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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):

61 John Vertente Boulevard

a. Street Address

New Bedford

b. City/Town

02745

c. Zip Code

Latitude and Longitude:

41° 43' 09 N

d. Latitude

70° 57' 53" W

e. Longitude

133

f. Assessors Map/Plat Number

47

g. Parcel /Lot Number

2. Applicant:

Tim

a. First Name

Cusson

b. Last Name

Parallel Products of New England

c. Organization

401 Industry Road

d. Street Address

Louisville

e. City/Town

KY

f. State

40208

g. Zip Code

(617) 908-0825

h. Phone Number

i. Fax Number

timc@parallelproducts.com

j. Email Address

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

a. First Name

b. Last Name

Symmetry New Bedford Real Estate, LLC

c. Organization

61 John Vertente Boulevard

d. Street Address

New Bedford

e. City/Town

MA

f. State

02745

g. Zip Code

h. Phone Number

i. Fax Number

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):

\$2,950

a. Total Fee Paid

\$1,462.40

b. State Fee Paid

\$1,487.50

c. City/Town Fee Paid



## WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

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### A. General Information (continued)

6. General Project Description:

The applicant is proposing to install 16 loading dock bays along the eastern wall of the existing building. Pavement is proposed between the building and the existing paved parking. A proposed gravel trailer parking area along the southern portion of the site within an existing utility easement area will require a wetland crossing to provide access.

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

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

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

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

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

Bristol (New Bedford)

a. County

8931

c. Book

b. Certificate # (if registered land)

199

d. Page Number

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

- ☐ 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.
- ☐ 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

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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. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	700 1. square feet	930 2. square feet
c. <input type="checkbox"/> 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. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if available) - <b>specify coastal or inland</b>	

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

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

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

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





## WPA Form 3 – Notice of Intent

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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](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

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

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### 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/esa\\_fee\\_schedule.htm](http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/esa_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/esa/esa\\_exemptions.htm](http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/esa/esa_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](mailto: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](mailto: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

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

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

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

### D. Additional Information

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

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

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

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



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

**WPA Form 3 – Notice of Intent**

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

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**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 – 61 John Vertente Boulevard – Assessors Map 133 Lot 47 – New Bedford, Massachusetts |                          |
| Farland Corp.  | Christian A. Farland     |
| b. Prepared By   | c. Signed and Stamped by |
| 08-10-17   | 1"=50'                   |
| d. Final Revision Date   | e. Scale                 |
| Stormwater Report  | 08-10-17                 |
| 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:

5964	08-10-17
2. Municipal Check Number	3. Check date
5693	08-10-17
4. State Check Number	5. Check date
Farland Corp.	
6. Payor name on check: First Name	7. Payor name on check: Last Name



## WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

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### F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date

#### For Conservation Commission:

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

#### For MassDEP:

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

#### Other:

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

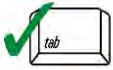
The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

# 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:

61 John Vertente Boulevard

a. Street Address

5963

c. Check number

New Bedford

b. City/Town

\$1,462.50

d. Fee amount

### 2. Applicant Mailing Address:

a. First Name

Parallel Products of New England

c. Organization

401 Industry Road

d. Mailing Address

Louisville

e. City/Town

KY

f. State

40208

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

### 3. Property Owner (if different):

a. First Name

SM Real Estate, LLC

c. Organization

401 Industry Road

d. Mailing Address

Louisville

e. City/Town

KY

f. State

40208

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

## B. Fees

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

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

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

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

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

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

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

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



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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) Parking Lot	2	\$500	\$1000
Category 2) Source Discharge	1	\$500	\$500
Category 4) Crossing	1	\$1,450	\$1,450

**Step 5/Total Project Fee:** \_\_\_\_\_

**Step 6/Fee Payments:**

Total Project Fee:	<u>\$2,950</u>
	a. Total Fee from Step 5
State share of filing Fee:	<u>\$1,462.50</u>
	b. 1/2 Total Fee <b>less</b> \$12.50
City/Town share of filing Fee:	<u>\$1,487.50</u>
	c. 1/2 Total Fee <b>plus</b> \$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.)



# 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, Christian Farland hereby certify under the pains and penalties of perjury that on August 10, 2017, 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 Parallel Products of New England with the New Bedford Conservation Commission on August 10 for property located at Assessor's Plot 133, Lot 47 (61 John Vetente 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

8/10/17  
Date

# 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)#	47
ADDRESS: 61 John Vertente Boulevard			
OWNER INFORMATION			
NAME: Symmetry New Bedford Real Estate, LLC			
MAILING ADDRESS: 61 John Vertente Boulevard - New Bedford, MA 02745			
APPLICANT/CONTACT PERSON INFORMATION			
NAME (IF DIFFERENT): Matthew J. White, Farland Corp.			
MAILING ADDRESS (IF DIFFERENT): 401 County Street - New Bedford, MA 02740			
TELEPHONE #	(508) 717-3479		
EMAIL ADDRESS:	mwhite@farlandcorp.com		
REASON FOR THIS REQUEST: <i>Check appropriate</i>			
<input type="checkbox"/>	ZONING BOARD OF APPEALS APPLICATION		
<input checked="" type="checkbox"/>	PLANNING BOARD APPLICATION		
<input type="checkbox"/>	CONSERVATION COMMISSION APPLICATION		
<input type="checkbox"/>	LICENSING BOARD APPLICATION		
<input type="checkbox"/>	OTHER (Please explain):		

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

Printed Name

*Carlos Amado*

Signature

2/9/2017

Date



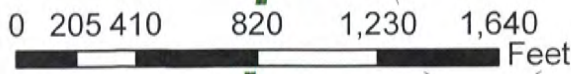
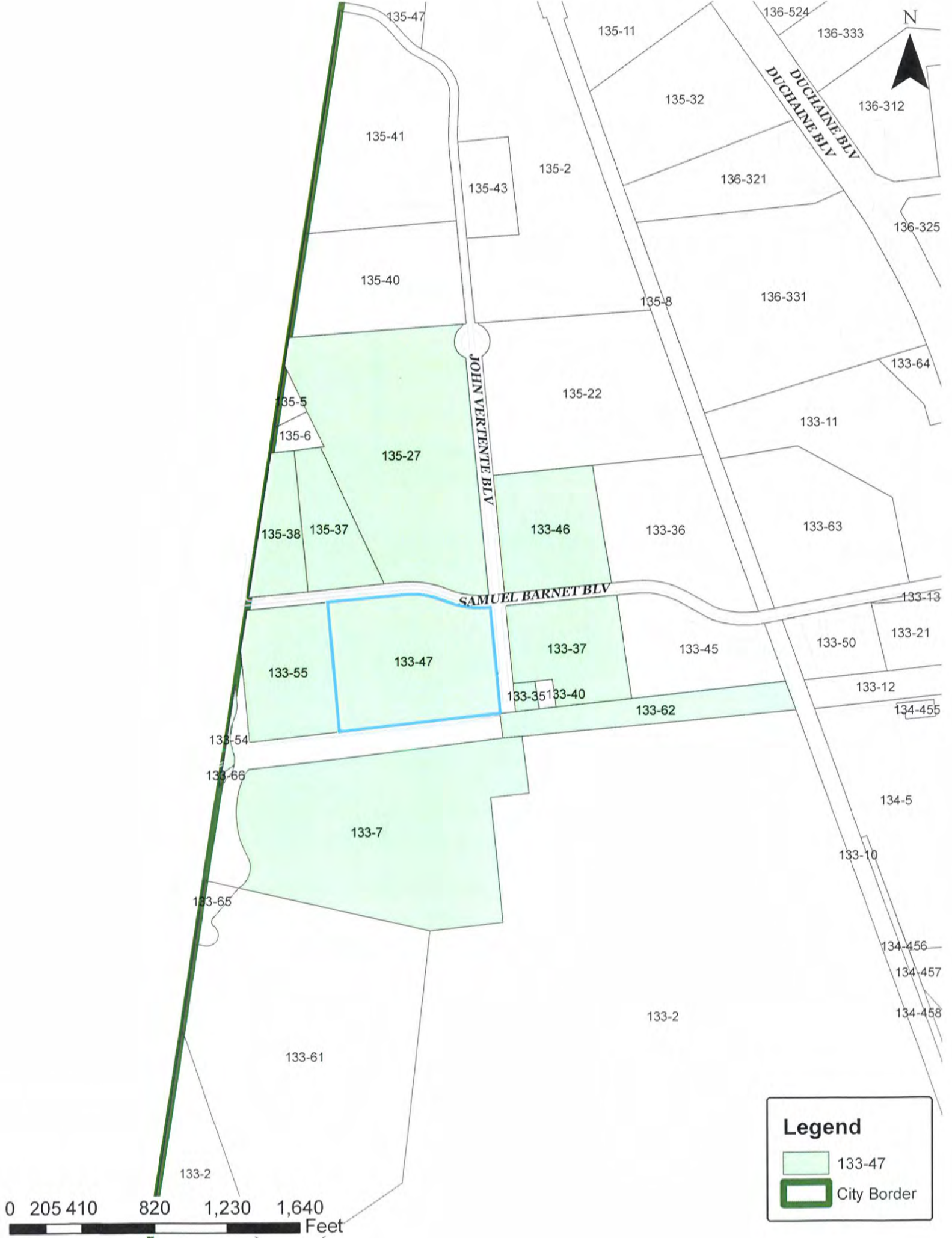
July 6, 2017

Dear Applicant,



Please find below the List of Abutters within 300 feet of the property known as 61 John Vertente Blvd (133-47). 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
135-38	181 SAMUEL BARNETT BLVD	SAMUEL BARNET BOULEVARD CORP, P O BOX 51593 NEW BEDFORD, MA 02745
133-7	960 FLAHERTY DR	AFC CABLE SYSTEMS INC, 260 DUCHAINE BOULEVARD NEW BEDFORD, MA 02745
135-37	163 SAMUEL BARNETT BLVD	ZENITH VENTURES LLC, 163 SAMUEL BARNETT BLVD NEW BEDFORD, MA 02745
133-54 <i>SS</i>	JOHN VERTENTE BLVD	ACUSHNET COMPANY, C/O SUE BRENNER P O BOX 965 FAIRHAVEN, MA 02719-0965
133-62 <i>SS</i>	SAMUEL BARNETT BLVD	GNBIF/POLAROID LLC, C/O CORPORATE REAL ESTATE <del>227 UNION STREET</del> <i>1213 Purchase St.</i> NEW BEDFORD, MA 02740
133-35 <i>WS</i>	RAILROAD	CITY OF NEW BEDFORD, INTERCEPTING SEWER 131 WILLIAM ST NEW BEDFORD, MA 02740
133-55	214 SAMUEL BARNETT BLVD	LONE OAK - NEW BEDFORD, LLC, C/O REYES HOLDINGS, LLC 6250 NORTH RIVER ROAD ROSEMONT, IL 60018
133-37	64 JOHN VERTENTE BLVD	H & M DARTMOUTH REALTY LLC, 861 PINE HILL DRIVE NEW BEDFORD, MA 02745
133-47	61 JOHN VERTENTE BLVD	SYMMETRY NEW BEDFORD REAL ESTATE LLC, 61 JOHN VERTENTE BLVD NEW BEDFORD, MA 02745-1202
135-27 <i>WS</i>	JOHN VERTENTE BLVD	GREATER NEW BEDFORD, INDUSTRIAL FOUNDATION <del>227 UNION STREET</del> <i>RM 607 1213 Purchase St. Unit 2</i> NEW BEDFORD, MA 02740
133-46	125 SAMUEL BARNETT BLVD	POYANT REALTY LLC, 125 SAMUEL BARNET BLVD NEW BEDFORD, MA 02745



**Legend**

-  133-47
-  City Border

July 6, 2017  
Dear Applicant,

Please find below the List of Abutters within 300 feet of the property known as Rosa 61 John Vertente Boulevard (133-47). The current ownership listed herein must be checked and verified by the Town of Acushnet 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.

<u>Parcel</u>	<u>Location</u>	<u>Owner and Mailing Address</u>
84-8-3	256 Samuel Barnet Blvd	ACUSHNET COMPANY 333 BRIDGE ST- PO BOX 965 FAIRHAVEN, MA 02719-0965

**Official Use Only:**

As Administrative Assistant to the Town of Dartmouth 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.

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature


\_\_\_\_\_  
Date



Abutter's List



Property Information	
Property ID	84_8_3
Location	256 SAMUEL BARNET BLVD
Owner	ACUSHNET COMPANY



**MAP FOR REFERENCE ONLY  
NOT A LEGAL DOCUMENT**

Town of Dartmouth, MA makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 1/1/2013  
Properties updated 1/1/2013

# 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 Parallel Products of New England.
- 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 61 John Vertente Boulevard (Assessor's Plot 133 Lot 47).
- 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

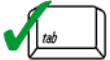
# STORMWATER CHECKLIST



# 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.<sup>1</sup> 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<sup>2</sup>
- 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.

<sup>1</sup> 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.

<sup>2</sup> 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.





# 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.

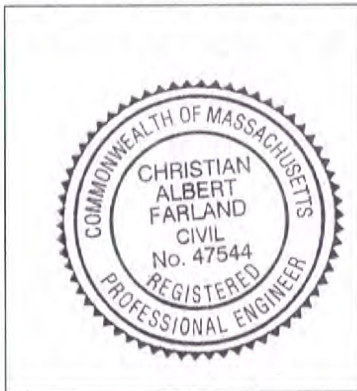
*Note:* Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that 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



 8/10/17  
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

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## 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

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## 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<sup>1</sup>
- ☐ 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.

<sup>1</sup> 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



# Checklist for Stormwater Report

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## 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

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## 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

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## 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

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## 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.



ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

# STORMWATER REPORT

August 10, 2017

LAST REVISED: 092917

## SITE PLAN

ASSESSORS PLOT 133 LOT 47  
61 JOHN VERTENTE BOULEVARD  
NEW BEDFORD, MASSACHUSETTS



PREPARED FOR:

Parallel Products of New England  
401 Industry Road  
Louisville, KY 40208

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2. METHODOLOGY
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
- EXHIBIT "D" – NRCS SOIL MAP
- EXHIBIT "E" – HYDROLOGIC CALCULATIONS (STANDARD 2)
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- EXHIBIT "K" – PIPE CAPACITY CALCULATIONS
- EXHIBIT "L" – WATERSHED PLANS



# **STORMWATER MANAGEMENT REPORT AND HYDROLOGIC ANALYSIS**

## **SECTION 1: Project Summary**

The project area associated with this proposed development is located at the southwest quadrant of the intersection of Samuel Barnett Boulevard and John Vertente Boulevard in the New Bedford Business Park. The site is comprised of one existing parcel, identified as Assessors Plot 133, Lot 47 which consists of approximately 16.4 acres. The site is located entirely within the Industrial C Zoning District.

The site is partially developed, and consists of an 82,000+/- square foot manufacturing building, with associated parking areas to the north, east, and west of the building, and loading areas at the southwest corner of the building. Access to the site is gained from a single site entrance driveway off of John Vertente Boulevard. A bordering vegetated wetland is located along the eastern portion of the site, along the parcel's frontage on John Vertente Boulevard and along the eastern portion of the parcel's frontage on Samuel Barnett Boulevard. An electric easement runs along the parcel's southern boundary. 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 to change the use of the structure, install loading dock bays along the structure's eastern wall, expand the paved parking area to the east of the building to allow for access to the loading docks, and to create additional gravel surfaced trailer storage parking spaces within the proposed easement area south of the existing building. This will require alteration of approximately 700 square feet of existing bordering vegetated wetland in order to construct an access to the easement area. The disturbed resource area, located along a finger-like ditch running along the existing site driveway, will be replicated on-site.

In order to attenuate the increased stormwater runoff generated by the proposed impervious site coverage and to provide the appropriate level of water quality treatment, stormwater management practices have been proposed. Proposed structural BMP's include proprietary separators and a detention basin.

## **SECTION 2: Methodology**

Drainage computations were performed using the Natural Resources Conservation Services (NRCS) TR-20 method and HydroCAD<sup>®</sup> 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 306B (Paxton fine sandy loam, Hydrologic Soils Group [HSG "C"]), 311B (Woodbridge fine sandy loam, [HSG "C/D"]), and 73A (Whitman fine sandy loam, HSG "D").

### **SECTION 4: Stormwater Management Overview**

#### Existing Conditions:

One design point has been chosen for this project: (1) the limit of the bordering vegetated wetlands along the eastern portion of the site. One subcatchment area which sheds runoff toward the design point has been analyzed for the purposes of this report. Areas which will not be altered as a result of the proposed construction have not been included in this analysis.

Stormwater runoff from that portion of the site located within the proposed limit of work sheds toward the bordering vegetated wetland at the southeast corner of the site, including the finger-like extension along the ditch. Much of the area consists of the existing easement area, where runoff sheds directly toward the wetland. The area along the eastern edge of the building sheds runoff toward existing catch basins within the paved area, which discharge directly into the wetland.

#### 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 toward the Bordering Vegetated Wetland without any BMP's designed to attenuate flow. The second subcatchment area, which captures a portion of the proposed gravel trailer parking storage area, will shed runoff toward a proposed Stormwater Dry Detention Basin, which will discharge via an outlet control structure towards the BVW. The proposed basin is not designed to provide water quality treatment. It is solely designed to attenuate peak runoff.

### **SECTION 5: Stormwater Management Standards**

#### **Standard 1:**

- Under proposed conditions, there will be no new untreated discharges or erosion in wetland areas. The drainage outfall from the detention basin which discharges toward the existing BVW design point is provided with rip-rap outlet protection (6" max. graded rock size) to help control velocity and erosion at the outlet. Maximum velocity from Dry Detention Basin #1 is 4.89 feet per second (12" pipe @ 3.84 cfs).

**Table A-3.3: Permissible Velocities for Rock Lined Channels**

NSA No.	Graded Rock Size (In.)			Permissible Velocity* (fps)
	Max.	D <sub>50</sub>	Min.	
R-1	1.5	0.75	No. 8	2.5
R-2	3	1.5	1	4.5
R-3	6	3	2	6.5
R-4	12	6	3	9
R-5	18	9	5	11.5
R-6	24	12	7	13
R-7	30	15	12	14.5

\*Permissible velocities based on rock at 165 lbs. per cubic foot. Adjust velocities for other rock weights used.

Source: Pa DER Bureau of Soil and Water Conservation, April 1990. Erosion and Sedimentation Control Program Manual. Please refer to this document for additional information and stipulations.

Stormwater discharges have been held below erodible velocities. 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 (af)	Rate (cfs)	Volume (af)
<b>2-Year Storm</b>				
To B.V.W.	12.58	1.151	12.48	1.264
<b>10-Year Storm</b>				
To B.V.W.	19.57	1.819	19.31	1.948
<b>100-Year Storm</b>				
To B.V.W.	30.48	2.900	30.43	3.042

**Standard 3:**

- The site is comprised entirely of soils belonging to Hydrologic Soils Groups "C" and "D", and is therefore required to meet the recharge requirements of Standard 3 to the maximum extent practicable. Due to the elevation of the existing building and parking areas to the east of the building, and the estimated seasonal high groundwater's proximity to the surface, providing recharge of the proposed impervious areas is not feasible.

**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 G**. Suitable practices for source control and pollution prevention have been identified in a long-term pollution prevention plan in **Exhibit H**. Structural BMPs have been designed to capture the required water quality volume (**Exhibit F**) 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 through proprietary separator units prior to discharge to underground infiltration chambers and a surface infiltration basin, exceeding the 44% pretreatment requirement. 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:**

- Although a portion of the site may qualify as redevelopment, the project has not been designed as a redevelopment project. This standard does not apply.

**Standard 8:**

- Where there will be over one acre of disturbance, an EPA Construction General Permit must be obtained and a Storm Water Pollution Prevention Plan (SWPPP) is 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. Additional erosion controls and pollutant source controls will be provided in the Stormwater Pollution Prevention Plan that will be completed prior to land disturbance. This standard will be met upon submittal of the final SWPPP and Construction General Permit filing.

**Standard 9:**

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

**Standard 10:**

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

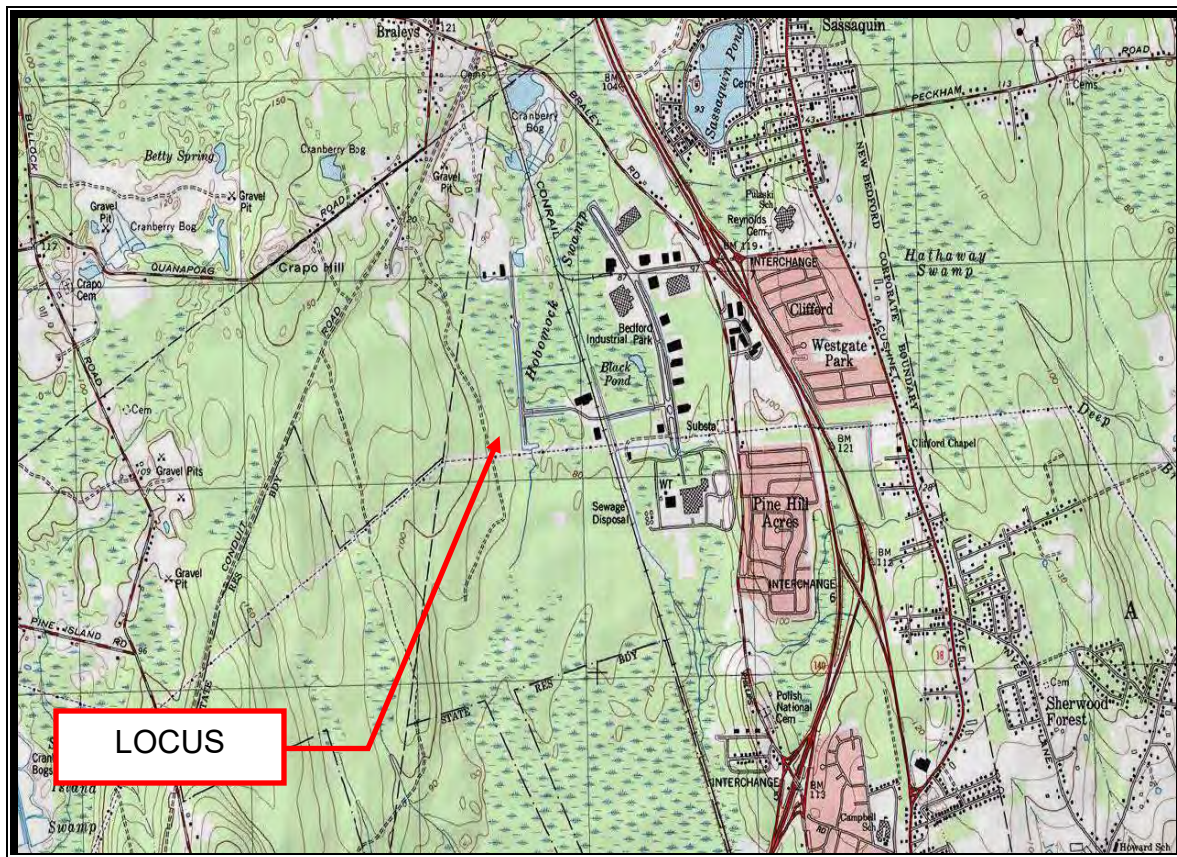




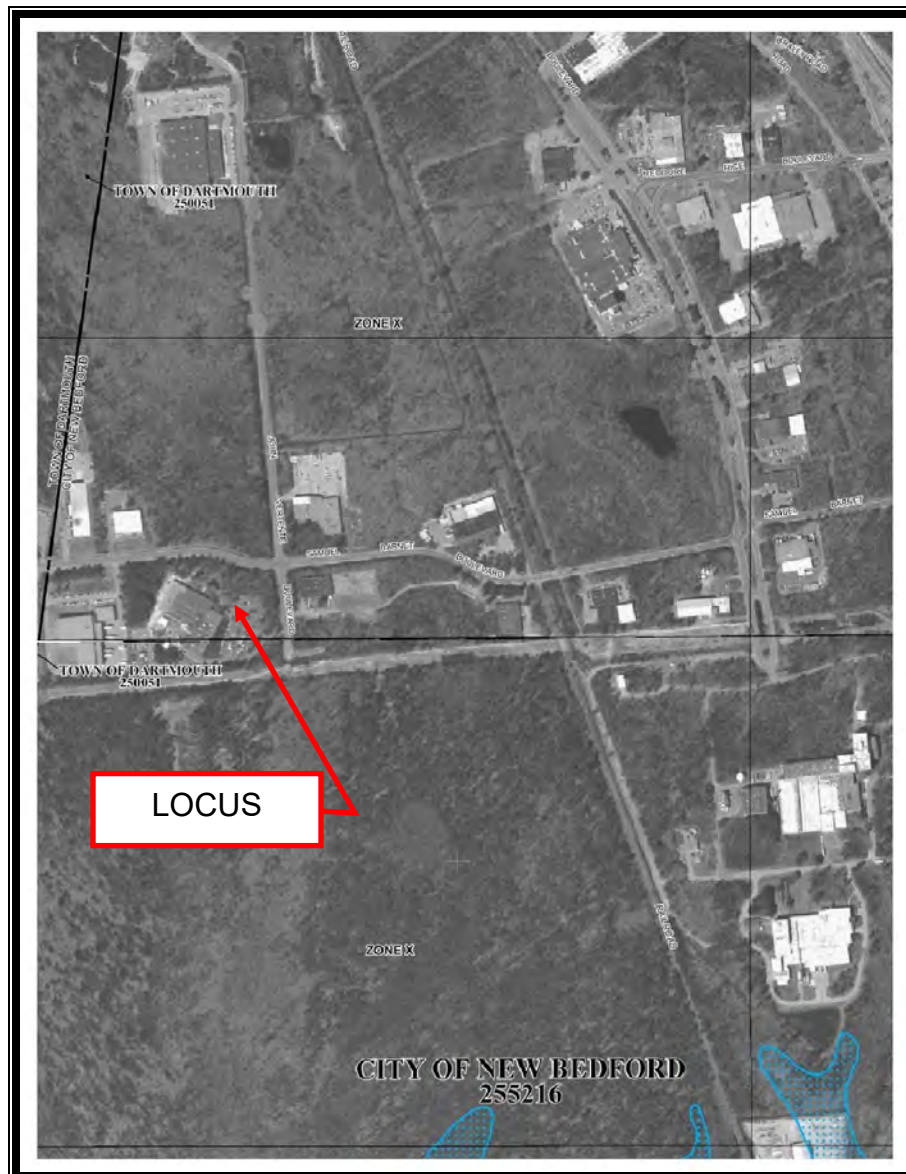
ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

# USGS MAP TOPO! VERSION 2.1.0

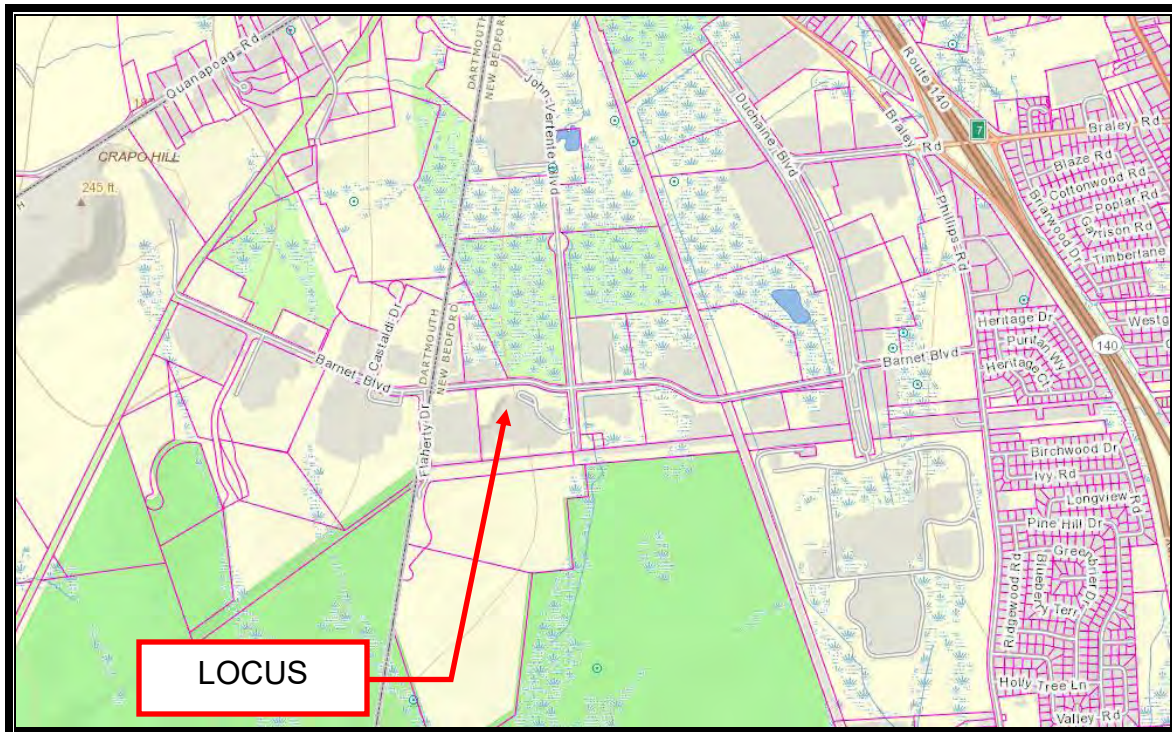


FIRM MAP  
PANELS #25005C0377F  
& 25005C0379F



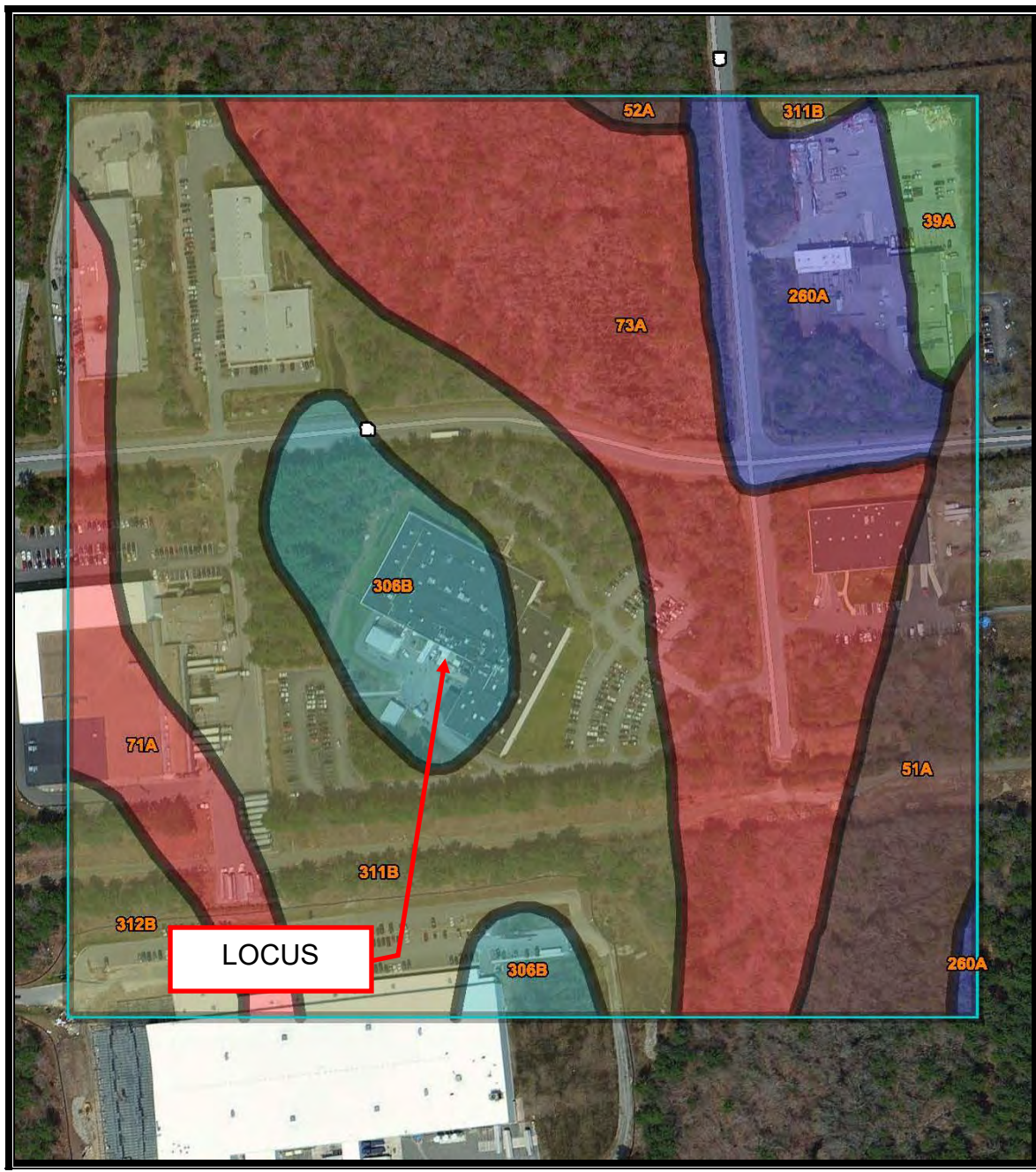


# NHESP PRIORITY & ESTIMATED HABITAT MAP, 2008

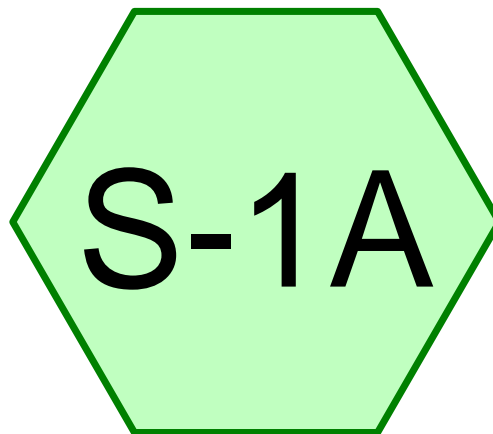




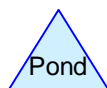
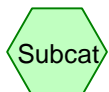
# NRCS SOIL MAP



# HYDROLOGIC CALCULATIONS (STANDARD #2)



# Uncontrolled to BVW



**Drainage Diagram for 17-413 PRE**

Prepared by Farland Corp.

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**17-413 PRE***Type III 24-hr 2-Year Rainfall=3.40"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Uncontrolled to BVW**

Runoff Area=265,576 sf 36.18% Impervious Runoff Depth=2.26"

Flow Length=700' Tc=13.4 min CN=89 Runoff=12.58 cfs 1.151 af

**Total Runoff Area = 6.097 ac Runoff Volume = 1.151 af Average Runoff Depth = 2.26"****63.82% Pervious = 3.891 ac 36.18% Impervious = 2.206 ac**

**Summary for Subcatchment S-1A: Uncontrolled to BVW**

Runoff = 12.58 cfs @ 12.18 hrs, Volume= 1.151 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
256	70	Woods, Good, HSG C
27,950	77	Woods, Good, HSG D
1,514	74	>75% Grass cover, Good, HSG C
43,322	80	>75% Grass cover, Good, HSG D
69,757	98	Paved parking
* 24,684	98	Roof
* 385	98	Concrete
9,781	91	Gravel roads, HSG D
86,670	89	<50% Grass cover, Poor, HSG D
* 1,257	98	BVW Area
265,576	89	Weighted Average
169,493		Pervious Area
96,083		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b>
					Woods: Light underbrush n= 0.400 P2= 3.40"
4.3	650	0.0250	2.55		<b>Shallow Concentrated Flow, BC</b>
					Unpaved Kv= 16.1 fps
13.4	700	Total			

**17-413 PRE***Type III 24-hr 10-Year Rainfall=4.80"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Uncontrolled to BVW**

Runoff Area=265,576 sf 36.18% Impervious Runoff Depth=3.58"

Flow Length=700' Tc=13.4 min CN=89 Runoff=19.57 cfs 1.819 af

**Total Runoff Area = 6.097 ac Runoff Volume = 1.819 af Average Runoff Depth = 3.58"****63.82% Pervious = 3.891 ac 36.18% Impervious = 2.206 ac**

**Summary for Subcatchment S-1A: Uncontrolled to BVW**

Runoff = 19.57 cfs @ 12.18 hrs, Volume= 1.819 af, Depth= 3.58"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
256	70	Woods, Good, HSG C
27,950	77	Woods, Good, HSG D
1,514	74	>75% Grass cover, Good, HSG C
43,322	80	>75% Grass cover, Good, HSG D
69,757	98	Paved parking
* 24,684	98	Roof
* 385	98	Concrete
9,781	91	Gravel roads, HSG D
86,670	89	<50% Grass cover, Poor, HSG D
* 1,257	98	BVW Area
265,576	89	Weighted Average
169,493		Pervious Area
96,083		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b>
					Woods: Light underbrush n= 0.400 P2= 3.40"
4.3	650	0.0250	2.55		<b>Shallow Concentrated Flow, BC</b>
					Unpaved Kv= 16.1 fps
13.4	700	Total			

**17-413 PRE***Type III 24-hr 100-Year Rainfall=7.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Uncontrolled to BVW**

Runoff Area=265,576 sf 36.18% Impervious Runoff Depth=5.71"

Flow Length=700' Tc=13.4 min CN=89 Runoff=30.48 cfs 2.900 af

**Total Runoff Area = 6.097 ac Runoff Volume = 2.900 af Average Runoff Depth = 5.71"****63.82% Pervious = 3.891 ac 36.18% Impervious = 2.206 ac**



**17-413 PRE**

Type III 24-hr 100-Year Rainfall=7.00"

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**Summary for Subcatchment S-1A: Uncontrolled to BVW**

Runoff = 30.48 cfs @ 12.18 hrs, Volume= 2.900 af, Depth= 5.71"

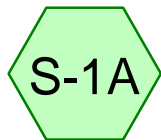
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
256	70	Woods, Good, HSG C
27,950	77	Woods, Good, HSG D
1,514	74	>75% Grass cover, Good, HSG C
43,322	80	>75% Grass cover, Good, HSG D
69,757	98	Paved parking
* 24,684	98	Roof
* 385	98	Concrete
9,781	91	Gravel roads, HSG D
86,670	89	<50% Grass cover, Poor, HSG D
* 1,257	98	BVW Area
265,576	89	Weighted Average
169,493		Pervious Area
96,083		Impervious Area

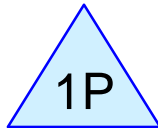
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b>
					Woods: Light underbrush n= 0.400 P2= 3.40"
4.3	650	0.0250	2.55		<b>Shallow Concentrated Flow, BC</b>
					Unpaved Kv= 16.1 fps
13.4	700	Total			



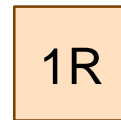
Unattenuated flow  
toward BVW



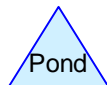
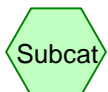
Flow toward proposed  
Basin-1



Basin-1



Combined Flow to BVW



**Drainage Diagram for 17-413 POST**

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**17-413 POST***Type III 24-hr 2-Year Rainfall=3.40"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Unattenuated flow**Runoff Area=215,487 sf 53.58% Impervious Runoff Depth=2.54"  
Flow Length=417' Tc=11.0 min CN=92 Runoff=12.08 cfs 1.048 af**Subcatchment S-1B: Flow toward proposed**Runoff Area=50,089 sf 0.00% Impervious Runoff Depth=2.26"  
Flow Length=309' Tc=11.0 min CN=89 Runoff=2.55 cfs 0.217 af**Reach 1R: Combined Flow to BVW**Inflow=12.48 cfs 1.264 af  
Outflow=12.48 cfs 1.264 af**Pond 1P: Basin-1**Peak Elev=83.44' Storage=3,114 cf Inflow=2.55 cfs 0.217 af  
Outflow=0.98 cfs 0.216 af**Total Runoff Area = 6.097 ac Runoff Volume = 1.265 af Average Runoff Depth = 2.49"**  
**56.53% Pervious = 3.446 ac 43.47% Impervious = 2.651 ac**

**17-413 POST**

Type III 24-hr 2-Year Rainfall=3.40"

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**Summary for Subcatchment S-1A: Unattenuated flow toward BVW**

Runoff = 12.08 cfs @ 12.15 hrs, Volume= 1.048 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
810	70	Woods, Good, HSG C
16,575	77	Woods, Good, HSG D
1,514	74	>75% Grass cover, Good, HSG C
21,938	80	>75% Grass cover, Good, HSG D
87,149	98	Paved parking
* 24,684	98	Roof
* 1,316	98	Concrete
41,305	91	Gravel roads, HSG D
17,887	89	<50% Grass cover, Poor, HSG D
* 2,309	98	BVW Area
215,487	92	Weighted Average
100,029		Pervious Area
115,458		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b> Woods: Light underbrush n= 0.400 P2= 3.40"
0.1	17	0.0400	3.22		<b>Shallow Concentrated Flow, BC</b> Unpaved Kv= 16.1 fps
1.1	210	0.0260	3.27		<b>Shallow Concentrated Flow, CD</b> Paved Kv= 20.3 fps
0.4	75	0.0350	3.01		<b>Shallow Concentrated Flow, BC</b> Unpaved Kv= 16.1 fps
0.2	55	0.0090	4.30	3.38	<b>Circular Channel (pipe), EF</b> Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Concrete pipe, bends & connections
0.1	10	0.0150	1.97		<b>Shallow Concentrated Flow, FG</b> Unpaved Kv= 16.1 fps
11.0	417	Total			

**Summary for Subcatchment S-1B: Flow toward proposed Basin-1**

Runoff = 2.55 cfs @ 12.15 hrs, Volume= 0.217 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 2-Year Rainfall=3.40"

**17-413 POST**

Type III 24-hr 2-Year Rainfall=3.40"

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Area (sf)	CN	Description
2,292	77	Woods, Good, HSG D
7,050	80	>75% Grass cover, Good, HSG D
35,481	91	Gravel roads, HSG D
5,266	89	<50% Grass cover, Poor, HSG D
50,089	89	Weighted Average
50,089		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b> Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	35	0.0400	3.22		<b>Shallow Concentrated Flow, BC</b> Unpaved Kv= 16.1 fps
0.0	9	0.3300	9.25		<b>Shallow Concentrated Flow, CD</b> Unpaved Kv= 16.1 fps
1.7	215	0.0170	2.10		<b>Shallow Concentrated Flow, DE</b> Unpaved Kv= 16.1 fps
11.0	309	Total			

**Summary for Reach 1R: Combined Flow to BVW**

Inflow Area = 6.097 ac, 43.47% Impervious, Inflow Depth > 2.49" for 2-Year event  
Inflow = 12.48 cfs @ 12.15 hrs, Volume= 1.264 af  
Outflow = 12.48 cfs @ 12.15 hrs, Volume= 1.264 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

**Summary for Pond 1P: Basin-1**

Inflow Area = 1.150 ac, 0.00% Impervious, Inflow Depth = 2.26" for 2-Year event  
Inflow = 2.55 cfs @ 12.15 hrs, Volume= 0.217 af  
Outflow = 0.98 cfs @ 12.48 hrs, Volume= 0.216 af, Atten= 61%, Lag= 19.6 min  
Primary = 0.98 cfs @ 12.48 hrs, Volume= 0.216 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
Peak Elev= 83.44' @ 12.48 hrs Surf.Area= 2,897 sf Storage= 3,114 cf

Plug-Flow detention time= 69.6 min calculated for 0.216 af (100% of inflow)  
Center-of-Mass det. time= 67.7 min ( 881.0 - 813.3 )

Volume	Invert	Avail.Storage	Storage Description
#1	82.00'	11,401 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
82.00	1,448	328.0	0	0	1,448
83.00	2,450	344.0	1,927	1,927	2,367
84.00	3,509	362.0	2,964	4,891	3,438
85.00	4,625	381.0	4,054	8,945	4,622
85.50	5,204	391.0	2,456	11,401	5,266

**17-413 POST***Type III 24-hr 2-Year Rainfall=3.40"*

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Device	Routing	Invert	Outlet Devices
#1	Primary	81.90'	<b>12.0" x 14.0' long Culvert</b> CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 81.76' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	82.00'	<b>4.0" Vert. Orifice/Grate</b> C= 0.600
#3	Device 1	83.15'	<b>1.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 1.1' Crest Height

**Primary OutFlow** Max=0.98 cfs @ 12.48 hrs HW=83.44' (Free Discharge)↑ **1=Culvert** (Passes 0.98 cfs of 3.05 cfs potential flow)↑ **2=Orifice/Grate** (Orifice Controls 0.47 cfs @ 5.44 fps)↑ **3=Sharp-Crested Rectangular Weir** (Weir Controls 0.51 cfs @ 1.83 fps)

**17-413 POST***Type III 24-hr 10-Year Rainfall=4.80"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Unattenuated flow**Runoff Area=215,487 sf 53.58% Impervious Runoff Depth=3.89"  
Flow Length=417' Tc=11.0 min CN=92 Runoff=18.13 cfs 1.605 af**Subcatchment S-1B: Flow toward proposed**Runoff Area=50,089 sf 0.00% Impervious Runoff Depth=3.58"  
Flow Length=309' Tc=11.0 min CN=89 Runoff=3.96 cfs 0.343 af**Reach 1R: Combined Flow to BVW**Inflow=19.31 cfs 1.948 af  
Outflow=19.31 cfs 1.948 af**Pond 1P: Basin-1**Peak Elev=83.79' Storage=4,195 cf Inflow=3.96 cfs 0.343 af  
Outflow=2.12 cfs 0.342 af**Total Runoff Area = 6.097 ac Runoff Volume = 1.948 af Average Runoff Depth = 3.84"**  
**56.53% Pervious = 3.446 ac 43.47% Impervious = 2.651 ac**

**17-413 POST**

Type III 24-hr 10-Year Rainfall=4.80"

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**Summary for Subcatchment S-1A: Unattenuated flow toward BVW**

Runoff = 18.13 cfs @ 12.15 hrs, Volume= 1.605 af, Depth= 3.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
810	70	Woods, Good, HSG C
16,575	77	Woods, Good, HSG D
1,514	74	>75% Grass cover, Good, HSG C
21,938	80	>75% Grass cover, Good, HSG D
87,149	98	Paved parking
* 24,684	98	Roof
* 1,316	98	Concrete
41,305	91	Gravel roads, HSG D
17,887	89	<50% Grass cover, Poor, HSG D
* 2,309	98	BVW Area
215,487	92	Weighted Average
100,029		Pervious Area
115,458		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b>
					Woods: Light underbrush n= 0.400 P2= 3.40"
0.1	17	0.0400	3.22		<b>Shallow Concentrated Flow, BC</b>
					Unpaved Kv= 16.1 fps
1.1	210	0.0260	3.27		<b>Shallow Concentrated Flow, CD</b>
					Paved Kv= 20.3 fps
0.4	75	0.0350	3.01		<b>Shallow Concentrated Flow, BC</b>
					Unpaved Kv= 16.1 fps
0.2	55	0.0090	4.30	3.38	<b>Circular Channel (pipe), EF</b>
					Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25'
					n= 0.013 Concrete pipe, bends & connections
0.1	10	0.0150	1.97		<b>Shallow Concentrated Flow, FG</b>
					Unpaved Kv= 16.1 fps
11.0	417	Total			

**Summary for Subcatchment S-1B: Flow toward proposed Basin-1**

Runoff = 3.96 cfs @ 12.15 hrs, Volume= 0.343 af, Depth= 3.58"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 10-Year Rainfall=4.80"



**17-413 POST**

Type III 24-hr 10-Year Rainfall=4.80"

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Area (sf)	CN	Description
2,292	77	Woods, Good, HSG D
7,050	80	>75% Grass cover, Good, HSG D
35,481	91	Gravel roads, HSG D
5,266	89	<50% Grass cover, Poor, HSG D
50,089	89	Weighted Average
50,089		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b> Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	35	0.0400	3.22		<b>Shallow Concentrated Flow, BC</b> Unpaved Kv= 16.1 fps
0.0	9	0.3300	9.25		<b>Shallow Concentrated Flow, CD</b> Unpaved Kv= 16.1 fps
1.7	215	0.0170	2.10		<b>Shallow Concentrated Flow, DE</b> Unpaved Kv= 16.1 fps
11.0	309	Total			

**Summary for Reach 1R: Combined Flow to BVW**

Inflow Area = 6.097 ac, 43.47% Impervious, Inflow Depth > 3.83" for 10-Year event  
 Inflow = 19.31 cfs @ 12.16 hrs, Volume= 1.948 af  
 Outflow = 19.31 cfs @ 12.16 hrs, Volume= 1.948 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

**Summary for Pond 1P: Basin-1**

Inflow Area = 1.150 ac, 0.00% Impervious, Inflow Depth = 3.58" for 10-Year event  
 Inflow = 3.96 cfs @ 12.15 hrs, Volume= 0.343 af  
 Outflow = 2.12 cfs @ 12.36 hrs, Volume= 0.342 af, Atten= 47%, Lag= 12.7 min  
 Primary = 2.12 cfs @ 12.36 hrs, Volume= 0.342 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
 Peak Elev= 83.79' @ 12.36 hrs Surf.Area= 3,276 sf Storage= 4,195 cf

Plug-Flow detention time= 59.8 min calculated for 0.342 af (100% of inflow)  
 Center-of-Mass det. time= 58.8 min ( 859.3 - 800.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	82.00'	11,401 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
82.00	1,448	328.0	0	0	1,448
83.00	2,450	344.0	1,927	1,927	2,367
84.00	3,509	362.0	2,964	4,891	3,438
85.00	4,625	381.0	4,054	8,945	4,622
85.50	5,204	391.0	2,456	11,401	5,266

**17-413 POST***Type III 24-hr 10-Year Rainfall=4.80"*

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Device	Routing	Invert	Outlet Devices
#1	Primary	81.90'	<b>12.0" x 14.0' long Culvert</b> CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 81.76' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	82.00'	<b>4.0" Vert. Orifice/Grate</b> C= 0.600
#3	Device 1	83.15'	<b>1.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 1.1' Crest Height

**Primary OutFlow** Max=2.11 cfs @ 12.36 hrs HW=83.79' (Free Discharge)↑ **1=Culvert** (Passes 2.11 cfs of 3.52 cfs potential flow)↑ **2=Orifice/Grate** (Orifice Controls 0.54 cfs @ 6.14 fps)↑ **3=Sharp-Crested Rectangular Weir** (Weir Controls 1.57 cfs @ 2.81 fps)

**17-413 POST***Type III 24-hr 100-Year Rainfall=7.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment S-1A: Unattenuated flow**Runoff Area=215,487 sf 53.58% Impervious Runoff Depth=6.05"  
Flow Length=417' Tc=11.0 min CN=92 Runoff=27.50 cfs 2.496 af**Subcatchment S-1B: Flow toward proposed**Runoff Area=50,089 sf 0.00% Impervious Runoff Depth=5.71"  
Flow Length=309' Tc=11.0 min CN=89 Runoff=6.17 cfs 0.547 af**Reach 1R: Combined Flow to BVW**Inflow=30.43 cfs 3.042 af  
Outflow=30.43 cfs 3.042 af**Pond 1P: Basin-1**Peak Elev=84.24' Storage=5,748 cf Inflow=6.17 cfs 0.547 af  
Outflow=3.85 cfs 0.546 af**Total Runoff Area = 6.097 ac Runoff Volume = 3.043 af Average Runoff Depth = 5.99"**  
**56.53% Pervious = 3.446 ac 43.47% Impervious = 2.651 ac**

**17-413 POST**

Type III 24-hr 100-Year Rainfall=7.00"

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**Summary for Subcatchment S-1A: Unattenuated flow toward BVW**

Runoff = 27.50 cfs @ 12.15 hrs, Volume= 2.496 af, Depth= 6.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
810	70	Woods, Good, HSG C
16,575	77	Woods, Good, HSG D
1,514	74	>75% Grass cover, Good, HSG C
21,938	80	>75% Grass cover, Good, HSG D
87,149	98	Paved parking
* 24,684	98	Roof
* 1,316	98	Concrete
41,305	91	Gravel roads, HSG D
17,887	89	<50% Grass cover, Poor, HSG D
* 2,309	98	BVW Area
215,487	92	Weighted Average
100,029		Pervious Area
115,458		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b> Woods: Light underbrush n= 0.400 P2= 3.40"
0.1	17	0.0400	3.22		<b>Shallow Concentrated Flow, BC</b> Unpaved Kv= 16.1 fps
1.1	210	0.0260	3.27		<b>Shallow Concentrated Flow, CD</b> Paved Kv= 20.3 fps
0.4	75	0.0350	3.01		<b>Shallow Concentrated Flow, BC</b> Unpaved Kv= 16.1 fps
0.2	55	0.0090	4.30	3.38	<b>Circular Channel (pipe), EF</b> Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Concrete pipe, bends & connections
0.1	10	0.0150	1.97		<b>Shallow Concentrated Flow, FG</b> Unpaved Kv= 16.1 fps
11.0	417	Total			

**Summary for Subcatchment S-1B: Flow toward proposed Basin-1**

Runoff = 6.17 cfs @ 12.15 hrs, Volume= 0.547 af, Depth= 5.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Type III 24-hr 100-Year Rainfall=7.00"

**17-413 POST**

Type III 24-hr 100-Year Rainfall=7.00"

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Area (sf)	CN	Description
2,292	77	Woods, Good, HSG D
7,050	80	>75% Grass cover, Good, HSG D
35,481	91	Gravel roads, HSG D
5,266	89	<50% Grass cover, Poor, HSG D
50,089	89	Weighted Average
50,089		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	50	0.0400	0.09		<b>Sheet Flow, AB</b> Woods: Light underbrush n= 0.400 P2= 3.40"
0.2	35	0.0400	3.22		<b>Shallow Concentrated Flow, BC</b> Unpaved Kv= 16.1 fps
0.0	9	0.3300	9.25		<b>Shallow Concentrated Flow, CD</b> Unpaved Kv= 16.1 fps
1.7	215	0.0170	2.10		<b>Shallow Concentrated Flow, DE</b> Unpaved Kv= 16.1 fps
11.0	309	Total			

**Summary for Reach 1R: Combined Flow to BVW**

Inflow Area = 6.097 ac, 43.47% Impervious, Inflow Depth = 5.99" for 100-Year event  
 Inflow = 30.43 cfs @ 12.16 hrs, Volume= 3.042 af  
 Outflow = 30.43 cfs @ 12.16 hrs, Volume= 3.042 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

**Summary for Pond 1P: Basin-1**

Inflow Area = 1.150 ac, 0.00% Impervious, Inflow Depth = 5.71" for 100-Year event  
 Inflow = 6.17 cfs @ 12.15 hrs, Volume= 0.547 af  
 Outflow = 3.85 cfs @ 12.31 hrs, Volume= 0.546 af, Atten= 38%, Lag= 9.5 min  
 Primary = 3.85 cfs @ 12.31 hrs, Volume= 0.546 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs  
 Peak Elev= 84.24' @ 12.31 hrs Surf.Area= 3,758 sf Storage= 5,748 cf

Plug-Flow detention time= 52.6 min calculated for 0.545 af (100% of inflow)  
 Center-of-Mass det. time= 52.1 min ( 839.9 - 787.8 )

Volume #1	Invert	Avail.Storage	Storage Description
	82.00'	11,401 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
82.00	1,448	328.0	0	0	1,448
83.00	2,450	344.0	1,927	1,927	2,367
84.00	3,509	362.0	2,964	4,891	3,438
85.00	4,625	381.0	4,054	8,945	4,622
85.50	5,204	391.0	2,456	11,401	5,266

**17-413 POST***Type III 24-hr 100-Year Rainfall=7.00"*

Prepared by Farland Corp.

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Device	Routing	Invert	Outlet Devices
#1	Primary	81.90'	<b>12.0" x 14.0' long Culvert</b> CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 81.76' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	82.00'	<b>4.0" Vert. Orifice/Grate</b> C= 0.600
#3	Device 1	83.15'	<b>1.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 1.1' Crest Height

**Primary OutFlow** Max=3.84 cfs @ 12.31 hrs HW=84.23' (Free Discharge)↑ **1=Culvert** (Passes 3.84 cfs of 4.04 cfs potential flow)↑ **2=Orifice/Grate** (Orifice Controls 0.60 cfs @ 6.92 fps)↑ **3=Sharp-Crested Rectangular Weir** (Weir Controls 3.24 cfs @ 3.81 fps)

# WATER QUALITY VOLUME CALCULATIONS (STANDARD #4)





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LOCATION: 61 John Vertente Boulevard - New Bedford, MA

PROJECT #: 17-413

DATE: 8/10/17

REV: 9/29/17

#### **STANDARD 4: WATER QUALITY VOLUME:**

**Note:**

Water Quality Volume calculations are based on new impervious areas only. Existing impervious areas have not been included.

**Water Quality Treatment Volume Formula:**

$$V_{WQ} = D_{WQ} \times (1 \text{ ft.} / 12 \text{ in.}) \times A_{IMP}$$

Where,

$V_{WQ}$  = 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: CDS 2025 unit**

CONTRIBUTING IMPERVIOUS AREA ( $A_{IMP}$ ) = 17,610 S.F.

$$V_{WQ} = 1.0 \text{ inch} \times 1 \text{ ft} / 12 \text{ in.} \times 17,610 \text{ s.f.} = 1,468 \text{ c.f.}$$

**STRUCTURAL BMP TREATMENT TRAIN:**

**CDS-2025**

\*Refer to attached WQV conversion calculation & CDS report = 1,468 c.f.

**TOTAL WATER QUALITY VOLUME PROVIDED IN BMP TREATMENT TRAIN = 1,468 c.f.**



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LOCATION: 61 John Vertente Boulevard

PROJECT #: 17-413

DATE: 9/29/17

### **WATER QUALITY VOLUME CONVERSION TO FLOW RATE:**

Note: The following conversion performed according to methods described in "Standard Method to Convert Required Water Quality Volume to a Discharge Rate for Sizing Flow Based Manufactured Proprietary Stormwater Treatment Practices"

#### **FLOW CONVERSION FOR WATER QUALITY VOLUME FROM CDS-2025-5 OUTLET**

$$Q_1 = (q_U) \times (V_{WQ}) \times (A_{IMP})$$

Where,

$q_U$  = Unit peak discharge, in csm/in (From Figure 4 of conversion guidance document described above, based on 0.1 hour Time of Concentration)

$V_{WQ}$  = 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 square miles)

$$Q_1 = 774 \text{ csm/in} \times 1.468 \text{ s.f.} \times 3.587 \text{ e}^{-0} \text{ mi}^2 / \text{s.f.} \times 1.0 \text{ inch} = 0.04 \text{ cfs}$$

Rainfall Intensity¹ (in/hr)	% Rainfall Volume¹	Cumulative Rainfall Volume	Rainfall Volume Treated	Total Flowrate (cfs)	Treated Flowrate (cfs)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
0.0800	35.30%	35.30%	35.30%	0.2160	0.2160	13.50%	92.62%	32.69%
0.1600	23.79%	59.09%	23.79%	0.4320	0.4320	27.00%	88.02%	20.94%
0.2400	12.91%	72.00%	12.91%	0.6480	0.6480	40.50%	83.42%	10.77%
0.3200	7.83%	79.83%	7.83%	0.8640	0.8640	54.00%	78.83%	6.17%
0.4000	4.91%	84.74%	4.91%	1.0800	1.0800	67.50%	74.23%	3.64%
0.4800	3.50%	88.24%	3.50%	1.2960	1.2960	81.00%	69.63%	2.44%
0.5600	1.71%	89.95%	1.71%	1.5120	1.5120	94.50%	65.03%	1.11%
0.6400	1.83%	91.78%	1.69%	1.7280	1.6000	100.00%	58.48%	1.07%
0.7200	1.87%	93.65%	1.54%	1.9440	1.6000	100.00%	51.98%	0.97%
0.8000	0.91%	94.56%	0.67%	2.1600	1.6000	100.00%	46.78%	0.43%
1.0000	2.32%	96.88%	1.37%	2.7000	1.6000	100.00%	37.43%	0.87%
2.0000	2.88%	99.76%	0.85%	5.4000	1.6000	100.00%	18.71%	0.54%
3.0000	0.23%	99.99%	0.05%	8.1000	1.6000	100.00%	12.48%	0.03%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
0.0000	0.00%	99.99%	0.00%	0.0000	0.0000	0.00%	0.00%	0.00%
								81.67%
Removal Efficiency Adjustment2 =								0.00%
Predicted % Annual Rainfall Treated =								96.12%
Predicted Net Annual Load Removal Efficiency =								81.67%
1 - Based on 14 years of 15 minute precipitation data from NCDC station 3821, Hyannis, in Barnstable County, MA								
2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.								

# TSS REMOVAL CALCULATIONS (STANDARD #4)



**ENGINEERING A BETTER TOMORROW**  
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LOCATION: 61 John Vertente Boulevard - New Bedford, MA

PROJECT #: 17-413

DATE: 8/10/17  
REV: 9/29/17

**STANDARD 4: TSS REMOVAL CALCULATIONS:**  
**STORM WATER OUTFALL: OUTLET FROM CDS 2025 UNIT**

TREATMENT

<u>A</u> BMP	<u>B</u> TSS Removal Rate	<u>C</u> Starting TSS Load*	<u>D</u> Amount Removed (BXC)	<u>E</u> Remaining Load (C-D)
Proprietary Separator	82%	1.00	0.82	0.18
Total TSS Removal=			0.82	

# LONG TERM POLLUTION PREVENTION PLAN (STANDARD #4)



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# **Long Term Pollution Prevention Plan**

## **Site Plan 61 John Vertente Boulevard New Bedford, MA 02745**

### **Record Owner:**

Assessor's Map 133 Lot 47:  
Symmetry New Bedford Real Estate, LLC  
61 John Vertente Boulevard  
New Bedford, MA 02745

### **Prepared For:**

Parallel Products of New England  
401 Industry Road  
Louisville, KY 40208

### **Prepared By:**

Christian Farland, P.E.  
Farland Corp.  
Project No. 17-413

### **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 and parking 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 on top of storm drain catch basins, grassed swale, or in stormwater drainage basin 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 CFR 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.

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



**ENGINEERING A BETTER TOMORROW**

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# **Long Term Operation and Maintenance Plan**

## **Site Plan 61 John Vertente Boulevard New Bedford, MA 02745**

**August 10, 2017**

**Last Revised: September 29, 2017**

### **Record Owner(s):**

Assessor's Map 133 Lot 47:  
Symmetry New Bedford Real Estate, LLC  
61 John Vertente Boulevard  
New Bedford, MA 02745

### **Prepared For:**

Parallel Products of New England  
401 Industry Road  
Louisville, KY 40208

### **Prepared By:**

Christian Farland, P.E.  
Farland Corp.  
Project No. 17-413

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 annually, during March or April before spring rains wash residual sand from winter applications into stormwater systems.

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.

### **Deep Sump Catch Basins / Drain Manholes**

The catch basins, trench grate, and manholes are to be inspected and maintained by the owner.

It shall be the responsibility of the owner to:

**Inspections:**

Inspect the catch basins and manholes quarterly.

**Maintenance:**

Remove accumulated sediment, trash, leaves and debris when the depth of deposits is greater than or equal to one half the depth from the bottom invert of the lowest pipe in the basin and/or manhole to the bottom elevation of the basin or manhole.

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

### **CDS® Units**

The units are to be inspected and maintained by the owner.

CDS Units are proprietary products and must comply with manufacturer's inspection and maintenance requirements. Refer to the attached CDS Inspection and Maintenance Guide.

It shall be the responsibility of the owner to:

**Inspections:**

Inspect the units quarterly.

Prepare inspection reports as part of each inspection and include the following information:

1. Date of inspection
2. Maintenance personnel
3. Location of unit (GPS coordinates if possible)
4. Time since last rainfall
5. Installation deficiencies (missing parts, incorrect installation of parts)
6. Structural Deficiencies (concrete cracks, broken parts)
7. Operational deficiencies (leaks, blockages)
8. Presence of oil sheen or depth of oil layer
9. Estimate of depth/ volume of floatables (trash, leaves) captured
10. Sediment depth measured
11. Recommendations for any repairs and/ or maintenance for the units
12. Estimation of time before maintenance is required if not required at time of inspection.

#### Maintenance:

Cleaning should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method for removing pollutants from the system. The screen should be power washed to ensure it is free of trash and debris.

The CDS® Unit shall be cleaned once the sediment depth reaches 75% of the storage capacity.

If upon inspection, evidence of hydrocarbons is observed, such material shall be immediately removed and disposed of in accordance with local, state, and federal guidelines and regulations.

To remove oil and other hydrocarbons that accumulate, it may be preferable to use adsorbent pads.

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

#### **Stormwater Dry Detention Basin**

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

It shall be the responsibility of the owner to:

##### Inspections:

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

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

Ensure that the basins are 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.

#### 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 and forebay 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 basin is ponding in areas or not functioning as designed, use deep tilling to break up clogged surfaces, and re-vegetate immediately.

Do not store snow in basin area.

Remove sediment from the basin 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

**“61 John Vertente Boulevard”  
Operation & Maintenance Log Form**

**STRUCTURAL SEDIMENT CONTROL BMPS**

BMP	DATE INSPECTED	SEDIMENT BUILDUP (YES/NO)	IF SEDIMENT BUILDUP, DATE CLEANED
CDS-2025			
Stormwater Detention Basin #1			
Outlet Control Structure #1			
OTHER:			

Maintenance Notes:

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TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_

# ILLICIT DISCHARGE STATEMENT (STANDARD #10)



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### **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.

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

# PIPE CAPACITY CALCULATIONS



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**PIPE CAPACITY CALCULATIONS**

10 YEAR STORM EVENT													
Pipe Description				Drainge Area (Acres)			Comp. C-Value	CA	Time of Concentration (min)			I (in./hr)	Qc=CIA (cfs)
Length #	DA #	From	To	Total	Imperv. C=0.90	Pervious C=0.30			Inlet	Drain	Total		
DRAINAGE PIPES													
1		CB-1	CB-2	0.287	0.000	0.287	0.30	0.086	10	0.49	10.49	4.3	0.37
2		CB-2	CB-3	0.849	0.350	0.499	0.55	0.465	10	0.19	10.19	4.3	2.37
3		CB-3	DMH-3	1.316	0.717	0.599	0.63	0.825	10	0.27	10.27	4.3	5.92
4		DMH-3	FES	1.316	0.717	0.599	0.63	0.825	10	0.49	10.49	4.3	3.55
5		CB-4	CB-5	0.331	0.329	0.002	0.90	0.297	10	0.51	10.51	4.3	1.28
6		CB-5	CDS-2525	0.828	0.826	0.002	0.90	0.744	10	0.00	10.00	4.3	4.48
7		CDS-2525	FES	0.961	0.959	0.002	0.90	0.864	10	0.00	10.00	4.3	8.19

Length #	Pipe Diameter (in)	Pipe Material (n-value)	Slope (ft./ft.)	Length (ft)	Full Flow			Current Flow				Pipe capacity	
					Vf (ft/sec)	Qf (cfs)	Vc (ft/sec)	Qc (cfs)	Qc/Qf	d/D (in.)	Flow Depth in pipe (in)	Flow capacity check	
DRAINAGE PIPES													
1	8	0.013	0.0156	108	4.32	1.51	3.67	0.37	0.25	0.3	2.7	OK!	
2	18	0.013	0.0137	63	6.96	12.30	5.55	2.37	0.19	0.3	5.4	OK!	
3	18	0.013	0.0110	106	6.23	11.02	6.50	5.92	0.54	0.5	9.2	OK!	
4	18	0.013	0.0069	140	4.94	8.73	4.78	3.55	0.41	0.4	7.8	OK!	
5	12	0.013	0.0027	79	2.36	1.85	2.60	1.28	0.69	0.6	7.2	OK!	
6	12	0.013	0.0057	23	3.42	2.69	#####	4.48	1.66	9.1	109.4	FLOW TOO HIGH	
7	12	0.013	0.0041	27	2.90	2.28	#####	8.19	3.59	1371.6	16459.2	FLOW TOO HIGH	