLAND COUNTY

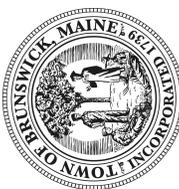
[Signature]

EXHIBIT 3.0: LOCATION MAP



DIRECTIONS: From Maine Street/Route 24 in downtown Brunswick, travel for approximately 1.5 miles. Bear left on Mere Point Road and travel for approximately 5.5 miles. Turn right on Monument Lane. #15 is located on the left.

 <p>ATLANTIC ENVIRONMENTAL LLC. Environmental Consultants 135 River Road, Woolwich, ME 04579 (207) 837-2199 tim@atlanticensviromaine.com</p>	<p>Date: 6/2/2020 Revised: Project: Blyberg, Brunswick Drafted By: ---</p>	<p>PROJECT LOCATION 15 Monument Lane, Brunswick, Maine Maine Atlas & Gazetteer Map 6 (Section D-2) 43.828747, -70.022505</p>	<p>Sheet 1 of 1</p>
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- Legend**
- Lines_Other
 - Other Road
 - Hydrography Line
 - ROW Property Access
 - Town Boundary
 - Other Lot Boundary
 - Parcels_Lines
 - Public Road
 - Private Road
 - ROW
 - Water

Disclaimer: This information is provided as a reasonably accurate point of reference. The user of this information is not to be held liable for any consequences that result from its use. The Town of Brunswick shall not be held liable for any consequences that result from its use. The accuracy of this data is not guaranteed. Copyright Town of Brunswick.

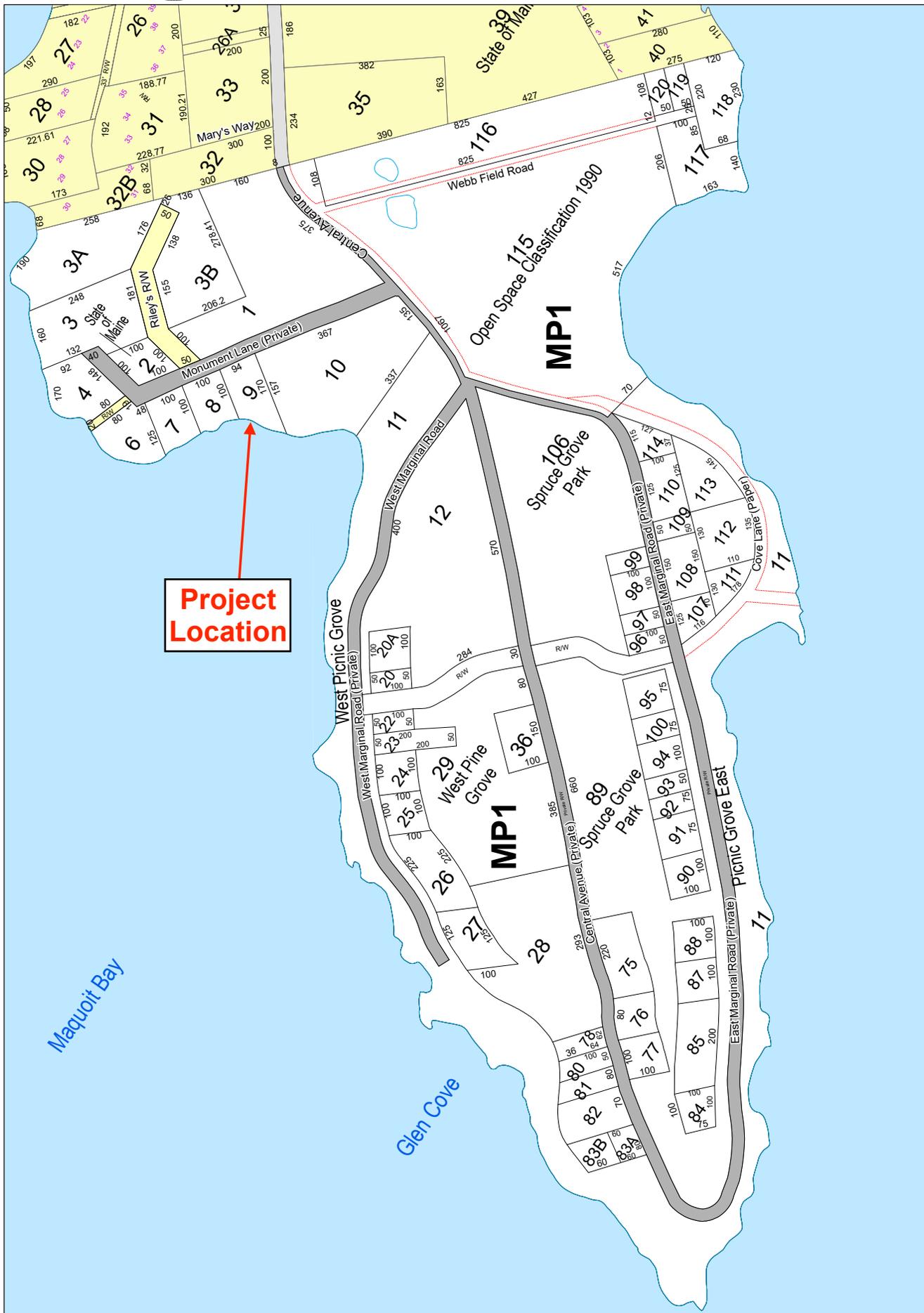


1 inch = 100 feet
Revised To: April 1, 2019

Maps Prepared by:
Town of Brunswick
Revised and Reprinted By:



**MAP
MP1**



**Project
Location**

EXHIBIT 4.0: PHOTOGRAPHS

The following photographs are taken from the site of the project and represent the proposed location of the shoreline stabilization located at 15 Monument Lane in the Town of Brunswick, ME.



Photograph One. Aerial View of Project Site. Red arrow indicates approximate location of project.
Source: Google Earth. Date: May 4, 2018.



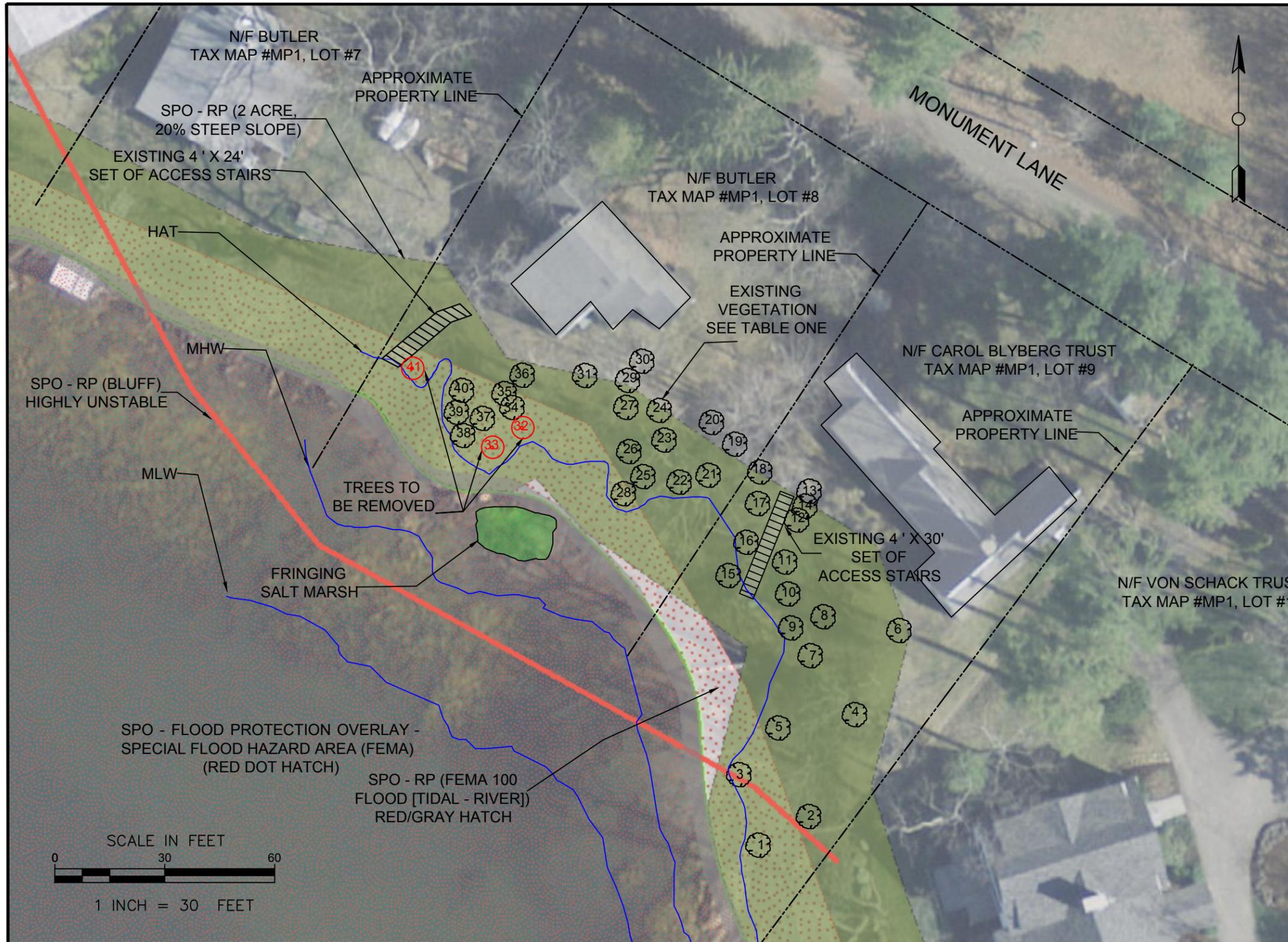
Photograph Two. Facing northeasterly – view of eroding slope. Photographer: Tim Forrester, Atlantic Environmental, LLC Date: April 27, 2020.



Photograph Three. Facing northerly – additional view of eroding slope. Photographer: Tim Forrester, Atlantic Environmental, LLC Date: April 27, 2020.



Photograph Four. Overview of intertidal area and construction access area. Photographer: Tim Forrester, Atlantic Environmental, LLC Date: April 27, 2020.



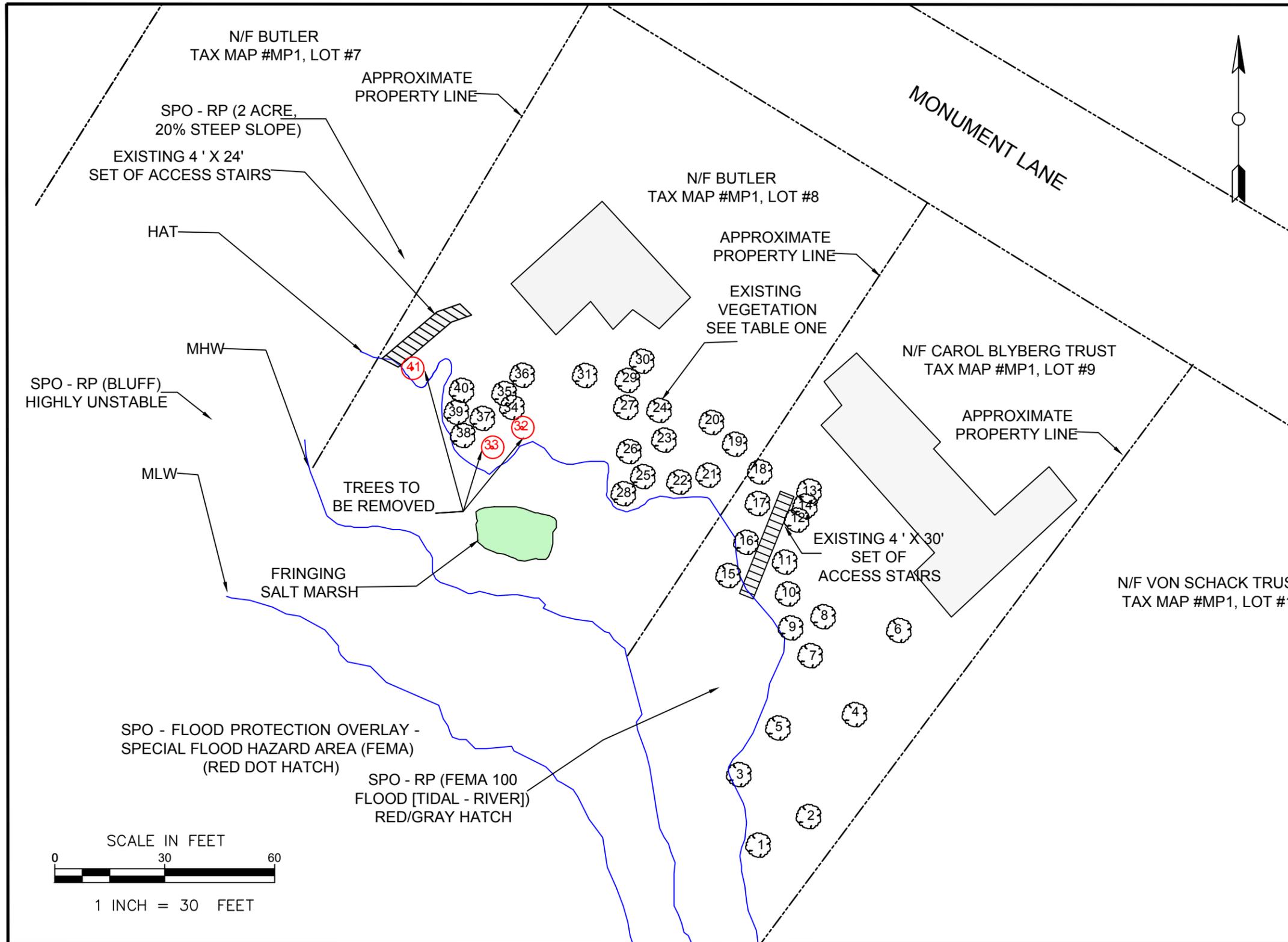
EXISTING VEGETATION		
NUMBER	COMMON NAME	SIZE (DBH)
1	RED OAK	18"
2	RED OAK	12"
3	UNKNOWN DOUBLE TRUNK	4"/5"
4	RED OAK	30"
5	SPRUCE	6"
6	RED MAPLE	16"
7	UNKNOWN DOUBLE TRUNK	3"/4"
8	ORNAMENTAL CHERRY	2'
9	RED OAK	5"
10	RED OAK	3"
11	FIR	4"
12	FIR	1"
13	BEECH	SAPLINGS
14	BEECH	12"
15	RED OAK	6"
16	RED OAK	4"
17	BEECH	4"
18	BEECH	18"
19	BEECH	1"
20	BEECH	3"
21	BEECH	3"
22	BEECH	2"
23	RED OAK	36"
24	RED OAK	6"
25	RED OAK	7"
26	RED OAK	5"
26	RED OAK	5"
27	SPRUCE	2"
28	RED OAK	16"
29	RED OAK	22"
30	RED OAK	2"
31	RED OAK	22"
32	RED MAPLE	7"
33	RED MAPLE	8"
34	WHITE BIRCH	6"
35	RED OAK	3"
36	RED OAK	2"
37	RED OAK	2"
38	RED OAK	2"
39	RED OAK	2"
40	RED OAK	2"
41	TRIPLE WHITE BIRCH	4"/5"/6"


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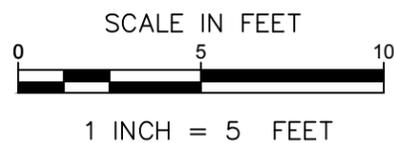
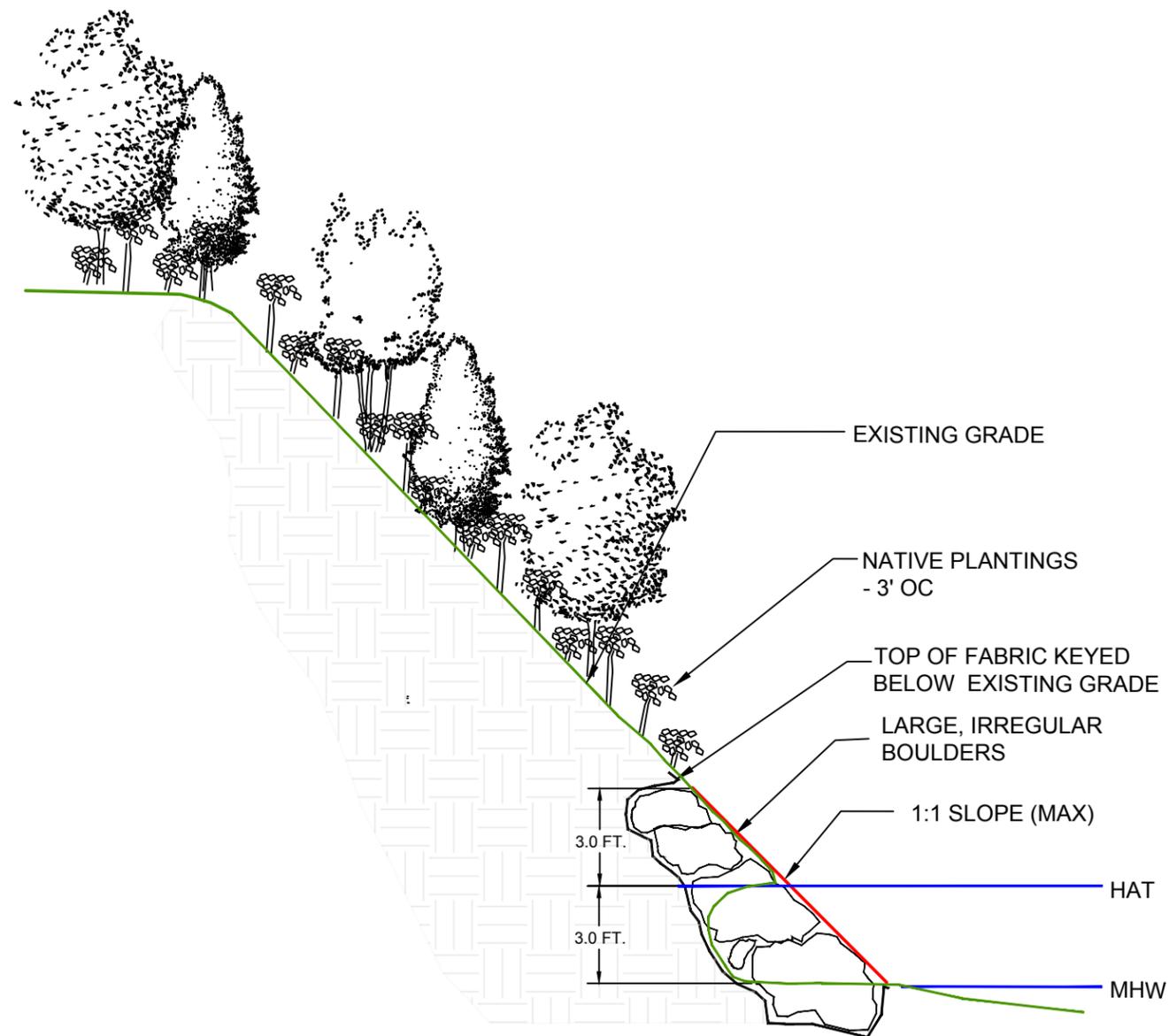
Date: 8/14/2020
 Revised:
 Project: Butler, Brunswick
 Drafted By: TAF/LCV

Existing Conditions Plan of Vegetation and Shoreline Structures for the Carol Blyberg Trust located at 15 Monument Lane and Katherine Butler located at 19 Monument Lane in Brunswick, Maine.

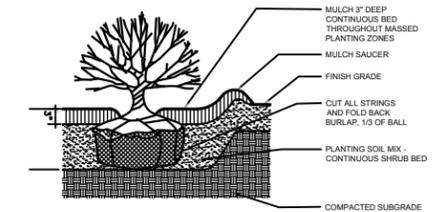
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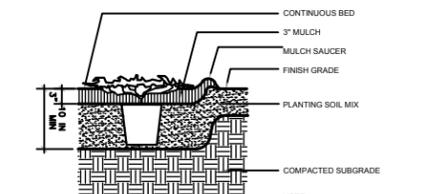
EXISTING VEGETATION		
NUMBER	COMMON NAME	SIZE (DBH)
1	RED OAK	18"
2	RED OAK	12"
3	UNKNOWN DOUBLE TRUNK	4"/5"
4	RED OAK	30"
5	SPRUCE	6"
6	RED MAPLE	16"
7	UNKNOWN DOUBLE TRUNK	3"/4"
8	ORNAMENTAL CHERRY	2'
9	RED OAK	5"
10	RED OAK	3"
11	FIR	4"
12	FIR	1"
13	BEECH	SAPLINGS
14	BEECH	12"
15	RED OAK	6"
16	RED OAK	4"
17	BEECH	4"
18	BEECH	18"
19	BEECH	1"
20	BEECH	3"
21	BEECH	3"
22	BEECH	2"
23	RED OAK	36"
24	RED OAK	6"
25	RED OAK	7"
26	RED OAK	5"
26	RED OAK	5"
27	SPRUCE	2"
28	RED OAK	16"
29	RED OAK	22"
30	RED OAK	2"
31	RED OAK	22"
32	RED MAPLE	7"
33	RED MAPLE	8"
34	WHITE BIRCH	6"
35	RED OAK	3"
36	RED OAK	2"
37	RED OAK	2"
38	RED OAK	2"
39	RED OAK	2"
40	RED OAK	2"
41	TRIPLE WHITE BIRCH	4"/5"/6"



- NOTES:
- 1) WHERE APPLICABLE, THE FIRST ROW OF BOULDERS WILL BE PINNED TO LEDGE OR BURIED IN A TRENCH. BOTTOM STONE WILL BE SET TO A DEPTH OF $\frac{1}{2}$ THE STONES DIAMETER.
 - 2) RIPRAP WILL CONSIST OF LARGE, IRREGULAR SHAPED ROCKS, FIT INTO PLACE AND/OR PINNED WITH REBAR. STONES WILL VARY IN SIZE FROM 2' - 4'.
 - 3) CONTRACTOR WILL HAVE A MAINE DEP EROSION CONTROL CERTIFIED INDIVIDUAL ON-SITE DURING ALL SOIL DISTURBANCE.
 - 4) NATIVE PLANTS WILL BE INSTALLED AT THE TOP OF THE RIPRAP 3' OC.



1 SHRUB PLANTING
SCALE: N.T.S.



2 GROUND COVER PLANTING
SCALE: N.T.S.

NOTE:
1. PLANT GROUND COVER IN
STAGGERED ROWS

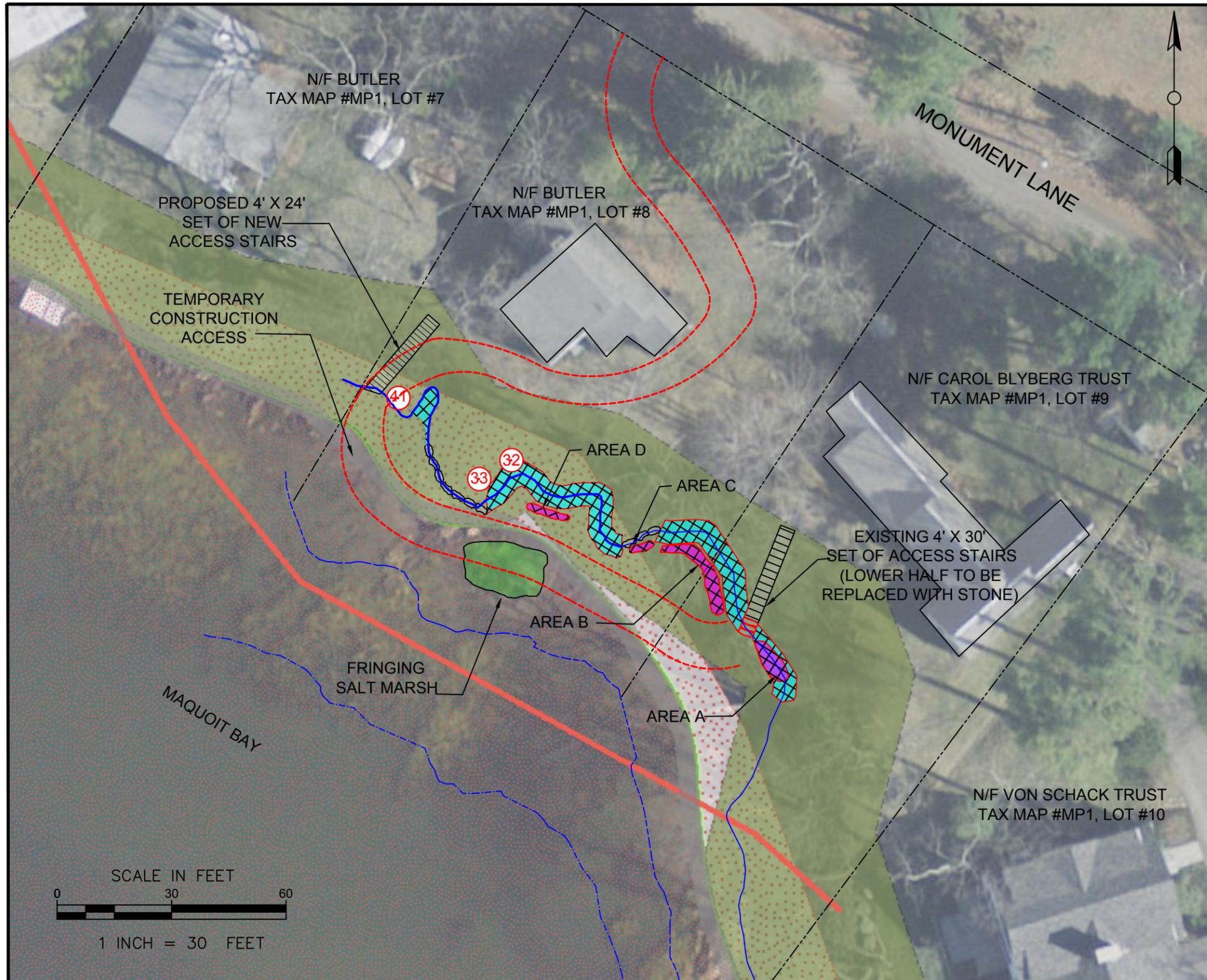
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Date: 8/14/2020
Revised:
Project: Blyberg, Brunswick
Drafted By: TAF/LCV

Cross Section View of the Proposed Shoreline Stabilization for the Carol Blyberg Trust located at 15 Monument Lane in Brunswick, Maine.

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LEGEND

	PROPERTY LINE
	HIGHEST ANNUAL TIDE LINE (HAT)
	MEAN HIGH WATER
	MEAN LOW WATER
	CONSTRUCTION ACCESS
	AREAS OF RIPRAP 3' BELOW HAT
	AREAS OF SHRUBS/GRASSES TO BE REMOVED
	FRINGING SALT MARSH
	AREAS OF RIPRAP 1' BELOW HAT

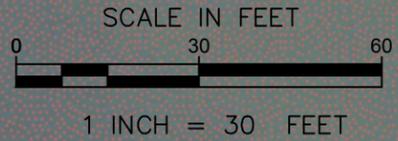
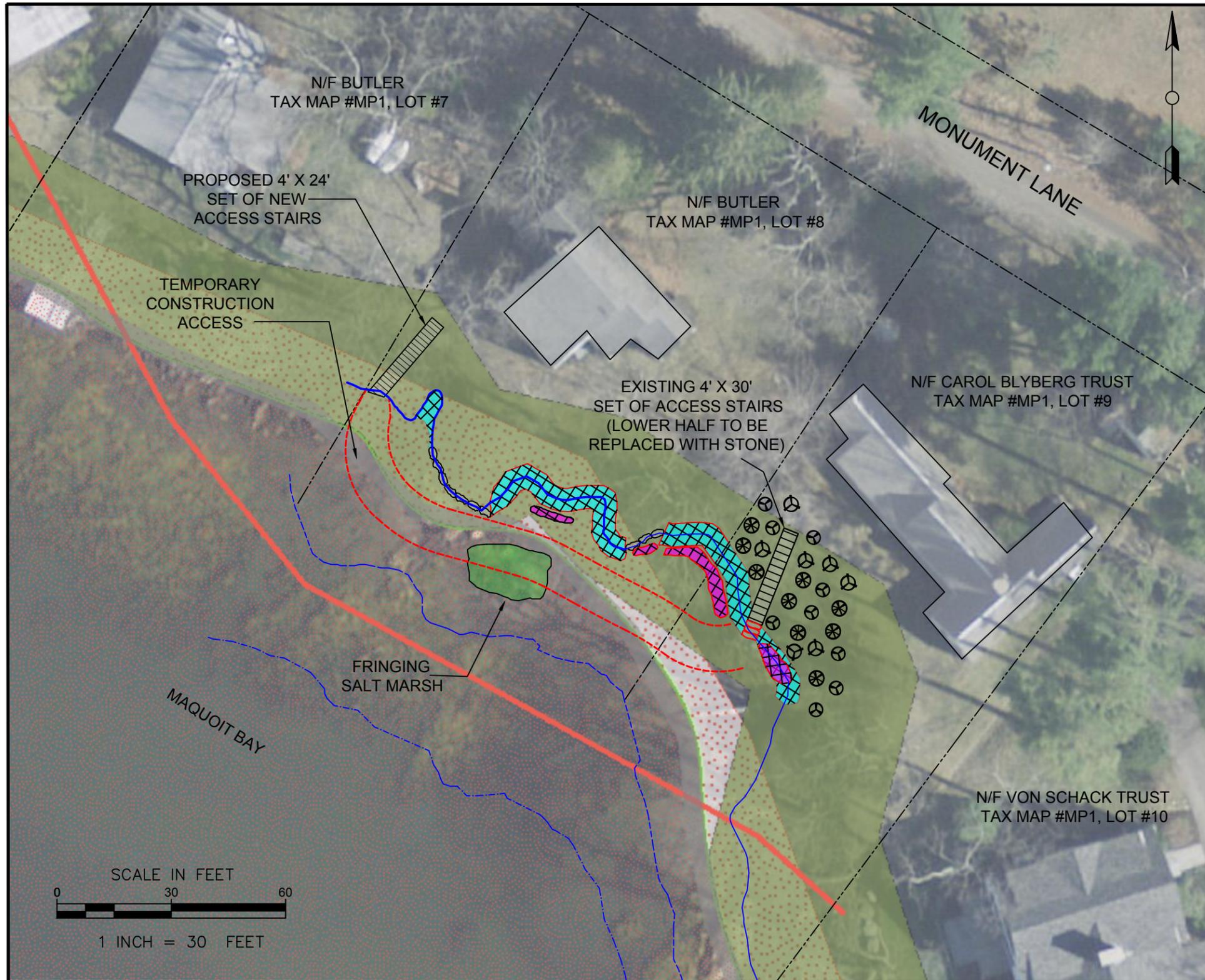
VEGETATION TO BE REMOVED			
AREA	SPECIES	SQ. FT. OR DBH	HEIGHT (TYP.)
A	DAYLILIES, JEWELWEED, MULTIFLORA ROSE	47	2' - 3'
B	DAYLILIES, JEWELWEED, MULTIFLORA ROSE	78	2' - 3'
C	DAYLILIES, JEWELWEED, MULTIFLORA ROSE	12	2' - 3'
D	DAYLILIES, JEWELWEED, MULTIFLORA ROSE	21	2' - 3'
TREE 32	RED MAPLE	7" DBH	6'
TREE 33	RED MAPLE	8"	7'
TREE 41	TRIPLE TRUNK BIRCH	4", 5", AND 6"	6'

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Proposed Plan for Riprap and Areas of Vegetaion Removal for the Carol Blyberg Trust located at 15 Monument Lane and Katherine Butler located at 19 Monument Lane in Brunswick, Maine.

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 of
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LEGEND

	PROPERTY LINE
	HIGHEST ANNUAL TIDE LINE (HAT)
	MEAN HIGH WATER
	MEAN LOW WATER
	CONSTRUCTION ACCESS
	AREAS OF RIPRAP 3' BELOW HAT
	AREAS OF SHRUBS/GRASSES TO BE REMOVED
	FRINGING SALT MARSH
	AREAS OF RIPRAP 1' BELOW HAT

REVEGETATION PLAN				
QTY.	BOTANICAL NAME AND SYMBOL	COMMON NAME	SIZE	SPACING
+/- 9	JUNIPERUS HORIZONTALIS 	CREEPING JUNIPER	#1	3' O.C.
+/- 9	MYRICA PENNSYLVANICA 	BAYBERRY	#3	3' O.C.
+/- 7	VACCINIUM CORYMBOSUM 	HIGHBUSH BLUEBERRY	#3	3' O.C.
--	NEW ENGLAND EROSION CONTROL RESTORATION SEED MIX	--	SEED MIX	--
TOTAL = 25 PROPOSED PLANTINGS				

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Proposed Revegetation Plan for the Carol Blyberg Trust located at 15 Monument Lane in Brunswick, Maine.

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of
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EXHIBIT 6.0: CONSTRUCTION PLAN

Access will take place from the abutting property (Map #MP-1, Lot #8) as shown on Sheet 4. Each lot intends to coordinate construction of the proposed shoreline stabilization. Equipment will travel along the shore and the contractor performing the work will place construction mats as necessary to traverse a small fringing salt marsh that is unavoidable.

Vegetation along the bank will remain intact except for the vegetation proposed to be removed and depicted on Sheet 3 of the Project Plans. This includes one (1) area of shrubs that will need to be removed in order to construct the project. The three shrub areas consist of Daylilies (*Hemerocallis spp.*), Jewelweed (*Impatiens capensis*), and Multiflora Rose (*Rosa multiflora*).

The banks will be graded to achieve a 1H : 1V slope and geotextile fabric will be placed behind the stone. Large diameter, irregular stones (approximately 2 – 4 feet) will be dug into a trench or pinned to ledge at the base of the slope, where applicable, and placed at a height of approximately three (3) feet (as measured from the HAT). The entire area of riprap is located with the SPO and SPO-RP (2 Acre 20% Steep Slope) and SPO-RP (FEMA 100 Flood [Tidal-River]). The area of earthmoving and filling for the construction of the riprap is approximately eight hundred and forty (840) cubic feet (+/-31 cubic yards) for the construction of the riprap and approximately two hundred cubic feet (+/-7.5 cubic yards) for loam associated with the revegetation plan in these zoning districts.

Upon completion of the riprap, the Applicant proposes to place plants along the face of the bank, in areas that are disturbed during construction, and along the top of the bank. The plants will be spaced approximately three (3) feet on center, depending on the size and type of plant. Native plant species may include but not be limited to the following: Creeping Juniper

(*Juniperus horizontalis*), Northern Bayberry (*Myrica pensylvanica*), and Highbush Blueberry (*Vaccinium corymbosum*). The approximate location and number of plants is shown on Sheet 4 and plants will be installed during the growing season at the completion of construction.

The contractor working on-site will have a Maine DEP Erosion Control Certified Individual onsite during all construction activity.

EXHIBIT 7.0: EROSION CONTROL PLAN

The Applicant proposes to minimize potential erosion at the site through the use of construction mats. At the completion of construction, any areas of soil disturbance will be stabilized with vegetation and mulch in accordance with the Department's permanent soil stabilization BMPs published in the most recent version of the Maine Erosion and Sediment Control BMPs manual.

REVIEW STANDARDS – TOWN OF BRUNSWICK ZONING ORDINANCE

CHAPTER 2 (14) – STRUCTURES AND OTHER ACTIVITIES EXTENDING OVER OR BELOW A WATER BODY OR WITHIN A WETLAND OR SHORELINE STABILIZATION AREA.

2.14.A No more than one (1) pier, dock, wharf, or similar structure extending over or located below the normal high-water line of a water body, or within a wetland or shoreline stabilization area is permitted on a single lot; excepting on single lots having a lot width at least twice the required lot width of the base zoning district and at least twice the minimum shore frontage as specified in Table 4.2.5.F(1), a second structure may be permitted and may remain as long as the lot is not further divided.

The Applicant does not propose to construct a dock on their property. The lower section of the access stairs that are proposed to be reconstructed with stones will be located in the same location and will not extend below the normal high-water line of the coastal wetland.

2.14.B Access from shore shall be developed on soils appropriate for such use and constructed so as to control erosion.

Access will take place from the abutting property and extend along the shorefront. The majority of the upper intertidal is ledge and mixed coarse and fines. In areas of fringing marsh vegetation, the contractor will utilize construction mats to minimize erosion. All work will be conducted at low tide.

2.14.C The location shall not interfere with existing developed or natural beach areas.

The proposed location is not located over a developed or natural beach area.

2.14.D The structure or activity shall be located so as to minimize adverse effects on fisheries as determined by the Marine Resource Officer or designee.

The proposed riprap has been designed to limited areas at the base of the slope. Areas above this will be planted with vegetation. In order to minimize potential impacts to shellfish, excess soil will be reused along the face and top of the bank. In addition, the project is under review by the Department of Inland Fisheries and Wildlife (MDIFW) and the Department of Marine Resources (DMR) as part of the Department of Environmental Protection (MDEP) review process. Any recommendations by these agencies will be incorporated into the project design. The project was also reviewed by the US Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and the Environmental Protection Agency (EPA) during the Army Corps of Engineers (ACOE) process. These review agencies did not identify any adverse effects to these resources as a result of the proposed modifications.

2.14.E The structure or activity shall be no larger in dimension than necessary to carry on the activity and be consistent with the surrounding character and uses of the area. A temporary pier, dock, or wharf shall not be wider than six (6) feet for noncommercial uses.

The stabilization is limited to the base of the slope and the stones used will be selected to blend into the existing ledge in the area.

2.14.F No new structure shall be built on, over, or abutting a pier, wharf, dock, or other structure extending beyond the normal high-water line of a water body or within a wetland or shoreline stabilization area unless the structure requires direct access to the water body or wetland or shoreline stabilization area as an operational necessity.

The Applicant does not propose to construct a new structure on, over, or abutting a dock.

2.14.G New permanent piers and docks on non-tidal waters shall not be permitted unless it is clearly demonstrated to the Code Enforcement Officer that a temporary pier or dock is not feasible, and a permit has been obtained from the Maine Department of Environmental Protection pursuant to the Natural Resources Protection Act, Title 38 M.R.S., § 480-C, as amended.

The project does not involve a dock on non-tidal waters.

2.14.H A structure constructed on a float is prohibited unless it is designed to function as a watercraft and is registered as such with the Maine Department of Inland Fisheries and Wildlife.

The Applicant does not propose to construct a structure on a float.

2.14.I No existing structures built on, over, or abutting a pier, dock, wharf, or other structure extending beyond the normal high-water line of water body or within a wetland shall be converted to residential dwelling units.

The Applicant does not propose to convert any existing structures on, over, or abutting a dock to a residential dwelling unit.

2.14.J Structures built on, over, or abutting a pier, wharf, dock, or other structure extending beyond the normal high-water line of a water body or within a wetland or shoreline stabilization area shall not exceed 20 feet in height above the pier, wharf, dock, or other structure.

The Applicant does not propose to construct a structure on, over, or abutting a dock.

2.14.K Commercial marine activities and piers, docks, wharves, breakwaters, causeways, marinas, bridges, and other structures projecting into water bodies shall conform to the supplementary use standards in Subsection 3.4.1.S.

The project does not involve a dock.

2.14.L Vegetation may be removed in excess of the standards in Subsection 2.3.3.C.(11) in order to stabilize an eroding shoreline, provided that prior to such removal, the proposed activity is reviewed onsite and approved by the Code Enforcement Officer. Construction equipment shall access the shoreline by barge when feasible, as determined by the Code Enforcement Officer.

i. When necessary, the removal of trees and other vegetation to allow for construction equipment access to the stabilization site by land shall be limited to no more than 12 feet in width. Upon completion of the stabilization activity, the area cleared for construction

equipment access shall be restored with native trees and other vegetation, in accordance with a plan submitted to and approved by the Code Enforcement Officer.

ii. Revegetation shall be completed in accordance with Subsection 2.3.3.C (10).

The majority of existing vegetation will remain along the face of the slope. The project will require the removal of approximately eighty-three (83) square feet of shrubs and grasses; however, vegetation will not be removed in excess of the standards of Subsection 2.3.3.C.(11). A revegetation plan is included in Sheet 4 and as part of the stabilization efforts, the Applicant intends to add additional vegetation along the face of the slope and at the top of the bank. That effort exceeds the minimum planting standards. The plantings will be monitored to ensure an 80% survival rate over a five (5) year period.

2.14.M A deck over a river may be exempt from the 125 foot shoreland setback requirement for new construction if the new construction is part of a downtown revitalization project, defined in a project plan and approved by Town Council. This may include the revitalization of structures formerly used as mills that do not currently meet the structure setback requirements, if the proposed deck complies with the following:

- i. The total deck area attached to the structure does not exceed 700 square feet;**
- ii. The deck is cantilevered over a river segment that is located within the boundaries of the downtown revitalization project area;**
- iii. The deck is attached or accessory to a permitted commercial use in a structure constructed prior to 1971 and is located within the boundaries of the downtown revitalization project area;**
- iv. The deck construction complies with all other applicable standards, with the exception of shoreland setback requirements contained in Subsection 2.3.3.(C); and**
- v. The deck construction complies with all other local, State and Federal laws and regulations.**

The Applicant does not propose to construct a deck.

Chapter 4: Property Development Standards

4.2 DIMENSIONAL AND DENSITY STANDARDS

The riprap will extend to the property lines; however, the proposed project is an allowable encroachment on the rear or side setbacks as noted in Table 4.2.5.B(4)c.

4.3 NATURAL AND HISTORIC AREAS

It is unavoidable to locate the shoreline stabilization outside the coastal wetland given the nature of the project. The Highest Annual Tide (HAT), Mean High Water (MHW), and Mean Low Water (MLW) are shown on the project plans.

The area is mapped in steep slopes; however, the proposed riprap has been minimized along the face of the slope. In addition, the Applicant will ensure the site is stabilized at the completion of construction in accordance with the Maine Department of Environmental Protection's Best Management Practices.

The project does not propose to impact the quality or quantity of groundwater.

The project has received approval from the ACOE. During the review process of the ACOE, it was determined the Applicant has avoided and minimized impacts to the coastal wetland to the greatest extent practicable. In addition, it was determined there would not be an adverse effect on the water quality or functions and values of the coastal wetland.

The project was reviewed by the Maine Historic Preservation Commission (MHPC) and the five tribes. These entities did not identify concerns with the proposed project and historical resources.

4.4 FLOOD HAZARD AREAS

The proposed project is located within a Special Flood Hazard area. The Applicant has included a Floodplain Development permit application that complies with Subsection 2.3.4.

4.5.1. SEWAGE DISPOSAL

The Applicant does not propose sewage disposal as part of the project.

4.5.2 WATER SUPPLY AND QUALITY

The Applicant does not propose to modify the existing water supply and/or quality as part of the project.

4.5.3. SOLID WASTE DISPOSAL

The proposed project will not increase solid waste.

4.5.4 STORMWATER MANAGEMENT

The Applicant will take appropriate measures to ensure the site is stabilized at the completion of construction. No formal stormwater management structures are proposed.

4.6 LANDSCAPING REQUIREMENTS

The project does not propose a cleared opening to the water. The planting plan includes native vegetation that will be planted three (3) feet on center and plants will be monitored for five years to ensure an 80% survival rate.

4.7. RESIDENTIAL RECREATION REQUIREMENTS

The proposed project does not involve the construction of a dwelling unit. Therefore, no impact fee or reserved land is proposed.

4.8 CIRCULATION AND ACCESS

The proposed project will not increase traffic and does not propose to modify the existing access. There are no public rights of access to the shoreline at the project site.

4.9 PARKING AND LOADING

The proposed project does not propose additional parking areas.

4.10 LIGHTING

The project does not propose lighting.

4.11 ARCHITECTURAL COMPATIBILITY

The project is consistent with marine shoreline construction standards. The riprap that will be selected will blend into the existing ledge that is located in the upper intertidal area. Plantings will be placed to further stabilize the shoreline and also screen the top sections of the riprap.

4.12 NEIGHBORHOOD PROTECTION STANDARDS

As stated, the design is consistent with neighboring structures.

4.13 SIGNS

The project does not propose any signs.

4.14 PERFORMANCE STANDARDS

The Applicant proposes to comply with the performance standards outlined in this section.

4.15 SITE FEATURE MAINTENANCE

The vegetation will be monitored for five (5) years to ensure an 80% survival rate of the proposed vegetation.

4.16 FINANCIAL AND TECHNICAL CAPACITY

The Applicant has the financial capacity to construct the stabilization project. The project will be constructed by Linkel Construction based in Topsham, Maine.

5.1.6.B PERFORMANCE GUARANTEE

No public infrastructure is proposed; therefore, no performance guarantee is anticipated to be required.

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

Monument Lane Soil Survey



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

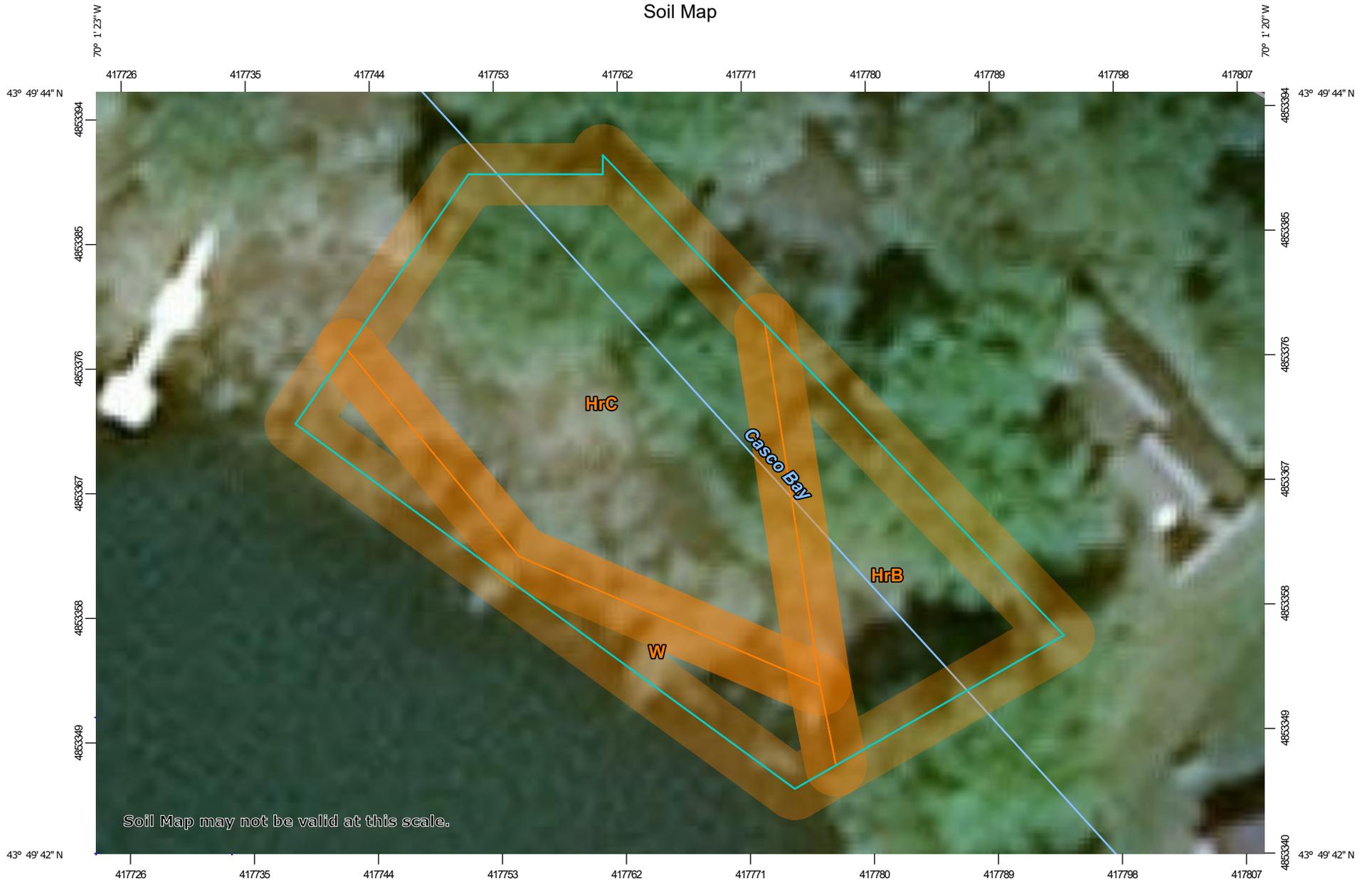
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

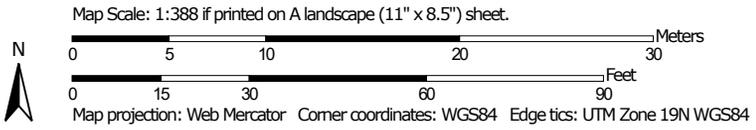
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
 Survey Area Data: Version 17, Jun 5, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 7, 2019—Jul 2, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	0.1	23.5%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	0.2	60.3%
W	Water	0.1	16.3%
Totals for Area of Interest		0.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

Custom Soil Resource Report

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2x1cx

Elevation: 0 to 520 feet

Mean annual precipitation: 36 to 65 inches

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Lyman and similar soils: 50 percent

Tunbridge and similar soils: 30 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Shoulder, backslope, summit

Landform position (three-dimensional): Crest, nose slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loam

E - 3 to 5 inches: fine sandy loam

Bhs - 5 to 7 inches: loam

Bs1 - 7 to 11 inches: loam

Bs2 - 11 to 18 inches: channery loam

R - 18 to 79 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: 11 to 24 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Custom Soil Resource Report

Hydric soil rating: No

Description of Tunbridge

Setting

Landform: Hills, ridges

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material

Oa - 3 to 5 inches: highly decomposed plant material

E - 5 to 8 inches: fine sandy loam

Bhs - 8 to 11 inches: fine sandy loam

Bs - 11 to 26 inches: fine sandy loam

BC - 26 to 28 inches: fine sandy loam

R - 28 to 79 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: 21 to 41 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Ragmuff

Percent of map unit: 10 percent

Landform: Ridges, hills

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Base slope, side slope

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Abram

Percent of map unit: 5 percent

Landform: Hills, ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Nose slope, crest

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Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Peru

Percent of map unit: 4 percent
Landform: Hills, ridges
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Hills, ridges
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Nose slope, crest, free face
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

HrC—Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2x1cy
Elevation: 0 to 520 feet
Mean annual precipitation: 36 to 65 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Lyman and similar soils: 45 percent
Tunbridge and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Custom Soil Resource Report

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loam
E - 3 to 5 inches: fine sandy loam
Bhs - 5 to 7 inches: loam
Bs1 - 7 to 11 inches: loam
Bs2 - 11 to 18 inches: channery loam
R - 18 to 79 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 11 to 24 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Tunbridge

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material
Oa - 3 to 5 inches: highly decomposed plant material
E - 5 to 8 inches: fine sandy loam
Bhs - 8 to 11 inches: fine sandy loam
Bs - 11 to 26 inches: fine sandy loam
BC - 26 to 28 inches: fine sandy loam
R - 28 to 79 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 41 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Ragmuff

Percent of map unit: 5 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Abram

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Peru

Percent of map unit: 4 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Ridges, hills
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Nose slope, crest, free face
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Setting

Landform: Lakes

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

MAINE GENERAL PERMIT (GP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

CAROL BLYBERG TRUST
C/O PETER BLYBERG
9 LARRABEE FARM ROAD
BRUNSWICK, MAINE 04011

CORPS PERMIT # NAE-2020-01548
CORPS GP ID# 20-332
STATE ID# NRPA

DESCRIPTION OF WORK:

To place fill below the highest annual tide line of Maquoit Bay off 15 Monument Lane, Map MP-1 Lot#9 at Brunswick, Maine in conjunction with the installation of a 35 linear foot bank stabilization project as shown on plans entitled "Carol Blyberg Trust" on 3 sheets dated "06-1-2020" revised "06-29-2020". A 6 foot section of stairs will be replaced by stone within the riprap installation. Approximately 105SF (0.002acres) of coastal wetland will be permanently impacted and approximately 288SF (0.007acres) will be temporarily impacted in association with construction access.

GENERAL and SPECIAL CONDITIONS: SEE ATTACHED SHEET

LAT/LONG COORDINATES: 43.828747° N -70.022505° W USGS QUAD: BRUNSWICK, MAINE

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP).** Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 37 of the GP (page 16) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 13, 2020. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 13, 2021.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [], ISSUED [], DENIED [] DATE _____

APPLICATION TYPE: PBR: _____, TIER 1: _____, TIER 2: _____, TIER 3: , LURC: _____, DMR LEASE: _____, NA: _____

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 06/25/2020 LEVEL OF REVIEW: CATEGORY 1: CATEGORY 2: _____

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 _____, 404 _____, 10/404 , 103 _____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at <http://per2.nwp.usace.army.mil/survey.html>

LEEANN B. NEAL
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

FOR: FRANK J. DEL GIUDICE DATE _____
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION



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

**PLEASE NOTE THE FOLLOWING GENERAL and SPECIAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
GENERAL PERMIT
NO. NAE-2020-01548**

GENERAL CONDITIONS

1. Other Permits: Permittees must obtain other federal, state, or local authorizations required by law. Applicants are responsible for applying for and obtaining all required state or local approvals. This includes, but is not limited to, the project proponent obtaining a Flood Hazard Development Permit issued by the town, if necessary. Inquiries may be directed to the municipality or to the Maine Floodplain Management Coordinator at (207) 287-8063. See <http://www.maine.gov/dacf/flood>.

26. Permit on Site: The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

28. Inspections: The permittee shall allow the Corps to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this GP and any written verification. To facilitate these inspections, the permittee shall complete and return to the Corps the following forms: a) Work-Start Notification Form and b) Compliance Certification Form, when either is provided with the authorization letter. These forms are attached after the plans.

SPECIAL CONDITIONS

1. Any equipment that must traverse vegetated wetland, shall be supported by mats or low ground pressure equipment. Any side casting of excavated material from trenching activity shall be placed on geotextile fabric to avoid direct impacts to the marsh vegetation.
2. Placement of fill below the high tide line associated with the riprap shall be conducted during times of low tide when the work area is above the tide in order to minimize suspended sediment in the water column and effect to species present in the work area; and during frozen ground conditions to minimize permanent impact to the adjacent salt marsh vegetation.



135 River Road • Woolwich, ME 04579
207-837-2199 • tim@atlanticenviromaine.com
www.atlanticenviromaine.com

August 19, 2020

Mr. Jared Woolston
Planning & Development
Town of Brunswick
85 Union Street
Brunswick, ME 04011

Re: Request for Development Review on behalf of Katherine Butler located at 19 Monument Lane in Brunswick Maine.

Dear Mr. Woolston,

On behalf of Katherine Butler, Atlantic Environmental, LLC (AE) is pleased to submit an application for Development Review by the Planning Board to stabilize an eroding shoreline with riprap and vegetation. This letter is intended to summarize the project and includes request for waivers in accordance with Subsection 5.2.9.M of the Town of Brunswick Zoning Ordinance.

Property Description

Katherine Butler owns property located at 19 Monument and identified as Lot #8 on the Town of Brunswick's Tax Map #MP-1. The project site is approximately 0.23 acres and is located in the Rural Protection 1 (RP1) zoning district and the SPO-RP (2% Acres 20% Steep Slope), SPO-RP (Bluff, Highly Unstable), SPO-RP (FEMA 100 Flood, Tidal – River) and SPO-FPO (Special Flood Hazard Area) overlay zones. The site is currently developed with a residential structure and associated development. There is currently an existing set of four (4) foot wide by twenty-four (24) foot long access stairs that provide access to the coastal wetland. The shoreline is exhibiting moderate to more severe erosion mainly due to surface water runoff at the top of the bank and wave action along the base of the slope. Given that the residential structure is located at the top of the bank, the Applicant proposes to stabilize the shoreline with riprap and plantings.

Project Description

The proposed project consists of stabilizing the shoreline in two approaches. First, in three areas with more severe erosion, the Applicant proposes to place riprap that consists of approximately two (2) to four (4) feet in diameter stones along the shoreline for a total of sixty-one (61) feet. Filter fabric will be placed below the existing grade and the riprap will extend three (3) feet below the Highest Annual Tide (HAT). The bottom row of riprap will be pinned to ledge or buried

Environmental Consultants, Wetland Scientists, Specializing in Federal, State and Local Permitting, Expert Witness

in a trench and in order to minimize impacts to the coastal wetland, the riprap will be constructed with a 1H: 1V slope. Second, in areas with less severe erosion and where ledge exists along the upper intertidal, the Applicant proposes to place a single row of boulders pinned to the top of the ledge and the riprap will extend approximately one (1) foot below the HAT. In order to address erosion occurring above this area, the Applicant intends to plant native vegetation along the slope face, install a French drain at the top of the slope with a six (6) to eight (8) foot riprap curtain to accommodate surface water during rain events, and install a vegetated berm at the top of the slope to improve the vegetative cover and absorb excess runoff. In addition to the stabilization efforts, the Applicant proposes to remove the existing stairs and reconstruct stairs in the same general location. Information including amount of filling and earthmoving, existing buffer conditions, areas of disturbance, and the proposed revegetation plan are included in the attached application materials. This project is being conducted in coordination with the abutting property owner, the Carol Blyberg Trust located at 15 Monument Lane (Tax Map #MP-1, Lot #9) who is proposing to stabilize a portion of their shoreline.

Request for Waivers

Given the scope and scale of the project, AE respectfully requests the following submission requirements are waived.

- Fiscal Capacity, Performance Guarantee
- A survey submitted by a professional surveyor – The Applicant owns the adjacent property to the west and the project is being conducted in coordination with the abutter to the east. A survey is not needed in this case to establish line or boundary of property given that abutter consents can be secured if necessary.
- Medium Intensity Soil Survey – The Applicant has included a Custom Soil Resource Report for the Project Location from the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture.
- Storm water management plan

The Applicant has received approval from the Army Corps of Engineers (ACOE) and a copy of that permit is included with the attached application materials. The Applicant anticipates receiving approval from the Maine Department of Environmental Protection (MDEP) by mid-September and a copy of the permit will be forwarded to the Town upon receipt. Thank you in advance for your consideration of this Application. If you require any additional information or clarifications, please feel free to contact me at 207 - 837 - 2199 or by email at tim@atlanticenviromaine.com.

Sincerely,
Atlantic Environmental LLC.



Timothy A. Forrester, Owner

**DEVELOPMENT REVIEW
APPLICATION**

1. Development Review application type (refer to **Appendix D**):

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> | Minor Development Review |
| <input checked="" type="checkbox"/> | Major Development Review: Sketch Plan |
| <input checked="" type="checkbox"/> | Major Development Review: Final Plan |
| <input type="checkbox"/> | Major Development Review: Streamlined Final Plan |

2. Project Name: Butler Shoreline Stabilization

3. Project Applicant

Name: Katherine Butler
Address: 8 Bunganuc Landing
Brunswick, ME 04011
Phone Number: (207) 216 - 8022
Email: butler@ge.com

4. Project Owner (if different than applicant)

Name: _____
Address: _____

Phone Number: _____
Email: _____

5. Authorized Representative

Name: Atlantic Environmental, LLC c/o Tim Forrester
Address: 135 River Road
Woolwich, ME 04579
Phone Number: (207) 837 - 2199
Email: tim@atlanticenviromaine.com

6. List of Design Consultants. Indicate the registration number, address and phone number, email for any additional project engineers, surveyors, architects, landscape architects or planners:

1. _____
2. _____
3. _____

7. Physical location of property: 19 Monument Lane

8. Lot Size: 0.23 acres

9. Zoning District: RP-1

SPO-RP (2 acre 20% Steep Slope), SPO-RP (Bluff - Highly Unstable, SPO-RP

10. Overlay Zoning District(s): (FEMA 100 Flood [Tidal - River], SPO - FPO - Special Flood Hazard Area

11. Indicate the interest of the applicant in the property and abutting property. For example, is the applicant the owner of the property and abutting property? If not, who owns the property subject to this application?

The Applicant, Katherine Butler, owns the property located at 19 Monument Lane. The Applicant owns the abutting property identified as Lot #7, Map #MP-1. The Applicant is intending to construct the proposed project in coordination with the abutting property owned by the Carol Blyberg Trust (Lot #9, Map #MP-1)

12. Assessor's Tax Map MP-1 Lot Number 8 of subject property.

13. Brief description of proposed use/subdivision: The property is a residential property.

14. Describe specific physical improvements to be done: The Applicant proposes to stabilize the shoreline with riprap and plantings. Specifically, the riprap will extend along the entire shoreline and will be constructed with two approaches. In three areas, riprap will extend three (3) feet below the HAT and constructed with a 1H: 1V slope. In two areas, riprap will extend one (1) foot below the HAT and will consist of a single row of boulders. Plantings will be placed along the face of the slope and at the top of the bank. In addition, a french drain will be installed at the top of the slope to accommodate surface water runoff. The existing access stairs will be replaced in the same general location and with the same dimensions.
Owner Signature:

Applicant Signature (if different):



DEVELOPMENT REVIEW APPLICATION REQUIREMENTS

The submission requirements contained in **Appendix D** of the Brunswick Zoning Ordinance (attached in checklist format for each application category) shall apply to all Minor Development, Major Development, and Streamlined Major Development Review unless a waiver is granted. Proposed development applications shall be submitted to the Director of Planning and Development.

For each item listed in Appendix D the applicant shall either submit the requested information or request a waiver from the information requirement pursuant to Subsection 5.2.9.M of the Zoning Ordinance.

FLOOD HAZARD DEVELOPMENT PERMIT FOR MINOR DEVELOPMENT BRUNSWICK, MAINE

(For Development not considered a Substantial Improvement)

This Flood Hazard Development Permit allows minor development as provided in Chapter 5.2.5 of the Brunswick Zoning Ordinance, for development in a Special Flood Hazard Area as defined in said ordinance. Development authorized by this permit must be adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, be constructed with materials resistant to flood damage and be constructed by methods and practices that minimize flood damage. This permit is issued based on documentation that the information provided in the Flood Hazard Development Permit Application is in compliance with the Floodplain Management Ordinance.

Tax Map # MP-1 Lot # 8

Project Description: The Applicant proposes to stabilize the shoreline with riprap, a french drain, and plantings. In addition, an existing set of access stairs will be reconstructed in the same location and dimensions.

The permittee understands and agrees that:

- The permit is issued on the representations made herein and on the application for permit;
- The permit may be revoked because of any breach of representation;
- Once a permit is revoked, all work shall cease until the permit is re-issued or a new permit is issued;
- The permit will not grant any right or privilege to erect any structure or use any premises described for any purposes or in any manner prohibited by the ordinances, codes, or regulations of the Town of Brunswick;
- The permittee hereby gives consent to the Code Enforcement Official to enter and inspect activity covered under the provisions of Brunswick Zoning Ordinance; and,
- The permit form will be posed in a conspicuous place on the premises in plain view.

Issued by: _____ Date: _____
(Signature of Codes Enforcement Official)

Permit # _____



135 River Road • Woolwich, ME 04579
207-837-2199 • tim@atlanticenviromaine.com
www.atlanticenviromaine.com

May 1, 2020

To whom it may concern:

By this letter, I authorize Atlantic Environmental LLC to act on my behalf as my Agent for the preparation and submission of all federal, state, and local town or city permit applications and relevant documents and correspondence related to the stabilization of the shoreline at 19 Monument Lane in Brunswick, Maine. This authorization includes attending meetings and site visits, appearing before all boards, commissions, and/or committees, and providing other services as required for completing the aforementioned tasks.

Thank you for the opportunity to work with you on this project. Should you have any additional questions, please do not hesitate to contact me at 207-837-2199 or via email at tim@atlanticenviromaine.com.

Katherine E. Butler

Print Name

Katherine E. Butler

Signature

June 1, 2020
Date

Sincerely,
Atlantic Environmental LLC.

Timothy A. Forrester

Timothy A. Forrester, Owner

REQUIREMENTS FOR FINAL PLAN, STREAMLINED REVIEW & MINOR REVIEW APPLICATION SUBMITTAL

Please mark box with one of the following:
“W” (Waiver); **“P”** (Pending); **“X”** (Submitted) or **“N/A”** (Not applicable)

		Final Plan	Streamlined	Minor
General	Application form and fee			
	Name of development			
	Existing zoning district and overlay designations			
	Location map			
	Names of current owner(s) of subject parcel and abutting parcels			
	Names of engineer and surveyor; and professional registration numbers of those who prepared the plan			
	Location of features, natural and artificial, such as water bodies, wetlands, streams, important habitats, vegetation, railroads, ditches and buildings			
	Documentation of Right, Title and Interest			
	Drafts of legal documents appropriate to the application, including: deeds, easements, conservation easements, deed restrictions or covenants, home/property owners association declarations and by-laws, and such other agreements or documents as are necessary to show the manner in which common areas will be owned, maintained, and protected			
	Draft performance guarantee or conditional agreement			
Survey, Topography, & Existing Conditions	Scale, date, north point, and area			
	A survey submitted (stamped for final plan submittal) by a professional surveyor with a current license by the State of Maine Board of Licensure for Professional Surveyors			
	Boundaries of all lots and tracts with accurate distances and bearings, locations of all permanent monuments property identified as existing or proposed			
	Existing easements associated with the development			
Survey, Topography, & Existing Conditions	Location of existing utilities; water, sewer, electrical lines, and profiles of underground facilities			
	Existing location, size, profile and cross section of sanitary sewers; description, plan and location of other means of sewage disposal with evidence of soil suitability			
	Topography with contour intervals of not more than two (2) feet			
	A Medium Intensity Soil Survey, available from the Cumberland County Soil and water Conservation District,. The Planning Board may require a Class A (high intensity) Soil Survey, prepared in accordance with the standards of the Maine Association of Professional Soil Scientists, if issues of water quality, wetlands or other natural constraints are noted.			
	Existing locations of sidewalks			
	A delineation of wetlands, floodplains, important habitats, and other environmentally sensitive areas			
Approximate locations of dedicated public open space, areas protected by conservation easements and recreation areas				

REQUIREMENTS FOR FINAL PLAN, STREAMLINED REVIEW & MINOR REVIEW APPLICATION SUBMITTAL

Please mark box with one of the following:
“W” (Waiver); “P” (Pending); “X” (Submitted) or “N/A” (Not applicable)

		Final Plan	Streamlined	Minor
Infrastructure - Proposed	Name, location, width of paving and rights-of-way, profile, cross-section dimensions, curve radii of existing and proposed streets; profiles of center-lines of proposed streets, at a horizontal scale of one (1) inch = 50 feet and vertical scale of one (1) = five (5) feet, with all evaluations referred to in U.S.G.S. datum			
	Proposed easements associated with the development			
	Kind, location, profile and cross-section of all proposed drainage facilities, both within and connections to the proposed development, and a storm-water management plan in accordance with Section			
	Location of proposed utilities; water, sewer, electrical lines, and profiles of underground facilities. Tentative locations of private wells.			
	Proposed location, size, profile and cross section of sanitary sewers; description, plan and location of other means of sewage disposal with evidence of soil suitability			
	Proposed locations, widths and profiles of sidewalks			
	Locations and dimensions of proposed vehicular and bicycle parking areas, including proposed shared parking arrangement if applicable.			
Infrastructure - Proposed	Grading, erosion control, and landscaping plan; proposed finished grades, slopes, swells, and ground cover or other means of stabilization			
	Storm water management plan for the proposed project prepared by a professional engineer			
	The size and proposed location of water supply and sewage disposal systems			
	Where a septic system is to be used, evidence of soil suitability			
	A statement from the General Manager of the Brunswick Sewer District as to conditions under which the Sewer District will provide public sewer and approval of the proposed sanitary sewer infrastructure			
	A statement from the Fire Chief recommending the number, size and location of hydrants, available pressure levels, road layout and street and project name, and any other fire protection measures to be taken			
	A statement from the General Manager of the Brunswick and Topsham Water District as to conditions under which public water will be provided and approval of the proposed water distribution infrastructure			
Proposed Development Plan	Lighting plan showing details of all proposed lighting and the location of that lighting in relation to the site			
	Reference to special conditions stipulated by the Review Authority			
	Proposed ownership and approximate location and dimensions of open spaces for conservation and recreation. Dedicated public open specs, areas protected by conservation easements, and existing and proposed open spaces or recreation areas and potential connectivity to adjoining open space.			
	When applicable, a table indicating the maximum number of lots permitted based upon the applicable dimensional requirements, the number of lots proposed, and the number of lots permitted to be further subdivided.			
	Building envelopes showing acceptable locations for principal and accessory structures, setbacks and impervious coverage			

REQUIREMENTS FOR FINAL PLAN, STREAMLINED REVIEW & MINOR REVIEW APPLICATION SUBMITTAL

Please mark box with one of the following:
“W” (Waiver); **“P”** (Pending); **“X”** (Submitted) or **“N/A”** (Not applicable)

		Final Plan	Streamlined	Minor
Proposed Development Plan	Disclosure of any required permits or, if a permit has already been granted, a copy of that permit			
	A statement from the General Manager of the Brunswick and Topsham Water District regarding the proposed development if located within an Aquifer Protection Zone			
	A plan of all new construction, expansion and/or redevelopment of existing facilities, including type, size, footprint, floor layout, setback, elevation of first floor slab, storage and loading areas			
	An elevation view of all sides of each building proposed indicating height, color, bulk, surface treatment, signage and other features as may be required by specific design standards			
	A circulation plan describing all pedestrian and vehicle traffic flow on surrounding road systems			
	A site landscaping plan indicating grade change, vegetation to be preserved, new plantings used to stabilize areas of cut and fill, screening, the size, locations and purpose and type of vegetation			
	Number of lots if a subdivision			
	A plan showing all ten (10) inch caliper trees to be removed as a result of the development proposal			
	All applicable materials necessary for the Review Authority to review the proposal in accordance with the criteria of Chapter 5.			
	Any additional studies required by the Review Authority			



200 foot Abutters List Report

Brunswick, ME
August 18, 2020

Subject Property:

Parcel Number: MP1-8
CAMA Number: MP1-8
Property Address: 19 MONUMENT LN

Mailing Address: BUTLER, KATHERINE E
8 BUNGANUC LANDING RD
BRUNSWICK, ME 04011

Abutters:

Parcel Number: MP1-1
CAMA Number: MP1-1
Property Address: 0 MONUMENT LN

Mailing Address: SEA POINT LAND CO C/O ANDREA
MACNAUGHTON
7 FREDON MARKSBORO RD
NEWTON, NJ 07860

Parcel Number: MP1-10
CAMA Number: MP1-10
Property Address: 11 MONUMENT LN

Mailing Address: VON SCHACK, WESLEY & KELLY J S
TRUSTEES OF THE VON SCHACK REV
TRUST
PO BOX 222820
CARMEL, CA 93922

Parcel Number: MP1-2
CAMA Number: MP1-2
Property Address: 0 MERE PT RD

Mailing Address: MAINE, STATE OF CONSERVATION
DIVISION
#22 STATE HOUSE STATION
AUGUSTA, ME 04333

Parcel Number: MP1-3
CAMA Number: MP1-3
Property Address: 33 MONUMENT LN

Mailing Address: BENNITT, FRED Y TRUSTEE 3/4 INT &
BENNITT, SUE R & FRED Y JT 1/2 INT
3051 EDELWEISS CT
MARS, PA 16046

Parcel Number: MP1-3B
CAMA Number: MP1-3B
Property Address: 0 MONUMENT LN

Mailing Address: SALLICK, RICHARD & LUCY CO-
TRUSTEES OF RICHARD & LUCY
SALLICK REV TR 1/2 INT EA
77 LONG LOTS RD
WESTPORT, CT 06880

Parcel Number: MP1-4
CAMA Number: MP1-4
Property Address: 29 MONUMENT LN

Mailing Address: WHITE, ALMA F TRUSTEE ALMA F
WHITE REV TRST 8/22/2003
210 EMERALD LN
DOVER, NH 03820

Parcel Number: MP1-6
CAMA Number: MP1-6
Property Address: 25 MONUMENT LN

Mailing Address: LOEBS, STEPHEN F & SUSAN M
3 PARTRIDGE RD #118
TOPSHAM, ME 04086

Parcel Number: MP1-7
CAMA Number: MP1-7
Property Address: 23 MONUMENT LN

Mailing Address: BUTLER, ELIZABETH R & KATHERINE E,
& BUTLER, EDWARD E, JR, JT
18 PHIPPANY WAY
BRUNSWICK, ME 04011

Parcel Number: MP1-9
CAMA Number: MP1-9
Property Address: 15 MONUMENT LN

Mailing Address: BLYBERG, CAROL G TRUSTEE OF THE
CAROL G BLYBERG TRUST
9 LARRABEE FARM RD
BRUNSWICK, ME 04011



www.cai-tech.com

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

8/18/2020

Page 1 of 1

MAINE REAL ESTATE TAX-Paid

DO NOT WRITE ABOVE THIS LINE: FOR REGISTRY USES ONLY

DLN: 1001940066168

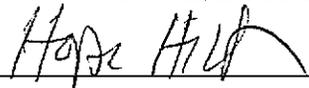
WARRANTY DEED
(Maine Statutory Short Form)

KNOW ALL PERSONS BY THESE PRESENTS, that **ARTHUR B. JOHNSON**, sometimes known as **ARTHUR BERRY JOHNSON**, and **MEREDITH R. JOHNSON**, husband and wife, of Severna Park, County of Anne Arundel and State of Maryland, for consideration paid, grant to **KATHERINE E. BUTLER**, single, of Brunswick, County of Cumberland and State of Maine, and with a mailing address of 8 Bunganuc Landing Road, Brunswick, Maine 04011, with **WARRANTY COVENANT**, a certain lot or parcel of land, together with any buildings thereon, situated in Brunswick, County of Cumberland and State of Maine, more fully described in **Exhibit A**, attached hereto and made a part hereof.

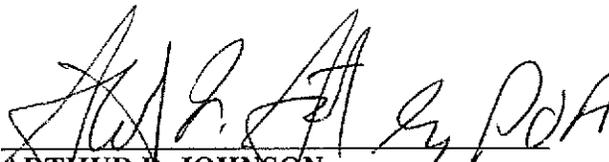
And hereby **RELEASING** any and all interests in the Sea Point Land Company and any and all right, title and interest of Arthur B. Johnson and Meredith R. Johnson in and to all lands and interests in land and related interests at Sea Point, sometimes referred to as Mere Point, in said Brunswick, Maine.

WITNESS my hand and seal this 1st day of August, 2019.

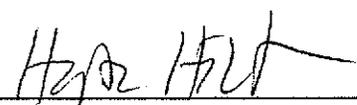
SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF:



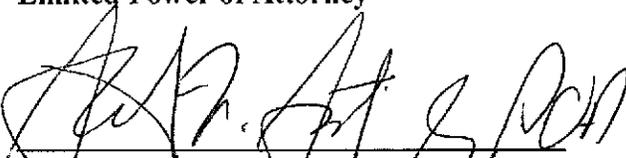
Witness



ARTHUR B. JOHNSON
By Stoddard L. Smith, as Agent under
Limited Power of Attorney



Witness



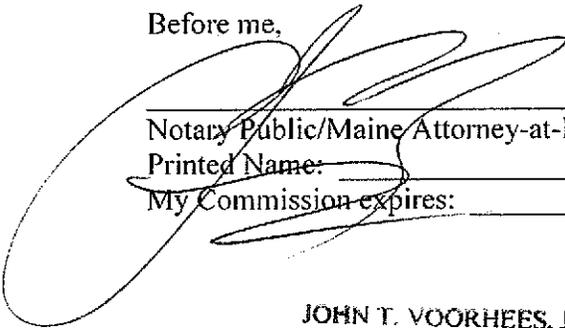
MEREDITH R. JOHNSON
By Stoddard L. Smith, as Agent under
Limited Power of Attorney

STATE OF MAINE
COUNTY OF CUMBERLAND ss

8/21, 2019

Then personally appeared the above-named Stoddard L. Smith, in his said capacity as Agent under Limited Power of Attorney, and acknowledged the foregoing instrument to be his free act and deed.

Before me,



Notary Public/Maine Attorney-at-Law
Printed Name: _____
My Commission expires: _____

JOHN T. VOORHEES, JR.
Attorney-at-Law/Notary Public
My Commission does not expire.

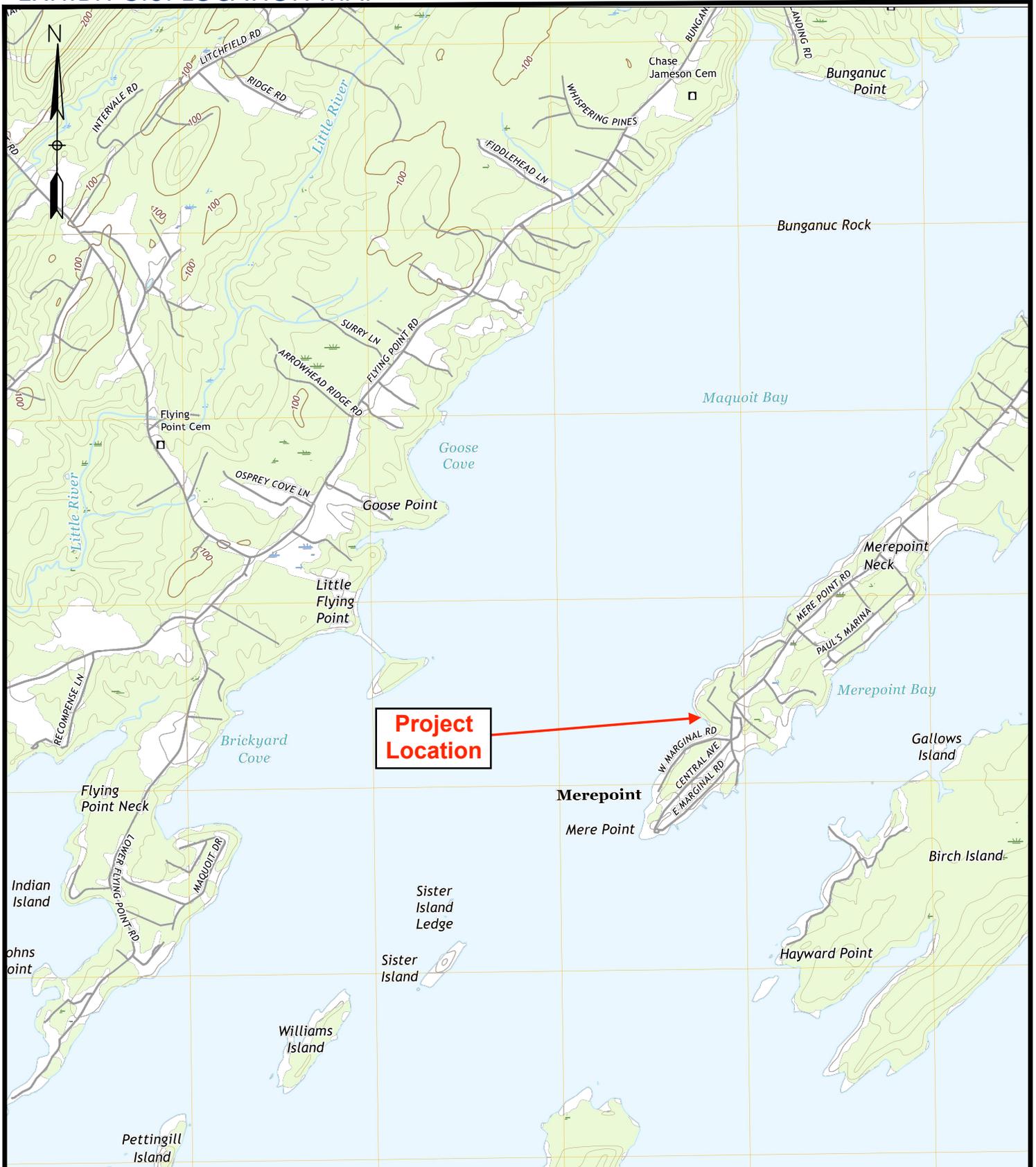
EXHIBIT A

A certain lot or parcel of land with any improvements thereon, situated in the Town of Brunswick, County of Cumberland and State of Maine, being bounded and described as follows, to wit:

On the southeast by land now or formerly of Lena E. Browne, on the southwest by Maquoit Bay; on the northwest now or formerly by Mary E. Butler; on the northeast by a right-of-way.

Meaning and intending to describe premises conveyed by Warranty Deed, dated January 19, 1981, from Arthur Berry Johnson, Elizabeth J. Kellenberger, Angela J. Peckenpaugh, Lewis C. Johnson and Paul T. Johnson to Arthur Berry Johnson and Meredith R. Johnson, recorded in the Cumberland County Registry of Deeds at Book 4761, Page 20 and by Warranty Deed, dated July 6, 2005, from Louis P. Kellenberger and Elizabeth J. Kellenberger to Arthur B. Johnson and Meredith R. Johnson, recorded in the Cumberland County Registry of Deeds at Book 22910, Page 39.

EXHIBIT 3.0: LOCATION MAP



Project Location

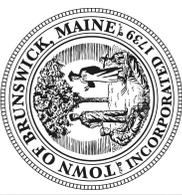
DIRECTIONS: From Maine Street/Route 24 in downtown Brunswick, travel for approximately 1.5 miles. Bear left on Mere Point Road and travel for approximately 5.5 miles. Turn right on Monument Lane. #19 is located on the left.

ATLANTIC ENVIRONMENTAL LLC.
 Environmental Consultants
 135 River Road, Woolwich, ME 04579
 (207) 837-2199
 tim@atlanticensviromaine.com

Date: 6/2/2020
Revised:
Project: Butler, Brunswick
Drafted By: ---

PROJECT LOCATION
 19 Monument Lane, Brunswick, Maine
 Maine Atlas & Gazetteer
 Map 6 (Section D-2)
 43.828972, -70.022727

Sheet
 1
 of
 1



Legend

- Lines_Other
- Other Road
- Hydrography Line
- ROW Property Access
- Town Boundary
- Other Lot Boundary
- Parcels_Lines
- Public Road
- Private Road
- ROW
- Water

Disclaimer: This information is provided as a reasonably accurate point of reference. The user of this information is not to be held responsible for any errors or omissions. The Town of Brunswick shall not be held responsible for any errors or omissions. The accuracy of this data is the responsibility of the user. Copyright Town of Brunswick.



1 inch = 100 feet

Revised To: April 1, 2019

Maps Prepared by:
Town of Brunswick

Revised and Reprinted By:



**MAP
MP1**

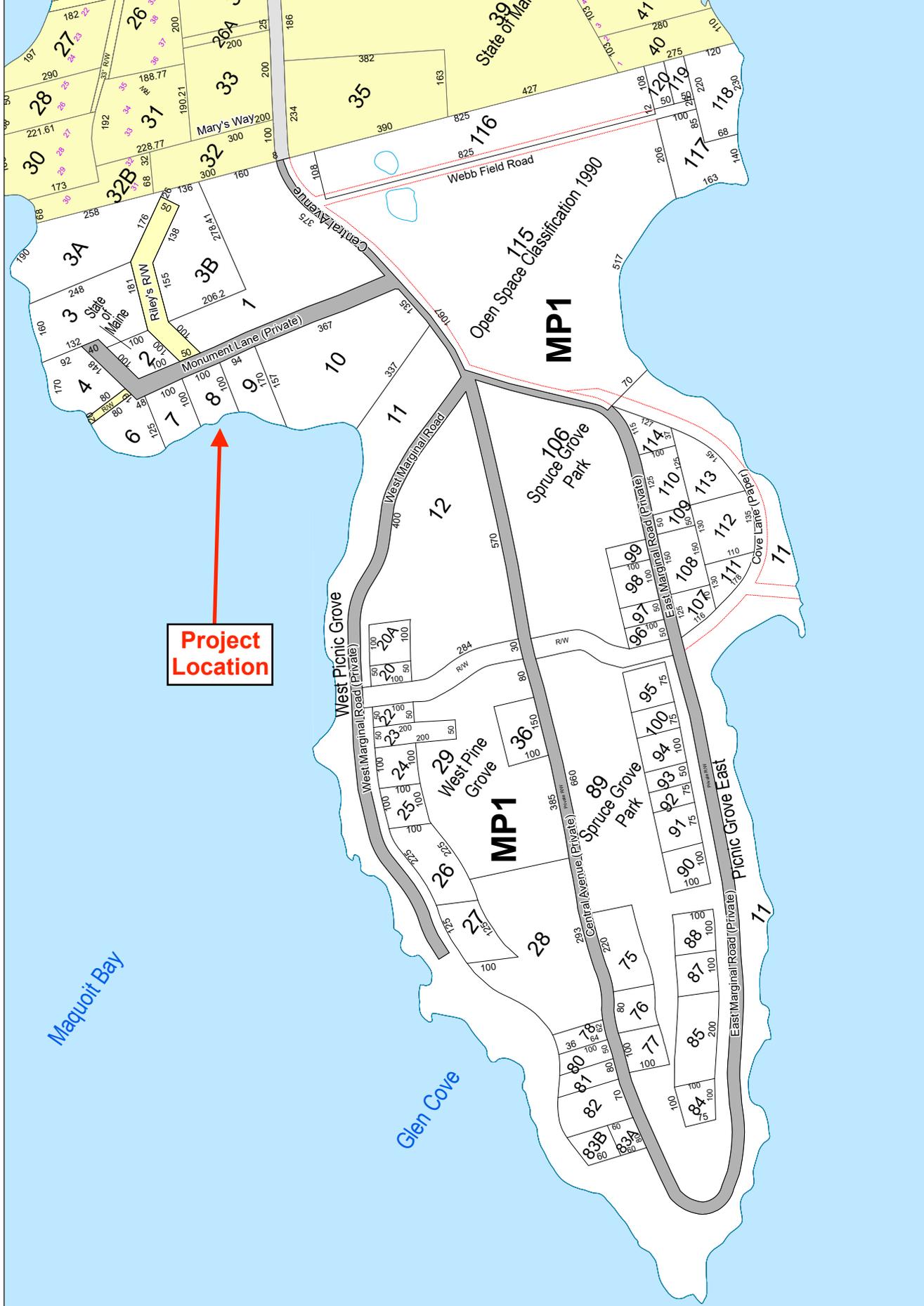


EXHIBIT 4.0: PHOTOGRAPHS

The following photographs are taken from the site of the project and represent the proposed location of the shoreline stabilization located at 19 Monument Lane in the Town of Brunswick, ME.



Photograph One. Aerial View of Project Site. Red arrow indicates approximate location of project.
Source: Google Earth. Date: May 4, 2018.



Photograph Two. Facing northerly— view of Applicant's residential structure and eroding slope.
Photographer: Tim Forrester, Atlantic Environmental, LLC Date: April 27, 2020.



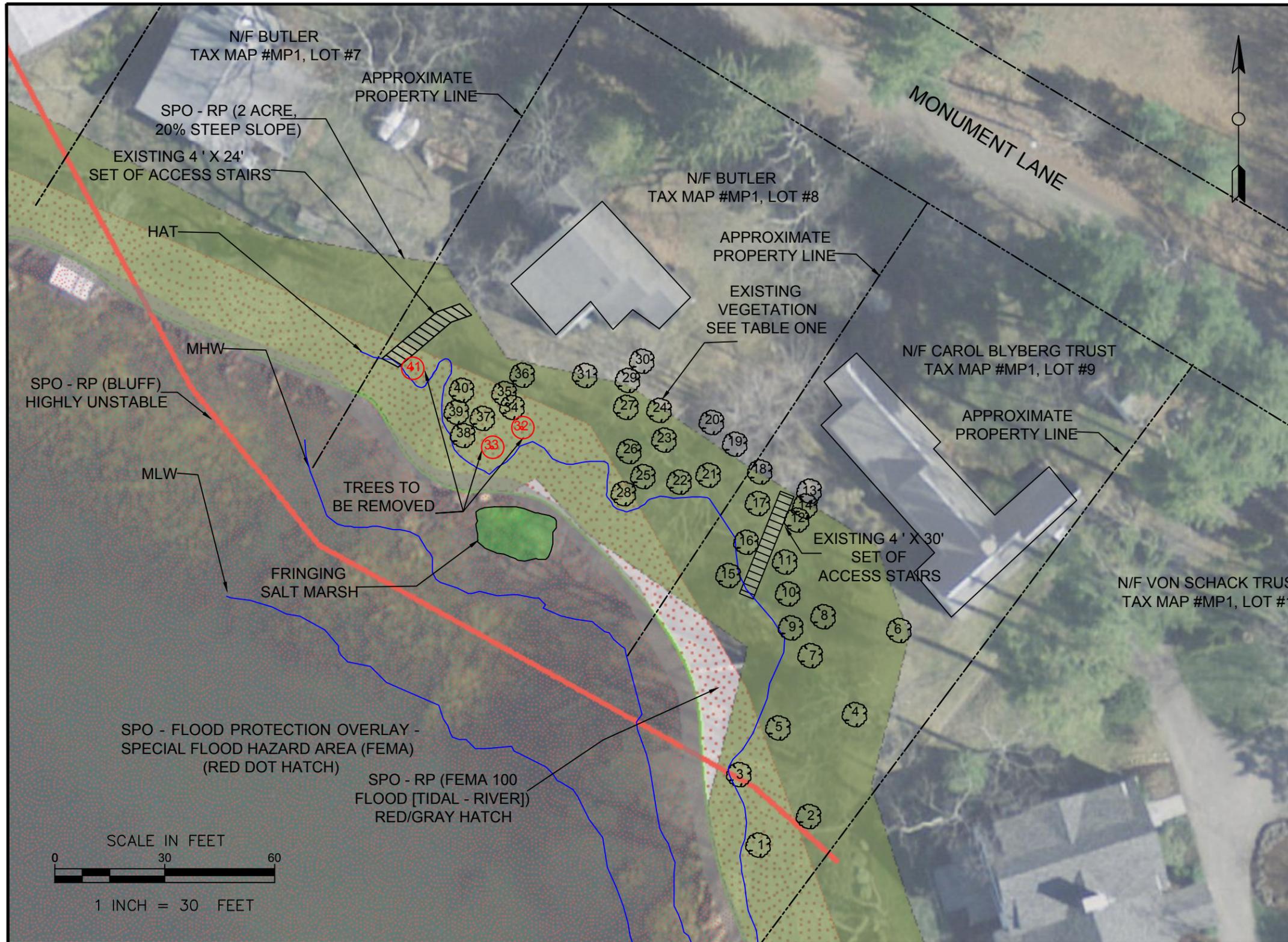
Photograph Three. Facing northwesterly – additional view of eroding slope. Photographer: Tim Forrester, Atlantic Environmental, LLC Date: April 27, 2020.



Photograph Four. View of 1 ft. below HAT stabilization area. Photographer: Tim Forrester, Atlantic Environmental, LLC Date: April 27, 2020.



Photograph Five. View of existing access stairs that will be removed. Also – view of where construction access will begin. Photographer: Tim Forrester, Atlantic Environmental, LLC Date: April 27, 2020.



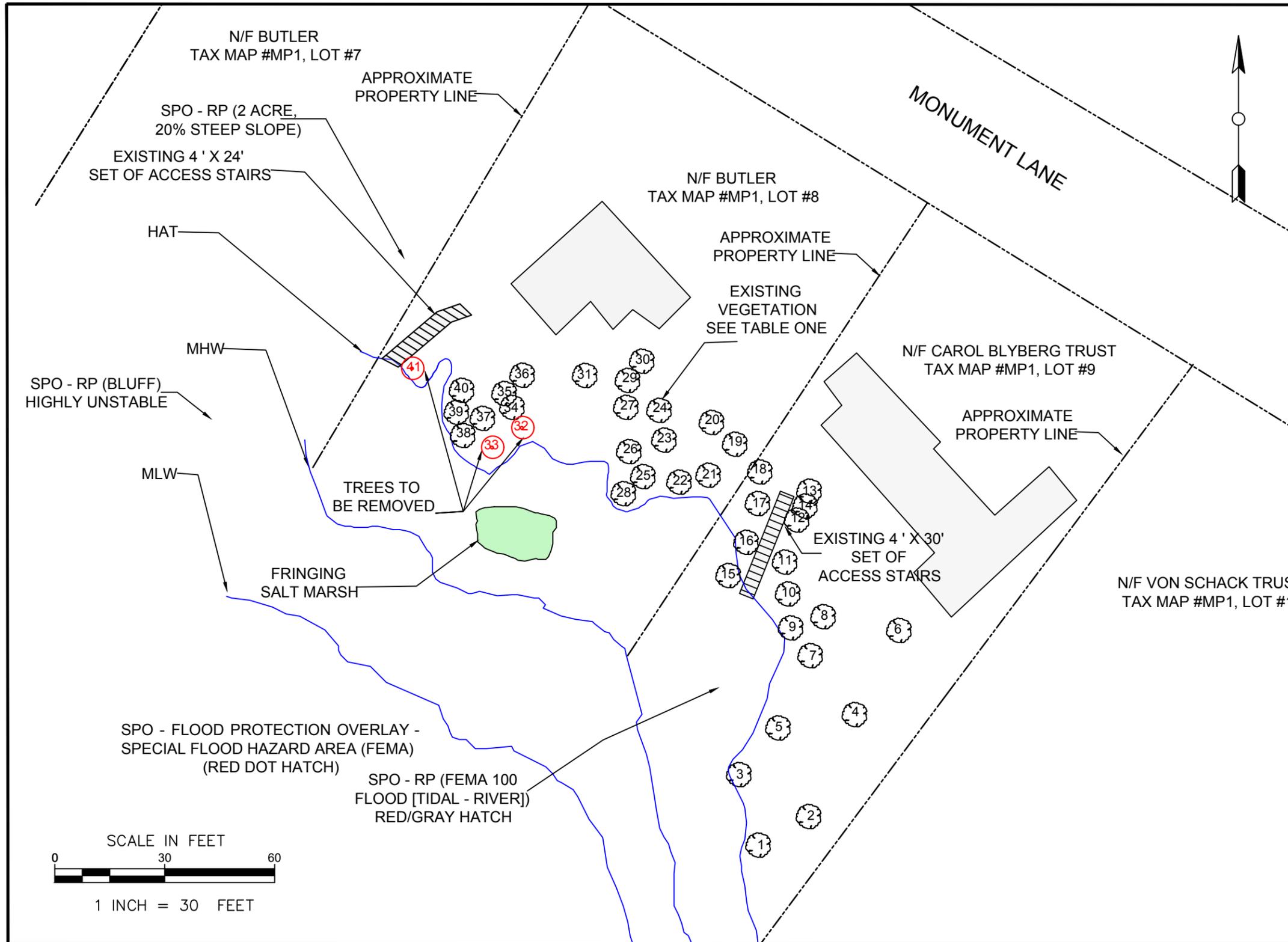
EXISTING VEGETATION		
NUMBER	COMMON NAME	SIZE (DBH)
1	RED OAK	18"
2	RED OAK	12"
3	UNKNOWN DOUBLE TRUNK	4"/5"
4	RED OAK	30"
5	SPRUCE	6"
6	RED MAPLE	16"
7	UNKNOWN DOUBLE TRUNK	3"/4"
8	ORNAMENTAL CHERRY	2'
9	RED OAK	5"
10	RED OAK	3"
11	FIR	4"
12	FIR	1"
13	BEECH	SAPLINGS
14	BEECH	12"
15	RED OAK	6"
16	RED OAK	4"
17	BEECH	4"
18	BEECH	18"
19	BEECH	1"
20	BEECH	3"
21	BEECH	3"
22	BEECH	2"
23	RED OAK	36"
24	RED OAK	6"
25	RED OAK	7"
26	RED OAK	5"
26	RED OAK	5"
27	SPRUCE	2"
28	RED OAK	16"
29	RED OAK	22"
30	RED OAK	2"
31	RED OAK	22"
32	RED MAPLE	7"
33	RED MAPLE	8"
34	WHITE BIRCH	6"
35	RED OAK	3"
36	RED OAK	2"
37	RED OAK	2"
38	RED OAK	2"
39	RED OAK	2"
40	RED OAK	2"
41	TRIPLE WHITE BIRCH	4"/5"/6"


ATLANTIC ENVIRONMENTAL LLC.
 Environmental Consultants
 135 River Road, Woolwich, ME 04579
 (207) 837-2199
 tim@atlanticenviromaine.com

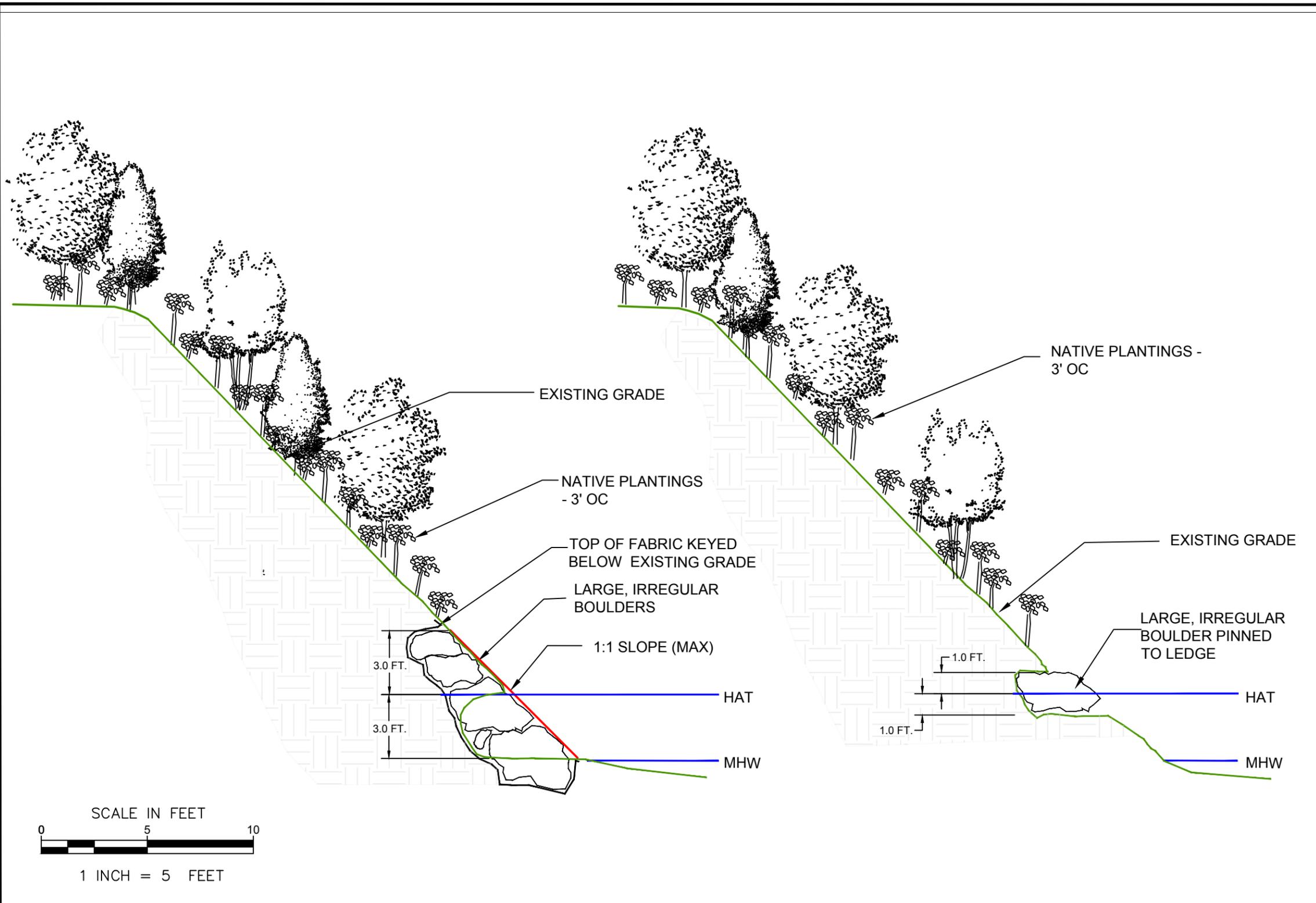
Date: 8/14/2020
 Revised:
 Project: Butler, Brunswick
 Drafted By: TAF/LCV

Existing Conditions Plan of Vegetation and Shoreline Structures for the Carol Blyberg Trust located at 15 Monument Lane and Katherine Butler located at 19 Monument Lane in Brunswick, Maine.

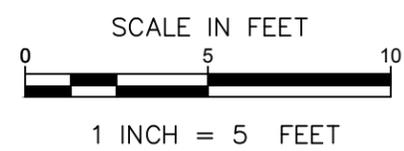
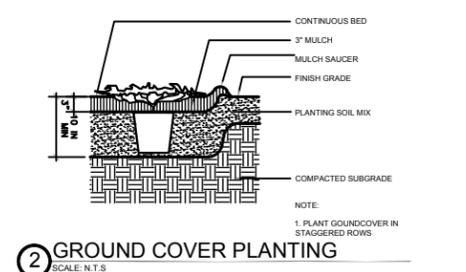
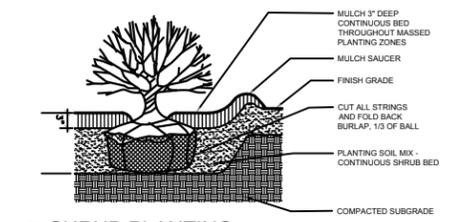
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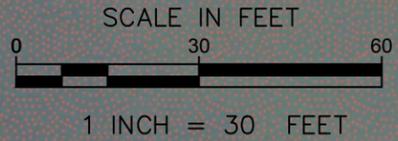
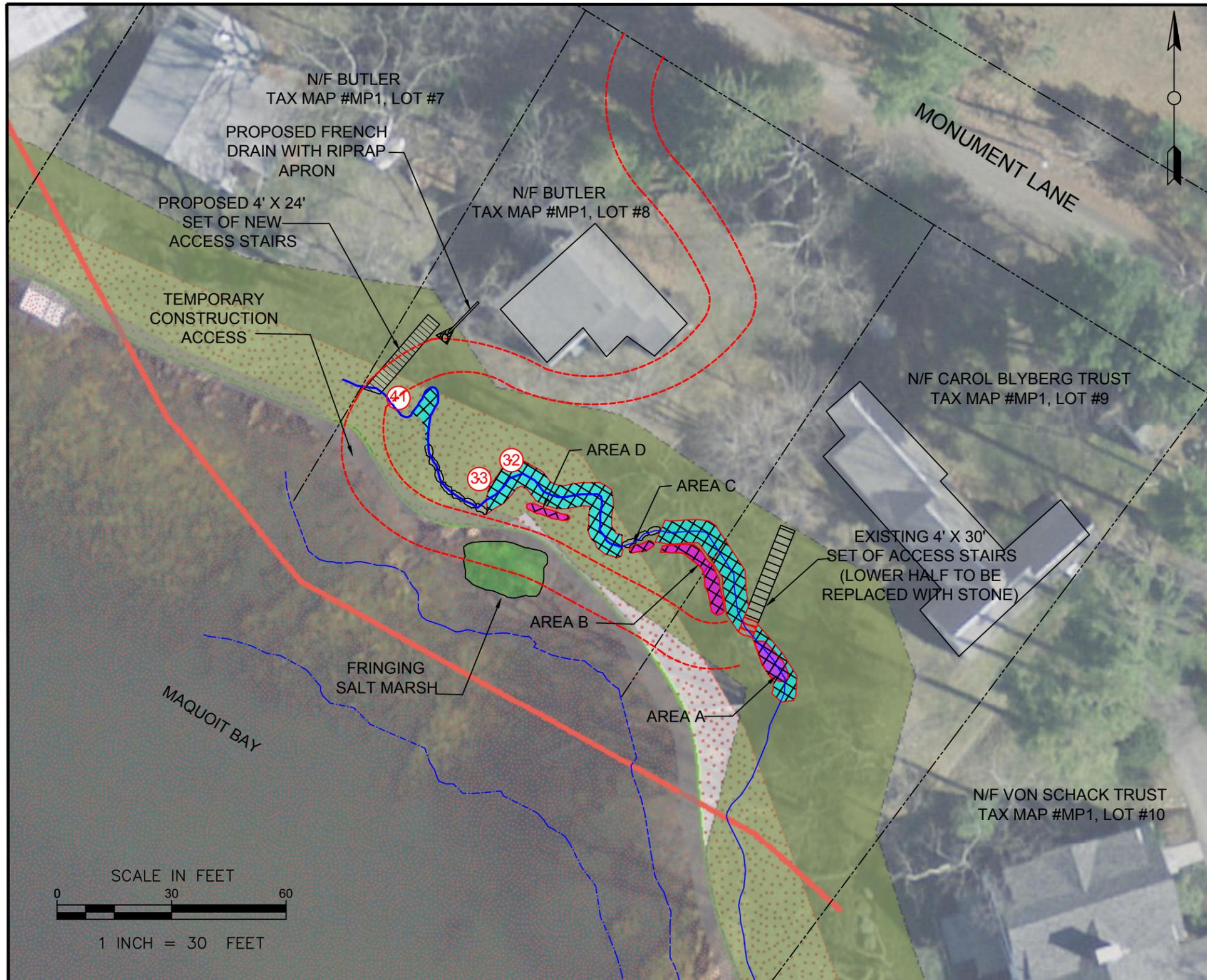
EXISTING VEGETATION		
NUMBER	COMMON NAME	SIZE (DBH)
1	RED OAK	18"
2	RED OAK	12"
3	UNKNOWN DOUBLE TRUNK	4"/5"
4	RED OAK	30"
5	SPRUCE	6"
6	RED MAPLE	16"
7	UNKNOWN DOUBLE TRUNK	3"/4"
8	ORNAMENTAL CHERRY	2'
9	RED OAK	5"
10	RED OAK	3"
11	FIR	4"
12	FIR	1"
13	BEECH	SAPLINGS
14	BEECH	12"
15	RED OAK	6"
16	RED OAK	4"
17	BEECH	4"
18	BEECH	18"
19	BEECH	1"
20	BEECH	3"
21	BEECH	3"
22	BEECH	2"
23	RED OAK	36"
24	RED OAK	6"
25	RED OAK	7"
26	RED OAK	5"
26	RED OAK	5"
27	SPRUCE	2"
28	RED OAK	16"
29	RED OAK	22"
30	RED OAK	2"
31	RED OAK	22"
32	RED MAPLE	7"
33	RED MAPLE	8"
34	WHITE BIRCH	6"
35	RED OAK	3"
36	RED OAK	2"
37	RED OAK	2"
38	RED OAK	2"
39	RED OAK	2"
40	RED OAK	2"
41	TRIPLE WHITE BIRCH	4"/5"/6"



NOTES:
 1) WHERE APPLICABLE, THE FIRST ROW OF BOULDERS WILL BE PINNED TO LEDGE OR BURIED IN A TRENCH. BOTTOM STONE WILL BE SET TO A DEPTH OF 1/2 THE STONES DIAMETER.
 2) RIPRAP WILL CONSIST OF LARGE, IRREGULAR SHAPED ROCKS, FIT INTO PLACE AND/OR PINNED WITH REBAR. STONES WILL VARY IN SIZE FROM 2' - 4'.
 3) CONTRACTOR WILL HAVE A MAINE DEP EROSION CONTROL CERTIFIED INDIVIDUAL ON-SITE DURING ALL SOIL DISTURBANCE.
 4) NATIVE PLANTS WILL BE INSTALLED AT THE TOP OF THE RIPRAP 3' OC.



 <p>ATLANTIC ENVIRONMENTAL LLC. Environmental Consultants 135 River Road, Woolwich, ME 04579 (207) 837-2199 tim@atlanticenviromaine.com</p>	<p>Date: 8/14/2020 Revised: Project: Butler, Brunswick Drafted By: TAF/LCV</p>	<p>Cross Section View of the Proposed Shoreline Stabilization for Katherine Butler located at 19 Monument Lane in Brunswick, Maine.</p>	<p>Sheet 3 of 5</p>
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LEGEND

	PROPERTY LINE
	HIGHEST ANNUAL TIDE LINE (HAT)
	MEAN HIGH WATER
	MEAN LOW WATER
	CONSTRUCTION ACCESS
	AREAS OF RIPRAP 3' BELOW HAT
	AREAS OF SHRUBS/GRASSES TO BE REMOVED
	FRINGING SALT MARSH
	AREAS OF RIPRAP 1' BELOW HAT

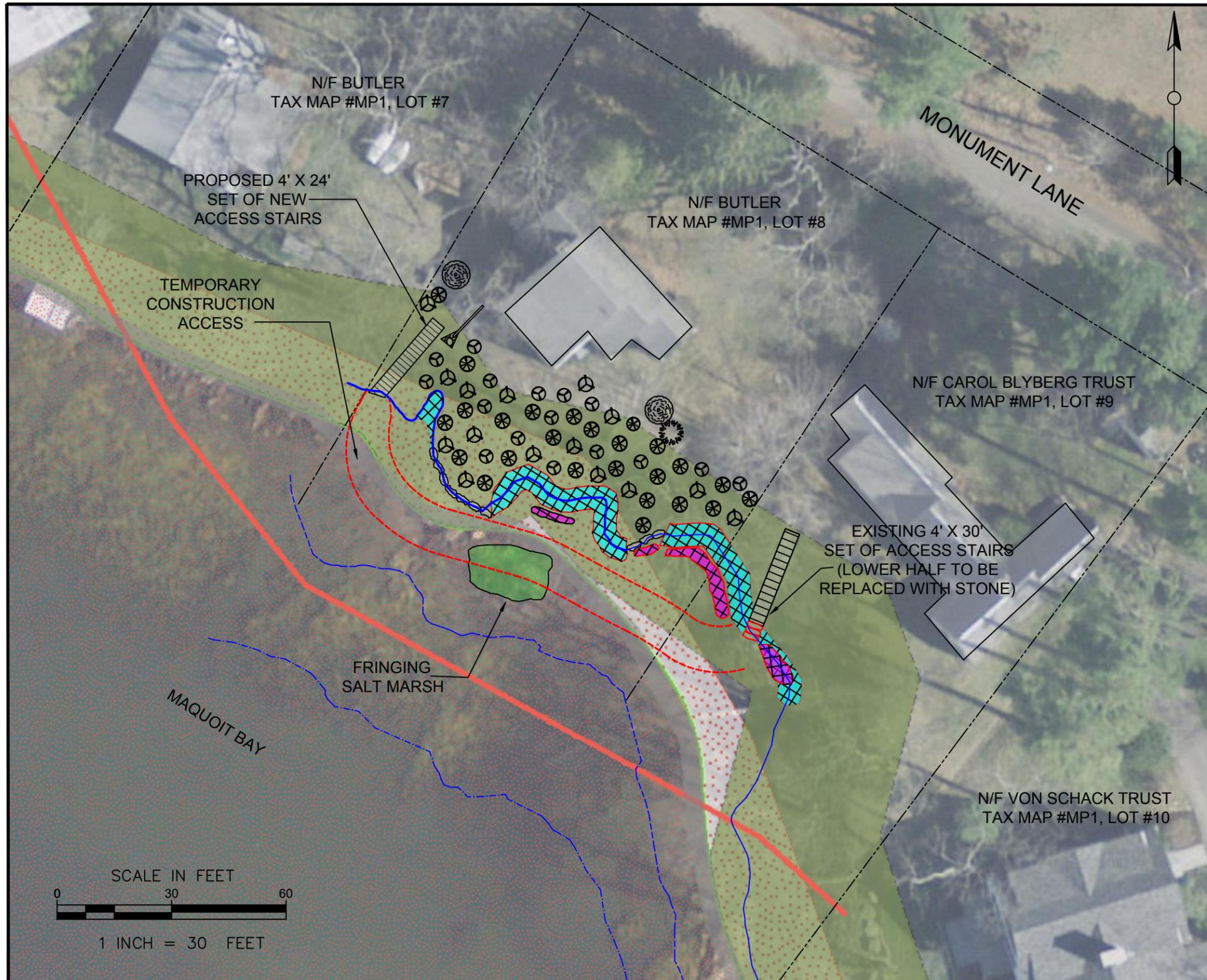
VEGETATION TO BE REMOVED			
AREA	SPECIES	SQ. FT. OR DBH	HEIGHT (TYP.)
A	DAYLILIES, JEWELWEED, MULTIFLORA ROSE	47	2' - 3'
B	DAYLILIES, JEWELWEED, MULTIFLORA ROSE	78	2' - 3'
C	DAYLILIES, JEWELWEED, MULTIFLORA ROSE	12	2' - 3'
D	DAYLILIES, JEWELWEED, MULTIFLORA ROSE	21	2' - 3'
TREE 32	RED MAPLE	7" DBH	6'
TREE 33	RED MAPLE	8"	7'
TREE 41	TRIPLE TRUNK BIRCH	4", 5", AND 6"	6'

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Date: 8/14/2020
 Revised:
 Project: Butler, Brunswick
 Drafted By: TAF/LCV

Proposed Plan for Riprap and Areas of Vegetaion Removal for the Carol Blyberg Trust located at 15 Monument Lane and Katherine Butler located at 19 Monument Lane in Brunswick, Maine.

Sheet
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 5



LEGEND

	PROPERTY LINE
	HIGHEST ANNUAL TIDE LINE (HAT)
	MEAN HIGH WATER
	MEAN LOW WATER
	CONSTRUCTION ACCESS
	AREAS OF RIPRAP 3' BELOW HAT
	AREAS OF SHRUBS/GRASSES TO BE REMOVED
	FRINGING SALT MARSH
	AREAS OF RIPRAP 1' BELOW HAT

REVEGETATION PLAN

QTY.	BOTANICAL NAME AND SYMBOL	COMMON NAME	SIZE	SPACING
+/- 25	JUNIPERUS HORIZONTALIS 	CREEPING JUNIPER	#1	3' O.C.
+/- 15	MYRICA PENNSYLVANICA 	BAYBERRY	#3	3' O.C.
+/- 15	VACCINIUM CORYMBOSUM 	HIGHBUSH BLUEBERRY	#3	3' O.C.
2	ACER RUBRUM 	RED MAPLE	2" CAL	3' O.C.
1	BETULA PAPYRIFERA 	WHITE BIRCH	2" CAL	3' O.C.
--	NEW ENGLAND EROSION CONTROL RESTORATION SEED MIX	--	SEED MIX	--
TOTAL = 58 PROPOSED PLANTINGS				

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Date: 8/14/2020
Revised:
Project: Butler, Brunswick
Drafted By: TAF/LCV

Proposed Revegetation Plan for Katherine Butler located at 19 Monument Lane in Brunswick, Maine.

Sheet
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EXHIBIT 6.0: CONSTRUCTION PLAN

Access will take place from the Applicant's property beginning at the location of the existing access stairs. Equipment will travel along the shore to the adjacent property. The contractor performing the work will place construction mats as necessary to traverse a small fringing salt marsh that is unavoidable.

Vegetation along the bank will remain intact except for the vegetation proposed to be removed and depicted on Sheet 3 of the Project Plans. This includes two (2) Red Maple trees (*Acer rubrum*) that measure 7" dbh and 8" dbh, respectively. In addition, one (1) triple trunk White Birch (*Betula papyrifera*) and three (3) areas of shrubs will need to be removed in order to construct the project. The three shrub areas consist of Daylilies (*Hemerocallis spp.*), Jewelweed (*Impatiens capensis*), and Multiflora Rose (*Rosa multiflora*).

The banks will be graded to achieve a 1H : 1V slope and geotextile fabric will be placed behind the stone. Large diameter, irregular stones (approximately 2 – 4 feet) will be dug into a trench or pinned to ledge at the base of the slope, where applicable, and placed at a height of approximately one (1) to three (3) feet (as measured from the HAT). The entire area of riprap is located with the SPO and SPO-RP (2 Acre 20% Steep Slope) and SPO-RP (FEMA 100 Flood [Tidal-River]). The area of earthmoving and filling for the construction of the riprap is approximately one thousand seven hundred (1700) cubic feet (63 cubic yards) for the construction of the riprap and approximately five hundred and forty (540) cubic feet (20 cubic yards) for loam associated with the revegetation plan in these zoning districts.

Upon completion of the riprap, the Applicant proposes to place plants along the face of the bank, in areas that are disturbed during construction, and along the top of the bank. The plants will be spaced approximately three (3) feet on center, depending on the size and type of

plant. Native plant species may include but not be limited to the following: Creeping Juniper (*Juniperus horizontalis*), Northern Bayberry (*Myrica pensylvanica*), and Highbush Blueberry (*Vaccinium corymbosum*), White Birch (*Betula papyrifera*), and Red Maple (*Acer rubrum*). The approximate location and number of plants is shown on Sheet 4 and plants will be installed during the growing season at the completion of construction.

The contractor working on-site will have a Maine DEP Erosion Control Certified Individual onsite during all construction activity.

EXHIBIT 7.0: EROSION CONTROL PLAN

The Applicant proposes to minimize potential erosion at the site through the use of construction mats. At the completion of construction, any areas of soil disturbance will be stabilized with vegetation and mulch in accordance with the Department's permanent soil stabilization BMPs published in the most recent version of the Maine Erosion and Sediment Control BMPs manual.

REVIEW STANDARDS – TOWN OF BRUNSWICK ZONING ORDINANCE

CHAPTER 2 (14) – STRUCTURES AND OTHER ACTIVITIES EXTENDING OVER OR BELOW A WATER BODY OR WITHIN A WETLAND OR SHORELINE STABILIZATION AREA.

2.14.A No more than one (1) pier, dock, wharf, or similar structure extending over or located below the normal high-water line of a water body, or within a wetland or shoreline stabilization area is permitted on a single lot; excepting on single lots having a lot width at least twice the required lot width of the base zoning district and at least twice the minimum shore frontage as specified in Table 4.2.5.F(1), a second structure may be permitted and may remain as long as the lot is not further divided.

The Applicant does not propose to construct a dock on their property. The reconstructed access stairs will be located in the same location and will not extend below the normal high-water line of the coastal wetland.

2.14.B Access from shore shall be developed on soils appropriate for such use and constructed so as to control erosion.

Access will take place from the upland and the existing stairs will be removed to allow the contractor to access the toe of the slope. The majority of the upper intertidal is ledge and mixed coarse and fines. In areas of fringing marsh vegetation, the contractor will utilize construction mats to minimize erosion. All work will be conducted at low tide.

2.14.C The location shall not interfere with existing developed or natural beach areas.

The proposed location is not located over a developed or natural beach area.

2.14.D The structure or activity shall be located so as to minimize adverse effects on fisheries as determined by the Marine Resource Officer or designee.

The proposed riprap has been designed to limited areas at the base of the slope. Areas above this will be planted with vegetation. In order to minimize potential impacts to shellfish, excess soil will be reused along the face and top of the bank. In addition, the project is under review by the Department of Inland Fisheries and Wildlife (MDIFW) and the Department of Marine Resources (DMR) as part of the Department of Environmental Protection (MDEP) review process. Any recommendations by these agencies will be incorporated into the design of the proposed riprap. The project was also reviewed by the US Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and the Environmental Protection Agency (EPA) during the Army Corps of Engineers (ACOE) process. These review agencies did not identify any adverse effects to these resources as a result of the proposed modifications.

2.14.E The structure or activity shall be no larger in dimension than necessary to carry on the activity and be consistent with the surrounding character and uses of the area. A temporary pier, dock, or wharf shall not be wider than six (6) feet for noncommercial uses.

The stabilization is limited to the base of the slope and the stones used will be selected to blend into the existing ledge in the area.

2.14.F No new structure shall be built on, over, or abutting a pier, wharf, dock, or other structure extending beyond the normal high-water line of a water body or within a wetland or shoreline stabilization area unless the structure requires direct access to the water body or wetland or shoreline stabilization area as an operational necessity.

The Applicant does not propose to construct a new structure on, over, or abutting a dock.

2.14.G New permanent piers and docks on non-tidal waters shall not be permitted unless it is clearly demonstrated to the Code Enforcement Officer that a temporary pier or dock is not feasible, and a permit has been obtained from the Maine Department of Environmental Protection pursuant to the Natural Resources Protection Act, Title 38 M.R.S., § 480-C, as amended.

The project does not involve a dock on non-tidal waters.

2.14.H A structure constructed on a float is prohibited unless it is designed to function as a watercraft and is registered as such with the Maine Department of Inland Fisheries and Wildlife.

The Applicant does not propose to construct a structure on a float.

2.14.I No existing structures built on, over, or abutting a pier, dock, wharf, or other structure extending beyond the normal high-water line of water body or within a wetland shall be converted to residential dwelling units.

The Applicant does not propose to convert any existing structures on, over, or abutting a dock to a residential dwelling unit.

2.14.J Structures built on, over, or abutting a pier, wharf, dock, or other structure extending beyond the normal high-water line of a water body or within a wetland or shoreline stabilization area shall not exceed 20 feet in height above the pier, wharf, dock, or other structure.

The Applicant does not propose to construct a structure on, over, or abutting a dock.

2.14.K Commercial marine activities and piers, docks, wharves, breakwaters, causeways, marinas, bridges, and other structures projecting into water bodies shall conform to the supplementary use standards in Subsection 3.4.1.S.

The project does not involve a dock.

2.14.L Vegetation may be removed in excess of the standards in Subsection 2.3.3.C.(11) in order to stabilize an eroding shoreline, provided that prior to such removal, the proposed activity is reviewed onsite and approved by the Code Enforcement Officer. Construction equipment shall access the shoreline by barge when feasible, as determined by the Code Enforcement Officer.

i. When necessary, the removal of trees and other vegetation to allow for construction equipment access to the stabilization site by land shall be limited to no more than 12 feet in width. Upon completion of the stabilization activity, the area cleared for construction

equipment access shall be restored with native trees and other vegetation, in accordance with a plan submitted to and approved by the Code Enforcement Officer.

ii. Revegetation shall be completed in accordance with Subsection 2.3.3.C (10).

The majority of existing vegetation will remain along the face of the slope. The project will require the removal of three (3) trees as outlined on Sheet 4 and approximately seventy-five (75) square feet of shrubs and grasses; however, vegetation will not be removed in excess of the standards of Subsection 2.3.3.C.(11). A revegetation plan is included in Sheet 4 and as part of the stabilization efforts, the Applicant intends to add additional vegetation along the face of the slope and at the top of the bank. That effort exceeds the minimum planting standards. The trees that will be removed along the face of the slope will be replanted at the top of the bank given stability concerns by replanting them along the face. The plantings will be monitored to ensure an 80% survival rate over a five (5) year period.

2.14.M A deck over a river may be exempt from the 125 foot shoreland setback requirement for new construction if the new construction is part of a downtown revitalization project, defined in a project plan and approved by Town Council. This may include the revitalization of structures formerly used as mills that do not currently meet the structure setback requirements, if the proposed deck complies with the following:

- i. The total deck area attached to the structure does not exceed 700 square feet;**
- ii. The deck is cantilevered over a river segment that is located within the boundaries of the downtown revitalization project area;**
- iii. The deck is attached or accessory to a permitted commercial use in a structure constructed prior to 1971 and is located within the boundaries of the downtown revitalization project area;**
- iv. The deck construction complies with all other applicable standards, with the exception of shoreland setback requirements contained in Subsection 2.3.3.(C); and**
- v. The deck construction complies with all other local, State and Federal laws and regulations.**

The Applicant does not propose to construct a deck.

Chapter 4: Property Development Standards

4.2 DIMENSIONAL AND DENSITY STANDARDS

The riprap will extend to the property lines; however, the proposed project is an allowable encroachment on the rear or side setbacks as noted in Table 4.2.5.B(4)c.

4.3 NATURAL AND HISTORIC AREAS

It is unavoidable to locate the shoreline stabilization outside the coastal wetland given the nature of the project. The Highest Annual Tide (HAT), Mean High Water (MHW), and Mean Low Water (MLW) are shown on the project plans.

The area is mapped in steep slopes; however, the proposed riprap has been minimized along the face of the slope. In addition, the Applicant will ensure the site is stabilized at the

completion of construction in accordance with the Maine Department of Environmental Protection's Best Management Practices.

The project does not propose to impact the quality or quantity of groundwater.

The project has received approval from the ACOE. During the review process, it was determined the Applicant has avoided and minimized impacts to the coastal wetland to the greatest extent practicable. In addition, it was determined there would not be an adverse effect on the water quality or functions and values of the coastal wetland.

The project was reviewed by the Maine Historic Preservation Commission (MHPC) and the five tribes. These entities did not identify concerns with the proposed project and historical resources.

4.4 FLOOD HAZARD AREAS

The proposed project is located within a Special Flood Hazard area. The Applicant has included a Floodplain Development permit application that complies with Subsection 2.3.4.

4.5.1. SEWAGE DISPOSAL

The Applicant does not propose sewage disposal as part of the project.

4.5.2 WATER SUPPLY AND QUALITY

The Applicant does not propose to modify the existing water supply and/or quality as part of the project.

4.5.3. SOLID WASTE DISPOSAL

The proposed project will not increase solid waste.

4.5.4 STORMWATER MANAGEMENT

The Applicant will take appropriate measures to ensure the site is stabilized at the completion of construction. No formal stormwater management structures are proposed.

4.6 LANDSCAPING REQUIREMENTS

The project does not propose a cleared opening to the water. The planting plan includes native vegetation that will be planted three (3) feet on center and plants will be monitored for five years to ensure an 80% survival rate.

4.7. RESIDENTIAL RECREATION REQUIREMENTS

The proposed project does not involve the construction of a dwelling unit. Therefore, no impact fee or reserved land is proposed.

4.8 CIRCULATION AND ACCESS

The proposed project will not increase traffic and does not propose to modify the existing access. There are no public rights of access to the shoreline at the project site.

4.9 PARKING AND LOADING

The proposed project does not propose additional parking areas.

4.10 LIGHTING

The project does not propose lighting.

4.11 ARCHITECTURAL COMPATIBILITY

The project is consistent with marine shoreline construction standards. The riprap that will be selected will blend into the existing ledge that is located in the upper intertidal area. Plantings will be placed to further stabilize the shoreline and also screen the top sections of the riprap.

4.12 NEIGHBORHOOD PROTECTION STANDARDS

As stated, the design is consistent with neighboring structures.

4.13 SIGNS

The project does not propose any signs.

4.14 PERFORMANCE STANDARDS

The Applicant proposes to comply with the performance standards outlined in this section.

4.15 SITE FEATURE MAINTENANCE

The vegetation will be monitored for five (5) years to ensure an 80% survival rate of the proposed vegetation.

4.16 FINANCIAL AND TECHNICAL CAPACITY

The Applicant has the financial capacity to construct the stabilization project. The project will be constructed by Linkel Construction based in Topsham, Maine.

5.1.6.B PERFORMANCE GUARANTEE

No public infrastructure is proposed; therefore, no performance guarantee is anticipated to be required.

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

Monument Lane Soil Survey



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

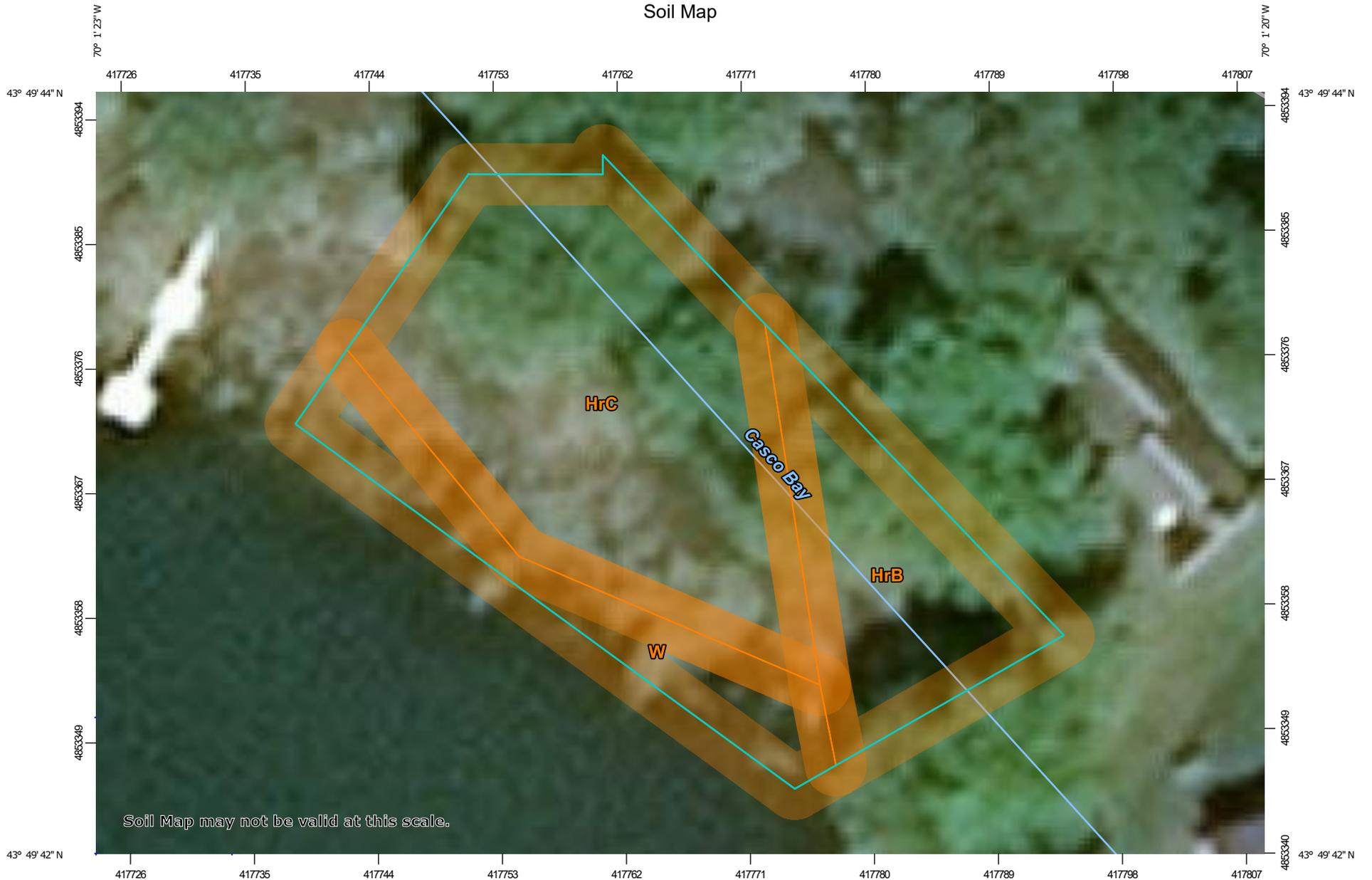
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

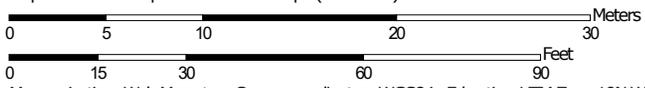
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:388 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
 Survey Area Data: Version 17, Jun 5, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 7, 2019—Jul 2, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	0.1	23.5%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	0.2	60.3%
W	Water	0.1	16.3%
Totals for Area of Interest		0.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

Custom Soil Resource Report

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

HrB—Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2x1cx

Elevation: 0 to 520 feet

Mean annual precipitation: 36 to 65 inches

Mean annual air temperature: 36 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Lyman and similar soils: 50 percent

Tunbridge and similar soils: 30 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Shoulder, backslope, summit

Landform position (three-dimensional): Crest, nose slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loam

E - 3 to 5 inches: fine sandy loam

Bhs - 5 to 7 inches: loam

Bs1 - 7 to 11 inches: loam

Bs2 - 11 to 18 inches: channery loam

R - 18 to 79 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: 11 to 24 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

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Hydric soil rating: No

Description of Tunbridge

Setting

Landform: Hills, ridges

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material

Oa - 3 to 5 inches: highly decomposed plant material

E - 5 to 8 inches: fine sandy loam

Bhs - 8 to 11 inches: fine sandy loam

Bs - 11 to 26 inches: fine sandy loam

BC - 26 to 28 inches: fine sandy loam

R - 28 to 79 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: 21 to 41 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Ragmuff

Percent of map unit: 10 percent

Landform: Ridges, hills

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Base slope, side slope

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Abram

Percent of map unit: 5 percent

Landform: Hills, ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Nose slope, crest

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Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Peru

Percent of map unit: 4 percent
Landform: Hills, ridges
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Hills, ridges
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Nose slope, crest, free face
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

HrC—Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky

Map Unit Setting

National map unit symbol: 2x1cy
Elevation: 0 to 520 feet
Mean annual precipitation: 36 to 65 inches
Mean annual air temperature: 36 to 52 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Lyman and similar soils: 45 percent
Tunbridge and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lyman

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

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Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loam
E - 3 to 5 inches: fine sandy loam
Bhs - 5 to 7 inches: loam
Bs1 - 7 to 11 inches: loam
Bs2 - 11 to 18 inches: channery loam
R - 18 to 79 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 11 to 24 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Tunbridge

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy supraglacial till derived from granite and gneiss and/or loamy supraglacial till derived from phyllite and/or loamy supraglacial till derived from mica schist

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material
Oa - 3 to 5 inches: highly decomposed plant material
E - 5 to 8 inches: fine sandy loam
Bhs - 8 to 11 inches: fine sandy loam
Bs - 11 to 26 inches: fine sandy loam
BC - 26 to 28 inches: fine sandy loam
R - 28 to 79 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: 21 to 41 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 14.03 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Ragmuff

Percent of map unit: 5 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Abram

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Peru

Percent of map unit: 4 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Ridges, hills
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Nose slope, crest, free face
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Setting

Landform: Lakes

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

MAINE GENERAL PERMIT (GP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

KATHERINE BUTLER
8 BUNGANUC LANDING
BRUNSWICK, MAINE 04011

CORPS PERMIT # NAE-2020-01547
CORPS GP ID# 20-333
STATE ID# NRPA

DESCRIPTION OF WORK:

To place fill at or below the highest annual tide line of Maguoi Bay off 19 Monument Lane, Map MP-1 Lot#8, Brunswick, Maine in conjunction with the construction of a 95 linear foot bank stabilization project as shown on plans entitled "Katherine Butler" on 3 sheets dated "06-1-2020", revised "06-29-2020". Approximately 300SF (0.007acres) of coastal wetland will be permanently impacted in conjunction with the placement of riprap in addition to approximately 1,296SF (0.03acres) of temporary impact associated with the 12 x 108 access to the site.

GENERAL and SPECIAL CONDITIONS: SEE ATTACHED SHEET

LAT/LONG COORDINATES: 43.828972° N -70.022727° W USGS QUAD: BRUNSWICK, MAINE

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP).** Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 37 of the GP (page 16) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 13, 2020. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 13, 2021.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [], ISSUED [], DENIED [] DATE _____

APPLICATION TYPE: PBR: _____, TIER 1: _____, TIER 2: _____, TIER 3: , LURC: _____, DMR LEASE: _____, NA: _____

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 06/25/2020 LEVEL OF REVIEW: CATEGORY 1: _____ CATEGORY 2:

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 _____, 404 _____, 10/404 , 103 _____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA_NO _____, USF&WS_NO _____, NMFS_NO _____

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at <http://per2.nwp.usace.army.mil/survey.html>

LEEANN B. NEAL
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

FOR: FRANK J. DEL GIUDICE DATE _____
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION



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

**PLEASE NOTE THE FOLLOWING GENERAL and SPECIAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
GENERAL PERMIT
NO. NAE-2020-01547**

GENERAL CONDITIONS

1. Other Permits: Permittees must obtain other federal, state, or local authorizations required by law. Applicants are responsible for applying for and obtaining all required state or local approvals. This includes, but is not limited to, the project proponent obtaining a Flood Hazard Development Permit issued by the town, if necessary. Inquiries may be directed to the municipality or to the Maine Floodplain Management Coordinator at (207) 287-8063. See <http://www.maine.gov/dacf/flood>.

26. Permit on Site: The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

28. Inspections: The permittee shall allow the Corps to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this GP and any written verification. To facilitate these inspections, the permittee shall complete and return to the Corps the following forms: a) Work-Start Notification Form and b) Compliance Certification Form, when either is provided with the authorization letter. These forms are attached after the plans.

SPECIAL CONDITIONS

1. Any equipment that must traverse vegetated wetland, shall be supported by mats or low ground pressure equipment. Any side casting of excavated material from trenching activity shall be placed on geotextile fabric to avoid direct impacts to the marsh vegetation.
2. Placement of fill below the high tide line associated with the riprap shall be conducted during times of low tide when the work area is above the tide in order to minimize suspended sediment in the water column and effect to species present in the work area; and during frozen ground conditions to minimize permanent impact to the adjacent salt marsh vegetation.