

Horsley Witten Group

Sustainable Environmental Solutions

90 Route 6A, Unit 1 • Sandwich, MA • 02563

Phone - 508-833-6600 • Fax - 508-833-3150 • www.horsleywitten.com



Notice of Intent Morses Pond Shoreline Stabilization Project

Wellesley, Massachusetts

April 2018



Prepared for:

Brandon Schmitt, Director

Wellesley Natural Resources Commission

525 Washington Street

Wellesley, MA 02482

Prepared by:

Horsley Witten Group, Inc.



April 10, 2018

Wellesley Wetlands Protection Committee
525 Washington Street
Wellesley, MA 02482

**Re: Notice of Intent Application – Morses Pond Shoreline Stabilization Project
Wellesley, Massachusetts**

Dear Members of the Wetlands Protection Committee:

On behalf of the Applicant, the Town of Wellesley, the Horsley Witten Group, Inc. (HW) is submitting the enclosed Notice of Intent (NOI) and supporting materials for erosion control and bank stabilization improvements at Morses Pond in Wellesley.

This shoreline stabilization project involves restoring and stabilizing eleven prioritized erosion sites along Morses Pond shoreline (*Morses Pond Erosion Study, 2016*). Morses Pond has been impacted by stormwater-related pollutants including sediment and phosphorus. This project is part of a town-wide water quality improvement effort including in-pond measures and watershed measures to preserve the long-term quantity and quality of drinking water.

Portions of this project will occur within Inland Bank, Bordering Land Subject to Flooding (BLSF) and within the buffer zone to Bank. Proposed activities will also include work within the locally-regulated 100-foot Buffer Zone, including a 25-foot No-Disturbance Zone, 75-foot Limited-Disturbance Zone, as well as the 200-foot Buffer Zone to BLSF. These jurisdictional areas are regulated under the Massachusetts *Wetlands Protection Act* (M.G.L. Ch. 131 § 40) and the Town of Wellesley Wetlands Protection Bylaw (Article 44) and associated Regulations. It is anticipated that the entire project will result in an overall improvement to the interests protected by these resource areas and to Morses Pond as a whole. Details of the proposed project are shown on the enclosed site plans, entitled “Morses Pond Shoreline Stabilization Permitting Plans, Wellesley, Massachusetts” dated April 2018, and described in the attached project narrative.

The proposed activities are intended to restore and stabilize the bank and buffer zones, improve water quality, increase habitat value and improve ecological connectivity. Accordingly, the proposed project will result in a net improvement to the resource areas, which is consistent with the intent and purpose of the Bylaw and its regulations. Ten of the sites are on Town-owned property and one is owned by the Wellesley Conservation Council.

Enclosed please find seven copies of the NOI application, supporting documentation, and site plans. As this is a municipal project, the state filing fees are exempt. The Applicant has also sent notification of the pending public hearing to abutters in accordance with local filing regulations.

Wellesley Wetlands Protection Committee

April 10, 2018

Page 2 of 2

Thank you in advance for your review of this NOI application. If you have any questions and/or require additional information pertaining to this submittal, please contact me at (508) 833-6600 or at mwest@horsleywitten.com. We look forward to meeting with you for a public hearing on April 12, 2018.

Sincerely,

Horsley Witten Group, Inc.

A handwritten signature in cursive script that reads "Michelle J. West".

Michelle West, P.E.
Project Manager

Enclosures

cc: MassDEP, Northeast Regional Office
Brandon Schmitt, Wellesley Natural Resources Commission
Dave Hickey, Town Engineer
Fred Fortmiller, Wellesley Conservation Council



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number
WELLESLEY

City/Town

Important:
 When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
 Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

1000 Worcester Street, Morses Pond - Multiple sites around the pond

 Latitude and Longitude:
 multiple:184-1, 183-4, 182-76, 192-28&30, 193-10

Wellesley

 b. City/Town

02482

 c. Zip Code

42.299329

 d. Latitude

-71.318951

 e. Longitude

 g. Parcel /Lot Number

2. Applicant:

Brandon

 a. First Name

Schmitt

 b. Last Name

Wellesley Natural Resources Commission

 c. Organization

525 Washington Street

 d. Street Address

Wellesley

 e. City/Town

MA

 f. State

02482

 g. Zip Code

781-431-1019

 h. Phone Number

 i. Fax Number

nrc@wellesleyma.gov

 j. Email Address

3. Property owner (required if different from applicant): Check if more than one owner

Town of Wellesley

 a. First Name

 b. Last Name

 c. Organization

525 Washington Street

 d. Street Address

Wellesley

 e. City/Town

MA

 f. State

02482

 g. Zip Code

781-431-1019

 h. Phone Number

 i. Fax Number

 j. Email address

4. Representative (if any):

Michelle

 a. First Name

West

 b. Last Name

Horsley Witten Group, Inc.

 c. Company

90 Route 6A

 d. Street Address

Sandwich

 e. City/Town

MA

 f. State

02563

 g. Zip Code

508-833-6600

 h. Phone Number

 i. Fax Number

mwest@horsleywitten.com

 j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

Exempt

 a. Total Fee Paid

 b. State Fee Paid

 c. City/Town Fee Paid



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

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Document Transaction Number

WELLESLEY

City/Town

A. General Information (continued)

6. General Project Description:

Proposed erosion control, bank restoration and stabilization for 11 sites on Morses Pond. The goal is to improve pond water quality by reducing the stormwater-related pollutants, sediment and nutrients that currently impact the pond. Ten of these are on Town-owned property and one is owned by the Wellesley Conservation Council.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

- 1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Norfolk

a. County

See attached table.

c. Book

b. Certificate # (if registered land)

See attached table.

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- 1. Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2. Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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WELLESLEY

City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input checked="" type="checkbox"/> Bank	319 1. linear feet	0 2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	4,232 1. square feet 3. cubic feet of flood storage lost	1,625 2. square feet 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
- 100 ft. - New agricultural projects only
- 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

6. Was the lot where the activity is proposed created prior to August 1, 1996? Yes No

3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



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City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	

	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	
	1. square feet	_____
		2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	
	1. square feet	_____
		2. cubic yards dune nourishment

	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	
	1. square feet	_____
		2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	

	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	

	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	

4. Restoration/Enhancement
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings



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C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

- Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:**

**Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581**

August 2017
b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

c. Submit Supplemental Information for Endangered Species Review*

- Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage
- Assessor's Map or right-of-way plan of site

- Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
 - (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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C. Other Applicable Standards and Requirements (cont'd)

- (c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) Vegetation cover type map of site
- (e) Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following
1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
 2. Separate MESA review ongoing. _____ a. NHESP Tracking # _____ b. Date submitted to NHESP
 3. Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.
3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. Not applicable – project is in inland resource area only b. Yes No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase Street – 3rd Floor
New Bedford, MA 02740-6694
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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Provided by MassDEP:

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WELLESLEY

City/Town

C. Other Applicable Standards and Requirements (cont'd)

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
a. Yes No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
a. Yes No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
2. A portion of the site constitutes redevelopment
3. Proprietary BMPs are included in the Stormwater Management System.
b. No. Check why the project is exempt:
1. Single-family house
2. Emergency road repair
3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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Provided by MassDEP:
MassDEP File Number
Document Transaction Number
WELLESLEY
City/Town

D. Additional Information (cont'd)

- 3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
- 4. List the titles and dates for all plans and other materials submitted with this NOI.

<u>Morses Pond Shoreline Stabilization Permitting Plans, Wellesley, Massachusetts</u>	
a. Plan Title	
<u>Horsley Witten Group, Inc.</u>	<u>Richard Claytor, P.E.</u>
b. Prepared By	c. Signed and Stamped by
<u>April 10, 2018</u>	<u>1 inch = 20 feet</u>
d. Final Revision Date	e. Scale
<u>Morses Pond Shoreline Stabilization Project - Project Narrative</u>	<u>April 2018</u>
f. Additional Plan or Document Title	g. Date
- 5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
- 6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
- 7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
- 8. Attach NOI Wetland Fee Transmittal Form
- 9. Attach Stormwater Report, if needed.

E. Fees

- 1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

<u>2. Municipal Check Number</u>	<u>3. Check date</u>
<u>4. State Check Number</u>	<u>5. Check date</u>
<u>6. Payor name on check: First Name</u>	<u>7. Payor name on check: Last Name</u>



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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Provided by MassDEP:

MassDEP File Number

Document Transaction Number

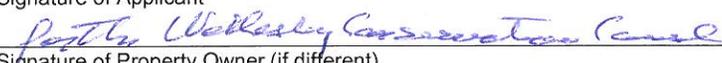
WELLESLEY

City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

	
1. Signature of Applicant	2. Date
	
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any)	6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

1000 Worcester Street, Morses Pond
 a. Street Address
 Wellesley
 b. City/Town

 c. Check number

 d. Fee amount

2. Applicant Mailing Address:

Brandon
 a. First Name
 Schmitt
 b. Last Name
 Wellesley Natural Resources Commission
 c. Organization
 525 Washington Street
 d. Mailing Address
 Wellesley
 e. City/Town
 MA
 f. State
 02482
 g. Zip Code
 781-431-1019
 h. Phone Number

 i. Fax Number
 nrc@wellesleyma.gov
 j. Email Address

3. Property Owner (if different):

Town of Wellesley
 a. First Name

 b. Last Name

 c. Organization
 525 Washington Street
 d. Mailing Address
 Wellesley
 e. City/Town
 MA
 f. State
 02482
 g. Zip Code
 781-431-1019
 h. Phone Number

 i. Fax Number

 j. Email Address

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

B. Fees

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Fee Exempt			

Step 5/Total Project Fee: _____

Step 6/Fee Payments:

Total Project Fee: Fee Exempt
 a. Total Fee from Step 5

State share of filing Fee: _____
 b. 1/2 Total Fee **less** \$12.50

City/Town share of filing Fee: _____
 c. 1/2 Total Fee **plus** \$12.50

C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

WPA Form 3, Section A. General Information

3. Property owners

Town of Wellesley
525 Washington Street
Wellesley, MA 02482

Wellesley Conservation Council, Inc.
PO Box 81129
Wellesley Hills, MA 02481

8. Property recorded at the Registry of Deeds for:

Norfolk County

Site ID	Parcel ID	Book:Page	Owner
MP-9	184-1	1926:173	Town of Wellesley
MP-10	184-1	1926:173	Town of Wellesley
MP-11	183-4	360-?	Town of Wellesley
MP-12	183-4	360-?	Town of Wellesley
MP-13	183-4	360-?	Town of Wellesley
MP-16	182-76	Unavailable	Town of Wellesley
MP-17	192-30	Unavailable	Town of Wellesley
MP-18	192-28	3800:380-1960	Wellesley Conservation Council, Inc.
MP-20	193-10	1926:173	Town of Wellesley
MP-21	182-76	Unavailable	Town of Wellesley
MP-22	182-76	Unavailable	Town of Wellesley

WPA Form 3, Section D. Additional Information

D. 5. Property Owners

Town of Wellesley
525 Washington Street
Wellesley, MA 02482

Wellesley Conservation Council, Inc.
PO Box 81129
Wellesley Hills, MA 02481

**Town of Wellesley
Wetland Protection Bylaw (Section 44)
Notice of Intent**

Applicant Name & Address: Brandon Schmitt, Director of Wellesley Natural Resource Commission
525 Washington Street
Wellesley, MA 02482
 Phone: 781-431-1019

Property Owner Name & Address: _____

 Phone: _____

Applicant's Representative: Michelle West
Horsley Witten Group, Inc.
90 Route 6A
Sandwich, MA 02563
 Phone: 508-833-6600

Mail *Original Order of Conditions* to: Applicant *or* Applicant's Representative

- This application *is* **not** being filing simultaneously with a Notice of Intent under the Massachusetts Wetlands Protection Act (please circle one).
- Additional Resource Areas subject to the Wellesley Wetland Protection Bylaw are listed below. **Please check all that apply. Attach a narrative** and supporting documentation describing how project will meet all Bylaw performance standards for each resource area altered.

<u>Resource Area</u>	<u>Resource Area Size</u>	<u>Proposed Alteration*</u>	<u>Proposed Mitigation</u>
a. <input type="checkbox"/> <i>Intermittent Stream</i>	<u>Linear feet</u>	<u>Linear feet</u>	<u>Linear feet</u>
b. <input type="checkbox"/> <i>Isolated Wetland (2,500+ sq ft)</i>	<u>Square feet</u>	<u>Square feet</u>	<u>Square feet</u>
c. <input type="checkbox"/> <i>Isolated Land Subject to Flooding</i>	<u>Square feet</u>	<u>Square feet</u>	<u>Square feet</u>
d. <input type="checkbox"/> <i>Vernal Pool Habitat (vernal pool + 100 ft. upland area)</i>	<u>Square feet</u>	<u>Square feet</u>	<u>Square feet</u>
e. <input type="checkbox"/> <i>100-foot Buffer Zone (Bylaw Resource Area):</i>	<u>Square feet</u>	<u>Square feet</u>	<u>Square feet</u>
<input checked="" type="checkbox"/> <i>(a) land area within 25-ft. No-Disturbance Zone</i>	<u>Square feet</u>	<u>Square feet</u>	<u>Square feet</u>
<input checked="" type="checkbox"/> <i>(b) land area within 75-ft. Limited-Disturbance Zone (i.e. between 25 ft. and 100 ft. from wetland)</i>	<u>Square feet</u>	<u>Square feet</u>	<u>Square feet</u>

3. Does any portion of the proposed project require a waiver from the Bylaw's performance standards for vernal pools or buffer zones?

Yes No ***If yes, complete and submit a Request for Wellesley Wetland Regulations Waiver Form with this Notice of Intent.***

4. **Does the proposed project require a Drainage Review under Wellesley's Bylaws, Sec. XVIC?**
(**Note:** All projects, not otherwise subject to Section XVIA (Site Plan Approval), involving grading or re-grading of land to planned elevations and/or removal or disturbance of the existing vegetative cover, **over an area of one acre or more** require a Drainage Review under Section XVIC.)

Yes No ***If yes, submit a grading and drainage plan with this Notice of Intent***

5. Total Wellesley Wetland Bylaw Fee (from fee transmittal form): \$_____

Wellesley Bylaw Fee Check Number

Check date

Payor name on check: First Name

Payor name on check: Last Name

Submittal Requirements: **Seven copies** of this form (and WPA Form 3 if applicable), including all supporting plans and documents and pages 1 and 2 of the Notice of Intent Wetland Fee Transmittal Form (if applicable) shall be submitted to the Wellesley Wetlands Protection Committee by certified mail or hand delivery. All applications shall be accompanied by the bylaw filing fee (from 5 above) made payable to the Town of Wellesley, one copy of the list of abutters and one copy of the abutter notification form. For Applications filed under the Massachusetts Wetlands Protection Act, a separate check made payable to the Town of Wellesley for the Town portion of the State filing fee (noted on WPA Form 3 Wetland Fee Transmittal form) shall be submitted at the time of filing.



Town of Wellesley Wetlands Protection Committee
Request for Wetland Regulations Waiver
OF WELLESLEY WETLAND PROTECTION BYLAW, ARTICLE 44

File Number:

324-_____

REQUEST FOR WAIVER OF BUFFER ZONE PERFORMANCE STANDARDS

1. Are there any practicable alternative that provides less impact to the resource area values?
 No (if no, explain why) Yes (if yes, then waiver can not be granted)

2. Would a significant hardship be imposed upon the applicant in the absence of a waiver?
 No (if no, then waiver can not be granted) Yes (if yes, explain why)

Do not continue unless you have answered "no" to #1 and "yes" to #2, above.

Demonstrate, clearly and convincingly, how the proposed project meets the the following requirements for a waiver, consistent with the intent and purpose of the Bylaw and Regulations.

3. Demonstrate that there are no practicable and substantially equivalent economic alternatives to the proposed project that would have less harmful effects on the buffer zone's protected interests.

4. Explain how the proposed project, or its natural and consequential effects, will have the least adverse effects on the buffer zone that can be practicalby achieved.

5. Explain the proposed project's mitigation measures that will improve the capacity of the resource area's ability to achieve the interests protected by the Bylaw.



Town of Wellesley Wetlands Protection Committee
Request for Wetland Regulations Waiver
OF WELLESLEY WETLAND PROTECTION BYLAW, ARTICLE 44

File Number:

324-_____

REQUEST FOR WAIVER OF VERNAL POOL HABITAT PERFORMANCE STANDARDS

1. Are there any practicable alternatives that would provide less impact to the current habitat values?
 No (if no, explain why) Yes (if yes, then waiver can not be granted)

2. Would any functions of the vernal pool, as a breeding area for vernal pool dependent species, be impaired?
 No (if no, explain why) Yes (if yes, then waiver can not be granted)

Do not continue unless you have answered "no" to both #1 and #2, above.

Demonstrate, clearly and convincingly, how the proposed project meets the the following requirements for a waiver, consistent with the intent and purpose of the Bylaw and Regulations.

3. Explain how sufficient vernal pool and adjacent upland habitat will remain.

4. Explain how the proposed use and maintenance of the altered area will have no detrimental effect on the vernal pool's water quality or quantity.

5. Explain how the proposed use and maintenance of the altered area will have no detrimental effect on the quality of the remaining vernal pool habitat area.

6. Describe proposed mitigation (for example: enhancement or protection of remaining habitat for vernal pool breeders, inside or outside the limit of the Bylaw's vernal pool habitat area):



WETLANDS PROTECTION COMMITTEE

Town Hall, 525 Washington Street, Wellesley, Massachusetts 02482-5992

Requirements for submittal of a Notice of Intent

- Signed and dated cover letter
- Completed, signed and dated WPA Form 3, Notice of Intent (NOI)
- Completed NOI Wetland Fee Transmittal Form
- Completed Abutter Notification Form
- Proof of abutter notification (proof of mailing may be submitted at the first session of the hearing)
- Completed Affidavit of Service Form
- List of abutters
- Locus map with project site marked
- Completed Town of Wellesley Wetlands Protection Bylaw Notice of Intent for work in the Buffer Zone or Vernal Pool Habitat
- Completed Request for Wetlands Regulations Waiver for work in the 25' No Disturbance Zone
- exempt* Two checks payable to the Town of Wellesley (WPA and Bylaw fees)
- exempt* Copies of the two checks payable to the Town and the check payable to the Commonwealth of Massachusetts (WPA fee)
- n/a* A copy of the Tree Protection Plan if required under the Tree Protection Bylaw
- n/a* Stormwater Management Report
- Full size plans **with a legend** on a white background clearly showing the following:
 - Site boundaries
 - Scale between 1" = 10' and 1" = 50'
 - All Wetland Resource Areas and Buffer Zones (including the 25' No Disturbance Zone under the Bylaw)
 - Existing site and proposed work including stockpiles
 - Properly placed erosion control barriers including those for protecting nearby stormwater catch basins and details of the barriers
 - Details of proposed walls, fences, drywells, etc.
 - FEMA and/or Town flood lines if applicable
 - Methods to keep drainage on the site (infiltration systems, dry wells, etc.)
 - All trees proposed to be removed and/or trees to be protected
 - Stamped and Signed by a Professional Land Surveyor and/or Registered Professional Engineer
- Detailed narrative of the existing site
- Detailed narrative of all proposed work including descriptions of walls, drywells, fences, etc., in wetland resource areas (include increase in impervious cover)
- Detailed narrative of the delineation (who did it, when, what methods)
- Describe how the proposed project meets the Performance Standards for each Wetland Resource Area including the Buffer Zone under the Bylaw
- n/a* Report whether the project must go through Large House Review
- Report any encroachments onto any abutting Town land - *Project is on Town land*
- Detailed narrative or a formal plan for the management of invasive species (if applicable)
- Submit the original and 6 paper copies of the complete application package before the deadline*
- Submit 1 copy of the complete application package to MassDEP Northeast Region, 205B Lowell Street, Wilmington, MA 01887. (DEP filing fee gets sent to dropbox address)

The local newspaper (Wellesley Townsman or MetroWest Daily News) will bill the applicant directly for the required legal notice. The NRC Office staff will place the legal notice in the paper.

*Note: Wetlands hearings are typically held every three weeks. Application deadlines and meeting dates are posted on the Wetlands Protection Committee (WPC) website at <http://ma-wellesley.civicplus.com/DocumentCenter/View/1159>. Please contact Wetlands Administrator, Julie Meyer at jmeyer@wellesleyma.gov for further information. The applicant and/or applicant's representative should plan to attend the hearing to present the proposed work to the Committee.



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
Linden St. 123-84	Mass Bay Transportation Authority Trackage	50 High St. Boston, MA 02110
106 Central St. 137-18	Wellesley College Attn: Melissa S. Fletcher	106 Central Street Wellesley, MA 02481
Fisher Ave. 171-12	Town of Wellesley Natural Resources Department	525 Washington St. Wellesley, MA 02482
Weston Rd 172-78	Town of Wellesley	525 Washington St. Wellesley, MA 02482
53 Russell Rd 182-1	Ligor, John P & Barbara A	PO Box 812787 Wellesley, MA 02482
16 Bay View Rd 182-10	Bay View, LLC	838 Washington Street Holliston, MA 01746
20 Bay View Rd 182-11	Love-Lombardi, C & Love, Peter & Murray, Jennifer Love, Trustees	20 Bay View Road Wellesley, MA 02482
24 Bay View Rd 182-12	Hammer, Laurie	24 Bay View Road Wellesley, MA 02482
28 Bay View Rd 182-13	Chinitz, Leigh M & Reilly, Erin C. Trustees	28 Bay View Road Wellesley, MA 02482
30 Bay View Rd 182-14	Luniewicz, John R & Beckman, Sharon L	30 Bay View Road Wellesley, MA 02482
29 Bay View Rd 182-16	Sarni, James L, III	29 Bay View Road Wellesley, MA 02482
24 Shadow Lane 182-17	Vig, Katherine W L, Trustee Katherine W L Vig 2015 Fam Trust	24 Shadow Lane Wellesley, MA 02482

Town of Wellesley
Abutters List

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Conserv. Commission (300 ft)

Property Location	Owner of Record	Mailing Address
19 Bay View Rd 182-18	Hess, Donna E	19 Bay View Road Wellesley, MA 02482
15 Bay View Rd 182-19	Copplestone, Barry R & Copplestone, Priscilla P	15 Bay View Road Wellesley, MA 02482
7 Stonecleve Rd 182-2	Greene, Gary A & Linda E	7 Stonecleve Road Wellesley, MA 02482
11 Bay View Rd 182-20	Martin, Middleton Ansley, Jr & Martin, Jennifer Appleyard, Trstees	11 Bay View Road Wellesley, MA 02482
7 Bay View Rd 182-21	Ko, Alan C&Chen, Rung-Jen, Trstes Alan C Ko Living Trust	7 Bay View Road Wellesley, MA 02482
3 Bay View Rd 182-22	Chin, Wendy Yuen-Yee, Trustee Wendy Yuen-Yee Chin Trust	3 Bay View Road Wellesley, MA 02482
3 Stonecleve Rd 182-3	Greene, Gary A & Linda E	7 Stonecleve Road Wellesley, MA 02481
51 Russell Rd 182-4	Greene, John J & Mary M	15 Brook Street Sherborn, MA 01770
49 Russell Rd 182-5	Fortmiller, Frederick V & Fortmiller, Mary Jane	49 Russell Road Wellesley, MA 02482
45 Russell Rd 182-6	Hurwitz, Susan & Lessing, Miguel E	45 Russell Road Wellesley, MA 02482
36 Russell Rd 182-69	Baugh, Christopher & Amy	36 Russell Road Wellesley, MA 02482
4 Bay View Rd 182-7	Hurwitz, Susan & Twarog, Stanley A, Trustees	4 Bay View Road Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
38 Russell Rd 182-70	Medley, Quintus G & Thompson, Kay A	38 Russell Road Wellesley, MA 02481
40 Russell Rd 182-71	D'Ortenzio, Michael A & Karen P	40 Russell Road Wellesley, MA 02482
44 Russell Rd 182-72	Natansohn, Saul & Linda G	44 Russell Road Wellesley, MA 02482
18 Kendall Rd 182-73	Khoory, Juann	18 Kendall Road Wellesley, MA 02482
1 Kendall Rd 182-74	Oliveri, Joyce Mathews	67 Long Beach Road Centerville, MA 02632
50 Russell Rd 182-75	Lai, Leonard	50 Russell Road Wellesley, MA 02482
47 Russell Rd 182-76	Town of Wellesley	525 Washington St. Wellesley, MA 02482
8 Bay View Rd 182-8	Herlinger, Robert A & Herlinger, Patricia A, Trustees	8 Bay View Road Wellesley, MA 02482
12 Bay View Rd 182-9	Chow, David & Marie Keung	12 Bay View Road Wellesley, MA 02482
54 Russell Rd 183-1	Lai, Leonard	50 Russell Road Wellesley, MA 02482
77 Russell Rd 183-10	Kissam, Alexis A	77 Russell Road Wellesley, MA 02482
75 Russell Rd 183-11	Foglia, Paul M	75 Russell Road Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
73 Russell Rd 183-12	Gould, Amy J	73 Russell Road Wellesley, MA 02482
69 Russell Rd 183-13	Lomp, Donna V	15 Antonellis Circle Newton, MA 02459
1 Beach Rd 183-14	Ligor, John P, Trustee Ligor Realty Trust	1 Beach Road Wellesley, MA 02482
6 Bay Rd 183-15	Robinson, Margaret A	1 Lake Road Wellesley, MA 02482
1 Lake Rd 183-16	Robinson, Margaret A	1 Lake Road Wellesley, MA 02482
2 Lake Rd 183-17	Alevizos, Robert J, Trustee 21 Stonecleve Rd Realty Trust	2 Lake Rd Wellesley, MA 02482
1 A Lake Rd 183-18	Moskow, Neal L & Christina R	18 Whitethorn Drive Guilford, CT 06437
4 Lake Rd 183-19	Tappe, Diane D	PO Box 812068 Wellesley, MA 02482
58 Russell Rd 183-2	Cerrotti, Dennis & Seckel-Cerrotti, Janet	58 Russell Road Wellesley, MA 02482
16 Bay Rd 183-20	Greene, Michael T	16 Bay Road Wellesley, MA 02482
21 Stonecleve Rd 183-21	Bock, Scott M	21 Stonecleve Road Wellesley, MA 02482
19 Stonecleve Rd 183-22	Briggs, Lucinda E & Yesko, Mark	19 Stonecleve Road Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
17 Stonecleve Rd 183-23	Bandte, Oliver & Joanna	17 Stonecleve Road Wellesley, MA 02482
11 Stonecleve Rd 183-24	Wellesley Conservation Council Inc.	PO Box 81129 Wellesley, MA 02481
9 Stonecleve Rd 183-26	Golden, Chester J & Beverly	9 Stonecleve Road Wellesley, MA 02482
57 Russell Rd 183-27	Fan, Zhigang	36 Clark Street Malden, MA 02148
59 Russell Rd 183-28	Adams, Bryan N & Heather T	59 Russell Road Wellesley, MA 02482
10 Stonecleve Rd 183-29	Golden, Bruce D & Rosemarie R	10 Stonecleve Road Wellesley, MA 02482
64 Russell Rd 183-3	Greene, Gary A & Linda E	7 Stonecleve Road Wellesley, MA 02482
12 Stonecleve Rd 183-30	Tuttelman, Beverly C	12 Stonecleve Road Wellesley, MA 02482
16 Stonecleve Rd 183-31	Cave, Michael R	144 Weston Road Wellesley, MA 02482
18 Stonecleve Rd 183-32	Lai, Foong K & Chung, Kim N	18 Stonecleve Rd Wellesley, MA 02482
22 Stonecleve Rd 183-33	Salani, Thomas A & Linda C	22 Stonecleve Road Wellesley, MA 02481
3 Lake Rd 183-34	Arcuri, Adriano & Assuntina	242 Maynard Road Sudbury, MA 01776



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
5 Lake Rd 183-35	Greene, John J & Mary M	15 Brook Street Sherborn, MA 01770
Russell Rd 183-36	Town of Wellesley Tax Title	525 Washington St. Wellesley, MA 02482
7 Lake Rd 183-37	Du, Zijong & Xu, Yuehong	48 Philip Street Medfield, MA 02052
5 Bay Rd 183-38	Libby, Thomas & Donna	5 Bay Road Wellesley, MA 02482
3 Bay Rd 183-39	Ligor, Perry & Helander, Kerry	3 Bay Road Wellesley, MA 02482
Russell Rd 183-4	Town of Wellesley Water Department	20 Municipal Way Wellesley, MA 02481
1 Bay Rd 183-40	Greene, Tyler G	7 Stonecleve Road Wellesley, MA 02482
63 Russell Rd 183-41	Elliott, Mary A & Benoit, Nancy L, Co-Trustees	PO Box 1069 West Dennis, MA 02670
97 Russell Rd 183-5	Jacobs, Edward M & Michelle L	97 Russell Road Wellesley, MA 02482
95 Russell Rd 183-6	Hoang, Ngoc B & Insogna, Salvatore	95 Russell Road Wellesley, MA 02482
93 Russell Rd 183-7	Giezentanner, William D Landre, Elissa M	93 Russell Road Wellesley, MA 02482
89 Russell Rd 183-8	Magpiong, Glen & Jane F	89 Russell Road Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
81 Russell Rd 183-9	Jia, Long & Wang, Jiali	81 Russell Road Wellesley, MA 02482
99 Turner Rd 184-1	Town of Wellesley Natural Resources Department	525 Washington St. Wellesley, MA 02482
34 Bay View Rd 192-1	Clifford, Joan Ellen	34 Bay View Road Wellesley, MA 02482
2 Dale St. 192-11	Canoni, Gary R & Barbara P	1 Dale Street Wellesley, MA 02482
1 Dale St. 192-12	Canoni, Gary R & Barbara P	1 Dale Street Wellesley, MA 02482
3 Dale St. 192-13	Town of Wellesley Sewer Department	20 Municipal Way Wellesley, MA 02481
5 Dale St. 192-14	Town of Wellesley Sewer Department	20 Municipal Way Wellesley, MA 02481
930 Worcester St. 192-16	Sancomb, Herbert A & Marilyn E, Trstees Herbert A Sancomb Rev Trust	930 Worcester Street Wellesley, MA 02482
934 Worcester St. 192-17	Khan, Rehan	934 Worcester Street Wellesley, MA 02482
8 Ottaway Circle 192-18	Lew, William M & Lisa	8 Ottaway Circle Wellesley, MA 02482
2 Ottaway Circle 192-18-A	Yee, Wat Hing Kevin & Yuk Chun, Connie	2 Ottaway Circle Wellesley, MA 02482
10 Ottaway Circle 192-18-B	Zhu, Chen & Gu, Huawei	10 Ottaway Circle Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
1 Ottaway Circle 192-18-E	Zhang, Jian & Dongning Bai	1 Ottaway Circle Wellesley, MA 02482
36 Bay View Rd 192-2	Mariani, Peter H & Linda M	36 Bay View Road Wellesley, MA 02482
944 Worcester St. 192-26	Town of Wellesley	525 Washington St. Wellesley, MA 02482
5 R Dale St. 192-27	Town of Wellesley Natural Resources Department	525 Washington St. Wellesley, MA 02482
49 R Russell Rd 192-28	Wellesley Conservation Council Inc.	PO Box 81129 Wellesley, MA 02481
38 Bay View Rd 192-3	Hodge, Thomas	38 Bay View Road Wellesley, MA 02482
47 R Russell Rd 192-30	Town of Wellesley Natural Resources Department	525 Washington St. Wellesley, MA 02482
42 Bay View Rd 192-4	Feingold, Joseph, Trustee 42 Bay View Rd Real Estate Trust	42 Bay View Road Wellesley, MA 02482
44 Bay View Rd 192-5	Grignaffini, Louis A & J Michelle	44 Bay View Road Wellesley, MA 02482
45 Bay View Rd 192-6	Meng, Song	45 Bay View Road Wellesley, MA 02482
26 Pickerel Rd 193-1	Giller, E & Milkin, R, Trustees Eugene Giller 2016 Trust	26 Pickerel Road Wellesley, MA 02482
32 Pickerel Rd 193-2	Ciolfi, John E & Mai T	32 Pickerel Road Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
1 Pickerel Terr. 193-3	Osathanondh, Rapin & ONeill, Suellen, Trustees	1 Pickerel Terrace Wellesley, MA 02482
6 Pickerel Terr. 193-4	McCollum, Deed A & Broholm, Dale	6 Pickerel Terrace Wellesley, MA 02482
10 Pickerel Terr. 193-5	Hodges, Stanley G & Mary E, Trste Stanley G Hodges Trust 1996	10 Pickerel Terrace Wellesley, MA 02482
12 Pickerel Terr. 193-6	Franciose, Anthony R	298 Eliot Street Natick, MA 01760
9 Pickerel Terr. 193-8	Franciose, Anthony R, estate of	298 Eliot Street Natick, MA 07160
29 Pickerel Rd 193-9	Kressy, Matthew & Kara S	29 Pickerel Road Wellesley, MA 02482
33 College Rd 194-1	East-West Enterprises Co., Ltd	10 Kearney Road Needham, MA 02494
15 Bacon St. 194-10	Larsen, Christine & Golenbock, Douglas T	15 Bacon Street Wellesley, MA 02482
11 Bacon St. 194-11	Knights, Peter B, et al	27 Elmwood Road Wellesley, MA 02482
9 Bacon St. 194-12	Hurray, Gregory & Hanson, Katharine	9 Bacon Street Wellesley, MA 02482
7 Bacon St. 194-13	Yildirim, Omer Ozgur	7 Bacon Street Wellesley, MA 02482
5 Bacon St. 194-14	Solem, Rachael & Herring, John Barry	5 Bacon Street Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
3 Bacon St. 194-15	Khorikian, George	3 Bacon Street Wellesley, MA 02482
1 Bacon St. 194-16	Marotta, Jamie, Trustee Bacon Street Realty Trust	1 Bacon Street Wellesley, MA 02482
8 Bacon St. 194-17-B	Hurray, Gregory & Hanson, Katharine	9 Bacon Street Wellesley, MA 02482
31 College Rd 194-2	Horne, Nancy C	31 College Road Wellesley, MA 02482
370 Central St. 194-21	Town of Wellesley Water Department	20 Municipal Way Wellesley, MA 02481
350 Central St. 194-23	Wellesley College Attn: Melissa S. Fletcher	106 Central Street Wellesley, MA 02481
27 College Rd 194-3	Willauer, Whiting R, Jr, Trustee 111 Crest Road Realty Trust	27 College Road Wellesley, MA 02482
23 College Rd 194-4	Chomp, LLC	21 College Road Wellesley, MA 02482
21 College Rd 194-5	Higgons, J Duncan & Dorene J	21 College Road Wellesley, MA 02482
19 College Rd 194-6	Hammond, Karl W & Bassler, Elisabeth C	19 College Road Wellesley, MA 02482
15 College Rd 194-7	Wang, Shudong & Xu, Lingyun	15 College Road Wellesley, MA 02482
17 Bacon St. 194-9	Keniry, John J & Lorraine R	17 Bacon Street Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
29 Overbrook Dr. 199-89	Town of Wellesley	525 Washington St. Wellesley, MA 02482
4 Morses Pond Rd 200-1	Grew, Virginia M	4 Morses Pond Road Wellesley, MA 02482
26 Shore Rd 200-10	Owner Unknown	Wellesley, MA 02482
30 Shore Rd 200-12	Lee, Jin Hee & Henry C	30 Shore Rd Wellesley, MA 02482
36 Shore Rd 200-13	Hiller, Benjamin R & Laura M	36 Shore Road Wellesley, MA 02482
40 Shore Rd 200-14	Owner Unknown	Wellesley, MA 02482
46 Shore Rd 200-15	Arthur, Kwesi Budu & Budu-Arthur, Marta Isajiw	46 Shore Road Wellesley, MA 02481
50 Shore Rd 200-16	Martin, Paul J & Emily T	50 Shore Road Wellesley, MA 02482
64 Shore Rd 200-17	Bigonet, Glenn R & Laila Eva L	64 Shore Road Wellesley, MA 02482
14 Ottaway Circle 200-18-F	Town of Wellesley Natural Resources Department	525 Washington St. Wellesley, MA 02482
958 Worcester St. 200-19	C & T Jarvis LLC	958 Worcester Street Wellesley, MA 02482
10 Morses Pond Rd 200-2	Bradvica, Christine	10 Morses Pond Road Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
962 Worcester St. 200-20	Donald Realty Trust, etal	91 Laurelwood Drive North Attleboro, MA 02760
978 Worcester St. 200-21	Wellesley Place, LLC	231 Sutton Street North Andover, MA 01845
984 Worcester St. 200-25	SIP Partners 984 Worcester Rd LLC	10 Newbury Street Boston, MA 02116
999 Worcester St. 200-27	Banknorth, N. A. c/o TD Bank	380 Wellington Street London Ontario, CN N6A 4S4
15 Overbrook Dr. 200-28	Tidwell, Charles H, III	15 Overbrook Drive Wellesley, MA 02482
5 Overbrook Dr. 200-28-A	Overbrook Drive 5 Group, LLC	965 Worcester Street Wellesley, MA 02482
987 Worcester St. 200-29	987 Worcester St Realty, LLC	987 Worcester Street Wellesley, MA 02482
14 Morses Pond Rd 200-3	Feldman, David B & Eaton Sandra J	14 Morses Pond Road Wellesley, MA 02482
981 Worcester St. 200-31	Cohen, Steven A, Trustee CEA Wellesley Trust	1105 Mass. Avenue Cambridge, MA 02138
965 Worcester St. 200-32	Worcester Street 965 Group, LLC	965 Worcester Street Wellesley, MA 02482
951 Worcester St. 200-33	Bike Realty, LLC	72 Sharp St. Hingham, MA 02043
2 Morses Pond Rd 200-35	Rutberg, Andrew J	6 Pine Ridge Road Natick, MA 01760



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
Worcester St. 200-36	Commonwealth of Massachusetts Mass Highway Department	10 Park Plaza Boston, MA 02116
Worcester St. 200-37	Commonwealth of Massachusetts Mass Highway Department	10 Park Plaza Boston, MA 02116
956 Worcester St. 200-38	Town of Wellesley c/o Jarvis Appliance, Inc.	958 Worcester Street Wellesley, MA 02482
16 Morses Pond Rd 200-4	Jaros, Edwin J	16 Morses Pond Road Wellesley, MA 02482
31 Shore Rd 200-5	Haidar, Semaan & Aborjaily, Lisa	31 Shore Road Wellesley, MA 02482
27 Shore Rd 200-6	Roalsen, Ronald E & Bonnie L	27 Shore Road Wellesley, MA 02482
4 Shore Rd 200-7	Glesner, Frank	PO Box 812191 Wellesley, MA 02482
16 Shore Rd 200-8	Gillespie, Thomas & Elizabeth	16 Shore Road Wellesley, MA 02482
20 Shore Rd 200-9	Ardakani, Ali & Ansari, Hengameh	20 Shore Road Wellesley, MA 02482
25 Pickerel Rd 201-1	Lunger, Joel S & Cathleen M	25 Pickerel Road Wellesley, MA 02482
2 B Pickerel Rd 201-10	Green, Sarah E	2 Pickerel Road Wellesley, MA 02482
11 Pond Terrace 201-11	Valera, Juan	2 Appleton Street Lynn, MA 01904



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
8 Pond Terrace 201-12	Valera, Juan	2 Appleton Street Lynn, MA 01904
1 A Pickerel Rd 201-13	Lomer, Edward P	154 Washington St. N. Easton, MA 02356
3 Pickerel Rd 201-15	Doku, Deadra A	3 Pickerel Road Wellesley, MA 02482
4 Pickerel Rd 201-16	Hildebrand Carol J & Eburne, Donald B	4 Pickerel Road Wellesley, MA 02482
Pickerel Rd 201-17	Town of Wellesley	525 Washington St. Wellesley, MA 02482
Pickerel Rd 201-18	Town of Wellesley Tax Title	525 Washington St. Wellesley, MA 02482
18 Pickerel Rd 201-19	Dmitrieva, Oxana	18 Pickerel Road Wellesley, MA 02482
14 Pickerel Rd 201-2	Belitsos, Helen C & Thorn, Deborah, Trustees	14 Pickerel Road Wellesley, MA 02482
11 Pickerel Rd 201-20	Alevizos, Marcia S, Trustee Marcia S Alevizos 1998 Rev Trust	396 Washington Street #325 Wellesley, MA 02481
49 Shore Rd 201-21	Susinno, James & Sally	49 Shore Road Wellesley, MA 02482
20 Morses Pond Rd 201-22	Reinelt, Olga V, Trustee Reinelt Family Rev Trust 2016	20 Morse Pond Road Wellesley, MA 02482
24 Morses Pond Rd 201-23	Satterfield, Richard C, Trustee Richard C Satterfield Trust	24 Morses Pond Road Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
26 Morses Pond Rd 201-24	Chan, Hon Pui A	180 Worcester Street Wellesley, MA 02481
30 R Morses Pond Rd 201-25	Fox, H Kent & Sally	30R Morses Pond Road Wellesley, MA 02482
30 Morses Pond Rd 201-26	Gilley, David E & Lyette Jean	30 Morses Pond Road Wellesley, MA 02482
9 Pond Terrace 201-27	Town of Wellesley Tax Title	525 Washington St. Wellesley, MA 02482
5 Pond Terrace 201-28	N & C Christie LLC	54 Yorkshire Road Dover, MA 02030
Pond Terrace 201-29	Town of Wellesley Tax Title	525 Washington St. Wellesley, MA 02482
10 Pickerel Rd 201-3	Thompson, John C, Jr & Nancy F	10 Pickerel Road Wellesley, MA 02482
37 Morses Pond Rd 201-30	O'Rourke, Paige	37 Morses Pond Road Wellesley, MA 02482
31 Morses Pond Rd 201-32	Donlan, Edmond & Boyd, Kirsty	31 Morses Pond Road Wellesley, MA 02482
27 Morses Pond Rd 201-33	Livingston, Gregory P & Livingston, Susan M	27 Morses Pond Road Wellesley, MA 02482
21 Morses Pond Rd 201-38	Ho, Patty & Kien Y	21 Morse's Pond Road Wellesley, MA 02482
8 Pickerel Rd 201-4	Mitchell, Kim E & Mitchell, Peter P, Trustees	8 Pickerel Road Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
99 Pond Terrace 201-40	Town of Wellesley Tax Title	525 Washington St. Wellesley, MA 02482
8 A Pickerel Rd 201-41	Town of Wellesley Tax Title	525 Washington St. Wellesley, MA 02482
9 Pickerel Rd 201-7	Alevizos, Nancy A, Trustee 2004 ALCS Trust	396 Washington Street, #325 Wellesley, MA 02481
1 Pickerel Rd 201-9	Yehiav, Guy & Maya	1 Pickerel Road Wellesley, MA 02482
24 College Rd 202-3	Anderson, Matthew P & Melissa W	24 College Road Wellesley, MA 02482
32 College Rd 202-4	Granoff, Michael J & Karen B	32 College Road Wellesley, MA 02482
38 College Rd 202-5	Juma, Sami F & Stephanie H	38 College Road Wellesley, MA 02482
43 College Rd 202-6	Linnell, D Gail	43 College Road Wellesley, MA 02482
40 College Rd 202-6-A	Snyder, John D & Angela M	40 College Road Wellesley, MA 02482
39 College Rd 202-7	Reif, Arnold E & Katherine c/o John Reif	3112 Devon Road Durham, NC 27707
35 College Rd 202-8	Breimyler, Frederick S & Langevin, Adele M, Trustees	35 College Road Wellesley, MA 02482
1 Edgemoor Circle 205-1-1	Koshnitsky, Natalya	1 Edgemoor Circle Wellesley, MA 02482



Town of Wellesley Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
10 Edgemoor Circle 205-1-10	Zeng, Dingli & Yue, Qiangnan	10 Edgemoor Circle Wellesley, MA 02482
12 Edgemoor Circle 205-1-12	Adaligil, Aral & Ozlem	12 Edgemoor Circle Wellesley, MA 02482
14 Edgemoor Circle 205-1-14	Javid, Ali E & Bondar, Hanieh	14 Edgemoor Circle Wellesley, MA 02482
16 Edgemoor Circle 205-1-16	Hariharan, Praveen & Balasubramanian, Kritika	1600 Washington Street Newton, MA 02465
18 Edgemoor Circle 205-1-18	Pan, Peng & Zhang, Zhao	295 Weston Rd Wellesley, MA 02482
3 Edgemoor Circle 205-1-3	Kane, John E & Susan E	3 Edgemoor Circle Wellesley, MA 02482
4 Edgemoor Circle 205-1-4	Qu, Deyang & Ren, Qiang	10033 N Miller Drive Mequon, WI 53092
5 Edgemoor Circle 205-1-5	London, Larisa	5 Tanglewood Rd Newton, MA 02459
6 Edgemoor Circle 205-1-6	Rixon, Colin A & Janet A	6 Edgemoor Circle Wellesley, MA 02482
7 Edgemoor Circle 205-1-7	Zheng, Yu & Wang, Zebin	7 Edgemoor Circle Wellesley, MA 02482
8 Edgemoor Circle 205-1-8	Zhang, Hongsheng & Gan, Xuanxuan	8 Edgemoor Circle Wellesley, MA 02482
2 Edgemoor Ave. 205-2	Bumstead LLC	19 French Avenue Wayland, MA 01778



Town of Wellesley
Abutters List

Conserv. Commission (300 ft)

Date: **02/07/2018**
Address: **1000 Worcester St.**
Parcel ID: **193-10**
Distance: **300 feet**

Property Location	Owner of Record	Mailing Address
1005 Worcester St. 205-3	Chammas, Michael Y	1005 Worcester Street Wellesley, MA 02482

**Notification to Abutters Under the
Massachusetts Wetlands Protection Act and the
Wellesley Wetlands Protection Bylaw**

*(this form must be completed and copies sent by certified mail
to all abutters within 300 feet of the site of the project)*

In accordance with the Massachusetts General Laws Chapter 131, Section 40 (the Wetlands Protection Act) and the Wellesley Wetlands Protection Bylaw (Article 44), you are hereby notified of the following:

1. The applicant's name is Brandon Schmitt, Director of Wellesley Natural Resource Commission
2. The applicant has filed the following application with the Wellesley Wetlands Protection Committee:
 A Notice of Intent, seeking permission to alter an area subject to protection under the Wetlands Protection Act and/or the Bylaw.
 A request to amend an existing Order of Conditions.
 A Notice of Resource Area Delineation, seeking to determine the extent of areas subject to protection under the Wetlands Protection Act and/or Bylaw.
3. The address or location of the site where the activity or delineation is proposed is:
Morses Pond, Wellesley, MA.
4. The proposed work includes Repairing and restoring 11 erosion sites around Morses Pond.
5. Copies of the above application may be examined at the Wetlands Protection Committee's office, located in the Lower Level of Town Hall, 525 Washington Street, Wellesley, between 8:30 a.m. and 4:00 p.m., Monday through Friday. Copies may be obtained at the office for a fee or from the applicant.
6. Information regarding the date, time, and place of the public hearing may be obtained:
 - a. from the Wetlands Protection Committee's (WPC) website at http://wellesleyma.gov/Pages/WellesleyMA_NRC/wetlands/index or
 - b. by calling the WPC Office at 781-431-1019, x2294 between 9:00 a.m. and 4:00 p.m., Monday through Friday or
 - c. from the applicant or the applicant's representative.
7. For additional information, please contact the Wetlands Protection Committee's Secretary at 781-431-1019, x2294 or the applicant/applicant's representative whose name is Michelle West at 508-833-6600.

PLEASE NOTE:

1. Notice of the public hearing including its date, time, and place will be published at least five business days in advance in the Wellesley Townsman, Metrowest Daily News or other regularly circulated local newspaper and will be posted in the Wellesley Town Hall not less than 48 hours in advance.
2. For more information about this application, the Wetlands Protection Act, or Wellesley's Wetlands Protection Bylaw, please contact the Wellesley Wetlands Protection Committee or the Massachusetts Department of Environmental Protection (DEP) Northeast Regional Office at 978-694-3200.

AFFIDAVIT OF SERVICE

**UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT
AND WELLESLEY WETLAND PROTECTION BYLAW**

I, Michelle West, hereby certify under the pains and penalties of perjury that on April 10, 2018, I gave notification to abutters within 300 feet of the proposed project in compliance with Section 6 of the Wellesley Wetland Protection Bylaw (Article 44) and with the second paragraph of the Massachusetts General Laws, Chapter 131, Section 40 and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Notice of Intent application, filed under the Massachusetts Wetlands Protection Act and the Wellesley Wetland Protection Bylaw, by Brandon Schmitt of Wellesley Nat. Res. Dept with the Wellesley Wetland Protection Committee on April 10, 2018, for a property located at 1000 Worcester Street, Morses Pond*, Wellesley, Massachusetts.

*Additional property: 49 R Russell Road, Wellesley, Massachusetts.

The form of the notification and the list of the abutters to whom it was given and their addresses are attached to this Affidavit of Service.


Signature

4-10-2018
Date

PROJECT NARRATIVE

Morses Pond – Shoreline Stabilization Project Wellesley Massachusetts

April 2018

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ATTACHMENTS

Attachment A – Locus Maps

Figure 1 – USGS Topographic Map

Figure 2 – Aerial Photograph

Figure 3 – Environmental Constraints

Figure 4 – FEMA Flood Zones and National Flood Hazard, Flood Insurance Rate Maps (FIRMette)

Figure 5 – NRCS County Soil Map

Attachment B – Project Plans

Morses Pond – Shoreline Stabilization Project

Wellesley, Massachusetts

April 2018

SUMMARY

The Town of Wellesley is proposing shoreline stabilization for Morses Pond, Wellesley, Massachusetts. In 2005, the Morses Pond Ad Hoc Committee developed the Morses Pond Comprehensive Management Plan with ENSR International (the “Plan”), which outlined management options to achieve the desired use goals. The priority goal for the pond is to preserve the long-term quantity and quality of drinking water from the nearby wells, with uses such as recreation, flood control, and wildlife protection listed as second and third level priorities. The Town has been implementing water quality improvement recommendations from the Plan over the past ten years. In 2016 the Town conducted an erosion assessment study with Horsley Witten Group, Inc., the “Morses Pond Erosion Study.” This study addressed one of the sediment sources to the pond – shoreline erosion, and identified priority erosion sites. The purpose of the proposed Shoreline Stabilization Project is to implement restoration of the prioritized erosion sites to improve water quality in Morses Pond. The proposed project will implement the publicly-owned and publicly-accessible recommended erosion sites identified and described in the “Morses Pond Erosion Study.” There are eleven sites proposed for erosion control, bank stabilization and access improvement.

The proposed project will occur within Inland Bank, Bordering Land Subject to Flooding, the 100-foot Buffer Zone to Bank, the 25-foot No Disturbance Zone, the 75-foot Limited Disturbance Zone, and a 200-foot Buffer Zone to BLS, jurisdictional areas under the Massachusetts Wetlands Protection Act and the Wellesley Wetlands Protection Bylaw.

1.0 INTRODUCTION

1.1 Project Description

Morses Pond is a 104-acre, shallow pond in the northwest corner of Wellesley, MA. It is one of the most important water resources in the Town, providing 40% of Wellesley’s drinking water via the adjacent water supply wells and offering the only Town swimming beach. With a 5,300-acre watershed of mostly developed land (including the contributing watersheds to Boulder, Bogle, and Jennings Brooks), the pond has been impacted by stormwater-related pollutants including sediment and phosphorus. In 2005, the Morses Pond Ad Hoc Committee developed the Morses Pond Comprehensive Management Plan with ENSR International (the “Plan”), which outlined management options to achieve the desired use goals. The priority goal for the pond is to preserve the long-term quantity and quality of drinking water from the nearby wells, with uses such as recreation, flood control, and wildlife protection listed as second and third level priorities. Non-motorized boats and boats with electric motors are allowed on the pond, but boats with gas motors are not permitted. The Town has been implementing water quality improvement recommendations from the Plan over the past ten years, including in-pond measures (e.g., dredging, macrophyte harvesting, etc.) and watershed measures (e.g., demonstration rain garden at Morses Beach and homeowner rain barrels/rain gardens campaigns with the Friends of Morses Pond Association).

In October 2016, Horsley Witten Group, Inc. (HW) completed the “Morses Pond Erosion Study.” This study addressed one of the sediment sources to the pond – shoreline erosion. The Study determined: (1) the locations and extent of erosion along the 3.5-mile shoreline; (2) appropriate stabilization and restoration measures based on cause(s) of erosion and surrounding land and pond use; (3) a prioritization of the 22 identified restoration efforts; and (4) an implementation plan that outlined the necessary next steps.

1.2 Project Purpose

The purpose of the Shoreline Stabilization Project is to implement the publicly-owned and publicly-accessible recommended erosion control sites described in the Morses Pond Erosion Study. These sites include the 10 Town-owned sites, plus Pickle Point (owned by the Wellesley Conservation Council): MP9, MP10, MP11, MP12, MP13, MP16, MP17, MP18, MP20, MP21, and MP22. The location and proposed restoration activities at each site are summarized below in Tables 1 and 2. Figures 1 and 2 in Attachment A show the location of each of these sites.

Table 1. List of Morses Pond Erosion Sites Targeted for this Project.

Site ID	Location
MP-9	Aquatic Weed Harvesting Boat Area
MP-10	Wellesley Public Beach
MP-11	Foot Access 1, Morses Pond Land
MP-12	Foot Access 2, Morses Pond Land
MP-13	Foot Access 3, Morses Pond Land
MP-16	Concrete Outfall near Crosstown Trail - Pond's Northeast Corner
MP-17	Foot Access 1, Crosstown Trail Pine Point

Site ID	Location
MP-18	Foot Access 2, Crosstown Trail Pickle Point
MP-20	Bird Island Access Point
MP-21	Foot Access 3, Crosstown Trail
MP-22	Foot Access 4, Crosstown Trail

Table 2. Proposed Restoration Activities for the Targeted Sites.

Restoration Type	Restoration Sites										
	MP-9	MP-10	MP-11	MP-12	MP-13	MP-16	MP-17	MP-18	MP-20	MP-21	MP-22
Slope/Toe Stabilization	X		X	X	X	X	X	X	X		X
Outfall Stabilization						X					
Invasive Species Management	X	X	X	X	X	X	X	X	X	X	X
Buffer Plantings	X	X	X	X	X	X	X	X	X	X	X
Upland Stormwater	X	X									
Erosion Control	X	X			X	X	X	X	X	X	X
Improved Public Access	X		X	X	X		X	X	X	X	X

2.0 GENERAL SITE DESCRIPTION

Morses Pond is located on the western edge of Wellesley, MA (Figures 1 and 2, Attachment A), with a small portion of its western reaches located in the neighboring town of Natick. The pond is bordered on the north by Route 9, on the south by Route 135, with town-owned land and low to medium density residential along the eastern edge. The western reaches of the pond are bordered by a medium density residential neighborhoods and a Town of Natick maintenance facility.

According to MADEP 2014 Integrated List of Waters 305b 303d, Morses Pond is listed as a Category 4C, impairment not caused by a pollutant.

Based on findings from HW erosion study conducted in 2016, eleven high priority erosion sites were identified for shoreline restoration (Table 1). At a majority of these, the dominant plant community is Maple Oak Deciduous, and the banks have moderately to very steep slopes. Exceptions to this include sites MP-9, a boat ramp/launch site for the aquatic weed harvester, and MP-10, the Town beach.

2.1 State-listed Rare Species Habitat

According to the most recent version of the *Massachusetts Natural Heritage Atlas* (14th Edition, August 1, 2017), the project corridor does not fall within areas of *Estimated Habitat of Rare Wildlife and Certified Vernal Pools* and/or *Priority Habitat of Rare Species* as designated by the Massachusetts Natural Heritage and Endangered Species Program (NHESP) (Figure 3, Attachment A).

2.2 FEMA Designation

According to the FEMA Flood Insurance Rate Map (FIRMette, Community Panel No. 25021C0012E dated July 17, 2012), all of the sites are located within or adjacent to Zone AE, areas that have a 1% probability of flooding every year (100-year floodplain), for which base flood elevations (BFE) have been determined (Figures 4 and 4A, Attachment A).

2.3 Wetland Resource Areas

On July 19, 2017, HW staff delineated resource areas at each targeted erosion site along Morses Pond. Wetland resource areas occurring at or near this project include the following, as defined under the Massachusetts Wetlands Protection Act (MGL Ch 131 § 40), and its regulations and under the Town of Wellesley Wetlands Protection Bylaw (Article 44 of Town Bylaws).

- Inland Bank
- Land Under Waterbodies and Waterways (LUWW); and
- Bordering Land Subject to Flooding (BLSF).

In addition to the resource areas listed above, the Wellesley Wetlands Protection Bylaw also regulates the 100-foot Buffer Zone to Bank as a resource area, establishing a 25-foot No Disturbance Zone that extends from 0 to 25 feet from the boundary of the resource area and a 75-foot Limited Disturbance Zone that extends from 25 to 100 feet from the resource area, and a 200-foot Buffer Zone to BLSF. Attachment A - Figure 3 depicts the approximate limits of wetland resource areas regulated under the MA Wetlands Protection Act (only); the limits of all resource areas are shown on the enclosed site plans entitled, "*Morses Pond Shoreline Stabilization Permitting Plans, Wellesley, Massachusetts*" prepared by Horsley Witten Group, Inc, dated April 2018. Existing conditions are also shown on a "*Morses Pond Wetlands Delineation Flags*" plan prepared by the Town of Wellesley, dated 02/22/2018 (revised) (sheet 1 of 1).

A brief description of the wetland resource areas is provided below.

2.3.1 Inland Bank

Bank is defined at 310 CMR 10.54(2)(a) as "*the portion of land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent floodplain, or, in the absence of these, it occurs between a water body and an upland. A Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel or stone. The upper boundary of a Bank is first observable break in the slope or the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level [310 CMR 10.54(2)(c)].*" The Wellesley Wetlands Protection Bylaw defines Inland Bank similarly.

Local Bylaw defines bank as “the portion of the land surface that normally abuts and confines a water body or waterway. A Bank may be partially or totally vegetated. It must consist of exposed sediment, gravel, stone, concrete, asphalt, or other artificial impervious material.

The banks around Morses Pond abut and confine the pond and are partially or well vegetated and are comprised of exposed soil, gravel, and stone. The upper boundary of the bank (first observable break in slope) was used to define bank, except where noted below. The following section describes the existing vegetation, including invasive species if present, and how the bank was determined and flagged in the field:

MP-9 – Aquatic Weed Harvesting Equipment Area – Near Pond Outlet

This site provides access to the pond for the aquatic weed harvesting boat. There is a compacted dirt access drive and ramp into the water. The drive is bordered by a fence on the east side and vegetation on the west. The dominant plants at this site include willow (*Salix* sp.), red maple (*Acer rubrum*), alder (*Alnus* sp.) and poplar (*Populus* sp.) with an understory of jewelweed (*Impatiens capensis*), dock (*Rumex* sp.), common milkweed (*Asclepias syriaca*), wild carrot (*Daucus carota*), a variety of sedges (*Carex* spp.), and poison ivy (*Toxicodendron radicans*). The invasive species present at this site include Asian bittersweet (*Celastrus orbiculatus*), purple loosestrife (*Lythrum salicaria*), glossy buckthorn (*Frangula alnus*), and tree-of-heaven (*Ailanthus altissima*).

Bank was delineated with blue flags labeled 9-1 through 9-6. For flags 9-1 to 9-4, the break in slope was used to delineate bank. For flags 9-5 to 9-6, the mean annual high water line was used to locate bank.

MP-10 – Wellesley Public Beach

The site primarily consists of the Town beach with fringes of vegetation on the edges. The vegetation on the south spans between sites MP-9 and MP-10 and consists of similar species as MP-9 including jewelweed, poison ivy, wild carrot, red maple. The vegetated area near the bathhouse includes two invasive species, purple loosestrife and common reed (*Phragmites australis*).

Bank, as defined by mean high water, was delineated with blue pin flags labeled 10-1 through 10-7. The final flag, 10-7, located on the north side of the paved access path, was defined by break in slope.

MP-11 – Foot Access Point #1 – Morses Pond Land

At this site, the plant community transitions from a Maple Deciduous to a Pine Oak Forest. The site consists of a vegetated bank with tree-of-heaven, white oak (*Quercus alba*), red maple, black locust (*Robinia pseudoacacia*), buckthorn, common buttonbush (*Cephalanthus occidentalis*), multiflora rose (*Rosa multiflora*), porcelain-berry (*Ampelopsis glandulosa*), virginia creeper (*Parthenocissus quinquefolia*), jewelweed (*Impatiens capensis*), poison ivy, and Asian bittersweet.

Bank, as defined by break in slope, was delineated with blue flags labeled 11-1 through 11-5. Flag 11-1 starts at the concrete wall.

MP-12 – Foot Access Point #2 – Morses Pond Land

The vegetated bank at this site has much the same plants as at MP-11 with the addition of honeysuckle. The access at this point of the bank is wider with more exposed roots and sediment.

Bank, as defined by break in slope, was delineated with blue flags labeled 12-1 through 12-5.

MP-13 – Foot Access Point #3 – Morses Pond Land

The bank at this site is much steeper with less vegetation and more exposed roots and gravel. The vegetation present consists of red maple, white oak, white pine, barberry, Asian bittersweet, iris, jewelweed, and buttonbush.

Bank, as defined by break in slope, was delineated with blue flags labeled 13-1 through 13-5.

MP-16 – Concrete Outfall near Crosstown Trail

The bank is steep on both sides of the outfall with a fair amount of vegetation including sedges (*Carex* sp.), Virginia creeper, spotted winterberry (*Chimaphila maculata*), dewberry (*Rubus hispidus*), winged euonymus (*Euonymus alatus*), honeysuckle, Asian bittersweet, buttonbush, sweet pepperbush (*Clethra alnifolia*), red maple, and ash trees.

Bank, as defined by break in slope, was delineated with blue flags labeled 16-1 through 16-7. Mean high water can be seen on the culvert headwall, indicated by the dark staining (Photo 1).



Photo 1. Culvert at MP-16. Note dark staining on granite headwall indicating Mean Annual High Water.

MP-17 – Foot Access Point #1 – Crosstown Trail “Pine Point”

The bank at this site is steep with a large area of erosion from exposed soils. Minimal vegetation is present and consists of red maple, white and black oak (*Quercus velutina*), greenbrier (*Smilax* sp.), low bush blueberry (*Vaccinium angustifolia*), hayscented fern (*Dennstaedtia punctilobula*), purple

loosestrife, bracken fern (*Pteridium aquilinum*), dewberry, maleberry (*Lyonia lingustrina*), spotted wintergreen (*Chimaphila maculata*), buttonbush, and skunk cabbage (*Symplocarpus foetidus*). The plant community along this section of shoreline was identified as a pine oak forest.

Bank was delineated at this site using break in slope. Blue flags were hung and labeled 17-1 through 17-8.

MP-18 – Foot Access Point #2 – Crosstown Trail “Pickle Point”

This access point is located at the end of a peninsula (Pickle Point). It is steep and frequently used, and therefore has eroded. Access is gained to the area on foot from the Crosstown Trail as well as from the water by boat. The bank has steep slopes with minimal vegetation, similar to site MP-17. The invasive species glossy buckthorn is present at this site.

Bank, as defined by break in slope, was delineated with blue flags labeled 18-1 through 18-10. The eroded access path is between flags 18-6 and 18-7.

MP-20 – Bird Island Access Point

This site is on an island with very steeply sloped banks that are well-vegetated except where the access path has been eroded. The vegetation on the banks consists of sweet pepperbush, highbush blueberry, with tupelo (*Nyssa sylvatica*), birch (*Betula* sp.) and beech (*Fagus* sp.) trees. Upslope on the island, purple loosestrife, Asian bittersweet, greenbrier, glossy buckthorn, and black oak were observed, along with a swan nest and slide into the pond.

The entire bank, as defined by break in slope, around Bird Island was delineated with blue flags labeled 20-1 through 20-18.

MP-21 – Foot Access Point #3 – Crosstown Trail

This site is located along the Crosstown Trail and has very steep, vegetated slopes. Cutting has occurred in the past, and subsequently, the vegetation is much shorter, lower to the ground and lacks the large trees present on the bank to either side. The current vegetation includes jewelweed, silky dogwood (*Swida amomum*), multiflora rose, bracken fern, barberry, winged euonymus, Asian bittersweet, tree-of-heaven, honeysuckle, red maple, white oak, glossy buckthorn, arrowwood (*Viburnum dentatum*).

Bank was delineated at this site with blue flags labeled 21-1 through 21-6. The eroded access path is located between flags 21-2 and 21-3.

MP-22 – Foot Access Point #4 – Crosstown Trail

This access point off of Crosstown Trail has a bank that is not as steep as site MP-21, and is well-vegetated, consisting of silky dogwood, jewelweed, multiflora rose, sweet pepperbush, barberry, iris, purple loosestrife, Asian bittersweet, winged euonymus, honeysuckle, buckthorn with black locust and an apple tree (*Malus* sp.).

Bank, as defined by break in slope, was delineated with blue flags labeled 22-1 through 22-4.

2.3.2 Land Under Water Bodies and Waterways

Land Under Water Bodies and Waterways is defined at 310 CMR 10.56(2)(a) as “*the land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock. The boundary of LUWW is the mean annual low water level.*” The Wellesley Wetlands Protection Bylaw defines LUWW similarly.

The substrate of Morses Pond near the shoreline is generally gravelly with occasional rocks and in some locations dark organic muck. It is solid and allows for stable footing. The proposed activities are not likely to have an impact on LUWW.

2.3.3 Bordering Land Subject to Flooding

Bordering Land Subject to Flooding (BLSF) is defined at 310 CMR 10.57(2)(a) as “*an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland.*”

“The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm. Said boundary shall be that determined by reference to the most recently available flood profile data prepared for the community within which the work is proposed under the National Flood Insurance Program (NFIP, currently administered by the Federal Emergency Management Agency, successor to the U.S. Department of Housing and Urban Development). Said boundary, so determined, shall be presumed accurate. This presumption may be overcome only by credible evidence from a registered professional engineer or other professional competent in such matters (310 CMR 10.57(2)(a)(3)).” The Wellesley Wetlands Protection Bylaw defines BLSF similarly; however, it affords this resource area a 200-foot jurisdictional buffer zone.

BLSF at the target sites around Morses Pond primarily consist of steep eroded banks with minimal vegetation present. The trees varied from red maple, tupelo, alder, beech, birch, oak, to white pine. The shrubs consist of buttonbush, high bush blueberry, sweet pepperbush, and buckthorn. The herbaceous vegetation layer includes milkweed, wild carrot, poison ivy, jewelweed, purple loosestrife, greenbrier, bittersweet and dock.

As noted above, the proposed project sites fall within FEMA Flood Zone AE. Additionally, sites MP-9, MP-10, MP-11 and MP-12 occur within the base elevation flood zone 123 ft. Sites MP-13, MP-16, MP-17, MP-18, MP-20, MP-21 and MP-22 occur within the base elevation 124 ft.

3.0 PROPOSED PROJECT

3.1 Description

The proposed Morses Pond – Shoreline Stabilization Project consists of various restoration components at eleven sites around the pond, including bank restoration and stabilization, stormwater management, invasive species removal, and buffer revegetation with a native plant community. Project activities will occur along the 3.5-mile shoreline of the pond as well as on an island and are intended to restore and improve 11 prioritized erosion sites. The overall goal is to improve water quality of Morses Pond by reducing erosion, stormwater runoff, and the pollutants it carries with it, into the pond.

Total limit of work for the combined 11 project sites is 38,912 SF (0.89 ac).

A description of the various project elements is provided below. Additional details of the proposed project elements are provided on the site plans entitled “*Morses Pond Shoreline Stabilization Permitting Plans, Wellesley, Massachusetts,*” prepared by Horsley Witten Group (dated April 2018).

MP-9 – Aquatic Weed Harvesting Equipment Area – Near Pond Outlet

This site is a compacted dirt driveway/water access where the aquatic weed harvesting boat and equipment are stored and launched. The area is near the pond outlet, beach, and Route 135. Due to the frequent use of this location for launching and storing the aquatic weed harvester, the shoreline has been impacted. Stormwater runoff has eroded the dirt surface, carrying sediment directly into the pond. The proposed design for this site is to stabilize the driveway with a dense grade stone material and manage stormwater with a narrow wet vegetated swale to capture sediment before it reaches the pond. The wet swale is sized for the water quality volume (treating the first inch of runoff), but will also convey flows from larger storm events non-erosively to the pond. The access drive will be graded to direct stormwater flow to the wet swale. A movable boulder barrier will be placed between the wet swale and vehicular access area.

Removal of invasive species will be done mechanically by cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work for this site is 4,984 SF. The drainage area is 7,398 SF of which 858 SF is impervious surface.



Photo 2. The launching and staging area for the aquatic weed harvester and equipment (left photo). The dirt surface is proposed to be replaced with dense grade to stabilize the area. The right photo shows the proposed wet swale approximate location in green, and the direction of stormwater flows with blue arrows.

MP-10 – Wellesley Public Beach

Wellesley Town Beach is one of the Town's greatest recreational assets and is heavily used throughout the summer season with moderate use for walking, birding, and other recreation during the off-season. Given the slope of the beach area, erosion gullies form during the off-season, carrying sand down into the pond. In addition, this site includes outdoor showers at the bathhouse that discharge without treatment to the pond, also creating erosion gullies that deposit sand into the pond from the beach.

The proposed stabilization concept for this site is to employ erosion control measures such as silt and snow fences installed along the beach during the off-season months to minimize sand loss to the pond. The fences would be installed approximately 25 feet from the water's edge allowing for off-season beachgoers to still enjoy the waterfront and beach, and would be staggered with gaps to provide access to the waterfront. Accumulated sand would then be raked back onto the beach prior to beach opening. A gentle slope should be maintained on the beach with grading and raking. In addition, a linear rain garden is proposed to capture and treat runoff from the showers and reduce erosion from the discharge.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

This site also provides a good opportunity for educational purposes during and after implementation, as it experiences a steady stream of the public during the summer and even off season for walkers and dog owners.

The limit of work for this site is 12,598 SF. The drainage area that is being managed for this site is 1,594 SF.



Photo 3. Town Beach at Morses Pond (top left photo). Top right photo shows the showers at the bathhouse (circled in yellow), the existing clogged trench drain, and down-gradient gully (circled in red). The bottom photo shows the beach at the end of the day after significant shower use, with the two water flows identified with red arrows – one eroding the beach before entering the water, and one flowing down the concrete handicap ramp directly into the pond.

MP-11 – Foot Access Point #1 – Morses Pond Trail

This is the first of three pond access points along Morses Pond Trail on the eastern side of Morses Pond. There is evidence of heavy use at this site from the lack of vegetation and the compacted soil leading to the pond.

The proposed stabilization concept for this site is to construct a set of steps that will lead users to the pond's edge. The step framing will be made of a rot-resistant wood, and will be filled with stone to encourage infiltration while stabilizing the access.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work for this site is 1,024 SF.



Photo 4. Foot access path # 1 at site location MP-11 (left photo). Precedent photo of “infiltrating steps” - wooden steps filled with stone (right photo).

MP-12 – Foot Access Point #2 – Morses Pond Trail

The second of the three sites along the Morses Pond trail is about 125 feet from the first site. This access point to the pond is heavily used by dog owners. Similarly to site 11, compacted soils and minimal vegetation show signs of heavy use.

The proposed stabilization concept for this site is to formalize this access path for pond users while reducing impact to the pond. The access area along the waters edge at this site is currently about twice as wide as site 11, but the proposed design aims to better direct and manage the foot traffic by limiting it to a 6-foot wide stable access, with new native buffer plantings along each edge. Bank erosion at the toe of the slope will be stabilized with coir logs. Boulders will be placed along the new edges of the access point to keep traffic on the path to allow the new plants to establish while providing seating for pond users.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work for this site is 3,478 SF.



Photo 5. Access way at MP-12 has a great deal of erosion and disturbance, due to its extensive use by dogs and dog owners.

MP-13 – Foot Access Point #3 – Morses Pond Land

This site is an extremely steep foot access point to pond from walking path on Morses Pond Land that is also popular for fishing. Heavy foot traffic, steep slopes, and erodible soils have created an area of immediate concern for erosion and sedimentation issues. This site is also a valuable location to educate the public about erosion, its causes, and methods to address it.

The proposed stabilization design for this site is to fill in eroded areas on the slope where necessary and apply a natural erosion control matting (coir fabric) to the slope along with native plantings to reestablish a natural stabilization. Coir logs will be installed along the shoreline where there are signs of undercutting bank. Construction of a fishing platform/viewing deck area with educational signage is also being proposed for this area, with a split rail fence to encourage traffic to stay off the banks. Water bars will be installed along the path to help divert runoff away from the fragile bank.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place, with a focus on trees, shrubs and groundcover with good root systems for enhance stabilization. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work for this site is 3,192 SF.



Photo 6. MP-13 has steep and eroding banks.

MP-16 – Concrete Outfall near Crosstown Trail

At this location, flow from an 18-inch concrete outfall enters the pond from the north. The integrity of the existing headwall is being compromised from runoff from the up-gradient path.

The proposed stabilization measures for this site is to slow and divert the runoff so that water is not eroding the area behind the existing headwall. This will be done using a log water bar, similar to the technique proposed at site 13. The headwall will also need to be repaired by filling the gaps in the headwall with mortar and stone.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work for this site is 1,386 SF.



Photo 7. Culvert at MP-16 as seen from the water (top left). Eroded pathway leading down to the culvert headwall (top right). Close up of the gaps in the headwall (bottom).

MP-17 – Foot Access Point #1 – Crosstown Trail “Pine Point”

Site MP-17 is a heavily-used pond access way from the Crosstown Trail that runs along the Cochituate Aqueduct. This site is located at the end of a peninsula known as Pine Point. The access path is very steep and unvegetated, leading to active erosion gullies, exposed roots, and major sediment deposits along the water's edge.

The proposed stabilization concept for this site is to construct a switchback path down to the existing trail near the water's edge. The path will be three feet wide with a 12% slope. Logs from the downed and dying trees at the site will be re-used and incorporated into the construction of the path. There will be two trees removed for this project, and the remainder of the site will be stabilized with coir fabric and plantings. Public educational signage is proposed for the top of the slope.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work for this site is 2,260 SF.



Photo 8. Steep and eroded access to the water from Crosstown Trail is site MP-17 as seen from the water (left). Note erosion and steep slope of access way that has exposed roots of large trees in this area (right).

MP-18 – Foot Access Point #2 – Crosstown Trail “Pickle Point”

This site focuses on a major pond access point from the Crosstown Trail at Pickle Point Sanctuary (Wellesley Conservation Council Land). The site is located at the end of a prominent peninsula known as Pickle Point. This area experiences heavy foot traffic, which has resulted in actively eroding gullies and exposed roots, with sediment deposits observed in the pond at the water's edge.

The proposed stabilization concept for this site is to install timber check dams perpendicular to the slope at regular intervals down to the water. The check dams will slow the water velocity and prevent future gullying and sedimentation. The installation and finished product will be low impact and non-intrusive with only three inches above the surface of the ground, and will be field adjusted to avoid/minimize impacts to trees. Under current conditions, the path widens as it gets closer to the water. The proposed improvements will also include reducing the path to 8 feet wide and stabilizing the area being removed from foot traffic with coir fabric and plantings of native vegetation.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas. The plant community along this section of shoreline was identified as a pine oak forest, so naturally-corresponding buffer plantings have been chosen.

The limit of work for this site is 1,850 SF.



Photo 9. Access way on Pickle Point, MP-18 (left). Exposed roots from erosion (right).

MP-20 – Bird Island Access Point

This access point is onto an island in Morses Pond called Bird Island. A narrow and steep path leads up to the top of the island. The path has become eroded from foot traffic and bird use, presumably swans and geese from the observed droppings and nest.

The proposed stabilization concept for this site is to install water bars along the path for stabilization and to act as steps, as well as coir fabric and native vegetation in areas on the island that shows signs of disturbance.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work for this site is 2,990 SF.

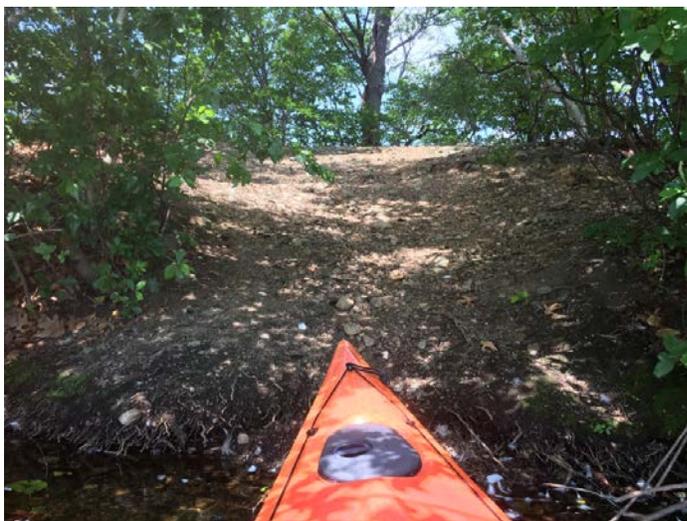


Photo 10. Access way on Bird Island, MP-20.

MP-21 – Foot Access Point #3 – Crosstown Trail

A narrow, steep path consisting of rocks embedded into the bank for foot traffic to pond shoreline from the Crosstown Trail. This access point is heavily used, with compacted soils and trampled vegetation observed. Adjacent to the path is a large swath of invasive species where previous cutting had occurred.

The proposed stabilization concept for this site is to reposition the existing stones and rocks along the path in a fashion so that they will reduce the runoff velocity. At the toe of the slope, a rock water bar is proposed that will divert runoff flow to reduce erosion.

Removal of invasive species will be done mechanically, and a significant revegetation effort is proposed to re-establish a native cover similar to the banks on either side of this site, including trees, shrubs, and groundcover. Early successional species will be planted to help shade and protect other species (like white pine) until they can become the canopy. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work is 2,936 SF.



Photo 11. Access way #3, MP-21, from the Crosstown Trail (right photo). Note vista pruning evident as large trees are absent, plants at this location are considerably shorter than surrounding vegetation, and there is a large amount of invasive species present (left photo).

MP-22 – Foot Access Point #4 – Crosstown Trail

At this site there is a narrow, steep path for foot traffic to pond shoreline along Crosstown Trail. It appears to be heavily used, with compacted soils and trampled vegetation observed.

The proposed stabilization concept for this site is to use rock water bars along the path in an arrangement that will reduce the runoff velocity and thereby decrease erosion. Due to the proximity of this location to parking areas on Russell Road, this site will also have a stabilized boat launch for kayaks.

Removal of invasive species will be done mechanically, cutting or pulling as appropriate, and a variety of native species will be planted in their place. Additionally, post-construction monitoring should occur to insure invasive species don't spread to occupy disturbed areas.

The limit of work for this site is 2,214 SF.



Photo 12. Access way #4 from the Crosstown Trail.

3.2 Data Collection and Modeling Analyses

Prior to arriving at the proposed design, HW conducted a shoreline assessment which entailed an in depth study of the shoreline to identify areas of erosion, the extent of erosion and the possible causes of the erosion. Plant communities and invasive plant species were also noted. The goal was to help inform the project design and to determine the effect of the project on the flood zone and the inland bank.

3.2.1 Field Assessments

HW performed field assessments on September 5, 2015, in order to observe the existing pond shoreline condition and identify areas of erosion, determine plant communities, and assess the extent of invasive species at the site. This information and proposed concepts were included in the Morses Pond Erosion Study completed for the Town of Wellesley in 2016. A second and more intensive field assessment was conducted on July 19, 2017. At this time detailed assessments, measurements and wetland delineations were conducted. Additional information was also gathered about presence and type of invasive plant species.

3.2.2 Cut/Fill Calculations in Flood zone

This project was specifically designed to minimize fill within the floodplain. Table 3 shows the cut-and-fill calculations for each elevation within the floodplain. The project will result in greater cut than fill, resulting in an increase in flood storage within the project reach.

Table 3. Summary of cut-and-fill calculations for each elevation within the floodplain.

Site	Elevation Range(ft)	Cut (CY)	Fill (CY)	Net Change in Flood Storage (CY)
All Sites (total)	121-124	9.27	0.93	-8.34
MP-9	121-122	9.26	0	-9.26
MP-17	123-124	0.01	0.93	0.92

3.3 Affected Jurisdictional Areas

Alteration of any wetland resource area and/or its associated buffer zone requires the filing of a Notice of Intent application with the Massachusetts Department of Environmental Protection (MassDEP) and with the Town of Wellesley under the Wetlands Protection Bylaw (Article 44).

As noted above, portions of the project will occur within inland bank, the respective buffer zones, and Bordering Land Subject to Flooding; however, this project is restorative in nature and not anticipated to adversely impact resource areas. The primary objective of the project is to restore and stabilize inland bank and improve water quality of the pond. Under inland bank existing conditions it is not effectively performing its designated functions to protect the interests identified in the By-law and Regulations. Table 4 summarizes the proposed activities within each resource area and/or jurisdictional buffer zones. Note that there may be overlap between areas of impact.

Table 4. Resource Area Impacts.

RESOURCE AREA	IMPACT (SF)*	
	Temporary	Permanent
Inland Bank (LF)	734	319
0-100-foot Buffer Zone	32,654	8,158
25-ft No-Disturbance Zone	15,396	5,249
75-ft Limited-Disturbance Zone	17,258	2,683
Bordering Land Subject to Flooding	10,140	4,232
0-200 foot Buffer Zone	32,654	8,158
Land Under Waterbodies and Waterways	0	0

4.0 PROTECTION OF RESOURCE AREA INTERESTS

In order to achieve the restoration goals of the project, the proposed Morses Pond – Shoreline Stabilization Project will result in necessary and unavoidable alterations to resource areas associated with Morses Pond. The entire proposed project has been sited inside of the 100-foot Inland Bank Buffer Zone, and 75-foot Limited Disturbance Zone, Bordering Land Subject to Flooding, and the 25-foot No-Disturbance Zone. These areas are largely located in eroded bank with little to no vegetation, diminishing the ability of these resources to serve the interests under the Massachusetts Wetlands Protection Act and the local Bylaw.

The project was specifically designed to have minimal impact on the 100-year floodplain and floodway. A total of 319 LF of Inland Bank (310 CMR 10.54) and 4,232 SF of Bordering Land Subject to Flood (310 CMR 10.57) will be permanently impacted; although there will be no loss of flood storage capacity as a result of the proposed project.

Additional alterations will occur within the 100-foot Buffer Zone to Inland Bank including within the locally-regulated 25-foot No-Disturbance Zone and 75-foot Limited-Disturbance Zone.

Proposed restoration activities, including stabilization of the embankments, implementation of an invasive species management plan, formalizing access to the water, and revegetation of these areas with native plant species, will result in the following temporary resource area alterations. Additional measures to improve local water quality include installation of multiple erosion controls and stormwater retrofit practices.

Table 4 above summarizes the temporary and permanent impacts to the wetland resource areas. It should be noted that some of the proposed resource area or buffer zone impacts are a result of the proposed restoration activities and are viewed as a project benefit rather than an alteration.

4.1 Wetland Resource Areas

Wetland resource areas occurring at this site include the following, as defined under the Massachusetts *Wetlands Protection Act* (M.G.L. Ch. 131 § 40), its regulations and the Town of Wellesley Wetlands Protection Bylaw (Article 44) and associated Wetlands Protection Rules and Regulations:

- Inland Bank;
- Bordering Land Subject to Flooding (BLSF); and
- Land Under Waterbodies and Waterways.

Resource areas were identified and delineated by HW on July 19, 2017 with the purpose of identifying wetland resource areas and determining the boundaries of Inland Bank.

Prior to conducting field assessments, HW reviewed existing source data, including the USGS topographic map, Massachusetts Natural Heritage and Endangered Species Program (NHESP) Natural Heritage Atlas and common and rare species lists, the USDA Natural Resources Conservation Services (NRCS) Soils Survey for Plymouth County, and available source data from the Massachusetts Geographic Information Service (MassGIS) to identify the presence of natural resources within the project area.

The wetland resource assessment and delineation were completed in accordance with methods described in the Massachusetts Department of Environmental Protection (DEP) handbook entitled *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act* (March 1995) and the Town of Wellesley Wetlands Protection Bylaw (Article 44) to accurately determine the limits of the jurisdictional freshwater wetlands.

The wetland delineation flags were survey-located by the Town of Wellesley, Department of Public Works, Engineering Division.

Resource area boundaries are shown on the existing conditions plans, provided by the Town of Wellesley. Figure 3 in Attachment A depicts the limits of the wetland resource areas as shown on the Massachusetts Department of Environmental Protection (MassDEP) GIS Wetlands data.

The proposed restoration practices have been designed to increase infiltration of stormwater runoff, improve water quality treatment, and help reduce down-gradient impacts to Morses Pond from erosion. In this way, the proposed project is designed to protect applicable interests under the Massachusetts Wetlands Protection Act and the local Wellesley Wetlands Regulation. Brief descriptions of existing resource areas are provided below.

4.2 Inland Bank

The regulations at 310 CMR 10.54(4) state that “*any proposed work on a Bank shall not impair the following:*

- 1. the physical stability of the Bank;*
- 2. the water carrying capacity of the existing channel within the Bank;*
- 3. ground water and surface water quality;*
- 4. the capacity of the Bank to provide breeding habitat, escape cover and food for fisheries;*
- 5. the capacity of the Bank to provide important wildlife habitat functions.”*

The proposed project is designed to improve the physical stability of the Bank by providing shoreline improvements such as planting native vegetation where none currently exist or to replace invasive plants, coir fiber and or rolls to prevent, boulders and steps to direct pedestrian traffic, water bars to direct runoff and reduce runoff velocity and increase infiltration.

4.3 Bordering Land Subject to Flooding

The proposed project is designed to minimize fill within the floodplain (BLSF). As described above, the project will result in greater cut than fill, resulting in an increase in flood storage capacity within the project reach, and will not result in a loss of flood storage volume per 310 CMR 10.57(4)(a)1.

The general performance standards for BLSF as found at 310 CMR 10.57(4) are addressed below.

- 1. Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows. Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.*

These performance standards are not applicable. Alterations within BLSF to allow for the proposed bank stabilization efforts will result in a net gain of flood storage capacity within

BLSF within the project limits and may alleviate flooding in downstream areas during larger storm events.

2. *Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.*

These performance standards are not applicable.

3. *Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work which would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.*

These performance standards are not applicable. As the Project is proposed for the purpose of resource area restoration, the Project is intended to enhance wildlife habitat functions of this resource area and will not adversely affect specified habitat sites of rare vertebrate or invertebrate species or vernal pools.

4.4 Land Under Waterbodies and Waterways

In accordance with 310 CMR 10.56(4), any proposed work within LUWW shall not impair the following:

1. *The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;*
2. *Ground and surface water quality;*
3. *The capacity of said land to provide breeding habitat, escape cover and food for fisheries; and*
4. *The capacity of said land to provide important wildlife habitat functions.*

The proposed activities do not take place under the pond water and are not likely to have an impact on pond's carrying capacity, water quality, wildlife habitat or habitat functions of the LUWW.

4.5 Buffer Zones

The Town of Wellesley Wetlands Protection Bylaw regulates the 100-foot buffer zone as a resource area, and has further established a 25-foot No-Disturbance Zone as well as a 25-100-foot Limited-Disturbance Zone. Portions of the proposed Project will occur within each of these areas by virtue of the project design and intent.

Specifically, in all locations where direct alterations to resource areas will occur as part of resource area restoration efforts (e.g., along the pond banks), work within the No-Disturbance Zone is inevitable during construction. Ultimately, following construction and restoration of the resource areas, these areas will be restored in kind following minor regrading and revegetation with native species. Temporary disturbance within the No-Disturbance Zone will also occur in areas where invasive species management is proposed. In these locations, following successful implementation, the No-Disturbance Zone and adjacent Limited-Disturbance Zone will be restored in kind.

However, no new impervious surfaces (e.g., refurbished pathways) are proposed. The project design was carefully balanced between resource area restoration and preservation of the No-Disturbance Zone, which is comprised largely of high erosion areas and minimally vegetated bank, and it was determined that disturbance in this location would better serve the interests and intent of the Bylaw by allowing for greater overall resource area restoration, stabilization, enhancement and greater ecological connectivity. The Town respectfully requests consideration by the Wetlands Protection Committee for a Waiver for temporary disturbance and limited permanent disturbance as discussed below.

4.6 Zone I - Public Water Supply

Sites MP-11, MP-12 and MP-13 of the proposed project are located within a DEP approved Zone I public water supply. The total area of disturbance (limit of work) to construct these three sites is 7,694 SF (0.18 ac), of which 6,431 SF is temporary, resulting in 1,263 SF of permanent alteration. The project would indirectly support the protection of public water supply as the BMPs are designed to improve treatment of stormwater runoff and reduce the impact of erosion.

The proposed disturbances include formalizing access pathways to water at both MP-11 and MP-12. The proposed concept for MP-11 consists of steps that will lead users to the pond's edge. The frame of the step will be made of wood while inside the step framing will be stone which will help encourage infiltration. At MP-12, the proposed design provides a 6-foot wide access area to the pond, with stabilization consisting of boulders and native plantings along the edges. Coir matting and plantings will help stabilize the area that traffic is not wanted. Landscape boulders will allow for plants to establish in the planting area along with provide seating for pond users. The proposed design for MP-13 includes stabilization concept by filling in voids with topsoil, coir fabric and plantings to reestablish a natural stabilization. Coir logs will be installed along the shoreline where there are signs of undercutting bank. Construction of a fishing platform/viewing deck area is also being proposed for this area. Further away from the bank, there will be water bars installed along the path to help divert the runoff up gradient.

No stormwater discharges are proposed for this area of the project within the Zone I of a public water supply. Additionally, there will be no increase in impervious surface at any of these sites.

The proposed bank restoration and stabilization practices at these sites are low impact and have been designed to increase infiltration of stormwater runoff, improve water quality treatment, and help reduce down-gradient impacts to Moses Pond. In this way, the proposed project is designed to protect drinking water supplies.

4.7 Waiver of Regulation under Wellesley Wetlands Protection Regulations

The Town respectfully requests a Waiver, pursuant to Section 1.6(9) of the Wellesley Wetlands Protection Regulations for temporary and limited permanent disturbance for the implementation of the Morses Pond Shoreline Stabilization Project. Disturbances will occur within the Bank and 100-foot buffer zone to the Bank including the locally regulated No-Disturbance Zone and Limited Disturbance Zone, the 200-foot Buffer to BLSF, as well as within a Zone I drinking water recharge area.

The overall goals of this project are to provide restoration of wetland resource areas while preserving the overall utility and recreation access to Morses Pond. Notwithstanding resource area restoration activities, which are designed to provide for better shoreline stabilization, water quality, and wildlife habitat along the shoreline of Morses Pond and within the adjacent banks, temporary alterations within the adjacent buffer zones will ultimately further enhance the ability of the resource areas to protect the interest under the Wetlands Protection Act and the Wetlands Protection Bylaw.

Additionally this project serves a substantial public interest by improving the water quality of Morses Pond. Morses Pond provides 40% of Wellesley's drinking water and offers numerous recreational opportunities for the residents, including swimming, kayaking, fishing and walking.

Upon restoration and, where proposed, implementation of the invasive species management program, will further protect and enhance the interests under Article 44. Formalizing the existing informal access ways to the water around Morses Pond will reduce the erosion that is currently occurring, which will improve the water quality of the pond. Planting native vegetation on the bank and in the buffer zones will provide stability and create protective buffer areas. This will improve the ability of the Inland Bank to perform its functions under the WPA and the local Bylaws. It will also provide for greater ecological connectivity around the shoreline of Morses Pond, provide greater wildlife habitat values, and further protect water quality of the pond by filtering sediments and nutrients from stormwater runoff prior to entering the pond. Outside of the limit of work, resource areas will be protected through implementation of an erosion and sedimentation control program as described below.

The proposed erosion control and bank stabilization practices have been designed to minimize impacts to the Bylaw Interests and Values. No impervious surfaces are proposed. All proposed activities are designed to reduce the flow of stormwater runoff, increase infiltration, and improve bank conditions with minimal disturbance to the surrounding resources.

The proposed project activities, to reduce erosion into the pond, are consistent with the intent and purpose of the Bylaw and its regulations. The goals of the project, to improve bank conditions and improve water quality, will enhance the resource areas natural capacity to preserve and protect the Bylaw interests and values. The methods and tools use to restore and stabilized the bank will also enhance the bylaw interest and values by improving the habitat function of the bank.

The proposed project inherently provides mitigation as it improves the Bylaw Interests and Values. The erosion control will improve the pond water quality. Bank stabilization will improve the Bank's functions to protect water supply, prevent pollution and protect fisheries and wildlife habitat. Invasive species removal will improve Bank and Buffer Zone conditions and subsequently their ability to protect the interests and values of the Bylaw.

The proposed activities are consistent with the intent and purpose of the Bylaw and will serve a substantial public interest, including the protection of the Bylaw interests and values. In light of the overall project purpose of providing resource area and buffer zone restoration, the Town respectfully requests a Waiver from the provisions of the Wetlands Regulations for encroachment within the locally regulated resource areas.

5.0 MITIGATION MEASURES

5.1 Stormwater Management

The wet swale proposed at MP-9 and the rain garden proposed for MP-10 will be located in the Buffer Zone (outside of Bank). The project does not propose any increase in impervious surfaces, and it does not trigger the stormwater management regulations. Therefore, a full stormwater report and checklist are not provided. However, the project is still designed to meet the Massachusetts Stormwater Management Standards (MASWMS) and local stormwater management standards to the extent practicable.

The purpose of the project, in addition to formalizing existing path ways and stabilizing the shoreline, is to design and install low impact design (LID) stormwater treatment practices where applicable (MP-9 and MP-10) to improve water quality, stormwater runoff treatment of existing impervious surfaces, and help reduce erosion impacts on Morses Pond. There is currently no existing stormwater management in these locations.

Stormwater runoff is a concern at these locations because the water quality of the pond is impaired and provides 40% of Wellesley's drinking water via the adjacent water supply wells. There currently are numerous erosion areas around the pond, which contribute sediment and other stormwater pollutants to the pond.

The stormwater systems have been designed to conform to the requirements of the Town of Wellesley Bylaw and the MASWMS. The proposed site designs conform to the Standards by incorporating LID elements to the maximum extent practicable and providing stormwater runoff treatment for the first 1-inch of runoff from the contributing impervious surface drainage area as well as non-erosive conveyance of runoff from larger storms.

According to the Wellesley Bylaw Regulations if the only impact from a proposed stormwater practice occurs within Buffer Zones and BLSF, the proposed project does not trigger the stormwater management regulations (Section 1.6(8)(b)4.g.1), and the project is therefore not required to meet the local Stormwater Standards.

5.2 Erosion and Sedimentation Control

In addition to other protective measures, the Town proposes to protect the adjacent wetland resource areas prior to, during, and immediately following construction by implementing a sedimentation and erosion control (ESC) program. The limits and details of the ESC are shown on the Site Layout Plans (Sheets 7-10). As described on the site plans, appropriate erosion control measures will be utilized to delineate the limit of work, staging areas, and access points to prevent

any migration of sediments or materials, erosion, or other runoff-related impacts to the resource areas.

ESC barriers (i.e., silt fence and/or silt sock) will be installed, and will remain in place and be maintained in good condition until construction activities are complete and all soils have been stabilized. If needed, a dewatering plan will be established to control water seeping into the construction areas so they can remain as dry as possible. All excess construction materials will be removed upon project completion.

Details of the proposed ESC measures are provided on the site plans.

5.3 Invasive Species Management

In addition to existing erosion issues around Moses Pond, invasive species are present along the bank and adjacent upgradient areas of the buffer zone. Invasive species were initially assessed from the water and subsequently not as well located or identified. The site visit conducted in July of 2017 yielded more invasive species identified as the sites were reevaluated on foot. An important component of the shoreline stabilization project is to address and manage these invasive species.

Typically, management techniques fall into three categories: mechanical, chemical, and biological. In general, mechanical control, such as cutting or pulling, has the least adverse impacts on the nearby resources and is the only method proposed for this project. Proposed management techniques for invasive plants encountered in substantial quantities at this site are described in detail in the *Invasive Species Management Plan* (Appendix B) provided with the *Moses Pond Erosion Study*. Additional details and invasive species management sequencing are provided within the notes on Sheet C-2 (Construction Notes) of the plan set. The proposed invasive species management plan is designed to strategically manage (reduce or eliminate) the invasive species identified at this site, while restoring a native plant community to stabilize soils and provide enhanced wildlife habitat values along the pond shoreline.

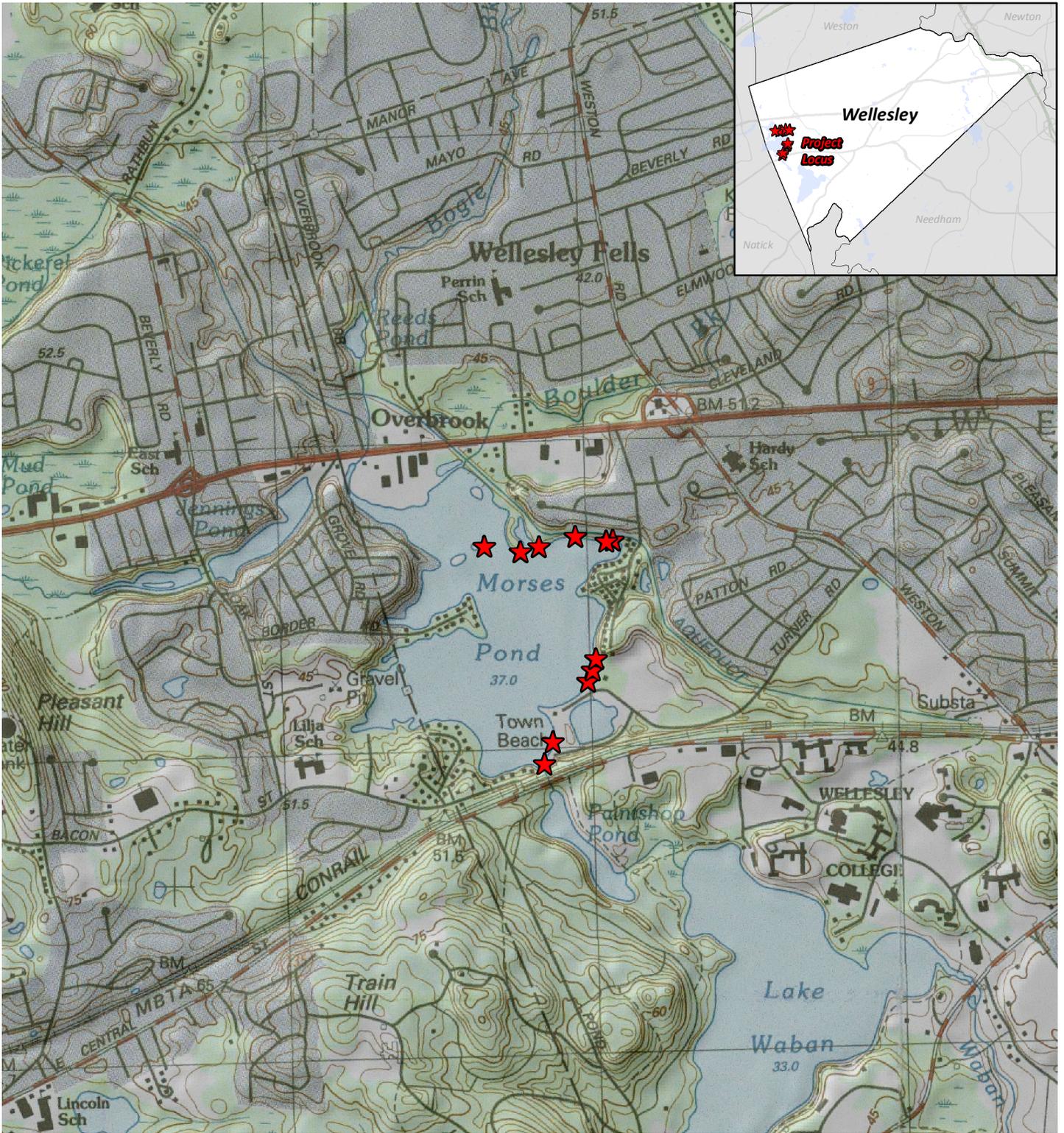
6.0 ADDITIONAL PROJECT PERMITTING

The proposed Moses Pond Shoreline Stabilization Project will require review and permitting under various environmental and wetland laws, including the following:

- U.S. Army Corps of Engineers Preconstruction Notification General Permit (GP) – for impacts to Waters of the United States; and
- 401 Water Quality Certification (WQC) through the Massachusetts Department of Environmental Protection.

Copies of other applications and approvals will be submitted to the Conservation Commission.

ATTACHMENT A – LOCUS MAPS



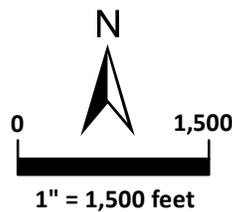
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Legend

- ★ Erosion Sites

*Natick Topographic Quadrangle

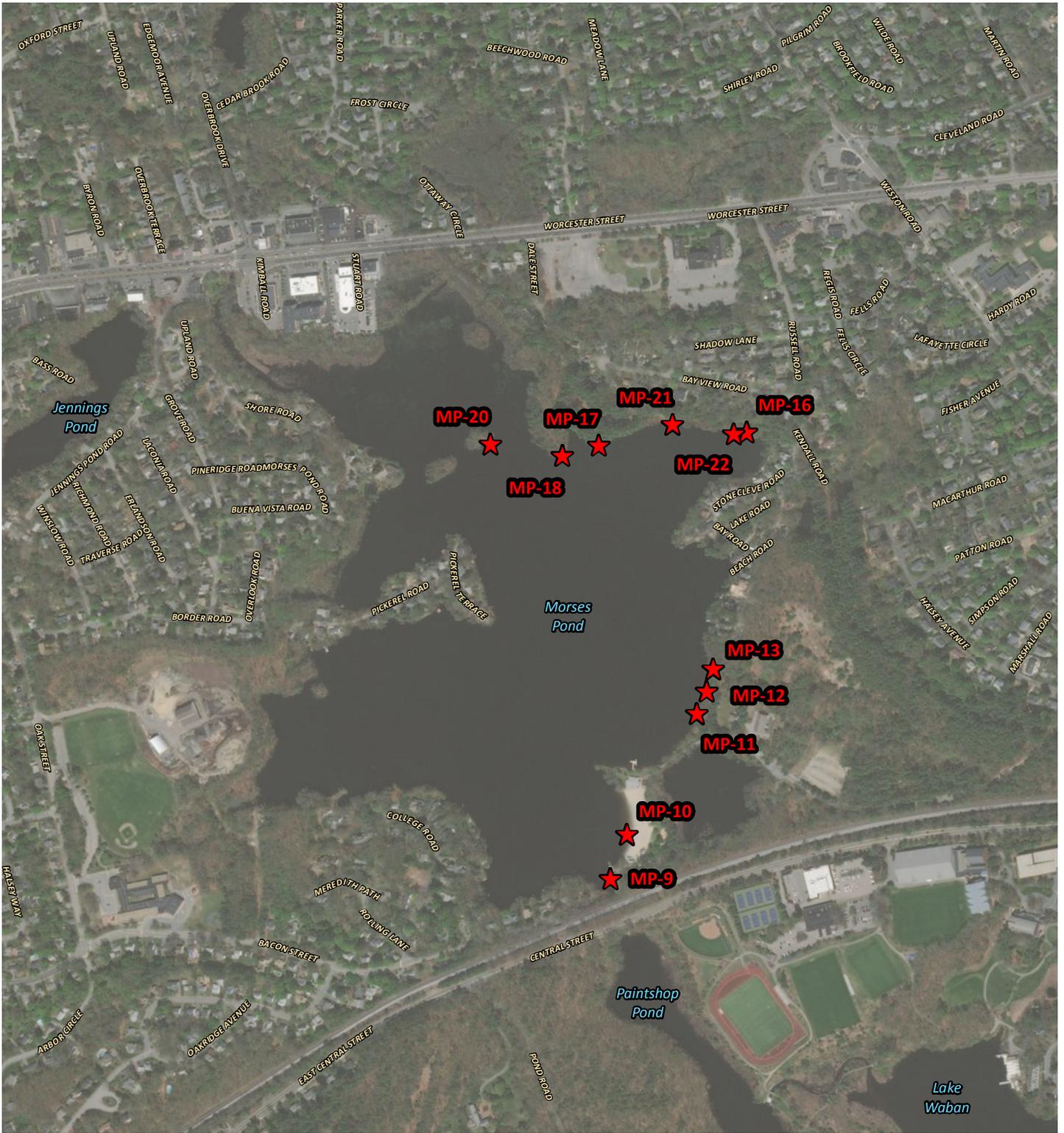
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 508-833-8600 • horsleywitten.com

USGS Topographic Map
 Morses Pond
 Town of Wellesley, MA

Date: 3/20/2018

Figure 1



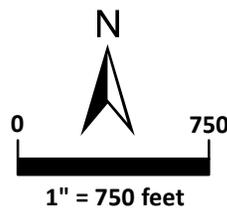
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Legend

★ Erosion Sites

*Aerial Imagery - ESRI 2016

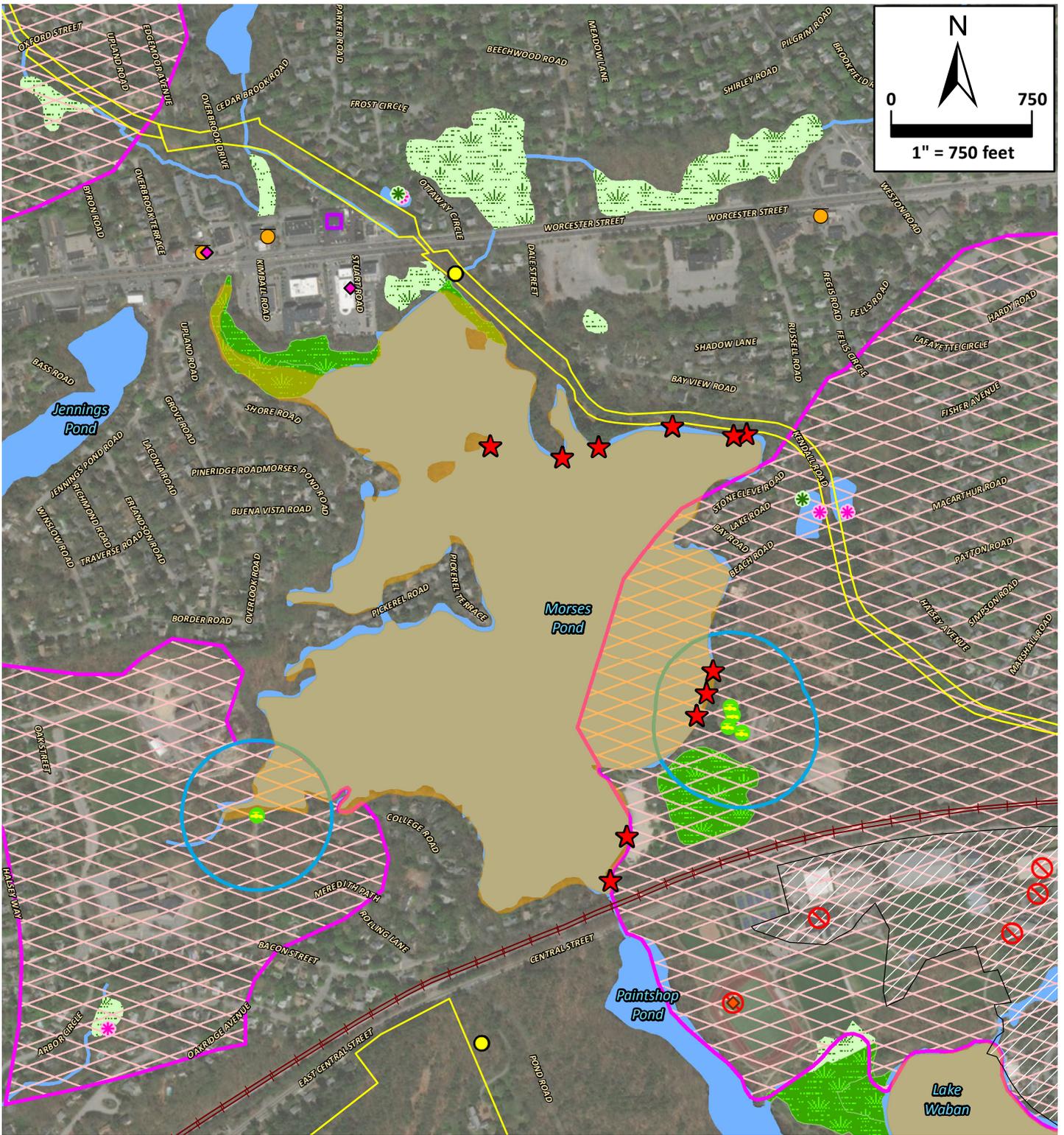
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Aerial Photograph
 Morses Pond
 Town of Wellesley, MA

Date: 3/20/2018

Figure 2



Document Path: H:\Projects\2015\15120 Morses Pond Erosion Study\15120A Morses Design & Permitting\GIS\Maps\Permitting\Constraints.mxd

Legend

- Erosion Sites
- NHESP Certified Vernal Pools
- Potential Vernal Pools
- Chapter 21E Tier Classified Sites - TIER I
- Chapter 21E Tier Classified Sites - TIER II
- Underground Storage Tanks
- Large Quantity Generators of MA-regulated Hazardous Waste
- 2014 Integrated List Data - 305(b)/303(d) - Impairment not caused by a pollutant
- DEP Approved Zone I
- DEP Approved Zone II
- Public Water Supplies - Community Groundwater Source
- AUL Sites
- Hydrologic Connection
- Active Rail Service
- Nat'l Register of Historic Places
- Nat'l Register of Historic Places
- Marsh/Bog
- Wooded marsh
- Open Water

*Aerial Imagery - ESRI 2016

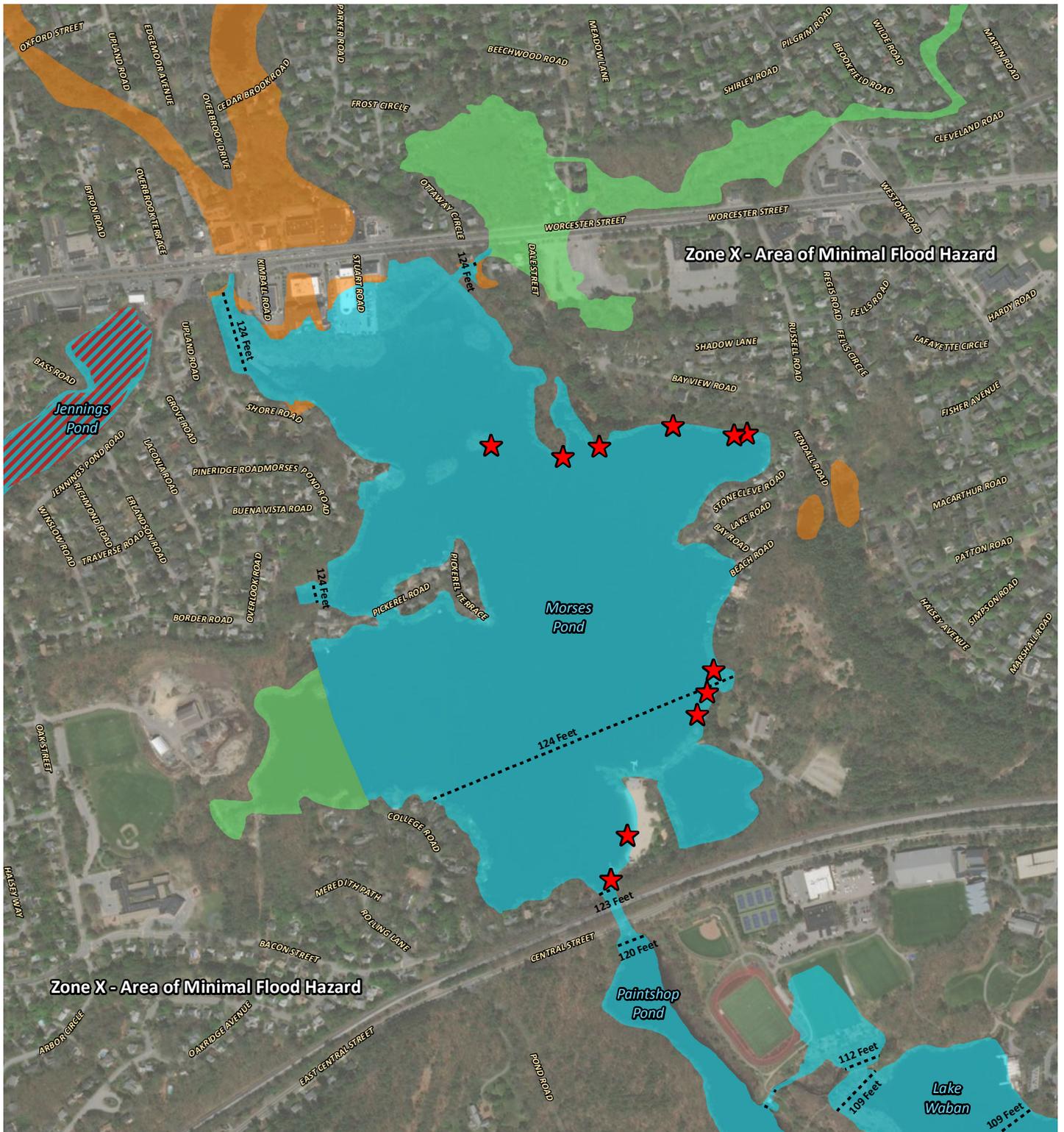
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Environmental Constraints
Morses Pond
Town of Wellesley, MA

Date: 3/20/2018

Figure 3

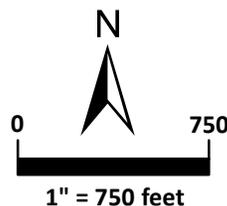


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Legend

*FEMA's National Flood Hazard Layer - 2012

-  Erosion Sites
-  Base Flood Elevations (BFE) (ft.)
-  A: 1% Annual Chance of Flooding, no BFE
-  AE: 1% Annual Chance of Flooding, with BFE
-  AE: Regulatory Floodway
-  X: 0.2% Annual Chance of Flooding



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FEMA Flood Zones
 Morses Pond
 Town of Wellesley, MA

Date: 3/20/2018

Figure 4

National Flood Hazard Layer FIRMMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth
		Regulatory Floodway Zone AE, AO, AH, VE, AR

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X

		Area with Flood Risk due to Levee Zone D
--	--	--

OTHER AREAS		Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/27/2018 at 9:56:03 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



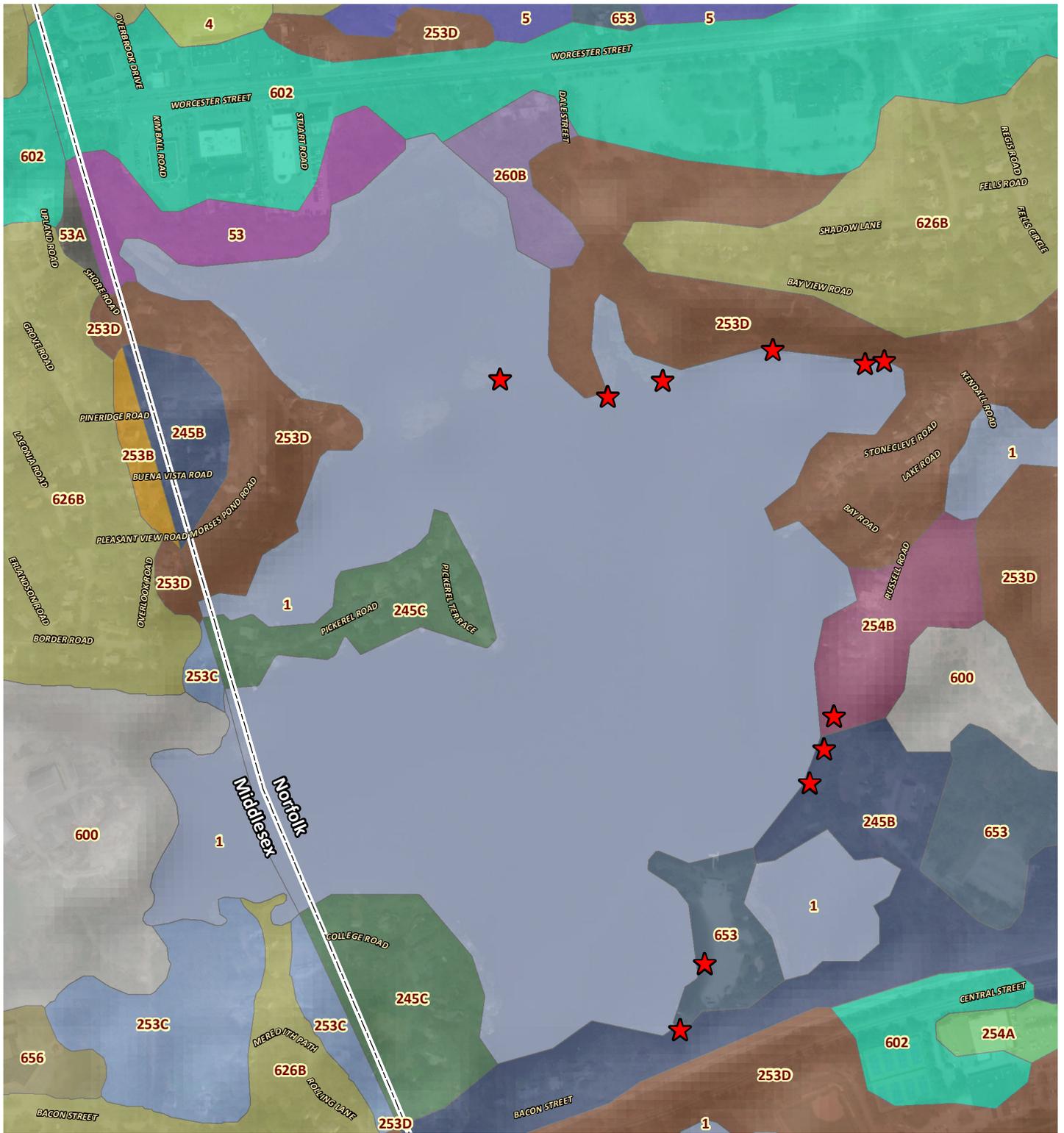
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71°19'30.09"W

71°18'52.63"W

42°17'47.27"N

Figure 4A

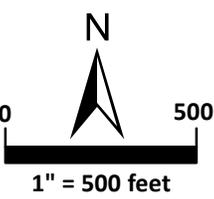


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Legend

- Erosion Sites
- County Boundary
- 1, Water
- 245B, Merrimac
- 245C, Hinckley
- 253B, Hinckley
- 253C, Hinckley
- 253D, Hinckley
- 254A, Merrimac
- 254B, Merrimac
- 260B, Sudbury
- 4, Rippowam
- 5, Saco
- 53, Freetown
- 600, Pits
- 602, Urban land
- 626B, Merrimac
- 653, Udorthents
- 656, Udorthents

*Aerial Imagery - ESRI 2016



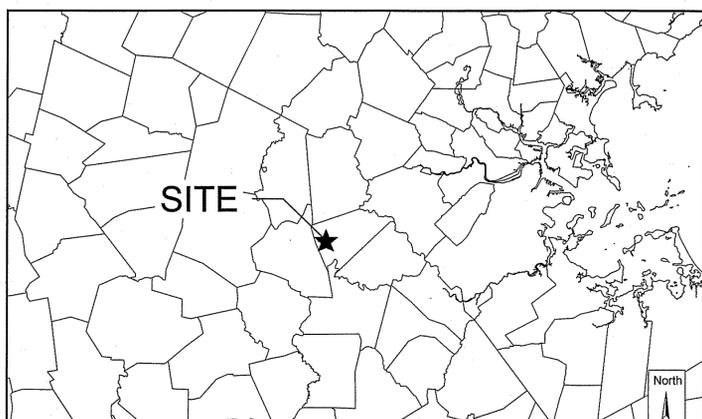
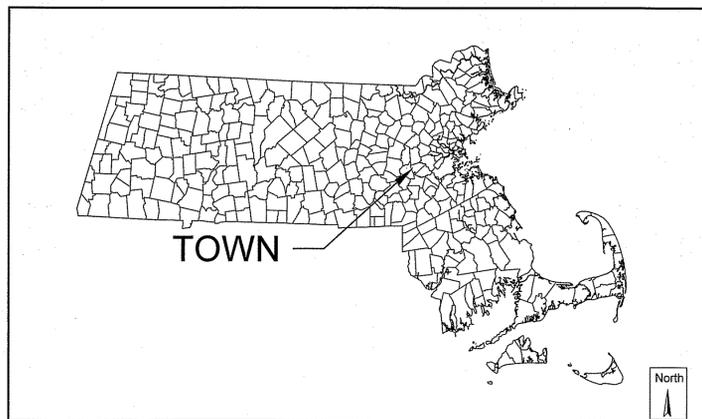
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**NRCS County Soils Map
 Morse Pond
 Town of Wellesley, MA**

*Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology and Security Services

ATTACHMENT B - PROJECT PLANS

MORSES POND SHORELINE STABILIZATION PERMITTING PLANS WELLESLEY, MASSACHUSETTS APRIL 2018



VICINITY MAP
Graphic Scale
1-inch = 500-feet

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	CONSTRUCTION NOTES
3	EXISTING CONDITIONS-SITES 9 & 10
4	EXISTING CONDITIONS-SITES 11,12 & 13
5	EXISTING CONDITIONS-SITES 16,21, & 22
6	EXISTING CONDITIONS-SITES 17,18, & 20
7	SITE PLAN - SITES 9 & 10
8	SITE PLAN - SITES 11,12, & 13
9	SITE PLAN - SITES 16,21, & 22
10	SITE PLAN - SITES 17,18, & 20
11	LANDSCAPE PLAN - SITES 9,10,11,12, & 13
12	LANDSCAPE PLAN - 16,17,18,20,21, & 22
13	LANDSCAPE DETAILS

- GENERAL NOTES:
- THIS PLAN SET IS FOR PERMITTING ONLY AND NOT FOR CONSTRUCTION.
 - SURVEY CONDUCTED BY THE TOWN OF WELLESLEY IN NOVEMBER, 2017. ELEVATION DATUM IS MASS GIS BASED ON TOWN PROVIDED SURVEY.
 - PROPERTY LINES APPROXIMATE ONLY.
 - A PORTION OF THE PROPERTY IS LOCATED IN A WELLHEAD PROTECTION DISTRICT AS SHOWN ON THE PLAN.
 - THE WETLAND DELINEATION SHOWN HEREON WAS CONDUCTED BY HORSLEY WITTEN GROUP, INC. ON JULY 19, 2017.

Plan Set:
**MORSES POND SHORELINE STABILIZATION
PERMITTING PLANS
WELLESLEY, MASSACHUSETTS**

Prepared For:
Town of Wellesley
525 Washington Street
Wellesley, MA
(781)-431-1019

Prepared By:
Horsley Witten Group, Inc.
Sustainable Environmental Solutions
www.horsleywitten.com

Headquarters
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Sandwich, MA 02563
(508) 833-6600 voice
(508) 833-3150 fax

294 Washington Street Suite 801
Boston, MA 02108
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(617) 574-4799 fax

55 Dorrance Street, Suite 403
Providence, RI 02906
(401) 272-1717 voice
(401) 439-8368 fax

Registration:
RICHARD A. CLAYTON
CIVIL
NO. 45116

Revisions	
Rev.	Description

Project Number:
15120A

Sheet Number:
1 of 13

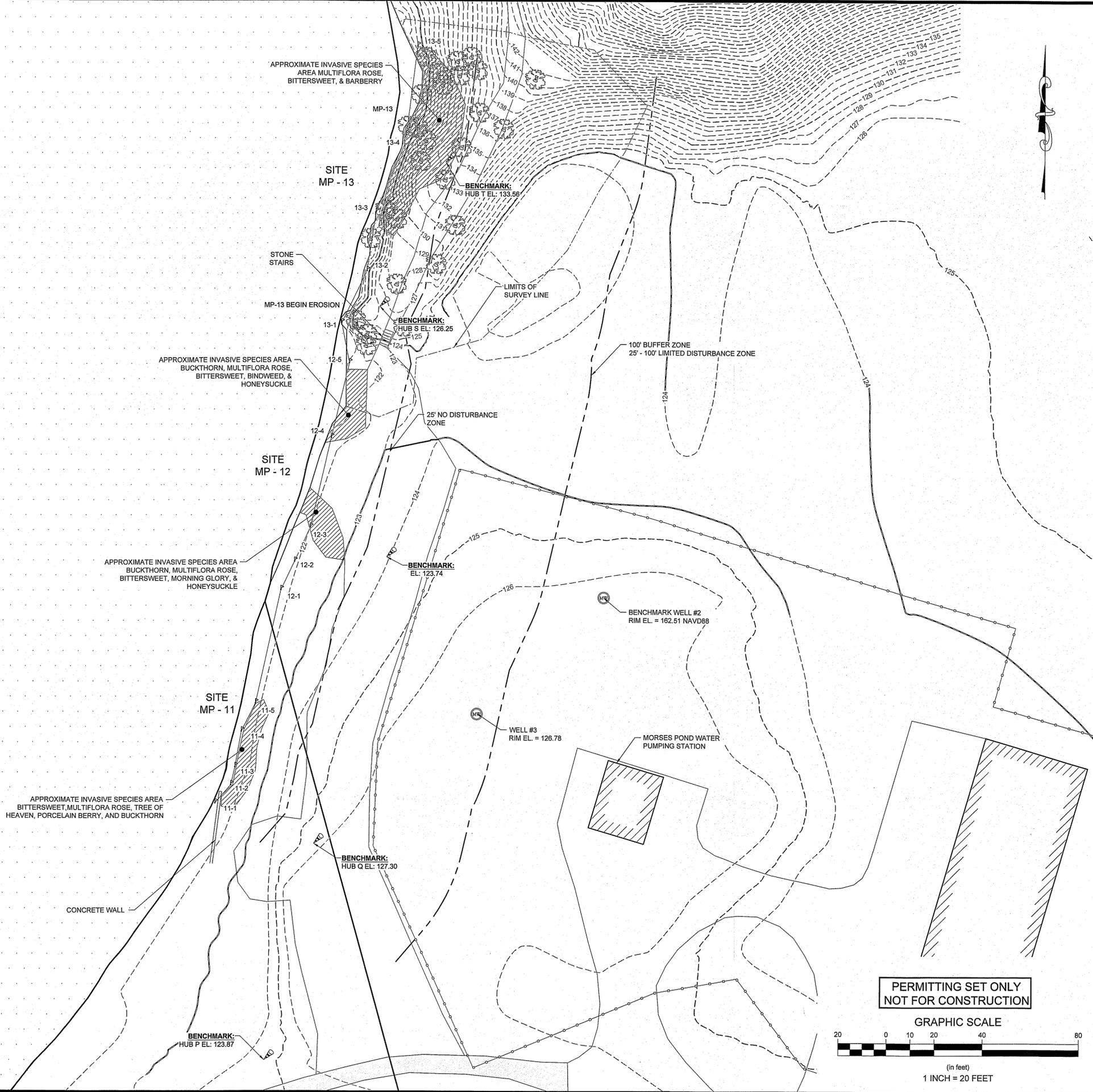
Drawing Number:
C-1

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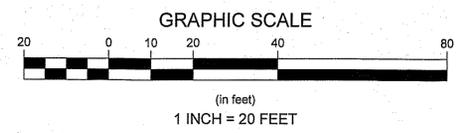
THE TOPOGRAPHICAL SURVEY, EXISTING CONDITIONS BASE MAP WERE PROVIDED BY THE TOWN OF WELLESLEY AND TAKEN FROM THE STAMPED PLAN ENTITLED "MORSES POND WETLAND DELINEATION", DATED FEBRUARY 26, 2018. SEE SURVEY NOTES FROM REFERENCED STAMPED PLAN ON SHEET C-2 OF THE PLAN SET ENTITLED "MORSES POND SHORELINE STABILIZATION".

ZONE 1 - WELLHEAD PROTECTION
400 FOOT BUFFER

MORSES POND



PERMITTING SET ONLY
NOT FOR CONSTRUCTION



Rev.	Date	By	Appr. Description
1			
2			
3			
4			
5			
6			
7			
8			
9			
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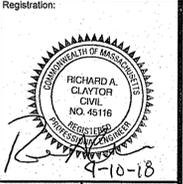
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Designed By: GSG
Drawn By: GSG
Checked By: RAC

Plan Set:
**MORSES POND SHORELINE STABILIZATION
PERMITTING PLANS
WELLESLEY, MASSACHUSETTS**

Plan Title:
EXISTING CONDITIONS-SITES 11, 12 & 13

Prepared For:
Town of Wellesley
525 Washington Street
Wellesley, MA 02158
Phone: (781)-431-1019
Fax: _____

Survey Provided By:
Town of Wellesley
20 Municipal Way
Wellesley, MA
Phone: 781-235-7600
Fax: _____
Dated: NOVEMBER 2017

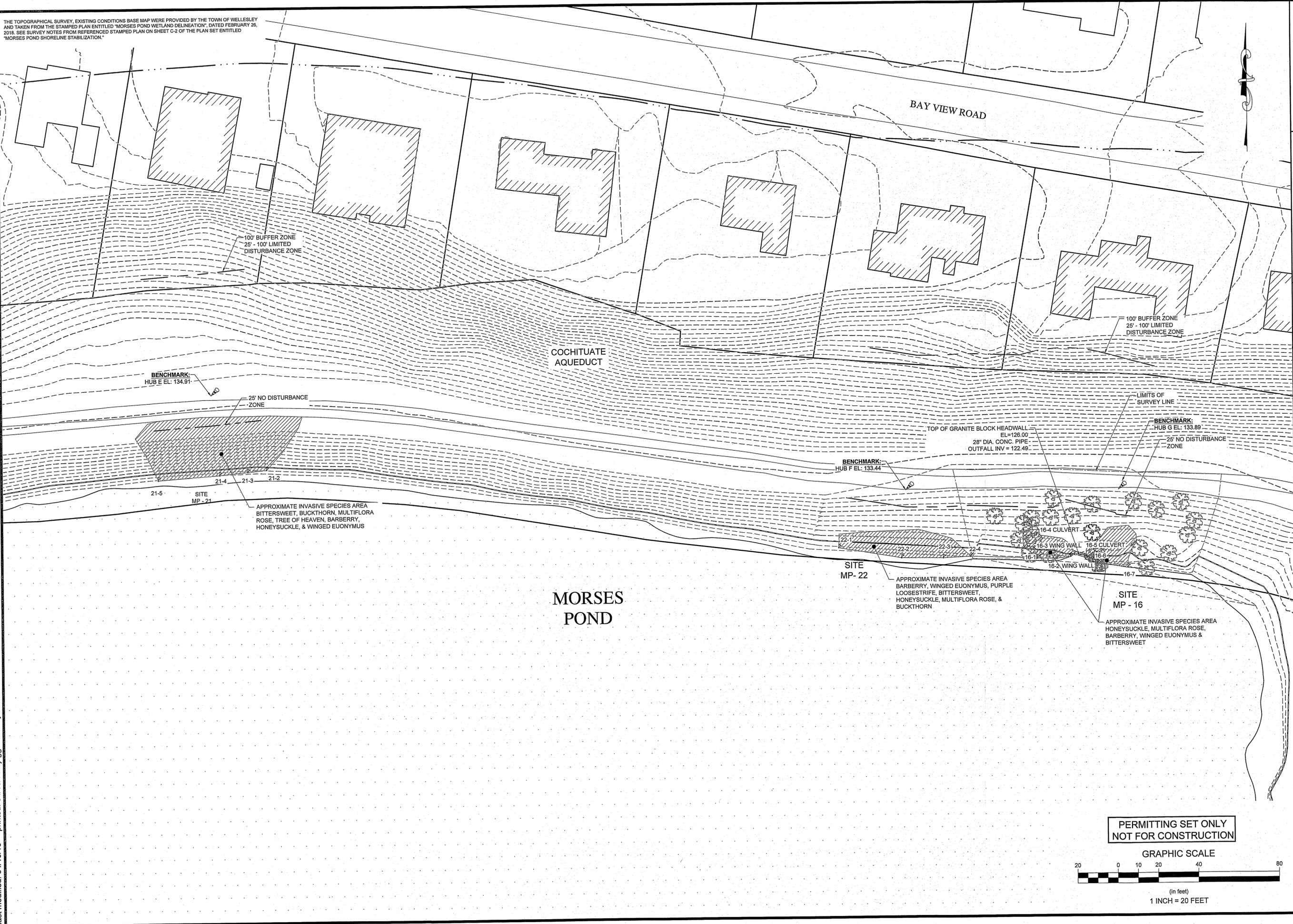


Registration:
Project Number: 15120A
Sheet: 4 of 13
Sheet Number: **C - 4**

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last modified: 04/10/18 printed: 04/10/18 by gg H:\Projects\2015\15120 Morses Pond Erosion Study\15120A Morses Design & Permitting\Drawings\15120A EX.dwg

THE TOPOGRAPHICAL SURVEY, EXISTING CONDITIONS BASE MAP WERE PROVIDED BY THE TOWN OF WELLESLEY AND TAKEN FROM THE STAMPED PLAN ENTITLED "MORSES POND WETLAND DELINEATION", DATED FEBRUARY 26, 2018. SEE SURVEY NOTES FROM REFERENCED STAMPED PLAN ON SHEET C-2 OF THE PLAN SET ENTITLED "MORSES POND SHORELINE STABILIZATION."



Revisions	By	Date	Description
1	GG	04/10/18	ISSUED FOR PERMITTING
2	GG	04/10/18	REVISED PER TOWN COMMENTS
3	GG	04/10/18	REVISED PER TOWN COMMENTS
4	GG	04/10/18	REVISED PER TOWN COMMENTS
5	GG	04/10/18	REVISED PER TOWN COMMENTS
6	GG	04/10/18	REVISED PER TOWN COMMENTS
7	GG	04/10/18	REVISED PER TOWN COMMENTS
8	GG	04/10/18	REVISED PER TOWN COMMENTS
9	GG	04/10/18	REVISED PER TOWN COMMENTS
10	GG	04/10/18	REVISED PER TOWN COMMENTS

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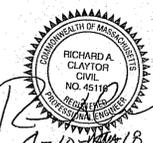
Date: APRIL 2018
 Designed By: GSG
 Drawn By: GSG
 Checked By: RAC

Plan Set:
MORSES POND SHORELINE STABILIZATION PERMITTING PLANS
WELLESLEY, MASSACHUSETTS

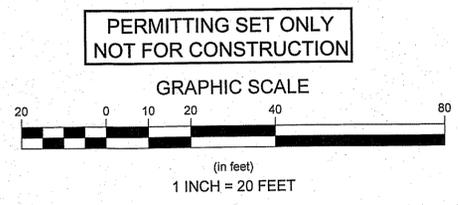
Plan Title:
EXISTING CONDITIONS-SITES 16,21, & 22

Prepared For:
Town of Wellesley
 525 Washington Street
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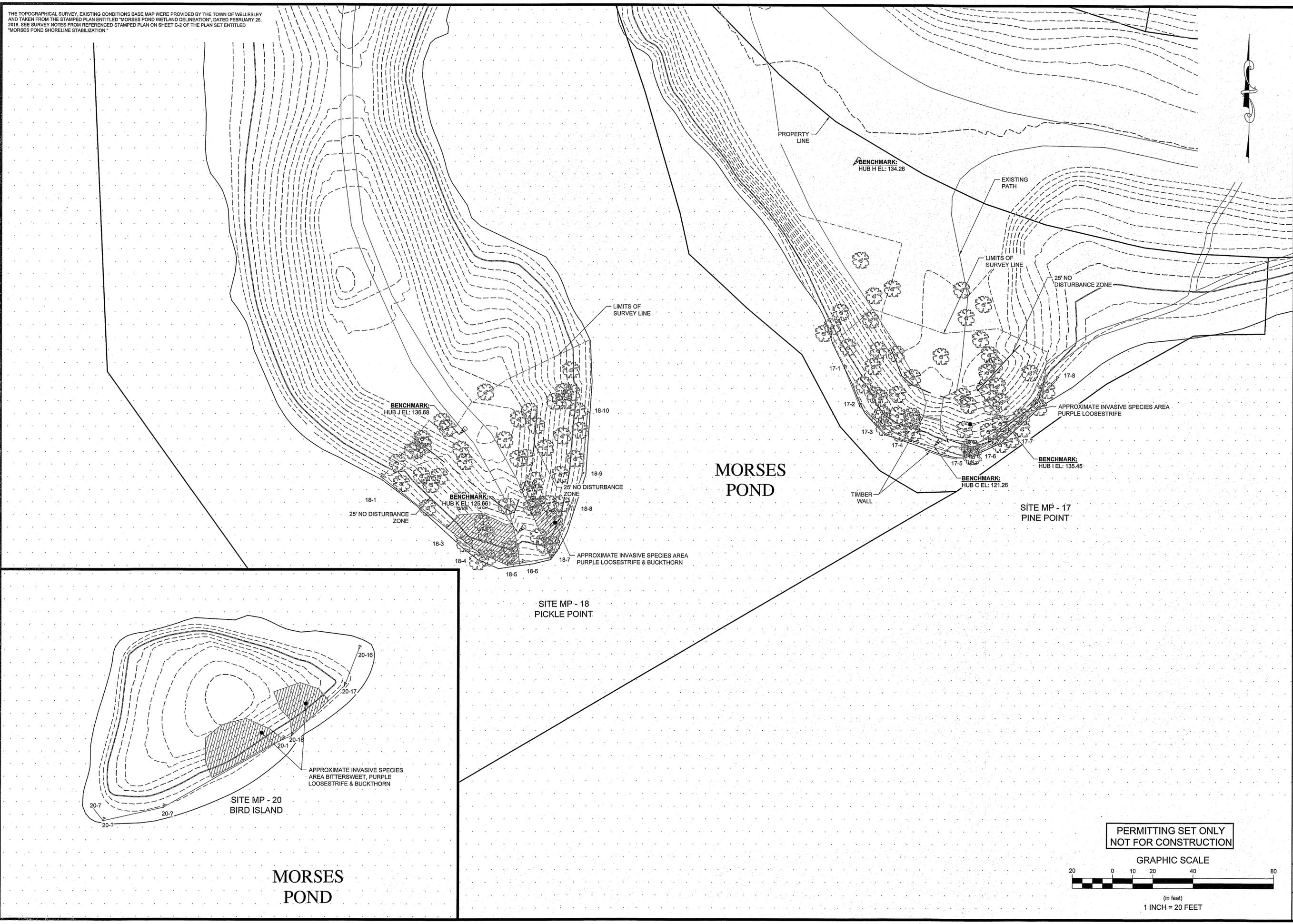
Registration:

 RICHARD A. CLAYTOR
 CIVIL
 NO. 45119
 STATE OF MASSACHUSETTS

Project Number: 15120A Sheet: 5 of 13
 Sheet Number: C-5



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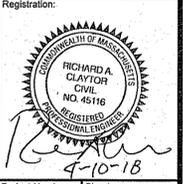


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 Sustainable Environmental Solutions
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 90 Route 6A
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 978-333-8900 voice
 978-333-9100 fax

Plan Set:
MORSES POND SHORELINE STABILIZATION PERMITTING PLANS WELLESLEY, MASSACHUSETTS
 Existing Conditions - Sites 17, 18, & 20

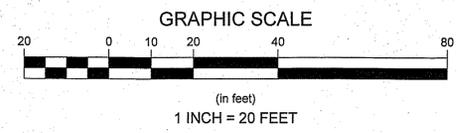
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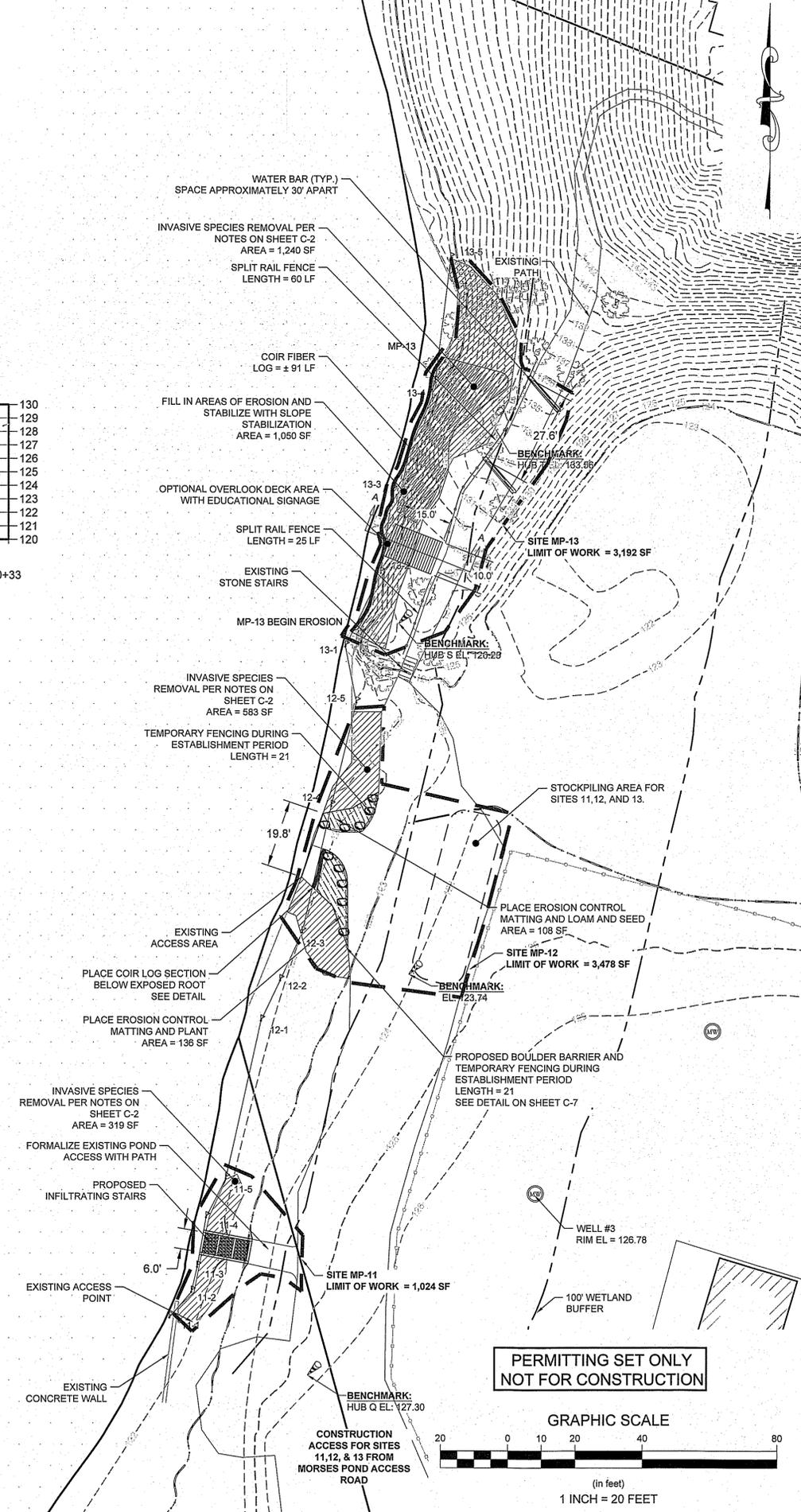
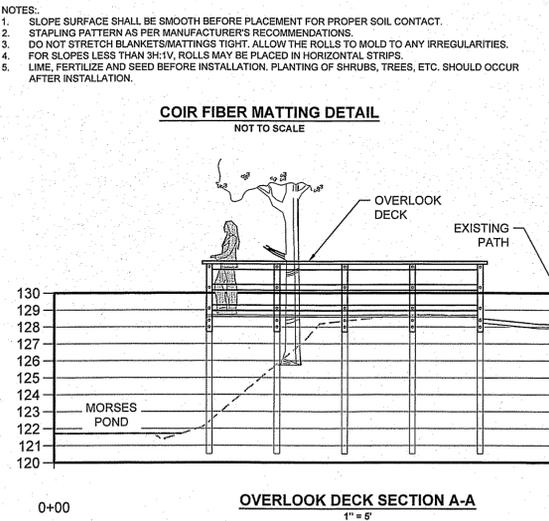
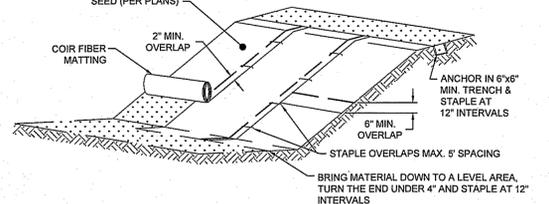
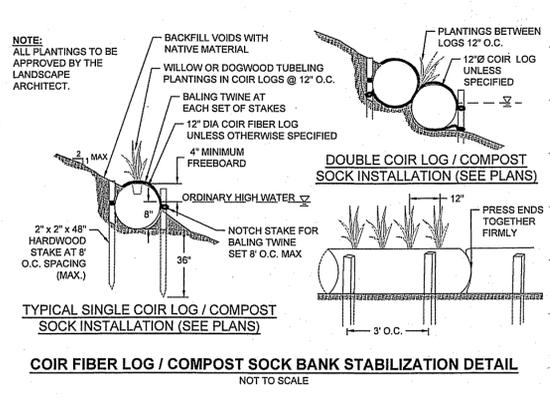
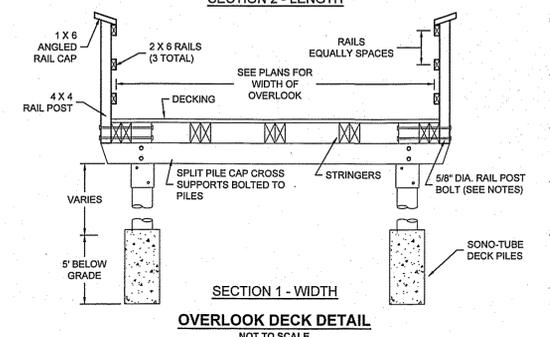
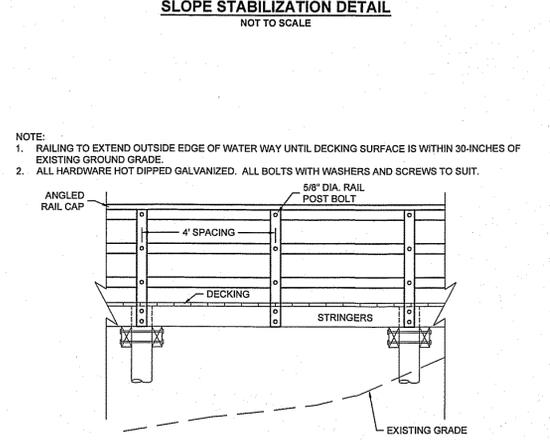
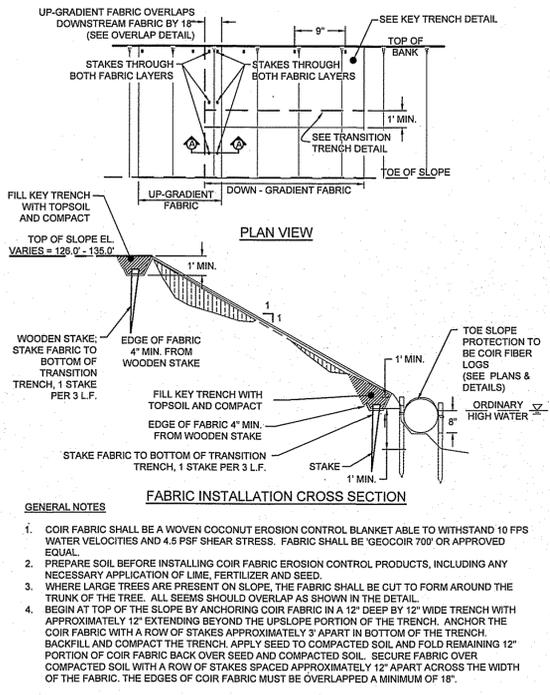
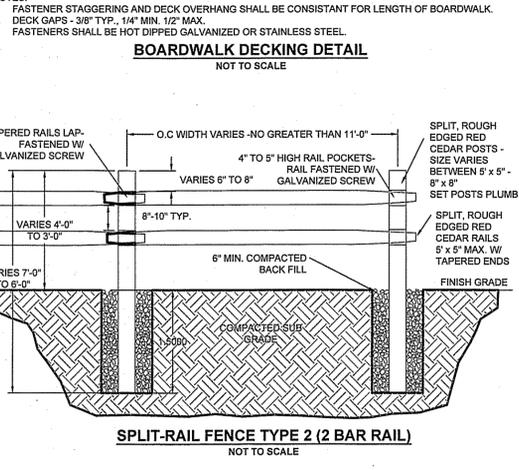
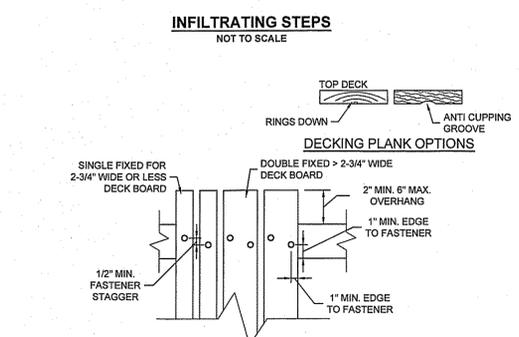
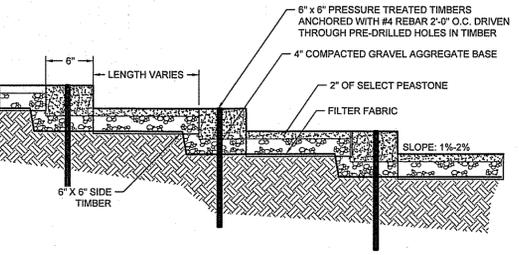
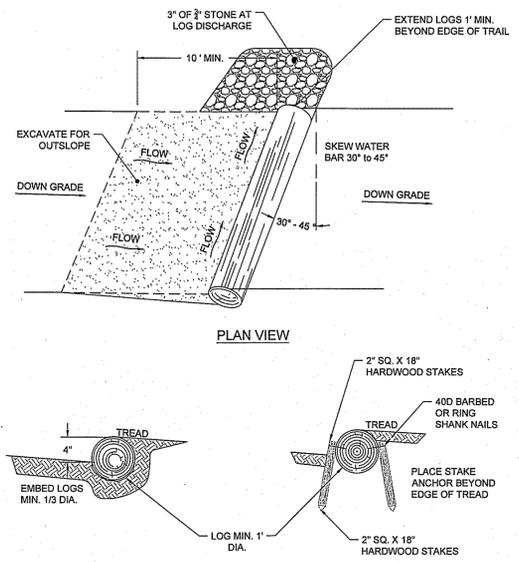
Registration:
 Project Number: 15120A
 Sheet: 6 of 13
 Sheet Number: **C - 6**

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 NOT FOR CONSTRUCTION**



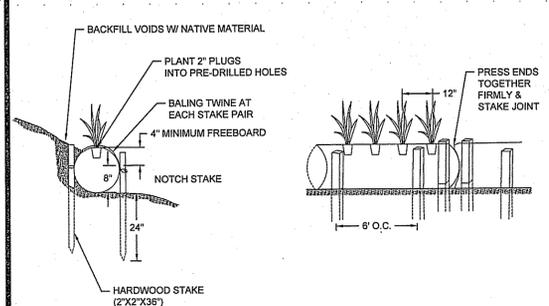
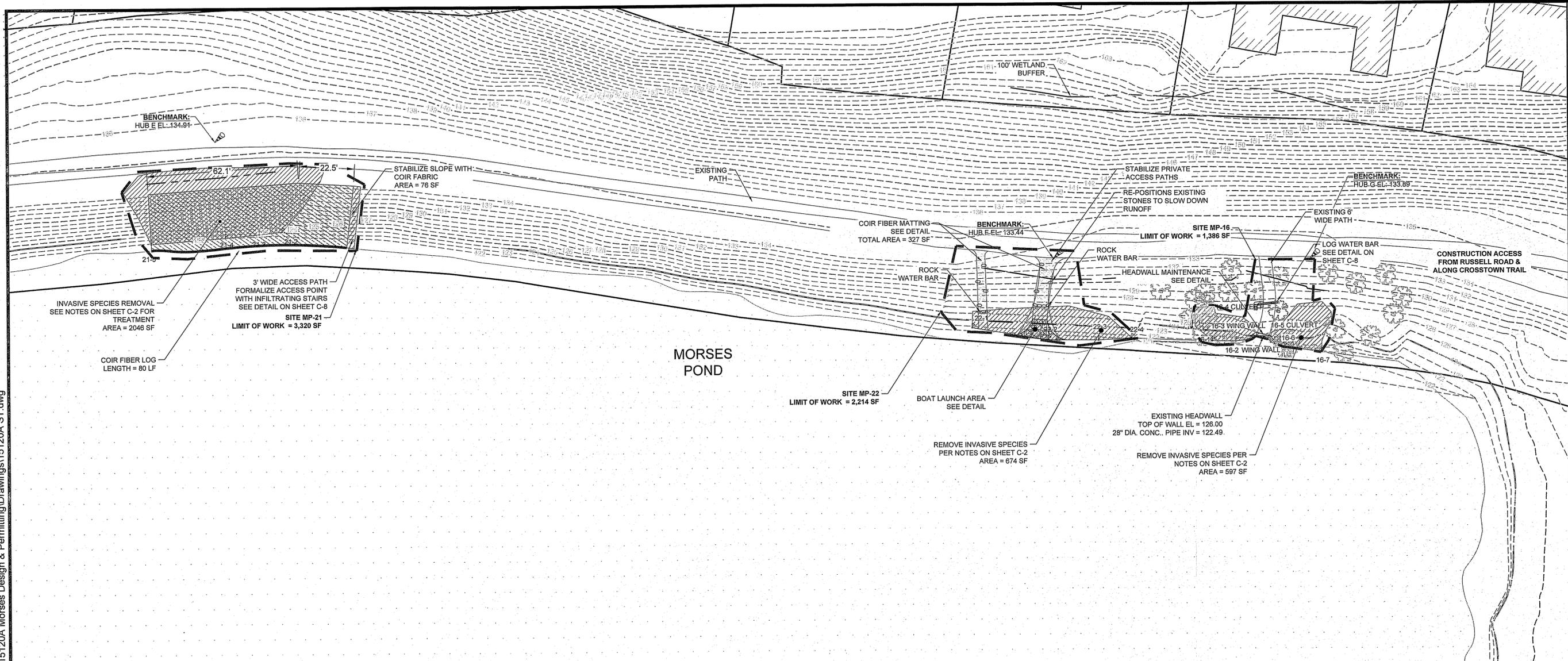
MORSES POND

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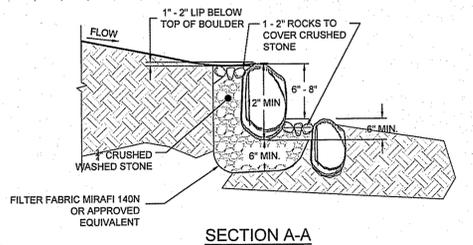


<p>Revisions</p> <table border="1"> <tr> <th>Rev.</th> <th>Date</th> <th>By</th> <th>Description</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		Rev.	Date	By	Description				
Rev.	Date	By	Description						
<p>Horsley Witten Group, Inc. Sustainable Environmental Solutions 90 Rouths Rd Sandwich, MA 02563 508-833-6600 voice 508-833-3160 fax</p>									
<p>Checked By: GSG</p>	<p>Designed By: GSG</p>								
<p>Date: APRIL 2018</p>	<p>Scale: 1" = 20'</p>								
<p>Project Number: 15120A</p>									
<p>Sheet: 8 of 13</p>									
<p>Site Plan - SITES 11, 12, & 13</p>									
<p>WELLESLEY, MASSACHUSETTS</p>									
<p>Prepared For: Town of Wellesley 525 Washington Street Wellesley, MA Phone: (781) 431-1019 Fax: _____</p>									
<p>Survey Provided By: Town of Wellesley 20 Municipal Way Wellesley, MA Phone: 781-235-7800 Fax: _____ Date: NOVEMBER 2017</p>									
<p>Registration: RICHARD A. CLAYTON CIVIL ENGINEER NO. 45116 RESIDENTIAL ENGINEERING</p>									
<p>Sheet Number: C - 8</p>									

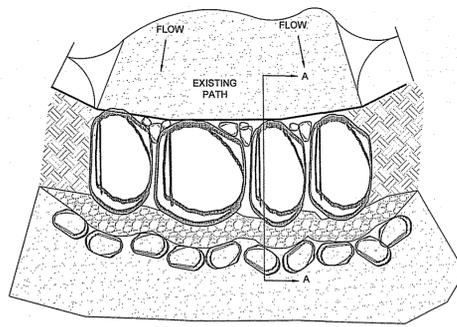
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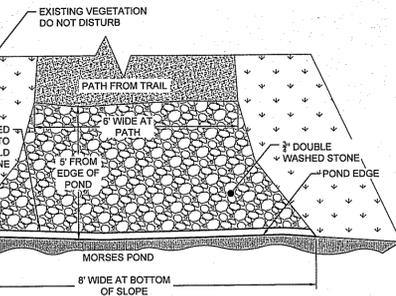
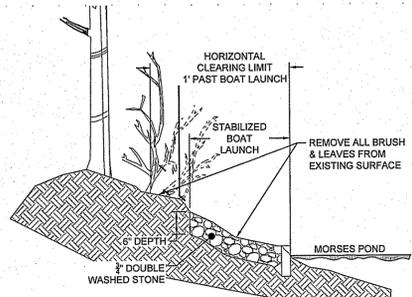
COIR FIBER LOG
NOT TO SCALE



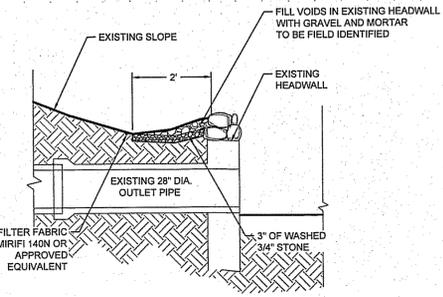
SECTION A-A



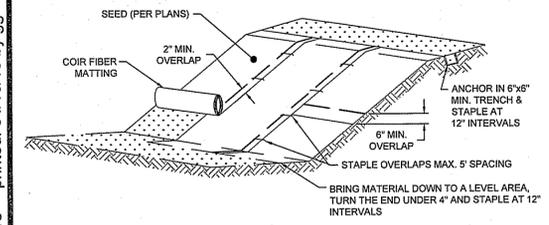
BOULDER WATER BAR DETAIL
NOT TO SCALE



BOAT LAUNCH AND CLEARING DETAIL
NOT TO SCALE



HEADWALL MAINTENANCE DETAIL
NOT TO SCALE

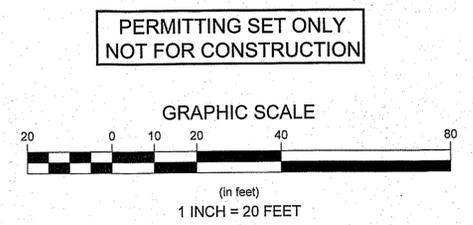


COIR FIBER MATTING DETAIL
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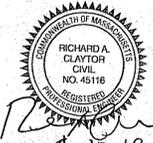
- NOTES:
1. SLOPE SURFACE SHALL BE SMOOTH BEFORE PLACEMENT FOR PROPER SOIL CONTACT.
 2. STAPLING PATTERN AS PER MANUFACTURER'S RECOMMENDATIONS.
 3. DO NOT STRETCH BLANKETS/MATTINGS TIGHT. ALLOW THE ROLLS TO MOLD TO ANY IRREGULARITIES.
 4. FOR SLOPES LESS THAN 3H:1V, ROLLS MAY BE PLACED IN HORIZONTAL STRIPS.
 5. LIMB, FERTILIZE AND SEED BEFORE INSTALLATION. PLANTING OF SHRUBS, TREES, ETC. SHOULD OCCUR AFTER INSTALLATION.

- NOTES:
1. THE ROCK WATER BAR SHALL BE CONSTRUCTED OF 6"-12" ROCKS, DEPENDENT UPON BAR HEIGHT. THE BOULDERS SHALL BE PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE PATH AREA AND KEYS IN THE PATH BANKS.
 2. TOP OF WALL ELEVATION SHALL BE LOWEST POINT IN THE BOULDER WALL. MINIMUM OF 6" HIGHER THAN SPILLWAY ELEVATION.

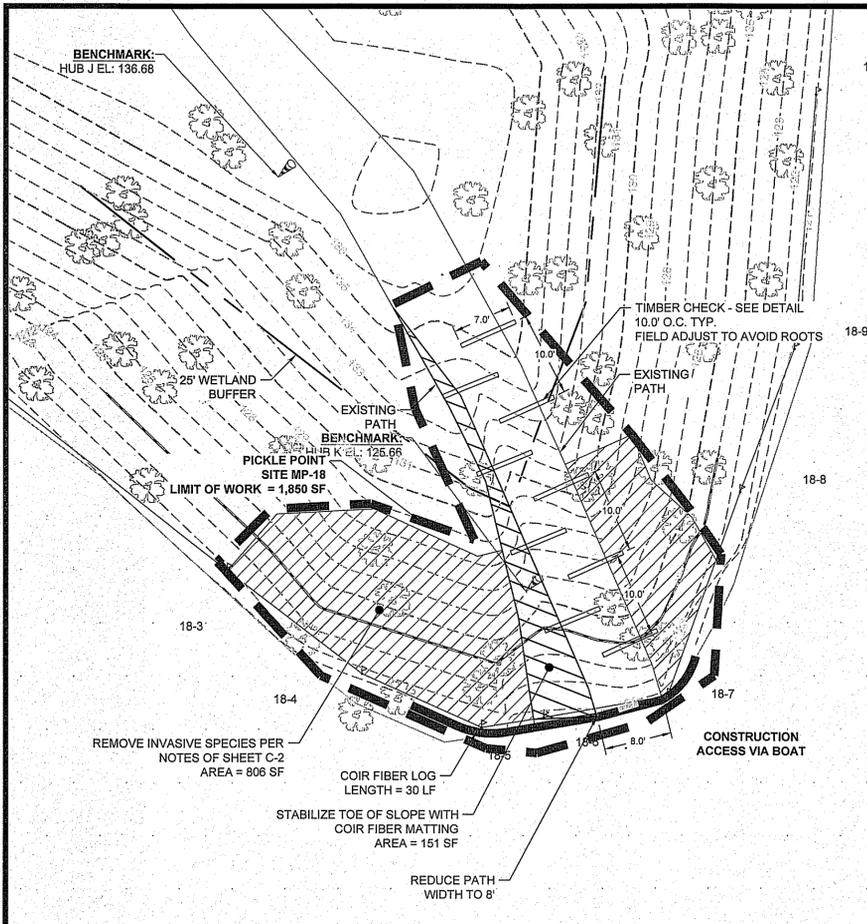
- NOTES:
1. NO SIGNIFICANT EXCAVATION OR GRADING IS REQUIRED FOR BOAT LAUNCH CONSTRUCTION.
 2. CONTRACTOR MAY RELOCATE BOAT LAUNCH AREA WITHIN THE LIMIT OF WORK AREA TO AVOID LARGE TREES OR OTHER OBSTRUCTIONS.
 3. DO NOT REMOVE TREES GREATER THAN 10 INCHES IN DIAMETER.
 4. AVOID REMOVING TREES GREATER THAN 6 INCH IN DIAMETER WITHIN THE LIMIT OF WORK IF POSSIBLE.
 5. AFTER BOAT LAUNCH AND STABILIZATION IS COMPLETE, CONTRACTOR SHALL RAKE ALL DISTURBED AREAS AND RESTORE EARTH TO EXISTING CONDITIONS. CONTRACTOR SHALL PROVIDE SEED AND TOPSOIL AS NECESSARY TO REPAIR DISTURBED AREAS AT NO ADDITIONAL COST TO THE OWNER.



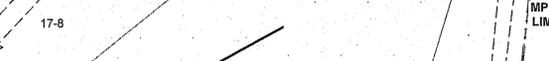
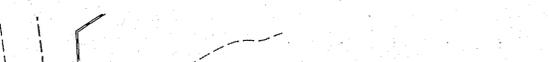
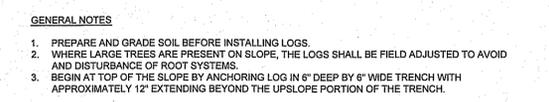
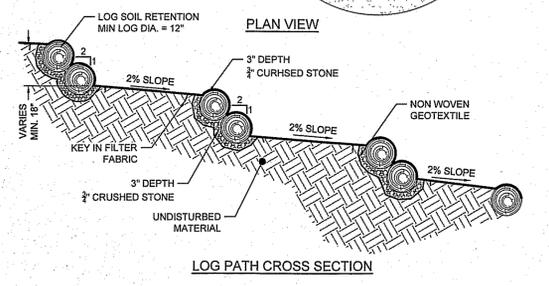
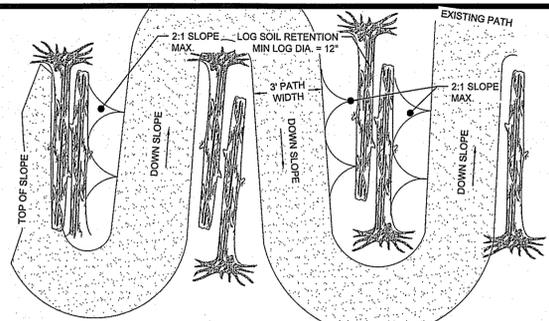
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<p>Revisions</p> <table border="1"> <tr><th>Rev.</th><th>Date</th><th>By</th><th>Appr.</th><th>Description</th></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		Rev.	Date	By	Appr.	Description																				
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<p>Horsley Witten Group, Inc. Sustainable Environmental Solutions www.horsleywitten.com 90 Route 6A Sandwich, MA 02563 508-333-6600 voice 508-333-3150 fax</p>																										
<p>Checked By: RAC Drawn By: GSG Designed By: GSG Date: APRIL 2018</p>	<p>Plan Set: MORSE POND SHORELINE STABILIZATION PERMITTING PLANS WELLESLEY, MASSACHUSETTS Site Plan - Sites 16,21, & 22</p>																									
<p>Prepared For: Town of Wellesley 525 Washington Street Wellesley, MA Phone: (781)-91-1019 Fax: ---</p>	<p>Survey Provided By: Town of Wellesley 20 Municipal Way Wellesley, MA Phone: 781-255-7600 Fax: --- Date: NOVEMBER 2017</p>																									
<p>Registration:  RICHARD A. CLAYTON CIVIL NO. 45116 STATE OF MASSACHUSETTS 4-10-18 </p>																										
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MORSES POND



- NOTES:**
1. SLOPE SURFACE SHALL BE SMOOTH BEFORE PLACEMENT FOR PROPER SOIL CONTACT.
 2. STAPLING PATTERN AS PER MANUFACTURER'S RECOMMENDATIONS.
 3. DO NOT STRETCH BLANKETS/MATTINGS TIGHT; ALLOW THE ROLLS TO MOLD TO ANY IRREGULARITIES.
 4. FOR SLOPES LESS THAN 3H:1V, ROLLS MAY BE PLACED IN HORIZONTAL STRIPS.
 5. LIME, FERTILIZE AND SEED BEFORE INSTALLATION. PLANTING OF SHRUBS, TREES, ETC. SHOULD OCCUR AFTER INSTALLATION.

- GENERAL NOTES:**
1. PREPARE AND GRADE SOIL BEFORE INSTALLING LOGS.
 2. WHERE LARGE TREES ARE PRESENT ON SLOPE, THE LOGS SHALL BE FIELD ADJUSTED TO AVOID AND DISTURBANCE OF ROOT SYSTEMS.
 3. BEGIN AT TOP OF THE SLOPE BY ANCHORING LOG IN 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" EXTENDING BEYOND THE UPSLOPE PORTION OF THE TRENCH.

- NOTES:**
1. KEY TIMBERS INTO THE PATH BANKS AND EXTEND INTO THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW FROM DIVERTING THE CHECK DAM.

- REMOVE INVASIVE SPECIES PER NOTES OF SHEET C-2**
- AREA = 806 SF

- STABILIZE TOE OF SLOPE WITH COIR FIBER MATTING**
- AREA = 151 SF

- REDUCE PATH WIDTH TO 8'**

- EROSION CONTROL MATTING AND LOAM AND SEED**
- AREA = 191 SF

- FORMAL WATER ACCESS POINT STABILIZE WITH EROSION CONTROL MATTING**

- EROSION CONTROL MATTING**
- AREA = 78 SF

- 3' WIDE FORMAL ACCESS PATH**
- MAX SLOPE = 12%

- REMOVE TREE**

- STOCKPILING AREA FOR SITES 17 AND 18**

- EDUCATIONAL SIGNAGE**

- CONSTRUCTION ACCESS VIA RUSSELL ROAD**

- CONSTRUCTION ACCESS VIA BOAT**

- REMOVE INVASIVE SPECIES PER NOTES OF SHEET C-2**
- AREA = 996 SF

- STABILIZE EXPOSED AREA WITH COIR FABRIC**
- APPROXIMATE AREA = 789 SF

- MP SITE 20 (BIRD ISLAND) LIMIT OF WORK = 2,969 SF**

- TIMBER CHECK - SEE DETAIL**
- 8.0' O.C. TYP. FIELD ADJUST TO AVOID ROOTS

- APPROXIMATE LOCATION OF EXISTING PATH**

- COIR LOG LENGTH = 16 LF**

- CONSTRUCTION ACCESS VIA BOAT**

- REMOVE INVASIVE SPECIES PER NOTES OF SHEET C-2**
- AREA = 806 SF

- CONSTRUCTION ACCESS VIA BOAT**

- FORMAL WATER ACCESS POINT STABILIZE WITH EROSION CONTROL MATTING**

- EROSION CONTROL MATTING AND LOAM AND SEED**
- AREA = 191 SF

- 3' WIDE FORMAL ACCESS PATH**
- MAX SLOPE = 12%

- REMOVE TREE**

- STOCKPILING AREA FOR SITES 17 AND 18**

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- ST**

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SUGGESTED BANK RESTORATION PLANTINGS

Botanical Name	Common Name
Trees (Late Succession Species)	
<i>Acer rubrum</i>	Red Maple
<i>Pinus strobus</i>	White Pine
<i>Quercus rubra</i>	Red Oak
<i>Quercus velutina</i>	Black Oak
Trees (Early Succession Species)	
<i>Amelanchier canadensis</i>	Shadblow Juneberry
<i>Betula papyrifera</i>	Paperbark Birch
<i>Betula populifolia</i>	Gray Birch
<i>Rhus typhina</i>	Staghorn Sumac
<i>Sassafras albidum</i>	Sassafras
Shrubs	
<i>Aronia arbutifolia</i>	Red Chokeberry
<i>Cephalanthus occidentalis</i>	Button Bush
<i>Clethra alnifolia</i>	White Summer Sweet
<i>Fothergilla gardenii</i>	Dwarf Fothergilla
<i>Ilex verticillata</i>	Winterberry (Male & Female)
<i>Kalmia angustifolia</i>	Sheep Laurel
<i>Kalmia latifolia</i>	Mountain Laurel
<i>Vaccinium corymbosum</i>	Highbush Blueberry
<i>Viburnum dentatum</i>	Arrowwood Viburnum

Botanical Name	Common Name
Ground Cover/Grasses/Perennials	
<i>Arctostaphylos uva-ursi</i>	Bearberry
<i>Asclepias syriaca</i>	Milkweed
<i>Baptisia australis</i>	Blue False Indigo
<i>Carex crinita</i>	Fringed Sedge
<i>Carex pennsylvanica</i>	Pennsylvania Sedge
<i>Carex stricta</i>	Tussock Sedge
<i>Chasmanthium latifolium</i>	Northern Sea Oats
<i>Eragrostis spectabilis</i>	Purple Lovegrass
<i>Panicum virgatum</i>	Switch Grass

SUGGESTED RAIN GARDEN PLANTINGS

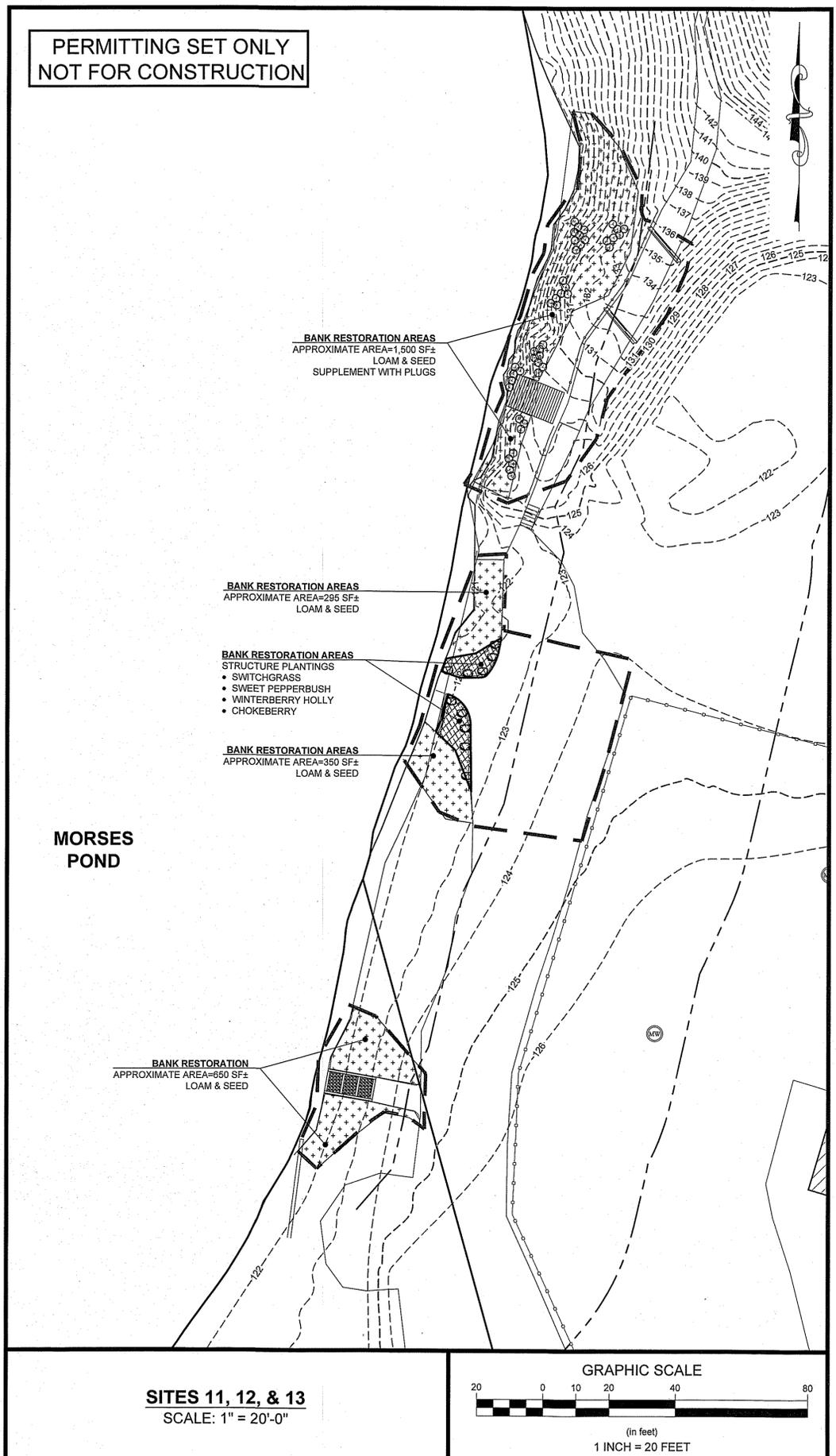
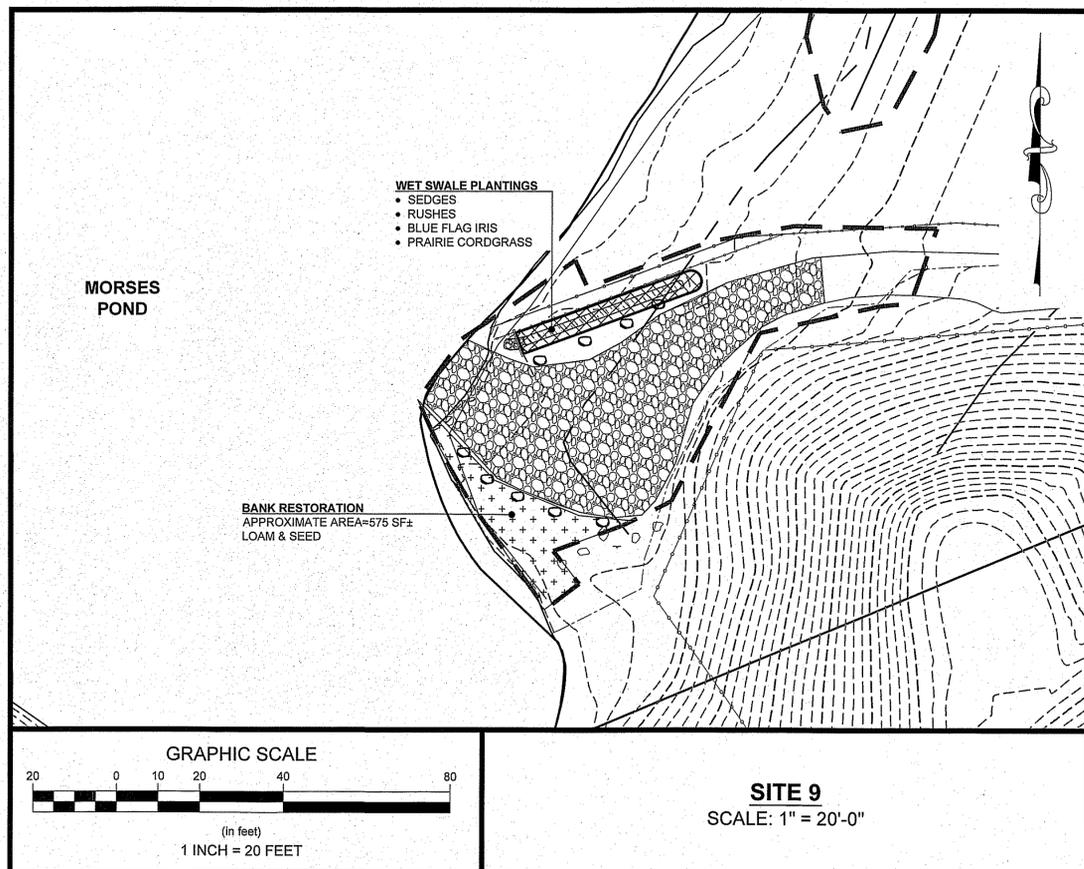
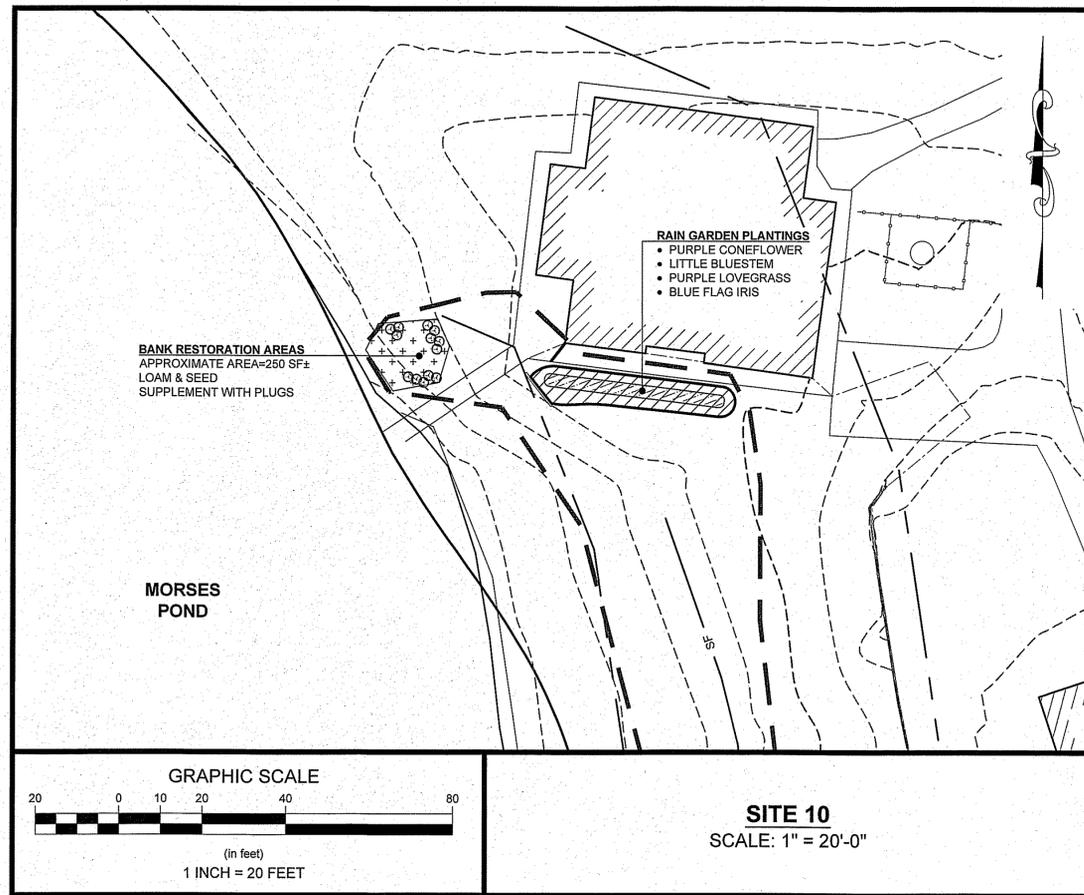
Botanical Name	Common Name
Ground Cover/Grasses/Perennials	
<i>Amsonia hubrichtii</i>	Thread-leaf Bluestar
<i>Arctostaphylos uva-ursi</i>	Bearberry
<i>Baptisia australis</i>	Blue False Indigo
<i>Echinacea purpurea</i>	Purple Coneflower
<i>Eragrostis spectabilis</i>	Purple Lovegrass
<i>Geranium maculatum</i>	Wild Geranium
<i>Iris versicolor</i>	Blue Flag
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Sporobolus heterolepis</i>	Prairie Dropseed

SUGGESTED WET SWALE PLANTINGS

Botanical Name	Common Name
Ground Cover/Grasses/Perennials	
<i>Asclepias incarnata</i>	Swamp Milkweed
<i>Carex lurida</i>	Shallow Sedge
<i>Carex vulpinoidea</i>	Fox Sedge
<i>Iris versicolor</i>	Blue Flag
<i>Juncus effusus</i>	Soft Rush
<i>Juncus tenuis</i>	Sleder Rush
<i>Spartina pectinata</i>	Prairie Cordgrass

SYMBOL LEGEND:

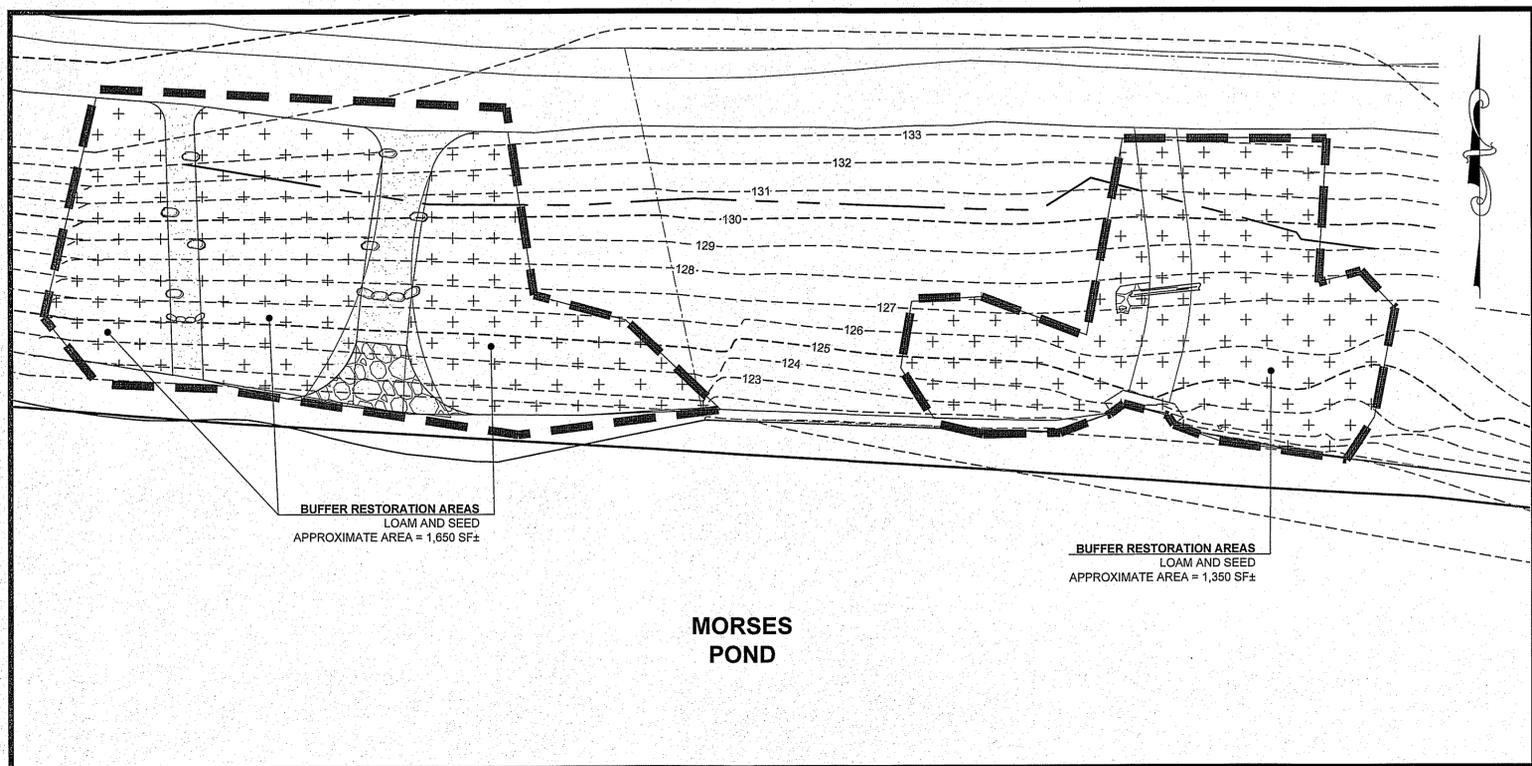
-  SUPPLEMENTAL PLUG PLANTINGS
SEE SUGGESTED BANK RESTORATION LIST
 -  RAIN GARDEN PLANTINGS
SEE SUGGESTED LIST
 -  WET SWALE PLANTINGS
SEE SUGGESTED LIST
 -  LOAM & SEED - BANK RESTORATION AREAS
NEW ENGLAND WET MEADOW MATRIX
- RIVERBANK WILD RYE
 VIRGINIA WILD RYE
 FOWL BLUEGRASS
 CREEPING RED FESCUE
 SWITCHGRASS
 SMOOTH PANIC GRASS
 LURID SEDGE
 BLUNT BROOM SEDGE
 TICKLEGRASS
 GREEN BULRUSH
 BLUE VERVAIN
 BUR MARIGOLD
 SWAMP MILKWEED
 NEW ENGLAND ASTER
 BONESET
 NEW YORK IRONWEED
 SPOTTED JOE PYE WEED
 FLAT TOPPED ASTER
 SQUARE STEMMED MONKEY FLOWER
 SILKY DOGWOOD
 ARROWWOOD VIBURNUM
 ELDERBERRY
 RED-OSIER DOGWOOD



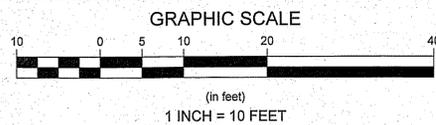
PERMITTING SET ONLY
NOT FOR CONSTRUCTION

<p>Revisions</p> <table border="1"> <tr> <th>No.</th> <th>Date</th> <th>By</th> <th>Description</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		No.	Date	By	Description																
No.	Date	By	Description																		
<p>Horsley Witten Group, Inc. Sustainable Environmental Solutions www.horsleywitten.com Sarasota, MA 02583 508-833-6600 voice 508-833-3150 fax</p>																					
<p>MORSES POND SHORELINE STABILIZATION PERMITTING PLANS WELLESLEY, MASSACHUSETTS</p>																					
<p>LANDSCAPE PLAN - SITES 9, 10, 11, 12, & 13</p>																					
<p>Prepared For: Town of Wellesley 525 Washington Street Wellesley, MA Phone: (781) 431-1019 Fax: —</p>																					
<p>Survey Provided By: Town of Wellesley 20 Municipal Way Wellesley, MA Phone: 781-235-7600 Fax: — Date: NOVEMBER 2017</p>																					
<p>Project Number: 15120A Sheet: 11 of 13</p>																					
<p>Sheet Number: LA - 11</p>																					

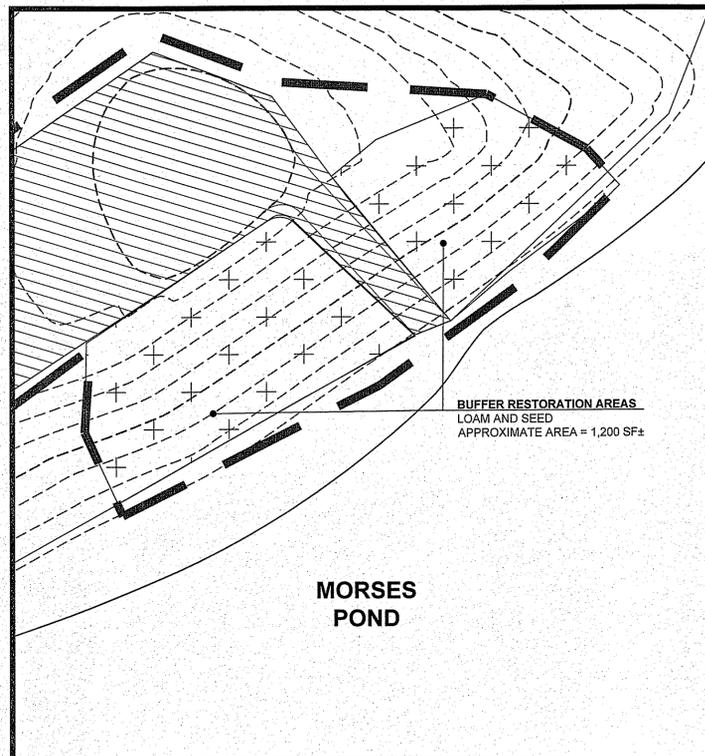
last modified: 04/09/18 printed: 04/09/18 by bl H:\Projects\2015\15120 Morse Pond Erosion Study\15120A Morse Design & Permitting\Drawings\15120A LA.dwg



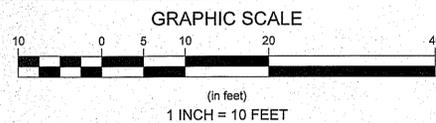
MORSES POND



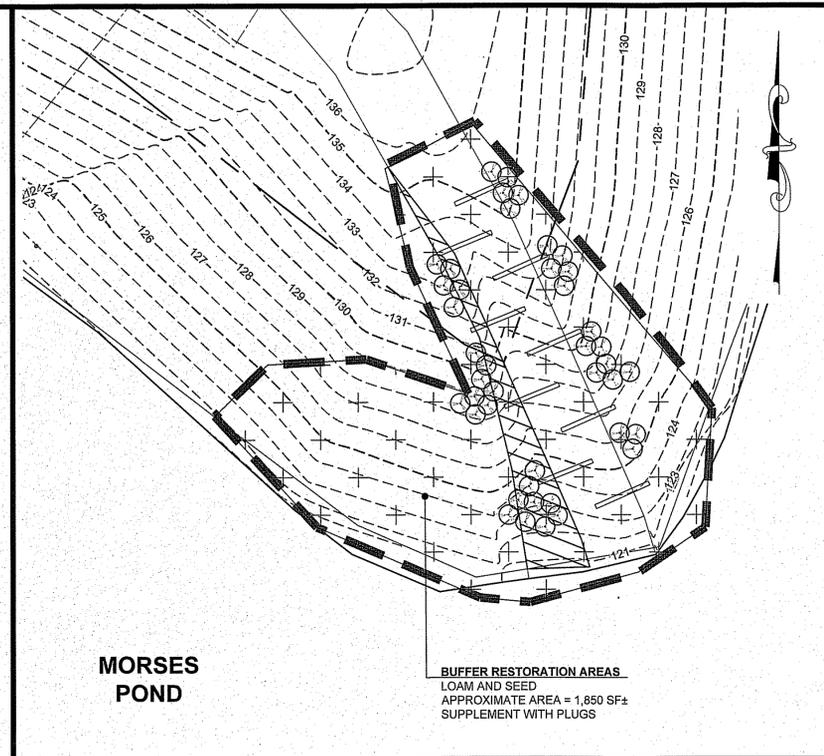
SITE 16 & 22
SCALE: 1" = 10'-0"



MORSES POND

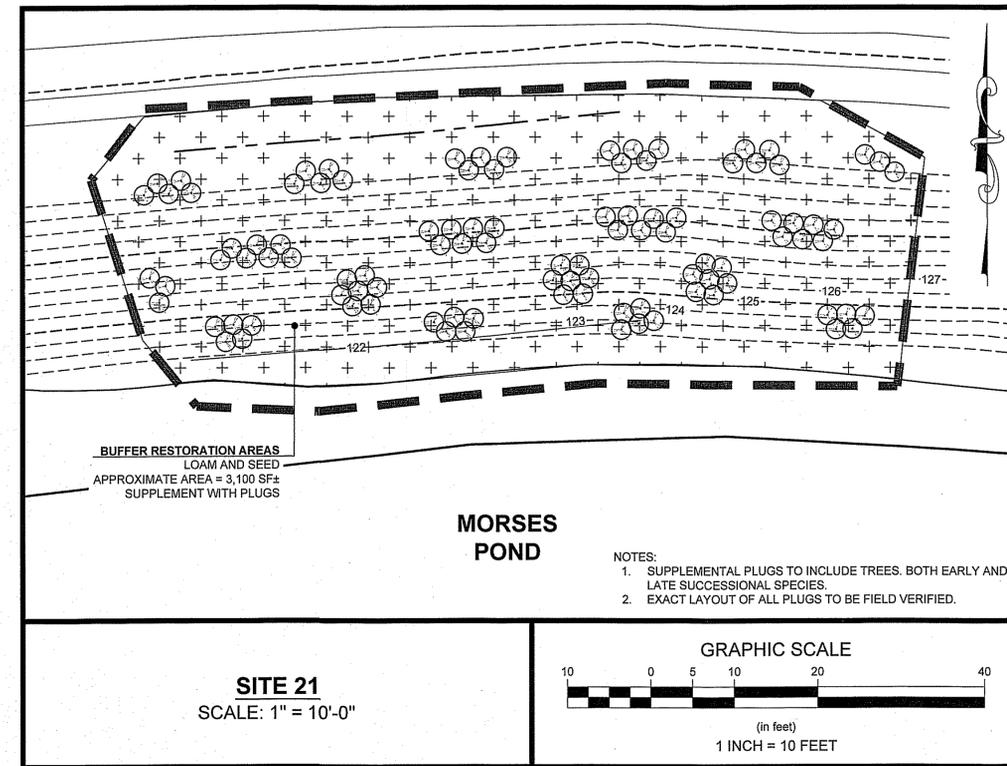


SITE 18 & 20
SCALE: 1" = 10'-0"



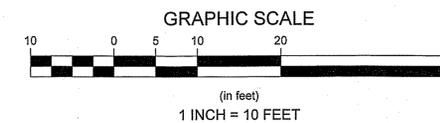
MORSES POND

BUFFER RESTORATION AREAS
LOAM AND SEED
APPROXIMATE AREA = 1,850 SF±
SUPPLEMENT WITH PLUGS

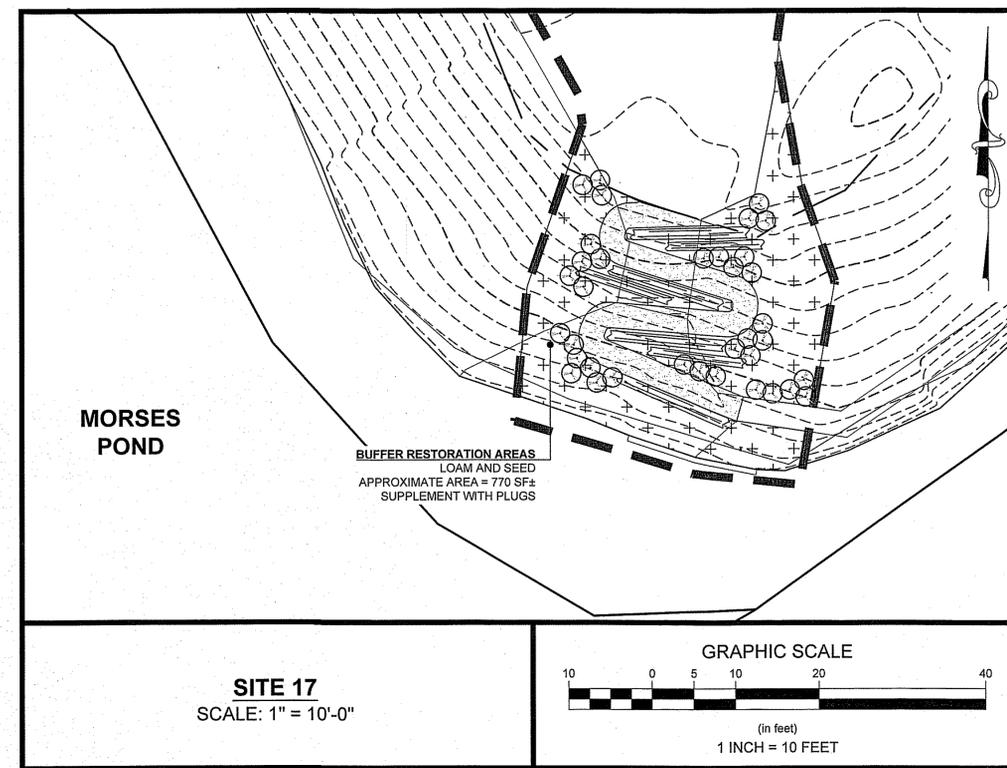


MORSES POND

- NOTES:
1. SUPPLEMENTAL PLUGS TO INCLUDE TREES, BOTH EARLY AND LATE SUCCESSIONAL SPECIES.
 2. EXACT LAYOUT OF ALL PLUGS TO BE FIELD VERIFIED.

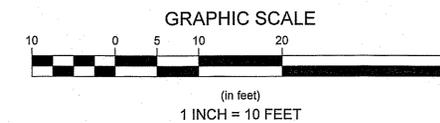


SITE 21
SCALE: 1" = 10'-0"



MORSES POND

BUFFER RESTORATION AREAS
LOAM AND SEED
APPROXIMATE AREA = 770 SF±
SUPPLEMENT WITH PLUGS



SITE 17
SCALE: 1" = 10'-0"

Rev.	Date	By	Description
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Horsley Witten Group, Inc.
Sustainable Environmental Solutions
www.horsleywitten.com
90 Route 6A
Sandwich, MA 02563
508-833-6600 voice
508-833-3750 fax

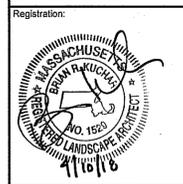
Date: APRIL 2018
Designed By: GSG
Drawn By: GSG
Checked By: RAC

Plan Set:
MORSES POND SHORELINE STABILIZATION PERMITTING PLANS
WELLESLEY, MASSACHUSETTS

Plan Title:
LANDSCAPE PLAN - 16, 17, 18, 20, 21, & 22

Prepared For:
Town of Wellesley
622 Washington Street
Wellesley, MA
Phone: (781) 431-0119
Fax: ---

Survey Provided By:
Town of Wellesley
20 Municipal Way
Wellesley, MA
Phone: 781-235-7600
Fax: ---
Dated: NOVEMBER 2017



Registration:
Project Number: 15120A
Sheet: 12 of 13
Sheet Number: LA - 12

**PERMITTING SET ONLY
NOT FOR CONSTRUCTION**

GENERAL PLANTING NOTES:

- THE FOLLOWING NOTES ARE PROVIDED AS GENERAL PLANTING GUIDELINES ONLY. THOROUGHLY REVIEW THE PROJECT SPECIFICATIONS FOR ALL LANDSCAPE REQUIREMENTS PRIOR TO THE COMMENCEMENT OF ANY LANDSCAPE WORK. SUBMIT IN WRITING TO THE LANDSCAPE ARCHITECT ANY QUESTIONS OR CLARIFICATIONS REQUIRED AT A MINIMUM OF 30 DAYS PRIOR TO ORDERING ANY MATERIALS OR BEGINNING ANY LANDSCAPE CONSTRUCTION.
- SUBMIT TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL ALL REQUIRED LANDSCAPE SUBMITTALS AS DESCRIBED IN THE SPECIFICATIONS INCLUDING A PLANT LIST WITH PLANT SIZE AND QUANTITIES TO BE ORDERED PRIOR TO DELIVERY TO THE PROJECT SITE.
- FURNISH AND INSTALL ALL PLANTS AS SHOWN ON THE DRAWINGS AND IN THE SIZE AND QUANTITIES SPECIFIED ON THE PLANTING SCHEDULE. PLANT SUBSTITUTION SELECTION MUST BE APPROVED BY BIOLOGIST OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- ALL PLANTS TO COMPLY WITH APPLICABLE REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK" LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION INC.
- PLANTS TO BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS. USE HEALTHY NURSERY GROWN PLANTS, FREE OF DISEASE, INSECTS, AND PESTS, EGGS OR LARVAE, AND HAVE A WELL DEVELOPED ROOT SYSTEM.
- INSTALL PLANTS WITHIN ONE (1) WEEK OF PURCHASE. IF PLANTS ARE TO BE STORED AT THE SITE PRIOR TO PLANTING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THEY ARE PROPERLY MAINTAINED, WATERED, AND REMAIN HEALTHY.
- PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT. SUBMIT TO THE LANDSCAPE ARCHITECT IN WRITING THE PROPOSED PLANTING SCHEDULE. OBTAIN APPROVAL OF PLANTING SCHEDULE FROM THE LANDSCAPE ARCHITECT PRIOR TO PERFORMING ANY WORK.
- SEASONS FOR PLANTING:

SPRING:	DECIDUOUS:	APRIL 1 TO JUNE 15
	EVERGREEN:	APRIL 1 TO JUNE 15
	PERENNIALS:	APRIL 15 TO JUNE 1
	GROUNDCOVERS:	APRIL 15 TO JUNE 1
FALL:	DECIDUOUS:	SEPTEMBER 15 TO NOVEMBER 15
	EVERGREEN:	SEPTEMBER 15 TO NOVEMBER 15
	PERENNIALS:	SEPTEMBER 15 TO NOVEMBER 15
	GROUNDCOVERS:	SEPTEMBER 15 TO NOVEMBER 15
- PLANTING UNDER FROZEN CONDITIONS IN EITHER THE SPRING OR FALL WILL NOT BE PERMITTED. PLANTING BEFORE OR AFTER THE ABOVE REFERENCED PLANTING DATES WILL INCREASE THE LIKELIHOOD OF PLANT OR GRASS SEED ESTABLISHMENT FAILURE. ANY DEVIATION FROM THE ABOVE REFERENCED PLANTING DATES IS UNDERTAKEN AT SOLE RISK OF THE CONTRACTOR AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY ADDITIONAL MAINTENANCE AND WATERING WHICH MAY BE REQUIRED TO ENSURE SATISFACTORY PLANT AND SEED ESTABLISHMENT.
- FURNISH ONE YEAR MANUFACTURER WARRANTY FOR TREES, PLANTS, AND GROUND COVER AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLIGENCE, OR ABUSE BY OWNER, OR ABNORMAL WEATHER CONDITIONS UNUSUAL FOR WARRANTY PERIOD. THE DATE OF FINAL ACCEPTANCE OF ALL COMPLETED PLANTING WORK ESTABLISHES THE END OF INSTALLATION AND INITIAL MAINTENANCE PERIOD AND THE COMMENCEMENT OF THE GUARANTEE PERIOD.
- ALL TREES WITHIN 5'-0" OF WALKWAYS AND SIDEWALKS TO HAVE A 6'-8" STANDARD BRANCHING HEIGHT.
- INSPECT ALL AREAS TO BE PLANTED OR SEEDED PRIOR TO STARTING ANY LANDSCAPE WORK. REPORT ANY DEFECTS SUCH AS INCORRECT GRADING, INCORRECT SUBGRADE ELEVATIONS OR DRAINAGE PROBLEMS, ETC. TO THE LANDSCAPE ARCHITECT AND ENGINEER PRIOR TO BEGINNING WORK. COMMENCEMENT OF WORK INDICATES ACCEPTANCE OF SUBGRADE AREAS TO BE PLANTED, AND THE LANDSCAPE CONTRACTOR ASSUMES RESPONSIBILITY FOR ALL LANDSCAPE WORK.
- PROVIDE PROPER PREPARATION OF ALL PROPOSED PLANTED AND SEEDED AREAS PER THE NOTES AND SPECIFICATIONS.
- ALL PLANT LAYOUT AND ACTUAL PLANTING LOCATIONS ARE TO BE FIELD VERIFIED BY LANDSCAPE ARCHITECT PRIOR TO PLANTING. NOTIFY THE LANDSCAPE ARCHITECT AT A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO SCHEDULING ANY FIELD INSPECTIONS.
- BALL AND BURLAP: REMOVE BURLAP AND WIRE BASKETS FROM TOPS OF BALLS AND FROM TOP HALF OF ROOTBALL AS INDICATED ON DRAWINGS. REMOVE PALLETS, IF ANY, BEFORE SETTING.
- POTTED PLANTS: REMOVE THE PLANT FROM THE POT AND LOOSEN OR SCORE THE ROOTS BEFORE PLANTING TO PROMOTE OUTWARDS ROOT GROWTH INTO THE SOIL.
- PLUGS: PLANT UPRIGHT AND NOT AT AN ANGLE. DIG PLANTING HOLES LARGE ENOUGH AND DEEP ENOUGH TO ACCOMMODATE THE ENTIRE ROOT MASS. PLANT PLUGS WITH NO TWISTED OR BALLED ROOTS AND WITH NO ROOTS EXPOSED ABOVE THE GRADE LINE. HAND PACK THE SOIL AROUND THE ENTIRE PLUG ROOT MASS.
- DIG THE THE PLANTING HOLE TO THE SAME DEPTH AS THE ROOT BALL AND TWO TO THREE TIMES WIDER. SCORE ALL SIDES OF THE HOLE. PLACE THE PLANT IN THE HOLE SO THE TOP OF ROOT BALL IS EVEN WITH SOIL SURFACE. FILL THE HOLE HALFWAY AND THEN ADD WATER ALLOWING IT TO SEEP INTO BACK FILLED MATERIAL. BE SURE TO REMOVE ALL AIR POCKETS FROM BACK FILLED SOIL. DO NOT SPREAD SOIL ON TOP OF THE ROOTBALL. IF SOIL IS EXTREMELY POOR, REPLACE BACK FILL WITH GOOD QUALITY TOP SOIL. AMEND THE SOIL, AS NECESSARY.
- CREATE A 2" TO 4" BERM AROUND THE EDGE OF PLANTING HOLE WITH REMAINING SOIL TO RETAIN WATER.
- REMOVE ALL PLANT TAGS AND FLAGS FROM THE PLANTS.
- TRIM BROKEN AND DEAD BRANCHES FROM TREES AND SHRUBS AFTER PLANTING. NEVER CUT A LEADER.

GENERAL SEEDING NOTES:

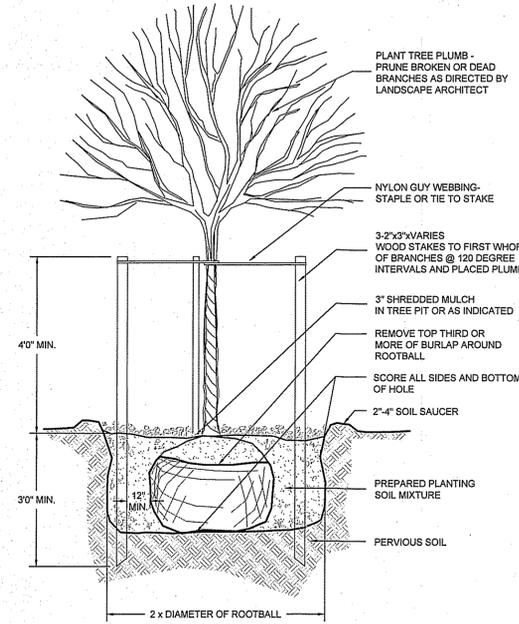
- SEND A REPRESENTATIVE SAMPLE OF THE TOPSOIL TO A TESTING LABORATORY FOR STANDARD SOIL ANALYSIS AS DESCRIBED IN THE SPECIFICATIONS. SUBMIT TO THE LANDSCAPE ARCHITECT AND ENGINEER TEST RESULTS WITH RECOMMENDED SOIL TREATMENTS TO PROMOTE PLANT AND GRASS GROWTH. CORRECT DEFICIENCIES IN THE LOAM AND STOCKPILED TOPSOIL AS DIRECTED BY THE TESTING AGENCY.
- ALL AREAS THAT ARE DISTURBED AND/OR GRADED DURING CONSTRUCTION ARE TO BE BROUGHT TO FINISHED GRADE WITH AT LEAST 4" MINIMUM DEPTH OF GOOD QUALITY LOAM AND SEEDED WITH A QUICK GERMINATING GRASS SEED SUCH AS NEW ENGLAND EROSION CONTROL RESTORATION MIX OR AS SPECIFIED ON THE PLANS.
- PRIOR TO THE PLACEMENT OF TOP SOIL, LOOSEN THE SUBGRADE OF ALL PROPOSED SEEDED AREAS TO A DEPTH OF 6" AND RAKE TO REMOVE STONES LARGER THAN 1 INCH, STICKS, ROOTS, RUBBISH AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE TO AN OFF SITE LOCATION.
- DO NOT SPREAD TOPSOIL IF THE SUBGRADE IS FROZEN, EXCESSIVELY WET, COMPACTED OR NOT PROPERLY PREPARED PER THE NOTES AND SPECIFICATIONS.

WATERING NOTES:

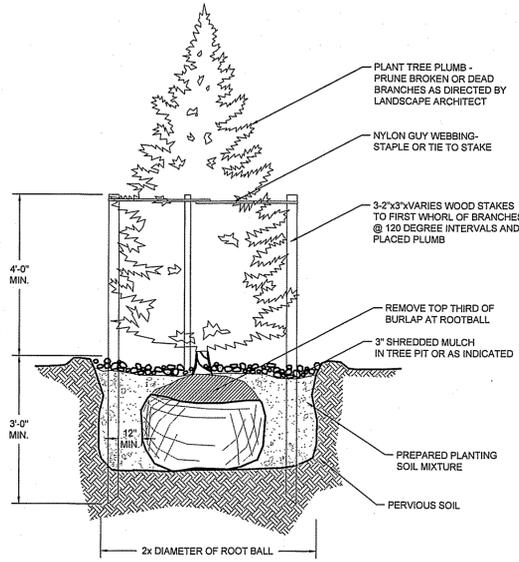
- PROVIDE PROPER PLANT CARE, MAINTENANCE AND WATERING ON SITE UNTIL SUCH TIME AS THE LANDSCAPING IS ACCEPTED BY THE PROPERTY OWNER AS SATISFACTORY PER THE SPECIFICATIONS OR AS DETERMINED BY ANY WRITTEN AGREEMENTS BETWEEN THE CONTRACTOR AND PROPERTY OWNER.
- ESTABLISH AN APPROPRIATE WATERING SCHEDULE FOR ALL PLANT MATERIAL BASED UPON PLANT SPECIES REQUIREMENTS AND PROVIDE IN WRITING TO THE LANDSCAPE ARCHITECT AND OWNER FOR REVIEW AND APPROVAL. ADHERE TO THE APPROVED SCHEDULE UNTIL PLANTS ARE FULLY ESTABLISHED.
- AT A MINIMUM THE NEWLY SEEDED AND/OR HYDROSEEDED LAWNS SHOULD BE WATERED 2-3 TIMES PER WEEK DURING ESTABLISHMENT. SPECIAL CARE SHOULD BE TAKEN TO ENSURE THAT THE LAWN IS NOT SATURATED DURING WATERING. IF AN IRRIGATION SYSTEM IS NOT PROVIDED, A TEMPORARY IRRIGATION SYSTEM OR HANDHELD GARDEN HOSE SHALL BE USED FOR WATERING SEEDED AREAS. THE AREA MUST BE MAINTAINED CONSISTENTLY MOIST FOR THE BEST GERMINATION RESULTS. ADDITIONAL WATERING WILL BE REQUIRED IF PLANTING AND SEEDING OCCUR OUTSIDE OF THE RECOMMENDED PLANTING SEASONS.

PLANTING LAYOUT NOTES

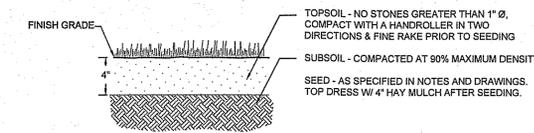
- HATCHED AREAS - DO NOT PLANT LARGE AREAS OF THE SAME SPECIES. RANDOMLY PLANT AS INDICATED ON THE PLANTING PLANS INTO SMALL GROUPINGS OF THE SAME SPECIES TO CREATE A MORE NATURALISTIC APPEARANCE. PLANT THE SAME PLANT SPECIES IN GROUPS OF 3-7 AND NOT LARGER THAN 7, DEPENDING ON THE OVERALL NUMBER OF PLANTINGS.



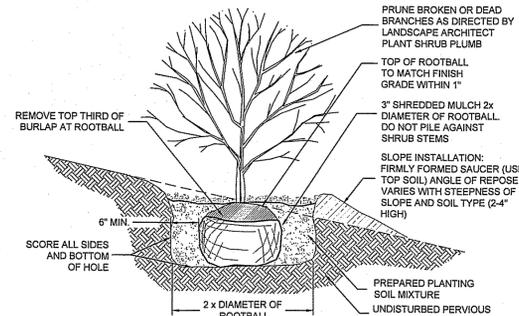
TREE PLANTING DETAIL
NOT TO SCALE



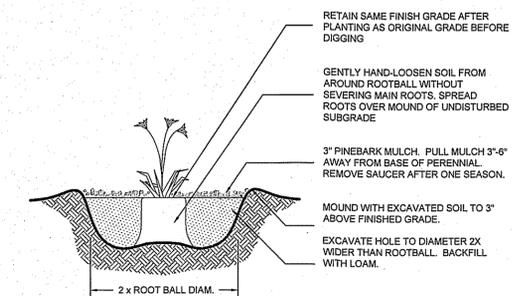
EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



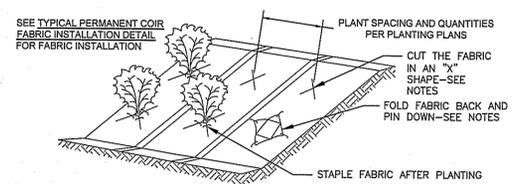
LOAM AND SEED DETAIL
NOT TO SCALE



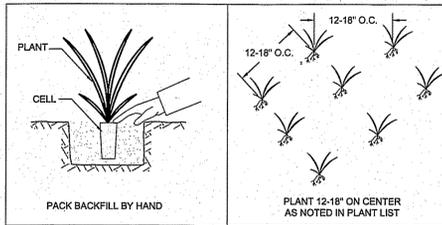
SHRUB PLANTING DETAIL
NOT TO SCALE



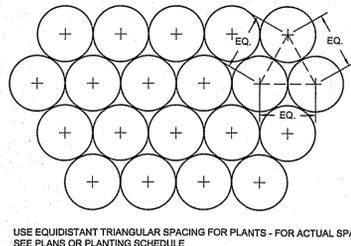
PERENNIAL PLANTING DETAIL
NOT TO SCALE



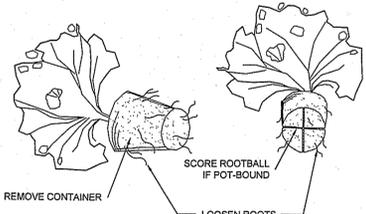
PLANTING IN COIR FABRIC DETAIL
NOT TO SCALE



PLUG PLANTING DETAIL
NOT TO SCALE



PLANTING SPACING DETAIL
NOT TO SCALE

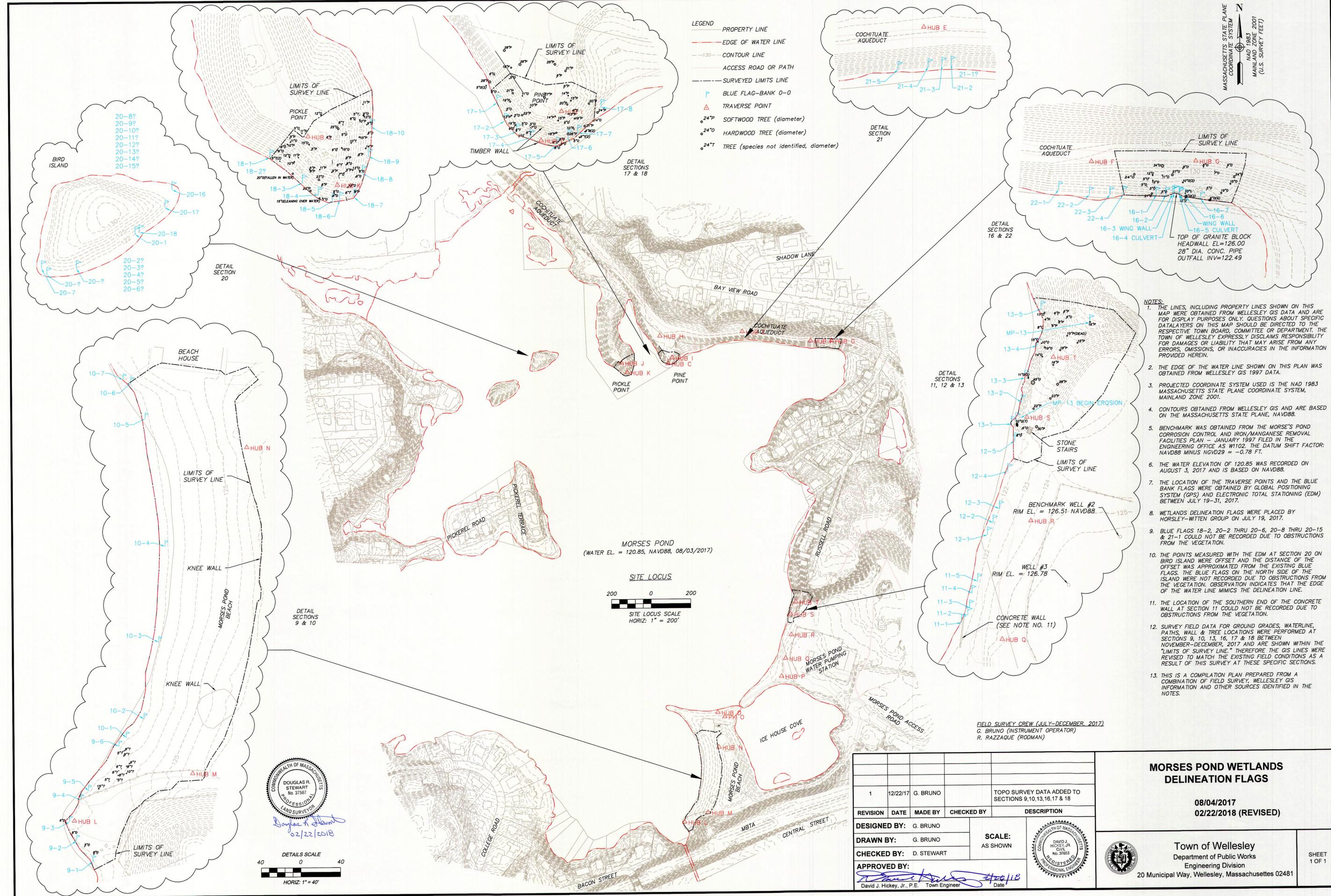


CONTAINER PLANT ROOTBALL TREATMENT
NOT TO SCALE

**PERMITTING SET ONLY
NOT FOR CONSTRUCTION**

<p>Revisions</p> <table border="1"> <tr> <th>No.</th> <th>Date</th> <th>By</th> <th>Description</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	Date	By	Description																	<p>Checked By: BGC</p> <p>Drawn By: GCS</p> <p>Designed By: GCS</p> <p>Date: APRIL 2018</p>
No.	Date	By	Description																		
<p>Horsley Witten Group, Inc. Sustainable Environmental Solutions www.horsleywitten.com Route 6 MA 02563 508-533-6600 voice 508-533-3750 fax</p>																					
<p>Plan Set: MORSES POND SHORELINE STABILIZATION PERMITTING PLANS WELLESLEY, MASSACHUSETTS</p> <p>Plan Title: LANDSCAPE DETAILS</p>																					
<p>Prepared For: Town of Wellesley 525 Washington Street Wellesley, MA Phone: (781)-431-1019 Fax: ---</p>																					
<p>Survey Provided By: Town of Wellesley 20 Municipal Way Wellesley, MA Phone: 781-235-7600 Fax: --- Date: NOVEMBER 2017</p>																					
<p>Registration: </p>																					
<p>Project Number: 15120A</p>	<p>Sheet: 13 of 13</p>																				
<p>Sheet Number: LA - 13</p>																					

last modified: 04/09/18 printed: 04/09/18 H:\Projects\2015\15120A Morse Pond Erosion Study\15120A Landscape Design & Permitting\Drawings\15120A LA.dwg

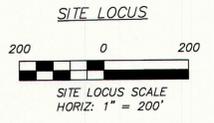


- LEGEND**
- PROPERTY LINE
 - EDGE OF WATER LINE
 - - - CONTOUR LINE
 - - - ACCESS ROAD OR PATH
 - - - SURVEYED LIMITS LINE
 - ▲ BLUE FLAG-BANK 0-0
 - ▲ TRAVERSE POINT
 - 24" P SOFTWOOD TREE (diameter)
 - 24" O HARDWOOD TREE (diameter)
 - 24" T TREE (species not identified, diameter)

MASSACHUSETTS STATE PLANE
COORDINATE SYSTEM
NAD 1983
MAINLAND ZONE 2001
(U.S. SURVEY FEET)

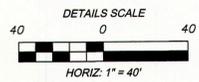
- NOTES:**
1. THE LINES, INCLUDING PROPERTY LINES SHOWN ON THIS MAP WERE OBTAINED FROM WELLESLEY GIS DATA AND ARE FOR DISPLAY PURPOSES ONLY. QUESTIONS ABOUT SPECIFIC DATALAYERS ON THIS MAP SHOULD BE DIRECTED TO THE RESPECTIVE TOWN BOARD, COMMITTEE OR DEPARTMENT. THE TOWN OF WELLESLEY EXPRESSLY DISCLAIMS RESPONSIBILITY FOR DAMAGES, OMISSIONS, OR INACCURACIES IN THE INFORMATION PROVIDED HEREIN.
 2. THE EDGE OF THE WATER LINE SHOWN ON THIS PLAN WAS OBTAINED FROM WELLESLEY GIS 1997 DATA.
 3. PROJECTED COORDINATE SYSTEM USED IS THE NAD 1983 MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE 2001.
 4. CONTOURS OBTAINED FROM WELLESLEY GIS AND ARE BASED ON THE MASSACHUSETTS STATE PLANE, NAVD83.
 5. BENCHMARK WAS OBTAINED FROM THE MORSE'S POND CORROSION CONTROL AND IRON/MANGANESE REMOVAL FACILITIES PLAN - JANUARY 1997 FILED IN THE ENGINEERING OFFICE AS W1102. THE DATUM SHIFT FACTOR: NAVD83 MINUS NGVD29 = -0.78 FT.
 6. THE WATER ELEVATION OF 120.85 WAS RECORDED ON AUGUST 3, 2017 AND IS BASED ON NAVD83.
 7. THE LOCATION OF THE TRAVERSE POINTS AND THE BLUE BANK FLAGS WERE OBTAINED BY GLOBAL POSITIONING SYSTEM (GPS) AND ELECTRONIC TOTAL STATIONING (EDM) BETWEEN JULY 19-31, 2017.
 8. WETLANDS DELINEATION FLAGS WERE PLACED BY HORSLEY-WITTEN GROUP ON JULY 19, 2017.
 9. BLUE FLAGS 18-2, 20-2 THRU 20-6, 20-8 THRU 20-15 & 21-1 COULD NOT BE RECORDED DUE TO OBSTRUCTIONS FROM THE VEGETATION.
 10. THE POINTS MEASURED WITH THE EDM AT SECTION 20 ON BIRD ISLAND WERE OFFSET AND THE DISTANCE OF THE OFFSET WAS APPROXIMATED FROM THE EXISTING BLUE FLAGS. THE BLUE FLAGS ON THE NORTH SIDE OF THE ISLAND WERE NOT RECORDED DUE TO OBSTRUCTIONS FROM THE VEGETATION. OBSERVATION INDICATES THAT THE EDGE OF THE WATER LINE MIMICS THE DELINEATION LINE.
 11. THE LOCATION OF THE SOUTHERN END OF THE CONCRETE WALL AT SECTION 11 COULD NOT BE RECORDED DUE TO OBSTRUCTIONS FROM THE VEGETATION.
 12. SURVEY FIELD DATA FOR GROUND GRADES, WATERLINE, PATHS, WALL & TREE LOCATIONS WERE PERFORMED AT SECTIONS 9, 10, 13, 16, 17 & 18 BETWEEN NOVEMBER-DECEMBER, 2017 AND ARE SHOWN WITHIN THE "LIMITS OF SURVEY LINE." THEREFORE THE GIS LINES WERE REVISED TO MATCH THE EXISTING FIELD CONDITIONS AS A RESULT OF THIS SURVEY AT THESE SPECIFIC SECTIONS.
 13. THIS IS A COMPILATION PLAN PREPARED FROM A COMBINATION OF FIELD SURVEY, WELLESLEY GIS INFORMATION AND OTHER SOURCES IDENTIFIED IN THE NOTES.

MORSE POND
(WATER EL. = 120.85, NAVD83, 08/03/2017)



COMMONWEALTH OF MASSACHUSETTS
DOUGLAS R. STEWART
No. 37567
PROFESSIONAL
LAND SURVEYOR

Douglas R. Stewart
02/22/2018



FIELD SURVEY CREW (JULY-DECEMBER, 2017)
G. BRUNO (INSTRUMENT OPERATOR)
R. RAZZAQUE (RODMAN)

REVISION	DATE	MADE BY	CHECKED BY	DESCRIPTION
1	12/22/17	G. BRUNO		TOPO SURVEY DATA ADDED TO SECTIONS 9, 10, 13, 16, 17 & 18
DESIGNED BY:		G. BRUNO		SCALE: AS SHOWN
DRAWN BY:		G. BRUNO		
CHECKED BY:		D. STEWART		
APPROVED BY:		<i>David J. Hickey, Jr.</i> Date: 02/22/18 Town Engineer		

**MORSE POND WETLANDS
DELINEATION FLAGS**

08/04/2017
02/22/2018 (REVISED)



Town of Wellesley
Department of Public Works
Engineering Division
20 Municipal Way, Wellesley, Massachusetts 02481