Olmsted Green Mixed Income Homeownership 80 Units

Harvard and Morton Streets
Boston, Massachusetts

SUBMITTED TO **Boston Conservation Commission**
City Hall Plaza, Room 709
Boston, MA 02201

PROPONENT **Lena New Boston, LLC**
c/o New Boston Fund, Inc.
53 State Street, Suite 500
Boston, Massachusetts 02109

PREPARED BY **VHB**
99 High Street, 10th Floor
Boston, MA 02110

August 5, 2020

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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

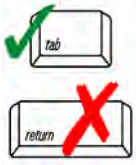
Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Boston
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):

Harvard and Morton Street — a. Street Address
Boston — b. City/Town
02126 — c. Zip Code

Latitude and Longitude:
42 17.33N — d. Latitude
71 5.72W — e. Longitude

N/A — f. Assessors Map/Plat Number
1405198500, 2A-11 — g. Parcel /Lot Number

2. Applicant:

Eric — a. First Name
VanDusen — b. Last Name
New Boston Fund — c. Organization
53 State Street, Suite 500 — d. Street Address
Boston — e. City/Town
MA — f. State
02109 — g. Zip Code
617-878-7902 — h. Phone Number
617-227-4727 — i. Fax Number
evandusen@newbostonfund.com — j. Email Address

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

Eric — a. First Name
VanDusen — b. Last Name
OG West Campus Land LLC c/o Lena New Boston — c. Organization
1700 District Avenue, Suite 310 — d. Street Address
Burlington — e. City/Town
MA — f. State
01803 — g. Zip Code
617.878.7902 — h. Phone Number
617-227-4727 — i. Fax Number
evandusen@newbostonfund.com — j. Email address

4. Representative (if any):

Stephanie — a. First Name
Kruel — b. Last Name
VHB — c. Company
99 High Street, 10th Floor — d. Street Address
Boston — e. City/Town
MA — f. State
02110 — g. Zip Code
617-607-2972 — h. Phone Number
— i. Fax Number
skruel@vhb.com — j. Email address

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

$1,737.50 — a. Total Fee Paid
$237.50 — b. State Fee Paid
$1,500.00 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Development of 80 residential units and associated parking and infrastructure at Olmsted Green.

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

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

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

1. ☐ Yes ☒ No

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

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

a. County	b. Certificate # (if registered land)
Suffolk	N/A
c. Book	**d. Page Number**
42318	97

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

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

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

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☒ Bordering Vegetated Wetland	7.0 1. square feet	7.0 2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. ☒ Isolated Land Subject to Flooding	350 1. square feet 37.80 2. cubic feet of flood storage lost	 0 3. cubic feet replaced
f. ☐ Riverfront Area	1. Name of Waterway (if available) - **specify coastal or inland**	

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☐ 200 ft. - All other projects

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

4. Proposed alteration of the Riverfront Area:

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

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

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

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

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

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

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

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

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

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

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

a. square feet of BVW _____ b. square feet of Salt Marsh _____

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings _____ b. number of replacement stream crossings _____

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 Notice of Intent – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

   a. ☐ Yes ☒ No

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

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

   August 2017
   b. Date of map

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

   c. Submit Supplemental Information for Endangered Species Review*

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

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

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

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

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

   (b) ☐ Photographs representative of the site

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

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

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

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

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

(d) ☐ Vegetation cover type map of site

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

(f) OR Check One of the Following

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

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

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

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

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

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

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

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

North Shore - Hull to New Hampshire border:

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

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

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

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

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

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

   b. ACEC

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

   a. ☐ Yes ☒ No

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

   a. ☐ Yes ☒ No

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

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

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

      2. ☒ A portion of the site constitutes redevelopment

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

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

      1. ☐ Single-family house

      2. ☐ Emergency road repair

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

D. Additional Information

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

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

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

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

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

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. Olmsted

Green Mixed Income Homeownership 80 Units, Sheets C-2.1, 3.1, 4.1, 6.3, 6.6, 6.7, 6.8
a. Plan Title

VHB
b. Prepared By

Progress Print
c. Signed and Stamped by

August 4, 2020
d. Final Revision Date

1"=20'
e. Scale

f. Additional Plan or Document Title

g. Date

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

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

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

8. ☒ Attach NOI Wetland Fee Transmittal Form

9. ☒ Attach Stormwater Report, if needed.

E. Fees

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

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

361423
2. Municipal Check Number

July 22, 2020
3. Check date

361431
4. State Check Number

July 22, 2020
5. Check date

Vanasse, Hangen, Brustlin, Inc.
6. Payor name on check: First Name

N/A
7. Payor name on check: Last Name

F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant	2. Date: 8/3/20
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any) Stephanie Kruel	6. Date: August 3, 2020

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.

City of Boston Environment

NOTICE OF INTENT APPLICATION FORM
Boston Wetlands Ordinance
City of Boston Code, Ordinances, Chapter 7-1.4

Boston File Number

MassDEP File Number

A. GENERAL INFORMATION

1. Project Location

Harvard and Morton Street	Boston	02126
a. Street Address	b. City/Town	c. Zip Code
N/A	1405198500	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant

Eric	Van Dusen	Lena New Boston LLC
a. First Name	b. Last Name	c. Company

53 State Street, Suite 500
d. Mailing Address

Boston	MA	02109
e. City/Town	f. State	g. Zip Code
617-878-7902	617-227-4727	evandusen@newbostonfund.com
h. Phone Number	i. Fax Number	j. Email address

3. Property Owner

Eric	Van Dusen	OG West Campus Land LLC c/o Lena New Boston
a. First Name	b. Last Name	c. Company

1700 District Avenue, Suite 301
d. Mailing Address

Burlington	MA	01803
e. City/Town	f. State	g. Zip Code
617-878-7902	617-227-4727	evandusen@newbostonfund.com
h. Phone Number	i. Fax Number	j. Email address

☐ Check if more than one owner
(If there is more than one property owner, please attach a list of these property owners to this form.)

4. Representative (if any)

Stephanie	Kruel	VHB
a. First Name	b. Last Name	c. Company

99 High Street 10th Floor
d. Mailing Address

Boston	MA	02110
e. City/Town	f. State	g. Zip Code
617-607-2972		skruel@vhb.com
h. Phone Number	i. Fax Number	j. Email address

5. Is any portion of the proposed project jurisdictional under the Massachusetts Wetlands Protection Act M.G.L. c. 131 §40?

☑ Yes ☐ No

If yes, please file the WPA Form 3 - Notice of Intent with this form

6. General Information

Development of 80 residential units and associated parking and infrastructure at Olmsted Green.

7. Project Type Checklist

a. ☐ Single Family Home
b. ☑ Residential Subdivision
c. ☐ Limited Project Driveway Crossing
d. ☐ Commercial/Industrial
e. ☐ Dock/Pier
f. ☐ Utilities
g. ☐ Coastal Engineering Structure
h. ☐ Agriculture – cranberries, forestry
i. ☐ Transportation
j. ☐ Other

8. Property recorded at the Registry of Deeds

Suffolk	97
a. County	b. Page Number
42318	N/A
c. Book	d. Certificate # (if registered land)

B. BUFFER ZONE & RESOURCE AREA IMPACTS

Buffer Zone Only - Is the project located only in the Buffer Zone of a resource area protected by the Boston Wetlands Ordinance?

☐ Yes ☑ No

1. Coastal Resource Areas

Resource Area	**Resource Area Size**	**Proposed Alteration***	**Proposed Migitation**
☐ *Coastal Flood Resilience Zone*	*Square feet*	*Square feet*	*Square feet*

☐ *25-foot Waterfront Area*

Square feet	*Square feet*	*Square feet*

2. Inland Resource Areas

Resource Area	**Resource Area Size**	**Proposed Alteration***	**Proposed Migitation**
☐ *Inland Flood Resilience Zone*	*Square feet*	*Square feet*	*Square feet*
☐ *Isolated Wetlands*	*Square feet*	*Square feet*	*Square feet*
☐ *Vernal Pool*	*Square feet*	*Square feet*	*Square feet*
☐ *Vernal Pool Habitat (vernal pool + 100 ft. upland area)*	*Square feet*	*Square feet*	*Square feet*
☐ *25-foot Waterfront Area*	*Square feet*	*Square feet*	*Square feet*

C. OTHER APPLICABLE STANDARDS & REQUIREMENTS

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://www.mass.gov/dfwele/dfw/nhesp/nhregmap.htm.

☐ Yes ☑ No

If *yes*, the project is subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18).

A. Submit Supplemental Information for Endangered Species Review

☐ Percentage/acreage of property to be altered:

(1) within wetland Resource Area _____ percentage/acreage

(2) outside Resource Area _____ percentage/acreage

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

2. Is the proposed project subject to provisions of the Massachusetts Stormwater Management

3. Is any portion of the proposed project within an Area of Critical Environmental Concern?

☐ Yes ☑ No

4. Is the proposed project subject to provisions of the Massachusetts Stormwater Management Standards?

- [x] *Yes. Attach a copy of the Stormwater Checklist & Stormwater Report as required.*
  - [ ] *Applying for a Low Impact Development (LID) site design credits*
  - [x] *A portion of the site constitutes redevelopment*
  - [ ] *Proprietary BMPs are included in the Stormwater Management System*
- [ ] *No. Check below & include a narrative as to why the project is exempt*
  - [ ] *Single-family house*
  - [ ] *Emergency road repair*
  - [ ] *Small Residential Subdivision (less than or equal to 4 single family houses or less than or equal to 4 units in a multifamily housing projects) with no discharge to Critical Areas*

5. Is the proposed project subject to Boston Water and Sewer Commission Review?

- [x] Yes
- [ ] No

D. 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 Protection Ordinance.

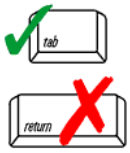
Signature of Applicant	August 3, 2020 Date
Signature of Property Owner (if different)	Date
Signature of Representative (if any)	August 3, 2020 Date

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

Checklist for Stormwater Report

A. Introduction

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



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

The Stormwater Report must include:

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

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

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

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

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

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

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

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

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

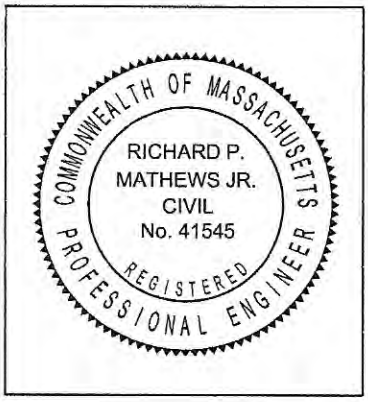
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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

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

Registered Professional Engineer's Certification

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

Registered Professional Engineer Block and Signature



8/5/20

Signature and Date

Checklist

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

☐ New development

☐ Redevelopment

☒ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

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

☒ No disturbance to any Wetland Resource Areas

☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)

☐ Reduced Impervious Area (Redevelopment Only)

☒ Minimizing disturbance to existing trees and shrubs

☐ LID Site Design Credit Requested:

- ☐ Credit 1
- ☐ Credit 2
- ☐ Credit 3

☐ Use of "country drainage" versus curb and gutter conveyance and pipe

☐ Bioretention Cells (includes Rain Gardens)

☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)

☐ Treebox Filter

☐ Water Quality Swale

☐ Grass Channel

☐ Green Roof

☒ Other (describe): Subsurface infiltration, infiltration basin, permeable pavement

Standard 1: No New Untreated Discharges

☒ No new untreated discharges

☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth

☒ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

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

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

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

Standard 3: Recharge

☒ Soil Analysis provided.

☒ Required Recharge Volume calculation provided.

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

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

☒ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

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

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

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

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

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

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

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

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

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

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

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

Standard 4: Water Quality

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

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

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

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

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

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

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

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

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

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

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

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

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

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

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

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

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

☐ All exposure has been eliminated.

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

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

Standard 6: Critical Areas

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

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

Checklist for Stormwater Report

Checklist (continued)

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

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

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

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

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

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

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

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

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

Checklist for Stormwater Report

Checklist (continued)

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

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

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

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

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

Standard 9: Operation and Maintenance Plan

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

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

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

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

Standard 10: Prohibition of Illicit Discharges

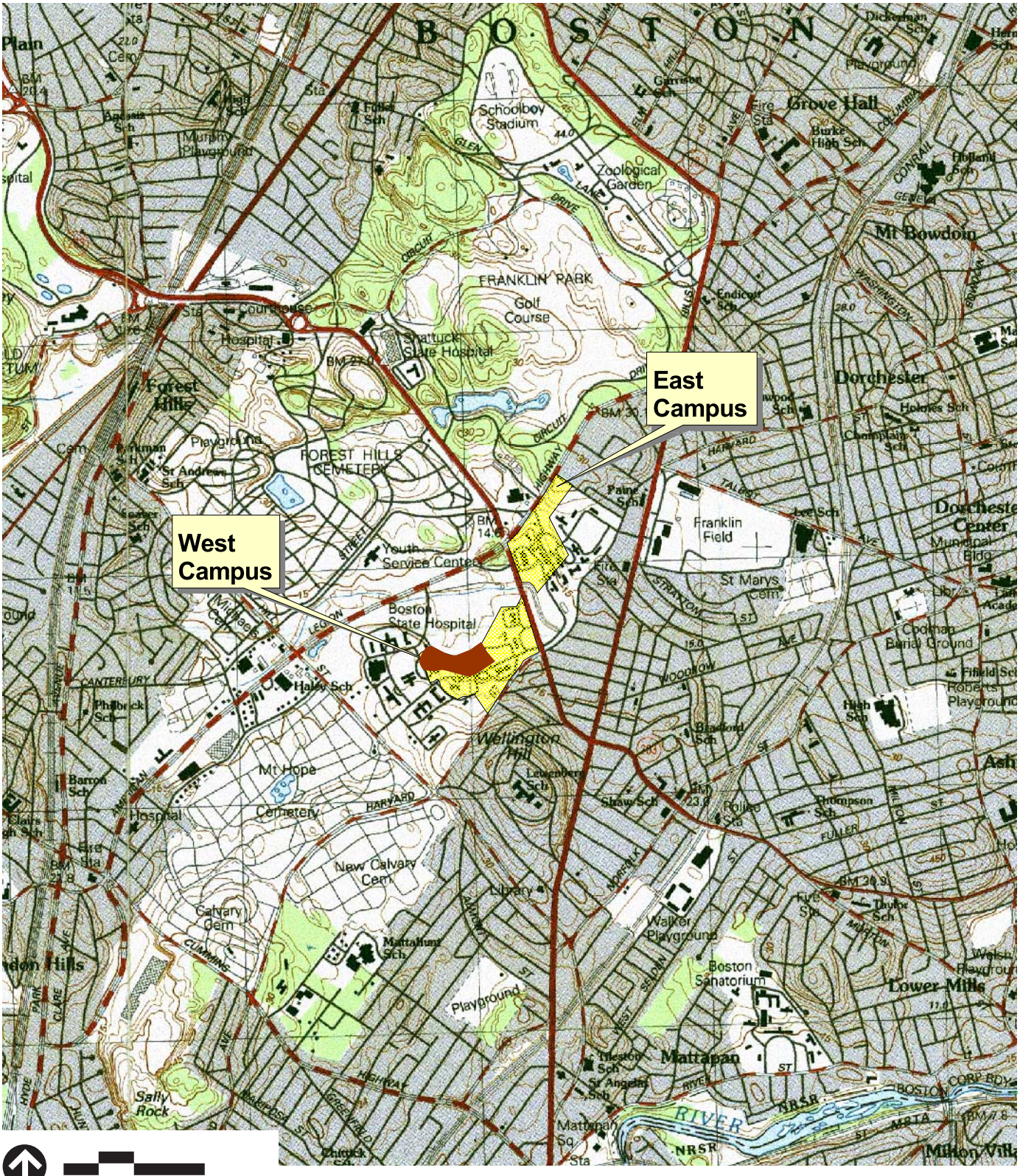
☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☒ An Illicit Discharge Compliance Statement is attached;

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

Notice of Intent Figures

- Figure 1 – Site Locus Map
- Figure 2 – FEMA Map
- Figure 3 – West Campus Phasing Diagram
- Figure 4 – Proposed Conditions – Landscape Plan
- Figure 5 – Proposed Conditions – Drainage Plan and Wetland Resource Areas



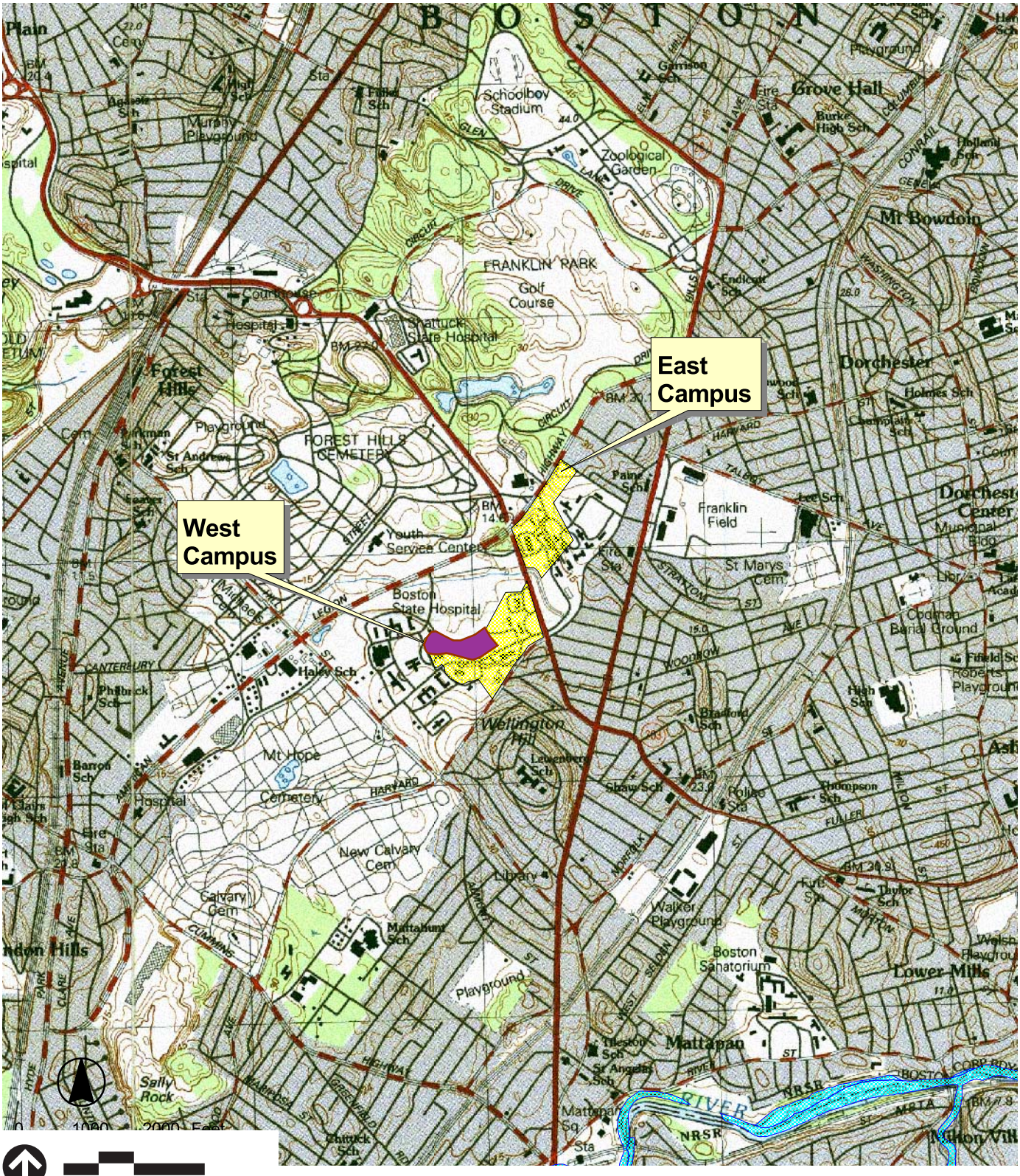
Source: MassGIS USGS Boston Massachusetts Quadrangle

Mixed Income Homeownership 80 Units
Project Site

Figure 1

Site Location Map

Olmsted Green
Mixed Income Homeownership 80 Units
Mattapan, Massachusetts



Source: MassGIS USGS Boston Massachusetts Quadrangle

Mixed Income Homeownership 80 Units Project Site

1% Annual Chance Floodplain

Figure 2

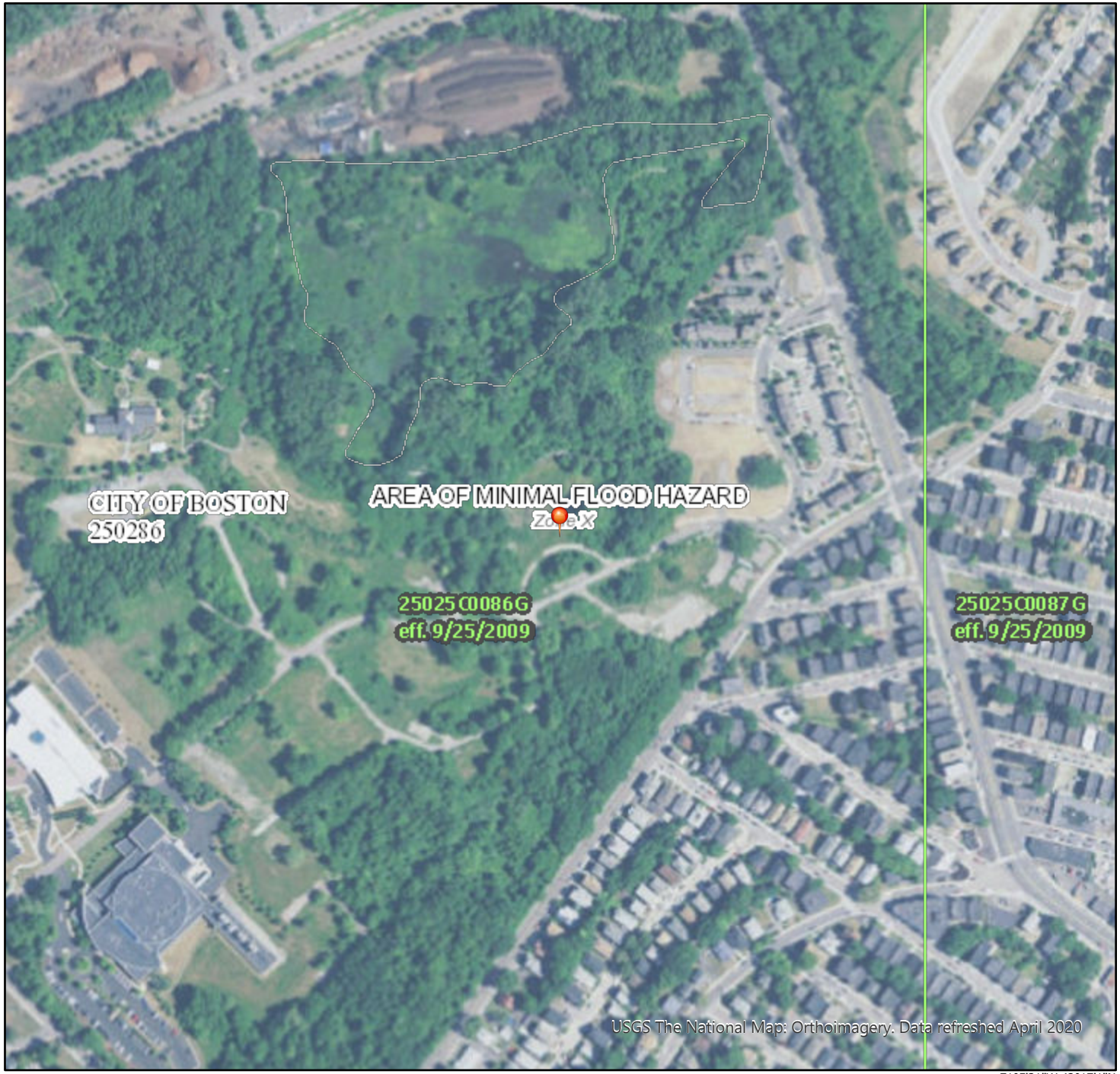
FEMA Floodplain

Olmsted Green
Mixed Income Homeownership 80 Units
Mattapan, Massachusetts

National Flood Hazard Layer FIRMette

FEMA

71°6'9"W 42°17'28"N



71°5'31"W 42°17'1"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

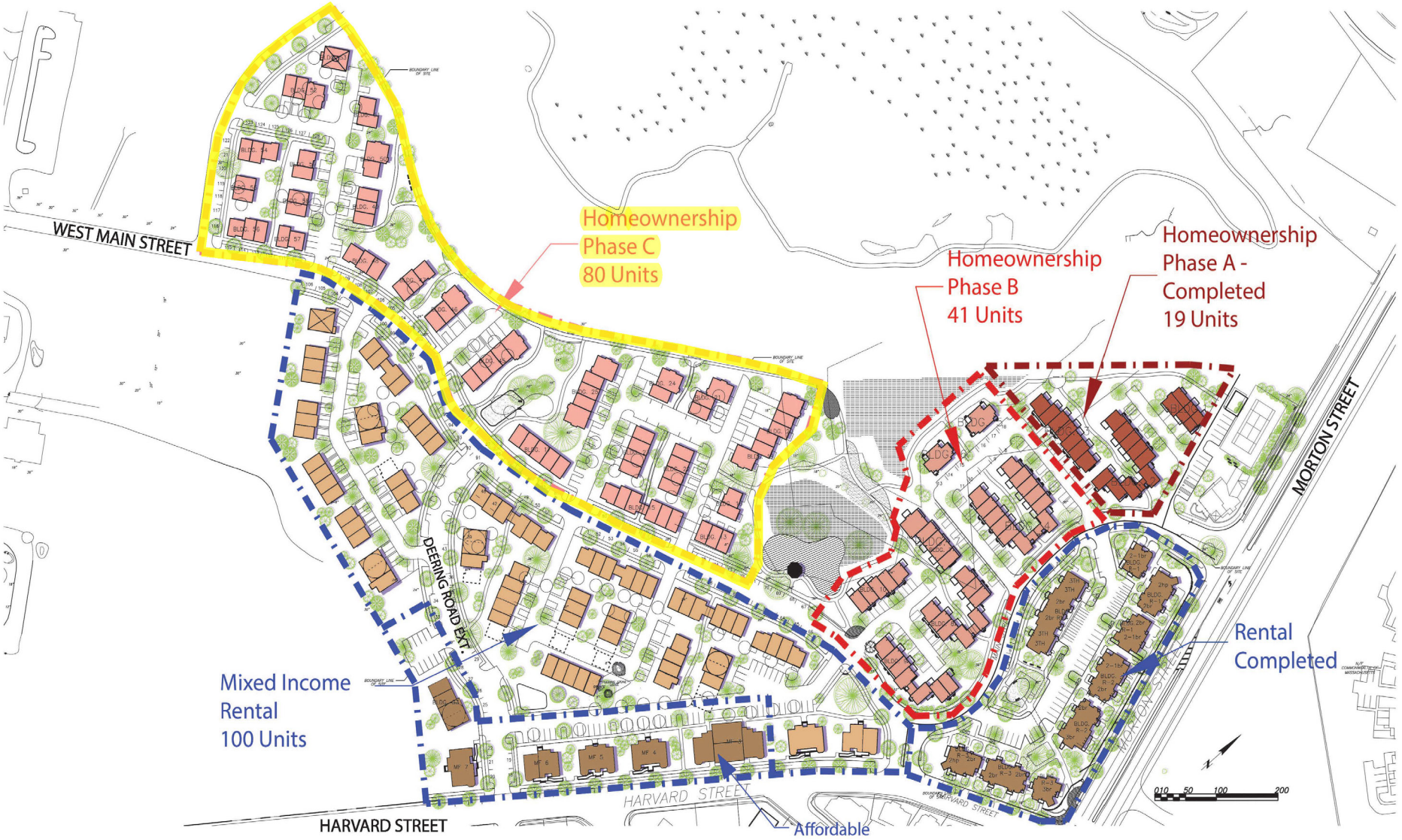
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/5/2020 at 3:47 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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



Source: ICON

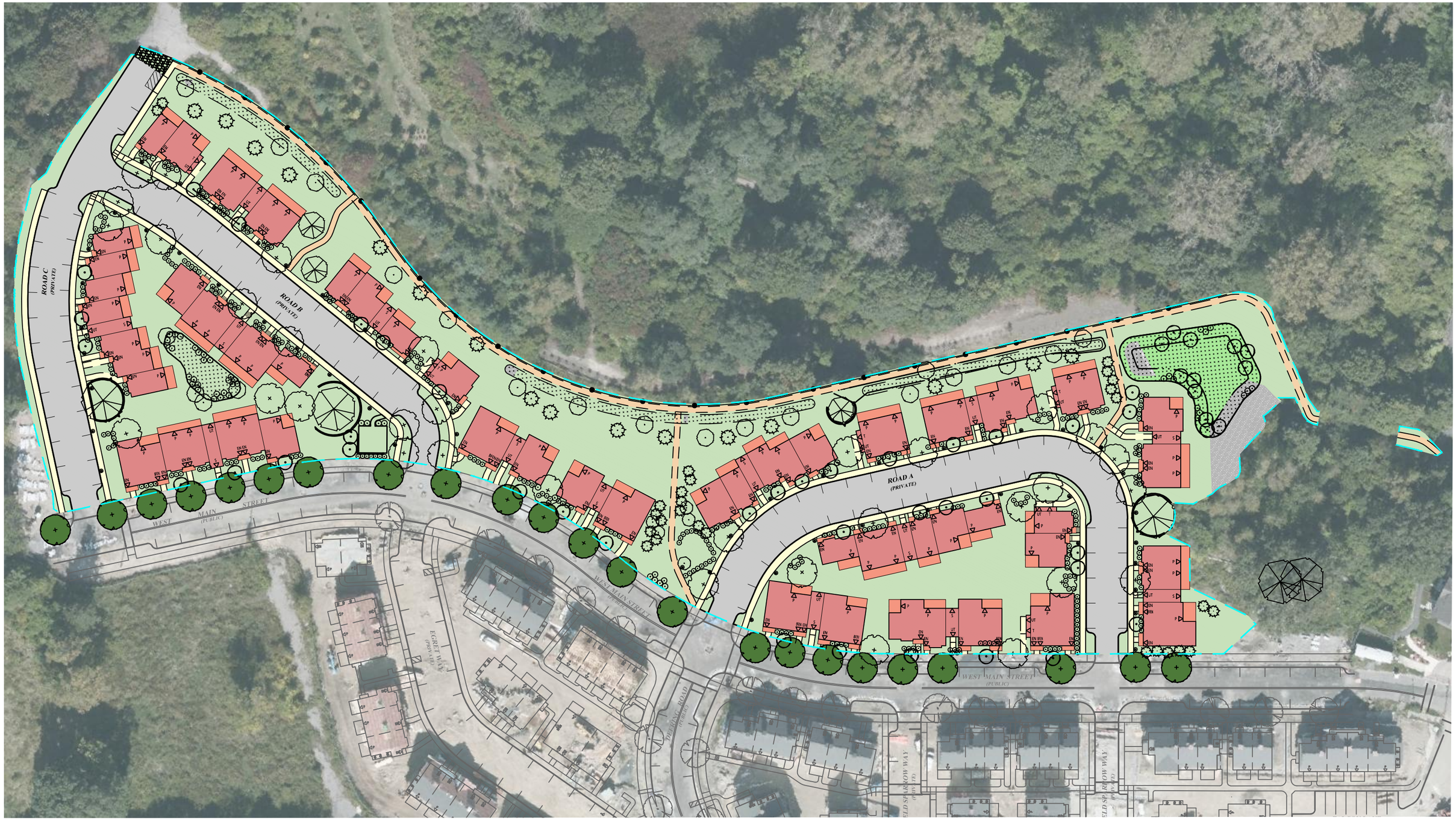
Mixed Income Homeownership 80 Units
Project Site

Figure 3

West Campus Phases

Olmsted Green
Mixed Income Homeownership 80 Units
Mattapan, Massachusetts

\\vhb\gbl\proj\Boston\08999.10 80 Unit\cad\ld\Planset\Concom\0899910_Proposed Conditions.dwg



Mixed–Income Homeownership
80 Units Limit of Work

Trees in Public Roadway

Biorentention Areas

Concrete Sidewalk

Pervious Walkway

Loam and Seed or
Wildflower Erosion
Seed Mix

Residential Building

Porches and Patios

Pervious Pavement

0 40 80 Feet

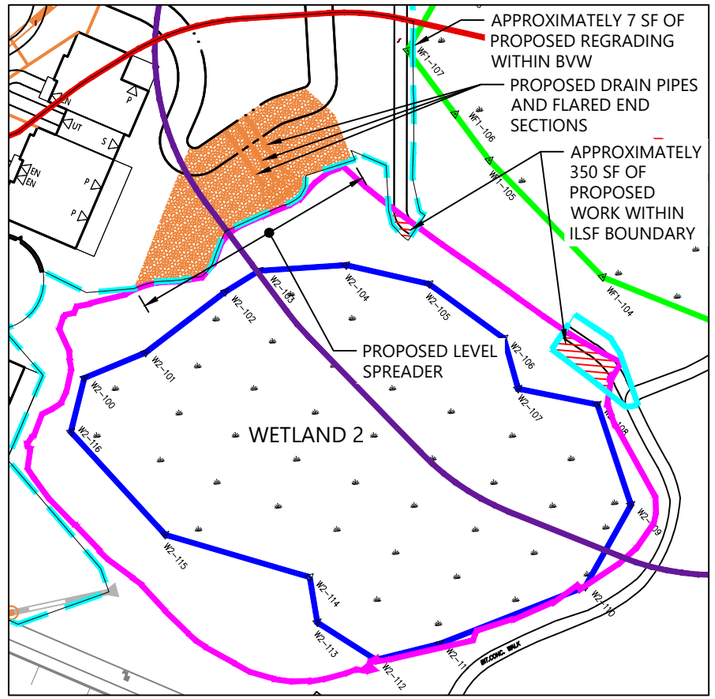
vhb

Proposed Conditions
Olmsted Green
Mixed-Income Homeownership 80 Units
Illustrative Landscape Plan

Figure 4

8/6/2020

WETLAND DETAIL



Mixed–Income Homeownership 80 Units Limit of Work

Drainage Infrastructure

100 Foot Buffer Zone to IVW

BVW Boundary

IVW Boundary

ILSF Boundary

100 Foot Buffer Zone to BVW

0 40 80 Feet

vhb

Proposed Conditions
Olmsted Green
Mixed-Income Homeownership 80 Units
Drainage Plan and Wetland Resource Areas

Figure 5

8/4/2020

Attachment A
Notice of Intent Narrative

- Introduction
- Project History
- Site Description
- Project Description
- Mitigation Measures
- Regulatory Compliance
- Summary

Attachment A
Notice of Intent Narrative

This Notice of Intent (NOI) is submitted pursuant to the requirements of the Massachusetts Wetlands Protection Act (MGL Chapter 131, Section 40) and its implementing regulations (310 CMR 10.00).

1.1 Introduction

Lena New Boston LLC (the applicant) is proposing additional work on the Olmsted Green mixed-use development project, portions of which have previously been reviewed and approved by the Boston Conservation Commission (the Commission). Although not proposed in this NOI, the Olmsted Green project will ultimately consist of the following elements:

- Approximately 140 units of for-sale and 298 units of rental housing;
- Approximately 59 units of senior rental housing;
- Community center with management offices, meeting areas, and a fitness center; and
- Active and passive open space including 4-acre sports field.

These features will be distributed over the entire 42.5-acre property, which includes lots that are located to the northeast (East Campus) and southwest (West Campus) of Morton Street (Figure 1). Phase 1 has been completed and Phase II is currently under construction. The development will be complete once the final phase, the Mixed-Income Homeownership-80 Units phase, is constructed within the next three to four years.

The project will impact Bordering Vegetated Wetland (BVW) and its associated buffer zone; the buffer zone associated with Isolated Vegetated Wetland (IVW); and Isolated Land Subject to Flooding. Because the Project will impact wetland resource areas and buffer zones, it must be reviewed by the Boston Conservation Commission in accordance with the requirements of the WPA and the Boston Wetlands Ordinance.

As described below, all work will be performed in a manner that minimizes adverse impacts to the wetland resource areas. Section 1.4, Mitigation Measures provides a detailed description of the erosion and sedimentation control program for the project. This program includes Best Management Practices (BMPs) specified in a manual prepared for the Massachusetts Executive

Office of Environmental Affairs (EOEA)[1]. The project will fully comply with the Stormwater Management Policy developed by the Massachusetts Department of Environmental Protection (DEP) and Office of Coastal Zone Management (CZM)[2]. The stormwater management program developed for this project incorporates many low impact development (LID) principles, as described in more detail in Sections 1.3 and 1.5.2. Climate change considerations are discussed in Section 1.6.4.

1.2 Project History

On June 6, 2006, the Commission issued an Order of Conditions (OOC) for DEP File No. 006-1073 permitting site preparation work on the project's West Campus. That work included removing remnants of the former state hospital (pavement, utilities and foundations), excavating unsuitable soils, blending it with other materials and replacing it on the site. That work has been completed, and a Certificate of Compliance (COC) was issued on July 13, 2016.

On September 20, 2006, the Commission issued an OOC for DEP File No. 006-1086, permitting Phase I construction work on the Olmsted Green West Campus. Phase I proposed construction of approximately 51 rental housing units, 72 privately owned town homes, and a community center on approximately 8.4 acres of land within the West Campus.

As the project progressed, Phase I was further divided into three phases, and the total number of units in the homeownership phases was reduced: Rental Phase (51 units), Phase A (19 homeownership units) and Phase B (41 homeownership units). Due to market conditions, only a portion of the work approved under DEP File No. 006-1086 was initially completed, and a partial COC was issued on July 13, 2016. The remainder of Phase B work was approved under DEP File No. 006-1471 issued on July 13, 2016. That work has been completed. A request for a Certificate of Compliance (COC) will be submitted pending satisfaction of the Condition 71, which requires an amendment to the Condominium Association's deed. Phase II includes the Olmsted Green Mixed Income Rental Phase, an NOI for which was filed with the Commission on November 1, 2017, with an OOC issued on December 7, 2017 under DEP File No. 006-1558. That phase consists of 100 units of mixed-income housing, 162 surface parking spaces, and associated infrastructure and landscaping. That work is ongoing and is expected to be completed by Winter 2020. Upon completion, the proponent will file a request for a COC.

1.3 Site Description

The proposed work will occur within the area identified as "Mixed Income Homeownership 80 Units Project Site" on the Olmsted Green property (see Figures 1 and 3). The Project Site is an

[1] Franklin, Hampden and Hampshire Conservation Districts, 1997. Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers and Municipal Officials.

[2] DEP and CZM, 1997. Stormwater Management: Volumes I and II.

approximately 6.6-acre area within the 24-acre West Campus. The Project Site is bounded by West Main Street to the south, Mass Audubon's Boston Nature Center to the west and north, and Olmsted Green Homeownership Phase B to the east.

Under existing conditions, the Site is a mix of overgrown grasses (formerly landscaped areas), wooded areas, and poor-condition pavement. The Site does not have any buildings. The storm drain system from the previous development has been abandoned and/or filled. Under existing conditions, runoff from the Site consists of overland flow toward three Design Points, which have been identified as Wetland 1 (DP-1), Wetland 2 (DP-2) and Boston Nature Center (DP-3) and further described in Section 1.2.2 below.

According to the currently effective Flood Insurance Rate Map (FIRM) panel 25025C0086G (Figure 2), no portion of the property lies within the 1% annual chance floodplain. The FIRM indicates that an area to the north of the West Campus property is classified as Zone X and may be inundated during a 1% annual chance flood event to average depths of one foot or less. According to data produced in 2017 by the Natural Heritage & Endangered Species Program (NHESP), the Site and surrounding areas do not contain any Priority Sites of Rare Species Habitat, Estimated Habitats of Rare Wildlife, or Certified Vernal Pools. Data maintained by EOEA's MassGIS department does not identify any Wellhead Protection Areas or Areas of Critical Environmental Concern on or near the property. According to the Surface Water Quality Standards (314 CMR 4.00) and an atlas prepared for the DEP,[3] the Project Site does not contain any Outstanding Resource Waters.

1.3.1 Wetland Resource Areas

On July 29, 2020 VHB personnel delineated wetland resource areas on the Olmsted Green West Campus, east of Blue Jay Circle, in accordance with criteria developed by the DEP[4] and the US Army Corps of Engineers[5]. The two wetland resource areas that were delineated are summarized in Table 1.

TABLE 1. DELINEATED RESOURCE AREAS

Flag Numbers	Resource Type	Description
WF1-100 to WF1-110	BVW	Wetland east of Blue Jay Circle, associated with an unnamed perennial stream to the north beyond limits of delineation
WF2-100 to WF2-116	IVW/ILSF	Isolated vegetated wetland and isolated land subject to flooding south of Wetland 1 and north of West Main Street

Source: VHB, 2020

[3] Rojko, A.M. and Kimball, W.A., 1995. Designated Outstanding Resource Waters of Massachusetts.
[4] DEP, 1995. Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act.
[5] Environmental Laboratory, 1987. Corps of Engineers Wetlands Delineation Manual.

Photos of the resource areas described below, as well as wetland delineation forms, are included in Attachment D – Wetland Delineation Report. Wetlands Resource Areas are shown in Figure 5.

Bordering Vegetated Wetland

Based on observed field conditions, Wetland 1 is a forested wetland with some standing water present, but no observable flow. Staked erosion controls are evident along the moderate slope which abuts the housing development to the east. The wetland receives stormwater runoff from an outflow on the southeast corner. Typical species in this wetland include bigtooth aspen (*Populus grandidentata*), glossy buckthorn (*Rhamnus frangula*), and sensitive fern (Onoclea sensibilis). Typical upland species include Japanese knotweed (*Polygonum cuspidatum)*, glossy buckthorn, wild grape (*Vitis sp.*), oriental bittersweet (*Celastrus orbiculatus*) and garlic mustard (*Alliaria petiolata*). BVW along the southern boundary of Wetland 1 was delineated with pink flags WF1 100 to WF1 110. Under the WPA, a 100-foot buffer zone extends from the limit of BVW. The Project will impact approximately 7.0 sf of BVW, and 12,110 sf of buffer to BVW.

Isolated Vegetated Wetland

Wetland 2 is an isolated forested wetland, which receives stormwater runoff from two outlets on the southern wetland boundary, which were approved and installed as part of earlier phases of the Olmsted Green project under DEP File Nos. 006-1086 and 006-1558. While there was no standing water present at the time of delineation, signs of periodic inundation were present, such as water stained leaves, buttressed roots and hydric soils. Wetland 2 is bounded by moderate slopes on the south and east sides, which abut a road (West Main Street) servicing the housing development. Typical species in this wetland include silver maple (*Acer saccharinum*) and big-tooth aspen. Typical upland species include red oak (*Quercus rubra*) common mugwort (*Artemisia vulgaris*), tansy (*Tanacetum vulgare*), pokeweed (*Phytolacca americana*), queen anne's lace (*Daucus carota*) burdock (*Arctium minus*), curly dock (*Rumex crispus)* and, multiflora rose (*Rosa multiflora*). Wetland 2 was delineated with pink flags WF2 100 to WF2 116. Approximately 25,200 sf of buffer to IVW will be impacted.

IVWs do not fall under the jurisdiction of the WPA. While IVWs are regulated under the Boston Wetland Ordinance, there are currently no performance standards for this resource area.

Isolated Land Subject to Flooding

Wetland 2 qualifies as ILSF under the WPA, based on the calculation of wetland volume, as shown in the calculations included in Attachment E - Isolated Land Subject to Flooding Calculations. An ILSF is an isolated depression or basin without an inlet or an outlet. It is an area which at least once a year confines standing water to a volume of at least ¼ acre-feet and to an average depth of at least six inches. ILSF may be underlain by pervious materials, which in turn may be covered by a mat of organic peat or muck. In Wetland 2, a calculation of wetland volume defines the extent of ILSF as elevation 48 NAVD88. The area of the ILSF is approximately 32,598 sf. There is no buffer to ILSF under the WPA. Approximately 350 sf of land below the calculated

ILSF flood elevation will be impacted by construction of the porous path connections with approximately 37.8 cf of fill.

1.4 Project Description

The Olmsted Green Mixed-Income Homeownership 80 Units scope of work entails the development of approximately 80 units of mixed income housing, 92 surface parking spaces, private roads open to public travel, landscaping, lighting and utility infrastructure. Figures 4 and 5 show the proposed landscaping plan and drainage plan, respectively. Figure 3 shows the Project in the context of the West Campus proposed site plan. Proposed site plans for the Mixed-Income Homeownership 80 Units phase are included in Attachment G.

Construction will impact approximately 25,200 sf of land within the 100-foot buffer to the IVW. Of that, 6,128 sf will be within new building footprints. A porous path will be constructed between the proposed detention basin and the Bordering Vegetated Wetland (BVW). Approximately 7.0 sf of land will be raised slightly as a consequence. In addition, a stormwater outfall will be constructed for the basin to discharge to the Isolated Land Subject to Flooding (ILSF). While the outfall and associated stone protection will be constructed outside the ILSF, approximately 350 sf of land below the calculated ILSF flood elevation will be impacted by construction of the porous path connections on either side of the existing asphalt pavement located between the wetlands.

The landscaping plan is currently in design development. Prior to the design development phase, a tree inventory was performed. Existing trees with a diameter of 4 caliper inches or more were tagged and identified on a site plan. The preservation value of each tree was evaluated. Per the proposed plan, five #1 "Best to preserve" specimens and three #2 "great to preserve" specimens will be protected.

Under proposed conditions, stormwater runoff will be collected and treated in a network of green infrastructure facilities as described in Section 1.4.2 below. Proposed structural BMPs include an infiltration basin, porous pavement, and subsurface infiltration chambers. Additional details can also be found in Attachment F - Stormwater Report.

1.5 Mitigation Measures

The project includes measures to prevent adverse impacts to the wetland resource areas on the property. These measures include replacing any disturbed wetland plantings, implementing an erosion and sedimentation control program and managing stormwater. Further details are provided below.

1.5.1 BVW Mitigation

The Project will impact approximately 7.0 sf of BVW to allow installation of the porous pavement pedestrian pathway immediately adjacent to the wetland. At the site of impact, the

grade will be raised by approximately 0.5 inches. Appropriate replacement wetland vegetation will be planted at this location upon completion of site work, in accordance with the regulatory requirements described in Section 1.6.1 below.

1.5.2 Erosion and Sedimentation Control Program

BMPs will be implemented prior to and throughout the work period until the site is stabilized. The erosion and sedimentation control measures that will be utilized during 80 Unit work are described below and shown on the Proposed Site Plans included in Attachment G.

Erosion Control Barriers

Prior to commencement of site preparation activities, an erosion control barrier will be installed at the limit of work between the work area and the resource area. This barrier will consist of embedded silt fence and staked hay bales. When necessary, additional barriers will be installed immediately downgradient of erosion-prone areas, such as around the base of stockpiles, throughout the construction phase of the project. A sufficient supply of materials will be kept at the work site to facilitate the repair or replacement of the barriers. The barriers will be maintained until all areas are paved, landscaped, or otherwise stabilized.

Stabilized Construction Exit

Stone anti-tracking pads will be installed at points of egress from the work area. These fifty-foot-long structures will consist of crushed stone placed over a layer of filter fabric.

Temporary Soil Stabilization

Areas of exposed soils that remain un-stabilized for a period of more than 30 days will be stabilized through application of mulch or bonded fiber matrix. If mulch is utilized, it will be hydraulically applied and anchored with biodegradable netting or a tacking agent.

Sedimentation Basins and Diversion Swales

Temporary sediment basins will be constructed to capture runoff and promote settling of suspended sediment. The basins will either be excavations or bermed structures (depending on grading) and will discharge onto rip rap aprons. They will be located based on construction needs as determined by the contractor. Where necessary, diversion swales will be constructed to direct runoff into the temporary basins. The swales will be lined with an erosion control mat and will be equipped with check dams to reduce flows and trap sediment.

Dewatering Protocol

Any sediment-laden water that collects in excavated areas will be pumped into the diversion swales described above or will be routed through a filter bag (Dirtbag® or similar). If a filter bag is utilized, it will be surrounded by staked hay bales and will not be placed upslope of areas devoid of vegetation. In certain areas of the site, dewatering may need to be conducted in accordance with the protocol presented in the site preparation NOI. The contractor will

review dewatering activities with the environmental engineer to determine if it must adhere to special criteria.

Catch Basin Inlet Protection

The inlets of all impacted catch basins will be protected from sediment inflow by surrounding them with staked hay bales or by installing Siltsacks®. If hay bales are used, a layer of filter fabric will be placed beneath the grate of the catch basin. These controls will be inspected and cleaned (if necessary) after storms that produce more than 0.25 inches of precipitation.

Permanent Stabilization

Upon completion of final grading, areas not covered by buildings, pavement or other forms of landscaping will be covered with a layer of topsoil, seeded with mix of non-invasive indigenous grasses and stabilized through the application of mulch or bonded fiber matrix.

1.5.3 Stormwater Management Program

Land cover under proposed conditions will consist of buildings, paved roads and drives (both impervious and pervious), parking areas, paths, and landscaped lawns. Under proposed conditions, stormwater runoff will be collected and treated in a network of green infrastructure facilities prior to discharge.

The stormwater management system for the West Campus consists of several components. Bioretention basins, distributed throughout the site to mimic natural hydrologic conditions, will improve water quality while enhancing the Site aesthetics and ecological services. All streets, paths, and parking areas, as well as most walkways within the Site (excluding the sidewalks on public roads) will feature permeable pavement underlain by open-graded stone reservoirs.

The majority of Site runoff will be directed to the porous asphalt roadways. These roadways feature deep stone reservoirs for retaining, infiltrating, and attenuating runoff. Half of the proposed roofs discharge runoff to subsurface infiltration chambers. When these infiltration chambers have reached capacity, they will discharge into the stone reservoir of the porous pavement roadways. When the stormwater level exceeds the capacity of the roadway, the excess stormwater is collected by either area drains (Road A) or deep-sump, hooded catch basins (Roads B and C).

Runoff from the Road A region discharges to the infiltration basin which will provide additional contaminant removal while also attenuating flows during large storm events. The infiltration basin also collects a large portion of runoff from the Mixed Income Rental phase to the south of the Site. Three pipes with flared end sections (FES 500, FES 600 and FES 700) carry runoff to Wetland 2 via stabilized stone aprons and a level spreader to slow and dissipate overland flow. During the 100-year storm, Wetland 2 may receive up to approximately 5.3 acre-feet of runoff from the Project Site, the Mixed Income Rental development and run-on flow onto these developments from abutting properties.

When Roads B and C overtop, catch basins collect the runoff and divert it to a swale that overflows via a level spreader onto the abutting Boston Nature Center property. This swale also collects runoff from the Mixed Income Rental development. A small portion of the Site discharges to Wetland 1. This area consists of landscaping and a section of porous path. During the 100-year storm, Wetland 1 may receive up to 0.1 acre-feet of runoff from the Site. The stormwater design is described in more detail in the Stormwater Report in Attachment F and shown on the Proposed Site Plans in Attachment G.

1.6 Regulatory Compliance

The Project has been designed to comply with general provisions contained in 310 CMR 10.53(1). Potential adverse impacts will be further minimized through the incorporation of the erosion and sedimentation control program described in Section 1.4, Mitigation Measures. The Boston Wetlands Ordinance does not contain performance standards for the on-site resource areas.

1.6.1 Bordering Vegetated Wetland

In accordance with 310 CMR 10.55(4)(b), an Order of Conditions may permit work that results in the loss of up to 5,000 square feet of Bordering Vegetated Wetland when said area is replaced in accordance with established general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost.

The Project will impact 7.0 sf of BVW, including a small amount of fill (approximately 0.3 cf) that will cause lateral displacement of water. Due to the proposed treatment and infiltration measures, neither ground water quality nor supply will be negatively affected by this work. Appropriate replacement wetland vegetation will be planted at this location upon completion of site work, in accordance with the performance standards a t310 CMR 10.55(4)(b) as follows:

1. The surface of the replacement area to be created ("the replacement area") shall be equal to that of the area that will be lost ("the lost area");
2. The ground water and surface elevation of the replacement area shall be approximately equal to that of the lost area;
3. The overall horizontal configuration and location of the replacement area with respect to the bank shall be similar to that of the lost area;
4. The replacement area shall have an unrestricted hydraulic connection to the same water body or waterway associated with the lost area;
5. The replacement area shall be located within the same general area of the water body or reach of the waterway as the lost area;
6. At least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons, and prior to said vegetative reestablishment any exposed soil in the replacement area shall be

temporarily stabilized to prevent erosion in accordance with standard U.S. Soil Conservation Service methods; and

7. The replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in Part III of 310 CMR 10.00.

1.6.2 Isolated Land Subject to Flooding

As established in 310 CMR 10.05(6)(k), ILSF may be altered for the impoundment or detention of stormwater and/or the control of sedimentation or the attenuation of pollutants in stormwater discharges, provided the applicable performance standards are met. Approximately 350 sf of land below the calculated ILSF flood elevation will be impacted by construction of the porous path connections with approximately 37.8 cf of fill. In accordance with 310 CMR 10.57(4)(b), the Project will not result in the following:

1. Flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area;
2. An adverse effect on public and private water supply or ground water supply, where said area is underlain by pervious material'
3. An adverse effect on the capacity of said area to prevent pollution of the ground water, where the area is underlain by pervious material which in turn is covered by a mat of organic peat and muck; or
4. An impairment of its capacity to provide wildlife habitat where said area is vernal pool habitat, as determined by procedures contained in 310 CMR 10.60.

1.6.3 Massachusetts Stormwater Management Standards

According to MassDEP's 1996 Stormwater Policy, and as codified in 310 CMR 10.05(6)(k), stormwater runoff from all industrial, commercial, institutional, office, residential and transportation projects including site preparation, construction and redevelopment, and all point source stormwater discharges from said projects shall be managed according to the Stormwater Management Standards. The Project has been designed to meet the Stormwater Standards as described below:

1. *No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.*

   The Project has been designed to fully comply with Standard 1.

   The BMPs included in the proposed stormwater management system have been designed in accordance with the Massachusetts Stormwater Handbook. Supporting information and computations demonstrating that no new untreated discharges will result from the Project are presented through compliance with Standards 4 through 6.

All proposed Project stormwater outlets and conveyances have been designed to not cause erosion or scour to wetlands or receiving waters. Outlets from closed drainage systems have been designed with flared end sections and stone protection to dissipate discharge velocities. Overflows from BMPs that impound stormwater have been designed with stone to protect down gradient areas from erosion.

Computations and supporting information for the sizing and selection of materials used to protect from scour and erosion are included in Appendix A of the Stormwater Report.

2. *Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.*

   The Project has been designed to fully comply with Standard 2.

   The rainfall-runoff response of the Site under existing and proposed conditions was analyzed for storm events with recurrence intervals of 2, 10, 25 and 100-years. The results of the analysis indicate that there is no increase in peak discharge rates between the existing and proposed conditions for the 2-, 10-, and 25-year storm events. In the 100-year storm event, the peak discharge rate to DP-2 increases by 4% post-development but the runoff volume decreases by 10%. The peak rate to the other discharge points decreases the 100-year storm event.

   Computations and supporting information regarding the hydrologic modeling are included in Appendix B of the Stormwater Report.

3. *Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.*

   The Project has been designed to fully comply with Standard 3.

   Recharge of stormwater has been provided via subsurface infiltration structures, an infiltration basin, and exfiltrating porous pavement. In addition, the project is removing a detention basin that was installed in the Mixed Income Rental phase and is providing compensatory recharge via other infiltration BMPs. Each infiltration BMP has been designed to drain completely within 72 hours. A summary of recharge calculations can be found in the Stormwater Report (Attachment F). Soil data (including boring and test pit logs from past soil investigations), computations, and supporting information are included in Appendix C of the Stormwater Report.

4. *Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This Standard is met when:*

    a. *Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan, and thereafter are implemented and maintained;*

    b. *Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and*

    c. *Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.*

    The Project has been designed to fully comply with Standard 4.

    The Project Area, located within the Stony Brook Watershed in the Lower Charles River Basin, is covered by a Total Maximum Daily Load (TMDL) for phosphorus. The Lower Charles River TMDL recommends a Total Phosphorus (TP) load reduction of 65% from Medium Density Residential land use. VHB estimated the pollutant removal for TP provided by proposed BMPs using guidance from the following documents:

    - EPA's Final Massachusetts MS4 General Permit – Attachment 3 to Appendix F "Methods to Calculate Phosphorus Load Reductions for Structural Stormwater Best Management Practices in the Watershed", Effective Date July 1, 2017
    - MassDEP's Technical Guidance Document titled "Stormwater Best Management Practices (BMP) Performance Analysis" developed by Tetra Tech, dated March 2010

    Based on the BMP performance curves and the phosphorus loading rate for medium-density residential, the proposed BMPs will remove an estimated 81% of total phosphorus generated on the Site under proposed conditions. The proposed BMPs will reduce phosphorus loading to less than the loading under existing conditions: from 9.0 lbs/yr to 2.7 lbs/yr, or a 69% reduction from existing conditions.

    The Massachusetts Stormwater Standards require a TSS reduction of 80%. The proposed stormwater management system implements a treatment train of BMPs that has been designed to provide 80% TSS removal for stormwater runoff from all proposed impervious surfaces.

    Supporting calculations for Water Quality treatment BMPs including BMP sizing, TSS removal, and TP removal are included in Appendix D of the Stormwater Report. The Long-Term Pollution Prevention Plan is also included in Appendix D of the Stormwater Report.

5. *For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses*

to the maximum extent practicable. If through source control and/or pollution prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

The Project is not considered a LUHPPL, therefore this standard is not applicable.

6. *Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A "storm water discharge" as defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.*

   The Project will not discharge stormwater near or to a critical area, therefore this standard is not applicable.

7. *A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.*

   As a redevelopment of the old Boston State Hospital site, a portion of the Project qualifies as a redevelopment project. The proposed stormwater management plan, however, has been designed to full comply with all ten of the Stormwater Management Standards.

8. *A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.*

The proposed Project will result in the disturbance of more than one acre of land and thus requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) by the site contractor and owner in accordance with the Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) General Permit Program for Stormwater Discharges from Construction Sites. The SWPPP is not included in this report. However, standard recommended components of the Stormwater Pollution Prevention Plan for construction phases of the development to be prepared and implemented by the site contractor are described in Appendix G of the Stormwater Report.

9. *A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed.*

   In compliance with Standard 9, a Post-Construction Stormwater Operation and Maintenance (O&M) Plan has been developed for the Project. The O&M Plan is included in Appendix D of the Stormwater Report as part of the Long-Term Pollution Prevention Plan.

10. *All illicit discharges to the stormwater management system are prohibited.*

    Sanitary sewer and storm drainage structures which were part of the Boston State Hospital development on this site are to be completely removed during the site redevelopment. Select sanitary sewer and storm drainage structures that were part of the West Main Street reconstruction are to remain. These structures and pipes are noted on the plans. The rest of the existing network within the limit of work is to be removed or relocated. The proposed storm drainage and sanitary sewer networks are separate. The design plans submitted with this report have been designed in full compliance with current standards. The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges.

The Project has also been designed to comply with the Boston Water and Sewer Commission's (BWSC) requirements. Per BWSC site plan requirements, water quality BMPs will treat a minimum 1-inch of runoff from total impervious area on the Site. As mentioned under Standard 3, the project is removing a detention basin that was installed in the Mixed Income Rental phase and providing equivalent recharge elsewhere onsite. Therefore, the total required recharge volume is 7,545 cubic feet. This volume is more than the volume required per the DEP Stormwater Handbook. In addition to post-development structural BMPs, the project will include construction-phase erosion and sedimentation controls, and a long-term operation and maintenance program.

1.6.4 Climate Change Impacts

The expected lifespan of the Project is will be 80 years or more. According to the Boston Water and Sewer Commission, the rainfall volume associated with the 10-year, 24-hour design storm is anticipated to increase from its current baseline of 4.8" to 6.08" in the Year 2100

Medium GHG emissions scenario and 6.65" in the Precautionary GHG emissions scenario. The Project Site will also be subject to projected extreme temperatures.

To determine the stormwater system's ability to manage future rainfall, the impacts of a 6.33" 24-hour storm was reviewed. This rainfall depth is between the Medium and Precautionary rainfall volumes and is equivalent to the current-day 25-year, 24-hour storm. The Project's inlets are designed to accept the runoff from this design storm. The Project's closed drainage system and swales are designed to convey this runoff without overtopping. Swale sections with higher velocities will be reinforced with grasses and other plantings that can withstand such velocities. The stone for pipe ends has also been sized for this design storm. Thus, the Project can adequately manage future rainfall amounts that are predicted to increase due to climate change.

The following strategies have been integrated into the Site design to help improve the Project's resilience to the impacts of climate change:

- Providing a network of green/landscaped open spaces with shading and planting materials to minimize heat gain and improve urban wildlife habitat;
- Planting street trees to shade sidewalks and roadways to reduce ground-level temperatures; and
- Installing native, drought-resistant landscaping to improve survival under low precipitation, high-heat conditions.

These strategies will also help to reinforce the wetlands' role in protecting groundwater supply, flood control, storm damage prevention, prevention of pollution, and the protection of wildlife habitat.

1.7 Summary

The Mixed Income Homeownership 80-Units phase of the Olmsted Green project consists of constructing approximately 80 mixed-income residential units, 92 parking spaces, and associated infrastructure. The project has been designed to discharge stormwater to an ILSF, as allowed in accordance with 310 CMR 10.05(6)(k). A small portion of porous pathway will also discharge to a BVW and grading for this path will impact approximately 7.0 sf of this resource area. The wetland resource areas will be protected through the implementation of stormwater BMPs and a comprehensive erosion and sedimentation control program that adheres to guidelines developed for the EOEEA. Stormwater will be managed in strict compliance with the Massachusetts Stormwater Policy.

The applicant respectfully requests that the Boston Conservation Commission find these measures protective of the affected resource area and issue an Order of Conditions allowing the Project to proceed as described in this NOI and shown on the accompanying plans.

Attachment B
Filing Fee Information

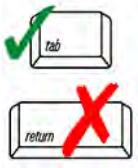
- Fee Transmittal Form
- Copy of Filing Fee Checks

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:

Harvard and Morton Streets	Boston
a. Street Address	b. City/Town
327406	$237.50
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Eric	VanDusen
a. First Name	b. Last Name

New Boston Fund
c. Organization

53 State Street, Suite 500
d. Mailing Address

Boston	MA	02109
e. City/Town	f. State	g. Zip Code

617-878-7902	617-227-4727	evandusen@newbostonfund.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

Eric	VanDusen
a. First Name	b. Last Name

OG West Campus Land LLC c/o Lena New Boston
c. Organization

1700 District Avenue
d. Mailing Address

Burlington	MA	01803
e. City/Town	f. State	g. Zip Code

617-878-7902	617-227-4727	evandusen@newbostonfund.com
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

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

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

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

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

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

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
2G -Storm Drain Discharge	1	500	500

Step 5/Total Project Fee: 500.00

Step 6/Fee Payments:

Total Project Fee:	500.00 a. Total Fee from Step 5
State share of filing Fee:	237.50 b. 1/2 Total Fee **less $**12.50
City/Town share of filling Fee:	1,500.00* *Per COB fee schedule

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.)

VANASSE HANGEN BRUSTLIN, INC.
101 WALNUT STREET • PO BOX 9151
WATERTOWN, MASSACHUSETTS 02471

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

361423
CHECK DATE

July 22, 2020

One Thousand Five Hundred and 00/100

AMOUNT

$1,500.00

City of Boston
1 City Hall Plaza
Room 709
Boston, MA 02201

AUTHORIZED SIGNATURE

Security Check features included. Details on back.

⑈361423⑈ ⑆211070175⑆ 113016137⑈

VANASSE HANGEN BRUSTLIN, INC.
101 WALNUT STREET • PO BOX 9151
WATERTOWN, MASSACHUSETTS 02471

EMILY BUSINESS FORMS 800.392.6018 VISION

361423

Check Date: 7/22/2020

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
Stephanie Kruel 7/22	7/22/2020	0095300	$1,500.00			$1,500.00
City of Boston		TOTAL	$1,500.00			$1,500.00
Citizens	20	0003222				

VANASSE HANGEN BRUSTLIN, INC.
101 WALNUT STREET • PO BOX 9151
WATERTOWN, MASSACHUSETTS 02471

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

361431
CHECK DATE

July 22, 2020

Five Hundred Twelve and 50/100

AMOUNT

$512.50

Commonwealth of Massachusetts
DEP-Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

MP
AUTHORIZED SIGNATURE

Security Check features included. Details on back.

⑈361431⑈ ⑆211070175⑆ 113016137⑈

VANASSE HANGEN BRUSTLIN, INC.
101 WALNUT STREET • PO BOX 9151
WATERTOWN, MASSACHUSETTS 02471

EMILY BUSINESS FORMS 800.392.6018 VISION

361431

Check Date: 7/22/2020

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
Stephanie Kruel 7/22	7/22/2020	0095301	$512.50			$512.50
Commonwealth of Massachusetts		TOTAL	$512.50			$512.50
Citizens	28	0004919				

Attachment C
Abutter Notification Materials

- Abutter Notification Form
- List of Abutters

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NOTIFICATION TO ABUTTERS
BOSTON CONSERVATION COMMISSION

In accordance with the Massachusetts Wetlands Protection Act, Massachusetts General Laws Chapter 131, Section 40, and the Boston Wetlands Ordinance, you are hereby notified as an abutter to a project filed with the Boston Conservation Commission.

A. **Lena New Boston LLC** has filed a Notice of Intent with the Boston Conservation Commission seeking permission to alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, section 40) and the Boston Wetlands Ordinance.

B. The address of the lot where the activity is proposed is **Olmsted Green, Harvard St and Morton Street, Mattapan.**

C. The project involves **Construction of 80 mixed-income homeownership units and associated infrastructure**.

D. Copies of the Notice of Intent may be examined at **Boston City Hall** between the hours of **9 AM and 5 PM, Monday through Friday.** For more information, contact the Boston Conservation Commission at **CC@boston.gov** or **(617) 635-3850.**

E. Copies of the Notice of Intent may be obtained from **Stephanie Kruel, skcopy@vhb.com, 617-607-2972** between the hours of 9am and 5pm, Monday through Friday**.**

F. In accordance with the Commonwealth of Massachusetts Executive Order Suspending Certain Provisions of the Open Meeting Law, the public hearing will take place **virtually** at https://zoom.us/j/6864582044. If you are unable to access the internet, you can call 1-929-205-6099, enter Meeting ID 686 458 2044 # and use "#" as your participant ID.

G. Information regarding the date and time of the public hearing may be obtained from the **Boston Conservation Commission** by emailing **CC@boston.gov** or calling **(617) 635-4416** between the hours of **9 AM to 5 PM, Monday through Friday.**

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

NOTE: Notice of the public hearing, including its date, tine, and place, will be posted on www.boston.gov/public-notices and in Boston City Hall not less than forty-eight (48) hours in advance.

NOTE: If you would like to provide comments, you may attend the public hearing or send written comments to CC@boston.gov or Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201

NOTE: You also may contact the Boston Conservation Commission or the Department of Environmental Protection Northeast Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call: the Northeast Region: (978) 694-3200.

List of Abutters Within 300 Feet of PID: 1405198500, 2A-11

PID	OWNER	ADDRESS		
1405198010 1405198400	MASS AUDUBON SOCIETY	450 WALK HILL ST	DORCHESTER MA	02124
1405198125	WORCESTER CITY CAMPUS CORP	100 CENTURY DR	WORCESTER MA	01606
1405198410	MA DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE	1 ASHBURTON PL FL 15	BOSTON MA	02108
1405198550	OG WEST CAMPUS LAND LLC*	C/O LENA NEW BOSTON 1700 DISTRICT AVENUE, SUITE 310	BURLINGTON MA	01803
1405198600	OLMSTED GREEN CONDOMINIUM*	C/O LENA NEW BOSTON 1700 DISTRICT AVENUE, SUITE 310	BURLINGTON MA	01803
1405198650 1405198900	OLMSTEAD GREEN CONDOMINIUMS*	C/O LENA NEW BOSTON 1700 DISTRICT AVENUE, SUITE 310	BURLINGTON MA	01803
1405198700	OLMSTED GREEN RENTAL 1 LLC	ONE WASHINGTON STREET, SUITE 500	BOSTON MA	02108

* Subsidiary of the Proponent – Abutter notification not required

Attachment D
Wetland Delineation Report

- July 29, 2020

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

Applicant: _____ Prepared by: **VHB, Inc.** Project location: **Olmsted Green, Mattapan, MA** DEP File #: _____

Check all that apply: ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **WF1-104** Transect Number: **Downgradient** Date of Delineation: **29-Jul-20**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
bigtooth aspen	*Populus grandidentata*	38.0%	65.0%	yes	FACU
swamp white oak	*Quercus bicolor*	20.5%	35.0%	yes	FACW*
Sapling/Shrub Layer					
glossy buckthorn	*Rhamnus frangula*	85.0%	100.0%	yes	FAC*
Climbing Woody Vine					
Oriental bittersweet	*Celastrus orbiculata*	20.5%	100.0%	yes	FACU
Ground Cover					
spotted jewelweed	*Impatiens capensis*	63.0%	38.1%	yes	FACW*
sensitive fern	*Onoclea sensibilis*	51.0%	30.8%	yes	FACW*
poison ivy	*Toxicodendron radicans*	20.5%	12.4%	no	FAC*
stinging nettle	*Urtica dioica*	20.5%	12.4%	no	FACU
garlic mustard	*Alliaria petiolata*	10.5%	6.3%	no	FACU

Remarks:

Morphological Adaptations: 0 **Description:** Wetland 1 is a forested swamp with some areas of standing water. Due to nearby development to the east, fill material and trash debris are present.

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 4 **Number of dominant non-wetland indicator plants: 2**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes

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

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

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

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number: **MA616**

soil type mapped: **Udorthents, wet substratum**

hydric soil inclusions: **yes**

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks: Soils contain hydric indicators but are disturbed with evidence of fill and debris materials from nearby upland development.

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
	0-12	10YR 3/1	sandy loam, evidence of fill material and debris
			redox features present (5YR 5/8)

Remarks:

3. Other:

Conclusion: Is soil hydric? ☑ yes ☐ no

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

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☑ Oxidized rhizoshperes:
- ☑ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other: topographic low

Vegetation and Hydrology Conclusion for Downgradient of WF1-104	**yes**	**no**
Number of wetland indicator plants >= number of non-wetland plants	**X**	
Wetland hydrology present:		
hydric soils present	**X**	
other indicators of hydrology present	**X**	
Sample location is in a BVW	**X**	

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

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

Applicant: _____ Prepared by: **VHB, Inc.** Project location: **Olmsted Green, Mattapan, MA** DEP File #: _____

Check all that apply: ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **WF1-104** Transect Number: **Upgradient** Date of Delineation: **29-Jul-20**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
big-tooth aspen	*Populus grandidentata*	38.0%	100.0%	yes	FACU
Sapling/Shrub Layer					
glossy buckthorn	*Rhamnus frangula*	20.5%	24.6%	yes	FAC*
Japanese knotweed	*Polygonum cuspidatum*	63.0%	75.4%	yes	FACU
Climbing Woody Vine					
Oriental bittersweet	*Celastrus orbiculata*	10.5%	100.0%	yes	FACU
Ground Cover					
garlic mustard	*Alliaria petiolata*	38.0%	65.0%	yes	FACU
grape	*Vitis sp.*	20.5%	35.0%	yes	NI

Remarks:

Morphological Adaptations: 0 **Description:**

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 1 **Number of dominant non-wetland indicator plants: 5**

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

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

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

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

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number: **MA616**

soil type mapped: **Udorthents, wet substratum**

hydric soil inclusions: **yes**

Are field observations consistent with soil survey? ☐ yes ☑ no

Remarks: Soils are disturbed with evidence of fill and debris materials from nearby upland development. No hydric soil indicators present in soil boring.

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
	0-12	10YR 2/2	sandy loam, fill material, some debris, including brick and ash

Remarks: Soil boring on upland slope above wetland.

3. Other:

Conclusion: Is soil hydric? ☐ yes ☑ no

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

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Upgradient of WF1-104	**yes**	**no**
Number of wetland indicator plants >= number of non-wetland plants		**X**
Wetland hydrology present:		
hydric soils present		**X**
other indicators of hydrology present		**X**
Sample location is in a BVW		**X**

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

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

Applicant: _____ Prepared by: **VHB, Inc.** Project location: **Olmsted Green, Mattapan, MA** DEP File #: _____

Check all that apply: ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **WF2-100** Transect Number: **Downgradient** Date of Delineation: **29-Jul-20**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
big-tooth aspen	*Populus grandidentata*	63.0%	55.3%	yes	FACU
silver maple	*Acer saccharinum*	51.0%	44.7%	yes	FACW*
Sapling/Shrub Layer					
glossy buckthorn	*Rhamnus frangula*	51.0%	82.9%	yes	FAC*
northern arrowwood	*Viburnum recognitum*	10.5%	17.1%	no	FACW*
Climbing Woody Vine					
Ground Cover					
sensitive fern	*Onoclea sensibilis*	20.5%	66.1%		FACW*
purple loosestrife	*Lythrum salicaria*	10.5%	33.9%		FACW*

Remarks:

Morphological Adaptations: 0 **Description:** Wetland 2 is an isolated, forested depression with signs of periodic inundation, however no standing water present during time of delineation.

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 2 **Number of dominant non-wetland indicator plants: 1**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes

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

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

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

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number: **MA616**

soil type mapped: **Udorthents, wet substratum**

hydric soil inclusions: **yes**

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks: Soils contain hydric indicators

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
	0-8	10YR 3/3	silty loam
	8-12+	10YR 5/5	silty sand with 10% redox conc. of 7.5YR 5/8

Remarks: Soil contains a reduced matrix with redox features present

3. Other:

Conclusion: Is soil hydric? ☑ yes ☐ no

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

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☑ Oxidized rhizoshperes:
- ☑ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☑ Other: topographic low, buttressed roots

Vegetation and Hydrology Conclusion for Downgradient of WF2-100	**yes**	**no**
Number of wetland indicator plants >= number of non-wetland plants	**X**	
Wetland hydrology present:		
hydric soils present	**X**	
other indicators of hydrology present	**X**	
Sample location is in a BVW	**X**	

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

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

Applicant: _____ Prepared by: **VHB, Inc.** Project location: **Olmsted Green, Mattapan, MA** DEP File #: _____

Check all that apply: ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only

☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II

☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **WF2-100** Transect Number: **Upgradient** Date of Delineation: **29-Jul-20**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
red oak	*Quercus rubra*	51.0%	100.0%	yes	FACU
Sapling/Shrub Layer					
multiflora rose	*Rosa multiflora*	20.5%	100.0%	yes	FACU
Climbing Woody Vine	*Entry not found!*				
Ground Cover					
common mugwort	*Artemisia vulgaris*	38.0%	27.5%	yes	UPL
tansy	*Tanacetum vulgare*	38.0%	27.5%	yes	UPL
pokeweed	*Phytolacca americana*	20.5%	14.9%	yes	FACU
queen anne's lace	*Daucus carota*	20.5%	14.9%	yes	UPL
burdock	*Arctium minus*	10.5%	7.6%	no	UPL
curly dock	*Rumex crispus*	10.5%	7.6%	no	FACU

Remarks:

Morphological Adaptations: 0 **Description:**

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 0 **Number of dominant non-wetland indicator plants: 6**

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

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

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

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

title/date: **Soil Survey of Norfolk and Suffolk Counties - 1989**

map number: **MA616**

soil type mapped: **Udorthents, wet substratum**

hydric soil inclusions: **yes**

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks: No hydric soil indicators present in soil boring. Boring data collected upslope from wetland area, fill material present

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
	0-12	10YR 3/2	sandy loam, with rocky debris fill

Remarks: Soil boring on upland slope above wetland.

3. Other:

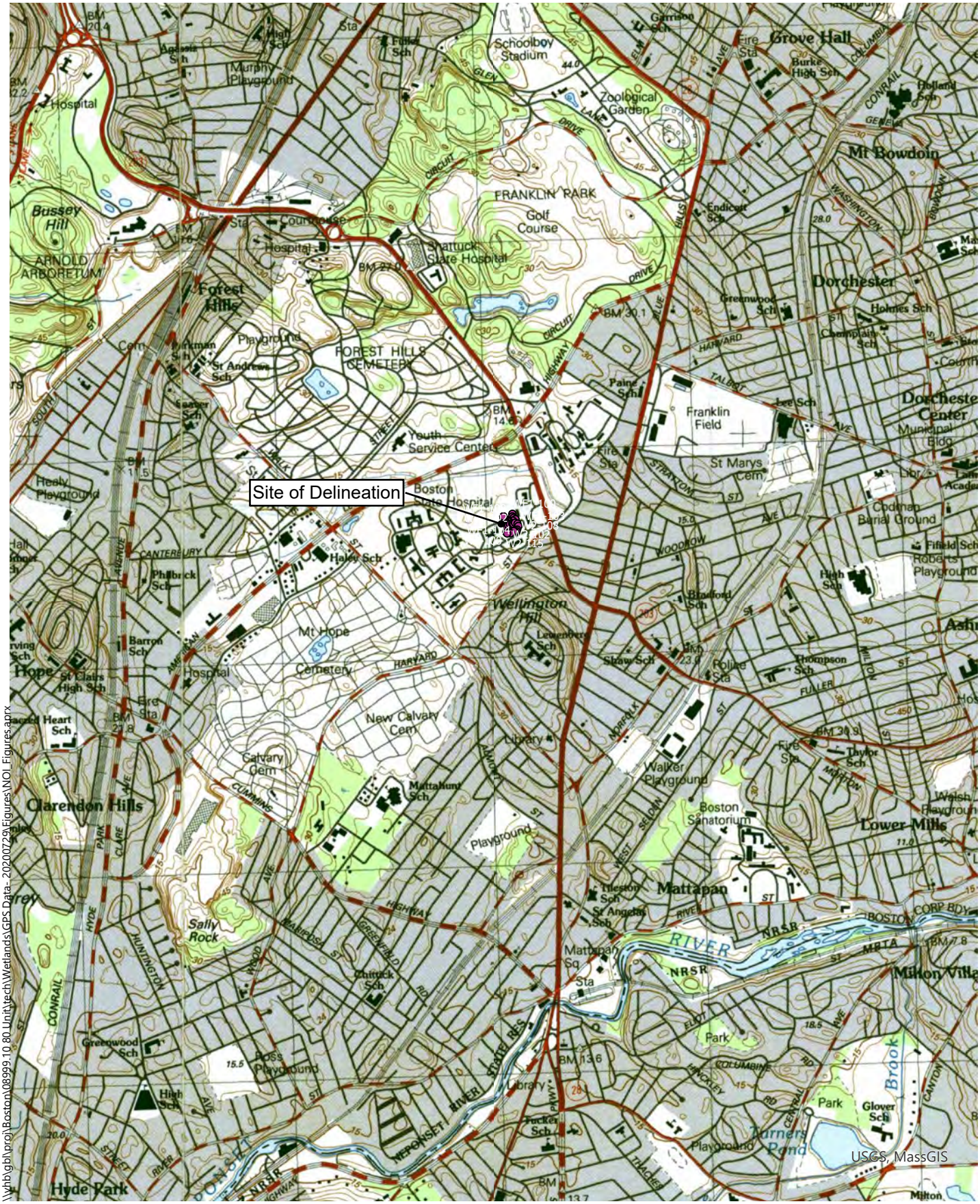
Conclusion: Is soil hydric? ☐ yes ☑ no

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

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion for Upgradient of WF2-100	**yes**	**no**
Number of wetland indicator plants >= number of non-wetland plants		**X**
Wetland hydrology present:		
hydric soils present		**X**
other indicators of hydrology present		**X**
Sample location is in a BVW		**X**

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



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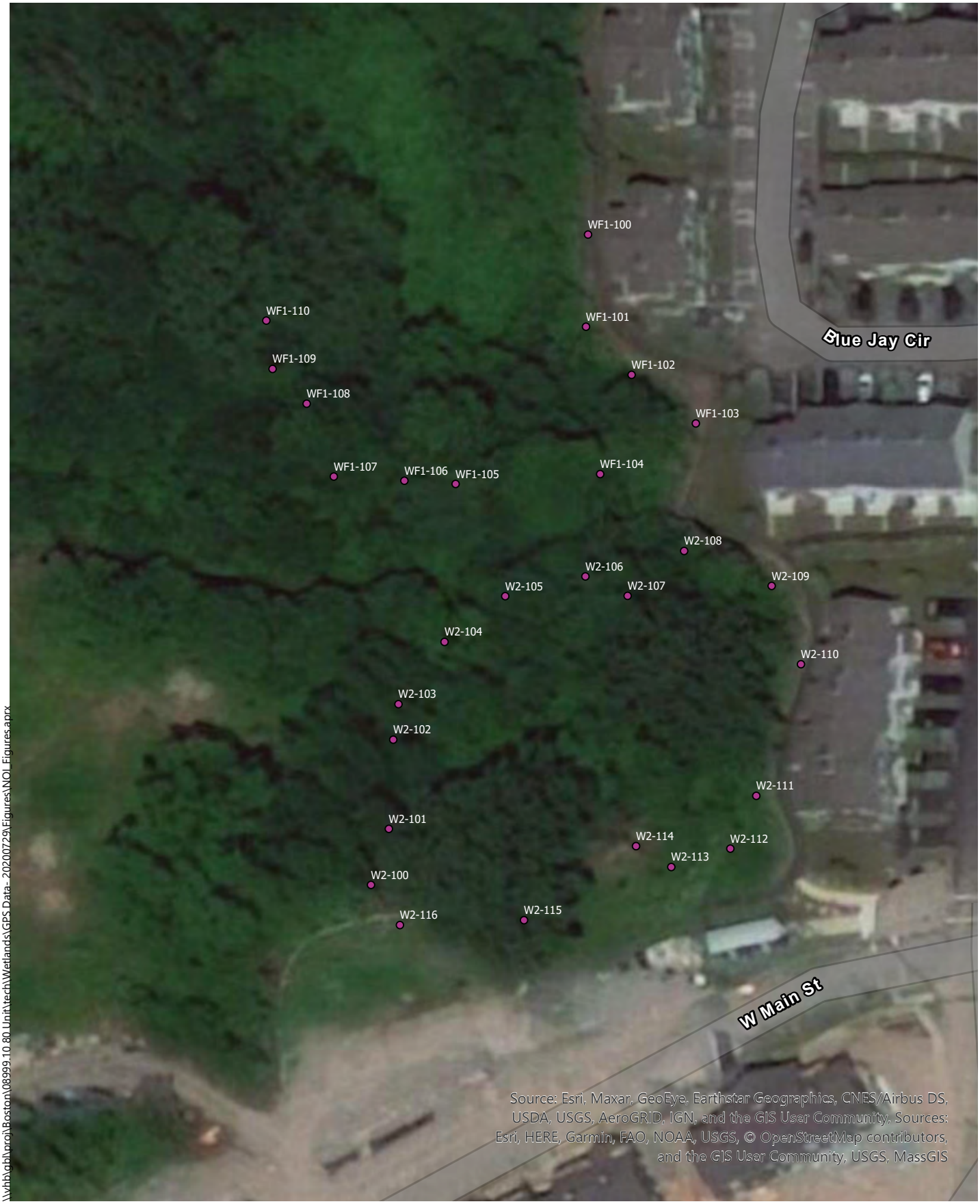
0 1000 2000 4000 Feet

Olmsted Green | Mattapan, MA

- Wetland Flag Location

Figure 1 - USGS Locus Map
Wetland Delineation
July 2020
Source Info: USGS, MassGIS, VHB



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0 25 50 100 Feet

Olmsted Green | Mattapan, MA

- Wetland Flag Location

Figure 2 - Aerial Map
Wetland Delineation
July 2020

Source Info: USGS, MassGIS, VHB

Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: New Boston Fund, Inc.	Site Location: Mattapan, MA	Project No: 08999.10

Photo No. : 1	Date: 7/29/2020

Description:

View of portion of Wetland 1, water stained leaves are present throughout.

Engineers | Scientists | Planners | Designers

PHOTOGRAPHIC LOG

Client Name: New Boston Fund, Inc.	Site Location: Mattapan, MA	Project No: 08999.10

Photo No. : 2	Date: 7/29/2020

Description:

-View of existing drainage outfall within the boundary of Wetland 1.

PHOTOGRAPHIC LOG

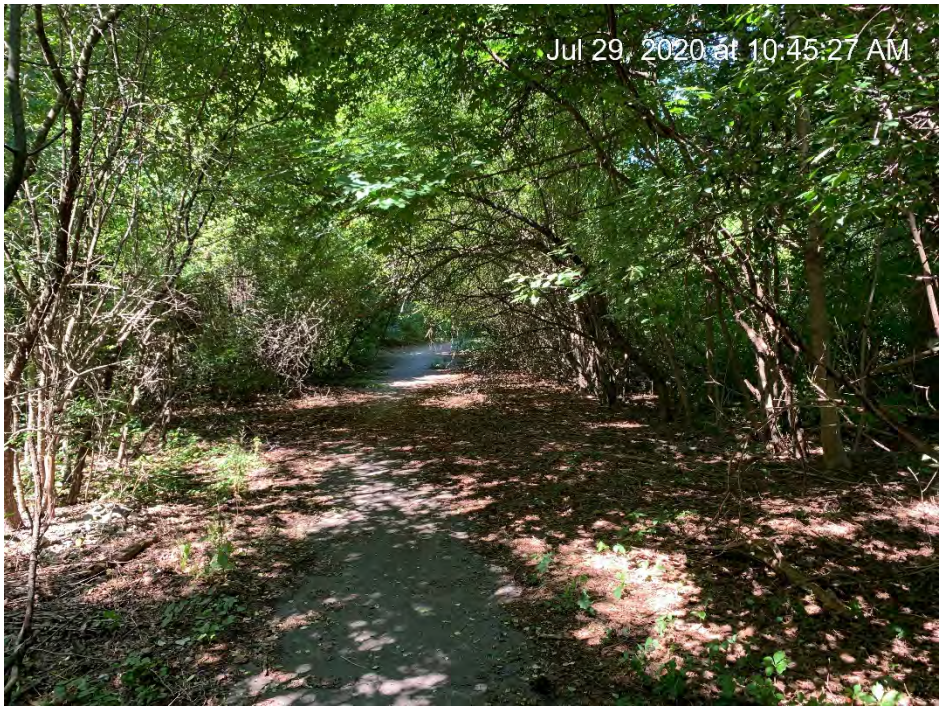
vhb Engineers | Scientists | Planners | Designers

Client Name: New Boston Fund, Inc.	Site Location: Mattapan, MA	Project No: 08999.10

Photo No. : 3 Date: 7/29/2020

Description:

-View looking west of exisiting overgrown pathway dividing wetland 1 to the north from wetland 2 to the south.



PHOTOGRAPHIC LOG

vhb Engineers | Scientists | Planners | Designers

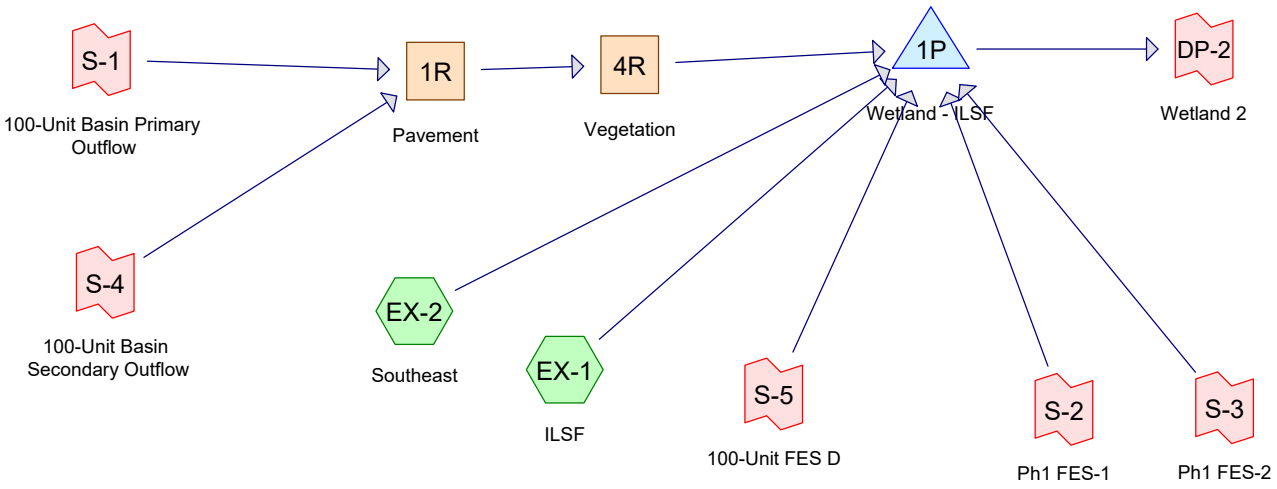
Client Name: New Boston Fund, Inc.	Site Location: Mattapan, MA	Project No: 08999.10

Photo No. : 4 Date: 7/29/2020

Description:

-View looking south within Wetland 2 indicators of hydrology include water stained leaves and hydric soils. The wetland receives flow from two drainage outfalls.

Attachment E
Isolated Land Subject to Flooding Calculations



Subcat Reach Pond Link

Routing Diagram for 0899910_EX_ILSF
Prepared by VHB, Printed 8/4/2020

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.224	98	Paved roads w/curbs & sewers, HSG C (EX-2)
0.414	98	Wetland (EX-1)
1.654	72	Woods/grass comb., Good, HSG C (EX-2)
2.292	**79**	**TOTAL AREA**

Total tributary area of the ILSF is 20.8 acres. The total area shown above does not include areas imported from other HydroCAD models, which have been used for detailed stormwater modeling of the phased development.

Summary for Subcatchment EX-1: ILSF

Runoff = 1.05 cfs @ 12.08 hrs, Volume= 0.083 af, Depth> 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.63"

	Area (sf)	CN	Description
*	18,050	98	Wetland
	18,050		100.00% Impervious Area

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

Summary for Subcatchment EX-2: Southeast

Runoff = 0.94 cfs @ 12.34 hrs, Volume= 0.113 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 1-Year Rainfall=2.63"

Area (ac)	CN	Description
0.224	98	Paved roads w/curbs & sewers, HSG C
1.654	72	Woods/grass comb., Good, HSG C
1.878	75	Weighted Average
1.654		88.07% Pervious Area
0.224		11.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.4	50	0.0020	0.04		**Sheet Flow, 1** Grass: Dense n= 0.240 P2= 3.26"
1.4	155	0.0129	1.83		**Shallow Concentrated Flow, 2** Unpaved Kv= 16.1 fps
0.5	90	0.0333	2.94		**Shallow Concentrated Flow, 3** Unpaved Kv= 16.1 fps
22.3	295	Total			

Summary for Reach 1R: Pavement

Inflow Area = 12.346 ac, 16.73% Impervious, Inflow Depth > 0.57" for 1-Year event
Inflow = 4.62 cfs @ 12.45 hrs, Volume= 0.583 af
Outflow = 4.59 cfs @ 12.55 hrs, Volume= 0.581 af, Atten= 1%, Lag= 5.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.37 fps, Min. Travel Time= 2.9 min
Avg. Velocity = 0.47 fps, Avg. Travel Time= 8.4 min

Peak Storage= 791 cf @ 12.50 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 1.00' Flow Area= 16.8 sf, Capacity= 63.72 cfs

16.78' x 1.00' deep channel, n= 0.016 Asphalt, rough
Length= 236.8' Slope= 0.0019 '/'
Inlet Invert= 51.00', Outlet Invert= 50.54'

Summary for Reach 4R: Vegetation

[62] Hint: Exceeded Reach 1R OUTLET depth by 0.01' @ 12.90 hrs

Inflow Area = 12.346 ac, 16.73% Impervious, Inflow Depth > 0.56" for 1-Year event
Inflow = 4.59 cfs @ 12.55 hrs, Volume= 0.581 af
Outflow = 4.59 cfs @ 12.57 hrs, Volume= 0.580 af, Atten= 0%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.19 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 0.78 fps, Avg. Travel Time= 2.8 min

Peak Storage= 274 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 15.0 sf, Capacity= 85.83 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 5.0 '/' Top Width= 20.00'
Length= 130.7' Slope= 0.0270 '/'
Inlet Invert= 50.54', Outlet Invert= 47.01'

Summary for Pond 1P: Wetland - ILSF

[62] Hint: Exceeded Reach 4R OUTLET depth by 0.58' @ 23.99 hrs

Inflow Area = 21.255 ac, 29.22% Impervious, Inflow Depth > 0.71" for 1-Year event
Inflow = 8.05 cfs @ 12.46 hrs, Volume= 1.264 af
Outflow = 6.50 cfs @ 12.75 hrs, Volume= 0.895 af, Atten= 19%, Lag= 17.0 min
Primary = 6.50 cfs @ 12.75 hrs, Volume= 0.895 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 47.69' @ 12.75 hrs Surf.Area= 27,437 sf Storage= 18,262 cf

Plug-Flow detention time= 138.2 min calculated for 0.894 af (71% of inflow)
Center-of-Mass det. time= 57.9 min (899.2 - 841.3)

Volume	Invert	Avail.Storage	Storage Description
#1	46.90'	103,887 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.90	9,375	0	0
47.00	21,268	1,532	1,532
47.60	26,727	14,399	15,931
48.00	30,026	11,351	27,281
49.00	38,300	34,163	61,444
50.00	46,586	42,443	103,887

Greater than 10,890 cubic feet - Area meets criteria for ILSF minimum storage

Device	Routing	Invert	Outlet Devices
#1	Primary	47.60'	**95.0' long x 25.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=6.43 cfs @ 12.75 hrs HW=47.69' (Free Discharge)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 6.43 cfs @ 0.79 fps)

No outlets within 6" of bottom of wetland, resulting in an average depth of pond greater than 6". Depth meets criteria for ILSF

Summary for Link DP-2: Wetland 2

Inflow Area = 21.255 ac, 29.22% Impervious, Inflow Depth > 0.51" for 1-Year event
Inflow = 6.50 cfs @ 12.75 hrs, Volume= 0.895 af
Primary = 6.50 cfs @ 12.75 hrs, Volume= 0.895 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link S-1: 100-Unit Basin Primary Outflow

Inflow Area = 12.346 ac, 16.73% Impervious, Inflow Depth > 0.57" for 1-Year event
Inflow = 4.62 cfs @ 12.45 hrs, Volume= 0.583 af
Primary = 4.62 cfs @ 12.45 hrs, Volume= 0.583 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

1-Year Primary Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\100-Unit PR Hydr

Summary for Link S-2: Ph1 FES-1

Inflow Area = 3.263 ac, 51.85% Impervious, Inflow Depth > 0.74" for 1-Year event
Inflow = 1.56 cfs @ 12.16 hrs, Volume= 0.202 af
Primary = 1.56 cfs @ 12.16 hrs, Volume= 0.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

1-year Primary Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\Phase 1 PR Hydro

Summary for Link S-3: Ph1 FES-2

Inflow Area = 0.584 ac, 28.84% Impervious, Inflow Depth = 0.83" for 1-Year event
Inflow = 0.39 cfs @ 12.26 hrs, Volume= 0.040 af
Primary = 0.39 cfs @ 12.26 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

1-year Primary Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\Phase 1 PR Hydro

Summary for Link S-4: 100-Unit Basin Secondary Outflow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

1-Year Secondary Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\100-Unit PR Hy

Summary for Link S-5: 100-Unit FES D

Inflow Area = 2.769 ac, 59.48% Impervious, Inflow Depth > 1.06" for 1-Year event
Inflow = 1.74 cfs @ 12.15 hrs, Volume= 0.245 af
Primary = 1.74 cfs @ 12.15 hrs, Volume= 0.245 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

1-Year Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\100-Unit PR Hydrograph F

Summary for Subcatchment EX-1: ILSF

Runoff = 2.85 cfs @ 12.08 hrs, Volume= 0.233 af, Depth> 6.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
*	18,050	98	Wetland
	18,050		100.00% Impervious Area

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

Summary for Subcatchment EX-2: Southeast

Runoff = 5.89 cfs @ 12.31 hrs, Volume= 0.647 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (ac)	CN	Description
0.224	98	Paved roads w/curbs & sewers, HSG C
1.654	72	Woods/grass comb., Good, HSG C
1.878	75	Weighted Average
1.654		88.07% Pervious Area
0.224		11.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.4	50	0.0020	0.04		**Sheet Flow, 1** Grass: Dense n= 0.240 P2= 3.26"
1.4	155	0.0129	1.83		**Shallow Concentrated Flow, 2** Unpaved Kv= 16.1 fps
0.5	90	0.0333	2.94		**Shallow Concentrated Flow, 3** Unpaved Kv= 16.1 fps
22.3	295	Total			

Summary for Reach 1R: Pavement

Inflow Area = 12.346 ac, 16.73% Impervious, Inflow Depth > 3.92" for 100-Year event
Inflow = 33.39 cfs @ 12.35 hrs, Volume= 4.038 af
Outflow = 33.38 cfs @ 12.37 hrs, Volume= 4.032 af, Atten= 0%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.97 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 0.88 fps, Avg. Travel Time= 4.5 min

Peak Storage= 2,658 cf @ 12.35 hrs
Average Depth at Peak Storage= 0.67'
Bank-Full Depth= 1.00' Flow Area= 16.8 sf, Capacity= 63.72 cfs

16.78' x 1.00' deep channel, n= 0.016 Asphalt, rough
Length= 236.8' Slope= 0.0019 '/'
Inlet Invert= 51.00', Outlet Invert= 50.54'

Summary for Reach 4R: Vegetation

[61] Hint: Exceeded Reach 1R outlet invert by 0.60' @ 12.37 hrs

Inflow Area = 12.346 ac, 16.73% Impervious, Inflow Depth > 3.92" for 100-Year event
Inflow = 33.38 cfs @ 12.37 hrs, Volume= 4.032 af
Outflow = 33.37 cfs @ 12.38 hrs, Volume= 4.030 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.29 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.41 fps, Avg. Travel Time= 1.5 min

Peak Storage= 1,016 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.60'
Bank-Full Depth= 1.00' Flow Area= 15.0 sf, Capacity= 85.83 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 5.0 '/' Top Width= 20.00'
Length= 130.7' Slope= 0.0270 '/'
Inlet Invert= 50.54', Outlet Invert= 47.01'

Summary for Pond 1P: Wetland - ILSF

[62] Hint: Exceeded Reach 4R OUTLET depth by 0.56' @ 23.99 hrs

Inflow Area = 21.255 ac, 29.22% Impervious, Inflow Depth > 4.12" for 100-Year event
Inflow = 55.82 cfs @ 12.36 hrs, Volume= 7.291 af
Outflow = 55.13 cfs @ 12.40 hrs, Volume= 6.913 af, Atten= 1%, Lag= 2.5 min
Primary = 55.13 cfs @ 12.40 hrs, Volume= 6.913 af

Peak Elevation = 47.96 during 100-Year storm event. Limits of ILSF at elevation 47.96

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 47.96' @ 12.40 hrs Surf.Area= 29,688 sf Storage= 26,059 cf

Plug-Flow detention time= 43.8 min calculated for 6.913 af (95% of inflow)
Center-of-Mass det. time= 17.5 min (844.8 - 827.3)

Volume	Invert	Avail.Storage	Storage Description
#1	46.90'	103,887 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.90	9,375	0	0
47.00	21,268	1,532	1,532
47.60	26,727	14,399	15,931
48.00	30,026	11,351	27,281
49.00	38,300	34,163	61,444
50.00	46,586	42,443	103,887

Device	Routing	Invert	Outlet Devices
#1	Primary	47.60'	**95.0' long x 25.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=55.10 cfs @ 12.40 hrs HW=47.96' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 55.10 cfs @ 1.62 fps)

Summary for Link DP-2: Wetland 2

Inflow Area = 21.255 ac, 29.22% Impervious, Inflow Depth > 3.90" for 100-Year event
Inflow = 55.13 cfs @ 12.40 hrs, Volume= 6.913 af
Primary = 55.13 cfs @ 12.40 hrs, Volume= 6.913 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link S-1: 100-Unit Basin Primary Outflow

Inflow Area = 12.346 ac, 16.73% Impervious, Inflow Depth > 3.12" for 100-Year event
Inflow = 11.81 cfs @ 12.35 hrs, Volume= 3.214 af
Primary = 11.81 cfs @ 12.35 hrs, Volume= 3.214 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

100-Year Primary Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\100-Unit PR Hy

Summary for Link S-2: Ph1 FES-1

Inflow Area = 3.263 ac, 51.85% Impervious, Inflow Depth > 3.79" for 100-Year event
Inflow = 7.49 cfs @ 12.37 hrs, Volume= 1.031 af
Primary = 7.49 cfs @ 12.37 hrs, Volume= 1.031 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

100-year Primary Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\Phase 1 PR Hyc

Summary for Link S-3: Ph1 FES-2

Inflow Area = 0.584 ac, 28.84% Impervious, Inflow Depth > 4.61" for 100-Year event
Inflow = 1.26 cfs @ 12.34 hrs, Volume= 0.224 af
Primary = 1.26 cfs @ 12.34 hrs, Volume= 0.224 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

100-year Primary Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\Phase 1 PR Hyc

Summary for Link S-4: 100-Unit Basin Secondary Outflow

Inflow = 21.58 cfs @ 12.35 hrs, Volume= 0.823 af
Primary = 21.58 cfs @ 12.35 hrs, Volume= 0.823 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

100-Year Secondary Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\100-Unit PR

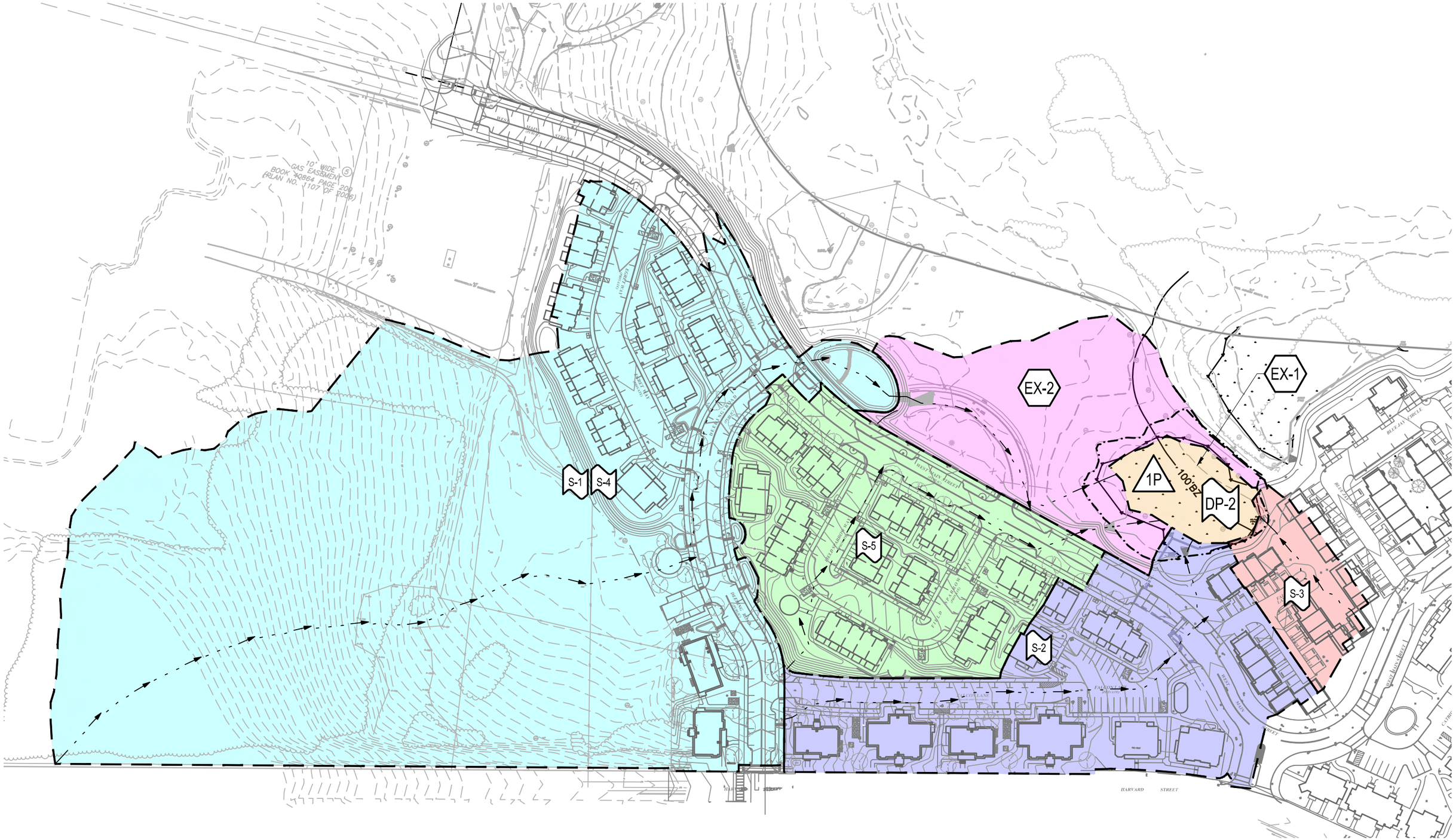
Summary for Link S-5: 100-Unit FES D

Inflow Area = 2.769 ac, 59.48% Impervious, Inflow Depth > 4.88" for 100-Year event
Inflow = 7.13 cfs @ 12.40 hrs, Volume= 1.126 af
Primary = 7.13 cfs @ 12.40 hrs, Volume= 1.126 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

100-Year Outflow Imported from \\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\100-Unit PR Hydrograph

\\vhb\gbl\proj\Boston\08999.10 80 Unit\tech\HydroCAD\ILSF\0899910_ILSF Watershed Figure.dwg



LEGEND:

- WATERSHED
- TIME OF CONCENTRATION
- LIMITS OF ILSF

DP-X DESIGN POINT

X DRAINAGE AREA DESIGNATION

X POND

L-X LINK

vhb

ILSF Watershed

Olmsted Green
Mixed-Income Homeownership-80 Units
Mattapan, Boston, MA

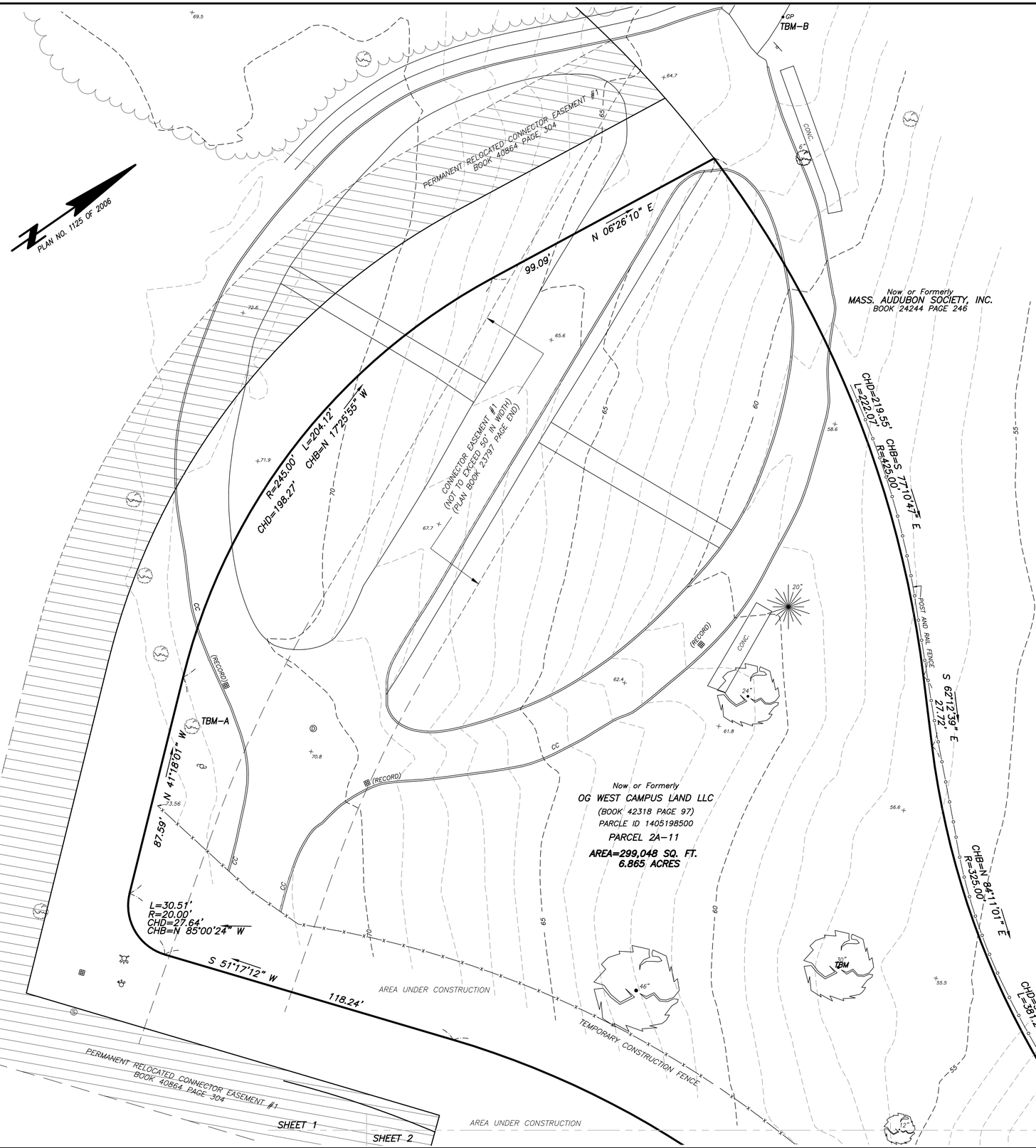
Figure 1

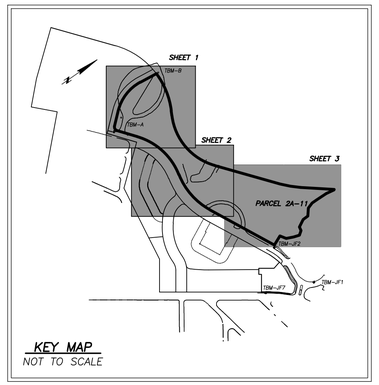
8/3/2020

Attachment F
Stormwater Report

Under Separate Cover

Attachment G
Construction Drawings





I CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND THE LATEST PLANS AND DEEDS OF RECORD.

KEVIN ARSENAULT, PLS (MA# 45286)
KARSENAULT@FELDMANSURVEYORS.COM

8-7-2020
DATE

COMMONWEALTH OF MASSACHUSETTS
KEVIN D. ARSENAULT No.45286
PROFESSIONAL LAND SURVEYOR

NOTES:

1) BENCH MARK INFORMATION:

BENCH MARKS USED:

RIGHT OUTER CORNER OF LOWER CONCRETE STEP OF HOUSE NUMBER 655 MORTON STREET. ELEVATION= 61.11 (BCB)

RIGHT OUTER CORNER OF LOWER CONCRETE STEP OF HOUSE NUMBER 625 MORTON STREET. ELEVATION= 56.00 (BCB)

SOUTHWEST CORNER OF CONCRETE SIGNAL POLE BASE LOCATED ON THE WEST SIDE OF MORTON STREET AT THE MAIN ENTRANCE TO SITE. ELEVATION=49.08

TEMPORARY BENCH MARKS USED:

TBM-JF1: FRONT RIGHT BONNET BOLT OF HYDRANT. (SEE KEY MAP)
ELEVATION = 53.22

TBM-JF2: FRONT RIGHT BONNET BOLT OF HYDRANT.
(AS SHOWN ON SHEET 3 OF 3)
ELEVATION = 54.21

TBM-JF7: FRONT RIGHT BONNET BOLT OF HYDRANT. (SEE KEY MAP)
ELEVATION = 56.31

TEMPORARY BENCH MARKS SET:

TBM-A: YELLOW BENCH MARK SPIKE SET 3' UP IN 30" TREE.
(AS SHOWN ON SHEET 1 OF 3)
ELEVATION = 75.25

TBM-B: TOP OF METAL GATE POST.
(AS SHOWN ON SHEET 1 OF 3)
ELEVATION = 68.21

2) ELEVATIONS REFER TO BOSTON CITY BASE (BCB)

3) CONTOUR INTERVAL EQUALS ONE (1) FOOT.

4) UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. WE CANNOT ASSUME RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES THAT ARE OMITTED OR INACCURATELY SHOWN ON SAID RECORD PLANS, SINCE SUBSURFACE UTILITIES CANNOT BE VISIBLY VERIFIED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL, TOLL FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY-TWO HOURS PRIOR TO EXCAVATION.

5) THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF FELDMAN LAND SURVEYORS ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO FELDMAN LAND SURVEYORS' SCOPE OF SERVICES UNDER CONTRACT TO OUR CLIENT FOR THIS PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN CONSENT IS PROVIDED BY FELDMAN LAND SURVEYORS.

6) THE SURVEY FOR PARCEL 2A-11 IS BASED ON MAPPING, FROM AERIAL PHOTOGRAPHY EXPOSED ON MARCH 14, 2007, PREPARED BY EASTERN TOPOGRAPHICS AND, FIELD VERIFIED JANUARY, 2019.

7) WETLAND FLAGS TAKEN FROM REFERENCE CAD FILE "MATTAPAN-042516.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN, INC., RECEIVED ON 10-30-2017.

REFERENCES

DEEDS

BOOK 45345 PAGE 002
BOOK 45435 PAGE 176
BOOK 45616 PAGE 046

PLANS

BOOK 23797 PAGE END
BOOK 25751 PAGE 056
BOOK 27754 PAGE 020
BOOK 43070 PAGE 295
BOOK 43070 PAGE 296
BOOK 43070 PAGE 297
BOOK 43070 PAGE 298
BOOK 43070 PAGE 299
BOOK 43070 PAGE 300

PLAN NO. 1105 OF 2006
PLAN NO. 1106 OF 2006
PLAN NO. 1107 OF 2006
PLAN NO. 1125 OF 2006
PLAN NO. 0143 OF 2007
PLAN NO. 0279 OF 2009
PLAN NO. 0143 OF 2010
PLAN NO. 0246 OF 2017

LEGEND

CHB ..... CHORD BEARING
CHD ..... CHORD DISTANCE
S ..... SEWER MANHOLE
D ..... DRAIN MANHOLE
..... HYDRANT
..... WATER SHUT OFF/WATER GATE
..... CATCH BASIN
..... ROUND CATCH BASIN
..... UTILITY POLE
..... SIGN
..... DECIDUOUS TREE
20" ..... DECIDUOUS TREE FLAGGED IN FIELD BY OTHERS WITH TREE DIAMETER SHOWN.
..... CONIFEROUS TREE
BIT ..... BITUMINOUS
CC ..... CONCRETE CURB
CONC ..... CONCRETE
R= ..... RIM ELEVATION
TOW ..... TOP OF WATER
X 51.7 ..... SPOT GRADE FROM AERIAL PHOTOGRAPHY
AD ..... AREA DRAIN
..... POST AND RAIL FENCE

EXISTING CONDITIONS PLAN
PARCEL 2A-11
WEST MAIN STREET
BOSTON, (WEST ROXBURY DISTRICT) MASS.

FELDMAN LAND SURVEYORS
152 HAMPDEN STREET
BOSTON, MASS. 02119
PHONE: (617)357-9740
www.feldmansurveyors.com

JANUARY 25, 2019

FELDMAN LAND SURVEYORS

20 0 10 20 40 80

SCALE: 1"=20'

RESEARCH EAC	FIELD CHIEF NC	PROJ MGR SMD	APPROVED	SHEET NO. 1 OF 3
CALC GL	CADD	FIELD CHECKED	CRD FILE 16586	JOB NO. 16586

FILENAME: S:\PROJECTS\16500\16586\DWG\16586.dwg

PLAN NO. 1125 OF 2006

SHEET 1

SHEET 2

POST AND RAIL FENCE

CHB=N 84°11'01" E
R=325.00'

CHD=308.38'
L=319.34'

Now or Formerly
MASS. AUDUBON SOCIETY, INC.
BOOK 24244 PAGE 246

CHD=359.76'
L=361.24'

AREA UNDER CONSTRUCTION

CHB=S 77°25'31" W
R=350.00'

Now or Formerly
OG WEST CAMPUS LAND LLC
(BOOK 42318 PAGE 97)
PARCLE ID 1405198500

PARCEL 2A-11

AREA=299,048 SQ. FT.
6.865 ACRES

R=49.68
T.O.W=47.7

VGC

TEMPORARY CONSTRUCTION FENCE

SHEET 2

SHEET 3

POST AND RAIL FENCE

N 50°34'41" E
376.62'

TOP=61.8
APPROXIMATE LIMITS
OF FILL PILE

TOP=69.3
APPROXIMATE LIMITS
OF FILL PILE

Now or Formerly
OG WEST CAMPUS LAND LLC
(BOOK 42318 PAGE 97)
PARCEL 2A-16

WEST MAIN STREET
(PRIVATE ~ 60' WIDE)
PARCEL 2A-12

DEERING ROAD

CHD=257.60'
L=262.96'
CHB=S 83°28'31" W
R=375.00'

AREA UNDER CONSTRUCTION

SHEET 2

SHEET 3

CONC.

CC

BIT. CONC.

TEMPORARY CONSTRUCTION FENCE

AREA UNDER CONSTRUCTION

LEGEND

- S ..... SEWER MANHOLE
- D ..... DRAIN MANHOLE
- ..... HYDRANT
- ..... WATER SHUT OFF/WATER GATE
- ..... CATCH BASIN
- ..... ROUND CATCH BASIN
- ..... UTILITY POLE
- ..... SIGN
- ..... DECIDUOUS TREE
- 20" ..... DECIDUOUS TREE FLAGGED IN FIELD BY OTHERS WITH TREE DIAMETER SHOWN.
- ..... CONIFEROUS TREE
- BIT ..... BITUMINOUS
- CC ..... CONCRETE CURB
- CONC ..... CONCRETE
- R= ..... RIM ELEVATION
- TOW ..... TOP OF WATER
- x 51.7 ..... SPOT GRADE FROM AERIAL PHOTOGRAPHY
- AD ..... AREA DRAIN
- ..... POST AND RAIL FENCE

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8-7-2020
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COMMONWEALTH OF MASSACHUSETTS
KEVIN D. ARSENAULT No.45286
PROFESSIONAL LAND SURVEYOR

EXISTING CONDITIONS PLAN
PARCEL 2A-11
WEST MAIN STREET
BOSTON, (WEST ROXBURY DISTRICT) MASS.

FELDMAN LAND SURVEYORS
152 HAMPDEN STREET
BOSTON, MASS. 02119

JANUARY 25, 2019
PHONE: (617)357-9740
www.feldmansurveyors.com

FELDMAN LAND SURVEYORS

20 0 10 20 40 80

SCALE: 1"=20'

RESEARCH EAC	FIELD CHIEF NC	PROJ MGR SMD	APPROVED	SHEET NO. 2 OF 3
CALC GL	CADD	FIELD CHECKED	CRD FILE 16586	JOB NO. 16586

FILENAME: S:\PROJECTS\16500\16586\DWG\16586.dwg

EXISTING CONDITIONS PLAN
PARCEL 2A–11
WEST MAIN STREET
BOSTON, (WEST ROXBURY DISTRICT) MASS.
FELDMAN LAND SURVEYORS
152 HAMPDEN STREET
BOSTON, MASS. 02119
JANUARY 25, 2019
PHONE: (617)357–9740
www.feldmansurveyors.com
FELDMAN LAND SURVEYORS
SCALE: 1"=20'
RESEARCH EAC
FIELD CHIEF NC
PROJ MGR SMD
APPROVED
SHEET NO. 3 OF 3
CALC GL
CADD
FIELD CHECKED
CRD FILE 16586
JOB NO. 16586
FILENAME: S:\PROJECTS\16500\16586\DWG\16586.dwg
KEVIN ARSENAULT, PLS (MA# 45286)
KARSENAULT@FELDMANSURVEYORS.COM
8–7–2020
DATE
COMMONWEALTH OF MASSACHUSETTS
KEVIN D. ARSENAULT No.45286
PROFESSIONAL LAND SURVEYOR
PLAN NO. 1125 OF 2006
Now or Formerly
MASS. AUDUBON SOCIETY, INC.
BOOK 24244 PAGE 246
Now or Formerly
OG WEST CAMPUS LAND LLC
(BOOK 42318 PAGE 97)
PARCLE ID 1405198500
PARCEL 2A–11
AREA=299,048 SQ. FT.
6.865 ACRES
Now or Formerly
OLMSTEAD GREEN CONDOMINIUM II LLC
(BOOK 57923 PAGE 246)
PARCEL 2A–8
BLUE JAY CIRCLE
WEST MAIN STREET
(PRIVATE ~ 60' WIDE)
PARCEL 2A–12
AREA UNDER CONSTRUCTION
TEMPORARY CONSTRUCTION FENCE
WETLAND FLAGS (SEE NOTE 7)
TOP=69.3 APPROXIMATE LIMITS OF FILL PILE
SHEET 2
SHEET 3
TBM–JF2
N 50°34'41" E
376.62'
CHD=113.43'
L=113.65'
CHB=N 44°22'36" E
R=525.00'
N 38°10'30" E
183.69'
MAG (FND)
S 09°20'15" W
46.39'
S 38°03'38" E
3.02'
S 01°49'46" W
62.78'
S 00°17'38" E
31.15'
REBAR (FND)
S 18°11'11" E
33.91'
S 51°56'15" E
44.90'
S 01°41'38" E
31.69'
S 27°28'55" E
46.21'
S 79°55'17" E
22.03'
S 35°19'46" E
26.79'
S 17°23'51" W
33.75'
S 24°13'32" W
41.05'
S 58°07'44" W
38.95'
S 23°37'09" E
58.31'
S 63°23'13" W
403.90'
REBAR (FND)
LEGEND
SEWER MANHOLE
DRAIN MANHOLE
HYDRANT
WATER SHUT OFF/WATER GATE
CATCH BASIN
ROUND CATCH BASIN
UTILITY POLE
SIGN
DECIDUOUS TREE
DECIDUOUS TREE FLAGGED IN FIELD BY OTHERS WITH TREE DIAMETER SHOWN.
CONIFEROUS TREE
BIT BITUMINOUS
CC CONCRETE CURB
CONC CONCRETE
R= RIM ELEVATION
TOW TOP OF WATER
x51.7 SPOT GRADE FROM AERIAL PHOTOGRAPHY
o AD AREA DRAIN
POST AND RAIL FENCE

\\VHB\GBL\PROJ\BOSTON\08999.10 80 UNIT\CAD\LD\PLANSET\0899910-LM

Match Line See Sheet C-2.2

LIMIT OF WORK

PERMEABLE BITUMINOUS WALKWAY (TYP)

INFILTRATION BASIN

BUILDING A4

BUILDING A5

BUILDING A7

BUILDING A3

BUILDING A6

BUILDING A2

BUILDING WM9

BUILDING WM8

BUILDING A1

ROAD A (PRIVATE)

PARCEL 2A-L3

POROUS BITUMINOUS ASPHALT PAVEMENT

MODULAR RETAINING WALL

APPROX TREE CANOPY OF TREE TO BE PROTECTED

ILSF BOUNDARY

CONCRETE SIDEWALK (TYP)

60' PUBLIC R.O.W.

BUILDING WM3

BUILDING WM2

2 Field Sparrow Way

61 W. Main St. 59 W. Main St. 57 W. Main St. 55 W. Main St. 53 W. Main St. 51 W. Main St. 49 W. Main St. 47 W. Main St. 45 W. Main St. 43 W. Main St. 41 W. Main St. 39 W. Main St. 37 W. Main St. 35 W. Main St. 33 W. Main St.

1" = 20'

NOTES

Key

Not To Scale

C2.3 C2.2 C2.1

No.	REVISIONS/SUBMISSIONS	Date

DAVIS SQUARE ARCHITECTS
240A Elm St,
Somerville, MA 02144
617 628 5700
www davissquarearchitects com

Consultant
vhb
99 High Street
Boston, MA 02110
617.728.7777

Project OLMSTED GREEN
MIXED-INCOME HOMEOWNERSHIP - 80 UNITS
MATTAPAN, BOSTON, MA 02126

Title LAYOUT AND MATERIALS PLAN

Designed	JHC
Checked	RPM
Project No.	08999.10
Scale	1" = 20'
Date	08/06/2020

Drawing No. C-2.1

\\VHB\GBL\PROJ\BOSTON\08999.10 80 UNIT\CAD\LD\PLANSET\0899910-ER

Match Line See Sheet C-3.2

BUILDING A4
FFE=54.8

BUILDING A5
FFE=55.9

BUILDING A7
FFE=56.7

BUILDING A6
FFE=56.5

BUILDING A2
FFE=55.2

BUILDING A3
FFE=54.6

BUILDING A1
FFE=52.6

BUILDING WM9
FFE=55.2

BUILDING WM8
FFE=52.9

BUILDING WM3

BUILDING WM2

ROAD A
(PRIVATE)

AREA=299,048 SQ. FT.
6.865 ACRES

INFILTRATION BASIN

LIMIT OF WORK

MATCH EXISTING GRADES

TREE PROTECTION FENCE

SILTSACK SEDIMENT TRAP (TYP)

ILSF BOUNDARY

APPROX TREE CANOPY OF TREE TO BE PROTECTED

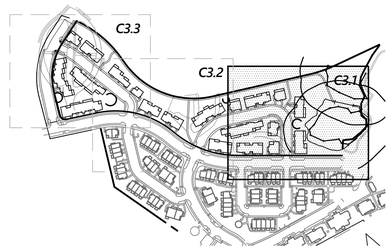
STABILIZED CONSTSTRUCTION EXIT (TYP)

SILTSOCK/ SILT FENCE BARIER (TYP)

60' PUBLIC R.O.W.

1" = 20'

NOTES



Key

Not To Scale

No.	REVISIONS/SUBMISSIONS	Date

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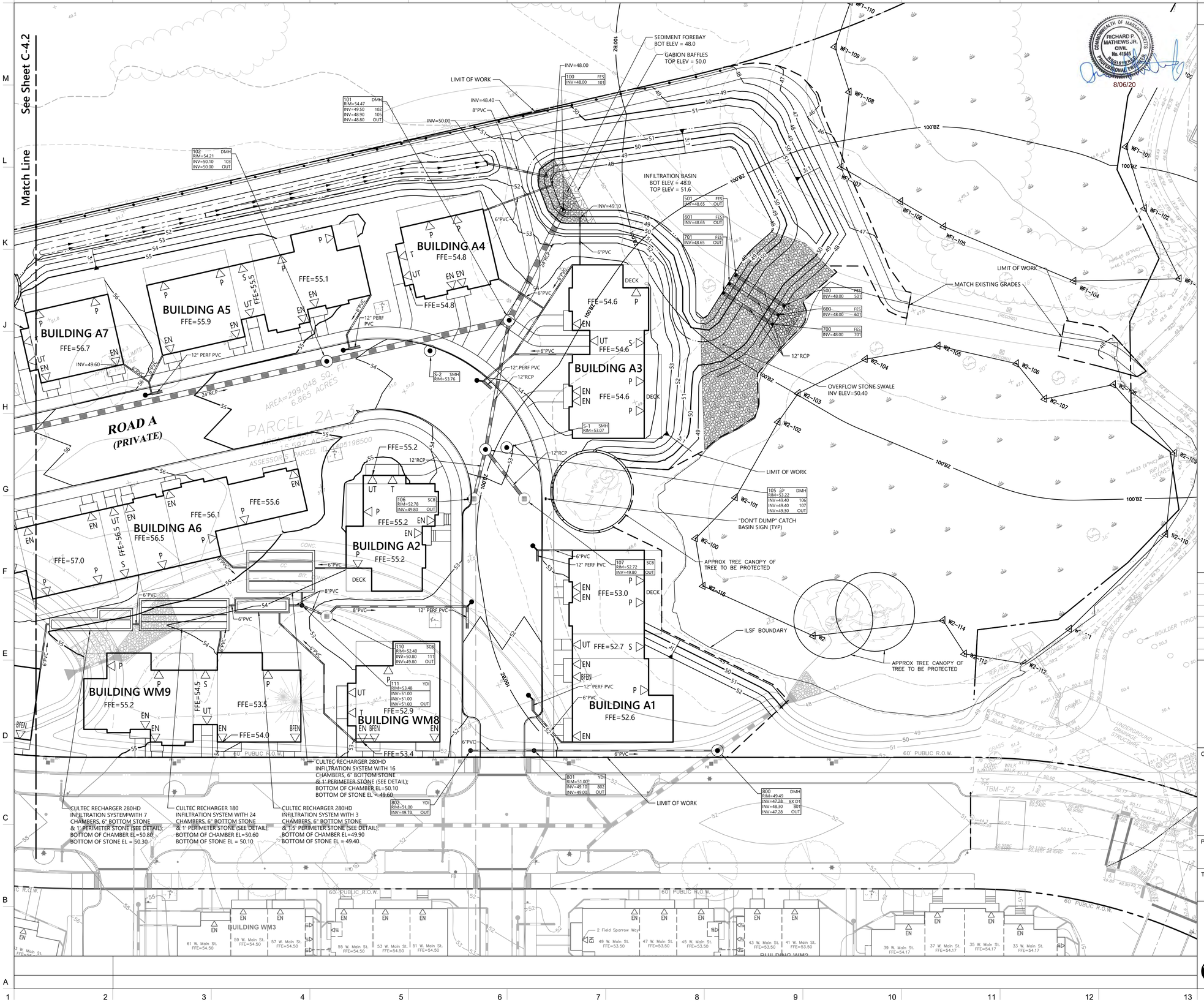
Project OLMSTED GREEN
MIXED-INCOME HOMEOWNERSHIP - 80 UNITS
MATTAPAN, BOSTON, MA 02126

Title EROSION & SEDIMENT CONTROL PLAN

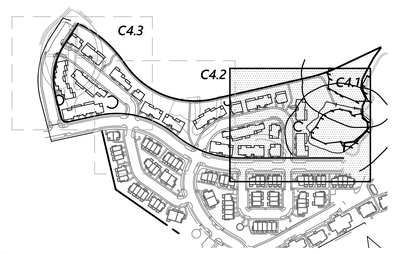
Designed	JHC
Checked	RPM
Project No.	08999.10
Scale	1" = 20'
Date	08/06/2020

Drawing No. C-3.1

\\VHB\GBL\PROJ\BOSTON\08999.10 80 UNIT\CAD\LD\PLANSET\0899910-GD



NOTES



Key

Not To Scale

No.	REVISIONS/SUBMISSIONS	Date

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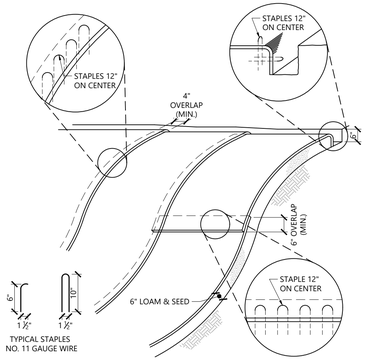
Project OLMSTED GREEN
MIXED-INCOME HOMEOWNERSHIP - 80 UNITS
MATTAPAN, BOSTON, MA 02126

Title GRADING AND DRAINAGE PLAN

Designed	JHC
Checked	RPM
Project No.	08999.10
Scale	1" = 20'
Date	08/06/2020

Drawing No. C-4.1



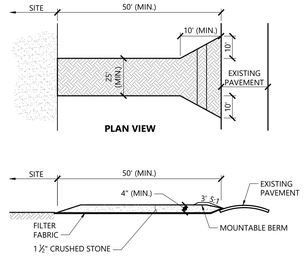
NOTES

1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE UPPER BLANKET END OVER LOWER END WITH 6 INCH (MIN.) OVERLAP AND STAPLE BOTH TOGETHER.
5. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
6. EROSION CONTROL BLANKETS SHALL BE USED IN ALL AREAS WHERE SLOPES EXCEED 3:1.

Erosion Control Blanket Slope Installation

1/16

N.T.S. Source: VHB LD_680



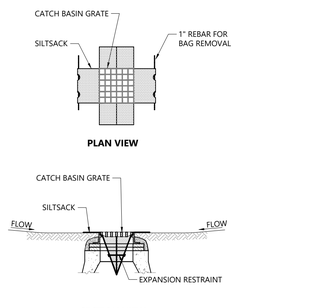
NOTES

1. EXIT WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

Stabilized Construction Exit

1/16

N.T.S. Source: VHB LD_682



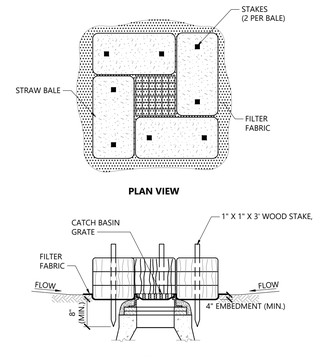
NOTES

1. INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND HAY BALES HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILTSACK.
3. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED

Siltsack Sediment Trap

1/16

N.T.S. Source: VHB LD_674



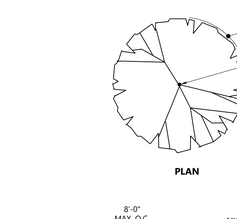
NOTES

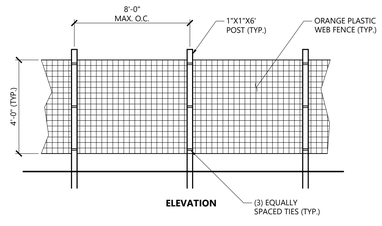
1. ENCLOSE STRUCTURE WITH HAYBALES IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION. MAINTAIN UNTIL PAVING BINDER COURSE IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. IF GRATE IS AGAINST EXISTING CURB THEN BALES ARE TO BE PLACED AROUND THREE SIDES OF GRATE ONLY.
3. GRATE TO BE PLACED OVER FILTER FABRIC.
4. BALES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

Catch Basin Sediment Trap

1/16

N.T.S. Source: VHB LD_673





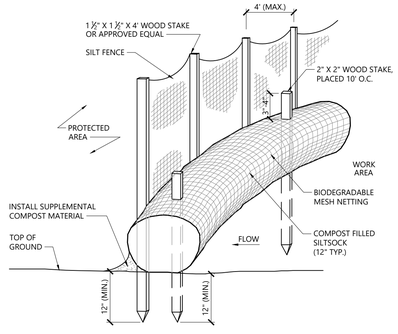
NOTE

1. INSTALL TREE PROTECTION FENCE AROUND EXISTING TREES TO REMAIN AS SHOWN ON PLANS.

Tree Protection Fence

6/20

N.T.S. Source: VHB REV LD_610



NOTES

1. SILTSOCK SHALL BE FILTREXX SILTSOXX, OR APPROVED EQUAL.
2. SILTSOCKS SHALL OVERLAP A MINIMUM OF 12 INCHES.
3. SILTSOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.
5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

Siltsock / Silt Fence Barrier

6/20

N.T.S. Source: VHB REV LD_658-A

COMMONWEALTH OF MASSACHUSETTS
RICHARD P. MATHEWS JR.
CIVIL
No. 41545
REGISTERED PROFESSIONAL ENGINEER

8/06/20

NOTES

No.	REVISIONS/SUBMISSIONS	Date

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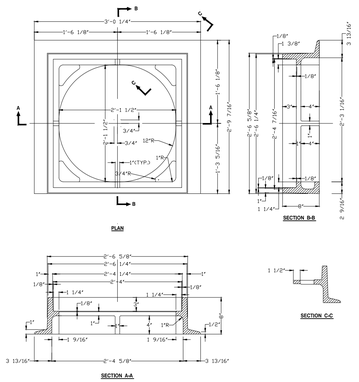
Project OLMSTED GREEN
MIXED-INCOME HOMEOWNERSHIP - 80 UNITS
MATTAPAN, BOSTON, MA 02126

Title CIVIL DETAILS

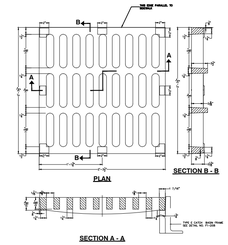
Designed	JHC
Checked	RPM
Project No.	08999.10
Scale	AS NOTED
Date	08/06/2020

Drawing No. C-6.3



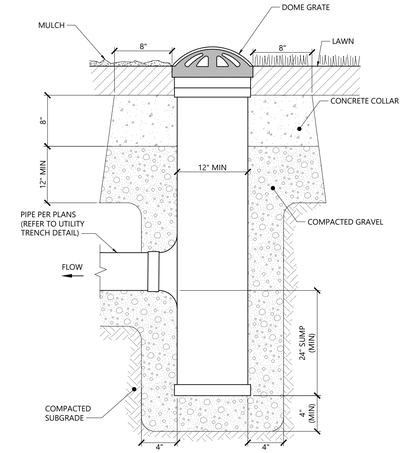
Type E Catch Basin Frame

N.T.S. Source: VHB F1-D08 1/14



Type E-1 Catch Basin Grate

N.T.S. Source: BWSC F1-D09 1/14

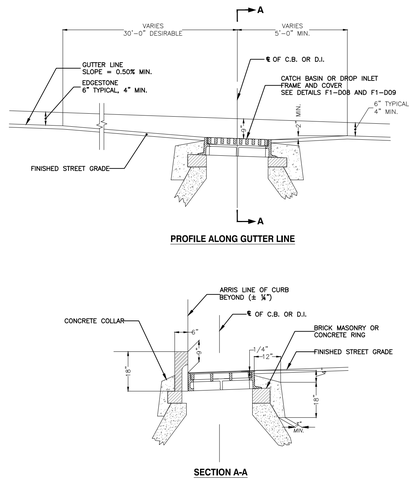


NOTES:

1. YARD DRAINS SHALL BE NYLOPLAST 12" DRAIN BASIN, OR APPROVED EQUAL.
2. GRATES SHALL BE NYLOPLAST, 12" DOME GRATE MODEL 1299CGD, OR APPROVED EQUAL AS SHOWN ON PLANS.

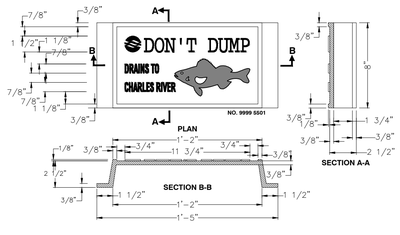
Yard Drain (YDI)

N.T.S. Source: VHB LD_197 9/17



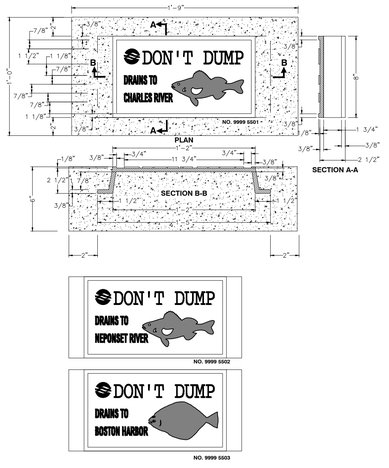
Tolerances for Setting Catch Basin and Curb Inlet Frame

N.T.S. SOURCE B-01h 6/12



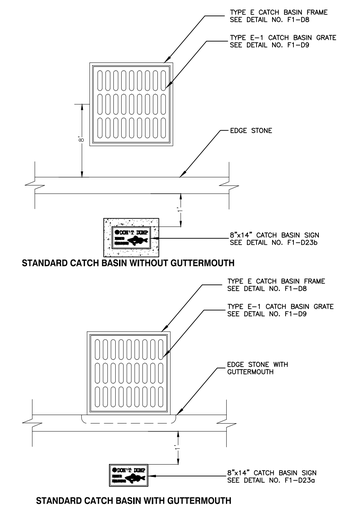
Catch Basin Sign Detail

N.T.S. Source: BWSC F1-D23a 1/14



Catch Basin Sign For Non-Concrete Areas

N.T.S. Source: BWSC F1-D23b 5/19



Catch Basin Sign Installation

N.T.S. Source: BWSC REV B-01f 6/12

NOTES

Olmsted Green - 80 Units
Harvard Street
Boston, MA 02126

Land Use Code: Exempt - xxxx

Ward: 14 Parcel: 1405198500, 1405198638

Reserved for Boston Water & Sewer Commission Use Only

Owner: Lena New Boston LLC
53 State Street
Suite 500
Boston, MA 02109
Contact: Eric VanDusen
Phone: (617) 723-7760

No.	REVISIONS/SUBMISSIONS	Date

DAVIS SQUARE ARCHITECTS
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www.davissquarearchitects.com

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617.728.7777

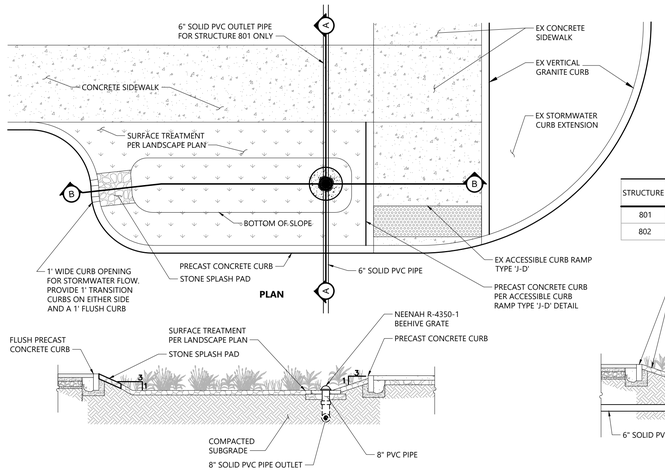
Project OLMSTED GREEN
MIXED-INCOME HOMEOWNERSHIP - 80 UNITS
MATTAPAN, BOSTON, MA 02126

Title CIVIL DETAILS

COMMONWEALTH OF MASSACHUSETTS
RICHARD P. MATHEWS JR.
CIVIL
No. 41545
REGISTERED PROFESSIONAL ENGINEER
8/06/20

Designed	JHC
Checked	RPM
Project No.	08999.10
Scale	1" = 20'
Date	08/06/2020

Drawing No. C-6.6

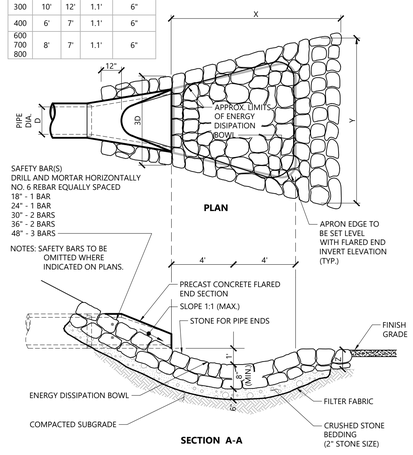


STRUCTURE	TOP (CURB) ELEV (FT)	BEEHIVE GRATE RIM ELEV (FT)	BOTTOM ELEV (FT)
801	52.0	51.1	51.1
802	52.0	51.1	51.1

Curb Bump-Out at Drainage Structures 801 and 802

N.T.S. Source: VHB 6/20 08999.10

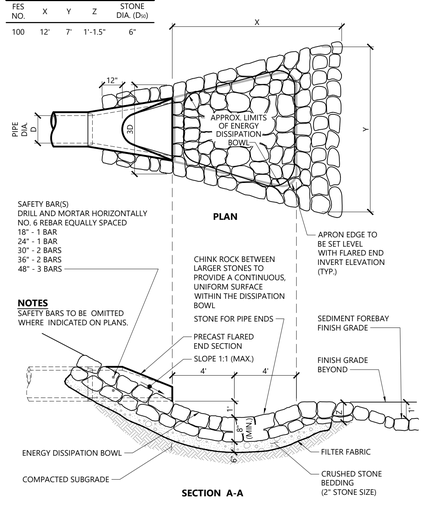
RIPRAP STONE				
FES NO.	X	Y	Z	STONE DIA. (D_{50})
200	6'	3'	1.1'	6"
300	10'	12'	1.1'	6"
400	6'	7'	1.1'	6"
600 700 800	8'	7'	1.1'	6"



Flared End Section (FES) with Stone Protection

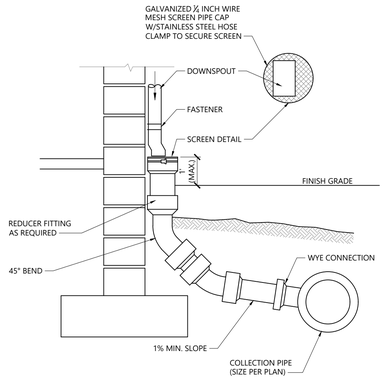
N.T.S. Source: VHB 3/19 LD_134

RIPRAP STONE				
FES NO.	X	Y	Z	STONE DIA. (D_{50})
100	12'	7'	1'-1.5"	6"



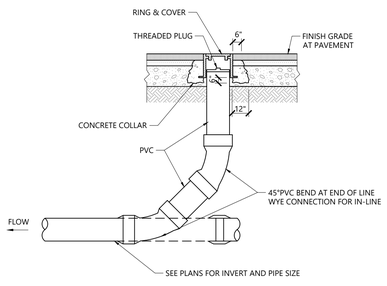
Flared End Section (FES) at Detention Basin

N.T.S. Source: VHB REV LD_134B 6/20



Downspout Rain Leader

N.T.S. Source: VHB 1/16 LD_195



Cleanout - Paved Area

N.T.S. Source: VHB 1/16 LD_303

NOTES

Olmsted Green - 80 Units
Harvard Street
Boston, MA 02126

Land Use Code: Exempt - xxxx

Ward: 14 Parcel: 1405198500, 1405198638

Reserved for Boston Water & Sewer Commission Use Only

Owner: Lena New Boston LLC
53 State Street
Suite 500
Boston, MA 02109
Contact: Eric VanDusen
Phone: (617) 723-7760

No.	REVISIONS/SUBMISSIONS	Date

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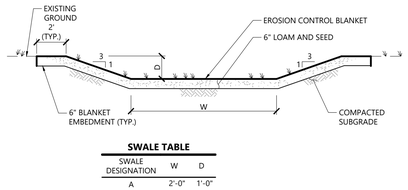
Project OLMSTED GREEN
MIXED-INCOME HOMEOWNERSHIP - 80 UNITS
MATTAPAN, BOSTON, MA 02126

Title CIVIL DETAILS

COMMONWEALTH OF MASSACHUSETTS
RICHARD P. MATHEWS JR.
CIVIL
No. 41515
REGISTERED PROFESSIONAL ENGINEER
8/06/20

Designed	Drawing No.
JHC	C-6.7
Checked: RPM	
Project No.: 08999.10	
Scale: 1" = 20'	
Date: 08/06/2020	



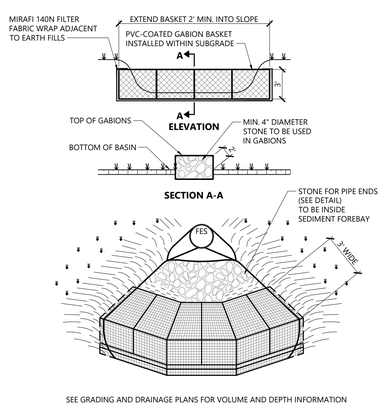
SWALE TABLE

SWALE DESIGNATION	W	D
A	2'-0"	1'-0"

Grassed Swale

1/16

N.T.S. Source: VHB REV LD_171

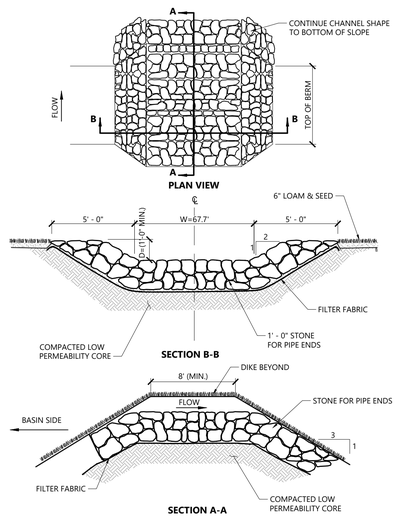


SEE GRADING AND DRAINAGE PLANS FOR VOLUME AND DEPTH INFORMATION

Sediment Forebay with Gabion Baffles

1/16

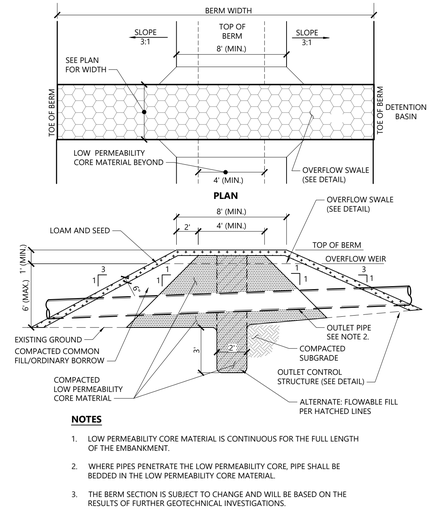
N.T.S. Source: VHB REV LD_166



Overflow Stone Swale

1/16

N.T.S. Source: VHB REV LD_161



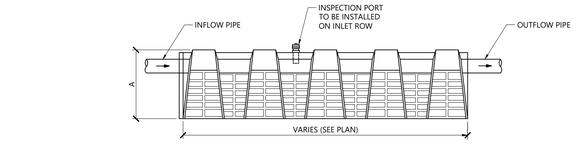
NOTES

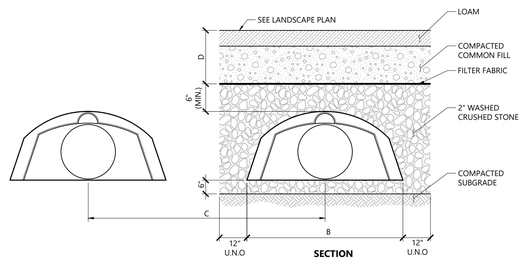
1. LOW PERMEABILITY CORE MATERIAL IS CONTINUOUS FOR THE FULL LENGTH OF THE EMBANKMENT.
2. WHERE PIPES PENETRATE THE LOW PERMEABILITY CORE, PIPE SHALL BE BEDDED IN THE LOW PERMEABILITY CORE MATERIAL.
3. THE BERM SECTION IS SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

Detention Basin Berm Section

3/19

N.T.S. Source: VHB REV LD_160





DIMENSIONS

RECHARGE CHAMBER	A	B	C	D
R-180HD	20.5"	36"	39"	10" MIN.
R-280HD	26.5"	47"	52"	10" MIN.
R-330XLHD	30.5"	52"	58"	12" MIN.

NOTES

1. ALL DIMENSIONS AND INSTALLATION PROCEDURES MUST BE IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS APPROVED BY ENGINEER.
2. PROVIDE FILTER FABRIC ON ALL SIDES OF EXCAVATION, WITH 12" MIN. OVERLAP.

Cultec Recharge Chamber

4/20

N.T.S. Source: VHB REV LD 182

8/06/20

NOTES

Olmsted Green - 80 Units
Harvard Street
Boston, MA 02126

Land Use Code: Exempt - xxxx

Ward: 14 Parcel: 1405198500, 1405198638

Reserved for Boston Water & Sewer Commission Use Only

Owner: Lena New Boston LLC
53 State Street
Suite 500
Boston, MA 02109
Contact: Eric VanDusen
Phone: (617) 723-7760

No.	REVISIONS/SUBMISSIONS	Date

DAVIS SQUARE ARCHITECTS
240A Elm St,
Somerville, MA 02144
617 628 5700
www.davissquarearchitects.com

Consultant
99 High Street
Boston, MA 02110
617.728.7777

Project OLMSTED GREEN
MIXED-INCOME HOMEOWNERSHIP - 80 UNITS
MATTAPAN, BOSTON, MA 02126

Title CIVIL DETAILS

Designed	JHC
Checked	RPM
Project No.	08999.10
Scale	1" = 20'
Date	08/06/2020

Drawing No. C-6.8