

Parcels O and P - Raymond L. Flynn Marine Park

Boston, Massachusetts

Notice of Intent

August 4, 2021

submitted to
Boston Conservation Commission

submitted by **MCP III Foundry, LLC**

prepared by **Fort Point Associates, Inc., a Tetra Tech Company**

in association with
BR+A
Copley Wolff Design Group
DLA Piper
Epsilon Associates
Haley & Aldrich
Howard Stein Hudson
Nitsch Engineering
SGA
Thornton Tomasetti



**boston planning &
development agency**

Economic Development & Industrial Corporation of Boston
Raymond L. Flynn Marine Park

August 3, 2021
Boston Conservation Commission
City Hall Plaza, Room 709
Boston, MA 02109

Re: Consent to File a Notice Intent
Au Bon Pain Way and 3 Anchor Way, South Boston, MA

Dear Mr. Chairmen and Commissioners,

The Economic Development Corporation of Boston (EDIC), d/b/a Boston Planning and Development Agency (BPDA), is the fee owner of the existing previously developed commercial/industrial property located at Au Bon Pain Way (otherwise known as Parcel P, identified in the City of Boston's Assessor record as Parcel 602674075) and 3 Anchor Way (otherwise known as Parcel O, identified in the City of Boston's Assessor record as Parcel 602674080) in South Boston.

EDIC hereby authorizes MCP III Foundry, LLC and its duly authorized agents to file permit applications under the Massachusetts Wetlands Protection Act and related City of Boston Ordinances subject to the review and permit authority of the Boston Conservation Commission.

Please do not hesitate to call me at 617-918-4431 if you have any questions in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Quirk".

Devin L. Quirk
Director of Real Estate

TABLE OF CONTENTS

TABLE OF CONTENTS

APPLICATION – WPA FORM 3

APPLICATION – BOSTON ENVIRONMENT DEPARTMENT NOTICE OF INTENT APPLICATION FORM

ATTACHMENT A – SUPPLEMENTAL INFORMATION

1.1	OVERVIEW	1
1.2	EXISTING CONDITIONS	1
1.3	PROJECT DESCRIPTION	2
1.4	WETLAND RESOURCES	3
1.5	COMPLIANCE WITH WPA PERFORMANCE STANDARDS.....	3

LIST OF FIGURES

Figure 1	Locus Map
Figure 2	Project Site
Figure 3	Existing Site Plan
Figure 4	Combined Parcels
Figure 5	FEMA Flood Insurance Rate Map (FIRM No. 25025C0082J)
Figure 6	Stacking Plan
Figure 7	Landscape Planting Plan
Figure 8	Landscape Planting List
Figure 9	NHESP Priority Habitats of Rare Species Map
Figure 10	Existing Conditions Flow Advancing
Figure 11	Existing Conditions Flow Receding
Figure 12	Proposed Conditions Flow Advancing
Figure 13	Proposed Conditions Flow Receding

ATTACHMENT B – ABUTTER NOTIFICATION INFORMATION

ATTACHMENT C – STORMWATER REPORT

ATTACHMENT D – CLIMATE RESILIENCY REPORT

ATTACHMENT E – EXTENSION FORM

ATTACHMENT F – PROJECT PLANS

Application

WPA FORM 3



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

City/Town

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



Note:
 Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

<u>1 Au Bon Pain Way and 3 Anchor Way</u>	<u>South Boston</u>	<u>02210</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	<u>42° 20' 46.8" N</u>	<u>71° 01' 43.2" W</u>
	d. Latitude	e. Longitude
<u>0602674080, 0602674075</u>	g. Parcel /Lot Number	
f. Assessors Map/Plat Number		

2. Applicant:

<u>Paul</u>	<u>Marcus</u>	
a. First Name	b. Last Name	
<u>MCP III Foundry, LLC</u>		
c. Organization		
<u>c/o Marcus Partners, Inc. 260 Franklin Street</u>		
d. Street Address		
<u>Boston</u>	<u>MA</u>	<u>02110</u>
e. City/Town	f. State	g. Zip Code
<u>617-556-5200</u>	<u>pmarcus@marcuspartners.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

<u>Brian</u>	<u>Golden</u>	
a. First Name	b. Last Name	
<u>Economic Development and Industrial Corporation (EDIC)</u>		
c. Organization		
<u>1 City Hall SQ 9th Floor</u>		
d. Street Address		
<u>Boston</u>	<u>MA</u>	<u>02201</u>
e. City/Town	f. State	g. Zip Code
<u>617-722-4300</u>	<u>brian.golden@boston.gov</u>	
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Ken</u>	<u>Fields</u>	
a. First Name	b. Last Name	
<u>Fort Point Associates, Inc., a Tetra Tech Company</u>		
c. Company		
<u>31 State Street, 3rd Floor</u>		
d. Street Address		
<u>Boston</u>	<u>MA</u>	<u>02109</u>
e. City/Town	f. State	g. Zip Code
<u>(617) 357-7044</u>	<u>kfields@fpa-inc.com</u>	
<u>x203</u>	i. Fax Number	j. Email address

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

<u>\$2,537.50</u>	<u>\$1,037.50</u>	<u>\$1,500 CoB Fee</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

A. General Information (continued)

6. General Project Description:

Redevelopment of 115,023 square-foot (sf) area including Parcels O and P on Fid Kennedy Avenue. Existing Parcel O building will be demolished and a 219,000-sf life science/R&D building will be constructed in its place. Minor construction for adaptive reuse of the existing 12,700-sf building at Parcel P. 96 existing parking spaces will be retained and landscaping and stormwater improvements.

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

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. Other

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

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

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Suffolk	
a. County	b. Certificate # (if registered land)
8960	484
c. Book	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.



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

City/Town

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

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

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

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

2. Width of Riverfront Area (check one):

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

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

4. Proposed alteration of the Riverfront Area:

a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
----------------------	-------------------------------	--

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

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

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

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



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

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.

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

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

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

	1. cubic yards dredged	
l. <input checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage	115,023+/-	
	1. square feet	

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

a. square feet of BVW

b. square feet of Salt Marsh

5. Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:**

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

2017
b. Date of map

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

c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage
2. Assessor's Map or right-of-way plan of site

2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
 - (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/endangered-species-act-mesa-regulatory-review>).

Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

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



Massachusetts Department of Environmental Protection
 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

City/Town

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

(c) MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).
 Make check payable to “Commonwealth of Massachusetts - NHESP” and **mail to NHESP** at above address

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

- (d) Vegetation cover type map of site
- (e) Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following

1. Project is exempt from MESA review.
 Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____

3. Separate MESA review completed.
 Include copy of NHESP “no Take” determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. Not applicable – project is in inland resource area only b. Yes No

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

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

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
 Southeast Marine Fisheries Station
 Attn: Environmental Reviewer
 836 South Rodney French Blvd.
 New Bedford, MA 02744
 Email: dmf.envreview-south@mass.gov

Division of Marine Fisheries -
 North Shore Office
 Attn: Environmental Reviewer
 30 Emerson Avenue
 Gloucester, MA 01930
 Email: dmf.envreview-north@mass.gov

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

- c. Is this an aquaculture project? d. Yes No

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



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
City/Town

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

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

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

D. Additional Information

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

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

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

D. Additional Information (cont'd)

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

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

<u>Boundary Plan (Existing Conditions) June 25, 2021</u>	<u>Utility Demolition Plan C-100 May 18, 2021</u>
<u>Civil Details C-000 May 18, 2021</u>	<u>Civil Layout Plan C-300 May 18, 2021</u>
<u>Erosion Control Plan C-200 May 18, 2021</u>	<u>Civil Grading Plan C-500 May 18, 2021</u>
<u>Site Civil Utilities C-400 May 18, 2021</u>	
<u>Civil Details C-600 – C-604 May 18, 2021</u>	

Nitsch Engineering for SGA Dream Collaborative

Chris Hodney, PE

7/02/2021

c. Signed and Stamped by
1"=20'

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title Figures 7 and 8 Landscape Planting Plan g. Date 07/08/2021

- 5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
- 6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
- 7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
- 8. Attach NOI Wetland Fee Transmittal Form
- 9. Attach Stormwater Report, if needed.

E. Fees

1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

<u>000159</u>	<u>08/03/2021</u>
2. Municipal Check Number	3. Check date
<u>000160</u>	<u>08/03/2021</u>
4. State Check Number	5. Check date
<u>MCP III Foundry LLC</u>	<u>MCP III Foundry LLC</u>
6. Payor name on check: First Name	7. Payor name on check: Last Name



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

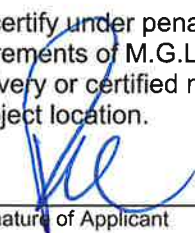

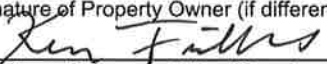
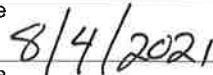
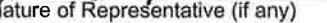
Document Transaction Number

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.

<p>x </p> <hr/> <p>1. Signature of Applicant</p>	<p></p> <hr/> <p>2. Date</p>
<p></p> <hr/> <p>3. Signature of Property Owner (if different)</p>	<p></p> <hr/> <p>4. Date</p>
<p></p> <hr/> <p>5. Signature of Representative (if any)</p>	<p>6. Date</p>

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:

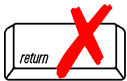
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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.



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

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



A. Applicant Information

1. Location of Project:

<u>1 Au Bon Pain Way and 3 Anchor Way</u>	<u>South Boston</u>
a. Street Address	b. City/Town
<u>000160</u>	<u>\$1,037.50</u>
c. Check number	d. Fee amount

2. Applicant Mailing Address:

<u>Paul</u>	<u>Marcus</u>	
a. First Name	b. Last Name	
<u>MCP III Foundry, LLC</u>		
c. Organization		
<u>c/o Marcus Partners, Inc., 260 Franklin Street</u>		
d. Mailing Address		
<u>Boston</u>	<u>MA</u>	<u>02109</u>
e. City/Town	f. State	g. Zip Code
<u>617-556-5200</u>	<u>pmarcus@marcuspartners.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

<u>Brian</u>	<u>Golden</u>	
a. First Name	b. Last Name	
<u>Economic Development and Industrial Corporation (EDIC)</u>		
c. Organization		
<u>1 City Hall SQ 9th Floor</u>		
d. Mailing Address		
<u>Boston</u>	<u>MA</u>	<u>02201</u>
e. City/Town	f. State	g. Zip Code
<u>617-722-4300</u>	<u>brian.golden@boston.gov</u>	
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

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

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

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

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

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

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

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

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

Application

BOSTON ENVIRONMENT
DEPARTMENT



A. GENERAL INFORMATION

1. Project Location

<u>1 Au Bon Pain Way and 3 Anchor Way</u>	<u>South Boston</u>	<u>02210</u>
a. Street Address	b. City/Town	c. Zip Code
<u> </u>	<u>0602674080, 0602674075</u>	<u> </u>
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant

<u>Paul</u>	<u>Marcus</u>	<u>MCP III Foundry, LLC</u>
a. First Name	b. Last Name	c. Company
<u>c/o Marcus Partners, Inc. 260 Franklin Street</u>		
d. Mailing Address		
<u>Boston</u>	<u>MA</u>	<u>02210</u>
e. City/Town	f. State	g. Zip Code
<u>617-556-5200</u>	<u> </u>	<u>pmarcus@marcuspartners.com</u>
h. Phone Number	i. Fax Number	j. Email address

3. Property Owner

<u>Brian</u>	<u>Golden</u>	<u>Economic Development and Industrial Corporation</u>
a. First Name	b. Last Name	c. Company
<u>1 City Hall SQ 9th Floor</u>		
d. Mailing Address		
<u>Boston</u>	<u>MA</u>	<u>02201</u>
e. City/Town	f. State	g. Zip Code
<u>617-722-4300</u>	<u> </u>	<u>brian.golden@boston.gov</u>
h. Phone Number	i. Fax Number	j. Email address

Check if more than one owner

(If there is more than one property owner, please attach a list of these property owners to this form.)

4. Representative (if any)

<u>Ken</u>	<u>Fields</u>	<u>Fort Point Associates, Inc.</u>
a. First Name	b. Last Name	c. Company
<u>31 State Street - 3rd Floor</u>		
d. Mailing Address		
<u>Boston</u>	<u>MA</u>	<u>02109</u>
e. City/Town	f. State	g. Zip Code
<u>(617) 357-7044 x203</u>	<u> </u>	<u>kfields@fpa-inc.com</u>
h. Phone Number	i. Fax Number	j. Email address



<u>Resource Area</u>	<u>Resource Area Size</u>	<u>Proposed Alteration*</u>	<u>Proposed Mitigation</u>
<input type="checkbox"/> Coastal Flood Resilience Zone	_____ Square feet	_____ Square feet	_____ Square feet
<input type="checkbox"/> 25-foot Waterfront Area	_____ Square feet	_____ Square feet	_____ Square feet
<input type="checkbox"/> 100-foot Salt Marsh Area	_____ Square feet	_____ Square feet	_____ Square feet
<input type="checkbox"/> Riverfront Area	_____ Square feet	_____ Square feet	_____ Square feet

2. Inland Resource Areas

<u>Resource Area</u>	<u>Resource Area Size</u>	<u>Proposed Alteration*</u>	<u>Proposed Mitigation</u>
<input type="checkbox"/> Inland Flood Resilience Zone	_____ Square feet	_____ Square feet	_____ Square feet
<input type="checkbox"/> Isolated Wetlands	_____ Square feet	_____ Square feet	_____ Square feet
<input type="checkbox"/> Vernal Pool	_____ Square feet	_____ Square feet	_____ Square feet
<input type="checkbox"/> Vernal Pool Habitat (vernal pool + 100 ft. upland area)	_____ Square feet	_____ Square feet	_____ Square feet
<input type="checkbox"/> 25-foot Waterfront Area	_____ Square feet	_____ Square feet	_____ Square feet
<input type="checkbox"/> Riverfront Area	_____ Square feet	_____ Square feet	_____ Square feet

C. OTHER APPLICABLE STANDARDS & REQUIREMENTS

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

See following insert page

Review Entity	Permit	Status
Boston Civic Design Commission	<ul style="list-style-type: none"> Review and approval pursuant to Article 28 of the Boston Zoning Code 	8/03/2021
Boston Planning & Development Agency	<ul style="list-style-type: none"> Review under Article 80, including Large Project Review, as required pursuant to Article 80B of the Zoning Code Cooperation Agreement Boston Residents Construction Employment Plan Agreement Certifications of Consistency and Compliance 	Expected by 8/18/2-21 Pending Article 80 Pending Article 80 Post construction
Boston Fire Department	<ul style="list-style-type: none"> Approval of Fire Safety Equipment Permit for Maintenance of Fire Protection Equipment Permit for Safe Access to Site by Fire Department Fuel Storage Permit 	During ISD Review During ISD Review During ISD Review During ISD Review
Interagency Green Building Committee	<ul style="list-style-type: none"> Article 37 Compliance 	Expected by 8/18/2-21
Boston Transportation Department	<ul style="list-style-type: none"> Transportation Access Plan Agreement Construction Management Agreement 	Pending Article 80 Pre-submission
Boston Water and Sewer Commission	<ul style="list-style-type: none"> Site Plan Review Water and Sewer Connection Permits Cross Connection Backflow Prevention Approval (as required) Temporary Construction Dewatering Permit (as required) Sewer Use Discharge Permit 	Submission in Advance of 8/18/2021 Pre-submission Pre-submission Pre-submission Pre-submission
Boston Inspectional Services Department	<ul style="list-style-type: none"> Building Permit Demolition Permit Other construction-related permits Certificate of Occupancy 	Pending Article 80 Pending Article 80 Pending Article 80 Pending Article 80
Boston Public Safety Commission Committee on Licenses	<ul style="list-style-type: none"> License for Storage of Inflammables (as required) 	During ISD Review
Boston Landmarks Commission	<ul style="list-style-type: none"> Article 85 review 	Expected by 8/18/2-21
Boston Zoning Board of Appeals	<ul style="list-style-type: none"> Zoning relief 	Pre-submission
State		
Executive Office of Energy and Environmental Affairs	<ul style="list-style-type: none"> Massachusetts Environmental Policy Act (MEPA) review 	5/7/2021
Massachusetts Department of Environmental Protection	<ul style="list-style-type: none"> Notification of Demolition and Construction Ch. 91 License Minor Revision to License #10233 	Prior to Construction In-progress
Massachusetts Historical Commission	<ul style="list-style-type: none"> State Register Review 	4/26/2021
Massachusetts Water Resources Authority	<ul style="list-style-type: none"> Construction Dewatering Permit (if required) Sewer Use Discharge Permit (if required) 	TBD TBD
Federal		
Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> EPA NPDES Dewatering General Permit for Construction Dewatering Discharges (construction dewatering discharges into surface waters) 	Prior to Construction
Federal Aviation Administration (FAA)	<ul style="list-style-type: none"> Determination of No Hazard to Air Navigation 	Pre-submission



2. Is any portion of the proposed project located in Estimated Habitat of Rare Wildlife as indicated on the most recent Estimated Habitat Map of State-Listed Rare 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://www.mass.gov/dfwele/dfw/nhesp/nhregmap.htm>.
- Yes No

If yes, the project is subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18).

A. Submit Supplemental Information for Endangered Species Review

- Percentage/acreage of property to be altered:
- (1) within wetland Resource Area _____ percentage/acreage
- (2) outside Resource Area _____ percentage/acreage
- Assessor's Map or right-of-way plan of site

3. Is any portion of the proposed project within an Area of Critical Environmental Concern?
- Yes No

If yes, provide the name of the ACEC: _____

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

- Yes. Attach a copy of the Stormwater Checklist & Stormwater Report as required.
- Applying for a Low Impact Development (LID) site design credits
 - A portion of the site constitutes redevelopment
 - Proprietary BMPs are included in the Stormwater Management System
- No. Check below & include a narrative as to why the project is exempt
- Single-family house
 - Emergency road repair
 - Small Residential Subdivision (less than or equal to 4 single family houses or less than or equal to 4 units in a multifamily housing projects) with no discharge to Critical Areas

5. Is the proposed project subject to Boston Water and Sewer Commission Review?
- Yes No



D. SIGNATURES AND SUBMITTAL REQUIREMENTS

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the Wetlands Protection Ordinance.

x

Signature of Applicant

Date

Signature of Property Owner (if different)

Signature of Representative (if any)

Date

Date

Attachment A

SUPPLEMENTAL INFORMATION

ATTACHMENT A: SUPPLEMENTAL INFORMATION

1.1 OVERVIEW

MCP III Foundry, LLC (the “Applicant”), an affiliate of Marcus Partners, is proposing the redevelopment of Parcels O and P located in the Raymond L. Flynn Marine Park (“RLFMP”) in the South Boston Waterfront. See Figure 1, Project Locus. The Applicant proposes to demolish the existing buildings at Parcel O (1 Au Bon Pain Way) and to construct an approximately 219,000-square-foot (“sf”) life science/R&D building and include alterations for the adaptive reuse of the existing building at Parcel P (3 Anchor Way). See Figure 2, Project Site and Figure 3, Existing Site Plan. Parcel O and Parcel P will be combined and will incorporate Au Bon Pain Way and a portion of Anchor Way to form a single, 115,023-sf parcel (the “Project Site”). See Figure 4, Combined Parcels. New landscaping and stormwater system upgrades are proposed on the Project Site, which includes the private ways and the existing surface parking for which no additional parking is proposed. Together, these improvements comprise the proposed work (the “Project”).

The only Wetland Resource Area on the Project Site is Land Subject to Coastal Storm Flowage (“LSCSF”). The Applicant is submitting this Notice of Intent (“NOI”) to request an Order of Conditions for the Project’s proposed work.

1.2 EXISTING CONDITIONS

The Project Site is situated north of the Ship Repair Dry Dock #3 in the RLFMP. The Site is surrounded by a mix of marine industrial uses and vacant lots on the north side of Fid Kennedy Avenue. The J.C. Cannistraro building at 25 Fid Kennedy Avenue is on the east side, and the Home Design Showroom building at 7 Tide Street is on the west side. See Figure 2, Project Site. The Project Site and surrounding areas are developed, mostly impervious, and constructed over historically filled areas.

The roadways serving the Project Site include Fid Kennedy Avenue to the north; Capstan Way to the east; Anchor Way to the west and Au Bon Pain Way runs between Parcels O and P. See Figure 2, Project Site and Figure 3, Existing Site Plan. The Project Site is fairly level and separated from the water by previously developed parcels and roads. Au Bon Pain Way and Anchor Way are presently private ways owned by the EDIC that provide access to Parcel O, Parcel P, and the adjacent Dry Dock #3 operated by Boston Ship Repair.

The closest point on the Project Site to the tidal waters of Boston Harbor is over 310 feet away. The current version of the Federal Emergency Management Agency (“FEMA”) Federal Insurance Rate Map (“FIRM”) that includes the Project Site is Community Panel 25025C0082J, effective March 16, 2016. The FIRM shows that the Project Site is located within Flood Zone AE, Elevation 10 (NAVD88). See Figure 5, FEMA Flood Insurance Rate Map (FIRM No. 25025C0082J). The conversion factor from NAVD88 to Boston City Base (BCB) is plus 6.46 feet. Therefore, the Flood Zone elevation is El 16.46 using BCB datum. There are some spots or “islands” where the Project Site topography exceeds the Base Flood Elevation (“BFE”). However, the AE Flood Zone covers almost the entire 115,023 sf of the Project Site.

Parcel O includes a vacant, approximately 46,000 gross square foot building, a smaller building with a combined footprint of 28,600 sf, and approximately 89 surface parking spaces. Parcel O was previously leased to Au Bon Pain. The Au Bon Pain Company previously used the building for the manufacturing, freezing, storing, and shipment of bakery products for Au Bon Pain and Panera Bread, the latter of which acquired Au Bon Pain in 2017. Au Bon Pain and Panera Bread have relocated their operation out of the RLFMP.

Parcel P has an area of 24,280 sf and includes an approximately 12,324-sf single story building with seven surface parking spaces. Parcel P is currently leased to McDonald Steel. Parcel P is used as machine shop to produce specialty metal components. McDonald Steel plans to relocate outside of the RLFMP.

The existing footprint for the buildings combined is 40,924 sf. The 73,400 sf +/- outside areas are mostly paved, and just under 5% of the Project site is landscaped.

1.3 PROJECT DESCRIPTION

The Project proposes to demolish the existing buildings on Parcel O and construct a new 8-story, 219,000-sf life science/R&D building in its place. The new building will have a footprint of 30,549 sf. The approximately 12,324-sf building on Parcel P will remain in place and be repurposed as an amenity space for the tenants of the new life science/R&D building. The proposed footprint for the Project’s two buildings combined is 42,873 sf for the purpose of stormwater management calculation as the area represents the drip edge of the two buildings combined.

The ground floor for both the proposed building on Parcel O and the repurposed building on Parcel P will include covered areas for outdoor employee gathering. Thus, the actual footprints will be smaller with Parcel O designed at a ground floor area footprint of 27,562 sf. On Parcel P, the Project will remove a 1,500-sf area at ground level from the existing building to create a covered porch area as part of the employee amenities facility. The

actual combined footprint at ground level will be 38,386 sf, which is 2,538 sf less than existing conditions.

The Project will regrade the existing Project Site and raise the elevation under the new building footprint to protect the building against potential future sea level rise. The Project Site is essentially flat with an average grade of approximately 16.5 feet (BCB). The Project will raise the first floor and front porch of the proposed Parcel O building by approximately four feet to El. 20.5 BCB, which is equivalent to the City's 2070 Sea Level Rise Design Flood Elevation (SLR DFE = El.19.5 BCB). Critical equipment will be raised by an additional foot to 21.5 BCB. See Figure 6, Stacking Plan. The rest of the Project Site will remain at the existing elevations - less than approximately El. 18 BCB.

The Building on Parcel P is to remain in place, except for the northward bump out where a 1,500-sf area at ground level will have exterior walls removed from the existing building to create a covered porch area as part of the employee amenities facility. Grading around the building's perimeter will be close to existing elevations with minor regrading to pitch stormwater to the stormwater system. On the north side, between the building and Fid Kennedy Avenue will be regraded to slight depression with a 643-square foot bottom area for stormwater bioretention purposes. The remaining grades will be close to existing elevations and contoured to direct sheet flow to the bioretention area. Overflow from the bioretention area will drain via connection to the existing stormwater system in the street. The Bioretention Basin 2 is proposed to treat stormwater runoff generated by the pedestrian zone to the north of the Parcel P existing building. The bioretention basin includes a minimum 16-inch planting media, with additional sand and pea stone filter to provide TSS and nutrient pollutant removal and will provide stormwater infiltration

The proposed Project will retain the existing 96 surface parking spaces. The development will include upgrades to the site utility system, including new subsurface utility conduits in the street, stormwater management system as well as increasing the landscaped area on the Project Site. The storm water management system is further described in Section 1.6.3 below, and more detail is provided in Attachment C, Stormwater Report and on plan sheet C-400, Site Civil Utilities in Attachment F, Project Plans.

The proposed Project site regrading directs surface stormwater flows to the designed landscape areas across the sidewalks and to two bioretention basins within the Project Site. See plan sheets C-400, Site Civil Utilities and C-500 Civil Grading Plan in Attachment F, Project Plans. These areas are designed to include vegetation resistant to drought and salt spray, and for aesthetics and heat island reduction. See Figure 7, Landscape Planting Plan and Figure 8, Landscape Planting List.

1.4 CONSTRUCTION MEANS AND METHODS

The contractor, once selected, will determine the means and methods of construction. Their approach to means and methods and bids is often influenced by permits and the Order of Conditions. The important construction phase information for the Commission is included in the Stormwater Management Plan in terms of site containment with erosion controls for protection of off-site resource areas. The contractor will follow SWPPP procedures, and any additional requirements detailed in the Order of Conditions.

Potential construction equipment on site will include:

- Pile drivers
- Excavators
- Backhoes
- Graders
- Concrete Pumps
- Mobile cranes and stationery 180-foot Lift Crane
- Lulls
- Bobcats

Construction set up is likely to include:

- Erosion control barriers will be installed/maintained on the entire site perimeter prior to commencement of construction activities.
- Entrances to the site will be stabilized with 2 1/2" + crushed stone. Each entrance will be equipped with means for wheel washing and a laborer to wash wheels as required.
- Inlet protection will be provided at all existing drainage grates within the site as well as outside of the immediate site perimeter.
- Use of both street sweepers and hand sweeping will be implemented daily around the site perimeter.
- A combination of both a water truck and hoses will be used for dust control during all phases of the project.
- The existing asphalt parking area will be maintained to the greatest extent possible to mitigate exposure time on subgrade below.
- After the demolition phase, construction of the new foundations and slab on grade will be completed in an expeditious manner to reduce exposure time for subgrade materials below.
- Sediment control measures (filtration system/frac tank) will be implemented for all required site dewatering activities.
- A spill containment kit will be stored at a central location on site during all heavy equipment activities.

Building demolition may be accomplished through various methods, i.e., wrecking ball, heavy equipment, and handheld cutters and percussion instruments, depending upon what portion of the existing are being demolished. Demolition will remove and dispose:

- Asphalt pavement
- Bollard

- Concrete
- Propane Tank
- Trench Drain
- Concrete Ramp
- Catch Basin
- Gas Service and Meter
- Mulch
- Utility Pole
- Signage
- Dumpster and pad
- Sump pump
- Transformer and pad
- Sewer Manhole
- Concrete pads
- Brick
- Drainage Structure
- Jersey Barriers

Construction Materials will include fungibles such as fill, concrete, bituminous concrete, and raw steel and aluminum sheeting. Manufactured materials may include, pvc pipes and conduits, steel Quonset, granite curbing, catch basins, cast iron pipes, copper wire, and glazing.

Materials will be specified to identify 20 products with EPDs and 20 with HPDs. In addition, recycled materials will be specified, with a Project goal of 20 percent recycled content with a focus on architectural, structural, and site components. The Project team is also planning on construction waste recycling including an 80 percent diversion goal and at least four diversion streams, which will be identified in a Construction Waste Management Plan. The Preliminary assumed water fixtures (1.28 gpf toilet; 0.35 gpm lavs; 1.0 gpm sink; 0.125 gpf urinals; 1.0-gallon showers) will result in 40 percent water savings for four points. Advanced water metering is also planned with domestic hot water, irrigation, and cooling tower water use planned for metering.

1.4.1 CLIMATE RESILIENCY AND ENVIRONMENTAL JUSTICE

The Project advances the goals of climate equity and environmental justice by including state of the art energy use conservation and reduction in Green House Gas (“GHG”) emissions compared to all regulatory requirements. High efficiency infrastructure, in concert with high performance building envelope systems, will significantly reduce the building’s energy usage. The building’s design will focus on minimizing the building’s carbon footprint and best practices related to stormwater management, energy consumption and energy reuse will be employed to support the sustainability goals outlined in the updated RLFMP Master Plan.

1. The Project will regrade the existing Project Site and raise the elevation under the new building footprint to protect the building against potential future sea level rise.

2. The existing Project Site is mostly paved or occupied by buildings. The Project will increase the total landscaped area. These areas are designed to include vegetation resistant to drought and salt spray with a positive aesthetic quality. Landscaping in the parking lot will result in heat island reduction and provide stormwater treatment.
3. The proposed building on Parcel O is designed to withstand the wind and wave forces associated with the statistical 100-year frequency storm event and will exceed the requirements for ground floor elevations located in floodplains in accordance with the State Building Code 780 CMR.
4. The raised first floor of the proposed building on Parcel O, combined with protection of the remaining building on Parcel P with deployable barriers during severe storms, will not alter the advancing or receding floodwater pathways when considering sea level rise. Analysis shows that the flow pathways under the built condition will mimic those of existing conditions. See Figure 10, Existing Conditions Flow Advancing, Figure 11, Existing Conditions Flow Receding, Figure 12, Proposed Conditions Flow Advancing, and Figure 13, Proposed Conditions Flow Receding.
5. The Applicant has also committed to participating in the City's newly created Climate Resiliency Infrastructure Fund, which will provide private-sector funding to mitigate the impacts of sea level rise for the RLFMP. The fund provides a mechanism for the City to finance much-needed neighborhood-wide resiliency infrastructure, such as construction of a seawalls to surround the RLMFP and prevent flood water intrusion. The upfront cost of the infrastructure improvements will be amortized over a 30-year period and back-charged to the beneficiaries of the infrastructure improvements. The Climate Resiliency Fund will allow the City to create cost effective neighborhood scale improvements to ensure the long-term viability of the Raymond L. Flynn Marine Park.

As part of a comprehensive climate resilient agenda, the Project will regrade the existing Project Site and raise the elevation under the new building footprint to protect the building against potential future sea level rise. The Project Site is essentially flat with an average grade of approximately 16.5 feet (BCB). The Project will raise the first floor and front porch of the proposed Parcel O building by approximately four feet to El. 20.5 BCB, which is above the City's 2070 Sea Level Rise Design Flood Elevation (SLR DFE = El.19.5 BCB) The design of the proposed building on Parcel O will withstand the wind and wave forces associated with the statistical 100-year frequency storm event and exceed the requirements for ground floor elevations located in floodplains in accordance with the State Building Code 780 CMR. Critical equipment will be raised by an additional foot to 21.5 BCB. See Figure 6, Stacking Plan. The rest of the Project Site will remain at the

existing elevations - less than approximately El. 18 BCB. The Parcel P building will have existing critical utilities relocated to above flood elevation levels.

The proposed Project will incorporate green infrastructure to help absorb and mitigate stormwater flowage and reduce heat island effects. The landscape design adds plantings around and two planting islands within the existing parking lot, which breaks up the heat island effect. Additionally, the basin for Bioretention I further breaks up the existing parking lot's heat island and collects stormwater for treatment and infiltration. The site regrading improves the direction of surface stormwater flows to the designed landscape areas on both parcels across the sidewalks and to the basin for Bioretention II.

Compared to similarly sized buildings constructed in Boston and Cambridge since 2012, Parcel O is anticipated to demonstrate an approximately 36 percent reduction in annual site energy consumption. As currently planned, the Project will be among the higher performing laboratory buildings in the Greater Boston Area. As the Project evaluates additional energy conservation and electrification measures, it has the potential to become a new benchmark for high performance Core & Shell lab buildings in the Greater Boston Area.

An alternative analysis would compare the Proposed Project with:

- Existing Conditions (i.e., No build);
- a building meeting the energy efficient provisions of the State Building Code;
- a building meeting the "Stretch Code" which includes more aggressive energy efficient provisions than the State Building Code; and
- the Proposed Project:

Based on current assumptions and the preliminary design documents for Parcel O at 1 Au Bon Pain Way, the Project is targeting 22 percent site energy savings relative to a MA "Stretch Code" baseline. Compared to similarly sized buildings constructed in Boston and Cambridge since 2012, Parcel O is anticipated to demonstrate an approximately 36 percent reduction in annual site energy consumption. As currently planned, the Project will be among the higher performing laboratory buildings in the Greater Boston Area. As the Project evaluates additional energy conservation and electrification measures, it has the potential to become a new benchmark for high performance Core & Shell lab buildings in the greater Boston area.

The Project Team is working with City and State agencies with relevant expertise and continues to assess the Project's potential to reduce or eliminate onsite fossil fuel usage. Additional measures under consideration include high performance triple-pane glazing, wrap-around energy recovery coils, heat recovery chillers, and air-to-water heat pumps. These systems seek to maximize the extent to which existing energy flows within the building can satisfy heating demand and produce a significant portion of the remaining heating load with heat pumps. The energy analysis report demonstrates an opportunity to substantially reduce on-site fossil fuel consumption

compared to similar existing buildings, while taking advantage of the decarbonizing of the electrical grid. These measures will continue to be evaluated on a basis of cost, life cycle payback, maintenance, practicality, and availability of critical technologies.

Solar Panels were considered and encouraged by state and municipal officials, but the developer is opting for the equipment and approach above, which will meet equivalent energy consumption goals, and the consideration of flooding and sea level rise had the location of mechanical equipment designed for on the roof top. Solar panels can cause glare and are a safety concern being within the flight path from Logan Airport.

“Maybe” Materials still being evaluated include: Low Mercury Lighting, Integrated Product Analysis, Designing with Nature, Design for Active Occupants, Exemplary Performance EPDs.

1.5 WETLAND RESOURCES

The Project Site does not contain wetlands and is more than 100 feet from any wetland resource area to have a buffer zone. However, it is within the FEMA 100-year floodplain. No portion of the proposed Project is 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). See Figure 8, NHESP Priority Habitats of Rare Species Map.

1.5.1 LAND SUBJECT TO COASTAL STORM FLOWAGE

Land Subject to Coastal Storm Flowage (LSCSF) is “land subject to any 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” (310 CMR 10.04).

The City of Boston Code, Ordinances, Chapter VII-I. IV- Protecting Local Wetlands and Promoting Climate Change Adaptation, includes LSCSF as a resource area. The Boston Conservation Commission currently uses the 310 CMR 10.04 definition of LSCSF per Section V. Definitions in the Boston Wetland Regulations.

1.6 COMPLIANCE WITH WPA PERFORMANCE STANDARDS

Neither the Wetland Regulations at 310 CMR 10.00 nor the Boston Wetland Regulations include performance standards for LSCSF. However, resiliency measures and stormwater management are reviewed to contribute to the interests in storm damage prevention and prevention of pollution functions. The entire Site is within the LSCSF resource area.

1.6.1 PREVENTION OF STORM DAMAGE

The Project designed the proposed building on Parcel O to withstand the wind and wave forces associated with the statistical 100-year frequency storm event and will exceed the requirements for ground floor elevations located in floodplains in accordance with the State Building Code 780 CMR. The building's entire first floor will be located at approximately El. 20.5 BCB, which is above the City's 2070 Sea Level Rise Design Flood Elevation (SLR DFE). The Project will not pose an unreasonable threat of being destroyed in a storm, causing damage to adjacent buildings or structures, or becoming a threat to public safety. The Project's 38,386 sf, combined building footprint is a modest decrease compared to existing conditions combined building footprint and is in approximately the same location.

Furthermore, the raised first floor of the proposed building on Parcel O, combined with protection of the remaining building on Parcel P with deployable barriers during severe storms, will not alter the advancing or receding floodwater pathways when considering sea level rise. Analysis shows that the flow pathways under the built condition will mimic those of existing conditions. See Figure 10, Existing Conditions Flow Advancing, Figure 11, Existing Conditions Flow Receding, Figure 12, Proposed Conditions Flow Advancing, and Figure 13, Proposed Conditions Flow Receding.

The Applicant has also committed to participating in the City's newly created Climate Resiliency Infrastructure Fund, which will provide private-sector funding to mitigate the impacts of sea level rise for the RLFMP.

1.6.2 PREVENTION OF POLLUTION

The Project will result in a minimal change in impervious area. The Project Site is over 95% impervious under existing conditions. However, the Project will decrease the overall impervious area by approximately 0.06 acres or 2.27 %. The Project will incorporate open space and landscaping, and at a minimum, maintain the existing peak rates and volumes of runoff in accordance with MassDEP Stormwater Management Standards. The first 1.25 inches of stormwater over Project Site impervious areas will be captured and retained onsite. Stormwater from the building roof and Project Site areas will be directed to a stormwater infiltration system beneath the parking lot east of the proposed new building. This system will be sized to retain the first 1.25 inches of stormwater onsite and infiltrate it into the ground. The system will overflow by gravity to existing storm drainage infrastructure in Fid Kennedy Avenue.

The proposed Stormwater Management System will be designed to remove greater than 80% of the average annual post-construction load of Total Suspended Solids (TSS). Proposed deep sump and hooded catch basins will provide pretreatment in the impervious parking lot and driveway areas of the Project site. Stormwater

will be directed to a 4-part Subsurface Infiltration System across the Site. This Subsurface Infiltration System is designed to completely infiltrate the 1.25-inch storm per BWSC requirements and will significantly reduce the peak rate and runoff volumes in the 2, 10, 25, and 100-year design storms. Two proposed on-site bioretention basins will further infiltrate stormwater runoff with planting media and sand and pea stone filter. Lastly, two proprietary water quality structures and two proprietary water quality inlets are proposed for water quality pretreatment in areas of the Site where space is limited, or additional pretreatment is required prior to infiltration.

All improvements and connections to BWSC infrastructure will be reviewed as part of the BWSC Site Plan review process. This process includes a comprehensive design review of the proposed service connections, assessment of Project demands and system capacity, and establishment of service accounts.

Construction phase best management practices will be implemented through a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the MassDEP Stormwater Management Standards and the 2017 Construction General Permit. Pollution management practices include containment of unconsolidated materials and protection of catch basins with silt sacks or perimeter filtration such as silt socks or haybales to mitigate potential pollution to receiving waters in Boston Harbor. All drainage pathways and ground surfaces will be protected from erosion by containing the limit of work using straw bales, siltsocks, staked or weighted waddles, crushed stone, or equivalent check dams. Temporary and permanent diversion ditches, channels, embankments, and any denuded surface exposed for more than 14 days will be stabilized with appropriate erosion control measures. Dust will be controlled through watering or other approved methods. An erosion control barrier will be installed along the edge of the proposed development prior to commencement of construction activities. Periodic inspection of sediment control infrastructure will be conducted to ensure optimal performance during the demolition and construction phase.

The Project will be designed to comply with MassDEP's stormwater management standards, as outlined below.

1.6.3 . MASS DEP STORMWATER MANAGEMENT STANDARDS

The Project's closed drainage system consists of deep sump and hooded catch basins, drainage manholes, and proprietary water quality treatment units connected with corrugated polyethylene pipe. System overflow will connect to the existing storm drain on the north side of Fid Kennedy Avenue that flows to an outfall into the Boston Harbor. The Project will meet or exceed the MassDEP

stormwater Management Standards as described below. See Attachment C, Stormwater Report, for more information.

Standard #1: No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

The Project will comply with this Standard. No new untreated stormwater will be directly discharged to, nor will erosion be caused to, wetlands or waters of the Commonwealth because of stormwater discharges related to the Project.

Standard #2: Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.

The Project will comply with this Standard. The existing discharge rate will be met or will decrease as a result of the improvements associated with the Project.

Standard #3: Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post development site should approximate the annual recharge from the pre-development or existing site conditions, based on soil types.

The Project will comply with this Standard to the maximum extent practicable. The stormwater system will allow infiltration of the first 1.25" of stormwater into an underground system.

Standard #4: For new development, stormwater management systems must be designed to remove 80% of the average annual load (post-development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when: Suitable nonstructural practices for source control and pollution prevention are implemented; Stormwater management best management practices (BMPs) are sized to capture the prescribed runoff volume; and Stormwater management BMPs are maintained as designed.

The Project will comply with this Standard. Any paved areas that would contribute unwanted sediments or pollutants to the existing storm drain system will be served by deep-sump, hooded catch basins and conveyed through water quality units before discharging into the storm drainage system.

Standard #5: For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of

stormwater runoff from such land uses to the maximum extent practicable. If, through source control and/or pollution prevention, all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L.c. 21, §§ 26-53 and the regulations promulgated there under at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

The Project will comply with this Standard. The R & D use proposed for the Project Site generates sufficient vehicle trips to manage stormwater as a Land Use with Higher Potential Pollutant Loads (LUHPPL). The stormwater management system will be designed to meet the requirements of Standard #5. Water quality structures and oil/water separators will be provided along the treatment trains as required to meet this Standard.

Standard #6: Stormwater discharge to critical areas must utilize certain stormwater management BMPs approved for critical areas. Critical areas are Outstanding Resource Waters (ORWs), shellfish beds, swimming beaches, cold-water fisheries, and recharge areas for public water supplies.

The Project will comply with this Standard. The Project will not discharge stormwater to a critical area.

Standard #7: A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural stormwater best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

The Project is a redevelopment of a previously altered site. The Project design will comply with this Standard.

Standard #8: Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities.

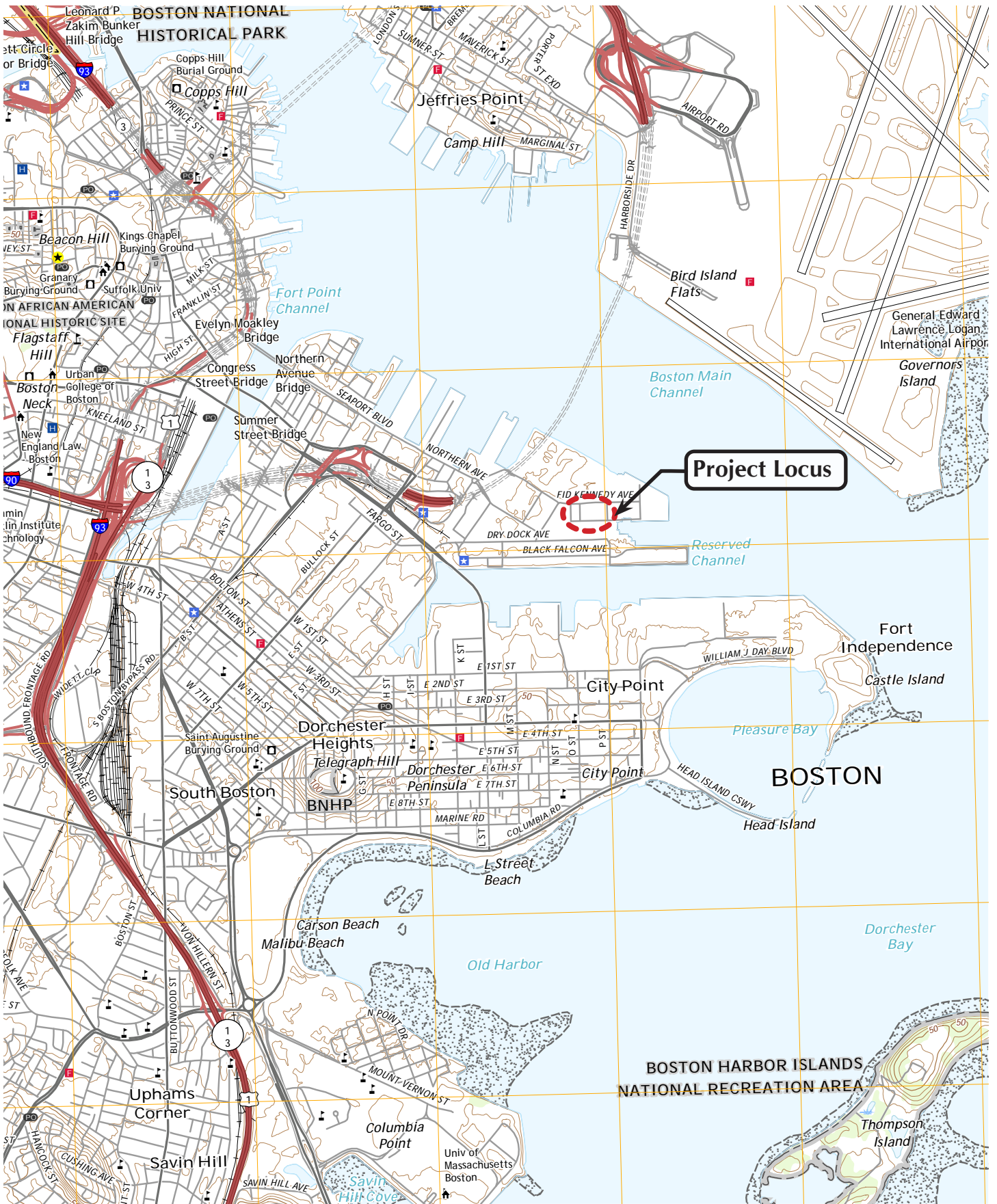
The Project will comply with this Standard. Sedimentation and erosion controls will be incorporated as part of the design of the Project and employed during construction.

Standard 9: A Long-Term Operation and Maintenance (O&M) Plan shall be developed and implemented to ensure that stormwater management systems function as designed.

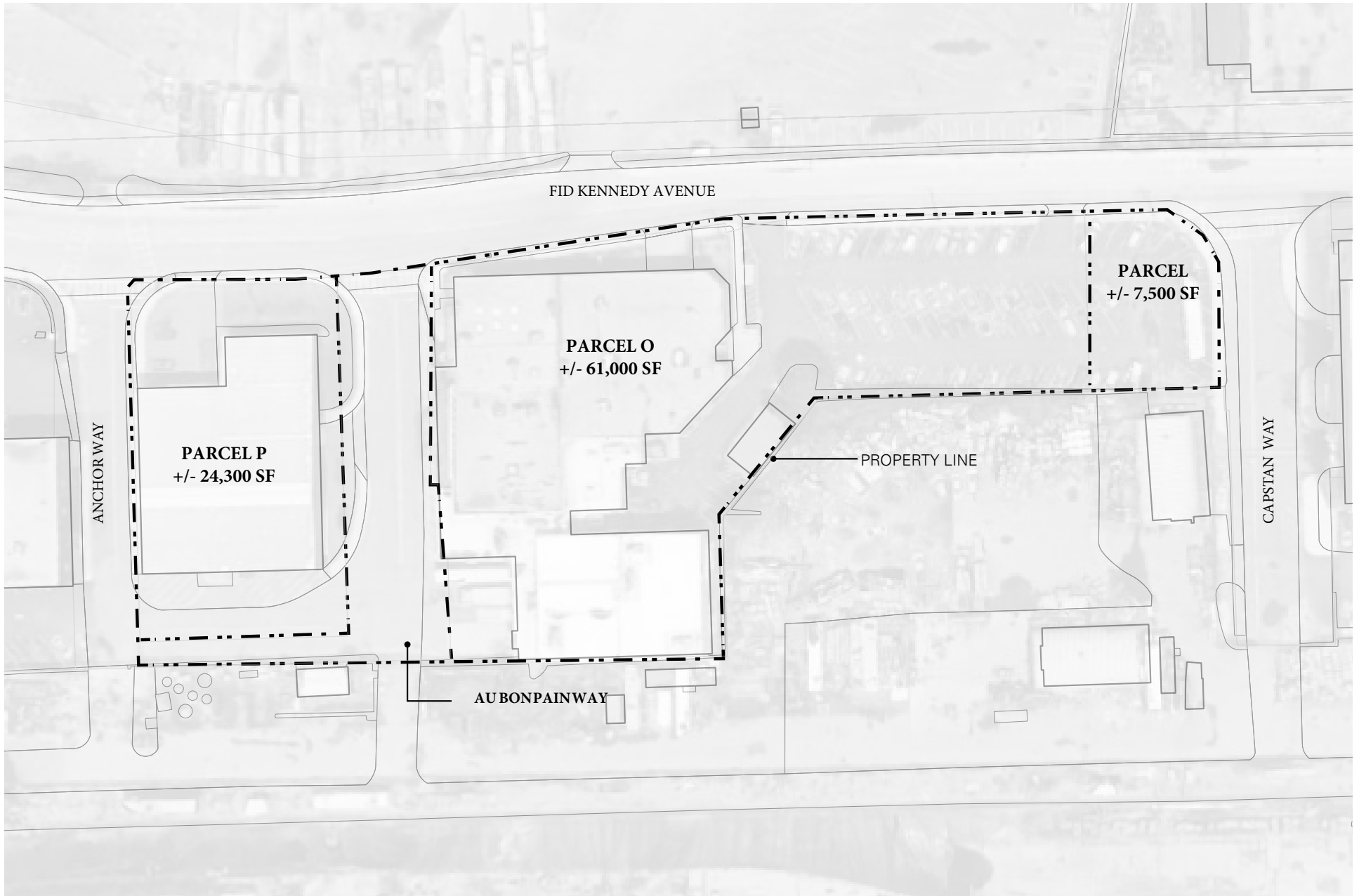
The Project will comply with this Standard. An O&M Plan including long-term BMP operation requirements will be prepared for the Project and will assure proper maintenance and functioning of the stormwater management system.

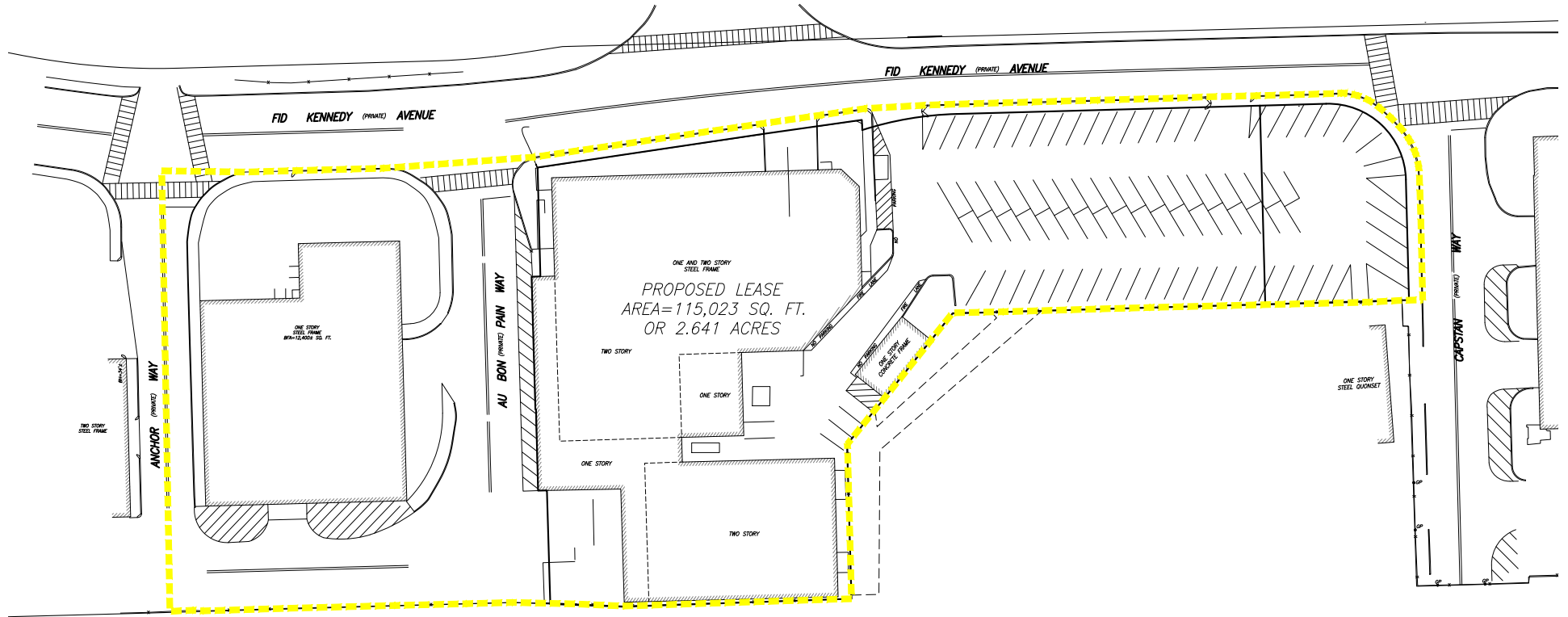
Standard 10: All illicit discharges to the stormwater management system are prohibited.

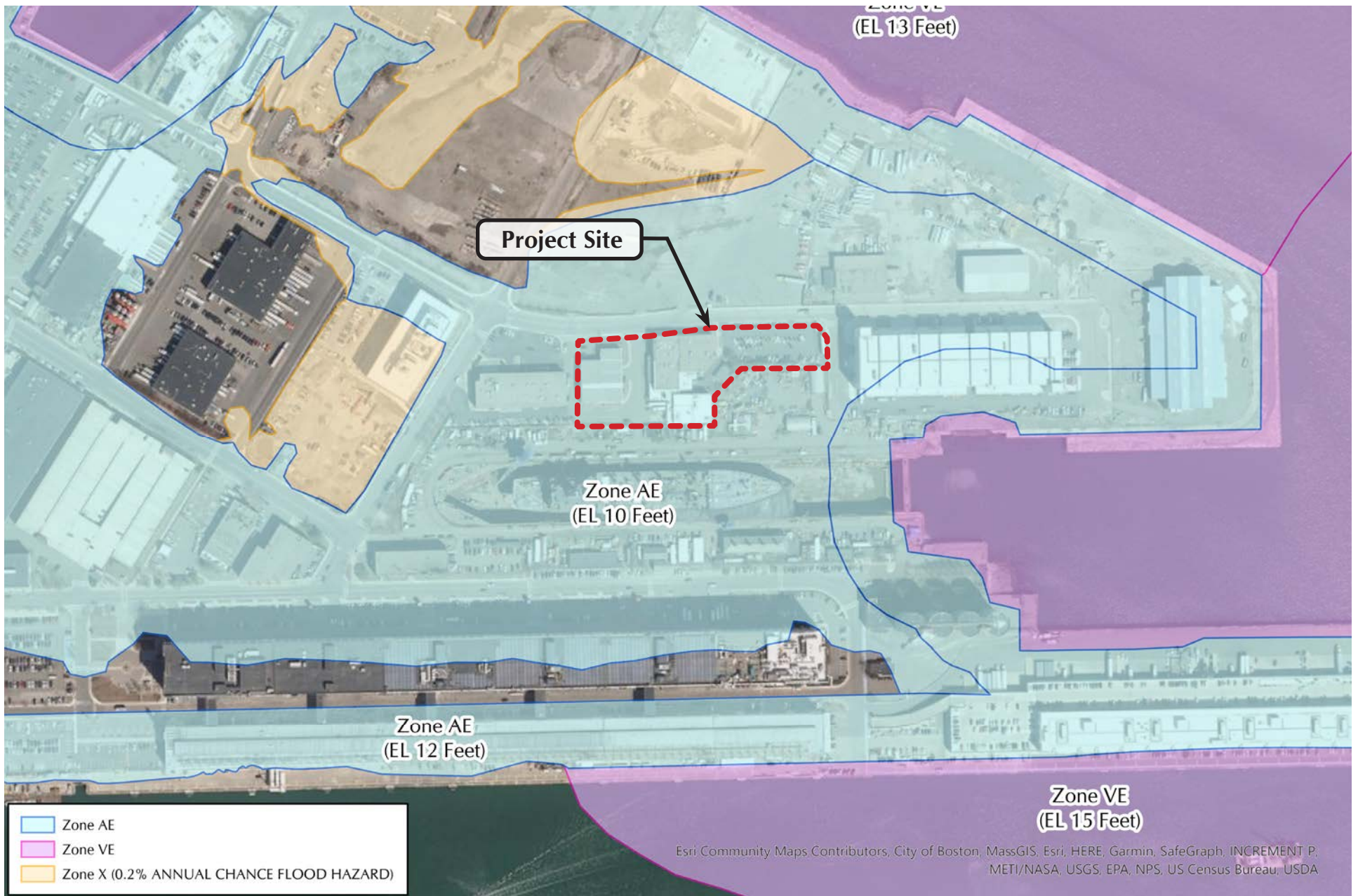
The Project will comply with this Standard. There will be no illicit connections.

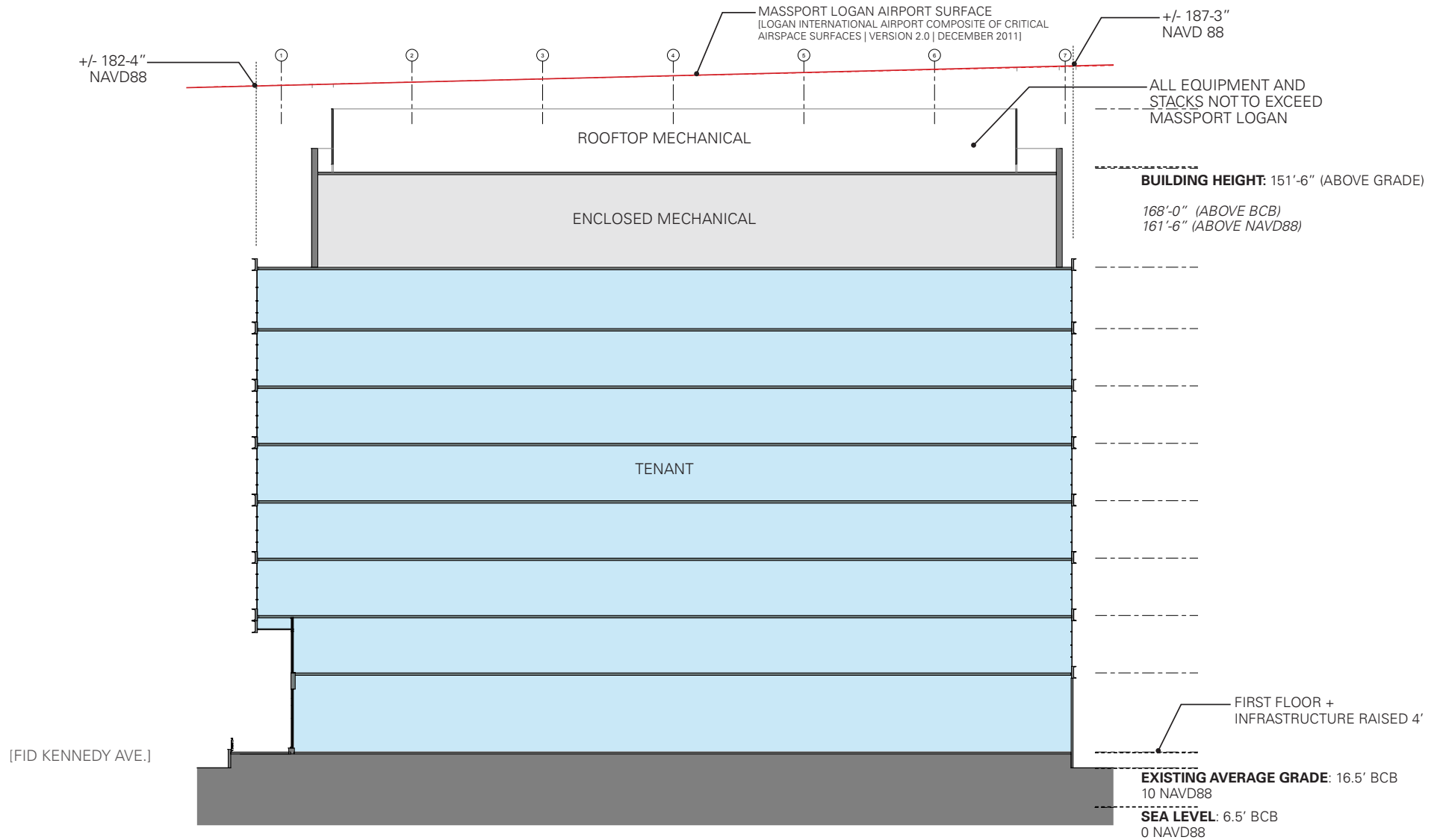


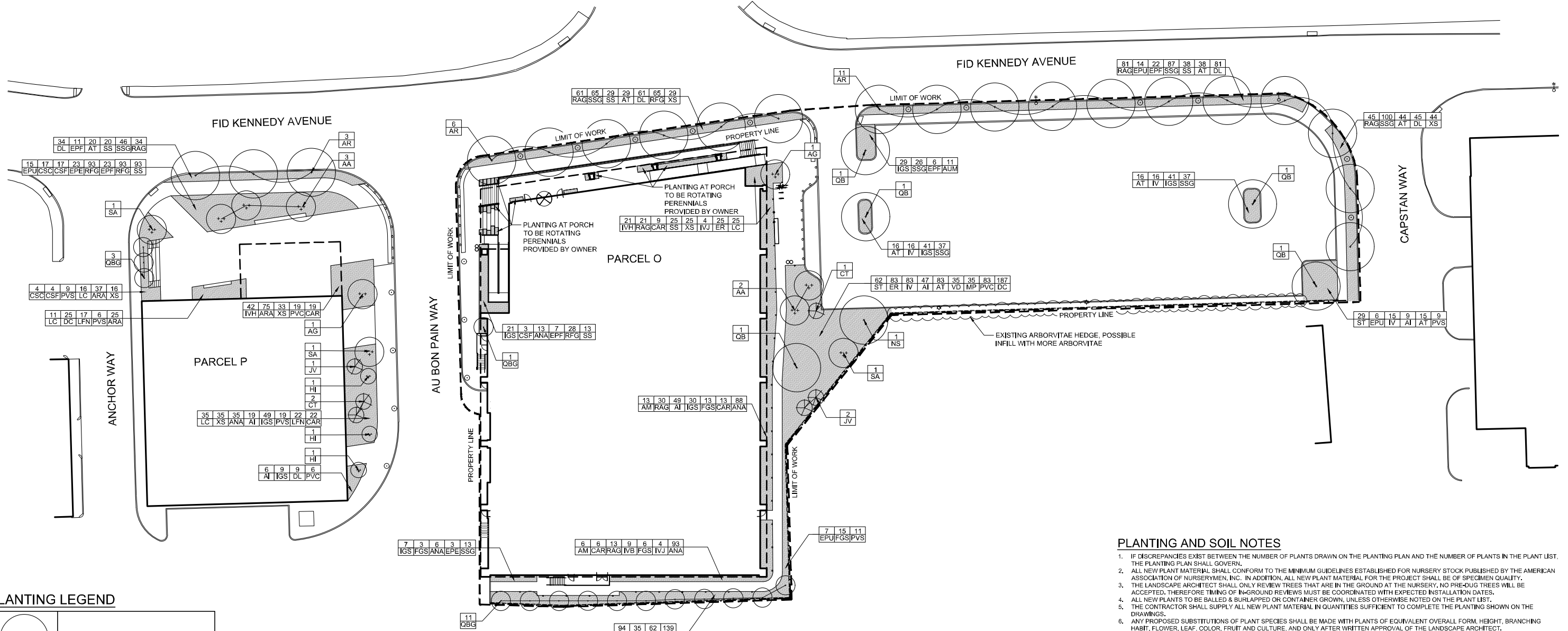












PLANTING LEGEND

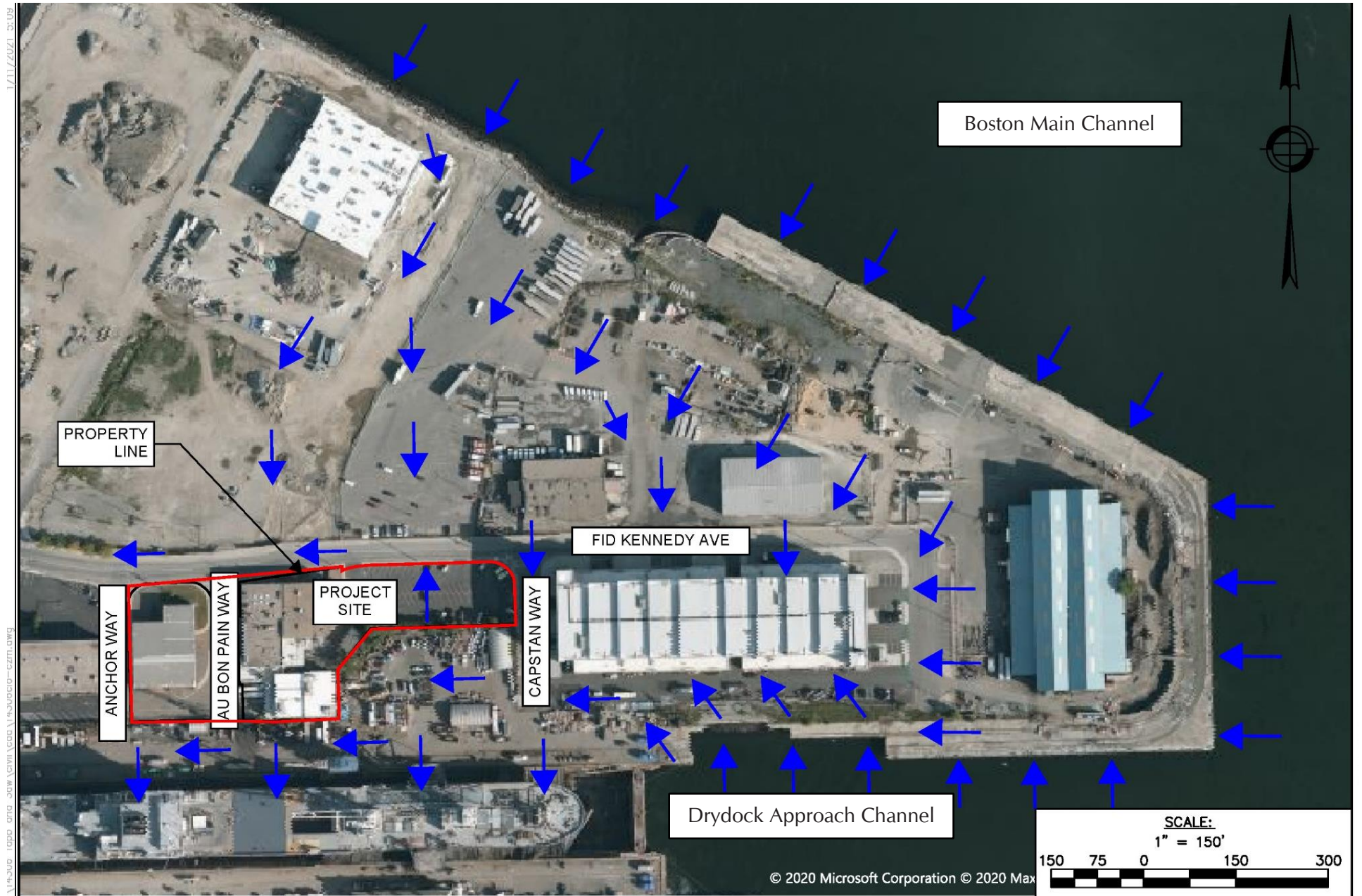
	DECIDUOUS TREE PLANTING
	ORNAMENTAL TREE PLANTING
	COLUMNAR TREE PLANTING
	EVERGREEN TREE PLANTING
	PLANTING AREA (EVERGREEN AND DECIDUOUS) SHRUBS, 60% OF AREA AND GROUND COVER AND PERENNIALS, 40% OF AREA

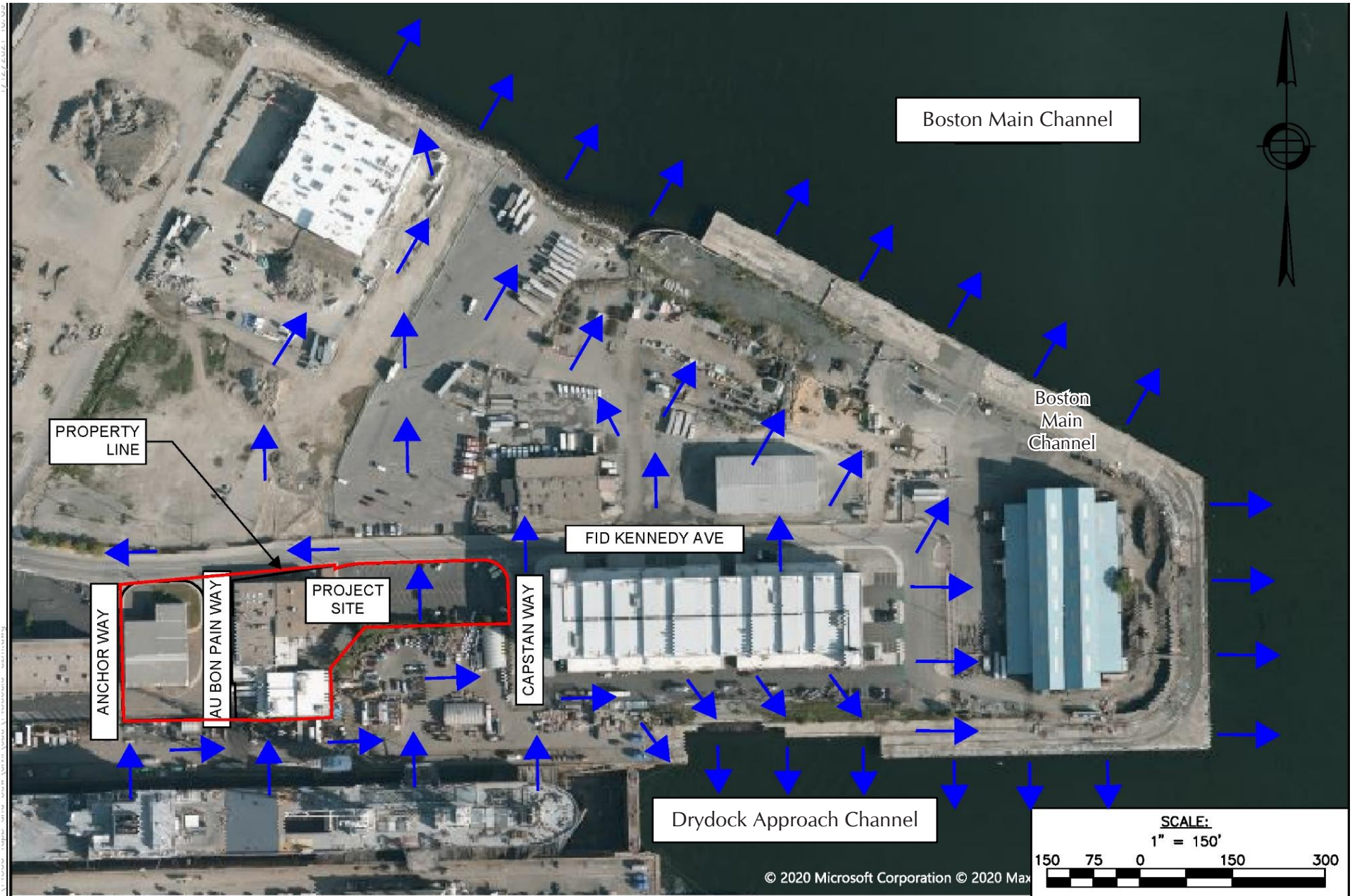
PLANTING AND SOIL NOTES

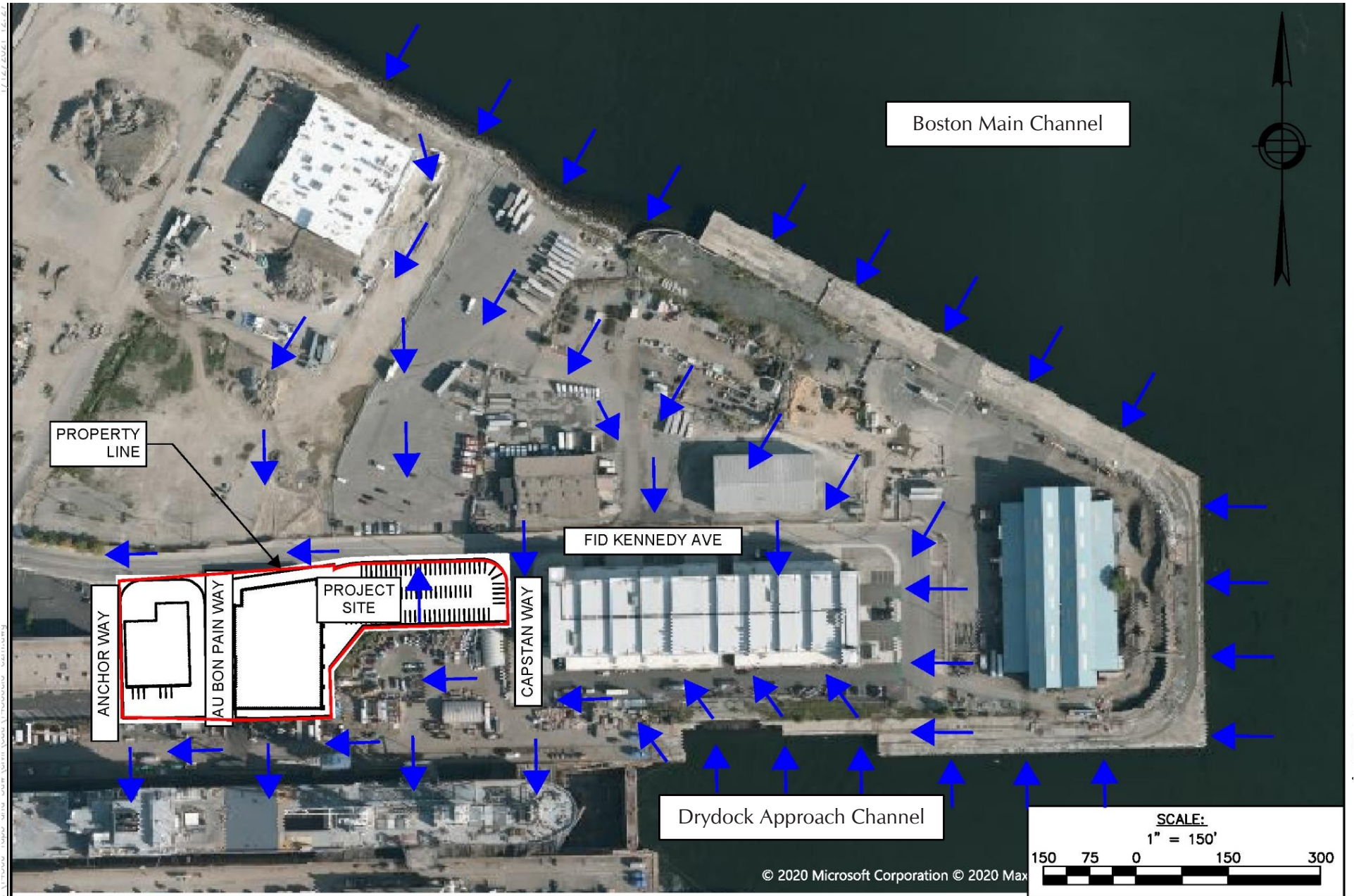
- IF DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE PLANT LIST, THE PLANTING PLAN SHALL GOVERN.
- ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
- THE LANDSCAPE ARCHITECT SHALL ONLY REVIEW TREES THAT ARE IN THE GROUND AT THE NURSERY. NO PRE-DUG TREES WILL BE ACCEPTED. THEREFORE TIMING OF IN-GROUND REVIEWS MUST BE COORDINATED WITH EXPECTED INSTALLATION DATES.
- ALL NEW PLANTS TO BE BALLED & BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE NOTED ON THE PLANT LIST.
- THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
- ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND ONLY AFTER WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO THE SITE.
- CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
- STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING.
- NEW SHRUBS AND GROUND COVER SHALL BEAR THE SAME RELATIONSHIP TO GRADE AS IT BORE TO PREVIOUS GRADE. TREES SHALL BE SET 3" HIGHER THAN PREVIOUS GRADE. NO TREES SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING.
- ALL PLANT BEDS TO RECEIVE UN-DYED, AGED AND SHREDDED BARK MULCH AS PER SPECIFICATIONS.
- ALL EXISTING TREES TO REMAIN SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. PROTECTION TECHNIQUES SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT.
- PRUNE TREES IN ACCORDANCE WITH THE SPECIFICATIONS.
- ALL PLANT MATERIAL SHALL BE MAINTAINED BY CONTRACTOR UNTIL FINAL ACCEPTANCE AND GUARANTEED FOR 1 CALENDAR YEAR.
- CONFIRM ALL QUANTITIES AGAINST PLANTING PLANS, GRADING PLANS, AND SPECIFICATIONS, INCLUDING SITE DISTURBANCE OUTSIDE OF THE LIMIT OF GRADING NECESSITATED TO FACILITATE CONSTRUCTION.
- WHERE SAND AND GRAVEL ARE SPECIFIED FOR A DRAINAGE LAYER, EXTEND DRAINAGE LAYER TO ASSOCIATED DRAIN LINES, DRAINAGE AREAS, OR DAYLIGHT.
- WHERE ONE SOIL TYPE MEETS ANOTHER SOIL TYPE, FORM A 1:1 SLOPED BOUNDARY TRANSITION.
- WHERE A SOIL PROFILE ENROACHES WITHIN THE DRIP LINE OF EXISTING TREES, CONSULT WITH LANDSCAPE ARCHITECT PRIOR TO COMMENCING EXCAVATION.
- ALL EXCAVATION AND PLACEMENT OF SOILS WITHIN THE DRIP LINE OF EXISTING TREES TO BE PERFORMED BY HAND.
- SCARIFY SUBGRADE AS SPECIFIED BEFORE PLACEMENT OF ANY PLANTING SOILS.
- DO NOT PLACE OR HANDLE SOILS THAT ARE WET.
- PROTECT ALL EXISTING SOILS AGAINST COMPACTION, CONTAMINATION WITH CONSTRUCTION MATERIALS, AND ALL DISTURBANCE.
- CONTRACTOR IS RESPONSIBLE FOR ACTUAL SITE CONDITIONS, COORDINATION OF SOILS PLACEMENT, AND PLANTING SUBDRAINAGE.
- DO NOT PLACE ANY PLANTING SOIL PRIOR TO INSPECTION BY LANDSCAPE ARCHITECT.
- EXTENTS OF SAND BASED STRUCTURAL SOIL (SBSS) ARE APPROXIMATE, PROVIDE A MINIMUM OF 1,000 C.F. OF SBSS FOR EACH TREE.

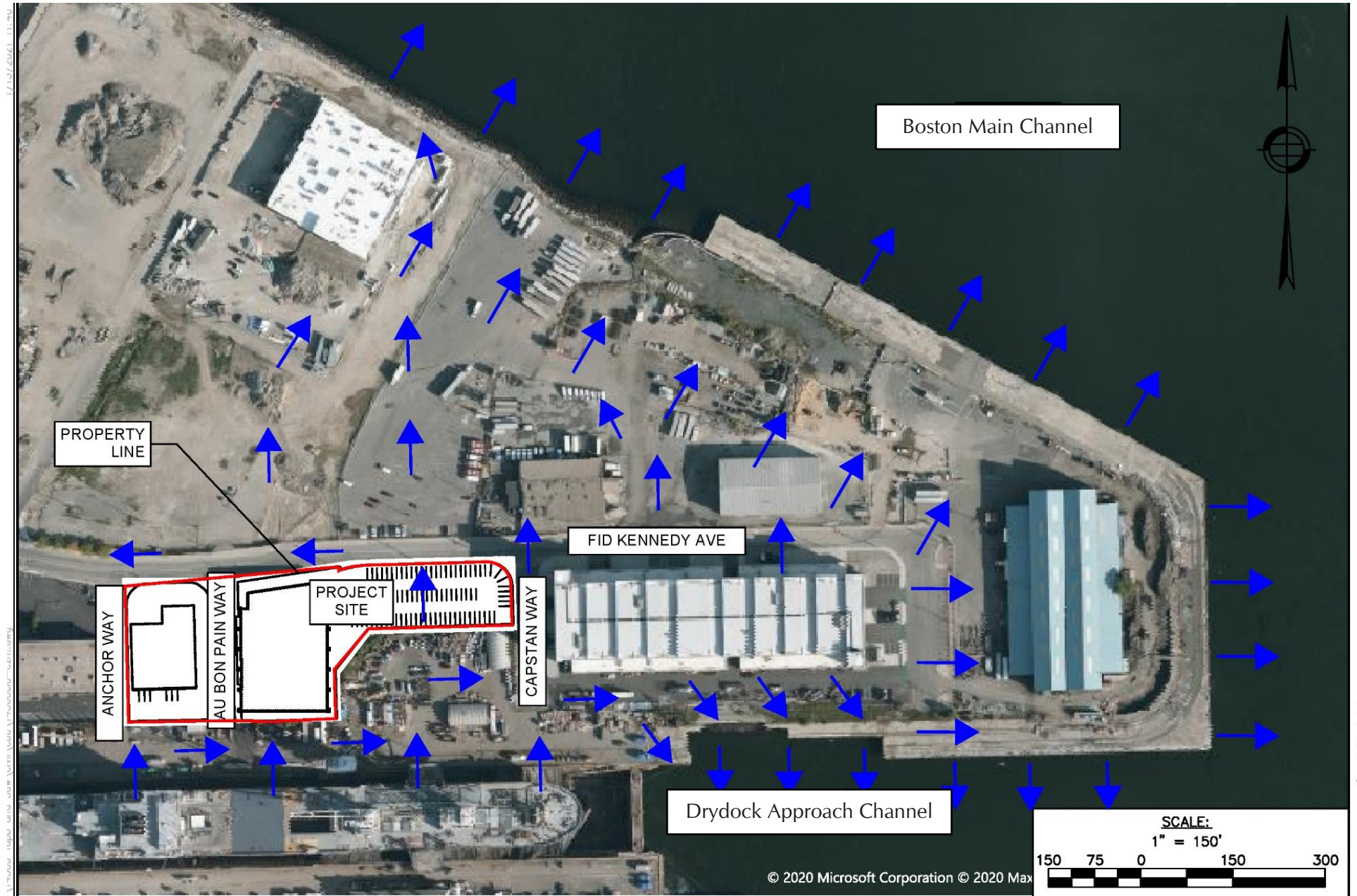
Symbol	Qty	Scientific Name	Common Name	Size	Comments
Shade Trees					
AR	20	<i>Acer rubrum</i> 'Franksred'	Red Sunset Maple	3.5"- 4" cal.	B&B, single straight central leader
NS	1	<i>Nyssa sylvatica</i>	Black Tupelo	1"- 1.5" cal.	B&B, single straight central leader
QB	5	<i>Quercus bicolor</i>	Swamp White Oak	3.5"- 4" cal.	B&B, single straight central leader
QBG	15	<i>Quercus palustris</i> 'Green Pillar'	Columnar Pin Oak	3"- 3.5" cal.	B&B, matching, single straight central leader
Ornamental Trees					
AA	5	<i>Amelanchier arborea</i>	Downy Serviceberry	12'-14' ht.	B&B, multi-stem, , 3-4 main trunks,
AG	2	<i>Amelanchier x. grandiflora</i> 'Autumn Brilliance'	Autumn Brilliance Serviceberry	12'-14' ht.	B&B, multi-stem, , 3-4 main trunks,
HI	3	<i>Hamamelis x intermedia</i> 'Arnold's Promise'	Arnold's Promise Witchhazel	10'-12' ht.	B&B, multi-stem, , 3-4 main trunks,
SA	3	<i>Sassafras albidum</i>	Sassafras	8'-10' ht.	B&B, multi-stem, , 3-4 main trunks,
Evergreen Trees					
CT	3	<i>Chamaecyparis thyoides</i>	Atlantic White Cedar	8'-10' ht.	B&B, single straight central leader
JV	3	<i>Juniperus virginianum</i>	Eastern Redcedar	8'-10' ht.	B&B, single straight central leader
Shrubs					
AM	19	<i>Aronia melanocarpa</i>	Black Chokeberry	30"-36" ht.	36" O.C. spacing
CAR	69	<i>Clethra alnifolia</i> 'Ruby Spice'	Ruby Spice Sweet Pepperbush	36"-42" ht.	36" O.C. spacing
CSC	21	<i>Cornus sericea</i> 'Cardinal'	Cardinal Red-Osier Dogwood	30"-36" ht.	B&B, 60" O.C. spacing
CSF	24	<i>Cornus sericea</i> 'Flaviramea'	Yellow Twig Dogwood	30"-36" ht.	B&B, 60" O.C. spacing
DL	230	<i>Diervilla lonicera</i>	Bush Honeysuckle	24"-30" ht.	24" O.C. spacing
FGS	37	<i>Fothergilla gardenii</i> 'Suzanne'	Dwarf Fothergilla	30"-36" ht.	36" O.C. spacing
IGS	227	<i>Ilex glabra</i> 'Shamrock'	Shamrock Inkberry	24"-30" ht.	24" O.C. spacing
IVB	9	<i>Ilex verticillata</i> 'Berry Poppins'	Dwarf Winterberry	30"-36" ht.	36" O.C. spacing
IVJ	8	<i>Ilex verticillata</i> 'Jim Dandy'	Dwarf Winterberry	30"-36" ht.	36" O.C. spacing
IVH	157	<i>Itea virginica</i> 'Henry's Garnet'	Dwarf Sweetspire	30"-36" ht.	24" O.C. spacing
LFN	39	<i>Leucothoe fontanesiana</i> 'Nana'	Compact Drooping Laurel	30"-36" ht.	36" O.C. spacing
MP	35	<i>Myrica pennsylvanica</i>	Bayberry	42"-48" ht.	B&B, 48" O.C. spacing
RAG	285	<i>Rhus aromatica</i> 'Gro-low'	Gro-low Sumac	24"-30" ht.	24" O.C. spacing
ST	91	<i>Spiraea tomentosa</i>	Steeplebush	30"-36" ht.	36" O.C. spacing
VD	36	<i>Viburnum dentatum</i>	Viburnum dentatum	42"-48" ht.	B&B, 48" O.C. spacing
Perennials, Grasses, Vines, and Groundcovers					
ARA	137	<i>Actaea racemosa</i> 'Atropurpurea'	Black Cohosh	1 GAL.	12" O.C. spacing
AI	130	<i>Asclepias incarnata</i>	Swamp Milkweed	1 GAL.	24" O.C. spacing
AT	261	<i>Asclepias tuberosa</i>	Butterfly Milkweed	1 GAL.	18" O.C. spacing
ANA	235	<i>Aster novae-angliae</i>	New England Aster	1 GAL.	18" O.C. spacing
AUM	11	<i>Arctostaphylos uva-ursi</i> 'Massachusetts'	Bearberry	1 GAL.	18" O.C. spacing
DC	212	<i>Deschampsia cespitosa</i>	Tufted Hair Grass	1 GAL.	12" O.C. spacing
EPF	69	<i>Echinacea purpurea</i> 'Finale White'	Finale White Coneflower	1 GAL.	24" O.C. spacing
EPE	26	<i>Eupatorium perfoliatum</i>	Common Boneset	2 GAL.	24" O.C. spacing
EPU	42	<i>Eutrochium pupureum</i>	Sweet Joe Pye Weed	1 GAL.	30" O.C. spacing
ER	108	<i>Eragrostis spectabilis</i>	Purple Love Grass	1 GAL.	18" O.C. spacing
IV	130	<i>Iris versicolor</i>	Blueflag Iris	1 GAL.	18" O.C. spacing
LC	149	<i>Lobelia cardinalis</i>	Cardinal Flower	1 GAL.	18" O.C. spacing
PVC	143	<i>Panicum virgatum</i> 'Cheyenne Sky'	Cheyenne Sky Switchgrass	2 GAL.	24" O.C. spacing
PVS	54	<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Switchgrass	2 GAL.	24" O.C. spacing
RFG	418	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black-eyed Susan	1 GAL.	12" O.C. spacing
SSG	411	<i>Solidago sempervirens</i> 'Seaside Goldenrod'	Goldenrod	1 GAL.	12" O.C. spacing
SS	218	<i>Schizachyrium scoparium</i>	Little Bluestem	1 GAL.	18" O.C. spacing
XS	182	<i>Xanthorhiza simplicissima</i>	Yellowroot	1 GAL.	18" O.C. spacing











Attachment B

NOTIFICATION INFORMATION

ATTACHMENT B: NOTIFICATION INFORMATION

The following table outlines abutters of the Project within 300 feet of the property lines of 1 Au Bon Pain Way and 3 Anchor Way as gathered from the City of Boston Assessing Department.

Property	Owner Name	Owner Address	Parcel ID
3 Anchor Way	Park Realty Trust	3 Anchor Way Boston, MA 02210	602674075
1 Au Bon Pain Way	Economic Development and Industrial Corporation	1 City Hall Square, 9 th floor Boston, MA 02201	602674080
25 Fid Kennedy Avenue	25 Fid Kennedy LLC	80 Rosedale Road Watertown, MA 02472	602674085
20 Fid Kennedy Avenue	Massachusetts Port Authority	1 City Hall Square, 9 th floor Boston, MA 02201	602674205
24 Drydock Avenue	Economic Development and Industrial Corporation	1 City Hall Square, 9 th floor Boston, MA 02201	602674230
7 Tide Street	7 Tide LLC	393 Fortune Boulevard Milford, MA 01757	602674250
6 Tide Street	RBK I Tenant LLC	177 Milk Street Boston, MA 02109	602674069



City of Boston
Environment



City of Boston
Mayor Martin J. Walsh

**AFFIDAVIT OF SERVICE
FOR ABUTTER NOTIFICATION**

**Under the Massachusetts Wetlands Protection Act
and Boston Wetlands Ordinance**

I, Ken Fields, hereby certify under pains and penalties of perjury that that at least one week prior to the public hearing, I gave notice to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Notice of Intent was filed under the Massachusetts Wetlands Protection Act and/or the Boston Wetlands Ordinance by MCP III Foundry, LLC for the redevelopment of Parcels O and P, including demolition, construction of a new building, and adaptive reuse of an existing building located at 1 Au Bon Pain Way and 3 Anchor Way, South Boston, MA 02127.

The Abutter Notification For, the list of abutters to whom it was given, and their addresses are attached to this Affidavit of Service.

Ken Fields

Name

08/04/2021

Date



NOTIFICATION TO ABUTTERS BOSTON CONSERVATION COMMISSION

In accordance with the Massachusetts Wetlands Protection Act, Massachusetts General Laws Chapter 131, Section 40, and the Boston Wetlands Ordinance, you are hereby notified as an abutterm to a project filed with the Boston Conservation Commission.

A. **MCP III Foundry, LLC** has filed a Notice of Intent with the Boston Conservation Commission seeking permission to alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, section 40) and Boston Wetlands Ordinance.

B. The address of the lot where the activity is proposed is **1 Au Bon Pain Way and 3 Anchor Way, South Boston, MA 02127.**

C. The project involves **the redevelopment of Parcels O and P in the Raymond L. Flynn Marine Park, including the demolition of an existing building and the construction of a new, approximately 219,000-square-foot (sf) life science/R&D building at 1 Au Bon Pain Way and the approximately 10,800-sf adaptive reuse of an existing building at 3 Anchor Way.**

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

E. Copies of the Notice of Intent may be obtained from **Ken Fields at Fort Point Associates by calling 617-357-7044 x203 or emailing kfields@fpa-inc.com** between the hours of **9 AM and 5 PM, Monday through Friday.**

F. In accordance with the Commonwealth of Massachusetts Executive Order Suspending Certain Provisions of the Open Meeting Law, the public hearing will take place **virtually** at <https://zoom.us/j/6864582044>. If you are unable to access the internet, you can call 1-929-205-6099, enter Meeting ID 686 458 2044 # and use # as your participant ID.

G. Information regarding the date and time of the public hearing may be obtained from the **Boston Conservation Commission** by emailing CC@boston.gov or calling **(617) 635-3850** between the hours of **9 AM to 5 PM, Monday through Friday.**

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

NOTE: Notice of the public hearing, including its date, time, and place, will be posted on www.boston.gov/public-notices and in Boston City Hall not less than forty-eight (48) hours in advance.

NOTE: If you would like to provide comments, you may attend the public hearing or send written comments to CC@boston.gov or Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201

NOTE: You also may contact the Boston Conservation Commission or the Department of Environmental Protection Northeast Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call: the Northeast Region: (978) 694-3200.

CERTIFICATE OF GOOD FAITH ACCURACY OF TRANSLATION


I, Río Hernández, do hereby state:

That a translator officially affiliated with the Translation Center at the University of Massachusetts Amherst and competent in both **English** and **Chinese** has made a good faith translation of the attached documents,

Notification to Abutters from the Boston Conservation Commission regarding activity proposed at 1 Au Bon Pain Way and 3 Anchor Way, South Boston :

From English to Chinese
(source language) (target language)

I hereby certify that the same is a true and complete translation to the best of my knowledge, ability and belief.


Río Hernández, Project Manager
Translation Center
University of Massachusetts Amherst



波士顿湿地保护委员会 项目邻近住户通知

根据《马萨诸塞州湿地保护法》、《马萨诸塞州普通法》第 131 章第 40 节以及《波士顿湿地条例》的规定，我们特此向您，即向波士顿湿地保护委员会提出申请的项目的邻近住户，发出以下通知。

- A. MCP III Foundry LLC已向波士顿湿地保护委员会提出申请，请求批准改建一块受《湿地保护法》（《普通法》第 131 章第 40 节）和《波士顿湿地条例》保护的地块。
- B. 拟开展改建活动的地块地址为：南波士顿奥本配恩路1号及船锚路3号（1 Au Bon Pain Way and 3 Anchor Way, South Boston, MA 02127）。
- C. 该项目涉及以下建设内容：对雷蒙德·弗林海洋公园O号和P号地块的再开发，包括拆除现有建筑，在奥本配恩路 1号新建一座约219,000平方英尺的生命科学/研发大楼，以及对船锚路3号现有12,700平方英尺的建筑进行约9,000平方英尺的改造再利用。
- D. 可通过联系波士顿保护委员会取得意向通知书的副本，电子邮件是CC@boston.gov。
- E. 您可于周一到周五的9AM至5PM联系Fort Point Associates公司，电话：617-357-7044x203，电邮：kfields@fpa-inc.com，联系人：Ken Fields，获取意向通知的副本。
- F. 根据《马萨诸塞州行政命令》（暂缓执行《公开会议法》听证会将在网上<https://zoom.us/j/6864582044>进行。如果无法上互联网(Internet)，则可致电 1-929-205-6099，输入会议编号(ID) 686 458 2044 #，然后使用#作为您参与的编号(ID.)
- G. 您可于周一至周五上午 9 点到下午 5 点联系波士顿湿地保护委员会，咨询公开听证会举行的日期和时间，邮箱地址：CC@boston.gov，电话：(617) 635-4416。

注：公开听证会的通知（包括其举行日期、时间和地点）将提前至少五天在《波士顿先驱报》上予以公布。

注：公开听证会的通知（包括其举行日期、时间和地点）将提前至少四十八（48）小时发布在以下网页之上以及波士顿市政厅内：www.boston.gov/public-notices。如果您想提出意见或建议，您可以参加该公开听证会或将书面形式的意见或建议发送至 CC@boston.gov 或邮寄至以下地址：Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201。

注：您也可以联系波士顿湿地保护委员会或环境保护部东北地区办公室，咨询有关此项申请或《湿地保护法》的更多信息。如要联系环境保护部，请致电：东北地区：（978）694-3200。

注：如果您准备参加该公开听证会并需要口译服务，则请在听证会举行前一天中午12点前通过以下电子邮箱地址告知工作人员：CC@boston.gov。

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

USPS® ARTICLE NUMBER

7314 7699 0430 0085 0976 95

Certified Mail Fee	\$ 3.60
Return Receipt (Hardcopy)	\$ 2.85
Return Receipt (Electronic)	\$ 0.00
Certified Mail Restricted Delivery	\$ 0.00
Postage	\$ 1.00
Total Postage and Fees	\$ 7.45



Sent to:

Economic Development and Industrial Corporation
 1 City Hall Square, 9th floor
 Boston, MA 02201

Referenc

Parcels O and P - NOI

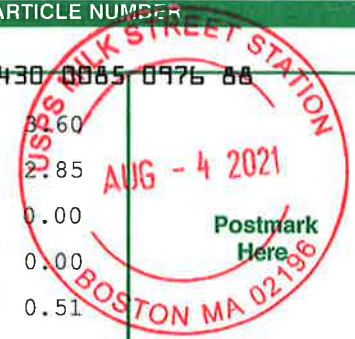
Ken Fields
 Fort Point Associates, Inc.
 31 State St.
 3rd Floor
 Boston, MA 02109

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

USPS® ARTICLE NUMBER

7314 7699 0430 0085 0976 88

Certified Mail Fee	\$ 3.60
Return Receipt (Hardcopy)	\$ 2.85
Return Receipt (Electronic)	\$ 0.00
Certified Mail Restricted Delivery	\$ 0.00
Postage	\$ 0.51
Total Postage and Fees	\$ 6.96



Sent to:

Massachusetts Port Authority
 1 City Hall Square, 9th floor
 Boston, MA 02201

Refer

Parcels O and P - NOI

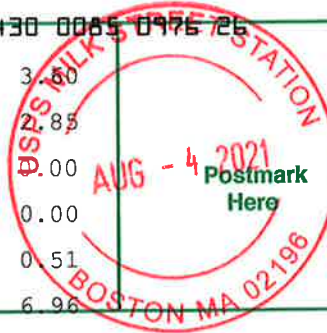
Ken Fields
 Fort Point Associates, Inc.
 31 State St.
 3rd Floor
 Boston, MA 02109

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

USPS® ARTICLE NUMBER

7314 7699 0430 0085 0976 76

Certified Mail Fee	\$ 3.60
Return Receipt (Hardcopy)	\$ 2.85
Return Receipt (Electronic)	\$ 0.00
Certified Mail Restricted Delivery	\$ 0.00
Postage	\$ 0.51
Total Postage and Fees	\$ 6.96



Sent to:

Economic Development and Industrial Corporation
 1 City Hall Square, 9th floor
 Boston, MA 02201

Referenc

Parcels O and P - NOI

Ken Fields
 Fort Point Associates, Inc.
 31 State St.
 3rd Floor
 Boston, MA 02109

**U.S. Postal Service®
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

USPS® ARTICLE NUMBER

9314 7699 0430 0085 0976 33

Certified Mail Fee	\$	3.60
Return Receipt (Hardcopy)	\$	2.85
Return Receipt (Electronic)	\$	0.00
Certified Mail Restricted Delivery	\$	0.00
Postage	\$	0.51
Total Postage and Fees	\$	6.96



Sent to:

25 Fid Kennedy LLC
80 Rosedale Road
Watertown, MA 02472

Refer

Parcels O and P - NOI

Ken Fields
Fort Point Associates, Inc.
31 State St.
3rd Floor
Boston, MA 02109

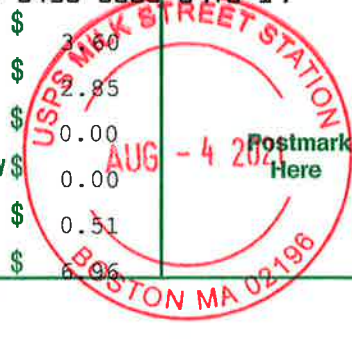
PS Form 3800, Facsimile, July 2015

**U.S. Postal Service®
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

USPS® ARTICLE NUMBER

9314 7699 0430 0085 0976 17

Certified Mail Fee	\$	3.60
Return Receipt (Hardcopy)	\$	2.85
Return Receipt (Electronic)	\$	0.00
Certified Mail Restricted Delivery	\$	0.00
Postage	\$	0.51
Total Postage and Fees	\$	6.96



Sent to:

Park Realty Trust
3 Anchor Way
Boston, MA 02210

Referen

Parcels O and P - NOI

Ken Fields
Fort Point Associates, Inc.
31 State St.
3rd Floor
Boston, MA 02109

PS Form 3800, Facsimile, July 2015

**U.S. Postal Service®
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

USPS® ARTICLE NUMBER

9314 7699 0430 0085 0977 01

Certified Mail Fee	\$	3.60
Return Receipt (Hardcopy)	\$	2.85
Return Receipt (Electronic)	\$	0.00
Certified Mail Restricted Delivery	\$	0.00
Postage	\$	1.00
Total Postage and Fees	\$	7.45



Sent to:

7 Tide LLC
393 Fortune Boulevard
Milford, MA 01757

Refer

Parcels O and P - NOI

Ken Fields
Fort Point Associates, Inc.
31 State St.
3rd Floor
Boston, MA 02109

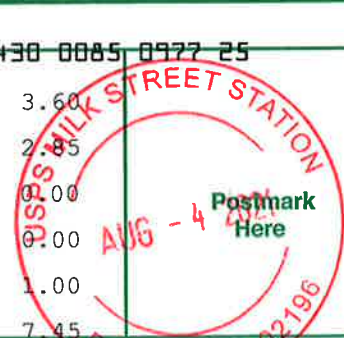
PS Form 3800, Facsimile, July 2015

**U.S. Postal Service®
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

USPS® ARTICLE NUMBER

9314 7699 0430 0085 0977 25

Certified Mail Fee	\$	3.60
Return Receipt (Hardcopy)	\$	2.85
Return Receipt (Electronic)	\$	0.00
Certified Mail Restricted Delivery	\$	0.00
Postage	\$	1.00
Total Postage and Fees	\$	7.45



Sent to:

RBK I Tenant LLC
177 Milk Street
Boston, MA 02109

Referenc

Parcels O and P - NOI

Ken Fields
Fort Point Associates, Inc.
31 State St.
3rd Floor
Boston, MA 02109

PS Form 3800, Facsimile, July 2015

Attachment C

STORMWATER REPORT



Nitsch Engineering

July 23, 2021

**STORMWATER
REPORT**

For

PARCEL O
1 Au Bon Pain Way, Boston, MA
&
PARCEL P
3 Anchor Way, Boston, MA

Prepared for:

Marcus Partners
200 Franklin Street
Boston, MA 02110

Prepared by:

NITSCH ENGINEERING, INC.
2 Center Plaza, Suite 430
Boston, MA 02143

Nitsch Project #14306

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 EXISTING CONDITIONS..... 1

2.1 Existing Drainage Infrastructure 1

2.2 NRSC Soil Designations 1

2.3 On-Site Soil Investigations 2

2.4 Total Maximum Daily Load (TMDL)..... 2

3.0 PROPOSED CONDITIONS 2

3.1 Project Description..... 2

3.2 Stormwater Management System 3

3.3 Stormwater Management During Construction..... 4

4.0 STORMWATER MANAGEMENT ANALYSIS 4

4.1 Methodology 4

4.2 HydroCAD Version 10.00..... 5

4.3 Existing Hydrologic Conditions..... 5

4.4 Proposed Hydrologic Conditions 5

4.5 Peak Flow Rates..... 5

4.6 Peak Volumes..... 6

5.0 MASSDEP STORMWATER MANAGEMENT STANDARDS 7

Standard 1: No New Untreated Discharges..... 7

Standard 2: Peak Rate Attenuation 7

Standard 3: Groundwater Recharge..... 7

Standard 4: Water Quality Treatment..... 8

Standard 5: Land Uses with Higher Potential Pollutant 8

Standard 6: Critical Areas 8

Standard 7: Redevelopments..... 8

Standard 8: Construction Period Pollution Prevention and Sedimentation Control 8

Standard 9: Operation and Maintenance Plan..... 9

Standard 10: Prohibition of Illicit Discharges 9

6.0 CLOSED DRAINAGE SYSTEM DESIGN.....10

7.0 CONCLUSION.....10

FIGURES

- Figure 1 Aerial Locus Map
- Figure 2 USGS Map
- DR-1 Existing Watershed Areas
- DR-2 Proposed Watershed Areas
- DR-3 Proposed Structures Drainage Map

APPENDICES

- Appendix A Stormwater Management Standards Documentation**
 - MassDEP Checklist for Stormwater Report
 - Standard 3: 72-HR Drawdown Calculations
 - Standard 4: TSS Removal Calculations
 - Standard 4: Proprietary Water Quality Structure Calculations
 - Standard 10: Illicit Discharge Compliance Statement
- Appendix B Existing Conditions – HydroCAD Calculations**
- Appendix C Proposed Conditions – HydroCAD Calculations**
- Appendix D Closed Drainage System Design**
- Appendix E Long-Term Pollution Prevention and Stormwater Operation and Maintenance Plan**
- Appendix F DRAFT Stormwater Pollution Prevention Plan (SWPPP)**
- Appendix G Soil Investigations**
 - NRCS Soil Maps and Descriptions
 - Report on Subsurface Data and Foundation Design Recommendations, Parcel O Lab / Office Development, 1 Au Bon Pain Way, Boston, Massachusetts, prepared by Haley and Aldrich, dated May 2021

1.0 INTRODUCTION

Nitsch Engineering has prepared this Stormwater Report to support the Notice of Intent application for the new Parcel O and Parcel P located in Boston, Massachusetts. The Project site is located at 1 Au Bon Pain Way and 3 Anchor Way (subsequently referred to as the “Site”).

The site improvements include the following:

1. Renovation of the existing building at 3 Anchor Way;
2. Demolition of the existing building at 1 Au Bon Pain Way;
3. Construction of a new building at 1 Au Bon Pain Way;
4. Renovation of the existing parking lot and overall site improvements;
5. Installation of new utilities to support the proposed building and building renovation; and
6. Construction of a new stormwater management systems.

The proposed stormwater management system has been designed to comply with the requirements of the Boston Water and Sewer Commission and the Massachusetts Department of Environmental Protection (DEP) Stormwater Management Standards.

2.0 EXISTING CONDITIONS

The Site is located in the Seaport District of Boston. The site consists of three main sections: an existing one-story building with a footprint of 12,400 +/- SF (Parcel P) at the west portion of the Site, an existing one-and-two-story building with a footprint of 28,600 +/- SF (Parcel O) at the center of the Site, and an existing parking lot at the east portion of the Site. The site’s total size is approximately 2.5 acres. The site is bordered by Fid Kennedy Avenue to the north, a drydock to the south, Anchor Way to the west, and Capstan Way to the east. Au Bon Pain Way divides Parcel O and P and run north/south through the site to provide access for the drydock.

2.1 Existing Drainage Infrastructure

The site drainage infrastructure consists entirely of a closed drainage system with three main drainage areas: Parcel P, Parcel O, and the parking lot. All three drainage areas discharge to a storm drain on the north side of Fid Kennedy Avenue that flows to an outfall into the Boston Harbor; therefore one design point is used in the drainage analysis. The existing drainage systems consist of catch basins and pipes directing the stormwater to closed drainage system in Fid Kennedy Avenue. The existing condition has no green infrastructure, stormwater recharge, or peak rate attenuation on site.

2.2 NRSC Soil Designations

The Soil Classification Summary (Table 1) outlines the Natural Resources Conservation Services (NRCS) designation of the soil series at the Site. The soils on Site are classified as udorthents, wet substratum. The Udorthents designation does not have a hydrologic soil group associated with it. The Site grades are generally flat and range from elevation 16 -18 Boston City Base.

Table 1. NRCS Soil Classification Summary

Soil Unit	Soil Series	Hydrologic Soil Group
655	Udorthents, wet substratum	---

2.3 On-Site Soil Investigations

Haley & Aldrich conducted a preliminary geotechnical and environmental subsurface exploration program at the site in April 2021 and laid out test boring locations prior to the subsurface investigation. Five (5) test borings were drilled by Geologic Exploration between the 13th and 16th of April, 2021 before Haley & Aldrich prepared test boring logs.

Haley and Aldrich found asphalt and topsoil from elevations of 14 to 17 feet. Below the asphalt was miscellaneous fill ranging from 22 to 27 feet in thickness. Bedrock was not encountered until elevation -43.5 to -54 feet below sea level.

Groundwater levels on the site are expected to be subject to tidal influence considering the close proximity to the ocean. Groundwater levels on the site are expected to range from elevation 1.5 to 11.5 feet based on tide levels.

Refer to Appendix G for a report on Subsurface Data and Foundation Design Recommendations, Parcel O Lab / Office Development, 1 Au Bon Pain Way, Boston, Massachusetts, prepared by Haley and Aldrich, dated May 2021.

2.4 Total Maximum Daily Load (TMDL)

The Site ultimately discharges into the Boston Harbor. There is no Total Maximum Daily Load (TMDL) prepared for the Boston Harbor although the harbor is classified as impaired. The impairments for the harbor include pathogens and PCBs. The Project has been designed to treat and infiltrate stormwater runoff which will reduce pathogen loading in the runoff from the site.

3.0 PROPOSED CONDITIONS

3.1 Project Description

The proposed Project includes the construction of a proposed 219,000 gsf office/lab building at Parcel O and the renovation of a 12,324 gsf amenities building at Parcel P. The site improvements include utilities, stormwater management, and associated site features like walkways, curbing, and landscaping.

The Project is a redevelopment. The Project is anticipated to decrease the overall impervious area for the Project by approximately 0.06 acres. Refer to Table 2 for a comparison of the existing and proposed land use for the Site.

Table 2. Proposed land use for Parcel O & Parcel P (in acres)

Land Use	Existing Site (acres)	Proposed Site (acres)	Change
Buildings	0.96	1.01	+0.05
Site Pavement	1.55	1.43	-0.12
Landscaped Areas	0.13	0.20	+0.07
Total	2.64	2.64	---

3.2 Stormwater Management System

The Site will include the installation of a stormwater management system that is being designed to meet the MassDEP Stormwater Management Standards and the Boston Water and Sewer Commission (BWSC) Requirements. As a redevelopment, the Project is required to meet the Stormwater Management Standards to the maximum extent practicable as described in Section 5.

The Project has been designed using environmentally sensitive site design and LID techniques. This design will reduce the volume of stormwater leaving the site and non-point source pollution by reducing impervious surfaces and treating and infiltrating stormwater at its source. Stormwater systems have been designed to model natural hydrologic features, including promoting infiltration throughout the site.

The proposed stormwater management system for the Project will include deep sump and hooded catch basins, infiltrating bioretention basins, subsurface infiltration systems, and proprietary water quality structures. Overflow from the proposed BMPs will be discharged to the closed drainage system in Fid Kennedy Avenue.

Deep Sump and Hooded Catch Basins

Deep sump and hooded catch basins are proposed to provide pretreatment in the impervious areas of the parking lot and driveways. Stormwater captured in the catch basins will be directed to a Subsurface Infiltration System prior to discharge.

Subsurface Infiltration/Detention Systems

Stormwater will be collected and infiltrated using 4 subsurface infiltration systems.

Subsurface Infiltration System #1 is proposed to collect and infiltrate runoff from the proposed parking lot and immediately adjacent impervious and landscaped site area. The system consists of StormTech SC-310 chambers enveloped by crushed stone. Subsurface Infiltration System #1 is located in the center of the parking lot on the east side of the site. Subsurface Infiltration System #1 is designed to infiltrate the 1.25-inch storm per BWSC requirements, and will significantly reduce the peak rate and runoff volumes in the 2-, 10-, 25-, and 100-year design storms.

Subsurface Infiltration System #2 is proposed to collect and infiltrate runoff from the Parcel O proposed building and immediately adjacent impervious and landscaped site area. The system is located under the building and must meet plumbing code. It consists of 24-inch perforated Schedule 40 PVC pipe enveloped by crushed stone. Subsurface Infiltration System #2 is designed to infiltrate the 1.25-inch storm per BWSC requirements, and will significantly reduce the peak rate and runoff volumes in the 2-, 10-, 25-, and 100-year design storms.

Subsurface Infiltration System #3 is proposed to collect and infiltrate runoff from the Parcel P existing building. The system consists of StormTech SC-310 chambers enveloped by crushed stone. Subsurface Infiltration System #3 is located to the northwest of the Parcel P building. Subsurface Infiltration System #3 is designed to completely infiltrate the 1.25-inch storm per BWSC requirements, and will significantly reduce the peak rate and runoff volumes in the 2-, 10-, 25-, and 100-year design storms.

Subsurface Infiltration System #4 is proposed to collect and infiltrate runoff from the proposed parking and site area to the south of the Parcel P existing building. The system consists of StormTech SC-310 chambers enveloped by crushed stone. Subsurface Infiltration System #4 is located south of the Parcel P existing building. Subsurface Infiltration System #4 is designed to completely infiltrate the

1.25-inch storm per BWSC requirements, and will significantly reduce the peak rate and runoff volumes in the 2-, 10-, 25-, and 100-year design storms.

Bioretention Basin

Two bioretention basins are proposed on Site.

Bioretention Basin 1 will treat stormwater runoff generated by a portion of the parking lot. The bioretention basin includes a minimum 12-inch planting media, with additional sand and pea stone filter to provide TSS and nutrient pollutant removal, and will provide stormwater infiltration.

Bioretention Basin 2 is proposed to treat stormwater runoff generated by the pedestrian zone to the north of the Parcel P existing building. The bioretention basin includes a minimum 16-inch planting media, with additional sand and pea stone filter to provide TSS and nutrient pollutant removal and will provide stormwater infiltration.

Water Quality Structures

Two proprietary water quality structures and two proprietary water quality inlets are proposed for water quality pretreatment in areas of the Site where space is limited or additional pretreatment is required prior to infiltration. Sizing calculations are provided in Appendix A.

3.3 Stormwater Management During Construction

The Site Contractor will be responsible for stormwater management of the active construction site and is required to adhere to the conditions of the 2017 Construction General Permit under the Environmental Protection Agency through the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). A draft SWPPP has been prepared in accordance with the MassDEP Stormwater Management Standards and the 2017 Construction General Permit (Appendix F).

4.0 STORMWATER MANAGEMENT ANALYSIS

4.1 Methodology

Nitsch Engineering completed a hydrologic analysis of the existing project site utilizing Soil Conservation Service (SCS) Runoff Curve Number (CN) methodology. The SCS method calculates the rate at which the runoff reaches the design point considering several factors: the slope and flow lengths of the subcatchment area, the soil type of the subcatchment area, and the type of surface cover in the subcatchment area. HydroCAD Version 10.00 computer modeling software was used in conjunction with the SCS method to determine the peak runoff rates and runoff volumes for the 2-, 10-, 25-, and 100-year, 24-hour storm events. The proposed project site is being analyzed with the same methodology.

The Site was divided into multiple drainage areas, or subcatchments, which drain to the design points along the property boundary and within the site. For each subcatchment area, SCS Runoff Curve Numbers (CNs) were selected by using the cover type and hydrologic soil group of each area. The peak runoff rates and runoff volumes for the 2-, 10-, 25- and 100-year 24-hour storm events were then determined by inputting the drainage areas, CNs, and time of concentration (T_c) paths into the HydroCAD model.

The National Oceanic and Atmospheric Administration Atlas 14 precipitation frequency estimates were used to calculate the 2-, 10-, 25-, and 100- year 24-hour storm events in HydroCAD. Refer to the HydroCAD calculations in Appendix B and C for rainfall information.

4.2 HydroCAD Version 10.00

The HydroCAD computer program uses SCS and TR-20 methods to model drainage systems. TR-20 (Technical Release 20) was developed by the Soil Conservation Service to estimate runoff and peak discharges in small watersheds. TR-20 is generally accepted by engineers and reviewing authorities as the standard method for estimating runoff and peak discharges.

HydroCAD Version 10.00 uses up to four types of components to analyze the hydrology of a given site: subcatchments, reaches, basins, and links. Subcatchments are areas of land that produce surface runoff. The area, weighted CN, and T_c characterize each individual subcatchment area. Reaches are generally uniform streams, channels, or pipes that convey water from one point to another. A basin is any impoundment that fills with water from one or more sources and empties via an outlet structure. Links are used to introduce hydrographs into a project from another source or to provide a junction for more than one hydrograph within a project. The time span for the model was set for 0-48 hours in order to prevent truncation of the hydrograph.

4.3 Existing Hydrologic Conditions

As summarized in Section 2.1, Nitsch Engineering delineated the project site into three on-site subcatchment (watershed) areas discharging to one design point utilizing an existing conditions survey and on-site observations (See Figure DR-1). The design point (DP-1) is defined as the closed drainage system in Fid Kennedy Avenue. The HydroCAD model for existing conditions is provided in Appendix B and results from the HydroCAD calculations are summarized below in Table 3.

4.4 Proposed Hydrologic Conditions

The proposed project has been designed to mitigate the change in stormwater runoff at the design point as required by the DEP Stormwater Management Standards and BWSC Standards. The existing watershed areas were modified to reflect the proposed topography, storm drainage structures and BMPs, and roof areas. Nitsch Engineering delineated the proposed project site into eight on-site subcatchment (watershed) areas discharging the same design point (DP-1) as the existing condition, the closed drainage system in Fid Kennedy Avenue. (See Figure DR-2). The HydroCAD model for proposed conditions is provided in Appendix C and results from the calculations are summarized in Table 3.

4.5 Peak Flow Rates

The proposed stormwater management system is expected to reduce the proposed peak runoff rates to at or below the existing rates for the Design Points (DP-1). Table 3 below summarize the existing and proposed hydrologic analyses for the site at each design point.

Table 3 – Peak Rates of Runoff in Cubic Feet per Second (cfs)

	Storm Event	2-year	10-year	25-year	100-year
DP-1	Existing	7.56	12.20	15.06	19.46
	Proposed	0.85	10.02	11.71	14.42

4.6 Peak Volumes

The proposed stormwater management system is expected to reduce or maintain the post-development peak rates of runoff to at or below the pre-development rates. Table 4 below demonstrates a reduction in runoff volumes for the required storm events.

Table 4 –Volumes of Runoff for Total Site (in acre-feet)

Storm Event	2-year	10-year	25-year	100-year
Existing	0.633	1.049	1.308	1.708
Proposed	0.127	0.419	0.625	0.967

5.0 MassDEP Stormwater Management Standards

The Project is considered a *redevelopment* under the DEP Stormwater Management System. As such, the project is required to meet Standards 2, 3, and the pretreatment and structural best management practice requirements of Standards 4,5, and 6 only to the maximum extent practicable. Existing stormwater discharges need to comply with Standard 1 only to the maximum extent practicable. The project will comply with all other Standards. The site will be designed to meet or meet to the maximum extent practicable the MassDEP Stormwater Management Standards as summarized below:

Standard 1: No New Untreated Discharges

The Project will not discharge any untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth. Stormwater from the Site will be collected and treated in accordance with the MassDEP Stormwater Management Standards and stormwater outfalls will be stabilized to prevent erosion.

Standard 2: Peak Rate Attenuation

The proposed stormwater management system will be designed so that the post-development peak discharge rates do not exceed pre-development peak discharge rates. To prevent storm damage and downstream flooding, the proposed stormwater management practices will mitigate peak runoff rates for the 2-, 10-, 25- and 100-year, 24 hour storm events. Refer to Table 3 for a pre- and post-development peak runoff rate comparison.

Standard 3: Groundwater Recharge

The Site was designed using environmentally-sensitive site design, low impact development techniques, and stormwater BMP treatment trains to minimize the loss of annual recharge to groundwater. The annual recharge from the post-development site will approximate the annual recharge from pre-development conditions based on soil type using the guidelines provided in the MassDEP Stormwater Management Handbook.

Impervious Area in HSG C = 99,951 square feet
 Rv (Recharge Volume) = 99,951 x 0.25 in. / (12 inches/ft)
 = 2,082 cubic feet

The infiltration BMPs are sized to exceed the recharge volume required under the MassDEP Stormwater Management Standards (Table 11)

Table 5 – Proposed Recharge Volumes for Stormwater BMPs

Infiltration BMP	Recharge Volume (cf)
Subsurface Infiltration System #1	2,567
Subsurface Infiltration System #2	3,707
Subsurface Infiltration System #3	1,299
Subsurface Infiltration System #4	996

Bioretention 1	1,149
Bioretention 2	611
Total	10,329

The HydroCAD reports provided in Appendix C indicate that all proposed infiltration BMPs will drain within 72 hours for the 2-, 10-, 25-, and 100-year storm events, meeting the 72-hour MassDEP drawdown requirement. 72-hour draw down calculations have been provided in Appendix A.

Groundwater mounding calculations have been provided in Appendix A.

Standard 4: Water Quality Treatment

The proposed stormwater management system will be designed to remove greater than 80% of the average annual post-construction load of Total Suspended Solids (TSS). Structural stormwater BMPs including deep sump and hooded catch basins, a bioretention basin, subsurface infiltration systems, and proprietary water quality units are sized to capture the required water quality volume (1-inch over the project site) and remove a minimum of 80% of total suspended solids.

TSS removal calculation spreadsheets and water quality structure sizing calculations are provided in Appendix A.

Source control and pollution prevention measures, such as proper snow management and stabilization of eroded surfaces, are included in the Long-Term Pollution Prevention Plan and Operation and Maintenance Plan (Appendix E).

Standard 5: Land Uses with Higher Potential Pollutant

Some areas of the Project may contain Land Uses with Higher Potential Pollutant Loads (LUHPPLs) as defined by MassDEP. These areas of the project are classified as a LUHPPL based on average daily vehicle trips anticipated to be generated by the proposed project. The average daily trips were established based on Institute for Transportation Engineers (ITE) trip generation guidelines. Stormwater in the driveway areas will be treated to meet the 44% pretreatment requirement prior to infiltration and will also treat the 1-inch water quality volume.

Standard 6: Critical Areas

The Project is not located within any critical areas. Therefore, this standard is not applicable.

Standard 7: Redevelopments

The Project is considered a redevelopment under the MassDEP Stormwater Management Standards. Therefore, the project is required to meet Standard 2, Standard 3, and the pretreatment and structural stormwater BMP requirements of Standards 4, 5, and 6 to the maximum extent practicable. The projects should comply with all other requirements of the Stormwater Management Standards and improve existing conditions. The Project meets this standard.

Standard 8: Construction Period Pollution Prevention and Sedimentation Control

A plan to control construction-related impacts, including erosion, sedimentation, and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) will be updated during the Notice of Intent permitting process and maintained by the Contractor throughout construction.

Because the Project will disturb more than one (1) acre of land, a Notice of Intent will be submitted to the Environmental Protection Agency (EPA) for coverage under the National Pollution Discharge Elimination System (NPDES) Construction General Permit. As part of this application the Applicant is required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and implement the measures in the SWPPP. The SWPPP, which is to be kept on site, includes erosion and sediment controls (stabilization practices and structural practices), temporary and permanent stormwater management measures, Contractor inspection schedules and reporting of all SWPPP features, materials management, waste disposal, off-site vehicle tracking, spill prevention and response, sanitation, and non-stormwater discharges. A draft SWPPP is provided in Appendix F.

Standard 9: Operation and Maintenance Plan

A post-construction operation and maintenance plan has been prepared and will be implemented to ensure that stormwater management systems function as designed. Source control and stormwater BMP operation requirements for the site are summarized in the Long-Term Pollution Prevention Plan and Operation and Maintenance Plan provided in Appendix E.

Standard 10: Prohibition of Illicit Discharges

There will be no illicit discharges to the stormwater management system associated with the Project. An Illicit Discharge Compliance Statement is provided in Appendix A.

6.0 CLOSED DRAINAGE SYSTEM DESIGN

The proposed closed drainage system consists of deep sump and hooded catch basins, drainage manholes, and proprietary water quality treatment units connected with corrugated polyethylene pipe. The closed drainage system was designed to convey the 25-year storm event using the Rational method. Refer to Appendix D for more information.

7.0 CONCLUSION

In conclusion, the Project's stormwater management system will reduce or maintain peak runoff rates and volumes through the widespread use of infiltration BMPs and improve the water quality of stormwater being discharged from the Site. Environmentally sensitive site design and low impact development techniques will be implemented throughout the Site. The Project is being designed to meet and exceed the MassDEP Stormwater Management Standards and Boston Water and Sewer Regulations.

FIGURES

Figure 1: Aerial Locus Map

Figure 2: USGS Map

DR-1 Existing Watershed Areas

DR-2 Proposed Watershed Areas

DR-3 Proposed Structures Drainage Map

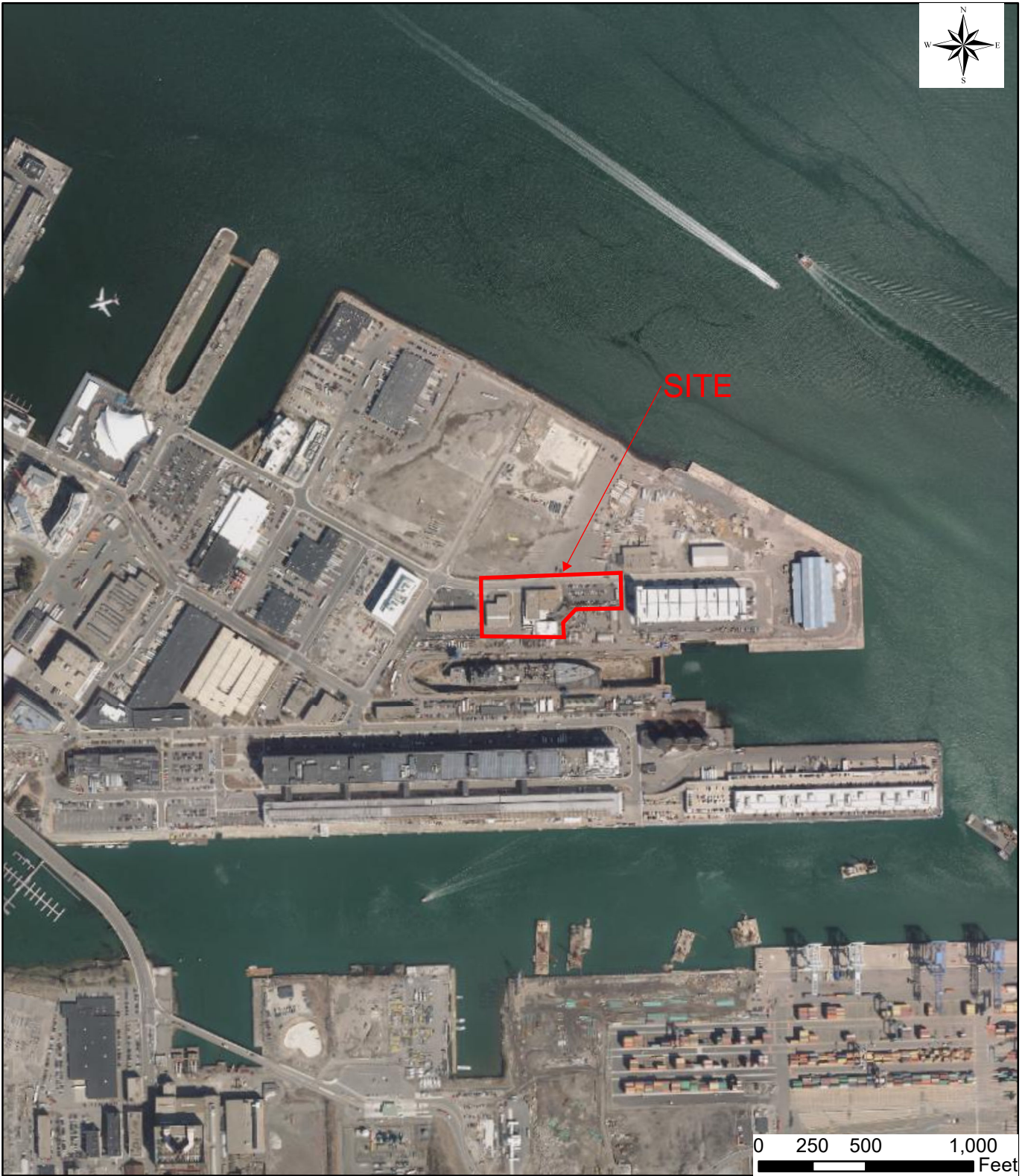
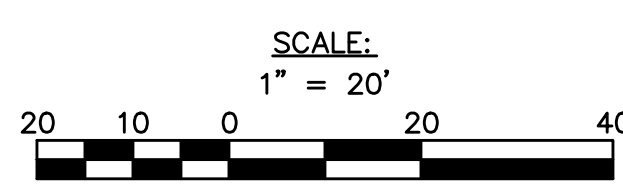
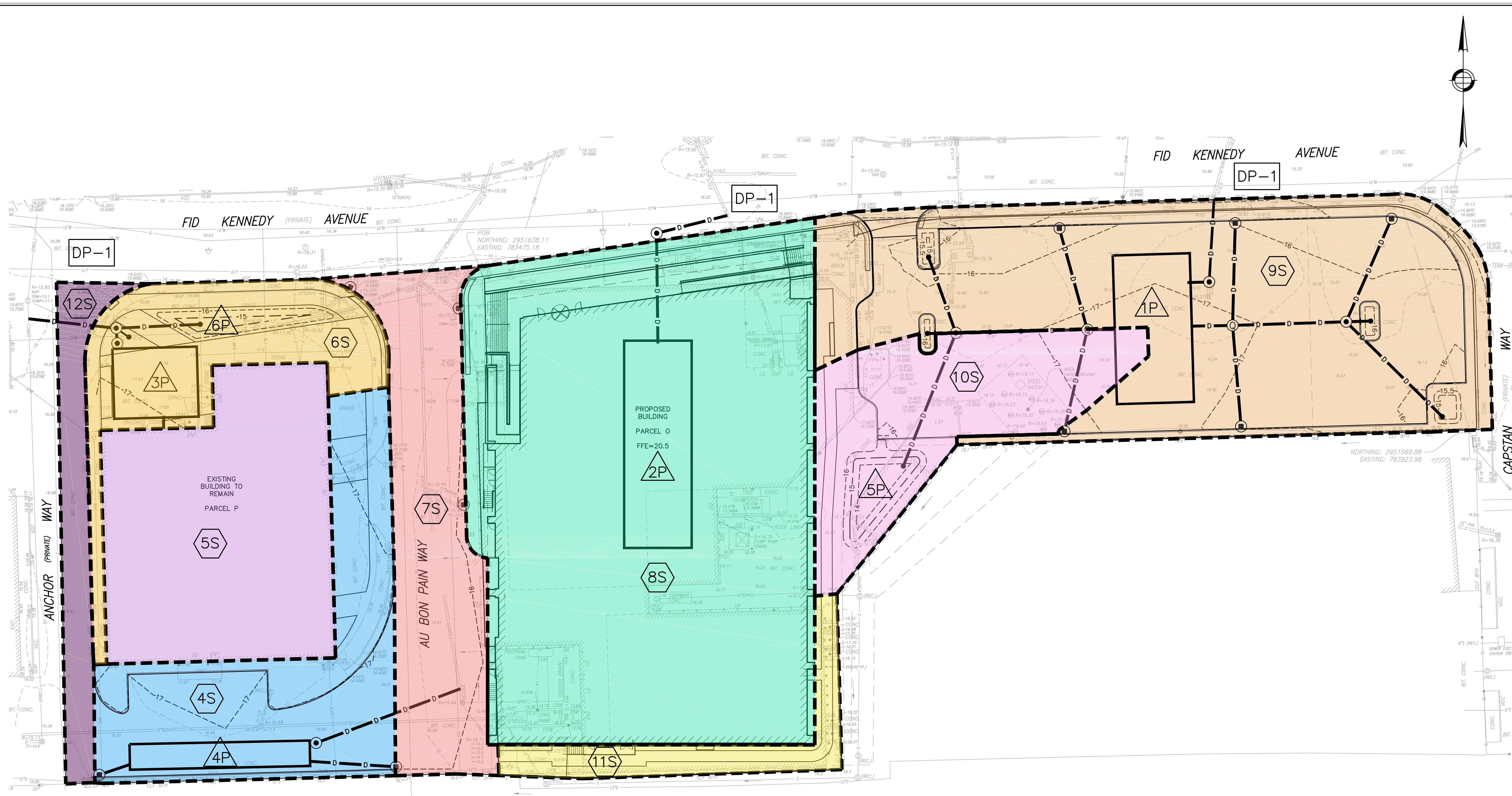


Figure 1: Aerial Locus Map
1ABP and 3AW
1 Au Bon Pain Way, Boston, MA

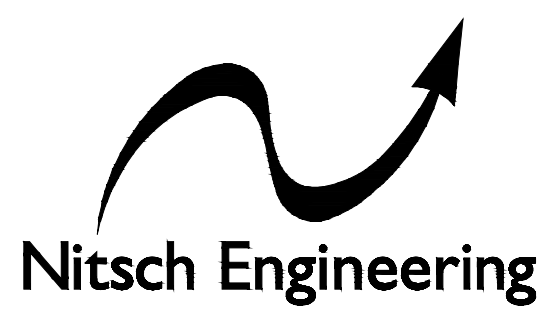


Figure 2: USGS Map
 1ABP and 3AW
 1 Au Bon Pain Way, Boston, MA

7/13/2021 10:55 AM
C:\4206_dpdp_and_3na\civil\loc\drainage\14306dapr.dwg



- LEGEND**
- SUBCATCHMENT AREA
 - ⬡ SUBCATCHMENT AREA LABEL
 - DP DESIGN POINT



www.nitscheng.com
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

- ▶ Civil Engineering
- ▶ Land Surveying
- ▶ Transportation Engineering
- ▶ Structural Engineering
- ▶ Green Infrastructure
- ▶ Planning
- ▶ GIS

NITSCH PROJECT # JOB.NO.
FILE: 14306DAPR
SCALE: AS NOTED
DATE: 06/23/2021
PROJECT MANAGER: CDH
SURVEYOR:
DRAFTED BY: YAA
CHECKED BY: PES

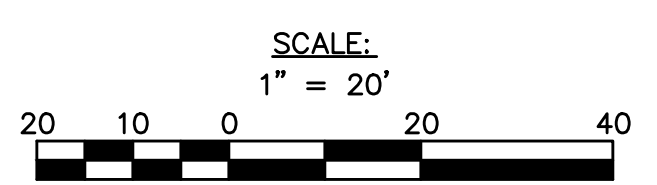
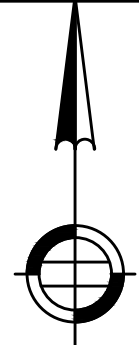
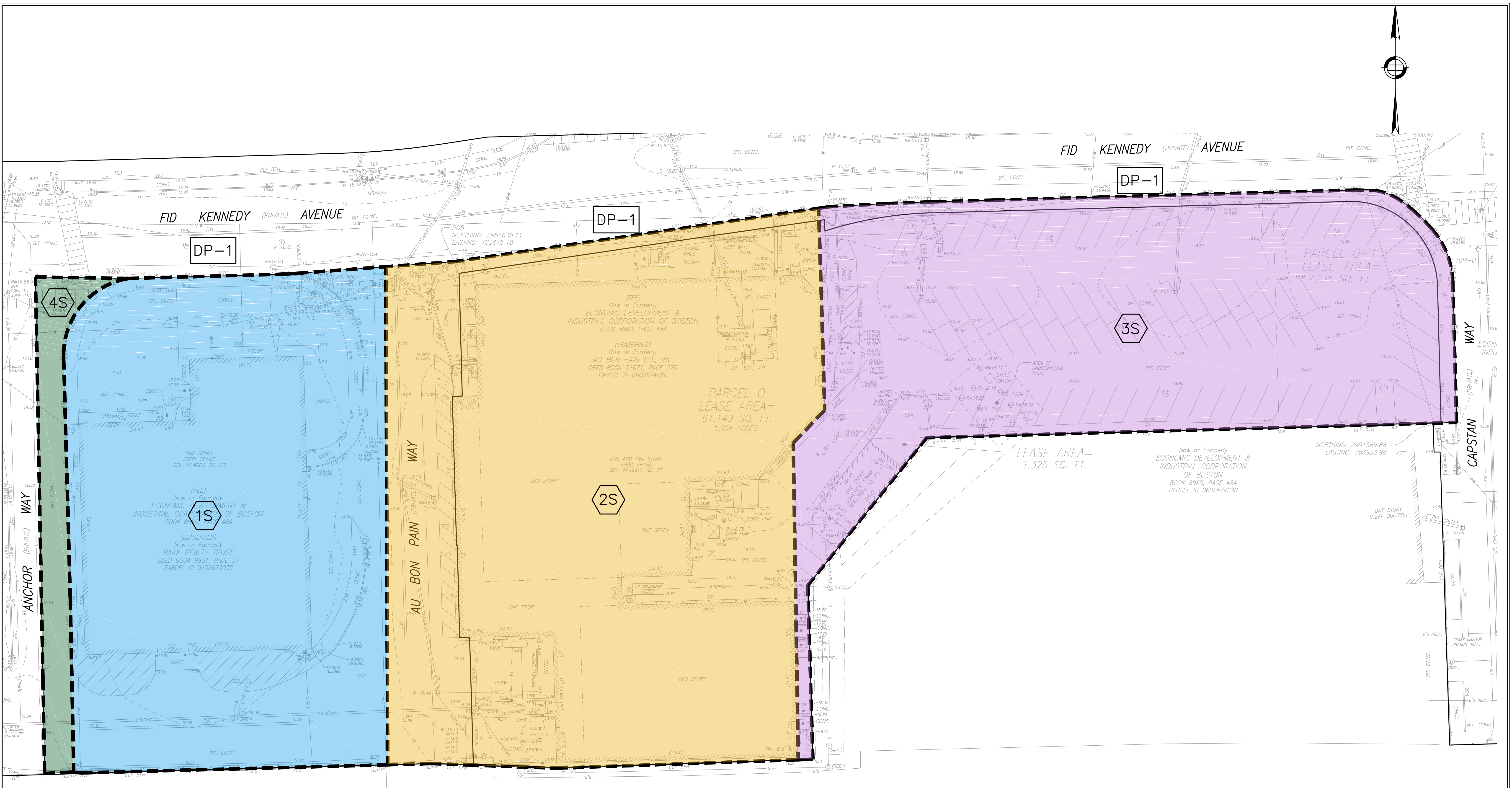
REV.	COMMENTS	DATE

PROPOSED DRAINAGE WATERSHED
PARCEL 0 - 1 AU BON PAIN WAY, BOSTON, MA
PARCEL P - 3 ANCHOR WAY, BOSTON, MA

PREPARED FOR:
MARCUS PARTNERS
250 FRANKLIN STREET, BOSTON, MA 02110

SHEET:
DR-2
OF REV.

7/13/2021 10:59 AM



- LEGEND**
- SUBCATCHMENT AREA
 - ⬡ SUBCATCHMENT AREA LABEL
 - DP
 - DESIGN POINT

Now or Formerly
ECONOMIC DEVELOPMENT &
INDUSTRIAL CORPORATION
OF BOSTON
BOOK 8960, PAGE 484

(FEE)
Now or Formerly
ECONOMIC DEVELOPMENT &
INDUSTRIAL CORPORATION OF BOSTON
BOOK 8960, PAGE 484

(LEASEHOLD)
Now or Formerly
PARK REALTY TRUST
DEED BOOK 9931, PAGE 37
PARCEL ID 0602674075

(FEE)
Now or Formerly
ECONOMIC DEVELOPMENT &
INDUSTRIAL CORPORATION OF BOSTON
BOOK 8960, PAGE 484

(LEASEHOLD)
Now or Formerly
AU BON PAIN CO., INC.
DEED BOOK 21071, PAGE 270
PARCEL ID 0602674080

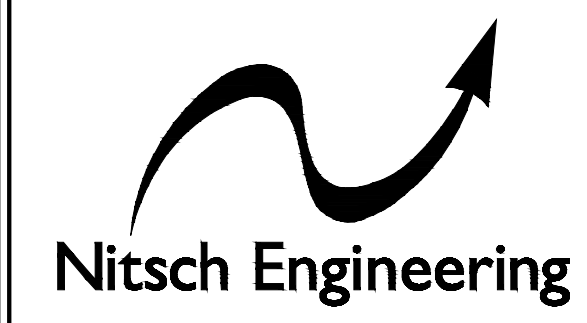
Now or Formerly
ECONOMIC DEVELOPMENT &
INDUSTRIAL CORPORATION
OF BOSTON
BOOK 8960, PAGE 484
PARCEL ID 0602674230

PARCEL 0
LEASE AREA =
61,149 SQ. FT.
1.404 ACRES

LEASE AREA =
1,325 SQ. FT.

PARCEL 0-1
LEASE AREA =
7,235 SQ. FT.

NORTHING: 2951569.88
EASTING: 783923.98



www.nitscheng.com
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

- ▶ & LYLO (QJLQHULJQ
- ▶ Land Surveying
- ▶ Transportation Engineering
- ▶ Structural Engineering
- ▶ Green Infrastructure
- ▶ Planning
- ▶ , 6

0+65% * 241.1% @ \$ 01
(+ . ' - & # ' :
5% # . ' - # 5 016' &
& # 6' -
241.1% 6 / # 0 #) % & *
5748' : 14 "
& 4 # (6' & \$; - : # #
% * ' - & \$; - 2' 5

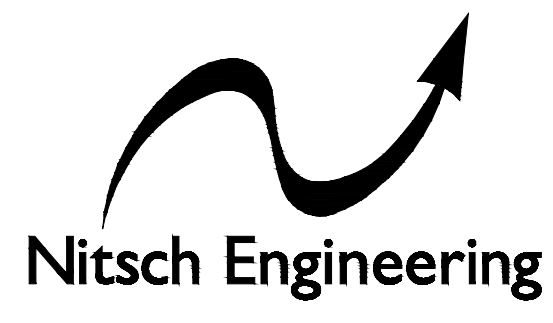
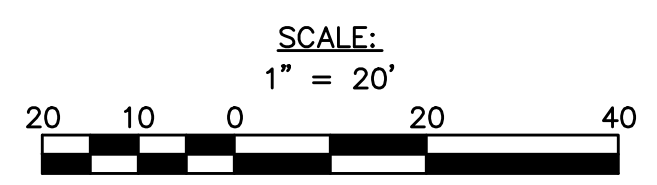
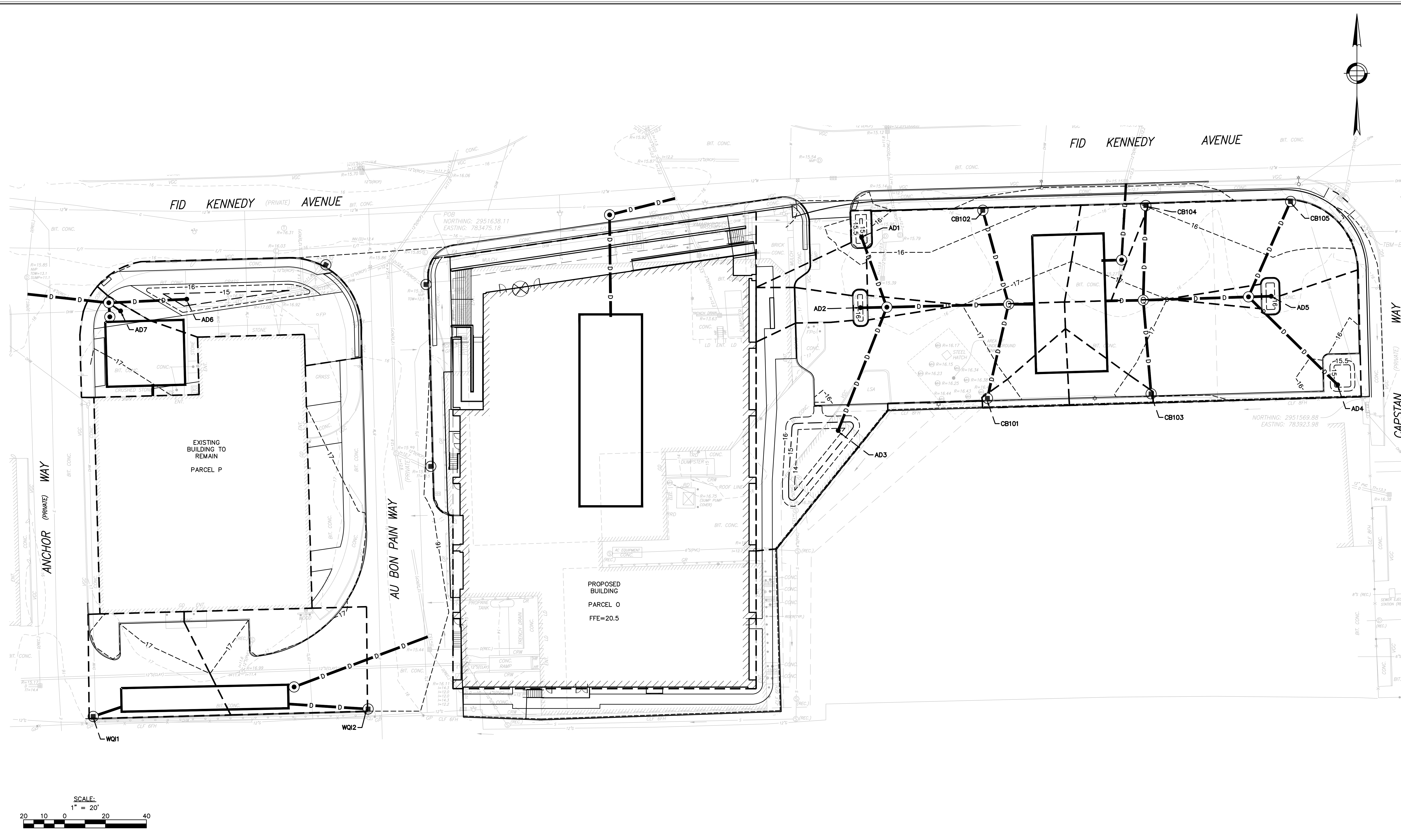
4' 8	% 1 / ' 065	# 6'
4' 8 + 5' 105		

EXISTING DRAINAGE WATERSHED
PARCEL 0 - 1 AU BON PAIN WAY, BOSTON, MA
PARCEL P - 3 ANCHOR WAY, BOSTON, MA

35(3\$5(')25,
MARCUS PARTNERS
250 FRANKLIN STREET, BOSTON, MA 02110

5' 6"
5
1 (4' 8

6/29/2021 4:41 PM



www.nitscheng.com
 2 Center Plaza, Suite 430
 Boston, MA 02108
 T: (617) 338-0063
 F: (617) 338-6472

- ▶ Civil Engineering
- ▶ Land Surveying
- ▶ Transportation Engineering
- ▶ Structural Engineering
- ▶ Green Infrastructure
- ▶ Planning
- ▶ GIS

NITSCH PROJECT # JOB.NO.
 FILE: 14306DAPR
 SCALE: AS NOTED
 DATE: 06/23/2021
 PROJECT MANAGER: CDH
 SURVEYOR:
 DRAFTED BY: YAA
 CHECKED BY: PES

REV.	COMMENTS	DATE

PROPOSED STRUCTURES DRAINAGE MAP
 PARCEL 0 - 1 AU BON PAIN WAY, BOSTON, MA
 PARCEL P - 3 ANCHOR WAY, BOSTON, MA
 PREPARED FOR:
MARCUS PARTNERS
 250 FRANKLIN STREET, BOSTON, MA 02110

SHEET:
DR-3
 OF REV.

APPENDIX A

Stormwater Management Standards Documentation

MassDEP Checklist for Stormwater Report

Standard 3: 72-HR Drawdown Calculations

Standard 4: TSS Removal Calculations

Standard 4: Proprietary Water Quality Structure Calculations

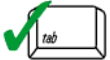
Standard 10: Illicit Discharge Compliance Statement



Checklist for Stormwater Report

A. Introduction

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



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

The Stormwater Report must include:

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



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.

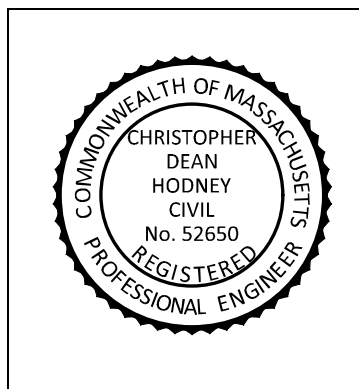
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the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



Chris Hodney
Signature and Date

8/3/21

Checklist

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

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



Checklist for Stormwater Report

Checklist (continued)

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

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

Standard 1: No New Untreated Discharges

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



Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- Soil Analysis provided.
- Required Recharge Volume calculation provided.
- Required Recharge volume reduced through use of the LID site Design Credits.
- Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - Static
 - Simple Dynamic
 - Dynamic Field¹
- Runoff from all impervious areas at the site discharging to the infiltration BMP.
- Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - Site is comprised solely of C and D soils and/or bedrock at the land surface
 - M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - Solid Waste Landfill pursuant to 310 CMR 19.000
 - Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

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



Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

- The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

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

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - is within the Zone II or Interim Wellhead Protection Area
 - is near or to other critical areas
 - is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - involves runoff from land uses with higher potential pollutant loads.
 - The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- The BMP is sized (and calculations provided) based on:
 - The ½" or 1" Water Quality Volume or
 - The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

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

- The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted **prior to** the discharge of stormwater to the post-construction stormwater BMPs.
- The NPDES Multi-Sector General Permit does **not** cover the land use.
- LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- All exposure has been eliminated.
- All exposure has **not** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- Critical areas and BMPs are identified in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

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

- The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - Limited Project
 - Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - Bike Path and/or Foot Path
- Redevelopment Project
- Redevelopment portion of mix of new and redevelopment.
- Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

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

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

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

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

- The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- The project is **not** covered by a NPDES Construction General Permit.
- The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

- The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - Name of the stormwater management system owners;
 - Party responsible for operation and maintenance;
 - Schedule for implementation of routine and non-routine maintenance tasks;
 - Plan showing the location of all stormwater BMPs maintenance access areas;
 - Description and delineation of public safety features;
 - Estimated operation and maintenance budget; and
 - Operation and Maintenance Log Form.
- The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- An Illicit Discharge Compliance Statement is attached;
- NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

**Form S3-G: Standard 3 – Recharge
 72-Hour Drawdown Calculation**

Project Name: Parcel O & Parcel P	Nitsch Project #: 14306
Location: Boston, MA	Checked by: CDH
Prepared by: PES	Sheet No. 1 of 6
Date: 06/25/2021	Subsurface Infiltration #1

INSTRUCTIONS:

1. In 'Method' Column, Click on Blue Cell to Activate Drop Down Menu
2. Enter the "Required recharge Volume" (in cubic feet) in Blue Cell for the appropriate chosen Method
3. Enter the "Bottom Area" (in square feet) in the blue cell as the maximum infiltration surface area. Do not use sidewalls.
4. **For "Dynamic: In-Situ Method" ONLY** (if other go to 4b) Enter hydraulic Conductivity Rate in Blue Cell
5. In 'Texture Class' Column, Click on Blue Cell to Activate Drop Down Menu

Step No.				
1	Method:	Static		
2	Required Recharge Volume (in cubic feet):	2567	as determined by the	Static Method
3	Bottom Area (in Sq.Ft.)	2343		
4a	ONLY - If using Dynamic: In-Situ Method --> Enter Hydraulic Conductivity Rate	Hydraulic Conductivity Rate:	In-Situ Saturated Hydraulic Conductivity Rate	
			0	
4b	Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate (Inches/Hour)	Hours
	Sandy Loam	B	1.02	
			Time _{drawdown} =	12.89
	72-Hour Drawdown Requirement Check:			OK

**Form S3-G: Standard 3 – Recharge
 72-Hour Drawdown Calculation**

Project Name: Parcel O & Parcel P	Nitsch Project #: 14306
Location: Boston, MA	Checked by: CDH
Prepared by: PES	Sheet No. 2 of 6
Date: 06/25/2021	Subsurface Infiltration #2

INSTRUCTIONS:

1. In 'Method' Column, Click on Blue Cell to Activate Drop Down Menu
2. Enter the "Required recharge Volume" (in cubic feet) in Blue Cell for the appropriate chosen Method
3. Enter the "Bottom Area" (in square feet) in the blue cell as the maximum infiltration surface area. Do not use sidewalls.
4. **For "Dynamic: In-Situ Method" ONLY** (if other go to 4b) Enter hydraulic Conductivity Rate in Blue Cell
5. In 'Texture Class' Column, Click on Blue Cell to Activate Drop Down Menu

Step No.				
1	Method:	Static		
2	Required Recharge Volume (in cubic feet):	3706	as determined by the	Static Method
3	Bottom Area (in Sq.Ft.)	2855		
4a	ONLY - If using Dynamic: In-Situ Method --> Enter Hydraulic Conductivity Rate	Hydraulic Conductivity Rate:	In-Situ Saturated Hydraulic Conductivity Rate	
			0	
4b	Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate (Inches/Hour)	Hours
	Sandy Loam	B	1.02	
			Time _{drawdown} =	15.27
	72-Hour Drawdown Requirement Check:			OK

**Form S3-G: Standard 3 – Recharge
 72-Hour Drawdown Calculation**

Project Name: Parcel O & Parcel P	Nitsch Project #: 14306
Location: Boston, MA	Checked by: CDH
Prepared by: PES	Sheet No. 3 of 6
Date: 06/25/2021	Subsurface Infiltration #3

INSTRUCTIONS:

1. In 'Method' Column, Click on Blue Cell to Activate Drop Down Menu
2. Enter the "Required recharge Volume" (in cubic feet) in Blue Cell for the appropriate chosen Method
3. Enter the "Bottom Area" (in square feet) in the blue cell as the maximum infiltration surface area. Do not use sidewalls.
4. **For "Dynamic: In-Situ Method" ONLY** (if other go to 4b) Enter hydraulic Conductivity Rate in Blue Cell
5. In 'Texture Class' Column, Click on Blue Cell to Activate Drop Down Menu

Step No.				
1	Method:	Static		
2	Required Recharge Volume (in cubic feet):	1299	as determined by the	Static Method
3	Bottom Area (in Sq.Ft.)	1209		
4a	ONLY - If using Dynamic: In-Situ Method --> Enter Hydraulic Conductivity Rate	Hydraulic Conductivity Rate:	In-Situ Saturated Hydraulic Conductivity Rate	
			0	
4b	Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate (Inches/Hour)	Hours
	Sandy Loam	B	1.02	
			Time _{drawdown} =	12.64
	72-Hour Drawdown Requirement Check:			OK

**Form S3-G: Standard 3 – Recharge
 72-Hour Drawdown Calculation**

Project Name: Parcel O & Parcel P	Nitsch Project #: 14306
Location: Boston, MA	Checked by: CDH
Prepared by: PES	Sheet No. 4 of 6
Date: 06/25/2021	Subsurface Infiltration #4

INSTRUCTIONS:

1. In 'Method' Column, Click on Blue Cell to Activate Drop Down Menu
2. Enter the "Required recharge Volume" (in cubic feet) in Blue Cell for the appropriate chosen Method
3. Enter the "Bottom Area" (in square feet) in the blue cell as the maximum infiltration surface area. Do not use sidewalls.
4. **For "Dynamic: In-Situ Method" ONLY** (if other go to 4b) Enter hydraulic Conductivity Rate in Blue Cell
5. In 'Texture Class' Column, Click on Blue Cell to Activate Drop Down Menu

Step No.				
1	Method:	Static		
2	Required Recharge Volume (in cubic feet):	996	as determined by the	Static Method
3	Bottom Area (in Sq.Ft.)	937		
4a	ONLY - If using Dynamic: In-Situ Method --> Enter Hydraulic Conductivity Rate	Hydraulic Conductivity Rate:	In-Situ Saturated Hydraulic Conductivity Rate	
			0	
4b	Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate (Inches/Hour)	Hours
	Sandy Loam	B	1.02	
			Time _{drawdown} =	12.51
	72-Hour Drawdown Requirement Check:			OK

**Form S3-G: Standard 3 – Recharge
 72-Hour Drawdown Calculation**

Project Name: Parcel O & Parcel P	Nitsch Project #: 14306
Location: Boston, MA	Checked by: CDH
Prepared by: PES	Sheet No. 5 of 6
Date: 06/25/2021	Bioretention 1

INSTRUCTIONS:

1. In 'Method' Column, Click on Blue Cell to Activate Drop Down Menu
2. Enter the "Required recharge Volume" (in cubic feet) in Blue Cell for the appropriate chosen Method
3. Enter the "Bottom Area" (in square feet) in the blue cell as the maximum infiltration surface area. Do not use sidewalls.
4. **For "Dynamic: In-Situ Method" ONLY** (if other go to 4b) Enter hydraulic Conductivity Rate in Blue Cell
5. In 'Texture Class' Column, Click on Blue Cell to Activate Drop Down Menu

Step No.							
1	Method: <input type="text" value="Static"/>						
2	Required Recharge Volume (in cubic feet): <input type="text" value="1149"/> as determined by the <input type="text" value="Static Method"/>						
3	Bottom Area (in Sq.Ft.) <input type="text" value="1062"/>						
4a	<p>ONLY - If using Dynamic: In-Situ Method --> Enter Hydraulic Conductivity Rate</p> <table border="1"> <thead> <tr> <th>Hydraulic Conductivity Rate:</th> <th>In-Situ Saturated Hydraulic Conductivity Rate</th> </tr> </thead> <tbody> <tr> <td><input type="text" value="0"/></td> <td><input type="text" value="0"/></td> </tr> </tbody> </table>	Hydraulic Conductivity Rate:	In-Situ Saturated Hydraulic Conductivity Rate	<input type="text" value="0"/>	<input type="text" value="0"/>		
Hydraulic Conductivity Rate:	In-Situ Saturated Hydraulic Conductivity Rate						
<input type="text" value="0"/>	<input type="text" value="0"/>						
4b	<table border="1"> <thead> <tr> <th>Texture Class</th> <th>NRCS Hydrologic Soil Group (HSG)</th> <th>Infiltration Rate (Inches/Hour)</th> </tr> </thead> <tbody> <tr> <td><input type="text" value="Sandy Loam"/></td> <td><input type="text" value="B"/></td> <td><input type="text" value="1.02"/></td> </tr> </tbody> </table> <p style="text-align: right;">Hours</p> <p style="text-align: right;">Time_{drawdown} = <input type="text" value="12.73"/></p>	Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate (Inches/Hour)	<input type="text" value="Sandy Loam"/>	<input type="text" value="B"/>	<input type="text" value="1.02"/>
Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate (Inches/Hour)					
<input type="text" value="Sandy Loam"/>	<input type="text" value="B"/>	<input type="text" value="1.02"/>					
72-Hour Drawdown Requirement Check: <input type="text" value="OK"/>							

**Form S3-G: Standard 3 – Recharge
 72-Hour Drawdown Calculation**

Project Name: Parcel O & Parcel P	Nitsch Project #: 14306
Location: Boston, MA	Checked by: CDH
Prepared by: PES	Sheet No. 6 of 6
Date: 06/25/2021	Bioretention 2

INSTRUCTIONS:

1. In 'Method' Column, Click on Blue Cell to Activate Drop Down Menu
2. Enter the "Required recharge Volume" (in cubic feet) in Blue Cell for the appropriate chosen Method
3. Enter the "Bottom Area" (in square feet) in the blue cell as the maximum infiltration surface area. Do not use sidewalls.
4. **For "Dynamic: In-Situ Method" ONLY** (if other go to 4b) Enter hydraulic Conductivity Rate in Blue Cell
5. In 'Texture Class' Column, Click on Blue Cell to Activate Drop Down Menu

Step No.							
1	Method: <input type="text" value="Static"/>						
2	Required Recharge Volume (in cubic feet): <input type="text" value="611"/> as determined by the <input type="text" value="Static Method"/>						
3	Bottom Area (in Sq.Ft.) <input type="text" value="643"/>						
4a	<p>ONLY - If using Dynamic: In-Situ Method --> Enter Hydraulic Conductivity Rate</p> <table border="1"> <thead> <tr> <th>Hydraulic Conductivity Rate:</th> <th>In-Situ Saturated Hydraulic Conductivity Rate</th> </tr> </thead> <tbody> <tr> <td><input type="text" value="0"/></td> <td><input type="text" value="0"/></td> </tr> </tbody> </table>	Hydraulic Conductivity Rate:	In-Situ Saturated Hydraulic Conductivity Rate	<input type="text" value="0"/>	<input type="text" value="0"/>		
Hydraulic Conductivity Rate:	In-Situ Saturated Hydraulic Conductivity Rate						
<input type="text" value="0"/>	<input type="text" value="0"/>						
4b	<table border="1"> <thead> <tr> <th>Texture Class</th> <th>NRCS Hydrologic Soil Group (HSG)</th> <th>Infiltration Rate (Inches/Hour)</th> </tr> </thead> <tbody> <tr> <td><input type="text" value="Sandy Loam"/></td> <td><input type="text" value="B"/></td> <td><input type="text" value="1.02"/></td> </tr> </tbody> </table> <p style="text-align: right;">Hours</p> <p style="text-align: right;">Time_{drawdown} = <input type="text" value="11.18"/></p>	Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate (Inches/Hour)	<input type="text" value="Sandy Loam"/>	<input type="text" value="B"/>	<input type="text" value="1.02"/>
Texture Class	NRCS Hydrologic Soil Group (HSG)	Infiltration Rate (Inches/Hour)					
<input type="text" value="Sandy Loam"/>	<input type="text" value="B"/>	<input type="text" value="1.02"/>					
72-Hour Drawdown Requirement Check: <input type="text" value="OK"/>							

**PARCEL O & PARCEL P
WATER QUALITY TREATMENT SUMMARY (06/28/2021)**

Nitsch Engineering has prepared this Water Quality Treatment Summary for the proposed Parcel O and Parcel P. In compliance with MassDEP Stormwater Management Standard #4, the proposed stormwater management system is designed to remove at least 80% of the average annual post-construction load of TSS prior to discharge. The stormwater management system is designed to remove at least 44% of the average annual post-construction TSS load prior to discharge to the infiltration systems because the Site is considered a LUHPPL.

A summary of treatment trains proposed to provide water quantity control and water quality improvement at the proposed project site is provided below.

Treatment Train A

Catchment Areas: 4S

Proprietary Water Quality Structure → Subsurface Infiltration → Discharge

Treatment Train B

Catchment Areas: 9S

Deep Sump & Hooded Catch Basin → Proprietary Water Quality Structure → Subsurface Infiltration → Discharge

Treatment Train C

Catchment Areas: 10S

Bioretention → Proprietary Water Quality Structure → Subsurface Infiltration → Discharge

Treatment Train A :
Proprietary Water Quality Structure → Subsurface Infiltration → Discharge

Pretreatment Spreadsheet

B BMP	C TSS Removal Rate	D Starting TSS Load	E Amount Removed (C*D)	F Remaining Load (D-E)
Proprietary Water Quality Structure	0.80	1.00	0.80	0.20

Total TSS Removal =

80%

Meets 44% TSS
removal pretreatment
requirement

Treatment Spreadsheet

B BMP	C TSS Removal Rate	D Starting TSS Load	E Amount Removed (C*D)	F Remaining Load (D-E)
Subsurface Infiltration	0.80	0.20	0.16	0.04

Total TSS Removal =

96%

Meets 80% TSS
removal requirement

Treatment Train B :

Deep Sump & Hooded Catch Basin → Proprietary Water Quality Structure → Subsurface Infiltration → Discharge

Pretreatment Spreadsheet

B BMP	C TSS Removal Rate	D Starting TSS Load	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump Hooded Catch Basin	0.25	1.00	0.25	0.75
Proprietary Water Quality Structure	0.80	0.75	0.60	0.15

Total TSS Removal =

85%

**Meets 44% TSS
removal pretreatment
requirement**

Treatment Spreadsheet

B BMP	C TSS Removal Rate	D Starting TSS Load	E Amount Removed (C*D)	F Remaining Load (D-E)
Subsurface Infiltration	0.80	0.15	0.12	0.03

Total TSS Removal =

97%

**Meets 80% TSS
removal requirement**

Treatment Train C:

Bioretention → Proprietary Water Quality Structure → Subsurface Infiltration → Discharge

Pretreatment Spreadsheet

B BMP	C TSS Removal Rate	D Starting TSS Load	E Amount Removed (C*D)	F Remaining Load (D-E)
Bioretention	0.90	1.00	0.90	0.10
Proprietary Water Quality Structure	0.80	0.10	0.08	0.02

Total TSS Removal =

85%

Meets 44% TSS
removal pretreatment
requirement

Treatment Spreadsheet

B BMP	C TSS Removal Rate	D Starting TSS Load	E Amount Removed (C*D)	F Remaining Load (D-E)
Subsurface Infiltration	0.80	0.02	0.01	0.01

Total TSS Removal =

99%

Meets 80% TSS
removal requirement



Nitsch Job # 14306
 Project: Parcel O & Parcel P
 Date: 6/29/2021

1" Calculation Sheet

This spreadsheet should be used to convert water quality volume to an equivalent water quality peak flow rate as outlined in the new MA DEP guidelines that take effect on October 15, 2013.

Glossary

Water Quality Flow Rate = WQF
 Water Quality Volume = WQV*
 unit peak discharge (csm/in) = qu**
 Impervious Area in watershed (square miles) = Ai

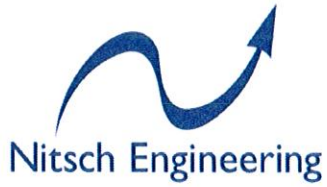
*WQV is expressed in watershed inches (you must use 1.0-inches in all cases with this method and not 0.5-inches)
 ** calculate the qu based on the time of concentration (see 1" - qu Table)

Compute Water Quality Flow with the following Equation

$WQF = (qu)(A)(WQV)$

Input Information (in colored cells only)

Site Plan Callout	Enter qu (from 1" - qu Table)	Enter Impervious Area (SF)	Ai (sq/mi)	WQV	WQF	
WQS1	= 774	12998	0.000466	1	=	0.36 cfs
WQS2	= 774	12978	0.000466	1	=	0.36 cfs
WQI1	= 774	2900	0.000104	1	=	0.08 cfs
WQI2	= 774	4033	0.000145	1	=	0.11 cfs
	=		0.000000	1	=	0.00 cfs
	=		0.000000	1	=	0.00 cfs
	=		0.000000	1	=	0.00 cfs
	=		0.000000	1	=	0.00 cfs
	=		0.000000	1	=	0.00 cfs
	=		0.000000	1	=	0.00 cfs



2 Center Plaza, Suite 430
Boston, MA 02108-1928
T: 617-338-0063
F: 617-338-6472
www.nitscheng.com

STANDARD 10: Illicit Discharge Compliance Statement

Project Name: Parcel O & Parcel P	Nitsch Project #: 14306
Location: Boston, MA	Checked by: CDH
Prepared by: PES	Sheet No. 1 of 1
Date: 06/25/2021	

Standard 10 states: All illicit discharges to the stormwater management system are prohibited.

This is to verify:

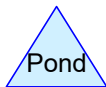
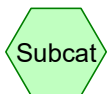
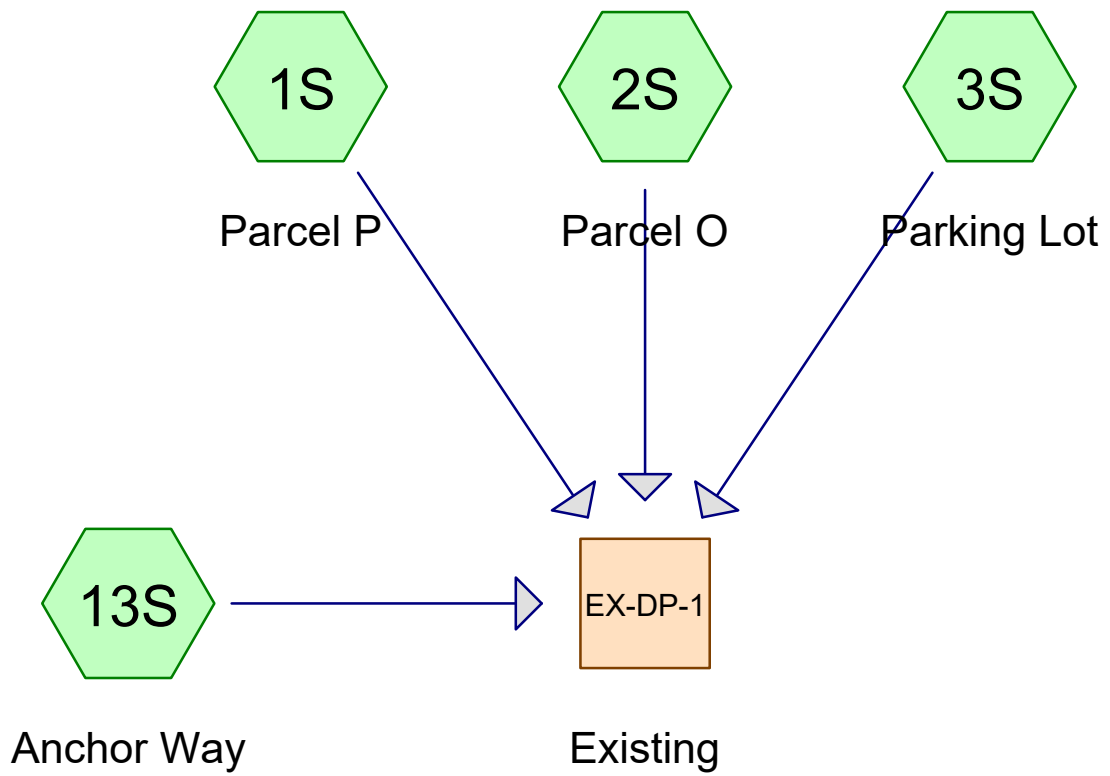
1. Based on the information available there are no known or suspected illicit discharges to the stormwater management system at the Parcel O and Parcel P site as defined in the MassDEP Stormwater Handbook.
2. The design of the stormwater system includes no proposed illicit discharges.

Christopher D. Hodney, PE

Date

APPENDIX B

Pre-Development Conditions – HydroCAD Calculations



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Printed 7/16/2021

Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.134	74	>75% Grass cover, Good, HSG C (1S, 2S, 3S)
1.623	98	Paved parking, HSG C (1S, 2S, 3S, 13S)
0.285	98	Roofs, HSG C (1S)
0.674	98	Unconnected roofs, HSG C (2S, 3S)
2.716	97	TOTAL AREA

14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Printed 7/16/2021

Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.716	HSG C	1S, 2S, 3S, 13S
0.000	HSG D	
0.000	Other	
2.716		TOTAL AREA

14306 - Drainage

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 4

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.134	0.000	0.000	0.134	>75% Grass cover, Good	1S, 2S, 3S
0.000	0.000	1.623	0.000	0.000	1.623	Paved parking	1S, 2S, 3S, 13S
0.000	0.000	0.285	0.000	0.000	0.285	Roofs	1S
0.000	0.000	0.674	0.000	0.000	0.674	Unconnected roofs	2S, 3S
0.000	0.000	2.716	0.000	0.000	2.716	TOTAL AREA	

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 5

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: Parcel P Runoff Area=35,788 sf 92.16% Impervious Runoff Depth=2.72"
Tc=6.0 min CN=96 Runoff=2.31 cfs 0.186 af

Subcatchment2S: Parcel O Runoff Area=45,885 sf 96.33% Impervious Runoff Depth=2.83"
Tc=6.0 min CN=97 Runoff=3.02 cfs 0.248 af

Subcatchment3S: Parking Lot Runoff Area=33,440 sf 96.03% Impervious Runoff Depth=2.83"
Tc=6.0 min CN=97 Runoff=2.20 cfs 0.181 af

Subcatchment13S: AnchorWay Runoff Area=0.073 ac 100.00% Impervious Runoff Depth=2.94"
Tc=0.0 min CN=98 Runoff=0.24 cfs 0.018 af

Reach EX-DP-1: Existing Inflow=7.56 cfs 0.633 af
Outflow=7.56 cfs 0.633 af

Total Runoff Area = 2.716 ac Runoff Volume = 0.633 af Average Runoff Depth = 2.80"
4.92% Pervious = 0.134 ac 95.08% Impervious = 2.582 ac

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 6

Summary for Subcatchment 1S: Parcel P

Runoff = 2.31 cfs @ 12.13 hrs, Volume= 0.186 af, Depth= 2.72"

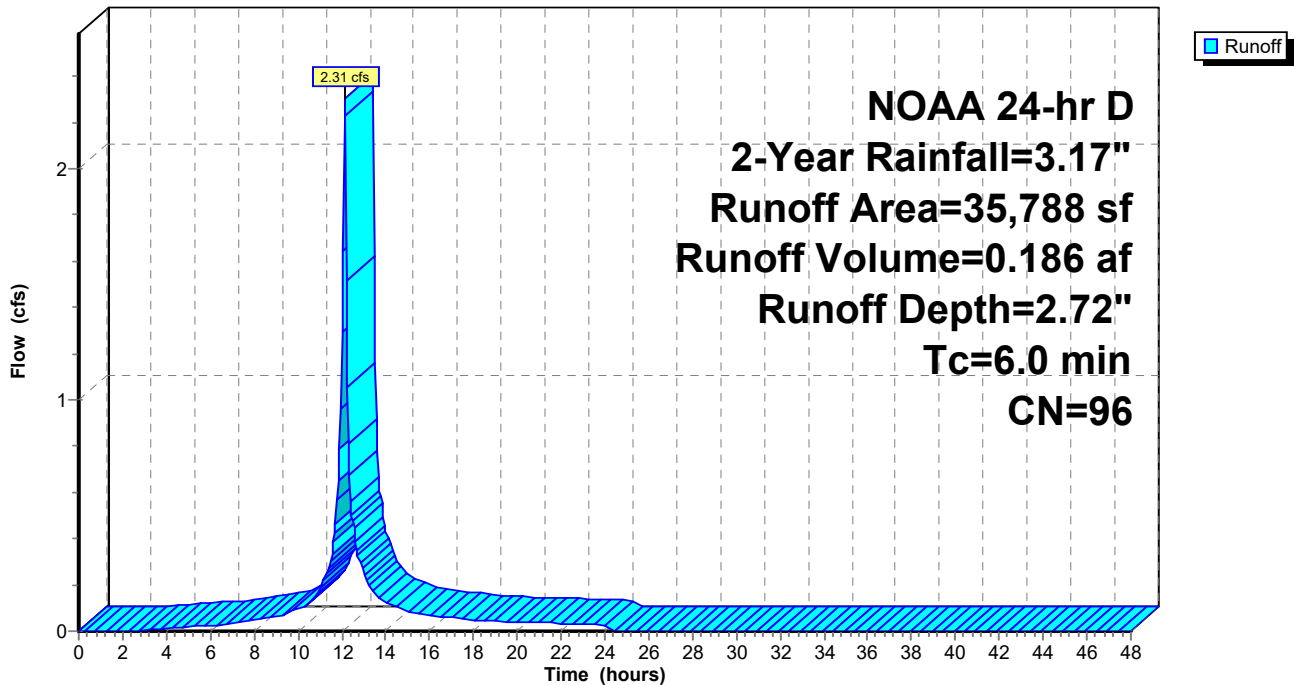
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
12,420	98	Roofs, HSG C
20,561	98	Paved parking, HSG C
2,807	74	>75% Grass cover, Good, HSG C
35,788	96	Weighted Average
2,807		7.84% Pervious Area
32,981		92.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1S: Parcel P

Hydrograph



14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 7

Summary for Subcatchment 2S: Parcel O

Runoff = 3.02 cfs @ 12.13 hrs, Volume= 0.248 af, Depth= 2.83"

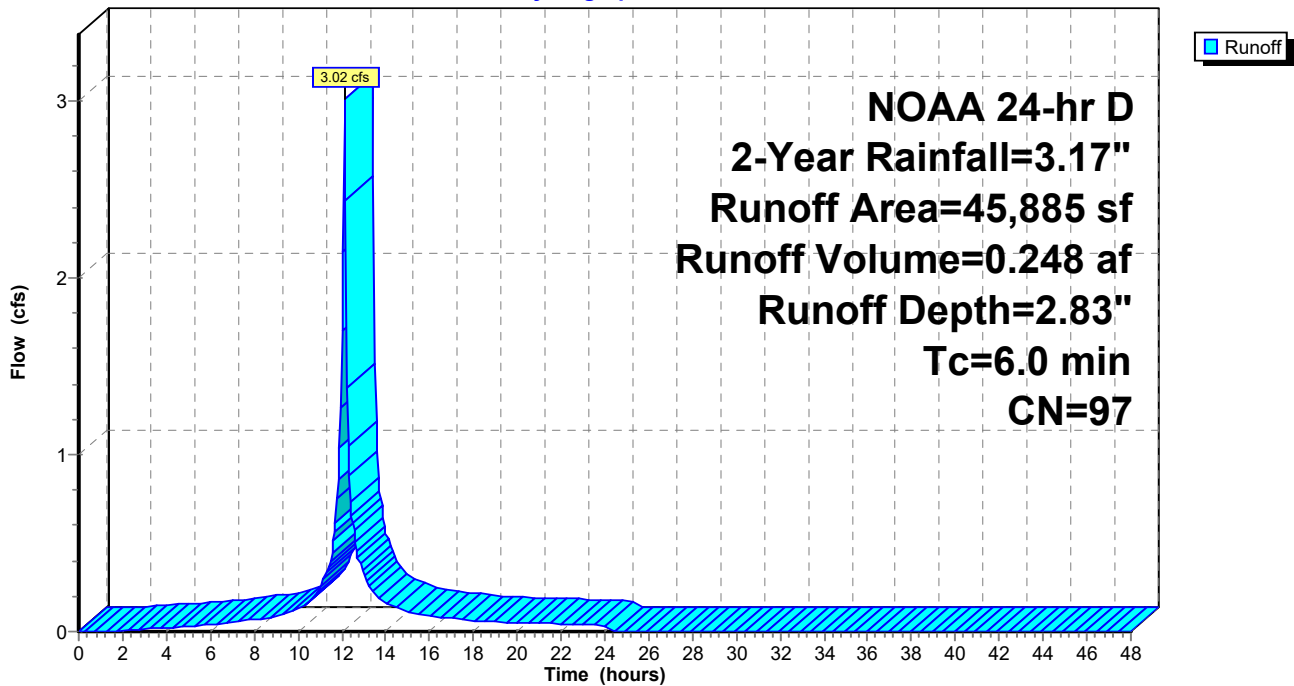
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
28,597	98	Unconnected roofs, HSG C
1,682	74	>75% Grass cover, Good, HSG C
15,606	98	Paved parking, HSG C
45,885	97	Weighted Average
1,682		3.67% Pervious Area
44,203		96.33% Impervious Area
28,597		64.69% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2S: Parcel O

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 8

Summary for Subcatchment 3S: Parking Lot

Runoff = 2.20 cfs @ 12.13 hrs, Volume= 0.181 af, Depth= 2.83"

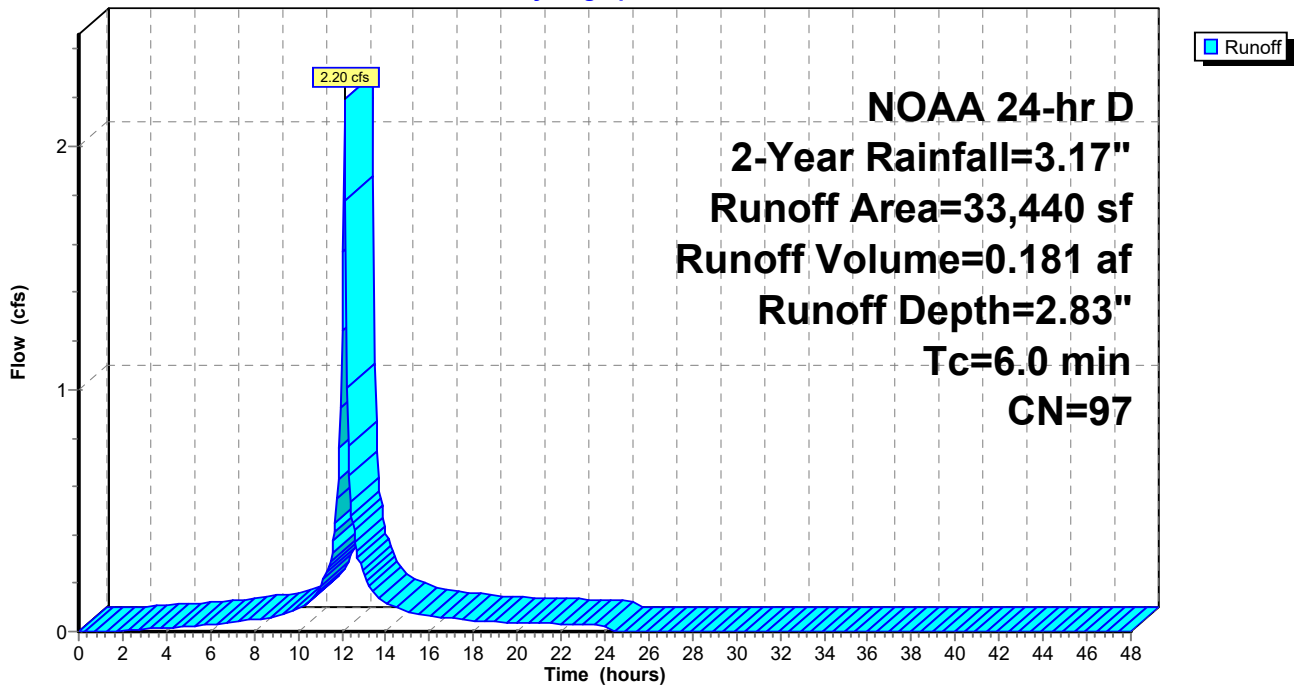
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
741	98	Unconnected roofs, HSG C
1,328	74	>75% Grass cover, Good, HSG C
31,371	98	Paved parking, HSG C
33,440	97	Weighted Average
1,328		3.97% Pervious Area
32,112		96.03% Impervious Area
741		2.31% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3S: Parking Lot

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 9

Summary for Subcatchment 13S: Anchor Way

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

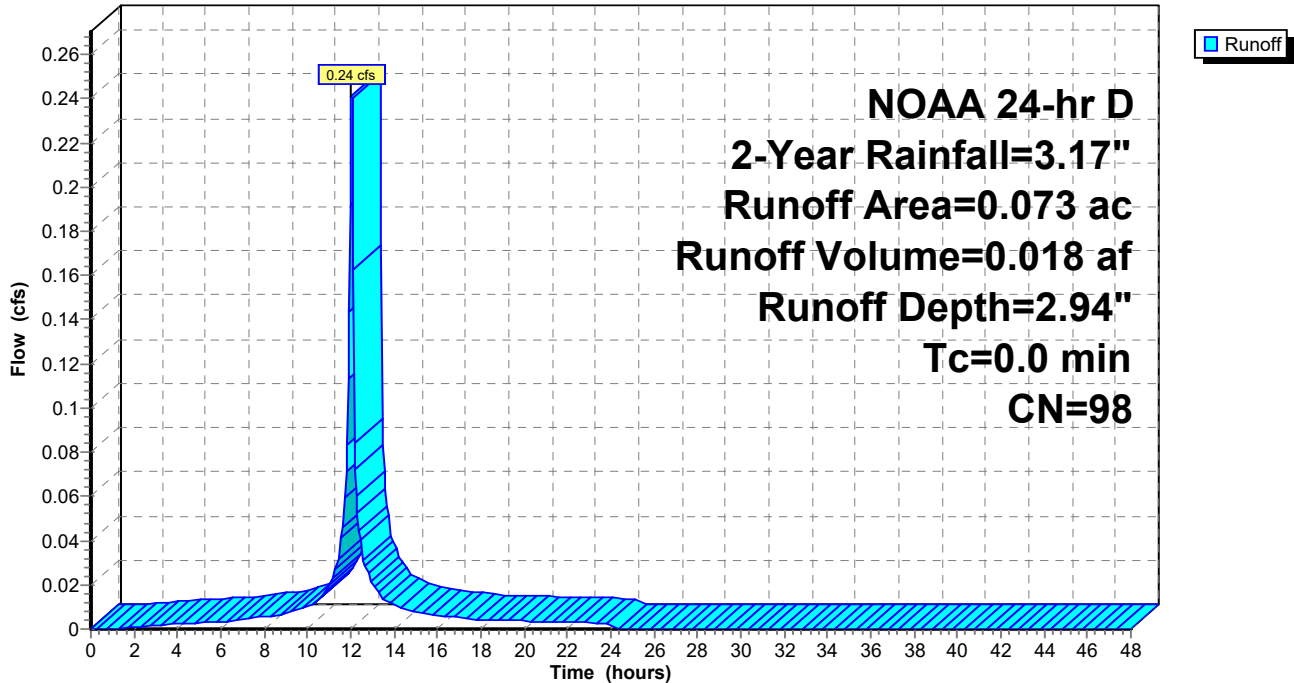
Runoff = 0.24 cfs @ 12.04 hrs, Volume= 0.018 af, Depth= 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.17"

Area (ac)	CN	Description
0.073	98	Paved parking, HSG C
0.073		100.00% Impervious Area

Subcatchment 13S: Anchor Way

Hydrograph



Summary for Reach EX-DP-1: Existing

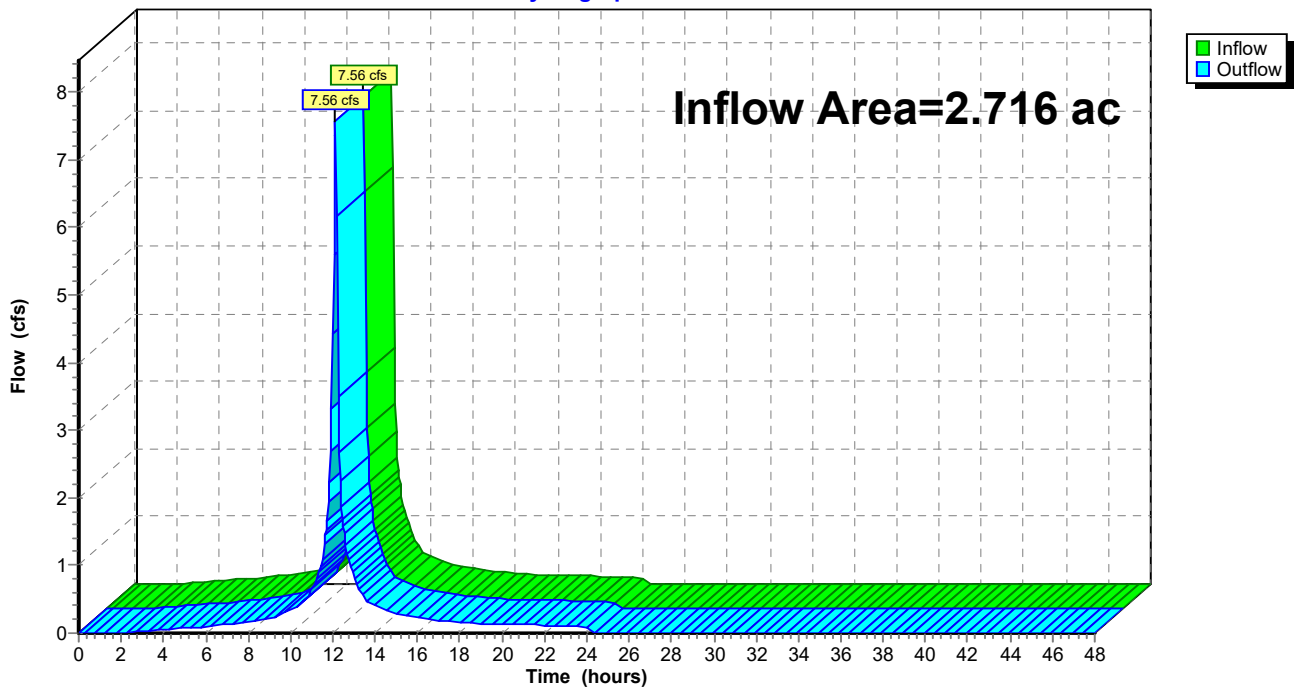
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.716 ac, 95.08% Impervious, Inflow Depth = 2.80" for 2-Year event
Inflow = 7.56 cfs @ 12.12 hrs, Volume= 0.633 af
Outflow = 7.56 cfs @ 12.12 hrs, Volume= 0.633 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3

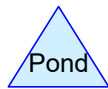
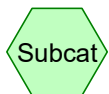
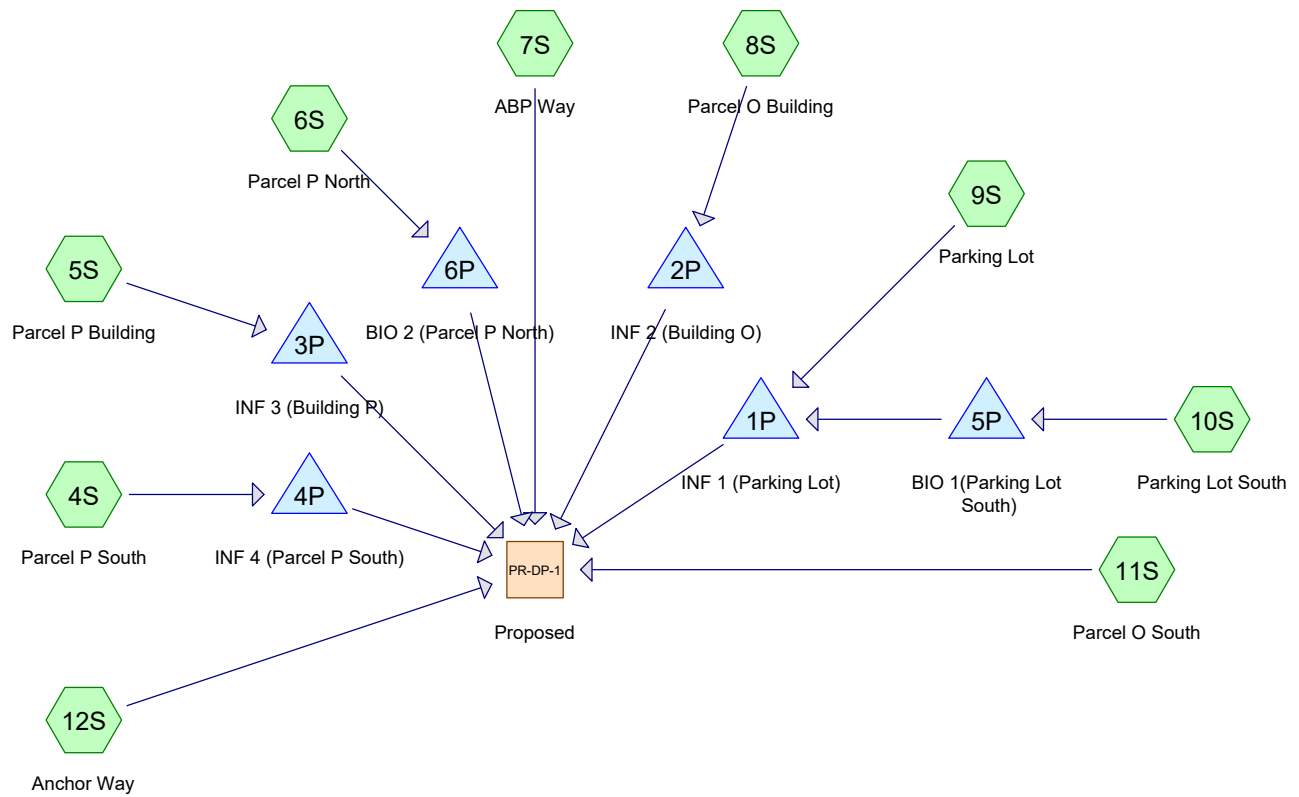
Reach EX-DP-1: Existing

Hydrograph



APPENDIX C

Post-Development Conditions – HydroCAD Calculations



Routing Diagram for 14306 - Drainage
 Prepared by {enter your company name here}, Printed 7/16/2021
 HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Printed 7/16/2021

Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.195	74	>75% Grass cover, Good, HSG C (4S, 6S, 8S, 9S, 10S, 11S)
1.426	98	Paved parking, HSG C (4S, 6S, 7S, 8S, 9S, 10S, 11S, 12S)
1.002	98	Unconnected roofs, HSG C (5S, 8S)
2.623	96	TOTAL AREA

14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Printed 7/16/2021

Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.623	HSG C	4S, 5S, 6S, 7S, 8S, 9S, 10S, 11S, 12S
0.000	HSG D	
0.000	Other	
2.623		TOTAL AREA

14306 - Drainage

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 4

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.195	0.000	0.000	0.195	>75% Grass cover, Good	4S, 6S, 8S, 9S, 10S, 11S
0.000	0.000	1.426	0.000	0.000	1.426	Paved parking	4S, 6S, 7S, 8S, 9S, 10S, 11S, 12S
0.000	0.000	1.002	0.000	0.000	1.002	Unconnected roofs	5S, 8S
0.000	0.000	2.623	0.000	0.000	2.623	TOTAL AREA	

14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Printed 7/16/2021

Page 5

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	13.00	12.60	35.0	0.0114	0.013	12.0	0.0	0.0
2	2P	12.80	12.28	33.0	0.0158	0.013	12.0	0.0	0.0
3	3P	12.60	12.50	7.0	0.0143	0.013	12.0	0.0	0.0
4	4P	13.80	13.17	70.0	0.0090	0.013	12.0	0.0	0.0
5	5P	13.25	12.90	65.0	0.0054	0.013	12.0	0.0	0.0
6	6P	12.90	12.50	38.0	0.0105	0.013	12.0	0.0	0.0

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 6

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points x 3
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment4S: Parcel P South	Runoff Area=10,631 sf 88.19% Impervious Runoff Depth=2.62" Tc=6.0 min CN=95 Runoff=0.67 cfs 0.053 af
Subcatchment5S: Parcel P Building	Runoff Area=12,421 sf 100.00% Impervious Runoff Depth=2.94" Tc=6.0 min CN=98 Runoff=0.83 cfs 0.070 af
Subcatchment6S: Parcel P North	Runoff Area=7,274 sf 75.58% Impervious Runoff Depth=2.32" Tc=6.0 min CN=92 Runoff=0.42 cfs 0.032 af
Subcatchment7S: ABP Way	Runoff Area=8,862 sf 100.00% Impervious Runoff Depth=2.94" Tc=6.0 min CN=98 Runoff=0.59 cfs 0.050 af
Subcatchment8S: Parcel O Building	Runoff Area=34,198 sf 99.94% Impervious Runoff Depth=2.94" Tc=6.0 min CN=98 Runoff=2.28 cfs 0.192 af
Subcatchment9S: Parking Lot	Runoff Area=26,117 sf 96.06% Impervious Runoff Depth=2.83" Tc=6.0 min CN=97 Runoff=1.72 cfs 0.141 af
Subcatchment10S: Parking Lot South	Runoff Area=8,724 sf 67.41% Impervious Runoff Depth=2.14" Tc=6.0 min CN=90 Runoff=0.48 cfs 0.036 af
Subcatchment11S: Parcel O South	Runoff Area=2,852 sf 45.41% Impervious Runoff Depth=1.73" Tc=6.0 min CN=85 Runoff=0.13 cfs 0.009 af
Subcatchment12S: Anchor Way	Runoff Area=0.073 ac 100.00% Impervious Runoff Depth=2.94" Tc=0.0 min CN=98 Runoff=0.24 cfs 0.018 af
Reach PR-DP-1: Proposed	Inflow=0.85 cfs 0.127 af Outflow=0.85 cfs 0.127 af
Pond 1P: INF 1 (Parking Lot)	Peak Elev=13.91' Storage=2,620 cf Inflow=1.72 cfs 0.141 af Discarded=0.06 cfs 0.124 af Primary=0.27 cfs 0.017 af Outflow=0.33 cfs 0.141 af
Pond 2P: INF 2 (Building O)	Peak Elev=14.25' Storage=3,769 cf Inflow=2.28 cfs 0.192 af Discarded=0.07 cfs 0.172 af Primary=0.26 cfs 0.020 af Outflow=0.33 cfs 0.192 af
Pond 3P: INF 3 (Building P)	Peak Elev=13.87' Storage=1,314 cf Inflow=0.83 cfs 0.070 af Discarded=0.03 cfs 0.064 af Primary=0.10 cfs 0.006 af Outflow=0.13 cfs 0.070 af
Pond 4P: INF 4 (Parcel P South)	Peak Elev=13.94' Storage=1,028 cf Inflow=0.67 cfs 0.053 af Discarded=0.02 cfs 0.047 af Primary=0.07 cfs 0.006 af Outflow=0.09 cfs 0.053 af
Pond 5P: BIO 1(Parking Lot South)	Peak Elev=14.02' Storage=485 cf Inflow=0.48 cfs 0.036 af Discarded=0.11 cfs 0.036 af Primary=0.00 cfs 0.000 af Outflow=0.11 cfs 0.036 af
Pond 6P: BIO 2 (Parcel P North)	Peak Elev=15.35' Storage=519 cf Inflow=0.42 cfs 0.032 af Discarded=0.07 cfs 0.032 af Primary=0.00 cfs 0.000 af Outflow=0.07 cfs 0.032 af

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 7

Total Runoff Area = 2.623 ac Runoff Volume = 0.602 af Average Runoff Depth = 2.75"
7.42% Pervious = 0.195 ac 92.58% Impervious = 2.428 ac

14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 8

Summary for Subcatchment 4S: Parcel P South

Runoff = 0.67 cfs @ 12.13 hrs, Volume= 0.053 af, Depth= 2.62"

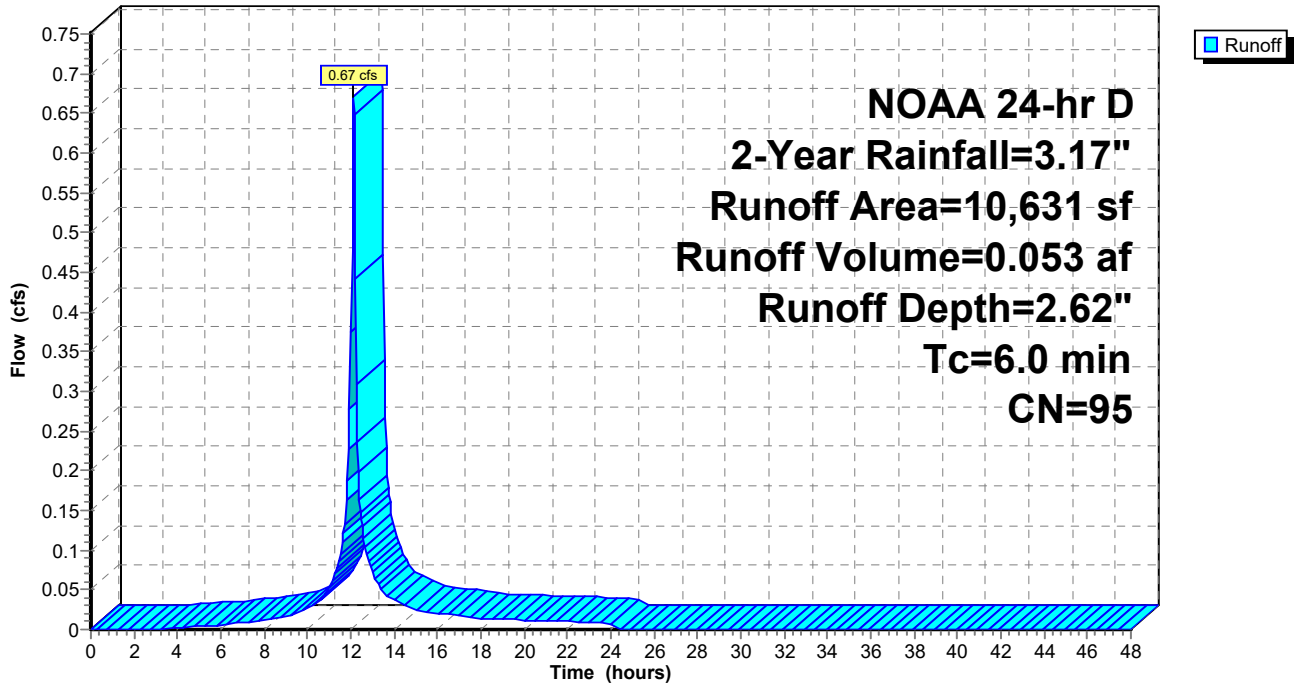
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
1,256	74	>75% Grass cover, Good, HSG C
9,375	98	Paved parking, HSG C
10,631	95	Weighted Average
1,256		11.81% Pervious Area
9,375		88.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4S: Parcel P South

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 9

Summary for Subcatchment 5S: Parcel P Building

Runoff = 0.83 cfs @ 12.13 hrs, Volume= 0.070 af, Depth= 2.94"

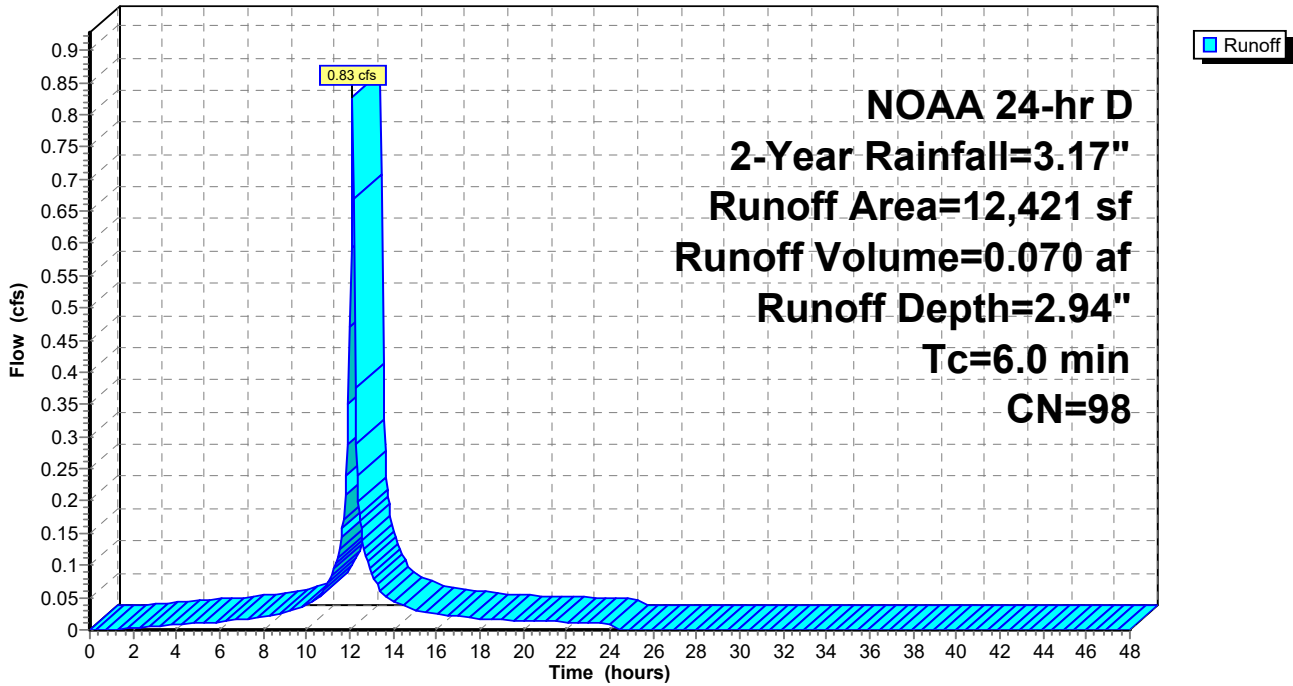
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
12,421	98	Unconnected roofs, HSG C
12,421		100.00% Impervious Area
12,421		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 5S: Parcel P Building

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 10

Summary for Subcatchment 6S: Parcel P North

Runoff = 0.42 cfs @ 12.13 hrs, Volume= 0.032 af, Depth= 2.32"

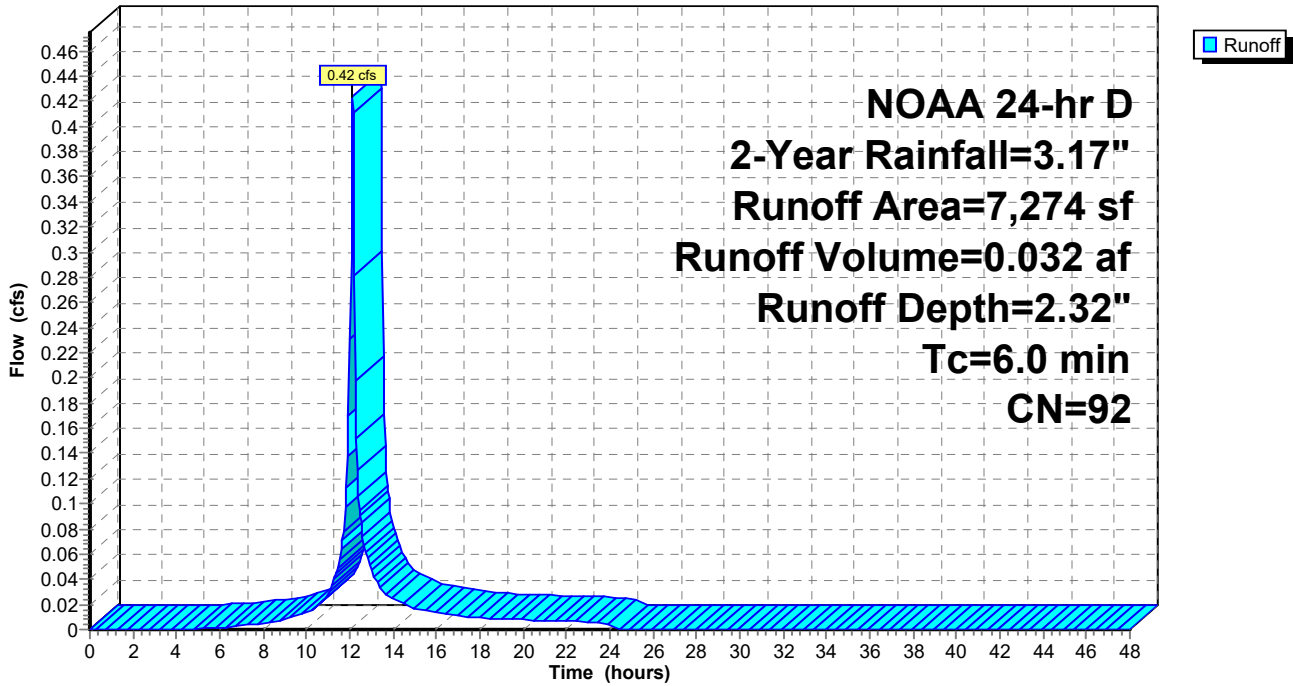
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
1,776	74	>75% Grass cover, Good, HSG C
5,498	98	Paved parking, HSG C
7,274	92	Weighted Average
1,776		24.42% Pervious Area
5,498		75.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 6S: Parcel P North

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 11

Summary for Subcatchment 7S: ABP Way

Runoff = 0.59 cfs @ 12.13 hrs, Volume= 0.050 af, Depth= 2.94"

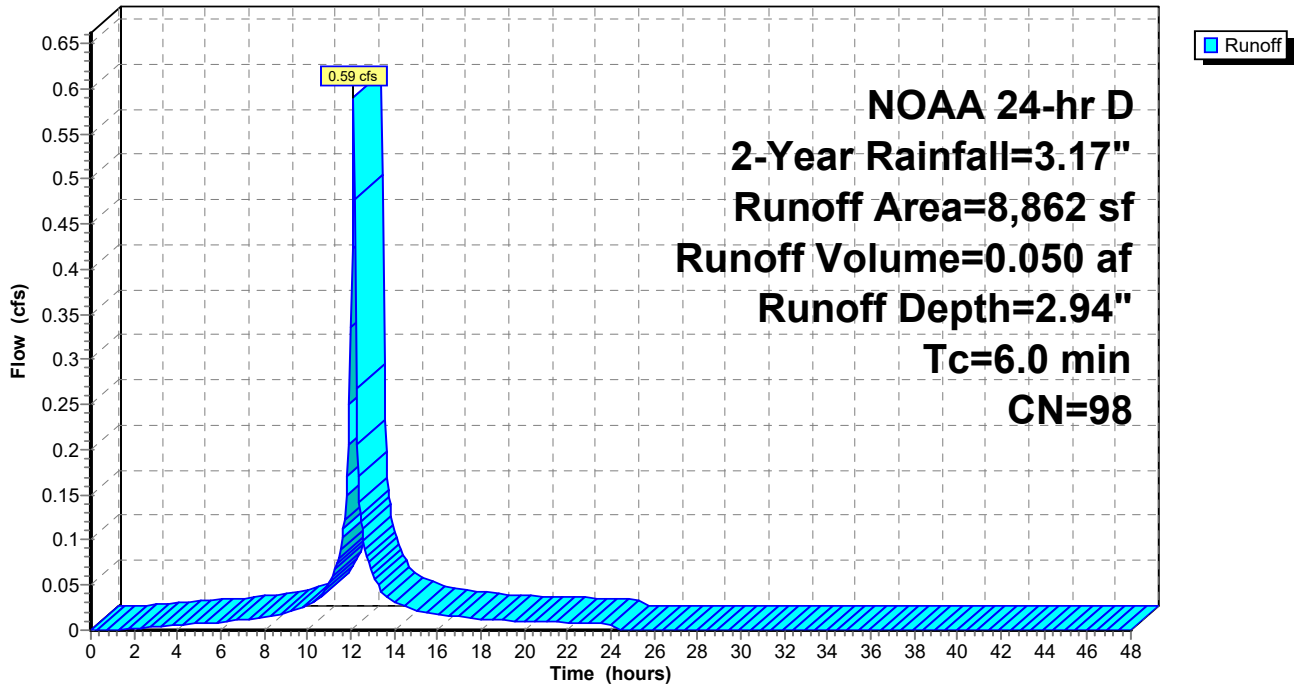
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
8,862	98	Paved parking, HSG C
8,862		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 7S: ABP Way

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 12

Summary for Subcatchment 8S: Parcel O Building

Runoff = 2.28 cfs @ 12.13 hrs, Volume= 0.192 af, Depth= 2.94"

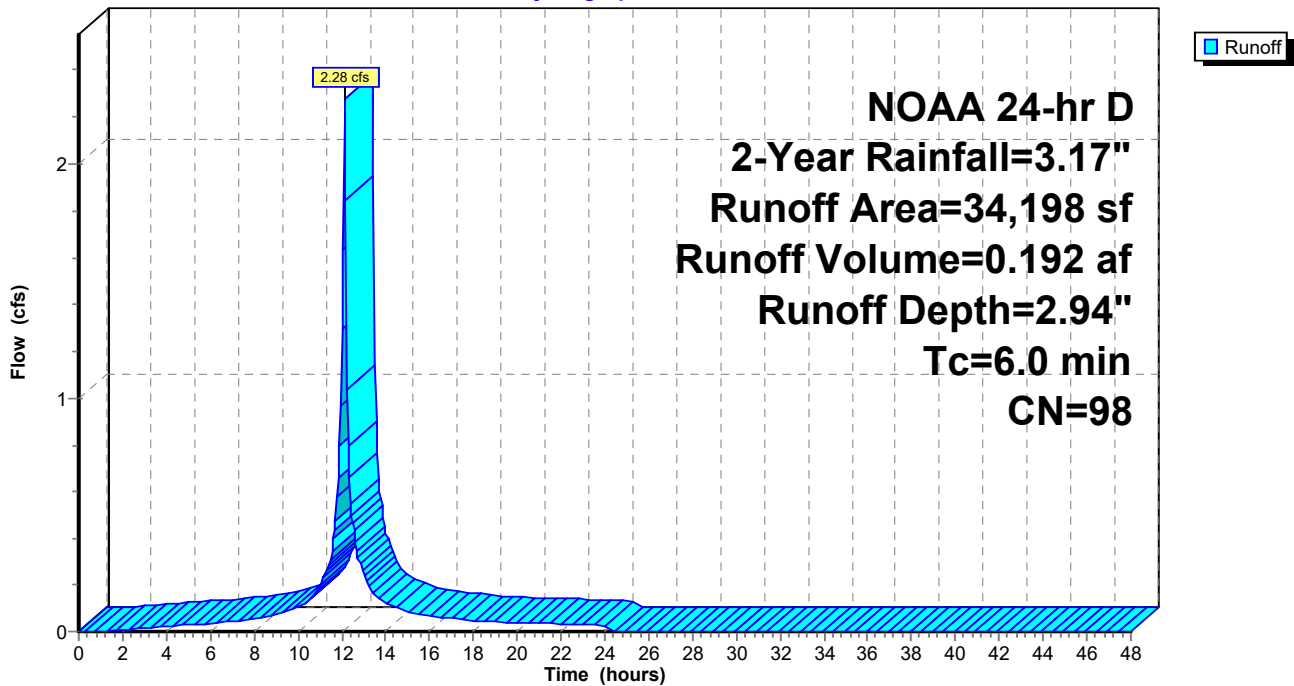
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
31,233	98	Unconnected roofs, HSG C
20	74	>75% Grass cover, Good, HSG C
2,945	98	Paved parking, HSG C
34,198	98	Weighted Average
20		0.06% Pervious Area
34,178		99.94% Impervious Area
31,233		91.38% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 8S: Parcel O Building

Hydrograph



14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 13

Summary for Subcatchment 9S: Parking Lot

Runoff = 1.72 cfs @ 12.13 hrs, Volume= 0.141 af, Depth= 2.83"

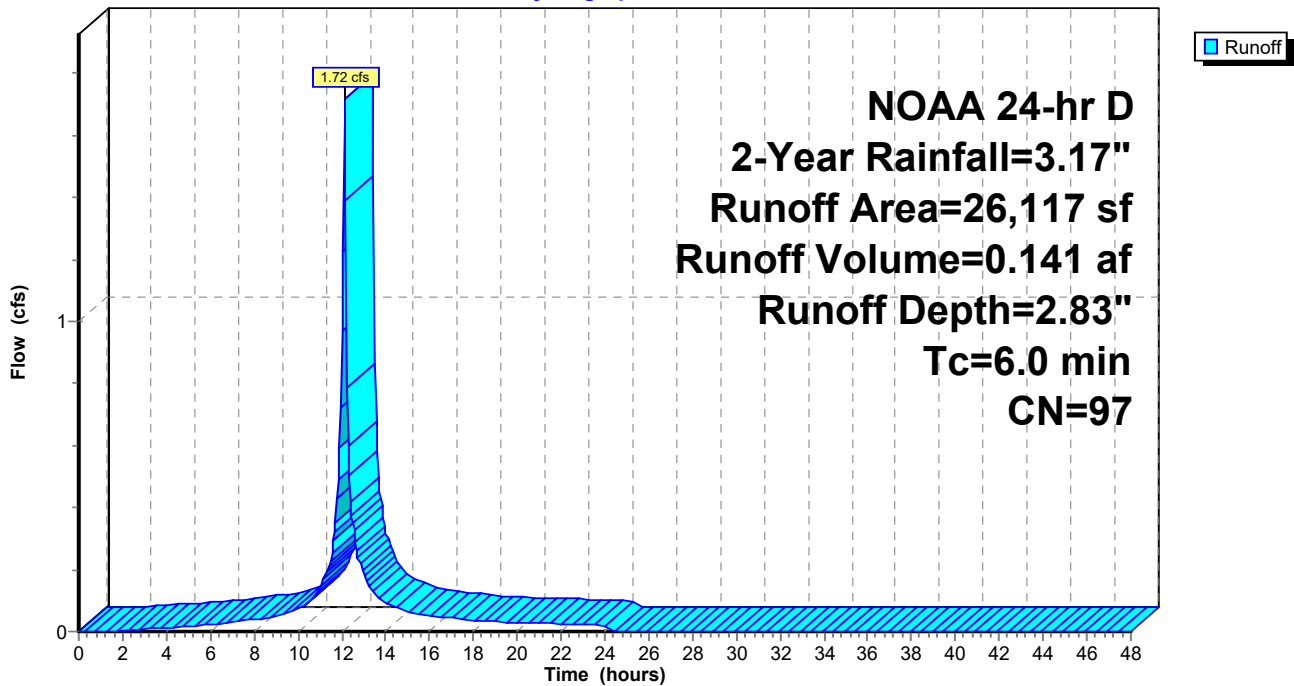
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
25,088	98	Paved parking, HSG C
1,029	74	>75% Grass cover, Good, HSG C
26,117	97	Weighted Average
1,029		3.94% Pervious Area
25,088		96.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 9S: Parking Lot

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 14

Summary for Subcatchment 10S: Parking Lot South

Runoff = 0.48 cfs @ 12.13 hrs, Volume= 0.036 af, Depth= 2.14"

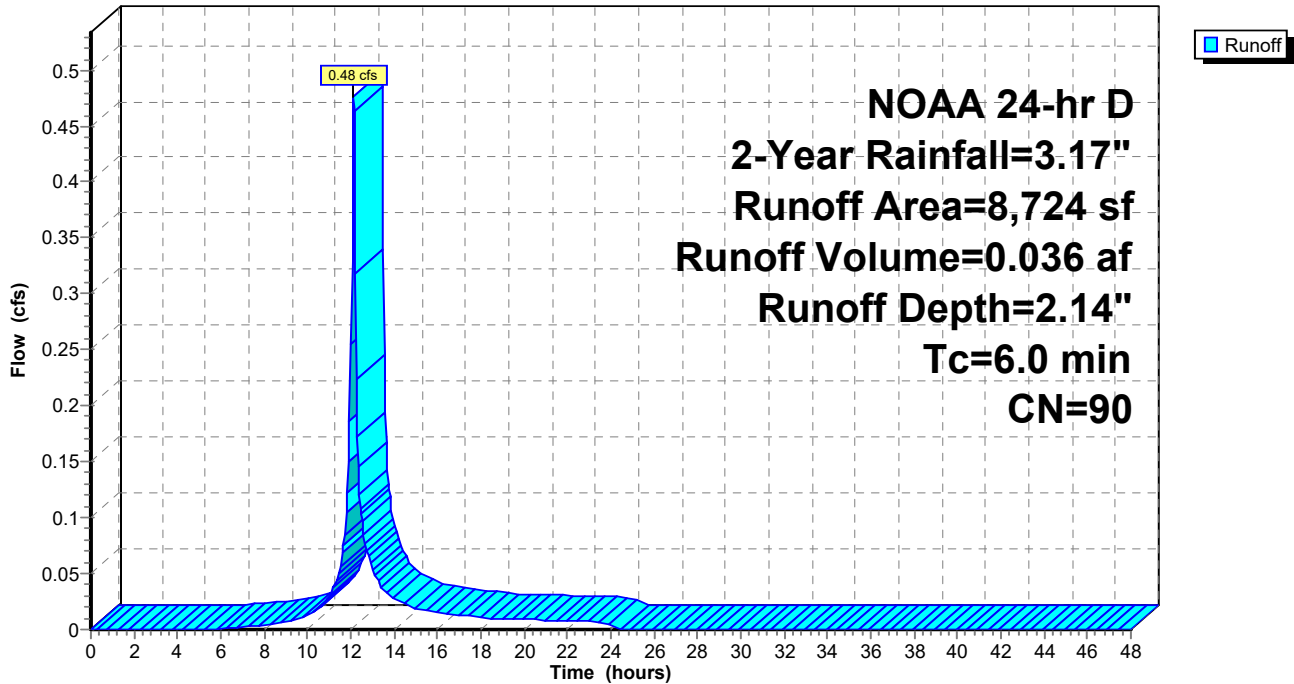
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
2,843	74	>75% Grass cover, Good, HSG C
5,881	98	Paved parking, HSG C
8,724	90	Weighted Average
2,843		32.59% Pervious Area
5,881		67.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 10S: Parking Lot South

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 15

Summary for Subcatchment 11S: Parcel O South

Runoff = 0.13 cfs @ 12.13 hrs, Volume= 0.009 af, Depth= 1.73"

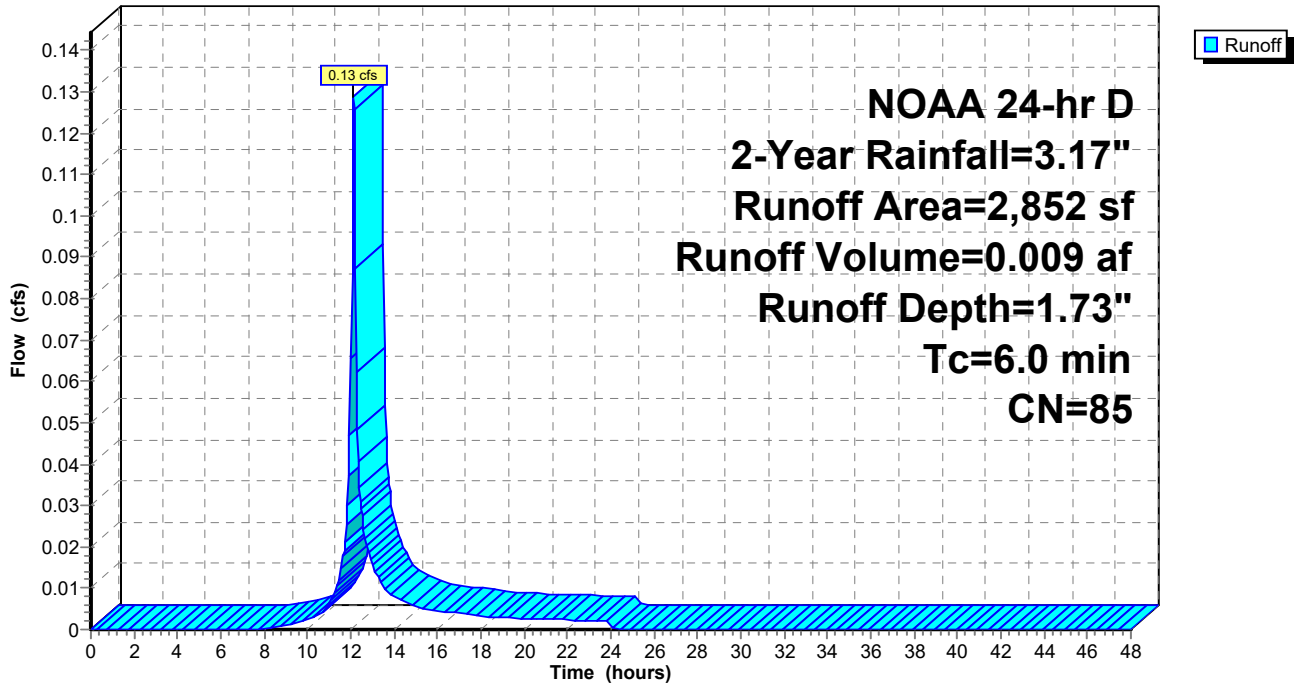
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D 2-Year Rainfall=3.17"

Area (sf)	CN	Description
1,557	74	>75% Grass cover, Good, HSG C
1,295	98	Paved parking, HSG C
2,852	85	Weighted Average
1,557		54.59% Pervious Area
1,295		45.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 11S: Parcel O South

Hydrograph



14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 16

Summary for Subcatchment 12S: Anchor Way

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

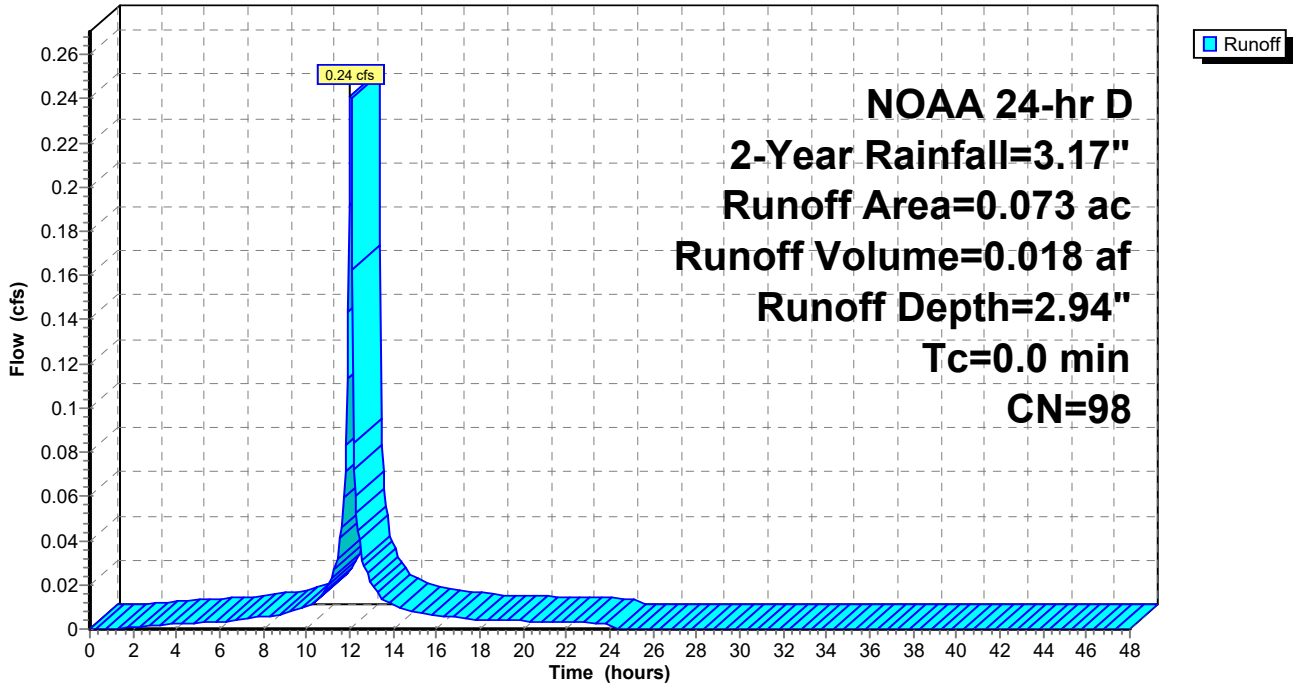
Runoff = 0.24 cfs @ 12.04 hrs, Volume= 0.018 af, Depth= 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.17"

Area (ac)	CN	Description
0.073	98	Paved parking, HSG C
0.073		100.00% Impervious Area

Subcatchment 12S: Anchor Way

Hydrograph



Summary for Reach PR-DP-1: Proposed

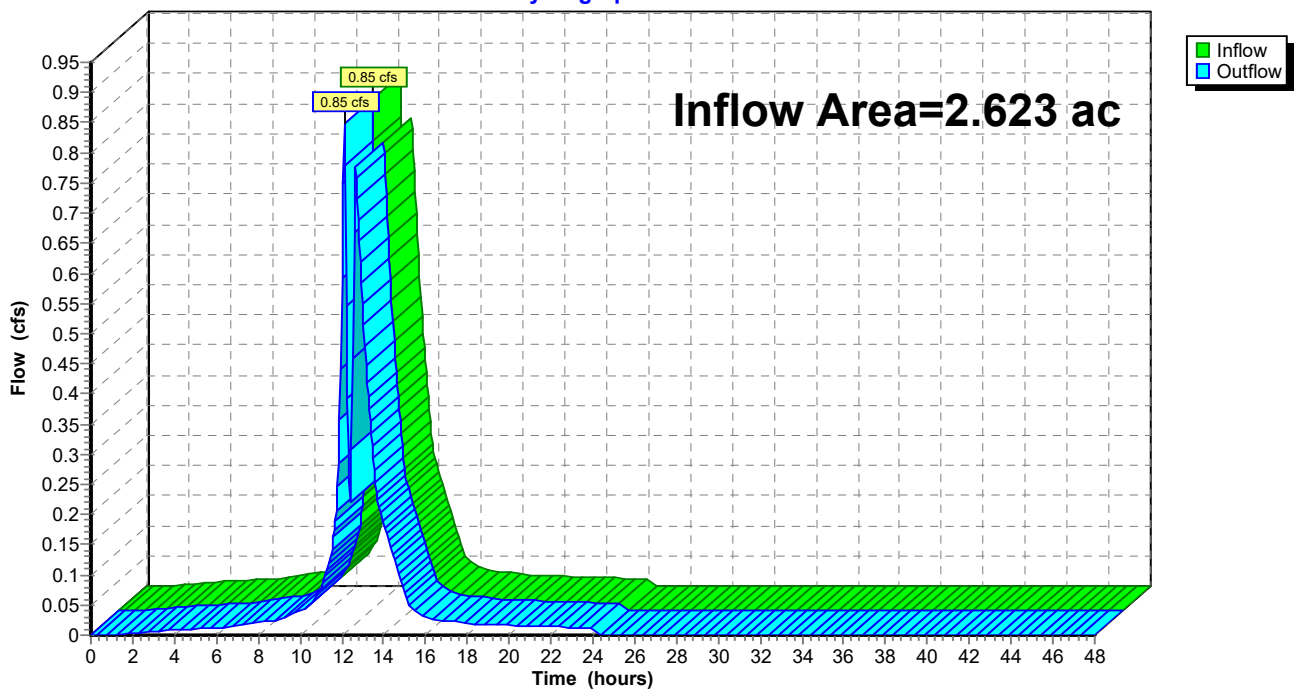
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.623 ac, 92.58% Impervious, Inflow Depth = 0.58" for 2-Year event
Inflow = 0.85 cfs @ 12.10 hrs, Volume= 0.127 af
Outflow = 0.85 cfs @ 12.10 hrs, Volume= 0.127 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3

Reach PR-DP-1: Proposed

Hydrograph



14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 18

Summary for Pond 1P: INF 1 (Parking Lot)

Inflow Area = 0.800 ac, 88.89% Impervious, Inflow Depth = 2.12" for 2-Year event
 Inflow = 1.72 cfs @ 12.13 hrs, Volume= 0.141 af
 Outflow = 0.33 cfs @ 12.57 hrs, Volume= 0.141 af, Atten= 81%, Lag= 26.4 min
 Discarded = 0.06 cfs @ 10.00 hrs, Volume= 0.124 af
 Primary = 0.27 cfs @ 12.57 hrs, Volume= 0.017 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 13.91' @ 12.57 hrs Surf.Area= 2,344 sf Storage= 2,620 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 368.2 min (1,137.3 - 769.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	11.50'	2,239 cf	34.83'W x 67.28'L x 3.75'H Field A 8,788 cf Overall - 1,327 cf Embedded = 7,462 cf x 30.0% Voids
#2A	12.00'	1,327 cf	ADS_StormTech SC-310 +Cap x 90 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 10 Rows of 9 Chambers
		3,565 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	11.50'	1.020 in/hr Exfiltration over Surface area
#2	Device 3	13.83'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	13.00'	12.0" Round Culvert L= 35.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.00' / 12.60' S= 0.0114 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.06 cfs @ 10.00 hrs HW=11.54' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.26 cfs @ 12.57 hrs HW=13.90' TW=0.00' (Dynamic Tailwater)
 ↑**3=Culvert** (Passes 0.26 cfs of 1.91 cfs potential flow)
 ↑**2=Sharp-Crested Rectangular Weir**(Weir Controls 0.26 cfs @ 0.89 fps)

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 19

Pond 1P: INF 1 (Parking Lot) - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-310 +Cap (ADS StormTech®SC-310 with cap length)

Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf

Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 6.0" Spacing = 40.0" C-C Row Spacing

9 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 65.28' Row Length +12.0" End Stone x 2 = 67.28' Base Length

10 Rows x 34.0" Wide + 6.0" Spacing x 9 + 12.0" Side Stone x 2 = 34.83' Base Width

6.0" Base + 16.0" Chamber Height + 23.0" Cover = 3.75' Field Height

90 Chambers x 14.7 cf = 1,326.8 cf Chamber Storage

8,788.5 cf Field - 1,326.8 cf Chambers = 7,461.7 cf Stone x 30.0% Voids = 2,238.5 cf Stone Storage

Chamber Storage + Stone Storage = 3,565.3 cf = 0.082 af

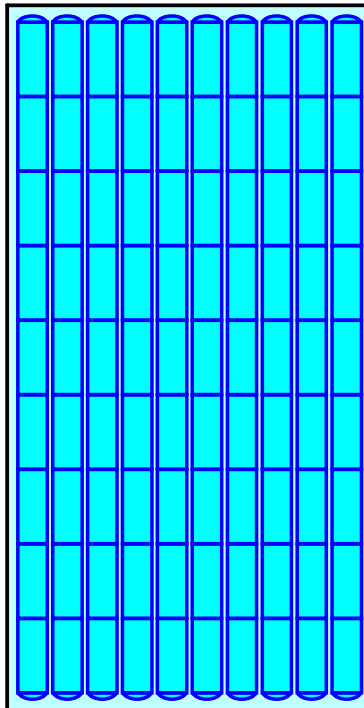
Overall Storage Efficiency = 40.6%

Overall System Size = 67.28' x 34.83' x 3.75'

90 Chambers

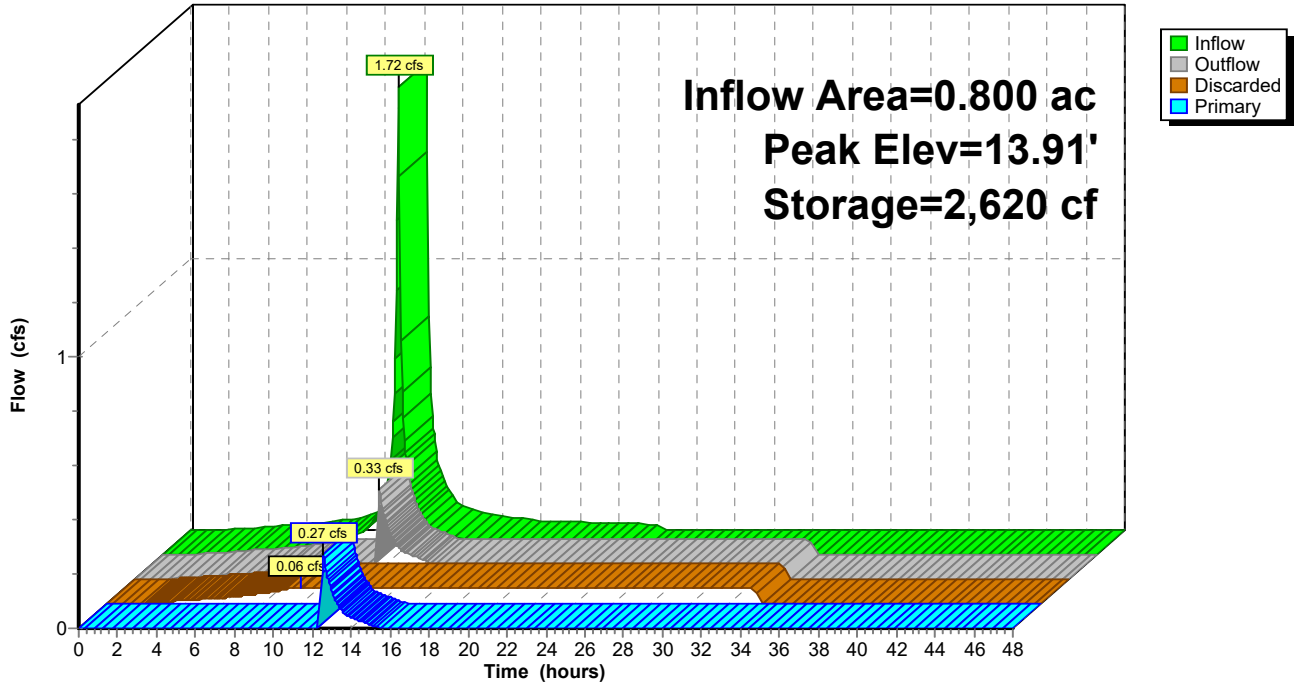
325.5 cy Field

276.4 cy Stone



Pond 1P: INF 1 (Parking Lot)

Hydrograph



14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 21

Summary for Pond 2P: INF 2 (Building O)

Inflow Area = 0.785 ac, 99.94% Impervious, Inflow Depth = 2.94" for 2-Year event
 Inflow = 2.28 cfs @ 12.13 hrs, Volume= 0.192 af
 Outflow = 0.33 cfs @ 12.71 hrs, Volume= 0.192 af, Atten= 86%, Lag= 34.8 min
 Discarded = 0.07 cfs @ 9.65 hrs, Volume= 0.172 af
 Primary = 0.26 cfs @ 12.71 hrs, Volume= 0.020 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 14.25' @ 12.71 hrs Surf.Area= 2,855 sf Storage= 3,769 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 435.2 min (1,193.7 - 758.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	11.50'	2,421 cf	30.48'W x 93.67'L x 3.83'H Field A 10,946 cf Overall - 2,874 cf Embedded = 8,071 cf x 30.0% Voids
#2A	11.83'	2,272 cf	ADS N-12 24" x 32 Inside #1 Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf Row Length Adjustment= +5.00' x 3.10 sf x 8 rows 26.48' Header x 3.10 sf x 2 = 164.2 cf Inside
		4,694 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	11.50'	1.020 in/hr Exfiltration over Surface area
#2	Primary	12.80'	12.0" Round Culvert L= 33.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.80' / 12.28' S= 0.0158 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	14.18'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Discarded OutFlow Max=0.07 cfs @ 9.65 hrs HW=11.54' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.07 cfs)

Primary OutFlow Max=0.26 cfs @ 12.71 hrs HW=14.25' TW=0.00' (Dynamic Tailwater)

↑2=Culvert (Passes 0.26 cfs of 2.92 cfs potential flow)

↑3=Sharp-Crested Rectangular Weir(Weir Controls 0.26 cfs @ 0.89 fps)

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 22

Pond 2P: INF 2 (Building O) - Chamber Wizard Field A

Chamber Model = ADS N-12 24" (ADS N-12® Pipe)

Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf

Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf

Row Length Adjustment= +5.00' x 3.10 sf x 8 rows

28.0" Wide + 13.4" Spacing = 41.4" C-C Row Spacing

4 Chambers/Row x 20.00' Long +5.00' Row Adjustment +2.33' Header x 2 = 89.67' Row Length +24.0"

End Stone x 2 = 93.67' Base Length

8 Rows x 28.0" Wide + 13.4" Spacing x 7 + 24.0" Side Stone x 2 = 30.48' Base Width

4.0" Base + 28.0" Chamber Height + 14.0" Cover = 3.83' Field Height

32 Chambers x 62.0 cf +5.00' Row Adjustment x 3.10 sf x 8 Rows + 26.48' Header x 3.10 sf x 2 = 2,272.2 cf Chamber Storage

32 Chambers x 78.4 cf +5.00' Row Adjustment x 3.92 sf x 8 Rows + 26.48' Header x 3.92 sf x 2 = 2,874.2 cf Displacement

10,945.5 cf Field - 2,874.2 cf Chambers = 8,071.3 cf Stone x 30.0% Voids = 2,421.4 cf Stone Storage

Chamber Storage + Stone Storage = 4,693.6 cf = 0.108 af

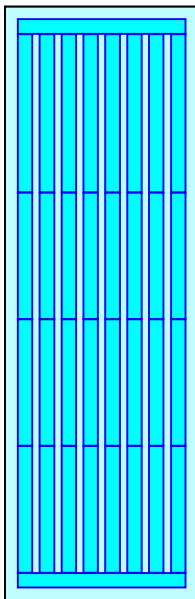
Overall Storage Efficiency = 42.9%

Overall System Size = 93.67' x 30.48' x 3.83'

32 Chambers

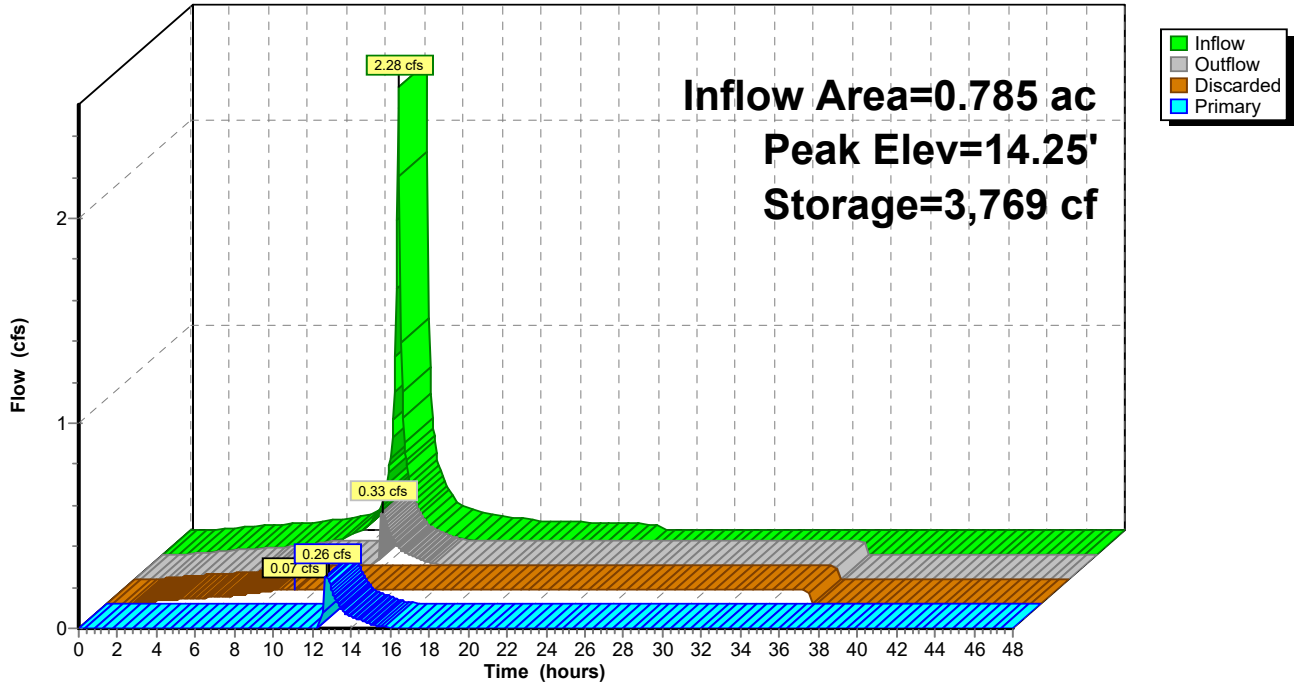
405.4 cy Field

298.9 cy Stone



Pond 2P: INF 2 (Building O)

Hydrograph



14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 24

Summary for Pond 3P: INF 3 (Building P)

Inflow Area = 0.285 ac, 100.00% Impervious, Inflow Depth = 2.94" for 2-Year event
 Inflow = 0.83 cfs @ 12.13 hrs, Volume= 0.070 af
 Outflow = 0.13 cfs @ 12.67 hrs, Volume= 0.070 af, Atten= 84%, Lag= 32.4 min
 Discarded = 0.03 cfs @ 9.90 hrs, Volume= 0.064 af
 Primary = 0.10 cfs @ 12.67 hrs, Volume= 0.006 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 13.87' @ 12.67 hrs Surf.Area= 1,209 sf Storage= 1,314 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 361.6 min (1,120.2 - 758.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	11.50'	773 cf	38.17"W x 31.68"L x 2.67'H Field A 3,224 cf Overall - 649 cf Embedded = 2,576 cf x 30.0% Voids
#2A	12.00'	649 cf	ADS_StormTech SC-310 +Cap x 44 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 11 Rows of 4 Chambers
		1,421 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	11.50'	1.020 in/hr Exfiltration over Surface area
#2	Device 3	13.83'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	12.60'	12.0" Round Culvert L= 7.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.60' / 12.50' S= 0.0143 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.03 cfs @ 9.90 hrs HW=11.53' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.10 cfs @ 12.67 hrs HW=13.87' TW=0.00' (Dynamic Tailwater)
 ↑3=Culvert (Passes 0.10 cfs of 2.62 cfs potential flow)
 ↑2=Sharp-Crested Rectangular Weir (Weir Controls 0.10 cfs @ 0.64 fps)

14306 - Drainage

Prepared by {enter your company name here}

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

NOAA 24-hr D 2-Year Rainfall=3.17"

Printed 7/16/2021

Page 25

Pond 3P: INF 3 (Building P) - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-310 +Cap (ADS StormTech®SC-310 with cap length)

Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf

Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 6.0" Spacing = 40.0" C-C Row Spacing

4 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 29.68' Row Length +12.0" End Stone x 2 = 31.68' Base Length

11 Rows x 34.0" Wide + 6.0" Spacing x 10 + 12.0" Side Stone x 2 = 38.17' Base Width

6.0" Base + 16.0" Chamber Height + 10.0" Cover = 2.67' Field Height

44 Chambers x 14.7 cf = 648.6 cf Chamber Storage

3,224.3 cf Field - 648.6 cf Chambers = 2,575.7 cf Stone x 30.0% Voids = 772.7 cf Stone Storage

Chamber Storage + Stone Storage = 1,421.3 cf = 0.033 af

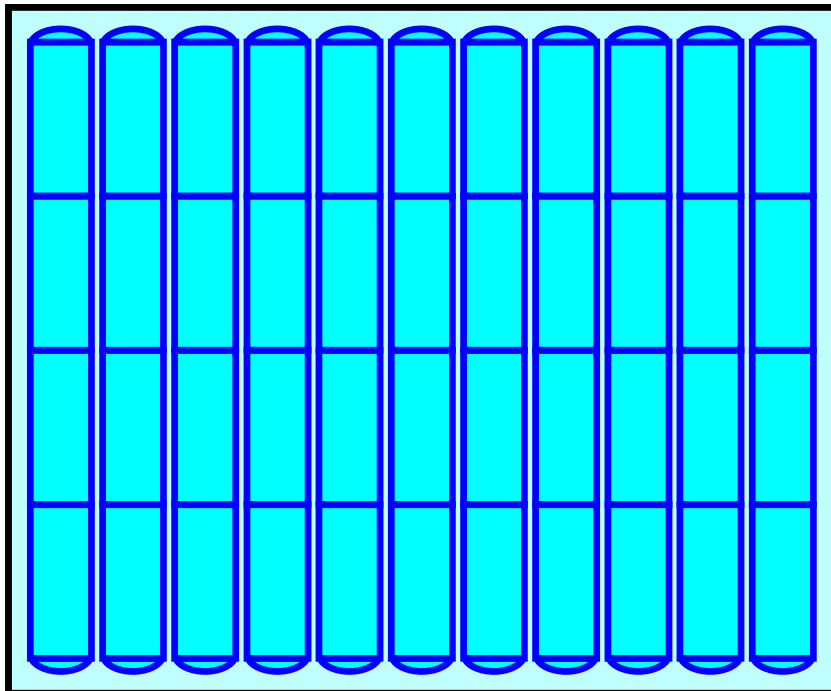
Overall Storage Efficiency = 44.1%

Overall System Size = 31.68' x 38.17' x 2.67'

44 Chambers

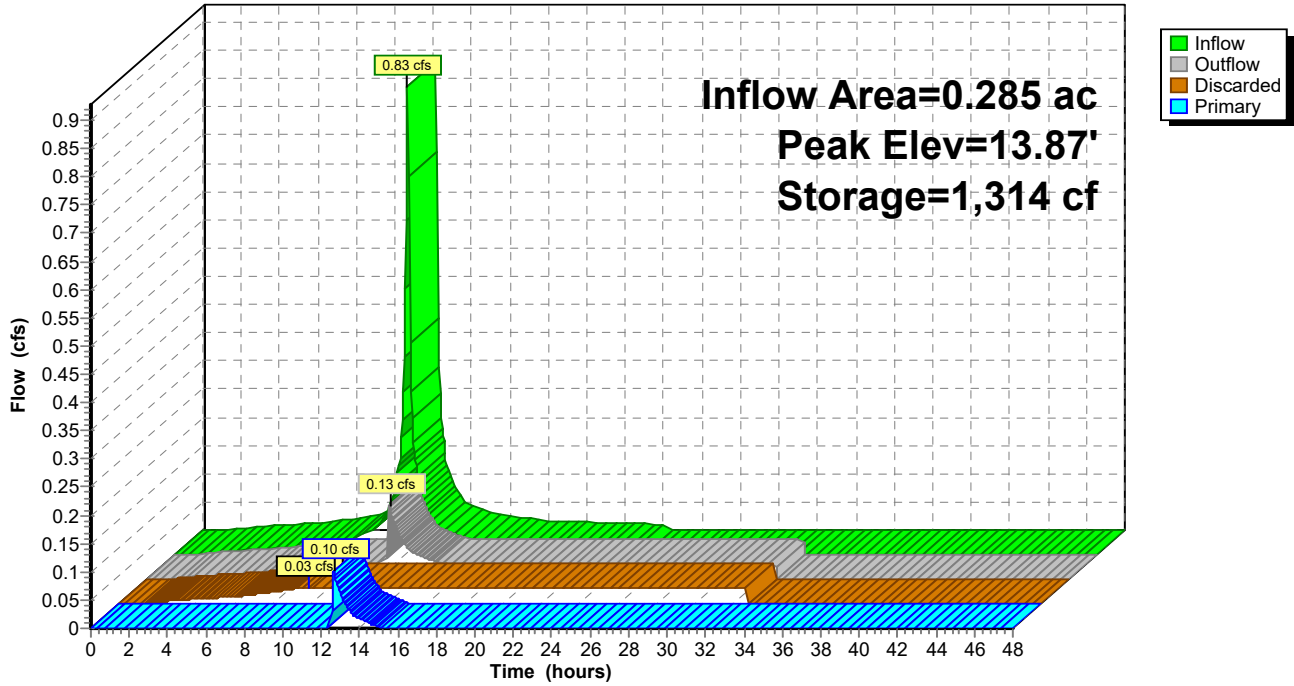
119.4 cy Field

95.4 cy Stone



Pond 3P: INF 3 (Building P)

Hydrograph



14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 27

Summary for Pond 4P: INF 4 (Parcel P South)

Inflow Area = 0.244 ac, 88.19% Impervious, Inflow Depth = 2.62" for 2-Year event
 Inflow = 0.67 cfs @ 12.13 hrs, Volume= 0.053 af
 Outflow = 0.09 cfs @ 12.75 hrs, Volume= 0.053 af, Atten= 86%, Lag= 37.2 min
 Discarded = 0.02 cfs @ 10.30 hrs, Volume= 0.047 af
 Primary = 0.07 cfs @ 12.75 hrs, Volume= 0.006 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 13.94' @ 12.75 hrs Surf.Area= 937 sf Storage= 1,028 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 372.6 min (1,158.3 - 785.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	11.50'	745 cf	11.50'W x 81.52'L x 3.17'H Field A 2,969 cf Overall - 486 cf Embedded = 2,482 cf x 30.0% Voids
#2A	12.00'	486 cf	ADS_StormTech SC-310 +Cap x 33 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 3 Rows of 11 Chambers
		1,231 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	11.50'	1.020 in/hr Exfiltration over Surface area
#2	Device 3	13.83'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	13.80'	12.0" Round Culvert L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.80' / 13.17' S= 0.0090 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.02 cfs @ 10.30 hrs HW=11.54' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.07 cfs @ 12.75 hrs HW=13.94' TW=0.00' (Dynamic Tailwater)
 ↑3=Culvert (Inlet Controls 0.07 cfs @ 1.02 fps)
 ↑2=Sharp-Crested Rectangular Weir(Passes 0.07 cfs of 0.50 cfs potential flow)

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 28

Pond 4P: INF 4 (Parcel P South) - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-310 +Cap (ADS StormTech®SC-310 with cap length)

Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf

Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 6.0" Spacing = 40.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 79.52' Row Length +12.0" End Stone x 2 = 81.52' Base Length

3 Rows x 34.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 11.50' Base Width

6.0" Base + 16.0" Chamber Height + 16.0" Cover = 3.17' Field Height

33 Chambers x 14.7 cf = 486.5 cf Chamber Storage

2,968.7 cf Field - 486.5 cf Chambers = 2,482.2 cf Stone x 30.0% Voids = 744.7 cf Stone Storage

Chamber Storage + Stone Storage = 1,231.1 cf = 0.028 af

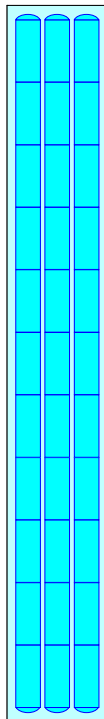
Overall Storage Efficiency = 41.5%

Overall System Size = 81.52' x 11.50' x 3.17'

33 Chambers

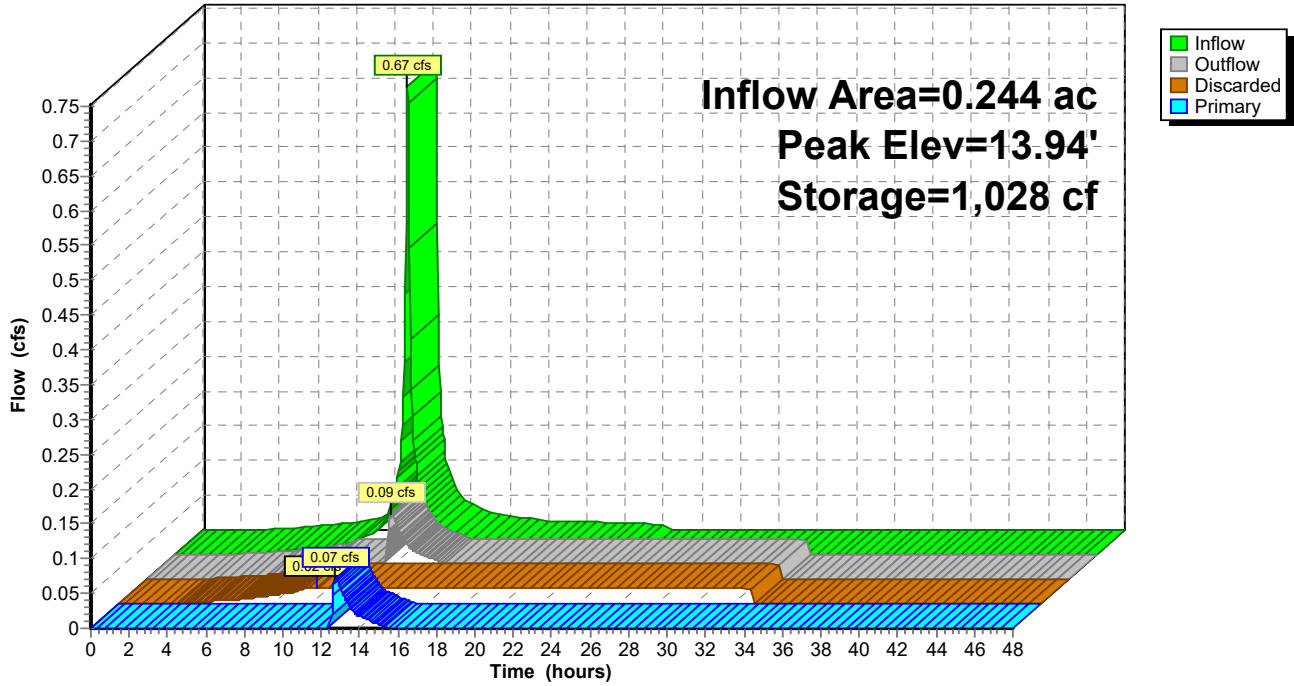
110.0 cy Field

91.9 cy Stone



Pond 4P: INF 4 (Parcel P South)

Hydrograph



14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 30

Summary for Pond 5P: BIO 1(Parking Lot South)

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=30)

Inflow Area = 0.200 ac, 67.41% Impervious, Inflow Depth = 2.14" for 2-Year event
 Inflow = 0.48 cfs @ 12.13 hrs, Volume= 0.036 af
 Outflow = 0.11 cfs @ 12.45 hrs, Volume= 0.036 af, Atten= 77%, Lag= 19.3 min
 Discarded = 0.11 cfs @ 12.45 hrs, Volume= 0.036 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 14.02' @ 12.46 hrs Surf.Area= 4,597 sf Storage= 485 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 80.8 min (895.5 - 814.7)

Volume	Invert	Avail.Storage	Storage Description
#1	14.00'	1,348 cf	Custom Stage Data (Irregular) Listed below (Recalc)
#2	13.00'	106 cf	12" Planting Soil (Irregular) Listed below (Recalc) 1,062 cf Overall x 10.0% Voids
#3	12.75'	27 cf	3" Sand (Irregular) Listed below (Recalc) 266 cf Overall x 10.0% Voids
#4	12.42'	53 cf	4" Pea Stone (Irregular) Listed below (Recalc) 350 cf Overall x 15.0% Voids
#5	11.50'	293 cf	11" Reservoir (Irregular) Listed below (Recalc) 977 cf Overall x 30.0% Voids
		1,826 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
14.00	344	92.0	0	0	344
15.00	661	116.1	494	494	756
16.00	1,062	142.0	854	1,348	1,304

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
13.00	1,062	142.0	0	0	1,062
14.00	1,062	142.0	1,062	1,062	1,204

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
12.75	1,062	142.0	0	0	1,062
13.00	1,062	142.0	266	266	1,098

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
12.42	1,062	142.0	0	0	1,062
12.75	1,062	142.0	350	350	1,109

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 31

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
11.50	1,062	142.0	0	0	1,062
12.42	1,062	142.0	977	977	1,193

Device	Routing	Invert	Outlet Devices
#1	Device 3	15.25'	12.0" Horiz. Orifice/Grate X 0.70 C= 0.600 Limited to weir flow at low heads
#2	Discarded	11.50'	1.020 in/hr Exfiltration over Surface area
#3	Primary	13.25'	12.0" Round Culvert L= 65.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.25' / 12.90' S= 0.0054 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.11 cfs @ 12.45 hrs HW=14.02' (Free Discharge)

↑**2=Exfiltration** (Exfiltration Controls 0.11 cfs)

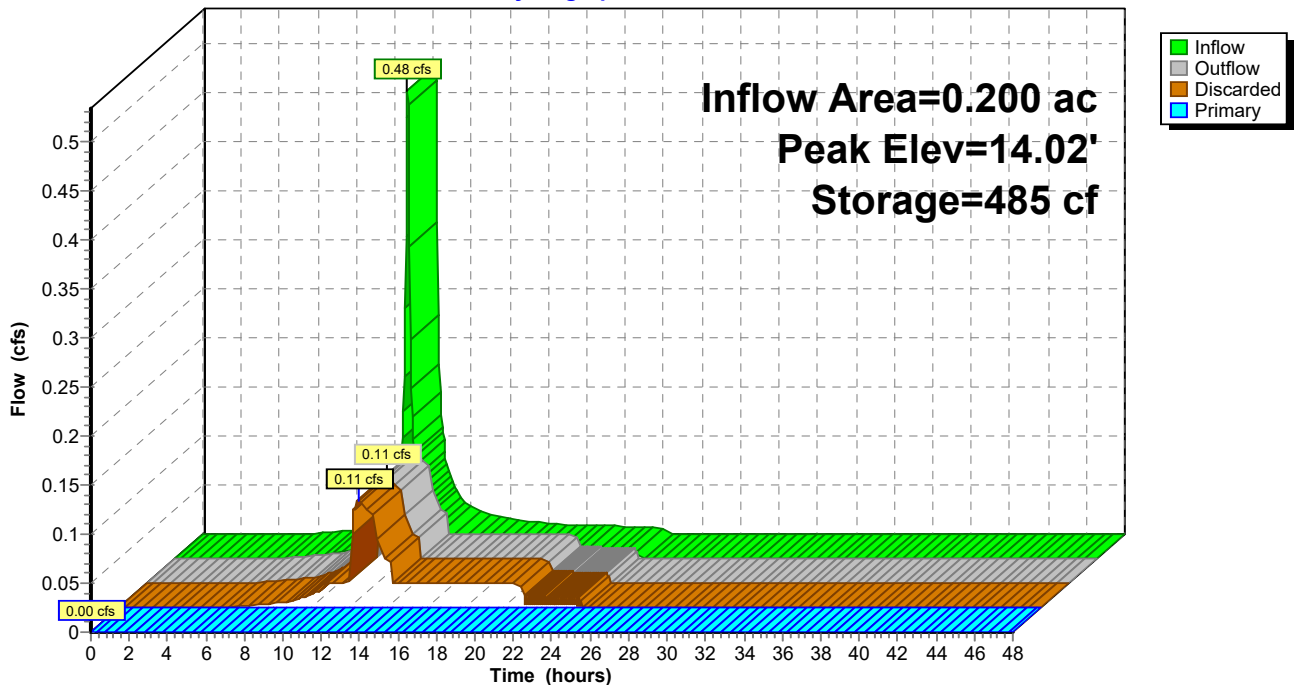
Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=11.50' TW=11.50' (Dynamic Tailwater)

↑**3=Culvert** (Controls 0.00 cfs)

↑**1=Orifice/Grate** (Controls 0.00 cfs)

Pond 5P: BIO 1(Parking Lot South)

Hydrograph



14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 32

Summary for Pond 6P: BIO 2 (Parcel P North)

Inflow Area = 0.167 ac, 75.58% Impervious, Inflow Depth = 2.32" for 2-Year event
 Inflow = 0.42 cfs @ 12.13 hrs, Volume= 0.032 af
 Outflow = 0.07 cfs @ 12.64 hrs, Volume= 0.032 af, Atten= 84%, Lag= 30.9 min
 Discarded = 0.07 cfs @ 12.64 hrs, Volume= 0.032 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 15.35' @ 12.64 hrs Surf.Area= 2,894 sf Storage= 519 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 141.2 min (945.7 - 804.5)

Volume	Invert	Avail.Storage	Storage Description
#1	15.00'	396 cf	Custom Stage Data (Irregular) Listed below (Recalc)
#2	13.67'	86 cf	16" Planting Soil (Irregular) Listed below (Recalc) 855 cf Overall x 10.0% Voids
#3	13.33'	22 cf	4" Sand (Irregular) Listed below (Recalc) 219 cf Overall x 10.0% Voids
#4	13.00'	32 cf	4" Pea Stone (Irregular) Listed below (Recalc) 212 cf Overall x 15.0% Voids
#5	11.50'	289 cf	18" Reservoir (Irregular) Listed below (Recalc) 965 cf Overall x 30.0% Voids
		825 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
15.00	193	125.0	0	0	193
16.00	643	165.0	396	396	1,127

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
13.67	643	165.0	0	0	643
15.00	643	165.0	855	855	862

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
13.33	643	165.0	0	0	643
13.67	643	163.0	219	219	719

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
13.00	643	165.0	0	0	643
13.33	643	165.0	212	212	697

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
11.50	643	165.0	0	0	643
13.00	643	165.0	965	965	891

14306 - Drainage

NOAA 24-hr D 2-Year Rainfall=3.17"

Prepared by {enter your company name here}

Printed 7/16/2021

HydroCAD® 10.00-20 s/n 00546 © 2017 HydroCAD Software Solutions LLC

Page 33

Device	Routing	Invert	Outlet Devices
#1	Device 3	15.60'	12.0" Horiz. Orifice/Grate X 0.70 C= 0.600 Limited to weir flow at low heads
#2	Discarded	11.50'	1.020 in/hr Exfiltration over Surface area
#3	Primary	12.90'	12.0" Round Culvert L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.90' / 12.50' S= 0.0105 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Discarded OutFlow Max=0.07 cfs @ 12.64 hrs HW=15.35' (Free Discharge)

↳ **2=Exfiltration** (Exfiltration Controls 0.07 cfs)

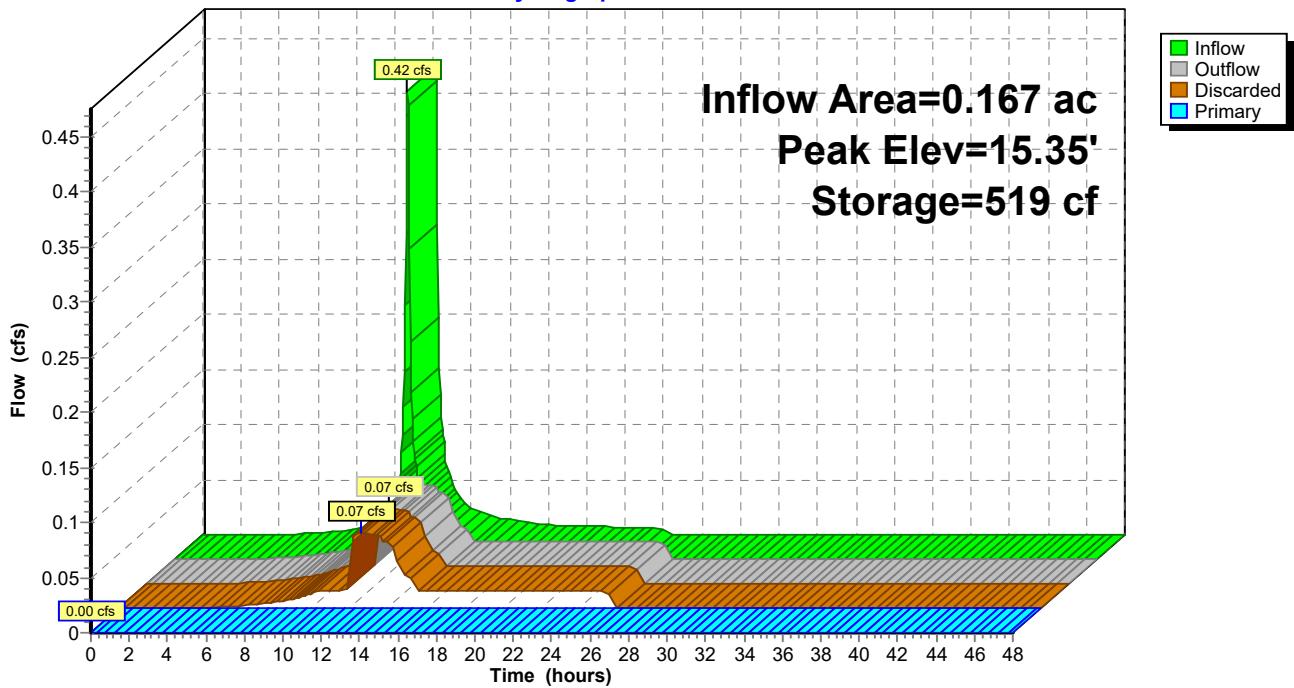
Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=11.50' TW=0.00' (Dynamic Tailwater)

↳ **3=Culvert** (Controls 0.00 cfs)

↳ **1=Orifice/Grate** (Controls 0.00 cfs)

Pond 6P: BIO 2 (Parcel P North)

Hydrograph



APPENDIX D

Closed Drainage System Design

SN	Element Description ID	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Inlet Invert Offset	Outlet Invert Elevation	Outlet Invert Offset	Total Drop	Average Slope	Pipe Shape	Pipe Diameter or Height	Pipe Width	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow	Flap Gate
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(%)	(inches)	(inches)						(cfs)	
1	Pipe - (103)	RD1	Out-1Pipe - (103)	5.77	13.50	0.50	13.00	-0.50	0.50	8.6700	CIRCULAR	12.000	0.00	0.0150	0.5000	0.5000	0.0000	0.00	NO
2	Pipe - (104)	DMH203	Out-1Pipe - (104)	39.82	12.40	0.00	12.00	0.00	0.40	1.0000	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
3	Pipe - (105) (1)	OCS2	Out-1Pipe - (105) (1)	32.94	12.80	0.00	12.28	0.00	0.52	1.5800	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
4	Pipe - (106)	OCS1	Out-1Pipe - (106)	37.34	13.00	0.00	12.60	0.00	0.40	1.0700	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
5	Pipe - (107)	CB104	WQS2	46.26	12.60	0.00	12.35	0.10	0.25	0.5400	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
6	Pipe - (108)	CB103	WQS2	45.86	12.81	0.00	12.35	0.10	0.46	1.0000	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
7	Pipe - (109)	AD1	DMH201	36.45	13.25	0.00	12.90	0.10	0.35	0.9600	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
8	Pipe - (110)	DMH201	WQS1	59.46	12.80	0.00	12.35	0.10	0.45	0.7600	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
9	Pipe - (111)	AD3	DMH201	64.76	13.25	0.00	12.90	0.10	0.35	0.5400	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
10	Pipe - (112)	AD5	DMH202	11.05	13.25	0.00	12.95	0.10	0.30	2.7100	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
11	Pipe - (113)	AD2	DMH201	12.86	13.20	0.00	12.90	0.10	0.30	2.3300	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
12	Pipe - (114)	OCS3	DMH203	6.85	12.60	0.00	12.50	0.10	0.10	1.4600	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
13	Pipe - (115)	AD6	DMH203	38.09	12.90	0.00	12.50	0.10	0.40	1.0500	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
14	Pipe - (116)	AD7	DMH203	6.99	13.00	0.00	12.50	0.10	0.50	7.1600	CIRCULAR	8.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
15	Pipe - (117)	WQI1	Out-1Pipe - (117)	14.61	12.25	0.00	12.15	0.00	0.10	0.6800	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
16	Pipe - (118)	WQI2	Out-1Pipe - (118)	38.88	12.35	0.00	12.15	0.00	0.20	0.5100	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
17	Pipe - (119)	OCS4	Out-1Pipe - (119)	69.69	13.80	0.00	13.17	0.00	0.63	0.9000	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
18	Pipe - (91)	WQS2	Out-1Pipe - (91)	18.44	12.25	0.00	12.15	0.00	0.10	0.5400	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
19	Pipe - (91) (1)	DMH202	WQS2	51.41	12.85	0.00	12.35	0.10	0.50	0.9700	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
20	Pipe - (92)	CB105	DMH202	50.89	13.20	0.00	12.95	0.10	0.25	0.4900	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
21	Pipe - (93)	AD4	DMH202	61.11	13.25	0.00	12.95	0.10	0.30	0.4900	CIRCULAR	12.000	0.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
22	Pipe - (97)	WQS1	Out-1Pipe - (97)	12.50	12.25	0.00	12.15	0.00	0.10	0.8000	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
23	Pipe - (98)	CB102	WQS1	47.54	12.59	0.00	12.35	0.10	0.24	0.5000	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO
24	Pipe - (99)	CB101	WQS1	47.14	12.82	0.00	12.35	0.10	0.47	1.0000	CIRCULAR	12.000	12.00	0.0120	0.5000	0.5000	0.0000	0.00	NO

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation (ft)	Boundary Type	Flap Gate	Fixed Water Elevation (ft)
1	Out-1Pipe - (103)	783330.06	2951570.18		13.50	FREE	NO	
2	Out-1Pipe - (104)	783268.98	2951619.90		12.00	FREE	NO	
3	Out-1Pipe - (105) (1)	783584.98	2951666.66		12.28	FREE	NO	
4	Out-1Pipe - (106)	783805.16	2951673.86		12.60	FREE	NO	
5	Out-1Pipe - (117)	783314.83	2951418.32		12.15	FREE	NO	
6	Out-1Pipe - (118)	783396.34	2951419.75		12.15	FREE	NO	
7	Out-1Pipe - (119)	783464.26	2951452.57		13.17	FREE	NO	
8	Out-1Pipe - (91)	783795.12	2951616.60		12.15	FREE	NO	
9	Out-1Pipe - (97)	783760.31	2951614.97		12.15	FREE	NO	

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Surcharge Elevation (ft)	Surcharge Depth (ft)	Ponded Area (ft ²)	Minimum Pipe Cover (inches)
1	AD1	783676.03	2951647.83		13.25	15.25	2.00	13.25	0.00	15.25	0.00	0.00	12.00
2	AD2	783675.52	2951613.27		13.20	16.25	3.05	13.20	0.00	16.25	0.00	10.00	24.60
3	AD3	783664.64	2951553.28		13.25	15.25	2.00	13.25	0.00	15.25	0.00	10.00	12.00
4	AD4	783908.43	2951575.65		13.25	15.25	2.00	13.25	0.00	15.25	0.00	0.00	12.00
5	AD5	783875.98	2951618.89		13.25	16.25	3.00	13.25	0.00	16.25	0.00	0.00	24.00
6	AD6	783346.62	2951617.44		12.90	15.60	2.70	12.90	0.00	15.60	0.00	10.00	20.40
7	AD7	783314.30	2951611.66		13.00	16.00	3.00	13.00	0.00	16.00	0.00	0.00	28.00
8	CB101	783737.48	2951569.01		12.82	16.82	4.00	12.82	0.00	16.82	0.00	0.00	36.05
9	CB102	783735.22	2951660.85		12.59	15.59	3.00	12.59	0.00	15.59	0.00	0.00	24.00
10	CB103	783817.40	2951571.24		12.81	16.81	4.00	12.81	0.00	16.81	0.00	0.00	35.97
11	CB104	783814.78	2951663.18		12.60	15.97	3.37	12.60	0.00	15.97	0.00	0.00	28.44
12	CB105	783885.46	2951665.15		13.20	15.20	2.00	13.20	0.00	15.20	0.00	0.00	12.00
13	DMH201	783688.38	2951613.53		12.80	16.63	3.83	12.80	0.00	16.63	0.00	0.00	32.76
14	DMH202	783864.94	2951618.58		12.85	26.78	13.93	12.85	0.00	26.78	0.00	0.00	154.00
15	DMH203	783308.57	2951615.67		12.40	16.40	4.00	12.40	0.00	16.40	0.00	0.00	34.80
16	OCS1	783803.00	2951636.58		13.00	16.75	3.75	13.00	0.00	16.75	0.00	0.00	33.05
17	OCS2	783553.03	2951658.61		12.80	16.15	3.35	12.80	0.00	16.15	0.00	0.00	28.20
18	OCS3	783309.08	2951608.84		12.60	16.40	3.80	12.60	0.00	16.40	0.00	0.00	33.60
19	OCS4	783399.03	2951428.06		13.80	16.50	2.70	13.80	0.00	16.50	0.00	0.00	20.40
20	RD1	783330.10	2951575.95		13.00	14.00	1.00	13.00	0.00	14.00	0.00	0.00	0.00
21	WQI1	783300.98	2951413.67		12.25	16.00	3.75	12.25	0.00	16.00	0.00	10.00	33.00
22	WQI2	783435.14	2951417.29		12.35	16.00	3.65	12.35	0.00	16.00	0.00	12.00	31.80
23	WQS1	783747.82	2951615.01		12.25	17.23	4.98	12.25	0.00	17.23	0.00	0.00	46.50
24	WQS2	783813.56	2951616.94		12.25	19.39	7.14	12.25	0.00	19.39	0.00	0.00	72.50

SN	Element Description ID	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Time of Concentration (days hh:mm:ss)
1	Sub-AD4	0.15	AD4	0.8600	0 00:06:00
2	Sub-AD1	0.02	AD1	0.7800	0 00:06:00
3	Sub-AD2	0.03	AD2	0.7700	0 00:06:00
4	Sub-AD5	0.01	AD5	0.7200	0 00:06:00
5	Sub-AD7	0.05	AD7	0.7800	0 00:06:00
6	Sub-CB101	0.02	CB101	0.9000	0 00:06:00
7	Sub-CB102	0.10	CB102	0.9000	0 00:06:00
8	Sub-CB103	0.02	CB103	0.9000	0 00:06:00
9	Sub-CB104	0.03	CB104	0.9000	0 00:06:00
10	Sub-CB105	0.10	CB105	0.9000	0 00:06:00
11	Sub-WQ1	0.07	WQ1	0.9000	0 00:06:00
12	Sub-WQ2	0.09	WQ2	0.9000	0 00:06:00

APPENDIX E

Long-Term Pollution Prevention and Stormwater Operation and Maintenance Plan

LONG-TERM POLLUTION PREVENTION PLAN AND STORMWATER OPERATION AND MAINTENANCE PLAN

Parcel O & Parcel P, Boston, MA

TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 LONG-TERM POLLUTION PREVENTION PLAN	2
2.1 Storage of Hazardous Materials	2
2.2 Storage of Waste Products	2
2.3 Spill Prevention and Response	2
2.4 Minimize Soil Erosion	2
2.5 Vehicle Washing	3
2.6 Maintenance of Lawns, Gardens, and other Landscaped Areas	3
2.7 Management of Deicing Chemicals and Snow	3
2.8 Coordination with other Permits and Requirements	3
3.0 STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE PLAN	4
3.1 Introduction	4
3.2 Stormwater Operation and Maintenance Requirements	4
Deep Sump and Hooded Catch Basins	4
Area Drains	5
Water Quality Units (Proprietary Separators)	5
Subsurface Detention/Infiltration Structures	5
Bioretention Areas	5
Oil/Water Separators	6
3.3 Street Sweeping	6
3.4 Repair of the Stormwater Management System	6
3.5 Reporting	6
STORMWATER MANAGEMENT SYSTEM INSPECTION FORM.....	7

FIGURES

Figure 1 – Stormwater Management System Location Map

1.0 INTRODUCTION

The purpose of this document is to specify the pollution prevention measures and stormwater management system operation and maintenance for the Parcel O & Parcel P site. The Responsible Party indicated below shall implement the management practices outlined in this document and proactively conduct operations at the project site in an environmentally responsible manner. Compliance with this Manual does not in any way dismiss the responsible party, owner, property manager, or occupants from compliance with other applicable federal, state or local laws.

Responsible Party: Andrew Mackin
Assistant Vice President - Development
260 Franklin Street, Suite 620
617-780-0550

This Document has been prepared in compliance with Standards 4 and 9 of the 2008 Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards, which state:

Standard 4:

The Long Term Pollution Prevention Plan shall include the proper procedures for the following:

- Good housekeeping
- Storing materials and waste products inside or under cover
- Vehicle washing
- Routine inspections of stormwater best management practices
- Spill prevention and response
- Maintenance of lawns, gardens, and other landscaped areas
- Storage and use of fertilizers, herbicides, and pesticides
- Pet waste management
- Operation and management of septic systems
- Proper management of deicing chemicals and snow

Standard 9:

The Long-Term Operation and Maintenance Plan shall at a minimum include:

- Stormwater management system(s) owner(s)
- The party or parties responsible for operation and maintenance, including how future property owners shall be notified of the presence of the stormwater management system and the requirement for operation and maintenance
- The routine and non-routine maintenance tasks to be undertaken after construction is complete and a schedule for implementing those tasks
- A plan that is drawn to scale and shows the location of all stormwater BMPs in each treatment train along with the discharge point
- A description and delineation of public safety features
- An estimated operations and maintenance budget

2.0 LONG-TERM POLLUTION PREVENTION PLAN

The Responsible Party shall implement the following good housekeeping procedures at the project site to reduce the possibility of accidental releases and to reduce safety hazards.

2.1 Storage of Hazardous Materials

To prevent leaks and spills, keep hazardous materials and waste products under cover or inside. Use drip pans or spill containment systems to prevent chemicals from entering the drainage system. Inspect storage areas for materials and waste products at least once per year to determine amount and type of the material on site, and if the material requires disposal.

Securely store liquid petroleum products and other liquid chemicals in federally- and state-approved containers. Restrict access to maintenance personnel and administrators.

2.2 Storage of Waste Products

Collect and store all waste materials in securely lidded dumpster(s) or other secure containers as applicable to the material. Keep dumpster lids closed and the areas around them clean. Do not fill the dumpsters with liquid waste or hose them out. Sweep areas around the dumpster regularly and put the debris in the garbage, instead of sweeping or hosing it into the parking lot. Legally dispose of collected waste on a regular basis.

Segregate liquid wastes from solid waste and recycle through hazardous waste disposal companies, whenever possible. Separate oil filters, batteries, tires, and metal filings from grinding and polishing metal parts from common trash items and recycle. These items are not trash and are illegal to dump. Contact a hazardous waste hauler for proper disposal to a hazardous waste collection center.

2.3 Spill Prevention and Response

Implement spill response procedures for releases of significant materials such as fuels, oils, or chemical materials onto the ground or other area that could reasonably be expected to discharge to surface or groundwater.

- For minor spills, keep fifty (50) gallon spill control kits and Speedy Dry at all shop and work areas.
- Immediately contact applicable Federal, State, and local agencies for reportable quantities as required by law.
- Immediately perform applicable containment and cleanup procedures following a spill release.
- Promptly remove and dispose of all material collected during the response in accordance with Federal, State and local requirements. A licensed emergency response contractor may be required to assist in cleanup of releases depending on the amount of the release, and the ability of the Contractor to perform the required response.
- Reportable quantities of chemicals, fuels, or oils are established under the Clean Water Act and enforced through Massachusetts Department of Environmental Protection (DEP).

2.4 Minimize Soil Erosion

Soil erosion facilitates mechanical transport of nutrients, pathogens, and organic matter to surface water bodies. Repair all areas where erosion is occurring throughout the project site. Stabilize bare soil with riprap, seed, mulch, or vegetation.

2.5 Vehicle Washing

Vehicle washing will not occur onsite.

2.6 Maintenance of Lawns, Gardens, and other Landscaped Areas

Pesticides and fertilizers shall not be used in the landscaped areas associated with the project site and shall not be stored on-site. Dumping of lawn wastes, brush or leaves or other materials or debris is not permitted in any Resource Area. Grass clippings, pruned branches and any other landscaped waste should be disposed of or composted in an appropriate location.

2.7 Management of Deicing Chemicals and Snow

The qualified contractor selected for snow plowing and deicing shall be made fully aware of the requirements of this section.

No road salt (sodium chloride) shall be stored on-site. The use of magnesium chloride de-icing product with a 0.5 to 1.0 percent sodium chloride mix for snow and ice treatment is permitted. The product shall be stored in a locked room inside the building and shall be used at exterior stairs and walkways. The snow plow contractor shall adhere to these magnesium chloride use and storage requirements.

During typical snow plowing operations, snow shall be pushed to the designated snow removal areas noted on the Snow Storage Plan (Figure 2). Snow shall not be stockpiled in wetland resource areas (with the exception of Land Subject to Coastal Storm Flowage), catch basins, or bioretention basins. In severe conditions where snow cannot be stockpiled on site, the snow shall be removed from the site and properly disposed of in accordance with DEP Guideline BRP601-01.

Use of sand is permitted only for impervious roadways and parking areas. If sand is applied, the snow plowed from impervious areas shall not be stored on porous asphalt.

Before winter begins, the property owner and the contractor shall review snow plowing, deicing, and stockpiling procedures. Areas designated for stockpiling should be cleaned of any debris. Street and parking lot sweeping should be followed in accordance with the Operation and Maintenance Plan.

2.8 Coordination with other Permits and Requirements

Certain conditions of other approvals affecting the long-term management of the property shall be considered part of this Long Term Pollution Prevention Plan. The Owner shall become familiar with those documents and comply with the guidelines set forth in those documents.

3.0 STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE PLAN

3.1 Introduction

This Operation and Maintenance Plan (O&M Plan) for Parcel O & Parcel P site is required under Standard 9 of the 2008 MassDEP Stormwater Handbook to provide best management practices for implementing maintenance activities for the stormwater management system in a manner that minimizes impacts to wetland resource areas.

The Owner shall implement this O&M Plan and proactively conduct operations at the site in an environmentally responsible manner. Compliance with this O&M Plan does not in any way dismiss the Owner from compliance with other applicable Federal, State or local laws.

Routine maintenance during construction and post-development phases of the project, as defined in the Operation and Maintenance Plan, shall be permitted without amendment to the Order of Conditions. A continuing condition in the Certificate of Compliance shall ensure that maintenance can be performed without triggering further filings under the Wetlands Protection Act.

All stormwater best management practices (BMPs) shall be operated and maintained in accordance with the design plans and the Operation and Maintenance Plan approved by the issuing authority. The Owner shall:

- a. Maintain an operation and maintenance log for the last three years, including inspections, repairs, replacement and disposal (for disposal the log shall indicate the type of material and the disposal location). This is a rolling log in which the responsible party records all operation and maintenance activities for the past three years.
- b. Make this log available to MassDEP and the Conservation Commission upon request; and
- c. Allow members and agents of the MassDEP and the Conservation Commission to enter and inspect the premises to evaluate and ensure that the Owner complies with the Operation and Maintenance requirements for each BMP.

3.2 Stormwater Operation and Maintenance Requirements

Inspect and maintain the stormwater management system as directed below. Refer to the Stormwater Management System Location Map (Figure 1) for the location of each component of the system. Repairs to any component of the system shall be made as soon as possible to prevent any potential pollutants (including silt) from entering the resource areas.

Deep Sump and Hooded Catch Basins

Inspect or clean catch basins four times per year and at the end of foliage and snow-removal seasons. Other inspection and maintenance requirements include:

- Remove organic material, sediment and hydrocarbons four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin.
- Always clean out catch basins after street sweeping. If any evidence of hydrocarbons is found during inspection, immediately remove the material using absorbent pads or other suitable measures and dispose of legally. Remove other accumulated debris as necessary.
- If handling runoff from land uses with higher potential pollutant loads or discharging runoff near or to a critical area, more frequent cleaning may be necessary.

- Transport and disposal of accumulated sediment off-site shall be in accordance with applicable local, state and federal guidelines and regulations.

Area Drains

Inspect area drains at least once per month and remove debris from the grate. Clean out accumulated sediments at least once per year and more frequently as necessary.

Water Quality Units (Proprietary Separators)

Maintain water quality units according the recommendations set forth by the manufacturer. General inspection and maintenance procedures for proprietary devices are provided below:

- Inspect units following completion of construction, prior to being put into service.
- Inspect units at least twice per year following installation and no less than once per year thereafter.
- Inspect units immediately after any oil, fuel or chemical spill.
- All inspections shall include checking the oil level and sediment depth in the unit. Removal of sediments/oils shall occur per manufacturer recommendations.
- A licensed waste management company shall remove captured petroleum waste products from any oil, chemical or fuel spills and dispose.
- OSHA confined space entry protocols shall be followed if entry into the unit is required.

Subsurface Detention/Infiltration Structures

- Inspect subsurface detention/infiltration structures twice per year. Inspect the inlets and observation ports to determine if there is accumulated sediment within the system. Remove all debris and accumulated sediment that may clog the system.

Bioretention Areas

Perform annual maintenance of all components of the bioretention area, including plants, soil, and mulch. Table 1, below, outlines recommended maintenance activities.

Table 1. Bioretention area maintenance recommendations

Location	Description	Frequency	Time of Year
Surface	Inspect and remove trash	Monthly	Year round
Soil	Inspect and repair erosion	Monthly	Year round
Organic Layer	Remulch void areas	Annually	Spring
	Remove previous mulch layer before applying new layer (optional)	Annually	Spring
Plants	Water vegetation at end of day for 14 consecutive days after planting	Immediately after planting	As needed
	Fertilize	Annually	Spring
	Mow grass	2 to 12 times per year	As needed

	Remove and replace all dead and diseased vegetation that cannot be treated	Annually	Spring
	Treat all diseased trees and shrubs	As needed	Variable

During and after storm events, record the length of time standing water remains in the bioretention areas. If the time is greater than 72 hours, thoroughly inspect the basins for signs of clogging and develop a corrective action plan. The corrective action plan, prepared by a qualified professional, will outline procedures to restore infiltrative function. The owner of the site shall take immediate action to implement these corrective measures. Inspect pretreatment devices and bioretention cells regularly for sediment build-up, structural damage, and standing water. Never store snow in bioretention areas.

Oil/Water Separators

At a minimum, inspect oil/water separators monthly, and clean them out at least twice per year. In the event of a hazardous waste spill, the oil/water separator should be cleaned immediately. Cleaning involves the removal of accumulated oil and grease and sediment using a vacuum truck. Polluted water or sediments removed from the oil/water separators shall be disposed of in accordance with all applicable local, state, and federal laws and regulations, including M.G.L.c. 21C and 310 CMR 30.00.

3.3 Street Sweeping

Perform street sweeping at least twice per year, whenever there is significant debris present on roads and parking lots. Street sweeping shall occur in the spring and fall. Sweepings must be handled and disposed of properly according to the Boston Conservation Commission.

3.4 Repair of the Stormwater Management System

The stormwater management system shall be maintained. The repair of any component of the system shall be made as soon as possible to prevent any potential pollutants including silt from entering the resource areas or the existing closed drainage system.

3.5 Reporting

The Owner shall maintain a record of drainage system inspections and maintenance (per this Plan) and submit a yearly report to the Boston Conservation Commission.

STORMWATER MANAGEMENT SYSTEM INSPECTION FORM

Parcel O & Parcel P Boston, MA		Inspected by: _____ Date: _____
Component	Status/Inspection	Action Taken
Deep Sump Catch Basins, Area Drains and Drain Manholes		
Bioretention Basin		
Subsurface Infiltration System		
Water Quality Units		
Oil/Water Separator		
Porous Asphalt		
Stormwater Outfalls & Level Spreaders		
General site conditions – evidence of erosion, etc.		

**SUBMIT COPIES OF STORMWATER MANAGEMENT SYSTEM INSPECTION FORM TO THE
BOSTON CONSERVATION COMMISSION WITH THE YEARLY REPORT.**

APPENDIX F

DRAFT Stormwater Pollution Prevention Plan (SWPPP)

DRAFT Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities At:

PARCEL O

1 Au Bon Pain Way, Boston, MA

&

PARCEL P

3 Anchor Way, Boston, MA

Site Telephone Number: xxx-xxx-xxxx

SWPPP Prepared For:

Marcus Partners, Inc.

Andrew Mackin, Assistant Vice President - Development

260 Franklin Street, Suite 620 | Boston MA 02110

d 617-556-5280 | c 617-780-0550

SWPPP Prepared By:

Nitsch Engineering

Paige E. Simmons, PE

SWPPP Preparer: Basel Alhadidi

2 Center Plaza

Boston, MA 02108

T: 617-338-0063

F: 617-338-6472

SWPPP Preparation Date:

07/23/2021

Estimated Project Dates:

Project Start Date: xx/xx/xxxx

Project Completion Date: xx/xx/xxxx



Contents

SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES 0

1.1 Operator(s) / Subcontractor(s) 0

1.2 Stormwater Team 2

SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING..... 3

2.1 Project/Site Information..... 3

2.2 Discharge Information 4

2.3 Nature of the Construction Activity 6

2.4 Sequence and Estimated Dates of Construction Activities 7

2.5 Allowable Non-Stormwater Discharges 8

2.6 Site Maps..... 9

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS10

3.1 Endangered Species Protection.....10

3.2 Historic Preservation11

3.3 Safe Drinking Water Act Underground Injection Control Requirements12

SECTION 4: EROSION AND SEDIMENT CONTROLS REQUIREMENTS13

4.1 Natural Buffers or Equivalent Sediment Controls13

4.3 Sediment Track-Out.....14

4.4 Stockpiled Sediment or Soil15

4.6 Minimize the Disturbance of Steep Slopes17

4.7 Preserve Native Topsoil18

4.8 Minimize Soil Compaction.....19

4.9 Storm Drain Inlets19

4.10 Minimize Erosion of Stormwater Conveyances20

4.12 Chemical Treatment.....20

4.13 Dewatering Practices20

4.14 Other Stormwater Controls21

4.15 Site Stabilization21

SECTION 5: POLLUTION PREVENTION STANDARDS22

5.1 Potential Sources of Pollution22

5.2 Spill Prevention and Response24

5.3 Fueling and Maintenance of Equipment or Vehicles.....24

5.4 Washing of Equipment and Vehicles.....25

5.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes25

5.6 Washing of Applicators and Containers used for Paint, Concrete, or Other Materials28

5.8 Other Pollution Prevention Practices.....29

SECTION 6: INSPECTION AND CORRECTIVE ACTION30

6.1 Inspection Personnel and Procedures.....30

6.2 Corrective Action31

6.3 Delegation of Authority.....31

SECTION 7: TRAINING LOG32

SECTION 8: CERTIFICATION AND NOTIFICATION.....33

SWPPP ATTACHMENTS34

SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES

1.1 *Operator(s) / Subcontractor(s)*

Operator(s):

Construction Manager Responsibilities:

Joel Snyder shall maintain the Stormwater Pollution Prevention Plan (SWPPP) documentation and will conduct and document self-inspections required under the 2017 Construction General Permit (CGP) once every 14 days and within 24 hours of a storm event 0.25" or greater. Joel Snyder will provide copies of inspections reports to the Owner's Representative within 24 hours following each inspection. Incidents of non-compliance will be immediately brought to the attention of the Owner's Representative. Joel Snyder shall be responsible for maintaining compliance with the SWPPP, including all requirements in the CGP and will maintain erosion and sediment control Best Management Practices (BMPs) in all areas of the site under its day-to-day control.

Joel Snyder shall file a Notice of Intent (NOI) to be covered by the CGP and obtain coverage by the Environmental Protection Agency (EPA) before beginning construction at the project. Permit coverage will be maintained throughout the project. Joel Snyder shall not file a Notice of Termination (NOT) until all disturbed areas of the site under its day-to-day control have been fully stabilized with permanent erosion controls that satisfy the final stabilization requirements in the CGP or have met another criteria of the NOT. Joel Snyder will maintain a clean site and construction trash and debris will be picked up and disposed of properly by the end of each day.

Each Operator is responsible for advising employees and subcontractors working on this project of the requirements in the CGP and SWPPP. Particular emphasis should be placed on ensuring that employees and subcontractors do not damage BMPs and maintain compliance with the CGP.

John Moriarty & Associates
Joel Snyder
3 Church Street
Suite 2
Winchester, MA 01890
T: (781) 729-3900

Owner’s Representative Responsibilities:

Andrew Mackin shall provide general oversight of the project including review of the SWPPP and any amendments, inspection reports, and corrective actions. Andrew Mackin shall file a NOI to be covered by the CGP and obtain coverage by the EPA before beginning construction at the project. Permit coverage will be maintained throughout the project. Andrew Mackin shall not file a notice of Termination until all disturbed areas of the site have been fully stabilized with permanent erosion controls that satisfy the final stabilization requirements in the CGP. Andrew Mackin will coordinate with the Joel Snyder to maintain a clean site so that trash and debris will be picked up and disposed of properly by the end of the day.

Each Operator is responsible for advising employees and subcontractors working on this project of the requirements in the CGP and SWPPP. Particular emphasis should be placed on ensuring that employees and subcontractors do not damage BMPs and maintain compliance with the CGP.

Marcus Partners, Inc.

Andrew Mackin, Assistant Vice President - Development
260 Franklin Street, Suite 620 | Boston MA 02110
d 617-556-5280 | c 617-780-0550
amackin@marcuspartners.com

Site Contractor(s):

- Company Name
- Contact person, Position
- Street Address
- Town, State, Zip Code
- T: xxx-xxx-xxxx
- Email Address:

If there is more than one Site Contractor conducting earth disturbing activities then list them all here.

Emergency 24-Hour Contact:

- Company
- Emergency Contact person, Position
- T: xxx-xxx-xxxx

1.2 Stormwater Team

Construction Manager: Company

Stormwater Role/Responsibility: Responsible for overseeing the development of the SWPPP, modifications and updates to the SWPPP, and for compliance with the requirements in the CGP (e.g., installing and maintaining stormwater controls, conducting site inspections, picking up trash, taking corrective actions where required, etc.).

Contact:

John Moriarty & Associates
Joel Snyder
3 Church Street
Suite 2
Winchester, MA 01890
T: (781) 729-3900

I, **Construction Manager Contact Person**, have read the CGP and Understand the Applicable Requirements

Yes

Date: _____

Site Contractor: Company

Stormwater Role/Responsibility: Responsible for compliance with the requirements in this permit (e.g., installing and maintaining stormwater controls, conducting site inspections, taking corrective actions where required, etc.).

Contact:

Contact Person, Position

T: xxx-xxx-xxxx

Email Address

Refer to the Subcontractor Certifications/Agreements in Attachment G.

SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING

2.1 Project/Site Information

Project Name and Address

Project/Site Name: Parcel O & Parcel P
Project Street/Location: 1 Au Bon Pain Way & 3 Anchor Way
City/Town: Boston
State: Massachusetts
ZIP Code: 02210
County or Similar Subdivision: Suffolk

Project Latitude/Longitude

(Use **one** of three possible formats, and specify method)

Latitude: _____ Longitude: _____
1. 42.34616° (degrees, decimals) 1. -71.02873° (degrees, decimals)

Method for determining latitude/longitude:

USGS topographic map (specify scale: _____) GPS
 Other (please specify): Google Earth

Horizontal Reference Datum:

NAD 27 NAD 83 WGS 84

If you used a U.S.G.S topographic map, what was the scale? _____

Additional Project Information

Is the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe? Yes No

Are you applying for permit coverage as a "federal operator" as defined in Appendix A of the CGP?
 Yes No

Will there be demolition of any structure built or renovated before January 1, 1980?
 Yes No

If yes, do any of the structures being demolished have at least 10,000 square feet of floor space?
 Yes No

Was pre-development land use used for agriculture (see Appendix A of the CGP for definition of "agricultural land")?
 Yes No

Type of Construction Site (check all that apply): Single-Family Residential
 Multi-Family Residential Commercial Industrial Institutional Highway or Road
 Utility Other _____

2.2 Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?

Yes No

Are there any surface waters that are located within 50 feet of your construction disturbances?

Yes No

Table 1 – Names of Receiving Waters

Name(s) of the first surface water that receives stormwater directly from your site and/or from the MS4 (note: multiple rows provided where your site has more than one point of discharge that flows to different surface waters)
001. Boston Inner Harbor
002.
003.

Table 2 – Impaired Waters / TMDLs (Answer the following for each surface water listed in Table 1 above)

	Is this surface water listed as "impaired" on the CWA303(d) list?	If you answered yes, then answer the following:			
		What pollutant(s) are causing the impairment?	Has a TMDL been completed?	Title of the TMDL document	Pollutant(s) for which there is a TMDL
001.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Dissolved oxygen, Enterococcus Bacteria, Fecal Coliform, Other cause (fish consumption), PCB(s) in Fish Tissue	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
002.	<input type="checkbox"/> YES <input type="checkbox"/> NO				
003.	<input type="checkbox"/> YES <input type="checkbox"/> NO				

Table 3 – Tier 2, 2.5, or 3 Waters (Answer the following for each surface water listed in Table 1 above)

	Is this surface water designated as a Tier 2, Tier 2.5, or Tier 3 water?	If you answered yes, specify which Tier (2, 2.5, or 3) the surface water is designated as?
001.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
002.	<input type="checkbox"/> YES <input type="checkbox"/> NO	
003.	<input type="checkbox"/> YES <input type="checkbox"/> NO	

2.3 Nature of the Construction Activity

General Description of Project

Provide a general description of the construction project:

Proposed project site is located at 1 Au Bon Pain Way and 3 Anchor Way in Boston, MA. The project includes the demolition of an existing building, the construction of a new building, the renovation of an existing building, and associated landscaping, walkways, and utilities.

Size of Construction Project

Size of Property: 3 acres

Total Area of Construction Disturbances: 3 acres

Maximum Area to be Disturbed at Any One Time: 3 acres

Construction Support Activities

Describe any construction support activities for the project including offsite construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas). Include areas offsite

Include a description of the construction support activities or reference Site Maps in Attachment A that include this information.

Contact Information for Construction Support Activity:

Note: this may be the same as the contractor or site contractor. If it is an offsite activity, it may be different.

Name: XXX

Telephone: XXX-XXX-XXXX

Email: XXXX

Address and/or Latitude and Longitude: (if offsite)

Business Hours

Day-Day Xa.m-Xp.m.

2.4 Sequence and Estimated Dates of Construction Activities

Phase I: Name of Phase

- Description of Phase
- Schedule: Month, Day Year – Month, Day Year
- Area Disturbed During Phase: xx acres
- Description of stormwater controls that will be installed/maintained during phase

2.5 Allowable Non-Stormwater Discharges

List of Allowable Non-Stormwater Discharges Present at the Site

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Your Site?
Discharges from emergency fire-fighting activities	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Fire hydrant flushings	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Landscape irrigation	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Waters used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Water used to control dust	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Potable water including uncontaminated water line flushings	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (as defined in Appendix A of the CGP) (e.g., paint or caulk containing polychlorinated biphenyls (PCBs))	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Uncontaminated air conditioning or compressor condensate	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Uncontaminated, non-turbid discharges of ground water or spring water	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated groundwater	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Construction dewatering water discharged in accordance with Part 2.4 of the CGP	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

Note: You are prohibited from directing pavement wash waters directly into any water of the U.S., storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control.

2.6 Site Maps

Site Maps must include the following:

- a) Boundaries of the property. The map(s) in the SWPPP must show the overall boundary of the property.
- b) Locations where construction activities will occur. The map(s) in the SWPPP must show the locations where construction activities will occur, including
 - i. Locations where earth-disturbing activities will occur (note any phasing), including any demolition activities;
 - ii. Approximate slopes before and after major grading activities (note any steep slopes);
 - iii. Locations where sediment, soil, or other construction materials will be stockpiled;
 - iv. Any water of the U.S. crossings;
 - v. Designated points where vehicles will exit onto paved roads;
 - vi. Locations of structures and other impervious surfaces upon completion of construction; and
 - vii. Locations of onsite and off-site construction support activity areas covered by the permit (see Part 1.2.1.c).
- c) Locations of all waters of the U.S. within and one mile downstream of the site's discharge point. Also identify if any are listed as impaired, or are identified as a Tier 2, Tier 2.5, or Tier 3 water.
- d) Areas of federally listed critical habitats within the site and/or at discharge locations.
- e) Type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures).
- f) Drainage patterns of stormwater and authorized non-stormwater before and after major grading activities.
- g) Stormwater and authorized non-stormwater discharge locations. The permit requires the site map to show information pertaining to discharge locations including:
 - i. Locations where stormwater and/or authorized non-stormwater will be discharges to storm drain inlets; and
 - ii. Locations where stormwater and/or authorized non-stormwater will be discharged directly to waters of the U.S.
- h) Locations of all potential pollutant-generating activities identified in Part 7.2.3.g. The permit requires identification in the site map of all potential pollutant-generating activities identified in Part 7.2.3.g.
- i) Locations of stormwater controls, including natural buffer areas and any shared controls utilized to comply with this permit. The permit requires identification on the site map of the location of stormwater control measures.
- j) Locations where polymers, flocculants, or other treatment chemicals will be used and stored. The permit requires identification on the site map of the locations where polymers, flocculants, or other treatment chemicals will be used and stored.

Refer to Attachment A

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS

3.1 *Endangered Species Protection*

Eligibility Criterion

Under which criterion listed in Appendix D of the CGP are you eligible for coverage under this permit?

A B C D E

For reference purposes, the eligibility criteria listed in Appendix D of the CGP are as follows:

Criterion A. No federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in your site's "action area" as defined in Appendix A of the CGP.

Criterion B. The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your action area under eligibility Criterion A, C, D, E, or F and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the "action area". To certify your eligibility under this Criterion, there must be no lapse of NPDES permit coverage in the other operator's certification. By certifying eligibility under this Criterion, you agree to comply with any effluent limitations or conditions upon which the other operator's certification was based. You must include in your NOI the tracking number from the other operator's notification of authorization under this permit. If your certification is based on another operator's certification under Criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in Criterion C in your NOI form.

Criterion C. Federally-listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your site's "action area," and your site's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat. This determination may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to adversely affect listed species and critical habitat. To make this certification, you must include the following in your NOI: 1) any federally listed species and/or designated habitat located in your "action area"; and 2) the distance between your site and the listed species or designated critical habitat (in miles). You must also include a copy of your site map with your NOI.

Criterion D. Coordination between you and the Services has been concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and must have resulted in a written concurrence from the relevant Service(s) that your site's discharges and discharge-related activities are not likely to adversely affect listed species or critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

Criterion E. Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded. The consultation must have addressed the effects of the construction site's discharges and discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat. The result of this consultation must be either:

- i. a biological opinion that concludes that the action in question (taking into account the effects of your site's discharges and discharge-related activities) is not likely to jeopardize the continued existence of listed species, nor the destruction or adverse modification of critical habitat; or
- ii. written concurrence from the applicable Service(s) with a finding that the site's discharges and discharge-related activities are not likely to adversely affect federally-listed species or federally-designated habitat.

You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

Criterion F. Your construction activities are authorized through the issuance of a permit under section 10 of the ESA, and this authorization addresses the effects of the site's discharges and discharge-related activities on federally-listed species and federally-designated critical habitat. You must include copies of the correspondence between yourself and the Services in your SWPPP and your NOI.

For criterion D, E, or F, attach copies of any letters or other communication between you and the U.S. Fish & Wildlife Service or National Marine Fisheries Service concluding consultation or coordination activities.

"The discharge is within an [MS4-regulated community](#) NMFS' Greater Atlantic Region consulted on the Massachusetts MS4 permit and arrived at a "Not Likely to Adversely Affect determination" for ESA-protected species and designated critical habitat under NMFS' jurisdiction. So long as discharges from this construction are consistent with the requirements of the CGP, NMFS considers them to be consistent with NMFS' Not Likely to Adversely Affect determination arrived at by the MS4 consultation."

3.2 *Historic Preservation*

Appendix E (of the CGP), Step 1

Do you plan on installing any of the following stormwater controls at your site? Check all that apply below, and proceed to Appendix E, Step 2.

- Dike
- Berm
- Catch Basin
- Pond
- Stormwater Conveyance Channel (e.g., ditch, trench, perimeter drain, swale, etc.)
- Culvert
- Other type of ground-disturbing stormwater control: Water Quality Inlets, Water Quality Structures, Outlet Control Structure, Subsurface Infiltration System, Drain Manhole.

If you will not be installing any ground-disturbing stormwater controls, no further documentation is required for Section 3.2 of the Template.

Appendix E, Step 2

If you answered yes in Step 1, have prior cultural resource surveys or other evaluations determined that historic properties do not exist, or that prior disturbances at the site have precluded the existence of historic properties? YES NO

If yes, provide documentation of the basis for your determination. If no, proceed to Appendix E, Step 3.

3.3 Safe Drinking Water Act Underground Injection Control Requirements

Do you plan to install any of the following controls? Check all that apply below.

- Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);
- Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and
- Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

SECTION 4: EROSION AND SEDIMENT CONTROLS REQUIREMENTS

Section 4 of this document describes the stormwater controls that will be implemented throughout construction. The operator must install and maintain all stormwater controls in compliance with Parts 2.2 and 2.3 of the CGP. The operator must install stormwater controls by the time construction activity in any given portion of the site begins.

The stormwater controls shall be designed and installed in accordance with good engineering practices and applicable design specifications. Specifications titled "312500- Erosion and Sedimentation Controls," dated May 18, 2021 and prepared by Nitsch Engineering and details titled "Erosion and Sedimentation Control Details," dated May 18, 2021 and prepared by Nitsch Engineering have been provided to the contractor under separate cover.

4.1 *Natural Buffers or Equivalent Sediment Controls*

Buffer Compliance Alternatives

Are there any surface waters within 50 feet of your project's earth disturbances? YES NO

(Note: If no, no further documentation is required for Part 4.1 in the SWPPP Template. Continue to Part 4.2.)

4.2 *Perimeter Controls*

General

The site will be enclosed by a temporary construction fence as shown on the Erosion and Sedimentation Control Plan in Attachment A. Construction gates will be located at the entrance to the site as shown on the Erosion and Sedimentation Control Plan and all entrances will have stabilized construction entrances. All gates and entrances to the site will be secured during non-working hours. The areas of the site that will receive pollutant discharges will be surrounded by a Specific Perimeter Control listed below as shown on the Erosion and Sedimentation Control Plan in Attachment A. Sediment tracked offsite must be removed by the end of the same workday.

Specific Perimeter Controls

Perimeter Control # 1

- BMP Description: Silt Fence.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Perimeter Control # 2

- BMP Description: Silt Fence with Wattles.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Perimeter Control # 3

- BMP Description: Super Silt Fence.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Perimeter Control # 4

- BMP Description: Wattles.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Perimeter Control # 5

- BMP Description: Silt Fence with Straw Bales.
- Installation Schedule: Prior to the Start of Construction and/or immediately after stockpile is established.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.3 Sediment Track-Out

General

Gates will be located as shown on the Erosion and Sedimentation Control Plan in Attachment A to allow for construction vehicle access. Construction access points will have a stabilized construction entrance station or wheel wash station to minimize the track-out of sediment onto off-site streets, other paved areas, and sidewalks from vehicles exiting the construction site. Where sediment has been tracked out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked out sediment into any stormwater conveyance, storm drain inlet, or water of the U.S.

Specific Track-Out Controls

Track-Out Control # 1

- BMP Description: Street Sweeping.
- Installation Schedule: Start of construction.
- Inspection Schedule: The areas adjacent to the site should be inspected daily to

- Responsible Staff determine if street sweeping is required.
Construction Manager and Site Contractor(s).

Track-Out Control # 2

- BMP Description: Stabilized Construction Entrance.
- Installation Schedule: Start of construction.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Track-Out Control # 3

- BMP Description: Wheel Wash Station.
- Installation Schedule: Start of construction.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP(s).
The operator must provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of wash waters. The operator must ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water. For storage of soaps, detergents, or solvents, the operator shall provide either a cover to minimize the exposure of these detergents to precipitation and to stormwater, or a similarly effective means designed to minimize discharge of pollutants from these areas.
- Responsible Staff: Construction Manager and Site Contractor.

4.4 Stockpiled Sediment or Soil

General

All soil stockpiles will be located outside of any natural buffers and away from existing and proposed catch basins and area drains and outside of proposed infiltration system footprints. A sediment barrier shall be installed along all downgradient perimeter areas. Examples of sediment barriers include silt fence, super silt fence, or wattles.

You are prohibited from hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or water of the U.S.

For stockpiles that will be unused for 14 or more days, a cover such as a tarp or blown straw shall be provided or temporary stabilization should be provided (consistent with Part 2.2.14 of the CGP).

Specific Stockpile Controls

Stockpile Control # 1

- BMP Description: Silt Fence.
- Installation Schedule: Immediately after stockpile is established.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.

- Responsible Staff: Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
Construction Manager and Site Contractor(s).

Stockpile Control # 2

- BMP Description: Wattles.
- Installation Schedule: Immediately after stockpile is established.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Stockpile Control # 3

- BMP Description: Tarp.
- Installation Schedule: When stockpile will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Stockpile Control # 4

- BMP Description: Straw Bales.
- Installation Schedule: Immediately after stockpile is established.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Stockpile Control # 5

- BMP Description: Blown Straw.
- Installation Schedule: When stockpile will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

Stockpile Control # 6

- BMP Description: Hydroseeding.
- Installation Schedule: When stockpile will remain inactive for 14 or more calendar days.

- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.5 Minimize Dust

General

Disturbed land will be temporarily stabilized as required by the CGP. Dust will be minimized using measures including sprinkling/irrigation, vegetative cover, mulch, and/or stone. Stockpiles will be handled in accordance with section 4.4 of the SWPPP.

Earth-disturbing activities are considered temporarily ceased when work will not resume for a period of 14 or more calendar days. Stabilization shall be initiated when earth-disturbing activities are temporarily or permanently ceased. Stabilization activities shall be complete within 14 calendar days after the initiation of soil stabilization measures.

Specific Dust Controls

Dust Control # 1

- BMP Description: Sprinkling/Irrigation.
- Installation Schedule: As needed throughout earthwork activities as determined by the site contractor and construction manager.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Dust Control # 2

- BMP Description: Straw or Mulch.
- Installation Schedule: As needed throughout earthwork activities as determined by the site contractor and construction manager. When disturbed land will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.6 Minimize the Disturbance of Steep Slopes

General

Steep slopes are defined as slopes of 15% or greater in grade. No steep slopes are proposed as part of this project. The EPA notes that the requirement to minimize disturbances to steep slopes does not apply to the creation of stockpiles.

Specific Steep Slope Controls

Steep Slope Control # 1

- BMP Description: Straw or Mulch.
- Installation Schedule: When disturbed land will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Steep Slope Control # 2

- BMP Description: Hydroseeding.
- Installation Schedule: When disturbed land will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Steep Slope Control # 3

- BMP Description: Soil Stabilization Mats.
- Installation Schedule: When disturbed land will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Steep Slope Control # 4

- BMP Description: Rip-Rap.
- Installation Schedule: When disturbed land will remain inactive for 14 or more calendar days.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.7 **Preserve Native Topsoil**

Onsite native topsoil shall be preserved, unless infeasible. Preserving native topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.

Stockpiling topsoil at off-site locations or transferring topsoil to other locations is an example of a way to preserve native topsoil.

The contractor shall perform construction sequencing such that earth materials are exposed for a minimum of time before they are covered, seeded, or otherwise stabilized.

4.8 **Minimize Soil Compaction**

General

In areas where infiltration practices will be installed or areas of the site where final vegetative stabilization will occur, soil compaction shall be minimized. This includes restricting vehicle access and equipment use.

Areas used for post-construction infiltration shall be constructed after all ground surfaces are fully stabilized when feasible. If proposed infiltration areas are constructed prior to the site being fully stabilized, additional erosion controls shall be installed. All stockpiled and material storage areas shall be located outside of the areas proposed for post-construction infiltration.

Areas of post-construction landscaping shall be constructed after all ground surface are fully stabilized. If proposed landscaped areas are constructed prior to the site being fully stabilized, additional erosion controls shall be installed. All soil stockpiles and material storage areas shall be located outside of the areas proposed for post-construction landscaping where feasible. Where this is not feasible, use techniques that rehabilitate and condition the soils as necessary to support vegetative growth prior to planting.

4.9 **Storm Drain Inlets**

General

All existing and proposed storm drain inlets affected by construction activities should be protected using an Inlet Sediment Filter as shown on the Erosion and Sedimentation Control Plan provided in Attachment A.

Clean or remove and replace the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

Specific Storm Drain Inlet Controls

Storm Drain Inlet Control # 1

- BMP Description: Inlet Sediment Filter.
- Installation Schedule: Prior to the Start of Construction.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Storm Drain Inlet Control # 2

- BMP Description: Inlet Protection with Gravel.
- Installation Schedule: Prior to the Start of Construction .
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Storm Drain Inlet Control # 3

- BMP Description: Inlet Protection with Block and Gravel.
- Installation Schedule: Prior to the Start of Construction.

- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.10 Minimize Erosion of Stormwater Conveyances

There are no proposed stormwater conveyance channels associated with this project.

4.11 Sediment Basins

There are no proposed sediment basins associated with this project.

4.12 Chemical Treatment

There are no proposed chemical treatments associated with this project.

4.13 Dewatering Practices

Dewatering will occur in a way that minimizes the discharge of pollutants in ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation. Dewatering water shall be treated in compliance with Section 2.4 of the CGP and water with visible floating solids or foam may not be discharged.

Any applicable permits shall be obtained from local permitting authorities.

Dewatering Control # 1

- BMP Description: Sediment basin or Sediment Trap.
- Installation Schedule: Start of construction of stormwater conveyance channel.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Dewatering Control # 2

- BMP Description: Sediment socks.
- Installation Schedule: Start of construction of stormwater conveyance channel.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Dewatering Control # 3

- BMP Description: Dewatering Tanks.
- Installation Schedule: Start of construction of stormwater conveyance channel.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or Greater and as required by the manufacturer.

- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

Dewatering Control # 4

- BMP Description: Filtration Systems.
- Installation Schedule: Start of construction of stormwater conveyance channel.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or Greater and as required by the manufacturer.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

4.14 Other Stormwater Controls

Any changes in construction activity that include means of stormwater control not included in this document will be identified, the SWPPP will be amended, and the appropriate erosion and sedimentation controls will be implemented.

4.15 Site Stabilization

Initiate the installation of stabilization measures immediately in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days. Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.

Site Stabilization Practice #1

- Vegetative Non-Vegetative
 Temporary Permanent

- BMP Description: Soil Stabilization Mat.
- Installation Schedule: As/if required.
- Maintenance and Inspection: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Responsible Staff: Construction Manager and Site Contractor(s).

Site Stabilization Practice #2

- Vegetative Non-Vegetative
 Temporary Permanent

- BMP Description: Temporary Seeding.
- Installation Schedule: As/if required.
- Maintenance and Inspection: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Responsible Staff: Construction Manager and Site Contractor(s).

SECTION 5: POLLUTION PREVENTION STANDARDS

5.1 *Potential Sources of Pollution*

Potential sources of sediment to stormwater runoff:

- Stockpiles and construction staging
- Clearing and grubbing operations
- Grading and site excavation
- Topsoil stripping
- Landscape operations
- Soil tracking offsite from construction vehicles
- Runoff from unstabilized areas
- Construction debris

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined Staging Area – fueling activities, equipment maintenance, sanitary facilities, and hazardous waste storage
- Materials Storage Area – building materials, solvents, adhesives, paving materials, paints, aggregates, trash, etc.
- Construction Activity-paving, curb installation, concrete pouring, and building construction

Staging areas are shown on the Erosion and Sedimentation Control Plan provided in Attachment A.

Construction Site Pollutants

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)	Location on Site (or reference SWPPP site map where this is shown)
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Chlorinated hydrocarbons, organophosphates, carbonates, arsenic	Herbicides used for noxious weed control
Fertilizers	Nitrogen, phosphorous	Newly seeded areas
Plaster	Calcium sulphate, calcium carbonate, sulfuric acid	Building construction
Cleaning Solvents	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project limits
Asphalt	Oil, petroleum distillates	Streets and parking lots
Concrete	Limestone, sand pH, chromium	Curb and gutter, sidewalk, building construction
Glue, Adhesives	Polymers, epoxies	Building construction
Paints	Metal oxides, Stoddard solvent, talc, calcium carbonate, arsenic	Building construction
Curing compounds	Naphtha	Curb and gutter, building construction
Wood preservatives	Stoddard solvent, petroleum distillates, arsenic, copper, chromium	Timber pads, bracing, building construction
Hydraulic Oils/fluids	Mineral oil	Leaks/broken hoses from equipment
Gasoline	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment/staging area
Diesel Fuel	Petroleum distillate, oil & grease, naphthalene, xylenes	Secondary containment/staging area
Kerosene	Coal oil, petroleum distillates	Secondary containment/staging area
Antifreeze/coolant	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Bacteria, parasites, and viruses	Staging area

5.2 **Spill Prevention and Response**

BMP Description: Spill kit, vehicle washing, silt sack catch basin protection, silt fence

Installation Schedule: Start of construction activity

Maintenance and Inspection: Minimum weekly & as necessary

Responsible Staff: Construction Manager and Site Contractor

- Major vehicle maintenance onsite is prohibited
- Re-fueling of vehicles within 25 feet of a drainage structure is prohibited
- Spill kit shall be kept onsite consisting of:
 - Gloves
 - Absorbent mats
 - Drip pan

Spill Prevention and Control Plan

- Refer to contractor's Spill Plan.
- Manufacturers' recommended spill control methods will be posted onsite and site personnel will be made aware of the requirements.
- Cleanup supplies will be kept onsite in a materials storage area. This equipment will include: goggles, brooms, dustpans, mops, rags, gloves, oil absorbent, sawdust, plastic and metal trash cans, and other materials and supplies specifically designated for cleanup.
- All spills will be immediately cleaned up after discovery.
- The spill area will be well ventilated.
- Cleanup personnel will wear suitable protective clothing.
- Spills of toxic and/or hazardous material will be reported to state, local, and Federal authorities, as required by law. Spills shall also be reported immediately to the owner.
- A spill incident report will be filed detailing the amount and extent of the spill, material(s) involved, and effectiveness of the cleanup. This report will be on file at the Construction Manager/Site Contractor office, as well as kept onsite in the field office. A copy shall also be filed with the Hazard Communication Coordinator (HCC).

The Construction Manager/Site Contractor will designate someone onsite that will serve as the Spill Cleanup Coordinator. At least two other personnel will be designated as alternate spill coordinators. All spill control personnel will be trained in spill prevention, control, and cleanup. The names of the responsible personnel will be posted at the jobsite office of the Construction Manager/ Site Contractor.

5.3 **Fueling and Maintenance of Equipment or Vehicles**

General

Minor vehicle and equipment emergency maintenance can be performed onsite away from drainage structures. Major vehicle and equipment maintenance must be performed offsite. Equipment/vehicle storage areas and any onsite fuel tanks will be inspected weekly and after storm events. Equipment and vehicles will be inspected for leaks, equipment damage, and other service problems on each day of use. Any leaks will be repaired immediately or the equipment/vehicle will be removed from the site.

Minor vehicle and equipment emergency maintenance shall occur when a vehicle cannot be safely removed from the site. The vehicle should be repaired so it can be taken off-site so that the rest of the maintenance can occur.

Major vehicle maintenance onsite is prohibited. Re-fueling or maintenance of vehicles within 25 feet of a drainage structure shall be prohibited. Drip pans, drip cloths, or absorbent pads should be used when replacing spent fluids. The fluids should be collect and stored prior to being disposed of offsite.

Specific Pollution Prevention Practice #1

- BMP Description: Spill Kit.
- Installation Schedule: Onsite throughout construction.
- Responsible Staff: Construction Manager and Site Contractor.

Specific Pollution Prevention Practice #1

- BMP Description: Drip Pans, Drip Cloths, Absorbent Pads.
- Installation Schedule: Onsite throughout construction.
- Responsible Staff: Construction Manager and Site Contractor.

5.4 Washing of Equipment and Vehicles

General

Vehicle and equipment washout areas shall be constructed by the contractor so that no untreated water enters the storm drain system. Soaps, detergents, or solvents must be stored in a way to prevent these detergents from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas.

Specific Pollution Prevention Practices

Pollution Prevention Practice # 1

- BMP Description: Designated vehicle/equipment washing areas
- Installation Schedule: Start of construction.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Responsible Staff: Construction Manager and Site Contractor

Pollution Prevention Practice # 2

- BMP Description: Spill kit, vehicle washing, straw bale catch basin protection, silt fence
- Installation Schedule: Start of construction activity
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Responsible Staff: Construction Manager and Site Contractor

5.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes

5.5.1 Building Products

General

The contractor will recycle all construction materials possible. For materials that cannot be recycled, solid waste will be disposed of in accordance with DEP Regulations for Solid Waste Facilities, 310 CMR 10.00.

Any building materials required to be stored onsite will be stored at a combined staging and materials storage area as shown on the CMP. Larger items will be elevated by appropriate methods to minimize contact with runoff. The storage area will be inspected weekly and after storm events. It will be kept clean, organized, and equipped with appropriate cleaning supplies.

Building product usage shall follow the following good housekeeping BMPs:

- The Responsible Staff: Construction Manager or Site Contractor representative will inspect daily for inspection of the work area to ensure proper management of waste materials.
- Store only enough material onsite required for that job as to satisfy current construction needs.
- Store required materials in tightly lidded containers under cover.
- Store materials in original containers with clearly legible labels.
- Separate and store materials apart from each other.
- Do not mix materials unless specifically in accordance with manufacturers' recommendations.
- Use all products from a container before disposing of the container.
- Follow manufacturers' instructions for handling, storage, and disposing of all materials.
- All materials shall be stored in an area to prevent the discharge of pollutants from building products.

Specific Pollution Prevention Practices

Pollution Prevention Practice # 1

- BMP Description: Perimeter Protection control around Stockpiles.
- Installation Schedule: Start of construction/ Immediately after stockpile is established.
- Inspection Schedule: Once every 14 days and within 24 hours of a storm event 0.25" or greater.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP. Remove any sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- Responsible Staff: Construction Manager and Site Contractor(s).

5.5.2 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials

- In storage areas, provide either (1) cover to minimize the exposure of these chemicals to precipitation and to stormwater or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.
- Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label.

5.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals

General

- Only skilled personnel in a designated area will perform fueling of vehicles onsite.
- Vehicles used onsite will be monitored for fuel and oil leaks.
- Vehicles used onsite will be maintained in good working order.
- Asphalt substances will be applied in accordance with manufacturers' recommendations.
- The use of petroleum products as a release agent for asphalt transport trucks is prohibited.
- Vehicle fueling will only be done in vehicle fueling areas located by the contractor. See section 5.3 of the SWPPP.
- The contractor shall be responsible for locating the fuel storage and re-fueling area onsite to minimize disturbance to construction activities and site area.
- Construction equipment not in active use for 5 minutes or more will be turned off.

5.5.4 Hazardous or Toxic Waste

(Note: Examples include paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, acids.)

General

- Keep products in their original containers.
- Original container labels should be clearly visible.
- Material safety data sheets will be kept onsite and be available.
- Follow all state, local, and Federal regulations regarding the handling, use, storage, and disposal of hazardous material.

Paints:

- All paint containers will be tightly sealed when not in use.
- Remove excess paint in original labeled containers from the jobsite.
- Paint will not be disposed of onsite. Remove excess paint material from the site and legally dispose of.
- Paint shall not be disposed of in the storm drain system.

5.5.5 Construction and Domestic Waste

General

The contractor will manage domestic waste onsite. The contractor will provide waste containers of sufficient size and number to contain construction and domestic wastes. The waste container lids will be kept closed when not in use and lids will be closed at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have lids, provide either a cover or a similarly effective means designed to minimize discharge of pollutants. Clean up immediately if containers overflow.

Pollution Prevention Practice # 1

- BMP Description: Dumpster.
- Installation Schedule: Start of construction.
- Maintenance and Inspection: Weekly and covered daily.
- Responsible Staff: Construction Manager and Site Contractor(s).

Pollution Prevention Practice # 2

- BMP Description: Litter/debris pick-up.
- Installation Schedule: Start of construction.
- Maintenance and Inspection: Daily.
- Responsible Staff: Construction Manager and Site Contractor(s).

5.5.6 Sanitary Waste

All sanitary waste portable toilets shall be positioned so that they are secure and will not be tipped or knocked over, and located away from any stormwater inlets or conveyances.

Pollution Prevention Practice # 1

- BMP Description: Porta John.
- Installation Schedule: Start of construction.
- Maintenance and Inspection: As manufacturer requires.
- Responsible Staff: Construction Manager and Site Contractor(s).

5.6 Washing of Applicators and Containers used for Paint, Concrete, or Other Materials

General

Washing of applicators and containers used for paint, concrete, or other materials shall follow the following good housekeeping BMPs:

- An effective means of eliminating the discharge of water from the washout and cleanout of stucco, paint, concrete, form release oils, curing compounds, and other construction materials.
- All washwater must be directed into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.
- Washout and cleanout wastes should be handled as follows:
 - Do not dump liquid wastes into storm sewers.
 - Dispose of liquid wastes in accordance with applicable requirements.
 - Remove and dispose of hardened concrete waste consistent with the handling of other construction wastes.
- Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances, and to the extent practicable, designate areas to be used for these activities and conduct such activities only in these areas.

Pollution Prevention Practice # 1

- BMP Description: Designated applicator and container washing areas.
- Installation Schedule: Start of construction.
- Maintenance and Inspection: Daily.
- Responsible Staff: Construction Manager and Site Contractor(s).

5.7 Fertilizers

General

If fertilizer is required onsite, installation will follow the following guidelines:

- Fertilizers will be used at the application rates called for in the specifications for the project.
- Once applied, fertilizer will be worked into the soil to minimize wash off from irrigation and stormwater.
- Fertilizer will be stored under cover.
- The contents of partially used fertilizer bags will be transferred to re-sealable, watertight containers clearly labeled with their contents.
- Avoid applying before heavy rains.
- Never apply to frozen ground.
- Never apply to stormwater conveyance channels with flowing water.

5.8 Other Pollution Prevention Practices

Any changes in construction activity that produce other allowable non-stormwater discharges will be identified, the SWPPP will be amended and the appropriate erosion and sedimentation controls will be implemented.

Control # X

- BMP Description: Description of control to be installed.
- Installation Schedule: Approximate date of installation.
- Inspection Schedule: Pick Inspection schedule from above.
- Maintenance: Ensure that all stormwater controls remain in effective condition as described in part 2.1.4 of the CGP.
- Responsible Staff: Construction Manager and Site Contractor(s).

SECTION 6: INSPECTION AND CORRECTIVE ACTION

6.1 *Inspection Personnel and Procedures*

Personnel Responsible for Inspections

Construction Manager
Contact Person

Site Contractor
Contact person

(Note: All personnel conducting inspections must be considered a “qualified person.” CGP Part 4.1.1 clarifies that a “qualified person” is a person knowledgeable in the principles and practices of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.)

Inspection Schedule

Specific Inspection Frequency

The contractor shall inspect and maintain erosion control measures, and remove sediment therefrom, once every 14 days and within 24 hours of a storm event 0.25” or greater.

Rain Gauge Location:

NOAA Rain Gauge Location : Boston, MA, US, Logan Airport.

Reductions in Inspection Frequency (if applicable):

Inspection frequency may be reduced to twice per month (no more than 14 days apart) for the first month in areas of the site where the stabilization steps outlined in Parts 2.2.14 of the CGP have been completed. After the first month, inspection frequency may be reduced to once per month. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required in Parts 4.2 and 4.3 as applicable. You must document the beginning and ending dates of this period in the SWPPP.

Inspection frequency may be reduced to once per month and within 24 hours of the occurrence of a storm event of 0.25 inches or greater if the project is located in an arid, semi-arid, or drought-stricken area and construction is occurring during the seasonally dry period or a period in which drought is predicted to occur. If this inspection frequency is followed, you must document the beginning and ending dates of this period in the SWPPP.

Inspections can be temporarily suspended under the following conditions:

- Earth-disturbing activity is suspended due to frozen condition;
- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three months based on historic seasonal averaged. **If unexpected weather conditions make discharges likely, the operators must immediately resume the regular inspection schedule;**
- Land disturbances have been suspended; and
- All disturbed areas of the site have been stabilized in accordance with Part 2.2.14a of the CGP.

Inspection frequency may be reduced to once per month under the following conditions:

- The operator is still conducting earth disturbing activities under frozen conditions;
- Runoff is unlikely due to continuous frozen conditions that are likely to continue at the site for at least three months based on historic seasonal averages. **If unexpected weather conditions make discharges likely, the operator must immediately resume the regular inspection schedule;** and
- Except for areas in which the operator is conducting earth-disturbing activities, disturbed areas of the site have been stabilized in accordance with Part 2.2.14a of the CGP.

Inspection Report Forms

Copies of inspection reports are in Attachment D.

6.2 Corrective Action

Personnel Responsible for Corrective Actions

Contact Person, Construction Manager Company

Contact Person, Site Contractor

Corrective Action Forms

A copy of the Corrective Action Form is in Attachment E.

6.3 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Construction Manager Company

Contact Person

Contact Person Title

Street Address

Town/City, State Zip Code

xxx-xxx-xxxx

Email address

SECTION 8: CERTIFICATION AND NOTIFICATION

Operator – Owner’s Representative

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

Operator – Construction Manager

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

SWPPP ATTACHMENTS

Attachment A – Site Maps

Attachment B – 2017 Construction General Permit

Attachment C – NOI and EPA Authorization Email

Attachment D – Inspection Form

Attachment E – Corrective Action Form

Attachment F – SWPPP Amendment Log

Attachment G – Subcontractor Certifications/Agreements

Attachment H – Grading and Stabilization Activities Log

Attachment I – SWPPP Training Log

Attachment J – Delegation of Authority Form

Attachment K – Endangered Species Documentation

Attachment L – Historic Preservation Documentation

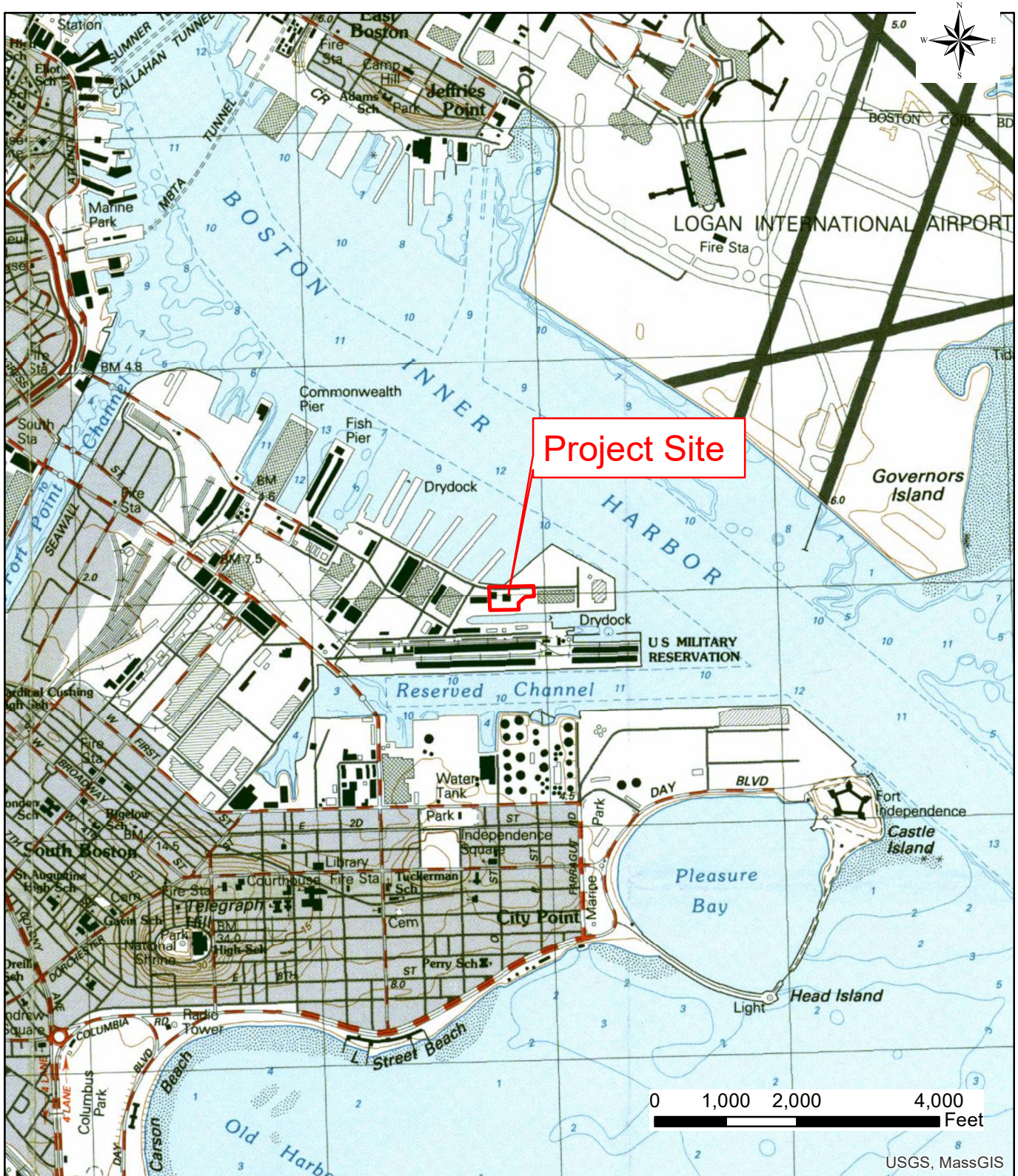
Attachment M – Rainfall Gauge

Attachment N – Order of Conditions

Attachment A – Site Maps



Attachment A-1: Locus Map
1ABP and 3AW
1 Au Bon Pain Way, Boston, MA



Attachment A-2: USGS Topographic Quad Map

1ABP and 3AW

1 Au Bon Pain Way, Boston, MA

PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT

COPLEY WOLFF DESIGN GROUP
10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-9000

CIVIL ENGINEER

NITSCH ENGINEERING
2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEFPF

BR+A CONSULTING ENGINEERS
10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

STRUCTURAL ENGINEER

MCNAMARA, SALVIA
101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-737-0040

BUILDING ENVELOPE

VIDARIS
250 DORCHESTER AVE.
BOSTON, MA 02127
617-288-8977

SUSTAINABILITY

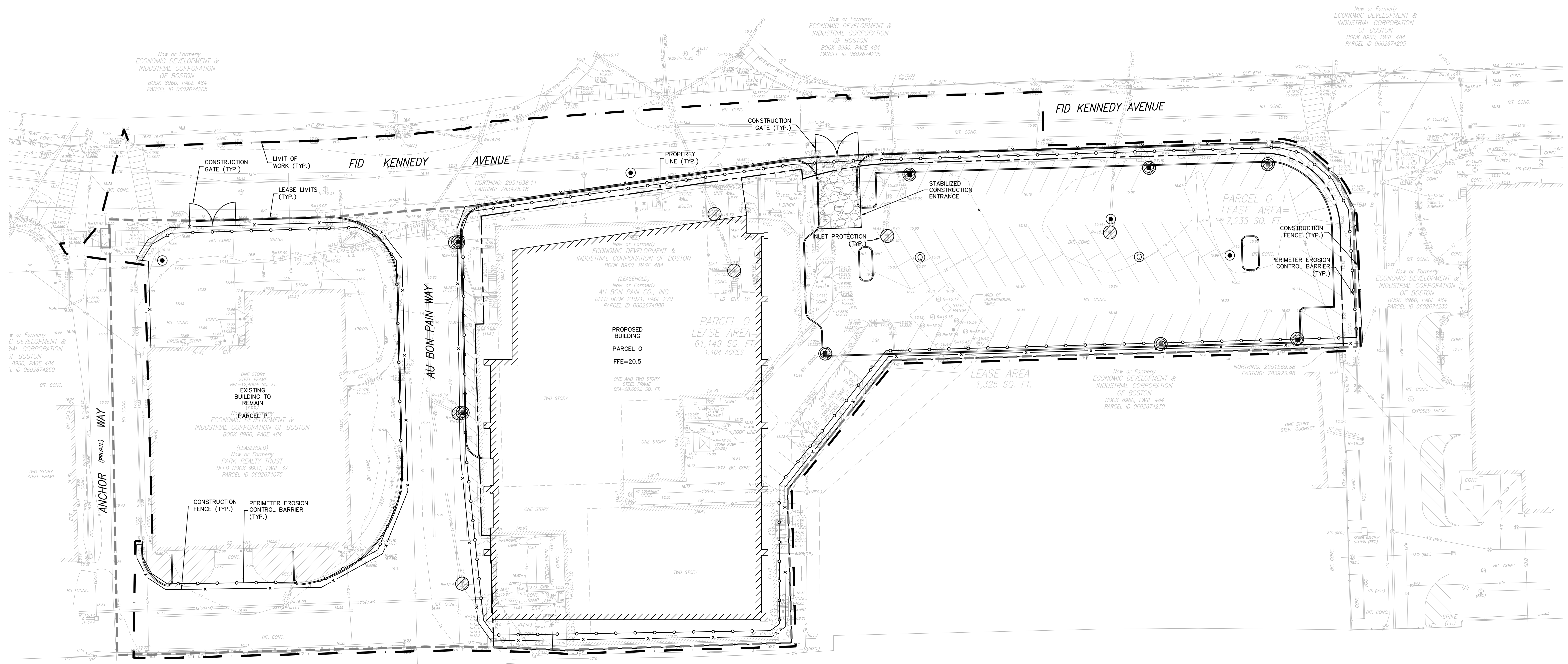
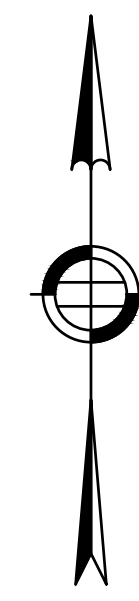
THORNTON TOMASETTI
27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-1100

CODE CONSULTANT

CODE RED CONSULTANTS
154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-500-1833

GEOTECHNICAL ENGINEER

HALEY & ALDRICH INC.
465 MEDFORD ST., SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389



SEAL / SIGNATURE

© Spagnolo Glesne & Associates, Inc.
05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

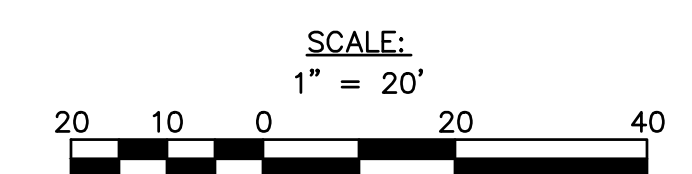
No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

SHEET TITLE:
EROSION CONTROL PLAN



PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT
COPLEY WOLFF DESIGN GROUP
10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-9000

CIVIL ENGINEER
NITSCH ENGINEERING
2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEPPP
BR+A CONSULTING ENGINEERS
10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

STRUCTURAL ENGINEER
MCNAMARA, SALVIA
101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-737-0500

BUILDING ENVELOPE
VIDARIS
250 DORCHESTER AVE.
BOSTON, MA 02127
617-288-8977

SUSTAINABILITY
THORNTON TOMASETTI
27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-4100

CODE CONSULTANT
CODE RED CONSULTANTS
154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-500-1633

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.
465 MEDFORD ST., SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389

CONSTRUCTION SPECIFICATIONS
LENGTH - GREATER THAN OR EQUAL TO 50 FEET

CONSTRUCTION SPECIFICATIONS
WIDTH - TWELVE FOOT MINIMUM (ONE WAY), TWENTY FOUR FOOT MINIMUM (TWO WAY), BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

CONSTRUCTION SPECIFICATIONS
SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHALL BE PERMITTED.

CONSTRUCTION SPECIFICATIONS
THICKNESS - 8"

CONSTRUCTION SPECIFICATIONS
MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

CONSTRUCTION SPECIFICATIONS
PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

CONSTRUCTION SPECIFICATIONS
REINFORCED CONCRETE

CONSTRUCTION SPECIFICATIONS
DRAIN SPACE

CONSTRUCTION SPECIFICATIONS
STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION SPECIFICATIONS
EXISTING PUBLIC RIGHT-OF-WAY

CONSTRUCTION SPECIFICATIONS
EXISTING GROUND

CONSTRUCTION SPECIFICATIONS
MOUNTABLE BERM (OPTIONAL)

CONSTRUCTION SPECIFICATIONS
TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY

CONSTRUCTION SPECIFICATIONS
ORANGE SAFETY FENCING RUNNING ENTIRE LENGTH OF STONE (TYP.)

CONSTRUCTION SPECIFICATIONS
WASHRACK* (OPTIONAL)

CONSTRUCTION SPECIFICATIONS
EXISTING PAVEMENT

CONSTRUCTION SPECIFICATIONS
EXISTING GROUND

CONSTRUCTION SPECIFICATIONS
POSITIVE DRAINAGE TO SEDIMENT TRAPPING DEVICE ON SITE.

CONSTRUCTION SPECIFICATIONS
12' MIN* (ONE WAY)

CONSTRUCTION SPECIFICATIONS
24' MIN* (TWO WAY)

CONSTRUCTION SPECIFICATIONS
4" MIN.

CONSTRUCTION SPECIFICATIONS
2" TO 3" STONE COURSE AGGREGATE (TYP.)

CONSTRUCTION SPECIFICATIONS
6'-7" (MIN.)

CONSTRUCTION SPECIFICATIONS
* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION

CONSTRUCTION SPECIFICATIONS
SCALE AS NOTED

CONSTRUCTION SPECIFICATIONS
DATE ISSUED 05/18/2021

CONSTRUCTION SPECIFICATIONS
PROJECT NO 5154

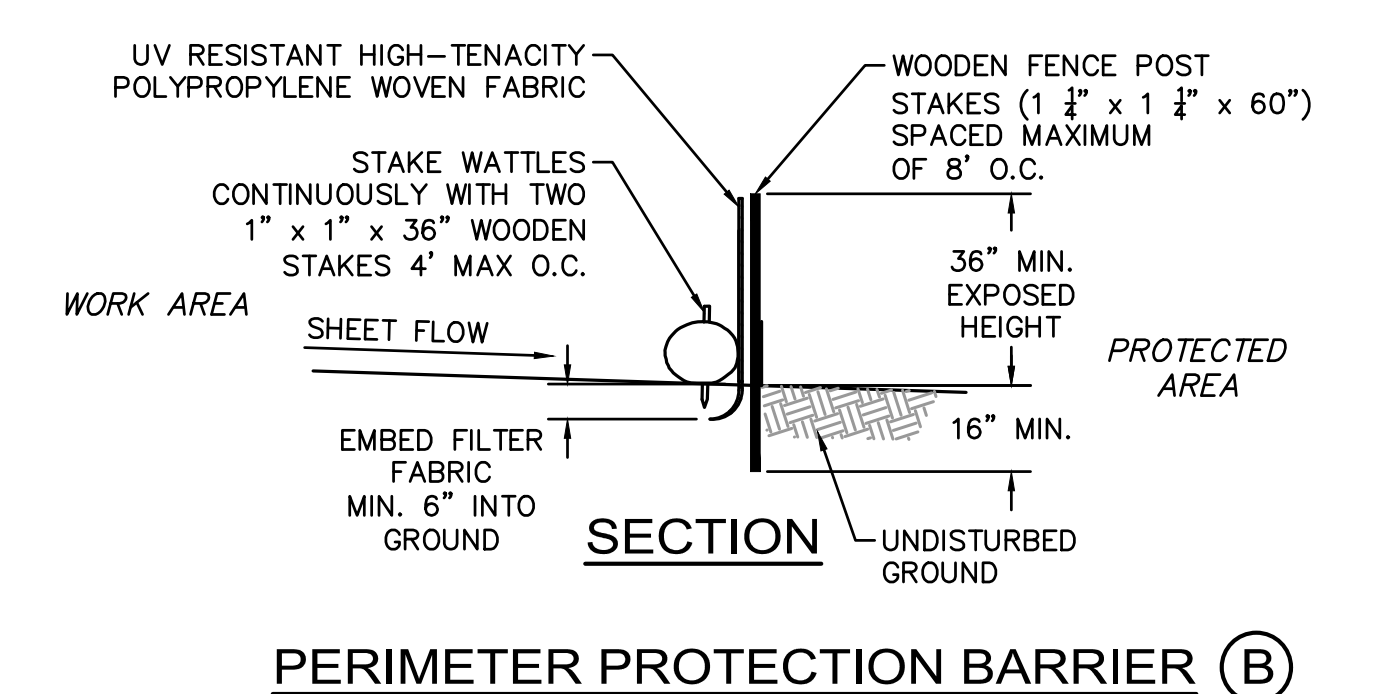
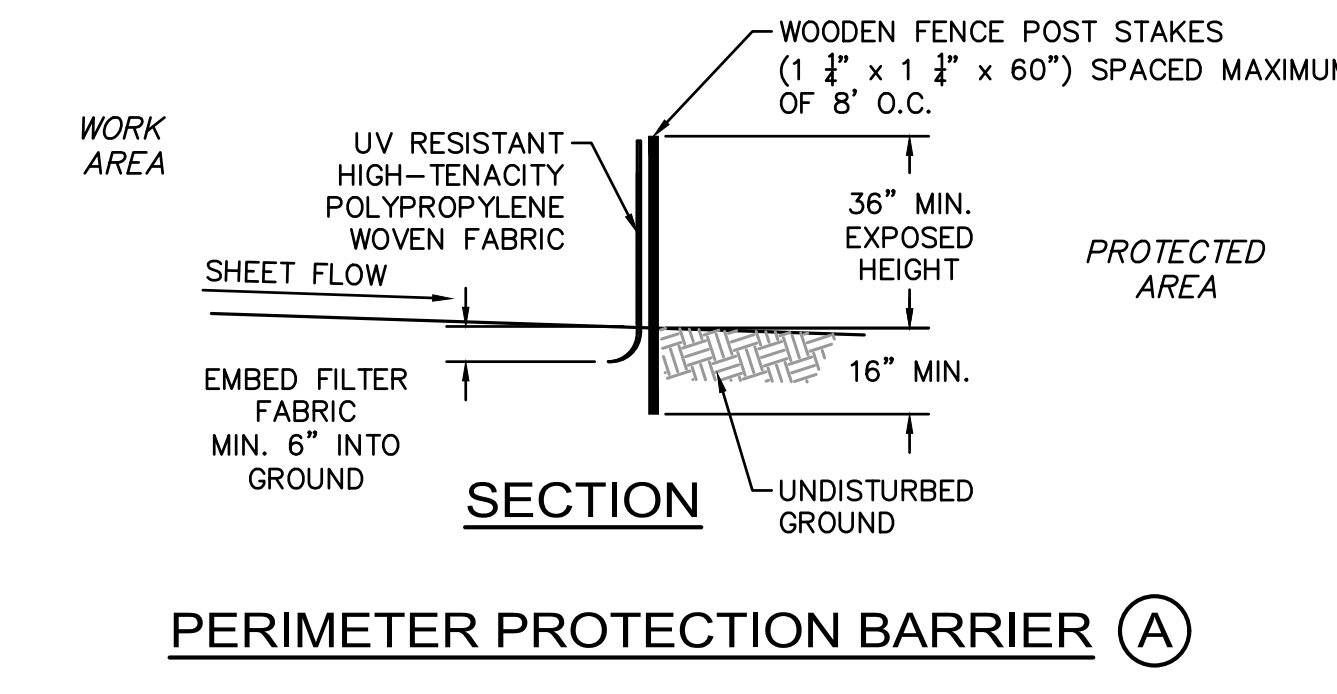
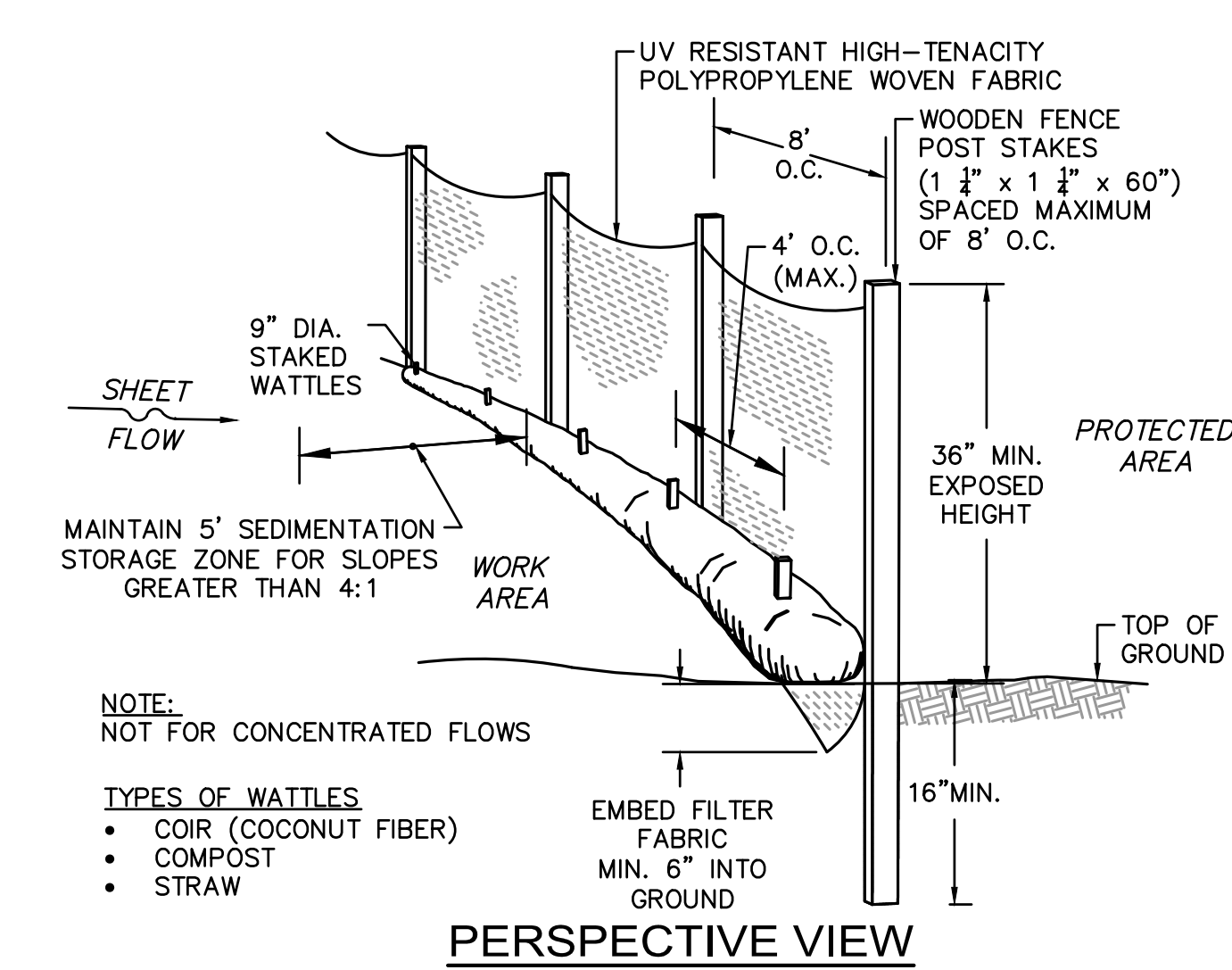
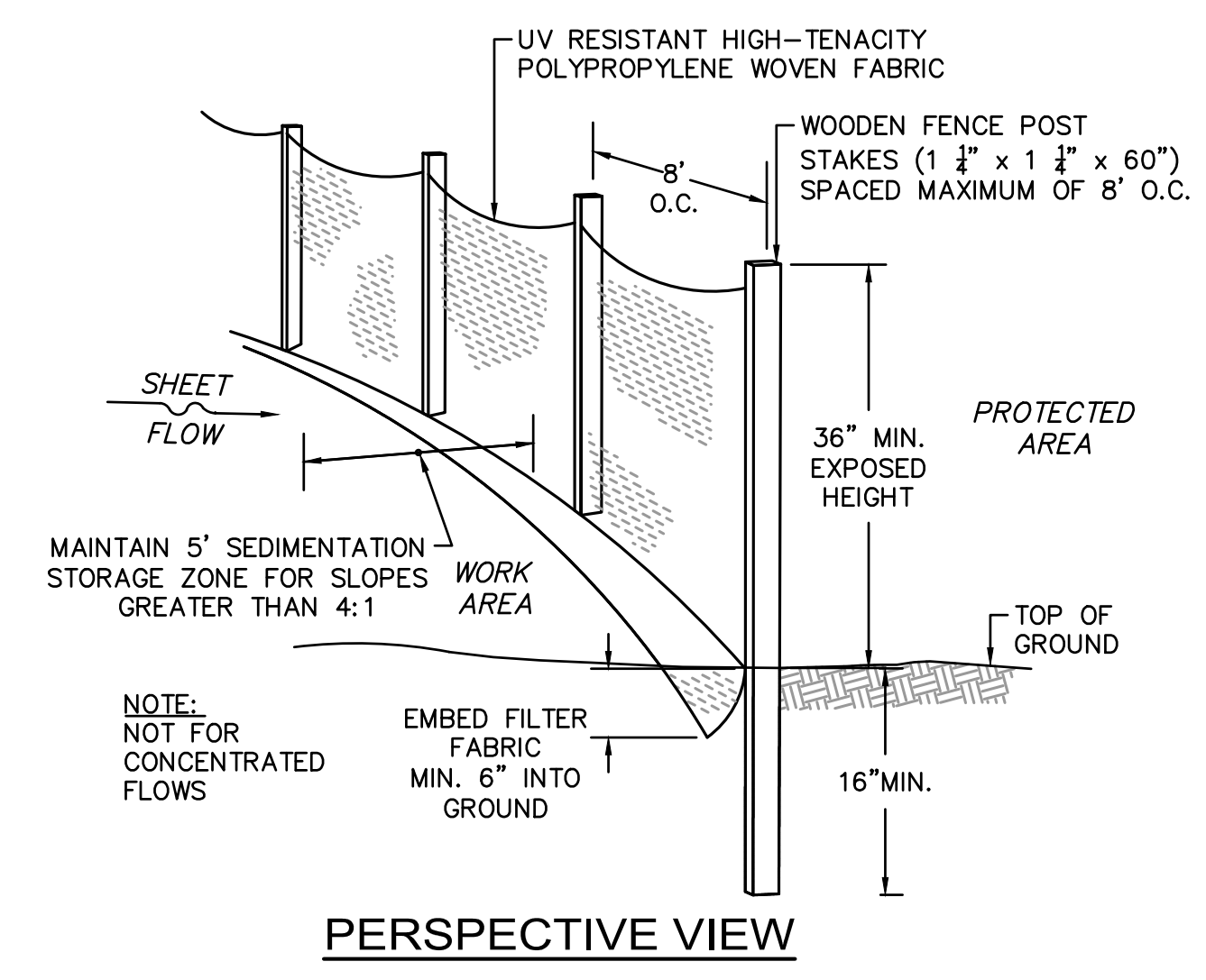
CONSTRUCTION SPECIFICATIONS
DRAWN BY YAA

CONSTRUCTION SPECIFICATIONS
CHECKED BY CDH

CONSTRUCTION SPECIFICATIONS
SHEET TITLE: CIVIL DETAILS

C-500

NITSCH PROJECT #14306

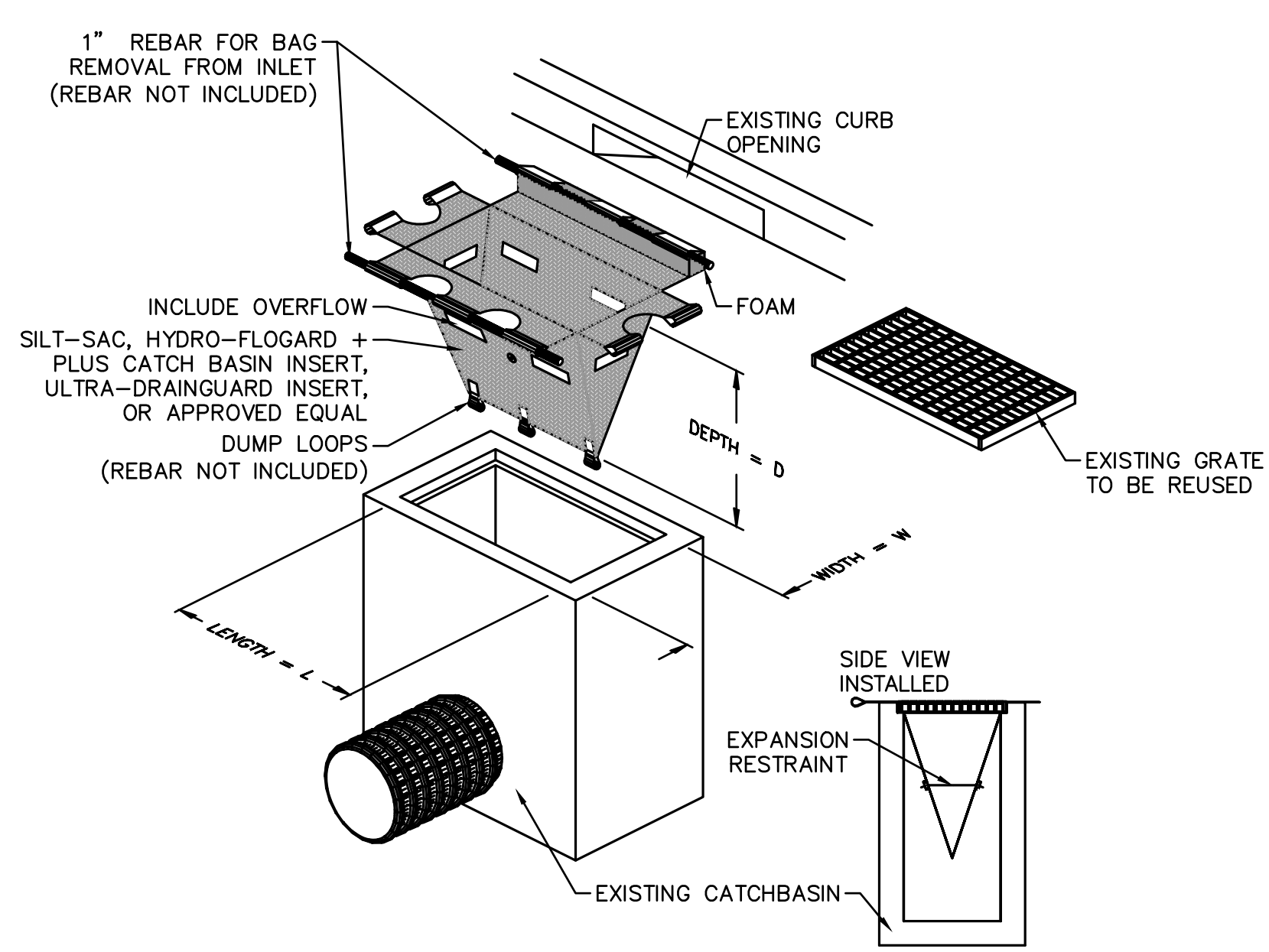


PERIMETER PROTECTION BARRIER (A)

PERIMETER PROTECTION BARRIER (B)

SILT FENCE DETAIL WITH WATTLES

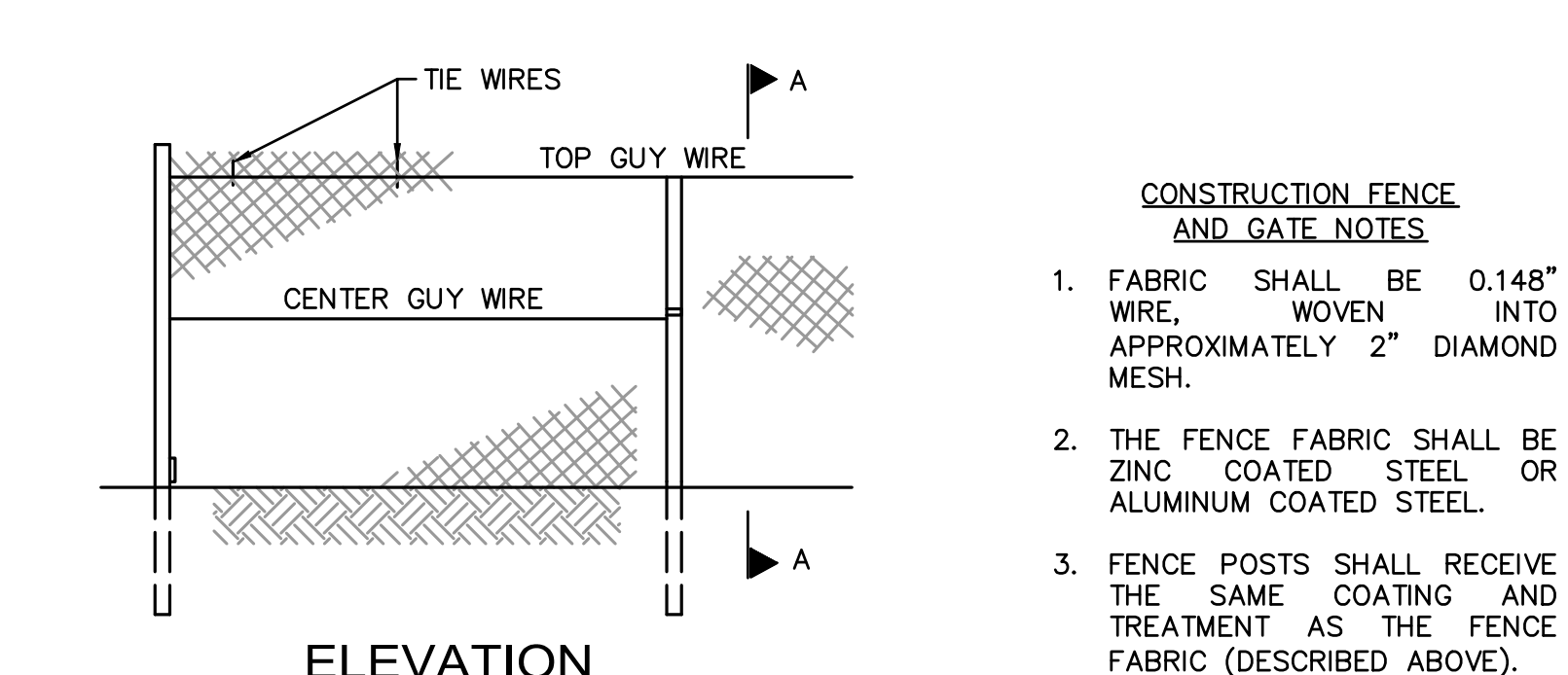
NOT TO SCALE



INLET PROTECTION (2)

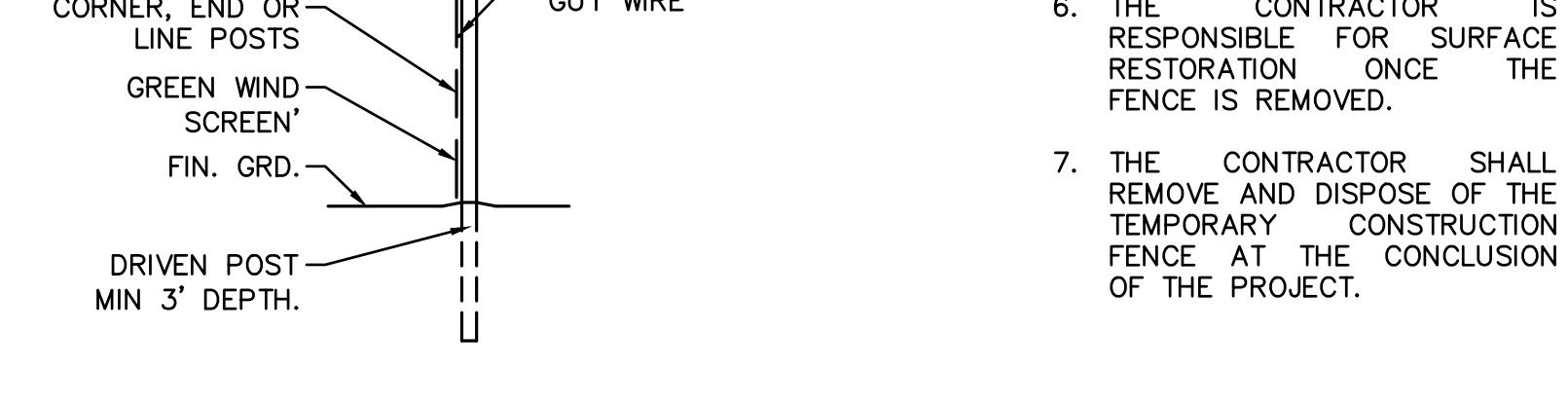
CATCH BASIN W/ SILTATION SACK

NOT TO SCALE



CHAIN LINK CONSTRUCTION FENCE

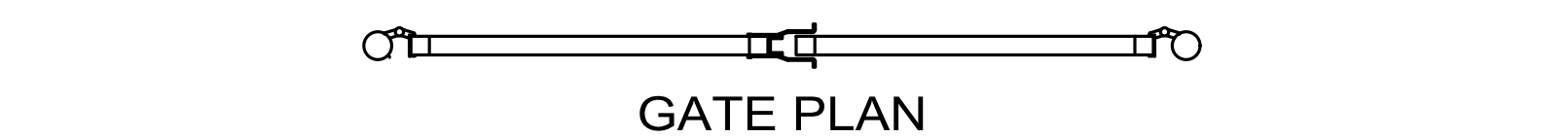
NOT TO SCALE



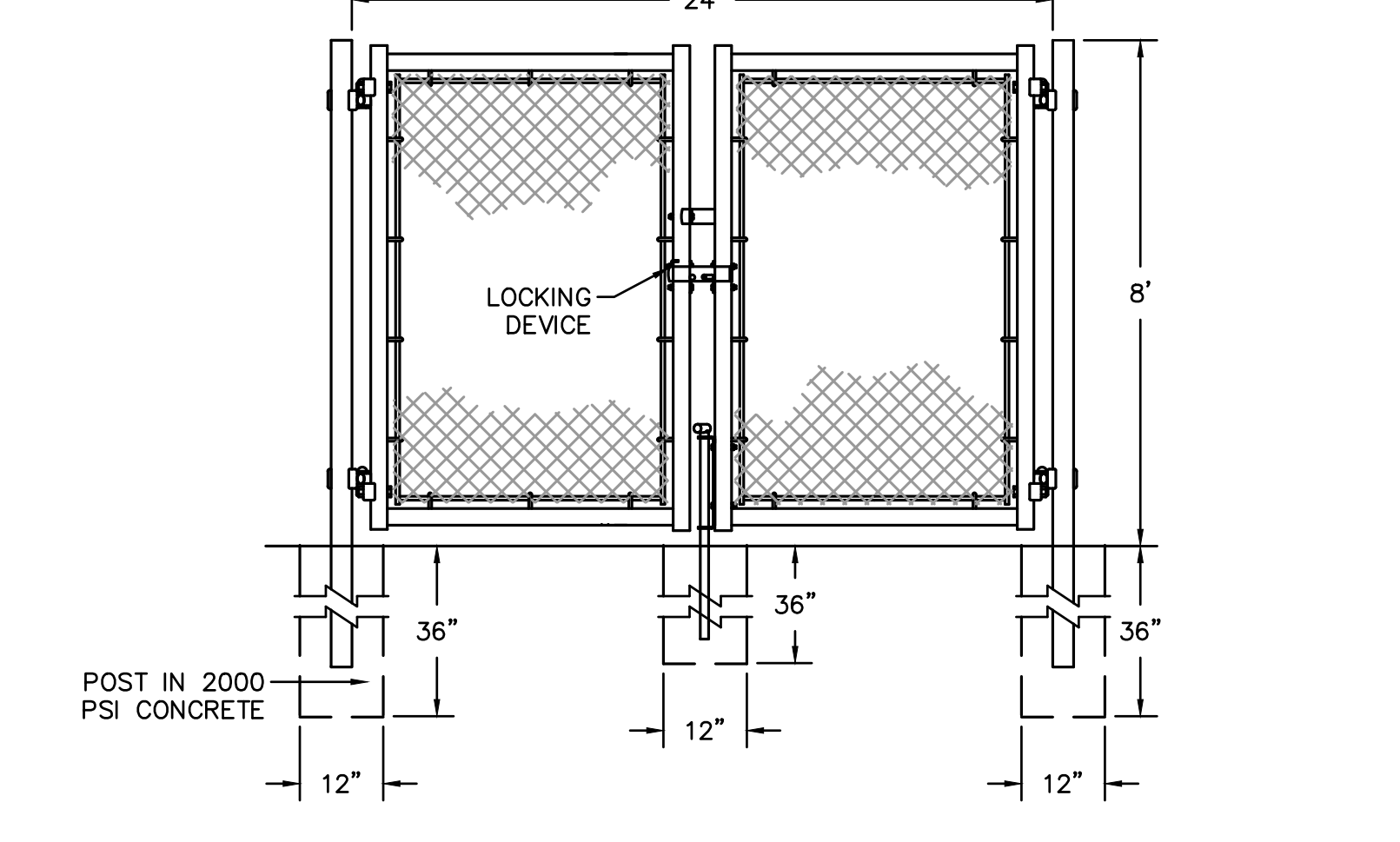
SECTION A-A

CHAIN LINK CONSTRUCTION FENCE

NOT TO SCALE



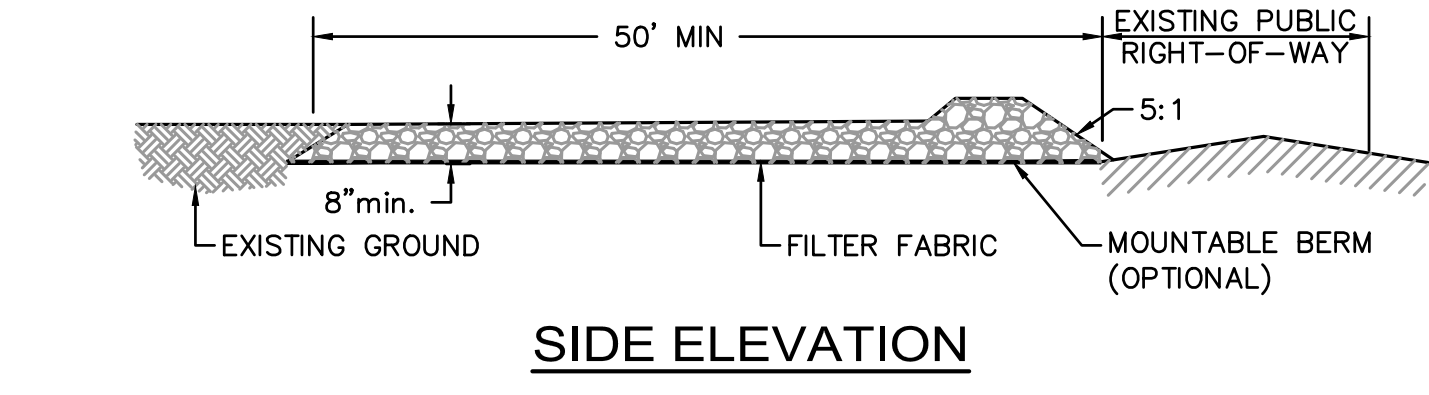
GATE PLAN



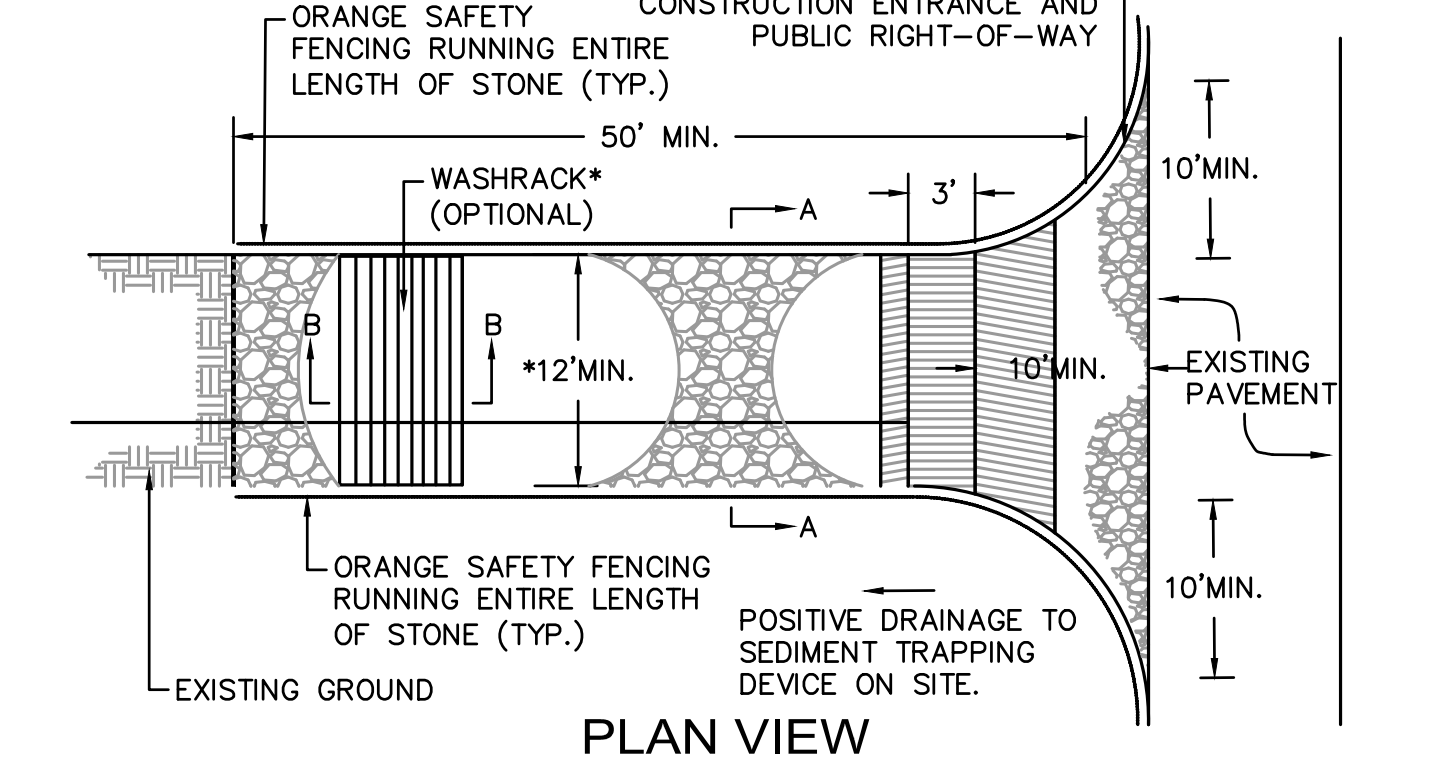
DOUBLE GATE ELEVATION

24' WIDE DOUBLE GATE

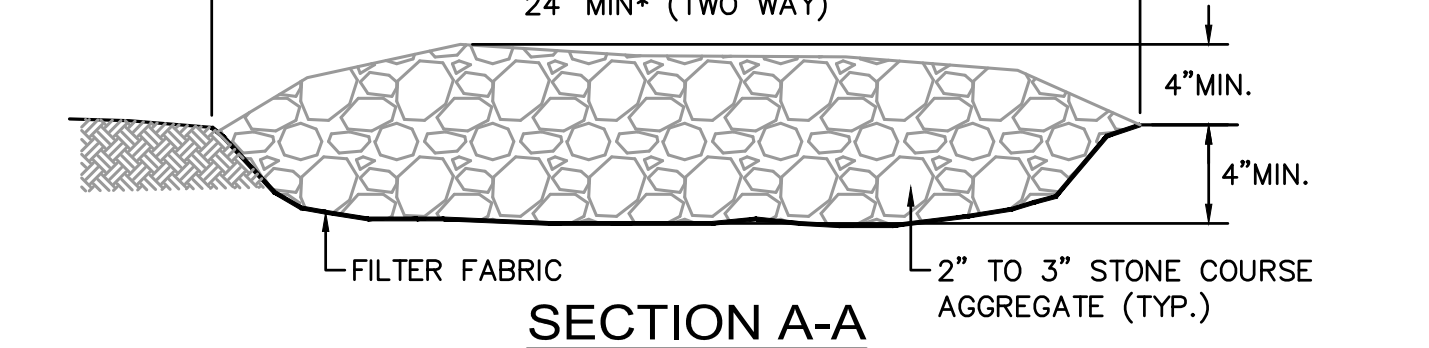
NOT TO SCALE



SIDE ELEVATION

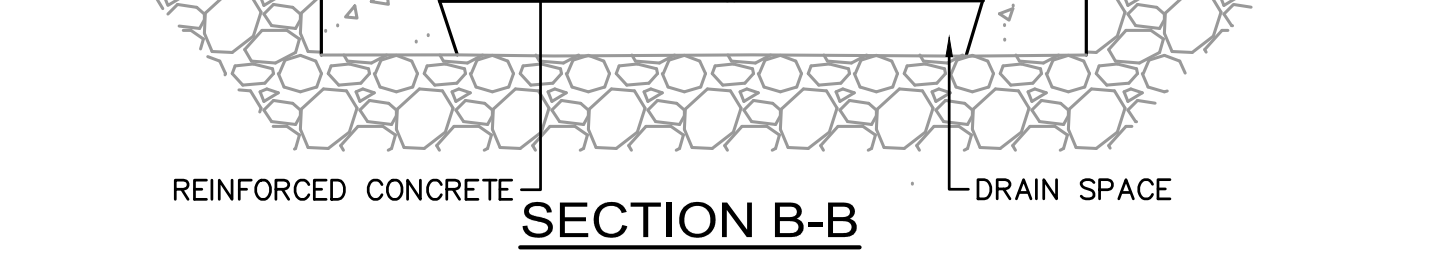


PLAN VIEW



SECTION A-A

* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION



SECTION B-B

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

Attachment B – 2017 Construction General Permit

**National Pollutant Discharge Elimination System
General Permit for Discharges from
Construction Activities
(as modified)**

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et. seq., (hereafter CWA), as amended by the Water Quality Act of 1987, P.L. 100-4, "operators" of construction activities (defined in Appendix A) that meet the requirements of Part 1.1 of this National Pollutant Discharge Elimination System (NPDES) general permit, are authorized to discharge pollutants in accordance with the effluent limitations and conditions set forth herein. Permit coverage is required from the "commencement of construction activities" (see Appendix A) until one of the conditions for terminating CGP coverage has been met (see Part 8.2).

This permit becomes effective on **June 27, 2019**.

This permit and the authorization to discharge expire at 11:59pm, **February 16, 2022**.

Signed and issued this 14th day of May 2019
Deborah Szaro,
Acting Regional Administrator, EPA Region 1.

Signed and issued this 14th day of May 2019
Charles W. Maguire,
Director, Water Division, EPA Region 6.

Signed and issued this 14th day of May 2019
Jeff Gratz,
Deputy Director, Water Division, EPA Region 2.

Signed and issued this 14th day of May 2019
Jeffery Robichaud,
Director, Water Division, EPA Region 7.

Signed and issued this 14th day of May 2019
Jose C. Font,
Acting Director, Caribbean Environmental
Protection Division, EPA Region 2.

Signed and issued this 14th day of May 2019
Darcy O'Connor,
Director, Water Division, EPA Region 8.

Signed and issued this 14th day of May 2019
Catharine McManus,
Deputy Director, Water Division, EPA Region 3.

Signed and issued this 14th day of May 2019
Tomás Torres,
Director, Water Division, EPA Region 9.

Signed and issued this 14th day of May 2019
Jeaneanne M. Gettle,
Director, Water Division, EPA Region 4.

Signed and issued this 14th day of May 2019
Daniel D. Opalski,
Director, Water Division, EPA Region 10.

Signed and issued this 14th day of May 2019
Joan M. Tanaka,
Acting Director, Water Division, EPA Region 5.

CONTENTS

1 How to Obtain Coverage Under the Construction General Permit (CGP) 1

1.1 Eligibility Conditions..... 1

1.2 Types of Discharges Authorized 2

1.3 Prohibited Discharges..... 4

1.4 Submitting your Notice of Intent (NOI) 4

1.5 Requirement to Post a Notice of Your Permit Coverage..... 6

2 Technology-Based Effluent Limitations 6

2.1 General Stormwater Control Design, Installation, and Maintenance Requirements..... 7

2.2 Erosion and Sediment Control Requirements 8

2.3 Pollution Prevention Requirements..... 14

2.4 Construction Dewatering Requirements 18

3 Water Quality-Based Effluent Limitations..... 18

3.1 General Effluent Limitation to Meet Applicable Water Quality Standards..... 18

3.2 Discharge Limitations for Sites Discharging to Sensitive Waters..... 19

4 Site Inspection Requirements 20

4.1 Person(s) Responsible for Inspecting Site 20

4.2 Frequency of Inspections..... 20

4.3 Increase in Inspection Frequency for Sites Discharging to Sensitive Waters..... 21

4.4 Reductions in Inspection Frequency..... 21

4.5 Areas that MUST Be Inspected 22

4.6 Requirements for Inspections 22

4.7 Inspection Report 23

4.8 Inspections By EPA..... 23

5 Corrective Actions 24

5.1 Conditions Triggering Corrective Action. 24

5.2 Corrective Action Deadlines 24

5.3 Corrective Action Required by EPA 25

5.4 Corrective Action Report..... 25

6 Staff Training Requirements 25

7 Stormwater Pollution Prevention Plan (SWPPP) 26

7.1 General Requirements 26

7.2 SWPPP Contents 26

7.3 On-Site Availability of Your SWPPP..... 32

7.4 SWPPP Modifications 32

8	How to Terminate Coverage	33
8.1	Minimum Information Required in NOT	33
8.2	Conditions for Terminating CGP Coverage	34
8.3	How to Submit Your NOT	34
8.4	Deadline for Submitting the NOT	34
8.5	Effective Date of Termination of Coverage.....	34
9	Permit Conditions Applicable to Specific States, Indian Country Lands, or Territories.....	35
	Appendix A: Definitions and Acronyms	A-1
	Appendix B: Permit Areas Eligible for Coverage and EPA Regional Addresses.....	B-1
	Appendix C: Small Construction Waivers and Instructions	C-1
	Appendix D: Eligibility Procedures Relating to Threatened & Endangered Species Protection. D-1	
	Appendix E: Historic Property Screening Process	E-1
	Appendix F: List of Tier 3, Tier 2, and Tier 2.5 Waters.....	F-1
	Appendix G: Buffer Requirements	G-1
	Appendix H: 2-Year, 24-Hour Storm Frequencies	H-1
	Appendix I: Standard Permit Conditions.....	I-1
	Appendix J: Notice of Intent (NOI) Form and Instructions.....	J-1
	Appendix K: Notice of Termination (NOT) Form and Instructions	K-1
	Appendix L: Suggested Format for Request for Chemical Treatment	L-1

1 HOW TO OBTAIN COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT (CGP)

To be covered under this permit, you must meet the eligibility conditions and follow the requirements for obtaining permit coverage in this Part.

1.1 ELIGIBILITY CONDITIONS

1.1.1 You are an “operator” of a construction site for which discharges will be covered under this permit. For the purposes of this permit and in the context of stormwater discharges associated with construction activity, an “operator” is any party associated with a construction project that meets either of the following two criteria:

- a. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
- b. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Where there are multiple operators associated with the same project, all operators must obtain permit coverage.¹ Subcontractors generally are not considered operators for the purposes of this permit.

1.1.2 Your site's construction activities:

- a. Will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land; or
- b. Have been designated by EPA as needing permit coverage under 40 CFR 122.26(a)(1)(v) or 40 CFR 122.26(b)(15)(ii);

1.1.3 Your site is located in an area where EPA is the permitting authority (see Appendix B);

1.1.4 Discharges from your site are not:

- a. Already covered by a different NPDES permit for the same discharge; or
- b. In the process of having coverage under a different NPDES permit for the same discharge denied, terminated, or revoked.^{2, 3}

1.1.5 You are able to demonstrate that you meet one of the criteria listed in Appendix D with respect to the protection of species that are federally listed as endangered or threatened under the Endangered Species Act (ESA) and federally designated critical habitat;

1.1.6 You have completed the screening process in Appendix E relating to the protection of historic properties; and

¹ If the operator of a “construction support activity” (see Part 1.2.1c) is different than the operator of the main site, that operator must also obtain permit coverage. See Part 7.1 for clarification on the sharing of permit-related functions between and among operators on the same site and for conditions that apply to developing a SWPPP for multiple operators associated with the same site.

² Parts 1.1.4a and 1.1.4b do not include sites currently covered under the 2012 CGP that are in the process of obtaining coverage under this permit, nor sites covered under this permit that are transferring coverage to a different operator.

³ Notwithstanding a site being made ineligible for coverage under this permit because it falls under the description of Parts 1.1.4a or 1.1.4b, above, EPA may waive the applicable eligibility requirement after specific review if it determines that coverage under this permit is appropriate.

- 1.1.7** You have complied with all requirements in Part 9 imposed by the applicable state, Indian tribe, or territory in which your construction activities and/or discharge will occur.
- 1.1.8** For “new sources” (as defined in Appendix A) only:
- a. EPA has not, prior to authorization under this permit, determined that discharges from your site will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures designed to bring your discharge into compliance with this permit, specifically the requirement to meet water quality standards. In the absence of information demonstrating otherwise, EPA expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part 3, will result in discharges that will not cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard.
 - b. Discharges from your site to a Tier 2, Tier 2.5, or Tier 3 water⁴ will not lower the water quality of the applicable water. In the absence of information demonstrating otherwise, EPA expects that compliance with the requirements of this permit, including the requirements applicable to such discharges in Part 3.2, will result in discharges that will not lower the water quality of such waters.
- 1.1.9** If you plan to add “cationic treatment chemicals” (as defined in Appendix A) to stormwater and/or authorized non-stormwater prior to discharge, you may not submit your Notice of Intent (NOI) unless and until you notify your applicable EPA Regional Office (see Appendix L) in advance and the EPA Regional Office authorizes coverage under this permit after you have included appropriate controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to discharges that cause an exceedance of water quality standards.

1.2 TYPES OF DISCHARGES AUTHORIZED⁵

- 1.2.1** The following stormwater discharges are authorized under this permit provided that appropriate stormwater controls are designed, installed, and maintained (see Parts 2 and 3):
- a. Stormwater discharges, including stormwater runoff, snowmelt runoff, and surface runoff and drainage, associated with construction activity under 40 CFR 122.26(b)(14) or 122.26(b)(15)(i);
 - b. Stormwater discharges designated by EPA as needing a permit under 40 CFR 122.26(a)(1)(v) or 122.26(b)(15)(ii);

⁴ Note: Your site will be considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first water to which you discharge is identified by a state, tribe, or EPA as a Tier 2, Tier 2.5, or Tier 3 water. For discharges that enter a storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system. See list of Tier 2, Tier 2.5, and Tier 3 waters in Appendix F.

⁵ See “Discharge” as defined in Appendix A. Note: Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the SWPPP, or during an inspection.

- c. Stormwater discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided that:
 - i. The support activity is directly related to the construction site required to have permit coverage for stormwater discharges;
 - ii. The support activity is not a commercial operation, nor does it serve multiple unrelated construction sites;
 - iii. The support activity does not continue to operate beyond the completion of the construction activity at the site it supports; and
 - iv. Stormwater controls are implemented in accordance with Part 2 and Part 3 for discharges from the support activity areas.
- d. Stormwater discharges from earth-disturbing activities associated with the construction of staging areas and the construction of access roads conducted prior to active mining.

1.2.2 The following non-stormwater discharges associated with your construction activity are authorized under this permit provided that, with the exception of water used to control dust and to irrigate vegetation in stabilized areas, these discharges are not routed to areas of exposed soil on your site and you comply with any applicable requirements for these discharges in Parts 2 and 3:

- a. Discharges from emergency fire-fighting activities;
- b. Fire hydrant flushings;
- c. Landscape irrigation;
- d. Water used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes;
- e. Water used to control dust;
- f. Potable water including uncontaminated water line flushings;
- g. External building washdown, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (as defined in Appendix A) (e.g., paint or caulk containing polychlorinated biphenyls (PCBs));
- h. Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used. You are prohibited from directing pavement wash waters directly into any water of the U.S., storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control;
- i. Uncontaminated air conditioning or compressor condensate;
- j. Uncontaminated, non-turbid discharges of ground water or spring water;
- k. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated ground water; and
- l. Construction dewatering water discharged in accordance with Part 2.4.

1.2.3 Also authorized under this permit are discharges of stormwater listed above in Part 1.2.1, or authorized non-stormwater discharges listed above in Part 1.2.2, commingled with a

discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

1.3 PROHIBITED DISCHARGES⁶

- 1.3.1 Wastewater from washout of concrete, unless managed by an appropriate control as described in Part 2.3.4;
- 1.3.2 Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
- 1.3.3 Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
- 1.3.4 Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and
- 1.3.5 Toxic or hazardous substances from a spill or other release.

To prevent the above-listed prohibited non-stormwater discharges, operators must comply with the applicable pollution prevention requirements in Part 2.3.

1.4 SUBMITTING YOUR NOTICE OF INTENT (NOI)

All “operators” (as defined in Appendix A) associated with your construction site, who meet the Part 1.1 eligibility requirements, and who seek coverage under this permit, must submit to EPA a complete and accurate NOI in accordance with the deadlines in **Table 1** prior to commencing construction activities.

Exception: If you are conducting construction activities in response to a public emergency (e.g., *mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services*), and the related work requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services, you may discharge on the condition that a complete and accurate NOI is submitted within 30 calendar days after commencing construction activities (see Table 1) establishing that you are eligible for coverage under this permit. You must also provide documentation in your Stormwater Pollution Prevention Plan (SWPPP) to substantiate the occurrence of the public emergency.

1.4.1 Prerequisite for Submitting Your NOI

You must develop a SWPPP consistent with Part 7 before submitting your NOI for coverage under this permit.

1.4.2 How to Submit Your NOI

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit your NOI for coverage under the 2017 CGP, unless you received a waiver from your EPA Regional Office.

To access NeT, go to <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>.

Waivers from electronic reporting may be granted based on one of the following conditions:

⁶ EPA includes these prohibited non-stormwater discharges here as a reminder to the operator that the only non-stormwater discharges authorized by this permit are at Part 1.2.2. Any unauthorized non-stormwater discharges must be covered under an individual permit or alternative general permit.

- a. If your operational headquarters is physically located in a geographic area (*i.e.*, ZIP code or census tract) that is identified as under-served for broadband Internet access in the most recent report from the Federal Communications Commission; or
- b. If you have limitations regarding available computer access or computer capability.

If the EPA Regional Office grants you approval to use a paper NOI, and you elect to use it, you must complete the form in Appendix J.

1.4.3 Deadlines for Submitting Your NOI and Your Official Date of Permit Coverage

Table 1 provides the deadlines for submitting your NOI and the official start date of your permit coverage, which differ depending on when you commence construction activities.

Table 1 NOI Submittal Deadlines and Official Start Date for Permit Coverage.

Type of Operator	NOI Submittal Deadline ⁷	Permit Authorization Date ⁸
Operator of a new site (<i>i.e.</i> , a site where construction activities commence on or after February 16, 2017)	At least 14 calendar days before commencing construction activities.	14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.
Operator of an existing site (<i>i.e.</i> , a site with 2012 CGP coverage where construction activities commenced prior to February 16, 2017)	No later than May 17, 2017 .	
New operator of a permitted site (<i>i.e.</i> , an operator that through transfer of ownership and/or operation replaces the operator of an already permitted construction site that is either a "new site" or an "existing site")	At least 14 calendar days before the date the transfer to the new operator will take place.	
Operator of an "emergency-related project" (<i>i.e.</i> , a project initiated in response to a public emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services)	No later than 30 calendar days after commencing construction activities.	You are considered provisionally covered under the terms and conditions of this permit immediately, and fully covered 14 calendar days after EPA notifies you that it has received a complete NOI, unless EPA notifies you that your authorization is delayed or denied.

1.4.4 Modifying your NOI

⁷ If you miss the deadline to submit your NOI, any and all discharges from your construction activities will continue to be unauthorized under the CWA until they are covered by this or a different NPDES permit. EPA may take enforcement action for any unpermitted discharges that occur between the commencement of construction activities and discharge authorization.

⁸ Discharges are not authorized if your NOI is incomplete or inaccurate or if you are not eligible for permit coverage.

If after submitting your NOI you need to correct or update any fields, you may do so by submitting a "Change NOI" form using NeT. Waivers from electronic reporting may be granted as specified in Part 1.4.1. If the EPA Regional Office has granted you approval to submit a paper NOI modification, you may indicate any NOI changes on the same NOI form in Appendix J.

When there is a change to the site's operator, the new operator must submit a new NOI, and the previous operator must submit a Notice of Termination (NOT) form as specified in Part 8.3.

1.4.5 Your Official End Date of Permit Coverage

Once covered under this permit, your coverage will last until the date that:

- a. You terminate permit coverage consistent with Part 8; or
- b. You receive permit coverage under a different NPDES permit or a reissued or replacement version of this permit after expiring on February 16, 2022; or
- c. You fail to submit an NOI for coverage under a revised or replacement version of this permit before the deadline for existing construction sites where construction activities continue after this permit has expired.

1.5 REQUIREMENT TO POST A NOTICE OF YOUR PERMIT COVERAGE

You must post a sign or other notice of your permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice must be located so that it is visible from the public road that is nearest to the active part of the construction site, and it must use a font large enough to be readily viewed from a public right-of-way.⁹ At a minimum, the notice must include:

- a. The NPDES ID (*i.e.*, *permit tracking number assigned to your NOI*);
- b. A contact name and phone number for obtaining additional construction site information;
- c. The Uniform Resource Locator (URL) for the SWPPP (if available), or the following statement: "If you would like to obtain a copy of the Stormwater Pollution Prevention Plan (SWPPP) for this site, contact the EPA Regional Office at [*include the appropriate CGP Regional Office contact information found at <https://www.epa.gov/npdes/contact-us-stormwater#regional>*];" and
- d. The following statement "If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, contact the EPA through the following website: <https://www.epa.gov/enforcement/report-environmental-violations>."

2 TECHNOLOGY-BASED EFFLUENT LIMITATIONS

You must comply with the following technology-based effluent limitations in this Part for all authorized discharges.¹⁰

⁹ If the active part of the construction site is not visible from a public road, then place the notice of permit coverage in a position that is visible from the nearest public road and as close as possible to the construction site.

¹⁰ For each of the effluent limits in Part 2, as applicable to your site, you must include in your SWPPP (1) a description of the specific control(s) to be implemented to meet the effluent limit; (2) any applicable design specifications; (3) routine maintenance specifications; and (4) the projected schedule for its (their)

2.1 GENERAL STORMWATER CONTROL DESIGN, INSTALLATION, AND MAINTENANCE REQUIREMENTS

You must design, install, and maintain stormwater controls required in Parts 2.2 and 2.3 to minimize the discharge of pollutants in stormwater from construction activities. To meet this requirement, you must:

2.1.1 Account for the following factors in designing your stormwater controls:

- a. The expected amount, frequency, intensity, and duration of precipitation;
- b. The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. You must design stormwater controls to control stormwater volume, velocity, and peak flow rates to minimize discharges of pollutants in stormwater and to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points; and
- c. The soil type and range of soil particle sizes expected to be present on the site.

2.1.2 Design and install all stormwater controls in accordance with good engineering practices, including applicable design specifications.¹¹

2.1.3 Complete installation of stormwater controls by the time each phase of construction activities has begun.

- a. By the time construction activity in any given portion of the site begins, install and make operational any downgradient sediment controls (*e.g., buffers, perimeter controls, exit point controls, storm drain inlet protection*) that control discharges from the initial site clearing, grading, excavating, and other earth-disturbing activities.¹²
- b. Following the installation of these initial controls, install and make operational all stormwater controls needed to control discharges prior to subsequent earth-disturbing activities.

2.1.4 Ensure that all stormwater controls are maintained and remain in effective operating condition during permit coverage and are protected from activities that would reduce their effectiveness.

- a. Comply with any specific maintenance requirements for the stormwater controls listed in this permit, as well as any recommended by the manufacturer.¹³
- b. If at any time you find that a stormwater control needs routine maintenance, you must immediately initiate the needed maintenance work, and complete such work by the close of the next business day.

installation/implementation. See Part 7.2.6.

¹¹ Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practices and must be explained in your SWPPP. You must also comply with any additional design and installation requirements specified for the effluent limits in Parts 2.2 and 2.3.

¹² Note that the requirement to install stormwater controls prior to each phase of construction activities for the site does not apply to the earth disturbance associated with the actual installation of these controls. Operators should take all reasonable actions to minimize the discharges of pollutants during the installation of stormwater controls.

¹³ Any departures from such maintenance recommendations made by the manufacturer must reflect good engineering practices and must be explained in your SWPPP.

- c. If at any time you find that a stormwater control needs repair or replacement, you must comply with the corrective action requirements in Part 5.

2.2 EROSION AND SEDIMENT CONTROL REQUIREMENTS

You must implement erosion and sediment controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater from construction activities.

2.2.1 Provide and maintain natural buffers and/or equivalent erosion and sediment controls when a water of the U.S. is located within 50 feet of the site's earth disturbances.

- a. **Compliance Alternatives.** For any discharges to waters of the U.S. located within 50 feet of your site's earth disturbances, you must comply with one of the following alternatives:
 - i. Provide and maintain a 50-foot undisturbed natural buffer; or
 - ii. Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve, in combination, the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or
 - iii. If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

See Appendix G, Part G.2 for additional conditions applicable to each compliance alternative.

- b. **Exceptions.** See Appendix G, Part G.2 for exceptions to the compliance alternatives.

2.2.2 Direct stormwater to vegetated areas and maximize stormwater infiltration and filtering to reduce pollutant discharges, unless infeasible.

2.2.3 Install sediment controls along any perimeter areas of the site that will receive pollutant discharges.¹⁴

- a. Remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control.
- b. **Exception.** For areas at "linear construction sites" (as defined in Appendix A) where perimeter controls are infeasible (*e.g., due to a limited or restricted right-of-way*), implement other practices as necessary to minimize pollutant discharges to perimeter areas of the site.

2.2.4 Minimize sediment track-out.

- a. Restrict vehicle use to properly designated exit points;
- b. Use appropriate stabilization techniques¹⁵ at all points that exit onto paved roads.

¹⁴ Examples of perimeter controls include filter berms, silt fences, vegetative strips, and temporary diversion dikes.

¹⁵ Examples of appropriate stabilization techniques include the use of aggregate stone with an underlying geotextile or non-woven filter fabric, and turf mats.

- i. **Exception:** Stabilization is not required for exit points at linear utility construction sites that are used only episodically and for very short durations over the life of the project, provided other exit point controls¹⁶ are implemented to minimize sediment track-out;
- c. Implement additional track-out controls¹⁷ as necessary to ensure that sediment removal occurs prior to vehicle exit; and
- d. Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet, or water of the U.S.¹⁸

2.2.5 Manage stockpiles or land clearing debris piles composed, in whole or in part, of sediment and/or soil:

- a. Locate the piles outside of any natural buffers established under Part 2.2.1 and away from any stormwater conveyances, drain inlets, and areas where stormwater flow is concentrated;
- b. Install a sediment barrier along all downgradient perimeter areas;¹⁹
- c. For piles that will be unused for 14 or more days, provide cover²⁰ or appropriate temporary stabilization (consistent with Part 2.2.14);
- d. You are prohibited from hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or water of the U.S.

2.2.6 Minimize dust. On areas of exposed soil, minimize dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged in stormwater from the site.

2.2.7 Minimize steep slope disturbances. Minimize the disturbance of “steep slopes” (as defined in Appendix A).

¹⁶ Examples of other exit point controls include preventing the use of exit points during wet periods; minimizing exit point use by keeping vehicles on site to the extent possible; limiting exit point size to the width needed for vehicle and equipment usage; using scarifying and compaction techniques on the soil; and avoiding establishing exit points in environmentally sensitive areas (e.g., karst areas; steep slopes).

¹⁷ Examples of additional track-out controls include the use of wheel washing, rumble strips, and rattle plates.

¹⁸ Fine grains that remain visible (*i.e.*, staining) on the surfaces of off-site streets, other paved areas, and sidewalks after you have implemented sediment removal practices are not a violation of Part 2.2.4.

¹⁹ Examples of sediment barriers include berms, dikes, fiber rolls, silt fences, sandbags, gravel bags, or straw bale.

²⁰ Examples of cover include tarps, blown straw and hydroseeding.

2.2.8 Preserve native topsoil, unless infeasible.²¹

2.2.9 Minimize soil compaction.²² In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed:

- a. Restrict vehicle and equipment use in these locations to avoid soil compaction; and
- b. Before seeding or planting areas of exposed soil that have been compacted, use techniques that rehabilitate and condition the soils as necessary to support vegetative growth.

2.2.10 Protect storm drain inlets.

- a. Install inlet protection measures that remove sediment from discharges prior to entry into any storm drain inlet that carries stormwater flow from your site to a water of the U.S., provided you have authority to access the storm drain inlet;²³ and
- b. Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

2.2.11 Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.²⁴

2.2.12 If you install a sediment basin or similar impoundment:

- a. Situate the basin or impoundment outside of any water of the U.S. and any natural buffers established under Part 2.2.1;
- b. Design the basin or impoundment to avoid collecting water from wetlands;
- c. Design the basin or impoundment to provide storage for either:
 - i. The calculated volume of runoff from a 2-year, 24-hour storm (see Appendix H); or
 - ii. 3,600 cubic feet per acre drained.

²¹ Stockpiling topsoil at off-site locations, or transferring topsoil to other locations, is an example of a practice that is consistent with the requirements in Part 2.2.8. Preserving native topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed. For example, some sites may be designed to be highly impervious after construction, and therefore little or no vegetation is intended to remain, or may not have space to stockpile native topsoil on site for later use, in which case, it may not be feasible to preserve topsoil.

²² Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted.

²³ Inlet protection measures can be removed in the event of flood conditions or to prevent erosion.

²⁴ Examples of control measures that can be used to comply with this requirement include the use of erosion controls and/or velocity dissipation devices (e.g., check dams, sediment traps), within and along the length of a stormwater conveyance and at the outfall to slow down runoff.

- d. Utilize outlet structures that withdraw water from the surface of the sediment basin or similar impoundment, unless infeasible;²⁵
- e. Use erosion controls and velocity dissipation devices to prevent erosion at inlets and outlets; and
- f. Remove accumulated sediment to maintain at least one-half of the design capacity and conduct all other appropriate maintenance to ensure the basin or impoundment remains in effective operating condition.

2.2.13 If using treatment chemicals (e.g., polymers, flocculants, coagulants):

- a. **Use conventional erosion and sediment controls before and after the application of treatment chemicals.** Chemicals may only be applied where treated stormwater is directed to a sediment control (e.g., *sediment basin, perimeter control*) before discharge.
- b. **Select appropriate treatment chemicals.** Chemicals must be appropriately suited to the types of soils likely to be exposed during construction and present in the discharges being treated (i.e., *the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or area*).
- c. **Minimize discharge risk from stored chemicals.** Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., *spill berms, decks, spill containment pallets*), or provide equivalent measures designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., *storing chemicals in a covered area, having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill*).
- d. **Comply with state/local requirements.** Comply with applicable state and local requirements regarding the use of treatment chemicals.
- e. **Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier.** Use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal design specifications provided by the provider/supplier of the applicable chemicals, or document in your SWPPP specific departures from these specifications and how they reflect good engineering practice.
- f. **Ensure proper training.** Ensure that all persons who handle and use treatment chemicals at the construction site are provided with appropriate, product-specific training. Among other things, the training must cover proper dosing requirements.
- g. **Perform additional measures specified by the EPA Regional Office for the authorized use of cationic chemicals.** If you have been authorized to use cationic chemicals at your site pursuant to Part 1.1.9, you must perform all additional measures as conditioned by your authorization to ensure that the use of such chemicals will not cause an exceedance of water quality standards.

²⁵ The circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include areas with extended cold weather, where using surface outlets may not be feasible during certain time periods (although they must be used during other periods). If you determine that it is infeasible to meet this requirement, you must provide documentation in your SWPPP to support your determination, including the specific conditions or time periods when this exception will apply.

2.2.14 Stabilize exposed portions of the site. Implement and maintain stabilization measures (e.g., seeding protected by erosion controls until vegetation is established, sodding, mulching, erosion control blankets, hydromulch, gravel) that minimize erosion from exposed portions of the site in accordance with Parts 2.2.14a and 2.2.14b.

a. Stabilization Deadlines:²⁶

Total Amount of Land Disturbance Occurring At Any One Time ²⁷	Deadline
<p>i. Five acres or less (≤5.0)</p> <p>Note: this includes sites disturbing more than five acres (>5.0) total over the course of a project, but that limit disturbance at any one time (i.e., phase the disturbance) to five acres or less (≤5.0)</p>	<ul style="list-style-type: none"> • Initiate the installation of stabilization measures immediately²⁸ in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;²⁹ and • Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.³⁰

²⁶ EPA may determine, based on an inspection carried out under Part 4.8 and corrective actions required under Part 5.3, that the level of sediment discharge on the site makes it necessary to require a faster schedule for completing stabilization. For instance, if sediment discharges from an area of exposed soil that is required to be stabilized are compromising the performance of existing stormwater controls, EPA may require stabilization to correct this problem.

²⁷ Limiting disturbances to five (5) acres or less at any one time means that at no time during the project do the cumulative earth disturbances exceed five (5) acres. The following examples would qualify as limiting disturbances at any one time to five (5) acres or less:

1. The total area of disturbance for a project is five (5) acres or less.
2. The total area of disturbance for a project will exceed five (5) acres, but the operator ensures that no more than five (5) acres will be disturbed at any one time through implementation of stabilization measures. In this way, site stabilization can be used to “free up” land that can be disturbed without exceeding the five (5)-acre cap to qualify for the 14-day stabilization deadline. For instance, if an operator completes stabilization of two (2) acres of land on a five (5)-acre disturbance, then two (2) additional acres could be disturbed while still qualifying for the longer 14-day stabilization deadline.

²⁸ The following are examples of activities that would constitute the immediate initiation of stabilization:

1. Prepping the soil for vegetative or non-vegetative stabilization as long as seeding, planting, and/or installation of non-vegetative stabilization products takes place as soon as practicable, but no later than one (1) calendar day of completing soil preparation;
2. Applying mulch or other non-vegetative product to the exposed area;
3. Seeding or planting the exposed area;
4. Starting any of the activities in # 1 – 3 on a portion of the entire area that will be stabilized; and
5. Finalizing arrangements to have stabilization product fully installed in compliance with the deadlines for completing stabilization.

²⁹ The requirement to initiate stabilization immediately is triggered as soon as you know that construction work on a portion of the site is temporarily ceased and will not resume for 14 or more days, or as soon as you know that construction work is permanently ceased. In the context of this provision, “immediately” means as soon as practicable, but no later than the end of the next business day, following the day when the construction activities have temporarily or permanently ceased.

³⁰ If vegetative stabilization measures are being implemented, stabilization is considered “installed” when all activities necessary to seed or plant the area are completed. If non-vegetative stabilization measures are being implemented, stabilization is considered “installed” when all such measures are implemented or applied.

<p>ii. More than five acres (>5.0)</p>	<ul style="list-style-type: none"> • Initiate the installation of stabilization measures immediately³¹ in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days;³² and • Complete the installation of stabilization measures as soon as practicable, but no later than seven (7) calendar days after stabilization has been initiated.³³
--	--

iii. **Exceptions:**

(a) Arid, semi-arid, and drought-stricken areas (as defined in Appendix A). If it is the seasonally dry period or a period in which drought is occurring, and vegetative stabilization measures are being used:

- (i) Immediately initiate and, within 14 calendar days of a temporary or permanent cessation of work in any portion of your site, complete the installation of temporary non-vegetative stabilization measures to the extent necessary to prevent erosion;
- (ii) As soon as practicable, given conditions or circumstances on the site, complete all activities necessary to seed or plant the area to be stabilized; and
- (iii) If construction is occurring during the seasonally dry period, indicate in your SWPPP the beginning and ending dates of the seasonally dry period and your site conditions. Also include the schedule you will follow for initiating and completing vegetative stabilization.

(b) Operators that are affected by unforeseen circumstances³⁴ that delay the initiation and/or completion of vegetative stabilization:

- (i) Immediately initiate and, within 14 calendar days, complete the installation of temporary non-vegetative stabilization measures to prevent erosion;
- (ii) Complete all soil conditioning, seeding, watering or irrigation installation, mulching, and other required activities related to the planting and initial establishment of vegetation as soon as conditions or circumstances allow it on your site; and
- (iii) Document in the SWPPP the circumstances that prevent you from meeting the deadlines in Part 2.2.14a and the schedule you will follow for initiating and completing stabilization.

(c) Discharges to a sediment- or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes. Complete stabilization as soon as

³¹ See footnote 27

³² See footnote 28

³³ See footnote 29

³⁴ Examples include problems with the supply of seed stock or with the availability of specialized equipment and unsuitability of soil conditions due to excessive precipitation and/or flooding.

practicable, but no later than seven (7) calendar days after stabilization has been initiated.

b. **Final Stabilization Criteria** (for any areas not covered by permanent structures):

- i. Establish uniform, perennial vegetation (*i.e.*, *evenly distributed, without large bare areas*) that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas; and/or
- ii. Implement permanent non-vegetative stabilization measures³⁵ to provide effective cover.

iii. **Exceptions:**

- (a) **Arid, semi-arid, and drought-stricken areas** (as defined in Appendix A). Final stabilization is met if the area has been seeded or planted to establish vegetation that provides 70 percent or more of the cover that is provided by vegetation native to local undisturbed areas within three (3) years and, to the extent necessary to prevent erosion on the seeded or planted area, non-vegetative erosion controls have been applied that provide cover for at least three years without active maintenance.
- (b) **Disturbed areas on agricultural land that are restored to their preconstruction agricultural use.** The Part 2.2.14b final stabilization criteria does not apply.
- (c) **Areas that need to remain disturbed.** In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed, and only the minimum area needed remains disturbed (*e.g.*, *dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, materials*).

2.3 POLLUTION PREVENTION REQUIREMENTS³⁶

You must implement pollution prevention controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater and to prevent the discharge of pollutants from spilled or leaked materials from construction activities.

2.3.1 For equipment and vehicle fueling and maintenance:

- a. Provide an effective means of eliminating the discharge of spilled or leaked chemicals, including fuels and oils, from these activities;³⁷

³⁵ Examples of permanent non-vegetative stabilization measures include riprap, gravel, gabions, and geotextiles.

³⁶ Under this permit, you are not required to minimize exposure for any products or materials where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

³⁷ Examples of effective means include:

- Locating activities away from waters of the U.S. and stormwater inlets or conveyances so that stormwater coming into contact with these activities cannot reach waters of the U.S.;
- Providing secondary containment (*e.g.*, *spill berms, decks, spill containment pallets*) and cover where appropriate; and
- Having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill.

- b. If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR part 112 and Section 311 of the CWA;
- c. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids;
- d. Use drip pans and absorbents under or around leaky vehicles;
- e. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements; and
- f. Clean up spills or contaminated surfaces immediately, using dry clean up measures (do not clean contaminated surfaces by hosing the area down), and eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

2.3.2 For equipment and vehicle washing:

- a. Provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of wash waters;³⁸
- b. Ensure there is no discharge of soaps, solvents, or detergents in equipment and vehicle wash water; and
- c. For storage of soaps, detergents, or solvents, provide either (1) cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these detergents to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.

2.3.3 For storage, handling, and disposal of building products, materials, and wastes:

- a. For building materials and building products³⁹, provide either (1) cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these products to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas.

Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

- b. For pesticides, herbicides, insecticides, fertilizers, and landscape materials:
 - i. In storage areas, provide either (1) cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these chemicals to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas; and
 - ii. Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label (see also Part 2.3.5).
- c. For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals:

³⁸ Examples of effective means include locating activities away from waters of the U.S. and stormwater inlets or conveyances and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls.

³⁹ Examples of building materials and building products typically present at construction sites include asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures, and gravel and mulch stockpiles.

- i. Store chemicals in water-tight containers, and provide either (1) cover (e.g., plastic sheeting, temporary roofs) to minimize the exposure of these containers to precipitation and to stormwater, or (2) a similarly effective means designed to minimize the discharge of pollutants from these areas (e.g., having a spill kit available on site and ensuring personnel are available to respond expeditiously in the event of a leak or spill), or provide secondary containment (e.g., spill berms, decks, spill containment pallets); and
 - ii. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. You are prohibited from hosing the area down to clean surfaces or spills. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.
- d. *For hazardous or toxic wastes:*⁴⁰
- i. Separate hazardous or toxic waste from construction and domestic waste;
 - ii. Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, tribal, or local requirements;
 - iii. Store all outside containers within appropriately-sized secondary containment (e.g., spill berms, decks, spill containment pallets) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., storing chemicals in a covered area, having a spill kit available on site);
 - iv. Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, tribal, and local requirements;
 - v. Clean up spills immediately, using dry clean-up methods, and dispose of used materials properly. You are prohibited from hosing the area down to clean surfaces or spills. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge; and
 - vi. Follow all other federal, state, tribal, and local requirements regarding hazardous or toxic waste.
- e. *For construction and domestic wastes:*⁴¹
- i. Provide waste containers (e.g., dumpster, trash receptacle) of sufficient size and number to contain construction and domestic wastes;
 - ii. Keep waste container lids closed when not in use and close lids at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have lids, provide either (1) cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation,

⁴⁰ Examples of hazardous or toxic waste that may be present at construction sites include paints, caulks, sealants, fluorescent light ballasts, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids.

⁴¹ Examples of construction and domestic waste include packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, demolition debris; and other trash or building materials.

- or (2) a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment);
- iii. On business days, clean up and dispose of waste in designated waste containers; and
- iv. Clean up immediately if containers overflow.
- f. For sanitary waste, position portable toilets so that they are secure and will not be tipped or knocked over, and located away from waters of the U.S. and stormwater inlets or conveyances.

2.3.4 For washing applicators and containers used for stucco, paint, concrete, form release oils, curing compounds, or other materials:

- a. Direct wash water into a leak-proof container or leak-proof and lined pit designed so that no overflows can occur due to inadequate sizing or precipitation;
- b. Handle washout or cleanout wastes as follows:
 - i. Do not dump liquid wastes in storm sewers or waters of the U.S.;
 - ii. Dispose of liquid wastes in accordance with applicable requirements in Part 2.3.3; and
 - iii. Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Part 2.3.3; and
- c. Locate any washout or cleanout activities as far away as possible from waters of the U.S. and stormwater inlets or conveyances, and, to the extent feasible, designate areas to be used for these activities and conduct such activities only in these areas.

2.3.5 For the application of fertilizers:

- a. Apply at a rate and in amounts consistent with manufacturer's specifications, or document in the SWPPP departures from the manufacturer specifications where appropriate in accordance with Part 7.2.6.b.ix;
- b. Apply at the appropriate time of year for your location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;
- c. Avoid applying before heavy rains that could cause excess nutrients to be discharged;
- d. Never apply to frozen ground;
- e. Never apply to stormwater conveyance channels; and
- f. Follow all other federal, state, tribal, and local requirements regarding fertilizer application.

2.3.6 Emergency Spill Notification Requirements

Discharges of toxic or hazardous substances from a spill or other release are prohibited, consistent with Part 1.3.5. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 or, in the Washington, DC metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 as soon as you have knowledge of the release. You must also, within seven (7) calendar days of knowledge of the release, provide a

description of the release, the circumstances leading to the release, and the date of the release. State, tribal, or local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies.

2.4 CONSTRUCTION DEWATERING REQUIREMENTS

Comply with the following requirements to minimize the discharge of pollutants in ground water or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, in accordance with Part 1.2.2.⁴²

- 2.4.1** Treat dewatering discharges with controls to minimize discharges of pollutants;⁴³
- 2.4.2** Do not discharge visible floating solids or foam;
- 2.4.3** Use an oil-water separator or suitable filtration device (such as a cartridge filter) that is designed to remove oil, grease, or other products if dewatering water is found to contain these materials;
- 2.4.4** To the extent feasible, use vegetated, upland areas of the site to infiltrate dewatering water before discharge. You are prohibited from using waters of the U.S. as part of the treatment area;
- 2.4.5** At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 2.2.11;
- 2.4.6** With backwash water, either haul it away for disposal or return it to the beginning of the treatment process; and
- 2.4.7** Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.

3 WATER QUALITY-BASED EFFLUENT LIMITATIONS

3.1 GENERAL EFFLUENT LIMITATION TO MEET APPLICABLE WATER QUALITY STANDARDS

Discharges must be controlled as necessary to meet applicable water quality standards. Discharges must also comply with any additional state or tribal requirements that are in Part 9.

In the absence of information demonstrating otherwise, EPA expects that compliance with the conditions in this permit will result in stormwater discharges being controlled as necessary to meet applicable water quality standards. If at any time you become aware, or EPA determines, that discharges are not being controlled as necessary to meet applicable water quality standards, you must take corrective action as required in Parts 5.1 and 5.2, and document the corrective actions as required in Part 5.4.

⁴² Uncontaminated, clear (non-turbid) dewatering water can be discharged without being routed to a control.

⁴³ Appropriate controls include sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, filtration systems (e.g., *bag or sand filters*), and passive treatment systems that are designed to remove sediment. Appropriate controls to use downstream of dewatering controls to minimize erosion include vegetated buffers, check dams, riprap, and grouted riprap at outlets.

EPA may insist that you install additional controls (to meet the narrative water quality-based effluent limit above) on a site-specific basis, or require you to obtain coverage under an individual permit, if information in your NOI or from other sources indicates that your discharges are not controlled as necessary to meet applicable water quality standards. This includes situations where additional controls are necessary to comply with a wasteload allocation in an EPA-established or approved TMDL.

If during your coverage under a previous permit, you were required to install and maintain stormwater controls specifically to meet the assumptions and requirements of an EPA-approved or established TMDL (for any parameter) or to otherwise control your discharge to meet water quality standards, you must continue to implement such controls as part of your coverage under this permit.

3.2 DISCHARGE LIMITATIONS FOR SITES DISCHARGING TO SENSITIVE WATERS⁴⁴

For any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes, you must comply with the inspection frequency specified in 4.3 and you must comply with the stabilization deadline specified in Part 2.2.14.a.iii.(c).⁴⁵

If you discharge to a water that is impaired for a parameter other than a sediment-related parameter or nutrients, EPA will inform you if any additional controls are necessary for your discharge to be controlled as necessary to meet water quality standards, including for it to be consistent with the assumptions of any available wasteload allocation in any applicable TMDL, or if coverage under an individual permit is necessary.

In addition, on a case-by-case basis, EPA may notify operators of new sites or operators of existing sites with increased discharges that additional analyses, stormwater controls, or other measures are necessary to comply with the applicable

⁴⁴ Sensitive waters include waters that are impaired and Tier 2, Tier 2.5, and Tier 3 waters.

"Impaired waters" are those waters identified by the state, tribe, or EPA as not meeting an applicable water quality standard and (1) requires development of a TMDL (pursuant to section 303(d) of the CWA; or (2) is addressed by an EPA-approved or established TMDL; or (3) is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1). Your construction site will be considered to discharge to an impaired water if the first water of the U.S. to which you discharge is an impaired water for the pollutants contained in the discharge from your site. For discharges that enter a storm sewer system prior to discharge, the first water of the U.S. to which you discharge is the waterbody that receives the stormwater discharge from the storm sewer system. For assistance in determining whether your site discharges to impaired waters, EPA has developed a tool that is available both within the electronic NOI form in NeT, and at <https://water.epa.gov/polwaste/npdes/stormwater/discharge.cfm>.

Tiers 2, 2.5 and 3 refer to waters either identified by the state as high quality waters or Outstanding National Resource Waters under 40 CFR 131.12(a)(2) and (3). For the purposes of this permit, you are considered to discharge to a Tier 2, Tier 2.5, or Tier 3 water if the first water of the U.S. to which you discharge is identified by a state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3. For discharges that enter a storm sewer system prior to discharge, the water of the U.S. to which you discharge is the first water of the U.S. that receives the stormwater discharge from the storm sewer system. See list of Tier 2, Tier 2.5, and Tier 3 waters in Appendix F.

EPA may determine on a case-by-case basis that a site discharges to a sensitive water.

⁴⁵ If you qualify for any of the reduced inspection frequencies in Part 4.4, you may conduct inspections in accordance with Part 4.4 for any portion of your site that discharges to a sensitive water.

antidegradation requirements, or notify you that an individual permit application is necessary.

If you discharge to a water that is impaired for polychlorinated biphenyls (PCBs) and are engaging in demolition of any structure with at least 10,000 square feet of floor space built or renovated before January 1, 1980, you must:

- a. Implement controls⁴⁶ to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures, to precipitation and to stormwater; and
- b. Ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.

4 SITE INSPECTION REQUIREMENTS

4.1 PERSON(S) RESPONSIBLE FOR INSPECTING SITE

The person(s) inspecting your site may be a person on your staff or a third party you hire to conduct such inspections. You are responsible for ensuring that the person who conducts inspections is a "qualified person."⁴⁷

4.2 FREQUENCY OF INSPECTIONS.⁴⁸

At a minimum, you must conduct a site inspection in accordance with one of the two schedules listed below, unless you are subject to the Part 4.3 site inspection frequency for discharges to sensitive waters or qualify for a Part 4.4 reduction in the inspection frequency:

4.2.1 At least once every seven (7) calendar days; or

4.2.2 Once every 14 calendar days *and* within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge.⁴⁹ To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

⁴⁶ Examples of controls to minimize exposure of PCBs to precipitation and stormwater include separating work areas from non-work areas and selecting appropriate personal protective equipment and tools, constructing a containment area so that all dust or debris generated by the work remains within the protected area, using tools that minimize dust and heat (<212°F). For additional information, refer to Part 2.3.3 of the CGP Fact Sheet.

⁴⁷ A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

⁴⁸ Inspections are only required during the site's normal working hours.

⁴⁹ "Within 24 hours of the occurrence of a storm event" means that you must conduct an inspection within 24 hours once a storm event has produced 0.25 inches within a 24-hour period, even if the storm event is still continuing. Thus, if you have elected to inspect bi-weekly in accordance with Part 4.2.2 and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you must conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

4.3 INCREASE IN INSPECTION FREQUENCY FOR SITES DISCHARGING TO SENSITIVE WATERS.

For any portion of the site that discharges to a sediment or nutrient-impaired water or to a water that is identified by your state, tribe, or EPA as Tier 2, Tier 2.5, or Tier 3 for antidegradation purposes (see Part 3.2), instead of the inspection frequency specified in Part 4.2, you must conduct inspections in accordance with the following inspection frequencies:

Once every seven (7) calendar days *and* within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

4.4 REDUCTIONS IN INSPECTION FREQUENCY

4.4.1 Stabilized areas.

- a. You may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, then once per month in any area of your site where the stabilization steps in 2.2.14a have been completed. If construction activity resumes in this portion of the site at a later date, the inspection frequency immediately increases to that required in Parts 4.2 and 4.3, as applicable. You must document the beginning and ending dates of this period in your SWPPP.
- b. **Exception.** For "linear construction sites" (as defined in Appendix A) where disturbed portions have undergone final stabilization at the same time active construction continues on others, you may reduce the frequency of inspections to twice per month for the first month, no more than 14 calendar days apart, in any area of your site where the stabilization steps in 2.2.14a have been completed. After the first month, inspect once more within 24 hours of the occurrence of a storm event of 0.25 inches or greater. If there are no issues or evidence of stabilization problems, you may suspend further inspections. If "wash-out" of stabilization materials and/or sediment is observed, following re-stabilization, inspections must resume at the inspection frequency required in Part 4.4.1a. Inspections must continue until final stabilization is visually confirmed following a storm event of 0.25 inches or greater.

4.4.2 Arid, semi-arid, or drought-stricken areas (as defined in Appendix A). If it is the seasonally dry period or a period in which drought is occurring, you may reduce the frequency of inspections to once per month and within 24 hours of the occurrence of a storm event of 0.25 inches or greater. You must document that you are using this reduced schedule and the beginning and ending dates of the seasonally dry period in your SWPPP. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on your site, or obtain the storm event information from a weather station that is representative of your location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, you must record the total rainfall measured for that day in accordance with Part 4.7.1d.

4.4.3 Frozen conditions:

- a. If you are suspending construction activities due to frozen conditions, you may temporarily suspend inspections on your site until thawing conditions (as defined in Appendix A) begin to occur if:

- i. Runoff is unlikely due to continuous frozen conditions that are likely to continue at your site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.2 and 4.3, as applicable;
 - ii. Land disturbances have been suspended; and
 - iii. All disturbed areas of the site have been stabilized in accordance with Part 2.2.14a.
- b. If you are still conducting construction activities during frozen conditions, you may reduce your inspection frequency to once per month if:
- i. Runoff is unlikely due to continuous frozen conditions that are likely to continue at your site for at least three (3) months based on historic seasonal averages. If unexpected weather conditions (such as above freezing temperatures or rain events) make discharges likely, you must immediately resume your regular inspection frequency as described in Parts 4.2 and 4.3, as applicable; and
 - ii. Except for areas in which you are actively conducting construction activities, disturbed areas of the site have been stabilized in accordance with Part 2.2.14a.

You must document the beginning and ending dates of this period in your SWPPP.

4.5 AREAS THAT MUST BE INSPECTED

During your site inspection, you must at a minimum inspect the following areas of your site:

- 4.5.1** All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Part 2.2.14a;
- 4.5.2** All stormwater controls (including pollution prevention controls) installed at the site to comply with this permit;⁵⁰
- 4.5.3** Material, waste, borrow, and equipment storage and maintenance areas that are covered by this permit;
- 4.5.4** All areas where stormwater typically flows within the site, including drainageways designed to divert, convey, and/or treat stormwater;
- 4.5.5** All points of discharge from the site; and
- 4.5.6** All locations where stabilization measures have been implemented.

You are not required to inspect areas that, at the time of the inspection, are considered unsafe to your inspection personnel.

4.6 REQUIREMENTS FOR INSPECTIONS

During your site inspection, you must at a minimum:

- 4.6.1** Check whether all stormwater controls (*i.e., erosion and sediment controls and pollution prevention controls*) are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges;

⁵⁰ This includes the requirement to inspect for sediment that has been tracked out from the site onto paved roads, sidewalks, or other paved areas consistent with Part 2.2.4.

- 4.6.2** Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
- 4.6.3** Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts 2 and/or 3;
- 4.6.4** Check for signs of visible erosion and sedimentation (*i.e., sediment deposits*) that have occurred and are attributable to your discharge at points of discharge and, if applicable, the banks of any waters of the U.S. flowing within or immediately adjacent to the site;
- 4.6.5** Identify any incidents of noncompliance observed;
- 4.6.6** If a discharge is occurring during your inspection:
 - a. Identify all discharge points at the site; and
 - b. Observe and document the visual quality of the discharge, and take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants.
- 4.6.7** Based on the results of your inspection, complete any necessary maintenance under Part 2.1.4 and corrective action under Part 5.

4.7 INSPECTION REPORT

- 4.7.1** You must complete an inspection report within 24 hours of completing any site inspection. Each inspection report must include the following:
 - a. The inspection date;
 - b. Names and titles of personnel making the inspection;
 - c. A summary of your inspection findings, covering at a minimum the observations you made in accordance with Part 4.6, including any necessary maintenance or corrective actions;
 - d. If you are inspecting your site at the frequency specified in Part 4.2.2, Part 4.3, or Part 4.4.1b, and you conducted an inspection because of rainfall measuring 0.25 inches or greater, you must include the applicable rain gauge or weather station readings that triggered the inspection; and
 - e. If you determined that it is unsafe to inspect a portion of your site, you must describe the reason you found it to be unsafe and specify the locations to which this condition applies.
- 4.7.2** Each inspection report must be signed in accordance with Appendix I, Part I.11 of this permit.
- 4.7.3** You must keep a copy of all inspection reports at the site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by EPA.
- 4.7.4** You must retain all inspection reports completed for this Part for at least three (3) years from the date that your permit coverage expires or is terminated.

4.8 INSPECTIONS BY EPA

You must allow EPA, or an authorized representative of EPA, to conduct the following activities at reasonable times. To the extent that you are utilizing shared controls that are

not on site to comply with this permit, you must make arrangements for EPA to have access at all reasonable times to those areas where the shared controls are located.

- 4.8.1** Enter onto all areas of the site, including any construction support activity areas covered by this permit, any off-site areas where shared controls are utilized to comply with this permit, discharge locations, adjoining waterbodies, and locations where records are kept under the conditions of this permit;
- 4.8.2** Access and copy any records that must be kept under the conditions of this permit;
- 4.8.3** Inspect your construction site, including any construction support activity areas covered by this permit (see Part 1.2.1c), any stormwater controls installed and maintained at the site, and any off-site shared controls utilized to comply with this permit; and
- 4.8.4** Sample or monitor for the purpose of ensuring compliance.

5 CORRECTIVE ACTIONS

5.1 CONDITIONS TRIGGERING CORRECTIVE ACTION.

You must take corrective action to address any of the following conditions identified at your site:

- 5.1.1** A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); or
- 5.1.2** A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
- 5.1.3** Your discharges are causing an exceedance of applicable water quality standards; or
- 5.1.4** A prohibited discharge has occurred (see Part 1.3).

5.2 CORRECTIVE ACTION DEADLINES

For any corrective action triggering conditions in Part 5.1, you must:

- 5.2.1** Immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events;
- 5.2.2** When the problem does not require a new or replacement control or significant repair, the corrective action must be completed by the close of the next business day;
- 5.2.3** When the problem requires a new or replacement control or significant repair, install the new or modified control and make it operational, or complete the repair, by no later than seven (7) calendar days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7-day timeframe and document your schedule for installing the stormwater control(s) and making it operational as soon as feasible after the 7-day timeframe. Where these actions result in changes to any of the stormwater controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within seven (7) calendar days of completing this work.

5.3 CORRECTIVE ACTION REQUIRED BY EPA

You must comply with any corrective actions required by EPA as a result of permit violations found during an inspection carried out under Part 4.8.

5.4 CORRECTIVE ACTION REPORT

For each corrective action taken in accordance with this Part, you must complete a report in accordance with the following:

- 5.4.1** Within 24 hours of identifying the corrective action condition, document the specific condition and the date and time it was identified.
- 5.4.2** Within 24 hours of completing the corrective action (in accordance with the deadlines in Part 5.2), document the actions taken to address the condition, including whether any SWPPP modifications are required.
- 5.4.3** Each corrective action report must be signed in accordance with Appendix I, Part I.11 of this permit.
- 5.4.4** You must keep a copy of all corrective action reports at the site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by EPA.
- 5.4.5** You must retain all corrective action reports completed for this Part for at least three (3) years from the date that your permit coverage expires or is terminated.

6 STAFF TRAINING REQUIREMENTS

Each operator, or group of multiple operators, must assemble a “stormwater team” to carry out compliance activities associated with the requirements in this permit.

- 6.1** Prior to the commencement of construction activities, you must ensure that the following personnel⁵¹ on the stormwater team understand the requirements of this permit and their specific responsibilities with respect to those requirements:
 - a. Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls (including pollution prevention controls);
 - b. Personnel responsible for the application and storage of treatment chemicals (if applicable);
 - c. Personnel who are responsible for conducting inspections as required in Part 4.1; and
 - d. Personnel who are responsible for taking corrective actions as required in Part 5.
- 6.2** You are responsible for ensuring that all activities on the site comply with the requirements of this permit. You are not required to provide or document formal training for subcontractors or other outside service providers, but you must ensure that such personnel understand any requirements of this permit that may be affected by the work they are subcontracted to perform.

⁵¹ If the person requiring training is a new employee who starts after you commence construction activities, you must ensure that this person has the proper understanding as required above prior to assuming particular responsibilities related to compliance with this permit.

For emergency-related projects, the requirement to train personnel prior to commencement of construction activities does not apply, however, such personnel must have the required training prior to NOI submission.

- 6.3** At a minimum, members of the stormwater team must be trained to understand the following if related to the scope of their job duties (*e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections*):
- a. The permit deadlines associated with installation, maintenance, and removal of stormwater controls and with stabilization;
 - b. The location of all stormwater controls on the site required by this permit and how they are to be maintained;
 - c. The proper procedures to follow with respect to the permit's pollution prevention requirements; and
 - d. When and how to conduct inspections, record applicable findings, and take corrective actions.
- 6.4** Each member of the stormwater team must have easy access to an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWPPP, and other relevant documents or information that must be kept with the SWPPP.

7 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

7.1 GENERAL REQUIREMENTS

All operators associated with a construction site under this permit must develop a SWPPP consistent with the requirements in Part 7 prior to their submittal of the NOI.^{52, 53} The SWPPP must be kept up-to-date throughout coverage under this permit.

If a SWPPP was prepared under a previous version of this permit, the operator must review and update the SWPPP to ensure that this permit's requirements are addressed prior to submitting an NOI for coverage under this permit.

7.2 SWPPP CONTENTS

At a minimum, the SWPPP must include the information specified in this Part and as specified in other parts of this permit.

- 7.2.1 All Site Operators.** Include a list of all other operators who will be engaged in construction activities at the site, and the areas of the site over which each operator has control.
- 7.2.2 Stormwater Team.** Identify the personnel (by name or position) that are part of the stormwater team, as well as their individual responsibilities, including which members are responsible for conducting inspections.

⁵² The SWPPP does not establish the effluent limits and other permit terms and conditions that apply to your site's discharges; these limits, terms, and conditions are established in this permit.

Where there are multiple operators associated with the same site, they may develop a group SWPPP instead of multiple individual SWPPPs. Regardless of whether there is a group SWPPP or multiple individual SWPPPs, each operator is responsible for compliance with the permit's terms and conditions. In other words, if Operator A relies on Operator B to satisfy its permit obligations, Operator A does not have to duplicate those permit-related functions if Operator B is implementing them for both operators to be in compliance with the permit. However, Operator A remains responsible for permit compliance if Operator B fails to implement any measures necessary for Operator A to comply with the permit. In addition, all operators must ensure, either directly or through coordination with other operators, that their activities do not compromise any other operators' controls and/or any shared controls.

7.2.3 Nature of Construction Activities.⁵⁴ Include the following:

- a. A description of the nature of your construction activities, including the age or dates of past renovations for structures that are undergoing demolition;
- b. The size of the property (in acres or length in miles if a linear construction site);
- c. The total area expected to be disturbed by the construction activities (to the nearest quarter acre or nearest quarter mile if a linear construction site);
- d. A description of any on-site and off-site construction support activity areas covered by this permit (see Part 1.2.1c);
- e. The maximum area expected to be disturbed at any one time, including on-site and off-site construction support activity areas;
- f. A description and projected schedule for the following:
 - i. Commencement of construction activities in each portion of the site, including clearing and grubbing, mass grading, demolition activities, site preparation (*i.e.*, *excavating, cutting and filling*), final grading, and creation of soil and vegetation stockpiles requiring stabilization;
 - ii. Temporary or permanent cessation of construction activities in each portion of the site;
 - iii. Temporary or final stabilization of exposed areas for each portion of the site; and
 - iv. Removal of temporary stormwater controls and construction equipment or vehicles, and the cessation of construction-related pollutant-generating activities.
- g. A list and description of all pollutant-generating activities⁵⁵ on the site. For each pollutant-generating activity, include an inventory of pollutants or pollutant constituents (*e.g.*, *sediment, fertilizers, pesticides, paints, caulks, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels*) associated with that activity, which could be discharged in stormwater from your construction site. You must take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed or removed during construction;
- h. Business days and hours for the project;
- i. If you are conducting construction activities in response to a public emergency (see Part 1.4), a description of the cause of the public emergency (*e.g.*, *mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services*), information substantiating its occurrence (*e.g.*, *state disaster declaration or similar state or local declaration*), and a description of the construction necessary to reestablish affected public services.

7.2.4 Site Map. Include a legible map, or series of maps, showing the following features of the site:

- a. Boundaries of the property;

⁵⁴ If plans change due to unforeseen circumstances or for other reasons, the requirement to describe the sequence and estimated dates of construction activities is not meant to "lock in" the operator to meeting these dates. When departures from initial projections are necessary, this should be documented in the SWPPP itself, or in associated records, as appropriate.

⁵⁵ Examples of pollutant-generating activities include paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal; and dewatering operations.

- b. Locations where construction activities will occur, including:
 - i. Locations where earth-disturbing activities will occur (note any phasing), including any demolition activities;
 - ii. Approximate slopes before and after major grading activities (note any steep slopes (as defined in Appendix A));
 - iii. Locations where sediment, soil, or other construction materials will be stockpiled;
 - iv. Any water of the U.S. crossings;
 - v. Designated points where vehicles will exit onto paved roads;
 - vi. Locations of structures and other impervious surfaces upon completion of construction; and
 - vii. Locations of on-site and off-site construction support activity areas covered by this permit (see Part 1.2.1c).
- c. Locations of all waters of the U.S. within and one mile downstream of the site's discharge point. Also identify if any are listed as impaired, or are identified as a Tier 2, Tier 2.5, or Tier 3 water;
- d. Areas of federally listed critical habitat within the site and/or at discharge locations;
- e. Type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, structures);
- f. Drainage patterns of stormwater and authorized non-stormwater before and after major grading activities;
- g. Stormwater and authorized non-stormwater discharge locations, including:
 - i. Locations where stormwater and/or authorized non-stormwater will be discharged to storm drain inlets;⁵⁶ and
 - ii. Locations where stormwater or authorized non-stormwater will be discharged directly to waters of the U.S.
- h. Locations of all potential pollutant-generating activities identified in Part 7.2.3g;
- i. Locations of stormwater controls, including natural buffer areas and any shared controls utilized to comply with this permit; and
- j. Locations where polymers, flocculants, or other treatment chemicals will be used and stored.

7.2.5 Non-Stormwater Discharges. Identify all authorized non-stormwater discharges in Part 1.2.2 that will or may occur.

7.2.6 Description of Stormwater Controls.

- a. For each of the Part 2.2 erosion and sediment control effluent limits, Part 2.3 pollution prevention effluent limits, and Part 2.4 construction dewatering effluent limits, as applicable to your site, you must include the following:
 - i. A description of the specific control(s) to be implemented to meet the effluent limit;

⁵⁶ The requirement to show storm drain inlets in the immediate vicinity of the site on your site map only applies to those inlets that are easily identifiable from your site or from a publicly accessible area immediately adjacent to your site.

- ii. Any applicable stormwater control design specifications (including references to any manufacturer specifications and/or erosion and sediment control manuals/ordinances relied upon);⁵⁷
 - iii. Routine stormwater control maintenance specifications; and
 - iv. The projected schedule for stormwater control installation/implementation.
- b. You must also include any of the following additional information as applicable.
- i. **Natural buffers and/or equivalent sediment controls** (see Part 2.2.1 and Appendix G). You must include the following:
 - (a) The compliance alternative to be implemented;
 - (b) If complying with alternative 2, the width of natural buffer retained;
 - (c) If complying with alternative 2 or 3, the erosion and sediment control(s) you will use to achieve an equivalent sediment reduction, and any information you relied upon to demonstrate the equivalency;
 - (d) If complying with alternative 3, a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size;
 - (e) For "linear construction sites" where it is infeasible to implement compliance alternative 1, 2, or 3, a rationale for this determination, and a description of any buffer width retained and/or supplemental erosion and sediment controls installed; and
 - (f) A description of any disturbances that are exempt under Part 2.2.1 that occur within 50 feet of a water of the U.S.
 - ii. **Perimeter controls for a "linear construction site"** (see Part 2.2.3). For areas where perimeter controls are not feasible, include documentation to support this determination and a description of the other practices that will be implemented to minimize discharges of pollutants in stormwater associated with construction activities.

Note: Routine maintenance specifications for perimeter controls documented in the SWPPP must include the Part 2.2.3a requirement that sediment be removed before it has accumulated to one-half of the above-ground height of any perimeter control.
 - iii. **Sediment track-out controls** (see Parts 2.2.4b and 2.2.4c). Document the specific stabilization techniques and/or controls that will be implemented to remove sediment prior to vehicle exit.
 - iv. **Sediment basins** (see Part 2.2.12). In circumstances where it is infeasible to utilize outlet structures that withdraw water from the surface, include documentation to support this determination, including the specific conditions or time periods when this exception will apply.
 - v. **Treatment chemicals** (see Part 2.2.13), you must include the following:
 - (a) A listing of the soil types that are expected to be exposed during construction in areas of the project that will drain to chemical treatment systems. Also include a listing of soil types expected to be found in fill material to be used in these same areas, to the extent you have this information prior to construction;

⁵⁷ Design specifications may be found in manufacturer specifications and/or in applicable erosion and sediment control manuals or ordinances. Any departures from such specifications must reflect good engineering practice and must be explained in the SWPPP.

- (b) A listing of all treatment chemicals to be used at the site and why the selection of these chemicals is suited to the soil characteristics of your site;
 - (c) If the applicable EPA Regional Office authorized you to use cationic treatment chemicals for sediment control, include the specific controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to an exceedance of water quality standards;
 - (d) The dosage of all treatment chemicals to be used at the site or the methodology to be used to determine dosage;
 - (e) Information from any applicable Safety Data Sheet (SDS);
 - (f) Schematic drawings of any chemically enhanced stormwater controls or chemical treatment systems to be used for application of the treatment chemicals;
 - (g) A description of how chemicals will be stored consistent with Part 2.2.13c;
 - (h) References to applicable state or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer's specifications regarding the use of your specific treatment chemicals and/or chemical treatment systems; and
 - (i) A description of the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to use of the treatment chemicals at your site.
- vi. **Stabilization measures** (see Part 2.2.14). You must include the following:
- (a) The specific vegetative and/or non-vegetative practices that will be used;
 - (b) The stabilization deadline that will be met in accordance with Part 2.2.14.a.i-ii;
 - (c) If complying with the deadlines for sites in arid, semi-arid, or drought-stricken areas, the beginning and ending dates of the seasonally dry period and the schedule you will follow for initiating and completing vegetative stabilization; and
 - (d) If complying with deadlines for sites affected by unforeseen circumstances that delay the initiation and/or completion of vegetative stabilization, document the circumstances and the schedule for initiating and completing stabilization.
- vii. **Spill prevention and response procedures** (see Part 1.3.5 and Part 2.3). You must include the following:
- (a) Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for detection and response of spills or leaks; and
 - (b) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 2.3.6 and established under either 40 CFR 110, 40 CFR 117, or 40 CFR 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available to all employees.

You may also reference the existence of Spill Prevention Control and

Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required by an NPDES permit for the construction activity, provided that you keep a copy of that other plan on site.⁵⁸

- viii. **Waste management procedures** (see Part 2.3.3). Describe the procedures you will follow for handling, storing and disposing of all wastes generated at your site consistent with all applicable federal, state, tribal, and local requirements, including clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.
- ix. **Application of fertilizers** (see Part 2.3.5). Document any departures from the manufacturer specifications where appropriate.

7.2.7 Procedures for Inspection, Maintenance, and Corrective Action. Describe the procedures you will follow for maintaining your stormwater controls, conducting site inspections, and, where necessary, taking corrective actions, in accordance with Part 2.1.4, Part 4, and Part 5 of this permit. Also include:

- a. The inspection schedule you will follow, which is based on whether your site is subject to Part 4.2 or Part 4.3, or whether your site qualifies for any of the reduced inspection frequencies in Part 4.4;
- b. If you will be conducting inspections in accordance with the inspection schedule in Part 4.2.2, Part 4.3, or Part 4.4.1b, the location of the rain gauge or the address of the weather station you will be using to obtain rainfall data;
- c. If you will be reducing your inspection frequency in accordance with Part 4.4.1b, the beginning and ending dates of the seasonally defined arid period for your area or the valid period of drought;
- d. If you will be reducing your inspection frequency in accordance with Part 4.4.3, the beginning and ending dates of frozen conditions on your site; and
- e. Any maintenance or inspection checklists or other forms that will be used.

7.2.8 Staff Training. Include documentation that the required personnel were, or will be, trained in accordance with Part 6.

7.2.9 Compliance with Other Requirements.

- a. **Threatened and Endangered Species Protection.** Include documentation required in Appendix D supporting your eligibility with regard to the protection of threatened and endangered species and designated critical habitat.
- b. **Historic Properties.** Include documentation required in Appendix E supporting your eligibility with regard to the protection of historic properties.
- c. **Safe Drinking Water Act Underground Injection Control (UIC) Requirements for Certain Subsurface Stormwater Controls.** If you are using any of the following stormwater controls at your site, document any contact you have had with the applicable state agency⁵⁹ or EPA Regional Office responsible for implementing the requirements for underground injection wells in the Safe Drinking Water Act and EPA's implementing

⁵⁸ Even if you already have an SPCC or other spill prevention plan in existence, your plans will only be considered adequate if they meet all of the requirements of this Part, either as part of your existing plan or supplemented as part of the SWPPP.

⁵⁹ For state UIC program contacts, refer to the following EPA website: <https://www.epa.gov/uic>.

regulations at 40 CFR 144 -147. Such controls would generally be considered Class V UIC wells:

- i. Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system);
- ii. Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow; and
- iii. Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system).

7.2.10 SWPPP Certification. You must sign and date your SWPPP in accordance with Appendix I, Part I.11.

7.2.11 Post-Authorization Additions to the SWPPP. Once you are authorized for coverage under this permit, you must include the following documents as part of your SWPPP:

- a. A copy of your NOI submitted to EPA along with any correspondence exchanged between you and EPA related to coverage under this permit;
- b. A copy of the acknowledgment letter you receive from NeT assigning your NPDES ID (*i.e.*, *permit tracking number*);
- c. A copy of this permit (an electronic copy easily available to the stormwater team is also acceptable).

7.3 ON-SITE AVAILABILITY OF YOUR SWPPP

You must keep a current copy of your SWPPP at the site or at an easily accessible location so that it can be made available at the time of an on-site inspection or upon request by EPA; a state, tribal, or local agency approving stormwater management plans; the operator of a storm sewer system receiving discharges from the site; or representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS).

EPA may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) will be withheld from the public, but may not be withheld from EPA, USFWS, or NMFS.⁶⁰

If an on-site location is unavailable to keep the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance of your construction site.

7.4 SWPPP MODIFICATIONS

⁶⁰ Information covered by a claim of confidentiality will be disclosed by EPA only to the extent of, and by means of, the procedures set forth in 40 CFR Part 2, Subpart B. In general, submitted information protected by a business confidentiality claim may be disclosed to other employees, officers, or authorized representatives of the United States concerned with implementing the CWA. The authorized representatives, including employees of other executive branch agencies, may review CBI during the course of reviewing draft regulations.

- 7.4.1** You must modify your SWPPP, including the site map(s), within seven (7) days of any of the following conditions:
- a. Whenever new operators become active in construction activities on your site, or you make changes to your construction plans, stormwater controls, or other activities at your site that are no longer accurately reflected in your SWPPP. This includes changes made in response to corrective actions triggered under Part 5. You do not need to modify your SWPPP if the estimated dates in Part 7.2.3f change during the course of construction;
 - b. To reflect areas on your site map where operational control has been transferred (and the date of transfer) since initiating permit coverage;
 - c. If inspections or investigations by EPA or its authorized representatives determine that SWPPP modifications are necessary for compliance with this permit;
 - d. Where EPA determines it is necessary to install and/or implement additional controls at your site in order to meet the requirements of this permit, the following must be included in your SWPPP:
 - i. A copy of any correspondence describing such measures and requirements; and
 - ii. A description of the controls that will be used to meet such requirements.
 - e. To reflect any revisions to applicable federal, state, tribal, or local requirements that affect the stormwater controls implemented at the site; and
 - f. If applicable, if a change in chemical treatment systems or chemically enhanced stormwater control is made, including use of a different treatment chemical, different dosage rate, or different area of application.
- 7.4.2** You must maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change (see Part 7.2.10 above) and a brief summary of all changes.
- 7.4.3** All modifications made to the SWPPP consistent with Part 7.4 must be authorized by a person identified in Appendix I, Part I.11.b.
- 7.4.4** Upon determining that a modification to your SWPPP is required, if there are multiple operators covered under this permit, you must immediately notify any operators who may be impacted by the change to the SWPPP.

8 HOW TO TERMINATE COVERAGE

Until you terminate coverage under this permit, you must comply with all conditions and effluent limitations in the permit. To terminate permit coverage, you must submit to EPA a complete and accurate Notice of Termination (NOT), which certifies that you have met the requirements for terminating in Part 8.

8.1 MINIMUM INFORMATION REQUIRED IN NOT

- 8.1.1** NPDES ID (*i.e.*, *permit tracking number*) provided by EPA when you received coverage under this permit;
- 8.1.2** Basis for submission of the NOT (see Part 8.2);
- 8.1.3** Operator contact information;
- 8.1.4** Name of site and address (or a description of location if no street address is available); and

8.1.5 NOT certification.

8.2 CONDITIONS FOR TERMINATING CGP COVERAGE

You must terminate CGP coverage only if one or more of the following conditions has occurred:

8.2.1 You have completed all construction activities at your site and, if applicable, construction support activities covered by this permit (see Part 1.2.1c), and you have met the following requirements:

- a. For any areas that (1) were disturbed during construction, (2) are not covered over by permanent structures, and (3) over which you had control during the construction activities, you have met the requirements for final vegetative or non-vegetative stabilization in Part 2.2.14b;
- b. You have removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following your termination of permit coverage;
- c. You have removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following your termination of permit coverage or those that are biodegradable; and
- d. You have removed all potential pollutants and pollutant-generating activities associated with construction, unless needed for long-term use following your termination of permit coverage; or

8.2.2 You have transferred control of all areas of the site for which you are responsible under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit; or

8.2.3 Coverage under an individual or alternative general NPDES permit has been obtained.

8.3 HOW TO SUBMIT YOUR NOT

You must use EPA's NPDES eReporting Tool (NeT) to electronically prepare and submit your NOT for the 2017 CGP.

To access NeT, go to <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#ereporting>.

Waivers from electronic reporting may be granted as specified in Part 1.4.1. If the EPA Regional Office grants you approval to use a paper NOT, and you elect to use it, you must complete the form in Appendix K.

8.4 DEADLINE FOR SUBMITTING THE NOT

You must submit your NOT within 30 calendar days after any one of the conditions in Part 8.2 occurs.

8.5 EFFECTIVE DATE OF TERMINATION OF COVERAGE

Your authorization to discharge under this permit terminates at midnight of the calendar day that a complete NOT is submitted to EPA.

9 PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY LANDS, OR TERRITORIES

The provisions in this Part provide modifications or additions to the applicable conditions of this permit to reflect specific additional conditions required as part of the state or tribal CWA Section 401 certification process, or the Coastal Zone Management Act (CZMA) certification process, or as otherwise established by the permitting authority. The specific additional revisions and requirements only apply to activities in those specific states, Indian country, and areas in certain states subject to construction projects by Federal Operators. States, Indian country, and areas subject to construction by Federal Operators not included in this Part do not have any modifications or additions to the applicable conditions of this permit.

9.1 EPA Region 1

9.1.1 NHR100000 State of New Hampshire

- a. If you disturb 100,000 square feet or more of contiguous area, you must also apply for an Alteration of Terrain (AoT) permit from DES pursuant to RSA 485- A:17 and Env-Wq 1500. This requirement also applies to a lower disturbance threshold of 50,000 square feet or more when construction occurs within the protected shoreline under the Shoreland Water Quality Protection Act (see RSA 483-B and Env-Wq 1400). A permit application must also be filed if your project disturbs an area of greater than 2,500 square feet, is within 50 feet of any surface water, and has a flow path of 50 feet or longer disturbing a grade of 25 percent or greater. Project sites with disturbances smaller than those discussed above, that have the potential to adversely affect state surface waters, are subject to the conditions of an AoT General Permit by Rule.
- b. You must determine that any excavation dewatering discharges are not contaminated before they will be authorized as an allowable non-stormwater discharge under this permit (see Part 1.2.2). The water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the groundwater dewatering location. Information on groundwater contamination can be generated over the Internet via the NHDES web site <http://des.nh.gov/> by using the One Stop Data Mapper at <http://des.nh.gov/onestop/gis.htm>. If it is determined that the groundwater to be dewatered is near a remediation or other waste site you must apply for the Remediation General Permit (see <https://www3.epa.gov/region1/npdes/rqp.html>.)
- c. You must treat any uncontaminated excavation dewatering discharges as necessary to remove suspended solids and turbidity. The discharges must be sampled at least once per week during weeks when discharges occur. Samples must be analyzed for total suspended solids (TSS) or turbidity and must meet monthly average and daily maximum limits of 50 milligrams per liter (mg/L) and 100 mg/L, respectively for TSS or 33 mg/l and 67 mg/l, respectively for turbidity. TSS (a.k.a. Residue, Nonfilterable) or turbidity sampling and analysis must be performed in accordance with Tables IB and II in 40 CFR 136.3 (http://www.ecfr.gov/cgi-bin/text-idx?SID=0243e3c4283cbd7d8257eb6afc7ce9a2&mc=true&node=se40.25.136_13&rgn=div8). Records of any sampling and analysis must be maintained and kept with the SWPPP for at least three years after final site stabilization.
- d. Construction site owners and operators must consider opportunities for post-construction groundwater recharge using infiltration best management practices

(BMPs) during site design and preparation of the SWPPP. If your construction site is in a town that is required to obtain coverage under the NPDES General Permit for discharges from Municipal Separate Storm Sewer Systems (MS4) you may be required to use such practices. The SWPPP must include a description of any on-site infiltration that will be installed as a post-construction stormwater management measure or reasons for not employing such measures such as 1) The facility is located in a wellhead protection area as defined in RSA 485- C:2; or 2) The facility is located in an area where groundwater has been reclassified to GAA, GAI or GA2 pursuant to RSA 485-C and Env-DW 901; or 3) Any areas that would be exempt from the groundwater recharge requirements contained in Env-Wq 1507.04, including all land uses or activities considered to be a "High-load Area" (see Env-Wq 1502.30). For design considerations for infiltration measures see Env-Wq 1508.06.

- e. Appendix F contains a list of Tier 2, or high quality waters. Although there is no official list of tier 2 waters, it can be assumed that all NH surface waters are tier 2 for turbidity unless 1) the surface water that you are proposing to discharge into is listed as impaired for turbidity in the states listing of impaired waters (see Surface Water Quality - Watershed Report Cards at http://des.nh.gov/organization/divisions/water/wmb/swqa/report_cards.htm) or 2) sampling upstream of the proposed discharge location shows turbidity values greater than 10 NTU. A single grab sample collected during dry weather (no precipitation within 48 hours) is acceptable.
- f. To ensure compliance with RSA 485-C, RSA 485-A, RSA 485-A:13, I(a), Env-Wq 1700 and Env-Wq 302, the following information may be requested by NHDES. This information must be kept on site unless you receive a written request from NHDES that it be sent to the address shown in Part 9.1.4 (g).
 - i. A site map required in Part 7.2.4, showing the type and location of all post-construction infiltration BMPs utilized at the facility or the reason(s) why none were installed;
 - ii. A list of all non-stormwater discharges that occur at the facility, including their source locations and the control measures being used (see Part 1.2.2).
 - iii. Records of sampling and analysis of TSS required for construction dewatering discharges (see Part 9.1.4 (c)).
- g. All required or requested documents must be sent to:

NH Department of Environmental Services, Wastewater Engineering Bureau,
Permits & Compliance Section
P.O. Box 95
Concord, NH 03302-0095

9.1.2 VTR10F000 Areas in the State of Vermont subject to construction by a Federal Operator

- a. Earth disturbance at any one time is limited to five acres.
- b. All areas of earth disturbance must have temporary or final stabilization within 14 days of the initial disturbance. After this time, disturbed areas must be temporarily or permanently stabilized in advance of any runoff producing event. A runoff producing event is an event that produces runoff from the construction site. Temporary stabilization is not required if the work is occurring in a self-contained

excavation (i.e. no outlet) with a depth of two feet or greater (e.g. house foundation excavation, utility trenches). Areas of a construction site that drain to sediment basins are not considered eligible for this exemption, and the exemption applies only to the excavated area itself.

- c. The use of the cationic polymers is prohibited unless approved under a site-specific plan.
- d. Site inspections on active construction sites shall be conducted daily during the period from October 15 – April 15.
- e. Any applicant under EPA's CGP shall allow authorized Agency representatives, at reasonable times and upon presentation of credentials, to enter upon the project site for purposes of inspecting the project and determining compliance with this Certification.
- f. The Agency may reopen and alter or amend the conditions of this Certification over the life of the project when such action is necessary to assure compliance with the VWQS.

9.2 EPA Region 3

9.2.1 DCR100000 District of Columbia

- a. The permittee must comply with the District of Columbia Water Pollution Control Act of 1984, as amended, (D.C. Official Code § 8-103.01 et seq.) and its implementing regulations in Title 21, Chapters 11 and 19 of the District of Columbia Municipal Regulations. Nothing in this permit will be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to District of Columbia laws and regulations.
- b. The permittee must comply with the District of Columbia Stormwater Management, and Soil Erosion and Sediment Control in Chapter 5 of Title 21 of the District of Columbia Municipal Regulations.
- c. The permittee must comply with District of Columbia Flood Management control in Chapter 31 of Title 20 of the District of Columbia Municipal Regulations.
- d. The Department may request a copy of the Stormwater Pollution Prevention Plan (SWPPP) and the permittee is required to submit the SWPPP to the Department within 14 days of such request. The Department may conduct an inspection of any facility covered by this permit to ensure compliance with District's law requirements, including water quality standards. The Department may enforce its certification conditions.
- e. The Department may require the permittee to perform water quality monitoring during the permit term if monitoring is necessary for the protection of public health or the environment as designated under the authority in Chapter 19 of Title 21 of the District of Columbia Municipal Regulations.
- f. The Department may require the permittee to provide measurable verification of the effectiveness of Best Management Practices (BMPs) and other control measures used in the stormwater management program, including water quality monitoring.
- g. The Department has determined that compliance with this permit does not protect the permittee from enforcement actions deemed necessary by the Department

under its associated regulations to address an imminent threat to public health or a significant adverse environmental impact which results in a violation of the District of Columbia Water Pollution Control Act of 1984, as amended, (D.C. Official Code § 8-103.01 et seq.) and its implementing regulations.

- h. The Department reserves the right to modify this Section 401 Water Quality Certification if any changes, modifications, or deletions are made to this general permit. In addition, the Department reserves the right to add and/or alter the terms and conditions of this Section 401 Water Quality Certification to carry out its responsibilities during the term of this general permit with respect to water quality, including any revisions to District of Columbia Water Quality Standards in Chapter 11 of Title 21 of the District of Columbia Municipal Regulations.
- i. Should any violation of the District's Water Quality Standards, or the conditions of this Section 401 Water Quality Certification occur, the Department will direct the permittee to correct the violation(s). The Department has the right to take any action as authorized by the District laws and regulations to address the violations of this permit or the Water Pollution Control Act and implementing regulations. Substantial civil and criminal penalties are authorized for discharging into District waters in violation of an order or permit issued by the Department. This Section 401 Water Quality Certification does not relieve the permittee of the duty to comply with other applicable District's statutes and regulations.
- j. The permittee must submit copies of Notice of Intent (NOI) and Notice of Termination to DOEE at the same time these documents are submitted to EPA.
- k. The permittee shall allow DOEE to inspect any facilities, equipment, practices, or operations regulated or required under this permit and to access records maintained under the conditions of this permit.
- l. All required or requested documents shall be signed and sent to the: Department of Energy & Environment, 1200 First Street, N.E., 5th Floor, Washington, DC 20002, Attention: Associate Director, Inspection and Enforcement Division.

9.2.2 DER10F000 Areas in the State of Delaware subject to construction by a Federal Operator

- a. Federal agencies engaging in construction activities must submit, to DNREC, a sediment and stormwater management (S&S) plan and obtain approval from DNREC in accordance with 7 Del. C. §4010, 7 DE Admin. Code 5101, and 7 DE Admin. Code 7201.
- b. Federal agencies engaging in construction activities must provide for construction review by a certified construction reviewer in accordance with 7 Del. C. §§4010 & 4013 and 7 DE Admin. Code 5101, subsection 6.1.6.
- c. Federal agencies engaging in construction activities must certify that all responsible personnel involved in the construction project will have attended the blue card training prior to initiation of any land disturbing activity – see 7 Del. C. §§ 4002 & 4014 and 7 DE Admin. Code 5101.

9.3 EPA Region 5

9.3.1 MNR10I000 Indian country within the State of Minnesota

9.3.1.1 Fond du Lac Band of Lake Superior Chippewa. The following conditions apply only to discharges on the Fond du Lac Band of Lake Superior Chippewa Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan (SWPPP) must be submitted to the Office of Water Protection at least fifteen (15) days in advance of sending the Notice of Intent (NOI) to EPA. The SWPPP can be submitted electronically to richardgitar@FDLREZ.com or by hardcopy sent to:

Fond du Lac Reservation
Office of Water Protection
1720 Big Lake Road
Cloquet, MN 55720

CGP applicants are encouraged to work with the FDL Office of Water Protection in the identification of all proposed receiving.

- b. Copies of the Notice of Intent (NOI) and the Notice of Termination (NOT) must be sent to the Fond du Lac Office of Water Protection at the same time they are submitted to EPA.
- c. The turbidity limit shall NOT exceed 10% of natural background within the receiving water(s) as determined by Office of Water Protection staff.
- d. Turbidity sampling must take place within 24 hours of a ½-inch or greater rainfall event. The results of the sampling must be reported to the Office of Water Protection within 7 days of the sample collection. All sample reporting must include the date and time, location (GPS: UTM/Zone 15), and NTU. CGP applicants are encouraged to work with the Office of Water Protection in determining the most appropriate location(s) for sampling.
- e. Receiving waters with open water must be sampled for turbidity prior to any authorized discharge as determined by Office of Water Protection staff. This requirement only applies to receiving waters in which no ambient turbidity data exists.
- f. This Certification does not pertain to any new discharge to Outstanding Reservation Resource Waters (ORRW) as described in §105 b.3. of the Fond du Lac Water Quality Standards (Ordinance #12/98, as amended). Although additional waters may be designated in the future, currently Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake, and Jaskari Lake are designated as ORRWs. New dischargers wishing to discharge to an ORRW must obtain an individual permit from EPA for stormwater discharges from large and small construction activities.
- g. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Fond du Lac Reservation, Ordinance 12/98, as amended. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Fond du Lac Reservation for any of the uses designated in the Water Quality Standards of the Fond du Lac Reservation. These uses include wildlife, aquatic life, warm water fisheries, cold water fisheries, subsistence fishing (netting), primary contact recreation, secondary

contact recreation, cultural, wild rice areas, aesthetic waters, agriculture, navigation, and commercial.

- h. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Fond du Lac Reservation. All spills must be reported to the appropriate emergency management agency (National Response Center AND the State Duty Officer), and measures shall be taken immediately to prevent the pollution of waters of the Fond du Lac Reservation, including groundwater. The Fond du Lac Office of Water Protection must also be notified immediately of any spill regardless of size.
- i. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

9.3.1.2 Grand Portage Band of Lake Superior Chippewa. The following conditions apply only to discharges on the Grand Portage Band of Lake Superior Chippewa Reservation:

- a. The CGP authorization is for construction activities that may occur within the exterior boundaries of the Grand Portage Reservation in accordance to the Grand Portage Land Use Ordinance. The CGP regulates stormwater discharges associated with construction sites of one acre or more in size. Only those activities specifically authorized by the CGP are authorized by this certification (the "Certification"). This Certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for listing as such.
- b. All construction stormwater discharges authorized by the CGP must comply with the Water Quality Standards and Water Resources Ordinance, as well as Applicable Federal Standards (as defined in the Water Resources Ordinance). As such, appropriate steps must be taken to ensure that petroleum products or other chemical pollutants are prevented from entering the Waters of the Reservation (as defined in the Water Resources Ordinance). All spills must be reported to the appropriate emergency-management agency, and measures must be taken to prevent the pollution of the Waters of the Reservation, including groundwater.
- c. The 2017 CGP requires inspections and monitoring reports of the construction site stormwater discharges by a qualified person. Monitoring and inspection reports must comply with the minimum requirements contained in the 2017 CGP. The monitoring plan must be prepared and incorporated into the Stormwater Pollution Prevention Plan (the "SWPPP"). A copy of the SWPPP must be submitted to the Board at least 30 days in advance of sending the requisite Notice of Intent to EPA. The SWPPP should be sent to:

Grand Portage Environmental Resources Board
P.O. Box 428
Grand Portage, MN 55605

Copies of the Notice of Intent and Notice of Termination required under the CGP must be submitted to the Board at the address above at the same time they are submitted to the EPA.

- d. If requested by the Grand Portage Environmental Department, the permittee must provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Water Quality Standards and any Applicable Federal Standards.

- e. Discharges that the Board has determined to be or that may reasonably be expected to be contributing to a violation of Water Quality Standards or Applicable Federal Standards are not authorized by this Certification.
- f. The Board retains full authority provided by the Water Resources Ordinance to ensure compliance with and to enforce the provisions of the Water Resource Ordinance and Water Quality Standards, Applicable Federal Standards, and these Certification conditions.
- g. Appeals related to Board actions taken in accordance with any of the preceding conditions may be heard by the Grand Portage Tribal Court.

9.3.2 WIR101000 Indian country within the State of Wisconsin, except the Sokaogon Chippewa (Mole Lake) Community

9.3.2.1 Bad River Band of Lake Superior Tribe of Chippewa Indians: The following conditions apply only to discharges on the Bad River Band of the Lake Superior Tribe of Chippewa Indians Reservation:

- a. Only those activities specifically authorized by the CGP are authorized by this Certification. This Certification does not authorize impacts to cultural properties, or historical sites, or properties that may be eligible for listing as such.^{61, 62}
- b. All projects which are eligible for coverage under the CGP and are located within the exterior boundaries of the Bad River Reservation shall be implemented in such a manner that is consistent with the Tribe's Water Quality Standards (WQS) in order to protect Reservations waters that may be impacted by stormwater discharge including embankments, outlets, adjacent streambanks, slopes, and downstream waters.⁶³
- c. Operators are not eligible to obtain authorization under the CGP for all new discharges to an Outstanding Tribal Resource Water (or Tier 3 water).⁶⁴ Outstanding Tribal Resource Waters, or Tier 3 waters, include the following: Kakagon Slough and the lower wetland reaches of its tributaries that support wild rice, Kakagon River, Bad River Slough, Honest John Lake, Bog Lake, a portion of Bad River, from where it enters the Reservation through the confluence with the White River, and Potato River.⁶⁵
- d. An operator proposing to discharge to an Outstanding Resource Water (or Tier 2.5 water) under the CGP must comply with the antidegradation provisions of the Tribe's WQS. Outstanding Resource Waters, or Tier 2.5 waters, include the following: a portion of Bad River, from downstream the confluence with the White River to Lake Superior, White River, Marengo River, Graveyard Creek, Bear Trap Creek, Wood Creek, Brunsweller River, Tyler Forks, Bell Creek, and Vaughn Creek.⁶⁶ The antidegradation demonstration materials described in provision E.4.iii. must be submitted to the following address:

⁶¹ Bad River Band of Lake Superior Tribe of Chippewa Indians Water Quality Standards adopted by Resolution No. 7-6-11-441 (hereafter, Tribe's WQS).

⁶² 36 C.F.R. § 800.16(l)(2).

⁶³ See footnote 61.

⁶⁴ Tribe's WQS: See provisions E.3.ii. and E.4.iv.

⁶⁵ Tribe's WQS: See provision E.2.iii.

⁶⁶ Tribe's WQS: See provision E.2.ii.

Bad River Tribe's Natural Resources Department
Attn: Water Resources Specialist
P.O. Box 39
Odanah, WI 54861

- e. An operator proposing to discharge to an Exceptional Resource Water (or Tier 2 water) under the CGP must comply with the antidegradation provisions of the Tribe's WQS. Exceptional Resource Waters, or Tier 2 waters, include the following: any surface water within the exterior boundaries of the Reservation that is not specifically classified as an Outstanding Resource Water (Tier 2.5 water) or an Outstanding Tribal Resource Water (Tier 3 water).⁶⁷ The antidegradation demonstration materials described in provision E.4.ii. must be submitted to the following address:

Bad River Tribe's Natural Resources Department
Attn: Water Resources Specialist
P.O. Box 39
Odanah, WI 54861

- f. Projects utilizing cationic treatment chemicals⁶⁸ within the Bad River Reservation boundaries are not eligible for coverage under the CGP.⁶⁹
- g. A discharge to a surface water within the Bad River Reservation boundaries shall not cause or contribute to an exceedance of the turbidity criterion included in the Tribe's WQS, which states: Turbidity shall not exceed 5 NTU over natural background turbidity when the background turbidity is 50 NTU or less, or turbidity shall not increase more than 10% when the background turbidity is more than 50 NTU.⁷⁰
- h. All projects which are eligible for coverage under the CGP within the exterior boundaries of the Bad River Reservation must comply with the Bad River Reservation Wetland and Watercourse Protection Ordinance, or Chapter 323 of the Bad River Tribal Ordinances, including the erosion and sedimentation control, natural buffer, and stabilization requirements. Questions regarding Chapter 323 and requests for permit applications can be directed to the Wetlands Specialist in the Tribe's Natural Resources Department at (715) 682-7123 or wetlands@badriver-nsn.gov.
- i. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must notify the Tribe prior to the commencing earth-disturbing activities.⁷¹ ⁷² The operator must submit a copy of the Notice of Intent (NOI) to the following addresses at the same time it is submitted to the U.S. EPA:

⁶⁷ Tribe's WQS: See provision E.2.i.

⁶⁸ See definition of cationic treatment chemicals in Appendix A of the CGP.

⁶⁹ Tribe's WQS: See provisions E.6.ii.a. and E.6.ii.c.

⁷⁰ Tribe's WQS: See provision E.7.iii.

⁷¹ See footnote 61.

⁷² See footnote 62.

Bad River Tribe's Natural Resources Department
Attn: Water Resources Specialist
P.O. Box 39
Odanah, WI 54861

Bad River Tribe's Natural Resources Department
Attn: Tribal Historic Preservation Officer (THPO)
P.O. Box 39
Odanah, WI 54861

The operator must also submit a copy of the Notice of Termination (NOT) to the above addresses at the same time it is submitted to the U.S. EPA.

- j. The Tribal Historic Preservation Officer (THPO) must be provided 30 days to comment on the project.⁷³
- k. The operator must obtain THPO concurrence in writing. This written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties. For more information regarding the specifics of the cultural resources process, see 36 CFR Part 800. A best practice for an operator is to consult with the THPO during the planning stages of an undertaking.⁷⁴
- l. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the following address at the same time as submitting the NOI:⁷⁵

Bad River Tribe's Natural Resources Department
Attn: Water Resources Specialist
P.O. Box 39
Odanah, WI 54861

- m. Any corrective action reports that are required under the CGP must be submitted to the following address within one (1) working day of the report completion:⁷⁶

Bad River Tribe's Natural Resources Department
P.O. Box 39
Odanah, WI 54861

- n. An operator shall be responsible for meeting any additional permit requirements imposed by the U.S. EPA necessary to comply with the Tribe's antidegradation policies if the discharge point is located upstream of waters designated by the Tribe.⁷⁷

⁷³ 36 C.F.R. § 800.3(c)(4).

⁷⁴ 36 C.F.R. § 800.3(b).

⁷⁵ See footnote 61.

⁷⁶ See footnote 61.

⁷⁷ See footnote 61.

9.3.2.2 Lac du Flambeau Band of Lake Superior Tribe of Chippewa Indians: The following conditions apply only to discharges on the Lac du Flambeau Band of the Lake Superior Tribe of Chippewa Indians Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan must be submitted to the following office, for the Tribal environmental review process, at least thirty (30) days in advance of sending the Notice of Intent (NOI) to EPA:

Lac du Flambeau
Tribal Land Management
P.O. Box 279
Lac du Flambeau, WI 54538

CGP applicants are encouraged to work with the LdF Water Resources Program in the identification of all proposed receiving waters.

- b. Copies of the NOI and the Notice of Termination (NOT) must be sent to the LdF Water Resources Program at the same time they are submitted to EPA.
- c. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Lac du Flambeau Reservation. This includes, but is not limited to, the prevention of any discharge that cause a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Lac du Flambeau Reservation for any of the uses designated in the Water Quality Standards of the Lac du Flambeau Reservation.
- d. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Lac du Flambeau Reservation. All spills must be reported to the appropriate emergency management agency, and measures shall be taken immediately to prevent the pollution of waters of the Lac du Flambeau reservation, including groundwater.
- e. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.
- f. Due to the significant ecological and cultural importance of the Lac du Flambeau Reservation, any operator requesting a permit for a point source discharge of pollutants (i.e., discharge) associated with the Stormwater Discharge will need a stormwater pollution prevention plan in place that does not violate Lac du Flambeau Water Quality Standards to protect Reservation Waters.

9.4 EPA Region 6

9.4.1 NMR100000 State of New Mexico, except Indian country

- a. If construction dewatering activities are anticipated at a site, permittees must complete the following steps:
 - i. Investigative information must be documented in the facility SWPPP.
 - ii. Refer to the GWQB Mapper at <https://gis.web.env.nm.gov/GWQB/> AND the PSTB Mapper (Go Mapper) at <https://gis.web.env.nm.gov/GoNM/>

and check if the following sources are located within the noted distance from your anticipated construct site groundwater dewatering activity:

Project Location Relative to a Source of Potential Groundwater Contamination	Constituents likely to be required for testing
<i>Within 0.5 mile of an open Leaking Underground Storage Tank (LUST) site</i>	<i>BTEX (Benzene, Toluene, Ethylbenzene, and Xylene) plus additional parameters depending on site conditions.*</i>
<i>Within 0.5 mile of an open Voluntary Remediation site</i>	<i>All parameters listed in Appendix A (or an alternate list approved by the NMED SWQB)**</i>
<i>Within 0.5 mile of an open RCRA Corrective Action Site</i>	
<i>Within 0.5 mile of an open Abatement Site</i>	
<i>Within 0.5 mile of an open Brownfield Site</i>	
<i>Within 1.0 mile or more of a Superfund site or National Priorities List (NPL) site with associated groundwater contamination.</i>	

**For further assistance determining whether dewatering may encounter impacted groundwater, the permittee may contact the NMED Ground Water Quality Bureau at: 505-827-2965.*

***EPA approved-sufficiently sensitive methods must be used - approved methods are listed in 40 CFR Part 136.3.*

- ii. Indicate on the NOI that dewatering activities are anticipated. Provide information on flow and potential to encounter impacted groundwater.
 - iii. Permittee must test the quality of the groundwater according to the chart above. Hardness and pH must also be measured.
 - iv. Permittee must send test result data to EPA Region 6 and the NMED Surface Water Quality Bureau. If the test data exceed standards, it cannot be discharged from the construction site into surface waters under this permit. Discharge to surface waters must be conducted under a separate NPDES individual permit to ensure proper treatment and disposal.
 - v. If disposal will be to the ground surface or in an unlined pond, the permittee must submit an NO/ to the NMED Ground Water Quality Bureau.
- b. Operators are not eligible to obtain authorization under this permit for all new and existing storm water discharges to outstanding national resource waters (ONRWs) (also referred to as "Tier 3" waters.)
- c. Operators who intend to obtain authorization under this permit for new and existing storm water discharges from construction sites must satisfy the following condition:
- i. The SWPPP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion and sediment control best management practices (BMPs) and/or other controls that are designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure that applicable standards in 20.6.4.NMAC, including the antidegradation policy, or TMDL waste load allocations (WLAs) are met. This requirement applies to discharges both during construction and after construction operations have been completed. The SWPPP must identify

and document the rationale for selecting these BMPs and/or other controls. The SWPPP must also describe design specifications, construction specifications, maintenance schedules (including a long term maintenance plan), criteria for inspections, and expected performance and longevity of these BMPs. For sites greater than 5 acres in size, BMP selection must be made based on the use of appropriate soil loss prediction models (i.e. SEDCAD, RUSLE, SEDIMOT, MULTISED, etc.) OR equivalent generally accepted (by professional erosion control specialists) soil loss prediction tools.

- ii. For all sites, the operator(s) must demonstrate, and include documentation in the SWPPP, that implementation of the site-specific practices will assure that the applicable standards or TMDL WLAs are met, and will result in sediment yields and flow velocities that, to the maximum extent practicable, will not be greater than the sediment yield levels and flow velocities from preconstruction, pre-development conditions.
 - iii. All SWPPPs must be prepared in accordance with good engineering practices by qualified (e.g. CPESC certified, engineers with appropriate training) erosion control specialists familiar with the use of soil loss prediction models and design of erosion and sediment control systems based on these models (or equivalent soil loss prediction tools). Qualifications of the preparer (e.g., professional certifications, description of appropriate training) must be documented in the SWPPP. The operator(s) must design, implement, and maintain BMPs in the manner specified in the SWPPP.
- d. Permittees can call 505-827-9329 for emergencies at any time and 505-476-6000 for non-emergencies during business hours from 5am-5pm, Monday through Friday.

9.4.2 NMR10I000 Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10I000 and Ute Mountain Reservation Lands that are covered under Colorado permit COR10I000.

9.4.2.1 Pueblo of Isleta. The following conditions apply only to discharges on the Pueblo of Isleta Reservation:

- a. CGP at 1.3 Prohibited discharges: Stormwater discharges associated with construction activity that EPA or the Pueblo of Isleta, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or may reasonably be expected to contribute to a violation or excursion of any applicable water quality standard, including the antidegradation policy, or the impairment of a designated use of receiving waters are not authorized by this permit.
- b. CGP at 1.4.1 How to Submit Your NOI: The operator shall provide a copy of the Notice of Intent ("NOI") to the Pueblo of Isleta at the same time it is submitted to the U.S. Environmental Protection Agency, for projects occurring within the exterior boundaries of the Pueblo of Isleta. The operator shall also notify the Pueblo of Isleta when it has submitted the Notice of Termination ("NOT"). The NOI and NOT shall be sent to the Pueblo of Isleta at the following address:

Water Quality Control Officer
Pueblo of Isleta
Environment Department
PO Box 1270

Isleta, NM 87022
(505) 869-9819
E-mail: POI36871@isletapueblo.com

Overnight/Express Mail Delivery
Pueblo of Isleta
Environment Department
6 Sagebrush St.
Albuquerque, NM 87105

- c. CGP at 1.5 Requirement to post a notice of your permit coverage: Amend to read: "You must post a sign or other notice of your permit coverage at a safe, publicly accessible location in close proximity to the construction site. The notice must be located so that it is visible from the public road or tribal road that is nearest to the active part of the construction site..."
- d. CGP at 7.2.6 Description of stormwater controls: The SWPPP will be considered to be incomplete if the operator has not coordinated requirements under this Part with the Pueblo of Isleta Environment Department.
- e. CGP I.12.6.1 at pg.1-6 of 8. The Pueblo of Isleta requests notification within 10 hours (rather than 24 hrs.) if health or the environment become endangered.
- f. CGP at I.12.2 Anticipated noncompliance: Amend to read: "You must give advance notice to EPA and the Pueblo of Isleta at the address indicated in 1.4.1(a) of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements."
- g. CGP at I.12.6.1: Any noncompliance for projects within the exterior boundaries of the Pueblo of Isleta which may endanger health or the environment shall be reported directly to the EPA Regional Office [(see contacts at <https://www2.epa.gov/national-pollutant-discharge-elimination-system-npdes/contact-us-stormwater#regional>)] and to the Pueblo of Isleta Water Quality Control Officer. Any information must be provided orally within 12 hours of the time you become aware of the circumstances. Other requirements of this Part for a written submission apply. Electronic communication (E-mail) shall be provided as soon as practical. Verbal notice shall be provided to:

Water Quality Control Officer
Pueblo of Isleta
E-mail: POI36871@isletapueblo.com
(505) 869-9819
(505) 917-8346 mobile
(505) 869-3030 Police Dispatch

- h. CGP at 2.2 Erosion and sediment control requirements: Erosion and sediment controls shall be designed to retain sediment on-site.
- i. CGP at 2.2 Under Sediment control requirements, Standard Permit Condition Duty to Mitigate Volumes of sediment at or over (five) 5 cubic yards must be removed and placed for disposal within a tribally approved sediment Disposal Site, located on Pueblo of Isleta lands. CGP 2.2 at pg. 8.
- j. Under Minimize erosion, a permittee must secure permission from the Pueblo or affected Pueblo of Isleta land assignment owner if a dissipation device needs to

be placed up- or down- elevation of a given construction site. CGP 2.2.11 at pg. 11.

- k. CGP at 2.3.6 Emergency spill notification requirements: You must notify the Pueblo of Isleta Water Quality Control Officer and National Response Center (NRC) [at (800) 424-8802 or, in the Washington, DC metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302] as soon as you have knowledge of the release. Verbal and electronic notice shall be provided as specified in I.12.6.1
- l. CGP at C.3 Equivalent analysis waiver: Parties wishing to apply for an Equivalent Analysis Waiver (see Appendix D, Section C) must provide a copy of the waiver analysis to the Pueblo of Isleta Water Quality Control Officer at the address indicated in 1.4.1 (a).

9.4.2.2 Pueblo of Sandia. The following conditions apply only to discharges on the Pueblo of Sandia Reservation:

- a. Only those activities specifically authorized by the CGP are authorized by the Pueblo of Sandia's Water Quality certification. The Pueblo of Sandia's Water Quality Certification does not authorize impact to cultural properties, historical sites or properties that may be eligible as such.
- b. Copies of all Notices of Intent (NOI) submitted to the EPA must also be sent concurrently to the Pueblo of Sandia at the following address. Discharges are not authorized by this permit unless an accurate and complete NOI has been submitted to the Pueblo of Sandia, either by mail or electronically.

Regular U.S. Delivery Mail:

Pueblo of Sandia Environment Department
Attention: Scott Bulgrin, Water Quality Manager
481 Sandia Loop
Bernalillo, New Mexico 87004

Electronically:

sbulgrin@sandiapueblo.nsn.us

- c. Any correspondences between the applicant and EPA related to analytical data, written reports, corrective action, enforcement, monitoring, or an adverse incident written reports should likewise be routed to the Pueblo of Sandia at the above address.
- d. The Stormwater Pollution Prevention Plan (SWPPP) must be available to the Pueblo of Sandia Environment Department either electronically or hard copy upon request for review. The SWPPP must be made available at least fourteen (14) days before construction begins. The fourteen (14) day period will give Pueblo staff time to become familiar with the project site, prepare for construction site inspections, and determine compliance with the Pueblo of Sandia Water Quality Standards. Failure to provide a SWPPP to the Pueblo of Sandia may result in the delay or denial of the construction project.
- e. If requested by the Pueblo of Sandia Environment Department, the permittee must provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Pueblo of Sandia Water Quality Standards and/or applicable Federal Standards not authorized by this certification.
- f. An "Authorization to Proceed Letter" with site specific mitigation requirements may

be sent out to the permittee when a review of the NOI and SWPPP, on a case-by-case basis is completed by the Pueblo of Sandia Environment Department. This approval will allow the application to proceed if all mitigation requirements are met.

- g. The Pueblo of Sandia will not allow Small construction Waivers (Appendix C) or the Rainfall Erosivity Waiver (Appendix C.1) to be granted for any small construction activities.
- h. Before submitting a Notice of Termination (NOT) to the EPA, permittees must clearly demonstrate to the Pueblo of Sandia Environment Department through a site visit or documentation that requirements for site stabilization have been met and any temporary erosion control structures have been removed. A short letter stating the NOT is acceptable and all requirements have been met will be sent to the permittee to add to the permittee's NOT submission to EPA.
- i. Copies of all NOT submitted to the EPA must also be sent concurrently to the Pueblo of Sandia through the mail or electronically.

Regular U.S. Delivery Mail:

Pueblo of Sandia Environment Department
Attention: Scott Bulgrin, Water Quality Manager
481 Sandia Loop
Bernalillo, New Mexico 87004

Electronically:

sbulgrin@sandiapueblo.nsn.us

- j. The Pueblo of Sandia may require the permittee to perform water quality monitoring for pH, turbidity, and total suspended solids (TSS) during the permit term if the discharge is to a surface water leading to the Rio Grande for the protection of public health and the environment.

9.4.2.3 Pueblo of Santa Ana. The following conditions apply only to discharges on the Pueblo of Santa Ana Reservation:

- a. The permittee shall provide a copy of the Notice of Intent (NOI) to the Pueblo of Santa Ana (the Pueblo), at the same time it is submitted to the U.S. Environmental Protection Agency (EPA), for projects with discharges onto the lands of the Pueblo as defined in the Pueblo's antidegradation policy within the Pueblo of Santa Ana Water Quality Standards.
- b. The permittee shall provide a final copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Pueblo that is associated with any project identified in the NOI, at the same time that an NOI is submitted to the EPA. The SWPPP should include any projects with discharges onto the lands of the Pueblo as defined in

the antidegradation policy within the Pueblo of Santa Ana Water Quality Standards.

- c. The operator shall provide copies of inspections reports and of corrective action reports to the Pueblo at the address below for review, upon request.
- d. Upon completion of the project identified in the NOI, the permittee will submit a Notice of Termination (NOT) to the Pueblo.
- e. All required or requested permittee specific information identified above shall be submitted to the following address:

Pueblo of Santa Ana Department of Natural Resources,
Attention: Water Resources Division
2 Dove Road
Santa Ana Pueblo, NM 87004

- f. Discharges are not authorized by permittee unless an accurate and complete NOI and SWPPP have been submitted to the Pueblo. Failure to provide an accurate and complete NOI and SWPPP may result in a denial of the discharge permit or a delay in groundbreaking or construction.
- g. The permittee will not proceed with site work until authorized by the Pueblo. The Pueblo requires review of the complete and final SWPPP before authorization to proceed. The Pueblo will provide an "Authorization to Process" notice after review and approval of the SWPPP.
- h. The permittee could be required to perform water quality monitoring, sampling or analysis during the active permit dates for constituents determined by the Pueblo.
- i. Before submitting a NOT, permittees must certify to the Pueblo's Department of Natural Resources in writing that requirements for site stabilization have been met, and any temporary erosion control structures have been removed. Documentation of the Pueblo's review that such requirements have been reviewed and met will be provided for the permittee to add to the permittee's NOT submission to EPA. Copies of all NOT submitted to the EPA must also be sent to the Pueblo at the address provided above.

9.4.2.4 Pueblo of Santa Clara. The following conditions apply only to discharges on the Pueblo of Santa Clara Reservation:

- a. The operator must provide a copy of the Notice of Intent (NOI) and Notice of Termination (NOT) to the Santa Clara Pueblo Governor's Office at the same time it is provided to the US Environmental Protection Agency.
- b. A copy of the Storm water Pollution Prevention Plan shall be made available to the Pueblo of Santa Clara staff upon request.

9.4.2.5 Pueblo of Tesuque. The following conditions apply only to discharges on the Pueblo of Tesuque Reservation:

- a. Based on the Section 401 Certification provisions within the CWA, no discharges that will exceed or cause the exceedance of the Pueblo of Tesuque Water Quality Standards will be allowed within the boundaries of the Pueblo of Tesuque.
- b. The operator shall provide a copy of the Notice of Intent (NOI) to the Pueblo of Tesuque Governor's Office in care of the Department of Environmental and Natural Resources (DENR) at the same time it is submitted to the Environmental

Protection Agency, for projects occurring within the boundaries of Tesuque tribal lands. The operator shall also notify the Pueblo of Tesuque Governor's Office in care of the DENR when it submits the Notice of Termination (NOT), but not before the DENR post-construction inspection has been completed as described below. The NOI and NOT shall be sent to the following address:

Pueblo of Tesuque
Office of the Governor
Attn: DENR
20 TP828 Administration Bldg.
Santa Fe, NM 87506-5512

Alternatively, the operator may arrange with DENR to email the documents.

- c. The operator shall also provide a copy of the Stormwater Pollution Prevention Plan, copies of inspection reports, and copies of corrective action reports to the DENR.
- d. Construction requiring this permit will not commence until the above document submissions have been made and DENR provides the operator with notice to proceed. Operators will not demobilize until DENR personnel inspect the site for completion of stabilization. Once the inspection has taken place and all SWPPP-related work has been completed to the satisfaction of DENR, the operator will submit its NOT as described above and then demobilize.

9.4.2.6 Taos Pueblo. The following conditions apply only to discharges on the Taos Pueblo Reservation:

- a. The operator shall provide a copy of the Notice of Intent (NOI) to the Taos Pueblo Governor's Office, War Chief's Office and Environmental Office, at the same time it is submitted to the U.S. Environmental Protection Agency, for projects occurring within the exterior boundaries of Taos Pueblo. The operator shall also notify Taos Pueblo when it has submitted the Notice of Termination (NOT). The NOI and NOT shall be sent to the Taos Pueblo at the following addresses:
 - i. Taos Pueblo Governor's Office
P.O. Box 1846
Taos NM 87571
 - ii. Taos Pueblo War Chief's Office
P.O. Box 2596
Taos NM 87571
 - iii. Environmental Office
Attn: Program Manger
P.O. Box 1846
Taos NM 87571

- b. Taos Pueblo requests that in the event Indian artifacts or human remains are inadvertently discovered on projects occurring near or on Taos Pueblo lands that consultation with the tribal Governor's Office occur at the earliest possible time.
- c. The operator shall provide a copy of the Stormwater Pollution Prevention Plan, copies of inspections reports, and copies of corrective action reports to staff in the Taos Pueblo Environmental Office for review and copy, upon request.

9.4.2.7 Ohkay Owingeh. The following conditions apply only to discharges on the Ohkay Owingeh Reservation:

- a. Prior to commencement of any construction activity on Ohkay Owingeh Lands requiring permit coverage under EPA's Construction General Permit, the operator(s) shall submit to Ohkay Owingeh Office of Environmental Affairs, a copy of the electronic "Notice of Intent," submitted to the Environmental Protection Agency, immediately following EPA's electronic notification that the NOI has been received. A copy of the Stormwater Pollution Prevention Plan(s) must be made available to the Ohkay Owingeh Office of Environmental Affairs upon the tribe's request either electronically or hard copy. Operator(s) shall also submit to Ohkay Owingeh Office of Environmental Affairs a copy of the electronic Notice of Termination (NOT) submitted to the Environmental Protection Agency. Documents shall be submitted to Ohkay Owingeh at the following address:

Ohkay Owingeh Office of Environment Affairs
Attention: Environmental Programs Manager
P.O. Box 717
Ohkay Owingeh, New Mexico 87566
Office # 505.852.4212
Fax # 505.852.1432
Electronic mail: naomi.archuleta@ohkay.org

- b. Ohkay Owingeh will not allow the Rainfall Erosivity Waivers (see Appendix C) to be granted for any small construction activities.
- c. All vegetation used to prevent soil loss, seeding or planting of the disturbed area(s) to meet the vegetative stabilization requirements must utilize native seeds/vegetation commonly known to the area. All temporary erosion control structures, such as silt fences must be removed as soon as stabilization requirements are met.

9.4.2.8 Pueblo of Laguna. The following conditions apply only to discharges on the Pueblo of Laguna Reservation:

- a. The operator must provide a paper and electronic copy of the Notice of Intent (NOI) and Notice of Termination (NOT) to the Pueblo of Laguna at the same time it is provided to the U.S. Environmental Protection Agency. The NOI and NOT should be provided to the following address:

Pueblo of Laguna, Office of the Governor
Attn: Environmental & Natural Resources Department
P.O. Box 194
Laguna, NM 87026
Email: setter@pol-nsn.gov

- b. The operator must provide an electronic copy of the Storm Water Pollution

Prevention Plan to the Pueblo of Laguna Environmental Program at the same time the NOI is submitted to the above listed email addresses. Any correspondences between the applicant and EPA related to analytical data, written reports, corrective action, enforcement, monitoring, or an adverse incident written reports threshold likewise be routed to the Pueblo of Laguna Environmental Program.

- c. Immediate initiation of consultation with the Pueblo of Laguna is required should any human remains or artifacts be unearthed during the project that fall under the Native American Graves Protection and Repatriation Act guidelines. If human remains are unearthed, contact the Pueblo of Laguna Police Department at 505.552.6666. If artifacts are unearthed, contact the Pueblo of Laguna Tribal Historic Preservation Office at 505.552.5033.

9.4.2.9 Picuris Pueblo. The following conditions apply only to discharges on the Picuris Pueblo Reservation:

- a. The operator, landowner and construction operators doing earth-disturbance work must meet the definition of "operator" under the Construction General Permit (CGP), and must provide an electronic and paper copy of the Notice of Intent (NOI) and Notice of Termination (NOT) to **both** The Office of the Picuris Pueblo Governor and the Picuris Pueblo Environmental Department at the same time it is provided to the U.S. Environmental Protection Agency (USEPA). The NOI and NOT should be provided to the following address:

Picuris Pueblo
The Office of the Governor
PO BOX 127
Penasco, NM 87553
575-587-2519
575-587-1071 (Fax)
Governor: governor@picurispueblo.org

Picuris Pueblo Environmental Department
PO BOX 158
Penasco, NM 87553
575-587-0110
575-587-0223 (Fax)
Environmental Director: environment@picurispueblo.org

- b. The operator must provide an electronic copy of the Storm Water Pollution Prevention Plan to the Picuris Pueblo Environmental Department at least 30 days prior to submitting the NOI to USEPA and the Picuris Pueblo by email to Picuris Pueblo Environmental Department: environment@picurispueblo.org.

9.4.2.10 Pueblo of Pojoaque. The following conditions apply only to discharges on the Pueblo of Pojoaque Reservation:

- a. The operator, landowner and construction operators doing earth-disturbance work must meet the definition of "operator" under the CGP and must provide a copy of the Notice of Intent (NOI) to the Pueblo of Pojoaque Governor's Office and Environmental Department within 3 days following U.S. Environmental Protection Agency's electronic confirmation that the NOI was certified and submitted and is undergoing its 14-day review period. Additionally, a copy of the Notice of Termination (NOT) must be provided the same day electronic confirmation is

received from the U.S. Environmental Protection Agency that the NOT has been accepted. The NOI and NOT should be provided to the following address:

Pueblo of Pojoaque
Office of the Governor
78 Cities of Gold Road
Santa Fe, NM 87506

Pueblo of Pojoaque
Environmental Department
39 Camino Del Rincon
Santa Fe, NM 87506

- b. The operator must provide an electronic copy of the Stormwater Pollution Prevention Plans to the Pueblo of Pojoaque Environmental Department by email to Adam L Duran (aduran@pojoaque.org) at least 30 days prior to submitting the NOI to EPA and the Pueblo of Pojoaque.

9.4.2.11 Nambe Pueblo. The following conditions apply only to discharges on Nambe Pueblo:

- a. The operator must provide a copy of the Notice of Intent (NOI) and Notice of Termination (NOT) to the Nambe Pueblo Governor's Office at the same time it is provided to the US Environmental Protection Agency. The NOI and NOT should be provided to the following address:

Office of the Governor
Nambe Pueblo
15A NP102 WEST
Nambe Pueblo, NM 87506

- b. The operator must provide a copy of the Stormwater Pollution Prevention Plan to Nambe Pueblo at the same time it is submitted to the EPA, either by email to srydeen@nambepueblo.org or mailed to the above address.

9.4.3 OKR10I000 Indian country within the State of Oklahoma

9.4.3.1 Pawnee Nation. The following conditions apply only to discharges within Pawnee Indian country:

- a. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pawnee Nation at the same time it is submitted to the Environmental Protection Agency to the following address:

Pawnee Nation Department of Environmental Conservation and Safety
P.O. Box 470
Pawnee, OK 74058
Or email to mmatlock@pawneenation.org

- b. The Storm Water Pollution Prevention Plan must be available to Departmental inspectors upon request.
- c. The Department must be notified at 918-762-3655 immediately upon discovery of any noncompliance with any provision of the permit conditions.

9.4.4 OKR10F000 Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).

- a. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Lee Creek or any water or watershed designated "ORW" in Oklahoma's Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Certification is denied for any on-going activities such as sand and gravel mining or any other mineral mining.
- b. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Lee Creek or any water or watershed designated "ORW" in Oklahoma's Water Quality Standards, certification is denied for any discharges originating from support activities, including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas.
- c. In order to comply with Oklahoma's Water Quality Standards, these conditions and restrictions also apply to any construction projects located wholly or partially on Indian Country lands within the State of Oklahoma.

9.5 EPA Region 8

9.5.1 COR10I000 Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico.

9.5.1.1 The Ute Mountain Ute Tribe. The following conditions apply only to discharges on the Ute Mountain Ute Reservation.

- a. Permittees must send the Stormwater Pollution Prevention Plan (SWPPP) to the Tribal Environmental Department for review and approval at least 30 days before construction starts.
- b. Before submitting the Notice of Termination (NOT), permittees must clearly demonstrate to the Tribal Environmental Department during an on-site inspection that requirements for site stabilization have been met.
- c. The permittee must send a copy of the Notice of Intent (NOI) and the Tribal Environmental Department.
- d. Permittees may submit their SWPPPs and NOI and NOT requests electronically to: clarrick@utemountain.org.
- e. Written NOIs, SWPPPs, and NOTs may be mailed to:

Colin Larrick, Water Quality Program Manager
Ute Mountain Ute Tribe
Environmental Department
P.O. Box 448
Towaoc, CO 81334

9.5.2 MTR10I000 Indian country within the State of Montana

9.5.2.1 The Confederated Salish and Kootenai Tribes of the Flathead Nation. The following conditions apply only to discharges on the Confederated Salish and Kootenai Tribes of the Flathead Nation Reservation:

- a. Permittees must submit the Stormwater Pollution Prevention Plan (SWPPP) to the Confederated Salish and Kootenai Tribes at least 30 days before construction starts.
- b. Before submitting the Notice of Termination (NOT), permittees must clearly demonstrate to an appointed Tribal staff person during an onsite inspection that requirements for site stabilization have been met.
- c. The permittee must send a copy of the Notice of Intent (NOI) and the NOT to CSKT.
- d. Permittees may submit their SWPPPs, NOIs and NOTs electronically to: clintf@cskt.org.
- e. Written SWPPPs, NOIs and NOTs may be mailed to:

Clint Folden, Water Quality Regulatory Specialist
Confederated Salish and Kootenai Tribes
Natural Resources Department
P.O. Box 278
Pablo, MT 59855

9.6 EPA Region 9

9.6.1 AZR10I000 Indian Country within the state of Arizona, as well as Navajo Nation lands in New Mexico and Utah

9.6.1.1 Navajo Nation. The following conditions apply only to discharges on the Navajo Nation reservation:

- a. Courtesy copies of Notice of Intents and stormwater pollution prevention plans shall be made available to Navajo EPA.
- b. Copies of all monitoring reports must be provided to Navajo EPA.
- c. Facilities covered under the CGP will be subject to compliance inspections by Navajo EPA staff with active Federal Inspector Credentials under the authority of the Clean Water Act.
- d. Specific awareness and adherence to Sections 201 – Anti-degradation Policy, 203 – Narrative WQS, and 207.H - Turbidity.

9.6.2 CAR10I000 Indian country within the State of California

9.6.2.1 Twenty-Nine Palms Band of Mission Indians. The following conditions apply only to discharges on the Twenty-Nine Palms Band of Mission Indians Reservation:

- a. At the time the applicant submits its Notice of Intent (NOI) to the EPA, the applicant must concurrently submit written notification of the NOI and a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Twenty-Nine Palms Band of Mission Indians at the address below:

Tribal Environmental Coordinator
Twenty-Nine Palms Band of Mission Indians
46-200 Harrison Place

Coachella, CA 92236

- b. The applicant must also concurrently submit to the Tribal Environmental Coordinator written notification of any other forms or information submitted to the EPA, including waivers, reporting, and Notice of Termination (NOT).
- c. Permitted entities under the CGP must keep the Tribal EPA informed of authorized discharges under the CGP by submitting written information about the type, quantity, frequency and location, intended purpose, and potential human health and/or environmental effects of their activities. These requirements are pursuant to Section 4 of the Twenty-Nine Palms Band of Mission Indians Water Pollution Control Ordinance (022405A). This information may be submitted to Tribal EPA in the form of Stormwater Pollution Prevention Plans (SWPPPs), monitoring reports, or other reports as required under the CGP. Spills, leaks, or unpermitted discharges must be reported in writing to Tribal EPA within 24 hours of the incident.

9.6.2.2 Morongo Band of Mission Indians. The following conditions apply only to discharges on the Morongo Band of Mission Indians Reservation:

- a. This certification does not exempt, and is provisional upon compliance with, other applicable statutes and codes administered by federal and tribal agencies. Pursuant to the Morongo Band of Mission Indians Surface Water Quality Protection Ordinance (Ordinance 39), all unpermitted discharges must be reported to the Morongo Band of Mission Indians Environmental Protection Department (Morongo EPD) within 24 hours of the incident.
- b. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) and stormwater pollution prevention plan (SWPPP) to the Morongo EPD at the same time it is submitted electronically to the EPA.
- c. The operator shall allow the Morongo EPD or its designee to inspect and sample at the construction site as needed.

Correspondence should be submitted to:

Morongo Band of Mission Indians
Environmental Protection Department
12700 Pumarra Road
Banning, CA 92220
Phone: (951) 755-5128
Email: epd@morongo-nsn.gov

9.6.3 GUR100000 Island of Guam. The following conditions apply only to discharges on the Island of Guam:

- a. Any earth-moving operations which require a permit must be obtained from the Department of Public Works (DPW) with clearance approval from various Government of Guam Agencies including Guam EPA prior to the start of any earth-moving activity.
- b. In the event that the construction sites are within the Guam Sole Source Aquifer, the construction site owner and operator must consider opportunities to facilitate groundwater recharge for construction and post-construction implementing infiltration Best Management Practices. Stormwater disposal systems shall be designed and operated within the boundaries of the project. Stormwater systems shall not be permitted within any Wellhead Protection Zone unless the discharge meets the Guam Water Quality Standards within the zone. Waters discharged

within the identified category G-2 recharge zone shall receive treatment to the degree required to protect the drinking water quality prior to it entering the category G-1 resource zone.

- c. All conditions and requirements set forth in the 22 Guam Administrative Rules and Regulations (GARR), Division II, Water Control, Chapter 10, Guam Soil Erosion and Sediment Control Regulations (GSESCR) that are more protective than the CGP regarding construction activities must be complied with.
- d. All standards and requirements set forth in the 22 GARR, Division II, Water Control, Chapter 5, *Guam Water Quality Standards (GWQS) 2001 Revisions*, must be complied with to include reporting GWQS exceedance to Guam EPA.
- e. All operators/owners of any property development or earth moving activities shall comply with the erosion control pre-construction and post-construction BMP design performance standards and criteria set forth in the 2006 CNMI and Guam Stormwater Management Manual.
- f. All conditions and requirements regarding dewatering activities set forth in 22 Guam Administrative Rules and Regulations Chapter 7, Water Resources Development and Operating Regulations must be complied with to include securing permits with Guam EPA prior to the start of any dewatering activities.
- g. If a project to be developed is covered under the Federal Stormwater Regulations (40 CFR Parts 122 & 123), a Notice of Intent (NOI) to discharge stormwater to the surface and marine waters of Guam must be submitted to the U.S. EPA and a copy furnished to Guam EPA, pursuant to Section 10, 104(B)(5)(d) 22GAR, Division II, Chapter 10.
- h. Guam EPA shall apply the Buffer Requirements listed in Appendix G of the CGP NPDES Permit for construction activities as it pertains to Waters of the U.S. in Guam. Guam EPA shall also apply the same buffer requirements for sinkholes in Guam.
- i. When Guam EPA, through its permit review process, identifies that the proposed construction activity is close proximity to marine waters, contractors and owners will be informed that any activity that may impair water quality are required to stop during peak coral spawning periods as per the Guam Coral Spawning Construction Moratoriums.
- j. The Proposed Construction General Permit must set appropriate measures and conditions to protect Guam's Threatened and Endangered Species and Outstanding Resource Waters of exceptional recreational or ecological significance as determined by the Guam EPA Administrator as per *Guam Water Quality Standards 2001 Revisions*, §5102, Categories of Waters, D. Outstanding Resource Waters.
- k. When Guam EPA through its permit review process identifies that proposed construction activity is in close proximity to any Section 303d impaired waters, which includes marine waters and surface waters, shall ensure that construction activity does not increase the impaired water's ambient parameters.
- l. When Rainfall Erosivity and TMDL Waivers reflected in the CGP, Appendix C, are submitted to the U.S. EPA, Guam EPA will review waivers on a project by project basis.
- m. Prior to submission of the Notice of Termination (NOT) to the U.S. EPA, permittees must clearly demonstrate to Guam EPA that the project site has met all soil

stabilization requirements and removal of any temporary erosion control as outlined in the GSESCR.

9.7 EPA Region 10

9.7.1 IDR100000 State of Idaho, except Indian country

a. Idaho's Antidegradation Policy. The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).

1. Tier I Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier 1 review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.05).
2. Tier II Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
3. Tier III Protection. The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).

DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier I protection for that use, unless specific circumstances warranting Tier II protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).

b. Pollutants of Concern. The primary pollutants of concern associated with stormwater discharges from construction activities are sediment, typically measured as total suspended solids and turbidity. Other potential pollutants include the following: phosphorus, nitrogen, pesticides, organics, metals, PCBs, petroleum products, construction chemicals, and solid wastes.

c. Receiving Water Body Level of Protection. The CGP provides coverage to construction activities throughout the entire State of Idaho. Because of the statewide applicability, all of the jurisdictional waters within Idaho could potentially receive discharges either directly or indirectly from activities covered under the CGP. DEQ applies a water body by water body approach to determine the level of antidegradation a water body will receive.

All waters in Idaho that receive discharges from activities authorized under the CGP will receive, at minimum Tier I antidegradation protection because Idaho's antidegradation policy applies to all waters of the state. Water bodies that fully support their aquatic life or recreational uses are considered to be *high quality waters* and will receive Tier II antidegradation protection.

Although Idaho does not currently have any Tier III designated outstanding resource waters (ORWs) designated, it is possible for a water body to be designated as an ORW during the life of the CGP. Because of this potential, the antidegradation review also assesses whether the permit complies with the

outstanding resource water requirements of Idaho's antidegradation policy.

To determine the support status of the receiving water body, persons filing a Notice of Intent (NOI) for coverage under this general permit must use the most recent EPA-approved Integrated Report, available on Idaho DEQ's website:

<http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report/>.

High quality waters are identified in Categories 1 and 2 of the Integrated Report. If a water body is in either Category 1 or 2, it is a Tier II water body.

Unassessed waters are identified as Category 3 of DEQ's Integrated Report. These waters require a case-by-case determination to be made by DEQ based on available information at the time of the application for permit coverage. If a water body is unassessed, the applicant is directed to contact DEQ for assistance in filing the NOI.

Impaired waters are identified in Categories 4 and 5 of the Integrated Report. Category 4(a) contains impaired waters for which a TMDL has been approved by EPA. Category 4(b) contains impaired waters for which controls other than a TMDL have been approved by EPA. Category 5 contains waters which have been identified as "impaired," for which a TMDL is needed. These waters are Tier I waters, for the use which is impaired. With the exception, if the aquatic life uses are impaired for any of these three pollutants—dissolved oxygen, pH, or temperature—and the biological or aquatic habitat parameters show a health, balanced biological community, then the water body shall receive Tier II protection, in addition to Tier I protection, for aquatic life uses (IDAPA 58.01.02.052.05.c.i.).

DEQ's webpage also has a link to the state's map-based Integrated Report which presents information from the Integrated Report in a searchable, map-based format: <http://www.deq.idaho.gov/assistance-resources/maps-data/>.

Water bodies can be in multiple categories for different causes. If assistance is needed in using these tools, or if additional information/clarification regarding the support status of the receiving water body is desired, the operator is directed to make contact with the appropriate DEQ regional office of the State office in the table below:

Regional and State Office	Address	Phone Number	Email
Boise	1445 N. Orchard Rd., Boise 83706	208-373-0550	Kati.carberry@deq.idaho.gov
Coeur d'Alene	2110 Ironwood Parkway, Coeur D'Alene 83814	208-769-1422	June.bergquist@deq.idaho.gov
Idaho Falls	900 N. Skyline, Suite B., Idaho Falls 83402	208-528-2650	Troy.saffle@deq.idaho.gov

Lewiston	1118 "F" St., Lewiston 83501	208-799- 4370	Mark.sellet@deq.idaho.gov
Pocatello	444 Hospital way, #300 Pocatello 83201	208-236- 6160	Lynn.vanevery@deq.idaho.gov
Twin Falls	650 Addison Ave., W., Suite 110, Twin Falls 83301	208-736- 2190	Balthasar.buhidar@deq.idaho.gov
State Office	1410 N. Hilton Rd., Boise 83706	208-373- 0502	Nicole.deinarowicz@deq.idaho.gov

- d. *Turbidity Monitoring*. The permittee must conduct turbidity monitoring during construction activities and thereafter on days where there is a direct discharge of pollutants from an unstabilized portion of the site which is causing a visible plume to a water of the U.S.

A properly and regularly calibrated turbidimeter is required for measurements analyzed in the field (preferred method), but grab samples may be collected and taken to a laboratory for analysis. If the permittee can demonstrate that there will be no direct discharge from the construction site, then turbidity monitoring is not required. When monitoring is required, a sample must be taken at an undisturbed area immediately upstream of the project area to establish background turbidity levels for the monitoring event. Background turbidity, location, date and time must be recorded prior to monitoring downstream of the project area. A sample must also be taken immediately downstream from any point of discharge and *within* any visible plume. The turbidity, location, date and time must be recorded. The downstream sample must be taken immediately following the upstream sample in order to obtain meaningful and representative results.

Results from the compliance point sampling or observation⁷⁸ must be compared to the background levels to determine whether project activities are causing an exceedance of state WQS. If the downstream turbidity is 50 NTUs or more than the upstream turbidity, then the project is causing an exceedance of WQS. *Any exceedance of the turbidity standard must be reporting to the appropriate DEQ regional office within 24 hours. The following six (6) steps should be followed to ensure compliance with the turbidity standard:*

1. If a visible plume is observed, quantify the plume by collecting turbidity measurements from within the plume and compare the results to Idaho's instantaneous numeric turbidity criterion (50 NTU over the background).

⁷⁸ A visual observation is only acceptable to determine whether BMPs are functioning properly. If a plume is observed, the project may be causing an exceedance of WQS and the permittee must collect turbidity data and inspect the condition of the projects BMPs. If the BMPs appear to be functioning to their fullest capability and the turbidity is 50 NTUs or more than the upstream turbidity, then the permittee must modify the activity or implement additional BMPs (this may also include modifying existing BMPs).

2. If turbidity is less than 50 NTU instantaneously over the background turbidity; continue monitoring as long as the plume is visible. If turbidity exceeds background turbidity by more than 50 NTU instantaneously then stop all earth disturbing construction activities and proceed to step 3.
3. Take immediate action to address the cause of the exceedance. That may include inspection the condition of project BMPs. If the BMPs are functioning to their fullest capability, then the permittee must modify project activities and/or BMPs to correct the exceedance.
4. Notify the appropriate DEQ regional office within 24 hours.
5. Possibly increase monitoring frequency until state water quality standards are met.
6. Continue earth disturbing construction activities once turbidity readings return to within 50 NTU instantaneously and 25 NTU for more than ten consecutive days over the background turbidity.

Copies of daily logs for turbidity monitoring must be available to DEQ upon request. The report must describe all exceedances and subsequent actions taken, including the effectiveness of the action.

- e. Reporting of Discharges Containing Hazardous Materials or Petroleum Products. All spills of hazardous material, deleterious material or petroleum products which may impact waters (ground and surface) of the state shall be immediately reported. Call 911 if immediate assistance is required to control, contain or clean up the spill. If no assistance is needed in cleaning up the spill, contact the appropriate DEQ regional office in the table below during normal working hours or Idaho State Communications Center after normal working hours. If the spilled volume is above federal reportable quantities, contact the National Repose Center.

For immediate assistance: Call 911

National Response Center: (800) 424-8802

Idaho State Communications Center: (208) 632-8000

Regional office	Toll Free Phone Number	Phone Number
Boise	888-800-3480	208-373-0321
Coeur d'Alene	877-370-0017	208-769-1422
Idaho Falls	800-232-4635	208-528-2650
Lewiston	977-547-3304	208-799-4370
Pocatello	888-655-6160	208-236-6160
Twin Falls	800-270-1663	208-736-2190

9.7.2 IDR10I000 Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)

9.7.2.1 Shoshone-Bannock Tribes. The following conditions apply only to discharges on the Shoshone-Bannock Reservation:

- f. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the Shoshone-Bannock Tribes Water Resources Department at the same time it is

submitted electronically to the Environmental Protection Agency (EPA) and shall provide the Shoshone-Bannock Tribes Water Resources Department the acknowledgement of receipt of the NOI from the EPA within 7 calendar days of receipt from the EPA.

9.7.3 WAR10F000 Areas in the State of Washington, except those located on Indian country, subject to construction activity by a Federal Operator. The following conditions apply only to discharges on federal facilities in the State of Washington:

- a. Discharges shall not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), groundwater quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges that are not in compliance with these standards are not authorized.
- b. Prior to the discharge of stormwater and non-storm water to waters of the State, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate SWPPP, with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.
- c. Permittees who discharge to segments of waterbodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, phosphorus, or pH must comply with the following numeric effluent limits:

Parameter Identified in 303(d) Listing	Parameter Sampled	Unit	Analytical Method	Numeric Effluent Limit
<ul style="list-style-type: none"> • Turbidity • Fine Sediment • Phosphorus 	Turbidity	NTU	SM2130 or EPA 180.1	25 NTUs at the point where the stormwater is discharged from the site.
High pH	pH	Su	pH meter	In the range of 6.5 – 8.5

- d. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current EPA approved listing of impaired waters that exists on February 16, 2017, or the date when the operator's complete permit application is received by EPA, whichever is later.
- e. Discharges to waterbodies subject to an applicable Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus, shall be consistent with the assumptions and requirements of the TMDL.
 - i. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges shall be consistent with any specific waste load allocations or requirements establish by the applicable TMDL.
 - ii. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but no specific requirements have been identified, compliance with this permit will be assumed to be consistent with the approved TMDL.

- iii. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with this permit will be assumed to be consistent with the approved TMDL.
- iv. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.
- v. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which has been completed and approved by EPA prior to February 16, 2017, or prior to the date the operator's complete NOI is received by EPA, whichever is later.

9.7.4 WAR10I000 Indian country within the State of Washington

9.7.4.1 Confederated Tribes of the Colville Reservation. The following conditions apply only to discharges on the Colville Indian Reservation (CIR) and on other Tribal trust lands or allotments of the Confederated Tribes of the Colville Reservation:

- a. A copy of the Stormwater Pollution Prevention Plan must be submitted to the following office at least thirty (30) days in advance of sending the Notice of Intent (NOI) to EPA:

Environmental Trust Department
Confederated Tribes of the Colville Reservation
PO Box 150
Nesepalem, WA 99155

- b. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be sent to the ETD at the same time they are submitted to EPA.
- c. Discharges to Omak Creek, the Okanogan River, and Columbia River downstream of Chief Joseph Dam may affect threatened or endangered species, and shall only be permitted in adherence with Appendix D of the CGP.
- d. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Chapter 4-8 Water Quality Standards of the Colville Law and Order Code, as amended.
- e. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the CIR. All spills must be reported to the appropriate emergency management agency and the ETD, and measures shall be taken immediately to prevent the pollution of waters of the CIR, including groundwater.
- f. Stormwater site inspections shall be conducted at least once every 7 calendar days, within 24-hours of the occurrence of a rain event of 0.25 inches or greater in a 24-hour period, and daily during periods of saturated ground surface or snowmelt with accompanying surface runoff.
- g. Results of discharge sampling must be reported to the ETD within 7 days of sample collection. All sample reporting must include the date and time, location, and individual performing the sampling.
- h. Any corrective action reports that are required under the CGP must be submitted to the ETD at the above address within one (1) working day of the report completion.

- i. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

9.7.4.2 Lummi Nation. The following conditions apply only to discharges on the Lummi Reservation:

- a. The Lummi Nation reserves the right to modify this 401 certification if the final version of the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (CGP) on tribal lands in the State of Washington (Permit No. WAR10I000) is substantively different than the draft version of the proposed permit that was made available for public comments during April 2016. The Lummi Nation will determine if the final version of the NPDES CGP is substantively different than the draft version following review of the final version once the EPA makes it available.
- b. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Lummi tribal agencies. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must also obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.
- c. Pursuant to LCL 17.05.020(a), each operator shall develop and submit a Storm Water Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.
- d. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210 together with supplements and amendments thereto).
- e. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the Lummi Water Resources Division at the same time it is submitted electronically to the Environmental Protection Agency (EPA) and shall provide the Lummi Water Resources Division the acknowledgement of receipt of the NOI from the EPA and the associated NPDES tracking number provided by the EPA within 7 calendar days of receipt from the EPA.
- f. Each operator shall submit a signed hard copy of the Notice of Termination (NOT) to the Lummi Water Resources Division at the same time it is submitted electronically to the EPA and shall provide the Lummi Water Resources Division the EPA acknowledgement of receipt of the NOT.
- g. Storm Water Pollution Prevention Plans, Notice of Intent, Notice of Termination and associated correspondence with the EPA shall be submitted to:

Lummi Natural Resources Department
ATTN: Water Resources Manager
2665 Kwina Road
Bellingham, WA 98226-9298

9.7.4.3 Makah Tribe. The following conditions apply only to discharges on the Makah Reservation:

- a. The operator shall be responsible for achieving compliance with the Makah Tribe's Water Quality Standards.

- b. The operator shall submit a Storm Water Pollution Prevention Plan to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division for review and approval at least thirty (30) days prior to beginning any discharge activities.
- c. The operator shall submit a copy of the Notice of Intent to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division at the same time it is submitted to EPA.
- d. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:

Aaron Parker
Makah Fisheries Management Water Quality Specialist
(360) 645-3162
Cell 206-356-0319
Aaron.parker@makah.com
PO Box 115
Neah Bay WA 98357

9.7.4.4 Puyallup Tribe of Indians. The following conditions apply only to discharges on the Puyallup Tribe of Indians Reservation:

- a. Each permittee shall be responsible for achieving compliance with the Puyallup Tribe's Water Quality Standards, including antidegradation provisions. The Puyallup Natural Resources Department will conduct an antidegradation review for permitted activities that have the potential to lower water quality. The antidegradation review will be consistent with the Tribe's Antidegradation Implementation Procedures. The Tribe may also impose additional controls on a site-specific basis, or request EPA to require the operator obtain coverage under an individual permit, if information in the NOI or from other sources indicates that the operator's discharges are not controlled as necessary to meet applicable water quality standards.
- b. The permittee shall be responsible for meeting any additional permit requirements imposed by EPA necessary to comply with the Puyallup Tribe's antidegradation policies if the discharge point is located within 1 linear mile upstream of waters designated by the Tribe.
- c. Each permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to Char Naylor (char.naylor@puyalluptribe.com) and Russ Ladley (russ.ladley@puyalluptribe.com) by email or at the address listed below at the same time it is submitted to EPA.

Puyallup Tribe of Indians
3009 E. Portland Avenue
Tacoma, WA 98404
ATTN: Russ Ladley and Char Naylor

- d. All supporting documentation and certifications in the NOI related to coverage under the general permit for Endangered Species Act purposes shall be submitted to the Tribe's Resource Protection Manager (russ.ladley@puyalluptribe.com) and Char Naylor (char.naylor@puyalluptribe.com) for review.
- e. If EPA requires coverage under an individual or alternative permit, the permittee shall submit a copy of the permit to Russ Ladley and Char Naylor at the address listed above.

- f. The permittee shall submit all stormwater pollution prevention plans to Char Naylor for review and approval prior to beginning any activities resulting in a discharge to tribal waters.
- g. The permittee shall conduct benchmark monitoring for turbidity (or transparency) and, in the event of significant concrete work or engineered soils, pH monitoring as well. Monitoring, benchmarks, and reporting requirements contained in Condition S.4. (pp.13-20) of the Washington State Construction Stormwater General Permit, effective January 1, 2016, shall apply, as applicable.
- h. The permittee shall notify Char Naylor (253-680-5520) and Russ Ladley (253-680-5560) prior to conducting inspections at construction sites generating storm water discharged to tribal waters.
- i. Treat dewatering discharges with controls necessary to minimize discharges of pollutants in order to minimize the discharge of pollutants to groundwater or surface waters from stormwater that is removed from excavations, trenches, foundations, vaults, or other storage areas. Examples of appropriate controls include sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, and filtration systems (e.g., bag or sand filters) that are designed to remove sediment.

To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 2.2.11 of EPA's 2016 General Construction Stormwater Permit. Examples of velocity dissipation devices include check dams, sediment traps, riprap, and grouted riprap at outlets.

- j. The permittee shall provide and maintain natural buffers to the maximum extent possible (and/or equivalent erosion and sediment controls) when tribal waters are located within 100 feet of the site's earth disturbances. If infeasible to provide and maintain an undisturbed 100 foot natural buffer, erosion and sediment controls to achieve the sediment load reduction equivalent to a 100-foot undisturbed natural buffer shall be required.

9.7.4.5 Spokane Tribe of Indians. The following conditions apply only to discharges on the Spokane Tribe Reservation:

- a. Pursuant to Tribal Law and Order Code (TLOC) Chapter 30 each operator shall be responsible for achieving compliance with the Surface Water Quality Standards of the Spokane Tribe. The operator shall notify the Spokane Tribe, Water Control Board (WCB) of any spills of hazardous material and;
- b. Each operator shall submit a signed hard copy of the Notice of Intent (NOI) to the WCB at the same time it is submitted to EPA.
- c. The permittee shall allow the Tribal Water Control Board or its designee to inspect and sample at the construction site as needed.
- d. Each operator shall submit a signed copy of the Notice of Termination (NOT) to the WCB at the same time it is submitted to EPA.

The correspondence address for the Spokane Tribe Water Control Board is:

Water Control Board
c/o. Brian Crossley
PO Box 480
Wellpinit WA 99040

(509)626-4409
crossley@spokanetribe.com

9.7.4.6 Swinomish Indian Tribal Community. The following conditions apply only to discharges on the Swinomish Reservation:

- a. Owners and operators seeking coverage under this permit who intend to discharge to Regulated Surface Waters must submit a copy of the Notice of Intent (NOI) to the DEP at the same time the NOI is submitted to EPA.
- b. Owners and operators seeking coverage under this permit must also submit a Stormwater Pollution Prevention Plan to the DEP for review and approval by DEP prior to beginning any discharge activities.
- c. Owners and operators must also submit to the DEP Changes in NOI and/or Notices of Termination at the same time they are submitted to EPA.

9.7.4.7 Tulalip Tribes. The following conditions apply only to discharges on the Tulalip Reservation:

- a. This certification does not exempt and is provisional upon compliance with other applicable statutes and codes administered by federal and Tulalip tribal agencies. Pursuant to Tulalip Tribes code of law, the operator must also obtain a land use permit from the Tulalip Tribes Planning Department as provided in Title 7 of the Tulalip Tribal Code (<http://www.codepublishing.com/WA/Tulalip/?Tulalip02/Tulalip0205.html>).
- b. Each CGP operator shall be responsible for achieving compliance with Tulalip Tribes Water Quality Standards.
- c. Each CGP operator shall submit their Stormwater Pollution Prevention Plan (SWPPP) to the:

Tulalip Natural & Cultural Resources Department
Tulalip Tribes
6406 Marine Drive
Tulalip, WA 98271

Attachment C – NOI and EPA Authorization e-mail

Attachment D – Inspection Form

2017 Construction General Permit Inspection Report Template – Field Version

Purpose

This Inspection Report Template (or “template”) is to assist you in preparing inspection reports for EPA’s 2017 Construction General Permit (CGP). If you are covered under the 2017 CGP, you can use this template to create an inspection report form that is customized to the specific circumstances of your site and that complies with the minimum reporting requirements of Part 4.7 of the permit. Note that the use of this form is optional; you may use your own inspection report form provided it includes the minimum information required in Part 4.7 of the CGP.

If you are covered under a state CGP, this template may be helpful in developing a form that can be used for that permit; however, it will need to be modified to meet the specific requirements of that permit. If your permitting authority requires you to use a specific inspection report form, you should not use this form.

Notes:

While EPA has made every effort to ensure the accuracy of all instructions contained in the Inspection Report Template, it is the permit, not the template, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between the Inspection Report Template and any corresponding provision of the 2017 CGP, you must abide by the requirements in the permit. EPA welcomes comments on the Inspection Report Template at any time and will consider those comments in any future revision of this document. You may contact EPA for CGP-related inquiries at cgp@epa.gov.

Overview of Inspection Requirements (see CGP Part 4)

Construction operators covered under the 2017 CGP are subject to the following inspection requirements:

Person(s) Responsible for Inspecting the Site (see Part 4.1)

The person(s) inspecting your site must be a “qualified person” who may be either on your staff or a third party you hire to conduct such inspections.

- A “qualified person” is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

Inspection Frequency (see Part 4.2)

You are required to conduct inspections either:

- Once every 7 calendar days; or
- Once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater or the occurrence of runoff from snowmelt sufficient to cause a discharge.

Your inspection frequency is increased if the site discharges to a sensitive water. See Part 4.3. Your inspection frequency may be decreased to account for stabilized areas, or for arid, semi-arid, or drought-stricken conditions, or for frozen conditions. See Part 4.4.

Areas That Need to Be Inspected (see Part 4.5)

During each inspection, you must inspect the following areas of your site:

- Cleared, graded, or excavated areas of the site;
- Stormwater controls (e.g., perimeter controls, sediment basins, inlets, exit points etc.) and pollution prevention practices (e.g., pollution prevention practices for vehicle fueling/maintenance and washing, construction product storage, handling, and disposal, etc.) at the site;
- Material, waste, or borrow areas covered by the permit, and equipment storage and maintenance areas;
- Areas where stormwater flows within the site;
- Stormwater discharge points; and
- Areas where stabilization has been implemented.

What to Check For During Your Inspection (see Part 4.6)

During your site inspection, you are required to check:

- Whether stormwater controls or pollution prevention practices are properly installed, require maintenance or corrective action, or whether new or modified controls are required;
- For the presence of conditions that could lead to spills, leaks, or other pollutant accumulations and discharges;
- For locations where new or modified stormwater controls are necessary to meet requirements of the permit;

- Whether there are visible signs of erosion and sediment accumulation at points of discharge and to the channels and streambanks that are in the immediate vicinity of the discharge;
- If a stormwater discharge is occurring at the time of the inspection, whether there are obvious, visual signs of pollutant discharges; and
- If any permit violations have occurred on the site.

Inspection Reports (see Part 4.7)

Within 24 hours of completing each inspection, you are required to complete an inspection report that includes:

- Date of inspection;
- Names and titles of person(s) conducting the inspection;
- Summary of inspection findings;
- Rain gauge or weather station readings if your inspection is triggered by the 0.25-inch storm threshold; and
- If you determine that a portion of your site is unsafe to access for the inspection, documentation of what conditions prevented the inspection and where these conditions occurred on the site

Instructions for Using This Template

This Field Version of the Inspection Report Template is intended to be used in the field and filled out by hand. If you will be filling out the Inspection Report Template electronically (i.e., you will be typing in your findings), please use the Electronic Version of the Inspection Report Template available at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. The Electronic Version includes text fields with instructions for what to enter.

Keep in mind that this document is a template and not an "off-the-shelf" inspection report that is ready to use without some modification. You must first customize this form to include the specifics of your project in order for it to be useable for your inspection reports. Once you have entered all of your site-specific information into these fields, you may print out this form for use in the field to complete inspection reports.

The following tips for using this template will help you ensure that the minimum permit requirements are met:

- **Review the inspection requirements.** Before you start developing your inspection report form, read the CGP's Part 4 inspection requirements. This will ensure that you have a working understanding of the permit's underlying inspection requirements.
- **Complete all required text fields.** Fill out all text fields. Only by filling out all fields will the template be compliant with the requirements of the permit. (Note: Where you do not need the number of rows provided in the template form for your inspection, you may leave those rows blank. Or, if you need more space to document your findings, you may add an additional sheet.)
- **Use your site map to document inspection findings.** In several places in the template, you are directed to specify the location of certain features of your site, including where stormwater controls are installed and where you will be stabilizing exposed soil. You are also asked to fill in location information for unsafe conditions and the locations of any discharges occurring during your inspections. Where you are asked for location information, EPA encourages you to reference the point on your SWPPP site map that corresponds to the requested location on the inspection form. Using the site map as a tool in this way will help you conduct efficient inspections, will assist you in evaluating problems found, and will ensure proper documentation.
- **Sign and certify each inspection report.** The operator or a duly authorized representative (see Appendix I, Part I.11.2) must sign and certify each inspection report for it to be considered complete. Where a contractor or subcontractor carries out your inspections, it is recommended that you also have the inspector sign and certify the form, in addition to the signature and certification required of the permitted operator. The template includes a signature block for both parties.
- **Include the inspection form with your SWPPP.** Once your form is complete, make sure to include a copy of the inspection form in your SWPPP in accordance with Part 7.2.7.e of the CGP.
- **Retain copies of all inspection reports with your records.** You must also retain in your records copies of all inspection reports in accordance with the requirements in Part 4.7.3 of the 2017 CGP. These reports must be retained for at least 3 years from the date your permit coverage expires or is terminated.

Section-by-Section Instructions

You will find specific instructions corresponding to each section of the report form on the reverse side of each page. These instructions provide you with more details in terms of what EPA expects to be documented in these reports.

General Information
(see reverse for instructions)

Name of Project		NPDES ID No.		Inspection Date	
Weather conditions during inspection		Inspection start time		Inspection end time	

Inspector Name, Title & Contact Information

Present Phase of Construction

Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)

Inspection Frequency *(Note: you may be subject to different inspection frequencies in different areas of the site. Check all that apply)*

Standard Frequency:

Every 7 days

Every 14 days and within 24 hours of a 0.25" rain or the occurrence of runoff from snowmelt sufficient to cause a discharge

Increased Frequency:

Every 7 days and within 24 hours of a 0.25" rain (for areas of sites discharging to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3)

Reduced Frequency:

Twice during first month, no more than 14 calendar days apart; then once per month after first month; (for stabilized areas)

Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of a 0.25" rain (for stabilized areas on "linear construction sites")

Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)

Once per month (for frozen conditions where earth-disturbing activities are being conducted)

Was this inspection triggered by a 0.25" storm event? Yes No

If yes, how did you determined whether a 0.25" storm event has occurred?

Rain gauge on site Weather station representative of site. Specify weather station source:

Total rainfall amount that triggered the inspection (in inches):

Was this inspection triggered by the occurrence of runoff from snowmelt sufficient to cause a discharge? Yes No

Unsafe Conditions for Inspection

Did you determine that any portion of your site was unsafe for inspection per CGP Part 4.5? Yes No

If "yes", complete the following:

- Describe the conditions that prevented you from conducting the inspection in this location:

- Location(s) where conditions were found:

Instructions for Filling Out “General Information” Section

Name of Project

Enter the name for the project.

NPDES ID No.

Enter the NPDES ID number that was assigned to your NOI for permit coverage.

Inspection Date

Enter the date you conducted the inspection.

Weather Conditions During Inspection

Enter the weather conditions occurring during the inspection, e.g., sunny, overcast, light rain, heavy rain, snowing, icy, windy.

Inspection start and end times

Enter the time you started and ended the inspection.

Inspector Name, Title & Contact Information

Provide the name of the person(s) (either a member of your company's staff or a contractor or subcontractor) that conducted this inspection. Provide the inspector's name, title, and contact information as directed in the form.

Present Phase of Construction

If this project is being completed in more than one phase, indicate which phase it is currently in.

Inspection Location

If your project has multiple locations where you conduct separate inspections, specify the location where this inspection is being conducted. If only one inspection is conducted for your entire project, enter "Entire Site." If necessary, complete additional inspection report forms for each separate inspection location.

Inspection Frequency

Check the box that describes the inspection frequency that applies to you. Note that you may be subject to different inspection frequencies in different areas of your site. If your project does not discharge to a "sensitive water" (i.e., a water impaired for sediment or nutrients, or listed as Tier 2, 2.5, or 3 by your state or tribe) and you are not affected by any of the circumstances described in CGP Part 4.4, then you can choose your frequency based on CGP Part 4.2 – either every 7 calendar days, or every 14 calendar days and within 24 hours of a 0.25-inch storm event. For any portion of your site that discharges to a sensitive water, your inspection frequency for that area is fixed under CGP Part 4.3 at every 7calendar days and within 24 hours of a 0.25-inch storm event. If portions of your site are stabilized, are located in arid, semi-arid, or drought-stricken areas, or are subject to frozen conditions, consult CGP Part 4.4 for the applicable inspection frequency. Check all the inspection frequencies that apply to your project.

Was This Inspection Triggered by a 0.25 Inch Storm Event or the occurrence of runoff from snowmelt sufficient to cause a discharge?

If you were required to conduct this inspection because of a 0.25-inch (or greater) rain event, indicate whether you relied on an on-site rain gauge or a nearby weather station (and where the weather station is located). Also, specify the total amount of rainfall for this specific storm event. If you were required to conduct this inspection because of the occurrence of runoff from snowmelt, then check the appropriate box.

Unsafe Conditions for Inspection

Inspections are not required where a portion of the site or the entire site is subject to unsafe conditions. See CGP Part 4.5. These conditions should not regularly occur, and should not be consistently present on a site. Generally, unsafe conditions are those that render the site (or a portion of it) inaccessible or that would pose a significant probability of injury to applicable personnel. Examples could include severe storm or flood conditions, high winds, and downed electrical wires.

If your site, or a portion of it, is affected by unsafe conditions during the time of your inspection, provide a description of the conditions that prevented you from conducting the inspection and what parts of the site were affected. If the entire site was considered unsafe, specify the location as "Entire site"

Condition and Effectiveness of Erosion and Sediment (E&S) Controls (CGP Part 2.2)

(see reverse for instructions)

Type/Location of E&S Control [Add an additional sheet if necessary]	Maintenance Needed?*	Corrective Action Required?*	Date on Which Maintenance or Corrective Action First Identified?	Notes
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
8.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
9.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
10.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

* **Note:** The permit differentiates between conditions requiring routine maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition. Corrective actions are triggered only for specific conditions, which include: 1) A stormwater control needs repair or replacement (beyond routine maintenance) if it is not operating as intended; 2) A stormwater control necessary to comply with the permit was never installed or was installed incorrectly; 3) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 4) One of the prohibited discharges in Part 1.3 is occurring or has occurred; or 5) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.8. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. See Part 5 of the permit for more information.

Instructions for Filling Out the “Erosion and Sediment Control” Table

Type and Location of E&S Controls

Provide a list of all erosion and sediment (E&S) controls that your SWPPP indicates will be installed and implemented at your site. This list must include at a minimum all E&S controls required by CGP Part 2.2. Include also any natural buffers established under CGP Part 2.2.1. Buffer requirements apply if your project's earth-disturbing activities will occur within 50 feet of a water of the U.S. You may group your E&S controls on your form if you have several of the same type of controls (e.g., you may group “Inlet Protection Measures”, “Perimeter Controls”, and “Stockpile Controls” together on one line), but if there are any problems with a specific control, you must separately identify the location of the control, whether maintenance or corrective action is necessary, and in the notes section you must describe the specifics about the problem you observed.

Maintenance Needed?

Answer “yes” if the E&S control requires maintenance due to normal wear and tear in order for the control to continue operating effectively. At a minimum, maintenance is required in the following specific instances: (1) for perimeter controls, whenever sediment has accumulated to half or more the above-ground height of the control (CGP Part 2.2.3.a); (2) where sediment has been tracked-out onto the surface of off-site streets or other paved areas (CGP Part 2.2.4); (3) for inlet protection measures, when sediment accumulates, the filter becomes clogged, and/or performance is compromised (CGP Part 2.2.10); and (4) for sediment basins, as necessary to maintain at least half of the design capacity of the basin (CGP Part 2.2.12.f). Note: In many cases, “yes” answers are expected and indicate a project with an active operation and maintenance program. You should also answer “yes” if work to fix the problem is still ongoing from the previous inspection.

Corrective Action Needed?

Answer “yes” if during your inspection you found any of the following conditions to be present (CGP, Part 5.1): (1) a required E&S control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); (2) a required E&S control was never installed or was installed incorrectly; (3) you become aware that the inadequacy of the E&S control has led to an exceedance of an applicable water quality standard; (4) one of the prohibited discharges in Part 1.3 is occurring or has occurred; or (5) EPA requires corrective action for an E&S control as a result of a permit violation found during an inspection carried out under Part 4.8. If you answer “yes”, you must take corrective action and complete a corrective action report, found at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. Note: You should answer “yes” if work to fix the problem from a previous inspection is still ongoing.

Date on Which Maintenance or Corrective Action First Identified?

Provide the date on which the condition that triggered the need for maintenance or corrective action was first identified. If the condition was just discovered during this inspection, enter the inspection date. If the condition is a carryover from a previous inspection, enter the original date of the condition's discovery.

Notes

For each E&S control and the area immediately surrounding it, note whether the control is properly installed and whether it appears to be working to minimize sediment discharge. Describe any problem conditions you observed such as the following, and why you think they occurred as well as actions (e.g., maintenance or corrective action) you will take or have taken to fix the problem:

1. Failure to install or to properly install a required E&S control
2. Damage or destruction to an E&S control caused by vehicles, equipment, or personnel, a storm event, or other event
3. Mud or sediment deposits found downslope from E&S controls
4. Sediment tracked out onto paved areas by vehicles leaving construction site
5. Noticeable erosion at discharge outlets or at adjacent streambanks or channels
6. Erosion of the site's sloped areas (e.g., formation of rills or gullies)
7. E&S control is no longer working due to lack of maintenance

For buffer areas, make note of whether they are marked off as required, whether there are signs of construction disturbance within the buffer, which is prohibited under the CGP, and whether there are visible signs of erosion resulting from discharges through the area.

If maintenance or corrective action is required, briefly note the reason. If maintenance or corrective action have been completed, make a note of the date it was completed and what was done. *If corrective action is required, note that you will need to complete a separate corrective action report describing the condition and your work to fix the problem.*

Condition and Effectiveness of Pollution Prevention (P2) Practices (CGP Part 2.3)

(see reverse for instructions)

Type/Location of P2 Practices [Add an additional sheet if necessary]	Maintenance Needed?*	Corrective Action Required?*	Date on Which Maintenance or Corrective Action First Identified?	Notes
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
7.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
8.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
9.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
10.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

* **Note:** The permit differentiates between conditions requiring routine maintenance, and those requiring corrective action. The permit requires maintenance in order to keep controls in effective operating condition. Corrective actions are triggered only for specific conditions, which include: 1) A stormwater control needs repair or replacement (beyond routine maintenance) if it is not operating as intended; 2) A stormwater control necessary to comply with the permit was never installed or was installed incorrectly; 3) You become aware that the stormwater controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.1; 4) One of the prohibited discharges in Part 1.3 is occurring or has occurred; or 5) EPA requires corrective actions as a result of a permit violation found during an inspection carried out under Part 4.8. If a condition on your site requires a corrective action, you must also fill out a corrective action form found at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. See Part 5 of the permit for more information.

Instructions for Filling Out the “Pollution Prevention (P2) Practice” Table

Type and Location of P2 Controls

Provide a list of all pollution prevention (P2) practices that are implemented at your site. This list must include all P2 practices required by Part 2.3, and those that are described in your SWPPP.

Maintenance Needed?

Answer “yes” if the P2 practice requires maintenance due to normal wear and tear in order for the control to continue operating effectively. Note: In many cases, “yes” answers are expected and indicate a project with an active operation and maintenance program.

Corrective Action Needed?

Answer “yes” if during your inspection you found any of the following conditions to be present (CGP, Part 5.1): (1) a required P2 practice needs repair or replacement (beyond routine maintenance required under Part 2.1.4); (2) a required P2 practice was never installed or was installed incorrectly; (3) you become aware that the inadequacy of the P2 practice has led to an exceedance of an applicable water quality standard; (4) one of the “prohibited discharges” listed in CGP Part 1.3 is occurring or has occurred, or (5) EPA requires corrective action for a P2 practice as a result of a permit violation found during an inspection carried out under Part 4.8. If you answer “yes”, you must take corrective action and complete a corrective action report (see <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>). Note: You should answer “yes” if work to fix the problem from a previous inspection is still ongoing.

Date on Which Maintenance or Corrective Action First Identified?

Provide the date on which the condition that triggered the need for maintenance or corrective action was first identified. If the condition was just discovered during this inspection, enter the inspection date. If the condition is a carryover from a previous inspection, enter the original date of the condition's discovery.

Notes

For each P2 control and the area immediately surrounding it, note whether the control is properly installed, whether it appears to be working to minimize or eliminate pollutant discharges, and whether maintenance or corrective action is required. Describe problem conditions you observed such as the following, and why you think they occurred, as well as actions you will take or have taken to fix the problem:

1. Failure to install or to properly install a required P2 control
2. Damage or destruction to a P2 control caused by vehicles, equipment, or personnel, or a storm event
3. Evidence of a spill, leak, or other type of pollutant discharge, or failure to have properly cleaned up a previous spill, leak, or other type of pollutant discharge
4. Spill response supplies are absent, insufficient, or not where they are supposed to be located
5. Improper storage, handling, or disposal of chemicals, building materials or products, fuels, or wastes
6. P2 practice is no longer working due to lack of maintenance

If maintenance or corrective action is required, briefly note the reason. If maintenance or corrective action have been completed, make a note of the date it was completed and what was done. *If corrective action is required, note that you will need to complete a separate corrective action report describing the condition and your work to fix the problem.*

Stabilization of Exposed Soil (CGP Part 2.2.14)

(see reverse for instructions)

Stabilization Area [Add an additional sheet if necessary]	Stabilization Method	Have You Initiated Stabilization?	Notes
1.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
2.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
3.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
4.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	
5.		<input type="checkbox"/> YES <input type="checkbox"/> NO If yes, provide date:	

Description of Discharges (CGP Part 4.6.6)

(see reverse for instructions)

Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No If "yes", provide the following information for each point of discharge:	
Discharge Location [Add an additional sheet if necessary]	Observations
1.	Describe the discharge: At points of discharge and the channels and banks of waters of the U.S. in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge: At points of discharge and the channels and banks of waters of the U.S. in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Instructions for Filling Out the “Stabilization of Exposed Soil” Table

Stabilization Area

List all areas where soil stabilization is required to begin because construction work in that area has permanently stopped or temporarily stopped (i.e., work will stop for 14 or more days), and all areas where stabilization has been implemented.

Stabilization Method

For each area, specify the method of stabilization (e.g., hydroseed, sod, planted vegetation, erosion control blanket, mulch, rock).

Have You Initiated Stabilization

For each area, indicate whether stabilization has been initiated.

Notes

For each area where stabilization has been initiated, describe the progress that has been made, and what additional actions are necessary to complete stabilization. Note the effectiveness of stabilization in preventing erosion. If stabilization has been initiated but not completed, make a note of the date it is to be completed. If stabilization has been completed, make a note of the date it was completed. If stabilization has not yet been initiated, make a note of the date it is to be initiated, and the date it is to be completed.

Instructions for Filling Out the “Description of Discharges” Table

You are only required to complete this section if a discharge is occurring at the time of the inspection.

Was a Stormwater Discharge Occurring From Any Part of Your Site At The Time of the Inspection?

During your inspection, examine all points of discharge from your site, and determine whether a discharge is occurring. If there is a discharge, answer “yes” and complete the questions below regarding the specific discharge. If there is not a discharge, answer “no” and skip to the next page.

Discharge Location (repeat as necessary if there are multiple points of discharge)

Location of discharge. Specify the location on your site where the discharge is occurring. The location may be an outlet from a stormwater control or constructed stormwater channel, a discharge into a storm sewer inlet, or a specific point on the site. Be as specific as possible; it is recommended that you refer to a precise point on your site map.

Describe the discharge. Include a specific description of any noteworthy characteristics of the discharge such as color; odor; floating, settled, or suspended solids; foam; oil sheen; and other obvious pollution indicators.

Are there visible signs of erosion or sediment accumulation? At each point of discharge and the channel and streambank in the immediate vicinity, visually assess whether there are any obvious signs of erosion and/or sediment accumulation that can be attributed to your discharge. If you answer “yes”, include a description in the space provided of the erosion and sediment deposition that you have found, specify where on the site or in the water of the U.S. it is found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue.

Contractor or Subcontractor Signature and Certification

(see reverse for instructions)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____ **Date:** _____

Printed Name and Affiliation: _____

Operator Signature and Certification

(see reverse for instructions)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative": _____ **Date:** _____

Printed Name and Affiliation: _____

Instructions for Signature/Certification

Each inspection report must be signed and certified to be considered complete.

Contractor or Subcontractor Signature and Certification

Where you rely on a contractor or subcontractor to carry out the inspection and complete the inspection report, you should require the inspector to sign and certify each report. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the inspection report as well.

Operator Signature and Certification

At a minimum, the inspection report must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply to scenarios (1) and (2):

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation:* A responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship:* A general partner or the proprietor, respectively.
- *For a municipality, state, federal, or other public agency:* Either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

Attachment E – Corrective Action Form

2017 Construction General Permit Corrective Action Report Form – Field Version

Purpose

This Corrective Action Report Form is to assist you in preparing corrective action reports for EPA's 2017 Construction General Permit (CGP). If you are covered under EPA's 2017 CGP, you can use this form to create a corrective action report that complies with the minimum reporting requirements of Part 5.4 of the permit.

You are only required to fill out this form if one of the conditions triggering corrective action in Part 5.1 or 5.3 occurs on your site. Routine maintenance is generally not considered to trigger corrective action. Corrective actions are triggered only for specific conditions that are identified below in the "Overview of Corrective Action Requirements."

If you are covered under a state CGP, this form may be helpful in developing a report that can be used for that permit; however, it will need to be modified to meet the specific requirements of the permit. If your permitting authority requires you to use a specific corrective action report form, you should not use this form.

Notes

While EPA has made every effort to ensure the accuracy of all instructions contained in the Corrective Action Report Form, it is the permit, not the form, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between the Corrective Action Report Form and any corresponding provision of the 2017 CGP, you must abide by the requirements in the permit. EPA welcomes comments on the Corrective Action Report Form at any time and will consider those comments in any future revision of this document. You may contact EPA for CGP-related inquiries at cgp@epa.gov.

Overview of Corrective Action Requirements

Construction operators covered under the 2017 CGP are required to conduct corrective actions and report on progress made in correcting the problem condition(s) in accordance with the following requirements:

Conditions Triggering Corrective Action (Parts 5.1 and 5.3)

Corrective action is required whenever any of the following conditions occur at your site:

- A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4); or
- A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
- Discharges are causing an exceedance of applicable water quality standards; or
- A Part 1.3 prohibited discharge has occurred; or
- EPA requires corrective action as a result of permit violations found during an inspection carried out under Part 4.8.

Deadlines for Completing Corrective Actions (Part 5.2)

For any condition triggering corrective action:

- You must immediately take all reasonable steps to address the condition (e.g. cleaning up contaminated surfaces so the material(s) is not discharged in subsequent storm events);
- If the problem does not require a new or replacement control or significant repair, you must complete the corrective action by the close of the next business day
- If the problem does require a new or replacement control or significant repair, you must complete corrective action (e.g., installing and making operational any new or modified control, completing repairs) by no later than 7 calendar days from the time of discovery of the condition. If infeasible to complete the installation or repair within 7 calendar days, you must document why it is infeasible and document your schedule for completing the corrective action as soon as practicable. If any of these actions result in changes to the stormwater controls documented in your SWPPP, you must modify your SWPPP within 7 calendar days.

Deadlines for Documenting Corrective Actions in a Report (Part 5.4)

You are required to complete a corrective action report for each corrective action you take in accordance with the following deadlines.

- Within 24 hours of *identifying* the corrective action condition, you must document the following:
 - The condition identified at your site; and
 - The date and time you identified the condition

- Within 24 hours of completing the corrective action, you must document the following:
 - The actions you took to address the condition, and
 - Whether any SWPPP modifications are required.

Instructions for Using This Report Form

This Field Version of the Corrective Action Report Form is intended to be used in the field and filled out by hand. If you will be filling out the Corrective Action Report Form electronically (i.e., you will be typing in your findings), please use the Electronic Version of the Corrective Action Report Form available at <https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>. The Electronic Version includes text fields with instructions for what to enter.

The following tips for using this form will help you ensure that the minimum permit requirements are met:

- **Review the corrective action requirements.** Before you fill out this corrective action report form, read the CGP's Part 5 corrective action requirements. This will ensure that you have a working understanding of the permit's underlying corrective action requirements.

- **Complete a separate report for each condition that triggers corrective action.** For each triggering condition on your site, you will need to fill out a separate corrective action report form.

- **Complete all required text fields.** Fill out all text fields. Only by filling out all fields will the form be compliant with the requirements of the permit. (Note: Where you do not need the number of rows provided in the corrective action report form, you may leave those rows blank. Or, if you need more space to document your findings, you may add an additional sheet.)

- **Sign and certify each corrective action report.** The operator or a duly authorized representative (see Appendix I, Part I.11.2) must sign and certify each corrective action report form for it to be considered complete. Where a contractor or subcontractor carries out your corrective actions, it is recommended that you also have that individual sign and certify the form, in addition to the signature and certification required of the permitted operator. The form includes a signature block for both parties.

- **Include the corrective action report form with your SWPPP.** Once your form is complete, make sure to include a copy of the corrective action report form in your SWPPP in accordance with Part 7.2.7.e of the CGP.

- **Retain copies of all corrective action reports with your records.** You must retain copies of your corrective action reports in your records in accordance with the requirements in Part 5.4.4 of the 2017 CGP. These reports must be retained for at least 3 years from the date your permit coverage expires or is terminated.

Section-by-Section Instructions

You will find specific instructions corresponding to each section of the report form on the reverse side of each page. These instructions were written in order to provide you with more details in terms of what EPA expects to be documented in these reports

Section A – Initial Report (CGP Part 5.4.1)

(Complete this section within 24 hours of identifying the condition that triggered corrective action)

Name of Project		NPDES ID No.		Today's Date	
Date Problem First Discovered		Time Problem First Discovered			
Name and Contact Information of Individual Completing this Form					

What site conditions triggered the requirement to conduct corrective action (*check the box that applies*):

- A stormwater control needs repair or replacement (beyond routine maintenance required under Part 2.1.4)
- A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly
- A discharge is causing an exceedance of applicable water quality standards
- A Part 1.3 prohibited discharge has occurred
- EPA requires corrective action as a result of permit violations found during an EPA inspection carried out under Part 4.8

Provide a description of the problem:

Deadline for completing corrective action (*check the box that applies*):

- Immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events
- Complete by close of the next business day when problem does not require a new or replacement control or significant repair
- No later than 7 calendar days from the time of discovery for problems that require a new or replacement control or significant repair
- Infeasible to complete the installation or repair within 7 calendar days. Explain why it is infeasible and document schedule for installing control:

Enter date of corrective action completion: _____

Section B – Corrective Action Completion (CGP Part 5.4.2)

(Complete this section no later than 24 hours after completing the corrective action)

Section B.1 – Why the Problem Occurred

Cause(s) of Problem (Add an additional sheet if necessary)	How You Determined the Cause and the Date You Determined the Cause
1.	1.
2.	2.

Section B.2 – Stormwater Control Modifications Implemented to Correct the Problem

List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Date of Completion	SWPPP Update Necessary?	Notes
1.		<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified:	
2.		<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified:	

Instructions for Filling Out the Initial Report (Section A)

You must complete Section A of the report form within 24 hours of discovering the condition that triggered corrective action

Name of Project

Enter the name for the project.

NPDES ID No.

Enter the NPDES ID number that was assigned to your NOI for permit coverage.

Today's Date

Enter the date you completed this form.

Date/Time Problem First Discovered

Specify the date on which the triggering condition was first discovered. Also specify the time of the discovery.

Name/Contact Information

Provide the individual's name, title, and contact information as directed in the form.

Site Condition That Triggered Corrective Action

Under the CGP, corrective action is required when one of 4 triggering conditions occurs at your site or when EPA requires a corrective action as a result of a permit violation found during an EPA inspection. See CGP Parts 5.1 and 5.3. Check the box that corresponds to the condition that triggered this corrective action.

Description of the Site Condition

Provide a summary description of the condition you found that triggered corrective action under CGP Part 5.1 and the specific location where it was found. Be as specific as possible about the location; it is recommended that you refer to a precise point on your site map. If you have already provided this explanation in an inspection report, you can refer to that report.

Deadline for Completing Corrective Action

This deadline is fixed in CGP Part 5.2. For all projects, the deadlines are: (1) immediately take all reasonable steps; (2) by the close of the next business day when the problem does not require significant repair or replacement; (3) no more than 7 calendar days after the date you discovered the problem when the problem does require significant repair or replacement, or (4) if it is infeasible to complete work within the first 7 days, as soon as practicable following the 7th day. If your estimated date of completion falls after the 7-day deadline consistent with (3), above, explain (a) why you believe it is infeasible to complete work within 7 days, and (b) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe.

Instructions for Filling Out the Corrective Action Completion Table (Section B)

You must complete Section B of the report form no later than 24 hours after completing the correction action.

Section B.1 – Why the Problem Occurred

After you have had the opportunity to examine the problem more closely, provide details as to what you believe to be the cause of the problem, and specify the follow-up actions you took (along with the dates of such actions) to diagnose the problem. This is consistent with CGP Part 5.4.2.

Section B.2 – Stormwater Control Modifications Implemented

Provide a list of modifications you made to your stormwater controls to correct the problem and the date you completed such work. Keep in mind that your work must be completed within the timeline specified in Section A for the completion of corrective action work.

Also, if a SWPPP modification is necessary consistent with Part 7.4.1.a in order to reflect changes implemented at your site, indicate the date you modified your SWPPP. Keep in mind that SWPPP changes must be made within 7 days of discovering the problem that triggered this corrective action.

Space is provided for you to include additional notes or observations regarding the change that you implemented at your site to correct the problem.

Section C –Signature and Certification (CGP Part 5.4.3)

Section C.1 – Contractor or Subcontractor Signature and Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Contractor or Subcontractor: _____

Date:

Printed Name and Affiliation: _____

Section C.2 – Operator Signature and Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Operator or "Duly Authorized Representative": _____

Date:

Printed Name and Affiliation: _____

Instructions for Signature and Certification (Section C)

Each corrective action report must be signed and certified to be considered complete.

Section C.1 – Contractor or Subcontractor Signature and Certification

Where you rely on a contractor or subcontractor to complete this report and the associated corrective action, you should require the individual(s) to sign and certify each report. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the report as well.

Section C.2 – Operator Signature and Certification

At a minimum, the corrective action report form must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply to scenarios (1) and (2):

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation:* A responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship:* A general partner or the proprietor, respectively.
- *For a municipality, state, federal, or other public agency:* Either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

Attachment F – SWPPP Amendment Log

Attachment G –Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform onsite. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

Signature: _____

Title: _____

Date: _____

Attachment H – Grading and Stabilization Activities Log

Attachment I – SWPPP Training Log

Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- Sediment and Erosion Controls**
- Emergency Procedures**
- Stabilization Controls**
- Inspections/Corrective Actions**
- Pollution Prevention Measures**

Specific Training Objective: _____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

Attachment J – Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

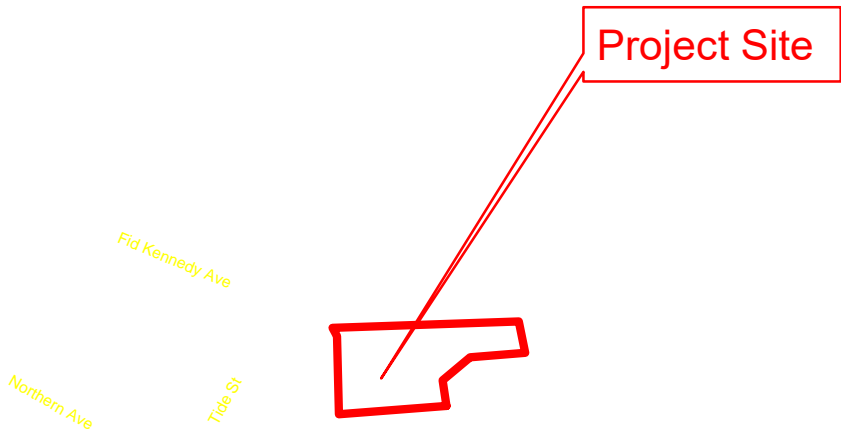
_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix I of EPA's Construction General Permit (CGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix I.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

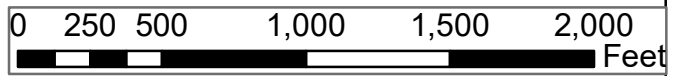
Name: _____
Company: _____
Title: _____
Signature: _____
Date: _____

Attachment K – Endangered Species Documentation



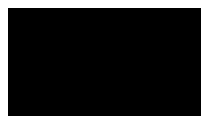
Legend

- MassDOT Roads
- * NHESP Certified Vernal Pools
- ⊙ NHESP Potential Vernal Pools
- ▨ NHESP Natural Communities
- ▨ NHESP Priority Habitats of Rare Species
- ▨ NHESP Estimated Habitats of Rare Wildlife



Attachment K: NHESP Map

1ABP and 3AW
1 Au Bon Pain Way, Boston, MA



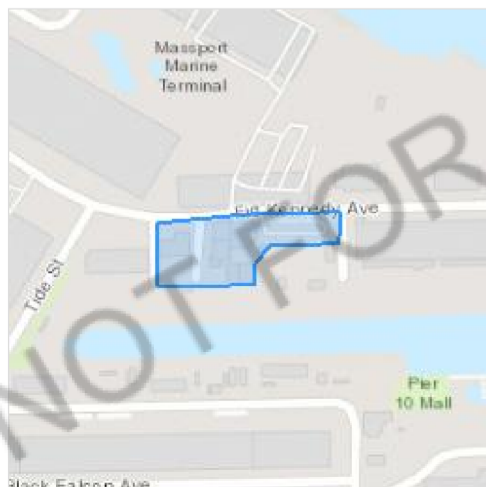
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Suffolk County, Massachusetts



Local office

New England Ecological Services Field Office

☎ (603) 223-2541

📅 (603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

<http://www.fws.gov/newengland>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

THERE ARE NO ENDANGERED SPECIES EXPECTED TO OCCUR AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS

ELSEWHERE" INDICATES THAT
THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT AREA.)

<p>American Oystercatcher <i>Haematopus palliatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935</p>	Breeds Apr 15 to Aug 31
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626</p>	Breeds Oct 15 to Aug 31
<p>Black Skimmer <i>Rynchops niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234</p>	Breeds May 20 to Sep 15
<p>Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 20 to Jul 31
<p>Buff-breasted Sandpiper <i>Calidris subruficollis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9488</p>	Breeds elsewhere
<p>Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 20 to Aug 10
<p>Dunlin <i>Calidris alpina arctica</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds elsewhere
<p>King Rail <i>Rallus elegans</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936</p>	Breeds May 1 to Sep 5
<p>Least Tern <i>Sterna antillarum</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Apr 20 to Sep 10

Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-eared Owl <i>asio otus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds elsewhere
Nelson's Sparrow <i>Ammodramus nelsoni</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Sep 5
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Purple Sandpiper <i>Calidris maritima</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Red-throated Loon <i>Gavia stellata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Ruddy Turnstone <i>Arenaria interpres morinella</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Seaside Sparrow <i>Ammodramus maritimus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 20
Semipalmated Sandpiper <i>Calidris pusilla</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere

Snowy Owl *Bubo scandiacus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Whimbrel *Numenius phaeopus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9483>

Willet *Tringa semipalmata*

Breeds Apr 20 to Aug 5

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush *Hylocichla mustelina*

Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

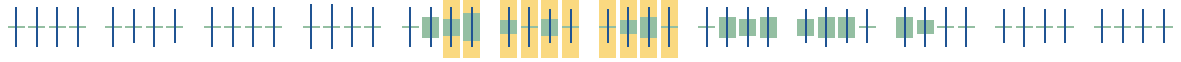
How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Black Skimmer
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



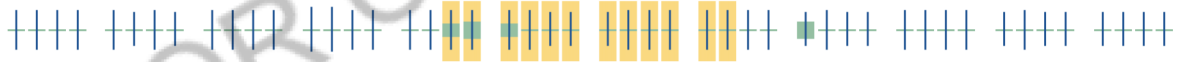
Bobolink
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Buff-breasted
 Sandpiper
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Canada Warbler
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Dunlin
 BCC - BCR (This is a
 Bird of
 Conservation
 Concern (BCC) only
 in particular Bird
 Conservation
 Regions (BCRs) in
 the continental
 USA)



DRAFT FOR CONSULTATION



Prairie Warbler
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Purple Sandpiper
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Red-throated Loon
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Ruddy Turnstone
BCC - BCR (This is a
Bird of
Conservation
Concern (BCC) only
in particular Bird
Conservation
Regions (BCRs) in
the continental
USA)



Rusty Blackbird
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Seaside Sparrow
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Semipalmated
 Sandpiper
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Short-billed
 Dowitcher
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Snowy Owl
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



Whimbrel
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental USA
 and Alaska.)



NOT FOR CONSULTATION

Willet
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Wood Thrush
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting

point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

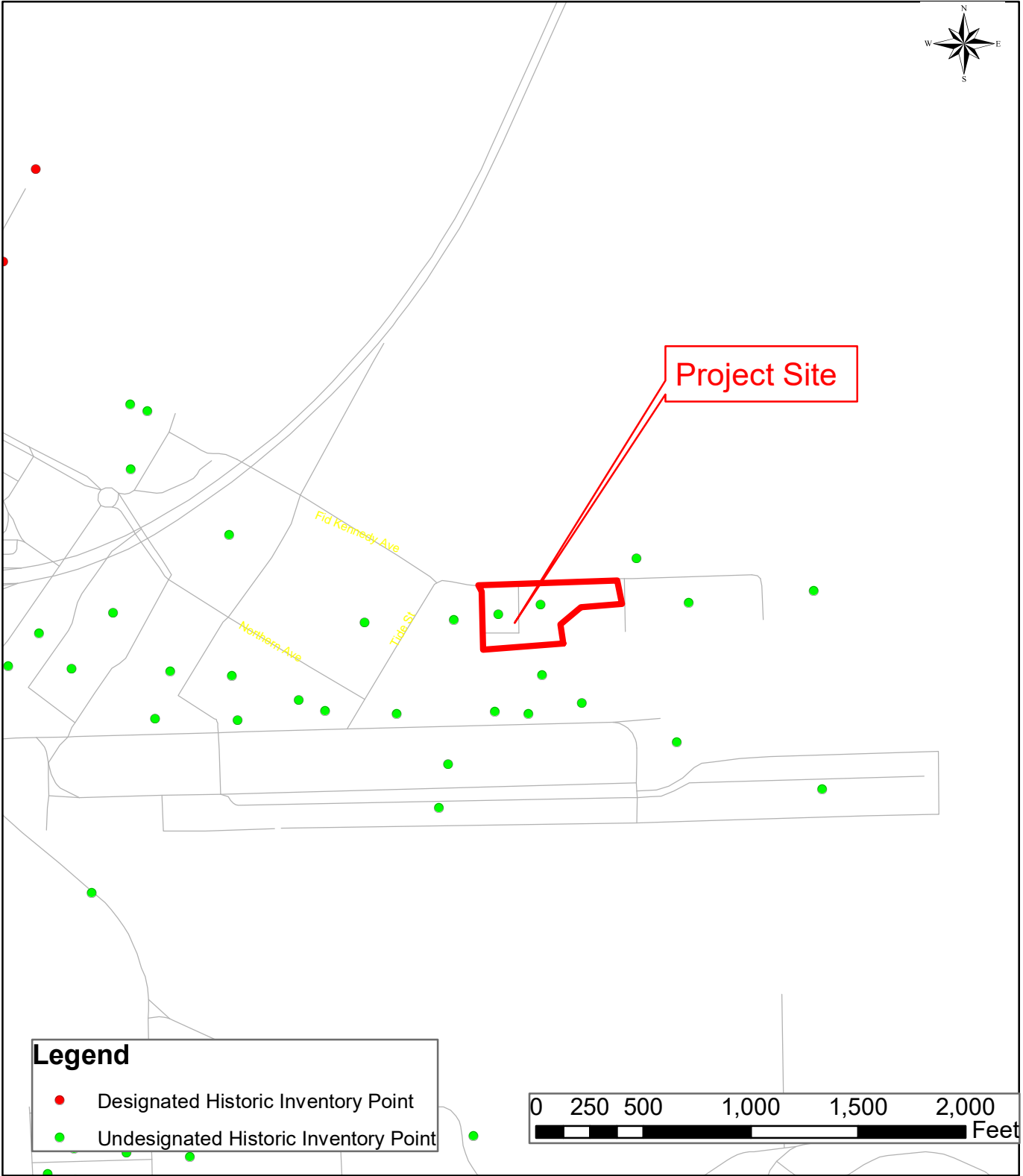
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

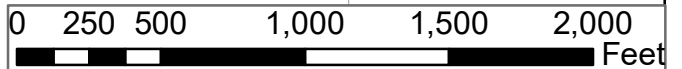
NOT FOR CONSULTATION

Attachment L – Historic Preservation Documentation



Legend

- Designated Historic Inventory Point
- Undesignated Historic Inventory Point



Attachment L: Historic Inventory Map

1ABP and 3AW

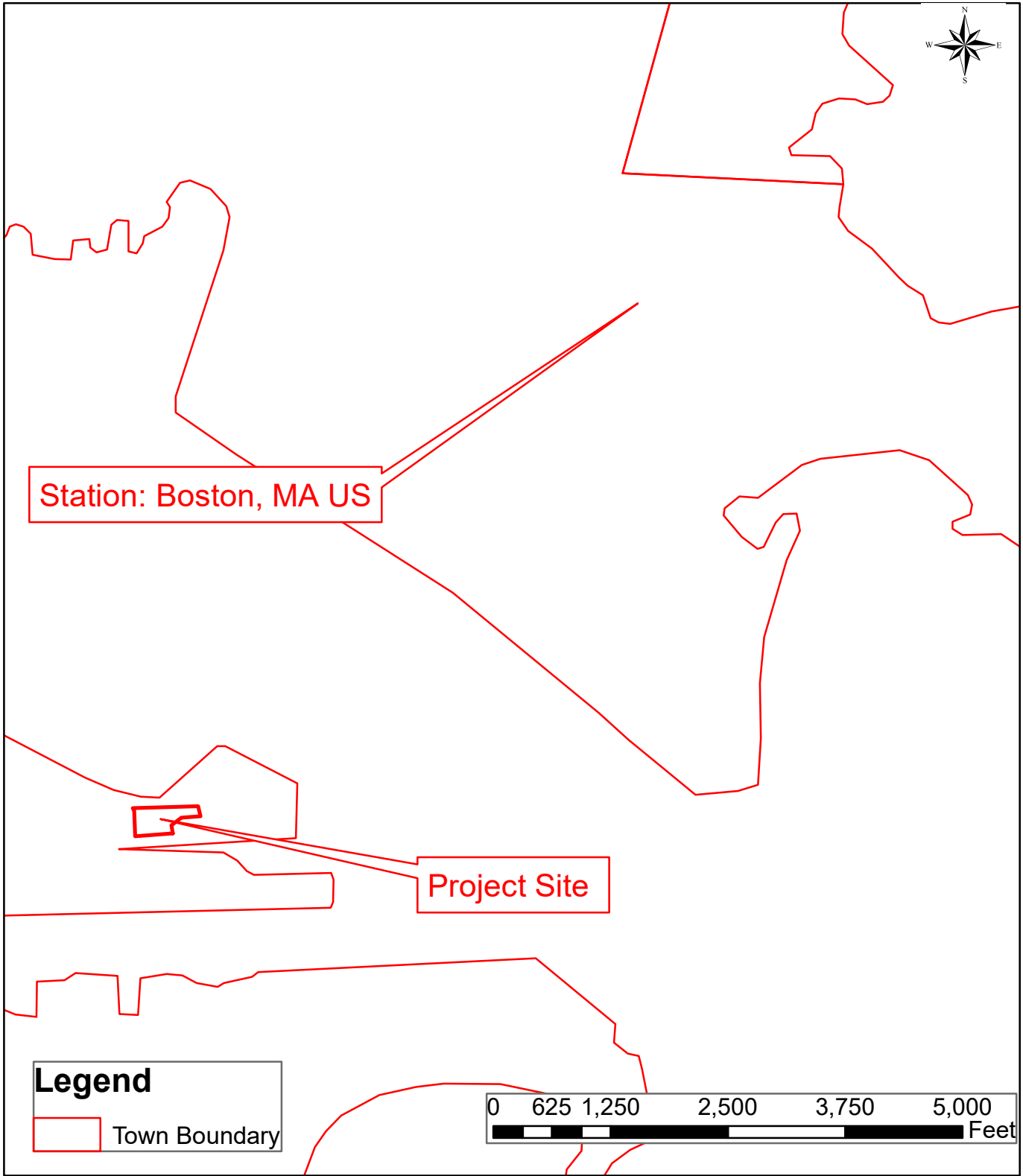
1 Au Bon Pain Way, Boston, MA



Attachment M – Rainfall Gauge Recording

Use the table below to record the rainfall gauge readings at the beginning and end of each work day. An example table follows.

Month/Year			Month/Year			Month/Year		
Day	Start time	End time	Day	Start time	End time	Day	Start time	End time
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
10			10			10		
11			11			11		
12			12			12		
13			13			13		
14			14			14		
15			15			15		
16			16			16		
17			17			17		
18			18			18		
19			19			19		
20			20			20		
21			21			21		
22			22			22		
23			23			23		
24			24			24		
25			25			25		
26			26			26		
27			27			27		
28			28			28		
29			29			29		
30			30			30		
31			31			31		



Attachment M: Rain Gauge Map

1ABP and 3AW

1 Au Bon Pain Way, Boston, MA



Attachment N – Order of Conditions

APPENDIX G

Soil Investigations

NRCS Soil Maps and Descriptions
Geotechnical Report



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Norfolk and Suffolk Counties, Massachusetts



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Norfolk and Suffolk Counties, Massachusetts.....	13
1—Water.....	13
603—Urban land, wet substratum, 0 to 3 percent slopes.....	13
655—Udorthents, wet substratum.....	14
References	15

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

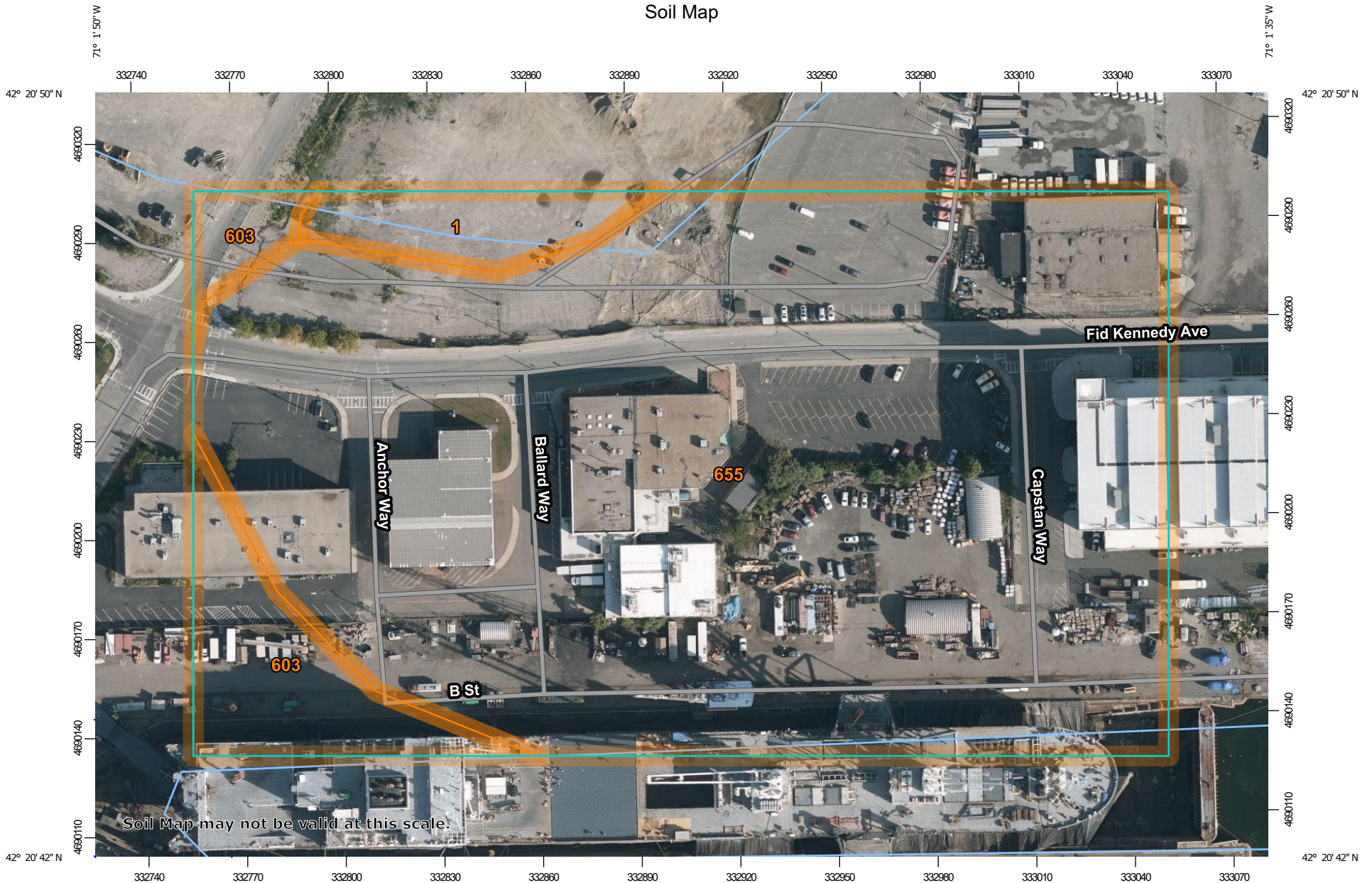
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

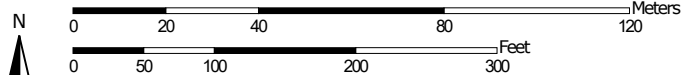
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map




Map Scale: 1:1,630 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Norfolk and Suffolk Counties, Massachusetts
 Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 11, 2019—Oct 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Water	0.5	3.7%
603	Urban land, wet substratum, 0 to 3 percent slopes	1.1	8.4%
655	Udorthents, wet substratum	11.1	87.9%
Totals for Area of Interest		12.6	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

Custom Soil Resource Report

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Norfolk and Suffolk Counties, Massachusetts

1—Water

Map Unit Setting

National map unit symbol: vkyp
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

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

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

655—Udorthents, wet substratum

Map Unit Setting

National map unit symbol: vkyd
Elevation: -30 to 310 feet
Mean annual precipitation: 45 to 54 inches
Mean annual air temperature: 43 to 54 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Landform position (two-dimensional): Footslope, shoulder
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Excavated and filled sandy and gravelly human transported material over highly-decomposed herbaceous organic material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Minor Components

Urban land

Percent of map unit: 3 percent
Hydric soil rating: Unranked

Ipswich

Percent of map unit: 2 percent
Landform: Marshes
Hydric soil rating: Yes

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Attachment D

CLIMATE RESILIENCY REPORT

NOTE: Project filings should be prepared and submitted using the online [Climate Resiliency Checklist](#).

A.1 - Project Information

Project Name:	Parcel O + P		
Project Address:	1 Au Bon Pain Way, Boston, MA 02210		
Project Address Additional:			
Filing Type (select)	Initial (<i>PNE, EPNF, NPC or other substantial filing</i>) Design / Building Permit (<i>prior to final design approval</i>), or Construction / Certificate of Occupancy (<i>post construction completion</i>)		
Filing Contact	Patrick Sousa	MCP III Foundry, LLC c/o Marcus Partners	psousa@marcuspartners.com 617-556-5239
Is MEPA approval required	Yes		n/a

A.3 - Project Team

Owner / Developer:	MCP III Foundry, LLC c/o Marcus Partners
Architect:	SGA
Engineer:	BR+A
Sustainability / LEED:	Thornton Tomasetti
Permitting:	DLA Piper LLP
Construction Management:	JMA

A.3 - Project Description and Design Conditions

List the principal Building Uses:	R+D, Lab
List the First Floor Uses:	R+D, Lab
List any Critical Site Infrastructure and or Building Uses:	At this time, no critical infrastructure or building uses have been identified.

Site and Building:

Site Area:	115,023 sf	Building Area:	219,860 SF
Building Height:	151.5 Ft	Building Height:	8 Stories + penthouse
Existing Site Elevation – Low:	13.34 Ft BCB	Existing Site Elevation – High:	17.97 Ft BCB
Proposed Site Elevation – Low:	14.0 Ft BCB	Proposed Site Elevation – High:	17.9 Ft BCB
Proposed First Floor Elevation:	20.5 Ft BCB	Below grade levels:	0 Stories

Article 37 Green Building:

LEED Version - Rating System :	LEED BD+C C&S v4/v4.1	LEED Certification:	Yes
Proposed LEED rating:	Certified/Silver/ <u>Gold/Platinum</u>	Proposed LEED point score:	60 Pts.

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:	R-40	Exposed Floor:	R-30
Foundation Wall:	n/a	Slab Edge (at or below grade):	R-15 FOR 24"

Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):

Area of Opaque Curtain Wall & Spandrel Assembly:	10.6 (%)	Wall & Spandrel Assembly Value:	Wall: U-0.064 Spandrel: U-0.20
Area of Framed & Insulated / Standard Wall:	56.7 (%)	Wall Value	R-13 + R-7.5 c.i
Area of Vision Window:	40% 32.5%	Window Glazing Assembly Value:	U-0.34
		Window Glazing SHGC:	U-0.29 (SHGC)
Area of Doors:	0.2%	Door Assembly Value:	U-0.50 (U)

Energy Loads and Performance

For this filing – describe how energy loads & performance were determined

Energy loads were determined with a Trane TRACE block load calculation. Performance was modeled using 8,760 hourly simulation in eQUEST.			
Annual Electric:	7,969,000 kWh	Peak Electric:	3,325 kW
Annual Heating:	2,550 MMBtu	Peak Heating:	16.9 MMBtu
Annual Cooling:	1,680,00 ton-hr	Peak Cooling:	2650 tons
Energy Use - Below ASHRAE 90.1 - 2013:	44%	Have the local utilities reviewed the building energy performance?:	NO
Energy Use - Below Mass. Code:	40%	Energy Use Intensity:	113 kBtu/SF

Back-up / Emergency Power System

Electrical Generation Output:	600 (kW) Diesel 500 (kW) Nat. Gas	Number of Power Units:	2
System Type:	Combustion Engine	Fuel Source:	1 x Diesel 1 x Natural Gas (for 4-floor anchor tenant)

Emergency and Critical System Loads (in the event of a service interruption)

Electric:	600 (kW)	Heating:	20 (MMbtu/hr)
		Cooling:	160 (Tons/hr)

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

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

B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions: 2,605 metric tons

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

The energy model, following ASHRAE App G, has been used as a design tool to test various design options for envelope, glazing, lighting & HVAC considerations and their impact to building energy, energy cost, and carbon emissions. The options were also evaluated for construction cost, annual operating cost, and overall lifecycle cost.

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

Vision Glass areas were reduced to increase building performance. Depth is added to the façade articulation to aid in solar shading. The team will continue to optimize the thermal performance of the envelope in subsequent phases.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

The proposed design is anticipated to utilize dedicated outdoor air for makeup air in office and lab zones. Fan coils in the tenant areas will satisfy the remaining sensible load. Systems will be served by high efficiency water-cooled chillers with water-side economizer, heat recovery chillers, modular air-to-water heat pumps, and condensing hot water boilers. The heat pumps will be the primary stage of heating, displacing a significant amount of natural gas boiler run time. Ventilation systems will be provided with high performance glycol run around systems to prevent cross-contamination of supply/exhaust air. Building controls will be provided for the central plants and sized to be expanded for use by tenants. Daylight harvesting and occupancy sensor LED lighting will be utilized throughout the Project. The design team will continue to evaluate energy efficiency measures (EEMs) for possible inclusion in select portions of the Project.

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

Heating and cooling loads are reduced by optimized envelope systems, reduced air flow, and energy recovery on both air-side and water-side. The building will produce most of its heating from electricity due to the addition of air-to-water heat pumps. Solar panels will be incorporated into the South Penthouse façade to provide renewable energy to the building.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

The Project will include air source heat pumps to produce heat and ~1,600 SF of solar has been added as a renewable energy source. The current design represents a 41% GHG emissions reductions compared to the code baseline for year 2035 projections. The building is designed to the future Net Carbon Zero standards being proposed at the City level.

Describe any energy efficiency assistance or support provided or to be provided to the project:

The design team and owner will engage the utility companies to participate in the custom Mass Save program for commercial buildings. A full building energy model will be utilized to optimize building efficiency and study life cycle options to improve energy performance.

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):

The proposed design will include modular arrangement for the heating system to allow for future connection of heat recovery chillers and air source heat pumps to reduce runtimes for hot water condensing boilers.

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:	0 Deg.	Temperature Range - High:	91 Deg.
Annual Heating Degree Days:	5.641	Annual Cooling Degree Days	796

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

Days - Above 90°:	60	Days – Above 100°:	30
Number of Heatwaves / Year:	6	Average Duration of Heatwave (Days):	5

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

The design will look to add shade trees through the parking area where appropriate. The roof will have a low SRI. The reflectivity of the hardscape is still being evaluated. Site plantings will be included.

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:

Spaces to have expanded setpoints during extreme weather events to mitigate load increases over longer heatwave periods.

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:

Base building will have a generator to provide standby power for all life safety and code required systems and equipment. A standby generator will be provided for anchor tenant to have 5 W/sf allowance for lab spaces to maintain lab equipment and critical systems during extended outages. Space will be provided on roof for remaining tenants to install generators for up to 5 W/sf lab space.

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

10 Year, 24 Hour Design Storm:

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

The available site area in the parking area will be used to provide stormwater storage and promote infiltration via an underground chamber or a pipe and stone system. Runoff from the building roof will be collected internally and directed to the infiltration system. The parking area will also be collected by catch basins and directed to the infiltration systems. The Project will meet or exceed the BWSC storage requirements of 1.25" over the impervious site area.

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):

The Project is evaluating the potential for onsite stormwater reuse as well as opportunities for green roofs and porous pavements. Green space and planting are also being introduced throughout the site. These strategies not only reduce stormwater generation but also reduce peak flow during events.

E – Sea Level Rise and Storms

Under any plausible greenhouse gas emissions scenario, sea levels 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 SFHA?

What Zone:

Current FEMA SFHA Zone Base Flood Elevation:

Is any portion of the site in a BPDA Sea Level Rise - Flood Hazard Area? Use the online [BPDA SLR-FHA Mapping Tool](#) to assess the susceptibility of the project site.

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 on the BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map, which depicts a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). Use the online [BPDA SLR-FHA Mapping Tool](#) to identify the highest Sea Level Rise - Base Flood Elevation for the site. The Sea Level Rise - Design Flood Elevation is determined by adding either 24” of freeboard for critical facilities and infrastructure and any ground floor residential units OR 12” of freeboard for other buildings and uses.

Sea Level Rise - Base Flood Elevation:	19.5 Ft BCB		
Sea Level Rise - Design Flood Elevation:	20.5 Ft BCB	First Floor Elevation:	20.5 Ft BCB
Site Elevations at Building:	16.5 Ft BCB	Accessible Route Elevation:	16.5 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.:

The building’s entire first floor will be raised 4’ above the Base Flood Elevation (BFE) to above the Sea Level Rise - Base Flood Elevation (SLR – BFE) and the first floor elevation will be 20.5 Ft BCB, which is equal to the Sea Level Rise – Design Flood Elevation (SLR _ DFE). Critical infrastructure that is not located at the penthouse level such as switchgear and transformers will be raised an additional 1’ to a floor elevation of 21.5 Ft BCB. The proposed building will be designed to incorporate storm water back flow prevention.

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.:

Critical infrastructure that is not located at the penthouse level such as switchgear and transformers is located above the SLR – DFE at 21.5 Ft BCB. The proposed building will be designed to incorporate storm water back flow prevention.

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:

Occupants will be able to temporarily shelter in place at the building with an emergency generator providing Fire and Life Safety power.

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

Critical infrastructure that is not located at the penthouse level such as switchgear and transformers is located at 21.5 Ft BCB. This puts the equipment above the SLR – DFE to prevent damage during an event and allows systems to operate as long as normal and/or generator power is available.

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.:

The building’s first floor is raised 4’ above average grade. The building will be adaptable to future raised infrastructure including road systems.

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

-The Building has been designed to anticipate future sea level rise. If necessary, the first floor has additional ceiling height that could be sacrificed to raise the ground floor elevation further, if necessary.

A pdf and word version of the Climate Resiliency Checklist is provided for informational use and off-line preparation of a project submission. **NOTE: Project filings should be prepared and submitted using the online [Climate Resiliency Checklist](#).**

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

Attachment E

EXTENSION FORM



City of Boston
Environment



City of Boston
Mayor Martin J. Walsh

EXTENSION FORM

The undersigned hereby allows the **Boston Conservation Commission** an extension of time, beyond the statutory limit, to review an application or issue a final decision under the Massachusetts Wetlands Protection Act, M.G.L. Chapter 131, Section 40, and the Boston Wetlands Ordinance, Boston City Code, Ordinances, Chapter 7-1.4d during the state of emergency declared by the Governor on March 10, 2020.

Applicant:

Paul **Marcus** **MCP III Foundry, LLC**

a. First Name

b. Last Name

c. Company

c/o Marcus Partners, Inc. 260 Franklin Street

d. Mailing Address

Boston

e. City/Town

MA

f. State

02110

g. Zip Code

617-556-5280

h. Phone Number

i. Fax Number

Paul Marcus <pmarcus@marcuspartners.com>

j. Email address

[Handwritten Signature]

Signature of Applicant

8/4/21

Date

Property Owner (if different):

Brian **Golden** **Economic Development and Industrial Corporation (EDIC)**

a. First Name

b. Last Name

c. Company

1 City Hall Square, 9th Floor

d. Mailing Address

Boston

e. City/Town

MA

f. State

02201

g. Zip Code

617-722-4300

h. Phone Number

i. Fax Number

brian.golden@boston.gov

j. Email address

Signature of Property Owner (if different)

Date

Applications will only be accepted when submitted with a properly executed Extension Form.

Attachment F

PROJECT PLANS

GROUND LEASE BOUNDARY DESCRIPTION

A CERTAIN PARCEL OF LAND SITUATED IN THE CITY OF BOSTON, COUNTY OF SUFFOLK AND THE COMMONWEALTH OF MASSACHUSETTS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT LOCATED IN 16°22'39" W, A DISTANCE OF 69.75 FEET FROM THE MOST NORTHWESTERLY CORNER OF A BUILDING LOCATED AT THREE ANCHOR WAY, SAID POINT HAVING A MASSACHUSETTS STATE PLANE, NAD 1983, COORDINATE OF N 2951636.42, E 783281.63,

- THENCE RUNNING S 89°08'01" E, A DISTANCE OF 42.56 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 88°23'35" E, A DISTANCE OF 26.91 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 88°27'22" E, A DISTANCE OF 44.77 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 85°46'14" E, A DISTANCE OF 77.61 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 81°42'51" E, A DISTANCE OF 47.56 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 81°33'32" E, A DISTANCE OF 46.09 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 81°45'00" E, A DISTANCE OF 22.83 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 81°44'27" E, A DISTANCE OF 33.23 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 81°33'19" E, A DISTANCE OF 22.87 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 86°49'11" E, A DISTANCE OF 31.87 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 88°05'49" E, A DISTANCE OF 13.87 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 88°23'11" E, A DISTANCE OF 73.95 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 88°29'21" E, A DISTANCE OF 41.56 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 87°28'42" E, A DISTANCE OF 13.96 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 88°46'05" E, A DISTANCE OF 26.37 FEET TO A POINT;
- THENCE TURNING AND RUNNING IN 88°23'53" E, A DISTANCE OF 39.45 FEET TO A POINT OF NON-TANGENCY;

THENCE TURNING AND RUNNING ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 30.10 FEET, A LENGTH OF 10.97 FEET, A DELTA ANGLE OF 48°22'49", A CHORD DISTANCE OF 24.67 FEET, AND A CHORD BEARING OF S 7°19'38" E, TO A POINT OF NON-TANGENCY;

THENCE TURNING AND RUNNING S 50°27'16" E, A DISTANCE OF 4.48 FEET TO A POINT OF NON-TANGENCY;

THENCE TURNING AND RUNNING ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 84.86 FEET, A LENGTH OF 10.97 FEET, A DELTA ANGLE OF 7°24'29", A CHORD DISTANCE OF 10.96 FEET, AND A CHORD BEARING OF S 44°51'53" E, TO A POINT OF NON-TANGENCY;

THENCE TURNING AND RUNNING ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 37.96 FEET, A LENGTH OF 26.53 FEET, A DELTA ANGLE OF 40°02'25", A CHORD DISTANCE OF 25.99 FEET, AND A CHORD BEARING OF S 21°43'11" E, TO A POINT OF NON-TANGENCY;

THENCE TURNING AND RUNNING S 01°53'50" E, A DISTANCE OF 21.89 FEET TO A POINT;

THENCE TURNING AND RUNNING S 01°20'56" E, A DISTANCE OF 42.51 FEET TO A POINT, SAID POINT HAVING A MASSACHUSETTS STATE PLANE, NAD 1983, COORDINATE OF N 2951569.95, E 783931.05;

THENCE TURNING AND RUNNING S 88°39'04" W, A DISTANCE OF 10.71 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°36'14" W, A DISTANCE OF 112.81 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°20'32" W, A DISTANCE OF 75.59 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°44'47" W, A DISTANCE OF 26.03 FEET TO A POINT;

THENCE TURNING AND RUNNING S 38°49'32" W, A DISTANCE OF 17.83 FEET TO A POINT;

THENCE TURNING AND RUNNING S 51°12'09" E, A DISTANCE OF 0.15 FEET TO A POINT;

THENCE TURNING AND RUNNING S 38°47'51" W, A DISTANCE OF 38.33 FEET TO A POINT;

THENCE TURNING AND RUNNING S 38°53'26" W, A DISTANCE OF 30.40 FEET TO A POINT;

THENCE TURNING AND RUNNING S 01°30'56" E, A DISTANCE OF 79.72 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°29'56" W, A DISTANCE OF 6.13 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°08'50" W, A DISTANCE OF 111.35 FEET TO A POINT;

THENCE TURNING AND RUNNING IN 87°27'17" W, A DISTANCE OF 24.35 FEET TO A POINT;

THENCE TURNING AND RUNNING IN 88°40'55" W, A DISTANCE OF 32.91 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°28'24" W, A DISTANCE OF 23.79 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°34'46" W, A DISTANCE OF 36.80 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°29'14" W, A DISTANCE OF 49.23 FEET TO A POINT;

THENCE TURNING AND RUNNING S 88°17'16" W, A DISTANCE OF 49.62 FEET TO A POINT;

THENCE TURNING AND RUNNING IN 86°04'29" W, A DISTANCE OF 5.04 FEET TO A POINT;

THENCE TURNING AND RUNNING S 87°14'52" W, A DISTANCE OF 12.01 FEET TO A POINT OF BEGINNING.

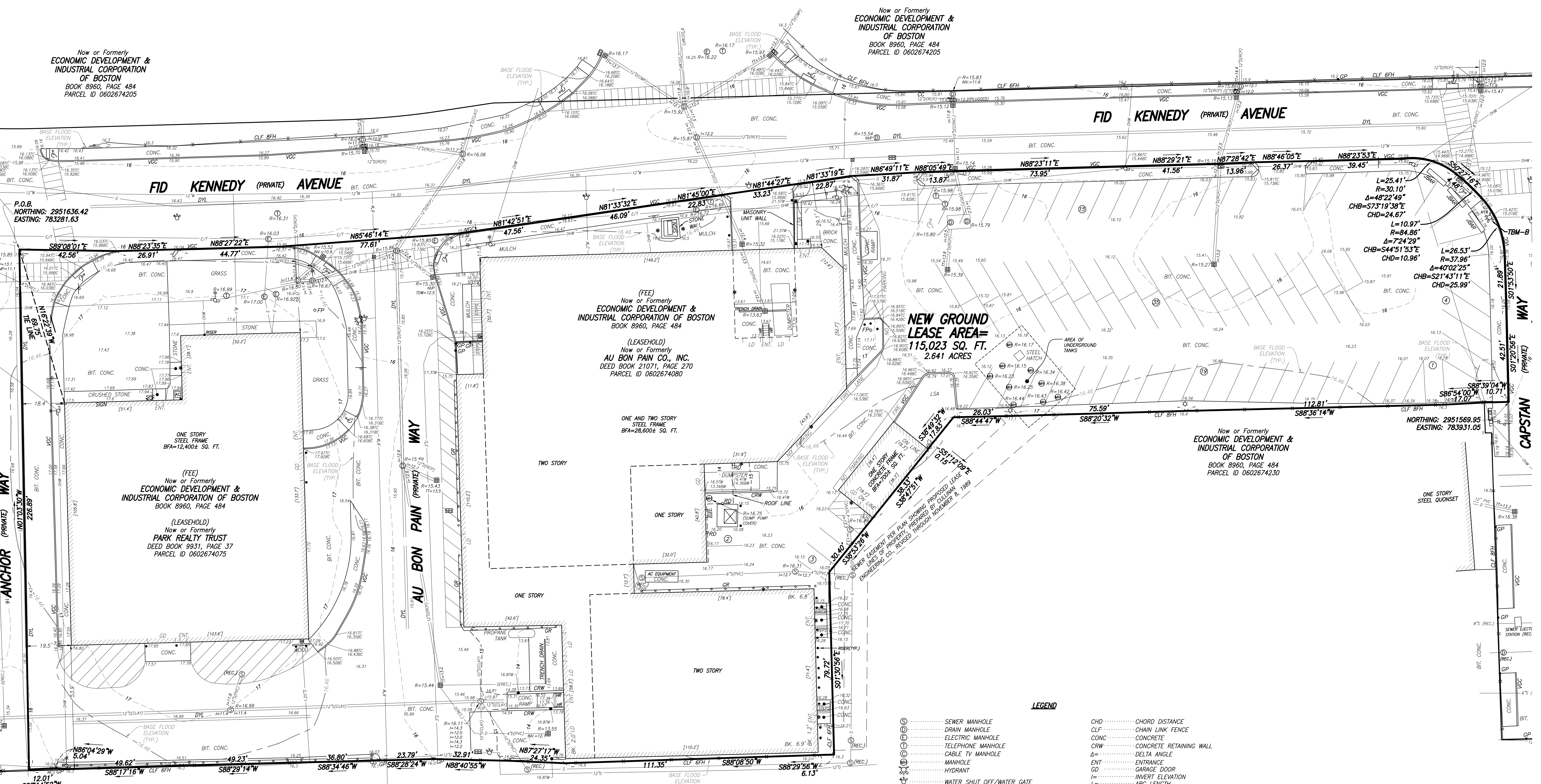
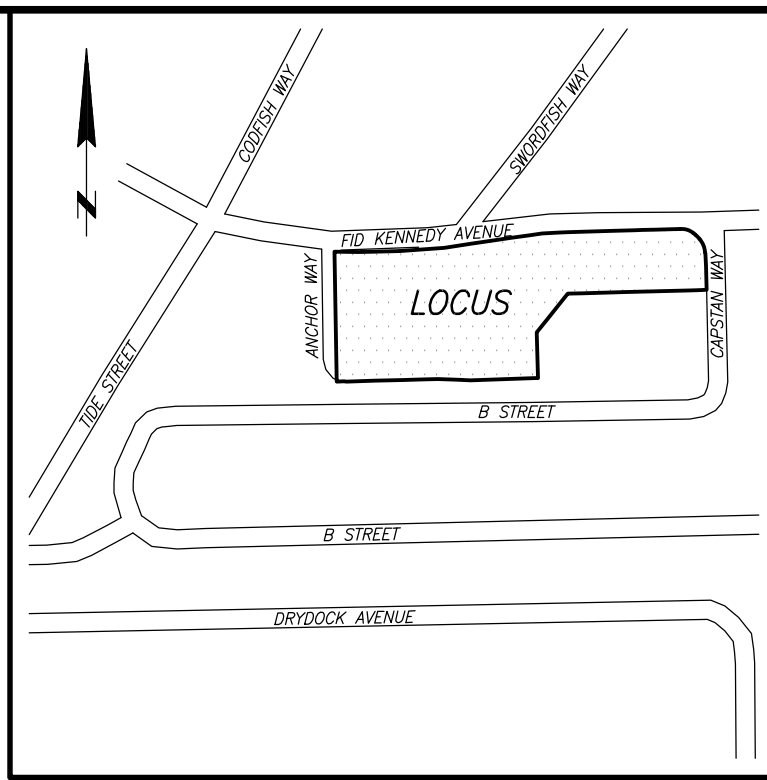
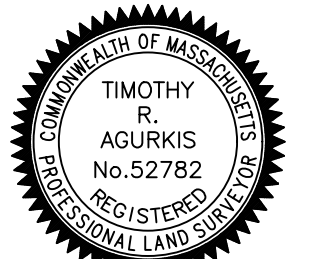
SAID PARCEL CONTAINS AN AREA OF 115,023 SQUARE FEET OR 2.641 ACRES.

NOTES:

1. BENCH MARK INFORMATION:
BENCH MARK USED:
A MASSACHUSETTS GEODETIC SURVEY DISK STAMPED "TRADE" SET IN THE CONCRETE ON THE SOUTHEAST CORNER OF THE SECOND LEVEL PLATFORM OF THE WORLD TRADE CENTER. ELEVATION = 47.41.
TEMPORARY BENCH MARKS SET:
TBM-A: X-CUT ON THE FLANGE BOLT OF A HYDRANT AT THE CORNER OF ANCHOR WAY AND FID KENNEDY AVENUE. ELEVATION = 18.14
TBM-B: X-CUT ON THE RIGHT FRONT BOLT OF A HYDRANT AT THE CORNER OF CAPSTAN WAY AND FID KENNEDY AVENUE. ELEVATION = 18.10
2. ELEVATIONS REFER TO BOSTON CITY BASE (BCB).
3. CONTOUR INTERVAL EQUALS ONE (1) FOOT.
4. BY GRAPHIC PLOTTING ONLY, THE PARCEL SHOWN HEREON LIES WHOLLY WITHIN A ZONE "AE", AN AREA WITHIN THE 1% ANNUAL CHANCE FLOOD (100 YEAR FLOOD). BASE FLOOD ELEVATIONS DETERMINED, AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR SUFFOLK COUNTY, MASSACHUSETTS, MAP NUMBER 25025C002R2, CITY OF BOSTON COMMUNITY NUMBER 250286, PANEL NUMBER 00B2J, HAVING AN EFFECTIVE DATE OF MARCH 16, 2016.
5. UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD, THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFORESAID RECORD PLANS AND ARE APPROXIMATE ONLY. WE CANNOT ASSUME RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES THAT ARE OMITTED OR INACCURATELY SHOWN ON SAID RECORD PLANS, SINCE SUBSURFACE UTILITIES CANNOT BE VISIBLY VERIFIED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL TOLL FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY-TWO HOURS PRIOR TO EXCAVATION.
6. THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF FELDMAN LAND SURVEYORS ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO FELDMAN LAND SURVEYORS' SCOPE OF SERVICES UNDER CONTRACT TO OUR CLIENT FOR THIS PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY PARTY OR FOR ANY PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN CONSENT IS PROVIDED BY FELDMAN LAND SURVEYORS.

ZONING CLASSIFICATION
ZONING DISTRICT: GENERAL INDUSTRIAL (I-2)
DISTRICT OVERLAY: RESTRICTED PARKING
DIMENSIONAL TABLE PER - GENERAL INDUSTRIAL (I-2):
MAXIMUM FLOOR AREA RATIO 2
MAXIMUM BUILDING HEIGHT NONE
MINIMUM LOT SIZE NONE
MINIMUM LOT AREA/DWELLING NONE
MINIMUM USEABLE OPEN SPACE NONE
MINIMUM LOT WIDTH NONE
MINIMUM FRONT YARD NONE
MINIMUM SIDE YARD 5 FEET
MINIMUM REAR YARD 12 FEET
* SEE ARTICLE 13, TABLE F, OF THE CITY OF BOSTON ZONING ORDINANCE.

I CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND THE LATEST PLANS AND DEEDS OF RECORD.
TIMOTHY R. AGURIS, PLS (MA# 52782) DATE: JULY 8, 2021
TRAFELDMANLANDSURVEYORS.COM



LEGEND

⊙	SEWER MANHOLE	CHD	CHORD DISTANCE
⊙	DRAIN MANHOLE	CLF	CHAIN LINK FENCE
⊙	ELECTRIC MANHOLE	CONC	CONCRETE
⊙	TELEPHONE MANHOLE	CRW	CONCRETE RETAINING WALL
⊙	CABLE TV MANHOLE	Δ	DELTA ANGLE
⊙	MANHOLE	ENT	ENTRANCE
⊙	HYDRANT	GD	GARAGE DOOR
⊙	WATER SHUT OFF/WATER GATE	IE	INVERT ELEVATION
⊙	GAS SHUT OFF/GAS GATE	LD	LOADING DOCK
⊙	BOSTON WATER VALVE	LSA	LANDSCAPED AREA
⊙	CATCH BASIN	NTS	NOT TO SCALE
⊙	"DON'T DUMP" PLACARD	NVP	NO VISIBLE PIPES
⊙	UTILITY POLE	OV	OVERHEAD WIRES
⊙	FLAG POLE	TOW	TOP OF WATER
⊙	TRANSFORMER	TW	TOP OF WALL
⊙	ELECTRIC METER	TYP	TYPICAL
⊙	AIR CONDITIONING UNIT	VGC	VERTICAL GRANITE CURB
⊙	DISABLED PARKING SPACE	-C-	CABLE TELEVISION
⊙	JERSEY BARRIER	-CS-	COMBINED SEWER
⊙	BOTTOM OF CURB	-D-	DRAIN
⊙	BIT CONC. BERM	-E-	ELECTRIC
⊙	BUILDING DIMENSION	-G-	GAS
⊙	BUILDING FOOTPRINT AREA	-OHW-	OVERHEAD WIRES
⊙	BUTTIMOUS	-T-	TELEPHONE
⊙	BACK	-W-	WATER
⊙	BOTTOM ELEVATION	-S(ABD)-	ABANDONED
⊙	BOTTOM OF WALL	-PVC-	PIPE SIZE AND MATERIAL
⊙	CALCULATED	-FO-	CAST IRON
⊙	CHORD BEARING	-PTC-	FIBER OPTIC
		-PVC-	PIPE TYPE CABLE
		-RCP-	POLYVINYL CHLORIDE
		-VCP-	REINFORCED CONCRETE PIPE
		-X-	VITRIFIED CLAY PIPE
		-X-	METAL FENCE
		-X-	GUARD RAIL

BOUNDARY PLAN
PARCEL "O" 1 AU BON PAIN WAY
PARCEL "P" 3 ANCHOR WAY
BOSTON, MASS.

FELDMAN LAND SURVEYORS JUNE 25, 2021
152 HAMPDEN STREET PHONE: (617)357-9740
BOSTON, MASS. 02119 www.feldmansurveyors.com

FELDMAN
LAND SURVEYORS

SCALE: 1"=20'

RESEARCH TRA	FIELD CHIEF KB	PROJ MGR JRZ	APPROVED	SHEET NO. 1 OF 1
CADD JRZ	CADD JRZ	FIELD CHECKED	CRD FILE 17617	JOB NO. 17617

FILENAME: S:\PROJECTS\17800\17617\DWG\17617-POL.dwg

BWSC & CONTRACTOR NOTES:

- THE ESTIMATED SANITARY SEWAGE DISCHARGE IS XX,XXX GALLONS PER DAY (GPD). THIS ESTIMATE IS BASED ON 310 C.M.R. 15.000 THE STATE ENVIRONMENTAL CODE, TITLE 5, STANDARD REQUIREMENTS FOR THE SITING, CONSTRUCTION, INSPECTION, UPGRADE AND EXPANSION OF ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS AND FOR THE TRANSPORT AND DISPOSAL OF WASTEWATER.
- THE ESTIMATED DAILY WATER USE IS XXX [110X SEWAGE NUMBER ABOVE] GPD BASED ON THE ESTIMATED SANITARY SEWAGE DISCHARGE WITH A 10X PEAKING FACTOR. THE PEAK DOMESTIC FLOW BASED ON FIXTURE COUNTS IS APPROXIMATELY XX GPM [FROM MEP].
- THE BWSC SHALL PROVIDE A XXXX" DISC TYPE WATER METER AND METER TRANSMITTER UNIT (MTU).
--- --- --- OR --- --- ---
- TWO XXXX" COMPOUND WATER METERS WILL BE EITHER NEPTUNE OR ELSTER AMCO COMPOUND TYPE METERS. THE METERS MUST BE PURCHASED BY THE CONTRACTOR. A METER TRANSMITTER UNIT (MTU) SHALL BE SUPPLIED BY THE COMMISSION AT THE OWNER'S EXPENSE. A FEE OF \$325/MTU WILL BE PAID TO THE COMMISSION AT THE TIME OF FILING THE GENERAL SERVICE APPLICATION.
- BACKWATER VALVES SHALL BE PROVIDED BY THE PLUMBER AT ALL GRAVITY SANITARY SEWER AND STORM DRAIN CONNECTIONS FOR ANY FIXTURE LOCATED AT AN ELEVATION BELOW THE TOP OF THE SEWER OR DRAIN MANHOLE.
- THE CONTRACTOR SHALL NOTIFY THE BWSC CROSS-CONNECTION DEPARTMENT AT 617-989-7283 ONCE BACKWATER VALVES ARE INSTALLED FOR BWSC INSPECTION.
- DYE TESTING SHALL BE PERFORMED ON NEW STORM DRAIN AND SANITARY SEWER CONNECTIONS AFTER INSTALLATION IS COMPLETE. DYE TESTS SHALL BE WITNESSED BY THE BWSC.
- A PREREQUISITE FOR FILING A GENERAL SERVICE APPLICATION WITH THE BWSC FOR NEW CONSTRUCTION IS THE SUBMISSION OF A SIGN-OFF DOCUMENT FROM THE CITY OF BOSTON'S INSPECTORIAL SERVICES DEPARTMENT.
- AN AS-BUILT PLAN (AUTOCAD 2016 OR EARLIER RELEASE) SHALL BE PROVIDED BY THE CONTRACTOR AND ENDORSED BY A CIVIL ENGINEER OR PROFESSIONAL LAND SURVEYOR SHOWING THE LOCATION, DEPTH, AND INVERT OF EVERY BEND, FITTING, VALVE, CLEANOUT AND ANCHOR. THE AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE BOSTON AND WATER SEWER COMMISSION FOR REVIEW AND APPROVAL.
- WATER SHUT DOWN SHALL BE COORDINATED WITH BWSC WATER OPERATIONS. (617) 989-7276, 24 HOURS NOTICE REQUIRED.
- PROVIDE "DON'T DUMP" PLAQUES AT ALL CATCH BASIN AND DRAIN INLET LOCATIONS. "DON'T DUMP" PLAQUES TO BE PURCHASED FROM BWSC.
- THE CONTRACTOR SHALL PURCHASE THE NEW HYDRANT(S) FROM THE BWSC. THE CONTRACTOR SHALL PURCHASE THE HYDRANT(S) FROM THE COMMISSION WHEN FILING THE GENERAL SERVICE APPLICATION.
- EXISTING WATER METER(S) TO BE REMOVED OR REPLACED SHALL BE RETURNED TO BWSC.
- THE CONTRACTOR SHALL VIDEO INSPECT THE EXISTING XXX" BWSC XXXX MAIN IN XXX STREET PRIOR TO CONSTRUCTION AND AFTER CONSTRUCTION IS COMPLETE AND SUBMIT TO BWSC AND NITSCHE ENGINEERING FOR REVIEW. THE SOFTWARE SHALL BE CAPABLE OF EXPORTING DIGITAL INSPECTION LOG DATA INTO AN MSACCESS DATABASE IN THE PIPELINE ASSESSMENT AND CERTIFICATION PROGRAM (PACP) STANDARD EXCHANGE FORMAT. THE INSPECTION SOFTWARE COODING SYSTEM SHALL BE PACP CERTIFIED (LATEST EDITION) AS PER THE NATIONAL ASSOCIATION OF SEWER SERVICE COMPANIES (NASSCO). THE SOFTWARE SHALL BE EQUIPPED WITH ALL MODULES NECESSARY FOR PACP INSPECTIONS AND SCORING. THE CONTRACTOR SHALL COORDINATE DIRECTLY WITH BWSC TO DETERMINE AN APPROVED VIDEO INSPECTION COMPANY AND DELIVERABLE.

DEMOLITION NOTES:

- SITE PREPARATION AND DEMOLITION SHALL INCLUDE THOSE AREAS WITHIN THE LIMIT OF WORK LINE AS SHOWN ON THE CONTRACT DOCUMENTS.
- ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING DEMOLITION.
- THE CONTRACTOR SHALL COORDINATE SITE DEMOLITION EFFORTS WITH ALL TRADES THAT MAY BE AFFECTED BY THE WORK.
- ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED TO FULL DEPTH TO INCLUDE BASE MATERIAL AND FOOTINGS OR FOUNDATIONS AS REQUIRED TO FACILITATE CONSTRUCTION, AND LEGALLY DISPOSED OF OFFSITE BY CONTRACTOR.
- UTILITY PIPES DESIGNATED TO BE ABANDONED IN PLACE SHALL BE PLUGGED AT THEIR ENDS WITH WATERTIGHT BRICK MASONRY OR CEMENT MORTAR WITH A MINIMUM THICKNESS OF 8 INCHES.
- UTILITY PIPES DESIGNATED TO BE REMOVED SHALL CONSIST OF THE COMPLETE REMOVAL AND DISPOSAL OF THE ENTIRE LENGTH OF PIPE AND BACKFILL AND 95% COMPACTION OF THE VOID WITH ORDINARY BORROW. WHEN THE VOID IS WITHIN THE FOOTPRINT OF THE NEW BUILDING, GRAVEL BORROW SHALL BE USED TO BACKFILL THE VOID.
- UTILITY STRUCTURES DESIGNATED TO BE ABANDONED IN PLACE SHALL HAVE THEIR CAST IRON CASTINGS REMOVED AND DISPOSED. INLET AND OUTLET PIPES PLUGGED. THE BOTTOM OF THE STRUCTURES SHALL BE BROKEN. THE VOID OF THE STRUCTURES SHALL BE BACKFILLED AND COMPACTED TO 95% WITH ORDINARY BORROW OR FLOWABLE FILL, AND THE TOP OF THE STRUCTURE SHALL BE REMOVED SO THAT IT IS AT LEAST 36 INCHES BELOW FINISH GRADE.
- UTILITY STRUCTURES DESIGNATED TO BE REMOVED SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF CAST IRON CASTINGS, PLUGGING OF INLET AND OUTLET PIPES. REMOVAL OF THE STRUCTURE, AND BACKFILL AND 95% COMPACTION OF THE VOID WITH ORDINARY BORROW. WHEN THE VOID IS WITHIN THE FOOTPRINT OF THE NEW BUILDING, GRAVEL BORROW SHALL BE USED TO BACKFILL THE VOID.
- ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY DISPOSED OF OFFSITE.
- AT ALL LOCATIONS WHERE EXISTING CURBING, CONCRETE PAVEMENT OR BITUMINOUS CONCRETE ROADWAY ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE.
- EXTEND DESIGNATED LIMIT OF WORK AS NECESSARY TO ACCOMPLISH ROUGH GRADING, EROSION CONTROL, TREE PROTECTION, AND SITE WORK AS REQUIRED BY THESE DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL RUBBISH AND DEBRIS FOUND THEREON. STORAGE OF SUCH MATERIALS ON THE PROJECT SITE WILL NOT BE PERMITTED. THE CONTRACTOR SHALL LEAVE THE SITE IN SAFE, CLEAN, AND LEVEL CONDITION UPON COMPLETION OF THE SITE DEMOLITION WORK.
- REMOVE AND STOCKPILE ALL EXISTING SITE LIGHTS, BENCHES, TRASH RECEPTACLES, TRAFFIC SIGNS, GRANITE CURB, AND OTHER SITE IMPROVEMENTS WITHIN LIMIT OF WORK LINE UNLESS OTHERWISE NOTED.
- ALL EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED AND MAINTAINED THROUGHOUT THE TIME OF CONSTRUCTION, AS SPECIFIED AND DIRECTED BY THE LANDSCAPE ARCHITECT.
- BEFORE ANY TREES OR SHRUBS ARE REMOVED, THE CONTRACTOR SHALL ARRANGE A CONFERENCE ON THE SITE WITH THE OWNER OR OWNER'S REPRESENTATIVE TO IDENTIFY TREES AND SHRUBS THAT ARE TO BE REMOVED, AS WELL AS THOSE WHICH ARE TO BE PROTECTED. DO NOT COMMENCE CLEARING OPERATIONS WITHOUT A CLEAR UNDERSTANDING OF EXISTING CONDITIONS TO BE PRESERVED.
- THE CONTRACTOR SHALL REMOVE FROM THE AREA OF CONSTRUCTION PAVEMENT, CONCRETE, CURBING, POLES AND FOUNDATIONS, ISLANDS, TREE BERMS AND OTHER FEATURES WITHIN THE LIMITS OF CONSTRUCTION AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION WHETHER SPECIFIED ON THE DRAWINGS OR NOT.

EROSION AND SEDIMENT CONTROL NOTES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE LATEST EDITION OF THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS PREPARED BY DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF RESOURCE PROTECTION, AND THE CURRENT NOTES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES.
- MEANS OF EROSION AND SEDIMENT PROTECTION AS NOTED ON THE DRAWINGS INDICATE MINIMUM RECOMMENDED PROVISIONS. THE CONTRACTOR IS RESPONSIBLE FOR FINAL SELECTION AND PLACEMENT OF EROSION AND SEDIMENTATION CONTROLS BASED ON ACTUAL SITE CONDITIONS AND CONSTRUCTION CONDITIONS. ADDITIONAL MEANS OF PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED FOR CONTINUED OR UNFORESEEN EROSION PROBLEMS, OR AS DIRECTED BY CONTROLLING MUNICIPAL AUTHORITIES, AT NO ADDITIONAL EXPENSE TO THE OWNER.
- AN EROSION CONTROL BARRIER SHALL BE INSTALLED ALONG THE EDGE OF PROPOSED DEVELOPMENT AS INDICATED IN THE PLAN PRIOR TO COMMENCEMENT OF DEMOLITION OR CONSTRUCTION OPERATIONS.
- SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF AND DURING ALL PHASES OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO AND IMMEDIATELY AFTER ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
- AFTER ANY SIGNIFICANT RAINFALL (GREATER THAN 0.25 INCHES OF RAINFALL WITHIN 24 HOURS), SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOR INTEGRITY. ANY DAMAGE SHALL BE CORRECTED IMMEDIATELY.
- PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES SHALL BE PROVIDED TO ENSURE THAT THE INTENDED PURPOSE IS ACCOMPLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT LEAVING THE LIMIT OF WORK. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT FROM ENTERING ANY STORM DRAINAGE SYSTEM AND FROM BEING CONVEYED TO ANY WETLAND RESOURCE AREA, PUBLIC WAYS, ABUTTING PROPERTY, OR OUTSIDE OF THE PROJECT LIMITS.
- THE CONTRACTOR SHALL PROTECT ALL DRAINAGE SWALES AND GROUND SURFACES WITHIN THE LIMIT OF WORK FROM EROSION CONDITIONS. STRAW BALE, CRUSHED STONE OR EQUIVALENT CHECK DAMS ARE TO BE PROVIDED AT A MAXIMUM OF TWO HUNDRED (200) FOOT SPACING, OR LESS AS SITE-SPECIFIC CONDITIONS WARRANT, WITHIN ALL DRAINAGE SWALES AND DITCHES AND AT UPSTREAM SIDES OF ALL DRAINAGE INLETS.
- ALL STOCK PILES SHALL BE PROTECTED AND LOCATED A MINIMUM OF 100' FROM EXISTING WETLAND RESOURCE AREAS & WITHIN THE LIMIT OF WORK.
- ANY SEDIMENT TRACKED ONTO PAVED AREAS SHALL BE SWEEPED AT THE END OF EACH WORKING DAY.
- ALL SEDIMENT RETAINED BY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE LEGALLY DISPOSED OF OFFSITE.
- TEMPORARY DIVERSION DITCHES, PERMANENT DITCHES, CHANNELS, EMBANKMENTS, AND ANY DENIED SURFACE THAT WILL BE EXPOSED FOR A PERIOD OF 14 CALENDAR DAYS OR MORE SHALL BE CONSIDERED CRITICAL VEGETATION AREAS. THESE AREAS SHALL BE STABILIZED/PROTECTED WITH APPROPRIATE EROSION CONTROL MATTING OR OTHER EROSION CONTROL METHODS.
- DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS AS DIRECTED BY THE PERMITTING AUTHORITY OR OWNER.
- THE CONTRACTOR SHALL USE TEMPORARY SEEDING, MULCHING, OR OTHER APPROVED STABILIZATION MEASURES TO PROTECT EXPOSED AREAS DURING PROLONGED CONSTRUCTION OR OTHER LAND DISTURBANCE. STOCKPILES THAT WILL BE EXPOSED FOR LONGER THAN 14 DAYS SHALL BE STABILIZED.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL EROSION AND SEDIMENT CONTROLS AT THE COMPLETION OF SITE CONSTRUCTION, BUT ONLY WHEN DIRECTED BY THE CITY/TOWN OF XXXX CONSERVATION AGENT. STABILIZE OR SEED BARE AREAS LEFT AFTER EROSION CONTROL REMOVAL.

COST ESTIMATING NOTES:

- ALL WATER LINES ARE DUCTILE IRON UNLESS OTHERWISE NOTED. ASSUME ALL WATER LINES INSTALLED WITH 5' OF COVER.
- ASSUME ALL ROADWAY DRAINAGE LINES ARE 12" RCP UNLESS OTHERWISE NOTED. ASSUME ALL DRAIN LINES INSTALLED WITH 6' OF COVER.
- ASSUME ALL ROOF DRAINAGE LINES ARE 6" CORRUGATED PLASTIC PIPE UNLESS OTHERWISE NOTED. ASSUME ALL DRAIN LINES INSTALLED WITH 4' OF COVER.
- ASSUME THAT ALL SEWER LINES ARE 8" PVC. ASSUME ALL SEWER LINES INSTALLED WITH 6' OF COVER.
- ASSUME ALL STRUCTURES ARE 4' INSIDE DIAMETER, EXCEPT FOR DOUBLE CATCH BASINS AND STRUCTURES THAT ARE DIRECTLY CONNECTED TO UNDERGROUND RECHARGE/RETENTION SYSTEMS. ASSUME THOSE STRUCTURES ARE 6' INSIDE DIAMETER.
- SEE MEP PLANS FOR SIZING OF ELECTRIC, CABLE, TELEPHONE AND LIGHTING.

GENERAL NOTES:

- TOPOGRAPHIC DATA, PROPERTY LINE INFORMATION, AND EXISTING SITE FEATURES WERE OBTAINED FROM A PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY PARCEL OF 1 AU BON PAIN WAY, BOSTON, MASS", PREPARED BY FELDMAN LAND SURVEYORS, DATED SEPTEMBER 21, 2020.
- FLOODPLAIN INFORMATION WAS OBTAINED FROM THE FLOOD INSURANCE RATE MAP (FIRM) NO. 25025C0082J. THE SITE IS IN ZONE AE.
- THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82, SECTION 40, AS AMENDED, WHICH STATES THAT NO ONE MAY EXCAVATE, IN THE COMMONWEALTH OF MASSACHUSETTS EXCEPT IN AN EMERGENCY WITHOUT 72 HOURS NOTICE, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, TO NATURAL GAS OR UNFORESEEN EROSION PROBLEMS, OR AS DIRECTED BY CONTROLLING MUNICIPAL ELECTRICITY, TELEPHONE, OR CABLE TELEVISION SERVICE IN OR TO THE CITY OR TOWN WHERE THE EXCAVATION IS TO BE MADE. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-DIG-SAFE.
- THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, ALSO REFERRED TO AS JACKIE'S LAW, AS DETAILED IN SECTION 520 CMR 14.00 OF THE CODE OF MASSACHUSETTS REGULATIONS.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS AND SAFETY CODES IN THE CONSTRUCTION OF ALL IMPROVEMENTS.
- THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. PRESENCE AND LOCATIONS OF ALL UTILITIES WITHIN THE LIMIT OF WORK MUST BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND CONTACTING THE CONTROLLING AUTHORITIES AND/OR UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THEIR LINES. THE CONTRACTOR SHALL KEEP A RECORD OF ANY DISCREPANCIES OR CHANGES IN THE LOCATIONS OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND NITSCHE ENGINEERING. ANY DAMAGE RESULTING FROM THE FAILURE OF THE CONTRACTOR TO MAKE THESE DETERMINATIONS AND CONTACTS SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL, THROUGHOUT CONSTRUCTION, TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, GRADING, SIDEWALKS AND SITE DETAILS OUTSIDE OF THE LIMIT OF WORK AS DEFINED ON THE DRAWINGS AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AS DIRECTED BY THE ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE ANY SUCH OR OTHER DAMAGE SO CAUSED.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.
- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND CONSTRUCTION DOCUMENTS TO DEVELOP A THOROUGH UNDERSTANDING OF THE PROJECT, INCLUDING ANY SPECIAL CONDITIONS AND CONSTRAINTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PROJECT SITE AND TO VERIFY ALL CONDITIONS IN THE FIELD AND REPORT DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER OR OWNER'S REPRESENTATION IMMEDIATELY.
- THE CONTRACTOR SHALL CONDUCT ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE ESTABLISHMENT AND USE OF ALL VERTICAL AND HORIZONTAL CONSTRUCTION CONTROLS.
- ELEVATIONS REFER TO BOSTON CITY BASE.
- THE CONTRACTOR SHALL COMPLY WITH THE ORDER OF CONDITIONS DATED XXXX XX, XXXX AND ISSUED BY THE XXXX CONSERVATION COMMISSION (DEP #XXX-XXX).
- FOR SOIL INFORMATION REFER TO GEOTECHNICAL REPORT.

UTILITY NOTES:

- ALL UTILITY CONNECTIONS ARE SUBJECT TO THE APPROVAL OF, AND GRANTING OF PERMITS BY, THE LOCAL MUNICIPALITY. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS RELATED TO UTILITY WORK PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ALL PERMISSIONS FOR, AND FOR CONDUCTING ALL PREPARATIONS RELATED TO, WORK AFFECTING ANY UTILITIES WITHIN THE JURISDICTION OF ANY NON-MUNICIPAL UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE, AND/OR GAS. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE AGENCIES, DEPARTMENTS, AND UTILITY COMPANIES, IN WRITING, AT LEAST 7 DAYS (OR PER UTILITY COMPANY REQUIREMENT) AND NOT MORE THAN 30 DAYS PRIOR TO ANY CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN UTILITIES SERVICING BUILDINGS AND FACILITIES WITHIN OR OUTSIDE THE PROJECT LIMIT UNLESS THE INTERRUPTION OF SERVICE IS COORDINATED WITH THE OWNER.
- ALL WATER, SEWER, AND DRAIN WORK SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS AND STANDARD SPECIFICATIONS OF THE LOCAL MUNICIPALITY.
- GAS, TELECOMMUNICATIONS AND ELECTRIC SERVICES ARE TO BE DESIGNED BY EACH UTILITY COMPANY IN COORDINATION WITH THE MECHANICAL, ELECTRIC, AND PLUMBING CONSULTANTS.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES OF NEW UTILITIES WITH GAS, TELECOMMUNICATION AND ELECTRICAL SERVICES.
- INSTALL WATER LINES WITH A MINIMUM OF FIVE FEET OF COVER AND A MAXIMUM OF SEVEN FEET COVER FROM THE FINAL DESIGN GRADES.
- MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18 INCHES VERTICAL SEPARATION (WATER OVER SEWER) BETWEEN SEWER AND WATER LINES. WHEREVER THERE IS LESS THAN 10 FEET OF HORIZONTAL SEPARATION AND 18 INCHES OF VERTICAL SEPARATION BETWEEN A PROPOSED OR EXISTING SEWER LINE TO REMAIN AND A PROPOSED OR EXISTING WATER LINE TO REMAIN BOTH WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10- FEET ON EITHER SIDE OF THE CROSSING. ONE (1) FULL LENGTH OF WATER PIPE SHALL BE CENTERED OVER THE SEWER AT THE CROSSING.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED AND/OR REMOVED & DISPOSED.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR TRENCHING, BACKFILLING, AND SURFACE RESTORATION FOR GAS UTILITY SYSTEMS.
- ALL ONSITE UTILITIES SHALL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
- ALL EXISTING AND PROPOSED MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, CASTINGS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL GRADING AND PAVING CONSTRUCTION.
- ALL GRATES IN WALKWAYS SHALL BE ADA COMPLIANT.

PROPOSED LEGEND

—	LIMIT OF WORK
— / / —	EXISTING UTILITY TO BE ABANDONED, REMOVED AND DISPOSED IF IN CONFLICT WITH NEW SITE IMPROVEMENTS, OR AS NOTED ON DRAWINGS
○	EROSION CONTROL BARRIER
○ — x —	CONSTRUCTION FENCE
— W —	DOMESTIC WATER PIPE
— FP —	FIRE PROTECTION PIPE
— S —	SANITARY SEWER PIPE
— D —	STORM DRAIN PIPE
— G —	GAS PIPE
— E —	ELECTRIC DUCTBANK
— T/C —	TELECOM DUCTBANK
— CW —	CHILLED WATER PIPE
— STM —	STEAM PIPE
— CR —	CONDENSATE RETURN PIPE
— HW —	HOT WATER PIPE/RETURN
— HHW —	HEATING HOT WATER
— RW —	REUSE WATER PIPE
— GRW —	GREY WATER PIPE
— / —	FUTURE UTILITY, SHOWN FOR INFORMATION ONLY
⊙	INLET PROTECTION
---	ELEVATION CONTOURS
---	MATCH LINE
---	CENTERLINE
●	CLEANOUT
●	AREA DRAIN
●	ACCESS BASIN
⊙	DRAIN MANHOLE
⊙	WATER QUALITY STRUCTURE
⊙	CATCH BASIN
⊙	DOUBLE CATCH BASIN
⊙	WATER QUALITY INLET
⊙	SEWER MANHOLE
STM	STEAM MANHOLE
TMH	TELECOM MANHOLE
EMH	ELECTRIC MANHOLE
CWV	CHILLED WATER VALVE
WV	WATER VALVE
HYD	FIRE HYDRANT

ABBREVIATIONS

AB	ACCESS BASIN
AD	AREA DRAIN
BC	BOTTOM OF CURB ELEVATION
BW	BOTTOM OF WALL ELEVATION
CB	CATCH BASIN
COB	CAPE COO BERM
CI	CAST IRON
CJ	CONTROL JOINT
CL	CENTER LINE
CO	CLEANOUT
COP	CENTER OF PIPE
CP	CARRIER PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
DCB	DOUBLE CATCH BASIN
DI	DUCTILE IRON PIPE CEMENT LINED
DM	DRAIN MANHOLE
EHH	ELECTRIC HANDHOLE
EJ	EXPANSION JOINT
EMH	ELECTRIC MANHOLE
FD	FOUNDATION DRAIN
FFE	FINISHED FLOOR ELEVATION
HP	HIGH POINT
HYD	FIRE HYDRANT
INV	INVERT ELEVATION
LF	LINEAR FEET
LOW	LIMIT OF WORK
LP	LOW POINT
LW	LAB WASTE
M&P	MAINTAIN AND PROTECT
NIC	NOT IN CONTRACT
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
PD	PERIMETER DRAIN
PERF	PERFORATED
PVC	POLYVINYL CHLORIDE PIPE
P&M	PROTECT AND MAINTAIN
R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
RD	ROOF DRAIN
RM	RISE ELEVATION
SMH	SEWER MANHOLE
SS	SEWER SERVICE
TC	TOP OF CURB ELEVATION
TW	TOP OF WALL ELEVATION
TMH	TELECOM MANHOLE
TMH	TELECOM MANHOLE
TOP	TOP OF PIPE
TOO	TOP OF DUCT BANK
TYP	TYPICAL
UD	UNDERDRAIN
USD	UNDERSLAB DRAIN
VGC	VERTICAL GRANITE CURB
WQI	WATER QUALITY INLET
WQS	WATER QUALITY STRUCTURE
WV	WATER VALVE



200 HIGH ST., BOSTON, MA 02110
857.300.2610 | SGA-ARCH.COM

D/R/E/A/M
COLLABORATIVE
ARCHITECTURE | REAL ESTATE DEVELOPMENT

31 St. James Avenue 4th Floor, Boston MA, 02116
617.466.7029 www.dreamcollaborative.com

PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT
COPELY WOLFF DESIGN GROUP

10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-454-0003

CIVIL ENGINEER
NITSCHE ENGINEERING

2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEPPP
BR+A CONSULTING ENGINEERS

10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

STRUCTURAL ENGINEER
MCMAMARA,SALVIA

101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-737-0040

BUILDING ENVELOPE
VIDARIS

250 DORCHESTER AVE.
BOSTON, MA 02127
617-268-8977

SUSTAINABILITY
THORNTON TOMASETTI

27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-4100

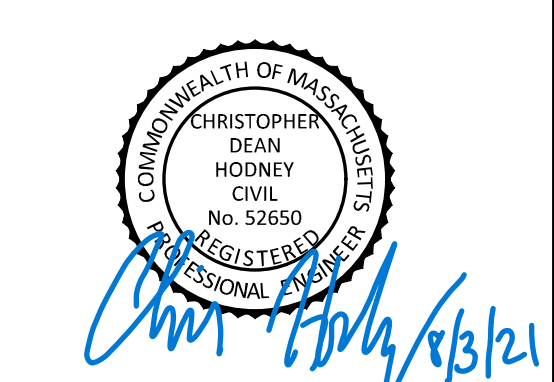
CODE CONSULTANT
CODE RED CONSULTANTS

154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-500-1533

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.

465 MEDFORD ST. SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389

SEAL / SIGNATURE



© Spagnolo Glesnes & Associates, Inc.
05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAK
CHECKED BY CDH

SHEET TITLE:

CIVIL DETAILS

C-000

PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT
COPLEY WOLFF DESIGN GROUP
10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-0000

CIVIL ENGINEER
NITSCH ENGINEERING
2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEFPF
BR+A CONSULTING ENGINEERS
10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

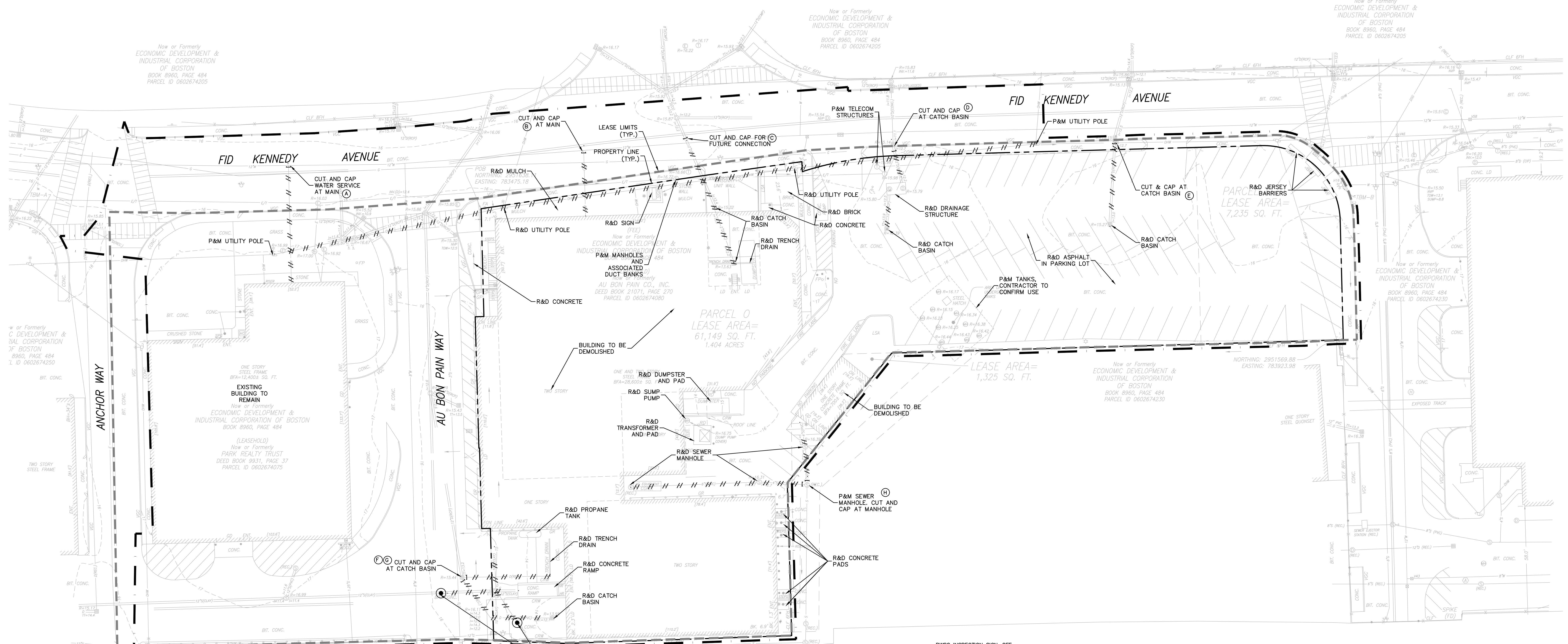
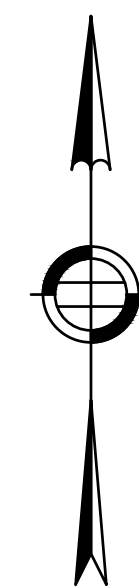
STRUCTURAL ENGINEER
MCNAMARA, SALVIA
101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-737-0040

BUILDING ENVELOPE
VIDARIS
250 DORCHESTER AVE.
BOSTON, MA 02127
617-288-8977

SUSTAINABILITY
THORNTON TOMASETTI
27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-4100

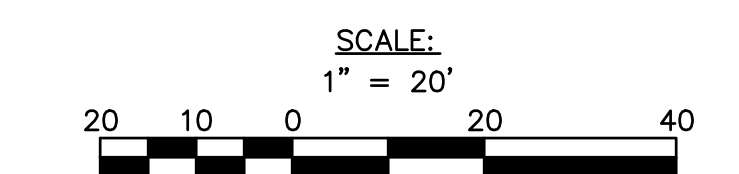
CODE CONSULTANT
CODE RED CONSULTANTS
154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-500-1633

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.
465 MEDFORD ST., SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389



BWSC INSPECTION SIGN-OFF

INSPECTOR	DATE	COMMENT	DYE TEST
(A) CUT AND CAP WATER SERVICE AT MAIN			N/A
(B) CUT AND CAP AT MAIN			
(C) CUT AND CAP FOR FUTURE CONNECTION			
(D) CUT AND CAP AT CATCH BASIN			
(E) CUT AND CAP AT CATCH BASIN			
(F) CUT AND CAP AT CATCH BASIN			
(G) CUT AND CAP AT CATCH BASIN			
(H) P&M SEWER MANHOLE, CUT AND CAP AT MANHOLE			



BWSC SITE PLAN #21
BWSC USE ONLY

SITE ADDRESS:
1 AU BON PAIN WAY
BOSTON, MA 02210

NEW BWSC ACCOUNT/METER NUMBER:
XXXXXXXX/XXXXXX

WARD / PARCEL NUMBER:
06/02674080

SITE USE:
COMMERCIAL (C)

OWNER CONTACT INFORMATION:
ERIC EWER
BEACON CAPITAL PARTNERS
200 STATE ST
BOSTON, MA 02109

SEAL / SIGNATURE



© Spagnolo Gieness & Associates, Inc. 05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

SHEET TITLE:
UTILITY DEMOLITION PLAN

C-100

PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT
COPLEY WOLFF DESIGN GROUP

10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-9000

CIVIL ENGINEER
NITSCH ENGINEERING

2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEFPF
BR+A CONSULTING ENGINEERS

10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

STRUCTURAL ENGINEER
MCNAMARA.SALVIA

101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-737-0040

BUILDING ENVELOPE
VIDARIS

250 DORCHESTER AVE.
BOSTON, MA 02127
617-288-8977

SUSTAINABILITY
THORNTON TOMASETTI

27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-1100

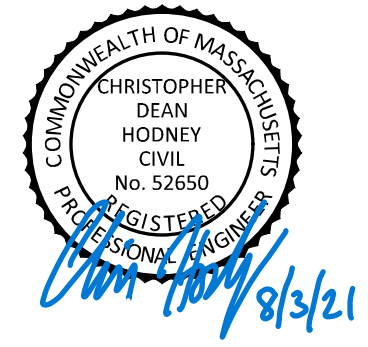
CODE CONSULTANT
CODE RED CONSULTANTS

154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-500-1833

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.

465 MEDFORD ST., SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389

SEAL / SIGNATURE



© Spagnolo Gieness & Associates, Inc.
05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

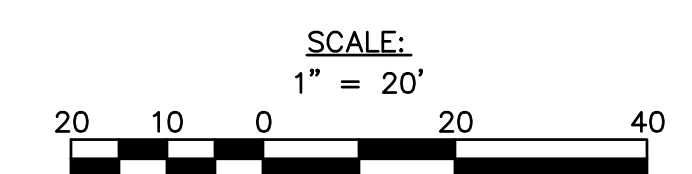
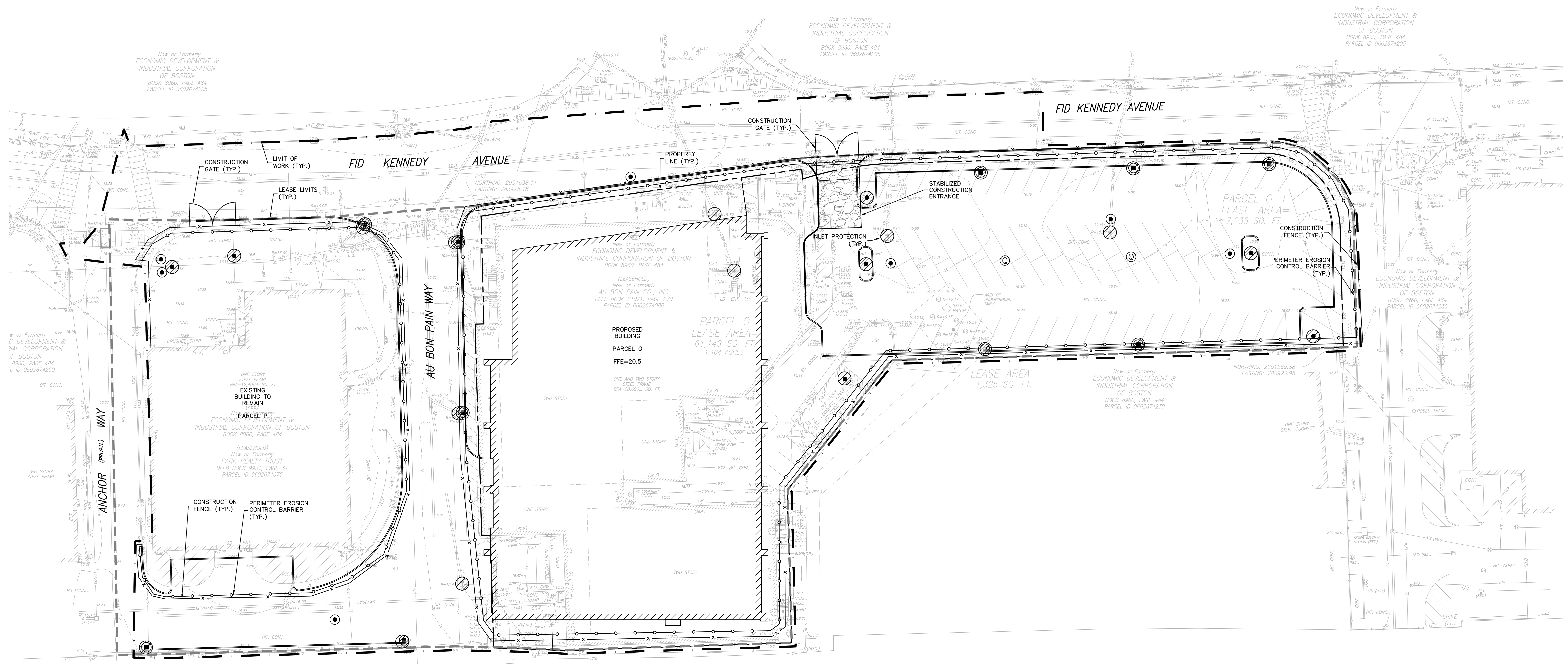
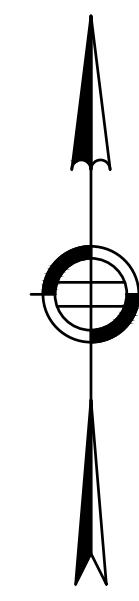
No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

SHEET TITLE:
EROSION CONTROL PLAN



PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-6200

LANDSCAPE ARCHITECT
COPLEY WOLFF DESIGN GROUP
10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-9000

CIVIL ENGINEER
NITSCH ENGINEERING
2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEFPF
BR+A CONSULTING ENGINEERS
10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

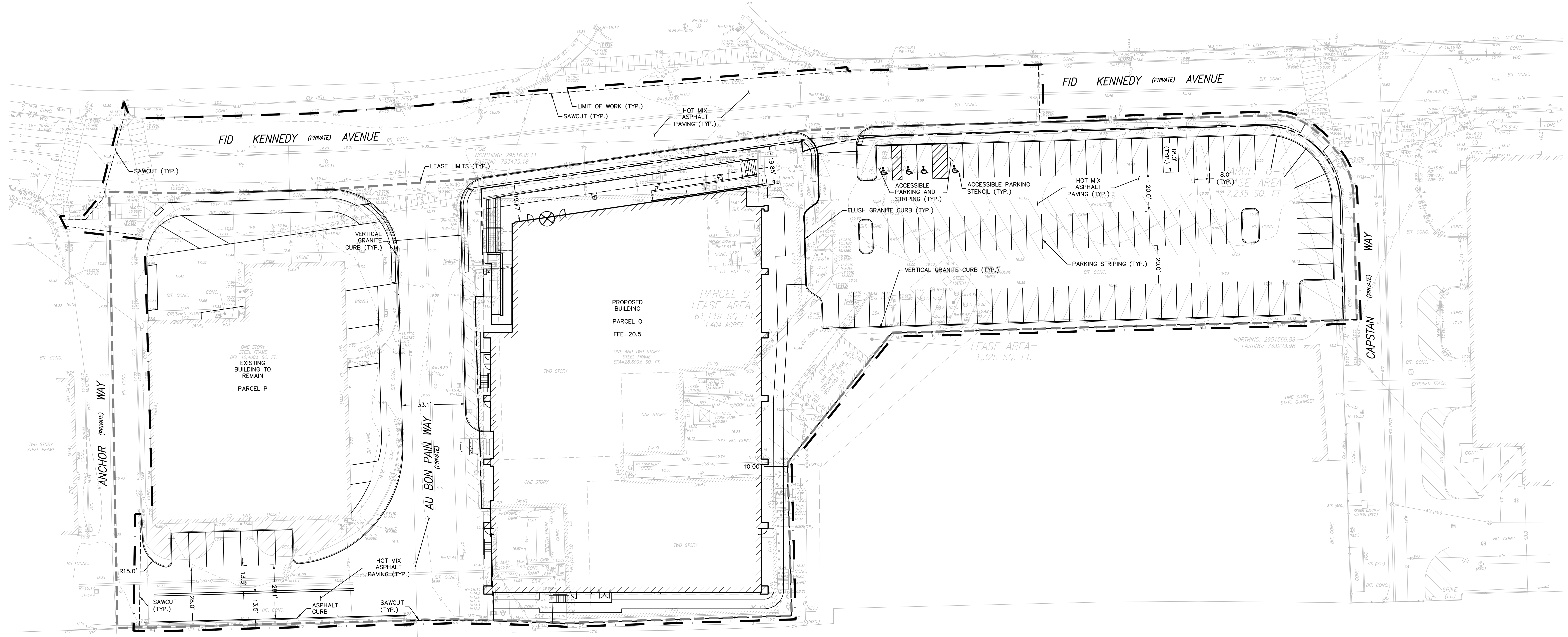
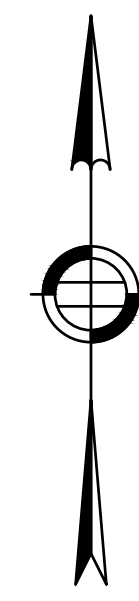
STRUCTURAL ENGINEER
MCNAMARA, SALVIA
101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-237-0400

BUILDING ENVELOPE
VIDARIS
250 DORCHESTER AVE.
BOSTON, MA 02127
617-288-8977

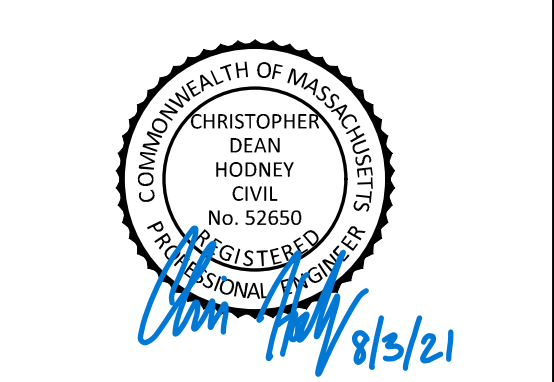
SUSTAINABILITY
THORNTON TOMASETTI
27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-4100

CODE CONSULTANT
CODE RED CONSULTANTS
154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-569-1633

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.
465 MEDFORD ST., SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389



SEAL / SIGNATURE



© Spagnolo Gieness & Associates, Inc.
05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

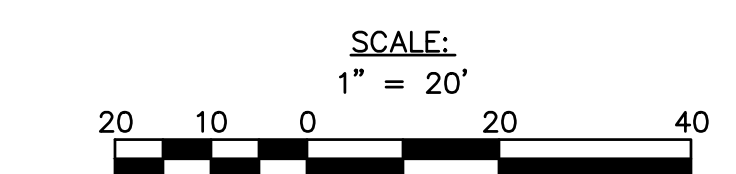
No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

SHEET TITLE:
CIVIL LAYOUT PLAN



PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT
COPLEY WOLFF DESIGN GROUP
10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-0000

CIVIL ENGINEER
NITSCH ENGINEERING
2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEPPP
BR+A CONSULTING ENGINEERS
10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

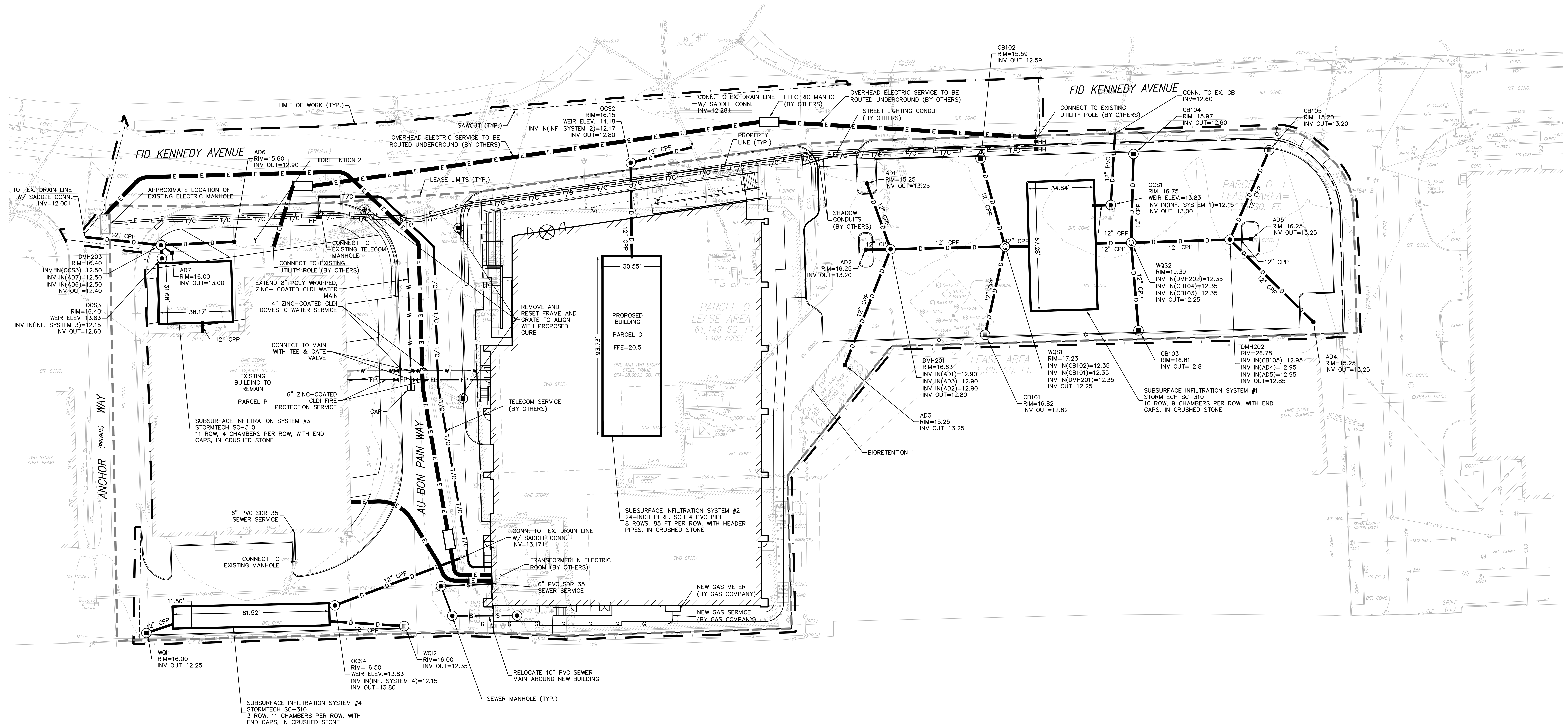
STRUCTURAL ENGINEER
MCNAMARA, SALVIA
101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-737-0040

BUILDING ENVELOPE
VIDARIS
250 DORCHESTER AVE.
BOSTON, MA 02127
617-288-8977

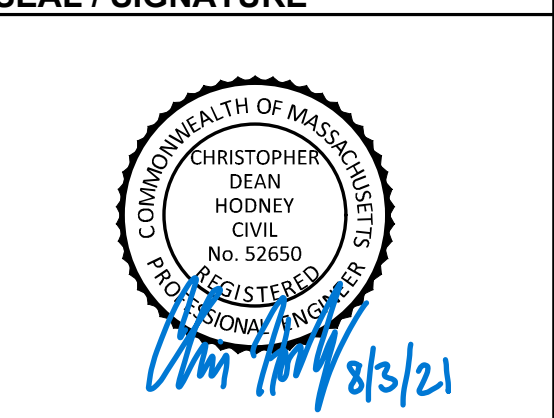
SUSTAINABILITY
THORNTON TOMASETTI
27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-4100

CODE CONSULTANT
CODE RED CONSULTANTS
154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-500-1633

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.
465 MEDFORD ST., SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389



SEAL / SIGNATURE



© Spagnolo Glenshaw & Associates, Inc.
05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA
Parcel P
3 Anchor Way
Boston, MA
Marcus Partners

REVISIONS:

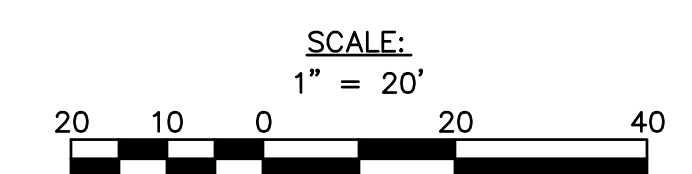
No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YALA
CHECKED BY CDH

SHEET TITLE:
SITE CIVIL UTILITIES



PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT
COPLEY WOLFF DESIGN GROUP
10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-0000

CIVIL ENGINEER
NITSCH ENGINEERING
2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEFPF
BR+A CONSULTING ENGINEERS
10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

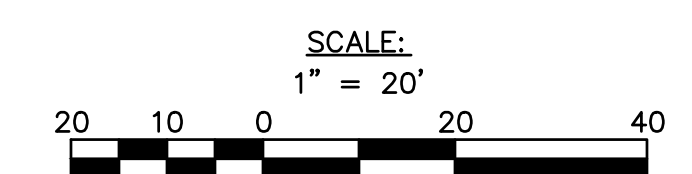
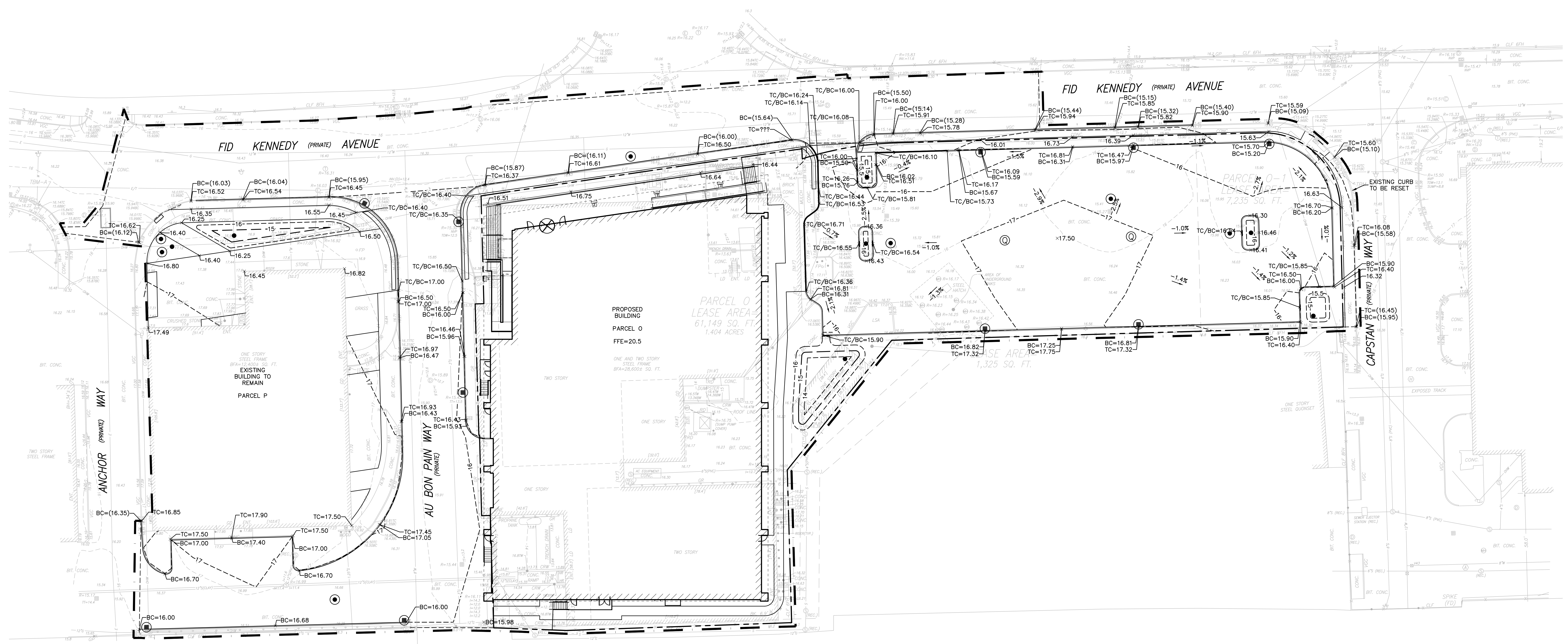
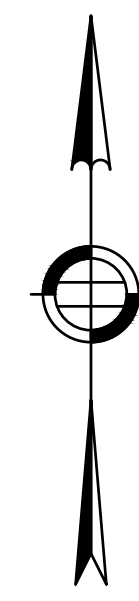
STRUCTURAL ENGINEER
MCNAMARA, SALVIA
101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-237-0040

BUILDING ENVELOPE
VIDARIS
250 DORCHESTER AVE.
BOSTON, MA 02127
617-288-8977

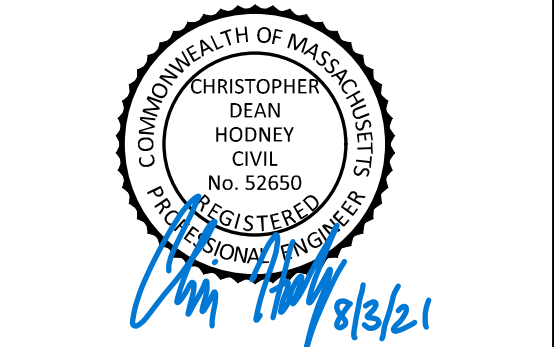
SUSTAINABILITY
THORNTON TOMASETTI
27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-1100

CODE CONSULTANT
CODE RED CONSULTANTS
154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-503-1533

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.
465 MEDFORD ST., SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389



SEAL / SIGNATURE



© Spagnolo Glens & Associates, Inc.
05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA
Parcel P
3 Anchor Way
Boston, MA
Marcus Partners

REVISIONS:

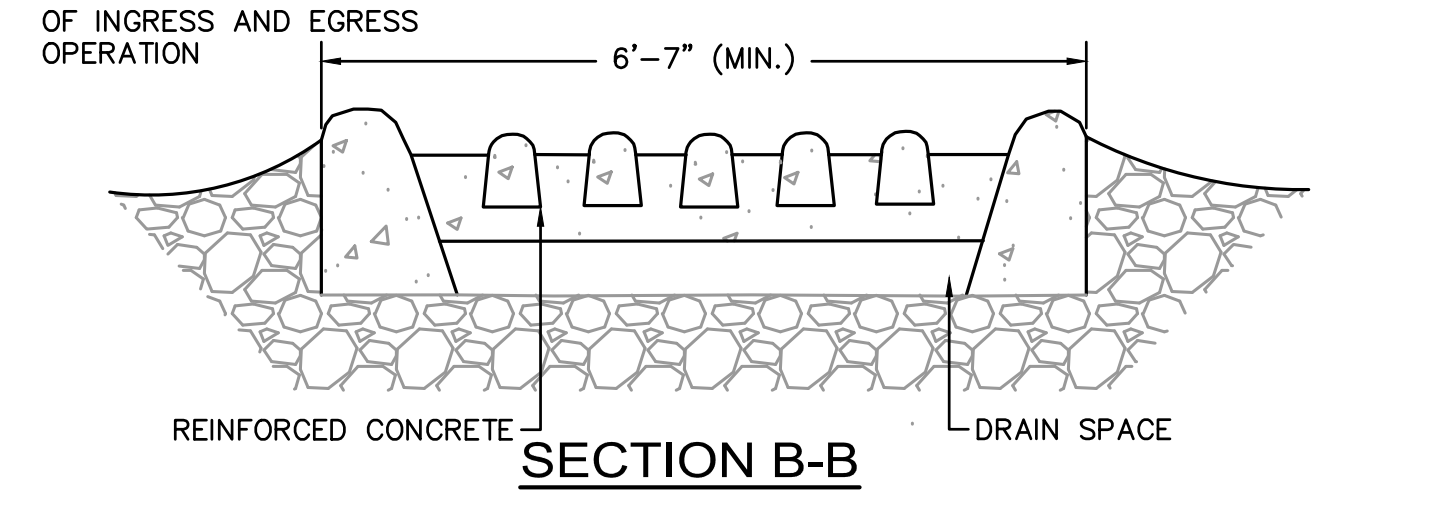
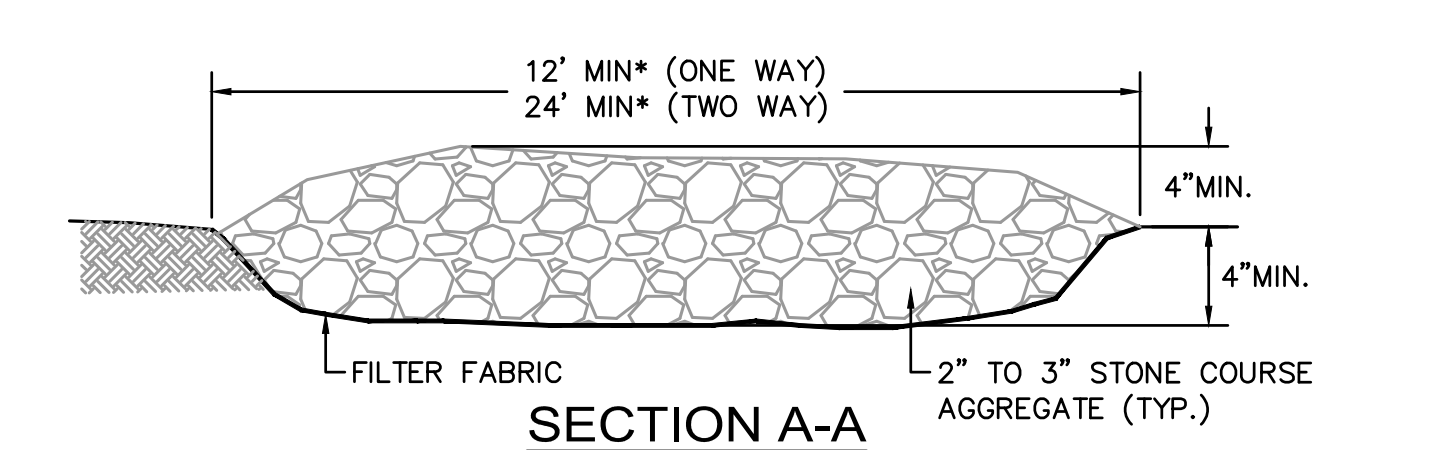
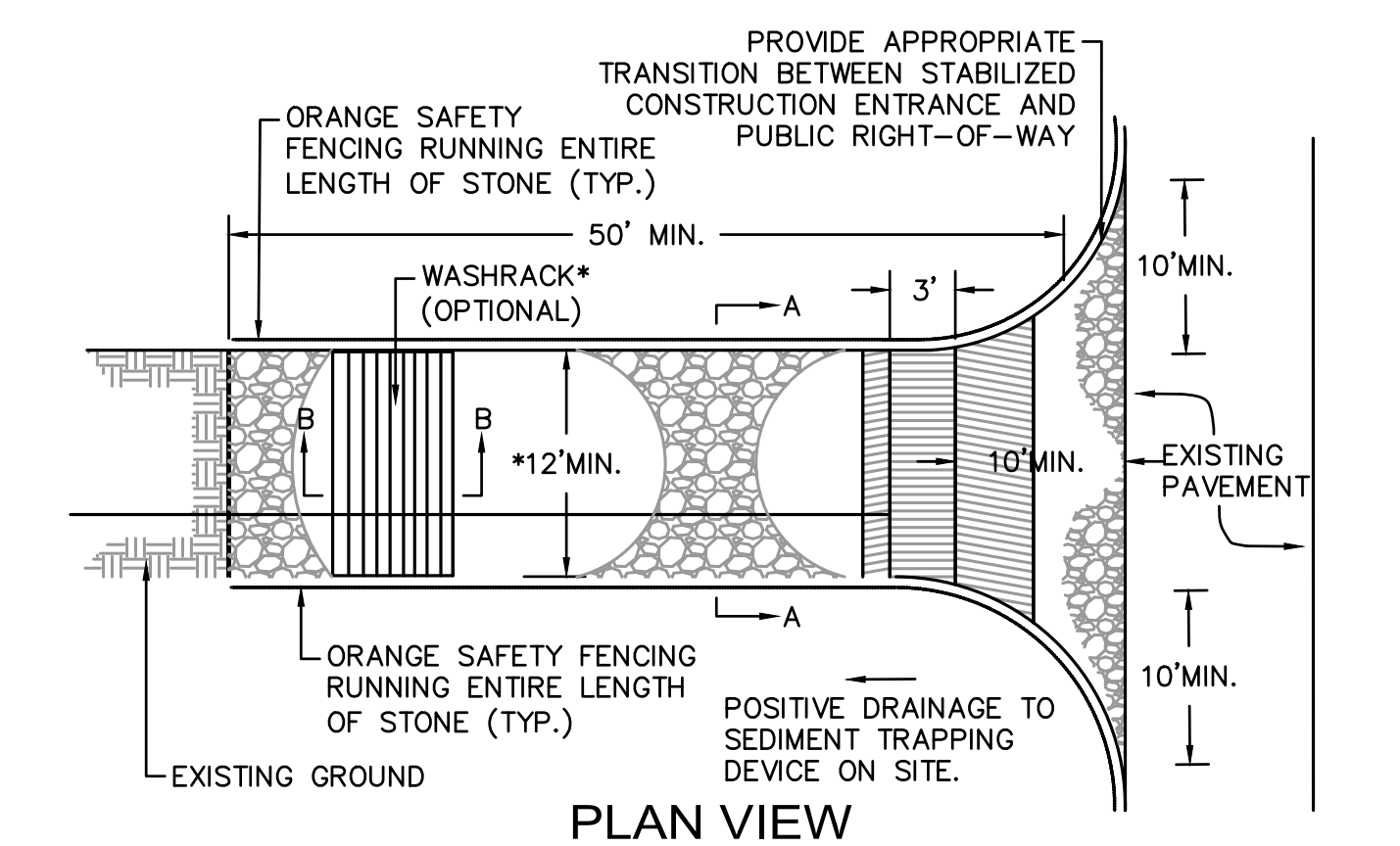
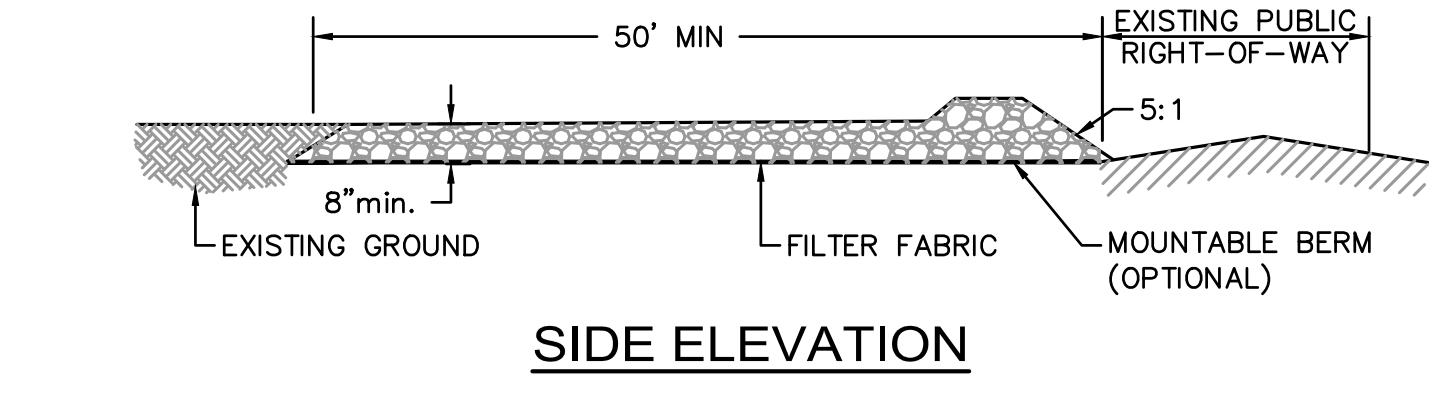
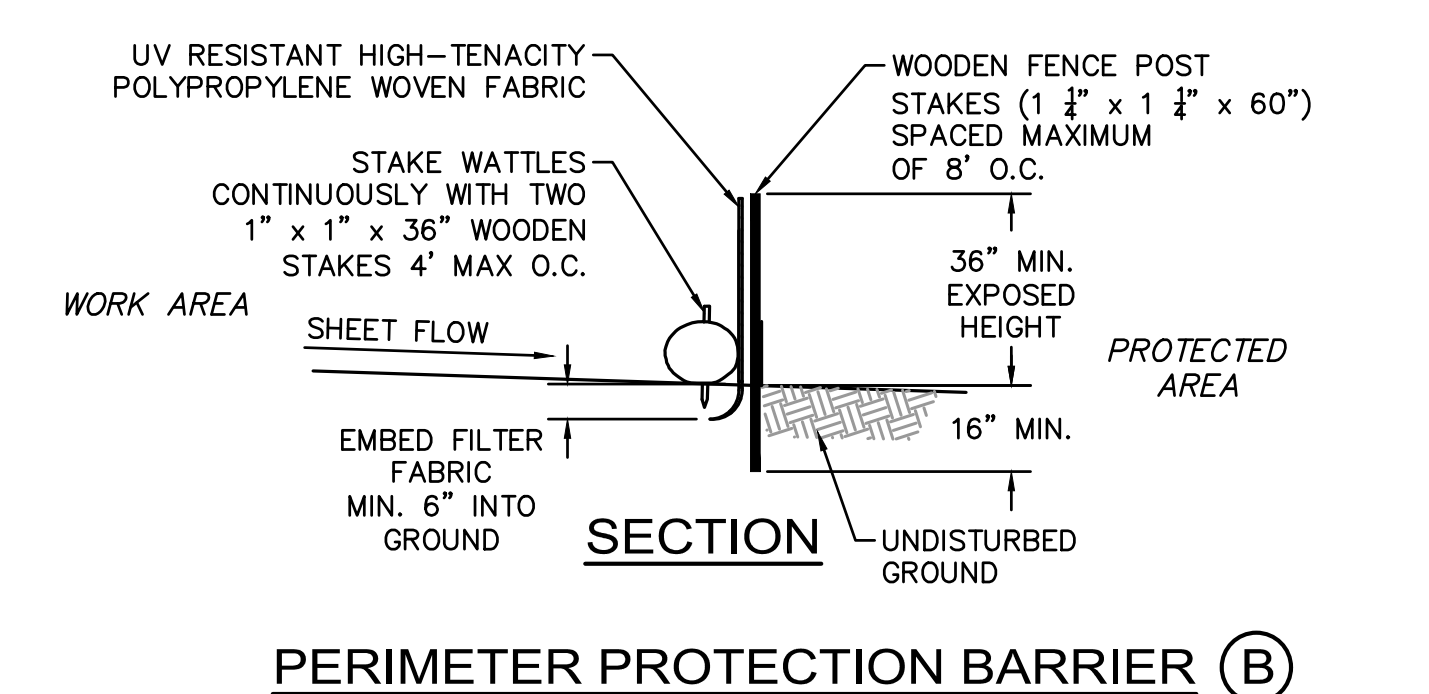
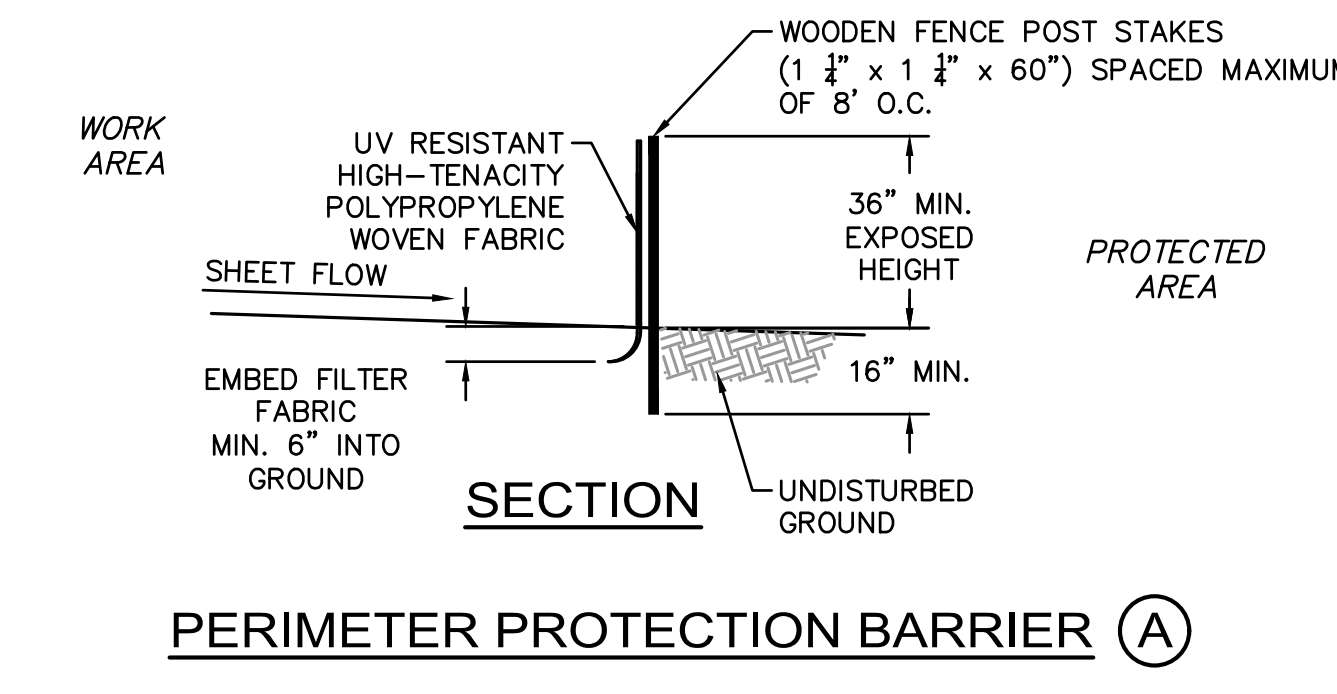
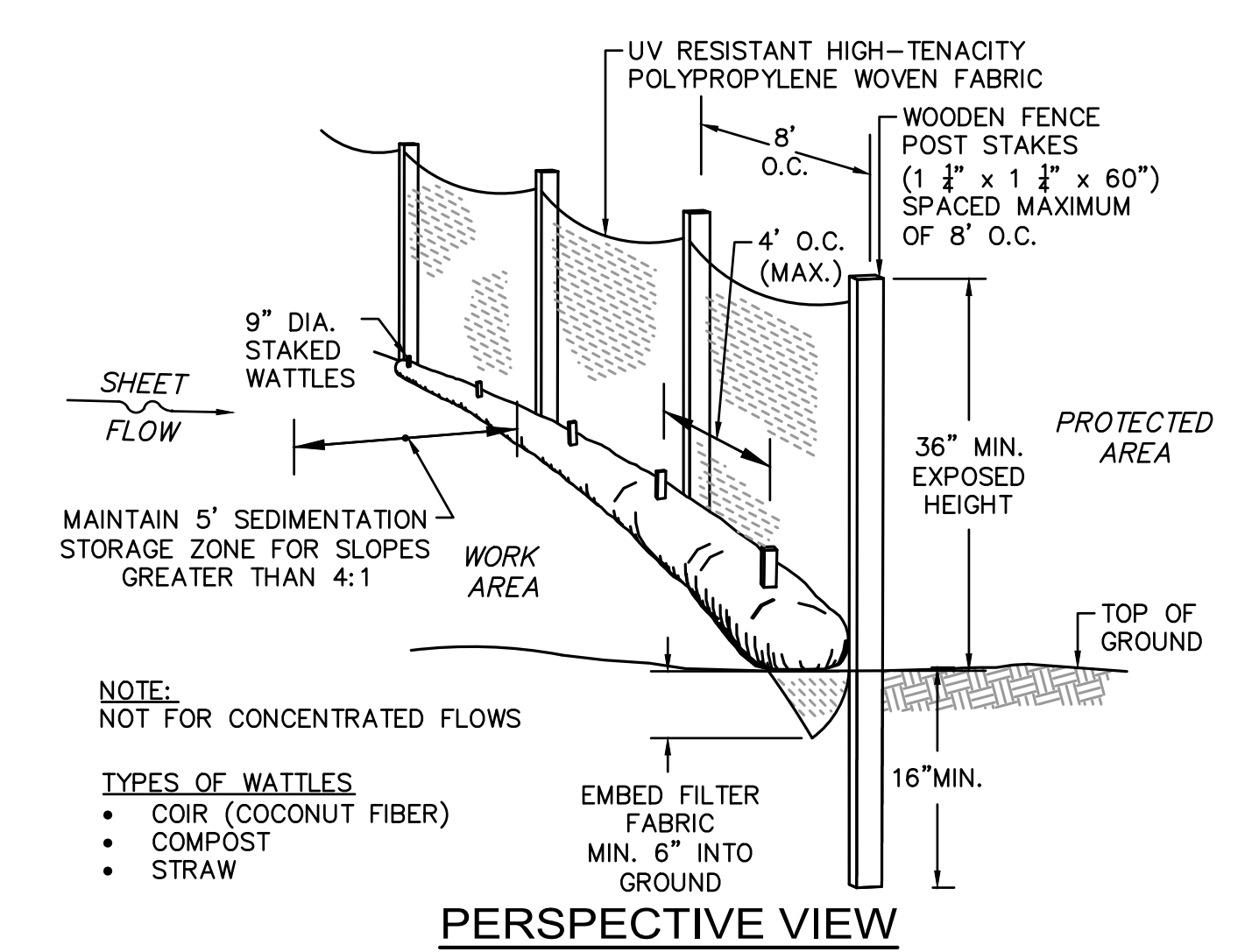
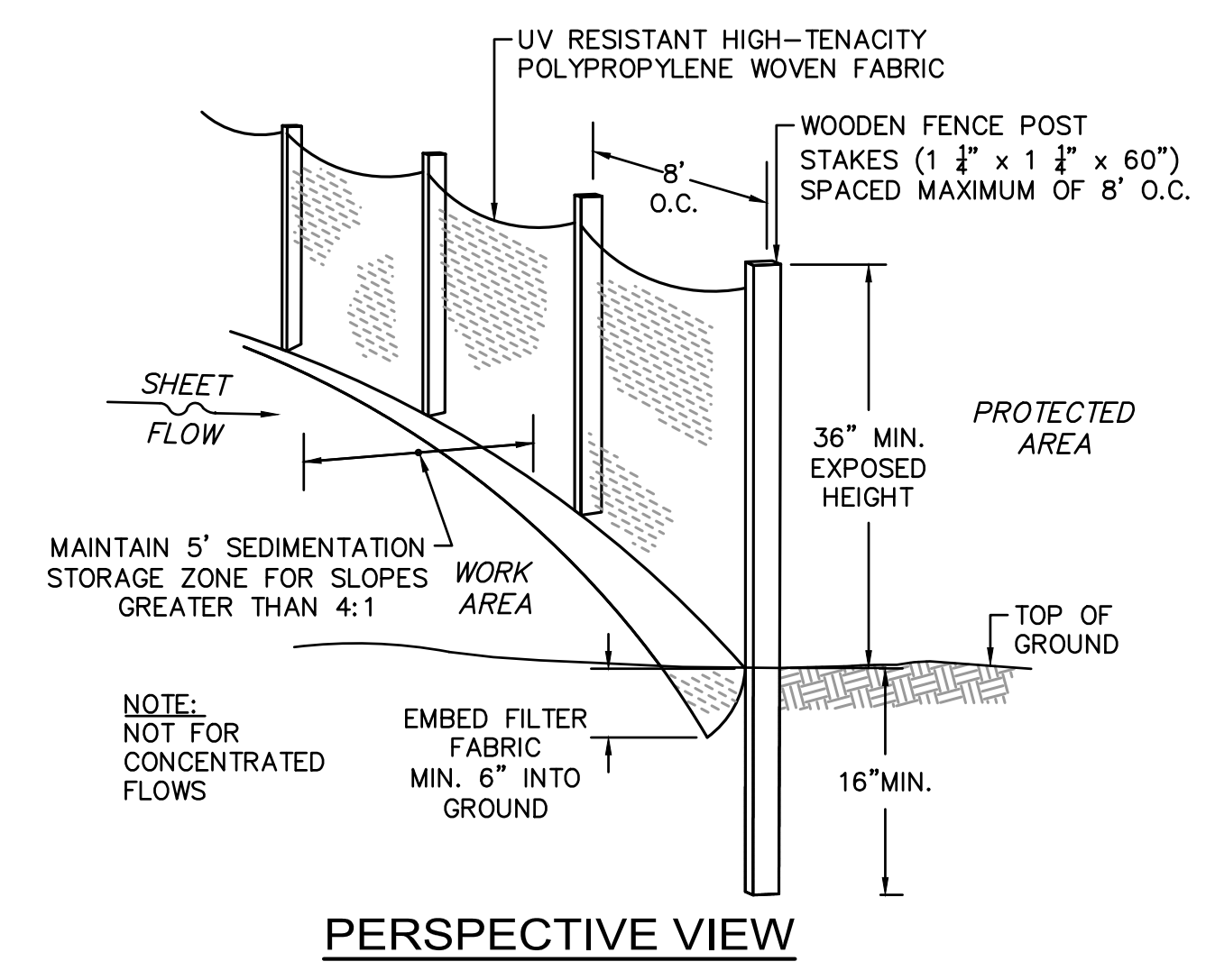
No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

SHEET TITLE:
CIVIL GRADING PLAN



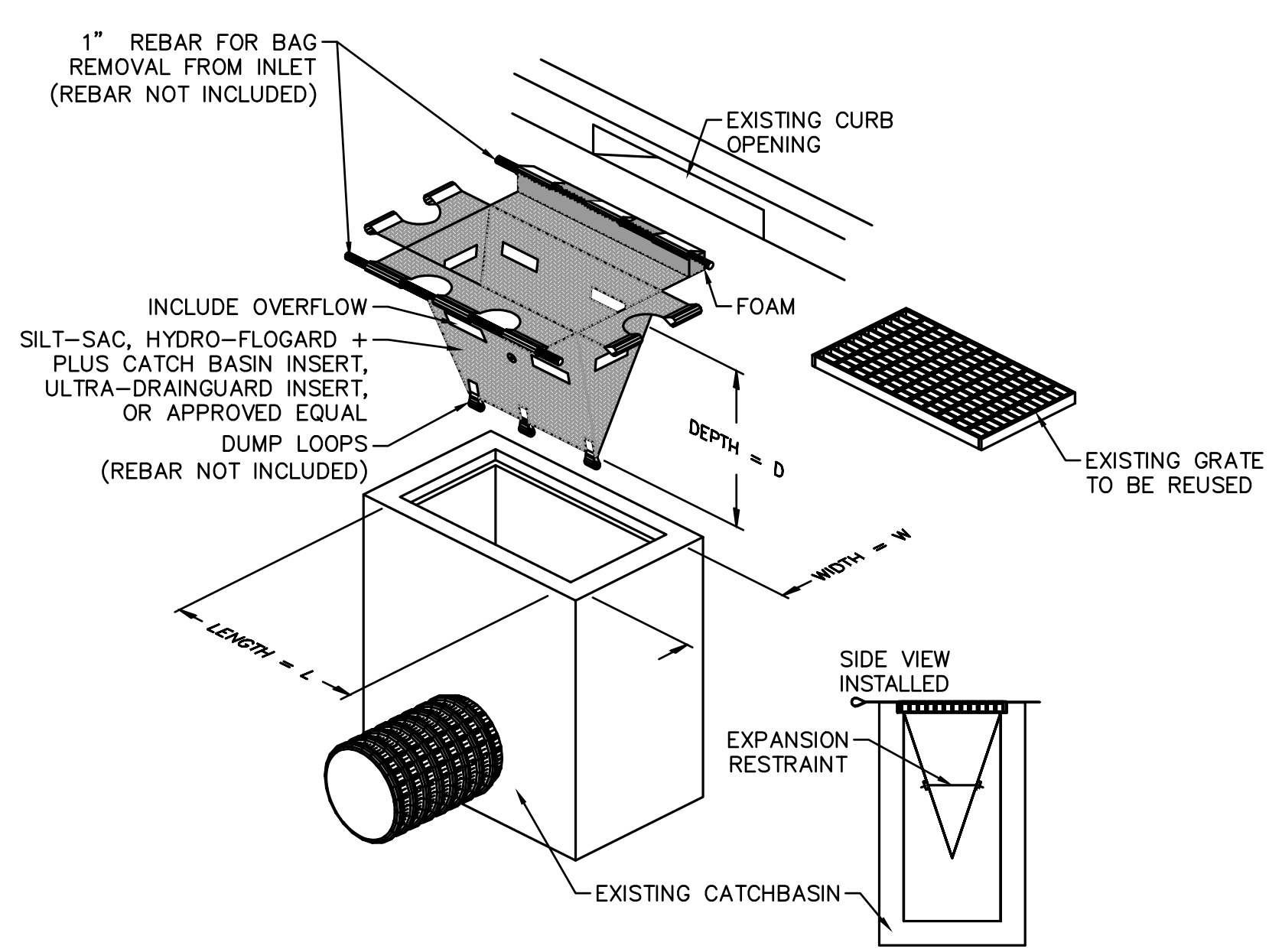
CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS
LENGTH - GREATER THAN OR EQUAL TO 50 FEET
WIDTH - TWELVE FOOT MINIMUM (ONE WAY), TWENTY FOUR FOOT MINIMUM (TWO WAY), BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

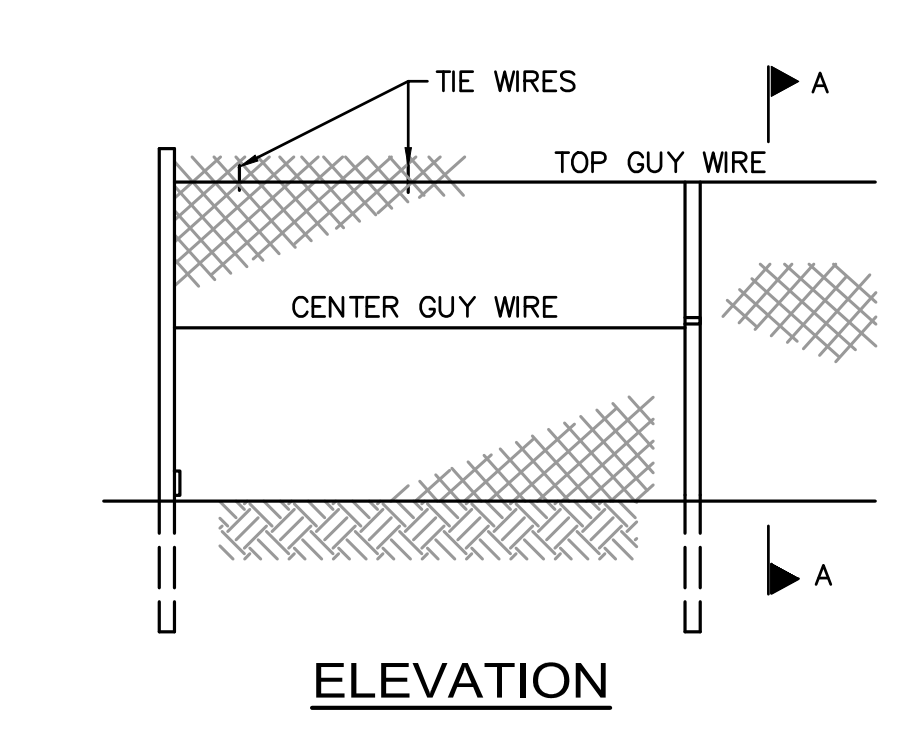
THICKNESS - 8"
PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

STABILIZED CONSTRUCTION ENTRANCE

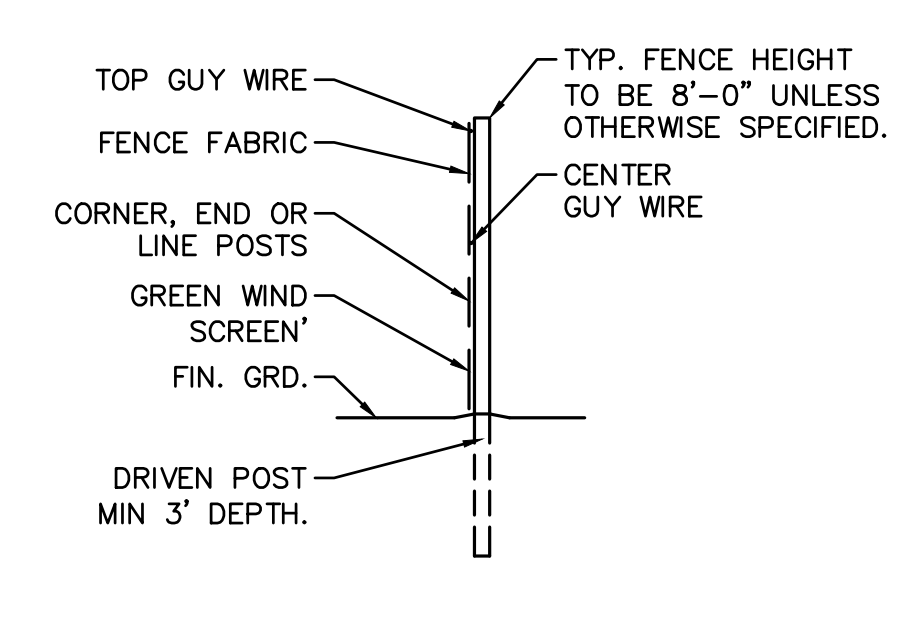


THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS SHEET, OVERLAND OR CONCENTRATED FLOWS (NOT GREATER THAN 1 CFS). THE METHOD CAN DRAIN FLAT AREA TO STEEP SLOPES. INLET CAPACITY WILL BE DECREASED WITH THIS METHOD AND THE CONTRACTOR SHALL EXPECT FLOODING DURING HIGH FLOW EVENTS.

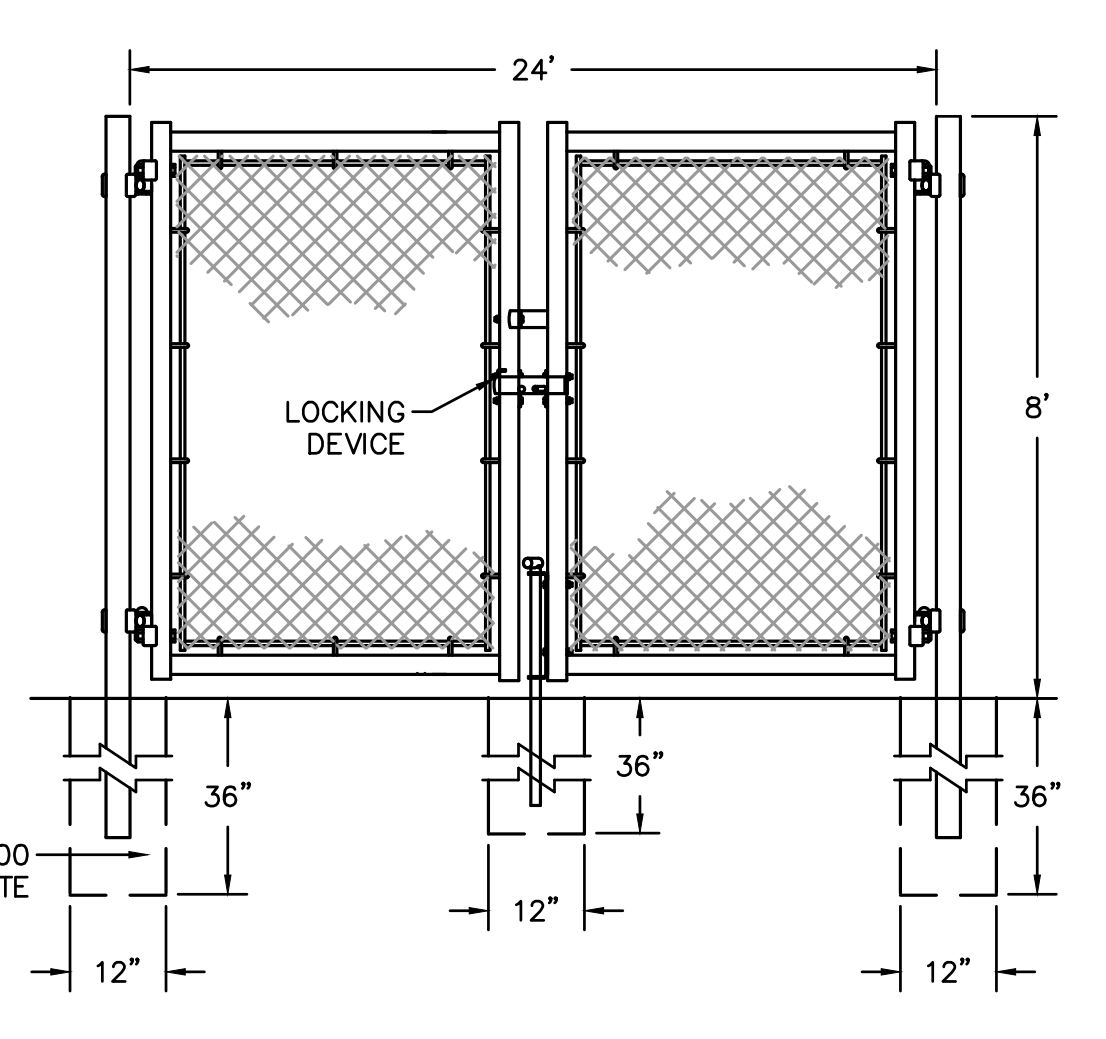
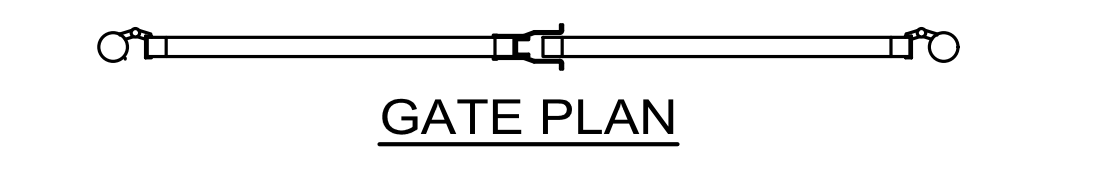
INLET PROTECTION (2)
CATCH BASIN W/ SILTATION SACK
NOT TO SCALE



- CONSTRUCTION FENCE AND GATE NOTES**
- FABRIC SHALL BE 0.148" WIRE, WOVEN INTO APPROXIMATELY 2" DIAMOND MESH.
 - THE FENCE FABRIC SHALL BE ZINC COATED STEEL OR ALUMINUM COATED STEEL.
 - FENCE POSTS SHALL RECEIVE THE SAME COATING AND TREATMENT AS THE FENCE FABRIC (DESCRIBED ABOVE).
 - THE CONTRACTOR SHALL ADD A GREEN WIND SCREEN
 - LINE POSTS SHALL BE 2 1/2" O.D. END OR CORNER POSTS SHALL BE 3" O.D.
 - THE CONTRACTOR IS RESPONSIBLE FOR SURFACE RESTORATION ONCE THE FENCE IS REMOVED.
 - THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE TEMPORARY CONSTRUCTION FENCE AT THE CONCLUSION OF THE PROJECT.



CHAIN LINK CONSTRUCTION FENCE
NOT TO SCALE



24' WIDE DOUBLE GATE
NOT TO SCALE

SEAL / SIGNATURE



© Spagnolo Glens & Associates, Inc.
05/18/2021

PROJECT:
Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

SHEET TITLE:
CIVIL DETAILS

C-600

NITSCH PROJECT #14306

PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT
COPLEY WOLFF DESIGN GROUP
10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-0000

CIVIL ENGINEER
NITSCH ENGINEERING
2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEPPP
BR+A CONSULTING ENGINEERS
10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

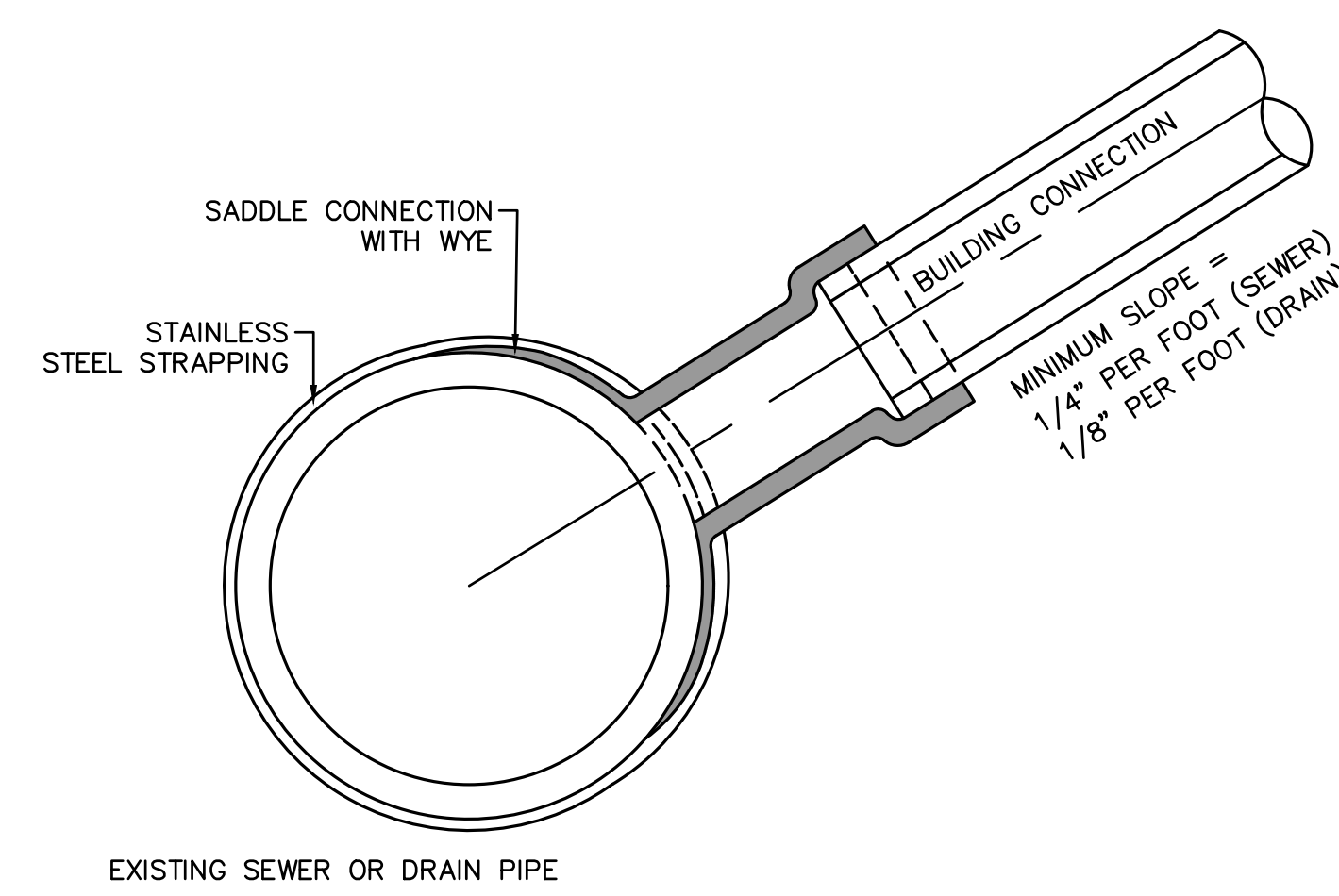
STRUCTURAL ENGINEER
MCNAMARA, SALVIA
101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-737-0040

BUILDING ENVELOPE
VIDARIS
250 DORCHESTER AVE.
BOSTON, MA 02127
617-288-8977

SUSTAINABILITY
THORNTON TOMASETTI
27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-4100

CODE CONSULTANT
CODE RED CONSULTANTS
154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-560-1633

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.
465 MEDFORD ST., SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389



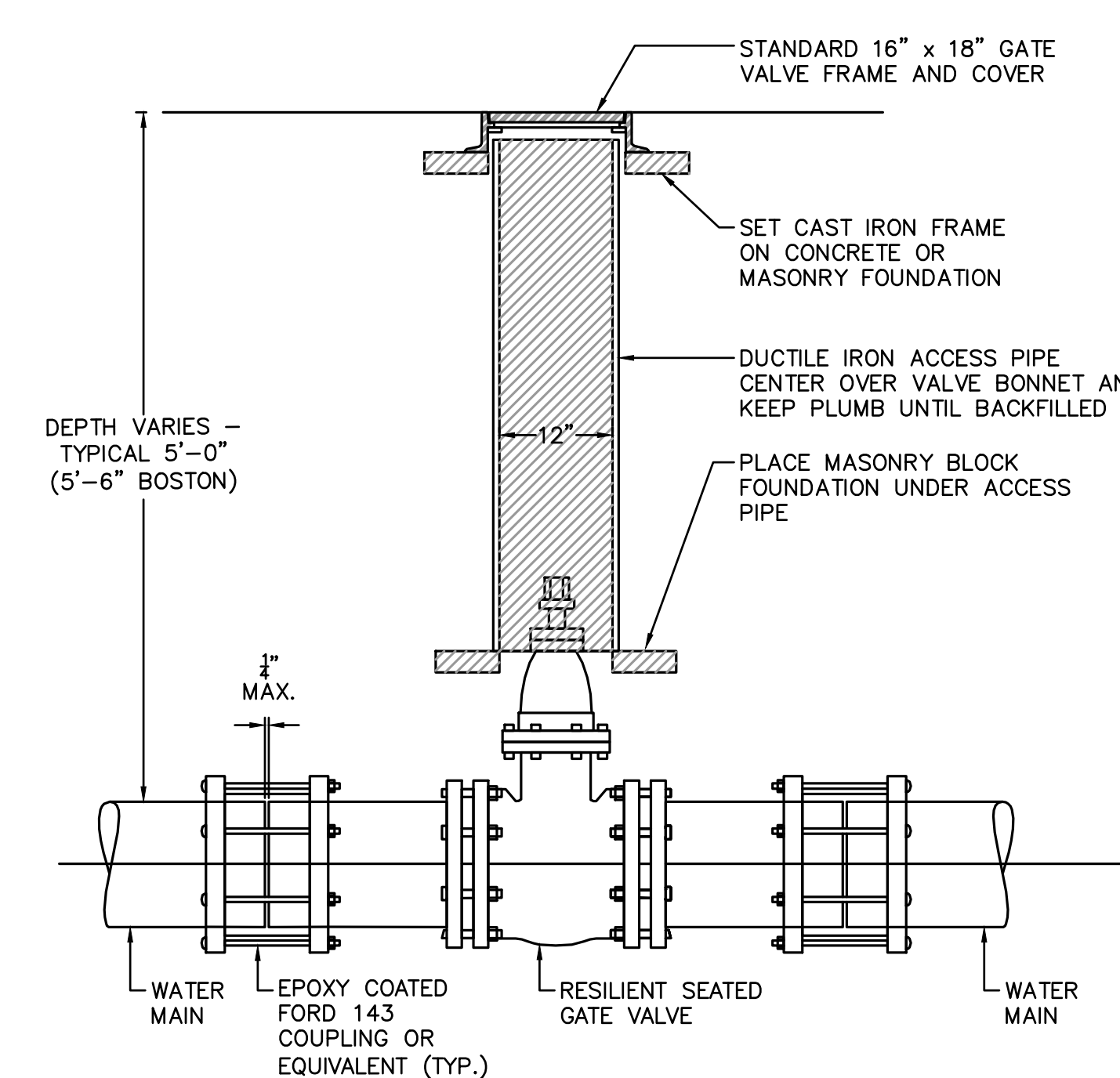
EXISTING SEWER OR DRAIN PIPE

NOTES:

1. FULL PVC OR IRON SADDLE MAY BE USED TO CONNECT TO EXISTING PVC, CLAY, CONCRETE OR IRON PIPE.
2. SADDLES MUST HAVE RUBBER GASKETS AND SHALL BE TIGHTENED WITH STRAPS. SADDLES WILL NOT BE CEMENTED ONTO THE PIPE.
3. FULL WYE CONNECTION FITTINGS MAY BE USED.
4. PIPE SHALL BE CUT TO CONFORM TO THE OPENING IN THE SADDLE.
5. CONNECTIONS DIRECTLY INTO THE EXISTING PIPE WITHOUT A SADDLE OR A FULL WYE FITTING ARE NOT ALLOWED.

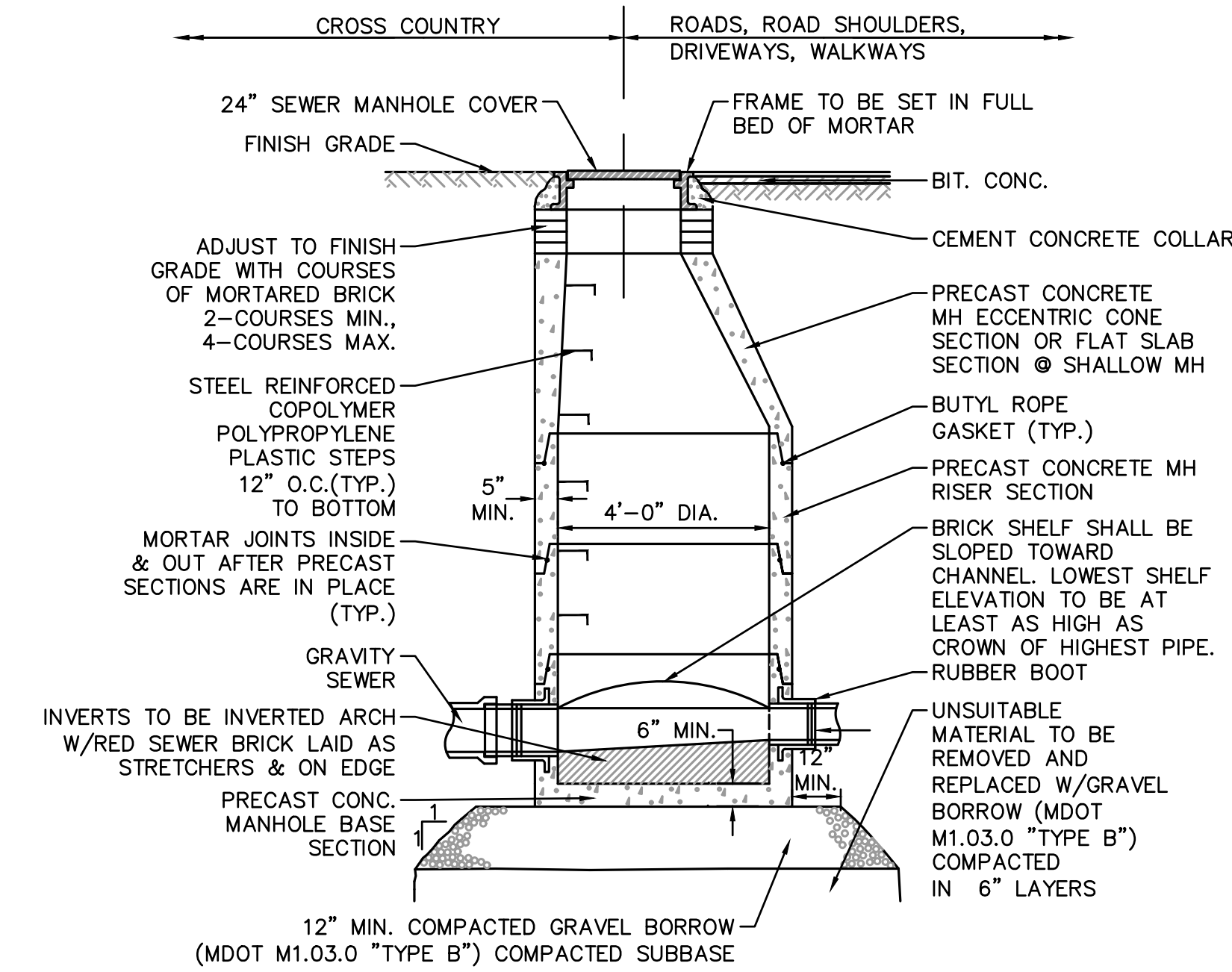
TYPICAL SADDLE CONNECTION DETAIL TO EXISTING DRAIN OR SEWER (6\"/>

NOT TO SCALE



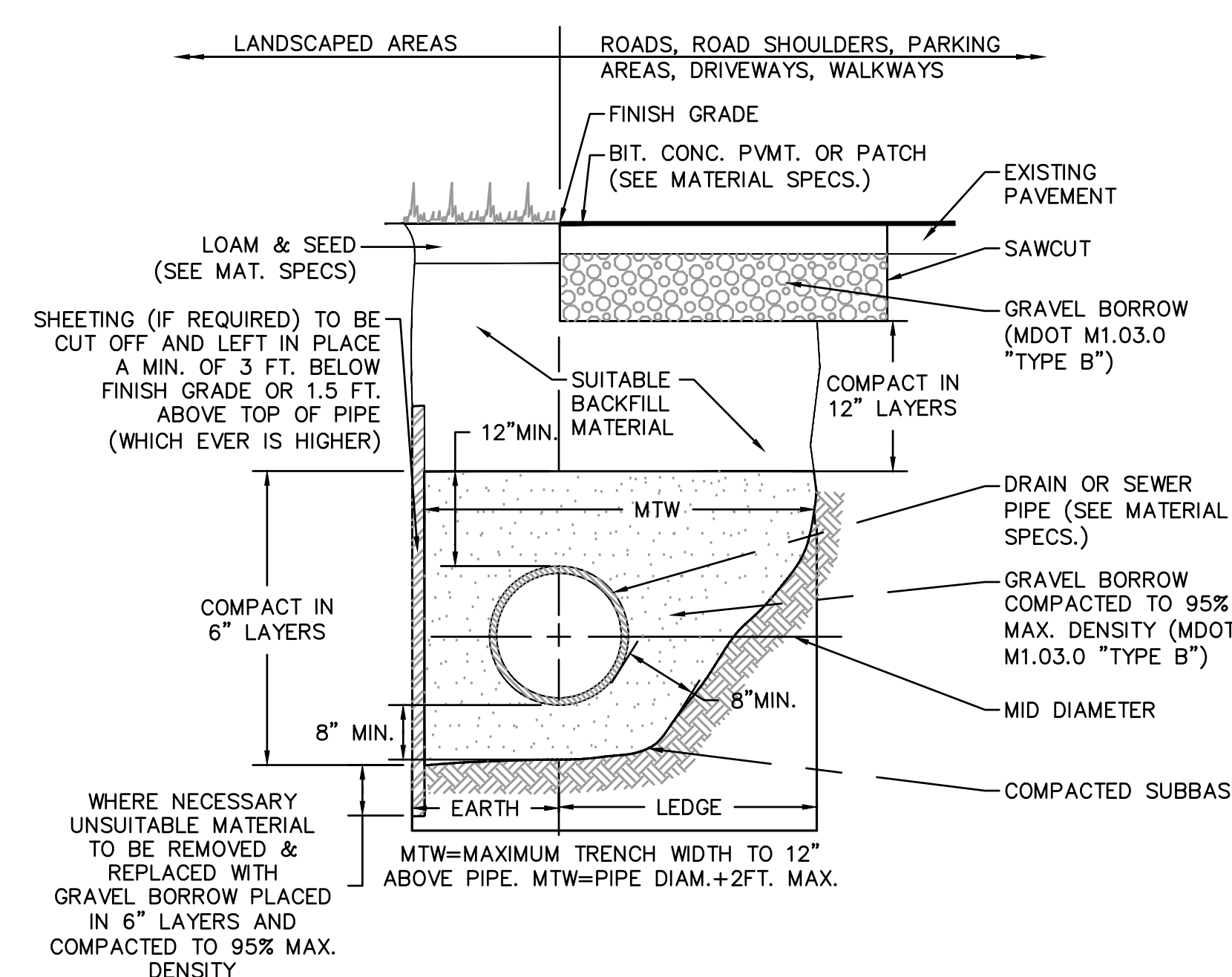
GATE VALVE DETAIL

NOT TO SCALE



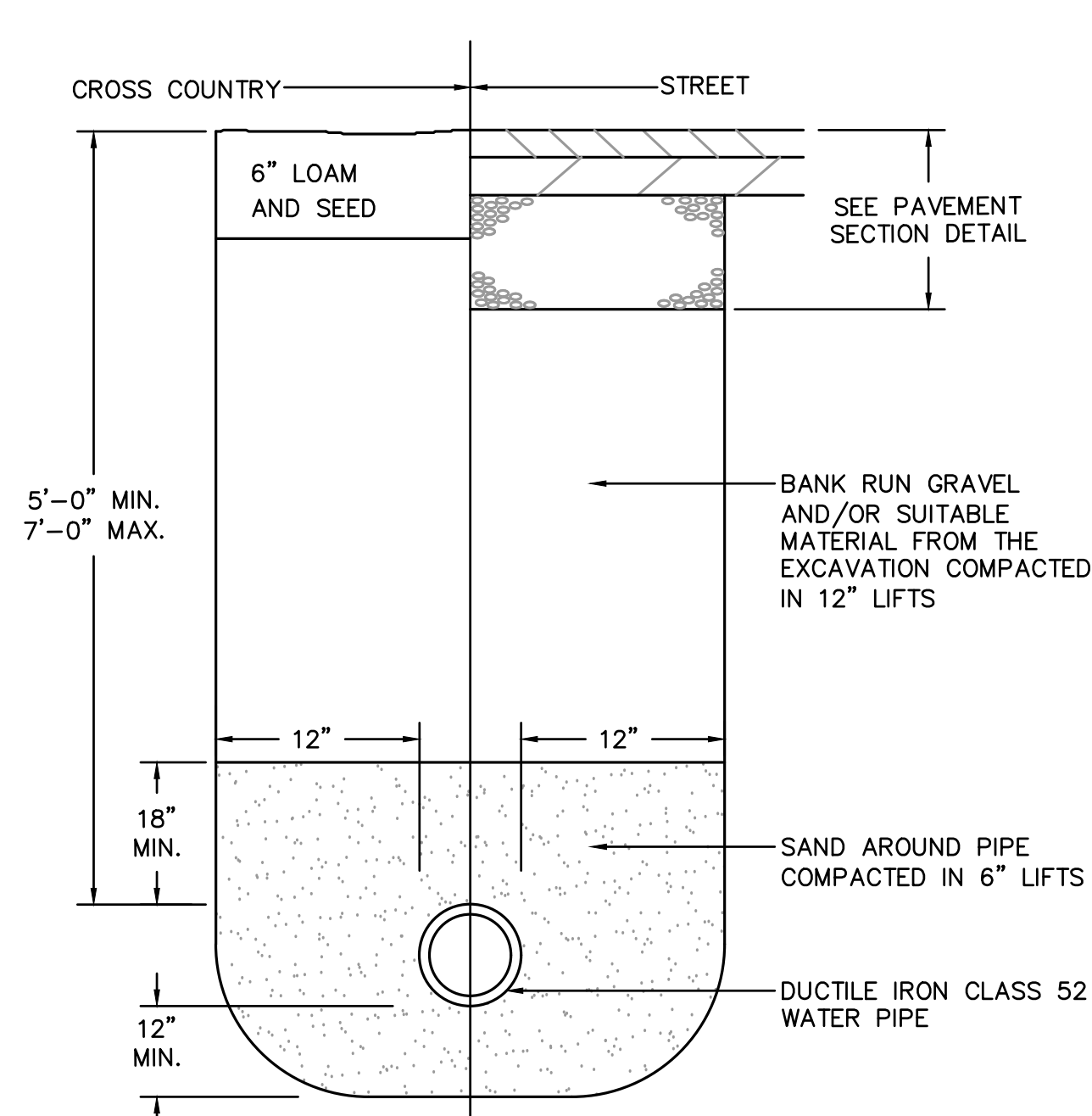
TYPICAL SEWER MANHOLE DETAIL

NOT TO SCALE



STANDARD TRENCH DETAIL FOR UTILITY PIPE

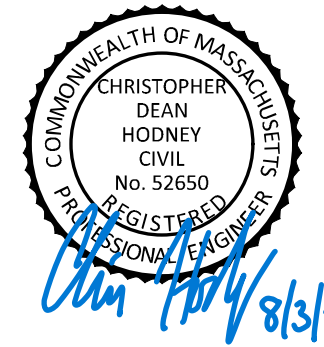
NOT TO SCALE



WATER TRENCH DETAIL

NOT TO SCALE

SEAL / SIGNATURE



© Spagnolo Glens & Associates, Inc. 05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

No.	Date	Description

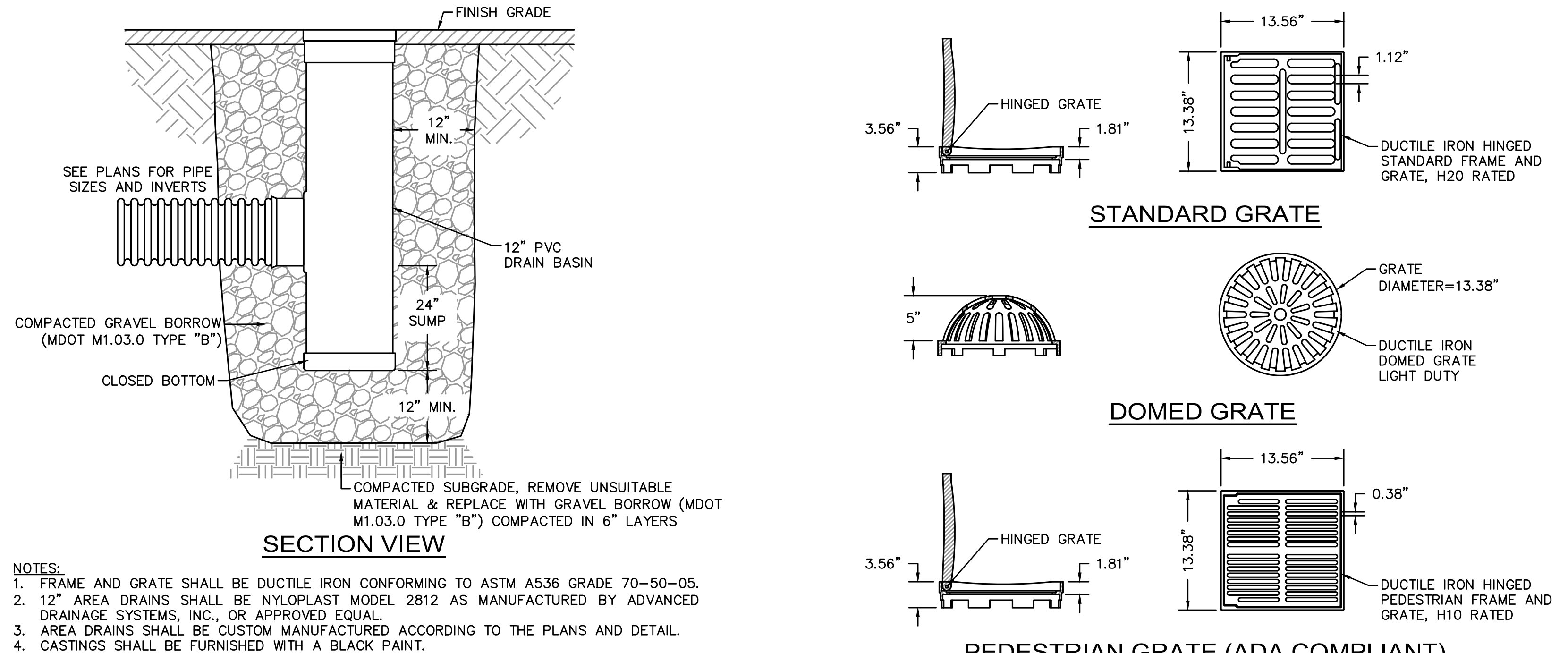
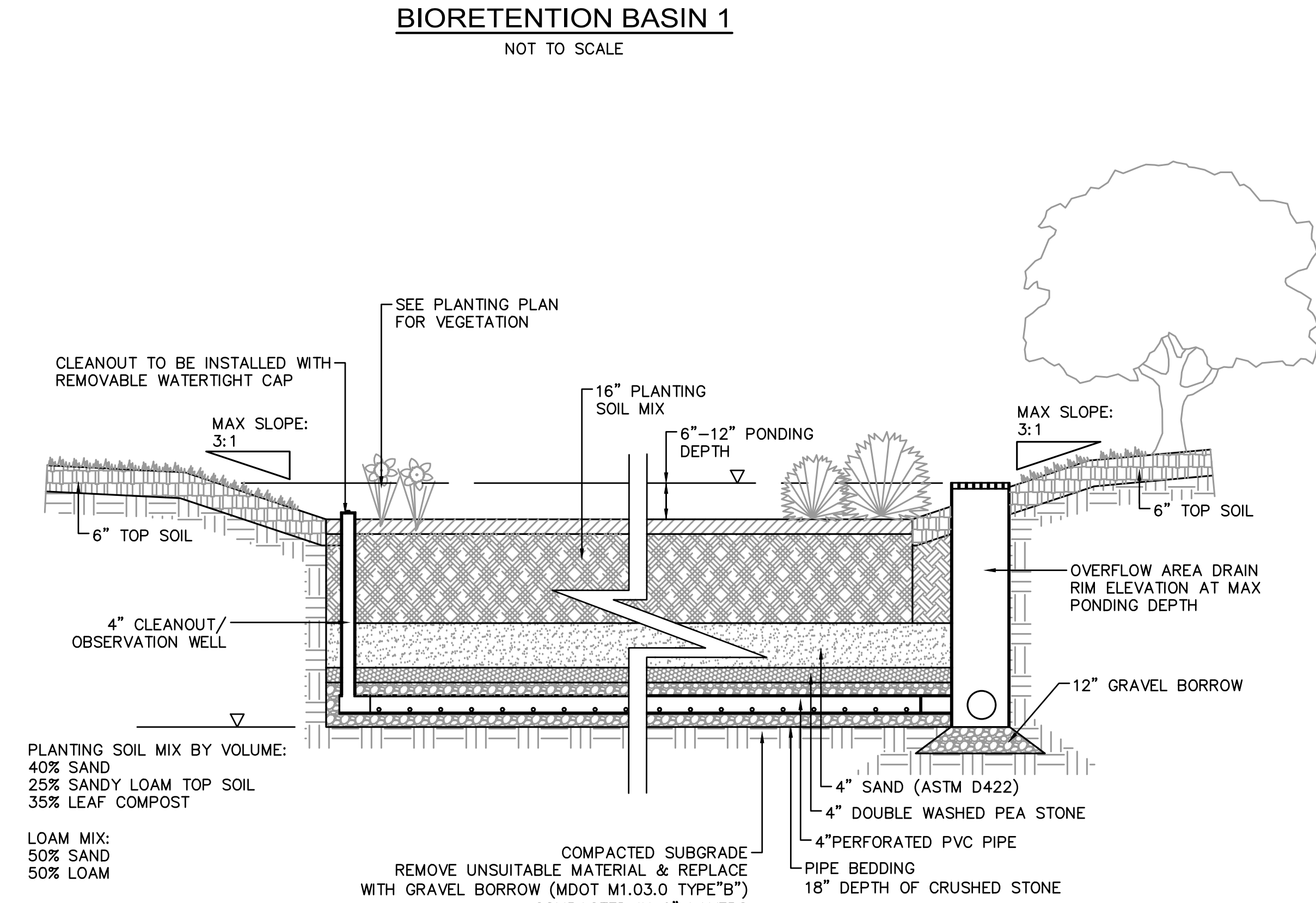
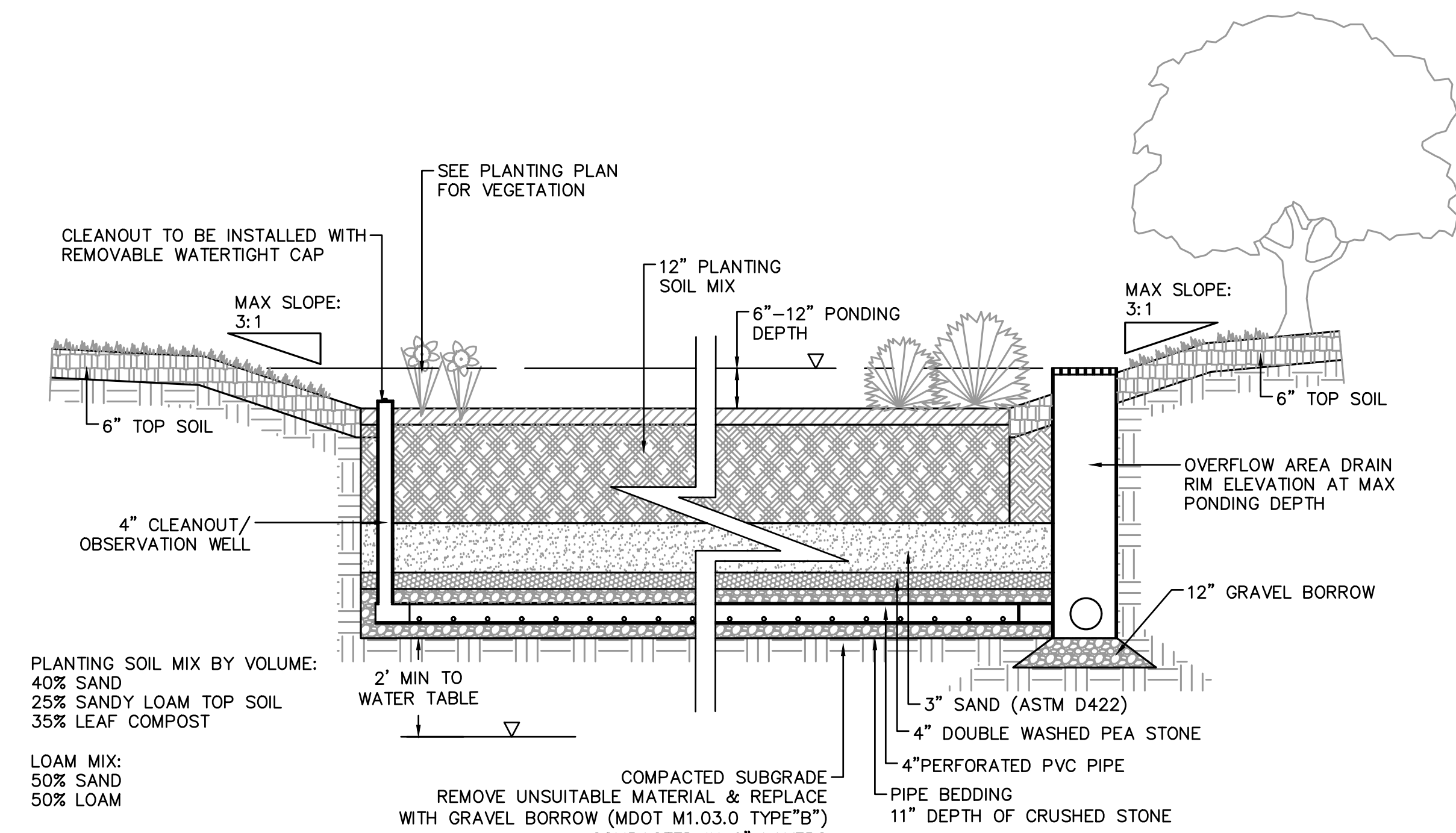
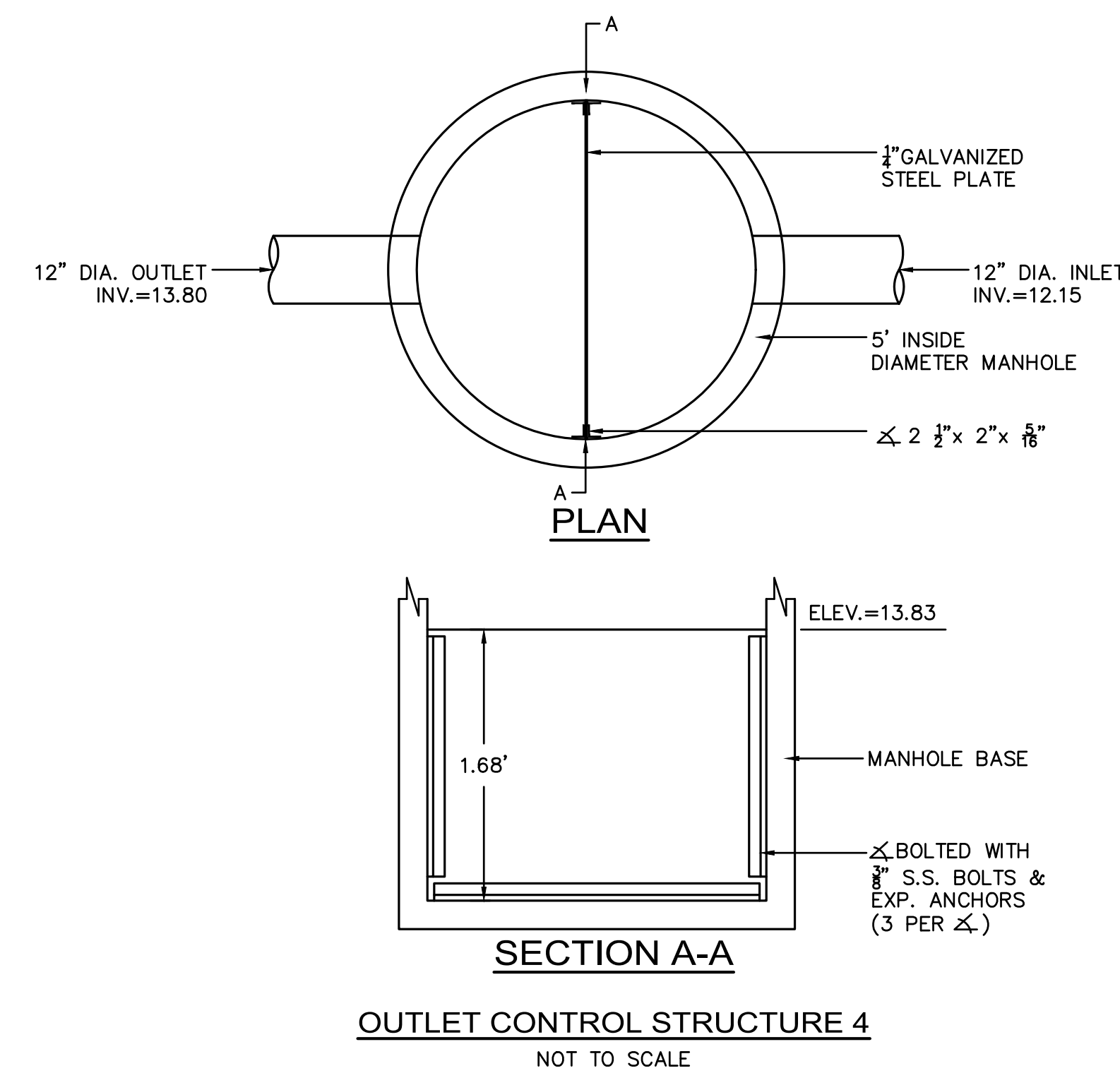
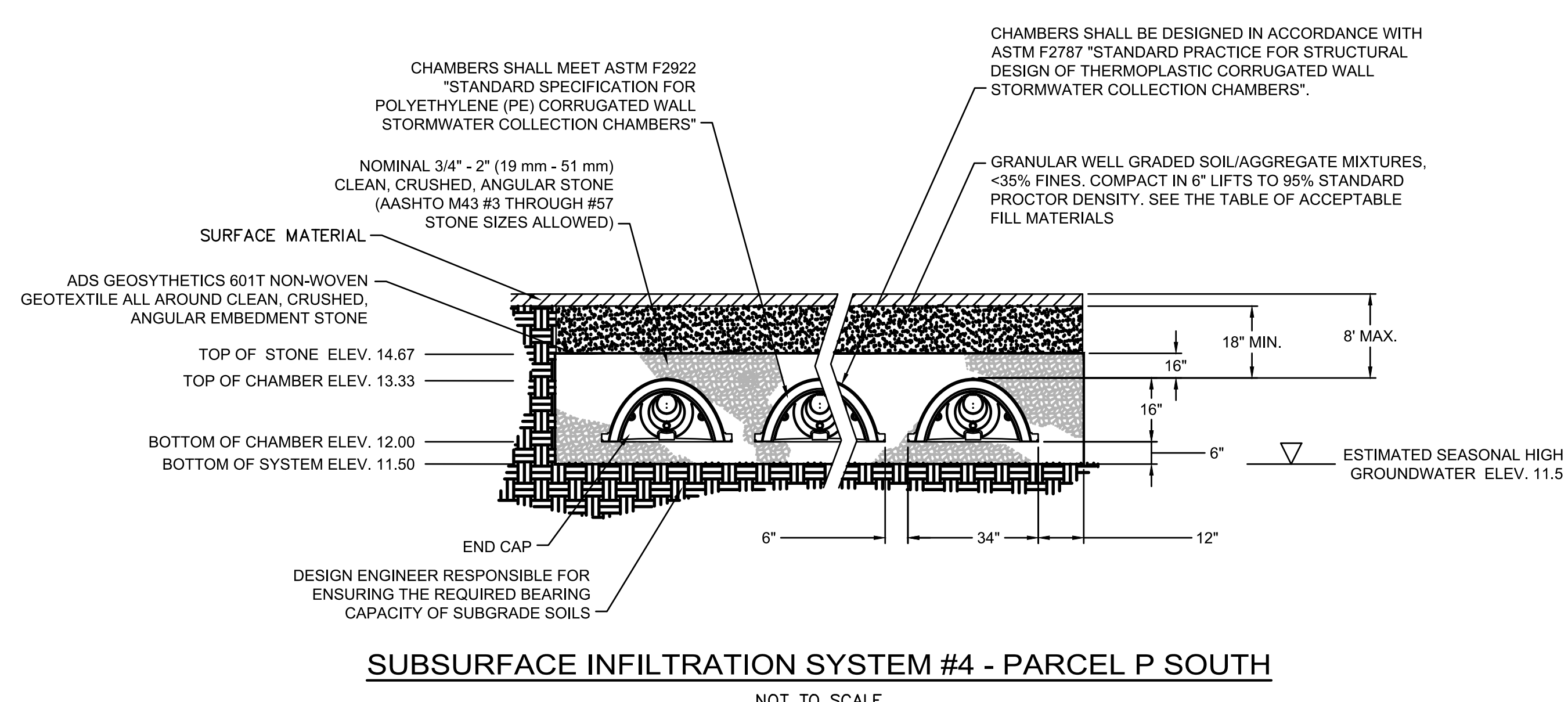
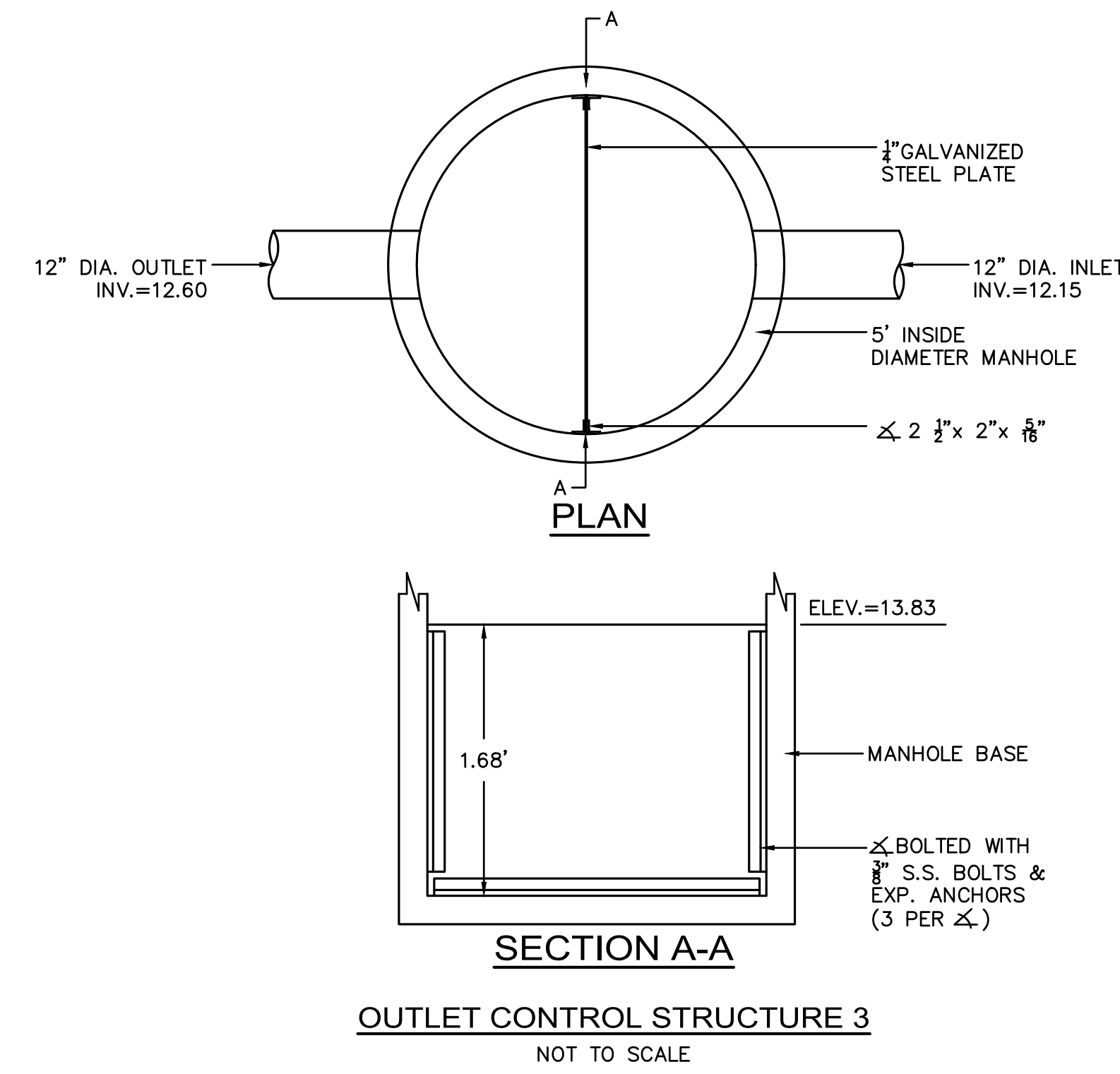
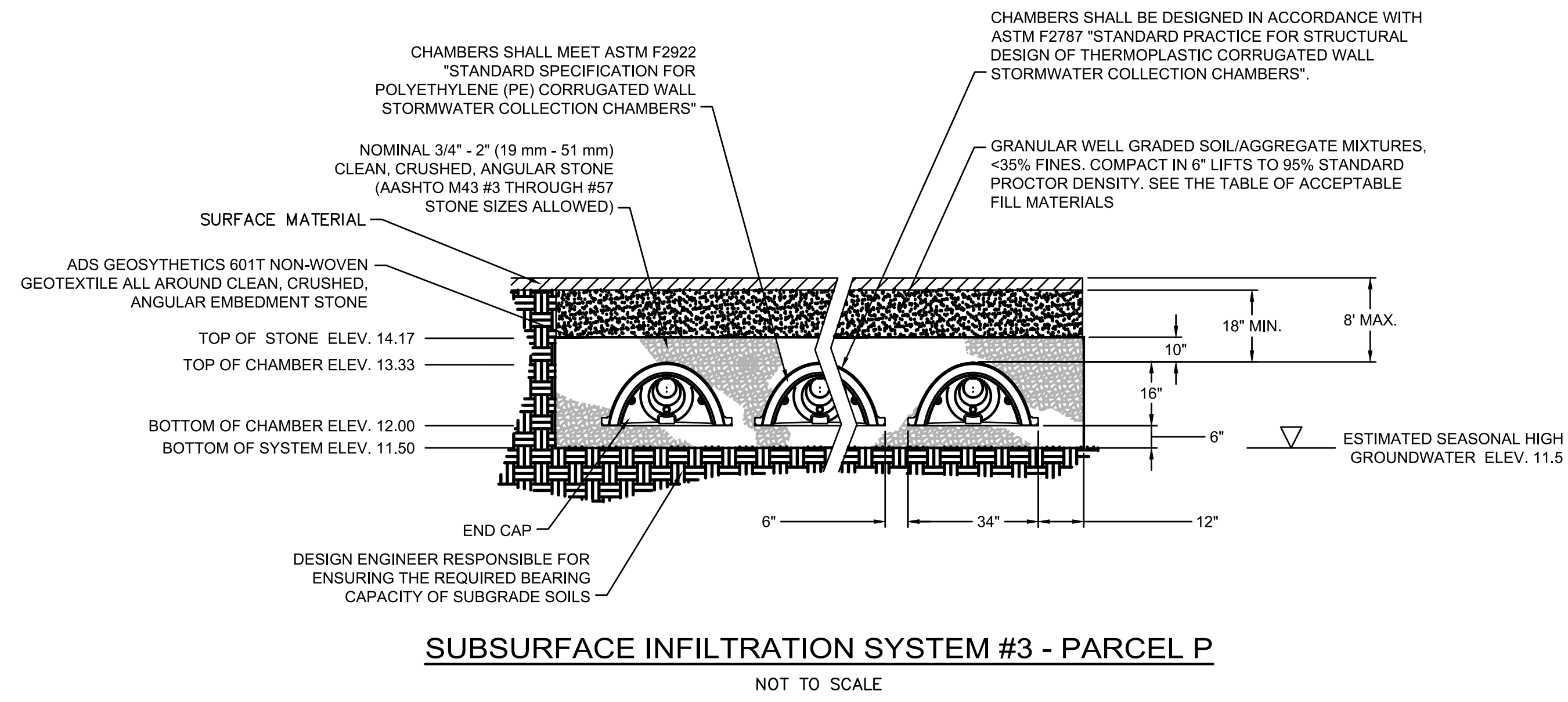
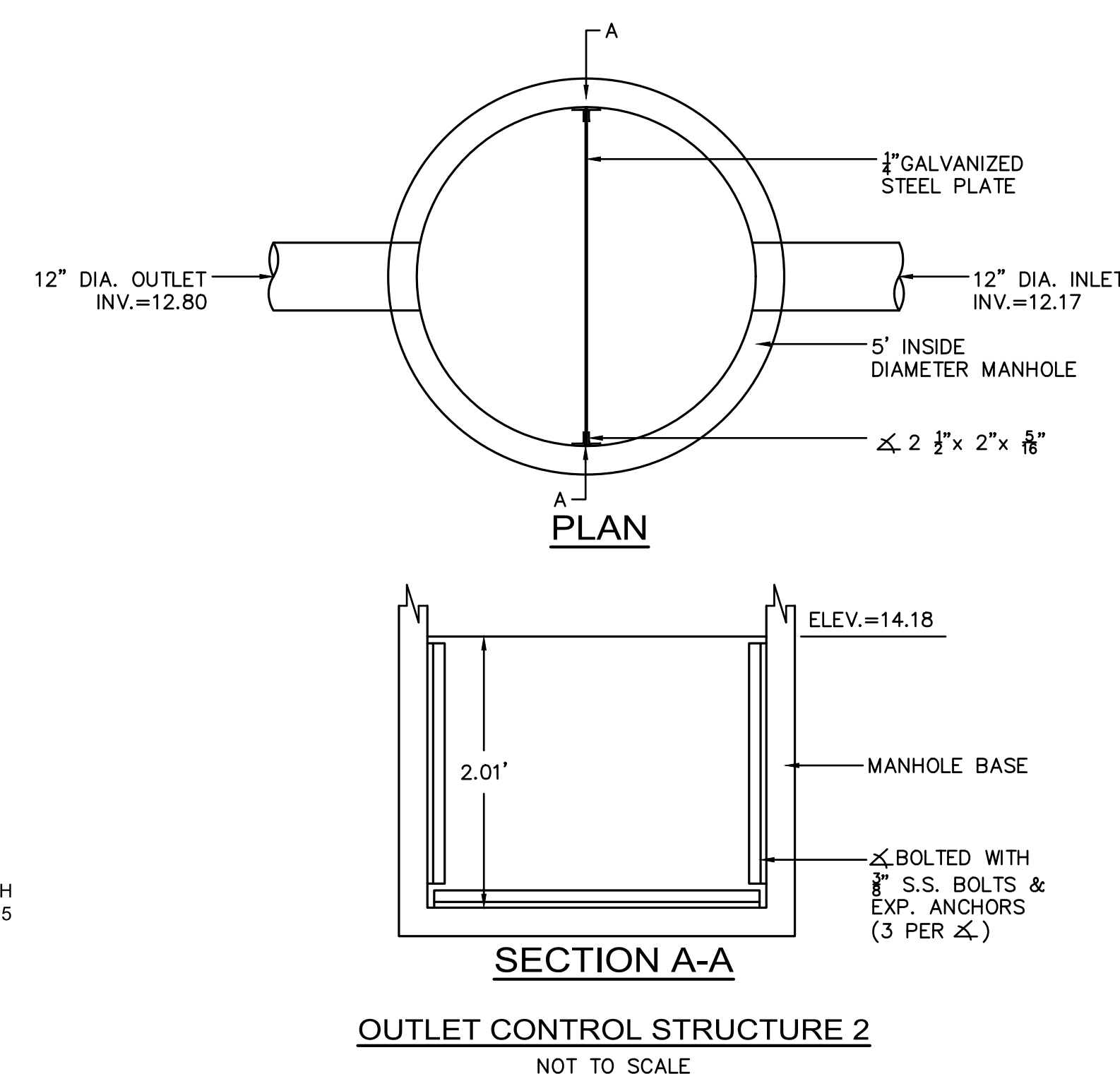
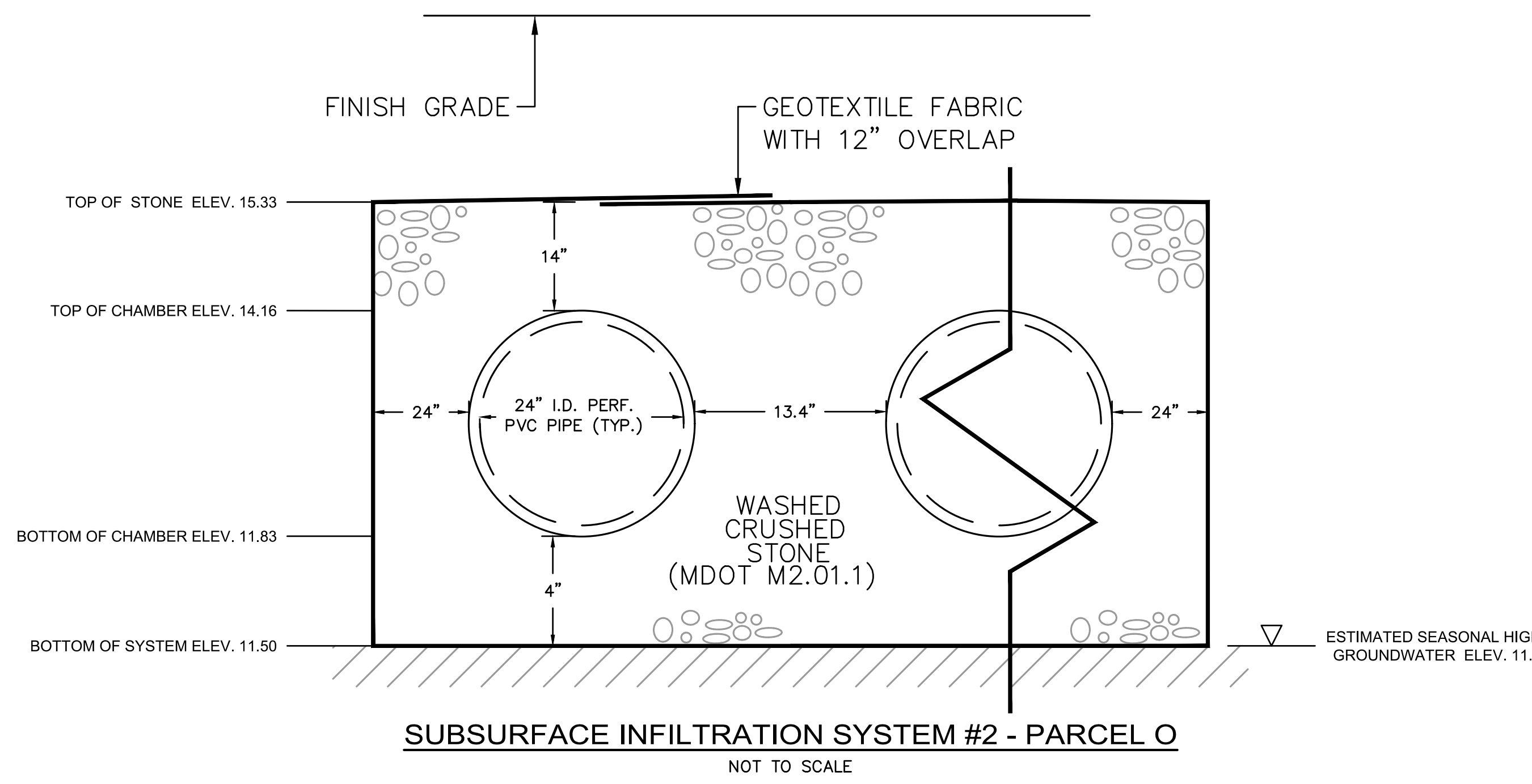
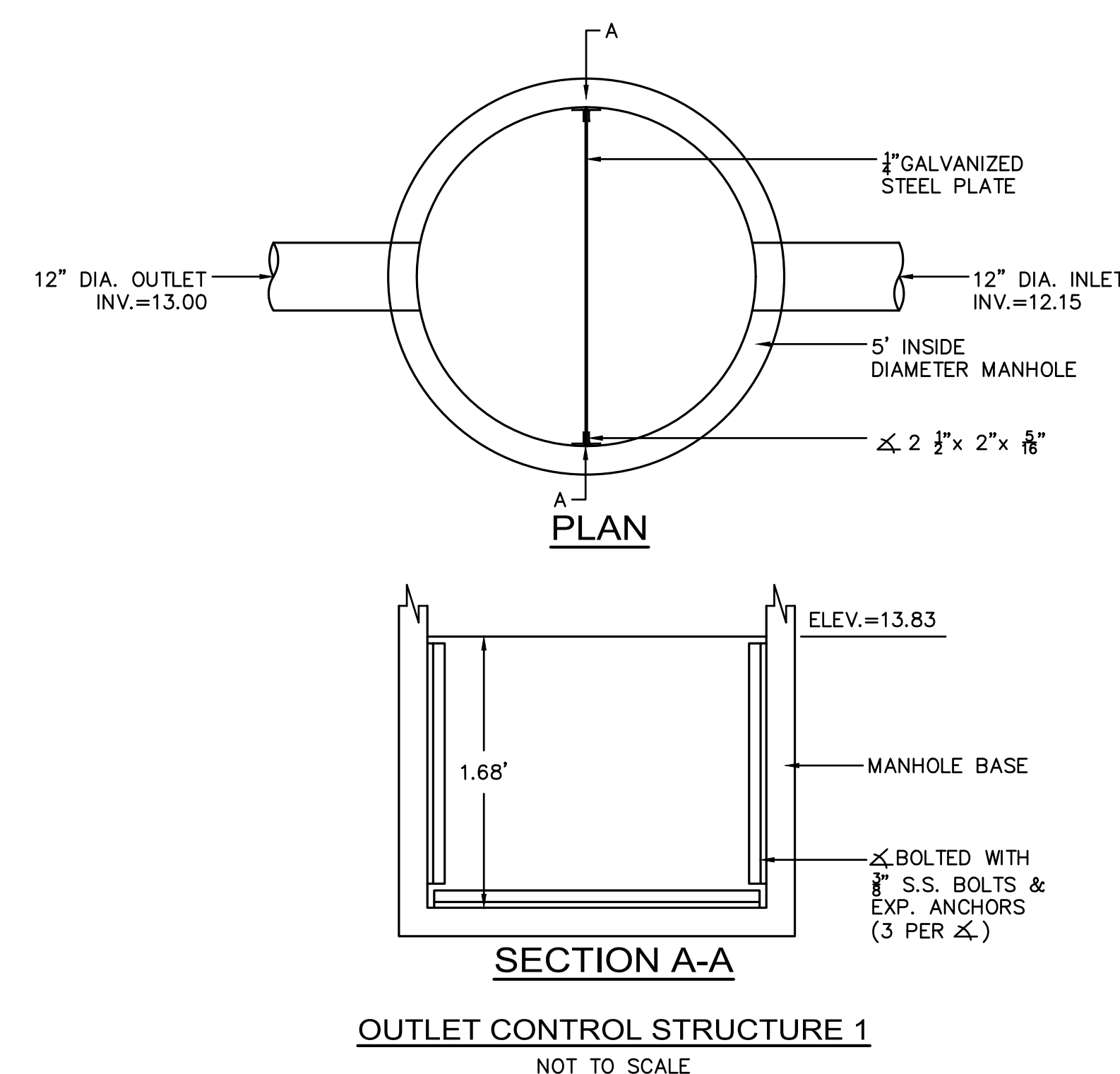
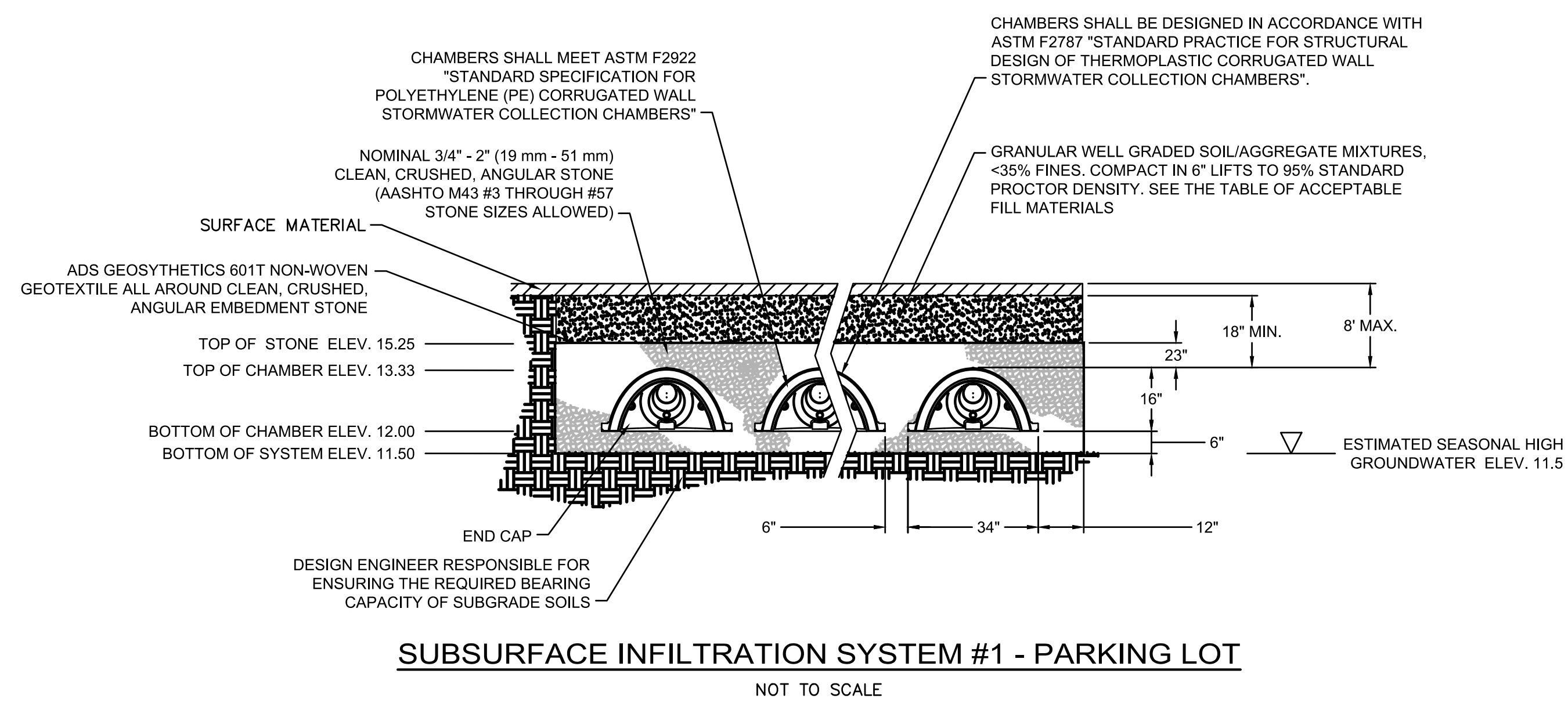
SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

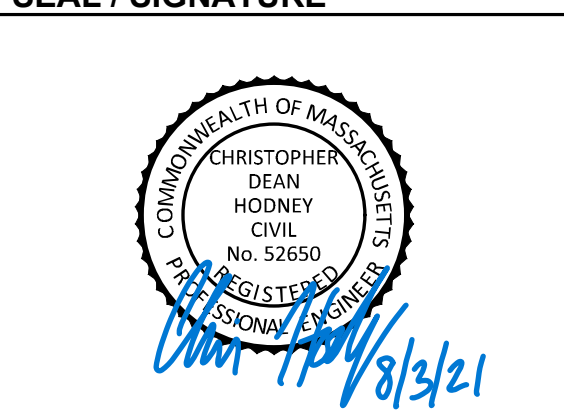
SHEET TITLE:

CIVIL DETAILS



- NOTES:**
1. FRAME AND GRATE SHALL BE DUCTILE IRON CONFORMING TO ASTM A536 GRADE 70-50-05.
 2. 12\"/>
 3. AREA DRAINS SHALL BE CUSTOM MANUFACTURED ACCORDING TO THE PLANS AND DETAIL.
 4. CASTINGS SHALL BE FURNISHED WITH A BLACK PAINT.
 5. SEE PLANS FOR LAYOUT AND ELEVATIONS OF DRAIN PIPES TO AREA DRAINS.

SEAL / SIGNATURE



© Spagnolo Glines & Associates, Inc.
05/18/2021

PROJECT:

- Parcel O**
1 Au Bon Pain Way
Boston, MA
- Parcel P**
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

No.	Date	Description

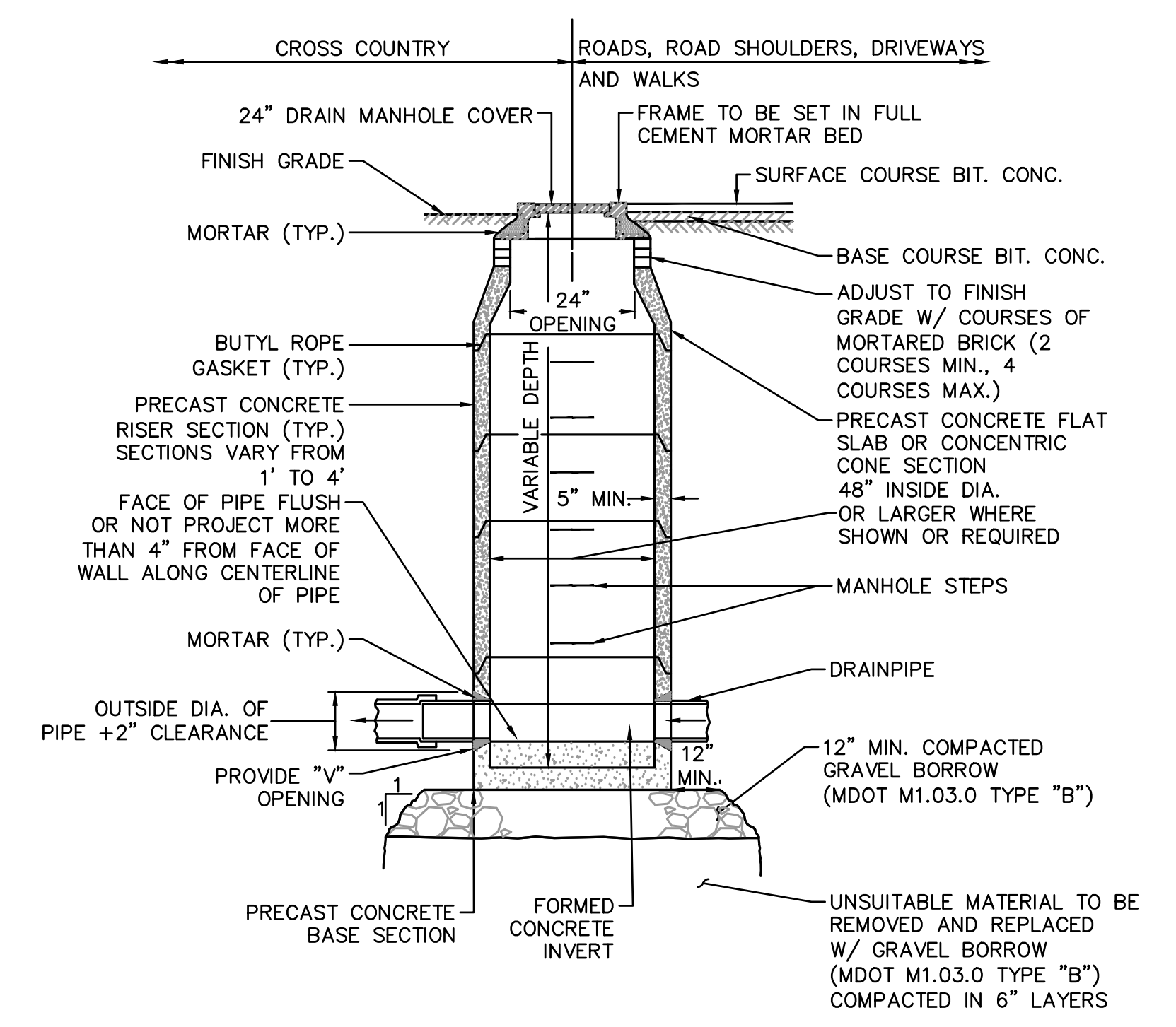
SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

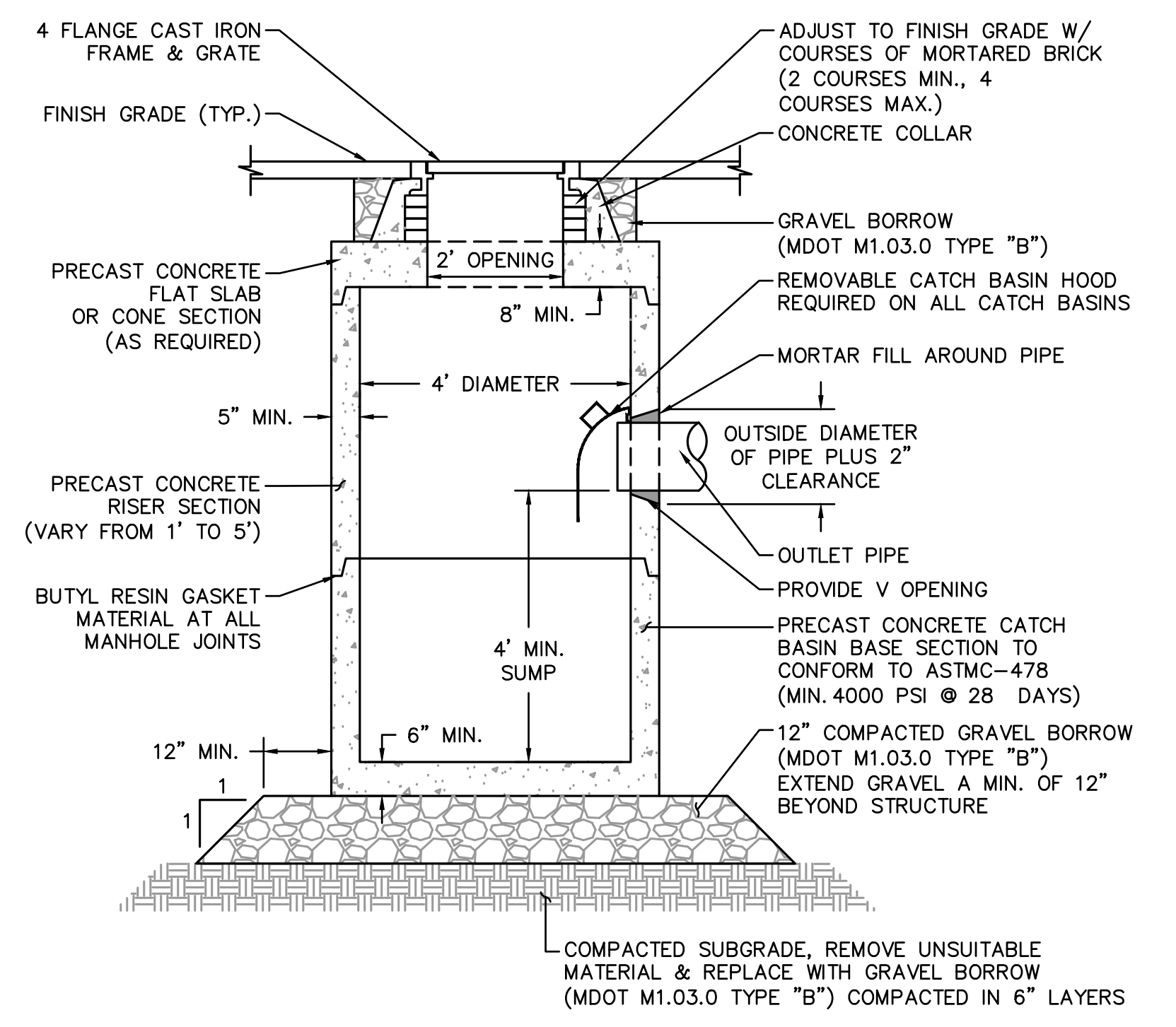
SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAK
CHECKED BY CDH

SHEET TITLE:

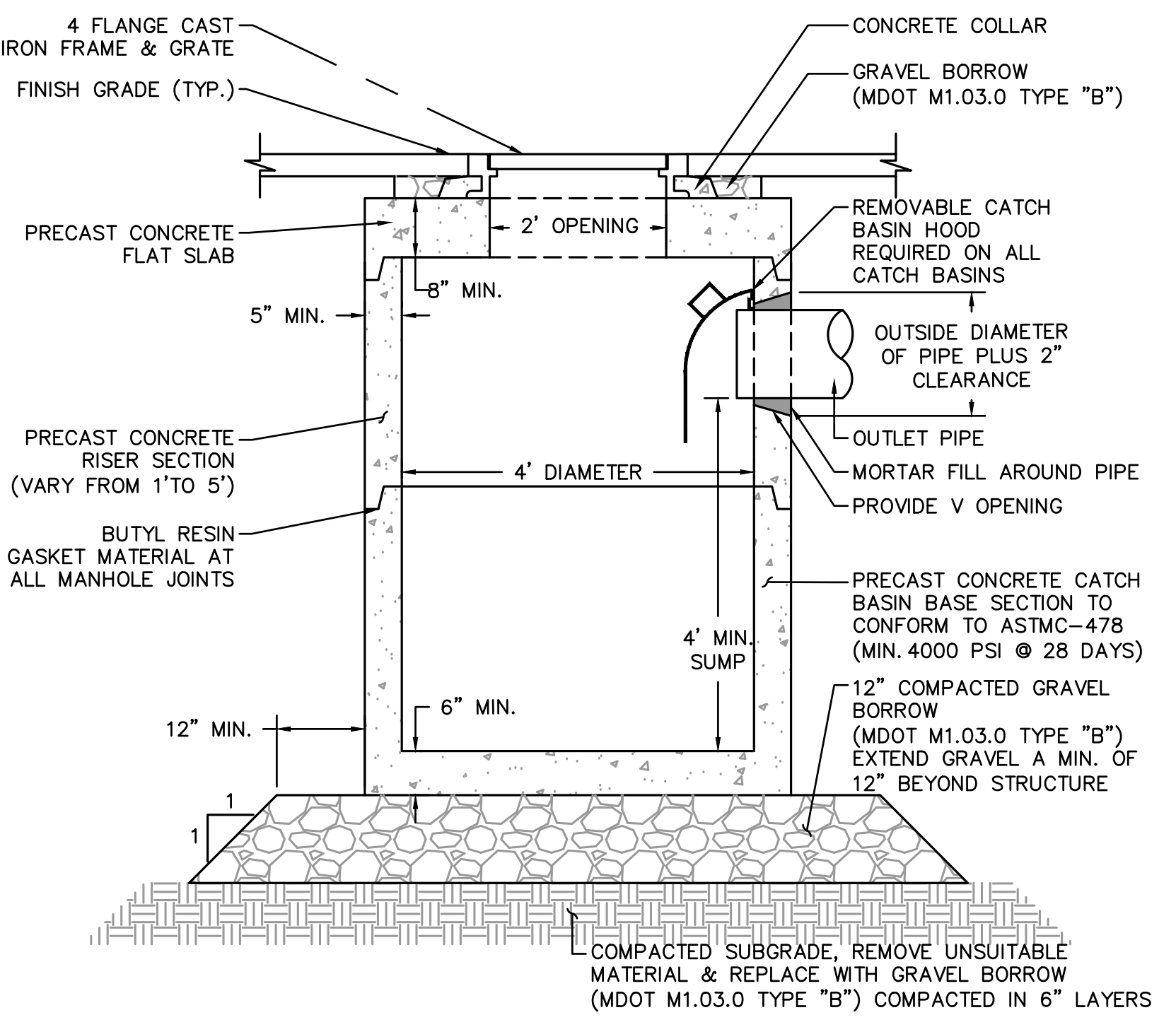
CIVIL DETAILS



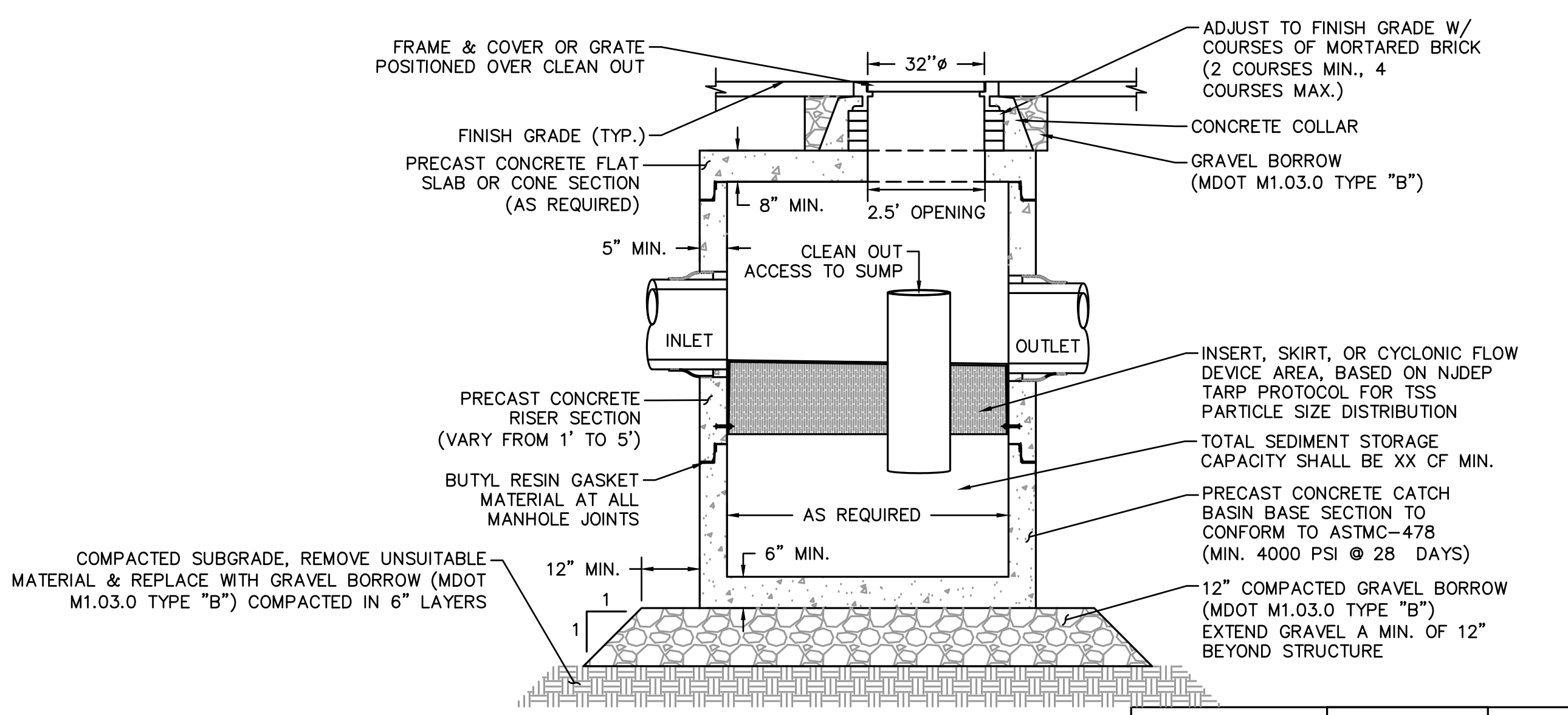
TYPICAL DRAIN MANHOLE DETAIL
NOT TO SCALE



TYPICAL CATCH BASIN DETAIL
NOT TO SCALE



SHALLOW CATCH BASIN DETAIL
NOT TO SCALE



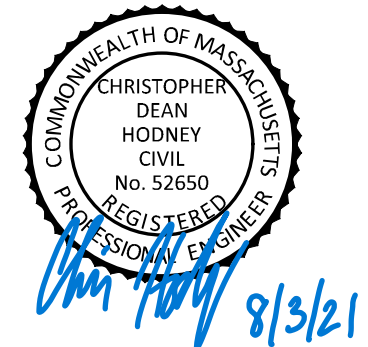
NOTE:

1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE OUTLET DROP PIPE AND THE OIL CLEANOUT PIPE.
3. STRUCTURE DESIGNED FOR 120 LADING

STRUCTURE NAME	MINIMUM WQF	PEAK FLOW RATE*	MINIMUM SEDIMENT STORAGE CAPACITY
WQS#1	0.36 CFS	1.72 CFS	6.21 CF
WQS#2	0.36 CFS	1.71 CFS	6.16 CF
WQI#1	0.08 CFS	0.38 CFS	1.39 CF
WQI#2	0.11 CFS	0.53 CFS	1.93 CF

WATER QUALITY STRUCTURE DETAIL
NOT TO SCALE

SEAL / SIGNATURE



© Spagnolo Glens & Associates, Inc.
05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED
DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

SHEET TITLE:
CIVIL DETAILS

PROJECT TEAM:

CLIENT
MARCUS PARTNERS
260 FRANKLIN STREET
BOSTON, MA 02110
617-556-5200

LANDSCAPE ARCHITECT
COPLY WOLFF DESIGN GROUP
10 POST OFFICE SQ, SUITE 1315
BOSTON, MA 02109
617-654-0000

CIVIL ENGINEER
NTSCH ENGINEERING
2 CENTER PLAZA, SUITE 430
BOSTON, MA 02108
617-338-0063

MEPPP
BR+A CONSULTING ENGINEERS
10 GUEST STREET, 4TH FLR
BOSTON, MA 02135
617-254-0016

STRUCTURAL ENGINEER
MCNAMARA, SALVIA
101 FEDERAL ST., STE 1100
BOSTON, MA 02110
617-737-0040

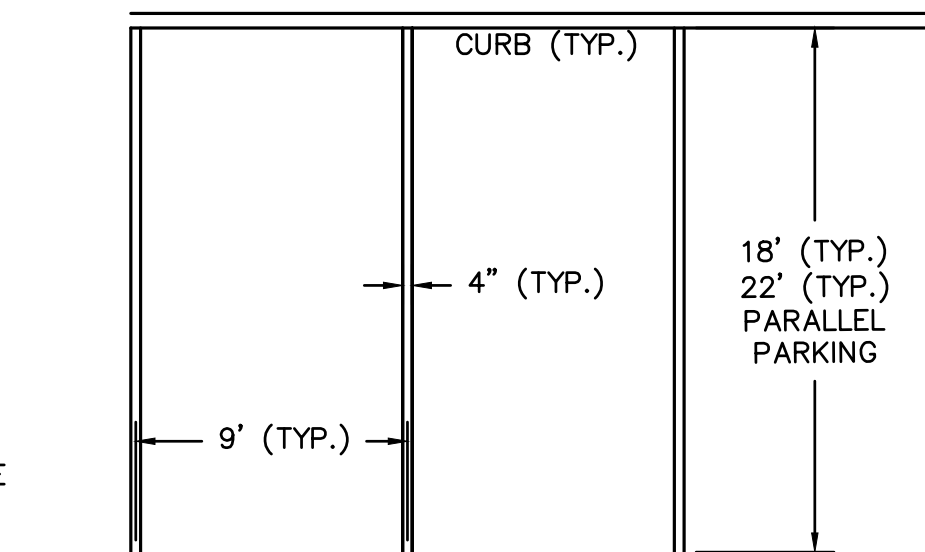
BUILDING ENVELOPE
VIDARIS
250 DORCHESTER AVE.
BOSTON, MA 02127
617-268-8977

SUSTAINABILITY
THORNTON TOMASETTI
27 WORMWOOD ST., STE 200
BOSTON, MA 02210
617-250-4100

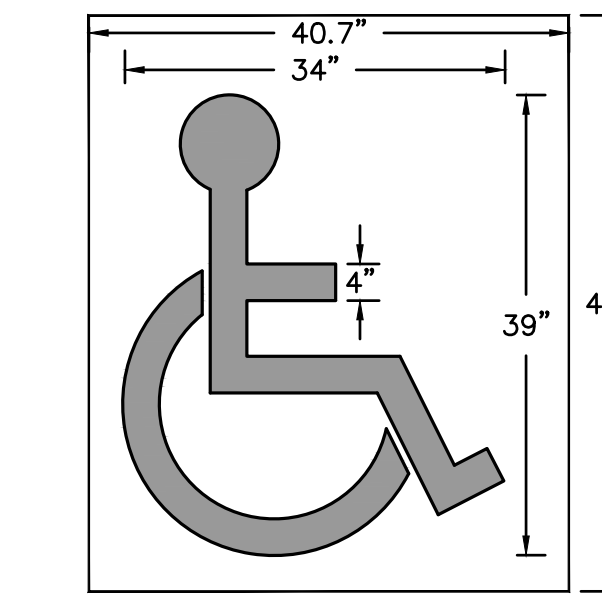
CODE CONSULTANT
CODE RED CONSULTANTS
154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772
617-560-1633

GEOTECHNICAL ENGINEER
HALEY & ALDRICH INC.
465 MEDFORD ST. SUITE 2200
CHARLESTOWN, MA 02129
617-886-7389

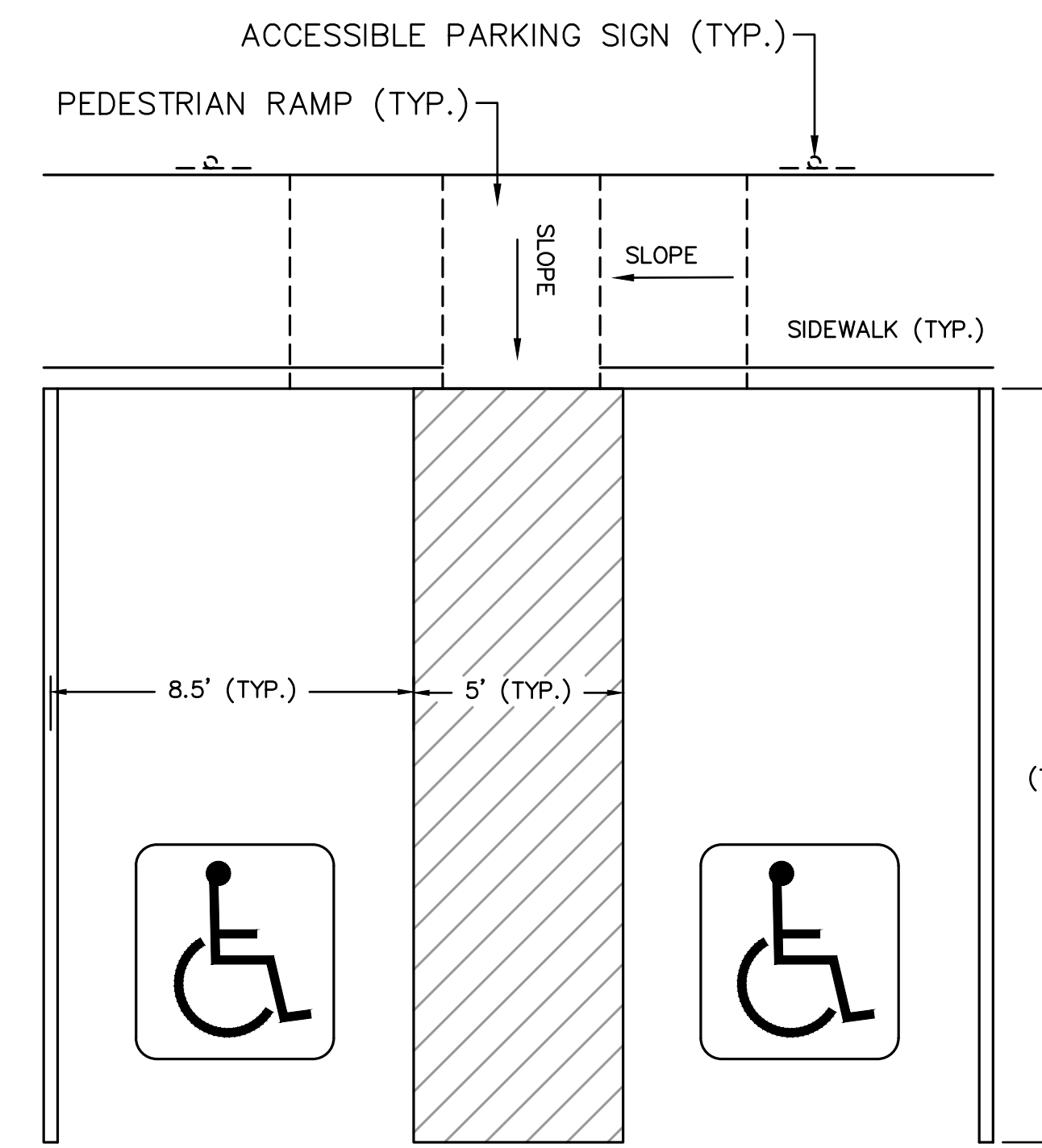
NOTE:
STRIPING SHALL BE
INSTALLED PER
SPECIFICATIONS



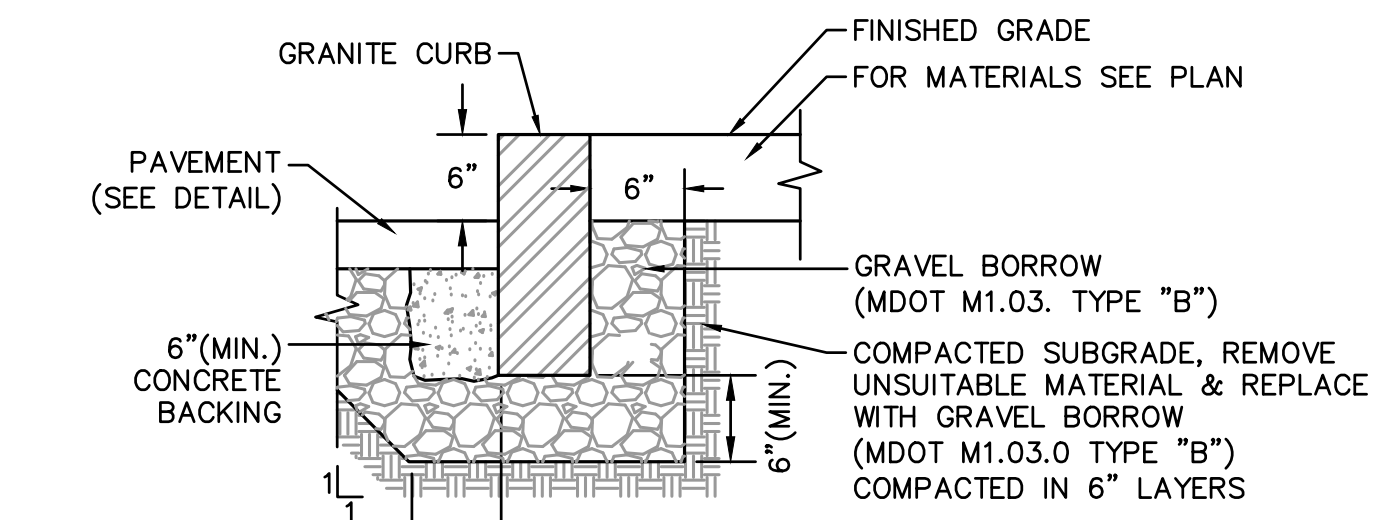
TYPICAL PARKING STRIPING DETAIL
NOT TO SCALE



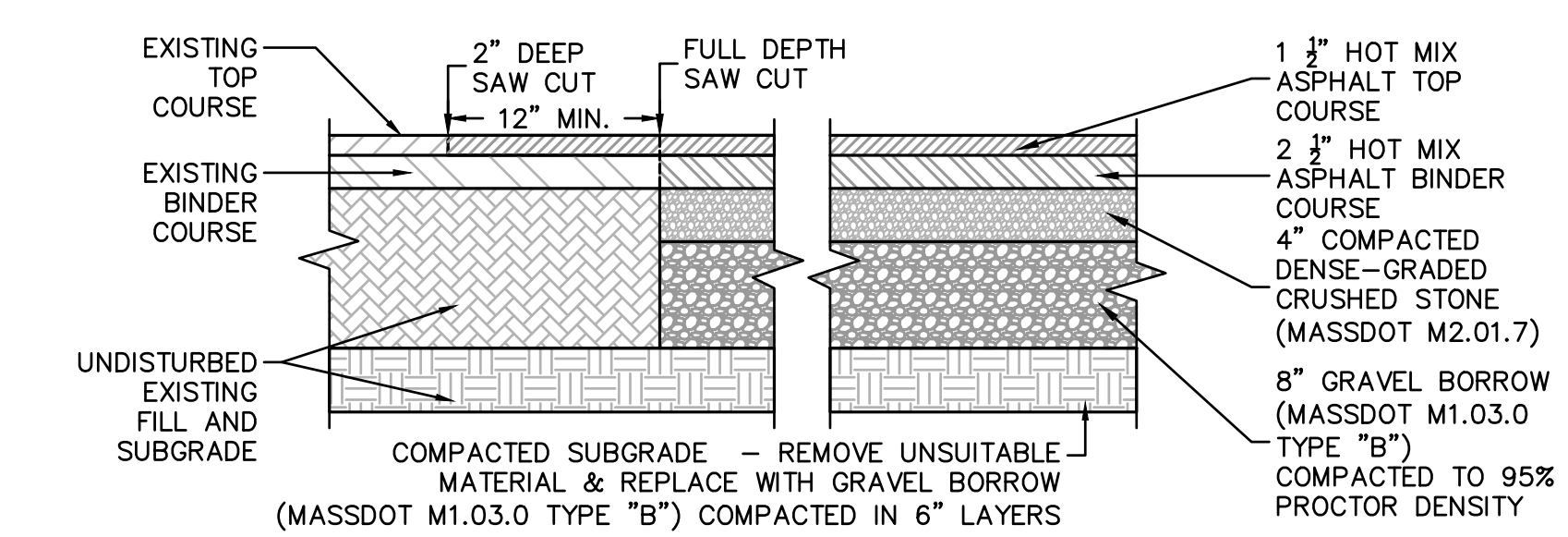
ACCESSIBLE PARKING STENCIL DETAIL
NOT TO SCALE



ACCESSIBLE PARKING DETAIL
NOT TO SCALE



VERTICAL GRANITE CURB SETTING DETAIL
NOT TO SCALE



HOT MIX ASPHALT PAVING (TWO COURSES) DETAIL
NOT TO SCALE

SEAL / SIGNATURE



© Spagnolo Glenshaw & Associates, Inc.
05/18/2021

PROJECT:

Parcel O
1 Au Bon Pain Way
Boston, MA

Parcel P
3 Anchor Way
Boston, MA

Marcus Partners

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
01/15/21	Conceptual Design
04/28/21	SD Check Set
05/18/21	SD Submission
07/02/21	Demolition Package

SCALE AS NOTED

DATE ISSUED 05/18/2021
PROJECT NO 5154
DRAWN BY YAA
CHECKED BY CDH

SHEET TITLE:

CIVIL DETAILS