

HANCOCK ASSOCIATES

Surveyors | Engineers | Scientists

#25409

October 6, 2022

Boxford Conservation Commission
Attention: Ross Povenmire
7A Spofford Road
Boxford, MA 01921

RE: 18 Chadwick Farm Road/Lot 4 Chadwick Farm Road – Notice of Intent

Dear Members of the Conservation Commission,

On behalf of Mr. Charles Cochrane (Applicant), Hancock Associates respectfully submits this Notice of Intent in request to permit construction of a single-family house. Elements of construction are proposed within the 200-foot Riverfront Area to a perennial stream, the 100-foot Buffer Zone to Bordering Vegetated Wetland (BVW), NHESP Mapped Priority Rare Species Habitat (NHESP PH 2136), and an Outstanding Resource Water (ORW).

Existing Conditions and Wetland Resource Areas

The property is located at 18 Chadwick Farm Road in Boxford (identified as Map 6/Lot 2-11 on Boxford Assessors Maps). The property is a 6.23-acre undeveloped residential lot split between the towns of Boxford and Groveland (1.8+/- acres in Boxford, 4.4+/- acres in Groveland). No work is proposed in Groveland. This area is regulated under the Massachusetts Wetlands Protection Act (WPA, M.G.L. c. 131 § 40) and the Town of Boxford Wetlands Protection Bylaw (Town Code Chapter 192) and implementing regulations. Portions of the proposed work will occur within Riverfront Area and the 100-foot Buffer Zone to BVW.

Prior to performing field wetland delineations, an environmental constraints desktop assessment of the subject property was performed through review of MassGIS data layers, USGS 7.5-minute quadrangle maps, NRCS soil survey data, aerial photography, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs).

Based on this review, NHESP Estimated, and Priority Rare Species Habitats are mapped on the subject property (PH 2136). An unnamed perennial stream occurs adjacent to the property to the north, which projects a 200-foot Riverfront Area onto the subject property. The property is also located within a mapped Outstanding Resource Water (ORW) associated with a Public Water Supply Watershed for Johnsons Pond/Merrimack River. There are no Areas of Critical Environmental Concern (ACECs), Cold Water Fisheries, Surface Water Protection Zones, or Wellhead Protection Zones on the property.

According to the FEMA FIRM, none of the proposed work occurs at or below the 100-year floodplain elevation coinciding with the resource area Bordering Land Subject to Flooding (BLSF).

In November 2021, a qualified Wetland Professional in Training (WPIT®) field delineated the limit of Bordering Vegetated Wetland and Mean Annual High Water (MAHW) with a wetland flag series demarcated as WF flags series A100 through A114, and a Bank (MAHW) Flag Series BA100-115. BVW was delineated in accordance with the guidance document *Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act* published by the MassDEP Division of Wetlands and Waterways in March 1995. All wetland flags were located via survey and plotted to the Existing Conditions Plan herein by a Professional Land Surveyor (PLS) (refer to Site Plan as Attachment F).

The resource areas impacting activities on-site are the following:

- Bordering Vegetated Wetlands (BVW) and the associated 100-foot Buffer Zone under the WPA and the 75' No Build Zone under the Local Bylaw
- 200-foot Riverfront Area associated with an unnamed perennial stream

Buffer Zones and Setback Zones

Buffer Zone is defined in 310 CRM 10.04 as “that area of land extending 100 feet horizontally outward from the boundary of any area specified in 310 CMR 10.02(1)(a).” Buffer Zone within the area of interest is associated with BVW and Bank.

Work within the Buffer Zones/Riverfront to both MAHW and BVW fall under the jurisdiction of both the Massachusetts Wetlands Protection Act and Boxford Wetland Bylaw, and both have a 100-foot Buffer Zone horizontally off the limits of resource area.

Bordering Vegetated Wetlands (BVW)

BVW was delineated to the extent that it would broadcast associated buffer zone toward the limits of proposed work on the property. The delineation was based on observations of where vegetative species composition transitions from dominance of wetland indicator species to dominance of upland indicator species. Other notable characteristics were the presence of standing water and surface hydrology within the BVW complex, and saturated hydric soils. The water table was shallow and observed at 18 inches.

BVW was delineated with one (1) flag series, identified as Series A as follows:

A-series Wetland

The limit of BVW associated with the A-series wetland was demarcated with a single series of seven (7) wetland flags labeled A (100 through 106).

Wetland indicator plant species within the wetland included cinnamon fern (*Osmundastrum cinnamomeum*, FACW), red maple (*Acer rubrum*, FAC), cattail (*Typha latifolia*, OBL), tussock sedge (*Carex stricta*, OBL), winterberry (*Ilex verticillata*, FACW), sensitive fern (*Onoclea sensibilis*, FACW), soft rush (*Juncus effuses*, OBL), and highbush blueberry (*Vaccinium corymbosum*, FACW).

On the up-gradient side of the wetland flags, upland species such as red oak (*Quercus rubra*, FACU), white pine (*Pinus strobus*, FACU), and American beech (*Fagus grandifolia*, FACU) become dominant species, and no indicators of surface hydrology or hydric soils were observed.

Riverfront Area (MAHW)

MAHW was delineated to the extent that it broadcasts associated 200-foot Riverfront Area on the subject property. The delineation was based on field indicators of bank full condition. In this circumstance, MAHW is coincident to Inland Bank.

MAHW was delineated with one (1) flag series, identified as Series BA as follows:
BA Series (Bank Flags)

The limit of MAHW associated with the Bank flag series was demarcated with a series of sixteen (16) wetland flags labeled BA (100 through 115).

Proposed Work

The following section provides detail on the project proposed within the 200-foot Riverfront Area to the unnamed perennial river and 100-foot Buffer Zone to BVW.

The house has been located to be within the 200-foot minimum diameter of the lot width. The location of the proposed subsurface sewage system is limited to the front of the property due to proximity to drinking water wells on abutting properties and protectable resource areas.

As planned, effective construction-related erosion and sediment controls will be implemented such that adverse impacts to resources areas will be avoided and the Interests of the Wetlands Protection Act upheld. All efforts will be made to avoid impacts to resource areas on-site and adjacent to the proposed project. The project, as proposed, is designed to protect the interests of the Wetlands Protection Act as defined by 310 CMR 10.01 (2). Please refer to **Table 1-1** for Riverfront Area Impact calculations below.

Because of the construction of the house, the well on the neighboring property must be relocated to conform to the Town of Boxford Board of Health regulations. The two properties are under common ownership. A separate RDA is planned for that scope of work to be filed concurrently with this NOI.

Table 1-1: Riverfront Area Impacts

	Total existing	Proposed work within 100-foot inner riparian zone	Proposed work within the 100-200
RIVERFRONT AREA	±59,796 SF	0 SF	5100 SF

Table 1-2: Buffer Zone Impacts

	Existing (sf)	Proposed (sf)	Net (± sf)
100' Buffer	0	1,300	1,300
75' NBZ	0	0	0

Performance Standards

Bordering Vegetated Wetland (BVW)

There is no work proposed within BVW, however work is proposed within the 100-foot buffer zone to BVW. There are no regulatory performance standards for the 100-foot Buffer Zone to BVW under 310 CMR 10.00. The scope of work proposed has been designed to meet the regulatory standards for work within the 100-foot Buffer Zone of the BVW. With BMPs for wetland protection during construction and permanent stabilization of alterations within the buffer zone following construction, we anticipate that there will be no adverse impact to BVW (See Table 2-1, Compliance with Performance Standards for Bordering vegetated Wetlands (310. CMR. 10.55).

Table 2-1, Compliance with Performance Standards for Bordering Vegetated Wetlands (310 CMR 10.55)

BORDERING VEGETATED WETLAND PERFORMANCE STANDARD	COMPLIANCE WITH PERFORMANCE STANDARD
310 CMR 10.55(4)(a): Where the presumption set forth in 310 CMR 10.55(3) is not overcome, any proposed work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of said area.	No alteration within BVW is proposed.
310 CMR 10.55(4) (b): Notwithstanding the provisions of 310 CMR 10.55(4) (a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of up to 5,000	The entire portion of BVW will not be permanently altered in any way. Work proposed within 100' Buffer to BVW and local 75' NBZ will not alter or impact the wetland resource area and its existing conditions.

BORDERING VEGETATED WETLAND PERFORMANCE STANDARD	COMPLIANCE WITH PERFORMANCE STANDARD
square feet of Bordering Vegetated Wetland when said area is replaced in accordance with the following general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost.	
310 CMR 10.55(4)(c): Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of a portion of Bordering Vegetated Wetland when:	
a. said portion has a surface area less than 500 square feet;	No surface area permanent alteration will occur.
b. said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands; and	No portions of the near shore and uplands are being removed.
c. in the judgment of the issuing authority it is not reasonable to scale down, redesign or otherwise change the proposed work so that it could be completed without loss of said wetland.	There will be no loss of the wetland resource area itself. The impacts to the BVW Buffer zone will be outweighed by the proposed improvements to the project site, which includes pervious landscape design and stormwater management.
d. Notwithstanding the provisions of 310 CMR 10.55(4)(a),(b) and (c), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.	The Project Proponent is filing a Simplified MESA Permit application simultaneously to this NOI. The applicant and proponent understand that they are responsible for providing the information required for this review process and anticipates working with MassDEP and the local conservation commission to see this through a compliant approval.
(e) Any proposed work shall not destroy or otherwise impair any portion of a Bordering Vegetated Wetland that is within an Area of Critical Environmental Concern designated by the Secretary of Energy and Environmental Affairs under M.G.L. c. 21A, § 2(7) and 301 CMR 12.00: Areas of Critical Environmental Concern. 310 CMR 10.55(4)(e):	
a. supersedes the provisions of 310 CMR 10.55(4)(b) and (c);	Not applicable

BORDERING VEGETATED WETLAND PERFORMANCE STANDARD	COMPLIANCE WITH PERFORMANCE STANDARD
b. shall not apply if the presumption set forth at 310 CMR 10.55(3) is overcome;	Not applicable
c. shall not apply to work proposed under 310 CMR 10.53(3)(l); and	310 CMR 10.53(3) (l) references the construction, reconstruction, operation, or maintenance of water dependent uses. Water-dependent uses are specifically defined in 310 CMR 9.12 and include shore protection structures, such as seawalls, bulkheads, revetments, and any associated fill which are necessary either to protect an existing structure from natural erosion or to protect, construct, or expand a water-dependent use. Therefore, not applicable.
d. shall not apply to maintenance of storm water detention, retention, or sedimentation ponds, or to maintenance of storm water energy dissipating structures, that have been constructed in accordance with a valid order of conditions.	Not applicable

Riverfront Area

The project has been designed to minimize all project impacts within the 200-foot Riverfront Area, wetland resource areas and associated buffer zones in protection of all interest in wetland protection defined in the WPA and the Boxford Wetland Bylaw.

Based on field survey, in the existing condition there is 59,796 square feet of Riverfront Area on the property. There is 1,000 square feet proposed of the construction of the house within the 200' Riverfront Area and proposed permanent alteration within 200' Riverfront Area is 5,100 square feet. This is below the threshold of 10% of the Riverfront Area within the lot.

Riverfront Area

In accordance with the Wetlands Protection Act Regulations, 310 CMR 10.58(4) (3.) (d)1., *"Within 200-foot Riverfront Areas, the issuing authority may allow the alteration of up to 5,000 square feet or 10% of the Riverfront Area within the lot, whichever is greater, on a lot recorded on or before October 6, 1997."*

Almost the entire lot and all the existing structures are within Conservation Commission jurisdiction. The proposed activities are located within previously disturbed areas and have been designed to minimize and mitigate impacts to the resource area.

The project is subject to the requirements of maximum alteration of 10% of the Riverfront Area, therefore we have provided Riverfront Alternatives Analysis herein, for the proposed 5,100± SF of Riverfront Area being altered. See Table 2-2, Compliance with Performance Standards for Riverfront Area (310 CMR 10.58).

Table 2-2, Compliance with Performance Standards for Riverfront Area (310 CMR 10.58)

RIVERFRONT AREA PERFORMANCE STANDARD	COMPLIANCE WITH PERFORMANCE STANDARD
<p>310 CMR 10.58(4): General Performance Standard. Where the presumption set forth in 310 CMR 10.58(3) is not overcome, the applicant shall prove by a preponderance of the evidence that there are no practicable and substantially equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c.131 § 40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. In the event that the presumption is partially overcome, the issuing authority shall make a written determination setting forth its grounds in the Order of Conditions and the partial rebuttal shall be taken into account in the application of 310 CMR 10.58 (4)(d)1. a. and c.; the issuing authority shall impose conditions in the Order that contribute to the protection of interests for which the riverfront area is significant.</p>	<p>Once construction is completed, all disturbed areas to be stabilized with loam and seed.</p>
<p>310 CMR 10.58(4)(a): Protection of Other Resource Areas. The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (Coastal Bank), 10.32 (Salt Marsh), 10.55 (Bordering Vegetated Wetland), and 10.57 (Land Subject to Flooding). When work in the riverfront area is also within the buffer zone to another resource area, the performance standards for the riverfront area shall contribute to the protection of the interests of M.G.L. c. 131, § 40 in lieu of any additional</p>	<p>As described previously, there is a small section of home within the 100-foot buffer zone to BVW and no work within the local 75-foot No-Build Buffer that will comply with the performance standards set forth by the Boxford Conservation Commission and the WPA 310 CMR 10.55.</p>

requirements that might otherwise be imposed on work in the buffer zone within the riverfront area.	
310 CMR 10.58(4) (b): Protection of Rare Species. No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate, or invertebrate species, as identified by the procedures established under 310 CMR 10.59 or 10.37, or which will have any adverse effect on vernal pool habitat certified prior to the filing of the Notice of Intent.	Coinciding to this NOI, the Applicant is applying for a Simplified MESA review permit for work within Priority Habitat Mapped 2136.
310 CMR 10.58(4) (c): Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 § 40.	Please see the alternatives analysis provided herein prior to this table, which concludes that there is no other practicable alternative with less adverse effects on the interests identified in M.G.L. c. 131 § 40, no other purpose other than constructing a residential single-family home for the Applicant, and no other logistical location to place the SFH due to physical and legal constraints on the lot that would comply with zoning, Title V and/or other regulating standards.

Riverfront Area Alternatives Analysis

In the existing condition, the project site consists of a previously cleared, vacant lot. The proposed work has been minimized to the outer limits of the existing Riverfront Area. There is a total of ±59,796 SF of Riverfront Area on site to which we are proposing to alter 5,100± SF or 8.5% of the existing Riverfront Area. This is below the threshold of 10%, for allowed disturbance of a riverfront area.

Scope of Alternatives. The scope of alternatives under consideration shall be commensurate with the type and size of the project. The issuing authority shall presume that alternatives beyond the scope described below are not practicable and therefore need not be considered.

The Alternatives Considered:

Alternative 1: "No-build" Scenario

- The no-build alternative would leave the lot undeveloped.

Alternative 2: Placing the house further into the lot and Riverfront Area

- This was the preference of the owner. Placing the proposed single-family home away from the existing street would increase impact and disturbance within the buffer zone to BVW (10,000 sf +/-). It is the goal of the project to reduce and minimize impact where

feasible since the entire riverfront area is prior disturbed and developed, so this option would not be favored.

Alternative 3: Previously Approved Plans (DEP File No. 114-634)

- This alternative was approved with the Boxford Board of Health and issued an Order of Conditions on October 8th, 1997, by the Boxford Conservation Commission and included a leaching pit, which is no longer allowed under code. This alternative is not preferred for many reasons, which include the determination that the portion of the stream located on this property is not intermittent. The Order of Conditions approved the construction of a single-family home with associated driveway, utilities, tree clearing, landscaping, grading and well within buffer zone to BVW. The proposed well location is ± 10 feet from the previous wetland boundary and within the 25-foot No Disturb Zone. The commission found that there was no other practicable alternative to site the well on the property. The applicant received a Hardship Provisions under the Boxford Wetlands Protection Bylaw Regulations for this. Sketching the Riverfront Area on now, the entire house was within Riverfront. The area of this home was about $\pm 16,000$ SF No work was conducted under this order.

Alternative 4: Preferred Alternative

- With this alternative, the proposed single-family home, driveway, and associated construction minimizes impacts while accommodating the proposed septic system in the front of the lot. The house is about 2,000 SF and only 1,000 sq ft +/- is within the Riverfront Area. The lot is extremely limited because of the 150' well radius proximity to drinking water wells on abutting properties and protectable resource areas. This option is also designed to preserve most of the large tree canopy in the back of the lot, as the proposed house is located and designed to be towards the front of the existing lot.

As outlined above, there are no practicable and substantially equivalent or logistic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 § 40. The work being proposed is intended to meet all other performance standards for all other resource areas associated with the Riverfront Area.

Estimated Habitat of Rare Wildlife and Priority Rare Species Habitat

As the scope of work is proposed within mapped Estimated and Priority Habitats for Rare Species as administered through the Massachusetts Endangered Species Act (MESA), the Applicant has submitted a MESA Simplified Review Application with NHESP. A copy of the MESA Simplified Review Application is provided herein as Attachment E.

Conclusion

As described herein, we believe the scope of work proposed has been designed to meet the performance standards for work within the 200' Riverfront Area and buffer zone to BVW. With standard Best Management Practices (BMPs) for erosion and sediment control during construction, we believe the physical activity of construction will not result in any impacts to the wetland resource areas. As such, we respectfully request that the Commission consider

issuance of an Order of Conditions to permit to work described herein. Thank you for your consideration in this matter.

Regards,
Hancock Associates on behalf of Mr. Charles Cochrane,

A handwritten signature in black ink that reads "Kristan M. Farr". The signature is written in a cursive, flowing style.

Kristan Farr
Project Wetland Scientist

cc: MassDEP Northeast Regional Office (EDEP)

Attachments:

- A – WPA Form 3 (EDEP Copy)
- B – Filing Fees
- C – Abutter Notification
- D – Figures
- E – MESA Simplified Review Application
- F – Permit Site Plan



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: **KFARRHSA**

Transaction ID: **1433159**

Document: **WPA Form 3 - NOI**

Size of File: **249.76K**

Status of Transaction: **In Process**

Date and Time Created: **10/6/2022:1:22:20 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 #:1433159
City/Town:BOXFORD

A.General Information

1. Project Location:

a. Street Address	CHADWICK FARM ROAD		
b. City/Town	BOXFORD	c. Zip Code	
d. Latitude	42.72459N	e. Longitude	71.04555W
f. Map/Plat #	6	g.Parcel/Lot #	2-11

2. Applicant:

Individual Organization

a. First Name	CHARLES	b.Last Name	COCHRANE
c. Organization			
d. Mailing Address	18 CHADWICK FARM ROAD		
e. City/Town	BOXFORD	f. State	MA
		g. Zip Code	01921
h. Phone Number	978-873-1731	i. Fax	
		j. Email	ccochrane@cochraneventilation.com

3.Property Owner:

more than one owner

a. First Name	CHARLES	b. Last Name	COCHRANE
c. Organization			
d. Mailing Address	18 CHADWICK FARM ROAD		
e. City/Town	BOXFORD	f.State	MA
		g. Zip Code	01921
h. Phone Number	978-873-1731	i. Fax	
		j.Email	ccochrane@cochraneventilation.com

4.Representative:

a. First Name	KRISTAN	b. Last Name	FARR
c. Organization	HANCOCK ASSOCIATES		
d. Mailing Address	185 CENTRE STREET		
e. City/Town	DANVERS	f. State	MA
		g. Zip Code	01923
h.Phone Number	978-777-3050	i.Fax	
		j.Email	kfarr@hancockassociates.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 HOUSE

7a.Project Type:

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Limited Project Driveway Crossing | 4. <input type="checkbox"/> Commercial/Industrial |
| 5. <input type="checkbox"/> Dock/Pier | 6. <input type="checkbox"/> Utilities |
| 7. <input type="checkbox"/> Coastal Engineering Structure | 8. <input type="checkbox"/> Agriculture (eg., cranberries, forestry) |
| 9. <input type="checkbox"/> Transportation | 10. <input type="checkbox"/> 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)?

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 #:1433159
 City/Town:BOXFORD

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:
SOUTHERN ESSEX		33198	500

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. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
----------------------------------	----------------	----------------

b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
---	----------------	----------------

c. <input type="checkbox"/> Land under Waterbodies and Waterways	1. Square feet	2. square feet
--	----------------	----------------

	3. cubic yards dredged	
--	------------------------	--

d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
--	----------------	----------------

	3. cubic feet of flood storage lost	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 checked="" type="checkbox"/> Riverfront Area	Unnamed	
	1. Name of Waterway (if any)	

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 checked="" type="checkbox"/> 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project	59796 square feet
--	-------------------

4. Proposed Alteration of the Riverfront Area:

5100	0	5100
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

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 #:1433159
 City/Town:BOXFORD

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. <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 Beaches	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
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, crea.
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

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:2022 MASSMAPPER

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	11000/4% percentage/acreage
(b) outside Resource Area	3000/1% 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.

□ **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 #:1433159

City/Town:BOXFORD

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:

North Shore - Hull to New Hampshire:

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

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

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 #:1433159
City/Town:BOXFORD

- 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)).
- 4. 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:

PROPOSED				
SUBSURFACE	HANCOCK			
SEWAGE DISPOSAL	ASSOCIATES	CHARLES E. WEAR, III, P.E.	October 5, 2022	1"=20'
SYSTEM PLAN				

- 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.

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 #:1433159
City/Town:BOXFORD

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.

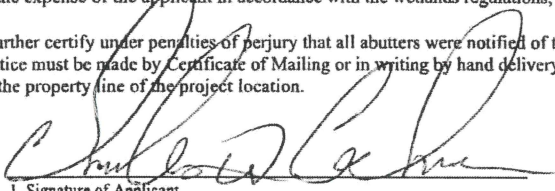
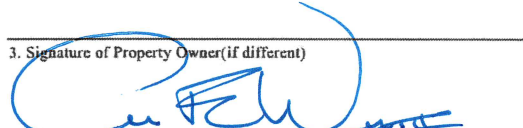
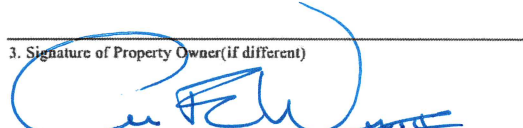
Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number	8880	3. Check date	10/4/2022
4. State Check Number	Charles	5. Check date	Cochrane
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	10-3-22
3. Signature of Property Owner (if different)		4. Date	
5. Signature of Representative (if any)		6. Date	10/4/22

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.

Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 3 - Notice of Wetland Fee Transmittal
Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 MassDEP File #:
 eDEP Transaction #:1433159
 City/Town:BOXFORD

A. Applicant Information

1. Applicant:

a. First Name	CHARLES	b. Last Name	COCHRANE
c. Organization			
d. Mailing Address	18 CHADWICK FARM ROAD		
e. City/Town	BOXFORD	f. State	MA
		g. Zip Code	01921
h. Phone Number	9788731731	i. Fax	
		j. Email	ccochrane@cochraneventilation.com

2. Property Owner:(if different)

a. First Name	CHARLES	b. Last Name	COCHRANE
c. Organization			
d. Mailing Address	18 CHADWICK FARM ROAD		
e. City/Town	BOXFORD	f. State	MA
		g. Zip Code	01921
h. Phone Number	9788731731	i. Fax	
		j. Email	ccochrane@cochraneventilation.com

3. Project Location:

a. Street Address	CHADWICK FARM ROAD	b. City/Town	BOXFORD
-------------------	--------------------	--------------	---------

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	RFA MULTIPLIER 1.5	750.00
		City/Town share of filing fee \$387.50	State share of filing fee \$362.50	Total Project Fee \$750.00

Joanne E. Cochrane
Charles W. Cochrane
18 Chadwick Farm Rd.
Boxford, Ma 01921

53-179/113

8877

Date 10/4/22

Pay to Hancock Assoc the order \$ 416.88
Four Hundred Sixteen & 88/100 Dollars

Eastern Bank
Boston, MA 02110
easternbank.com
1-800-EASTERN

Memo

Joanne E Cochrane MP

Thomas Kinkadee

A Light in the Storm © 1995 Thomas Kinkadee

THOMAS KINKADEE

Joanne E. Cochrane
Charles W. Cochrane
18 Chadwick Farm Rd.
Boxford, Ma 01921

53-179/113

8879

Date 10/4/22

Pay to Town of Boxford the order \$ 1,475.00
one thousand four hundred seventy five & 00/100 Dollars

Eastern Bank
Boston, MA 02110
easternbank.com
1-800-EASTERN

Memo Cons com

Charles W Cochrane MP

Thomas Kinkadee

The Sea of Tranquility © 1998 Thomas Kinkadee

THOMAS KINKADEE

Joanne E. Cochrane
Charles W. Cochrane
18 Chadwick Farm Rd.
Boxford, Ma 01921

53-179/113

8880

Date 10/4/22

Pay to Town of Boxford the order \$ 387.00
three hundred eighty seven dollars and 00/100 Dollars

Eastern Bank
Boston, MA 02110
easternbank.com
1-800-EASTERN

Memo Vetlands ACT

Charles W Cochrane MP

Thomas Kinkadee

© DELUXE deluxe.com/checks

Security Copy © 2009 Thomas Kinkadee

THOMAS KINKADEE

Notification to Abutters Under the Massachusetts
Wetlands Protection Act And the Boxford Wetlands Bylaw

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

- A. The name of the applicant is Charles Cochrane.
- B. The applicant has filed a
 Determination of Applicability
 Notice of Intent
 Abbreviated Notice of Resource Area Delinestation

with the Conservation Commission of the Town of Boxford seeking permission to remove, fill, dredge or alter an area subject to protection under the wetland protection act (General Laws Chapter 131, Section 40).

- C. The address where the activity is proposed is Lot 4 Chadwick Farm Road
- D. The activity consists of construction of a single-family house.
- E. Copies of the filing may be examined at the Conservation Commission Office, Town Hall, between the hours of 8:30am and 2 PM on Monday to Thursday. For more information, call (978) 887-6000.
- F. Copies of the Notice of Intent may be obtained from Hancock Associates by calling (978) 777-3050 during the hours 8am - 4pm, Monday - Friday.
- G. Information regarding the date, time and place of the public hearing may be obtained from the Conservation Commission Office by calling (978) 887-6000 during the hours listed above.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in the Tri Town Transcript.

NOTE: 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 The Boxford Conservation Commission or the Department of Environmental Protection (DEP) Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP call the Northeast Regional Office at (978) 694-3200.

06-02-11- LOT 4 CHADWICK FARM RD, BOXFORD ABUTTERS LIST
 CONSERVATION COMMISSION 250'

Parcel ID	Location	Owner	Owner 2	Owner Address	Owner City/Town	Owner State	Zip Code
06-02-10	18 CHADWICK FARM RD	COCHRANE JOANNE E TR	JOANNE E COCHRANE 2008 TR	18 CHADWICK FARM RD	BOXFORD	MA	01921
06-02-11	LOT4 CHADWICK FARM RD	COCHRANE CHARLES W TR	CHARLES W COCHRANE 2008 TR	18 CHADWICK FARM RD	BOXFORD	MA	01921
06-02-12	20 CHADWICK FARM RD	STEEN EDWARD TE	STEEN DIANNE	20 CHADWICK FARM RD	BOXFORD	MA	01921
06-02-13	19B CHADWICK FARM RD	CATTAN MICHAEL F TE	CATTAN REGINA F	19 B CHADWICK FARM RD	BOXFORD	MA	01921
06-02-14	19A CHADWICK FARM RD	PRICE THOMAS M TE	PRICE SHEILA R	19A CHADWICK FARM RD	BOXFORD	MA	01921
06-02-02-A	WASHINGTON ST	PRICE THOMAS M		19A CHADWICK FARM RD	BOXFORD	MA	01921
06-02-02-B	22 WASHINGTON ST	PRICE THOMAS M		19A CHADWICK FARM RD	BOXFORD	MA	01921
06-02-04-B	4 WASHINGTON ST	ROMBULT PHILIP A	ROMBULT MARTINA	4 WASHINGTON ST	BOXFORD	MA	01921
06-02-08	2 CHADWICK FARM RD	NICOLAOU CONSTANTINO TR	CONSTANTINO NICOLAOU LIVING TRUST	2 CHADWICK FARM RD	BOXFORD	MA	01921
06-02-09	8 CHADWICK FARM RD	LANG HEIDI OUSLER	LANG STEPHEN BRYSON	8 CHADWICK FARM RD	BOXFORD	MA	01921

CERTIFIED COPY

9/29/22
 Heather Shufault

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, Kristan Farr, hereby certify under the pains and penalties of perjury that on October 5, 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, in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by Charles Cochrane with the Boxford Conservation Commission on October 5, 2022 for property located at Lot 4 Chadwick Farm Road.

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.

Kristan M. Farr

Signature

10/6/2022

Date

National Flood Hazard Layer FIRMMette



71°3'5"W 42°43'41"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

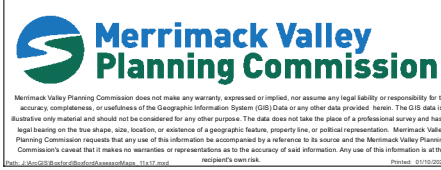
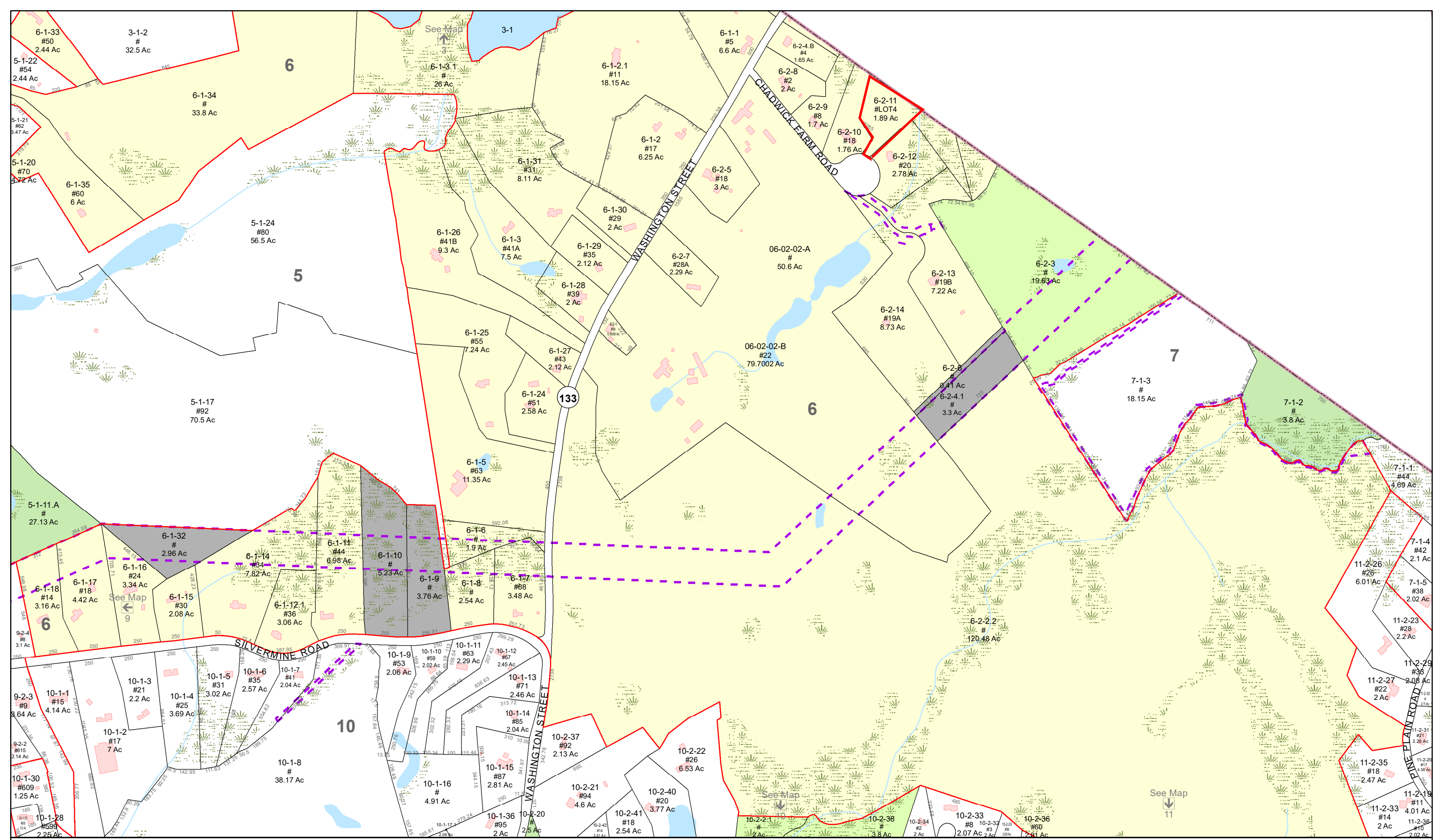
SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

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 9/29/2022 at 10:43 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.

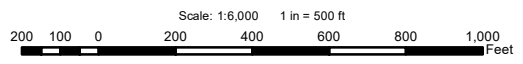
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory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



Notes
 This map is for assessment purposes only. It is not a valid document for legal description or conveyance. Lot dimensions were compiled from existing assessor maps and survey based plans. For legal determination please refer to parcel specific deeds or the Town of Boxford Assessor Office.
 * Wetlands Note: The wetlands shown on the map do not depict their actual extent or boundary. A wetlands scientist should be consulted if a delineation is required.

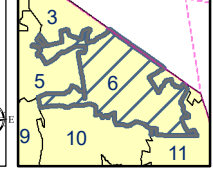
Map Revision Date: January 1, 2021

**Town of Boxford
 Property Parcel Maps
 6**



Legend

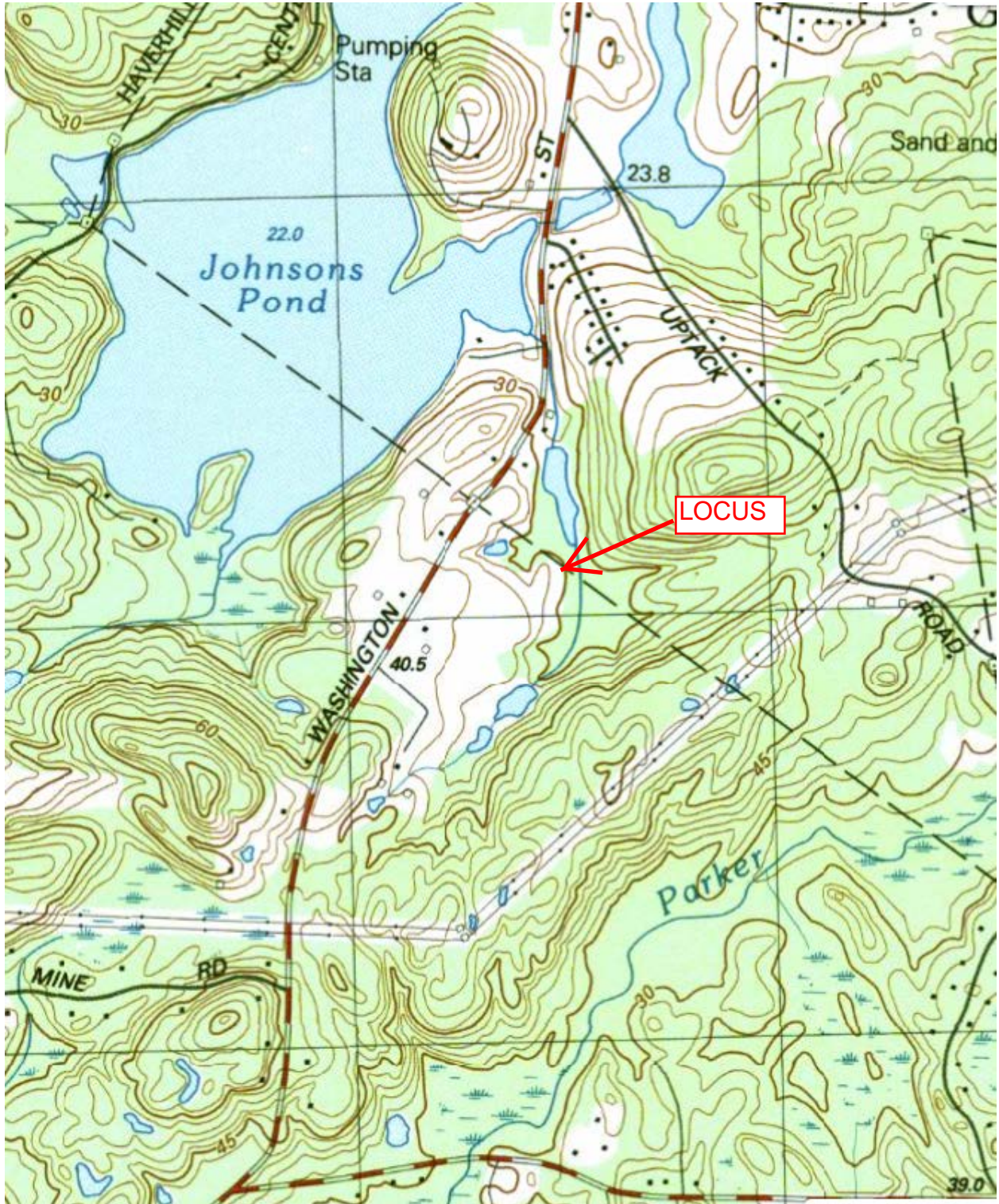
Adj. Maps	Streams
Town Boundaries	Wetlands
Map Boundaries	Commercial Land Use
Property Parcels	Industrial Land Use
Easements	State
Building Footprint	County
Hydrographic Features	Municipal
	Private



HANCOCK ASSOCIATES

Surveyors | Engineers | Scientists

Locus Map: 18 Chadwick Farm Road, Boxford





MASSWILDLIFE

MASSACHUSETTS PROJECT REVIEW CHECKLIST

Massachusetts Endangered Species Act M.G.L. c.131A and Regulations (321 CMR 10.00)

Project Details

*Project or Site Name: Lot 4 Chadwick Farm Road

*Street Address/Location: Lot 4 Chadwick Farm Road

*Town(s): Boxford/Groveland

*Total Site Acreage: 6.23 *Acreage of Disturbance¹: 11,000

Parcel/lot number: 6 Assessors map/plat number: 2-11

Project Description (If necessary, a project/site description can also be provided as an attachment): Construction of a single-family house

Registry of deeds information²

Registry: Essex South Certificate # (if registered land): _____

Book: 33198 Page Number: 500

Do you have a previous NHESP Tracking number? (Yes / **No**) If yes, please provide: _____

Will this project require a filing with the Conservation Commission and/or DEP pursuant to the Wetlands Protection Act (WPA)? **(Yes / No)**

Map

*Required: Enclose a map with the site location clearly marked and centered on the page.

Landowner Info

*Are you the Record Owner³ of the property? (Yes / **No**)

*If No, are you a representative of the Record Owner or do you have permission from the Record Owner to submit this request or filing?⁴ **(Yes / No)**

Charles Cochrane

*Landowner Name	*City/Town	*State	*Zip Code
18 Chadwick Farm Road	Boxford	MA	01921
*Street Address/Location	*City/Town	*State	*Zip Code
ccochrane@cochraneventilation.com	(978) 973-1731		
Email	Telephone		

Comments/Purpose of request⁵: _____

¹ Please disclose the full acreage of disturbance associated with the project, including areas outside of Priority Habitat.
² If your project contains more than one registered property, please attach a document listing the Registry information for each.
³ Record Owner means any person or entity holding a legal or equitable interest, right or title to real property, as reflected in a written instrument or recorded deed, or any person authorized in writing by such person.
⁴ If you are not the record owner, a statement or proof that you are authorized by the record owner must be attached.
⁵ Provide the authorization you have to submit this request if you are not the record owner and not a representative of the record owner.

Applicant Info

Applicant Name (if different from Landowner)

Street Address/Location City/Town State Zip Code

Email (if available) Telephone

Representative Info

Kristan Farr, Hancock Associates

Applicant Name (if different from Landowner)

185 Centre Street Danvers MA 01923

Street Address/Location City/Town State Zip Code

kfarr@hancockassociates.com (978) 777-3050

Email (if available) Telephone

*Required Documents

- USGS map (1:24,000 or 1:25,000) with property boundary clearly outlined
- Project plans for entire site (including wetland Resource Areas, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work)
- Assessor's map or right-of-way plan of site
- Statement/proof that applicant is the Record Owner or that applicant is a person authorized in writing by the record owner to submit this filing
- Photographs representative of the site

Projects altering 10 or more acres, must also submit:

- A vegetation cover type map of the site
- Project plans showing Priority Habitat boundaries

The Division will notify you within 30 days if the materials submitted do not satisfy the filing requirements under 321 CMR 10.20. The Division may request additional information, such as, but not limited to, species and habitat surveys. A request for additional information would come within 30 days of receiving a complete filing.

*Filing Fee

Fee schedule is available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>

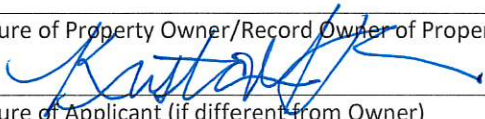
*Total MESA Fee Enclosed: \$300.00 Payable via check to **Comm. of MA - NHESP**

*Required Signatures

I hereby certify under the pains and penalties of perjury that the information contained is true and complete to the best of my knowledge.

Signature of Property Owner/Record Owner of Property

Date



10/6/2022

Signature of Applicant (if different from Owner)

Date

Please mail this completed form, with the required document and fee to:
NHESP Regulatory Review | MassWildlife Field Headquarters | 1 Rabbit Hill Road | Westborough, MA 01581

ASSESSORS:

MAP 06, BLOCK 02, LOT 11

REFERENCES:

DEED BOOK 33198, PAGE 500
PLAN BOOK 264 PLAN 28

RECORD OWNER:

THE CHARLES W. COCHRANE 2008 TRUST

SOIL TEST DATA

PERCOLATION TESTING:

SOIL EVALUATOR
JAMES J. POLAKIEWICZ E.I.T. SE#14369

BOARD OF HEALTH AGENT
MARK CARLEO

PERC RATE	DEPTH	DATE
P1 2MP1	62"	8/3/22
P2 6MP1	65"	8/3/22

SOIL EVALUATOR
JAMES J. POLAKIEWICZ E.I.T.

BOARD OF HEALTH AGENT
KENDELL LONGO

TP1
0-23" Ap SL 10YR2/2 ROOTS
23-28" Bw SL 2.5YR4/4
28-112"+ C GLS 10YR4/4 BOULDERS, FRACT. LEDGE, FIRM IN PLACE

NO WEEPING, NO STANDING, NO REFUSAL, NO MOTTLING

TP2
0-16" Ap SL 10YR2/1 ROOTS
16-34" Bw SL 7.5YR4/4
34-106"+ C GLS 10YR4/4 BOULDERS, FRACT. LEDGE, FIRM IN PLACE

NO WEEPING, NO STANDING, NO REFUSAL, NO MOTTLING

TP3
0-19" Ap SL 10YR2/2 ROOTS
19-24" Bw SL 7.5YR2/1
24-100"+ C GLS 10YR3/2 BOULDERS, FRACT. LEDGE, FIRM IN PLACE

NO WEEPING, NO STANDING, NO REFUSAL, NO MOTTLING

TP4
0-23" O/Ap SL 10YR2/2 ROOTS
23-36" Bw LS 7.5YR2/1
36-115"+ C GLS 10YR3/2 BOULDERS, FRACT. LEDGE, FIRM IN PLACE

NO WEEPING, NO STANDING, NO REFUSAL, NO MOTTLING

LEGEND

- 102--- SURFACE CONTOUR
- 102--- PROPOSED CONTOUR
- 102--- EDGE OF PAVEMENT
- 102--- EDGE OF WOODED AREA
- 102--- RETAINING WALL
- 79.3 WFA2 LIMIT OF WETLAND FLAGS WITH FLAG NUMBER AND ELEVATION
- 150' WETLAND BUFFER ZONE LIMIT OF 150-FOOT WETLAND BUFFER ZONE (LOCAL CODE 209-1.E)
- 100' WETLAND BUFFER ZONE LIMIT OF 100-FOOT WETLAND BUFFER ZONE
- 75' WETLAND BUFFER ZONE LIMIT OF 75-FOOT WETLAND BUFFER ZONE
- 100' INNER RIPARIAN ZONE LIMIT OF 100-FOOT INNER RIPARIAN ZONE
- 200' RIVERFRONT ZONE LIMIT OF 200-FOOT RIVERFRONT ZONE
- 2136 PRIORITY HABITAT 2136

- 100.7 SPOT ELEVATION
 - 93.7 12"M PROMINENT DECIDUOUS TREE WITH ELEVATION, SIZE AND SPECIES
 - 96.2 18"P PROMINENT CONIFEROUS TREE WITH ELEVATION, SIZE AND SPECIES
 - DMH DRAIN MANHOLE
 - CB CATCH BASIN
 - 101.7 TEST PIT WITH ELEVATION
 - 100.3 PERC PIT WITH ELEVATION
 - (FD) FOUND
 - I.ROD IRON ROD
 - BIT. CONC. BITUMINOUS CONCRETE
 - B.G. BELOW GRADE
 - A.G. ABOVE GRADE
 - SAS SOIL ABSORPTION SYSTEM
- TREE ABBREVIATIONS**
- M MAPLE
 - O OAK
 - P PINE
 - C CEDAR
 - BC BLACK CHERRY

SURVEY NOTES:

1) THE VERTICAL DATUM FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SAID DATUMS WERE ESTABLISHED VIA GPS OBSERVATIONS UTILIZING NAD83 (NA2011) EPOCH 2010.00 (MYCS2) AND GEOID 18.

2) UTILITIES SHOWN HEREON FROM FIELD LOCATIONS OF SURFACE STRUCTURES. NO UNDERGROUND UTILITIES WERE INCLUDED AS PART OF THIS SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK AND TO CONTACT "DIG-SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR CONSTRUCTION.

3) LIMITS OF BORDERING VEGETATED WETLANDS SHOWN HEREON WERE DELINEATED BY HANCOCK ASSOCIATES ON 11/1/21 AND LOCATED BY FIELD SURVEY. LIMITS OF UNNAMED PERENNIAL STREAM ASSOCIATED WITH MEAN ANNUAL HIGH WATER (MAHW) WERE FIELD DELINEATED ON 11/1/21 BY HANCOCK ASSOCIATES AND SURVEY LOCATED ON 8/26/22

CONSTRUCTION KEY NOTES:

(NOT A CONSTRUCTION SEQUENCE)

- 01 INSTALL EROSION CONTROL, EROSION CONTROL SHALL SERVE AS LIMIT OF WORK
- 02 REMOVE AND REPLACE FILL, A AND B SOIL HORIZONS WITH SELECT SOIL FILL.
- 03 INSTALL 1500 GAL TWO COMPARTMENT SEPTIC TANK AND CONNECTING PIPE
- 04 INSTALL 6-OUTLET DISTRIBUTION BOX AND CONNECTING PIPE. TEE REQUIRED
- 05 INSTALL FOUR (5) 3' LONG 2'x2' STONE TRENCHES
- 06 INSTALL INSPECTION PORT
- 07 ALL DISTURBED AREAS SHALL BE BACKFILLED, FINISH GRADED, AND HYDROSEEDED WITH ANNUAL RYEGRASS OR LANDSCAPED

DESIGN CRITERIA

- SYSTEM IS DESIGNED TO ACCOMMODATE SANITARY SEWAGE ASSOCIATED WITH DOMESTIC USAGE CONSISTING OF PUTRESCIBLE WASTE AND FOR THE FLOWS CALCULATED.
- SYSTEM IS DESIGNED FOR THE USE OF A GARBAGE GRINDER, REQUIRING SIZING FOR 200% BASE FLOW RATE.
- FLOWS: 4 BEDROOMS @ 110 GPD = 440 GPD x 2 = 880 GPD
- SEPTIC TANK: 2 x FLOW REQUIRED 1500 GALLON TANK-MINIMUM SIZE 1000/500 GAL. TWO-COMPARTMENT TANK REQUIRED
- LEACHING AREA:
 - PERCOLATION RATE USED: <5 MIN/IN
 - SOIL CLASS: 1
 - APPLICATION RATE: 0.74 GPD/SF
 - TOTAL AREA REQUIRED - TITLE 5: (150% x 440 GPD)/(0.74GPD/SF) = 892 SF
 - TOTAL AREA REQUIRED - LOCAL CODE: 892 SF
 - TOTAL AREA PROVIDED:
 - FOUR (5) 30' LONG x 2' WIDE x 2' DEEP TRENCHES
 - BOTTOM AREA: 300 SF
 - SIDEWALL: 600 SF
 - TOTAL: 900 SF
 - CAPACITY PROVIDED: 900 SF x 0.74 GPD/SF = 666 GPD
 - MINIMUM GROUNDWATER OFFSET PROVIDED: 5'

ELEVATIONS

	DESIGN	AS-BUILT
TOP OF FOUNDATION	112.25	---
INVERTS	---	---
AT FOUNDATION	109.56	---
AT SEPTIC TANK INLET	109.34	---
AT SEPTIC TANK OUTLET	109.09	---
AT D-BOX INLET	109.06	---
AT D-BOX OUTLET	108.89	---

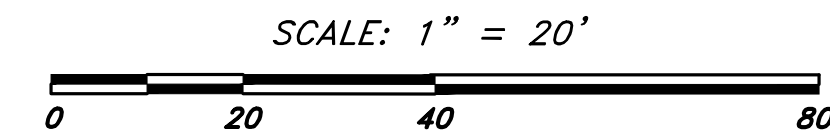
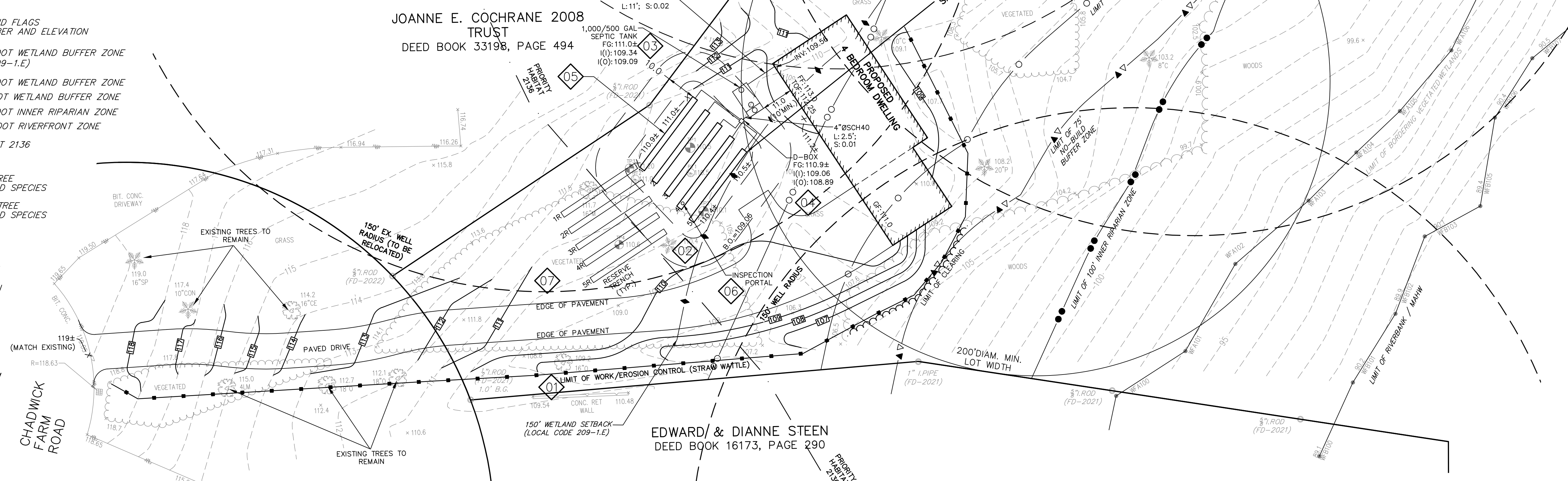
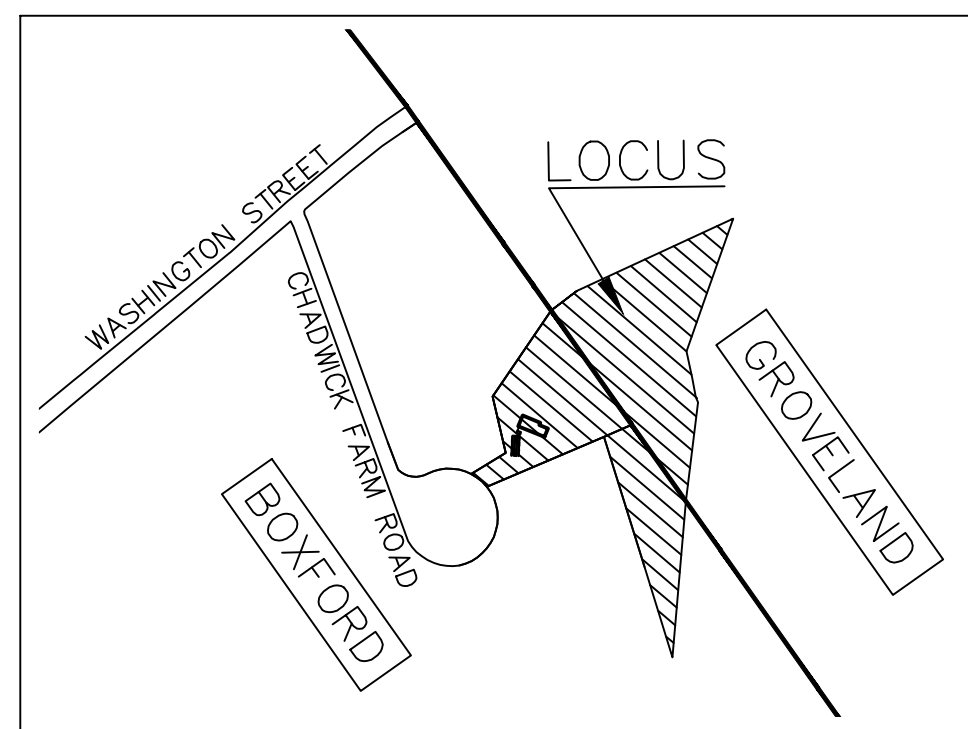
PRIMARY TRENCH ELEVATIONS

TRENCH	MIN PROPOSED GRADE	MAX PROPOSED GRADE	TOP & B.O.	INV @ START	INV @ END	BOTTOM	EXISTING GRADE	GROUND WATER ELEV [1]	OFFSET
1-5	110.4±	111.0±	109.06	108.56	108.41	106.41	110.80	101.27	5.14

RESERVE TRENCH ELEVATIONS

TRENCH	MIN PROPOSED GRADE	MAX PROPOSED GRADE	TOP & B.O.	INV @ START	INV @ END	BOTTOM	EXISTING GRADE	GROUND WATER ELEV [1]	OFFSET
1R-5R	110.4±	111.0±	109.06	108.56	108.41	106.41	110.50	101.27	5.14

[1] NO GROUNDWATER WAS OBSERVED DURING SOIL TESTING. GROUNDWATER IS ASSUMED AT ELEVATION 101.27 BASED ON TEST PIT "TP2" EXCAVATION DEPTH.



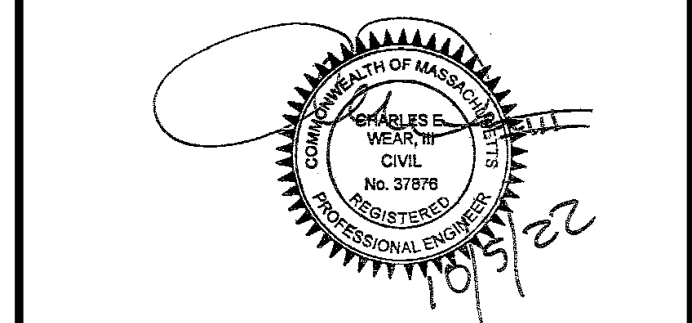
ELEVATION BENCH MARKS		
DATUM: NAVD88		
NO.	DESCRIPTION	ELEV.
1.	12" CEDAR STUMP / MAG NAIL(SET) 0.3 A.G.	108.32

Lot #4
Chadwick Farm
Road

Boxford, Massachusetts

PREPARED FOR
Charles W. Cochrane
220 Ballardvale Street
Wilmington, Massachusetts 01887

HANCOCK ASSOCIATES
Civil Engineers
Land Surveyors
Environmental Consultants
185 CENTRE STREET, DANVERS, MA 01923
VOICE (978) 777-3050, FAX (978) 774-7816
WWW.HANCOCKASSOCIATES.COM



NO.	BY	APP	DATE	ISSUE/REVISION	DESCRIPTION
DATE:	10/05/22	DESIGN BY:	MJS		
SCALE:	AS SHOWN	DRAWN BY:	MJS		
		CHECK BY:	CW		

PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM PLAN

DWG: 25409sds.dwg
LAYOUT: SDS
SHEET: 1 OF 2
JOB NO.: 25409

GENERAL NOTES

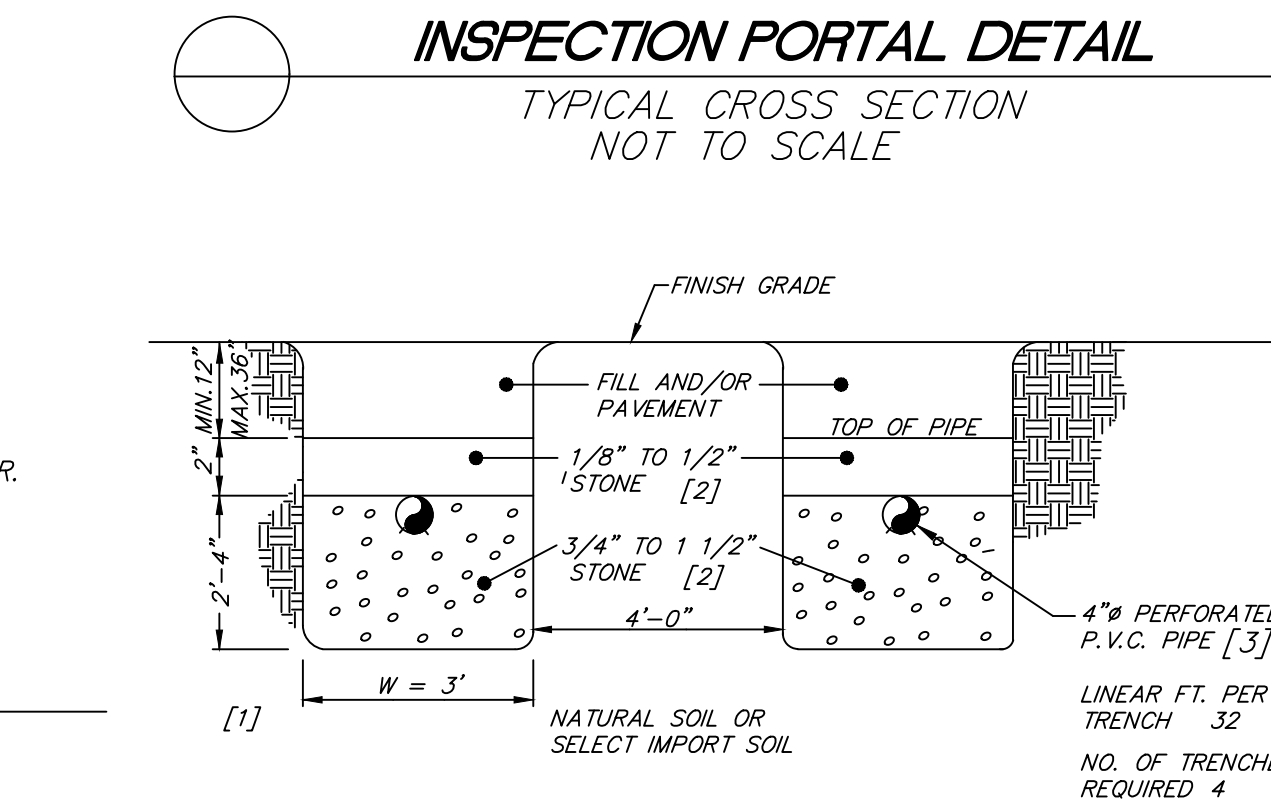
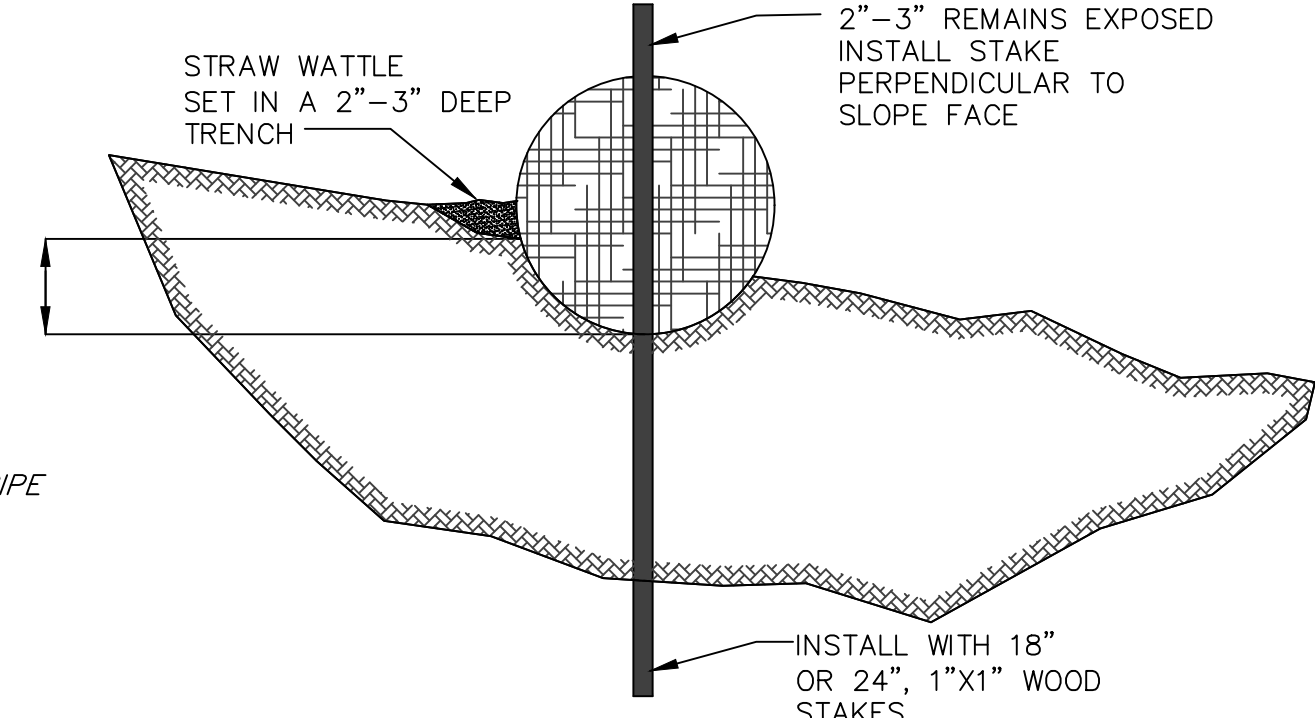
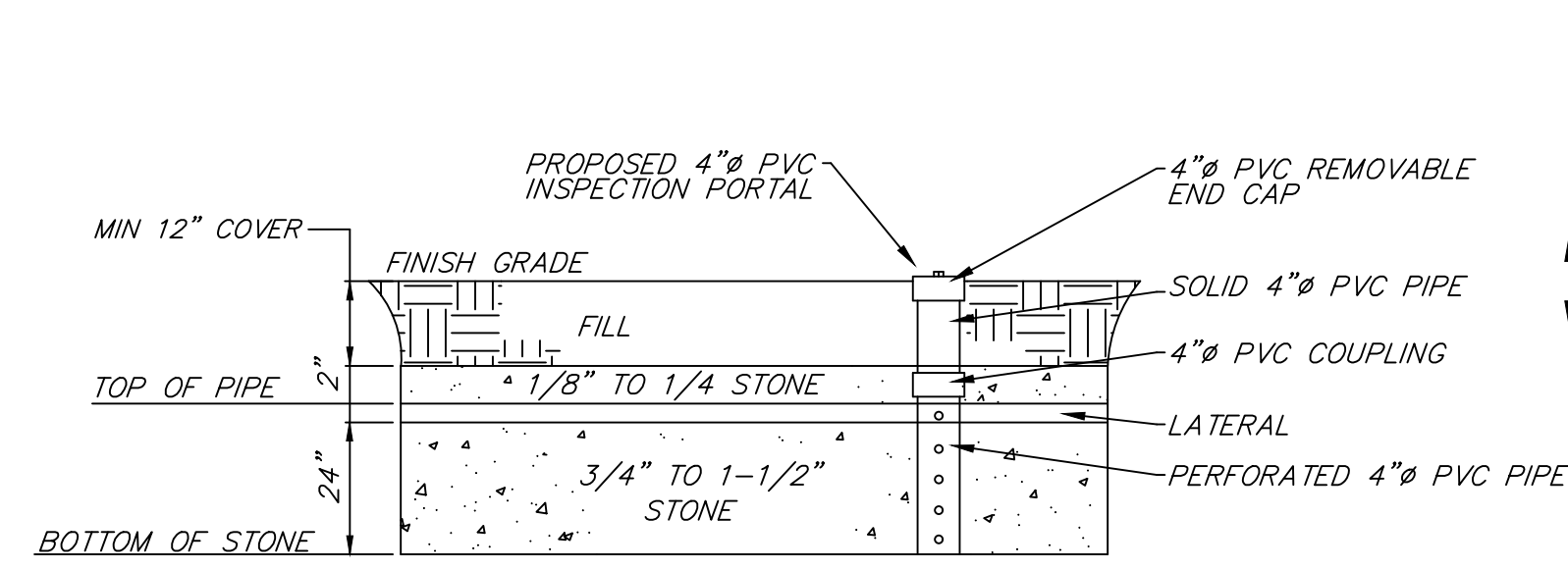
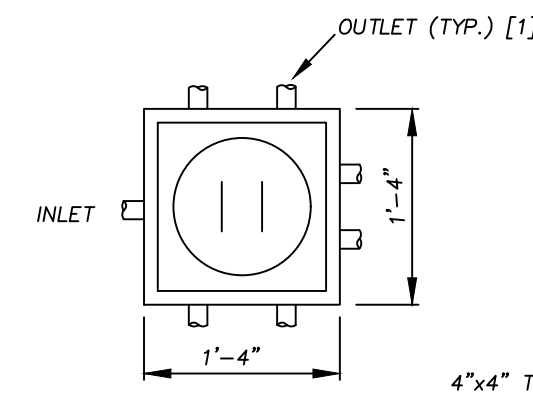
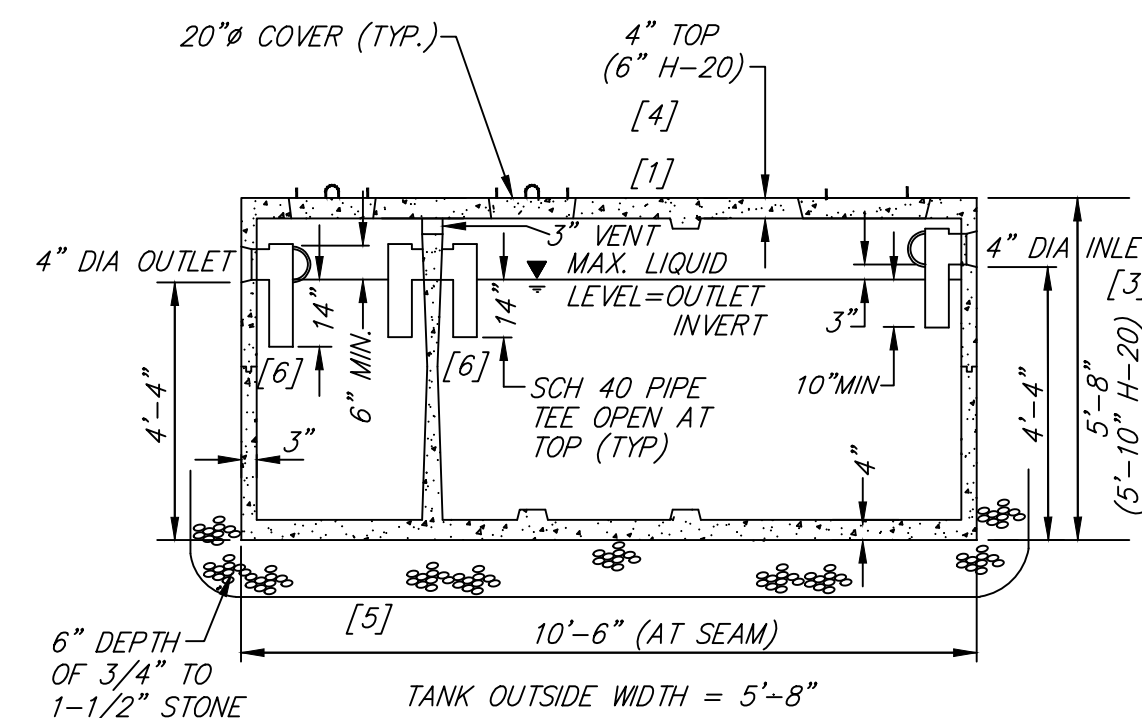
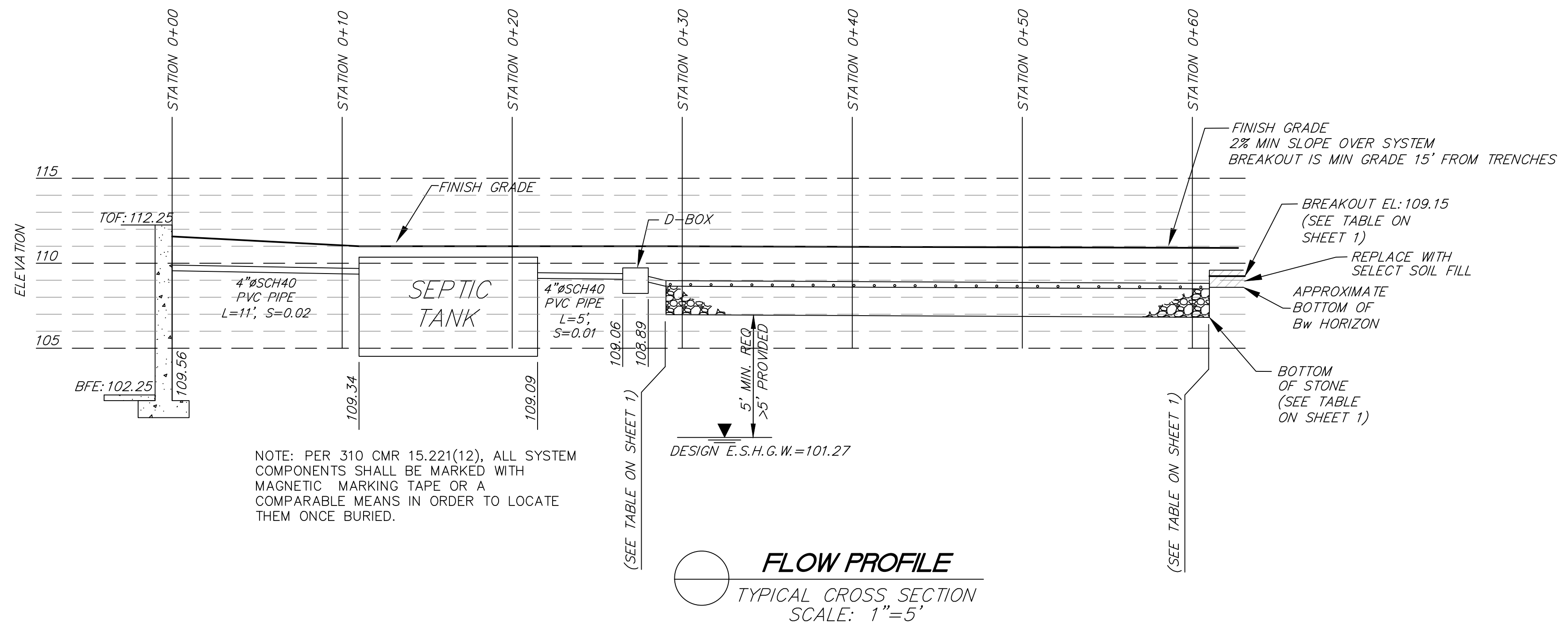
1. LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
2. UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
3. CONTRACTOR SHALL FURNISH CONSTRUCTION LAYOUT OF SEPTIC SYSTEM, AND SITE IMPROVEMENTS. THIS WORK SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR.
4. SAFETY MEASURES, CONSTRUCTION METHODS AND CONTROL OF WORK SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND/OR REMOVAL HEREON. DAMAGED IMPROVEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
6. ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
7. RIM ELEVATIONS SHOWN FOR NEW STRUCTURES ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR WITH MATERIAL TAKEOFFS. FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING, OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
8. WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH OWNER REQUIREMENTS.
9. ALL WORK ON SEWAGE DISPOSAL SYSTEM SHALL BE COMPLETED BY A LICENSED "DISPOSAL WORKS INSTALLER."
10. THE ISSUANCE OF A PERMIT TO CONSTRUCT, OR A CERTIFICATE OF COMPLIANCE, SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE DISPOSAL SYSTEM WILL FUNCTION SATISFACTORILY.
11. THE CONTRACTOR SHALL VERIFY THE LOCATION AND RELATIVE ELEVATION OF BENCH MARKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
12. STRUCTURE DETAILS FROM INDEPENDENT VENDORS ARE CONSTANTLY CHANGING. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT DETAILS SHOWN MATCH CURRENT DETAILS AND SPECIFICATIONS FROM VENDORS.
13. BACKWASH FROM A WATER SOFTENER SHALL NOT BE DISCHARGED INTO THE SUBSURFACE SEWAGE DISPOSAL SYSTEM, BUT INTO A SEPARATE DRY WELL OR ONTO GROUND PER 310 CMR 15.004(9).
15. PERIMETER OF SOIL ABSORPTION SYSTEM TO BE STAKED AND FLAGGED FROM BEFORE CONSTRUCTION UNTIL ISSUANCE OF CERTIFICATE OF COMPLIANCE, 15.246(2).
16. NO CHANGES ARE TO BE MADE IN THE FIELD WITHOUT THE APPROVAL OF THE BOARD OF HEALTH OR ITS DESIGNEE AND THE DESIGN ENGINEER.
17. PER 310 CMR 15.221(12), ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.

SITE NOTES

1. ALL SEWAGE DISPOSAL SYSTEM COMPONENTS ARE GREATER THAN 400 FEET AWAY FROM SURFACE WATER RESERVOIRS AND GREATER THAN 400 FEET FROM TRIBUTARIES TO SURFACE WATER RESERVOIRS.
2. ALL SEWAGE DISPOSAL SYSTEM COMPONENTS ARE GREATER THAN 300 FEET AWAY FROM GREAT PONDS AS DEFINED BY TOWN OF BOXFORD BYLAWS 2.4.201.15
3. THERE ARE NO WELLS WITHIN 150 FEET OF THE SOIL ABSORPTION AREA.
4. SITE DOES NOT LIE WITHIN A NITROGEN SENSITIVE AREA.
5. EROSION CONTROL SHOWN HEREON SHALL BE INSTALLED BEFORE EARTH DISTURBANCE OCCURS, AND SHALL SERVE AS THE LIMIT OF WORK.

REGULATORY NOTES

1. CONTRACTOR SHALL CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 811 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
2. CONTRACTOR SHALL MAKE HIMSELF AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
3. ALL WORK OUTSIDE OF BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF BUILDING FOUNDATIONS SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 248 CMR 2.00.
4. ALL WORK SHALL COMPLY WITH TITLE V AND LOCAL BOARD OF HEALTH REGULATIONS EXCEPT AS PROVIDED BY APPROVED WAIVERS.



EROSION CONTROL NOTES

1. EARTHEN STOCKPILES NOT IN ACTIVE USE FOR MORE THAN 48 HOURS SHALL BE KEPT HYDROSEEDED OR COVERED.
2. STRIPPED TOPSOIL SHALL BE DEPOSITED INSIDE LEASE LINE OR IN AREA DESIGNATED, BUT IN ALL CASES EROSION CONTROLS SHALL BE INSTALLED AT THE TOE OF SLOPES TO PREVENT EROSION. LOAM PILES TO BE HYDROSEEDED OR COVERED.
3. CONTRACTOR TO EMPLOY MEASURES TO CONTROL DUST DURING DEMOLITION AND CONSTRUCTION. ALL SOIL PILES NOT IN ACTIVE USE SHALL BE KEPT COVERED AND MOIST TO LIMIT DUST GENERATION. THE CONTRACTOR SHALL SUBMIT A DUST MANAGEMENT PLAN, FOR REVIEW AND ACCEPTANCE BY THE OWNER PRIOR TO COMMENCEMENT OF WORK. PARKING LOT AND STREET CLEANING SHALL BE DONE EVERY WEEK AS NEEDED. CONTINUOUSLY CLEAN DRIVES AND WALKS OF FALLEN OR WIND BLOWN DEBRIS.
4. EROSION CONTROL BARRIERS SHALL BE INSPECTED ON A DAILY BASIS AND MAINTAINED IN GOOD REPAIR AND REPLACED IF NECESSARY THROUGHOUT THE COURSE OF CONSTRUCTION. ACCUMULATED SEDIMENT TO BE REMOVED AFTER EACH RAINFALL AND AS OTHERWISE NEEDED.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT CONTROLS. COMPOST FILTER TUBES SHALL BE EMPLOYED TO PREVENT SEDIMENT FROM WASHING OFF THE SITE. SILT SACKS, CRUSHED STONE AND EROSION CONTROL TUBES SHALL BE PLACED AROUND CATCH BASINS AND STORM INLETS TO PREVENT SEDIMENT FROM WASHING INTO THE DRAINAGE SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SEDIMENT CONTROLS UNTIL THE COMPLETION OF THE PROJECT, AT WHICH TIME THE SEDIMENT CONTROLS ARE TO BE REMOVED WHEN APPROVED BY THE TOWN OF IPSWICH.
6. EROSION CONTROLS SHOWN ARE THE MINIMUM REQUIRED. CONTRACTOR TO INSTALL ADDITIONAL CONTROLS AS NEEDED TO ENSURE THAT NO SEDIMENTATION OCCURS BEYOND THE LIMIT OF WORK LINE. UPON COMPLETION OF GRADING, ALL AREAS SHALL BE LOAMED AND SEEDED OR HAY MULCHED OR SEEDED WITH RYE GRASS, AS REQUIRED.
7. ALL EXPOSED SURFACES NOT COVERED WITH LANDSCAPING OR PAVEMENT SHALL HAVE 1-INCH OF STRAW MULCH STREWN OVER THE AREAS TO PROTECT AGAINST EROSION AND WIND BLOWN DUST.

SEGMENT	DIA. (IN.)	MATERIAL [4]	MIN. SLOPE (IN/FT.)
BUILDING TO SEPTIC TANK	4	PVC SCH 40, ASTM D1785	1/4
D-BOX TO SOIL ABSORPTION AREA	4	PVC SCH 40, ASTM D1785	1/8 [2]
SOIL ABSORPTION AREA	4	PERFORATED [3] [6], SCH 40, ASTM D1785 (FOR GRAVITY SYSTEMS ONLY)	1/16

- [1] ALL PIPE SHALL BE PROPERLY BEDDED, HAUNCHED, BACKFILLED. ALL JOINTS SHALL BE WATERTIGHT.
- [2] PIPE SHALL BE LAID LEVEL, FIRST 2 FEET DOWNSTREAM FROM DISTRIBUTION BOX.
- [3] PERFORATIONS DOWN AT 5 AND 7 O'CLOCK (FOR GRAVITY SYSTEMS ONLY).
- [4] UNLESS OTHERWISE SPECIFIED ON FLOW PROFILE.

PIPE SPECIFICATIONS

**Lot #4
Chadwick Farm
Road**

Boxford, Massachusetts

PREPARED FOR:

**Charles W.
Cochrane**

220 Ballardvale Street
Wilmington, Massachusetts 01887

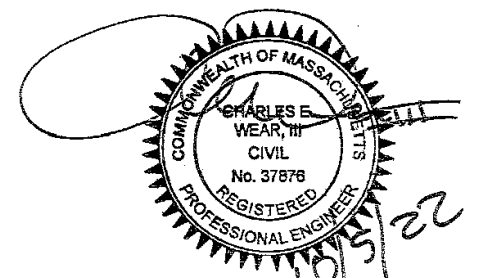
**HANCOCK
ASSOCIATES**

Civil Engineers

Land Surveyors

Environmental
Consultants

185 CENTRE STREET, DANVERS, MA 01923
WWW.HANCOCKASSOCIATES.COM



NO.	BY	APP	DATE	ISSUE/REVISION	DESCRIPTION
			10/05/22	DESIGN BY:	MJS
			SCALE: AS SHOWN	DRAWN BY:	MJS
				CHECK BY:	CW

**DETAIL
AND
NOTES**

DWG: 25409sds.dwg
LAYOUT: DET
SHEET: 2 OF 2
JOB NO.: 25409

2-2