

GRAZ Engineering, L.L.C.



323 West Lake Road • Fitzwilliam, NH 03447 • Telephone (603) 585-6959 • Fax (603) 585-6960

Transmittal

To: Conservation Commission
Company: Town of Leicester
Address: 3 Washburn Square
City/State: Leicester, MA 01524
Subject: Pine Street – Assessors Parcel 41/C2.3
NOI Application
Date: July 31, 2017
Transmitted: ☐ Mail ☐ Fax ☒ Hand

☒ For Your Approval
☒ For Your Review
☐ For Your Signature
☒ For Your Information
☐ For Your Files

☒ Which You requested
☐ Approved
☐ Approved As Noted
☐ Revise And Resubmit
☐ Not Approved

2	copies	WPA Form 3, NOI Application, & associated documents
3	copies	Pine St., Assessors Map 41, Parcel C2.3 – NOI Site Plan, Sht. 1 of 2 (24x36)
3	copies	Pine St., Assessors Map 41, Parcel C2.3 – NOI Const. Details Plan, Sht. 2 of 2 (24x36)
2	copies	Pine St., Assessors Map 41, Parcel C2.3 – NOI Site Plan, Sht. 1 of 2 (11x17)
2	copies	Pine St., Assessors Map 41, Parcel C2.3 – NOI Const. Details Plan, Sht. 2 of 2 (11x17)
2	copies	EcoTec, Inc. Wetland Resource Evaluation Report
2	copies	EcoTec, Inc. Wetland Replication Area Description & Construction Protocol
2	copy	National Flood Insurance Program FIRM
1	check	NOI Town Share & Local Filing Fees Check for \$ 84.38 (see fee breakdown below)
1	copy	PDF Digital Copy of Submittal Materials

Comments: Enclosed is the NOI submittal for Matt Schold (Schold Development, LLC) for the property located on Pine Street and depicted on Assessors Map 41 as Parcel C2.3. I trust that this submittal meets the requirements of the Commission and look forward to discussing this project at the public hearing.

The fee breakdown for the filing check is as follows:

Total State Project Fee:	\$ 110.00	(Cat. 1.b)
NOI Town Share:	\$ 67.50	
Local Bylaw Fees:	\$ 16.88	(25% Total State Fee)
Total Local Fee:	\$ 84.38	

Should you have any questions or require any additional information, please call my cell at 508-769-9084.

Respectfully yours,
GRAZ Engineering, L.L.C.

Brian MacEwen, P.L.S., E.I.T.
Project Manager

cc: Matt Schold, Applicant/Owner



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

Leicester

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):

Pine Street

a. Street Address

Spencer

b. City/Town

01562

c. Zip Code

Latitude and Longitude:

41

f. Assessors Map/Plat Number

42.21913

d. Latitude

71.94573

e. Longitude

C2.3

g. Parcel /Lot Number

2. Applicant:

Matt

a. First Name

Schold

b. Last Name

Schold Development, LLC

c. Organization

77 Chickering Road

d. Street Address

Spencer

e. City/Town

MA

f. State

01562

g. Zip Code

508-612-8777

h. Phone Number

i. Fax Number

ScholdDev@gmail.com

j. Email Address

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

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Brian

a. First Name

MacEwen

b. Last Name

GRAZ Engineering, LLC

c. Company

323 West Lake Road

d. Street Address

Fitzwilliam

e. City/Town

NH

f. State

03447

g. Zip Code

508-769-9084 (Cell) 603-585-6959

h. Phone Number

i. Fax Number

Brian@GrazEngineering.com

j. Email address

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

110.00

a. Total Fee Paid

\$42.50

b. State Fee Paid

\$67.50

c. City/Town Fee Paid



WPA Form 3 – Notice of Intent

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

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A. General Information (continued)

6. General Project Description:

Construction of a wetland replication area as the result of the construction of a new single family dwelling and associated site improvements which are results in the loss of a "finger-like" portion of the Bordering Vegetated Wetlands at the locus of the proposed site development in the Town of Spencer.

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

- | | |
|---|---|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation |
| 9. <input checked="" type="checkbox"/> 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 CMR 10.24(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:

Worcester District

a. County

56775

c. Book

b. Certificate # (if registered land)

126

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

WPA Form 3 – Notice of Intent

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

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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 type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	<u>936 (Spencer)</u> 1. square feet	<u>1,416 (Leicester)</u> 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 type="checkbox"/> Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	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): <input type="checkbox"/> 25 ft. - Designated Densely Developed Areas only <input type="checkbox"/> 100 ft. - New agricultural projects only <input type="checkbox"/> 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:

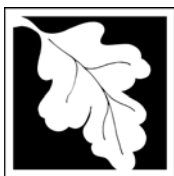
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
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5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☐ No

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

Provided by MassDEP:

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Leicester

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.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
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

1. 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

October 1, 2008

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*

1. ☐ Percentage/acreage of property to be altered:

(a) within wetland Resource Area

percentage/acreage

(b) outside Resource Area

percentage/acreage

2. ☐ Assessor's Map or right-of-way plan of site

2. ☐ 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/nhesp/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/nhesp/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.



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

Provided by MassDEP:

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Leicester

City/Town

Online Users:

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

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

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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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.

Notice of Intent - Existing & Proposed Site Plan, Pine Street, Leicester, MA, Sheet 1 of 2

a. Plan Title

GRAZ Engineering, LLC

Paul F. Grasewicz, PE

b. Prepared By

c. Signed and Stamped by

July 31, 2017

1" = 30'

d. Final Revision Date

e. Scale

Notice of Intent - Construction Details & Notes, Sheet 2 of 2

July 31, 2017

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:

2. Municipal Check Number

7/31/2017

3. Check date

Online Filing paid with Credit Card

4. State Check Number

5. Check date

Schold Development, LLC

6. Payor name on check: First Name

7. Payor name on check: Last Name



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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

July 31, 2017

2. Date

3. Signature of Property Owner (if different)

4. Date

July 31, 2017

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:

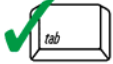
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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:

Chickering Road (Assessors U30-1)

a. Street Address

Online Filing with Credit Card

c. Check number

Leicester

b. City/Town

\$42.50

d. Fee amount

2. Applicant Mailing Address:

Matt

a. First Name

Schold Development, LLC

c. Organization

77 Chickering Road

d. Mailing Address

Spencer

e. City/Town

508-612-8777

h. Phone Number

MA

f. State

01562

g. Zip Code

ScholdDev@gmail.com

j. Email Address

i. Fax Number

3. Property Owner (if different):

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

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.

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Cat. 1.b: Site Work w/o House	1	\$110.00	\$110.00
Step 5/Total Project Fee:			\$110.00

Step 6/Fee Payments:

Total Project Fee:	\$110.00
	a. Total Fee from Step 5
State share of filing Fee:	\$42.50
	b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee:	\$67.50
	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.)



EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street
Worcester, MA 01605-2629
508-752-9666 / Fax: 508-752-9494

June 30, 2017

Matthew Schold
Schold Development
77 Chickering Road
Spencer, MA 01562

RE: Wetland Resource Evaluation, Lots A, B & C Pine St., Spencer, Massachusetts

Dear: Matt:

On October 28 & November 2, 2016, EcoTec, Inc. inspected the above-referenced property for the presence of wetland resources as defined by: (1) the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40; the “Act”) and its implementing regulations (310 CMR 10.00 *et seq.*; the “Regulations”); and (2) the U.S. Clean Water Act (i.e., Section 404 and 401 wetlands). Arthur Allen, CPSS, CWS conducted the inspection.

The subject site consists of three lots comprising a 6-acre area located in Leicester and Spencer. The upland portions of the site are wooded and undeveloped. Plant species observed include northern red oak (*Quercus rubra*), sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), white ash (*Fraxinus americana*), eastern white pine (*Pinus strobus*), American witch-hazel (*Hamamelis virginiana*), American beech (*Fagus grandifolia*), and mountain-laurel (*Kalmia latifolia*). The wetland resources observed on the site are described below.

Methodology

The site was inspected, and areas suspected to qualify as wetland resources were identified. The boundary of Bordering Vegetated Wetlands was delineated in the field in accordance with the definition set forth in the regulations at 310 CMR 10.55(2)(c). Section 10.55(2)(c) states that “The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.” The methodology used to delineate Bordering Vegetated Wetlands is further described in: (1) the BVW Policy “*BVW: Bordering Vegetated Wetlands Delineation Criteria and Methodology*,” issued March 1, 1995; and (2) “*Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act: A Handbook*,” produced by the Massachusetts Department of Environmental Protection, dated March 1995. The plant taxonomy used in this report is based on the *National Wetland Plant List (Massachusetts 2012 Final State Wetland Plant List)*, ERDC/CRREL TR-12-11 (Lichvar, 2012). Federal wetlands were presumed to have boundaries conterminous with the delineated Bordering Vegetated Wetlands. Two sets of DEP Bordering Vegetated Wetland Delineation Field Data Forms completed for observation plots located in the wetlands and uplands near flags A-6 and B-12 are attached. The table below provides the Flag Numbers, Flag Type, and Wetland Types and Locations for the delineated wetland resources.

Flag Numbers	Flag Type	Wetland Types and Locations
A-1 to A-63	Blue Flags	Boundary of Bordering Vegetated Wetlands located in the westerly and southerly portions of the site that is associated with Stiles Reservoir and an unnamed, intermittent, tributary stream.
B-1 to B-28	Blue Flags	Boundary of Bordering Vegetated Wetlands located in the northeasterly portion of the site that is associated with the headwaters to an unnamed, intermittent stream.

Findings

Wetlands A and B consist of wooded swamps located in the easterly and westerly portions of the site that are associated with intermittent streams. Plant species observed include red maple (*Acer rubrum*), yellow birch (*Betula allegheniensis*), highbush blueberry (*Vaccinium corymbosum*), cinnamon fern (*Osmunda cinnamomea*), common winterberry (*Ilex verticillata*), skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmunda cinnamomea*) and New York fern (*Parathelypteris noveboracensis*). Evidence of wetland hydrology, including hydric soils, high groundwater and saturated soils was observed within the delineated wetlands. These vegetated wetlands border intermittent streams; accordingly, the vegetated wetlands would be regulated as Bordering Vegetated Wetlands and the intermittent streams would be regulated as Bank under the Act. A 100-foot Buffer Zone extends horizontally outward from the edge of Bordering Vegetated Wetlands under the Act.

Bordering Land Subject to Flooding is an area that floods due to a rise in floodwaters from a bordering waterway or water body. Where flood studies have been completed, the boundary of Bordering Land Subject to Flooding is based upon flood profile data prepared by the National Flood Insurance Program. Section 10.57(2)(a)3. states that “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.” The project engineer should evaluate the most recent National Flood Insurance Program flood profile data to determine the limits of Bordering Land Subject to Flooding on the site. Bordering Land Subject to Flooding would occur in areas where the 100-year flood elevation is located outside of or upgradient of the delineated Bordering Vegetated Wetlands boundary. Bordering Land Subject to Flooding does not have a Buffer Zone under the Act. A copy of the most recent FEMA flood zone map is attached to this report.

The Massachusetts Rivers Protection Act amended the Act to establish an additional wetland resource area: Riverfront Area. Based upon a review of the current USGS Map (i.e., Worcester South Quadrangle, dated 1983, attached) and observations made during the site inspection, two streams that are not shown on the USGS Map are located within wetlands A & B. The watershed areas for these streams, at the site, were determined to be less than 0.1 square miles each, which is less than 0.5 square miles. As such, the stream would be designated intermittent under the Massachusetts Wetlands Protection Act regulations. Furthermore, based upon a review of the current USGS Map and observations made during the site inspection, there are no other mapped

or unmapped streams located within 200 feet of the site. Accordingly, Riverfront Area would not occur on the site. Riverfront Area does not have a Buffer Zone under the Act.

The Regulations require that no project may be permitted that will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures set forth at 310 CMR 10.59. Based upon a review of the *Massachusetts Natural Heritage Atlas*, 13th edition, Priority Habitats and Estimated Habitats, Leicester Quadrangle, valid from October 1, 2008, there are no Estimated Habitats [for use with the Act and Regulations (310 CMR 10.00 *et seq.*)], Priority Habitats [for use with Massachusetts Endangered Species Act (M.G.L. Ch. 131A; “MESA”) and MESA Regulations (321 CMR 10.00 *et seq.*)], or Certified Vernal Pools on or in the immediate vicinity of the site. A copy of this map is attached.

The reader should be aware that the regulatory authority for determining wetland jurisdiction rests with local, state, and federal authorities. A brief description of my experience and qualifications is attached. If you have any questions, please feel free to contact me at any time.

Cordially,
ECOTEC, INC.



Arthur Allen, CPSS, CWS, CESSWI, ASE
Vice President

Attachments (5, 12 pages)

AA/Wetland/Leicester Pine St Report

QUALIFICATIONS

Arthur Allen, CPSS, CWS, CESSWI
Vice President
Soil & Wetland Scientist

Arthur Allen is the Vice President of EcoTec, Inc. and has been a senior environmental scientist there since 1995. His work with EcoTec has involved wetland delineation, wildlife habitat evaluation, environmental permitting (federal, state and local), environmental monitoring, expert testimony, peer reviews, contaminated site assessment and the description, mapping and interpretation of soils. His clients have included private landowners, developers, major corporations and regulatory agencies. Prior to joining EcoTec, Mr. Allen mapped and interpreted soils in Franklin County, MA for the U.S.D.A. Natural Resources Conservation Service (formerly Soil Conservation Service) and was a research soil scientist at Harvard University's Harvard Forest. Since 1994, Mr. Allen has assisted the Massachusetts Department of Environmental Protection and the Massachusetts Association of Conservation Commissions as an instructor in the interpretation of soils for wetland delineation and for the Title V Soil Evaluator program.

Mr. Allen has a civil service rating as a soil scientist, an undergraduate degree in Natural Resource Studies and a graduate certificate in Soil Studies. His work on the Franklin County soil survey involved interpretation of landscape-soil-water relationships, classifying soils and drainage, and determining use and limitation of the soil units that he delineated. As a soil scientist at the Harvard Forest, Mr. Allen was involved in identifying the legacies of historical land-use in modern soil and vegetation at a number of study sites across southern New England. He has a working knowledge of the chemical and physical properties of soil and water and how these properties interact with the plants that grow on a given site. While at Harvard Forest he authored and presented several papers describing his research results which were later published. In addition to his aforementioned experience, Mr. Allen was previously employed by the Trustees of Reservations as a land manager and by the Town of North Andover, MA as a conservation commission intern.

Education:

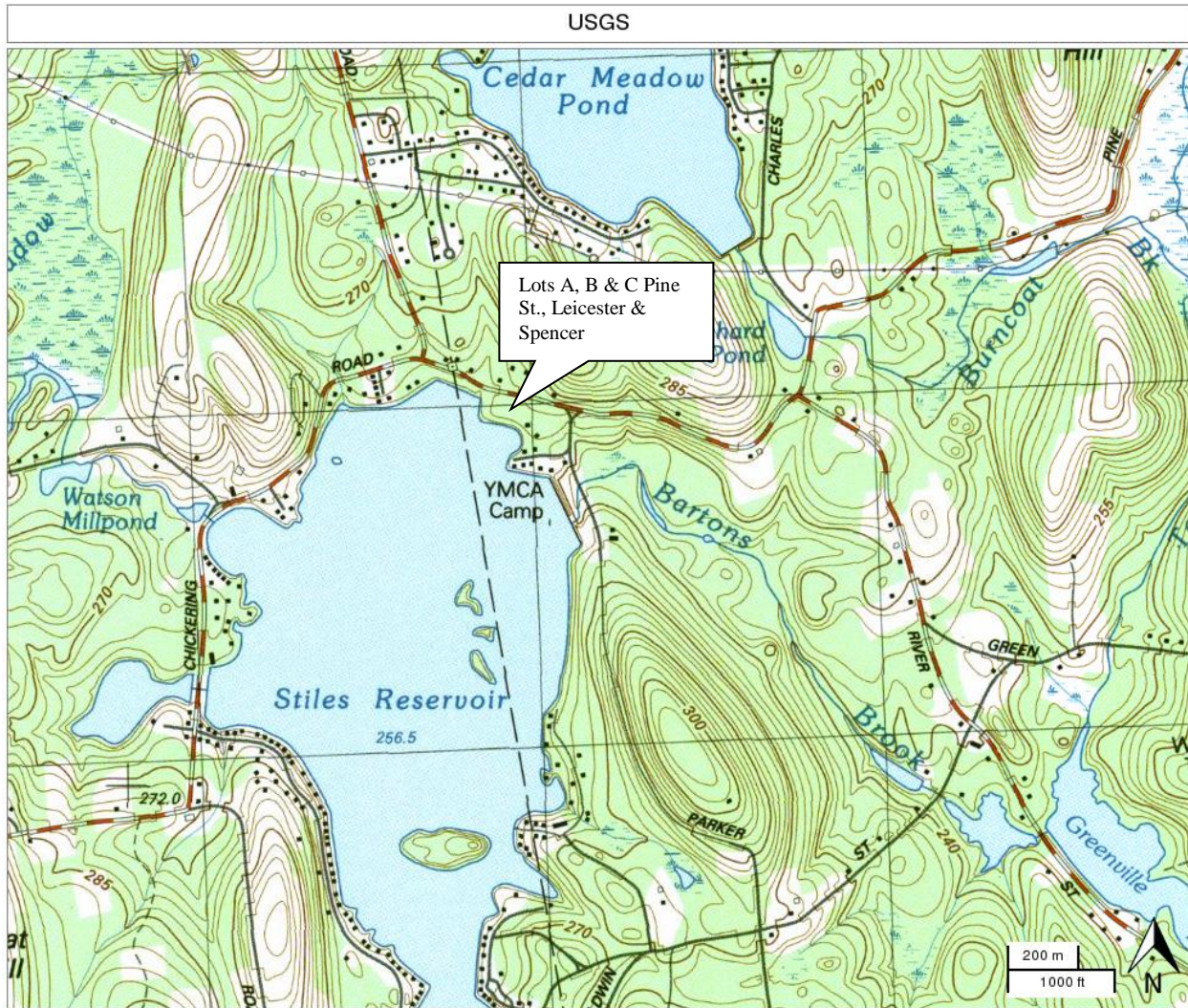
1993-Graduate Certificate in Soil Studies, University of New Hampshire
1982-Bachelor of Science in Natural Resource Studies, University of Massachusetts

Professional Affiliations:

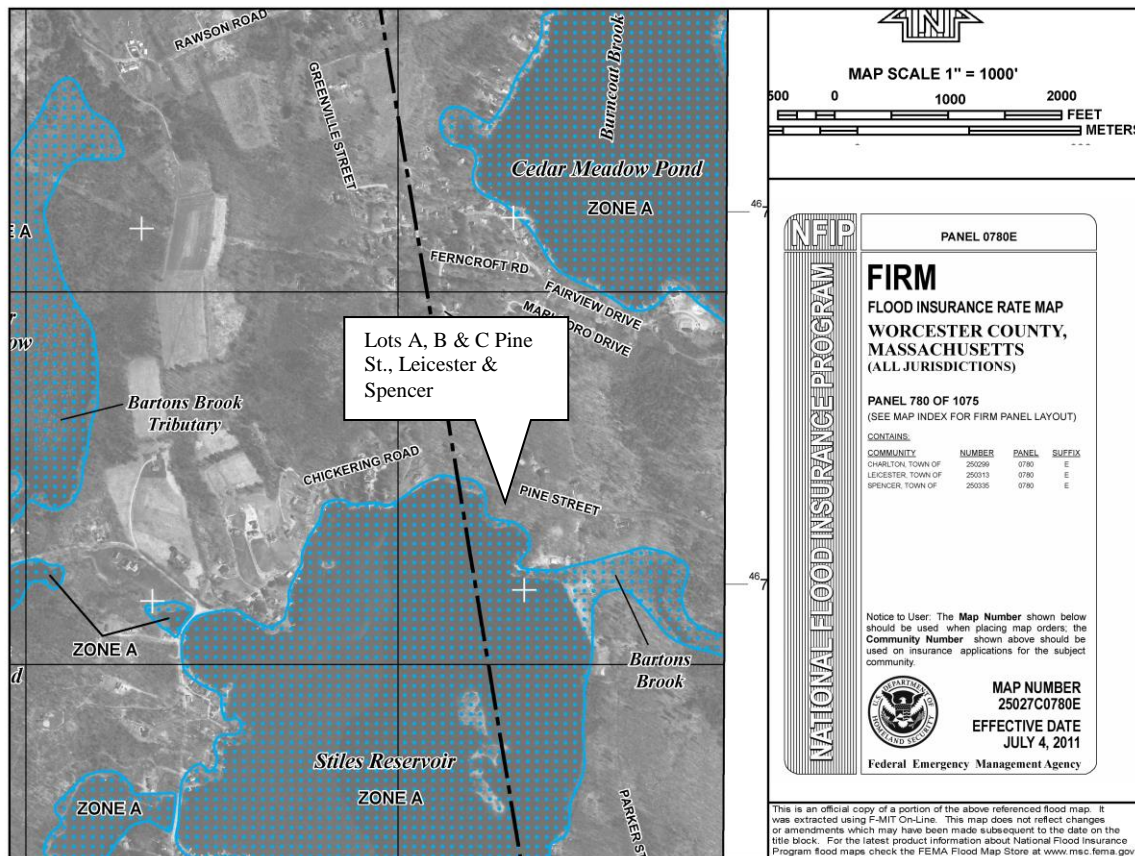
Certified Professional Soil Scientist (ARCPACS CPSS #22529)
New Hampshire Certified Wetland Scientist (#19)
Registered Professional Soil Scientist – Society of Soil Scientists of SNE [Board Member (2000-2006)]
Certified Erosion, Sediment & Stormwater Inspector (#965)
Approved Soil Evaluator (#13764)
Massachusetts Arborists Association-Certified Arborist (1982 – 1998)
New England Hydric Soils Technical Committee member
Massachusetts Association of Conservation Commissions member
Society of Wetland Scientists member

Refereed Publications:

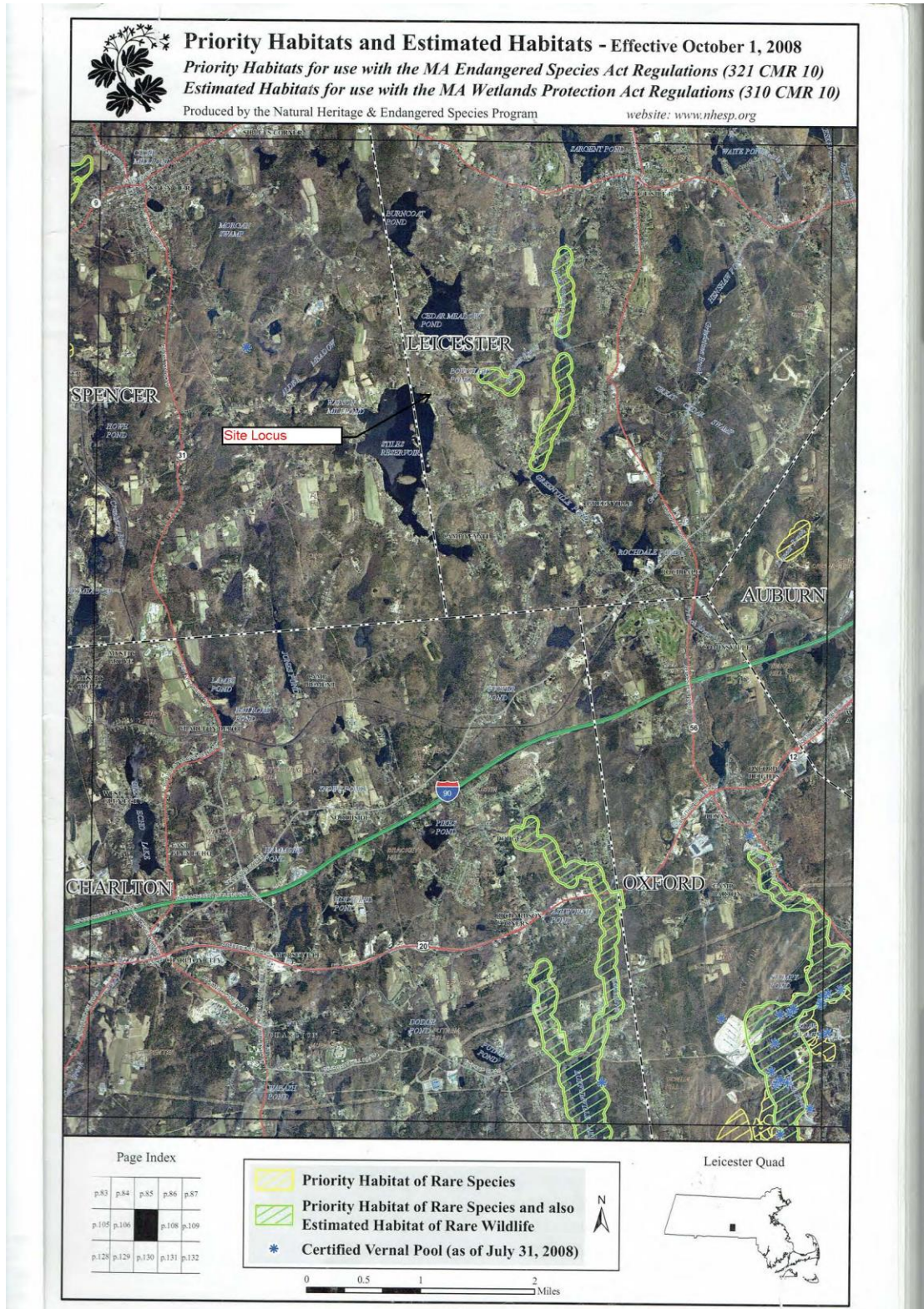
Soil Science and Survey at Harvard Forest. A.Allen. In: Soil Survey Horizons. Vol. 36, No. 4, 1995, pp. 133-142.
Controlling Site to Evaluate History: Vegetation Patterns of a New England Sand Plain. G.Motzkin, D.Foster, A.Allen, J.Harrold, & R.Boone. In: Ecological Monographs 66(3), 1996, pp. 345-365.
Vegetation Patterns in Heterogeneous Landscapes: The Importance of History and Environment. G.Motzkin, P.Wilson, D.R.Foster & A.Allen. In: Journal of Vegetation Science 10, 1999, pp. 903-920.



USGS PROJECT LOCUS – Leicester, MA



FEMA FLOOD MAP



NATURAL HERITAGE RARE SPECIES & VERNAL POOL MAP

EcoTec, Inc.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant:

Prepared by: A.Allen - EcoTec, Inc.

Project location: Pine St. Leicester MA

DEP File # :

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☒ Vegetation and other indications of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation			Observation Plot Number: TP-U	Transect Number: A-6	Date of Delineation: 11/2/16		
A. Sample Layer and Plant Species (by common/scientific name)				B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category *
TREES	Red oak	<i>Quercus rubra</i>		50	71	yes	FACU-
	Sugar maple	<i>Acer saccharum</i>		20	28	yes	FACU-
SAPLINGS	Red maple	<i>Acer rubrum</i>		10	100	yes	FAC*
SHRUB	Witch hazel	<i>Hamamelis virginiana</i>		90	90	yes	FAC-
	American Beech	<i>Fagus grandifolia</i>		10	10	no	FACU
GROUNDCOVER	Cinnamon fern	<i>Osmunda cinnamomea</i>		10	66	yes	FACW*
	Lady fern	<i>Athyrium pycnocarpopn</i>		5	33	yes	FAC*

*Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusions:

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 3
 Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes

Pine St. Leicester; A-6

Section II. Indicators of Hydrology

1. Soil Survey

Is there a published soil survey for this site?

title/date:

map number:

soil type mapped:

hydric soil inclusions:

Are field observations consistent with soil survey?

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
litter	2		
0	1-0		
A	0-6	10YR2/2	
Bw	6-14	10YR4/6	

Remarks: very stony fine sandy loams

3. Other:

Conclusion: Is soil Hydric? no

Other Indications of Hydrology: (check all that apply and describe)

- ☐ Site inundated: _____
- ☐ Depth to free water in observation hole: _____
- ☐ Depth to soil saturation in observation hole: _____
- ☐ Water marks: _____
- ☐ Drift lines: _____
- ☐ Sediment deposits: _____
- ☐ Drainage patterns in BVW: _____
- ☐ Oxidized rhizospheres: _____
- ☐ Water-stained leaves: _____
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- ☐ Other: _____

Vegetation and Hydrology Conclusion

	yes	no
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:		
hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
other indicators of hydrology present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Submit this form with the Request for Determination of Applicability or Notice of Intent.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant:

Prepared by: A.Allen - EcoTec, Inc.

Project location: Pine St. Leicester Ma

DEP File # :

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☒ Vegetation and other indications of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation		Observation Plot Number: TP-U	Transect Number: B-12		Date of Delineation: 11/2/17	
A. Sample Layer and Plant Species (by common/scientific name)			B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category *
TREES	Red Oak	<i>Quercus rubra</i>	60	60	yes	FACU-
	White ash	<i>Fraxinus americana</i>	20	20	yes	FACU
	White pine	<i>Pinus strobus</i>	10	10	no	FACU
	Red maple	<i>Acer rubrum</i>	10	10	no	FAC*
SAPLINGS	Red maple	<i>Acer rubrum</i>	20	66	yes	FAC*
	Yellow birch	<i>Betula Alleghaniensis</i>	10	33	yes	FAC*
SHRUB	Mountain laurel	<i>Kalmia latifolia</i>	10	40	yes	FACU
	Beaked hazelnut	<i>Corylus cornuta</i>	10	40	yes	FACU-
	Red maple	<i>Acer rubrum</i>	5	20	yes	FAC*
	White Pine	<i>Pinus strobus</i>	<5	<5	no	FACU
GROUND COVER						

*Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusions:

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 4
 Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? NO

Pine St. Leicester; B-12

Section II. Indicators of Hydrology

1. Soil Survey

Is there a published soil survey for this site?

title/date:

map number:

soil type mapped:

hydric soil inclusions:

Are field observations consistent with soil survey?

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
litter	3		
O	2-0		
A	0-6	10YR2/2	
Bw	6-15	10YR4/6	

Remarks: Stony fine sandy loams

3. Other:

Conclusion: Is soil Hydric? no

Other Indications of Hydrology: (check all that apply and describe)

- ☐ Site inundated: _____
- ☐ Depth to free water in observation hole: _____
- ☐ Depth to soil saturation in observation hole: _____
- ☐ Water marks: _____
- ☐ Drift lines: _____
- ☐ Sediment deposits: _____
- ☐ Drainage patterns in BVW: _____
- ☐ Oxidized rhizospheres: _____
- ☐ Water-stained leaves: _____
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- ☐ Other: _____

Vegetation and Hydrology Conclusion

	yes	no
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetland hydrology present:		
hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
other indicators of hydrology present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Submit this form with the Request for Determination of Applicability or Notice of Intent.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant:

Prepared by: A.Allen - EcoTec, Inc.

Project location: Pine St. Leicester MA

DEP File # :

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☒ Vegetation and other indications of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation			Observation Plot Number: TP-W	Transect Number: A-6	Date of Delineation: 11/2/16		
A. Sample Layer and Plant Species (by common/scientific name)				B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category *
TREES	Red oak	<i>Quercus rubra</i>		40	66	yes	FACU-
	White ash	<i>Fraxinus americana</i>		20	33	yes	FACU
SAPLINGS	Red maple	<i>Acer rubrum</i>		10	50	yes	FAC*
	Yellow birch	<i>Betula alleghaniensis</i>		10	50	yes	FAC*
SHRUB	Witch hazel	<i>Hamamelis virginiana</i>		80	88	yes	FAC-
	Canada elderberry	<i>Sambucus canadensis</i>		10	11	no	FACW
GROUND COVER	Cinnamon fern	<i>Osmunda cinnamomea</i>		30	100	yes	FACW*

*Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusions:

Number of dominant wetland indicator plants: 3 Number of dominant non-wetland indicator plants: 3
 Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? YES

Pine St. Leicester; A-6

Section II. Indicators of Hydrology

1. Soil Survey

Is there a published soil survey for this site?

title/date:

map number:

soil type mapped:

hydric soil inclusions:

Are field observations consistent with soil survey?

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
litter	3		
O	2-0		
A	0-10	10YR3/2	
Bw	10-17	7.5YR4/3	15% 10YR5/2 10% 7.5YR4/6

Remarks: Very stony fine sandy loams

3. Other:

Conclusion: Is soil Hydric? YES

Other Indications of Hydrology: (check all that apply and describe)

- ☐ Site inundated: _____
- ☐ Depth to free water in observation hole: _____
- ☐ Depth to soil saturation in observation hole: _____
- ☐ Water marks: _____
- ☐ Drift lines: _____
- ☐ Sediment deposits: _____
- ☐ Drainage patterns in BVW: _____
- ☐ Oxidized rhizospheres: _____
- ☐ Water-stained leaves: _____
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- ☐ Other: _____

Vegetation and Hydrology Conclusion

	yes	no
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:		
hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
other indicators of hydrology present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Submit this form with the Request for Determination of Applicability or Notice of Intent.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant:

Prepared by: A.Allen - EcoTec, Inc.

Project location: Pine St. Leicester MA

DEP File # :

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☒ Vegetation and other indications of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation			Observation Plot Number: TP-W	Transect Number: B-12	Date of Delineation: 11/2/16		
A. Sample Layer and Plant Species (by common/scientific name)				B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category *
TREES	Red oak	<i>Quercus rubra</i>		90	90	yes	FACU-
	White pine	<i>Pinus strobus</i>		10	10	no	FACU
SAPLINGS	Red maple	<i>Acer rubrum</i>		20	66	yes	FAC*
	American chestnut	<i>Castanea dentata</i>		10	33	yes	NL
SHRUB	Highbush blueberry	<i>Vaccinium corymbosum</i>		10	50	yes	FACW-*
	White pine	<i>Pinus strobus</i>		10	50	yes	FACU
GROUNDCOVER	Cinnamon fern	<i>Osmunda cinnamomea</i>		60	63	yes	FACW*
	Teaberry	<i>Gaultheria procumbens</i>		15	15	no	FACU
	New York fern	<i>Thelypteris novaboracensis</i>		20	21	yes	FAC*

*Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c. 131, s. 40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusions:

Number of dominant wetland indicator plants: 4 Number of dominant non-wetland indicator plants: 3
 Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? YES

Pine St. Leicester; B-12

Section II. Indicators of Hydrology

1. Soil Survey

Is there a published soil survey for this site?

title/date:

map number:

soil type mapped:

hydric soil inclusions:

Are field observations consistent with soil survey?

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
litter	2		
O	2-0		
A	0-10	10YR2/1	
Bg	10-16	10YR5/2	10% 7.5YR4/4

Remarks: **Stony loam**

3. Other:

Conclusion: Is soil Hydric? **YES**


Other Indications of Hydrology: (check all that apply and describe)

- ☐ Site inundated: _____
- ☐ Depth to free water in observation hole: _____
- ☐ Depth to soil saturation in observation hole: _____
- ☐ Water marks: _____
- ☐ Drift lines: _____
- ☐ Sediment deposits: _____
- ☐ Drainage patterns in BVW: _____
- ☐ Oxidized rhizospheres: _____
- ☐ Water-stained leaves: _____
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other): _____
- ☐ Other: _____

Vegetation and Hydrology Conclusion

	yes	no
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:		
hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
other indicators of hydrology present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Submit this form with the Request for Determination of Applicability or Notice of Intent.

	<p style="text-align: center;">EcoTec, Inc.</p> <hr/> <p style="text-align: center;">ENVIRONMENTAL CONSULTING SERVICES 102 Grove Street Worcester, MA 01605-2629 508-752-9666 / Fax: 508-752-9494</p>
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Wetland Replication Area Description & Construction Protocol

Lot A Pine Street
Spencer & Leicester, MA

July 21, 2017

Introduction:

The following descriptions and protocol were prepared by Arthur Allen (Certified Professional Soil & Wetland Scientist) of EcoTec, Inc. This information is based on an evaluation of the proposed impact and replication areas performed on July 20, 2017. The descriptions and protocol are based on the Massachusetts Inland Wetland Replication Guidelines (issued March, 2002 by the MA Dept. of Environmental Protection), are in accordance with the General Performance Standards of the Massachusetts Wetlands Protection Act Regulations at 310 CMR 10.55(4)(b) and serve to protect the interests of the Wetlands Protection Act. The overall wetland delineation on this site was performed by EcoTec on November 2, 2016 and is described in a report dated June 30, 2017.

Descriptions:

The project consists of single-family home, septic system and well construction. The wetland area proposed to be altered consists of 936 square feet of Bordering Vegetated Wetland adjacent to the Bank of Stiles Reservoir. No Bank alteration is proposed. The local wetland type is wooded swamp and the Cowardin classification is Palustrine Forest. The native wetland vegetation within the proposed impact area consists of Red Maple (*Acer rubrum*), Yellow Birch (*Betula allegheniensis*), Highbush blueberry (*Vaccinium corymbosum*), Winterberry (*Ilex verticillata*), Cinnamon fern (*Osmunda cinnamomea*) and Skunk cabbage (*Symplocarpus foetidus*). Soil conditions consist of stony fine sandy loams with 10 inches of dark, organic-rich topsoil over a depleted subsoil (with redox concentrations) at 10 inches. These soil conditions are indicative of a seasonal high water table at less than 10 inches below ground surface.

The upland area proposed for replication consists of a wooded upland area that extends between Stiles Reservoir and an intermittent tributary stream. The replication area is at a similar elevation and topographic position relative to the resource area as the impact area. The replication area is presently vegetated with Red Oak (*Quercus rubra*), Red Maple (*Acer rubrum*), Eastern Hemlock (*Tsuga canadensis*), Sassafras (*Sassafras albidum*) and Mountain Laurel (*Kalmia latifolia*) saplings and shrubs. Soil conditions and hydrology within the proposed replication area were established in a flagged test pit as described below. These soil profile is indicative of an estimated seasonal high

water table at approximately 18 inches. No restrictive layers were noted to at least 24 inches below ground surface.

Table No. 1 Replication Area Soil Description

Test Pit TP-R1		
Litter	2"	
O	1-0	
A	0-3	10YR 3/2
Bw1	3-18	7.5YR 4/6 with 2% 5YR 4/4 concentrations
Bw2	18-24	7.5YR 5/3 with 10% 10YR 5/2 depletions & 15% 5YR 4/4 concentrations

Table No. 2 below summarizes the interests of the Wetlands Protection Act which the wetland to be altered is presently serving and predicts the value of the proposed replication area to those interests.

Table No. 2

Public Interests:	Value of Area To Be Altered:	Value of Replication Area:
Public and Private Water Supply, Groundwater Supply	YES. Recharges groundwater through infiltration. Seasonally recharges surface water through overland flow.	YES. Will also recharge groundwater and surface water through infiltration into friable subsoil and substrate.
Flood control and Storm Damage Prevention	YES. Some storage of runoff in seasonally saturated soils.	YES. Seasonally saturated soils will store greater volumes of runoff at similar elevation in the watershed.
Prevention of Pollution	YES. Contaminants and excess nutrients retained in, and degraded by, mineral and organic components of hydric soils.	YES. Contaminants and excess nutrients will also be retained in, and degraded by, mineral and organic components of replicated/restored hydric soils.
Fisheries	N/A. No fisheries use of the terrestrial wetland.	N/A. No perennial waterway or waterbody.
Wildlife Habitat	YES. Existing vegetative layers and soil structure provide foraging and shelter opportunities.	YES. Replicated soil structure and plantings will provide opportunities for wildlife shelter and forage.

Construction Protocol:

1. The following protocol conforms to the general performance standards in the MA Wetlands Protection Act Regulations at 310 CMR 10.55(4)(b) as summarized in Table 2 below.

Table no. 2

Performance Standard:	Standards Met Within Replication Area:
Equal surface areas (936 s.f. altered).	YES. Greater surface area (1,416 s.f. replicated/restored).
Similar groundwater and surface elevations.	YES. Similar elevations within the same watershed.
Location relative to Stiles Reservoir Bank.	YES. Replication/restoration borders Bank of intermittent stream at the confluence with Stiles Reservoir.
Unrestricted hydraulic connection.	YES. Unrestricted connection bordering wetland in same watershed.
Same general location.	YES. Closest possible restoration opportunity with the least associated buffer impact.
Minimum 75% cover of native wetland plants within two growing seasons and prevention of soil erosion.	YES. To be insured by following construction and planting protocol combined with annual monitoring and re-planting and/or modifications as necessary. Plantings designed to replicate lost area(s) in-kind. Erosion prevented with siltation barriers and stabilized sideslopes.

2. A qualified Wetland Scientist will monitor all phases of replication area construction and will provide reports to the Conservation Commission as required.
3. The wetland boundaries (i.e., downgradient edges of the wetland replication area) will be marked in the field.
4. Prior to the start of earth-moving activities in the replication area, an erosion control barrier of properly installed siltation fence (i.e., the bottom few inches of the siltation fence installed in a narrow, trench and the trench filled with soil around the siltation fence) will be installed along the wetland boundaries between the wetland and the wetland replication area. The project Wetland Scientist will evaluate the replication area prior to clearing and determine if any existing trees can be saved. The wetland replication area will then be cleared and grubbed, with the exception of any trees that have been marked to be saved.
5. The proposed final grade for the replication area should approximate the elevation of the adjacent wetland area, as noted on the site plans. The replication area will be excavated to a depth of 12 inches below the proposed final grade. The excavation and planting work will be closely supervised by a qualified Wetland Scientist. Modifications to the proposed grading may be made in the field by the Wetland Scientist in response to observed subsurface hydrologic

conditions. All excavated material will be disposed of away from all wetland resource areas and protected from erosion.

6. Existing topsoils within the impact area will be excavated, stockpiled and moved immediately to the prepared replication area or kept moist by watering and/or covering.
7. Relocated wetland topsoils will be supplemented with a 1:1 mixture of high quality, loamy topsoil and leaf mold compost, as necessary, to approximate 12 inches in thickness throughout the replication area. The substrate will be roughly graded to provide an appropriate microtopography.
8. An erosion control barrier comprising only toed-in siltation fence will be properly installed between the completed replication area and the adjacent upland sideslopes.
9. Planting will be done only during the beginning (April 15 through June 1) or end (September 15 to November 1) of the growing season. Planting in the mid-growing season is only acceptable if irrigation is provided. The plant species identified in the table below will be planted in the replication area from nursery stock. The saplings will be distributed throughout the area. The shrubs will be planted randomly throughout the area in clumps of two to three with the average spacing between shrub clumps approximately 5 feet on-center. The woody vegetation should not be planted in rows. The herbaceous species will be planted between the shrubs and saplings.

Planting Plan for 1,416 S.F. Wetland Replication Area	
SPECIES; SIZE; SPACING	NUMBER
Saplings; 6 to 8' height, container or balled, burlapped; 15' on-center avg.	
Red Maple (<i>Acer rubrum</i>)	3
Yellow birch (<i>Betula allegheniensis</i>)	3
Shrubs; 2.5 to 3' in height, container; 5' on-center average spacing	
Highbush Blueberry (<i>Aronia prunifolia</i>)	25
Winterberry (<i>Ilex verticillata</i>)	25
Herbaceous; containerized; 5' on-center average spacing	
Cinnamon fern (<i>Osmunda cinnamomea</i>)	30

10. The planted replication area will be mulched with 1 to 2 inches of shredded leaves or weed-free straw to simulate a forest floor and to provide for temporary erosion control and moisture retention.
11. The replication areas will be inspected, by a qualified Wetland Scientist, at the end of each growing season for a minimum of two years or until such time as the required 75% of vegetative cover with wetland species has been established. If invasive species are noted (e.g., knotweed, phragmites, etc.) these species will be removed by either hand-pulling the entire plant out by the roots or by cutting the above-ground portion and applying glyphosate herbicide to the stem with a drip applicator. The cut or pulled plants will be properly disposed of outside the wetlands and buffer zones and care will be taken not to distribute any seeds or berries that may be present.

12. After the wetland replication area has become vegetatively stabilized, and following approval of the issuing authority, the siltation fence and all wooden stakes will be removed and disposed of properly.

AA/Wet/SpencerLotA Pine St Protocol.doc

06/20/2017

Town of Leicester

Page 1 of 1

4:12:24PM

Abutters List

ParcelID	Location	Owner	Co-Owner	Mailing Address	City	State	Zip
41 A1 0	600 PINE ST	CYR HEATHER M	VAN HAZINGA JONATHAN A	600 PINE ST	LEICESTER	MA	01524
41 A2 0	596 PINE ST	ROWLAND SCOTT R	ROWLAND SUSAN L	596 PINE ST	LEICESTER	MA	01524
41 A3 0	PINE ST	HARRIS KATHLEEN		568 PINE ST	LEICESTER	MA	01524
41 A4 0	568 PINE ST	HARRIS REALTY TRUST	HARRIS PAUL A GEOFFREY	568 PINE ST	LEICESTER	MA	01524
41 A6 0	562 PINE ST	REYNOLDS NICOLE J		562 PINE ST	LEICESTER	MA	01524
41 C2.1 0	565 PINE ST	SCHOLD DEVELOPEMENT LLC		77 CHICKERING RD	SPENCER	MA	01562
41 C2.2 0	555 PINE ST	SCHOLD DEVELOPEMENT LLC		77 CHICKERING RD	SPENCER	MA	01562
41 C3 0	PARKER ST	STILES LAKE WATER DISTRICT		PO BOX 401	ROCHDALE	MA	01542-0401

End of Report

Please Note: Abutters in the Town of Spencer

Above is a certified list of abutters and abutters to abutters within 300 feet of subject.
 Subject property: 567 Pine Street, Assessors Map 41-C2.3-0, Deed Ref. 56775/126
 Subject owner(s): Schold Development LLC

John Prescott, Principal Assessor

Prepared by: Kathleen Asquith, Assistant

*Notification to Abutters Under the
Massachusetts Wetlands Protection Act & the
Town of Leicester Wetland Bylaw*

In accordance with the second paragraph Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

- A. A **Notice of Intent** has been filed with the **Leicester Conservation Commission** for construction of a wetland replication area associated with the construction of a single-family home in an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, Section 40) and the Leicester Wetland Bylaw.
- B. The name of the Applicant is **Schold Development, LLC.**
- C. The project location is at **Pine Street, Assessors Map 41, Parcel C2.3, Leicester, MA.**
- D. The submitted documents may be viewed **Monday, Wednesday, Thursday, 8 AM to 5 PM** and **Tuesday, 8 AM to 7 PM** in the **Leicester Town Clerk's Office.**
- E. Copies of the submittal or more information may be obtained from the **Applicant's Representative (GRAZ Engineering, LLC)** by calling **508-769-9084** between the hours of **9 AM to 4 PM Monday through Friday.**
- F. Further information regarding the date, time, and place of the Public Hearing may be obtained from: **Leicester Conservation Commission office** by calling **508-892-7007 Monday, Wednesday, Thursday, 8 AM to 5 PM** and **Tuesday, 8 AM to 7 PM.**
- G. Notice of the Public Hearing, including its date, time, and place, will be published at least five (5) days in advance in the **Worcester Telegram & Gazette.**
- H. Notice of the Public Hearing including its date, time, and place will be posted in the Town Hall not less than forty-eight (48) hours in advance.

Note: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call: Central Region: 508-792-7650

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

(To be submitted to the Massachusetts Department of Environmental Protection and the Conservation Commission when filing a Notice of Intent)

I, Brian C. MacEwen, hereby certify under the pains and penalties of perjury that on August 1, 2017 I gave notification to the abutters in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by Schold Development, LLC (Matt Schold, Applicant/Owner) with the Leicester Conservation Commission on July 31, 2017 for property located at Pine Street, Map 41, Parcels C2.3, Leicester, MA.
(address of proposed work)

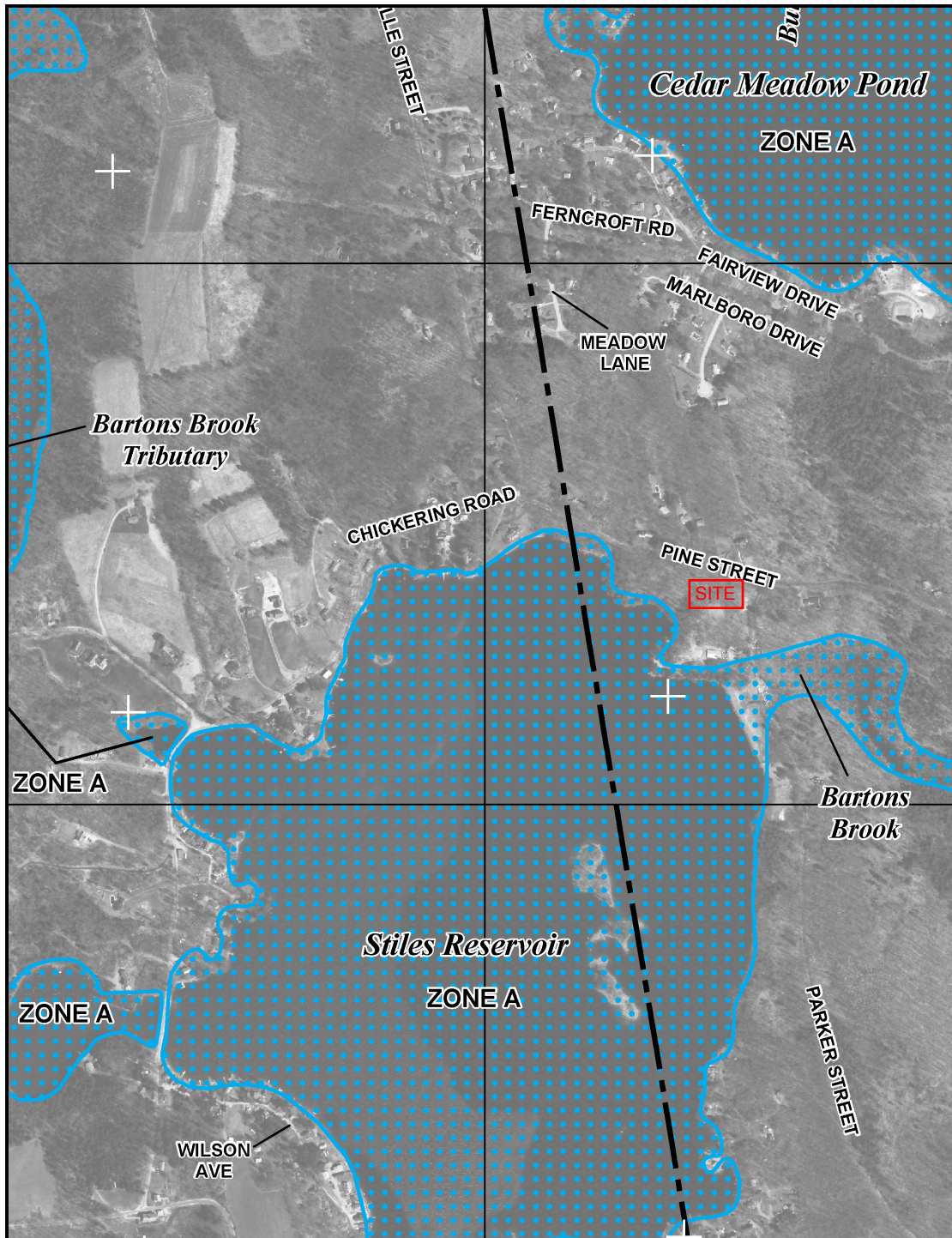
The form of the notification and a list of the abutters to whom it was given and their addresses are attached to this Affidavit of Service.




Signature

August 1, 2017

Date





MAP SCALE 1" = 1000'

500 0 1000 2000
FEET
METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0780E

FIRM


FLOOD INSURANCE RATE MAP
WORCESTER COUNTY,
MASSACHUSETTS
(ALL JURISDICTIONS)

PANEL 780 OF 1075
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHARLTON, TOWN OF	250299	0780	E
LEICESTER, TOWN OF	250313	0780	E
SPENCER, TOWN OF	250335	0780	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

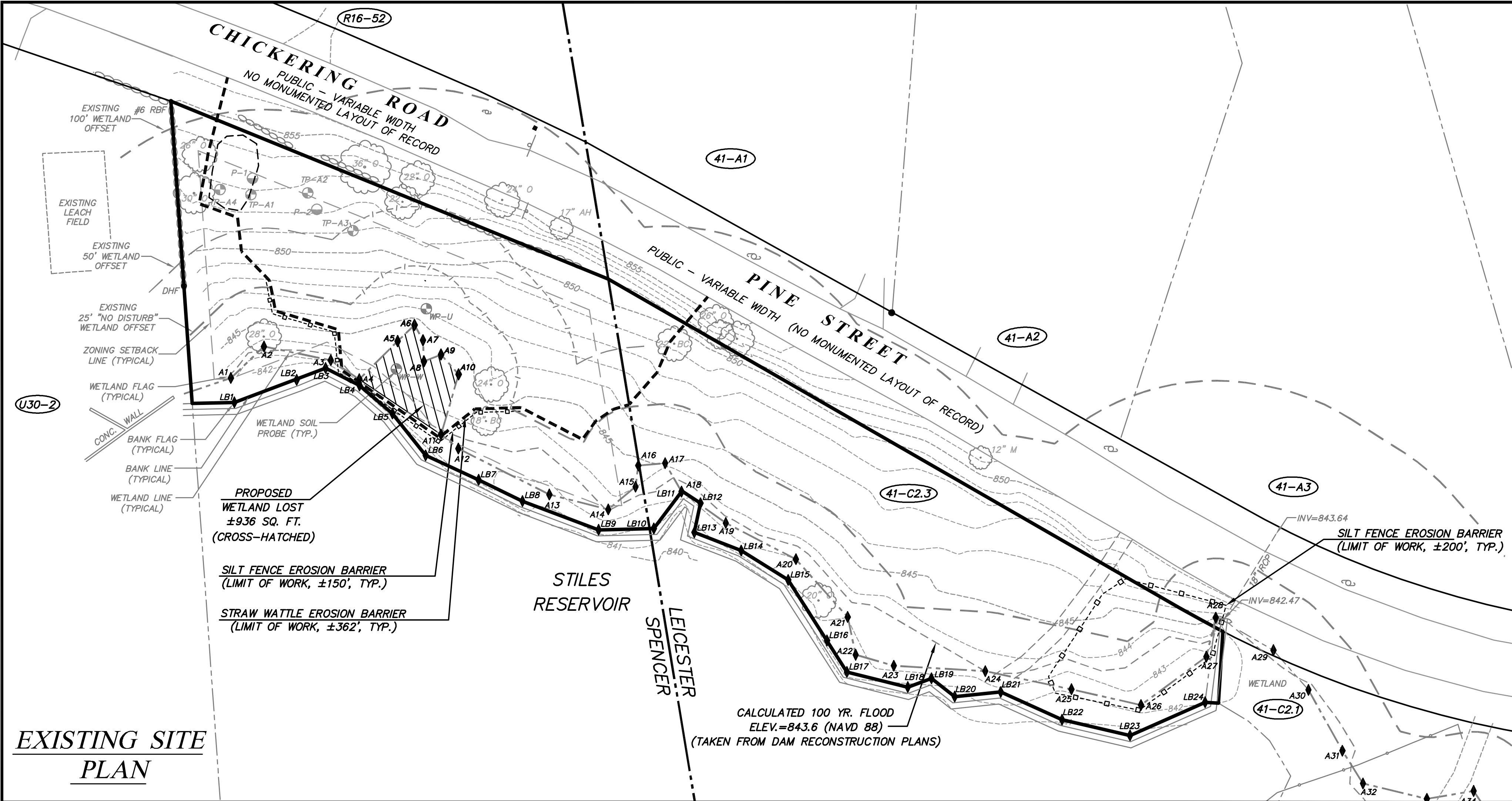


MAP NUMBER
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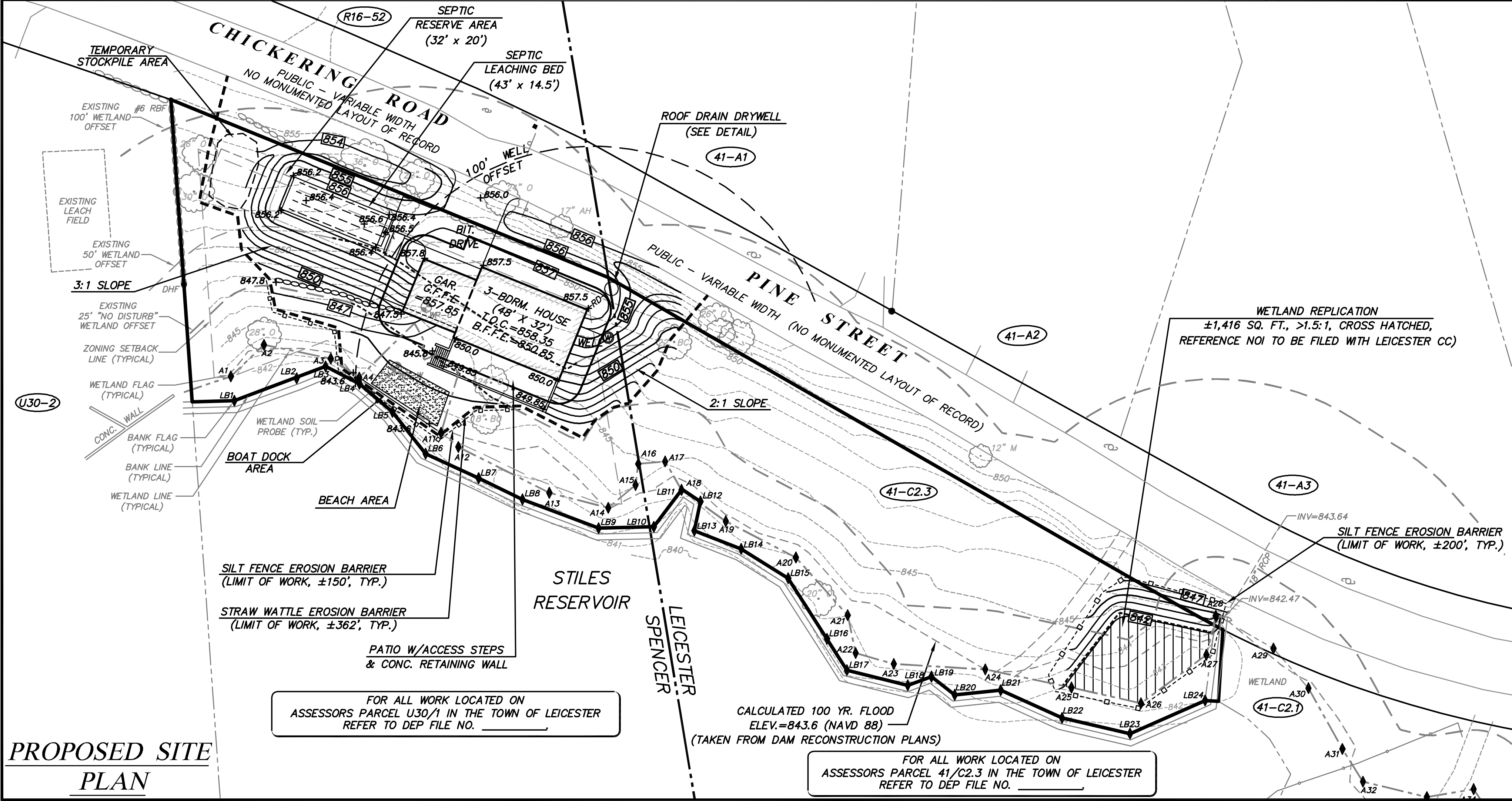
EFFECTIVE DATE
JULY 4, 2011

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



EXISTING SITE
PLAN



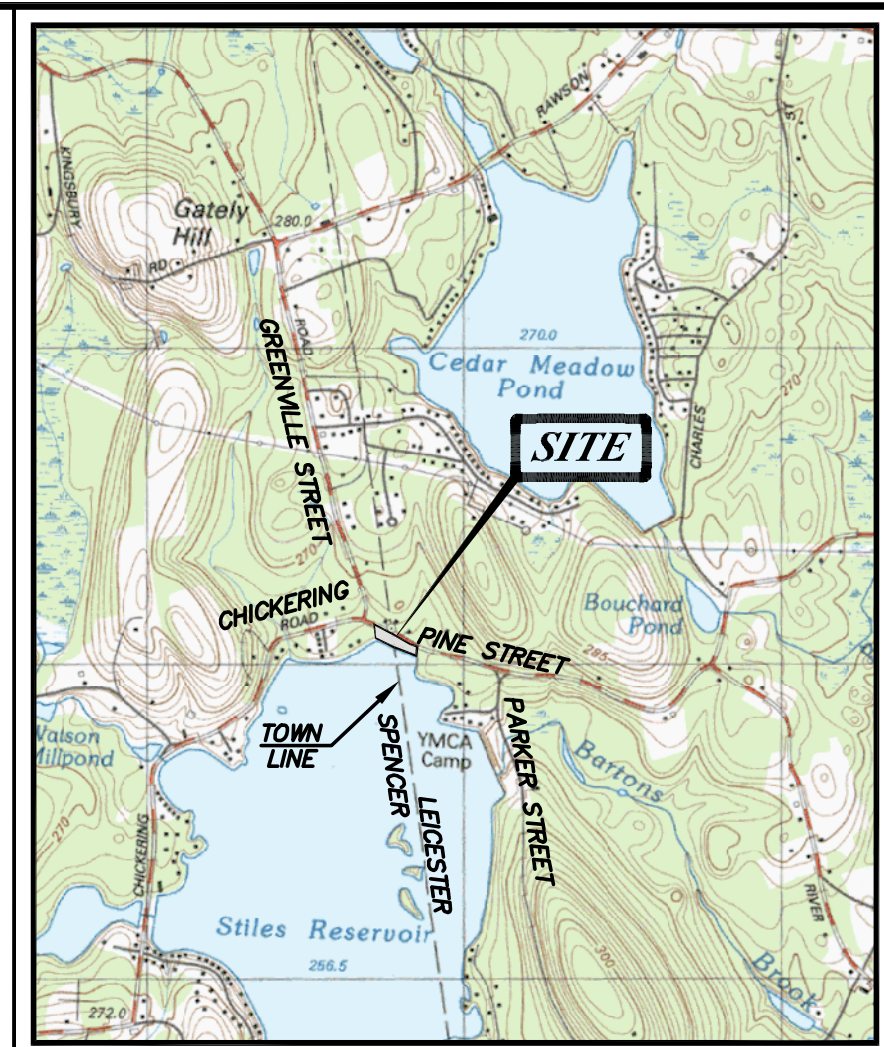
PROPOSED SITE
PLAN

GENERAL NOTES

- 1) THIS PLAN WAS PREPARED FROM AN ACTUAL ON THE GROUND INSTRUMENT FIELD SURVEY PERFORMED BY GRAZ ENGINEERING, L.L.C. IN DECEMBER 2016 & JULY 2017 AND A COMPILATION OF THE DEEDS AND PLANS OF RECORD CITED HEREON.
- 2) THE HORIZONTAL AND VERTICAL DATUMS WERE ESTABLISHED BY NETWORK-RTK GNSS GPS PERFORMED AT THE SITE.
HORIZONTAL DATUM & BEARING BASIS = MASSACHUSETTS MAINLAND GRID (NAD83)
VERTICAL DATUM = NAVD88 (REFER TO PLAN FOR LOCATION OF BENCHMARKS SET DURING SURVEY)
- 3) THE WETLANDS WERE DELINEATED BY ECOTEC, INC. ON NOVEMBER 4, 2016 AND WITH FIELD SURVEY LOCATION PERFORMED BY GRAZ ENGINEERING, LLC DURING THE ABOVE NOTED FIELD SURVEYS.
- 4) THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON, ARE APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF THE OBSERVABLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER GATES, ETC. AND THE COMPILATION OF INFORMATION OBTAINED FROM VARIOUS UTILITY COMPANIES, AND GOVERNMENT AGENCIES. THE ENGINEER DOES NOT GUARANTEE THAT ALL UTILITIES AND SUB-SURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION, AND INVERT ELEVATIONS OF THE UTILITIES AND STRUCTURES, AS REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES ARE OBSERVED BETWEEN THE EXISTING CONDITIONS DEPICTED HEREON AND THE ACTUAL CONDITIONS.
- 5) IN ACCORDANCE WITH CHAPTER 82, SECTION 40, INCLUDING AMENDMENTS, ALL CONTRACTORS SHALL NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE AT 1-888-344-7233 72 HOURS BEFORE ANY EXCAVATION.
- 6) AS DEPICTED HEREON, A PORTION OF THE SITE LIES WITHIN ZONE A OF THE FLOOD HAZARD AREA (1% CHANCE) AS SET FORTH ON THE NATIONAL FLOOD INSURANCE RATE MAP (FIRM) 25027C0780E, WHICH BEARS AN EFFECTIVE DATE OF JULY 4, 2011.

PROJECT STATISTICS

LOT AREA = ± 41,099 SQ. FT. (SPENCER = 19,762 SQ. FT.)
WETLAND ALTERED = ± 936 SQ. FT.
WETLAND REPLICATED = ± 1,416 SQ. FT. (1.5:1)
- REPLICATION LOCATED ON PORTION OF LOT LOCATED IN LEICESTER
BUFFER ZONE WORK = ± 17,012 SQ. FT.



LOCUS PLAN
SCALE: 1" = 2000'

SPENCER PROPERTY DATA

ASSESSORS PARCEL NO.: MAP U30, PARCEL 1
LOT ADDRESS: CHICKERING ROAD
OWNER OF RECORD: SCHOLD DEVELOPMENT, LLC
LOCUS DEED: BOOK 56775, PAGE 126

LOCUS PLAN: PLAN BOOK 926, PLAN 18 - LOT A-2

ZONING DISTRICT: LAKE RESIDENTIAL (LR)

	REQUIRED	PROVIDED
AREA	22,500 SF	± 19,762 SF*
FRONTAGE	100'	199.28' (CHICKERING RD.)
WIDTH	50'	N/A*
FRONT YARD	15'	16'
SIDE YARD	10'	91.2'
REAR YARD	10'	41.3'
BLDG. COVERAGE	25%	3.6%

* EXISTING NON-CONFORMING LOT

LEICESTER PROPERTY DATA

ASSESSORS PARCEL NO.: MAP 41, PARCEL C2.31
LOT ADDRESS: PINE STREET
OWNER OF RECORD: SCHOLD DEVELOPMENT, LLC
LOCUS DEED: BOOK 56775, PAGE 126

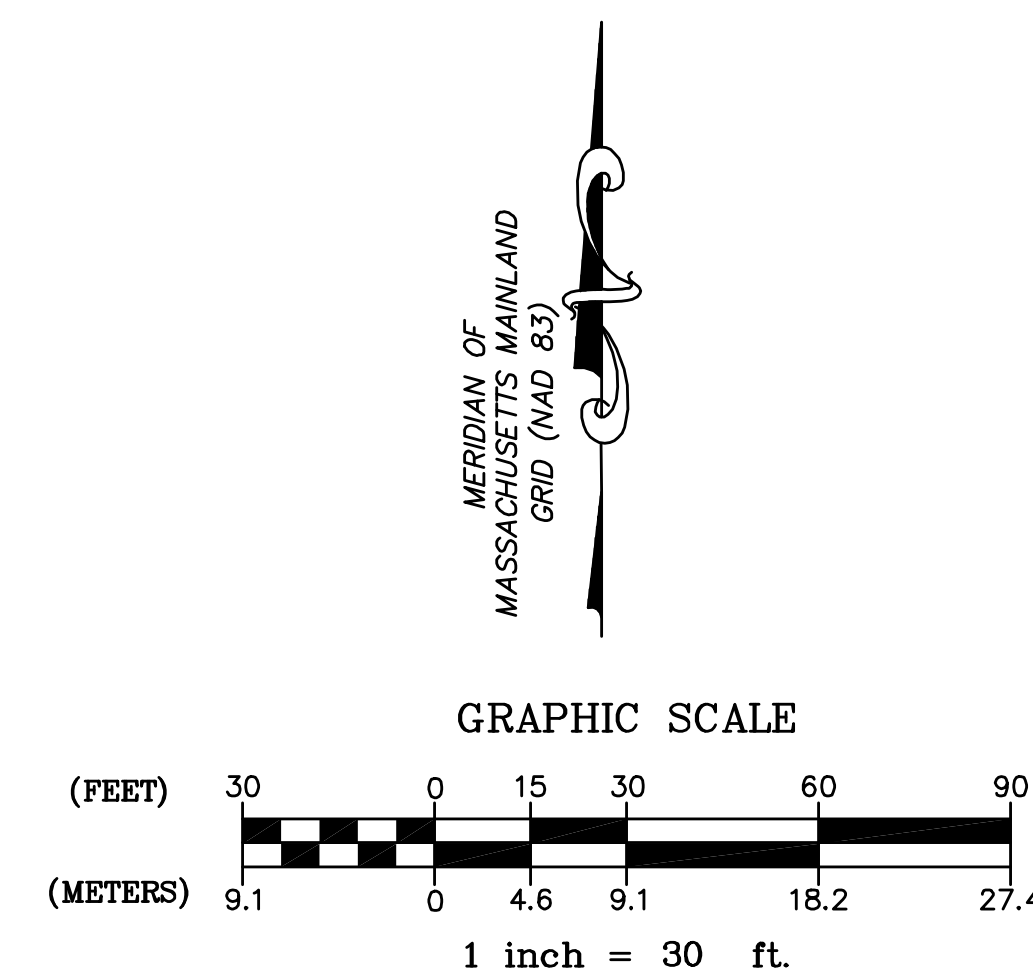
LOCUS PLAN: PLAN BOOK 926, PLAN 18 - LOT A-2

ZONING DISTRICT: SUBURBAN AGRICULTURAL (SA)

	REQUIRED	PROVIDED
AREA	80,000 SF	± 21,338 SF
FRONTAGE	200'	298.95' (PINE ST.)
WIDTH	200'	N/A
FRONT YARD	40'	N/A
SIDE YARD	40'	N/A
REAR YARD	40'	N/A
BLDG. COVERAGE	30%	N/A

LEGEND & ABBREVIATIONS

STONEWALL	TEMPORARY BENCH MARK
EXISTING CONTOUR	PROPOSED CONTOUR
BIR	BIRCH
MAP	MAPLE
OAK	OAK
+495.0	PROPOSED SPOT ELEVATION
150/B	ASSESSORS MAP & PARCEL

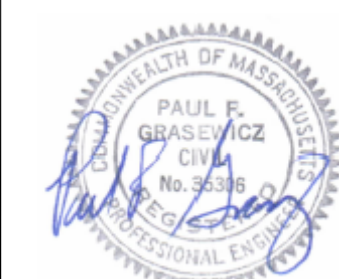


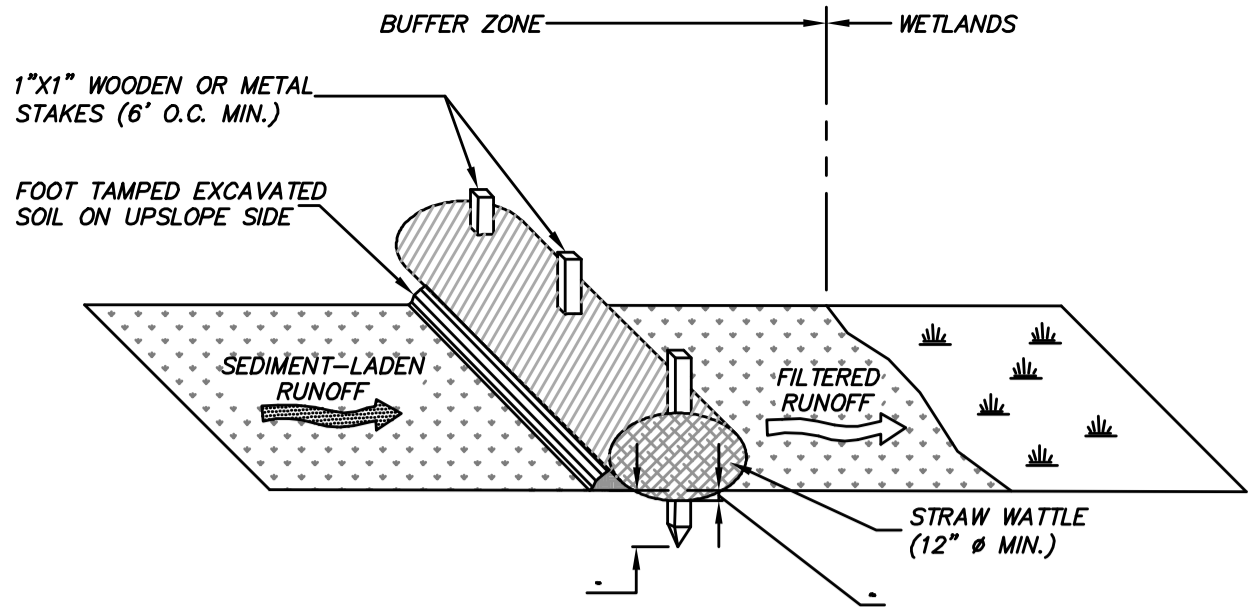
GRAZ Engineering, L.L.C.

323 West Lake Road, Fitzwilliam, NH 03447
Phone: (603) 585-6959 Fax: (603) 585-6960

PINE STREET - ASSESSORS MAP 41, PARCEL C2.3
LEICESTER, MASSACHUSETTS
NOTICE OF INTENT - EXISTING & PROPOSED SITE PLAN
PREPARED FOR: SCHOLD DEVELOPMENT, LLC
77 CHICKERING ROAD
SPENCER, MA 01562

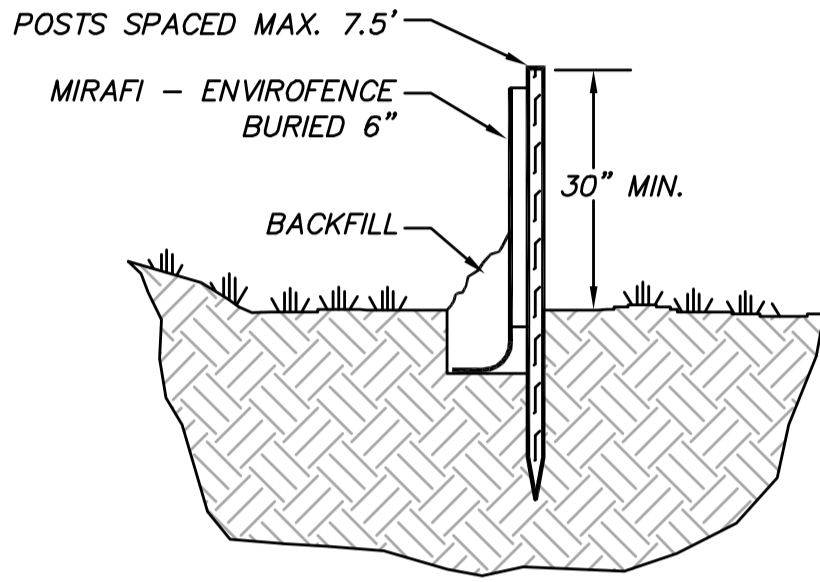
SCALE	AS-NOTED	DATE	CHECKED BY	DATE	BY
REV.	1	07/31/17	DESCRIPTION		BCM
			REVISED REPLICATION PROTOCOL & DRY WELL		





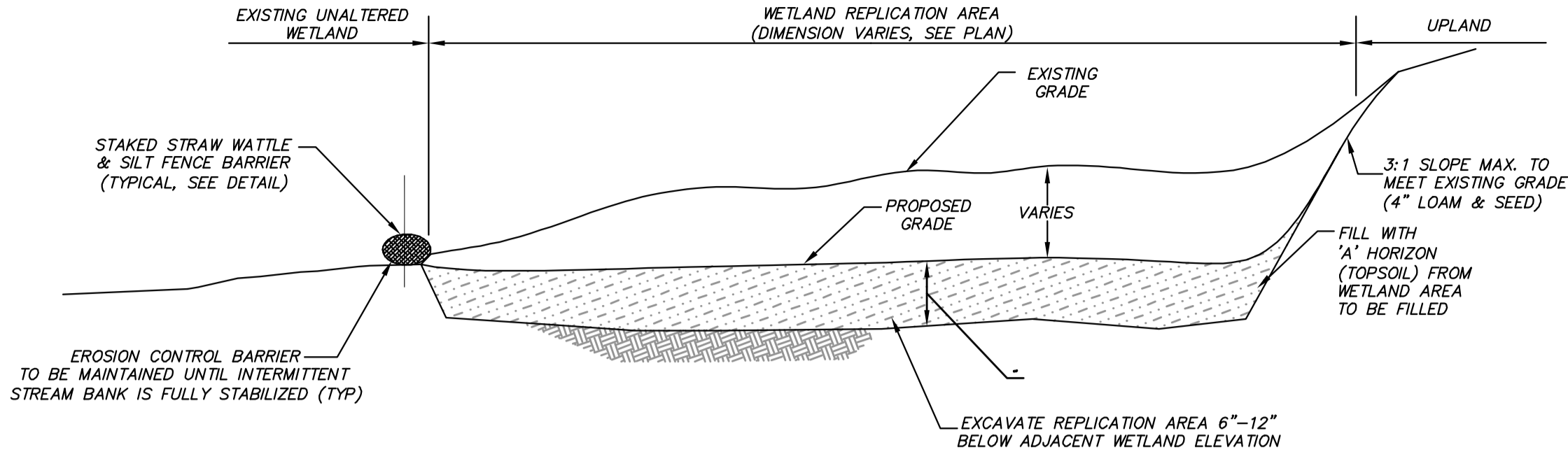
- NOTES:**
- 1) SHEATHING FOR STRAW WATTLES SHALL BE 100% BIODEGRADABLE AND WITHOUT FIXED DIAMETER OPENINGS.
 - 2) WATTLES SHALL BE AS THE SOLE EROSION CONTROL BARRIER AT ALL LOCATIONS WITH UPGRAIDENT SLOPES OF LESS THAN 10%.
 - 3) DIG A TRENCH 2"-3" DEEP X 9" WIDE WHERE WATTLES ARE TO BE INSTALLED.
 - 4) SEAT WATTLE FIRMLY INTO TRENCH AND STAKE WITH WOODEN STAKES AT 6' O.C. MINIMUM.
 - 5) FOOT TAMP THE EXCAVATED SOIL ALONG THE ENTIRE UPSLOPE SIDE THE WATTLES TO PREVENT DRAINAGE FROM ROUTING BENEATH THE BARRIER.

STRAW WATTLE EROSION CONTROL BARRIER DETAIL
N.T.S.



- NOTES:**
- 1) SILT FENCE SHALL BE THE SOLE EROSION CONTROL BARRIER AT ALL LOCATIONS WITH UPGRAIDENT SLOPES OF EQUAL OR GREATER THAN 10% AND AROUND ALL STOCKPILES.
 - 2) DIG A TRENCH 4" DEEP X 4" WIDE WHERE SILT FENCE IS TO BE INSTALLED.
 - 3) SEAT THE SILT FENCE AGAINST THE DOWNGRADIENT SIDE OF THE TRENCH WITH THE BASE OF THE FENCING FABRIC SEATED INTO BOTTOM OF THE TRNCH.
 - 4) STAKE WITH WOODEN STAKES AT 7.5' MAXIMUM ON CENTER.
 - 5) FOOT TAMP THE EXCAVATED SOIL ALONG THE ENTIRE UPSLOPE SIDE THE SILT FENCE TO PREVENT DRAINAGE FROM ROUTING BENEATH THE BARRIER.

SILT FENCE EROSION CONTROL BARRIER DETAIL
N.T.S.



SEE WETLAND & STREAM RESTORATION PROTOCOL
NOTES FOR WETLAND REPLICATION PLANTINGS
WETLAND REPLICATION DETAIL
N.T.S.

EROSION CONTROL NOTES

- 1) PRIOR TO THE START OF ANY CONSTRUCTION, ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS DEPICTED HEREON. THE CONTRACTOR SHALL INSPECT THE BARRIERS AT LEAST WEEKLY AND AFTER SIGNIFICANT (0.5 INCH OR GREATER) PRECIPITATION EVENTS. THE CONTRACTOR SHALL MAINTAIN AND REPAIR THE BARRIERS, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENTS, UNTIL ALL WORK IS COMPLETED AND ALL AREAS HAVE BEEN STABILIZED.
- 2) THE SEDIMENTATION AND EROSION CONTROLS DEPICTED HEREON ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL INSTALL ADDITIONAL MITIGATION MEASURES AS MAY BE NECESSARY TO ENSURE PROTECTION OF ALL WETLAND RESOURCES. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL REQUIREMENTS OF THE PROJECT "ORDER OF CONDITIONS" AS ISSUED BY THE TOWN CONSERVATION COMMISSION.
- 3) ALL DISTURBED NON-PAVED AREAS SHALL BE STABILIZED BY LOAMING, SEEDING, AND MULCHING OR SHALL BE RIPRAPED AS SOON AS POSSIBLE AFTER THE FINAL GRADING IS COMPLETED. IF PERMANENT SEEDING CAN NOT BE INSTALLED IMMEDIATELY AFTER FINAL GRADING OR FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED WITH HAY SECURED BY WEIGHTED SNOW FENCE, CHICKEN WIRE MESH, OR JUTE NETTING WITH STAPLES. WHERE PRACTICAL DURING CONSTRUCTION, DISTURBED AREAS SHALL BE STABILIZED BY TEMPORARILY SEEDING OR MULCHING.
- 4) ALL NON-PAVED AREAS SHALL BE DRESSED WITH A MINIMUM OF FOUR INCHES (4") OF SCREENED LOAM AND SHALL BE SEEDD WITH AN APPROVED GRASS MIX.
- 5) ALL SLOPES EXCEEDING 3:1 SHALL BE LINED WITH EXCELSIOR GEOTEXTILE FABRIC OR EQUAL.
- 6) DEWATERING OPERATIONS, IF REQUIRED SHALL DISCHARGE ONTO STABILIZED AREAS AND ALL DISCHARGE WATER IS TO PASS THROUGH SEDIMENTATION CONTROL DEVICES TO PREVENT IMPACTS UPON THE WATERSHED AND WETLAND RESOURCES, DRAINAGE SYSTEMS, AND ABUTTING PROPERTIES.
- 7) ALL ACCUMULATED AND TRAPPED SEDIMENT SHALL BE REMOVED AND DISPOSED OF AS REQUIRED BY THE CONSERVATION COMMISSION.
- 8) ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE REMOVED IN THEIR ENTIRETY AFTER FINAL SITE STABILIZATION AND ISSUANCE OF THE FINAL CERTIFICATE OF COMPLIANCE BY THE CONSERVATION COMMISSION.

CONSTRUCTION & UTILITY NOTES

- 1) THE TREE CLEARING LIMITS SHALL NOT EXTEND BEYOND THE EROSION CONTROL BARRIERS. AREAS OF EXISTING VEGETATION TO REMAIN ARE TO BE PROTECTED THROUGHOUT CONSTRUCTION. REVIEW THE ACTUAL LIMITS OF CLEARING WITH THE OWNER, AND SELECTIVELY CLEAR AND PRUNE AS REQUIRED TO REMOVE DEAD, DISEASED, OR POORLY FORMED VEGETATION.
- 2) THE CONTRACTOR SHALL KEEP ANY CONSTRUCTION STOCKPILES DUE TO SITE EXCAVATION AND REGRADING FOR THE FOUNDATION, SEPTIC SYSTEM, AND DRIVEWAY AS FAR AWAY FROM THE WETLANDS AS POSSIBLE.
- 3) ALL STOCKPILES SHALL BE PROTECTED FROM EROSION WITH A TOED-IN SILTFENCE AT THE BASE AND/OR BY COVERING WITH TARPS. ALL SITE CONSTRUCTION SLOPES SHALL BE STABILIZED UPON COMPLETION. SLOPES OF 3:1 (HORIZONTAL:VERTICAL) OR GREATER WILL BE STABILIZED WITH TOPSOIL, SEED AND STRAW MULCH COVERED WITH ANCHORED JUTE NETTING, ANCHORED EROSION CONTROL BLANKETS OR SIMILAR. SLOPES OF LESS THAN 3:1 WILL BE STABILIZED WITH TOPSOIL AND TACKIFIED HYDROSEED WITH MULCH OR SIMILAR. ALL SLOPES WITHIN THE 100 FOOT BUFFER ZONE SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 14 DAYS OF THE END OF CONSTRUCTION ACTIVITIES. STOCKPILES TO BE LEFT OVER 30 DAYS SHALL BE SEEDD WITH ANNUAL RYE GRASS.
- 4) ALL FINISHED SURFACES SHALL BE GRADED SMOOTHLY AND EVENLY TO PROVIDE POSITIVE DRAINAGE.
- 5) ALL MATERIALS AND CONSTRUCTION PRACTICES SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE MASSACHUSETTS HIGHWAY DEPARTMENT OF PUBLIC WORKS (MHPW) CONSTRUCTION STANDARDS AND THE MHPW "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES", UNLESS OTHERWISE SPECIFIED BY THE LOCAL AUTHORITY OR THE ENGINEER.
- 6) PROPOSED PIPING PLANS ARE SCHEMATIC IN NATURE AND DEPICT THE GENERAL PIPING CONCEPT AND CONFIGURATION. THE SITE CONTRACTOR SHALL PROVIDE ALL FITTINGS, COUPLINGS, GASKETS, ETC. REQUIRED TO CONSTRUCT THE PROPOSED SYSTEMS WITHIN THE SPECIFIED PARAMETERS AND IN A WORKMANSHIP LIKE MANNER. ALL UTILITY WORK SHALL BE FULLY COORDINATED WITH THE APPROPRIATE UTILITY COMPANY AND INSTALLED BY A CONTRACTOR LICENSED IN ACCORDANCE WITH THE UTILITY COMPANYS' REQUIREMENTS.
- 7) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND SUBMIT ONE SET OF RED-LINED AS BUILT DRAWINGS TO THE OWNER.

DEMOLITION NOTES

- 1) THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICES. ANY DAMAGE TO THE EXISTING UTILITIES BY THE CONTRACTOR'S OPERATION SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 2) ALL EXISTING FEATURES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY AND DISPOSED OF LEGALLY OFF SITE UNLESS NOTED OTHERWISE.
- 3) THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE GOVERNMENT AGENCIES AND UTILITY COMPANIES FOR DETAILS ON THE TEMPORARY REMOVAL, RELOCATION, AND ABANDONMENT OF ALL OVERHEAD AND UNDERGROUND UTILITY SERVICES INCLUDING ELECTRICAL, COMMUNICATIONS, AND DRAINAGE.

WETLAND RESTORATION PROTOCOL

THE FOLLOWING PROTOCOL WAS PREPARED BY ARTHUR ALLEN (CERTIFIED PROFESSIONAL SOIL & WETLAND SCIENTIST) OF ECOTEC, INC. THE PROTOCOL IS BASED ON THE MASSACHUSETTS INLAND WETLAND REPLICATION GUIDELINES (ISSUED MARCH, 2002 BY THE MA DEPT. OF ENVIRONMENTAL PROTECTION), IS IN ACCORDANCE WITH THE GENERAL PERFORMANCE STANDARDS OF THE MASSACHUSETTS WETLANDS PROTECTION ACT REGULATIONS AT 310 CMR 10.55(4)(B) AND SERVES TO PROTECT THE INTERESTS OF THE WETLANDS PROTECTION ACT. THE MOST RECENT, OVERALL WETLAND DELINEATION ON THIS SITE WAS PERFORMED BY ECOTEC ON NOVEMBER 2, 2016 AND IS DESCRIBED IN A REPORT DATED JUNE 30, 2017. THE WETLAND IMPACT AND RESTORATION AREAS WERE EVALUATED ON JULY 20, 2017. THE WETLAND RESTORATION PROTOCOL IS AS FOLLOWS:

- 1) THE WETLAND REPLICATION AREA (I.E. DOWNGRADIENT EDGES OF THE WETLAND REPLICATION AREA) WILL BE SURVEY-STAKED IN THE FIELD IN ACCORDANCE WITH THE APPROVED SITE PLAN.
- 2) WORK WITHIN THE REPLICATION AREA WILL ONLY BE DONE DURING PERIODS OF NO STREAM FLOW (TYPICALLY JULY 1 TO OCTOBER 1).
- 3) PRIOR TO THE START OF EARTH-MOVING ACTIVITIES IN THE REPLICATION AREA, AN EROSION CONTROL BARRIER OF PROPERLY INSTALLED SILTATION FENCE (I.E., THE BOTTOM FEW INCHES OF THE SILTATION FENCE INSTALLED IN A NARROW, TRENCH AND THE TRENCH FILLED WITH SOIL AROUND THE SILTATION FENCE) WILL BE INSTALLED ALONG BETWEEN THE WETLAND AND THE WETLAND REPLICATION AREA.
- 4) THE PROJECT WETLAND SCIENTIST WILL EVALUATE THE REPLICATION AREA PRIOR TO CLEARING AND DETERMINE IF ANY EXISTING TREES CAN BE SAVED.
- 5) THE PROPOSED FINAL GRADE FOR THE REPLICATION AREA SHOULD APPROXIMATE THE ELEVATION OF THE ADJACENT WETLAND AREA, AS NOTED ON THE APPROVED PLANS. THE WETLAND REPLICATION AREA WILL BE EXCAVATED TO A DEPTH OF 12 INCHES BELOW THE PROPOSED FINAL GRADE. THE EXCAVATION AND PLANTING WORK WILL BE CLOSELY SUPERVISED BY THE QUALIFIED PROJECT WETLAND SCIENTIST. THE EXCAVATION AND PLANTING WORK WILL BE CLOSELY SUPERVISED BY A QUALIFIED WETLAND SCIENTIST. MODIFICATIONS TO THE PROPOSED GRADING MAY BE MADE IN THE FIELD BY THE WETLAND SCIENTIST IN RESPONSE TO OBSERVED SUBSURFACE HYDROLOGIC CONDITIONS. ALL EXCAVATED MATERIAL WILL BE DISPOSED OF AWAY FROM ALL WETLAND RESOURCE AREAS AND PROTECTED FROM EROSION.
- 6) ANY EXISTING WETLAND TOPSOILS WITHIN THE 936 SQUARE FOOT WETLAND IMPACT AREA, WILL BE EXCAVATED, STOCKPILED AND MOVED IMMEDIATELY TO THE PREPARED REPLICATION AREA OR KEPT MOIST BY WATERING AND/OR COVERING.
- 7) RELOCATED WETLAND TOPSOILS WILL BE SUPPLEMENTED WITH A 1:1 MIXTURE OF HIGH QUALITY, LOAMY TOPSOIL AND LEAF MOLD COMPOST, AS NECESSARY, TO APPROXIMATE 12 INCHES IN THICKNESS THROUGHOUT THE REPLICATION AREA. THE SUBSTRATE WILL BE ROUGHLY GRADED TO PROVIDE AN APPROPRIATE MICROTOPOGRAPHY. A MINIMUM OF 4 INCHES OF LOAMY TOPSOIL WILL BE APPLIED TO THE SIDE-SLOPES OF THE WETLAND REPLICATION AREA. THE SIDE SLOPES WILL BE STABILIZED AS NECESSARY TO PREVENT EROSION.
- 8) AN EROSION CONTROL BARRIER COMPRISING ONLY TOED-IN AND STAKED SILTATION FENCE WILL BE PROPERLY INSTALLED BETWEEN THE COMPLETED REPLICATION AREA AND THE ADJACENT UPLAND SIDE SLOPES.
- 9) PLANTING WILL BE DONE ONLY DURING THE BEGINNING (APRIL 15 THROUGH JUNE 1) OR END (SEPTEMBER 15 TO NOVEMBER 1) OF THE GROWING SEASON. PLANTING IN THE MID-GROWING SEASON IS ONLY ACCEPTABLE IF IRRIGATION IS PROVIDED. THE PLANT SPECIES IDENTIFIED IN THE TABLE BELOW WILL BE PLANTED IN THE REPLICATION AREA EITHER BY TRANSPLANT OR FROM NURSERY STOCK. THE SAPLINGS WILL BE DISTRIBUTED THROUGHOUT THE AREA. THE SHRUBS WILL BE PLANTED RANDOMLY THROUGHOUT THE AREA IN CLUMPS OF TWO TO THREE WITH THE AVERAGE SPACING BETWEEN SHRUB CLUMPS APPROXIMATELY 5 FEET ON-CENTER. THE WOODY VEGETATION SHOULD NOT BE PLANTED IN ROWS.

PLANTING PLAN FOR 1,416 S.F. WETLAND REPLICATION AREA

SPECIES; SIZE; SPACING

		NUMBER	
SAPLINGS; 6 TO 8' HEIGHT, CONTAINER OR BALLED, BURLAPPED; 15' ON-CENTER AVG.	RED MAPLE (ACER RUBRUM)	3	
	YELLOW BIRCH (BETULA ALLEGHENIENSIS)	3	
SHRUBS; 2.5 TO 3' IN HEIGHT, CONTAINER; 5' ON-CENTER AVERAGE SPACING	HIGHBUSH BLUEBERRY (ARONIA PRUNIFOLIA)	25	
	WINTERBERRY (ILEX VERICOLLATA)	25	
HERBACEOUS; CONTAINERIZED; 5' ON-CENTER AVERAGE SPACING	CINNAMON FERN (OSMUNDA CINNAMOMEA)	30	
10) THE PLANTED REPLICATION AREA WILL BE MULCHED WITH 1 TO 2 INCHES OF CHOPPED LEAVES OR WEED-FREE STRAW TO SIMULATE A FOREST FLOOR AND TO PROVIDE FOR TEMPORARY EROSION CONTROL AND MOISTURE RETENTION.			
10) THE SIDE-SLOPES OF THE WETLAND REPLICATION AREA WILL BE SEEDD WITH A GRASS/WILDFLOWER MIXTURE DESIGNED TO PROVIDE PERMANENT COVER. AFTER SEEDING, THE SIDE-SLOPES WILL BE MULCHED WITH A THIN LAYER OF WEED-FREE STRAW TO PROVIDE FOR TEMPORARY EROSION CONTROL.			
11) THE REPLICATION AREAS WILL BE INSPECTED, BY A QUALIFIED WETLAND SCIENTIST, AT THE END OF EACH GROWING SEASON FOR A MINIMUM OF TWO YEARS OR UNTIL SUCH TIME AS THE REQUIRED 75% OF VEGETATIVE COVER WITH WETLAND SPECIES HAD BEEN ESTABLISHED. IF INVASIVE SPECIES ARE NOTED (E.G., KNOTWEED, PHAKOMITES, ETC.) THESE SPECIES WILL BE REMOVED BY EITHER HAND-PULLING THE ENTIRE PLANT OUT BY THE ROOTS OR BY CUTTING THE ABOVE-GROUND PORTION AND APPLYING GLYPHOSATE HERBICIDE TO THE STEM WITH A DRIP APPLICATOR. THE CUT OR PULLED INVASIVE PLANTS WILL BE PROPERLY DISPOSED OF OUTSIDE THE WETLANDS AND BUFFER ZONES AND CARE WILL BE TAKEN NOT TO DISTRIBUTE ANY SEEDS OR BERRIES THAT MAY BE PRESENT.			
12) AFTER THE WETLAND REPLICATION AREA HAS BECOME VEGETATIVELY STABILIZED AND FOLLOWING APPROVAL OF THE ISSUING AUTHORITY, THE SILTATION FENCE AND ALL WOODEN STAKES WILL BE REMOVED AND DISPOSED OF PROPERLY.			

CONSTRUCTION SEQUENCING NOTES

- 1) THE LIMIT OF WORK FOR THE BOTH THE BUILDING LOT AND THE REPLICATION AREAR WILL BE SURVEY-STAKED IN THE FIELD IN ACCORDANCE WITH THE APPROVED SITE PLANS IN PREPARATION FOR TREE CLEARING.
- 2) CLEAR ALL TREES AND LARGE VEGETATION FROM BOTH THE BUILDING LOT AND THE REPLICATION AREA TO THE LIMIT OF WORK LINES.
- 3) INSTALL ALL EROSION CONTROL MEASURES FOR BOTH THE BUILDING LOT AND THE REPLICATION AREA.
- 4) INSTALL THE WATER SUPPLY WELL ON THE BUILDING LOT. THE WELL DRILLING CONTRACTOR SHALL CONSTRUCT A CONTAINMENT OR MUD PIT AS REQUIRED IMMEDIATELY ADJACENT TO THE PROPOSED WELL DRILLING LOCATION PRIOR TO COMMENCEMENT OF ANY DRILLING. THE DOWN-GRADIENT SIDE OF THE CONTAINMENT PIT SHALL BE ENVICORLED WITH PROPERLY INSTALLED SILT FENCING SO AS TO PREVENT ANY OVERFLOW OF SEDIMENT TO THE WETLANDS OR THE STILES RESERVOIR SURFACE WATERS.
- 5) THE WETLAND REPLICATION AREA WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND THE ORDER OF CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY FURTHER LOT DEVELOPMENT WORK IS PERFORMED. (SEE WETLAND RESTORATION PROTOCOL, THIS SHEET)
- 6) THE CONTRACTOR SHALL COORDINATE THE REQUIRED INSPECTIONS AND FINAL APPROVAL OF THE WETLAND REPLICATION AREA WORK. UPON APPROVAL OF THIS WORK, THE REMAINING LOT DEVELOPMENT WORK CAN PROCEED AS FOLLOWS.
- 7) GRUB AND STOCKPILE THE TOPSOIL FROM THE BUILDING LOT AREA TO THE LIMIT OF WORK LINES.
- 8) EXCAVATE AND CONSTRUCT THE HOUSE FOUNDATION AND PATIO RETAINING WALLS.
- 9) INSTALL FOUNDATION DRAIN AND BACKFILL FOUNDATION TO THE APPROVED GRADES. BACKFILL THE LEFT SIDE YARD AREA AND INSTALL ROOF DRAIN DRY WELL.
- 10) GRADE BACK YARD AND BEACH ACCESS AREA WITH REQUIRED FILL, TOPSOIL, AND SAND TO THE APPROVED GRADES.
- 11) EXCAVATE AND CONSTRUCT THE SEPTIC SYSTEM AND REQUIRED BREAKOUT EMBANKMENTS TO THE APPROVED GRADES.
- 12) DRESS ALL NON-PAVED AREAS WITH LOAM, APPROVED GRASS SEED MX, AND MULCH.
- 13) REMOVE ALL EROSION CONTROL MEASURES ONLY UPON STABILIZATION OF ENTIRE BUILDING DEVELOPMENT SITE AND ISSUANCE OF THE FINAL CERTIFICATE OF COMPLIANCE BY THE CONSERVATION COMMISSION. AS NOTED IN THE WETLAND RESTORATION PROTOCOL (SEE THIS SHEET), THE EROSION CONTROL BARRIERS SHALL REMAIN IN PLACE UNTIL FINAL APPROVAL BY THE CONSERVATION COMMISSION (A MINIMUM OF TWO YEARS.)

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PINE STREET - ASSESSORS MAP 41, PARCEL C2.3
LEICESTER, MASSACHUSETTS

NOTICE OF INTENT - CONSTRUCTION DETAILS & NOTES
PREPARED FOR: SCHOLD DEVELOPMENT, LLC
77 CHICKERING ROAD
SPENCER, MA 01562

SCALE	AS-NOTED	REV.	DATE	CHECKED BY	DATE	BY
		1	07/31/17			BCM

