

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

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

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):

Gallops Island Boston
a. Street Address b. City/Town c. Zip Code
Latitude and Longitude: 42degrees 19' 15"N 70degrees 56' 13" W
d. Latitude e. Longitude
f. Assessors Map/Plat Number g. Parcel /Lot Number

2. Applicant:

Ellen Berkland
a. First Name b. Last Name
MA Department of Conservation and Recreation
c. Organization
251 Causeway Street
d. Street Address
Boston MA 02114
e. City/Town f. State g. Zip Code
617-626-1250 617-626-1370 ellen.berkland@state.ma.us
h. Phone Number i. Fax Number j. Email Address

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

Priscilla Geigis
a. First Name b. Last Name
MA Department of Conservation and Recreation
c. Organization
251 Causeway Street
d. Street Address
Boston MA 02114
e. City/Town f. State g. Zip Code
617-626-1250 617-626-1370 priscilla.geigis@state.ma.us
h. Phone Number i. Fax Number j. Email address

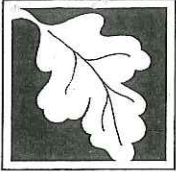
4. Representative (if any):

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

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

\$42.50 \$42.50 \$0 (separate fee structure)
a. Total Fee Paid b. State Fee Paid c. City/Town Fee Paid





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Boston

City/Town

A. General Information (continued)

6. General Project Description:

Exhumation, analysis and removal of 66 burials at the Gallops Island Quarantine Cemetery. Human remains are currently eroded out of the bank. Stockpiled soils will be used to restore existing topography to match existing slope, but at no more that a maximum slope of 3H:1V.

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

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

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

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

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 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:

Suffolk

a. County

Book 8621

c. Book

b. Certificate # (if registered land)

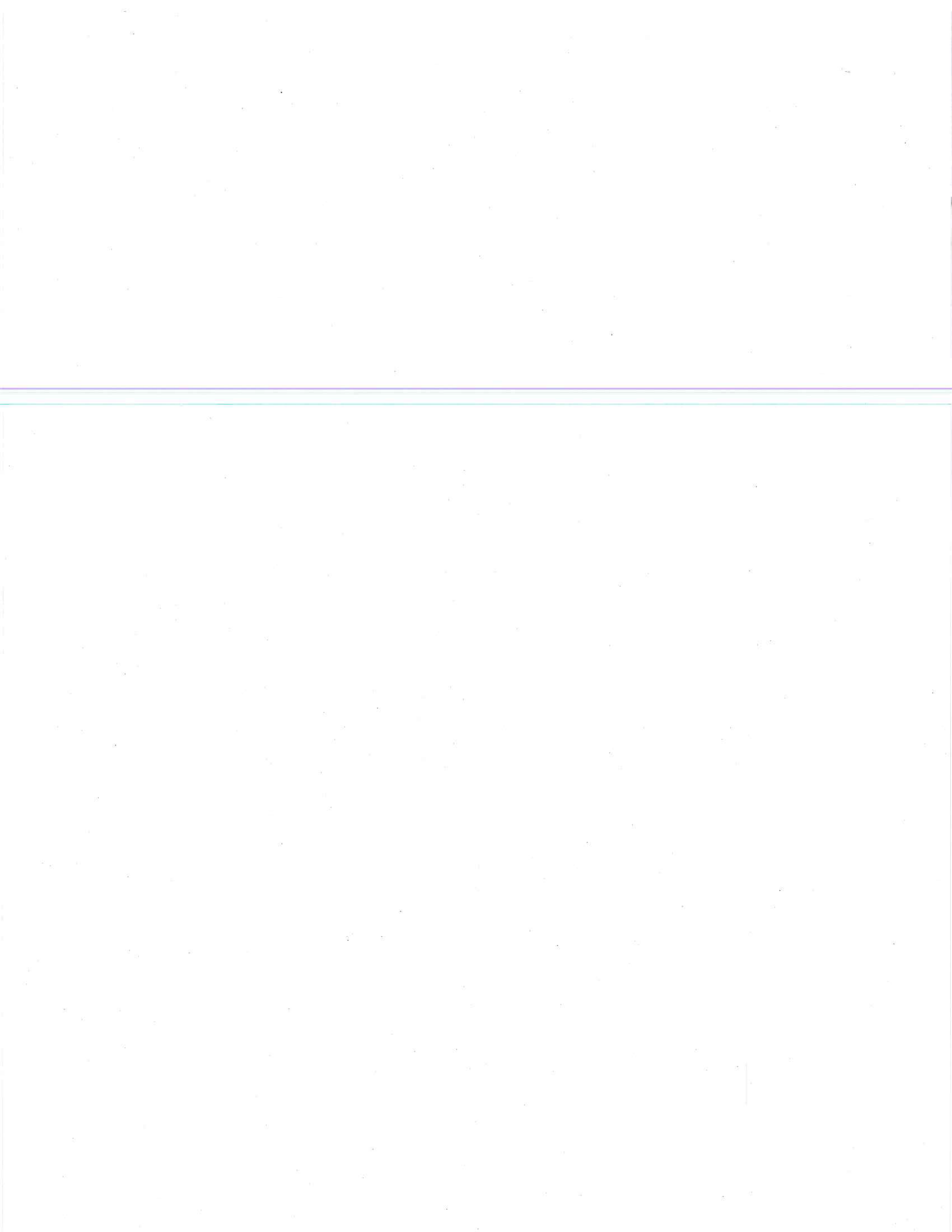
Page 50

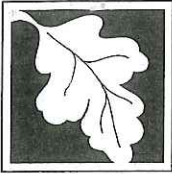
d. Page Number

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

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

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





Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

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

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
- 100 ft. - New agricultural projects only
- 200 ft. - All other projects

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

4. Proposed alteration of the Riverfront Area:

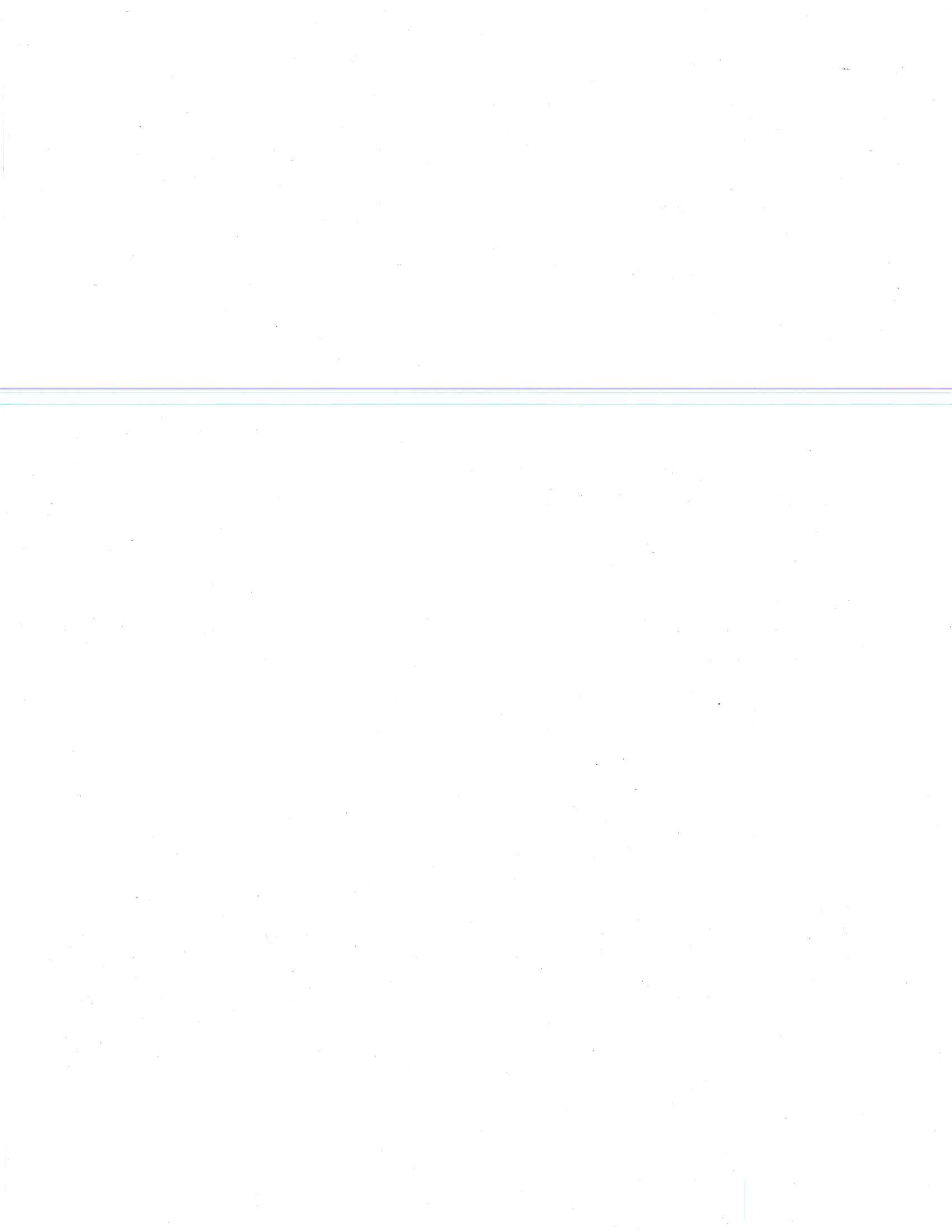
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
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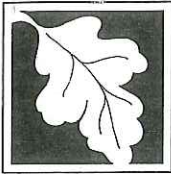
5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

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.





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 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. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input checked="" type="checkbox"/> Coastal Beaches	2618 1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. <input checked="" type="checkbox"/> Coastal Banks	150 1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet	
h. <input type="checkbox"/> Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. <input checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage	497 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.

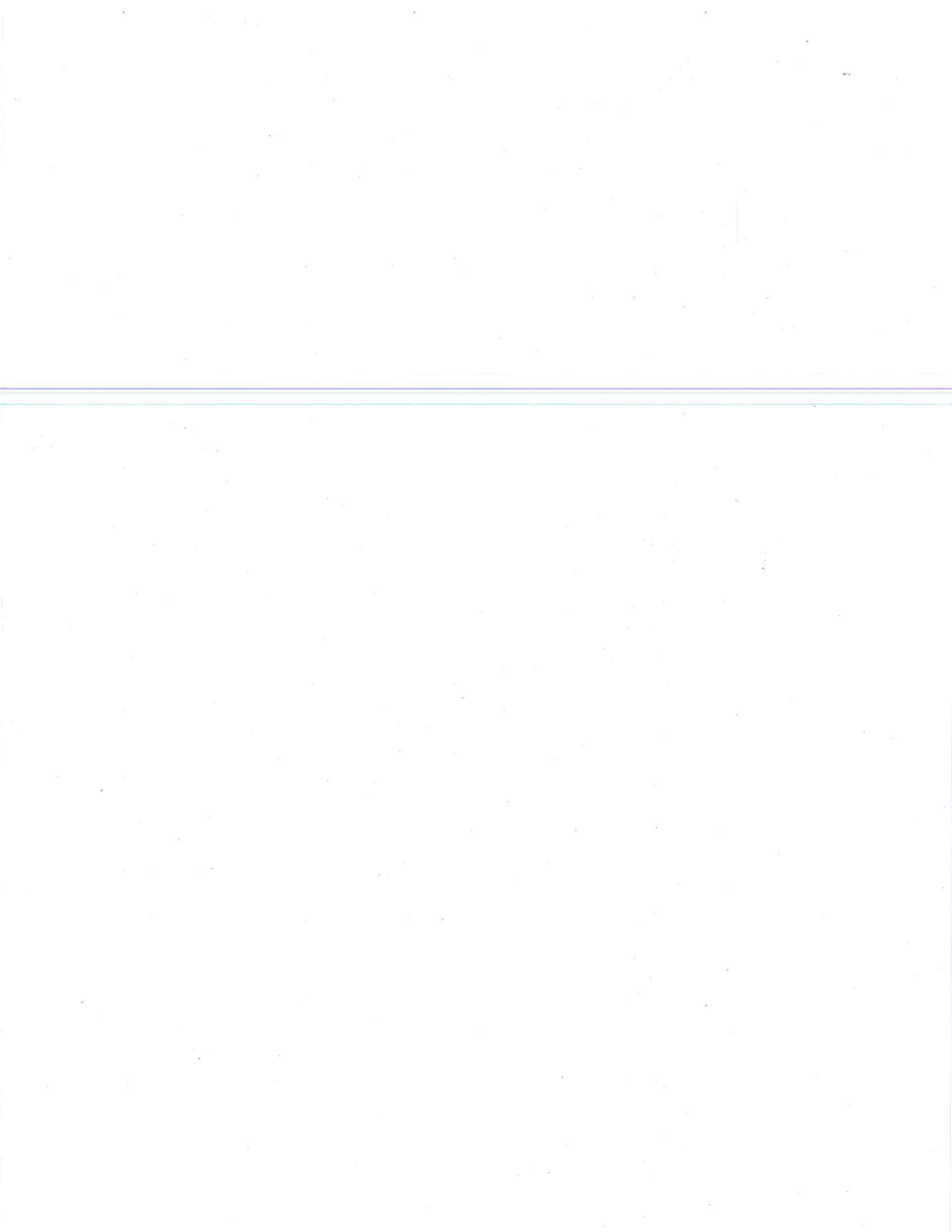
a. square feet of BVW

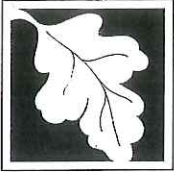
b. square feet of Salt Marsh

5. Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings





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MassDEP File Number _____

Document Transaction Number _____

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C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

- a. Yes No

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

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

- b. Date of map _____

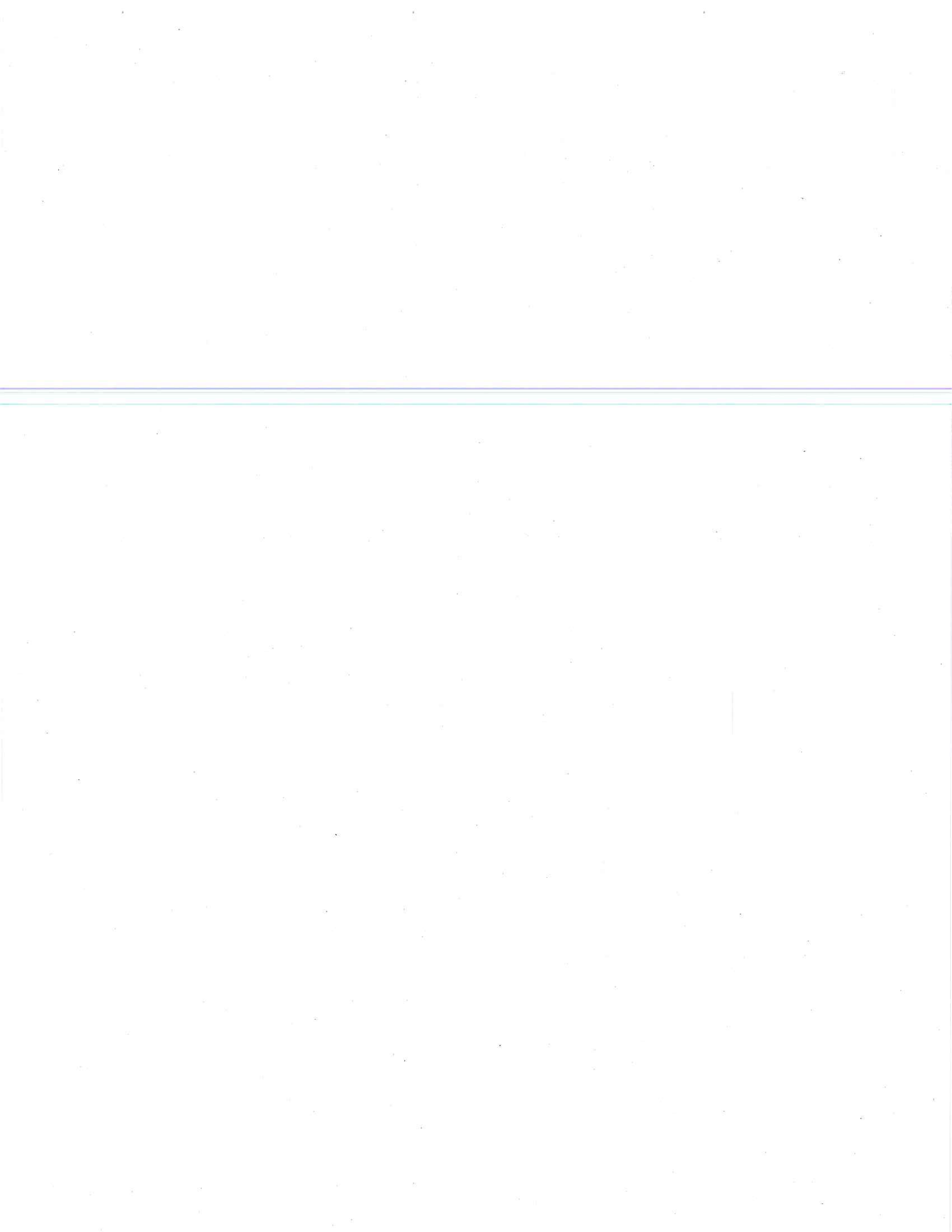
If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); OR complete Section C.2.f,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

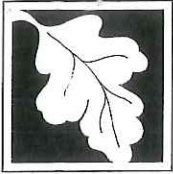
- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:
- (a) within wetland Resource Area _____ percentage/acreage
- (b) outside Resource Area _____ percentage/acreage
2. Assessor's Map or right-of-way plan of site
2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
- (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
- (b) Photographs representative of the site

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

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





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WPA Form 3 – Notice of Intent

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

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MassDEP File Number _____

Document Transaction Number _____

Boston

City/Town

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

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

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

- (d) Vegetation cover type map of site
- (e) Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following
1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
 2. Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____
 3. Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.
3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. Not applicable – project is in inland resource area only b. Yes No

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

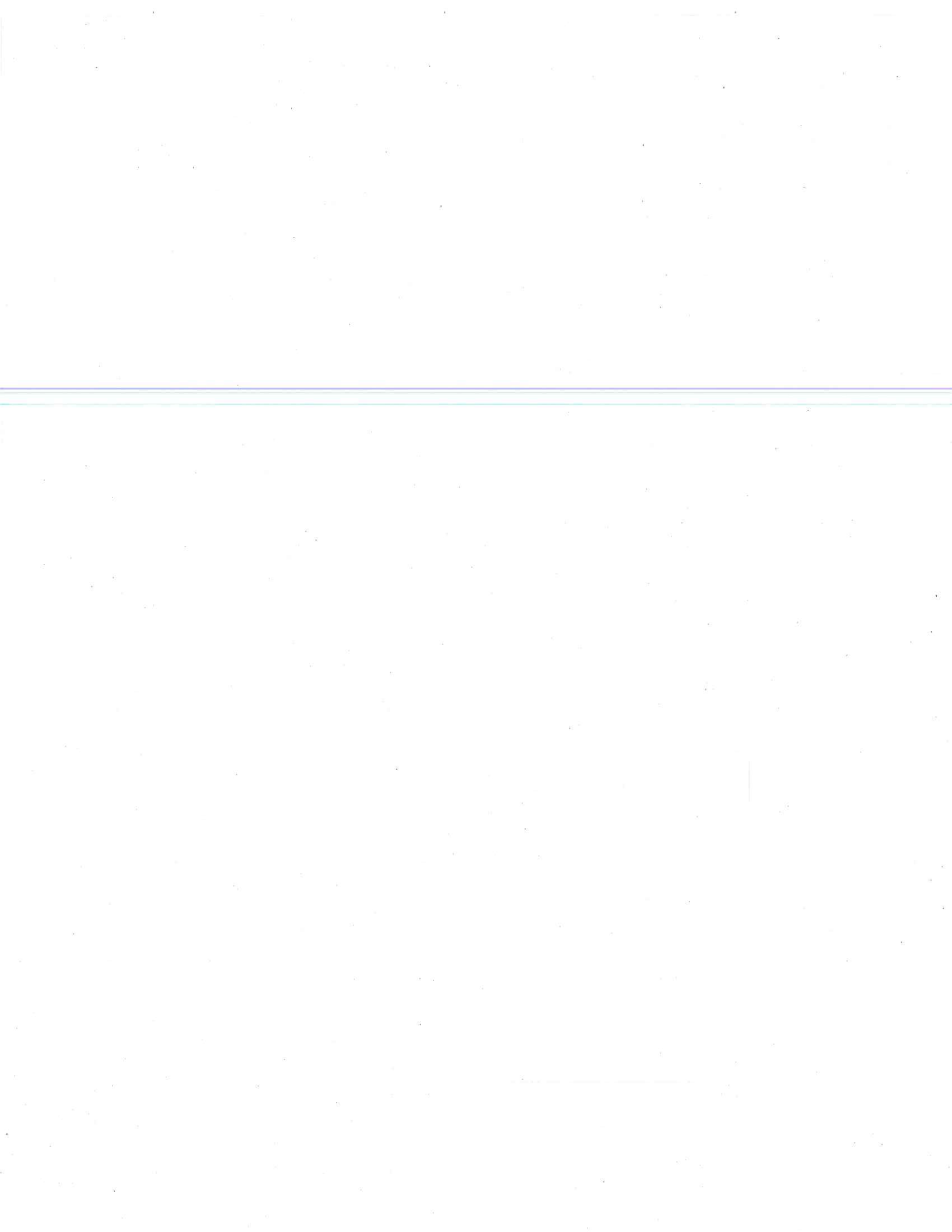
South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

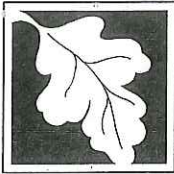
Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

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

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





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

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

D. Additional Information

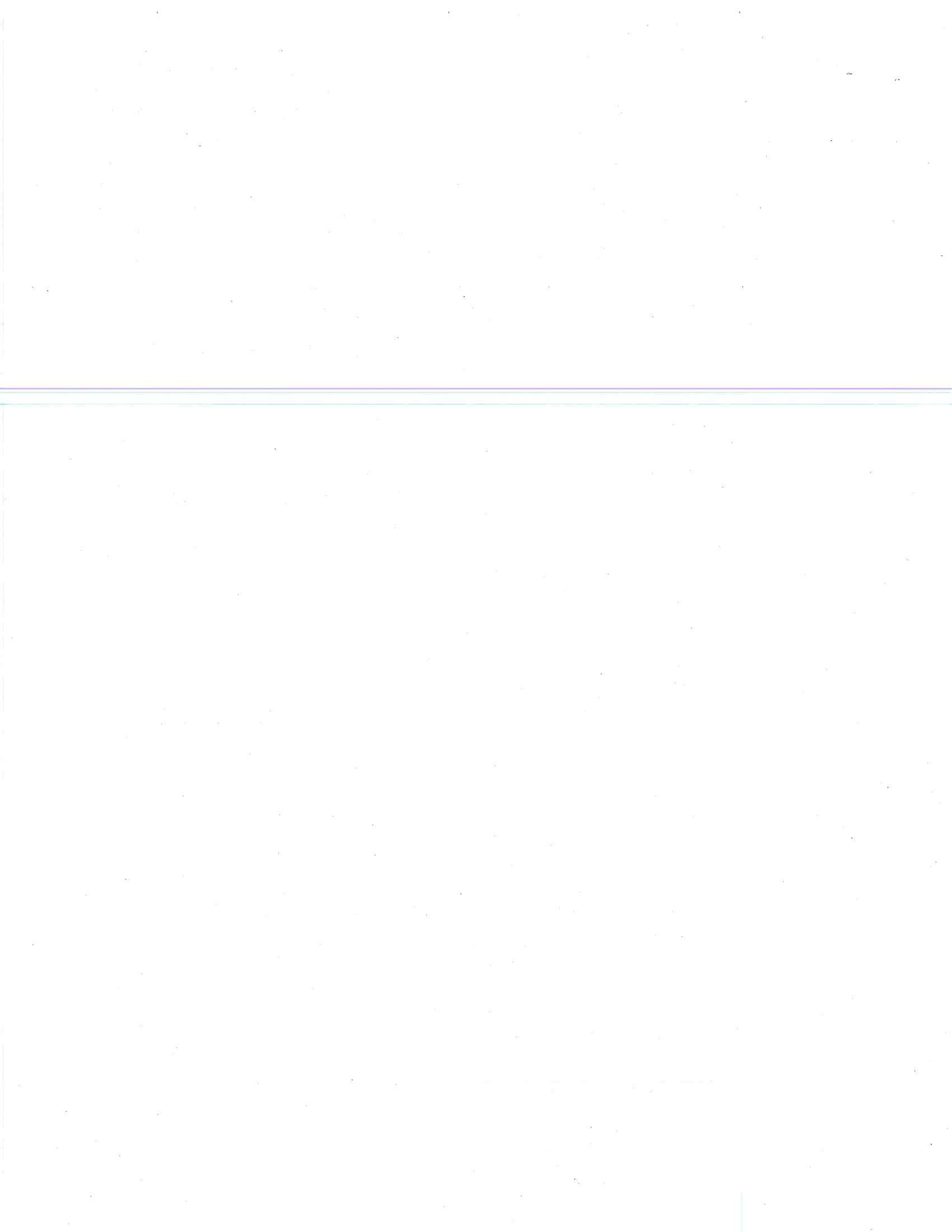
- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

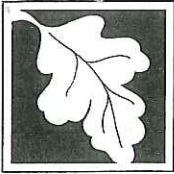
Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

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.

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





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Bureau of Resource Protection - Wetlands

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MassDEP File Number

Document Transaction Number

Boston

City/Town

D. Additional Information (cont'd)

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

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

Gallops Island Quarantine Cemetery Project (Dwgs E-100 thru E-103, G-100, SK-001, SK002)

a. Plan Title

AECOM

Michael S. Stiller

b. Prepared By

c. Signed and Stamped by

7/31/2018

1"=40'

d. Final Revision Date

e. Scale

Wetland Delineation memo, Proposed Graves Excavation Plan

July 2018

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:

3596

6/15/18

2. Municipal Check Number

3. Check date

electronic payment to DEP

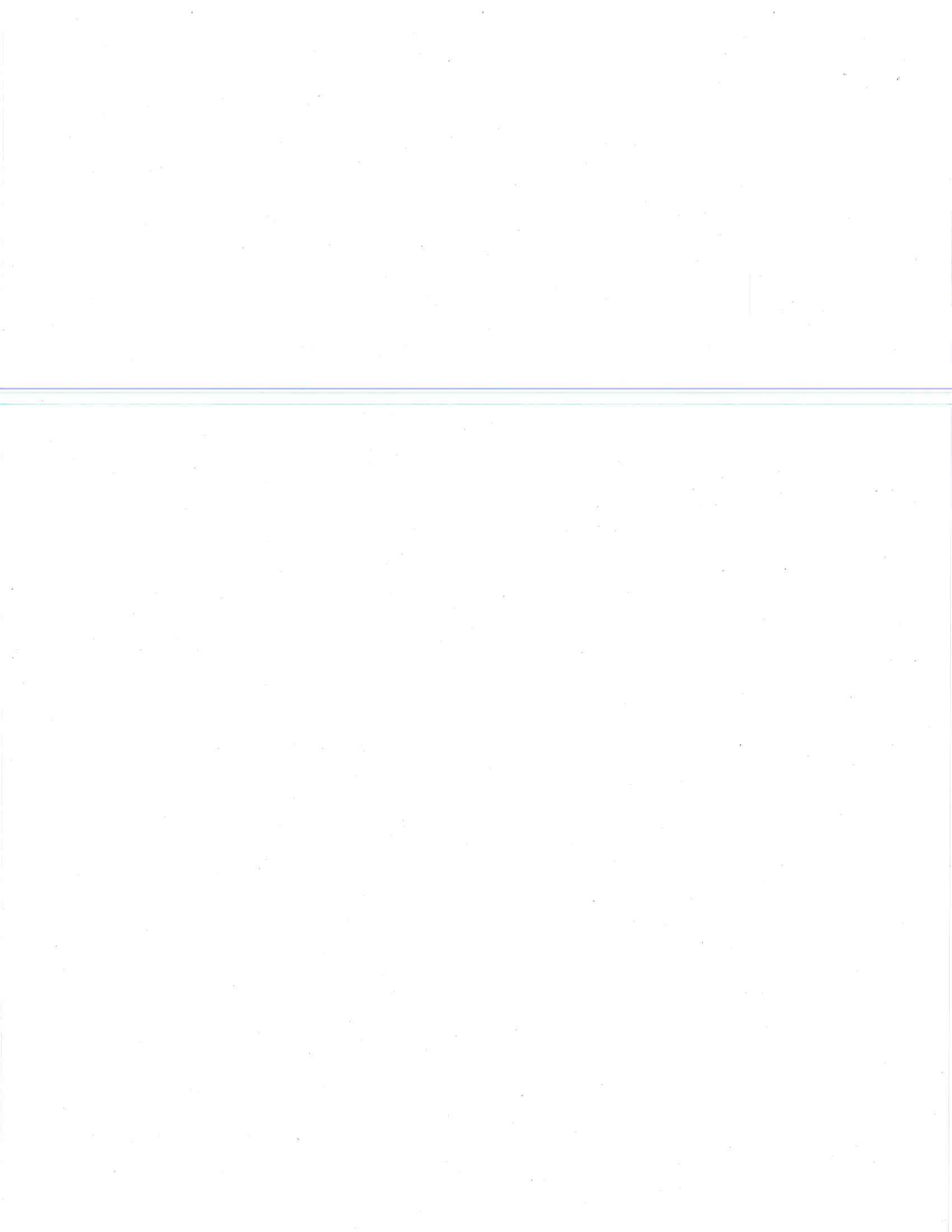
4. State Check Number

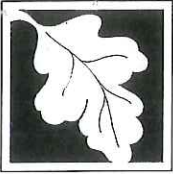
5. Check date

Heritage Consultants, LLC

6. Payor name on check: First Name

7. Payor name on check: Last Name





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MassDEP File Number

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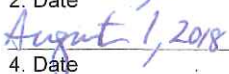
Boston

City/Town

F. Signatures and Submittal Requirements

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

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

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

For Conservation Commission:

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

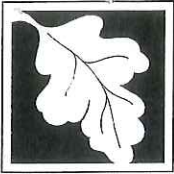
For MassDEP:

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

Other:

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

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



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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:

Gallops Island Boston
 a. Street Address b. City/Town
electronic payment \$42.50
 c. Check number d. Fee amount

2. Applicant Mailing Address:

Ellen Berkland
 a. First Name b. Last Name
MA Department of Conservation and Recreation
 c. Organization
251 Causeway Street
 d. Mailing Address
Boston MA 02114
 e. City/Town f. State g. Zip Code
617-626-1377 617-626-1370 ellen.berkland@state.ma.us
 h. Phone Number i. Fax Number j. Email Address

3. Property Owner (if different):

Patrice Kish
 a. First Name b. Last Name
MA Department of Conservation and Recreation
 c. Organization
251 Causeway Street
 d. Mailing Address
Boston MA 02114
 e. City/Town f. State g. Zip Code
617-626-1378 617-626-1370 patrice.kish@state.ma.us
 h. Phone Number i. Fax Number j. Email Address

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

B. Fees

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

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

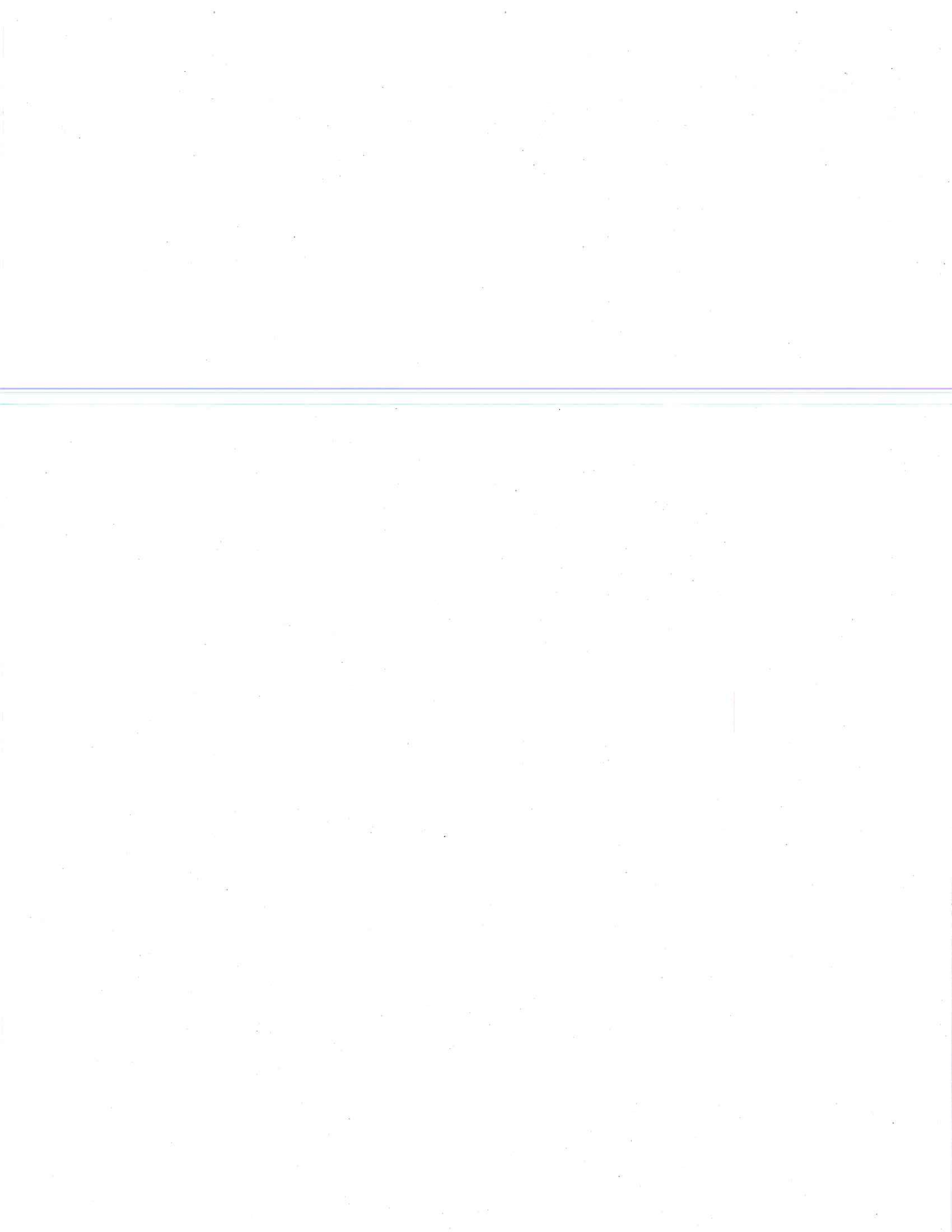
Step 2/Number of Activities: Identify the number of each type of activity.

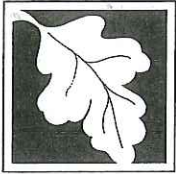
Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

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

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

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





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NOI Wetland Fee Transmittal Form
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B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Cat 1b (site work without a house)	1	\$110	\$110

Step 5/Total Project Fee: \$110

Step 6/Fee Payments:

Total Project Fee: \$110
a. Total Fee from Step 5
State share of filing Fee: \$42.50
b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee: n/a
c. 1/2 Total Fee plus \$12.50

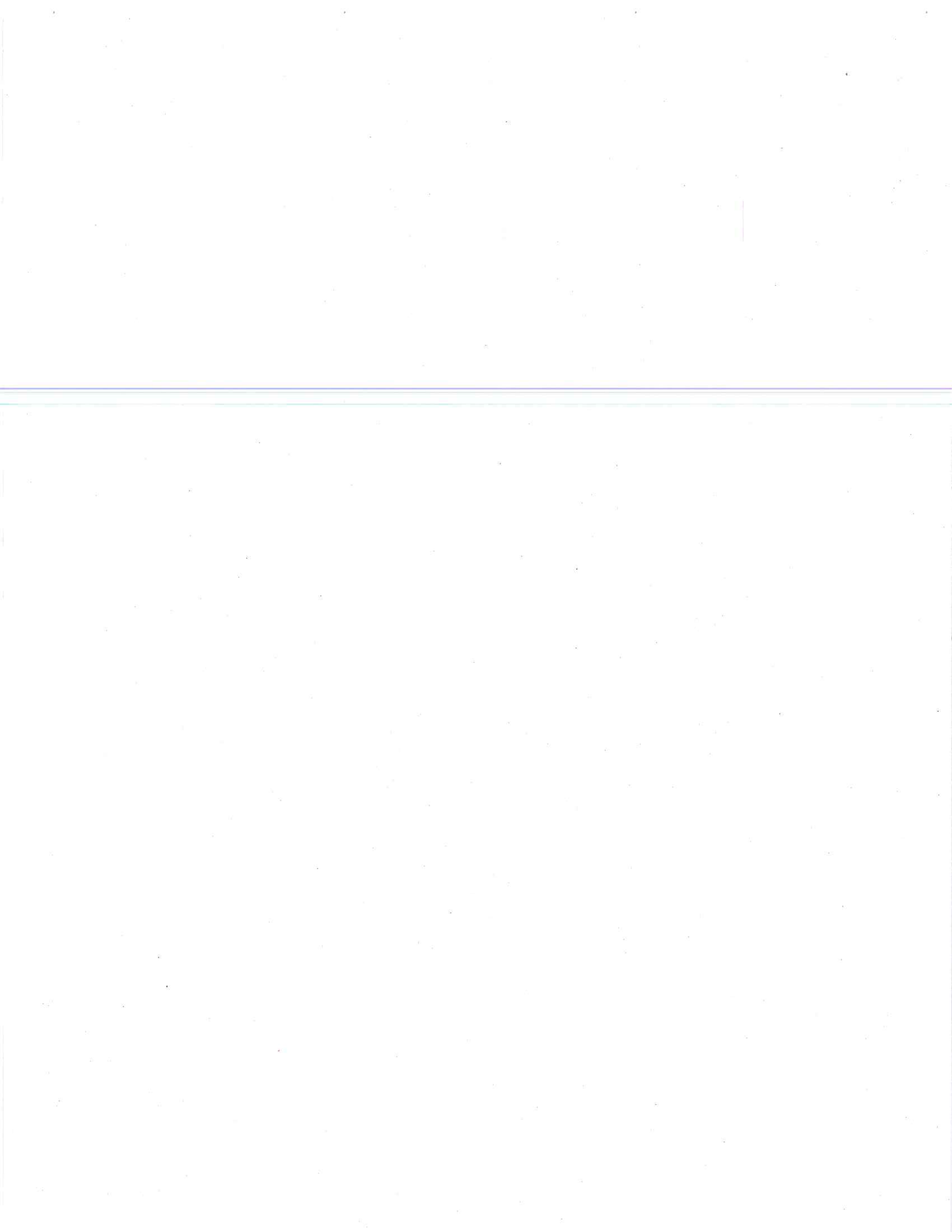
C. Submittal Requirements

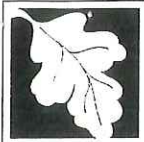
- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

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.)





Enter your transmittal number

X280568

Transmittal Number

Your unique Transmittal Number can be accessed online:

<http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html>

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: MassDEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. Copy 2 must accompany your fee payment. Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

* Note:
For BWSC Permits,
enter the LSP.

A. Permit Information

WPA Form 3

Wetlands Notice of Intent

1. Permit Code: 4 to 7 character code from permit instructions

2. Name of Permit Category

Site Work without a House

3. Type of Project or Activity

B. Applicant Information - Firm or Individual

MA Department of Conservation and Recreation

1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. Last Name of Individual
251 Causeway Street

3. First Name of Individual

4. MI

5. Street Address

Boston

MA

02114

617-626-1377

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

Ellen Berkland

ellen.berkland@state.ma.us

11. Contact Person

12. e-mail address

C. Facility, Site or Individual Requiring Approval

Gallops Island, Boston Harbor Islands State Park

1. Name of Facility, Site Or Individual

2. Street Address

Boston

MA

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

X280568

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

1. Name of Firm Or Individual

2. Address

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? yes no
If yes, enter the project's EOE file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

Special Provisions:

- 1. Fee Exempt (city, town or municipal housing authority)(state agency if fee is \$100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
- 2. Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
- 3. Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
- 4. Homeowner (according to 310 CMR 4.02).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

ITA DCR 8200
ITADCR8200WET1802000

\$42.50
Dollar Amount

4/25/18
Date

MA Department of Conservation and Recreation

Notice of Intent Application for

Gallops Island Quarantine Cemetery Project

Attachment A- Project Description and Performance Standards

Project Description

Project Background:

Gallops Island is one of three islands listed on the State and National Registers of Historic Places as part of the Boston Harbor Islands Archaeological District. The islands were first inhabited thousands of years ago seasonally by ancient Native Americans for resource procurement and were subsequently inhabited by Colonial settlers and later historic populations for a wide variety of purposes, including social welfare institutions. The quarantine hospital was relocated from Deer Island to Gallops Island in 1872 and remained a quarantine location for the next 42 years. During that time many of the island's buildings underwent renovations, and various treatments were developed for smallpox victims. An estimated 230 smallpox victims are buried on island.

Exposure of five grave shafts in 2004 prompted an emergency stabilization of Gallops Island quarantine cemetery by DCR. Subsequent storm surges, including Super Storm Sandy in 2012, exposed the burials again. Post-storm disaster funding was made available by the federal government, and DCR applied for, and was awarded, money for a two phase project to address sustained damages. With funding from the Historic Preservation Fund Hurricane grant program of the National Park Service (NPS), through the Massachusetts Historical Commission (MHC), DCR will undertake two phases of work:

- Phase 1 Archaeological Data Recovery and Site Stabilization for Gallops Island Quarantine Cemetery (awarded to Heritage Consultants, LLC)
- Phase 2 Hydrographic Survey and Conditions Assessment of Lovells, Gallops and Georges Islands (awarded to CLE Engineering)

This NOI covers work under Phase 1 only, as described below.

Scope of Work

Under this project, DCR's consultants will undertake the burial recovery program and stabilization of the Gallops Island Quarantine Cemetery, exhuming the remains and personal artifacts of smallpox victims from the cemetery to prevent further erosion of the graves into the ocean, and restoration of the coastal bank along the northern limit of the cemetery area. DCR will preserve and relocate the remains of sixty-six people whose graves are threatened by further erosion.

Heritage Consultants, LLC (Heritage) of Newington, CT will perform the work, with permits from the Boston Department of Public Health and the Massachusetts Historical Commission. DCR's Staff Archaeologist Ellen Berkland will provide oversight and support. Heritage has developed a Health and Safety Plan for protecting project personnel, DCR staff and the public from any potential health hazards.

The project includes:

- Site mapping, marking project limits, and erecting fencing and signage around ACM (see Project Area map)
- Excavation of three rows of graves, using heavy machinery as well as hand tools (see Excavation Process). Graves will be exposed 2 graves at a time.
 - Stripping topsoil (stockpile on site)
 - ~~Mach. excavation to base top of grave shaft removing up to 2 feet of soil (stockpile~~
on site within the designated areas of the cemetery area limits shown on the plans)
 - Hand excavation of grave shaft – removal of contents
- Regrading to restore cemetery to pre-construction condition including:
 - Backfill using indigenous soil
 - All excavation areas will be planted with species listed in Massachusetts Coastal Zone Management's (MA CZM) living shoreline guide for coastal vegetation. A landscaping plan detailing the use of the appropriate plantings will be developed prior to the hearing with the Boston Conservation Commission.
 - Installation of anti-erosion blanket
- Temporary Coastal Bank Restoration
 - Restore the Coastal Bank where removal of graves at the edge of Buffer Zone and top of Coastal Bank occurred, to mimic pre-construction topographic conditions or a 3H:1V maximum slope using residual, indigenous soils from the excavations. No disturbance to the toe of Coastal Bank or Coastal Beach is planned.
- Analysis of remains and material culture at an off-site lab
- Confirmation of forensic analyses with death records, followed by reburial off site
- Site work on Gallops Island is to be complete by Fall 2018
- Laboratory analysis, curation, and final reports to be filed by December 31, 2018

Heavy machinery will be delivered to the island using a marine landing vehicle, landing at the south end of the island where rubber mats will provide a protected pathway for machinery. Similar matting will be used to create a "pad" from which equipment will be operated. The pad will be located on the upland side of the cemetery at all times to minimize resource area impacts.

Heritage Consultants will work closely with DCR's Staff Archeologist and staff of the Boston Harbor Islands, who will provide daily transport for consultant personnel. Gallops Island will remain closed to the public, with additional signage and State Police patrols to deter unauthorized entry.

Gallops Island Quarantine Cemetery Excavation Process

Identification and recovery of burial within the Gallops Island Quarantine Cemetery will be accomplished through both mechanized and hand excavation throughout an area measuring approximately 5,950 square feet in size. Mechanized stripping will be used to remove overburden (topsoil) and to expose underlying soils within northern portion of the cemetery that contains the first three burial rows. Because of the environmental sensitivity of Gallops Island, mechanized stripping will be staged across the project area so that topsoil segregation and stockpiling can be carefully controlled and erosion, whether by rain or wind, will be minimized. During mechanical stripping, the project area (i.e., the area containing burials rows 1 through 3) will be bifurcated into eastern and western halves, and stripping will be conducted incrementally over half of the area at time, proceeding to the base of the topsoil to control its removal and segregation. The second half of the area then will be stripped to the base of the topsoil. This protocol for soil segregation will facilitate sensitive environmental reconstruction in proper stratigraphic sequence once the burial removal is completed. Heritage Consultants, LLC anticipates that no more than 18 to 24 inches of topsoil will need to be removed and stockpiled to expose the grave shafts.

Mechanized Excavation Methods to Identify Grave Shafts

Mechanized stripping and grave shaft identification will be accomplished using heavy equipment, such as a 14,000 lb. mini-excavator fitted with a smooth-edged clean-up blade measuring three feet in width. Work will focus on two graves at one time. Soil will be removed in controlled increments (2-3 inch layer) and all mechanized soil removal will be monitored by a team of professional archaeologists, who will direct the machine operator during the overburden removal process. During mechanized excavation, the exposed ground surface will be hand-cleaned using flat-bladed shovels, hoes, and trowels to identify grave shaft locations. Care will be taken to ensure that the machine operator is skilled and is experienced in the use of mechanized equipment in sensitive areas. Soil removed during mechanized and hand excavation will be segregated and stockpiled within a designated area in the southern portion of the cemetery. Stockpiled soil will be segregated using best soil management practices and placed on an appropriate, temporary geo-textile barrier fabric. Stockpiled soil also will be enclosed by silt fencing and covered with plastic sheeting to mitigate surface erosion while the archaeological fieldwork progresses. It is anticipated that no excavation (mechanical or otherwise) will take place to the south of the location containing the first three burial rows; however, excavation will take place 20 feet to east and west of the predicted burial locations to ensure that the cemetery boundaries have been identified correctly and that all human burial in the first three rows of the cemetery are recovered.

Identification and Hand Excavation of Grave Shafts

Once exposed through mechanical means, all grave shaft locations will be cleaned and delineated by hand using flat-bladed shovels, hoes, and trowels to verify the shaft dimensions. All backfill removed while exposing and excavating the human burials will be wheelbarrowed and included in the appropriate soil stockpile location for later return to the appropriate strata (i.e., topsoil vs subsoil). If grave shaft fill overlying the top of the coffin or coffin remains is greater than 18 inches, additional mechanized excavation to remove excess grave shaft fill will be undertaken to permit safe hand-excavation of burials. When mechanized removal of the upper extent of the grave shaft fill is necessary, a portion of the

surrounding soil also will be removed to create a “bench” to permit safe entry into the excavation area. The depth and extent of mechanized soil removal will be determined by the locations and depths of the grave shafts and all soils removed during the supplementary mechanized excavations will be included in the soil stockpiling procedure.

Cemetery Backfilling Procedures

Initial filling of the stripped and excavated portion of the cemetery will entail placement of indigenous soil in the openings followed by replacement of sub-topsoil using the mini-excavator. The area will be graded preliminarily. The segregated topsoil then will be applied. This sequential operation will return the soil stratigraphy to as close to pre-excavation conditions as possible and will provide a suitable environment to foster regrowth of plant life. Following final grading, the team will install plantings from [MA CZM's living shoreline guide for coastal vegetation](#).

Once the plantings are in place, the excavated portion of the Gallops Island Quarantine Cemetery will be covered with a biodegradable anti-erosion blanket. The blanket will be purchased from the American Excelsior Company, the inventor of biodegradable erosion control blankets (ECB) and the Curlex® brand. ECB will be net free. Designed using cuts of Great Lakes aspen fibers, the Curlex® brand blankets were developed in the early 1960s to provide ideal conditions for seed growth, while simultaneously shielding the topsoil from water and wind erosion. These blankets also have a built-in swell factor that allows the fibers to expand and form a stronger matrix when wet. Once the above-described restoration process is complete, DCR staff will conduct routine walkovers of the site once a week has passed and record/photograph any changes or concerns that may affect the cemetery.

Protective Matting and Heavy Equipment Movement Within the Project Area Heritage Consultants, LLC understands that the habitat surrounding the Gallops Island Quarantine Cemetery is sensitive and impacts to it should be minimized as much as possible throughout the life of the project. Thus, Heritage Consultants, LLC plans to employ construction matting for the transfer of the mini excavator and field supplies/equipment (storage trailer, porta potty, hand equipment) from the barge landing zone to the work area, as well as to act as a platform for mechanized excavation within the cemetery itself. The construction matting that will be used consists of a heavy duty molded plastic matting system that is durable, lightweight, and can withstand well over the 14,000 lb., mini-excavator load that it will carry. The proposed matting system, which is used routinely in construction settings, is engineered to provide ground protection and heavy equipment access over soft surfaces, while providing a firm support base and traction. Heritage Consultants, LLC will supply enough matting to transport the heavy equipment across the eastern beach of Gallops Island from the barge landing zone to the cemetery without impacts to local soils. These mats also will be laid down within the cemetery and used as a stable base from which the heavy equipment will can operate safely while completing with the mechanical excavation portion of the project.

Finally, since the relatively narrow northern beach of Gallops Island in the vicinity of the cemetery consists of large boulders, loose and shifting cobbles, and a partially destroyed seawall, no mechanical equipment will be utilized in this area, as it will not afford a stable base from which to operate the machine safely. Instead any mechanical stripping in the vicinity of the scarp that forms the northern border

of the burial ground will take place from within the cemetery itself. Thus, no impacts to the northern beach of the island are anticipated from heavy equipment use.

Wetland Resource Areas

A portion of the island which is the focus of the cemetery work is located within jurisdictional wetland resource areas as defined by the WPA Regulations. Wetland resource areas were determined in conjunction with an environmental scientist of AECOM during a field visit on June 5, 2018. The field delineation was limited to the southern and eastern areas of the island, including Peggy's Point, and north to the upper limits of the erosion. The Coastal Bank delineation was analyzed and determined based on guidance and information obtained from the Coastal Manual published in August 2017 and field observations during the site visit. The wetland resource areas present on the island are Coastal Beach, Coastal Dune, Barrier Beach, Coastal Bank, Rocky Intertidal Shores, and Land Subject to Coastal Storm Flowage (LSCSF). No resource areas were identified upland or landward of Coastal Bank resulting in the 100-foot Buffer Zone extending horizontally outward from the top of Coastal Bank. All resource areas are shown on the Resource Area and Transect Key Plan (Sheet E-100). Resource areas are further described in the attached June 2018 Wetland Resource Area Delineation Memorandum by AECOM.

Work in Resource Areas

The excavation process associated with the cemetery work, as described above, will cause temporary impacts to the Coastal Bank, Coastal Beach and LSCSF resource areas and the 100-foot Buffer Zone to Coastal Bank. Temporary impacts to Coastal Beach, Coastal Bank and LSCSF resource areas result due to the temporary nature of the construction which includes the construction access and landing area where the protective matting will be placed and used for access to the cemetery area.; mats will disperse weight of vehicles and minimize impacts to the resource areas. There are temporary impacts from foot traffic on the Coastal Beach, Coastal Bank and LSCSF at the proposed landing area and foot path. No excavation work is proposed in the coastal beach, and no equipment will be staged there; all equipment will be staged within the Buffer Zone.

The excavation occurring in the cemetery area along the top of Coastal Bank results in a temporary impact to Coastal Bank. Heavy equipment will be used to uncover grave shafts, then hand tools will be used for the excavation of human and material remains (clothing, artifacts, caskets, hardware, etc.). Graves and their contents will be removed, and the bank regraded to no steeper than 3H:1V, with indigenous soil filling grave shafts. The remaining area of excavation work, and in addition, the area within the cemetery limits designated as a staging area is considered work within the 100-foot Buffer Zone to Coastal Bank. The impacts are categorized as temporary because the ground will be excavated to a maximum depth of approximately 2 feet and then re-filled to follow pre-construction topographic conditions after the shallow, extant graves are removed. Temporary impact areas are identified on the Grave Excavation Impact Plan (Sheet E-103) and in the table below.

Table 1 - Impact Areas Associated with Cemetery Excavation Work

Resource Area	Temporary Impact	Permanent Impact	Total Impact
Coastal Bank	150 LF	0 LF	150 LF
Coastal Beach	2,618 SF	0 SF	2,618 SF
LSCSF	497 SF	0 SF	497 SF
Buffer Zone	12,569 SF	0 SF	12,569 SF

The work will be performed in compliance with the Performance Standards articulated in 310 CMR 10.27(3) through 10.27(7) (Coastal Beach), and 10.30(3) through 10.30(8) (Coastal Bank) and described in the following sections.

Restoration of Resource Areas

in work areas that are within the buffer zone, existing topsoil will be stripped from each burial for subsequent re-use. Then subsoil will be carefully excavated to expose and remove remains. Upon removal of the burial remains, the subsoil will be re-used as backfill. Supplementary backfill soils are expected to be needed to replace the volume of human burial removed from the island. The supplementary backfill will come from the existing soil stockpile located within the cemetery area limits. Soil for planting substrate will also be re-used from existing stockpile. Plantings will be as specified above and shall be consistent with Massachusetts Coastal Zone Management living shoreline guide for coastal vegetation.

Removal of burials along the slope at the top of Coastal Bank will be carefully conducted to minimize disturbance to both the human burial remain and the topography of the slope which is detailed in Sk-001 and SK-002. And as indicated above, equipment will be sited on the uplands within the Buffer Zone which minimizes the impact and subsequent restoration of Coastal Bank. Upon removal of the remains, stockpiled soils will be used to restore existing topography to match existing slope but no more than at a maximum slope of 3H:1V. The disturbance along the slope will be limited to the top of the slope within the limit of the graves so that there is no planned disturbance to Coastal Beach.

Mitigation Measures

In order to mitigate impacts to jurisdictional wetland resources, the work will be conducted under direct oversight of a Licensed Site Professional (LSP). The design calls for the use of compost filter tubes, or other appropriate erosion control measures, along the perimeter of the limit of work to protect the surrounding resource areas during construction.

To control stormwater during project activities, the following types of temporary techniques will be employed during excavation:

- Runoff will be diverted around excavation areas to the extent practicable
- Silt fencing will be installed around temporary stockpiles
- Sediment filters will be installed in areas of concentrated flow
- Temporary soil stockpiles will be covered with plastic sheeting, geo-textile fabric or otherwise appropriately controlled to prevent erosion and removed at the end of the project duration

Regulatory Compliance

As afforded at 310 CMR 10.24, it is within the issuing authority's discretion to consider the magnitude of the alteration and the significance of the Project site to the interests identified in the WPA, the availability of reasonable alternatives to the proposed activities, the extent to which disturbances are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in the WPA.

The WPA Regulations provide specific performance standards for work within Coastal Beach and Coastal Bank. The pertinent regulatory citations of these performance standards and a description of the Project's compliance with these standards are provided below. The WPA Regulations do not provide performance standards for work within LSCSF, however, as previously described; the final condition of the area of LSCSF will be restored to its previous, pre-construction condition. The Performance Standards are listed below in italics and the Project's compliance with the standards immediately follows.

The Coastal Beach Performance Standards at 310 CMR 10.27(3) - 10.27(7) of the WPA Regulations state:

Any project on a coastal beach, except any project permitted under 310 CMR 10.30(3)(a), shall not have an adverse effect by increasing erosion, decreasing the volume or changing the form of any such coastal beach or an adjacent or downdrift coastal beach.

The project does not propose any excavation on the Coastal Beach resource area which will only be impacted temporarily from equipment matting and construction access. After the equipment matting is removed, the Coastal Beach will be restored to its previous, pre-construction condition. The project will avoid impacts to the Coastal Beach by establishing an erosion control boundary at the limit of work. The construction will follow the protocols listed above for erosion control and mitigation.

Any groin, jetty, solid pier, or other such solid fill structure which will interfere with littoral drift, in addition to complying with 310 CMR 10.27(3), shall be constructed as follows:

- a. It shall be the minimum length and height demonstrated to be necessary to maintain beach form and volume. In evaluating necessity, coastal engineering, physical oceanographic and/or coastal geologic information shall be considered.*
- b. Immediately after construction any groin shall be filled to entrapment capacity in height and length with sediment of grain size compatible with that of the adjacent beach.*
- c. Jetties trapping littoral drift material shall contain a sand by-pass system to transfer sediments to the downdrift side of the inlet or shall be periodically redredged to provide beach nourishment to ensure that downdrift or adjacent beaches are not starved of sediments.*

The project does not propose a groin, jetty, solid pier or other solid fill structures on a Coastal Beach that would interfere with littoral drift.

Notwithstanding 310 CMR 10.27(3), beach nourishment with clean sediment of a grain size compatible with that on the existing beach may be permitted.

There is no beach nourishment proposed as no excavation will occur on the Coastal Beach.

In addition to complying with the requirements of 310 CMR 10.27(3) and 10.27(4), a project on a tidal flat shall, if water-dependent, be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water dependent, have no adverse effects, on marine fisheries and wildlife habitat caused by: (intentionally omitted)

The project, as currently designed, will not impact tidal flats.

No project may be permitted which will have any adverse effect on specified habitat sites or rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

The project is not within the limits of estimated or priority habitat, as established by the Natural Heritage and Endangered Species Program's (NHESP) 14th Edition Natural Heritage Atlas, August 1, 2017.

When a Coastal Bank is significant to storm damage prevention and flood control because it is a vertical ~~buffer to uplands from storm waters, the applicable Coastal Bank Performance Standards at 310 CMR 10.30(6) - 10.30(8) of the WPA Regulations state:~~

Any project on such a coastal bank or within 100 feet landward of the top of such coastal bank shall have no adverse effects on the stability of the coastal bank.

The restoration of the top of Coastal Bank where the graves has been excavated will be restored to match the existing topography at a slope not to exceed 3H:1V. The intent is to minimize disturbance to existing vegetated Coastal Bank by only excavating in areas directly around the graves. Final condition of the Coastal Bank is as shown in Sk-002. This restoration design is intended to minimize disturbance to the Coastal Bank and the surrounding resource areas. By minimizing disturbance, the stability of the slope will be maintained, however the bank will be susceptible to future erosion by storms and wave action. In the case of future storms and subsequent erosion of the Coastal Bank, this graves excavation and restoration process will be repeated.

Bulkheads, revetments, seawalls, groins or other coastal engineering structures may be permitted on such a coastal bank except when such bank is significant to storm damage prevention or flood control because it supplies sediment to coastal beaches, coastal dunes, and barrier beaches.

The project does not propose a coastal engineering structure that will impact the Coastal Bank.

Notwithstanding the provisions of 310 CMR 10.30(3) through (7), 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 10.37.

The project is not within the limits of estimated or priority habitat, as established by the Natural Heritage and Endangered Species Program's (NHESP) 14th Edition Natural Heritage Atlas, August 1, 2017 .

In summary, this project establishes the burial recovery program and stabilization of the Gallops Island Quarantine Cemetery, exhuming the remains and personal artifacts of smallpox victims from the cemetery to prevent further erosion of the graves into the ocean, and subsequent restoration of the Coastal Bank resource area along the northern limit of the cemetery area.

Identification and recovery of burials within the Gallops Island Quarantine Cemetery will be accomplished through both mechanized and hand excavation. Mechanized stripping will be used to remove overburden (topsoil) and to expose underlying soils within the northern portion of the cemetery that contains the first three burial rows. Because of the environmental sensitivity of Gallops Island,

mechanized stripping will be staged across the project area so that topsoil segregation and stockpiling can be carefully controlled and erosion, whether by rain or wind, will be minimized. The second half of the area then will be stripped to the base of the topsoil. Once exposed through mechanical means, all grave shaft locations will be cleaned and delineated by hand using flat-bladed shovels, hoes, and trowels.

Initial filling of the stripped and excavated portion of the cemetery will entail placement of indigenous soil in the openings followed by replacement of sub-topsoil. The segregated topsoil then will be applied. Following final grading, the team will install plantings from MA CZM's living shoreline guide for coastal vegetation. Once the plantings are in place, the excavated portion of the Gallops Island Quarantine Cemetery will be covered with a biodegradable anti-erosion blanket.

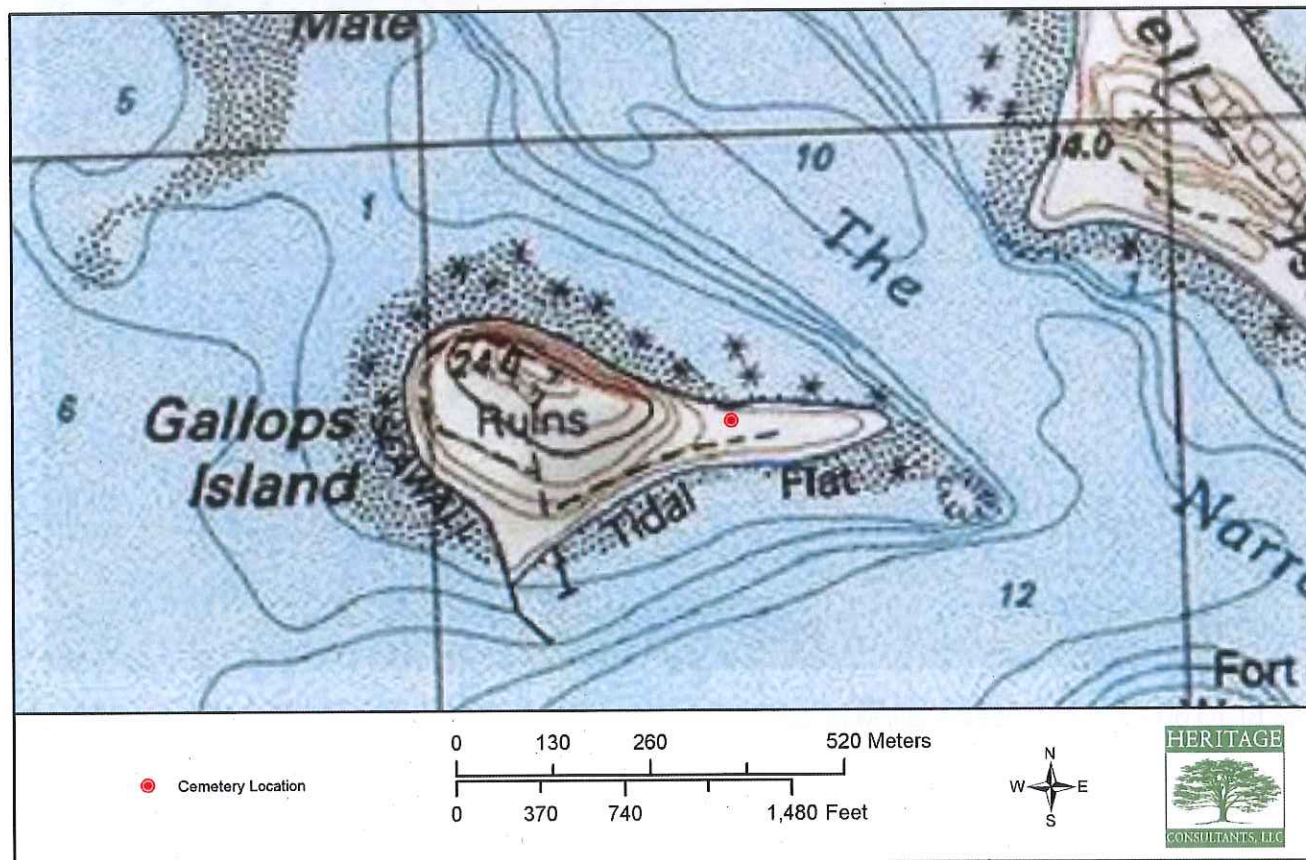
A portion of the Island which is the focus of the cemetery work is located within jurisdictional wetland resource areas as defined by the WPA Regulations. The wetland resource areas are Coastal Beach, Coastal Dune, Barrier Beach, Coastal Bank, and LSCSF. No resource areas were identified upland or landward of Coastal Bank resulting in the 100-foot Buffer Zone extending horizontally outward from the top of Coastal Bank. The excavation process associated with the cemetery work, as described above, will cause temporary impacts to the Coastal Bank, Coastal Beach and LSCSF resource areas and the 100-foot Buffer Zone to Coastal Bank. The impacts are categorized as temporary because the ground will be excavated to a maximum depth of approximately 2 feet and then re-filled to follow pre-construction topographic conditions after the shallow, extant graves are removed.

Upon removal of the remains, stockpiled soils will be used to restore existing topography to match existing slope but no more than at a maximum slope of 3H:1V. The disturbance along the slope will be limited to the top of the slope within the limit of the graves so that there is no planned disturbance to Coastal Beach. The intent is to minimize disturbance to existing vegetated Coastal Bank by only excavating in areas directly around the graves. This restoration design is intended to minimize disturbance to the Coastal Bank and the surrounding resource areas. By minimizing disturbance, the stability of the slope will be maintained, however the bank will be susceptible to future erosion by storms and wave action. In the case of future storms and subsequent erosion of the Coastal Bank, this graves excavation and restoration process will be repeated.

DCR respectfully requests that the City of Boston Conservation Commission find these measures adequately protective of the interests identified in the WPA and issue an Order of Conditions approving the work described in this NOI and shown on the accompanying plans.

MA Department of Conservation and Recreation Notice of Intent Application for Gallops Island Quarantine Cemetery Project

Attachment B- Maps, Photographs and Plans



Excerpt from a 1995 USGS 7.5" series topographic quadrangle image showing the location of the Gallops Island Quarantine Cemetery on Gallops Island, Boston Harbor Islands State Park, Boston, MA



Gallops Island orthophoto (2018 Google Map data)



Work area in yellow with overlay of approximate burial locations (taken from 1906 map)



Figure 3. Overview photo of the Gallops Island Quarantine Cemetery area facing east.



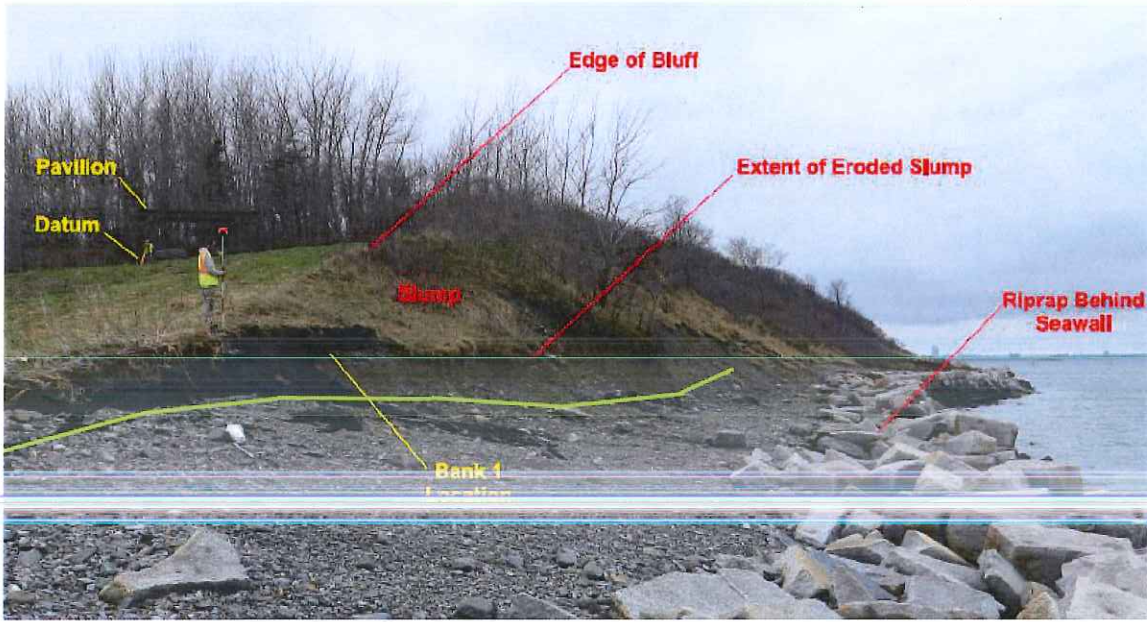
Figure 4. Overview photo of the Gallops Island Quarantine Cemetery area facing west (note the five burials currently eroding out the cemetery area are located beneath the black landscape fabric in the center of the photo).



At left: Conditions April 2018, Lot #60, Grave of Joseph Fitzgerald, died of smallpox 1872

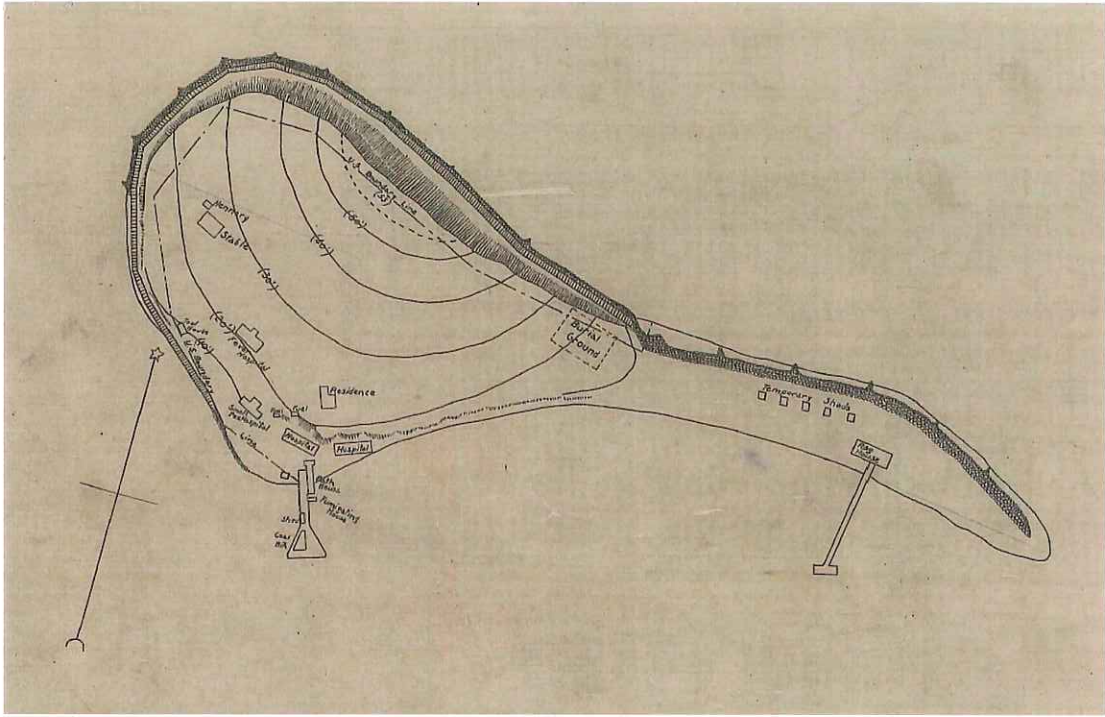
Below: View of Coastal Bank and Beach, April 2018





Green line indicates limits of work – all work and equipment to be staged upland from the resource areas

April 2018



(copy)
Sketch of
Gallops Island Boston Harbor Mass.
Showing property of the City of Boston.
Locations and uses of all buildings thereon.
Scale 1:2500

U.S. Engineers 1875, 1884, 1885
Revised 1916

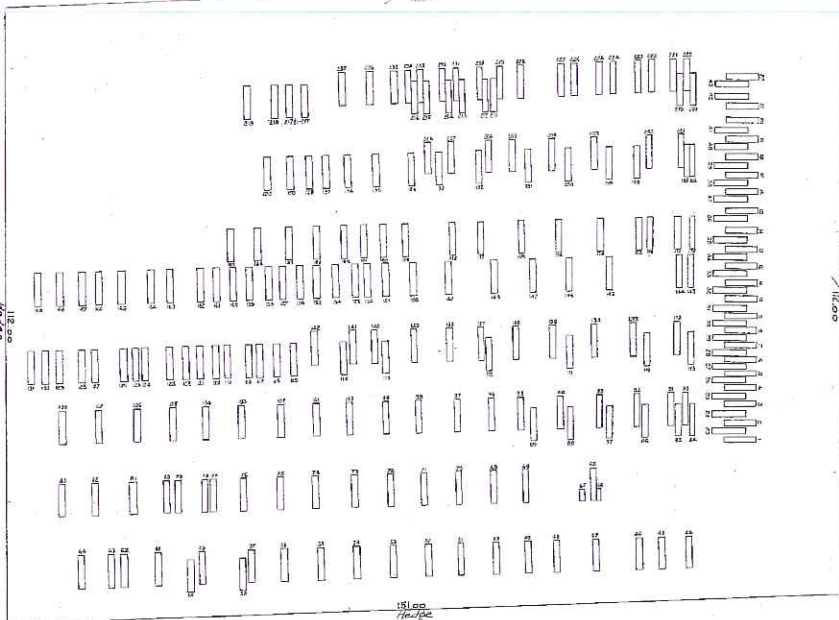
CITY OF BOSTON
GALLOPS ISLAND
BOSTON HARBOR
Dec. 30, 1916

R.W. Whittemore
Chief Engineer
Street Layout and Dept.

NOTE: This plan was compiled from surveys of the U.S. Engineers, with additions made by measurement of the locality. The names of local buildings above 1875 were used as taken from the U.S.C.S. Topographical Survey of 1885. Transferred to U.S. of America Dec. 30, 1916. Staff Data 4084 (2) 172.

1916 map of Gallops Island

1906 Map of Cemetery

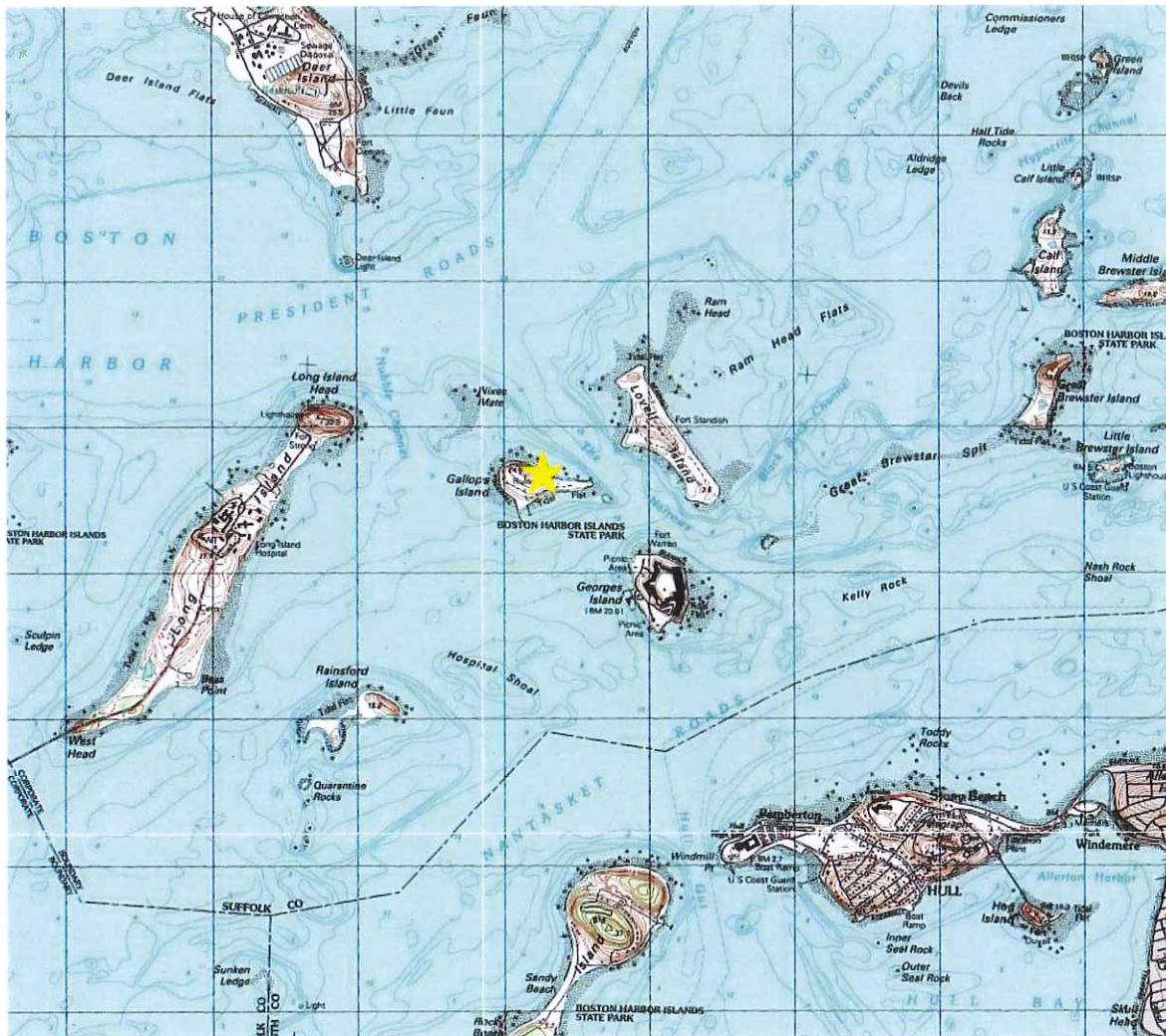


PL	NAME	DATE	AGE	SEX	HT	WT	HAIR	EYES	COMPL	REMARKS
1	Adams, John	1824	62	M	5-10	140	B	B	Thin	
2	Adams, John	1824	62	M	5-10	140	B	B	Thin	
3	Adams, John	1824	62	M	5-10	140	B	B	Thin	
4	Adams, John	1824	62	M	5-10	140	B	B	Thin	
5	Adams, John	1824	62	M	5-10	140	B	B	Thin	
6	Adams, John	1824	62	M	5-10	140	B	B	Thin	
7	Adams, John	1824	62	M	5-10	140	B	B	Thin	
8	Adams, John	1824	62	M	5-10	140	B	B	Thin	
9	Adams, John	1824	62	M	5-10	140	B	B	Thin	
10	Adams, John	1824	62	M	5-10	140	B	B	Thin	
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23	Adams, John	1824	62	M	5-10	140	B	B	Thin	
24	Adams, John	1824	62	M	5-10	140	B	B	Thin	
25	Adams, John	1824	62	M	5-10	140	B	B	Thin	
26	Adams, John	1824	62	M	5-10	140	B	B	Thin	
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33	Adams, John	1824	62	M	5-10	140	B	B	Thin	
34	Adams, John	1824	62	M	5-10	140	B	B	Thin	
35	Adams, John	1824	62	M	5-10	140	B	B	Thin	
36	Adams, John	1824	62	M	5-10	140	B	B	Thin	
37	Adams, John	1824	62	M	5-10	140	B	B	Thin	
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44	Adams, John	1824	62	M	5-10	140	B	B	Thin	
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73	Adams, John	1824	62	M	5-10	140	B	B	Thin	
74	Adams, John	1824	62	M	5-10	140	B	B	Thin	
75	Adams, John	1824	62	M	5-10	140	B	B	Thin	
76	Adams, John	1824	62	M	5-10	140	B	B	Thin	
77	Adams, John	1824	62	M	5-10	140	B	B	Thin	
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79	Adams, John	1824	62	M	5-10	140	B	B	Thin	
80	Adams, John	1824	62	M	5-10	140	B	B	Thin	

Plan showing Cemetery on Gallops Island, Boston Harbor. Scale of Feet 7/8 an inch. CITY OF BOSTON GALLOPS ISLAND BOSTON HARBOR May 23, 1806. Wm. Parker

MA Department of Conservation and Recreation

Application for a Notice of Intent for the Gallops Island Quarantine Cemetery Project



USGS Quad showing project location

Memorandum

To	Melissa Ryan	Page 1
CC	Michael Stiller	
Subject	Gallops Island – Wetland Resource Area Delineation 2018	
From	Matt Devlin, Senior Wetland Scientist	
Date	June 21, 2018	

Introduction

On June 5, 2018 a coastal wetland resource area boundary delineation was conducted by AECOM on Gallops Island, Boston, MA along the southern and northern shorelines in the vicinity of the solid waste removal area (SWRA), Peggy's Point and the Cemetery. The wetland delineation was performed by Matt Devlin (a Senior Wetland Scientist at AECOM) within these areas to identify wetland resource areas pursuant to the Massachusetts Wetlands Protection Act and its implementing regulations (310 CMR 10.00). The Massachusetts Office of Coastal Zone Management (CZM) document entitled *Applying the Massachusetts Coastal Wetlands Regulations: A Practical Manual for Conservation Commissions to Protect the Storm Damage Prevention and Flood Control Functions of Coastal Resource Areas*, otherwise known as the CZM Coastal Manual (2017), was utilized to conduct the delineation. Alpha Survey Group (Alpha) also surveyed the flagging on June 5, 2018 that was used to delineate the wetland resource areas. The June 5, 2018 delineation performed by AECOM was conducted to provide an update for the Massachusetts Department of Environmental Protection (DEP) to the previous wetland delineation conducted by LEC Environmental Consultants, Inc. (LEC) on August 7, 2012 since the land areas have changed over time due to erosion in the area.

Wetland Resource Area Delineation

The following provides the methodology used to delineate wetlands resource areas and a description of the wetlands resource areas.

The 2017 CZM Coastal Manual and the Massachusetts Wetland Protection Act Regulations (310 CMR 10.00) were used to delineate coastal wetland resource areas. There were no inland (freshwater) wetlands identified within the southern and northern shorelines of the island. There were several coastal wetlands delineated including: Coastal Beach and Coastal Dune (sandy dune, cobble dune and barrier beach/dune).

It should be noted that several coastal wetland resource areas including Coastal Bank, Land Subject to Coastal Storm Flowage (LSCSF), Land Under the Ocean and Rocky Intertidal Shore were not delineated in the field since those types of wetland resource areas are based

on topographic elevation and survey information. The topography along the upland slope of Coastal Beach and Coastal Dune was surveyed by Alpha Survey Group (Alpha) on June 5 and June 8, 2018 and AECOM will use that surveyed topography to run transects perpendicular to the slopes in order to determine the landward limit of Coastal Bank (i.e. Top of Bank). The LSCSF is based on 100-year floodplain elevation and therefore the FEMA Flood Insurance Rate Map elevations will be used to determine LSCSF. The seaward limit of Coastal Beach (mean low water line based on 19-year metonic cycle of the National Tidal Datum Epoch) was not delineated; however, the generally observed low tide on June 5, 2018 was surveyed by Alpha. The Rocky Intertidal Shore between mean high water (MHW) and mean low water (MLW) was also not delineated for the lower limits of Coastal Beach and the landward limit of Land Under the Ocean.

Coastal Beach

Coastal Beach is defined at 310 CMR 10.27(2) as *unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing man-made structures, when these structures replace one of the above lines, whichever is closest to the ocean.*

Tidal Flat means any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean.

A Coastal Beach (including Tidal Flat) extends landward from MLW in Boston Harbor to either the Coastal Dune line, Coastal Bank line and/or the seaward edge of existing man-made structures depending on the shoreline section of the island. The landward boundary of Coastal Beach was delineated in the field by AECOM with pink surveyors flagging (numbered CB1 through CB 141 and CB 200 through CB 213). The most extensive and continuous Coastal Beach (100 series beach) is located along the southern shoreline (and small portion of northern shoreline) where the landward boundary is either a Coastal Bank line or Coastal Dune line (see photos 1 through 4). The sediments along this section of beach vary from fine/medium sand from MLW up to the MHW line, to coarse sand and gravel along the higher parts of the beach or the high tide line (HTL). The southern shoreline is somewhat divided between the southernmost peninsula consisting of a stone jetty (near the gazebo) into a western portion of the southern shoreline (see photos 1 and 2) and an eastern portion of the southern shoreline (see photos 3 and 4).

There is also a somewhat narrow band of Coastal Beach along the northern shoreline (200 series beach) (see photos 11 and 12). The sediments along this section of beach vary from fine/medium sand, coarse sand, gravel and some cobbles and rock along the higher portions of the beach. This section of beach and upland has undergone extensive erosion due to their northern facing shoreline.

Coastal Dune

According to 310 CMR 10.28(2), Coastal Dune is defined as *any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control.*

Several distinct areas of dunes are located along the southern and northern sides of the island.

Two areas of Coastal Dune were delineated with blue surveyors flagging (numbered D100 through D110 and D200 through D206). The D100 and D-200 series dunes are typical sandy dunes composed of fine, windblown sand that are vegetated by American beach grass (*Ammophila brevigulata*) (see photos 5 and 6).

A cobble dune consisting of small to large cobbles with a steep north facing slope is currently present along the northern shoreline (see photos 9 and 10) directly behind the stone revetment that apparently receives washover. The two areas of the 100 and 200 series Coastal Beach also terminate along either side of this area of cobble dune. Portions of the cobble dune were not flagged in the field since the ground would not allow for the placement of stakes in the rocky surface; therefore, AECOM walked the boundary and Alpha surveyed the limits (identified on the plan as cobble dune points CD1 through CD12).

Barrier Beach (Barrier Dune)

According to 310 CMR 10.29(2), Barrier Beach is defined as *a narrow, generally low-lying strip of land generally, but not always, consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends. A barrier beach may contain areas of glacially deposited sediments.*

A Barrier Beach (considered to be a dune as part of this project) exists towards the far eastern tip of the island (see photos 7 and 8) known as Peggy's Point. The western (upland) limit of the barrier dune was identified in the field with several shallow auger holes, a visual analysis of sediments and other indicators (e.g., cobble and shell overwash). Sediment within the barrier dune consists of sand, gravel and cobble with various thickness of shell deposits. Soil encountered at the upland boundary of the western limit of the barrier dune consisted of loam and loamy coarse sand. This area of Barrier Beach/dune is thickly vegetated by beach rose (*Rosa rugosa*) and stunted staghorn sumac (*Rhus typhina*). The north and northeast side of the Barrier Beach is a high-energy environment with some protection offered by a row of stone riprap that parallels the shoreline.

PHOTOGRAPHIC LOG

Project Name: Gallops Island

Site Location: Gallops Island, Boston, MA

Project No. 60541761

Photo No.
1

Date:
6/5/18

Direction Photo Taken:
Southeast

Description:

View of the coastal beach along the southern shoreline (westerly side of jetty peninsula near gazebo) near coastal beach flag CB-103.



Photo No.
2

Date:
6/5/18

Direction Photo Taken:
Southeast

Description:

View of the coastal beach along the southern shoreline (westerly side of jetty peninsula near gazebo) near coastal beach flag CB-101.



PHOTOGRAPHIC LOG

Project Name: Gallops Island

Site Location: Gallops Island, Boston, MA

Project No. 60541761

Photo No.
3

Date:
6/5/18

Direction Photo Taken:
Southwest

Description:

View of the coastal beach along the southern shoreline (easterly side of jetty peninsula) near coastal beach flag CB-125. Note view of gazebo and dock in background.



Photo No.
4

Date:
6/5/18

Direction Photo Taken:
Northeast

Description:

View of the coastal beach along the southern shoreline (easterly side of jetty peninsula) near coastal beach flag CB-113.



PHOTOGRAPHIC LOG

Project Name: Gallops Island

Site Location: Gallops Island, Boston, MA

Project No. 60541761

Photo No.
5

Date:
6/5/18

Direction Photo Taken:
Southwest

Description:
View of the Coastal Dune (west of the gazebo and dock) containing American beach grass (*Ammophila brevigulata*) near coastal beach flag CB-109.



Photo No.
6

Date:
6/5/18

Direction Photo Taken:
Northeast

Description:
View of the Coastal Dune (east of the gazebo and dock) containing American beach grass (*Ammophila brevigulata*) near coastal beach flag CB-112.



PHOTOGRAPHIC LOG

Project Name: Gallops Island

Site Location: Gallops Island, Boston, MA

Project No. 60541761

Photo No.
7

Date:
6/5/18

Direction Photo Taken:
Northeast

Description:

View of the barrier beach (barrier dune) vegetated with beach rose (*Rosa rugosa*) and stunted staghorn sumac (*Rhus typhina*) near coastal beach flag 131.



Photo No.
8

Date:
6/5/18

Direction Photo Taken:
West

Description:

View of the barrier beach (barrier dune) vegetated with beach rose (*Rosa rugosa*) and stunted staghorn sumac (*Rhus typhina*) near coastal beach flag 135 (looking at the vegetated tip of Peggy's Point).



PHOTOGRAPHIC LOG

Project Name: Gallops Island

Site Location: Gallops Island, Boston, MA

Project No. 60541761

Photo No.
9

Date:
6/5/18

Direction Photo Taken:
West

Description:
View of the cobble dune along the northern shoreline near coastal beach flag CB 140.



Photo No.
10

Date:
6/5/18

Direction Photo Taken:
West

Description:
View of the cobble dune along the northern shoreline near coastal beach flag CB 140. Note the steep facing northern slope of dune



PHOTOGRAPHIC LOG

Project Name: Gallops Island

Site Location: Gallops Island, Boston, MA

Project No. 60541761

Photo No.
11

Date:
6/5/18

Direction Photo Taken:
East

Description:

View of the narrow band of coastal beach along the northern shoreline near coastal beach flag CB 210. Note the extensive erosion along upland slope.



Photo No.
12

Date:
6/5/18

Direction Photo Taken:
West

Description:

View of the narrow band of coastal beach along the northern shoreline near coastal beach flag CB 205. Note the extensive erosion along upland slope.

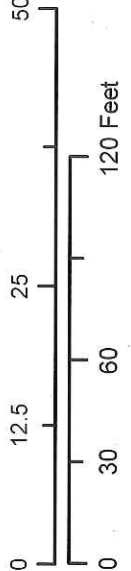
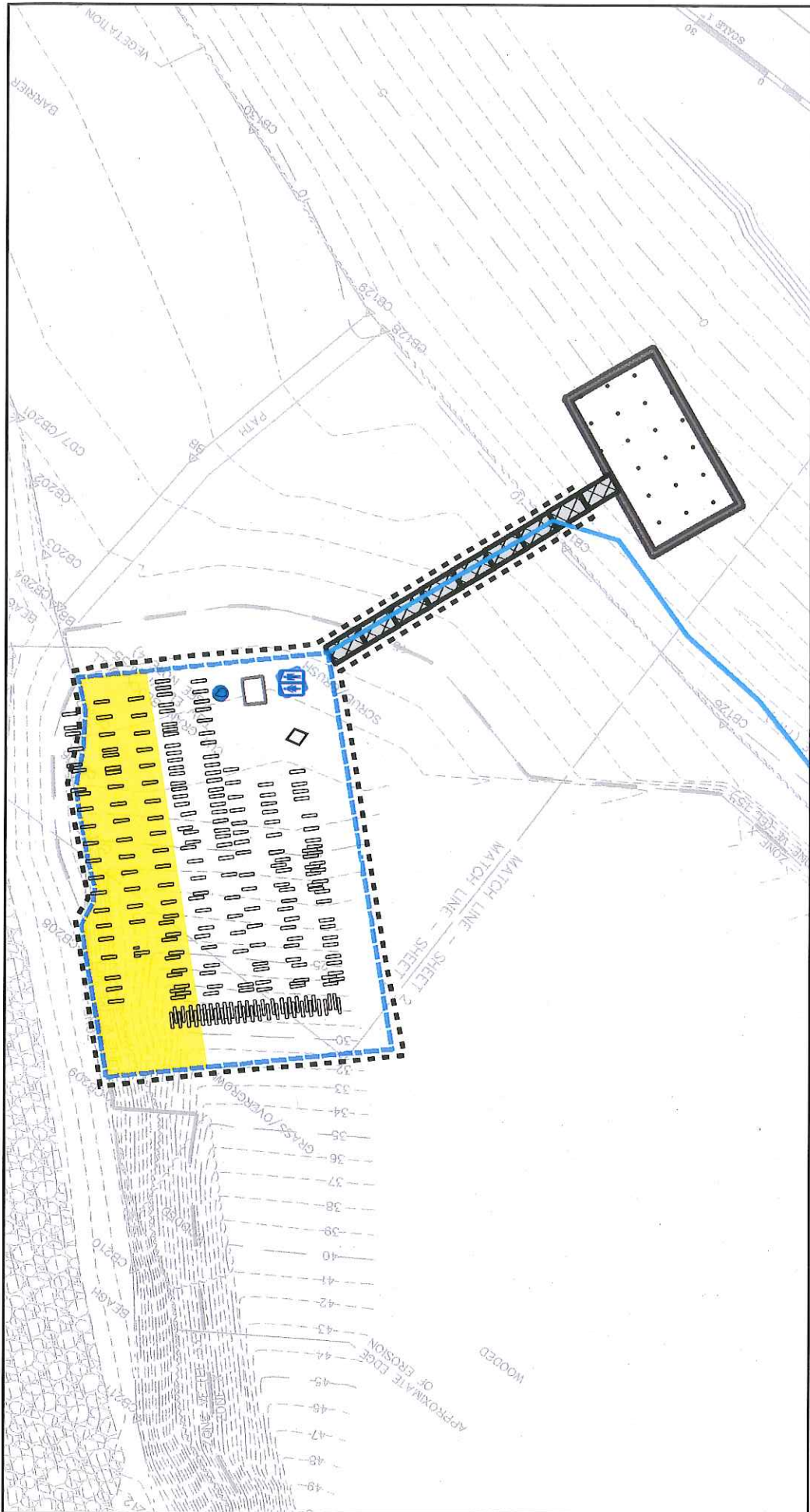


Top of Coastal Bank

Approx. edge of erosion

Coastal Beach





PROPOSED GRAVES EXCAVATION PLAN - JULY 2018

- Cemetery Limit of Work
- Graves to Be Excavated
- Grave Plots
- Erosion Control
- Hand Washing Station
- Portable Toilet
- Matting
- Storage Container
- Barge Landing Area
- Vehicle Refueling Area
- Alternative Foot Path



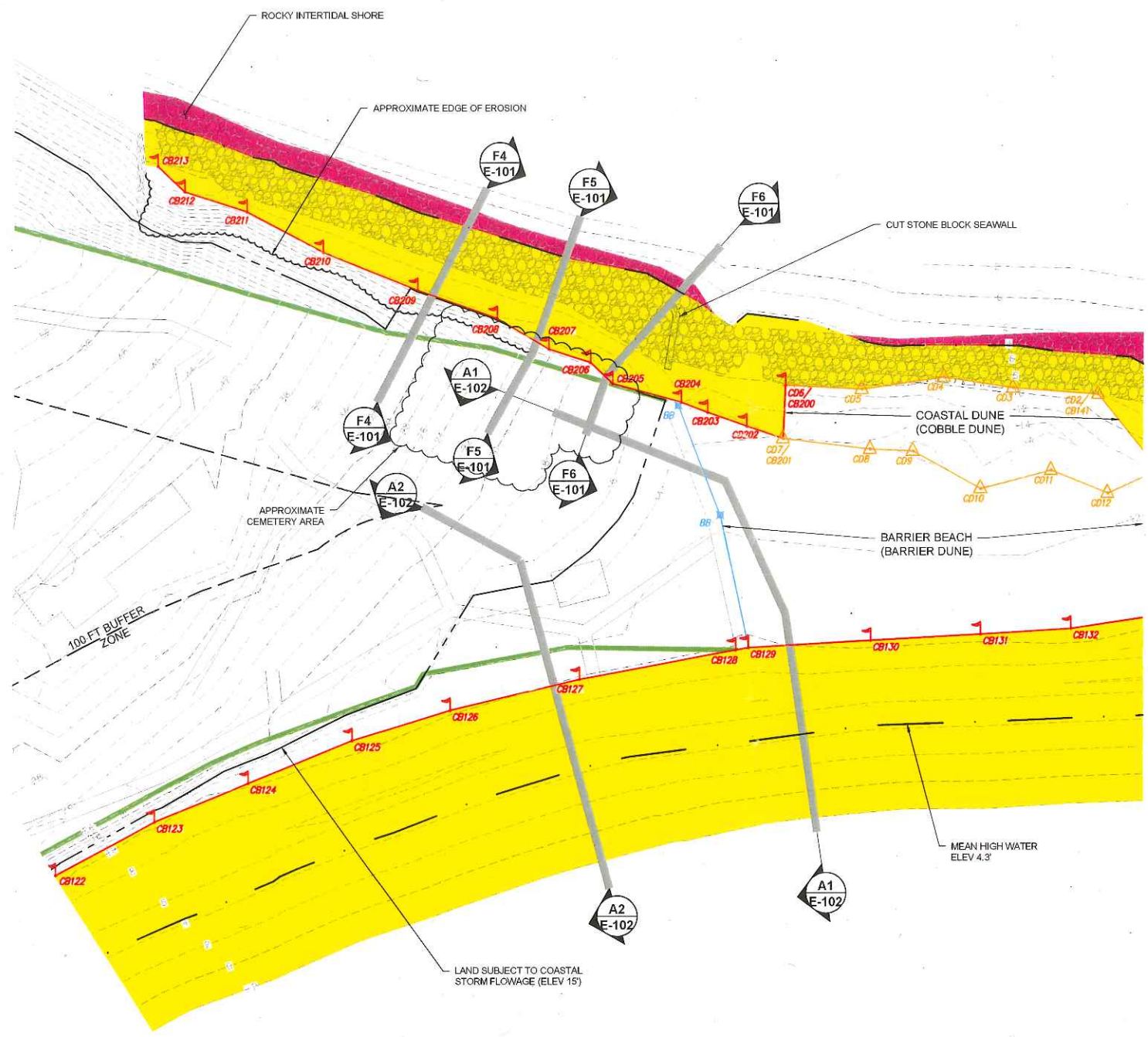
GALLOPS ISLAND
QUARANTINE CEMETERY PROJECT
 GALLOPS ISLAND MASSACHUSETTS



07/31/18

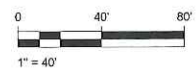
RESOURCE AREA PLAN AND TRANSECT KEY PLAN

DWG. NO. **E-100**



- LEGEND:**
- 100 FT BUFFER ZONE
 - LAND SUBJECT TO COASTAL STORM FLOWAGE (LSCSF) (ELEVATION VARIES)
 - TOP OF COASTAL BANK
 - MEAN HIGH WATER (MHW) (4.3)
 - MEAN LOW WATER (-5.2) (NOT SHOWN)
 - COASTAL BEACH (DELINEATED)
 - ROCKY INTERTIDAL SHORE (DELINEATED/MASSGIS)
 - COASTAL BEACH
 - COASTAL DUNE
 - COBBLE DUNE
 - BARRIER BEACH

RESOURCE AREA PLAN AND TRANSECT KEY PLAN



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GALLOPS ISLAND

QUARANTINE CEMETERY PROJECT

GALLOPS ISLAND MASSACHUSETTS

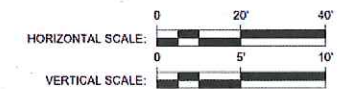
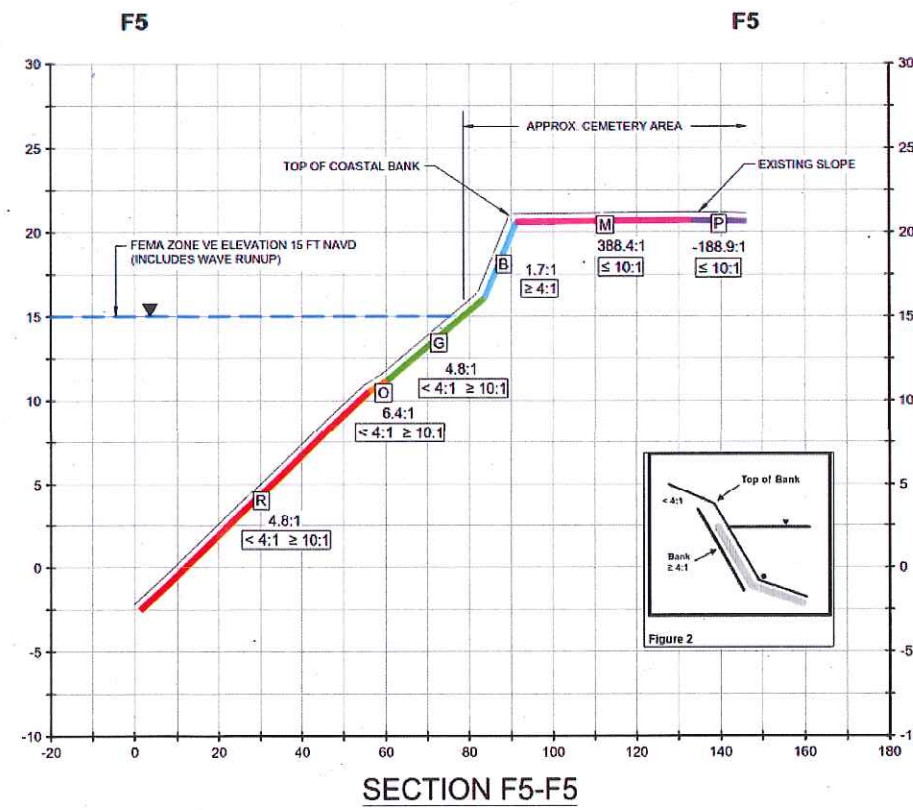
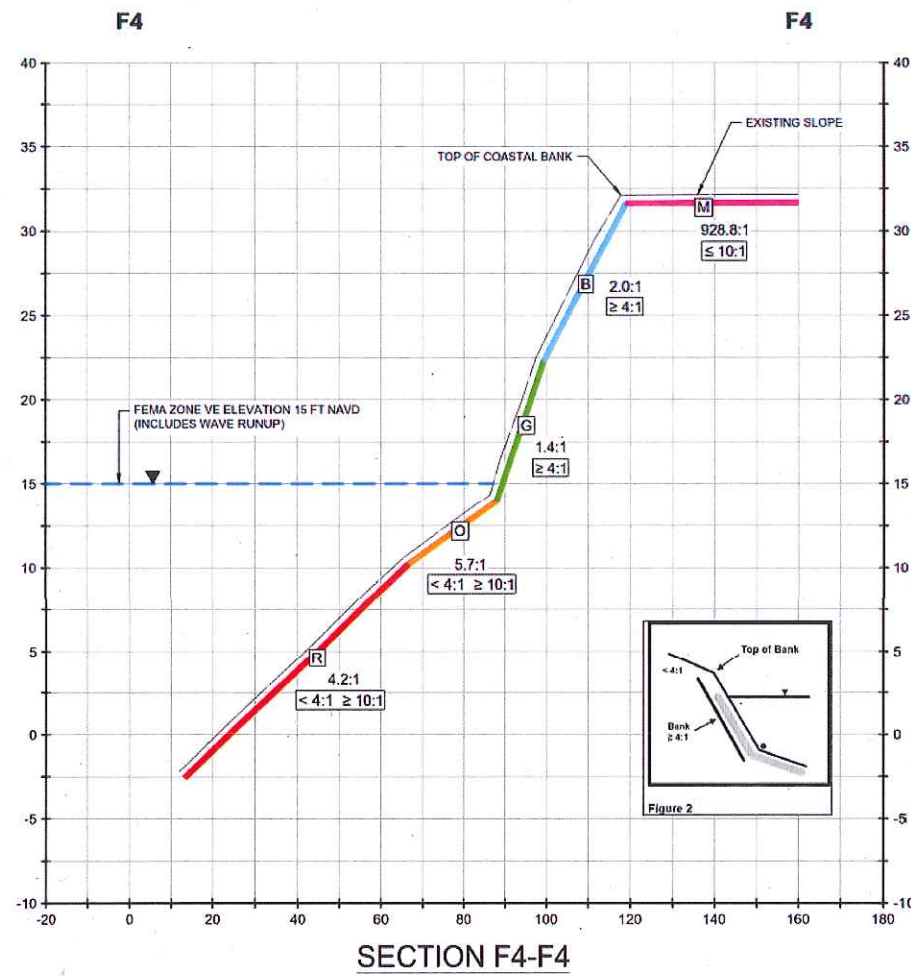
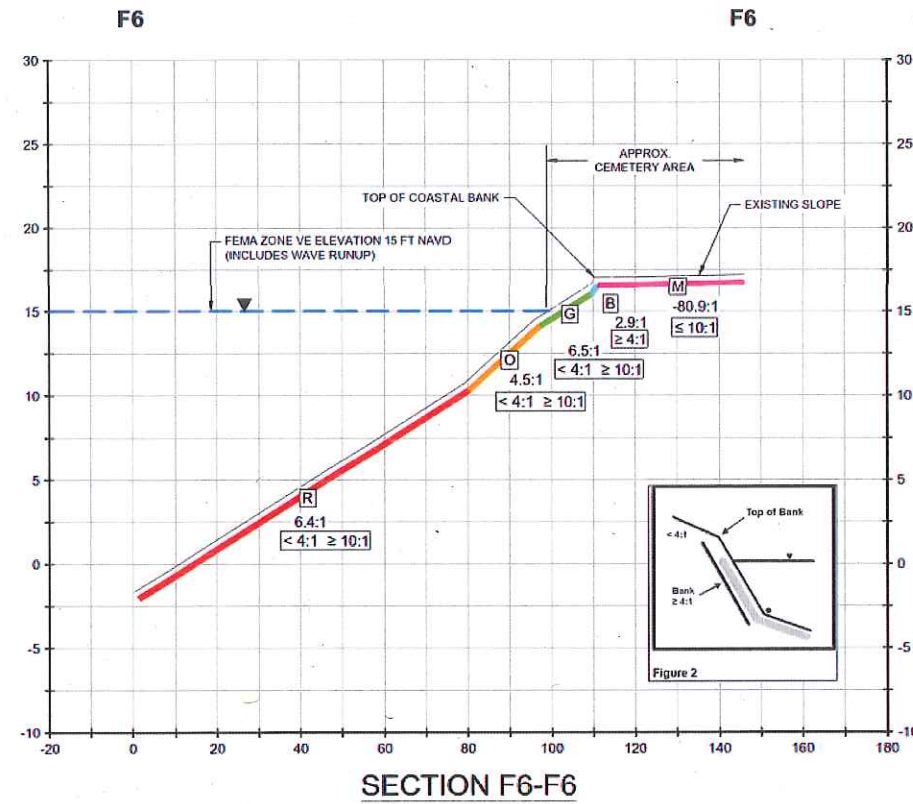
COASTAL BANK CROSS SECTIONS SHEET 1 OF 2

AECOM

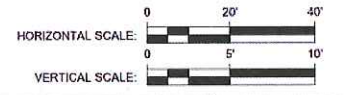
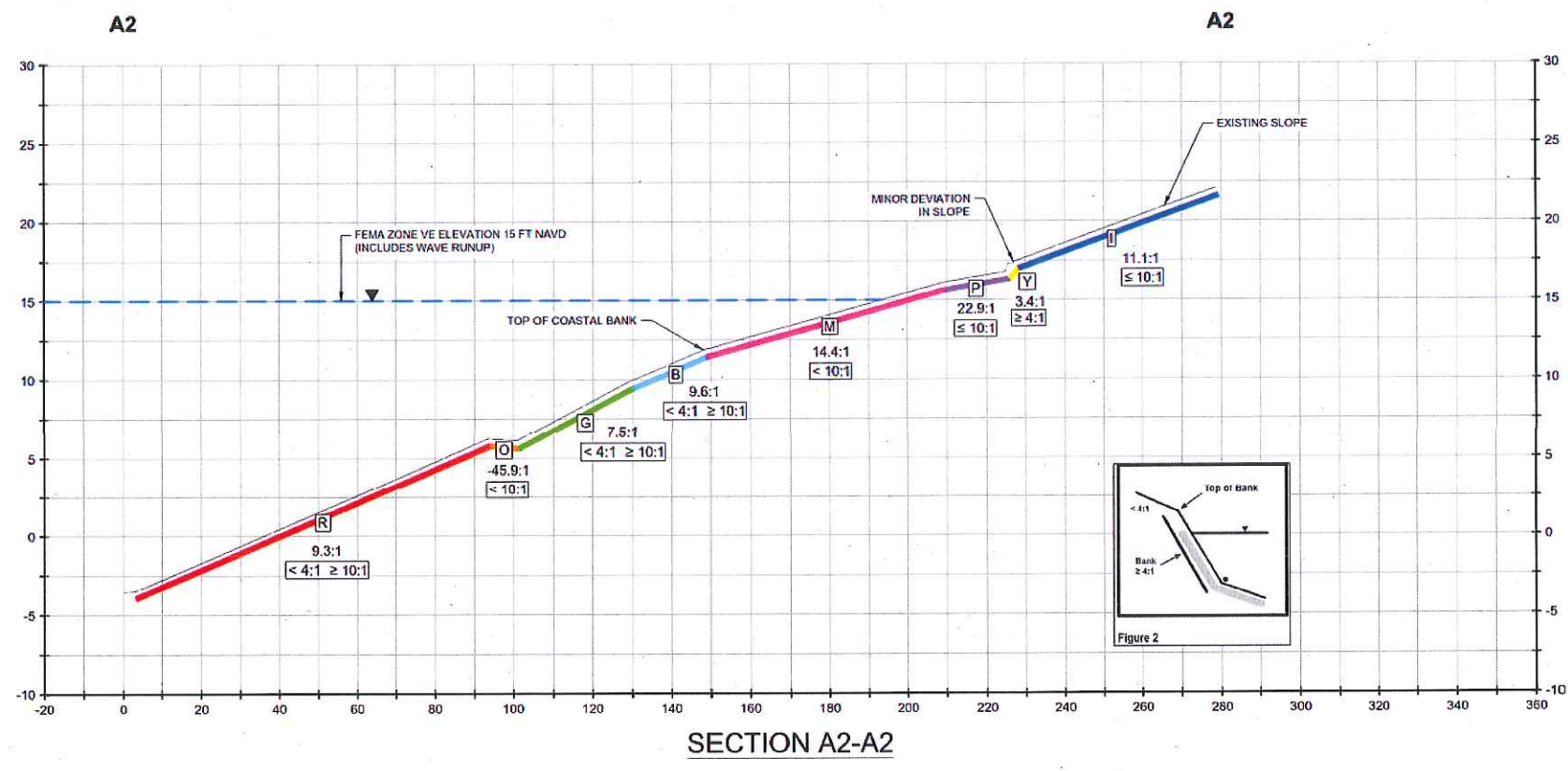
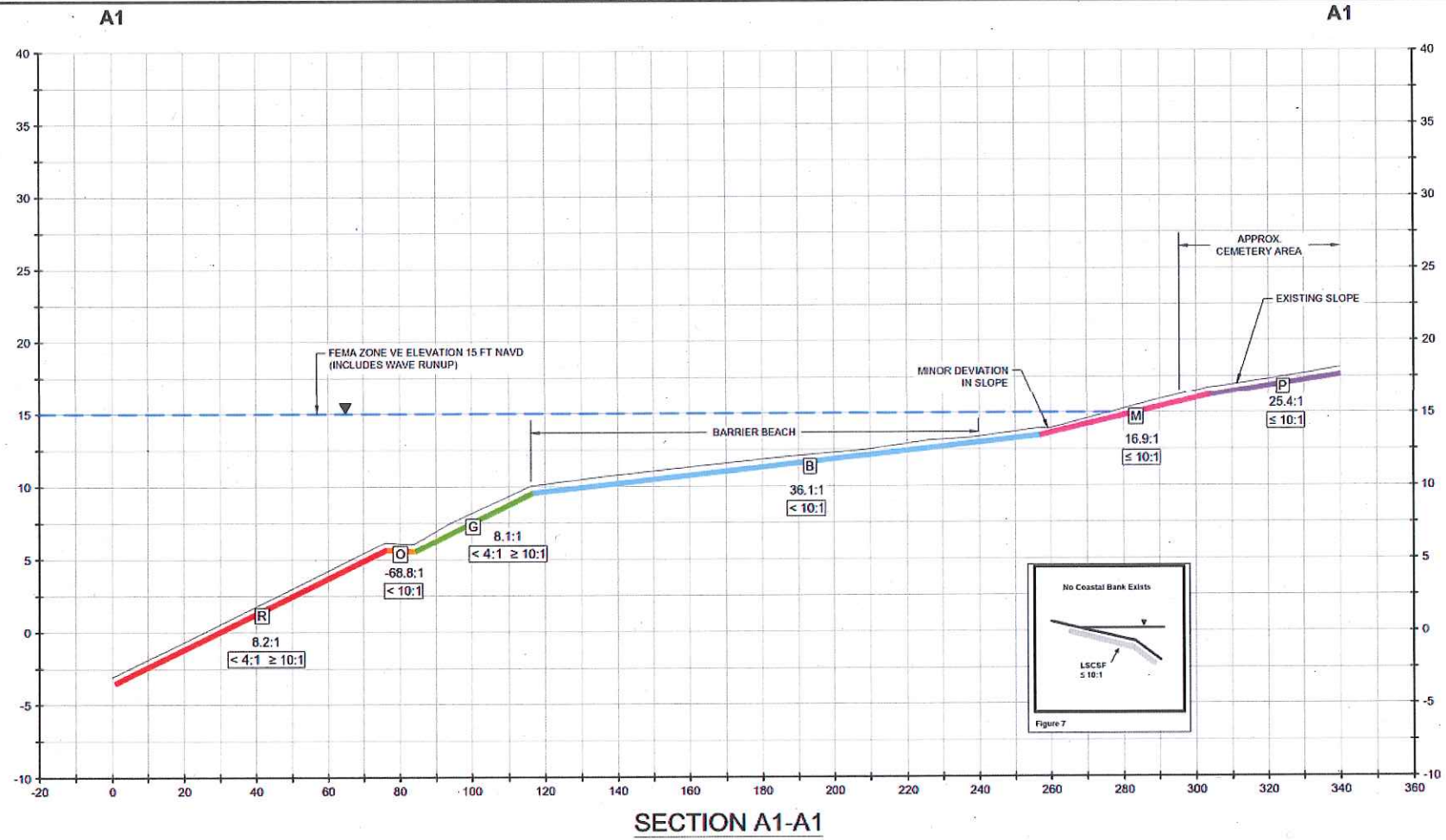
250 APOLLO DRIVE CHELSEA, MA 01824
1 878 925-2300
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07/31/18

DWG NO. E-101



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GALLOPS ISLAND
QUARANTINE CEMETERY PROJECT

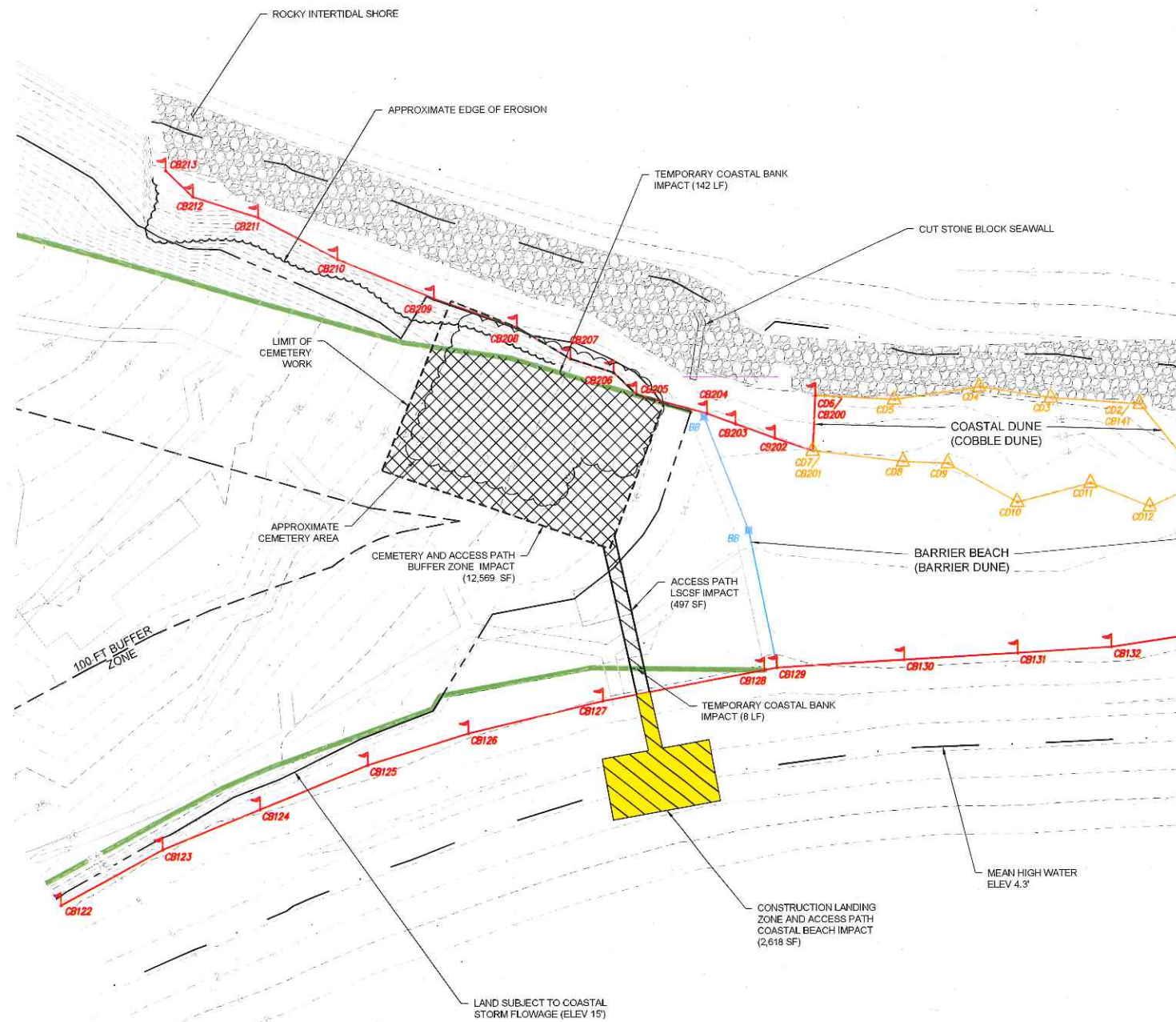


GALLOPS ISLAND
 MASSACHUSETTS

07/31/18

GRAVE EXCAVATION
 IMPACT PLAN

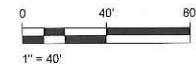
DWG NO.
E-103



RESOURCE AREA	TEMP IMPACT	PERM IMPACT	TOTAL IMPACT
COASTAL BANK	150 LF	0 LF	150 LF
COASTAL BEACH	2,618 SF	0 SF	2,618 SF
LSCSF	497 SF	0 SF	497 SF
BUFFER ZONE	12,569 SF	0 SF	12,569 SF

- LEGEND:**
- 100 FT BUFFER ZONE
 - LAND SUBJECT TO COASTAL STORM FLOWAGE (LSCSF) (ELEVATION VARIES)
 - TOP OF COASTAL BANK
 - MEAN HIGH WATER (MHW) (4.3)
 - MEAN LOW WATER (-5.2) (NOT SHOWN)
 - COASTAL BEACH
 - COASTAL DUNE
 - COBBLE DUNE
 - BARRIER BEACH

**GRAVE EXCAVATION
 IMPACT PLAN**



VERTICAL DATUM IS NAVD 88

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GALLOPS ISLAND

QUARANTINE CEMETERY PROJECT

GALLOPS ISLAND MASSACHUSETTS

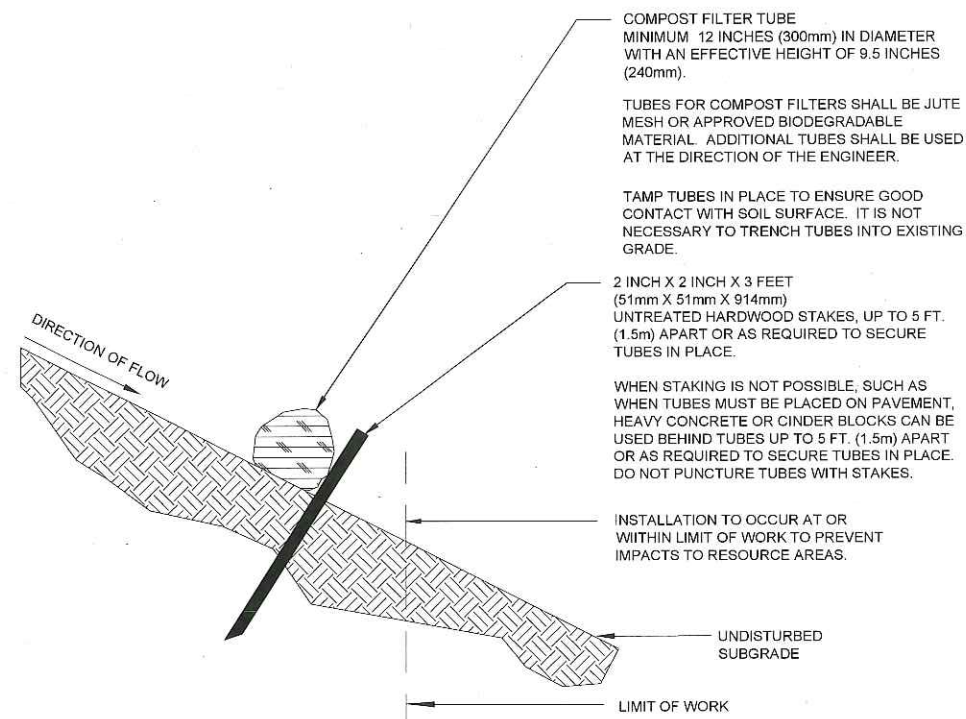
CIVIL DETAILS

AECOM

250 APOLLO DRIVE CHELSEA, MA 01824
1 878 800-2000
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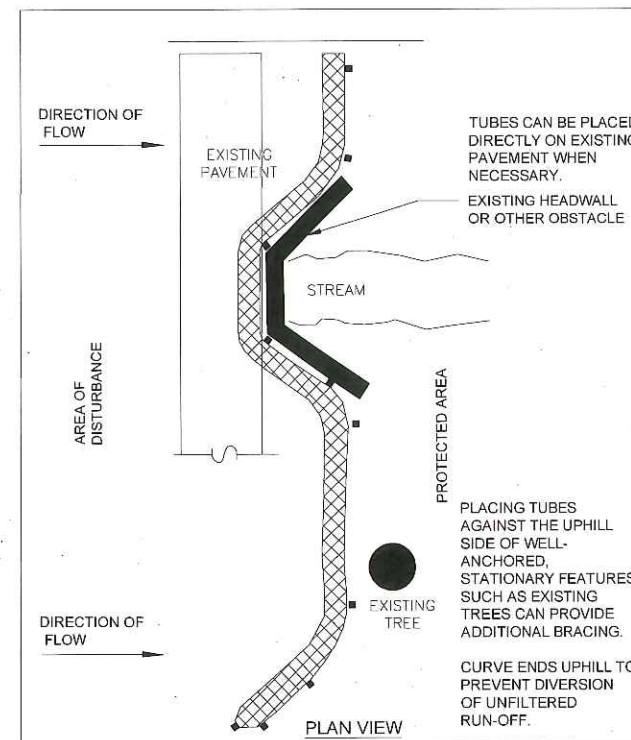
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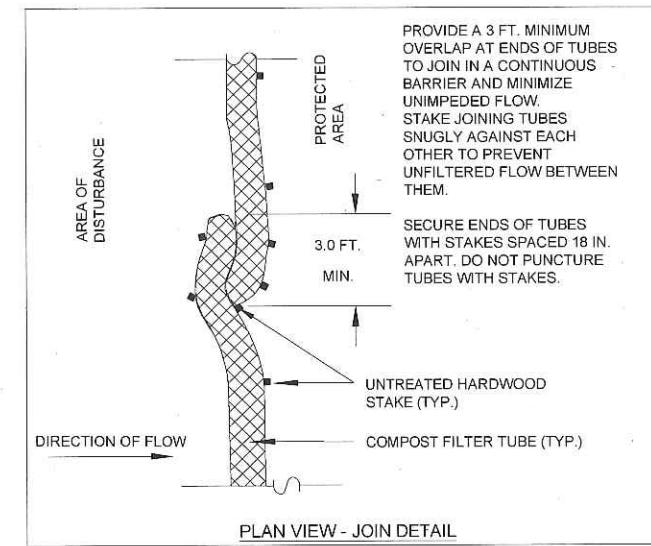
SINGLE COMPOST FILTER TUBE DETAIL

NTS



GENERAL NOTES:

1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
2. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
3. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.
- 4.





GALLOPS ISLAND

QUARANTINE CEMETERY PROJECT

GALLOPS ISLAND MASSACHUSETTS

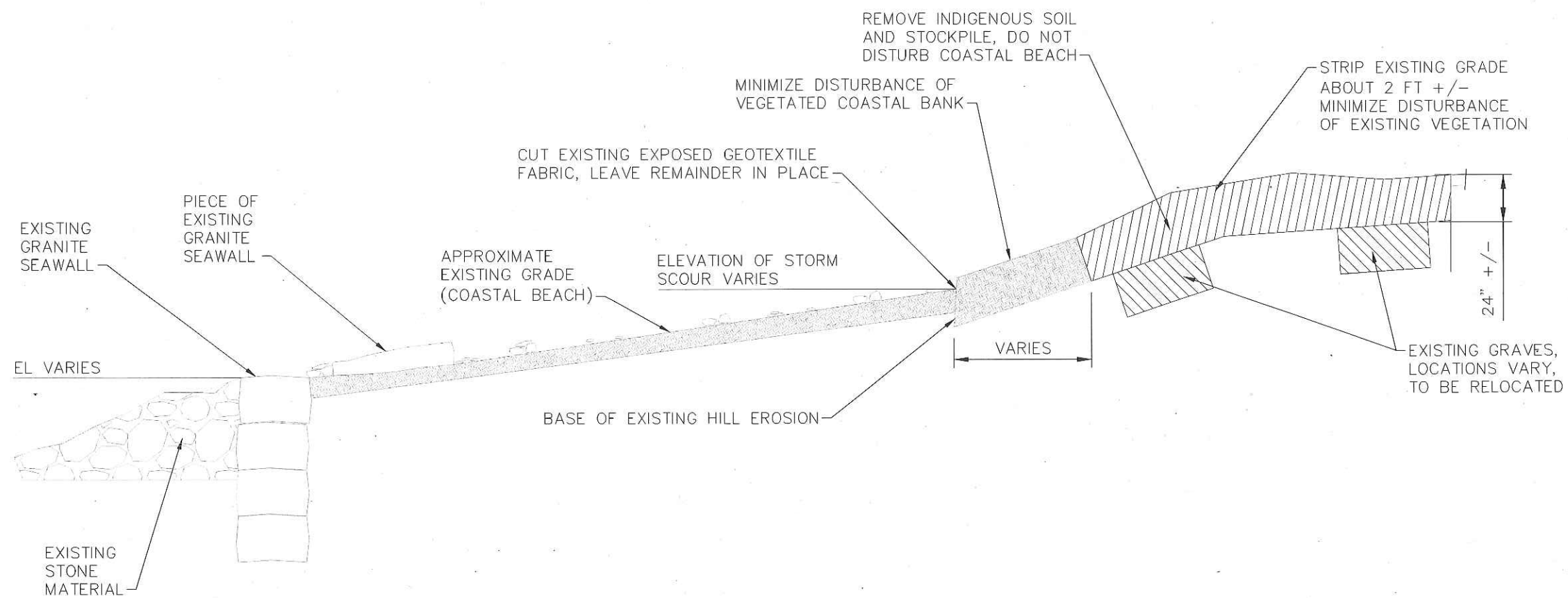
PROPOSED GRAVES EXCAVATION CROSS SECTION

AECOM

255 ARDOLLO DRIVE CHELSEA, MA 02156
1 878 800-2500
www.aecom.com

07/31/18

DWG. NO. SK-001



GALLOPS ISLAND
PROPOSED GRAVES EXCAVATION, CROSS SECTION

SCALE	DES BY	DR BY	CHK BY	APP BY	DATE	
NTS	WBT	WBT	BV	MS	7/31/18	
					SHEET NO.	SK-001

Drawn by: F:\temp\proj\18-001\18-001.dwg - DCR Gallops Island Quarantine Cemetery Project - 07/31/18
 Plotted on: Wednesday, August 1, 2018 - 9:10am by: ANA/AT/RO



GALLOPS ISLAND
QUARANTINE CEMETERY PROJECT



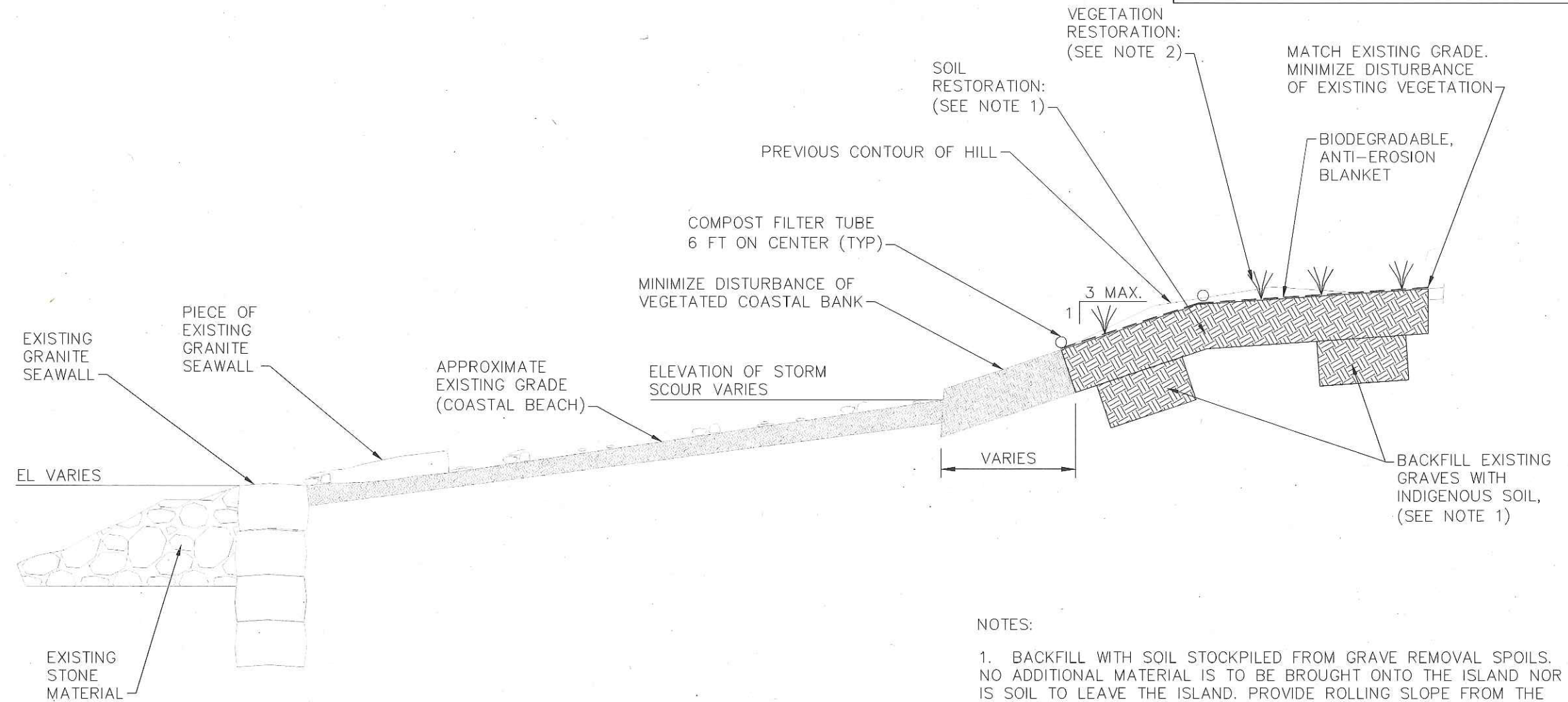
250 APOLLO DRIVE
 CHELSEA, MA 01824
 1 878 805-3300
 www.aecom.com

GALLOPS ISLAND
 MASSACHUSETTS

07/31/18

TEMPORARY COASTAL BANK RESTORATION
 CROSS SECTION

DWG. NO.
SK-002



NOTES:

1. BACKFILL WITH SOIL STOCKPILED FROM GRAVE REMOVAL SPOILS. NO ADDITIONAL MATERIAL IS TO BE BROUGHT ONTO THE ISLAND NOR IS SOIL TO LEAVE THE ISLAND. PROVIDE ROLLING SLOPE FROM THE BOTTOM OF THE DISTURBED AREA TO THE TOP. SLOPE NOT TO EXCEED 3H:1V.
2. USE SUGGESTED PLANTINGS REFERENCED FROM CZM LIVING SHORELINE GUIDE FOR COASTAL VEGETATION. SUPPLY PLAN WITH SELECTED PLANTINGS SELECTED FROM THAT LIST IN LIEU OF SEED MIX.



GALLOPS ISLAND
TEMPORARY COASTAL BANK RESTORATION
CROSS SECTION

SCALE	DES BY	DR BY	CHK BY	APP BY	DATE	7/31/18
NTS	WBT	WBT	BV	MS	SHEET NO.	SK-002