

June 18, 2020
Revised: March 22, 2021

Westwood Conservation Commission
Westwood Town Hall
50 Carby St
Westwood, MA 02090

Re: Notice of Intent
Lot 2B Mill St, Westwood, MA (Map: 28, Parcel: 013, DEP File #338-0706)

Dear Westwood Conservation Commission (WCC):

Goddard Consulting, LLC (Goddard), is pleased to submit this supplemental information in regard to the Notice of Intent (NOI) on behalf of the applicant, Joanne Delapa (Delapa Realty Trust), for the construction of a single-family home, paving of a driveway, and construction of associated structures on the property known as Lot 2B Mill St. in Westwood (DEP File #338-0706). This is a joint filing under the Massachusetts Wetlands Protection Act (WPA), Regulations 310 CMR 10.00 et. al. and the Town of Westwood Wetlands Protection Bylaw.

A copy of the NOI application and full-sized plans has been submitted to digitally and to the Westwood Conservation Commission. The titles of all the documents enclosed are as follows:

A list of new/revised documents is as follows:

- NOI (WPA Form 3) Application Form
- NOI Wetland fee Transmittal Form, Copies of Submittal Checks
- Westwood Property Owner Application Authorization
- Westwood Filing Fee Worksheet
- Affidavit of Service, Abutters List, Notification to Abutters
- Final Order of Resource Area Delineation (DEP File #338-0594), 12/19/16
- Final Order of Resource Area Delineation Extension (DEP File #338-0594)
12/24/19
- *USGS Site Locus*. Goddard Consulting, LLC
- *Ortho View of Site*. Goddard Consulting, LLC
- *Wetland Replication Plan*, Goddard Consulting, LLC 3/19/21
- *Quitclaim Deed*, Bk:14299, Pg: 480, signed 7/17/00
- *Plan of Land in Westwood Mass*, Pilling Engineering Company, Inc., 2/4/69,
revised 2/5/69
- *Directional Drilling Means & Methods*, Henniker Directional Drilling LLC
- *Proposed Site Plan of Land Lot 2B- Mill St. Westwood, MA*. GLM Engineering
Consultants, Inc. 3/10/2021

Existing Conditions

Lot 2B Mill St. (Map 28, Parcel 13) is a ± 4.0-acre property which is currently forested and undeveloped. Per the attached deed and associated plan of land, the parcel has been in existence since at least 1969.

Resource areas on site consists of Bordering Vegetated Wetlands (BVW), Bank of Pond, Riverfront Area, and Bordering Land Subject to flooding. On-site resource areas were confirmed by MassDEP in a Final Order of Resource Area Delineation (FORAD) on 12/19/16. This FORAD was extended on 12/24/19. Of the two on-site BVWs one is centrally located with an upland area adjacent, and one is found in the western portion of the property. The on-site perennial stream is known as Mill Brook and enters the central region of the property from the north before entering Bakers Pond which occupies much of the southern portion of the property. Mill Brook then leaves Bakers Pond flowing off property in the south west corner. Due to the presence of the pond, Riverfront area on site is only assessed to the stream at its inlet and outlet from the pond and is not assessed to the banks of Bakers Pond.

The adjacent lot to the north, known as lot 2A is host to a shared common driveway which exists within a Right of Way easement on that property. While located off site this common drive the subject parcel as referenced in the attached deed.

Proposed Conditions

The applicant is proposing the development of the site with a detached single-family residence and appurtenant amenities. The house is to be sited on the only suitable and easily accessible piece of upland on the site. As stated previously, a shared common driveway located on the adjacent parcel will serve as the primary access path to the proposed residence with an individual driveway constructed off of that right-of-way to service the proposed residence.

Due to the existing deed agreement governing the use of the shared access driveway, underground utilities are not able to be installed within the easement. As a result, the applicant has proposed directional drilling in order to supply water and sewer utilities to the proposed residence. Directional drilling is a trenchless method of installing underground utilities in a way that has no adverse impact to resource areas on the surface. A pilot hole is drilled along a directional path from one surface point to another. Next, the bore created during pilot hole drilling is enlarged to a diameter that will allow the underground utilities to be installed. Lastly, the pipe or wire associated with the utility is pulled through the ground creating a continuous segment underground that is only exposed at the two surface points. In order facilitate this activity, two staging pits will need to be dug to act as surface points entirely within on-site buffer zone and RFA.

In order to facilitate access from the right of way, a small wetland crossing will be necessitated for construction of the individual driveway. This crossing is currently associated with a small wetland finger which is part of the “GC-series” wetland. A 12” Reinforced Concrete Pipe (RCP) will be placed at this crossing to maintain a hydrologic connection between the wetlands. This will result in 550sf of wetland fill, which will be replicated immediately adjacent to the crossing

at 700sf. This fill is replicated at a ratio of 1:1.27. The project as proposed will result in a net increase of 150sf of wetlands on-site.

Additionally, construction of the individual driveway and crossing will result in the alteration of ± 560 sf of the 0-10 ft Buffer Zone. This general portion of buffer zone has already experienced alteration through prior installation of the 12" RCP just north of the fill.

As stated, the house itself will be sited on the only suitable and readily accessible piece of upland on the subject parcel. The house lot will fall entirely within the 100 ft Buffer Zone of on-site BVW and will result in the alteration of $\pm 25,301$ sf of Buffer Zone (see Photo 1). No alteration of the 0-10 ft Buffer Zone is proposed in association with house lot itself, only the driveway.

Permanent Buffer Zone Impacts total $\pm 25,301$ sf.

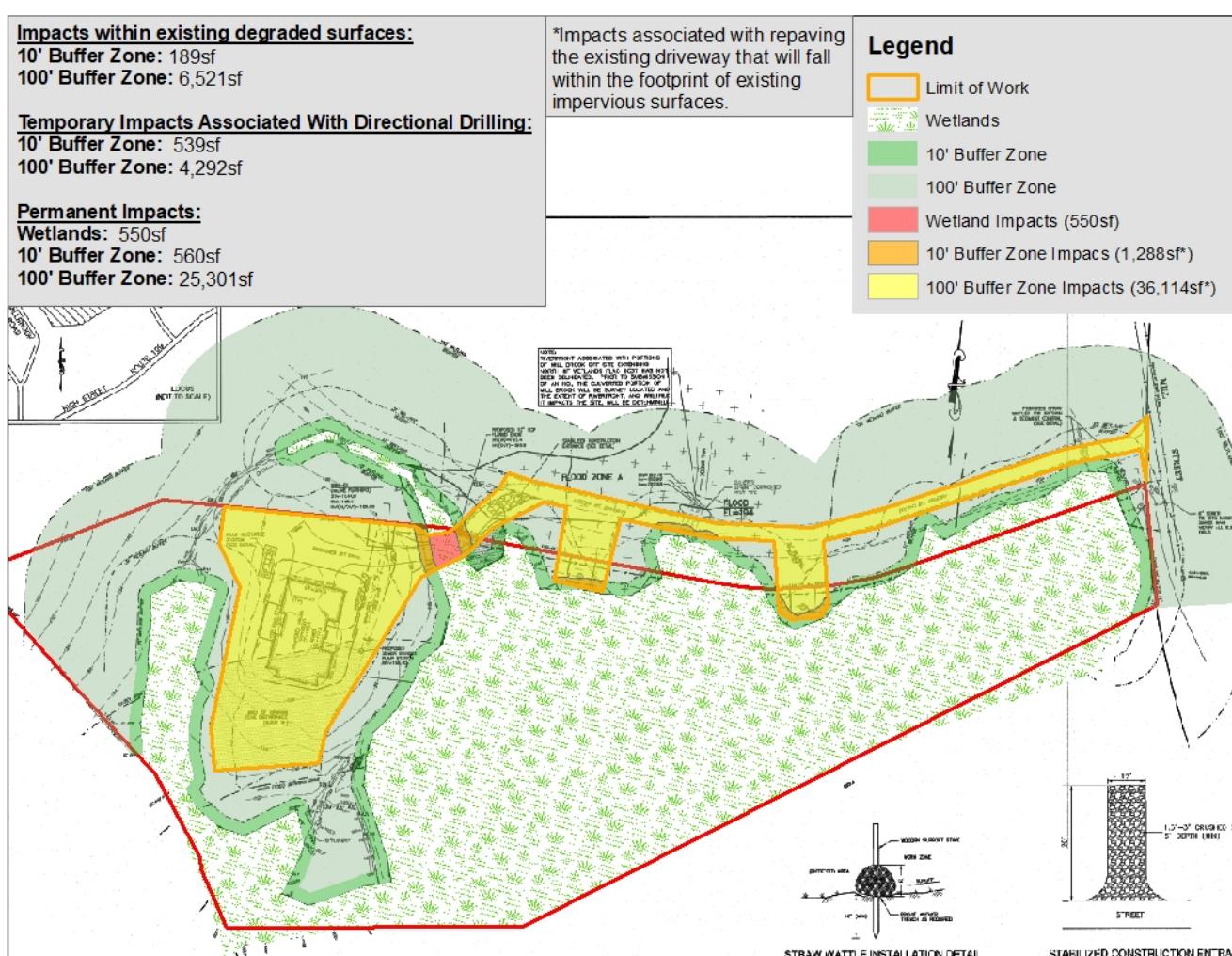


Photo 1. The proposed alterations within the 10' and 100' Buffer Zones of BVW.

The southern portion of the house and Limit of Work (LOW) will enter the Outer Riparian Zone, resulting in the permanent alteration of $\pm 9,200$ sf of RFA in this area, with an additional 1,660sf. Proposed permanent Riverfront Area impacts total $\pm 10,860$ sf, less than the allowable 11,505sf. RFA impacts associated with the new driveway. Temporary and permanent impacts to RFA will total $\pm 20,382$ sf, with $\pm 5,345$ sf occurring within the Inner Riparian Zone (see Photo 2). Impacts associated with the staging pits will be temporary, with the area restored to existing grade and revegetated following directional drilling activities. Riverfront associated with the repaving of the existing common driveway are exempt under redevelopment standards (see below). A portion of the site exists within FEMA flood zone A. Temporary impacts to floodplain associated with the directional drilling staging pits will occur within a 4,957sf footprint. These areas will be restored to the existing grade upon completion of directional drilling.

A summary of resource area and buffer zone impacts is provided in Table 1 below.

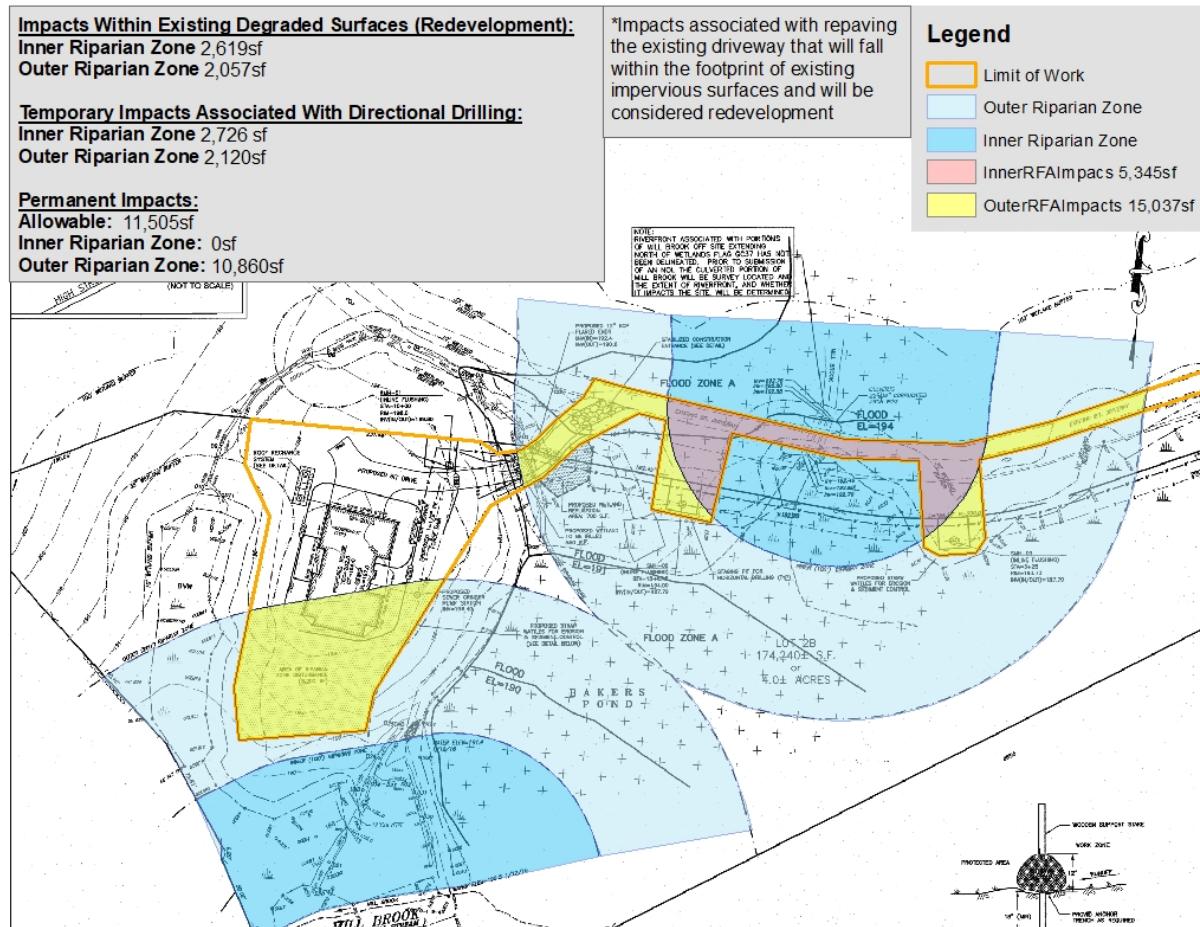


Photo 2. Impacts to the Inner and Outer Riparian Zones as a result of the proposed construction.

Table 1: A summary of proposed Resource Area alteration in square feet.

Activity	Total RFA	Inner Riparian Zone	Outer Riparian Zone	100' Buffer Zone	0-10ft Buffer Zone
Staging Pits *temporary impacts	±4,846	±2,726	±2,120	±4,292	±539
House and House Site (Including Driveway)	±10,860	0	±10,860	±25,301	±560
Repaving Driveway *occurring within existing impervious surface	±4,676	±2,619	±2,057	±6,521	±189
Total Impacts	±20,382	±5,345	±15,037	±36,114	±1,288
Total Permanent New Development Impacts	±10,860	0	±10,860	±25,301	±560

Regulatory Compliance Under the Wetlands Protection Act

The work proposed under this application impact the Buffer Zone to BVW, therefore under the WPA the project is subject to 310 CMR 10.02(3) which states:

“3. Activities within the buffer zone which do not meet the requirements of 310 CMR 10.02(2)(b)1. and 2. are subject to preconstruction review through the filing of a Determination of Applicability to clarify jurisdiction or a Notice of Intent under the provisions of 310 CMR 10.05(4) and 10.53(1).”

This submittal is a Notice of Intent application. The WPA Regulations [310 CMR 10.02(2)(b)] do not contain performance standards for Buffer Zone Alteration.

Statutory Interest Compliance

To show that the work proposed will not harm the interests protected by the Bylaw, MA WPA and DEP wetland regulations the following statutory interests and BVW/Buffer Zone compliance evaluation was performed.

Protection of Public and Private Water Supply and Ground Water Supply

The single-family house is proposed to be connected to town water and sewer facilities and as a result will not draw from ground water via a private well or have a leaching field to impact ground water resource areas.

Flood Control and Storm Damage Prevention

No replication of the filled wetlands will result in a net increase of 150sf of BVW on-site, therefore improving the ability of onsite wetlands to provide flood control or mitigated storm damage.

Prevention of Pollution

Erosion control measures will prevent pollution via erosion into adjacent resource areas during construction.

Protection to Fisheries, Shellfish, Wildlife Habitat and Rare Species

Constructions and erosion control measures will be implemented to secure down-stream protection to fisheries, shellfish and surrounding wildlife habitat. No rare species and/or mapped vernal pools are within the vicinity of the site.

Protection of Recreation

No recreational resources will be impacted by the proposed project

Bordering Vegetated Wetlands: 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 5000 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:

The project as proposed will result in 550sf of BVW impacts which is less than 5000sf. These impacts are required in order to facilitate access via the shared common driveway and right of way. Access to upland portions of the lot outside of the right of way would result in even greater impacts to BVW (see below). 700sf of replication is proposed, a ratio of 1:1.27 leading to a net increase of 150sf of on-site BVW.

- 1. the surface of the replacement area to be created (“the replacement area”) shall be equal to that of the area that will be lost (“the lost area”);*

The project will impact 550sf of wetlands. The proposed surface area of the replacement area (700sf) is greater than the area that will be lost.

- 2. the ground water and surface elevation of the replacement area shall be approximately equal to that of the lost area;*

The ground water elevation of the replacement area is expected to be approximately equal to that for the lost area. See attached site plan.

- 3. The overall horizontal configuration and location of the replacement area with respect to the Bank shall be similar to that of the lost area;*

The BVW impact area does not border the bank of a stream.

- 4. The replacement area shall have an unrestricted hydraulic connection to the same water body or waterway associated with the lost area;*

The replacement areas will have an unrestricted hydraulic connection to the on-site BVW as they are proposed directly adjacent to it.

- 5. The replacement area shall be located within the same general area of the waterbody or reach of the waterway as the lost area;*

The replacement areas are directly adjacent to the on-site BVW and the impact area.

- 6. At least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons, and prior to said vegetative reestablishment any exposed soil in the replacement area shall be temporarily stabilized to prevent erosion in accordance with standard U.S. Soil Conservation Service methods; and*

The replacement area has been designed with native tree, shrub and herbaceous species with the intention of complying with this condition. As described in the attached planting plan, the replacement area will be inspected annually for two growing seasons to ensure that the replacement area meets the 75% coverage within two growing seasons. Any bare soils following construction will have been seeded with a wetland seed mix in order to facilitate rapid soil stabilization.

- 7. The replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in Part III of 310 CMR 10.00. In the exercise of this discretion, the issuing authority shall consider the magnitude of the alteration, and the significance of the project site to the interests identified in M.G.L. c. 131, Sec. 40, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, area provided to contribute to the protection of the interests identified in M.G.L. c. 131, Sec. 40.*

The project has been designed to avoid and minimize wetland impacts. Erosion controls will be placed at the limit of work. The replacement area meets the general performance standards for the altered resource area, which is BVW.

In the exercise of its discretion, the Commission should consider that the project has been designed to minimize impacts to BVW and buffer zone to the greatest extent practicable while conforming with the right of way. Due to the lack of viable locations for the house on-site, BVW fill becomes necessary. The disturbed BVW will be replicated at a ratio of 1:1.27.

10.58 Riverfront Area

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.

Due to the existing distribution on-site resource areas no reasonable alternatives exist for the development of the site. The proposed house site has been located on the only reasonably accessible portion of upland on the site. Proposed access will use an existing shared common driveway to gain access through the majority of on-site RFA, and the proposed individual driveway will be placed outside of RFA. Avoiding use of the common driveway and constructing a driveway elsewhere on site would necessitate filling wetlands and further impacts to Riverfront Area.

Similarly, alternative methods besides directional drilling like trenching would prove to be much more detrimental to the resource areas on-site. Proposed directional drilling for utility the surface impacts associated with directional drilling to Buffer Zone and Riverfront Area as proposed limit resource are impacts to two temporary staging pits. An alternative to directional drilling would involve disturbing the entire length of the utility rather than just two temporary staging pits. Installation by means of directional drilling has been proposed as the only reasonable means of providing subsurface utilities to the site due to existing restrictions on the placement of such utilities within the existing right of way. A copy of the deed of record which establishes these restrictions has been included with this application for your review.

The construction of an alternate driveway would result in ±6,867sf of impact to buffer zone and ±229sf of impact to the 10' buffer zone (see Photo 3.). This alternate construction of a separate driveway would also necessitate ±6,135sf of BVW impact, a significant increase from the proposed 550sf of impacts.

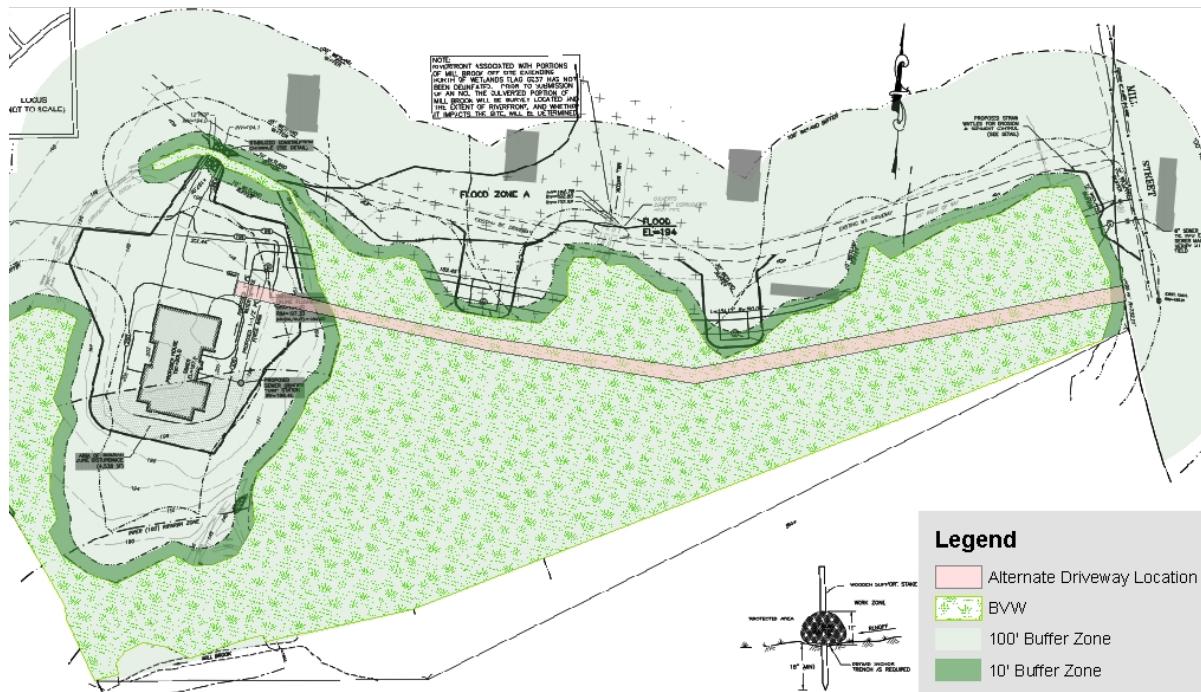


Photo 3. Impacts to Buffer one of BVW associated with the alternative construction of a new driveway.

This alternative would remove impacts to inner riparian zone, but would involve no redevelopment, resulting in 4,010sf of new development impacts to the outer riparian (see Photo 4). Although as proposed there are impacts to the inner riparian zone, these impacts are occurring within the footprint of the existing driveway and in association with the directional drilling staging pits, which are temporary impacts.

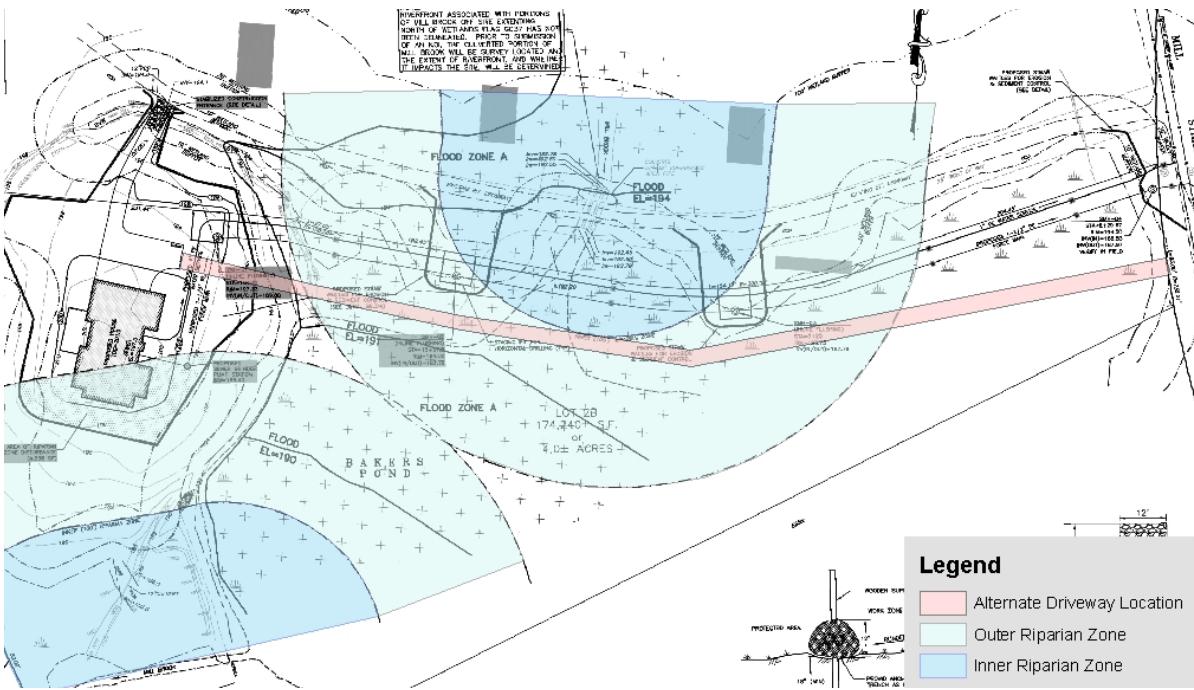


Photo 4. Impacts to Riverfront Area associated with the alternative construction of a new driveway.

10.58(4)(c)2. 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 issuing authority or another party may overcome the presumption by demonstrating the practicability of a wider range of alternatives, based on cost, and whether the cost is reasonable or prohibitive to the owner; existing technology; proposed use; and logistics in light of the overall project purpose.*

a. The area under consideration for practicable alternatives is limited to the lot for activities associated with the construction or expansion of a single-family house on a lot recorded on or before August 1, 1996.

The subject parcel was created prior to August 1, 1996. Therefore, the scope of alternatives for the proposed project is limited to the subject parcel.

10.58(4)(d) No Significant Adverse Impact: *The work, including proposed mitigation measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, § 40.*

1. Within 200 foot riverfront areas, the issuing authority may allow the alteration of up to 5000 square feet or 10% of the riverfront area within the lot, whichever is greater, on a lot recorded on or before October 6, 1997 or lots recorded after

October 6, 1997 subject to the restrictions of 310 CMR 10.58(4)(c)2.b.vi., or up to 10% of the riverfront area within a lot recorded after October 6, 1997, provided that:

a. At a minimum, a 100 foot wide area of undisturbed vegetation is provided. This area shall extend from mean annual high-water along the river unless another location would better protect the interests identified in M.G.L. c. 131 § 40. If there is not a 100 foot wide area of undisturbed vegetation within the riverfront area, existing vegetative cover shall be preserved or extended to the maximum extent feasible to approximate a 100 foot wide corridor of natural vegetation. Replication and compensatory storage required to meet other resource area performance standards are allowed within this area; structural stormwater management measures may be allowed only when there is no practicable alternative. Temporary impacts where necessary for installation of linear site-related utilities are allowed, provided the area is restored to its natural conditions. Proposed work which does not meet the requirement of 310 CMR 10.58(4)(d)1.a. may be allowed only if an applicant demonstrates by a preponderance of evidence from a competent source that an area of undisturbed vegetation with an overall average width of 100 feet will provide equivalent protection of the riverfront area, or that a partial rebuttal of the presumptions of significance is sufficient to justify a lesser area of undisturbed vegetation;

Total on-site riverfront area totals 115,054sf. Proposed permanent alteration of on-site RFA will total 10,860sf. which is also less than 10% of the total RFA on-site (11,505sf). All permanent alteration of on-site RFA will maintain an area of undisturbed vegetation within RFA greater than 100ft. Additional, temporary impacts to RFA which will occur within 100ft of the MAHW line will occur in direct association with the directional drilling staging pits which are expressly allowed under this regulation if “the area is restored to its natural conditions.” The applicant proposes the restoration of natural conditions in all areas which will be temporarily impacted by directional drilling associated with sub-surface utility installation.

b. Stormwater is managed according to standards established by the Department in its Stormwater Policy.

The proposed project is a single-family residence and is therefore exempt from adherence to the Stormwater Standards established by the Department.

c. Proposed work does not impair the capacity of the riverfront area to provide important wildlife habitat functions. Work shall not result in an impairment of the capacity to provide vernal pool habitat identified by evidence from a competent source, but not yet certified. For work within an undeveloped riverfront area which exceeds 5,000 square feet, the issuing authority may require a wildlife habitat evaluation study under 310 CMR 10.60.

The proposed project will not significantly impair the ability of on-site RFA to provide important wildlife habitat functions. All permanent alteration of on-site RFA will occur more than 100 ft

from the established MAHW line of Mill Brook thereby maintaining important wildlife habitat and movement corridors on-site.

- d. Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution.*

The project has proposed the use of adequate erosion control measures between all proposed work and downgradient resource areas during the construction phase of the project.

10.58(4)(d)3.: Notwithstanding the provisions of 310CMR10.58(4)(d)1.or 2.,the issuing authority shall allow the construction of a single family house, a septic system if no sewer is available, and a driveway, on a lot recorded before August 7, 1996 where the size or shape of the lot within the riverfront area prevents the construction from meeting the requirements of 310 CMR 10.58(4)(d)1. or 2., provided that:

- a. The lot can be developed for such purposes under the applicable provisions of other municipal and state law; and*
- b. The performance standards of 310 CMR 10.58(4)(d) are met to the maximum extent feasible. In difficult siting situations, the maximum extent of yards around houses should be limited to the area necessary for construction. Except where the lot contains vernal pool habitat or specified habitat sites of rare species, a wildlife habitat evaluation study shall not be required.*

The subject lot has been in existence since at least 1969, predating the adoption of the Rivers Protection Act. These regulations make it clear that issuing authorities shall allow the construction of a single-family house, driveway, and septic system if no sewer is available on lots that were recorded prior to August 7, 1996, as the locus site has been. All proposed work has been proposed in accordance with 310 CMR 10.58(4)(d)1 with all other applicable municipal and state laws.

Regulatory Compliance Under the Westwood Wetlands Protection Bylaw

The project as proposed is in compliance with the Town of Westwood's Wetland Protection Bylaw with the exception of a small portion of permanent impacts occurring within the 10' buffer of BVW (560sf).

C. Alteration of resource areas.

(1) The presumption that activity undertaken within 35 feet of certain resource areas shall alter those resource areas, as set out in Subsection (11) of the definition of "alter" in § 392-8 of this bylaw, shall not apply to:

- (a) Any lot shown on a subdivision plan filed and approved by the Planning Board pursuant to MGL c. 41, § 81P or 81S, for which application for Planning Board endorsement or approval has been made prior to March 1, 1998;*

- (b) Any lot otherwise in existence as of March 1, 1998;
- (2) Such land and structures shall be subject to the presumption that any activity undertaken within 10 feet of the boundary of a wetland, bank, pond, vernal pool, stream or river shall alter that resource area. The subdivision of any lot otherwise grandfathered pursuant to Subsection C(1)(a) or (b) above shall be subject to the thirty-five-foot setback presumption.

Per the attached deed and Plan of Land, Lot 2B has definitively been in existence since at least 1969, predating the March 1, 1998 threshold established in these regulations. Accordingly, the parcel is subject to the 10ft boundary established or house lots created prior to March 1, 1998. Work within this 10ft buffer zone associated with this project is therefore presumed to have impacts on associated resource areas.

Proposed alteration within the 10-ft Buffer will total $\pm 1,288\text{sf}$, of which only $\pm 560\text{sf}$ will be permanent in nature. Permanent impacts are required to gain access to the house lot from the right of way. The applicant requests the Commission to allow an exception to the Town's bylaw, allowing this alteration, as it facilitates access to the proposed house with the least amount of impacts to resource areas on-site.

Conclusion

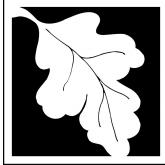
Goddard Consulting believes that the proposed project meets all regulatory compliance standards under the WPA and that the project will not have an adverse impact on the on- site resource areas. As such, GC respectfully requests that the Commission issues an Order of Conditions (OOC) approving the project. Please feel free to contact us if you have any questions.

Very truly yours,



Scott Goddard,
Principal & PWS

Joanne Delapa, Delapa Realty Trust, PO Box 277 Norwood, MA 02062
MassDEP Northeast Region Main Office, Wetlands Division, 205B Lowell St. Wilmington, MA 01887.



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 &
Westwood Wetlands Protection Bylaw

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Westwood

City/Town

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



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

A. General Information

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

42 Mill St.

a. Street Address

Westwood

02090

b. City/Town

c. Zip Code

42.209018

-71.239671

d. Latitude

e. Longitude

28

f. Assessors Map/Plat Number

013

g. Parcel /Lot Number

2. Applicant:

Joanne

Delapa

a. First Name

b. Last Name

Delapa Realty Trust

c. Organization

PO Box 277

d. Street Address

Norwood

MA

02062

e. City/Town

f. State

g. Zip Code

781-769-3429

h. Phone Number

i. Fax Number

anthony@delapa.com

j. Email Address

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

Same as Applicant

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Scott

Goddard

a. First Name

b. Last Name

Goddard Consulting, LLC

c. Company

291 Main St. Ste 8

d. Street Address

Northborough

MA

01532

e. City/Town

f. State

g. Zip Code

(508)393-3784

h. Phone Number

i. Fax Number

scott@goddardconsultingllc.com

j. Email address

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

\$3,993.30

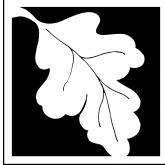
a. Total Fee Paid

\$362.50

b. State Fee Paid

\$3,630.80

c. City/Town Fee Paid



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 &
Westwood Wetlands Protection Bylaw

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Westwood

City/Town

A. General Information (continued)

6. General Project Description:

Construction of a detached single-family residence and appurtenant structures within the buffer zone of Bordering Vegetated Wetland and on-site Riverfront Area.

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

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

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

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

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Norfolk

a. County

14299

c. Book

b. Certificate # (if registered land)

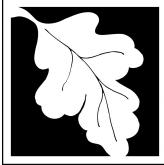
480

d. Page Number

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

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

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



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

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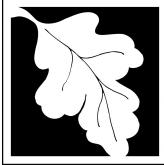
City/Town

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Bank	1. linear feet 550	2. linear feet 700
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet
<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	4957 1. square feet	4957 2. square feet
e. <input type="checkbox"/> Isolated Land Subject to Flooding	3. cubic feet of flood storage lost 1. square feet	4. cubic feet replaced
f. <input checked="" type="checkbox"/> Riverfront Area	2. cubic feet of flood storage lost Mill Brook 1. Name of Waterway (if available) - specify coastal or inland	3. cubic feet replaced
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:		115,054 square feet
4. Proposed alteration of the Riverfront Area:		
9,522 Temporary 10,860sf(9.4%)Permanent	5,345 Temporary 0 Permanent	15,037 Temporary 10,860 Permanent
5. Has an alternatives analysis been done and is it attached to this NOI?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6. Was the lot where the activity is proposed created prior to August 1, 1996?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3. <input type="checkbox"/> Coastal Resource Areas: (See 310 CMR 10.25-10.35)		

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



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 &
Westwood Wetlands Protection Bylaw

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Westwood

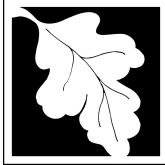
City/Town

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

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	1. square feet	2. cubic yards dune nourishment
<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>	
f. <input type="checkbox"/> Coastal Banks	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet	
h. <input type="checkbox"/> Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet	
j. <input type="checkbox"/> Land Containing Shellfish	2. cubic yards dredged	
k. <input type="checkbox"/> Fish Runs	1. square feet	
	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. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
a. square feet of BVW		
	b. square feet of Salt Marsh	
5. <input type="checkbox"/> Project Involves Stream Crossings		
a. number of new stream crossings		
	b. number of replacement stream crossings	



Massachusetts Department of Environmental Protection

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MassDEP File Number

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Westwood

City/Town

C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

a. Yes No

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

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

Aug 2017

b. Date of map

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

- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:

(a) within wetland Resource Area _____ percentage/acreage

(b) outside Resource Area _____ percentage/acreage

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

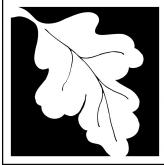
2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

(a) Project description (including description of impacts outside of wetland resource area & buffer zone)

(b) Photographs representative of the site

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

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



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 &
Westwood Wetlands Protection Bylaw

Provided by MassDEP:

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Document Transaction Number

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City/Town

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

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

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

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

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

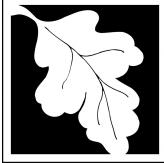
South Shore - Cohasset to Rhode Island border, and
the Cape & Islands:

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

North Shore - Hull to New Hampshire border:

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

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



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

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Westwood

City/Town

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

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

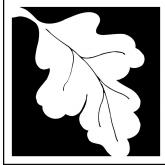
D. Additional Information

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

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

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

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



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Westwood

City/Town

D. Additional Information (cont'd)

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

Proposed Site Plan of Land Lot 2B - Mill St

a. Plan Title

GLM Engineering

b. Prepared By

3/10/21

d. Final Revision Date

Paul Truax, PE

c. Signed and Stamped by

1"=30'

e. Scale

f. Additional Plan or Document Title

g. Date

5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8. Attach NOI Wetland Fee Transmittal Form
9. Attach Stormwater Report, if needed.

E. Fees

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

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

3364

2. Municipal Check Number

3365

4. State Check Number

Rebecca

6. Payor name on check: First Name

5/11/20

3. Check date

5/11/20

5. Check date

Leovich

7. Payor name on check: Last Name



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 &
Westwood Wetlands Protection Bylaw

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Westwood

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 Joanne Delapa (Delapa Realty Trust)	2. Date 3/19/21
 3. Signature of Property Owner (if different)	4. Date
 5. Signature of Representative (if any) Scott Goddard (Goddard Consulting)	6. Date 3/19/21

For Conservation Commission:

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

For MassDEP:

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

Other:

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

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



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

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



A. Applicant Information

1. Location of Project:

42 Mill St. (Lot 2B)

a. Street Address

3365

c. Check number

Westwood

b. City/Town

\$362.50

d. Fee amount

2. Applicant Mailing Address:

Joanne

a. First Name

Delapa Realty Trust

c. Organization

PO Box 277

d. Mailing Address

Norwood

e. City/Town

781-769-3429

h. Phone Number

i. Fax Number

MA

f. State

02072

g. Zip Code

anthony@delapa.com

j. Email Address

3. Property Owner (if different):

Same as Applicant

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

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

B. Fees

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

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

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

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

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

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

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



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

B. Fees (continued)

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

2(a) _____	1 _____	500 x 1.5 _____	\$750 _____
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Westwood Wetlands Bylaw Fee _____	_____	_____	\$3,243.30 _____
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_____	_____	_____	_____
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_____	_____	_____	_____
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_____	_____	_____	_____
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_____	_____	_____	_____
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_____	_____	_____	_____
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_____	_____	_____	_____
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Step 5/Total Project Fee:

Step 6/Fee Payments:

Total Project Fee:	\$3,993.30
--------------------	------------

a. Total Fee from Step 5

\$362.50

b. 1/2 Total Fee less \$12.50

\$3,630.80

c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

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

Department of Environmental Protection
Box 4062
Boston, MA 02211

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

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



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 &
Westwood Wetlands Protection Bylaw

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Westwood

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	Joanne Delapa (Delapa Realty Trust)	2. Date	3/19/21
 3. Signature of Property Owner (if different)		4. Date	3/19/21
 5. Signature of Representative (if any) Scott Goddard (Goddard Consulting)		6. Date	3/19/21

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.

Goddard Consulting, LLC 291 Main Street, Suite 8 Northborough, MA 01532 508-393-3784		3365 53-7062/2113
Pay to the Order of <u>Commonwealth of MA</u>		<u>5/11 2020</u>
<u>Three hundred sixty two + 50/100</u>		\$ 362.50
Avidia Bank Hudson, MA		Dollars <input checked="" type="checkbox"/> Security Features are included. Checklist on back.
For <u>335-5 NOI</u>		<u>Reba A. Lark</u>
12113705290 31 623507# 3365		MP

Goddard Consulting, LLC 291 Main Street, Suite 8 Northborough, MA 01532 508-393-3784		3364 53-7062/2113
Pay to the Order of <u>Town of Westwood</u>		<u>5/11 2020</u>
<u>Three thousand six hundred thirty + 86/100</u>		\$ 3,630.80
Avidia Bank Hudson, MA		Dollars <input checked="" type="checkbox"/> Security Features are included. Checklist on back.
For <u>335-5 NOI</u>		<u>Reba A. Lark</u>
12113705290 31 623507# 3364		MP

Town of Westwood
Commonwealth of Massachusetts



Jon Rogers, Chairman
Todd Sullivan, Vice Chair
R.J. Sheer
Todd Weston
Helen Gordon
Stephen David
Vesna Maneva, Associate

Karon Skinner Catrone, Conservation Agent
kcatrone@townhall.westwood.ma.us
(781) 251-2580

CONSERVATION COMMISSION

Property Owner Application Authorization

This form certifies that the party listed below has been granted authorization to submit an application to the Town of Westwood Conservation Commission on behalf of a property owner. The Owner's signature shall also grant permission to members of the Conservation Commission and the Conservation agent permission to visit the property for related site inspections during the application and construction process. This form must be filled out and completed by the property owner if another party is submitting an application(s) on the owner's behalf. This form must be signed by the property owner and submitted for all individual land owners for all land involved with the application project and submitted at the time of application. No Application to the Conservation Commission will be considered complete without the authorization from the property owner.

I, Joanne Delapa am the owner of the property
at 42 Mill St., Westwood, MA and I certify that I have granted,
Goddard Consulting to submit an application with
the Town of Westwood Conservation Commission to (brief description of proposed project):

Construction of a detached single family residence and appurtenant structures

within Buffer Zone to Bordering Vegetated Wetlands and Riverfront Area

Printed Name of Property Owner: Joanne Delapa, Delapa Realty Trust

Printed Name of Property Owner if more than one: _____

Signature of Property Owner: Joanne C Delapa-DRT Date: 3/19/21

Signature of Property Owner if more than one: _____ Date: _____

Town of Westwood

Commonwealth of Massachusetts



Karon Skinner Catrone, Conservation Agent
kcatrone@townhall.westwood.ma.us
(781) 251-2580

John Rogers, Chairman
Todd Sullivan, Vice Chair
Stephen David
Helen Gordon
Vesna Maneva
R.J. Sheer
Todd Weston

CONSERVATION COMMISSION

Fees

Westwood Wetlands Bylaw – Article 18 (In Addition to DEP filing Fees)

Applicant: Joanne Delapa (Delapa Realty Trust)

Address: 511 Washington St. Norwood, MA 02062

Location of Project: 42 Mill St. Westwood, MA 02090

Notice of Intent

Minor project **\$100.00**

Major project **\$250.00 plus \$1.00 additional sq. ft.**

New single family home **\$500.00 plus \$1.00 per 10 sq. ft. of disturbance (27,433sf)**

Subdivision road and utility **\$750.00 plus \$5.00 per road sideline in resource or buffer zone**

Drainage detention/retention **\$750.00 plus \$1.00 per 10cf. Of basin in resource or buffer zone**

Multiple Dwelling **\$500.00 plus \$100.00/unit and \$1.00 per 10 sq. ft. of disturbance**

Commercial institutional, industrial **\$750.00 plus \$1.00 per 10 sq. ft. of disturbance**

Request for Det. of Applicability \$50.00

ANRAD \$750.00 plus \$1.00 per 10 sq. ft. of disturbance

Application filed after enforcement Double application fees

Amendments **\$100.00**

Certificate of Compliance

Residence **\$100.00**

Non Residence **\$100.00**

Commercial or subdivision **\$200.00**

Agent Site Visit

Resident **\$25.00** per hour

Non Resident **\$45.00** per hour

Total **\$3,243.30**

See Westwood Wetlands Protection Bylaw Regulations for more detail.

AFFIDAVIT OF SERVICE

UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT AND WESTWOOD WETLAND PROTECTION BYLAW

I, Tim McGuire, hereby certify under the pains and penalties of perjury that on June 18, 2020, I gave notification to abutters within 300 feet of the proposed project in compliance with the Westwood Wetland Protection Bylaw and with the second paragraph of the Massachusetts General Laws, Chapter 131, Section 40 and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act and the Westwood Wetland Protection Bylaw, by Goddard Consulting, LLC with the Westwood Conservation Commission on June 18, 2020 for a property located at 42 Mill St. in Westwood, Massachusetts.

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



Signature

June 18, 2020

Date



TOWN OF WESTWOOD BOARD OF ASSESSORS

Maureen H. Bleday, Chairman
Mark F. Murphy, Clerk
Christopher J. McKeown, Third Member

April 15, 2020

Timothy McGuire

Mr. McGuire,

Attached please find a list of abutters to abutters within 100' of the locus,

- *Mill St. – Map 28 Lot 013*

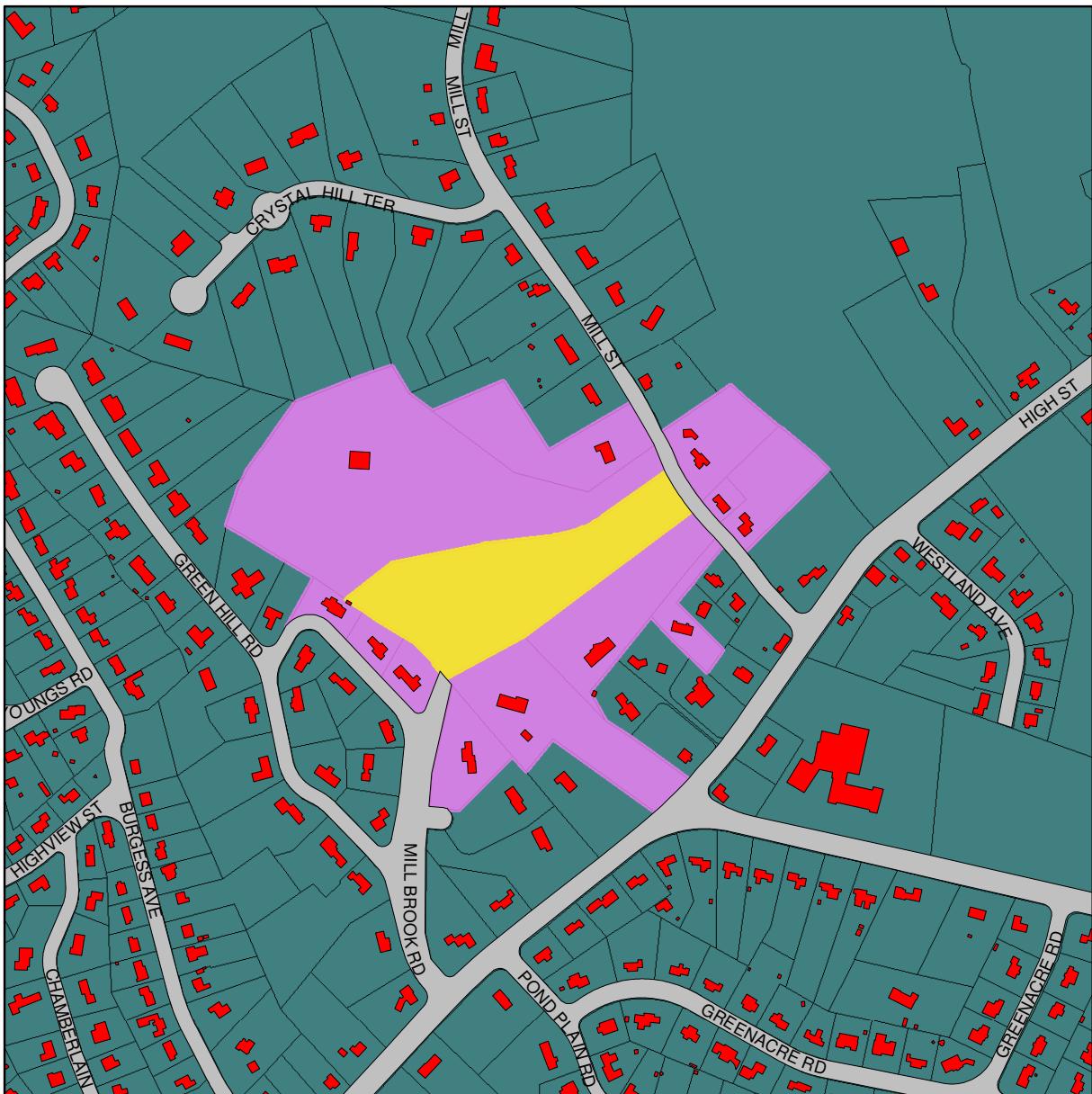
These lists reflect owners of record as of January 1, 2020 or current owners, according to our records.

Sincerely,

Mark F. Murphy
Assessor

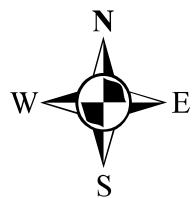
MM/jb

ABUTTERS WITHIN 100' - MILL ST



MAP 28 LOT 013

VISION APPRAISAL TECHNOLOGY



27/ 131/ / /
MCMANUS KEVIN J TRS
51 MILL BROOK RD REL TR
51 MILL BROOK RD
WESTWOOD , MA 02090

27/ 132/ / /
BUCKLEY GREGORY W
CYNTHIA L BUCKLEY
41 MILL BROOK RD
WESTWOOD , MA 02090

27/ 133/ / /
TSCHIRCH MARYLOU
31 MILL BROOK RD
WESTWOOD , MA 02090

27/ 134/ / /
LUND JOHN D
CAROLE A LUND
10 OLD MINE ROCK WAY
HINGHAM , MA 02043

28/ 002/ / /
DEMELLE TODD
SHEILA DEMELLE
1355 HIGH ST
WESTWOOD , MA 02090

28/ 011/ / /
GRINDROD THOMAS J
KARA R GRINDROD
36 MILL ST
WESTWOOD , MA 02090

28/ 012/ / /
TASE IGLI
ENTELA TASE
1331 HIGH ST
WESTWOOD , MA 02090

28/ 013/ / /
VINCI SALVATORE
MARGARET VINCI
67 HAZELWOOD DRIVE
NORWOOD , MA 02062

28/ 014/ / /
YUDZINSKY ARTUR
YELENA PLATSMAN
44 MILL ST
WESTWOOD , MA 02090

28/ 015/ / /
HOSSEIN MOSTAFAEI
ZAHRA MOSTAFAEI ABIZ
60 MILL ST,
WESTWOOD , MA 02090

28/ 029/ / /
WINN GREGORY P
CLAUDIA V H WINN
43 MILL ST
WESTWOOD , MA 02090

28/ 030/ / /
SOUCY ROBERT J
33 MILL ST
WESTWOOD , MA 02090

28/ 031/ / /
MAGALETTA ELEANOR C
25 MILL ST
WESTWOOD , MA 02090

Notification to Abutters Under the Massachusetts Wetlands Protection Act and the Westwood Wetlands Protection Bylaw

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

1. The name of the applicant is: **Salvatore Vinci**
2. The applicant has filed a Notice of Intent with the Conservation Commission for the Town of **Westwood, MA** seeking to construct a detached single-family residence and appurtenant structures within the buffer zone of Bordering Vegetated Wetland and on-site River Front Area
3. The address of the lot where the activity is proposed is: 42 Mill St. Westwood, MA 02090.

Copies of the NOI may be examined at the **Westwood Town Hall** or by contacting the Conservation Commission at **(781) 251-2580**.

1. Copies of the ANRAD may be obtained for a reasonable fee from the applicant's representative, by calling **(508) 393-3784** between the hours of **10 and 3** on the following days of the week: **M-F**.
2. A public hearing will be held at **Westwood Town Hall, 50 Carby Street**. For more information regarding the date, time, and place of the public hearing; please contact the **Westwood Conservation Commission** at **(781) 251-2580** or the applicant's representative Goddard Consulting LLC at **(508) 393-3784**.

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

NOTE: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:

Northeast Region: (978) 694-3200 Southeast Region: (508) 946-2700 Central Region: (508) 792-7650 Western Region: (413) 784-1100



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

Charles D. Baker
Governor

Kathleen A. Theoharides
Secretary

Karyn E. Polito
Lieutenant Governor

Martin Suuberg
Commissioner

December 17, 2019

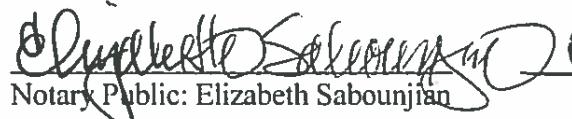
On this date, Tuesday, December 17, 2019, I, Rachel Freed, Deputy Regional Director for the Department of Environmental Protection, Bureau of Water Resources, Northeast Regional Office and Keeper of the Records, do hereby attest that the attached copy of the Final Order of Resource Area Delineation for DEP File #338-0594 which was originally signed by Martin Suuberg, Commissioner, MassDEP on December 19, 2016, and issued on the same date, is a True Copy of said Final Order of Resource Area Delineation for the above-referenced Final Order of Resource Area Delineation that resides in this file.

Signed Under the Pains and Penalties of Perjury:

Rachel Freed
Rachel Freed

December 17, 2019
Date

On this 17th day of December, 2019, before me personally appeared Rachel Freed for the Department of Environmental Protection, to me known to be the person described in and who executed the foregoing instrument and acknowledged that she executed the same as her free act and deed.


Notary Public: Elizabeth Sabounjian

My commission expires: December 23, 2023

My commission expires



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 4B – Final Order of Resource Area Delineation
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:
338-0594
Provided by DEP

A. General Information

From:

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Issuing Authority

This Issuance is for (check one):

- Final Order of Resource Area Delineation
 Amended Superseding Order of Resource Area Delineation

To: Applicant:

Anthony Delapa
Name

Property Owner (if different from applicant):

Salvatore Vinci
Name

Delapa Properties
511 Washington Street
Mailing Address

67 Hazelwood Drive
Mailing Address

Norwood City/Town	MA State	02062 Zip Code	Norwood City/Town	MA State	02062 Zip Code

1. Project Location:

<u>42 Mill Street</u> Street Address	<u>Westwood</u> City/Town
<u>28</u> Assessor's Map/Plat Number	<u>013</u> Parcel /Lot Number

2. Title and Revised Date of Final Plans and Other Documents:

<u>"Wetland Delineation Plan 42 Mill Street Westwood, MA"</u> Title	<u>Last revised</u> <u>Date 10/20/2016</u>
--	---

3. Final Plans and Documents Signed and Stamped by:

Joyce Hastings, PLS
Name

4. Dates:

<u>11/10/2014</u> Date ANRAD Filed	<u>11/9/2015</u> Date Public Hearing Closed	<u>11/9/2015</u> Date of Local Order
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<u>\$200</u> Total Filing Fee Paid	<u>\$87.50</u> State Fee Paid	<u>\$112.50</u> City/Town Fee Paid
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**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 4B – Final Order of Resource Area Delineation
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40**

DEP File Number:
338-0594
Provided by DEP

B. Order of Delineation

The Department has determined the following (check whichever is applicable):

- Accurate:** The boundaries described on the referenced plan(s) above and in the Abbreviated Notice of Resource Area Delineation are accurately drawn for the following resource area(s):

- Bordering Vegetated Wetlands
 Other Resource Area(s), specifically:
-
-

- Modified:** The boundaries described on the plan(s) referenced above, as modified by the Department from the plans contained in the Abbreviated Notice of Resource Area Delineation, are accurately drawn for the following resource area(s):

- Bordering Vegetated Wetlands
 Other Resource Area(s), specifically:

Mill Brook perennial stream/Riverfront Area. Note that Riverfront associated with portions of Mill Brook off site extending north of wetlands flag GC37 has not been delineated. Prior to submission of an NOI, the culverted portion of Mill Brook will be survey located and the extent of riverfront, and whether it impacts the site, will be determined.

- Inaccurate:** The boundaries described on the referenced plan(s) and in the Abbreviated Notice of Resource Area Delineation were found to be inaccurate and cannot be confirmed for the following resource area(s):

- Bordering Vegetated Wetlands
 Other Resource Area(s), specifically:
-
-

The boundaries were determined to be inaccurate because:



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 4B – Final Order of Resource Area Delineation
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40**

DEP File Number:
338-0594
Provided by DEP

B. Order of Delineation (cont.)

This Final Order of Resource Area Delineation determines the boundaries of those resource areas noted above and is binding as to all decisions rendered pursuant to the Massachusetts Wetlands Protection Act (M.G.L. c.131, § 40) and its regulations (310 CMR 10.00) regarding such boundaries. This Order does not, however, determine the boundaries of any resource area or Buffer Zone to any resource area not specifically noted above, regardless of whether such boundaries are contained on the plans attached to this Order or to the Abbreviated Notice of Resource Area Delineation.

Signature:

Martin Suuberg
Commissioner, MassDEP

This Order is valid for three years from the date of issuance.

This Order is issued to the applicant and the property owner (if different) as follows:

by hand delivery on _____

Date _____

by certified mail

12/19/16 #7003315000161000942
Date _____



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 4B – Final Order of Resource Area Delineation
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40**

DEP File Number:
338-0594
Provided by DEP

C. Appeals

NOT APPLICABLE



Massachusetts Department of Environmental Protection

Bureau of Water Resources - Wetlands

**WPA Form 7 – Extension Permit for Final Order of
Resource Area Delineation**

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

DEP File Number:
338-0594
Provided by
DEP**A. General Information**

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



1. Applicant:

Anthony Delapa

Name

Delapa Properties, 511 Washington Street

Mailing Address

Norwood

City/Town

MA

State

02062

Zip Code

2. Property Owner (if different):

Salvatore Vinci

Name

67 Hazelwood Drive

Mailing Address

Norwood

City/Town

MA

State

02062

Zip Code

B. Authorization

The Final Order of Resource Area Delineation issued to the applicant or property owner listed above on:

December 19, 2016

Date

for work at:

42 Mill Street, Westwood

Street Address

28

Assessor's Map/Plat Number

013

Parcel/Lot Number

recorded at the Registry of Deeds for:

Norfolk

County

37467

Book

20

Page

Certificate (if registered land)

is hereby extended until:

December 19, 2022

Date

This date can be no more than 3 years from the expiration date of the Final Order of Resource Area Delineation or the latest extension. Only unexpired Orders or Extension may be extended.

Date the Order was last extended (if applicable):

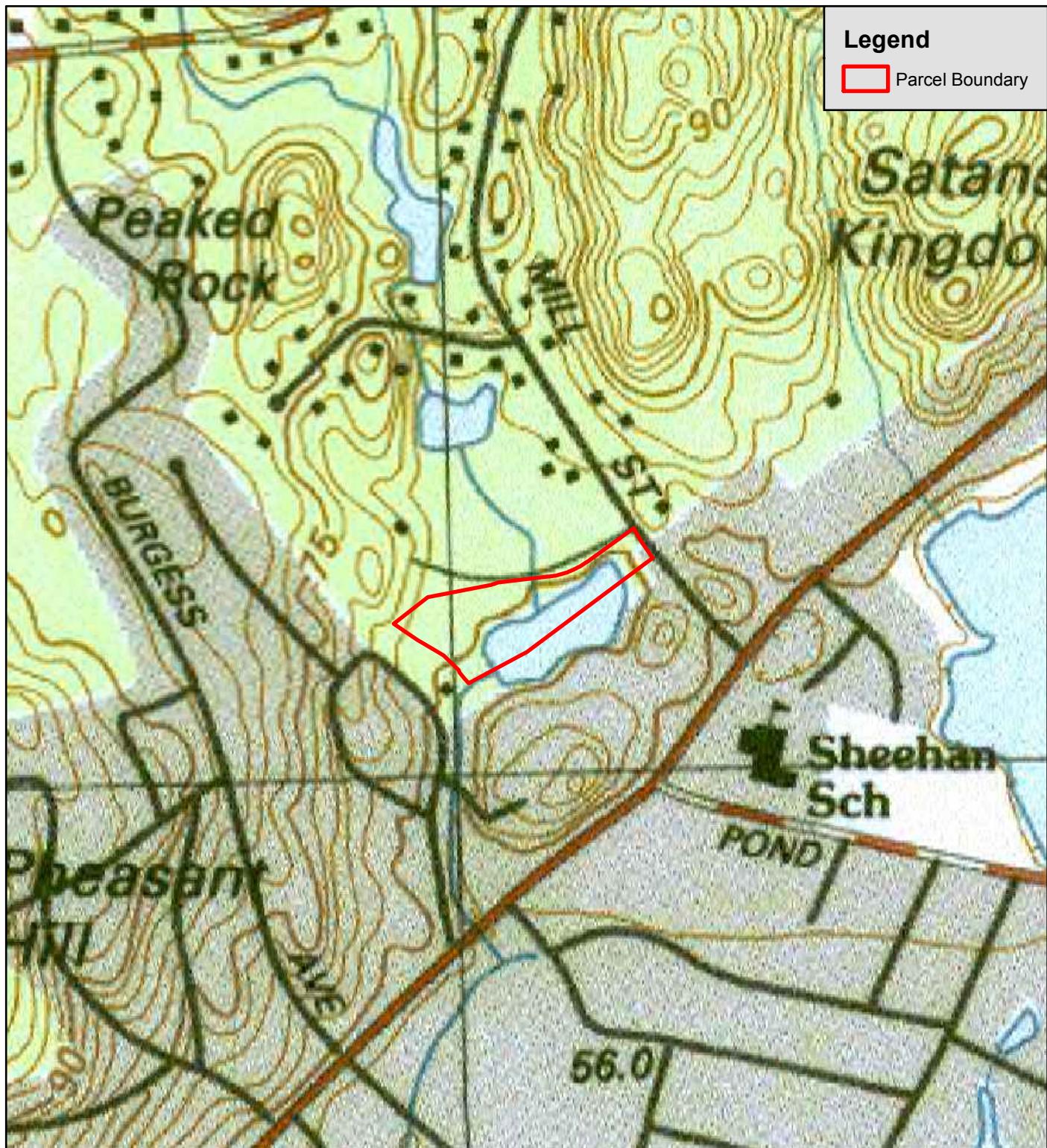
Date

Issued by:

MassDEP Northeast Regional Office

December 24, 2019

Date



USGS Site Locus

Lot 2B Mill St. - Westwood, MA

(Map: 28, Lot: 013)

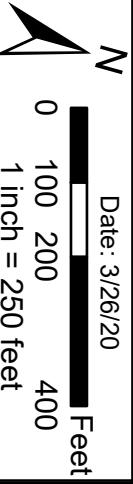


Date: 12/19/19

0 205 410 820
Ft
1 inch = 500 feet

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

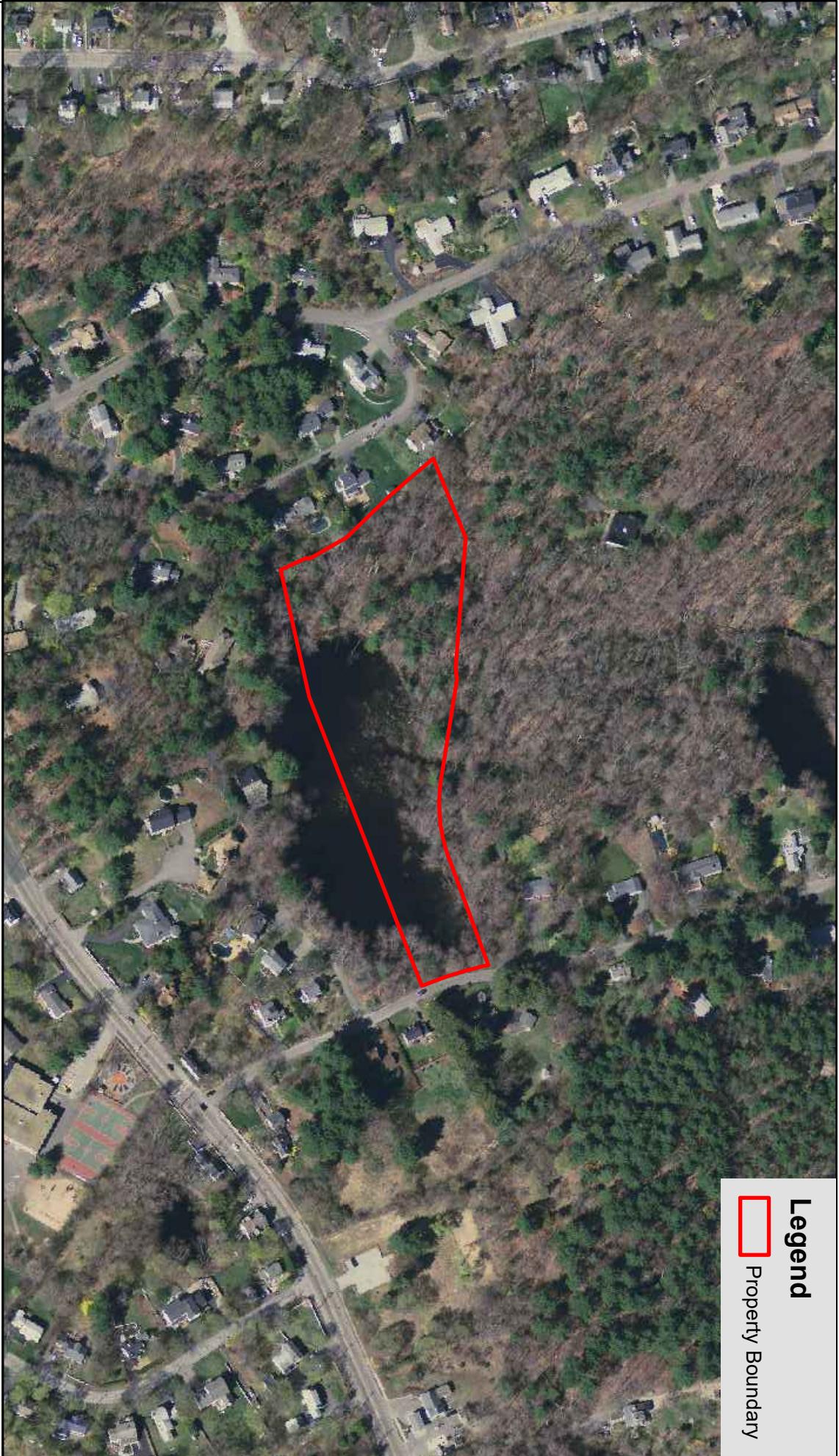
GODDARD CONSULTING LLC
Strategic Wetland Permitting



Orthophoto View of Locus Site

Lot 2B Mill St.- Westwood, MA
(Map: 28, Lot: 13)

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"



Legend



Property Boundary

GODDARD CONSULTING
Strategic Wetland Permitting LLC

March 19, 2021

Westwood Conservation Commission
Westwood Town Hall
50 Carby Street
Westwood, MA 02090

Re: Wetland Replication Plan
42 Mill St. Westwood MA 02090 (DEP # 338-0706)

Dear Conservation Commission:

Attached please find the Wetland Replication Plan supplemental to the Notice of Intent application for the property addressed as 42 Mill St. Westwood, MA.

This project proposes the fill of 550sf of fill of wetlands. The purpose of this Wetland Replication Plan is to provide replication for the fill of Bordering Vegetated Wetlands associated with the construction of the proposed single-family house. The current project proposes 700sf of replication, resulting in a net increase of 150sf of wetlands on-site. This replication is proposed at a 1:1.27 ratio. The replication area already has approximately 8" of organic topsoil with redoximorphic features occurring after 8". There is however a lack of dominant wetland vegetation in this area. Vegetation present consists of Japanese barberry and white pine with sweet pepperbush and winterberry also present. This area was selected due to its proximity to the fill area and its existing hydric soils, removing the necessity of bringing in large equipment to grade the area (see Photo 1).



Photo 1. The proposed location of the replication area. The existing on-site BVW can be seen in the background.

The onsite wetland is vegetated with sphagnum moss, red maple, skunk cabbage, jewelweed, sweet pepperbush, and wetland ferns. This wetland replication plan proposes the following native planting selections as plants that mirror the existing conditions of the wetland and that will thrive in the proposed replication area. With the interest of maintaining existing vegetation on-site, efforts will be taken to supplement the replication area with as many native transplants as possible from on-site impact areas. To determine the quantity of plantings needed, the Army Corps of Engineers guidelines for wetland replication area replacement planting specifications were followed. These specifications state that shrubs be planted 8-10 feet on center and herbaceous material 3-4 feet on center throughout the replication area. With these calculations, the 700sf wetland replication area should be planted/seeded with a total of 10 shrubs, 7 herbaceous plugs, and 1lb of New England Wetland Mix. See Table 1 below for planting schedule. Exact quantities of proposed plantings will be dependent on the quantity of transplants of the listed species below that can be implemented.

Table 1: Planting Schedule.

Size	Quantity	Common Name	Scientific Name
1-2 gallon(s) or 2-4' or larger	2	Red Maple	<i>Acer rubrum</i>
1-2 gallon(s) or 2-4' or larger	3	Sweet Pepperbush	<i>Clethra alnifolia</i>
1-2 gallon(s) or 2-4' or larger	2	American Elm	<i>Ulmus americana</i>
1-2 gallon(s) or 2-4' or larger	3	Winterberry	<i>Ilex verticillata</i>
2" plug or larger	4	Skunk Cabbage	<i>Symplocarpus foetidus</i>
2" plug or larger	3	Cinnamon Fern	<i>Osmunda cinnamomeum</i>
-	1lb	New England Wetland Mix.	var.

General Installation Procedures

Supervision: All work within the replication area shall be supervised by a qualified wetland scientist with a minimum of five years' experience. The supervisor shall submit monitoring reports to the Conservation Commission as described below. Reports shall contain details of all work performed and photographs of completed conditions.

Step 1: Install Erosion Control Barriers

Prior to any work, erosion control barriers will be installed at the downgradient edge of the limit of work.

Step 2: Ensure Hydrology of Replication Area

As stated, the replication area already has 8" of organic topsoil and redoximorphic features present after 8" depth. A wetland scientist will confirm that this is the case prior to planting and ensure that there is at least 6" of organic topsoil across the entirety of the area.

Step 3: Remove Existing Upland Vegetation

All upland vegetation in the area will be physically removed from the replication area.

Step 4: Planting

Precise citing of plants may be determined by the wetland scientist in the field prior to installation, however overall placement should be reflective of the Wetland Replication Plan submitted with this document. Planting spacing shall be as follows: shrubs spaced at 8-10' on center and herbaceous species 3-4' on center. All plantings will be removed from burlap sacks, wire cages and plastic containers prior to planting. Each plant will have its roots loosened prior to planting to encourage root growth away from the root ball. Planting holes shall be dug a minimum of 2x the diameter of the root ball to reduce soil compaction and allow for healthy root establishment.

Step 5: Seeding

Wetland seed mix comparable to that specified in this document, shall be scattered evenly by hand throughout the replication area. Following seeding a light application of weed free hay mulch shall be applied to the areas to encourage seed germination and reduce water loss.

Step 6: Monitoring

- a. **Seasonal monitoring reports** shall be prepared for the replication area by a qualified wetland scientist for a period of two additional years after replication completion. This monitoring program will consist of early summer and early fall inspections and will include photographs and details about the vitality of the replication area. Monitoring reports shall be submitted to the Commission by November 15th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the replication area with respect to stability, survival of vegetation and plant mortality, aerial extent and distribution, species diversity and vertical stratification (i.e. herb, shrub and tree layers). Invasive species will be documented if present within areas impacted by the project, monitored and removed.
- b. **At least 75% survival of installed native plants** shall be observed by the end of the second growing season. If the replication area does not meet the 75% survival requirement by the end of the second growing season after installation, the Applicant shall submit a remediation plan to the Commission for approval that will achieve, under the supervision of a Wetland Specialist, replication goals. This plan must include an analysis of why the areas have not been successful and how the applicant intends to resolve the problem.

If there are any questions concerning this report, please do not hesitate to contact us.

Very truly yours,

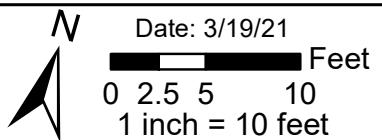


Scott Goddard,
Principal & PWS



Wetland Replication Plan

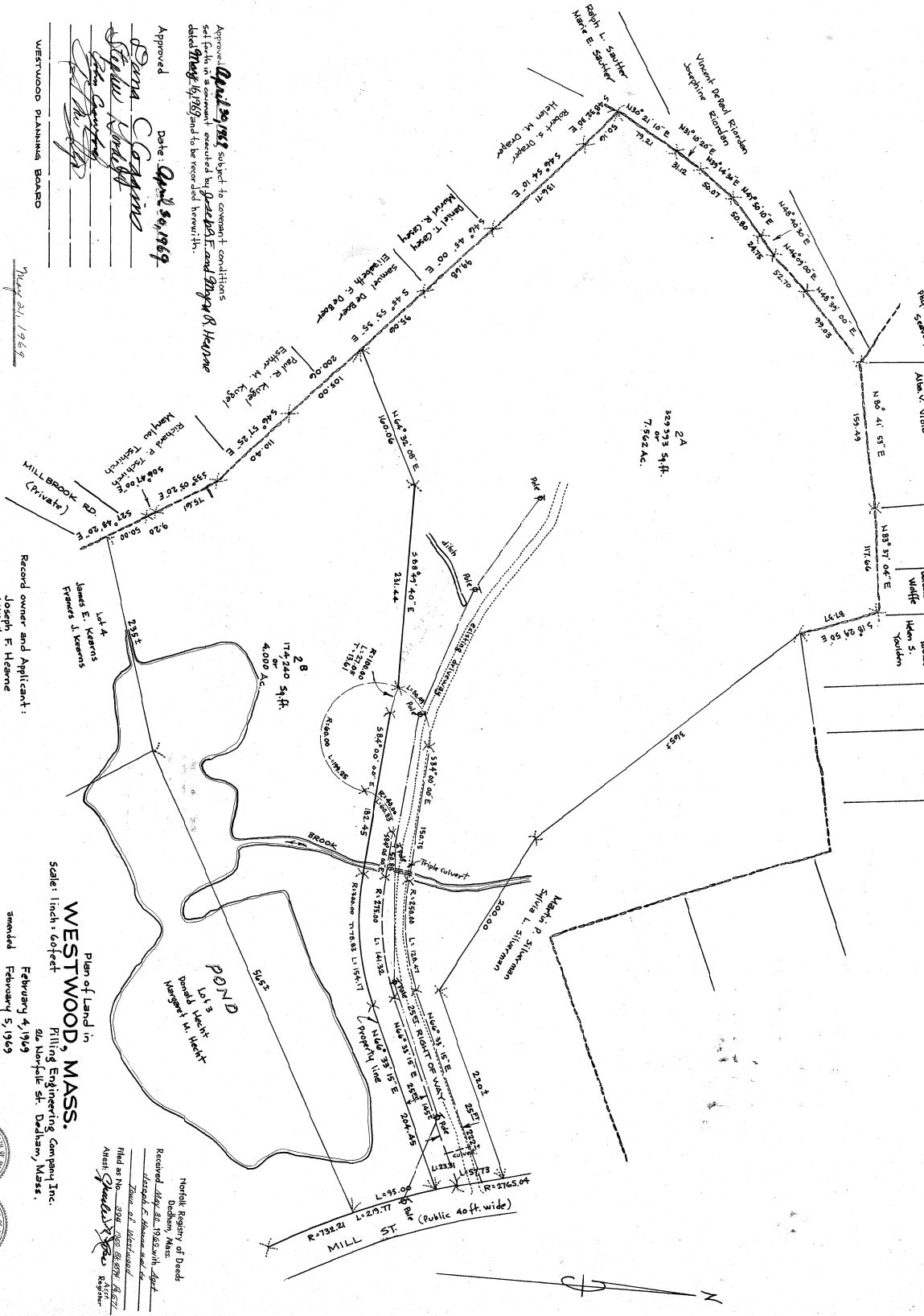
42 Mill St.- Westwood, MA
(Map: 28, Lot: 13)



GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT"

GODDARD CONSULTING
Strategic Wetland Permitting LLC

O F E N A O N T I A L O F E N A O N T I A L



N O T QUITCLAIM DEED N O T

A N A N

Anthony F. Delapa and Joanne C. Delapa as they are Trustees of the Delapa Realty Trust,
 Grantor, w/d/t dated March 9, 1967, recorded in the Norfolk Deeds in Book 4416, Page 326 for
 consideration paid of Ten Thousand (\$10,000.00) grant to

Salvatore Vinci and Margaret Vinci, Grantee, husband and wife as tenants by the entirety,
 of 65 Bay Colony Drive, Westwood, Massachusetts 02090

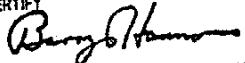
with quitclaim covenants the land situated on Mill Street, Westwood, Norfolk County,
 Massachusetts being designated and shown as Lot 2 on a plan entitled "Plan of Land in Westwood,
 Mass." by Pilling Engineering Company Inc. dated February 4, 1969, which plan is recorded with
 Norfolk Registry of Deeds as Plan No. 394 of 1969, Book 4594, Page 671, bounded and described
 according to said plan as follows:

NORTHEASTERLY	by Mill Street, as shown on said plan, 95 feet;
SOUTHEASTERLY	by land marked "Lot 3 Donald Hecht, Margaret M. Hecht" on said plan 565 feet more or less;
SOUTHERLY	by land marked "Lot 4 James F. Kearns, Francis J. Kearns" on said plan 235 feet more or less;
WESTERLY	in part by the end of Millbrook Road and in part by land marked "Richard P. Tschirch, Marylou Tschirch" on said plan, by three lines measuring 50 feet; 9.20 feet and 75.61 feet;
SOUTHWESTERLY	in part by said land marked "Richard P. Tschirch, Marylou Tschirch" on said plan in part by land marked Paul R. Kugel, Esther M. Kugel" on said plan and in part by land marked "Samuel DeBoer, Elizabeth P. DeBoer" on said plan, by two lines measuring 110.40 feet and 105 feet;
NORTHWESTERLY	by Lot 2A, as shown on said plan, 160.06 feet
NORTHERLY	by said Lot 2A, 231.44 feet;
NORTHEASTERLY	by said Lot 2A, 27.05 feet;
NORTHERLY	by said Lot 2A by two lines measuring 182.45 feet and 154.17 feet; and
NORTHWESTERLY	by said Lot 2A, 204.45 feet,

Containing according to said plan 174,240 square feet or 4.000 Acres.

Said premises are conveyed with the following right as appurtenant thereto:

- (a) To use in common with the Grantor and others lawfully entitled thereto for purposes of ingress and egress to and from said Lot 2B those portions crossing the Grantors remaining land consisting of a strip noted "Right of Way" on the plan hereinafter mentioned which lies within the limits of a parcel of land situated on Mill Street in Westwood, Norfolk County, Massachusetts, being designated and shown as Lot 2A on a plan entitled "Plan of Land in Westwood, Mass." by Pilling Engineering Company dated February 4, 1969 amended February 5, 1969, which

RECEIVED AND RECORDED
 NORFOLK COUNTY
 REGISTRY OF DEEDS
 DEDHAM, MA
 CERTIFY

 BARRY T. HANNON, REGISTER

072924

00 JUL 27 AM 11:05

plan is filed in Norfolk Registry of Deeds as Plan No. 394 of 1969, Book 4594,
Page 671 and said right of way being bounded and described as follows:

N O T **N O T**

Beginning at a point ^A on the common boundary line of Lot 2A and Lot 2B, as shown on said plan, said point being a distance, measuring in three lines 204.45 feet, 154.17 feet and 182.45 feet, Southwesterly and Northwesterly from Mill Street, as shown on said plan, and bounded.

SOUTHWESTERLY
NORTHWESTERLY

NORTHERLY

NORTHWESTERLY
NORTHEASTERLY
SOUTHEASTERLY
SOUTHERLY

SOUTHEASTERLY

by Lot 2B, as shown on said plan, 27.05 feet;
by Lot 2A, as shown on said plan, being a curved line, 80.49
feet;
again by said Lot 2A, by two lines measuring 150.75 feet
and 128.47 feet;
again by said Lot 2A, 222 feet more or less;
by Mill Street, as shown on said plan, 25 feet more or less;
again by said Lot 2A, 145 feet more or less;
again by said Lot 2A, by two lines measuring 141.32 feet and
50.88 feet;
again by said Lot 2A, being a curved line with a radius of
40.00 to the point where said curved line intersects with the
common boundary line of said Lot 2A and said Lot 2B;
thence turning and running N 84° 00' 00" W along said
common boundary line to the point of beginning.

- (b) The appurtenant right to pass and repass is limited to private passenger automobiles, bicycles and foot passage only; trucks, vans, machinery and such non-private passenger vehicles are restricted to passage for fuel delivery, maintenance and repairs to and construction of a proposed single family residence.
 - (c) The appurtenant right to pass over said "right of way" on Lot 2A requires the grantees to conduct prompt removal of all snow and ice from all pavement and the repair and maintenance of the now existing bituminous concrete pavement, on Lot 2A, in a reasonable condition for passage as aforesaid of a standard similar to accepted streets and ways in the Town of Westwood.
 - (d) No vehicles or bicycles may be left standing or parked at any time on the aforesaid "right of way."
 - (e) The appurtenant right conveyed about does not include any rights to lay pipes, change grades, erect structures in, on, over or under the said "right of way."

The premises hereby conveyed shall be subject to the following restrictions which shall be construed as covenants running with the land and shall be binding and in full force and effect until the first day of January in the year 2025.

- (1) Said Lot 2B shall be used only for the purpose of a dwelling house designed for the occupancy of and used by one family only.

(2) No business of any nature, whether mercantile, manufacturing, professional or other shall be allowed or conducted upon said premises.

N O T

(3) No commercial vehicle shall be regularly parked on the premises nor shall any house trailer, camper or boat and/or trailer, or other recreational vehicle be allowed to remain on the premises.

C O P Y

N O T

A N
O F F I C I A L
C O P Y

(4) No livestock, poultry or pigeons shall be kept on the premises, household pets to be excepted from the restrictions.

The Grantors expressly reserve the following rights, privileges and easements, forever, in, over, under, upon or through said Lot 2B:

- A. To use the areas designated and shown as a pond on Lot 2B on said plan for skating, sledding, bathing, swimming, boating, fishing, or other recreational purposes and for the purpose of access to the same the right, privilege and easement, forever, to pass and repass by foot, bicycle, horse or horse-drawn sleigh or carriage, over that portion of Lot 2B.

For title of Grantor see Deed recorded at Book 7211, Page 711.

Witness my hand and seal this 17th day of July, 2000.


Anthony F. Delapa, Trustee


Joanne C. Delapa

COMMONWEALTH OF MASSACHUSETTS

SS. Norfolk County

July 17, 2000

Then personally appeared the above-named Anthony F. Delapa and Joanne C. Delapa, Trustees of the Delapa Realty Trust and acknowledged the foregoing to be their free act and deed, before me,

C A N C E L L E D
DEEDS REG#1
M 27 2000

g-lw3/delapa.dad


Joanne C. Delapa
Notary Public:
My Commission Expires: 10/1/2001

07/27/00 10:59AM 01
000000 #1467

FEE \$45.60

CASH \$45.60



Directional Drilling Means and Methods: 42 Mill street in Westwood, MA

Scope of work

Two 3" HDPE sleeves installed approximately 650 feet in dirt ground conditions

Construction Crew

The HDD crew consisting of a 4-6 member team will work between the hours of 8am-4pm with overtime as required and approved.

Drilling Operations-

The HDD drilling foreman will meet with Site Foreman to walk the job site and review the drilling plan. They will also identify any job site risks including potential or known interfering utilities and traffic control plan. This information will be communicated to both crews.

The drill operator will calculate the bore path. This may be done with the contractor on a day prior to the scheduled start. HDD will use the plans supplied for the proposed bore path and will notify the engineer if the bore path varies from the engineer's plan. HDD will mark the path with stakes or flags and provide documentation of the information gathered during the pilot bore. The driller will have already received the copies of the permits required and have them on site, verify the dig safe status and locate all utilities. Potholing methods may be utilized to confirm depths. The site and size of the entry and exit pits will then be determined and communicated to the excavator.

The driller will begin the bore thru the entry pit. Pilot bore will be drilled with standard dirt tooling, spade or Railhead type housing. A bentonite polymer mix (drilling fluid) is injected into the hole to stabilize the hole, remove cuttings, reduce torque, lubricate the pipe and cool the bit. Monitoring of the bore shall be accomplished thru the use of an F2 tracking system and a tracking equipment operator. The F2 tracker gathers data from the sonde placed in the drill head.

Calibration of the electronic detection and control system shall be verified prior to start of the bore. The sonde gathers data such as location, depth, roll angle, pitch, and temperature to guide the direction of the bit and control the bore path. Readings shall be taken on every drill rod.

Monitoring of the drilling fluids will be continuous during the drilling process and adjustments made according to drilling conditions. Excess fluids will be contained and removed by a Vac-truck as needed and disposed of at a site to be determined by the contractor.

If loss of circulation occurs, either lost to the formation or surface returns outside of entry-exit pits, drilling will stop until fluid circulation returns or can be contained without impact. Attempts to seal off inadvertent returns will be determined on site and materials will be available for this purpose. When the pilot hole has been bored a reamer will then be placed. The size and type of reamer will be chosen after the condition of the pilot bore is evaluated.



Back reaming will begin and the pipe is pulled into the exit pit. Bend radii (if determined to be a factor) will be addressed with the onsite engineer.

Installation and excavation locations along with the bore dimensions will follow the given plan. The GC (in addition to Dig Safe) will identify any interfering utilities and pot hole as deemed necessary. Traffic control is the responsibility of the GC.

Work schedule:

Day 1- Mobilize to site, set up equipment, determine work area, establish traffic control, and begin drilling. Pipe will be fused as drilling continues. HDD site to be secured at day's end.

Day 2 and Ongoing-Directional Drilling will resume. Pipe fusion will be continued. Site will be secured at days end.

Directional Drilling Equipment

Drill:	Vermeer 16x20
Pilot tooling:	Railhead 4 ¾"
Pull head:	To be determined in the field.
Reamer:	To be determined in the field
Tracking:	Digitrack F2 tracking System
Support vehicles:	Ditch Witch FM 50 Vac system
	Mack Truck supporting the mud mixing system
	Ford F 550 heavy duty tooling/crew support

Vermeer®

Horizontal Directional
Drilling System

D 16x20

Series II



NAVIGATOR®

NAVIGATOR®

D16x20

Series II

Big Power,
Small Footprint.

For over a decade, Vermeer Navigator® horizontal directional drills have helped thread the utilities which make up our modern infrastructure. Vermeer continues the tradition with the D16x20 Series II, designed with intelligent features on a compact frame.

Powered by 65 hp (48.5 kW) Kubota diesel engine providing 16,000 lb (7257.5 kg) of thrust/ pullback force and 2,000 ft-lb (2,711.6 Nm) of torque, the D16x20 Series II brings performance to a wide range of bores.

Designed with a similar configuration to other Vermeer HDDs, precise fingertip controls are mounted on two joysticks within the comfortable operator's station. A one-piece hood provides easy access to the engine compartment and hydraulic components.

The D16x20 Series II is also equipped with a 25 gpm (94.6 L/min) onboard pump that provides high flow in larger-diameter bores and increases efficiency while backreaming. Plus, the pump doubles as a high-pressure washer for quick cleanup at the end of the day.

Protect your investment.

The industry-exclusive Vermeer equipment limited warranty offers you peace of mind by providing additional lifetime warranty protection on all rack-and-pinion gears.



Operator's station. The D16x20 Series II integrates primary drilling functions into an operator's station designed for increased operator comfort and productivity.

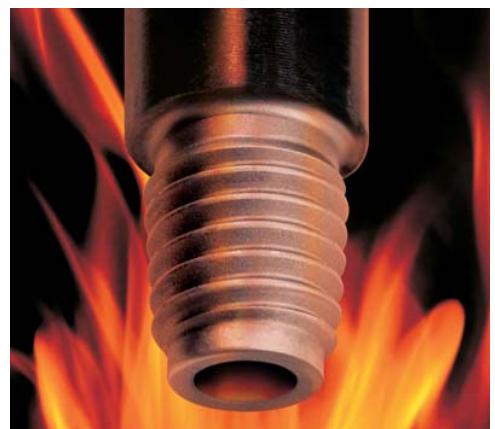


Sliding tracks adjust outward for improved stability in uneven terrain. With the tracks returned to the inward position, the D16x20 Series II has a compact footprint which allows entry to confined jobsites and side-by-side trailering with many modular drilling fluid mix systems models.

Horizontal Directional Drilling System



AutoDrill allows the operator to set thrust/pullback speed, thrust/pullback pressure, or rotation pressure mode while drilling in changing soil conditions. The patent-pending Auto Resume function allows slurry/cuttings to mix before thrust/pullback resumes.





Measured to exact tolerances.

Firestick® drill stem from Vermeer is designed to handle high-torque drilling situations while retaining a large inside diameter for superior drilling fluid flow. Constructed of Vermeer specified high-carbon alloy steel, Firestick drill stem features one-piece forged rods that have been heat-treated for uniform strength and consistent quality.



Tethered ground drive.

For enhanced safety and visibility during loading/unloading, a tethered ground-drive controller is available as an option.



Serviceability. A one-piece, hinged hood provides easy access to the engine and vital components during maintenance.

D16x20 Series II Specifications

General

Length: 16.7' (5.1 m)
Width (transport): 41" (104.1 cm)
Width (tracks extended): 48" (121.9 cm)
Height: 75" (190.5 cm)
Weight: 10,500 lb (4762.7 kg)

Operational

Max spindle torque: 2000 ft-lb (2711.6 Nm)
Max spindle speed: 248 rpm
Thrust (actual): 16,000 lb (7257.5 kg)
Max carriage speed: 120 ft-lb (36.6 m/min)
Pullback (actual): 16,000 lb (7257.5 kg)
Min bore diameter: 3.5" (8.9 cm)
Max ground drive speed: 2 mph (3.2 km/hr)
High/Low carriage speed: 120 fpm (36.6 m/min)
Drill rack angle: 12-18°
Automated rod loader: Yes

Power

Engine: Kubota 3600
Gross power rating: 65 hp (48.5 kW)
Rated rpm: 2400

Drill Stem

Type: Firestick® I
Length: 10' (3 m)
Pipe diameter: 1.9" (4.8 cm)
Weight: 51 lb (23.1 kg)
Min bend radius: 98.7' (30.1 m)
Rod carrying capacity: 400' (121.9 m)

Drilling Fluid System

Max flow: 25 gpm (94.6 L/min)
Max pressure: 1000 psi (69 bar)

Fluid Capacities

Engine oil (including filter): 8 qt (7.6 L)
Fuel tank: 15 gal (56.8 L)
Hydraulic reservoir: 23 gal (87.1 L)

Options

Tethered ground control
Bucket greaser



Vermeer offers everything from specialty tooling to training and technology.

At any given time, more than half of all horizontal directional drilling units in the world are Vermeer Navigator machines.

To help ensure smooth-running operations, Vermeer offers everything you need – from one-day training seminars to computer software – for more efficient bore planning and performance.



The Vermeer Cutting Edge Group produces some of the world's most popular HDD, specialty and custom-made tooling. For a FREE HDD accessories catalog call **1-866-VERMEER**



Vermeer drilling fluid management systems provide the horizontal directional drill with quality mud mixing in a minimum amount of time. Smaller systems are self-contained on a mounting skid. Larger systems are available preassembled on mounting platforms to provide drilling operations with greater versatility.



Wetting agents, polymers and bentonites — you need the right mix to get through the tough bores. Vermeer offers specially formulated nontoxic polymer and bentonite drilling fluids to get the job done.



Locating systems are developed by working closely with the world's premier locating companies. Vermeer helps keep you on the leading edge of technology by offering a variety of options designed to meet the needs of varying applications.



Vermeer features a global team of Navigator HDD solutions specialists that provide localized training and operation expertise designed for the conditions in your area.



One-day horizontal directional drilling seminars offered by industry experts at a Vermeer dealership near you focus on current issues in the horizontal directional drilling industry.



The efficient, economical way to plan a bore. Vermeer software heightens professionalism by aiding the operator in preplanning the bore and comparing the planned bore path with the actual bore path.

The Vermeer dealer network: Reliable support, all over the world.



With nearly 200 locations across the globe - you're never far from an independent, authorized Vermeer dealer. Our dealers are in place to support your success with product expertise that's second to none.



When you need service, you can count on your local Vermeer dealer. With multiple locations, remote service trucks, and factory-offered technician training, your local Vermeer dealer offers reliable service that keeps your equipment running.



Vermeer parts are designed and manufactured to original specifications, so whether they're new parts or replacement parts, they'll live up to the Vermeer name.



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No Dig 2009 Award Winner

Directional Drilling Locating System



The DigiTrak® F2® Directional Drilling Locating System combines new lithium-ion battery technology with DCI's patented 3D antenna configuration to offer the longest-lasting, easiest-to-use horizontal directional drilling tracking device available. The F2® system also has an intuitive picture-driven menu structure and an increased depth range.

The 3D antenna enables *target-in-the-box*® locating with a bird's-eye view that allows you to walk directly to a locate point from any direction. The patented antenna configuration also enables DCI's exclusive *Target Steering*® function, which makes up/down, left/right remote steering possible.

The update meter included on the F2® display shows the relative rate at which data is being obtained from the transmitter or receiver. The receiver's update meter shows the roll/pitch update rate from the transmitter, and the remote display's update meter shows the telemetry data rate from the receiver.

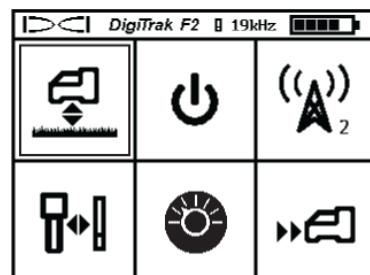
The picture-driven menu system removes language as a barrier to using the system anywhere in the world. The menu structure is easily navigated using a single trigger switch.

When using a nonfixed housing, the roll offset feature

- Two different transmitter frequency options
- Streamlined graphic display and intuitive picture-driven menu structure
- Rechargeable lithium-ion battery technology for the longest battery life in its class
- Roll offset adjusts transmitter's clock to match drill head's clock
- Update meter displays data transfer rate
- Left/right and up/down *Target Steering*®
- Off-track guidance can be used when walk-over locating is not possible

allows the transmitter's 12 o'clock position to be electronically compensated to match that of the drill head's 12 o'clock position.

The F2® system offers eight transmitter options: the mini at 12 kHz, which is rated to 15 ft (4.6 m); the standard at 12 or 19 kHz, rated to 65 ft (19.8 m); the long-range at 12 or 19 kHz, rated to 85 ft (25.9 m); a 12-kHz cable transmitter, rated to 90 ft (27.4 m); and two 12-kHz DucTrak™ transmitters. The F2® transmitters have the same dimensions as other DigiTrak® transmitters, so tooling adjustments are not necessary for current DigiTrak® users.



Receiver Menus



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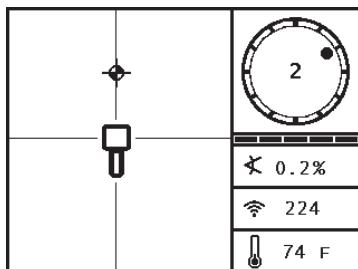
DigiTrak® F2®

F2® Receiver and FSD™ Remote

Contributing to the F2® system's award winning qualities, the graphic display on both the F2® receiver and the FSD™ (F Series™ Display) remote are designed to be as viewer friendly as possible.

The tracking display on the receiver shows a bird's-eye view of the transmitter's position next to a panel that displays the transmitter's signal strength, status, and orientation.

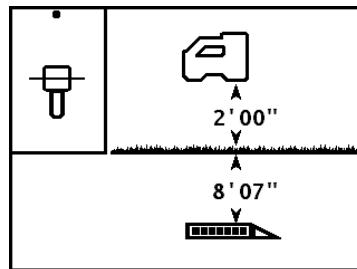
When a depth reading is taken, the depth display shows a side view of the drill head along with the bird's-eye view, which appears in the upper left corner. This means that the transmitter's location is shown in three dimensions on the same screen. Depth readings can be taken over the tool, and predicted depth readings can be taken at the front locate point (FLP). The predicted depth feature allows for tracking



Tracking Display

"on-the-fly" over a level drill path.

The FSD™ remote's main display is similar to that of the receiver, except the main portion of the screen is dedicated to the transmitter's roll clock. When a depth reading is taken at the receiver, the FSD™ remote's screen changes to show the depth in place of the clock circle, which then appears in the upper right portion of the screen.



Depth Display

The FSD™ remote will work with any compatible[†] DigiTrak® receiver. If you own a DigiTrak® Multi-Function Display (MFD®), it can be upgraded to work with the F2® receiver.

[†]Compatibility is a function of local frequency licensing requirements.

F2® Receiver Specifications

Model number.....	F2R
Frequency.....	12 or 19 kHz
Power source.....	Lithium-ion battery pack
Battery life.....	10–14 hr (approx.)
Battery charger*	12 V DC
Functions	Menu driven
Controls	Trigger switch
Graphic display.....	LCD
Audio output	Beeper
Telemetry range**	1800 ft (550 m)
Telemetry channels.....	4 channels
Operating temperature	-4°F to 140°F -20°C to 60°C
Accuracy.....	±5% absolute
Height.....	11 in. (27.94 cm)
Width	5.5 in. (13.97 cm)
Length.....	15 in. (38.1 cm)
Weight (with battery).....	7.7 lb (3.5 kg)

FSD™ Remote Specifications

Model number.....	FSD
Power source.....	Lithium-ion battery pack/12 V DC
Battery life.....	14–18 hr (approx.)
Battery charger*	12 V DC
Controls	Five-button touch pad
Graphic display.....	LCD
Audio output	Beeper
Telemetry range**	1800 ft (550 m)
Telemetry channels.....	4 channels
Operating temperature	-4°F to 140°F -20°C to 60°C
Footprint	9.5 in. x 7.6 in. (24.13 cm x 19.3 cm)
Height	8.5 in. (21.6 cm)
Weight (with battery).....	6.2 lb (2.8 kg)

*The battery charger system includes an AC/DC adapter that requires 100–240 V AC.

**The telemetry range can be increased with an optional external antenna.



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SPECIFICATIONS, FM50

DIMENSIONS—GENERATOR SET

	U.S.	METRIC
Length	72 in	1.83 m
Height	47 in	1.19 m
Width	36 in	914 mm
Weight	2000 lb	907 kg

DIMENSIONS—HOPPER

	U.S.	METRIC
Length	58 in	1.47 m
Height	40 in	1.02 m
Width	26 in	660 mm
Weight	500 lb	227 kg

DIMENSIONS—DRILLING FLUID TANKS

	U.S.	METRIC
1000-gal (3780 L) tank		
Length	125 in	3.18 m
Height, with tank fill	80 in	2.03 m
Width	42 in	1.07 m
Weight, empty	1000 lb	454 kg
Weight, full of water	9350 lb	4241 kg

POWER

	U.S.	METRIC
Engine: Kutoba V3300 EBG-2		
Fuel: Diesel		
Cooling medium: Liquid		
Injection: Indirect		
Aspiration: Natural		
Number of cylinders: 4		
Displacement	201 in ³	3.3 L
Bore	3.9 in	98 mm
Stroke	4.3 in	110 mm
Manufacturer's gross power rating	53 hp	39.5 kW
Rated Speed: 1800 rpm		
Emissions Compliance	EPA Tier 2	EU Stage II

FLUID CAPACITIES

	U.S.	METRIC
Fuel tank	15 gal	57 L
Engine oil	14 qt	13.2 L

FLUID MIXING SYSTEM

	U.S.	METRIC
Maximum pump flow rate, water	300 gpm	1135 L/min
Drilling fluid/mixing tank capacity	1000 gal	3785 L
Mixing time for 50 lb (22.7 kg): 30 sec		
Mixing time for 100 lb (45 kg): 1 min		

Maximum flow rate to drilling unit*	235 gpm	890 L/min
Maximum fluid pressure	50 psi	3.4 bar
Mixing hopper capacity	1.0 ft ³	28 L
Liquid chemical hopper capacity	1.0 qt	0.9 L

ACCESSORY OUTLETS

U.S.	METRIC
North America 139V AC @ 60 Hz (2 duplex outlets)	Europe 200V AC @ 50 Hz (2 IEC 16A outlets)
240V AC @ 60 Hz (1 twist-lock outlet)	

Specifications are general and subject to change without notice. If exact measurements are required, equipment should be weighed and measured. Due to selected options, delivered equipment may not necessarily match that shown. *42-second viscosity fluid delivered at 30 psi (2.1 bar) through 3 in x 50 ft (76 mm x 15 m) hose. Note: Delivered (charge) pressure is 30-50 psi (2.1-3.4 bar) depending on pump speed, selection and flow rates.

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HALLIBURTON

SAFETY DATA SHEET

Product Trade Name: BORE-GEL®

Revision Date: 02-Apr-2015

Revision Number: 14

1. Identification

1.1. Product Identifier

Product Trade Name: BORE-GEL®
Synonyms: None
Chemical Family: Mineral
Internal ID Code HM003576

1.2 Recommended use and restrictions on use

Application: Viscosifier
Uses Advised Against No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier Baroid Fluid Services
Product Service Line of Halliburton
P.O. Box 1675
Houston, TX 77251
Telephone: (281) 871-4000
Emergency Telephone: (281) 575-5000

Prepared By Chemical Stewardship
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number (281) 575-5000

2. Hazard(s) Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Carcinogenicity	Category 1A - H350
Specific Target Organ Toxicity - (Repeated Exposure)	Category 1 - H372

2.2. Label Elements

Hazard Pictograms



Signal Word Danger

Hazard Statements H350 - May cause cancer
H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary Statements

Prevention	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear protective gloves/protective clothing/eye protection/face protection
Response	P308 + P313 - IF exposed or concerned: Get medical advice/attention P314 - Get medical attention/advice if you feel unwell
Storage	P405 - Store locked up
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains**Substances**

Sodium carbonate

CAS Number

497-19-8

Crystalline silica, quartz

14808-60-7

Crystalline silica, cristobalite

14464-46-1

Crystalline silica, tridymite

15468-32-3

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Sodium carbonate	497-19-8	1 - 5%	Eye Irrit. 2 (H319)
Crystalline silica, quartz	14808-60-7	1 - 5%	Carc. 1A (H350) STOT RE 1 (H372)
Crystalline silica, cristobalite	14464-46-1	0.1 - 1%	Carc. 1A (H350) STOT RE 1 (H372)
Crystalline silica, tridymite	15468-32-3	0.1 - 1%	Carc. 1A (H350) STOT RE 1 (H372)

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First-Aid Measures**4.1. Description of first aid measures**

Inhalation	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin	Wash with soap and water. Get medical attention if irritation persists.
Ingestion	Under normal conditions, first aid procedures are not required.

4.2 Most important symptoms/effects, acute and delayed

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

5.2 Specific hazards arising from the substance or mixture

Special Exposure Hazards

None anticipated

5.3 Special protective equipment and precautions for fire-fighters

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid creating and breathing dust.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

7. Handling and storage

7.1. Precautions for Safe Handling

Handling Precautions

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Do not reuse empty container. Product has a shelf life of 12 months.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Sodium carbonate	497-19-8	Not applicable	Not applicable

Crystalline silica, quartz	14808-60-7	10 mg/m ³ %SiO ₂ + 2	TWA: 0.025 mg/m ³
Crystalline silica, cristobalite	14464-46-1	1/2 x 10 mg/m ³ %SiO ₂ + 2	TWA: 0.025 mg/m ³
Crystalline silica, tridymite	15468-32-3	1/2 x 10 mg/m ³ %SiO ₂ + 2	0.05 mg/m ³

8.2 Appropriate engineering controls

Engineering Controls Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment	If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.
Respiratory Protection	Not normally needed. But if significant exposures are possible then the following respirator is recommended: Dust/mist respirator. (N95, P2/P3)
Hand Protection	Normal work gloves.
Skin Protection	Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.
Eye Protection	Wear safety glasses or goggles to protect against exposure.
Other Precautions	None known.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

Physical State: Powder	Color: Light brown or Gray
Odor: Mild earthy	Odor Threshold: No information available
Property	Values
Remarks/ - Method	
pH:	8-10
Freezing Point/Range	No information available.
Melting Point/Range	No data available
Boiling Point/Range	No data available
Flash Point	No data available
Flammability (solid, gas)	No data available
upper flammability limit	No data available
lower flammability limit	No data available
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	2.5
Water Solubility	Partly soluble
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available

Oxidizing Properties No information available

9.2. Other information
VOC Content (%) No data available

10. Stability and Reactivity

10.1. Reactivity
Not expected to be reactive.

10.2. Chemical Stability
Stable

10.3. Possibility of Hazardous Reactions
Will Not Occur

10.4. Conditions to Avoid
None anticipated

10.5. Incompatible Materials
Hydrofluoric acid.

10.6. Hazardous Decomposition Products

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

11. Toxicological Information

11.1 Information on likely routes of exposure

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation

Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).

Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).

Eye Contact

May cause mechanical irritation to eye.

Skin Contact

May cause mechanical skin irritation.

Ingestion

None known

Chronic Effects/Carcinogenicity Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium carbonate	497-19-8	4090 mg/kg (Rat) 2800 mg/kg (Rat)	2210 mg/kg (Mouse) > 2000 mg/kg (Rabbit)	2.3 mg/L (Rat) 2h
Crystalline silica, quartz	14808-60-7	500 mg/kg (Rat) >15,000 mg/kg (Human)	No data available	No data available
Crystalline silica, cristobalite	14464-46-1	500 mg/kg (Rat)	No data available	No data available
Crystalline silica, tridymite	15468-32-3	500 mg/kg (Rat)	No data available	No data available

Substances	CAS Number	Skin corrosion/irritation
Sodium carbonate	497-19-8	Non-irritating to the skin
Crystalline silica, quartz	14808-60-7	Non-irritating to the skin
Crystalline silica, cristobalite	14464-46-1	Non-irritating to the skin
Crystalline silica, tridymite	15468-32-3	Non-irritating to the skin

Substances	CAS Number	Eye damage/irritation
Sodium carbonate	497-19-8	Irritating to eyes.
Crystalline silica, quartz	14808-60-7	Mechanical irritation of the eyes is possible.
Crystalline silica, cristobalite	14464-46-1	Mechanical irritation of the eyes is possible.
Crystalline silica, tridymite	15468-32-3	Mechanical irritation of the eyes is possible.

Substances	CAS Number	Skin Sensitization
Sodium carbonate	497-19-8	Not classified
Crystalline silica, quartz	14808-60-7	Not regarded as a sensitizer.
Crystalline silica, cristobalite	14464-46-1	Not regarded as a sensitizer.
Crystalline silica, tridymite	15468-32-3	Not regarded as a sensitizer.

Substances	CAS Number	Respiratory Sensitization
Sodium carbonate	497-19-8	No information available
Crystalline silica, quartz	14808-60-7	No information available

Crystalline silica, cristobalite	14464-46-1	No information available
Crystalline silica, tridymite	15468-32-3	No information available

Substances	CAS Number	Mutagenic Effects
Sodium carbonate	497-19-8	In vivo tests did not show mutagenic effects.
Crystalline silica, quartz	14808-60-7	Not regarded as mutagenic.
Crystalline silica, cristobalite	14464-46-1	Not regarded as mutagenic.
Crystalline silica, tridymite	15468-32-3	Not regarded as mutagenic.

Substances	CAS Number	Carcinogenic Effects
Sodium carbonate	497-19-8	Not regarded as carcinogenic.
Crystalline silica, quartz	14808-60-7	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.
Crystalline silica, cristobalite	14464-46-1	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.
Crystalline silica, tridymite	15468-32-3	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.

Substances	CAS Number	Reproductive toxicity
Sodium carbonate	497-19-8	Did not show teratogenic effects in animal experiments.
Crystalline silica, quartz	14808-60-7	No information available
Crystalline silica, cristobalite	14464-46-1	No information available
Crystalline silica, tridymite	15468-32-3	No information available

Substances	CAS Number	STOT - single exposure
Sodium carbonate	497-19-8	None under normal use conditions
Crystalline silica, quartz	14808-60-7	No significant toxicity observed in animal studies at concentration requiring classification.
Crystalline silica, cristobalite	14464-46-1	No significant toxicity observed in animal studies at concentration requiring classification.
Crystalline silica, tridymite	15468-32-3	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Sodium carbonate	497-19-8	No information available
Crystalline silica, quartz	14808-60-7	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)
Crystalline silica, cristobalite	14464-46-1	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)
Crystalline silica, tridymite	15468-32-3	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)

Substances	CAS Number	Aspiration hazard
Sodium carbonate	497-19-8	Not applicable
Crystalline silica, quartz	14808-60-7	Not applicable
Crystalline silica, cristobalite	14464-46-1	Not applicable
Crystalline silica, tridymite	15468-32-3	Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity Effects

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Sodium carbonate	497-19-8	EC50 242 mg/L (Nitzschia)	TLM24 385 mg/L (Lepomis macrochirus) LC50 310-1220 mg/L (Pimephales promelas) LC50 (96h) 300 mg/L (Lepomis macrochirus)	No information available	EC50 265 mg/L (Daphnia magna) EC50 (48h) 200 – 227 mg/L (Ceriodaphnia sp.)
Crystalline silica, quartz	14808-60-7	No information available	LL50 (96h) 10,000 mg/L (Danio rerio) (similar substance)	No information available	LL50 (24h) > 10,000 mg/L (Daphnia magna) (similar substance)
Crystalline silica, cristobalite	14464-46-1	No information available	LL0 (96h) 10,000 mg/L (Danio rerio) (similar substance)	No information available	LL50 (24h) > 10,000 mg/L (Daphnia magna) (similar substance)
Crystalline silica, tridymite	15468-32-3	No information available	LL0 (96h) 10,000 mg/L(Danio rerio) (similar substance)	No information available	LL50 (24h) > 10,000 mg/L (Daphnia magna) (similar substance)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Sodium carbonate	497-19-8	The methods for determining biodegradability are not applicable to inorganic substances.
Crystalline silica, quartz	14808-60-7	The methods for determining biodegradability are not applicable to inorganic substances.
Crystalline silica, cristobalite	14464-46-1	The methods for determining biodegradability are not applicable to inorganic substances.
Crystalline silica, tridymite	15468-32-3	The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Sodium carbonate	497-19-8	No information available
Crystalline silica, quartz	14808-60-7	No information available
Crystalline silica, cristobalite	14464-46-1	No information available
Crystalline silica, tridymite	15468-32-3	No information available

12.4. Mobility in soil

No information available

Substances	Mobility
Sodium carbonate	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations**13.1. Waste treatment methods****Disposal Method**

If practical, recover and reclaim, recycle, or reuse by the guidelines of an approved local reuse program. Should contaminated product become a waste, dispose of in a licensed industrial landfill according to federal, state, and local regulations.

Contaminated Packaging

Follow all applicable national or local regulations.

14. Transport Information**US DOT**

UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

US DOT Bulk
DOT (Bulk) Not applicable

Canadian TDG
UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IMDG/IMO
UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IATA/ICAO
UN Number: Not restricted
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Special Precautions for User: None

15. Regulatory Information

US Regulations

US TSCA Inventory	All components listed on inventory or are exempt.
EPA SARA Title III Extremely Hazardous Substances	Not applicable
EPA SARA (311,312) Hazard Class	Chronic Health Hazard
EPA SARA (313) Chemicals	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).
EPA CERCLA/Superfund Reportable Spill Quantity	Not applicable.
EPA RCRA Hazardous Waste Classification	If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.
California Proposition 65	The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law One or more components listed.

NJ Right-to-Know Law One or more components listed.

PA Right-to-Know Law One or more components listed.

Canadian Regulations

Canadian DSL Inventory All components listed on inventory or are exempt.

16. Other information

Preparation Information

Prepared By Chemical Stewardship
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

Revision Date: 02-Apr-2015

Reason for Revision Update to Format SECTION: 2

Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms

bw – body weight

CAS – Chemical Abstracts Service

EC50 – Effective Concentration 50%

ErC50 – Effective Concentration growth rate 50%

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL50 – Lethal Loading 50%

mg/kg – milligram/kilogram

mg/L – milligram/liter

NIOSH – National Institute for Occupational Safety and Health

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PEL – Permissible Exposure Limit

ppm – parts per million

STEL – Short Term Exposure Limit

TWA – Time-Weighted Average

UN – United Nations

h - hour

mg/m³ - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

w/w - weight/weight

d - day

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet

Henniker Directional Drilling Employee Point of Contact Information

Name	Jeffrey Martin President	Charlie Hunt	Mathew Page	Hunter Reynolds	Fred Currier	Bill Martin
Position	Site Superintendent - Lead Driller	Driller/Foreman	Drilling Assistant/Tracker	Drilling Assistant	Tracker Driller Ass.	Tracker/Driller
Office Phone	603-428-6333	603-428-6333	603-428-3333	603-428-6333	603-428-6333	603-428-6333
Cell phone	603-496-1912	603-496-9285	603-496-9285	603-494-7690	603-608-5110	603-496-6970
Email	jefm@hddbore.com					
Drilling Experience	19 years	19 years	3 years	>1 year	6 years	15 years
Training & Certification						
10 Hr. OSHA	X	X	X	X	X	X
Qualified Fusion Technician	X	X	X	X	X	X
CDL License	X	X	X	X	X	X
Baroid Mud School	X	X	X	X	X	X
OQ Certified	X	X	X	X	X	X
Competent Person Training	X	X	X	X	X	X
Confined Space Certified	X	X	X	X	X	X
Office Staff	Danielle Martin	Joan Florence				
General Manager/Authorized to Sign for Co.	603-428-6333	Accounting				
	603-428-6333	603-428-6333				
	603-496-1908					
	daniellerm@hddbore.com	joan@hddbore.com				



NOTE: IT SHALL BE THE RESPONSIBILITY
OF THE CONTRACTOR TO VERIFY
LOCATIONS AND ELEVATIONS OF EXISTING
AND NEW CONSTRUCTION COMMENCEMENT
DISEASE IS TO BE NOTIFIED 72 HOURS
IN ADVANCE OF CONSTRUCTION
DISEASE + 100-34-223

