TOWN OF MILLIS

Dr. James A. Lederer, *Chair*
Carol Hayes, *Vice Chair*
Edward Chisholm
Christine Gavin
John Steadman
Scott McPhee
David Larsen

OFFICE OF THE CONSERVATION COMMISSION

Camille Standley
Administrative Assistant
cstandley@millisma.gov

900 Main Street • Millis, MA 02054
Phone: 508-376-7045
Fax: 508-376-7053
https://www.millisma.gov/conservation-commission

NOTICE OF PUBLIC HEARING

Pursuant to Mass Gen Law Ch. 131, s. 40, and in accordance with Article XIX, Town of Millis Wetlands Protection Bylaw, Section 5, a public hearing will be held on Monday, April 25, 2022, at 7:15 p.m. at the Veterans Memorial Building, Room 104, 900 Main St., Millis, MA, on a Notice of Intent, under the MA Wetlands Protection Act and the Millis Wetlands Protection Bylaw, filed by Peter Godwin, Briarwood Realty, LLC, 49 Briarwood Dr., Westwood, MA 02090 for proposed construction of a single-family dwelling and appurtenances in the buffer zone of a bordering vegetated wetland located at 1 Granite Dr., Millis, MA. Map 43, Lot 62. Property owned by Sat Bir Singh Khalsa, Sikh Dharma of MA, Inc.

A copy of the application and plan is on file in the office of the Town Clerk and at the Commission's webpage: https://www.millisma.gov/conservation-commission

All interested parties are urged to attend.

Dr. James Lederer, Chair

cc: Applicant/Engineer (via email)
Building Dept. (via email)
BOH (via email)
Town Clerk
File

dan@legacy-ce.com
508-376-8883(o)
508-868-8353(c)
730 Main Street
Suite 2C
Millis, MA 02054

March 30, 2022

Millis Conservation Commission
900 Main Street
Town Offices
Millis, MA 02054

Ref: Notice of Intent
Proposed Single Family Dwelling
1 Granite Drive

Dear Members of the Commission:

On behalf of the applicant, Briarwood Realty, LLC, we are pleased to submit the enclosed Notice of Intent under both the Wetlands Protection Act and the Town of Millis Wetlands Protection Bylaw (Article XIX) to perform work associated with the construction of a new single family dwelling at 1 Granite Drive. Please find the following enclosed in support of the application:

- Four copies of a Notice of Intent booklet which contains the fully executed Form 3 Notice of Intent and a variety of supporting information and attachments;
- Two full-size copies of the site plan;
- A check in the amount of $262.50 made payable to the Town of Millis for the Town's portion of the state filing fee; and
- A check in the amount of $85.00 made payable to the Town of Millis for the advertising fee.

Note that the application was filed on edep and the state filing fee was paid on edep. Do not hesitate to contact me if you have any questions or comments.

dan@legacy-ce.com
508-376-8883(o)
508-868-8353(c)
730 Main Street
Suite 2C
Millis, MA 02054

Sincerely,

LEGACY ENGINEERING LLC

Daniel J. Merrikin, P.E.
President

cc: File
MassDEP Central Region, 8 New Bond Street, Worcester, MA 01606 (by edep filing)

Notice of Intent

For

1 Granite Drive
Millis, MA

Proposed Residential Development

March 30, 2022

PREPARED BY:
LEGACY ENGINEERING LLC
Consulting Engineers
730 Main Street, Suite 2C
Millis, MA 02054

PREPARED FOR:
Briarwood Realty, LLC
49 Briarwood Drive
Westwood, MA 02090

The WPA Form 3 Application is also hereby submitted under the Millis Wetlands Protection By-law

TABLE OF CONTENTS

TABLE OF CONTENTS 2

WPA FORM 3: Notice of Intent 3

APPENDIX A: Fee Transmittal and Fee Calculation Worksheet 4

APPENDIX B: Affidavit of Service and Abutter Notification 5

APPENDIX C: Locus Maps 6

APPENDIX D: Narrative Description 7

NARRATIVE DESCRIPTION 8

Introduction 8
Existing Conditions 8
Resource Areas 8
Proposed Work 8
Project Schedule 8

APPENDIX E: "1 Granite Drive Site Plan of Land in Millis, MA" Dated March 29, 2022, Prepared by Legacy Engineering LLC (bound separately) 9

APPENDIX F: Botanist Report 10

WPA FORM 3: Notice of Intent

Supplemental Information Referenced in the Notice of Intent:

WPA Form 3 – Notice of Intent pursuant to the Massachusetts Wetlands Protection Act and the Town of Millis Wetlands Protection By-law. The following identifies additional information pursuant to the various sections within Form 3:

- A.5 See Appendix A for the Wetland Fee Transmittal Form
- A.6 See the Narrative Description for additional description of the proposed redevelopment
- D.1 See Appendix C for locus maps
- D.2 See Appendix E for the site plan
- D.3 See the Narrative Description for a discussion of the resource areas on the site
- D.4 The plans and supporting information submitted within this application are identified in the various Appendices noted herein
- D.8 See Appendix A for the Wetland Fee Transmittal Form

Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username:	**DMERRIKIN**
Transaction ID:	**1359507**
Document:	**WPA Form 3 - NOI**
Size of File:	**248.91K**
Status of Transaction:	**In Process**
Date and Time Created:	**3/30/2022:12:46:00 PM**

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to “Download a Copy” from the Current Submittals page.

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 #:
eDEP Transaction #:1359507
City/Town:MILLIS

A.General Information

1. Project Location:

a. Street Address	1 GRANITE DRIVE		
b. City/Town	MILLIS	c. Zip Code	02054
d. Latitude	42.13944N	e. Longitude	71.36649W
f. Map/Plat #	43	g.Parcel/Lot #	62

2. Applicant:

☐ Individual ☑ Organization

a. First Name	PETER		b.Last Name	GODWIN	
c. Organization	BRIARWOOD REALTY, LLC				
d. Mailing Address	49 BRIARWOOD DRIVE				
e. City/Town	WESTWOOD	f. State	MA	g. Zip Code	02090
h. Phone Number	781-858-5538	i. Fax		j. Email	PJGbuild@yahoo.com

3.Property Owner:

☐ more than one owner

a. First Name	SAT BIR SINGH		b. Last Name	KHALSA	
c. Organization	SIKH DHARMA OF MASSACHUSETTS, INC.				
d. Mailing Address	368 VILLAGE STREET				
e. City/Town	MILLIS	f.State	MA	g. Zip Code	02054
h. Phone Number	508-376-4527	i. Fax		j.Email	khalsa@hms.harvard.edu

4.Representative:

a. First Name	DANIEL		b. Last Name	MERRIKIN	
c. Organization	LEGACY ENGINEERING LLC				
d. Mailing Address	730 MAIN STREET, SUITE 2C				
e. City/Town	MILLIS	f. State	MA	g. Zip Code	02054
h.Phone Number	508-376-8883	i.Fax		j.Email	dan@legacy-ce.com

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

a.Total Fee Paid	750.00	b.State Fee Paid	362.50	c.City/Town Fee Paid	387.50

6.General Project Description:

CONSTRUCTION OF A SINGLE-FAMILY DWELLING AND APPURTENANCES IN THE BUFFER ZONE OF A BORDERING VEGETATED WETLAND.

7a.Project Type:

1. ☑ Single Family Home	2. ☐ Residential Subdivision
3. ☐ Limited Project Driveway Crossing	4. ☐ Commercial/Industrial
5. ☐ Dock/Pier	6. ☐ Utilities
7. ☐ Coastal Engineering Structure	8. ☐ Agriculture (eg., cranberries, forestry)
9. ☐ Transportation	10. ☐ Other

7b.Is any portion of the proposed activity eligible to be treated as a 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:
2. Limited Project

8.Property recorded at the Registry of Deeds for:

a.County:	b.Certificate:	c.Book:	d.Page:
NORFOLK		5912	453
NORFOLK		14629	410

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

1.Buffer Zone & Resource Area Impacts (temporary & permanent):

☑ This is a Buffer Zone only project - 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)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a.☐ Bank	1. linear feet	2. linear feet
b.☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c.☐ Land under Waterbodies and Waterways	1. Square feet	2. square feet
	3. cubic yards dredged	
d.☐ Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	4. cubic feet replaced
e.☐ Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet replaced

f.☐ Riverfront Area

1. Name of Waterway (if any)

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)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under	Land under the ocean below,
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beaches	Indicate size under Coastal Beaches and/or Coatstal Dunes, below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab, crea.
i. ☐ Land Under Salt Ponds	1. square feet	
	2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ 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. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4.Restoration/Enhancement

☐ Restoration/Replacement

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 entered the additional amount here.

a. square feet of BVW b. square feet of Salt Marsh

5.Projects Involves Stream Crossings

☐ Project Involves Streams Crossings

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

a. number of new stream crossings b. number of replacement stream crossings

C. Other Applicable Standards and Requirements

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 of Endangered Species program (NHESP)?

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

b. Date of map:FROM MAP VIEWER

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18)....

c. Submit Supplemental Information for Endangered Species Review * (Check boxes as they apply)

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

3.☐ Project plans for entire project site, including wetland resource areas and areas outside of wetland 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

c.☐ MESA filing fee (fee information available at: http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/mass-endangered-species-act-mesa/mesa-fee-schedule.html)
Make check payable to "Natural Heritage & Endangered Species Fund" 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

d. 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/eea/agencies/dfg/dfw/laws-regulations/cmr/321-cmr-1000-massachusetts-endangered-species-act.html#10.14; 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 Number

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.

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review...

2. For coastal projects only, is any portion of the proposed project located below the mean high waterline or in a fish run?
   a. ☑ Not applicable - project is in inland resource area only
   b. ☐ Yes ☐ No

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

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

   Division of Marine Fisheries -
   Southeast Marine Fisheries Station
   Attn: Environmental Reviewer
   836 S. Rodney French Blvd
   New Bedford, MA 02744

   North Shore - Hull to New Hampshire:

   Division of Marine Fisheries -
   North Shore Office
   Attn: Environmental Reviewer
   30 Emerson Avenue
   Gloucester, MA 01930

   If yes, it 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.

3. 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 DEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC Name

4. 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

5. 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

6. 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, Explain why the project is exempt:
      1. ☑ Single Family Home

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

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 by regular mail delivery.

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.
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.

a. Plan Title:	b. Plan Prepared By:	c. Plan Signed/Stamped By:	c. Revised Final Date:	e. Scale:
GRANITE DRIVE SEPTIC SYSTEM DESIGN PLAN OF LAND IN MILLIS, MA	LEGACY ENGINEERING LLC	DANIEL J. MERRIKIN, P.E.	03/29/2022	

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	3. Check date
4. State Check Number	5. Check date
6. Payer name on check: First Name	7. Payer name on check: Last Name

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 Section C, Items 1-3, 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.

dotloop signature verification: dtlp.us/A7RL-9MU5-7Uh8

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
Millis
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 3/26/2022
Sat Bir Singh — dotloop verified 03/28/22 1:56 PM EDT 9DTH-DN1A-4HJT-6CT0	03/28/2022
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any)	6. Date 3/29/2022

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.

APPENDIX A: Fee Transmittal and Fee Calculation Worksheet

Under the Wetlands Protection Act

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Wetland FeeTransmittal Form

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

Provided by MassDEP:
MassDEP File #:
eDEP Transaction #:1359507
City/Town:MILLIS

A. Applicant Information

1. Applicant:

a. First Name	PETER		b.Last Name	GODWIN	
c. Organization	BRIARWOOD REALTY, LLC				
d. Mailing Address	49 BRIARWOOD DRIVE				
e. City/Town	WESTWOOD	f. State	MA	g. Zip Code	02090
h. Phone Number	7818585538	i. Fax		j. Email	PJGbuild@yahoo.com

2.Property Owner:(if different)

a. First Name	SAT BIR SINGH		b. Last Name	KHALSA	
c. Organization	SIKH DHARMA OF MASSACHUSETTS, INC.				
d. Mailing Address	368 VILLAGE STREET				
e. City/Town	MILLIS	f.State	MA	g. Zip Code	02054
h. Phone Number	5083764527	i. Fax		j.Email	khalsa@hms.harvard.edu

3. Project Location:

a. Street Address	1 GRANITE DRIVE	b. City/Town	MILLIS

Are you exempted from Fee? ☐

Note: Fee will be exempted if you are one of the following:

- City/Town/County/District
- Municipal Housing Authority
- Indian Tribe Housing Authority
- MBTA

State agencies are only exempt if the fee is less than $100

B. Fees

Activity Type	Activity Number	Activity Fee	RF Multiplier	Sub Total
A.) CONSTRUCTION OF SINGLE FAMILY HOUSE;	1	500.00		500.00

City/Town share of filling fee	State share of filing fee	Total Project Fee
$262.50	$237.50	$500.00

CASH ONLY IF ALL *CheckLock*™ SECURITY FEATURES LISTED ON BACK INDICATE NO TAMPERING OR COPYING

LEGACY ENGINEERING LLC
730 MAIN STREET
MILLIS, MA 02054
508-376-8883

Sharon CU
42 Pond Street
Sharon, MA 02067
53-8555/2113

25689

3/30/2022

PAY TO THE ORDER OF Town of Millis $ **85.00

Eighty-Five and 00/100********** DOLLARS

PROTECTED AGAINST FRAUD

Town of Millis
Collector of Taxes
900 Main Street
Millis, MA 02054

MEMO 1 Granite Drive Adv Fee

MP

© 2014 INTUIT INC. # 1728 1-800-433-8810
Details on Back
Intuit® *CheckLock*™ Secure Check

CASH ONLY IF ALL *CheckLock*™ SECURITY FEATURES LISTED ON BACK INDICATE NO TAMPERING OR COPYING

LEGACY ENGINEERING LLC
730 MAIN STREET
MILLIS, MA 02054
508-376-8883

Sharon CU
42 Pond Street
Sharon, MA 02067
53-8555/2113

25691

3/30/2022

PAY TO THE ORDER OF Town of Millis $ **262.50

Two Hundred Sixty-Two and 50/100********** DOLLARS

PROTECTED AGAINST FRAUD

Town of Millis
Collector of Taxes
900 Main Street
Millis, MA 02054

MEMO 1 Granite Drive Filing Fee

MP

© 2014 INTUIT INC. # 1728 1-800-433-8810
Details on Back
Intuit® *CheckLock*™ Secure Check

APPENDIX B: Affidavit of Service and Abutter Notification

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act and the Millis Wetland Protection Bylaw

I, Daniel J. Merrikin, hereby certify under the Pains and Penalties of Perjury that on March 30, 2022 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws, Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated, April 8, 1994 and in compliance with the Town of Millis Wetland Protection Bylaw, in connection with the following matter:

> **A Notice of Intent has been filed under the Massachusetts Wetlands Protection Act and the Millis Wetland Protection Bylaw by Briarwood Development LLC with the Millis Conservation Commission on or about March 30, 2022 regarding property located at assessors Map-Parcel 0043-0062 on 1 Granite Drive in Millis, MA.**

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

_____ **March 30, 2022**

Signature

Notification to Abutters Under the Massachusetts Wetlands Protection Act and Millis Wetland Protection Bylaw

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and the Millis Wetland Protection Bylaw (the Bylaw), you are hereby notified of the following:

A. The name of the applicant is: Briarwood Development LLC

B. The name of the owner is: Sikh Dharma of Massachusetts, Inc.

C. The applicant has filed a Notice of Intent with the Millis Conservation Commission seeking permission to remove, fill, dredge or alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, Section 40) and the Millis Wetland Protection Bylaw.

D. The address of the lot where the activity is proposed is: 1 Granite Drive (Assessors Parcel ID 43-062)

E. Copies of the Notice of Intent may be examined at the Millis Conservation Commission, 900 Main Street, Town Offices, Millis, MA, during normal office hours or by appointment. For more information, call: (508) 376-8883. This is the applicant's representative, Legacy Engineering LLC.

F. Copies of the Notice of Intent and information regarding the date, time and place of the public hearing may be obtained from the applicant's representative, Legacy Engineering LLC, by calling (508) 376-8883 between the hours of 8:00 am thru 12:00 pm and 1:00 pm thru 5:00 pm on the Monday thru Friday (excluding holidays). Pursuant to the DEP guide to abutter notification dated April 8, 1994, Legacy Engineering LLC may charge a reasonable fee for the copy of the Notice of Intent.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days prior to the hearing date in the local newspaper.

NOTE: Notice of the meeting of the Conservation Commission, including its date, time and place will be posted in the Town Hall not less than forty-eight (48) hours in advance of the meeting.

NOTE: You also may contact your local Conservation Commission or the Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act at 508-792-7650.

Parcel 43-062, Granite Drive- Abutter's List

Millis, MA

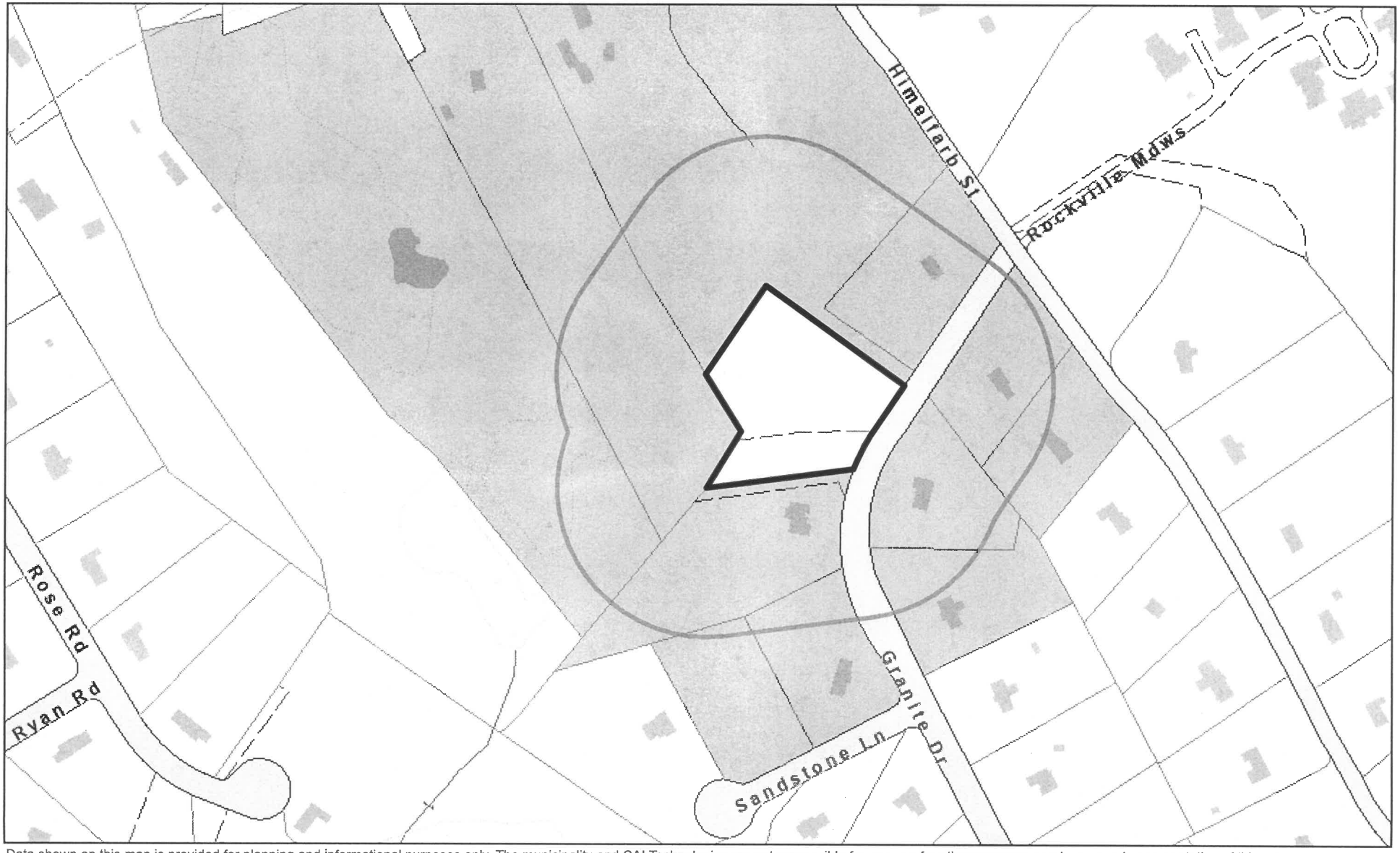
March 21, 2022

1 inch = 279 Feet

0 279 558 837

CAI Technologies
Precision Mapping Geospatial Solutions

www.cai-tech.com



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

300 foot Abutters List Report

Millis, MA
March 21, 2022

CERTIFIED COPY by the TOWN OF MILLIS

Assessors Office _____

Subject Property:

Parcel Number: 0043-0062-0000
CAMA Number: 0043-0062-0000
Property Address: GRANITE DR

Mailing Address: SIKH DHARMA OF MASS INC
P O BOX 308
MILLIS, MA 02054

Abutters:

Parcel Number: 0042-0018-0000
CAMA Number: 0042-0018-0000
Property Address: 368 VILLAGE ST

Mailing Address: SIKH DHARMA OF MASS INC MAHAN SINGH KHALSA
P.O. BOX 308
MILLIS, MA 02054

Parcel Number: 0042-0018-0000
CAMA Number: 0042-0018-000A
Property Address: 368 VILLAGE ST

Mailing Address: SIKH DHARMA OF MASS INC
P.O. BOX 308
MILLIS, MA 02054

Parcel Number: 0042-0019-0000
CAMA Number: 0042-0019-0000
Property Address: 376B VILLAGE ST

Mailing Address: TUCKER EVA L TR THE MAYSON REALTY TRUST
376B VILLAGE ST
MILLIS, MA 02054

Parcel Number: 0042-0020-0000
CAMA Number: 0042-0020-0000
Property Address: VILLAGE ST

Mailing Address: RUSSELL JAMES W JR TRUSTEE THE JWR JR VILLAGE ST REALTY TRUST
392 VILLAGE ST
MILLIS, MA 02054

Parcel Number: 0042-0058-0000
CAMA Number: 0042-0058-0000
Property Address: 3 GRANITE DR

Mailing Address: KOMAN JR EDWARD & BARBARA V
3 GRANITE DR
MILLIS, MA 02054

Parcel Number: 0043-0039-0000
CAMA Number: 0043-0039-0000
Property Address: 16 HIMELFARB ST

Mailing Address: MITCHELL JOSEPH & BOUVIER SARA J
16 HIMELFARB ST
MILLIS, MA 02054

Parcel Number: 0043-0040-0000
CAMA Number: 0043-0040-0000
Property Address: 18 HIMELFARB ST

Mailing Address: DION DANIEL C PRZYBYLOWICZ PAMELA H
18 HIMELFARB ST
MILLIS, MA 02054

Parcel Number: 0043-0041-0000
CAMA Number: 0043-0041-0000
Property Address: 20 HIMELFARB ST

Mailing Address: DOYLE JOHN J DOYLE KATHLEEN B
20 HIMELFARB ST
MILLIS, MA 02054

Parcel Number: 0043-0060-0000
CAMA Number: 0043-0060-0000
Property Address: 2 GRANITE DR

Mailing Address: TRACY LOMBARDI ARTHUR LOMBARDI
285 UNION ST
MILLIS, MA 02054

Parcel Number: 0043-0061-0000
CAMA Number: 0043-0061-0000
Property Address: 4 GRANITE DR

Mailing Address: DAY THOMAS J & BROOKS P
4 GRANITE DR
MILLIS, MA 02054

300 foot Abutters List Report

Millis, MA
March 21, 2022

Parcel Number:	0047-0005-0000	Mailing Address:	BURSTEIN JAY A & PAMELA J
CAMA Number:	0047-0005-0000		1 SANDSTONE LN
Property Address:	1 SANDSTONE LN		MILLIS, MA 02054

Parcel Number:	0047-0006-0000	Mailing Address:	WEAVER JEFFREY TR T& B RLTY TR
CAMA Number:	0047-0006-0000		P O BOX 121
Property Address:	3 SANDSTONE LN		NORFOLK, MA 02056

Easy Peel® Labels
Use Avery® Template 5160®

Feed Paper

Bend along line to
expose Pop-up Edge™

AVERY® 5160®

BURSTEIN JAY A & PAMELA J
1 SANDSTONE LN
MILLIS, MA 02054

TUCKER EVA L TR
THE MAYSON REALTY TRUST
376B VILLAGE ST
MILLIS, MA 02054

DAY THOMAS J & BROOKS P
4 GRANITE DR
MILLIS, MA 02054

WEAVER JEFFREY TR T& B RL
P O BOX 121
NORFOLK, MA 02056

DION DANIEL C
PRZYBYLOWICZ PAMELA H
18 HIMELFARB ST
MILLIS, MA 02054

DOYLE JOHN J
DOYLE KATHLEEN B
20 HIMELFARB ST
MILLIS, MA 02054

KOMAN JR EDWARD & BARBARA
3 GRANITE DR
MILLIS, MA 02054

MITCHELL JOSEPH &
BOUVIER SARA J
16 HIMELFARB ST
MILLIS, MA 02054

RUSSELL JAMES W JR TRUSTE
THE JWR JR VILLAGE ST REA
392 VILLAGE ST
MILLIS, MA 02054

SIKH DHARMA OF MASS INC
MAHAN SINGH KHALSA
P.O. BOX 308
MILLIS, MA 02054

SIKH DHARMA OF MASS INC
P.O. BOX 308
MILLIS, MA 02054

TRACY LOMBARDI
ARTHUR LOMBARDI
285 UNION ST
MILLIS, MA 02054

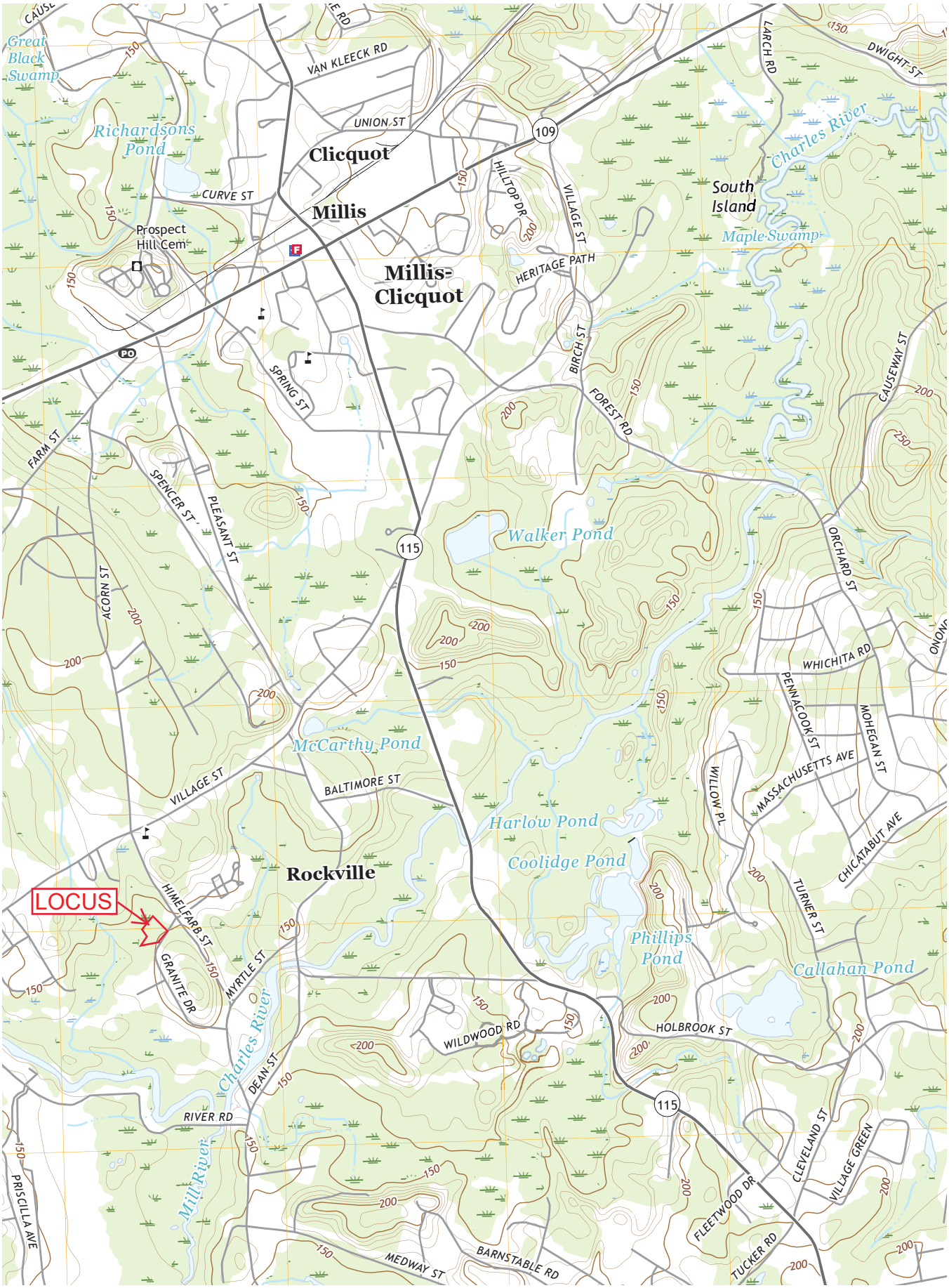
Étiquettes faciles à peler
Utilisez le gabarit AVERY® 5160®

Sens de
chargement

Repliez à la hachure afin de
révéler le rebord Pop-up™

www.avery.com
1-800-GO-AVERY

APPENDIX C: Locus Maps


LOCUS
Great Black Swamp
Richardsons Pond
Prospect Hill Cem
Clicquot
Millis
Millis-Clicquot
Rockville
South Island
Maple Swamp
Charles River
Walker Pond
McCarthy Pond
Harlow Pond
Coolidge Pond
Phillips Pond
Callahan Pond
Mill River
VAN KLEECK RD
UNION ST
CURVE ST
HILLTOP DR
VILLAGE ST
HERITAGE PATH
BIRCH ST
FOREST RD
SPRING ST
FARM ST
SPENCER ST
PLEASANT ST
ACORN ST
BALTIMORE ST
HIMELFARB ST
GRANITE DR
MYRTLE ST
DEAN ST
RIVER RD
PRISCILLA AVE
WILDWOOD RD
HOLBROOK ST
MEDWAY ST
BARNSTABLE RD
FLEETWOOD DR
TUCKER RD
CLEVELAND ST
VILLAGE GREEN
TURNER ST
WILLOW PL
MASSACHUSETTS AVE
CHICATABUT AVE
PENNACOOK ST
MOHEGAN ST
WHICHITA RD
ORCHARD ST
CAUSEWAY ST
LARCH RD
DWIGHT ST
109
115
PO

National Flood Hazard Layer FIRMette

FEMA

71°22'19"W 42°8'36"N

71°21'41"W 42°8'9"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

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 *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

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
- NO SCREEN 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
- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 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

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/21/2022 at 12:55 PM 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: basemap 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.

APPENDIX D: Narrative Description

NARRATIVE DESCRIPTION

Introduction

This Notice of Intent proposes the construction of a single-family dwelling at 1 Granite Drive, along with all appurtenant driveways, landscaping areas, and utilities.

Existing Conditions

The existing 1.9 acre site is undeveloped forest on the north side of Granite Drive. An existing stormwater basin for the surrounding subdivision lies in the southern portion of the site. Wetlands lie to the rear of the site.

Resource Areas

Resource Areas listed below have been identified by a wetland scientist, whose report is included as Appendix G:

- Bordering Vegetated Wetlands (BVW): BVW have been flagged and is shown on the site plan along with its associated Buffer Zone. No work is proposed within the BVW or the 50-foot wetland buffer.
- Bordering Land Subject to Flooding: This resource area includes all land below elevation 137.0. The BLSF boundary lies at the rear of the site well within wetland areas, and will therefore not be disturbed.

Proposed Work

<u>Buffer Zone on Site</u>

The proposed development consists of the construction of a single-family dwelling along with associated driveways, landscaping, and utilities. As shown on the plans, the proposed work includes activities in the buffer zone associated with the construction of the building and driveway. An undisturbed buffer of a least 50 feet is provided to the edge of wetland areas in all locations per Millis regulations.

Project Schedule

The applicant intends to begin construction this Spring and expects to be completed by the Summer of 2023.

APPENDIX E: "1 Granite Drive Site Plan of Land in Millis, MA" Dated March 29, 2022, Prepared by Legacy Engineering LLC (bound separately)

GENERAL NOTES:

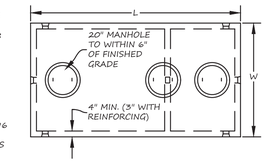
1. ANY ALTERATIONS MUST BE APPROVED IN WRITING BY THE DESIGN ENGINEER.
2. ANY CONDITIONS ENCOUNTERED DURING CONSTRUCTION DIFFERING FROM THOSE SHOWN OR REPORTED HEREON SHALL BE REPORTED TO THE DESIGN ENGINEER BEFORE CONSTRUCTION CONTINUES.
3. BENCH MARK DATUM: NAVD 88.
4. TEST HOLE INFORMATION SHOWN HEREON IS LIMITED TO SOIL CONDITIONS FOUND AT THAT PARTICULAR LOCATION AND IS NOT CONSIDERED AN IMPLIED OR EXPRESS WARRANTY OF SOIL CONDITION BEYOND THE LIMITS OF SUCH TEST HOLES.
5. EXISTING UTILITY INFORMATION DEPICTED HEREON IS APPROXIMATE ONLY AND BASED ON BEST AVAILABLE INFORMATION. LEGACY ENGINEERING DOES NOT WARRANTY THAT ALL EXISTING UTILITIES ARE SHOWN. CONTRACTOR SHALL CONFIRM ALL UTILITY LOCATIONS.
6. CONTRACTOR SHALL CONTACT DIGSAFE PRIOR TO CONDUCTING ANY EXCAVATION ACTIVITIES.
7. NO SYSTEM TO BE BACKFILLED OR CONCEALED WITHOUT THE REQUIRED INSPECTION BY AND PERMISSION OF THE BOARD OF HEALTH AGENT.
8. AS-BUILT AND CONSTRUCTION CERTIFICATION TO BE PREPARED BY THE DESIGN ENGINEER.
9. CERTIFICATION OF CONSTRUCTION REQUIRED BY THE INSTALLER.
10. SYSTEM SHALL BE STAKED AND FLAGGED FROM THE DATE OF INSTALLATION UNTIL A CERTIFICATE OF COMPLIANCE IS ISSUED.
11. THE SITE IS NOT IN A NITROGEN SENSITIVE AREA.
12. THERE ARE NO PUBLIC WELLS WITHIN 400' OF THE SEPTIC SYSTEM.
13. THERE ARE NO PRIVATE WELLS WITHIN 200' OF THE SEPTIC SYSTEM.
14. THERE ARE NO BORDERING VEGETATED WETLANDS WITHIN 150' OF THE SOIL ABSORPTION SYSTEM.
15. THERE ARE NO INLAND BANKS OR SURFACE WATERS WITHIN 50' OF THE SOIL ABSORPTION SYSTEM.
16. THERE ARE NO VERNAL POOLS WITHIN 100' OF THE SOIL ABSORPTION SYSTEM.
17. THERE ARE NO WETLANDS BORDERING SURFACE WATER SUPPLIES OR TRIBUTARIES WITHIN 100' OF THE SEPTIC SYSTEM.
18. THERE ARE NO SURFACE WATER SUPPLIES WITHIN 400' OF THE SEPTIC SYSTEM.
19. THERE ARE REGULATORY FLOODWAYS ON THE PROPERTY.
20. THERE IS A 100-YEAR FLOOD LIMIT ON THE PROPERTY.
21. THERE ARE NO OPEN, SURFACE OR SUBSURFACE DRAINS WHICH INTERCEPT HIGH GROUNDWATER WITHIN 50' OF THE SOIL ABSORPTION SYSTEM.
22. THERE ARE NO OTHER OPEN, SURFACE, OR SUBSURFACE DRAINS.
23. THERE ARE NO FOUNDATION DRAINS AROUND THE BUILDING.
24. THERE ARE NO LEACHING CATCH BASINS OR DRY WELLS WITHIN 25' OF THE SOIL ABSORPTION SYSTEM.
25. THERE ARE NO INDUSTRIAL CATEGORY OR OTHER PROHIBITED WASTEWATERS DISCHARGING FROM THE FACILITY.
26. ALL SEPTIC SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE.
27. GRAVITY EFFLUENT DISTRIBUTION LINE OUTLET ORIFICES SHALL BE EVENLY SPACED AND LOCATED IN ACCORDANCE WITH 310 CMR 15.251(8). HOLE SIZES SHALL BE BETWEEN 3/8" AND 5/8".
28. ALL TOPSOIL, FILL, OR OTHER UNSUITABLE MATERIALS WITHIN 5' OF THE SOIL ABSORPTION SYSTEM, WHICH LIES BELOW THE TOP OF THE SOIL ABSORPTION SYSTEM, MUST BE REMOVED AND REPLACED WITH GRAVEL IN COMPLIANCE WITH 310 CMR 15.255(3): REQUIRED
29. FINISHED GRADE TO BE IN ACCORDANCE WITH THIS PLAN.
30. SOIL EVALUATOR: DANIEL J. MERRIKIN, P.E.
31. LIMITING SOIL HORIZON: C
32. GROUNDWATER DETERMINATION METHOD: REDOXIMORPHIC FEATURES
33. RESIDENTIAL SYSTEMS ARE NOT SIZED FOR GARBAGE GRINDERS.
34. PROPOSED TANKS ARE ABOVE SEASONAL-HIGH GROUNDWATER.
35. FOR PROPER PERFORMANCE, THE SEPTIC TANK SHOULD BE PUMPED ANNUALLY.

SYSTEM DESIGN

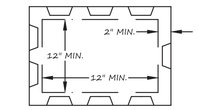
BEDROOMS: 4 DESIGN FLOW: 440 GPD SEPTIC TANK: 1,500 GAL. PERCOLATION RATE: 11 MPI GARB. GRINDER?: NO
PROPOSED SOIL ABSORPTION SYSTEM: SIX 27' LONG TRENCHES
DESIGN CAPACITY: [{(27' x (3 + 1 + 1)} x 6 TRENCHES x 0.56 GPD/S.F. = 453 GPD

SEPTIC TANK PLAN VIEW

1. TANK TO HAVE OUTLET GAS BAFFLE.
2. PRECAST CONC. TANK SHALL MEET THE FOLLOWING PER 310 CMR 15:
   2.1. CONC. STRENGTH f'c=4,000 PSI @ 28 DAYS.
   2.2. CONC. DENSITY = 140 PCF
   2.3. ADMIXTURES PER ASTM C233-95
   2.4. FOR WIRE FABRIC: GRADE 88 R'd OR EQUIVALENT
   2.5. H-10 DESIGN LOADING
   2.6. TANK SHALL BE WATERTIGHT
   2.7. TANK SHALL BE EMBOSSED WITH A SEAL STATING THAT ASTM C1227-96 HAS BEEN MET.
3. DISTANCE BETWEEN INLET/OUTLET TEES SHALL BE GREATER THAN THE LIQUID DEPTH.



DIST. BOX PLAN VIEW



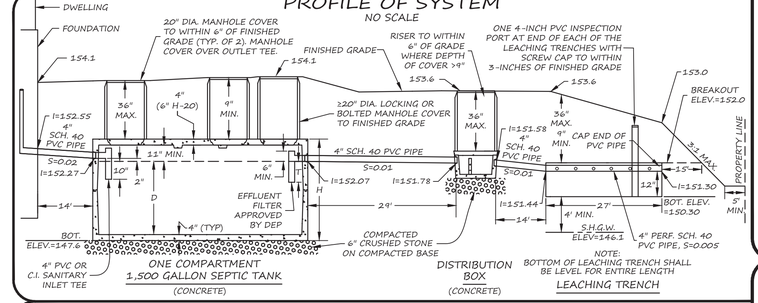
1. DISTRIBUTION BOX TO HAVE 6 OUTLETS
2. 0 OUTLETS TO BE PLUGGED
3. ALL DISTRIBUTION BOX OUTLET PIPES SHALL BE LEVEL FOR THE FIRST TWO FEET. ALL OUTLET PIPES SHALL HAVE THE SAME INVERT ELEVATION AT THE DISTRIBUTION BOX.
4. WHEN THE S.A.S. IS TO BE DOSED OR THE DIST. BOX INLET PIPE HAS A SLOPE GREATER THAN 8%, PROVIDE A CONCRETE INLET BAFFLE IN THE DIST. BOX. TO 1" ABOVE THE OUTLET INVERT.
5. MIN. SUMP BELOW OUTLET INVERT ELEV. = 6"
6. OUTLET INVERT ELEVATION SHALL BE AT LEAST 2-INCHES BELOW THE INLET INVERT ELEVATION.
7. COVER TO BE WATERTIGHT.

SEPTIC/PUMP TANK DIMENSION TABLE

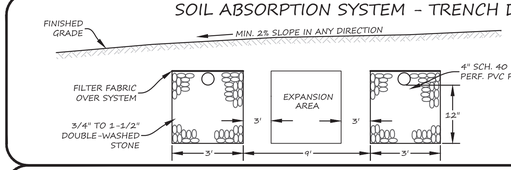
TANK VOLUME	A	B	D	H(H-10)	H(H-20)	L	T	W
1,000 GALLON	N/A	N/A	4'-6"	5'-4"	5'-6"	8'-6"	N/A	4'-10"
1,500 GALLON	N/A	N/A	4'-4"	5'-8"	5'-10"	10'-6"	N/A	5'-8"
2,000 GALLON	1,330 GAL.	670 GAL.	4'-5"	5'-8"	5'-10"	12'-0"	1'9"	6'-6"

PROFILE OF SYSTEM

NO SCALE



SOIL ABSORPTION SYSTEM - TRENCH DETAIL



NOTES:
1. SOIL ABSORBTION SYSTEM TO HAVE A MINIMUM COVER OF 9" AND A MAXIMUM COVER OF 36".
2. BOTTOM AND SIDES OF TRENCHES TO BE SCARIFIED.

SOIL TEST RESULTS

OTH 21-1	OTH 21-3
2021/10/09	2021/10/09
BY: D. MERRIKIN	BY: D. MERRIKIN
INSP: J. MCVEIGH	INSP: J. MCVEIGH
GND. ELEV. 148.7	GND. ELEV. 149.3
Ap, LS MASSIVE/V.FRIABLE 10YR4/3 8"(148.0)	Ap, LS MASSIVE/V.FRIABLE 10YR4/3 7"(148.7)
Bw, LS/SL MASSIVE/V.FRIABLE 10YR6/8 24"(146.7)	Bw, LS MASSIVE/V.FRIABLE 10YR6/8 24"(147.3)
C, LS/SL MASSIVE/V.FRIABLE 2.5Y6/2 115"(139.1)	C, LS MASSIVE/V.FRIABLE 2.5Y6/4 116"(139.6)
REDOX@39"(145.5) WEEPING @ 90" STANDING @ 90"	REDOX@39"(146.1) WEEPING @ 98" STANDING @ 98"

NOTE: REPLACE Ap & Bw LAYERS AND REPLACE WITH SEPTIC SAND.

PERCOLATION RESULTS

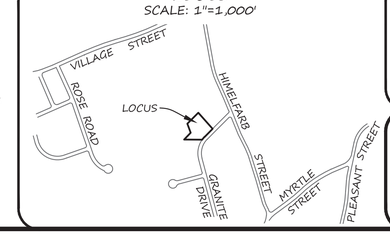
DATE: 2021/10/09			
	PT 21-1	PT 21-3	
DEPTH (IN.)	25/43"	24/42"	
TIME @ 12"	10:07	9:20	
TIME @ 11"	10:13	9:20	
TIME @ 10"	10:19	9:20	
TIME @ 9"	10:26	9:22	
TIME @ 8"	10:35	9:20	
TIME @ 7"	10:44	9:20	
TIME @ 6"	10:56	9:26	
TIME 9"-6"	30 MIN.	32 MIN.	
RATE (mpi)	10 mpi	11 mpi	
	GROUND ELEV. 148.8 BTM. TEST ELEV. 142.2	GROUND ELEV. 149.4 BTM.TEST ELEV. 145.4	

SCHEDULE OF ELEVATIONS

	SEPTIC TANK	TRENCHES
Top of Found. (T.C.)	154.7	
Basement Floor	146.0	
Invert of Pipe at Found.	152.55	
Invert at Tank Inlet	152.27	
Invert at Tank Outlet	152.07	
Invert at D. Box Inlet	151.78	
Invert at D. Box Outlet	151.58	
Invert at Trench Beginning		151.44
Invert at Trench End		151.30
Elevation of Trench Bottom (Level)		150.30
Finish Grade Over Leach Area (F.G.)		153.5 - 153.0

LOCUS

SCALE: 1"=1,000'



LEGEND & ABBREVIATIONS

- CB: CATCH BASIN
- DMH: DRAIN MANHOLE
- X" D — DRAIN PIPE
- PVC: POLYVINYL CHLORIDE PIPE
- SMH: SEWER MANHOLE
- X" S — SEWER PIPE
- CO: SEWER CLEANOUT
- X" W — WATER MAIN
- HYD: HYDRANT
- G.V.: WATER GATE VALVE
- C.S.: WATER SERVICE CURB STOP
- G — GAS PIPELINE
- U.P.: UTILITY POLE
- 252 — EXIST. CONTOUR
- 252 — PROP. CONTOUR
- E.O.P. EDGE OF PAVEMENT
- C.C.B. CAPE COD BIT. BERM
- V.B.B. VERTICAL BIT. BERM
- S.G.C SLOPED GRANITE CURB
- V.G.C. VERT. GRANITE CURB

730 MAIN STREET
SUITE 2C
MILLIS, MA 02054
508-376-8883(o)

SHEET 1 OF 1

LEGACY ENGINEERING

COMMONWEALTH OF MASSACHUSETTS — DANIEL J. MERRIKIN — CIVIL — No. 43309 — REGISTERED PROFESSIONAL ENGINEER

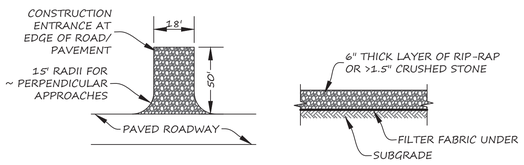
Digitally signed by Daniel J. Merrikin, P.E.
Date: 2022.03.30 11:23:16 -04'00'

PLAN SCALE: AS NOTED

PLAN DATE: MARCH 29, 2022

REVISION	DATE	BY

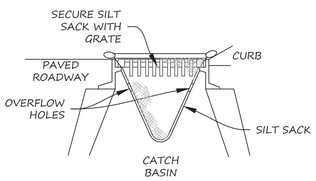
GRANITE DRIVE SEPTIC SYSTEM DESIGN PLAN OF LAND IN MILLIS, MA



NOTES:
1. ENTRANCE SHALL BE INSTALLED BEFORE ANY EXCAVATION WORK OCCURS ON-SITE.
2. ENTRANCE SHALL BE MAINTAINED IN GOOD CONTITION UNTIL A PAVED DRIVEWAY IS INSTALLED. REPLACE ENTRANCE IF FILLED WITH SOILS OR IF SOILS ARE BEING TRACKED ONTO ADJACENT ROADWAYS.

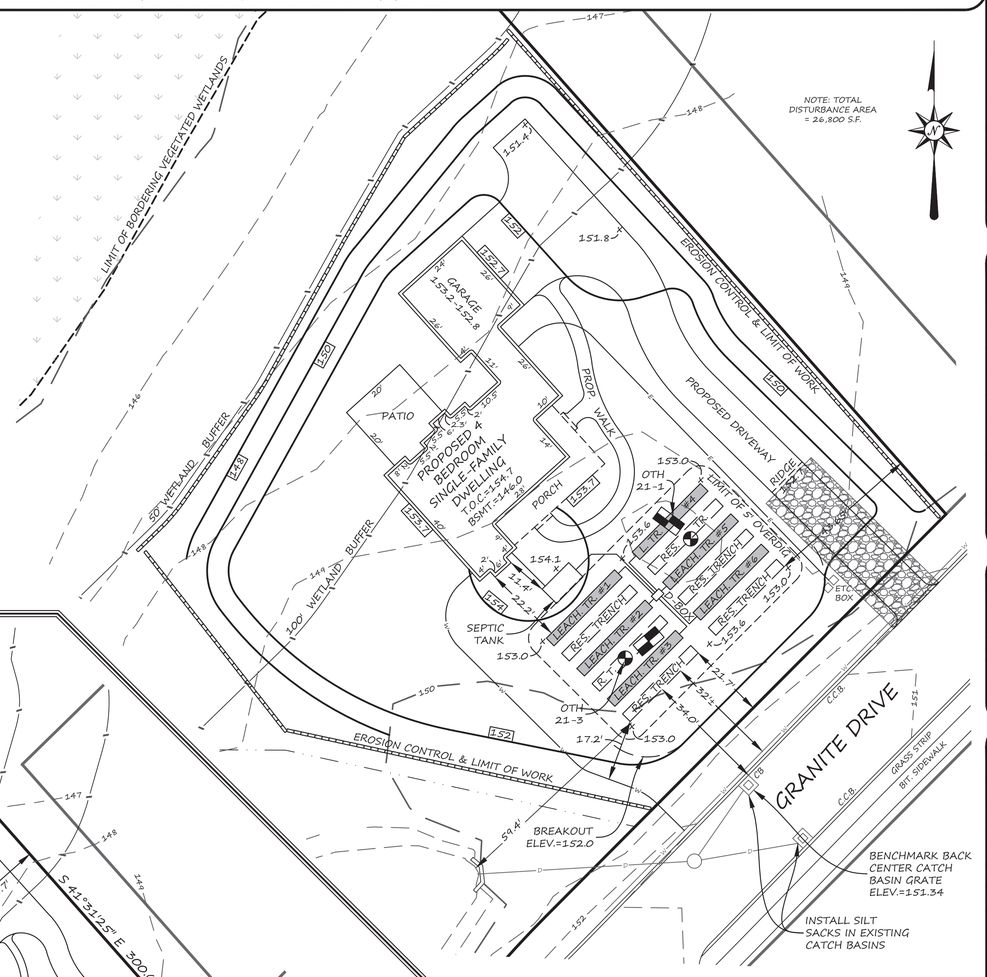
CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



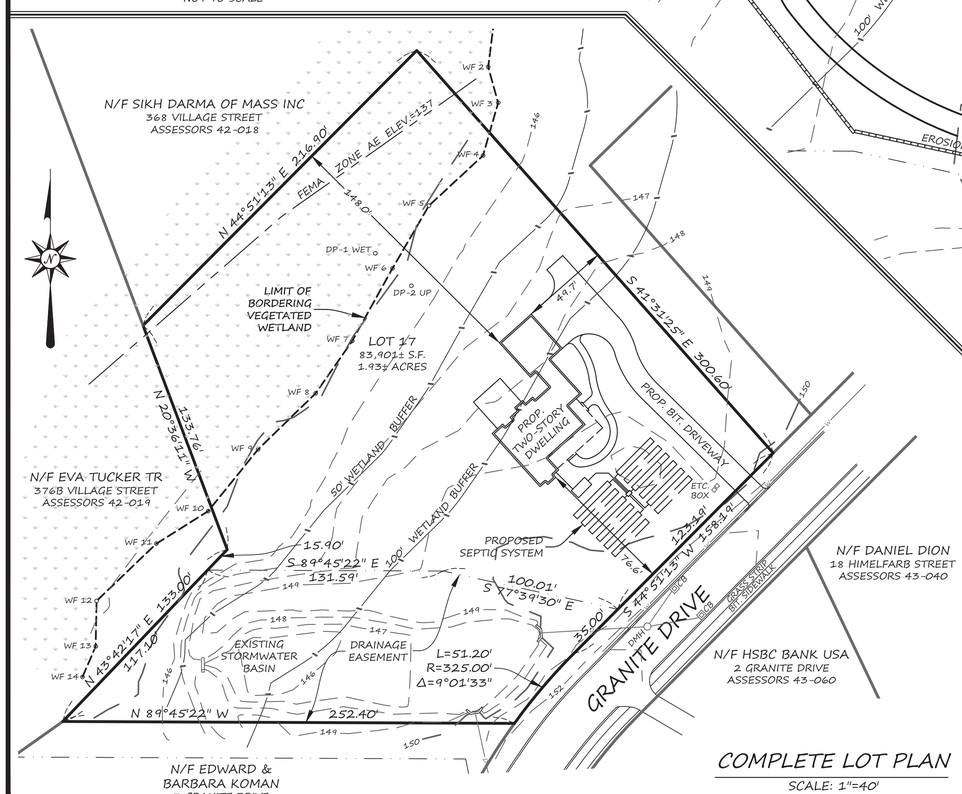
CATCH BASIN SILT SACK DETAIL

NOT TO SCALE



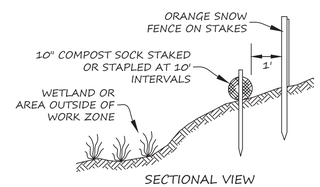
ENLARGED SEPTIC PLAN

SCALE: 1"=20'



COMPLETE LOT PLAN

SCALE: 1"=40'



NOTE: NON-BIODEGRADABLE SOCK SHELL FILLED WITH COMPOST MEDIA. JOINTS SHALL BE OVERLAPPED BY AT LEAST TWO FEET. ORANGE SNOW FENCE IS ONLY NEEDED IF THERE IS EVIDENCE OF THE COMPOST SOCK BEING BURIED BY CONSTRUCTION ACTIVITIES.

EROSION CONTROL DETAIL (COMPOST SOCK)

NOT TO SCALE

APPENDIX F: Botanist Report

AES

Site Evaluation & Wetland delineation

February 18, 2022

Assessor Parcel 43-62
0 Granite Street
Millis, Massachusetts

Prepared for

Legacy Engineering LLC
730 Main Street, Suite 2C
Millis, MA 02054

Prepared by

Applied Ecological Sciences

P.O. Box 184
Norfolk, MA 02056
(508) 528-2866
(508) 740-0438 cell
email: rwaldron@earthlink.net

Table of Contents

Introduction 1.

General Site Description 1.

Forested Upland Description 1.

Soils 2.

Wetland Delineation Methodology 2.

Wetland Resource Description 2.

Bordering Vegetated Wetland (BVW) 2.

Bordering Land Subject to Flooding (BLSF) 2.

NHESP Estimated & Priority Habitat 3.

Water Supply Protection Areas 3.

Outstanding Resource Water (ORW) 3.

Buffer Zone 3.

References 5.

Appendix A: MA DEP Wetland Delineation Data Forms, Soil Data Sheet 6.

Appendix B: U.S.G.S Topo Map, FEMA Map 7.

Site Evaluation & Wetland Delineation
Assessor Parcel 43-62
0 Granite Street
Millis, Massachusetts

Introduction

A site evaluation was conducted at the above referenced property on February 16, 2022. Wetland resource areas protectable under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40), the implementing *Regulations* (310 CMR 10.00), and the Town of Millis *Wetlands Protection Bylaw* (Article XIX) were identified and characterized. The upland/wetland boundary to Bordering Vegetated Wetland (BVW) was delineated in the field with red flagging tape. The following narrative provides a general site description, wetland resource delineation methodology, and wetland resource descriptions.

General Site Description

The subject property encompasses a forested parcel of land located westerly of Granite Street in Millis, Massachusetts. Topography of the site is generally flat. Residential development abuts the site to the north and south. Forested land lies to the west.

Forested Upland

A moderately dense canopy of Northern Red Oak *(Quercus rubra)*, White Oak *(Quercus alba)*, Eastern White Pine *(Pinus strobus)*, Gray Birch *(Betula populifolia)*, Red Maple *(Acer rubrum)*, and Black Cherry *(Prunus serotina)* dominates vegetation within the forested upland. The woody understory is comprised of saplings from the canopy, Black Huckleberry *(Gaylussacia baccata)*, Highbush Blueberry *(Vaccinium corymbosum)*, Poison Ivy *(Toxicodendron radicans)*, and Witch-hazel *(Hamamelis virginiana)*. Ground cover species include seedlings from the canopy and understory, Tree Clubmoss *(Lycopodium obscurum)*, Pennsylvania Sedge *(Carex pensylvanica)*, Cinnamon Fern *(Osmunda cinnamomea)*, Partridgeberry *(Mitchella repens)*, Hay-Scented Fern *(Dennstaedtia punctilobula)*, Indian Pipe *(Monotropa uniflora)*, and Sheep Laurel *(Kalmia angustifolia)*.

Soils

Soils underlying the site consist of poorly drained Raynham silt loam (Ra, 30), 0% to 3% slopes. (USDA SCS 1989, Map #28, www.nesoil.com).

Wetland Delineation Methodology

The extent of vegetated wetland was determined through observations of the existing plant communities while verifying wetland hydrology through interpretation of soil characteristics and other indications of surface hydrology. Soils were analyzed for texture and color to determine soil morphology in accordance with the most up to date standards. Evidence of surface hydrology was determined through visual inspection of existing site conditions including typical indicators such as water marks, drift-lines, water-stained leaves, sediment deposits, and drainage patterns.

Wetland Resource Description

Wetland resources associated with the site include Bordering Vegetated Wetland (BVW) and Bordering Land Subject to Flooding (BLSF).

Bordering Vegetated Wetland (BVW)

Seasonally saturated to seasonally flooded Forested Swamp and seasonally flooded Emergent Marsh is located within or adjacent to the western portion of the site. Topography within the BVW is generally flat with distinct pit and mound micro-topography, drainage patterns, leaf staining, and surface water evident throughout. A moderately dense canopy of Red Maple and Eastern White Pine dominates vegetation within the wetland. The woody understory is comprised of saplings from the canopy, Highbush Blueberry, Winterberry *(Ilex verticillata)*, Southern Arrowwood *(Viburnum dentatum)*, Silky Dogwood *(Cornus amomum)*, Poison Ivy, and Glossy Buckthorn *(Frangula alnus)*. Ground cover species include seedlings from the canopy and understory, Cinnamon Fern, Skunk Cabbage *(Symplocarpus foetidus)*, Sphagnum Moss *(Sphagnum* sp.*),* and Broad-Leaf Cattail *(Typha latifolia)*.

The upland/wetland boundary to BVW is delineated in the field with AES flagging stations #1 through #14.

Bordering Land Subject to Flooding (BLSF)

Based on the *Federal Emergency Management Agency Flood Insurance Rate Map* for the Town of Millis, Massachusetts (Map No. 25021C0163E), the site is located within Zone X (non-shaded), *Areas determined to be outside the 0.2% annual chance floodplain*; and Zone AE; *Special flood areas subject to inundation by the 1% annual chance flood. Base flood elevations determined.* The base flood elevation established for the site is 137 feet.

NHESP Estimated & Priority Habitat

According to the *Massachusetts Natural Heritage and Endangered Species Program* habitat map, the site is not located within an Estimated Habitat of Rare Wildlife or a Priority Habitat of Rare Species.

Water Supply Protection Areas

According to the Massachusetts Geographic Information Systems *Water Supply Protection Areas Map*, the site is not located within a Zone II groundwater recharge area or an Interim Wellhead Protection Area (IWPA).

Outstanding Resource Water (ORW)

According to the Massachusetts Geographic Information Systems *Outstanding Resource Waters Map*, the site is not located within a contributing watershed to an ORW.

Buffer Zone

Under Section 1.4 of the Town of Millis *Wetlands Protection Rules and Regulations* Adjacent Upland Resource Area Performance Standards:

1.4.1 To protect the interests and values of the Adjacent Upland Resource Area(s) (or Buffer Zone(s)), construction activities and placement of permanent structures within said Resource Area(s) are regulated.

(1) No structures shall be placed within the inner 50-foot of the Buffer Zone(s) from the edge of a wetland resource area. A strip of continuous, undisturbed vegetative cover shall be maintained. Permanently placed stone granite bounds, 6" x 6" x 4'- 0" long mounted with a single railing of pressure treated timber at 2'- 0" above ground surface, shall be placed to delineate and demarcate this undisturbed protected zone. Mounting details will be provided by the Commission.

If site condition warrants, as determined by the Commission, the Commission may waive the requirement for the demarcation railing with stone granite bounds or allow for an alternative method of delineation and demarcation.

(2) For new lots formed and/or new subdivision roads approved after the effective date of these rules and regulations, it is presumed that alteration to the outer 50-foot of the Buffer Zone area(s) can be avoided. If a project proposes alteration within this buffer, the Applicant must present a vigorous Alternatives Analysis

showing that the proposed project avoids alteration to the fullest extent and has minimized impacts. Any permanent structure so placed within this outer 50-foot portion of the Buffer Zone(s) would cover an area no greater than 30 percent of the calculated area of this outer 50-foot of the Buffer Zone(s) that is within the subject individual property. Mitigation for any and all Buffer Zone Alteration is required.

(3) For projects on undeveloped lots in existence prior to the effective date of these rules and regulations, the Applicant must present strong evidence that a reasonable effort has been made to avoid and minimize impacts to the outer 50-foot area of the buffer. Any permanent structure so placed within this outer 50-foot portion of the Buffer Zone(s) would cover an area no greater than 30 percent of the calculated area of this outer 50-foot of the Buffer Zone(s) that is within the subject individual property. Mitigation for any and all Buffer Zone Alteration may be required.

(4) For projects on lots with existing structures, the Applicant must minimize work within the Buffer Zone and present strong evidence that a larger intrusion into the Buffer Zone will still secure the protection of the interests and values of the Bylaw. Addition of any permanent structure within the outer 50-foot of the Buffer Zone, combined with the existing structure(s), would cover an area no greater than 35 percent of the calculated area of this outer 50-foot of the Buffer Zone(s) that is within the subject individual property. Addition of any new permanent structure within the inner 50-foot of the Buffer Zone is not permitted.

(a) Maintenance of existing structure(s) within the Buffer Zone is permitted as long as the activities will not cause degradation or diminish the interests and values of the resources that are protected by the Bylaw.

(b) Prior to commencement of maintenance work to existing structure(s) within the Buffer Zone, the property owner shall contact the Commission to ensure that proposed maintenance activities would not violate the Bylaw.

The western portions of the site are contained within the regulatory Buffer Zones.

References

Federal Emergency Management Agency, FEMA Map Service Center, www.fema.gov.

Massachusetts Geographic Information Systems, www.massgis.ma.state.us.

Natural Resources Conservation Service, www.nesoil.com, websoilsurvey.nrcs.usda.gov.

United States Department of Agriculture, Soil Conservation Service. 1989. *Soil Survey of Norfolk and Suffolk Counties, Massachusetts*.

Appendix A

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

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

Applicant: Prepared by: **Applied Ecological Sciences (AES)** Project location: **0 Granite Street Millis, MA** DEP File #: _____

Check all that apply:

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

DP-1 @ AES #6

Section I. Vegetation Observation Plot Number: **DP-1 WET** Transect Number: **1** Date of Delineation: **2/16/2022**

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or dominance ratio)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category
Trees				
Red Maple *(Acer rubrum)*	38.0	33%	yes	FAC*
Eastern White Pine *(Pinus strobus)*	38.0	33%	yes	FACU
Northern Red Oak *(Quercus rubra)*	38.0	33%	yes	FACU-
TOTAL COVER =	114.0			
Woody Vines:				
Absent				
TOTAL COVER =	0.0			
Saplings				
Absent				
TOTAL COVER =	0.0			
Shrubs				
Glossy Buckthorn *(Frangula alnus)*	63.0	45%	yes	FAC*
Highbush Blueberry *(Vaccinium corymbosum)*	38.0	27%	yes	FACW-*
Eastern White Pine *(Pinus strobus)*	38.0	27%	yes	FACU
TOTAL COVER =	139.0			
Ground Cover				
Absent				
TOTAL COVER =	0.0			

Vegetation conclusion:

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**

Section II. Indicators of Hydrology
Hydric Soil Interpretation
DP-1 WET

1. Soil Survey (www.nesoil.com)

Is there a published soil survey for this site? Yes

title/date: Soil Survey of Norfolk & Suffolk Counties, Massachusetts, 1989.

map number: 28

soil type mapped: Raynham (Ra, 30), PD, sil, 0% to 3% slopes.

hydric soil inclusions: Birdsall, Walpole, Whitman

Are field observations consistent with soil survey? No

Remarks:

2. Soil Description

Horizon	Depth	Matrix color		Redoximorphic features
Oa	0"- 9"	10YR 2/1		
Bw1	9"- 18"+	2.5Y 7/2	sl	2.5Y 7/1 m/2/f (>20%) 10YR 5/8 m/2/d (>20%)

Remarks:

3. Other: Sunny, wet, trace snow

Conclusion: Is soil hydric? Yes

Other indicators of Hydrology: (check all that apply)

- [ ] Site inundated:
- [X] Depth to free water in observation hole: **1"**
- [X] Depth to soil saturation in observation hole: **Surface**
- [ ] 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 greater than or equal to non-wetland indicator plants?	X	
Wetland hydrology present?		
hydric soil present?	X	
other indicators of hydrology present?	X	
Sample location is in a BVW	X	

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

Applicant: Prepared by: **Applied Ecological Sciences (AES)** Project location: **0 Granite Street Millis, MA** DEP File #: _____

Check all that apply:

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

DP-2 @ AES #6

Section I. Vegetation Observation Plot Number: **DP-2 UPL** Transect Number: **1** Date of Delineation: **2/16/2022**

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or dominance ratio)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category
Trees				
Red Maple *(Acer rubrum)*	63.0	52%	yes	FAC*
Northern Red Oak *(Quercus rubra)*	38.0	31%	yes	FACU-
Whie Oak *(Quercus alba)*	20.5	17%	no	FACU
TOTAL COVER =	121.5			
Woody Vines:				
Absent				
TOTAL COVER =	0.0			
Saplings				
Absent				
TOTAL COVER =	0.0			
Shrubs				
Highbush Blueberry *(Vaccinium corymbosum)*	5.0	6%	no	FACW-*
Eastern White Pine *(Pinus strobus)*	20.5	23%	yes	FACU
Black Huckleberry *(Gaylussacia baccata)*	63.0	71%	yes	FACU
TOTAL COVER =	88.5			
Ground Cover				
Partridgeberry *(Mitchella repens)*	10.5	100%	yes	FACU
TOTAL COVER =	10.5			

Vegetation conclusion:

Number of dominant wetland indicator plants: **1** 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**

Section II. Indicators of Hydrology
Hydric Soil Interpretation
DP-2 UPL

1. Soil Survey (www.nesoil.com)

Is there a published soil survey for this site? Yes

title/date: Soil Survey of Norfolk & Suffolk Counties, Massachusetts.

map number: 28

soil type mapped: Raynham (Ra, 30), PD, sil, 0% to 3% slopes.

hydric soil inclusions: Birdsall, Walpole, Whitman

Are field observations consistent with soil survey? No

Remarks:

2. Soil Description

Horizon	Depth	Matrix color		Redoximorphic features
A	0"- 16"	10YR 2/2	sl	
Bw1	16" +	10YR 5/4	sl	

Remarks:

3. Other: Sunny, wet, trace snow

Conclusion: Is soil hydric? **No**

Other indicators of Hydrology: (check all that apply)

- [ ] 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 greater than or equal to non-wetland indicator plants?		X
Wetland hydrology present?		
hydric soil present?		X
other indicators of hydrology present?		X
Sample location is in a BVW		X

Appendix B

U.S.G.S. Topographic Map

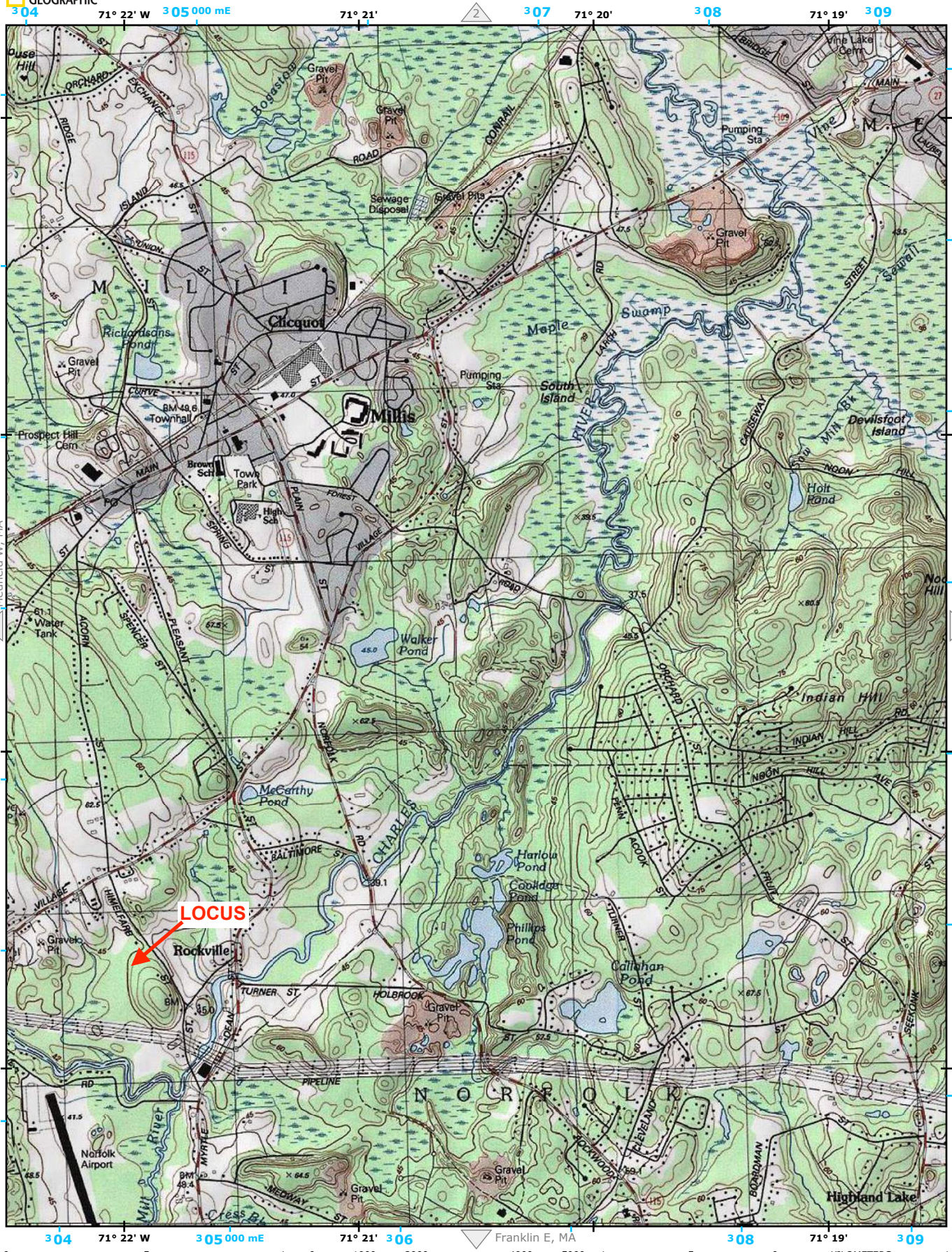
FEMA Map

NATIONAL GEOGRAPHIC

Medfield E, MA

USGS 7.5' Map Series

4


71° 22' W
71° 21'
71° 20'
71° 19'
42° 11'
42° 10'
42° 9'
42° 8' N
Medfield W, MA
Franklin E, MA
LOCUS
Millis
Clicquot
Rockville
Norfolk
Norfolk Airport
Highland Lake
Vine Lake Cem
Prospect Hill Cem
Richardsons Pond
Maple Swamp
South Island
Devilsfoot Island
Holt Pond
Indian Hill
Walker Pond
McCarthy Pond
Harlow Pond
Coolidge Pond
Phillips Pond
Callahan Pond
Mill River
Cress Bk
Townhall
Town Park
Brown Sch
High Sch
Pumping Sta
Sewage Disposal
Gravel Pit
Water Tank
Bogastow
Sawall
Lapha
Big Mill Bk
Noon Hill
Seekonk
Boardman
Cleveland
Rockwood
Turner
Holbrook
Baltimore
Charles
Norfolk
Pleasant
Spencer
Acorn
Hinkle Farm
Village
Plain
Forest
Spring
Main
Pond
Union
Island
Ridge
Exchange
Orchard
Conrail
Bridge
Causeway
Larch
Street
Pipeline
Myrle
Medway
Ocean
Hill
Fruit
Acock
Penn
Noon Hill Ave
Indian Hill Rd
Dean
Curve
Bm 49.6
Bm 49.4
Bm 35.0
Bm 39.1
Bm 47.0
Bm 59.1
Bm 59.4
Bm 64.5
Bm 67.5
Bm 80.9
Bm 89.5
Bm 62.5
Bm 45.0
Bm 37.5
Bm 47.5
Bm 48.5
Bm 61.1
Bm 62.5
Bm 75
Bm 60
Bm 45
Bm 115
Bm 109
Bm 27
Bm 54
Bm 39
Bm 59
Bm 65
Bm 75
Bm 90
Bm 60
Bm 45
Bm 75
Bm 60
Bm 45
Bm 60
Bm 45
Bm 60
Bm 45

National Flood Hazard Layer FIRMette

FEMA

71°22'19"W 42°8'36"N

71°21'41"W 42°8'9"N

Feet 1:6,000

0 250 500 1,000 1,500 2,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

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 *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

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
- NO SCREEN 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
- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 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

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/17/2022 at 8:37 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: basemap 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.