NANTUCKET CONSERVATION COMMISSION

Updated Meeting Notice/Agenda for Wednesday, January 4th, 2017

4:00 P.M. in the **2nd Floor** of the Public Safety Facility 4 Fairgrounds Rd.

*Matter has not been heard

I. PUBLIC MEETING

A. Public Comment

II. PUBLIC HEARING

A. Notice of Intent

1. Edwin Snider RT – 2 Brock's Court (42.3.4-84) SE48-2834
2. *Sunset House, LLC – 15 Hallowell Lane (30-10) SE48-2924
3. *Maddelone – 14 Western Ave (87-41) SE48-2937
4. *E. Garrett Bewkes III - 67 Squam Road (13 -14) SE48-

PUBLIC MEETING

A. Request for Determination

1. *Carpenter – 17 Columbus Ave (59.3-108)
2. * East Eden LLC & 82 Baxter Road LLC- 82 & 82A Baxter Road (49, - 39,38)
3. * Heirs of Charles W. Brinton - 10 Ocean Avenue (73.2.4,- 23)
4. *U.S. Reif Marine Nantucket Fee, LLC -134 Orange Street (55-49)

B. Certificate of Compliance

1. Thompson – 14 Fargo Way (14-17) SE48-2645

C. Orders of Conditions (If the public hearing is closed – for discussion and/or issuance)
Discussion of other closed Notices of Intent

1. Edwin Snider RT – 2 Brock's Court (42.3.4-84) SE48-2834
2. *Sunset House, LLC – 15 Hallowell Lane (30-10) SE48-2924
3. *Maddelone – 14 Western Ave (87-41) SE48-2937
4. *E. Garrett Bewkes III - 67 Squam Road (13 -14) SE48-

D. Extension of Orders of Conditions

1. *Goldsmith- 86 Pocomo Road (15-41) SE48-2626

E. Monitoring Reports

1. *Nantucket Island Land Bank – 21/23 Sesachacha Road (21-16) SE48-2775
2. *Nantucket Island Land Bank – 22 Cathcart Road (43-68) SE48-2810
3. *Nantucket Island Land Bank – 27 N. Cambridge St (38-24) SE48-2527
4. *Nantucket Island Land Bank – 28,30A,30B Washington Street (42.3.2-23.1,23.2,23.3) SE48-2526
5. *Nantucket Island Land Bank – 158 Orange St (55-611) SE48-2689
6. * Nantucket Island Land Bank – 72 Washington St (42.2.3-17) SE48-2741
7. *Nantucket Island Land Bank – Long Pond (59-59.3) SE48-2771
8. *Nantucket Island Land Bank – 80 Miacomet Ave (66-126) SE48-2394

F. Other Business

1. Approval of Minutes 12/14/2016
2. Enforcement Action
3. Reports: CPC, NP&EDC, Mosquito Control Committee, Other
4. Commissioner's Comment
5. Administrator/ Staff Report

PUBLIC MEETINGS AND PUBLIC HEARING

(from pp. 5-7 of the Nantucket Conservation Commission's Information and Procedures)

Public Meetings and Public Hearings are not the same. Public Meetings are conducted so that the Commission may discuss matters affecting the interests of the public and the rights of individuals in an open forum. To act on a matter, a quorum of the Commission (four of the seven members) must be present. Public Hearings are conducted for the same overall reasons as the Public Meeting – to protect both the public interest and the rights of individuals – with the additional purpose of gathering relevant information from the applicant, interested parties, and the public at large, and providing the Commission with the means of gathering the information necessary to developing an informed opinion and to issuing Orders that are fully supported by the appropriate facts, laws, and science.

Public Meetings, and Public Hearings held within Public Meetings, are held in conformance with the Massachusetts Open Meetings Law, M.G.L. Ch. 39 §§23A-C, and the Code of the Town of Nantucket §§1-7, 2-1, et seq., 136-4, where applicable. Pursuant to Section 1-7 of the Code of the Town of Nantucket, the Commission conducts business in accordance with parliamentary procedure as set out by Roberts Rules. The tenth edition is the most recent and presently effective version of Robert Rules. Additionally, where appropriate, the Commission follows the guidelines for Conservation Commission Meetings and Hearings set out by the Massachusetts Association of Conservation Commissions (MACC), the state umbrella organization of Conservation Commissions that works for strong, workable, science-based laws and regulations.

The Chairman or Chairwoman (hereinafter "Chair") presides at Public Meetings and Public Hearings. In the absence of the Chair, the Vice Chair, or another Commissioner designated by the Chair presides. Public Hearings are conducted with an appropriate degree of formality, in accordance with Roberts Rules of Order, and with reference to state and local laws and regulations. During the Public Hearing portion of the Public Meeting, the Commission follows the following procedures:

A. The Hearing is called by the applicant's name and the address of the proposed activity. The applicant may or may not be the owner of the property.
B. The applicant, or the applicant's representative, presents the proposal to the Commission by describing the activity or project, its environmental impact, and its location relative to resource areas and buffer zones.
C. The Commissioners or the Commission staff may at this point have questions for the applicant or the applicant's representative relating to clarity of the application.
D. Interested parties, whether abutters, representatives of other entities, or the public, are invited to provide evidence or propose questions relevant to the project, to the resource area, to the protected interests arising by statute or regulation in relation to the resource area, and/or to the performance standards for such activities in such resource areas. Any questions must be directed to and through the Chair, not to the applicant or another person at the hearing. The time available for such public input may be limited by the Chair, especially where a large number of people seek to address the Commission. Public input should be limited to new information—if someone already has provided the same information to the Commission it is unnecessary for it to be restated by another speaker. For the above reasons, it is helpful to the Commission, and often will have more impact, if comments or questions are submitted in writing, in advance if at all possible.
E. The Commission staff and/or technical consultants retained by the Commission will provide any additional information they may deem relevant to the application, may answer questions from the Commission, and may provide a recommendation to the Commission.
F. The Commissioners may have additional questions from either the applicant or from persons who have provided evidence or other input to the Hearing.
G. The Chairman will ask if the applicant has any additional information based on the questions and input outlined above.
H. The Commission then will deliberate and decide a course of action. The Commission should not be interrupted during its deliberations.

Comments and questions are welcomed at the appropriate time in the hearing. Those most helpful to assisting the Commission in fulfilling its legal mandate are those comments or questions that pertain to the proposal or resource areas that are the subject of the Public Hearing. Issues beyond the Commission's jurisdiction are not legally relevant and should be avoided.

Because of the acoustics of the room in which the Commissions conducts Pubic Meetings, it can be difficult for Commissioners to hear those appearing before the Commission, or each other for that matter, if people are engaging in conversation elsewhere in the room. Please take all private conversations to the hallway outside.

Please note that the Commission keeps minutes of its proceedings in accordance with state law. The person keeping the minutes must record the names of persons addressing the Commission, and those addressing the Commission may need to spell their names if the spelling is not obvious. The files related to applications are available for public review at the Commission's office during normal business hours in advance of, and following the Pubic Meeting. They are not available for such review during the meeting, when such review would be distracting to Commissioners and staff, and would interfere with the orderly conduct of the Public Meeting.

Typically, the persons appearing before the Commission are professionals, that is, persons who are paid to attend the hearings on behalf of their client or employer. Such persons are expected to understand the rules and procedures of the Commission, and the relevancy of evidence, commentary, or questions submitted to the Commission.

It is not unusual for members of the public to appear before the Commission, especially in response to a notice that an activity is proposed on an abutting or nearby property. The Commission's staff is available to assist the public in understanding the applications under consideration by the

Commission relative to resource areas and protected interests. The public may visit the Commission's office and examine the application, the plans that are part of the application, and other materials that may be related to the proposal. Recognizing that non-professionals are not as familiar with the rules and procedures, the Chair is likely to allow them a little more leeway than might be permitted professionals practicing before the Commission. Nevertheless, this guide to Information & Procedures is designed to inform everyone of the practices and procedures. The Chair may redirect anyone at any point if they go beyond what is appropriate under the Commission's rules of procedure.

NOTICES OF INTENT

Edwin Snider RT

1 Brock’s Court

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

NOTICE OF INTENT APPLICATION

Relocation of an Existing Single Family residence and Construction of an Addition Partially Within Wetland Resource Area Buffer Zones

1 Brock's Court
Portions of Map 42.3.4 Parcel 84
Nantucket, Massachusetts

Prepared for:

Edwin Snider Realty Trust
C/O Cohen and Cohen Law PC
34 Main Street
Second Floor
Nantucket, MA 02554

Prepared By:

Site Design Engineering, LLC
11 Cushman Street
Middleboro, MA 02346

October 30, 2015

SDE No.: 12035

WPA FORM 3

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

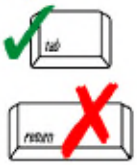
Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Nantucket
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):

1 Brock's Court — a. Street Address
Nantucket — b. City/Town
02554 — c. Zip Code

Latitude and Longitude:
41 17 01.78 — d. Latitude
70 06 15.92 — e. Longitude

42.3.4 — f. Assessors Map/Plat Number
84 — g. Parcel /Lot Number

2. Applicant:

a. First Name
b. Last Name
Edwin Snider Realty Trust C/O Cohen & Cohen Law PC — c. Organization
34 Main Street Second Floor — d. Street Address
Nantucket — e. City/Town
MA — f. State
02554 — g. Zip Code
h. Phone Number
i. Fax Number
j. Email Address

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

a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Mark — a. First Name
Rits — b. Last Name
Site Design Engineering, LLC — c. Company
11 Cushman Street — d. Street Address
Middleboro — e. City/Town
MA — f. State
02346 — g. Zip Code
508-802-5832 — h. Phone Number
508-967-0674 — i. Fax Number
mrits@sitedesigneng.com — j. Email address

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

$220.00 — a. Total Fee Paid
$97.50 — b. State Fee Paid
$122.50 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Relocation of an existing Single Family Residence and construction of an addition located partially within the 100-foot buffer zone to a Bordering Vegetated Wetland.

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

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

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

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

a. County
b. Certificate # (if registered land)
c. Book
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.

PROJECT NARRATIVE

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

PROJECT DESCRIPTION

1 Brock's Court
NANTUCKET, MASSACHUSETTS

October 30, 2015

INTRODUCTION

The purpose of this Notice of Intent (NOI) application is to request approval from the Nantucket Conservation Commission (Commission) under the Massachusetts Wetlands Protection Act (WPA) and its implementing regulations 310 CMR (CMR) and the Town of Nantucket Wetlands Protection Bylaw (Bylaw) and its implementing regulations (Local Regs) for work within 100 feet of a Bordering Vegetated Wetland (BVW) resource area on property located at 1 Brock's Court in Nantucket (Subject Property). The work includes the previously performed relocation of an existing single family residence (SFR) and the construction of an addition, wooden deck, and pervious patio. The work was performed by a previous property owner and was not subject to an Order of Conditions (OOC). The previously performed work was located within the 100-foot buffer zone to a BVW resource area but was entirely outside of the 50-foot BVW buffer zone.

This Notice of Intent application is presented by the following Property Owner/Applicant:

1 Brock's Court
(Map 42.3.4 Lot 84)

Edwin Snider Realty trust
C/O Cohen and Cohen Law PC
34 Man Street
Second Floor
Nantucket, MA. 02554

SITE OVERVIEW & EXISTING CONDITIONS

The Subject Property consists of an approximately 18,675 square foot (0.43 acre) lot located on the south side of Brock's Court and west of Liberty Street (see Figures 1 through 3 and Site Plan). To the north, the Subject Property is bordered by developed residential property. To the east, the Subject Property is bordered by Liberty Street, a paved public way, and developed residential properties. To the south, the Subject Property is bordered by developed residential properties. To the west, the Subject Property is bordered by undeveloped property (see Figures 1 through 3 and Site Plan). The Subject Property has been historically developed and is the site of an SFR, deck, pervious driveway, and associated landscaping/grading. A BVW resource area is located on the adjacent property to the west and extends onto the western portion of the Subject Property. The extent of the wetland resource area has been previously delineated as part of a separate NOI application for work performed on an adjacent property and was used as a basis for an OOC for property located at 3 Brock's Court.

The extent of wetland resource areas on the Subject Property and adjacent properties has been previously confirmed as part of filings on adjacent properties. However, all previous delineations have since expired. In order to confirm that all work on the Subject Property was performed outside of the 50-foot BVW buffer zone, Laura A. Schofield of Schofield Brothers of Cape Cod (Schofield) performed a wetland delineation on the Subject Property on June 25, 2015. The location of all wetland boundaries on the Subject Property and associated buffer zones are indicated on the Site Plan. A delineation report and DEP BVW Delineation Forms are included as an attachment to this NOI Application. Based on the delineation performed by

Schofield, a large portion of the Subject Property is located within the 50-foot BVW buffer zone. This portion of the Subject Property has been historically maintained as a lawn area nearly to the edge of the BVW. All previously performed activities are located well outside of the 50-foot BVW buffer zone and the previously performed work does not require any waivers under the Bylaw.

The Subject Property is located entirely outside of the 100-year flood zone as determined from the Digital FEMA Flood Maps available from MassGIS and site specific topographic survey information (see Figure 6 and Site Plan) and is therefore outside of Land Subject to Coastal Storm Flowage (LSCSF).

PROJECT ACTIVITIES

Work on the Subject Property was performed by a previous property owner and included the relocation of the existing SFR from within the 100-foot BVW buffer zone to a portion of the Subject Property outside of the 100-foot BVW buffer zone. The previously performed work also included the construction of an addition partially within the 100-foot BVW buffer zone. The constructed addition, including the wooden deck, has a smaller footprint within the 100-foot BVW buffer zone than the previously existing SFR and occupies nearly the same footprint. Finally, previously performed work also included the construction of a pervious patio and planting of a privet hedge along the eastern side of the previously existing pervious driveway and parking area. All previously performed work, was located entirely outside of the 50-foot BVW buffer zone with the exception of a small portion of the hedge which is located partially within the 50-foot BVW buffer (see Site Plan). The existing SFR is connected to town sewer and water.

NHESP / MESA

The Subject Property is located entirely outside of both Estimated and Priority Habitat of Rare or Endangered Species as indicated on the 2008 NHESP Atlas available through MassGIS (see Figure 5).

EROSION / SEDIMENTATION CONTROL & CONSTRUCTION PROTOCOL

No erosion or sedimentation control is proposed as part of this NOI. All described work and activities have already been completed.

WETLAND RESOURCE AREAS

The previously performed project was a buffer zone project. No activities within any wetland resource areas are proposed as part of this project. All work associated with the Proposed Project will be performed within the following wetland resource area buffer zones subject to the jurisdiction of the Nantucket Conservation Commission under the State Wetlands Protection Act (WPA) and 310 CMR (CMR), the Nantucket Wetlands Protection Bylaw (Bylaw) and the Nantucket Wetland Protection Regulations (Local Regs):

- 100-foot Buffer Zone to a BVW (Figure 4 and Site Plan)

COMPLIANCE WITH STATE AND LOCAL PERFORMANCE STANDARDS

The previously performed project was a residential redevelopment project and included the relocation of an existing SFR and the construction of an addition, a wooden deck, a pervious patio, and associated landscaping within the 100-foot buffer zone to a BVW.

State Wetlands Performance Standards

Bordering Vegetated Wetlands

The previously performed project occurred within the 100-foot buffer zone to a BVW. No work is proposed within any State or local BVW Resource Areas. The Proposed Project includes the construction of a secondary dwelling, pool, shed, pervious patio, pervious driveway, and associated landscaping/grading which will be located within the 100-foot buffer zone to a BVW. The Act and CMR do not include any specific performance standards for work within the 100-foot buffer zone to a BVW. Instead, local jurisdictions are permitted to regulate the buffer zone areas as deemed appropriate under local Bylaws. A detailed discussion of local permitting requirements within the 100-foot BVW buffer zone is included in the Local Wetlands Performance Standards Section below.

Local Wetlands Performance Standards

Vegetated Wetlands

> *"Vegetated Wetlands or land within 100 feet of Vegetated Wetlands shall be presumed significant to the Interests Protected by the Bylaw as referenced in Section A, therefore the following regulations shall apply:"*
>
> *3.02B(1)*
> *"Proposed projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to the vegetated wetlands. All structures which are not water dependent shall be at least 50 feet from a vegetated wetland, and all structures shall maintain an undisturbed two-foot separation to high groundwater. Fifty percent (50%) of the area between the 25-foot buffer and the 50-foot buffer shall not be altered. Additional soils and groundwater information may be required for applications in areas of high groundwater."*

The previously performed project, including relocation of the existing SFR and construction of an addition, wooden deck, and pervious patio. All structural components were constructed entirely outside of the 50-fooot BVW buffer zone. All new structures including the addition and wooden deck were located almost entirely within the footprint of the previously existing SFR. No new structures were built within the 50-foot BVW buffer zone and no new alterations occurred within the 25-foot BVW buffer zone. The portion of the Subject Property located within the 25-foot and 50-foot BVW buffer zones has been historically maintained as a lawn area. This portion of the Subject Property was not significantly altered as a result of the previously performed site work and will be maintained.

> *3.02B(2)*
> *"Proposed projects shall not use procedures that the Commission determines changes the flood protection function (leveling out of storm surges by storing and slowly releasing water) of vegetated wetlands by significantly changing the rate of water flow through the wetlands (by channelization or other means)."*

The Proposed Project included the relocation of an existing SFR and the construction of an addition, wooden deck, and pervious patio. No significant grading or filling was performed within the 50-foot BVW buffer zone. The previously performed project did not have any adverse impact on the ability of the BVW to provide flood protection.

3.02B(3)
"No permit shall be issued which authorizes the destruction of forested swamps. The Commission may authorize the excavation of other vegetated wetlands to create ponds or clear the edge of a pond if the project is designed to increase wildlife habitat diversity and to minimize groundwater or surface water loss."

This standard is not applicable. The Proposed Project does not include the excavation of any wetland resource areas.

3.02B(4)
"The septic leach facility of a septic system shall be at least 100 feet from the vegetated wetland."

This standard is not applicable. The Propose Project will be connected to town water and sewer.

3.02B(5)
"Piers shall be constructed and maintained using procedures determined by the Commission to be the best available measures to minimize adverse effects on Interests protected by the Bylaw."

This standard is not applicable. The Proposed Project does not include the construction of any piers.

3.02B(6)
"Elevated walkways determined to be water dependent designed not to affect existing vegetation shall be required for pedestrian passage over vegetated wetlands."

This standard is not applicable. The Proposed Project does not include the construction of any elevated walkways.

3.02B(7)
"The Commission may impose such additional requirements as necessary to protect the Interests Protected under the Bylaw."

The Applicant acknowledges the right of the Commission to apply additional requirements to protect the Interests of the Bylaw.

CONCLUSION

The Subject Property is a historically developed property which included an SFR, pervious driveway, and associated landscaping and grading. The majority of the 25-foot and 50-foot BVW buffer zone has been historically maintained as a lawn area. Work performed on the Subject Property by a previous owner included the relocation of the existing SFR and the

construction of an addition, wooden deck, pervious patio, and associated landscaping. The previously existing SFR was entirely outside of the 50-foot BVW buffer zone. The majority of the newly constructed structures including the addition and wooden deck are within the footprint previously occupied by the existing SFR. No new structures are located within the 50-foot BVW buffer zone and no new alterations occurred within the 25-foot BVW buffer zone. All work performed is in compliance with State and local regulations and does not require any waivers under the Bylaw. The Applicant is seeking an OOC approving the previously performed site work. The Applicant feels that al previously performed activities did not result in any significant new or additional adverse impacts to the BVW or associated buffer zones and that the work was performed in compliance with all State and local performance standards. Therefore, the Applicant respectfully requests that the Commission grant an OOC approving the previously performed site alterations.

1 Brock's Court - Nantucket, Massachusetts
Map 42.3.4 Lot 84
SDE Project No. 12035

Figure 4 - Wetland Boundaries
October 30, 2015

WETLAND DELINEATION INFORMATION

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

SCHOFIELD BROTHERS OF CAPE COD
Engineering - Land Surveying
Environmental Permitting
161 Cranberry Highway
P.O. Box 101
Orleans, MA 02653-0101
508-255-2098 - 508-240-1215 (fax)
E-mail: schobro@verizon.net

July 16, 2015

Site Design Engineering, LLC
11 Cushman Street
Middleboro, MA 02346
Attn: Daniel Mulloy, PE
Principal

RE: 44 Liberty Street
Nantucket, Massachusetts

Dear Mr. Mulloy;

At your request, on June 25, 2015 I visited the above referenced address to identify and delineate wetlands at or immediately adjacent to the subject property. It is my understanding that the buffer zone of a nearby wooded swamp may extend over the work limit for an existing dwelling that was recently renovated without a permit.

Project Location/Description
The subject property is located at 44 Liberty Street, west of downtown Nantucket. The existing and recently renovated dwelling is located on the easterly portion of the site. There is an existing lawn area in between the dwelling and the wooded swamp. The lawn area is surrounded by a well-established privet hedge.

According to Flood Insurance Rate Map #25019C0086G effective date June 9, 2014 the subject parcel is not within land subject to flooding.

There are two wetland resource areas affecting the subject property; a wooded swamp/isolated wetland to the west and a small pond to the southwest.

Wetland Resource Area Descriptions
Isolated Wooded Swamp/Vegetated Wetland
There is a wooded swamp that borders the westerly property line. The swamp is isolated, as it is surrounded by development. Topography within the wetland is rather hummocky and appear to have been altered in the past.

Consecutively numbered blue survey ribbon was used to delineate the wetland boundaries in the field. The wetland line was established utilizing topographic and hydrologic indicators. A small bank was observed in the topography running parallel to and behind the existing privet hedge separating the woods from the lawn. During the site visit made on June 25, 2015 there were areas of standing water observed within the wetland and in some places the soil was damp at the surface. It should be noted that in the northwesterly corner of the property, standing water was observed. However, upon further investigation, that particular area of standing water appears to be the result of a sump pump discharge and not standing groundwater.

The vegetation at the site was evaluated in accordance with the methods described in the Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act Handbook dated 1995 by the MA Department of Environmental Protection Division of Wetlands and Waterways. A significant amount of vegetation at this site is invasive. Japanese knotweed has overwhelmed the herbaceous and shrub layers of the wooded swamp. Other invasive plants observed within the wooded area immediately adjacent to the isolated wetland include garlic mustard and barberry. The vegetation in the area is predominantly invasive, non-wetland indicator plants. White poplar and red maple are the predominant trees within the wooded area. White poplar is not a wetland indicator plant, but the white poplars at the site showed signs of high groundwater indicators, such as shallowly rooted individual trees that have blown over. Red maple is a wetland indicator plant.

Small Pond/Inland Water Body
There is a small pond (shown on the attached locus map) located on an adjacent parcel southerly of the locus parcel. The pond's 100 foot buffer zone, and possibly portions of the 50 foot buffer zone, overlap the subject property. The edges of the pond should be accurately located to establish the buffer zones.

Massachusetts Wetland Protection Act/Nantucket Wetlands Regulations
Massachusetts Wetland Protection Act
The pond does not exceed a surface area 10,000 square feet and therefore would be considered *Isolated Land Subject to Flooding* (and not a pond) under the Massachusetts Wetlands Protection Act. The wooded swamp area appears to border on a marshy area to the west, but it does not border on a stream, river, creek, pond or lake and therefore the wooded swamp is also considered Isolated Land Subject to Flooding under the Massachusetts Wetlands Protection Act. Isolated Land Subject to Flooding does not have a protective buffer zone pursuant to the state act.

Nantucket Wetlands Regulations
Land within 100 feet of Vegetated Wetlands and Small Ponds are presumed to be significant to the interests of the Nantucket Bylaw and therefore both the small pond and the isolated vegetated wetland have protective buffer zones under the local regulations.

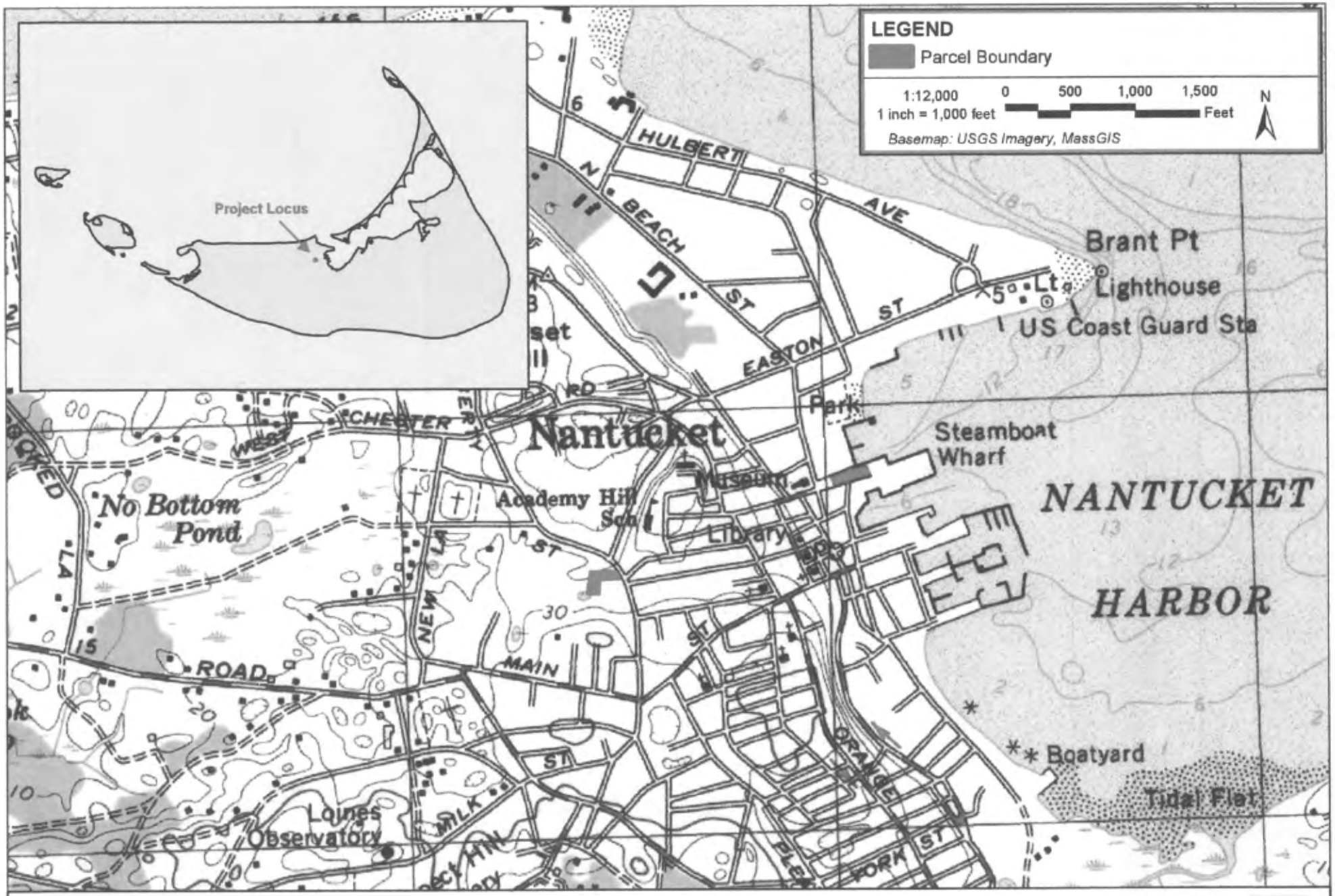
Natural Heritage and Endangered Species
Based on a review of the Massachusetts GIS online mapping Natural Heritage Data Layer, the site does not exist within any area designated as Estimated Habitat or Priority Habitat of Rare Wetlands Wildlife. There are also no certified vernal pools or potential vernal pools on this site or the adjacent parcels to the subject property.

Should you have any questions, please do not hesitate to contact me.

Sincerely,
Schofield Brothers of Cape Cod

Laura A. Schofield, RS, SE
Principal

enc.



44 Liberty Street - Nantucket, Massachusetts
Map 42.3.4 Lot 84
SDE Project No. 12035

Figure 1 - USGS Locus Map
May 28, 2015

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

Applicant:_____ Prepared by: L. Schofield Project location: 44 Liberty St DEP File #:_____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II — 8'± west of WF#4
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation

Observation Plot Number: 1W Transect Number: 1 Date of Delineation: 6/25/15

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Herbaceous Layer				
Japanese Knotweed/Polygonum cuspidatum	75%	100	yes	FACU-
Shrub Layer				
Japanese Knotweed/ Polygonum cuspidatum	80%	80%	yes	FACU-
Privet/Ligustrum vulgare	20%	20%	yes	FACU
Tree Layer				
Red maple, Acer rubrum	20	19%	no	FAC*
White poplar, Populus alba	85%	81%	yes	NI* shallow roots

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

Vegetation conclusion:

Number of dominant wetland indicator plants: 1 **Number of dominant non-wetland indicator plants:** 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes (no)

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? yes no

title/date:

map number:

soil type mapped:

hydric soil inclusions:

Are field observations consistent with soil survey? yes no

Remarks:

2. Soil Description

Horizon	Depth	Matrix Color	Mottles Color

Remarks:

3. Other:

Conclusion: Is soil hydric? yes no

site has been overwhelmed by → invasives. Dominant tree shows adaptations to high groundwater elevation (shallow root system)

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

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

Vegetation and Hydrology Conclusion

	yes	no
Number of wetland indicator plants ≥ number of non-wetland indicator plants	☐	☒
Wetland hydrology present:		
hydric soil present	☐	☐
other indicators of hydrology present	☒	☐
Sample location is in a BVW	☐	☐

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

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

Applicant: _____ Prepared by: L. Schofield Project location: 442 Liberty St. DEP File #: _____

Check all that apply:

- [x] Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only — within lawn east of WF#4
- [ ] Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- [ ] Method other than dominance test used (attach additional information) Boring was performed ~ soil damp at 33"

Section I. Vegetation

Observation Plot Number: 1 Upl. Transect Number: 1 Date of Delineation: 6/25/15

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Herbaceous Layer:				
Lawngrass	100%	100%	yes	NO
Shrub Layer:				
Privet / Ligustrum vulgare	25%	71%	yes	FACU
Japanese Knotweed / Polygonum cuspidatum	10%	28%	yes	FACU-

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

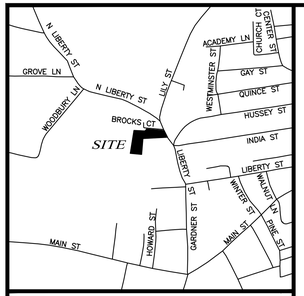
Vegetation conclusion:

Number of dominant wetland indicator plants: **Number of dominant non-wetland indicator plants:** 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes (no)

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

MA DEP, 3/95



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- X FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE

N/F
JOAN PRATEL
8 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 42

N/F
ONE BROCK'S COURT LLC
1 BROCK'S COURT
MAP 42.3.4 PARCEL 85

EXISTING DWELLING

N/F
MICHAEL HATRICK
2 N. LIBERTY ST.
MAP 42.3.4 PARCEL 86

BROCK'S COURT

BITUMINOUS CONCRETE

WOOD FENCE

PREVIOUS HOUSE LOCATION

PLANT AREA

SHELL DRIVEWAY

LAWN

PORCH

PATIO

DECK

COVERED DECK

EXISTING DWELLING
FFL=25.0
AREA=1,997.95 SQ. FT.
GROUND COVER=10.7%

1 BROCKS CT
MAP 42.3.4
PARCEL 84

EXISTING 6" PT TIMBER RETAINING WALL HEIGHT=2.5 FT.

HEIGHT=0.5 FT.

ABANDONED CLAMSHELL DRIVEWAY

LIBERTY STREET

1 BROCKS CT
MAP 42.3.4
PARCEL 84

BENCHMARK
TOP OF SURVEY SPIKE
ELEV.=19.00 (ASSUMED DATUM)

N/F
JOAN PRATEL
12 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 171

LIMIT OF WETLAND

WLF#1 19.0
WLF#2 18.9
WLF#3 18.8
WLF#4 20.5
WLF#5 20.5

25 FT. BUFFER ZONE

50 FT. BUFFER ZONE

EXSITING CATCH BASIN
RIM=19.15

N/F
MARSHA FADER
36 LIBERTY ST.
MAP 42.3.4 PARCEL 83

10 0 5 10 20
SCALE: 1 INCH = 10 FEET

ZONING CLASSIFICATION: R–1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPAEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–

GENERAL NOTES:

1. EXISTING CONDITIONS INFORMATION WAS COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY J. MARCKLINGER & ASSOCIATES, INC. AND SUPPLEMENTED WITH RECORD PLAN INFORMATION.
2. ELEVATIONS ARE REFERENCED TO AN ASSUMED DATUM.
3. WETLAND RESOURCE AREA DELINEATED BY SCHOFIELD BROTHERS OF CAPE COD IN JUNE 2015.
4. THE SITE IS NOT LOCATED WITHIN ANY KNOWN FLOOD HAZARD ZONES AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 250230 0086 G, DATED JUNE 9, 2014.
5. THIS PLAN AND ANY ACCOMPANYING CERTIFICATIONS DO NOT CONSTITUTE A CERTIFICATION OF TITLE TO THE PROPERTY DISPLAYED HEREON. THE OWNER OF LOCUS AND ABUTTING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.
6. EXISTING UTILITY LINES SHOWN ON THIS PLAN ARE FROM AVAILABLE INFORMATION AND ARE APPROXIMATE LOCATIONS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. SITE DESIGN ENGINEERING, LLC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER PUBLIC UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED.

J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
NANTUCKET, MA. 02554
(310) 945-7054

SITE DESIGN ENGINEERING, LLC.
11 CUSHMAN STREET
MIDDLEBORO, MA 02346
T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

EXISTING CONDITIONS PLAN

1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
EXISTING CONDITIONS PLAN

SCALE: 1"=10'

SHEET NO.
1 OF 1

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

November 27, 2015 SDE No. 12035

Ernest Steinauer
Chairman – Nantucket Conservation Commission
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Supplemental Information for Notice of Intent SE48-2834
1 Brock's Court
Nantucket, Massachusetts
Tax Map 42.3.4, Parcel 84

Dear Mr. Steinauer:

The purpose of this letter is to provide supplemental information addressing issues which were discussed by the Commission during the November 18, 2015 Public Hearing for the above referenced NOI application. Specifically, the Commission requested additional groundwater information, foundation information, and structural footprint information within the 100-foot BVW buffer zones.

Groundwater Information
Five (5) auger holes were performed on the Subject Property. The depth to groundwater at each auger location has been provided on the revised Site Plan.

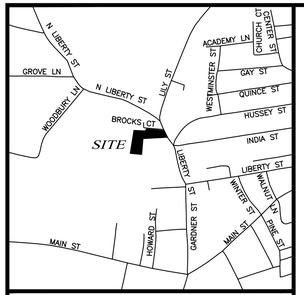
Foundation Information
It has been confirmed that the entire existing structure is constructed on a slab and frost wall foundation. The existing structure does not have a full basement.

Structural Footprint
The previously existing structure had a footprint of approximately 1,150 square feet within the 100-foot BVW buffer zone. The existing structure has a foot print of approximately 475 square feet within the 100-foot BVW buffer zone. The existing wooden deck has a footprint of approximately 310 square feet within the 100-foot BVW buffer zone.

If you have any questions please feel free to contact me via email at mrits@sitedesigneng.com or at 508-802-5832.

Respectfully,
Site Design Engineering, LLC.

Mark Rits
Project Manager/Permitting Specialist



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- X FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- GW DEPTH TO GROUNDWATER

N/F
JOAN PRATEL
8 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 42

N/F
ONE BROCK'S COURT LLC
3 BROCK'S COURT
MAP 42.3.4 PARCEL 85

EXISTING DWELLING

N/F
MICHAEL HATRICK
2 N. LIBERTY ST.
MAP 42.3.4 PARCEL 86

BROCK'S COURT

BITUMINOUS CONCRETE

LIBERTY STREET

PREVIOUS HOUSE LOCATION

PLANT AREA

SHELL DRIVEWAY

PORCH

PREVIOUS HOUSE LOCATION

PATIO

DECK

COVERED DECK

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AREA=1,997.95 SQ. FT.
GROUND COVER=10.7%

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PARCEL 84

EXISTING 6" PT TIMBER RETAINING WALL HEIGHT=2.5 FT.

HEIGHT=0.5 FT.

ABANDONED CLAMSHELL DRIVEWAY

EXISTING CATCH BASIN
RIM=19.15

1 BROCKS CT
MAP 42.3.4
PARCEL 84

WOOD FENCE

LAWN

SHELL DRIVEWAY

PLANT AREA

BENCHMARK
TOP OF SURVEY SPIKE
ELEV.=19.00
(ASSUMED DATUM)

WLF#1
WLF#2
WLF#3
WLF#4
WLF#5

LIMIT OF WETLAND

25 FT. BUFFER ZONE

50 FT. BUFFER ZONE

TP-1 GW=2.1'
TP-2 GW=2.6'
TP-3 GW=2.1'
TP-4 GW >3.2'
TP-5 GW >3.2'

N/F
JOAN PRATEL
12 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 171

N/F
MARSHA FADER
36 LIBERTY ST.
MAP 42.3.4 PARCEL 83

ZONING CLASSIFICATION: R-1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPAEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–

GENERAL NOTES:

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10 0 5 10 20
SCALE: 1 INCH = 10 FEET

J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
NANTUCKET, MA. 02554
(310) 945-7054

SITE DESIGN ENGINEERING, LLC.
11 CUSHMAN STREET
MIDDLEBORO, MA 02346
T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
1	11/25/15	ADDED BORING LOCATIONS, REMOVE SHED	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR: APPROVAL

JOSEPH C. MARCKLINGER No. 9838 REGISTERED LAND SURVEYOR COMMONWEALTH OF MASSACHUSETTS

EXISTING CONDITIONS PLAN

1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE: EXISTING CONDITIONS PLAN

SCALE: 1"=10'

SHEET NO. 1 OF 1

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

January 5, 2016 SDE No. 12035

Ernest Steinauer
Chairman – Nantucket Conservation Commission
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Supplemental Information for Notice of Intent SE48-2834
1 Brock's Court
Nantucket, Massachusetts
Tax Map 42.3.4, Parcel 84

Dear Mr. Steinauer:

The purpose of this letter is to provide supplemental information addressing issues which were discussed by the Commission during the Public Hearing for the above referenced NOI application. Specifically, the Commission requested additional groundwater and soils information for the Subject Property.

Additional site evaluation was performed on December 9, 2015 by Daniel C. Mulloy. PE and on December 16, 2015 By Laura Schofield. The December 9. 2015 evaluation included the excavation of three deep test pits (TP-6 through TP-8) along the eastern portion of the Subject Property (see attached plan). The December 16, 2015 evaluation included the excavation of three shallow test pits adjacent to the BVW on the western portion of the Subject Property.

Rainfall totals from the Nantucket Airport were obtained from the Weather Underground website (www.weatherunderground.com) for the 7 days prior to each site visit (dates highlighted in blue) and are provided in Table 1 below.

Table 1: Total rainfall data for the Nantucket Airport from www.weatherunderground.com for the 7-day period prior to each site visit. Site visits highlighted in blue.

Date	Precipitation (in)	Events
12/2/2015	0.1	Fog-Rain
12/3/2015	0.03	Fog-Rain
12/4/2015	0	
12/5/2015	0	
12/6/2015	0	Fog
12/7/2015	0	
12/8/2015	0.3	Rain
12/9/2015	0	
12/10/2015	0.02	Rain
12/11/2015	0	Fog
12/12/2015	0	
12/13/2015	0	
12/14/2015	0.33	Fog-Rain
12/15/2015	0.36	Fog-Rain
12/16/2015	0	

Nantucket received approximately 0.3 inches of rainfall in the 48 hours prior to the December 9, 2015 site visit and approximately 0.69 inches of rainfall in the 48 hours prior to the December 15, 2015 site visit.

Deep Observation Hole Groundwater Information

Three (3) deep observation holes were excavated using a small track mounted excavator along the eastern side of the Subject Property on December 9, 2015. TP-6 was located near the southeast corner of the Subject Property closest to the Fader Pond. TP-7 was located along the central portion of the Subject Property near the existing catch basin. TP-8 Was located in the existing shell driveway adjacent to the existing stone patio. Complete logs of each test pit location are provided below.

TP-6 showed weeping at the top of the C-1 layer (36") and mottling at 32". No weeping was observed within the C-1 layer. After the observation hole had been allowed to stay open for a time standing water was observed at a depth of 108 inches.

TP-7 showed weeping at 24-48" (within the C-1 layer). No mottles were observed in TP-7. After the observation hole had been allowed to stay open for a time standing water was observed at a depth of 88 inches.

TP-8 showed weeping just above the C-1 layer (26-32") and mottling was observed at 70". After the observation hole had been allowed to stay open for a time standing water was observed at a depth of 75 inches.

Shallow Test Pit Groundwater Information

Three (3) shallow test pits were excavated by Laura Schofield along the western portion of the Subject Property on December 16, 2015. These test pits were excavated by hand. Test Pit #1 was located along the southwestern portion of the Subject Property closest to the Fader Pond. Test Pit #2 was located along the central portion of the Subject Property. Test Pit #3 was located along the northwestern portion of the Subject Property. Complete logs for each Test Pit are included in the Attached Schofield Brothers report.

Test Pit #1 showed isolated weeping in one pocket at a depth of 12 inches. No mottles were observed in the test pit. A boring was done in the center of the Test Pit and groundwater was encountered at 43". After the Test Pit had been allowed to remain open for a time ground water rose to 31".

Test Pit #2 showed no weeping. No mottles were observed in the test pit. A boring was done in the center of the Test Pit and groundwater was encountered at 33". Remnants of an old organic horizon was encountered at 39 inches.

Test Pit #3 showed no weeping. No mottles were observed in the test pit. No ground water was observed in the test pit.

Summary

The supplemental soils and groundwater information indicates that there is a transient perched water table at a depth of 2-3 feet below the surface with an actual water table at a greater depth. Soils

information collected by Laura Schofield in the area immediately upland of the BVW boundary indicates that hydric soils are not present and confirms the previously delineated extent of the BVW.

If you have any questions please feel free to contact me via email at mrits@sitedesigneng.com or at 508-802-5832.

Respectfully,
Site Design Engineering, LLC.

Mark Rits
Project Manager/Permitting Specialist

1 Brocks Court, Nantucket. December 9, 2015. By Dan Mulloy, PE., Site Design Engineering LLC

Deep Observation Hole Number: 6

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-12	A	10 YR 2/2				Sandy Loam					
12-36	B	10 YR 5/8	-	-	0	Loamy Sand					
36-100	C1	5 Y 6/3	-	-		Silt Loam, Clay			massive		firm
100-120	C2	5 Y 5/1				Sand			loose	wet	

Additional Notes:

Weeping at 36", mottling at 32", no weeping within C1 layer, perched water table on top of C1 restrictive layer, standing water 108"

1 Brocks Court, Nantucket. December 9, 2015. By Dan Mulloy, PE., Site Design Engineering LLC

Deep Observation Hole Number: 7

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-12	A	10 YR 2/2				Sandy Loam					
12-84	C1	10 YR 3/1	-	-	0	Sandy Loam			blocky	moist	
84-120	C2	5 Y 5/1	-	-		Sand			loose	wet	

Additional Notes:

Weeping at 24”-48” perched, no mottling observed, standing water 88”

1 Brocks Court, Nantucket. December 9, 2015. By Dan Mulloy, PE., Site Design Engineering LLC

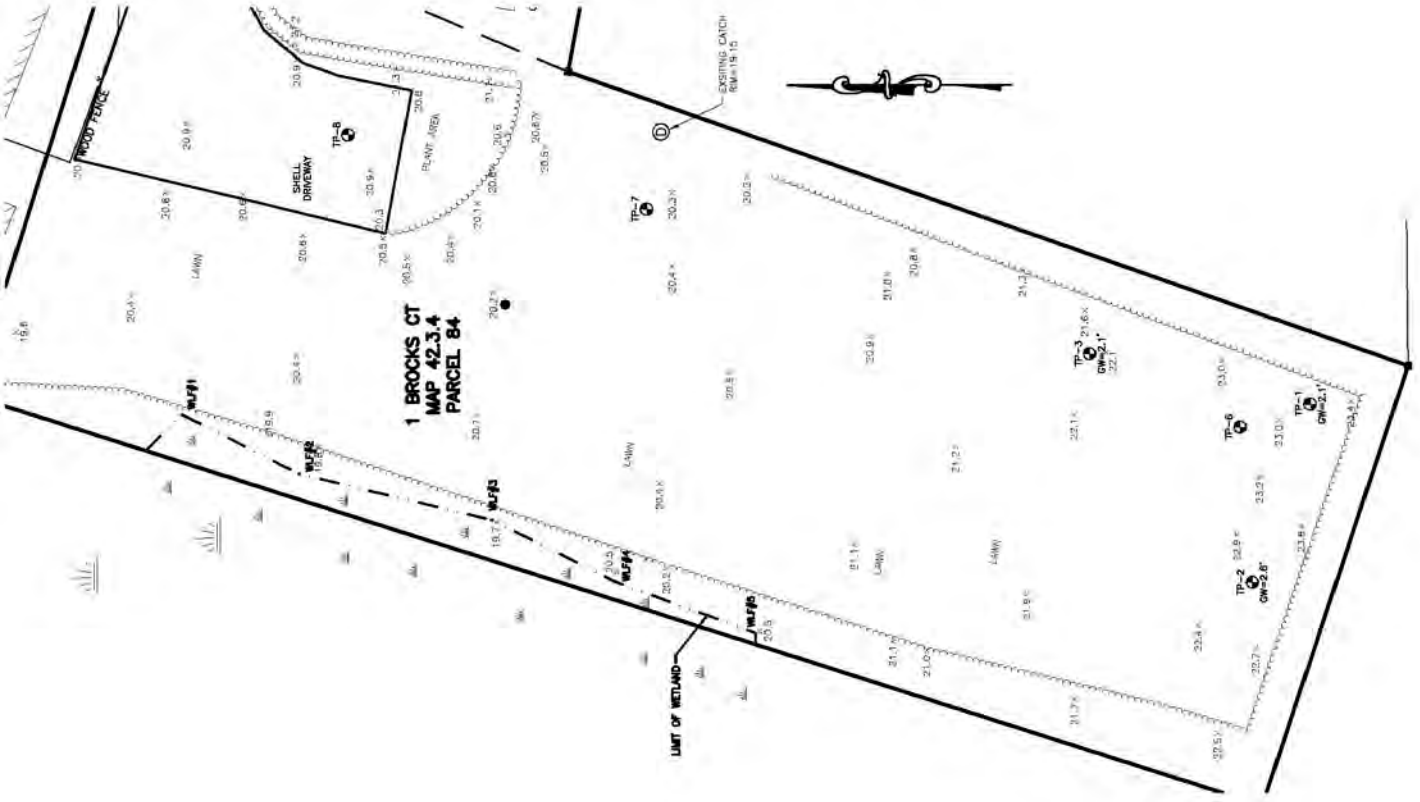
Deep Observation Hole Number: 8

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-32	Fill										
32-68	C1	10 YR 3/1	-	-	0	Sandy Loam			blocky	moist	
68-108	C2	5 Y 5/1	-	-		Sand			loose	wet	

Additional Notes:

Weeping at 26”-32” perched, standing water 75”, mottling at 70”

Field Diagrams



SCHOFIELD BROTHERS OF CAPE COD
Engineering - Land Surveying
Environmental Permitting
161 Cranberry Highway
P.O. Box 101
Orleans, MA 02653-0101
508-255-2098 - 508-240-1215 (fax)
E-mail: schobro@verizon.net

December 21, 2015

Site Design Engineering, LLC
11 Cushman Street
Middleboro, MA 02346
Attn: Mark Ritts

RE: 1 Brock's Court
Nantucket, MA

Dear Mr. Ritts;

As you requested, I conducted a site visit on December 16, 2015 for the purpose of evaluating the soil conditions within the lawn adjacent to the privet hedge along the westerly property line at 1 Brock's Court to provide additional information to the Conservation Commission.

Three test pits were performed parallel to the westerly privet hedge. The results are as follows:

Test Pit #1

Horizon	**Depth**	**Matrix Color**	**Mottles Color**
Fill	0-18"	10 YR 2/2	No mottles observed but some oxidized rhizospheres noted at 8-14".

Fill is a sandy loam. Bits of brick were observed. At 12" some weeping in the pit was noted, but it was observed only in one pocket and there had been rain in the prior 24 hours. A boring was done in the bottom of the test pit. Groundwater was encountered at 43". Eventually the groundwater rose to 31" after the boring was left to stand open for a period of time.

Test Pit #2

Horizon	**Depth**	**Matrix Color**	**Mottles Color**
Fill	0-18"	10 YR 2/2	No – but some oxidized rhizospheres noted

Fill is a sandy loam. At 12" there were some small pockets of sand (10 YR5/3) noted. Fill contains few pieces of brick.

A boring was done in the bottom of the test pit. Remnants of an old organic horizon was noted at 39" Groundwater observed at 33"

SCHOFIELD BROTHERS OF CAPE COD
Engineering - Land Surveying
Environmental Permitting

Test Pit #3

Horizon	Depth	Matrix Color	Mottles Color
Fill	0-12"	10 YR 2/2	No mottles observed but some oxidized rhizospheres noted

Fill is a sandy loam. Brick pieces observed in the fill.

Fill (sand)	12-18"	10 YR 5/4	No mottles observed. No groundwater observed.

In a report dated July 16, 2015 summarizing my initial field visit, I noted that "a small bank was observed in the topography running parallel to and behind the existing privet hedge separating the wooded swamp from the lawn". The depth of the observed water table below the test pits seems consistent with the elevation of the adjacent wetland. The presence of the fill in the test pits and the traces of an old organic horizon at approximately the same elevation suggest that the lawn area was altered at some point in the past.

While some oxidized rhizospheres were observed in the test pits, and these are an indicator of saturated soil conditions, the fill material in the test pits is a very dark brown material and any mottles, if present, were not observed within 18" of the ground surface.

Catch basin/drainage swale at the inside corner of the L-shape property corner

There is a catch basin located at the inside corner of the L-shape in the subject property. There is what appears to be man-made drainage swale in conjunction with the catch basin that extends along the property line in a southerly direction for several feet until it dwindles away into the privet hedge. Running or standing water was not observed in the swale during my December 16, 2015 field visit. As the swale does not connect to another wetland resource area upgradient of the catch basin, it appears that the swale was perhaps intended to collect and direct surface water runoff towards the catch basin.

Very truly yours,

Schofield Brothers of Cape Cod

Laura A. Schofield

Laura A. Schofield, RS, SE
Project Manager

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January 12, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

RE: Review, Notices of Intent
Brock's Court, Nantucket, MA
DEP Files SE 48-2834, 2835
NEE File 13-4266

Dear Commission members,

New England Environmental, Inc. (NEE) met Jeff Carlson, representing the Nantucket Conservation Commission, and consultants to the Notice of Intent applicants at Brock's Court on January 7, 2015. NEE was representing the interests of concerned abutters to the property. During the site visit all parties were able to observe aspects of current hydrology and soil conditions at the 1 Brock's Court and 36 Liberty Street properties. This letter summarizes certain findings from that site visit and ongoing concerns about the proposed work.

Soils and wetland boundaries

NEE, representing the abutters, and Laura Schofield, representing the applicant, had noted that a small pond and potential bordering wetlands were present on the 36 Liberty Street property, well within 100 feet of a proposed new house on the Brock's Court property. During the site assessment on January 7, several soil borings and pits were made in the mown lawn on the northern side of the pond. It was agreed that hydric soil profiles were present in most of these locations. The soil profiles were similar to the soil profile described in the NEE report of September 9, 2013, and were consistent with NRCS Hydric Soil Indicators A11 (Depleted Below Dark Surface) and/or F6 (Depleted Dark Surface). Due to fading daylight and limited time, it was agreed to mark the edge of soil profiles agreed by all parties to be hydric. Three orange stick flags numbered A1-A3 were placed adjacent to soil borings. This was not a wetland boundary delineation, as soils were not sampled in all locations north of these flags, but it marks the limit of wetland conditions agreed during the available time on January 7. The flags were to be surveyed and placed on the project plans by Site Design Engineering. Revised plans have not been made available as of this submission on January 12.

A separate soil pit was excavated on the Brock's Court property, approximately 15 feet south-southeast of flag WF5, in mown lawn east of the privet hedge which occupies the western edge of this lot. This soil profile was consistent with NRCS Hydric Soil Indicator F6 (Depleted Dark Surface). A description of this soil, with photographs, is attached to this report. Again, time limitations made it impossible to conduct further examination of soils within the Brock's Court lawn. However, this soil did have oxidized

rhizospheres within the upper 12", as well as other high-chroma pore linings. Oxidized rhizospheres were noted in the three soil profiles submitted by Schofield Brothers in a letter to Site Design Engineering, dated December 21, 2015. These are high-chroma redoximorphic features which form under saturated soil conditions. Observation of 2% or more oxidized rhizospheres within the top 12" of the soil is considered a primary indicator of wetland hydrology (Corps of Engineers Hydrology Indicator C3). The Schofield letter noted "no mottles" within the three profiles, but this contradicts the finding of oxidized rhizospheres.

These soil observations support the finding that the delineation of wetlands depicted on the Proposed Site Plan dated October 29, 2015 by Site Design Engineering is incomplete or incorrect, and that additional wetlands within the Brock's Court lawn and associated with the 36 Liberty Street pond will extend their 50-foot no-structures buffer zones onto the footprint of the proposed new house at Brock's Court.

Site and neighborhood hydrology

Three additional deep observation holes were dug by Site Design Engineering on the Brock's Court site on December 9, 2015, and labeled TP-6, TP-7, and TP-8 on the Field Diagram which accompanies the letter to the Nantucket Commission dated January 5, 2016. Water was recorded as weeping from the sides of these pits at 26", 24", and 36", respectively, with "mottling" noted in TP-8 at 32". Groundwater in three soil borings around TP-8 (TP-1, 2, and 3) was noted to be at 2.1', 2.6', and 2.1', respectively, on the revised Existing Conditions Plan by Site Design Engineering, revision date 11/25/15. Water was noted weeping from one of the Schofield shallow pits at 12", standing water in another at 33", and no water in the third pit which extended only down to 18". Standing water in the NEE pit southeast of flag WF5 was seen at 18". All of these observations between November 18, 2015 and January 7, 2016 place the groundwater level between 12" and 36". However, this is not the high water level on this site. 2015 was a dry year (30.38" precipitation, over 7" under the annual average of 37.53"), and even in a normal year, groundwater levels are highest in the early spring. The following table shows water levels below ground surface in the two USGS groundwater monitoring wells closest to Brock's Court, which are located to the east near Old South Road (411609070050701) and Rugged Road (411535070051002).

well number	spring average*	11/25/2015	12/22/2015
411535070051002	20.07 feet	22.47 feet	22.25 feet
411609070050701	7.70 feet	9.86 feet	9.75 feet

* 10-year average 2006-2015, inclusive, of readings on April 24-29, except 2012, when the reading was on March 29.

This data shows that groundwater levels in these two wells in November and December of 2015 was more than two feet below the average high water levels recorded in the early spring. If groundwater on the Brock's Court site showed a similar pattern, we could expect that high water levels in a normal spring would be within a foot of the surface, and possibly at the surface in low spots. If these water levels were to persist for a week or more during the growing season, then wetland hydrology would be present.

Observations made during the site visit on January 7 confirmed that the pond on the Liberty Street property is at a higher elevation than the Brock's Court lawn. Both surface water and groundwater can be expected to move north, following the surface topography. Groundwater moving north from Brock's Court may flow through sandy soils under North Liberty Street, toward the topographical depression known as Lily Pond. The unpermitted fill already placed around the existing home, and the proposed new structures, will alter the neighborhood hydrology. Neighbors have already observed increased

surface flooding on adjacent properties. The construction of a pool and house, with increased impervious surface and structures sure to be within groundwater, will further displace groundwater and affect the flow of surface water. There is currently a lack of information about existing hydrology, in particular whether the grate in the privet hedge on the eastern side of the lawn is connected to a working drainage system, and the fate of surface water running off the property. Further, the applicant has not, to this point, modeled the hydrological changes which will result from the project. Both groundwater and surface water leaving the site may end up in Lily Pond. The effects upon water levels and water quality are unknown.

We hope these observations are helpful. Please contact NEE if you have any questions regarding these findings. We are available to discuss these projects and their implications with the Conservation Commission at the public hearing.

Sincerely,
New England Environmental, Inc.

Bruce Griffin
Certified Professional Soil Scientist

cc: Jeff Carlson, Natural Resources Coordinator, Town of Nantucket
Mark Rits, P.E., Site Design Engineering, LLC
Laura Schofield, R.S., Schofield Brothers of Cape Cod
Kendra Kinscherf, Esq., Davis, Malm & D'Agostine, P.C.
Joanna Lewis, Gregory Elder, and Marsha Fader, abutters

enc. Soil datasheets

SOIL

Sampling Point: 15' SE of WF5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3"	2.5Y2.5/1	100%	none				sandy loam	some stripped grains
3-14"	10YR3/1	88%	7.5YR4/4,4/6	2%	C	PL	sandy loam	incl. oxidized rhizospheres
			10YR4/1,5/1	10%	D	M		
14-18"	10YR4/1	90%	10YR7/1	10%	D	M	sandy loam	
18-24"	10YR4/1	60%	10YR7/1	20%	D	M	sandy loam	
	10YR3/1	20%						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Redox concentrations, including but not limited to oxidized rhizospheres, begin at about 6" from surface.

SOIL - additional photos and remarks from Brocks Court soil pit Sampling Point: 15' SE of WF5

Remarks: Photographs of redox concentrations and depletions within second layer of soil profile.
Evidence of historic fill and disturbance, including a chip of coal, were seen.
Standing water at 18" was observed in the pit.
This soil profile also matches the criteria for Indicator VIII, Dark Mineral Soils, in Field Indicators for Identifying Hydric Soils in New England (Version 3, 2004).

DAVIS MALM & D'AGOSTINE P.C.
ATTORNEYS AT LAW

Kendra Kinscherf

January 13, 2016

VIA EMAIL

Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: One Brock's Court Notices of Intent (SE48-2834 & SE48-2835)

Dear Members of the Conservation Commission:

This office represents Marsha Fader, who is an abutter to the proposed project at One Brock's Court. I submit this letter in opposition to the proposed development of the property. The proposed development does not comply with the Nantucket Wetlands Bylaw and Wetland Protection Regulations and will have a significant impact on wetlands resources in the neighborhood.

My client's and the Applicant's properties are located adjacent to Bordering Vegetative Wetlands (BVW), which are protected under Nantucket's bylaw and regulations. The following provisions are relevant to the applications before you:

- All structures that are not water dependent must be at least 50 feet from the vegetated wetland;
- No more than 50% of the area located within the 25- and 50-foot buffer shall be altered; and
- All structures must maintain an undisturbed two-foot separation to high groundwater.

In order to grant waivers from these requirements, the Applicant has the burden of demonstrating:

> that, given existing conditions, the proposed project will not adversely impact the interests identified in the Bylaw and there are no reasonable conditions or alternatives that would allow that project to proceed in compliance with the regulations... The burden of proof to show no

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> reasonable alternative shall be the responsibility of the owner/applicant and shall consist of a written alternatives analysis detailing why the proposed project can not [*sic*] otherwise proceed in compliance with the performance standards in these regulations with an explanation of why each is not feasible.

Regulations § 1.03F.3(a). The Applicant has not met any of these requirements.

The Proposal Does Not Meet the Performance Standards Set Forth in the Regulations

The Applicant proposes to construct a second home on the Property and install a pervious patio, pervious driveway, and an in-ground pool. Although the Applicant has not yet provided all of the previously requested information, it is clear that the proposal will not comply with the applicable performance standards.

As addressed during the first hearing, the Applicant's delineation of the BVW is not accurate. Additional soil samples taken by Schofield Brothers of Cape Cod and New England Environmental, Inc. have identified hydric soils at least twenty feet from the pond on Ms. Fader's property and also in the lawn area of the Applicant's property, as well as oxidized rhizospheres along the privet hedge on the Applicant's property. According to the DEP's Delineating Bordering Wetlands Manual, hydric soil indicators take many years to develop and are therefore good indicators of wetland hydrology. Also as noted in that Manual, where the vegetation was previously altered (as here with the filled and lawn areas of the properties), the use of soil characteristics is necessary to delineate BVW due to the lack of native vegetation. The presence of the hydric soils and oxidized rhizospheres are indicators of wetland hydrological conditions and confirm saturated soil conditions just below the surface. In addition, the presence of hydric soils meets the definition of freshwater wetlands in the Nantucket Wetlands Regulations.

Schofield Brothers of Cape Cod has also noted that the Applicant's property has areas of fill. It is our understanding that the location of the pool, if not a greater area, is an area previously filled. According to DEP's Manual, in order to accurately characterize filled areas, it is necessary to dig below the fill and take samples of the original soil. It does not appear this practice was followed by Schofield at all test locations. However, in its December 21, 2015 report, Schofield indicated that the groundwater was at a shallower depth than the original soil (groundwater at 33"; old organic soil at 39").

Based on this data, the Applicant's delineation of the BVW is not accurate and the boundary of the BVW is located farther within the boundaries of the Applicant's property. In addition, the pond on Ms. Fader's property meets the Nantucket Wetlands Regulations' definition of a pond, subjecting it and the surrounding vegetated wetland (meadow) to protection.

As a result of a proper delineation, the locations of the 25-foot, 50-foot, and 100-foot buffer setbacks will change from those shown on the plans submitted and have a significant impact on the proposed

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project. The 50-foot buffer should be shifted to the east, and thus, the proposed second home and in-ground pool will be in between the 25-foot and 50-foot buffer. Since structures are not permitted within that buffer zone, the proposed project will violate the performance standards under the local regulations. *See* Regulations §§ 3.02B.1 & 3.03B.1.

Even if the Applicant's wetlands delineation and buffer setbacks are not changed, the proposed project does not comply with the performance standards. Based upon the plans, it appears that more than 50% of the area between the 25- and 50-foot buffers will be altered and become a pervious driveway and patio. Although these areas will be pervious, they will become compacted over time, reducing the capability of water infiltration and drainage. This raises concerns of flooding in an area already prone to flooding due to the high water table.

Based upon the Applicant's waiver request, the proposed project does not meet the requirement of maintaining the 2-foot separation between structures (the second home and the pool) and groundwater. Regarding the in-ground pool, the Applicant indicates that groundwater is at a depth greater than 3.2 feet. No information on the precise depth is provided. Because the pool will be at a depth greater than 3.2 feet and because it is well documented that the water table is high in this area, a 2-foot separation will not occur.

In addition, as described by NEEI in its most recent submission, it is likely that the groundwater will be within a foot of the surface during normal spring conditions. Therefore a 2-foot separation between the foundation of the new building and groundwater will not be maintained.

Overall, the large amount of compacted pervious and impervious surfaces proposed to be added to the Applicant's property likely will cause a significant alteration to the hydrology of the area and result in adverse impacts to the resources protected by Nantucket's Wetlands Bylaw and Regulations.

The Applicant Has Not Demonstrated Waivers Are Appropriate

As conceded by the Applicant, waivers are necessary for the proposed project even if the wetlands delineation remains the same. The Applicant is required to provide an analysis of alternatives and an explanation why such alternatives are not feasible. The Applicant also must demonstrate that the proposed project will not adversely affect the wetlands resources.

The Applicant utterly failed to provide any analysis of alternatives that would not result in violations of the regulations. In considering possible alternatives, the Conservation Commission should analyze the proposal as a single project because the Applicant should not benefit from the previous unapproved work by arbitrarily separating it into two Notices of Intent. This is not a case in which the Applicant is left with no possibility of developing its property. When viewed as a whole, the Applicant already has a single-family home on the property. There is absolutely no need for a secondary dwelling or in-ground swimming pool. Simply put, the Applicant's first Notice of Intent seeking approval for work already done to improve the single-family home can be approved with no

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ATTORNEYS AT LAW

significant violations of the regulations. The requested waivers for the additional work therefore are unjustified.

In addition, it cannot seriously be contended that the project will not have adverse impacts on the interests protected by Nantucket's Wetlands Bylaw. The Bylaw protects wetlands values in Nantucket, including groundwater and flood control. The proposed project likely will alter groundwater and the infiltration and drainage capacity of the soils in the area by increasing the amount of compacted and impervious surfaces, and by displacement due to the below-surface structures.

Since the Applicant cannot meet its burden of demonstrating compliance with Section 1.03F.3(a), the Conservation Commission should deny the request for the waivers.

The proposed project does not meet the requirements of the local wetlands regulations, and Ms. Fader respectfully requests that the Conservation Commission deny an Order of Conditions.

Sincerely,

Kendra Kinscherf

KK:
cc: Client
Jeff Carlson
Steven Cohen
Mark Rits

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The contest of the application for 44 Liberty Street is not about a "not in my backyard" complaint. The proposed development at 44 Liberty Street is about the abuse of a resource--a resource that once was a wooded wetland, home to pheasant and water-loving plants. In the late 1990's this wooded area was cut down, grassed over and filled with soil in an attempt to add yet another piece of property for development. These are facts. In the months that followed, my parents and I watched the remaining trees that bordered this property begin to decline from diversion of a natural water flow. Water, which now had no resting place from its downward path began to pool in the surrounding yards. Gradually, our backyard trees declined and died as the water pooled. Ironically, but obviously to local residents who knew how wet the area already was, no house or structure was ever built on this property despite the unscrupulous efforts of real estate agents to advertise the land as 'developable'. In fact, even mowing the grassed lawn was almost impossible at times because of the naturally high water table. Landscapers can verify this.

This wetland condition is intimately known to us as we have observed it over the many years we have lived at 36 and 42 Liberty Street. The water table has always been close to the surface. To see yet another attempt to sidestep what Mother Nature has naturally intended is frustrating and essentially abusive to what was once a pristine wetland swamp. While the applicant may not know this history as we do, we strongly feel that the science speaks for itself. The science will demonstrate the history of the land and show that the proposed development is ultimately wrong from a regulatory and resource protection standpoint.

Lastly, the final insult to this condition is the disregard for the grading against code which the applicant uses, and the retaining wall which further impedes the flow of water. This exacerbates the already pooling condition of our yard and is clearly over a foot above the lowest section of our yard. We are frankly at a loss as to how this re-grading was allowed by local authorities, and feel further victimized by the damage from the natural water flow. We not only urge decisions on this application to deny further insult to this resource and take absolute steps to enforce local and national wetland law, but propose an absolute remediation of the harm that has already been done.

Greg and Caryl Elder
42 Liberty Street

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February 4, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

RE: Review, Notices of Intent
Brock's Court, Nantucket, MA
DEP Files SE 48-2834, 2835
NEE File 13-4266

Dear Commission members,

New England Environmental, Inc. (NEE) again met Jeff Carlson, representing the Commission, and Mark Rits of Site Design Engineering, LLC at Brock's Court and the adjacent property at 36 Liberty Street on January 21, 2016. During the site visit NEE was able to further investigate soil conditions on and around the Brock's Court site, delineate the edge of wetlands at 36 Liberty Street closest to Brock's Court, and assess neighborhood hydrology and the wetlands complex that occupies the northern slopes of Quarter Mile Hill. This letter summarizes certain findings from that site visit and ongoing concerns about the proposed work.

NEE dug soil pits in two new locations on the Brock's Court lot, and performed soil borings on the adjacent lot to the east, at 42 Liberty Street. Soil profiles are described on attached Corps of Engineers data forms, and were designated H2, H3, and H4. The location of the soil pit dug on January 7, for which a profile was submitted to the Commission previously, was designated H1. The approximate locations of these soils are shown on the attached figure labeled "soil pit sketch". All four locations were also surveyed by Mr. Rits. These soil profiles were all consistent with NRCS Hydric Soil Indicators A11 (Depleted Below Dark Surface) and/or F6 (Depleted Dark Surface). Mr. Rits also surveyed the location of three orange stick flags numbered A1-A3 on the 36 Liberty Street property, which were placed adjacent to soil borings agreed by all parties to be hydric during the January 7 assessment. Revised plans showing these hydric soil locations have not been made available as of this submission.

These soil observations provide additional evidence that the delineation of wetlands depicted on the Proposed Site Plan dated October 29, 2015 by Site Design Engineering is incorrect, with additional wetlands within the Brock's Court lawn and extending onto 36 and 42 Liberty Street.

In our letter of January 12, NEE provided evidence that seasonal high groundwater elevations might be higher than those previously submitted by Site Design Engineering. Their observations between November 18, 2015 and January 7, 2016 place the groundwater level between 12" and 36" below the surface. Data from two USGS groundwater monitoring wells on Nantucket shows that groundwater

levels in these wells in November and December of 2015 was more than two feet below the average high water levels recorded in the early spring.

On January 16 a rain storm deposited over an inch of rain on Nantucket. The pond at 36 Liberty Street was overflowing, with sheet flow toward Brock's Court. Surface water was visible in the Brock's Court lawn and on the lawn at 42 Liberty Street. Photographs of these locations taken at 10 a.m., as the rain was ending, are attached to this letter. Photographs of the same areas a day later, January 17 at 10 a.m., show that water was still visible at the surface. This is further evidence that groundwater levels at the proposed house site on Brock's Court are much higher than previously reported, and that the proposed structure not only cannot be built with the mandated two feet of separation from groundwater, but would actually be within the groundwater during a portion of the year.

We hope these observations are helpful. Please contact NEE if you have any questions regarding these findings. We are available to discuss these projects and their implications with the Conservation Commission at the public hearing.

Sincerely,
New England Environmental, Inc.

Bruce Griffin
Certified Professional Soil Scientist

cc: Jeff Carlson, Natural Resources Coordinator, Town of Nantucket
Gregory DeCesare, Massachusetts Department of Environmental Protection
Mark Rits, P.E., Site Design Engineering, LLC
Laura Schofield, R.S., Schofield Brothers of Cape Cod
Paul Feldman, Esq., Davis, Malm & D'Agostine, P.C.
Joanna Lewis, Gregory Elder, and Marsha Fader, abutters

enc. Soil datasheets, soil pit sketch, site photographs

SOIL Sampling Point: H2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR2/1	100%	none				sandy loam	some stripped grains
4-10"	10YR3/1	75%	7.5YR3/3,3/4	5%	C	PL	sandy loam	5/1 mixed, not depletions
	2.5Y5/1	20%						
10-20"	2.5Y5/1	65%	2.5Y6/1	15%	D	M	sandy loam	
			7.5YR3/3,3/4	20%	C	PL		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: This hydric soil also matches New England indicator VII, Depleted Below Dark Surface.

SOIL - additional photo and remarks from Brocks Court soil pit H2 Sampling Point: H2

Remarks: Photograph of redox concentrations and depletions within third layer of soil profile.
Mixing in second layer may be evidence of historic disturbance.
Standing water at 16" was observed in the pit.
New England indicators found in "Field Indicators for Identifying Hydric Soils in New England" (Version 3, 2004).

SOIL Sampling Point: H3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3"	10YR2/1	100%	none				sandy loam	some stripped grains
3-16"	10YR3/1	85%	7.5YR3/4,4/4	5%	C	PL	sandy loam	refusal at 16" - stones
			2.5Y5/1	10%	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: This hydric soil formed in entirely filled or regraded material.

SOIL - additional photo and remarks from Brocks Court soil pit H3 Sampling Point: H3

Remarks: Photograph of redox concentrations and depletions within second layer of soil profile.
Evidence of historic disturbance included chunks of coal or coke, patches of 10YR4/3 loamy sand around pit walls .
Standing water not observed within this 16" pit.
New England indicators found in "Field Indicators for Identifying Hydric Soils in New England" (Version 3, 2004).

SOIL

Sampling Point: H4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR2/1	100%	none				sandy loam	
3-20"	10YR3/1	95%	7.5YR4/4	5%	C	PL	sandy loam	sloppy saturated soil, may have depletions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Redox concentrations begin at about 6" from surface.

SOIL - additional photo and remarks from H4 soil boring Sampling Point: H4

Remarks: Photograph of redox concentrations from the first bite of the auger.
Soil probably contains at least some fill.
Standing water at 4" was observed in the hole.
This soil profile also matches the criteria for Indicator VIII, Dark Mineral Soils, in Field Indicators for Identifying Hydric Soils in New England (Version 3, 2004).

Photo 1:

Looking northeast at the 1 Brocks Court lawn, at the end of a rainstorm. Groundwater is at the surface.

Photograph taken January 16 at 10 a.m.

Photo 2:

The same location 24 hours later, with groundwater down only slightly.

Photograph taken January 17 at 10 a.m.

Photo 3: The northern property line at 42 Liberty Street, which is subject to frequent flooding. Photograph taken January 16 at 10 a.m.

Photo 4: The same location on January 17 at 10 a.m.

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

February 4, 2016 SDE No. 12035

Ernest Steinauer
Chairman – Nantucket Conservation Commission
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Supplemental Information for Notice of Intent SE48-2834 and SE48-2835
1 Brock's Court
Nantucket, Massachusetts
Tax Map 42.3.4, Parcel 84

Dear Mr. Steinauer:

The purpose of this letter is to provide supplemental information addressing issues which were discussed by the Commission during multiple Public Hearings for the above referenced NOI application for work proposed on the 1 Brock's Court property (Subject Property). Specifically, issues associated with a potential wetland resource area on property located at 36 Liberty Street (Map 42.3.4 Lot 83) hereafter referred to as the "Fader Property", questions about the wetland resource delineation on the Subject Property, and questions about groundwater elevations on the Subject Property.

A site visit was performed on both the Subject Property and the Fader Property on January 7, 2016. The site visit was attended by Jeff Carlson (Conservation Commission), Bruce Griffin (New England Environmental), Mark Rits (Site Design), Laura Schofield (Schofield Brothers), Marsha Fader (abutting property owner), and Lucy Dillon (abutter).

The purpose of the site visit was to evaluate potential resource areas on the Fader Property and to provide Mr. Griffin an opportunity to perform a field evaluation of the soils information which was submitted to the Commission on January 5, 2016.

Subject Property Development History

Figure 1 shows a 1940 aerial photograph (Nantucket GIS) of the Subject Property and the surrounding area. It is clear from this photograph that the western portion of the Subject Property was landscaped and that a substantial building was present on the northern portion of the Subject Property approximately where the existing pervious driveway is currently located. It is also clear that there was an enclosure on the southern portion of the Subject Property (likely an animal pen) in the approximate location of the proposed secondary dwelling. Additionally, the property to the west of the Subject Property was in agricultural use and was the site of a large building in an area which is currently delineated as a wetland. It is clear from this photograph that the Subject Property and the surrounding properties have been historically developed and heavily modified and have been in both residential and agricultural use for an extended period of time.

Project Modifications

The Applicant is submitting a two revised site plans dated February 3, 2016 for the NOI application for the previously performed house relocation (SE48-2834). The first revised plan is titled "Existing Conditions Site Plan A" and shows the wetland resource areas and associated buffer zones on the Subject Property, the surveyed location of the man-made pond on the Fader Property, and the buffer zones to the man-made pond. The second revised plan is titled "Existing Conditions Site Plan B" and includes the location of the edge of the Hydric Soil Zone and associated buffer zones on the Fader Property as determined during the January 7, 2016 site visit (see discussion below). The Applicant is also submitting two revised site plans dated February 3, 2016 for the NOI application for the secondary dwelling and swimming pool (SE48-2835). These plans also include minor modifications to the Proposed Project. The first revised plan is titled "Proposed Conditions Site Plan A" and shows the wetland resource areas and associated buffer zones on the Subject Property, the surveyed location of the man-made pond on the Fader Property, and the buffer zones to the man-made pond. The second revised plan is titled "Proposed Conditions Site Plan B" and includes the location of the edge of the Hydric Soil Zone and associated buffer zones on the Fader Property as determined during the January 7, 2016 site visit (see discussion below). The project modifications in both Proposed Conditions plans are the same and include enhanced buffer zone plantings and a modified driveway configuration going to the proposed secondary dwelling. The previously proposed pervious driveway will now include a central grass strip as indicated on both sets of revised site plans.

Fader Property Site Overview

The entirety of the Fader Property including the portion adjacent to the Subject Property has been previously altered, developed, and landscaped. Historical alterations of the Fader Property include extensive terracing of the western portion of the property (see Photos 1 through 4), construction of a partially lined man-made pond on the property (see Photos 5 through 8), use of a circulation pump in portions of the pond (see Photos 9 and 10), construction of a wooden bridge over a portion of the pond (see Photo 7). According to the current property owner, the original terracing of the Fader Property and the excavation of the original man-made pond were performed sometime between 1910 and 1920. The original configuration of the man-made pond was different from the current configuration. Aerial photographs from 1940 (Nantucket GIS) show a pond which is substantially different from the current configuration (see Figure 1 and Figure 2). It is unclear exactly when the pond configuration was altered or when the bridge was constructed, a portion of the pond was lined, and pumping equipment was installed. The terracing altered the existing grade on the Fader Property such that the area adjacent to the man-made pond is now relatively flat (see Photo 5 and Photo 6) instead of following what was likely originally a gentle slope similar to the one which extends onto the Subject Property and the natural wetland to the northwest. The resulting flat portion of the Fader Property is inconsistent with the slope on the southern portion of the Fader Property and the slope which is found on the Subject Property and the adjacent natural wetland area. It is our understanding that the area surrounding the man-made pond has been continuously maintained as a landscaped lawn area since it was constructed. This area does not currently include, nor is there any evidence that it has historically included, any significant native wetland vegetation which was not continuously mowed. The area around the man-made pond as well as the remainder of the western portion of the Fader Property consists of a well maintained manicured lawn (see Photos 11 and 12). Additionally, there are several large stumps located on the northern portion of the Fader

Property immediately south of the Subject Property boundary (see Photos 13 through 14). Recent aerial photography (Google Earth imagery) indicate that several large trees or shrubs were present on this portion of the property and that they may have been removed from the Fader Property within the last couple of years. Additionally, the Property Owner indicated that there were issues with invasive species encroaching onto the property from the adjacent parcel to the northwest. As there are currently no invasive species along the northern portion of the Fader Property the assumption is that these have been removed. The man-pond on the Fader Property and the area surrounding the man-pond have been significantly altered and have been continuously maintained for an extended period of time and do not exhibit the characteristics of a natural system.

A review of Conservation Commission files for the Fader Property as well as for all abutting properties did not include any filings which delineate the existing man-made pond or any other portions of the Fader Property as a wetland resource area. Additionally, there have been no filings on the Fader Property for any activities including the removal of trees, lining of a portion of the pond, installation of pumping equipment, construction of a bridge, installation of split-rail fencing, or invasive species management along the northern portion of the Fader Property which is located within the buffer zone to an off-site BVW.

Fader Property Site Evaluation (January 7, 2016)

During the January 7, 2016 site visit, a number of auger holes and shallow test pits were excavated on the Fader Property. The test pits and auger holes were excavated between the existing man-made pond and the Subject Property boundary. The presence and/or extent of hydric soils around other portions of the man-made pond was not determined as part of the January 7, 2016 site evaluation. Test pits and auger holes were excavated into fill material which was comprised primarily of topsoil near the surface with medium to fine sands below. The test pits and auger holes indicated that hydric soils were present in an area adjacent to the man-made pond. These hydric soils extend for a distance of approximately 15-20 feet from the edge of the man-made pond in a northerly direction towards the Subject Property boundary. Mr. Griffin indicated that the underlying sands exhibited hydric characteristics because they were very pale in color. It is important to note that on Nantucket the presence of light colored sands may not necessarily be a hydric indicator as light colored sands are widespread throughout the island. A series of three pin flags were placed by Mr. Griffin to delineate the approximate boundary of the near surface hydric soils in the area located between the existing man-made pond and the Subject Property boundary. The location of the pin flags has been survey located and is shown on the revised Site Plan. The observed hydric indicators were present in loam and fill which was placed on the property as part of original historic site alterations and/or more recent landscaping and maintenance work.

A large natural wetland system is found on the property located to the west of the Subject Property and to the north of the western portion of the Fader Property. This wetland is located in a low spot on the landscape at the bottom of the slope which extends northward away from the terraced Fader Property. A series of test pits and auger holes were excavated near the boundary of the Fader Property adjacent to this wetland system in order to determine if there was a connection between the hydric soils on the Fader Property and the natural vegetated wetland. Hydric soils and other ground water indicators were not present within 18 inches of the surface indicating that the hydric soils around the man-made pond on the Fader Property do not connect directly to the vegetated wetland on the abutting property and that these are two discrete systems.

Fader Property Site Analysis

The hydric soils which are present around the existing man-made pond are the direct result of water leaching from the man-made pond. This water is then impounded by the terrace fill which results in a longer than usual residence time in the soils adjacent to the pond and leads to the development of hydric features within the near surface soils. Because of ongoing maintenance of this area, no wetland vegetation has been established within these hydric soils. It is also likely that if any other landscaping scenario had been utilized around the man-pond, such as landscaping which included trees, shrubs, or vegetation other than lawn, a significant portion of the excess water in the soils around the man-made pond would have been utilized by the vegetation and the development of hydric features in the surrounding soils would have been significantly less likely to occur. It is also likely that use of a more robust vegetative community around the existing man-made pond would alleviating some of the groundwater issues which are a significant concern to abutters in this portion of the neighborhood. Additionally, the relatively recent removal of trees and/or large shrubs along the property boundary has further reduced the amount of water uptake from this area increasing the amount of time water leaching from the man-made pond stays in the surrounding soils. The presence of hydric soils within the terraced fill material adjacent to the man-made pond is directly the result of terracing of the property, excavation of the man-pond, and both historic and ongoing vegetation management practices on this portion of the Fader Property. Without the man-pond, terracing, or maintenance of a lawn it is unlikely that a substantial natural wetland would exist on this portion of the Fader Property.

Typically, wetland resource areas are delineated based on the presence of both hydric soils and the presence of a dominance of facultative and obligate wetland vegetation. In the event that an established existing wetland resource area has been altered, such as when vegetation has been removed from a wetland resource area, the Department of Environmental Protection (DEP) policy is to fall back to a delineation based solely on soil conditions. Again, this methodology is used when a pre-existing wetland resource area has been recently stripped of indicator wetland vegetation. In the case of the area surrounding the man-made pond on the Fader Property, there is no reliable contemporary record that a natural wetland system existed in this area since the area was altered approximately a century ago. It would not be appropriate to determine that this portion of the Fader Property is a wetland resource area when it does not currently, nor has it historically contained any wetland vegetation. Additionally, the existence of hydric soil conditions on this portion of the Fader Property is the direct result of historic site alteration and ongoing landscape maintenance.

Alteration and maintenance of this portion of the Fader Property is so extensive that no natural wetland vegetation is evident. Mowing occurs to the edge of the existing man-made pond and removal of trees or large shrubs has occurred in the area adjacent to the hydric soils.

Subject Property Historical Overview

A review of historical aerial photographs indicates that portions of the Subject Property have been in residential and agricultural use dating back to at least 1938 (see Figure 1) and that this use has varied over time. Extensive historic agricultural and residential use the Subject Property and the surrounding properties has resulted in an area which has likely been excavated and filled over time. Test pits and shallow soil borings indicate the presence of extensive fill which includes fragments of

brick, clay tile, and other debris. As a result of these alterations which date back at least 75 years, there are no well-developed natural soil conditions on the Subject Property.

Project Justification

The Applicant is proposing a pervious driveway located partially within the 50-foot BVW buffer zone. The proposed pervious driveway will be located entirely within previously altered and landscaped portions of the Subject Property. Under the Bylaw, pervious driveways are permitted up to the 25-foot BVW buffer zone. The Commission has approved numerous pervious driveways and parking areas outside of the 25-foot BVW buffer zone on a variety of other projects on Nantucket.

The Applicant feels that the man-made pond on the Fader Property meets the Bylaw definition of a Pond as it connects to perched groundwater but does not have a hydrologic connection to any adjacent water bodies. Therefore, the Applicant feels that the extent of the wetland resource area on the Fader Property is the edge of the existing man-made pond and that the appropriate 25-foot, 50-foot, and 100-foot wetland buffer zones must be measured from the edge of the man-made pond. Proposed Conditions Site Plan A (03-Feb-2016) depicts this extent of jurisdictional wetland resource areas and associated buffer zones as they relate to the Proposed Project. The proposed 774 square foot secondary dwelling on the Subject Property is located outside of the 50-foot wetland buffer zone as calculated from the edge of the man-made pond on the Fader Property. It is standard practice for the Commission to allow applicants to construct structures outside of the 50-foot buffer zone to a wetland resource area.

In the event that the Commission decides that the heavily altered area of hydric soils (hereafter referred to as the Hydric Soil Zone) around the man-made pond on the Fader Property somehow qualify as a jurisdictional wetland resource area under the Bylaw. Proposed Conditions Site Plan B (03-Feb-2016) depicts the extent of wetland resource areas and associated buffer zones in the event that the Commission determines that the Hydric Soil Zone is a jurisdictional resource area under the Bylaw. it is important to keep in mind that all of this Hydric Soil Zone is currently mowed and maintained as lawn area. Additionally, the 25-foot buffer zone to this Hydric Soil Zone is also currently mowed and maintained as lawn area and that all of the area between the 25-foot and 50-foot buffer zones to this Hydric Soil Zone which is located on the Fader Property is also maintained as lawn area. Finally, there is evidence to suggest that several large trees have been recently removed from a portion of the Fader Property which is located within the 25-foot and 50-foot buffer zone to this Hydric Soil Zone.

The man-made pond is a jurisdictional wetland resource area under the Bylaw. Currently all of the 25-foot and 50-foot buffer zone to this jurisdictional wetland are altered and maintained as a lawn area. Additionally, if the Hydric Soil Zone surrounding the man-made pond is determined to be a jurisdictional wetland resource area, the entire resource area as well as the associated 25-foot and 50-foot buffer zones are currently maintained as a lawn and do not include any native wetland vegetation. Current use and maintenance of the Fader Property has resulted in significant impacts to the 25-foot and 50-foot buffer zones to the jurisdictional man-made pond. This ongoing use and maintenance has also resulted in significant impacts to the Zone of Hydric Soils and the associated 25-foot and 50-foot buffer zones if this portion of the Fader Property is determined to be a jurisdictional resource area.

If the Commission determines that the extent of the wetland resource area on the Fader Property includes the Hydric Soil Zone and determines that 25-foot and 50-foot buffer zones must be cast from the limit of the Hydric Soil Zone, the Applicant feels that the proposed 774 square foot secondary dwelling on the Subject Property meets the requirements for a waiver for a structure within the 50-foot wetland buffer zone. Approximately 500 square feet of the proposed secondary dwelling will be located within the 50-foot buffer to the Hydric Soil Zone. The proposed off-locus secondary dwelling will be located on a portion of the Subject Property which is located several feet downgradient of the haltered Hydric Soil Zone on the Fader Property. Any groundwater flow would occur from the Fader Property towards the proposed secondary dwelling. The proposed secondary dwelling would be outside of the 50-foot buffer zone to the man-made pond and would have no adverse impacts on the Hydric Soil Zone or the associated 25-foot and 50-foot buffer zones on the Fader Property as it would be downstream from these features. Additionally, the proposed secondary dwelling will be located on a previously altered and landscaped portion of an abutting property and would not result in the loss of any native buffer zone vegetation. Currently, the Fader Property is mowed and maintained up to the edge of the man-made pond. The entire Hydric Soil Zone and associated 25-foot and 50-foot buffer zones are currently mowed. It is not known if any portions of this maintained lawn area are fertilized or otherwise treated. The Applicant is also proposing approximately 800 square feet of native buffer zone plantings along the western edge of the Subject Property. The proposed plantings will provide a significant net benefit to the resource areas and associated buffer zones. The Applicant feels that the impacts to the man-made pond, Hydric Soil Zone, and the 25-foot and 50-foot buffer zones to these resource areas resulting from ongoing use and maintenance of this portion of the Fader Property are significantly greater than any potential impacts resulting from the construction of a frost wall foundation for the proposed off-locus secondary dwelling located on a previously altered and downgradient portion of an abutting property and that the proposed native plantings will result in an overall net benefit to the resource area and associated buffer zones.

Alternatives Analysis

Proposed Pool

The proposed pool has been located outside of the 50-foot buffer zone to the BVW resource area on the adjacent property to the east and is also outside of the 50-ffoot buffer zone to the man-made pond on the Fader Property. Additionally, if the Commission determines that the Hydric Soil zone on the Fader Property is a jurisdictional wetland resource area, the proposed pool is located entirely outside of the 50-foot buffer zone t this potential resource area. The proposed pool is located on the portion of the Subject Property which has groundwater at the lowest elevation. There is no alternative location for the proposed pool which would place it farther from the wetland resource areas or would allow for an increased separation to high groundwater.

Proposed Secondary Dwelling

The proposed secondary dwelling has been located on the portion of the Subject Property which is outside of the 50-foot buffer zone to the natural well established BVW on the abutting property to the west and is also outside of the 50-foot buffer zone to the man-made pond on the Fader Property. If the Commission determines that the Hydric Soil Zone on the Fader property is a jurisdictional wetland resource area, portions of the proposed secondary dwelling will be located within the 50-foot buffer zone to this heavily altered and maintained resource area. There is no alternative location for the

proposed secondary dwelling on the Subject Property. Relocating the proposed secondary dwelling anywhere else on the Subject Property would place it within the 50-foot buffer zone to the well-established natural BVW on the abutting property to the west. The proposed location is the best available location for the proposed secondary dwelling.

Project Waivers

Required Ground Water Separation Waiver

The Applicant feels that the wetland resource delineation on the abutting property to the west is accurate and that all structural components of the Proposed Project will be located outside of the 50-foot BVW buffer zone. Additionally, the Applicant feels that the extent of the wetland resource area on the Fader Property is the edge of the existing man-made pond and that the Proposed Project will be located entirely outside of the 50-foot buffer zone to this resource area.

It is our understanding that the intent of the two-foot groundwater separation requirement in Section 3.02B(1) of the Bylaw Regulations is to reduce impacts to adjacent wetland resource areas which may result from the construction of foundations or other buried structures which may be sufficiently large so as to act as a dam preventing subsurface groundwater flow from moving naturally towards a downgradient wetland system. Such structures, if sufficiently large, could potentially result in the disruption of groundwater flow to the wetland resource area thereby significantly reducing the amount of water entering the wetland and adversely impacting the ability of the system to support wetland flora and fauna. It is important to note that such an adverse impact would only occur if the buried structure was blocking groundwater flow and was large enough to have a regional impact on the adjacent wetland system.

The proposed secondary dwelling foundation and proposed pool may require a waiver under the Bylaw because high groundwater will be located within 2 feet of the base of the footings for the proposed foundation and base of pool. In a letter to the Commission dated January 5, 2016 detailed information showing groundwater elevations from a deep hole test pit excavated in the proposed foundation location and adjacent to the proposed pool location was submitted to the Commission. In the proposed foundation location weeping was observed at a depth of approximately 36 inches and mottling was observed at a depth of approximately 32 inches placing high ground water at approximately elevation 20. The proposed base of footing for the secondary dwelling foundation will be constructed at elevation 20. The proposed base of footing will be at the top of high groundwater. Adjacent to the proposed pool location weeping was observed at a depth of approximately 26-32 inches, standing water was observed at a depth of approximately 75 inches and, and mottling was observed at a depth of approximately 70 inches placing high ground water at approximately elevation 15. The proposed pool will be located at a surface elevation of approximately 22. The proposed pool will have of a depth of 6 feet placing the bottom of the pool at approximately elevation 16. The bottom of the proposed pool excavation will be at an elevation of approximately 15 which is at or slightly above high groundwater. Neither the proposed foundation footings or the proposed pool will be in high groundwater. Both proposed structures will be at or slightly above high groundwater and will not result in any damming of groundwater flow and therefor will not result in any adverse impacts to the BVW on the adjacent property to the west. A detailed waiver request for this required waiver is provided in the Waiver Request section below.

In the event that the Commission determines that the Hydric Soil Zone surrounding the man-made pond on the Fader Property is in fact a jurisdictional resource area, the proposed pool will be located outside of the 100-foot buffer zone to this resource area. Additionally, the proposed secondary dwelling foundation footings will be downgradient of the resource area and will not have any adverse impact on groundwater flow into this resource area.

Optional 50-Foot Structural Setback Waiver

It is our understanding that the intent of the 50-foot structural setback to a wetland resource requirement in section 3.02B(1) of the Bylaw Regulations is to reduce impacts to unaltered jurisdictional wetland resource areas which may result from the construction of a structure within 50 feet of a downgradient wetland. These adverse impacts may include disruption of groundwater or surface flow to the resource area, alteration of natural infiltration adjacent to the resource area, leaching of contaminants or other contaminated runoff associated with the structure entering the resource area, impacts to native buffer zone vegetation adjacent to the resource area, or impacts to wildlife which may be using the resource area.

In addition to the required waiver for separation to high groundwater discussed above, the Proposed Project may require a second waiver in the event that the Commission determines that the Hydric Soil Zone on the Fader Property is in fact a jurisdictional wetland resource area. If the Commission makes such a determination, approximately 500 square feet of the proposed secondary dwelling will be located within the 50-foot buffer zone to this resource area. The Applicant feels that the proposed secondary dwelling will not have an adverse impact on this resource area as it will be located off-locus and downgradient of the resource area and will be on a previously altered and landscaped portion of the Subject Property. The Applicant also feels that the proposed planting of 800 square feet of native buffer zone vegetation will result in an overall net benefit to the resource area and associated buffer zones. Additionally, the Applicant feels that the ongoing maintenance and mowing of this resource area, the 25-foot buffer zone to this resource area and fifty percent (50%) of the area between the 25-foot and 50-foot buffers to this resource area constitute a significant and ongoing impact to the resource area and associated buffer zones. The proposed off-locus downgradient structure will not result in any additional impacts to this heavily altered and maintained resource area. A detailed waiver request for this optional secondary waiver is provided in the Waiver Request section below.

Summary

The Applicant feels that the wetland resource area on the Fader Property is defined by the limit of the existing man-made pond and that this casts a 50-foot wetland buffer zone which falls short of the proposed secondary dwelling on the Subject Property. The Applicant also feels that the Hydric Soil Zone present on portions of the Fader Property adjacent to the man-made pond are the direct result of historic and ongoing site alterations and landscape maintenance activities and that this area does not qualify as a jurisdictional wetland resource area. Further, the Applicant feels that the man-made pond and Hydric Soil Zone do not connect to any water body or the nearby natural wetland resource area to the northwest of the Fader Property. In the event that the Commission feels that the Hydric Soil Zone somehow qualifies as a jurisdictional wetland resource area, The Applicant feels that the proposed secondary dwelling qualifies for a 50-foot no structure setback waiver under the Bylaw as it will have no additional adverse impact on the man-made pond and heavily altered and maintained

Hydric Soil Zone especially when compared to existing use and ongoing maintenance of this portion of the Fader Property. The Applicant also feels that the proposed native buffer zone plantings will result in a significant net benefit to the resource areas and associated buffer zones.

WAIVER REQUEST

Secondary Dwelling – Required Groundwater Separation Waiver

The Applicant is proposing to construct a secondary dwelling and pool on the Subject Property. The Applicant feels that the limit of the wetland resource area on the abutting Fader Property is coincident with the edge of the existing man-made pond. Based on that, the proposed secondary dwelling and pool will be located entirely outside of the 50-foot wetland buffer zone to both the man-made pond on the Fader Property wetland and the BVW located to the west of the Subject Property. The base of the footings for the proposed secondary dwelling foundation and the base of the excavation for the proposed pool will be located at approximately the top, or slightly above, the high ground water elevation as detailed above. The proposed foundation footings and pool will not meet the two-foot high groundwater separation requirement. Under the Bylaw this activity would require a waiver and therefore, the Applicant is respectfully requesting a waiver from the following section of the Nantucket Wetlands Protection Bylaw:

> *3.02B(1)*
> *"Proposed projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to the vegetated wetlands. All structures which are not water dependent shall be at least 50 feet from a vegetated wetland, and all structures shall maintain an undisturbed two-foot separation to high groundwater. Fifty percent (50%) of the area between the 25-foot buffer and the 50-foot buffer shall not be altered. Additional soils and groundwater information may be required for applications in areas of high groundwater."*

The proposed foundation and pool will not adversely impact the BVW or associated buffer zones. The proposed foundation and pool will be outside of the 50-foot BVW buffer zone and 50-foot buffer zone to the man-made pond and will be consistent with foundations and other structures approved for numerous projects located outside of the 50-foot wetland buffer zone. The proposed foundation will be located down gradient from the wetland located on the Fader Property and will not have any adverse impact on groundwater flowing towards this wetland as all groundwater flow towards this wetland occurs from upgradient portions of the Fader Property. Because the proposed foundation footings and pool will be located at the top of the high groundwater elevation they will not impede or alter the flow of groundwater towards the wetland located to the west of the Subject Property and will not result in any adverse impacts to this resource area. These structures are consistent with other structures which have been permitted by the Commission within two feet of high groundwater on numerous other properties on Nantucket. Therefore, the Applicant is requesting a waiver for the crawl space foundation two-foot separation to high groundwater under section 1.03F(3)(A) of the Bylaw which state the following:

> *Section 1.03F(3)(A):*
> *"The Commission may grant a waiver from these regulations when the Commission finds that, given existing conditions, the proposed project will not adversely impact the interests identified in the Bylaw and there are no reasonable conditions or alternatives that would allow*

that project to proceed in compliance with the regulations. The burden of proof to show no adverse impact to the interests identified in the Bylaw, Chapter 136 Section 2, shall be the responsibility of the owner/applicant. The burden of proof to show no reasonable alternative shall be the responsibility of the owner/applicant and shall consist of a written alternatives analysis detailing why the proposed project can not otherwise proceed in compliance with the performance standards in these regulations with an explanation of why each is not feasible.

It shall be the responsibility of the applicant to provide the Commission with any information, which the Commission may request in order to enable the Commission to ascertain such adverse effects. The failure of the applicant to furnish any information which has been so requested may result in the denial of a request for a waiver pursuant to this subsection."

The proposed secondary dwelling will not include a basement and the base of the proposed footings will be located at the top of high groundwater. The base of the excavation for the proposed pool will be located at or slightly above high groundwater. The proposed foundation and pool are consistent with numerous other projects within 2 feet of high groundwater which have been approved by the Commission for areas outside of the 50-foot BVW buffer zone. The proposed foundation and pool have been designed to minimize or eliminate any adverse impacts to the BVW and associated buffer zones. Additionally, the Applicant is proposing to restore approximately 800 square feet of the 25-foot and 50-foot BVW buffer zones on the Subject Property with native buffer zone vegetation resulting in a significant overall net benefit to the existing BVW and associated buffer zones. Therefore, the Applicant feels that constructing the foundation and pool within two feet of high groundwater will not result in any adverse impacts to the BVW or associated buffer zones and that the overall project will result in a net benefit to the adjacent jurisdictional resource areas.

Secondary Dwelling – Optional 50-Foot Structural Setback Waiver

The Applicant is proposing to construct a secondary dwelling on the Subject Property. In the event that the Commission determines that the Hydric Soil Zone adjacent to the man-made pond on the Fader Property somehow constitutes a jurisdictional wetland resource area, portions of the proposed secondary dwelling will be located within the 50-foot buffer zone to this resource area. Under the Bylaw this activity would require a waiver and therefore, the Applicant is respectfully requesting a waiver from the following section of the Nantucket Wetlands Protection Bylaw:

3.02B(1)
"Proposed projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to the vegetated wetlands. All structures which are not water dependent shall be at least 50 feet from a vegetated wetland, and all structures shall maintain an undisturbed two-foot separation to high groundwater. Fifty percent (50%) of the area between the 25-foot buffer and the 50-foot buffer shall not be altered. Additional soils and groundwater information may be required for applications in areas of high groundwater."

Although the proposed secondary dwelling will be located partially within the 50-foot buffer zone to the Hydric Soil Zone on the Fader Property it will be located significantly downgradient from this resource area and will not alter or impact groundwater flow into or towards this resource area as all

groundwater flow to this area originates from upgradient portions of the Fader Property. If the Hydric Soil Zone of Fader Property is in fact a jurisdictional wetland resource area, the entire resource area is currently mowed, altered, and maintained. Additionally, the entire 25-foot buffer zone to this resource area is mowed, altered, and maintained as well as 50% percent of the area between the 25-foot and 50-foot buffer zones to this resource area. The Applicant feels that the existing alteration, maintenance, and use of this resource area and associated buffer zones is a significantly impact to this resource area. The proposed off-locus downgradient structure located on a previously altered and landscaped portion of the Subject Property will not have any impacts the already heavily altered and maintained Hydric Soil Zone and associated buffer zones, especially when compared to the existing impacts resulting from ongoing use and maintenance of this area. Therefore, the Applicant is requesting a waiver for the proposed shed which will be located within the 50-foot buffer zone to a wetland resource are under section 1.03F(3)(A) of the Bylaw which states the following:

> *Section 1.03F(3)(A):*
> *"The Commission may grant a waiver from these regulations when the Commission finds that, given existing conditions, the proposed project will not adversely impact the interests identified in the Bylaw and there are no reasonable conditions or alternatives that would allow that project to proceed in compliance with the regulations. The burden of proof to show no adverse impact to the interests identified in the Bylaw, Chapter 136 Section 2, shall be the responsibility of the owner/applicant. The burden of proof to show no reasonable alternative shall be the responsibility of the owner/applicant and shall consist of a written alternatives analysis detailing why the proposed project can not otherwise proceed in compliance with the performance standards in these regulations with an explanation of why each is not feasible.*
>
> *It shall be the responsibility of the applicant to provide the Commission with any information, which the Commission may request in order to enable the Commission to ascertain such adverse effects. The failure of the applicant to furnish any information which has been so requested may result in the denial of a request for a waiver pursuant to this subsection."*

The proposed secondary dwelling will be located within a previously altered and landscaped portion of the Subject Property and will be located off-locus and downgradient from a completely altered, maintained, and mowed resource area on the Fader Property. The proposed secondary dwelling will not result in any adverse impacts to this wetland resource area or associated buffer zones. Additionally, the Applicant is proposing to restore approximately 800 square feet of the 25-foot and 50-foot BVW buffer zones on the Subject Property with native buffer zone vegetation resulting in a significant overall net benefit to the existing BVW and associated buffer zones. Therefore, the Applicant feels that constructing the secondary dwelling partially within the 50-foot buffer zone to an off-locus resource area will not result in any adverse impacts to this significantly altered and maintained resource area or associated buffer zones and that the overall project will result in a net benefit to the adjacent jurisdictional resource areas.

If you have any questions, please feel free to contact me via email at mrits@sitedesigneng.com or at 508-802-5832.

Respectfully,
Site Design Engineering, LLC.

Mark Rits
Project Manager/Permitting Specialist

Photo 1: **View Southwestward Showing Terracing on Southern Portion of Fader Property.**

Photo 2: **View Southward Showing Terracing on Fader Property.**

Photo 3: View Southeastward Showing Terracing on Fader Property.

Photo 4: View Eastward Showing Terracing on Fader Property.

Photo 5: **View Southwestward Showing Partially Lined Man-Made Pond on Fader Property.**

Photo 6: **View Southwestward Showing Partially Lined Man-Made Pond on Fader Property.**

Photo 7: **View Northward Showing Partially Lined Man-Made Pond on Fader Property with Subject Property in Background.**

Photo 8: **View Westward Showing Partially Lined Man-Made Pond on Fader Property.**

Photo 9: **Photo Showing Pumping Equipment in Partially Lined Man-Made Pond on Fader Property.**

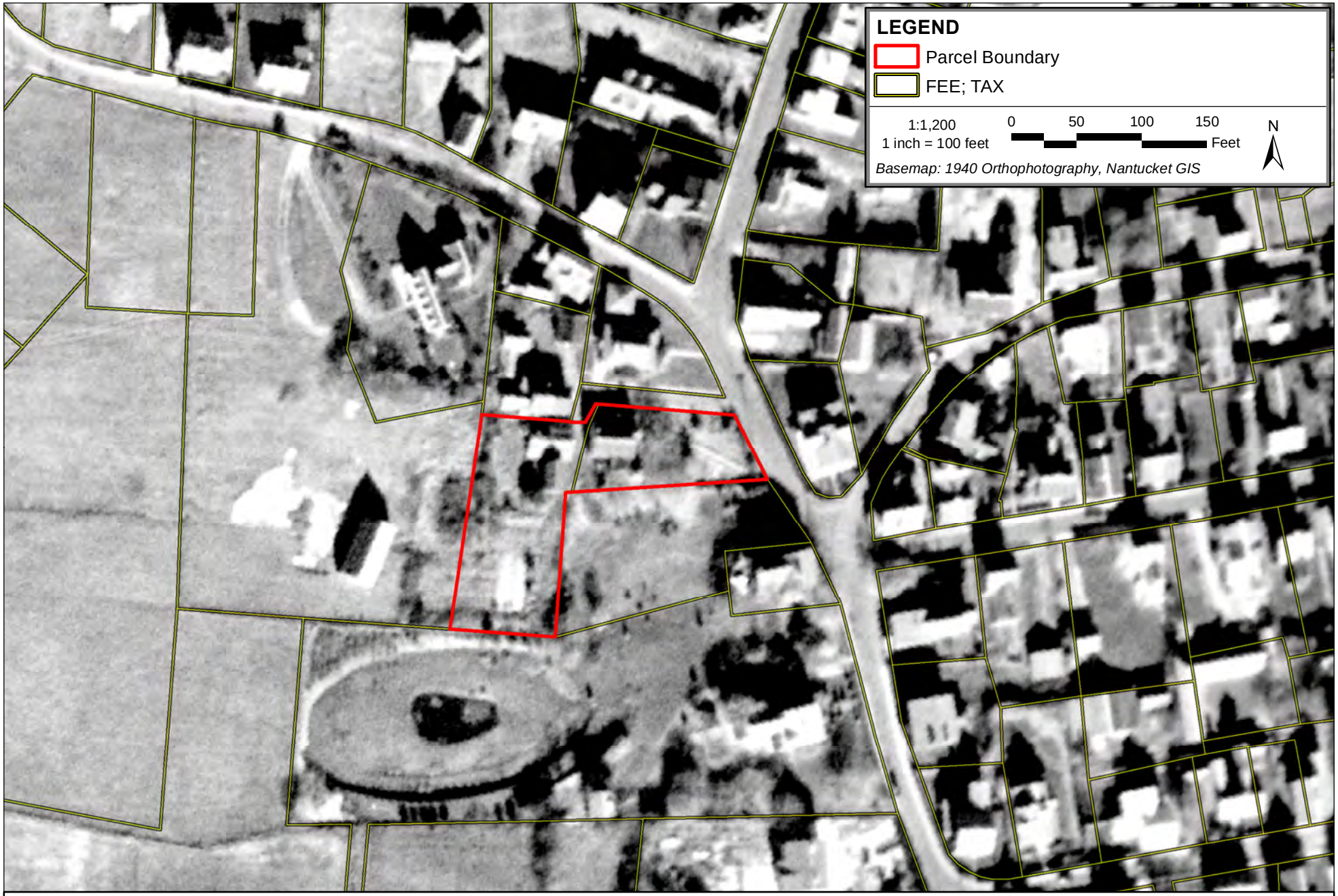
Photo 10: **Photo Showing Pumping Equipment in Partially Lined Man-Made Pond on Fader Property.**

Photo 11: View Westward Showing Extensive Lawn on Western Portion of Fader Property.

Photo 12: View Northwestward Showing Extensive Lawn on Western Portion of the Fader Property.

Photo 13: **View Eastward Showing Large Stump on Fader Property.**

Photo 14: **View Northward Showing Large Stumps on Fader Property with Subject Property in the Background.**

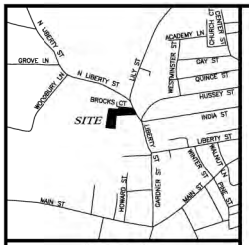


1 Brock's Court - Nantucket, Massachusetts
Map 42.3.4 Lot 84
SDE Project No. 12035

Figure 1 - Detailed Site Overview - 1940
February 3, 2016

1 Brock's Court - Nantucket, Massachusetts
Map 42.3.4 Lot 84
SDE Project No. 12035

Figure 2 - Detailed Site Overview - 2014
February 3, 2016



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- GW — DEPTH TO GROUNDWATER
- TP–# / GW — TEST PIT, DEPTH TO GROUNDWATER
- A–#/BG–#/LS–# — SOIL BORING

ZONING CLASSIFICATION: R–1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–

N/F
JOAN PRATEL
8 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 42

N/F
ONE BROCK'S COURT LLC
3 BROCK'S COURT
MAP 42.3.4 PARCEL 85

N/F
MICHAEL HATRICK
2 N. LIBERTY ST.
MAP 42.3.4 PARCEL 86

N/F
JOAN PRATEL
12 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 171

N/F
FRANCIS L & GREGORY ELDER TRS.
42 LIBERTY ST.
MAP 42.3.4 PARCEL 122

N/F
MARSHA FADER
36 LIBERTY ST.
MAP 42.3.4 PARCEL 83

1 BROCKS CT
MAP 42.3.4
PARCEL 84

EXISTING DWELLING
FFL=25.0
AREA=1,997.95 SQ. FT.
GROUND COVER=10.7%

BENCHMARK
TOP OF SURVEY SPIKE
ELEV.=19.00
(ASSUMED DATUM)

BROCK'S COURT

LIBERTY STREET

LIMIT OF WETLAND

25 FT. WETLAND BUFFER ZONE

50 FT. WETLAND BUFFER ZONE

100 FT. WETLAND BUFFER ZONE

50 FT. BUFFER ZONE TO MAN MADE POND

100 FT. BUFFER ZONE TO MAN MADE POND

EDGE OF MAN MADE POND

EXISTING CATCH BASIN
RIM=19.15

ABANDONED CLAMSHELL DRIVEWAY

EXISTING DWELLING

EXISTING 4' TO 7' TIMBER RETAINING WALL HEIGHT=± 5 FT

GENERAL NOTES:

1. EXISTING CONDITIONS INFORMATION WAS COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY J. MARCKLINGER & ASSOCIATES, INC. AND SUPPLEMENTED WITH RECORD PLAN INFORMATION.
2. ELEVATIONS ARE REFERENCED TO AN ASSUMED DATUM.
3. WETLAND RESOURCE AREAS SHOWN ON SITE WERE DELINEATED BY SCHOFIELD BROTHERS OF CAPE COD IN JUNE 2015.
4. THE SITE IS NOT LOCATED WITHIN ANY KNOWN FLOOD HAZARD ZONES AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 250230 0086 G, DATED JUNE 9, 2014.
5. THIS PLAN AND ANY ACCOMPANYING CERTIFICATIONS DO NOT CONSTITUTE A CERTIFICATION OF TITLE TO THE PROPERTY DISPLAYED HEREON. THE OWNER OF LOCUS AND ABUTTING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.
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10 0 5 10 20
SCALE: 1 INCH = 10 FEET

J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
NANTUCKET, MA. 02554
(310) 945-7054

SITE DESIGN ENGINEERING, LLC.
11 CUSHMAN STREET
MIDDLEBORO, MA 02346
T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
1	2/3/16	ADDED POND AND BORING LOCATIONS	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

COMMONWEALTH OF MASSACHUSETTS
DAVID C. MARCKLINGER
No. 39550
REGISTERED LAND SURVEYOR

EXISTING CONDITIONS PLAN

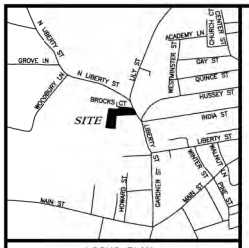
1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
EXISTING CONDITIONS PLAN 'A'

SCALE: 1"=10'

SHEET NO.
1 OF 1



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- GW — DEPTH TO GROUNDWATER
- TP–# / GW — TEST PIT / DEPTH TO GROUNDWATER
- A–#/BG–#/LS–# — SOIL BORING

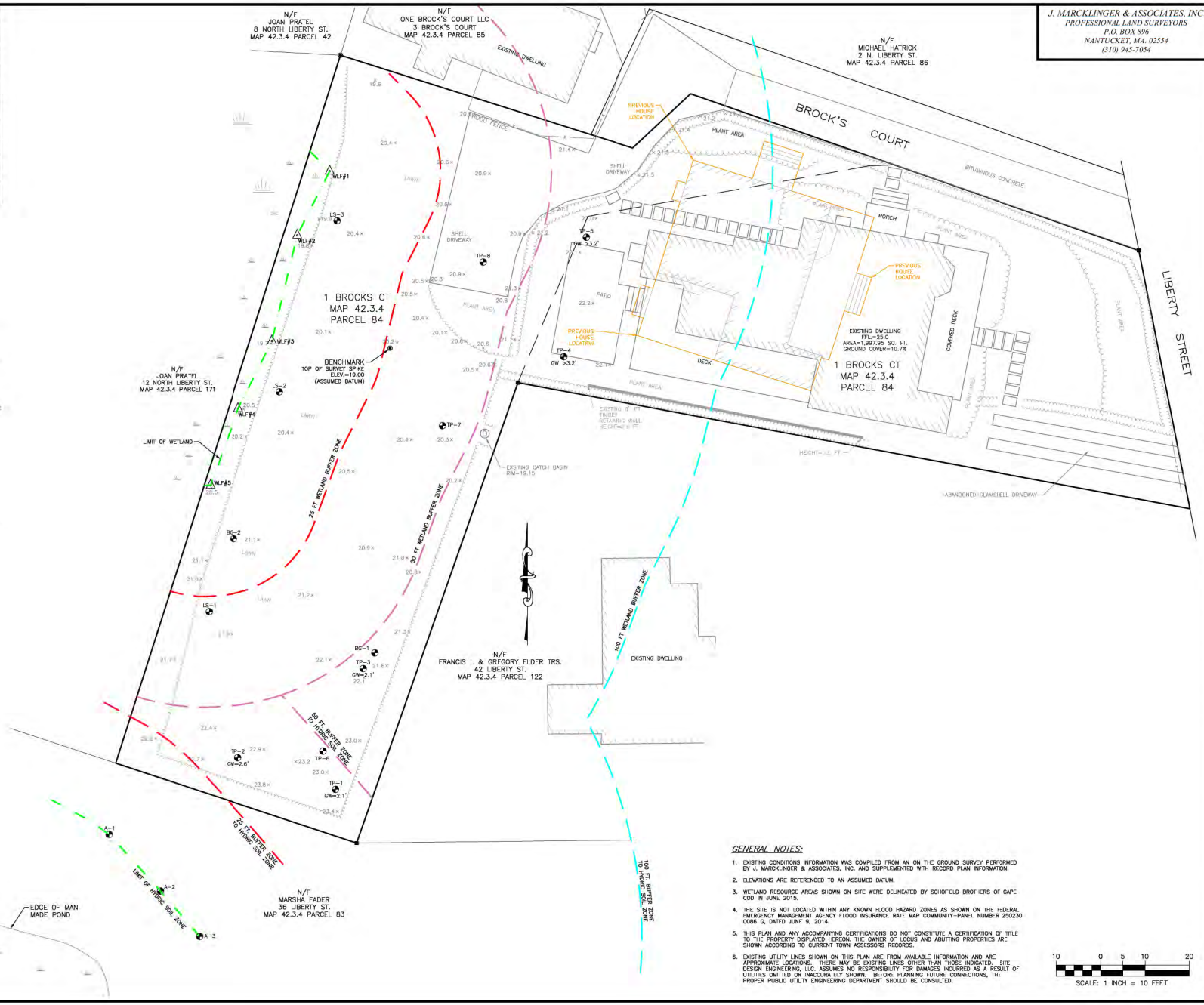
ZONING CLASSIFICATION: R–1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



GENERAL NOTES:

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10 0 5 10 20
SCALE: 1 INCH = 10 FEET

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T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
1	2/3/16	ADDED POND AND BORING LOCATIONS	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

COMMONWEALTH OF MASSACHUSETTS
DAVID C. MARCKLINGER
No. 39550
REGISTERED LAND SURVEYOR

EXISTING CONDITIONS PLAN

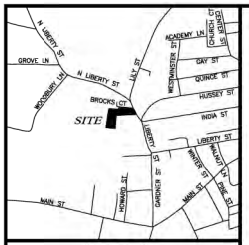
1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
EXISTING CONDITIONS PLAN 'B'

SCALE: 1"=10'

SHEET NO.
1 OF 1



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- TP-# — TEST PIT
- GW — DEPTH TO GROUNDWATER
- A-#/BG-#/LS-# — SOIL BORING

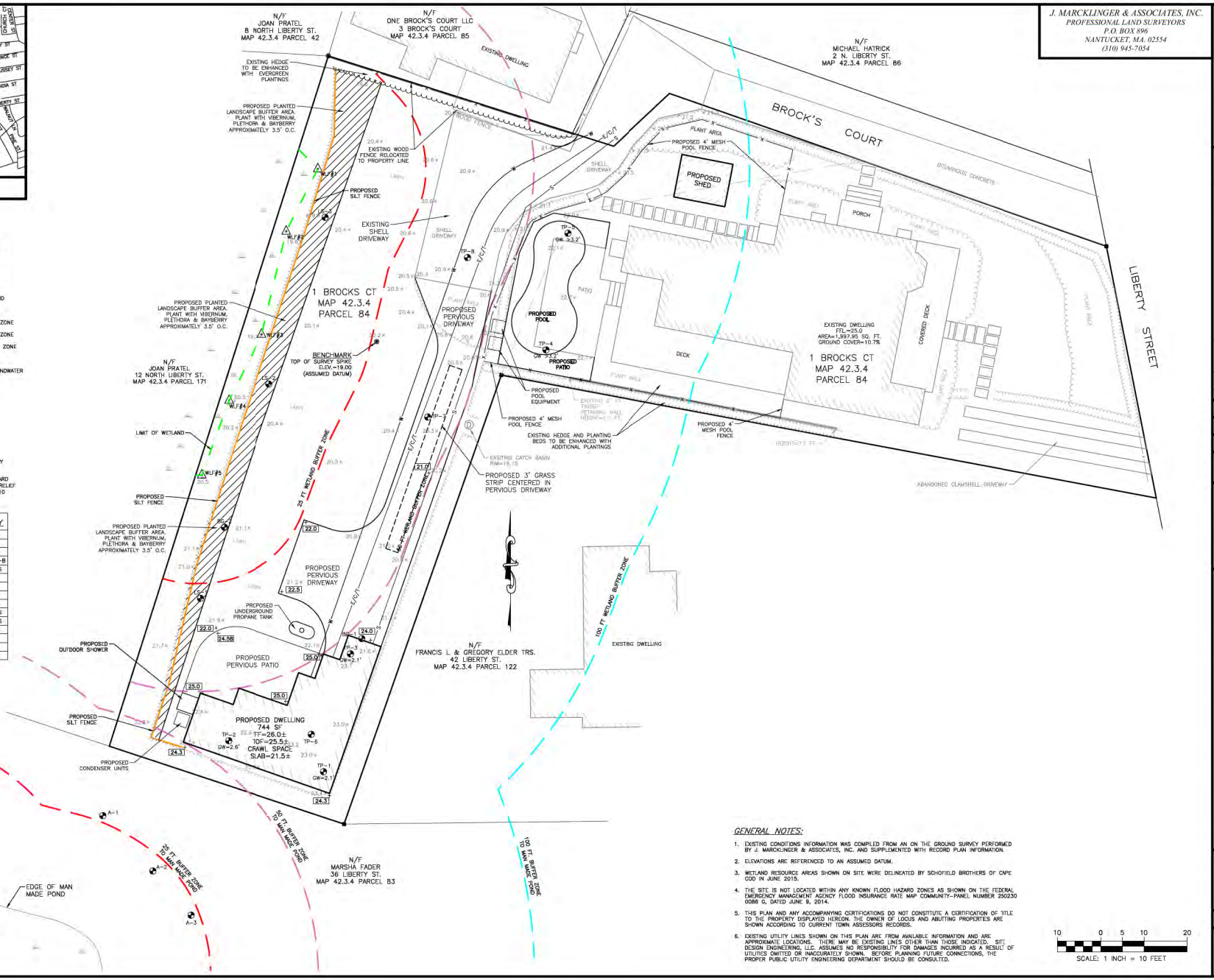
ZONING CLASSIFICATION: R-1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1358 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
NANTUCKET, MA. 02554
(310) 945-7054

GENERAL NOTES:

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SCALE: 1 INCH = 10 FEET

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T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
2	2/3/16	ADDED POND AND BORING LOCATIONS	DCM
1	11/25/15	ADDED BORING LOCATIONS, REMOVE SHED	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. MULLOY
CIVIL
No. 41757
REGISTERED PROFESSIONAL ENGINEER

PROPOSED SITE PLAN

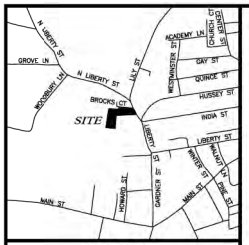
1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
PROPOSED SITE PLAN 'A'

SCALE: 1"=10'

SHEET NO.
1 OF 1



LOCUS PLAN
NTS

LEGEND

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- SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- TP-# — TEST PIT
- GW — DEPTH TO GROUNDWATER
- A-#/BG-#/LS-# — SOIL BORING

ZONING CLASSIFICATION: R-1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1358 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
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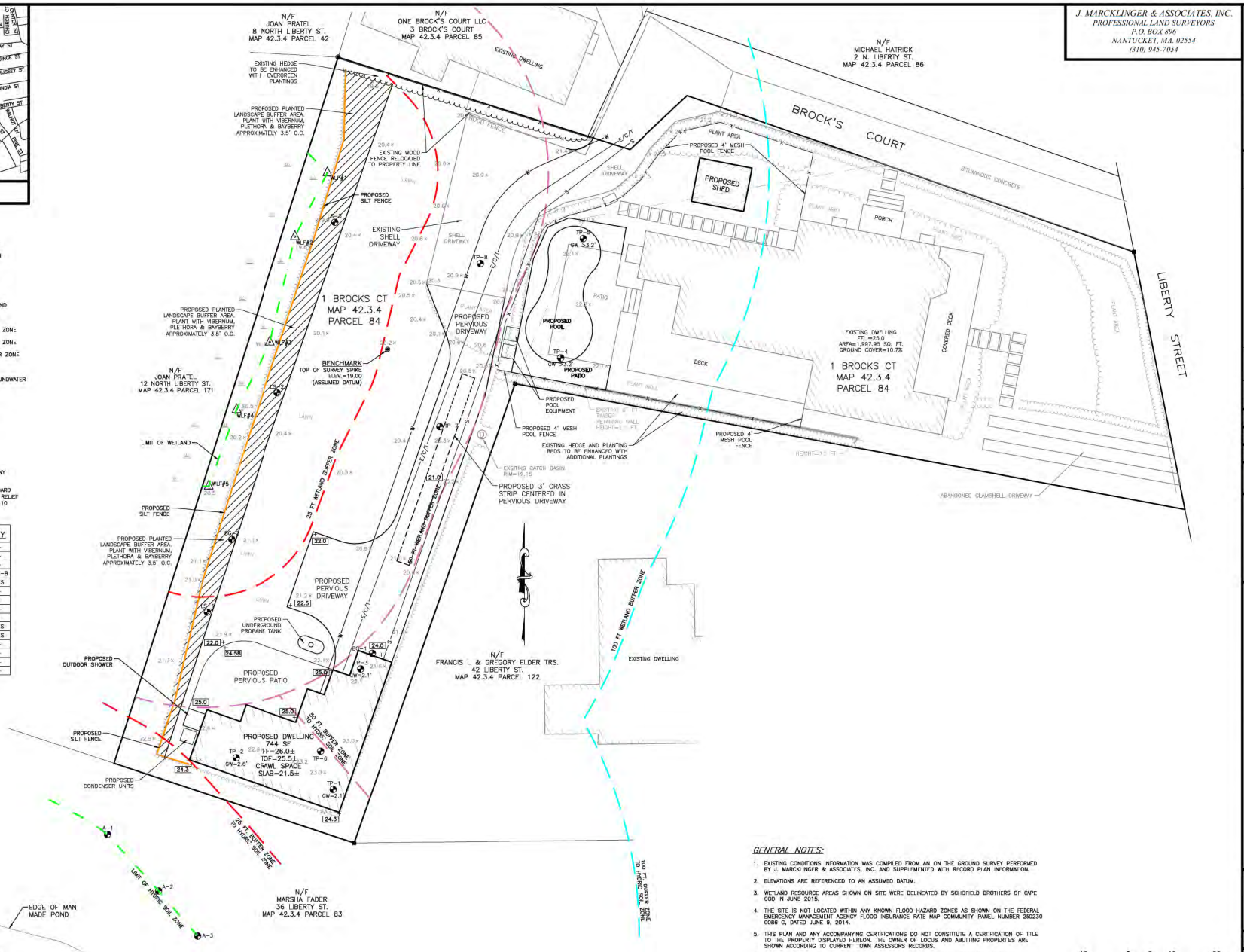
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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SCALE: 1 INCH = 10 FEET

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11 CUSHMAN STREET
MIDDLEBORO, MA 02346
T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
2	2/3/16	ADDED POND AND BORING LOCATIONS	DCM
1	11/25/15	ADDED BORING LOCATIONS, REMOVE SHED	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. MULLOY
CIVIL
No. 41757
REGISTERED PROFESSIONAL ENGINEER

PROPOSED SITE PLAN

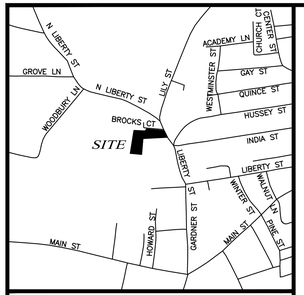
1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
PROPOSED SITE PLAN 'B'

SCALE: 1"=10'

SHEET NO.
1 OF 1



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- GW — DEPTH TO GROUNDWATER
- TP–# — TEST PIT
- GW — DEPTH TO GROUNDWATER
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ZONING CLASSIFICATION: R–1

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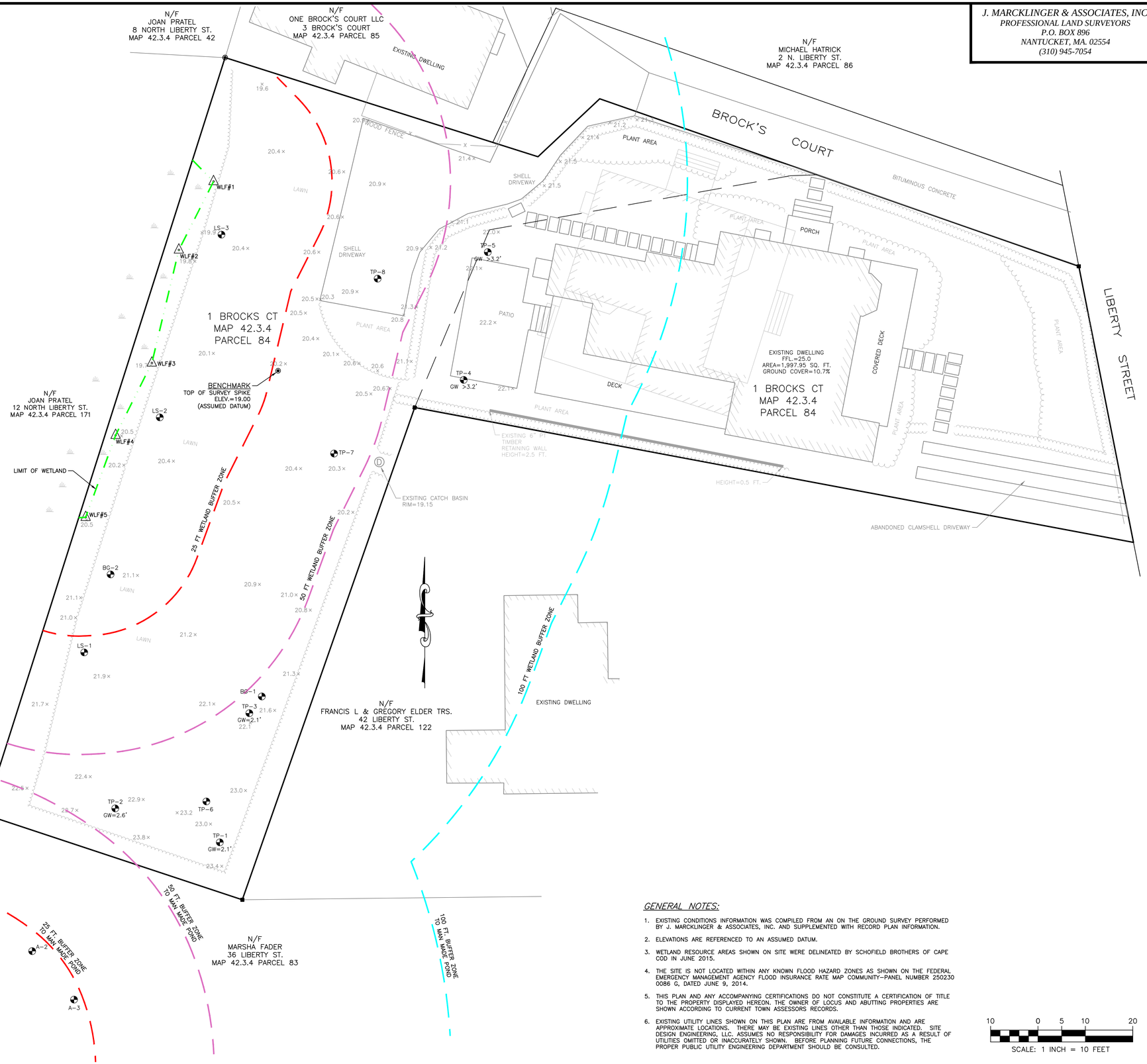
OVERLAY DISTRICT APPLICABILITY

DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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PROJECT NO. 12035

ISSUED FOR:
APPROVAL

JOSEPH E. MARCKLINGER No. 9330 REGISTERED LAND SURVEYOR COMMONWEALTH OF MASSACHUSETTS

EXISTING CONDITIONS PLAN

1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
EXISTING CONDITIONS PLAN 'A'

SCALE: 1"=10'

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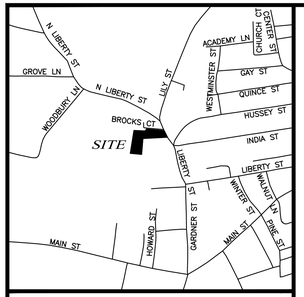

LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- X FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- TP–# TEST PIT
- GW DEPTH TO GROUNDWATER
- A–#/BG–#/LS–# SOIL BORING

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DORMITORY	–
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FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–

N/F
JOAN PRATEL
8 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 42

N/F
ONE BROCK'S COURT LLC
3 BROCK'S COURT
MAP 42.3.4 PARCEL 85

N/F
MICHAEL HATRICK
2 N. LIBERTY ST.
MAP 42.3.4 PARCEL 86

N/F
JOAN PRATEL
12 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 171

N/F
FRANCIS L & GREGORY ELDER TRS.
42 LIBERTY ST.
MAP 42.3.4 PARCEL 122

N/F
MARSHA FADER
36 LIBERTY ST.
MAP 42.3.4 PARCEL 83

1 BROCKS CT
MAP 42.3.4
PARCEL 84

EXISTING HEDGE TO BE ENHANCED WITH EVERGREEN PLANTINGS

PROPOSED PLANTED LANDSCAPE BUFFER AREA. PLANT WITH VIBERNUM, PLETHORA & BAYBERRY APPROXIMATELY 3.5' O.C.

EXISTING WOOD FENCE RELOCATED TO PROPERTY LINE

EXISTING WOOD FENCE

EXISTING DWELLING

PROPOSED SILT FENCE

EXISTING SHELL DRIVEWAY

SHELL DRIVEWAY

PROPOSED PERVIOUS DRIVEWAY

PROPOSED PERVIOUS PATIO

PROPOSED PLANTED LANDSCAPE BUFFER AREA. PLANT WITH VIBERNUM, PLETHORA & BAYBERRY APPROXIMATELY 3.5' O.C.

BENCHMARK
TOP OF SURVEY SPIKE
ELEV.=19.00
(ASSUMED DATUM)

LIMIT OF WETLAND

25 FT. WETLAND BUFFER ZONE

50 FT. WETLAND BUFFER ZONE

PROPOSED PLANTED LANDSCAPE BUFFER AREA. PLANT WITH VIBERNUM, PLETHORA & BAYBERRY APPROXIMATELY 3.5' O.C.

PROPOSED UNDERGROUND PROPANE TANK

PROPOSED OUTDOOR SHOWER

PROPOSED DWELLING
744 SF
FF=26.0±
TOF=25.5±
CRAWL SPACE
SLAB=21.5±

PROPOSED CONDENSER UNITS

EDGE OF MAN MADE POND

25 FT. BUFFER ZONE TO MAN MADE POND

50 FT. BUFFER ZONE TO MAN MADE POND

100 FT. BUFFER ZONE TO MAN MADE POND

100 FT. WETLAND BUFFER ZONE

EXISTING DWELLING

BROCK'S COURT

LIBERTY STREET

BITUMINOUS CONCRETE

PROPOSED SHED

PLANT AREA

PROPOSED 4' MESH POOL FENCE

SHELL DRIVEWAY

PORCH

PROPOSED POOL

PROPOSED PATIO

PATIO

DECK

COVERED DECK

EXISTING DWELLING
FFL.=25.0
AREA=1,997.95 SQ. FT.
GROUND COVER=10.7%

1 BROCKS CT
MAP 42.3.4
PARCEL 84

PROPOSED POOL EQUIPMENT

EXISTING 8"x8" TIMBER RETAINING WALL HEIGHT=2.5 FT.

PROPOSED 4' MESH POOL FENCE

EXISTING HEDGE AND PLANTING BEDS TO BE ENHANCED WITH ADDITIONAL PLANTINGS

EXSITING CATCH BASIN
RIM=19.15

PROPOSED 3' GRASS STRIP CENTERED IN PERVIOUS DRIVEWAY

ABANDONED CLAMSHELL DRIVEWAY

HEIGHT=0.5 FT.

TP–1 GW=2.1'
TP–2 GW=2.6'
TP–3 GW=2.1'
TP–4 GW=3.2'
TP–5 GW=3.2'
TP–6
TP–7
TP–8

BC–1
LS–2
LS–3
A–1
A–2
A–3
WLF#1
WLF#2
WLF#3
WLF#4
WLF#5

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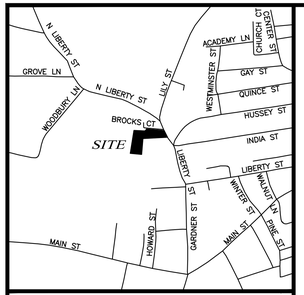

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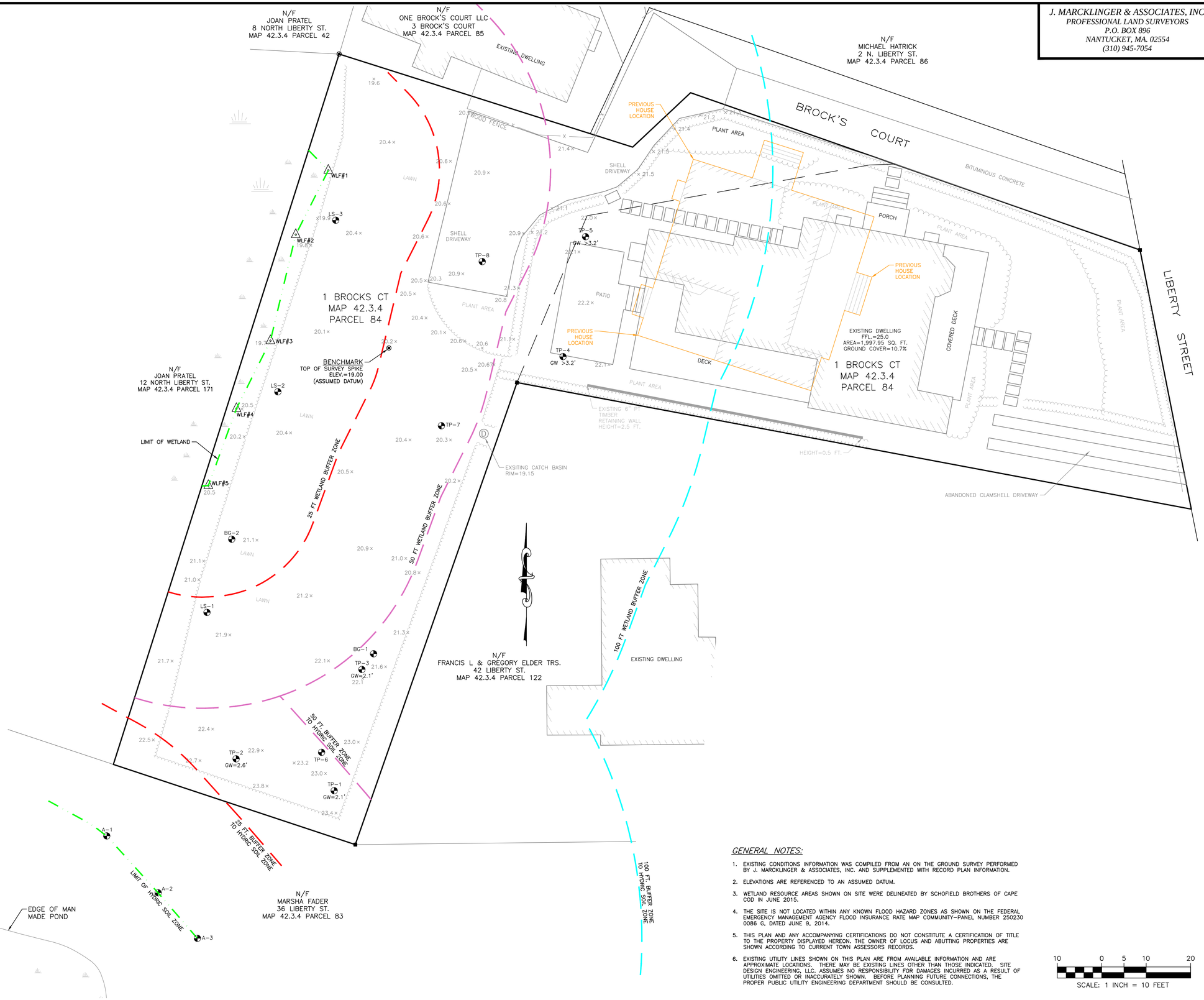

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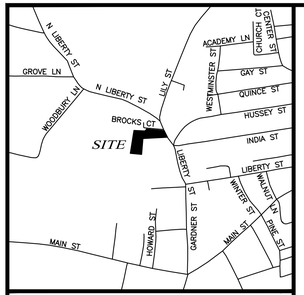

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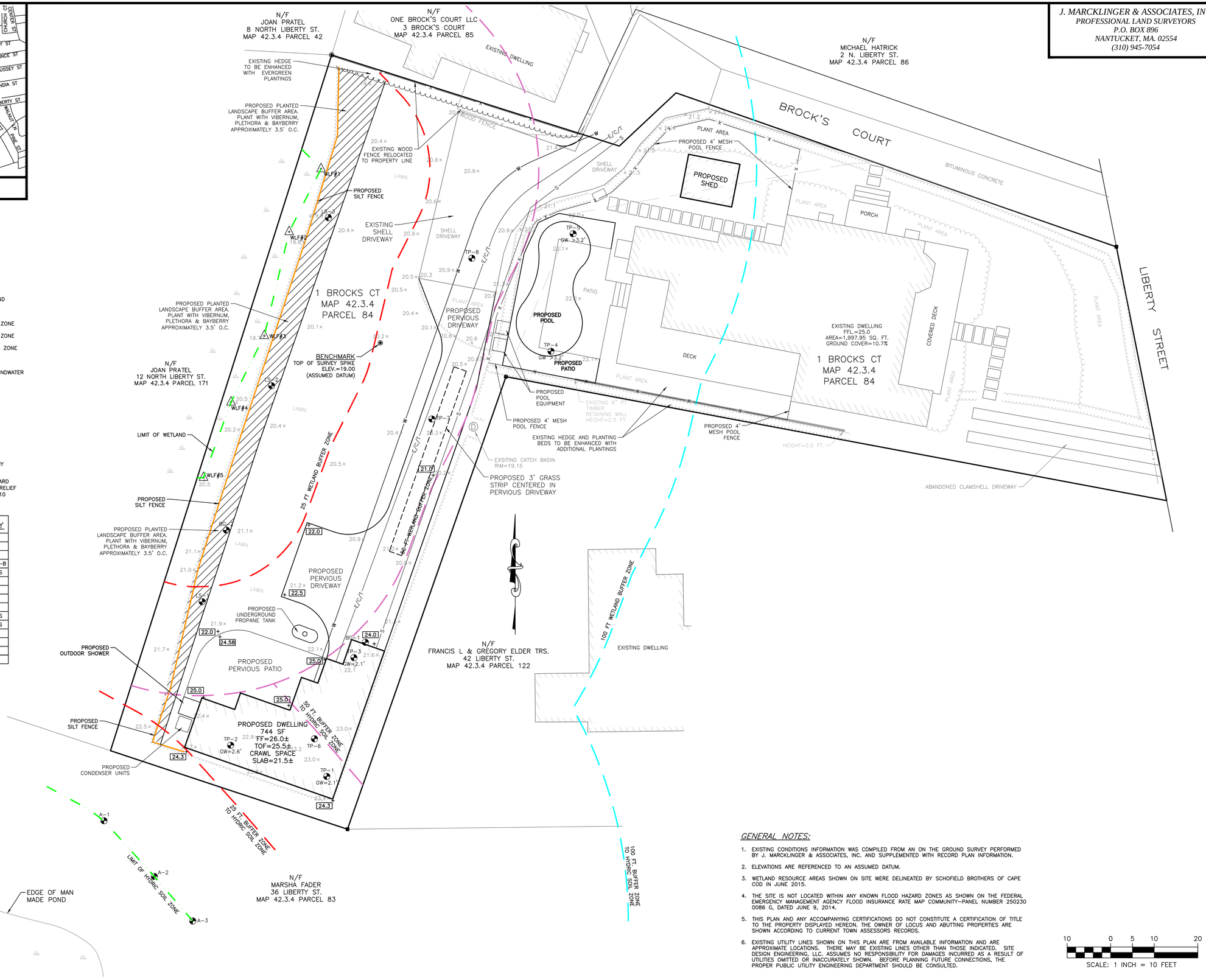

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ASSESSOR'S MAP 42.3.4, PARCEL 84
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PREPARED FOR EDWIN SNIDER REALTY TRUST

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SHEET NO.
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Rec. @ 2/10/16
Hearing by
Davis, Malm & D'Agostine

DAVIS MALM &
D'AGOSTINE P.C.
ATTORNEYS AT LAW

Paul L. Feldman

February 10, 2016

Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: One Brock's Court Notices of Intent (SE48-2834 & SE48-2835)

Dear Members of the Conservation Commission:

This office represents Marsha Fader, who is an abutter to the proposed project at One Brock's Court. We submit this letter to provide additional information regarding and the wetland resources on both Ms. Fader's and the Applicant's properties and the further bases to deny the requested Order of Conditions for construction of a second home (NOI SE48-2835) on the Applicant's property.

Failure to Properly Delineate Wetland Resources

After the January 13, 2016 hearing, additional soil borings and soil pits were performed on the Applicant's property and Ms. Fader's property. Those results document the existence of hydric soils on both properties and confirm the delineation of wetlands depicted on the proposed Site Plan dated October 29, 2015 is incorrect. Moreover, after review of the supplemental information submitted by the Applicant's engineer on February 4, 2016 it is apparent the Applicant continues to ignore these results when depicting the resource areas on the Applicant's property. The existing conditions plans and proposed site plans submitted by Site Design Engineering, LLC in its latest filing continue to incorrectly depict wetland resources. This failure is significant because the second house is not to be built in buffer at all, but in the resource area itself.

As noted in a previous letter from our colleague to the Commission dated January 13, 2016, the DEP Delineating Bordering Wetlands Manual acknowledges that determining the boundaries of BVW in areas that have been altered may be challenging, but the BVW can still be located and protected. In fact, the manual indicates that a review of the soils will be important to determine if wetlands hydrology still exists in those areas and to delineate the wetlands. And, more importantly, the DEP Regulations define the boundary line for BVW in an area that has been disturbed ("e.g. by cutting, filling, or cultivation") as "the line within which there are indicators of saturated or inundated conditions sufficient to support a predominance of wetland indicator plants, or credible evidence from

direct 617-589-3831 *direct fax* 617-305-3131
email pfeldman@davismalm.com

ONE BOSTON PLACE • BOSTON • MA • 02108
617·367·2500 • *fax* 617·523·6215
www.davismalm.com

a competent source that the area supported or would support under undisturbed conditions a predominance of wetland indicator plants prior to the disturbance." 310 CMR 10.55(2)(c)3. Nantucket's Regulations do not define BVW, but state that if a term is not defined, it shall have the definition contained in the WPA and regulations promulgated thereunder. *See* Section 1.02. Therefore, the definition in 310 CMR 10.55(2)(c)3 applies to the wetland resources on Ms. Fader's and the Applicant's properties.

The results of soil samples taken on both properties on January 21, 2016 were submitted to the Commission by letter dated February 4, 2016 from Bruce Griffin of New England Environmental, Inc. ("NEEI"). Those results and the results of the previous assessment by all parties on January 7 demonstrate that there are saturated conditions on both properties for an extended period during the growing season, as indicated by the presence of hydric soils and oxidized rhizospheres. NEEI has indicated that such conditions would support a predominance of wetland indicator plants if current lawn areas on both properties were left unmown.

The Applicant has not fully delineated the resource areas that are the subject of the second NOI (SE48-2835). The area where the NOI proposes to locate a house as well as adjacent areas are BVW and should be delineated as such.

Area of Proposed Second Home Location was Unlawfully Altered

The Applicant's property in the area of the proposed house was altered in the late 1990s and there is no record of a Notice of Intent Filing or issuance of an Order of Conditions for such alteration. Aerial photographs show the property having significant vegetation and what appears to be water features similar to the adjacent wetlands at least from until 1993 through 1995. Neighbors recall fill being added and the lawn developing on the Applicant's property in this area in the late 1990s.

There is no dispute that such area was previously with the Commission's jurisdiction and a likely resource area. The Wetlands Protection Act provides that "[n]o person shall remove, fill, dredge or alter any area subject to protection under this section without the required authorization, or cause, suffer or allow such activity, **or leave in place unauthorized fill, or otherwise fail to restore illegally altered land to its original condition**...." G.L. c. 131, § 40. The Act further provides that "[a]ny person who purchases, inherits, or otherwise acquires real estate upon which work has been done in violation of the provisions of this section ... shall forthwith comply with any such order or restore such real estate to its condition prior to any such violation." Case law provides that upon acquiring ownership of land in violation of the Act, the purchaser is obligated to comply with its provisions. *In the Matter of Margot Xarras*, 2010 WL 3427465, at *19 n.3 (DEP 2010); *Junior v. Town of Marshfield Conservation Com'n*, 2014 WL 4364845, at *4 (Mass. Land Ct. 2014) (successor landowners are responsible for either compliance with order of conditions issued to prior owner or restoration of the land to its prior condition). While we are not advocating that the Applicant as the current owner of improperly filled land restore such land, we do submit the Applicant should not be benefitted by this fill. As addressed below, this same area is properly classified as Bordering Vegetated Wetlands (BVW) even today given its hydric soils. Even if the Commission did not agree

with this finding and considers this area to be buffer today, an Order of Conditions should not issue. This area was improperly filled and, at the very least, should be protected.

For these reasons as well as those set forth in this office's earlier letter, the Conservation Commission should deny the Order of Conditions requested in the second NOI.

Very truly yours,

Paul L. Feldman

PLF:

Rec. @ 2/10/16
Hearing by NEE

New England Environmental, Inc.
Environmental Consulting
15 Research Drive
Amherst, MA 01002
(p) 413.256.0202
(f) 413.256.1092
www.neeinc.com

February 9, 2016

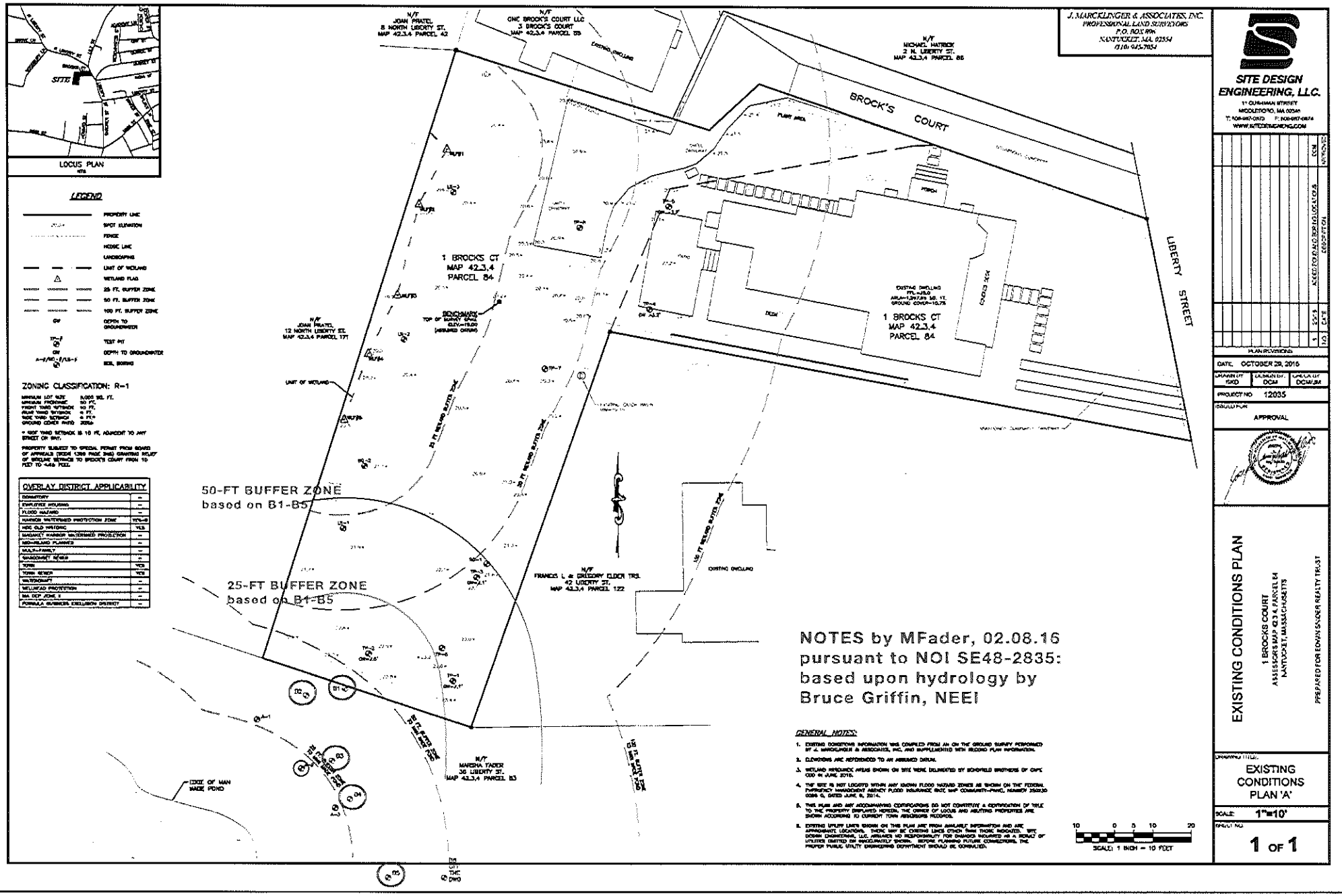
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

RE: **Review, Notices of Intent**
Brock's Court, Nantucket, MA
DEP Files SE 48-2834, 2835
NEE File 13-4266

Dear Commission members,

New England Environmental, Inc. (NEE) has read through a copy of the supplemental information documents from Site Design Engineering, LLC (SDE) dated February 4, 2016, concerning two Notices of Intent for development at Brock's Court. While a full discussion of all the issues raised in the SDE letter is not possible on short notice, we would like to briefly address a few of the deficiencies within this and preceding submissions concerning these projects.

1. The February 4 letter devotes 2½ pages to discussing wetland resources on the abutting property at 36 Liberty Street, and a single short paragraph to the subject property, stating "there are no well-developed natural soil conditions on the Subject Property." This statement is contradicted by hydric soil profiles documented on the site by NEE, soil profiles the Applicant simply chooses to ignore. These hydric soil profiles developed naturally within the fill, in response to wetland hydrology. None of the SDE Existing Conditions Plans shows a complete delineation of the wetland resources on the subject property.
2. The hydric soil pits observed on January 5 (designated A1, A2, & A3) are not a complete delineation of the wetland edge on the 36 Liberty Street property. NEE delineated the edge of the BVW on the portion of this property closest to the subject property with flags B1-B6 on January 21. These flag locations are depicted upon the attached plan. This is only a partial delineation of the BVW on this property, but it projects a buffer zone onto the subject property which is different from both the A and B plans submitted by SDE. However, we still submit that the proposed house site on the subject property is not just in the buffer zone, it is within a wetland.
3. At least some of the fill under the Brock's Court lawn was placed during or after 1995, and well after passage of the Wetlands Protection Act, with no record of a permit. The applicants should not benefit from this illegal activity.
4. The aerial photo from 1940 shows agricultural use within the area proposed for additional structures. This is not inconsistent with wetland conditions. Farmers often placed animal paddocks and pastures in locations which were too wet for crop production. In any event the series of photos from subsequent decades show this area of the subject property to be a wetland resource.



J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 899
NANTUCKET, MA. 02554
(508) 925-7054

SITE DESIGN ENGINEERING, LLC.
11 CUMMAN STREET
MIDDLETON, MA 01949
T: 508-887-0870 F: 508-887-0874
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	BY
1	10/29/16	ADDED TO AND REVISED LOCUS & LEGEND	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2016

DRAWN BY:	CALCULATED BY:	CHECKED BY:
ISKD	DCM	DCM/JM

PROJECT NO: 12035

ISSUED FOR: APPROVAL

EXISTING CONDITIONS PLAN

1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE: EXISTING CONDITIONS PLAN 'A'

SCALE: 1"=10'

SHEET NO.: 1 OF 1

NEW INFORMATION FOR CURRENT HEARING

Sunset House, LLC

15 Hallowell Lane

(30-10)

NOTICE OF INTENT APPLICATION

To Increase the Height of an
Existing Timber Bulkhead

At

15 Hallowell Lane
Nantucket, MA

September 2016

Prepared For

SUNSET HOUSE, LLC

20 Mary Ann Drive • Nantucket, MA 02554
508-825-5053 • www.NantucketEngineer.com

NANTUCKET ENGINEERING & SURVEY, PC

September 2, 2016

Mr. Andrew Bennet, Chair
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: Notice of Intent for Increased Bulkhead Height
15 Hallowell Lane
Map 30 Parcel 10

Dear Mr. Bennett:

On behalf of the property owner Sunset House, LLC, Nantucket Engineering & Survey, P.C. is submitting this Notice of Intent (NOI) to the Nantucket Conservation Commission for increase in the height of an existing timber bulkhead at the referenced property (the "Site") in Nantucket, Massachusetts.

Proposed activities consist of adding timbers along, and planting of American Beach Grass along the length of Coastal Bank located at the Site. Resource areas at the Site include Coastal Bank, Coastal Beach, Coastal Dune, Land Subject to Coastal Storm Flowage and Land Under the Ocean. Attached are permit drawings, including plans showing a site locus, existing conditions including resource area locations, and proposed construction areas.

A completed WPA Form 3 – Notice of Intent is attached along with the NOI Wetland Fee Transmittal Form including checks for $252.50, $25 and $200 to cover the WPA filing fee, Nantucket Wetland by-law fee and the Nantucket Expert Review fee. Also included is a check for $266.90 to the Inquirer & Mirror for publication of the notice of the public hearing. A Waiver from Section 2.05.B.3 of the Town of Nantucket Bylaw Chapter 136 has not been requested as the work is associated with a water dependent use.

Notification of this NOI filing was provided to all abutting property owners by certified mail. This property owner listing was obtained from the Town of Nantucket Assessor's office. Documentation of the notification is provided including a copy of the notification letter, the property owner listing and certified mail receipts.

Site Description

The subject property is approximately three-quarters of an acre in size and is located on the north shore of Nantucket. The property is bounded to the north by Nantucket Sound, and abutted by existing residential-use properties also served by on-site septic systems. The property and surrounding properties are provided drinking water from the municipal supply.

A review of the October 1, 2008 "Massachusetts Natural Heritage Atlas", prepared by the Natural Heritage and Endangered Species Program (NHESP), indicates that the site is within the known range of state listed rare wildlife species. A relevant portion of the Atlas has been included with this filing, and a copy provided to NHESP.

Resource Areas on the Site consist of Coastal Bank, Coastal Dune and Coastal Beach and associated buffer zones, Land Subject to Coastal Storm Flowage and Land under the Ocean (Nantucket Sound). No work is proposed in Nantucket Sound (Land Subject to Coastal Storm Flowage), or below Mean High Water.

The Coastal Beach is located between the Sound and the existing Coastal Bank (Timber Bulkhead). Work proposed in this resource area includes only temporary laborer activity associated with the project.

The Coastal Bank is an existing timber bulkhead located between the Coastal Beach and the Coastal Dune. Work in this area consists of installation of posts behind the timber bulkhead. The disturbed areas will be covered with sand and planted with American Beach Grass.

Land Subject to Coastal Storm Flowage extends to the 100-year flood elevation of 9 (NAVD88). The performance standards within this area are met as the ability of the land to contain flood waters is not impacted.

A portion of the project area is located within National Heritage and Endangered Species Program (NHESP) Priority Habitats of Rare Species or Estimated Habitats of Rare Wildlife. A copy of this application has been provided to NHESP for review and comment.

Project & Work Description

Sunset House, LLC will retain an experienced contractor to perform the proposed work. The plans show the proposed construction details, including timber and planting details. The Applicant proposes to add up to three horizontal timber members across the top of an existing timber bulkhead. Construction access will be from the existing driveway areas to the top of the bank. Posts will be installed along the backside of the bulkhead, with a majority of the work done by hand labor, and no machinery is proposed to work from the beach. Workers may use a step ladder on the beach while securing the timbers with bolts. Any disturbed areas on the bank will be filled with clean compatible sand and planted with American Beach Grass.

The construction access for the project will be from the upland portion of the property along the west side of the house. This access will be used for once daily trips to get a small track excavator to the bulkhead. No equipment will be left on the bank overnight or during severe storms. The access will be restored to match the existing conditions. Before and after construction photographs will be provided to the Commission to document appropriate restoration of the access area.

Sand and materials for the project will be delivered to the upland portion of the property for staging and transported to the beach as needed via small hoppers or skid steer.

Existing sand will be used as available and tested for grain size as part of this work. Supplemental sand brought in from offsite will be tested to confirm similar grain size characteristics to the existing sand.

Upon completion of the project, any disturbed areas within the Coastal Bank & Dune will be vegetated with American Beach Grass.

Monitoring & Maintenance

The applicant proposes to conduct the following observation and maintenance program for the installed timbers and vegetation:

- Visit the site twice per year in early spring and late fall to observe condition of the slope and assess need for maintenance.
- Visit the site after each significant storm to assess conditions and provide as needed repairs.
- When significant storm damage is observed, the Conservation Commission will be notified to implement corrective measures.

Conclusion

The work is being proposed as part of the applicant's obligation to protect the integrity of the coastal engineering structure. Further, the proposed work will improve the stability of the coastal bank, and viability of vegetation, in alignment with the protected interests. The work as proposed will not affect the ability of the resource areas to function as they currently do, and will result in an improvement to the stability and vegetative community of the coastal bank system. The project will not result in an adverse impact on the areas or the interests protected by the Commission including flood control, erosion control, storm damage prevention, prevention of pollution, wildlife, and scenic views.

Sincerely,

Arthur D. Gasbarro, PE, PLS, LEED AP

A. General Information (continued)

6. General Project Description:

The Applicant proposes to increase the height of a portion of an existing timber bulkhead that is being over topped during storm events. Horizontal timbers will be added to the top within the footprint of the existing structure. Timber posts are proposed behind the bulkhead to provide support. Disturbed areas behind the bulkhead will be filled with clean, compatible sand then planted with American Beach Grass. Please refer to the attached Project Narrative and Site Plan for additional information.

7a. Project Type Checklist:

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

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

1. ☐ Yes ☒ No If yes, describe which limited project applies to this project:

2. Limited Project

8. Property recorded at the Registry of Deeds for:

NANTUCKET	24,340
a. County	b. Certificate # (if registered land)
c. Book	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.

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet	2. square feet
	3. cubic yards dredged	

MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

Jack Buckley, *Director*

October 12, 2016

Sunset House LLC
535 Chestnut Street, #210
Chattanooga TN 37402

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket MA 02554

Project Location: **15 Hallowell Lane**
Town: **Nantucket**
Project Description: **Increase height of timber bulkhead (±2 ft)**
Wetlands File No.: **048-2924**
NHESP Tracking No.: **09-26559**

RE: Notice that your application for review pursuant to the WPA (321 CMR 10.37) and MESA (321 CMR 10.18) is incomplete.

Dear Commissioners and Applicant:

On **September 12, 2016** the Natural Heritage and Endangered Species Program (NHESP) of the Division of Fisheries and Wildlife (Division) received a Notice of Intent and other information from the Applicant pursuant to the rare wildlife species provision of the Massachusetts Wetlands Protection Act (WPA) and its implementing regulations **310 CMR 10.37**, and the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.18).

The Division has determined that the proposed project is located within the mapped *Priority* and *Estimated Habitat* of Piping Plover (*Charadrius melodus*) a species state-listed as Threatened pursuant to the MESA. This species and its habitats are protected pursuant to the WPA and the MESA. Fact sheets for state-listed species can be found at www.mass.gov/nhesp. The Piping Plover is also federally protected as a Threatened species pursuant to the U.S. Endangered Species Act (ESA, 50 CFR 17.11).

The purpose of the Division's review of the proposed project under the WPA regulations is to determine whether the project will have any adverse effects on the Resource Areas Habitats of state-listed species. The purpose of the Division's review under the MESA regulations is to determine whether a Take of state-listed species will result from the proposed project. Under 321 CMR 10.18(1), the Division is required to notify the Record Owner of the property where the project is proposed within 30 days whether the submitted application contains the information required to be submitted to the Division pursuant to 321 CMR 10.20, including the applicable review fee.

The proposed height increase (2 ft) of the timber bulkhead has the potential to affect the available nesting habitat by reducing the amount of sediment within the system (down-drift beaches and dunes)

available to nesting Piping Plovers (*Charadrius melodus*). Soft solutions such as dune nourishment or bioengineering help to reduce wave energy and potentially reduce erosion through the use of natural fiber blankets or rolls and plantings with deep root systems which aid in stabilization. These methods allow sand to remain within the littoral system and available to down-drift nesting habitat.

This letter is to inform you that the Division has reviewed the materials submitted with your combined application under the WPA and MESA regulations and has determined that your application is **incomplete** because it does not contain all of the minimum information required in order for the Division to complete its review pursuant thereto. Consequently, the following information must be submitted to the Division in order to take further action on your application:

1) Project plan – Please submit a site plan for the entire project site showing existing and proposed conditions and clearly demarcated limits of work. Said plan should provide tidal datum for this site. Please show the appropriate locations of Mean Higher High Water (MHHW) and Mean Lower Low Water (MLLW).
2) Alternatives Analysis – Provide an alternatives analysis that includes either bioengineering (e.g. natural fiber blankets or coir rolls with plantings that assist in coastal bank stabilization) or other soft solutions to absorb the wave energy that may overtop the bulkhead.

After receiving the above information, the Division will continue its review of the proposed project for compliance with the state-listed species provisions of the WPA and MESA regulations. The Division reserves the right to request additional information to understand the potential impacts of the proposed project on state-listed species and their habitats.

No work or other activities related to your filing may be conducted anywhere on the project site until the Division completes its review.

If you have any questions concerning this notice, please contact Amy Hoenig, Endangered Species Review Biologist, at (508) 389-6364.

Sincerely,

Thomas W. French

Thomas W. French, Ph.D.
Assistant Director

cc: MA DEP Southeast Region
Arthur D. Gasbarro, Nantucket Engineering & Survey

Property

Address	15 HALLOWELL LN
ID	30 10

Ownership

Name	SUNSET HOUSE LLC
Address	535 CHESTNUT ST #210, CHATTANOOGA, TN 37402

Valuation

Total	$9,507,900
Land	$8,524,800
Last Sale	$5,200,000 on 2012-08-08
Book/Page	/C0024340

Land

Area	0.58 AC
Zone	R2

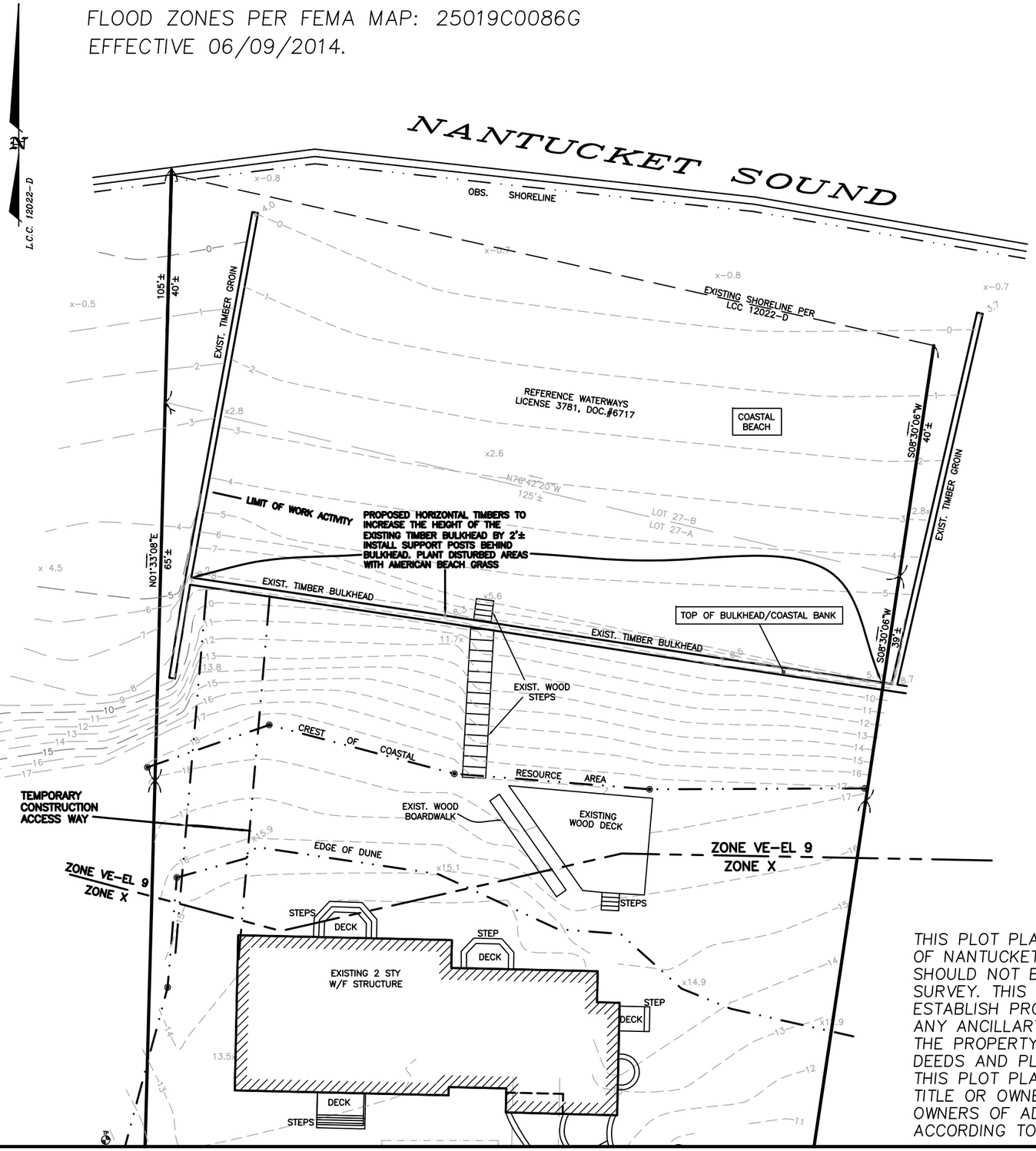

Storm Damage
Google
Imagery Date: 5/23/2015 41°17'39.29" N 70°07'20.81" W elev 0 ft

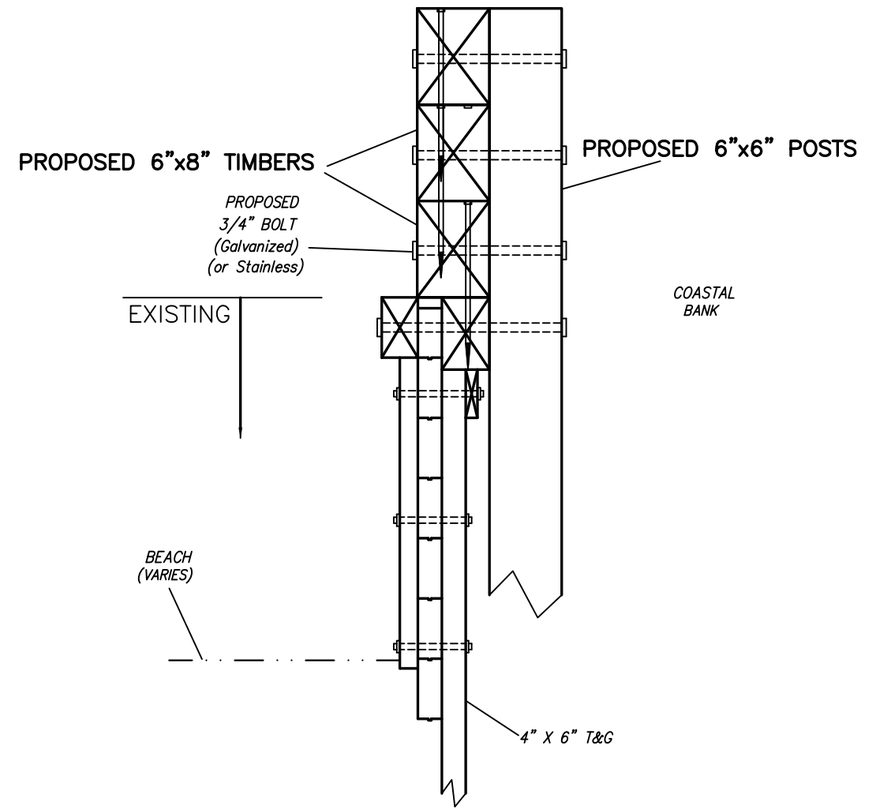
LOCUS

Eastern End of the Project

Western End of the Project

FLOOD ZONES PER FEMA MAP: 25019C0086G
EFFECTIVE 06/09/2014.





BULKHEAD DETAIL
(NTS)

THIS PLOT PLAN WAS PREPARED FOR THE TOWN OF NANTUCKET CONSERVATION COMMISSION ONLY & SHOULD NOT BE CONSIDERED A PROPERTY LINE SURVEY. THIS PLAN SHOULD NOT BE USED TO ESTABLISH PROPERTY LINES, FENCES, HEDGES OR ANY ANCILLARY STRUCTURES ON THE PREMISES. THE PROPERTY LINES SHOWN RELY ON CURRENT DEEDS AND PLANS OF RECORD.
THIS PLOT PLAN IS NOT A CERTIFICATION AS TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT ASSESOR RECORDS.

SITE PLAN TO ACCOMPANY A
NOTICE OF INTENT APPLICATION
Prepared For
SUNSET HOUSE LLC
15 Hallowell Lane
Map 30 Parcel 10
Certificate No. 24,340
Land Court Plan 12022D
Scale: 1"=20' September 6, 2016

NANTUCKET ENGINEERING & SURVEY, PC
20 Mary Ann Drive Nantucket, MA 02554
NantucketEngineer.com 508-825-5053

Notice of Intent Application

14 Western Avenue
Map 87, Parcel 71
Nantucket, MA

November 22, 2016

Main Office:
49 Herring Pond Rd.
Buzzards Bay, MA 02532
Ph. 508-833-0070
Fax 508-833-2282

Nantucket Office:
19 Old South Rd.
Nantucket, MA 02554
www.brackeneng.com
Ph. 508-325-0044

List of Materials and Plans - Notice of Intent

1. Notice of Intent – Form 3
2. Appendix A – Wetland Fee Transmittal Form
3. Project Narrative
4. Waiver Request
5. Maps
    - USGS Topographic Map
    - Aerial Orthophoto
    - Nantucket Parcel Map
    - FEMA Flood Insurance Map #25019C0151G, effective date June 9, 2014
    - Natural Heritage & Endangered Species Map
6. Affidavit of Service
7. Certified Abutters List
8. Notification to Abutters
9. Proof of Abutter Mailing (Certified Receipts)
10. Copies of the Filing Fees
11. Plan: *Proposed Site Plan in Nantucket, MA*, dated 11/22/16, prepared by Bracken Engineering, Inc.

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 an
The Town of Nantucket Wetlands Bylaw Chapter 136

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Nantucket
City/Town

A. General Information

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

14 Western Avenue
a. Street Address

Nantucket
b. City/Town

02554
c. Zip Code

Latitude and Longitude:

41° 14' 34.6452" N
d. Latitude

70° 5' 42.72" W
e. Longitude

Map 87
f. Assessors Map/Plat Number

Parcel 71
g. Parcel /Lot Number

2. Applicant:

Guy and Diane
a. First Name

Maddalone
b. Last Name

c. Organization

16 Fairhill Road
d. Street Address

Clifton Park
e. City/Town

NY
f. State

12065
g. Zip Code

518-366-0038
h. Phone Number

i. Fax Number

guymaddalone@gmail.com
j. Email Address

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

Pauline
a. First Name

Dalton
b. Last Name

Nantucket Surfside Rental, Inc.
c. Organization

P.O. Box 2406
d. Street Address

Bonita Springs
e. City/Town

FL
f. State

34133
g. Zip Code

h. Phone Number

i. Fax Number

evergreenpauline@aol.com
j. Email address

4. Representative (if any):

Donald F.
a. First Name

Bracken, Jr. P.E.
b. Last Name

Bracken Engineering, Inc.
c. Company

19 Old South Road
d. Street Address

Nantucket
e. City/Town

MA
f. State

02554
g. Zip Code

508-325-0044
h. Phone Number

i. Fax Number

don@brackeneng.com
j. Email address

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

$220.00
a. Total Fee Paid

$97.50
b. State Fee Paid

$122.50
c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Modifications to the existing dwelling within the buffer zone of a Coastal Bank and Coastal Dune.
Replace failed septic system within a Coastal Dune and the buffer zone of a Coastal Bank.

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

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

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

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

Nantucket	21739
a. County	b. Certificate # (if registered land)
c. Book	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.

PROJECT NARRATIVE 14 WESTERN AVENUE

EXISTING SITE DESCRIPTION

The site is located on the southern side of Western Avenue abutting Surfside Beach. Resource Areas on the site include a Coastal Dune and Coastal Bank. The Coastal Bank is defined under the Nantucket Wetlands Protection Regulations 1.02 as the seaward face of an elevated landform which lies at the landward edge of a Coastal Dune. The Coastal Dune was delineated by observing the land form, vegetation and review of recent approved applications for abutting properties.

A portion of the site fall within zone VE 10 as determined on the FEMA Flood Insurance Rate Map #25019C0151G dated June 9, 2014. The proposed work does not occur within this area.

According to the 13th edition of the Massachusetts Natural Heritage Atlas (effective 10/1/2008) a portion of the site falls within Estimated Habitats of Rare Wildlife and Priority Habitats of Rare Species as shown on the attached NHESP Map. A copy of this Notice and the Three Hundred Dollar ($300.00) filing fee have been forwarded to NHESP for Simplified MESA Review.

PROPOSED PROJECT DESCRIPTION

The proposed project consists of the following:

- Replacement of a failed septic system in a Coastal Dune;
- Revegetation of disturbed areas;
- Construction of a new foundation under the existing house footprint with the addition of an exterior basement stairwell;
- Reconstruction of existing porches and decks;
- Relocation of an existing outdoor shower, and
- Construction of a dry laid patio.

All the above work falls within the buffer zone of a Coastal Dune and Coastal Bank (per local definition only).

WAIVER REQUESTS - 14 WESTERN AVENUE

Waivers are required in accordance with Regulation 1.03 Procedures, Section F as follows:

Regulation 2.03 Coastal Dunes, B2., *"All projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to a coastal dune. All structures which are not water dependent shall be at least 50-feet from a coastal dune."*

It is proposed to construct a full basement below the existing structure 39 feet from the coastal dune, including a new exterior stairwell to the basement which will be 40 feet from the coastal dune. The proposed work will not adversely impact the interests identified in the bylaw given the fact that all work will be performed within the footprint of existing structures and disturbed areas. Furthermore, there are no reasonable alternatives for the relocation of the structure due to zoning constraints.

Regulation 2.03 Coastal Dunes, B5., *"No part of any septic system shall be placed in shifting sands or on or in a coastal dune. The septic leach facility shall be at least 100 feet from the upland edge of a coastal dune or coastal dune field."*

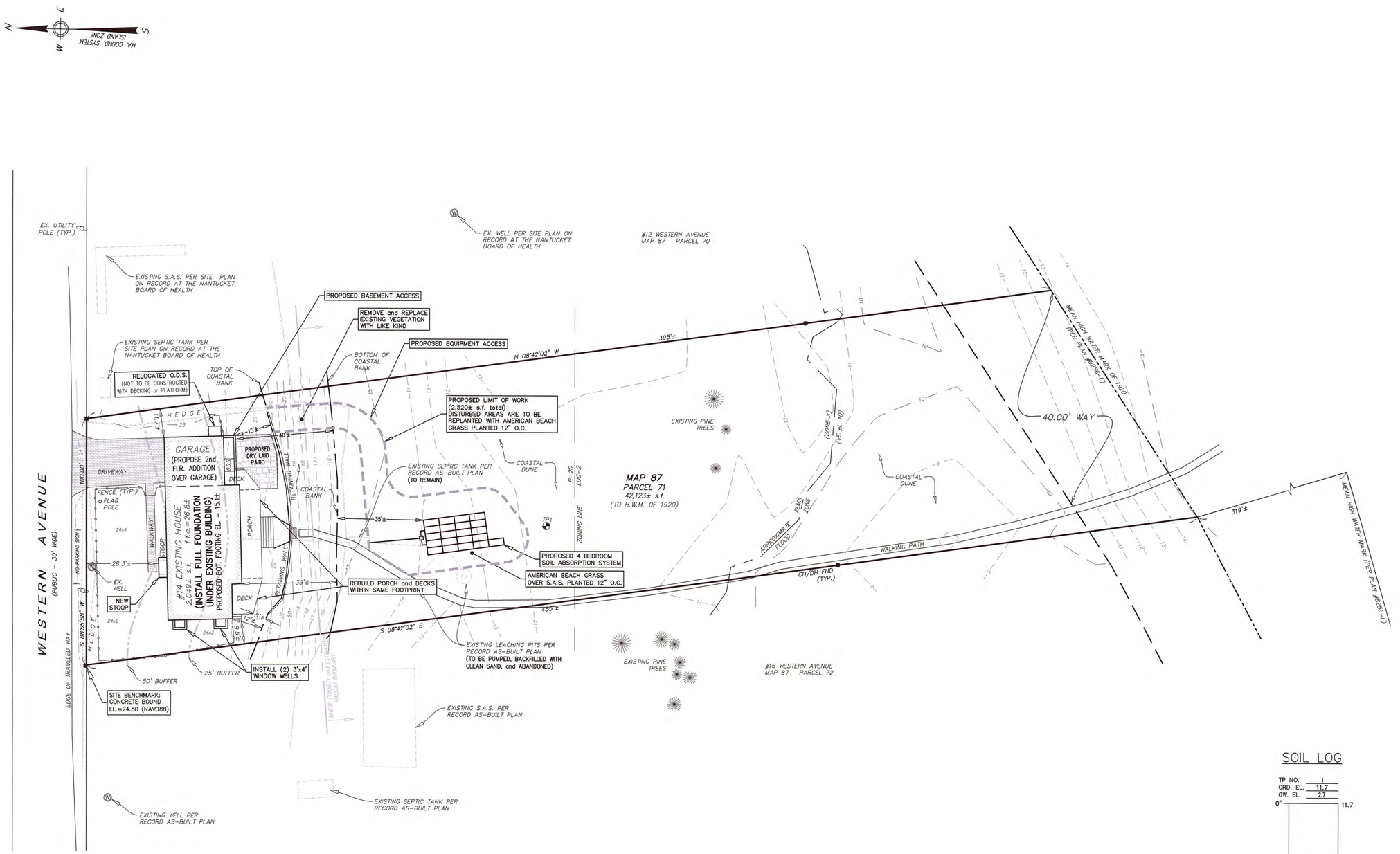
It is proposed to replace the existing septic system currently in the coastal dune area. The existing leaching pits shall be replaced with a new Title V soil absorption system (SAS). This will result in a greater separation between the SAS and groundwater which will have a direct environmental benefit. There are no reasonable alternatives for the location of the septic system due to the location and setback requirements of area wells.

Regulation 2.05 Coastal Banks, B5., *"All projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to a coastal bank. All structures which are not water dependent shall be at least 50-feet from a coastal bank."*

The proposed basement and stairwell shall be 12' and 15' from the top of the coastal bank, respectively. The proposed work will not adversely impact the interests identified in the bylaw and there are no other reasonable alternatives as stated previously.

Regulation 2.05 Coastal Banks, B6., *"The septic leach facility of a septic system shall be constructed at least 100 feet from the top of the coastal bank and shall not be located within the face of a coastal bank."*

The proposed location of the soil absorption system (SAS) is 35' from the bottom of the coastal bank. There are no other reasonable locations for reasons stated previously.



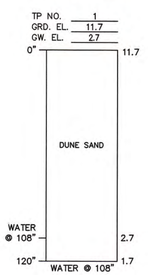
PLAN SCALE

0 4 8 12 16 20 30 40 60

1 inch = 20 feet

SOIL LOG

TP NO. 1
GRD. EL. 11.7
GW. EL. 2.7



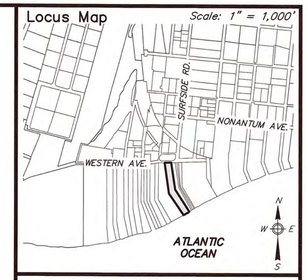
DATE PERFORMED: NOVEMBER 18, 2016
SOIL EVALUATOR: DONALD F. BRACKEN, JR., P.E.
WITNESSED BY: KATHY LAFARVE, HEALTH AGENT

NOTE: ADDITIONAL SOIL EVALUATION TO BE PERFORMED PRIOR TO SUBMISSION TO THE BOARD OF HEALTH.

COMMONWEALTH OF MASSACHUSETTS ALAN M GRADY No. 37732 PROFESSIONAL LAND SURVEYOR
11/22/16

COMMONWEALTH OF MASSACHUSETTS DONALD F. BRACKEN JR CIVIL No. 37071 REGISTERED PROFESSIONAL ENGINEER
11-22-16

Locus Map Scale: 1" = 1,000'



Notes

1. LOCUS: #14 WESTERN AVENUE MAP 87 PARCEL 71
2. OWNER: NANTUCKET SURFSIDE RENTAL, INC. c/o PAULINE DALTON P.O. BOX 2406 BONITA SPRINGS, FL 34133
3. DEED REF: CERT. #21739
4. PLAN REF: L.C.C. #8256-E (Lot 2)
5. LOCUS DOES FALL WITHIN A SPECIAL FLOOD HAZARD ZONE "VE" (EL. 10) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25019C-0151-G dated 06/09/2014.
6. LOCUS DOES FALL WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
7. LOCUS DOES FALL WITHIN AN INTERIM WELLHEAD PROTECTION ZONE.

ZONE: R-20

	REQUIRED	EXISTING
LOT AREA:	20,000 s.f.	42,123± s.f.
FRONTAGE:	75'	100'
FRONT YARD:	30'	28.3'±
SIDE YARD:	10'	9.5'±
REAR YARD:	10'	321'±
GROUND COVER:	12.5% (MAX) (5,265 s.f.)	4.9% (2,049 s.f.)

ZONE: LUG-2

	REQUIRED	EXISTING
LOT AREA:	80,000 s.f.	42,123± s.f.
FRONTAGE:	150'	100'
FRONT YARD:	35'	28.3'±
SIDE YARD:	15'	9.5'±
REAR YARD:	15'	321'±
GROUND COVER:	4% (MAX) (1,684 s.f.)	4.9% (2,049 s.f.)

Prepared By:
BRACKEN ENGINEERING, INC.
49 HERRING POND ROAD BUZZARDS BAY, MA 02532
(tel) 508.833.0070 (fax) 508.833.2282
19 OLD SOUTH ROAD NANTUCKET, MA 02554
(tel) 508.325.0044 www.brackeneng.com

PROPOSED SITE PLAN IN NANTUCKET, MASSACHUSETTS

Prepared For:

GUY & DIANE MADDALONE

#14 WESTERN AVENUE
MAP 87 PARCEL 71

No.	Date	Revision Description	By
-	-	-	-

Date:	Drawn:	Checked:	Sheet:
NOVEMBER 22, 2016	RMM/PCM/BEI	DFB/AMG	1 of 1

S:\Autocad Drawings\Nantucket\Western Avenue\14 Western Avenue\14 Western Avenue - PR Site Plan.dwg

HML ASSOCIATES

Geotechnical and Civil Engineers

19 Rockwood Road
Hingham, MA 02043
(Phone/Fax) 781-740-9999

December 30, 2016

TO: Don Bracken, P.E.
Bracken Engineering, Inc

FROM: Nicholas Lanney, P.E.

RE: Slope Stability Assessment of Coastal Bank
14 Western Avenue
Nantucket, Massachusetts

12-30-16

SUMMARY: The construction of a full basement at 14 Western Avenue will not affect the stability of the face of the coastal bank because the construction of the basement will have no change of the stresses that the slope will be subjected to by the house.

EXISTING CONDITIONS

The house at 14 Western Avenue is two stories with a slab on grade at el 26.8 feet. The house is setback between 12.5 and 20 feet from the top of the coastal bank. The porch and deck which are supported on sonotubes are within 10 feet of the top of the coastal bank.

The existing bank in the vicinity of the existing house is well vegetated and shows no signs of failure such as shallow sloughing or tension cracks. The top of the coastal back is defined by an existing timber retaining wall and the bottom of the bank is defined by a flattening of the slope at about el 15.5 feet. The bank slopes at about 3 horizontal to 1 vertical or about 18 degrees.

A test pit performed by Bracken Engineering for new septic system encountered groundwater at el 2.7 feet. Soils encountered in a hand dug test pit at the base of the bank consisted of 14 inches of a Bw horizon of fine sand with a trace of silt underlain by fine to medium sand with a trace of silt to 48 inches.

PROPOSED CONDITIONS

The applicant proposes to remove the deck and porch and temporarily support the existing house in place, then proceed to demolish the existing foundation, to excavate about 10 feet below grade to el 15.1, and construct new footings and foundation walls. Once the foundation is complete, the house will be set on top of the new foundation and the deck and porch will be rebuild within the same footprint. No change in grade is proposed.

SLOPE STABILITY EVALUATION

The "mass" stability of the coastal bank is the ratio the resisting forces to the driving forces. The resisting force is the "angle of internal friction" of the sand that underlies the bank as well as the roots of the plants and shrubs that populate the bank, the latter being difficult to assess will be ignore. The driving forces are gravity as a function of the steepness of the slope, seepage forces (groundwater) and externals forces such as permanent structures.

Groundwater is well below the toe of the slope and thus seepage forces can be ignored. Any influence from the proposed construction can be ignored because the new footings will be placed at the same elevation as the toe of the coastal back and thus cannot influence the coastal bank itself. In addition, the increase in vertical and horizontal stresses from the house (existing and proposed conditions) on the surrounding soil dissipate in less than 10 feet and thus do not influence the bank's stability.

Thus, the safety factor against failure of the coastal bank is the ratio of the tangent of "angle of internal friction" of the sand to the tangent of the slope angle (18 degrees). Based on published data for fine to medium sand and our experience, a conservative range for the angle of internal friction is 22 to 25 degrees. Doing the math, the safety factor is 1.26 to 1.45 against slope failure, above the recommended minimum of 1.25. Thus, we conclude that the proposed construction as outlined on Bracken Engineering's Proposed Site Plan for 14 Western Avenue, dated November 22, 2016, will have no affect of the stability of the coastal bank.

Please feel free to contact me if you have any questions or require additional information.

NOTICE OF INTENT APPLICATION

For Installation of a Swimming Pool
Within the Buffer Zone and
Management of Invasive Species (Phragmites)

At

67 Squam Road
Nantucket, MA

December 2016

Prepared For

E.GARRETT BEWKES, III

20 Mary Ann Drive • Nantucket, MA 02554
508-825-5053 • www.NantucketEngineer.com

NANTUCKET ENGINEERING & SURVEY, PC

December 13, 2016

Mr. Andrew Bennett, Chair
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: Notice of Intent
67 Squam Road
Map 12 Parcel 36

Dear Mr. Bennett:

On behalf of the property owner, E.Garrett Bewkes, III, Nantucket Engineering & Survey, P.C. is submitting this Notice of Intent (NOI) to the Nantucket Conservation Commission for proposed activities within the Buffer Zone to a Bordering Vegetated Wetland at the above referenced property (the "Site") in Nantucket, Massachusetts.

Proposed activities at the Site consist of the installation of swimming pool with surround fence and landscaping in place of an existing brick patio with existing walls and fencing. Also proposed is invasive species management of phragmites. Attached are permit drawings, including plans showing a site locus, existing conditions including resource area locations, and proposed construction areas.

A completed WPA Form 3 – Notice of Intent is attached along with the NOI Wetland Fee Transmittal Form including checks for $112.50, $122.50, $25 and $200 to cover the WPA filing fee, Nantucket Wetland by-law fee and the Nantucket Expert Review fee. Also included is a check for $266.90 to the Inquirer & Mirror for publication of the notice of the public hearing. A waiver is required from the Town of Nantucket Bylaw Chapter 136 for the proposed project to allow the footings for the structure within two-feet of groundwater.

Notification of this NOI filing was provided to all abutting property owners by certified mail. This property owner listing was obtained from the Town of Nantucket Assessor's office. Documentation of the notification is provided including a copy of the notification letter, the property owner listing and certified mail receipts.

SITE DESCRIPTION

The subject property is approximately 5.5-acres in size and is located on the northeast end of Nantucket Island. The lot contains an existing single-family dwelling with landscaping served by an on-site well and a septic system.

The Wetland Resource Areas on-site subject to jurisdiction of the Commission were activity is proposed are a Bordering Vegetated Wetland, and the respective Buffer Zones. A portion of the wetland resource area boundaries were approved by the Nantucket Conservation Commission in the past, per Order of Conditions SE48-2836.

A review of the October 1, 2008 "Massachusetts Natural Heritage Atlas", prepared by the Massachusetts Natural Heritage and Endangered Species Program (NHESP), indicates that the work area is not within the known range of state listed rare wildlife species defined by the Estimated Habitat mapping.

WORK DESCRIPTION

Prior to commencement of work, a silt fence will be placed at the limit of work as shown on the site plan. This fence will be inspected regularly and kept in good repair until the work has been completed and the site has stabilized. The Applicant proposes to remove the existing patio and walls. Excavation for the new swimming pool will then occur. If dewatering is required, it will be pumped to a settling area outside of the 50-foot buffer zone on the east side of the house. The pool will then be constructed and backfilled. The landscaping will be installed, with all disturbed areas will be covered with a minimum of 6" of topsoil and planted with grass seed and native plants.

WAIVER REQUEST

A waiver is required from Section 3.02.B.1 to allow the existing fence and wall within the 50-foot buffer zone to be replace and for the bottom of the swimming pool within two-feet vertically of estimated seasonal high groundwater. Any dewatering activity will be temporary. Disturbed areas will be covered with topsoil and then be planted with Cape Cod Premium Grass Seed Mix. Waivers from the By-law can be granted for a number of reasons including:

> **Chapter 1.03 F.3.a:** *The Commission may grant a waiver from these regulations when the Commission finds that, given existing conditions, the proposed project will not adversely impact the interests identified in the Bylaw and there are no reasonable conditions or alternatives that would allow that project to proceed in compliance with the regulations.*

There is no reasonable alternative location on the property for the pool that would allow for a greater separation distance to groundwater without being closer to a wetland resource area. The existing walls and fences will be replaced without expansion. The proposed project will not have any adverse impact to the interests protected in the resource area by the Commission. Further, the management of the invasive phragmites will provide a long-term net benefit to the protected interests.

CONCLUSION

The proposed addition of a swimming pool to an existing residential-use property will not result in an adverse impact on the areas or the interests protected by the Commission including flood control, erosion control, storm damage prevention, prevention of pollution, wildlife, and wetland scenic views. I plan to attend the Public Hearings for this application to address any questions, comments or concerns that the Commission may have.

Sincerely,

Arthur D. Gasbarro, PE, PLS, LEED AP

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
And the Town of Nantucket Wetlands Bylaw Chapter 136

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

A. General Information

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

67 Squam Road (a. Street Address) | Nantucket (b. City/Town) | 02554 (c. Zip Code)

Latitude and Longitude: 41d 17' 18"N (d. Latitude) | 70d 06' 05"W (e. Longitude)

13 (f. Assessors Map/Plat Number) | 14 (g. Parcel /Lot Number)

2. Applicant:

E. Garrett (a. First Name) | Bewkes, III (b. Last Name)

(c. Organization)

774 Hollow Tree Ridge Road (d. Street Address)

Darien (e. City/Town) | CT (f. State) | 06820 (g. Zip Code)

(h. Phone Number) | (i. Fax Number) | (j. Email Address)

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

(a. First Name) | (b. Last Name)

(c. Organization)

(d. Street Address)

(e. City/Town) | (f. State) | (g. Zip Code)

(h. Phone Number) | (i. Fax Number) | (j. Email address)

4. Representative (if any):

Arthur D. (a. First Name) | Gasbarro, PE, PLS, LEED AP (b. Last Name)

Nantucket Engineering & Survey, PC (c. Company)

20 Mary Ann Drive (d. Street Address)

Nantucket (e. City/Town) | MA (f. State) | 02554 (g. Zip Code)

508-825-5053 (h. Phone Number) | (i. Fax Number) | art@nantucketengineer.com (j. Email address)

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

$220 + $25 + $200 (a. Total Fee Paid) | $97.50 (b. State Fee Paid) | $122.50 + $25 + $200 (c. City/Town Fee Paid)

A. General Information (continued)

6. General Project Description:

The Applicant is proposing to install a swimming pool within the Buffer Zone to a Bordering Vegetated Wetland (BVW) and manage invasive species (phragmites). A waiver from the regulations is required to allow the footings within two-feet vertically of estimated seasonal high groundwater, and a portion of the pool within 50-feet of a BVW. Please refer to the attached Project Narrative, Landscape and Site Plans for additional information.

7a. Project Type Checklist:

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

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

1. ☐ Yes ☒ No If yes, describe which limited project applies to this project:

2. Limited Project

8. Property recorded at the Registry of Deeds for:

NANTUCKET	17,880
a. County	b. Certificate # (if registered land)
c. Book	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.

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet	2. square feet
	3. cubic yards dredged	

NOTE:
SEPTIC SYSTEM AND WELL LOCATIONS SHOWN HEREON ARE BASED UPON RECORD FILES AT THE NANTUCKET HEALTH DEPARTMENT.

WETLAND RESOURCE BOUNDARIES PER SE48–2836

PLAN No. 2008-82

THIS PLOT PLAN WAS PREPARED FOR THE TOWN OF NANTUCKET CONSERVATION COMMISSION ONLY SHOULD NOT BE CONSIDERED A PROPERTY LINE SURVEY. THIS PLAN SHOULD NOT BE USED TO ESTABLISH PROPERTY LINES, FENCES, HEDGES OR ANY ANCILLARY STRUCTURES ON THE PREMISES. THE PROPERTY LINES SHOWN RELY ON CURRENT DEEDS AND PLANS OF RECORD.
THIS PLOT PLAN IS NOT A CERTIFICATION AS TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT ASSESOR RECORDS.

Site Plan of Land
To Accompany A Notice of Intent in Nantucket, MA
Prepared for
E. GARRETT BEWKES, III
#67 SQUAM ROAD
ASSESSOR'S MAP 13, PARCEL 14
Scale: 1"= 20' *DECEMBER 11, 2016*

NANTUCKET ENGINEERING & SURVEY, PC
20 Mary Ann Drive Nantucket, MA 02554
NantucketEngineer.com 508-825-5053

COMMONWEALTH OF MASSACHUSETTS
ARTHUR D. GASBARRO, III
No. 47493
PROFESSIONAL LAND SURVEYOR
12/11/16

"WAY EASEMENT" REF. DOC 7327 (PRIVATE)
REPLACE EXISTING TIMBER WALL & FENCE
REPLACE EXISTING BRICK PATIO WITH POOL
REPLACE EXISTING BRICK WALL WITH STONE WALL
SETTLING BASIN W/HAYBALE PERIMETER
ZONING SETBACK
COASTAL BANK
PROPOSED POOL 15x30
EXIST. BRICK PATIO
PLANTER
TRW
BRW
BRICK
PF
STONE WALK
TRW & FENCE
ARBOR
O.D.S.
LAWN
EXIST. LEACH PIT
EXIST. 1,500 GAL SEPTIC TANK
PORCH
2 STY W.F. DWELLING #67 SQUAM ROAD
BRICK
PERGOLA
DECK
2ND STY DECK
PLANTER
BRW
PORCH
BRICK WALK
EXIST. WELL
LAWN
EXISTING SHELL DRIVE
LAWN
REMOVE SHED
VEGETATED WETLAND
SILT FENCE
LAWN
WLF 17B
WLF 16B
WLF 15B
WLF 14B
WLF 13B
WLF 12B
WLF 10B
WLF 9B
WLF
WLF 15A
WLF 16A
WLF 14A
WLF 13A
25'
50'
34
33
32
31
30
25
20

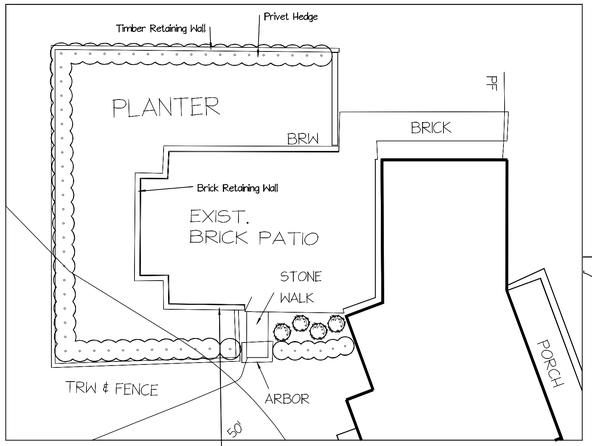
Plant List for Vegetated Buffer To Be Installed By: Champoux Landscape Per SE48-2836

Arrow wood viburnum
Clethra alnifolia
High bush blueberry
Winterberry
Swamp mallow
Baccharis
Swamp azalea

BENCHMARK:
12" SPK
ELEV.=32.17
'34 H.T.L. DATUM

OWNER INFORMATION
E. GARRETT BEWKES, III
CERT. OF TITLE #17880
L.C.C. 14902–I, LOT 4
MAP 13, PARCEL 14
#67 SQUAM ROAD

Existing Conditions



Existing Brick Walls
To Be Replaced With Stone Wall

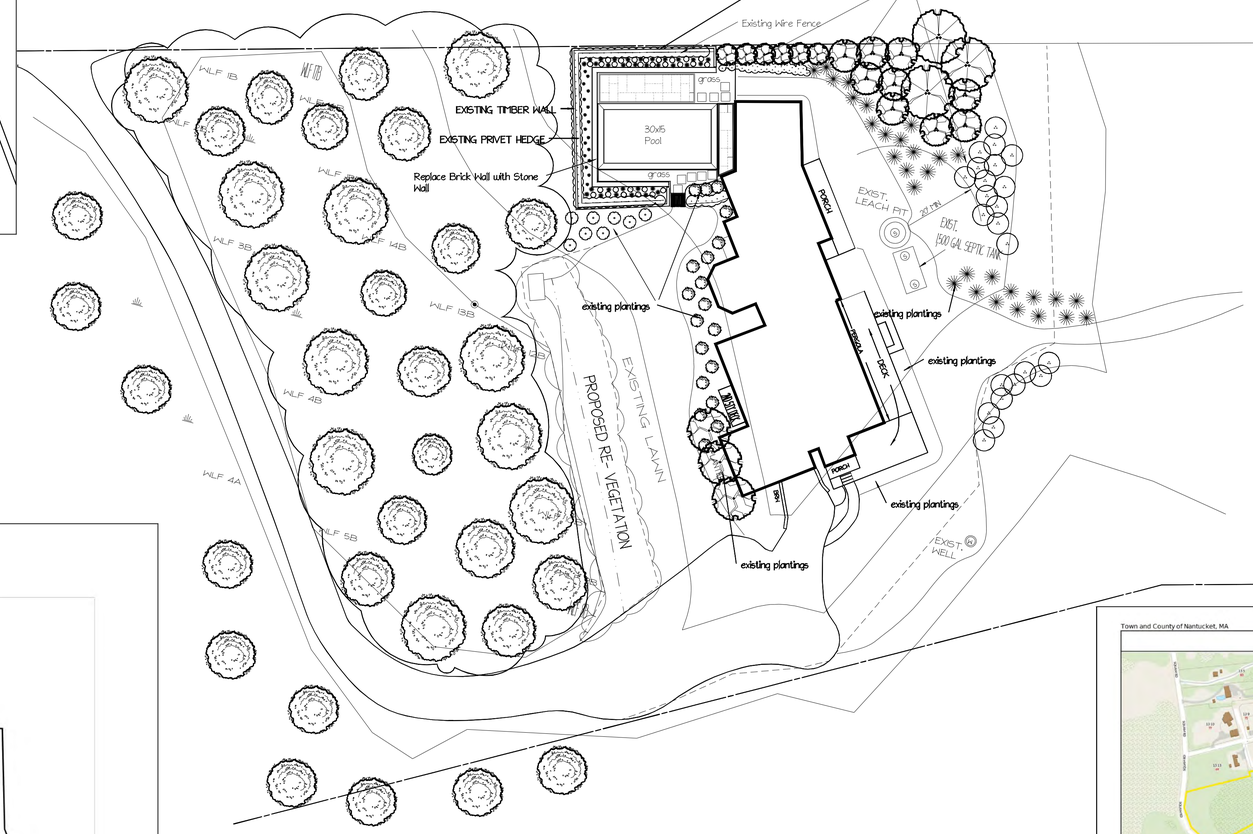
Proposed

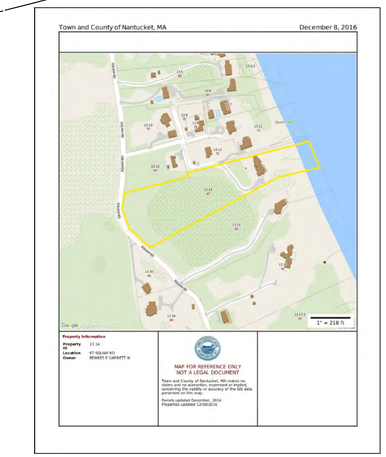
Proposed Pool Area Plants


HAMELIN CHINESE FOUNTAIN GRASS


SWEET ALYSSUM


PURPLE CONEFLOWER





NOTES

Bewkes Residence
67 Squam Rd

No.	Date	Description

REVISIONS

Champoux Landscape
4 Arrowhead Drive
Nantucket MA 02554

508.228.1374

SCALE: 1" = 20'

DRAWN BY	Ben C
CHECKED BY	
DATE	
DATE OF PRINT	

PROJECT NO.

SHEET NO.

CHAMPOUX
LANDSCAPE
ESTABLISHED 1978

Management of Phragmites at 67 Squam Road

Initial treatment of Phragmites will follow a modified clip and drip method whereby multiple stalks of the plant are tied together using a biodegradable twine and treated with glyphosate-based herbicide. Herbicide treatment will be scheduled in late summer and fall when the plants are alive and the herbicide will be actively transported to the root systems.

Treatment method detailed :

1. Seed heads of the phragmites stalks will be removed and bagged to prevent further distribution, and disposed of at the Town of Nantucket's Invasive Species waste disposal bin at the landfill
2. Stalks will be bundled together using a biodegradable twine
3. Bundles will be cut to uniform length to achieve a large surface area to apply herbicide
4. Cut stems will be bagged and removed from the site and disposed of at the Town of Nantucket's Invasive Species waste disposal bin at the landfill
5. Bundle ends will be treated/wiped with Rodeo Herbicide at a 25% solution.
6. The process will be repeated every year, for 3-5 years in late summer/fall when plants are alive and actively transporting the herbicide to their root structures

During Application, a marker dye formulated for use with herbicide will be added to accurately show the applicator which plants have been treated.

Only Massachusetts Licensed Pesticide Applicators will be applying herbicide.

Specimen Label

Dow AgroSciences™

Rodeo®

Herbicide

®Trademark of Dow AgroSciences LLC

For control of annual and perennial weeds and woody plants in natural and production (plantations), forests for site preparation, mid-rotation release treatments, timber stand improvement activities, noncrop sites including industrial sites, rights-of-way (including roadsides, electric utility and communication transmission lines, pipelines, railroads, airports), irrigation and drainage ditches, canals, reservoirs, natural areas (including wildlife management areas, wildlife openings, wildlife habitats and refuges, parks and recreational areas, campgrounds, trailheads and trails), rangeland, and in and around aquatic sites and wetlands; also for perennial grass release, and grass growth suppression and grazed areas on these sites.

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.

Group	9	HERBICIDE

Active Ingredient:	
glyphosate† N-(phosphonomethyl)glycine, isopropylamine salt	53.8%
Other Ingredients	46.2%
Total	100.0%

†Contains 5.4 lb per gallon glyphosate, isopropylamine salt (4 lb per gallon glyphosate acid).

Precautionary Statements

Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-324

CAUTION

Harmful If Inhaled

Avoid breathing spray mist. Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

First Aid

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants. This oxygen loss can cause fish suffocation.

In case of leak or spill, soak up and remove to a landfill.

Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

Do not mix, store or apply this product or spray solutions of this product in galvanized steel or unlined steel (except stainless steel) containers or spray tanks. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas, which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

This is an end-use product. Dow AgroSciences does not intend and has not registered it for reformulation.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried.

Storage and Disposal

Do not contaminate water, food, feed or seed by storage or disposal.
Pesticide Storage: Store above 10°F (-12°C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and roll or shake container or recirculate in mini-bulk containers to mix well before using.
Pesticide Disposal: Wastes resulting from use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.

Nonrefillable containers 5 gallons or less:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable containers larger than 5 gallons:
Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable containers 5 gallons or larger:
Container Handling: Nonrefillable container. Do not reuse or refill this container.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

This product is a broad spectrum, systemic, postemergent herbicide with no soil residual activity. It is intended for control of annual and perennial weeds and woody plants and brush. It is formulated as a water soluble liquid.

Time to Symptoms: The active ingredient in this product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant that advances to complete browning of above ground growth and deterioration of underground plant parts. Visible effects on most annual weeds occur within two to four days, but on most perennial weeds visible effects may not occur for seven days or more. Extremely cool or cloudy weather following treatment may slow the activity of this product and delay development of visual symptoms.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual, perennial and woody brush and trees rate tables for specific weeds. Always use the higher rate within the rate range for heavy or dense weed growth or when weeds are growing in an undisturbed (noncultivated) area. When treating weeds with disease or insect damage, weeds heavily covered with dust, or weeds under poor growing conditions, reduced weed control may result.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the specified stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash off this product from the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, spray coverage should be uniform and complete.

Mode of Action: The active ingredient in this product inhibits an enzyme. This enzyme is found only in plants and microorganisms that are essential to forming specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by the herbicide and will continue to grow.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Maximum Application Rates: The maximum application rates specified in this label are given in units of volume, either fluid ounces, pints or quarts, of this product per acre. The maximum allowed application rates apply to this product combined with the use of any and all other glyphosate- or sulfosate-containing herbicides, either applied separately or in a tank mix, on the basis of total pounds of glyphosate (acid equivalents) per acre. If more than one glyphosate- or sulfosate-containing product is applied to the same site within the same year, ensure that the total of pounds acid equivalent gyphosate does not exceed the maximum allowed.

Do not apply more than 8 quarts of this product (8 lb glyphosate acid) per acre per year for all use sites listed on this label.

IMPORTANT: When using this product, unless otherwise specified, mix with a surfactant, such as a nonionic surfactant containing 80% or greater active ingredient. For conifer release (pine release) use only surfactants that are approved for conifer release and specified on the surfactant label as safe for use in conifer release (pine release). Use of this product without surfactant will result in reduced herbicide performance. Ammonium sulfate, drift control additives, or dyes and colorants may be used. See Mixing Directions and the surfactant manufacturer's label for more information.

Grazing Restrictions: This product may be used to treat undesirable vegetation in utility rights-of-way that pass through pastures, rangeland, and forestry sites that are being grazed. For tank mix applications, comply with all restrictions appearing on the tank mix product label.

Except for lactating dairy animals there are no grazing restrictions following the labeled applications of this product.

For lactating dairy animals there are no grazing restrictions for the following labeled applications of this product:
- Where the spray can be directed onto undesirable woody brush and trees, including in handgun spray to wet or low volume directed spray treatments.
- For tree injection of frill applications and for cut stump treatments.

For broadcast applications, observe the following restrictions for lactating dairy animals:
- For application rates between 4.5 and 7.5 quarts per acre, no more than 15 percent of the available grazing area may be treated.
- For application rates less than 4.5 quarts per acre, no more than 25 percent of the available grazing area may be treated.

These restrictions do not apply to pastures, rangeland or forestry sites outside of utility rights-of-way.

Herbicide Resistance Management

Glyphosate, the active ingredient in this product, is a group 9 herbicide (inhibitor of EPSP synthase). Some naturally occurring weed biotypes that are tolerant (resistant) to glyphosate may exist due to genetic variability in a weed population. Where resistant biotypes exist, the repeated use

of herbicides with the same mode of action can lead to the selection for resistant weeds. Certain agronomic practices reduce the likelihood that resistant weed populations will develop, and can be utilized to manage weed resistance once it occurs.

To delay the selection for glyphosate resistant weeds, use the following practices:

- Scout fields before and after application to detect weed escapes or shifts in weed species
- Start with a clean field by applying a burndown herbicide or by tillage.
- Control weeds early when they are small.
- Add other herbicides, including a selective and/or a residual herbicide, and cultural practices, including tillage or crop rotation, where appropriate
- Use the application rate for the most difficult to control weed in the field. Do not tank mix with other herbicides that reduce this product's efficacy through antagonism or with ones that encourage application rates of this product below those specified on this label.
- Control weed escapes and prevent weeds from setting seeds.
- In situations where resistant weeds are a problem, before moving from one site to another, clean equipment to minimize the spread of weed seeds or plant parts
- Use new commercial seed that is as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product against a particular weed species to the local retailer, county extension agent, or Dow AgroSciences representative

The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate-resistant biotypes:

- Tank mix this product or apply it sequentially with an appropriately labeled herbicide with a different mode of action to achieve control if a naturally occurring resistant biotype is present in the site.
- Cultural and mechanical control practices, including crop rotation or tillage, may also be used.
- To control weed escapes, including resistant biotypes, before they set seed, scout treated sites after applying this product.
- Thoroughly clean equipment before leaving any site known to contain resistant biotypes

Because the presence of glyphosate resistance in weed populations is difficult to detect prior to use, Dow AgroSciences accepts no liability for any losses that may result from the failure of this product to control glyphosate-resistant weeds

Attention

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.

AVOID DRIFT. Use extreme care when applying this product to prevent injury to desirable plants and crops.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing, or when there are other meteorological conditions that favor spray drift When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift Avoid applying at excessive speed or pressure.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and-weather-related factors determine the potential for spray drift The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory.

Aerial Drift Reduction Advisory
This section is advisory in nature and does not supersede the mandatory label requirements.

Importance of Droplet Size: The most effective way to reduce drift potential is to apply large droplets The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent adverse effects from drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows product larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. Use the lower spray pressures for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is parallel to the airstream produces larger droplets than other orientations and is the recommended practice Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.)

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Do not apply this product when wind speed is below 2 mph due to variable wind direction and high inversion potential Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation Droplet evaporation is most severe when conditions are both hot and dry

Temperature Inversions: Do not apply this product during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: Apply this pesticide only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas)

Mixing Directions

Use only clean, stainless steel, fiberglass, plastic or plastic-lined steel containers to mix, store and apply spray solutions of this product. Do not mix, store or apply this product or spray solutions of this product in galvanized steel or unlined steel, except stainless steel, containers or spray tanks

Eliminate any risk of siphoning the contents of the tank mix back into the carrier source while mixing. Use approved anti-back-siphoning devices where required by state or local regulations.

Note: Reduced results may occur if water containing soil is used, including visibly muddy water or water from ponds and ditches that is not clear.

Rodeo – Alone
This product mixes readily with water. Mix spray solutions of this product as follows:

1. Fill the mixing or spray tank with the required amount of clean water.
2. Add the specified amount of this product and nonionic surfactant near the end of the filling process and mix well.
3. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foaming, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

Rodeo – Tank Mix
This product does not provide residual weed control. For residual weed control or an alternate mode of action, tank mix this product with other herbicides. Read and carefully observe the precautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Under certain conditions, at certain growth stages, and/or under other circumstances, some tank mix products have the potential to cause injury. Read all labels for products used in the tank mix prior to using them to determine the potential for crop injury.

Tank mixing with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or injury. Do not use these products in applications with this product unless otherwise noted in this label. Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified in this labeling. Mixing this product with herbicides or other materials not specified on this label may result in reduced performance.

The user is responsible for ensuring that the specific application being made is included on the label of the product used in the tank mix when a tank mixture with a generic active ingredient, including 2,4-D, atrazine, dicamba, diuron, or pendimethalin, is used.

Read all individual product labels for all products in the tank mix and observe all precautions and restrictions on the label. Use according to the most restrictive directions for each product in the tank mix. Always predetermine the compatibility of all tank mix products, together in the carrier, by mixing small proportional quantities in advance of mixing and applying them to the use site. Add the tank mix product to the tank as directed by the label. Maintain agitation and add the required amount of this product.

Maintain good agitation at all times until the contents in the tank are sprayed. If the mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying resumes. Keep the bypass line on or near the bottom of the tank to minimize foaming. The screen size in the nozzle or line strainers should be no finer than 50 mesh.

Note: If tank mixing with Garlon® 3A herbicide, ensure that Garlon 3A is well mixed with at least 75 percent of the total spray volume before adding this product to the spray tank to avoid incompatibility.

Hand-Held Sprayers
Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Nonionic Surfactant
When using this product, unless otherwise specified, mix with a surfactant, including a nonionic surfactant containing 80% or more active ingredient. For conifer release (pine release), use only surfactants that are approved for conifer release and specified on the surfactant label as safe for use in conifer release. Using this product without surfactant will result in reduced herbicide performance.

Colorants or Dyes
Agriculturally-approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's directions.

Drift Control Additives
Drift control additives may be used with all equipment types except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, read and carefully observe the precautionary statements and all other information appearing on the additive label.

Application Equipment and Application Methods

Chemigation: Do not apply this product through any type of irrigation system.

Apply spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

This product may be applied with the following application equipment and application methods.

Aerial Application
Equipment: Fixed wing and helicopter

Do not apply this product using aerial spray equipment except under conditions as specified within this label.

For aerial application in California, refer to the supplemental label entitled for aerial applications in that state for specific instructions, restrictions, and requirements. Note: Do not aerially apply this product in a tank mix with dicamba in California.

Avoid drift. Do not apply when winds are gusty or under any other condition which favors drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, maintain appropriate buffer zones.

Do not directly apply to any body of water.

Use the specified rates of this herbicide in 3 to 25 gallons of water per acre unless otherwise specified on this label. Refer to the specific use directions of this label for volumes and application rates.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. A drift control additive may be used. When a drift control additive is used, carefully read and observe the precautionary statements and all other information specified on the additive label.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Ground Application
Equipment: Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Use the specified rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified on this label. As density of weeds increases, increase the spray volume within the rate range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

Hand-Held and High-Volume Including Backpack Application
Equipment: Knapsack and backpack sprayers, pump up pressure sprayers, handguns, hand wands, mistblowers, lances, and other hand-held and motorized spray equipment used to direct the spray onto weed foliage. Note: This product is not registered in Arizona or California for use in mistblowers.

Apply to foliage of vegetation to be controlled. Do not spray to the point of runoff for applications made on a spray to wet basis. Use coarse sprays only. For best results, cover the top half of the plant and at least half of the total foliage. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple sprouts.

High Volume Sprays: Prepare a 3/4 to 2 percent solution of this product in water, add a nonionic surfactant and apply to foliage of vegetation to be controlled. For specific rates of application and instructions for control of various annual and perennial weeds, see the Weeds Controlled section.

Make applications on a spray to wet basis with uniform and complete spray coverage. Do not spray to point of runoff.

Low Volume Directed Sprays: This product may be used as a 5 to 10 percent solution in low volume directed sprays for spot treatment of trees and brush. This treatment method is most effective in areas where there is a low density of undesirable trees or brush. If a straight stream nozzle is used, start the application at the top of the targeted vegetation and spray from top to bottom in a lateral zigzag motion. Ensure that at least 50 percent of the leaves are contacted by the spray solution. For flat fan and cone nozzles and with hand-directed mist blowers, mist the application over the foliage of the targeted vegetation. Treat small, open-branched trees only from one side. If the foliage is thick or there are multiple root sprouts, apply from several sides to ensure adequate spray coverage. Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table.

Spray Solution:

Desired Volume	Amount of This Product								
	0.5	0.75	1	1.25	1.5	2	5	8	10
1 gal	2/3 fl oz	1 fl oz	1 1/3 fl oz	1 2/3 fl oz	2 fl oz	2 2/3 fl oz	6 1/2 fl oz	10 1/4 fl oz	13 fl oz
25 gal	1 pt	1 1/2 pt	1 qt	1 1/4 qt	1 1/2 qt	2 qt	1 1/4 gal	2 gal	2 1/2 gal
100 gal	2 qt	3 qt	1 gal	1 1/4 gal	1 1/2 gal	2 gal	5 gal	8 gal	10 gal

2 Tablespoons = 1 fl oz

For best results when using knapsack sprayers, mix the specified amount of product with water in a larger container. Fill the knapsack sprayer with the solution and add the correct amount of surfactant.

Selective Equipment
Equipment: Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars

Do not contact desirable vegetation with herbicide. Droplets, mist, foam, or splatter of the herbicide settling on desirable vegetation is likely to result in discoloration, stunting or destruction.

Better results are obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when the height of weeds varies so that not all weeds are contacted. If this occurs, repeat treatment may be necessary.

Shielded and Hooded Applicators: A shielded or hooded applicator directs the herbicide solution onto weeds while shielding desirable vegetation from the herbicide. Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. Exercise extreme care to avoid contact of the herbicide with desirable vegetation.

Wiper Applicators: Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation.

Adjust wiper applicators used over the top of desirable vegetation so that the wiper contact point is at least 2 inches above the desirable vegetation. Better results are obtained when more of the weed is exposed to the herbicide solution. Weeds should be a minimum of 6 inches above the desirable vegetation. Adjust the applicator height to ensure adequate contact with weeds as weeds not contacted by the herbicide solution will not be affected. Poor contact may occur when weeds are growing in dense clumps, in severe weed infestations, or when weed height varies dramatically. If this occurs, repeat treatment may be necessary.

Operate this equipment at ground speeds no more than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions.

Droplets, mist, foam, or splatter of the herbicide settling onto desirable vegetation may result in discoloration, stunting or destruction. Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a one-day period as reduced activity may result from use of leftover solutions. Clean wiper parts by thoroughly flushing with water immediately after using this product.

For best results, use a nonionic surfactant at a rate of 10 percent by volume of total herbicide solution for all wiper applications.

Injection Systems
Equipment: Aerial or ground injection sprayers.

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

Controlled Droplet Applicator (CDA)
Equipment: Hand-held or boom-mounted applicators that produce a spray consisting of a narrow range of droplet sizes.

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount specified on this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fl oz per minute and a walking speed of 1.5 mph (1 1/2 pints of product per acre). For control of perennial weeds, apply a 20 to 40 percent solution of this product at a flow rate of 2 fl oz per minute and a walking speed of 0.75 mph (3 to 6 pints of product per acre).

CDA equipment produces a spray pattern that is not easily visible. Exercise extreme care to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation as damage or destruction may result.

Use Sites

Use this product in noncrop areas, including airports, apartment complexes, aquatic sites, Christmas tree farms, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, driveways, dry ditches, dry canals, fencerows, golf courses, greenhouses, habitat management, industrial areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parking areas, parks, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreation areas, utility rights-of-way, roadsides, shadehouses, sod or turf seed farms, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, wildlife habitat management areas, and in grazed areas on these sites.

Aquatic Sites

This product may be applied to emerged weeds in all bodies of fresh and brackish water that may be flowing, nonflowing or transient including lakes, rivers, streams, ponds, estuaries, rice levees, seeps, irrigation and drainage ditches, canals, reservoirs, wastewater treatment facilities, wildlife habitat restoration and management areas and similar sites.

If aquatic sites are present in the noncrop area and are part of the intended treatment, read and observe the following directions:

- This product does not control plants that are completely submerged or have a majority of their foliage under water.
- There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.
- Consult local and state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.
- To make aquatic applications around and within 1/2 mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 parts per million as determined by laboratory analysis. These aquatic applications may be made only in those cases where there are alternative water sources or holding ponds which would permit the turning off of an active potable water intake for a minimum period of 48 hours after the application.
- For treatments after draw down of water or in dry ditches, allow 7 days or more after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds.
- Floating mats of vegetation may require retreatment. Avoid wash off of sprayed foliage by spray boat or recreational boat backwash or by rainfall within 6 hours of application. Do not re-treat within 24 hours following the initial treatment.
- Applications made to moving bodies of water must be made while traveling upstream to prevent concentration of this herbicide in water. When making any bankside applications, do not overlap more than 1 foot into open water. Do not spray in bodies of water where weeds do not exist. The maximum application rate of 7 1/2 pints per acre must not be exceeded in any single broadcast application that is being made over water.
- When emerged infestations require treatment of the total surface area of impounded water, treating the area in strips may avoid oxygen depletion due to decaying vegetation. Oxygen depletion may result in fish kill.

Restrictions:
- Do not apply this product directly to water within 1/2 mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.);

or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond or reservoir. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites.

Wetland Sites

This product may be applied to undesirable vegetation in and around water (aquatic areas) and wetlands found in forestry, utility rights-of-way sites or other site listed on the label, including where these sites are adjacent to or surrounding domestic water supply reservoirs, supply streams, lakes and ponds.

If wetland sites are present, read and observe the following directions:

- There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.
- Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat in such areas.

Restrictions:

- Do not apply this product directly to water within 1/2 mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.), or within 1/2 mile of an active potable water intake in a standing body of water, such as a lake, pond or reservoir. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites.
- Do not spray open bodies of water where woody brush, trees and herbaceous weeds do not exist. Do not apply more than 3 3/4 quarts per acre in a single over water broadcast application except in stream crossings in utility right-of-way or where applications will result in less than 20 percent of the total water area being treated. In either of these locations, any specified rate may be applied:

Christmas Tree Plantations

Broadcast Application (Oregon and Washington Only)
Broadcast apply this product over the established Christmas tree species Douglas fir (Pseudotsuga menziesii), fir species (Abies spp.), pine species (Pinus spp.) (except eastern white, loblolly, longleaf, shortleaf, slash), and spruce species (Picea spp.). Use 1 quart of this product per acre in 5 to 30 gallons of water per acre. For best results, add up to 10 fl oz of Entry II surfactant per acre. If using a different surfactant, follow the manufacturer's directions for use and ensure conifer safety has been adequately tested for that surfactant. Apply after trees have completed at least a full growing season since planting or transplanting.

Apply only in the fall after the formation of the final conifer resting buds or in the spring prior to initial bud swell. Final resting buds must be fully hardened and in the dormant stage. Applying this product at any other time may result in unacceptable injury to the Christmas trees. Avoid spray pattern overlap as injury may occur.

In some areas, 1 to 2 quarts of this product per acre may be used. Consult your local representative for specific use instructions if rates greater than 1 quart per acre are required.

For best results, do not use drift control additives as they may increase injury to Christmas trees.

Precautions and Restrictions:

- Preharvest Interval: Do not apply within 1 full year prior to tree harvest.
- Ensure that adequate buffers are maintained to prevent drift onto nearby desirable crops or vegetation.

Cut Stump

Treat cut stumps in any noncrop site listed on this label. This product will control regrowth of freshly cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, make applications during periods of active growth and full leaf expansion.

When used according to directions for cut stump application, this product will control, partially control or suppress most woody brush and tree species, some of which are listed below:

Common Name	Scientific Name
alder	Alnus spp.
coyotebrush[1]	Baccharis pilularis
dogwood[1]	Cornus spp.
eucalyptus	Eucalyptus spp.
hickory[1]	Carya spp.
madrone, Pacific	Arbutus menziesii
maple[1]	Acer spp.
oak	Quercus spp.
peppertree, Brazilian	Schinus terebinthifolius
Australian-pine,	Casuarina equisetifolia
poplar[1]	Populus spp.
reed, giant	Arundo donax
saltcedar	Tamarix ramosissima
sweetgum[1]	Liquidambar styraciflua
sycamore[1]	Platanus occidentalis
tan oak	Lithocarpus densiflorus
willow	Salix spp.

[1]Do not use this product on these species in the state of California.

Precautions and Restrictions:

- Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems, or trees may share the same root system.
- Adjacent trees that are of a similar age, height and spacing may indicate shared roots.
- Injury is likely to occur to non-treated stems or trees when one tree or more that shares a common root is treated.

Injection and Frill (Woody Brush and Trees)

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment that penetrates into the living tissue. Apply the equivalent of 1 mL of this product per each two to three inches of trunk diameter at breast height (DBH). This is best achieved by applying 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Do not make any applications that allow runoff to occur from frilled or cut areas in species that exude sap freely. In species such as this, make frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent undiluted concentration of this product. For best results, apply during periods of active growth and full leaf expansion.

This product controls the following woody species:

Common Name	Scientific Name
oak	Quercus spp.
poplar	Populus spp.
sweetgum	Liquidambar styraciflua
sycamore	Platanus occidentalis

This product suppresses the following woody species:

Common Name	Scientific Name
blackgum[1]	Nyssa sylvatica
dogwood	Cornus spp.
hickory	Carya spp.
maple, red	Acer rubrum

[1]Do not use this product on these species in the state of California.

Forestry Site Preparation

This product is for the control or partial control of woody brush, trees, and herbaceous weeds in forestry. This product is also for use in preparing or establishing wildlife openings within these sites and maintaining logging roads.

In forestry sites, use this product in site preparation prior to planting any tree species including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites. Unless otherwise specified, make applications of this product for control or partial control of herbaceous weeds, woody brush and trees listed in the Weeds Controlled section.

Application Rates

Method of Application	Rate	Spray Volume (gal/acre)
Broadcast		
aerial	1.5 - 7.5 qt/acre	5 - 30
ground		10 - 60
Spray to Wet		
handgun, backpack	0.5 - 2%	spray to wet
mistblower	by volume	
Low Volume Directed Spray[1]		
handgun, backpack	5 - 10%	partial coverage
mistblower	by volume	

[1] For low volume directed spray applications, coverage should be uniform with at least 50% of the foliage contacted. For best results, coverage of the top one-half of the plant, including the growing tip, is important (over the top and down coverage) To ensure adequate spray coverage, spray all sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple sense or tall sprouts.

Use a higher rate in the rate range for control or partial control of woody brush, trees and hard to control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before leaf drop. Use increased rates within the rate range to control perennial herbaceous weeds from emergence up to the appearance of seedheads, flowers or berries. Use a lower rate in the rate range to control annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to foliage of actively growing annual herbaceous weeds anytime after emergence.

This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not apply more than 8 quarts of product per acre per year.

Tank Mixes

This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled. When tank mixing, read and observe applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Note: For forestry site preparation, make sure the tank mix product is approved for use prior to planting the desired species. Observe planting interval restrictions.

Any specified rate of this product may be used in a tank mix with the following products for forestry site preparation:

Product	Method of Application	Rate
Milestone VM[1]	broadcast[3]	5 – 7 fl oz/acre
Garlon 3A[2]		1 – 4 qt/acre
Garlon 4		
Arsenal Applicators Concentrate		2 – 16 fl oz/acre
Escort		1/2 – 1 1/2 oz/acre
Chopper		4 – 32 fl oz/acre
Oust XP		1 – 4 oz/acre
Arsenal Applicators Concentrate	spray to wet	1/32 – 1/2% by volume
Arsenal Applicators Concentrate	low volume directed spray	1/8 – 1/2% by volume

[1]Use Milestone VM only in those states that have a Special Local Need label for use in forestry.
[2]Ensure that Garlon 3A is thoroughly mixed with water before adding this product. Agitation is required while mixing this product with Garlon 3A to avoid compatibility problems.
[3]When using a tank mix partner, up to the maximum labeled rate for a treatment site may be applied in combination with this product.

For control of herbaceous weeds, use the lower specified tank mixture rates. For control of dense stands or difficult to control woody brush and trees, use the higher specified rates.

Aerial Application

Aerially apply this product by helicopter only in forestry sites. See Aerial Application in Application Equipment and Application Methods for more details.

Ground Application

Apply this product using suitable ground equipment for broadcast applications in forestry sites. See Ground Application in Application Equipment and Application Methods for more details. Unless otherwise specified, apply the specified rates of this product as a broadcast spray in sufficient spray volume to provide complete and uniform coverage of plant foliage. Check for even distribution throughout the spray pattern.

Hand-Held and Backpack Application

Apply this product using handgun and backpack equipment in forestry sites. See Hand-Held and Backpack Application in Application Equipment and Application Methods for more details. For spray to wet applications, coverage should be uniform and complete, but not to the point of runoff.

This product may be used for low volume directed sprays for spot treatment of trees and brush. It is most effective in areas where there is a low density of undesirable trees or brush. For flat fan and cone nozzles, spray the foliage of the targeted vegetation. Small, open branched trees need only be treated from one side. If the foliage is thick or there are multiple root sprouts, apply from several sides to ensure adequate spray coverage.

Forestry Conifer and Hardwood Release

Directed Sprays and Selective Equipment

Apply this product as a directed spray or with selective equipment in forestry conifer and hardwood sites, including Christmas tree plantations and silvicultural nurseries. A surfactant must be used with this product. Use only surfactants approved for conifer release and specified on the surfactant label as safe for use in conifer release (pine release). Using this product without a surfactant will result in reduced herbicide performance. See Mixing Directions and Application Equipment and Application Methods sections.

Avoid contact of spray drift, mist or drips with foliage, green bark or non-woody surface roots of desirable plant species.

Tank Mixes: When tank mixing, read and observe applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture.

Broadcast Application Outside Area of Southeastern United States

Apply this product as a broadcast application for release of Douglas fir (Pseudotsuga menziesii), fir (Abies species), hemlock (Tsuga species), pines (Pinus species) (includes all species except loblolly, longleaf, shortleaf, or slash), and California redwood (Sequoia species) outside the area of the southeastern United States. Apply this product as a broadcast application only after formation of final conifer resting buds in the fall or prior to initial bud swelling in the spring. Note: Except where specified, make broadcast applications of this product only where conifers have been established for more than one year.

Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied. Damage can be accentuated if applications are made when conifers are actively growing, are under stress from drought, flood water, improper planting, insects, animal damage or diseases.

Apply 3/4 to 1 1/2 quarts per acre as a broadcast spray. Apply 3/4 to 1 1/8 quarts of this product per acre to release Douglas fir, pine and spruce species at the end of the first growing season (except California). Ensure all conifers are well hardened off.

A surfactant must be used with this product for optimum weed control. Use only surfactants approved for use in over the top release applications. Using this product without a surfactant will result in reduced herbicide performance. For best results, do not use a surfactant for release of hemlock species or California redwood. In mixed conifer stands, injury to these species may result if a surfactant is used. See Mixing Directions and Application Equipment and Application Methods sections.

For release of Douglas fir, a nonionic surfactant for over the top foliar spray may be used. To avoid possible conifer injury, use nonionic surfactants at 2 fl oz per acre at elevations above 1500 feet, or 1 fl oz per acre in the coastal range or at elevations below 1500 feet. Using a higher rate of surfactant may result in unacceptable conifer injury. Ensure the nonionic surfactant has been adequately tested for safety to Douglas fir before using.

Tank Mixes with Oust XP: Apply 3/4 to 1 1/2 quarts of this product with 1 to 3 oz of Oust XP per acre to release jack pine and white. Use 1 to 1 1/2 oz of Oust XP per acre with this product to release white pine. Make applications to actively growing weeds as a broadcast spray over the top of established conifers. Make applications after formation of conifer resting buds in the late summer or fall.

Tank Mixes with Arsenal Applicators Concentrate: Apply 3/4 to 1 1/8 quarts of this product with 2 to 6 fl oz of Arsenal Applicators Concentrate per acre to release Douglas fir. Apply 1 1/2 quarts of this product with 1 to 2 1/2 fl oz of Arsenal Applicators Concentrate per acre to release balsam fir and red spruce.

In Maine and New Hampshire, apply up to 2 1/4 quarts of this product per acre to control or suppress difficult to control hardwood species. For the release of red pine, balsam fir, red spruce, white spruce, Norway spruce, and black spruce with dense tough to control brush, and where maples make up a large component of the undesirable trees, this product may be tank mixed with 1 to 2 1/2 fl oz of Arsenal Applicators Concentrate and 1 to 3 oz of Oust XP per acre. Apply this mix as a broadcast spray.

Broadcast Application in Southeastern United States

Apply this product as a broadcast application for release of loblolly pine (Pinus taeda), eastern white pine (Pinus strobus), shortleaf pine (Pinus echinata), slash pine (Pinus elliottii), Virginia pine (Pinus virginiana), and longleaf pine (Pinus palustris) in the southeastern United States.

Apply 1 1/8 to 1 7/8 quarts of this product per acre as a broadcast spray during late summer or early fall after the conifers have hardened off. For applications at the end of the first growing season, use 3/4 quart of this product alone or in a tank mix.

Tank Mixes with Arsenal Applicators Concentrate: For conifer release, apply 3/4 to 1 1/2 quarts of this product with 2 to 16 fl oz of Arsenal Applicators Concentrate per acre as a broadcast spray. Use only on conifer species that are labeled for over the top spray for both products. Use the higher specified rates for dense tough to control wood brush and trees.

Herbaceous Release
When applied as directed, this product plus listed residual herbicides provide postemergence control of the annual weeds and control or suppression of the perennial weeds listed in this label, and residual control of the weeds listed in the residual herbicide label. Make applications to actively growing weeds as a broadcast spray over the top of labeled conifers.

Use a surfactant labeled for use in over the top herbaceous release applications. Using this product without a surfactant will result in reduced herbicide performance. See Mixing Directions and Application Equipment and Application Methods sections on this label.

Weed control may be reduced if spray solution water volumes exceed 25 gallons per acre for these treatments.

Tank Mixes with Oust XP: Apply 12 to 18 fl oz of this product with 2 to 4 oz of Oust XP per acre to release loblolly pines. Apply 9 to 12 fl oz of this product with 2 to 4 oz of Oust XP per acre to release slash pines.

Tank Mix with Atrazine: Apply 3/4 quarts of this product with 4 lb ai of atrazine per acre to release Douglas fir. Apply only over Douglas fir that has been established for at least one full growing season. Apply in the early spring, usually mid-March through early April. Injury will occur if applications are made after bud swell in the spring. For this use, do not add surfactant to the tank mix.

In Maine and New Hampshire, for release of red pine, balsam fir, red spruce, white spruce, Norway spruce, and black spruce with heavy grass and herbaceous weeds infesting the site, up to 2 1/4 quarts of this product per acre may be tank mixed with 1 to 3 oz of Oust XP to control grass, herbaceous weeds and woody brush. Apply this mix as a broadcast spray.

Mid-Rotation Conifer Release and Spot Treatments for Crop Tree Release and Timber Stand Improvement

This product is applied as a ground broadcast or directed spray application for mid-rotation release applications under the canopy of pines (and other conifers) and hardwoods. Make applications using application techniques that prevent or minimize direct contact to the foliage of crop trees (including in stands of pine, other conifers, or hardwood). This may be accomplished using directed sprays and ground equipment with nozzles oriented to target only undesirable understory vegetation below the crop tree canopy. This product is applied as a spot, individual plant treatment for woody and herbaceous weeds (see Hand-Held and Backpack Application in Application Equipment and Application Methods section). When making spot applications, do not allow spray to contact the foliage of desirable crop trees.

Noncrop Areas and Industrial Sites

See the rate tables in the Annual Weeds, Perennial Weeds, and Woody Brush and Trees sections for specific application rates. This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not apply more than 8 quarts of this product per acre per year.

Use a higher rate in the rate range for control or partial control of woody brush, trees, and hard to control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Use increased rates within the rate range for difficult to control species, where dense stands occur, or where conditions for control are not ideal and to control perennial herbaceous weeds from emergence up to the appearance of seedheads, flowers or berries. Use a lower rate in the rate range to control annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to foliage of actively growing annual herbaceous weeds anytime after emergence.

Tank Mixing for Noncrop Areas
This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled. When tank mixing, read and observe applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Maintain good agitation at all times during the mixing process and application. Ensure that the tank mix product(s) is well mixed with the spray solution before adding this product. Mix only the amount of spray solution that will be used during the same day. Reduced weed control may result if a tank mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Weed Control, Trim and Edge, and Bare Ground
This product may be used in general noncrop and non-food areas. It may be applied with any application equipment described in this label. This product may be used to trim and edge around objects in noncrop sites, for spot treatment of unwanted vegetation, and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

To maintain bare ground, repeated applications of this product may be used.

This product provides control of emerged annual weeds and control or partial control of emerged perennial weeds, woody brush and trees when applied in a tank mix to bare ground.

Turfgrass Renovation, Seed or Sod Production

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. When repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm season turfgrass, including bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at last one regular mowing to allow sufficient grown for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques, including vertical mowing, coring, or slicing, for seven days after application to allow translocation into underground plant parts.

Desirable turfgrass may be planed following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

Do not feed or graze turfgrass grown for seed or sod production for eight weeks following application.

Ornamentals and Plant Nurseries

Post-Direct and Trim and Edge
This product may be used as a post-directed spray around established woody ornamental species, including arborvitae, azalea, boxwood, crabapple, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, provet, pine, spruce and yew. This product may also be used to trim and edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. Do not use this product for any over the top broadcast spray in ornamentals. Exercise care to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

Site Preparation
This product may be used prior to planting any ornamental, nursery or Christmas tree species.

Greenhouse/Shadehouse
This product may be used to control weeds growing in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

Wildlife Habitat Management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Apply to allow recovery of native plant species, prior to planting desirable native species, and for broad spectrum vegetation control. Apply spot treatments to selectively remove unwanted plants for habitat enhancement.

Wildlife Food Plots
This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tilling to allow translocation into underground plant parts.

Hollow Stem Injection

Apply this product to control giant knotweed (Polygonum sachalinense), Japanese knotweed (Polygonum cuspidatum), or other invasive knotweeds using individual stem treatment. Use a hand-held injection device that delivers the specified amount of this product into these hollow stem plants

Make a hole through both sides of the stem about 6 inches above the ground, just below a node, using an awl or other pointed tool. Inject 5 mL of undiluted product directly into this hole in the hollow stem. Treat each stem of the knotweed plant

Restrictions:

- Do not apply more than a total of 8 quarts of this product per acre for all treatments combined. At 5 mL per stem, 8 quarts will treat approximately 1420 stems per acre.

Parks, Recreational and Residential Areas

Use this product in parks, recreational and residential areas. Apply it with any application equipment described in this label. Use this product to trim and edge around trees, fences, paths, around buildings, sidewalks, and other objects in these areas. This product may be used for spot treatment of unwanted vegetation, eliminate unwanted weeds growing in established shrub beds or ornamental plantings, and prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

All of the label instructions apply to park and recreational areas.

Railroads

All of the instructions in the Noncrop Areas and Industrial Sites and Roadside sections apply to railroads

Bare Ground, Ballast and Shoulders, Crossings, and Spot Treatment
Use this product to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used as weeds emerge to maintain bare ground. Use this product to control tall growing weeds to improve line of sight at railroad crossings and reduce the need for mowing along rights-of-way

Brush Control
Apply 3 to 8 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Applications up to 80 gallons of spray solution per acre may be used. Apply a 3/4 to 1.5 percent solution of this product when using high volume spray to wet applications. Apply a 5 to 10 percent solution of this product when using low volume directed sprays for spot treatment

Roadsides

All of the instructions in the Noncrop Areas and Industrial Sites and Railroads sections apply to roadsides

Shoulder Treatments
Use this product on road shoulders. Apply it with boom sprayers, shielded boom sprayers, high volume off-center nozzles, OC nozzle clusters, manifold nozzle systems, hand-held equipment, and similar equipment, and under-deck mowing plus herbicide systems..

Guardrails and Other Obstacles to Mowing
Use this product to control weeds growing under guardrails and around signposts and other objects along the roadside.

Spot Treatment
Use this product as a spot treatment to control unwanted vegetation growing along roadsides

Tank Mixes: This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. Follow applicable use directions, precautions and limitations on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Chemical Mowing
Perennials: This product suppresses perennial grasses listed in this section to serve as a substitute for mowing. Use 4.5 fl oz of this product per acre when treating Kentucky bluegrass, tall fescue, fine fescue, orchardgrass, or quackgrass. Apply 12 fl oz of this product per acre when treating bermudagrass. Apply 4.5 to 8 fl oz of this product per acre when treating bahiagrass. Use the higher rates when grass is under heat stress. Apply 3 pints of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre

Annuals: For growth suppression of some annual grasses, including annual ryegrass, wild barley and wild oats growing in coarse turfgrass on roadsides or other industrial areas, apply 3 to 3.75 fl oz of this product in 10 to 40 gallons of spray solution per acre. Apply when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

Release of Dormant Bermudagrass or Bahiagrass
Apply 6 to 48 fl oz of this product per acre in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable groundcovers and where some temporary injury or discoloration can be tolerated. Treatments of more than 12 fl oz per acre may result in injury or delayed greenup in highly maintained areas, including golf courses and lawns

For best results on winter annuals, treat when weeds are in an early growth stage (less than 6 inches in height) after most have germinated For best results on tall fescue, treat when fescue is in or beyond the 4- to 6-leaf stage

Tank Mixes: This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Actively Growing Bermudagrass
Use this product to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Use only in areas where some temporary injury or discoloration can be tolerated. Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not specified since severe injury may occur.

Apply up to 2.25 pints of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds less than 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation

Actively Growing Bahiagrass
For suppression of vegetable growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4.5 fl oz of this product in 10 to 40 gallons of water per acre. Apply one to two weeks after full greenup or after mowing to a uniform height of 3 to 4 inches. Make this application prior to seedhead emergence. For suppression up to 120 days, apply 3 fl oz of this product per acre, followed by an application of 1.5 to 3 fl oz per acre about 45 days later. Make no more than two applications per year

Tank Mixes: This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Utility Sites

Use this product for control of brush, tree, and weed control and sidetrimming in areas including electrical power, pipeline and telephone rights-of-ways, and other sites associated with these rights-of-ways including substations, roadsides, and railroads. this product may be applied with any application equipment or method described on this label unless specifically prohibited.

Tank Mixes: This product may be used in tank mix combination with other herbicide products to broaden the spectrum of vegetation controlled and for residual weed control. When tank mixing, read and follow all applicable use directions, precautions, and limitation on the respective product labels. Use according to the most restrictive precautionary statements for each product in the mixture. Any specified rate of this product may be used in a tank mix.

Rangelands

Use this product to control or suppress many annual weeds growing in perennial cool and warm season grass rangelands Preventing weed seed production is critical to the successful control of annual grassy weeds invading these perennial grass sites Eliminate most of the viable seeds with follow up applications in sequential years. Delay grazing of treated areas to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

Bromus: Use this product to control or suppress downy brome/ cheatgrass (Bromus tectorum), Japanese brome (Bromus japonicus), soft chess (Bromus mollis), cheat (Bromus secalinus), cereal rye and jointed goatgrass. Apply 6 to 12 fl oz of this product per acre as a broadcast treatment

For best results, coincide treatments with early seedhead emergence of the most mature plants. Delaying the application until this growth stage maximizes the emergence of other weedy grass flushes. Make applications to the same site each year until seed banks are depleted and the desirable perennial grasses become established on the site.

Medusahead: Apply 12 fl oz of this product per acre to control or suppress medusahead at the 3-leaf stage when plants are actively growing. Delaying applications beyond this stage results in reduced or unacceptable control. Repeat applications in subsequent years to eliminate the seed bank before reestablishing desirable perennial grasses. Apply in the fall or spring.

Apply by ground or air. Make aerial applications for these uses with fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For ground applications, apply in at least 10 to 20 gallons of water per acre.

Spot Treatment and Wiper Application

Apply this product in rangeland, pastures, or industrial sites as a spot treatment or over the top of desirable grasses using wiper applicators to control tall weeds. See Wiper Application section for specific instructions. Make repeat applications in the same area at 30-day intervals.

The entire site or any portion of it may be treated when using 2.25 quarts or less of this product per acre for spot treatments or wiper applications. No more than 10 percent of the total site may be treated at any one time when using more than 2.25 quarts of this product per acre for spot treatments or wiper applications. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting for feed.

Pastures

Type of Pastures: Bahiagrass, bermudagrass, bluegrass, brome, fescue, orchardgrass, ryegrass, timothy, wheatgrass, alfalfa, clover

Spot Treatment and Wiper Application

This product may be applied as a spot treatment or as a wiper application. Make applications in the same area at 30-day intervals. See Wiper Application section for specific instructions.

Precautions and Restrictions:

- For spot treatment and wiper applications, the entire field or any portion of it may be treated when using a rate of 2.25 quarts or less per acre.
- Do not treat more than 10 percent of any acre at one time if applying more than 2.25 quarts per acre as a spot treatment or wiper application.
- To achieve maximum performance, remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Preplant, Preemergence, and Pasture Renovation

Apply this product prior to planting or emergence of forage grasses and legumes. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

Precautions and Restrictions:

- If the application rates total 2.25 quarts or less per acre, there is no waiting period between treatment and feeding or livestock grazing is required.
- If the application rates total more than 2.25 quarts per acre, remove domestic livestock before application and wait eight weeks after application before grazing or harvesting.
- Crops listed for treatment in this label may be planted into the treated area at any time. Wait 30 days between application and planting for all other crops.

Bamboo

Use this product on roadside rights-of way to control or suppress bamboo. Use the higher rate in the rate range for dense stands and larger plants. Mow or cut bamboo and allow it to resprout to have sufficient foliage in order for the spray solution to completely cover the foliage. Optimum control or suppression of bamboo is achieved when this product is applied between August and October (prior to frost). One application of this product plus a surfactant will not eradicate bamboo. Several mowings and applications are required to completely control bamboo.

Apply the specified rate plus a surfactant (1/4 to 1/2% v/v), such as a nonionic surfactant containing 80% active ingredient or more. Using this product without a surfactant results in reduced performance.

Application Method	Rate	Spray Volume (gal/acre)
ground broadcast	1.5 – 7.5 qt/acre	10 - 60
handgun spray to wet	0.75 - 2%	spray to wet
handgun or backpack low volume directed spray	4 - 10%	spray to cover

Restrictions:

- Do not apply more than a total of 8 quarts of this product per acre per year.

Annual Weeds, Perennial Weeds, and Woody Brush and Trees

Annual Weeds

Apply 24 fl oz of this product per acre if weeds are less than 6 inches in height or runner length. Use 1.25 to 3 quarts of this product per acre if weeds are more than 6 inches in height or runner length or when weeds are growing under stressed conditions. Use a higher rate in the rate range for tough to control species regardless of the size of the weed at the time of application. Treat tough to control weeds when they are relatively small. Tank mix this product with only those products that are labeled for application at the target site. Refer to the label of the tank mix partner for use sites and application rates.

Apply a 0.4 percent solution of this product as a spray to wet application to weeds less than 6 inches in height or runner length. Use a 0.7 to 1.5 percent solution for annual weeds more than 6 inches tall or for smaller weeds growing under stressed conditions. Use the higher concentration for tough to control species or for weeds more than 24 inches tall. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds.

Use a 4 to 7 percent solution of this product for low volume directed spray applications. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top one-half of the plant. To ensure adequate spray coverage, spray both sides of large or tall weeds when foliage is thick and dense or where there are multiple sprouts.

Common Name	Scientific Name
anoda, spurred	Anoda cristata
balsamapple[1]	Momordica charantia
barley	Hordeum vulgare
barnyardgrass	Echinochloa crus-galli
bassia, fivehook	Bassia hyssopifolia
bittercress	Cardamine spp.
bluegrass, annual	Poa annua
bluegrass, bulbous	Poa bulbosa
brome, downy/cheatgrass	Bromus tectorum
brome, Japanese	Bromus japonicus
buttercup	Ranunculus spp.
Carolina foxtail	Alopecurus carolinianus
Carolina geranium	Geranium carolinianum
castorbean	Ricinus communis
chamomile, mayweed	Anthemis cotula
cheat	Bromus secalinus
chervil	Anthriscus cerefolium
chickweed	Cerastium vulgatum
cocklebur, common	Xanthium strumarium
coreopsis, plains	Coreopsis tinctoria
corn, volunteer	Zea mays
crabgrass	Digitaria spp.
dwarfdandelion, Virginia	Krigia virginica
eastern mannagrass	Glyceria spp.
eclipta	Eclipta prostrata
falsedandelion	Pyrrhopappus carolinianus
falseflax, smallseed	Camelina microcarpa
fiddleneck	Amsinckia spp.
field pennycress	Thlaspi arvense
fleabane, annual	Erigeron annuus
fleabane, hairy	Conyza bonariensis
fleabane, rough	Erigeron strigosus
Florida pusley	Richardia scabra
foxtail	Setaria spp.
goatgrass, jointed	Aegilops cylindrica
goosegrass	Eleusine indica
groundsel, common	Senecio vulgaris
henbit	Lamium amplexicaule
horseweed/marestail	Conyza canadensis
itchgrass	Rottboellia cochinchinensis
johnsongrass	Sorghum halepense
junglerice	Echinochloa colona
knotweed	Polygonum spp.
kochia[2]	Kochia scoparia
lambsquarters, common	Chenopodium album
mallow, little	Malva parviflora
medusahead	Taeniatherum caput-medusae
morningglory	Ipomoea spp.
mustard, blue	Chorispora tenella
mustard, tumble	Sisymbrium altissimum
mustard, wild	Sinapis arvensis
oats, wild	Avena fatua
panicum, fall	Panicum dichotomiflorum
pigweed, redroot	Amaranthus retroflexus
pigweed, smooth	Amaranthus hybridus
prickly lettuce	Lactuca serriola

Common Name (Cont.)	Scientific Name
puncturevine	Tribulus terrestris
purslane, common	Portulaca oleracea
ragweed, common	Ambrosia artemisiifolia
ragweed, giant	Ambrosia trifida
rocket, London	Sisymbrium irio
Russian-thistle	Salsola tragus
rye, cereal	Secale cereale
ryegrass, Italian[3]	Lolium perenne
sandbur, field	Cenchrus spinifex
sesbania, hemp	Sesbania herbacea
shattercane	Sorghum bicolor
shepherd's-purse	Capsella bursa-pastoris
sicklepod	Senna obtusifolia
signalgrass, broadleaf	Urochloa platyphylla
smartweed, Pennsylvania	Polygonum pensylvanicum
sowthistle, annual	Sonchus oleraceus
Spanishneedles[3]	Bidens bipinnata
speedwell, corn	Veronica arvensis
speedwell, purslane	Veronica peregrina
sprangletop	Leptochloa spp
spurge, annual	Chamaesyce spp
spurge, prostrate	Chamaesyce humistrata
spurge, spotted	Chamaesyce maculata
spurry, umbrella	Holosteum umbellatum
stinkgrass	Eragrostis cilianensis
sunflower, common	Helianthus annuus
tansymustard, pinnate	Descurainia pinnata
teaweed/sida, prickly	Sida spinosa
Texas panicum	Panicum spp
velvetleaf	Abutilon theophrasti
Virginia pepperweed	Lepidium virginicum
wheat	Triticum aestivum
witchgrass	Panicum capillare
woolly cupgrass	Eriochloa villosa
yellow rocket	Barbarea vulgaris

[1]Apply with hand-held equipment only.
[2]Do not treat kochia in the button stage.
[3]Apply 3 pints of product per acre.

Perennial Weeds

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). Best results are obtained when non-flowering plants are treated when they reach a mature stage of growth. In many situations, applications are required prior to these growth stages. Under these conditions, use a higher rate in the rate range.

When using spray to wet treatments with hand-held equipment, ensure thorough coverage of the plant. For best results, use a 1.5 percent solution on harder to control perennials including bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

Use a 4 to 7 percent solution of this product in low volume directed spray applications. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top one-half of the plant. To ensure adequate spray coverage, spray both sides of large or tall weeds when foliage is thick and dense or where there are multiple sprouts.

Allow 7 days or more after application before tillage.

Common Name	Scientific Name
alfalfa	Medicago sativa
alligatorweed[1]	Alternanthera philoxeroides
anise/fennel	Foeniculum vulgare
artichoke, Jerusalem	Helianthus tuberosus
bahiagrass	Paspalum notatum
beachgrass, European	Ammophila arenaria
bentgrass	Agrostis spp
bermudagrass	Cynodon dactylon
bindweed, field	Convolvulus arvensis
bluegrass, Kentucky	Poa pratensis
blueweed, Texas	Helianthus ciliaris
brackenfern	Pteridium aquilinum
brome, smooth	Bromus inermis
bursage, woollyleaf	Ambrosia grayi
canarygrass, reed	Phalaris arundinacea
cattail	Typha spp
clover, red	Trifolium pratense
clover, white	Trifolium repens
cogongrass	Imperata clylindrica
cordgrass	Spartina spp.
cutgrass, giant[1]	Zizaniopsis miliacea
dallisgrass	Paspalum dilatatum
dandelion	Taraxacum officinale
dock, curly	Rumex crispus
dogbane, hemp	Apocynum cannabinum
fescue	Festuca spp
fescue, tall	Lolium arundinaceum
German ivy	Senecio mikanioides
guineagrass	Urochloa maxima
horsenettle	Solanum carolinense
horseradish	Armoracia rusticana
iceplant, crystalline	Mesembryanthemum crystallinum
johnsongrass	Sorghum halepense
kikuyugrass	Pennisetum clandestinum
knapweed, Russian	Acroptilon repens
lantana, largeleaf	Lantana camara
lespedeza, common	Kummerowia striata
lespedeza, sericea	Lespedeza cuneata
loosestrife, purple	Lythrum salicaria
lotus, American	Nelumbo lutea
maidencane	Panicum hemitomon
milkweed	Asclepias spp
muhly, wirestem	Muhlenbergia frondosa
mullein, common	Verbascum thapsus
napiergrass	Pennisetum purpureum
nightshade, silverleaf	Solanum elaeagnifolium
nutsedge, purple	Cyperus rotundus
nutsedge, yellow	Cyperus esculentus
orchardgrass	Dactylis glomerata
pampasgrass	Cortaderia selloana
paragrass	Urochloa mutica
phragmites[2]	Phragmites spp
poison-hemlock	Conium maculatum
quackgrass	Elymus repens
redvine	Brunnichia ovata
reed, giant	Arundo donax
ryegrass, perennial	Lolium perenne
smartweed, swamp	Polygonum amphibium
sowthistle, perennial	Sonchus arvensis
spatterdock	Nuphar lutea
starthistle, yellow	Centaurea solstitialis
sweet potato, wild[1]	Ipomoea pandurata
thistle, artichoke	Cynara cardunculus
thistle, Canada	Cirsium arvense
timothy	Phleum pratense
torpedograss[1]	Panicum repens
trumpetcreeper	Campsis radicans
tules, common	Scirpus acutus
vaseygrass	Paspalum urvillei
velvetgrass	Holcus spp
waterhyacinth	Eichornia crassipes
waterlettuce	Pistia stratiotes
waterprimrose	Ludwigia spp
wheatgrass, western	Pascopyrum smithii

[1] Partial control
[2] Partial control in southeastern states.

Woody Brush and Trees

Apply this product after full leaf expansion unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring or early summer when brush species are at high moisture content and are flowering.

Ensure thorough coverage when using hand-held equipment.

See Low Volume Directed Spray Application section of label. Spray coverage should be uniform with at least 50 percent of the foliage contacted. For best results, cover the top half to 2/3 of the plant foliage. Spray both sides of large or tall woody brush and trees to ensure adequate spray coverage when foliage is thick and dense or where there are multiple sprouts. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow seven days or more after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Note: If brush has been mowed or tilled, or trees have been cut, do not treat until regrowth has reached the specified stage of growth.

This product will control, partially control, or suppress the following woody brush and trees.

Common Name	Scientific Name
alder	Alnus spp
ash[1]	Fraxinus spp
aspen, quaking	Populus tremuloides
bearclover, bearmat	Ceanothus prostratus
beach	Fagus spp
birch	Betula spp
bittercherry	Prunus emarginata

Common Name (Cont.)	Scientific Name
blackberry	Rubus spp
blackgum	Nyssa sylvatica
blue gum, Tasmanian	Eucalyptus globulus
brackenfern	Pteridium aquilinum
broom, French	Genista monspessulana
broom, Scotch	Cytisus scoparius
buckwheat, California[1]	Eriogonum fasciculatum
cascara[1]	Frangula purshiana
catclaw-vine[1]	Macfadyena unguis-cati
ceanothus	Ceanothus spp
chamise	Adenostoma fasciculatum
cherry	Prunus spp
cherry, black	Prunus serotina
cherry, pin	Prunus pensylvanica
copperleaf, hophornbeam	Acalypha ostryifolia
coyotebrush	Baccharis pilularis
deer vetch	Lotus unifoliolatus
dewberry, southern	Rubus trivialis
dogwood	Cornus spp
elderberry	Sambucus nigra
elm[1]	Ulmus spp
gorse	Ulex europaeus
hasardia[1]	Haplopappus squamosus
hawthorn	Crataegus spp
hazel	Corylus spp
hickory	Carya spp
holly, Florida	Schinus terebinthifolius
honeysuckle	Lonicera spp
hornbeam, American	Carpinus caroliniana
kudzu	Pueraria montana
locust, black[1]	Robinia pseudoacacia
madrone, Pacific	Arbutus menziesii
manzanita	Arctostaphylos spp
maple	Acer spp
maple, red[1]	Acer rubrum
maple, sugar	Acer saccharum
maple, vine[1]	Acer circinatum
monkeyflower[1]	Mimulus guttatus
oak	Quercus spp
oak, black[1]	Quercus kellogia
oak, pin	Quercus palustris
oak, post	Quercus stellata
oak, red	Quercus rubra
oak, southern red	Quercus falcata
oak, white[1]	Quercus alba
peppertree, Brazilian	Schinus terebinthifolius
persimmon[1]	Diospyros spp
pine	Pknus spp
poison-ivy, eastern	Toxicodendron radicans
poison-oak	Toxicodendron spp
poison-sumac[1]	Toxicodendron vernix
prunus	Prunus spp
raspberry	Rubus spp
redbud, eastern	Cercis canadensis
rose, multiflora	Rosa multiflora
Russian-olive	Elaeagnus angustifolia
sage,: black, white	Salvia spp
sagebrush, California	Artemisia californica
salmonberry	Rubus spectabilis
saltcedar[1]	Tamarix ramosissima
saltbush, sea myrtle	Baccharis halimifolia
sassafras	Sassafras albidum
sourwood[1]	Oxydendrum arboreum
sumac, smooth[1]	Rhus glabra
sumac, dwarf[1]	Rhus copallinum
sweetgum	Liquidambar styraciflua
swordfern[1]	Polystichum munitum
tallowtree, Chinese	Triadica sebifera
oak, tanbark resprouts	Lithocarpus densiflorus
thimbleberry, western	Rubus parviflorus
tobacco, tree[1]	Nicotiana glauca
trumpetcreeper	Campsis radicans
Virginia-creeper[1]	Parthenocissus quinquefolia
waxmyrtle, southern[1]	Myrica cerifera
willow	Salix spp
yellow-poplar [1]	Liriodendron tulipifera
yerba santa	Eriodictyon californicum

[1]Partial control

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Label Code: D02-148-006
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LOES Number: 010-01471

EPA accepted 07/07/11

Revisions

1 Added resistance management section

2. Added use directions for Christmas tree plantations; mid-rotation conifer release and spot treatments for crop tree release and timber stand improvement; noncrop areas and industrial sites; turfgrass renovation, seed or sod production; ornamentals and plant nurseries; hollow stem injection; parks; recreational and residential areas; roadsides; rangelands; pastures; bamboo.
3. Added Brazilian peppertree and Australian-pine to cut stump.
4. Added spurred anoda, bittercress, Japanese brome, Carolina geranium, castorbean, mayweed chamomile, chervil, plains coreopsis, eastern mannagrass, eclipta, falsedandelion, hairy fleabane, rough fleabane, Florida pusley, jointed goatgrass, goosegrass, henbit, itchgrass, johnsongrass, junglerice, knotweed, little mallow, medusahead, smooth pigweed, puncturevine, common purslane, hemp sesbania, sicklepod, corn speedwell, purslane speedwell, sprangletop, annual spurge, prostrate spurge, spotted spurge, teaweed/prickly sida, Virginia pepperweed, woolly cupgrass, and yellow rocket to annual weeds.
5. Added European beachgrass, bentgrass, woollyleaf bursage, German ivy, redvine, perennial sowthistle, and trumpetcreeper to perennial weeds
6. Added beach, blackgum, brackenfern, cherry, hophornbeam copperleaf, deer vetch, gorse, Pacific madrone, maple, oak, Brazilian peppertree, pine, tanbark oak resprouts, and yerba santa to woody brush and trees.

REQUESTS FOR DETERMINATION

REQUEST FOR DETERMINATION OF APPLICABILITY

For Deck Addition and Landscape Features

At

17 Columbus Ave.
Nantucket, MA

November 2016

Prepared for

Edmund & Patricia Carpenter

By

BLACKWELL & ASSOCIATES, Inc.
Professional Civil Engineers & Land Surveyors
20 Teasdale Circle
Nantucket, MA 02554
508-228-9026

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

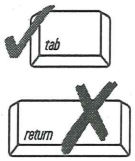
Nantucket
City/Town

WPA Form 1- Request for Determination of Applicability

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

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:

Edmund and Patricia Carpenter
Name

patty.carpenter@rewicksothebysrealt

604 Guardhill Rd
Mailing Address

Bedford | NY | 10506
City/Town | State | Zip Code

914-953-4665
Phone Number

Fax Number (if applicable)

2. Representative (if any):

Blackwell & Assoc., Inc.
Firm

Jeffrey Blackwell
Contact Name

jeff@blackwellsurvey.com
E-Mail Address

20 Teasdale Cr
Mailing Address

Nantucket | MA | 02554
City/Town | State | Zip Code

508-228-9026
Phone Number

Fax Number (if applicable)

B. Determinations

1. I request the Nantucket (Conservation Commission) make the following determination(s). Check any that apply:

☐ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.

☒ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.

☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.

☒ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Nantucket
Name of Municipality

☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

17 Columbus Ave	Nantucket
Street Address	City/Town
59.3	108
Assessors Map/Plat Number	Parcel/Lot Number

b. Area Description (use additional paper, if necessary):

Proposed work includes clearing brush down to a line no closer than 50' from the wetland boundary, landscaping within the cleared area and construction of a deck associated with a building addition.

c. Plan and/or Map Reference(s):

Site Plan of Land - Request For Determination of Applicability	November 20, 2016
Title	Date
Title	Date
Title	Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

D.E.P. Bordering Vegetated Wetland

Delineation Field Data Forms

By:

Kenneth Panacek

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

Applicant: Gary J & Lila M. Aamodt	Transect No. TR1 Upland Plot
Project location: 17 Colombus Ave	DEP File No:
Prepared By: Kenneth J Panacek, KJP L&E	Date of Delineation: 1/6/11

Check all that apply:

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

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Shrub	Bayberry	*Morella pensylvanica*	30%	33.3%	Y	FAC
	Winterberry	*Ilex verticillata*	25%	27.8%	Y	FACW+
	Arrowwood	*Viburnum dentatum*	20%	22.2%	Y	FAC
	Highbush Blueberry	*Vaccinium corymbosum*	15%	16.7%	N	FACW-

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

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants?	Yes
Percent of dominant wetland plants vs. non-wetland plants: 100% /0%	

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

Section II. Indicators of Hydrology

Soil Survey

Title/date: Nantucket County 1979	Location of Plot: The upland plot for the transect is located in an area of dense shrubbery that occurs on a slight slope along the upland edge adjacent to Long Pond.
Map number: 6	
Soil type mapped: ReA / ReB	
Hydric soil inclusions:	
Are field observations consistent with soil survey? Yes	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
O	2-0	N/A	Leaf Litter Decay	None Obs.	Dry / Fluffy
A	0-6"	10YR3/2	Sandy Loam	None Obs.	
B	6-24	10YR4/6	Loamy Sand	Faint at 20"	

Remarks:

Other Indicators of Hydrology: check all that apply and describe

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

Vegetation and Hydrology Conclusion

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a BVW?	yes	☐	no	☒

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

Applicant: Gary J & Lila M. Aamodt	Transect No. TR1 Wetland Plot
Project location: 17 Colombus Ave	DEP File No:
Prepared By: Kenneth J Panacek, KJP L&E	Date of Delineation: 1/6/11

Check all that apply:

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

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Shrub	Huckleberry	*Gaylussacia bacata*	20%	36.4%	Y	FAC
	Arrowwood	*Viburnum dentatum*	25%	45.5%	Y	FACW+
	Serviceberry	*Amelanchiar canadensis*	10%	19.1%	N	FAC
G.C.	Cinnamon Fern	*Osmunda cinnomomea*	10%	100%	Y	FACW

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

Vegetation Conclusion

Number of dominant wetland indicator plants: 3	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants?	Yes
Percent of dominant wetland plants vs. non-wetland plants: 100% /0%	

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

Section II. Indicators of Hydrology

Soil Survey

Title/date: Nantucket County 1979	Location of Plot: The wetland plot for the transect is located in the brushy border of the wetland along the shore of Long Pond.
Map number: 6	
Soil type mapped: ReA / ReB	
Hydric soil inclusions:	
Are field observations consistent with soil survey? Yes	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
O	2-0	N/A	Leaf Litter Decay	None Obs.	Wet and Matted
A	0-6"	10YR2/2	Sandy Loam	None Obs.	
B	6-24	10YR4/2	Loamy Sand	Depletions	

Remarks:

Other Indicators of Hydrology: check all that apply and describe

- ☐ Site inundated:
- ☒ Depth to free water in observation hole: 16"
- ☒ Depth to soil saturation in observation hole: 10"
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☒ Oxidized rhizospheres:
- ☒ Water-stained leaves:
- ☒ Recorded data (stream, lake or tidal gauge; aerial photo; other): Long Pond
- ☐ Other:

Vegetation and Hydrology Conclusion

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a BVW?	yes	☒	no	☐

CURRENT ZONING CLASSIFICATION:
Village Residential (VR)

		Existing:
MINIMUM LOT SIZE:	20,000 S.F.	39,885 S.F.±
MINIMUM FRONTAGE:	100 FT.	SEE PLAN
FRONT YARD SETBACK:	20 F.T.	SEE PLAN
REAR/SIDE SETBACK:	10 FT.	SEE PLAN
GROUND COVER % :	10%	2% ±

LEGEND

- ■ *DENOTES CONCRETE BOUND FOUND*
- x5.2 *DENOTES EXIST. GRADE SPOT ELEVATION*
- 5 *DENOTES EXIST. GRADE CONTOUR*
- BVW#1 *DENOTES EXIST. WETLAND FLAG FOUND*
- *DENOTES EXIST. WETLAND DELINEATION*
- *DENOTES EXIST. EDGE OF BRUSH LOCATED 11-17-16*
- —x— x— *DENOTES PROPOSED LIMIT OF CLEARING*

COLUMBUS AVE

COLUMBUS STREET

DIRT DRIVE

DIRT DRIVEWAY

EDGE TRAVELED TRACK

BENCHMARK:
12" SPK
ELEVATION = 15.54
DATUM: HTL 1934

THRESHOLD
FFE=19.60±

DECK

1 1/2 STY
W/F
DWELLING
782± S.F.

RIDGE
EL=38.2±

THRESHOLD
BASEMENT=11.43±

DECK

PROPOSED
ADDITION

PROPOSED DECK

EXISTING
EDGE OF
BRUSH
11-17-16

EXISTING
LAWN

SHED

EXISTING
PATH

EXIST.
WELL

EXIST.
WELL

PROPOSED LIMIT OF
WORK AND EDGE OF
CLEARING

PROPOSED LIMIT OF
WORK AND EDGE OF
CLEARING

dhCB
FD

VR SIDE ZONING SETBACK

161.00'

165.00'

114.92'

124.10'

34.18'

75.00'

373.82'

152.50'

100'

50'

25'

LOT AREA=
39,885±

59.3-106
N/F
SHELIA SMITH 2000 REALTY TRUST
BOYLAN, JENNIFER S. – TR.
L.C.C. 3092-23
CERT. #19778
LOT 380

L.C.C. 3092-23

59.3-107
N/F
EPPICH, JOHN F.
& MAUREEN M.
L.C.C. 3092-23
CERT. #7480
LOT 379

59.3-109
N/F
DAVID SHEA
CAROL SHEA
L.C.C. 3092-23
CERT. #23577
LOT 377

59.3-46
N/F
MADAKET CONSERVATION LAND TRUST
CERT. #10248

TP

1 2 3 4 5 6 7

OWNER INFORMATION

EDMUND M. CARPENTER, JR.
PATRICIA F. CARPENTER
Cert. 23848; LCC 3092-48, LOT 604
ASSESSOR'S MAP 59.3, PARCEL 108
#17 COLUMBUS AVENUE

Site Plan of Land
A Request for Determination of Applicability in Nantucket, MA
Prepared for

EDMUND M. CARPENTER, Jr.
PATRICIA F. CARPENTER

ASSESSOR'S MAP 59.3, PARCEL 108
#17 COLUMBUS AVENUE STREET

Scale: 1"= 30' NOVEMBER 21, 2016

BLACKWELL & ASSOCIATES, Inc.
Professional Land Surveyors
20 TEASDALE CIRCLE
NANTUCKET, MASS. 02554
(508) 228-9026

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

T:\JACK 26 JOB 32
V:\DRAWFILES\B7377\RDA.dwg 11/21/2016 2:46:23 PM EST

B7377

REQUEST FOR DETERMINATION OF APPLICABILITY APPLICATION

For
Landscaping & Stormwater Improvements
In the Buffer Zone

At

82 & 82A Baxter Road
Nantucket, MA

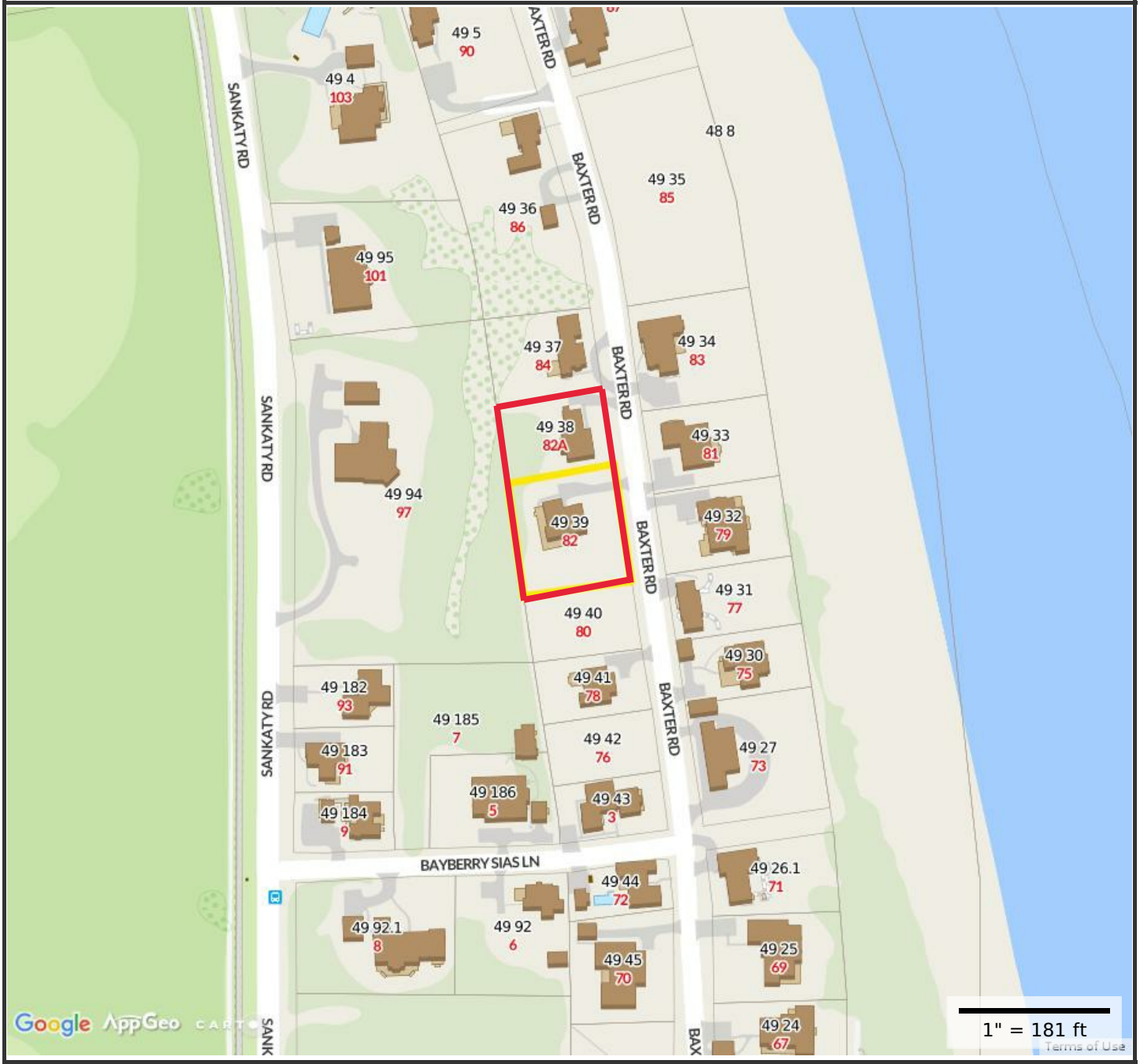
December 2016

Prepared For

East Eden LLC &
82 Baxter Road LLC

20 Mary Ann Drive • Nantucket, MA 02554
508-825-5053 • www.NantucketEngineer.com

Locus Map - 82 & 82A Baxter Road



Property Information

Property ID	49 39
Location	82 BAXTER RD
Owner	82 BAXTER ROAD LLC

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Town and County of Nantucket, MA makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated December, 2014
Properties updated 12/14/2016

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Nantucket
City/Town

WPA Form 1- Request for Determination of Applicability

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

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:

East Eden LLC & 82 Baxter Road LLC
Name

E-Mail Address

3100 Pacific Ave
Mailing Address

San Francisco
City/Town

CA
State

94115
Zip Code

Phone Number

Fax Number (if applicable)

2. Representative (if any):

Nantucket Engineering & Survey, P.C.
Firm

Arthur D. Gasbarro, PE, PLS
Contact Name

art@NantucketEngineer.com
E-Mail Address

20 Mary Ann Drive
Mailing Address

Nantucket
City/Town

MA
State

02554
Zip Code

508-825-5053
Phone Number

Fax Number (if applicable)

B. Determinations

1. I request the Nantucket (Conservation Commission) make the following determination(s). Check any that apply:

☐ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.

☒ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.

☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.

☒ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Nantucket
Name of Municipality

☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

82 & 82A Baxter Rd	Nantucket
Street Address	City/Town
49	39 & 38, respectively
Assessors Map/Plat Number	Parcel/Lot Number

b. Area Description (use additional paper, if necessary):

The subject property is located on the eastern end of Nantucket, on the western side of Baxter Road. The area is developed residentially, with a mix of sewer and water serviced properties. The Bordering Vegetated Wetland resource area boundary is delineated by flags on site and shown on the plan.

c. Plan and/or Map Reference(s):

Plan to Accompany a Request for Determination of Applicability	12/14/16
Title	Date
Title	Date
Title	Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

The Applicant is proposing to install landscaping and stormwater drainage improvements within the Buffer Zone to a Bordering Vegetated Wetland (BVW). No waivers are required from the regulations Please refer to the attached Landscape and Site Plans for additional information.

C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

All work is located greater than 25-feet from the resource area. No waivers are required from applicable regulations.

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

☐ Single family house on a lot recorded on or before 8/1/96

☐ Single family house on a lot recorded after 8/1/96

☐ Expansion of an existing structure on a lot recorded after 8/1/96

☐ Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96

☐ New agriculture or aquaculture project

☐ Public project where funds were appropriated prior to 8/7/96

☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision

☐ Residential subdivision; institutional, industrial, or commercial project

☐ Municipal project

☐ District, county, state, or federal government project

☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

East Eden LLC & 82 Baxter Road LLC
Name

3100 Pacific Ave
Mailing Address

San Francisco
City/Town

CA
State

94115
Zip Code

Signatures:

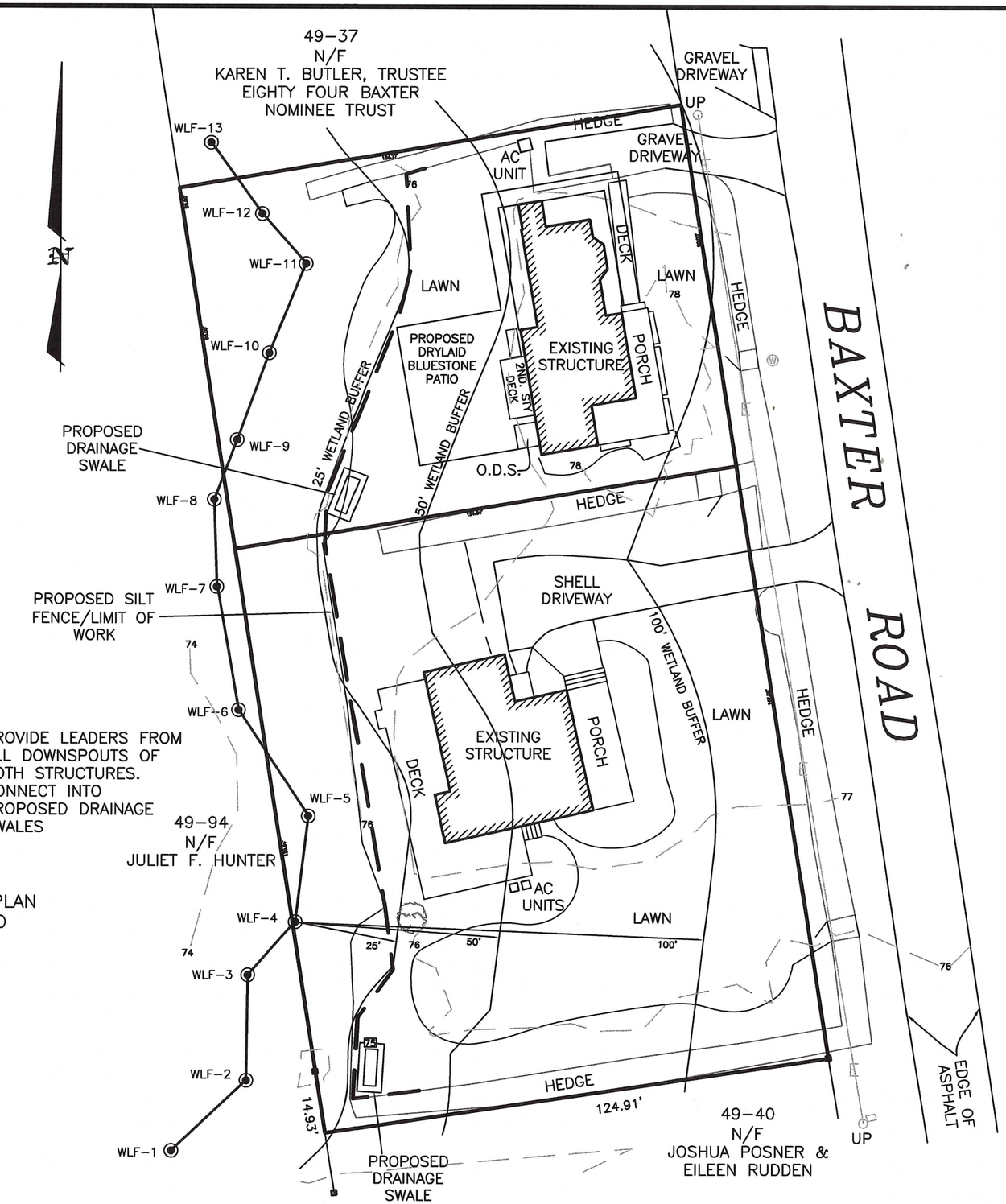
I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Arthur D. Sabaro Agent
Signature of Applicant

12/14/16
Date

Arthur D. Sabaro
Signature of Representative (if any)

12/14/16
Date



THIS PLOT PLAN WAS PREPARED FOR THE TOWN OF NANTUCKET CONSERVATION COMMISSION ONLY SHOULD NOT BE CONSIDERED A PROPERTY LINE SURVEY. THIS PLAN SHOULD NOT BE USED TO ESTABLISH PROPERTY LINES, FENCES, HEDGES OR ANY ANCILLARY STRUCTURES ON THE PREMISES. THE PROPERTY LINES SHOWN RELY ON CURRENT DEEDS AND PLANS OF RECORD.
THIS PLOT PLAN IS NOT A CERTIFICATION AS TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT ASSESOR RECORDS.

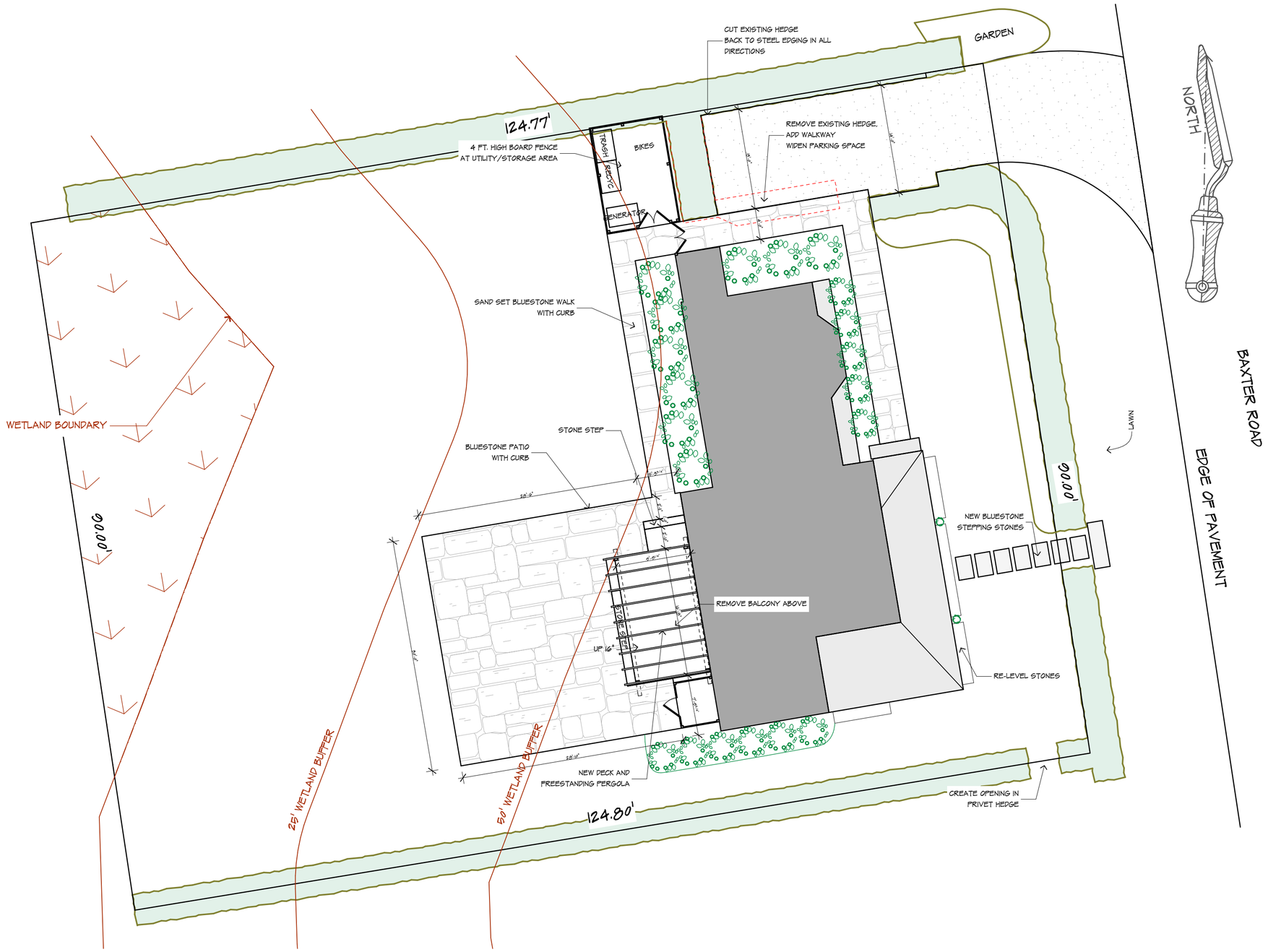
SITE PLAN OF LAND TO ACCOMPANY A REQUEST FOR DETERMINATION OF APPLICABILITY PREPARED FOR

82 BAXTER ROAD LLC
& EAST EDEN LLC
#82 & 82A BAXTER ROAD
MAP 43, PARCELS 38 & 39
CERT. OF TITLE #18292 & 19157
L.C.C. 9710–F, LOTS 10 & 11
SCALE: 1"=30' DEC. 15, 2016

COMMONWEALTH OF MASSACHUSETTS
ARTHUR D. GASBARRO
CIVIL
No. 45951
REGISTERED PROFESSIONAL ENGINEER
12/15/16

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch =30 ft.

NANTUCKET ENGINEERING & SURVEY, PC
20 Mary Ann Drive Nantucket, MA 02554
NantucketEngineer.com 508-825-5053



1 SITE PLAN
SCALE: 1" = 10'

'Sconset Gardener INC.

SGI DESIGNS
88 Somerset Road, Nantucket, MA 02554
508-228-3422 (tel) 508-228-8432 (fax)
sgidesign@sconsetgardener.com

Site Plan

EAST EDEN LLC
82A Baxter Rd
Sconset, Ma. 02564
Map: 49
Parcel: 38
Zoning: SR-20

SCALE: AS NOTED
DATE: 12/15/2016

L-2

18 x 24

MassDEP Bordering Vegetated Wetland Field Delineation Data Forms

By:

Kenneth Panacek
KJP Environmental & Land Services

20 Mary Ann Drive • Nantucket, MA 02554
508-825-5053 • www.NantucketEngineer.com

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

Applicant: Whiteside Management LLC	Transect No. TR-1
Project location: 82 & 82A Baxter Road	DEP File No:
Prepared By: Kenneth J. Panacek, KJP LAnd and Environment Inc	Date of Delineation: 10/21/2016

Check all that apply:

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

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Shrub	Maleberry	*Lyonia ligustrina*	30%	66.7%	Y	FACW
	Sweet Pepper Bush	*Clethra alnifolia*	15%	33.3%	Y	FAC
G.C.	Cinnamon Fern	*Osmunda cinnamomea*	40%	66.7%	Y	FAC
	Sensitive Fern	*Onoclea sensibilis*	20%	33.3%	Y	FACW
Vines	Greenbrier	*Smilax rotundifolia*	5%	100%	Y	FAC

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

Vegetation Conclusion

Number of dominant wetland indicator plants: 5	Number of dominant non-wetland indicator plants: 0
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants?	Yes
Percent of dominant wetland plants vs. non-wetland plants: 100% / 0%	

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

Section II. Indicators of Hydrology

Soil Survey

Title/date: NRCS Custom Soils Report	Location of Plot:
Map number: n/a	TR1 Hydric plot is located below a small drop off
Soil type mapped: Woodbridge Variant Loam	near WLF #6. The area is in a low drainage area that
Hydric soil inclusions: Yes	flows into a cat tail fringed marsh on the property to
Are field observations consistent with soil survey? Yes	the North East.

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
O	1-0	10YR 4/2	Peat	None Obs	
A	0-12	10YR 2/1	Sandy loam	Depletions @ 9"	
B	12-18	10YR 5/1	Loamy sand	Faint redox	

Remarks:

Other Indicators of Hydrology: check all that apply and describe

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

Vegetation and Hydrology Conclusion

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☒	no	☐
Other indicators of hydrology present?	yes	☒	no	☐
Sample location is in a BVW?	yes	☒	no	☐

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

Applicant: Whiteside Management LLC	Transect No. TR-1
Project location: 82 & 82A Baxter Road	DEP File No:
Prepared By: Kenneth J. Panacek, KJP LAnd and Environment Inc	Date of Delineation: 10/21/2016

Check all that apply:

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

Section I. Vegetation

Strata	Plant Species	Scientific Name	Percent Cover	Percent Dominance	Dominant Plant?	Wetland Indictor Category*
Shrub	Sweet Pepper Bush	*Clethra alnifolia*	15%	100%	Y	FAC
Vines	Fox Grape	*Vitis labrusca*	45%	56.2%	Y	FACU
	Greenbrier	*Smilax rotundifolia*	35%	43.8%	Y	FAC
	Vitis labrusca	*Vitis labrusca*	5%	100%	Y	FAC

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

Vegetation Conclusion

Number of dominant wetland indicator plants:	3	Number of dominant non-wetland indicator plants:	1
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants?			Yes
Percent of dominant wetland plants vs. non-wetland plants:	75% / 25%		

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

Section II. Indicators of Hydrology

Soil Survey

Title/date: NRCS Custom Soils Report	Location of Plot:
Map number: n/a	TR1 Nonhydric plot is located on a flat area
Soil type mapped: Woodbridge Variant Loam	near WLF #6. The area slopes from the existing lawn
Hydric soil inclusions: Yes	to the small drop that contains the wetland.
Are field observations consistent with soil survey? Yes	

Soil Profile Description

Soil Horizon	Depth - Inches	Color	Soil Texture	Soil Mottling	Comments
A	0-14	10YR 4/3	Loamy sand	None Obs	
B	12-20+	10YR 5/6	Loamy sand	None Obs	

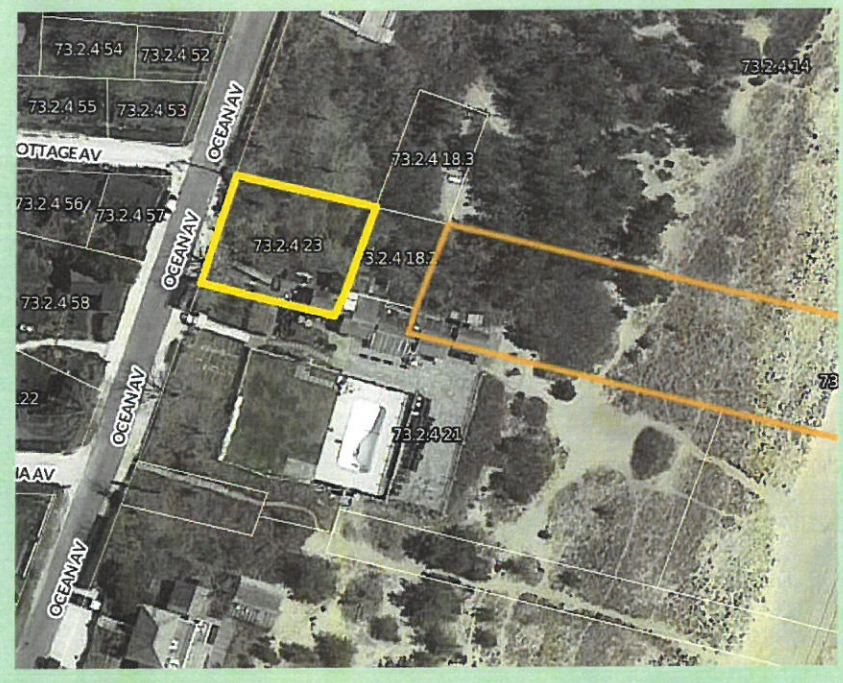
Remarks:

Other Indicators of Hydrology: check all that apply and describe

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

Vegetation and Hydrology Conclusion

Number of wetland indicator plants ≥ number of non-wetland indicator plants?	yes	☒	no	☐
Hydric soil present?	yes	☐	no	☒
Other indicators of hydrology present?	yes	☐	no	☒
Sample location is in a BVW?	yes	☐	no	☒



Request for Determination of Applicability

Map 73.2.4 Parcel 23
10 Ocean Avenue
Nantucket, Massachusetts

Prepared for: **Heirs of Charles W. Brinton**
C/O Cohen & Cohen, P.C.
P.O. Box 786
Nantucket, MA 02554

Prepared by: **Nantucket Surveyors, LLC**
5 Windy Way, PO Box 3627
Nantucket, MA 02584

December 16, 2016

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

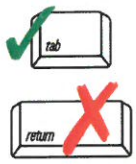
Nantucket
City/Town

WPA Form 1- Request for Determination of Applicability

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

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:

Heirs of Charles W. Brinton, C/O Cohen & Cohen Law, P.C. — Name
paul@cohenlegal.net — E-Mail Address
P.O. Box 786 — Mailing Address
Nantucket — City/Town
MA — State
02554 — Zip Code
508-228-0337 — Phone Number
508-228-0970 — Fax Number (if applicable)

2. Representative (if any):

Nantucket Surveyors LLC — Firm
Paul J. Santos — Contact Name
psantos@nantucketsurveyors.com — E-Mail Address
P.O. Box 3627 — Mailing Address
Nantucket — City/Town
MA — State
02584-3627 — Zip Code
(508) 228-0240 — Phone Number
(508) 228-9856 — Fax Number (if applicable)

B. Determinations

1. I request the Nantucket (Conservation Commission) make the following determination(s). Check any that apply:

☒ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.

☒ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.

☐ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.

☐ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Name of Municipality

☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

10 Ocean Avenue Street Address	Nantucket City/Town
73.2.4 Assessors Map/Plat Number	23 Parcel/Lot Number

b. Area Description (use additional paper, if necessary):

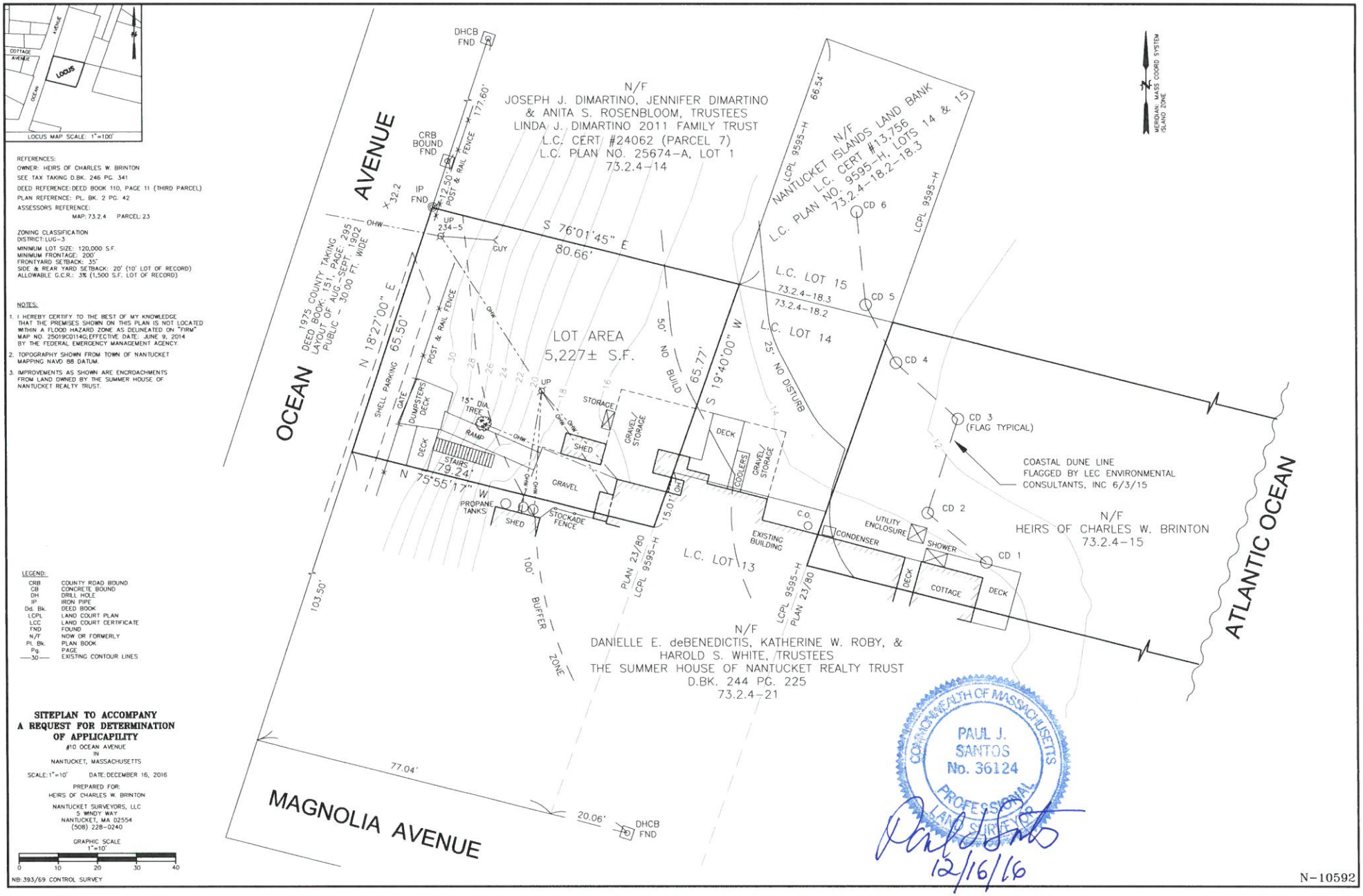
The subject lot is located on the east side of Ocean Avenue, Nantucket Assessor's Map: 73.2.4 Parcel: 23. The lot is approximately 5,227±S.F. The surrounding land uses are residential and commercial.

c. Plan and/or Map Reference(s):

"Site Plan to Accompany a Request for Determination of Applicability, #10 Ocean Avenue" Prepared by Nantucket Surveyors LLC	December 16, 2016 Date
Title	Date
Title	Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

No work is proposed at this time.


LOCUS MAP SCALE: 1"=100'
COTTAGE AVENUE
OCEAN
LOCUS
REFERENCES:
OWNER: HEIRS OF CHARLES W. BRINTON
SEE TAX TAKING D.BK. 246 PG. 341
DEED REFERENCE: DEED BOOK 110, PAGE 11 (THIRD PARCEL)
PLAN REFERENCE: PL. BK. 2 PG. 42
ASSESSORS REFERENCE:
MAP: 73.2.4 PARCEL: 23
ZONING CLASSIFICATION
DISTRICT: LUG-3
MINIMUM LOT SIZE: 120,000 S.F.
MINIMUM FRONTAGE: 200'
FRONTYARD SETBACK: 35'
SIDE & REAR YARD SETBACK: 20' (10' LOT OF RECORD)
ALLOWABLE G.C.R.: 3% (1,500 S.F. LOT OF RECORD)
NOTES:
1. I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE PREMISES SHOWN ON THIS PLAN IS NOT LOCATED WITHIN A FLOOD HAZARD ZONE AS DELINEATED ON "FIRM" MAP NO. 25019C0114G, EFFECTIVE DATE: JUNE 9, 2014 BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
2. TOPOGRAPHY SHOWN FROM TOWN OF NANTUCKET MAPPING NAVD 88 DATUM.
3. IMPROVEMENTS AS SHOWN ARE ENCROACHMENTS FROM LAND OWNED BY THE SUMMER HOUSE OF NANTUCKET REALTY TRUST.
LEGEND:
CRB COUNTY ROAD BOUND
CB CONCRETE BOUND
DH DRILL HOLE
IP IRON PIPE
Ded. Bk. DEED BOOK
LCPL LAND COURT PLAN
LCC LAND COURT CERTIFICATE
FND FOUND
N/F NOW OR FORMERLY
PL Bk. PLAN BOOK
Pg. PAGE
30 EXISTING CONTOUR LINES
SITEPLAN TO ACCOMPANY
A REQUEST FOR DETERMINATION
OF APPLICAPILITY
#10 OCEAN AVENUE
IN
NANTUCKET, MASSACHUSETTS
SCALE: 1"=10' DATE: DECEMBER 16, 2016
PREPARED FOR:
HEIRS OF CHARLES W. BRINTON
NANTUCKET SURVEYORS, LLC
5 WINDY WAY
NANTUCKET, MA 02554
(508) 228-0240
GRAPHIC SCALE
1"=10'
0 10 20 30 40
NB: 393/69 CONTROL SURVEY
OCEAN AVENUE
MAGNOLIA AVENUE
ATLANTIC OCEAN
DHCB FND
CRB BOUND FND
IP FND
POST & RAIL FENCE
177.60'
32.2
12.50'
UP 234-5
GUY
OHW
1975 COUNTY TAKING
DEED BOOK: 151, PAGE: 295
LAYOUT OF AUG.-SEPT. 1902
PUBLIC - 30.00 FT. WIDE
N 18°27'00" E
65.50'
SHELL PARKING
GATE
DUMPSTERS
DECK
15" DIA TREE
RAMP
STAIRS
DECK
79.24'
N 75°55'17" W
PROPANE TANKS
SHED
STOCKADE FENCE
GRAVEL
STORAGE
SHED
GRAVEL STORAGE
DECK
COOLERS
GRAVEL STORAGE
S 76°01'45" E
80.66'
50' NO BUILD
65.77'
S 19°40'00" W
25' NO DISTURB
L.C. LOT 15
73.2.4-18.3
73.2.4-18.2
L.C. LOT 14
L.C. LOT 13
LOT AREA
5,227± S.F.
100' BUFFER ZONE
103.50'
77.04'
20.06'
PLAN 23/80
LCPL 9595-H
66.54'
N/F
JOSEPH J. DIMARTINO, JENNIFER DIMARTINO
& ANITA S. ROSENBLOOM, TRUSTEES
LINDA J. DIMARTINO 2011 FAMILY TRUST
L.C. CERT #24062 (PARCEL 7)
L.C. PLAN NO. 25674-A, LOT 1
73.2.4-14
N/F
NANTUCKET ISLANDS LAND BANK
L.C. CERT #13,756
L.C. PLAN NO. 9595-H, LOTS 14 & 15
73.2.4-18.2-18.3
N/F
DANIELLE E. deBENEDICTIS, KATHERINE W. ROBY, &
HAROLD S. WHITE, TRUSTEES
THE SUMMER HOUSE OF NANTUCKET REALTY TRUST
D.BK. 244 PG. 225
73.2.4-21
N/F
HEIRS OF CHARLES W. BRINTON
73.2.4-15
CD 1
CD 2
CD 3
(FLAG TYPICAL)
CD 4
CD 5
CD 6
COASTAL DUNE LINE
FLAGGED BY LEC ENVIRONMENTAL
CONSULTANTS, INC 6/3/15
C.O.
UTILITY ENCLOSURE
CONDENSER
SHOWER
EXISTING BUILDING
DECK
COTTAGE
DECK
MERIDIAN: MASS COORD SYSTEM
ISLAND ZONE
COMMONWEALTH OF MASSACHUSETTS
PAUL J. SANTOS
No. 36124
PROFESSIONAL LAND SURVEYOR
12/16/16
N-10592

Nantucket SURVEYORS LLC

P.O. Box 3627, Nantucket, Massachusetts 02584-3627
Tel. (508) 228-0240 Fax (508) 228-9856
www.nantucketsurveyors.com
nsllcinfo@nantucketsurveyors.com

COPY

N-10592

December 16, 2016

RECEIVED
DEC 16 2016
By

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, Massachusetts 02554

Re: Request for Determination of Applicability
Applicant: Heirs of Charles W. Brinton, C/O Cohen & Cohen Law, P.C.
10 Ocean Avenue Map: 73.2.4 Parcel: 23
Nantucket, MA 02554

Dear Commission Members,

Enclosed please find the following:

- Two (2) copies of a Request for Determination of Applicability for the above-referenced project;
- One (1) Filing Fee to the Town of Nantucket - $25.00 (bylaw);
- One (1) Filing Fee to the Town of Nantucket - $200.00 (Consultant review fee);
- One (1) Check to the Inquirer & Mirror - $266.90 (publishing of the Public Notice).

This application is to determine if the boundaries of resource areas depicted on the plan "Site Plan to Accompany a Request of Determination of Applicability, #10 Ocean Avenue" prepared by Nantucket Surveyors LLC, dated December 16, 2016, are accurately delineated.

Thank you for your attention to this matter. If you have any questions, please do not hesitate to call our office.

Respectfully,
Nantucket Surveyors, LLC

Paul J. Santos, PLS

Enclosures

cc: Heirs of Charles W. Brinton
Cohen & Cohen Law, P.C.
D.E.P. Southeast Regional

LEC WETLANDS WILDLIFE WATERWAYS

December 29, 2016

EMAIL (psantos@nantucketsurveyors.com)

Paul Santos
Nantucket Surveyors, LLC
P.O. Box 3627
Nantucket, MA 02584

Re: Wetland Resource Area Analysis
10 Ocean Avenue
Map 73.2.4, Parcels 15 & 23
Nantucket, Massachusetts

[LEC File #NSLLC\15-167.01]

Dear Paul:

As requested, LEC Environmental Consultants, Inc., (LEC) conducted a site evaluation on June 3, 2015, at the above-referenced subject parcels to demarcate Coastal Resource Area boundaries protected under the *Massachusetts Wetlands Protection Act* (WPA, M.G.L., c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and/or the *Town of Nantucket Bylaw* (Chapter 136) and *Wetlands Protection Regulations* (*Bylaw*). The following report provides a description of general site conditions and Wetland Resource Areas.

General Site Description

The project site is composed of two subject parcels totaling 0.84± acres located south of Sconset Beach, situated between Ocean Avenue and the Atlantic Ocean. A 0.05± acre Nantucket Islands Land Bank (NILB) property (73.2.4-18) exists between the two subject parcels. Development associated with the Summer House beach and pool club facilities extends on-site from the south, including a building, shed, deck, coolers, utilities, shower, gravel storage areas, wooden platform/stairs/ramp, and shell parking along Ocean Avenue. Aside from a separate set of wooden stairs and viewing platform, undeveloped land exists north of the site up to Gully Road. Moderately dense residential homes and the Summer House exists across Ocean Avenue.

Parcel 23 affords frontage off Ocean Avenue and contains a moderately steep embankment extending from El. 30 at the road to El. 16. A few sycamore maple (*Acer pseudoplatanus*) trees occupy the majority of the embankment with ground ivy (*Glechoma hederacea*), garlic mustard (*Alliaria petiolata*) and Asiatic bittersweet (*Celastrus orbiculata*) primarily occurring underneath the overhanging canopy. Dense Asiatic bittersweet entanglements dominate portions of the embankment lacking an overhanging canopy. Black cherry (*Prunus serotina*) and crab apple (*Malus* spp.) saplings, escaped privet (*Privet* spp.), bush honeysuckle (*Lonicera* spp), rugosa rose (*Rosa rugosa*), autumn olive (*Elaeagnus umbellata*), and Asiatic bittersweet occur sporadically, including areas along the top of the slope defined by a split rail fence.

Within the eastern portion of Parcel 23, topography continues to mildly descend in an easterly direction across the NILB property to the landward boundary of the Coastal Dune. Vegetative cover is dominated by Asiatic bittersweet entanglements with scattered black cherry and Japanese black pine (*Pinus thunbergii*) saplings, multiflora rose (*Rosa multiflora*), poison ivy (*Toxicodendron radicans*), and Virginia creeper (*Parthenocissus quinquefolia*).

According to the June 9, 2014, Federal Emergency Management Agency Flood Insurance Rate Map for the Town of Nantucket (25019C0114G), Flood Zone VE (El 9) occupies the eastern portion of Parcel 15.

Wetland Resource Areas

Wetland Resource Areas located on-site include Coastal Beach, Land Subject to Coastal Storm Flowage (LSCSF), and Coastal Dune. LSCSF (Flood Zone VE, El. 9) and Coastal Beach occur within the eastern portion of Parcel 15, downgradient of the Coastal Dune boundary. Additional detail on the Coastal Dune, including resource boundary methodology is provided below.

Coastal Dune is defined under the Nantucket *Wetlands Protection Regulations* as *any hill, mound, ridge, or field of ridges, hills, or mounds, composed of sediment, any portion or component of which over the course of a year touches upon, exchanges sediment with, and is landward of a coastal beach deposited by wind action, storm overwash, and/or is man-made*. Additionally, a Coastal Dune Field is *an assemblage or grouping of coastal dunes, at least a portion of which over the course of a year touches upon, exchanges sediment with, and is landward of a coastal beach, that may or may not be oriented parallel to the shoreline or in response to a dominant wind direction but has been deposited by wind action, wave action, and/or storm overwash* (*Bylaw* Section 1.02).

Coastal Dune is defined at (310 CMR 10.28 (2)) as *any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal Dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control.*

The on-site Coastal Dune extends approximately 200-225± feet from the Coastal Beach landward in a westerly direction. The easterly portion of the Coastal Dune is occupied by minimally undulating topography. American beachgrass (*Ammophila breviligulata*) dominates vegetative cover with scattered seaside goldenrod (*Solidago sempervirens*), rugosa rose, dusty miller (*Centaurea cineraria*), and beach pea (*Lathyrus japonicus*). Clusters of Japanese black pine trees dominate the westerly portion of the Coastal Dune, while patches of rugosa rose and bayberry (*Morella pensylvanica*) occur along the established landward boundary. Open, denuded conditions exists off-site to the north, likely associated with human activity within the Coastal Dune.

During the site evaluation, LEC reviewed topography, sediment samples, and vegetative cover to delineate the Coastal Dune's landward extent. Sediment samples were collected by a hand-held auger and/or tile spade to visually evaluate grain size, color, and mineralogy to differentiate between dunal and glacial sediments.

Orange "LEC Resource Area Boundary" flag #'s CD 1-6 demarcate the landward boundary of the Coastal Dune.

Surficial dunal sediments within the eastern portion of Parcel 15 generally have light gray/tan colors and are heavily dominated by American beachgrass. Distinct dunal mounds are also are present. East of the established Coastal Dune flag #'s 1-5, a thin veneer of organic and mineral soils have begun to form under the Japanese black pine cover. However, the thin veneer overlays dunal sediments maintaining light gray/tan colors. Upgradient (west) of the Coastal Dune boundary, soils transition to primarily glacial sediments that are dark grayish/black in color, indicative of an A-horizon characterized by an accumulation of humified organic matter intimately mixed with the mineral faction.

The following details the soils and dominant vegetation information collected at each test pit:

- Plot 1 (east of CD flag #'s 2 & 3): 0-3" decomposing pine needle cover overlaying 0-6" 5YR 6/2 and 6-18" 5YR 7/4 (dunal sediments w/ light gray/tan colors); Dominant vegetation: Japanese black pine and poison ivy = Coastal Dune
- Plot 2 (west of CD flag #'s 2 & 3): 0-16" mineral A-horizon, dark grayish/black in color (10 YR 2/1); Dominant vegetative: ground ivy, poison ivy, rugosa rose, multiflora rose, sycamore maple sapling, & Japanese black pine sapling = Upland
- Plot 3 (west of Plot 2, eastern portion of Parcel 23): 0-8" mineral A-horizon, dark grayish/black in color (10 YR 2/1) overlaying weathered B-horizon (10 YR 5/6); Dominant vegetation: Asiatic bittersweet, sycamore maple, ground ivy, and poison ivy = Upland

Considering that the Coastal Dune and Flood Zone do not intercept or touch the embankment located on Parcel 23, no protectable Coastal Bank occurs on the project site.

Summary

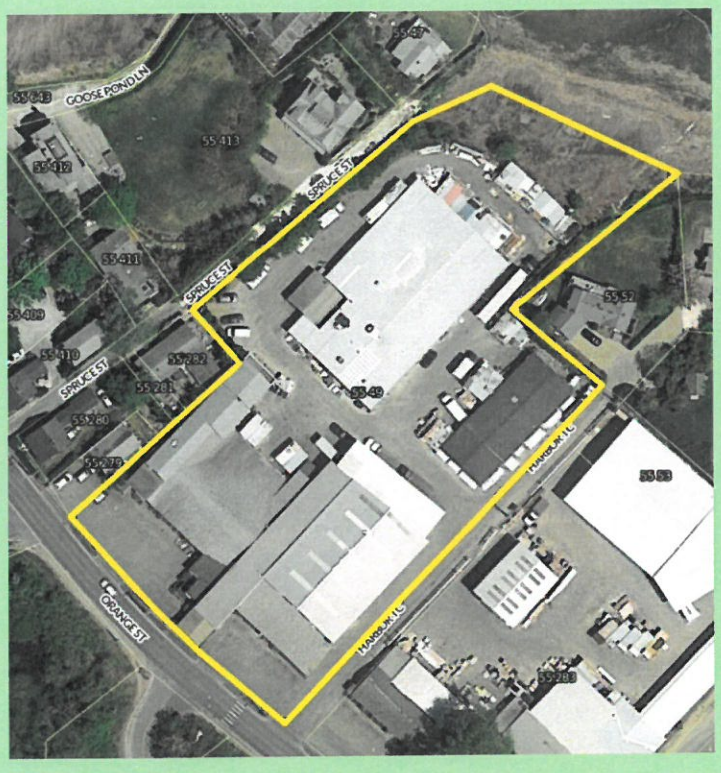
Wetland Resource Areas located on-site include Land Subject to Coastal Storm Flowage (LSCSF), Coastal Beach, and Coastal Dune as defined by flag #'s 1-6. These Wetland Resource Areas and their associated 100-foot Buffer Zones are subject to protection under the *Massachusetts Wetlands Protection Act* (M.G.L., c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and/or the *Town of Nantucket Bylaw* (Chapter 136) and *Wetlands Protection Regulations*.

Should you have any questions or require additional information, please do not hesitate to contact me at 508-746-9491 or at bmadden@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

Brian T. Madden
Wildlife Scientist



Request for Determination of Applicability

Map 55 Parcels 49
134 Orange Street
Nantucket, Massachusetts

Prepared for: **U.S. Reif Marine Nantucket Fee, LLC**
c/o Reade, Gullicksen, Hanley & Gifford, LLP
P.O. Box 2669
Nantucket, MA 02584

Prepared by: **Nantucket Surveyors, LLC**
5 Windy Way, PO Box 3627
Nantucket, MA 02584

December 16, 2016

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

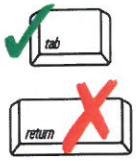
Nantucket
City/Town

WPA Form 1- Request for Determination of Applicability

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

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:

U.S. Reif Marine Nantucket Fee, LLC — Name
mh@readelaw.com — E-Mail Address
c/o Reade, Gullicksen, Hanley & Gifford, LLP P.O. Box 2669 — Mailing Address
Nantucket — City/Town
MA — State
02584 — Zip Code
508-228-3128 — Phone Number
Fax Number (if applicable)

2. Representative (if any):

Nantucket Surveyors LLC — Firm
Paul J. Santos — Contact Name
psantos@nantucketsurveyors.com — E-Mail Address
P.O. Box 3627 — Mailing Address
Nantucket — City/Town
MA — State
02584-3627 — Zip Code
(508) 228-0240 — Phone Number
(508) 228-9856 — Fax Number (if applicable)

B. Determinations

1. I request the Nantucket (Conservation Commission) make the following determination(s). Check any that apply:

☒ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.

☒ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.

☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.

☐ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Name of Municipality

☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

134 Orange Street
Street Address

Nantucket
City/Town

55
Assessors Map/Plat Number

49
Parcel/Lot Number

b. Area Description (use additional paper, if necessary):

The subject property is located on the north side of the Orange Street, Nantucket Assessors Map: 55 Parcels: 49. It is a commercially developed parcel of land d/b/a as Marine Home Center.

c. Plan and/or Map Reference(s):

November 7, 2016

"Major Commercial Development, Site Development Plan, #128 & #134 Orange Street" Prepared by Nantucket Surveyors LLC

Revised 12/16/16
Date

Title

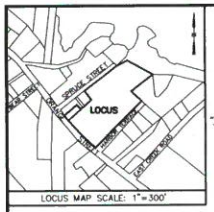
Date

Title

Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

The applicant is constructing a new commercial building, containing approximately 18,800 S.F. of roofed over commercial area at 134 Orange Street, to consolidate certain existing retail, storage and millwork areas at Marine Home Center. The new commercial building will replace an approximate 14,200 S.F. building recently destroyed by fire, and an approximate 4,100 S.F. wood-frame building to be demolished.



LOCUS MAP SCALE: 1"=300'

OWNERS REFERENCE:
U.S. REIF MARINE NANTUCKET FEE, LLC
DEED REFERENCE: DEED BOOK 1150, PAGE 208

PLAN REFERENCE: PLAN FILE #2008-63 (LOT 1)
PLAN BOOK 17, PAGE 37 (LOT 4)

MAP 55 PARCEL 49 & 279
TOTAL LOT AREA=104,908±S.F.

ZONING CLASSIFICATION
DISTRICT:RC (RESIDENTIAL COMMERCIAL)(MIPOD)(PWR)
MINIMUM LOT SIZE =5,000 S.F.
MINIMUM FRONTAGE =40'
FRONT YARD SETBACK =NONE
SIDE YARD SETBACK =5'
REAR YARD SETBACK =5'
MAX. GROUND COVER RATIO =50%

GROUND COVER/OPEN SPACE SUMMARY

PROPOSED GROUND COVER RATIO		43%±
#128 & #134 ORANGE STREET	EXISTING OPEN SPACE =	
	PROPOSED OPEN SPACE	
MINIMUM OPEN SPACE REQUIRED 20% (SECT. 139-11.E(1))		

PARKING SUMMARY
(REF. NANTUCKET ZONING BYLAW S.139-18)

PARKING SPACES REQUIRED	
#128 & #134 ORANGE STREET	
COMMERCIAL INDUSTRIAL	
1 SP/900 SF GFA 44,300 X 900	49
STORAGE OR OFFICE SPACE ANCILLARY TO A COMMERCIAL USE	0
SINGLE FAMILY DWELLING	1
TOTAL	50

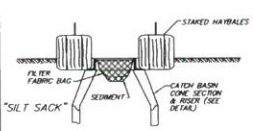
BENCHMARK:
STONE BOUND
ELEV. 14.75
DATUM: NAVD 88

LEGEND

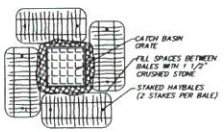
DHCB	DRILL HOLE/CONCRETE BOUND
FND	FOUND
N/F	NOW OR FORMERLY
S.F.	SQUARE FEET
14.5	EXISTING SPOT GRADE
WF1	WETLAND FLAG NUMBER
TYP.	TYPICAL

MAJOR COMMERCIAL DEVELOPMENT
SITE DEVELOPMENT PLAN
#128 & #134 ORANGE STREET
IN
NANTUCKET, MASSACHUSETTS
SCALE: 1"=30' DATE: NOVEMBER 7, 2016
REVISED: DECEMBER 16, 2016 (WETLAND BUFFERS ADDED)
PREPARED FOR:
U.S. REIF MARINE NANTUCKET FEE, LLC
NANTUCKET SURVEYORS, LLC
5 WINDY WAY
NANTUCKET, MA 02554
(508) 228-0240

GRAPHIC SCALE
1"=30'
0 30 60 90 120



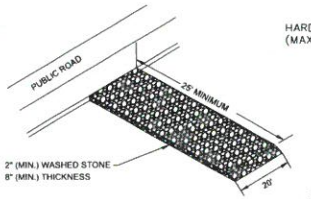
CROSS SECTION



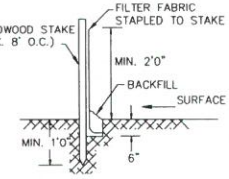
PLAN VIEW

CATCH BASIN SEDIMENT TRAP
N.T.S.

MERIDIAN: STATE PLANE 83 MA ISLAND



CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



SILTATION FENCING DETAIL
N.T.S.

SOIL EROSION SEDIMENT CONTROL NOTES

1. LAND DISTURBANCE WILL BE KEPT TO A MINIMUM NECESSARY FOR CONSTRUCTION OPERATIONS; RESTABILIZATION WILL BE SCHEDULED AS SOON AS PRACTICAL.
2. CATCH BASINS WILL BE PROTECTED WITH PRODUCT KNOWN AS "SILT SACK" THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED.
3. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO CONSTRUCTION.
4. ALL CONTROL MEASURES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
5. ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD IF NECESSARY OR REQUIRED.
6. SEDIMENT REMOVED FROM CONTROL STRUCTURES WILL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
7. U.S. REIF MARINE NANTUCKET FEE, LLC, AS THE OWNER IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE NANTUCKET PLANNING BOARD OF ANY TRANSFER OF THIS RESPONSIBILITY AND FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT PLAN IF THE TITLE TO THE LAND IS TRANSFERRED. CONTACT MARINE HOME CENTER AT 508-228-0900.

CONSTRUCTION AND STABILIZATION SEQUENCE NARRATIVE

PRE-CONSTRUCTION MEETING WITH TOWN DEPARTMENTS, APPLICANT, CONTRACTOR AND SITE ENGINEER.

PHASE I SITE PREPARATION
1. INSTALL ANTI-TRACKING PAD AT CONSTRUCTION ENTRANCE.
2. INSTALL SEDIMENT CONTROL BARRIER AS DIRECTED BY THE ENGINEER. PROTECT ALL CATCH BASINS WITH SEDIMENTATION CONTROL UNITS UNTIL PROJECT IS COMPLETED.

PHASE II SITE CONSTRUCTION
1. PROCEED WITH EXCAVATION FOR FOUNDATION.
2. PROTECT ALL CATCH BASINS WITH SEDIMENTATION CONTROL UNITS UNTIL PROJECT IS COMPLETED.
3. PLACE FOOTING.
4. POUR FOUNDATION WALL.
5. INSTALL DRAIN SYSTEM.
6. INSTALL UTILITIES.
7. BACKFILL SITE, GRADE AS REQUIRED.

PHASE III SITE STABILIZATION
1. REMOVE ALL CONSTRUCTION DEBRIS.
2. MAINTAIN ALL EROSION CONTROL UNTIL DISTURBED AREAS HAVE BEEN STABILIZED.
3. SEDIMENT IN ALL EXISTING CATCH BASINS TO BE REMOVED.
4. REMOVE ALL EROSION CONTROL AND CLEAN UP SITE.

COMMONWEALTH OF MASSACHUSETTS
PAUL J. SANTOS
No. 36124
PROFESSIONAL LAND SURVEYOR
12/16/16

NOTE:
THIS PLAN IS INTENDED FOR PERMITTING PURPOSES ONLY AND SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNTIL ISSUED FOR CONSTRUCTION BY NANTUCKET SURVEYORS, LLC.

NANTUCKET PLANNING BOARD
MAJOR COMMERCIAL DEVELOPMENT
SPECIAL PERMIT

BARRY RECTOR, CHAIRMAN
LINDA WILLIAMS, VICE-CHAIRWOMAN
NATHANIEL LOWELL
JOSEPH MAROKLINGER
JOHN TRUDEL
DATE APPROVED
DATE SIGNED
FILE NO.

N-10781

Nantucket SURVEYORS LLC

P.O. Box 3627, Nantucket, Massachusetts 02584-3627
Tel. (508) 228-0240 Fax (508) 228-9856
www.nantucketsurveyors.com
nsllcinfo@nantucketsurveyors.com

COPY

N-10781

December 16, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, Massachusetts 02554

RECEIVED
DEC 16 2016
By

Re: Request for Determination of Applicability
Applicant: U.S. Reif Marine Nantucket Fee, LLC
134 Orange Street Map: 55 Parcel: 49
Nantucket, MA 02554

Dear Commission Members,

Enclosed please find the following:

- Two (2) copies of a Request for Determination of Applicability for the above-referenced project;
- One (1) Filing Fee to the Town of Nantucket - $25.00 (bylaw);
- One (1) Filing Fee to the Town of Nantucket - $200.00 (Consultant review fee);
- One (1) Check to the Inquirer & Mirror - $266.90 (publishing of the Public Notice).

This application is to determine if the boundaries of resource areas depicted on the plan "Major Commercial Development, Site Development Plan #128 & #134 Orange Street", Nantucket MA prepared by Nantucket Surveyors LLC, dated November 7, 2016 revised thru December 16, 2016, are accurately delineated and whether the work depicted is subject to the Wetland Protection Act.

Thank you for your attention to this matter. If you have any questions, please do not hesitate to call our office.

Respectfully,
Nantucket Surveyors, LLC

Paul J. Santos, PLS

Enclosures

cc: D.E.P. Southeast Regional
U.S. Reif Marine Nantucket Fee, LLC

LEC WETLANDS WILDLIFE WATERWAYS

December 29, 2016

EMAIL (psantos@nantucketsurveyors.com)

Paul Santos
Nantucket Surveyors, LLC
P.O. Box 3627
Nantucket, MA 02584

Re: Wetland Resource Area Analysis [LEC File #NSLLC\16-281.01]
134 Orange Street
Map 55, Parcel 49
Nantucket, Massachusetts

Dear Paul:

As requested, LEC Environmental Consultants, Inc., (LEC) conducted a site evaluation on September 15, 2016, at the above-referenced subject parcel to demarcate Wetland Resource Area boundaries protected under the *Massachusetts Wetlands Protection Act* (WPA, M.G.L., c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and/or the *Town of Nantucket Bylaw* (Chapter 136) and *Wetlands Protection Regulations* (*Bylaw*). The following report provides a description of general site conditions and Wetland Resource Areas.

General Site Description

The 2.36± acre subject parcel extends northeasterly from Orange Street to "The Creeks", a series of tidal creeks associated with a larger Salt Marsh system south of Nantucket Harbor. Existing residential and commercial development abut to the east and west. Multiple commercial buildings (aka Marine Home Center) are located on the property. The northerly-most building was more recently demolished following a fire with only its foundation remaining. Pavement surrounds the old foundation, while storage trailers occupy the northerly extent of developed conditions.

Dense Japanese knotweed (*Fallopia japonica*) and sporadic privet (*Privet* spp.) and sycamore maple (*Acer pseudoplatanus*) saplings occupy upland areas north of the pavement and trailers. From the northerly edge of the developed conditions, topography moderately descends to the Salt Marsh boundary occupied by a dense stand of common reed (*Phragmites australis*).

According to the June 9, 2014, Federal Emergency Management Agency Flood Insurance Rate Map for the Town of Nantucket (25019C0089G), Flood Zone AE (El. 8) appears to extend onto the northern portion of the subject parcel.

According to the 13th edition of the Massachusetts *Natural Heritage Atlas* (effective October 1, 2008) published by the Natural Heritage & Endangered Species Program (NHESP), the *Priority Habitat of Rare Species* boundary extends onto the northerly portion of the project site, terminating just north of the existing storage trailers.

Wetland Resource Areas

Wetland Resource Areas located on-site include Salt Marsh, Land Subject to Coastal Storm Flowage (LSCSF), and Coastal Bank. While no *Bylaw*-protected Riverfront Area exists on island, there is no WPA-protected Riverfront Area associated with "The Creeks". A brief description of each Wetland Resource Area is provided below.

Salt Marsh

As defined under 310 CMR 10.32(2), *Salt Marsh means a coastal wetland that extends landward up to the highest high tide line, that is, the highest spring tide of the year, and is characterized by plants that are well adapted to or prefer living in, saline soils. Dominant plants within salt marshes typically include salt meadow cord grass (Spartina patens) and/or salt marsh cord grass (Spartina alterniflora), but may also include, without limitation, spike grass (Distichlis spicata), high-tide bush (Iva frutescens), black grass (Juncus gerardii), and common reedgrass (Phragmites). A salt marsh may contain tidal creeks, ditches and pools.*

The Salt Marsh boundary is demarcated with sequentially numbered blaze orange surveyor's tape with the words "LEC Resource Area Boundary" embossed in bold, black print, #'s 1-9. The boundary represents the transition from dominant *Phragmites* growth to Japanese knotweed growth, nearly concurrent with the toe of the slope (Coastal Bank). *S. patens* occurs further off-site to the north, while *S. alterniflora* is prevalent along edges of the tidal creeks. Wrack deposits also occur north of the property boundary.

The demarcated Salt Marsh boundary appears to be slightly upgradient of the expected and observed highest spring tide based on Nantucket Harbor tidal datum.

Land Subject to Coastal Storm Flowage

LSCSF is defined at 310 CMR 10.04 as *land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater.*

Based on Nantucket GIS contours, Flood Zone AE (El 8) appears to extend onto the northern portion of the property, slightly upgradient of the Salt Marsh boundary.

Coastal Bank

Coastal Bank is defined at (310 CMR 10.30 (2)) as *the seaward face or side of any elevated landform, other than a Coastal Dune, which lies at the landward edge of a Coastal Beach, land subject to tidal action, or other wetland.*

Coastal Bank is defined in the *Bylaw* (Section 1.02) as *the seaward face or side of any elevated landform, other than a Coastal Dune, which lies at the landward edge of a Coastal Beach, Coastal Dune, land subject to tidal action or coastal storm flowage, or other coastal wetland. Any minor discontinuity of the slope notwithstanding, the top of the bank shall be the first significant break in slope as defined by site specific topographic plan information, site inspection, wetland habitat evaluation, geologic origin, and/or relationship to coastal storm flowage. A bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel, stone, or sand. A bank may be created by man and/or made of man-made materials. A bank may or may not contribute sediment to coastal dunes, beaches and/or to the littoral drift system. A bank may be significant as a major source of sediment, as a vertical buffer, for wildlife habitat and for wetland scenic views.*

Flood Zone AE (El 8) extends onto the northern portion of the property and intercepts the slope north of developed conditions (existing pavement and storage trailers). The slope is therefore considered to be protectable as Coastal Bank by definition. The top of the Coastal Bank per DEP *Wetlands Program Policy 92-1: Coastal Banks* follows the standards identified below:

> B) For a coastal bank with a slope greater than or equal to 4:1 the "top of coastal bank" is that point above the 100-year flood elevation where the slope becomes less than 4:1. (see Figure 2).
>
> C) For a coastal bank with a slope greater than or equal to 10:1 but less than 4:1, the top of coastal bank is the 100-year flood elevation. (see Figure 3).
>
> D) A "top of coastal bank" will fall below the 100-year flood elevation and is the point where the slope ceases to be greater than or equal to 10:1. (see Figure 4).

The Coastal Bank is dominated by Japanese knotweed and *Phragmites* extending landward from the Salt Marsh.

Summary

Wetland Resource Areas located on-site include Land Subject to Coastal Storm Flowage (LSCSF), Coastal Bank, and Salt Marsh as defined by flag #'s 1-9. These Wetland Resource Areas and their associated 100-foot Buffer Zones are subject to protection under the *Massachusetts Wetlands Protection Act* (M.G.L., c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and/or the *Town of Nantucket Bylaw* (Chapter 136) and *Wetlands Protection Regulations*.

Should you have any questions or require additional information, please do not hesitate to contact me at 508-746-9491 or at bmadden@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

Brian T. Madden
Wildlife Scientist

EXTENSION REQUESTS

Nantucket SURVEYORS LLC

P.O. Box 3627, Nantucket, Massachusetts 02584-3627
Tel. (508) 228-0240 Fax (508) 228-9856
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N-9296

December 30, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, Massachusetts 02554

Re: Request for Extension of Order of Conditions
Applicant: J. Graham & Katherine P. Goldsmith
86 Pocomo Road (Map 15 Parcel 41)
Nantucket, MA 02554
D.E.P. File #SE48-2626

Dear Commission Members,

Pursuant to 310 CMR 10.05(8)(a) and Bylaw Section 136-4B, Nantucket Surveyors, LLC would like to request on behalf of the applicants, a three (3) year extension of Order of Conditions, SE48-2626. The Order of Conditions was issued on January 29, 2014 and recorded in the Nantucket County Registry of Deeds as LC Doc. #143859.

Work Permitted is as indicated on the Orders attached hereto. Reports pursuant to Special Condition #20 are forthcoming.

Thank you for your attention to this matter. If you have any questions, please do not hesitate to call our office.

Respectfully,
Nantucket Surveyors, LLC

Paul J. Santos, PLS

Enclosures

- One (1) filing fee Check to the Town of Nantucket $25.00

Cc: J. Graham Goldsmith

2014 00143859
Cert: 22370 Doc: OOC
Registered: 03/05/2014 10:27 AM

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
And the Town of Nantucket Wetlands Bylaw Chapter 136

Provided by MassDEP: SE48-2626
MassDEP File #

eDEP Transaction #

Nantucket
City/Town

A. General Information

1. From: Nantucket
Conservation Commission

2. This issuance is for (check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

J. Graham & Katherine P.
a. First Name

Goldsmith
b. Last Name

c. Organization

7 Kilburn Street
d. Mailing Address

Burlington
e. City/Town

VT
f. State

05401
g. Zip Code

4. Property Owner (if different from applicant):

Same as applicant
a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

5. Project Location:

86 Pocomo Road
a. Street Address

Nantucket
b. City/Town

15
c. Assessors Map/Plat Number

41
d. Parcel/Lot Number

Latitude and Longitude, if known: d m s
d. Latitude

d m s
e. Longitude

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
And the Town of Nantucket Wetlands Bylaw Chapter 136

Provided by MassDEP: SE48-2626
MassDEP File #

eDEP Transaction #

Nantucket
City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

Nantucket
a. County

22370
b. Certificate Number (if registered land)

c. Book

d. Page

7. Dates: 12/20/2013 a. Date Notice of Intent Filed; 1/8/2014 b. Date Public Hearing Closed; 1/29/2014 c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Site Plan to Accompany a Notice of Intent
a. Plan Title

Nantucket Surveyors, LLC
b. Prepared By

Paul J. Santos, P.L.S.
c. Signed and Stamped by

12/20/2013
d. Final Revision Date

1" = 30'
e. Scale

f. Additional Plan or Document Title

g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

a. ☐ Public Water Supply
b. ☒ Land Containing Shellfish
c. ☒ Prevention of Pollution
d. ☐ Private Water Supply
e. ☒ Fisheries
f. ☒ Protection of Wildlife Habitat
g. ☐ Groundwater Supply
h. ☒ Storm Damage Prevention
i. ☒ Flood Control
j. ☒ Wetland Scenic Views (bylaw)
k. ☒ Recreation (Bylaw)

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

FINDINGS and ADDITIONAL CONDITIONS

Massachusetts Wetlands Protection Act (MGL Chapter 131, Section 40)
Town of Nantucket Wetlands Bylaw (Chapter 136)

Address:	86 Pocomo Road
Assessor's Map and Parcel:	15-41
Property Owner:	J. Graham & Katherine P. Goldsmith
Applicant:	J. Graham & Katherine P. Goldsmith
DEP File Number:	SE48-2626
Filing Date:	December 20, 2013
Date Hearing Closed:	January 8, 2014
Date Orders Issued:	January 29, 2014
Plan of Record Information:	Site Plan to Accompany a Notice of Intent, Dated 12/20/2013, stamped by Paul J. Santos, P.L.S.

Permit Overview:
This order permits the construction of a coastal dune with beachgrass plantings and sand drift fencing on a coastal beach, adjacent to a coastal bank and adjoining existing coastal dunes and within land subject to coastal storm flowage.

Additional Findings:

1. The area falls outside mapped habitat areas and does not require NHESP review.

In addition to the General Conditions contained elsewhere in this document, the Commission includes the following Special Conditions pursuant to MGLCh131s40 and the Town of Nantucket Wetlands Protection Bylaw, Chapter 136:

18. All work shall be performed in accordance with the Site and Work Description contained within the Notice of Intent and plan notes set out on the plan of record, provided project narratives and protocols.
19. No work on this project may be done between April 1st and September 15th of each year without written permission from the Town of Nantucket Beach Manager.
20. A monitoring report showing erosion rates and beach/dune profiles and site photographs must be submitted to the Commission by May 15th for a minimum of three years or until a Certificate of Compliance is issued, whichever is the longer.
21. Should the monitoring reports show an adverse impact to surrounding properties the fencing shall be removed and the applicant shall file an Amendment or new Notice of Intent that addresses the removal and mitigation of this project.
22. All posts shall be five inches in diameter or smaller.

WAIVERS UNDER THE NANTUCKET WETLANDS BYLAW/REGULATIONS
No waivers are required for this project.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
And the Town of Nantucket Wetlands Bylaw Chapter 136

Provided by MassDEP: SE48-2626
MassDEP File #

eDEP Transaction #

Nantucket
City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

1/29/2014
1. Date of Issuance

Please indicate the number of members who will sign this form.
This Order must be signed by a majority of the Conservation Commission.

6
2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Ernest Steinauer

Ernest Steinauer

Sarah Oktay

Sarah Oktay

Leslie Johnson

Andrew Bennett

Ian Golding

Michael Glowacki

Jennifer Karberg

☒ by hand delivery on

Date

☐ by certified mail, return receipt requested, on

Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request of Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

Monitoring Reports

Conservation Commission Update
December 15, 2016
Property: 21/23 Sesachacha Road
DEP File # SE 48-2775

There was no additional work performed at this property during 2016. The path is maintaining and Land Bank staff are mowing the fenceline to reduce the likelihood of further encroachment of invasive species. The following pictures show the current state of the property, fenceline and path.

Monitoring Report
December 16, 2016
Property: 22 Cathcart Road
DEP File #: SE48-2810

During the summer of 2015 construction began on the expansion of the parking lot at 22 Cathcart Road. Vegetation and stumps were removed from the site and the area was smoothed and topped with a mixture of sand and gravel. In an effort to protect the nearby wetland from sedimentation, a biodegradable fiber roll was installed along the northern edge of the parking lot and the exposed dirt around the southern and western edges of the property was seeded with a Cape Cod grass mixture for aesthetics and to stabilize the raised berm. Additionally, two pressure treated wooden posts were installed along the southern edge of the parking area with signage advising visitors to park “nose in”. Construction was finished in the end of September and the existing parking area was expanded by less than 1,800 square feet.

There has been no additional work at the site since the parking area construction was completed in 2015. We are monitoring the coconut fiber roll that demarcates the edge of the parking area from the BVW to ensure that it is functioning as an effective silt barrier. This will be replaced if necessary. Current conditions are shown in the photos below.

Monitoring Report
December 16, 2016
Property: 27 North Cambridge Street
DEP File # SE 48-2527

In November of 2015, the existing structures were removed from the property and the associated tight tank was pumped and filled. The disturbed areas were filled, smoothed and replanted with a native seed mix. Ongoing property maintenance includes minimal vegetation pruning to the existing beach access and any necessary repairs to the boardwalk and beach stairs. Additionally, a wooden viewing platform was constructed in the northern section of the property as well as a gravel drive and split rail fence in the southern portion. Monitoring and removal of spotted knapweed is ongoing at this site. No additional work has been performed in 2016. Photos below show current conditions on this property.

Conservation Commission Update
December 16, 2016
Property: 28, 30A & 30B Washington Street
DEP File #: SE 48-2526

In the spring of 2013 all structures were removed from 30A and 30B Washington Street. Soon after the building removal, the foundation holes were filled, smoothed, and seeded with lawn grasses. Ongoing property maintenance includes seasonal vegetation pruning and mowing of existing lawn areas. The footpath at 30A Washington Street has been allowed to revegetate and a split rail fence was installed along the road edge of 30A and 30B Washington Street.

The structure at 28 Washington Street that houses the Maria Mitchell Aquarium still remains. The Maria Mitchell Association filed for a lease extension until November 17, 2022 to raise the funds necessary for relocating the Aquarium and Natural Science Center. Due to the unforseen delay in moving the Aquarium building, the Land Bank is seeking to close out the existing permit. Our plan is to reapply to the Conservation Commission for permission to remove the building when the Maria Mitchell Association is prepared to undertake this project. Therefore, approved work for this project has been completed and no additional work is planned at this time.

Conservation Commission Update
December 15, 2016
Property: 158 Orange Street
DEP File # SE 48-2689

The property at 158 Orange Street originally contained an existing structure that was removed in the fall of 2014. Subsequently, the area was smoothed, seeded with a Cape Cod seed mix and 5 red maples were planted. A parking area was established at the entrance on Orange Street. The Land Bank is in the process of getting Chapter 91 approval for a dock and planning for public use of this site.

On October 16, 2016, five Land Bank staff members treated the *Phragmites australis* within the wetland on the Bachman property with a 25% Glyphosate solution combined with a tracking dye. A total of 274 oz of Rodeo solution was used to perform a bundle, clip and drip methodology. All cut stems were piled on the site and allowed to solarize. Standing dead stems will be mowed during the winter of 2016/2017 once the ground has frozen.

Phragmites australis Treatment

Conservation Commission Update
December 15, 2016
Property: Aladgem, 72 Miacomet Ave
DEP File # SE 48-2741

As stated in the Notice of Intent, permitted in the Order of Conditions and described in the request for a Certificate of Compliance, the Nantucket Land Bank demolished/removed a single family dwelling and garage, used compatible beach material to bring the existing crawl space up to grade, smoothed the area, planted American beachgrass and installed a split-rail fence. During the hearing, the Land Bank was granted permission to install posts for dinghy storage. In lieu of posts, the Land Bank Commission decided to post the property with signs indicating that no dinghy storage is allowed. No additional work has been performed since the removal of the buildings and the beachgrass has established on the site. Please see the photos below for current property conditions.


DEAD END
NO BOAT STORAGE

Long Pond *Phragmites australis*
Glyphosate Treatment
Conservation Commission Update
December, 2016
Rachael Freeman, Nantucket Islands Land Bank
DEP # SE 48-2771

Wilkinson Ecological performed the follow-up, year 2 clip and drip treatment to the *Phragmites australis* along Land Bank property at Long Pond. This treatment was performed on September 9, 2016 and included the use of 38 oz of Rodeo mixed with 4.7 oz of Cidekick II surfactant. The clip and drip method of treatment was well suited to this site because of the low density of *Phragmites australis* stems and the increased cover of native species intermixed with the invasive plant. Current conditions are shown in the photos below.

Conservation Commission Update
December 15, 2016
Property: Reis, 80 Miacomet Ave
DEP File # SE 48-2394

During August 2016, the Japanese Knotweed on the Reis property was treated with a glyphosate solution containing a cirus-based surfactant by a combination of 3 Land Bank staff and 3 Wilkinson Ecological employees. A 25% solution of glyphosate was utilized in a clip and drip methodology to the top of the bank or within 25-feet of the pond edge, and a 3% solution of glyphosate was used for foliar spray outside of 25-feet. The work was performed on August 4th, August 9th, August 18th and September 8th. A total of 160 oz of Rodeo with 15 oz of Cidekick II surfactant was used for the clip and drip along the wetland edge and 64 oz of Roundup was used for foliar application in the upland areas. All stalks removed during the clip and drip procedure were piled on site, covered with plastic and allowed to solarize. All Japanese Knotweed on the site will be mowed during the winter of 2016/2017. Follow-up treatment in 2017 will include fequent mowing during the growing season followed by a similar method of herbicide treatment by Wilkinson Ecological during August.

The monitoring performed on site included the esablishment of four 10m transects within the main knotweed stand along the pond edge. All transects had 100% knotweed cover. These will be re-surveyed in the spring/summer of 2017.

Pre-treatment Knotweed Pictures

Post-Treatment Knotweed Pictures

Other Business

CONSERVATION COMMISSION
PUBLIC MEETING

2 Bathing Beach Road
Nantucket, Massachusetts 02554
www.nantucket-ma.gov
Wednesday, December 14, 2016 5:00 P.M.
4 Fairgrounds Road, Training Room

Commissioners: Andrew Bennett(Chair), Ashley Erisman(Vice Chair), Ernie Steinauer, David LaFleur, Ben Champoux, Ian Golding, Joe Topham

Called to order at 4:04 p.m.

Staff in attendance:	Jeff Carlson, Natural Resources Coordinator, Terry Norton, Town Minutes Taker
Attending Members:	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham
Absent Members:	None
Late Arrivals:	Erisman, 4:05 p.m.
Earlier Departure:	None

Agenda adopted by unanimous consent
*Matter has not been heard

I. PUBLIC MEETING

A. Public Comment:

1. **Steve Bender**, 73 Orange Street – When the Boat Basin was renovated, they received an amnesty license, which is supposed to be monitored by the ConCom; read Special Condition 10 of that license detailing the maintenance regime. None of the maintenance conditions are being met; this commission needs to adhere to the responsibility because the harbor is dying. He's told the commission about chemicals used at the cranberry bogs possibly affecting the harbor. He's told the board about the massive amounts of grey water being dumped into the harbor by luxury yachts. Stated he had just read the 1997 Woods Hole Oceanographic Institute study on the condition of Nantucket Harbor; the study stated the oxygen level in the upper harbor was compromised at that time. The algae blooms have increased so the oxygen level must be worse. We had a massive die-off of seed oysters, which is probably a combination of algae and lack of oxygen. **Staff** – Part of the condition is that the Boat Basin provide maintenance logs upon request; we should request those logs to demonstrate they are in compliance and then require to see the maintenance logs every two months in perpetuity. **Golding** – He wants to have mandatory dye requirements for vessels in the harbor to ensure they aren't dumping grey water. **Staff** – Suggested ConCom host a discussion with the Board of Health (BOH), Board of Selectmen (BOS, and the Harbor Master on these issues.
   Motion to Craft a letter to go to BOS about dealing with grey water issues from boats in the harbor. (made by: Steinauer) (seconded by: Topham)
   Motion to Issue a letter to Boat Basin requesting maintenance logs and records in conjunction with their Chapter 91 license. (made by: Steinauer) (seconded by: Topham)
2. **Rachel Freeman, Nantucket Islands Land Bank** – Update on 175 Polpis Road Enforcement Order. The homeowner has offered to pay for the restoration in full. The Land Bank will be coming in with an NOE for a plan to do that work.

II. PUBLIC HEARING

A. Notice of Intent

1. Nantucket Islands Land Bank – 17 Commercial Wharf & Unnumbered Lot New Whale Street (42.2.4-7 & 8) SE48-2885 (**Cont. 01/18/2017)**
2. Sunset House, LLC – 15 Hallowell Lane (30-10) SE48-2924 **(Cont. 01/04/2017)**
3. *Maddelone – 14 Western Avenue (87-41) SE48-2937

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham
Recused	None
Documentation	Site and topographical plans, photos, requisite departmental reports and correspondence.
Representative	**Don Bracken**, Bracken Engineering, Inc. – They have not heard back from Massachusetts Natural Heritage so this will have to be continued. Resource areas: coastal dune, coastal bank, and flood zone. The first part of the project is to upgrade the septic with restoration of beach grass; waivers are required due to performance standards prohibiting septic systems within coastal dunes and the distance from a coastal bank. A second portion is the renovation of the building to include: full foundation with walk-down stairwell and window wells, replacement of porch and deck, and dry-laid patio; all work is within the 50-foot buffer to the coastal bank and a portion within the 25-foot buffer; A waiver is required for work within the 25-foot no disturb. Groundwater is at elevation 1.7.
Public	None

Discussion (4:21)	**Steinauer** – Asked about the system being a simple Title V system and not I/A. **Champoux** – Confirmed the waivers are based upon no reasonable alternative and net benefit. There is a lot of accretion there and the dune system is stable. **Erisman** – She is concerned about the full basement at the top of the bank. **Bracken** – The location of the house meets the Building Code slope setback requirements. Alternative, he can submit a geo-technical report confirming the stability of the bank. **Steinauer** – He sees no alternative location for the septic. The basement is another matter. **Erisman** – Replanting the bank should be a mix if what is currently growing there is a mix. Discussion about the stability of the bank and its ability to stand up to the full foundation. **Bracken** – Asked for a continuance.
Staff	This area is not deemed nitrogen sensitive because all groundwater flow is toward the ocean; the BOH doesn't require an I/A component. This has to continue so there is time for the applicant to provide an analysis of the bank to ensure it won't destabilize
Motion	Continued to January 4, 2017 without objection.
Vote	N/A

4. * Nantucket Islands Land Bank – 48 South Cambridge Street (59.3-42) SE48-2938

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham
Recused	None
Documentation	Site and topographical plans, photos, requisite departmental reports and correspondence.
Representative	**Paul Santos**, Nantucket Surveyors – This parcel is now vacant; this NOI is for a 4-space parking area, access path, and viewing platform for use by the public in the same area as the former dwelling. The deck is outside the 50-foot setback. The parking area is in previously mowed lawn area outside the 25-foot no-disturb zone. The in the future there will be an NOI or amended order for an elevated walkway to a dock that requires a Chapter 91 license. They have the Natural Heritage and Endangered Species Program (NHESP) approval. Resource areas are Long Pond and flood zone. Rachel Freeman, Nantucket Islands Land Bank
Public	Larry Lavigne, President Massasoit Village Condo Association
Discussion (4:39)	**Erisman** – Asked why the parking can't be shifted further south away from the 25-foot buffer. **Santos** – In this location, the H/C parking would be nearly level with the viewing platform to be Americans with Disabilities Act (ADA) accessible. The future walkway would have a 2% grade to the platform to meet ADA requirements **Freeman** – Their goal is to make access to the site ADA compliant. **Steinauer** – To that end, there should be a bench on the viewing platform. **Lavigne** – We are in favor of the open space but there is a concern that it looks like much of the cleared property is the Land Bank's. We would like to discuss the ability to mark where Land Bank property begins and ends. Also concerned about use of the parking after hours that might create noise and trash. **Santos** – A post-and-rail fence along the property line would be a good idea to mark the property line. The deck is setback off the property line to comply with zoning. **Freeman** – Some Land Bank properties are posted against after-hours usage.
Staff	If the commission doesn't grant a waiver, it can condition the project to move the walkway away from the 25-foot no-disturb zone. Have everything needed to close.
Motion	**Motion to Close.** (made by: Steinauer) (seconded by: LaFleur)
Vote	Carried unanimously

5. *Fargo Way Realty Trust & Wauwinet Realty Trust – 10 Fargo Way (14-15 7 61) SE48-____ **(Cont. 01/18/2017)**

B. Amended Orders of Conditions

1. Hither Creek Boatyard, Inc – 20 North Cambridge Street (59.4,38,38,60-2,14,15,17) SE48-2141

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Recused	Topham
Documentation	Site and topographical plans, photos, requisite departmental reports and correspondence.
Representative	**Paul Santos**, Nantucket Surveyors – This amendment is for the in-water component to expand to eleven 4X32 foot new floating finger piers attached to piles; they are at the most westerly end of the current dock and run down the creek. Reviewed a supplemental letter that discusses reports for the original NOI. Explained how the boats would approach and dock; would propose protection for the saltmarsh from backwash if required but have not had issues with other portions of the docks. Resource areas: Land containing shellfish and coastal bank. Boats are shallow draft with sufficient depth that the boats don't impact the bottom. Read a statement in regards to the benefits of the docks for Madaket Marine. 11 additional slips require full Chapter 91 filing. Chris Shannon, Chief Operating Officer Madaket Marine Sarah Alger, Sarah F. Alger P.C.
Public	Emily Molden, Nantucket Land Council
Discussion (4:54)	**Steinauer** – Would like to have some kind of baseline measurement by which to track erosion of the adjacent saltmarsh bank.

Santos – That can be noted and documented but there has been no significant erosion of the bank adjacent to the existing docks.

Erisman – In a storm, the existing slips are harbored and the proposed is almost in the middle of the channel; asked if there are any anticipated difficulties.

Shannon – Prevailing summer winds are southwest so intrusion is about one-third to one-half; besides the docks are set up for storm surge.

Golding – Asked if there are plans to extend the bulkhead in the future.

Santos – No, there are limitations that restrict parking and tight-tank usage. There are shellfish in a specific area of the basin and is included in the original file.

Erisman – Asked if there is a way to quantify nitrous-oxide from the boat engines.

Shannon – Boat engine technology is such that oil and fuel don't go into the water. 95% of the engines are four stroke.

Steinauer – Asked what would happen to the moorings in the area.

Santos – Those belong to Madaket Marine and would be relocated within the area. The original NOI file was for extending 50 feet down the creek; in the end the only work on the docks was to make their access ADA compliant.

Bennett – Asked who polices the boat owners lifting the engines and backing into the slips.

Shannon – They can't come bow in because it would protrude over the dock impeding access. When they exit the dock, they move very easy and don't create a wake. Noted they don't have transient use of slips.

Molden – At this point, their biggest concern is the amount of time that has passed since the original studies; the shellfish study is eight years old. Thinks it a good idea to request an updated shellfish study. She doesn't expect there to be a lot of eel grass but thinks the information from a new study would be helpful to have on file.

Santos – They would be willing to get the 2008 shellfish survey for baseline information. They have no issue with providing information for an updated shellfish report. Asked that the amended order include the condition that public comments from the Chapter 91 hearing be included in this file. Pointed out that Hither Creek is an area protected against shellfishing. The upland portion of the original NOI had significant monitoring.

Golding – Feels it was an oversight in 2008 not to include monitoring of the existing slips and would like that added to the amended order.

Staff — Last meeting there were questions about who could sit on this, only Mr. Topham has a conflict.

Condition 26 of the original Order of Conditions sort of addresses monitoring erosion of the saltmarsh and can be expanded upon.

There are a couple things that have happened since 2008: the remap of eel grass in 2015 showed none present in this area; also the 2010 estuary plan included shellfish information. Haven't asked for monitoring to this point; the edge of the saltmarsh is obviously something that should be monitored and can be conditioned. Noted that Hither Creek is frequently hypoxic.

Language of the condition would be, "Prior to start of work on the 11-slip expansion, a report – including photographs and surveys showing the current edge of the saltmarsh for the entire facility, composition and density of shellfish and eel grass found within the expansion area – shall be filed with the commission on an annual basis for the duration of the permit." Conditions of the original Order are still effective.

Motion — **Motion to Close the Public Hearing and Issue with additional conditions as drafted.** (made by: Steinauer) (seconded by: LaFleur)

Vote — Carried unanimously

2. Colson – 9 Hallowell Road (30-14,15,257) SE48-2916

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Recused — None

Documentation — Site and topographical plans, photos, requisite departmental reports and correspondence.

Representative — **Bob Emack** – Current order is to demolish the garage portion and put a full foundation under the remaining portion; this request is to demolish the entire main structure due to water infiltration and mold and build a new dwelling in the same footprint.

Public — **Emily Molden**, Nantucket Land Council – Looking at the aerials, this lot is protected by a small bulkhead; now that this pre-1978 structure has a request to be demolished, the motion should contain a finding or condition to document that the main structure is new should a future request come for additional protection. In the past there have been questions about on-going conditions after the permit ends; suggested a finding in the order that has a statement about the bulkhead.

Discussion (5:42) — **Golding** – The bulkhead in place was built to specifically protect a pre-1978 structure that is no longer there.

Discussion about a finding on the Order of Conditions stating this is a new structure and no longer qualifies for protection.

Bennett – It is the finding of this board that this would be a new structure.

Staff — Under Coastal Bank Performance Standard 8 stipulates that any new or substantially renovated structure within 100 feet of the top of a coastal bank that no coastal engineering structure of any kind shall be permitted. "Substantially improved" relates to the expansion of habitable space; there would have to be an additional finding that the structure is new. They can maintain the bulkhead that is in place; if they are going to rebuild, expand or substantially improve, then the pre-1978 exemption would not apply. They would have to apply for a waiver and prove that they meet the conditions of that waiver before expanding or substantially improving the existing bulkhead.

Motion — **Motion to Close the public hearing and Issue with the finding that the demolition creates the condition that the replacement structure is a new house.** (made by: Golding) (seconded by: Topham)

Vote — Carried unanimously

III. PUBLIC MEETING

A. Requests for Determination of Applicability

1. Carpenter – 17 Columbus Avenue (59.3-108)

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Representative — None

Staff — No one is here, suggested carrying forward.

Discussion (5:59) — No questions or comments at this time.

Motion — Continued to January 4, 2017 without objection.

Vote — N/A

2. Pommet Family Trust – 46 Dukes Road (56-247)

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Representative — **Don Bracken**, Bracken Engineering, Inc. – This is to convert from septic to sewer. A bordering vegetated wetlands are on the other side of the road. The existing tank will be retrofitted with a grinder pump system and tie into the existing force main; these pumps last about 20 years. The tank is 1000 gallons so if something goes wrong with the pump, there is a lot of storage while it is being repaired.

Staff — Recommend issue as Negative 3 for work within the buffer zone.

Discussion (6:00) — None.

Motion — **Motion to Issue as recommended.** (made by: LaFleur) (seconded by: Golding)

Vote — Carried unanimously

B. Minor Modifications

1. Hunter Realty Trust – 47 Cliff Road (29-43) SE48-2753

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Representative — **Mark Rits**, Site Design Engineering – This is for the relocation of a previously approved spa closer to but still outside the 50-foot buffer; addition of a patio and fire pit outside the 50-foot buffer to the toe of a coastal bank; and the house footprint has been modified but most of that is outside the 100-foot buffer. The condition that the spa be drained outside the 100-foot buffer will be carried forward.
Bill Hunter

Staff — Recommends approval.

Discussion (6:03) — None

Motion — **Motion to Approve as a minor modification.** (made by: Steinauer) (seconded by: Topham)

Vote — Carried unanimously

C. Certificates of Compliance

1. Thompson – 14 Fargo Way (14-17) SE48-2645

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Staff — He has been working with the client to bring the project into compliance. Recommends it be carried forward to January 4, 2017 and it is not in compliance at that time, the certificate should be denied and issue out an enforcement to bring into compliance or remove.

Discussion (6:06) — **Erisman** – It has been two years of work and being out of compliance with on-going issues.
Staff – The structure is correctly built; it's the maintenance activity, sand, and plantings that are at issue.

Motion — Continued to January 4, 2017 without objection.

Vote — N/A

2. DeAngelis – 109 Baxter Road (48-12) SE48-2593

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Staff — Relocation of structure; work completed and no on-going conditions.

Discussion (6:11) — None

Motion — **Motion to Issue as recommended.** (made by: Golding) (seconded by: Steinauer)

Vote — Carried unanimously

3. Grove Lane Realty Trust – 24 Grove Lane (41-439) SE48-2781

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Staff — All the mitigation plants are in; all monitoring reports submitted; work is in compliance. Asked the board continue Condition 24 requiring monitoring reports for 2017 and 2018 to get the last two years.

Discussion (6:12) — None

Motion — **Motion to Issue with continuation of Condition 24.** (made by: LaFleur) (seconded by: Topham)

Vote — Carried unanimously

D. Orders of Condition

1. Nantucket Islands Land Bank – 48 South Cambridge Street (59.3-42) SE48-2938

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham
Staff — Will add Condition 20 putting the parking and path outside the 25-foot buffer.
Discussion (6:14) — **Erisman** – Asked for a condition that would move the parking out of the 25-foot buffer.
Motion — **Motion to Issue as amended.** (made by: Steinauer) (seconded by: LaFleur)
Vote — Carried unanimously

E. Monitoring Reports

1. Nantucket Conservation Foundation – 161 Polpis Road (44-16) SE48-2404
2. Nantucket Conservation Foundation – 2 Squidnet Way (21-119) SE48-2475
3. Grove Lane Realty Trust – 24 Grove Lane (41-439) SE48-2781
4. Nantucket Pond Coalition – White Goose Cove within Long Pond (59.3;60;62-46,47,104;35;9) SE48-2908

Presentation (6:17) — **Staff** – A representative of the Pond Coalition will give an update on the phragmites removal project.

Dr. Doug Horst, MD – They did their pre- and post-treatment assessments and submitted their reports. The affect of the herbicide won't be appreciated until spring during the period of regrowth; it is toward the end of the growing season and all the phragmites are dying out. In the area done last year, there is very little regrowth. Other plant life in the area is growing nicely and appears to be unaffected. The soil samples showed no significant change or activity. The water quality samples were not taken properly so can't make a comparison; the water quality testing is done by a company that was hired.

Erisman – Noted they are measuring CO^2 for invertebrates; asked if they are doing species analysis to ensure the CO^2 respiration is not from decomposing tissue.

Horst – Not in the soil. They are using CO^2 as a marker; there is virtually no activity in the sandy soil.

Golding – We asked for a baseline assessment; but it seems that might not have happened.

Horst – It did and is included in the report, which showed very minor changes. Temperatures changes could also affect the results of the test; seasonal changes could affect the invertebrate viability but they did not see a seasonal change. There was no visible or measurable change in the CO^2.

Erisman – She did not support this so will continue to question the CO^2 as a standard.

Steinauer – He believes the board's intent would have been to look more at the individual, small, invertebrate animal, not necessarily bacteria; this could all be bacteria.

Golding – Asked the volume of glyphosate that was used. When he went out there, he saw about 200 to 300 gallons of glyphosate concentrate in the support vehicle. He thought the volume was going to be no more than three or four gallons.

Steinauer – As a licensed applicator, he's required to fill out a form that states how much was used. That data should have been collected.

Horst – The volume is not listed in the report.

Erisman – She is concerned about drawing conclusions from the invertebrate sampling especially without the post-treatment sample, which allegedly wasn't able to be done. Next time a sample won't be relative unless there is post-treatment sampling.

Horst – Suggested that if the population rebounded well, that should be sufficient data of no adverse impact.

Erisman – Disagrees because the glyphosate would have had time to break down into chemicals that are naturally in the soil.

Horst – Asked if a temporary drop with a full recover in time be a reasonable means to measure the project.

Staff – Taking a snapshot and projecting it across a project is difficult to accept; we are using the data to make a better decision on a similar project.

Bennett – We have a baseline and a control area that can be used for comparison.

Erisman – Reviewed her concerns regarding the monitoring reports.

Staff – There were some issues with information that came in, but that wasn't recognized until after it was processed. That's why the Pond Coalition sent someone to present the report.

Horst – In regards to the water sampling, management ultimately decided we couldn't trust the results; we questioned what the company we hired did and learned the sample wasn't taken as expected.

Staff – It is important to recognize there are problems and make changes to correct them.

F. Other Business (6:22)

1. Approval of Minutes – 11/30/2016: Approved by unanimous consent.
2. Enforcement Actions

a. 84 Baxter Road:

Sitting — Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham
Staff — This was for house renovation and landscaping; a lot of the areas went right up to the wetland. The most troublesome is a white pipe in the landscaping the comes out of the ground; he can't ascertain what it is for. Even more troubling is a shed constructed without a permit; we specifically removed the shed because they wouldn't get the waivers necessary for its construction. Recommends that as part of the enforcement, the board order removal of the shed and ask about the pipe.
Discussion — Discussion about what the pipe might be.

Action **Motion to Issue the Enforcement Order requiring removal of the shed and applicant is to appear before the board to explain the pipe.** (made by: LaFleur) (seconded by: Erisman)

Vote Carried unanimously

b. 41 Shawkemo Road

Sitting Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Staff This is an unpermitted cutting; when he went to the site Green Plant iT Landscape, Inc. was there. The work was done on a rear parcel within the buffer for a coastal bank and wetland; the lumber was stacked behind the sign for 41 Shawkemo Road. The work actually took place on Nantucket Conservation Foundation (NCF) property, not unlike what has happened to Nantucket Island Land Bank. He has informed NCF of the enforcement order. If the board the chooses, an enforcement order can be issued to the party the work clearly benefitted or let NCF handle it as the Land Bank did. It was hard to tell how much was included in the cutting; it was mostly cedar trees and some brush. With this Enforcement Order, he wants to issue it and also wants the board's permission put the violator in the paper with NCF's blessing running the name and address with the pile of wood. He would like a public hearing after the new year to do a table for violations and to change and adopt the fines for scale of trees: for example $300 per tree over eight inches in diameter at the stump. He feels people just aren't getting it. He will first coordinate with NCF so that he doesn't infer with any proceedings on their part.

Discussion **Golding** – Noted that there is a body of law over this.

Action **Motion to Issue the Enforcement Order for NCF property on Shawkemo Road.** (made by: Steinauer) (seconded by: Erisman)

Vote Carried unanimously

3. Reports:
   a. CPC, Golding – Reviewed a handout listing the projects and monies being granted. Discussion about grants for affordable housing.
   b. NP&EDC, Bennett – Discussion about sand dispersal of 'Sconset Bluff Preservation Foundation (SBPF). Review of ConCom jurisdiction in regards to stormwater management.
   c. Mosquito Control Committee, Erisman – Nothing to report
4. Commissioners Comment
   a. Erisman – She was contacted by the Coastal Conservancy and D Anne Atherton about the 'Sconset Bluff and the potential trigger of failure criteria. Staff – Their first full monitoring reports arrived late today; those will be sent to the commissioners in the morning. There is a condition they need to provide updates every six months on the status of the relocation of Baxter Road; that has not happened to date. Both SBPF and the Town are responsible for those updates. He will review the report condition by condition to ensure the information the board needs are in there; if not he will state that then send the report off for review. That will trigger the four-week review period.
   b. Golding – Noted that in the article about the Madaket sewer defeat, there was no mention of lawn runoff; everything else was brought up.
   c. Steinauer – In regards to nitrogen in the harbor, he asked about the harbor surface area; it is about 5,250 acres. Looking at two pounds nitrogen atmospheric deposition per acre, that's almost five tons of nitrogen coming from the atmosphere into the harbor every year; if he remembers correctly during fertilizer committee, that is over half the input of nitrogen into the harbor; the rest is street runoff, lawn fertilizer, and septic. Staff – The percentage we use for atmospheric deposition is almost seventy percent. Atmospheric deposition has gone up over the last fifty years due to burning of fossil fuels.
5. Administrator/Staff Reports
   a. This past Monday, he travelled with a group of charterboat fishermen to the Mid- Atlantic Fisheries Council Meeting in Baltimore Maryland; they were there to support the inclusion of looking into the possibility of an area closure for small-mesh dragging for squid south of the Island out twelve miles. We petitioned that it needs to be looked because the dragging is so efficient it is destroying our recreational and other fisheries. The best example is that Martha's Vineyard has a five-week striped bass tournament; last year they had 4,000 entrants and only 121 striped bass were caught. We asked the council to include looking into a capacity amendment for squid; they heard three people and declined to take comment for anyone else and argue that narratives from recreational fishermen isn't sufficient to indicate there is an impact on the fish. On December 15, a similar meeting will be held by the State for within the three-mile line. They will be petitioning the state to hold a public hearing here on the Island. Spawning squid is the primary forage food for all the fish around Nantucket. The board might consider signing a letter of support for legislation on the small-mesh dragging. Explained that the Asian market for calamari is driving the industry because they don't have the squid any longer. The rest of the Massachusetts coast has protection; for some reason the Cape and Islands were omitted from protection.

Motion to Adjourn: 7:17 p.m.

Submitted by:
Terry L. Norton