

NOTICE OF PUBLIC HEARING SUDBURY CONSERVATION COMMISSION

The Sudbury Conservation Commission will review the Notice of Intent filing under the Wetlands Protection Act and Wetlands Bylaw to construct security gates, parking expansion and driveway reconfiguration improvements, within the Buffer Zone, at 275 Old Lancaster Road, Sudbury MA. Dan Nason, Director of DPW, applicant. The hearing will be held virtually on Monday, June 7, 2021, at 6:45pm, via Zoom. Please see the Conservation Commission web page for further information.

<https://sudbury.ma.us/conservationcommission/meeting/conservation-commission-meeting-monday-june-7-2021/>

SUDBURY CONSERVATION COMMISSION
May 24, 2021



EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES
102 Grove Street
Worcester, MA 01605-2629
508-752-9666 / Fax: 508-752-9494

NOTICE OF INTENT

**DPW Site Improvements
275 Old Lancaster Road
Sudbury, MA**

May, 2021

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3. Technical Memorandum by Woodard & Curran, Inc. (including project description, alternatives analysis, wetland report, USGS & other map figures)
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Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **ECOTEC**

Transaction ID: **1281258**

Document: **WPA Form 3 - NOI**

Size of File: **247.76K**

Status of Transaction: **In Process**

Date and Time Created: **5/20/2021:11:41:41 AM**

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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 #:
eDEP Transaction #:1281258
City/Town:SUDBURY

A.General Information

1. Project Location:

a. Street Address 275 OLD LANCASTER ROAD
b. City/Town SUDBURY c. Zip Code 01776
d. Latitude 42.37562N e. Longitude 71.42401W
f. Map/Plat # H08 g.Parcel/Lot # 49

2. Applicant:

Individual Organization

a. First Name DANIEL b.Last Name NASON
c. Organization TOWN OF SUDBURY DEPT. OF PUBLIC WORKS
d. Mailing Address 275 OLD LANCASTER ROAD
e. City/Town SUDBURY f. State MA g. Zip Code 01776
h. Phone Number 978-443-2209 i. Fax j. Email nasond@sudbury.ma.us

3.Property Owner:

more than one owner

a. First Name DANIEL b. Last Name NASON
c. Organization TOWN OF SUDBURY DEPT. OF PUBLIC WORKS
d. Mailing Address 275 OLD LANCASTER ROAD
e. City/Town SUDBURY f.State MA g. Zip Code 01776
h. Phone Number 978-443-2209 i. Fax j.Email nasond@sudbury.ma.us

4.Representative:

a. First Name ARTHUR b. Last Name ALLEN
c. Organization ECOTEC, INC.
d. Mailing Address 102 GROVE STREET
e. City/Town WORCESTER f. State MA g. Zip Code 01605
h.Phone Number 508-752-9666 i.Fax j.Email aallen@ecotecinc.com

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

a.Total Fee Paid 0.00 b.State Fee Paid 0.00 c.City/Town Fee Paid 0.00

6.General Project Description:

SITE ENTRANCE AND PARKING IMPROVEMENTS AT DPW FACILITY.

7a.Project Type:

- 1. Single Family Home
2. Residential Subdivision
3. Limited Project Driveway Crossing
4. Commercial/Industrial
5. Dock/Pier
6. Utilities
7. Coastal Engineering Structure
8. Agriculture (eg., cranberries, forestry)
9. Transportation
10. Other

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

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1. Yes No If yes, describe which limited project applies to this project:
 2. Limited Project

8. Property recorded at the Registry of Deeds for:

a. County:	b. Certificate:	c. Book:	d. Page:
SOUTHERN MIDDLESEX		7431	153

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

1. Buffer Zone & Resource Area Impacts (temporary & permanent):

This is a Buffer Zone only project - 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)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
---------------	-----------------------------	-------------------------------

a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land under Waterbodies and Waterways	1. Square feet	2. square feet
	3. cubic yards dredged	
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet replaced

- f. Riverfront Area
1. Name of Waterway (if any)
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

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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)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
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 Beaches	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
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, crea.
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

Restoration/Replacement

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 entered the additional amount here.

a. square feet of BVW b. square feet of Salt Marsh

5.Projects Involves Stream Crossings

Project Involves Streams Crossings

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

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a. number of new stream crossings

b. number of replacement stream crossings

C. Other Applicable Standards and Requirements

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 of Endangered Species program (NHESP)?

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:4/9/2021

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

c. Submit Supplemental Information for Endangered Species Review * (Check boxes as they apply)

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

3. Project plans for entire project site, including wetland resource areas and areas outside of wetland 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

c. MESA filing fee (fee information available at: <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/mass-endangered-species-act-mesa/mesa-fee-schedule.html>)

Make check payable to "Natural Heritage & Endangered Species Fund" 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

d. 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/eea/agencies/dfg/dfw/laws-regulations/cmr/321-cmr-1000-massachusetts-endangered-species-act.html#10.14>; 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 Number

b. Date submitted to NHESP

3. Separate MESA review completed.

□ **Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

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City/Town:SUDBURY

Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review...

2. For coastal projects only, is any portion of the proposed project located below the mean high waterline or in a fish run?
a. Not applicable - project is in inland resource area only

b. Yes No

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

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

North Shore - Hull to New Hampshire:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 S. Rodney French Blvd
New Bedford, MA 02744

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930

If yes, it 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.

3. 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 DEP Website for ACEC locations). **Note:** electronic filers click on Website.

b. ACEC Name

4. 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

5. 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

6. 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, Explain why the project is exempt:

1. Single Family Home

2. Emergency Road Repair

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- 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

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 by regular mail delivery.

- 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.
- 3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s)).
- 4. List the titles and dates for all plans and other materials submitted with this NOI.

a. Plan Title:	b. Plan Prepared By:	c. Plan Signed/Stamped By:	c. Revised Final Date:	e. Scale:
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TECHNICAL
MEMORANDUM &
SITE PLANS,
SUDBURY MA DPW
IMPROVEMENTS
ECOTEC WETLAND
EVALUATION
REPORT & DATA
FORMS

WOODARD &
CURRAN

May, 2021

ARTHUR ALLEN,
ECOTEC, INC.

April 23, 2021

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

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

Provided by MassDEP:
MassDEP File #:
eDEP Transaction #:1281258
City/Town:SUDBURY

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:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payer name on check: First Name

7. Payer name on check: Last Name

F. Signatures and Submittal Requirements

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

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

1. Signature of Applicant

2. Date

3. Signature of Property Owner(if different)

4. Date

Arthur Allen

5/20/2021

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 Section C, Items 1-3, 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
WPA Form 3 - Notice of Wetland Fee Transmittal
Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 MassDEP File #:
 eDEP Transaction #:1281258
 City/Town:SUDBURY

A. Applicant Information

1. Applicant:

a. First Name	DANIEL	b. Last Name	NASON		
c. Organization	TOWN OF SUDBURY DEPT. OF PUBLIC WORKS				
d. Mailing Address	275 OLD LANCASTER ROAD				
e. City/Town	SUDBURY	f. State	MA	g. Zip Code	01776
h. Phone Number	9784432209	i. Fax		j. Email	nasond@sudbury.ma.us

2. Property Owner:(if different)

a. First Name	DANIEL	b. Last Name	NASON		
c. Organization	TOWN OF SUDBURY DEPT. OF PUBLIC WORKS				
d. Mailing Address	275 OLD LANCASTER ROAD				
e. City/Town	SUDBURY	f. State	MA	g. Zip Code	01776
h. Phone Number	9784432209	i. Fax		j. Email	nasond@sudbury.ma.us

3. Project Location:

a. Street Address	275 OLD LANCASTER ROAD	b. City/Town	SUDBURY
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Are you exempted from Fee? (YOU HAVE SELECTED 'YES')

Note: Fee will be exempted if you are one of the following:

- City/Town/County/District
- Municipal Housing Authority
- Indian Tribe Housing Authority
- MBTA

State agencies are only exempt if the fee is less than \$100

B. Fees

Activity Type	Activity Number	Activity Fee	RF Multiplier	Sub Total
		City/Town share of filling fee	State share of filing fee	Total Project Fee
		\$0.00	\$0.00	\$0.00

abutters_id_field	abutters_owner1	abutters_owner2	abutters_address	abutters_town	abutters_state	abutters_zip	abutters_bookpage	abutters_location
H07-0016	FITZHUGH WILLIAM H & SOPHIA		37 BROOK LN	SUDBURY	MA	01776	13224-713	37 BROOK LN
H07-0018	ATKINSON MARY W	TRUSTEE MARY W ATKINSON TRUST	18 BROOK LN	SUDBURY	MA	01776	59971-377	18 BROOK LN
H07-0019	FITZHUGH WILLIAM H & SOPHIA		37 BROOK LANE	SUDBURY	MA	01776	13224-718	BROOK LN
H07-0021	LINDGREN JOHN O		474 PEAKHAM ROAD	SUDBURY	MA	01776	29799-531	474 PEAKHAM RD
H07-0050	GOUGH ROBERT J C & MELISSA		16 WILDWOOD LANE	SUDBURY	MA	01776	37688-503	16 WILDWOOD LN
H07-0051	FISCHER STEVEN C & ANNE V		24 WILDWOOD LANE	SUDBURY	MA	01776	61867-378	24 WILDWOOD LN
H07-0052	MULLER ROBERT C & LORIE S		23 WILDWOOD LANE	SUDBURY	MA	01776	62588-371	23 WILDWOOD LN
H07-0053	BASINSKI ANDREW & SARA		17 WILDWOOD LANE	SUDBURY	MA	01776	68364-430	17 WILDWOOD LN
H07-0313	GANNON JOHN J JR &	YEUNG LAN-CHU FLORENCE	38 FOREST ST	SUDBURY	MA	01776	51802-379	38 FOREST ST
H07-0314	FETTERER LOUANN N		32 FOREST ST	SUDBURY	MA	01776	39999-220	32 FOREST ST
H08-0004	BARTH DOUGLAS J & LISA V		286 OLD LANCASTER ROAD	SUDBURY	MA	01776	25175-479	286 OLD LANCASTER RD
H08-0005	CLANCY BRETT & ALICA		270 OLD LANCASTER RD	SUDBURY	MA	01776	70182-95	270 OLD LANCASTER RD
H08-0006	ARSHADI AMIR &	BAHREVAR ELIKA	258 OLD LANCASTER RD	SUDBURY	MA	01776	71220-210	258 OLD LANCASTER RD
H08-0007	WELTMAN ROY S & SHIK-WELTMAN H ELEN		252 OLD LANCASTER RD	SUDBURY	MA	01776	27316-507	252 OLD LANCASTER RD
H08-0044	ALTERIO DINO R & MAUREEN L		259 OLD LANCASTER RD	SUDBURY	MA	01776	66651-410	259 OLD LANCASTER RD
H08-0049	TOWN OF SUDBURY	DEPARTMENT OF PUBLIC WORKS	275 OLD LANCASTER	SUDBURY	MA	01776	7431-153	275 OLD LANCASTER RD
H08-0053	YARNALL KAREN L	TRUSTEE KAREN L YARNALL	7 WILDWOOD LANE	SUDBURY	MA	01776	72985-104	7 WILDWOOD LN
H08-0502	GOLDFARB DANIEL J &	GOLDFARB PAIGE GILBERT-	9 BROWNSTONE LANE	SUDBURY	MA	01776	35879-122	9 BROWNSTONE LN
H08-0503	GRIFFIN PAUL E & PATRICIA M TR	THE GRIFFIN FAMILY TRUST	19 BROWNSTONE LANE	SUDBURY	MA	01776	76559-452	19 BROWNSTONE LN
H08-0505	TOWN OF SUDBURY	CONSERVATION	278 OLD SUDBURY ROAD	SUDBURY	MA	01776	25432-523	OFF PEAKHAM CIR
J07-0006	CAVICCHIO FARMING LLC		110 CODJER LANE	SUDBURY	MA	01776	35469-596	CODJER LN
J07-0007	CAVICCHIO FAMILY REAL	ESTATE LLC	110 CODJER LANE	SUDBURY	MA	01776	76537-294	CODJER LN
J07-0310	KENDA WILLIAM V & MARGARET E	TRUSTEES OF THE KENDA FAMILY	68 FOREST ST	SUDBURY	MA	01776	66482-549	68 FOREST ST
J07-0311	MAGUIRE THOMAS E & MICHELE M		56 FOREST ST	SUDBURY	MA	01776	28513-542	56 FOREST ST
J07-0312	KAWACHI CATHERINE B & ICHIRO		44 FOREST ST	SUDBURY	MA	01776	30537-206	44 FOREST ST
J07-0318	TOWN OF SUDBURY	CONSERVATION	278 OLD SUDBURY ROAD	SUDBURY	MA	01776	12877-656	FOREST ST
J07-0401	CAVICCHIO FAMILY REAL	ESTATE LLC	110 CODJER LANE	SUDBURY	MA	01776	76537-294	CODJER LN
J08-0001	TOWN OF SUDBURY		278 OLD SUDBURY RD	SUDBURY	MA	01776	33383-149	WASH BROOK RD
J08-0002	SUDBURY WATER DISTRICT		199 RAYMOND RD	SUDBURY	MA	01776	12668-388	WASH BROOK RD
J08-0004	CODJER LANE LLC		112 CODJER LANE	SUDBURY	MA	01776	48795-63	110 CODJER LN
J08-0004	CODJER LANE LLC		112 CODJER LANE	SUDBURY	MA	01776	48795-63	110 CODJER LN
J08-0004	CODJER LANE LLC		112 CODJER LANE	SUDBURY	MA	01776	48795-63	110-2 CODJER LN
J08-0033	ALTERIO DINO R & MAUREEN L		259 OLD LANCASTER RD	SUDBURY	MA	01776	66651-410	OLD LANCASTER RD

J08-0305	ARAYAS JOSEPH F & DUGGAN SUSAN		16 PINE RIDGE RD	SUDBURY	MA	01776	13619-321	16 PINE RIDGE RD
J08-0306	KUNKEL NANCY J		22 PINE RIDGE RD	SUDBURY	MA	01776	66346-0031	22 PINE RIDGE RD
J08-0315	SUDBURY WATER DISTRICT		199 RAYMOND RD	SUDBURY	MA	01776	12668-388	WASH BROOK RD
J08-0316	LOUGHRY KEVIN G & JUDITH A		24 WASH BROOK RD	SUDBURY	MA	01776	19063-75	24 WASH BROOK RD
J08-0317	YAO GANG & QIAN ZIAOHUA		20 WASH BROOK RD	SUDBURY	MA	01776	37518-256	20 WASH BROOK RD
J08-0319	FORINO JOHN F & PATRICIA C		15 PINE RIDGE RD	SUDBURY	MA	01776	20986-247	15 PINE RIDGE RD
J08-0320	KORN ANDREW & RANDI		21 PINE RIDGE RD	SUDBURY	MA	01776	68273-459	21 PINE RIDGE RD
H07-0055	TOWN OF SUDBURY	CONSERVATION	278 OLD SUDBURY RD	SUDBURY	MA	01776	57792-79	0 HUCKLEBERRY LN

TECHNICAL MEMORANDUM

TO: Arthur Allen, EcoTec, Inc.
PREPARED BY: Dan Pasquale & Michelle MacDonald, Woodard & Curran
REVIEWED BY: Scott Salvucci, Woodard & Curran
DATE: May 24, 2021
RE: Sudbury MA DPW Site Improvements



1. INTRODUCTION

Woodard & Curran has developed a preliminary-phase design of several site improvements at the existing Department of Public Works (DPW) facility located at 275 Old Lancaster Road. The site improvements include the installation of two security gates with closet-circuit cameras, a small parking area expansion along the southern side of the building, and a re-configuration of the DPW driveway at Old Lancaster Road. This memorandum is intended to support the filing of a Notice of Intent (NOI) application with the Sudbury Conservation Commission for authorization to construct the security gates, parking expansion, and driveway reconfiguration improvements. Please refer to Figure 1 for the Site Location Map.

2. EXISTING CONDITIONS EVALUATION

2.1 Survey

An existing conditions site plan was created using available record plans for the existing DPW facility. Existing conditions topography is represented based on the design plans from the initial construction of the DPW facility site. The record plans provide adequate information for the limited earthwork associated with the proposed site improvements.

2.2 Wetland Resource Evaluation

A wetland resource evaluation was performed by EcoTec, Inc. on April 9, 2021 to evaluate the presence of resource areas within the project area. Wetland flags were delineated for the boundary of bordering vegetated wetlands (BVW) starting at the Old Lancaster Road intermittent stream culvert outlet, joining the wetland bordering Hop Brook and ending on the southeast side of the site, labeled A-1 to A-76. Flags marking the Mean Annual High-water Line (MAHWL) of the perennial stream (Hop Brook) within 200 feet of the project locus were also delineated, labeled MH-1 to MH-11. The Wetland Resource Evaluation is included as Attachment A.

2.3 Site Soil Conditions

According to the USDA Web Soil Survey, the DPW facility consists of various soils including Freetown muck, Windsor loamy sand of varying slopes, and Deerfield loamy fine sand. The work areas for this project are within areas of Deerfield loamy fine sand and Windsor loamy sand. As soil conditions can vary across a given site, Woodard & Curran recommends that soil conditions be monitored during construction activities and that any unsuitable soil materials encountered at the subgrade be removed and replaced with clean gravel borrow material. A Soil Map is included as Attachment B.

2.4 FEMA FIRM Review

Review of the Federal Emergency Management Agency (FEMA) flood maps indicates that the work areas are within an Area of Minimal Flood Hazard as mapped on FEMA Flood Insurance Rate Map (FIRM) Panels 25017C0506F and 25017C0368F. The FIRMette showing the project site is included as Attachment C.



3. PROPOSED CONDITIONS AND DESIGN CONSIDERATIONS

Please refer to Figure 2 for preliminary-phase project plans. The design intent is to reduce disturbance and minimize unnecessary pavement across the site while accommodating the security gates for enhanced security, new parking area to provide additional Town employee designated spaces, and reconfigured driveway entrance to promote a safer intersection.

Two security gates are proposed to provide enhanced security to the DPW facility maintenance areas and fueling station. One gate will be located along the main driveway entrance prior to accessing the maintenance facility and fueling station, and the second gate will be located at the southern end of the public parking area to control access to the maintenance facility. The gates will be operated by radio-frequency identification technology and keypad authentication, eliminating the need to construct an attendant booth at either gate thereby reducing the footprint of the gates.

The gates will consist of a gate arm attached to a controller (which raises and lowers the gate), a gate arm holder on the opposite side of the roadway from the controller, and card reader/keypad assemblies. The controller, card reader/keypad equipment, and gate arm holder will be protected by bollards. Loop detectors will be embedded within the roadway to detect vehicles traveling through the gates. Disturbance associated with installation of the loop detectors is anticipated to be minimal.

A proposed bituminous concrete parking area expansion, which will provide four new parking spaces to allow staff access to the DPW office building from the south door, will be located within the area secured by the new gates. The proposed parking spaces are 18.5' long and 9' wide, meeting the requirements of the Town of Sudbury Zoning Bylaw (Article IX) dated May 6, 2019, and one-foot wide aisles are proposed along both ends of the parking area for ease of vehicle access. A 4' wide concrete walkway is proposed to link the driveway near the parking area to the existing walkway surrounding the building. Due to the existing grade surrounding the proposed parking area, a one-foot wide, four-foot to six-foot high retaining wall is proposed adjacent to the proposed spaces.

The existing driveway entrance to the DPW facility from Old Lancaster Road will be reconfigured as a "T" intersection to enhance safety. This reconfiguration will also mitigate the impact of the impervious area created by the new parking area, walkway, and retaining wall. The existing partially landscaped traffic island will be removed, and the driveway approach to the intersection will be replaced with a narrower approach without a traffic island. This will reduce the amount of pavement necessary for the intersection, which in turn will offset the new parking area impervious cover. Overall, a net reduction in impervious area across the entire DPW site is anticipated as a result and benefit of this project.

3.1 Anticipated Impacts to Adjacent Upland Resource Areas (AURAs)

The Town of Sudbury Wetlands Administration Bylaw (Article XXII) and its associated Sudbury Wetlands Administration Bylaw Regulations (revised September 25, 2017) establishes jurisdictional Adjacent Upland Resource Areas (AURAs). The Bylaw defines AURAs as land within 100-feet of wetland resource areas, within 200-feet of top of bank, and with varying extent when adjacent to vernal pools, ponds <10,000-square feet in area, or isolated land subject to flooding. The proposed project includes work within 100-feet of Bordering Vegetated Wetlands, considered an AURA under the Bylaw.

The project has been designed to minimize the amount of disruption and alteration to the AURAs within the project limit of work. The parking expansion area and southern security gate are not located in jurisdictional resource areas. The northern security gate will create minimal disturbance within the AURA to construct footings for the gate components.



The proposed re-configuration of the driveway entrance from Old Lancaster Road is within the 100-foot buffer of the Bordering Vegetated Wetlands in the northeast corner of the site. The re-configuration will relocate the driveway farther from the resource area, providing an increased natural buffer between impervious cover and the resource area. The re-configuration will also reduce the site's existing impervious area, providing a net reduction of stormwater runoff from the overall site. Under proposed conditions, there will be a net decrease of 887.95 SF in impervious area at the driveway intersection with Old Lancaster Road. This decrease in impervious area will promote groundwater recharge within the 100-foot Bordering Vegetated Wetland buffer and reduce the DPW facility's impact within the AURAs. Across the entire site, including the driveway, parking area, walkway, and retaining wall, there will be an overall decrease in impervious area of 19.66 SF. Figure 3 contains square footages of impacts to resource areas.

A native New England Conservation/Wildlife seed mix will be applied to temporarily disturbed areas within the AURAs. The blend of species will provide a permanent cover of grasses, forbs, wildflowers, and legumes to control soil erosion and enhance wildlife habitat. See attachment D for seed specification.

4. CONCEPTUAL SEQUENCE OF CONSTRUCTION

The DPW facility driveway is a two-lane access way. It is anticipated that temporary closure of alternating lanes will be required to facilitate construction, with temporary signage to direct traffic at time of construction. The anticipated sequence of construction is as follows:

1. Install temporary erosion and sedimentation control;
2. Locate and protect existing utilities;
3. Close one lane of the driveway;
4. Excavate existing traffic island, roadway pavement, and base layers. Store signage to be reused;
5. Excavate for installation of retaining wall and expanded parking area;
6. Install retaining wall;
7. Grade and prepare roadway/parking area subgrade;
8. Install new base layer and pavement binder/wearing courses. Reinstall signage;
9. Reopen roadway and open new expanded parking area;
10. Install security gates and protective bollards;
11. Stabilize side slopes as needed;
12. Install erosion control matting, loam, and seed on all disturbed areas; and
13. Remove temporary erosion and sedimentation control measures and flow control measures.

5. ATTACHMENTS

Figures

Figure 1 – Site Location Map

Figure 2 – Preliminary-Phase Project Plans

Figure 3 – Resource Area Impact Figure

Attachments

Attachment A – Wetland Resource Evaluation

Attachment B – Soils Map

Attachment C – FEMA FIREMETTE

Attachment D – Seed Specification

6. REFERENCES

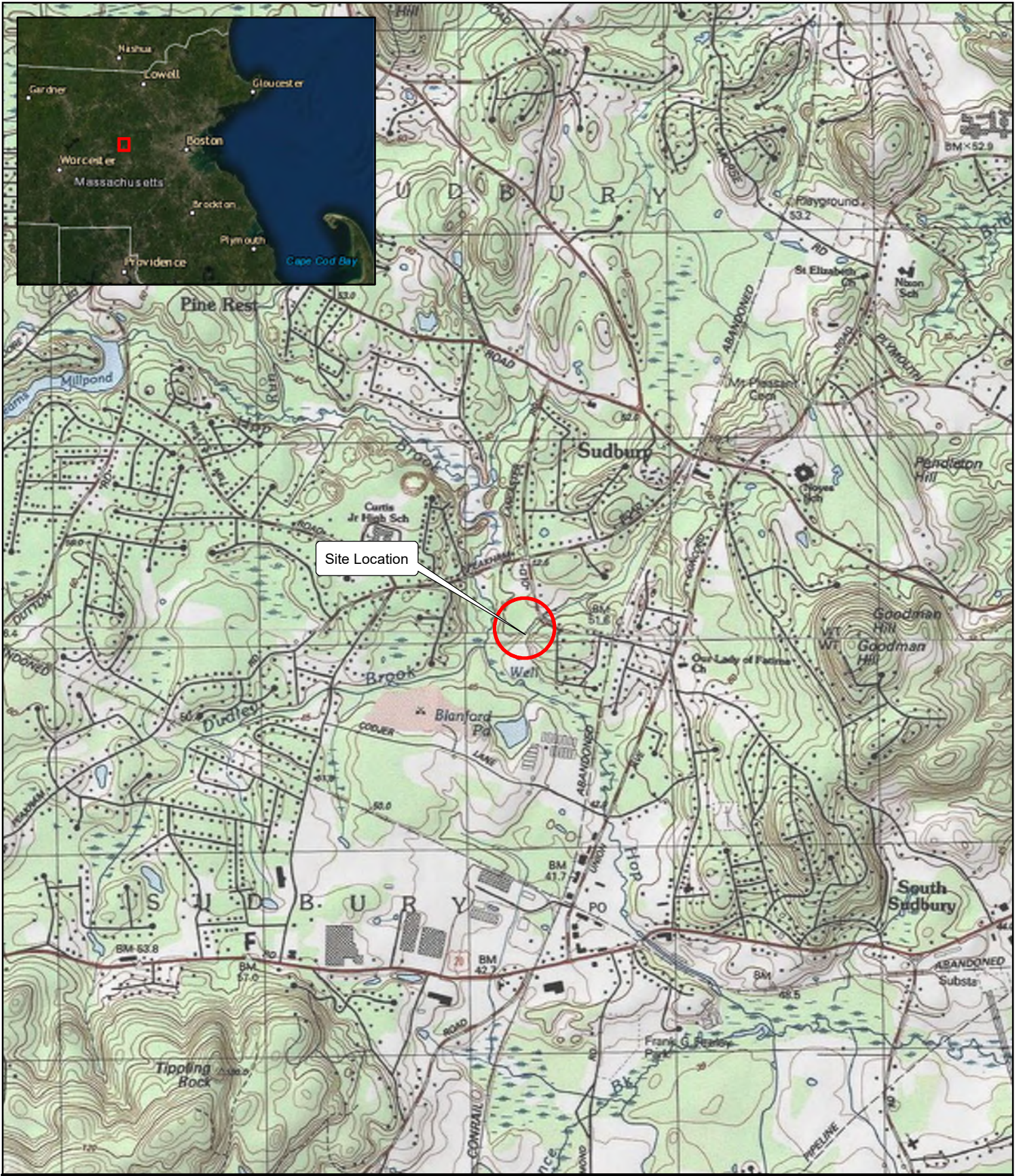
FEMA FIRM Panel 25017C0506F, effective July 7, 2014

FEMA FIRM Panel 25017C0368F, effective July 7, 2014





Figure 1: Site Location Map



Site Location

0 0.1 0.2 0.3 0.4 0.5 Miles

SUDBURY DPW SITE IMPROVEMENTS

SUDBURY, MA
FIGURE 1 - SITE LOCATION MAP



Project #: 0233350.00
Map Created: May 2021

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. Data Sources: ESRI, National Geographic

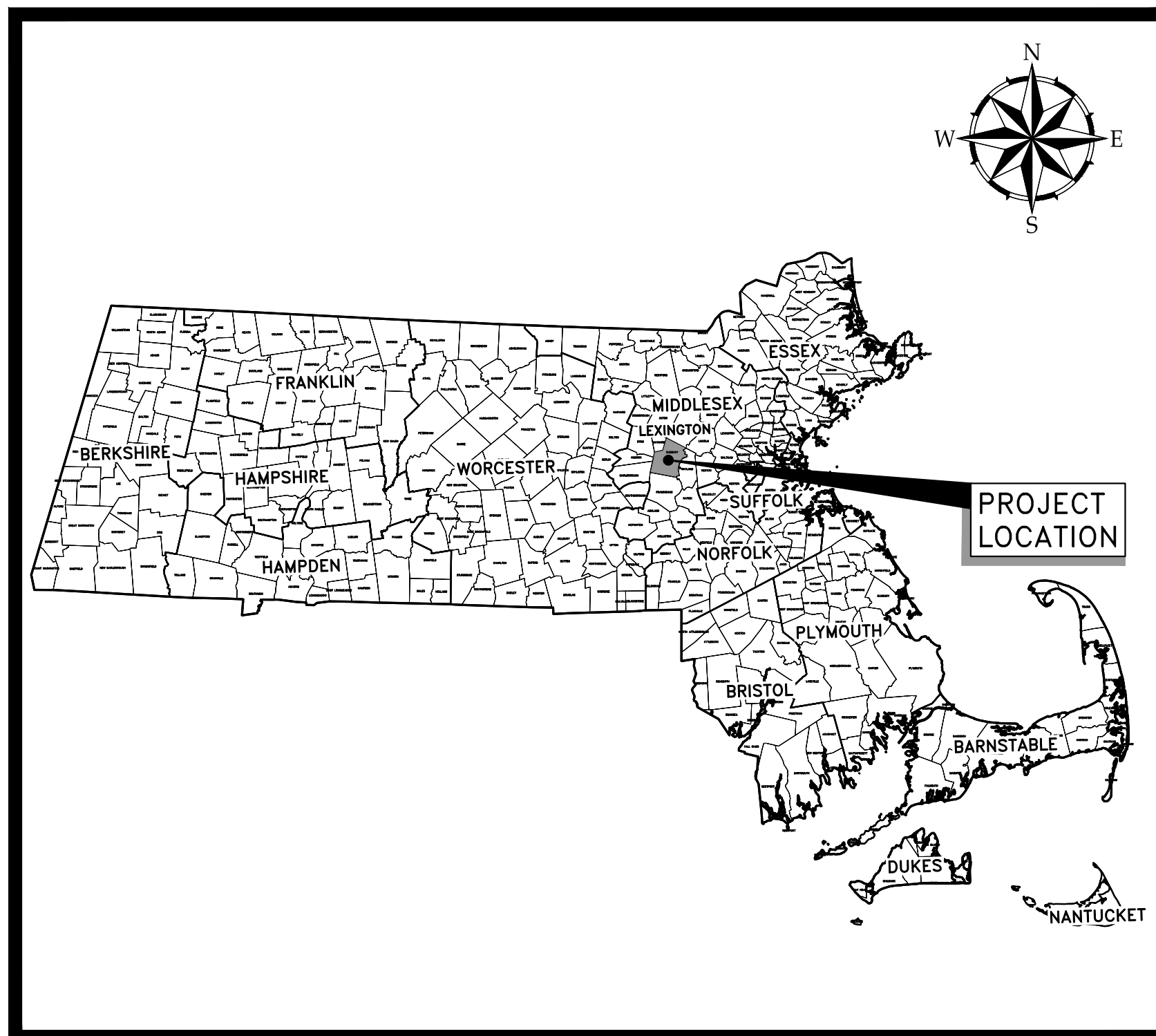
Figure 2: Preliminary-Phase Project Plans



TOWN OF SUDBURY SUDBURY, MA

DPW SITE IMPROVEMENTS

**PROJECT NO.
0233350.00
MAY 2021
FOR PERMITTING -
NOT FOR CONSTRUCTION**



PROJECT LOCATION MAP



SOURCE: GOOGLE EARTH

SITE LOCATION MAP



250 Royall Street Suite 200E
Canton, Massachusetts 02021
800.446.5518 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

GENERAL NOTES:

- 1. EXISTING CONDITIONS ARE BASED ON RECORD PLANS PREPARED BY DIMARINISI & WOLFE TITLED, "TOWN OF SUDBURY DEPARTMENT OF PUBLIC WORKS BUILDING," DATED MAY 2002.
2. CONTRACTOR SHALL INVESTIGATE EXISTING CONDITIONS AND FIELD VERIFY LOCATIONS, DEPTH, AND SIZE OF UTILITIES AND SUB-SURFACE STRUCTURES PRIOR TO CONSTRUCTION.
3. THE ELEVATIONS DEPICTED ON THE PLANS HEREIN ARE BASED ON AN ASSUMED DATUM OBTAINED FROM THE RECORD DRAWINGS REFERENCED IN NOTE 1.
4. ANY PROPERTY AND RIGHT OF WAY LOCATIONS THAT MAY BE SHOWN HEREON ARE APPROXIMATE AND DO NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
5. WOODARD & CURRAN ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
6. COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES AND TOWN.
7. RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS NOTED OTHERWISE ON THE PLANS.
8. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A LICENSED LAND SURVEYOR ACCEPTABLE TO THE TOWN.
9. EXISTING FACILITIES (I.E. TREES, POLES, LIGHT POSTS, CATCH BASINS, ETC.) SHALL BE REMOVED AND/OR PROTECTED DURING CONSTRUCTION.
10. THE DPW BUILDING, PARKING LOT, ACCESS ROADS, AND YARD ARE OPERATIONAL FACILITIES.
11. ALL TREES NOT NOTED TO BE REMOVED OR RELOCATED SHALL BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION.
12. RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, BARRIERS, FENCES, ETC.
13. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS INCLUDING "PERMIT TO CONSTRUCT WITHIN A PUBLIC WAY" FROM THE TOWN.
14. ALL WORK ASSOCIATED WITH THE PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE TOWN OF SUDBURY BYLAW AND LOCAL REGULATIONS AND MASSACHUSETTS DOT STANDARD SPECIFICATIONS.
15. UPON COMPLETION OF CONSTRUCTION, A COMPLETE SET OF "RECORD" DRAWINGS SHALL BE SUBMITTED TO THE TOWN ENGINEER.
16. PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION SHALL BE PROVIDED AT NO ADDITIONAL COST.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR SWEEPING AS NECESSARY DURING THE DURATION OF THE WORK.
18. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING HELD AT THE PROJECT SITE WITH THE CONTRACTOR, ENGINEER, OWNER, TO REVIEW THE CONSTRUCTION SCHEDULE AND SEQUENCING, STOCKPILE LOCATIONS AND CRITICAL ASPECTS OF THE PROJECT.
19. ALL DISTURBED UPLAND AREAS SHALL BE BROUGHT TO FINAL GRADE AND SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS AFTER DISTURBANCE.
20. CONTRACTOR SHALL DEMARCAT CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE AREAS PRIOR TO CONSTRUCTION.
21. THE CONSTRUCTION SITE SHALL BE MAINTAINED IN CLEAN CONDITIONS AT ALL TIMES AND CONSTRUCTION REFUSE AND DEBRIS SHALL BE DISPOSED OF PROMPTLY AND IN A LEGAL MANNER.
22. STORING, SERVICING, OR CLEANING OF TRUCKS OR EQUIPMENT SHALL BE PERFORMED IN AN UPLAND AREA AT A HORIZONTAL DISTANCE GREATER THAN 100 FEET FROM THE WETLAND RESOURCE AREAS.
23. CONTRACTOR SHALL REFER TO SPECIFICATION XXX MASSACHUSETTS COVID ORDER AND CONSTRUCTION GUIDELINES AND EXECUTE CONSTRUCTION IN COMPLIANCE WITH APPLICABLE SOCIAL DISTANCING PROTOCOLS.
24. WETLAND DELINEATION WAS PREPARED BY ECOTEC, INC. 102 GROVE STREET, WORCESTER, MA 01605. THE WETLAND RESOURCE EVALUATION REPORT IS DATED XX XX, 2021 AND WETLAND FIELD INSPECTION WAS CONDUCTED ON APRIL 9, 2021.
25. PRIOR TO THE START OF WORK, CONTRACTOR SHALL CONFIRM EXISTING WETLAND FLAGS ARE IN PLACE AND SHALL BE MAINTAINED DURING CONSTRUCTION.
26. NO EQUIPMENT IS TO CROSS OR ENTER WETLAND RESOURCE AREAS AT ANY TIME UNLESS THE LOCATION OF DISTURBANCE IS MARKED ON THE PLANS REFERENCED IN THE ORDER OF CONDITIONS AND FLAGGED IN THE FIELD (DEP FILE #XXX-XXXX).
27. THE CONTRACTOR, SITE ENGINEER, OR OTHER INDIVIDUAL IN CHARGE OF WORK ON THE SITE SHALL HAVE A COPY OF THE ORDER OF CONDITIONS AT ALL TIMES (DEP FILE #XXX-XXXX).

EROSION CONTROL NOTES:

- 1. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE, UNTIL ALL DISTURBED SURFACES HAVE BEEN STABILIZED WITH FINAL VEGETATION COVER OR THE COMMISSION HAS AUTHORIZED THEIR REMOVAL.
2. EROSION CONTROL MEASURES AND BARRIERS SHALL BE MONITORED DAILY AND MAINTAINED, OR REINFORCED AS NECESSARY TO ENSURE AND PREVENT EROSION AND SILTATION OF SOILS TO WETLAND RESOURCE AREAS.
3. DURING ALL PHASES OF CONSTRUCTION, ALL DISTURBED OR EXPOSED AREAS OUTSIDE THE ROADWAY SHALL BE BROUGHT TO FINISHED GRADE AND EITHER A) LOAMED AND SEEDED FOR PERMANENT STABILIZATION, IN ACCORDANCE WITH U.S. SOIL CONSERVATION SERVICE PROCEDURES, OR B) STABILIZED IN ANOTHER WAY APPROVED BY THE COMMISSION.
4. AN ADEQUATE STOCKPILE OF EROSION AND SEDIMENTATION CONTROL MATERIALS SHALL BE ON SITE AT ALL TIMES FOR EMERGENCY OR ROUTINE REPLACEMENT.
5. ANY DAMAGE CAUSED AS A DIRECT RESULT OF CONSTRUCTION TO THE WETLAND RESOURCE AREAS SHALL BE REPAIRED, RESTORED AND/OR REPLACED.

ABBREVIATIONS

Table listing abbreviations and their full names, including: & A.G. ABOVE GROUND, BIT BITUMINOUS, B/W BETWEEN, B/WV BORDERING VEGETATED WETLAND, CB CATCH BASIN, CI CAST IRON, CMP CORRUGATED METAL PIPE, CONC CONCRETE, D STORM DRAIN, DI DUCTILE IRON, DIA. DIAMETER, DMH DRAIN MANHOLE, DOT DEPARTMENT OF TRANSPORTATION, DTL. DETAIL, E UNDERGROUND ELECTRICAL, EL. ELEVATION, E.O.P. EDGE OF PAVEMENT, EXIST. EXISTING, FF FINISH FLOOR, FT FOOT/FEET, G GAS MAIN, GS GAS SERVICE, GALV. GALVANIZED, GRAN. GRANITE, HDPE HIGH DENSITY POLYETHYLENE, HDPP HIGH DENSITY POLYPROPYLENE, HYD HYDRANT, INV. INVERT, LF LINEAR FEET, MASSDEP MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, MADOT MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, MAX. MAXIMUM, MIN. MINIMUM, MON MONUMENT, N.L.C. NOT IN CONTRACT, NO. NUMBER, NR NO REFUSAL, N.T.S. NOT TO SCALE, OE OVERHEAD ELECTRIC, OH OVERHEAD, +/- PLUS OR MINUS, LLS LICENSED LAND SURVEYOR, PROP. PROPOSED, PT. POINT, PVC POLYVINYL CHLORIDE, R.O.W. RIGHT-OF-WAY, RCP REINFORCED CONCRETE PIPE, REINF. REINFORCED, REQ'D REQUIRED, RPP RIBBED PLASTIC PIPE, S SLOPE (FT./FT.), S SEWER, SMH SEWER MANHOLE, SCH SCHEDULE, STA. STATION, TOWN TOWN OF SUDBURY, TYP. TYPICAL, UNO UNLESS NOTED OTHERWISE, UP UTILITY POLE, VC VITRIFIED CLAY, VT. VITRIFIED CLAY, W WEST, W WATER, W/ WITH, W WATERMAIN, WS WATER SERVICE, WV WATER VALVE.

DRAWING LIST:

Table listing drawing sheets: G-001 COVER SHEET, G-002 GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX, C-100 EXISTING CONDITIONS PLAN, C-101 EROSION AND SEDIMENT CONTROL PLAN, C-102 PROPOSED SITE PLAN, C-103 GRADING AND DRAINAGE PLAN, C-200 CIVIL DETAILS 1, C-201 CIVIL DETAILS 2.

LINE TYPES & HATCHES

Table showing line types and hatches for existing and proposed conditions, including: BUILDING, EDGE OF PAVEMENT, UNDERGROUND ELECTRIC, TELEPHONE LINE, 100' WETLAND BUFFER, 200' RIVER FRONT, LIMIT OF WORK, SEDIMENTATION BARRIER, CATCH BASIN, INLET PROTECTION, BITUMINOUS CONCRETE PAVEMENT, CEMENT CONCRETE SIDEWALK, RETAINING WALL.

RESOURCE AREA LEGEND

Table showing resource area hatches: BORDERING VEGETATED WETLAND, MEAN ANNUAL HIGH-WATER LINE (MAHWL) OF HOP BROOK (PERENNIAL STREAM).

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Revision table with columns: REV, DESCRIPTION, DATE, CHECKED BY, DESIGNED BY, DRAWN BY.

GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX

TOWN OF SUDBURY SUDBURY, MA DPW SITE IMPROVEMENTS

Job information table: JOB NO: 0233350.00, DATE: MAY 2021, SCALE: N.T.S., SHEET: 2 OF 13.

G-002

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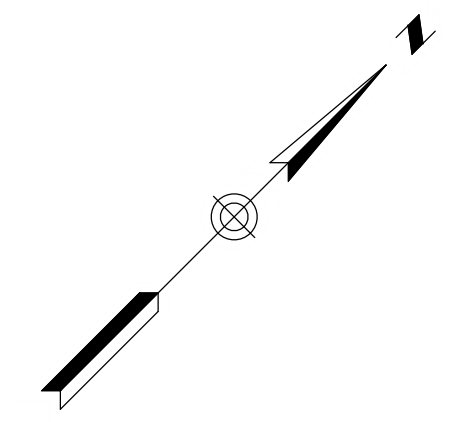
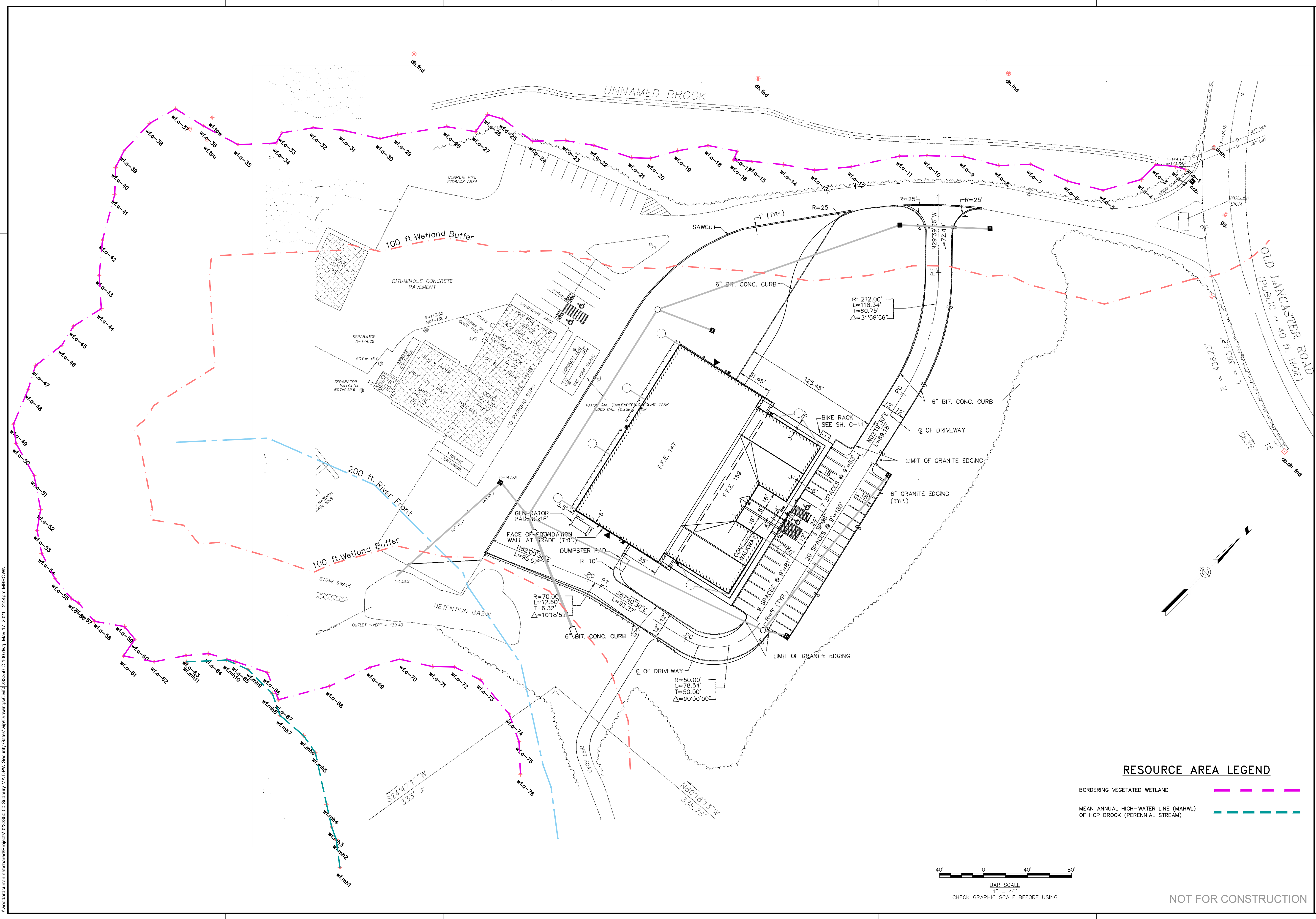
DESIGNED BY: MB
 DRAWN BY: MB
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EXISTING CONDITIONS PLAN

TOWN OF SUBBURY
 SUBBURY, MA

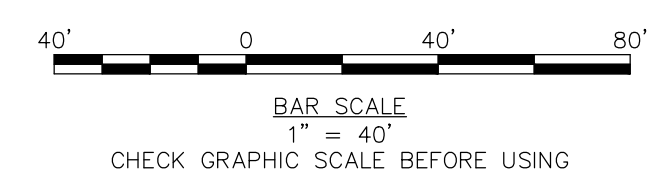
DPW SITE IMPROVEMENTS

JOB NO: 0233350.00
 DATE: MAY 2021
 SCALE: AS SHOWN
 SHEET: 3 OF 13



RESOURCE AREA LEGEND

- BORDERING VEGETATED WETLAND -----
- MEAN ANNUAL HIGH-WATER LINE (MAHL) OF HOP BROOK (PERENNIAL STREAM) -----

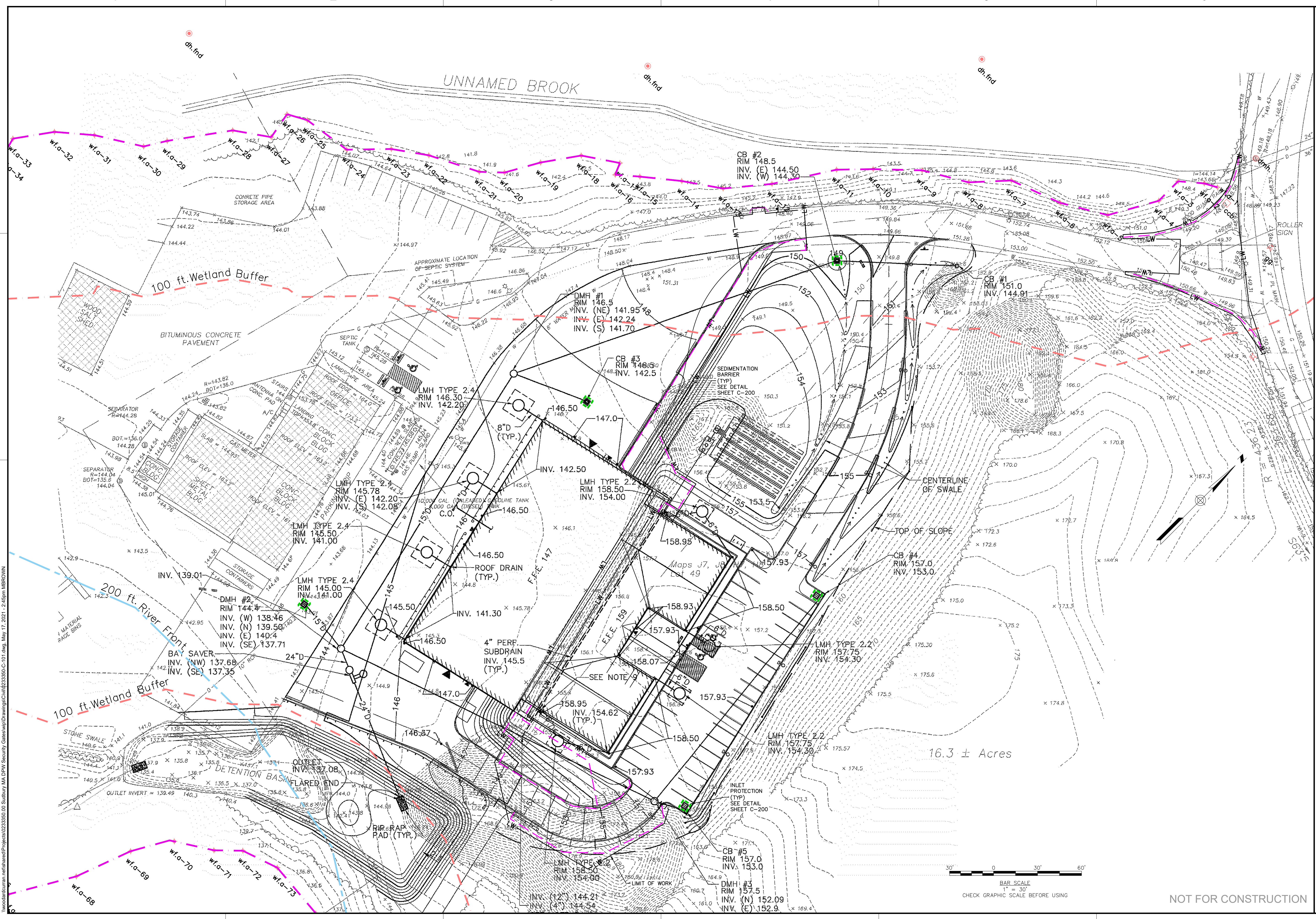


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 CHECKED BY: SC5/HCP
 DRAWN BY: MB

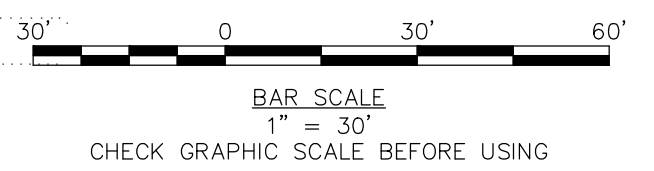
EROSION AND SEDIMENT CONTROL PLAN

TOWN OF SUBURBY
 SUBURBY, MA

DPW SITE IMPROVEMENTS

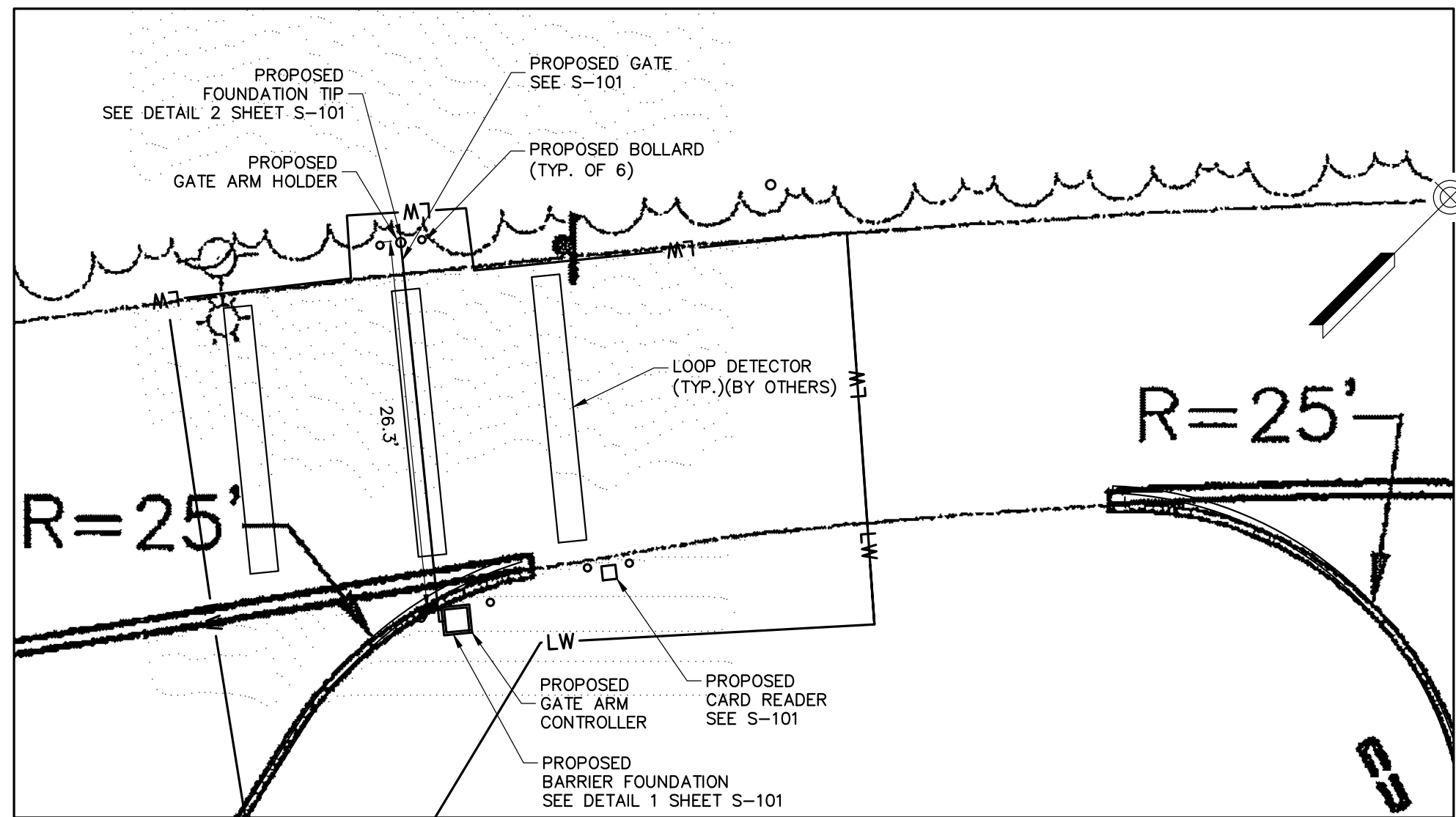
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 DATE: MAY 2021
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 SHEET: 4 OF 13

C-101

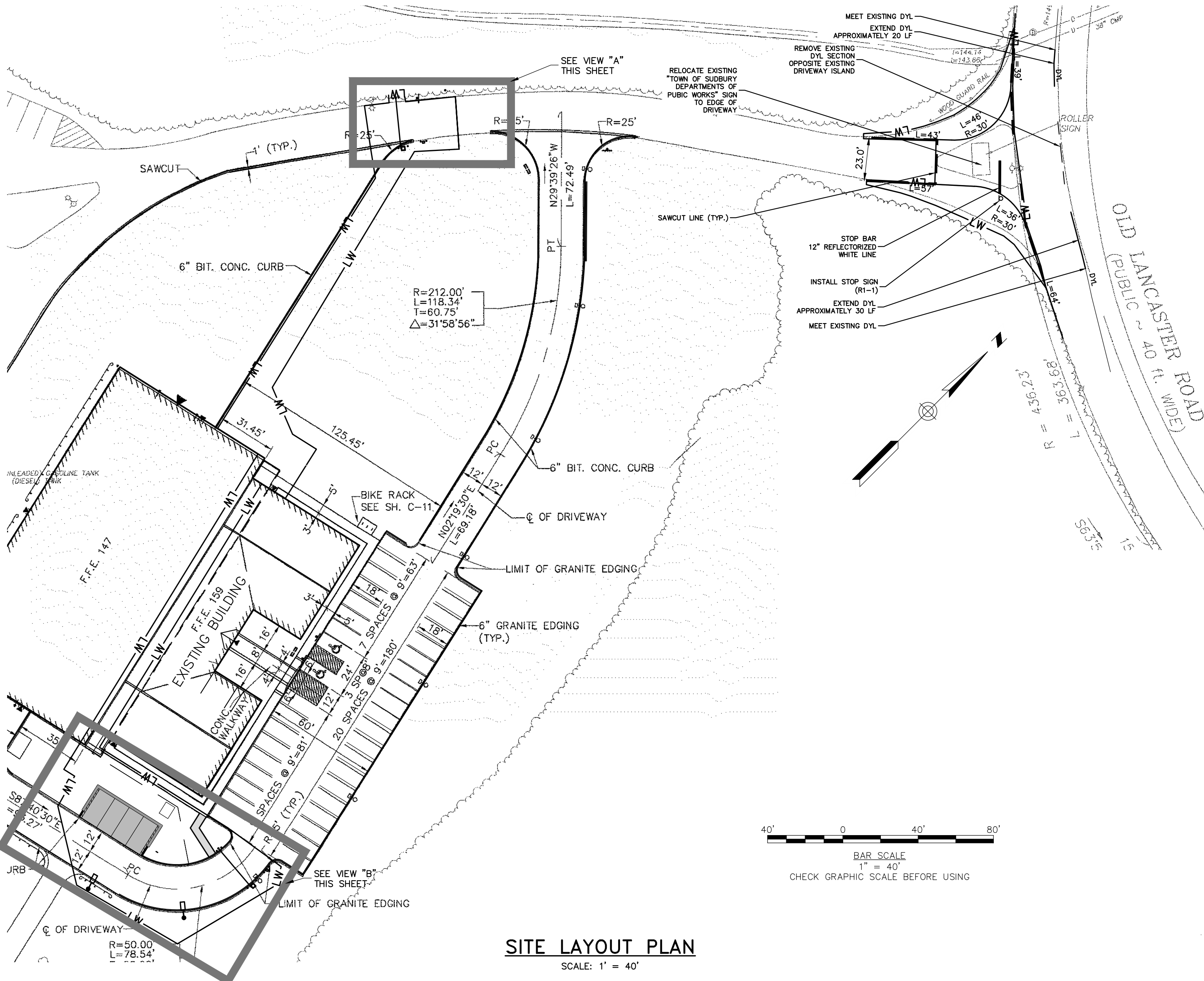


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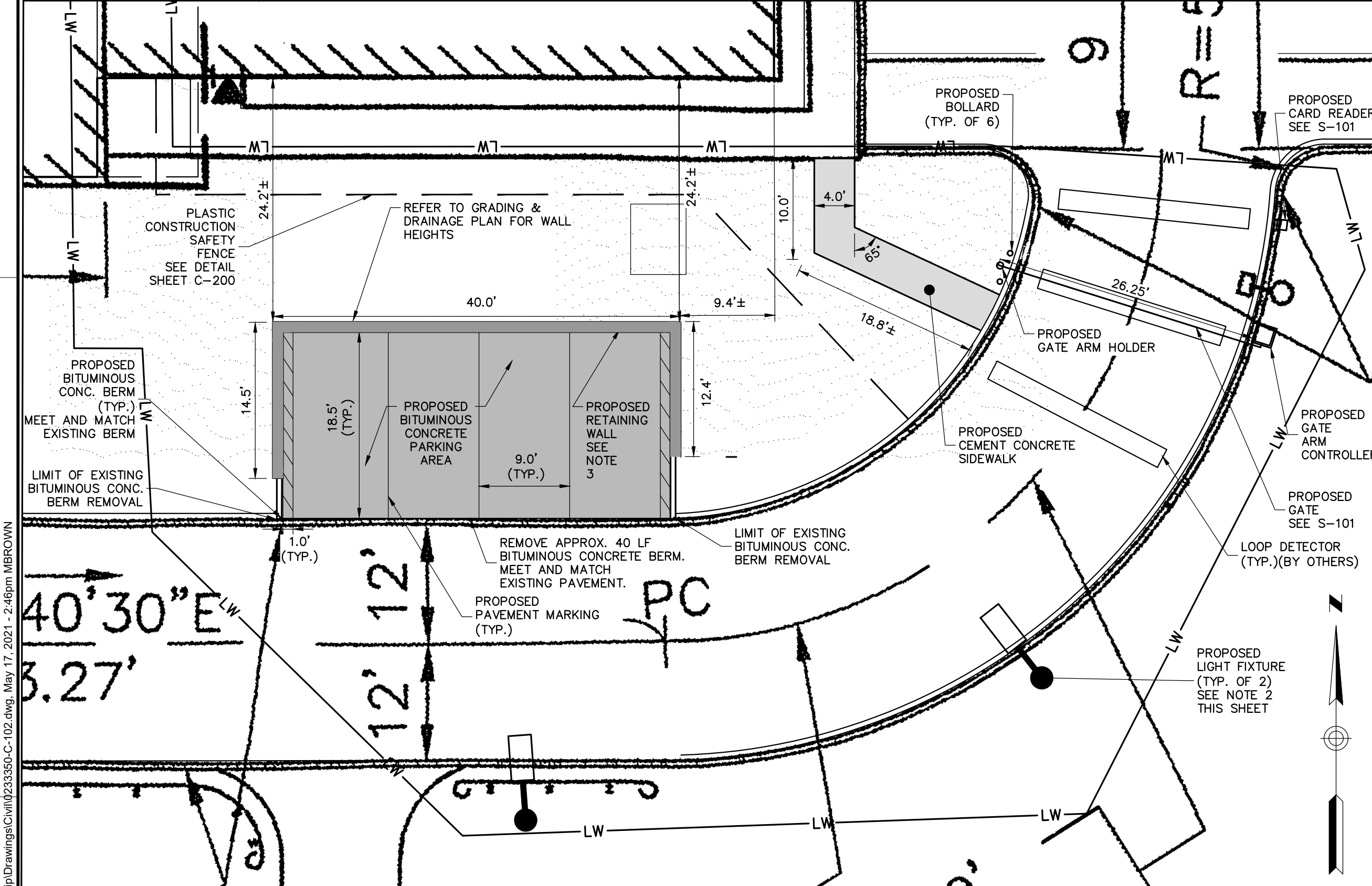


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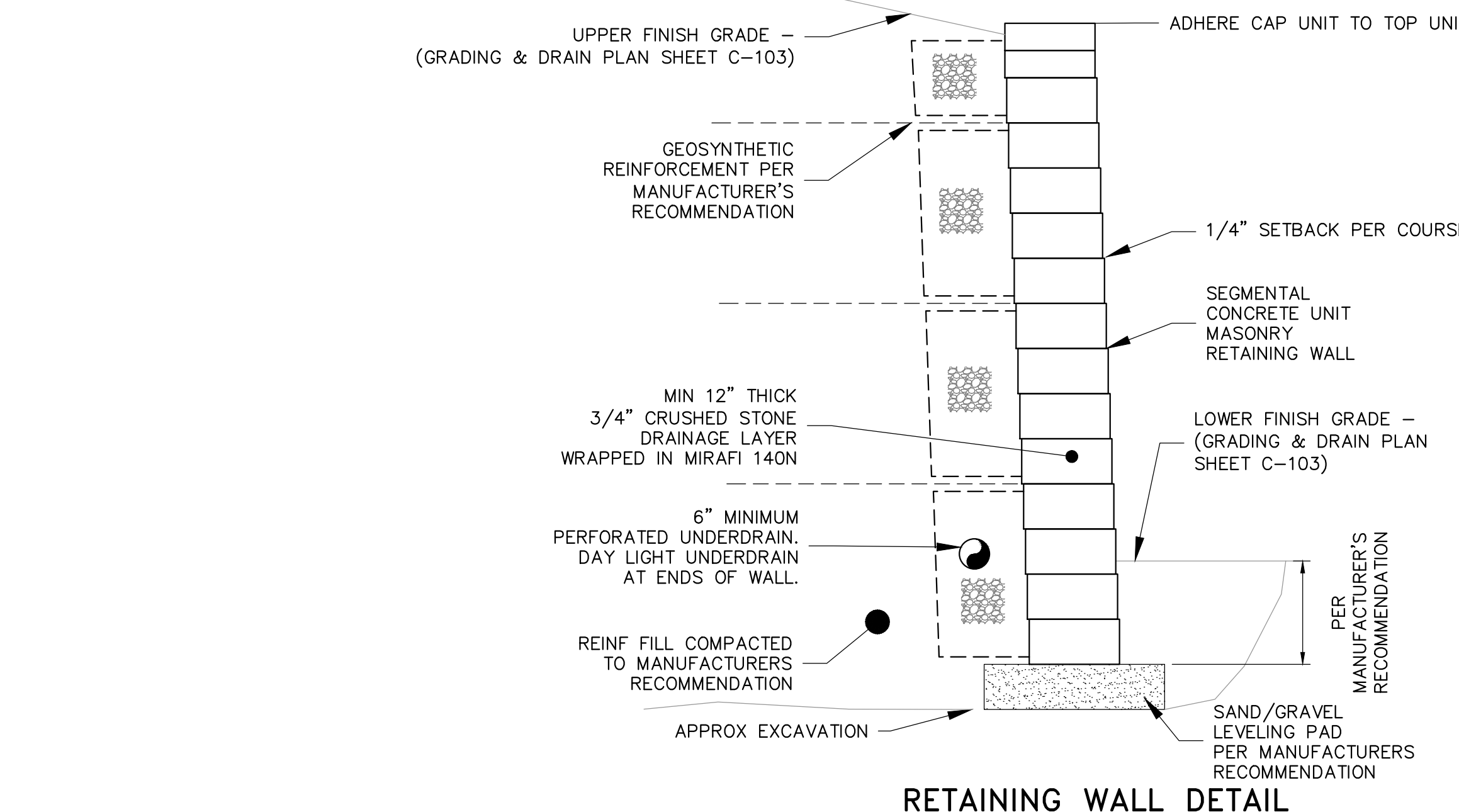
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BAR SCALE
CHECK GRAPHIC SCALE BEFORE USING

SITE LAYOUT PLAN
SCALE: 1" = 40'



VIEW "B"
SCALE: 1" = 10'
10' 0 10' 20'
BAR SCALE
CHECK GRAPHIC SCALE BEFORE USING

- NOTES**
- PRIOR TO ORDERING MATERIALS OR STARTING WORK, CONTRACTOR SHALL FIELD VERIFY THE LAYOUT OF ALL PROPOSED SITE FEATURES SHOWN HEREON, INCLUDING THE DRIVEWAY, RETAINING WALL, CURBING, WALKWAYS, BOLLARDS, SECURITY GATES, AND ALL EQUIPMENT RELATED TO THE SECURITY GATES. THE CONTRACTOR SHALL REPORT ANY CONFLICTS OR DISCREPANCIES TO THE ENGINEER. THE HORIZONTAL LOCATION OF PROPOSED SITE FEATURES SHALL BE DETERMINED BY MEASURING FROM EXISTING SITE FEATURES.
 - LIGHT FIXTURES ARE SHOWN ON THE PLAN FOR REFERENCE PURPOSES ONLY. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION, INCLUDING CONDUIT ROUTING. FIELD COORDINATE FINAL LOCATION.
 - STRUCTURAL DESIGN OF THE RETAINING WALL SHALL BE BY OTHERS. CONTRACTOR SHALL PROVIDE A RETAINING WALL DESIGN STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS. A TYPICAL RETAINING WALL DETAIL IS PROVIDED ON THIS SHEET FOR REFERENCE PURPOSES ONLY.
 - THE SECURITY GATE ARMS/CONTROLLERS, GATE ARM HOLDERS, CARD READERS, LOOP DETECTORS, AND OTHER EQUIPMENT RELATED TO THE GATE ARM SHALL BE FURNISHED AND INSTALLED BY OTHERS. THE VENDOR SHALL CONFIRM THAT THE FINAL LOCATIONS FOR ALL COMPONENTS WILL RESULT IN A FUNCTIONAL FINISHED PRODUCT. CONTRACTOR SHALL PROVIDE FOUNDATIONS FOR THE GATE ARM CONTROLLERS, GATE ARM HOLDERS, AND CARD READERS PER THE PLANS ON SHEET S-101.



RETAINING WALL DETAIL
N.T.S.

- NOTES:**
- CONTRACTOR SHALL COORDINATE ALL DIMENSIONS & ELEVATIONS
 - SEGMENTAL CONCRETE UNIT MASONRY RETAINING WALL SHALL BE PROVIDED PER SPECIFICATION 32.3223.13.

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REV.	DATE	DESCRIPTION	CHECKED BY	DATE

DESIGNED BY: DP
DRAWN BY: MB

PROPOSED SITE PLAN

TOWN OF SUBBURY
SUBBURY, MA

DPW SITE IMPROVEMENTS

JOB NO: 0233350.00
DATE: MAY 2021
SCALE: AS SHOWN
SHEET: 5 OF 13

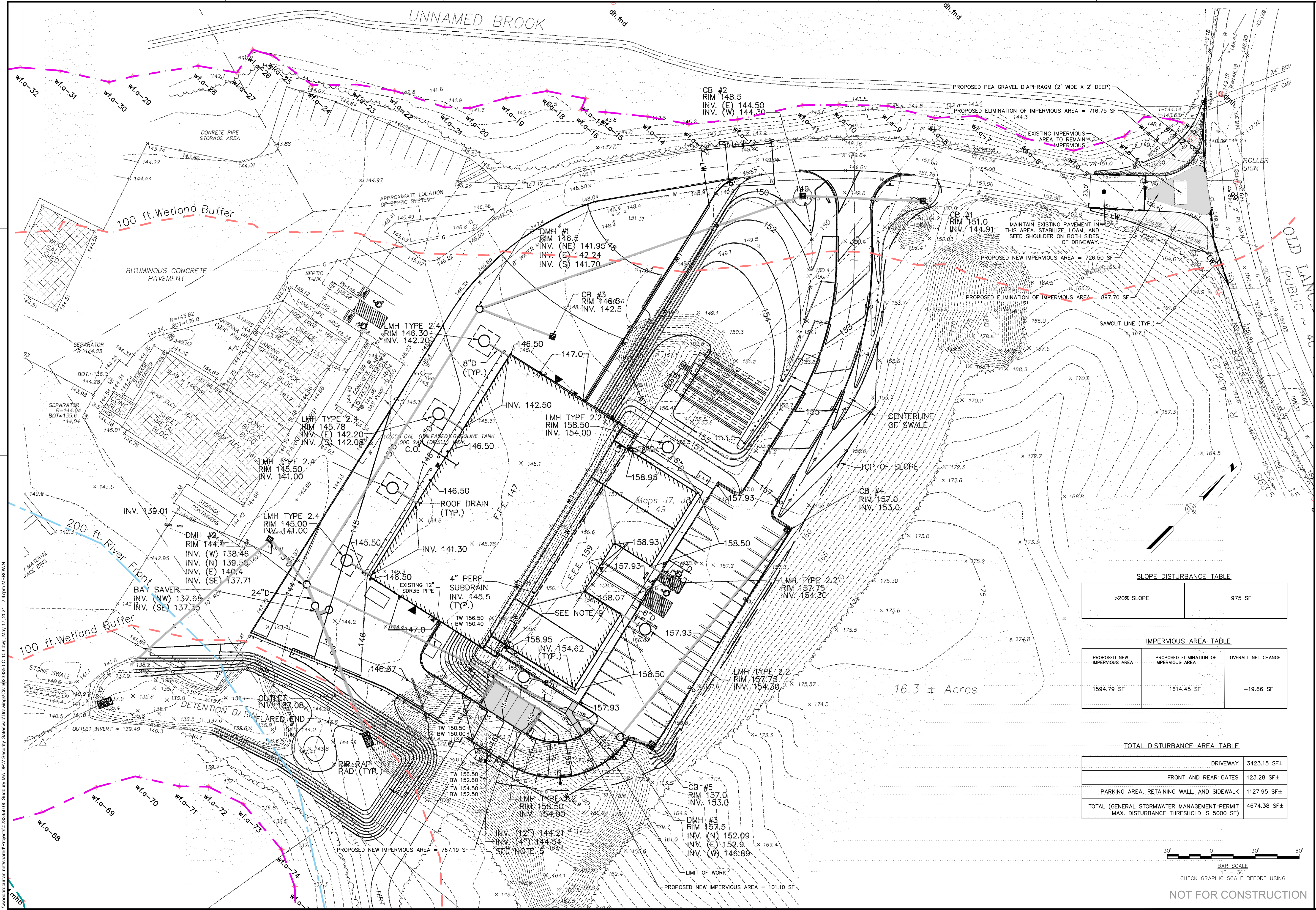
C-102

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REV.	DESCRIPTION	DATE

GRADING AND DRAINAGE PLAN

TOWN OF SUBURBY
SUBURBY, MA
DPW SITE IMPROVEMENTS
JOB NO: 0233350.00
DATE: MAY 2021
SCALE: AS
SHEET: 6 OF 13
C-103



SLOPE DISTURBANCE TABLE

SLOPE	AREA (SF)
>20% SLOPE	975 SF

IMPERVIOUS AREA TABLE

PROPOSED NEW IMPERVIOUS AREA	PROPOSED ELIMINATION OF IMPERVIOUS AREA	OVERALL NET CHANGE
1594.79 SF	1614.45 SF	-19.66 SF

TOTAL DISTURBANCE AREA TABLE

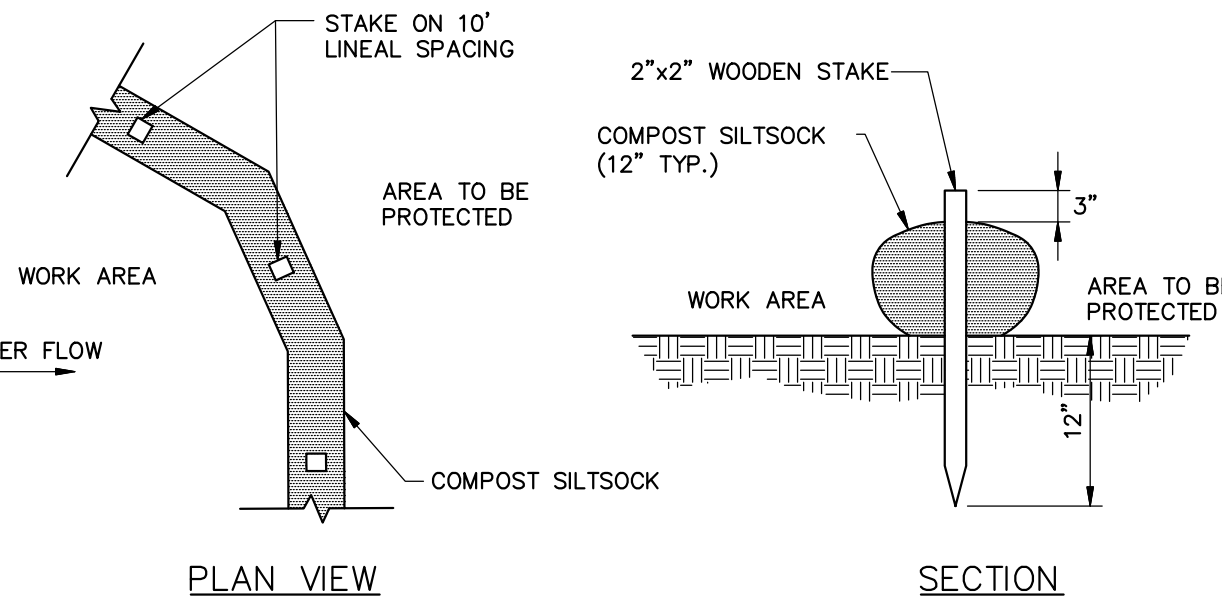
AREA	AREA (SF±)
DRIVEWAY	3423.15 SF±
FRONT AND REAR GATES	123.28 SF±
PARKING AREA, RETAINING WALL, AND SIDEWALK	1127.95 SF±
TOTAL (GENERAL STORMWATER MANAGEMENT PERMIT MAX. DISTURBANCE THRESHOLD IS 5000 SF)	4674.38 SF±

30' 0 30' 60'
BAR SCALE
1" = 30'
CHECK GRAPHIC SCALE BEFORE USING
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL NOTES

Temporary Erosion Control

Measure	Dates For Use	Timing, Activity, and Location
Sedimentation Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up-slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and around material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsock, SiltSaver Inlet Filter, or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 15	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 95% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events apply 100-150 lbs (2.5 bales) per 1,000 sq. ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31	On all areas of exposed soil prior to precipitation apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower. Erosion control blanket may be used as a substitute for winter mulch.
	Nov. 1 to April 14	On all areas of exposed soil, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and after rainfall of half inch or greater in a 24-hour period, and maintain and repair as necessary.



NOTE:
WHEN STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT CONTROL TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.

Permanent Erosion Control:

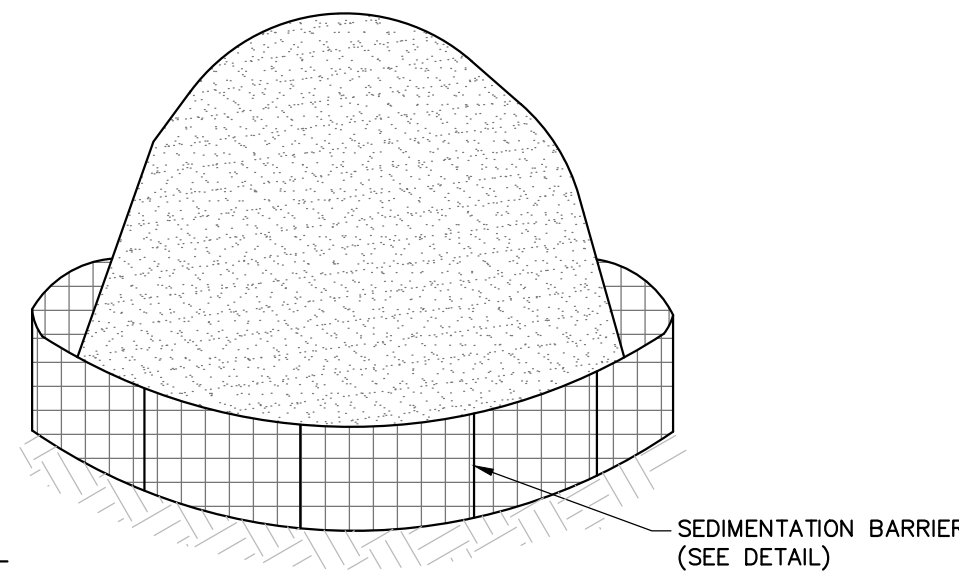
Measure	Dates For Use	Timing, Activity, and Location
Pavement - Base Course - Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

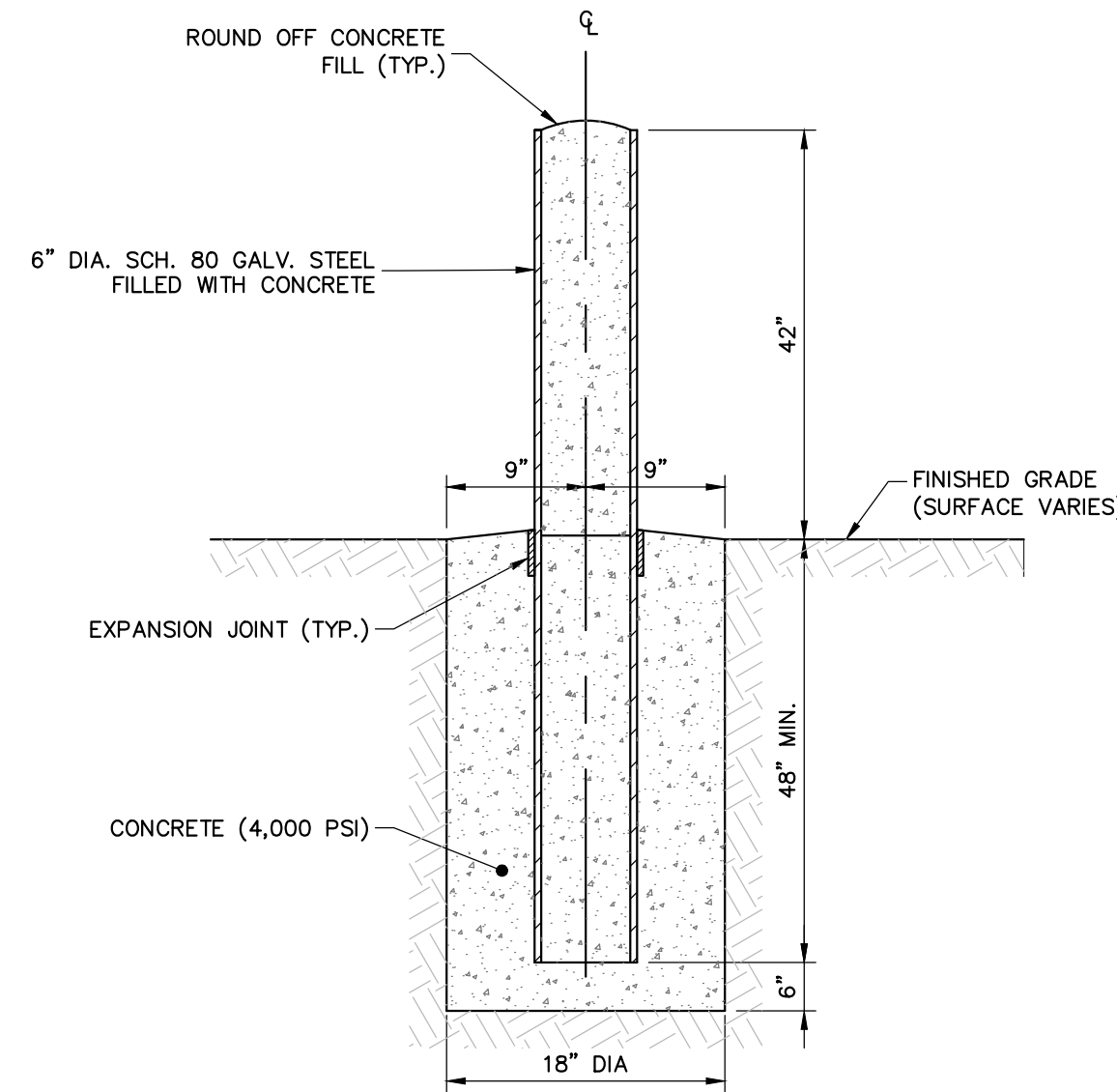
Inspected Item	Look For
Mulched Surfaces	Thin mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rivulets.
Sediment Barrier	Sediment build-up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build-up and structure blockages. Slow flow/ponding water. Breaks in fabric or voids in barrier.
Site Roadways	Sedimentation of roadways. Off-site dust complaints.

SEDIMENTATION BARRIER - SILT SOCK
NOT TO SCALE

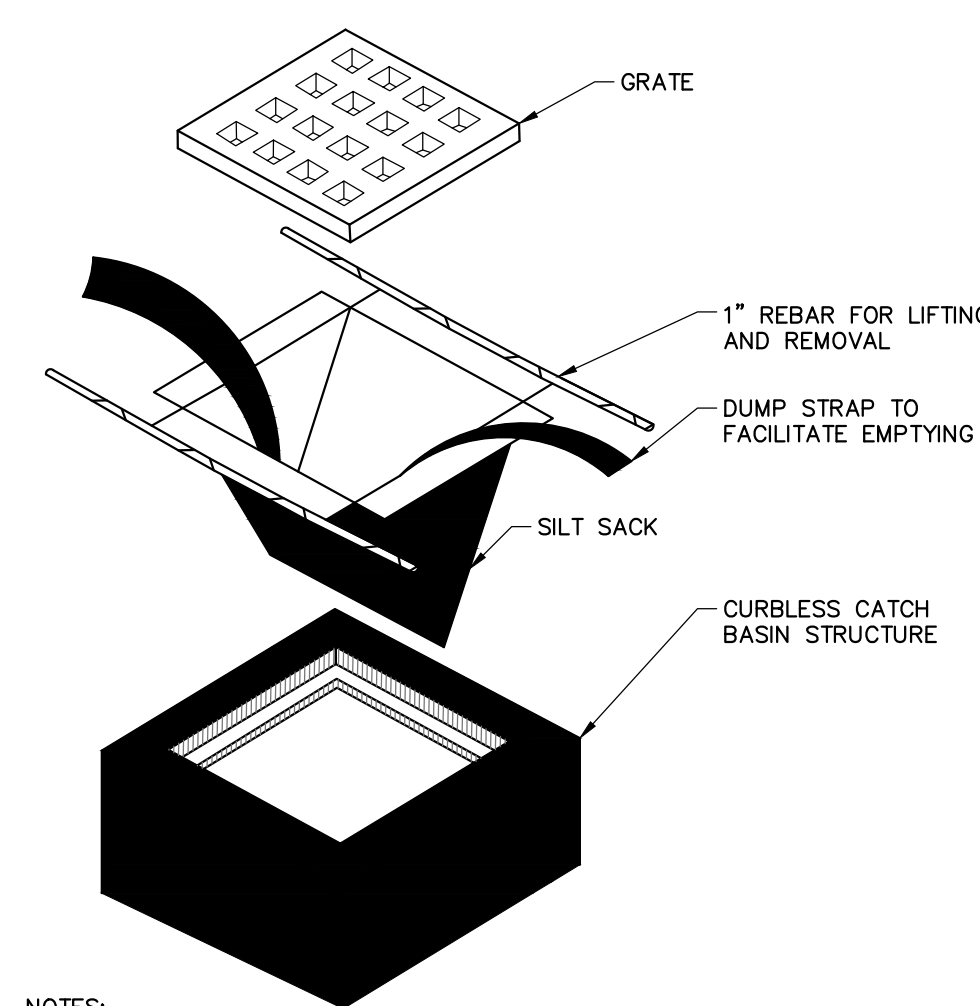


- NOTES:**
- STOCKPILES SHALL BE SURROUNDED BY SEDIMENTATION BARRIER.
 - STOCKPILES SHALL HAVE A MAXIMUM 2:1 (H:V) SIDE SLOPE.
 - REPAIR OR REPLACE DAMAGED SEDIMENTATION BARRIER DUE TO CONSTRUCTION ACTIVITIES OR STOCKPILE MITIGATION.
 - STOCKPILE SHALL BE LOCATED IN AREAS AS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.

TEMPORARY SOIL STOCK PILE AREA
NOT TO SCALE

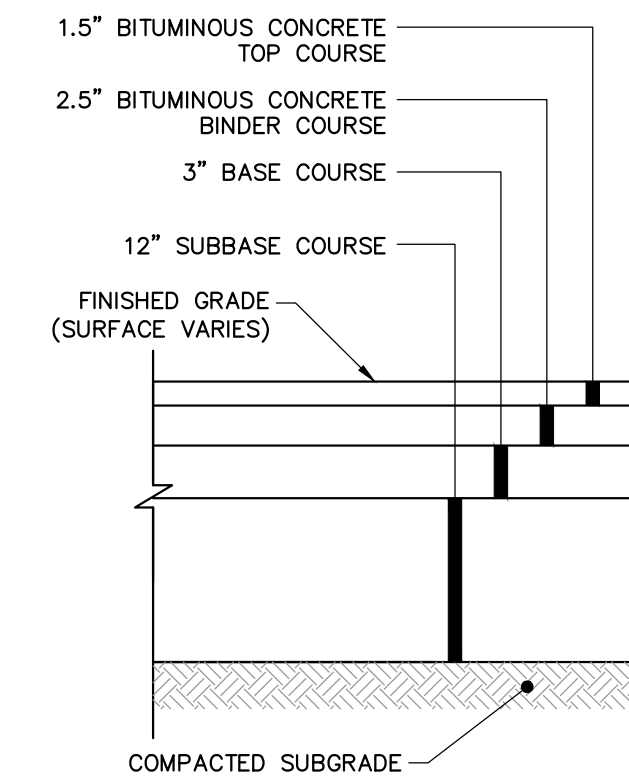


NOTE:
1. ALL BOLLARDS SHALL BE PAINTED. COLOR SELECTED BY OWNER.

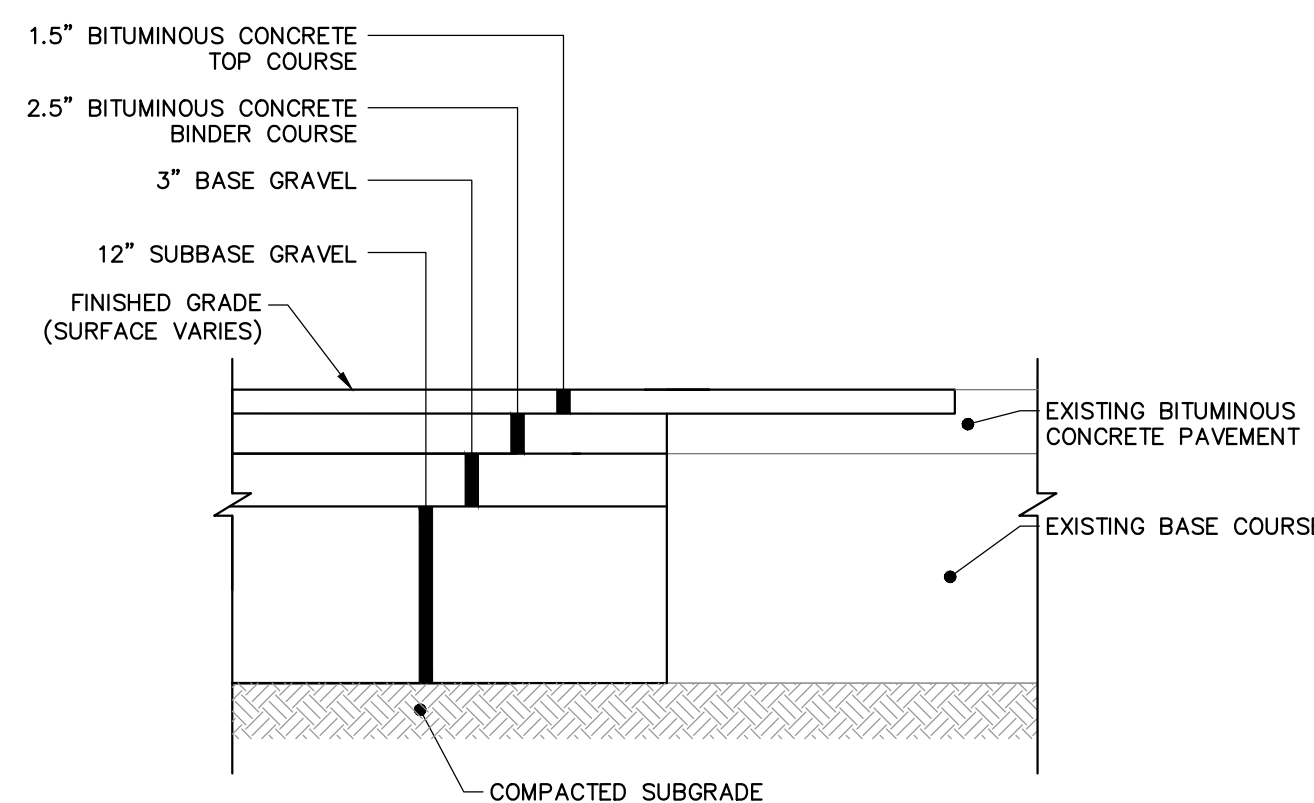


- NOTES:**
- INSTALL SILT SACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
 - EMPTY OR REMOVE SEDIMENT FROM SILT SACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.
 - SILT SACKS TO BE INSTALLED WHEN THE POTENTIAL FOR SEDIMENT TO ENTER EXISTING & PROPOSED BASINS EXISTS.

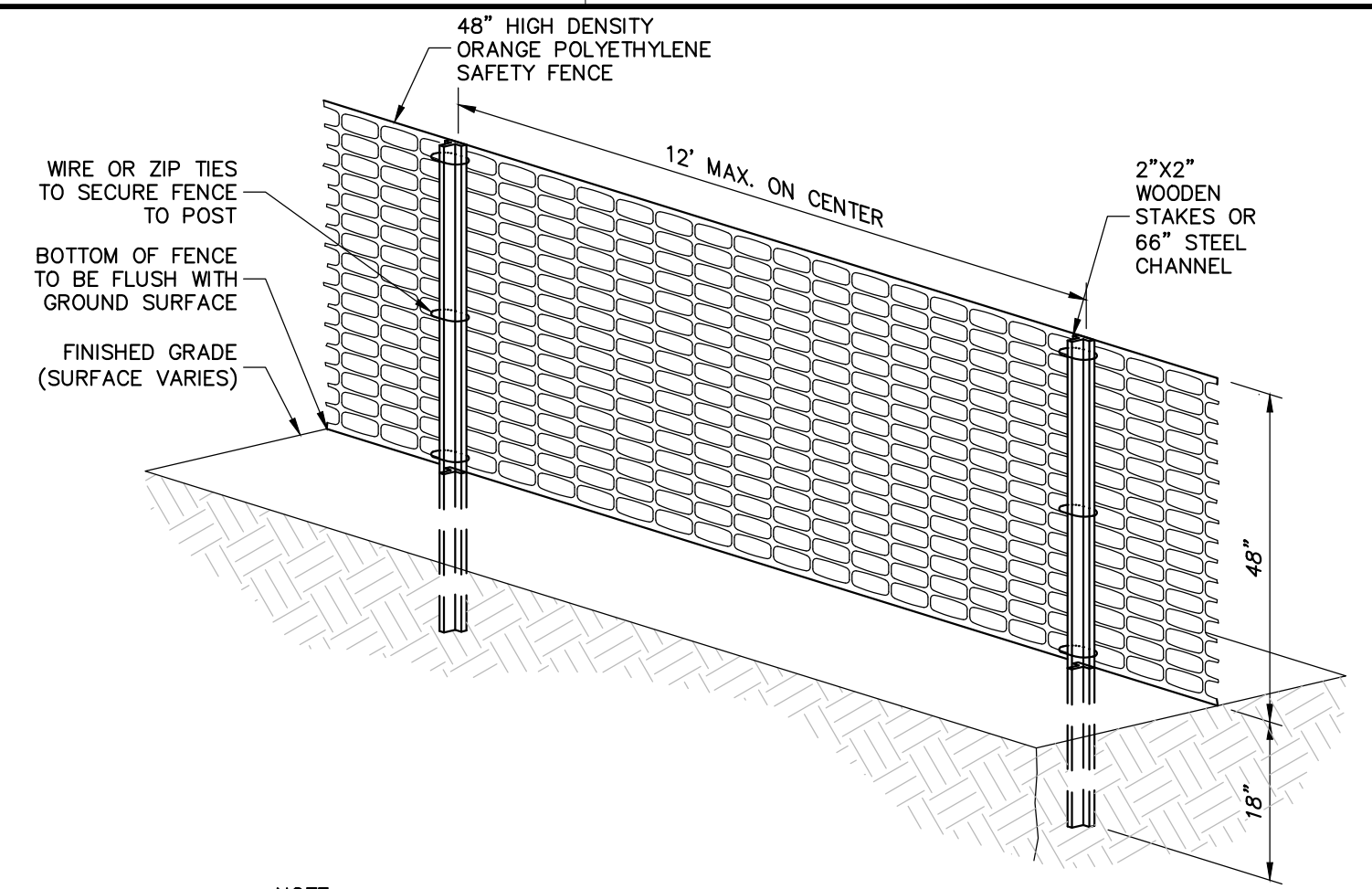
SILT SACK - CURBLESS INLET
NOT TO SCALE



BITUMINOUS PAVEMENT BUTT JOINT
N.T.S.



BITUMINOUS PAVEMENT BUTT JOINT
N.T.S.



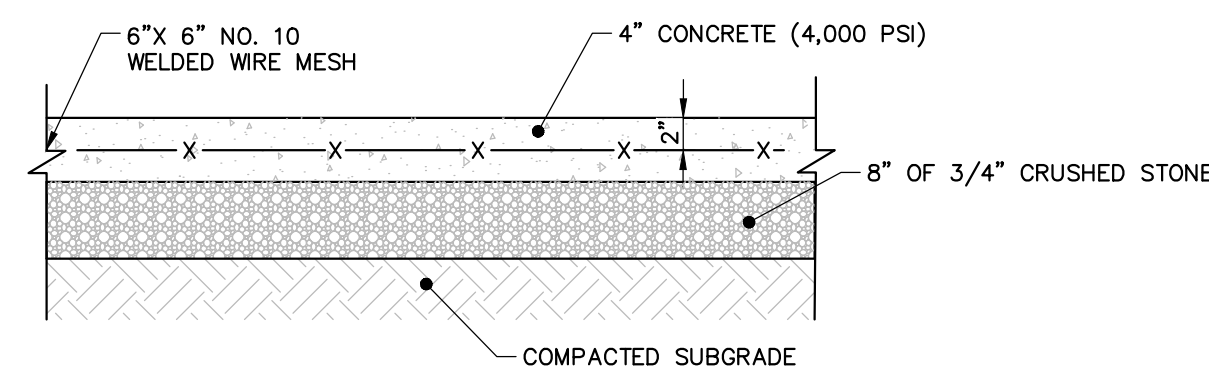
- NOTE:**
- MAINTAIN TENSION ACROSS FULL HEIGHT AND LENGTH OF FENCE.
 - PROVIDE PERIODIC INSPECTION AND MAINTENANCE OF FENCE.
 - FENCE SHALL BE HIGH DENSITY ORANGE POLYETHYLENE SAFETY FENCE AS MANUFACTURED BY EROSION RUNNER® OR APPROVED EQUAL.

PLASTIC CONSTRUCTION SAFETY FENCE
N.T.S.

WOODARD & CURRAN \net\blair\Projects\0233350-00 Subbury MA DPW Security Gates\wp\Drawings\Civil\0233350-DETAILS.dwg, May 17, 2021 - 2:47pm, MBR/DOWN

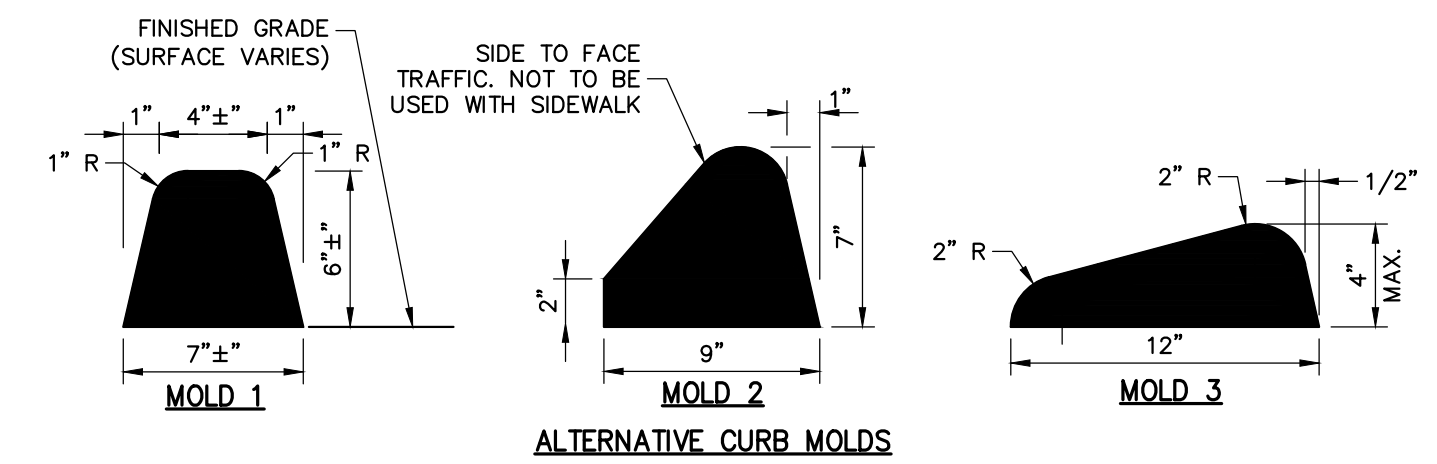
I.D. NUMBER	SIZE OF SIGN WIDTH (IN)	WIDTH (IN)	TEXT	NUMBER OF SIGNS REQ'D	AREA IN SQUARE FEET	COMMENTS
R1-1	30	30		1	6.25	

SIGN DETAILS
NOT TO SCALE

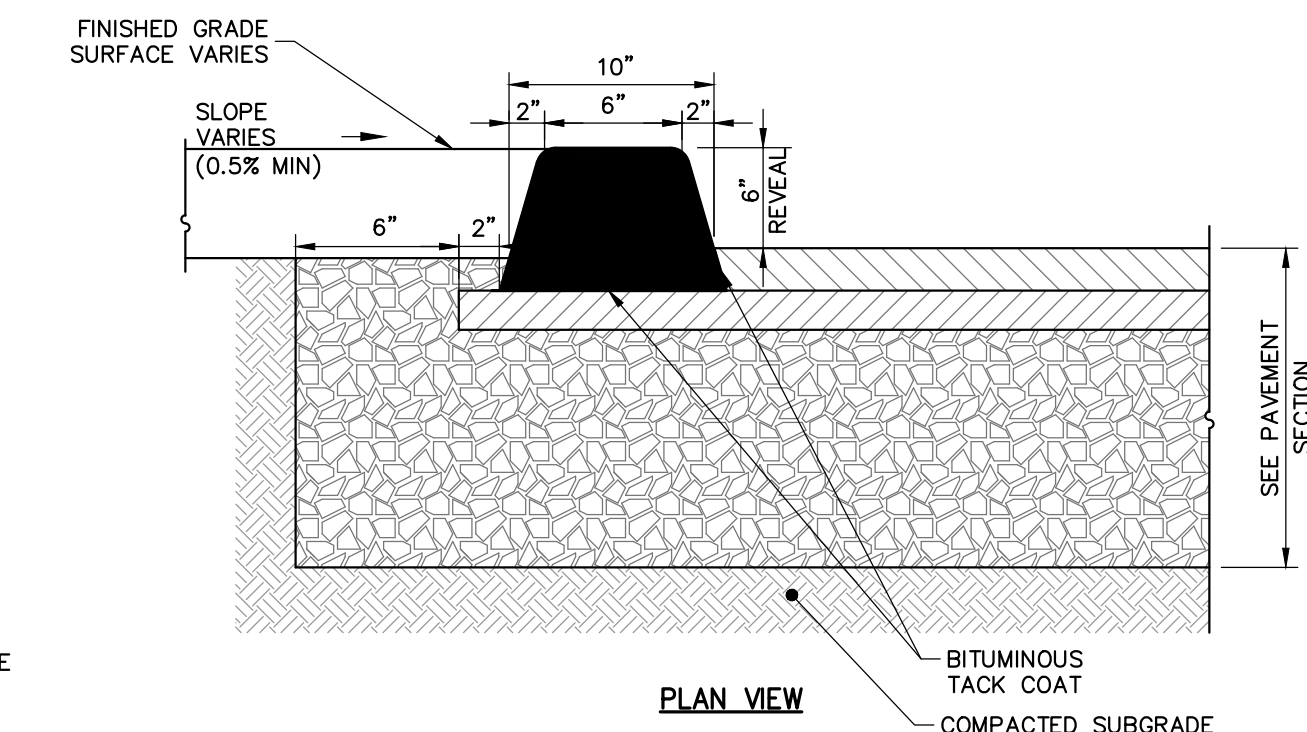


- NOTES:**
- PROVIDE 1/2-INCH PREMOLDED BITUMINOUS EXPANSION JOINTS AT 20 FT. INTERVALS.
 - PROVIDE CONTROL JOINTS AT 5-FOOT INTERVALS.
 - PROVIDE LIGHT BROOM FINISH WITH 3-INCH EDGE.

CAST-IN-PLACE CONCRETE SIDEWALK
NOT TO SCALE



ALTERNATIVE CURB MOLDS



- NOTES:**
- CURB MOLD 2 WILL BE USED IN ALL SITUATIONS EXCEPT WHERE THE CURB FORMS THE EDGE OF THE SIDEWALK. MOLD 1 SHALL BE USED IN CONJUNCTION WITH SIDEWALKS OR WHERE THERE IS A POTENTIAL FOR SIDEWALKS.

BITUMINOUS CURB
NOT TO SCALE

250 Royal Street, Suite 200E
Canton, Massachusetts 02021
800.446.5518 | www.woodardcurran.com

WOODARD & CURRAN
COMMITMENT & INTEGRITY DRIVE RESULTS

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REV	DESCRIPTION	DATE

CHECKED BY: SS
DESIGNED BY: MB
DRAWN BY: MB
DATE: 02/23/2021

CIVIL DETAILS 1

TOWN OF SUBBURY
SUBBURY, MA

DPW SITE IMPROVEMENTS

JOB NO: 0233350.00
DATE: MAY 2021
SCALE: N.T.S.
SHEET: 7 OF 13

C-200

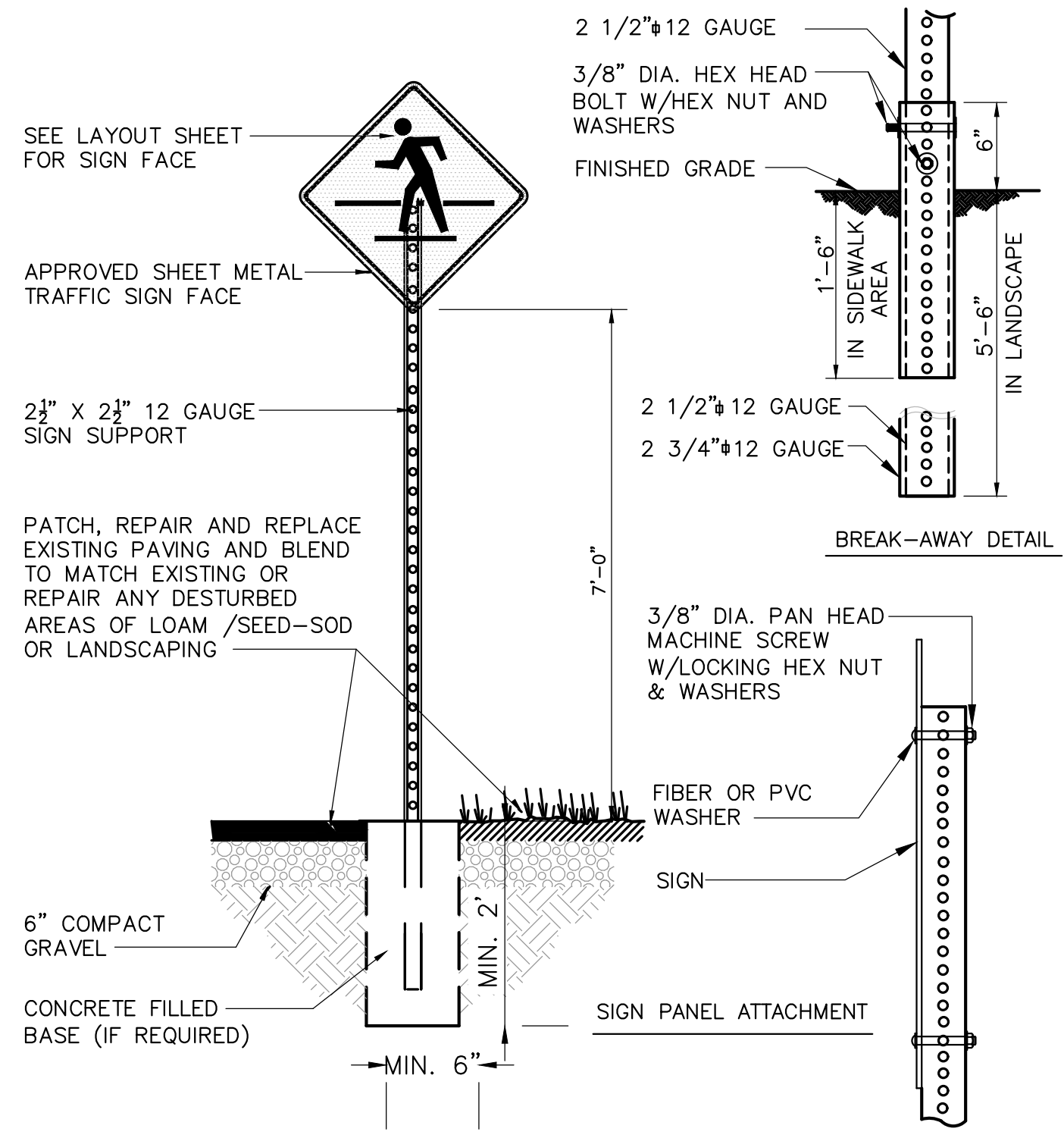
1 2 3 4 5 6

A

B

C

D



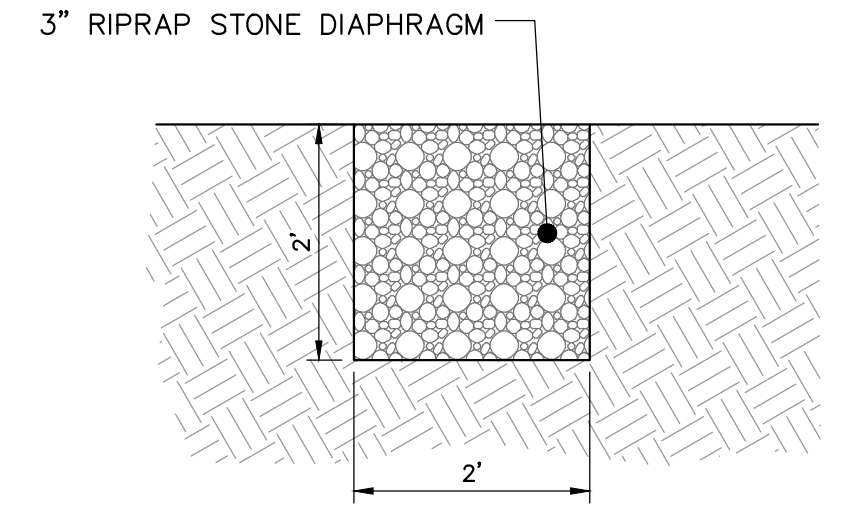
- NOTES:
1. ALL 2 1/2" POSTS SHALL BE BLACK POWDER COATED.
 2. ALL 2 3/4" DIRECT GROUND CONTACT POSTS SHALL BE HOT DIPPED GALVANIZED.
 3. ALL HARDWARE SHALL BE 304 STAINLESS STEEL (SS).
 4. ALL SIGN POSTS SHALL BE SQUARE CHANNEL IN ACCORDANCE MASS DOT SPECIFICATION 840

TRAFFIC SIGN POST
NOT TO SCALE



**DOUBLE YELLOW LANE (DYL)
DIVIDER MARKINGS**
NOT TO SCALE

- NOTE:
1. SEE SPECIFICATIONS FOR PAINT REQUIREMENTS.



PEA GRAVEL DIAPHRAGM
NOT TO SCALE

WoodardCurran.net\shared\Projects\0233350.00_Sudbury_MA_DPW_Security_Gates\wp\Drawings\Civil\0233350-DETAILS.dwg, May 17, 2021, 2:47pm, MBROWN

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Canton, Massachusetts 02021
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REV	DESCRIPTION	DATE	CHECKED BY	DRAWN BY
			XXX	XXX

CIVIL DETAILS 2

TOWN OF SUDBURY
SUDBURY, MA

DPW SITE IMPROVEMENTS

JOB NO:	0233350.00
DATE:	MAY 2021
SCALE:	XXX
SHEET:	8 OF 13

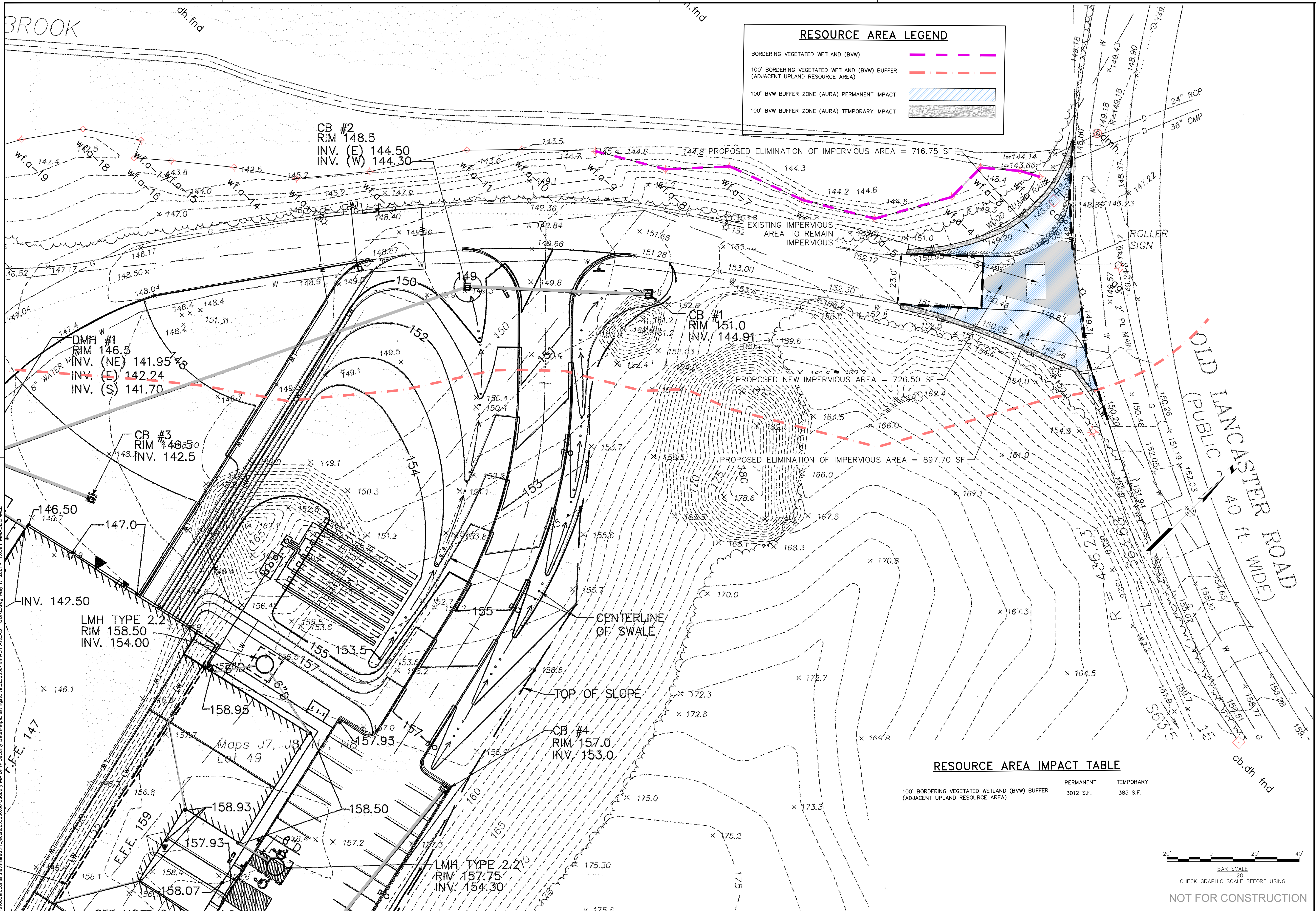
C-201

FOR PERMITTING - NOT FOR CONSTRUCTION

1 2 3 4 5 6

Figure 3: Resource Area Impact Figure





RESOURCE AREA LEGEND

- BORDERING VEGETATED WETLAND (BVW)
- 100' BORDERING VEGETATED WETLAND (BVW) BUFFER (ADJACENT UPLAND RESOURCE AREA)
- 100' BVW BUFFER ZONE (AURA) PERMANENT IMPACT
- 100' BVW BUFFER ZONE (AURA) TEMPORARY IMPACT

RESOURCE AREA IMPACT TABLE

Resource Area	PERMANENT	TEMPORARY
100' BORDERING VEGETATED WETLAND (BVW) BUFFER (ADJACENT UPLAND RESOURCE AREA)	3012 S.F.	385 S.F.



BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

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Canton, Massachusetts 02021
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COMMITMENT & INTEGRITY DRIVE RESULTS

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REV	DESCRIPTION	DATE

CHECKED BY: SS
DESIGNED BY: DP
DRAWN BY: MB

IMPACT AREAS FIGURE

TOWN OF SUBURBY
SUBURBY, MA

DPW SITE IMPROVEMENTS

JOB NO: 0233350.00
DATE: MAY 2021
SCALE: AS
SHEET: x OF 13

FIG



ATTACHMENT A: WETLAND RESOURCE EVALUATION



EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street

Worcester, MA 01605-2629

508-752-9666 / Fax: 508-752-9494

April 23, 2021

Scott Salvucci, PE
Woodard & Curran, Inc.
980 Washington Street, Suite 325
Dedham, MA 02026

RE: Wetland Resource Evaluation, 275 Old Lancaster Road, Sudbury, MA

Dear Scott:

On April 9, 2021, EcoTec, Inc. inspected the above-referenced property for the presence of wetland resources as defined by: (1) the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40; the “Act”) and its implementing regulations (310 CMR 10.00 *et seq.*; the “Regulations”); and (2) the U.S. Clean Water Act (i.e., Section 404 and 401 wetlands). Arthur Allen, CPSS, CWS conducted the inspections.

The subject site consists of a Department of Public Works facility and town offices. The site is largely developed with buildings and paved/landscaped areas. The upland perimeters are wooded. The wetland resources observed on the site are described below.

Methodology

The site was inspected, and areas suspected to qualify as wetland resources were identified. The boundary of Bordering Vegetated Wetlands was delineated in the field in accordance with the definitions set forth in the regulations at 310 CMR 10.55(2)(c) and 310 CMR 10.54(2). Section 10.55(2)(c) states that “The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.” The methodology used to delineate Bordering Vegetated Wetlands is further described in: (1) the BVW Policy “*BVW: Bordering Vegetated Wetlands Delineation Criteria and Methodology*,” issued March 1, 1995; and (2) “*Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act: A Handbook*,” produced by the Massachusetts Department of Environmental Protection, dated March 1995. The plant taxonomy used in this report is based on the *National List of Plant Species that Occur in Wetlands: Massachusetts* (Fish and Wildlife Service, U.S. Department of the Interior, 1988), ERDC/CRREL TR-12-11 (Lichvar, 2012). Federal wetlands were presumed to have boundaries conterminous with the delineated Bordering Vegetated Wetlands. One set of DEP Bordering Vegetated Wetland Delineation Field Data Forms completed for observation plots located in the wetlands and uplands near flag A-36 is attached. The table below provides the Flag Numbers, Flag Type, and Wetland Types and Locations for the delineated wetland resources.

Flag Numbers	Flag Type	Wetland Types and Locations
A-1 to A-76 (Test Plots at A-36)	Blue Flags	Boundary of Bordering Vegetated Wetlands starting at the Old Lancaster Road intermittent stream culvert outlet, joining the wetland bordering Hop Brook and ending on the southeast side of the site.
MH-1 to MH-11	Red Flags	Mean Annual High-water Line (MAHWL) of perennial stream (Hop Brook) within 200 feet of the project locus.

Findings

Wetland A consists of Bordering Vegetated Wetlands associated with a mapped perennial stream (AKA: Hop Brook). Plant species observed include red maple (*Acer rubrum*) and American elm (*Ulmus americana*) trees and saplings; winterberry (*Ilex verticillata*), arrowwood (*Viburnum dentatum*), silky dogwood (*Cornus amomum*) and highbush blueberry (*Vaccinium corybosum*) shrubs; and skunk cabbage (*Symplocarpus foetidus*), sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmunda cinnamomea*), swamp dewberry (*Rubus hispidus*), reed canary grass (*Phalaris arundinacea*) sedges (*Carex* spp.) and skunk cabbage (*Symplocarpus foetidus*) groundcover. Evidence of wetland hydrology, including hydric soils, high groundwater, saturated soils, pore linings, and drainage patterns, was observed within the delineated wetlands. This vegetated wetland borders an intermittent stream; accordingly, the vegetated wetlands would be regulated as Bordering Vegetated Wetlands, the stream would be regulated as Bank and Land Under Water under the Act. A 100-foot Buffer Zone extends horizontally outward from the edge of Bordering Vegetated Wetlands under the Act.

Bordering Land Subject to Flooding is an area that floods due to a rise in floodwaters from a bordering waterway or water body. Where flood studies have been completed, the boundary of Bordering Land Subject to Flooding is based upon flood profile data prepared by the National Flood Insurance Program. Section 10.57(2)(a)3. states that “The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm.” The project engineer should evaluate the most recent National Flood Insurance Program flood profile data to confirm the location and elevation of Bordering Land Subject to Flooding on the site. Bordering Land Subject to Flooding would occur in areas where the 100-year flood elevation is located outside of or upgradient of the delineated Bordering Vegetated Wetlands boundary. Bordering Land Subject to Flooding does not have a Buffer Zone under the Act. A copy of the most recent FEMA flood zone map is attached to this report.

The Massachusetts Rivers Protection Act amended the Act to establish an additional wetland resource area: Riverfront Area. Based upon a review of the current USGS Map (attached) there is a perennial stream (AKA: Hop Brook) that flows on the west and south sides of the property. There is also an unnamed, intermittent stream that flows on the north side of the site and drains to Hop Brook. Based on observations made during the site inspection, there are no unmapped streams present on, or in the vicinity of, the site. Therefore, Riverfront Area is presumed to occur on the site associated with the Mean Annual High Water Line of the mapped perennial stream, as

delineated with the MH-series of red flags. The unnamed, intermittent stream was analyzed using the USGS StreamStats program and found to have a watershed area of 0.38 square miles (see attached StreamStats report). Since this watershed is less than the 0.5 square mile threshold for perennial flow, the intermittent stream would not have a Riverfront Area.

The Regulations require that no project may be permitted that will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures set forth at 310 CMR 10.59. Based upon a review of the *Massachusetts Natural Heritage Atlas*, 14th edition, Priority Habitats and Estimated Habitats, online data viewer, valid from August 1, 2017, there is no Estimated Habitat [for use with the Act and Regulations (310 CMR 10.00 *et seq.*)], and no Priority Habitat [for use with Massachusetts Endangered Species Act (M.G.L. Ch. 131A; “MESA”) and MESA Regulations (321 CMR 10.00 *et seq.*)] present on the subject site. There are no Certified Vernal Pools on or in the immediate vicinity of the site. A copy of this map is attached.

The reader should be aware that the regulatory authority for determining wetland jurisdiction rests with local, state, and federal authorities. A brief description of my experience and qualifications is attached. If you have any questions, please feel free to contact me at any time.

Cordially,
ECOTEC, INC.



Arthur Allen, CPSS, CWS, CESSWI, ASE
Vice President

Attachments (6, 11 pages)

AA/Wetland/Sudbury 275 Old Lancaster Wet Report



EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street
Worcester, MA 01605-2629
508-752-9666 / Fax: 508-752-9494

Arthur Allen, CPSS, CWS, CESSWI
Vice President
Soil & Wetland Scientist

Arthur Allen is the Vice President of EcoTec, Inc. and has been a senior environmental scientist there since 1995. His work with EcoTec has involved wetland delineation, wildlife habitat evaluation, environmental permitting (federal, state and local), environmental monitoring, expert testimony, peer reviews, contaminated site assessment and the description, mapping and interpretation of soils. His clients have included private landowners, developers, major corporations and regulatory agencies. Prior to joining EcoTec, Mr. Allen mapped and interpreted soils in Franklin County, MA for the U.S.D.A. Natural Resources Conservation Service (formerly Soil Conservation Service) and was a research soil scientist at Harvard University's Harvard Forest. Since 1994, Mr. Allen has assisted the Massachusetts Department of Environmental Protection and the Massachusetts Association of Conservation Commissions as an instructor in the interpretation of soils for wetland delineation and for the Title V Soil Evaluator program.

Mr. Allen has a civil service rating as a soil scientist, an undergraduate degree in Natural Resource Studies and a graduate certificate in Soil Studies. His work on the Franklin County soil survey involved interpretation of landscape-soil-water relationships, classifying soils and drainage, and determining use and limitation of the soil units that he delineated. As a soil scientist at the Harvard Forest, Mr. Allen was involved in identifying the legacies of historical land-use in modern soil and vegetation at a number of study sites across southern New England. He has a working knowledge of the chemical and physical properties of soil and water and how these properties interact with the plants that grow on a given site. While at Harvard Forest he authored and presented several papers describing his research results which were later published. In addition to his aforementioned experience, Mr. Allen was previously employed by the Trustees of Reservations as a land manager and by the Town of North Andover, MA as a conservation commission intern.

Education:

1993-Graduate Certificate in Soil Studies, University of New Hampshire
1982-Bachelor of Science in Natural Resource Studies, University of Massachusetts

Professional Affiliations:

Certified Professional Soil Scientist (ARCPACS CPSS #22529)
New Hampshire Certified Wetland Scientist (#19)
Registered Professional Soil Scientist – Society of Soil Scientists of SNE [Board Member (2000-2006)]
Certified Erosion, Sediment & Stormwater Inspector (#965)
Massachusetts Approved Soil Evaluator (#13764)
Massachusetts Arborists Association-Certified Arborist (1982 – 1998)
New England Hydric Soils Technical Committee member
Massachusetts Association of Conservation Commissions member
Society of Wetland Scientists member

Refereed Publications:

Soil Science and Survey at Harvard Forest. A.Allen. In: Soil Survey Horizons. Vol. 36, No. 4, 1995, pp. 133-142.
Controlling Site to Evaluate History: Vegetation Patterns of a New England Sand Plain. G.Motzkin, D.Foster, A.Allen, J.Harrold, & R.Boone. In: Ecological Monographs 66(3), 1996, pp. 345-365.
Vegetation Patterns in Heterogeneous Landscapes: The Importance of History and Environment. G.Motzkin, P.Wilson, D.R.Foster & A.Allen. In: Journal of Vegetation Science 10, 1999, pp. 903-920.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant [REDACTED]

Prepared by: EcoTec, Inc

Project Location: 275 Old Lancaster Rd., Sudbury

DEP File #

Section I. Vegetation

Number: TP-U

Transect # A-36

Date of Delin: 4/9/2021

A.	Sample layer and plant species (Enter largest to smallest % cover by layer)	Percent Cover (or basal area)	Percent Dominance	Dominant Plant?	Wetland Indicator Category
Tree	White Pine <i>Pinus strobus</i>	40	40.0	YES	FACU
	White Oak <i>Quercus alba</i>	20	20.0	YES	FACU-
	Red Oak <i>Quercus rubra</i>	10	10.0	NO	FACU-
	Red Maple <i>Acer rubrum</i>	30	30.0	YES	FAC *
Sapling	White Pine <i>Pinus strobus</i>	10	100.0	YES	FACU
Shrub	Black Cherry <i>Prunus serotina</i>	20	66.7	YES	FACU
	Red Maple <i>Acer rubrum</i>	10	33.3	YES	FAC *
Ground	none				
Vine	Asiatic bittersweet <i>Celastrus scandens</i>	10	100.0	YES	NL

Vegetation Conclusions	
Number of dominant wetland indicator plants	2
Number of dominant non-wetland indicator plants	5
Is the number of dominant wetland plants equal or greater than the number of dominant non-wetland plants?	NO

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant [redacted]

Prepared by: EcoTec, Inc

Project Location: 275 Old Lancaster Rd., Sudbury DEP File #

Section II. Indicators of Hydrology

Number: TP-U

Transect # A-36

Date of Delin: 4/9/2021

1. Soil Survey

Is there a published soil survey for this site? [redacted]

title/date
map number
soil type mapped
hydric soil inclusions

Are field observations consistent with soil survey? [redacted]

Remarks: [redacted]

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
Litter	3	[redacted]	[redacted]
O	2-0	[redacted]	[redacted]
A	0-6	10YR 3/2	[redacted]
Bw	6-15	10YR 5/6	2% 10YR 5/8

Remarks loamy sands

3. Other [redacted]

Conclusion: Is the soil hydric? No

Other Indicators of hydrology (check all that apply):

- Site Inundated [redacted]
- Depth to free water in observation hole [redacted]
- Depth to soil saturation in observation hole [redacted]
- Water marks [redacted]
- Drift lines [redacted]
- Sediment Deposits [redacted]
- Drainage patterns in BVWs [redacted]
- Oxidized rhizospheres [redacted]
- Water stained leaves [redacted]
- Recorded data (stream, lake, or tidal gauge; aerial photo; other): [redacted]
- Other: [redacted]

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetland hydrology present:		
Hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other indicators of hydrology present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample Location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant

Prepared by: EcoTec, Inc

Project Location: 275 Old Lancaster Rd., Sudbury

DEP File #

Section I. Vegetation

Number: TP-W

Transect # A-36

Date of Delin: 4/9/2021

A. Sample layer and plant species (Enter largest to smallest % cover by layer)			Percent Cover (or basal area)	Percent Dominance	Dominant Plant?	Wetland Indicator Category
Tree	White Pine	Pinus strobus	50	50.0	YES	FACU
	Red Maple	Acer rubrum	50	50.0	YES	FAC *
Sapling	Red Maple	Acer rubrum	10	100.0	YES	FAC *
Shrub	Beaked Hazelnut	Corylus cornuta	20	40.0	YES	FACU-
	Highbush Blueberry	Vaccinium corymbosum	20	40.0	YES	FACW- *
	Silky Dogwood	Cornus amomum	10	20.0	YES	FACW *
Ground	Cinnamon Fern	Osmunda cinnamomea	50	66.7	YES	FACW *
	Skunk Cabbage	Symplocarpus foetidus	25	33.3	YES	OBL *
Vine						

Vegetation Conclusions

Number of dominant wetland indicator plants

6

Number of dominant non-wetland indicator plants

2

Is the number of dominant wetland plants equal or greater than the number of dominant non-wetland plants?

YES

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant [redacted]

Prepared by: EcoTec, Inc

Project Location: 275 Old Lancaster Rd., Sudbury DEP File #

Section II. Indicators of Hydrology

Number: TP-W

Transect # A-36

Date of Delin: 4/9/2021

1. Soil Survey

Is there a published soil survey for this site? [redacted]

title/date
map number
soil type mapped
hydric soil inclusions

Are field observations consistent with soil survey? [redacted]

Remarks: [redacted]

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
Litter	1	[redacted]	[redacted]
O	2-0	[redacted]	[redacted]
A	0-12	10YR 2/1	[redacted]
Bg	12-16	10YR 6/2	10% 10YR 4/6

Remarks silt loams

3. Other [redacted]

Conclusion: Is the soil hydric? Yes

Other Indicators of hydrology (check all that apply):

- Site Inundated [redacted]
- Depth to free water in observation hole [redacted]
- Depth to soil saturation in observation hole [redacted]
- Water marks [redacted]
- Drift lines [redacted]
- Sediment Deposits [redacted]
- Drainage patterns in BVWs [redacted]
- Oxidized rhizospheres [redacted]
- Water stained leaves [redacted]
- Recorded data (stream, lake, or tidal gauge; aerial photo; other): [redacted]
- Other: [redacted]

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:		
Hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other indicators of hydrology present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample Location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

USGS Topographic Map
Sudbury, MA

275 Old Lancaster Rd.



200 m
1000 ft

Scale = 1:18,056

205,799.14m 901,676.09m

MassGIS Topographic Features Basemap

National Flood Hazard Layer FIRMette



71°25'49"W 42°22'40"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
- 17.5 Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

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NHESP



NHESP ATLAS, 14TH EDITION
VALID AUGUST 1, 2017
PRIORITY HABITAT, ESTIMATED HABITAT
AND CERTIFIED VERNAL POOLS
CREATED: November 3, 2020

- Potential Vernal Pools
- NHESP Certified Vernal Pools
- MassDOT Roads Street Names
- Major MassDOT Routes
 - Interstate Highways
 - US Roads
 - State
- Massachusetts Towns
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Priority Habitats of Rare Species
- 2013-2014 Color Orthos (USGS)
- Orthos 2019
- 2019 Color Orthos (USGS)

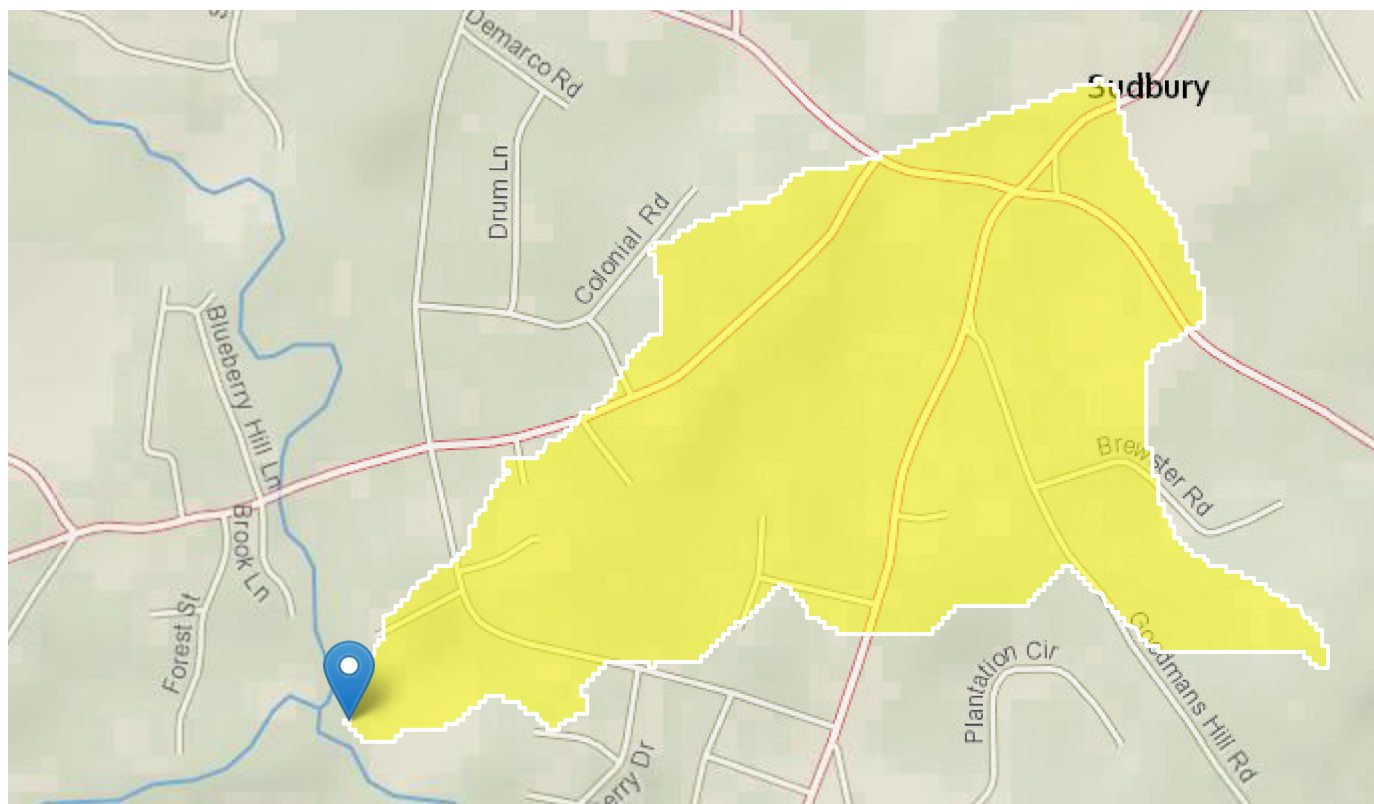
StreamStats Report

Region ID: MA

Workspace ID: MA20210409115121629000

Clicked Point (Latitude, Longitude): 42.37413, -71.42686

Time: 2021-04-09 07:45:24 -0400



275 Old Lancaster Road, Sudbury, MA

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.38	square miles
DRFTPERSTR	Area of stratified drift per unit of stream length	0.14	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.092	percent

Flow-Duration Statistics Parameters [Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.38	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0.14	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	2.092	percent	0.32	24.6

Flow-Duration Statistics Disclaimers [Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
50 Percent Duration	0.356	ft ³ /s
60 Percent Duration	0.232	ft ³ /s
70 Percent Duration	0.13	ft ³ /s
75 Percent Duration	0.0966	ft ³ /s
80 Percent Duration	0.0779	ft ³ /s
85 Percent Duration	0.0534	ft ³ /s
90 Percent Duration	0.038	ft ³ /s
95 Percent Duration	0.0195	ft ³ /s
98 Percent Duration	0.0121	ft ³ /s
99 Percent Duration	0.00817	ft ³ /s

Flow-Duration Statistics Citations

Ries, K.G., III, 2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (<http://pubs.usgs.gov/wri/wri004135/>)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.5.1

StreamStats Services Version: 1.2.22

NSS Services Version: 2.1.1

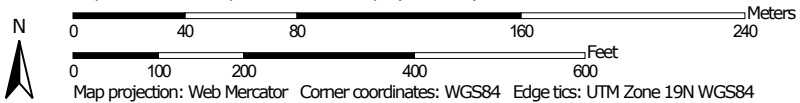
ATTACHMENT B: SOILS MAP



Soil Map—Middlesex County, Massachusetts
(Sudbury DPW)



Map Scale: 1:2,700 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 20, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 28, 2019—Aug 15, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
52A	Freetown muck, 0 to 1 percent slopes	5.4	21.3%
255A	Windsor loamy sand, 0 to 3 percent slopes	5.6	22.2%
255B	Windsor loamy sand, 3 to 8 percent slopes	12.4	48.7%
255C	Windsor loamy sand, 8 to 15 percent slopes	1.9	7.5%
256A	Deerfield loamy fine sand, 0 to 3 percent slopes	0.1	0.3%
Totals for Area of Interest		25.4	100.0%

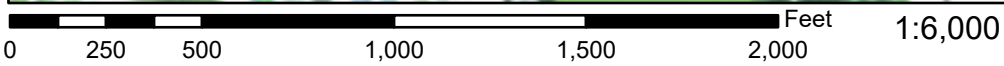
ATTACHMENT C: FEMA FIRMETTE



National Flood Hazard Layer FIRMMette



71°25'49"W 42°22'41"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR

		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD

		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D

OTHER AREAS

		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

		Digital Data Available
		No Digital Data Available
		Unmapped

MAP PANELS

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The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/7/2020 at 1:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT D: SEED SPECIFICATION



Attachment: Seed Specifications

New England Conservation/Wildlife Mix

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, forbs, wildflowers, legumes and grasses to provide both good erosion control and wildlife habitat value. This mix is designed to be a no maintenance seeding, and it is appropriate for cut and fill slopes, detention basins, and disturbed areas adjacent to commercial and residential projects.

Application Rate: 25 LBS/ACRE (1750 SQ. FT./LB)

Price: \$30.00/LB**

Species *: Big Bluestem (*Andropogon gerardii*), Switchgrass (*Panicum virgatum*), Little Bluestem (*Schizachyrium scoparium*), Canada Wild Rye (*Elymus canadensis*), Fox Sedge (*Carex vulpinoidea*), Partridge Pea (*Chamaecrista fasciculata*), Fringed Bromegrass (*Bromus ciliatus*), Pennsylvania Smartweed (*Polygonum pennsylvanicum*), Common Milkweed (*Asclepias syriaca*), Showy Tick-Trefoil (*Desmodium canadense*), New England Aster (*Aster novae-angliae*), Flat-top Aster (*Aster umbellatus*), Nodding Bur-Marigold (*Bidens cernua*).

New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites

The New England Erosion Control/Restoration Mix contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an excellent seed mix for ecologically appropriate restorations on moist sites that require quick stabilization as well as long-term establishment of native vegetation. This mix is particularly appropriate for detention basins that do not normally hold standing water. The plants in this mix can tolerate infrequent inundation, but not constant flooding.

Seeding: The mix may be applied by hydroseeding, by mechanical spreader, or on small sites it can be spread by hand. When applying on bare soil, rake the soil to create grooves, apply seed, then lightly rake over. In New England, the best results are obtained with a Spring or early Fall seeding. Summer and late Fall seeding will benefit with a light mulching of weed-free straw to conserve moisture. Late Fall and Winter dormant seeding require a slight increase in the seeding rate. Fertilization is not required unless the soils are particularly infertile.

Application Rate: 35 LBS/ACRE (1250 SQ. FT./LB.)

Price: \$26.00/LB**

Species *: Switchgrass (*Panicum virgatum*), Virginia Wild Rye (*Elymus virginicus*), Creeping Red Fescue (*Festuca rubra*), Fox Sedge (*Carex vulpinoidea*), Creeping Bentgrass (*Agrostis stolonifera*), Soft Rush (*Juncus effusus*), New England Aster (*Aster novae-angliae*), Grass-leaved Goldenrod (*Euthamia graminifolia*), Nodding Bur Marigold (*Bidens cernua*), Green Bulrush (*Scirpus atrovirens*), Joe-Pye Weed (*Eupatorium maculatum*), Boneset (*Eupatorium perfoliatum*), Blue Vervain (*Verbena hastata*).