NOTICE OF INTENT

Charles River Esplanade Wireless Outdoor Distributed Antenna System Boston, Massachusetts



SUBMITTED TO:

City of Boston Conservation Commission City Hall Plaza, Room 709 Boston, MA 02201

PREPARED BY:

Lucas Environmental, LLC 500A Washington Street Quincy, Massachusetts 02169

PREPARED FOR:

Extenet Systems, Inc. 3030 Warrenville Road, Suite 340 Isle. IL 60532

IN ASSOCIATION WITH:

Jacobs Engineering Group, Inc. 120 St James Avenue, 5th Floor Boston, MA 02116

LUCAS ENVIRONMENTAL, ILC

REPORT DATE: September 25, 2019



September 25, 2019

Boston Conservation Commission City of Boston Environmental Department Boston City Hall, Room 709 Boston, MA 02201

Re: Notice of Intent

Wireless Outdoor Distributed Antenna System (oDAS) Project

Charles River Esplanade, Boston, Massachusetts

Members of the Boston Conservation Commission:

On behalf of the Applicant, Extenet Systems, Inc., and in association with Jacobs Engineering Group, Inc., Lucas Environmental, LLC (LE) is pleased to submit this Notice of Intent (NOI) to the Boston Conservation Commission for the installation of a Wireless Outdoor Distributed Antenna System (oDAS) along the Charles River Esplanade in Boston, Massachusetts. The purpose of the project is to address the increase in wireless demand at the Esplanade, especially during large scale events.

The proposed work includes the installation of wireless oDAS telecommunication nodes that will be mounted on 14 replacement light poles and installation of underground fiber optic cable conduit. This NOI is submitted in accordance with the Massachusetts Wetlands Protection Act (WPA; M.G.L. Ch. 131, Section 40) and implementing regulations (310 CMR 10.00 et seq.).

Enclosed please find one original and one (1) copy of the NOI, two (2) copies of the Stormwater Report, and two (2) copies of the Site Plans reduced to 11" x 17". The NOI application package includes the WPA Form 3, project narrative, figures, photographic documentation, abutter notification, filing fees, and BCC filing checklist. Site Plans and a stormwater report are provided separately. A link to an electronic copy of the pdf file of the NOI application and supporting documentation will be provided concurrently with this submittal. We respectfully request that you place this matter on your agenda for the October 9, 2019 Public Hearing.

If you have any questions, please do not hesitate to contact me at 617.405.4053 or tel@lucasenvironmental.net. Thank you for your consideration in this matter.

Sincerely,

LUCAS ENVIRONMENTAL, LLC

Thomas E. Liddy, PWS

Environmental Consultant/Wetland Scientist

cc: Extenet Systems, Mass DCR, Jacobs Engineering Group, Inc., MassDEP – NERO



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SECTION I - FORMS



WPA Form 3 – Notice of Intent

A. General Information

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

i. Fax Number

Massachusetts Department of Conservation and Recreation

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

3. Property owner (required if different from applicant):

251 Causeway Street, 9th Floor (Main Office)

Provided by MassDEP: MassDEP File Number **Document Transaction Number Boston**

g. Zip Code

02114

g. Zip Code

\$1,500 Boston Fee (\$0 WPA)

c. City/Town Fee Paid

Check if more than one owner

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.

Isle

e. City/Town

Priscilla

Boston

e. City/Town

\$750.00

a. Total Fee Paid

a. First Name

c. Organization

d. Street Address

617.626.1250

508.776.2161

h. Phone Number

1. Project Location (Note: electronic filers will click on button to locate project site):				
	Charles River Esplanade, Storrow Drive	Boston	02114	
	a. Street Address	b. City/Town	c. Zip Code	
		42° 21' 20.11" N	71° 4' 39.36" W	
	Latitude and Longitude:	d. Latitude	e. Longitude	
	0502496000 and 0503747000			
	f. Assessors Map/Plat Number	g. Parcel /Lot Number		
2.	Applicant:			
	Rick	Angelini		
	a. First Name	b. Last Name		
	Extenet Systems, Inc.			
	c. Organization			
	3030 Warrenville Road, Suite 340			
	d. Street Address			
	Isle	II	60532	

f. State

j. Email Address

Geigis

b. Last Name

Priscilla.geigis@state.ma.us

rangelini@extenetsystems.com

h. Phone Number i. Fax Number j. Email address 4. Representative (if any): **Thomas** Liddy a. First Name b. Last Name Lucas Environmental, LLC c. Company 500A Washington Street d. Street Address MA 02169 Quincy e. City/Town f. State g. Zip Code 617.405.4053 617.405.4465 tel@lucasenvironmental.net i. Fax Number h. Phone Number j. Email address

MA

f. State

\$362.50

b. State Fee Paid



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rovided by MassDEP:		
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	City/Town	

		Sity rown		
Α.	General Information (continued)			
6.	General Project Description:			
	The proposed work includes the installation of wirelemounted on 14 replacement light poles and installat within the 25-Foot Riverfront Area, Bordering Land the Charles River.	tion of underground fiber optic cable conduit		
7a.	Project Type Checklist: (Limited Project Types see	Section A. 7b.)		
	1. Single Family Home	2. Residential Subdivision		
	3. 🛛 Commercial/Industrial	4. Dock/Pier		
	5. Utilities	6. Coastal engineering Structure		
	7. Agriculture (e.g., cranberries, forestry)	8. Transportation		
	9. Dther			
7b.	Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?			
	1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)			
	10.53(3)(d): underground & overhead public utilities 2. Limited Project Type			
	If the proposed activity is eligible to be treated as an CMR10.24(8), 310 CMR 10.53(4)), complete and at Project Checklist and Signed Certification.			
8.	Property recorded at the Registry of Deeds for:			
	Suffolk			
	a. County N/A	b. Certificate # (if registered land)		
	c. Book	d. Page Number		
В.	Buffer Zone & Resource Area Impa	acts (temporary & permanent)		
1.	☐ Buffer Zone Only – Check if the project is locate			

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

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

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)		
a. 🔲 🛮 Bank	1. linear feet	2. linear feet		
b. Bordering VegetatedWetland	1. square feet	2. square feet		
c. Land Under Waterbodies and	1. square feet	2. square feet		
Waterways	3. cubic yards dredged			
Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)		
d. 🛛 Bordering Land	637	637		
Subject to Flooding	1. square feet	2. square feet		
	0	0		
	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		
<u>_</u>	Charles River	•		
f. 🛛 Riverfront Area	Name of Waterway (if available) - spe	ecify coastal or inland		
2. Width of Riverfront Area (check one):				
☐ 100 ft New agricult	☐ 100 ft New agricultural projects only			
200 ft All other proj	ects			
O Total area of Divertrent Are	a an the aite of the proposed proje	ect: $\frac{126,050}{\text{square feet}}$		
3. Total area of Riverionit Are	a on the site of the proposed proje			
4. Proposed alteration of the F	Riverfront Area:			
500	500	0		
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.		
5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☑				
6. Was the lot where the activ	ity is proposed created prior to Au	gust 1, 1996? ⊠ Yes ☐ No		
3. Coastal Resource Areas: (See	310 CMR 10.25-10.35)			

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



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

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

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

4.

5.

Resource Area		Size of Proposed	Alteration	Proposed Replacement (if any)
а. 🗌	Designated Port Areas	Indicate size un	der Land Under	the Ocean, below
b. 🗌	Land Under the Ocean	square feet cubic yards dredge	nd.	
с. 🔲	Barrier Beach			hes and/or Coastal Dunes below
d. 🗌	Coastal Beaches	1. square feet		2. cubic yards beach nourishment
е. 🗌	Coastal Dunes	1. square feet		2. cubic yards dune nourishment
		Size of Proposed	Alteration	Proposed Replacement (if any)
f.	Coastal Banks	1. linear feet		
g. 🗌	Rocky Intertidal Shores	1. square feet		
h. 🗌	Salt Marshes	1. square feet		2. sq ft restoration, rehab., creation
i. 🗌	Land Under Salt Ponds	1. square feet		
		2. cubic yards dredge	ed .	
j. 🗌	Land Containing Shellfish	1. square feet		
k. 🗌	Fish Runs			s, inland Bank, Land Under the Waterbodies and Waterways,
		1. cubic yards dredge	ed	
I. Land Subject to Coastal Storm Flowage 1. square feet Restoration/Enhancement		·		
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.				
a. square	e feet of BVW		b. square feet of Sa	alt Marsh
☐ Project Involves Stream Crossings				
a. numb	er of new stream crossings		b. number of replace	cement stream crossings



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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40 C. Other Applicable Standards and Requirements This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists - Required Actions (310 CMR 10.11). Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review 1. Is any portion of the proposed project located in Estimated Habitat of Rare Wildlife as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the Massachusetts Natural Heritage Atlas or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm. If yes, include proof of mailing or hand delivery of NOI to: a. ☐ Yes ☒ No **Natural Heritage and Endangered Species Program Division of Fisheries and Wildlife** 1 Rabbit Hill Road August 1, 2017 Westborough, MA 01581 b. Date of map If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); OR complete Section C.2.f, if applicable. If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below). c. Submit Supplemental Information for Endangered Species Review* 1. Percentage/acreage of property to be altered: (a) within wetland Resource Area percentage/acreage (b) outside Resource Area percentage/acreage 2. Assessor's Map or right-of-way plan of site 2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work ** Project description (including description of impacts outside of wetland resource area & (a) buffer zone)

Photographs representative of the site

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

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



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

	(c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm). 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	ated Habitat boundaries		
	(f) OF	R Check One of the Following			
Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 1 http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions the NOI must still be sent to NHESP if the project is within estimated habitat pursua 310 CMR 10.37 and 10.59.)					
	2. 🗌	Separate MESA review ongoing.	a. NHESP Tracking #	b. Date submitted to NHESP	
	3. 🗌	Separate MESA review completed. Include copy of NHESP "no Take" dete Permit with approved plan.	rmination or valid Conser	vation & Management	
3.	3. For coastal projects only, is any portion of the proposed project located below the mean high wat line or in a fish run?			w the mean high water	
	a. 🛛 Not a	applicable – project is in inland resource	area only b. 🗌 Yes	☐ No	
	If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:				
	South Shore the Cape &	e - Cohasset to Rhode Island border, and Islands:	North Shore - Hull to New	Hampshire border:	
	Southeast M Attn: Environ 836 South F New Bedford	Marine Fisheries - Marine Fisheries Station nmental Reviewer Rodney French Blvd. d, 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.EnvReviev</u>	wer	

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

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	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. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). Note: electronic filers click on Website.
transaction		b. ACEC
number (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 information you		a. 🗌 Yes 🔀 No
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: 1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
		2. A portion of the site constitutes redevelopment
		3. Proprietary BMPs are included in the Stormwater Management System.
		b. No. Check why the project is exempt:
		1. Single-family house
		2. Emergency road repair
		3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.
	D.	Additional Information
		This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).
		Applicants must include the following with this Notice of Intent (NOI). See instructions for details.
		Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.
		1. Substituting Sufficient information for the Conservation Commission and the Department to locate the site (Electronic filers may omit this item.)

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

2.

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D.

D.	Add	itional Information (cont'd)			
	3. 🗵		urce area boundary delineations (MassDEP BVW ability, Order of Resource Area Delineation, etc.), dology.		
	4. List the titles and dates for all plans and other materials submitted with this NOI. Esplanade oDAS, Storrow Drive, Boston, MA 02114				
		Plan Title	- 10: 1 - 5 -		
		cobs Engineering Group, Inc.	Earl Stande, P.E.		
		Prepared By	c. Signed and Stamped by		
		gust 21, 2019 inal Revision Date	1" = 40' e. Scale		
		ormwater Management Report	June 2019		
		dditional Plan or Document Title	g. Date		
	5.		ease attach a list of these property owners not		
	6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if no				
7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed			ivision of Marine Fisheries, if needed.		
	8. 🛛	Attach NOI Wetland Fee Transmittal Form			
9. Attach Stormwater Report, if needed.					
_	Fees				
⊏.	rees				
	1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.				
		ants must submit the following information (in ansmittal Form) to confirm fee payment:	addition to pages 1 and 2 of the NOI Wetland		
	90089		06/28/19		
		ipal Check Number	3. Check date		
	90090		06/28/19		
		Check Number	5. Check date		
		t Systems, Inc.			
	Payor	name on check: First Name	7. Payor name on check: Last Name		

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Provided	by	MassDEP:
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MassDEP File Number

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Boston City/Town

F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant

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.

Checklist for Filing a Notice of Intent with Boston Conservation Commission

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

To the Conservation Commission:

×	Two copies (a signed original and 1 copy) of a completed Notice of Intent (WPA Form 3)
×	Two copies of plans (reduced to 11" X 17") in their final form with engineer's stamp affixed supporting calculations and other documentation necessary to completely describe the proposed work and mitigating measures. Plans must include existing conditions, the proposed project, erosion controls and mitigation measures, grading and spot elevations and all wetland resource areas and associated buffer zones. Some projects may require both an aerial view of the plans along with a profile view of plans depending on the scope of work.
又	Two copies of an 8 ½" x 11" section of the <u>USGS quadrangle map</u> of the area, containing sufficient information for the Conservation Commission and the Department to locate the site of the work.
×	(If applicable) Two copies the Federal Emergency Management Agency Flood Insurance Rate Map for the project site. FEMA Flood Maps: https://msc.fema.gov/portal .
□ N/A	Two copies of the determination regarding the Natural Heritage and Endangered Species Program: Review Section C. Other Applicable Standards and Requirements of the Notice of Intent, page 4 of 8, pertaining to wildlife habitat. The Conservation Commission and the Natural Heritage & Endangered Species Program have the maps necessary to make this determination.
×	(If applicable) Two hard copies of a Stormwater Report to document compliance with the Stormwater Management Standards per 310 CMR $10.05(6)(k)$ -(q), including associated drainage calculations for rooftops, parking lots, driveways, etc., for the required design storm events.
×	(If applicable) Two hard copies of the Checklist for Stormwater Report
×	Details of the stormwater management system, including: catch basins, oil separating tanks, detention basins, outfalls, sewer connections, etc.
×	Any photographs related to the project representing the wetland resource areas.
×	Two copies of a detailed project narrative describing the following: an overview of the entire project, the work proposed within wetland resource areas and/or buffer zones; how the performance standards specific to the wetland resource areas will be met (listing out each performance standard); construction equipment and material involved; and measures to protect wetland resource areas and mitigate impacts.
×	Two copies of an Abutters List, Affidavit of Service and Abutter Notification, filed concurrently with the Notice of Intent.
□ N/A	(If applicable) Two copies of the BPDA Climate Resiliency Checklist (for new buildings). This can be completed online at http://www.bostonplans.org/planning-initiatives/article-37-green-building-guidelines . Please print the pdf that you will receive via email after completion and include it in your submission.

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



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



SECTION II – PROJECT NARRATIVE



1.0 INTRODUCTION

On behalf of the Applicant, Extenet Systems, Inc., Lucas Environmental, LLC (LE) is pleased to submit this Notice of Intent (NOI) to the Boston Conservation Commission for the installation of a Wireless Outdoor Distributed Antenna System (oDAS) along the Charles River Esplanade in Boston, Massachusetts. The purpose of the project is to address the increase in wireless demand at the Esplanade, especially during large scale events.

The proposed work includes the installation of wireless oDAS telecommunication nodes that will be mounted on 14 replacement light poles located, and installation of underground fiber optic cable conduit within the 25-Foot Riverfront Area, 100-Foot Buffer Zone to Inland Bank, and Bordering Land Subject to Flooding (BLSF) associated with the Charles River. This NOI is submitted in accordance with the Massachusetts Wetlands Protection Act (WPA; M.G.L. Ch. 131, Section 40) and implementing regulations (310 CMR 10.00 et seq.).

This project narrative describes the existing conditions, wetland resource areas, proposed design, project impacts, and regulatory compliance for work within jurisdictional areas on and near the site. The proposed project is depicted on the Site Plans prepared by Jacobs Engineering Group, Inc., titled "Esplanade oDAS, Storrow Drive, Boston, MA 02114", dated October 23, 2018, last revised on August 21, 2019.

2.0 EXISTING CONDITIONS

The subject property is located at the Charles River Esplanade (Boston Esplanade, Esplanade) in Boston, Massachusetts (See Figure 1 – USGS Map and Figure 2 – Aerial Map). The Esplanade is bounded by the Charles River to the north and Storrow Drive to the south. The area of the Esplanade where work is proposed lies generally from just east of Massachusetts Avenue to just north of Lederman Park, and consists of two lots. The western lot (Boston PID 0503747000) contains 43.7 total acres and the eastern lot (Boston PID 0502496000) contains 26.8 total acres. The total area of these two lots is approximately 70.5 acres.

A review of the current MassGIS data layer for the Massachusetts Natural Heritage Atlas (effective August 1, 2017) under the Natural Heritage & Endangered Species Program (NHESP) indicates that no portion of the Study Area is located within Estimated Habitat of Rare Wildlife or Priority Habitat of Rare Species (See Figure 3 – NHESP Map). No Certified or Potential Vernal Pools under the jurisdiction of the Wetlands Protection Act Regulations (310 CMR 10.00 et seq.) or the Massachusetts Endangered Species Act (321 CMR 10.00 et seq.) are mapped by NHESP in the Study Area.

The Study Area is not located within an Area of Critical Environmental Concern (ACEC), Outstanding Resource Water (ORW), or Wellhead Protection Zone.



3.0 WETLAND RESOURCE AREAS

A Professional Wetland Scientist (PWS) from LE conducted a wetland site investigation at the project site and adjacent areas on April 25, 2019. The wetland investigation was performed in accordance with the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40) and regulations (310 CMR 10.00 et seq.); Section 404 of the Clean Water Act (33 U.S.C. 1344); Massachusetts Department of Environmental Protection (MassDEP) publication "Delineating Bordering Vegetated Wetlands" under the Massachusetts Wetlands Protection Act (1995); the U.S. Army Corp of Engineers (USACE) Wetland Delineation Manual (1987); and the Northcentral and Northeast Regional Supplement (2012). The following data sources were examined prior to the site investigation:

- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps;
- United States Geological Survey Topographic Quadrangle;
- MassGIS MassDEP Wetland and Hydrography Datalayers;
- MassGIS Natural Heritage Atlas Datalayers; and
- United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) Soil Survey.

Resource areas identified at the site include Inland Bank, Land Under Water Bodies and Waterways (LUWW), Bordering Land Subject to Flooding (BLSF), and Riverfront Area. The resource area Bank (delineated based on the Mean Annual High Water line) and Land Under Water Bodies and Waterways are associated with the Charles River, a perennial stream that flows along northern portion of the site. Under the Massachusetts Wetlands Protection Act, the wetlands at or near the site are regulated as follows:

3.1 Inland Bank – 310 CMR 10.54

Section 310 CMR 10.54 of the WPA defines a Bank as the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or, in the absence of these, it occurs between a water body and an upland. The upper boundary of a Bank is the first observable break in the slope or the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level.

3.2 Land Under Water Bodies and Waterways – 310 CMR 10.56

LUWW is defined as land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock. Under section 310 CMR 10.56 (2)(c) of the WPA, the boundary of LUWW is defined as the mean annual low water level. Therefore, LUWW at the site is present below the mean annual low water level of the Charles River and lagoons. Because this resource area is located below the top of Bank or the Mean Annual High Water (MAHW) line, it was not field delineated.



3.3 Bordering Land Subject to Flooding – 310 CMR 10.57

Section 310 CMR 10.57(2)(a) of the WPA defines Bordering Land Subject to Flooding (BLSF) as an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland. The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm.

According to the March 16, 2016 FEMA Flood Insurance Rate Map for Suffolk County, Massachusetts, Map Number 25025C0077J, the Charles River is located within Zone AE, which is defined as an area subject to the 1% annual chance flood (100-year flood), where base flood elevations have been determined. The base flood elevation for the portion of the Charles River at the site is Elevation 4 NAVD88. Other areas of the site are located within either Zone X defined as the 0.2% annual flood chance (500-year flood) or Zone X defined as minimal flood hazard (see Figure 4 – FEMA Map). The limit of BLSF is identified on the plans at Elevation 4. The FEMA graphic depiction is also identified as required by the Conservation Commission.

3.4 Riverfront Area – 310 CMR 10.58

Under section 310 CMR 10.58 of the WPA, the Riverfront Area is the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away, except that the parallel line is located: a. 25 feet away in Boston. Therefore, the 25-Foot Riverfront Area extends from the delineated MAHW line.

3.5 Resource Area Descriptions

The following section briefly characterizes the wetland resource areas delineated on-site. Representative photographs are included in Appendix A.

Bank Series 1 – Charles River and Lagoons

The Charles River flows from west to east along the northern edge of the site. The MAHW along the river and lagoons was delineated using blue survey tape numbered sequentially as BF1-1 to BF1-222. These flags delineate the top of the Inland Bank as well as the lower boundary of the Riverfront Area. The Banks are steep and well-defined. The MAHW and Bank line are coincident. The Bank at the site consists of a mix of vegetated areas, stone rip-rap, and concrete walls. Where bank vegetation is present, it generally consists of mowed grass. In some locations, invasive vegetation such as common reed (*Phragmites australis*), Oriental bittersweet (*Celastrus orbiculatus*), and common buckthorn (*Rhamnus cathartica*) are also present.



4.0 PROPOSED WORK

The proposed work includes the installation of fourteen wireless DAS telecommunication nodes. The nodes will be mounted on replacement light poles and will include the associated equipment including the DAS Antenna, switch, and GX Remote as shown on the Site Plans. The replacement light poles will be installed within the area of the existing light poles.

Fiber optic cable conduit installation and excavation for new pole foundations will use methods that will minimize impact on the trees and avoid cutting the paved paths. Light pole foundations will use helical piles which require less soil disturbance. The installation of the fiber optic cable will use horizontal directional drilling (HDD), hydro excavation, and/or pneumatic excavation methods depending on location. These drilling methods are used for crossing under environmentally sensitive areas such as waterways, paths, and where protection of tree roots is required. A Massachusetts Certified Arborist will be will be present at all times when excavation and drilling is ongoing to ensure there is no impact to tree roots. Upon completion of construction and after installation of conduit, there will be a minimum offset of three inches between the tree roots and the conduit. Back fill within the root zone shall consist of loam placed to match the elevation of the original soil surface. Disturbed areas will be loamed and seeded. See Site Plans for details on the proposed work.

There will be temporary closures of some of the paths but the park will remain open during construction and additional staff and signage will direct park users to alternate paths and bikeways. The color and design of the light poles and location of the antennas on the poles will be subject to review and approval by the Boston Landmarks Commission and the Massachusetts Department of Conservation & Recreation (DCR). Site photographs of some of the existing areas in the Esplanade are provided in Appendix A. The Site Plans provide additional information and are included under separate cover.

The proposed project will not increase impervious area at the site and there are no anticipated changes to stormwater quantity, quality, or recharge due to the minor nature of the work. The proposed project meets or exceeds the MassDEP Stormwater Management Standards as detailed in the Stormwater Report, prepared by Jacobs Engineering Group, dated June 2019, under separate cover.

Erosion and sedimentation control best management practices (BMPs) have been incorporated into the project design in order to prevent siltation into waterways during construction (see Site Plans). This will consist of silt fencing in any area where trenching is proposed in close proximity to the top of the Bank. Erosion controls will be installed where indicated on the Site Plans prior to soil disturbance activity in that area.

5.0 REGULATORY COMPLIANCE

The following section details the project's compliance with the performance standards for each resource area under the Wetlands Protection Act. The use of HDD technology has been selected to avoid impact to Inland Bank and LUWW, therefore no further discussion is warranted for these resource areas. There is minor work proposed within the Riverfront Area and BLSF due to the proximity of the existing poles and necessary underground utility conduits to the resource area.





The proposed work is exempt from the requirements of Riverfront Area. Per 310 CMR 10.58(6)(i), "Structures and activities subject to a M.G.L. c. 91 waterways license or permit...are exempt, provided the structure or activity is subject to jurisdiction and obtains a license, permit, or authorization under 310 CMR 9.00". The Charles River Esplanade consists of filled tidelands subject to M.G.L Chapter 91 Waterways Regulations. A Chapter 91 license application will be submitted to the MassDEP Waterways Program for the proposed project. Therefore, compliance with the Riverfront Area performance standards is not required.

Work within BLSF is limited to some minor trenching for the utility conduit near the far western bridge (See Sheet C-1). Also included with the impact calculation is the location of each of the HDD drill rigs. A total of approximately 637 square feet of temporary disturbance is proposed within the limit of BLSF. All pre-and post-construction surface contours will remain the same. Horizontal drilling is proposed to occur under this resource area at a depth sufficient to prevent any disturbance of the ground surface or elevations within the resource area. Areas will be restored to existing grade upon completion.

Section 310 CMR 10.53(3) of the WPA states the following:

Notwithstanding the provisions of 310 CMR 10.54 through 10.58 and 10.60, the Issuing Authority may issue an Order of Conditions and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40 permitting the following limited projects (although no such project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59). In determining whether to exercise its discretion to approve the limited projects listed in 310 CMR 10.53(3), the Issuing Authority shall consider the following factors: the magnitude of the alteration and the significance of the project site to the interests identified in M.G.L. c. 131, § 40, the availability of reasonable alternatives to the proposed activity, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

This project qualifies as a Limited Project under 310 CMR 10.53(3)(d) for the construction, reconstruction, operation and maintenance of underground and overhead public utilities, such as electrical distribution or transmission lines, or communication, sewer, water and natural gas lines, may be permitted, in accordance with the following general conditions and any additional conditions deemed necessary by the issuing authority and 10.53(3)(l) for the construction, reconstruction, operation or maintenance of water dependent uses.

6.0 **SUMMARY**

The proposed work includes the installation of wireless oDAS telecommunication nodes that will be mounted on 14 replacement light poles located within the area of the existing light poles. Fiber optic cable conduit installation and excavation for new pole foundations will use methods that will minimize impact on the resource areas and trees, and avoid cutting the paved paths. As currently designed, work will occur within the 100-Foot Buffer Zone of Inland Bank, Bordering Land Subject to Flooding, and the 25-Foot Riverfront Area of the Charles River.





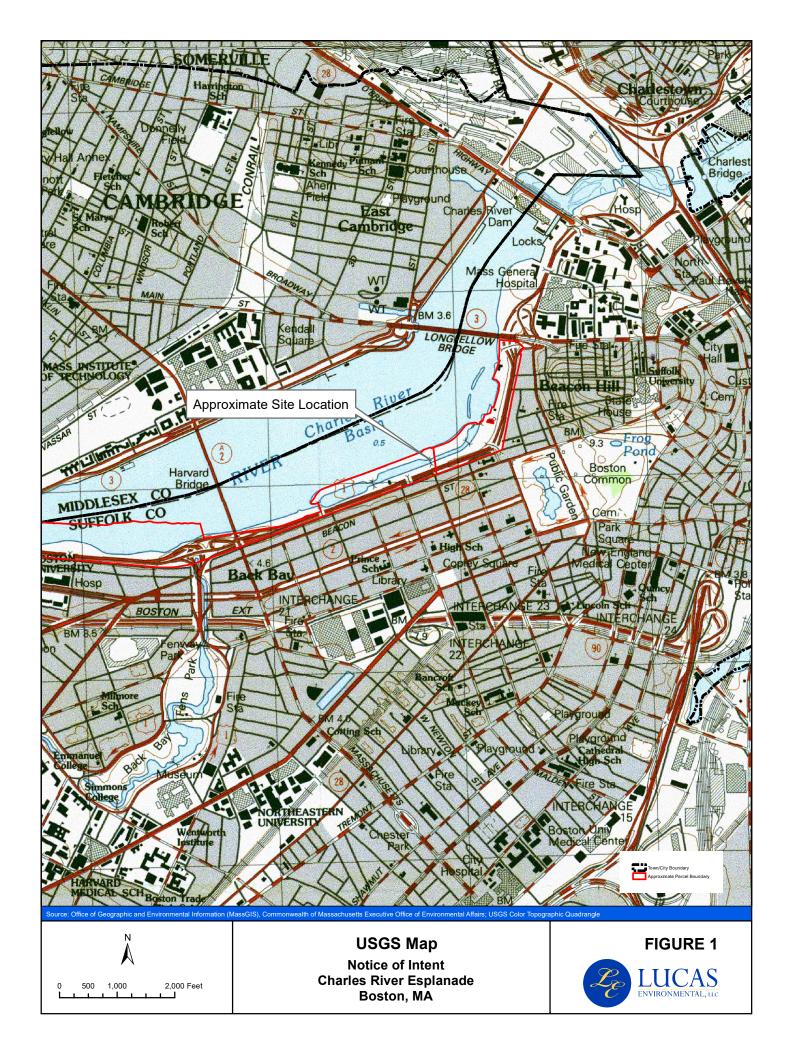
It is LE's opinion, based on our professional education, training, and familiarity with the project site, that the proposed work will not have any adverse effect on any interests identified in the Wetlands Protection Act. The basis for our opinion is as follows:

- The site is previously developed and degraded conditions are present in locations with existing pavement, riprap, and concrete.
- Replacement light poles will be installed at the locations of the existing light poles.
- Installation of fiber optic cable conduits will utilize methods to minimize impacts to resource areas, trees and paved pathways. These methods include horizontal directional drilling and pneumatic excavation.
- No work is proposed within Inland Bank or LUWW.
- Work within BLSF is temporary and minor (637 square feet).
- Work within Riverfront Area is minimal and within existing disturbed and developed areas of the Esplanade.
- Work qualifies as a Limited Project.
- Erosion controls consisting of silt fencing will be installed where necessary to prevent sediment from entering waterways.
- Tree protection measures will be implemented.

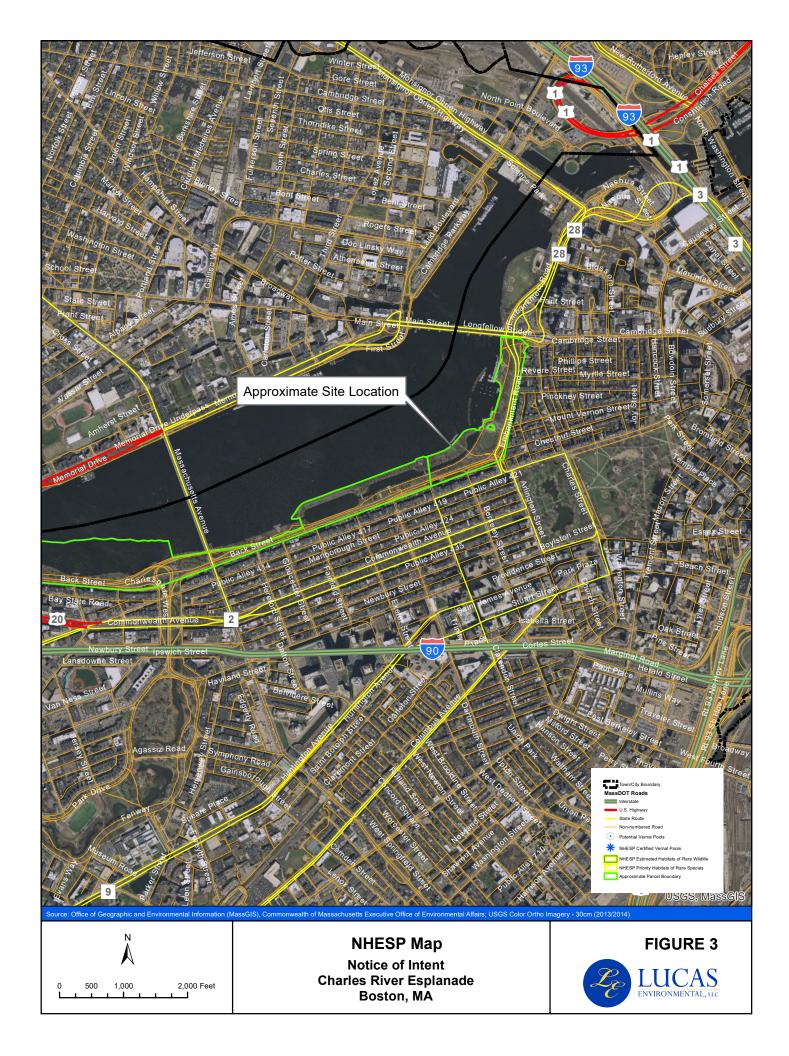
The proposed design achieves the goals of the Applicant, improves services to the general public, and is sensitive to adjacent regulated resource areas. Accordingly, the Applicant respectfully requests that the Conservation Commission consider a finding that the proposed design is adequately protective of the interests identified in the Wetlands Protection Act and issue an Order of Conditions approving the project as described in this Notice of Intent and as shown on the attached Site Plans.



SECTION III – FIGURES











SECTION IV – APPENDICES







DATE: April 25, 2019



Photograph 1: View of typical Inland Bank along Charles River.



<u>Photograph 2:</u> View of typical location for proposed underground conduit.



DATE: April 25, 2019



<u>Photograph 3:</u> View of light pole to be replaced (typical).



Photograph 4: View of bridge where proposed conduit will be located (typical).



DATE: April 25, 2019



Photograph 5: View of Inland Bank along inner lagoon (typical).



<u>Photograph 6:</u> View of typical location for proposed underground conduit.





ABUTTER INFORMATION



ABUTTER NOTIFICATION

Notification to Abutters Under the Massachusetts Wetlands Protection Act

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

A.	The name of the applicant is Extenet Systems, Inc.			
В.	The applicant has filed a Notice of Intent with the Conservation Commission for the Municipality Boston seeking to remove, fill, dredge or alter an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40).			
	Activities Proposed: The proposed work includes the installation of wireless oDAS telecommunication nodes that will be mounted on 14 replacement light poles and installation of fiber optic cable conduction within the 25-Foot Riverfront Area, 100-Foot Buffer Zone to Inland Bank, and Bordering Land Subject to Flooding associated with the Charles River.			
C.	The Address of the Lot where the activity is proposed is Charles River Esplanade, Storrow Drive, Boston, MA			
D.	Copies of the Notice of Intent may be examined at the For more information, call: 617.635.3850 between the hours of 9:00 AM And 4:00 PM on the following days of the week: Mon-Friday This is the applicant \(\Pi\), representative \(\Pi\), or other \(\Pi\) (specify): Boston Conservation Commission			
Е.	Electronic copies of the Notice of Intent may be obtained from either (check one) the applicant or the applicant's representative by calling this telephone number 617.405.4140 between the hours of 8:00 AM And 5:00 PM on the following days of the week: Mon-Friday Name of Representative: Christopher M. Lucas, Lucas Environmental, LLC Copies will be provided for the cost of copying and postage.			
F.	Information regarding the date, time, and place of the public hearing may be obtained from:			
	Boston Conservation Commission by calling this telephone number 617.635.3850			
	This is the applicant □, representative □, or other ☑ (specify): Boston Conservation Commission			
	NOTE: Notice of the public hearing, including its date, time and place, will be published at least five (5) days in advance in the The Herald (name of newspaper)			
	NOTE: Notice of the public hearing, including its date, time, and place, will be posted in the Boston City Offices 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 (MassDEP) Regional Office for more information about this application or the Wetlands Protection Act. <u>To contact MassDEP, call:</u> Northeast Region: 978.694.3200			
	NOTE: To preserve your appeal rights you must submit comments/concerns in writing.			

Charles River Esplanade 100-Foot Abutters List

PID	Owner	Mailing Addresss	City	State	Zip Code
502639001	TWO 70 BEACON ST CONDO TR	270 BEACON	BOSTON	MA	02116
502639006	BICKFORD KATHERINE	270 BEACON ST #A	BOSTON	MA	02116
502639008	GOLDBERG AURIAM J ETAL	270 BEACON ST #B	BOSTON	MA	02116
502639010	ACKERMAN ROBERT W	270 BEACON ST #C	BOSTON	MA	02116
502639018	SULLIVAN LORI	270 BEACON ST #D	BOSTON	MA	02116
502639026	GOLDBERG AVRAM J TS	225 FRANKLIN ST	BOSTON	MA	02110
502639028	ROBINSON ALBERT S	270 BEACON ST #F	BOSTON	MA	02116
502639030	RIBAKOFF CHARLES K II	274 BEACON ST	BOSTON	MA	02116
502639032	GOLDBERG AVRAM J TS	PO BOX 961989	BOSTON	MA	02196
502639036	KENNEY LESLIE	745 GREEN HILL BEACH RD	WAKEFIELD	RI	02879
502639038	VISCOMI SALVATORE G	270 BEACON ST #H5	BOSTON	MA	02116





FILING FEE INFORMATION



CALCULATED FILING FEE STATEMENT

The proposed project is located at the Charles River Esplanade along Storrow Drive in Boston, Massachusetts. Proposed activities are included under Category 2(j) under the Wetlands Filing Fee Calculation Worksheet.

Category 2(j): Any other activity not described in Categories 1, 3, 4, 5 or 6 (e.g., the determination of whether a stream is perennial or intermittent).

The fee is \$500.00 per activity under the WPA. For activities within Riverfront Area in addition to another Resource Area or buffer zone, the fee per activity should be multiplied by 1.5.

Wetlands Protection Act Fees:

Category $2(j) = 1.5 \times \$500.00 = \750.00

State Share of WPA Filing Fee: (\$750.00/2) - \$12.50 = \$362.50

Town Share of WPA Filing Fee: Included in Local Fees per Boston Conservation Commission

Local Fees:

Maximum Fee = \$1,500.00 per local requirement.

Checks:

Check Payable to: City of Boston for \$1,500.00

Check Payable to: Commonwealth of Massachusetts for \$362.50



Bureau of Resource Protection - Wetlands

A. Applicant Information

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.





	• •					
1. Lo	ocation of Project:					
С	harles River Esplanade	Storrow Drive	Boston			
	Street Address	,	b. City/Town			
9(0090		\$362.50			
	Check number		d. Fee amour	nt		
2. A	pplicant Mailing Addres	s:				
R	ick		Angelini			
a.	First Name		b. Last Name			
Е	xtenet Systems, Inc.					
C.	Organization					
30	030 Warrenville Road, S	Suite 340				
d.	Mailing Address					
ls	sle			IL	60532	
e.	City/Town			f. State	g. Zip Code	
5	08.776.2161		rangelini@	extenetsystems	s.com	
h.	Phone Number	i. Fax Number	j. Email Addre			
3. P	roperty Owner (if differe	nt):				
Р	riscilla		Geigis			
a.	First Name		b. Last Name			
M	Massachusetts Department of Conservation and Recreation					
C.	Organization					
2	51 Causeway Street, #9	00				
d.	Mailing Address					
В	oston			MA	02114	
e.	City/Town			f. State	g. Zip Code	
6	17.626.1250		Priscilla.ge	igis@state.ma.	us	
	Phone Number	i. Fax Number	j. Email Addre			

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

B. Fees

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

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

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

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

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

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

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



Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

B. F	ees (continued)			
St	tep 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
2(j) Other activity not described	1.5 for RA	\$500.00	\$750.00
<u> </u>				
		Step 5/To	otal Project Fee:	\$750.00
		Step 6/	Fee Payments:	
		Total	Project Fee:	\$750.00 a. Total Fee from Step 5
		State share	of filing Fee:	\$362.50 b. 1/2 Total Fee less \$12.50
		City/Town share	e of filling Fee:	\$0 (\$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.)

REFERENCE NO.	DESCRIF	PTION	INVOICE DATE	INVOICE AMOUNT	DISCOUNT TAKEN	AMOUNT PAID
CH REQ 062819A	MASS DEPT OF I	ENV PROT	6/28/2019	1,500.00	0.00	1,500.00
CHECK DATE	CHECK NO.		PAYEE		DISCOUNTS TAKEN	CHECK AMOUNT
6/28/2019	0000090089	CITYBOSTON C	ty of Boston		0.00	1,500.00



EXTENET SYSTEMS, INC. 3030 WARRENVILLE ROAD, STE. 340 LISLE, IL 60532 PH. (630) 505-3800

One thousand five hundred and xx / 100 Dollars

COMERICA BANK 32-75/1110

90089

C

DATE 6/28/2019

AMOUNT

**********1,500.00

PAY TO THE ORDER OF:

City of Boston 1 City Hall Square Boston, MA 02201 USA

REFERENCE NO.	DESCRIP	PTION	INVOICE DATE	INVOICE AMOUNT	DISCOUNT TAKEN	AMOUNT PAID
CK REQ 0628 9	MASS DEPT OF	··	6/28/2019	362.50	0.00	362.50
CHECK DATE	CHECK NO.		PAYEE		DISCOUNTS TAKEN	CHECK AMOUNT
6/28/2019	0000090090	AONWEALTH C	ommonwealth of	Massachusetts	0.00	362.50



EXTENET SYSTEMS, INC.

3030 WARRENVILLE ROAD, STE. 340 LISLE, IL 60532 PH. (630) 505-3800

Three hundred sixty-two and 50 / 100 Dollars

COMERICA BANK 32-75/1110 FRAUD ARMOR 90090

C

DATE 6/28/2019

AMOUNT

**************362.50

PAY TO THE ORDER OF:

Commonwealth of Massachusetts The Commonwealth of Massachusetts Department of Telecom and Cable Commonwealth Master Lockbox

P.O. Box 415300

Boston, MA 02241-5300

USA

"OPO090"

#111000753#

1881253056#

AUTHORIZED SIGNATURE



September 27, 2019

Boston Conservation Commission City of Boston Environmental Department Boston City Hall, Room 709 Boston, MA 02201

Re: Notice of Intent Supplement

Wireless Outdoor Distributed Antenna System (oDAS) Project

Charles River Esplanade, Boston, Massachusetts

Members of the Boston Conservation Commission:

On behalf of the Applicant, Extenet Systems, Inc., and in association with Jacobs Engineering Group, Inc., Lucas Environmental, LLC (LE) is pleased to submit this supplement to the Notice of Intent (NOI) to the Boston Conservation Commission for the installation of a Wireless Outdoor Distributed Antenna System (oDAS) along the Charles River Esplanade in Boston, Massachusetts. This letter addresses the technical comment raised by Conservation Staff regarding the status of limited project as related to water dependent uses related to Section 310 CMR 10.53(3)(l) for the construction, reconstruction, operation or maintenance of water dependent uses.

Regarding water dependency, LE discussed this with Ben Lynch at the Massachusetts Department of Environmental Protection (MassDEP) Waterways program. The entire Esplanade is jurisdictional under the Chapter 91 Waterways Regulations and this project requires a Chapter 91 license. The Chapter 91 Regulations define Water Dependent Uses per 310 CMR 9.12(2)(a)(4): The Department shall find to be water-dependent the following uses: parks, esplanades, boardwalks, and other pedestrian facilities that promote use and enjoyment of the water by the general public and are located at or near the water's edge, including but not limited to any park adjacent to a waterway and created by a public agency. The Esplanade is by definition a water dependent use, and this project requires access to the Esplanade to be completed. MassDEP has indicated they would review this work as a water dependent use for the purposes of Chapter 91 Water Dependency. The WPA defines water dependent uses in a similar manner.

Further, this project qualifies as a Limited Project under 310 CMR 10.53(3)(d) for the construction, reconstruction, operation and maintenance of underground and overhead public utilities, such as electrical distribution or transmission lines, or communication, sewer, water and natural gas lines, may be permitted, in accordance with the following general conditions and any additional conditions deemed necessary by the issuing authority regardless of the water-dependent use provision under Section 310 CMR 10.53(3)(1).

Regardless, if the Commission does not agree that this project meets the provisions of a limited project then it can be discussed at the hearing. The work does not technically require limited project status to be permitted as the project meets all applicable performance standards; however, the Applicant is requesting the Commission discuss the status of a limited project and make a formal determination if the project meets those definitions. As such, revising the entire application and resubmitting hard copies would not be necessary and the Commission can make the determination at the public hearing.



As a complete application has been submitted, we respectfully request that you place this matter on your agenda for the October 9, 2019 Public Hearing. The Applicant is amenable to further discussion with the Commission related to the limited project status.

If you have any questions, please do not hesitate to contact me at 617.405.4053 or tel@lucasenvironmental.net. Thank you for your consideration in this matter.

Sincerely,

LUCAS ENVIRONMENTAL, LLC

Thomas E. Liddy, PWS

Environmental Consultant/Wetland Scientist

cc: Extenet Systems, Mass DCR, Jacobs Engineering Group, Inc., MassDEP – NERO

JACOBS°



Presented to:

City of Boston, Massachusetts



Report for:

Extenet Systems
Charles River Esplanade
Boston, Massachusetts

Stormwater Management Report

June 2019

Submitted by:

Jacobs 120 St. James Ave 5th FI Boston, MA 02116 USA

SECTION 1 PROJECT DESCRIPTION

Extenet Systems, the Applicant, is proposing to construct 14 wireless telecommunication along the Charles River Esplanade on Storrow Drive, MA and connecting them by underground conduits using horizontal directional drilling (HDD)

Objectives for the Project include:

- Replacing 12 existing light poles with new light poles.
- Fixing wireless telecommunication equipment to 2 existing poles.
- Using HDD to reduce soil and tree/shrub disturbances.
- Using silt fences and filter tubes during construction to prevent sediment infiltration into wetland resource areas.

SECTION 2 EXISTING CONDITIONS

The Project site is located off of Storrow Drive along the Charles River in Boston, MA

The Project site consists of hydrologic soil group (HSG) B/D. The existing impervious area is comprised of paved pedestrian pathways and assembly areas, as well as an entertainment venue. The sub catchment area also is comprised mostly of shrubs and trees.

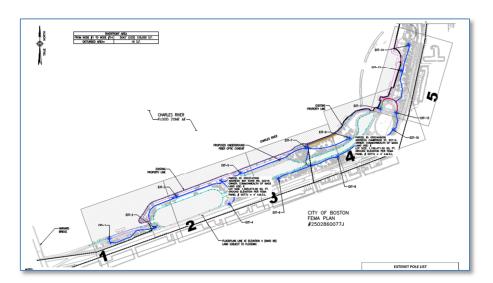


Figure 1 – Project Area

The Project is located within 25 feet of the existing wetland. The wetland resource area was flagged by Lucan Environmental, LLC on April 25th, 2019, describing the location of the existing wetland. There will be no stockpiling of materials within resource areas. All construction vehicles will be accessing the work area via the existing pedestrian paths and bridges.

SECTION 3 PROPOSED CONDITIONS

Since this project will consist of light pole replacement and retrofitting only, there is no expected changes to the impervious surface area or surface profile as a result of the project.

The following Best Management Practices (BMPs) are included in the proposed design:

- Compost Amended Filter Tubes: Shall consist of 12 inch mesh tubes of approved compost or coarse compost material. Alternate compost materials or methods such as hydro seeding may be used only when approved by the Department of Conservation and Recreation (DCR)
- **Dust control:** Mitigation measures to be implemented during construction including daily dust checks, application of water to suppress dust, and earth moving activities to be curtailed during high wind conditions.
- **Silt Fence:** Contractor to use filter fabric stretched and attached to supporting posts in areas of disturbance in proximity to the wetland resource area. Silt fence shall remain in place until the disturbed area is permanently stabilized. To be used along the toe of fills, on the downhill side of large through-cut areas and at natural drainage areas to reduce the quantity of sediment and to dissipate flow velocities to downstream areas.

SECTION 4 OPERATIONS AND MAINTENANCE

Maintenance is critical for the proper operation of the proposed BMP's. During construction and after precipitation produces the equivalent of one-half inch of rainfall, the contractor shall inspect and maintain all erosion control measures.

Maintenance shall include, but not be limited to, removal of sediment from silt fences if soil accumulates to a depth of one-half the fabric height and removal of excess accumulated sediment from detention basins. Silt fence repairs to be made immediately and replaced after each storm event.

SECTION 5 CONCLUSION

The overall project results in no change to the impervious surface in the sub catchment area. If constructed in conformance with the Project Drawings and the Stormwater Management Report, herein, the Project should not result in any significant erosion or sedimentation issues either on or off the site



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 8²
- Operation and Maintenance Plan required by Standard 9

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

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

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

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

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



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.

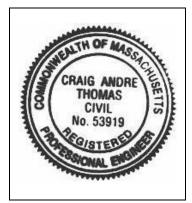
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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



Gym

6/12/2019

Signature and Date

Checklist

	ject Type: Is the application for new development, redevelopment, or a mix of new and evelopment?
	New development
	Redevelopment
X	Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

env	vironmentally sensitive design and LID Techniques were considered during the planning and design of project:
	No disturbance to any Wetland Resource Areas
	Site Design Practices (e.g. clustered development, reduced frontage setbacks)
	Reduced Impervious Area (Redevelopment Only)
X	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	andard 1: No New Untreated Discharges
X	No new untreated discharges
	Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
	Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Checklist for Stormwater Report

Cr	necklist (continu	ued)	
Sta	ındard 2: Peak Rat	e Attenuation	
	and stormwater disc	charge is to a wetland subject to	located in land subject to coastal storm flowage coastal flooding. boding increases during the 100-year 24-hour
	development rates flooding increases	for the 2-year and 10-year 24-ho during the 100-year 24-hour stor	nt peak discharge rates do not exceed pre- our storms. If evaluation shows that off-site m, calculations are also provided to show that eed pre-development rates for the 100-year 24-
Sta	ındard 3: Recharge		
	Soil Analysis provid	led.	
	Required Recharge	Volume calculation provided.	
	Required Recharge	volume reduced through use of	the LID site Design Credits.
	Sizing the infiltration	n, BMPs is based on the followin	g method: Check the method used.
	Static	☐ Simple Dynamic	☐ Dynamic Field ¹
	Runoff from all impo	ervious areas at the site dischar	ging to the infiltration BMP.
	are provided showing		scharging to the infiltration BMP and calculations outing runoff to the infiltration BMPs is sufficient to
	Recharge BMPs ha	ive been sized to infiltrate the Re	equired Recharge Volume.
		ive been sized to infiltrate the Reor the following reason:	equired Recharge Volume only to the maximum
	☐ Site is comprise	ed solely of C and D soils and/or	bedrock at the land surface
	☐ M.G.L. c. 21E s	sites pursuant to 310 CMR 40.00	00
	☐ Solid Waste La	ndfill pursuant to 310 CMR 19.0	00
	Project is other practicable.	wise subject to Stormwater Man	agement Standards only to the maximum extent
	Calculations showing	ng that the infiltration BMPs will o	drain in 72 hours are provided.
	Property includes a	M.G.L. c. 21E site or a solid wa	ste landfill and a mounding analysis is included.

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



Checklist for Stormwater Report

Cł	necklist (continued)
Sta	ndard 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	ndard 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.



Checklist for Stormwater Report

Ch	ecklist (continued)
Stai	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> (1997).
	to the discharge of stormwater to the post-construction stormwater BMPs. The NPDES Multi-Sector General Permit does not cover the land use.
	LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
	All exposure has been eliminated.
	All exposure has <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.



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
	 Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area. Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
	☐ Bike Path and/or Foot Path
	Redevelopment Project
	Redevelopment portion of mix of new and redevelopment.
	Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report. The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.
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:
	 Narrative; Construction Period Operation and Maintenance Plan; Names of Persons or Entity Responsible for Plan Compliance; Construction Period Pollution Prevention Measures; Erosion and Sedimentation Control Plan Drawings; Detail drawings and specifications for erosion control BMPs, including sizing calculations; Vegetation Planning; Site Development Plan; Construction Sequencing Plan; Sequencing of Frosion and Sedimentation Controls;

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

any stormwater to post-construction BMPs.

Ш	The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
П	An Illicit Discharge Compliance Statement is attached;

NO Illicit Discharge Compliance Statement is attached but will be submitted *prior to* the discharge of