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NOTICE OF INTENT APPLICATION

CANTERBURY BROOK CULVERT SEDIMENT REMOVAL PROJECT
Myerson Access Road Culvert over Canterbury Brook
Boston, Massachusetts

January 2021
File No. 01.0174917.00

PREPARED FOR:
City of Boston
Environmental Department, Boston City Hall, Room 709
1 City Hall Sq Ste 500
Boston, MA 02201

GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue | Norwood, MA 02062
781-278-5700

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GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

249 Vanderbilt Avenue
Norwood, MA 02062
T: 781.278.3700
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F: 781.278.5702
www.gza.com

January 22, 2021
File No. 01.0174917.00

Boston Conservation Commission
1 City Hall Sq St 500
Boston, MA 02201

Re: Notice of Intent Application
Myerson Access Road Over Canterbury Brook
American Legion Highway
Boston, Massachusetts

Dear Commission Members:

On behalf of the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM), GZA GeoEnvironmental Inc. (GZA) is pleased to submit this Notice of Intent (NOI) application for the proposed Canterbury Brook Culvert Sediment Removal Project (the Project) located along the Myerson Access Road at approximately 438 American Legion Highway, Mattapan (Boston), Massachusetts. GZA has prepared this NOI application per the requirements of the Massachusetts Wetlands Protection Act (WPA; M.G.L. Chapter 131, Section 40) and its associated Regulations (310 CMR 10.00) and the City of Boston Wetlands Ordinance, Boston City Code, Ordinances, Chapter 7-1.4 and its associated Rules and Regulations (the Ordinance).

GZA, DCAMM, and the Mass Audubon's Boston Nature Center conducted a survey of the culvert and adjacent areas at the Myerson Access Road crossing and concluded that debris and sediment is obstructing flow through the culvert (Project Area). The Project involves the removal of sediment and debris from within and at the inlet and outlet of the culvert. A woody debris obstruction, located approximately 320-feet downstream of the culvert within the brook, is also proposed to be removed using manual methods. Additional information on the proposed project, including resource area impacts, is presented in the Project Narrative.

Please contact Anthony Damiano at GZA at (603) 213-2682 if you have any questions or require additional information regarding this application. We look forward to working with the Conservation Commission during the permitting process.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Anthony Damiano	Daniel M. Nitzsche CPESC, CESSWI, SE	Matthew Smith, P.E.
Assistant Project Manager	Consultant/Reviewer	Associate Principal

CC: Susan Ruch, Division of Capital Asset Management & Maintenance
MassDEP – Headquarters Boston Office

Checklist for Filing a Notice of Intent with Boston Conservation Commission

In order for the Boston Conservation Commission to effectively process your Notice of Intent, BCC requests that you complete the checklist below and include it with your submission. If you should need assistance please contact Commission Staff: 617-635-3850 (cc@boston.gov).

Please Submit the Following to the Conservation Commission:

- ☒ Two copies (a signed original and 1 copy) of a completed Notice of Intent (WPA Form 3)
- ☒ Two copies (a signed original and 1 copy) of a completed Boston Notice of Intent (Local Form)
- ☒ Two copies of plans (reduced to 11" X 17") in their final form with engineer's stamp affixed supporting calculations and other documentation necessary to completely describe the proposed work and mitigating measures. Plans must include existing conditions, the proposed project, erosion controls and mitigation measures, grading and spot elevations and all wetland resource areas and associated buffer zones. Some projects may require both an aerial view of the plans along with a profile view of plans depending on the scope of work.
- ☒ Two copies of an 8 ½" x 11" section of the USGS quadrangle map of the area, containing sufficient information for the Conservation Commission and the Department to locate the site of the work.
- ☒ (If applicable) Two copies the Federal Emergency Management Agency Flood Insurance Rate Map for the project site. FEMA Flood Maps: https://msc.fema.gov/portal.
- ☒ Two copies of the determination regarding the Natural Heritage and Endangered Species Program: Review Section C. Other Applicable Standards and Requirements of the Notice of Intent, page 4 of 8, pertaining to wildlife habitat. The Conservation Commission and the Natural Heritage & Endangered Species Program have the maps necessary to make this determination.
- ☒ (If applicable) Two hard copies of a Stormwater Report to document compliance with the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q), including associated drainage calculations for rooftops, parking lots, driveways, etc., for the required design storm events.
- ☑ (If applicable) A narrative detailing best management practices for stormwater management as set forth in the Stormwater Management Standards of the Massachusetts Department of Environmental Protection and any separate standards and guidelines prepared by the City and the Boston Water and Sewer Commission.
- ☒ (If applicable) Two hard copies of the Checklist for Stormwater Report
- ☒ Details of the stormwater management system, including: catch basins, oil separating tanks, detention basins, outfalls, sewer connections, etc.
- ☑ Any photographs related to the project representing the wetland resource areas.
- ☒ Two copies of a detailed project narrative describing the following: an overview of the entire project, the work proposed within wetland resource areas and/or buffer zones; how the performance standards specific to the wetland resource areas will be met (listing out each performance standard); a consideration of the effect that projected sea level rise, changes in storm intensity and frequency, and other consequences of climate change may have on the resource areas and proposed activities; construction equipment and material involved; and measures to protect wetland resource areas and mitigate impacts. The applicant shall also include narrative on how they plan to integrate climate change and adaptation planning considerations into their project to promote climate resilience to protect and promote Resource Area Values and functions into the future.
- ☒ Two copies of an Abutters List, Affidavit of Service and Abutter Notification, filed concurrently with the Notice of Intent. Abutter notices shall be sent in both English and the second most commonly spoken language(s) in the neighborhood(s) where the project is proposed. Notices shall also include Babel notice cards for additional translation and language access services. All abutters within 300' of the project

property line must be notified including those in a neighboring municipality. In such an instance, a copy of the filing must also be sent to the local Conservation Commission of the neighboring municipality. EXCEPTION: When work is in land under water bodies and waterways or on a tract of land greater than 50 acres, written notification must only be given to abutters within 300 feet of the "project site."

☐ Two copies of the BPDA Climate Resiliency Checklist (for new buildings). This can be completed online at http://www.bostonplans.org/planning/planning-initiatives/article-37-green-building-guidelines. Please print the pdf that you will receive via email after completion and include it in your submission.

☒ **Electronic copies.** Documents may be submitted via email, or via an email link to downloadable documents.

To minimize the use of non-recyclable materials ***please do not include vinyl or plastic binders, bindings, folders or covers with the filing.*** Staples and binder clips are good choices.

INSTRUCTIONS FOR COMPLETING APPLICATION
NOTICE OF INTENT – BOSTON NOI FORM

The Boston Notice of Intent Form is intended to be a supplement to the WPA Form 3 detailing impacts to locally designated wetland resource areas and buffer zones. Please read these instructions for assistance in completing the Notice of Intent application form. These instructions cover certain items on the Notice of Intent form that are not self-explanatory.

INSTRUCTIONS TO SECTION B: BUFFER ZONE AND RESOURCE AREA IMPACTS

Item 1. Buffer Zone Only. If you check the Buffer Zone Only box in this section you are indicating that the project is entirely in the Buffer Zone to a resource area ***under both*** the Wetlands Protection Act and Boston Wetlands Ordinance. If so, skip the remainder of Section B and go directly to Section C. Do not check this box if the project is within the Waterfront Area.

Item 2. The ***boundaries of coastal resource areas*** specific to the Ordinance can be found in Section II of the Boston Wetlands Regulations. You must also include the size of the proposed alterations (and proposed replacement areas) in each resource area.

Item 3. The ***boundaries of inland resource areas*** specific to the Ordinance can be found in Section II of the Boston Wetlands Regulations. You must also include the size of the proposed alterations (and proposed replacement areas) in each resource area.

INSTRUCTIONS TO SECTION C: OTHER APPLICABLE STANDARDS AND REQUIREMENTS

Item 1. Rare Wetland Wildlife Habitat. Except for Designated Port Areas, no work (including work in the Buffer Zone) may be permitted in any resource area that would have adverse effects on the habitat of rare, "state-listed" vertebrate or invertebrate animal species.

The most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife is published by the Natural Heritage and Endangered Species Program (NHESP). See: http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm or the *Massachusetts Natural Heritage Atlas*.

If any portion of the proposed project is located within Estimated Habitat, the applicant must send the Natural Heritage Program, at the following address, a copy of the Notice of Intent by certified mail or priority mail (or otherwise sent in a manner that guarantees delivery within two days), no later than the date of the filing of the Notice of Intent with the Conservation Commission.

Evidence of mailing to the Natural Heritage Program (such as Certified Mail Receipt or Certificate of Mailing for Priority Mail) must be submitted to the Conservation Commission along with the Notice of Intent.

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581-3336
508.792.7270

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

438 American Legion Highway — a. Street Address
Mattapan — b. City/Town
02126 — c. Zip Code
14 — f. Assessors Map/Plat Number
1405198010 — g. Parcel /Lot Number

2. Applicant

Susan — a. First Name
Ruch — b. Last Name
Division of Capital Asset Mangagement and Maintenance — c. Company
1 Ashburton Place, 15th Floor — d. Mailing Address
Boston — e. City/Town
MA — f. State
02108 — g. Zip Code
857-204-1214 — h. Phone Number
i. Fax Number
susan.ruch2@mass.gov — j. Email address

3. Property Owner

a. First Name
Mass Audubon Boston Nature Center — b. Last Name / c. Company
450 Walk Hill Street — d. Mailing Address
Mattapan — e. City/Town
MA — f. State
02126 — g. Zip Code
617-983-8500 — h. Phone Number
i. Fax Number
bnc@massaudubon.org — 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)

Anthony — a. First Name
Damiano — b. Last Name
GZA GeoEnvironmental Inc. — c. Company
249 Vanderbilt Ave — d. Mailing Address
Norwood — e. City/Town
MA — f. State
02026 — g. Zip Code
603-213-2682 — h. Phone Number
i. Fax Number
anthony.damiano@gza.com — 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

Proposed work involves sediment and debris removal from the culvert located beneath the Myerson access road at approximately 438 American Legion Highway, Mattapan, MA. Temporary impact to BVW and Buffer Zone are associated with the project. Permanent impact to LUWW is proposed.

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	333
a. County	b. Page Number
33333	
c. Book	d. Certificate # (if registered land)

9. Total Fee Paid

$562.50	$237.50	$325.00
a. Total Fee Paid	b. State Fee Paid	c. City Fee Paid

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*
❑ *100-foot Salt Marsh Area*	*Square feet*	*Square feet*	*Square feet*
❑ *Riverfront 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*	5,809 *Square feet*	5,809 *Square feet*	*Square feet*
❑ *Riverfront Area*	6,550 *Square feet*	6,550 *Square feet*	*Square feet*

C. OTHER APPLICABLE STANDARDS & REQUIREMENTS

1. What other permits, variances, or approvals are required for the proposed activity described herein and what is the status of such permits, variances, or approvals?

US Army Corps of Engineers Self Verification and Project Notification Forms (Section 404)

US Army Corps of Engineers Historic Property Notification (Section 106 Documentation)

2. 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 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

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

❑ Yes ❑ No

If yes, provide the name of the ACEC: _____

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

☒ *Yes. Attach a copy of the Stormwater Checklist & Stormwater Report as required.*
- ❑ *Applying for a Low Impact Development (LID) site design credits*
- ❑ *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?

❑ 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.

MASS AUDUBON

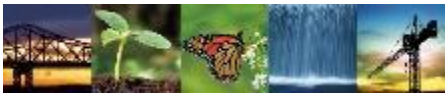
MA DCAMM
by Susan Ruch
Signature of Applicant — 01/19/2021 Date

(*) by Susan Ruch Julie Brandler
Signature of Property Owner (if different) — 01/19/2021 Date

Anthony Demisco
Signature of Representative (if any) — 1/19/2021 Date

(*) Note: DCAMM owns Stream Bed and banks

Mass Audubon's Boston Nature Center owns the surrounding real property



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249 Vanderbilt Avenue
Norwood, MA 02062
T: 781.278.3700
F: 781.278.5701
F: 781.278.5702
www.gza.com

VIA EMAIL

January 19, 2021
File No. 01.0174917.00

Boston Conservation Commission
Boston City Hall/Room 709
Boston, MA 02201

Re: NOI Boston Conservation Commission Fee Breakdown
Canterbury Brook Culvert Sediment Removal Project

Dear Conservation Members,

According to the Boston Conservation Commission (The Commission) Filing Guide, Section 6. Filing fees, The Commission requires a separate fee schedule. The check included with this letter is associated with the Notice of Intent filled electronically on January 20, 2021. It consists of a $25.00 processing fee associated with a project with a fair cost of $1000.00 or less (Pursuant to the City of Boston Title 14 Section 450) and the amount of $300.00 since the proposed project is a Category 2 Notice of Intent, as filled out in the MA DEP WPA-3 Form included in the NOI submittal.

If you have any questions, please feel free to contact Anthony Damiano at (603)-213-2682 or anthony.damiano@gza.com.

Sincerely,

GZA GEOENVIRONMENTAL, INC.

Anthony Damiano, WPIT
Assistant Project Manager

Matthew Smith, P.E., LSP
Associate Principal

Attachments: Check #275917

\\gzanor\jobs\170,000-179,999\174917\174917-00.KKD\ECOLOGY\PERMITTING\NOI\FINAL\BCC_Fee Breakdown Letter.docx

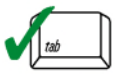
Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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):

438 American Legion Highway — a. Street Address
Mattapan — b. City/Town
02126 — c. Zip Code

Latitude and Longitude:
42°17'22.98"N — d. Latitude
71°05'59.76"W — e. Longitude

14 — f. Assessors Map/Plat Number
1405198010 — g. Parcel /Lot Number

2. Applicant:

Susan — a. First Name
Ruch — b. Last Name
MA Division of Capital Asset Mangagement and Maintenance — c. Organization
1 Ashburton Place, 15th Floor — d. Street Address
Boston — e. City/Town
MA — f. State
02108 — g. Zip Code
617-727-4050 — h. Phone Number
i. Fax Number
susan.ruch2@mass.gov — j. Email Address

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

a. First Name
b. Last Name
Mass Audubon Boston Nature Center — c. Organization
500 Walk Hill Street — d. Street Address
Mattapan — e. City/Town
MA — f. State
02126 — g. Zip Code
617-983-8500 — h. Phone Number
i. Fax Number
bnc@massaudubon.org — j. Email address

4. Representative (if any):

Anthony — a. First Name
Damiano — b. Last Name
GZA GeoEnvironmental Inc. — c. Company
249 Vanderbilt Ave — d. Street Address
Norwood — e. City/Town
MA — f. State
02062 — g. Zip Code
603-213-2682 — h. Phone Number
i. Fax Number
anthony.damiano@gza.com — j. Email address

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

$750.00 — a. Total Fee Paid
$362.50 — b. State Fee Paid
$325.00 — c. City/Town Fee Paid

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Boston
City/Town

A. General Information (continued)

6. General Project Description:

Proposed work involves sediment and debris removal from the culvert located beneath the Myerson access road at approximately 438 American Legion Highway, Mattapan, MA.

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	
c. Book	d. Page Number
33333	333

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Boston
City/Town

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☒ Bank	242 (temp) 1. linear feet	242 (restore) 2. linear feet
b. ☒ Bordering Vegetated Wetland	4,576 (temp) 0 (perm) 1. square feet	4,576 (restore) 2. square feet
c. ☒ Land Under Waterbodies and Waterways	266 (temp) 1,317 (perm) 1. square feet 97.5 3. cubic yards dredged	0 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	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. ☒ Riverfront Area	Canterbury Brook (inland) 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: 6,550 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.
6,550	6,550	0

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

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

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

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Boston
City/Town

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

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

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

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

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

4. ☐ Restoration/Enhancement

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

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings

Massachusetts Department of Environmental Protection
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

C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

a. ☐ Yes ☒ No

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

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

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 https://www.mass.gov/ma-endangered-species-act-mesa-regulatory-review).
Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

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

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

Provided by MassDEP:
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Boston
City/Town

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

(c) ☐ MESA filing fee (fee information available at https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review).
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, https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat; 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
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

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@mass.gov

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. ☐ Is this an aquaculture project? d. ☐ Yes ☐ No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).

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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.

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Provided by MassDEP:

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D. Additional Information (cont'd)

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

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

Canterbury Brook at Myerson Access Road Sediment Removal Project
a. Plan Title

GZA GeoEnvironmental Inc
b. Prepared By

n/a
c. Signed and Stamped by

January 2021
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:

275917
2. Municipal Check Number

01/13/2021
3. Check date

275953
4. State Check Number

01/22/2021
5. Check date

GZA GeoEnvironmental Inc
6. Payor name on check: First Name

7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
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F. Signatures and Submittal Requirements

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

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

MA DCAMM
by Susan Ruch
1. Signature of Applicant

01/19/2021
2. Date

(*) by Susan Ruch
3. Signature of Property Owner (if different)

01/19/2021
4. Date

Anthony Simmons
5. Signature of Representative (if any)

1/19/2021
6. Date

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

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

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

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

(*) Note: DCAMM owns Stream Bed and banks

Mass Audubon's Boston Nature Center owns the surrounding real property

Massachusetts Department of Environmental Protection
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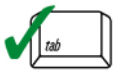
NOI Wetland Fee Transmittal Form

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:

438 American Legion Highway	Mattapan
a. Street Address	b. City/Town
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Susan	Ruch	
a. First Name	b. Last Name	
Division of Capital Asset Management and Maintenance		
c. Organization		
1 Ashburton Place, 15th Floor		
d. Mailing Address		
Boston	MA	02108
e. City/Town	f. State	g. Zip Code
617-727-4050		susan.ruch2@mass.gov
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

a. First Name	b. Last Name	
Mass Audubon Boston Nature Center		
c. Organization		
500 Walk Hill Street		
d. Mailing Address		
Mattapan	MA	02126
e. City/Town	f. State	g. Zip Code
617-983-8500		bnc@massaudubon.org
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.

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
2.j	1	$500.00	$500.00
Riverfront Area	1	$250.00	$250.00

Step 5/Total Project Fee: $750.00

Step 6/Fee Payments:

Total Project Fee:	$750.00 a. Total Fee from Step 5
State share of filing Fee:	$362.50 b. 1/2 Total Fee **less $**12.50
City/Town share of filling Fee:	$325.00 c. 1/2 Total Fee **plus** $12.50

C. Submittal Requirements

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

Department of Environmental Protection
Box 4062
Boston, MA 02211

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

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

WPA3 TRANSMITTAL FORM / NOI WETLAND FEE TRANSMITTAL FORM

1.0 INTRODUCTION

On behalf of the Massachusetts Division of Capital Asset Management & Maintenance (DCAMM) (Applicant), GZA GeoEnvironmental, Inc. (GZA) has prepared this Notice of Intent (NOI) application to describe the proposed sediment removal project (Project) for Canterbury Brook in the City of Boston, Massachusetts (see **Figure 1 – Locus Map**).

This application is submitted in accordance with the requirements of the Massachusetts Wetlands Protection Act (WPA; M.G.L. Chapter 131, Section 40) and its associated Regulations (310 CMR 10.00), and the City of Boston Wetlands Ordinance (Chapter 7-1.4 and its associated Rules and Regulations).

The sediment removal Project is located at the Myerson Access Road crossing over Canterbury Brook. The Project includes the brook beneath the Myerson Access Road, portions of adjacent Bordering Vegetated Wetlands, it's 100-foot buffer zone and a small portion of the brook's Riverfront Area located at approximately 438 American Legion Highway, Boston, Massachusetts. A second hydraulic restoration project, involving the removal of a wood debris obstruction, is located approximately 320-feet downstream of the culvert project (see **Figure 2 – Existing Conditions**).

The Project Area is shown within the "Limit of Work" on the Proposed Project Plans (**Appendix A**) and includes the areas of temporary and permanent impact from sediment removal activities, staging of material, dewatering and treatment for transportation of sediment to either an offsite approved facility.

1.1 PROJECT PURPOSE AND NEED

The culverted brook beneath the Myerson Access Road crossing is obstructed by debris and sediment, which substantially diminishes the ability for water to flow through the culvert (i.e. hydraulic capacity). In addition, a wood debris obstruction within the brook has developed approximately 320-feet downstream (west) of the existing culvert crossing (see **Figure 2 – Existing Conditions**). The purpose of the Project is to remove the obstructions to flow and restore hydraulic capacity of the brook within the culvert and the downstream area currently dammed. Removing the sediment and debris and vegetative dam would improve the hydraulic performance of the culvert within the Mass Audubon's Boston Nature Center parcel and restore wildlife passage within the brook. Observed flooding of the recreational trail/boardwalk that originates approximately 25 feet southeast of the culvert may also be improved by the restoration of culvert hydraulic capacity. Flooding has rendered the trail impassable, as observed at the time of the most recent site visit in December 2020. In addition, flooding and ponding of the brook has contributed to deterioration of the brook bank and has accelerated the felling of stream side trees, degrading the local mature overstory and affecting wildlife habitat.

2.0 EXISTING CONDITIONS

Canterbury Brook is a typical urban stream located in the Mattapan neighborhood of Boston, MA. The brook daylights on Harvard Street, traverses beneath Morton Street where it enters the Mass Audubon's Boston Nature Center parcel and flows west until it enters the Project Area. The brook is mapped as an NWI intermittent stream upstream but a perennial stream downstream of the culvert (see **Figure 2 – Existing Conditions**). The culvert is contained beneath a concrete bridge with wingwalls on both the upstream and downstream ends. Photos of the Project Area and culvert are included in **Appendix B.** Photos of the woody debris obstruction are included in **Appendix F**.

2.1 JURISDICTIONAL RESOURCE AREAS

A site visit was conducted by a GZA Environmental wetland scientist in December 2020. The purpose of the work was to evaluate and demarcate the boundaries of wetlands and waterbodies in the Project Area. GZA has identified several resource areas that are subject to protection and/or jurisdiction under the federal Clean Water Act and / or the Massachusetts Wetlands Protection Act, on or within 200 feet of the Project Area.

These WPA resource areas include Bank, Bordering Vegetated Wetland (BVW), Land Under Water Bodies and Waterways (LUWW), and Riverfront Area (RA) The Bank and BVW resources includes a regulated 100-foot Buffer Zone. Refer to the Wetland Delineation Report included herein as **Appendix B** for a description of the wetland resources associated with the Project Area. The Applicant is requesting an Order of Conditions for the proposed work within each of the following resources.

2.1.1 Bank

The Bank resource (both sides) for Canterbury Brook were delineated as Wetland A. The limits of the Bank resource were based upon the first observable break in topography between the Brook and adjacent BVW or upland. The delineated Bank coincides with the Mean Annual High-Water Line (MAHWL)/bankfull, as defined under 310 CMR 10.58 (2)(a)(2). Canterbury Brook flows westerly through the Project Area. Adjacent to the Bank/MAHWL, the delineation on both the north and south limits of the Bank join with three BVW observed within the Project Area.

Bank areas upstream and north of the culvert are well defined by a topographic break and steep embankment that separates the brook from the City of Boston's Compost Project parking lot/laydown yard. Bank along the southeast, southwest and northwest sides of the culvert crossing consist of a strong topographic bank occupied generally by herbaceous species and occasional large, native trees like Silver maple (*Acer saccharinum*). Recreation trails traverse parallel to the southern bank both upstream and downstream of the culvert.

2.1.2 Bordering Vegetated Wetland (BVW)

Three BVW resource areas were delineated within the Project Area. BVW located along the southeast side of the culvert crossing includes a scrub shrub dominant vegetation type which roughly coincides with MassDEP mapped polygon. BVW located in the southwest and northwest sides of the culvert crossing include forested dominant vegetation types, with silver maple, American elm (*Ulmus americana*) and eastern cottonwood (*Populous deltoides*).

2.1.3 Land Under Water Bodies and Waterways (LUWW)

Canterbury Brook is a non-tidal, freshwater perennial stream that flows from east to west and includes LUWW resource area. LUWW was not specifically field delineated because it is located at the low water line, which was under the water surface at the time of our assessment. For the intent of the resource area delineation for this project, the delineated area was limited to the Bank as that resource is closer to the proposed work area; therefore, the Bank extends a greater amount of jurisdiction into the Project Area.

2.1.4 Riverfront Area (RA)

The Project Area is located within Riverfront Area (RA) associated with Canterbury Brook. The RA extends 25-feet landward and parallel to the demarcated MAHW Line (see **Figure 2** – **Existing Conditions**). The 25-foot RA is concurrent with the 25-foot outer riparian zone. Riverfront Area within the Project Area includes scrub-shrub and forested wetlands to the southeast, southwest and northwest of the culvert crossing, and a forested upland habitat fringe adjacent to the northeast

side of the culvert crossing. City of Boston's Compost Project is located to the north and east of the culvert crossing and upland forest fringe; the composting facility includes a large gravel / asphalt parking lot. Canterbury Brook does not have an associated mapped floodplain. A desktop analysis conducted on MassGIS OLIVER for the Project Area indicated that Canterbury Brook is not listed as an ACEC and there are no anadromous fish present.

2.1.5 Waterfront Area

The Project Area is located within Waterfront Area associated with Canterbury Brook. The Waterfront Area extends an additional 25-feet landward and parallel to the RA. The Waterfront Area includes portions of the scrub-shrub and forested wetlands located northwest, southwest and southeast of the culvert. The northeast portion of the Waterfront Area consists principally of the City of Boston's Compost Project parking lot.

2.1.6 Buffer Zone

The Buffer Zone, which extends 100 feet landward from the BVW and the Bank resources, is present within the Project Area. Due to the nature of sediment removal work being located within the brook, the limit of work is located entirely within Buffer Zone. Most of the proposed work will be within areas that are previously disturbed (i.e., paved or gravel surfaces associated with the access road and adjoining City of Boston's Compost Project parking area). Erosion and sediment controls will be placed prior to the start of work to avoid potential adverse impacts to adjacent resource areas.

3.0 PROPOSED PROJECT

3.1 CULVERT EXCAVATION ELEMENTS

The proposed project includes the removal of sediment and debris from the inlet, outlet and the concrete culvert itself. In addition, removal of the vegetative dam would also occur.

The Myerson Access Road and adjacent upland areas within the City of Boston's Composting Project parking lot will primarily be used for construction access and staging of equipment. Limited temporary impacts to resource areas are required for safe access to the work area during construction activities. Access to the vegetative dam would occur from adjacent bank and wetlands with limited work within the brook channel. Disposal of the woody material would occur either as leaving within adjacent uplands as additional wildlife habitat or manual removal to a dump truck parked on the American Legion Highway.

3.2 CONSTRUCTION APPROACH AND SEQUENCING

3.2.1 Construction Approach

Construction start and completion of this project is pending a grant for the construction phase. General Contractor bidding is anticipated for early 2021.

3.2.2 Groundwater and Surface Water Control and Bypass– Myerson Access Road Culvert

The Contractor will manage and control surface water and groundwater during construction. The Contractor will be responsible for selecting dewatering methods based on proposed methods and equipment used to maintain a dry condition during construction. The method of dewatering will depend on several factors, including depth of excavation, localized soil conditions encountered, time of year performed, size of the open excavation, and the length of time the excavation is left open. Additionally, the construction methods will include means and measures for temporary diversion of Canterbury Brook to accommodate construction. Dewatering efforts will satisfy requirements of applicable federal, state, and local agencies.

3.2.3 Anticipated Construction Sequence – Myerson Access Road Culvert

The City has targeted February 2021 to start the proposed Project. However, the exact time of construction is pending general contractor assignment. The Project will be completed in dry conditions. Cofferdams upstream and downstream of the culvert will be installed to temporarily redirect the water around the culvert. Should inclement weather cause a temporary increase in flow, the Contractor may have to suspend activities during periods of high water. The contractor will be required to maintain minimum downstream flows by pumping or other means of bypass. Excavated material will be disposed lawfully and responsibly either within the adjacent City of Boston's Composting Project or removed to an off-site location.

Best Management Practices (BMPs) will be used during dewatering of specific work areas. Fractionation tanks will be used so that the release of water is uncontaminated and sediment-free. Anticipated equipment to be used includes an excavator, loader, dump truck, compactor, generator, and dewatering pumps, as needed.

The anticipated construction sequence is as follows:

- Mobilization to the Project Area and establishment of soil erosion and sediment control BMPs including turbidity curtains around areas of proposed ground disturbance;
- Installation of tree protection measures, exclusion fencing, wood chip surfacing and necessary matting;
- Limb and vine removal and grubbing to allow access within the Project Area;
- Vegetation trimming or removal of select trees or shrubs to accommodate excavation equipment, if required;
- Construction of limited area of benching within the project work zone for safe access by equipment;
- Installation of upstream and downstream cofferdams to isolate and temporarily dewater areas;
- Establishment of temporary diversion structure, water bypass and dewatering areas including a fractionation tank (as needed);
- Excavation of deposited sediment;
- Grading of channel;
- Installation of loam and seed at disturbed areas;
- Removal of temporary portable cofferdams in the work areas within Canterbury Brook;
- Removal of tree protection, and temporary sediment and erosion control BMPs.
- Restoration of temporary impacts to BVW and uplands within RA and 100' Buffer Zone.

3.2.4 Anticipated Construction Sequence – Vegetative Dam Removal

Removal of the blockage created by a natural vegetative dam would be conducted using manual methods. Logs and other material would be hand cut and manually removed from the brook channel and removed from the wetland resource area. Use of mechanical methods is not anticipated. No bypass of the stream or dewatering methods are proposed.

3.3 RESTORATION AND STABILIZATION

Exposed soils disturbed by the proposed Project will be stabilized with loam, free of invasive species, and native seed mix as appropriate. The sediment controls will remain in place until exposed soils are permanently stabilized.

4.0 REGULATORY COMPLIANCE AND IMPACTS

Proposed work activities within resource areas and the buffer zone as prescribed by the City of Boston Wetlands Ordinance, Boston City Code, Ordinances (Chapter 7-1.4 and its associated Rules and Regulations) for the Project. The Project has been designed to limit both temporary and permanent impacts within the Project Area to the extent practicable. However, the proposed sediment excavation project will result in unavoidable impacts to RA, LUWW, Bank, BVW, and associated Buffer Zone. Impacts to the resource areas are unavoidable due to the nature of the work, but the impacts to resource areas for this project are anticipated to be mostly temporary and the result of the staging area, erosion controls, and temporary limit of work.

4.1 JURISDICTIONAL RESOURCE AREAS

Proposed impacts are discussed and quantified in the following subsections. GZA and the City recognize the concerns about the effects to wildlife by temporarily dewatering the Project Area. However, Canterbury Brook, within the limit of

work, must be dewatered to safely complete the work. The total impacts proposed within each resource area are summarized in the table below:

Table No. 1A – Summary of Resource Area Impacts

Resource Area	Temporary Impacts (Sediment Removal)	Permanent Impacts (Sediment Removal)	Temporary Impacts (Woody Debris Removal)	Permanent Impacts (Woody Debris Removal)	Total Temporary Impacts	Total Permanent Impacts
Bank	202 linear feet	--	40 linear feet	0	242 sq. ft.	0
BVW	4,176 sq. ft.	--	400 sq. ft.	0	4,576 sq. ft.	0
LUWW	266 sq. ft.	1,317 sq. ft.	150 sq. ft.	0	416 sq. ft.	1,317 sq. ft.
0-25-ft RA	6,150 sq. ft.	--	400 sq. ft.	0	6,550 sq. ft.	0
25-50-ft Waterfront Area	5,809 sq. ft.	--	--	--	5,809 sq. ft.	--

4.1.1 Bank

Massachusetts WPA Regulations define Bank as, "*the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or, in the absence of these, it occurs between a water body and an upland. A Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel, or stone*."

Temporary impacts, required for access to the brook, will occur. Restoration of the Bank will include loam and seeding as appropriate and shown on the attached Permit Plans. Once the project is complete and the stream refills, the Bank would be expected to return to its current condition. Therefore, no permanent impact to Bank is anticipated for the Project.

As stated in 310 CMR 10.54 (4), the proposed project will address the following performance standards:

Table No. 2 – Bank Performance Standards

Performance Standard	Proposed Project
a. The physical stability of the Bank.	Temporary access to the brook will be made from several dedicated access points along the Bank within the project limits, as determined by the Project Engineer. Areas of access will be reinforced using geotextile material or other temporary stabilizing subbase material for machinery to sit upon while work commences to prevent compaction and/or rutting of the ground surface.
b. The water carrying capacity of the bank and the existing channel within the bank.	The limited area of temporary impact associated with the debris and sediment removal will not affect the carrying capacity of this section of the channel.

Performance Standard	**Proposed Project**
c. Ground water and surface water quality.	Both the ground and surface water quality of Canterbury Brook is anticipated to be improved over the existing condition through the reduction of solid waste that currently exists within the brook sediments. In addition, the alleviating of the current flooding condition due to blockage of the hydraulic opening of the culvert is anticipated to facilitate passage of water and aquatic wildlife. Water quality is expected to improve by reducing stagnation of the water that currently occurs.
d. The capacity of the Bank to provide breeding habitat, escape cover, and food for fisheries/wildlife.	Bank habitat within the Project Area currently provides limited opportunity for escape cover or a food source for fish due to the practically stagnant condition of the brook. The capacity of the existing Bank to provide the necessary habitat, cover and food for wildlife will not be impeded by the proposed project and the Project will provide expanded fish passage.
e. The capacity of the Bank to provide important wildlife habitat functions.	The portion of the Bank that is made of concrete (e.g., the culvert) does not include protection of wildlife habitat. The Bank associated with Canterbury Brook in the Project Area will not be altered during the proposed Project. The anticipated expansion of breeding habitat for fish and wildlife by removing a current passage restriction within the Brook is anticipated to increase wildlife habitat function over existing conditions.

As per section (b) of the performance standards for Bank resource, the performance standards above may be exceeded for "*structures….when required to prevent flood damage to facilities, buildings and roads constructed prior to the effective date of 310 CMR 10.51 through 10.60, including the renovation or reconstruction (but not substantial enlargement) of such facilities, buildings and roads, provided that the following requirements are met:*

1. *The proposed protective structure, renovation or reconstruction is designed and constructed using best practical measures so as to minimize adverse effects on the characteristics and functions of the resource area;*

2. *The applicant demonstrates that there is no reasonable method of protecting, renovating, or rebuilding the facility in question other than the one proposed.*"

Bank performance standards will be met.

4.1.2 Bordering Vegetated Wetlands (BVW)

Massachusetts WPA Regulations define BVW as, *"freshwater wetlands which border on creeks, rivers, streams, ponds and lakes. The types of freshwater wetlands are wet meadows, marshes, swamps, and bogs. Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The ground and surface water regime and the vegetational community which occur in each type of freshwater wetland are specified in M.G.L. c. 131, § 40."*

The City of Boston Ordinance defines "Bordering" as "Any portion of a marsh, freshwater wetland, coastal wetland, wet meadow, bog, swamp, bank, beach, dune, flat, fen that touches any portion of a river, stream, brook, creek, pond, vernal pool, reservoir, estuary, lake, or the ocean shall be considered bordering."

The City of Boston Ordinance defines a Freshwater/Vegetated Wetlands as, "*Freshwater vegetated wetlands area areas where soils are saturated and/or inundated such that they support wetland indicator plants. The ground water and surface water hydrological regime, soils, and the vegetational community which occur in each type of freshwater wetlands, including both bordering and isolated vegetated wetlands, are defined under this Ordinance bason on MGL c. 131 § 40*."

The removal of sediment and debris within the brook and the removal of the woody debris obstruction would result in temporary impacts to BVW due to necessary access to facilitate construction activities. Upon project completion, the BVW areas will be restored and returned to pre-construction conditions.

As stated in 310 CMR 10.55 (4), the proposed project will address the following performance standards:

Table No. 3 – BVW Performance Standards

Performance Standard	**Proposed Project**
a. Where the presumption set forth in 310 CMR 10.55(3) is not overcome, any proposed work in a BVW shall not destroy or otherwise impair any portion of said area.	The project proposes to temporarily impact the adjacent BVW areas due to the required access. These areas will be restored to pre-construction conditions as Canterbury Brook returns to its current water level.
b. Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an OOC permitting work which results in the loss of up to 5,000 square feet of BVW when said area is replaced in accordance with the following general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the excavation area will function in a manner similar to the area that will be lost.	The project does not propose permanent impacts to BVW. Temporary impacts to BVW will be restored at the conclusion of the Project when the water in Canterbury Brook is returned.
c. Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an OOC permitting work which results in the loss of a portion of BVW.	Proposed impacts to BVW are temporary and will be restored at the conclusion of the Project.
d. Notwithstanding the provisions of 310 CMR 10.55(4)(a), (b), and (c), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.	The Project Area is not located within Natural Heritage and Endangered Species Program (NHESP) Priority Habitat or Estimated Habitat.
e. Any proposed work shall not destroy or otherwise impair any portion of a BVW that is within an Area of Critical Environmental Concern (ACEC).	The project is not located within an ACEC.

The Applicant recognizes the requirement to provide replication for impacted BVW, however all proposed impacts are anticipated to be temporary. Therefore, mitigation is not required as part of the Project.

4.1.3 Land Under Waterbodies and Waterways (LUWW)

Massachusetts WPA Regulations define LUWW as, "*the land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks, or bedrock*."

The City of Boston's Ordinance defines a LUWW as, "*The land beneath any creek, river, stream, pond or lake*."

The removal of sediment and debris would result in both temporary and permanent impacts to LUWW. Temporary impacts to LUWW would be due to installation of the construction limit of work and dewatering activities required to complete the project. In addition, temporary impacts to LUWW would occur due to access for removal of the woody debris obstruction. Permanent impacts would include areas of sediment and solid waste removal and regrading bottom elevations to blend back to existing elevations within the Brook. The impacts are anticipated to provide a net benefit to this resource area.

As stated in 310 CMR 10.56(4), the proposed project will address the following performance standards:

Table No. 4 – Performance Standards for Work in LUWW

Performance Standard	**Proposed Project**
a. The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks.	The water carrying capacity of Canterbury Brook will be improved with the removal of the debris and sediment and will be a net benefit to LUWW. Removal of sediment and solid waste within the project limits will increase the water carrying capacity of the Brook.
b. The ground and/or surface water quality.	The project is anticipated to provide a net benefit to ground and surface water quality. However, sedimentation and erosion controls will be utilized during the project activities to limit temporary impacts due to construction.
c. The capacity of the area to provide breeding habitat, escape, cover, and food for fisheries/shellfish.	The project is anticipated to provide a net benefit to breeding habitat, escape cover and food sources to fish or shellfish. Removal of sediment and solid waste within the dredge prism would allow for increased surface area for wildlife to make use of and expose native soils. Removal of the sediment would also remove contaminated materials and solid wastes within the brook.
d. The capacity of the area to provide important wildlife habitat functions.	The permanent impacts of the proposed Project include approximately 1,377 sf of sediment removal, below the thresholds for LUWW (5,000 SF or 10%, whichever is less) for Canterbury Brook.

4.1.4 Riverfront Area (RA)

Massachusetts WPA Regulations define RA as, "*the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away*."

The City of Boston's Ordinance defines Riverfront Area as, "*The area of land between the mean annual high water line and the parallel line measured twenty-five (25) feet horizontally landward of the mean annual high water line of any river,*

stream brook or creek, except for areas the Commission may designate as Extended Riverfront Areas, in which the Riverfront Area may be extended up to two hundred (200) feet."

The proposed sediment and debris removal would result in temporary impacts to RA due to the construction limit of work and access to the culvert located over the brook. Removal of the woody debris obstruction would also require temporary impacts to the RA due to access. Once the construction is complete, areas of work within the RA will be restored and returned to pre-construction conditions.

As stated in 310 CMR 10.58 (4), the proposed project will address the following performance standards:

Table No. 5 – RA Performance Standards

Performance Standard	**Proposed Project**
a. Protection of Other Resource Areas – the work shall meet the performance standards for all other resource areas within the RA, as identified in 310 CMR 10.30 (coastal bank), 10.32 (salt marsh), 10.55 (BVW), and 10.57 (BLSF).	The proposed work in the Riverfront Area meets performance standards for BVW, LUWW, Bank, and RA resource areas.
b. Protection of Rare Species.	The Project Area is not located within NHESP Priority or Estimated Habitat. Therefore, the proposed project is not expected to impact rare species.
c. Practicable and Substantially Equivalent Economic Alternatives – there must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. C. 131 § 40.	There is no practical alternative to working within the Riverfront Area due to the location of the work. Impacts to the RA resource area will be temporary and limited in scope.
d. No Significant Adverse Impacts.	It is anticipated that the project will not result in significant adverse impacts within the RA with respect to stormwater management, wildlife habitat, or surface and groundwater quality. Limited and temporary impacts to vegetation within 100 feet of the MAHWL are unavoidable due to the nature and location of the work.

4.1.5 Waterfront Area

The Waterfront Area is defined in the City of Boston Ordinance as "*The portion of the buffer zone which extends twenty-five (25) feet horizontally from the edge of the following resource area;*

1. *Any coastal beach, dune, bank, tidal flats, rocky intertidal shores, salt marshes or land containing shellfish; or*
2. *Any inland bank, lake, pond, intermittent stream, brook, creek or riverfront area."*

According to the Ordinance, the Waterfront Area would extend 25-feet from the edge of the RA. Impacts within the Waterfront Area will be limited to the extent practicable. All proposed impacts within the Waterfront Area are temporary

and will not result in the introduction of additional impervious surfaces. All temporary impacts shall be restored at the conclusion of the project.

Table No. 6 – Performance Standards for Work in Waterfront Area

Performance Standard	Proposed Project
The Commission may require the Applicant restore or maintain a strip of continuous, undisturbed or restored vegetative cover or waterfront public access throughout the Waterfront Area.	The proposed work is located within 100 feet of BVW and Bank but does not involve installation of new impervious materials. Areas of temporary disturbance will be restored upon completion of the project to maintain the existing strip of continuous vegetative cover adjacent to the brook.

4.1.6 Buffer Zone

Massachusetts WPA Regulations define Buffer Zone as, *"100-ft area horizontally (on a true lateral) landward of approved delineation of applicable wetland resource areas."* The WPA further states that any activities undertaken within 100 feet of an area specified in 310 CMR 10.02(1)(a) (e.g., Bank, Bordering Vegetated Wetland) will be conducted per (310 CMR 10.02(2)(b)), "*in a manner so as to reduce the potential for any adverse impacts to the resource area during construction, and with post-construction measures implemented to stabilize any disturbed areas*."

The City of Boston's Ordinance defines Buffer Zone as, "*The areas 100 feet horizontally lateral from the boundary of any Resource Area, including: freshwater or coastal wetland (excluding LSCSF), marsh, wet meadow, bog, swamp, vernal pool, spring, bank, reservoir, stream, brook, creek, river, lake, pond of any size, beach, dune, estuary, flat, or the ocean*."

The removal of sediment and debris from the brook would result in temporary impacts to Buffer Zone due to the limit of work and dewatering. Impacts to the Buffer Zone are unavoidable due to the location of the work and access requirements. Temporary impacts have been limited to the extent practicable and will be restored upon completion of the Project.

Table No. 7 – Performance Standards for Work in Buffer Zone

Performance Standard	Proposed Project
Special attention to proposals involving new pavement or new installation of impervious surfaces within any area less than one hundred (100) feet from bordering vegetated wetland, bank, beach, and meadow.	The proposed work is located within 100 feet of BVW and Bank but does not involve installation of new impervious materials. Areas of temporary disturbance will be restored upon completion of the project.

4.2 OTHER REGULATED RESOURCE AREAS

GZA has also considered whether the Project Area falls within other environmental regulatory boundaries that would require additional permits. There are no Outstanding Resource Waters, Areas of Critical Environmental Concern, Natural Heritage and Endangered Species Program (NHESP) Priority or Estimated Habitat, Certified or Potential Vernal Pools, or IWPA, Zone I, or Zone II water supply areas associated with the Project Area.

4.3 COMPLIANCE WITH STORMWATER MANAGEMENT STANDARDS

As a sediment removal project, the majority of the WPA Stormwater Standards do not apply. The project is considered a redevelopment project and therefore must comply with WPA Regulations, 310 CMR 10.05(6)(k) for Stormwater Management Standards. There are no existing stormwater structures, as stormwater currently drains directly into the stream from adjacent uplands, including a gravel parking lot associated with City of Boston's Compost Project, on the northern Bank of the brook. The project includes the use of best management practices for stormwater and erosion controls during the construction period. The proposed project is anticipated to be a net ecological benefit for stormwater as it is anticipated to help alleviate localized flooding and associated stagnation issues that currently occur, likely improving water quality. The project will not change river flow rates nor river water surface elevations. The project will not generate additional runoff. The Stormwater Report and Checklist are included in **Appendix E**.

4.4 AVOIDANCE AND MINIMIZATION

In addition to the avoidance and minimization efforts discussed elsewhere in this Notice of Intent, the proposed project has been designed to avoid and limit impacts to wetland resources to the extent possible and in the following ways:

- Prior to construction, site preparation will include installation of soil erosion and sedimentation controls as shown in the attached Project Drawings by hand preparation or use of a small excavator.
- Clearing, grubbing and / or selective removal of vegetation will be conducted by hand at the direction of the Engineer only to the extent required for the removal of sediment. Removal of vegetation will be limited to areas of construction access and otherwise avoided to the greatest extent possible.
- BMPs such as compost socks or berms will be used to reduce the potential for sedimentation into the waterway;
- Loaming and seeding of embankments at all disturbed areas within work limits will precede removal of soil erosion and sediment control BMPs.

4.5 MITIGATION

There are no anticipated permanent impacts to BVW associated with the proposed Project. Therefore, based on the understanding of the Applicant, mitigation is not required.

5.0 ALTERNATIVES ANALYSIS

Work associated with the removal of the vegetative dam will be conducted by hand using manual methods. DCAMM, in conjunction with Mass Audubon's Boston Nature Center, are coordinating to remove the woody debris blockage to restore the hydraulic capacity within Canterbury Brook and aid in reduction of localized flooding events.

5.1 ALTERNATIVE FOR THE MYERSON ACCESS ROAD CULVERT SEDIMENT REMOVAL

An analysis of potential actions to address the condition of Canterbury Brook at the Myerson Access Road culvert, located in Boston, Massachusetts, has been completed as follows.

5.1.1 Alternative 1 – No Action (Not Selected)

The existing Myerson Access Road culvert needs to be cleared of sediment and debris. The No action Alternative assumes no maintenance of the existing culvert structure will occur and the existing condition will remain. As a result of the partially blocked culvert, the areas surrounding the culvert and the brook would continue to have increased potential for flooding, deposition of sediment and debris throughout the adjacent Mass Audubon's Boston Nature Center property. As such, this is not a feasible alternative for the project.

5.1.2 Alternative 2 – Removal of Sediment and Debris from the Myerson Access Road Culvert Using Mechanical Means (Selected)

This alternative describes removal of the sediment and debris obstructing the culvert using a small excavator. The work area would be isolated from regular and storm flowage using a cofferdam or porta dam. If, and as necessary, a small excavator will be stationed within adjacent BVW as required to safely reach areas of the dredge prism during work hours. The area of sediment removal will be marked by survey. The excavator will remove material and place it within a small dump truck staged adjacent to the stone bridge; the material will then be sorted, dewatered and packaged for transport to a pre-approved landfill offsite. The proposed project elements are currently located within WPA resource areas and, as such, impacts to wetlands and waterbodies cannot be avoided with this alternative. However, the machinery would be staged in uplands and be utilized to remove the materials using the excavator bucket. This would require minimal impact to the LUWW but would provide a sufficient method for clearing the obstructions to flow within the culvert and therefore achieve project. Additional impacts to wetlands and waterbodies are avoided with this alternative.

5.1.3 Alternative 3 – Removal of Sediment and Debris from the Myerson Access Road Culvert by Hydrojet and Vac Truck (Not Selected)

Utilizing a large vacuum to remove the sediment and debris represents the third alternative. The work area would be isolated from regular and storm flowage, the area of sediment removal marked by survey and the use of a hydrojet and Vac Truck staged adjacent to the brook. Using the vacuum truck allows for the combination of solid and water removal in a relatively low impact process when combined with visual observations, to determine when the native stream bottom is reached. The collected material will then be sorted, dewatered and packaged for transport to a pre-approved landfill offsite. The proposed project elements are currently located within WPA resource areas and, as such, impacts to wetlands and waterbodies cannot be avoided with this alternative. While this alternative results in some temporary impacts to wetland resources, it accomplishes the project need of addressing the existing maintenance needs while minimizing impacts to adjacent wetland and water resource areas.

6.0 CLIMATE RESILIENCE AND ADAPTATION

The purpose of the Project is to remove sediment and other materials within Canterbury Brook and the Myerson Access Road culvert. The Project activities are being undertaken to alleviate the existing flooding and stagnation conditions that occur during large precipitation events. Localized flooding, likely caused by the backwater effects from additional and separate downstream culvert obstructions and backwater conditions, creates a safety and environmental concern within the Mass Audubon's Boston Nature Center. Flooding events carry solid waste and other materials from the brook into neighboring wetland areas; in addition, erosion and destabilization of the banks is occurring and causing adjacent mature trees to fall into the brook. Loss of important streamside habitat is occurring. Removal of sediment within the culvert, in concert with future actions to address the hydraulic performance of the Canterbury Brook – Stony Brook system, will aid in alleviating flooding conditions in this section of the brook from future storm events that are predicted to be of increased intensity and frequency.

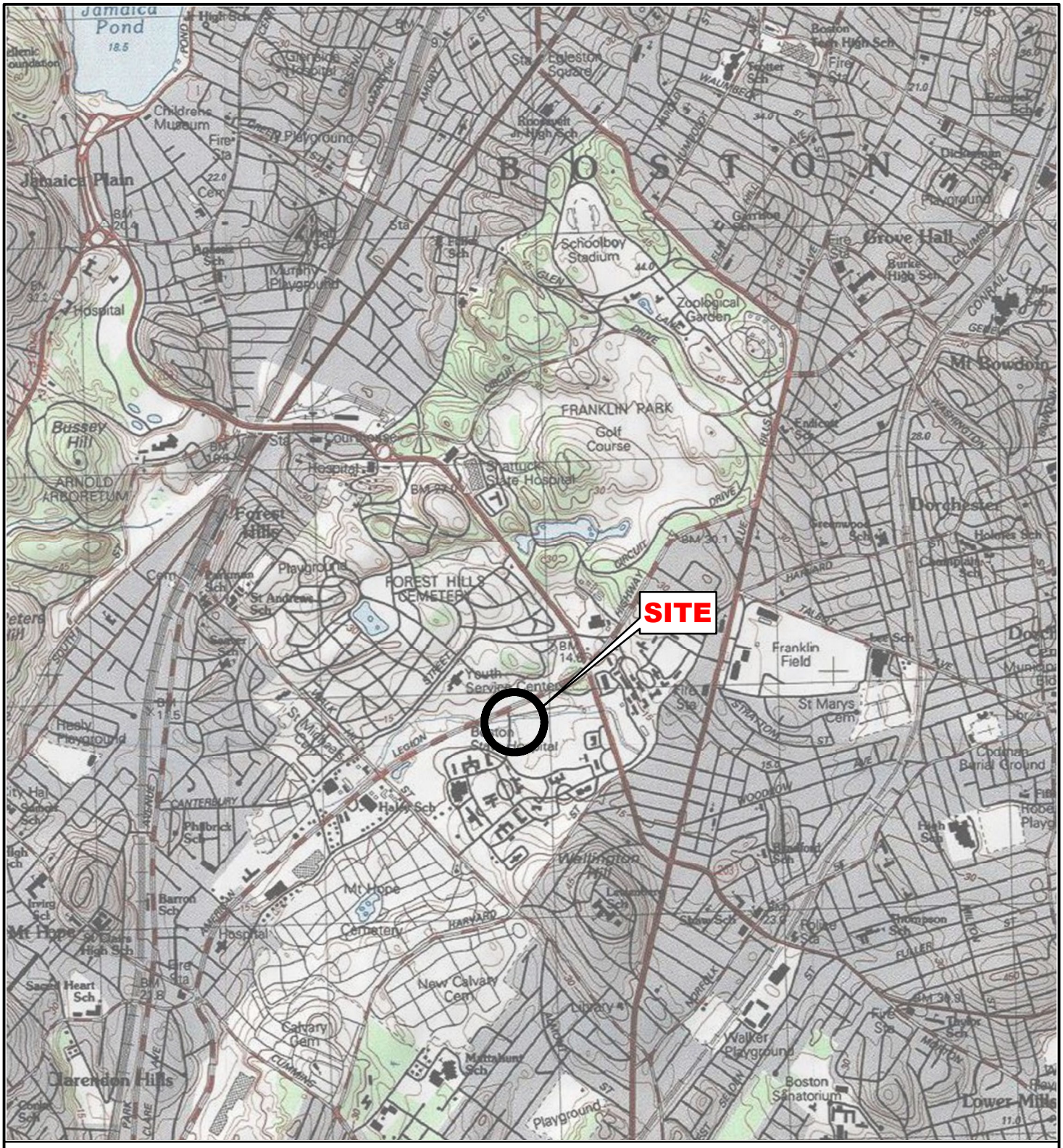
7.0 CONCLUSION

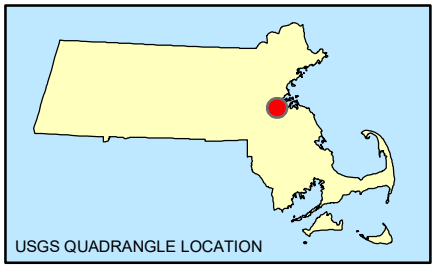
The proposed Project is required for maintaining the hydraulic capacity of the existing Myerson Access Road culvert at Canterbury Brook in Boston, Massachusetts. The Project has been designed to limit impacts to regulated resource areas.

Although temporary disturbance is unavoidable to complete the project activities, the temporary resource impacts will be restored upon project completion.

Pursuant to the City of Boston's Ordinance, the Applicant is requesting a variance for work within resource areas. The proposed work will not have adverse effects upon the interests protected by the City of Boston, rather the proposed work will have an overriding public benefit due to the restoration of hydraulic capacity of the culvert, resulting in the protection of surrounding lands including recreational trails and buildings, and the protection of the stream.

Figures





SOURCE : THIS MAP CONTAINS THE ESRI ARCGIS ONLINE USA TOPOGRAPHIC MAP SERVICE, PUBLISHED JUNE 19, 2019 BY ESRI ARCIMS SERVICES AND UPDATED AS NEEDED. THIS SERVICE USES UNIFORM NATIONALLY RECOGNIZED DATUM AND CARTOGRAPHY STANDARDS AND A VARIETY OF AVAILABLE SOURCES FROM SEVERAL DATA PROVIDERS.

0 1,000 2,000 4,000 6,000

SCALE IN FEET

Data Supplied by : esri

N W E S

PROJ. MGR.: KKD
DESIGNED BY: AJD
REVIEWED BY: BW

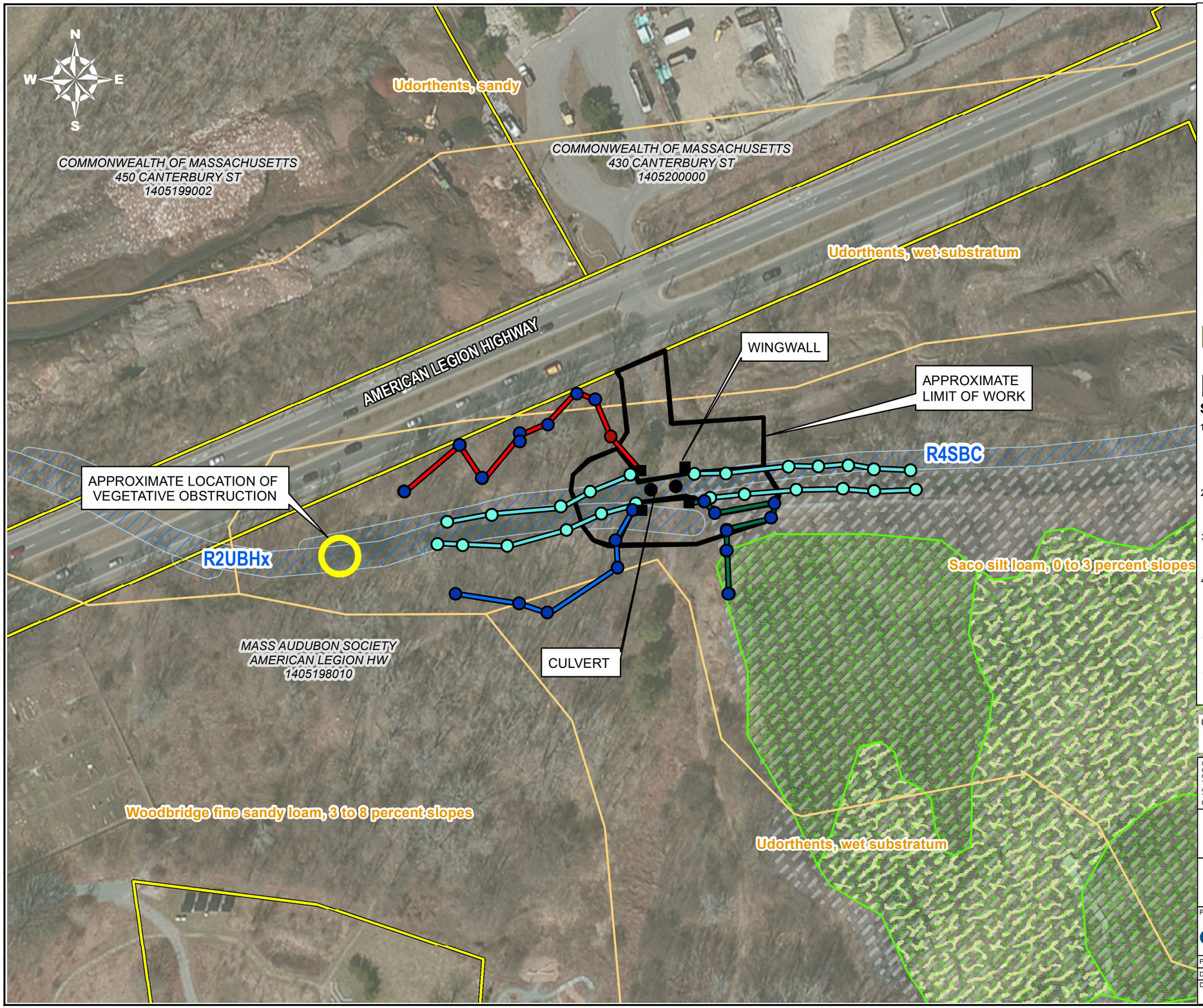
DATE: 01-07-2021

SITE LOCUS

MYERSON ACCESS ROAD OVER
CANTERBURY BROOK
BOSTON, MASSACHUSETTS

JOB NO.
01.0174917.00

FIGURE NO.
1



2020 BVW C FLAGS PER GZA
2020 BVW D FLAGS PER GZA
2020 BVW B FLAGS PER GZA
2020 BANK A FLAGS PER GZA
GZA BVW D BOUNDARY
GZA BVW C BOUNDARY
GZA BVW B BOUNDARY
GZA BANK A BOUNDARY
SOIL BY MAP UNIT
MASSDEP WETLANDS DATA
NWI Freshwater Emergent
NWI Freshwater Forested/Shrub
NWI Riverine
TAX PARCEL DATA (LEVEL-3)
FEMA FLOOD ZONE X
LIMIT OF WORK - SEDIMENT REMOVAL

SOURCE

1) THIS MAP CONTAINS THE ESRI ArcGIS ONLINE WORLD IMAGERY MAP SERVICE, PUBLISHED DECEMBER 12, 2009 BY ESRI ARCIMS SERVICES AND UPDATED OFTEN. THIS SERVICE USES UNIFORM NATIONALLY RECOGNIZED DATUM AND CARTOGRAPHY STANDARDS AND A VARIETY OF AVAILABLE SOURCES FROM SEVERAL DATA PROVIDERS.

2) THE LOCATION OF THE 2019 BVW FLAGS AND ADJUSTED BOUNDARY WERE APPROXIMATELY DETERMINED BY GPS USING SUB-METER ACCURACY. THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

3) MINIMAL VEGETATION TRIMMING AS NECESSARY TO ALLOW FOR MACHINE ACCESS, MAY OCCUR. ROUTES MAY ALTER SLIGHTLY FROM THOSE DEPICTED TO ALLOW FOR AVOIDANCE OF LARGE TREES AND SHRUBS.

4) THE LEVEL-3 ASSESSORS' PARCEL MAPPING DATA SET WAS DEVELOPED THROUGH COMPETITIVE PROCUREMENT FUNDED BY MASSGIS. THE SPECIFICATION FOR THIS WORK WAS LEVEL 3 OF THE MASSGIS DIGITAL PARCEL STANDARD. THE DATA WAS DISTRIBUTED BY MASSGIS IN NOVEMBER 2018.

5) THE MASSDEP WETLANDS DATA SET WAS DEVELOPED BY THE MASSDEP WETLAND CONSERVANCY PROGRAM AND PROVIDED BY MASSSGIS. LAST UPDATED ON 07-18-2019.

6) THE NATIONAL WETLANDS INVENTORY DATA SET WAS DEVELOPED AND PROVIDED BY THE NATIONAL FISH AND WILDLIFE SERVICE. LAST UPDATED ON 05-03-2019.

0 75 150 300
SCALE IN FEET

CANTERBURY AT MYERSON ACCESS ROAD SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

EXISTING CONDITIONS

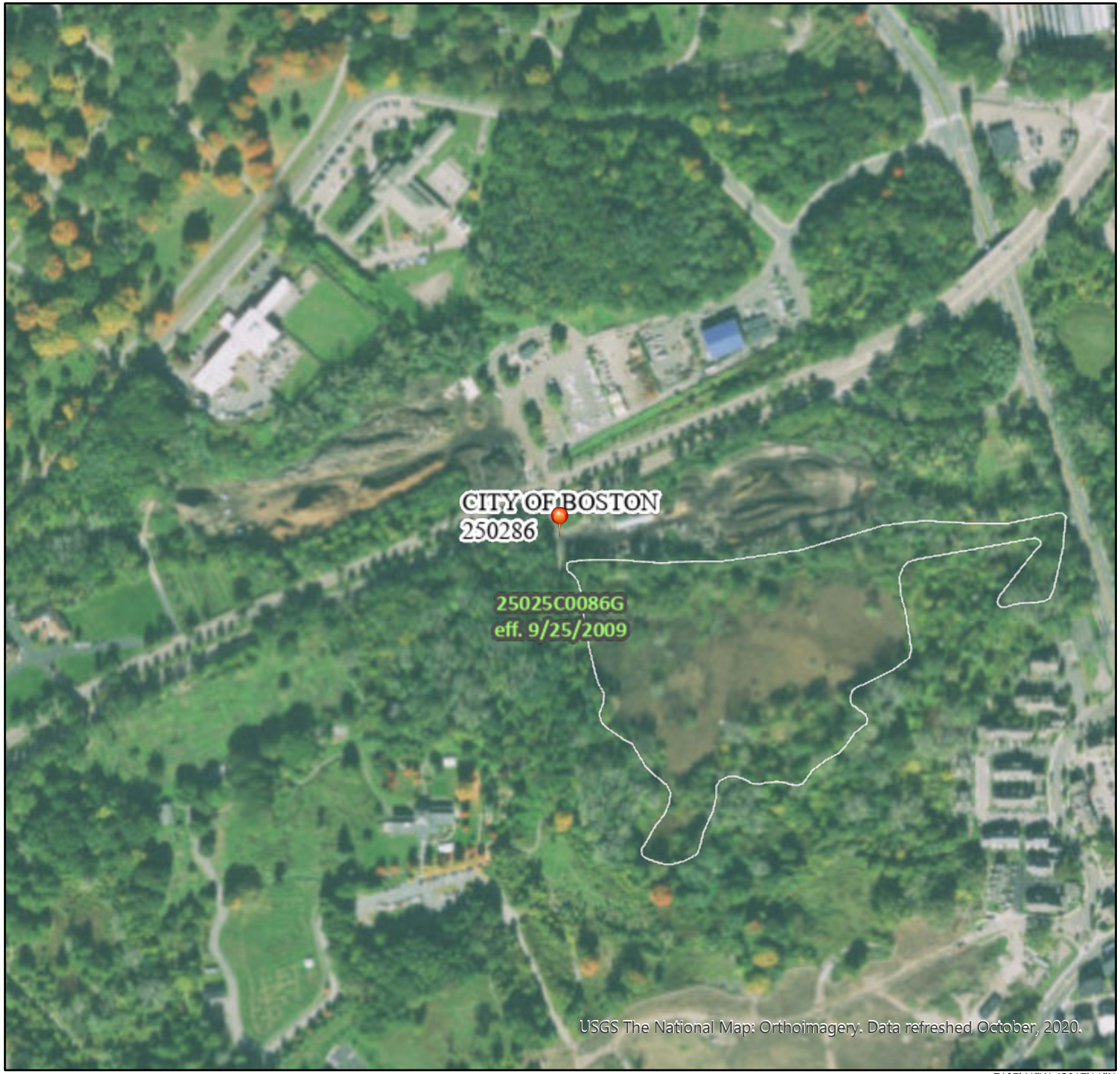
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: DCAMM	
PROJ MGR: KKD	REVIEWED BY: DML	CHECKED BY: KKD	FIGURE 2
DESIGNED BY: KKD	DRAWN BY: AJD	SCALE: 1 " = 100 FEET	
DATE: 01/22/2021	PROJECT NO. 01.0174917.00	REVISION NO.	

 J:\170,000-179,999\174917\174917-00.KKD\GIS\174917_FIG2_EX_Conditions_KKD.mxd, 1/22/2021, 10:50:59 AM, kimberly.degutis

National Flood Hazard Layer FIRMette

FIGURE 3 - FEMA FIRM

71°6'18"W 42°17'38"N



71°5'41"W 42°17'11"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 / 17.5 Cross Sections with 1% Annual Chance / 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 1/6/2021 at 9:53 AM 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.

Appendix A – Limitations

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) has prepared this report on behalf of, and for the exclusive use of Massachusetts Division of Capital Asset Management and Maintenance ("Client") for the stated purpose(s) and location(s) identified in the report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or proposal and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the data gathered and observations made during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

LIMITS TO OBSERVATIONS

4. Natural resource characteristics are inherently variable. Biological community composition and diversity can be affected by seasonal, annual or anthropogenic influences. In addition, soil conditions are reflective of subsurface geologic materials, the composition and distribution of which vary spatially.

5. The observations described in this report were made on the dates referenced and under the conditions stated therein. Conditions observed and reported by GZA reflect the conditions that could be reasonably observed based upon the visual observations of surface conditions and/or a limited observation of subsurface conditions at the specific time of observation. Such conditions are subject to environmental and circumstantial alteration and may not reflect conditions observable at another time.

6. The conclusions and recommendations contained in this report are based upon the data obtained from a limited number of surveys performed during the course of our work on the site, as described in the Report. There may be variations between these surveys and other past or future surveys due to inherent environmental and circumstantial variability.

RELIANCE ON INFORMATION FROM OTHERS

7. Preparation of this Report may have relied upon information made available by Federal, state and local authorities; and/or work products prepared by other professionals as specified in the report. Unless specifically stated, GZA did not attempt to independently verify the accuracy or completeness of that information.

COMPLIANCE WITH REGULATIONS AND CODES

8. GZA's services were performed to render an opinion on the presence and/or condition of natural resources as described in the Report. Standards used to identify or assess these resources as well as regulatory jurisdiction, if any, are stated in the Report. Standards for identification of jurisdictional resources and regulatory control over them may vary between governmental agencies at Federal, state and local levels and are subject to change over time which may affect the conclusions and findings of this report.

NEW INFORMATION

9. In the event that the Client or others authorized to use this report obtain information on environmental regulatory compliance issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this work, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

10. GZA recommends that we be retained to provide further investigation, if necessary, which would allow GZA to (1) observe compliance with the concepts and recommendations contained herein; (2) evaluate whether the manner of implementation creates a potential new finding; and (3) evaluate whether the manner of implementation affects or changes the conditions on which our opinions were made.

Appendix B – Wetland Delineation Report

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F: 781.278.5702
www.gza.com

December 31, 2020
File No. 01.0174917.00

Ms. Susan Ruch
Division of Capital Asset Management and Maintenance
Office of Facilities Management and Maintenance
One Ashburton Place, 15th Floor
Boston, Massachusetts 02108

Re: Wetland Assessment and Delineation Report
Canterbury Brook Culvert Sediment Removal Project
438 American Legion Highway
Boston, Massachusetts

Dear Ms. Ruch:

GZA GeoEnvironmental, Inc. (GZA) has prepared this report detailing the completion of wetland assessment and delineation services for the Division of Capital Asset Management and Maintenance (DCAMM) for a site located at 438 American Legion Highway in Boston, Massachusetts. The wetland delineation was limited to an area including approximately 200 feet east (upstream) and west (downstream) of a stone bridge containing a culvert that conveys Canterbury Brook, as well as the area 100 feet north and south of the culvert (the Project Area, see **Figure 1**). The wetland delineation was performed by a GZA Environmental Scientist on December 8, 2020. This report is subject to the Limitations attached as **Appendix A**.

PROJECT BACKGROUND

The purpose of the wetland assessment and delineation work was to evaluate and demarcate the limits of regulated wetland boundaries within the Project Area. GZA understands that this report will be used in subsequent filing of a WPA Form 3 - Notice of Intent application under the Massachusetts Wetlands Protection Act regulations, 310 CMR 10.00 for the proposed removal of accumulated sediment and refuse from within and at the inlet/outlet of the culvert located within the Project Area.

Canterbury Brook has been historically channelized within the Project Area using overlapping field stones. However, field stones were observed along both banks of the brook on the downstream side just outside of the Project Area; no field stone along the banks was observed within the Project Area at the time of investigation.

A 2003 study conducted by GZA[1] concluded that the majority of flooding associated with Canterbury Brook is likely a result of backwater effects of the Stony Brook conduit located west (downstream) of the Project Area. On December 5, 2020, approximately 1.7 inches of rain fell across the Boston area[2], creating a flooding condition at the time of the delineation. The rainfall, in conjunction with the previously identified backwater effect, likely created several ponded areas throughout the Project Area.

[1] GZA GeoEnvironmental. Hydrologic and Hydraulic Assessment – Canterbury Brook at the Former Boston State Hospital, Boston, Massachusetts. January 2004.
[2] National Weather Service Preliminary monthly climate data for Boston Logan airport, December 2020. Online at: https://w2.weather.gov/climate/index.php?wfo=box. Accessed 12/14/2020.

SITE LOCATION AND DESCRIPTION

The Project Area is located immediately south of the City of Boston's Compost Project at approximately 438 American Legion Highway in the City of Boston. The Project Area is bounded by the American Legion Highway to the north and Mass Audubon Society owned land to the east, west and south (See **Figure 1**, attached).

The Project Area is located within a 58.17-acre parcel owned and actively managed by Massachusetts Audubon Society as an educational conservation sanctuary and is open to the public for use of its recreation trails located immediately south of Canterbury Brook. A gravel path transitions to a wood boardwalk east of the stone bridge/culvert and traverses west to east beyond the limits of the Project Area. A gravel parking lot utilized by the composting facility is located directly north of the Project Area. Earthen berms create a partial barrier between the Bank of Canterbury Brook and a portion of the parking lot.

Within the Project Area, Canterbury Brook exhibits characteristics of a typical urban stream, including significant quantities of refuse and evidence of poor water quality likely associated with the close proximity to well-trafficked city roadways (i.e. road salt, petroleum biproducts, etc.). Evidence of scour from prior flood events was observed along the stream corridor.

RESOURCE AREA BOUNDARY DELINEATION AND METHODOLOGY

The Project Area assessment and boundary delineation was conducted by a GZA Environmental Scientist in December 2020 consistent with the 1995 Massachusetts Department of Environmental Protection (MassDEP) handbook titled *Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act*[3], the National Plant List: 2016 wetlands ratings[4], *Field Indicators of Hydric Soils in the United States Version 8.2*[5], *and Field Indicators for Identifying Hydric Soils in New England*[6].

Additional references included the definitions in the federal Clean Water Act (Section 404). The wetland delineation was conducted in accordance with the 1987 Corps of Engineers *Corps of Engineers Wetlands Delineation Manual*[7], using the *Routine Determination Method;* in conjunction with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*[8] (Regional Supplement). Observed wetlands were classified in accordance with the *Classification of Wetlands and Deepwater Habitats of the United States – Second Edition*[9].

Publicly available environmental data including the USDA Natural Resources Conservation Service Soil Survey for Suffolk County (MA); Massachusetts OLIVER GIS[10]; and FEMA Flood Insurance Rate Maps were used to prepare the field data forms and this wetland delineation report. Descriptions of wetlands delineated within the Project Area are provided in the following sections, and representative photographs are provided in **Appendix B.**

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[3] 310 CMR: Department of Environmental Protection; Wetlands Protection Act

[4] Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Plant List: 2016 wetland ratings.* Phytoneuron 2016-30: 1-17

[5] United States Department of Agriculture, Natural Resource Conservation Service, 2018. *Field Indicators of Hydric Soils in the United States,* Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils

[6] New England Hydric Soils Technical Committee. 2019. Version 4. *Field Indicators for Identifying Hydric Soils in New England,* New England Interstate Water Pollution Control Commission, Lowell, Massachusetts

[7] U.S. Army Corps of Engineers, Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi

[8] U.S. Army Corps of Engineers, 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, C.V. Noble and J.F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, Mississippi; U.S. Army Engineer Research and Development Center

[9] Federal Geographic Data Committee. 2013. *Classification of Wetlands and Deepwater Habitats of the United States*. FGDT-STD-004-2013, 2nd edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC

[10] MassGIS (Bureau of Geographic Information), Commonwealth of Massachusetts EOTSS. OLIVER Interactive Mapping Application. Accessed online at: http://maps.massgis.state.ma.us/map_ol/oliver.php. Accessed 12/11/2020.

Regulated wetland resource boundaries were witnessed in the field with pink flagging tied on vegetation. The wetland boundary flags were established by examining the dominant vegetation, soils, and evidence of hydrology at several locations within the Project Area. Sample plots were conducted, and data were collected to characterize the wetland and upland conditions. Dominant vegetation, soils, and indicators of hydrology were recorded on standard Wetland Determination Data Forms sourced from the Regional Supplement; these forms are provided in **Appendix C**. Additionally, several undocumented soil pits were examined throughout the Project Area to observe hydric soil and hydrology indicators that were used to help determine wetland boundaries.

DESKTOP ANALYSIS

A desktop analysis using MassGIS's OLIVER database preceded the field investigation to identify critical areas on or within 200 feet of the Project Area.

Table 1 - Critical Environmental Areas as Mapped by MassGIS OLIVER

Mapped Resources on or Within 100 Feet of the Project Area	Yes	No
NHESP Certified Vernal Pool		X
NHESP Potential Vernal Pool		X
Outstanding Resource Water		X
FEMA 100-Year Flood Zones		X

According to the MassGIS OLIVER database, one state-identified wetland polygon is mapped within the Project Area. A Scrub Shrub Swamp (i.e., BVW) polygon is located within the eastern portion of Project Area and extends to the south and east within Mass Audubon's Boston Nature Center parcel. The east half of the Project Area is also located within a mapped FEMA Zone X, 1% Drainage Area < 1 sq. mi.

Based on the Massachusetts Natural Heritage Atlas 14th Edition (2017), the Project Area does not contain mapped NHESP Estimated or Priority Habitats of Rare Species or Wildlife. In addition, there are no potential or certified vernal pool habitats mapped within the Project Area limits.

According to the U.S. Department of Agriculture National Resource Conservation Service (NRCS) Web Soil Survey[11] and the NRCS SSURGO soils data[12], there are three soil units mapped within the Project Area (*Custom Soil Resource Report for Suffolk County, Massachusetts)*. However, the majority of the Project Area consists of Saco silt loam, 0 to 3 percent slopes. The Saco soil series is identified as having a drainage class of Very Poorly Drained which qualifies the series as a hydric soil. Table 2 identifies NRCS soil series that are mapped within the Project Area.

[11] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: https://websoilsurvey.sc.egov.usda.gov/. Accessed 12/4/2020.
[12] USDA. 1989. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Suffolk County, Massachusetts. Available online. Accessed 12/11/2020.

Table 2 - NRCS Mapped Soils Series within the Project Area

Soil Unit Name	Hydric Rating	Acres / Percent Area of Project Area
Saco silt loam, 0 to 3 percent slopes	100	2.0 / 70.4
Woodbridge fine sandy loam, 3 to 8 percent slopes	8	0.1 / 0.7
Udorthents, wet substratum	2	0.8 / 28.9
	Total Project Acres	2.9

According to the U.S. Fish and Wildlife Service's National Wetlands Inventory[13] (NWI), three polygons are mapped within the Project Area. Canterbury Brook is mapped as a seasonally flooded intermittent stream (R4SBC) within the Project Area; a finger of a linear polygon to the south of the brook is mapped as a lower perennial stream, with an unconsolidated bottom that was historically excavated (R2UBHx) and extends to the west and out of the Project Area. A portion of a large, scrub-shrub wetland (PSS1E) is also located in the Project Area, southeast of the stone bridge. This wetland appears to be hydrologically connected to a larger wetland complex containing other mapped emergent and shrub wetland polygons, located southeast of the stone bridge and south of the recreation trail installed by Mass Audubon Society. The mapped polygons are considered to be Waters of the United States (WOUS) within the Project Area. No other WOUS are mapped within the Project Area.

FINDINGS

Within the Project Area, we observed regulated wetland resources including three (3) Bordering Vegetated Wetland (BVW) and two (2) Bank limits, which are coincident with the mean annual high-water (MAHW) that begins the 200-foot Riverfront Area (refer to **Figure 2**). Given the time of year of the delineation, the understory contained few identifiable herbaceous species, although woody vegetation was readily identified. Additionally, ponding within the Project Area was observed, although this would not necessarily be definitive to determine a wetland because the observations were outside of the growing season and the ponding may have been the result of a recent heavy precipitation event (approximately 1.70 inches three (3) days prior to the field observations, as reported by the National Weather Service monitoring station at Boston Logan airport[14]). Also, this area is subject to backwater conditions associated with the brook in the Project Area. Thus, the delineated boundaries were generally defined by a distinct topographic break and evidence of scour. The brook appeared to be at bankfull condition at the time of our site observations.

WETLAND RESOURCE DESCRIPTIONS

WETLAND A

The limits of the Bank resource on each side of Canterbury Brook were delineated as Wetland A with flagging labeled A1 to A7 and A19 to A24, which are located on the eastern (upstream) side of the stone bridge/culvert. Flags A8 to A12 and A13 to A18 are located on the western (downstream) side of the bridge within the Project Area. Bank flags were hung on existing vegetation at the upper break in slope, and coincident with the MAHW mark of the brook. The brook was observed at bankfull condition during the delineation resulting from a heavy precipitation event that preceded field observations.

WETLAND B

Wetland B is a BVW/palustrine forested wetland system located northwest of the stone bridge. Wetland B is dominated by eastern cottonwood (*Populus deltoides*, FAC) American elm (*Ulmus americana*, FACW), and honeysuckle (*Lonicera sp.*).

[13] National Wetlands Inventory Wetland Mapped. Available online at the following link: https://www.fws.gov/wetlands/data/mapper.html. Accessed 12/4/2020.
[14] Preliminary Monthly Climate Data for December 2020 at Boston Logan airport. Accessed online at: https://w2.weather.gov/climate/index.php?wfo=box. Accessed 12/15/2020.

Wetland B is underlain principally by Saco silt loam, 0 to 3 percent slopes which is rated as a hydric soil according to NRCS Web Soil Survey. Hydric soil indicators observed at the time of the delineation met the criteria for A11 – Depleted Below Dark Surface, F6 – Redox Dark Surface and F3 - Depleted Matrix within the sample plot location. Positive indicators of hydrology included observations of stained leaves, and saturated soils within 12-inches of the surface.

Wetland B is marked by one series of pink flags, denoted as B1 to B9. Flag B9 ties into Bank flag A8 on the west side (downstream) of the stone bridge.

GZA observed ponding within Wetland B at the time of delineation, which appears to be a result of the backwater effects resulting from the obstruction of downstream culverts. Ponding may also be a result of a likely floodplain connection to the brook, observed at flag B1 and Bank flag A12, which appears to allow the brook to overflow into the wetland during flood events.

WETLAND C

Wetland C is a BVW/palustrine forested wetland system located southwest of the stone bridge (downstream). Wetland C is dominated by silver maple (*Acer saccharinum*, FACW), American elm (*Ulmus americana*, FACW) and silky dogwood (*Cornus amomum*, FACW). Wetland B is underlain principally by Saco series soil and Udorthents with a wet substratum. The Saco silt loam is a hydric soil that met the Corps criteria for F6 – Redox Dark Surface within the sample plot location. Hydrology indicators included observations of primary criteria, including stained leaves, sediment deposits on trees and saturated soils within 12-inches of the surface.

Wetland C is marked by one series of pink flags, denoted as C1 to C6. Flag C1 connects to Bank flag A18 on the west side (downstream) of the stone bridge.

Ponding within Wetland C appeared to connect directly to the brook near Bank flag A13. Like Wetland B, ponding within Wetland C may also be a result of downstream impediments.

Ponding observed within wetland resource areas B & C may be associated with a potential surface hydrologic connection observed from flags A12 and A13. Potential overtopping of the brook is supported by field observations of water-deposited woody debris from flooding and sediment markings were observed on trees, south of flags A9 to A13.

WETLAND D

Wetland D is a BVW/palustrine scrub shrub wetland system located southeast of the stone bridge and recreation trail. The delineated wetland boundaries are generally consistent with the MassGIS/NWI mapped wetland system located southeast of the Project Area. Wetland D is dominated by American elm (*Ulmus americana*, FACW), silver maple (*Acer saccharinum*, FACW) and silky dogwood (*Cornus amomum*, FACW) species. Wetland D is underlain principally by Saco silt loam. Hydric soil indicators met the criteria for F6 – Redox Dark Surface within the sample plot location. Hydrology indicators included observations of primary criteria including saturation within 12-inches of the ground surface and sediment marks on trees. The wetland complex connected to Wetland D also appears inundated on aerial imagery.

Wetland D is marked with a single series of pink flags labeled D1 through D7. Flag D7 is connected to Bank flag A19 on the east side (upstream) of the stone bridge. Wetland D, located upstream of the culvert within the Project Area, was also experiencing flooding conditions at the time of delineation. Woody debris and refuse (i.e. plastic bottles, Styrofoam containers) were observed pushed against trees adjacent to the brook, indicating that water may overtop the Bank and flood waters enter Wetland D.

JURISDICTIONAL WETLAND RESOURCE AREAS – FEDERAL CLEAN WATER ACT (SECTION 404)

The wetlands located in the Project Area are likely "Waters of the United States," and would be subject to protection under the federal Clean Water Act, 33 U.S.C. §1251 et seq (1972). According to 33 CFR §328.3(c)(4), vegetated wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions." The wetland boundaries previously described in this report were delineated in accordance with this definition.

United States Army Corps wetland boundary delineation field data sheets are attached in Appendix B, documenting GZA's observations including evidence of hydrology, soils, and hydrophytic vegetation at specific data plots. It is GZA's opinion that work conducted within vegetated wetlands is Subject to Jurisdiction under Section 404 of the Clean Water Act.

JURISDICTIONAL WETLAND RESOURCE AREAS – MASSACHUSETTS WETLANDS PROTECTION ACT

Wetland resource area boundaries were assessed and delineated in accordance with methods developed by the 1995 Massachusetts Department of Environmental Protection's handbook for *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act*[15](the Act), as well as definitions set forth in the Wetland Regulations, 310 CMR 10.00. The Project Area contains regulated resources (BVW, Bank, and Riverfront Area (RA) subject to protection under the Act exists in the Project Area.

<u>BANK – 310 CMR 10.54</u>

Within the Project Area we delineated two (2) Bank resources that meet the definition of Bank, 310 CMR 10.54(2), "*the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or, in the absence of these, it occurs between a water body and an upland*."

<u>BORDERING VEGETATED WETLAND – 310 CMR 10.55</u>

Three BVW boundaries were observed within the Project Area. According to 310 CMR 10.55(2), the definition of BVW are "freshwater wetlands which border on creeks, rivers, streams, ponds and lakes and are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants". The boundary of BVW is the line within which 50% or more of the vegetation community consists of wetland indicator plants and saturated or inundated conditions exist.

<u>RIVERFRONT AREA – 310 CMR 10.58</u>

According to 310 CMR 10.58(2), the definition of RA is "the area of land between a river's MAHW line and a parallel line measured horizontally. The riverfront area may include or overlap other resource areas or their buffer zones. The riverfront area does not have a buffer zone." Riverfront Area within the Project Area includes forested wetlands and uplands developed with impervious surfaces.

[15] 310 CMR: Department of Environmental Protection; Wetlands Protection Act

GZA identified three (3) BVW and two (2) Bank resources of a perennial stream within the Project Area. Wetland resources are summarized in Table 3.

Table 3 - Resource Area Summary Table

Wetland ID	MassDEP Resource Type	Cowardin Class	HGM Class	Sample Plots	Anticipated Federal (USACE) Jurisdiction	Anticipated State (WPA) Jurisdiction	Notes
A	Bank	R2UB3	N/A	N/A	Likely – contains a direct connection to a WOUS	Bank is likely jurisdictional	Bank within Project Area extends outside Project Area.
B	BVW	PFO1B	Riverine	1	Likely – contains a direct connection to a WOUS	BVW is likely jurisdictional	BVW within Project Area borders on Canterbury Brook within Project Area.
C	BVW	PFO1B	Riverine	2	Likely – contains a direct connection to a WOUS	BVW is likely jurisdictional	BVW within Project Area borders on Canterbury Brook within Project Area.
D	BVW	PSS1B	Riverine	3	Likely – contains a direct connection to a WOUS	BVW is likely jurisdictional	BVW within Project Area borders on Canterbury Brook and a larger wetland system extending outside Project Area.
N/A	Riverfront Area	N/A	N/A	N/A	N/A	Riverfront Area is jurisdictional	Canterbury Brook is a perennial stream with a Riverfront Area beginning at the delineated Bank/MAHW of the brook.

JURISDICTIONAL WETLAND RESOURCE AREAS – MASSACHUSETTS CLEAN WATERS ACT (SECTION 401)

The limit of jurisdiction under Massachusetts Clean Waters Act (Section 401), as specified in 314 CMR 9.00, is the limit of Section 404 jurisdiction under the federal Clean Water Act. If proposed work exceeds the jurisdictional thresholds under 314 CMR 9.00, an Applicant is required to apply for a Water Quality Certificate under Section 401.

CONCLUSIONS AND RECOMMENDATIONS

GZA has identified six (6) areas Subject to Protection and/or Jurisdiction under the Massachusetts Wetlands Protection Act, the MassDEP Water Quality Certification, and the federal Clean Water Act., on or within 200 feet of the Project Area, and has delineated the boundaries of these areas that exist within the Project Area, with the exception of Riverfront Area. Riverfront Area was established by flagging MAHW of Canterbury Brook and extends 200 feet from the flagged boundary to establish the resource area.

Wetlands within the Project Area are comprised mostly of BVW/Palustrine Forested systems that border upon Canterbury Brook, a perennial stream that flows east to west between wetland systems throughout the Project Area and extends outside the Project Area. Boundaries of the wetlands in the Project Area are generally defined by distinct topographic changes and observed areas of ponding. Based on a 2003 analysis, downstream culverts obstructed with debris and

sediment may be contributing to the ponding observed in each of the wetlands within the Project Area. We observed high water conditions in the Project Area wetlands and assumed to be due to the nearly two inches of rainfall recorded three days prior to the wetland assessment.

Should you have any questions or comments regarding this submittal, or if you require additional information, please contact the undersigned at (781) 278-3700.

Sincerely,

GZA GEOENVIRONMENTAL, INC.

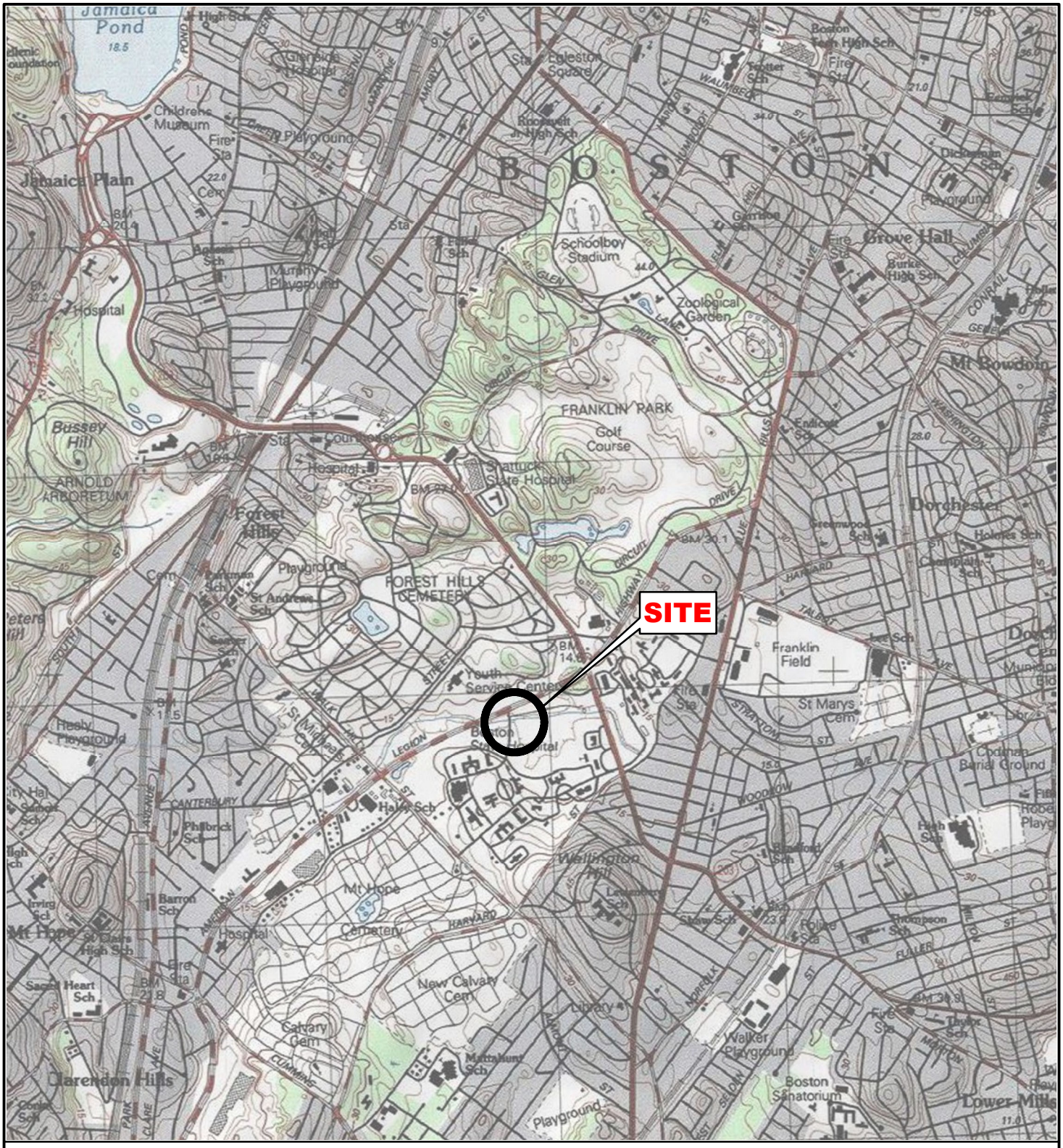
Kimberly K. Degutis, PWS, CESCL
Senior Project Manager

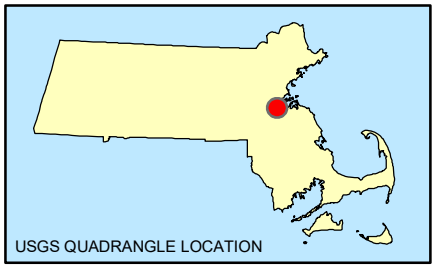
Daniel M. Nitzsche, CPESC, CESWWI
Consultant/Reviewer

Matthew Smith, P.E., LSP
Associate Principal

Attachments: Figure 1 – Site Locus
Figure 2 – Existing Conditions
Appendix A – Limitations
Appendix B - Representative Site Photographs
Appendix C – Wetland Data Sheets

Figures





SOURCE : THIS MAP CONTAINS THE ESRI ARCGIS ONLINE USA TOPOGRAPHIC MAP SERVICE, PUBLISHED JUNE 19, 2019 BY ESRI ARCIMS SERVICES AND UPDATED AS NEEDED. THIS SERVICE USES UNIFORM NATIONALLY RECOGNIZED DATUM AND CARTOGRAPHY STANDARDS AND A VARIETY OF AVAILABLE SOURCES FROM SEVERAL DATA PROVIDERS.

0 1,000 2,000 4,000 6,000

SCALE IN FEET

Data Supplied by : esri

N W E S

PROJ. MGR.: KKD
DESIGNED BY: AJD
REVIEWED BY: BW

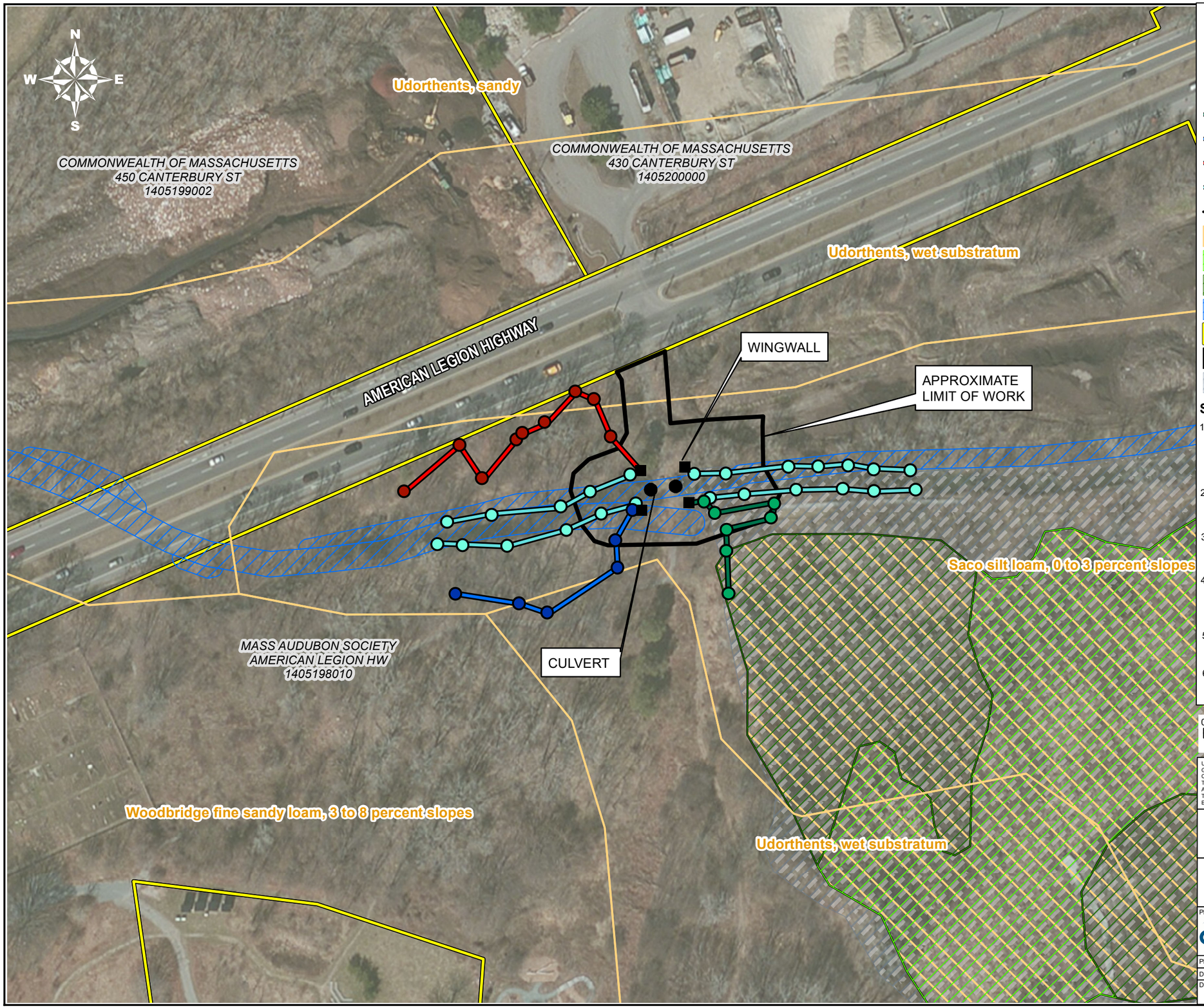
DATE: 01-07-2021

SITE LOCUS

MYERSON ACCESS ROAD OVER
CANTERBURY BROOK
BOSTON, MASSACHUSETTS

JOB NO.
01.0174917.00

FIGURE NO.
1



2020 BVW C FLAGS PER GZA

2020 BVW D FLAGS PER GZA

2020 BVW B FLAGS PER GZA

2020 BANK A FLAGS PER GZA

GZA BVW D BOUNDARY

GZA BVW C BOUNDARY

GZA BVW B BOUNDARY

GZA BANK A BOUNDARY

LIMIT OF WORK (LOW)

SOIL BY MAP UNIT

NWI Freshwater Emergent

NWI Freshwater Forested/Shrub

NWI Riverine

TAX PARCEL DATA (LEVEL-3)

MASSDEP WETLANDS DATA

FEMA FLOOD ZONE X

SOURCE

1) THIS MAP CONTAINS THE ESRI ArcGIS ONLINE WORLD IMAGERY MAP SERVICE, PUBLISHED DECEMBER 12, 2009 BY ESRI ARCIMS SERVICES AND UPDATED OFTEN. THIS SERVICE USES UNIFORM NATIONALLY RECOGNIZED DATUM AND CARTOGRAPHY STANDARDS AND A VARIETY OF AVAILABLE SOURCES FROM SEVERAL DATA PROVIDERS.

2) THE LOCATION OF THE 2019 BVW FLAGS AND ADJUSTED BOUNDARY WERE APPROXIMATELY DETERMINED BY GPS USING SUB-METER ACCURACY. THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

3) MINIMAL VEGETATION TRIMMING AS NECESSARY TO ALLOW FOR MACHINE ACCESS, MAY OCCUR. ROUTES MAY ALTER SLIGHTLY FROM THOSE DEPICTED TO ALLOW FOR AVOIDANCE OF LARGE TREES AND SHRUBS.

4) THE LEVEL-3 ASSESSORS' PARCEL MAPPING DATA SET WAS DEVELOPED THROUGH COMPETITIVE PROCUREMENT FUNDED BY MASSGIS. THE SPECIFICATION FOR THIS WORK WAS LEVEL 3 OF THE MASSGIS DIGITAL PARCEL STANDARD. THE DATA WAS DISTRIBUTED BY MASSGIS IN NOVEMBER 2018.

5) THE MASSDEP WETLANDS DATA SET WAS DEVELOPED BY THE MASSDEP WETLAND CONSERVANCY PROGRAM AND PROVIDED BY MASSSGIS. LAST UPDATED ON 07-18-2019.

6) THE NATIONAL WETLANDS INVENTORY DATA SET WAS DEVELOPED AND PROVIDED BY THE NATIONAL FISH AND WILDLIFE SERVICE. LAST UPDATED ON 05-03-2019.

0 75 150 300

SCALE IN FEET

CANTERBURY AT MYERSON ACCESS ROAD SEDIMENT REMOVAL PROJECT

MATTAPAN, MASSACHUSETTS

EXISTING CONDITIONS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: DCAMM	
PROJ MGR: KKD	REVIEWED BY: DML	CHECKED BY: KKD	FIGURE 2
DESIGNED BY: KKD	DRAWN BY: AJD	SCALE: 1 " = 100 FEET	
DATE: 01/08/2021	PROJECT NO. 01.0174917.00	REVISION NO.	

Appendix A – Limitations

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) has prepared this report on behalf of, and for the exclusive use of Massachusetts Division of Capital Asset Management and Maintenance ("Client") for the stated purpose(s) and location(s) identified in the report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or proposal and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the data gathered and observations made during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

LIMITS TO OBSERVATIONS

4. Natural resource characteristics are inherently variable. Biological community composition and diversity can be affected by seasonal, annual or anthropogenic influences. In addition, soil conditions are reflective of subsurface geologic materials, the composition and distribution of which vary spatially.

5. The observations described in this report were made on the dates referenced and under the conditions stated therein. Conditions observed and reported by GZA reflect the conditions that could be reasonably observed based upon the visual observations of surface conditions and/or a limited observation of subsurface conditions at the specific time of observation. Such conditions are subject to environmental and circumstantial alteration and may not reflect conditions observable at another time.

6. The conclusions and recommendations contained in this report are based upon the data obtained from a limited number of surveys performed during the course of our work on the site, as described in the Report. There may be variations between these surveys and other past or future surveys due to inherent environmental and circumstantial variability.

RELIANCE ON INFORMATION FROM OTHERS

7. Preparation of this Report may have relied upon information made available by Federal, state and local authorities; and/or work products prepared by other professionals as specified in the report. Unless specifically stated, GZA did not attempt to independently verify the accuracy or completeness of that information.

COMPLIANCE WITH REGULATIONS AND CODES

8. GZA's services were performed to render an opinion on the presence and/or condition of natural resources as described in the Report. Standards used to identify or assess these resources as well as regulatory jurisdiction, if any, are stated in the Report. Standards for identification of jurisdictional resources and regulatory control over them may vary between governmental agencies at Federal, state and local levels and are subject to change over time which may affect the conclusions and findings of this report.

NEW INFORMATION

9. In the event that the Client or others authorized to use this report obtain information on environmental regulatory compliance issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this work, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

10. GZA recommends that we be retained to provide further investigation, if necessary, which would allow GZA to (1) observe compliance with the concepts and recommendations contained herein; (2) evaluate whether the manner of implementation creates a potential new finding; and (3) evaluate whether the manner of implementation affects or changes the conditions on which our opinions were made.

Appendix B – Representative Site Photographs

Photographic Log

Client Name:	Site Location:	Project No.
Division of Capital Asset Management and Maintenance	438 American Legion Highway Boston, Massachusetts	01.0174917.00

Photo No.	Date:
1	12/8/20

Direction Photo Taken:
Southeast

Description:
View looking upstream at Canterbury Brook from the culvert wingwall adjacent to bank flag A7.

Photo No.	Date:
2	12/8/20

Direction Photo Taken:
East

Description:
View looking upstream at the pedestrian trail south of Canterbury Brook.

Photographic Log

Client Name:	Site Location:	Project No.
Division of Capital Asset Management and Maintenance	438 American Legion Highway Boston, Massachusetts	01.0174917.00

Photo No.	Date:
3	12/8/20

Direction Photo Taken:
West

Description:
View from bank flag A20 (upstream). Also shown is the culvert within the Project Area.

Photo No.	Date:
4	12/8/20

Direction Photo Taken:
South

Description:
Typical wetland view near flag A3.

Photographic Log

Client Name: Division of Capital Asset Management and Maintenance	**Site Location:** 438 American Legion Highway Boston, Massachusetts	**Project No.** 01.0174917.00

Photo No.	**Date:**
5	12/8/20

Direction Photo Taken:
South

Description:
Wetland boundary view near flag A1.

Photo No.	**Date:**
6	12/8/20

Direction Photo Taken:
Southwest

Description:
Typical wetland boundary view near flag B2.

Photographic Log

Client Name:	Site Location:	Project No.
Division of Capital Asset Management and Maintenance	438 American Legion Highway Boston, Massachusetts	01.0174917.00

Photo No.	Date:
7	12/8/20

Direction Photo Taken:
Northeast

Description:
Typical wetland boundary view near B1.

Photo No.	Date:
8	12/8/20

Direction Photo Taken:
Southeast

Description:
View of brook (downstream) from bank flag A12.

Photographic Log

Client Name:	Site Location:	Project No.
Division of Capital Asset Management and Maintenance	438 American Legion Highway Boston, Massachusetts	01.0174917.00

Photo No.	Date:
9	12/8/20

Direction Photo Taken:
Northeast

Description:
Typical wetland boundary view from flag C4.

Photo No.	Date:
10	12/8/20

Direction Photo Taken:
Northeast

Description:
Typical wetland boundary view near flag C6.

Photographic Log

Client Name:	Site Location:	Project No.
Division of Capital Asset Management and Maintenance	438 American Legion Highway Boston, Massachusetts	01.0174917.00

Photo No.	Date:
11	12/8/20

Direction Photo Taken:
Northwest

Description:
View of brook (downstream) from bank flag A17.

Photo No.	Date:
12	12/8/20

Direction Photo Taken:
Northeast

Description:
View of brook (downstream) from bank flag A15.

Appendix C – Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 438 American Legion Highway, Boston, MA City/County: Boston / Suffolk Sampling Date: 12/8/20

Applicant/Owner: MA Department of Capital Assest Management and Maintenance State: MA Sampling Point: 1

Investigator(s): A Damiano Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope %: 1

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42°17'23.08" Long: -71°06'00.77" Datum: NAD83

Soil Map Unit Name: Saco silt loam, 0 to 3 percent slopes NWI classification: PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: B

Remarks: (Explain alternative procedures here or in a separate report.)
Sample plot associated with flag B9. Portion of sample plot flooded at time of observation due to heavy rainfall event 3-days prior to delineation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 3
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NRCC percent of normal precipitation (3-month, New England) indicates region is below normal precipitation:
http://www.nrcc.cornell.edu/regional/monthly/monthly.html

Remarks:
Areas of ponding frozen at time of observation within plot - depth is estimated. Ponding observed within wetland likely due to backwater effects of obstructed downstream culverts of Canterbury Brook and recent heavy precipitation event (1.72 inches reported at Boston Logan airport). Area was observed during site walk on 8/12/2020; no ponding was observed however secondary indicators, including sediment deposits and water marks were observed.

VEGETATION – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	65	Yes	FAC
2. *Ulmus americana*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Lonicera canadensis*	40	Yes	FACU
2. *Rhamnus cathartica*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Alliaria petiolata*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	=Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	75	x 3 =	225
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	130 (A)		425 (B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 2/1	100					Loamy/Clayey	
7-9	10YR 2/1	50					Loamy/Clayey	
	10YR 3/1	48	10YR 5/6	2	C	M		Prominent redox concentrations
9-20	5Y 6/2	95	10YR 5/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: N/A

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 438 American Legion Highway, Boston, MA City/County: Boston / Suffolk Sampling Date: 12/8/20

Applicant/Owner: MA Department of Capital Assest Management and Maintenance State: MA Sampling Point: 2

Investigator(s): A Damiano Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope %: 1

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42°17'22.21" Long: -71°06'00.55" Datum: NAD83

Soil Map Unit Name: Saco silt loam, 0 to 3 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: C

Remarks: (Explain alternative procedures here or in a separate report.)
Sample plot associated with flag C2. Area ponded due to heavy precipitation event 3-days prior to delineation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 6
Water Table Present?	Yes X	No ____	Depth (inches): 3
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NRCC percent of normal precipitation (3-month, New England) indicate below normal precipitation:
http://www.nrcc.cornell.edu/regional/monthly/monthly.html

Remarks:
Areas of ponding frozen at time of observation within plot - depth is estimated. Ponding observed within wetland likely due to backwater effects of obstructed downstream culverts of Canterbury Brook and recent heavy precipitation event (1.72 inches reported at Boston Logan airport). Area was observed during site walk on 8/12/2020; no ponding was observed however secondary indicators, including sediment deposits and water marks were observed.

VEGETATION – Use scientific names of plants. Sampling Point: 2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	75	Yes	FACW
2. *Ulmus americana*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
	85	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Lonicera canadensis*	5	Yes	FACU
2. *Cornus amomum*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		=Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	95 (A)		200 (B)

Prevalence Index = B/A = 2.11

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Loamy/Clayey	
8-20	10YR 2/1	90	5YR 5/3	10	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ? Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: N/A

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 438 American Legion Highway, Boston, MA City/County: Boston / Suffolk Sampling Date: 12/8/20

Applicant/Owner: MA Department of Capital Assest Management and Maintenance State: MA Sampling Point: 3

Investigator(s): A Damiano Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope %: 1

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 42°17'22.92" Long: -71°05'58.73" Datum: NAD83

Soil Map Unit Name: Saco silt loam, 0 to 3 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ___	**within a Wetland?** **Yes** X **No** ___
Wetland Hydrology Present?	Yes X	No ___	If yes, optional Wetland Site ID: D

Remarks: (Explain alternative procedures here or in a separate report.)
Sample plot associated with flag D5. Area ponded due to heavy precipitation event 3-days prior to delineation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 3
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Aerial photos, NRCC percent of normal precipitation (3-month, New England) indicates below normal precipitation for the region: http://www.nrcc.cornell.edu/regional/monthly/monthly.html

Remarks:
Areas of ponding frozen at time of observation within plot - depth is estimated. Ponding observed within wetland likely due to backwater effects of obstructed downstream culverts of Canterbury Brook and recent heavy precipitation event (1.72 inches reported at Boston Logan airport). Plot located upstream of culvert impeded by sediment and mannmade debris. Area was observed during site walk on 8/12/2020; no ponding was observed however secondary indicators, including sediment deposits and water marks were observed.

VEGETATION – Use scientific names of plants. Sampling Point: 3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	60	Yes	FACW
2. *Acer saccharinum*	25	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	85	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Cornus amomum*	50	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Alliaria petiolata*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	=Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	135	x 2 =	270
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	140 (A)		290 (B)

Prevalence Index = B/A = 2.07

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1						Loamy/Clayey	
8-24	10YR 2/1	90	5Y 5/3	10	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: N/A

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Appendix C – Permit Plans

CANTERBURY BROOK AT MYERSON ACCESS ROAD SEDIMENT REMOVAL PROJECT

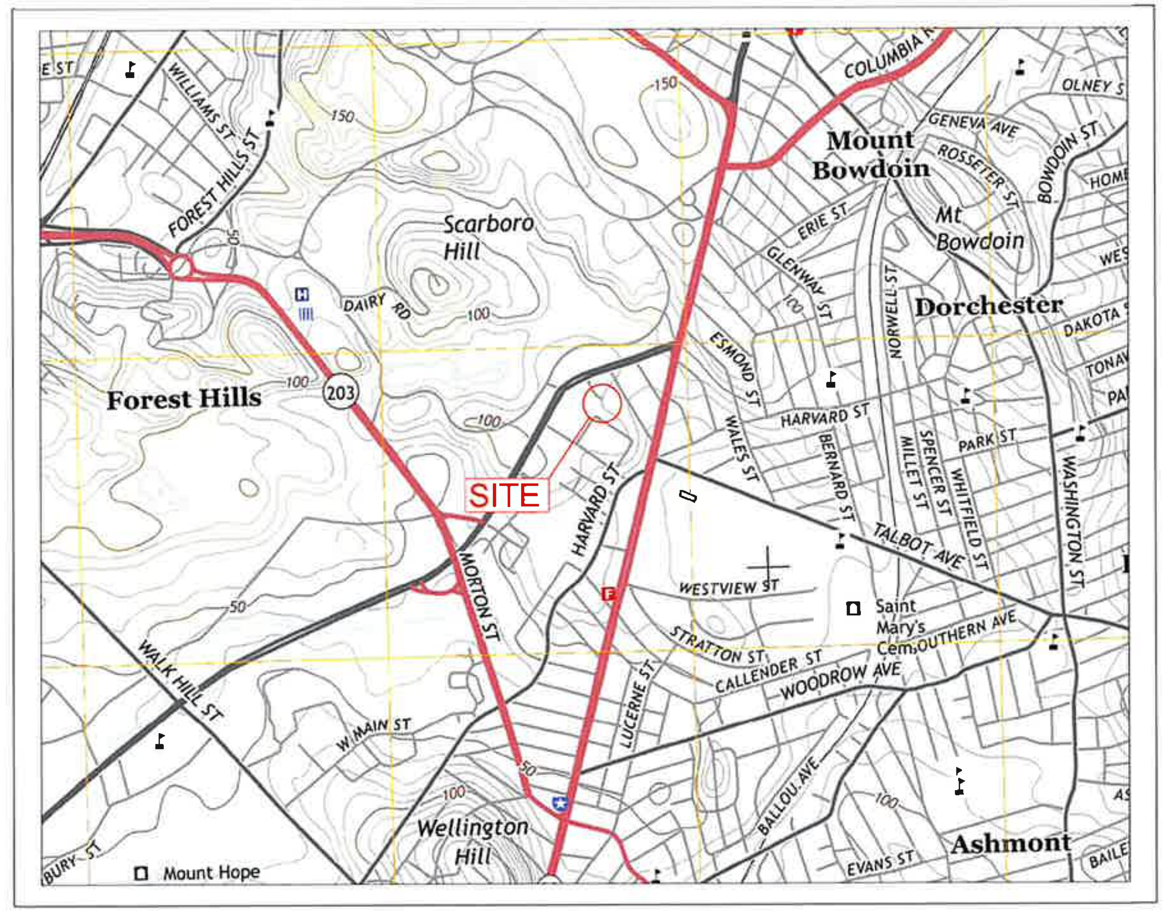
MATTAPAN, MASSACHUSETTS

PROJECT OWNER

MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE

PROJECT ENGINEER

GZA GEOENVIRONMENTAL, INC.
249 VANDERBILT AVE.
NORWOOD, MASSACHUSETTS 02062



PROJECT LOCUS MAP

SOURCE: THIS MAP CONTAINS THE ESRI ARCGIS ONLINE USA TOPOGRAPHIC MAP SERVICE, PUBLISHED DECEMBER 2009 BY ESRI RCIMS SERVICES. LAST UPDATED MARCH 2014.

0 500' 1000' 2000' 3000'
SCALE IN FEET

NOTE: ALL SCALES APPLICABLE FOR 22"X34" DRAWINGS. USE SCALE BAR FOR ALTERNATE SIZE DRAWINGS.

INDEX OF DRAWINGS

PERMITTING ONLY
NOT FOR CONSTRUCTION

COMMONWEALTH OF MASSACHUSETTS
MATTHEW M. SMITH
CIVIL
No. 41356
REGISTERED PROFESSIONAL ENGINEER

NO.	ISSUE/DESCRIPTION	BY	DATE

CANTERBURY BROOK AT MYERSON ACCESS ROAD
SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

TITLE SHEET, SITE LOCUS AND INDEX OF DRAWINGS

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE

PROJ MGR: KKD	REVIEWED BY: KKD	CHECKED BY: JAC	DRAWING
DESIGNED BY: AMD	DRAWN BY: CMC	SCALE: AS NOTED	1
DATE: JANUARY 2021	PROJECT NO. 01.00174917.00	REVISION NO.	SHEET NO. 1 OF 8

GENERAL CONDITIONS

1. DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE (DCAMM) IS THE OWNER AND CLIENT OF THIS PROJECT (THE "CLIENT" OR "OWNER"). GZA GEOENVIRONMENTAL, INC. (GZA) IS THE DESIGN ENGINEER FOR THIS PROJECT (THE "ENGINEER").
2. THE PROJECT SITE IS LOCATED IN MASS AUDUBON BOSTON NATURE CENTER (BNC), MATTAPAN, BOSTON, MASSACHUSETTS. THE CULVERT OF INTEREST TO THIS PROJECT IS UNDER AN UNNAMED ACCESS ROAD (FORMERLY KNOWN AS MEYERSON ROAD) BETWEEN THE CITY OF BOSTON COMPOST SITE AND BNC.
3. LOCATION OF UNDERGROUND UTILITIES (WHERE SHOWN) ARE APPROXIMATE ONLY, AND ARE NOT WARRANTED TO BE CORRECT. ALL EXISTING UTILITIES SHALL BE VERIFIED FOR SERVICE, SIZE, INVERT ELEVATION, LOCATIONS, ETC. PRIOR TO START OF ANY WORK IN THE GENERAL AREA. CONTRACTOR MUST NOTIFY DIG-SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION. NOTIFY ENGINEER IN WRITING OF ANY AND ALL DISCREPANCIES PRIOR TO COMMENCING ANY WORK.
4. THE RESPONSIBILITY FOR SAFETY IN, ON, OR ABOUT THE JOBSITE SHALL BE THAT OF THE CONSTRUCTION CONTRACTOR. THESE DRAWINGS DO NOT INCLUDE COMPONENTS WHICH MAY BE NECESSARY FOR CONSTRUCTION SAFETY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION, EXCEPT WHERE SPECIFICALLY DETAILED IN THE PLANS AND SPECIFICATIONS. LIKEWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEQUENCE OF THE WORK, EXCEPT WHERE SPECIFICALLY DETAILED IN THE PLANS AND SPECIFICATIONS.
6. THE CONTRACTOR SHALL BE SHALL BE RESPONSIBLE FOR ALL SURFACE AND GROUNDWATER CONTROL DURING THE WORK OF THE CONTRACT. TEMPORARY WATER CONTROL MEASURES SHALL BE, AT MINIMUM, AS REQUIRED BY THE PROJECT PLANS, SPECIFICATIONS, AND PERMIT CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL MEASURES NECESSARY FOR WATER CONTROL NECESSARY TO EXECUTE THE WORK OF THE CONTRACT. WATER CONTROL MEASURES AND BROOK LEVEL MANIPULATION ARE SUBJECT TO SPECIFIC LIMITS AND CONDITIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL DURING THE WORK OF THE CONTRACT. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE, AT MINIMUM, AS REQUIRED BY THE PROJECT PLANS, SPECIFICATIONS, AND PERMIT CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL MEASURES NECESSARY FOR THE PREVENTION OF SEDIMENT DISCHARGE OR EROSION AT THE SITE.
8. SPECIFIC AREAS HAVE BEEN DESIGNATED AND DELINEATED ON THE PLANS AS CONTRACTOR STAGING AREAS. THE CONTRACTOR SHALL USE THESE AREAS, AND THESE AREAS ONLY, FOR ON-SITE PARKING, OFFICE TRAILERS, EQUIPMENT AND MATERIAL STORAGE, ETC. THE CONTACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY SIGNAGE, FENCING, SAFETY, SEDIMENT/EROSION CONTROL, IMPROVEMENTS, RESTORATIONS ETC. IN THESE AREAS. AREA WITHIN THE LIMITS OF THE WORK MAY BE USED FOR TEMPORARY STORAGE, HAUL ROADS, PARKING, ETC.; HOWEVER, NO ADDITIONAL CONSIDERATION OR PAYMENT WILL BE MADE FOR WORK NECESSARY TO RE-GRADE SUCH AREAS OR RELOCATE ANY MATERIALS OR EQUIPMENT TEMPORARILY STORED WITHIN THE LIMITS OF THE WORK. IF THE CONTRACTOR REQUIRES AND IDENTIFIES ADDITIONAL STAGING AREAS ON THE OWNER'S PROPERTY, THE CONTRACTOR SHALL MAKE A WRITTEN REQUEST TO THE OWNER AND ENGINEER DESCRIBING THE NEED AND LOCATION OF THE PROPOSED AREA. NO GUARANTEE IS MADE THAT ADDITIONAL LAY-DOWN AREAS WILL BE MADE AVAILABLE.
9. THE CONTRACTOR SHALL RESTORE AREAS DISTURBED BY CONSTRUCTION AS PER THE PLANS AND SPECIFICATIONS. WHERE NO SPECIFIC INSTRUCTION IS GIVEN, RESTORATION SHALL BE TO THE ORIGINAL CONDITION AND AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR IS SPECIFICALLY INFORMED THAT THE RESTORATION REQUIREMENT APPLIES TO ALL AREAS DISTURBED AS A RESULT OF THE PROJECT.
11. IN THE EVENT OF THE DISCOVERY OF THE PRESENCE OF AN ENDANGERED PLANT OR ANIMAL IN THE WORK AREA OR STAGING AREAS, ALL WORK IN THE IMMEDIATE AREA OF THE FIND SHALL STOP AND THE OWNER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY. WORK IN THE IMMEDIATE AREA AND/OR THE ENTIRE SITE (AT THE DISCRETION OF THE OWNER) SHALL BE DISCONTINUED UNTIL CLEARANCE IS GRANTED BY THE OWNER.
12. IN THE EVENT OF THE DISCOVERY OF A PREVIOUSLY UNKNOWN ARCHEOLOGICAL SITE, POTENTIAL CULTURAL ARTIFACTS OR RESOURCES, OR ANY OTHER UNUSUAL ITEMS OR CONDITIONS, ALL WORK IN THE IMMEDIATE AREA OF THE FIND SHALL STOP AND THE OWNER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY. WORK IN THE IMMEDIATE AREA SHALL BE DISCONTINUED UNTIL CLEARANCE IS GRANTED BY THE OWNER.
13. PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL DEVELOP, SUBMIT, AND MAINTAIN AN EMERGENCY CONTACT LIST WITH NAMES AND PHONE NUMBERS (DAY AND NIGHT) OF ALL KEY PERSONNEL INVOLVED WITH THE PROJECT. THE LIST SHALL SPECIFICALLY INCLUDE THE PERSON FROM THE CONTRACTOR WHO SHALL BE RESPONSIBLE FOR ENVIRONMENTAL COMPLIANCE. THE LIST SHALL BE PROVIDED TO THE OWNER, ENGINEER, AND CONSERVATION COMMISSION AND UPDATED AS NEEDED.
14. IN THE EVENT OF UNANTICIPATED ENVIRONMENTAL AND/OR ARCHEOLOGICAL CONDITIONS WHICH PREVENT CONTINUED WORK, THE CLIENT MAY DIRECT THE CONTRACTOR TO STOP WORK AND STABILIZE THE SITE. THE CLIENT RESERVES THE RIGHT TO TERMINATE THE CONTRACT IN SUCH A CASE.
15. THE CONTRACTOR IS RESPONSIBLE FOR ALL PENALTIES AND DELAYS DUE TO NON-COMPLIANCE WITH PERMIT CONDITIONS.
16. ALL STATIONARY HEAVY EQUIPMENT AND PARKING AREAS SHALL BE PROVIDED WITH RIGID CONSTRUCTION MATS WITHIN THE MASS AUDUBON PROPERTY (EXCEPT FOR THE BOSTON COMPOST LOT). ALL TRAVEL PATHS WTIHIN THE MASS AUDUBON PROPERTY SHALL BE PAVED WITH A TEMPORARY LAYER OF CRUSHED STONE, 2" MINIMUM LAYER THICKNESS.

GENERAL SCOPE OF WORK & ANTICIPATED CONSTRUCTION SEQUENCE

THE GENERAL SCOPE OF WORK OF THIS CONTRACT IS TO DREDGE THE ACCESS ROAD CULVERT IN CATNERBURY BROOK PER THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS AND AS SHOWN ON THE FINAL CONDITIONS PLAN. THE INTENT OF THE ANTICIPATED CONSTRUCTION SEQUENCE IS TO PROVIDE GUIDANCE TO THE CONTRACTOR TOWARDS MEETING THE TERMS AND CONDITIONS OF ENVIRONMENTAL PROTECTION PERMITS AND BEST MANAGEMENT PRACTICES (BMP). CERTAIN ASPECTS OF THE ANTICIPATED CONSTRUCTION SEQUENCE MAY BE ALTERED BY THE CONTRACTOR WITH APPROVAL FROM THE OWNER, EXCEPT AS REQUIRED BY PERMIT CONDITIONS AND SPECIFIC INSTRUCTIONS CONTAINED IN THE SPECIFICATIONS. THE FOLLOWING LIST IS NOT COMPREHENSIVE AND DOES NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR EXECUTING ALL REQUIRED WORK AS PER THE CONTRACT PLANS AND SPECIFICATIONS.

1. MOBILIZE TO THE SITE AND DEPLOY TEMPORARY SEDIMENT AND EROSION CONTROLS, INCLUDING PERIMETER EROSION AND SEDIMENT CONTROL BARRIERS, TURBIDITY CURTAINS, AND OTHER BMPS. INSTALL TEMPORARY CONSTRUCTION PERIMETER FENCING, GATE, AND NECESSARY SIGNAGE. INSTALL TREE PROTECTION MEASURES, EXCLUSION FENCING AROUND TREES, WOOD CHIP SURFACING, AND NECESSARY MATTING. NO VEHICLE ACCESS IN AREAS WHERE TREES ARE PRESENT SHALL BE ALLOWED UNTIL ALL TREE AND ROOT PROTECTION MEASURES ARE IN PLACE.
2. NOTIFY SITE OWNER (MASS AUDUBON BOSTON NATURE CENTER), ENGINEER, CONSERVATION COMMISSION, AND OTHER CITY AND STATE AGENCIES BESIDES DCAMM (E.G., BOSTON WATER AND SEWER COMMISSION) AS NECESSARY SCHEDULE AND CONDUCT SITE WALK TO INSPECT SEDIMENT AND EROSION CONTROL AND TREE PROTECTION MEASURES. MODIFY SEDIMENT AND EROSION CONTROL MEASURES AND TREE PROTECTION MEASURES AS REQUIRED. WORK MAY PROCEED ONCE APPROVAL HAS BEEN PROVIDED BY OWNER, ENGINEER, CONSERVATION COMMISSION, AND OTHER CITY AND STATE AGENCIES BESIDES DCAMM (E.G., BOSTON WATER AND SEWER COMMISSION) .
3. CLEAR VINE AND SHRUBS IN AREAS INDICATED ON THE PLANS. ONLY CLEAR SPECIES INDENTIFIED BY OWNER ECOLOGIST. CLEAR ONLY INDICATED TREES. CONTRACTOR TO MINIMIZE TREE CLEARING.REMOVE STUMPS ONLY FROM AREAS WHERE EXCAVATION WILL OCCUR. STRIP TOPSOIL ONLY FROM AREAS WHERE EXCAVATION OR FILL WILL OCCUR.
4. INSTALL WATER CONTROL AND DEWATER AREA OF WORK. MAINTAIN THE DEWATERED AREA IN ACCORDANCE WITH THE APPROVED WATER CONTROL PLAN SUBMITTAL.
5. WORK WITH DEPARTMENT ARCHEOLOGIST TO MAKE EXPLORATORY EXCAVATIONS ON SITE AS DIRECTED BY THE ARCHEOLOGIST AND AS PER THE CONTRACT SPECIFICATIONS.
6. EXCAVATE TO REMOVE SEDIMENT DEPOSIT AS SHOWN ON THE PLANS. DISPOSE OF ACCUMULATED SEDIMENT AT DESIGNATED ON-SITE SOIL MANAGEMENT AREA IN DEWATERING STRUCTURE. ALLOW FREE LIQUID TO DRAIN AND TRANSFER TO FRACTIONATION TANK. LAWFULLY DISPOSE OF SEDIMENT OFF-SITE. LAWFULLY DISPOSE OF CONCRETE RUBBLE AND OTHER DEBRIS OFF-SITE.
7. INSTALL TRASHRACK.
8. GRADE CHANNEL AND BANKS AS SHOWN ON THE PLANS.
9. INSTALL EROSION CONTROL MATTING ALONG CHANNEL BANKS.
10. PLACE LOAM AND PLANT/SEED ALONG CHANNEL BANKS. LOAM AND PLANT/SEED TYPES REQUIRE REVIEW AND APPROVAL FROM THE ENGINEER.
11. DECOMMISSION AND REMOVE TEMPORARY WATER CONTROL SYSTEMS AND TEMPORARY COFFERDAMS.
12. REMOVE REMAINING EQUIPMENT AND MATERIALS FROM SITE. REMOVE MATTING AND WOODCHIP COVERING.
13. REMOVE TREE PROTECTION AND TEMPORARY ACCESS CONTROLS. COMPLETE ALL OTHER SITE RESTORATIONS.
14. NOTIFY OWNER, ENGINEER, AND CONSERVATION COMMISSION OF FINAL STABILIZATION. SCHEDULE AND CONDUCT SITE INSPECTION.
15. MODIFY STABILIZATION MEASURES AS NECESSARY.
16. COMPLETE DEMOBILIZATION.
17. INSPECT, MAINTAIN, AND REPLACE PLANTINGS AND SEEDED AREAS AS NECESSARY THROUGH THE MAINTENANCE PERIOD.

GENERAL SEDIMENT AND EROSION CONTROL

1. CONTROL OF EROSION AND SEDIMENT DISCHARGE IS REQUIRED THROUGHOUT THE DURATION OF THE PROJECT AND UNTIL FINAL STABILIZATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT THE AREAS WITHIN THE LIMITS OF WORK AND BEYOND FROM SEDIMENT AND/OR POLLUTANTS ORIGINATING FROM ANY WORK DONE ON OR IN SUPPORT OF THE PROJECT, INCLUDING SEDIMENT DUE TO EROSION FROM STORMWATER RUNOFF.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES NECESSARY TO EXECUTE AND COMPLETE THE WORK OF THE CONTRACT, IN COMPLIANCE WITH THE TERMS AND CONDITIONS CONTAINED IN THE CONTRACT, PROJECT PERMITS AND ALL STATE AND LOCAL ORDINANCES THAT APPLY. CONTROLS SHOWN ON THE CONTRACT DRAWINGS SHALL BE CONSIDERED MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL EMPLOY WHATEVER SUPPLEMENTARY MEASURES NECESSARY TO PROTECT WETLANDS, WATERS, AND ADJACENT AREAS FROM DISTURBANCE OR DISCHARGE OF SEDIMENTS.
3. THE CONTRACTOR SHALL NOT DISTURB VEGETATED AREAS OUTSIDE OF THE WORK ZONE, EXCEPT TO THE MINIMUM EXTENT NECESSARY FOR ACCESS AND ACCOMPLISHMENT OF THE WORK SHOWN.
4. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT MIGRATION INTO WATER BY SILT, SEDIMENT, FUELS, SOLVENTS, LUBRICANTS, CONCRETE, GROUT, OR ANY OTHER POLLUTANTS ASSOCIATED WITH CONSTRUCTION PROCEDURES.
5. ACTUAL LOCATIONS OF EROSION CONTROLS AND BEST MANAGEMENT PRACTICES (BMPS) MAY VARY DUE TO FIELD CHANGES, ONGOING CONSTRUCTION, ACCESS NEEDS, WEATHER, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING THESE CHANGES AND ADJUSTING EROSION CONTROLS AND BMP LOCATIONS ACCORDINGLY. IN PARTICULAR, THE CONTRACTOR SHALL COORDINATE THE INSTALLATION AND RELOCATION OF BMPS WITH PROJECT PHASING, AS NECESSARY.
6. ALL EROSION CONTROLS AND BMPS SHALL REMAIN IN PLACE, EXCEPT AS OTHERWISE NECESSARY, UNTIL CONSTRUCTION IS COMPLETED AND FINAL STABILIZATION IS ACHIEVED.
7. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING A PROJECT-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PRIOR TO THE START OF CONSTRUCTION. A COPY OF THE SWPPP SHALL BE KEPT ON SITE AT ALL TIMES.
8. EXCAVATED MATERIALS SUSPECTED OF CONTAMINATION SHALL BE STOCKPILED ON SITE FOR EVALUATION BY THE ENGINEER.
9. ADDITIONAL EROSION CONTROL BARRIERS SHALL BE INSTALLED AT THE DIRECTION OF THE ENGINEER TO MINIMIZE THE THREAT OF ADVERSE IMPACT DURING THE CONSTRUCTION PROCESS. AN ADEQUATE SUPPLY OF REPLACEMENT EROSION CONTROL BARRIERS WILL BE AVAILABLE ON-SITE FOR EMERGENCY PURPOSES.
10. SEDIMENT AND EROSION CONTROLS AND BMPS SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION AT THE SITE. NO WORK WHICH SHALL DISTURB THE SITE OR CREATE THE POTENTIAL FOR SEDIMENT RELEASE SHALL COMMENCE UNTIL THE SEDIMENT AND EROSION CONTROLS HAVE BEEN INSPECTED AND APPROVED BY THE OWNER, ENGINEER, AND THE CONSERVATION COMISSION, IF NECESSARY. ALL CONTROLS AND BMPS SHALL BE SUBJECT TO INSPECTION BY THE OWNER AND THEIR REPRESENTATIVE AT ANYTIME THEREAFTER.
11. PERIODIC INSPECTION, MAINTENANCE, AND CLEANING OF TEMPORARY EROSION OF SEDIMENT CONTROL MEASURES AND BMPS ARE REQUIRED. ALL CONTROLS AND BMPS SHALL BE INSPECTED, AT MINIMUM, DAILY DURING ACTIVE CONSTRUCTION. DURING PERIODS WITHOUT ACTIVE CONSTRUCTION, ALL CONTROLS AND BMPS SHALL BE INSPECTED, AT MINIMUM, EVERY 7 DAYS AND WITHIN 24 HOURS OF RAINFALL EVENTS OF 2 INCHES OR GREATER. ROUTINE INSPECTION AND MAINTENANCE WILL REDUCE THE CHANCE OF POLLUTING STORMWATER BY FINDING AND CORRECTING PROBLEMS BEFORE THE NEXT RAIN EVENT. A SITE MAINTENANCE LOG SHALL BE PREPARED AND UPDATED.
12. REPORTING AND RECORD KEEPING: IN ADDITION TO THE AFOREMENTIONED INSPECTION AND MAINTENANCE PROCEDURES, THE CONTRACTOR IS TO KEEP A RECORD OF THE FOLLOWING INFORMATION:
    - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR IN A PARTICULAR AREA;
    - THE DATES WHEN CONSTRUCTION ACTIVITIES CEASE IN AN AREA, TEMPORARILY OR PERMANENTLY;
    - THE DATES WHEN AN AREAS IS STABILIZED, TEMPORARILY OR PERMANENTLY;
    - A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND ALL REPORTS GENERATED DURING CONSTRUCTION ACTIVITIES ARE TO BE RETAINED AS REQUIRED BY REGULATION.
13. SITE CLEARING: PRIOR TO ANY SITE CLEARING ACTIVITIES, SEDIMENT CONTROL BARRIERS SHALL BE INSTALLED AS INDICATED ON THE PLANS. ALONG THE OUTER LIMIT OF DISTURBANCE. DISTURBED AREAS ARE TO BE KEPT TO A MINIMUM. NO CLEARING IS ALLOWED OUTSIDE THE WORK AREA WITHOUT PRIOR APPROVAL FROM THE OWNER.
14. SEDIMENT AND EROSION CONTROL BARRIERS: SEDIMENT/EROSION CONTROL BARRIERS ARE INTENDED TO TRAP SEDIMENT TRANSPORTED BY RUNOFF BEFORE IT REACHES THE DRAINAGE FEATURES, WATERBODIES, OR WETLANDS, IN ADDITION TO AREAS WHERE HIGH RUNOFF VELOCITIES OR HIGH SEDIMENT LOADS ARE EXPECTED. THE SILT FENCES ARE TO BE REPLACED AS NEEDED AS DETERMINED BY PERIODIC FIELD INSPECTIONS.
15. DUST CONTROL.: DUST CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.
16. STAGING AREAS: THE CONTRACTOR MAY ESTABLISH LAYDOWN AND STAGING AREAS IN WHICH TO STORE EQUIPMENT AND MATERIALS ONLY IN THOSE AREAS SPECIFICALLY INDICATED ON THE CONTRACT DRAWINGS OR SPECIFICATIONS OR AS DIRECTED BY THE OWNER. LOCATION OF ADDITIONAL AREAS, IF NEEDED, SHALL BE COORDINATED WITH AND SHALL BE SUBJECT TO APPROVAL BY THE OWNER. STAGING AREAS SHALL BE ENCIRCLED WITH SEDIMENT/EROSION CONTROL BARRIERS. STAGING AREAS SHALL BE ENCIRCLED BY ORANGE PLASTIC TEMPORARY CONSTRUCTION FENCING. AT THE CONTRACTOR'S OPTION, ADDITIONAL OR MORE STURDY BARRIERS MAY BE INCLUDED.
17. STOCKPILED MATERIALS: STOCKPILES OF SOIL IN AREAS CREATED DURING CONSTRUCTION ACTIVITIES ARE TO BE SURROUNDED WITH SEDIMENT/EROSION CONTROL WHERE POSSIBLE. OTHER ALTERNATIVES UTILIZED MAY INCLUDE GRAVEL FILTER BERMS OR SIMILAR MEASURES LAID AROUND THE PERIMETER OF THE STOCKPILE.
18. TEMPORARY STABILIZATION: WHEN NECESSARY, TEMPORARY SLOPE PROTECTION SHALL BE PROVIDED BY INSTALLING SEDIMENT/EROSION CONTROL BARRIERS AT THE TOE OF FILLS OR CUT SLOPES. IF ADDITIONAL STABILIZATION IS NEEDED, THEN THE CONTRACTOR SHALL INSTALL MATTING, SUCH AS STRAW, JUTE, WOOD FIBER, OR BIO OR PHOTO-DEGRADABLE MESH. IN THE EVENT THAT DISTURBED AREAS AT THE SITE ARE TO BE LEFT UN-WORKED FOR MORE THAN TWO WEEKS, THE AREAS SHALL BE MULCHED WITH STRAW AT A RATE OF 100 LBS. PER 1,000 S.F. TO HELP CONTROL EROSION. TWO INCHES OF WOOD CHIP MULCH MAY ALSO BE USED AS TEMPORARY COVER. IN THE EVENT THAT DISTURBED AREAS AT THE SITE ARE TO BE LEFT UN-WORKED FOR MORE THAN ONE MONTH, THE AREAS SHALL BE TOPSOILED AND SEEDED AT NO ADDITIONAL COST TO THE OWNER. LEAVE THE SURFACE OF ALL EXCAVATIONS AND FILLS IN A FIRM AND STABLE CONDITION AT THE END OF EACH DAY. ROLL OR OTHERWISE TREAT THE SURFACE AS NEEDED.
19. SITE RESTORATION: STABILIZATION OF DISTURBED AREAS OR NEW SOIL FILLS SHALL BE IMPLEMENTED WITHIN 14 DAYS AFTER GRADING OR CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. APPROPRIATE VEGETATIVE SOIL STABILIZATION IS TO BE USED TO MINIMIZE EROSION. TEMPORARY AND PERMANENT VEGETATIVE COVER IS TO BE ESTABLISHED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, USING HYDRO-SEEDING, BROADCASTING, OR OTHER APPROVED TECHNIQUES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF PREVIOUSLY VEGETATED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES. UNLESS OTHERWISE SHOWN ON DRAWINGS, RESTORATION SHALL CONSIST OF REPLACEMENT OF TOPSOIL OR PLACEMENT OF IMPORTED LOAM AS NEEDED SUCH THAT A MINIMUM OF 6 INCHES OF SUITABLE MATERIAL IS PRESENT AND APPROPRIATELY, LIMED, FERTILIZED, GRADED, AND SCARIFIED. WHERE NOT OTHERWISE SPECIFIED, DISTURBED UPLAND AREAS SHALL BE SEEDED WITH AN APPROVED SEED MIX AND AT A RATE SHOWN ON THE PROJECT PLANS AND SPECIFICATIONS. SEEDING RATE SHALL BE DOUBLED FOR DORMANT SEEDING.
    RESTORED AREAS SHALL BE ROLLED AND THEN APPROPRIATELY MULCHED WITH WOOD CHIPS.
20. FINAL STABILIZATION SHALL BE CONSIDERED COMPLETE WHEN ALL SOIL-DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY PERCENT HAS BEEN ESTABLISHED OR EQUIVALENT STABILIZATION MEASURES (SUCH AS THE USE OF MULCHES OR EROSION CONTROL MATTING) HAVE BEEN EMPLOYED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL VEGETATED SURFACES AND PLANTINGS, INCLUDING WATERING, FERTILIZING, AND RE-SEEDING UNTIL ESTABLISHMENT CONDITIONS ARE MET AND UNTIL THE END OF THE CONTRACTUAL MAINTENANCE PERIOD.
22. ALL SLOPES WITHIN THE PROJECT LIMITS WILL BE STABILIZED WITHIN 2 WEEKS OF THE FINAL GRADING. AREAS FAILING TO BE STABILIZED SHALL BE RE-GRADED AND CONTINUED TO BE STABILIZED AS NEEDED.

WATER CONTROL NOTES

1. TEMPORARY WATER CONTROL BY THE CONTRACTOR SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 01565 OF THE SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY WATER CONTROL, SURFACE WATER AND GROUNDWATER, NECESSARY TO EXECUTE AND COMPLETE THE WORK OF THE CONTRACT, SUBJECT TO THE RESTRICTIONS CONTAINED IN THE CONTRACT AND PROJECT PERMITS. CONTROLS SHOWN IN THE CONTRACT DRAWINGS AND MENTIONED IN THE TECHNICAL SPECIFICATIONS SHALL BE CONSIDERED MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL EMPLOY WHATEVER SUPPLEMENTARY MEASURES NECESSARY TO PROTECT THE SITE AND THE WORKS.
3. ALL TEMPORARY WATER CONTROL MEASURES SHALL BE IMPLEMENTED IN CONJUNCTION WITH APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES SO AS TO MITIGATE TO THE GREATEST EXTENT POSSIBLE RELEASE OF SEDIMENT INTO WATER BODIES AND POTENTIAL EROSION OF SOIL.
4. THE CONTRACTOR IS HEREBY NOTIFIED ADHERENCE TO THE WATER CONTROL CONDITIONS AND LIMITATIONS AND USE OF BEST MANAGEMENT PRACTICES IS CRITICAL TO PREVENT POSSIBLE IMPACTS TO SENSITIVE ENVIRONMENTAL AREAS.
5. THE WATER LEVEL IN THE BROOK TYPICALLY FLUCTUATES IN RESPONSE TO CLIMATE CONDITIONS.
6. THE CONTRACTOR SHALL USE PUMPS, SIPHONS, OR OTHER MEANS TO MAINTAIN A MINIMUM DISCHARGE 25 GALLONS PER MINUTE OF WATER INTO THE DOWNSTREAM CHANNEL. DISCHARGE WATER SHALL MEET APPROPRIATE WATER QUALITY STANDARDS. MINIMUM DISCHARGE BYPASS FLOWS SHALL BE WITHDRAWN DIRECTLY FROM THE RIVER UPSTREAM OF THE UPSTREAM TEMPORARY COFFERDAM.
7. ANY TEMPORARY PUMPS UTILIZED AT THE SITE MUST BE PROPERLY BAFFLED AGAINST EXCESSIVE NOISE. PUMPS OR GENERATORS WHICH UTILIZE LIQUID FUEL MUST BE PLACED WITHIN AN IMPERMEABLE SECONDARY CONTAINMENT AREA WITH SUFFICIENT CAPACITY TO CONTAIN THE FULL VOLUME OF THE FUEL TANK.
8. PUMP OR SIPHON INTAKES SHALL BE PLACED SUCH THAT SEDIMENT AND DEBRIS ENTRAINMENT IS MINIMIZED.
9. WATER PUMPED FROM EXCAVATIONS MUST BE PASSED THROUGH A SEDIMENTATION TANK OR OTHER SUCH BEST MANAGEMENT PRACTICE (BMP) FEATURE PRIOR TO BEING DISCHARGED BACK TO A SURFACE WATER BODY. DISCHARGE WATER SHALL MEET APPROPRIATE WATER QUALITY STANDARDS.
10. THE DISCHARGE AREA FOR THE PUMP OR SIPHON OUTLET MUST BE PROPERLY PROTECTED TO PREVENT EROSION BY HIGH VELOCITY FLOW.
11. WATER CONTROL DURING CONSTRUCTION SHALL REQUIRE THE CONTRACTOR TO DEWATER THE REACH OF RIVER OUTLINED IN THE PLANS. THE RIVER REACH SHALL REMAIN DEWATERED TO ALLOW FOR COMPLETION OF THE WORK. DEWATERING MEANS AND METHODS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR SUBJECT TO THE APPROVED WATER CONTROL PLAN.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND SUBMISSION OF A CONSTRUCTION-PHASE FLOOD CONTROL / EMERGENCY RESPONSE PLAN.
13. THE CONTRACTOR IS SPECIFICALLY RESPONSIBLE FOR TEMPORARY GROUNDWATER CONTROL DURING CONSTRUCTION. THE CONTRACTOR'S SURFACE AND GROUNDWATER CONTROL SYSTEMS SHALL BE COMPATIBLE. THE CONTRACTOR IS SPECIFICALLY NOTIFIED THAT SEEPAGE FROM GENERAL GROUNDWATER, MUST BE EXPECTED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SIZING AND OPERATION OF THE TEMPORARY GROUNDWATER CONTROL SYSTEM TO PROVIDE FOR APPROPRIATE CONDITIONS FOR CONSTRUCTION AND TO MEET ALL PERMIT OBLIGATIONS.

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NOT FOR CONSTRUCTION

NO.	ISSUE/DESCRIPTION	BY	DATE

COMMONWEALTH OF MASSACHUSETTS
MATTHEW D. SMITH
No. 41356
REGISTERED PROFESSIONAL ENGINEER
APPROVED:

CANTERBURY BROOK AT MYERSON ACCESS
ROAD SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

GENERAL NOTES

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE

PROJ MGR: KKD	REVIEWED BY: KKD	CHECKED BY: JAC	DRAWING 2
DESIGNED BY: AMD	DRAWN BY: AMD	SCALE: AS NOTED	
DATE: JANUARY 2021	PROJECT NO. 01.00174917.00	REVISION NO.	SHEET NO. 2 OF 8

ABUTTERS MAP

REF.	PARCEL ID.	OWNER
1	1405198400	CITY OF BOSTON
2	140598200	MASS AUDUBON SOCIETY
3	140598250	MASS AUDUBON SOCIETY
4	140598300	MASS AUDUBON SOCIETY
5	140598175	WORCESTER CITY CAMPUS CORP
6	1405198410	COMMONWEALTH OF MASS
7	1405198500	OG WEST CAMPUS LAND LLC
8	1405198900	SECOND OLMSTED GREEN CONDOMINIUM TRUST
9	1405198600	GEORGIADIS PANOS
10	1405198800	LENA NEW BOSTON LLC
11	1405198020	MASS AUDUBON SOCIETY
12	1405198030	MASS WATER RESOURCES AUTHORITY

GENERAL NOTES

1. THIS PLAN WAS DEVELOPED FROM ELECTRONIC FILES PROVIDED BY DIPRETE ENGINEERING ENTITLED "TOPOGRAPHIC SURVEY - CANTERBURY BROOK" DATED DECEMBER 11 2020, ORIGINAL SCALE 1" = 50'.
2. SURVEY COMPLETED ON THE GROUND BY DIPRETE ENGINEERING ON AUGUST 24, OCTOBER 2, AND DECEMBER 10 2020.
3. ALL PROJECT WORK AREAS ARE WITHIN THE 25 FOOT RIVERFRONT AREA, 100 FOOT BUFFER TO BVW AND 100 FOOT BUFFER TO BANK.
4. WETLAND DELINEATION PERFORMED BY ANTHONY DAMIANO OF GZAGEOENVIRONMENTAL, INC. ON DECEMBER 18, 2020.
5. DEP WETLANDS WERE DOWNLOADED FROM MASSGIS IN DECEMBER 2020.
6. LOCATIONS OF TREES OF 6 IN DIAMETER AT BREAST HEIGHT (DBH) WERE APPROXIMATED AND DO NOT REPRESENT GPS LOCATED FEATURES.
7. ALL ELEVATIONS REPRESENTED ARE IN NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
8. PROPERTY LINE INFORMATION, PARCEL DATA, AND THE LOCATION OF CANTERBURY BROOK WERE DOWNLOADED FROM MASSGIS IN DECEMBER 2020.

LEGEND

- PROPERTY LINE
- A1 A2 BORDERING VEGETATED WETLAND
- A1 A2 BANK
- CANTERBURY BROOK
- 40 EXISTING GROUND CONTOURS
- 100' BANK BUFFER
- 100' BVW BUFFER
- 25' RIVER FRONT AREA LIMIT
- DEP WETLANDS
- TREE WITH DBH 6IN. OR GREATER

N

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0 10 20 40
SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
MATTHEW M. SMITH
CIVIL
No. 41356
REGISTERED
PROFESSIONAL ENGINEER

NO.	ISSUE/DESCRIPTION	BY	DATE

CANTERBURY BROOK AT MYERSON ACCESS ROAD
SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

EXISTING CONDTIONS

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE

PROJ MGR: KKO	REVIEWED BY: KKD	CHECKED BY: JAC	DRAWING 3
DESIGNED BY: AMD	DRAWN BY: CMC	SCALE: AS NOTED	
DATE: JANUARY 2021	PROJECT NO. 01.00174917.00	REVISION NO.	SHEET NO. 3 OF 8

GENERAL NOTES

1. THIS PLAN WAS DEVELOPED FROM ELECTRONIC FILES PROVIDED BY DIPRETE ENGINEERING ENTITLED "TOPOGRAPHIC SURVEY - CANTERBURY BROOK" DATED DECEMBER 11 2020, ORIGINAL SCALE 1" = 50'.
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7. PROPERTY LINE INFORMATION, PARCEL DATA, AND THE LOCATION OF CANTERBURY BROOK WERE DOWNLOADED FROM MASSGIS IN DECEMBER 2020.
8. FOR INFORMATION ON ABUTTING PROPERTIES SEE THE ABUTTERS MAP ON DRAWING 3.

LEGEND

- PROPERTY LINE
- BORDERING VEGETATED WETLAND
- BANK
- CANTERBURY BROOK
- EXISTING GROUND CONTOURS
- LIMIT OF WORK
- 100' BANK BUFFER
- 100' BVW BUFFER
- 25' RIVER FRONT AREA LIMIT
- TEMPORARY COMPOST FILTER SOCK EROSION CONTROL
- EROSION CONTROL MATTING OVER 6" OF LOAM AND SEED
- TREE WITH DBH 6IN. OR GREATER

0 10 20 40
SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE

CANTERBURY BROOK AT MYERSON ACCESS ROAD SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

STAGING ACCESS AND EROSION CONTROL PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE

PROJ MGR: KKD	REVIEWED BY: KKD	CHECKED BY: JAC	DRAWING
DESIGNED BY: AMD	DRAWN BY: CMC	SCALE: AS NOTED	4
DATE: JANUARY 2021	PROJECT NO. 01.00174917.00	REVISION NO.	SHEET NO. 4 OF 8

GENERAL NOTES

1. THIS PLAN WAS DEVELOPED FROM ELECTRONIC FILES PROVIDED BY DIPRETE ENGINEERING ENTITLED "TOPOGRAPHIC SURVEY - CANTERBURY BROOK" DATED DECEMBER 11 2020, ORIGINAL SCALE 1" = 50'.
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8. FOR INFORMATION ON ABUTTING PROPERTIES SEE THE ABUTTERS MAP ON DRAWING 3.

LEGEND

- PROPERTY LINE
- A1 A2 BORDERING VEGETATED WETLAND
- A1 A2 BANK
- CANTERBURY BROOK
- 100' BANK BUFFER
- 100' BVW BUFFER
- 25' RIVER FRONT AREA LIMIT
- -40- FINISHED GRADE CONTOURS
- UPLAND RESTORATION AREA (SEEDED USING CONSERVATION SEED MIX)
- WETLAND RESTORATION AREA - BVW (SEEDED USING NATIVE WETLAND MIX)

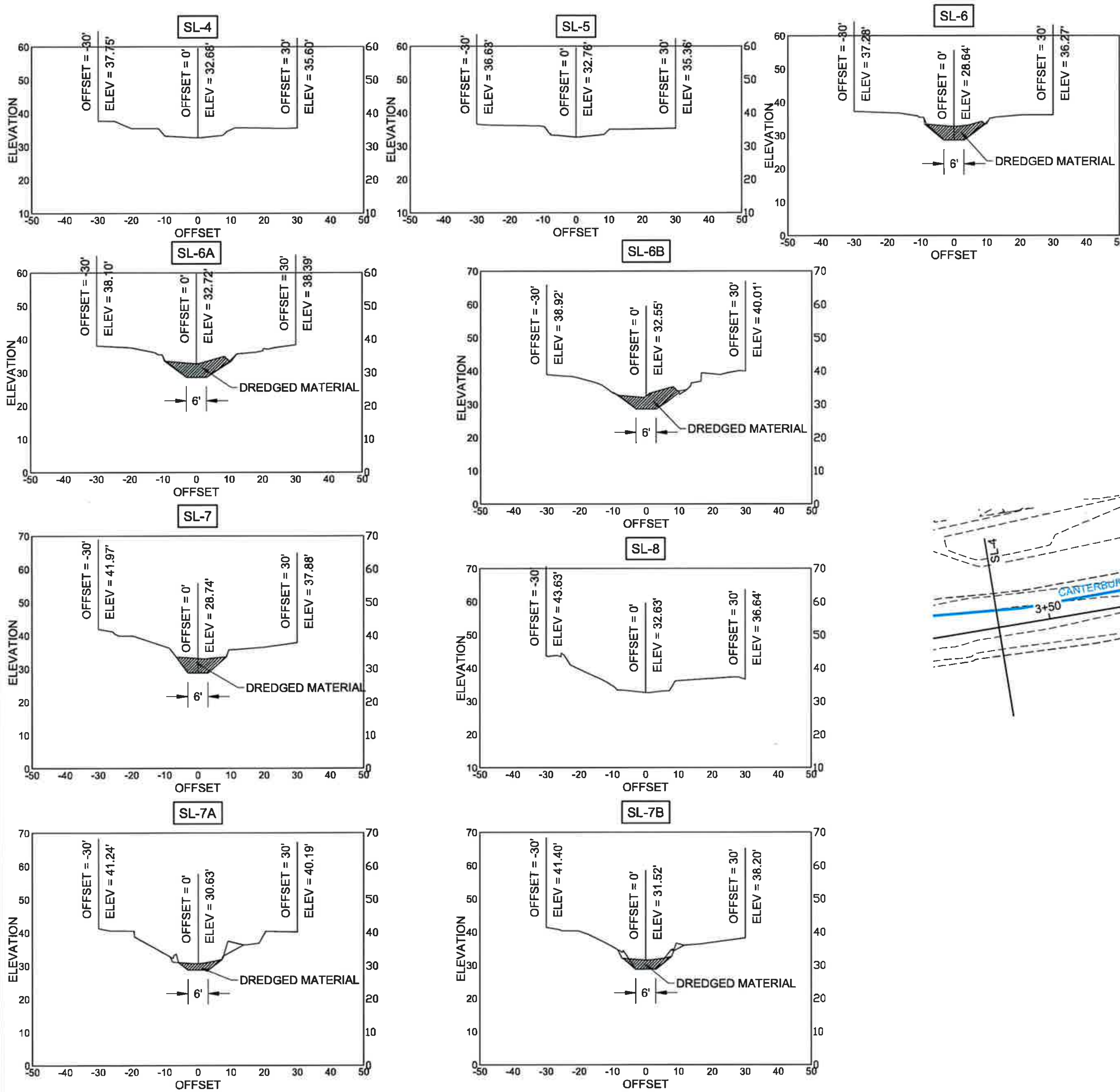
NO.	ISSUE/DESCRIPTION	BY	DATE

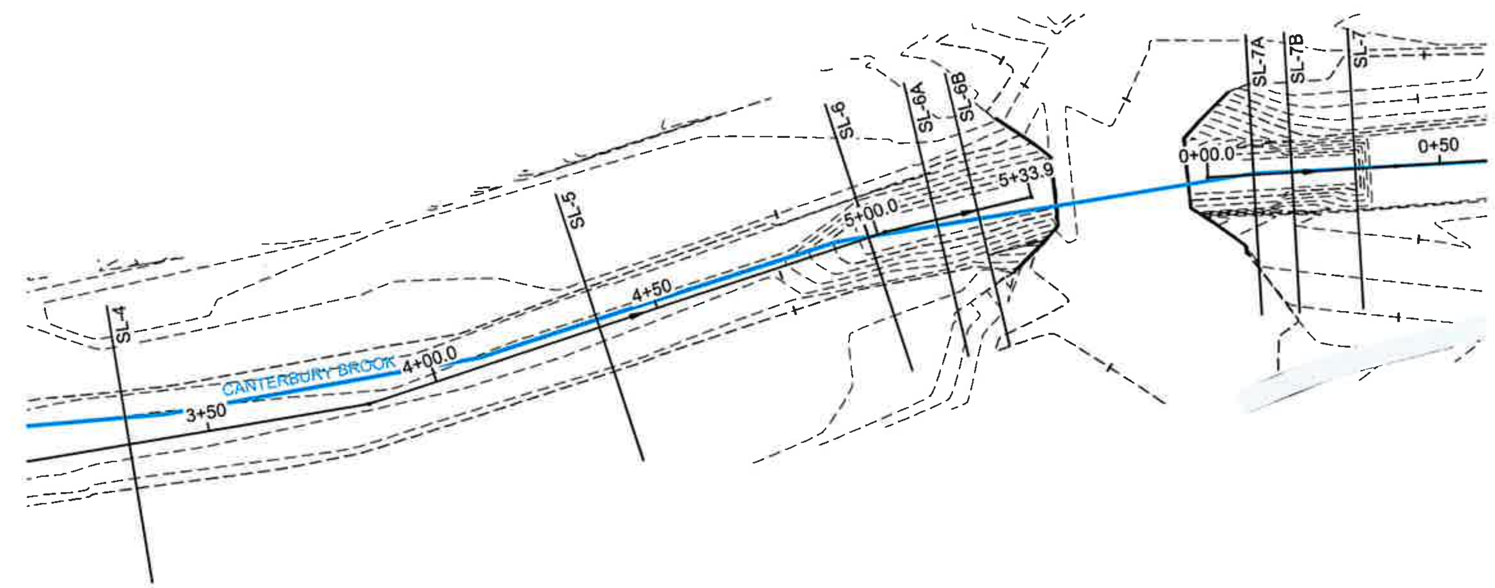
COMMONWEALTH OF MASSACHUSETTS
MATTHEW M. SMITH
CIVIL
No. 41358
REGISTERED PROFESSIONAL ENGINEER

CANTERBURY BROOK AT MYERSON ACCESS ROAD
SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

FINAL CONDITIONS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE	
PROJ MGR: KKD	REVIEWED BY: KKD	CHECKED BY: JAC	DRAWING 5
DESIGNED BY: AMD	DRAWN BY: CMC	SCALE: AS NOTED	
DATE: JANUARY 2021	PROJECT NO. 01.00174917.00	REVISION NO.	SHEET NO. 5 OF 8





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NO.	ISSUE/DESCRIPTION	BY	DATE

CANTERBURY BROOK AT MYERSON ACCESS ROAD
SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

CULVERT CROSS SECTIONS AND DETAILS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

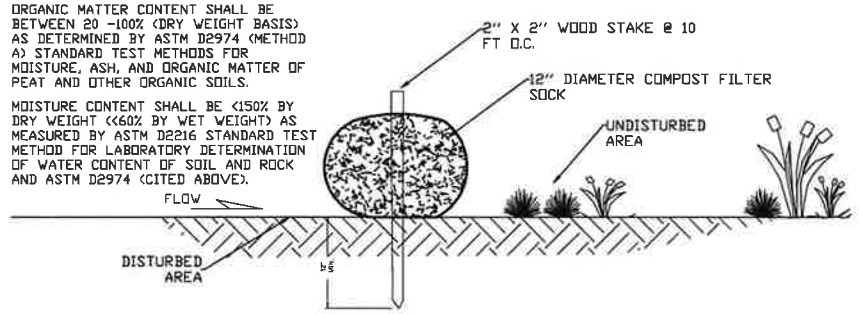
PREPARED FOR: MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE

PROJ MGR: KKD	REVIEWED BY: KKD	CHECKED BY: JAC	DRAWING 6
DESIGNED BY: AMD	DRAWN BY: CMC	SCALE: AS NOTED	
DATE: JANUARY 2021	PROJECT NO. 01.00174917.00	REVISION NO.	SHEET NO. 6 OF 8

COMMONWEALTH OF MASSACHUSETTS MATTHEW M. SMITH CIVIL No. 51356 REGISTERED PROFESSIONAL ENGINEER

NOTES:

1. FILTER SOCK SHALL BE MADE OF 100% ORGANIC HESSIAN FABRIC (BURLAP) OR BIO-DEGRADABLE 5 MIL HDPE (NO LONGER THAN 6 MONTHS). REPLACEMENT NEEDED AFTER 6 MONTHS.
2. ORGANIC MATTER CONTENT SHALL BE BETWEEN 20 -100% (DRY WEIGHT BASIS) AS DETERMINED BY ASTM D2974 (METHOD A) STANDARD TEST METHODS FOR MOISTURE, ASH, AND ORGANIC MATTER OF PEAT AND OTHER ORGANIC SOILS.
3. MOISTURE CONTENT SHALL BE <150% BY DRY WEIGHT (<60% BY WET WEIGHT) AS MEASURED BY ASTM D2216 STANDARD TEST METHOD FOR LABORATORY DETERMINATION OF WATER CONTENT OF SOIL AND ROCK AND ASTM D2974 (CITED ABOVE).



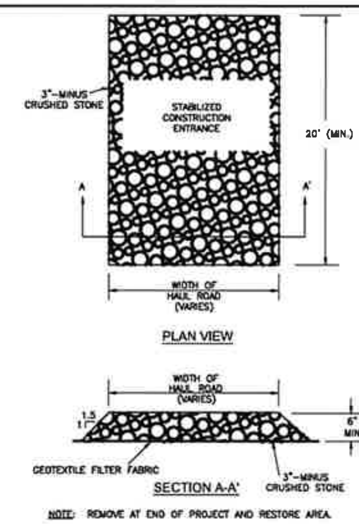
4. PARTICLE SIZE IS MEASURED BY SIEVING SHALL BE AS FOLLOWS:

SIEVE SIZE	% PASSING
75MM	100%
19MM	70-100%
#4	30- 75%
#20	20-40%

NO PARTICLE MAY BE LONGER THAN 150MM

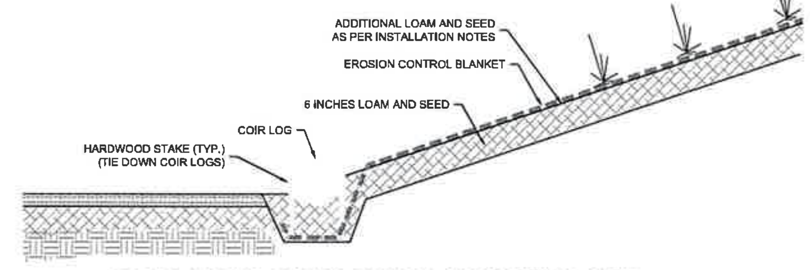
5. SOLUBLE SALTS SHALL BE <5.0 MMHOS/CM (DS/M).
6. THE PH SHALL BE BETWEEN 5.5 AND 8.0.
7. FILTER SOCKS MUST BE PLACED PARALLEL TO CONTOUR WITH BOTH ENDS OF THE SOCK EXTENDED UPSLOPE AT A 45 DEGREE ANGLE TO THE REST OF THE SOCK TO PREVENT END-AROUNDS.
8. THE CONTRACTOR SHALL MAINTAIN THE FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES, INCLUDING INSPECTIONS AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
9. FOR REMOVAL, THE CONTRACTOR SHALL RAKE OUT SO THAT FILTER MATERIAL IS NO GREATER THAN 3" IN DEPTH ON SOIL SUBSTRATE.

COMPOST FILTER SOCK DETAIL
NOT TO SCALE



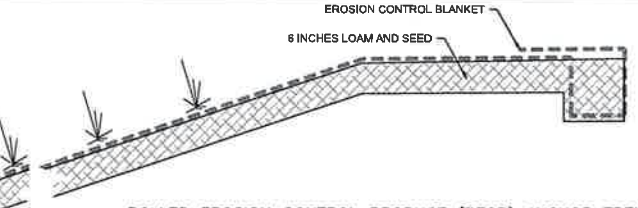
NOTE: REMOVE AT END OF PROJECT AND RESTORE AREA.

STABILIZED CONSTRUCTION ENTRANCE (TYPICAL)
NOT TO SCALE

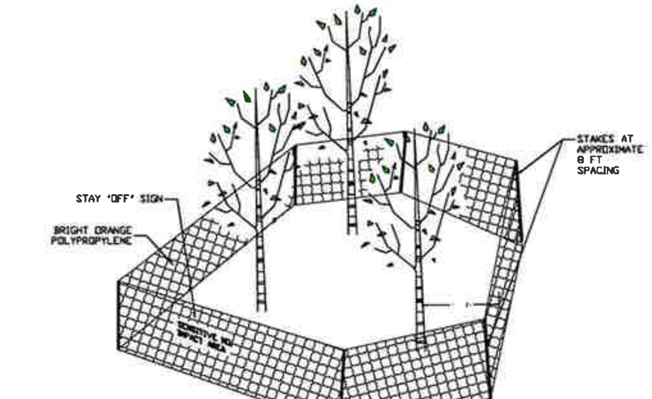


ROLLED EROSION CONTROL PRODUCT (RECP) TRENCH DETAIL (TYP.)
NOT TO SCALE

NOTES:
1) EROSION CONTROL BLANKET FOR RIGHT BANK AT BREACH LOCATION AND FOR SEDIMENT STABILIZATION AREA ON LEFT (EAST) BANK.

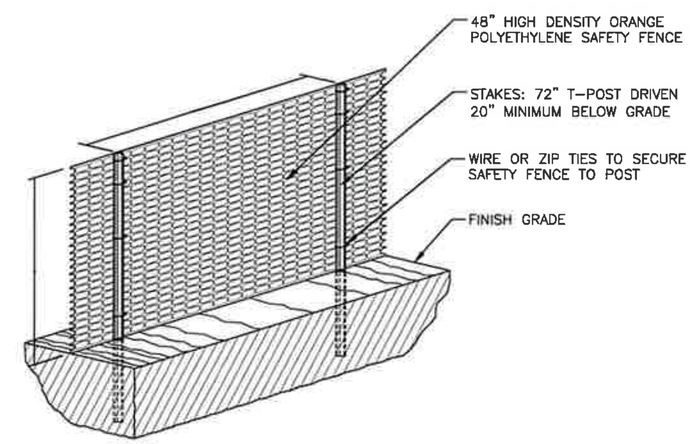


ROLLED EROSION CONTROL PRODUCT (RECP) ANCHOR TRENCH DETAIL AT TOP OF SLOPE (TYP.)
NOT TO SCALE



ORANGE SAFETY FENCE DETAIL
NOT TO SCALE

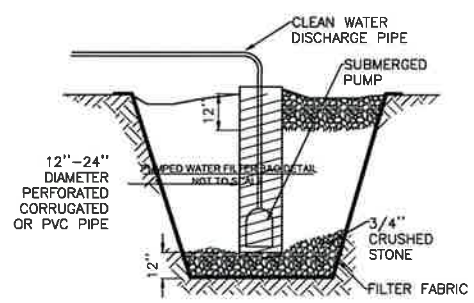
TREE PROTECTION FENCE DETAIL (TYPICAL)
NOT TO SCALE



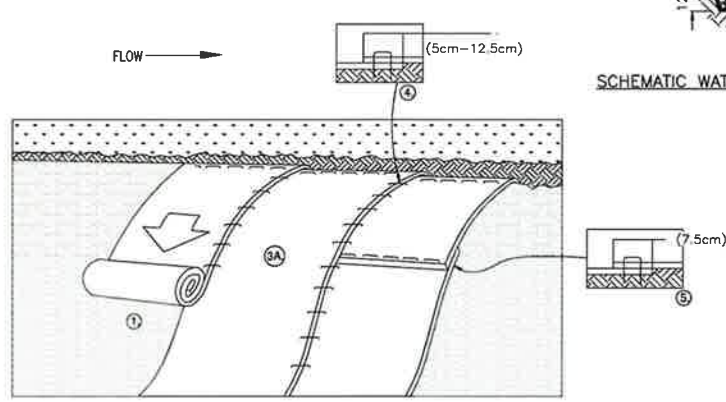
NOTES:

1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. ALL TREES IN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED AND PROTECTED WITH HIGH VISIBILITY FENCE AS PER PLAN.
3. WHEN PRACTICABLE, INSTALL HIGH VISIBILITY 3 FEET OUTSIDE OF THE DRIP LINE OF THE TREE.
4. SAFETY FENCE SHOULD BE FASTENED SECURELY TO THE T-POSTS.
5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

TEMPORARY SAFETY FENCE DETAIL (TYP.)
NOT TO SCALE



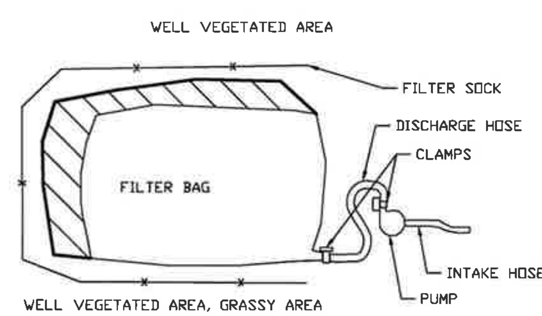
SCHEMATIC WATER CONTROL SUMP PIT DETAIL
NOT TO SCALE



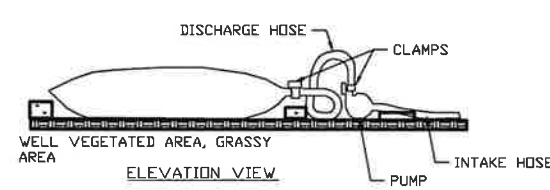
NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCT (RECP) (I.E. EORSION CONTROL BLANKET) INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 12" (30 CM) DEEP X 12" (30 CM) WIDE TRENCH WITH APPROXIMATELY 18" (45cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 18" (45 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's DOWN THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. RECP's SHOULD BE INSTALLED DOWNSTREAM FIRST AND PROGRESS UPSTREAM SO PARALLEL EDGES OF RECP's OVERLAP CREATING A SHINGLE-TYPE ARRANGEMENT (SO WATER MAY FLOW OVER THE MATERIAL WITHOUT UNDERMINING IT). THE EDGES OF OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
6. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.
7. AFTER EROSION CONTROL BLANKET HAS BEEN INSTALLED WORK AN ADDITIONAL THIN LAYER (3" TO 4") OF TOPSOIL INTO THE MATRIX FOLLOWED BY OVERSEEDING AND WATERING TO PROMOTE HEALTHY VEGETATIVE GROWTH.

ROLLED EROSION CONTROL PRODUCT (RECP) INSTALLATION
NOT TO SCALE



PLAN VIEW

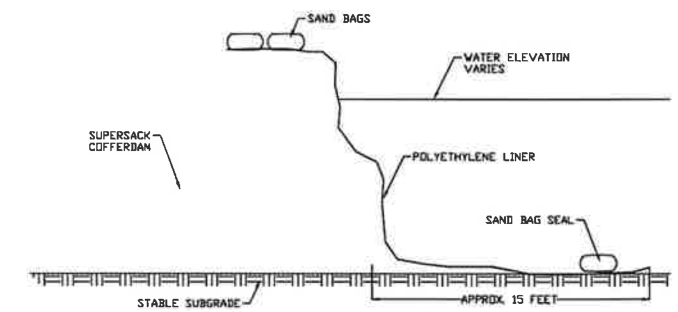


ELEVATION VIEW

PUMPED WATER FILTER BAG NOTES:

1. CONTRACTOR SHALL LOCATE FILTER BAG TO COMPLY WITH REQUIREMENTS BELOW. LOCATION IS SUBJECT TO APPROVAL BY THE ENGINEER.
2. FILTER BAGS SHALL BE USED TO FILTER WATER PUMPED FROM DISTURBED AREAS PRIOR TO DISCHARGING.
3. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. CONTRACTOR SHALL PROVIDE A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY (FOR DISPOSAL PURPOSES).
4. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL OF SEDIMENT.
5. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
6. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, SURROUNDED BY FILTER SOCK AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
7. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
8. THE PUMPING RATE SHALL BE NO GREATER THAN 100 GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
9. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAG DETAIL
NOT TO SCALE



NOTES:
1. THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MASSACHUSETTS TO DESIGN AND STAMP THE TEMPORARY COFFERDAM PROPOSED FOR USE IN THE WORK, AT NO ADDITIONAL COST TO THE OWNER.

SUPERSACK DETAIL
NOT TO SCALE

PERMITTING ONLY
NOT FOR CONSTRUCTION

NO.	ISSUE/DESCRIPTION	BY	DATE

CANTERBURY BROOK AT MYERSON ACCESS ROAD
SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

EROSION AND WATER CONTROL DETAILS

COMMONWEALTH OF MASSACHUSETTS
MATTHEW M. SMITH
CIVIL
No. 41356
REGISTERED PROFESSIONAL ENGINEER

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE

PROJ MGR: KKD	REVIEWED BY: KKD	CHECKED BY: JAC	DRAWING 7
DESIGNED BY: AMD	DRAWN BY: CMC	SCALE: AS NOTED	
DATE: JANUARY 2021	PROJECT NO. 01.00174917.00	REVISION NO.	SHEET NO. 7 OF 8

Wetland Resource Impacts

Resource	Units	Temporary	Permanent
Land Under Water and Waterbodies (LUWW)	SF	266	1,317
Bordering Vegetated Wetlands (BVW)	SF	4,176	0
Bordering Vegetated Wetlands Buffer (BVWB)	SF	16,348	0
Riverfront Area	SF	6,150	0
Bank	LF	202	0
Waterfront Area	SF	5,809	0

Wetland Resource Impacts-Removal of Vegetative Obstruction

Resource	Units	Temporary	Permanent
Land Under Water and Waterbodies (LUWW)	SF	150	0
Bordering Vegetated Wetlands (BVW)	SF	400	0
Bordering Vegetated Wetlands Buffer (BVWB)	SF	0	0
Riverfront Area	SF	400	0
Bank	LF	40	0
Waterfront Area	SF	0	0

GENERAL NOTES

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5. LOCATIONS OF TREES OF 6 IN DIAMETER AT BREAST HEIGHT (DBH) WERE APPROXIMATED AND DO NOT REPRESENT GPS LOCATED FEATURES.
6. ALL ELEVATIONS REPRESENTED ARE IN NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
7. PROPERTY LINE INFORMATION, PARCEL DATA, AND THE LOCATION OF CANTERBURY BROOK WERE DOWNLOADED FROM MASSGIS IN DECEMBER 2020.
8. FOR INFORMATION ON ABUTTING PROPERTIES SEE THE ABUTTERS MAP ON DRAWING 3.

LEGEND

- PROPERTY LINE
- A1 A2 BORDERING VEGETATED WETLAND
- A1 A2 BANK
- CANTERBURY BROOK
- 40 FINISHED GRADE CONTOURS
- LIMIT OF WORK
- 25' RIVER FRONT AREA LIMIT
- 100' BANK BUFFER
- 100' BVW BUFFER
- 50' WATERFRONT AREA LIMIT
- AREA OF PERMANENT IMPACT (LUWW)
- AREA OF TEMPORARY IMPACT (LUWW)
- TREE WITH DBH 6IN, OR GREATER

PERMITTING ONLY
NOT FOR CONSTRUCTION

0 10 20 40
SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE

CANTERBURY BROOK AT MYERSON ACCESS ROAD
SEDIMENT REMOVAL PROJECT
MATTAPAN, MASSACHUSETTS

RESOURCE ALTERATION SUMMARY PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: MASSACHUSESTTS DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE

COMMONWEALTH OF MASSACHUSETTS MATTHEW M. SMITH CIVIL No. 41358 REGISTERED PROFESSIONAL ENGINEER

PROJ MGR: KKD	REVIEWED BY: KKD	CHECKED BY: JAC	DRAWING 8
DESIGNED BY: AMD	DRAWN BY: CMC	SCALE: AS NOTED	
DATE: JANUARY 2021	PROJECT NO. 01.00174917.00	REVISION NO.	SHEET NO. 8 OF 8

Appendix D – Abutter Notifications

Canterbury Brook Culvert Sediment Removal Project
City of Boston
Abutter List
Boston, Massachusetts

Wetland Scientist
GZA GeoEnvironmental, Inc.
Attn: Anthony Damiano
249 Vanderbilt Ave
Norwood, MA 02062

Applicant/Owner
Division of Capital Asset
Management and Maintenance
1 Ashburton Pl
Boston, MA 02108

DEP Regional Office
Headquarters Boston Office
1 Winter Street
Boston, MA 02108

Owner
Parcel: 1405198010
Mass Audubon Society
450 Walk Hill Street
Dorchester, MA 02124

Parcel: 1405199002
Commonwealth of Massachusetts
450 Canterbury Street
Roslindale, MA 02131

Parcel: 1405200000
Commonwealth of Massachusetts
430 Canterbur Street
Roslindale, MA 02132

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

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

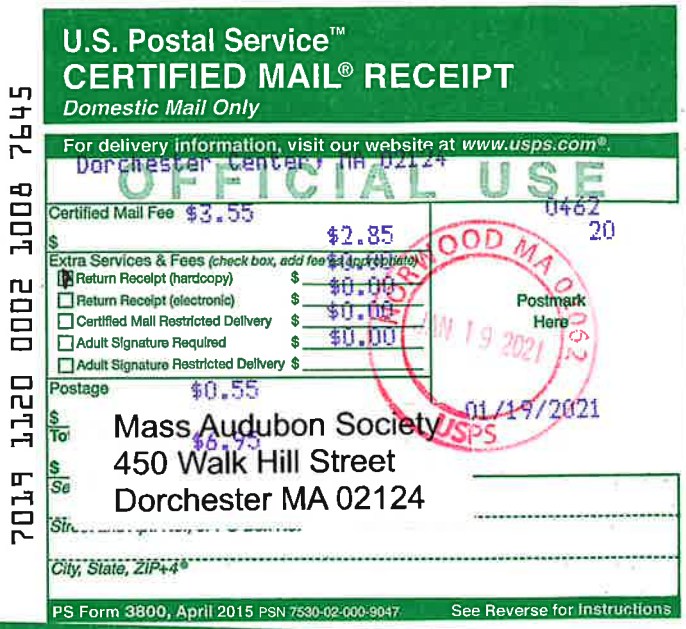
I**,** Anthony Damiano, hereby certify under the pains and penalties of perjury that on January 20, 2021, I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by the Division of Capital Asset Management and Maintenance with the City of Boston Conservation Commission on January 20, 2021, for property located at 438 American Legion Highway for removal of sediment and debris from Canterbury Brook at the Myerson Access Road culvert crossing, found adjacent to the City Soil composting facility. parking lot.

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

Anthony Damiano 1.20.2021

Name Date



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01/19/2021
USPS

Mass Audubon Society
450 Walk Hill Street
Dorchester MA 02124

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 1120 0002 1008 7645

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☐ Certified Mail Restricted Delivery $0.00
☐ Adult Signature Required
☐ Adult Signature Restricted Delivery $
Postage $0.55
Total Postage and Fees $6.95

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01/19/2021
USPS

Commonwealth of Massachusetts
430 Canterbury Street
Roslindale MA 02131

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Postage $0.55
Total Postage and Fees $6.95

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01/19/2021
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Commonwealth of Massachusetts
450 Canterbury Street
Roslindale MA 02131

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 1120 0002 1008 7652

BABEL NOTICE

English:

IMPORTANT! This document or application contains **important information** about your rights, responsibilities and/or benefits. It is crucial that you understand the information in this document and/or application, and we will provide the information in your preferred language at no cost to you. If you need them, please contact us at cc@boston.gov or 617-635-3850.

Spanish:

¡IMPORTANTE! Este documento o solicitud contiene **información importante** sobre sus derechos, responsabilidades y/o beneficios. Es fundamental que usted entienda la información contenida en este documento y/o solicitud, y le proporcionaremos la información en su idioma preferido sin costo alguno para usted. Si los necesita, póngase en contacto con nosotros en el correo electrónico cc@boston.gov o llamando al 617-635-3850.

Haitian Creole:

AVI ENPÒTAN! Dokiman oubyen aplikasyon sa genyen **enfòmasyon ki enpòtan** konsènan dwa, responsablite, ak/oswa benefis ou yo. Li enpòtan ke ou konprann enfòmasyon ki nan dokiman ak/oubyen aplikasyon sa, e n ap bay enfòmasyon an nan lang ou prefere a, san ou pa peye anyen. Si w bezwen yo, tanpri kontakte nou nan cc@boston.gov oswa 617-635-3850.

Traditional Chinese:

非常重要！這份文件或是申請表格包含關於您的權利，責任，和／或福利的重要信息。請您務必完全理解這份文件或申請表格的全部信息，這對我們來說十分重要。我們會免費給您提供翻譯服務。如果您有需要請聯系我們的郵箱 cc@boston.gov 電話# 617-635-3850..

Vietnamese:

QUAN TRỌNG! Tài liệu hoặc đơn yêu cầu này chứa **thông tin quan trọng** về các quyền, trách nhiệm và/hoặc lợi ích của bạn. Việc bạn hiểu rõ thông tin trong tài liệu và/hoặc đơn yêu cầu này rất quan trọng, và chúng tôi sẽ cung cấp thông tin bằng ngôn ngữ bạn muốn mà không tính phí. Nếu quý vị cần những dịch vụ này, vui lòng liên lạc với chúng tôi theo địa chỉ cc@boston.gov hoặc số điện thoại 617-635-3850.

Simplified Chinese:

非常重要！这份文件或是申请表格包含关于您的权利，责任，和／或福利的重要信息。请您务必完全理解这份文件或申请表格的全部信息，这对我们来说十分重要。我们会免费给您提供翻译服务。如果您有需要请联系我们的邮箱 cc@boston.gov 电话# 617-635-3850.

CITY of BOSTON

Cape Verdean Creole:

INPURTANTI! Es dukumentu ó aplikason ten **informason inpurtanti** sobri bu direitus, rasponsabilidadis i/ó benefísius. Ê krusial ki bu intendi informason na es dukumentu i/ó aplikason ó nu ta da informason na língua di bu preferênsia sen ninhun kustu pa bó. Si bu prisiza del, kontata-nu na cc@boston.gov ó 617-635-3850.

Arabic:

مهم! يحتوي هذا المستند أو التطبيق على معلومات مهمة حول حقوقك ومسؤولياتك أو فوائدك. من الأهمية أن تفهم المعلومات الواردة في هذا المستند أو التطبيق. سوف نقدم المعلومات بلغتك المفضلة دون أي تكلفة عليك. إذا كنت في حاجة إليها، يرجى الاتصال بنا على cc@boston.gov أو 617-635-3850.

Russian:

ВАЖНО! В этом документе или заявлении содержится **важная информация** о ваших правах, обязанностях и/или льготах. Для нас очень важно, чтобы вы понимали приведенную в этом документе и/или заявлении информацию, и мы готовы бесплатно предоставить вам информацию на предпочитаемом вами языке. Если Вам они нужны, просьба связаться с нами по адресу электронной почты cc@boston.gov, либо по телефону 617-635-3850.

Portuguese:

IMPORTANTE! Este documento ou aplicativo contém **Informações importantes** sobre os seus direitos, responsabilidades e/ou benefícios. É importante que você compreenda as informações contidas neste documento e/ou aplicativo, e nós iremos fornecer as informações em seu idioma de preferência sem nenhum custo para você. Se precisar deles, fale conosco: cc@boston.gov ou 617-635-3850.

French:

IMPORTANT ! Ce document ou cette demande contient des **informations importantes** concernant vos droits, responsabilités et/ou avantages. Il est essentiel que vous compreniez les informations contenues dans ce document et/ou cette demande, que nous pouvons vous communiquer gratuitement dans la langue de votre choix. Si vous en avez besoin, veuillez nous contacter à cc@boston.gov ou au 617-635-3850.

CITY of BOSTON

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f. 617.731.3700
service@languageconnections.com

2001 beacon street
boston, ma 02135
www.LanguageConnections.com

STATE OF: *Massachusetts*

COUNTY OF: *Suffolk*

CERTIFICATE OF ACCURACY

Leo Galperin on behalf of Language Connections, certifies:

1. That our translator(s) are familiar with both the **Haitian Creole** and the **English** languages.

2. That we have made the attached translation of the below mentioned original document(s) from **English** into **Haitian Creole** and hereby certify that the same is a true and complete translation to the best of our translator(s) knowledge, ability and belief.

3. Document name:

- Abutter Notification Form 2020 filed by the Division of Capital Asset Management and Maintenance (DCAMM)

Signature: Leo Galperin

City of Boston
Mayor Martin J. Walsh

City of Boston
Environment

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. **Division of Capital Asset Management and Maintenance** 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 Boston Wetlands Ordinance.

B. The address of the lot where the activity is proposed is **438 American Legion Highway, Boston MA 02126.**

C. The project involves **removal of sediment and debris from Canterbury Brook at the Myerson Access Road**

culvert crossing, found adjacent to the City of Boston's Compost Project parking lot.

D. Copies of the Notice of Intent may be obtained by contacting the Boston Conservation Commission at **CC@boston.gov**.

E. Copies of the Notice of Intent may be obtained from **Susan Ruch at susan.ruch2@mass.gov or 857 -204-1214 between the hours of 9 AM to 5 PM, 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) 635-3850** 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.

City of Boston
Mayor Martin J. Walsh

City of Boston
Environment

AVI POU PWOPRIYETÈ KI GEN PWOPRIYETE KOLE AK LÒT YO
BOSTON CONSERVATION COMMISSION (KOMISYON KONSÈVASYON BOSTON)

Annakò avèk Lwa sou Pwoteksyon Zòn Imid nan Massachusetts (Massachusetts Wetlands Protection Act), Lwa Jeneral Massachusetts (Massachusetts General Laws) Chapit 131, Seksyon 40, ak Òdinans sou Zòn Marekaj nan Boston (Boston Wetlands Ordinance), n ap avize w antanke yon pwopriyetè ki gen pwopriyete kole ak lòt yo e ki asosye ak yon pwojè ki anrejistre avèk Boston Conservation Commission (Komisyon Konsèvasyon Boston) an.

A. **Division of Capital Asset Management and Maintenance (DCAMM)** depoze yon aplikasyon avèk Komisyon Konsèvasyon Boston (Boston Conservation Commission) kote l ap mande pèmisyon pou modifye yon Zòn ki Ka Sijè a Pwoteksyon anba Lwa pou Pwoteksyon Zòn Marekaj (Wetlands Protection Act) (Lwa Jeneral Chapit 131, seksyon 40) ak Òdinans sou Zòn Imid nan Boston (Boston Wetlands Ordinance) yo.

B. Adrès sit kote aktivite y ap pwopoze a ye a se **438 American Legion Highway,**

Boston, MA 02126

C. Pwojè a gen ladann **retire sediman ak debris nan Canterbury Brook ki nan**

kwazman ponso Myerson Access Road ki twouve li tou pre etablisman konpostaj

City of Boston's Compost Project la.

D. Ou ka jwenn kopi Avi Entansyon yo lè ou kontakte Komisyon Konsèvasyon nan Boston sou CC@boston.gov.

E. Ou ka jwenn kopi Avi Dentansyon an nan men **Susan Ruch, susan.ruch2@mass.gov oswa 857-204-1214** ant 9 AM a 5PM, Lendi jiska Vandredi..

F. An akò avèk dekrè Egzekitif Commonwealth Massachusetts lan kap Sispann Sèten Dispozisyon Lwa sou Reyinyon Piblik yo, odyans piblik la pral fèt vityèlman sou sit entènèt sa https://zoom.us/j/6864582044. Si ou pa gen aksè a entènèt, ou ka patisipe nan telefòn. Rele (929) 205-6099, antre nimewo reyinyon an: 686 458 2044 # epi itilize # kòm ID patisipan ou.

G. Ou ka jwenn enfòmasyon konsènan dat ak lè odyans piblik la nan **Boston Conservation Commission (Komisyon Konsèvasyon Boston)** lè w voye yon imèl nan **CC@boston.gov** oswa lè w rele nan **(617) 635-4416** ant **9 AM a 5 PM, Lendi jiska Vandredi.**

REMAKE: Y ap pibliye avi sou odyans piblik la, ansanm ak dat la, lè a ak ki kote l ap fèt, omwen senk (5) jou davans nan **Boston Herald**.

REMAKE: Y ap pibliye avi sou odyans piblik la, ansanm ak dat la, lè a ak ki kote l ap fèt, sou www.boston.gov/public-notices ak nan Meri Boston (Boston City Hall) pa mwens ke karantuit (48) èdtan davans. Si w ta renmen pataje kòmantè w yo, ou kapab patisipe nan odyans piblik la oswa voye kòmantè w yo alekri nan CC@boston.gov oswa nan Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201

REMAKE: Ou kapab kontakte Boston Conservation Commission (Komisyon Konsèvasyon Boston)

oswa Biwo Rejyonal Nòdès Depatman Pwoteksyon Anviwònman an pou plis enfòmasyon sou aplikasyon sa a oswa sou Lwa sou Pwoteksyon Zòn Imid yo (Wetlands Protection Act). Pou kontakte Depatman Pwoteksyon Anviwònman an (DEP), rele Rejyon Nòdès la nan: (978) 694-3200.

REMAKE: Si w gen lentansyon ale nan odyans piblik la e ou bezwen sèvis entèpretasyon, tanpri avize manm pèsonèl yo nan CC@boston.gov avan 12 PM (Midi) jou anvan odyans lan.

CITY of BOSTON

1 CITY HALL SQUARE BOSTON, MA 02201-2021 | ROOM 709 | 617-635-3850 | ENVIRONMENT@BOSTON.GOV

Appendix E – Stormwater Report and Checklist

1.0 INTRODUCTION

This Stormwater Management Report has been prepared on behalf of the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) for the removal of sediment deposits within Wetlands Protection Act resource areas associated with Canterbury Brook. The project involves the excavation of sediment and other materials from Canterbury Brook at the Myerson Access Road culvert near 480 American Legion Highway in the Mattapan neighborhood of Boston, Massachusetts.

The purpose of the report is to demonstrate compliance with the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards in accordance with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00) and Water Quality Certification Regulations (314 CMR 9.00).

The project occurs within Land Under Water Bodies and Waterways, Bordering Vegetated Wetland and the 100-foot buffer zone. The sediment excavation project will be designed to meet the appropriate Stormwater Standards to the maximum extent practicable. The project site is limited to the area of Canterbury Brook within the immediate vicinity of the Myerson Access Road; the adjoining portion of the wetland area where equipment will access the Brook dredging area; and those portions of the buffer zone and upland areas where materials and equipment will be staged in support of the project.

Details of the proposed work are presented on the project permit plans in the **Notice of Intent - Appendix C**.

The Stormwater Report, Erosion Control and Operation & Maintenance Plans were developed in accordance with the following:

1. Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas (March 1997).
2. The Massachusetts Department of Environmental Protection's Storm Water Handbook (January 2008).
3. The United States Environmental Protection Agency's (EPA) Storm Water Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices (BMPs).

2.0 PROJECT INFORMATION

Project Name:

Myerson Access Road over Canterbury Brook Sediment Removal

Project Location:
480 American Legion Highway
Lancaster, Massachusetts 01523

Owner's Name(s) and Address:
Massachusetts Division of Capital Asset Management and Maintenance
220 Old Common Road
Lancaster, Massachusetts 01523

Project Proponent's Name(s) and Address:
Massachusetts Division of Capital Asset Management and Maintenance
220 Old Common Road
Lancaster, Massachusetts 01523

Report Preparer:
Kimberly Degutis, PWS, CESCL
GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue
Norwood, MA 02062

3.0 SEQUENCE OF CONSTRUCTION ACTIVITIES

The general construction process consists of site mobilization and preparation, establishment of site survey controls, installation of erosion and sediment control measures, establishment of access through buffer zone areas and bordering vegetation wetlands, excavation of sediments from Canterbury Brook, preparation for transport to offsite disposal location, restoration of the construction area using native plant materials, removal of erosion and sediment controls and demobilization.

4.0 LONG-TERM STORMWATER POLLUTION PREVENTION PLAN

A long-term Stormwater Pollution Prevention Plan is included as **Attachment II**. The Brook will revert back to natural conditions upon project completion.

5.0 CONSTRUCTION PERIOD POLLUTION PREVENTION PLAN AND EROSION & SEDIMENT CONTROL PLAN

The project's construction specifications and plans will require the implementation of pollution prevention, erosion and sediment control measures will be implemented by the contractor to prevent and minimize potential impacts to adjacent wetland resource areas. These measures will include, at a minimum, the items listed below. Additional measures will be implemented should unusual site or weather conditions require them. Erosion and sediment control measures are shown on the project permit plans in the **Notice of Intent - Appendix C**.

- The contractor shall not leave equipment, materials, debris, or any other items within resource areas.
- Excavated or excess materials shall be removed and properly disposed of by the contractor. Upon finishing work, contractor shall restore the areas to pre-construction conditions.
- Erosion control measures will be implemented around stockpiles of loose erodible material and storage and staging areas.
- Erosion control measures will be implemented around the area of access to the brook.

5.1 CONSTRUCTION SEQUENCE

The construction phase of the proposed project requires the installation of erosion and sediment controls and their maintenance. During the construction phase the following major activities and their sequence in the construction phase will be as follows:

1. Mobilization.
2. Installation of temporary erosion control measures including silt sock, silt fence and/or weed free straw wattles or bales.
3. Excavation of sediments within the Brook.

4. Restoration of areas of temporary disturbance with loam and native seed mix.

5. Removal of temporary erosion controls upon final stabilization of disturbed areas.

5.2 DUST CONTROL

Dust control will be utilized as required throughout the construction process of the site. It is not anticipated that dust control will be required for this project due to the nature of the work.

5.3 NON-STORMWATER DISCHARGES

No non-stormwater discharges are anticipated. If dewatering is required, water will be containerized in one or more frac tanks outside of the resource areas pending off-site disposal.

5.4 EQUIPMENT STORAGE

Machinery, tools, and materials will be stored in a designated upland area.

5.5 SOLID WASTE DISPOSAL

The disposal of construction site wastes will be managed carefully. Waste materials will be collected and stored in securely covered receptacles. Waste materials that may be encountered on site include the following:

- Packaging materials (including wood, paper, plastic, etc.).
- Brook sediment deposits and associated non-native material that may be encountered within the deposits.
- Sampling and other testing materials.

5.6 TEMPORARY SANITARY WASTE DISPOSAL

There will be sanitary waste from workers during construction activities that will be confined to temporary facilities. Domestic waste haulers licensed by the State of Massachusetts will be contracted to regularly remove the sanitary waste and to maintain the facilities in good working order.

5.7 MAINTENANCE AND INSPECTION PROCEDURES

The following inspection and maintenance practices will be used to maintain the erosion/ sediment and pollution controls measures:

- Control measures will be inspected at least once every 7-day period.
- Control measures will be maintained in good working order. If an inspection indicates that repair or maintenance work is required, then it will be initiated within 24 hours.

5.8 SPILL PREVENTION

The typical construction materials expected to be present onsite during dredging activities will include the following:

- Petroleum products for equipment
- Geotextile materials for sediment handling and removal

5.9 MATERIALS MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

1. The following good housekeeping practices will be followed onsite during the construction project:

- An effort will be made to store only sufficient amounts of products necessary to complete the work.
- Materials will be stored onsite in a neat, orderly manner in their original containers and, if possible, under a roof or other enclosure as necessary.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The site superintendent will inspect daily to ensure proper use and disposal of materials.
- Substances will not be mixed with one another, unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.

2. Hazardous Products. While the use of hazardous products is not anticipated, the following practices will be used to reduce the risks associated with hazardous materials:

- Products will be kept in their original containers, unless they are not re-sealable.
- Original labels and material safety data will be retained for important product information.
- Surplus products that must be disposed will be discarded according to the manufacturers' or agency's recommended methods of disposal.

3. Product Specific Practices. The following product specific practices will be followed onsite:

- Petroleum Products: Onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce leakage. Petroleum products will be stored in tightly sealed containers, which are clearly labeled.

5.10 SPILL CONTROL PRACTICES

In addition to good housekeeping and material management practices discussed in the previous section, the following practices as required by the construction activities will be followed for spill prevention and cleanup:

- Site personnel will be made aware of Manufacturers' recommended methods for spill cleanup procedures and the location of cleanup supplies.

- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include, but not limited to, brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic or metal trash containers specifically for this purpose.
- Minor spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- The site superintendent responsible for day-to-day site operations will be the spill prevention and cleanup coordinator.

6.0 LONG-TERM OPERATION AND MAINTENACE PLAN

The Brook will revert back to natural conditions upon project completion. Long term maintenance of the brook by DCAMM is not anticipated. The parties responsible for the operation and maintenance of the sediment removal project components are listed below.

Owner's Name(s) and Address:
Massachusetts Division of Capital Asset Management and Maintenance
220 Old Common Road
Lancaster, Massachusetts 01523

Responsible Party Name(s) and Address:
Massachusetts Division of Capital Asset Management and Maintenance
220 Old Common Road
Lancaster, Massachusetts 01523

6.1 ROUTINE & NON-ROUTINE MAINTENANCE TASKS

The Project does not have or require maintenance tasks.

6.2 BMPS TREATMENT TRAIN PLAN

The Project does not include the construction of new stormwater BMPs.

6.3 PUBLIC SAFETY FEATURES

The Project does not have or require public safety procedures related to stormwater management.

6.4 ESTIMATED OPERATIONS AND MAINTENANCE BUDGET

The Project does not have or require maintenance tasks and no additional budget costs are anticipated.

7.0 PROJECT COMPLIANCE TO STORMWATER MANAGEMENT STANDARDS

As demonstrated below, the project is considered a Redevelopment Project and includes the removal of sediments and associated non-native material within the brook. For these reasons, the project has been categorized as a Redevelopment Project under Volume 2, Chapter 3 of the Massachusetts Stormwater Handbook.

7.1 STANDARD 1 – UNTREATED STORMWATER DISCHARGES

The standard is *"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 will not result in the installation of new stormwater conveyances (e.g. outfalls).

7.2 STANDARD 2 – PEAK RATE CONTROL AND FLOOD PREVENTION

The standard is *"Stormwater management systems shall be designed so that the post-development peak discharge rates do not exceed pre-development discharge rates."*

As a Redevelopment Project, the project is required to meet Standard 2 only to the maximum extent practicable. The drainage conditions at the completion of the project have been designed to maintain existing local watershed patterns and improve drainage within the brook. Stormwater in the project area sheet flows off of the adjacent asphalt parking area and over vegetated, sloped areas. There are no new drainage swales located within the project limits. The project will not result in an increase in impervious area or change in the runoff curve number for the Site. Also, the project will not alter drainage areas nor times of concentration; thus, the post-development peak discharge rates will not exceed pre-development peak discharge rates.

7.3 STANDARD 3 – RECHARGE TO GROUNDWATER

The standard is *"Loss of annual recharge to groundwater shall be eliminated or minimized through the use of environmentally sensitive site designs, low impact development techniques, stormwater best management practices and good operations and maintenance".*

As a Redevelopment Project, the project is required to meet Standard 3 only to the maximum extent practicable. The proposed project will not include the creation of new impervious areas, and disturbed areas will be returned to their preconstruction condition. The proposed work is expected to be improve flow through conditions within the Brook and relieve upstream flooding conditions. The Project is not proposing to modify adjacent wetlands or buffer zone areas as part of construction activities. Therefore, it is not practicable to increase recharge at the Site.

7.4 STANDARD 4 – 80% TSS REMOVAL

The standard is *"Stormwater management systems shall be designed to remove 80% of the average annual post construction load of Total Suspended Solids (TSS)."*

As a Redevelopment Project, the project is required to meet the pretreatment and structural stormwater best management practice requirements of Standard 4 to the maximum extent practicable. The proposed project will not include the creation of new impervious areas, and disturbed areas will be returned to their preconstruction condition. The

project will not increase the TSS in stormwater. For the reasons described in Section 7.3, modifications to the existing stormwater system to provide additional water quality treatment are not practicable.

7.5 STANDARD 5 – HIGHER POTENTIAL POLLUTANT LOADS

The standard is *"For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented…to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable".*

As a Redevelopment Project, the project is required to meet the pretreatment and structural stormwater best management practice requirements of Standard 5 to the maximum extent practicable. The project is not classified as a use with a higher potential pollutant load; thus, Standard 5 is not applicable.

7.6 STANDARD 6 – CRITICAL AREA

The standard is *"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 specific source control and pollution prevention measures…"*

As a Redevelopment Project, the project is required to meet the pretreatment and structural stormwater best management practice requirements of Standard 6 to the maximum extent practicable. The project does not include proposed discharges to a Zone II, Interim Wellhead Protection Area or other critical area. The proposed construction will not adversely affect runoff or increase stormwater pollution.

7.7 STANDARD 7 – REDEVELOPMENT PROJECT REQUIREMENTS

The standard is that *"A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2 [Peak Rate Control and Flood Prevention], Standard 3 [Recharge to Groundwater], and the pretreatment and structural best management practices requirements of Standards 4 [80% TSS Removal], 5 [Higher Potential Pollutant Loads], and 6 [Critical Area]. Existing stormwater discharges shall comply with Standard 1 [Untreated Stormwater Discharges] 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. "*

The Project has been classified as a redevelopment project because it results in no net increase in impervious area. The project maintains open or "country drainage." Existing side slopes will be stabilized and seeded immediately after construction activities cease. Soil erosion and sediment controls will remain in place until the site is vegetatively stabilized. Combined with the reduction in exposed erosive soils, these measures will decrease the direct suspended solid deposition into the resource areas.

7.8 STANDARD 8 – EROSION AND SEDIMENT CONTROL

The standard is *"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."*

Due to the area of disturbance, the project will not be required to obtain coverage under the EPA National Pollutant Discharge Elimination System (NPDES) Construction General Permit. As required under this permit, a Construction Period Pollution Prevention Plan has been developed and is included in **Section 5.0** of this report.

7.9 STANDARD 9 – OPERATION AND MAINTENANCE

The standard is that *"A Long-Term Operation and Maintenance (O&M) Plan shall be developed and implemented to ensure that stormwater management systems function as designed."*

In compliance with Standard 9, a Long-Term Operations and Maintenance (O&M) Plan has been developed to ensure that the existing drainage system functions as intended. It is included under Section 6 of this report. Upon completion of the proposed project, the maintenance of the adjacent parking areas associated with the City of Boston's Compost Project facility will be the responsibility of Mass Audubon's Boston Nature Center.

7.10 STANDARD 10 – ILLICIT DISCHARGE

The standard is "*All illicit discharges to the stormwater management system are prohibited."*

There are no known or proposed illicit discharges into the stormwater management system. Any illicit connections to storm drainage structures found in the project limit of work will be removed. The project will be developed in full compliance with current stormwater management standards. No statement is made regarding the drainage system in portions of the site not included in the redevelopment area.

8.0 PROHIBITION OF ILLICIT DISCHARGES

The MassDEP Stormwater Management Standards prohibit illicit discharges to the stormwater management system. Illicit discharges are discharges that do not entirely consist of stormwater, except for certain specified non-stormwater discharges.

Examples of discharges from the following sources are not considered illicit discharges[1]:

- Firefighting activities
- Riparian habitats/wetlands
- Foundation drain lines
- Potable water sources
- Line flushing
- Dechlorinated swimming pool water
- Footing drains
- Street sweeping

[1] Water from firefighting activities is allowed under this permit and need only be addressed where they are identified as significant sources of pollutants to waters of the United States.

- Irrigation systems
- Wash water from buildings (without detergents)
- Residential car washing
- Condensation from air conditioning units
- Uncontaminated groundwater
- Rising groundwater
- Run-on from private driveways caused by precipitation
- Lawn watering

There are no known or proposed illicit connections associated with this project. If a potential illicit discharge from the activities or facilities covered by this plan is detected (e.g., dry weather flows at any pipe outlet, evidence of contamination of surface water discharge by non-stormwater sources), DCAMM shall be notified for assistance in determining the nature and source of the discharge, and for resolution of the discharge.

Attachments: Attachment I - Massachusetts Department of Environmental Protection Checklist for Stormwater Report
Attachment II - Long-Term Stormwater Pollution Prevention Plan

Attachment I - Massachusetts Department of Environmental Protection Checklist for Stormwater Report

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

Checklist for Stormwater Report

A. Introduction

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

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

The Stormwater Report must include:

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

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

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

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

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

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

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

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

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

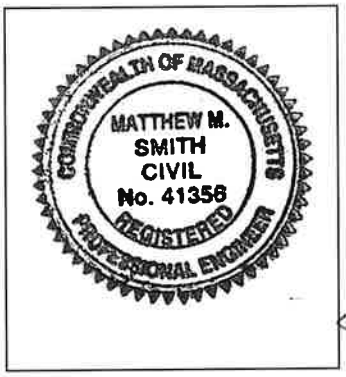
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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

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

Registered Professional Engineer's Certification

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

Registered Professional Engineer Block and Signature



1/20/2021

Signature and Date

Checklist

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

☐ New development

☒ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

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

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

Standard 1: No New Untreated Discharges

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

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

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

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

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

Standard 3: Recharge

☐ Soil Analysis provided.

☐ Required Recharge Volume calculation provided.

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

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

☐ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

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

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

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

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

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

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

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

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

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

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

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

Standard 4: Water Quality

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

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

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

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

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

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

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

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

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

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

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

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

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

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

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

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

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

☐ All exposure has been eliminated.

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

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

Standard 6: Critical Areas

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

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

Checklist for Stormwater Report

Checklist (continued)

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

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

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

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

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

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

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

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

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

Checklist for Stormwater Report

Checklist (continued)

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

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

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

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

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

Standard 9: Operation and Maintenance Plan

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

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

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

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

Standard 10: Prohibition of Illicit Discharges

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

☒ An Illicit Discharge Compliance Statement is attached;

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

Attachment II - Long-Term Stormwater Pollution Prevention Plan

The Long-Term Pollution Prevention Plan that follows is a guideline for source control and pollution prevention to help maintain stormwater quality. The Long-Term Pollution Prevention Plan included herein was prepared in accordance with the Massachusetts Stormwater Handbook (Volume 1, Chapter 1 and Volume 2, Chapter 1) to satisfy criteria of Stormwater Standards 4, 5, 6, and 10.

1.0 GOOD HOUSEKEEPING

1.1 PROVISIONS FOR SOLID WASTE MANAGEMENT

Waste receptacles when not in use. The waste receptacles shall be regularly maintained and emptied by a waste management contractor on a minimum weekly basis.

1.2 SWEEPING

The paved asphalt area within the project limits will be swept as needed. All swept material shall be collected and disposed of in accordance with local, state, and federal regulations.

2.0 STORING MATERIALS AND WASTE PRODUCTS INSIDE OR UNDER COVER

2.1 WASTE MATERIALS

All waste materials shall be collected and stored in a manner that will prevent materials from entering watercourses, wetlands, or other offsite areas. Material shall be regularly collected and disposed of offsite in a manner consistent with all federal, state, and local regulations.

2.2 HAZARDOUS WASTE

The use of hazardous materials during project activities is not anticipated. All hazardous waste materials shall be disposed of in a manner specified by State and Federal regulations and/or in accordance with the manufacturer's recommendations.

2.3 SANITARY WASTE

Sanitary waste will be collected via onsite, portable bathroom facilities. Third party contractors will be utilized to install, maintain and remove the portable bathroom facilities. Sanitary waste discharges from project activities are not anticipated.

2.4 ROUTINE INSPECTIONS AND MAINTENANCE OF STORMWATER BEST MANAGEMENT PRACTICES (BMPS)

Please refer to the Operation and Maintenance Plan described in Section 6 of the Stormwater Management Report.

2.5 SPILL PREVENTION AND RESPONSE PLAN

The following good housekeeping and material management practices shall be followed to reduce the risk of spills or other accidental exposure of hazardous materials to storm water runoff:

- Store quantities of materials required for the project and not more.
- Store materials onsite in a neat, orderly manner in appropriate labeled containers.
- Store materials indoors or under cover, when possible.
- Follow manufacturers' recommendations for proper use and disposal of materials.

If an emergency spill or release occurs, the Boston Department of Public Works and the Boston Fire Department should be contacted immediately.

3.0 MAINTENANCE OF LAWNS, GARDENS, & OTHER LANDSCAPED AREAS

Vegetated areas shall be kept free of bare spots or erosion with proper mulching and seeding using a native seed mix.

4.0 STORAGE AND USE OF FERTILIZERS, HERBICIDES, AND PESTICIDES

Fertilizers, herbicides, and pesticides should be stored indoors or under cover. Partially used bags of fertilizers should be stored in sealable plastic bins.

5.0 PET WASTE MANAGEMENT

Not applicable.

6.0 PROPER MANAGEMENT OF DEICING CHEMICALS AND SNOW

The project site is not within a water supply protection area. Use of deicing chemicals, sand or salt is not anticipated. However, the following BMPs for salt storage shall be adhered to the maximum extent practical:

- Sand piles shall be contained and stabilized,
- Salt and deicing chemicals shall be stored on an impervious surface and under cover, and
- Runoff from salt/deicing chemical storage piles shall be collected and contained.

7.0 PROVISIONS FOR PREVENTION OF ILLICIT DISCHARGES TO THE STORMWATER MANAGEMENT SYSTEM

No chemicals, litter, trash or other illicit materials shall be dumped into or otherwise allowed to enter the stormwater drainage system. Only stormwater and the following non-stormwater discharges may enter the storm drainage system:

- Water line flushing

- Landscape irrigation
- Diverted stream flows
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
- Uncontaminated pumped ground water
- Discharge from potable water sources
- Irrigation water and springs
- Footing drains
- Lawn watering
- Flow from riparian habitats and wetlands
- Street wash waters

Discharges from the spray down of lumber and wood product storage yards where no chemical additives are used in the spray-down waters and no chemicals are applied to the wood during storage.

8.0 CONTACT INFORMATION

Owner

Name: _Susan Ruch, Director of Environmental Services_____

Phone: _617-727-4050_____

Appendix F – Woody Debris Obstruction Photos

Photographic Log

Client Name: Division of Capital Asset Management and Maintenance	**Site Location:** 438 American Legion Highway Boston, Massachusetts	**Project No.** 01.0174917.00

Photo No.	**Date:**
1	1/17/21

Direction Photo Taken:
Northeast

Description:
View looking upstream at woody debris obstruction (photo courtesy Mass Audubon).

Photo No.	**Date:**
2	1/17/21

Direction Photo Taken:
Northeast

Description:
View looking upstream at woody debris obstruction and adjacent wetlands (photo courtesy Mass Audubon).

Photographic Log

Client Name:	Site Location:	Project No.
Division of Capital Asset Management and Maintenance	438 American Legion Highway Boston, Massachusetts	01.0174917.00

Photo No.	Date:
3	1/22/21

Direction Photo Taken:
West

Description:
View facing downstream along wetland/upland boundary on north side of Canterbury Brook at woody debris obstruction (foreground). Note evidence of recent overbank flooding.

Photo No.	Date:
4	1/22/21

Direction Photo Taken:
East

Description:
View facing upstream along wetland/upland boundary on north side of Canterbury Brook at woody debris obstruction. Note evidence of recent overbank flooding.

GZA GeoEnvironmental, Inc.