FARLAND CORP.

ENGINEERING A BETTER TOMORROW

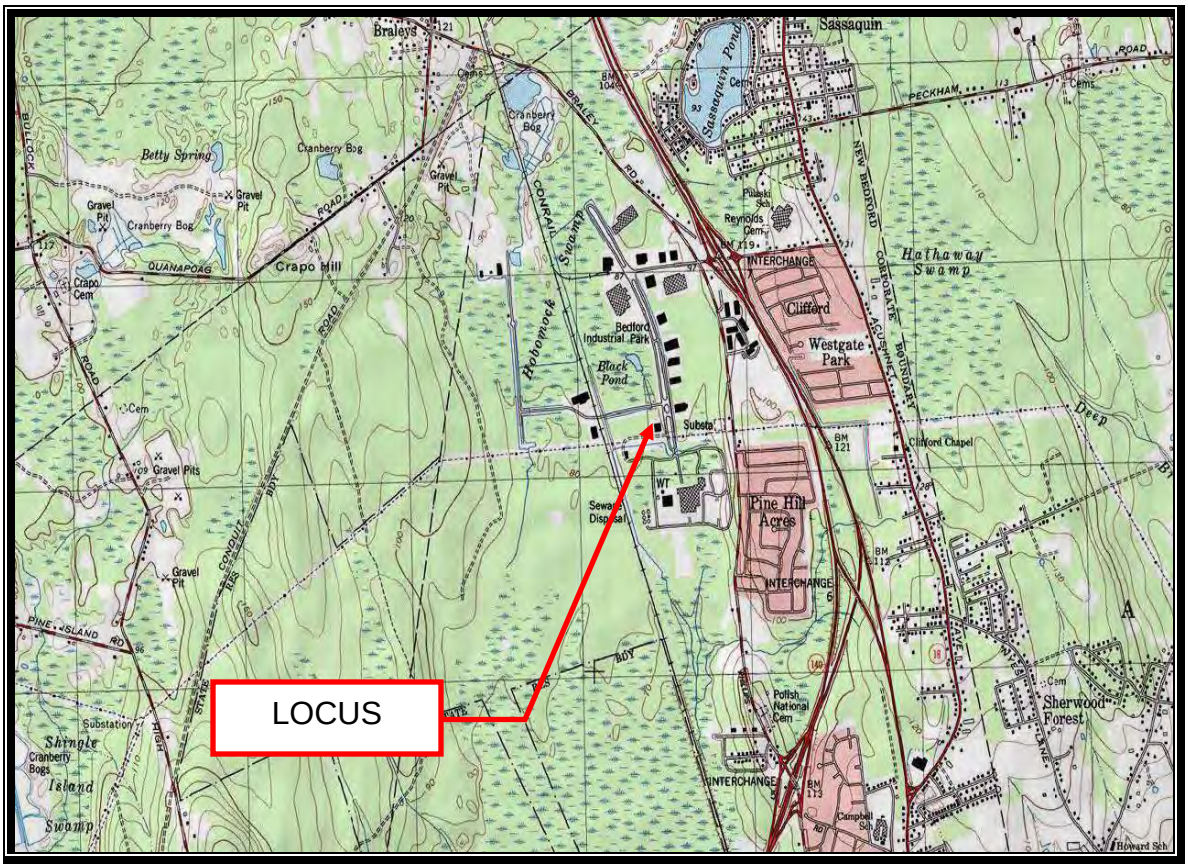
ENGINEERING | SITE WORK | LAND SURVEYING

NOTICE OF INTENT

August 8, 2018

SITE PLAN

ASSESSORS PLOT 133 LOT 21
127 DUCHAINE BOULEVARD
NEW BEDFORD, MASSACHUSETTS 02745



PREPARED FOR:

Heike Milhench
Milhench Supply Co.
127 Duchaine Boulevard
New Bedford, MA 02745

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NOTICE OF INTENT
(WPA FORM 3)

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

New Bedford
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):

127 Duchaine Boulevard — a. Street Address
New Bedford — b. City/Town
02745 — c. Zip Code

Latitude and Longitude:
41° 43' 9.5628" — d. Latitude
-70° 57' 12.8118" — e. Longitude

133 — f. Assessors Map/Plat Number
21 — g. Parcel /Lot Number

2. Applicant:

HeikE — a. First Name
Milhench — b. Last Name
Milhench Supply Co. — c. Organization
127 Duchaine Boulevard — d. Street Address
New Bedford — e. City/Town
MA — f. State
02745 — g. Zip Code
508-995-8331 — h. Phone Number
i. Fax Number
heike@milhench.com — j. Email Address

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

a. First Name
b. Last Name
Milhench 2001 Nominee Trust — c. Organization
127 — d. Street Address
Duchanie Boulevard — e. City/Town
MA — f. State
02745 — g. Zip Code
508-995-8331 — h. Phone Number
i. Fax Number
heike@milhench.com — j. Email address

4. Representative (if any):

Christian — a. First Name
Farland — b. Last Name
Farland Corp. — c. Company
401 County Street — d. Street Address
New Bedford — e. City/Town
MA — f. State
02740 — g. Zip Code
508-717-3479 — h. Phone Number
508-717-3481 — i. Fax Number
cfarland@farlandcorp.com — j. Email address

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

$500.00 — a. Total Fee Paid
$237.50 — b. State Fee Paid
$262.50 — c. City/Town Fee Paid

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

New Bedford
City/Town

A. General Information (continued)

6. General Project Description:

Construction of 10,680 sqaure foot addition with associated grading.

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)
Bristol	
c. Book	d. Page Number
4877	287

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☒ Bordering Vegetated Wetland	4,900 1. square feet	5,930 2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet replaced
f. ☐ Riverfront Area	1. Name of Waterway (if available) - **specify coastal or inland**	

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☐ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☐ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

New Bedford
City/Town

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

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings

Massachusetts Department of Environmental Protection
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WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
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New Bedford
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C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

   a. ☐ Yes ☒ No

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

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

   August 2017
   b. Date of map

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

   c. Submit Supplemental Information for Endangered Species Review*

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

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

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

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

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

   (b) ☐ Photographs representative of the site

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

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

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

New Bedford
City/Town

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

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

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

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing.
a. NHESP Tracking # _____ b. Date submitted to NHESP _____

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☒ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

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

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

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

North Shore - Hull to New Hampshire border:

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

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

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

New Bedford
City/Town

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

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

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

   a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

   a. ☒ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

      2. ☐ A portion of the site constitutes redevelopment

      3. ☐ Proprietary BMPs are included in the Stormwater Management System.

   b. ☐ No. Check why the project is exempt:

      1. ☐ Single-family house

      2. ☐ Emergency road repair

      3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

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

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

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

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

New Bedford
City/Town

D. Additional Information (cont'd)

3. ☒ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

Site Plan
a. Plan Title

Farland Corp.
b. Prepared By

Christian A. Farland, PE, LEED AP
c. Signed and Stamped by

August 6, 2018
d. Final Revision Date

1" = 40'
e. Scale

f. Additional Plan or Document Title

g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☒ Attach NOI Wetland Fee Transmittal Form

9. ☒ Attach Stormwater Report, if needed.

E. Fees

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

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

020058
2. Municipal Check Number

8/6/18
3. Check date

020059
4. State Check Number

8/6/18
5. Check date

Milhench
6. Payor name on check: First Name

7. Payor name on check: Last Name

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant	2. Date 8/7/18
3. Signature of Property Owner (if different)	4. Date 8/8/18
5. Signature of Representative (if any)	6. Date

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

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

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

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

NOI FEE TRANSMITTAL FORM

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

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

A. Applicant Information

1. Location of Project:

127 Duchaine Boulevard	New Bedford
a. Street Address	b. City/Town
020059	$237.50
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Heike	Milhench	
a. First Name	b. Last Name	
Milhench Supply Co.		
c. Organization		
127 Duchaine Boulevard		
d. Mailing Address		
New Bedford	MA	02745
e. City/Town	f. State	g. Zip Code
508-995-8331		heike@milhench.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

a. First Name	b. Last Name	
Milhench 2001 Nominee Trust		
c. Organization		
127 Duchaine Boulevard		
d. Mailing Address		
New Bedford	MA	02745
e. City/Town	f. State	g. Zip Code
508-995-8331		heike@milhench.com
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

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

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

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

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

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

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 2 j.)	1	$500.00	$500.00

Step 5/Total Project Fee:

Step 6/Fee Payments:

Total Project Fee:	$500.00 a. Total Fee from Step 5
State share of filing Fee:	$237.50 b. 1/2 Total Fee **less $**12.50
City/Town share of filling Fee:	$262.50 c. 1/2 Total Fee **plus** $12.50

C. Submittal Requirements

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

Department of Environmental Protection
Box 4062
Boston, MA 02211

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

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

BK 4877 PG 287
01/23/01 01:34 DOC. 1758
Bristol Co. S.D.

KNOW ALL MEN BY THESE PRESENTS that I, ARTHUR L. MILHENCH of Marion, Plymouth County, Massachusetts, for consideration paid, and in full consideration of One and 00/100 ($1.00) Dollars grant to Arthur L. Milhench, Trustee of THE MILHENCH 2001 NOMINEE TRUST, of even date and recorded herewith with a mailing address of 24 Point Road, Marion, Massachusetts 02738 with QUITCLAIM COVENANTS the land in New Bedford, Bristol County, Massachusetts, with any buildings thereon, bounded and described as follows:

Beginning at a cement bound in the westerly line of Duchaine Boulevard, and in the northerly line of an easement to the New Bedford Gas & Edison Light Company

SOUTH 84° 30' 50" WEST	five hundred eighty-three and 44/100 (583.44) feet to a cement bound at land now or formerly of said Greater New Bedford Industrial Foundation; thence
NORTH 10 ° 15' 37" WEST	by last named land, three hundred seventy-four and 99/100 (374.99) feet to a cement bound at other land now or formerly of said Foundation; thence
NORTH 84 ° 30' 50" EAST	by last named land, five hundred eighty-three and 44/100 (583.44) feet to a cement bound set in the westerly line of Duchaine Boulevard; thence
SOUTHERLY	in the westerly line of Duchaine Boulevard in an arc of a circle having a radius of fifteen thousand nine hundred eleven and 98/100 (15,911.98) feet, three hundred seventy-five (375) feet to the point of beginning.

Containing five (5) acres.

Being Parcel P as shown on a "Plan of Land in New Bedford, Mass., Southeastern, Mass. Development Corporation, New Bedford Industrial Found., Scale 1" - 200', Sept. 29, 1965, Tibbetts Engineering Corp., New Bedford, Mass." on file with the Bristol S. D. Registry of Deeds in Plan Book 73, Page 24.

Being the same premises conveyed by deed of Robert A. Hoagland and Gertrude F. Hoagland to Arthur L. Milhench dated April 23, 1984 and recorded in Bristol County (S.D.) registry of Deeds in Book 1890, Page 394.

Said premises are subject to mortgages, easement rights, and restrictions of record to extent the same remain in force and effect.

GRANTEE'S Address: 24 Point Road Marion, Massachusetts

The address in the margin is not part of this conveyance. Its accuracy has not been verified

DOWNEY & DOWNEY, P.C.
700 Pleasant Street, Fourth Floor
P.O. Box-3936
New Bedford, MA 02742

Said premises are conveyed subject to real estate taxes for the current fiscal year, which the Grantee, by the acceptance of this deed, hereby assumes and agrees to pay.

WITNESS my hand and seal this 18th day of January 2001

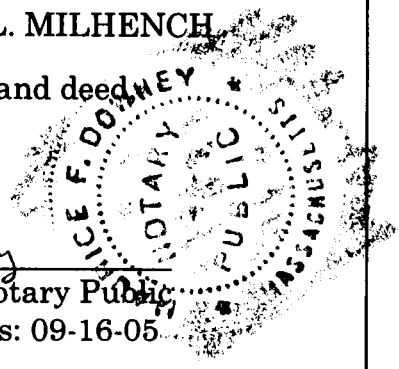
ARTHUR L. MILHENCH

COMMONWEALTH OF MASSACHUSETTS

Bristol, ss. January 18, 2001

Then personally appeared the above named ARTHUR L. MILHENCH and acknowledged the foregoing instrument to be his free act and deed before me,

Maurice F. Downey, Notary Public
My Commission expires: 09-16-05



AFFADAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

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

I, Matthew J. White hereby certify under the pains and penalties of perjury that in August of 2018, I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

> A Notice of Intent filed under the Massachusetts Wetlands Protection Act by Heike Milhench with the City of New Bedford Conservation Commission in August of 2018 for property located at 127 Duchaine Boulevard.

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

Name _____ Date 8/8/18

CERTIFIED ABUTTERS LIST

City of New Bedford

REQUEST *for a* CERTIFIED ABUTTERS LIST

This information is needed so that an official abutters list as required by MA General Law may be created and used in notifying abutters. You, as applicant, are responsible for picking up and paying for the certified abutters list from the assessor's office (city hall, room #109).

SUBJECT PROPERTY			
MAP #	133	LOT(S)#	21 & Portion of 12
ADDRESS: 127 Duchaine Boulevard, New Bedford, MA 02745			
OWNER INFORMATION			
NAME: Milhench 2001 Nominee Trust			
MAILING ADDRESS: 127 Duchaine Boulevard, New Bedford, MA 02745			
APPLICANT/CONTACT PERSON INFORMATION			
NAME (IF DIFFERENT): Stevie Carvalho			
MAILING ADDRESS (IF DIFFERENT): 401 County Street, New Bedford, MA 02740			
TELEPHONE #	508-717-3479		
EMAIL ADDRESS:	scarvalho@farlandcorp.com		

REASON FOR THIS REQUEST: *Check appropriate*	
	ZONING BOARD OF APPEALS APPLICATION
	PLANNING BOARD APPLICATION
✓	CONSERVATION COMMISSION APPLICATION
	LICENSING BOARD APPLICATION
	OTHER (*Please explain*):

PLANNING DEPARTMENT AUG 10 2017

Once obtained, the Certified List of Abutters must be attached to this Certification Letter.

Submit this form to the Planning Division Room 303 in City Hall, 133 William Street. You, as applicant, are responsible for picking up and paying for the certified abutters list from the assessor's office (city hall, room #109).

Official Use Only:

As Administrative Assistant to the City of New Bedford's Board of Assessors, I do hereby certify that the names and addresses as identified on the attached "abutters list" are duly recorded and appear on the most recent tax.

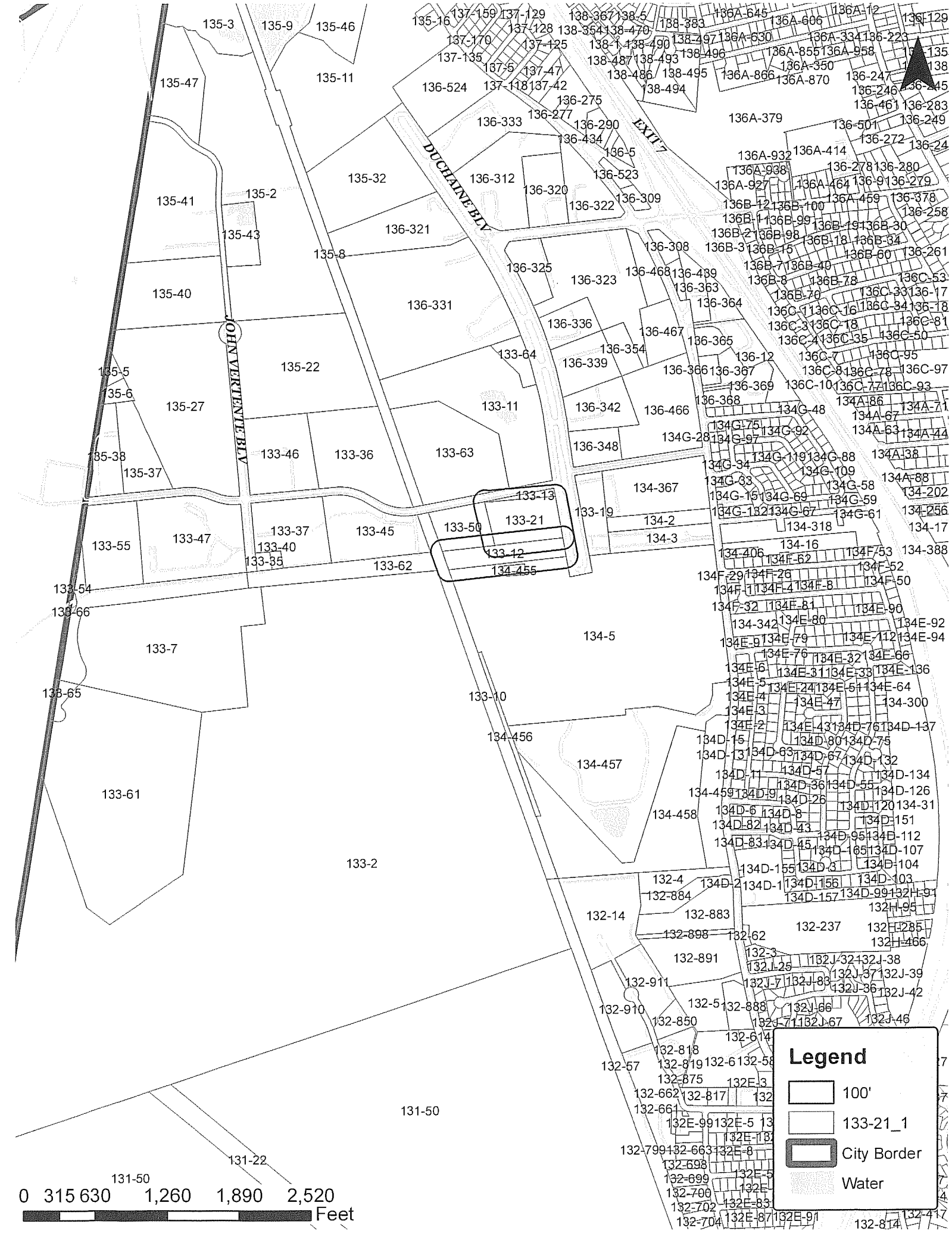
Carlos Amado	Juliette Mendall	8/14/2017
Printed Name	Signature	Date

August 11, 2017
Dear Applicant,

Please find below the List of Abutters within 100 feet of the property known as 127 Duchaine Blvd (133-21 & 12). The current ownership listed herein must be checked and verified by the City of New Bedford Assessor's Office. Following said verification, the list shall be considered a Certified List of Abutters.

Please note that multiple listed properties with identical owner name and mailing address shall be considered duplicates, and shall require only 1 mailing. Additionally, City of New Bedford-Owned properties shall not require mailed notice.

Parcel	Location	Owner and Mailing Address
133-12 R-ES	SAMUEL BARNETT BLVD	GREATER NEW BEDFORD, INDUSTRIAL FOUNDATION ~~227 UNION ST RM 607~~ 1213 Purchase Street Unit 2 NEW BEDFORD, MA 02740
133-10	RIGHT OF WAY	PENN CENTRAL CO, CONSOLIDATED RAIL CORP ~~P O BOX 8097~~ 500 Water Street Dept J910 ~~PHILADELPHIA, PA 19101~~ Jacksonville, FL 32202
133-50	30 SAMUEL BARNETT BLVD	IMTRA CORPORATION, 30 SAMUEL BARNET BLVD NEW BEDFORD, MA 02745
133-21	127 DUCHAINE BLVD -127D	MILHENCH ARTHUR L "TRUSTEE", MILHENCH 2001 NOMINEE TRUST (THE) 127 DUCHAINE BLVD NEW BEDFORD, MA 02745
133-13 WS	DUCHAINE BLVD	GREATER NEW BEDFORD, INDUSTRIAL FOUNDATION ~~227 UNION STREET RM 607~~ 1213 Purchase Street Unit 2 ✓ NEW BEDFORD, MA 02740
133-63 NS	SAMUEL BARNETT BLVD	GREATER NEW BEDFORD INDUSTRIAL FOUNDATION DEVELOPMENT, CORPORATION ~~227 UNION STREET~~ 1213 Purchase Street Unit 2 ✓ NEW BEDFORD, MA 02740~~-5960~~
134-5	100 DUCHAINE BLVD	LOGAL LLC, C/O ERIC DECOSTA ~~89 BLACKMER STREET~~ 100 Duchaine Blvd. NEW BEDFORD, ~~MA 02744~~ 02745


DUCHAINE BLV
JOHN VERTENTILE BLV
EXIT 7
Legend
100'
133-21_1
City Border
Water
0 315 630 1,260 1,890 2,520
Feet

ABUTTER NOTIFICATION

Notification to Abutters Under the Massachusetts Wetlands Protection Act

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

A. The name of the applicant is Heike Milhench, Milhench Supply Co.

B. The applicant has filed a Notice of Intent with the Conservation Commission for the municipality of New Bedford seeking permission to remove, fill, dredge or alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, Section 40).

C. The address of the lot where the activity is proposed is 127 Duchaine Boulevard (Assessor's Plot 133 Lot 21).

D. Copies of the Notice of Intent may be examined at the New Bedford Conservation Commission office at 133 William Street, Room 304 (Office of Environmental Stewardship) – New Bedford, MA 02740 between the hours of 8:30 a.m. and 3:30 p.m. on Monday through Friday.

E. Copies of the Notice of Intent may also be obtained from the applicant's representative FOR A REASONABLE FEE by calling: Farland Corp. at (508) 717-3479 between the hours of 8:00 am and 4:00 pm on Monday – Friday.

F. Information regarding the date, time and place of the public hearing may be obtained from the NEW BEDFORD CONSERVATION COMMISSION by calling: (508)991-6188.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in a publication with general circulation in the Community.

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

NOTE: You also may contact the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call: (508) 946-2700

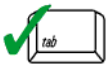
STORMWATER CHECKLIST

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

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



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature

8/9/18

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☐ New development

☐ Redevelopment

☒ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☐ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☒ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☒ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☐ Soil Analysis provided.

☒ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☐ Static ☒ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☒ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☒ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☒ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☒ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☒ The BMP is sized (and calculations provided) based on:

- ☒ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☐ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☒ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☒ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☒ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

FARLAND CORP.

ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

STORMWATER REPORT

August 8, 2018

SITE PLAN

ASSESSORS PLOT 133 LOT 21
127 DUCHAINE BOULEVARD
NEW BEDFORD, MASSACHUSETTS 02745

PREPARED FOR:

Heike Milhench
Milhench Supply Co.
127 Duchaine Boulevard

(MAIN OFFICE) 401 COUNTY STREET, NEW BEDFORD, MA 02740 P 508.717.3479 F 508.717.3481
ADDITIONAL OFFICES IN: TAUNTON ● MARLBOROUGH ● WARWICK, RI
WWW.FARLANDCORP.COM

New Bedford, MA 02745

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3. EXISTING CONDITIONS
4. STORMWATER MANAGEMENT OVERVIEW
5. STORMWATER MANAGEMENT STANDARDS

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EXHIBIT “B” – FIRM MAP

EXHIBIT “C” – NHESP PRIORITY AND ESTIMATED HABITAT MAP 2008

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STORMWATER MANAGEMENT REPORT AND HYDROLOGIC ANALYSIS

SECTION 1: Project Summary

The project area associated with this proposed development is located on the west side of Duchaine Boulevard, south of Samuel Barnet Boulevard in the New Bedford Business Park. The site is comprised of one existing parcel, identified as Assessors Plot 133, Lot 21, which consists of approximately 4.99 acres. The site is located entirely within the Industrial C Zoning District.

The site is partially developed, and consists of a 29,600+/- square foot industrial warehouse style building, with associated parking areas to the north and south of the building, and loading areas on the north side of the building. Access to the site is gained from three entrance driveways off of Duchaine Boulevard. Two entrance driveways serve the parking area north of the building, and one entrance driveway serves the parking area to the south of the building. Enclosed utility areas consisting of radio communications towers are located north of the northern parking area. A bordering vegetated wetland abuts the developed site to the north and west of the existing building and parking areas. The site is located entirely in Zone X, areas determined to be outside the 0.2% annual chance floodplain. The site is not located within an area identified by the Natural Heritage and Endangered Species Program as a Priority Habitat of Rare Species or an Estimated Habitat of Rare Wildlife.

The applicant is seeking permission construct an 10,680 s.f. (97.1 ft. x 110 ft.) addition on the west side of the building and conduct associated grading to control expected stormwater runoff due to the increase in total impervious area. The proposed addition will result in an alteration of approximately 4,900 s.f. of bordering vegetated wetland. The disturbed resource area will be replicated on-site.

In order to attenuate the increased stormwater runoff generated by the proposed increase of impervious site coverage and to provide the appropriate level of water quality treatment, stormwater management practices have been proposed. Proposed structural BMP's include roof drains leading to an infiltration basin.

SECTION 2: Methodology

Drainage computations were performed using the Natural Resources Conservation Services (NRCS) TR-20 method and HydroCAD® Drainage Calculation Software to determine the change in the existing and post-development runoff rates from each drainage area for the 2-, 10-, and 100-year 24 hour storm events. The limits of the work proposed to complete the project fall within an area subject to protection by the Wetlands Protection Act, therefore, compliance with DEP Stormwater Management Standards is required. Sketches of the existing and proposed watershed areas,

HydroCAD® Report, and copies of the calculation sheets are included as appendices to this report.

SECTION 3: Existing Conditions

The soils underlying the proposed development site are identified in the Natural Resources Conservation Service (NRCS) Soil Survey of Bristol County, Southern Part ***(see Exhibit D)***. The site soils are classified as 602 (Urban Land), 38A (Pipestone loamy sand, [HSG "A/D"]), 39A (Scarboro mucky fine sandy loam, [HSG "A/D"]), 52A (Freetown muck, [HSG "B/D"]), and 260A (Sudbury fine sandy loam, [HSG "B"]).

Soils identified as 602 are not assigned a Hydrologic Soils Group by the NRCS. For the purposes of performing hydrologic calculations, a hydrologic soil group "A" was assumed for these soils, based on on-site soil testing.

Soil testing was performed by Farland Corp. under the direction of Stevie Carvalho, on October 18, 2017 (Test Holes 1-3) to confirm the soil survey and determine the soil suitability for on-site stormwater and wastewater management purposes. The locations of the test holes are shown on the Site Plans.

The deep test-holes were performed to depths or approximately 10 feet to determine the estimated seasonal high groundwater elevation. Mottling was encountered at depths varying from 46" to 48", and standing water was encountered at depths varying from 73" to 77". The soil texture of the underlying parent material encountered in test holes consisted of medium sand.

SECTION 4: Stormwater Management Overview

Existing Conditions:

One design point has been chosen for this project, that being the bordering vegetated wetlands to the north and west of the project site. The design point receives stormwater runoff flows from one subcatchment area. Areas which will not be altered as a result of the proposed construction have not been included in this analysis.

The existing building roof area and those areas of upland directly north and west of the building shed runoff towards the bordering vegetated wetland. Areas to the south and east of the building shed runoff towards the southern property line and towards the ditch running along Duchaine Boulevard in a southerly flow direction.

Proposed Conditions:

Under proposed conditions, two subcatchment areas have been included in the drainage model for the same design point. One subcatchment area sheds runoff and eventually discharge toward the Bordering Vegetated Wetland design point. The other subcatchment area sheds runoff from the proposed roof area to a stormwater infiltration basin designed to capture and infiltrate the 100 –year 24-hour storm event. This basin is designed to overflow towards the wetland.

SECTION 5: Stormwater Management Standards

Standard 1:

- Under proposed conditions, there will be no new untreated discharges or erosion in wetland areas. Of the two subcatchment areas which discharge towards the BVW, one contains stormwater BMPs which treat, temporarily store, and discharge towards the resource area. The drainage outfall from the infiltration basin is intended to convey runoff from storms only in excess of the 100-year storm event, and is intended to serve as an emergency overflow. It is also provided with rip-rap outlet protection. The remaining clean runoff is shed overland towards the BVW following existing drainage patterns. This standard has been met.

Standard 2:

- The design of the stormwater system was designed for the post-development conditions to handle all storms' peak discharges and runoff volume to include the 2, 10, and 100-year storm events. The site drainage system was designed in consideration of the structural standards and techniques of the Best Management Practices (BMP) and Low Impact Development (LID) outlined in the "Stormwater Management Handbook".

  The results of site drainage calculations are presented in the following Table. The results are based upon evaluation of Pre-development conditions and the design of proposed surface drainage systems for the Post-development condition. These results show the Post-Development offsite runoff rates are reduced to less than the Pre-development conditions, thus meeting the BMP guidelines for this site development. This standard has been met.

Table 1 - Comparison of Pre- versus Post-Development Offsite Runoff

	Pre-Development		Post-Development	
Storm Frequency	**Rate (cfs)**	**Volume (cf)**	**Rate (cfs)**	**Volume (cf)**
2-Year Storm				
Runoff to Western BVW	<0.01	8	<0.01	3
10-Year Storm				
Runoff to Western BVW	0.01	286	<0.01	119
100-Year Storm				
Runoff to Western BVW	0.21	1,359	0.09	567

Standard 3:

- The proposed infiltration basin has been designed to recharge runoff from additional impervious area resulting from the proposed development. Because the project is a partial redevelopment project, required recharge calculations have been provided based on the increased impervious area, and not the total site impervious area. The required Recharge Volume has been calculated using the Simple Dynamic Method and calculations are provided in ***Exhibit F***. The proposed design provides the required recharge volume within the proposed basin for this additional impervious area. Drawdown Calculations have also been provided in ***Exhibit G***. This standard has been met.

Standard 4:

- The proposed stormwater management systems for this project have been designed to remove 80% of the average annual post construction load of Total Suspended Solids in accordance with this standard, as shown in calculations provided in ***Exhibit I***. Suitable practices for source control and pollution prevention have been identified in a long-term pollution prevention plan in ***Exhibit J***. Structural BMPs have been designed to capture the required water quality volume (***Exhibit H***) determined in accordance with the Stormwater Handbook. This standard has been met.

Standard 5:

- The use associated with this project is classified as a Land Use with Higher Potential Pollutant Load (LUHPPL); therefore, Standard 5 is applicable to this project. Stormwater runoff from the parking areas have been designed to flow to surface infiltration basins. This standard has been met.

Standard 6:

- The site does not discharge within the Zone II or IWPA of a public water supply, nor does it discharge near or to any critical areas. This standard does not apply.

Standard 7:

- This project is a partial re-development project. Much of the site is currently paved or covered with impervious cover. Those areas where new impervious coverage is proposed, as well as much of the existing impervious areas, have been designed to meet all of the required Stormwater Standards. The remaining existing impervious area, consisting of mainly existing roof areas and areas within the communication tower areas, will follow existing drainage patterns.

Standard 8:

- Where there will be less than one acre of disturbance, an EPA Construction General Permit and a Storm Water Pollution Prevention Plan (SWPPP) is not required. A construction period sedimentation and erosion control plan has been incorporated in the Site Plans. Safeguards have been incorporated into the construction period sedimentation and erosion control plans to ensure proper

operation and maintenance and to prevent negative impacts to the on-site wetland resource areas. This standard has been met.

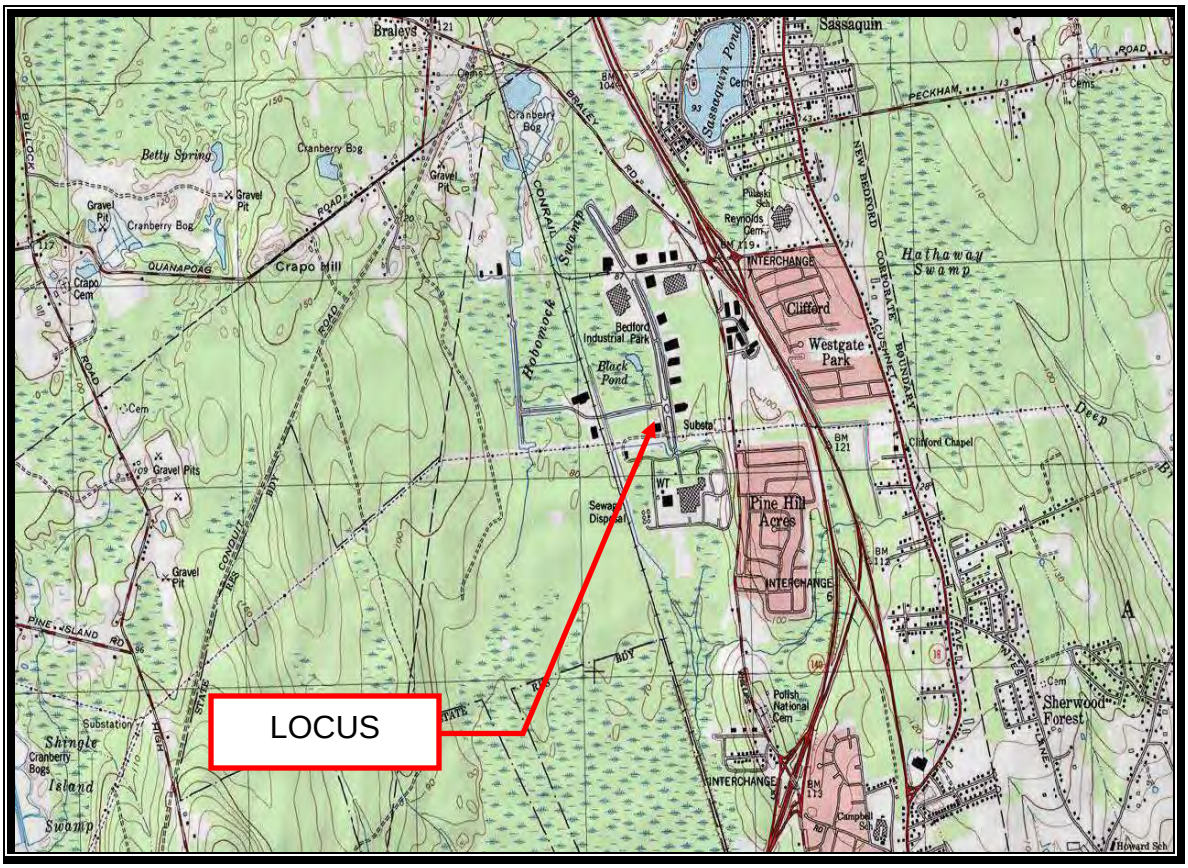
Standard 9:

- A long-term operation and maintenance plan has been prepared to ensure that stormwater management systems function as designed. ***(Exhibit K)***

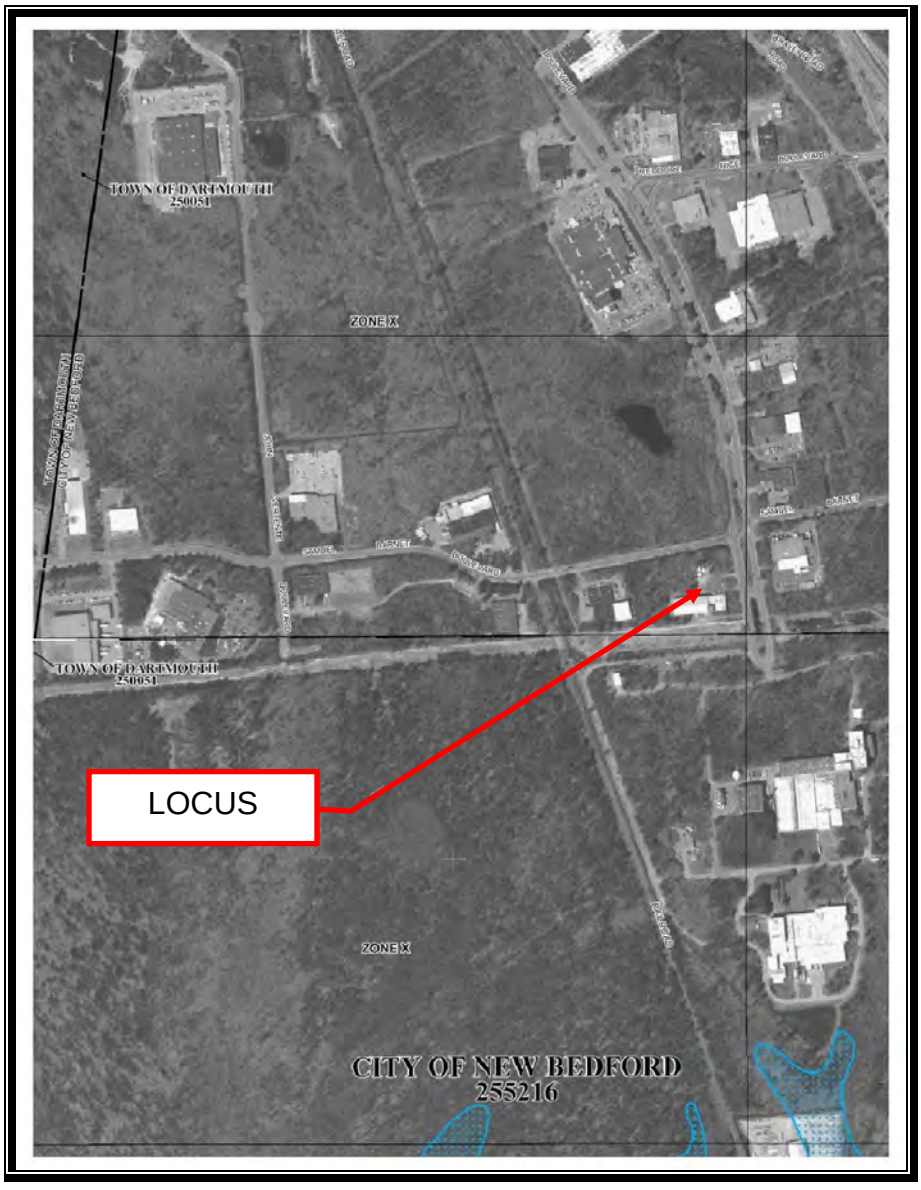
Standard 10:

- We are not proposing any illicit discharges as defined in the Stormwater Management Regulations. See attached letter in ***Exhibit L***

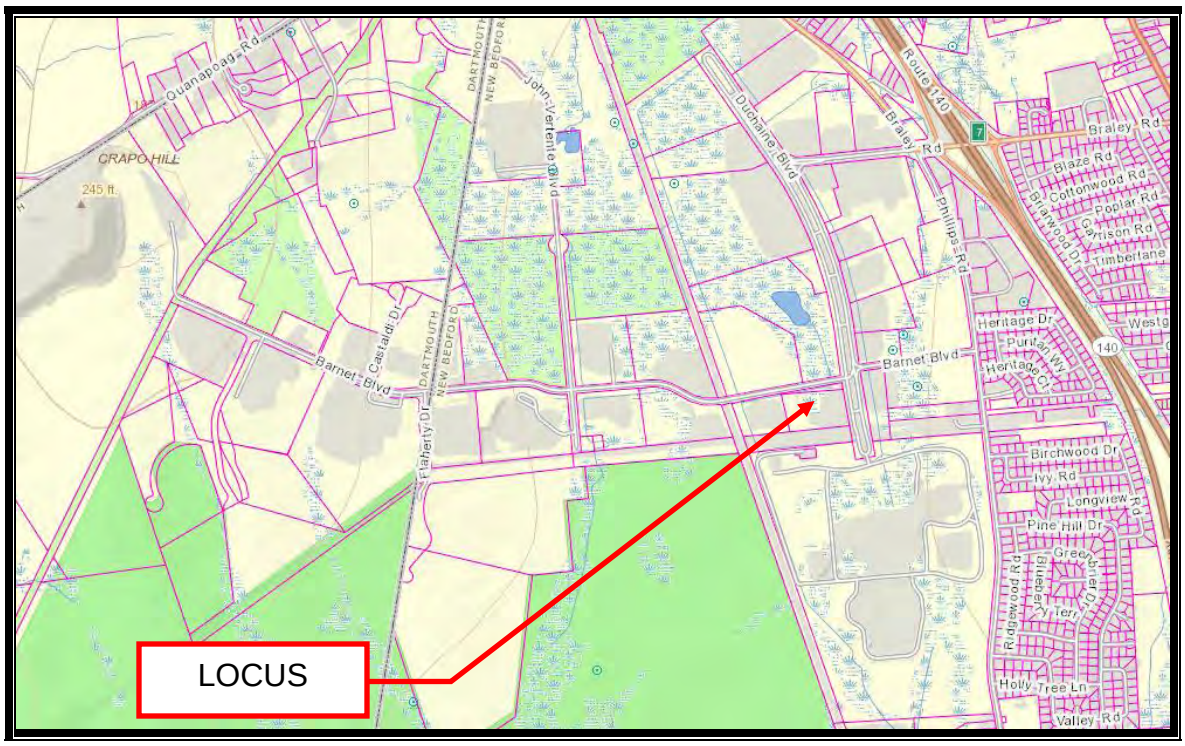
USGS MAP
TOPO! VERSION 2.1.0



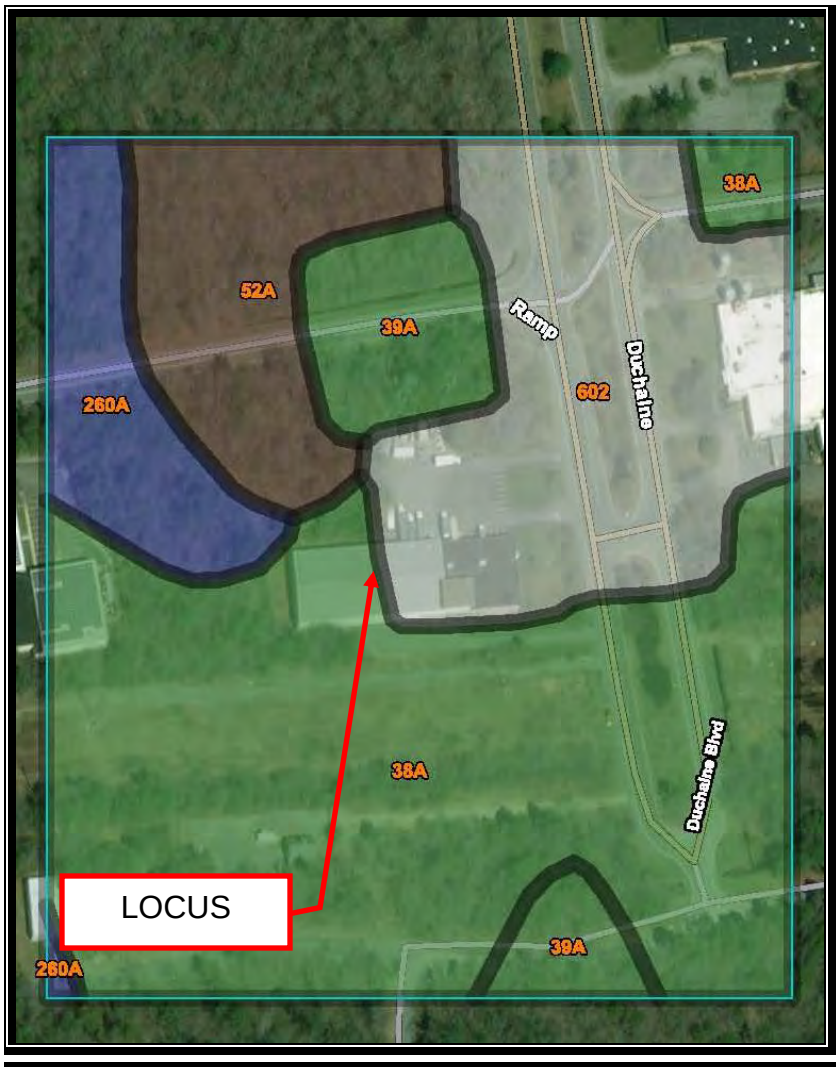
FIRM MAP
PANELS #25005C0377F
& 25005C0379F



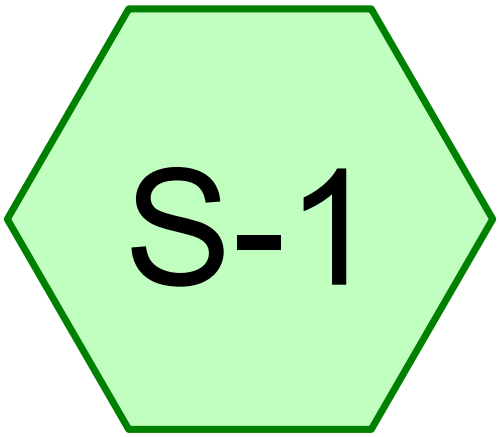
NHESP PRIORITY & ESTIMATED HABITAT MAP, 2017



NRCS SOIL MAP



HYDROLOGIC CALCULATIONS (STANDARD #2)



Tributary to North

Subcat Reach Pond Link

Drainage Diagram for 151077PRE
Prepared by Farland Corp.

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
16,025	36	Woods, Fair, HSG A (S-1)
5,200	49	50-75% Grass cover, Fair, HSG A (S-1)
21,225		**TOTAL AREA**

Summary for Subcatchment S-1: Tributary to North

Calculated Tc=3.3 minutes

Runoff = 0.00 cfs @ 23.42 hrs, Volume= 8 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.40"

Area (sf)	CN	Description
5,200	49	50-75% Grass cover, Fair, HSG A
16,025	36	Woods, Fair, HSG A
21,225	39	Weighted Average
21,225		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	160		0.44		**Direct Entry, pave to woods**

Summary for Subcatchment S-1: Tributary to North

Calculated Tc=3.3 minutes

Runoff = 0.01 cfs @ 13.66 hrs, Volume= 286 cf, Depth= 0.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.80"

Area (sf)	CN	Description
5,200	49	50-75% Grass cover, Fair, HSG A
16,025	36	Woods, Fair, HSG A
21,225	39	Weighted Average
21,225		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	160		0.44		**Direct Entry, pave to woods**

Summary for Subcatchment S-1: Tributary to North

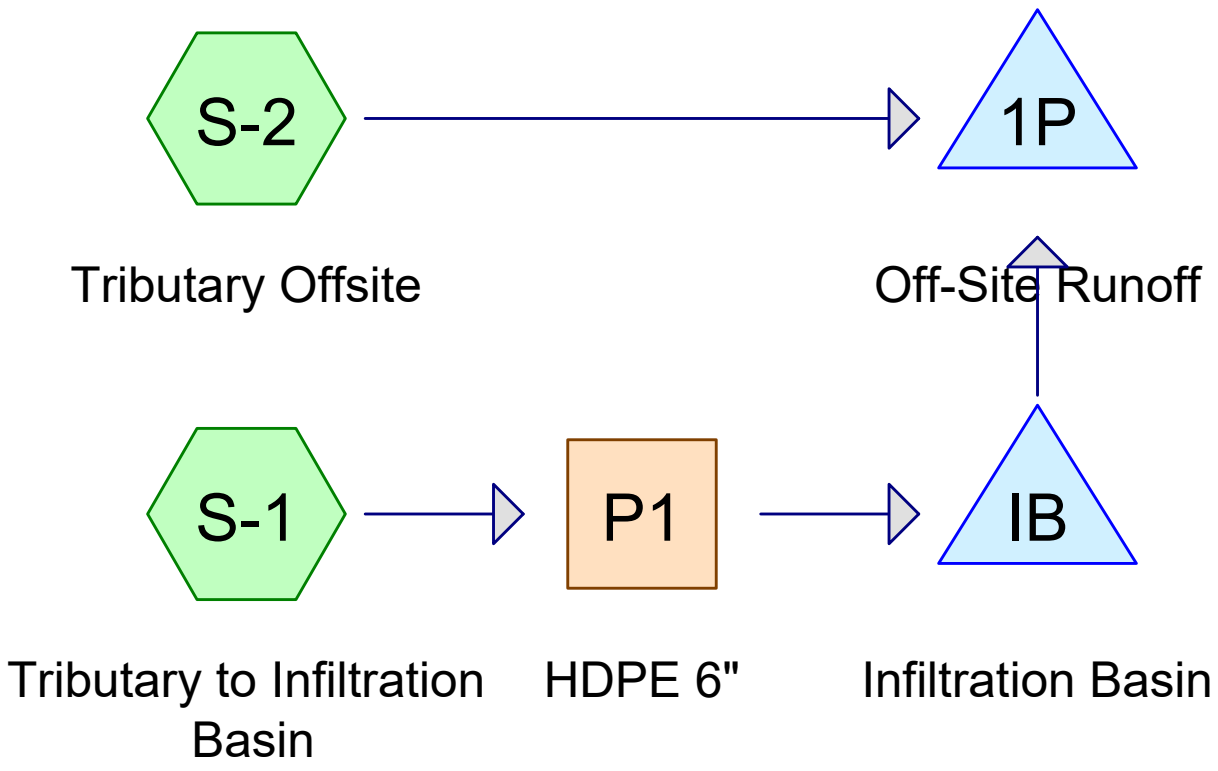
Calculated Tc=3.3 minutes

Runoff = 0.21 cfs @ 12.14 hrs, Volume= 1,359 cf, Depth= 0.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 year Rainfall=7.00"

Area (sf)	CN	Description
5,200	49	50-75% Grass cover, Fair, HSG A
16,025	36	Woods, Fair, HSG A
21,225	39	Weighted Average
21,225		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	160		0.44		**Direct Entry, pave to woods**



Subcat Reach Pond Link

Drainage Diagram for 151077POST
Prepared by Farland Corp.

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
8,855	39	>75% Grass cover, Good, HSG A (S-2)
10,680	98	Rooftop (S-1)
19,535		**TOTAL AREA**

Summary for Subcatchment S-1: Tributary to Infiltration Basin

Runoff = 0.81 cfs @ 12.08 hrs, Volume= 2,818 cf, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.40"

	Area (sf)	CN	Description
*	10,680	98	Rooftop
	10,680		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment S-2: Tributary Offsite

Runoff = 0.00 cfs @ 23.42 hrs, Volume= 3 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 year Rainfall=3.40"

Area (sf)	CN	Description
8,855	39	>75% Grass cover, Good, HSG A
8,855		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

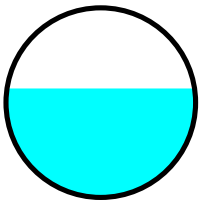
Summary for Reach P1: HDPE 6"

Inflow Area = 10,680 sf,100.00% Impervious, Inflow Depth = 3.17" for 2 year event
Inflow = 0.81 cfs @ 12.08 hrs, Volume= 2,818 cf
Outflow = 0.81 cfs @ 12.08 hrs, Volume= 2,818 cf, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.95 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.37 fps, Avg. Travel Time= 0.3 min

Peak Storage= 5 cf @ 12.08 hrs, Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 0.50', Capacity at Bank-Full= 1.29 cfs

6.0" Diameter Pipe, n= 0.013 Corrugated PE, smooth interior
Length= 47.1' Slope= 0.0531 '/'
Inlet Invert= 83.00', Outlet Invert= 80.50'



Summary for Pond 1P: Off-Site Runoff

Inflow Area = 19,535 sf, 54.67% Impervious, Inflow Depth = 0.00" for 2 year event
Inflow = 0.00 cfs @ 23.42 hrs, Volume= 3 cf
Primary = 0.00 cfs @ 23.42 hrs, Volume= 3 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond IB: Infiltration Basin

Inflow Area = 10,680 sf,100.00% Impervious, Inflow Depth = 3.17" for 2 year event
Inflow = 0.81 cfs @ 12.08 hrs, Volume= 2,818 cf
Outflow = 0.18 cfs @ 12.48 hrs, Volume= 2,819 cf, Atten= 77%, Lag= 23.7 min
Discarded = 0.18 cfs @ 12.48 hrs, Volume= 2,819 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 80.76' @ 12.48 hrs Surf.Area= 960 sf Storage= 653 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 19.5 min (774.9 - 755.4)

Volume	Invert	Avail.Storage	Storage Description
#1	80.00'	2,119 cf	**Custom Stage Data (Irregular)**Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
80.00	677	111.0	0	0	677
81.00	1,049	135.0	856	856	1,163
82.00	1,489	157.0	1,263	2,119	1,694

Device	Routing	Invert	Outlet Devices
#1	Discarded	80.00'	**8.270 in/hr Exfiltration over Surface area**
#2	Primary	81.75'	**10.0' long x 5.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.18 cfs @ 12.48 hrs HW=80.76' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.18 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment S-1: Tributary to Infiltration Basin

Runoff = 1.15 cfs @ 12.08 hrs, Volume= 4,062 cf, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.80"

	Area (sf)	CN	Description
*	10,680	98	Rooftop
	10,680		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment S-2: Tributary Offsite

Runoff = 0.00 cfs @ 13.66 hrs, Volume= 119 cf, Depth= 0.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 year Rainfall=4.80"

Area (sf)	CN	Description
8,855	39	>75% Grass cover, Good, HSG A
8,855		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

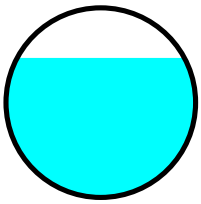
Summary for Reach P1: HDPE 6"

Inflow Area = 10,680 sf,100.00% Impervious, Inflow Depth = 4.56" for 10 year event
Inflow = 1.15 cfs @ 12.08 hrs, Volume= 4,062 cf
Outflow = 1.15 cfs @ 12.08 hrs, Volume= 4,062 cf, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.44 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.64 fps, Avg. Travel Time= 0.3 min

Peak Storage= 7 cf @ 12.08 hrs, Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 0.50', Capacity at Bank-Full= 1.29 cfs

6.0" Diameter Pipe, n= 0.013 Corrugated PE, smooth interior
Length= 47.1' Slope= 0.0531 '/'
Inlet Invert= 83.00', Outlet Invert= 80.50'



Summary for Pond 1P: Off-Site Runoff

Inflow Area = 19,535 sf, 54.67% Impervious, Inflow Depth = 0.07" for 10 year event
Inflow = 0.00 cfs @ 13.66 hrs, Volume= 119 cf
Primary = 0.00 cfs @ 13.66 hrs, Volume= 119 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond IB: Infiltration Basin

Inflow Area = 10,680 sf,100.00% Impervious, Inflow Depth = 4.56" for 10 year event
Inflow = 1.15 cfs @ 12.08 hrs, Volume= 4,062 cf
Outflow = 0.22 cfs @ 12.52 hrs, Volume= 4,063 cf, Atten= 81%, Lag= 26.2 min
Discarded = 0.22 cfs @ 12.52 hrs, Volume= 4,063 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 81.18' @ 12.52 hrs Surf.Area= 1,129 sf Storage= 1,086 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 31.0 min (779.9 - 748.9)

Volume	Invert	Avail.Storage	Storage Description
#1	80.00'	2,119 cf	**Custom Stage Data (Irregular)**Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
80.00	677	111.0	0	0	677
81.00	1,049	135.0	856	856	1,163
82.00	1,489	157.0	1,263	2,119	1,694

Device	Routing	Invert	Outlet Devices
#1	Discarded	80.00'	**8.270 in/hr Exfiltration over Surface area**
#2	Primary	81.75'	**10.0' long x 5.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.22 cfs @ 12.52 hrs HW=81.18' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.22 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment S-1: Tributary to Infiltration Basin

Runoff = 1.68 cfs @ 12.08 hrs, Volume= 6,017 cf, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 year Rainfall=7.00"

	Area (sf)	CN	Description
*	10,680	98	Rooftop
	10,680		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment S-2: Tributary Offsite

Runoff = 0.09 cfs @ 12.14 hrs, Volume= 567 cf, Depth= 0.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100 year Rainfall=7.00"

Area (sf)	CN	Description
8,855	39	>75% Grass cover, Good, HSG A
8,855		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

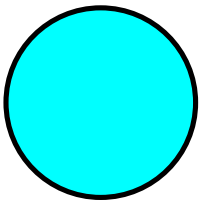
Summary for Reach P1: HDPE 6"

Inflow Area = 10,680 sf,100.00% Impervious, Inflow Depth = 6.76" for 100 year event
Inflow = 1.68 cfs @ 12.08 hrs, Volume= 6,017 cf
Outflow = 1.34 cfs @ 12.03 hrs, Volume= 6,017 cf, Atten= 20%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.50 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.96 fps, Avg. Travel Time= 0.3 min

Peak Storage= 9 cf @ 12.04 hrs, Average Depth at Peak Storage= 0.50'
Bank-Full Depth= 0.50', Capacity at Bank-Full= 1.29 cfs

6.0" Diameter Pipe, n= 0.013 Corrugated PE, smooth interior
Length= 47.1' Slope= 0.0531 '/'
Inlet Invert= 83.00', Outlet Invert= 80.50'



Summary for Pond 1P: Off-Site Runoff

Inflow Area = 19,535 sf, 54.67% Impervious, Inflow Depth = 0.36" for 100 year event
Inflow = 0.09 cfs @ 12.14 hrs, Volume= 581 cf
Primary = 0.09 cfs @ 12.14 hrs, Volume= 581 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond IB: Infiltration Basin

Inflow Area = 10,680 sf,100.00% Impervious, Inflow Depth = 6.76" for 100 year event
Inflow = 1.34 cfs @ 12.03 hrs, Volume= 6,017 cf
Outflow = 0.30 cfs @ 12.53 hrs, Volume= 6,019 cf, Atten= 77%, Lag= 29.9 min
Discarded = 0.27 cfs @ 12.53 hrs, Volume= 6,005 cf
Primary = 0.04 cfs @ 12.53 hrs, Volume= 14 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 81.76' @ 12.53 hrs Surf.Area= 1,385 sf Storage= 1,821 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 48.0 min (791.2 - 743.3)

Volume	Invert	Avail.Storage	Storage Description
#1	80.00'	2,119 cf	**Custom Stage Data (Irregular)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
80.00	677	111.0	0	0	677
81.00	1,049	135.0	856	856	1,163
82.00	1,489	157.0	1,263	2,119	1,694

Device	Routing	Invert	Outlet Devices
#1	Discarded	80.00'	**8.270 in/hr Exfiltration over Surface area**
#2	Primary	81.75'	**10.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.27 cfs @ 12.53 hrs HW=81.76' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.27 cfs)

Primary OutFlow Max=0.04 cfs @ 12.53 hrs HW=81.76' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.04 cfs @ 0.28 fps)

RECHARGE CALCULATIONS (STANDARD #3)

STANDARD 3: RECHARGE CALCULATIONS

REQUIRED:

Recharge Volume Required ("A" Soils) = [Impervious Area x (Recharge Depth inches/12)]
= [10,680 sf x (0.60"/12)]
= 534 cf (Required Volume)

PROVIDED:

Infiltration Basin #1:

- Cumulative Volume below the lowest outlet (Elev.=81.75) = 1,803 c.f.

Total Recharge Volume Provided = 1,803 c.f. >>> 534 c.f. (required)

New On-Site Impervious

Infiltration Basin

Subcat Reach Pond Link

Drainage Diagram for RECHARGE
Prepared by Farland Corp.

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.245	98	Rooftop (1S)
0.245		**TOTAL AREA**

Summary for Subcatchment 1S: New On-Site Impervious

Runoff = 0.60 cfs @ 12.08 hrs, Volume= 0.025 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 11.00-13.00 hrs, dt= 0.01 hrs
Type III 24-hr RECHARGE Rainfall=2.53"

	Area (sf)	CN	Description
*	10,680	98	Rooftop
	10,680		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Minimum**

Summary for Pond 2P: Infiltration Basin

Inflow Area = 0.245 ac,100.00% Impervious, Inflow Depth > 1.23" for RECHARGE event
Inflow = 0.60 cfs @ 12.08 hrs, Volume= 0.025 af
Outflow = 0.60 cfs @ 12.08 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.60 cfs @ 12.08 hrs, Volume= 0.025 af

Routing by Dyn-Stor-Ind method, Time Span= 11.00-13.00 hrs, dt= 0.01 hrs
Peak Elev= 100.00' @ 12.08 hrs Surf.Area= 5,014 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (724.2 - 724.2)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	4,513 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
100.00	5,014	0	0
100.90	5,014	4,513	4,513

Device	Routing	Invert	Outlet Devices
#1	Discarded	100.00'	**8.270 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.96 cfs @ 12.08 hrs HW=100.00' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.96 cfs)

DRAWDOWN CALCULATIONS (STANDARD #3)

STANDARD 3: DRAWDOWN CALCULATIONS

$$Time_{drawdown} = \frac{Rv}{(K)(Bottom\ Area)}$$

Where:
Rv = Required Storage Volume = (F)(impervious area)
K = Saturated Hydraulic Conductivity
For "Static" and "Simple Dynamic" Methods, use Rawls Rate (see Table 2.3.3).
For "Dynamic Field" Method, use 50% of the in-situ saturated hydraulic conductivity.

INFILTRATION BASIN #1

$$Time_{drawdown} = \frac{Rv}{(K)(Bottom\ Area)} = 3.86 \text{ hours}$$

Rv =	*1,803*	*C.F.*	*(Recharge Volume Provided)*
K =	*8.27*	*inch/hr.*	
BA =	*677*	*S.F.*	

TABLE 2.3.3

Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate Inches/Hour
Sand	A	8.27
Loamy Sand	A	2.41
Sandy Loam	B	1.02
Loam	B	0.52
Silt Loam	C	0.27
Sandy Clay	C	0.17
Clay Loam	D	0.09
Silty Clay Loam	D	0.06
Sandy Clay	D	0.05
Silty Clay	D	0.04
Clay	D	0.02

WATER QUALITY VOLUME CALCULATIONS (STANDARD #4)

ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

LOCATION: 127 Duchaine Boulevard - New Bedford PROJECT #: 15-1077 DATE: 8/8/18

REV:

STANDARD 4: WATER QUALITY VOLUME:

Water Quality Treament Volume Formula:

V_{WQ} = D_{WQ} X (1 ft. / 12 in.) X A_{IMP}

Where,

V_{WO} = *Required Water Quality Volume* (in cubic feet)

D_{WQ} = Water Quality Depth: one-inch for discharges within a Zone II or IWPA, to or near another critical area, runoff from a LUHPPL, or exfiltration to soils with infiltration rate greater than 2.4 inches/hour; 1/2 -inch for discharges near or to other areas

A_{IMP} = Impervious Area (in cubic feet)

STORM WATER OUTFALL: OUTLET FROM INFILTRATION BASIN #1

CONTRIBUTING IMPERVIOUS AREA (A_{IMP}) = 10,680 S.F.

V_{WQ}	=	**1.0**	inch	X	1 ft/ 12 in.	X	10,680	s.f.	=	**890** c.f.

STRUCTURAL BMP TREATMENT TRAIN:

Infiltration Basin #1 (Below lowest outlet invert)

*Refer to Groundwater Recharge Calculations	=	1,803 c.f.
TOTAL WATER QUALITY VOLUME PROVIDED IN BMP TREATMENT TRAIN	=	**1,803** c.f.

TSS REMOVAL CALCULATIONS (STANDARD #4)

FARLAND CORP.

ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

LOCATION: 127 Duchaine Boulevard - New Bedford

PROJECT #: 15-1077

DATE: 8/8/18

REV:

STANDARD 4: TSS REMOVAL CALCULATIONS:

STORM WATER OUTFALL: OUTLET FROM INFILTRATION BASIN #1

Runoff to Infiltration Basin #1 is from Roof Area only. No Pre-treatment is provided

TREATMENT

A BMP	B TSS Removal Rate	C Starting TSS Load*	D Amount Removed (BXC)	E Remaining Load (C-D)
Infiltration Basin (with adequate pre-treatment)	80%	1.00	0.80	0.20
		Total TSS Removal=	0.80	

LONG TERM POLLUTION PREVENTION PLAN (STANDARD #4)

FARLAND CORP.

ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

Long Term Pollution Prevention Plan

Site Plan
127 Duchaine Boulevard
New Bedford, MA 02745

August 8, 2018

Record Owner(s):

Assessor's Map 133 Lot 21:
Arthur L. Milhench, Trustee
127 Duchaine Boulevard
New Bedford, MA 02745

Prepared For:

Heike Milhench
Milhench Supply Co.
121 Duchaine Boulevard
New Bedford, MA 02745

Prepared By:

Farland Corp.
Project No. 15-1077

Long Term Pollution Prevention Plan

This Long Term Pollution Prevention Plan serves to outline good housekeeping practices in order to prevent pollution of the wetland resource areas and surrounding environment. The Long Term Operation & Maintenance Plan shall be taken as part of this document as it is a critical part of this plan and shall be adhered to. Proper operation and maintenance records shall be kept on file at all times.

Snow disposal shall be carried out by the owner. The owner should follow DEP guideline #BWR G2015-01 for all snow removal requirements. For this site, it is anticipated that snow will be plowed from the impervious parking and driveway areas and piled along the shoulders of the driveway areas. Snow along the building is anticipated to be removed by shovel or snow blower.

Snow disposal in the following areas are prohibited:

- Dumping snow in the bordering vegetated wetlands is prohibited.
- Dumping of snow in stormwater drainage basins is prohibited. Snow combined with sand and debris may block a storm drainage system, causing localized flooding. A high volume of sand, sediment, and litter released from melting snow also may be quickly transported through the system into surface water.

Illicit discharges to the stormwater management system are prohibited. Illicit discharges are those that are not entirely comprised of stormwater. Notwithstanding the foregoing, an illicit discharge does not include discharges from the following activities or facilities; firefighting, water line flushing, landscape irrigation, uncontaminated groundwater, potable water sources, foundation drains, air conditioning condensation, footing drains, individual residence car washing, flows from riparian habitats and wetlands, de-chlorinated water from swimming pools, water used for street washing, and water used to clean residential buildings without detergents. Measures are provided below to prevent illicit discharges to the stormwater management system.

In order to prevent or minimize the potential for a spill of hazardous substances or oils to contaminate stormwater, a spill control and containment kit, including spill berm, absorbent materials, rags, gloves, and trash containers, shall be readily available. All product manufacturers recommended spill cleanup methods shall be known by maintenance personnel, who shall be trained regarding these procedures and the location of the cleanup procedure information and supplies. In the event of oil, gasoline or other hazardous waste spill on-site, the New Bedford Fire Department, DEP and the Conservation Agent shall be notified immediately. For spills of less than ¼ gallon, clean-up with absorbent materials or other appropriate means, unless circumstances dictate that the spill should be treated by a professional emergency response contractor. Spills which exceed the reportable quantities of substances mentioned in 40 CFR 110, 40 CFR 117, or 40 CFG 302 must be immediately reported to the EPA National Response Center (800) 242-8802. Any drainage inlet that may be affected by the spill shall be covered immediately with a spill protector drain cover or similar product, or a spill berm

placed around the perimeter of the opening to prevent any contamination into the drainage system. Proper cleanup and disposal of hazardous wastes must follow all applicable local and state regulations and must be carried out by a qualified contractor.

The maintenance of all lawns, gardens and landscaped areas shall be performed by the owner. Good housekeeping practices should include proper storage and minimal use of cleaning products and fertilizers. Facility owner should consult with a professional landscaper for proper maintenance of lawns and landscaped areas.

LONG TERM OPERATION & MAINTENANCE PLAN & LOGS (STANDARD #9)

FARLAND CORP.

ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

Long Term Operation and Maintenance Plan

Site Plan
127 Duchaine Boulevard
New Bedford, MA 02745

August 8, 2018

Record Owner(s):

Assessor's Map 133 Lot 21:
Arthur L. Milhench, Trustee
127 Duchaine Boulevard
New Bedford, MA 02745

Prepared For:

Heike Milhench
Milhench Supply Co.
121 Duchaine Boulevard
New Bedford, MA 02745

Prepared By:

Farland Corp.
Project No. 15-1077

The Operator, Owner, and Party Responsible for Operation and Maintenance of the Stormwater BMP's will be the landowner of the property on which the BMP is located. The responsible party shall:

a) Maintain an operation and maintenance log for at least three years, including inspections, repairs, replacement and disposal (for disposal, the log shall indicate the type of material and disposal location);
b) Make this log available to MassDEP and the Conservation Commission upon request during normal business hours; and
c) Allow members and agents of the MassDEP and the Conservation Commission to enter and inspect the premises to evaluate and ensure that the responsible party complies with the Operation and Maintenance Plan requirements for each BMP.

Street Sweeping

It shall be the responsibility of the owner to:

Inspections:

Inspect sediment deposit accumulations on the parking lots quarterly.

Maintenance:

Sweep parking lots at least twice annually, during March or April before spring rains wash residual sand from winter applications into stormwater systems, and in the fall after leaf drop.

Dispose of the accumulated sediment and hydrocarbons in accordance with local, state, and federal guidelines and regulations.

Stone/ Rip Rap Areas

The rip rap areas are to be inspected and maintained by the owner.

It shall be the responsibility of the owner to:

Inspections:

Inspect the rip rapped areas quarterly.

Maintenance:

Remove accumulated sediment, trash, leaves and debris at least annually. Check for signs of erosion and repair as need. Replace any damaged areas with new rip rap of the same size.

Dispose of the accumulated sediment and hydrocarbons in accordance with local, state, and federal guidelines and regulations.

Infiltration Basin

The basin is to be inspected and maintained by the owner.

It shall be the responsibility of the owner to:

Inspections:

Inspect the basin quarterly and after major storms (>3.2" of rain in 24 hours)

Inspect basin for settlement, subsidence, erosion, cracking or tree growth on the embankment, condition of stone; sediment accumulation around the outlet or within the basin; and erosion within the basin and banks.

Inspect outlet for evidence of clogging, sediment deposits or signs of erosion around the structure.

Ensure that the basin is operating as designed. If inspection shows that a basin fails to fully drain within 72 hours following a storm event, then the responsible party shall retain a Registered Professional Civil Engineer licensed in the state of Massachusetts to assess the reason for infiltration/ detention failure and recommend corrective action for restoring the intended functions. For an infiltration basin, fully drained means that there is no ponding occurring in the infiltration basin.

Maintenance:

When mowing the basin, mow the buffer area, side slopes, and basin bottom. Remove grass clippings and accumulated debris. Mow three times per year in May, July and September.

Remove accumulated trash, leaves, debris in basin every month between April and November of each year. Inspect areas in February of each year, if possible, to determine whether the aforementioned services are required.

If the infiltration basin is ponding in areas or not infiltrating as designed, use deep tilling to break up clogged surfaces, and re-vegetate immediately.

Replace stone in forebay and at all pipe ends once every five (5) years or when sediment depth is excessive.

Do not store snow in basin area.

Remove sediment from the basin and as necessary and at least once every 5 years but wait until the floor of the basin is thoroughly dry. After removing sediment, replace any vegetation damaged during clean-out by either re-seeding or re-sodding.

Dispose of the accumulated sediment and hydrocarbons in accordance with local, state, and federal guidelines and regulations.

Drain Lines

After construction, the drain lines shall be inspected after every major storm for the first few months to ensure proper functions. Presence of accumulated sand and silt would indicate more frequent maintenance of the pre-treatment devices is required. Thereafter, the drain lines shall be inspected at least once per year. Accumulated silt shall be removed by a vactor truck or other method preferred.

Access Ways & Parking Areas

Inspections:

- Inspect Daily
- Clear any debris daily
- Sweep bi-annually
- Repair cracks and potholes as needed
- Maintain painted lines as necessary for visibility

Fences/Walls

Inspections:

- Inspect Monthly
- Remove debris and litter daily
- Repair as necessary

Landscaping

Inspections:

- Inspect weekly
- Remove debris and litter as necessary
- Prune and fertilize bi-annually
- Mow lawn as necessary
- Fertilize quarterly

“127 Duchaine Boulevard”
Operation & Maintenance Log Form

STRUCTURAL SEDIMENT CONTROL BMPS

BMP	DATE INSPECTED	SEDIMENT BUILDUP (YES/NO)	IF SEDIMENT BUILDUP, DATE CLEANED
Infiltration Basin #1			
OTHER:			

Maintenance Notes:

_____
_____
_____

TO BE PERFORMED BY:_____ON OR BEFORE:_____

ILLICIT DISCHARGE STATEMENT (STANDARD #10)

Illicit Discharge Compliance Statement (IDCS)

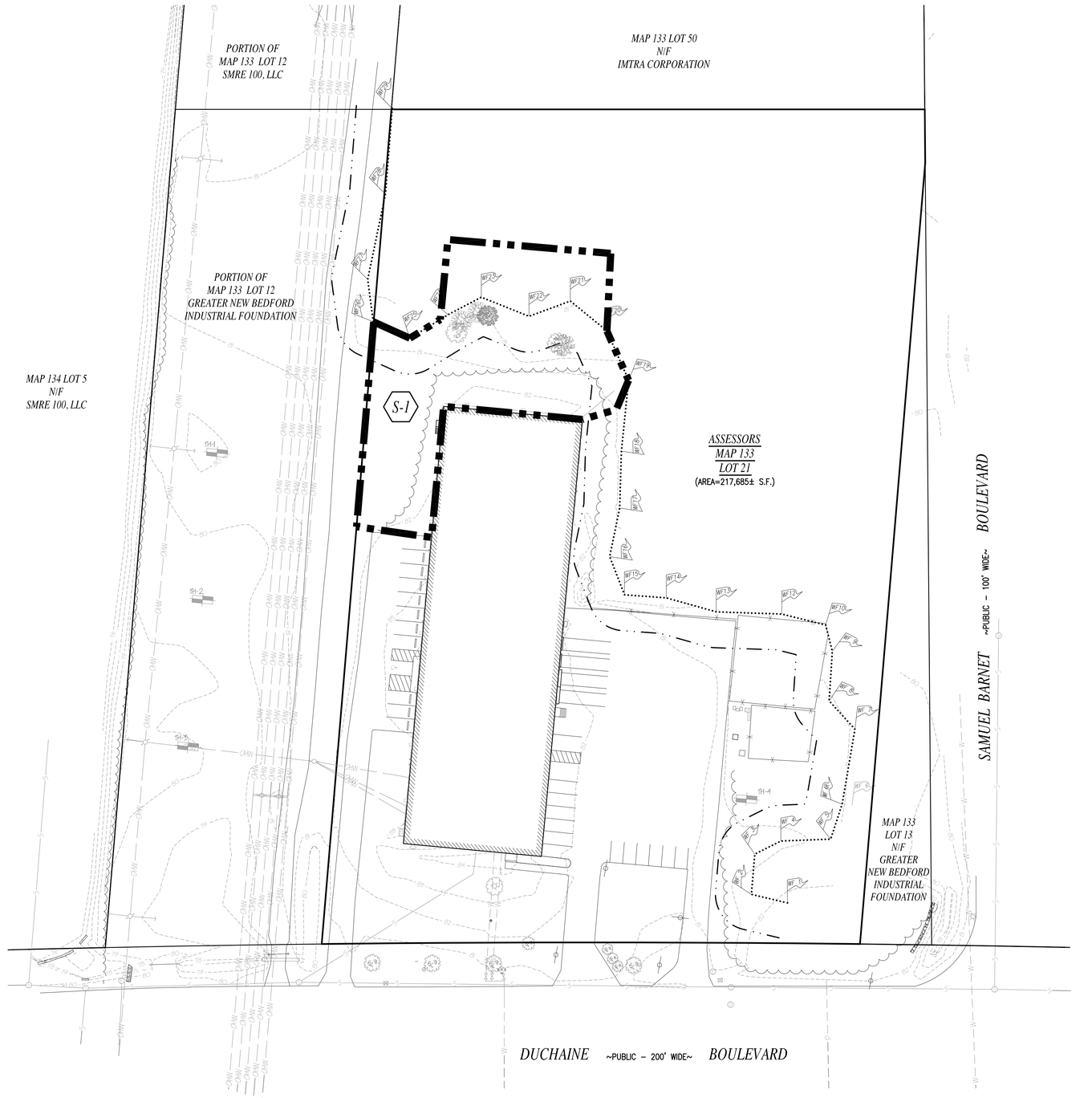
This Illicit Discharge Compliance Statement is intended to verify that no illicit discharges exist on the site or are proposed. We have included, in the pollution prevention plan, measures to prevent illicit discharges to the stormwater management system, including wastewater discharges and discharges of stormwater contaminated by contact with process wastes, raw materials, toxic pollutants, hazardous substances, oil, or grease.

The site plan identifies the location of any systems for conveying wastewater and/or groundwater on the site and show that there are no connections between the stormwater and wastewater management systems and the location of any measures taken to prevent the entry of illicit discharges into the stormwater management system.

Farland Corp.

Christian A. Farland, P.E., LEED AP
Principal Engineer and President

WATERSHED PLANS



0' 40' 80' 120'
1" = 40'

REVISIONS

CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

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OFFICES IN:
•TAUNTON
•MARLBOROUGH
•WARWICK, RI

DRAWN BY: SC
DESIGNED BY: SC
CHECKED BY: CAF

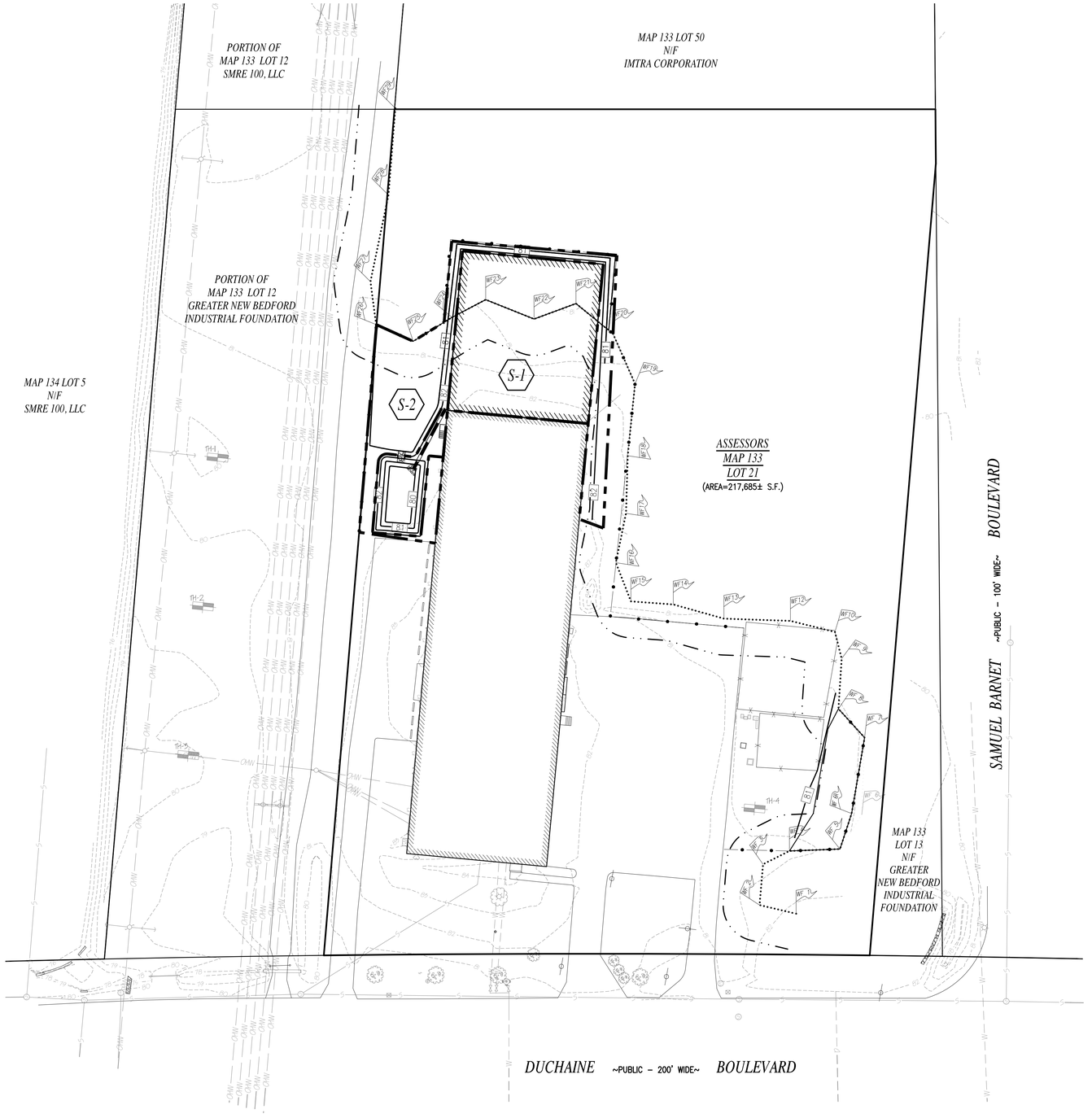
SITE PLAN
— 127 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 21
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: MILHENCH SUPPLY COMPANY
121 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745

AUGUST 6, 2018
SCALE: 1"=40'
JOB NO. 15-1077
LATEST REVISION:

PRE-DEVELOPMENT
WATERSHED PLAN

PL BK 116 PG 110



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SITE PLAN

127 DUCHAINE BOULEVARD
ASSESSORS MAP 133 LOT 21
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: MILHENCH SUPPLY COMPANY
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AUGUST 6, 2018	
SCALE:	1"=40'
JOB NO.	15-1077
LATEST REVISION:	

POST-DEVELOPMENT
WATERSHED PLAN

SITE PLAN