

# 77-85 Liverpool Street

East Boston, Massachusetts

# **Notice of Intent**

**November 7, 2018** 

submitted to **Boston Conservation Commission** 

submitted by Flying Cloud Realty Trust

prepared by Fort Point Associates, Inc.

in association with:

Roche-Christopher Architecture, LLC Columbia Design Group, LLC



# TABLE OF CONTENTS

# TRANSMITTAL FORM

#### **APPLICATION FORM**

#### ATTACHMENT A – SUPPLEMENTAL INFORMATION

A.1	OVERVIEW OF PROPOSED PROJECT	A-1
A.2	EXISTING CONDITIONS	A-1
A.3	PROJECT DESCRIPTION	A-2
A.4	WETLAND RESOURCE AREAS	A-4
A.6	PROJECT IMPACTS AND MITIGATION	A-6
A.8	CONSTRUCTION METHODS AND SCHEDULE	A-8
A.9	NOI PLAN LIST	.A-10

#### **FIGURES**

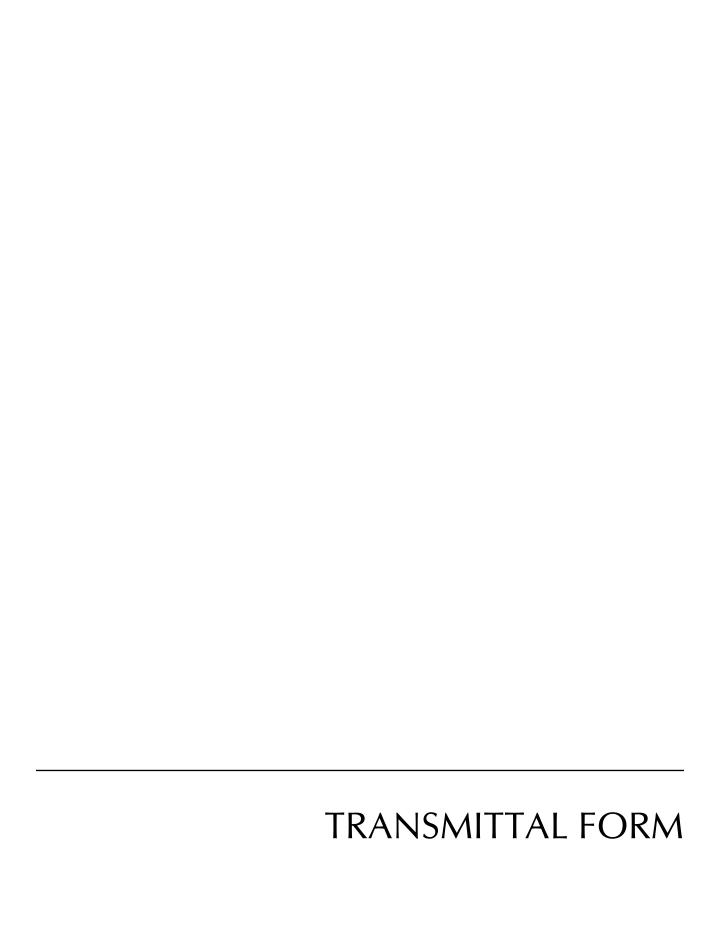
Figure I	Locus Map
Figure 2	Aerial View of Project Site and Surrounding Area
Figure 3	Existing Conditions Photographs
Figure 4	Existing Conditions Photographs
Figure 5	FEMA FIRMette

ATTACHMENT B – STORMWATER REPORT

ATTACHMENT C - CLIMATE CHANGE QUESTIONNAIRE

ATTACHMENT D – ABUTTER NOTIFICATION

ATTACHMENT E – PROJECT PLANS





# 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: 75 and 77-85 Liverpool Street **East Boston** a. Street Address b. City/Town \$512.50 c. Check number d. Fee amount 2. Applicant Mailing Address: Ben Goodman a. First Name b. Last Name Flying Cloud Realty Trust c. Organization 42 Maverick Street d. Mailing Address **East Boston** 02128 MA e. City/Town f. State g. Zip Code (617)721-4696 bgoodman@fastforwards.com h. Phone Number i. Fax Number j. Email Address 3. Property Owner (if different): Goodman, Trustee Ben a. First Name b. Last Name Flying Cloud Realty Trust c. Organization PO Box 201 d. Mailing Address Quincy 02171 MA e. City/Town f. State g. Zip Code (617)721-4696 bgoodman@fastforwards.com

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

#### B. Fees

h. Phone Number

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

i. Email Address

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.

i. Fax Number

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

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

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

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



## **Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

# **NOI Wetland Fee Transmittal Form**

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

B. Fees (continued)			
Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 3 - New Building	1	\$1,050	\$1,050 ———————————————————————————————————
	Step 5/Te	otal Project Fee:	
	Step 6	Fee Payments:	
	Total	Project Fee:	\$1,050 a. Total Fee from Step 5
	State share	of filing Fee:	\$512.50 b. 1/2 Total Fee <b>less</b> \$12.50
	City/Town share	e of filling Fee:	\$1,500 (Boston Fee) 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.)





# 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		
	Roston		

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	

	ol Street	East Boston	02128
a. Street Address		b. City/Town	c. Zip Code
Latitude and Longitud	e:	42.371944 d. Latitude	-71.040830 e. Longitude
0105565000 and 010	5566000	a. Lantado	S. Longitudo
f. Assessors Map/Plat Num		g. Parcel /Lot Number	er
·		3	
Applicant:			
Ben		Goodman	
a. First Name		b. Last Name	
Flying Cloud Realty T	rust		
c. Organization			
42 Maverick Street			
d. Street Address			
East Boston		MA	02128
e. City/Town		f. State	g. Zip Code
(617) 721-4696		bgoodman@fastforw	vards.com
h. Phone Number	i. Fax Number	j. Email Address	
Ben a. First Name		Goodman, Tri b. Last Name	ustee
Flying Cloud Realty T	rust		
c. Organization			
PO Box 201			
d. Street Address			
Quincy		MA MA	02171
e. City/Town		f. State	g. Zip Code
(617)721-4696		bgoodman@fastforw	vards.com
	i. Fax Number	j. Email address	
h. Phone Number		,	
	<b>'</b> ):	•	
h. Phone Number Representative (if any Ken	<b>y</b> ):	Fields	
h. Phone Number Representative (if any Ken a. First Name		·	
h. Phone Number Representative (if any Ken a. First Name Fort Point Associates,		<u>Fields</u>	
h. Phone Number Representative (if any Ken a. First Name Fort Point Associates, c. Company	, Inc.	<u>Fields</u>	
h. Phone Number  Representative (if any Ken a. First Name Fort Point Associates, c. Company 31 State Street, 3rd F	, Inc.	<u>Fields</u>	
h. Phone Number Representative (if any Ken a. First Name Fort Point Associates, c. Company 31 State Street, 3rd Fd. Street Address	, Inc.	Fields b. Last Name	
h. Phone Number  Representative (if any Ken a. First Name Fort Point Associates, c. Company 31 State Street, 3rd Fdd. Street Address Boston	, Inc.	Fields b. Last Name	02109
h. Phone Number  Representative (if any Ken a. First Name Fort Point Associates, c. Company 31 State Street, 3rd Fdd. Street Address Boston e. City/Town	, Inc.	Fields b. Last Name  MA f. State	g. Zip Code
h. Phone Number  Representative (if any Ken a. First Name Fort Point Associates, c. Company 31 State Street, 3rd Fid. Street Address Boston e. City/Town (617)357-7044	, Inc.	Fields b. Last Name  MA f. State kfields@fpa-inc.com	g. Zip Code
h. Phone Number  Representative (if any Ken a. First Name Fort Point Associates, c. Company 31 State Street, 3rd Fdd. Street Address Boston e. City/Town	, Inc.	Fields b. Last Name  MA f. State	g. Zip Code
h. Phone Number  Representative (if any Ken a. First Name Fort Point Associates, c. Company 31 State Street, 3rd Fid. Street Address Boston e. City/Town (617)357-7044 x203	, Inc. loor  i. Fax Number	Fields b. Last Name  MA f. State kfields@fpa-inc.com j. Email address	g. Zip Code
h. Phone Number  Representative (if any Ken a. First Name Fort Point Associates, c. Company 31 State Street, 3rd Fd. Street Address Boston e. City/Town (617)357-7044	i. Fax Number	Fields b. Last Name  MA f. State kfields@fpa-inc.com j. Email address	g. Zip Code



# WPA Form 3 - Notice of Intent

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

and deather Manager				
rovided by MassDEP:				
MassDEP File Number				
Document Transaction Number				
Boston				
City/Town				

A. General Information (continued) 6. General Project Description: The Project will include building demolition and construction of a 5-story mixed-use residential development with approximately 11 off-street covered parking spaces, improved stormwater management, natural landscaping, and sidewalk enhancements partially within Land Subject to Coastal Storm Flowage resource area. 7a. Project Type Checklist: (Limited Project Types see Section A. 7b.) 1. Single Family Home 2. Residential Subdivision 3. Commercial/Industrial ☐ Dock/Pier 5. Utilities Coastal engineering Structure 7. Agriculture (e.g., cranberries, forestry) 8. Transportation 9. X 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)? If yes, describe which limited project applies to this project. (See 310 CMR 1. ☐ Yes ☒ No 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 b. Certificate # (if registered land) a. County 54666 177 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.

wpaform3.doc • rev. 2/8/2018 Page 2 of 9



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

# **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

rovided by MassDEP:			
	MassDEP File Number		
	Document Transaction Number		
	Boston		
	City/Town		

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

	Resource	ce Area	Size of Proposed Alteration	Proposed Replacement (if any)	
	a. 🗌	Bank	1. linear feet	2. linear feet	
	b	Bordering Vegetated Wetland	1. square feet	2. square feet	
	c. 🗌	Land Under Waterbodies and	1. square feet	2. square feet	
		Waterways	3. cubic yards dredged		
	Resource	ce Area	Size of Proposed Alteration	Proposed Replacement (if any)	
	d. 🗌	Bordering Land Subject to Flooding	1. square feet	2. square feet	
			3. cubic feet of flood storage lost	4. cubic feet replaced	
	e. 🗌	Isolated Land Subject to Flooding	1. square feet		
			2. cubic feet of flood storage lost	3. cubic feet replaced	
	f. 🗌	Riverfront Area	1. Name of Waterway (if available) - spec	ify 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 7	Γotal area of Riverfront Δrea	on the site of the proposed projec	<del></del>	
	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 between 100 ft. and 200 ft.				
	5. Has an alternatives analysis been done and is it attached to this NOI?				
	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.

wpaform3.doc • rev. 2/8/2018



# WPA Form 3 - Notice of Intent

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

rovided by MassDEP:			
	MassDEP File Number		
	Document Transaction Number		
	Boston		
	City/Town		

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

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

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

4.

5.

Resou	irce Area	Size of Proposed Alteration	Proposed Replacement (if any)
а. 🗌	Designated Port Areas	Indicate size under Land Unde	er the Ocean, below
b. 🗌	Land Under the Ocean	square feet      cubic yards dredged	
с. 🗌	Barrier Beach		iches and/or Coastal Dunes below
d.	Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. 🗌	Coastal Dunes	1. square feet	2. cubic yards dune nourishment
		Size of Proposed Alteration	Proposed Replacement (if any)
f g	Coastal Banks Rocky Intertidal	1. linear feet  1. square feet	
h.	Shores Salt Marshes Land Under Salt Ponds	1. square feet  1. square feet  1. square feet	2. sq ft restoration, rehab., creation
j. 🔲	Land Containing Shellfish	2. cubic yards dredged  1. square feet	
k. 🗌	Fish Runs		iks, inland Bank, Land Under the er Waterbodies and Waterways,
If the p		1. cubic yards dredged  5,766 1. square feet  restoring or enhancing a wetland tered in Section B.2.b or B.3.h about	
a. square feet of BVW b. square feet of Salt Marsh			Salt Marsh
	oject Involves Stream Cros		
a. number of new stream crossings		b. number of repla	acement stream crossings

wpaform3.doc • rev. 2/8/2018 Page 4 of 9



# WPA Form 3 - Notice of Intent

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

Prov	ided by MassDEP:
	MassDEP File Number
	Document Transaction Number
	Boston
	City/Town

		BOSION
		City/Town
C.	Other Applicable Standards and F	Requirements
	This is a proposal for an Ecological Restoration complete Appendix A: Ecological Restoration (310 CMR 10.11).	on Limited Project. Skip Section C and Limited Project Checklists – Required Actions
Str	reamlined Massachusetts Endangered Spec	ies Act/Wetlands Protection Act Review
<ol> <li>Is any portion of the proposed project located in Estimated Habitat of Rare Wildlife at the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, Massachusetts Natural Heritage Atlas or go to <a href="http://maps.massgis.state.ma.us/PRI">http://maps.massgis.state.ma.us/PRI</a> EST HAB/viewer.htm.</li> </ol>		
	a.  Yes No If yes, include proof of n	nailing or hand delivery of NOI to:
	Natural Heritage and E Division of Fisheries at 1 Rabbit Hill Road Westborough, MA 015	
	If yes, the project is also subject to Massachusetts CMR 10.18). To qualify for a streamlined, 30-day, complete Section C.1.c, and include requested macomplete Section C.2.f, if applicable. If MESA supply completing Section 1 of this form, the NHESP was up to 90 days to review (unless noted exceptions in	MESA/Wetlands Protection Act review, please aterials with this Notice of Intent (NOI); OR plemental information is not included with the NOI, will require a separate MESA filing which may take
	c. Submit Supplemental Information for Endangere	ed Species Review*
	1. Percentage/acreage of property to be a	altered:
	(a) within wetland Resource Area	percentage/acreage
	(b) outside Resource Area	percentage/acreage
	2. Assessor's Map or right-of-way plan of	f site

tree/vegetation clearing line, and clearly demarcated limits of work \*\*

Photographs representative of the site

(a)

buffer zone)

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

Project description (including description of impacts outside of wetland resource area &

wpaform3.doc • rev. 2/8/2018 Page 5 of 9

<sup>\*</sup> 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.

<sup>\*\*</sup> 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.



# WPA Form 3 - Notice of Intent

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

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Boston
City/Town

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

	(c) MESA filing fee (fee information available at <a href="http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm">http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm</a> ). Make check payable to "Commonwealth of Massachusetts - NHESP" and <i>mail to NHESP</i> 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 & Estima	ted Habitat boundaries		
	(f) OF	R Check One of the Following			
	1. 🗌	Project is exempt from MESA review. Attach applicant letter indicating which <a href="http://www.mass.gov/dfwele/dfw/nhesp.">http://www.mass.gov/dfwele/dfw/nhesp.</a> the NOI must still be sent to NHESP if the 310 CMR 10.37 and 10.59.)	/regulatory_review/mesa	/mesa_exemptions.htm;	
	2. 🗌	Separate MESA review ongoing.	a. NHESP Tracking #	b. Date submitted to NHESP	
	3. 🗌	Separate MESA review completed. Include copy of NHESP "no Take" dete Permit with approved plan.	rmination or valid Conser	vation & Management	
3.	For coastal	projects only, is any portion of the propo fish run?	osed project located belo	w the mean high water	
	a. Not a	applicable – project is in inland resource	area only b. 🗌 Yes	⊠ No	
	If yes, inclu	ide proof of mailing, hand delivery, or ele	ctronic delivery of NOI to	either:	
	South Shore the Cape &	e - Cohasset to Rhode Island border, and Islands:	North Shore - Hull to New	Hampshire border:	
	Southeast M Attn: Environ 836 South R New Bedford	Marine Fisheries - Marine Fisheries Station Inmental Reviewer Rodney French Blvd. Id, MA 02744 F.EnvReview-South@state.ma.us	Division of Marine Fisheric North Shore Office Attn: Environmental Revie 30 Emerson Avenue Gloucester, MA 01930 Email: <u>DMF.EnvRevie</u>	ewer	

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.

wpaform3.doc • rev. 2/8/2018 Page 6 of 9



2.

# **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

Provi	ded by MassDEP:
=	MassDEP File Number
_	Document Transaction Number
	Boston
_	City/Town

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

	4.	Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
Online Users: Include your document		a. $\square$ Yes $\boxtimes$ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). <b>Note:</b> electronic filers click on Website.
transaction number		b. ACEC
(provided on your receipt page) with all	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?
supplementary		a. 🗌 Yes 🛛 No
information you submit to the Department.	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:
		<ol> <li>Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)</li> </ol>
		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.
		<b>Online Users:</b> Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.
		1. Subject to 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.)

wpaform3.doc • rev. 2/8/2018 Page 7 of 9

to the boundaries of each affected resource area.

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



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

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Boston
City/Town

# D.

D. Add	ditional Information (cont'd)			
3.		source area boundary delineations (MassDEP BVW licability, Order of Resource Area Delineation, etc.), odology.		
4. 🔀	List the titles and dates for all plans and o	ther materials submitted with this NOI.		
	ivil Site Plan (in Attachment B, Stormwater	Report)		
	Plan Title	Detay Commis		
	olumbia Design Group, LLC Prepared By	Peter Gammie c. Signed and Stamped by		
	ly 21, 2018	1" = 10 '		
	Final Revision Date	e. Scale		
(A	ttachment E, Project Plans)			
f. <i>F</i>	Additional Plan or Document Title	g. Date		
5. 🗌	If there is more than one property owner, listed on this form.	please attach a list of these property owners not		
6.	Attach proof of mailing for Natural Heritag	e 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	1		
9. 🛛	Attach Stormwater Report, if needed.			
E. Fees	<u> </u>			
1.		ed for projects of any city, town, county, or district ed Indian tribe housing authority, municipal housing sportation Authority.		
	ants must submit the following information (ransmittal Form) to confirm fee payment:	in addition to pages 1 and 2 of the NOI Wetland		
1090	1090			
Municipal Check Number     3. Check date				
1089		11/5/18		
	Check Number	5. Check date		
	Cloud Realty Trust			
6. Pavo	6. Payor name on check: First Name 7. Payor name on check: Last Name			

wpaform3.doc • rev. 2/8/2018 Page 8 of 9



# WPA Form 3 - Notice of Intent

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

Pro	ovided by MassDEP:
	MassDEP File Number
	Document Transaction Number

City/Town

# F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date

#### For Conservation Commission:

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

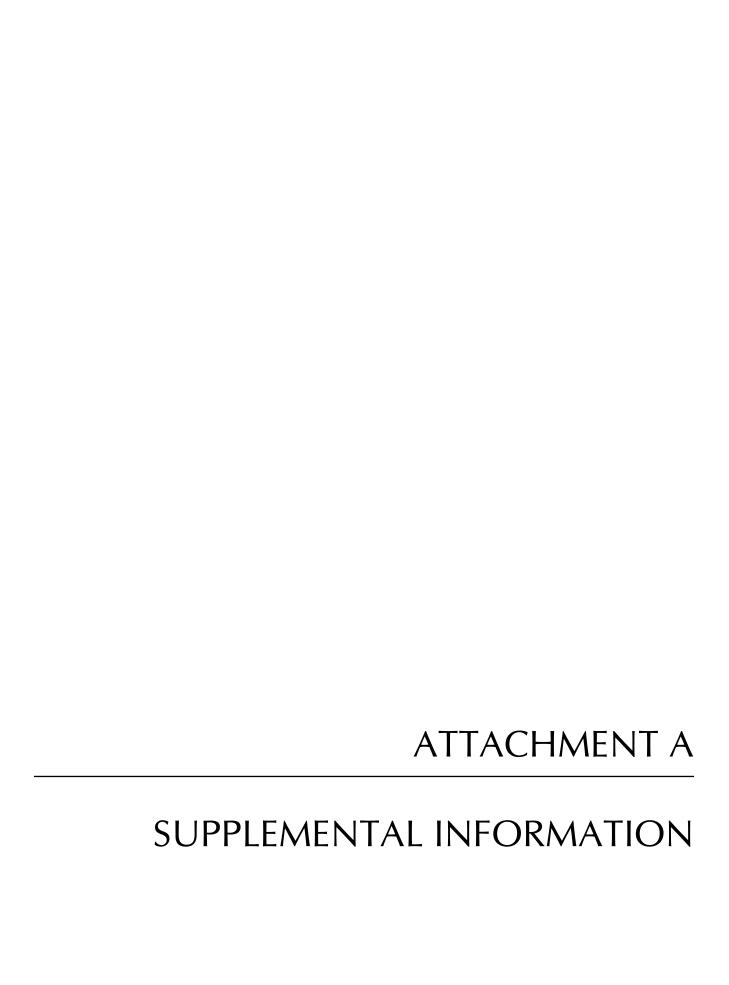
#### For MassDEP:

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

#### Other:

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

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



# ATTACHMENT A: SUPPLEMENTAL INFORMATION

#### A.1 OVERVIEW OF PROPOSED PROJECT

Flying Cloud Realty Trust (the "Applicant") is proposing to construct a mixed-use residential building (the "Project") on two combined lots totaling approximately 8,000 square feet ("sf") at 75 and 77-85 Liverpool Street (collectively referred to as "77-85 Liverpool Street") in East Boston, Massachusetts (the "Project Site"). The Project will include demolition of three existing buildings, and construction of an approximately 22-unit mixed-use residential development, approximately 11 off-street parking spaces, improved stormwater management, native landscaping, and sidewalk enhancements partially within Land Subject to Coastal Storm Flowage (LSCSF).

#### A.2 EXISTING CONDITIONS

The Project Site is located at 77-85 Liverpool Street in East Boston within a dense residential neighborhood. The Project Site is bound by Liverpool Street to the northwest, a residential backyard to the east (70-74 London Street), and a three-story wood-framed multi-residential building to the south. The Project Site is approximately 469 feet from the Mean High Water mark of Boston Harbor, and within walking distance of both Central Square and Maverick Square commercial areas. The Project Site is within 100 feet of Veteran's Park II and proximate to Decatur Street Park, East Boston Central Catholic School, and Most Holy Redeemer Parish - Parroquia Santisimo Redentor. See Figure 1, Locus Map and Figure 2, Aerial View of Project Site and Surrounding Area.

The Project Site is currently accessed by an existing curb cut on Liverpool Street, between the 77-85 Liverpool parcel. Currently, the Project Site includes a two-story residential building (75 Liverpool Street), a one-story two-bay garage (77 Liverpool Street), and another two-story residential building (85 Liverpool Street). The total combined properties are approximately 8,000 sf, all of which is impervious surfaces (rooftop, paved driveways, and parking). See Figures 3 and 4, Existing Conditions Photographs and Attachment E, Project Plans.

According to the Federal Emergency Management's (FEMA) Flood Insurance Rate Map (FIRM) Panel 25025C0081J, an approximately 6,000 sf portion of the Project Site is within the 100-year floodplain at elevation +10 NAVD88 or +16.46 Boston City Base Datum (BCB), as shown on Figure 5, FEMA FIRMette.

# A.3 PROJECT DESCRIPTION

The Applicant is proposing to redevelop the three parcels into a single transit-oriented mixeduse residential development with approximately 22 residential units, one 575 sf office unit, and driveway to 11 off-street parking spaces, 9 of which will be covered (see Attachment E, Project Plans).

The Project will have a main entrance on Liverpool Street. The proposed building is five-stories with a ground floor parking lot. The first floor of the building will be at elevation +12.85 NAVD88, comprised of a lobby, one office unit, building mechanicals, and storage area. See Attachment E, NOI Plans, Elevation 1. The upper floors contain residential units. Landscaping around the building and driveway includes grass and Inkberry (*Ilex glabra*) plantings over approximately 750 sf. Four new Red Maple (*Acer rubrum*) street trees will be planted to improve the streetscape. See Attachment E, Project Plans, Landscaping Plan for further detail.

The Project includes stormwater management improvements, as described in the attached Site Stormwater Report. The stormwater system takes sheet flow directed from the driveway (2,000 sf) and trench drains to a catch basin which will drain to an underground infiltration system located under the driveway. Rooftop (4,000 sf) runoff will also be conveyed to the infiltration system. The infiltration system has been designed to retain and infiltrate the 1-inch, 24-hour storm event. The system is designed to exceed the required recharge volume and has an overflow connection to the Boston Water and Sewer Commission (BWSC) system within Liverpool Street for larger storm events. BWSC stormwater requirements for new development sites have been incorporated into the design. See Attachment B, Stormwater Report.

#### A.4 WETLAND RESOURCES

The Project Site includes the LSCSF area. The LSCSF resource area is defined under the Wetlands Regulations as "land subject to an inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record, or storm of record, whichever is greater." LSCSF was determined based on the 100-year flood data provided by the FEMA FIRM for the area (Zone AE), at a base elevation of +10.0 NAVD88 (+16.46 BCB) which spans across the front of the Project Site. See Figure 5, FEMA FIRMette. FEMA's March 16, 2016 Flood Insurance Study for Suffolk County, Massachusetts provides that the abovementioned FIRM Base Flood Elevations (BFE) are rounded up from the actual 1% annual storm elevation at +9.4 NAVD88 (+15.86 BCB).

#### A.4.1 PROJECT IMPACTS AND MITIGATION

Project work within, and related impacts to, the LSCSF resource area are included in Table 1.

**Table 1: Alteration of LSCSF** 

Project-Related Impacts	Impact Type	Area
Impervious:		
Residential building footprint & roof	Permanent	2,866 sf
Driveway & open-air parking (2 spaces)	Permanent	2,000 sf
Brick walkways	Permanent	150 sf
Pervious:		
Landscaping and ground cover	Permanent	750 sf
	Total:	5,766 sf

There are no current performance standards associated with LSCSF. According to American Society of Civil Engineers (ASCE) Standard 24 the proposed building is assigned Flood Design Class 2. The State Building Code has the minimum elevation of the lowest floor at the BFE plus one foot, or +11 NAVD88 (+17.46 BCB). Using the Flood Insurance Study there is justification to set the lowest floor elevation at +10.4 NAVD88 (+16.86 BCB). This is the minimum standard. The Applicant understands that building in the resource area should consider flood protection and climate change resiliency. Therefore, all occupiable space for the residential units, supporting communal areas, and electrical utility areas are set above +12.85 NAVD88, which is 2.5 feet above the 100-year floodplain. See Attachment C, Climate Change Questionnaire.

Construction will not begin until all required preconstruction regulatory approvals have been obtained. Construction is expected to take approximately 18 months. Construction will be staged to minimize impacts on the wetland resources on and surrounding the Project Site. All temporary structures, including job trailers, portable bathroom facilities, and materials will be handled, stored, installed, cleaned, and protected in accordance with the best industry standards. Construction will include the following methods for avoidance and mitigation:

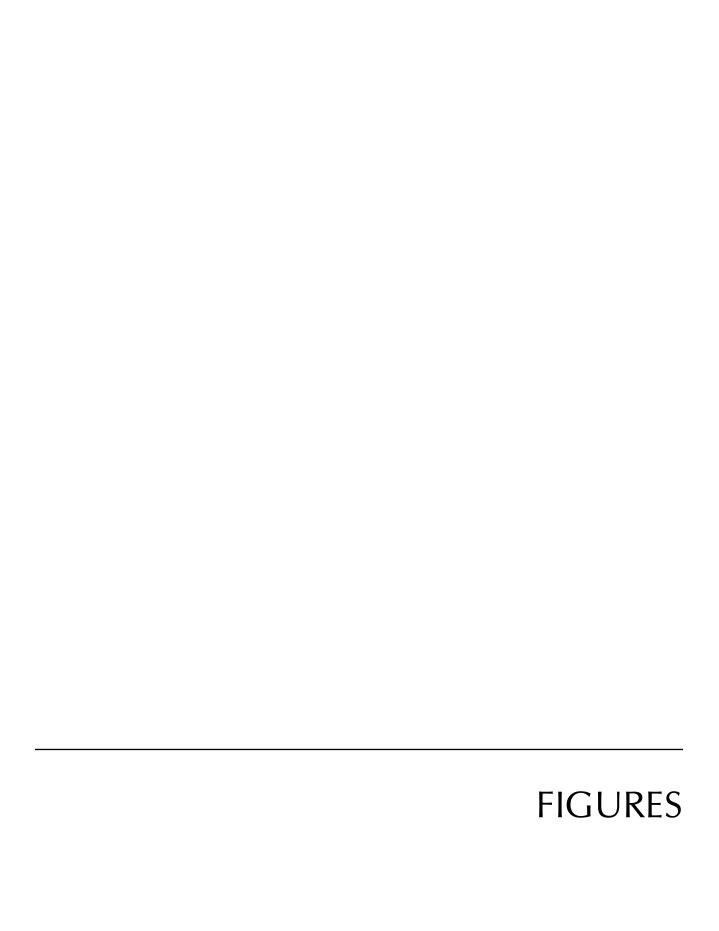
- Installation of an erosion control barrier consisting of wattles or equal at the limit of work along the down gradient site border;
- Establishment of construction entrance apron pads at the main site access to prevent tracking of sediment on vehicle tires from transport onto adjacent streets;
- Removal of equipment and unconsolidated materials from the floodplain prior to a significant storm event;
- Spill contaminants kit to be kept on-site at all times in case there is a release of oil, gasoline, or other toxic substances related to mechanical equipment;
- Containment and covering of stockpiled soils to prevent erosion during rain events;
   and

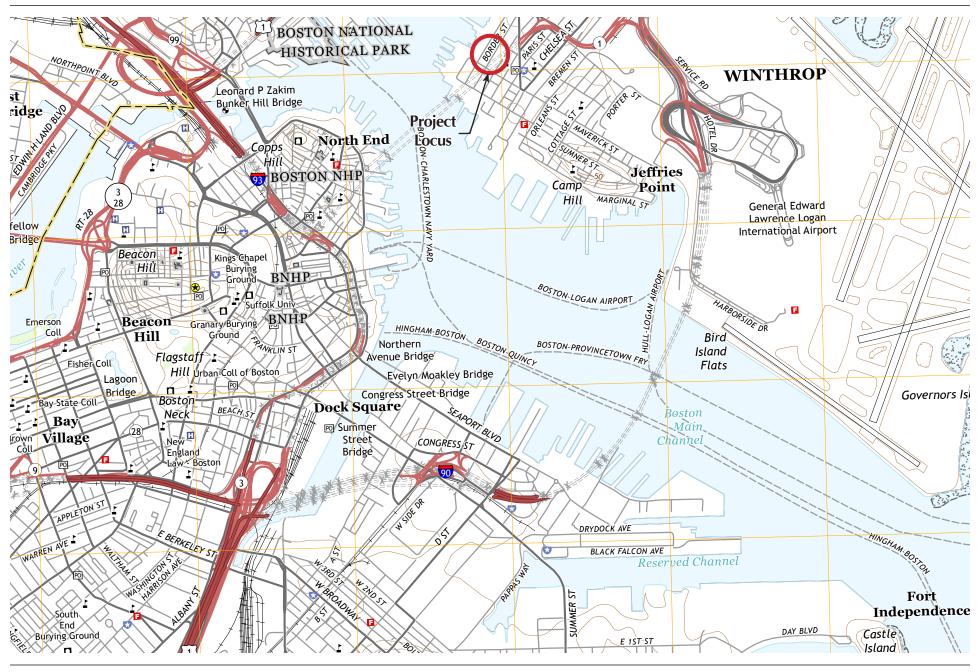
• Upon completion of the site work, stabilization of the landscape area and all erosion control measures will be removed, and all structures will be cleaned of silt and debris.

## A.5 NOI PLAN LIST

The list of Project Plans prepared by the Project team members for this NOI are listed below, in order of appearance.

Title	Sheet #	Date	Original Scale	Prepared By
Certified Plot Plan (Existing Conditions)		2/23/17	1" = 10'	Boston Survey, Inc.
Presentation Sheet	C2	11/1/2018	N/A	Columbia Design Group, LLC
Proposed Elevation	A6	10/31/18	1/4" = 1'	RCA, LLC
Proposed Landscape Plan	L1	10/31/18	3/16" = 1'	RCA, LLC
Proposed Floor Plan (First Floor)	A1	10/31/18	1/4" = 1'	RCA, LLC
Proposed Floor Plan (Second Floor)	A2	10/31/18	1/4" = 1'	RCA, LLC
Proposed Floor Plan (Third Floor)	A3	10/31/18	1/4" = 1'	RCA, LLC
Proposed Floor Plan (Fourth Floor)	A4	10/31/18	1/4" = 1'	RCA, LLC
Proposed Floor Plan (Penthouse Level)	A5	10/31/18	1/4" = 1'	RCA, LLC





East Boston, Massachusetts

Figure 1
Locus Map
Source: USGS; Fort Point Associates, Inc., 2018



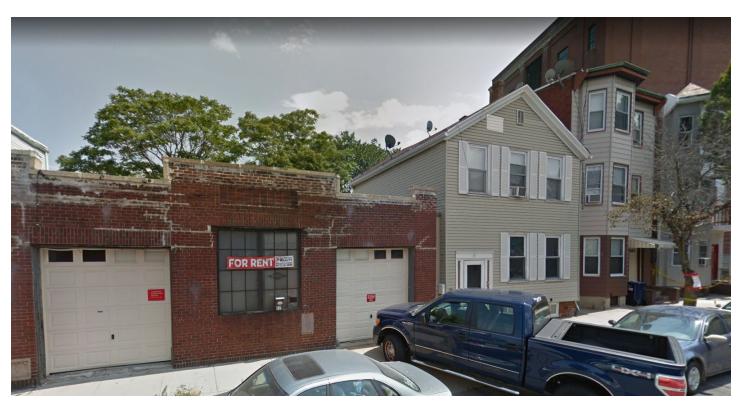
East Boston, Massachusetts

Figure 2

Aerial View of Project Site and Surrounding Area

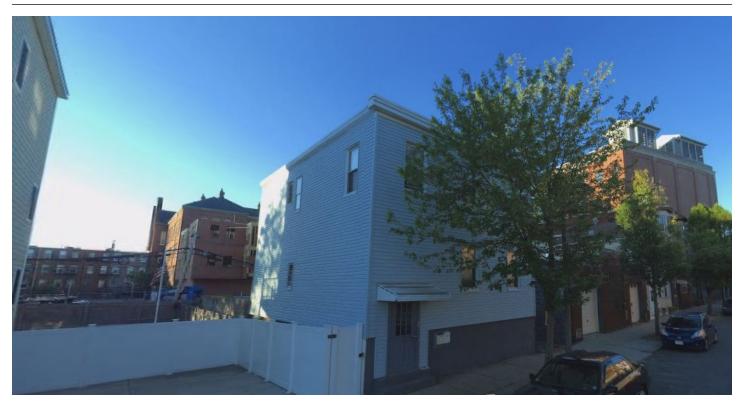


1. View of existing building at 75 Liverpool Street



2. View of existing buildings at 77 Liverpool Street and 75 Liverpool Street

Source: Google, 2018

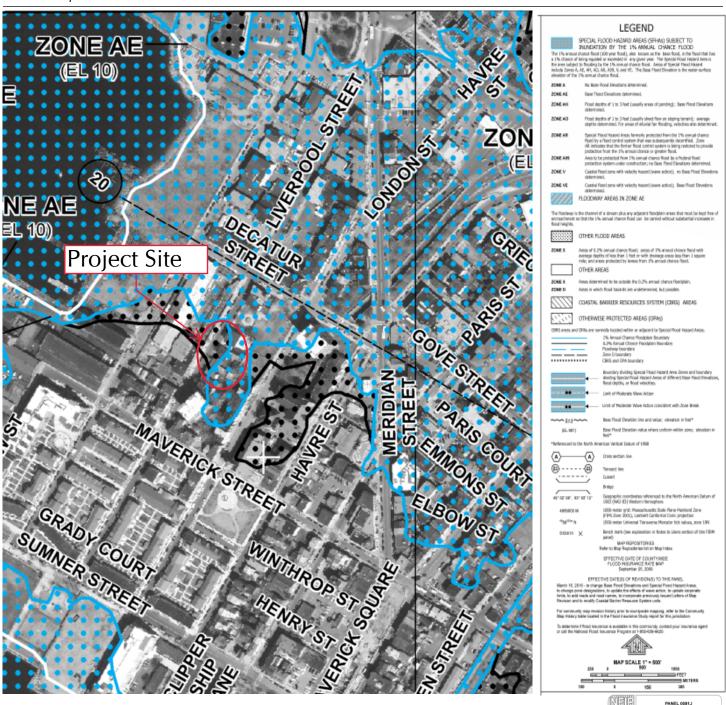


3. View of existing building at 85 Liverpool Street



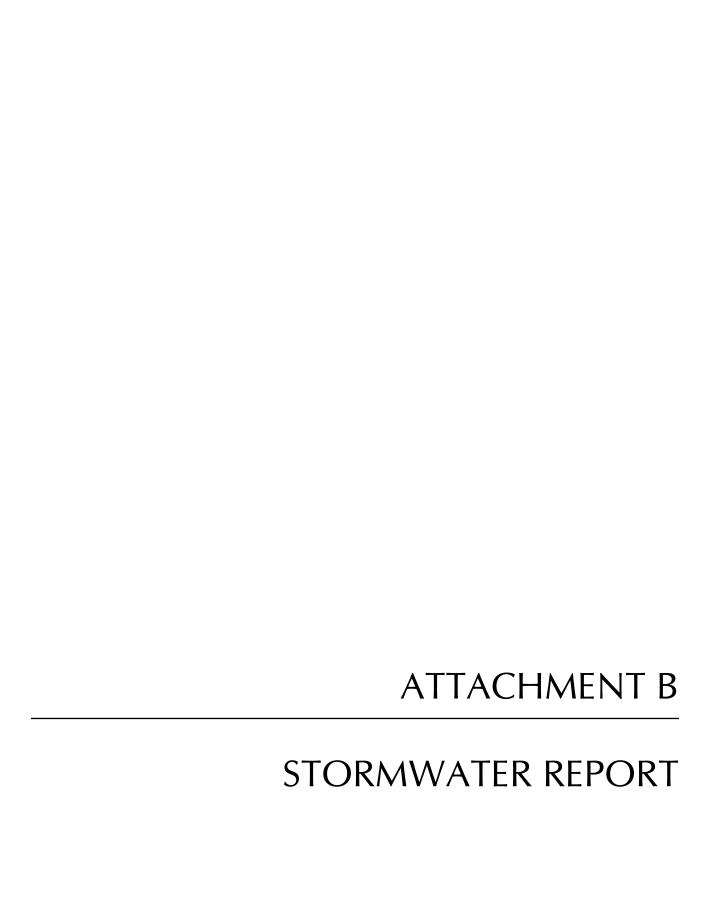
4. View of existing building at 85 Liverpool Street

Source: Bing, 2018



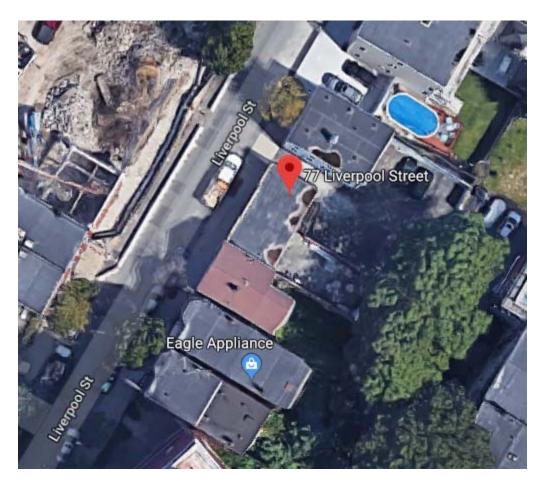


East Boston, Massachusetts Figure 5
FEMA FIRMette



# Storm Drainage Report

**For** 77-85 Liverpool St., East Boston, MA



Applicant: Condor Creek, LLC c/o Ben Goodman

November 1, 2018

By: Peter Gammie, P.E.
Columbia Design Group, LLC



#### Introduction

This report discusses the stormwater management system and analysis for the proposed redevelopment at 77-85 Liverpool St., East Boston, MA. It also contains documentation of compliance with the MassDEP Stormwater Standards, the Erosion and Sediment Control Report, and an Operations and Maintenance Plan. The proposed redevelopment includes the razing of the existing commercial buildings and construction of a new multiunit residential facility with parking at grade. The existing buildings and driveway/parking areas cover the entire site, approximately 8,000 sf. The site is relatively flat. Total disturbance is less than one acre, therefore the NPDES General Permit is not required.

#### Stormwater Management Plan Report

The Site is approximately 0.18 acres and identified as Assessor's Ward 01 Parcel 05566000. The only disturbance outside the project site is the public sidewalk running in front of the facility which will be reconstructed. There are no known environmental resources other than the site being located within the 100 Year flood plain.

The topography is flat with either existing buildings or paved surfaces on all sides. All of the existing stormwater runoff is to the street. The post construction site will consist primarily of the new building, driveway and approximately 769 sf of landscaped areas. The proposed stormwater management for this site includes Best Management Practices that address the pre- verses post-development runoff volumes and peak flow, TSS removal and recharge to groundwater. The proposed stormwater management plan consists of a single infiltration system located under the driveway at the rear of the parcel. This system has been sized to mitigate the BWSC requirements for the capture and storage of 1" runoff of all impervious surfaces. Once this system is full, the excess runoff is piped through an overflow line to the municipal drain located in the street. The net result is a total containment and management of all onsite stormwater. The HydroCAD model provides the peak flow and volume for all storm events. Runoff from the exposed parking areas and driveway is captured in a catch basin and piped to the infiltrations system.

#### Design Point #1

Table 2 Volume of Discharge (cf)

	Design Point 1		
Design Storm	Pre-	Post-	
2 year, 3.2"	1977	0	
10 year, 4.7"	2974	0	
100 year, 8.5"	5504	0	

Table 3 Peak Rate of Discharge (cfs)

	Design Point 1	
Design Storm	Pre-	Post-
2 year, 3.2"	0.57	0
10 year, 4.7"	0.85	0
100 year, 8.5"	1.54	0

#### Soils

Soils Information obtained from the National Resources Conservation Service (NRCS) defines this area as 603 – Urban Land, excavated and filled land over herbaceous organic material and/or alluvium deposits.

#### **Erosion and Sediment Control Report**

Elements of erosion control consist of wattles placed around the entire construction site, protection of the proposed infiltration systems during construction, truck wash-off area and street sweeping (See Civil Site Plan). In addition, the proposed development has taken into consideration:

- Minimize total area of disturbance and minimize unnecessary clearing and grading
- Estimates of the total area expected to be disturbed by excavation, grading, less than 40,000 SF
- All erosion control will be inspected and maintained on a daily basis
- All stockpiling of materials on site will be surrounded with erosion control barrier

Multiple erosion and sedimentation control devices will be implemented to prevent erosion during and after construction. The following erosion and sediment controls will be installed as necessary for this project:

- Initially, an erosion control barrier consisting of wattles will be installed at the limit of work along the down gradient site borders.
- Construction entrance apron pads will be constructed at the main site access to prevent the tracking of sediment on vehicle tires from transport onto adjacent streets.

#### Operation and Maintenance Plan

The Operations and Maintenance Plan is attached, see Appendix A

#### **Documenting Compliance**

The proposed stormwater management system complies with the ten standards of the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Policy. This report was prepared under the direction of Peter Gammie, a Registered Professional Engineer (RPE) licensed to do business in the Commonwealth pursuant to MGL Chapter 112 Section 81R.

This section of the Stormwater Report includes the computations required to document compliance with the following standards:

• Standard 1 – No new untreated discharges.

- Standard 2 Peak Rate Attenuation.
- Standard 3 Recharge
- Standard 4 Required Water Quality Volume.
- Standard 5-6: Computations used to demonstrate compliance with Standard 4.
- Standard 7: Computations demonstrating that peak rate attenuation, recharge, and water quality treatment is provided to maximum extent practicable
- Standard 8: Computations related to sizing of erosion and sediment controls
- Standard 9: Operation And Maintenance Plan
- Standard 10: Illicit Discharges to Drainage System

#### STANDARD 1. NO UNTREATED DISCHARGES

There are no new untreated discharges. Roof runoff is directed to infiltration system located under the driveway. Driveway runoff is collected vis catch basins and directed to the infiltration system.

#### STANDARD 2. PEAK RATE ATTENUATION

As per DEP regulations, the stormwater analysis was developed for the 2-, 10-, and 100-year, 24-hour storm events. As noted above, there is no increase in the rate of runoff for any event. See HydroCad reports.

#### STANDARD 3. RECHARGE

The proposed on-site subsurface infiltration systems will increase recharge to groundwater.

#### **Existing Soils Evaluation**

Soil conditions from the Geotechnical report indicate a sandy loam soil.

NRCS HYDROLOGIC	APPROX. SOIL TEXTURE	TARGET DEPTH FACTOR (F)
SOIL TYPE		
A	sand	0.6-inch
В	loam	0.35-inch

#### Recharge Target Depth by Hydrologic Soil Group

#### Rawls Rates

Texture Class	NRCS Hydrologic Soil Group	Infiltration Rate
	(HSG)	Inches/Hour
Sand	A	8.27
Loamy Sand	A	2.41
Sandy Loam	В	1.02
Loam	В	0.52
Silt Loam	C	0.27
Sandy Clay Loam	C	0.17
Clay Loam	D	0.09
Silty Clay Loam	D	0.06
Sandy Clay	D	0.05
Silty Clay	D	0.04
Clay	D	0.02

#### Required Recharge Volume

Using the recharge requirements established by the DEP, the following calculations are provided:

$$Rv = F x impervious area$$

 $Rv = Required\ Recharge\ Volume$ , expressed in  $Ft^3$ , cubic yards, or acre-feet  $F = Target\ Depth\ Factor$  associated with each Hydrologic Soil Group Impervious Area =pavement area on site

This site: Rv = 0.35 \*8000 sf/12 = 233. CF Required Recharge

The DEP stormwater requirements include an analysis as to any negative impacts on where the recharge volume is directed. The recharge on this site, as an infiltration BMP measure, will not alter or cause changes to the hydrologic regime.

#### **Proposed Recharge Volume**

To comply with MassDEP, without taking into account the existing impervious area, the site requires a total recharge volume of 233.3 cubic feet. The proposed on-site infiltration system exceeds this volume as it provides approximately 618 cubic feet (see Civil site plan calculations). The site complies with the regulations relative to recharge to groundwater.

#### Drawdown within 72 hours

DEP Stormwater Handbook requires an analysis to show that the *Required Recharge Volume* will drain down in less than 72 hours in order to provide infiltration volume for subsequent rainfall events. To determine the ability to drawdown within 72 hours, we are using an infiltration rate of 1.02 in/hr (Rawls Rates), the storage volume, the bottom area and the "Static" method formula:

$$Time_{drawdown} = \frac{Rv}{(K)(Bottom\ Area)}$$

= 233.3/(1.02in/hr)(1ft/12in)(341 sf)=8 hrs

Where:

 $Rv = Storage\ Volume$ 

K = Saturated Hydraulic Conductivity For "Static" and "Simple Dynamic" Methods, use Rawls Rate (see Table 2.3.3).

Bottom Area = Bottom Area of Recharge Structure

The system will drain down in less than the required 72 hour maximum.

#### STANDARD 4. WATER QUALITY

The stormwater management design for this site complies with the required 80 percent total suspended solids (TSS) removal as the first inch of runoff is treated and infiltrated. All runoff from the roof is considered clean. Driveway runoff is treated via deep sump catch basins and the infiltration system.

#### STANDARD 5. LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS

This site is not a LUHPPL.

#### STANDARD 6. CRITICAL AREAS

The project site is not located within a Zone II or Interim Wellhead Protection area of a public water supply or any other critical area.

#### STANDARD 7. REDEVELOPMENT

This project is considered a redevelopment.

#### STANDARD 8. CONSTRUCTION PERIOD CONTROLS

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan will be implemented generally as follows.

<u>Narrative</u>: Multiple erosion and sedimentation control devices will be implemented to prevent erosion during and after construction. The following erosion and sediment controls will be installed for this project:

• Initially, an wattles will be installed at the limit of work along the down gradient site borders.

- Construction entrance apron pads may be constructed at the main site access to prevent the tracking of sediment on vehicle tires from transport onto adjacent streets if this becomes an issue or problem.
- Silt sacks will be installed at catch basins within the street with in close proximity.

<u>Construction Period Operation and Maintenance Plan</u>: The O & M Plan provided will be modified accordingly and used during construction period.

<u>Names of Persons or Entity Responsible for Plan Compliance:</u> As part of the Submittal Process, the General Contractor shall submit the names of responsible parties.

<u>Construction Period Pollution Prevention Measures:</u> Erosion control measures as are standard practice shall be installed accordingly. Best Management Practices shall be implemented. No vehicle maintenance or refueling will be allowed on site.

<u>Drawings and specifications for erosion control BMPs:</u> Contractor shall submit his plan for proposed sequencing of the work and the associated locations for diversion swales, erosion control dikes and berms, and/or temporary sedimentation basins.

Operation and Maintenance of Erosion and Sedimentation Controls: Contractor shall submit his plan for proposed sequencing of the work and the associated locations for diversion swales, erosion control dikes and berms, and temporary sedimentation basins.

#### STANDARD 9. OPERATION AND MAINTENANCE PLAN

A stormwater operation and maintenance plan is included in Appendix A.

#### STANDARD 10. PROHIBITION OF ILLICIT DISCHARGES

There are no illicit discharges proposed. An Illicit Discharge Compliance Statement will be submitted prior to the discharge of any stormwater to post-construction BMP's.



### Norfolk and Suffolk Counties, Massachusetts

### 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 Hydric soil rating: Unranked

#### **Beaches**

Percent of map unit: 2 percent Hydric soil rating: Unranked

### **Data Source Information**

Soil Survey Area: Norfolk and Suffolk Counties, Massachusetts

Survey Area Data: Version 14, Sep 12, 2018

## Appendix 'A'

## OPERATION AND MAINTENANCE PLAN/Long Term Pollution Prevention Plan

for

## 77-85 Liverpool St., East Boston, MA

The proponent/owner is responsible for the operation and maintenance of the proposed stormwater management system as follows:
Stormwater Management System Owners:
Party Responsible for the O & M: owner
Schedule for Implementation: see O & M Schedule
Plan Showing the location of all Stormwater BMPs: See Site Plan Titled — Civil Site Plan,
Public Safety Features: Not Applicable.
Estimated Budget: <u>To be determined.</u>
Log Form: See below.
Description of proposed O & M:
After construction and site is stabilized, the site will be inspected to assure that all exposed surfaces are clean of debris and that the surrounding walkways, alleys and streets adjacent to the project are clean.
An Illicit Discharge Compliance Statement will be submitted prior to the discharge of any stormwater to post-construction BMP's.
The proposed underground infiltration system shall be inspection to determine if any excessive buildup of sediments is present. Inspections to be performed as noted in the following schedule Removal of sediment, if required, to be performed by a maintenance company familiar with the system design.
Other site areas, including the overflow outlet, to be inspected to ensure proper function and any repairs implemented as needed and with the frequency shown in the schedule.
Accepted By: Date:

Stormwa	ter Managemen	t Operation	and Maint	<u>enance Schedule</u>
Property	:	<del>-</del>	_	
Date:				

ВМР	Frequency	Date Performed	Comments	Cleaning/ Repair Needed? Yes/No	Date of Cleaning/ Repair	Performed By
Subsurface Infiltration System Inspect for proper functioning	Once at the end of construction and then video inspected every 5 years.					
Catch Basin	Once at the end of construction and then inspected every year. Any debris or sediments removed					
Roof Drains Inspect for proper functioning	Once at the end of construction and then every spring and fall. Roof area drains must be kept clear of ice and snow.					

# Appendix 'B'

HydroCad Calculations

 14 Upham Avenue
 W(617)506.1474

 Boston, MA 02125
 F(617)507.7740



Ex. Roof









Printed 11/2/2018

Page 2

### **Area Listing (selected nodes)**

8,000	98	TOTAL AREA
8,000	98	prop roof (14S)
(sq-ft)		(subcatchment-numbers)
Area	CN	Description

### Liverpool St System

Type III 24-hr 2-Year Rainfall=3.20"

Prepared by Columbia Design Group

Printed 11/2/2018

HydroCAD® 10.00-19 s/n 05890 © 2016 HydroCAD Software Solutions LLC

Page 3

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 14S: Ex. Roof

Runoff Area=8,000 sf 100.00% Impervious Runoff Depth>2.97" Tc=5.0 min CN=98 Runoff=0.57 cfs 1,977 cf

Total Runoff Area = 8,000 sf Runoff Volume = 1,977 cf Average Runoff Depth = 2.97" 0.00% Pervious = 0 sf 100.00% Impervious = 8,000 sf

### Liverpool St System

Type III 24-hr 2-Year Rainfall=3.20"

Prepared by Columbia Design Group

Printed 11/2/2018

HydroCAD® 10.00-19 s/n 05890 © 2016 HydroCAD Software Solutions LLC

Page 4

### Summary for Subcatchment 14S: Ex. Roof

Runoff = 0.57 cfs @ 12.07 hrs, Volume=

1,977 cf, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 2-Year Rainfall=3.20"

	Α	rea (sf)	CN	Description				
*		8,000	98	prop roof				
		8,000		100.00% Impervious Area				
	Tc	Length	Slope	Velocity	Capacity	Description		
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)			
	5.0					Direct Entry,		

### **Liverpool St System**

Type III 24-hr 10-Year Rainfall=4.70"

Prepared by Columbia Design Group
HydroCAD® 10.00-19 s/n 05890 © 2016 HydroCAD Software Solutions LLC

Printed 11/2/2018

Page 5

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 14S: Ex. Roof

Runoff Area=8,000 sf 100.00% Impervious Runoff Depth>4.46" Tc=5.0 min CN=98 Runoff=0.85 cfs 2,974 cf

Total Runoff Area = 8,000 sf Runoff Volume = 2,974 cf Average Runoff Depth = 4.46" 0.00% Pervious = 0 sf 100.00% Impervious = 8,000 sf

### Liverpool St System

Type III 24-hr 10-Year Rainfall=4.70"

Prepared by Columbia Design Group

Printed 11/2/2018

HydroCAD® 10.00-19 s/n 05890 © 2016 HydroCAD Software Solutions LLC

Page 6

### Summary for Subcatchment 14S: Ex. Roof

Runoff = 0.85 cfs @ 12.07 hrs, Volume=

2,974 cf, Depth> 4.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 10-Year Rainfall=4.70"

	Α	rea (sf)	CN [	Description				
*		8,000	98 p	rop roof				
_		8,000	1	100.00% Impervious Area				
	Tc			•		Description		
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)			
	5.0					Direct Entry,		

Liverpool St System

Type III 24-hr 50-Year Rainfall=5.90"

Prepared by Columbia Design Group

Printed 11/2/2018

HydroCAD® 10.00-19 s/n 05890 © 2016 HydroCAD Software Solutions LLC

Page 7

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 14S: Ex. Roof

Runoff Area=8,000 sf 100.00% Impervious Runoff Depth>5.66" Tc=5.0 min CN=98 Runoff=1.07 cfs 3,773 cf

Total Runoff Area = 8,000 sf Runoff Volume = 3,773 cf Average Runoff Depth = 5.66" 0.00% Pervious = 0 sf 100.00% Impervious = 8,000 sf

Type III 24-hr 50-Year Rainfall=5.90"

Prepared by Columbia Design Group

Printed 11/2/2018

HydroCAD® 10.00-19 s/n 05890 © 2016 HydroCAD Software Solutions LLC

Page 8

### Summary for Subcatchment 14S: Ex. Roof

Runoff = 1.07 cfs @ 12.07 hrs, Volume=

3,773 cf, Depth> 5.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 50-Year Rainfall=5.90"

	Α	rea (sf)	CN	Description					
*		8,000	98	prop roof					
		8,000		100.00% Impervious Area					
	Тс	Length	Slope	Velocity	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	5.0					Direct Entry,			

### Liverpool St System

Type III 24-hr 100-Year Rainfall=8.50"

Prepared by Columbia Design Group

Printed 11/2/2018

HydroCAD® 10.00-19 s/n 05890 © 2016 HydroCAD Software Solutions LLC

Page 9

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points Runoff by SCS TR-20 method, UH=SCS, Weighted-CN Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 14S: Ex. Roof

Runoff Area=8,000 sf 100.00% Impervious Runoff Depth>8.26" Tc=5.0 min CN=98 Runoff=1.54 cfs 5.504 cf

Total Runoff Area = 8,000 sf Runoff Volume = 5,504 cf Average Runoff Depth = 8.26" 0.00% Pervious = 0 sf 100.00% Impervious = 8,000 sf

## Liverpool St System

Type III 24-hr 100-Year Rainfall=8.50"

Prepared by Columbia Design Group

Printed 11/2/2018

HydroCAD® 10.00-19 s/n 05890 © 2016 HydroCAD Software Solutions LLC

Page 10

## Summary for Subcatchment 14S: Ex. Roof

Runoff = 1.54 cfs @ 12.07 hrs, Volume= 5,504

5,504 cf, Depth> 8.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 100-Year Rainfall=8.50"

	Area (sf)	CN	Description					
*	8,000	98	prop roof					
	8,000	100.00% Impervious Area						
Tc (min)	Length (feet)	Slope (ft/ft)	•	Capacity (cfs)	Description			
					D: 45.4			

5.0 Direct Entry,

#### **INSTRUCTIONS:**

Version 1, Automated: Mar. 4, 2008

- 1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
- 2. Select BMP from Drop Down Menu
- 3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: 77-85 Liverpool St.

Date: 11/5/2018

	B DMD <sup>1</sup>	C TSS Removal	D Starting TSS	E Amount	F Remaining
	BMP <sup>1</sup>	Rate <sup>1</sup>	Load*	Removed (C*D)	Load (D-E)
heet	Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Removal on Worksheet	Infiltration Basin	0.80	0.75	0.60	0.15
Rem on W		0.00	0.15	0.00	0.15
TSS ReCalculation		0.00	0.15	0.00	0.15
Cal		0.00	0.15	0.00	0.15
					Separate Form Needs to be Completed for Each

Total TSS Removal =

Project: 77-85 Liverpool

Prepared By: P. Gammie

\*Equals remaining load from previous BMP (E) which enters the BMP

85%

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed 1. From MassDEP Stormwater Handbook Vol. 1 **Outlet or BMP Train** 



Bureau of Resource Protection - Wetlands Program

# **Checklist for Stormwater Report**

### A. Introduction

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





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

The Stormwater Report must include:

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

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

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

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

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

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



Bureau of Resource Protection - Wetlands Program

# **Checklist for Stormwater Report**

### **B. Stormwater Checklist and Certification**

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

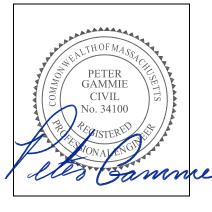
*Note:* Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that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

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

### **Registered Professional Engineer's Certification**

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

Registered Professional Engineer Block and Signature



Peter Gammie, P.E. #34100, 11-5-2018

Signature and Date

### **Checklist**

Project T	「 <b>ype:</b> Is	the ap	plication	for nev	v deve	lopment,	redeve	lopment,	or a m	ix of	new	and
redevelop	oment?											
_												

New development

Redevelopment

☐ Mix of New Development and Redevelopment



Bureau of Resource Protection - Wetlands Program

# **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:

<u>K</u>	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):
Sta	ndard 1: No New Untreated Discharges
K	No new untreated discharges
	Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
K	Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included



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

# **Checklist for Stormwater Report**

Cr	necklist (continued)
Sta	ndard 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.
<u> </u>	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.
Sta	indard 3: Recharge
4	Soil Analysis provided.
K	Required Recharge Volume calculation provided.
	Required Recharge volume reduced through use of the LID site Design Credits.
	Sizing the infiltration, BMPs is based on the following method: Check the method used.
	☐ Static ☐ Simple Dynamic ☐ Dynamic Field <sup>1</sup>
4	Runoff from all impervious areas at the site discharging to the infiltration BMP.
	Runoff from all impervious areas at the site is <i>not</i> 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.
4	Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
	Recharge BMPs have been sized to infiltrate the Required Recharge Volume <i>only</i> 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.
<u> </u>	Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
	Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

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



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

# **Checklist for Stormwater Report**

Cł	necklist (continued)
Sta	andard 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.
Sta	andard 4: Water Quality
The	e 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.



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

# **Checklist for Stormwater Report**

Cł	necklist (continued)
Sta	ndard 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.
Sta	ndard 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 <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted <i>prior</i> to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land use and the SWPPP will be submitted to the land us
	to the discharge of stormwater to the post-construction stormwater BMPs.
Ш	The NPDES Multi-Sector General Permit does <i>not</i> 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 <i>not</i> 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.
Sta	ndard 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.



Bureau of Resource Protection - Wetlands Program

# **Checklist for Stormwater Report**

## Checklist (continued)

	andard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum tent practicable
	The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
	☐ Limited Project
	<ul> <li>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.</li> <li>Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area</li> <li>Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff</li> </ul>
	☐ 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.
Sta	andard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control
	Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the owing information:
	<ul> <li>Narrative;</li> <li>Construction Period Operation and Maintenance Plan;</li> <li>Names of Persons or Entity Responsible for Plan Compliance;</li> <li>Construction Period Pollution Prevention Measures;</li> <li>Erosion and Sedimentation Control Plan Drawings;</li> <li>Detail drawings and specifications for erosion control BMPs, including sizing calculations;</li> <li>Vegetation Planning;</li> <li>Site Development Plan;</li> <li>Construction Sequencing Plan;</li> <li>Sequencing of Erosion and Sedimentation Controls;</li> </ul>

Operation and Maintenance of Erosion and Sedimentation Controls;

the information set forth above has been included in the Stormwater Report.

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing

Inspection Schedule; Maintenance Schedule;

Inspection and Maintenance Log Form.

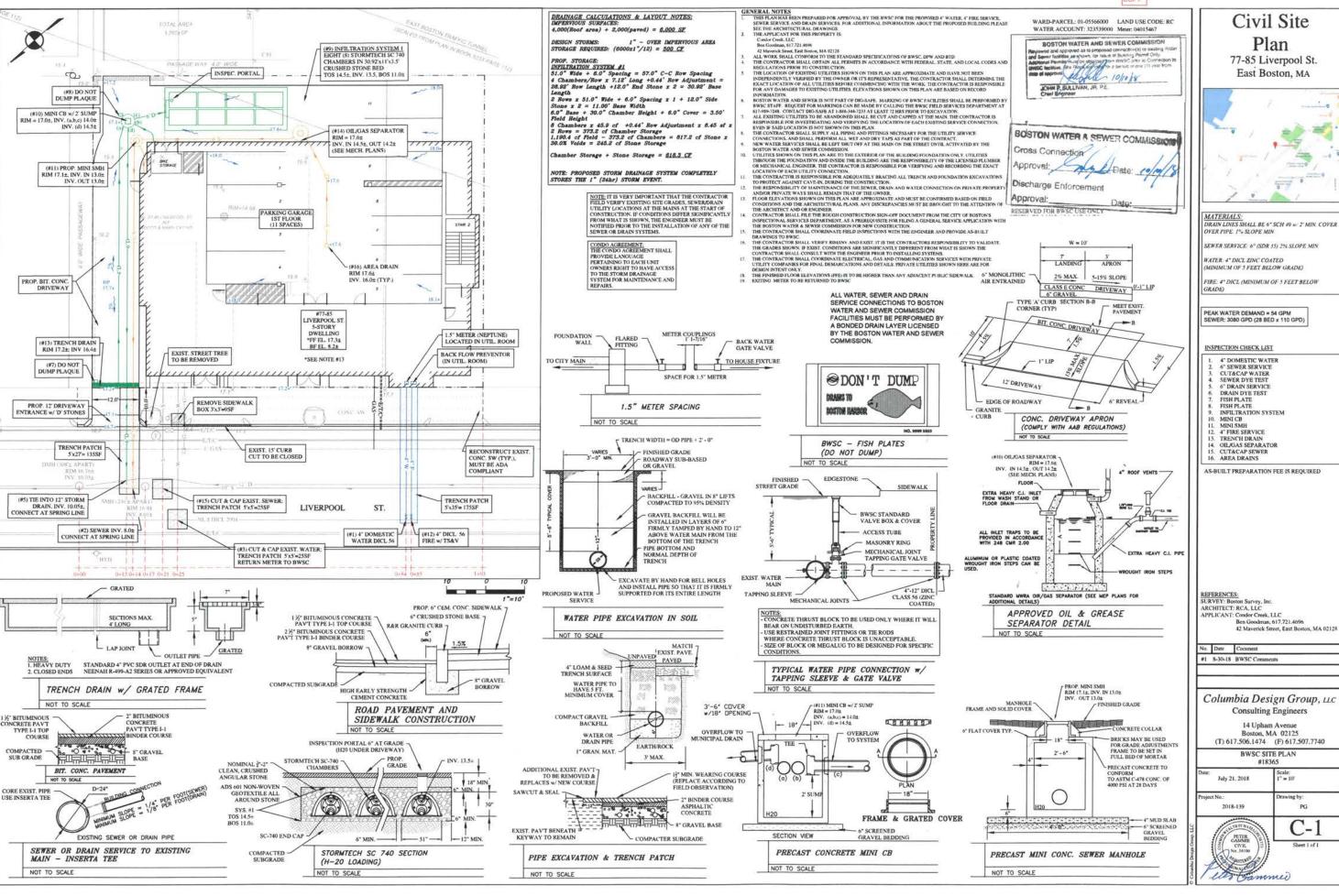


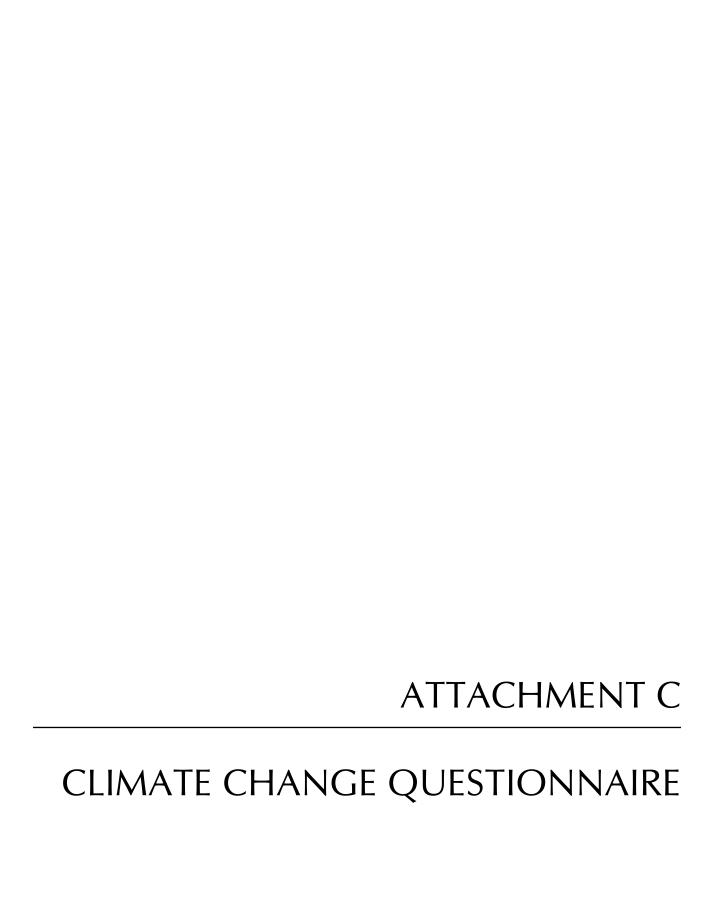
Bureau of Resource Protection - Wetlands Program

# **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: MO Illicit Discharge Compliance Statement is attached but will be submitted prior to the discharge of

any stormwater to post-construction BMPs.







**Submitted:** 11/06/2018 15:01:07

A.1 - Project Information

Project Name: 77-85 Liverpool Street

Project Address: 75 and 77-85 Liverpool Street

Filing Type: Initial (PNF, EPNF, NPC or other substantial filing)

Filing Contact: Ken Fields Fort Point kfields@fpa-inc.com 617-357-7044 x203

Associates, Inc.

Is MEPA approval required? No MEPA date:

A.2 - Project Team

Owner / Developer: Flying Cloud REalty Trust

Architect: Roche-Christopher Architects, LLC

Engineer: Columbia Design Group, LLC

Sustainability / LEED: N/A

Permitting: Fort Point Associates, Inc.

Construction Management: N/A

**A.3 - Project Description and Design Conditions** 

List the principal Building Uses: Mixed Use Residential

List the First Floor Uses: Office, Mechanicals, Storage, Parking, upper floor access

List any Critical Site Infrastructure

and or Building Uses:

### **Site and Building:**

Site Area (SF):	8000	Building Area (SF):	4000
Building Height (Ft):	51.73	Building Height (Stories):	5
Existing Site Elevation – Low (Ft BCB):	15.45	Existing Site Elevation – High (Ft BCB):	17.69
Proposed Site Elevation – Low (Ft BCB):	15.52	Proposed Site Elevation – High (Ft BCB):	17.69
Proposed First Floor Elevation (Ft BCB):	19.31	Below grade spaces/levels (#):	0

#### **Article 37 Green Building:**

LEED Version - Rating System:	N/A	LEED Certification:	No
Proposed LEED rating:		Proposed LEED point score (Pts.):	N/A



### **Building Envelope:**

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	38	Exposed Floor:	30	
Foundation Wall:	19	Slab Edge (at or below grade):	15	
Vertical Above-grade Assemblies (%	's are of total vertical	area and together should total 100%):		
Area of Opaque Curtain Wall & Spandrel Assembly:	N/A	Wall & Spandrel Assembly Value:	0.42	
Area of Framed & Insulated / Standard Wall:	N/A	Wall Value:	13 + 7.5 c.i.	
Area of Vision Window:	N/A	Window Glazing Assembly Value:	N/A	
		Window Glazing SHGC:	0.40	
Area of Doors:	N/A	Door Assembly Value :	0.80	
<b>Energy Loads and Performance</b>				
For this filing – describe how energy loads & performance were determined	N/A			
Annual Electric (kWh):		Peak Electric (kW):		
Annual Heating (MMbtu/hr):		Peak Heating (MMbtu):		
Annual Cooling (Tons/hr):		Peak Cooling (Tons):		
Energy Use - Below ASHRAE 90.1 - 2013 (%):		Have the local utilities reviewed the building energy performance?:	No	
Energy Use - Below Mass. Code (%):		Energy Use Intensity (kBtu/SF):		
Back-up / Emergency Power Syst	em			
Electrical Generation Output (kW):	CIII	Number of Power Units:		
• • • •		Fuel Source:		
System Type (kW):		ruel Source:		
<b>Emergency and Critical System L</b>	Emergency and Critical System Loads (in the event of a service interruption)			
Electric (kW):		Heating (MMbtu/hr):		
		Cooling (Tons/hr):		

### B - Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

**B.1 - GHG Emissions - Design Conditions** 



Reducing greenhouse gas emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon-neutrality by 2050 the performance of new buildings will need to progressively improve to carbon net zero and net positive.

For this filing - Annual Building GHG Emissions (Tons):
For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:
N/A
Describe building specific passive energy efficiency measures including orientation, massing, building envelop, and systems:
N/A
Describe building specific active energy efficiency measures including high performance equipment, controls, fixtures, and systems:
N/A
Describe building specific load reduction strategies including on-site renewable energy, clean energy, and storage systems:
N/A
Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:
N/A
Describe any energy efficiency assistance or support provided or to be provided to the project:
N/A

### **B.2 - GHG Reduction - Adaptation Strategies**

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):



N/A

#### C - Extreme Heat Events

Annual average temperature in Boston increased by about 2°F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

### C.1 - Extreme Heat - Design Conditions

Temperature Range - Low (Deg.):	32	Temperature Range - High (Deg.):	70
Annual Heating Degree Days:	180	Annual Cooling Degree Days	180

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90° (#): 9 Days - Above 100° (#): 0
Number of Heatwaves / Year (#): 3 Average Duration of Heatwave (Days): 3

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

### C.2 - Extreme Heat - Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

N/A

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

N/A

#### **D - Extreme Precipitation Events**

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

#### **D.1 - Extreme Precipitation - Design Conditions**



What is the project o	lesi	gn
precipitation level?	(In.	/ 24 Hours)

1

Describe all building and site measures for reducing storm water run-off:

All Stormwater will be infiltrated on site

### **D.2 - Extreme Precipitation - Adaptation Strategies**

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

Oversize infiltration system x 2.3 with overflow to BWSC Storm drain

#### E - Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, the sea level in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA Special Flood Hazard Area? Yes What Zone: AE

What is the current FEMA SFHA Zone Base Flood Elevation for the site (Ft BCB)? 15.86

Is any portion of the site in the BPDA Sea Level Rise Flood Hazard Area (see <u>SLR-FHA online map</u>)?

Yes

If you answered YES to either of the above questions, please complete the following questions. Otherwise you have completed the questionnaire; thank you!

#### E.1 - Sea Level Rise and Storms - Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented by the Sea Level Rise Flood Hazard Area (SLR-FHA), which includes 3.2' of sea level rise above 2013 tide levels, an additional 2.5" to account for subsidence, and the 1% Annual Chance Flood. After using the SLR-FHA to identify a project's Sea Level Rise Base Flood Elevation, proponents should calculate the Sea Level Rise Design Flood Elevation by adding 12" of freeboard for buildings, and 24" of freeboard for critical facilities and infrastructure and any ground floor residential units.



What is the Sea Level Rise -19.3 Base Flood Elevation for the site (Ft BCB)? What is the Sea Level Rise -First Floor Elevation (Ft BCB): 19.31 19.3 Design Flood Elevation for the site (Ft BCB)? What are the Site Elevations at 15.52 What is the Accessible Route Elevation 15.52 Building (Ft BCB)? (Ft BCB)?

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

Omit approved basement and elevate first floor

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

elevate mechanical above Design Flood Elevation

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

Living units are above first floor

Describe any strategies that would support rapid recovery after a weather event:

extra size infiltration unit and overflow to BWSC

### E.2 - Sea Level Rise and Storms - Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

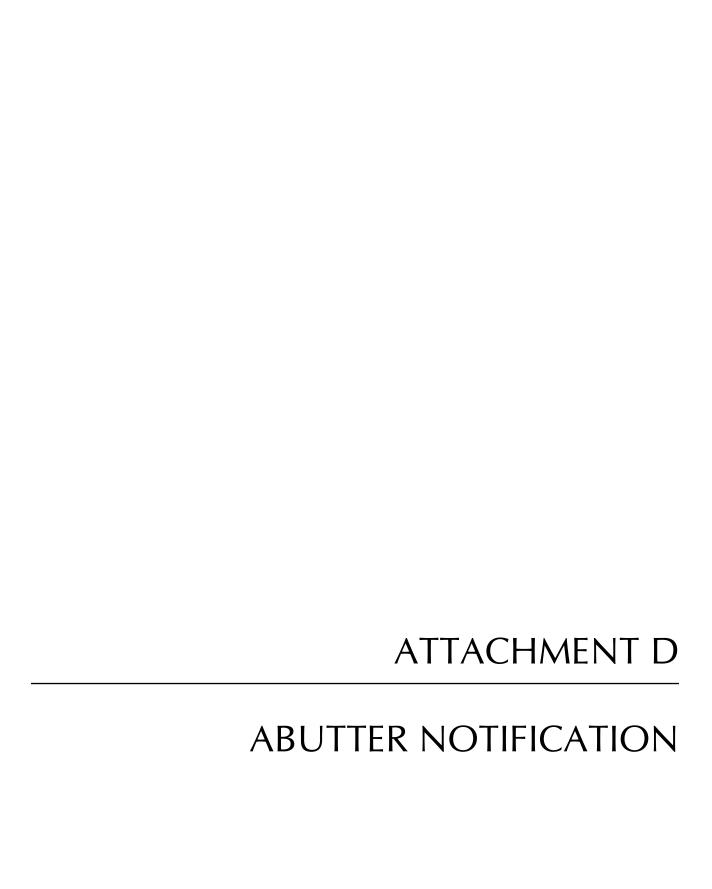
Oversize stormwater system; Mechanical above DFE

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

first floor above DFE

Thank you for completing the Boston Climate Change Checklist!

For questions or comments about this checklist or Climate Change best practices, please contact: John.Dalzell@boston.gov



# ATTACHMENT D: ABUTTER NOTIFICATION

The following table outlines abutters of the Project within 100 feet of the property line as gathered from the City of Boston Assessing Department.

Parcel ID	Property	Owner	Owner Address
0105569000	LIVERPOOL ST BOSTON, MA 02128	MASS TURNPIKE AUTHORITY	10 PARK PLAZA #4160 BOSTON, MA 02116
0105568000	91-93 LIVERPOOL ST BOSTON, MA 02128	KIM VELEZ	91 LIVERPOOL ST EAST BOSTON, MA 02128
0105567000	87-89 LIVERPOOL ST BOSTON, MA 02128	KIM VELEZ	91 LIVERPOOL ST EAST BOSTON, MA 02128
0105564000	73 LIVERPOOL ST BOSTON, MA 02128	GUILLERMO VAQUERANO	73 LIVERPOOL ST EAST BOSTON, MA 02128
0105563000	71 LIVERPOOL ST BOSTON, MA 02128	COUGAR REALTY TRUST	500 WEST CUMMINGS PK SUITE 240 WOBURN, MA 01801
0105562000	65 LIVERPOOL ST BOSTON, MA 02128	CITY OF BOSTON	65 LIVERPOOL EAST BOSTON, MA 02128
0105562001	65 LIVERPOOL ST BOSTON, MA 02128	AT&T	575 MOROSGO DR 12F N TOWER ATLANTA, GA 30324
0105591000	62 LIVERPOOL ST BOSTON, MA 02128	ANGELO PAGLUCCA	62 LIVERPOOL ST EAST BOSTON, MA 02128
0105581000	LIVERPOOL ST BOSTON, MA 02128	ANGELO PAGLUCCA	62 LIVERPOOL ST EAST BOSTON, MA 02128
0105580010	72 LIVERPOOL ST BOSTON, MA 02128	RANGEL DAROSA	72 LIVERPOOL ST EAST BOSTON, MA 02128
0105579010	74 LIVERPOOL ST BOSTON, MA 02128	RANGEL DAROSA	74 LIVERPOOL ST EAST BOSTON, MA 02128
0105590100	75–109 BORDER ST BOSTON, MA 02128	COPPERSMITH VILLAGE RENTAL	143 BORDER ST EAST BOSTON, MA 02128
0105590200	76–106 LIVERPOOL ST BOSTON, MA 02128	PEACE PROPERTIES INC	143 BORDER ST EAST BOSTON, MA 02128
0105535000	LONDON ST BOSTON, MA 02128	CITY OF BOSTON	c/o PARKS AND RECREATION 1010 MASSACHUSETTS AVE 3 <sup>RD</sup> FLOOR BOSTON, MA 02118
0105534000	LONDON ST BOSTON, MA 02128	CITY OF BOSTON	c/o PARKS AND RECREATION 1010 MASSACHUSETTS AVE 3 <sup>RD</sup> FLOOR BOSTON, MA 02118

Parcel ID	Property	Owner	Owner Address
0105536000	LONDON ST BOSTON, MA 02128	CITY OF BOSTON	c/o PARKS AND RECREATION 1010 MASSACHUSETTS AVE 3 <sup>RD</sup> FLOOR
			BOSTON, MA 02118
0105537000	LONDON ST BOSTON, MA 02128	CITY OF BOSTON	c/o PARKS AND RECREATION 1010 MASSACHUSETTS AVE 3 <sup>RD</sup> FLOOR BOSTON, MA 02118
0105538000	LONDON ST BOSTON, MA 02128	CITY OF BOSTON	c/o PARKS AND RECREATION 1010 MASSACHUSETTS AVE 3 <sup>RD</sup> FLOOR BOSTON, MA 02118
0105539000	LONDON ST BOSTON, MA 02128	CITY OF BOSTON	c/o PARKS AND RECREATION 1010 MASSACHUSETTS AVE 3 <sup>RD</sup> FLOOR BOSTON, MA 02118
0105540000	74 LONDON ST	EAST BREEZE LLC	42 MAVERICK ST
	BOSTON, MA 02128		EAST BOSTON, MA 02128
0105541000	72 LONDON ST BOSTON, MA 02128	EAST BREEZE LLC	42 MAVERICK ST EAST BOSTON, MA 02128
0105542000	70 LONDON ST	EAST BREEZE LLC	42 MAVERICK ST
	BOSTON, MA 02128		EAST BOSTON, MA 02128
0105543000	68 LONDON ST BOSTON, MA 02128	HOUVER PUERTA	68 LONDON ST EAST BOSTON, MA 02128
0105544000	66 LONDON ST	BENJAMIN	PO BOX 201 N
	BOSTON, MA 02128	GOODMAN	QUINCY, MA 02171
0105545000	64 LONDON ST	EAST WIND	42 MAVERICK ST
	BOSTON, MA 02128	PROPERTIES LLC	EAST BOSTON, MA 02128
0105546000	62 LONDON ST	SMITH HILL	PO BOX 201 N
	BOSTON, MA 02128	REALTY TRUST	QUINCY, MA 02171
0105547000	60 LONDON ST	MARIA E SANTOS	PO BOX 288 E
	BOSTON, MA 02128		BOSTON, MA 02128
0105548000	58 LONDON ST	BENJAMIN	PO BOX 201 N
	BOSTON, MA 02128	GOODMAN	QUINCY, MA 02171
0105549000	56 LONDON ST	BENJAMIN	PO BOX 201 N
	BOSTON, MA 02128	GOODMAN	QUINCY, MA 02171
0105550000	54 LONDON ST	FRANCISCO A	54 LONDON ST
	BOSTON, MA 02128	LOPEZ	EAST BOSTON, MA 02128

### Notification to Abutters Under the Massachusetts Wetlands Protection Act

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

- A. The name of the applicant is **Flying Cloud Realty Trust.** The applicant has filed a Notice of Intent with the Conservation Commission for the municipality of **Boston** seeking permission to remove, till, dredge, or alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, section 40).
- B. The address of the lot where the activity is proposed is <u>77-85 Liverpool Street, East Boston</u>, Massachusetts 02128.
- C. Copies of the notice of Intent may be examined at <u>Boston City Hall</u> between the hours of <u>9 AM</u> and <u>5 PM</u> on the following days of the weeks: <u>Monday through Friday.</u> For more information, call Boston City Hall at <u>(617)</u> 635-3850.
- D. Copies of the Notice of Intent may be obtained from the applicant's representative by calling this telephone number (617) 357-7044 x 203 between the hours of 9 AM and 5 PM on the following days of the week: Monday through Friday.
- E. Information regarding the date, time, and place of the public hearing may be obtained from <a href="Boston Conservation Commission">Boston Conservation Commission</a> by calling this telephone number: <a href="(617) 635-3850">(617) 635-3850</a> between the hours of and on the following days of the week: 9 AM to 5 PM, Monday through Friday.

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

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

NOTE: You also may 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: the Northeast Region: (978) 694-3200.

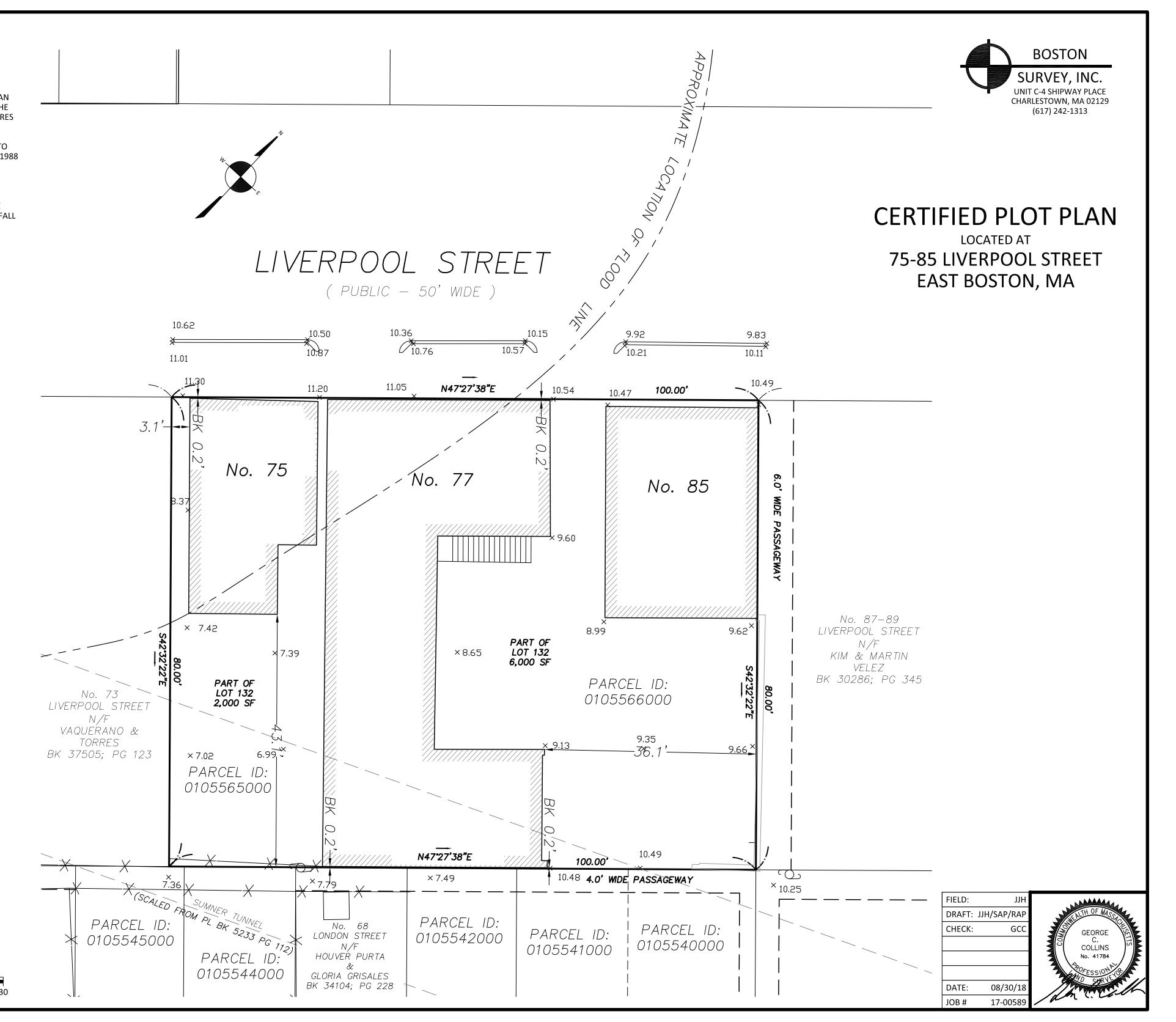
# ATTACHMENT E

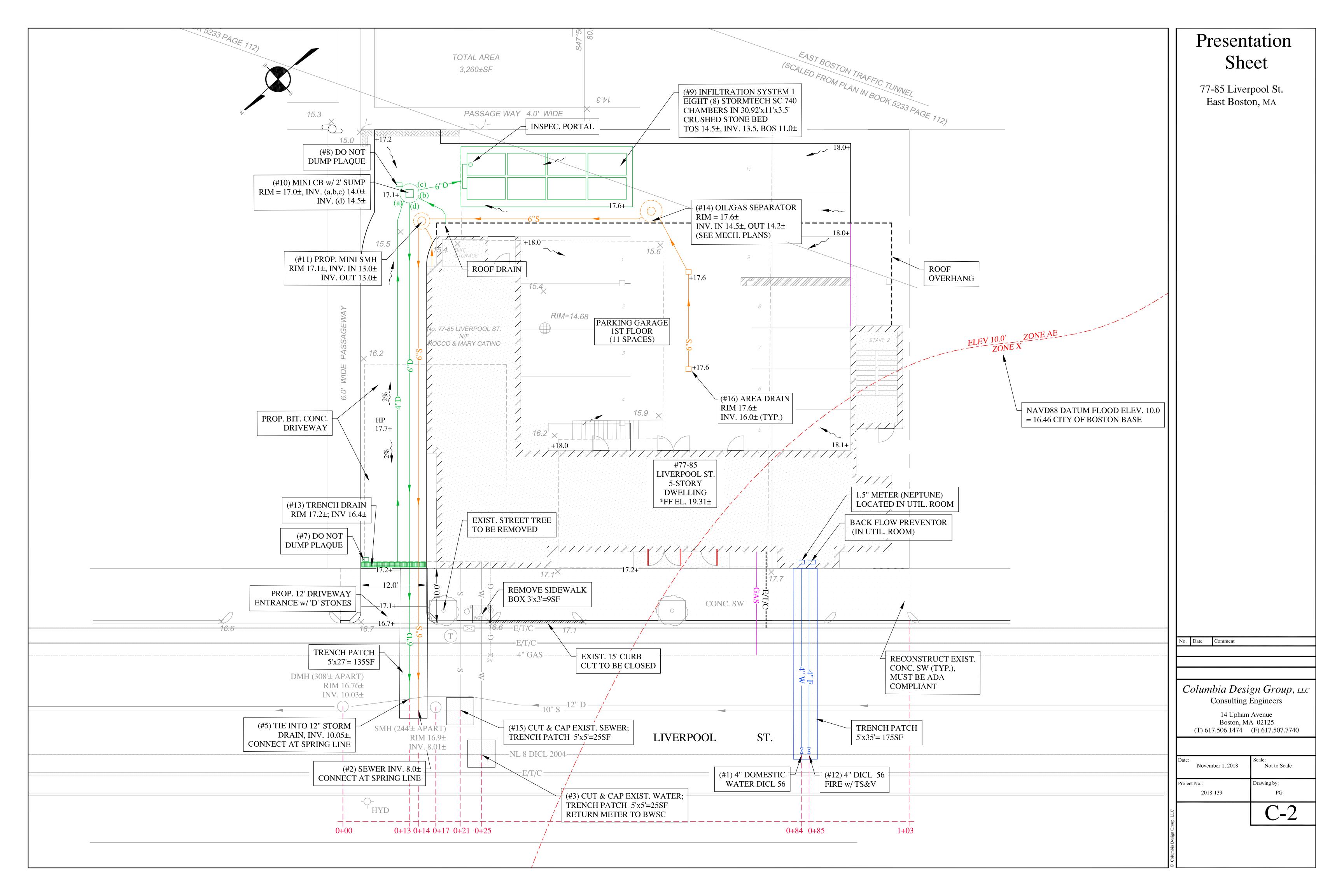
**PLANS** 

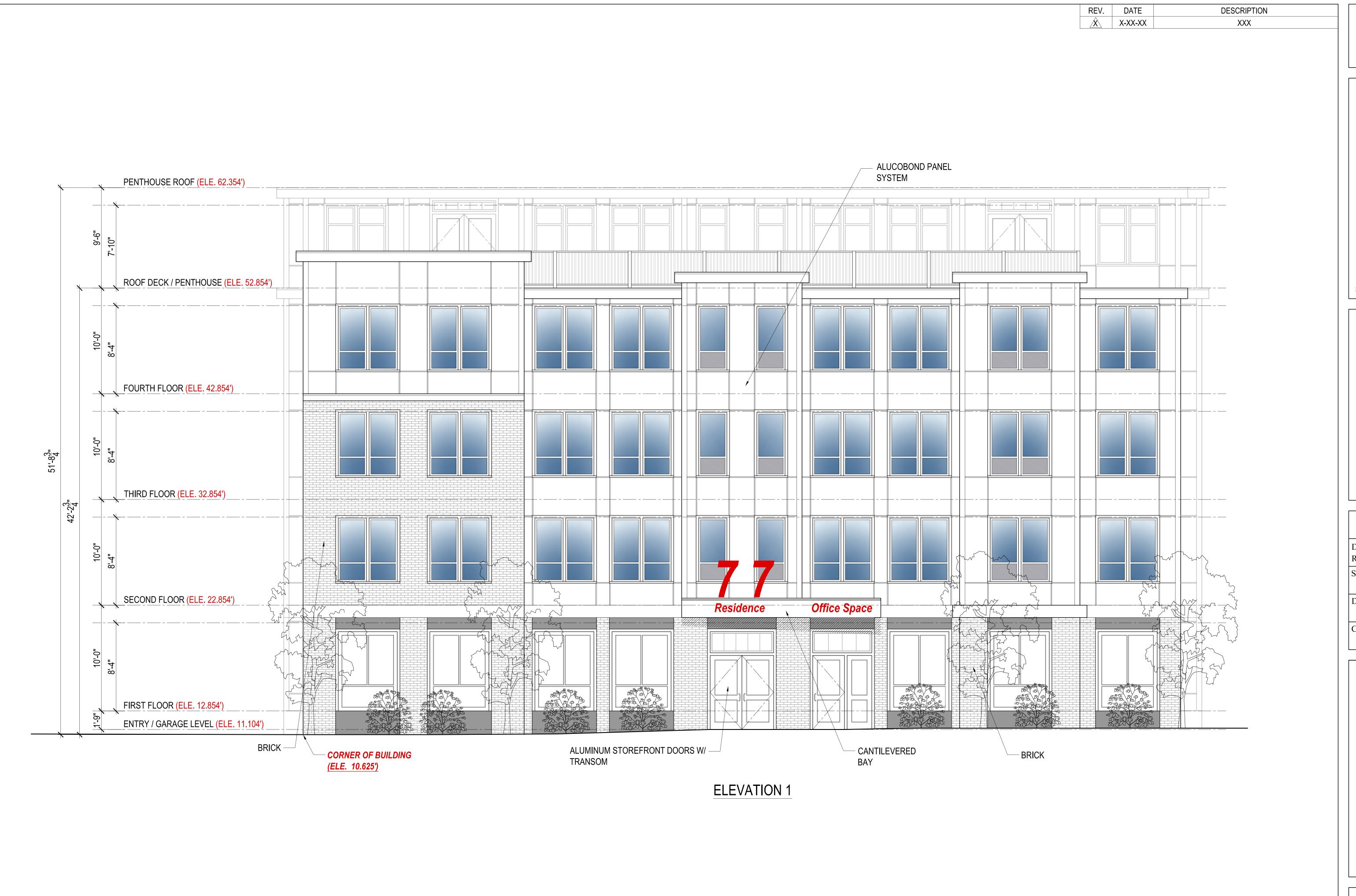
I CERTIFY THAT THIS PLAN WAS MADE FROM AN INSTRUMENT SURVEY ON THE GROUND ON THE DATE OF AUGUST 30, 2018 AND ALL STRUCTURES ARE LOCATED AS SHOWN HEREON. ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AND WERE DETERMINED FROM A GPS OBSERVATION. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) MAPS, THE MAJOR IMPROVEMENTS ON THIS PROPERTY FALL IN AN AREA DESIGNATED AS COMMUNITY PANEL: 25025C0081J EFFECTIVE DATE: MARCH 16, 2016 PREPARED FOR: BENJAMIN P. GOODMAN 77 - 85 LIVERPOOL ST. EAST BOSTON, MA 02128 DEED: BK 42819; PG 4 BK 54666; PG 175 PLAN: BK 406; PG END BK 1170; PG 300

PARCEL ID: 010556500 & 0105566000

SCALE: 1.0 INCH = 10.0 FEET







onset Ave. www.roche-christopher.com Tel

128 415 Neponset Ave.

Fast Forwards Management L 77- 85 Liverpool Street

PROJECT # 18-022

DATE: 10-31-18 REV:

SCALE: 1/4" = 1'-0"

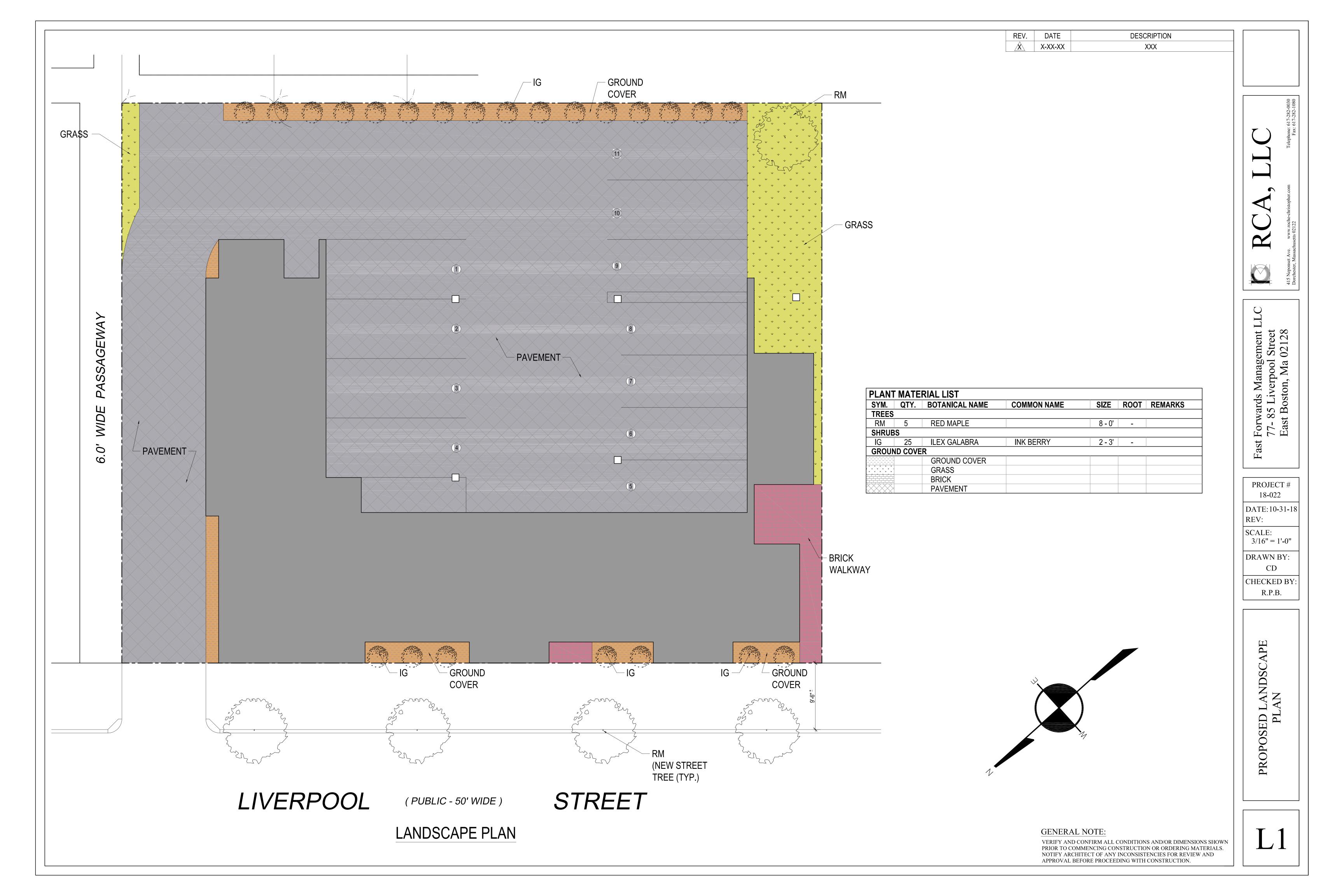
DRAWN BY:

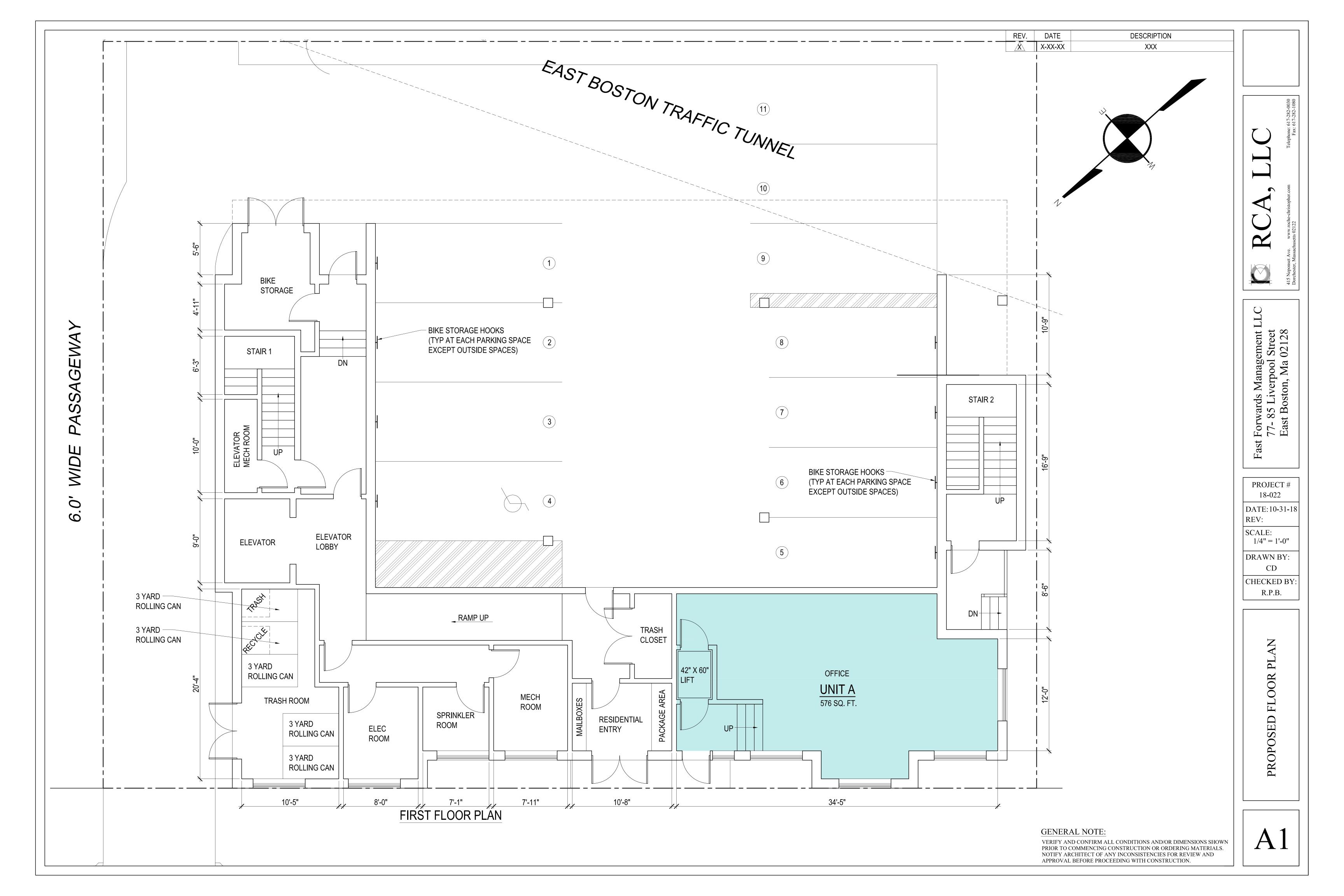
CHECKED BY: R.P.B.

R.P.B.

PROPOSED ELEVATION

A6











t Forwards Management LLC 77-85 Liverpool Street East Boston, Ma 02128

PROJECT # 18-022

DATE: 10-31-18

1/4" = 1'-0" DRAWN BY:

CHECKED BY:

R.P.B.

PROPOSED

