

NOTICE OF INTENT

**MGL Ch. 131 s. 40
and
City of Revere**

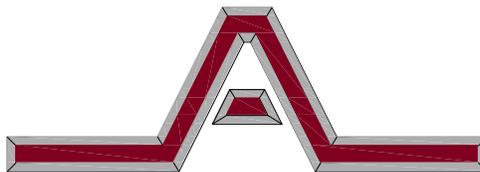
**For
Proposed 60 Unit Apartment Complex**

**Located at
90 Ocean Avenue
(Tax Map 2 Block 139 Lots 5 & 6)
Revere, Massachusetts**

***Submitted to:*
City of Revere
Conservation Commission
&
DEP N.E.R.O.**

***Prepared for:*
90 Ocean Avenue, LLC
140 Tremont Street
Everett, MA 02149**

Prepared by:



Engineering Alliance, Inc.

Civil Engineering & Land Planning Consultants
194 Central Street 1950 Lafayette Road
Saugus, MA 01906 Portsmouth, NH 03801
Tel: (781) 231-1349 Tel: (603) 610-7100
Fax: (781) 417-0020 Fax: (603) 610-7101

January 23, 2017

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SECTION I

**WPA Form 3 – Notice of Intent
Figure 1 – USGS Locus Map
Figure 2 – Ortho Photo
Figure 3 – FEMA Flood Map
Figure 4 – Natural Heritage Map
Figure 5 – SCS Soils Map
SCS Soils Description**



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

Revere

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):

<u>90 Ocean Avenue</u>	<u>Revere</u>	<u>02151</u>
a. Street Address	b. City/Town	c. Zip Code
<u>Latitude and Longitude:</u>	<u>42.4033</u>	<u>-70.9915</u>
	d. Latitude	e. Longitude
<u>Tax Map 2 Block 139</u>	<u>Lots 5 & 6</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>90 Ocean Avenue, LLC</u>	<u>90 Ocean Avenue, LLC</u>	
c. Organization	b. Last Name	
<u>140 Tremont Street</u>		
d. Street Address		
<u>Everett</u>	<u>MA</u>	<u>02149</u>
e. City/Town	f. State	g. Zip Code
<u>(617) 389-2800</u>	<u>greg@gtacoinc.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

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

4. Representative (if any):

<u>Richard</u>	<u>Salvo</u>	
a. First Name	b. Last Name	
<u>Engineering Alliance, Inc.</u>		
c. Company		
<u>194 Central Street</u>		
d. Street Address		
<u>Saugus</u>	<u>MA</u>	<u>01906</u>
e. City/Town	f. State	g. Zip Code
<u>(781) 231-3593</u>	<u>(781) 417-0020</u>	<u>rsalvo@eaicivil.com</u>
h. Phone Number	i. Fax Number	j. Email address

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

<u>\$1,050</u>	<u>\$512.50</u>	<u>\$537.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

The project consists of the demolition of an existing building (formerly a chinese food restaurant) and the construction of a proposed multi family apartment building. The project will consist of surface parking as well as parking under the building, utility connections, storm water management system and incidental site work. All of the work will occur within Land Subject to Coastal Storm Flowage.

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:

Suffolk

a. County

56282

c. Book

b. Certificate # (if registered land)

7

d. Page Number

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.



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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet	2. square feet
	3. cubic yards dredged	

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	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. _____

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

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	

	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	

	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	

	1. cubic yards dredged	
l. <input checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	13,590 s.f.	

	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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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**

2011 _____
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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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
1213 Purchase Street – 3rd Floor
New Bedford, MA 02740-6694
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

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

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



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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.

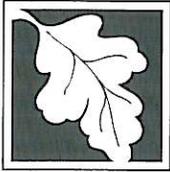
D. Additional Information

- 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.



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

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D. Additional Information (cont'd)

- 3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
- 4. List the titles and dates for all plans and other materials submitted with this NOI.

Proposed Site Plan

a. Plan Title	_____
Engineering Alliance, Inc.	Richard A. Salvo, P.E.
b. Prepared By	c. Signed and Stamped by
December 23, 2016	1"=20'
d. Final Revision Date	e. Scale

f. Additional Plan or Document Title	_____	g. Date	_____
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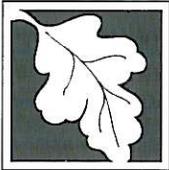
- 5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
- 6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
- 7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
- 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:

#1954	_____	4/11/17	_____
2. Municipal Check Number		3. Check date	
#1953	_____	4/11/17	_____
4. State Check Number		5. Check date	
100 TREMONT STREET, LLC	_____		
6. Payor name on check: First Name		7. Payor name on check: Last Name	



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Provided by MassDEP:

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F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date

For Conservation Commission:

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

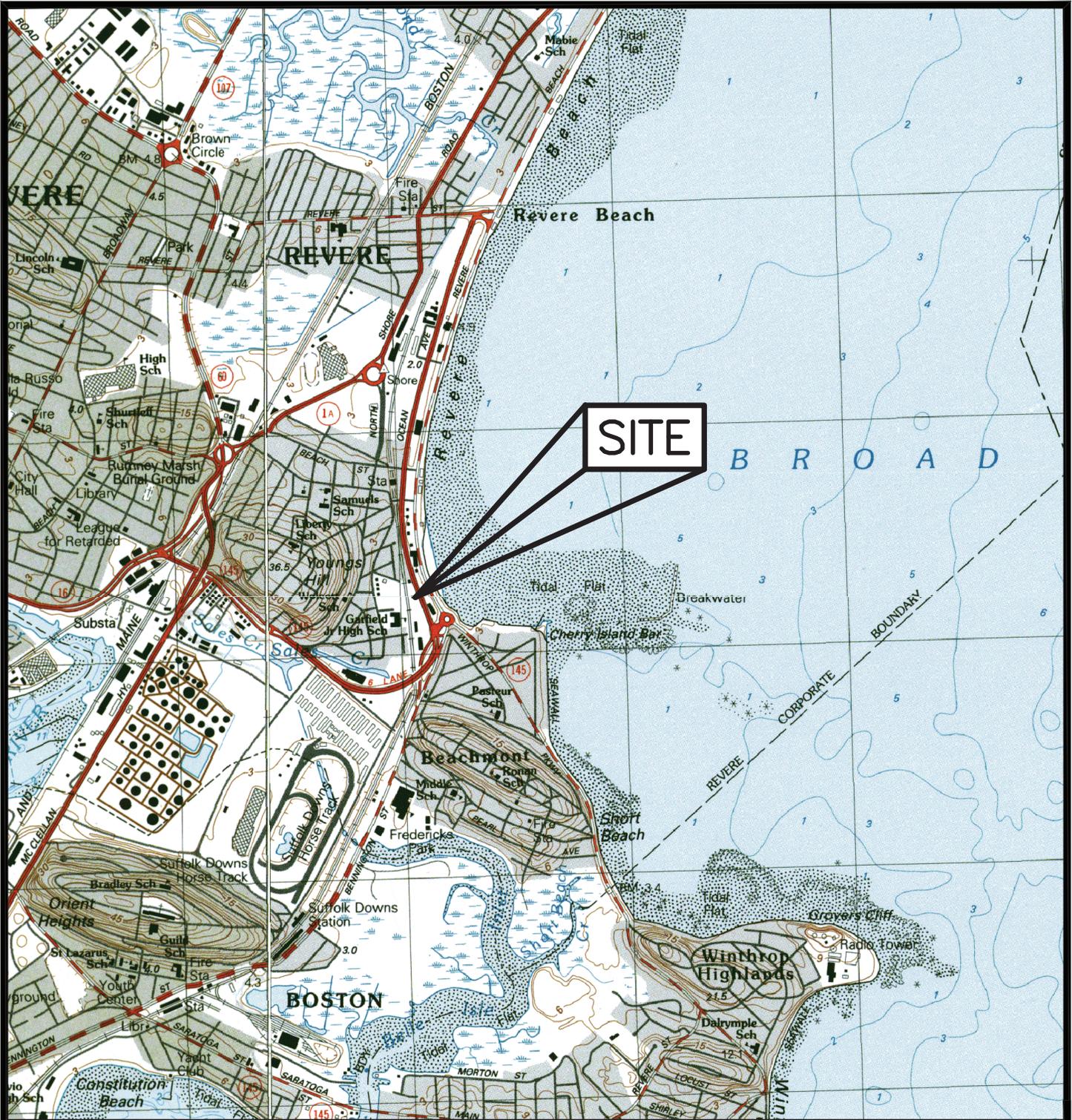
For MassDEP:

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

Other:

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

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



PREPARED BY:



Engineering Alliance, Inc.
 Civil Engineering & Land Planning Consultants
 194 Central Street
 Saugus, MA 01906
 Tel: (781) 231-1349
 Fax: (781) 417-0020

1950 Lafayette Road
 Portsmouth, NH 03801
 Tel: (603) 610-7100
 Fax: (603) 610-7101

PROJECT:

Proposed Multi-Family Dwelling
 90 Ocean Avenue
 (Tax Map 2 Block 139 Lot 5)
 Revere, Massachusetts

PROJECT#: 15-55604

DATE: March 31, 2016

SCALE: 1:25,000

DWG FILE NAME: Figures.dwg

DESIGNED BY: Eric Bradanese

CHECKED BY: Richard A. Salvo, P.E.

DRAWING TITLE:
FIGURE 1 - USGS LOCUS MAP

DRAWING #:
1 of 5



PREPARED BY:



Engineering Alliance, Inc.
 Civil Engineering & Land Planning Consultants
 194 Central Street 1950 Lafayette Road
 Saugus, MA 01906 Portsmouth, NH 03801
 Tel: (781) 231-1349 Tel: (603) 610-7100
 Fax: (781) 417-0020 Fax: (603) 610-7101

PROJECT:

Proposed Multi-Family Dwelling
 90 Ocean Avenue
 (Tax Map 2 Block 139 Lots 5)
 Revere, Massachusetts

PROJECT#: 15-55604

DATE: March 31, 2016

SCALE: 1"=500'

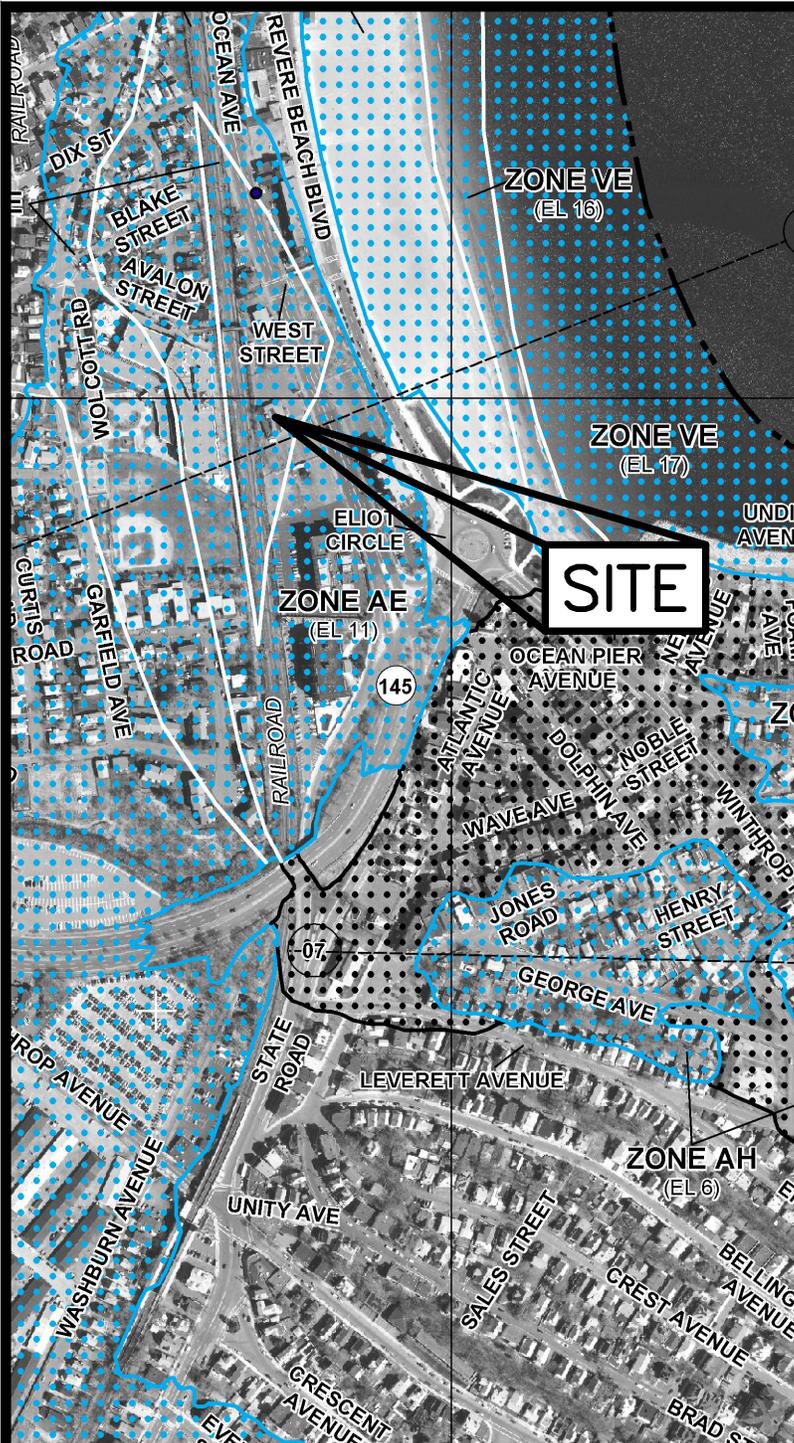
DWG FILE NAME: Figures.dwg

DESIGNED BY: Eric Bradanese

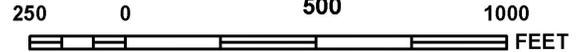
CHECKED BY: Richard A. Salvo, P.E.

DRAWING TITLE:
FIGURE 2 - ORTHO PHOTO

DRAWING #:
2of5



MAP SCALE 1" = 500'



LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determine.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevation determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary

NATIONAL FLOOD INSURANCE PROGRAM
SUFFOLK COUNTY

COMMUNITY PANEL NO: 25025C0038J,
EFFECTIVE DATE: March 16, 2016

PREPARED BY:



Engineering Alliance, Inc.
Civil Engineering & Land Planning Consultants
194 Central Street 1950 Lafayette Road
Saugus, MA 01906 Portsmouth, NH 03801
Tel: (781) 231-1349 Tel: (603) 610-7100
Fax: (781) 417-0020 Fax: (603) 610-7101

PROJECT:

Proposed Multi-Family Dwelling
90 Ocean Avenue
(Tax Map 2 Block 139 Lot 5)
Revere, Massachusetts

PROJECT#: 15-55604

DATE: March 31, 2016

SCALE: 1"=500'

DWG FILE NAME: Figures.dwg

DESIGNED BY: Eric Bradanese

CHECKED BY: Richard A. Salvo

DRAWING TITLE:
FIGURE 3 - FEMA FLOOD MAP

DRAWING #:
3of5



LEGEND:

-  - NHESP ESTIMATED HABITATS OF RARE SPECIES
-  - NHESP PRIORITY HABITATS OF RARE SPECIES
-  - NHESP CERTIFIED VERNAL POOLS

PREPARED BY:



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PROJECT:

Proposed Multi-Family Dwelling

90 Ocean Avenue
 (Tax Map 2 Block 139 Lots 5)
 Revere, Massachusetts

PROJECT#: 15-55604

DATE: March 31, 2016

SCALE: 1:25,000

DWG FILE NAME: Figures.dwg

DESIGNED BY: Eric Bradanese

CHECKED BY: Richard A. Salvo, P.E.

DRAWING TITLE:

FIGURE 4 - NATIONAL HERITAGE DATA

DRAWING #:

4of5



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PROJECT:

Proposed Multi-Family Dwelling

90 Ocean Avenue

(Tax Map 2 Block 139 Lots 5)

Revere, Massachusetts

PROJECT#: 15-55604

DATE: March 31, 2016

SCALE: 1"=300'

DWG FILE NAME: Figures.dwg

DESIGNED BY: Eric Bradanese

CHECKED BY: Richard A. Salvo, P.E.

DRAWING TITLE:

FIGURE 5 - SCS SOILS MAP

DRAWING #:

5of5

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8w

Hydrologic Soil Group: A/D

Ecological site: Tidal Salt Low Marsh mesic very frequently flooded (R144AR001CT), Tidal Salt High Marsh mesic very frequently flooded (R144AR002CT)

Minor Components

Westbrook

Percent of map unit: 5 percent

Landform: Tidal marshes

Landform position (three-dimensional): Dip

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: Tidal Salt Low Marsh mesic very frequently flooded (R144AR001CT), Tidal Salt High Marsh mesic very frequently flooded (R144AR002CT)

Pawcatuck

Percent of map unit: 5 percent

Landform: Tidal marshes

Landform position (three-dimensional): Dip

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: Tidal Salt Low Marsh mesic very frequently flooded (R144AR001CT), Tidal Salt High Marsh mesic very frequently flooded (R144AR002CT)

603—Urban land, wet substratum, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: vkyl

Mean annual precipitation: 32 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 120 to 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Parent material: Excavated and filled land over herbaceous organic material and/or alluvium and/or marine deposits

Minor Components

Udorthents

Percent of map unit: 13 percent

Beaches

Percent of map unit: 2 percent

610—Beaches

Map Unit Setting

National map unit symbol: vkpp

Mean annual precipitation: 32 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 120 to 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Beaches: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Beaches

Setting

Parent material: Reworked sandy and gravelly marine deposits derived from igneous and metamorphic rock and/or reworked sandy and gravelly marine deposits derived from igneous and metamorphic rock

Minor Components

Udorthents

Percent of map unit: 5 percent

626B—Merrimac-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyr9

Elevation: 0 to 820 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 250 days

Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 45 percent

Urban land: 40 percent

Minor components: 15 percent

SECTION II

Project Narrative
Storm Water Report Checklist
Stormwater Management Calculations
Best Management Practices Maintenance Plan
Illicit Discharge Statement

**Proposed 60 Unit Multifamily Dwelling
90 Ocean Avenue
Revere, Massachusetts, 02151**

Project Description

The project consists of the redevelopment of a site consisting of approximately 0.84 acres of land located at 90 Ocean Avenue in Revere, Massachusetts. The property is currently occupied by an abandoned restaurant building with a total footprint of 5,234 +/- s.f. and a bituminous concrete parking area. The existing building is to be removed.

The proposed project consists of the demolition of the existing building and the construction of a 60 unit multifamily dwelling with a footprint area of approximately 13,590 +/- s.f. In addition to the proposed building, the project will also include the construction of a drive under parking facility, new access driveways to the proposed building, a pervious paver amenity patio area, landscaped areas, utility connections, stormwater management facilities, and incidental site grading. The site abuts commercial land to the north and south, MBTA train tracks to the west, and Ocean Avenue to the East. Vehicle access will be provided via two entrance driveways from Ocean Avenue.

Site Description

The subject property is currently occupied by an abandoned restaurant and bituminous concrete parking area. The topography of the property is generally flat, ranging from 0.5% to 1%. The site has a well defined drainage patterns consisting of three distinct watershed areas. A large portion of the site drains via surface flow to an offsite low point at the northeast corner of the property. The southwest portion of the site drains via surface flow to an offsite low point at the southwest corner of the property. The remaining area drains via surface flow directly to the Ocean Avenue closed drainage system. The groundcover of the site is comprised of the existing building and the parking area.

In the proposed condition, the groundcover of the site will be comprised of the proposed building, the bituminous concrete driveway, pervious paver entryway and patio area, and assorted landscaped areas. Stormwater runoff from the proposed access driveways will drain via surface flow into the pervious paver entryways at each side of the proposed building. The front half of the proposed building and the amenity patio area will drain into the stone bed beneath the pervious paver patio. The bituminous concrete driveway and parking area will discharge to a subsurface infiltration facility (Cultec 330 XL HD Chambers) via catch basin and particle separator (Contech CDS Unit).

Soils information was obtained from the USDA Soil Conservation Service (SCS) Maps and available data for Suffolk County. The soils on the site are classified as Urban Land (603). Refer to Figure 5, SCS Soils Map, for a delineation of the boundaries of the soil with respect to the subject parcel and the attached SCS soil description information. The Flood Insurance Rate Map for the City of Revere (Community Panel 25025C0038J with an effective date of March 16, 2016) describes the project site as Zone AE. Zone AE is classified as special flood hazard areas subject to inundation by the 1% annual chance flood. According to this map, the subject parcel is located within a Zone AE with a base flood elevation of 11 (NAVD 88).

All lot lines, topography, utilities, and other existing site information used has been compiled from a field survey performed by Boston Survey, Inc. on June 12, 2015 and from plans of record obtained from the City of Boston where available.

Stormwater Management Facilities

The stormwater facilities were design to attenuate peak flows generated by all storm events up to and including the 100-year storm event. An infiltration rate of 1.02 in/hr was used based on the Rawls Rate of saturated hydraulic conductivity for a sandy loam soil type. Refer to Section II for the Stage Storage Curves and TR-20 computer results for the storage characteristics of the subsurface infiltration facilities. Refer to the Site Plans (attached) for design details.

Regulatory Compliance

The resource area affected by the proposed development is Land Subject to Coastal Storm Flowage. The subject property is located within a Zone AE established by the corresponding FEMA Flood map. The base flood elevation for the subject property is elevation 11 (NAVD 88). Currently, land subject to coastal storm flowage does not have any performance standards.



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.

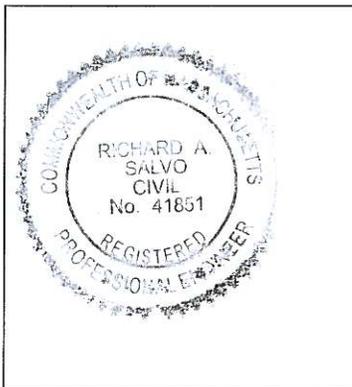
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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



RSalvo 1-18-17
Signature and Date

Checklist

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

- New development
- Redevelopment
- Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

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

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

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 Field¹
- 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.



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Project: Proposed Mixed Use Development
Client: 90 Ocean Avenue, LLC
Project Number: 15-55604

Prepared By: EJB
Checked By: RAS
Date: 12/23/16

STANDARD 3: REQUIRED RECHARGE VOLUME - Pervious Pavers (North Entrance)

$$Rv = F \times \text{impervious area}$$

Rv = Required Recharge Volume

F = Target Depth associated with each Hydrologic Soil Group

Impervious Area = total impervious area

Impervious Area: 1,615 sf = 0.04 acres

Hydrologic Group	Volume to Recharge
A	0.60
B	0.35
C	0.25
D	0.10

$$Rv = 0.04 \times 0.25 \times \frac{1 \text{ ft}}{12 \text{ in.}} \times \frac{43,560 \text{ sf}}{1 \text{ ac.}} = 34 \text{ CF}$$

NOTES:

1. Total storage capacity of the of subsurface infiltration facilities (24" crushed stone bed, beneath pervious paver entryway). These value were taken from the HydroCAD model.

$$342 \text{ CF} > 34 \text{ CF}$$

DRAWDOWN WITHIN 72 HOURS

$$\text{Time}_{\text{drawdown}} = \frac{\text{Recharge Volume}}{K(\text{Bottom Area})} \quad K = \text{Saturated Hydraulic Conductivity}$$

Subsurface Infiltration Facility

$$\text{Time}_{\text{drawdown}} = \frac{342 \text{ CF}}{(1.02 \text{ in/hr})(1/12 \text{ ft/in})(401 \text{ sf})} = 10.03 \text{ HRS} < 72 \text{ HRS}$$

NOTES:

1. K value is for Sandy Loam as shown in Table 2.3.3, entitled "1982 Rawls Rates," in the MADEP Stormwater Management Standards.
2. Bottom Area is equal to the total area of the Subsurface Infiltration Facility [24" crushed stone bed beneath pervious paver entryway]



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STANDARD 4: WATER QUALITY - Pervious Pavers (North Entrance)

WATER QUALITY TREATMENT VOLUME

$$V_{WQ} = (D_{WQ} \text{ in.} / 12 \text{ inches/foot}) \times (A_{IMP} \times 43,560 \text{ square feet/acre})$$

- V_{WQ} = Required Water Quality Volume (in cubic feet)
- D_{WQ} = Water Quality Depth
- A_{IMP} = Impervious Area (in acres)

$$V_{WQ} = (0.5 \text{ in.} / 12 \text{ inches/foot}) \times (0.04 \times 43,560 \text{ square feet/acre}) = \boxed{73 \text{ CF}}$$

Stormwater BMP	Volume
Cultec 330 XL Systems	342
Total	342

NOTES:

1. Storage volume for the stormwater BMPs obtained from the hydrologic model created in HydroCAD

CONCLUSION:

1. The storage volume provided by the proposed BMPs is greater than the required water quality treatment volume. 342 CF > 73 CF



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STANDARD 3: REQUIRED RECHARGE VOLUME - Pervious Pavers (Patio Area)

$$Rv = F \times \text{impervious area}$$

Rv = Required Recharge Volume

F = Target Depth associated with each Hydrologic Soil Group

Impervious Area = total impervious area

Impervious Area: 9,675 sf = 0.22 acres

Hydrologic Group	Volume to Recharge
A	0.60
B	0.35
C	0.25
D	0.10

$$Rv = 0.22 \times 0.25 \times \frac{1 \text{ ft}}{12 \text{ in.}} \times \frac{43,560 \text{ sf}}{1 \text{ ac.}} = 202 \text{ CF}$$

NOTES:

1. Total storage capacity of the of subsurface infiltration facilities (30" Crushed Stone Bed beneath Pervious Paver Patio). These value were taken from the HydroCAD model.

$$2,773 \text{ CF} > 202 \text{ CF}$$

DRAWDOWN WITHIN 72 HOURS

$$\text{Time}_{\text{drawdown}} = \frac{\text{Recharge Volume}}{K(\text{Bottom Area})} \quad K = \text{Saturated Hydraulic Conductivity}$$

Subsurface Infiltration Facility

$$\text{Time}_{\text{drawdown}} = \frac{2773 \text{ CF}}{(1.02 \text{ in/hr})(1/12 \text{ ft/in})(2636 \text{ sf})} = 12.38 \text{ HRS} < 72 \text{ HRS}$$

NOTES:

1. K value is for Sandy Loam as shown in Table 2.3.3, entitled "1982 Rawls Rates," in the MADEP Stormwater Management Standards.
2. Bottom Area is equal to the total area of the Subsurface Infiltration Facility [30" crushed stone bed beneath Pervious Paver Patio Area]



Project: Proposed Mixed Use Development
Client: 90 Ocean Avenue, LLC
Project Number: 15-55604

Prepared By: EJB
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STANDARD 4: WATER QUALITY - Pervious Pavers (Patio Area)

WATER QUALITY TREATMENT VOLUME

$$V_{WQ} = (D_{WQ} \text{ in.} / 12 \text{ inches/foot}) \times (A_{IMP} \times 43,560 \text{ square feet/acre})$$

- V_{WQ} = Required Water Quality Volume (in cubic feet)
- D_{WQ} = Water Quality Depth
- A_{IMP} = Impervious Area (in acres)

$$V_{WQ} = (0.5 \text{ in.} / 12 \text{ inches/foot}) \times (0.22 \times 43,560 \text{ square feet/acre}) = \boxed{399 \text{ CF}}$$

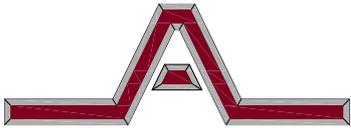
Stormwater BMP	Volume
Cultec 330 XL Systems	2,773
Total	2,773

NOTES:

1. Storage volume for the stormwater BMPs obtained from the hydrologic model created in HydroCAD

CONCLUSION:

1. The storage volume provided by the proposed BMPs is greater than the required water quality treatment volume. 2,773 CF > 399 CF



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Client: 90 Ocean Avenue, LLC
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STANDARD 3: REQUIRED RECHARGE VOLUME - Pervious Pavers (South Entrance)

$R_v = F \times \text{impervious area}$

$R_v =$ Required Recharge Volume

$F =$ Target Depth associated with each Hydrologic Soil Group

Impervious Area = total impervious area

Impervious Area: 1,443 sf = 0.03 acres

Hydrologic Group	Volume to Recharge
A	0.60
B	0.35
C	0.25
D	0.10

$R_v = 0.03 \times 0.25 \times \frac{1 \text{ ft}}{12 \text{ in.}} \times \frac{43,560 \text{ sf}}{1 \text{ ac.}} = 30 \text{ CF}$

NOTES:

1. Total storage capacity of the of subsurface infiltration facilities (24" crushed stone bed, beneath pervious paver entryway). These value were taken from the HydroCAD model.

377 CF > 30 CF

DRAWDOWN WITHIN 72 HOURS

$\text{Time}_{\text{drawdown}} = \frac{\text{Recharge Volume}}{K(\text{Bottom Area})}$ K = Saturated Hydraulic Conductivity

$\text{Time}_{\text{drawdown}} = \frac{\text{Subsurface Infiltration Facility}}{(1.02 \text{ in/hr})(1/12 \text{ ft/in})(442 \text{ sf})} = 10.03 \text{ HRS} < 72 \text{ HRS}$

NOTES:

1. K value is for Sandy Loam as shown in Table 2.3.3, entitled "1982 Rawls Rates," in the MADEP Stormwater Management Standards.
2. Bottom Area is equal to the total area of the Subsurface Infiltration Facility [24" crushed stone bed beneath pervious paver entryway]



Project: Proposed Mixed Use Development
Client: 90 Ocean Avenue, LLC
Project Number: 15-55604

Prepared By: EJB
Checked By: RAS
Date: 12/23/16

STANDARD 4: WATER QUALITY - Pervious Pavers (South Entrance)

WATER QUALITY TREATMENT VOLUME

$$V_{WQ} = (D_{WQ} \text{ in.} / 12 \text{ inches/foot}) \times (A_{IMP} \times 43,560 \text{ square feet/acre})$$

- V_{WQ} = Required Water Quality Volume (in cubic feet)
- D_{WQ} = Water Quality Depth
- A_{IMP} = Impervious Area (in acres)

$$V_{WQ} = (0.5 \text{ in.} / 12 \text{ inches/foot}) \times (0.03 \times 43,560 \text{ square feet/acre}) = \boxed{54 \text{ CF}}$$

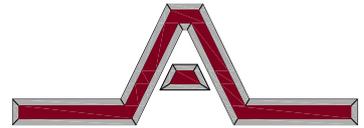
Stormwater BMP	Volume
Cultec 330 XL Systems	377
Total	377

NOTES:

1. Storage volume for the stormwater BMPs obtained from the hydrologic model created in HydroCAD

CONCLUSION:

1. The storage volume provided by the proposed BMPs is greater than the required water quality treatment volume. 377 CF > 54 CF



Engineering Alliance, Inc.
 Civil Engineering & Land Planning Consultants
 194 Central Street
 Saugus, MA 01906
 Tel: (781) 231-1349
 Fax: (781) 417-0020

1950 Lafayette Road
 Portsmouth, NH 03801
 Tel: (603) 610-7100
 Fax: (603) 610-7101

Project: Proposed Mixed Use Development
Client: 90 Ocean Avenue, LLC
Project Number: 15-55604

Prepared By: EJB
Checked By: RAS
Date: 12/23/16

STANDARD 3: REQUIRED RECHARGE VOLUME - Cultec 330 XL Chambers

$$Rv = F \times \text{impervious area}$$

Rv = Required Recharge Volume

F = Target Depth associated with each Hydrologic Soil Group

Impervious Area = total impervious area

Impervious Area: 20,006 sf = 0.46 acres

Hydrologic Group	Volume to Recharge
A	0.60
B	0.35
C	0.25
D	0.10

$$Rv = 0.46 \times 0.25 \times \frac{1 \text{ ft}}{12 \text{ in.}} \times \frac{43,560 \text{ sf}}{1 \text{ ac.}} = 417 \text{ CF}$$

NOTES:

1. Total storage capacity of the of subsurface infiltration facilities (One Systems of 5 Rows of 17 Cultec 330 HD XL Chambers). These value were taken from the HydroCAD model.

$$7,403 \text{ CF} > 417 \text{ CF}$$

DRAWDOWN WITHIN 72 HOURS

$$\text{Time}_{\text{drawdown}} = \frac{\text{Recharge Volume}}{K(\text{Bottom Area})} \quad K = \text{Saturated Hydraulic Conductivity}$$

Subsurface Infiltration Facility

$$\text{Time}_{\text{drawdown}} = \frac{7,403}{(1.02 \text{ in/hr})(1/12 \text{ ft/in})(3346 \text{ sf})} = 26.03 \text{ HRS} < 72 \text{ HRS}$$

NOTES:

1. K value is for Sandy Loam as shown in Table 2.3.3, entitled "1982 Rawls Rates," in the MADEP Stormwater Management Standards.

2. Bottom Area is equal to the total area of the Subsurface Infiltration Facility [One System of 5 Rows of 17 Cultec 330 HD XL Chambers]



Engineering Alliance, Inc.
 Civil Engineering & Land Planning Consultants
 194 Central Street 1950 Lafayette Road
 Saugus, MA 01906 Portsmouth, NH 03801
 Tel: (781) 231-1349 Tel: (603) 610-7100
 Fax: (781) 417-0020 Fax: (603) 610-7101

Project: Proposed Mixed Use Development
Client: 90 Ocean Avenue, LLC
Project Number: 15-55604

Prepared By: EJB
Checked By: RAS
Date: 12/23/16

STANDARD 4: WATER QUALITY - Cultec 330 XL Chambers

WATER QUALITY TREATMENT VOLUME

$$V_{WQ} = (D_{WQ} \text{ in.} / 12 \text{ inches/foot}) \times (A_{IMP} \times 43,560 \text{ square feet/acre})$$

- V_{WQ} = Required Water Quality Volume (in cubic feet)
- D_{WQ} = Water Quality Depth
- A_{IMP} = Impervious Area (in acres)

$$V_{WQ} = (0.5 \text{ in.} / 12 \text{ inches/foot}) \times (0.46 \times 43,560 \text{ square feet/acre}) = \boxed{835 \text{ CF}}$$

Stormwater BMP	Volume
Cultec 330 XL Systems	7,403
Total	7,403

NOTES:

1. Storage volume for the stormwater BMPs obtained from the hydrologic model created in HydroCAD

CONCLUSION:

1. The storage volume provided by the proposed BMPs is greater than the required water quality treatment volume. 7,403 CF > 835 CF

BEST MANAGEMENT PRACTICES MAINTENANCE PLAN

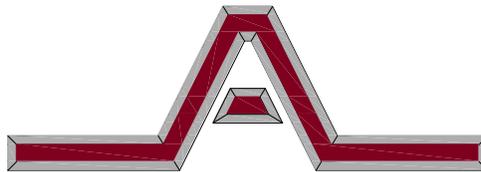
**For The
Proposed 60 Unit Apartment Complex**

**located at
90 Ocean Avenue
(Tax Map 2 Block 139 Lots 5 & 6)
Revere, Massachusetts**

***Submitted to:*
City of Revere
Conservation Commission
&
DEP N.E.R.O.**

***Prepared for:*
90 Ocean Avenue, LLC
140 Tremont Street
Everett, MA 02149**

Prepared by



Engineering Alliance, Inc.

Civil Engineering & Land Planning Consultants
194 Central Street 1950 Lafayette Road
Saugus, MA 01906 Portsmouth, NH 03801
Tel: (781) 231-1349 Tel: (603) 610-7100
Fax: (781) 417-0020 Fax: (603) 610-7101

January 23, 2017

BEST MANAGEMENT PRACTICES MAINTENANCE PLAN

A Best Management Practices Operations and Maintenance Plan is summarized below and will be incorporated into the construction documents for this project.

In accordance with the Storm Water Management Regulations issued by the Department of Environmental Protection (DEP), Engineering Alliance, Inc. has prepared the following best management practices maintenance plan for the proposed development of the property located at 90 Ocean Avenue (Tax Map 2 Block 139 Lot 5) in Revere, Massachusetts. This plan is broken into two major sections. The first section is construction-related erosion and sedimentation controls. The second section is devoted to a post-development operation and maintenance plan.

Basic Information

Owner: 90 Ocean Avenue, LLC
140 Tremont Street
Everett, MA 02149

Section 1 - Construction Activities

1. Contact the City of Revere at least three (3) days prior to start of construction.
2. Install haybales and silt fence to prevent sediment from leaving the subject property.
3. Install silt sacks in existing catch basins to prior to any construction.
4. The contractor shall only disturb the minimum area necessary.
5. Proper erosion and sediment control must be employed around all material stockpile areas and efficient. Regular provisions for dust control must be used, via a water truck or other acceptable method.
6. The entire project area shall be swept upon completion of construction and prior to removal of the erosion control devices.

Section 2 – Post Development Operation & Maintenance

1. Paved Areas – Vacuum sweepers shall sweep paved areas periodically during dry weather to remove excess sediments and to reduce the amount of sediments that the drainage system shall have to remove from the runoff. The sweeping should be conducted on a semiannual basis before April 30th and after November 15th.

Salt used for de-icing on the roadway during winter months shall be limited as much as possible as this will reduce the need for removal and treatment. Sand containing the minimum amount of calcium chloride (or approved equivalent) needed for handling may be applied as part of the routine winter maintenance activities.

2. Catch Basins & Water Quality Inlets – Inspect or clean catch basins and water quality inlets at least four times per year and at the end of the foliage and snow removal season. Sediments must also be removed four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the structure.

Upon a period beginning twelve months after the completion of the site, all trench drains shall be inspected and maintained twice annually, once in April and once in November. Debris shall be removed from the trench drain grates, sumps and outlet pipes and disposed of in compliance with local, state and federal guidelines.

3. Subsurface Infiltration Facilities (Cultec 330XL HD Chambers) –Subsurface Infiltration Facilities are equipped with an inspection port in each row. When the lid is removed, a screw-in plug will be exposed. Remove the plug and measure the depth of sediment. If the sediment exceeds 3 inches in depth, the row should be cleaned with high pressure water through a culvert cleaning nozzle. Inlets and outlets should be periodically maintained to prevent clogging and maintain infiltration capacity.

4. Eco-Stone Permeable Pavement – Eco-Stone areas should be maintained periodically to maintain infiltration. Care should be taken to keep sediment off the pavement during and after construction. Yearly cleaning by a vacuum-type street cleaner should be performed when the pavement is dry. Vacuum settings should be adjusted to prevent the uptake of aggregate in the pavement openings and joints. It is important to keep the drainage voids and joints filled with aggregate. Replenishment can be done, if needed, at the time of cleaning.
5. Pesticides, Herbicides, and Fertilizers - Pesticides and herbicides shall not be used within the limits of the 100-foot buffer zone to any wetland resource areas as defined under 310 CMR 10.00. In addition, fertilizers that are used within this zone should be restricted to organic fertilizers only.
6. Snow removal and storage - Plowed snow shall be placed in the pervious area shown on the plan where it can slowly infiltrate. Sediments shall be removed from this area every spring. When the amount of snow exceeds the capacity of the snow storage area, it shall be removed from the site by a privately contracted company. Snow shall be managed in accordance with the MassDEP Snow Disposal Guidelines. Roadway deicing will use the minimum amount of deicing and abrasive agents, and include catch basin stenciling to discourage illicit discharges.
7. Maintenance Responsibilities - All post construction maintenance activities should be documented and kept on file and made available to the City of Revere upon request. All post construction maintenance activities shall run with the title of the property in perpetuity.

ILLCIT DISCHARGE COMPLIANCE STATEMENT

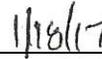
In accordance with the Wetland Regulations found in 310 CMR 10.05(6) and the *Massachusetts Stormwater Handbook* published by the Massachusetts Department of Environmental Protection, the stormwater management system for the proposed project located at 90 Ocean Avenue in Revere, Massachusetts shall accept no illicit discharges. Illicit discharges are defined as discharges not entirely comprised of stormwater and include, but are not limited to, wastewater discharges and discharges of stormwater contaminated by contact with process wastes, raw materials, toxic pollutants, hazardous substances, oil, or grease.

Engineering Alliance, Inc. has performed an investigation of the existing site conditions and did not find any illicit discharges. Prior to construction, additional investigations will take place to identify and remove any and all illicit discharges currently onsite. These actions include, without limitation, visual screening, dye or smoke testing, and the removal of any sources of illicit discharges to the stormwater management system.

Should any illicit discharges enter the stormwater management system after construction has been completed, immediate steps to remove the discharges and their source shall be taken to return the system to its proper working state.



Richard A. Salvo, P.E.
for Engineering Alliance, Inc.



Date

SECTION III

**Wetland Fee Transmittal Form
Copy of Checks**



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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



A. Applicant Information

1. Location of Project:

<u>90 Ocean Avenue</u>	<u>Revere</u>
a. Street Address	b. City/Town
<u></u>	<u>\$512.50</u>
c. Check number	d. Fee amount

2. Applicant Mailing Address:

<u>90 Ocean Ave, LLC</u>	<u></u>	
c. Organization	b. Last Name	
<u>140 Tremont Street</u>	<u></u>	
d. Mailing Address	<u></u>	
<u>Everett</u>	<u>MA</u>	<u>02149</u>
e. City/Town	f. State	g. Zip Code
<u>(617) 389-2800</u>	<u>greg@gtacoinc.com</u>	<u></u>
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

<u></u>	<u></u>	
a. First Name	b. Last Name	
<u></u>	<u></u>	
c. Organization		
<u></u>	<u></u>	
d. Mailing Address		
<u></u>	<u></u>	<u></u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

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

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

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

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

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

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

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

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



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 3b	\$1,050	\$1,050	\$1,050
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Step 5/Total Project Fee:			\$1,050
Step 6/Fee Payments:			
Total Project Fee:			\$1,050
State share of filing Fee:			\$512.50
City/Town share of filing Fee:			\$537.50
			a. Total Fee from Step 5
			b. 1/2 Total Fee less \$12.50
			c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

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

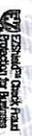
Department of Environmental Protection
 Box 4062
 Boston, MA 02211

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

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

140 TREMONT STREET, LLC
140 TREMONT STREET
EVERETT, MA 02149

1953

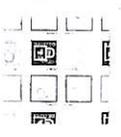
 Everett Bank
A CO-OPERATIVE BANK
53-7027/2113

PAY TO THE ORDER OF Commonwealth of MA

DATE 11/17

\$ 512.50

FOR 90 ocean five DOLLARS



⑈001953⑈ ⑆211370273⑆ 21249537⑈

140 TREMONT STREET, LLC
140 TREMONT STREET
EVERETT, MA 02149

1954

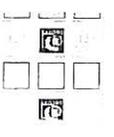
 Everett Bank
A CO-OPERATIVE BANK
53-7027/2113

PAY TO THE ORDER OF City of Revere

DATE 11/17

\$ 537.50

FOR 90 ocean five DOLLARS



⑈001954⑈ ⑆211370273⑆ 21249537⑈

Security Features 

Details on back

Security Features 

Details on back

SECTION IV

**Certified Abutters List
Abutter Notification Form**

Notification to Abutters Under the Massachusetts Wetlands Protection Act

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and the City of Revere Wetland By-Law Article 508, you are hereby notified of the following.

- A. The name of the applicant is **90 Ocean Avenue, LLC**.
- B. The applicant has filed a Request for Determination of Applicability with the municipality of the **City of Revere** seeking permission to remove, fill, dredge or alter an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40 and Article 508).

The project consists of constructing a 60 unit multifamily dwelling with first floor parking garage and bituminous concrete parking area.
- C. The address of the lot where the activity is proposed is **90 Ocean Avenue (Tax Map 2 Block 139 Lot 5)**
- D. Copies of the Request for Determination of Applicability may be examined at:

**Revere Conservation Commission
City Hall
281 Broadway
Revere, MA 02151**

between the hours of **8:00 A.M. and 12:00 P.M.** on the following days of the week: **Monday, Tuesday, Wednesday, and Thursday**. For more information or an appointment call: **781-286-8181**. This is the **number for the local conservation commission**.

- E. Copies of the Request for Determination of Applicability may be obtained from the applicant's representative, by calling this telephone number **(781) 231-1349** between the hours of **8:30 A.M. and 4:00 P.M.** on the following days of the week: **Monday, Tuesday, Wednesday, Thursday and Friday**.
- F. Information regarding the date, time, and place of the public hearing may be obtained from **The Revere Conservation Commission** by calling this telephone number **781-286-8181** between the hours of **8:00 A.M. and 12:00 P.M.** on the following days of the week: **Monday, Tuesday, Wednesday, and Thursday**. This is the **Local Conservation Commission**.

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

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

NOTE: You may also contact your local conservation commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:

Central Region: (508) 792-7650

Northeast Region: (978) 661-7600

Southeast Region: (508) 946-2800

Western Region: (413) 784-1100



Brian M. Arrigo
Mayor

The City of REVERE, MASSACHUSETTS

BOARD OF ASSESSORS
Andrew A. Iovanna
John J. Verrengia
Dana E. Brangiforte

*PO
Order #7683*

Request for Abutters List

Date: 1-6-17

Property Location: 90 Ocean Ave

Map: 2 Block: 139 Parcel: 5

Property Owner: 90 Ocean Avenue LLC

Is request for special permit or variance? YES NO

If yes than 300Ft is required distance. If no, than please indicate requested distance below.

Requested Distance:

100 FT

Fee: \$80.00

Please make checks payable to City of Revere

Requester Information:

Name: Richard Sabo

Address: 194 Central St

Saugus MA 01906

Telephone: 781-231-1349

Loc: RAILROAD LOCATIO Parcel ID #: 2-139-11
LUC: 920

MASS BAY TRANS AUTHORITY

10 PARK PLAZA

BOSTON MA 02116

Loc: 90 OCEAN AVE Parcel ID #: 2-139-5
LUC: 326

90 OCEAN AVENUE LLC

140 TREMONT ST

EVERETT MA 02149

Loc: OCEAN AVE Parcel ID #: 2-139-6
LUC: 337

90 OCEAN AVENUE LLC

140 TREMONT ST

EVERETT MA 02149

Loc: OCEAN AVE Parcel ID #: 2-139-7C
LUC: 390

BOSTON/LOGAN AIRPORT ASSOC INC

C/O PILOT RE GROUP

10 GLENVILLE ST

3RD FLR

GREENWICH CT 06831

Loc: REVERE BEACH BLVD Parcel ID #: 2-140-1D
LUC: 390

BOSTON LOGAN AIRPORT ASSOC LLP

C/O PILOT RE GROUP

10 GLENVILLE ST

3RD FLR

GREENWICH CT 06831

Loc: GARFIELD AVE Parcel ID #: 4-92-7A
LUC: 931

CITY OF REVERE / GARFIELD SCHO

C/O SUPT OF SCHOOLS

101 SCHOOL ST

REVERE MA 02151

Loc: 110 OCEAN AVE Parcel ID #: 8-139-4
LUC: 959

NORTH SUFFOLK MENTAL HEALTH

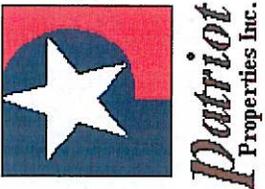
ASSOCIATION, INC

301 BROADWAY

CHELSEA MA 02150

THIS IS A TRUE & ATTESTED
COPY OF THE RECORDS OF THE
ASSESSOR'S OFFICE OF THE
CITY OF REVERE

DATE: 4/9/17



PROPERTY LOCATION
 No 90 Alt No 000 Direction/Street/City OCEAN AVE, REVERE
 Unit #:
OWNERSHIP
 Owner 1: 90 OCEAN AVENUE LLC
 Owner 2:
 Owner 3:
 Street 1: 140 TREMONT ST
 Street 2:
 Twn/City: EVERETT
 S/P/Prov: MA Cntry Own Occ: Type:
 Postal: 02149

IN PROCESS APPRAISAL SUMMARY

Use Code	Building Value	Yard Items	Land Size	Land Value	Total Value	Legal Description
326	228,400	4,400	0.537	397,600	630,400	LOT PT 4
Total Card	228,400	4,400	0.537	397,600	630,400	Entered Lot Size
Total Parcel	228,400	4,400	0.537	397,600	630,400	Total Land: 23409
Source: Market Adj Cost Total Value per SQ unit /Card: 121.00 /Parcel 121.00 Land Unit Type: SF						

USER DEFINED

Prior Id # 1:	HB
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
ASR Map:	2
Fact Dist:	
Reval Dist:	
Year:	
Land Reason:	
Bid Reason:	

PREVIOUS ASSESSMENT

Tax Yr	Use	Cat	Blgd Value	Yrd Items	Land Size	Land Value	Total Value	Notes	Date
2017	326	FV	228,400	4400	.537	397,600	630,400	Year End Roll	12/22/2016
2016	326	FV	228,400	4400	.537	397,600	630,400	Year End	12/28/2015
2015	326	FV	228,400	4400	.537	397,600	630,400	YEAR END	12/22/2014
2014	326	FV	228,400	4400	.537	382,900	615,700	YEAR END	12/23/2013
2013	326	FV	228,400	4400	.537	353,500	586,300	Year End	12/26/2012
2012	326	FV	228,400	4400	.537	368,200	602,800	year end	12/11/2011
2011	326	FV	228,400	6200	.537	368,200	602,800	YEAR END	12/15/2009
2010	326	FV	228,400	6200	.537	368,200	602,800	YEAR END	12/15/2009

SALES INFORMATION

Grantor	Legal Ref	Type	Date	Sale Price	V	Tst	Verif	Assoc PCL Value	Notes
EASTERN EQUITY	56282-7		6/15/2016	1,800,000	No			No	
SARATOGA TRUST,	56280-263		6/14/2016	1,400,000	No			No	
UNKNOWN	1/1		12/30/1987		No			No	

PRINT

Date	Time
01/09/17	11:27:31

LAST REV

Date	Time
11/07/16	14:03:39

VARRIATE DESCRIPTION
 This Parcel contains .537 Acres of land mainly classified as RST/BAR with a(n) RESTAURANT Building Built about 1960, having Primarily STUCCO Exterior and TAR+GRAVEL Roof Cover, with 1 Units, 0 Baths, 2 HalfBaths, 0 3/4 Baths, 0 Rooms, and 0 Bidrms.

PROPERTY FACTORS

Item Code	Descr	%	Item Code	Descr
Z			U	
o			t	
n			i	
Census: Exmpt				
Flood Haz: Topo				
D: Street				
s: Traffic				
t: Traffic				

ACTIVITY INFORMATION

Date	Result	By	Name
2/9/2006	MEASURED	335	JONATHAN D
11/12/2004	No change	119	WP
12/16/2001	Change - H	JF	

LAND SECTION (First 7 lines only)

Use Code	Description	LUC	No of Units	Depth / Price/Units	Unit Type	Land Type	Sq Feet	SITE
326	RST/BAR		23409				13.5	1.258 CG

BUILDING PERMITS

Date	Number	Descr	Amount	C/O	Last Visit	Fed Code	F. Descr	Comment
9/6/2001	7994	Commercial	1,000 C	7/29/2002			Commercial ADD PAR	

APPROVALS

Date	Alt	%	Spec	J	Fact	Use Value	Notes
2/9/2006						397,633	
11/12/2004						397,600	
12/16/2001						397,600	

TOTALS

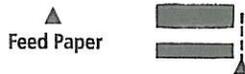
Total AC/H: 0.53740	Total SF/SM: 23409.14	Parcel LUC: 326	RST/BAR	Prime NB Desc: COMM GOOD	Total: 397,633	Spl Credit	Total: 397,600
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APPROVALS

Date	Alt	%	Spec	J	Fact	Use Value	Notes
2/9/2006						397,633	
11/12/2004						397,600	
12/16/2001						397,600	

APPROVALS

Date	Alt	%	Spec	J	Fact	Use Value	Notes
2/9/2006						397,633	
11/12/2004						397,600	
12/16/2001						397,600	



LUC: 920

MASS BAY TRANS AUTHORITY

10 PARK PLAZA

BOSTON MA 02116

LUC: 326

90 OCEAN AVENUE LLC

140 TREMONT ST

EVERETT MA 02149

LUC: 337

90 OCEAN AVENUE LLC

140 TREMONT ST

EVERETT MA 02149

LUC: 390

BOSTON/LOGAN AIRPORT ASSOC INC

C/O PILOT RE GROUP

10 GLENVILLE ST

3RD FLR

GREENWICH CT 06831

LUC: 390

BOSTON LOGAN AIRPORT ASSOC LLP

C/O PILOT RE GROUP

10 GLENVILLE ST

3RD FLR

GREENWICH CT 06831

LUC: 931

CITY OF REVERE / GARFIELD SCHO

C/O SUPT OF SCHOOLS

101 SCHOOL ST

REVERE MA 02151

LUC: 959

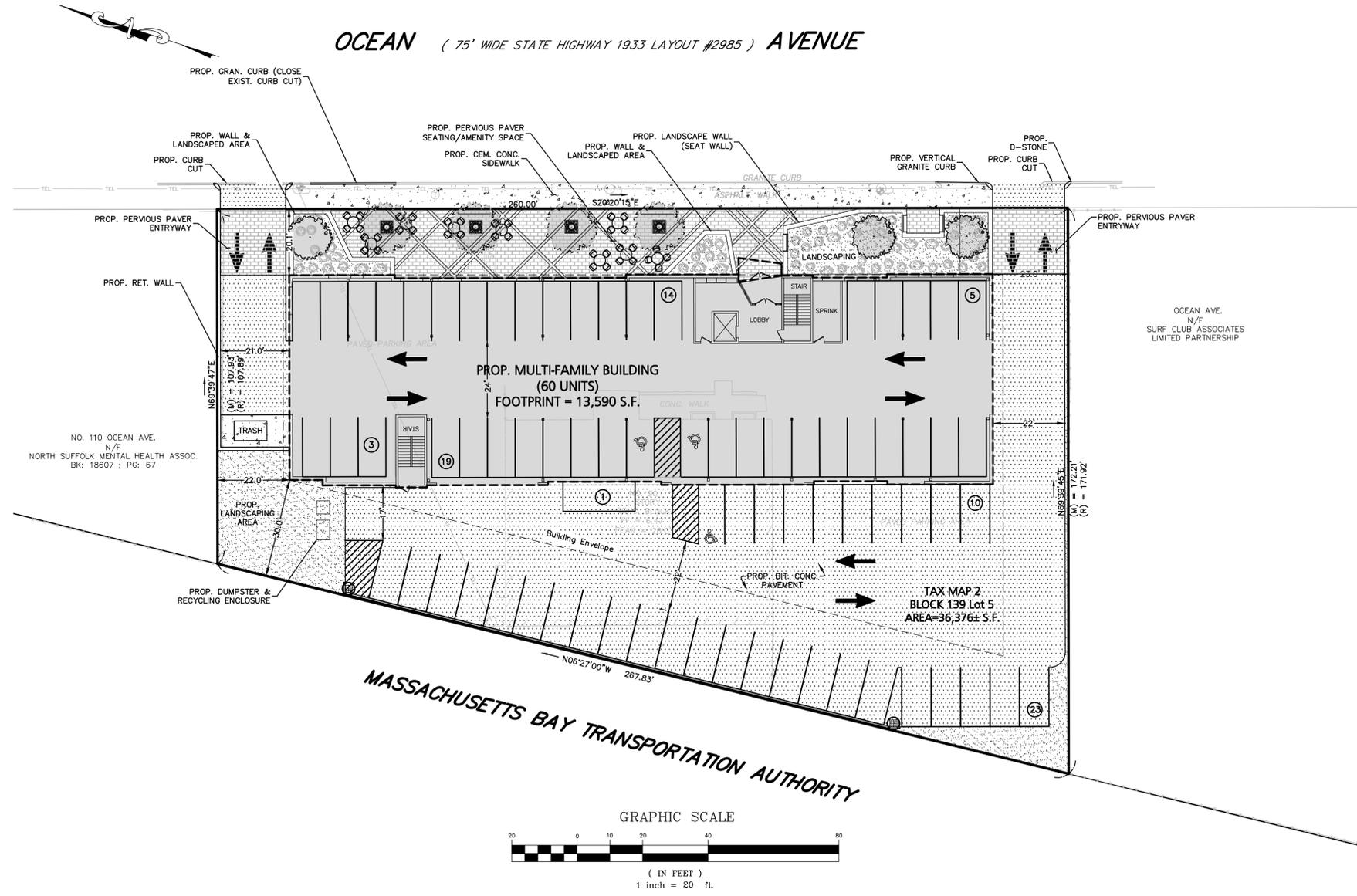
NORTH SUFFOLK MENTAL HEALTH

ASSOCIATION, INC

301 BROADWAY

CHELSEA MA 02150





GENERAL NOTES:

THIS PLAN WAS PREPARED WITHOUT A FULL TITLE EXAMINATION AND IS NOT A CERTIFICATION TO THE TITLE OF THE LANDS SHOWN. THE OWNERSHIP OF ADJUTING PROPERTIES IS ACCORDING TO ASSESSORS RECORDS. THIS PLAN MAY OR MAY NOT SHOW ALL ENCUMBRANCES WHETHER EXPRESSED, IMPLIED OR PRESCRIPTIVE.

EXISTING CONDITIONS INFORMATION SHOWN ON THIS PLAN WAS COMPILED FROM AN INSTRUMENT SURVEY ON THE GROUND ON THE DATE OF JUNE 12, 2015 PERFORMED BY BOSTON SURVEY, INC. AND PLANS OF RECORD WHERE AVAILABLE.

THE EXISTING PROPERTY IS SHOWN ON THE FEMA MAP FOR COMMUNITY NO. 25025C0038J DATED MARCH 16, 2016 AND IS LOCATED WITHIN A ZONE "AE" ALSO KNOWN AS SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD WITH BASE FLOOD ELEVATION 11 (NAVD 88 DATUM). THE ENTIRE PROPERTY IS LOCATED WITHIN THE FLOOD ZONE AND IS CONSIDERED LAND SUBJECT TO COASTAL STORM FLOWAGE.

LAND USAGE TABLE
LIMITED INDUSTRIAL DISTRICT (IC-2)

ITEM	REQUIRED	PROVIDED	EXCEPTION REQUIRED
MINIMUM LOT SIZE	25,000 SF	36,380 SF	NO
MINIMUM LOT FRONTAGE	100 FT	260.0 FT	NO
MINIMUM FRONT YARD SETBACK	20 FT	20.1 FT	NO
MINIMUM SIDE YARD SETBACK	20 FT	22.0 FT	NO
MINIMUM REAR YARD SETBACK	30 FT	30.0 FT	NO
MAXIMUM BUILDING COVERAGE	-	37.4%	NO
MAXIMUM HEIGHT	140 FT	73.5 FT	NO
MAXIMUM STORIES	14	5	NO
MAXIMUM FENCE HEIGHT	10 FT	N/A	NO
FLOOR AREA RATIO (FAR)	3.0	1.49	NO

PARKING CALCULATION

COMPONENT	REQUIRED	TOTAL REQUIRED	PROPOSED
TWO BEDROOM UNIT	1.75 Spaces per dwelling unit = 33 19 Two Bedroom Units x 1.75=33 Spaces	33	75
ONE BEDROOM UNIT	1.50 Spaces per dwelling unit = 62 41 One Bedroom Units x 1.5=62	62	
TOTAL		95	75

- NOTES:**
- STANDARD SPACE 9' x 18'
 - ACCESSIBLE SPACE REQUIRED = 3
 - IN THE IC-2 DISTRICTS THE OFF STREET PARKING REQUIREMENT SHALL BE 1.5 SPACES PER ONE BEDROOM UNIT, 1.75 SPACES PER TWO BEDROOM UNIT AND 2 SPACES PER UNIT FOR THREE OR MORE BEDROOMS.
 - RELIEF FROM REQUIRED OFF-STREET PARKING SPACES IS REQUIRED. THE PROPOSED DECISION ALLOWS FOR 1.2 SPACE PER UNIT

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR RECORDING ADOPTED BY THE REGISTERS OF DEEDS IN 1978 AND AMENDED JANUARY 12, 1988

Richard A. Salvo
RICHARD A. SALVO, P.E.
ENGINEERING ALLIANCE, INC.

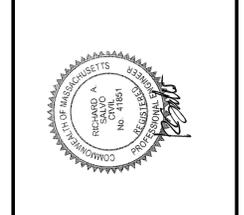
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NO.	DATE	DESCRIPTION OF REVISION

Engineering Alliance, Inc.
Civil Engineering & Land Planning Consultants
194 Central Street
Portsmouth, NH 03801
Tel: (603) 610-7100
Fax: (603) 610-7101

Proposed Site Plan
90 Ocean Avenue
(Tax Map 2 Block 139 Lots 5 & 6)
Revere, MA

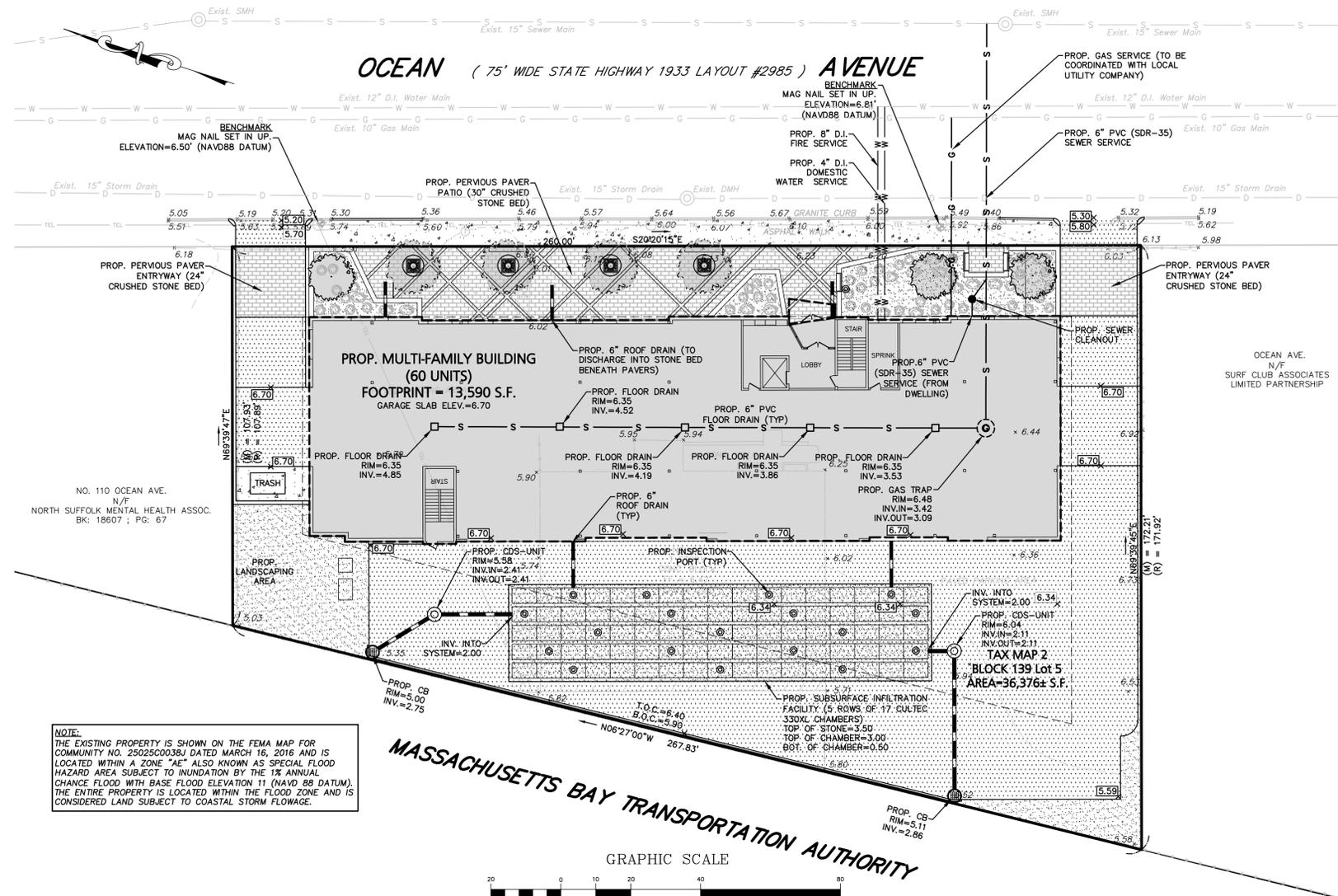
PROJECT #: 15-55604
DATE: December 23, 2016
DWG FILE NAME: 15-55604.dwg
SCALE: As Noted
DESIGN BY: Hourmat Abdul Rauf | CHECKED BY: Richard A. Salvo, P.E.



APPLICANT:
90 Ocean Avenue, LLC
140 Tremont Street
Everett, MA 02149

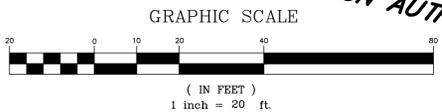
DWG. NO.
1 of 5

DRAWING TITLE:
Site Layout Plan



NOTE:
 THE EXISTING PROPERTY IS SHOWN ON THE FEMA MAP FOR COMMUNITY NO. 25025C0038J DATED MARCH 16, 2016 AND IS LOCATED WITHIN A ZONE "AE" ALSO KNOWN AS SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD WITH BASE FLOOD ELEVATION 11 (NAVD 88 DATUM). THE ENTIRE PROPERTY IS LOCATED WITHIN THE FLOOD ZONE AND IS CONSIDERED LAND SUBJECT TO COASTAL STORM FLOWAGE.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY



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LEGEND - GRADING & DRAINAGE PLAN	
PROPERTY LINE	—
EXISTING BUILDING	▨
EXISTING CURB	—
EXISTING CHAIN LINK FENCE	—*—*—*—*—*—*—
EXISTING WATER LINE	—W—W—W—
EXISTING SEWER LINE	—S—S—S—
EXISTING SEWER MANHOLE	⊙
EXISTING GAS LINE	—G—G—G—
EXISTING SPOT SHOT	6.53
PROPOSED BUILDING	▨
PROPOSED BIT. CONC. PAVEMENT	▨
PROPOSED WATER LINE	—W—W—W—
PROPOSED SEWER LINE	—S—S—S—
PROPOSED DRAIN LINE	—D—D—D—
PROPOSED DRAIN MANHOLE	⊙
PROPOSED CATCH BASIN	⊙
PROPOSED SPOT SHOT	6.34

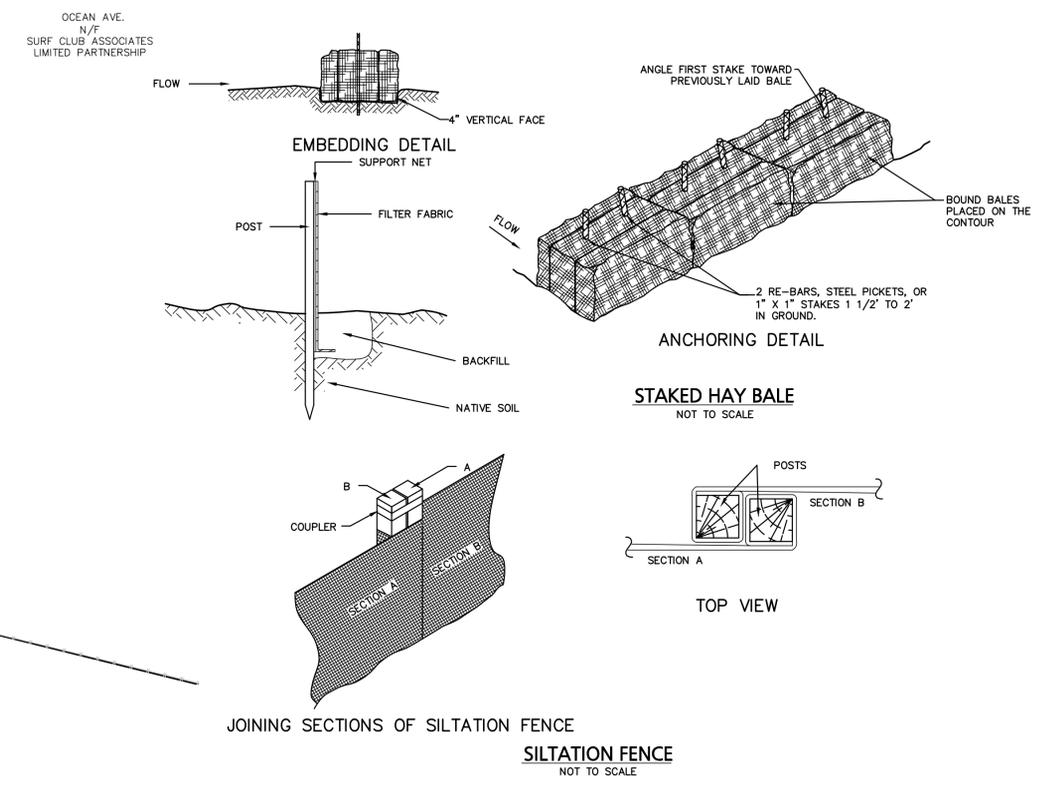
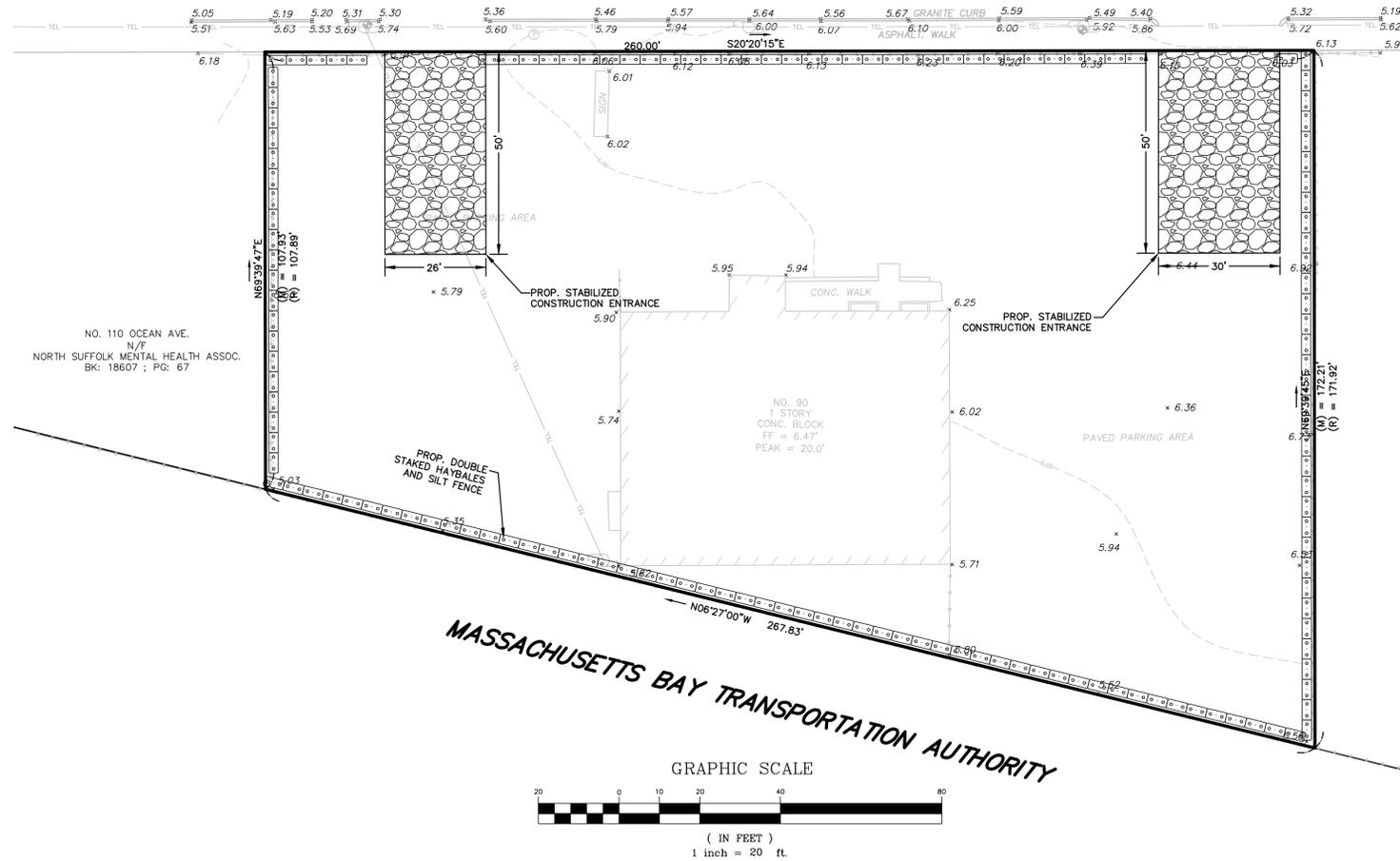
GENERAL UTILITY NOTES:

- ALL EXISTING SITE FEATURES SHALL BE RETAINED UNLESS OTHERWISE NOTED.
- DATUM: NAVD88
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DISSEAS" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
- THE CONTRACTOR SHALL EXCAVATE TEST PITS PRIOR TO COMMENCING WORK TO DETERMINE THE EXACT LOCATION OF WATER AND GAS SERVICES.
- WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
- ALL PROPOSED WORK SHALL BE PERFORMED IN FULL COMPLIANCE WITH THE CITY OF REVERE. THE CONTRACTOR SHALL NOTIFY THE CITY OF REVERE D.P.W. PRIOR TO THE COMMENCEMENT OF ANY UTILITY WORK.
- ALL UTILITY WORK WITHIN THE OCEAN AVENUE RIGHT-OF-WAY SHALL BE PERFORMED BY A CONTRACTOR LICENSED BY THE DPW & OBTAIN A PERMIT FOR SUCH WORK FROM THE DPW.
- ANY CHANGE IN THE FIELD CONDITIONS SHOULD BE REPORTED TO THE ENGINEER TO ENSURE THAT ANY MODIFICATIONS TO THE ORIGINAL DESIGN CONFORM TO STANDARD ENGINEERING AND CONSTRUCTION PRACTICES AND ADEQUATE TO SERVE THE PROJECT'S NEEDS AND COMPLY WITH APPLICABLE STANDARDS AND REGULATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL UTILITIES AS SHOWN ON THESE PLANS IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE APPROPRIATE UTILITY COMPANY STANDARDS FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SPECIFICATIONS OF MATERIALS AND INSTALLATION PROCEDURES AND INSTALL IN ACCORDANCE WITH THESE REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE TO CONTACT AND DETERMINE, COORDINATE AND SCHEDULE ALL NECESSARY INSPECTIONS AND MONITORING WITH ALL APPROPRIATE UTILITY COMPANIES.
- THE CONTRACTOR OR OWNER IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO PERFORM THE WORK.
- DISPOSAL OF ALL MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF THE PROJECT.
- ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE PIPE (H.D.P.E.) CORRUGATED OUTSIDE & SMOOTH INSIDE UNLESS NOTED OTHERWISE.
- ALL ROOF DRAINAGE SHALL BE INFILTRATED VIA THE SUB-SURFACE INFILTRATION SYSTEMS. ALL CONNECTIONS ARE TO BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS.
- ALL UTILITY TRENCHES IN THE PUBLIC RIGHT-OF-WAY ARE TO BE REPAIRED WITH CONTROL DENSITY FILL AND INFRA-RED.
- DURING CONSTRUCTION, TEST PITS AND PROPER SOIL EVALUATION ARE TO BE PERFORMED AT THE LOCATION OF ALL SUBSURFACE INFILTRATION FACILITIES. RESULTS ARE TO BE SUBMITTED TO THE ENGINEER AND THE CITY OF REVERE IMMEDIATELY UPON COMPLETION.

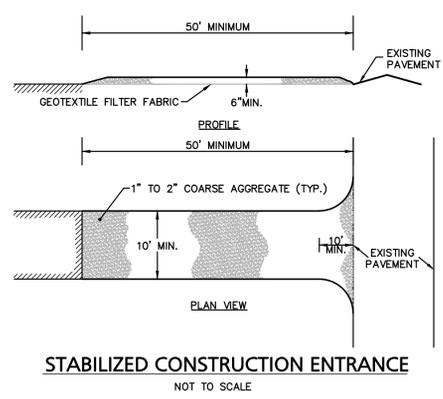
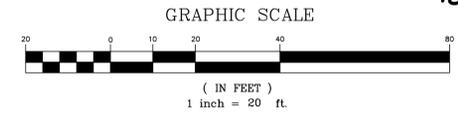
<p>Engineering Alliance, Inc. Civil Engineering & Land Planning Consultants 194 Central Street Portsmouth, NH 03801 Tel: (603) 610-7100 Fax: (603) 610-7101</p>	
<p>Proposed Site Plan 90 Ocean Avenue (Tax Map 2 Block 139 Lots 5 & 6) Revere, MA</p>	<p>DATE: December 23, 2016 DWG FILE NAME: 15-55604.dwg SCALE: As Noted DESIGN BY: Hourmat Abdul Rauf CHECKED BY: Richard A. Salvo, P.E.</p>
<p>APPLICANT: 90 Ocean Avenue, LLC 140 Tremont Street Everett, MA 02149</p>	<p>DRAWING TITLE: Grading, Drainage & Utility Plan</p>
<p>DWG. NO. 20f5</p>	<p>DESCRIPTION OF REVISION</p>

OCEAN (75' WIDE STATE HIGHWAY 1933 LAYOUT #2985) AVENUE

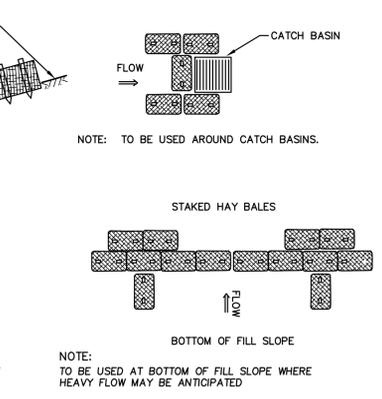
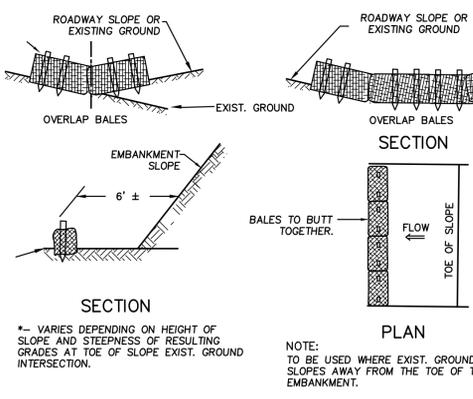
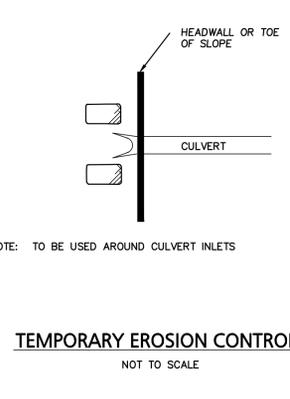
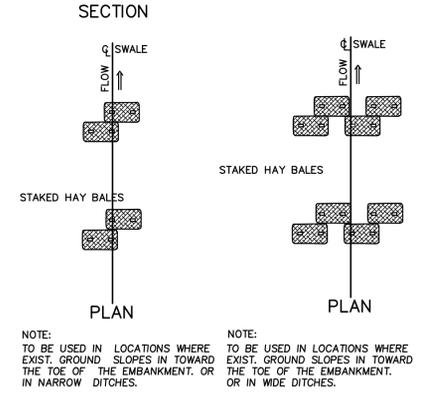
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- CONSTRUCTION SPECIFICATIONS:**
- STONE FOR A STABILIZATION CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
 - THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT A 30 FOOT MINIMUM LENGTH WOULD APPLY.
 - THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
 - THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN A FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
 - GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT.
 - ALL SURFACE WATER THAT IS FLOWING TO OR DEVERTED TOWARDS THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.



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APPLICANT: **90 Ocean Avenue, LLC**
 140 Tremont Street
 Everett, MA 02149

DWG. NO. **30f5**
 DRAWING TITLE: **Erosion Control Plan**

