



# 191 bolton st

Marlborough, MA

1 inch = 17 Feet



June 1, 2020



Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.



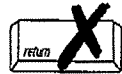
Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

**MARLBOROUGH**  
City/Town

**WPA Form 1- Request for Determination of Applicability**  
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**A. General Information**

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



1. Applicant:
- Keith E. Wheeler**  
Name
- mbren826@aol.com**  
E-Mail Address
- 191 Bolton Street**  
Mailing Address
- Marlborough**  
City/Town
- MA** **01752**  
State Zip Code
- (508) 361-0036 (Wife)**  
Phone Number
- (774) 245-1948 (Keith)**  
Phone Number
- (508) 624-6452**  
Fax Number (if applicable)
2. Representative (if any):
- Maureen A. Brennan**  
Firm
- Bailey & Burke Law Office**  
Contact Name
- mbrennan@baileyandburke.com**  
E-Mail Address
- 77 High Street**  
Mailing Address
- Clinton**  
City/Town
- MA** **01510**  
State Zip Code
- (978) 368-0983**  
Phone Number
- (978) 365-5645**  
Fax Number (if applicable)

**B. Determinations**

1. I request the **Marlborough** Conservation Commission make the following determination(s). Check any that apply:
- a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance or bylaw** of:
- \_\_\_\_\_  
Name of Municipality
- e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).
- \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





5000 SF

10000 SF

100

100

195

100

100

25

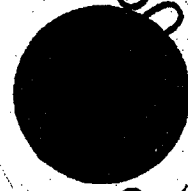
193

100

50

100

50



334

5000 SF

100

50

50

100

333A

5000 SF

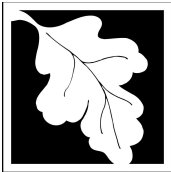
BOLTON STREET

185

50

100

100



**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:

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MassDEP File Number

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Document Transaction Number

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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>190 Sudbury Street</u>	<u>Marlborough</u>	<u>01752</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
<u>42.362476</u>	<u>-71.483136</u>	
d. Latitude	e. Longitude	
<u>Map 36/Parcel 17</u>	<u>36-17</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Susan</u>	<u>Gottschlich</u>	
a. First Name	b. Last Name	
<u>Homeowner</u>		
c. Organization		
<u>190 Sudbury St</u>		
d. Street Address		
<u>Marlborough</u>	<u>MA</u>	<u>01752</u>
e. City/Town	f. State	g. Zip Code
<u>508-485-1202</u>	<u>sngott@comcast.net</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

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

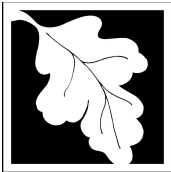
4. Representative (if any):

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

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

<u>110</u>	<u>42.50</u>	<u>67.50</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**

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**A. General Information (continued)**

6. General Project Description:

Fix clogged under-driveway culvert pipe. Remove rotted wood forming a basin at exposed end of culvert pipe. Erect new modular concrete block modular headwall roughly parallel to driveway. Install underlayment fabric on slopes of basin. Install 12" rip/rap drainage stones (4-6"). Use large rocks to form a wall at the end of the basin opposite headwall. see attached narrative for more details.

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:

Middlesex

a. County

44514

c. Book

b. Certificate # (if registered land)

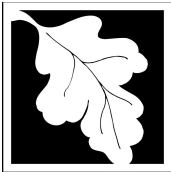
139

d. Page Number

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

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

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



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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input checked="" type="checkbox"/> Bank	~30 1. linear feet	~30 2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

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

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:

110	42.50	67.50
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.

- 5. Has an alternatives analysis been done and is it attached to this NOI?  Yes  No
- 6. Was the lot where the activity is proposed created prior to August 1, 1996?  Yes  No

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

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



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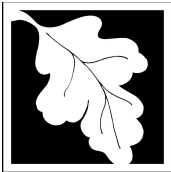
**B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)**

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	_____	
	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	
4. <input type="checkbox"/> 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. <input type="checkbox"/> Project Involves Stream Crossings		
	_____	_____
	a. number of new stream crossings	b. number of replacement stream crossings





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

Provided by MassDEP:

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MassDEP File Number

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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](http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm).

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

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

b. Date of map \_\_\_\_\_

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

c. Submit Supplemental Information for Endangered Species Review\*

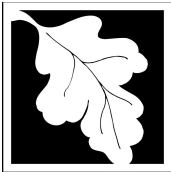
- 1.  Percentage/acreage of property to be altered:
  - (a) within wetland Resource Area \_\_\_\_\_ percentage/acreage
  - (b) outside Resource Area \_\_\_\_\_ percentage/acreage

2.  Assessor’s Map or right-of-way plan of site

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

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

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



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

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

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

(d)  Vegetation cover type map of site

(e)  Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1.  Project is exempt from MESA review.  
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, [http://www.mass.gov/dfwele/dfw/nhosp/regulatory\\_review/mesa/mesa\\_exemptions.htm](http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_exemptions.htm); the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

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

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

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a.  Not applicable – project is in inland resource area only      b.  Yes     No

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

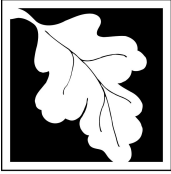
South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

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@state.ma.us](mailto:DMF.EnvReview-South@state.ma.us)

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

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



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

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

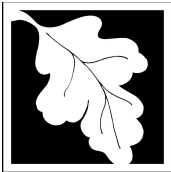
Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

**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.

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





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## D. Additional Information (cont'd)

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

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

Proposed Construction 190 Sudbury St

a. Plan Title

Toure Foster

b. Prepared By

5/19/2020

d. Final Revision Date

c. Signed and Stamped by

e. Scale

f. Additional Plan or Document Title

g. Date

5.  If there is more than one property owner, please attach a list of these property owners not listed on this form.

6.  Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7.  Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8.  Attach NOI Wetland Fee Transmittal Form

9.  Attach Stormwater Report, if needed.

## E. Fees

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

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

1609

2. Municipal Check Number

1608

4. State Check Number

Susan

6. Payor name on check: First Name

18 May 2020

3. Check date

18 May 2020

5. Check date

Gottschlich

7. Payor name on check: Last Name



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**F. Signatures and Submittal Requirements**

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

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

*Susan Beltschick*

1. Signature of Applicant

*19 May 2020*

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date

**For Conservation Commission:**

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

**For MassDEP:**

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

**Other:**

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

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



**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:**

190 Sudbury St	Marlborough
a. Street Address	b. City/Town
1608/1609	42.50/67.50
c. Check number	d. Fee amount

**2. Applicant Mailing Address:**

Susan	Gottschlich	
a. First Name	b. Last Name	
Home owner	c. Organization	
190 Sudbury St	d. Mailing Address	
Marlborough	MA	01752
e. City/Town	f. State	g. Zip Code
508-485-1202	sngott@comcas.net	
h. Phone Number	i. Fax Number	j. Email Address

**3. Property Owner (if different):**

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

**B. Fees**

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

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

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

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

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

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

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

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





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

**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
1a.)work on single family lot	1	110	110
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<b>Step 5/Total Project Fee:</b>			110
<b>Step 6/Fee Payments:</b>			
Total Project Fee:			110
State share of filing Fee:			42.50
City/Town share of filing Fee:			67.50
			a. Total Fee from Step 5
			b. 1/2 Total Fee <b>less</b> \$12.50
			c. 1/2 Total Fee <b>plus</b> \$12.50

**C. Submittal Requirements**

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

Department of Environmental Protection  
 Box 4062  
 Boston, MA 02211

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

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

WPA Form 3 Additional Documentation

**Project Narrative:**

**Existing conditions:**

This trough shown in the picture was covered completely with wood, until it flooded this spring and put the driveway underwater. To solve the problem, they had to remove the wood that was on top of this trough under which they found the pipe that was clogged flowing under the driveway. Upon this discovery and unclogging the pipe, it was noted that everything was rotten and a permanent fix was needed. The culvert pipe under the driveway still remains functional now that it has been cleaned, However, the rotten wooden structure will continue to decay and could threaten the driveway stability over time.

**Proposed condition:**

Remove all rotted wood forming a basin at exposed end of culvert pipe. Erect new modular concrete block modular headwall roughly parallel to driveway (thus replacing existing wood headwall in same place). Grade side slopes so they can be naturalized. Install underlayment fabric on side slopes of basin to stabilize slope. Install 12" rip/rap drainage stones (4-6") as needed to stabilize the banks. Use large rocks to form a stone slope at the end of the basin opposite headwall to provide a transition from the wetland above to the area upstream of the pipe. Restore bank back to natural banks add plantings along bank edges to stabilize area when work is completed.

This section of the stream channel that was once all covered, will now be open. Note, the downstream pipe and discharge points are all in good condition.

D. 3- The BVW is the top of bank in the area of work as identified by the Conservation Officer during a site visit. Below are pictures of the existing area.



# Proposed Construction

190 Sudbury St.  
Marlboro

1. Remove wood timber walls
2. Construct New Concrete Block head wall
3. Install Rock/Boulders to keep wetland terris in place
4. Install 5-7" Rip/Rap stone in lower stream Bed at Approach of Culvert pipe
5. use Existing on site Soils + Imported loam to stabilize and grade slope and Allow For re-vegetation.
6. Back Fill New wall with loam level with Top of Driveway.
7. Clean up site and restore to pre-Construction conditions.

## Construction Services

Excavating • Trucking • Dumpsters • Landscape Construction

**New England  
Enterprises**

**Touré Foster**

Phone: 508.481.5657

Mobile: 508.509.7244

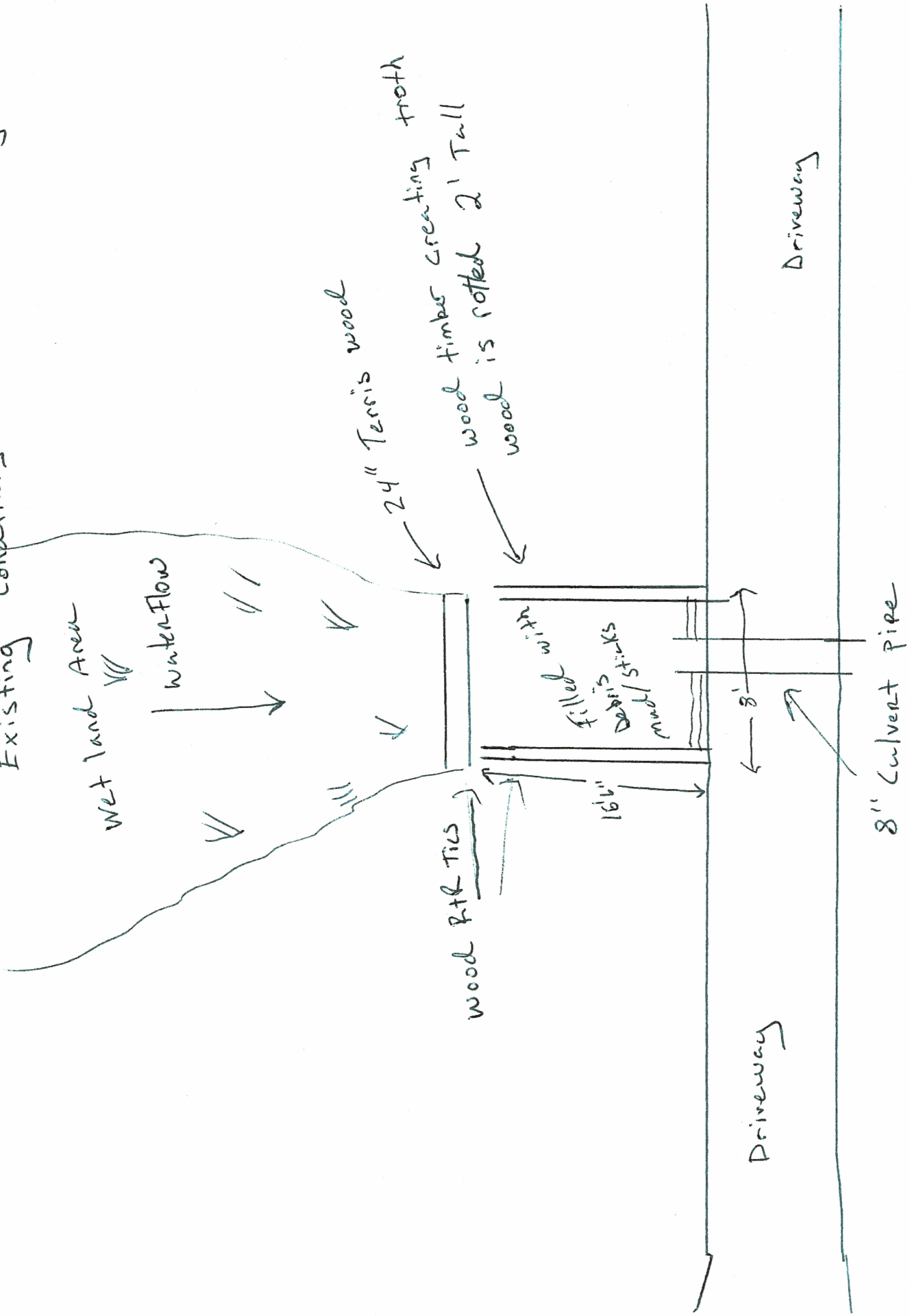
[toure@NewEnglandEnterprises.com](mailto:toure@NewEnglandEnterprises.com)

P.O. Box 311  
Marlborough, MA 01752  
[www.NewEnglandEnterprises.com](http://www.NewEnglandEnterprises.com)



190 Sudbury St. Marlboro

Existing Conditions



Proposed

190 Sudbury St. Marlboro

Natural vegetation undisturbed Area

Water Flow

Boulders/Rocks to Keel wetlands  
Teris in place

Install Rip/Rap 5-7"

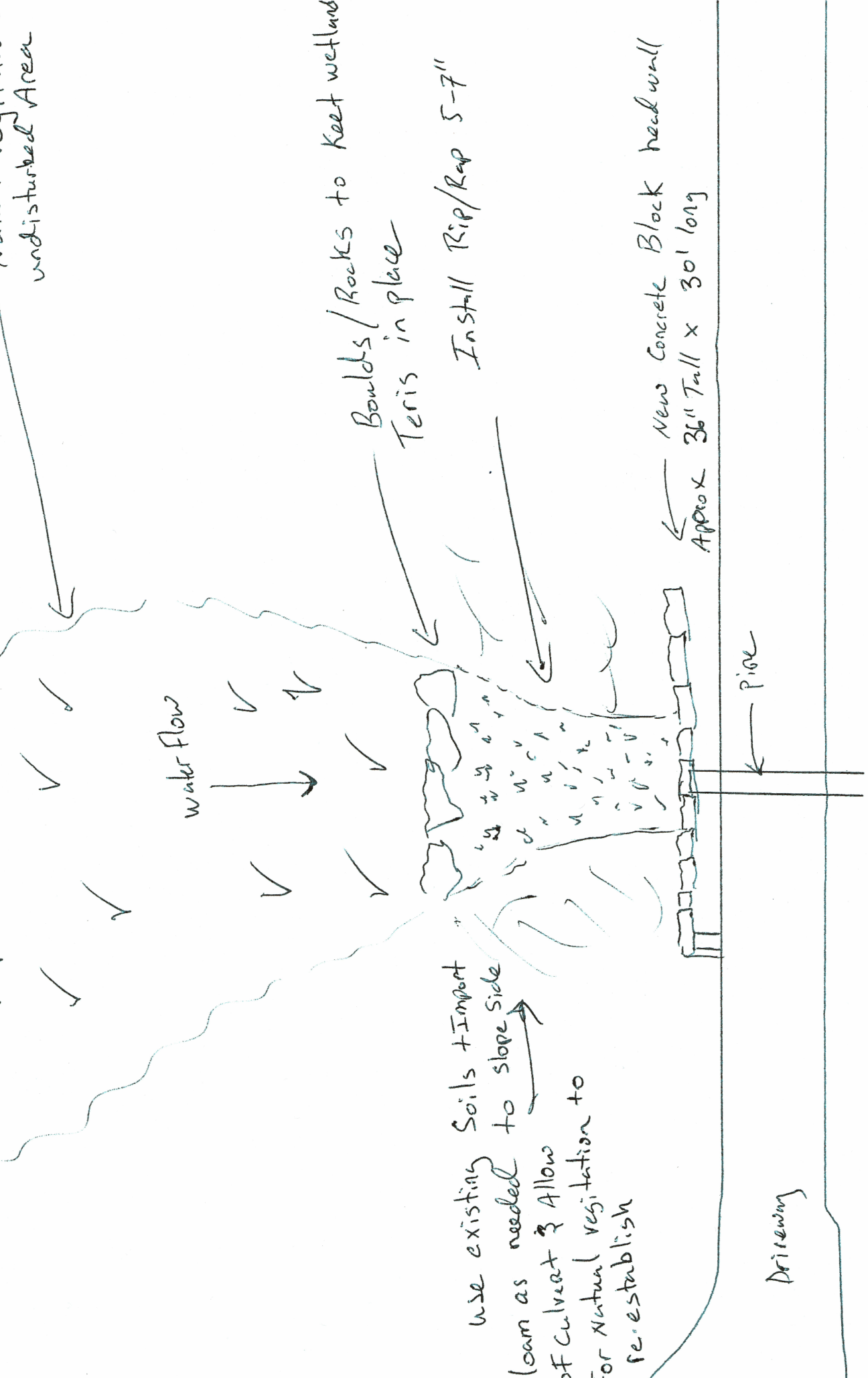
New Concrete Block head wall  
Approx 36" Tall x 30' long

use existing Soils + Import loam as needed to slope side

of Culvert & Allow For Natural vegetation to re-establish

Pipe

Driveway





# SITE PLAN FOR MULTI-FAMILY REDEVELOPMENT 447 BOSTON POST ROAD EAST MARLBOROUGH, MA.



**HOWARD STEIN HUDSON**  
114 Turnpike Road, Suite 2C  
Chelmsford, MA 01824  
www.hshassoc.com

PREPARED FOR:  
TRUE NORTH CAPITAL PARTNERS  
396 LINDSAY POND ROAD  
CONCORD, MA 01742

**MULTI-FAMILY  
RE-DEVELOPMENT  
447 BOSTON POST ROAD EAST  
MARLBOROUGH, MA, 01752  
MIDDLESEX COUNTY**

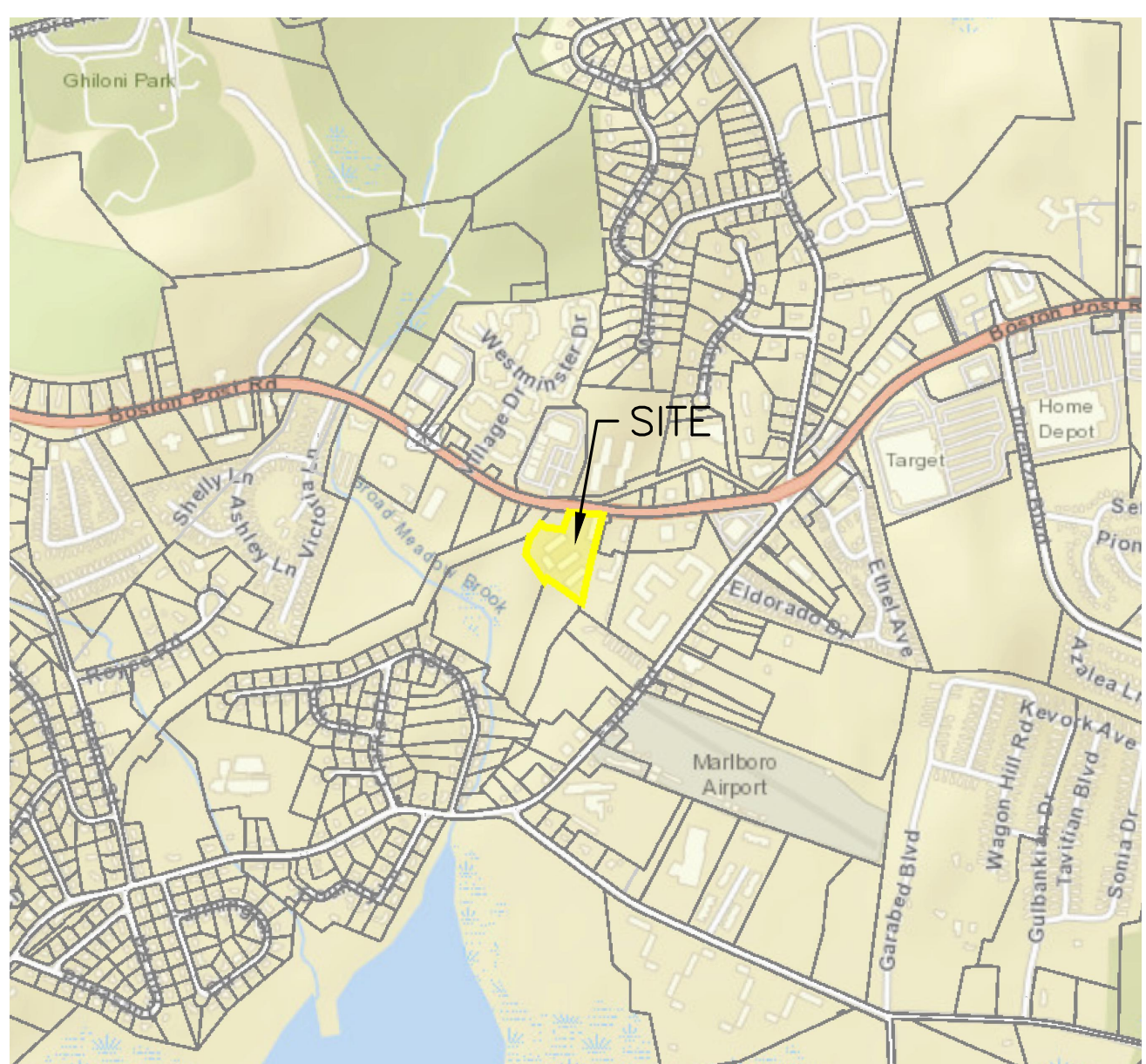
**GENERAL NOTES**

- EXISTING PROPERTY LINE AND UTILITY INFORMATION SHOWN IS BASED ON AN EXISTING SURVEY CONDUCTED BY MISTRY ASSOCIATES, INC. DATED FEBRUARY 5, 2020.
- THE ACCURACY AND COMPLETENESS OF THE UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE, TYPE, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK. AT LEAST 72 HOURS BEFORE EXCAVATION, THE CONTRACTOR SHALL BE REQUIRED TO CONTACT DIGSAFE AT 1-888-344-7233.
- THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE APPROPRIATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION.
- ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, PRIOR TO EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAVING.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED, REMOVED AND DISPOSED.
- THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS AT HIS/HER OWN EXPENSE, OUTSIDE OF THE PROJECT LIMITS.

**SHEET INDEX**

SHEET 1	COVER SHEET	LAST REVISED: N/A
SHEET 2	LOCUS PLAN	LAST REVISED: N/A
SHEET 3	EROSION, SEDIMENT CONTROL AND DEMOLITION PLAN	LAST REVISED: N/A
SHEET 4	LAYOUT AND MATERIALS PLAN	LAST REVISED: N/A
SHEET 5	GRADING, DRAINAGE AND UTILITY PLAN	LAST REVISED: N/A
SHEET 6	LANDSCAPING PLAN	LAST REVISED: N/A
SHEET 7	FIRE TRUCK TURN PLAN	LAST REVISED: N/A
SHEET 8	DETAIL SHEET 1 OF 2	LAST REVISED: N/A
SHEET 9	DETAIL SHEET 2 OF 2	LAST REVISED: N/A

PLANS ALSO INCLUDED:  
EXISTING CONDITIONS PLAN



**LOCUS MAP**  
1"=1,000'

**PROJECT TEAM**

<b>DEVELOPER:</b> TRUE NORTH CAPITAL PARTNERS 396 LINDSAY POND ROAD CONCORD, MA 01742	<b>ENGINEER:</b> HOWARD STEIN HUDSON 114 TURNPIKE ROAD, SUITE 2C CHELMSFORD, MA 01824
<b>SURVEYOR:</b> MISTRY ASSOCIATES, INC. 315 MAIN STREET READING, MA 01867	<b>LANDSCAPE ARCHITECT:</b> JAMES K. EMMANUEL 22 CARLTON ROAD MARBLEHEAD, MA 01945

**OWNER**

WAYSIDE APARTMENTS, LLC.  
369 LINDSAY POND ROAD  
CONCORD, MA 01742

**ASSESSORS INFORMATION**

ASSESSORS MAP 73 LOT 23

**REFERENCES**

EXISTING CONDITIONS PLAN BY MISTRY ASSOCIATES, INC. DATED FEBRUARY 5, 2020.

**ZONING REQUIREMENTS**

B - BUSINESS

**DIMENSIONAL REQUIREMENTS**

	REQUIREMENT	PROPOSED	(EXISTING)
MINIMUM LOT AREA	5,000 S.F.	U	(143,609 SF)
MINIMUM LOT FRONTAGE	50 FT	U	(200'±)
MINIMUM FRONT YARD	50 FT	U	(11.79')
MINIMUM SIDE YARD	0* FT	U	(10.83')
MINIMUM REAR YARD	0 FT	U	(10.10')
MAXIMUM BUILDING HEIGHT	52 FT	U	(29'±)
MAXIMUM LOT COVERAGE	30%		
EXISTING LOT COVERAGE	69.8% (100,239 SF / 143,609 SF)		
PROPOSED LOT COVERAGE	71.6% (102,786 SF / 143,609 SF)		

\*BASED ON NOTE 3 PER MARLBOROUGH ZONING DIMENSIONAL TABLE  
U=UNCHANGED BY APPLICATION

**PARKING REQUIREMENTS**

109 DWELLING UNITS EXISTING; 109 DWELLING UNITS PROPOSED  
 MULTIFAMILY DWELLING = 2 PER DWELLING UNIT  
 TOTAL PARKING REQUIRED = 109 \* 2 = 218 SPACES  
 EXISTING PARKING ONSITE = 148 SPACES  
 REQUIRED ADDITIONAL SPACES = 218 - 148 = 70 SPACES  
 TOTAL PROPOSED SPACES = 165 SPACES  
 TOTAL COMPACT SPACES = 55 SPACES  
 RATIO OF COMPACT SPACES = 55 / 164 = 0.33  
 EXISTING HANDICAP SPACES = 0  
 REQUIRED HANDICAP SPACES = 6 (1 OF WHICH IS VAN ACCESSIBLE)  
 PROPOSED HANDICAP SPACES = 6 (3 OF WHICH ARE VAN ACCESSIBLE)

DUE TO THE SITE LAYOUT AND TOPOGRAPHIC CONSTRAINTS IT IS NOT FEASIBLE TO INCREASE PARKING PAST THIS POINT. THERE IS A NET GAIN OF 17 SPACES ONSITE, AN IMPROVEMENT OVER THE EXISTING CONDITIONS.

**SITE PLAN AND SPECIAL PERMITS REQUIRED**

PER MARLBOROUGH CODE 650-11 THROUGH 13 (ALSO KNOWN AS MARLBOROUGH ZONING ARTICLE IV) ALL NON-CONFORMING REGULATIONS OR REQUIREMENTS ARE EITHER REMAINING THE SAME AS EXISTING OR IMPROVING APART FROM LOT COVERAGE. THIS PROJECT REQUESTS A SPECIAL PERMIT OR A MODIFICATION TO THE EXISTING SPECIAL PERMIT TO ALLOW FOR THE MINOR INCREASE IN LOT COVERAGE, WHICHEVER OPTION IS APPLICABLE.

**REVISIONS:**

NO	BY	DATE	DESCRIPTION

SITE PLAN

COVER SHEET

DATE:	05-13-2020
PROJECT NUMBER:	19176
DESIGNED BY:	ND
DRAWN BY:	ND
CHECKED BY:	KE

**SITE PLAN REVIEW COMMITTEE  
REVIEW COMMITTEE SIGNATURE BLOCK**

NAME _____	DATE _____
NAME _____	DATE _____
NAME _____	DATE _____
NAME _____	DATE _____
NAME _____	DATE _____
NAME _____	DATE _____

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**REFERENCES**

EXISTING CONDITIONS PLAN BY MISTRY ASSOCIATES, INC. DATED FEBRUARY 5, 2020.

**LEGEND**

	PROPERTY LINE
	STREET LINE
	EASEMENT LINE
	BUILDING LINE
	CONCRETE CURB
	VERTICAL GRANITE CURB
	EDGE OF PAVEMENT
	EDGE OF GRASS
	CHAIN LINK FENCE
	PLASTIC FENCE
	WOOD FENCE
	SANITARY SEWER
	STORM DRAIN
	ROOF DRAIN LINE
	WATER LINE
	FIRE PROTECTION LINE
	GAS LINE
	ELECTRIC LINE
	TELEPHONE LINE
	OVERHEAD WIRE
	CONC. RETAINING WALL
	GRANITE BLOCK RETAINING WALL
	SEWER MANHOLE
	DRAIN MANHOLE
	ROOF DRAIN
	WATER MANHOLE
	TELEPHONE MANHOLE
	HAND HOLE
	PLASTIC TELECOM CABINET
	CATCH BASIN
	GUY WIRE
	UTILITY POLE
	TRAFFIC CONTROL SIGNAL
	TRAFFIC SIGNAL CONTROL BOX
	ELECT. TRANSF. ON CONC. PAD
	LIGHT POLE
	WATER GATE
	HYDRANT
	POST INDICATOR VALVE
	AREA DRAIN
	FIRE ALARM BOX
	GAS GATE
	GAS METER
	SIGN POST
	BOLLARDS
	STONE BOUND
	MAIL BOX
	HAND HOLE
	LANDSCAPED AREA W/ PLANTINGS
	CRUSHED STONE
	LAND COURT CASE
	POINT OF BEGINNING
	SHRUBS/SMALL TREES
	TREE
	ASPHALT WALK
	ELECTRICAL CONTROL BOX
	DUMPSTER
	BOLDER
	RECORD PLAN FOUND
	BLDG. ENTRY
	GUTTER DOWNSPOUT
	SOLID YELLOW CENTER LINE
	SHRUB
	EDGE OF WOODS

**HOWARD STEIN HUDSON**  
 114 Turnpike Road, Suite 2C  
 Chelmsford, MA 01824  
 www.hshassoc.com

PREPARED FOR:  
 TRUE NORTH CAPITAL PARTNERS  
 369 LINDSAY POND ROAD  
 CONCORD, MA 01742

**MULTI-FAMILY  
 RE-DEVELOPMENT**  
 447 BOSTON POST ROAD EAST  
 MARLBOROUGH, MA, 01752  
 MIDDLESEX COUNTY

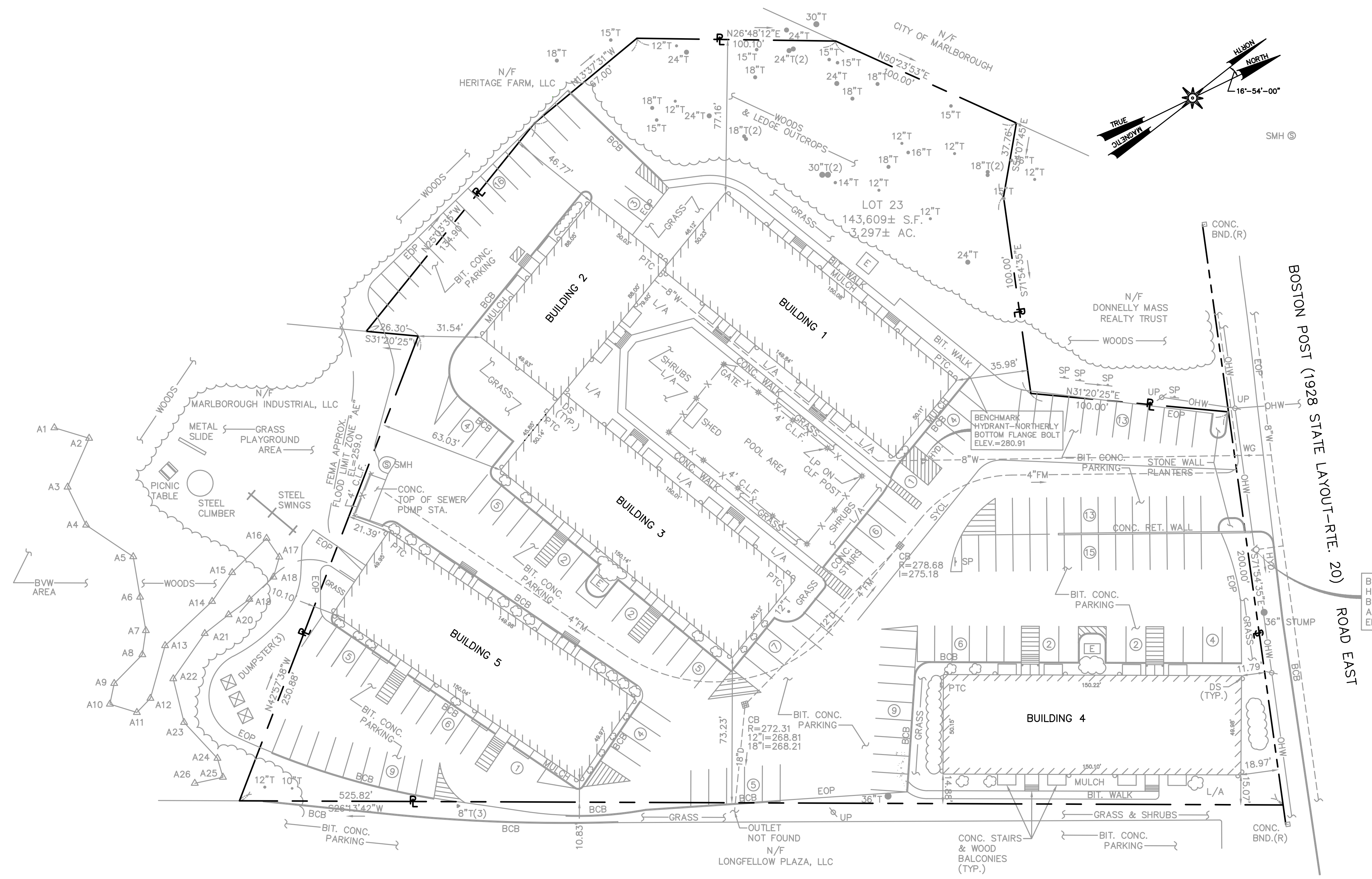
REVISIONS:

NO	BY	DATE	DESCRIPTION

SITE PLAN

LOCUS PLAN

DATE:	05-13-2020
PROJECT NUMBER:	19176
DESIGNED BY:	ND
DRAWN BY:	ND
CHECKED BY:	KE



- NOTES:**
1. THE PROPERTY SHOWN ON THE SURVEY IS THE SAME AS THAT IN THE LEGAL DESCRIPTION HEREON.
  2. UTILITIES SHOWN ON PLAN ARE FROM FIELD SURVEY OR RECORD PLANS AND LOCATIONS ARE APPROXIMATE. 4" SFM EXTENDS TO CITY SMH 200'± NORTHWESTERLY OF SITE DRIVEWAY.
  3. ELEVATION DATUM NAVD 88 CONVERTED FROM CITY SEWER PLAN-CONTRACT 1965-3 SHT. 6 OF 28
  4. PREMISES LOCATED IN ZONE "X" NO FLOOD HAZARD. LOCATION OF "AE" FLOOD ZONE REAR OF BLDG. 5 IS SHOWN PER FEMA COMMUNITY MAP 25017C0486F, DATED 7/7/2014 (ELEV. 259.0). LOWEST ELEV. SURVEYED ALONG REAR SITE BOUNDARY EL. 261.90.
  5. ASSESSOR'S PARCEL ID: 0073-0023
  6. FRONT ENTRY STAIRS COVERED WITH WOOD CANOPY.
  7. UNLESS NOTED OTHERWISE, AREAS OF SHRUBS AND L/A ARE MULCHED.
  8. BASED ON DEED RESEARCH THERE ARE NO PLOTTABLE EASEMENTS ON THE PREMISES OR WITHIN 50 FT. OF THE BOUNDARIES.

**DEED REFERENCES:**  
 BOOK 17726, PAGE 541  
 PLAN 1408 OF 1969

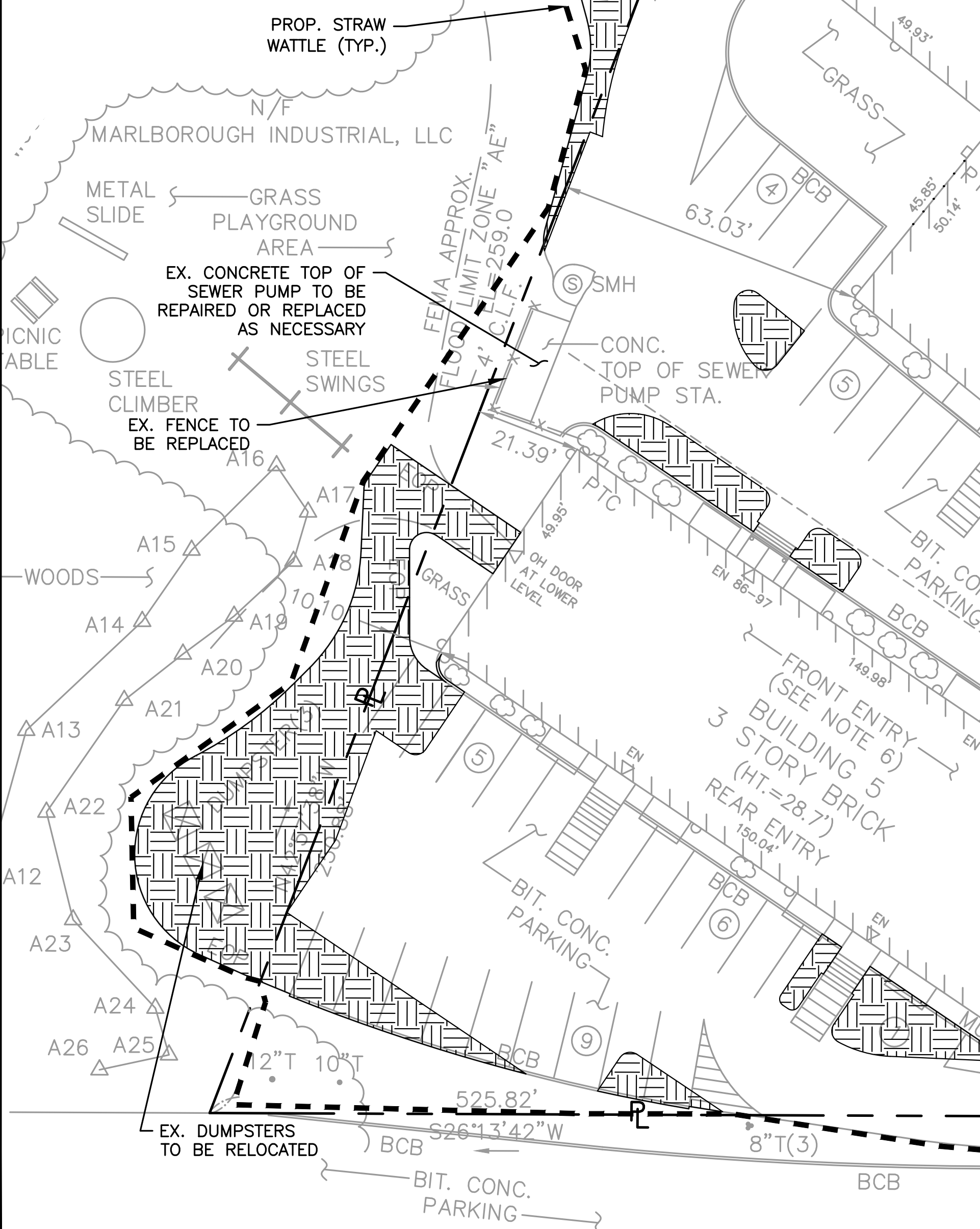
**OWNER OF RECORD**  
 WAYSIDE APARTMENTS, LLC.  
 369 LINDSAY POND  
 CONCORD, MA 01742

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**EROSION, SEDIMENT CONTROL AND DEMOLITION NOTES:**

- EXISTING PROPERTY LINE AND UTILITY INFORMATION SHOWN IS BASED ON ONLINE RESOURCES AND AN EXISTING SURVEY CONDUCTED BY MISTRY ASSOCIATES, INC. DATED JANUARY 19, 2020.
- THE ACCURACY AND COMPLETENESS OF THE UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE, TYPE, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK. AT LEAST 72 HOURS BEFORE EXCAVATION, THE CONTRACTOR SHALL BE REQUIRED TO CONTACT DIGSAFE AT 1-888-344-7233.
- THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE APPROPRIATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION.
- ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, PRIOR TO EXCAVATING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAVING.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED, REMOVED AND DISPOSED.
- THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS AT HIS/HER OWN EXPENSE, OUTSIDE OF THE PROJECT LIMITS.
- ALL EXISTING PAVING AND CURB ON-SITE TO BE REMOVED AND REPLACED UNLESS OTHERWISE NOTED. SEE LAYOUT AND MATERIALS PLAN FOR REPLACEMENT DETAILS.
- ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION. EROSION CONTROL SHALL CONFORM TO THE CITY OF MARLBOROUGH CONSERVATION COMMISSION REQUIREMENTS AS STATED IN THE ORDER OF CONDITIONS.
- SEE DETAIL SHEET 1 FOR SEQUENCE OF CONSTRUCTION.



**REFERENCES**  
EXISTING CONDITIONS PLAN BY MISTRY ASSOCIATES, INC. DATED FEBRUARY 5, 2020.

PREPARED FOR:  
TRUE NORTH CAPITAL PARTNERS  
389 LINDSAY POND ROAD  
CONCORD, MA 01742

**MULTI-FAMILY  
RE-DEVELOPMENT**  
447 BOSTON POST ROAD EAST  
MARLBOROUGH, MA, 01752  
MIDDLESEX COUNTY

REVISIONS:

NO	BY	DATE	DESCRIPTION

**SITE PLAN**

**EROSION, SEDIMENT CONTROL AND DEMOLITION PLAN**

DATE: 05-13-2020  
PROJECT NUMBER: 19176  
DESIGNED BY: ND  
DRAWN BY: ND  
CHECKED BY: KE

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National Drawn



**LAYOUT AND MATERIALS NOTES:**

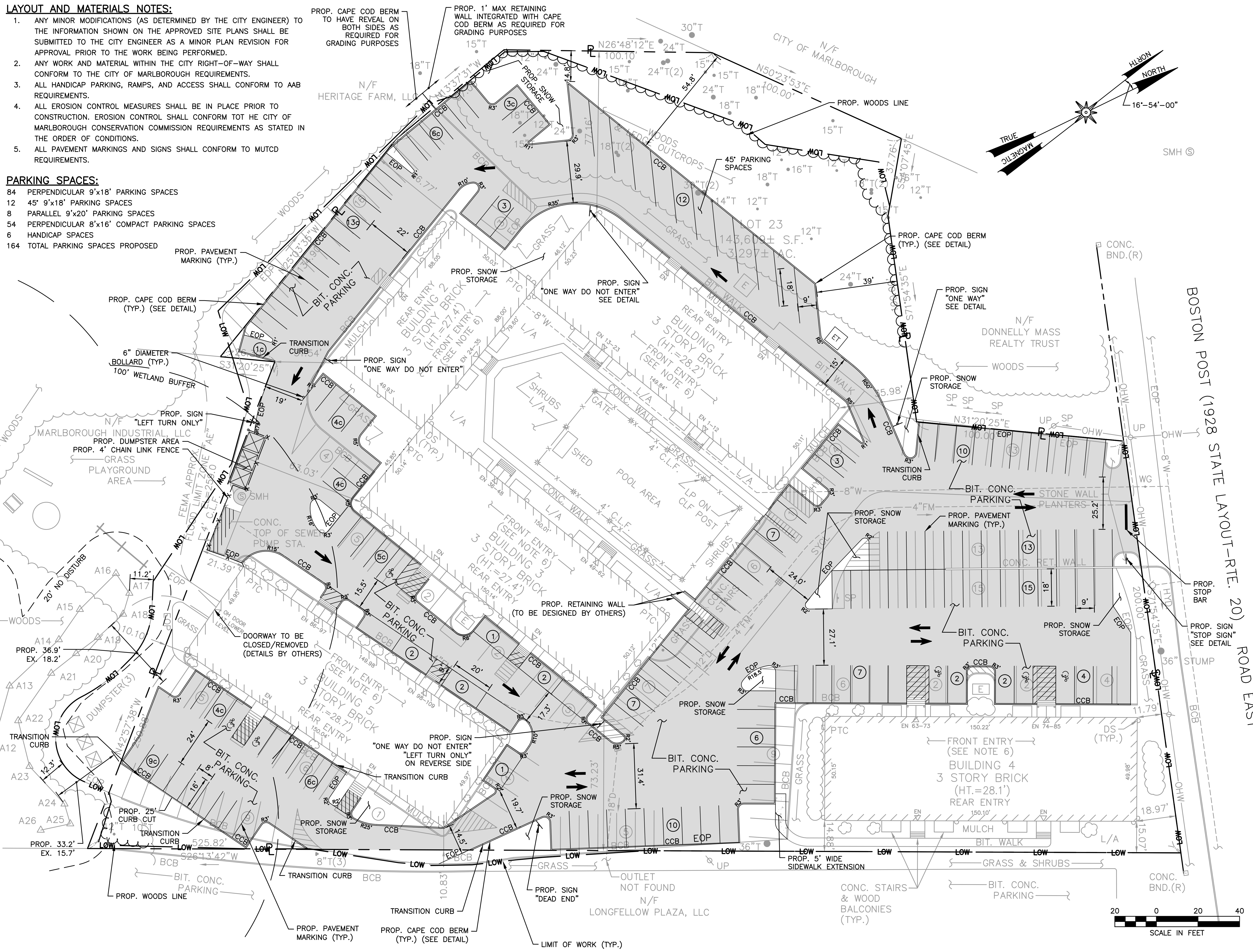
1. ANY MINOR MODIFICATIONS (AS DETERMINED BY THE CITY ENGINEER) TO THE INFORMATION SHOWN ON THE APPROVED SITE PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER AS A MINOR PLAN REVISION FOR APPROVAL PRIOR TO THE WORK BEING PERFORMED.
2. ANY WORK AND MATERIAL WITHIN THE CITY RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF MARLBOROUGH REQUIREMENTS.
3. ALL HANDICAP PARKING, RAMPS, AND ACCESS SHALL CONFORM TO AAB REQUIREMENTS.
4. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION. EROSION CONTROL SHALL CONFORM TO THE CITY OF MARLBOROUGH CONSERVATION COMMISSION REQUIREMENTS AS STATED IN THE ORDER OF CONDITIONS.
5. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO MUTCD REQUIREMENTS.

**PARKING SPACES:**

- 84 PERPENDICULAR 9'x18' PARKING SPACES
- 12 45' 9'x18' PARKING SPACES
- 8 PARALLEL 9'x20' PARKING SPACES
- 54 PERPENDICULAR 8'x16' COMPACT PARKING SPACES
- 6 HANDICAP SPACES
- 164 TOTAL PARKING SPACES PROPOSED

PROP. CAPE COD BERM TO HAVE REVEAL ON BOTH SIDES AS REQUIRED FOR GRADING PURPOSES

PROP. 1' MAX RETAINING WALL INTEGRATED WITH CAPE COD BERM AS REQUIRED FOR GRADING PURPOSES



PREPARED FOR:  
 TRUE NORTH CAPITAL PARTNERS  
 369 LINDSAY POND ROAD  
 CONCORD, MA 01742

**MULTI-FAMILY  
 RE-DEVELOPMENT**  
 447 BOSTON POST ROAD EAST  
 MARLBOROUGH, MA, 01752  
 MIDDLESEX COUNTY

**REVISIONS:**

NO	BY	DATE	DESCRIPTION

SITE PLAN

LAYOUT AND  
 MATERIALS  
 PLAN

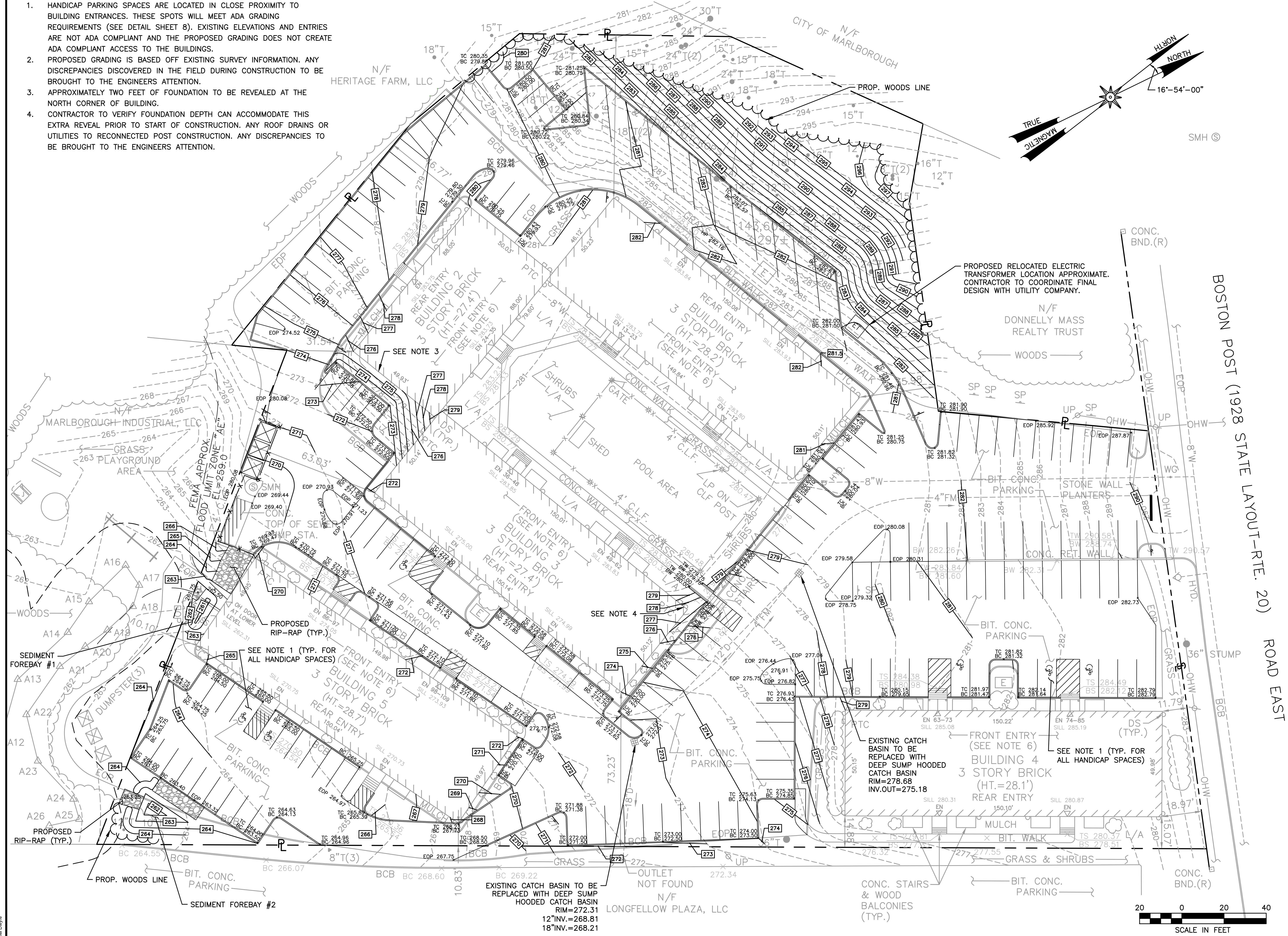
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DESIGNED BY:	ND
DRAWN BY:	ND
CHECKED BY:	KE

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**GRADING, DRAINAGE AND UTILITY NOTES:**

- HANDICAP PARKING SPACES ARE LOCATED IN CLOSE PROXIMITY TO BUILDING ENTRANCES. THESE SPOTS WILL MEET ADA GRADING REQUIREMENTS (SEE DETAIL SHEET 8). EXISTING ELEVATIONS AND ENTRIES ARE NOT ADA COMPLIANT AND THE PROPOSED GRADING DOES NOT CREATE ADA COMPLIANT ACCESS TO THE BUILDINGS.
- PROPOSED GRADING IS BASED OFF EXISTING SURVEY INFORMATION. ANY DISCREPANCIES DISCOVERED IN THE FIELD DURING CONSTRUCTION TO BE BROUGHT TO THE ENGINEERS ATTENTION.
- APPROXIMATELY TWO FEET OF FOUNDATION TO BE REVEALED AT THE NORTH CORNER OF BUILDING.
- CONTRACTOR TO VERIFY FOUNDATION DEPTH CAN ACCOMMODATE THIS EXTRA REVEAL PRIOR TO START OF CONSTRUCTION. ANY ROOF DRAINS OR UTILITIES TO RECONNECTED POST CONSTRUCTION. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEERS ATTENTION.



**HOWARD STEIN HUDSON**  
 114 Turnpike Road, Suite 2C  
 Chelmsford, MA 01824  
 www.hshassoc.com

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 CONCORD, MA 01742

**MULTI-FAMILY  
 RE-DEVELOPMENT**  
 447 BOSTON POST ROAD EAST  
 MARLBOROUGH, MA, 01752  
 MIDDLESEX COUNTY

REVISIONS:

NO	BY	DATE	DESCRIPTION

SITE PLAN

**GRADING,  
 DRAINAGE AND  
 UTILITY PLAN**

DATE: 05-13-2020  
 PROJECT NUMBER: 19176  
 DESIGNED BY: ND  
 DRAWN BY: ND  
 CHECKED BY: KE

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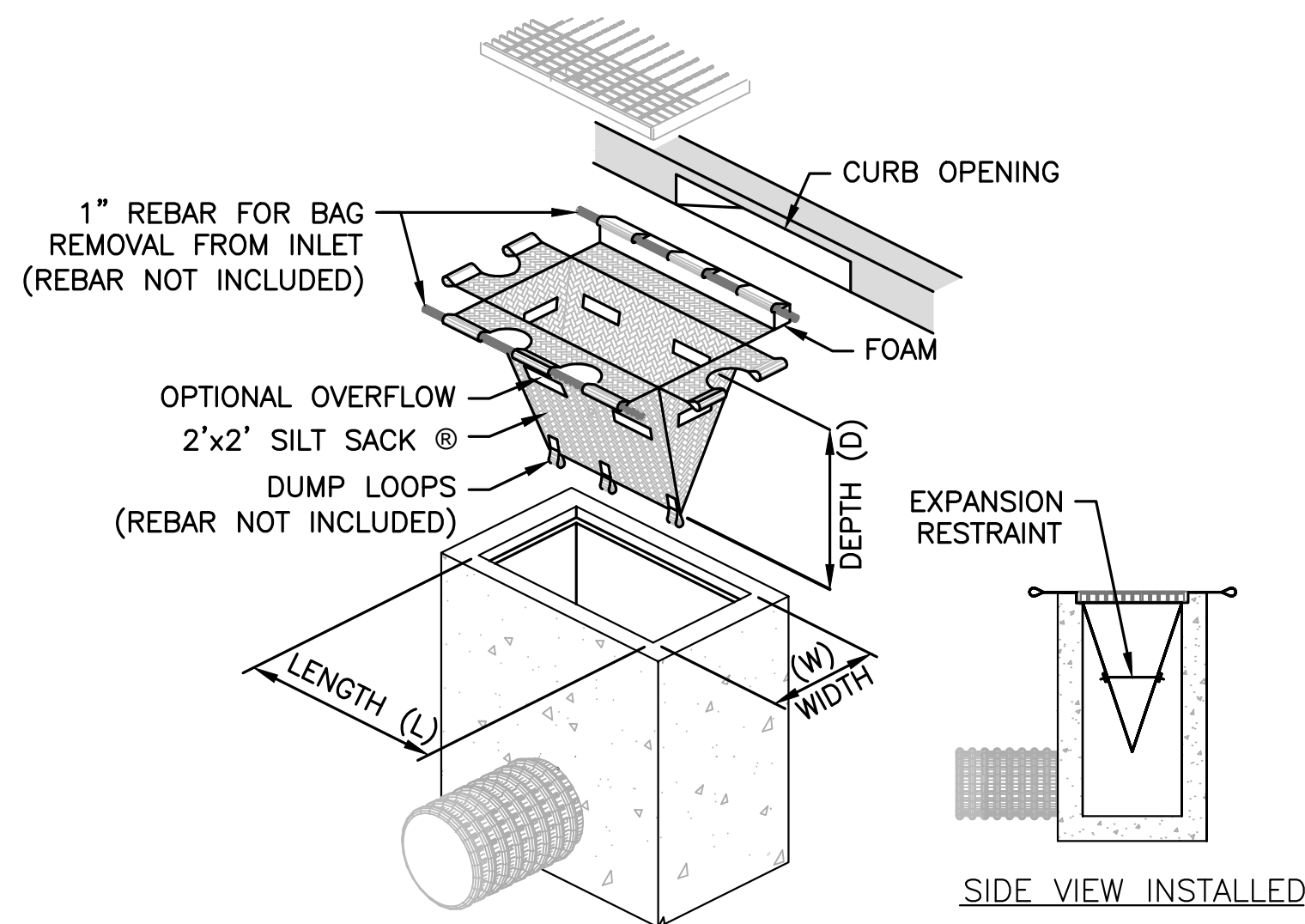




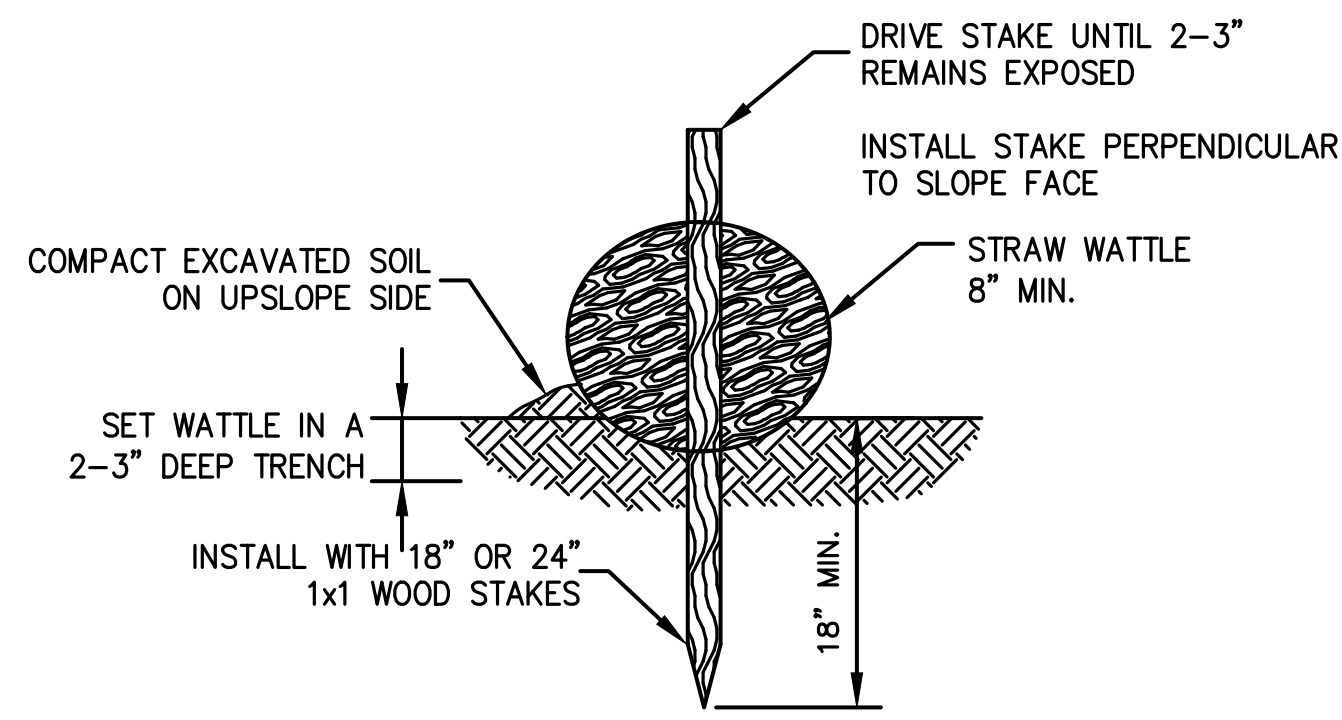


**SEQUENCE OF OPERATIONS:**

1. INSTALL STRAW WATTLE TO MAXIMUM EXTENT PRACTICABLE.
2. INSTALL TEMPORARY INLET CONTROL MEASURES AT EXISTING CATCH BASINS.
3. INSTALL STABILIZED CONTROL ENTRANCE.
4. DEMOLISH EXISTING IMPROVEMENTS PER PLAN AND REMOVE FROM SITE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
5. AS SOON AS FEASIBLE STABILIZE ANY AREAS OUTSIDE THE PROPERTY BUT WITHIN THE STRAW WATTLE LIMITS. ONCE PROPERLY STABILIZED MOVE STRAW WATTLE TO THE PROPERTY LINE.
6. BEGIN CLEARING AND GRUBBING.
7. INSTALL STORMWATER MANAGEMENT SYSTEM.
8. INSTALL SITE FURNISHINGS.
9. INSTALL PAVEMENT.
10. INSTALL LANDSCAPING.
11. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT COVER IS ESTABLISHED.

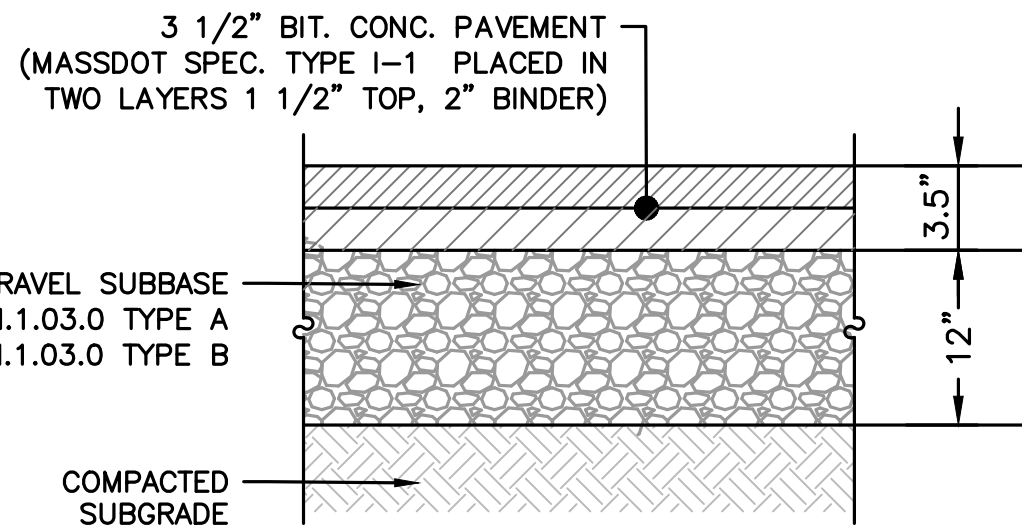


**TEMPORARY INLET PROTECTION**  
NOT TO SCALE

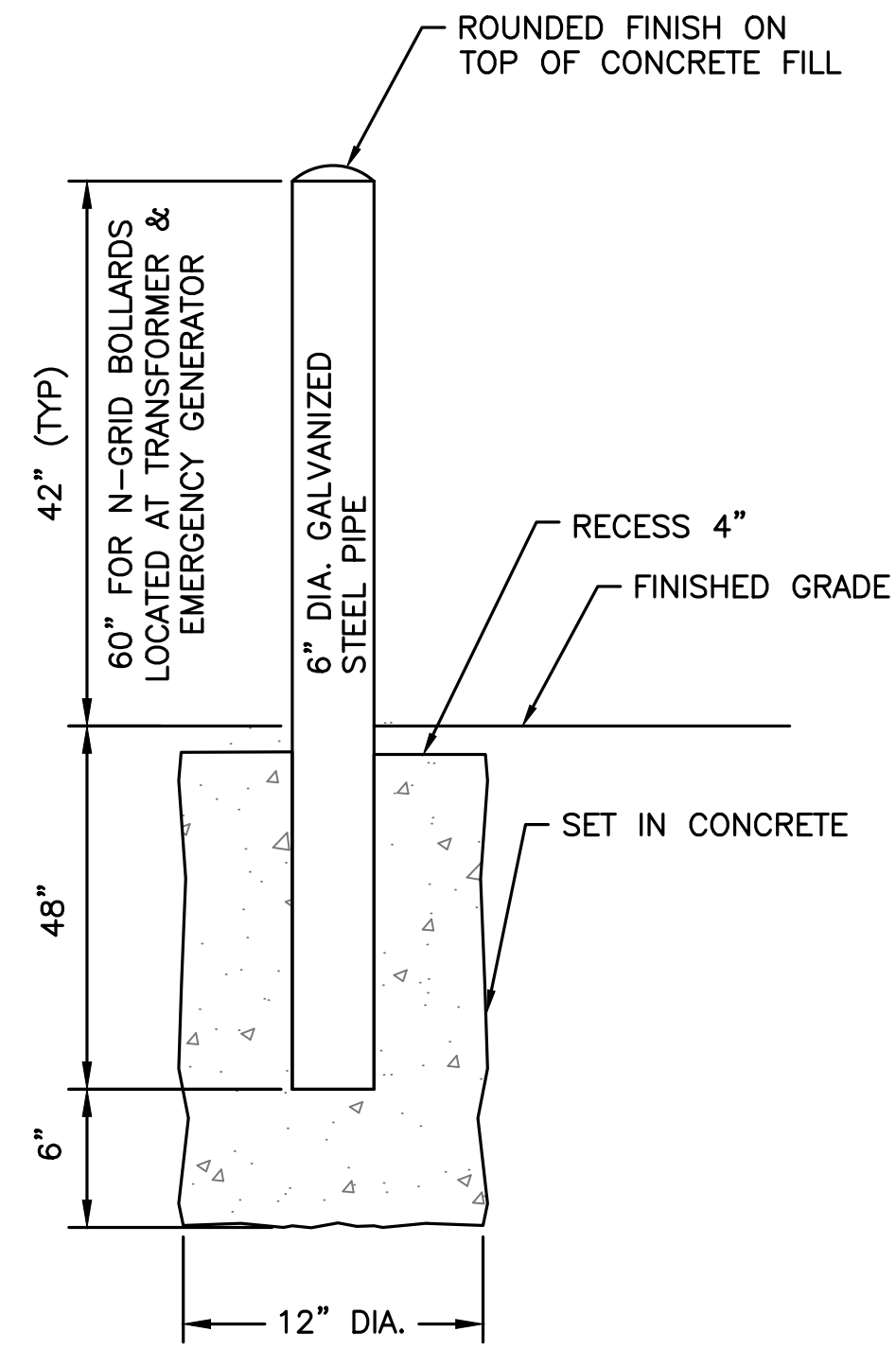


**STRAW WATTLE DETAIL**  
NOT TO SCALE

- NOTES:
1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3"(5-7.5 CM) DEEP X 9"(22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
  2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
  3. SECURE THE WATTLE WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9 - 1.2 M) AND WITH A STAKE ON EACH END. (STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.

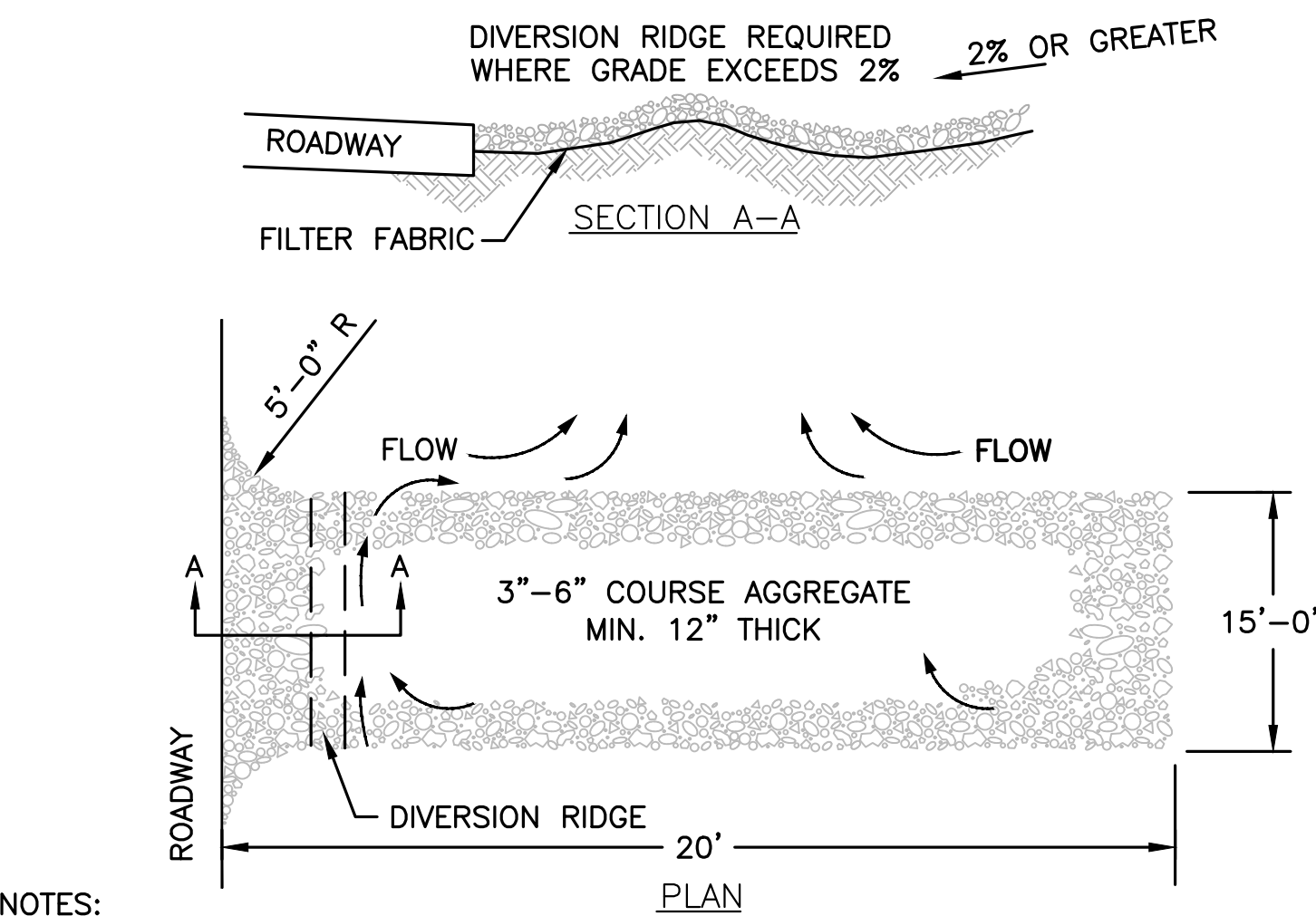
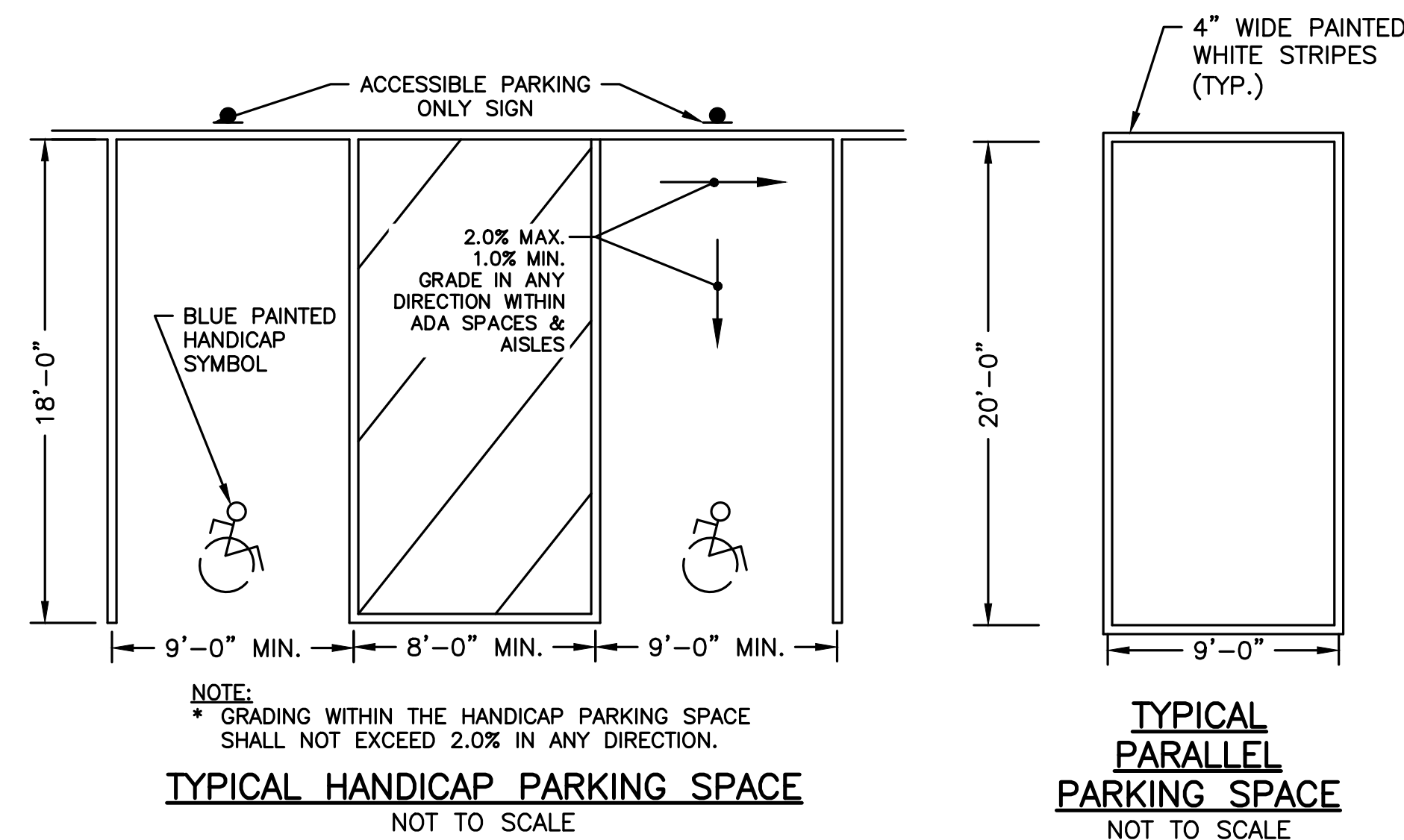
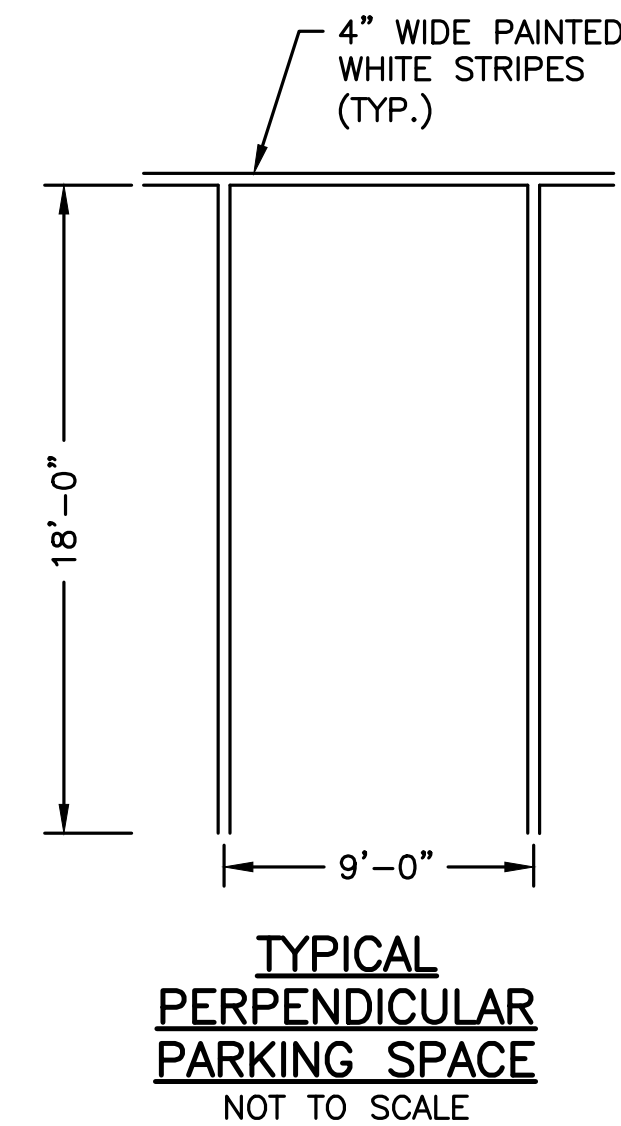
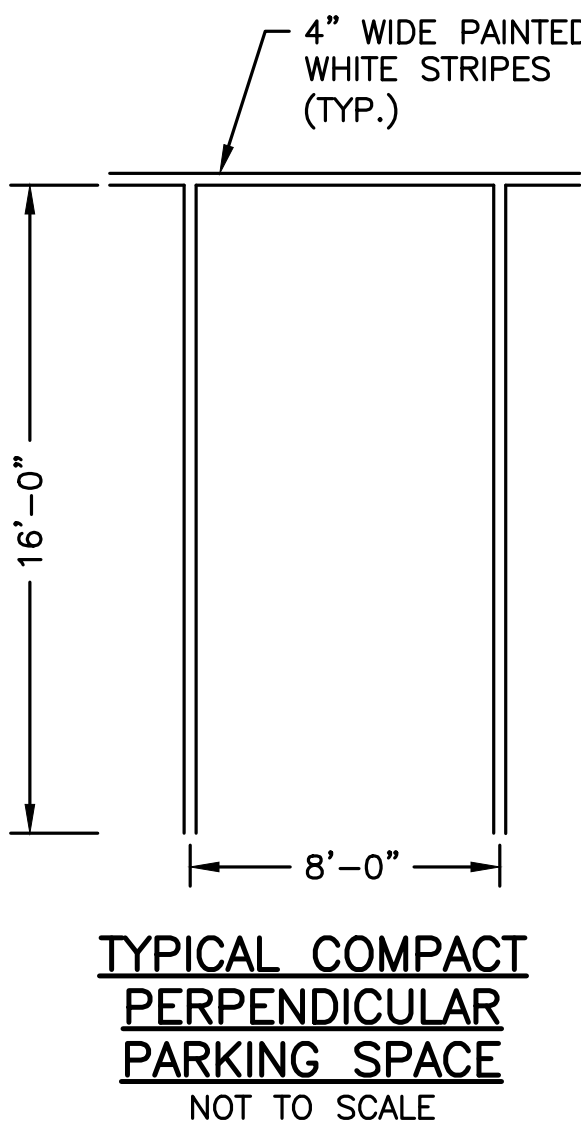


**FULL DEPTH PARKING LOT SECTION DETAIL**  
NOT TO SCALE



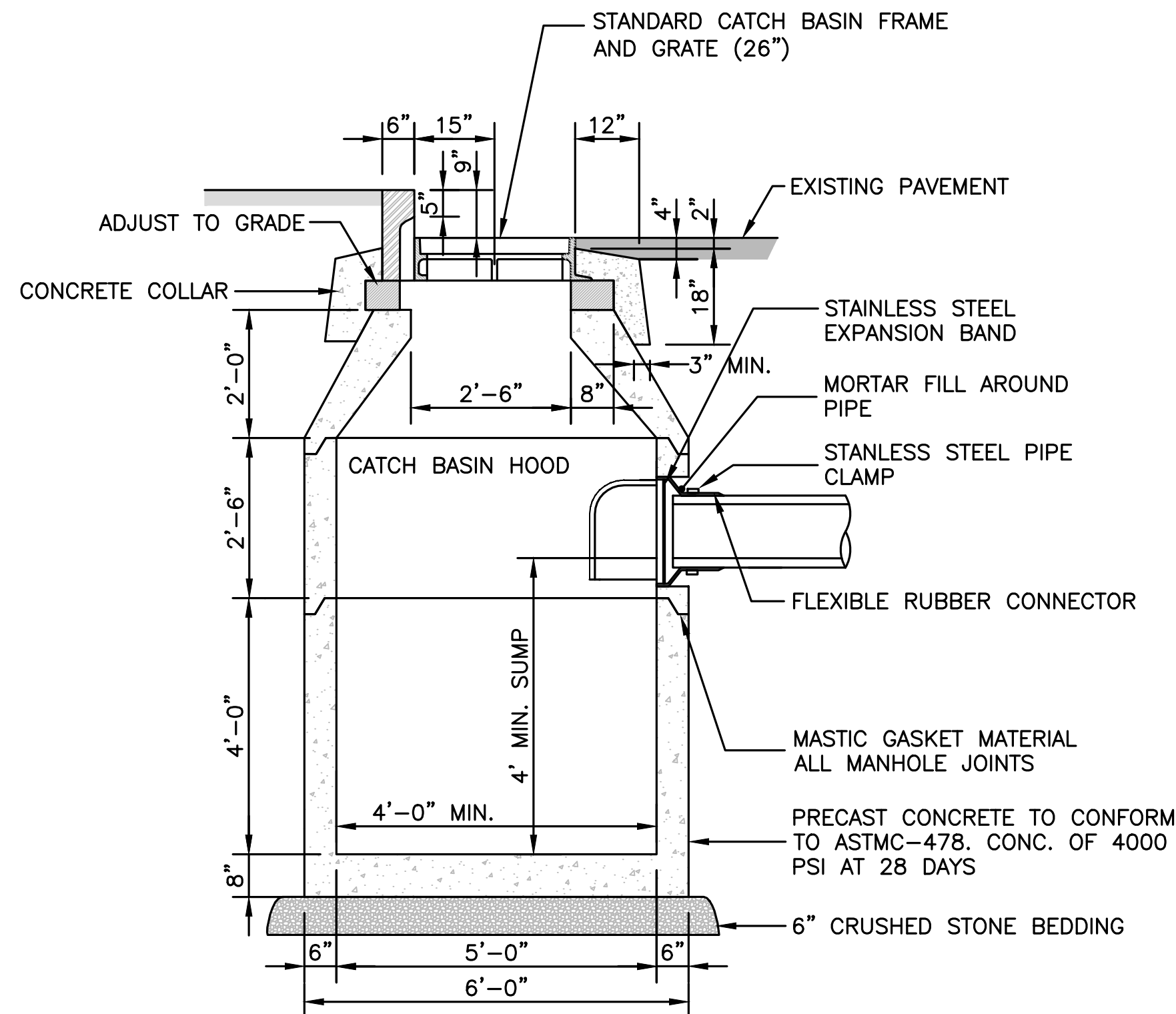
**BOLLARD**  
NOTE: NOT TO SCALE

1. DIG POST HOLE FOR BOLLARD, PARTIALLY FILL HOLE WITH CONCRETE MIX, INSTALL PIPE, FILL HOLE, AND FILL PIPE W/CONCRETE MIX.
2. SUPPORT BOLLARD AND PROTECT FROM DAMAGE WHILE CONCRETE CURES. THEN PAINT WITH APPROPRIATE PAINT. COLOR AS REQUIRED BY OWNER.



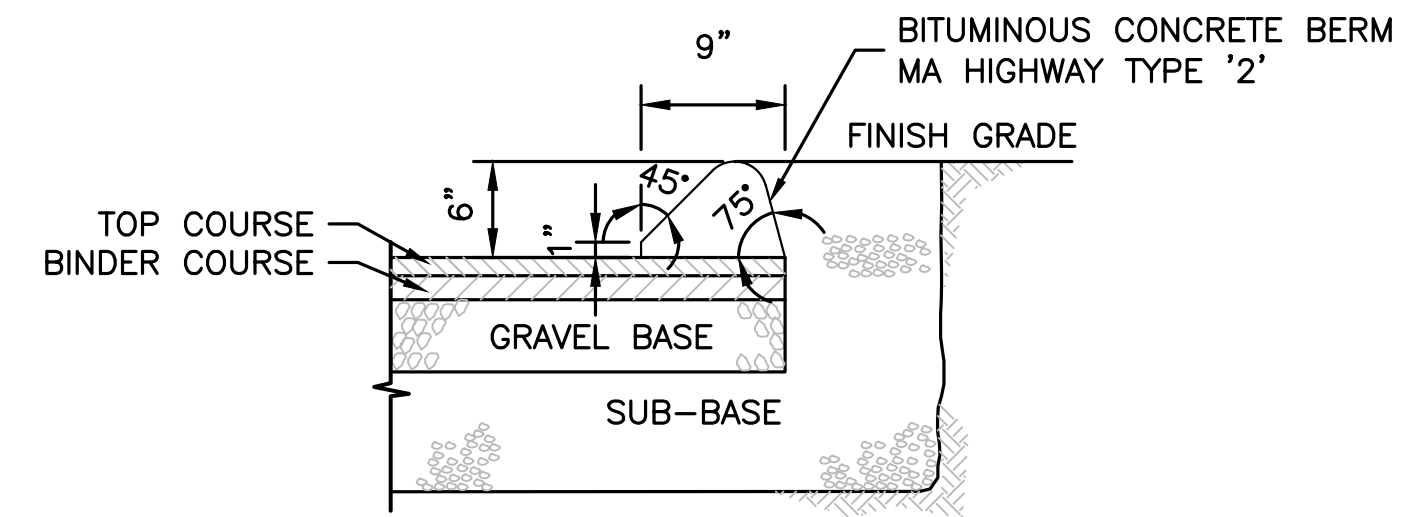
- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
  2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
  3. TEMPORARY CONSTRUCTION ENTRANCE SHALL BE APPLIED WHERE NECESSARY TO KEEP PUBLIC WAYS FREE OF SEDIMENT INCLUDING STAGING AREAS.
  4. CONTRACTOR ACCESS ACROSS EXISTING SIDEWALK SHALL BE COORDINATED WITH CITY OF MELROSE DEPARTMENT OF PUBLIC WORKS.

**STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE



- NOTES:
1. ADEQUATE FOR H-20 MINIMUM LOADING.

**CATCH BASIN**  
NOT TO SCALE



**CAPE COD BERM/CURB**  
NOT TO SCALE

NOTE: DETAIL DEVELOPED FROM MA HIGHWAY CONSTRUCTION STANDARDS DRAWING NUMBER 106.2.0 "BITUMINOUS CONCRETE BERM - TYPE '2'"

PREPARED FOR:  
TRUE NORTH CAPITAL PARTNERS  
369 LINDSAY POND ROAD  
CONCORD, MA 01742

**MULTI-FAMILY RE-DEVELOPMENT**  
447 BOSTON POST ROAD EAST  
MARLBOROUGH, MA, 01752  
MIDDLESEX COUNTY

REVISIONS:

NO	BY	DATE	DESCRIPTION

SITE PLAN

DETAIL SHEET  
1 OF 2

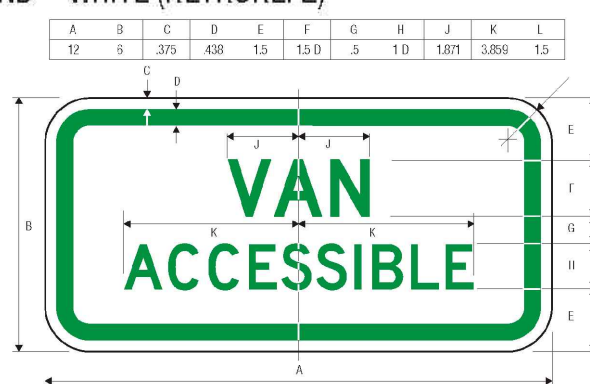
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PROJECT NUMBER:	19176
DESIGNED BY:	ND
DRAWN BY:	ND
CHECKED BY:	KE

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National Drive





LEGEND - GREEN (RETROREFL), WHITE SYMBOL ON BLUE (RETROREFL)  
BACKGROUND - WHITE (RETROREFL)



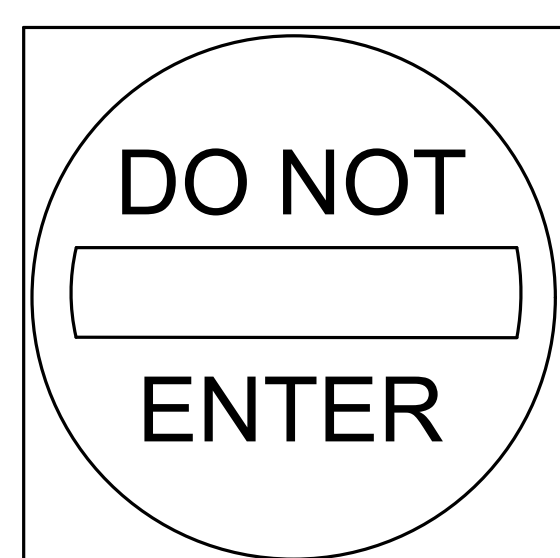
HANDICAP & VAN ACCESSIBLE SIGNS DETAIL  
NOT TO SCALE



R6-1L



R6-1R



R5-1

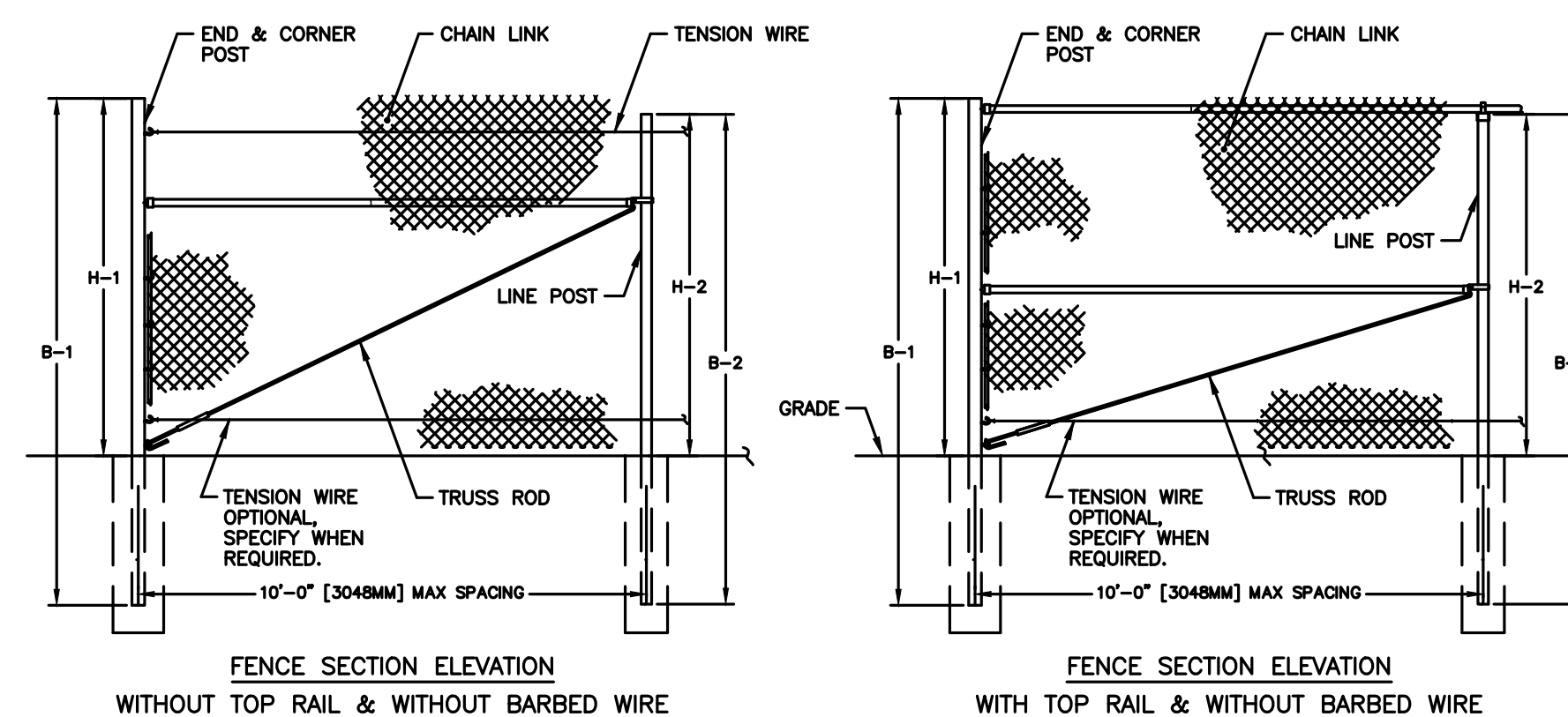


R5-1a



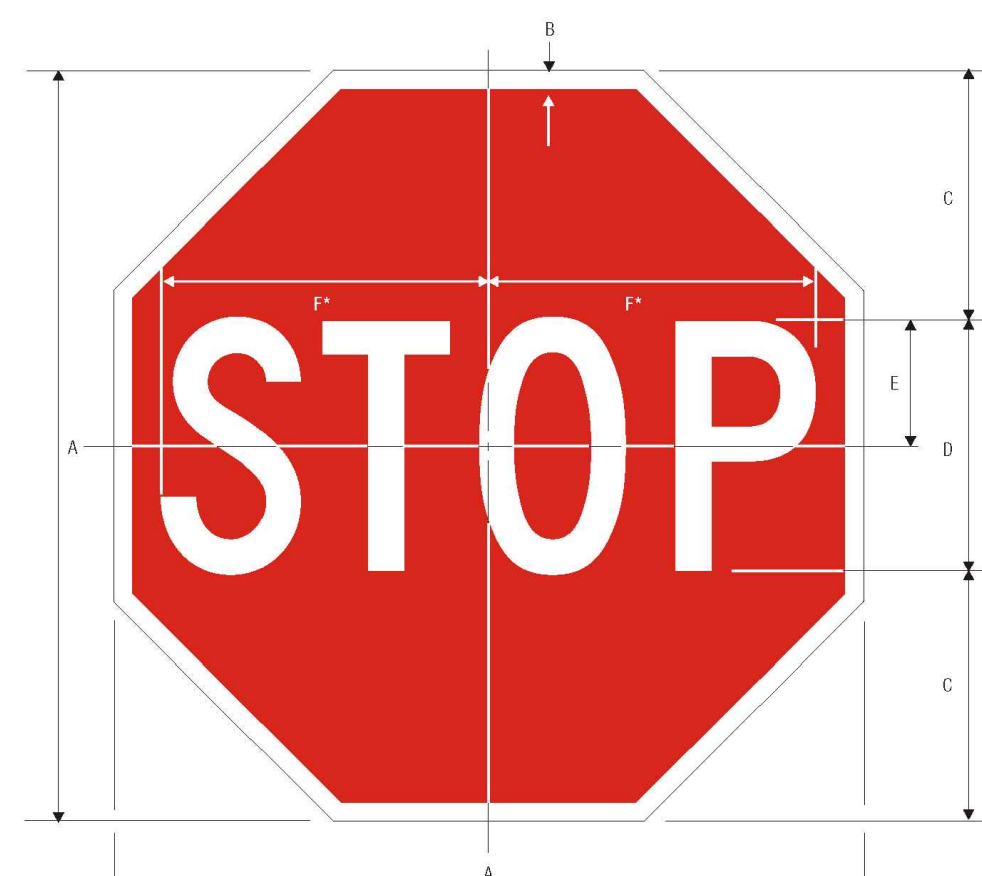
W14-1

ONE WAY, DO NOT ENTER & DEAD END  
MUTCD SIGNS DETAIL  
NOT TO SCALE

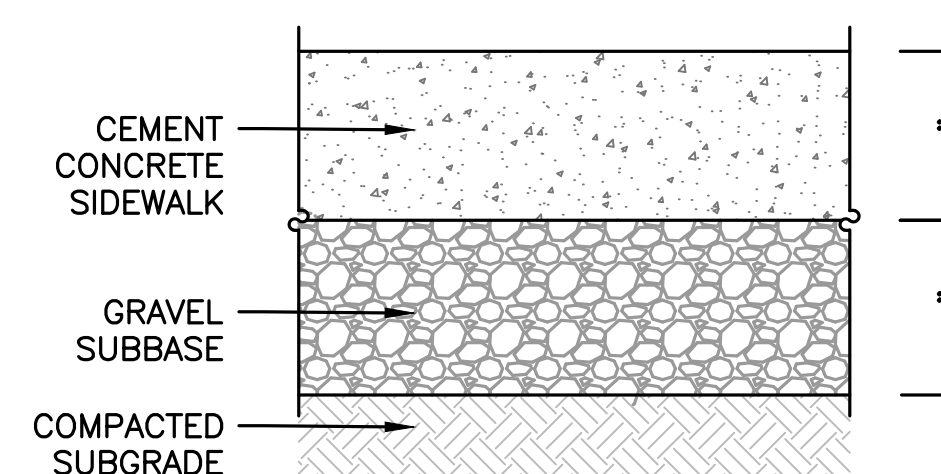


FENCE HEIGHT	END & CORNER POSTS			LINE POSTS		
	NOMINAL HEIGHT	B-1 BAR LENGTH	H-1 HEIGHT ABOVE GRADE	B-2 BAR LENGTH	H-2 HEIGHT ABOVE GRADE	
5'-0"	8'-0"	5'-0 5/8"	7'-8"	4'-8 7/8"		
6'-0"	9'-0"	6'-0 5/8"	8'-8"	5'-8 7/8"		
7'-0"	10'-0"	7'-0 5/8"	9'-8"	6'-8 7/8"		
8'-0"	11'-0"	8'-0 5/8"	10'-8"	7'-8 7/8"		
9'-0"	12'-0"	9'-0 5/8"	11'-8"	8'-8 7/8"		
10'-0"	13'-0"	10'-0 5/8"	12'-8"	9'-8 7/8"		
11'-0"	14'-0"	11'-0 5/8"	13'-8"	10'-8 7/8"		
12'-0"	15'-0"	12'-0 5/8"	14'-8"	11'-8 7/8"		

CHAIN-LINK FENCE DETAIL  
NOT TO SCALE



STOP SIGN DETAIL  
NOT TO SCALE



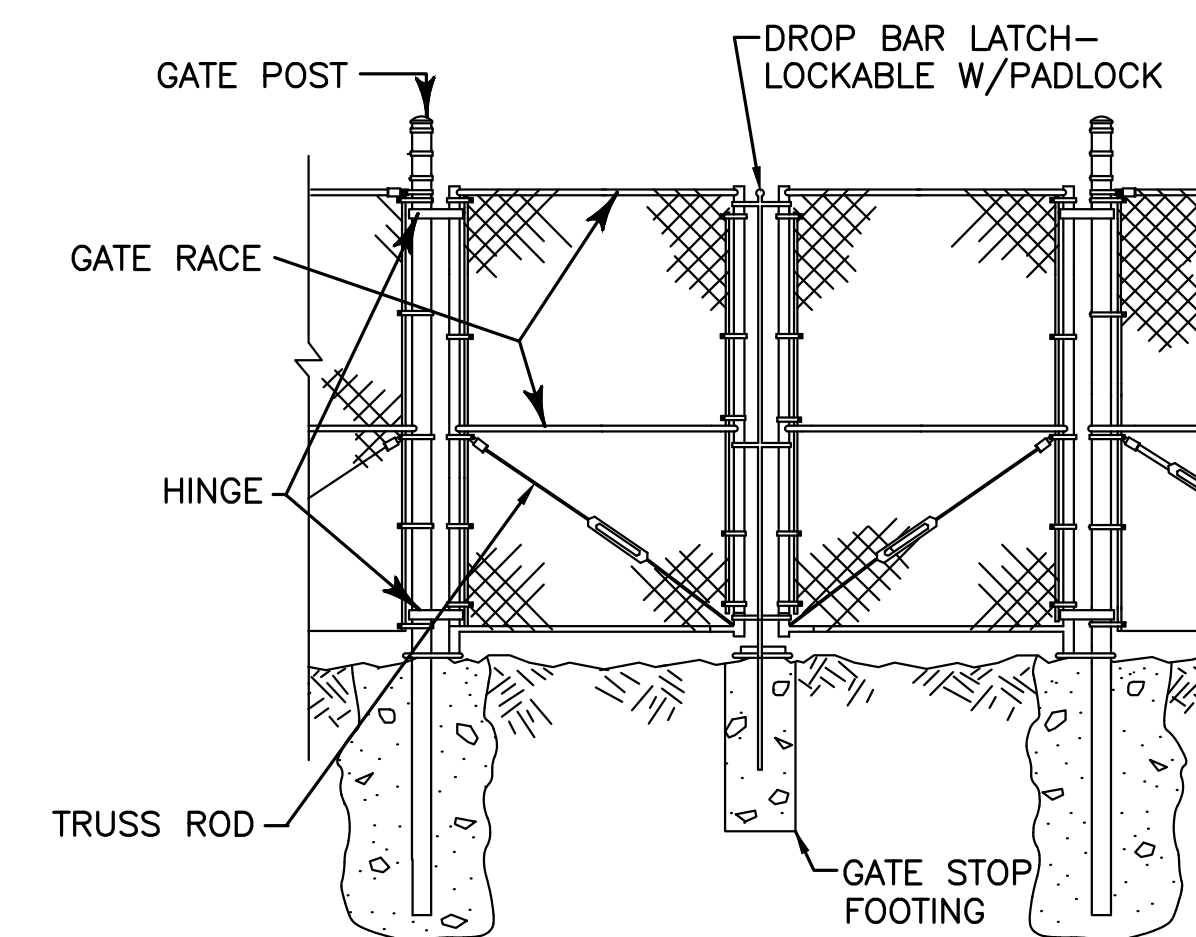
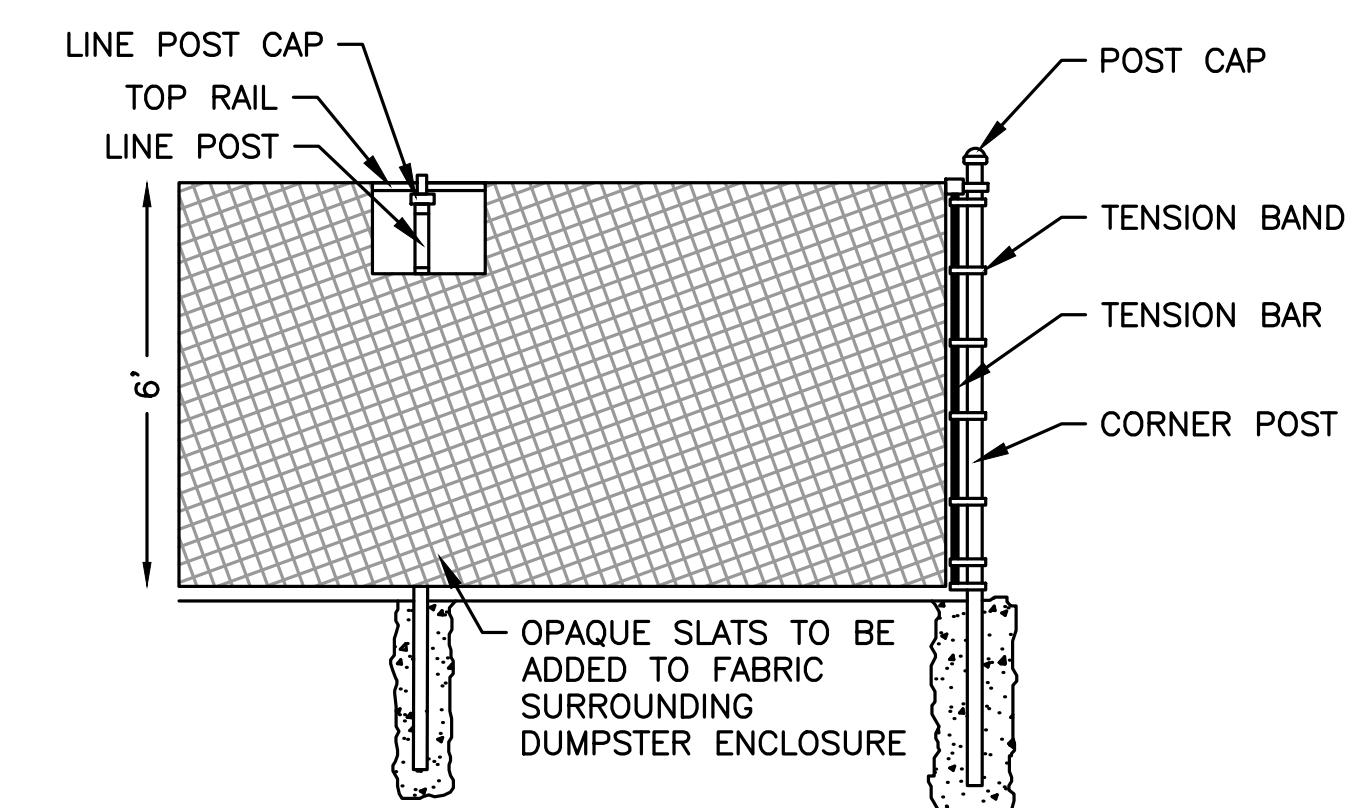
NOTES:

1. CONCRETE SIDEWALK DETAIL AND NOTES APPLY TO SIDEWALK WITHIN THE RIGHT-OF-WAY.
2. CONCRETE SHALL BE 4,000 PSI.
3. SIDEWALKS ARE TO BE RAKED FINISH WITH 3/8 INCH TROWEL JOINTS.

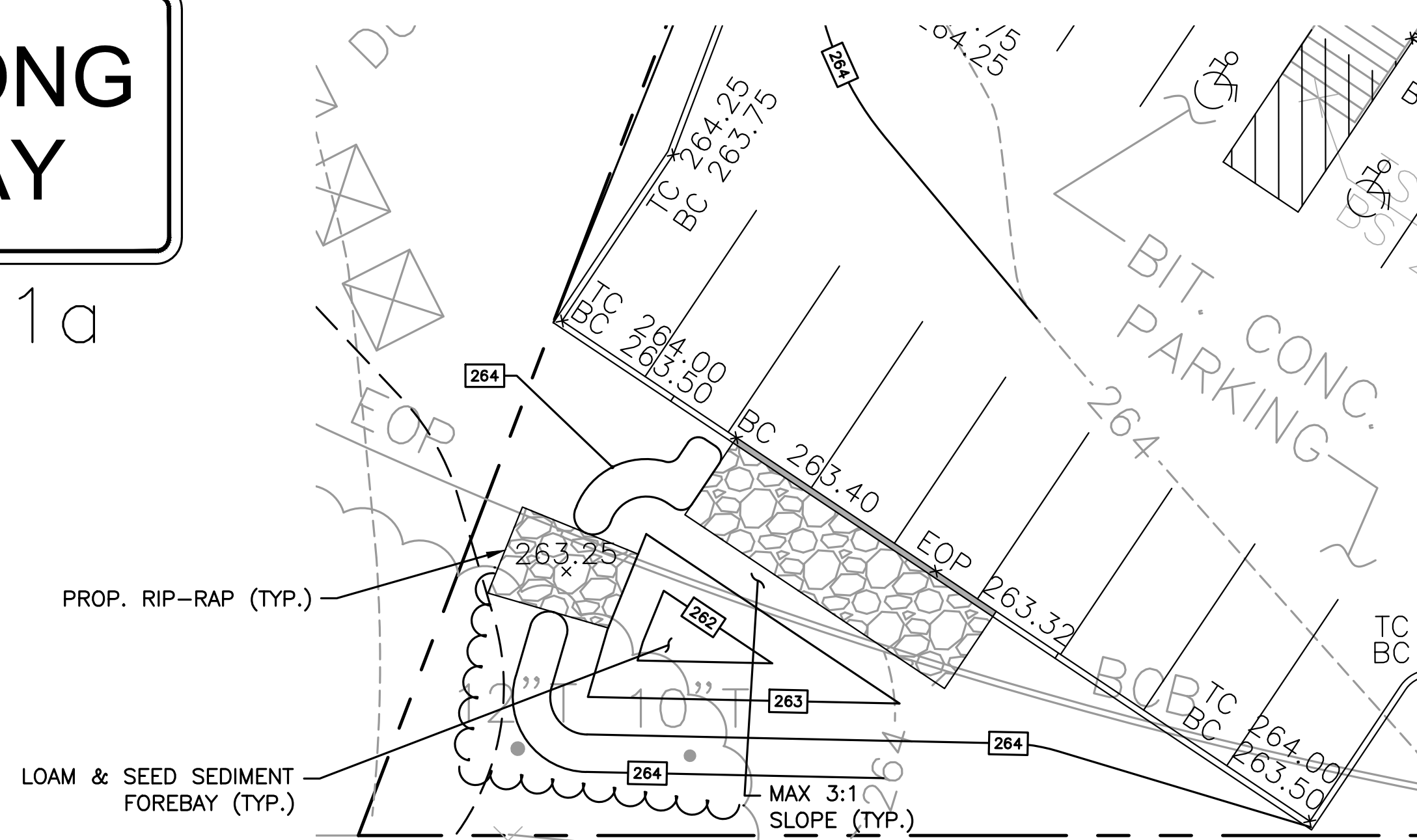
CEM CONC SIDEWALK SECTION DETAIL  
NOT TO SCALE



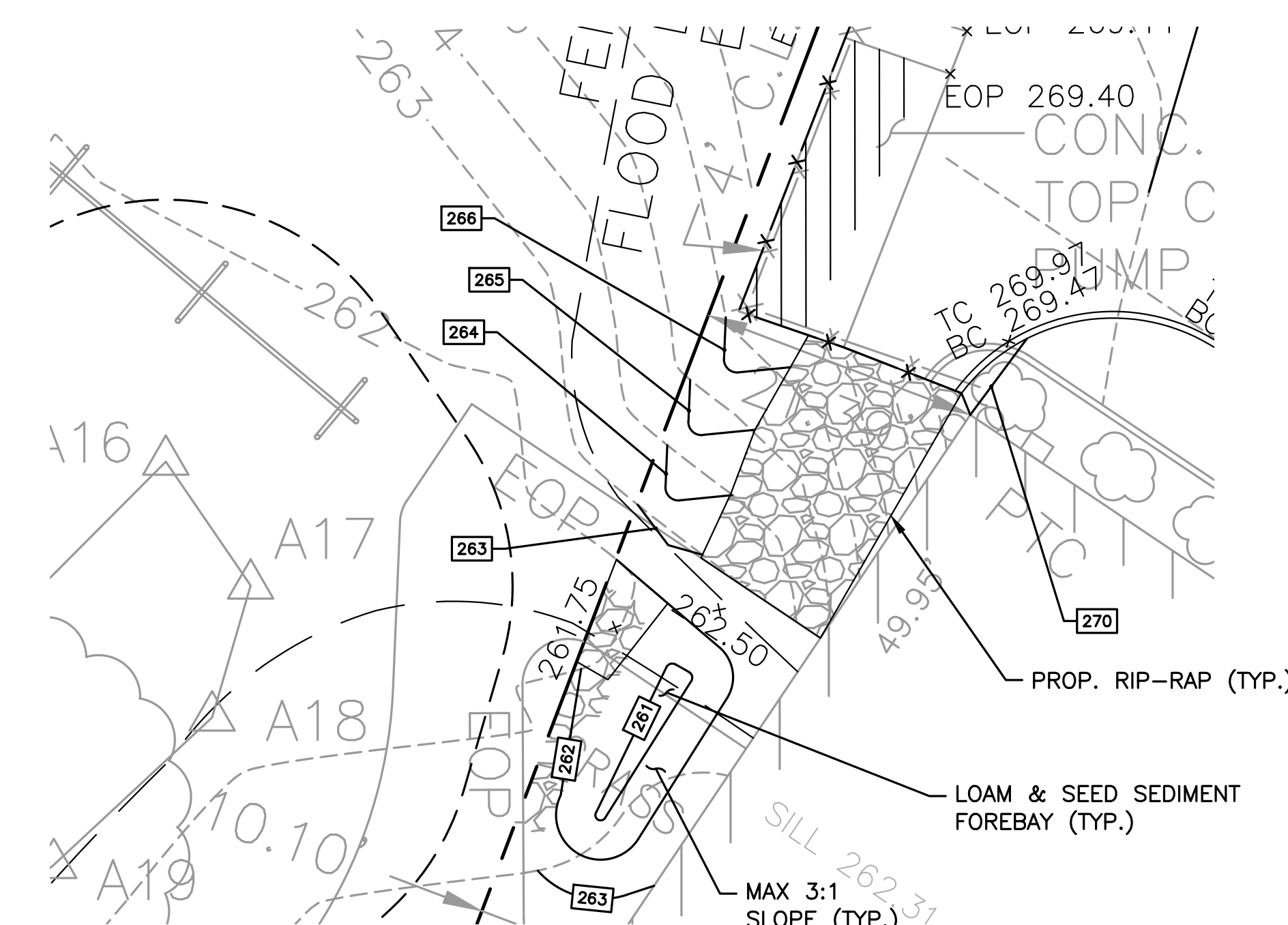
COMPACT PARKING SPACE SIGNS DETAIL  
NOT TO SCALE



CHAIN LINK FENCE DETAIL  
NOT TO SCALE



SEDIMENT FOREBAY #1 DETAIL  
NOT TO SCALE



SEDIMENT FOREBAY #2 DETAIL  
NOT TO SCALE

REVISIONS:

NO	BY	DATE	DESCRIPTION

SITE PLAN

DETAIL SHEET  
2 OF 2

DATE:	05-13-2020
PROJECT NUMBER:	19176
DESIGNED BY:	ND
DRAWN BY:	ND
CHECKED BY:	KE





HOWARD STEIN HUDSON

114 Turnpike Road, Suite 2C  
Chelmsford, MA 01824  
www.hshassoc.com

PREPARED FOR:  
TRUE NORTH CAPITAL PARTNERS  
389 LINDSAY POND ROAD  
CONCORD, MA 01742

**MULTI-FAMILY  
RE-DEVELOPMENT**  
447 BOSTON POST ROAD EAST  
MARLBOROUGH, MA, 01752  
MIDDLESEX COUNTY

REVISIONS:

NO	BY	DATE	DESCRIPTION

**PRE-DEVELOPMENT  
DRAINAGE**

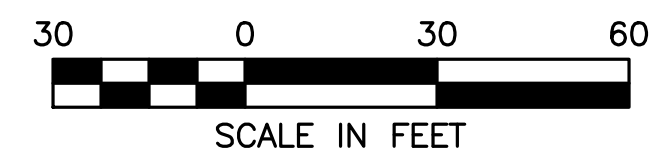
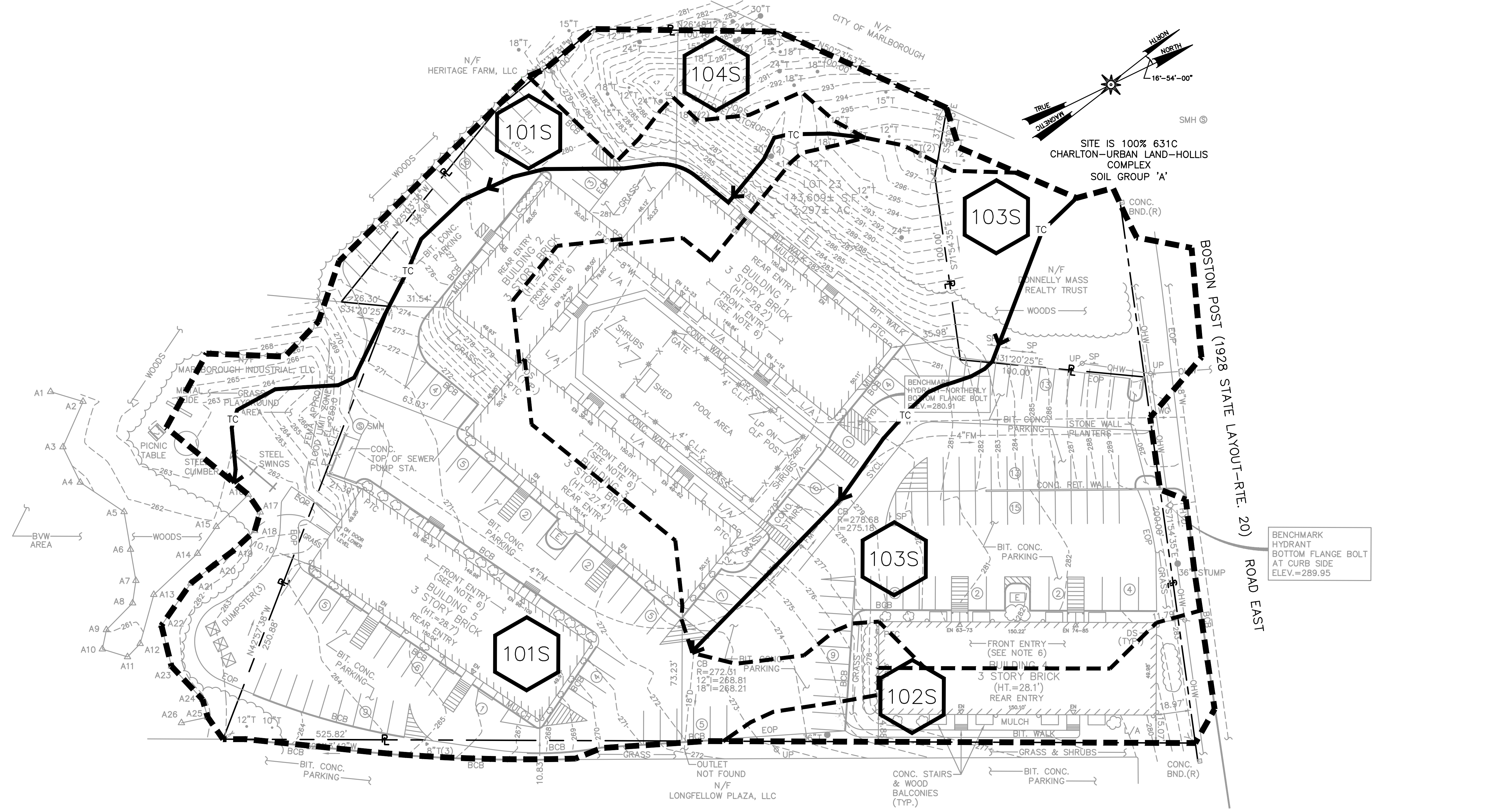
DATE: 05-14-2020

PROJECT NUMBER: 19176

DESIGNED BY: ND

DRAWN BY: ND

CHECKED BY: KE



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National Drive









HOWARD STEIN HUDSON

Engineers + Planners

## SUPPLEMENTAL DATA REPORT

# Proposed Multi-Family Redevelopment

447 Boston Post Road East

Marlborough, Massachusetts

Prepared by:

**Howard Stein Hudson**  
114 Turnpike Road, Suite 2C  
Chelmsford, MA 01824

**May 2020**



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# Existing Conditions

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The subject site consists of one parcel totaling 143,609 S.F. (3.30 Ac.) in the Business – B zone. The addresses of record for the parcel is 447 Boston Post Road East. The site is located approximately 1,250 feet west from the intersection of Farm Road and Boston Post Road East. There are five (5) existing 3-story multi-family buildings with associated improvements on site. The parcel frontage is located along Boston Post Road East, also known as Route 20. The abutters on the north, west and east side of our parcel are zoned Business while the abutter on the south side is zoned Resident A-2.

The property contains a mix of forest, open grassed areas and paving that are used for the existing buildings. There are no known easements on site. The terrain ranges from elevation 297' to 261'. The site currently accepts direct runoff from abutters on the north, west and east sides. This runoff flows onto our site and either enters two existing catch basins, which flow south-east, or flows overland across the site. Both flow paths end up meeting at a wetland on the southern side of the property. There are no streams or wetlands on-site. There is a small portion of the site located within a FEMA 'AE' zone per community map 25017C0486F, dated 7/7/2014. This flood zone reaches elevation 259', which doesn't exist on site. The lowest surveyed elevation on site is 261.90'. Existing flow patterns are generally from the north toward the south, with localized flow in other directions due to the site terrain. All water from the site drains into the existing wetland to the south of our property.

There are currently two catch basins leading to a 12" and then 18" pipe on the property. These pipes connect to an existing drainage system on the eastern abutters property which discharges into the wetland to the south of the site. There are no other known constructed stormwater management systems on site. There is an existing storm drain system on the eastern abutters property.

Soil conditions on site are 100% Charlton-Urban Land-Hollis Complex per NRCS online mapping. The hydrologic soil group for this soil is A.

Utilities are available within Boston Post Roads right-of-way. Existing connections include sewer, water, and electrical.



## Proposed Conditions

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This project proposes to resurface and restripe the existing parking lot, add interior landscaped areas and add paving on the north side of the property to increase the total number of available parking spaces while maintaining the impervious cover. The goal of the project is to improve the non-conforming parking lot regarding parking layout & traffic flow, parking space size and accessibility, increased fire access, and upgraded drainage. The proposed conditions will continue to be non-compliant however will be improved compared to the existing conditions. The site will also be improved with landscaping.

The access to the project is off Boston Post Road East and will be unchanged. Pedestrian amenities will remain unchanged.

The site grading and drainage system has been designed to comply with the requirements of the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards to the maximum extent practicable per Massachusetts Stormwater Standards for a redevelopment project. The project proposes to reduce the total impervious 1,479 S.F. Site topography has been designed to mimic the existing conditions to the maximum extent practicable. The project includes provisions to reduce offsite runoff rates for the 2-, 10-, and 100-year storm events, as required. Details of the stormwater system is discussed in greater detail in the Hydrology section of this report.

The project will continue to use the existing utility connections and proposes no changes related to utilities.

The project will file an NOI with the Conservation Commission for the proposed work within the 100' buffer of a bordering vegetated wetland. Approximately 585 s.f. of the project involves work within the 20' wetland setback. This work is part of the removal of existing impervious area, specifically paved parking area, and the subsequent stabilization and grading to existing elevations associated with said removal. HSH believes that this alteration would only have a positive benefit on the nearby wetland by reducing impervious runoff and that the associated construction impact is minor.



# Zoning

---

447 Boston Post Road East, Marlborough MA, 01752

Map 73 Lot 23

Business District – ‘B’

Proposed Building Type: N/A (Maintaining Existing Use of Multi-Family)

Business ‘B’ General Standards (§650 Attachment 2)

Lot Standards	Required	Proposed (Existing)
Minimum Lot Area	5,000 S.F.	143,609 S.F. (Unchanged)
Minimum Lot Frontage	50’	200’ (Unchanged)
Maximum Lot Coverage	30%	71.6% (69.8%)
Minimum Building Standards	Required	Proposed (Existing)
Maximum Building Height	52’	29’ (Unchanged)
Minimum Yard Dimensions	Required	Proposed (Existing)
Minimum Front Yard Setback	50’	11.97’ (Unchanged)
Minimum Side Yard Setback	0*	10.83’ (Unchanged)
Minimum Rear Yard Setback	0’	10.10’ (Unchanged)

\*Based on Note 3 per Marlborough Zoning Dimensional Table

## Special Permit Criteria

---

Per Marlborough Code 650-11 through 13 (also known as Marlborough Zoning Article IV), all non-conforming regulations or requirements are either remaining the same as existing conditions or being improved upon, except for a unique situation with Maximum Lot Coverage. Currently the property has approximately 70% lot coverage, however, this does not account for coverage due to the sites encroachments on the west and south which will be removed. This project requests a special permit or modification to the existing special permit to allow for the minor increase in lot coverage, whichever option is applicable.



# Hydrology

---

The existing site is improved with five multi-family buildings and associated improvements. Generally, the stormwater flows from the north towards the south, although terrain variations throughout the site create locations where drainage flows in other directions. All water flows into a wetland system to the south of the site, either uncontrolled overland or through a storm drain system.

As noted previously, the soil conditions on site are Charlton-Urban Land-Hollis Complex. The hydrologic soil group for this soil is A.

The project calls for the repaving of the existing parking lot, the addition of interior landscaped areas and addition of parking along the north side of the property. All newly paved areas will be curbed. Existing catch basins will be removed and new deep sump hooded catch basins installed onsite.

The project proposes 1,479 S.F. less impervious area than the existing condition and proposes to meet the Stormwater Management Standards to the maximum extent practicable under Massachusetts Stormwater Handbook Standard 7 for Redevelopment Projects.

The proposed stormwater management system will result in decreased runoff rates and volumes compared to the existing condition and will provide 25% TSS removal at the new catchbasins and increased TSS removal by the introduction of two small sediment forebays as compared to the 0% TSS removal in the existing condition.

# Stormwater Management Standards

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## Standard 1: No New Untreated Discharges

---

The Massachusetts Stormwater Handbook requires that the project demonstrates that no new stormwater conveyances (e.g. outfalls) discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

The proposed project will not discharge stormwater directly to, or cause erosion in, wetlands or water of the Commonwealth and will treat stormwater to the greatest extent practicable prior to discharge or infiltration. No new discharges have been proposed.





## Standard 2: Post-Development Peak Discharge Rates Not to Exceed Pre-Development Peak Discharge Rates

Post-development peak discharge rates do not exceed the pre-development peak discharge for all storm events. The proposed condition reduces rates by controlling the stormwater runoff through the addition of curb and reducing the impervious areas from the pre-existing condition.

Storm Event	2-year	10-year	25-year	100-year
Pre-Development Rates (cfs) AP1	5.52	11.72	15.82	22.24
Volume (cf) AP1	18,232	37,981	51,426	73,123
Post-Development Rates (cfs) AP1	5.41	10.89	14.51	20.34
Volume (cf) AP1	19,011	38,470	51,708	73,080
Rate Reductions (cfs)	-0.11	-0.83	-1.31	-1.90
Volume Reductions (cf)	+779	+489	+282	-43

## Standard 3: Minimize or Eliminate Loss of Annual Recharge to Groundwater

The site currently does not recharge stormwater to groundwater. All paved areas sheet flow directly to the wetlands at the south of the property.

The project calls for the decrease in impervious areas and therefore increases infiltration.

Due to the project constraints and limited scope of work it has been determined that it is not feasible to propose a system that involves recharge to groundwater. This standard has been met to the maximum extent practicable and has improved the existing condition.

## Standard 4: Stormwater Management System to Remove 80% of the Average Annual Load of Total Suspended Solids (TSS)

The stormwater management system is designed to remove the annual total suspended solids (TSS) to the maximum extent practicable from the proposed roadway, driveways, and sidewalks.

Total impervious area on site = 107,923 sf

Total clean (roof) impervious on site = 37,553 sf



Total impervious to be treated = 70,370 sf

Deep Sump Hooded Catch Basins:

Impervious Area to be Treated to Catch Basins = 27,797 sf (39.5% of total impervious to be treated)

Catch Basins Remove 25% TSS

Untreated Areas:

Impervious Area = 42,573 sf (60.5% of total impervious to be treated)

0% TSS Removal

Total Weighted TSS Removal Rate:

$(25\% * 39.5\%) + (0\% * 60.5\%) = 9.9\%$

Total TSS removal = 9.9%

Sediment Forebays:

No TSS removal credit is claimed for the proposed sediment forebays per the Massachusetts Stormwater Handbook Volume 2. The forebays however are sized to pre-treat the equivalent of 24,960 sf of impervious area for a 1-inch water quality depth. The goal is to create an improvement in water runoff quality as compared to the existing conditions. See calculations below.

Forebay #1: 55 cf; forebay is sized to 10% of water volume for theoretical infiltration practice.

Theoretical infiltration size:  $55 \text{ cf} / 0.1 = 550 \text{ cf}$

$A_{imp} = V_{wq} / (D_{wq}/12 \text{ inches/foot}) = 3,740 \text{ cf} / (1/12) = 6,600 \text{ sf}$  of impervious area.

Forebay #2: 153 cf; forebay is sized to 10% of water volume for theoretical infiltration practice.

Theoretical infiltration size:  $268 \text{ cf} / 0.1 = 1,530 \text{ cf}$

$A_{imp} = V_{wq} / (D_{wq}/12 \text{ inches/foot}) = 3,740 \text{ cf} / (1/12) = 18,360 \text{ sf}$  of impervious area.

Total:  $6,600 \text{ sf} + 18,360 \text{ sf} = 24,960 \text{ sf}$

---

## Standard 5: Land Uses with Higher Potential Pollutant Loads

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The development is not considered a land use that generally produces higher potential pollutant loads.

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## Standard 6: Stormwater Discharges to Critical Areas

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The proposed stormwater system does not discharge to a critical area.



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## Standard 7: Redevelopment Projects

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The project IS considered a redevelopment project.

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## Standard 8: Control Construction-Related Impacts

---

The project will install erosion and sediment controls prior to any earthwork activity. Erosion control barriers will be placed down slope from the proposed construction to prevent erosion and sedimentation into the surrounding areas. The barriers will be maintained and inspected periodically during construction; sediment buildup will be removed and any damaged barrier will be replaced as needed.

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## Standard 9: Long-Term Operation and Maintenance Plan

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See Appendix A for the operation and maintenance requirements of the stormwater management system.

---

## Standard 10: No Illicit Discharges

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An illicit discharge compliance statement will be provided by the property owner under separate cover.





**Sediment Forebay**

**System Owner: True North Capital Partners**

(Per DEP Stormwater Structural BMP's Vol 2)

In many cases, a landscaping contractor working elsewhere on the site can complete maintenance tasks. Stabilize the floor and sidewalls of the sediment forebay before making it operational, otherwise the practice will discharge excess amounts of suspended sediments.

Inspect and clean out the sediment forebay in order to assure that sediments and associated pollutants are cleaned out. Frequently removing accumulated sediments will make it less likely that sediments will be resuspended. At a minimum, inspect the sediment forebays monthly and clean them out at least four times a year.

Mow the grass areas and keep the grass height no greater than 6 inches. Check for signs of rilling and gullyng and repair as needed. After removing the sediment, replace any vegetation damaged during the clean-out by either reseeding or resodding. When reseeding, incorporate practices such as hydroseeding with a tackifier, blanket, or similar practice to ensure that no scour occurs in the forebay, while the seeds germinate and develop roots.

\* Paying careful attention to pretreatment and operation & maintenance can extend the life of the soil media





# Appendix B: Erosion and Sediment Control Notes and General Construction Sequence

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## Erosion and Sediment Control Notes

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- 1) Erosion and sediment control measures must be installed prior to the start of construction and maintained and upgraded as necessary during construction by the contractor. It is the contractor's responsibility to inspect and install additional control measures as needed during construction.
- 2) All catch basins receiving drainage from the project site must be provided with a catch basin filter.
- 3) Stabilization of all re-graded and soil stockpile areas must be maintained during all phases of construction.
- 4) Sediment removed from erosion and sediment control devices must be properly removed and disposed. All damaged controls must be removed and replaced.
- 5) The contractor is responsible for implementing the erosion and sediment control plan. This includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of the plan, and notifying the proper city agency of any transfer of this responsibility.
- 6) The contractor shall be responsible for controlling wind erosion and dust throughout the life of his contract. Dust control may include, but is not limited to, sprinkling of water on exposed soils and street sweeping adjacent roadways.
- 7) If final grading is to be delayed for more than 21 days after land disturbance activities cease, temporary vegetation or mulch shall be used to stabilize soils within 14 days of the last disturbance.
- 8) If a disturbed area will be exposed for greater than one year, permanent grasses or other approved cover must be installed.
- 9) The contractor must keep on-site at all times additional silt fence and hay bales for the installation at the direction of the engineer or the city to mitigate any emergency condition.





- 10) The construction fencing and erosion and sediment controls as shown may not be practical during all stages of construction. Earthwork activity on-site must be done in a manner such that runoff is directed to a sediment control device or infiltrated to the ground.
- 11) Demolition and construction debris must be properly contained and disposed of.
- 12) Disposal of all demolished materials is the responsibility of the contractor and must be hauled off-site in accordance with all federal, state and local requirements.

## General Construction Sequence

---

- 1) Install erosion and sediment controls prior to starting any earthworks activity.
- 2) Begin clearing, grubbing and demolition.
- 3) Install site furnishings.
- 4) Install landscaping.
- 5) Erosion and sediment controls shall be maintained until permanent cover is established.



# Appendix C: HydroCAD

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May 19, 2020

Marlborough Conservation Commission  
140 Main Street  
Marlborough, MA 01752

**Re: Notice of Intent, 447 Boston Post Road East, Marlborough, MA**

Dear Members of the Commission:

Howard Stein Hudson, on behalf of 447 Boston Post Road East, submit the following Site Plan, supplemental plans, and calculations to support a Notice of Intent. The lot is located at 447 Boston Post Road East, Assessor's Parcel ID: 0073-0022. A portion of the project is within the 100-foot Buffer Zone of a wetland.

The proposed project is a redevelopment of the existing parking lot and minor renovations of the existing multi-story existing buildings. This project proposes to resurface and restripe the existing parking lot and add paving on the north side of the property to increase the total number of available parking spaces. The goal of the project is to improve the non-conforming parking lot regarding parking layout and traffic flow, parking space size and accessibility, increased fire access, and upgraded drainage. The proposed conditions will continue to be non-compliant however will be improved compared to the existing conditions. The site will also be improved with landscaping.

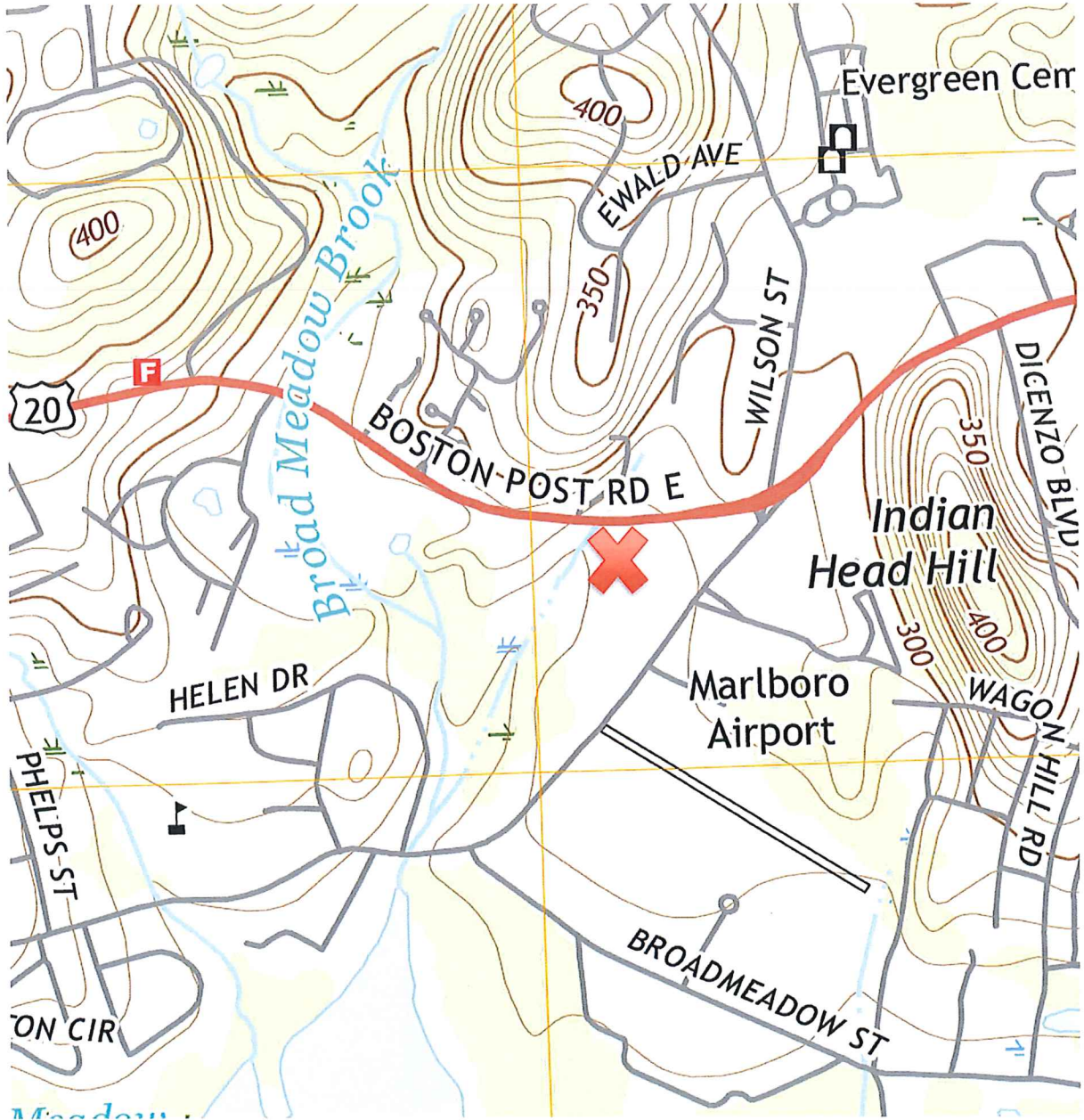
This project is considered a redevelopment under the Massachusetts Wetland Protection Act due to the net decrease of 1,479 sf in impervious areas for the proposed project. The proposed project intends to improve as many of the stormwater standards as possible to the maximum extent practicable under redevelopment guidelines. Please see the Supplemental Data Report for more information.

Approximately 585 s.f. of the project involves work within the 20' wetland setback. This work is part of the removal of existing impervious area, specifically paved parking area, and the subsequent stabilization and grading to existing elevations associated with said removal. HSH believes that this alteration would only have a positive benefit on the nearby wetland by reducing impervious runoff and that the associated construction impact is minor.

Please do not hesitate to call Howard Stein Hudson's Chelmsford Office with any questions or concerns. I look forward to presenting this project to the Commission at the next available date.

Sincerely,

Katie Enright, P.E.  
Associate / Senior Civil Engineer





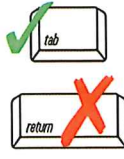
Rec 5-26-2020



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  
Marlborough  
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):

447 Boston Post Road East  
a. Street Address

Marlborough  
b. City/Town

01752  
c. Zip Code

Latitude and Longitude:  
42.347062  
d. Latitude

-71.513021  
e. Longitude

Assessor's Parcel ID: 8848  
f. Assessors Map/Plat Number

Map 73 Lot 23  
g. Parcel /Lot Number

2. Applicant:

Jeff  
a. First Name

Bruce  
b. Last Name

Wayside Apartments LLC  
c. Organization

369 Lindsay Pond Road  
d. Street Address

Concord  
e. City/Town

MA  
f. State

01742  
g. Zip Code

415-265-6933  
h. Phone Number

jeff@truenorthcapitalpartners.com  
j. Email Address

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

Jeff  
a. First Name

Bruce  
b. Last Name

Wayside Apartments LLC  
c. Organization

396 Lindsay Pond Road  
d. Street Address

Concord  
e. City/Town

MA  
f. State

01742  
g. Zip Code

415-265-6933  
h. Phone Number

jeff@truenorthcapitalpartners.com  
j. Email address

4. Representative (if any):

Katie  
a. First Name

Enright  
b. Last Name

Howard Stein Hudson  
c. Company

114 Turnpike Road, Suite 2C  
d. Street Address

Chelmsford  
e. City/Town

MA  
f. State

01824  
g. Zip Code

617-348-3308  
h. Phone Number

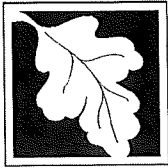
kenright@hshassoc.com  
j. Email address

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

\$500.00  
a. Total Fee Paid

\$237.50  
b. State Fee Paid

\$262.50  
c. City/Town Fee Paid



# WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

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## A. General Information (continued)

6. General Project Description:

Minor parking lot layout modifications with associated repaving.

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:

Middlesex South

a. County

17726

c. Book

b. Certificate # (if registered land)

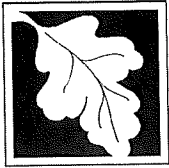
541

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

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

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

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

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

2. Width of Riverfront Area (check one):

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

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

4. Proposed alteration of the Riverfront Area:

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

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.



**WPA Form 3 – Notice of Intent**

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

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	1. square feet	2. cubic yards dune nourishment

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

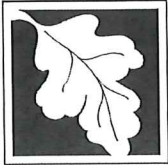
b. square feet of Salt Marsh

5.  Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings





# WPA Form 3 – Notice of Intent

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## C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Notice of Intent – 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](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

1/15/2020

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.1.f, if applicable. If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).

- c. Submit Supplemental Information for Endangered Species Review\*

1.  Percentage/acreage of property to be altered:

(a) within wetland Resource Area

percentage/acreage

(b) outside Resource Area

percentage/acreage

2.  Assessor's Map or right-of-way plan of site

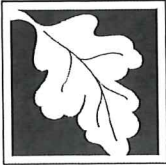
2.  Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work \*\*

(a)  Project description (including description of impacts outside of wetland resource area & buffer zone)

(b)  Photographs representative of the site

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

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



# WPA Form 3 – Notice of Intent

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

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

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

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

(d)  Vegetation cover type map of site

(e)  Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1.  Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, [http://www.mass.gov/dfwele/dfw/nhosp/regulatory\\_review/ mesa/ mesa\\_exemptions.htm](http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/ mesa/ mesa_exemptions.htm); the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

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

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

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a.  Not applicable – project is in inland resource area only      b.  Yes     No

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

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

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -  
Southeast Marine Fisheries Station  
Attn: Environmental Reviewer  
1213 Purchase Street – 3rd Floor  
New Bedford, MA 02740-6694  
Email: [DMF.EnvReview-South@state.ma.us](mailto:DMF.EnvReview-South@state.ma.us)

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

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



# WPA Form 3 – Notice of Intent

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Provided by MassDEP:

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City/Town

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

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

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?  
 a.  Yes  No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.  
 MA GIS  
 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

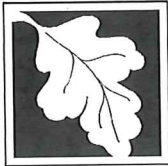
- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

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.





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## D. Additional Information (cont'd)

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

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

Site Plan for Multi-Family Re-Development 447 Boston Post Road East

a. Plan Title

Howard Stein Hudson

Katie Enright, P.E.

b. Prepared By

c. Signed and Stamped by

05-13-2020

Varies

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

5.  If there is more than one property owner, please attach a list of these property owners not listed on this form.

6.  Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7.  Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8.  Attach NOI Wetland Fee Transmittal Form

9.  Attach Stormwater Report, if needed.

## E. Fees

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

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

1234  
2. Municipal Check Number

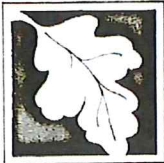
5/6/20  
3. Check date

1233  
4. State Check Number

5/6/20  
5. Check date

Wayside Apartments, LLC  
6. Payor name on check: First Name

7. Payor name on check: Last Name



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

Provided by MassDEP:

**WPA Form 3 – Notice of Intent**

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

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City/Town

**F. Signatures and Submittal Requirements**

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

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

  
\_\_\_\_\_  
1. Signature of Applicant

~~5-6-20~~ 5-6-20  
\_\_\_\_\_  
2. Date

\_\_\_\_\_  
3. Signature of Property Owner (if different)

\_\_\_\_\_  
4. Date

\_\_\_\_\_  
5. Signature of Representative (if any)

\_\_\_\_\_  
6. Date

**For Conservation Commission:**

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

**For MassDEP:**

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

**Other:**

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

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



**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:

443 Boston Post Road East  
 a. Street Address  
 Marlborough  
 b. City/Town  
 \$237.50  
 d. Fee amount

2. Applicant Mailing Address:

Jeff  
 a. First Name  
 Bruce  
 b. Last Name  
 Wayside Apartments LLC  
 c. Organization  
 369 Lindsay Pond Road  
 d. Mailing Address  
 Concord MA 01742  
 e. City/Town f. State g. Zip Code  
 415-265-6933  
 h. Phone Number i. Fax Number  
 jeff@truenorthcapitalpartners.com  
 j. Email Address

3. Property Owner (if different):

a. First Name  
 b. Last Name  
 c. Organization  
 d. Mailing Address  
 e. City/Town f. State g. Zip Code  
 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.

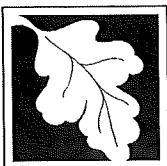
**Step 3/Individual Activity Fee:** Identify each activity fee from the six project categories listed in the instructions.

**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).



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

**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
2	1	\$500.00	\$500.00

Step 5/Total Project Fee: \_\_\_\_\_

**Step 6/Fee Payments:**

Total Project Fee:	\$500.00
State share of filing Fee:	a. Total Fee from Step 5 \$237.50
City/Town share of filling Fee:	b. 1/2 Total Fee less \$12.50 \$262.50
	c. 1/2 Total Fee plus \$12.50

**C. Submittal Requirements**

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

Department of Environmental Protection  
 Box 4062  
 Boston, MA 02211

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

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





# 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.<sup>1</sup> This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8<sup>2</sup>
- Operation and Maintenance Plan required by Standard 9

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

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

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

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

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



# 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



*Katie L. Enright* 5-19-20  
Signature and Date

## Checklist

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

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



# Checklist for Stormwater Report

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## 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): Deep Sump Hooded Catch Basins & Sediment Basin

### 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

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## 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 Field<sup>1</sup>
- 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.

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



# Checklist for Stormwater Report

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## 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

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## Checklist (continued)

### Standard 4: Water Quality (continued)

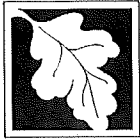
- The BMP is sized (and calculations provided) based on:
  - The ½" or 1" Water Quality Volume or
  - The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- The applicant proposes to use proprietary 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

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## 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

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## 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.

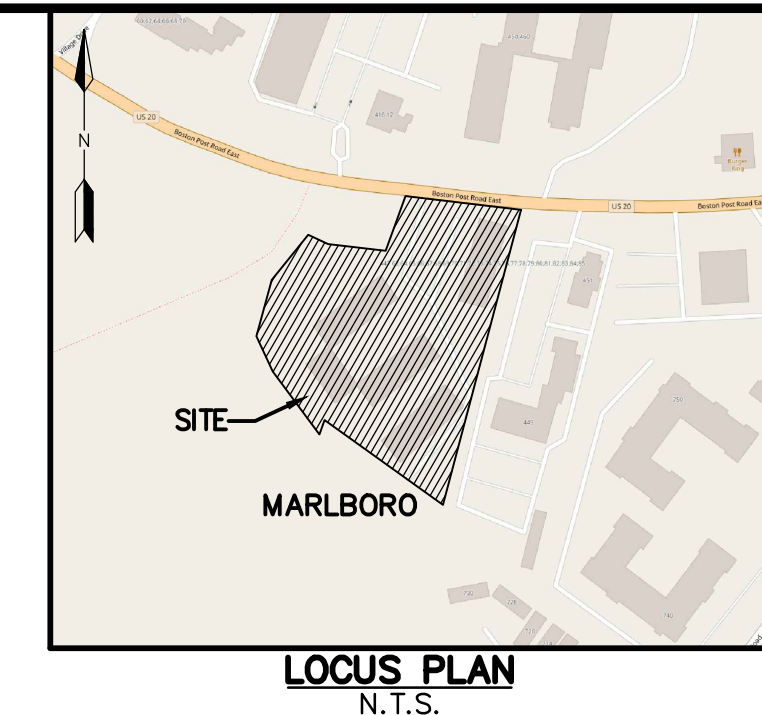
### Standard 10: Prohibition of Illicit Discharges

- 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.



ZONING DISTRICT: BUSINESS - "B"

ZONING DIMENSIONAL REQUIREMENTS		
DIMENSIONAL	MIN. REQ.	ACTUAL
AREA	5,000 S.F.	143,609± S.F.
FRONTAGE	50'	200'
FRONT YARD	50'	11.97'
SIDE YARD	NONE (1)	10.83'
REAR YARD	NONE	10.10'
BLDG. HEIGHT	52'	28.7' MAX.
LOT COVER	30% MAX.	69.8%



**NOTES:**

- (1) NONE BASED ON NOTE 3 ATTENDANT TO ZONING DIMENSIONAL TABLE (650 ATTACHMENT 2)
- (2) TOTAL NUMBER OF UNITS = 109

**REQ'D PARKING:**

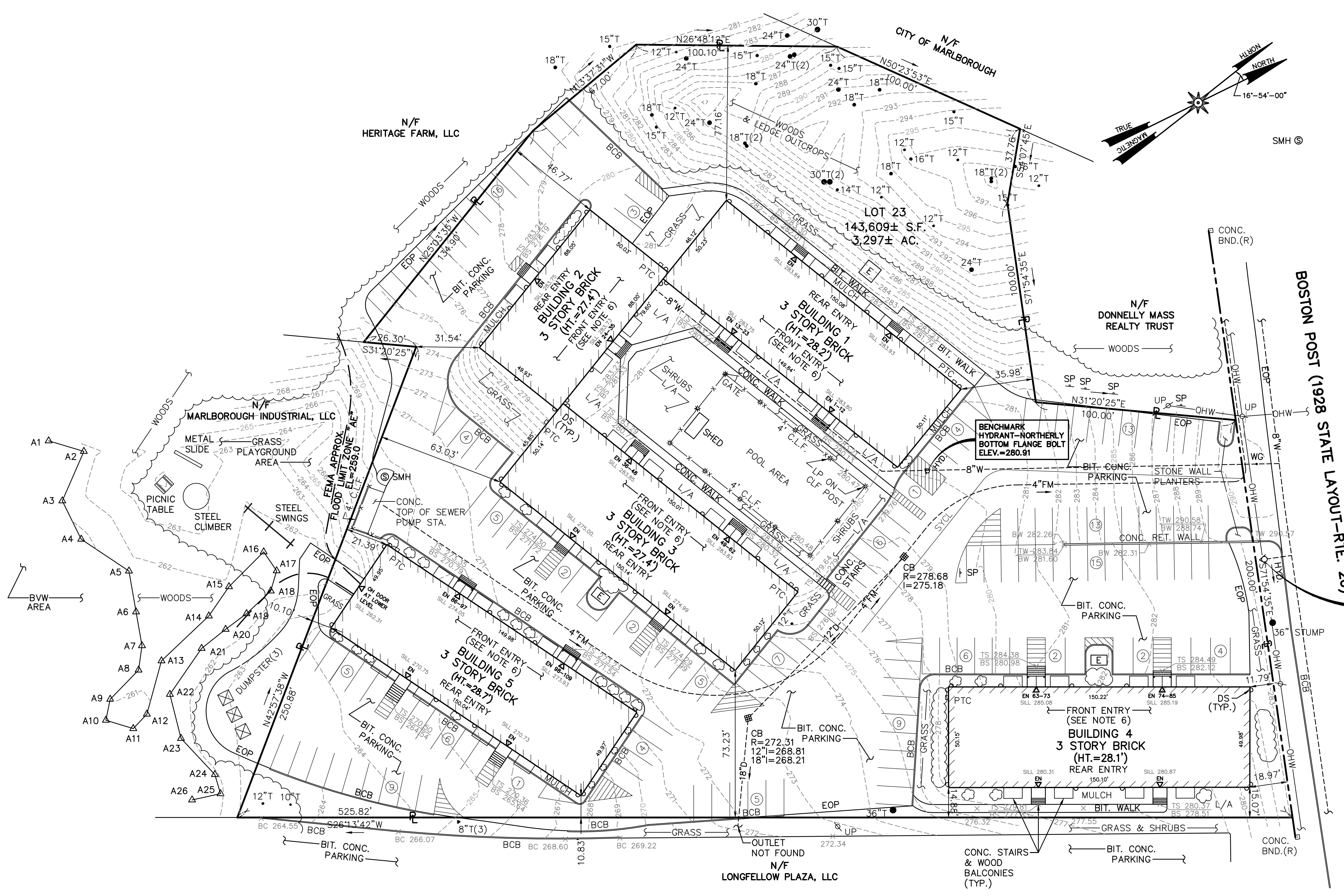
109 UNITS 2 SPACES/UNIT = 218 SPACES

**AVAILABLE PARKING:**

148 SPACES  
NO HP SPACES OBSERVED

**LEGEND**

- P — PROPERTY LINE
- S — STREET LINE
- E — EASEMENT LINE
- B — BUILDING LINE
- CC — CONCRETE CURB
- VGC — VERTICAL GRANITE CURB
- EOP — EDGE OF PAVEMENT
- EOG — EDGE OF GRASS
- CLF — CHAIN LINK FENCE
- PVC — PLASTIC FENCE
- W — WOOD FENCE
- S — SANITARY SEWER
- D — STORM DRAIN
- RD — ROOF DRAIN LINE
- W — WATER LINE
- FP — FIRE PROTECTION LINE
- G — GAS LINE
- E — ELECTRIC LINE
- T — TELEPHONE LINE
- OHW — OVERHEAD WIRE
- CRW — CONC. RETAINING WALL
- GBRW — GRANITE BLOCK RETAINING WALL
- SMH — SEWER MANHOLE
- DMH — DRAIN MANHOLE
- RD — ROOF DRAIN
- WMH — WATER MANHOLE
- TMH — TELEPHONE MANHOLE
- HH — HAND HOLE
- PTC — PLASTIC TELECOM CABINET
- CB — CATCH BASIN
- GW — GUY WIRE
- UP — UTILITY POLE
- TCS — TRAFFIC CONTROL SIGNAL
- TSCB — TRAFFIC SIGNAL CONTROL BOX
- EOP — ELECT. TRANS. ON CONC. PAD
- LP — LIGHT POLE
- WG — WATER GATE
- HYD. — HYDRANT
- PIV — POST INDICATOR VALVE
- AD — AREA DRAIN
- FA — FIRE ALARM BOX
- GC — GAS GATE
- GM — GAS METER
- SP — SIGN POST
- BLLDS — BOLLARDS
- SB — STONE BOUND
- MB — MAIL BOX
- HH — HAND HOLE
- L/A — LANDSCAPED AREA W/ PLANTINGS
- C/S — CRUSHED STONE
- LCC — LAND COURT CASE
- P.O.B. — POINT OF BEGINNING
- S — SHRUBS/SMALL TREES
- 8" T — TREE
- AW — ASPHALT WALK
- ECB — ELECTRICAL CONTROL BOX
- D — DUMPSTER
- BLD. — BOULDER
- (R) — RECORD PLAN
- (FND) — FOUND
- EN — BLDG. ENTRY
- DS — GUTTER DOWNSPOUT
- SYCL — SOLID YELLOW CENTER LINE
- SHRUB — SHRUB
- EDGE OF WOODS



BENCHMARK HYDRANT-NORTHERLY BOTTOM FLANGE BOLT ELEV.=289.95

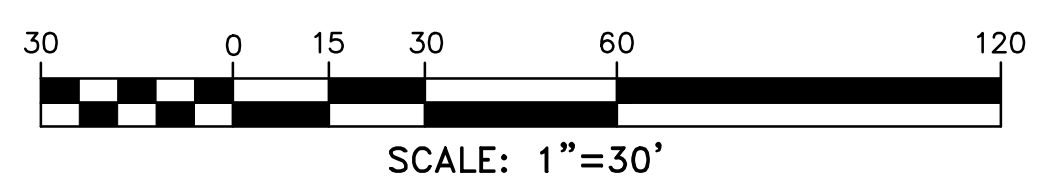
**NOTES:**

1. THE PROPERTY SHOWN ON THE SURVEY IS THE SAME AS THAT IN THE LEGAL DESCRIPTION HEREON.
2. UTILITIES SHOWN ON PLAN ARE FROM FIELD SURVEY OR RECORD PLANS AND LOCATIONS ARE APPROXIMATE. 4" SFM EXTENDS TO CITY SMH 200'± NORTHWESTERLY OF SITE DRIVEWAY.
3. ELEVATION DATUM NAVD 88 CONVERTED FROM CITY SEWER PLAN-CONTRACT 1965-3 SHT. 6 OF 28
4. PREMISES LOCATED IN ZONE "X" NO FLOOD HAZARD. LOCATION OF "AE" FLOOD ZONE REAR OF BLDG. 5 IS SHOWN PER FEMA COMMUNITY MAP 2501700486F, DATED 7/7/2014 (ELEV. 259.0). LOWEST ELEV. SURVEYED ALONG REAR SITE BOUNDARY EL. 261.90.
5. ASSESSOR'S PARCEL ID: 0073-0023
6. FRONT ENTRY STAIRS COVERED WITH WOOD CANOPY.
7. UNLESS NOTED OTHERWISE, AREAS OF SHRUBS AND L/A ARE MULCHED.
8. BASED ON DEED RESEARCH THERE ARE NO PLOTTABLE EASEMENTS ON THE PREMISES OR WITHIN 50 FT. OF THE BOUNDARIES.



**DEED REFERENCES:**  
BOOK 17726, PAGE 541  
PLAN 1408 OF 1969

**OWNER OF RECORD**  
WAYSIDE APARTMENTS, LLC.  
369 LINDSAY POND  
CONCORD, MA 01742



**SITE PLAN**

**447 BOSTON POST ROAD EAST  
MARLBOROUGH, MA**

**PREPARED FOR  
WAYSIDE APARTMENTS, LLC**

**Mistry Associates, Inc.**  
315 Main Street  
Reading, MA 01867  
TEL: 781-944-6400 FAX: 781-948-9908

February 5, 2020 SCALE: 1"=30'





Charles D. Baker, Governor  
Karyn E. Polito, Lieutenant Governor  
Stephanie Pollack, Secretary & CEO  
Jonathan L. Gulliver, Highway Administrator



May 19, 2020

Edward Clancy, Chairman  
Marlborough Conservation Commission  
140 Main Street  
Marlborough, MA 01752

Re: Ramp Improvements and Related work at I-495 (SB) to I-290 (WB) – Marlborough, MA  
(MassDOT Project No. 610552)  
Notice of Intent

Dear Mr. Clancy,

The Massachusetts Department of Transportation (MassDOT) – Highway Division is submitting the enclosed Notice of Intent (NOI) in accordance with the Massachusetts Wetlands Protection Act (MA WPA) for proposed improvements to the existing interchange of Interstate 495 (I-495) and Interstate 290 (I-290) in the City of Marlborough, Massachusetts. The purpose of the project is to improve traffic operations and safety for I-495 SB approaching Exit 25B, which services the I-495 SB to I-290 WB ramp (Ramp B) movement.

The project limits begin approximately 50-feet south of the I-495 southbound (SB) bridge over Donald Lynch Boulevard, continuing southwards along the I-495 SB to I-290 westbound (WB) ramp to I-290 WB, and terminates approximately 800-feet west of the I-290 WB bridge over Bigelow Street. A Project Location Map is provided in the Notice of Intent narrative.

The project proposes work solely within the 100-foot buffer zone to Bordering Vegetated Wetlands, subject to jurisdiction under the MA WPA. This NOI describes the work and the best management practices that will be implemented to protect downgradient wetland resource areas.

As a state agency, MassDOT is exempt from municipal bylaws and regulations; however, MassDOT will comply with applicable rules and regulations to the greatest extent practicable. Please note a butter notification is not required for projects proposed by MassDOT, as cited under 310 CMR 10.05(4)(a) of the Massachusetts Wetlands Protection Act Regulations.

Included in this submission are two copies of the NOI application and attachments, one full-size set of plans, and eight 11x17 sets of plans. Please advertise this matter and place it on the agenda for the next scheduled Conservation Commission meeting. We look forward to meeting with the Conservation Commission to discuss the proposed project at that time. For additional information, please do not hesitate to contact me at 857-368-8807 or [susan.mcarthur@state.ma.us](mailto:susan.mcarthur@state.ma.us). Thank you for your consideration of this request.

Regards,

Susan McArthur  
Environmental Permitting Supervisor

Ten Park Plaza, Suite 4160, Boston, MA 02116  
Tel: 857-368-4636, TTY: 857-368-0655  
[www.mass.gov/massdot](http://www.mass.gov/massdot)



**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

Marlborough

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):

Ramp Improvements and Related work at I-495  
(SB) to I-290 (WB)

Marlborough

01742

b. City/Town

c. Zip Code

Latitude and Longitude:

42.361215

-71.597229

d. Latitude

e. Longitude

26

I495-I290

f. Assessors Map/Plat Number

g. Parcel /Lot Number

2. Applicant:

Susan

McArthur

a. First Name

b. Last Name

Massachusetts Department of Transportation -- Highway Division

c. Organization

10 Park Plaza, Room 4260

d. Street Address

Boston

MA

02116

e. City/Town

f. State

g. Zip Code

(857) 368-8807

(857) 368-0609

susan.mcarthur@state.ma.us

h. Phone Number

i. Fax Number

j. Email Address

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

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Mike

Turgeon

a. First Name

b. Last Name

HNTB

c. Company

300 Apollo Dr # 1

d. Street Address

Chelmsford

MA

01824

e. City/Town

f. State

g. Zip Code

(978) 905-4094

i. Fax Number

mturgeon@HNTB.com

h. Phone Number

j. Email address

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

\$1,050.00

\$512.50

\$537.50

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	
Marlborough	
City/Town	

## A. General Information (continued)

### 6. General Project Description:

MassDOT – Highway Division is proposing improvements to the existing I-495/I-290 interchange in Marlborough, MA. The project will improve traffic operations and safety for I-495 SB approaching Exit 25B, which services the I-495 SB to I-290 WB ramp (Ramp B) movement. See attached narrative for additional project details.

### 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)

N/A

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(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:

Middlesex South

a. County

b. Certificate # (if registered land)

N/A

N/A

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

Marlborough

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.

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

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

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

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

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment

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

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

#### Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

MassGIS 4/24/2020

b. Date of map

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

- c. Submit Supplemental Information for Endangered Species Review\*

1.  Percentage/acreage of property to be altered:

(a) within wetland Resource Area

\_\_\_\_\_ percentage/acreage

(b) outside Resource Area

\_\_\_\_\_ percentage/acreage

2.  Assessor's Map or right-of-way plan of site

2.  Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work \*\*

(a)  Project description (including description of impacts outside of wetland resource area & buffer zone)

(b)  Photographs representative of the site

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

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





# WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

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Marlborough  
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

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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.

Ramp Improvements and Related Work at I290 (WB) and I495 (SB) Interchange in Marlborough, Middlesex County...Notice of Intent (29 Sheets)

HNTB

b. Prepared By

c. Signed and Stamped by

d. Final Revision Date

Varies

e. Scale

f. Additional Plan or Document Title

g. Date

5.  If there is more than one property owner, please attach a list of these property owners not listed on this form.

6.  Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7.  Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8.  Attach NOI Wetland Fee Transmittal Form

9.  Attach Stormwater Report, if needed.

## E. Fees

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

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

tbd

2. Municipal Check Number

tbd

3. Check date

tbd

4. State Check Number

tbd

5. Check date

HNTB

6. Payor name on check: First Name

HNTB

7. Payor name on check: Last Name





Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

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## F. Signatures and Submittal Requirements

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

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

Susan M. McLellan  
1. Signature of Applicant

5/20/2020  
2. Date

3. Signature of Property Owner (if different)

4. Date

m j s j m  
5. Signature of Representative (if any)

5/20/2020  
6. Date

### For Conservation Commission:

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

### For MassDEP:

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

### Other:

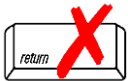
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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



**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:

1495/1290 Interchange Improvements Marlborough  
 a. Street Address b. City/Town  
Exempt  
 c. Check number d. Fee amount

2. Applicant Mailing Address:

Susan McArthur  
 a. First Name b. Last Name  
Massachusetts Department of Transportation -- Highway Division  
 c. Organization  
10 Park Plaza, Room 4260  
 d. Mailing Address  
Boston MA 02116  
 e. City/Town f. State g. Zip Code  
(857) 368-8807 (857) 368-0609 susan.mcarthur@state.ma.us  
 h. Phone Number i. Fax Number j. Email Address

3. Property Owner (if different):

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

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

**B. Fees**

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

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

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

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

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

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

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



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

**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
3c Road construction	1	\$1,050.00	\$1,050.00
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<b>Step 5/Total Project Fee:</b>			<u>\$1,050.00</u>
<b>Step 6/Fee Payments:</b>			
Total Project Fee:			<u>\$1,050.00</u> a. Total Fee from Step 5
State share of filing Fee:			<u>\$512.50</u> b. 1/2 Total Fee <b>less</b> \$12.50
City/Town share of filling Fee:			<u>\$537.50</u> c. 1/2 Total Fee <b>plus</b> \$12.50

**C. Submittal Requirements**

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

Department of Environmental Protection  
 Box 4062  
 Boston, MA 02211

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

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

**Marlborough I-290 & I-495 Interchange Ramp  
Improvements & Related Work at I-495 SB to I-290 WB**

**Project No. 610552**

# **Notice of Intent**

*Prepared for:*



**Massachusetts Department of Transportation  
Highway Division**

May 2020

*Prepared by*  
**HNTB**  
HNTB Corporation

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## 1. Project Description

The Massachusetts Department of Transportation (MassDOT) - Highway Division is proposing improvements to the existing interchange of Interstate 495 (I-495) and Interstate 290 (I-290) in the City of Marlborough, Massachusetts. The project limits begin approximately 50-feet south of the I-495 southbound (SB) bridge over Donald Lynch Boulevard, continue southwards along the I-495 SB to I-290 westbound (WB) ramp to I-290 WB, and terminate approximately 800-feet west of the I-290 WB bridge over Bigelow Street. A project locus map (**Appendix A, Figure 1**) is provided below. Proposed project improvements include:

- Realignment and widening of Ramp B to simplify the ramp geometry and accommodate an additional travel lane
- Modifications to pavement markings on I-495 SB in the project area
- Modifications to pavement markings on I-290 WB to accommodate the additional entrance lane
- Pavement mill and overlay on I-495 SB and I-290 WB
- Replacement of overhead signage, minor drainage modifications and new and updated guardrails

## 2. Existing Roadway Conditions

### 2.1. Interstate Mainlines

I-495 is an interstate that runs from I-95 in Salisbury, MA to I-195 in Wareham, MA. Within the project area, I-495 generally runs in a north-south direction with three 12-foot travel lanes, one four-foot left shoulder, and one 10-foot right shoulder in each direction. The posted speed limit in the northbound and southbound directions is 65 mph.

I-290 is an interstate that runs from Interstate 90 (I-90)/Massachusetts State Route 12 in Worcester, MA to I-495 in Marlborough, MA. I-290 generally runs in a northeast-southwest direction. I-290 is a divided highway with three 12-foot travel lanes, a four-foot left shoulder, and a 10-foot right shoulder in each direction. The roadway drops to two lanes in each direction where it meets the I-495 SB entrance and exit ramps within the project area. The posted speed limit in both directions is 65 mph.

### 2.2. Interstate Ramp B

Under existing conditions, Ramp B carries traffic for the I-495 SB to I-290 WB movement. The existing ramp cross-section consists of one 18-foot travel lane with two-foot shoulders on each side. The ramp features three reverse curves: the first controlling curve is approximately 430 feet in radius. The second curve is a reverse curve with an approximate radius of 485-feet. The third curve is approximately 300-feet in radius. The current design speed of Ramp B is approximately 30 miles per hour (mph). As described in the Massachusetts Project Development and Design Guide (PDDG), and the AASHTO Geometric Design of Highways and Streets (GDHS) 2018, it is advised that ramps be designed to allow drivers to travel at a minimum of 50% of the speed traveled on the highway mainline. With I-495 designed at 70 mph, the ramps should be designed to accommodate a minimum speed of 35 mph.

The deceleration lane along I-495 SB in advance of Ramp B is approximately 200 feet in length, which does not meet design standards and does not accommodate queues approaching the ramp. Approaching I-290, Ramp B enters into its own travel lane as an add lane.

### 2.3. Bridge Within Project Limits

The I-295 WB bridge over Bigelow Street (M-06-015) is located approximately 420 feet west of Ramp B. The existing cross section of the bridge includes one 4-foot left shoulder, two 12-foot lanes, one 14-foot auxiliary lane, and one 11.5-foot right shoulder.

### 2.4. Drainage Conditions

Most of the stormwater runoff for the first 1,000 feet of the existing ramp is captured by a series of catch basins along the ramp and conveyed through a network of closed pipes, ultimately discharging to an existing outlet to the north of the project site. A vegetated slope west of the ramp also directs runoff into a drainage ditch that runs along the edge of the road to the outfall north of the site. The remaining portion of the ramp and the project area along I-290 WB is captured by existing catch basin structures in the shoulder and conveyed to outfalls on the northwestern project side slopes. Additional existing drainage conditions details can be found in the Stormwater Report in **Appendix D**.

## 3. Existing Wetland Resources

### 3.1. Wetland Delineation Methods

A wetland scientist from HNTB performed a field delineation within the project limits on April 7, 2020 to identify wetlands and waterbodies that meet the criteria for federal or state regulation under Section 404 of the Clean Water Act (CWA) and/or the Massachusetts Wetlands Protection Act (MA WPA).

The wetland delineation was conducted in accordance with the methods described in the *U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987 edition)*, and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region dated January 2012*. Per the USACE 1987 manual, routine wetland determination methods with onsite inspection were used to determine the presence of wetlands in the project area. Wetland and non-wetland areas were identified based on representative plant communities, soil profile observations and hydrologic indicators. Pertinent observations were recorded on USACE Wetland Determination Data Forms. Two sample locations were given unique identifiers and photographed. The 22 boundary points were identified, delineated with consecutively numbered red survey flagging, and located using a handheld GPS unit.

### 3.2. Resource Area Descriptions

#### 3.2.1. Bordering Vegetated Wetlands

As shown in **Appendix A, Figure 2**, one jurisdictional Bordering Vegetated Wetland (BVW) was identified and delineated within the project area. This BVW extends west from Bigelow Street along the toe of the slope adjacent to I-290 WB.

The delineated BVW originates at wetland flag #1 on the west side of Bigelow Street and extends westward to the project limits along the base of the slope adjacent to I-290 WB. Slowly flowing water was observed originating at a discharge adjacent to Bigelow Street flowing westward within the wetland. The water was observed to be up to 12 inches deep within the wetland. Field data forms including photographs for the upland and wetland sample locations are provided in the Wetland Delineation Report in **Appendix B**.

Upland and wetland sample locations were established at a transect performed at flag HNTB14. Vegetative species observed at the upland sample location included: white pine (*Pinus strobus*), red maple (*Acer rubrum*), shagbark hickory (*Carya ovata*), Japanese honeysuckle (*Lonicera japonica*), and juniper (*Juniperus virginiana*). The soil at the upland sample location was a fine sandy loam with a 10YR5/3 matrix between 8" and 15" deep. The sample location was on the slope above the edge of water. Vegetative species observed at the wetland sample location included: white pine, red maple, speckled

alder (*Alnus rugosa*) glossy buckthorn (*Rhamnus frangula*) sensitive fern (*Onoclea sensibilis*), and purple loosestrife (*Lythrum salicaria*). The soil at the wetland sample location had a histic epipedon 9 inches thick over a sandy subsoil with 10YR4/2 matrix and 20% 10YR4/4 mottles between 9" and 15" deep. Standing water was observed at the sample location with a depth of 2". This wetland is jurisdictional as a Bordering Vegetated Wetland under the MA WPA.

### 3.2.2. Buffer Zone

The WPA Regulations (310 CMR 10.02 (2)(b)) establish a 100-foot buffer zone from the limit of the BVW described above.

### 3.3. Massachusetts Natural Heritage and Endangered Species Program

There are no vernal pools or Natural Heritage and Endangered Species Program (NHESP) Priority or Estimated Habitats within or near the project limits.

## 4. Proposed Improvements

### 4.1. Ramp B

The ramp from I-495 SB to I-290 WB (Ramp B) will be widened and realigned to accommodate an additional travel lane. To accommodate the two-lane ramp, the ramp exit will be designed with a tapered option lane. The proposed cross section will consist of one four-foot left shoulder, two 12-foot travel lanes, and one six-foot right shoulder. The right-most lane for the proposed cross section on I-495 SB will be a standard exit-only deceleration lane, while the adjacent lane will be an option lane to allow vehicles to proceed through I-495 SB or use the Ramp B exit. The simplified geometry of the ramp will feature two 650-foot reverse curves and accommodate a design speed of 45 mph.

The wider two-lane ramp will provide more capacity than existing conditions and will accommodate higher speeds due to the simplified geometry and increased curve radii. A retaining wall will be constructed to eliminate obstructions caused by the existing topography in the new location of the ramp.

### 4.2. I-290 WB Over Bigelow Street

The I-290 WB bridge over Bigelow Street will be restriped to accommodate the additional entrance lane. The proposed four lane cross-section includes one four-foot left shoulder, three 11.5-foot travel lanes, one 11-foot acceleration lane, and one four-foot right shoulder.

### 4.3. Other Related Work

Pavement mill and overlay is proposed along I-495 SB and I-290 WB within the project limits to enable proposed changes in pavement markings. The proposed scope of project-related improvements also includes minor drainage modifications, overhead guide sign replacement and new and upgraded guardrails along I-495 SB and I-290 WB.

### 4.4. Work in Buffer Zone

As shown on Construction Plan Sheets 6 through 8 in **Appendix C**, proposed work within the 100-foot buffer zone to BVW will total 65,500 square feet (sf) (1.5 acres) and will include the following:

- Clearing and grubbing, grading, and seeding of the slope from the proposed edge of pavement to within several feet of the wetland edge, and directly abutting the wetland edge between wetland flags #8 and #9.

- Standard milling and overlay of existing pavement.
- Roadway widening (approximately 4,500 sf of new impervious surface within the buffer zone).
- Modified rockfill installation between the roadway and the existing headwall near wetland flag #7.
- Guardrail installation.

## **5. Alternatives Analysis**

Project alternatives were evaluated with the objective of improving safety and operational efficiency at the interchange compared to existing and future No-Build traffic and safety conditions in the project area, while avoiding impacts to abutting properties and environmental resources to the maximum extent feasible. A design year of 2040 was selected for the analysis of future conditions.

### **5.1. No-Build Alternative**

Under the No-Build Alternative, there would be no improvements to the I-495 and I-290 interchange. The number of predicted congestion-related crashes would rise to 58 crashes per year (compared to 44 under existing conditions) given increases in volume and density under future (2040) No-Build conditions. The No-Build Alternative was eliminated from further consideration because Project goals of improving operations and safety at the interchange would not be met.

### **5.2. Preferred Alternative - Widen Ramp B to Two Lanes**

This alternative proposes realigning and widening Ramp B to accommodate two travel lanes. The realigned ramp features two 650-foot curves and a design speed of 45 mph. To accommodate the two-lane ramp, the exit will be designed with a tapered option lane. The proposed cross section will consist of one four-foot left shoulder, two 12-foot travel lanes, and one six-foot right shoulder. The right-most lane for the proposed cross section on I-495 SB will be a standard exit-only deceleration lane, while the adjacent lane will be an option lane to allow vehicles to proceed through I-495 SB or use the Ramp B exit.

This alternative also proposes narrowing the travel lanes on I-495 SB on the bridges over Donald Lynch Boulevard and the Assabet River to accommodate the lengthened deceleration lane. The proposed cross-section would be maintained within the existing pavement limits and would include three 11.5-foot travel lanes, an 11.5-foot deceleration lane, and 2-foot left and right shoulders.

This alternative nearly eliminates queues on I-495 SB, just north of the Ramp B exit. This design was selected as the Preferred Alternative as it improves upon traffic conditions by increasing the capacity of the roadway and does not impact right-of-way or environmental resources.

### **5.3. Realignment of Ramp B**

This alternative proposes realigning Ramp B to remove the existing reverse curve and increasing the radii of the other two curves. The larger radius curves will allow for traveling speeds of at least 45 mph on the ramp, compared to 30 mph under existing conditions. The deceleration lane would be lengthened to 1,000 feet by adjusting pavement markings.

This alternative also proposes narrowing the travel lanes on I-495 SB on the bridges over Donald Lynch Boulevard (M-06-007) and the Assabet River (H-25-016) to accommodate a lengthened deceleration lane. To keep within existing pavement limits, the proposed four-lane cross section for both bridges include three 11.5-foot travel lanes, an 11.5-foot deceleration lane, and 2-foot left and right shoulders.

Analysis of future year 2040 conditions indicates that the proposed ramp re-alignment and extended deceleration lane would improve queue lengths compared to future No-Build conditions; however,

anticipated queues would still exceed the proposed deceleration lane length. As such, this alternative was dismissed from further consideration.

#### 5.4. Widen Ramp B and Project Area Bridges

This alternative proposes increasing the Ramp B curve radii to 1,000 feet (the desirable minimum radius of a two-lane ramp), widening the I-495 SB mainline and widening adjacent bridges to maintain standard lane and shoulder widths.

On I-495 SB, the proposed cross-section would include one 4-foot left shoulder, three 12-foot travel lanes, and one 10-foot right shoulder. The proposed Ramp B cross section would include one two-foot left shoulder, two 12-foot exit-only lanes and one four-foot right shoulder. Construction of this alternative would also include widening of three bridges (M-06-007, M-06-015, and H-25-017) and deck replacement for the bridge over the Assabet River (H-25-016).

Although this alternative would improve on geometric deficiencies and safety conditions, increasing the radii of the two-lane ramp would require approximately 8,400 square feet (sf) of right-of-way land acquisition. Widening the I-495 SB roadway and bridge over the Assabet River would also impact wetland resources. Based on resulting wetland and ROW impacts, this alternative was dismissed from further consideration.

### 6. Wetlands Protection Act Compliance

As identified in 310 CMR 10.53(1) of the WPA regulations,

*“the issuing authority should consider the characteristics of the buffer zone, such as the presence of steep slopes, that may increase the potential for adverse impacts on resource areas. Conditions may include limitations on the scope and location of work in the buffer zone as necessary to avoid alteration of resource areas. The issuing authority may require erosion and sedimentation controls during construction, a clear limit of work, and the preservation of natural vegetation adjacent to the resource area and/or other measures commensurate with the scope and location of the work within the buffer zone to protect the interests of the Act.”*

The proposed project has been designed to address these requirements. In general, work within buffer zones is permissible when said work has been designed, or can be conditioned, such that there will be no impact on the wetland resource areas being buffered. An erosion and sedimentation control program will be implemented to prevent erosion and siltation impacts to the adjacent jurisdictional resources during construction.

### 7. Erosion/Sedimentation Controls and Stormwater Management

#### 7.1. Best Management Practices

Best Management Practices (BMPs) will be used to protect wetland resources west of Bigelow Street. Silt sacks shall be placed temporarily over existing and proposed catch basins within the project limits and as required by the engineer. Silt sacks shall be inspected on a weekly basis (and after each storm event) throughout the duration of the project, cleared of debris, and replaced or restored as deemed necessary by the engineer.

Sediment controls will be implemented in locations depicted on the Construction Plans based on the appropriate detail for the slope where work is proposed as shown on Construction Details sheet 1 of 1 in **Appendix C**. All disturbed unpaved surfaces within the project limits will be loamed and hydroseeded with a conservation seed mix and bonded fiber matrix mulch.



## **NOI Narrative**

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### 7.2. Stormwater Management

The proposed project is classified as a redevelopment project and is therefore required to meet stormwater management standards to the maximum extent practicable while improving upon existing conditions. The proposed drainage throughout the project corridor has been designed to match existing drainage patterns and layout as closely as possible to minimize the impacts to adjacent properties and resource areas. The existing I-495 SB & I-290 WB drainage network will remain the same, except that the catch basins within the project limits will be adjusted to finish grade. New catch basins will be installed along the reconfigured ramp and existing structures will be removed.

The proposed stormwater management system will also include an infiltration trench to direct stormwater runoff along the western side of the proposed ramp. Additional details regarding stormwater management and drainage design can be found in the Stormwater Report in **Appendix D**.

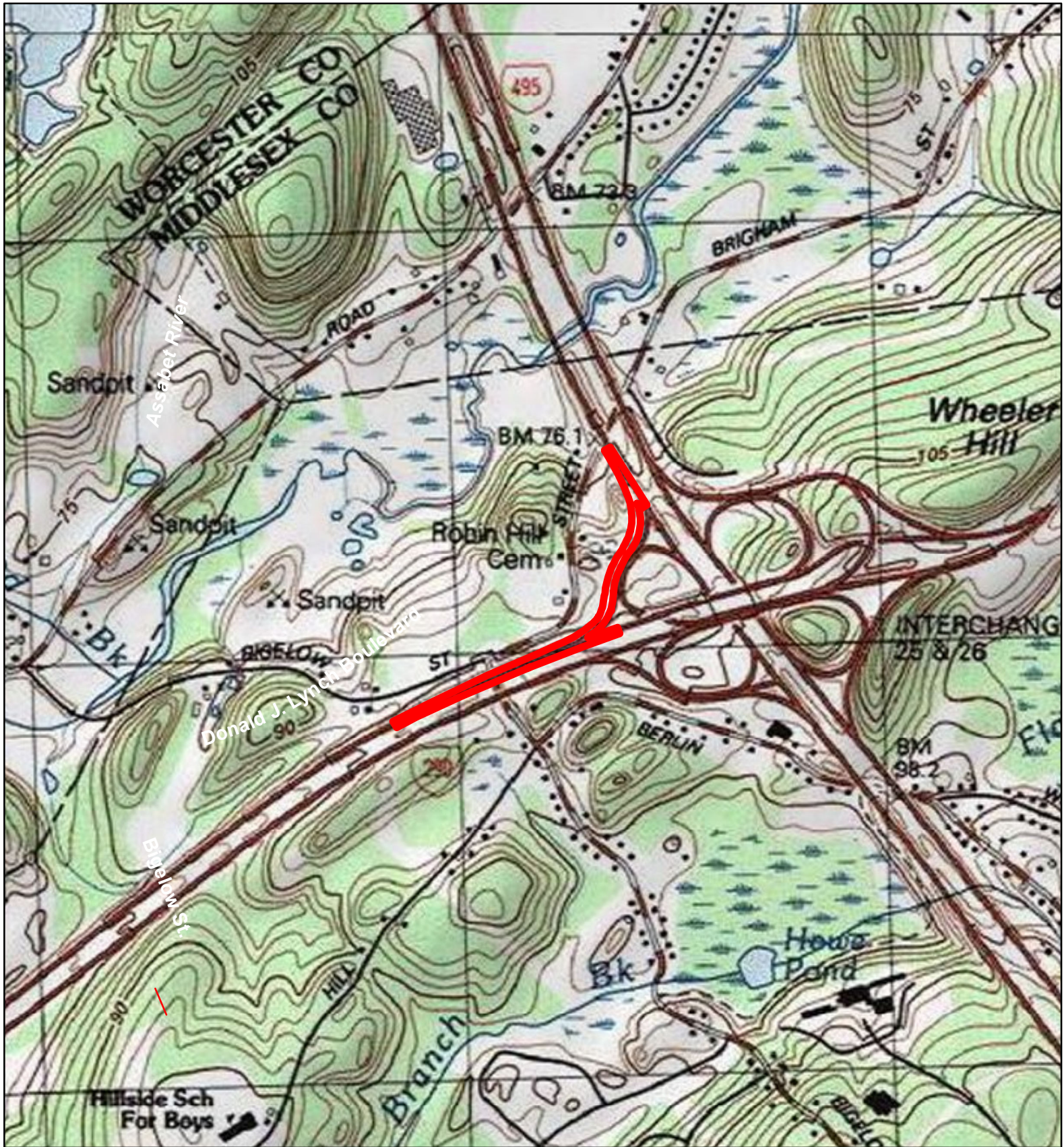
## 8. Summary

The proposed project will improve safety and operational conditions at the I-495/I-290 interchange. Impacts to regulated wetland resources are limited to 65,500 sf (1.5 acres) of 100-foot wetland buffer zone. As required, an erosion and sedimentation control program will be implemented to prevent erosion and siltation impacts to the adjacent jurisdictional resources during construction.

MassDOT requests that the Marlborough Conservation Commission finds these measures adequately protective of the interests identified in the MA WPA Regulations and issue an Order of Conditions approving the work described in this NOI and shown on the accompanying plans.

## Appendix A Figures





800 400 0 800 Feet



**Legend**

 Project Area

**Ramp Improvements & Related Work  
at I-495 (SB) to I-290 (WB)**

**Marlborough, MA**

Figure 1: Project Locus



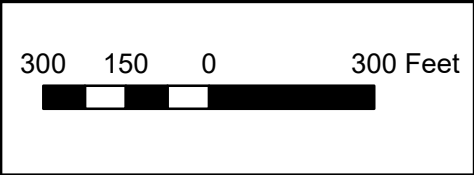
April 2020







There are no NHESP Priority or Estimated Habitats, Potential or Certified Vernal Pools, or ACECs located within the current map extent.

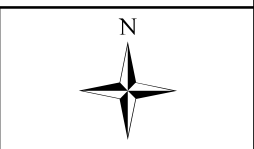


- Legend**
- Project Area
  - Delineated Wetland Flags
  - Delineated Wetland Boundary
  - 100' Delineated Wetland Buffer
  - DEP Wetlands
  - FEMA Flood Zones**
  - AE: 1% Annual Chance of Flood, w/ BFE
  - AE: Regulatory Floodway

**Ramp Improvements & Related Work  
at I-495 (SB) to I-290 (WB)  
Marlborough, MA**

Figure 2: Environmental Features Map

April 2020





## **Appendix B Wetland Delineation Report**

# WETLAND DELINEATION MEMO

Ramp Improvements and Related Work at I-495 (SB) to I-290 (WB)

Marlborough, MA

MassDOT Project Number: 610552

Prepared for:



**Massachusetts Department of Transportation**

Highway Division

10 Park Plaza

Boston, MA 02116

Submitted by:

**HNTB**

**HNTB Corporation**

31 St. James Avenue

Boston, MA 02116

May 2020



The Massachusetts Department of Transportation (MassDOT)-Highway Division is proposing improvements to the existing interchange of Interstate 495 (I-495) and Interstate 290 (I-290) in the City of Marlborough Massachusetts. The project limits begin approximately 50-feet south of the I-495 southbound (SB) bridge over Donald Lynch Boulevard, continuing southwards along the I495 SB to I-290 westbound (WB ramp to I-290 WB, and terminates approximately 800-feet west of the I-290 WB bridge over Bigelow Street.

The area within the project limits was initially reviewed by HNTB wetland scientists utilizing OLIVER the MassGIS online mapping tool ([http://maps.massgis.state.ma.us/map\\_ol/oliver.php](http://maps.massgis.state.ma.us/map_ol/oliver.php)). The MassDEP Wetlands data layer indicated that there is an intermittent stream less than 110 feet from the northern slope adjacent to I-290 WB, originating east of Bigelow Street passing under Bigelow Street and continuing west past the project limits.

A wetland scientist from HNTB performed a field delineation within the project limits on April 7, 2020 to identify wetlands and waterbodies that meet the criteria for federal or state regulation under Section 404 of the Clean Water Act (CWA) and/or the Massachusetts Wetlands Protection Act (MA WPA). The project area was accessed from the Digital Federal Credit Union parking lot located at 220 Donald J. Lynch Boulevard.

The wetland delineation was conducted in accordance with the methods described in the *U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987 edition)*, and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region dated January 2012*. Per the USACE 1987 manual, routine wetland determination methods with onsite inspection were used to determine the presence of wetlands in the project area. Wetland and non-wetland areas were identified based on representative plant communities, soil profile observations and hydrologic indicators. Pertinent observations were recorded on USACE Wetland Determination Data Forms. Two sample locations were given unique identifiers and photographed. The 22 boundary points were identified, delineated with consecutively numbered red survey flagging, and located using a handheld GPS unit.

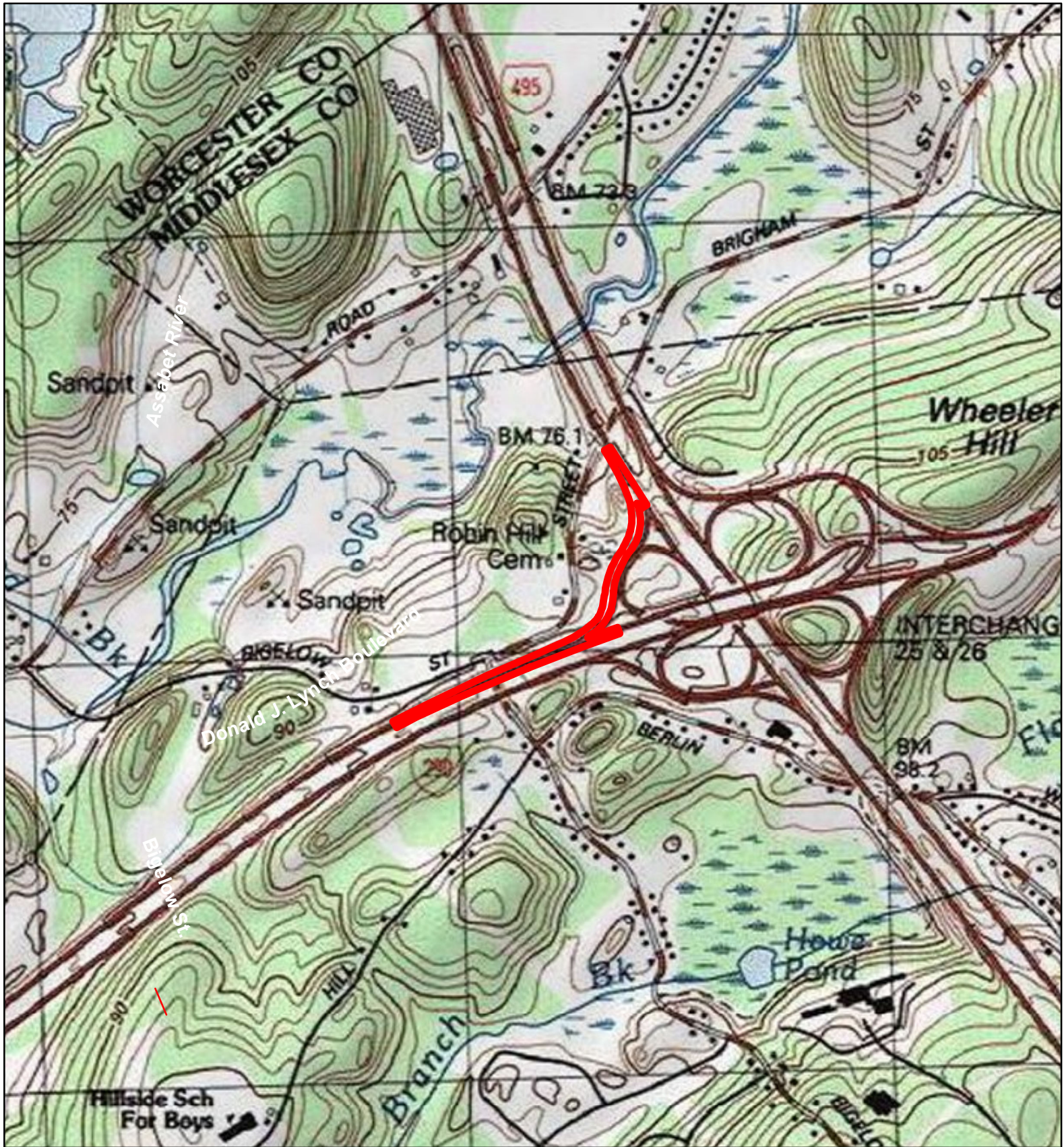
As shown on **Figure 4** (attached), one jurisdictional vegetated wetland (VW), flag series HNTB1-HNTB22, was identified within the project limits. A brief description of the VW area is provided below. Field data forms including photographs for the upland and wetland sample locations are attached. No jurisdictional VWs were observed east of Bigelow Street. The VW originates at HNTB1 on the west side of Bigelow Street. From HNTB1, the wetland extends westward to the project limits along the base of the slope adjacent to I-290 WB. Slowly flowing water was observed originating at a discharge adjacent to Bigelow Street flowing westward within the VW. The water was observed to be up to 12 inches deep within the VW.

Upland and wetland sample locations were established at a transect performed at flag HNTB14. Vegetative species observed at the upland sample location included: white pine (*Pinus strobus*), red maple (*Acer rubrum*), shagbark hickory (*Carya ovata*), Japanese honeysuckle (*Lonicera japonica*), and juniper (*Juniperus virginiana*). The soil at the upland sample location was a fine sandy loam with a 10YR5/3 matrix between 8" and 15" deep. The sample location was on the slope above the edge of water. Vegetative species observed at the wetland sample location included: white pine, red maple, speckled alder (*Alnus rugosa*) glossy buckthorn (*Rhamnus frangula*) sensitive fern (*Onoclea sensibilis*), and purple loosestrife (*Lythrum*

*salicaria*). The soil at the wetland sample location had a histic epipedon 9 inches thick over a sandy subsoil with 10YR4/2 matrix and 20% 10yr4/4 mottles between 9” and 15” deep. Standing water was observed at the sample location with a depth of 2”.

The VW observed within the project limits is classified as a Palustrine Scrub/Scrub wetland pursuant to the Classification of Wetlands and Deepwater Habitats of the United States, Cowardin et al. 1979. Any proposed discharge of dredged or fill material to this federally-jurisdictional VW will be subject to notification/permit authorization requirements from the U.S Army Corps of Engineers under Section 404 of the Clean Water Act (dependent on review thresholds met or exceeded for the activity). The VW is also jurisdictional as a Bordering Vegetated Wetland (BVW) under the MA WPA. Any direct impacts to this BVW, or work proposed within the 100-foot buffer zone of this wetland system will require the filing of a Notice of Intent with the Marlborough Conservation Commission.





800 400 0 800 Feet



**Legend**

 Project Area

**Ramp Improvements & Related Work  
at I-495 (SB) to I-290 (WB)**

**Marlborough, MA**

Figure 1: Project Locus



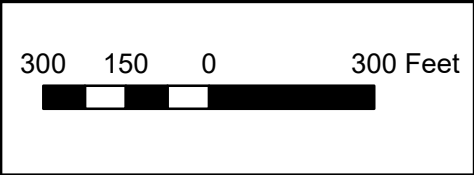
April 2020







There are no NHESP Priority or Estimated Habitats, Potential or Certified Vernal Pools, or ACECs located within the current map extent.

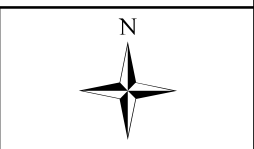


- Legend**
- Project Area
  - Delineated Wetland Flags
  - Delineated Wetland Boundary
  - 100' Delineated Wetland Buffer
  - DEP Wetlands
- FEMA Flood Zones**
- AE: 1% Annual Chance of Flood, w/ BFE
  - AE: Regulatory Floodway

**Ramp Improvements & Related Work  
at I-495 (SB) to I-290 (WB)  
Marlborough, MA**

Figure 2: Environmental Features Map

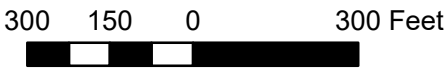
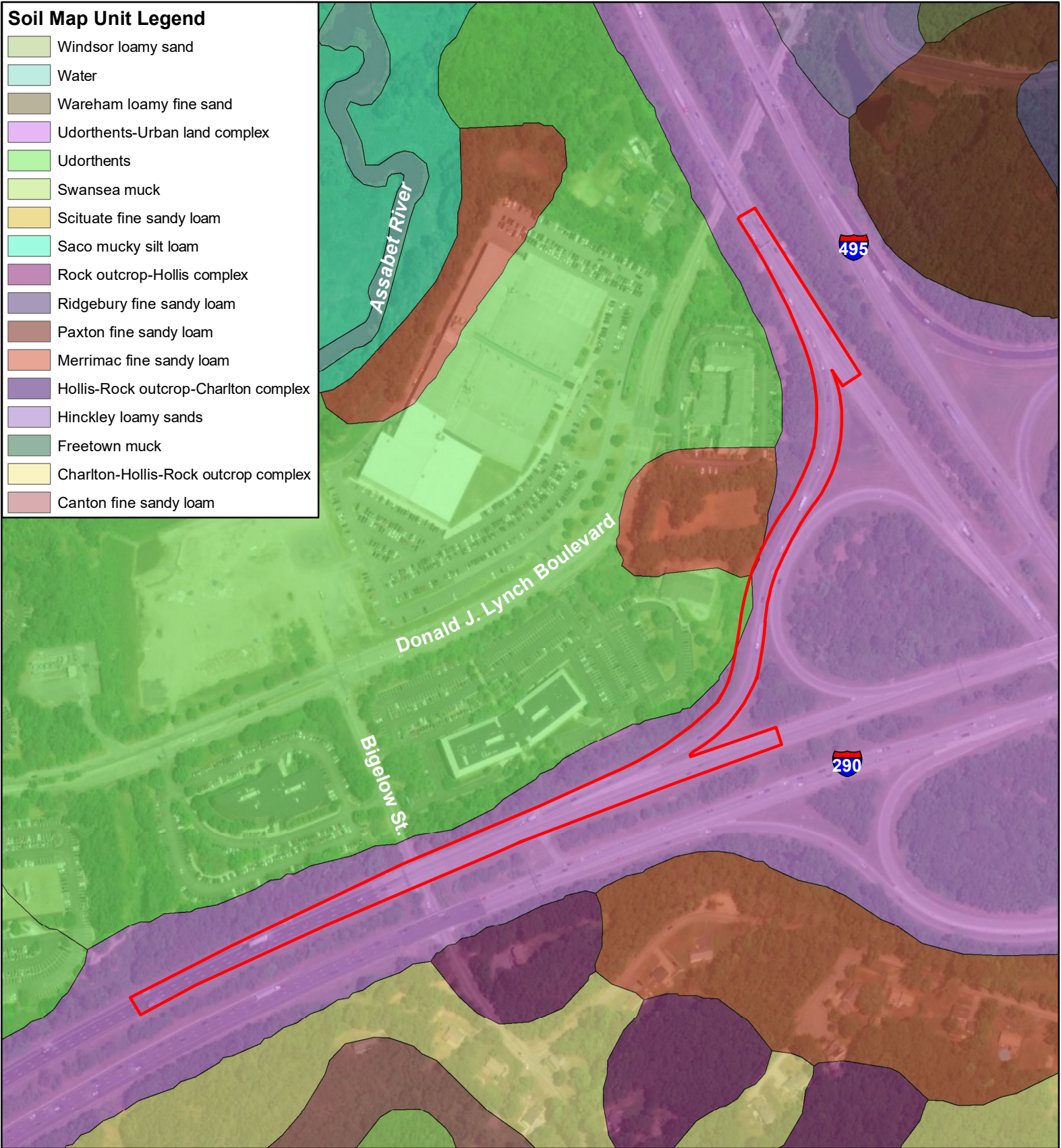
April 2020





**Soil Map Unit Legend**

-  Windsor loamy sand
-  Water
-  Wareham loamy fine sand
-  Udorthents-Urban land complex
-  Udorthents
-  Swansea muck
-  Scituate fine sandy loam
-  Saco mucky silt loam
-  Rock outcrop-Hollis complex
-  Ridgebury fine sandy loam
-  Paxton fine sandy loam
-  Merrimac fine sandy loam
-  Hollis-Rock outcrop-Charlton complex
-  Hinckley loamy sands
-  Freetown muck
-  Charlton-Hollis-Rock outcrop complex
-  Canton fine sandy loam



**Legend**

 Project Area

**Ramp Improvements & Related Work  
at I-495 (SB) to I-290 (WB)**

**Marlborough, MA**

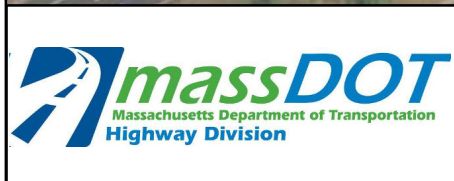
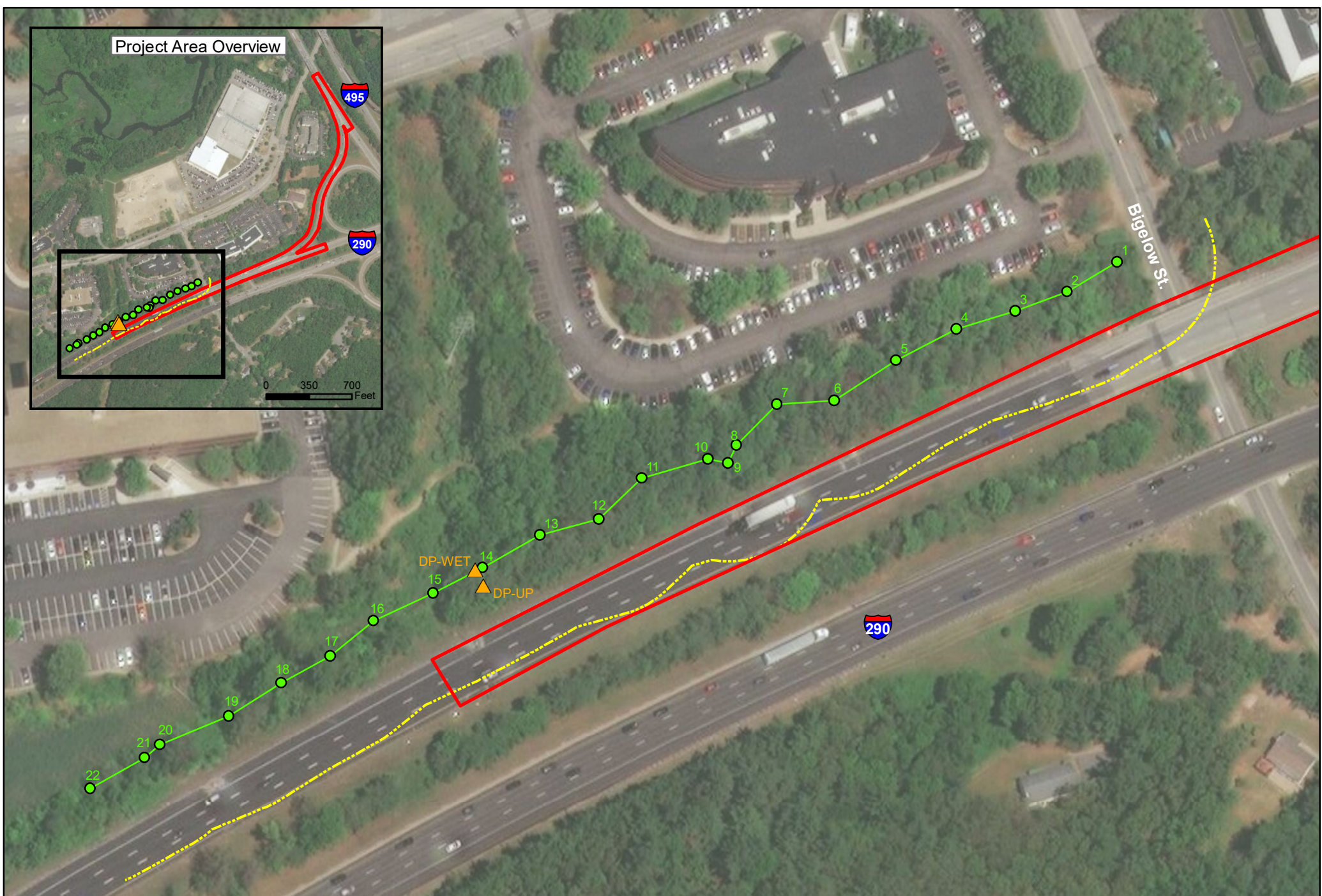
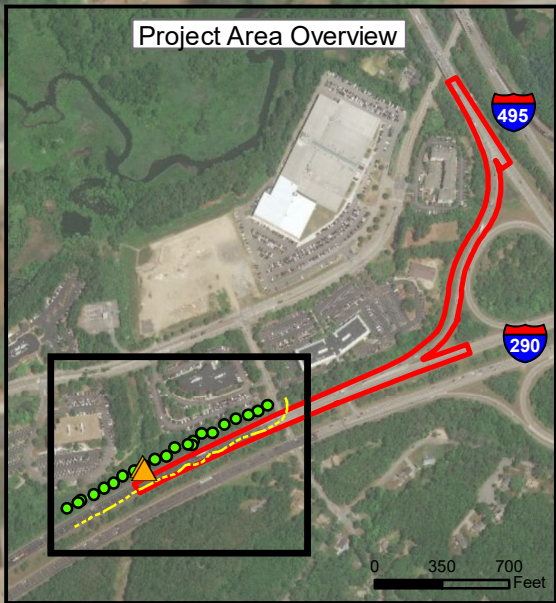
Figure 3: Soils Map



April 2020

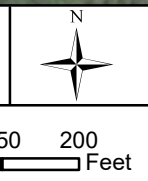






April 2020

0 50 100 150 200 Feet



**Legend**

Project Area	Data Points
Wetland Boundary	100' Wetland Buffer
Wetland Flags	

**Ramp Improvements & Related Work  
at I-495 (SB) to I-290 (WB)  
Marlborough, MA**

Figure 4: Wetland Delineation



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: \_\_\_\_\_ City/County: \_\_\_\_\_ Sampling Date: \_\_\_\_\_  
 Applicant/Owner: \_\_\_\_\_ State: \_\_\_\_\_ Sampling Point: \_\_\_\_\_  
 Investigator(s): \_\_\_\_\_ Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)      ___ Aquatic Fauna (B13) ___ Saturation (A3)      ___ Marl Deposits (B15) ___ Water Marks (B1)      ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)      ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)      ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)      ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____ )	1. _____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: _____ )	1. _____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: _____ )	1. _____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No _____
Remarks: (Include photo numbers here or on a separate sheet.)				





**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: 290 west at 495/290 Interchange City/County: Marlborough Sampling Date: 4/7/2020  
 Applicant/Owner: MassDOT State: MA Sampling Point: HNTB14 Up  
 Investigator(s): M. Turgeon Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): 22.5  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 42.360646 Long: -71599753 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Udorthents-Urban Land Complex NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks: <b>On slope between I-290 W and wetland/intermittent stream at toe of slope.</b>	

**VEGETATION – Use scientific names of plants.**

Sampling Point: HNTB14 Up

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>20</u>	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
2. <u>Pinus strobus</u>	<u>60</u>	Yes	FACU															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
<u>80</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>95</u></td> <td>x 4 = <u>380</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>135</u> (A)</td> <td><u>500</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.7</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>95</u>	x 4 = <u>380</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>135</u> (A)	<u>500</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>95</u>	x 4 = <u>380</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>135</u> (A)	<u>500</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u> )</b>																		
1. <u>Acer rubrum</u>	<u>20</u>	Yes	FAC															
2. <u>Pinus strobus</u>	<u>20</u>	Yes	FACU															
3. <u>Carya ovata</u>	<u>5</u>	No	FACU															
4. <u>Lonicera japonica</u>	<u>5</u>	No	FACU															
5. <u>Juniperus virginiana</u>	<u>5</u>	No	FACU															
6. _____																		
7. _____																		
<u>55</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>3'</u> )</b>																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
_____ = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>30'</u> )</b>																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b>														
				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														





## **Appendix C Design Plans**

# MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

MARLBOROUGH - HUDSON  
I-495 SOUTHBOUND TO I-290 WESTBOUND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	13
PROJECT FILE NO. 610552			

TITLE SHEET & INDEX

PLAN AND PROFILE OF  
**RAMP IMPROVEMENTS AND RELATED WORK  
AT I-290 (WB) & I-495 (SB) INTERCHANGE**

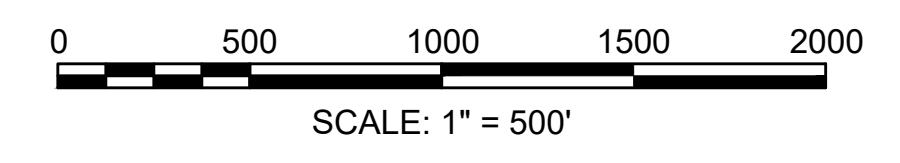
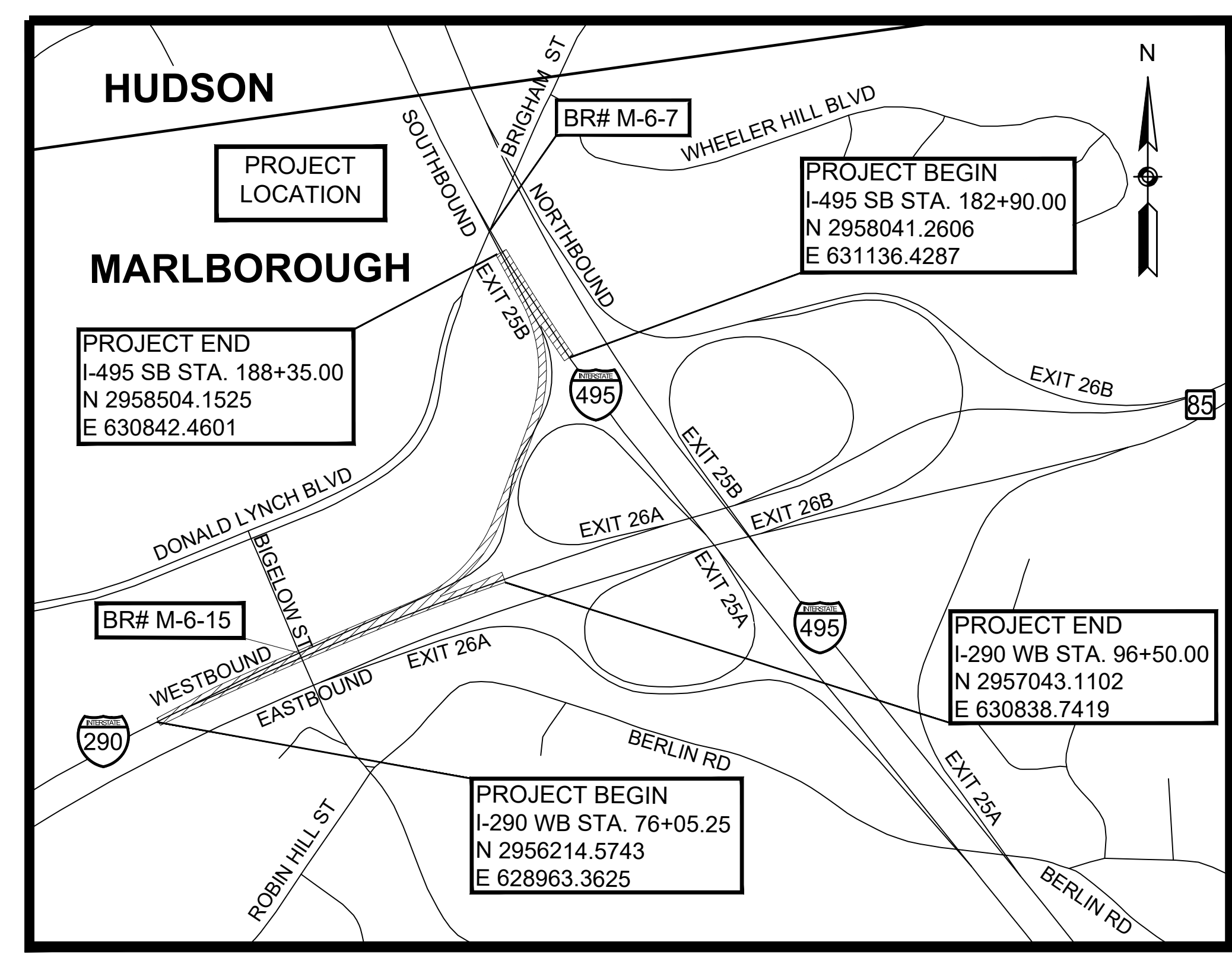
THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

IN THE CITY OF  
**MARLBOROUGH**  
MIDDLESEX COUNTY

FEDERAL AID PROJECT NO.

## NOTICE OF INTENT

INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	GENERAL NOTES
4	TYPICAL SECTIONS
5-12	CONSTRUCTION PLAN
13	CONSTRUCTION DETAILS



LENGTH OF PROJECT = 545 FEET = 0.103 MILES (I-495 SB)  
LENGTH OF PROJECT = 1800 FEET = 0.341 MILES (I-290 WB)

**DESIGN DESIGNATION - I-495 SB  
(NORTH OF RAMP)**

DESIGN SPEED	70 MPH
ADT (2017)	63,000
ADT (2040)	68,500
K	8.0%
D	100% SB
T (PEAK HOUR)	6.2%
T (AVERAGE DAY)	8.5%
DHV	5,450
DDHV	5,450 SB
FUNCTIONAL CLASSIFICATION	INTERSTATE

**DESIGN DESIGNATION - I-290  
WB (WEST OF RAMP)**

DESIGN SPEED	70 MPH
ADT (2017)	51,750
ADT (2040)	56,000
K	8.3%
D	100% WB
T (PEAK HOUR)	3.0%
T (AVERAGE DAY)	7.0%
DHV	4,650
DDHV	4,650 WB
FUNCTIONAL CLASSIFICATION	INTERSTATE

**DESIGN DESIGNATION - I-495 SB  
TO I-290 WB RAMP**

DESIGN SPEED	45 MPH
ADT (2017)	21,300
ADT (2040)	23,000
K	6.6%
D	100% WB
T (PEAK HOUR)	8.6%
T (AVERAGE DAY)	12.9%
DHV	1,500
DDHV	1,500 WB
FUNCTIONAL CLASSIFICATION	INTERSTATE

**DESIGN DESIGNATION - I-290  
WB TO I-495 SB RAMP**

DESIGN SPEED	30 MPH
ADT (2017)	4,150
ADT (2040)	-
K	9.7%
D	100% WB
T (PEAK HOUR)	5.7%
T (AVERAGE DAY)	4.1%
DHV	400
DDHV	400 WB
FUNCTIONAL CLASSIFICATION	INTERSTATE

DATE	DESCRIPTION	REV #

**HNTB**



RECOMMENDED FOR APPROVAL

\_\_\_\_\_  
CHIEF ENGINEER      DATE

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
APPROVED:

APPROVED

\_\_\_\_\_  
DIVISION ADMINISTRATOR      DATE

\_\_\_\_\_  
HIGHWAY ADMINISTRATOR      DATE

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		EDGE OF PAVEMENT
		LIMIT OF MICROMILLING AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		SIGN AND POST
		SIGN AND POST (2 POSTS)

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		6" SOLID WHITE LINE
		6" SOLID YELLOW LINE
		6" BROKEN WHITE LINE (10' MARK, 30' SKIP)
		6" BROKEN YELLOW LINE (10' MARK, 30' SKIP)
		6" DOTTED WHITE LINE (3' MARK, 9' SKIP)
		6" DOTTED YELLOW LINE (3' MARK, 9' SKIP)
		6" DOTTED WHITE LINE EXTENSION (2' MARK, 6' SKIP)
		6" DOTTED YELLOW LINE EXTENSION (2' MARK, 6' SKIP)
		SLOTTED PAVEMENT MARKER ONE-WAY (WHITE)
		SLOTTED PAVEMENT MARKER TWO-WAY (YELLOW/RED)
		SLOTTED PAVEMENT MARKING TWO-WAY (WHITE/RED)
		4" RECESSED WHITE PREFORMED PAVEMENT MARKINGS

PAVEMENT MARKING MATERIAL WILL BE RECESSED POLYUREA UNLESS OTHERWISE NOTED.

ABBREVIATIONS

GENERAL	
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DMH	DRAIN MANHOLE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ECB	EXISTING CATCH BASIN
EDMH	EXISTING DRAIN MANHOLE
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE

MARLBOROUGH - HUDSON  
I-495 SOUTHBOUND TO I-290 WESTBOUND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	13
PROJECT FILE NO.		610552	

LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL	
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION



## GENERAL NOTES:

1. THIS PLAN WAS PRODUCED FROM A COMBINATION OF AN ACTUAL ON-THE-GROUND FIELD SURVEY CONDUCTED BY WSP FROM NOVEMBER 5, 2008 TO MAY 11, 2009 AND AERIAL PHOTOGRAMMETRIC METHODS. THE DATE OF THE PHOTOGRAMATRY IS NOVEMBER 17, 2008. WSP ALSO CONDUCTED A 3D LASER SCAN SURVEY FOR SECTIONS OF I-495 SB TO I-290 WB RAMP ON SEPTEMBER 4, 2019. THE SURVEY WAS LIMITED TO THREE (3) INDEPENDENT SECTIONS OF THE TRAVELED WAY AND ON THE IMPERVIOUS SURFACE ONLY. THE FIELD DATA CAPTURED WAS USED TO UPDATE THE OVERALL DTM FOR THE PROJECT. CONTRACTOR TO FIELD VERIFY SURVEY PRIOR TO STARTING CONSTRUCTION. WETLAND FLAGS WERE LOCATED BY HNTB WETLAND SCIENTIST UTILIZING HANDHELD GPS UNIT.
2. EXISTING CONDITIONS ON I-290 WB WEST OF STATION 81+00 WERE DEVELOPED FROM ORTHOGRAPHIC IMAGERY AND CONSIDERED APPROXIMATE. CONTRACTOR TO VERIFY EXISTING CONDITIONS IN THE FIELD.
3. THE LOCATION OF UNDERGROUND IMPROVEMENTS, UTILITIES OR ENCROACHMENTS, IF ANY EXIST, OR AS SHOWN HEREON, ARE NOT CERTIFIED. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A UTILITY MARK OUT SERVICE. THE LOCATION OF UNDERGROUND UTILITIES DEPICTED ON THIS PLAN HAVE BEEN COMPILED FROM VARIOUS SOURCES, INCLUDING, BUT NOT LIMITED TO INFORMATION AND RECORD PLANS OBTAINED FROM VARIOUS UTILITY PROVIDERS, AND LOCATION OF STRUCTURES VISUALLY IDENTIFIED AND LOCATED DURING THE COURSE OF THE FIELD SURVEY. THE LOCATION OF ALL UTILITIES DEPICTED ON THIS PLAN SHALL BE CONSIDERED APPROXIMATE, WITH NO WARRANTY NOR GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF THE LOCATION OF THE UTILITY LINES DEPICTED ON THIS PLAT. FURTHERMORE, NO WARRANTY NOR GUARANTEE THAT THE UTILITIES DEPICTING ON THIS MAP COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ROUTE, SIZE, AND LOCATION OF ALL UTILITIES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES. THE PROPER UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION SHALL BE NOTIFIED, AND A UTILITY MARKOUT SERVICE DEPLOYED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATIONS AND/OR CONSTRUCTION.
4. PEDESTRIAN AND VEHICLE ACCESS TO ABUTTING PREMISES WILL BE MAINTAINED IN A SAFE CONDITION AT ALL TIMES.
5. EXISTING PAVEMENTS SHALL BE SAWCUT WHERE THEY MEET PROPOSED SURFACE TREATMENTS. SAWCUTS WILL BE SMOOTH AND STRAIGHT. WHERE NEW BITUMINOUS CONCRETE MEETS EXISTING BITUMINOUS CONCRETE SURFACES, SAWCUT EDGES ARE TO BE SEALED WITH BITUMEN AND BACKSANDED. AREAS OUTSIDE THE LIMITS OF WORK DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION WILL BE RESTORED TO THEIR ORIGINAL CONDITION.
6. EXISTING PAVEMENT AND SUBBASE MATERIAL SHALL BE EXCAVATED AND BACKFILLED WITH ORDINARY BORROW IN AREAS OF EXISTING PAVEMENT PROPOSED FOR REMOVAL AND REPLACED WITH LOAM AND SEED UNLESS OTHERWISE NOTED.
7. ALL TOWN OR STATE OWNED UTILITY STRUCTURES INCLUDING MANHOLES, CATCH BASINS, AND GATE BOXES WILL BE ADJUSTED OR REMODELED TO FINISHED GRADE BY CONTRACTOR. ALL PRIVATELY OWNED UTILITY STRUCTURES WILL BE ADJUSTED OR REMODELED BY THE OWNER.
8. LIMITS OF WORK HAVE BEEN SET ON THE PLANS, HOWEVER, THESE MAY BE EXTENDED OR REDUCED WHERE AGREED BY MASSDOT AND CONTRACTOR TO MEET WITH FIELD CONDITIONS.
9. CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH NEW WORK. TEST PITS WILL BE PERFORMED TO VERIFY PERTINENT DRAINAGE INVERTS AND POTENTIAL UTILITY CONFLICTS. DISCREPANCIES OR CONFLICTS WILL BE REPORTED TO THE ENGINEER IMMEDIATELY.
10. WHERE REQUIRED, EXISTING SURFACES, I.e. CEMENT CONCRETE, BITUMINOUS CONCRETE PAVEMENT, BRICK, ETC., WILL BE COMPLETELY REMOVED FROM AREAS OF PROPOSED WORK, INCLUDING PROPOSED PLANTING AREAS, AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
11. CONTRACTOR SHALL COORDINATE AND MAINTAIN ALL SAFETY SIGNING, BARRIERS, AND TEMPORARY PAVEMENT MARKINGS NECESSARY TO PROVIDE A SMOOTH AND PROPER TRANSITION FOR TRAFFIC FLOW AS REQUIRED BY THE ENGINEER.
12. ALL PROPOSED GRANITE EDGING WILL BE TYPE SB OR EXISTING, REMOVED AND RESET, UNLESS OTHERWISE NOTED.
13. AT LIMITS OF RECONSTRUCTION, THE EXISTING PAVEMENT WILL BE SAWCUT AND STEPPED BACK TO PROVIDE FOR A PAVEMENT TRANSITION.
14. CONTRACTOR SHALL NOTIFY MASSACHUSETTS DIG SAFE AND PROCURE A DIG SAFE NUMBER FOR EACH LOCATION PRIOR TO DISTURBING EXISTING GROUND IN ANY WAY AT LEAST 72 HOURS PRIOR TO BEGINNING WORK. TELEPHONE NUMBER OF THE DIG SAFE CENTER IS 811. UTILITY OWNERS, PUBLIC AND PRIVATE, MUST BE NOTIFIED INCLUDING CITIES OF MARLBOROUGH AND MASSDOT WITHIN WHOSE JURISDICTION THE WORK IS TO BE PERFORMED.
15. DISTURBED UNPAVED SURFACES WITHIN THE PROJECT LIMITS WILL BE HYDRO-SEEDED WITH CONSERVATION SEED MIX AND A BONDED FIBER MATRIX MULCH UNLESS OTHERWISE NOTED ON PLANS.
16. CONTRACTOR SHALL MAINTAIN EXISTING UTILITY SERVICES TO ABUTTING PROPERTIES DURING CONSTRUCTION.
17. CONTRACTOR SHALL PROVIDE EROSION CONTROL PROTECTION TO CONTAIN SEDIMENT FROM THE WORK ZONE AS SHOWN ON THE PLANS OUTSIDE THE LIMITS OF GRADING AND CONSISTENT WITH PROJECT ENVIRONMENTAL PERMITS, AND AS REQUIRED BY THE ENGINEER. EROSION CONTROL AND CONTAINMENT OF SEDIMENTS MAY REQUIRE TEMPORARY (AND PERMANENT) MEASURES TO STABILIZE SLOPES/BARE SOIL.
18. EQUIPMENT AND MATERIAL SHALL NOT BE STORED WITHIN THE DEFLECTION ZONE OF GUARDRAIL OR AT LEAST 30 FEET FROM THE EDGE OF TRAVEL WAY, OR IN STORAGE AREAS AS APPROVED BY MASSDOT OR APPROPRIATE AUTHORITIES.
19. PREPARATION OF UNDERLYING SURFACE, ASPHALT EMULSION FOR TACK COAT, HMA FOR PATCHING, AND HMA JOINT SEALANT WILL BE IN ACCORDANCE WITH SECTION 450.
20. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R&R).
21. ALL EXISTING DRAINAGE STRUCTURES WITHIN PROJECT LIMITS WILL BE CLEANED AND/OR FLUSHED PRIOR TO ACCEPTANCE.
22. CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH OTHER CONTRACTOR PERFORMING WORK WITHIN AND AT THE PROJECT LIMITS.
23. CONTRACTOR SHALL PROTECT WETLAND RESOURCES FROM SILTATION THROUGHOUT THE PROJECT.
24. CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND SILTATION BARRIERS TO PROTECT ALL WORK IN WETLANDS AND WETLAND BUFFER ZONES AS APPLICABLE.
25. SHOP DRAWINGS OF ALL CASTINGS, PRECAST CONCRETE STRUCTURES AND OTHER MANUFACTURED ITEMS WILL BE SUBMITTED FOR APPROVAL BY THE ENGINEER, IN CONFORMANCE WITH CONTRACT SPECIFICATIONS, AND SAID APPROVAL WILL BE REQUIRED PRIOR TO INITIATING PROCUREMENT OF MATERIALS.
26. WHERE FEASIBLE, PROPOSED CATCH BASINS WILL HAVE 4' DEEP SUMPS.
27. NO EXISTING DRAINAGE SYSTEMS SHALL BE ABANDONED, MODIFIED OR REMOVED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
28. FINAL LOCATION OF TRAFFIC SIGNS AND SUPPORTS AS SHOWN IN THE PLANS WILL BE FIELD-CONFIRMED BY THE ENGINEER PRIOR TO INSTALLATION.
29. THE MINIMUM MOUNTING HEIGHT OF POST-MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY, WILL BE 7 FEET UNLESS OTHERWISE SPECIFIED ON THE PLANS.
30. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EXISTING GRADES AND ELEVATIONS. THE CONTRACTOR SHALL INFORM THE ENGINEER OF ANY GRADE DISCREPANCIES PRIOR TO CONSTRUCTION.
31. THE CONTRACTOR STAGING AREAS SHALL BE LOCATED AS DIRECTED AND APPROVED BY THE ENGINEER WITHIN THE STATE HIGHWAY LAYOUT. AT NO TIME SHALL FUEL FOR CONSTRUCTION EQUIPMENT BE STORED ADJACENT TO WATERWAYS.
32. CONTRACTOR SHALL BE LIMITED TO CONSTRUCTION ACTIVITIES WITHIN THE IDENTIFIED LIMITS OF WORK AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. AREAS OUTSIDE THE LIMITS OF WORK DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR.
33. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS NOT OBTAINED BY MASSDOT FROM THE MUNICIPALITIES AND APPLICABLE AGENCIES PRIOR TO COMMENCING WORK.
34. PROPOSED INVERTS ON PLANS ARE SHOWN FOR BIDDING AND DESIGN PURPOSES ONLY. ACTUAL INVERT ELEVATIONS SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
35. GUARDRAIL POSTS SHOULD NOT BE DRIVEN IN CLOSE PROXIMITY TO EXISTING UNDERGROUND UTILITIES UNLESS UNDERGROUND UTILITIES ARE EXPOSED AND LOCATIONS ARE CLEARLY KNOWN.
36. SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS AND WORK ZONE PROTECTION SHALL BE IN ACCORDANCE WITH THE 2009 MUTCD AND CURRENT MASSDOT REQUIREMENTS AND SPECIFICATIONS.
37. ALL SLOPES FOR DRAINAGE PIPE ARE CALCULATED FROM THE INSIDE WALLS OF DRAINAGE STRUCTURES. ALL RIM ELEVATIONS AND STATIONS/OFFSETS FOR CATCH BASIN GRATES AND MANHOLE COVERS ARE FOR THE CENTER OF THE STRUCTURE.
38. ALL DRAINAGE STRUCTURES TO BE ABANDONED SHALL HAVE THEIR FLOOR/BASE SLAB BROKEN (FOR DRAINAGE PURPOSES), AT LEAST THE TOP 2 FEET OF THE STRUCTURE REMOVED, AND THE REMAINING STRUCTURE FILLED WITH GRAVEL. DRAIN PIPE CONNECTIONS, EXCLUDING CORRUGATED METAL PIPE CONNECTIONS, TO BE ABANDONED SHALL BE PLUGGED WITH A CEMENT CONC MASONRY PLUG.
39. ALL DRAINAGE PIPES UNDER PAVEMENT TO BE ABANDONED SHALL BE FILLED WITH CONTROLLED DENSITY FILL-EXCAVATABLE (CDF). DRAINAGE PIPES TO BE ABANDONED THAT CAN NOT BE FILLED WITH CDF SHALL BE REMOVED.
40. EXISTING DROP INLET FRAMES, GRATES AND CATCH BASIN FRAMES WITHIN THE LIMIT OF WORK SHALL BE REPLACED WITH NEW FRAMES AND GRATES (ITEM 222.). NEW CASTINGS SHALL COMPLY WITH MASSDOT ENGINEERING AND POLICY DIRECTIVES. EXISTING MANHOLES CASTINGS WITHIN THE TRAVELED WAY SHALL BE REPLACED WITH NEW CASTING WITH BOLTED COVERS.
41. SILT SACKS SHALL BE PLACED TEMPORARILY OVER EXISTING AND PROPOSED CATCH BASINS WITHIN THE PROJECT LIMITS AND AS REQUIRED BY THE ENGINEER. SILT SACKS SHALL BE INSPECTED ON A WEEKLY BASIS (AND AFTER EACH STORM EVENT) THROUGHOUT THE DURATION OF THE PROJECT, CLEARED OF DEBRIS AND REPLACED OR RESTORED AS DEEMED NECESSARY BY THE ENGINEER.
42. EXIT NUMBERS ON THE GUIDESIGNS WILL BE CHANGED BY OTHERS AS PART OF THE EXIT RENUMBERING PROJECT TO BE BASED ON THE RAMPS' MILE MARKER

## GENERAL PAVEMENT NOTES:

1. ALL PERMANENT HOT MIX ASPHALT PAVEMENTS WILL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 450 HOT MIX ASPHALT PAVEMENT AND SECTION 450 SUPERPAVE HOT MIX ASPHALT PAVEMENT SPECIFICATIONS.
2. ALL SUPERPAVE HMA COURSES WILL BE MANUFACTURED WITH A PERFORMANCE GRADE ASPHALT BINDER (PGAB), SEE SPECIAL PROVISIONS FOR TYPE.
3. ALL PERMANENT SUPERPAVE MIXTURES WILL BE MODIFIED USING A WARM MIX ASPHALT ADDITIVE THAT IS ON THE NORTHEAST ASPHALT USER PRODUCER GROUP (NEAUPG) QUALIFIED PRODUCTS LIST AND THAT COMPLIES WITH MASSDOT WMA SPECIAL PROVISIONS.
4. ASPHALT EMULSION FOR TACK COAT (RS-1h) WILL BE SPRAY APPLIED FOR UNIFORM COVERAGE OVER MICRO-MILLED SURFACES AND SMOOTH SURFACES. SEE SECTION 450.43 OF THE 2020 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES FOR APPLICATION RATES.
5. EXISTING SUBBASE MATERIAL MEETING MATERIAL SPECIFICATION M1.03.0 GRAVEL BORROW, TYPE b WILL BE RETAINED. EXISTING SUBBASE NOT CONFORMING TO THE MATERIAL SPECIFICATION M1.03.0 GRAVEL BORROW, TYPE b WILL BE REMOVED TO THE REQUIRED DEPTH AND REPLACED WITH GRAVEL BORROW, TYPE b.
6. HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT AND HMA JOINT SEALANT WILL BE PER SECTION 450.
7. SUPERPAVE LEVELING COURSE ONLY APPLIED IN LOCATIONS WHERE REQUIRED CROSS SLOPES CANNOT BE ACHIEVED WITH MICROMILLING, WITH APPROVAL BY ENGINEER.

## MARLBOROUGH - HUDSON I-495 SOUTHBOUND TO I-290 WESTBOUND

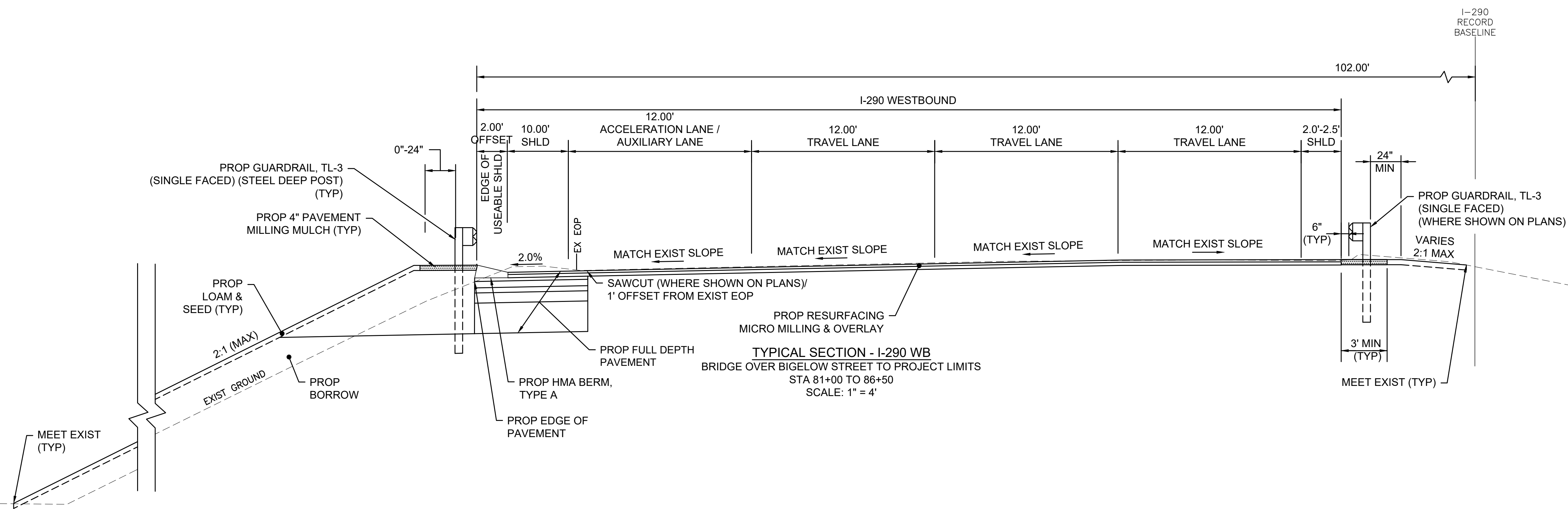
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	13
PROJECT FILE NO.		610552	

## GENERAL NOTES 610552 HD17(NOI GENERAL NOTES) - GEN NOTES

**MARLBOROUGH - HUDSON  
I-495 SOUTHBOUND TO I-290 WESTBOUND**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	13
PROJECT FILE NO.		610552	

**TYPICAL SECTIONS**





HIGHWAY GUARD DETAILS

PROP TRANSITION TO THRIE BEAM STA 300+00 RT TO 300+06 RT  
GUARDRAIL, TL-3 (SINGLE FACED) STA 300+06 RT TO STA 308+10 RT

PROP TRANSITION TO THRIE BEAM STA 300+00 LT TO 300+06 LT (I-495 SB)  
GUARDRAIL, TL-3 (SINGLE FACED) STA 300+06 LT TO STA 303+90 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

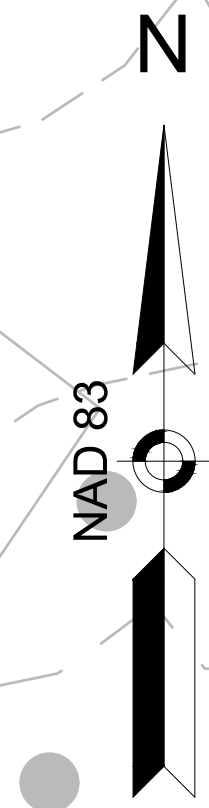
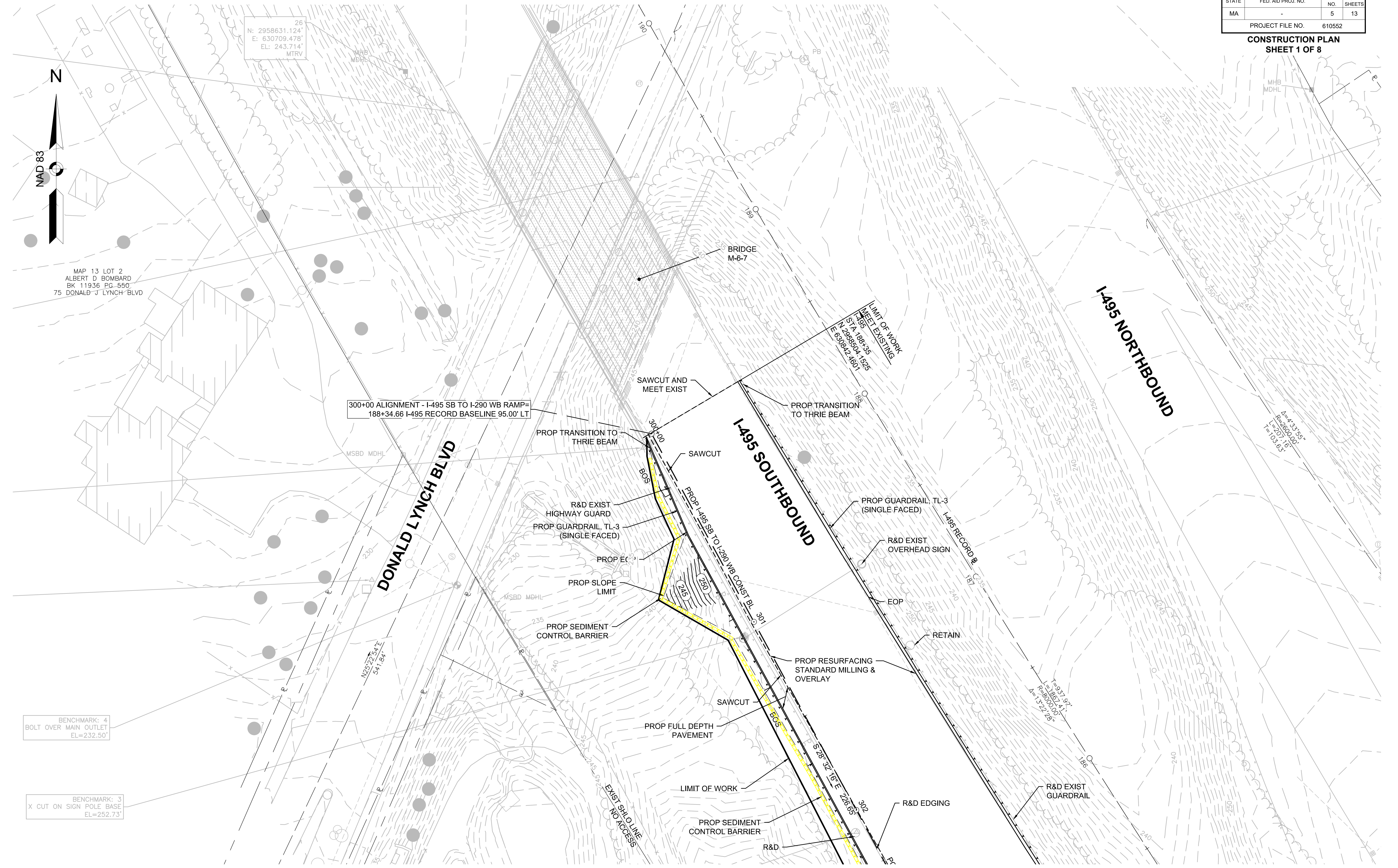
DRAINAGE DETAILS

SEE BELOW

MARLBOROUGH - HUDSON  
I-495 SOUTHBOUND TO I-290 WESTBOUND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	13
PROJECT FILE NO. 610552			

CONSTRUCTION PLAN  
SHEET 1 OF 8



MAP 13 LOT 2  
ALBERT D BOMBARD  
BK 11936 PG-550  
75 DONALD J LYNCH BLVD

26  
N: 2958631.124  
E: 630709.478  
EL: 243.714  
MTRV

300+00 ALIGNMENT - I-495 SB TO I-290 WB RAMP=  
188+34.66 I-495 RECORD BASELINE 95.00' LT

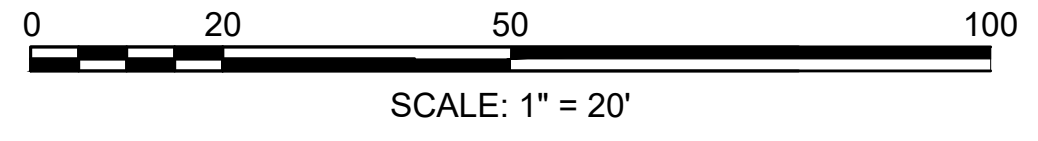
LIMIT OF WORK  
MEET EXIST  
STA 188+35  
N 2388904.925  
E 630842.2601

4+433.55'  
I=18.0000  
R=207.95  
T=103.65

BENCHMARK: 4  
BOLT OVER MAIN OUTLET  
EL=232.50'

BENCHMARK: 3  
X CUT ON SIGN POLE BASE  
EL=252.73'

CONTINUED ON  
SHEET NO. 15



SCALE: 1" = 20'



HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 300+06 RT TO STA 308+10 RT

GUARDRAIL, TL-3 (SINGLE FACED) STA 300+06 LT TO STA 303+90 LT  
TRAILING ANCHORAGE STA 303+90 LT TO STA 303+99 LT (I-495 SB)

CONTINUED ON  
SHEET NO. 14

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW

MARLBOROUGH - HUDSON  
I-495 SOUTHBOUND TO I-290 WESTBOUND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	13

PROJECT FILE NO. 610552  
CONSTRUCTION PLAN  
SHEET 2 OF 8



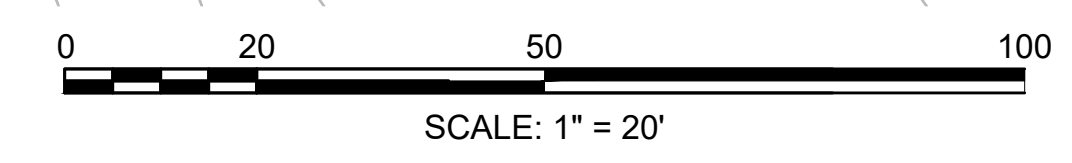
23  
N: 2758294.705'  
E: 630899.304'  
EL: 253.994'  
MTRV

22  
N: 2958166.319'  
E: 630969.861'  
EL: 256.824'  
MTRV

21  
N: 2958023.256'  
E: 631017.727'  
EL: 259.614'  
MTRV

MAP 26 LOT 7  
APPLE EIGHT HOSPITALITY  
MASSACHUSETTS INC.  
BK 50636 PG 224  
112 DONALD J LYNCH BLVD

CONTINUED ON  
SHEET NO. 16





**HIGHWAY GUARD DETAILS**

GUARDRAIL, TL-3 (SINGLE FACED) STA 300+06 RT TO STA 308+10 RT  
 TRANSITION TO RIGID BARRIER (SINGLE FACED) STA 308+10 RT TO CONCRETE BARRIER  
 TRANSITION TO RIGID BARRIER (SINGLE FACED) CONCRETE BARRIER TO STA 309+90 RT  
 GUARDRAIL, TL-3 (SINGLE FACED) STA 309+90 RT TO STA 87+50 (I-290)

TRANSITION TO NCHRP 350 GUARDRAIL STA 308+06 LT TO 308+37 LT (RAMP I-290 WB TO I-495 SB)  
 TRANSITION TO RIGID BARRIER (SINGLE FACED) STA 308+37 RT TO CONCRETE BARRIER

**TRAFFIC SIGNAL CONDUIT**

NONE

CONTINUED ON SHEET NO. 15

**WATER SUPPLY ALTERATIONS**

NONE

**DRAINAGE DETAILS**

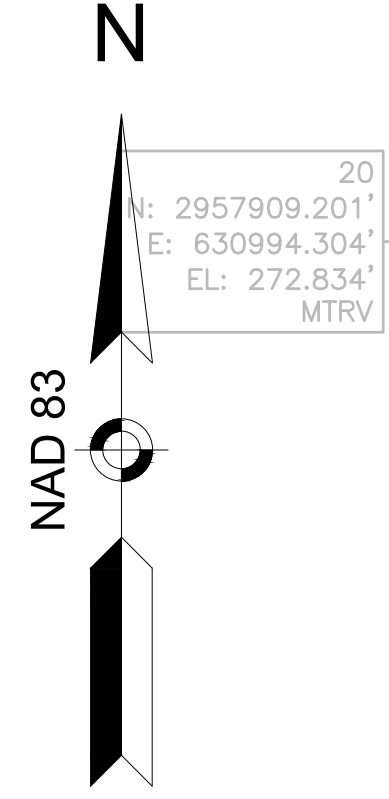
SEE BELOW

**MARLBOROUGH - HUDSON  
 I-495 SOUTHBOUND TO I-290 WESTBOUND**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	13
PROJECT FILE NO. 610552			

**CONSTRUCTION PLAN  
 SHEET 3 OF 8**

MAP 26 LOT 7  
 APPLE EIGHT HOSPITALITY  
 MASSACHUSETTS INC.  
 BK 50636 PG 224  
 112 DONALD J LYNCH BLVD

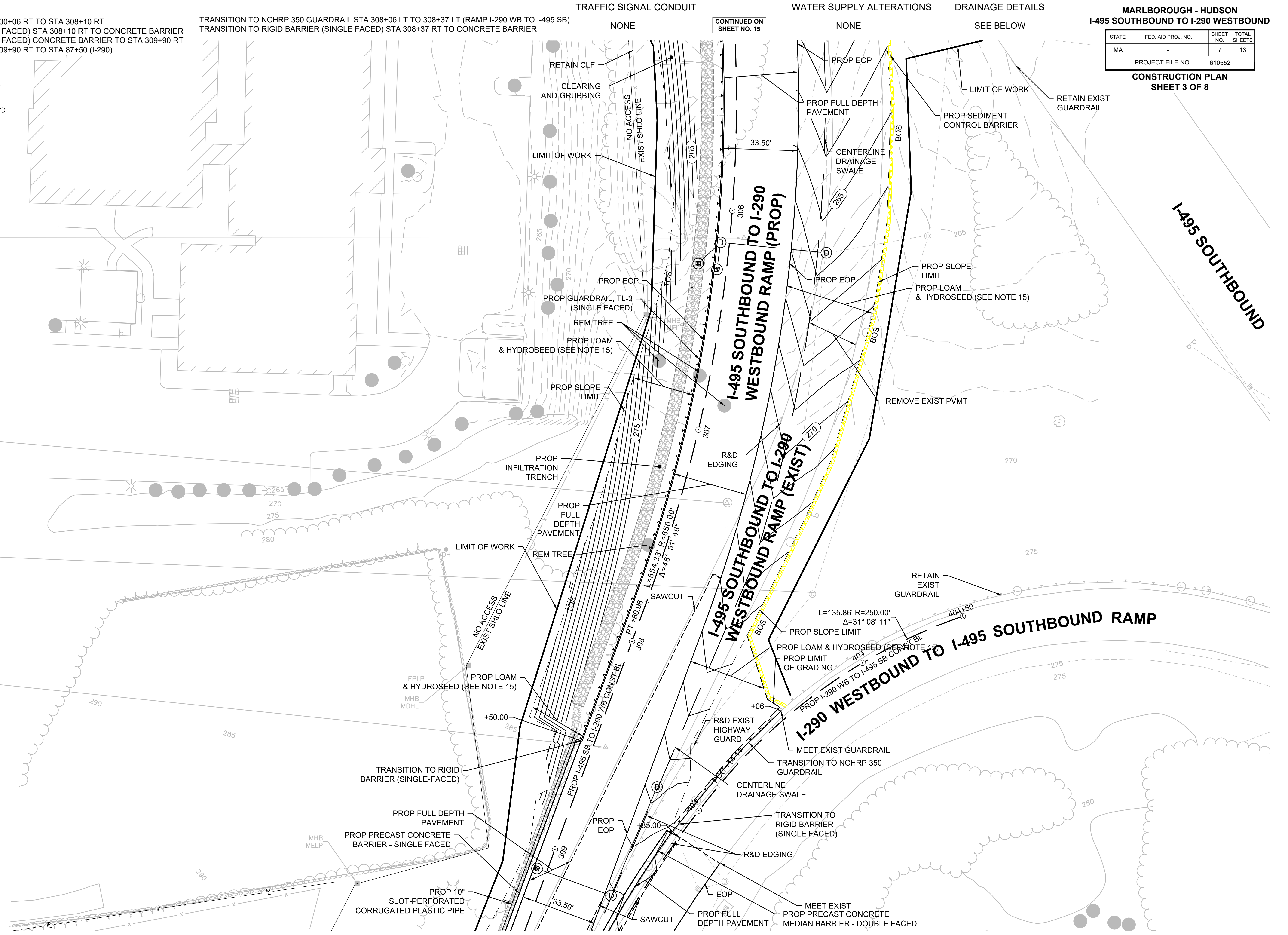


19  
 N: 2957789.780'  
 E: 630986.576'  
 EL: 270.744'  
 MTRV

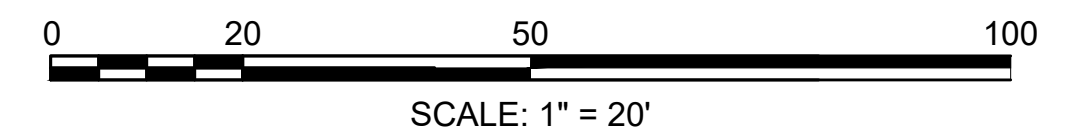
BENCHMARK: 2  
 X CUT ON MHD RIM  
 EL=272.93'

18  
 N: 2957679.675'  
 E: 630931.853'  
 EL: 276.794'  
 MTRV

MAP 26 LOT 8  
 CITY OF MARLBOROUGH  
 DONALD J LYNCH BLVD



CONTINUED ON SHEET NO. 17





HIGHWAY GUARD DETAILS

TRANSITION TO RIGID BARRIER (SINGLE FACED) CONCRETE BARRIER TO STA 309+90 RT  
GUARDRAIL, TL-3 (SINGLE FACED) STA 309+90 RT TO STA 87+50 (I-290)

TRANSITION TO RIGID BARRIER (SINGLE FACED) STA 308+37 RT TO CONCRETE BARRIER  
TRANSITION TO RIGID BARRIER (SINGLE FACED) CONCRETE BARRIER TO STA 311+45 RT  
TRAILING ANCHORAGE STA 311+45 LT TO STA 311+54 LT

TRAFFIC SIGNAL CONDUIT

NONE

CONTINUED ON  
SHEET NO. 18

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

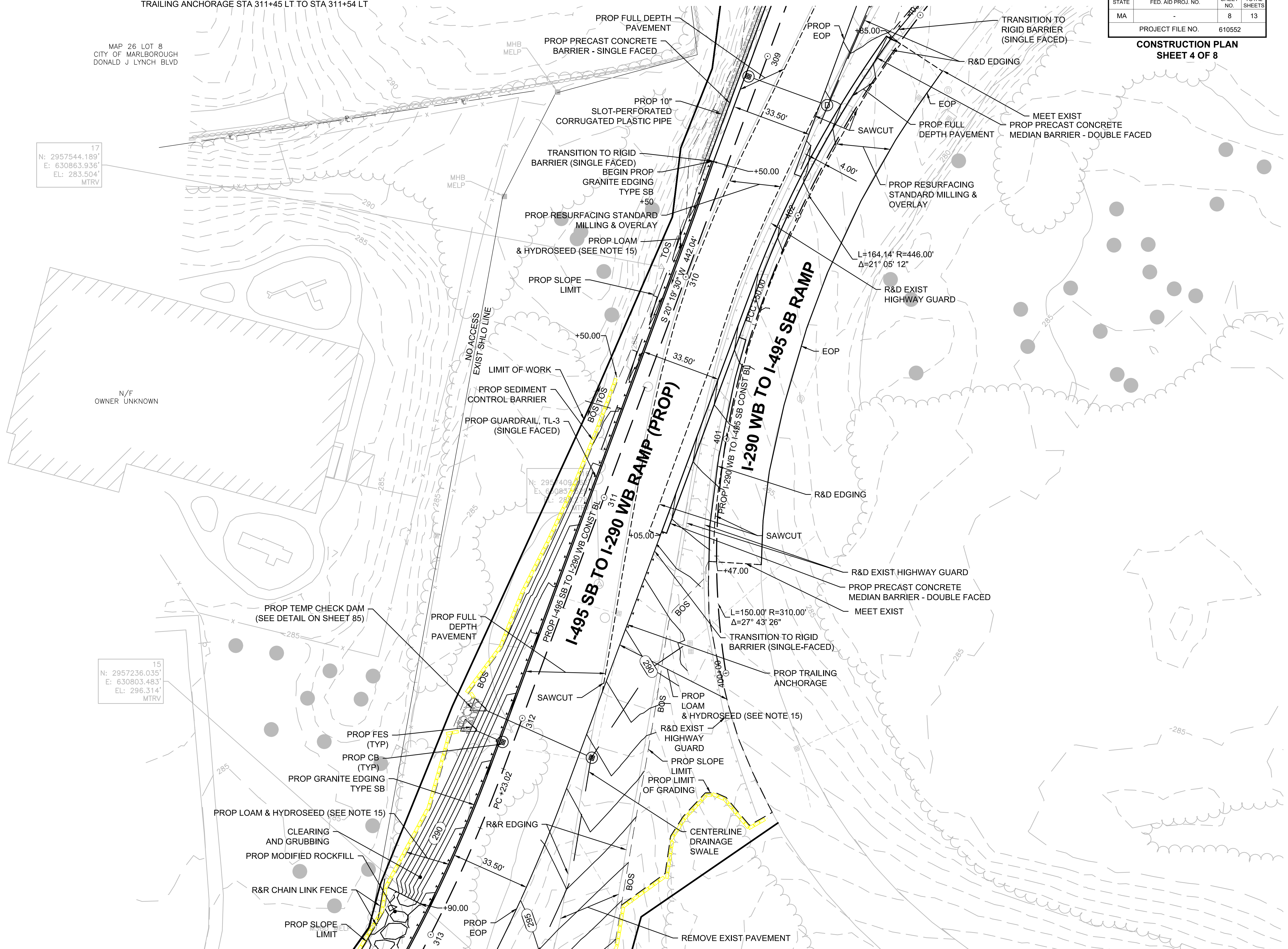
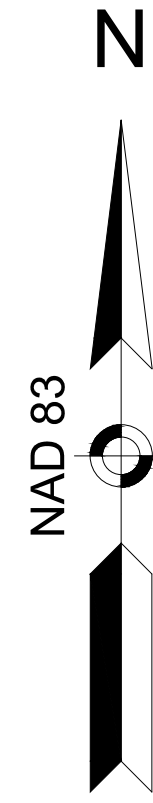
SEE BELOW

MARLBOROUGH - HUDSON

I-495 SOUTHBOUND TO I-290 WESTBOUND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	13
PROJECT FILE NO.		610552	

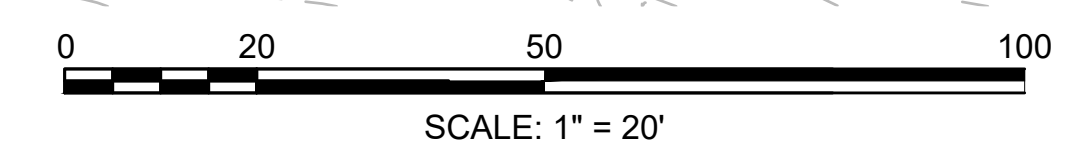
CONSTRUCTION PLAN  
SHEET 4 OF 8



17  
N: 2957544.189'  
E: 630863.936'  
EL: 283.504'  
MTRV

15  
N: 2957236.035'  
E: 630803.483'  
EL: 296.314'  
MTRV

CONTINUED ON  
SHEET NO. 18









HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 309+90 RT TO STA 87+50 (I-290)  
TRANSITION TO THRIE BEAM STA 87+50 TO GUARDRAIL RETROFIT ON BRIDGE  
GUARDRAIL RETROFIT ON BRIDGE  
GUARDRAIL RETROFIT ON BRIDGE TO TRANSITION TO THRIE BEAM  
GUARDRAIL, TL-3 (SINGLE FACED) STA 86+20 TO STA 78+85 (I-290)

PROP TRANSITION TO THRIE BEAM STA 87+69 LT TO 87+75 LT (I-290 WB MEDIAN)  
TRANSITION TO NCHRP 350 GUARDRAIL STA 87+70 LT TO 88+10 LT (I-290 WB MEDIAN)  
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 89+85 LT (I-290 WB MEDIAN)  
TRANSITION TO THRIE BEAM STA 87+50 TO GUARDRAIL RETROFIT ON BRIDGE (I-290 WB MEDIAN)

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

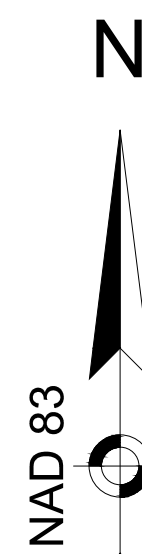
DRAINAGE DETAILS

SEE BELOW

MARLBOROUGH - HUDSON  
I-495 SOUTHBOUND TO I-290 WESTBOUND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	13
PROJECT FILE NO. 610552			

CONSTRUCTION PLAN  
SHEET 6 OF 8



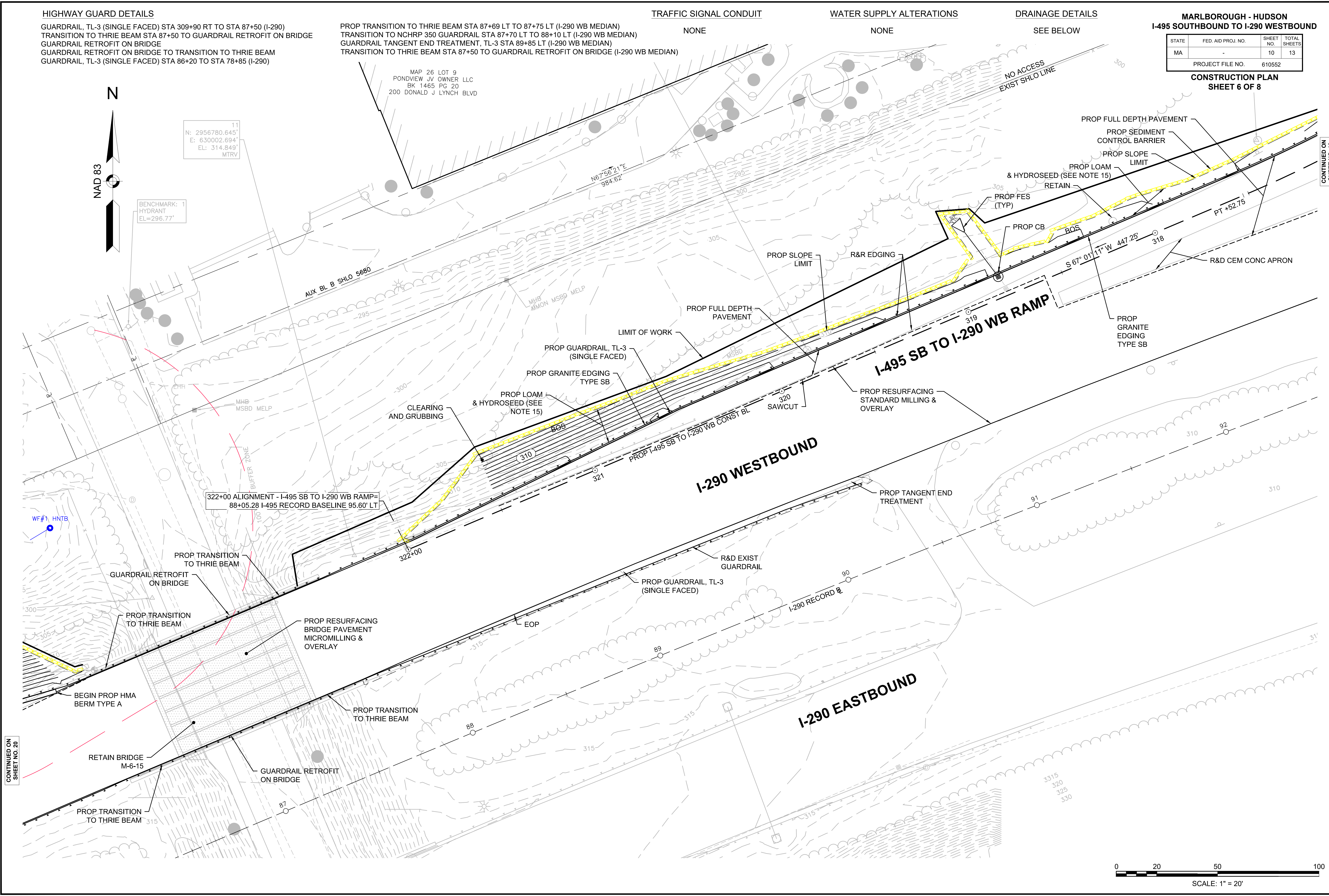
11  
N: 2956780.645'  
E: 630002.694'  
EL: 314.849'  
MTRY

BENCHMARK: 1  
HYDRANT  
EL=296.77'

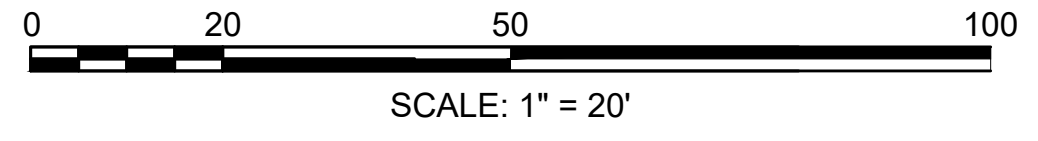
MAP 26 LOT 9  
PONDVIEW JV OWNER LLC  
BK 1465 PG 20  
200 DONALD J LYNCH BLVD

NO ACCESS  
EXIST SHLO LINE

CONTINUED ON  
SHEET NO. 18



CONTINUED ON  
SHEET NO. 20





**HIGHWAY GUARD DETAILS**

GUARDRAIL RETROFIT ON BRIDGE TO TRANSITION TO THRIE BEAM GUARDRAIL, TL-3 (SINGLE FACED) STA 86+20 TO STA 78+85 (I-290)  
 (STEEL DEEP POST STA 79+05 TO STA 82+10)  
 (STEEL DEEP POST STA 84+10 TO STA 84+30)

**TRAFFIC SIGNAL CONDUIT**

NONE

**WATER SUPPLY ALTERATIONS**

NONE

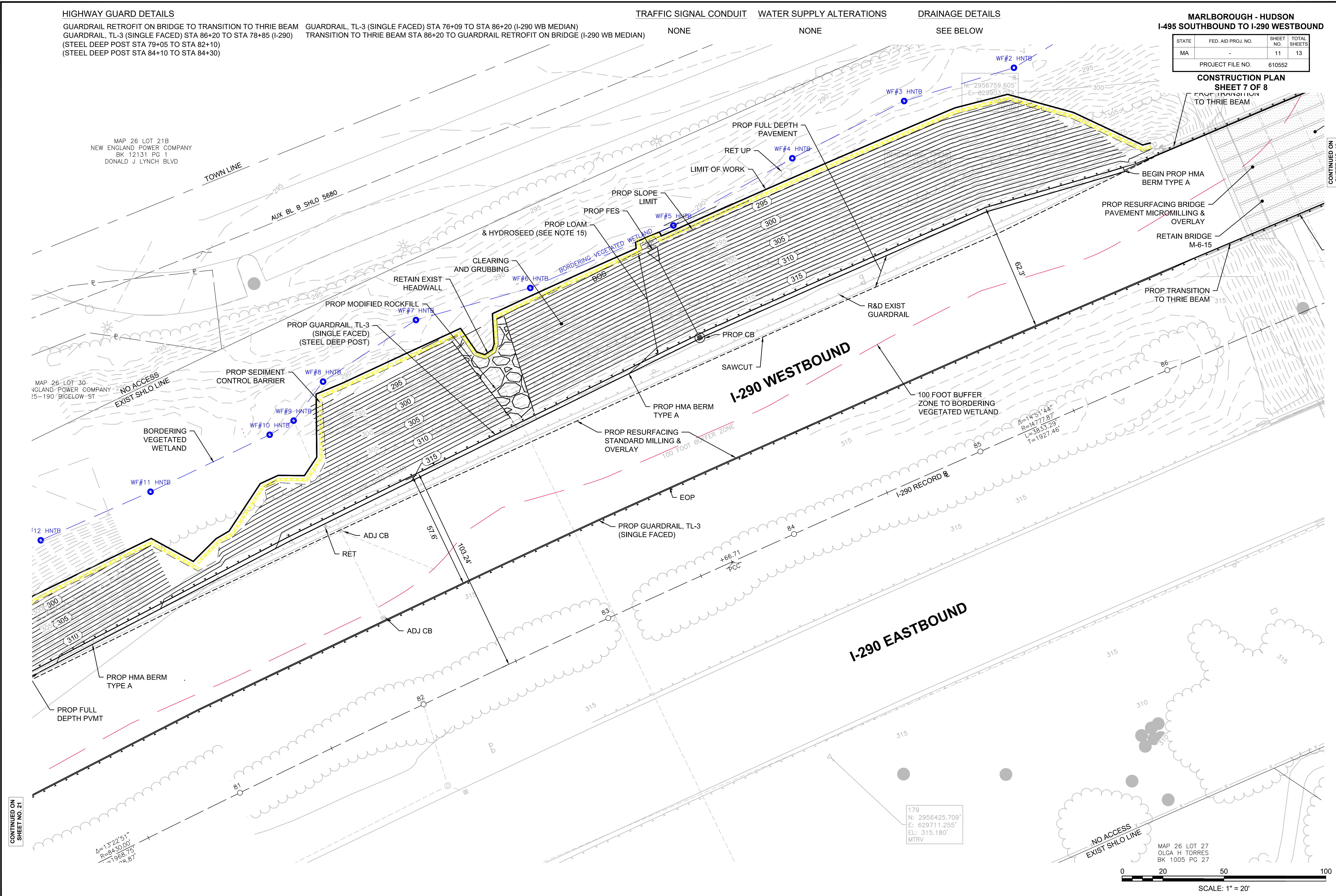
**DRAINAGE DETAILS**

SEE BELOW

**MARLBOROUGH - HUDSON  
 I-495 SOUTHBOUND TO I-290 WESTBOUND**

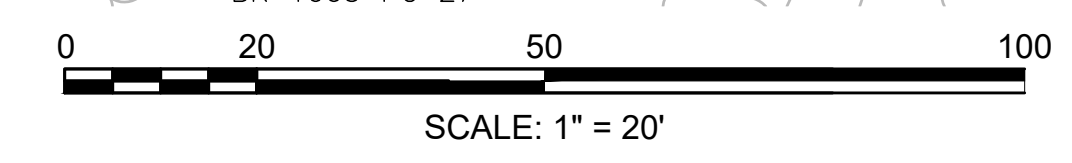
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	13
PROJECT FILE NO. 610552			

**CONSTRUCTION PLAN  
 SHEET 7 OF 8**



CONTINUED ON  
 SHEET NO. 21

CONTINUED ON  
 SHEET NO. 19



610552.HD18(10)CONSTR PLAN.DWG Picked on: 20-May-2020 9:12 AM



HIGHWAY GUARD DETAILS

TRANSITION TO NCHRP 350 GUARDRAIL STA 78+50 TO STA 78+85 (I-290 WB)  
 GUARDRAIL, TL-3 (SINGLE FACED) STA 78+85 TO STA 86+20 (I-290 WB)  
 (STEEL DEEP POST STA 79+05 TO STA 82+10)

TRAILING ANCHORAGE STA 76+00 TO STA 76+09 (I-290 WB MEDIAN)  
 GUARDRAIL, TL-3 (SINGLE FACED) STA 76+09 TO STA 86+20 (I-290 WB MEDIAN)

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

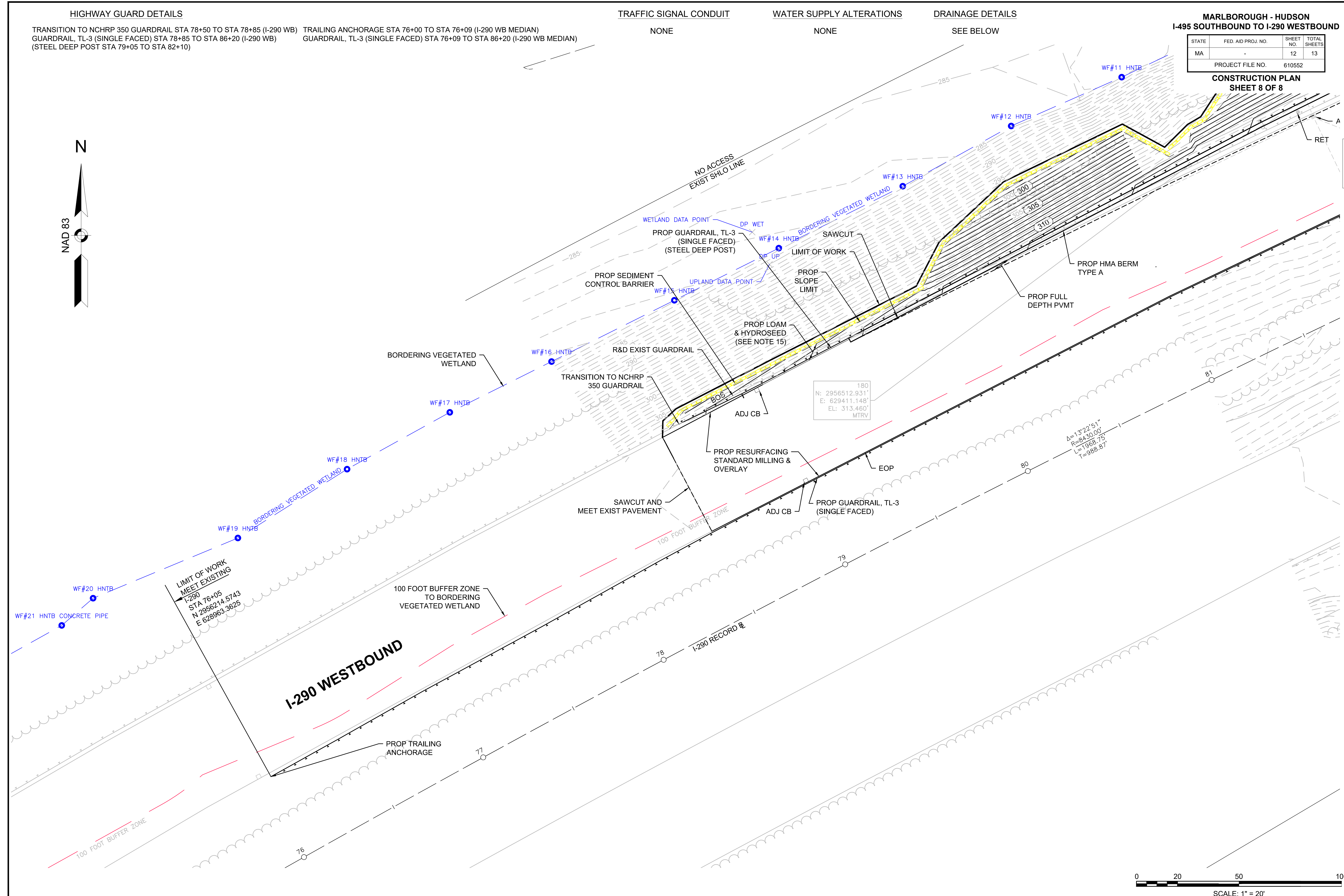
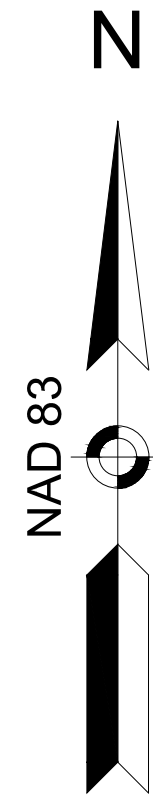
DRAINAGE DETAILS

SEE BELOW

MARLBOROUGH - HUDSON  
 I-495 SOUTHBOUND TO I-290 WESTBOUND

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	13
PROJECT FILE NO. 610552			

CONSTRUCTION PLAN  
 SHEET 8 OF 8

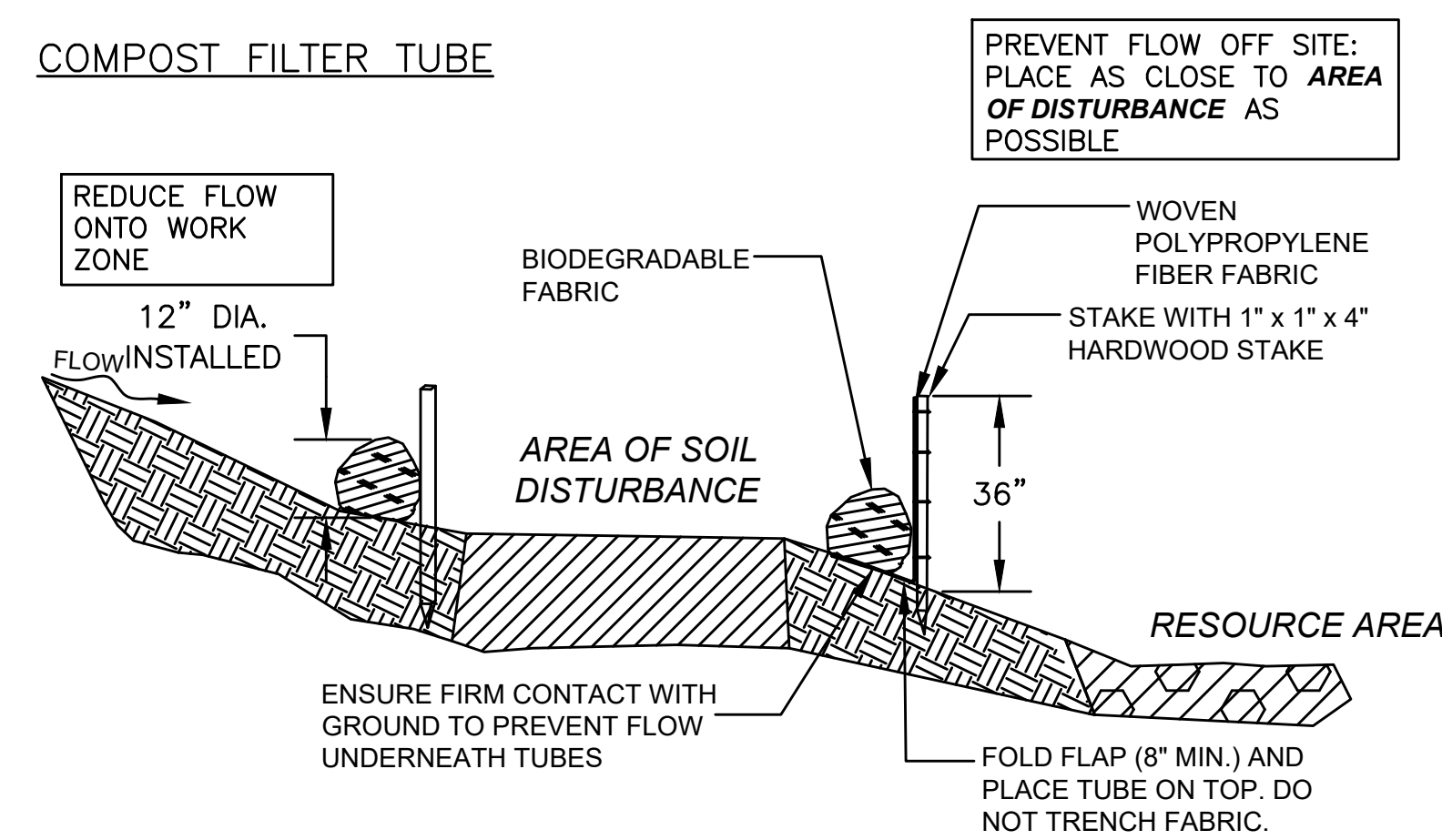


CONTINUED ON  
 SHEET NO. 20

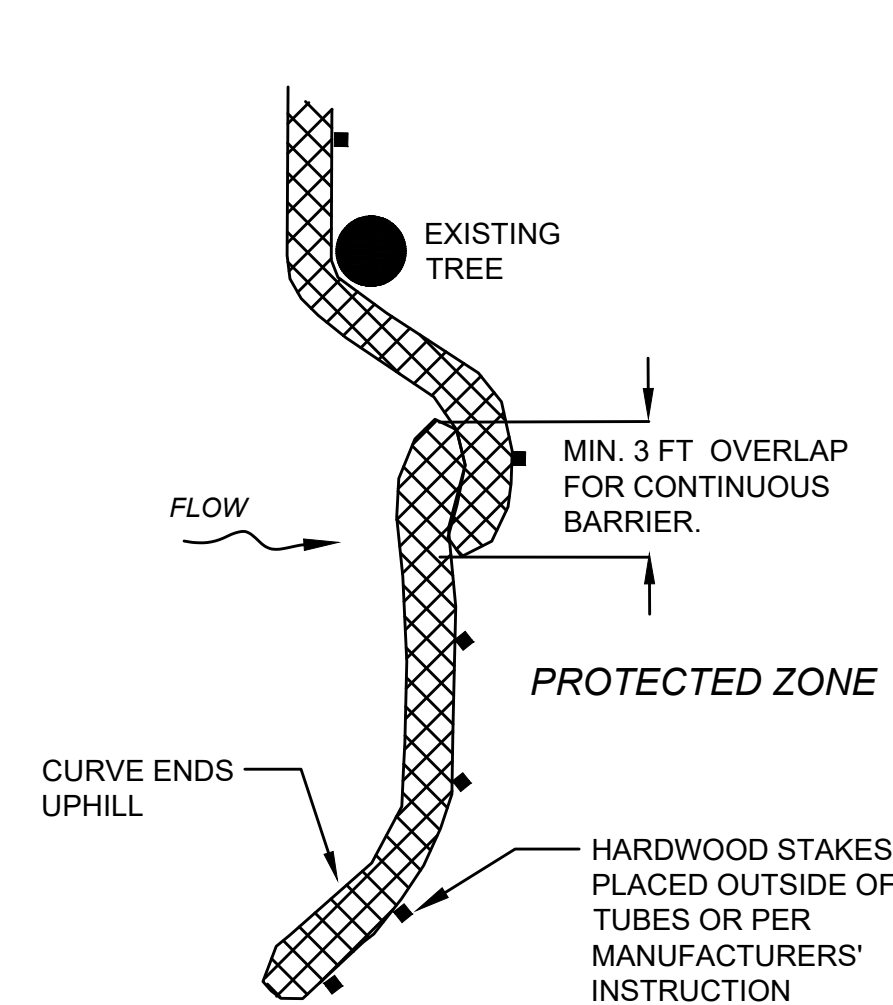


STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	13
PROJECT FILE NO.		610552	

COMPOST FILTER TUBE



SECTION

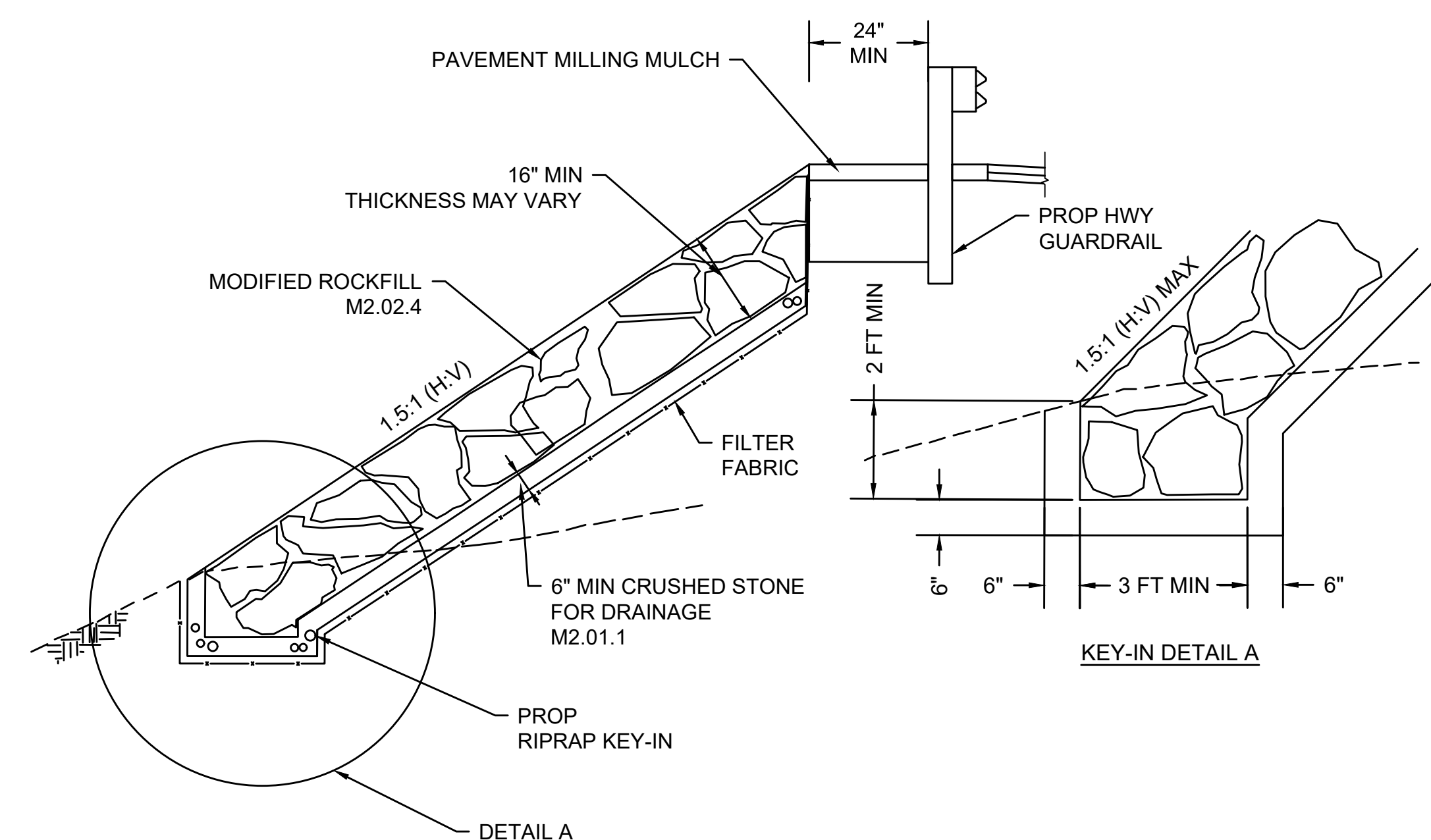


PLAN VIEW

SEDIMENT CONTROL BARRIER (SLOPES < 2:1) - COMPOST FILTER TUBES & SILT FENCE

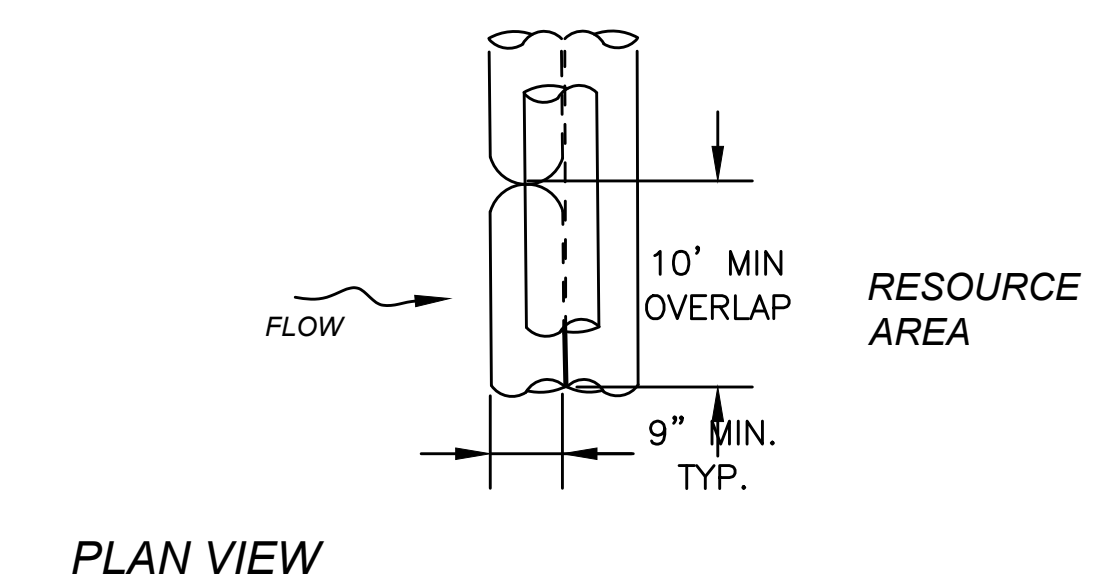
NOT TO SCALE

20181210\_MassDOT

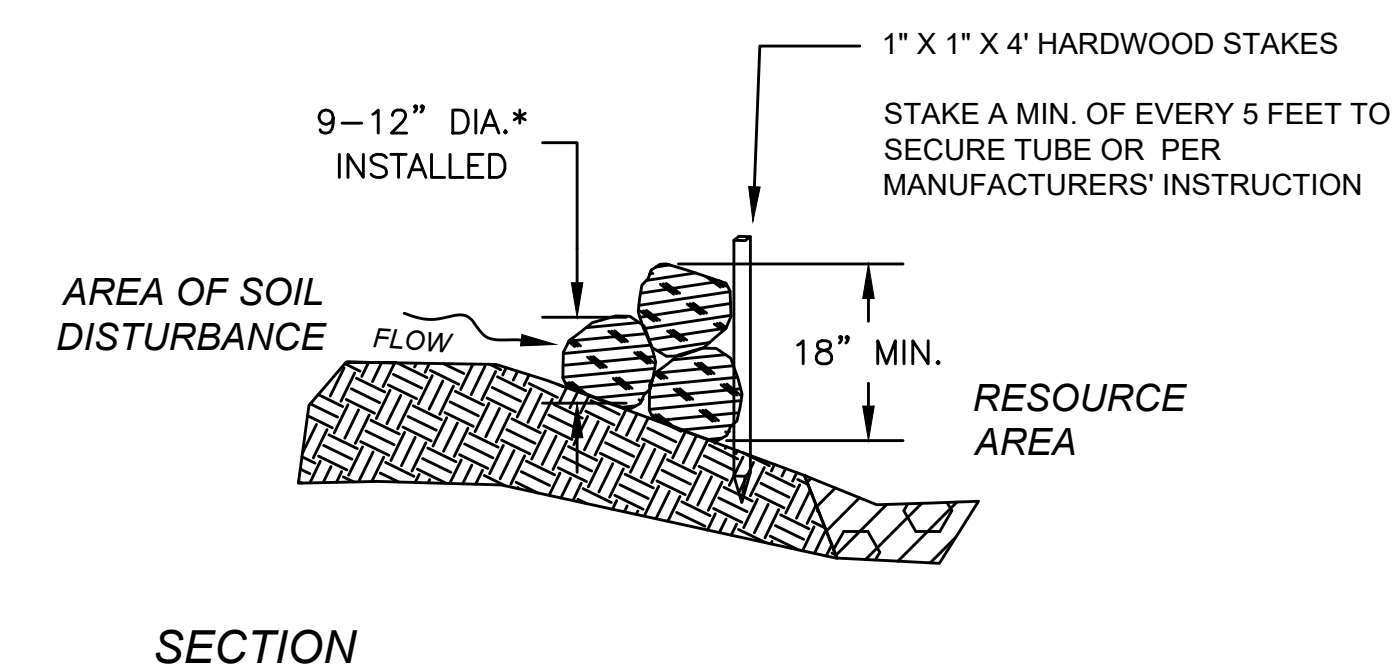


MODIFIED ROCK FILL SLOPE DETAIL

NTS



PLAN VIEW

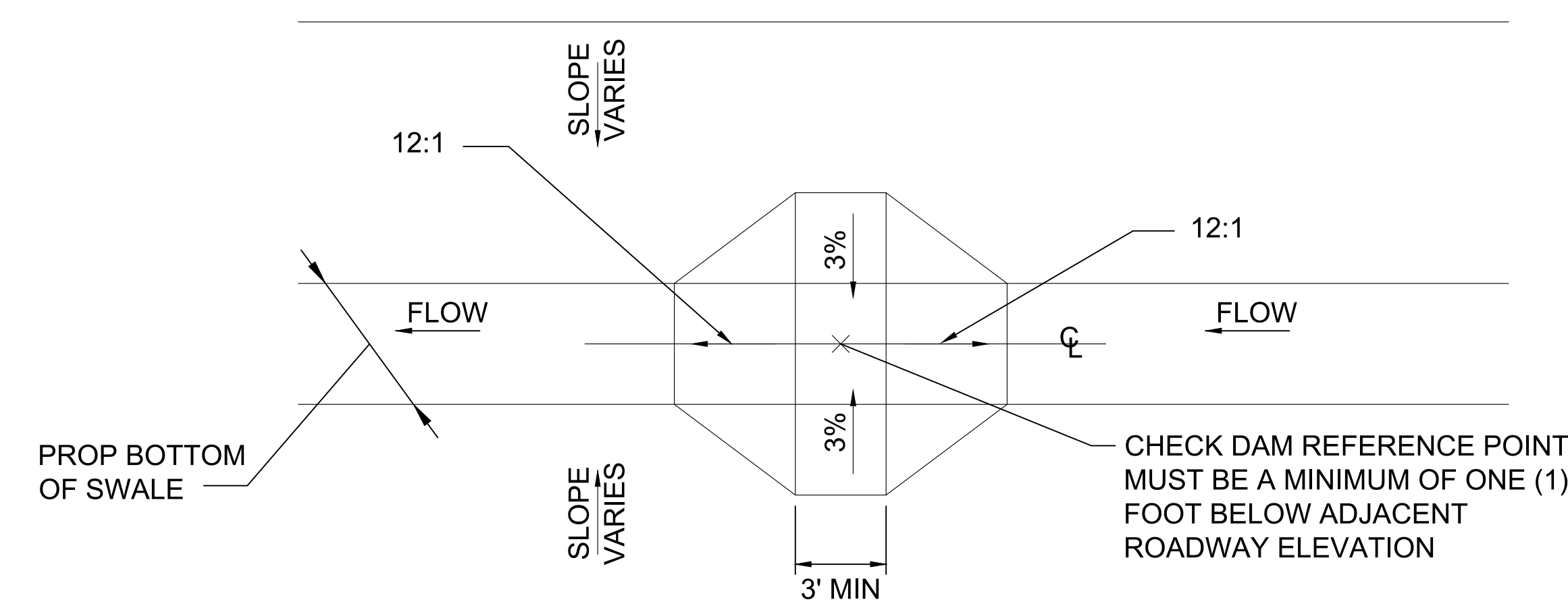


SECTION

NOTE:  
NO LOCATION FOR THIS IS IDENTIFIED ON THE PLAN. THIS DETAIL IS PROVIDED FOR DIRECTION IF THE ENGINEER IDENTIFIES A NEED FOR A BERM DURING CONSTRUCTION.

COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

NOT TO SCALE



PLAN VIEW

N.T.S.

NOTES:

- CONTRACTOR SHALL FIELD VERIFY THAT THE DIFFERENCE BETWEEN CHECK DAM REFERENCE POINT ELEVATION AND ADJACENT ROADWAY ELEVATION IS NOT LESS THAN 1-FOOT. IF FIELD CONDITIONS DO NOT RESULT IN 1-FOOT ELEVATION DIFFERENCE BETWEEN PROVIDED CHECK DAM REFERENCE POINT AND ADJACENT ROADWAY ELEVATION AT EDGE OF PAVEMENT, CONTRACTOR SHALL NOTIFY ENGINEER.

CHECK DAM DETAIL

NTS

## **Appendix D Stormwater Report**