

Repairs to North Street over Muddy Brook
Ware, Massachusetts

NOTICE OF INTENT

Town of Ware

May 2023

Tighe&Bond

W-2133-030
May 19, 2023

Mark Swett, Chairman
Ware Conservation Commission
126 Main Street
Ware, MA 01082

Re: **Notice of Intent**
Repairs to North Street over Muddy Brook (Ware)
MassDOT Bridge W-05-012

Dear Chairman Swett and Members of the Commission:

On behalf of the Town of Ware, Tighe & Bond respectfully submits this Notice of Intent (NOI) for the proposed Repairs to North Street over Muddy Brook Project in Ware, Massachusetts. The project consists of permanent repairs to the North Street Bridge, which spans Muddy Brook between Sheehy Road and Greenwich Road.

The North Street Bridge is rated in "Poor" condition by the Massachusetts Department of Transportation (MassDOT) due to severe deterioration of two of the steel rolled beams. The purpose of the project is to install permanent repairs to restore a stable and reliable crossing for vehicular traffic over Muddy Brook. The proposed work is located within Bordering Land Subject to Flooding (BLSF), the 200-foot Riverfront Area, and the 100-foot Buffer Zone to inland Bank and Bordering Vegetated Wetlands (BVW). As such, this application is being filed for the Commission's review pursuant to the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40; MAWPA) and the Town of Ware Local Wetlands Protection ByLaw (Article 20). The proposed project is also subject to review by the natural Heritage and Endangered Species Program (NHESP) under both MAWPA and the Massachusetts Endangered Species Act (MESA), as work will take place within Priority Habitat of Rare Species and Estimated Habitat of Rare Wildlife.

Thank you in advance for your review of this NOI. Should you have any questions or require additional information, please contact Isobel Arthen-Long at (413) 262-4960 or by email at iarthen-long@tighebond.com, or me at (413) 572-3224 or via email at mpcoady@tighebond.com. We look forward to meeting with you at your next public hearing.

Very truly yours,

TIGHE & BOND, INC.

Melissa P. Coady
Project Manager

Copy: MassDEP (WERO) Division of Wetlands and Waterways
NHESP Regulatory Review
Stuart Beckley, Town Manager, Town of Ware

Tighe&Bond

CONTENTS

WPA Form 3

Wetland Fee Transmittal Form

Section 1 Introduction

1.1	Project Background and Purpose	1-1
1.2	Project Locus	1-1
1.3	Project Site	1-2

Section 2 Existing Environment

2.1	Methodology of Resource Area Investigations	2-1
2.2	Summary of Jurisdictional Wetland Resource Areas	2-1
2.2.1	Inland Bank / Mean Annual High Water	2-2
2.2.2	Bordering Vegetated Wetlands	2-2
2.2.3	Land Under Water Bodies and Waterways	2-3
2.2.4	Bordering Lands Subject to Flooding	2-3
2.2.5	Riverfront Area	2-3
2.3	Rare Species.....	2-4

Section 3 Project Description

3.1	Proposed Activities	3-1
3.1.1	Access and Staging	3-1
3.2	Anticipated Sequence of Construction	3-1
3.3	Construction Period Protective Measures	3-1
3.4	Post-Construction Restoration	3-2

Section 4 Alternatives Analysis

4.1	No Action	4-1
4.2	Timber Blocking	4-1
4.3	Bridge Repairs (Preferred).....	4-1

Section 5 Regulatory Compliance

5.1	Massachusetts Wetlands Protection Act	5-1
5.1.1	Limited Project Status.....	5-1
5.1.2	Summary of MAWPA Jurisdictional Alterations.....	5-1
5.1.3	Performance Standards Compliance.....	5-2
5.1.4	Stormwater Management	5-4
5.1.5	Abutter Notification	5-5
5.2	Town of Ware Local Wetlands Protection ByLaw	5-5
5.2.1	Abutter Notification	5-5

Appendices

- A Figures
 - Figure 1 – Site Location Map
 - Figure 2 – Priority Resources Map
 - Figure 3 – Orthophotograph
- FEMA FIRM
- B Project Drawings – May 2023
- C Site Photographs
- D Abutter Notification Information
 - Abutter Notification Form
 - Certified List of Abutters
 - Affidavit of Service
- E NHESP State-Listed Species Information
- F Town of Ware Assessors Map



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

Ware

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):

North Street Bridge over Muddy Brook

a. Street Address

Ware

b. City/Town

01082

c. Zip Code

Latitude and Longitude:

42.27453

d. Latitude

-72.24365

e. Longitude

North Street right-of-way (ROW)

f. Assessors Map/Plat Number

g. Parcel /Lot Number

2. Applicant:

Stuart

a. First Name

Beckley

b. Last Name

Town of Ware

c. Organization

126 Main Street

d. Street Address

Ware

e. City/Town

MA

f. State

01082

g. Zip Code

413-967-9648 x

100

413-967-9649

i. Fax Number

sbeckley@townofware.com

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):

Melissa

a. First Name

Coady

b. Last Name

Tighe & Bond, Inc.

c. Company

53 Southampton Road

d. Street Address

Westfield

e. City/Town

MA

f. State

01085

g. Zip Code

413-572-3224

h. Phone Number

413-562-5317

i. Fax Number

MPCoady@tighebond.com

j. Email address

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

Fee Exempt - Municipal Project

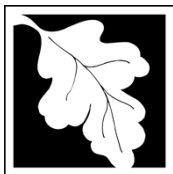
a. Total Fee Paid

N/A

b. State Fee Paid

N/A

c. City/Town Fee Paid



WPA Form 3 – Notice of Intent

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

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City/Town

A. General Information (continued)

6. General Project Description:

The Town of Ware proposes repairs to the North Street Bridge crossing over Muddy Brook, which MassDOT found to be in "Poor" condition during a 2021 inspection. Proposed activities include structural repairs to the steel superstructure and deck joints.

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

- | | |
|---|---|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input checked="" type="checkbox"/> Transportation |
| 9. <input type="checkbox"/> 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)

310 CMR 10.53(3)(i) - The maintenance, repair and improvement of structures and 310 CMR

10.53(3)(f) - Maintenance and improvement of existing public roadways

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:

Hampshire

a. County

N/A

b. Certificate # (if registered land)

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

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Document Transaction Number

Ware

City/Town

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

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	2,465 1. square feet 0 3. cubic feet of flood storage lost	2,465 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 checked="" type="checkbox"/> Riverfront Area	Muddy Brook (inland) 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: 25,330
square feet

4. Proposed alteration of the Riverfront Area:

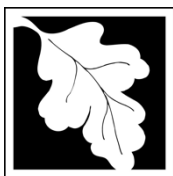
<u>5,390</u>	<u>5,390</u>	<u>0</u>
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.

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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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

Ware

City/Town

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

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

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

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 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

0

a. number of new stream crossings

1

b. number of replacement stream crossings



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

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

a. ☒ Yes ☐ No

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

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

August 1, 2021

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 100% / 0.2
percentage/acreage

(b) outside Resource Area 0 / 0
percentage/acreage

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

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

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

(b) ☒ Photographs representative of the site

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

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

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



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Ware

City/Town

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

- (c) ☒ MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).

Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

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

- (d) ☐ Vegetation cover type map of site

- (e) ☐ Project plans showing Priority & Estimated Habitat boundaries

- (f) OR Check One of the Following

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

2. ☐ Separate MESA review ongoing.

a. NHESP Tracking #

b. Date submitted to NHESP

3. ☐ Separate MESA review completed.

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

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

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

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

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

North Shore - Hull to New Hampshire border:

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

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

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

- c. ☐ Is this an aquaculture project?

- d. ☐ Yes ☒ No

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



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Bureau of Resource Protection - Wetlands

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Online Users:

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

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

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

D. Additional Information

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

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

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

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



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

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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.

Repairs to North Street over Muddy Brook

a. Plan Title

Tighe & Bond, Inc.

b. Prepared By

May 2023

d. Final Revision Date

c. Signed and Stamped by

Varies - as noted

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:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Ware

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.

John B. Behlery, Town of Ware
1. Signature of Applicant

5/19/2023
2. Date

3. Signature of Property Owner (if different)

Mark Coy
5. Signature of Representative (if any)

4. Date

5/19/23

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:

North Street Bridge over Muddy Brook

a. Street Address

N/A - Fee Exempt

c. Check number

Ware

b. City/Town

N/A

d. Fee amount

2. Applicant Mailing Address:

Stuart

a. First Name

Town of Ware

c. Organization

126 Main Street

d. Mailing Address

Ware

e. City/Town

413-967-9648 x 100

h. Phone Number

413-967-9649

i. Fax Number

Beckley

b. Last Name

MA

f. State

01082

g. Zip Code

sbeckley@townofware.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).



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

Step 5/Total Project Fee: 0

Step 6/Fee Payments:

Total Project Fee: 0
a. Total Fee from Step 5

State share of filing Fee: 0
b. 1/2 Total Fee **less** \$12.50

City/Town share of filing Fee: 0
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.)

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SECTION 1

Section 1

Introduction

This Notice of Intent (NOI) is being submitted on behalf of the Town of Ware (Town) for the Repairs to North Street over Muddy Brook project. The proposed project consists of structural repairs to the steel superstructure and deck joints of the existing bridge (identified as Bridge Number W-05-012 by the Massachusetts Department of Transportation (MassDOT)).

This project includes work within Areas Subject to Protection and Jurisdiction under the Massachusetts Wetlands Protection Act (MAWPA; M.G.L c. 131 § 40) and the Town of Ware Local Wetlands Protection ByLaw (Article 20), including Bordering Land Subject to Flooding (BLSF) the 200-foot Riverfront Area of Muddy Brook, and the 100-foot Buffer Zone to inland Bank and Bordering Vegetated Wetlands (BVW). The project area is additionally located within Priority Habitats of Rare Species and Estimated Habitats of Rare Wildlife. Accordingly, this NOI is being filed jointly under the Massachusetts Endangered Species Act (MESA; 321 CMR 10.00) and the MAWPA.

1.1 Project Background and Purpose

The North Street Bridge over Muddy Brook was built in 1939. and carries two lanes of bidirectional traffic and one sidewalk along the south edge of road, with concrete curbing and steel guiderail separating the sidewalk from the travel lanes. The existing superstructure consists of seven (7) painted steel rolled beams supporting a cast-in-place concrete deck with an asphalt overlay. Open steel rail runs the length of the bridge. The superstructure is supported on gravity-style, cast-in-place concrete abutments founded on spread footings.

A MassDOT Structures Inspection Field Report dated August 31, 2021, found the superstructure in “Poor” condition based on severe deterioration of three (3) of the steel rolled beams. As advised by MassDOT, the Town proposes structural repairs to the steel superstructure and deck joints. All work will be performed from a work platform suspended from the bridge and thus no encroachment outside the public roadway will occur and permanent impacts to wetland resource areas are not anticipated.

1.2 Project Locus

The Project Locus consists of the North Street roadway right-of-way (ROW) in between 203 Upper North Street, 28 Sheehy Road, and one Town-owned undeveloped parcel of land (Parcel ID 29-0-67). This area consists of a 25-foot-wide paved roadway, 6-foot-wide bituminous concrete sidewalk, unmaintained forest edge, and the channel of Muddy Brook where it crosses below the roadway. Land use in the general vicinity of the bridge predominantly consists of forest, including the Ware Town Forest, forested and emergent wetlands, and rural residential lots. The project location is shown on the USGS Site Location Map provided as Figure 1 in Appendix A.

1.3 Project Site

The Project Site, or Limits of Work, consists of approximately 8,565 square feet (sf) of land within the Project Locus at an approximate latitude of 42.27457 and longitude of y-72.24365. The Project Site is illustrated on Figure 3 in Appendix A and on the Project Drawings provided in Appendix B of this NOI.

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SECTION 2

Section 2

Existing Environment

This section provides a description of the Project Site and surrounding area, as well as information pertaining to wetland resource areas and rare species. Land use in the general vicinity of the Project Site was determined based on direct observations made during site inspections and a review of information available through the Massachusetts Geographic Information System (MassGIS).

The project location is shown on the Site Location Map (Figure 1), provided in Appendix A. The site and surrounding area are also shown on the Massachusetts Department of Environmental Protection (MassDEP) Priority Resources Map (Figure 2) and Orthophotograph (Figure 3) in Appendix A. Photographs of the site and surrounding area are provided in Appendix C.

2.1 Methodology of Resource Area Investigations

On May 8, 2023 a Tighe & Bond wetland scientist conducted wetland resource area field investigations in general accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0, U.S. Army Corps of Engineers, January 2012), *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands* (MassDEP, 2022), and 310 CMR 10.00.

2.2 Summary of Jurisdictional Wetland Resource Areas

The following wetland resource areas identified within or in close proximity to the project area are subject to jurisdiction under the MAWPA and its implementing regulations and Article 20:

- Inland Bank (Muddy Brook)
- Bordering Vegetated Wetlands (BVW)
- Land Under Water Bodies and Waterways (LUW; Muddy Brook)
- Bordering Land Subject to Flooding (BLSF)
- Riverfront Area (Muddy Brook)

A summary of resource areas delineated by flag series is presented in Table 2-1.

TABLE 2-1
Summary of Wetland Resource Areas by Flag Series

Wetland System ID	Flag Numbers	Resource Area Type
1A/2A	1A-1 through 1A-6 and 2A- 1 through 2A-4	Mean Annual High Water (MAHW), Bank (Muddy Brook, east side) ^{1,2}
1B/2B	1B-1 through 1B-5 and 2B-1 through 2B-6	MAHW, Bank (Muddy Brook, west side) ^{1,2}
1C	1C-1 through 1C-5	BVW

Notice of Intent - Repairs to North Street over Muddy Brook
(Ware)

TABLE 2-1

Summary of Wetland Resource Areas by Flag Series

Wetland System ID	Flag Numbers	Resource Area Type
2C	2C-1 through 2C-6	BVW

¹ Shown as perennial on the most current USGS topographic map (Ware, MA; 2021).² MAHW and Bank were found to be coincident at these locations.

2.2.1 Inland Bank / Mean Annual High Water

Inland Bank is defined at 310 CMR 10.54(2) as the portion of the land surface which normally abuts and confines a water body, and may be comprised of exposed soil, gravel, or stone.

1A/2A Series

The 1A/2A series demarcates the east Bank of Muddy Brook upstream and downstream of the North Street Bridge. The east Bank of the river in the vicinity of the Project Site is clearly defined and gently sloped down to the river. Vegetation on the Bank is dominated by red maple (*Acer rubrum*; FAC), eastern white pine (*Pinus strobus*; FACU), highbush blueberry (*Vaccinium corymbosum*; FACW), lowbush blueberry (*Vaccinium angustifolium*; FACU), and invasive Japanese barberry (*Berberis thunbergii*; FACU), Japanese knotweed (*Fallopia japonica*; FACU), and Japanese honeysuckle (*Lonicera japonica*; FACU).

2A/2B Series

The 2A/2B series demarcates the west Bank of Muddy Brook upstream and downstream of the North Street Bridge. The Bank on the west side is steep and rises abruptly from the riverbed. The Bank is characterized by large boulders and is dominated by invasive species including Japanese barberry, Japanese, knotweed, Japanese honeysuckle, and multiflora rose (*Rosa multiflora*; FACU).

2.2.2 Bordering Vegetated Wetlands

BVW is defined at 310 CMR 10.55(2)(a) as freshwater wetlands which border on creeks, rivers, streams, swamps, ponds, and lakes. The types of freshwater wetlands are wet meadows, marshes, swamps, and bogs.

1C Series

The 1C series demarcates the boundary of a BVW associated with the eastern Bank of Muddy Brook upstream of the North Street Bridge. This BVW is characterized as a Palustrine Emergent (PEM2B) wetland and is situated within a terrace adjacent to the Bank. Dominant vegetation includes marsh mermaid-weed (*Proserpinaca palustris*; OBL), water forget-me-not (*Myosotis scorpioides*; OBL), and tussock sedge (*Carex stricta*; OBL).

A representative soil profile was evaluated within the boundary of the BVW by advancing a Dutch auger approximately 10 inches (i.e., until refusal). Black (10YR 2/1) mucky sand was observed from 0 to 10 inches below the ground surface, meeting the criteria for the Sandy Mucky Mineral (S1) and Dark Surface (S7) hydric soil indicators. Indicators of wetland hydrology within the BVW included surface water, water-stained leaves, and hydrogen sulfide odor.

Series 2C

The 2C series demarcates the boundary of a BVW located on the eastern Bank of Muddy Brook downstream of the North Street Bridge. This BVW is characterized as a Palustrine Scrub-Shrub (PSS1E) wetland and is positioned at the toeslope of the forested shoulder of the North Street roadway. Vegetation in BVW 2C was dominated by highbush blueberry, skunk cabbage (*Symplocarpus foetidus*; OBL), tussock sedge, and Japanese barberry.

Soils within BVW 2C consisted of 12 inches of black (10YR2/1) mucky sandy loam with ten percent light gray (10YR 7/2) depletions, meeting the criteria for the Depleted Dark Surface (F7) hydric soil indicator. Refusal was encountered at a depth of 12 inches. Indicators of wetland hydrology in this area included presence of surface water and saturation to the soil surface.

2.2.3 Land Under Water Bodies and Waterways

Per 310 CMR 10.56(2), LUW is the land beneath any creek, river, stream, pond, or lake. Said land may be composed of organic muck or peat, fine sediments, rocks, or bedrock. LUW in the vicinity of the Project Site consists of Muddy Brook, which is characterized by a cobble-gravel streambed.

2.2.4 Bordering Lands Subject to Flooding

BLSF is defined at 310 CMR 10.57(2)(a) as the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm. The boundary shall be determined by reference to the most recently available flood profile data prepared for the community under the National Flood Insurance Program (NFIP) and said boundary shall be presumed accurate.

The Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) (Community Number 250172; revised February 17, 1981) was consulted to evaluate the presence of Land Subject to Flooding. The Project Site was not included within the detailed study, but the FEMA Flood Insurance Rate Map (FIRM) (Community Number 250172 0022 ; revised August 17, 1981) shows the area mapped as Zone A. This zone is associated with the 100-year flood with no base flood elevation (BFE). BLSF within the Project Site consists of the Banks and adjacent vegetated slopes of Muddy Brook, as well as the North Street ROW. A copy of the FIRM is provided in Appendix A of this NOI.

2.2.5 Riverfront Area

Riverfront Area is defined at 310 CMR 10.58(2)(a) as the area of land between a river's mean annual high water line and a parallel line measured 200 feet horizontally. The Riverfront Area may include or overlap other resource areas or their buffer zones. The Riverfront Area does not have a buffer zone.

Riverfront Area at the Project Site is based on the MAHW lines delineated along Muddy Brook and totals approximately 25,330 sf. It consists of the North Street paved roadway, maintained road shoulders, and unmaintained forest edge. Degraded Riverfront Area accounts for approximately 60% of Riverfront Area within the Project Site.

2.3 Rare Species

The Massachusetts Natural Heritage and Endangered Species Program (NHESP) Atlas, 15th edition, effective August 1, 2021, and MassGIS online mapping data (also August 1, 2021), were reviewed during the preparation of this NOI. According to these sources, the proposed work is located within the limits of mapped *Priority Habitats of Rare Species* and *Estimated Habitats of Rare Wildlife*. An information request was submitted to NHESP to determine the extent and type of state-listed protected species within the proposed Project Site. In correspondence dated April 21, 2023 (included as Appendix E), NHESP confirmed that the Project Site is located within both Priority Habitat of Rare Species (PH 1335) and Estimated Habitat of Rare Wildlife (EH 876) for the species included in Table 2-2. Accordingly, a copy of this NOI has been provided to NHESP for review.

TABLE 2-2

Summary of State-Listed Species Mapped within Project Site

Common Name	Scientific Name	Taxonomic Group	State Status
Wood Turtle	<i>Glyptemys insculpta</i>	Reptile	Special Concern

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SECTION 3

Section 3

Project Description

3.1 Proposed Activities

The proposed repairs will include partial demolition of select beam ends and replacement with new steel. To facilitate jacking and address the condition of the existing bearings, all existing bearing assemblies are anticipated to be demolished and replaced with new assemblies. The beam ends to be repaired will be painted in conformance with the provisions of the MassDOT Standard Specifications. If practical, deck ends will be closed off to prevent runoff from leaking onto the repaired steel.

3.1.1 Access and Staging

The Project Site will be accessed via North Street from east and west of the existing bridge. A staging area is proposed within the roadway surface to the west of the bridge. The location of the proposed staging area is shown on Sheet C-002 of the Project Drawings included as Appendix B of this NOI.

3.2 Anticipated Sequence of Construction

The following anticipated sequence of construction applies to the Project Site. Please note that the following sequence is based on Tighe & Bond's experience with similar projects. The contractor's preferred sequence of work may vary.

1. Mobilization to the site and install temporary sediment and erosion control measures, including perimeter barriers and other Best Management Practices (BMPs).
2. Establishment of staging and storage areas and hazardous materials containment.
3. Jacking of the existing bridge superstructure.
4. Cutting and replacement of deteriorated bridge bearing assemblies.
5. Repaving of disturbed pavement on the bridge.
6. Restore disturbed areas and monitor for establishment of vegetation.
7. Remove perimeter barriers and erosion controls once site has stabilized and regulatory agencies have authorized such actions.

3.3 Construction Period Protective Measures

Wetland resource areas near the Project Site will be protected by a row of erosion control barriers placed at the limits of work consisting of compost filter tubes. The limits of work have been established to restrict the contractor only to the areas necessary to conduct the work. The locations of these barriers are illustrated on Sheet C-002 of the Project Drawings provided in Appendix B. In addition, the following BMPs are incorporated into the project design:

- The contractor will be required to maintain a reserve supply of compost filter tubes on-site and to make repairs throughout the construction period, as necessary.

- The barriers will be inspected regularly, and accumulated silt will be removed and properly disposed.
- Protective measures will be inspected after significant precipitation events and repaired, as necessary.

Compost filter tubes and other sediment and erosion control measures will be removed and properly disposed upon final stabilization of the Project Site.

3.4 Post-Construction Restoration

Upon completion of the bridge repair work, the disturbed pavement on the bridge and approach will be repaired by milling the full width of the road and then overlaying the milled surface with new pavement. The restoration of the public roadway will not result in an increase in street width or impervious area. Restoration activities will not result in grade or other changes within the project area. Any disturbed unpaved areas within the roadway shoulder will be restored to pre-construction conditions. Disturbed areas on the site will be restored to the extent practicable. Restoration of disturbed areas will generally consist of loaming and seeding.

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SECTION 4

Section 4

Alternatives Analysis

The following alternatives were considered during the planning and design phases of the North Street Bridge repairs.

4.1 No Action

All proposed impacts could be avoided by taking “no action” at the North Street Bridge; however, the Town has an interest in providing a stable and reliable crossing of Muddy Brook for vehicular traffic.

4.2 Timber Blocking

The timber blocking alternative would consist of installing timber blocking at the ends of the deteriorated beams (1, 2, 4, and 5 on the west abutment and 1 and 5 on the east abutment).

Typically, live load is collected by the concrete deck and transferred to the steel stringers, which then transfer the loads into the abutment through a bearing assembly. Due to the deterioration, this load path through the beam ends no longer has adequate capacity.

The proposed blocking would alter this load path from the stringer ends into the steel diaphragm channel, through the timber blocking, and then into the abutment. Tighe & Bond completed a preliminary structural analysis of the connection between the steel diaphragm and the steel stringer and found that the existing rivets do not have adequate capacity to transfer the load. Therefore, to utilize this option, the rivets would need to be replaced with high strength steel bolts. The clip angles connecting the diaphragms to the stringers would need to be replaced as well.

The blocking would be shimmed into place. To allow for thermal expansion, it would likely be necessary to use a slip surface at the top of the blocking and bottom of the diaphragm channel to allow for movement of the superstructure. It would also likely be necessary to install a continuous angle on the leading edge of the blocking to secure it to the concrete abutment. A preliminary analysis indicates that the timber blocking itself will have sufficient load carrying capacity. However, this may require timber blocking to rest within the stream channel, thereby introducing additional impacts to wetland resource areas and mapped habitat of rare species.

Although the bearings would not need to be replaced as part of the timber blocking alternative, this option would be considered a temporary repair and the bearings would need to be addressed in the future.

4.3 Bridge Repairs (Preferred)

The bridge repairs alternative involves welding new partial depth beam sections to the ends of the deteriorated beams. WT sections would be welded into place and the sole plates and masonry plates would be replaced. Deteriorated anchor nuts and bolts would

also need to be addressed. This would be considered a permanent repair. No work would take place within Muddy Brook.

The bridge repairs alternative is be more costly, as there is an additional expense associated with jacking operations, which would be utilized to unload the beams during construction. The end diaphragm channels would need to have adequate strength to transfer the load through the jacking and into the abutment. This would likely require that web stiffeners be installed in the channels at the jacking locations and may result in additional strengthening measures.

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SECTION 5

Section 5

Regulatory Compliance

The project has been designed to avoid environmental impacts when possible, minimize unavoidable impacts when practicable, and provide mitigation that is commensurate with the proposed alterations. This section summarizes the project's compliance with the regulatory requirements of the MAWPA, Article 20, and other pertinent state and federal regulatory programs.

5.1 Massachusetts Wetlands Protection Act

5.1.1 Limited Project Status

The proposed activities qualify for consideration as the following Limited Projects:

310 CMR 10.53(3)(i): *The maintenance, repair and improvement (but not substantial enlargement except when necessary to meet the Massachusetts Stream Crossing Standards) of structures, including dams and reservoirs and appurtenant works to such dams and reservoirs, buildings, piers, towers, headwalls, bridges, and culverts which existed on the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983).*

310 CMR 10.53(3)(f): *Maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems.*

As performance standards are met for each resource area, there is no need to invoke limited project status for this project.

5.1.2 Summary of MAWPA Jurisdictional Alterations

As presented in Section 3, the proposed project will result in temporary and permanent alterations to wetland resource areas.

A summary of construction-period impacts to resource areas is presented in Table 5-1.

TABLE 5-1
Summary of Proposed Alterations to Jurisdictional Areas¹

Activity	BLSF (SF)	Riverfront Area (SF)	100-foot Buffer Zone (sf)
Bridge repair activities	1,785	1,785	1,785
Erosion controls	590	1,250	1,250
Access and staging	90	2,355	2,355
Total:	2,465	5,390	5,390

¹ Activity impacts may overlap across resource areas and the 100-foot Buffer Zone.

5.1.3 Performance Standards Compliance

The proposed project includes work within BLSF, Riverfront Area, and the 100-foot Buffer Zone to inland Bank and BVW. The following sections summarize the project's compliance with the General Performance Standards (provided in *italics*) established in the MAWPA regulations for each resource area.

5.1.3.1 Bordering Land Subject to Flooding

As noted in Table 5-1, approximately 2,465 sf of alterations to BLSF are anticipated due to the proposed activities. The Performance Standards for Bordering Land Subject to Flooding are set forth at 310 CMR 10.57(4)(a).

1. *Compensatory flood storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood water during peak flows. Compensatory flood storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream, or creek.*

The project will not result in any changes in grade or addition of new fill or structures. As such, the work will not result in a loss of flood storage capacity within the Project Site. Therefore, compensatory flood storage is not needed.

2. *Work within Bordering Land Subject to Flooding, including work required to provide the above-specified compensatory flood storage, shall not restrict flows so as to cause an increase in flood stage or velocity.*

Not applicable. As noted above, the project will not result in a net loss of flood storage and compensatory flood storage creation is not needed.

3. *Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work which would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.*

The proposed project will result in less than 5,000 sf of alteration of BLSF. Additionally, the majority of temporary alterations within BLSF are within paved public roadway, an area so altered by human activity that its important wildlife habitat functions have effectively been eliminated (as per 310 CMR 10.57(1)(a)(3)). As such, a Wildlife Habitat Evaluation is not required.

5.1.3.2 Riverfront Area

Approximately 5,390 sf of work will occur within the Riverfront Area of Muddy Brook. Proposed activities in Riverfront Area consist of bridge repair activities, placement of temporary erosion control barriers, and equipment staging. The proposed bridge repair project qualifies as a Riverfront Redevelopment Project in accordance with 310 CMR 10.58(5)(a) through (h), as the project consists of the repair of an existing structure and improvement of an existing road in a previously developed area that was degraded prior to August 7, 1996.

This section describes how the proposed project satisfies the Riverfront redevelopment provisions at 310 CMR 10.58(5).

(a) At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58(4) shall be met.

The proposed project is anticipated to result in an improvement over existing conditions of the Riverfront Area by reducing the threat of bridge failure and transport of bridge materials (e.g. corroded metal) into Muddy Brook

(b) Stormwater management is provided according to standards established by the Department.

The proposed project will not generate additional stormwater runoff, increase impervious area, or create a new point source discharge. Rather, the project will result in a net decrease of impervious area due to the reduction in size of the paved roadway. Per the Recommended Final Decision issued July 29, 2016, in the Matter of Berkshire Community College Docket No. WET-2015-023 from the MassDEP Office of Appeals and Dispute Resolution, it was ruled that 310 CMR 10.05(6)(k) through (q) do not apply to a project that does not propose a "point source" or "stormwater discharge" within Resource Areas or their Buffer Zones.

(c) Within 200 foot riverfront area, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25 foot riverfront areas, except in accordance with 310 CMR 10.58(5)(f) or (g).

The proposed bridge repair activities will occur at the location of the existing bridge. The North Street Bridge spans Muddy Brook, a perennial river, and therefore work within Riverfront Area is unavoidable to repair the bridge. However, work will not encroach closer than existing conditions.

(d) Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58(5)(f) or (g).

As stated above, the North Street Bridge spans Muddy Brook, a perennial river, and therefore work within Riverfront Area is unavoidable to repair the bridge.

(e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g).

The Project Site contains approximately 25,330 sf of Riverfront Area associated with Muddy Brook, all of which includes the paved surfaces and maintained shoulders of North Street. As all Riverfront Area within the Project Site is considered degraded, this standard has been met.

(f) *When an applicant proposed restoration on-site of degraded riverfront area, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(c), (d) and (e) at a ratio in square feet of at least 1:1 of restored area to area of alteration not conforming to the criteria. Areas immediately along the river shall be selected for restoration. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Restoration shall include*

- 1. removal of all debris, but retaining any trees or other mature vegetation;*
- 2. grading to a topography which reduces runoff and increases infiltration;*
- 3. coverage by topsoil at a depth consistent with natural conditions at the site; and*
- 4. seeding and planting with an erosion control seed mixture, followed by plantings of herbaceous and woody species appropriate to the site.*

Upon completion of construction activities, impacted areas within the footprint of North Street will be repaved in-kind. If work is required within the existing maintained road shoulders, those areas will be restored to pre-construction conditions.

(g) *When an applicant proposes mitigation either on-site or in the riverfront area within the same general area of the river basin, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(c), (d), or (e) at a ratio in square feet of at least 2:1 mitigation area to area of alteration not conforming to the criteria or an equivalent level of environmental protection where square footage is not a relevant measure. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Mitigation may include off-site restoration of riverfront areas, conservation restrictions under M.G.L. c. 184 §§ 31 to 33 to preserve undisturbed riverfront area that could otherwise be altered under 310 CMR 10.00, the purchase of development rights within the riverfront area, the restoration of bordering vegetated wetland, projects to remedy an existing adverse impact on the interests identified in M.G.L. c. 131 § 40 for which the applicant is not legally responsible, or similar activities undertaken voluntarily by the applicant which will support a determination by the issuing authority of no significant adverse impact. Preference shall be given to potential mitigation projects, if any, identified in a River Basin Plan approved by the Secretary of the Executive Office of Environmental Affairs.*

No mitigation is proposed within Riverfront Area. As previously stated, all work will take place within the existing roadway right-of-way and will be restored to pre-construction conditions.

5.1.4 Stormwater Management

No new impervious surfaces or point source discharges will result from the proposed activities. Per the recommended final decision issued on July 29, 2016, in the Matter of Berkshire Community College Docket # WET-2015-023 from the MassDEP Office of Appeals and Dispute Resolution, it was ruled that 310 CMR 10.05(6)(k) through (q) does

not apply to a project that does not propose a “point source” or “stormwater discharge” within resource areas or their Buffer Zones.

5.1.5 Abutter Notification

Abutters were notified in accordance with the MAWPA. A copy of the list of abutters and the abutter notification form are provided in Appendix D.

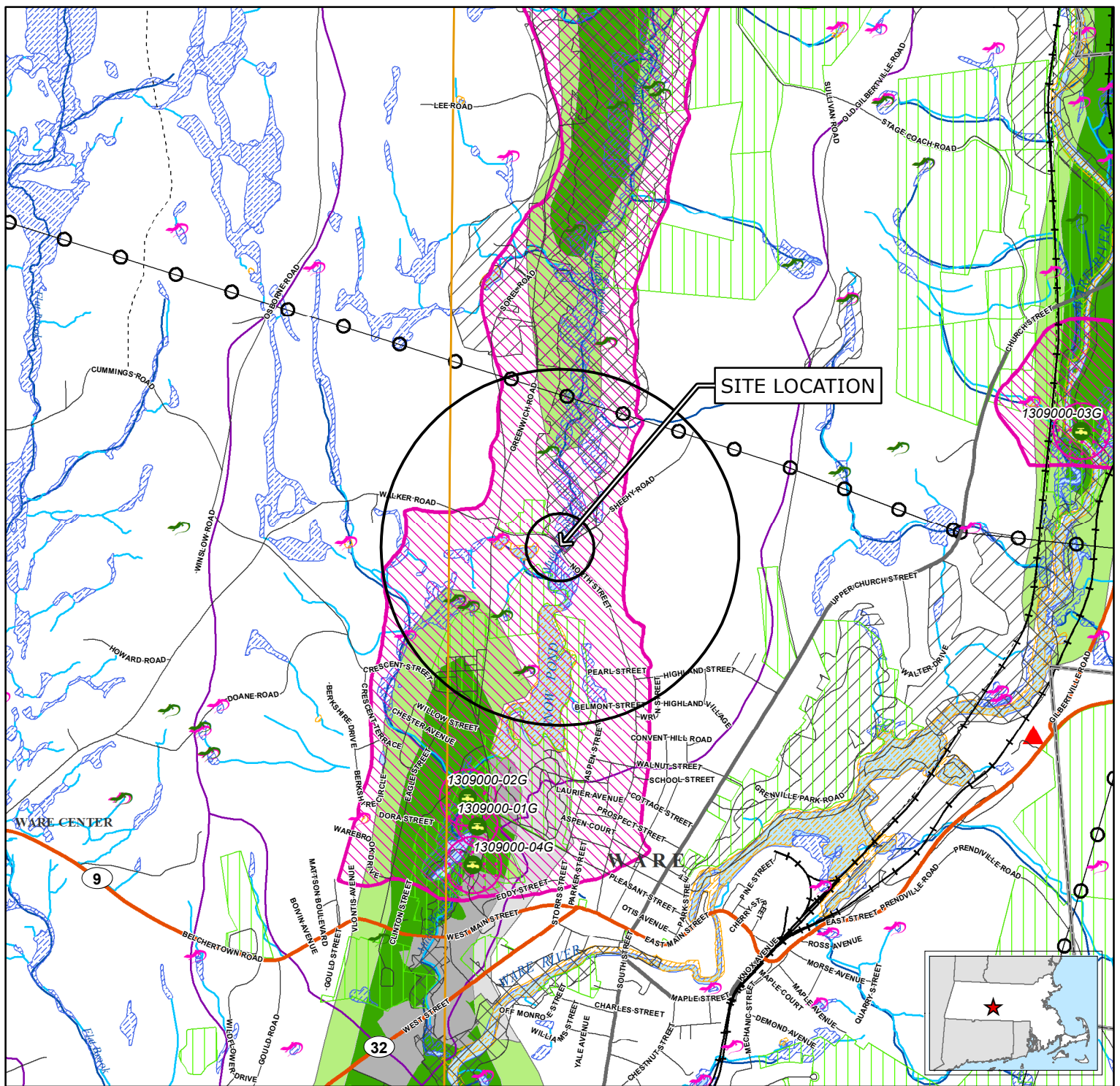
5.2 Town of Ware Local Wetlands Protection ByLaw

The proposed project will result in alterations to wetland resource areas and the Buffer Zone, as those areas are defined in Article 20. Given that the proposed project will result in minimal alterations to jurisdictional resource areas and meets all General Performance Standards established in the MAWPA, we respectfully request that the Conservation Commission find that (1) there is no practicable alternative to the proposed project with less adverse effects, and that (2) the proposed activities will have no significant adverse impact on the areas or values protected by the Ware Wetlands Protection ByLaw.

5.2.1 Abutter Notification

In addition to the abutter notification requirements of the MAWPA, abutters within 300 feet of the Project Site were notified in accordance with Article 20 Section V. The abutter notification form, list of abutters, and Affidavit of Service are provided in Appendix D.

APPENDIX A



Legend

- NHESP Certified Vernal Pools
- NHESP Potential Vernal Pools
- Non-Landfill Solid Waste Sites
- Proposed Well
- Emergency Surface Water
- Community Public Water Supply - Surface Water
- Community Public Water Supply - Groundwater
- Non-Community Non-Transient Public Water Supply
- Non-Community Transient Public Water Supply
- Limited Access Highway
- Multi-Lane Highway, NOT Limited Access
- Other Numbered Route
- Major Road - Arterials and Collectors
- Minor Street or Road
- Aqueducts
- Hydrologic Connections
- Stream/Intermittent Stream
- Powerline
- Pipeline
- Track or Trail
- Trains
- Public Surface Water Supply Protection Area (Zone A)
- DEP Approved Wellhead Protection Area (Zone I)
- DEP Approved Wellhead Protection Area (Zone II)
- DEP Interim Wellhead Protection Area (IWPA)
- Protected and Recreational Open Space
- Solid Waste Landfill
- Area of Critical Environmental Concern (ACEC)
- NHESP Priority Habitats for Rare Species
- NHESP Estimated Habitats for Rare Wildlife
- EPA Designated Sole Source Aquifer
- Major Drainage Basin
- Sub Drainage Basin
- MassDEP Open Water
- MassDEP Inland Wetlands
- MassDEP Coastal Wetlands
- MassDEP Not Interpreted Wetlands
- Public Surface Water Supply (PSWS)
- Water Bodies
- Non-Potential Drinking Water Source Area - High Yield
- Non-Potential Drinking Water Source Area - Medium Yield
- Potentially Productive Medium Yield Aquifer
- Potentially Productive High Yield Aquifer
- County Boundary
- Municipal Boundary
- USGS Quadrangle Sheet Boundary

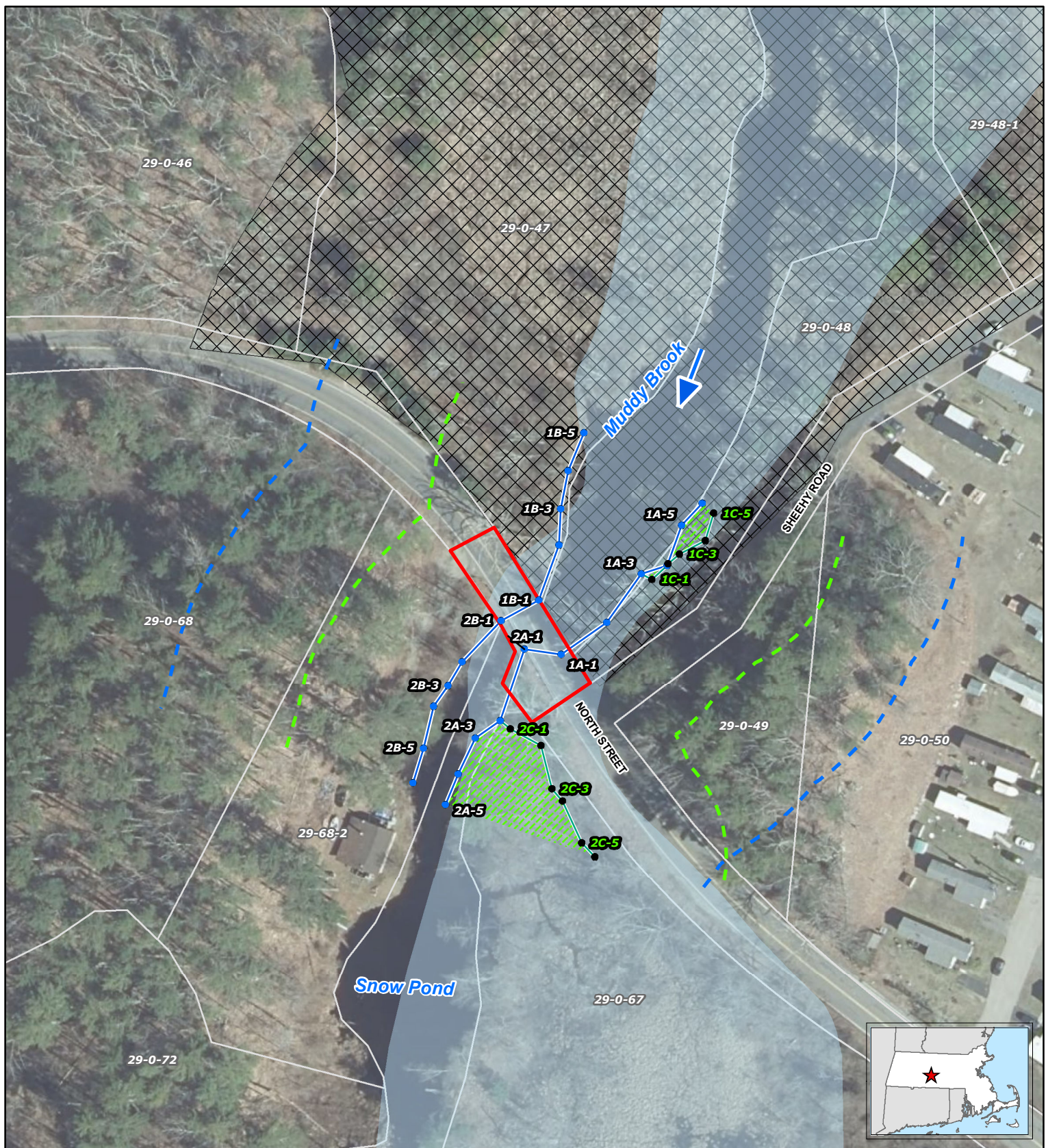
FIGURE 2 PRIORITY RESOURCES

Repairs to North Street
Over Muddy Brook
Ware, Massachusetts

Data source: Bureau of Geographic Information (MassGIS),
Commonwealth of Massachusetts, Executive Office of Technology
Circles indicate 500-foot and half-mile radii.
Data valid as of March 2023.

March 2023

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Legend

- Wetland Flag
- Bank Flag
- 100-Ft Buffer Zone
- 200-Ft Riverfront Area
- Delineated Wetland Boundary
- Delineated Bank Line
- Limit of Work
- Delineated Wetland Area
- Bordering Land Subject to Flooding
- NHESP Priority Habitats for Rare Species
- NHESP Estimated Habitats for Rare Wildlife
- Parcel Boundary

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Based on MassGIS Color Orthophotography (2021).
Parcels (FY2023) downloaded from MassGIS and are approximate.
BLSF data provided by FEMA.

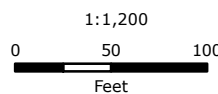
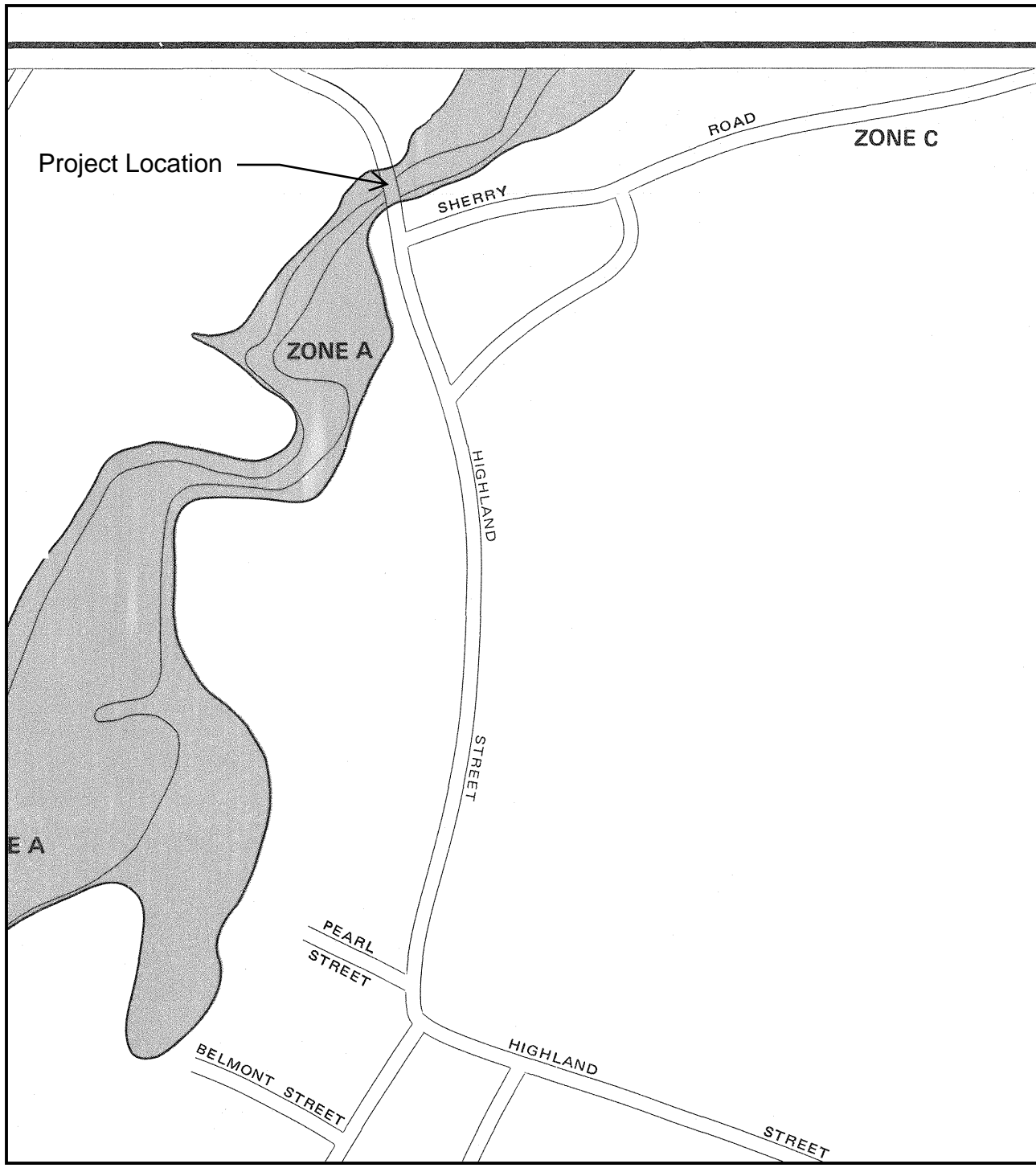



FIGURE 3 ORTHOGRAPH

Repairs to North Street
Over Muddy Brook
Ware, Massachusetts

May 2023

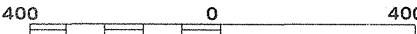


program at (800) 638-6620.



APPROXIMATE SCALE

400 0 400 FEET



ZONE B

STREET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM


FLOOD INSURANCE RATE MAP

TOWN OF
WARE,
MASSACHUSETTS
HAMPSHIRE COUNTY

PANEL 22 OF 30
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
250172 0022 B

EFFECTIVE DATE:
AUGUST 17, 1981



federal emergency management agency
federal insurance administration

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.

TOWN OF WARE, MASSACHUSETTS

REPAIRS TO NORTH STREET

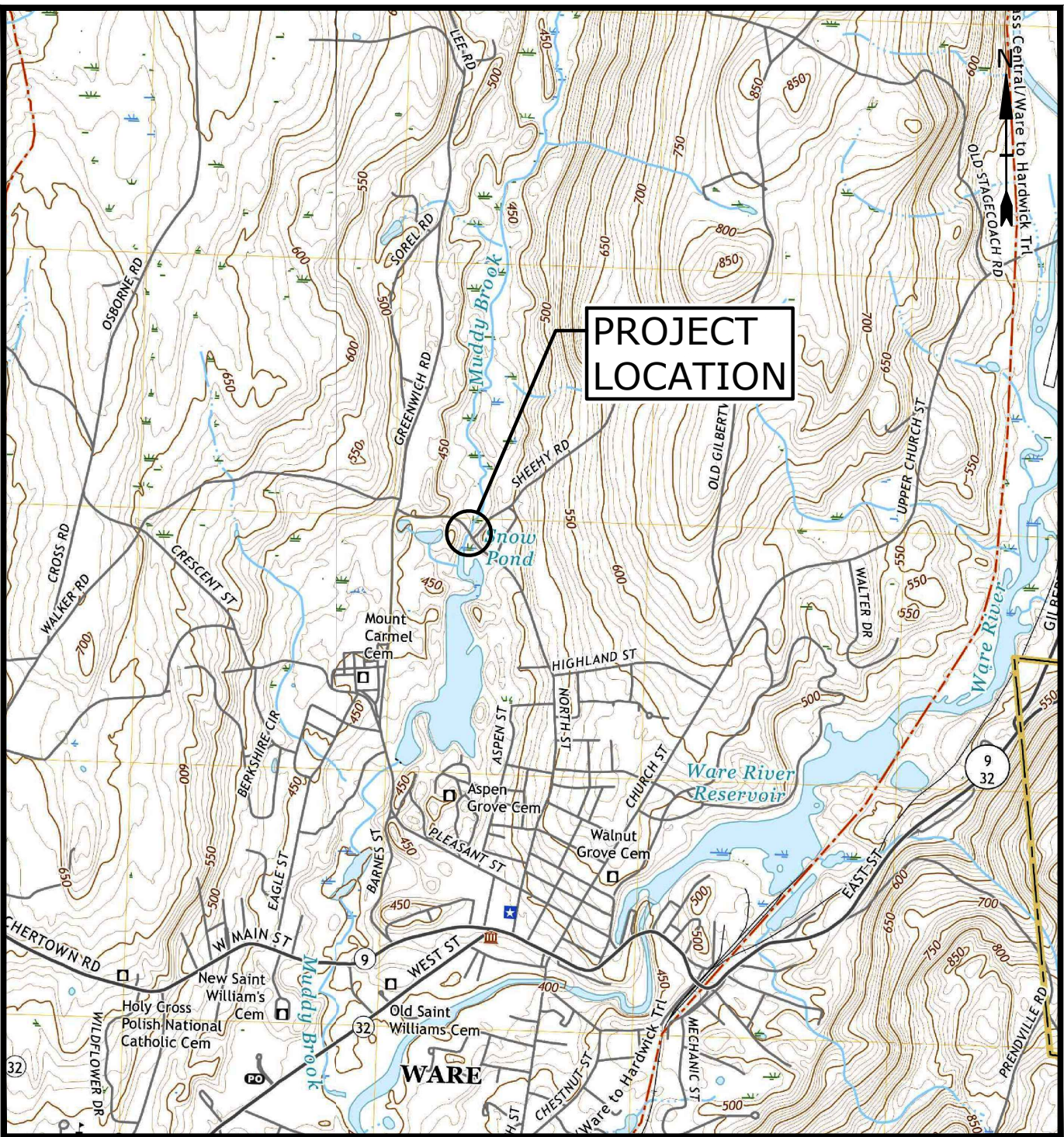
OVER MUDDY BROOK

MASSDOT BRIDGE NO. W-05-012 (ONE)

PERMIT SET

MAY 2023

LIST OF DRAWINGS	
SHEET NO.	SHEET TITLE
1	COVER
2	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
3	EXISTING CONDITIONS
4	SITE PLAN
5	TEMPORARY TRAFFIC CONTROL PLAN
6	CONSTRUCTION DETAILS
7	STRUCTURAL BRIDGE NOTES
8	DEMOLITION EXISTING BRIDGE PLANS AND SECTIONS
9	STRUCTURAL BRIDGE GIRDER REPAIRS PLAN AND SECTIONS

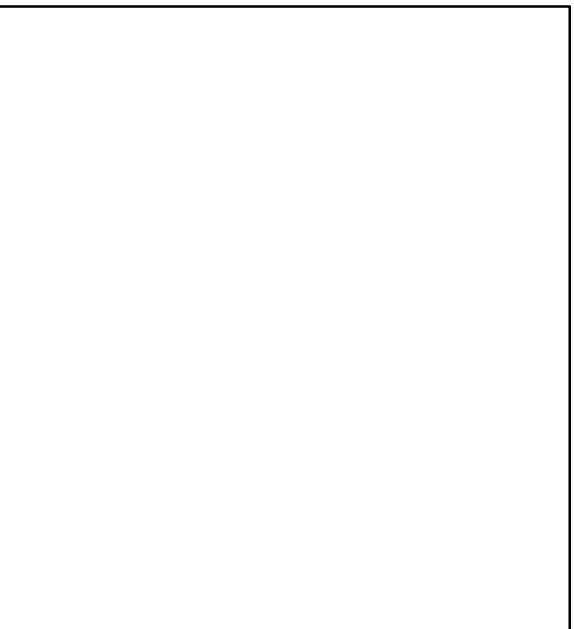
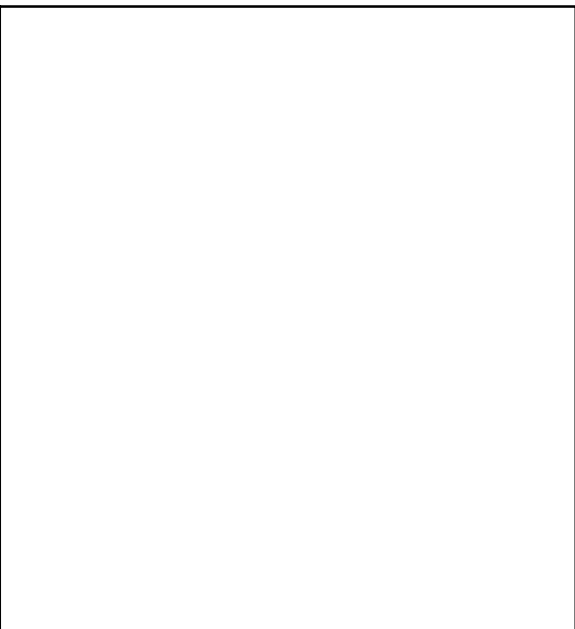


LOCATION MAP

SCALE: 1"=1000'

PREPARED BY:

Tighe&Bond



PREPARED FOR:

TOWN OF WARE,
MASSACHUSETTS

TOWN MANAGER

STUART B. BECKLEY

SELECT BOARD

CAITLIN M. MCCARTHY
JOSHUA A. KUSNIERZ
KEITH J. KRUCKAS
NANCY J. TALBOT
JOHN J. CASCIO

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NOT FOR CONSTRUCTION

COMPLETE SET 9 SHEETS

Last Saved: 5/11/2023
Plotted On: May 17, 2023 3:54pm By: SSak
Tighe & Bond C:\NW\2133 Ware\030 - North Street bridge rehabilitation\Drawings Figures\AutoCAD\Sheet\W2133-030-G-001.dwg

GENERAL NOTES:

1. BOLD TEXT AND LINES INDICATE PROPOSED WORK.
2. LIGHT TEXT AND LINES INDICATE APPROXIMATE EXISTING CONDITIONS.
3. THE HORIZONTAL COORDINATE SYSTEM IS THE NORTH AMERICAN DATUM OF 1983, MASSACHUSETTS STATE PLANE, MAINLAND ZONE, US FEET. VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988.
4. THE EXISTING BASE MAPPING WAS PREPARED USING LIDAR AND ORTHOGRAPHIC IMAGERY, AS DEVELOPED BY MASSGIS.
5. NOTIFY "DIGSAFE" AT 1-888-344-7233 TO ARRANGE FOR MARKING OUT EXISTING UNDERGROUND UTILITIES AT LEAST 72 HOURS IN ADVANCE OF MAKING EXCAVATION AT ANY GIVEN LOCATION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE ALLOWED TO START ANY KIND OF EXCAVATION WORK PRIOR TO HIS OBTAINING ALL THE NECESSARY INFORMATION REGARDING THE LOCATION OF UNDERGROUND UTILITIES AT THE SITE.
6. THE EXISTENCE OF UTILITIES AND APPURTENANCES AS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY, AND THE EXACT SIZE, TYPE, LOCATION AND ELEVATION SHALL BE THOROUGHLY INVESTIGATED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
7. SECURELY SUPPORT AND MAINTAIN EXISTING UTILITIES DURING CONSTRUCTION. IF REMOVAL OR RESTORATION OF UTILITIES ARE REQUIRED, THE RESPONSIBLE UTILITY OWNER SHALL BE NOTIFIED AND THEY SHALL COMMENCE THE WORK.
8. SILTATION CONTROL MEASURES SHALL BE TAKEN AS NEEDED TO PROTECT THE ADJACENT WATERWAY.
9. MATERIALS IDENTIFIED BY (MX.XX.XX) REFER TO THE MASSDOT "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES", DATED 2020.
10. CONTRACTOR SHALL BE AWARE OF OVERHEAD UTILITIES AND MAKE THE NECESSARY ARRANGEMENTS TO PERFORM ANY WORK NEAR THE OVERHEAD UTILITIES, PRIOR TO THE START OF CONSTRUCTION.
11. PROVIDE TO THE OWNER AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES A DETAILED PLAN OF APPROACH INDICATING METHODS OF PROPOSED TRAFFIC ROUTING ON A DAILY BASIS WHEN WORKING IN THE ROAD. PROVIDE COORDINATION TO ENSURE COMMUNICATION AND COORDINATION BETWEEN OWNER, CONTRACTOR AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
12. STORE FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS IN A SECONDARY CONTAINER AND REMOVE FROM THE SITE TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
13. PROVIDE A SUPPLY OF ABSORBENT SPILL RESPONSE MATERIALS, SUCH AS BOOMS OR BLANKETS, AT THE CONSTRUCTION SITE AT ALL TIMES TO CLEAN UP POTENTIAL SPILLS OF HAZARDOUS MATERIALS.
14. IMMEDIATELY REPORT SPILLS OF OIL AND/OR HAZARDOUS MATERIALS (OHM) TO THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION.
15. NOTIFY THE OWNER AND THE ENGINEER OF ANY EXISTING UTILITIES DISCOVERED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS.
16. WETLAND RESOURCE AREAS WERE DELINEATED BY TIGHE & BOND, INC. ON MAY 8, 2023.
17. THE LIMIT OF BORDERING LAND SUBJECT TO FLOODING (BLSF) IS BASED ON THE FEMA FLOOD INSURANCE STUDY (FIS) FOR THE TOWN OF WARE, HAMPSHIRE COUNTY (250172) EFFECTIVE FEBRUARY 17, 1981, AND FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NUMBER 2501720022 B, EFFECTIVE AUGUST 17, 1981.
18. ALL OF THE PROPOSED WORK IS WITHIN THE LIMITS OF NHESP PRIORITY HABITATS OF RARE SPECIES (PH1183) AND ESTIMATED HABITATS OF RARE WILDLIFE (EM 885) AS SHOWN ON THE PROJECT DRAWINGS. NHESP HAS VERIFIED THE PRESENCE OF CREEPER (*STROPHITUS UNDULATUS*) AND BROOK FLOATER (*ALASMIDONTA VANCOSA*).

TRAFFIC AND HIGHWAY DESIGN STANDARDS AND SPECIFICATIONS:














THE FOLLOWING STANDARDS GOVERN THE DESIGN AND CONSTRUCTION:

1. MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 2022, AS AMENDED
2. MASSDOT 2017 CONSTRUCTION STANDARD DETAILS
3. MASSACHUSETTS HIGHWAY DEPARTMENT 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS (AS RELATED TO TRAFFIC STANDARD DETAILS ONLY)
4. FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH 2012 MASSACHUSETTS AMENDMENTS
5. COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS
6. COMMONWEALTH OF MASSACHUSETTS 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING
7. LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK

ABBREVIATIONS

BIT	BITUMINOUS	LT	LEFT
BK	BOOK	MAHW	MEAN ANNUAL HIGH WATER
BLSF	BORDERING LAND SUBJECT TO FLOODING	MAX	MAXIMUM
BND	BOUND	MIN	MINIMUM
BVW	BORDERING VEGETATED WETLANDS	PB	PLAN BOOK
CL	CLASS	PG	PAGE
CONC	CONCRETE	PROP	PROPOSED
DH	DRILL HOLE	RCP	REINFORCED CONCRETE PIPE
DIA	DIAMETER	REINF.	REINFORCED
EL, ELEV.	ELEVATION	REQ'D	REQUIRED
EOP	EDGE OF PAVEMENT	RET	RETAIN
FND	FOUND	ROW	RIGHT OF WAY
FG	FINISHED GRADE	RT	RIGHT
FT	FOOT	R&R	REMOVE AND REPLACE
GALV	GALVANIZED	SB	STONE BOUND
HSE	HOUSE	SCH	SCHEDULE
INV	INVERT	SS	STAINLESS STEEL
IP	IRON PIN	TYP	TYPICAL
LF	LINEAR FEET	UP	UTILITY POLE

LEGEND

PROPERTY LINE	
RIGHT-OF-WAY	
EDGE OF PAVEMENT	
EXISTING MAJOR CONTOUR	
EXISTING MINOR CONTOUR	
EXISTING GUARDRAIL	
VEGETATED WETLAND	
BORDERING LAND SUBJECT TO FLOODING (BLSF)	
100-FOOT BUFFER ZONE	
200-FOOT RIVERFRONT AREA	
TOP OF BANK	
BORDERING VEGETATED WETLANDS (BVW)	
PROPOSED EROSION CONTROL	



PERMIT SET

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Repairs to North Street over Muddy Brook MassDOT Bridge W-05-012 (ONE)

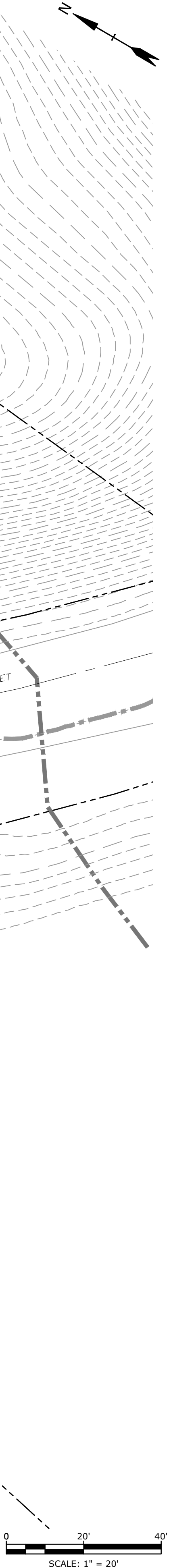
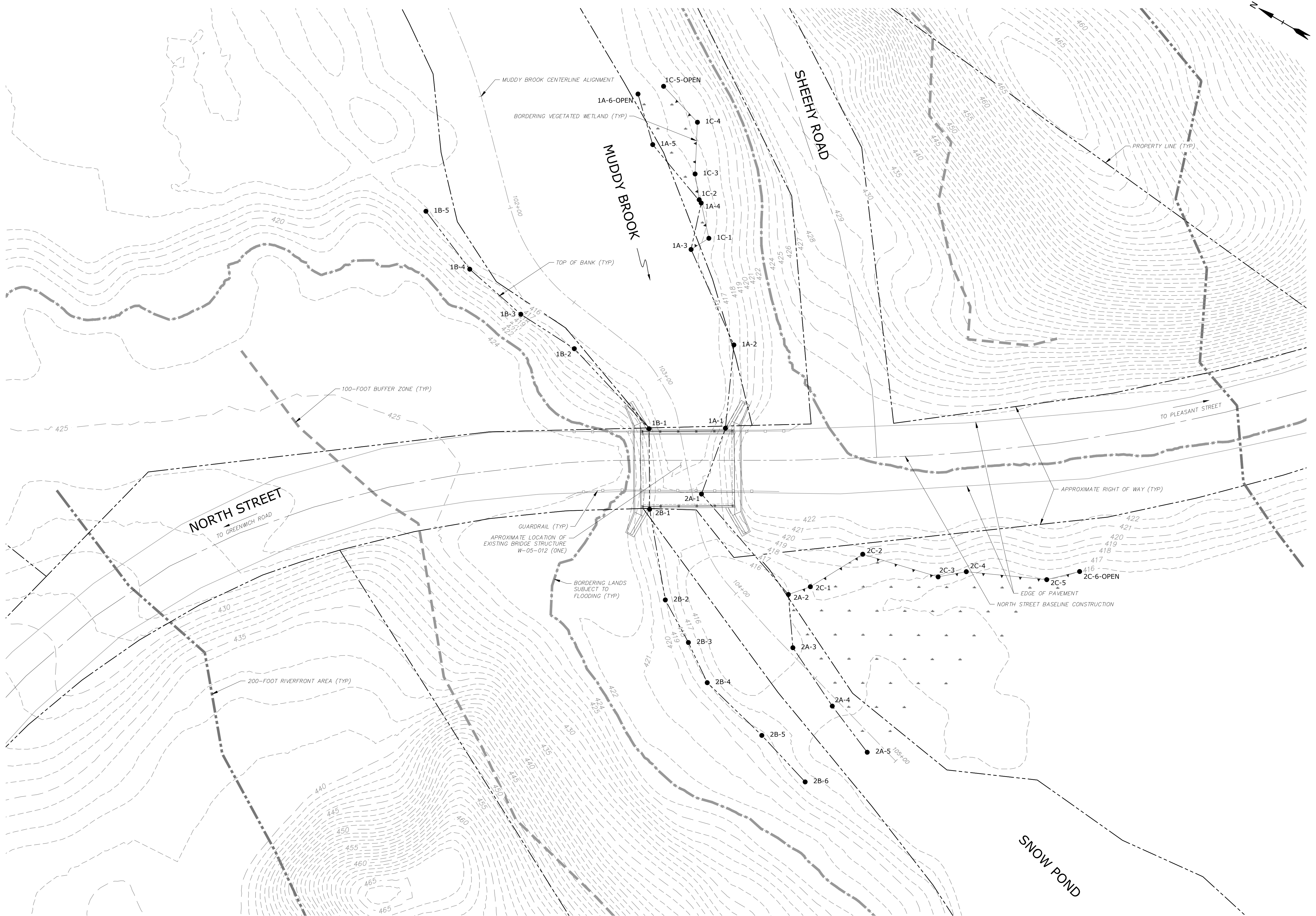
Town of Ware
Ware, Massachusetts

MARK	DATE	DESCRIPTION
PROJECT NO:		W2133-030
DATE:		MAY 2023
FILE:		W2133-030-G-001.dwg
DRAWN BY:		BJP
DESIGNED/CHECKED BY:		JJ
APPROVED BY:		DSH

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

SCALE:	NO SCALE
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Last Saved: 5/11/2023
Plotted On: May 12, 2023 8:53am By: SSak
Tighe & Bond 2:11W2133 Ware030 - North Street bridge rehabilitation Drawings Figures AutoCAD Sheet W2133-030-C-001.dwg



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Repairs to
North Street
over Muddy
Brook
MassDOT
Bridge
W-05-012
(ONE)

Town of Ware
Ware, Massachusetts

MARK	DATE	DESCRIPTION
PROJECT NO:	W2133-030	
DATE:	MAY 2023	
FILE:	W2133-030-C-001.dwg	
DRAWN BY:	SDS	
DESIGNED/CHECKED BY:	J1	
APPROVED BY:	DSH	

EXISTING CONDITIONS

SCALE: 1" = 20'

PERMIT SET

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Repairs to North Street over Muddy Brook
MassDOT Bridge W-05-012 (ONE)

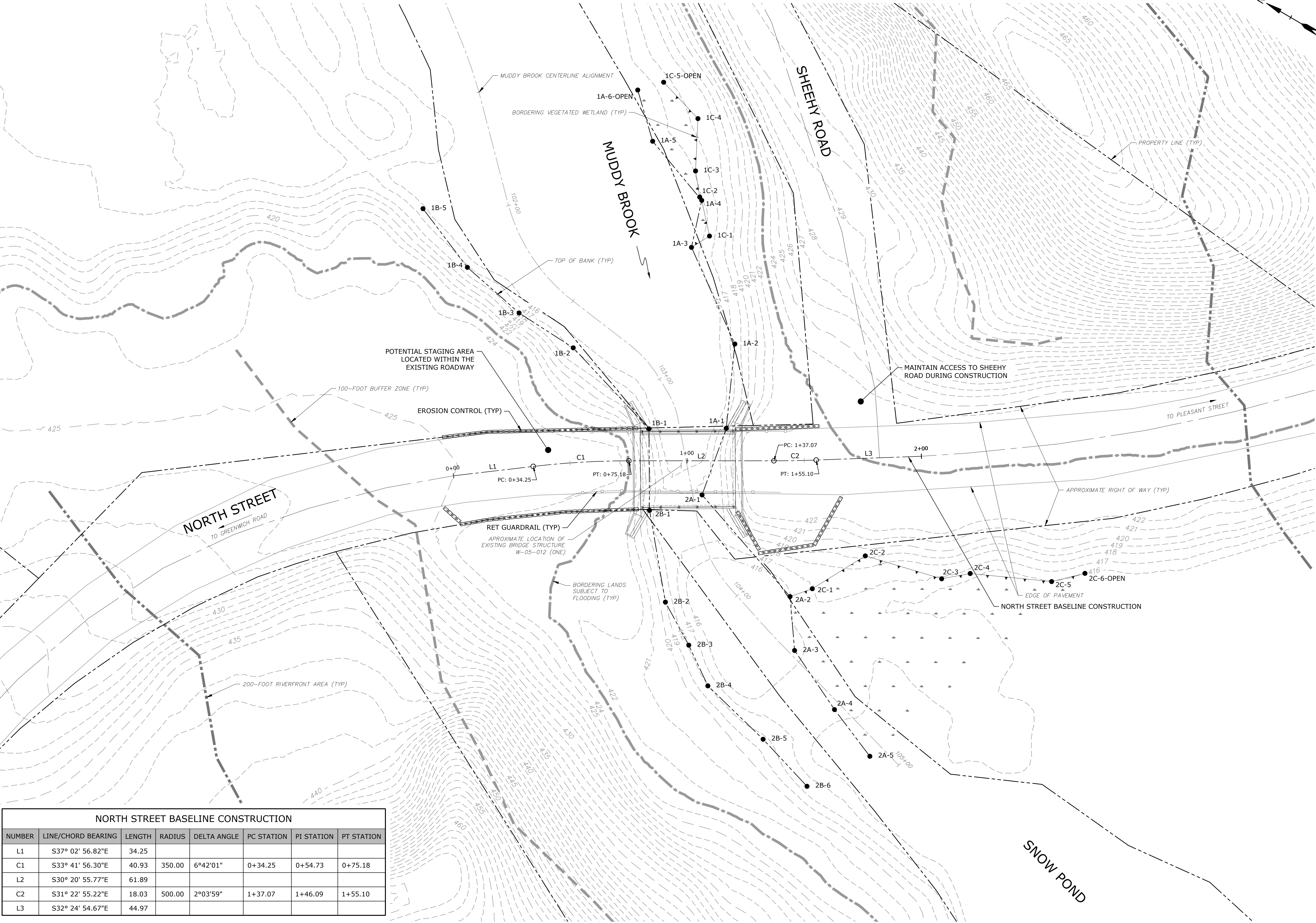
Town of Ware
Ware, Massachusetts

MARK	DATE	DESCRIPTION
PROJECT NO:		W2133-030
DATE:		MAY 2023
FILE:		W2133-030-C-001.dwg
DRAWN BY:		SDS
DESIGNED/CHECKED BY:		J1
APPROVED BY:		DSH

SITE PLAN

SCALE: 1" = 20'

C-002
SHEET 4 OF 9



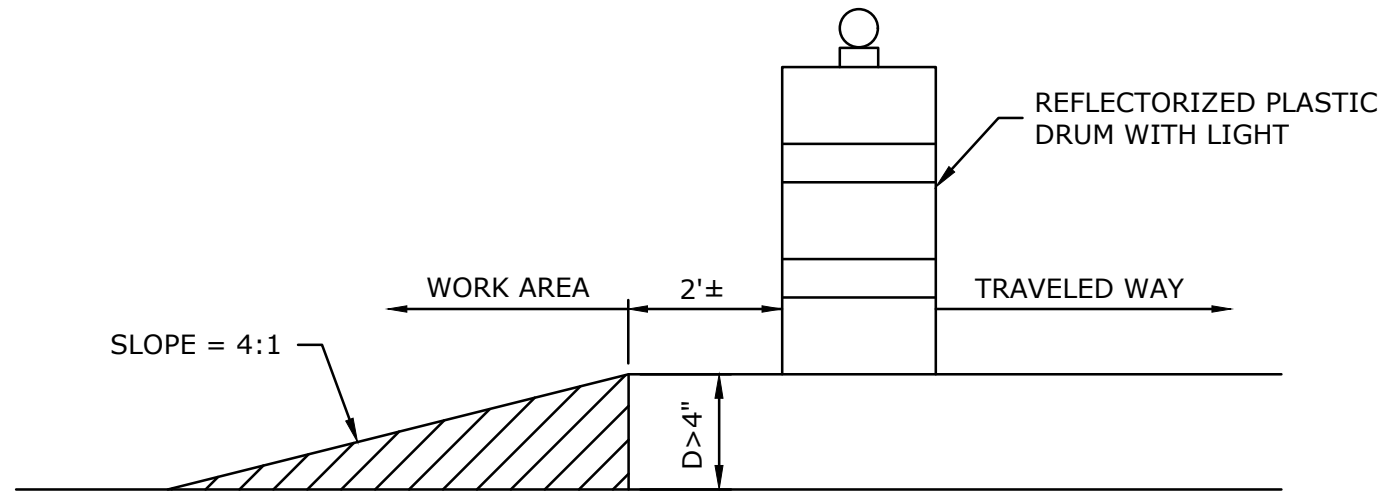
NORTH STREET BASELINE CONSTRUCTION							
NUMBER	LINE/CHORD BEARING	LENGTH	RADIUS	DELTA ANGLE	PC STATION	PI STATION	PT STATION
L1	S37° 02' 56.82"E	34.25					
C1	S33° 41' 56.30"E	40.93	350.00	6°42'01"	0+34.25	0+54.73	0+75.18
L2	S30° 20' 55.77"E	61.89					
C2	S31° 22' 55.22"E	18.03	500.00	2°03'59"	1+37.07	1+46.09	1+55.10
L3	S32° 24' 54.67"E	44.97					

NOTES:

- TEMPORARY FENCING AND BARRIERS SHALL BE DEPLOYED ON SITE DURING THE ROADWAY CLOSURE TO PREVENT ACCESS TO THE CROSSING.
- NO THRU TRAFFIC SHALL BE PERMITTED UNTIL THE BRIDGE STRUCTURE HAS BEEN INSTALLED.
- PLACEMENT OF SIGNS TO BE COORDINATED WITH THE ENGINEER, DEPARTMENT OF PUBLIC WORKS, POLICE DEPARTMENT, AND FIRE DEPARTMENT (WARE, MASSACHUSETTS).
- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 10 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- TWO-WAY TRAFFIC SHALL BE RESTORED AT THE END OF THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE ALL SIGNAGE, BARRICADES, POLICE DETAILS AND OTHER CONTROLS AS REQUIRED FOR TRAFFIC CONTROL.

LEGEND:

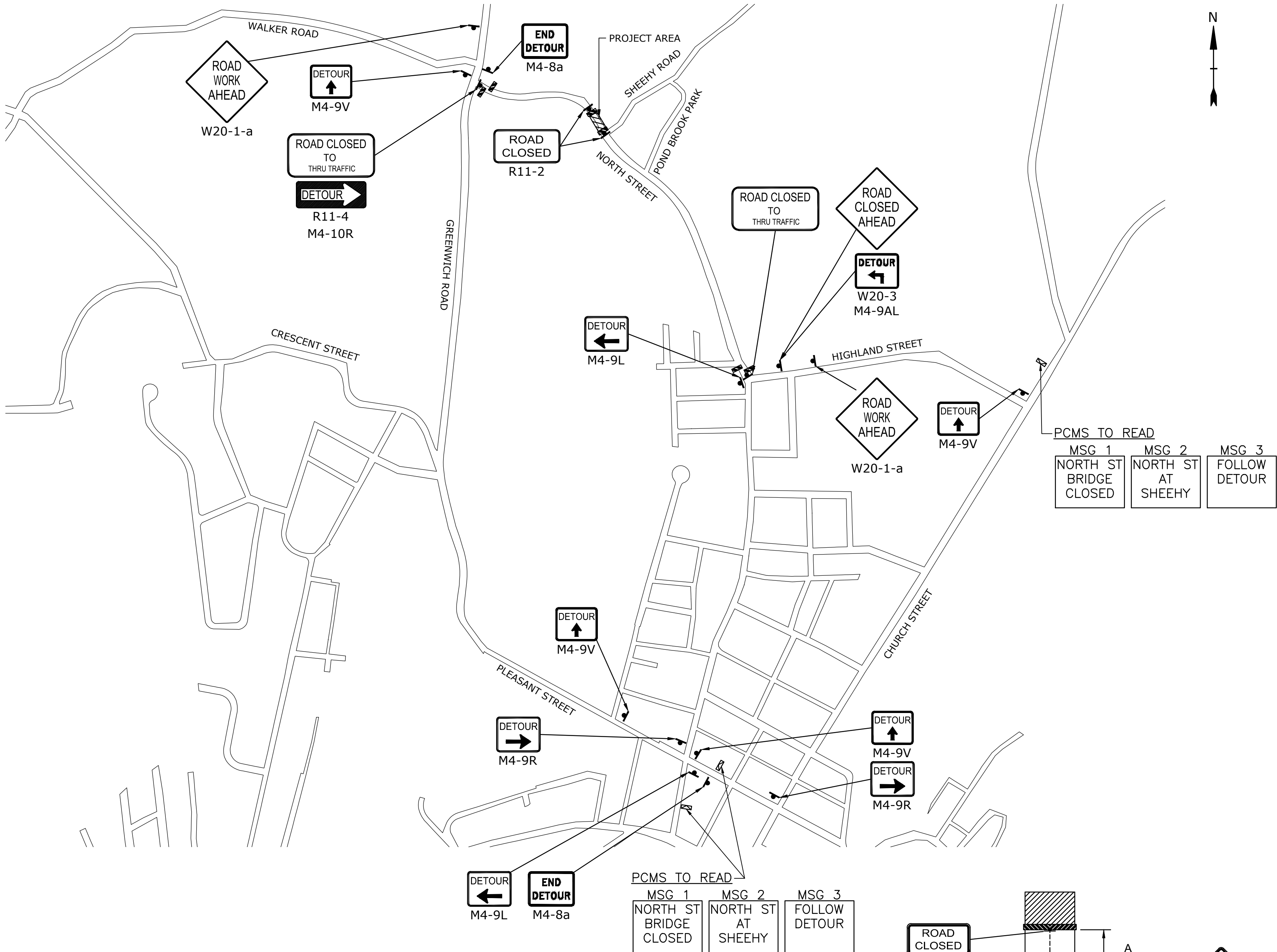
- TYPE III BARRICADE
- WORK ZONE
- SIGN



IF "D" IS GREATER THAN 4" THE CONTRACTOR SHALL PLACE FILL MATERIAL AT A 4:1 SLOPE AT THE EDGE OF THE EXCAVATED AREA. SUPPLYING, PLACING, AND REMOVING THIS FILL MATERIAL SHALL BE INCIDENTAL TO THE PROJECT AND NOT SEPARATELY MEASURED OR PAID FOR.

AFTER WORK HOURS
NO SCALE

SIGN LEGEND					
CODE	DESCRIPTION	SIZE	AREA	NO.	TOTAL AREA
W20-1-a	ROAD WORK AHEAD	36"x36"	9 SF	2	18 SF
W20-3	ROAD CLOSED AHEAD	36"x36"	9 SF	1	9 SF
R11-2	ROAD CLOSED	48"x30"	10 SF	2	20 SF
R11-4	ROAD CLOSED TO THRU TRAFFIC	60"x30"	12.5 SF	2	25 SF
M4-10R	DETOUR	48"x18"	6 SF	1	6 SF
M4-9L	DETOUR	30"x24"	5 SF	2	10 SF
M4-9R	DETOUR	30"x24"	5 SF	2	10 SF
M4-9V	DETOUR	30"x24"	5 SF	4	20 SF
M4-9AL	DETOUR	30"x24"	5 SF	1	5 SF
M4-8a	END DETOUR	30"x24"	5 SF	2	10 SF
TOTAL =					133 SF



ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350 (100)	350 (100)	350 (100)
MOST OTHER ROADWAYS*	500 (150)	500 (150)	500 (150)
FREEWAYS AND EXPRESSWAYS*	1,000 (300)	1,500 (450)	2,640 (800)

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

** DISTANCES ARE SHOWN IN FEET (METERS). THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

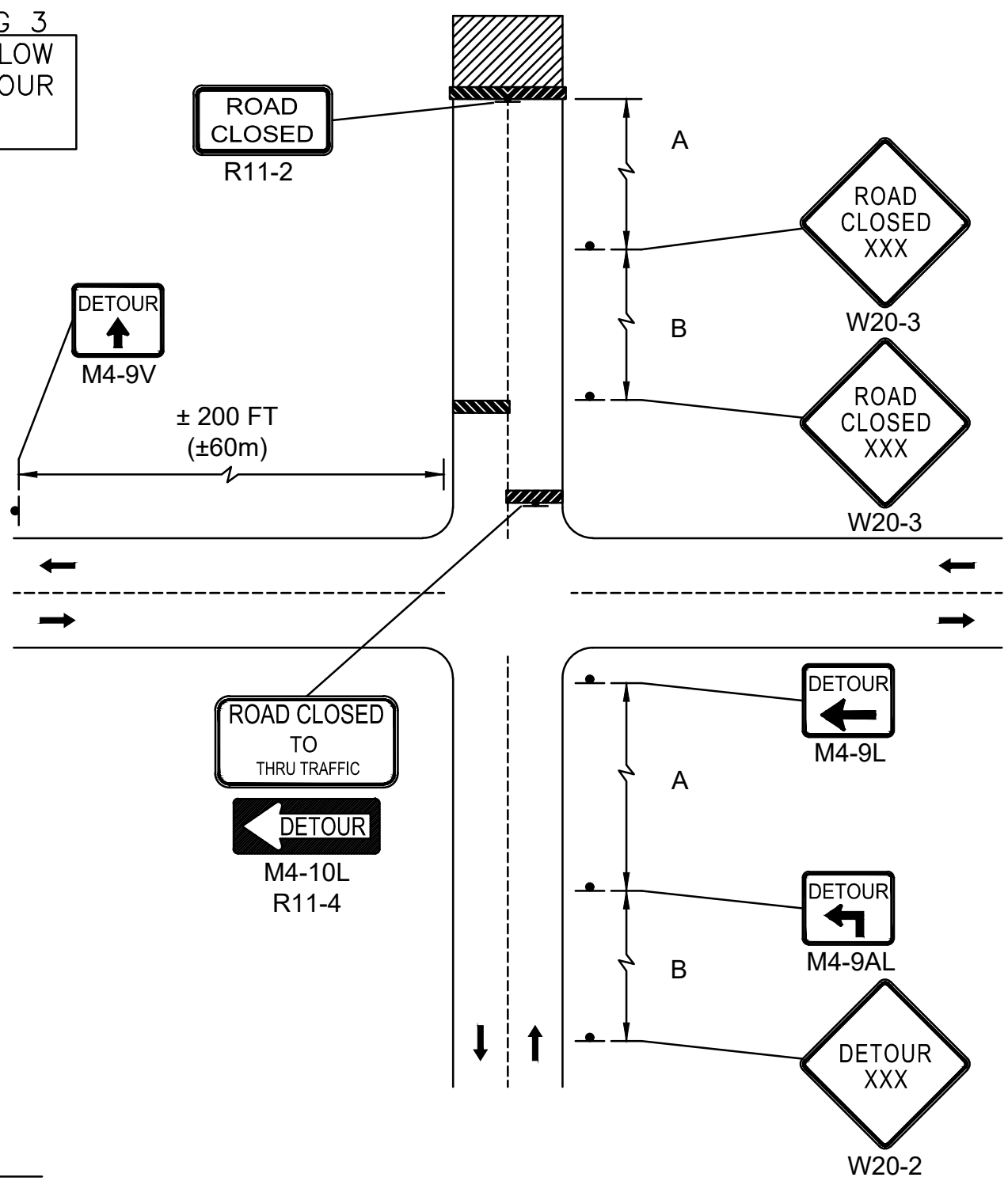
THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (I.E. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (I.E. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

R2-10a, R2-10e, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

Based on: Table 6C-1 MUTCD LATEST EDITION



Tighe&Bond

PERMIT SET

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Repairs to
North Street
over Muddy
Brook
MassDOT
Bridge
W-05-012
(ONE)

Town of Ware

Ware, Massachusetts

MARK	DATE	DESCRIPTION
PROJECT NO:	W2133-030	
DATE:	MAY 2023	
FILE:	W2133-030-C-100_200.dwg	
DRAWN BY:	SDS	
DESIGNED/CHECKED BY:	J1	
APPROVED BY:	DSH	

TEMPORARY TRAFFIC
CONTROL PLAN

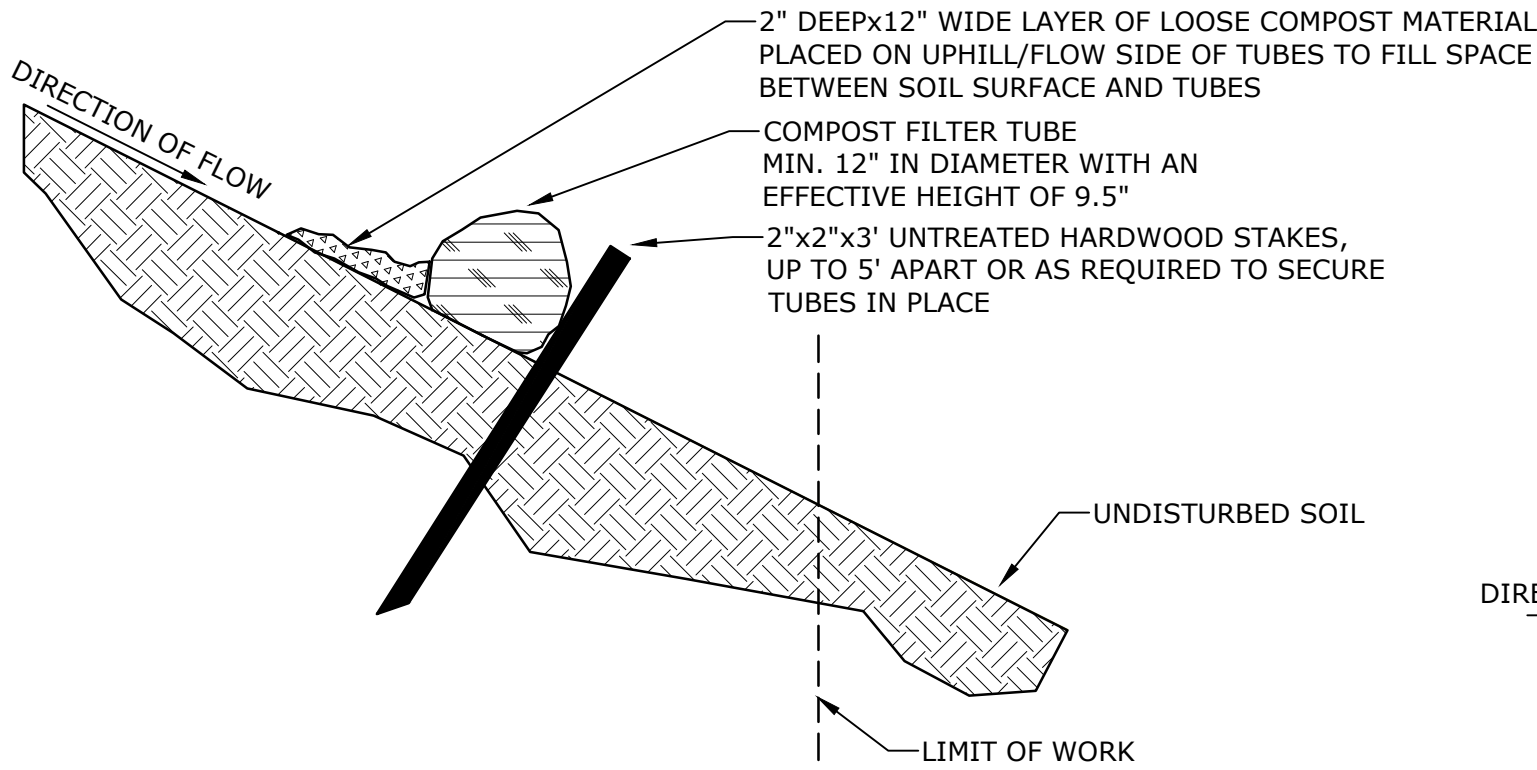
SCALE: AS SHOWN

C-100
SHEET 5 OF 9

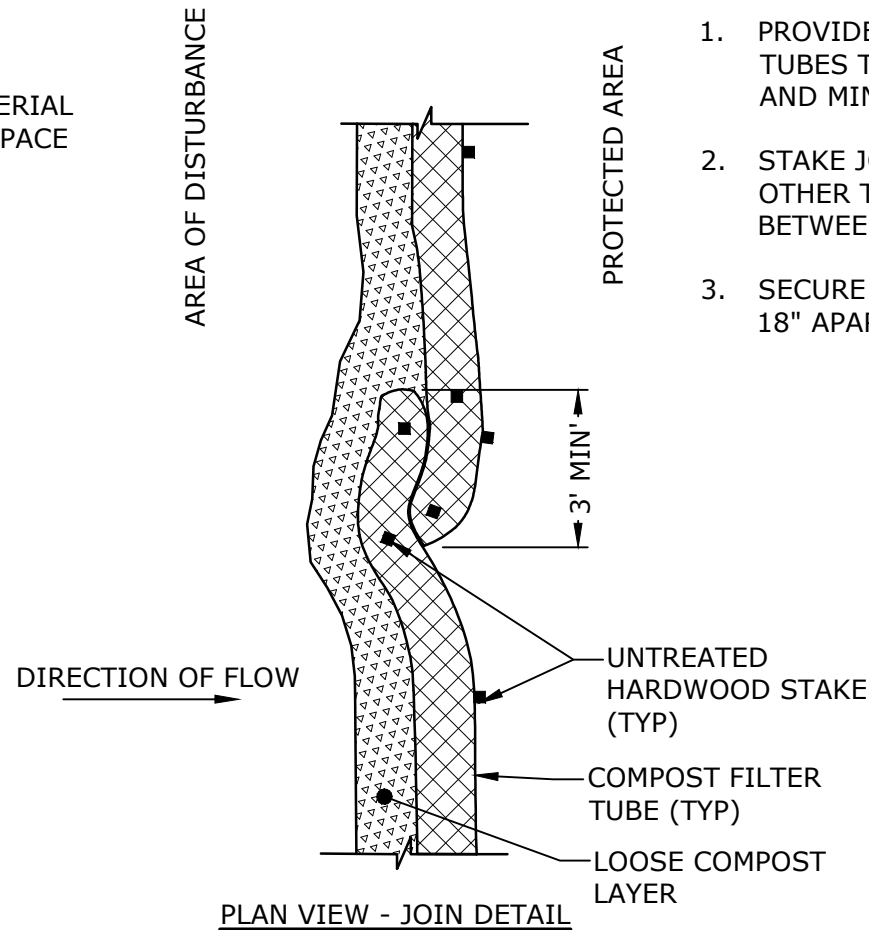
Last Saved: 1/6/2023
Plotted On: May 11, 2023 4:12pm By: SSak
Tighe & Bond 2:1NW2133 Ware 030 - North Street bridge rehabilitation Drawings Figures AutoCAD Sheet W2133-030-C-100_200.dwg

EROSION CONTROL NOTES:

- ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED AND REQUIRED BY THE ENGINEER SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OR IMMEDIATELY UPON REQUEST. MAINTAIN ALL SUCH CONTROL MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- MAINTAIN AN ADDITIONAL SUPPLY OF EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD.
- PRIOR TO STARTING WORK, CLEARLY STAKE WORK LIMIT LINE(S). DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE WORK LIMIT LINE. COORDINATE WITH THE ENGINEER THE LOCATIONS FOR THE TEMPORARY STOCKPILING OF TOPSOIL DURING CONSTRUCTION.
- SIDE SLOPES AND DISTURBED VEGETATED AREAS SHALL BE A MAXIMUM GRADE OF 2:1 COMPACTED, STABILIZED, LOAMED AND SEEDED AS SHOWN ON DRAWINGS. SIDE SLOPES SHALL BE IMMEDIATELY FINE GRADED AND SEEDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- SILT TRAPPED AT BARRIERS SHALL BE REMOVED AND DISPOSED OF IN UPLAND AREAS OUTSIDE BUFFER ZONES. MATERIALS DEPOSITED IN ANY TEMPORARY SETTLING BASIN SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT. ALL DISTURBED AREAS SHALL BE RESTORED.
- INSTALL EROSION CONTROLS AT THE EDGE OF NEW WORK. EROSION CONTROLS SHALL ACT AS LIMIT OF WORK LINE TO HELP ENSURE THAT EQUIPMENT DOES NOT DISTURB ADJACENT PROPERTIES.
- ADDITIONAL EROSION CONTROLS MAY BE REQUIRED TO PREVENT SEDIMENTS FROM DISCHARGING TO ADJACENT PROPERTIES OR WATERWAYS.
- PROPERLY STABILIZE AND PROTECT TEMPORARY STOCKPILES OF MATERIALS RELATED TO THE CONSTRUCTION ACTIVITIES TO PREVENT MOVEMENT OF MATERIAL ONTO ADJACENT PARCELS, OR INTO THE STREAM.
- STABILIZE THE AREAS OF CONSTRUCTION ACTIVITIES AT THE CLOSE OF EACH CONSTRUCTION DAY. CHECK EROSION CONTROLS AT THIS TIME AND MAINTAIN OR REINFORCE IF NECESSARY
- PROTECT WORK FROM FLOODING. PROPERLY SLOPE GRADING IN THE AREAS SURROUNDING ALL EXCAVATIONS TO PREVENT WATER FROM RUNNING INTO THE EXCAVATED AREA OR TO ADJACENT PROPERTIES. UPON COMPLETION OF THE WORK, RESTORE ALL AREAS IN A SATISFACTORY MANNER.
- ALL SILT-LADEN WATER MUST BE SETTLED OR FILTERED TO REMOVE ALL SEDIMENTS PRIOR TO RELEASE TO A WATERWAY IN A SEDIMENTATION OR FILTER BAG LOCATED DOWNSTREAM.
- DEWATER AS NECESSARY TO KEEP CONSTRUCTION AREAS FREE OF WATER, DISCHARGE WATER FROM DEWATERING TO APPROPRIATE LOCATION AND WITHOUT SEDIMENT.
- AT THE END OF EACH WORK DAY, ANY SEDIMENTS TRACKED ONTO PUBLIC RIGHT-OF-WAYS BEYOND THE PROJECT LIMITS SHALL BE SWEEPED AWAY.



SECTION VIEW



PLAN VIEW - JOIN DETAIL

COMPOST FILTER TUBE NOTES:

- PROVIDE A MINIMUM TUBE DIAMETER OF 12" FOR SLOPES UP TO 50' IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSES OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATION WITH LONGER SLOPES OR STEEPER SLOPES.
- INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
- DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
- CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.
- TUBES FOR COMPOST FILTERS SHALL BE JUTE MESH OR APPROVED BIODEGRADABLE MATERIAL. ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
- TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.
- WHEN STAKING IS NOT POSSIBLE, SUCH AS WHEN TUBES MUST BE PLACED ON PAVEMENT, HEAVY CONCRETE OR CINDER BLOCKS CAN BE USED BEHIND TUBES UP TO 5' APART OR AS REQUIRED TO SECURE TUBES IN PLACE.
- PROVIDE 3' MINIMUM OVERLAP AT ENDS OF TUBES TO JOIN IN A CONTINUOUS BARRIER AND MINIMIZE UNIMPEDED FLOW.
- STAKE JOINING TUBES SNUGLY AGAINST EACH OTHER TO PREVENT UNFILTERED FLOW BETWEEN THEM.
- SECURE ENDS OF TUBES WITH STAKES SPACED 18" APART THROUGH TOPS OF TUBES.

COMPOST FILTER TUBES

NO SCALE

NOTES:

- PROVIDE 3' MINIMUM OVERLAP AT ENDS OF TUBES TO JOIN IN A CONTINUOUS BARRIER AND MINIMIZE UNIMPEDED FLOW.
- STAKE JOINING TUBES SNUGLY AGAINST EACH OTHER TO PREVENT UNFILTERED FLOW BETWEEN THEM.
- SECURE ENDS OF TUBES WITH STAKES SPACED 18" APART THROUGH TOPS OF TUBES.

PERMIT SET

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Repairs to
North Street
over Muddy
Brook
MassDOT
Bridge
W-05-012
(ONE)

Town of Ware

Ware, Massachusetts

MARK	DATE	DESCRIPTION
PROJECT NO:		W2133-030
DATE:		MAY 2023
FILE:		W2133-030-C-100_200.dwg
DRAWN BY:		SDS
DESIGNED/CHECKED BY:		J1
APPROVED BY:		DSH

CONSTRUCTION DETAILS

SCALE: NO SCALE

- EXISTING BASE MAPPING WAS PREPARED USING LIDAR AND ORTHOGRAPHIC IMAGERY, AS DEVELOPED BY MASSGIS.
2. THE HORIZONTAL DATUM SHOWN HEREON REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
3. THE VERTICAL DATUM SHOWN HEREON REFERENCES THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. ALL EXISTING BRONZE DISCS REPRESENTING STATE BENCHMARKS OR SURVEY TRIANGULATION POINTS MUST NOT BE DISTURBED. WHEN THE WORK CALLED FOR INVOLVES DISTURBING A BRONZE DISC THE CONTRACTOR SHALL NOTIFY THE ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORK TO PERMIT THE STATE TO TEMPORARILY RELOCATE THE AFFECTED MARKER.
5. THE CONTRACTOR SHOULD BE AWARE THAT EXISTING STRUCTURE DIMENSIONS AND ELEVATIONS SHOWN IN THESE PLANS WERE TAKEN FROM THE ORIGINAL BRIDGE PLANS AND/OR SUBSEQUENT REHABILITATION PLANS AND DO NOT NECESSARILY REPRESENT "AS BUILT" DIMENSIONS AND ELEVATIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES AND BE PREPARED TO MAKE ADJUSTMENTS REQUIRED TO PROPERLY COMPLETE THE PROPOSED REPAIRS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER, OR EXTENT OF EXISTING FEATURES, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO ADVANCING THE WORK.
6. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR THE LOCATION OF EXISTING UTILITIES. THE ENGINEER AND OWNER MAKE NO GUARANTEE AS TO THE UNDERGROUND CONDITIONS THAT MAY BE ENCOUNTERED. CALL DIG SAFE.
7. COORDINATE RELOCATION OR SUPPORTING OF UTILITY POLES WITH THE RESPECTIVE UTILITIES.
8. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT DEBRIS DOES NOT FALL ON ANY ROADWAY, OR WATERWAY BELOW THE EXISTING STRUCTURE. ALL COSTS INCLUDING ERECTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURES OR OTHER SUCH APPROVED METHODS, SHALL BE SUBSIDIARY TO THE APPROPRIATE ITEMS OF WORK BEING PERFORMED.
9. THE WELDING OF ATTACHMENTS TO GIRDERS FOR CONSTRUCTION PURPOSES SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER OF RECORD.
10. NO SCAFFOLDS SHALL BE ERECTED OR OPERATIONS CONDUCTED IN WATERWAY, UNLESS APPROVED BY THE ENGINEER OF RECORD.
11. ALL MATERIALS AND METHODS ARE TO COMPLY WITH THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, DATED 2020, AND ITS LATEST REVISIONS.
12. JURISDICTIONAL WETLAND BOUNDARIES FOR A JURISDICTIONAL WETLAND DELINEATION CONDUCTED IN THE SUMMER OF 2019 WERE USED FOR THE DRAWINGS.
13. IF LOCATIONS, SIZES, ETC. CHANGE FROM THESE PLANS, THE NEW CHANGES SHALL BE SUBMITTED TO THE OWNER/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
14. ALL DIMENSIONS ARE HORIZONTAL AND VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT.
15. ALL WORK PERFORMED BY THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND REQUIREMENTS.
16. THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND ENSURE THAT ALL CONSTRUCTION CONDITIONS ARE MET.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SAFETY, AND MEANS AND METHODS TO PERFORM AND COMPLETE THE WORK.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTY OUTSIDE THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS CAUSED BY THE CONTRACTOR, AT THE SOLE COST TO THE CONTRACTOR.
19. THE CONTRACTOR SHALL SUBMIT LITERATURE (MANUFACTURER'S LITERATURE, CUT SHEETS, APPLICATION PROCEDURES, ETC.) FOR ALL PRODUCTS PROPOSED FOR USE ON THE PROJECT, FOR APPROVAL BY THE ENGINEER. APPROVAL OF MATERIALS SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION AS AMENDED, SUBSECTION 5.03 AND SECTION 6.00, CONTROL OF MATERIALS.
20. DETAIL OR SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED IN ACCORDANCE WITH THE REQUIREMENTS OF MASSDOT STANDARD SPECIFICATIONS, LATEST EDITION AS AMENDED, SUBSECTION 5.02, PLANS AND DETAIL DRAWINGS.
21. TAKE ALL NECESSARY MEASURES AND PROVIDE ALL NECESSARY CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAY'S WORK.
22. STORE FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS IN A SECONDARY CONTAINER AND REMOVE FROM THE SITE TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
23. IMMEDIATELY REPORT SPILLS OF OIL AND/OR HAZARDOUS MATERIALS (OHM) TO THE MASSDEP.
24. PROVIDE A SUFFICIENT SUPPLY OF ABSORBENT SPILL RESPONSE MATERIALS, SUCH AS BOOMS OR BLANKETS, AT THE CONSTRUCTION SITES AT ALL TIMES TO CLEAN UP POTENTIAL SPILLS OF HAZARDOUS MATERIALS.
25. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
26. SHEAR KEYS SHALL BE 3" HIGH BY ONE-THIRD THE WIDTH OF THE CONCRETE ELEMENT, CENTERED.
27. BARRIER MEMBRANE SHALL BE 2' WIDE WITH PROTECTION BOARD AND PLACED CENTERED OVER ALL HORIZONTAL AND VERTICAL EXPANSION AND CONSTRUCTION JOINTS.
28. APPLY PAVEMENT JOINT ADHESIVE ALONG ALL LONGITUDINAL JOINTS BETWEEN PAVEMENT PASSES AND ALONG BRIDGE CURB LINES AND EXPANSION JOINT ARMORING PRIOR TO PLACING ALL PAVEMENT COURSES.

1. DESIGN LOADING:	H20
2. DESIGN METHOD:	AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (PER SECTION 3.1.4.2 OF MASSDOT LRFD BRIDGE MANUAL)
3. SPECIFICATIONS:	AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH ED., 2002 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH ED., 2017 (FOR SUPPLEMENTAL INFORMATION) MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 2022, AS AMENDED MASSDOT LRFD BRIDGE MANUAL, 2013 EDITION (JANUARY 2020 REVISION)

S1	STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO AASHTO M270 - GRADE 50 UNLESS NOTED OTHERWISE ON DRAWINGS.
S2	HOLES, CUTS AND OTHER MODIFICATIONS TO THE STRUCTURAL STEEL SHALL NOT BE MADE IN THE FIELD EXCEPT WITH THE SPECIFIC PERMISSION OF THE ENGINEER.
S3	ALL BOLTED CONNECTIONS SHALL BE SLIP CRITICAL (CLASS-B) MADE WITH 7/8" DIA. HIGH STRENGTH BOLTS IN 15/16" DIA. HOLES. ALL FASTENERS SHALL CONFORM TO REQUIREMENTS FOR AASHTO M164 (ASTM A325) TYPE 3. (IN PAINTED AREAS, BOLTS SHALL BE TYPE 1 GALVANIZED)
S4	DIRECT TENSION INDICATORS SHALL BE INSTALLED WITH HIGH STRENGTH BOLTS.
S5	THE CONTRACTOR SHALL USE A SKIDMORE-WILHELM BOLT TESTING APPARATUS TO DETERMINE THE TORQUE REQUIRED TO ACHIEVE THE 39 KIPS PRE-TENSION IN 7/8" DIA. A-325 BOLT. A CALIBRATED TORQUE WRENCH SHALL BE USED TO VERIFY THE TORQUE IN ALL TIGHTENED BOLTS.
S6	INTENDED FINAL ERECTED POSITION OF I-GIRDER WEBS SHALL BE VERTICAL OR PLUMB. THIS SHALL BE ACHIEVED BY DETAILING FOR 'FULL DEAD LOAD FIT CONDITION' FOR STRAIGHT I-GIRDERS WITH A SKEW, AND DETAILING FOR 'STEEL DEAD LOAD FIT CONDITION' FOR HORIZONTALLY CURVED I-GIRDERS WITH OR WITHOUT SKEW.
S7	BEARING STIFFENERS AND THE ENDS OF GIRDERS SHALL BE VERTICAL UNDER FULL DEAD LOAD DEFLECTION.
S8	SHOP DRAWINGS SHALL INDICATE THE METHOD AND SEQUENCE TO BE FOLLOWED IN WELDING THE GIRDER COMPONENTS.
S9	CROSS FRAMES SHALL BE FABRICATED IN THE SHOP WITH 1/4" FILLET WELDS, UNLESS NOTED OTHERWISE. GRAVITY AXIS OF THE MEMBER SHALL INTERSECT AS NEARLY PRACTICABLE AT THE CENTERLINE OF THE GIRDER.
S10	ALL WELDING SHALL COMPLY WITH THE AASHTO/AWS BRIDGE WELDING CODE (ANSI/AASHTO/AWS D1.5).
S11	STEEL STRUCTURES PAINTING: ALL WORK CONSISTING OF SURFACE PREPARATION AND PAINTING OF ALL STEEL SHALL COMPLY WITH THE REQUIREMENTS OF PROJECT SPECIFICATIONS AND MASSDOT SUPPLEMENTAL SPECIFICATION SECTION 961.
S12	STEEL SHALL BE CONSIDERED A MAIN MEMBER AND CONFORM TO THE CHARPY V-NOTCH REQUIREMENTS OF AASHTO M270 ZONE T2.
S13	STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
S14	TEMPORARY ERECTION BRACING AND SUPPORTS SHALL BE PROVIDED TO HOLD STRUCTURAL STEEL FRAMING SECURELY IN POSITION. SUCH TEMPORARY BRACING AND SUPPORTS SHALL NOT BE REMOVED UNTIL PERMANENT BRACING HAS BEEN INSTALLED.

SR1	JACKING OF THE EXISTING STRUCTURE IS REQUIRED TO REMOVE AND REPLACE BRIDGE SHOES AS OUTLINED IN THE PLANS AND SPECIAL PROVISIONS. THE DRAWINGS SHOW A SUGGESTED METHOD. PER THE CONTRACTOR'S MEANS AND METHODS, THE CONTRACTOR'S PROPOSED JACKING METHOD SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. THE MAXIMUM ALLOWABLE DIFFERENCE BETWEEN ADJACENT JACKING POINTS SHALL BE 1/4". TEMPORARY SHIMS OR BLOCKS SHALL BE PLACED BENEATH GIRDER FLANGES DURING THE TIME THAT JACKS ARE SUPPORTING THE LOADS.
SR2	ENTRY INTO WATER RESTRICTED PER ORDER OF CONDITIONS DEP#317-461 . REFERENCE SPECIFICATIONS FOR FURTHER PROVISIONS.
SR3	NO LIVE LOAD SHALL BE ALLOWED ON THE DECK SECTIONS ABOVE THE BEAM(S) TO BE REPAIRED AND THE IMMEDIATE ADJACENT BEAM(S) DURING REPAIR.
SR4	CONTRACTOR SHALL VERIFY WELDABILITY OF EXISTING BEAMS.
SR5	PREPARE EXISTING BEAMS IN ACCORDANCE WITH SSPC GUIDE 4. LIMITS OF PREPARATION SHALL EXTEND 2" BEYOND THE PROPOSED PLATE REPAIR, ALL AROUND THE PERIMETER.
SR6	WT SECTION STEMS TO BE REDUCED AS REQUIRED TO MATCH EXISTING BEAM DEPTH AND ALIGN FLANGES. CONTRACTOR TO FIELD VERIFY DIMENSIONS OF REPAIRS AND DEPTH OF REPLACEMENT SECTIONS.
SR7	THE STRUCTURAL STEEL REPAIRS SHALL BE PERFORMED AFTER THE REPAIR AREAS HAVE BEEN CLEANED. THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED DEBRIS FROM THE REPAIR AREAS.
SR8	ALL STRUCTURAL STEEL SHALL RECEIVE AN APPROVED NEPCOAT SYSTEM PRIMER IN THE SHOP. ANY DAMAGE TO OCCUR TO THE COATING DURING SHIPPING AND/OR INSTALLATION SHALL BE REPAIRED AND TOUCH-UP PAINTED. THE TOUCH-UP PAINT FOR REPAIR SHALL BE THE SAME MANUFACTURER'S BRAND AS THE ONE USED IN THE SHOP.
SR9	THE INTERMEDIATE AND FINISH TOP COATS SHALL BE APPLIED AFTER THE INSTALLATION OF THE REPAIR MEMBERS IS COMPLETED. THE INTERMEDIATE AND FINISH TOP COAT SHALL BE FROM AN APPROVED NEPCOAT SYSTEM AND FROM THE SAME MANUFACTURER AS THE PRIMER USED AT THE REPAIR AREAS. THE COLOR OF THE TOP COAT SHALL MATCH EXISTING.
SR10	THE ENTIRE BEAM SECTION WITHIN 12" FROM THE EDGE OF REPAIR MEMBERS SHALL BE CLEANED AND PAINTED AFTER COMPLETION OF ALL WORK. THE PAINTING AREAS SHALL BE DELETED USING CHEMICAL STRIPPER AND CLEANED TO MEET THE REQUIREMENTS OF SSPC-SP3 POWER TOOL CLEANING (OR SSPC-SP10). THE CLEANED AREAS SHALL THEN BE PAINTED WITH AN APPROVED NEPCOAT SYSTEM FROM THE SAME MANUFACTURER AS THE PRIMER USED IN THE REPAIR MEMBER SHOP PAINTING.
SR11	SOLE PLATES SHALL BE CENTERED UNDER GIRDER FLANGE AND BEARING STIFFENERS PRIOR TO FIELD WELDING, ADJUSTMENT FOR TEMPERATURE IS NOT REQUIRED.
SR12	DRAWING S-101 SHOWS LIMITS OF PROPOSED PAINTING. THIS SHALL CONSTITUTE THE BASIS OF THE BASELINE BID. THE CONTRACTOR SHALL INCLUDE AN ALTERNATE BID FOR PAINTING OF ALL STEEL SECTIONS, NEW AND EXISTING, ON THE BRIDGE. INCLUDE THE ALTERNATE ITEM AS A SUB-ITEM IN SECTION 995.
SR13	THE REPAIR MEMBERS SHALL BE USED AS THE TEMPLATES FOR DRILLING HOLES ON EXISTING BEAMS.

S-001
SHEET 7 OF 9

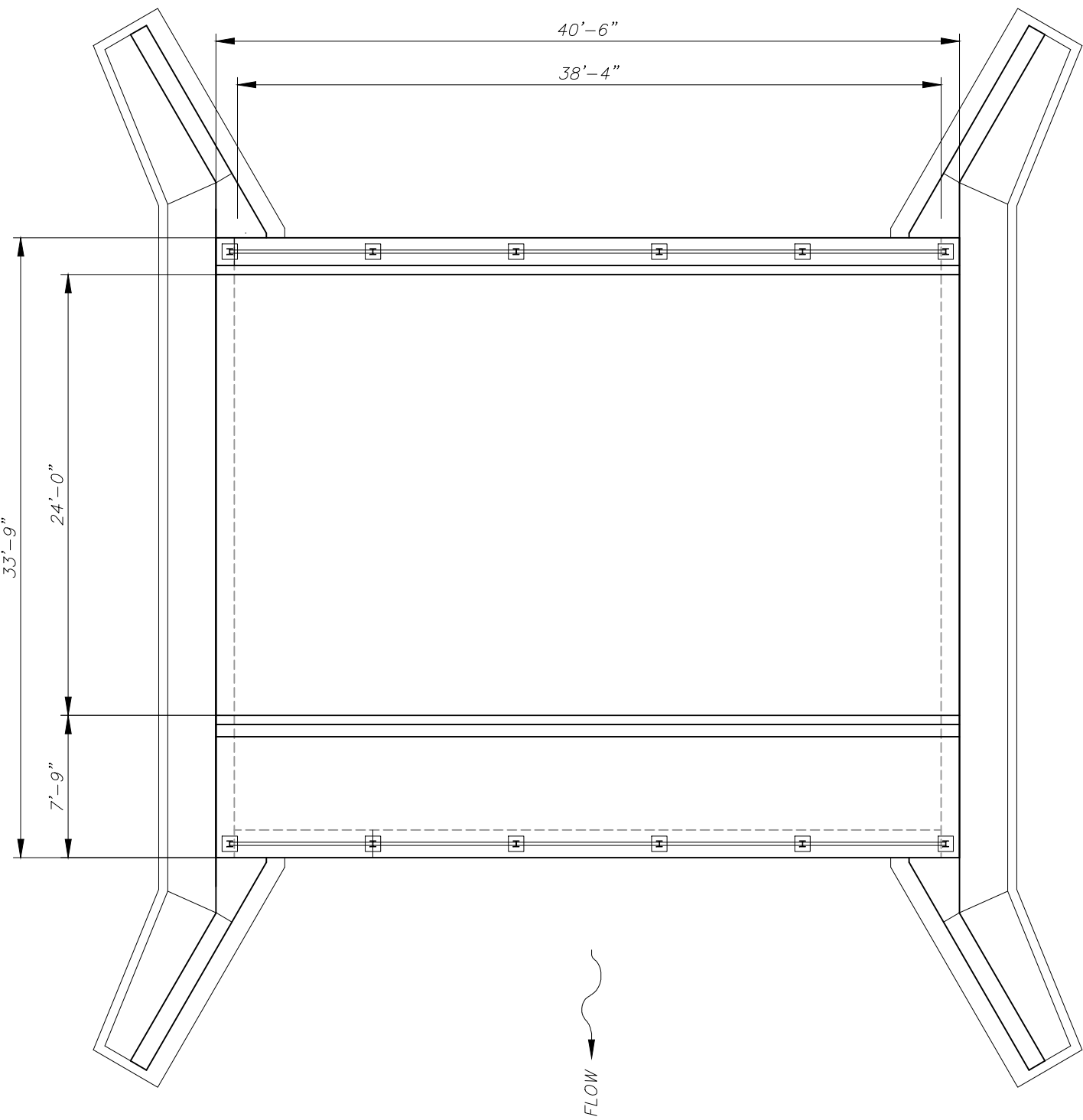
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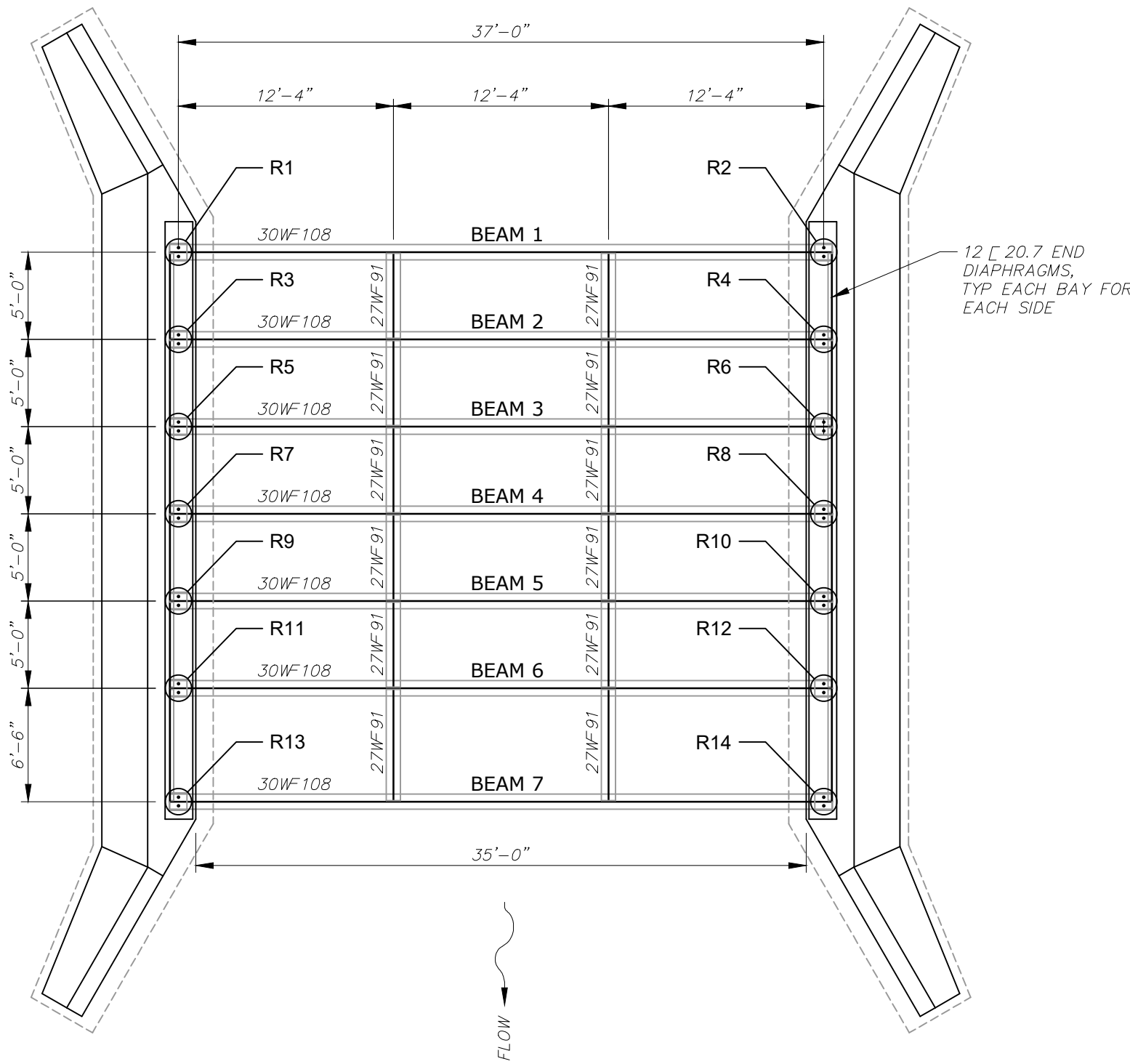
Repairs to
North Street
over Muddy
Brook
MassDOT
Bridge
W-05-012
(ONE)

Town of Ware
Ware, Massachusetts

MARK	DATE	DESCRIPTION
PROJECT NO:		W2133-030
DATE:		MAY 2023
FILE:		W2133-030-S-100_101.dwg
DRAWN BY:		BJP
DESIGNED/CHECKED BY:		BJP, JI
APPROVED BY:		DSH
DEMOLITION EXISTING BRIDGE PLANS AND SECTIONS		
SCALE:		AS SHOWN
S-100 SHEET 8 OF 9		

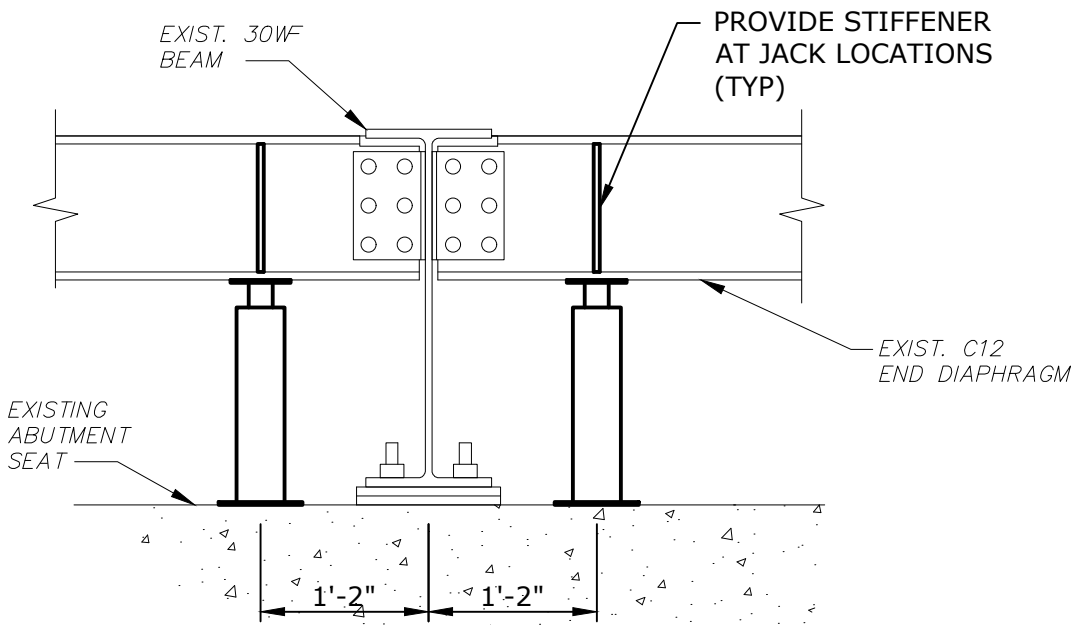
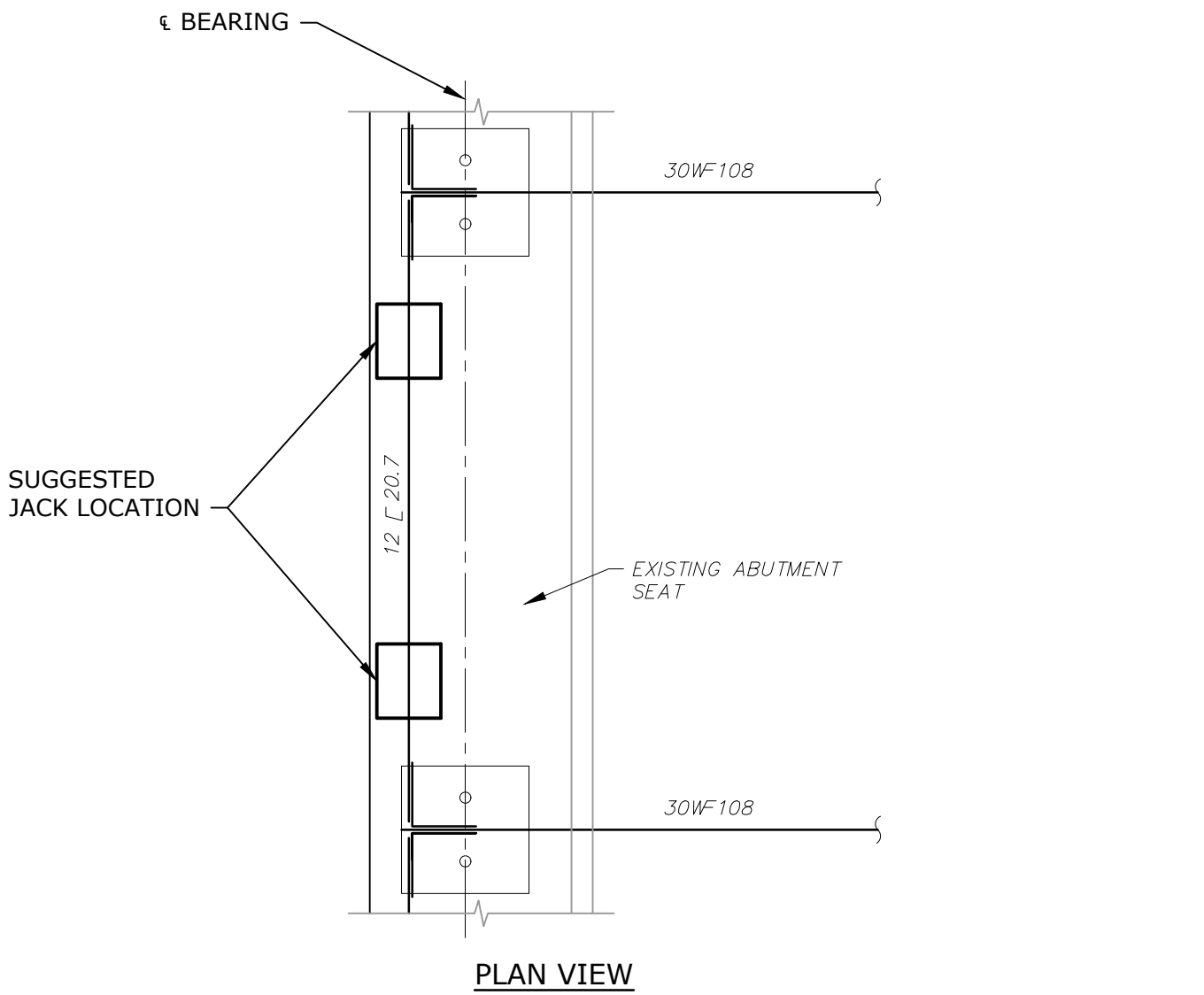


EXISTING BRIDGE PLAN
1/8" = 1'-0"



EXISTING BRIDGE FRAMING PLAN
1/8" = 1'-0"

NOTE
R# - INDICATES BEAM REPAIR NUMBER, SEE DEMOLITION
SCHEDULE ON THIS SHEET FOR ADDITIONAL INFORMATION.

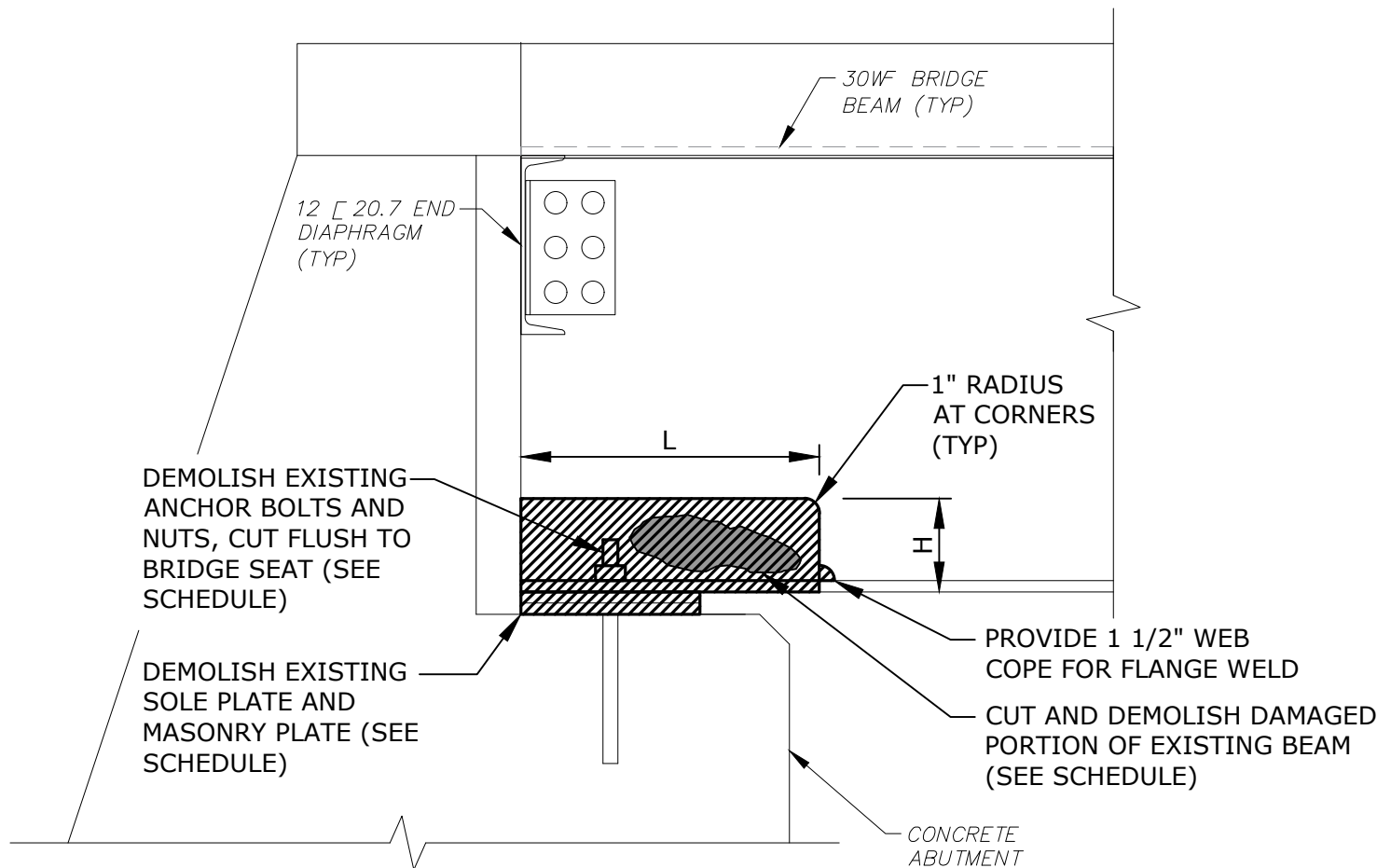


ELEVATION VIEW

SUGGESTED JACKING PLAN
3/4" = 1'-0"

- NOTES:
- SUGGESTED JACKING CONFIGURATION IS CONCEPTUAL ONLY. CONTRACTOR IS RESPONSIBLE FOR JACKING PROCEDURE AND DESIGN. SEE SPECIFICATION FOR DESIGN AND SUBMITTAL REQUIREMENTS OF CONTRACTOR-DESIGNED JACKING SYSTEMS.
 - VERIFY CONDITION OF EXISTING STRUCTURE FOR SUITABILITY AS PART OF CONTRACTOR'S PROPOSED JACKING PROCEDURE AND DESIGN.

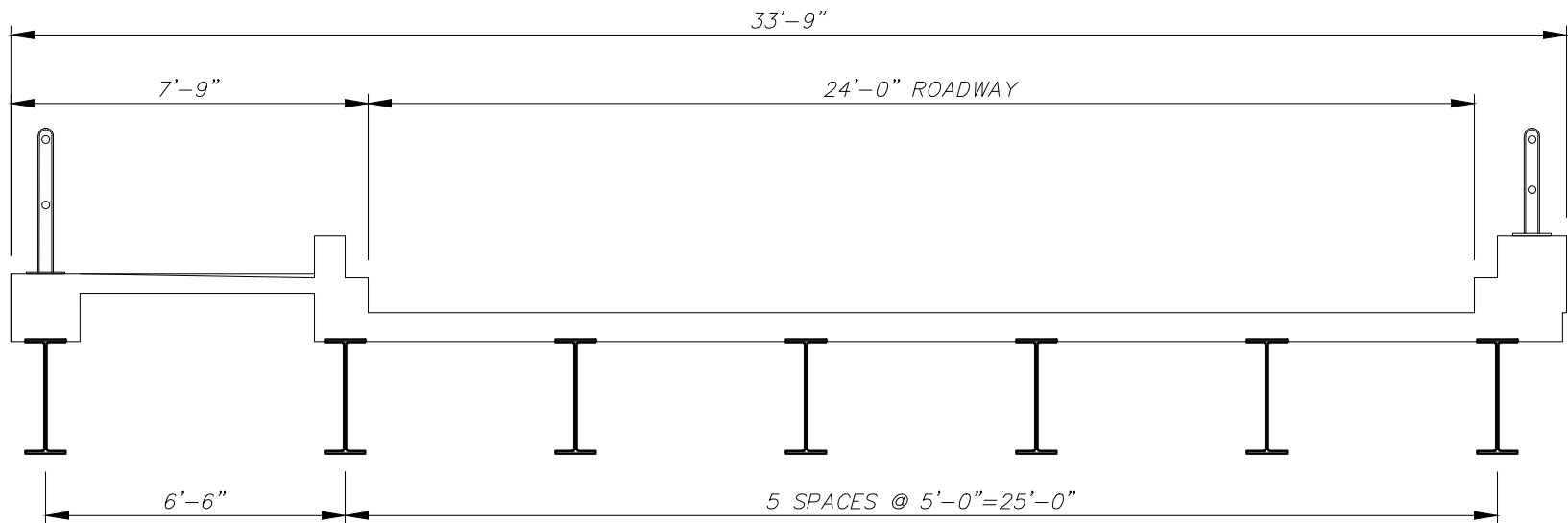
- NOTES:
- CONTRACTOR SHALL VERIFY DIMENSIONS SHOWN. NOTIFY ENGINEER OF ANY DISCREPANCIES. ACTUAL LIMITS OF BEAM DEMOLITION SHOULD BE THE MINIMUM OF THE DIMENSIONS IN SCHEDULE AND 2" BEYOND THE POINT WHERE 1/16" SECTION LOSS OCCURS.
 - REMOVE EXISTING ANCHOR BOLT TO FLUSH WITH EXISTING CONCRETE SURFACE.



TYPICAL BEAM END DEMOLITION DETAILS

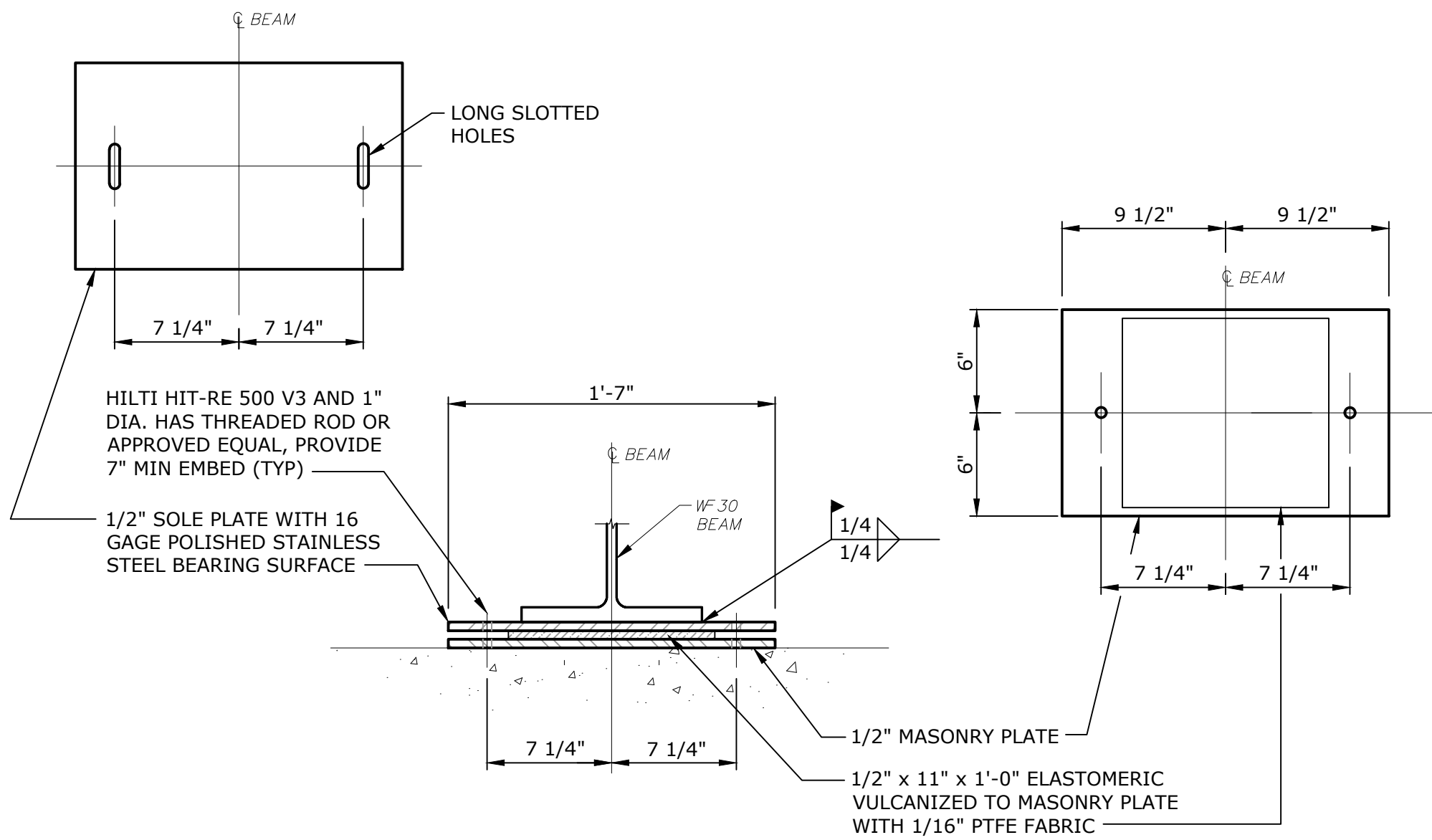
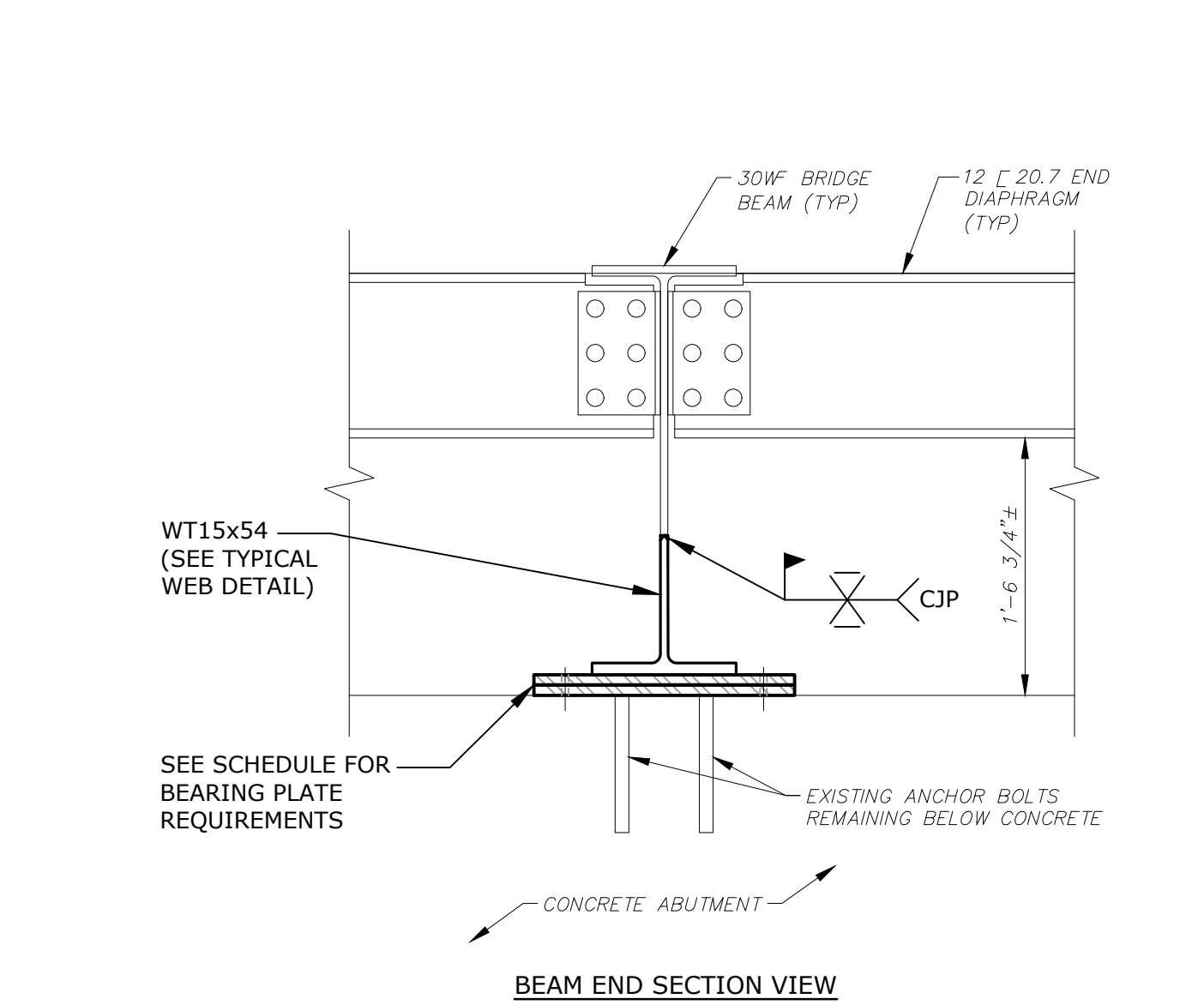
DETAIL	1
1" = 1'-0"	-

- NOTE:
- REFER TO DEMOLITION SCHEDULE FOR BEAM END LIMITS AND LOCATION.



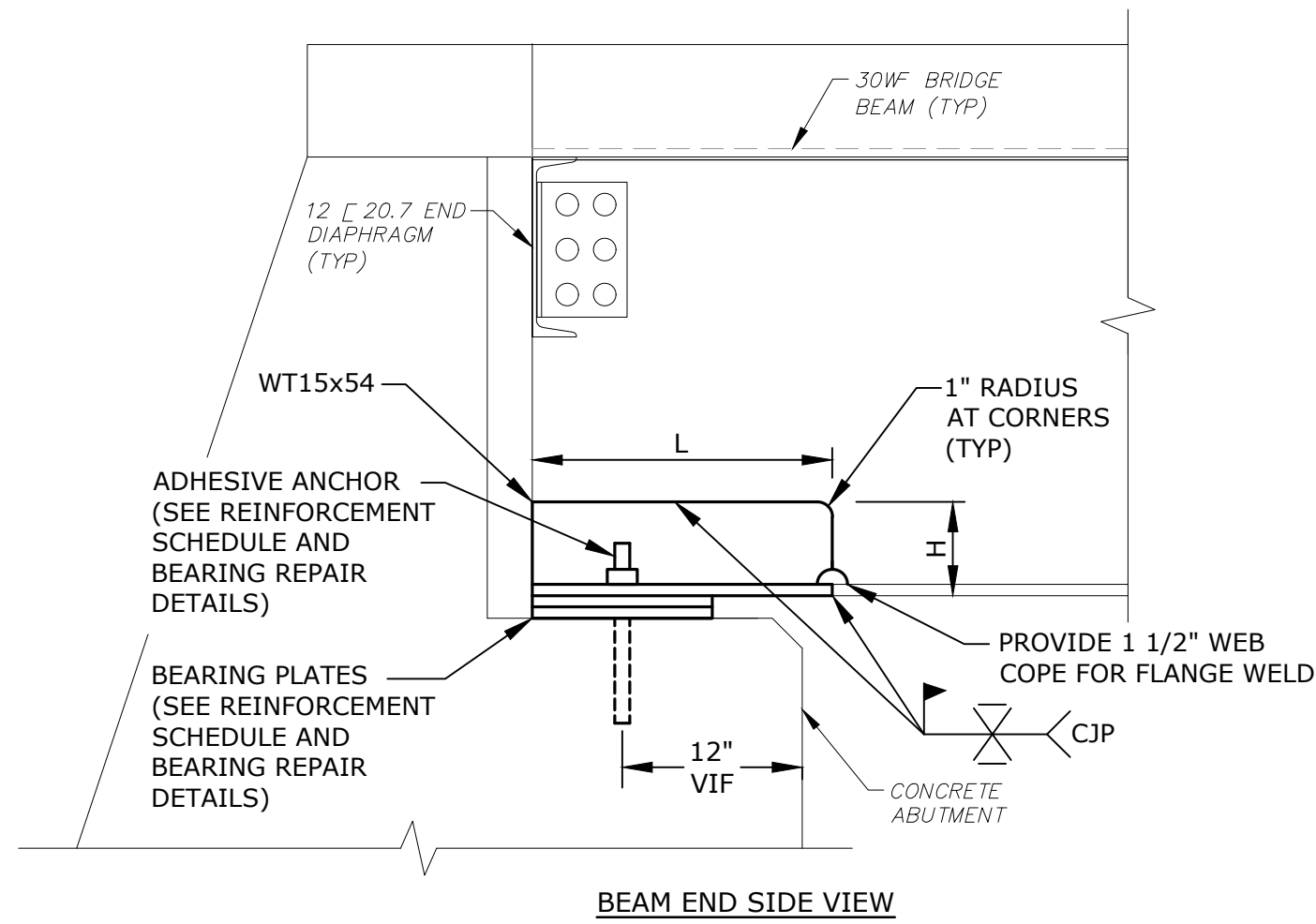
EXISTING BRIDGE SECTION
1/4" = 1'-0"

DEMOLITION SCHEDULE					
REPAIR	BEAM	END	DEMOLITION DIMENSIONS		COMPONENTS TO BE REMOVED
			L (INCHES)	H (INCHES)	
R1	1	WEST	36	6	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R2	1	EAST	36	6	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R3	2	WEST	30	6	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R4	2	EAST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R5	3	WEST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R6	3	EAST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R7	4	WEST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R8	4	EAST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R9	5	WEST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R10	5	EAST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R11	6	WEST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R12	6	EAST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R13	7	WEST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R14	7	EAST	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE



TYPICAL BEAM END EXPANSION BEARING REPLACEMENT DETAIL AT WEST ABUTMENT

DETAIL	3
1 1/2" = 1'-0"	S-101

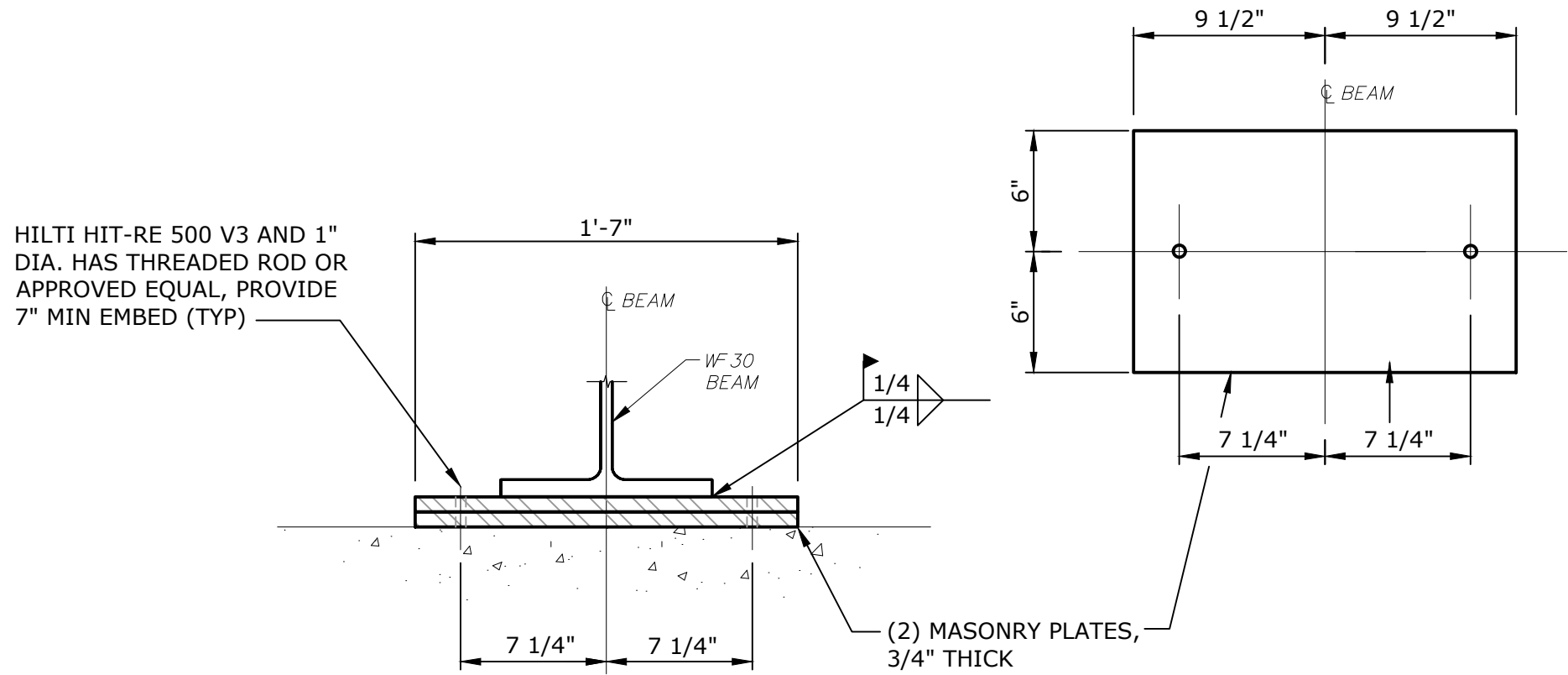


TYPICAL BEAM END REINFORCEMENT DETAILS

DETAIL	2
1" = 1'-0"	S-101

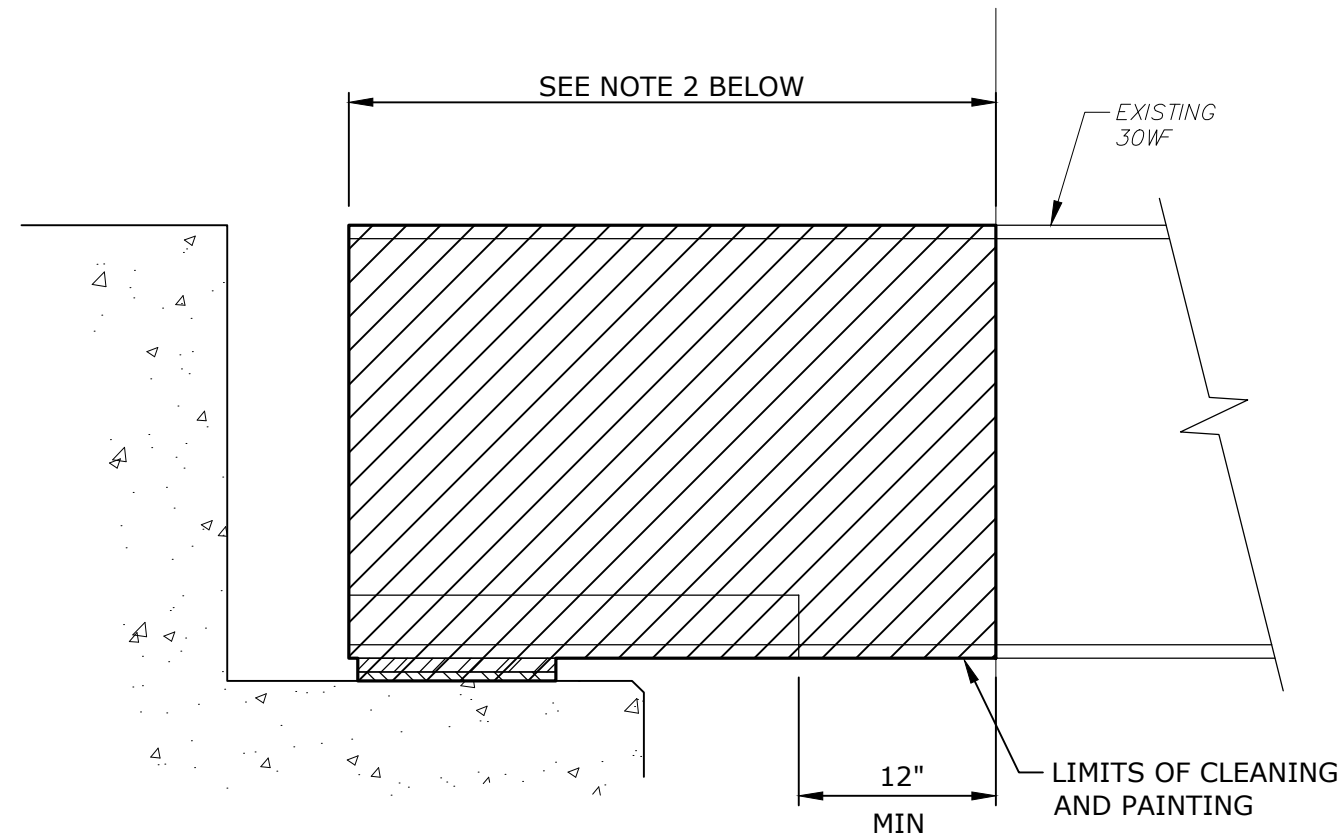
NOTES:

- REFER TO REINFORCEMENT SCHEDULE FOR BEAM END WT LIMITS AND LOCATION.
- PROVIDE LONG SLOTTED HOLES IN WT FLANGES ON WEST SIDE ONLY FOR SLIDE PLATE CONNECTION.



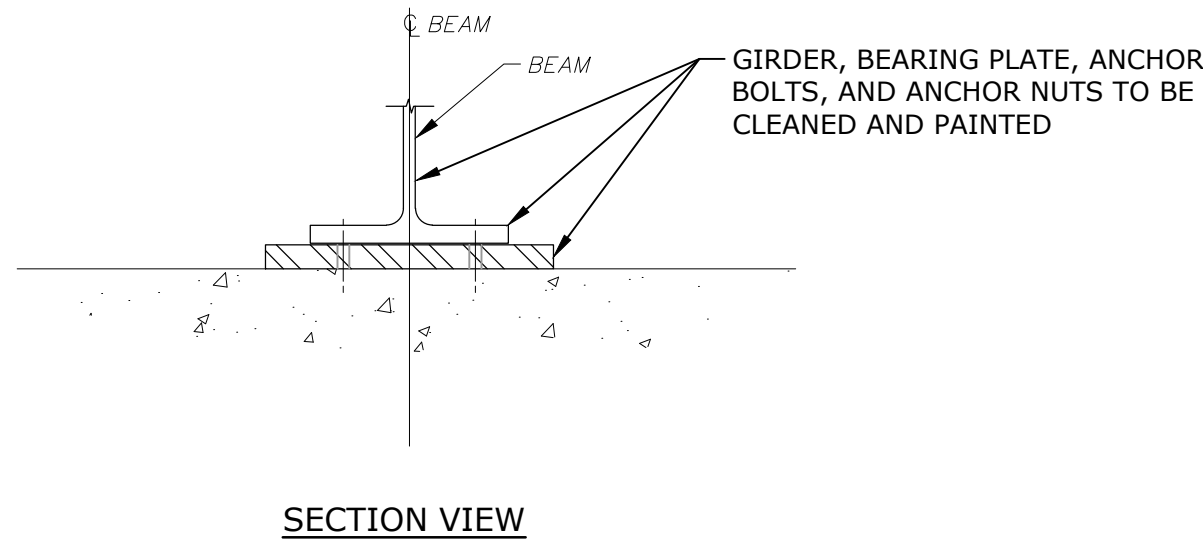
TYPICAL BEAM END FIXED BEARING REPLACEMENT DETAIL AT EAST ABUTMENT

DETAIL	4
1 1/2" = 1'-0"	S-101



NOTES:

- CLEANING AND PAINTING OF GIRDER, BEARING PLATES, ANCHOR BOLTS, AND ANCHOR NUTS TO BE COMPLETED AFTER ALL REPAIRS HAVE BEEN FINALIZED.
- LIMITS OF CLEANING AND PAINTING BASED ON CONTRACTOR'S FINAL DETERMINATION OF EXTENT OF REPAIRS BASED ON FIELD INSPECTION AND REPORTING TO ENGINEER.
- REFER TO GENERAL NOTE SR12 ON SHEET S-001 FOR ADDITIONAL INFORMATION ON LIMITS OF PAINTING.



SECTION VIEW

TYPICAL BEAM END CLEANING/PAINTING DETAIL AT EAST AND WEST ABUTMENTS

REINFORCEMENT SCHEDULE								
REPAIR	BEAM	END	BEAM END REPAIR	BEARING PLATE REPAIR	PAINTING DETAIL	WT DIMENSIONS		COMPONENTS TO BE REPLACED
						L (INCHES)	H (INCHES)	
R1	1	WEST	2/S-101	3/S-101	5/S-101	36	6	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R2	1	EAST	2/S-101	4/S-101	5/S-101	36	6	ANCHOR BOLTS, ANCHOR NUTS, MASONRY PLATES
R3	2	WEST	2/S-101	3/S-101	5/S-101	30	6	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R4	2	EAST	--	4/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, MASONRY PLATES
R5	3	WEST	--	3/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R6	3	EAST	--	4/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, MASONRY PLATES
R7	4	WEST	--	3/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R8	4	EAST	--	4/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, MASONRY PLATES
R9	5	WEST	--	3/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R10	5	EAST	--	4/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, MASONRY PLATES
R11	6	WEST	--	3/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R12	6	EAST	--	4/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, MASONRY PLATES
R13	7	WEST	--	3/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE
R14	7	WEST	--	3/S-101	5/S-101	--	--	ANCHOR BOLTS, ANCHOR NUTS, SOLE PLATE, MASONRY PLATE

NOTES:

- REFERENCE EXISTING FRAMING PLAN ON SHEET S-100 FOR REPAIR AND BEAM LABELS. COORDINATE DIMENSIONS WITH DEMOLITION SCHEDULE ON SHEET S-100.
- WT DIMENSIONS SHOWN ON THIS TABLE TO BE CONFIRMED AND FINALIZED BASED ON CONTRACTOR'S FINAL DETERMINATION OF EXTENT OF REPAIRS BASED ON FIELD INSPECTION AND REPORTING TO ENGINEER.

PERMIT SET

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Repairs to North Street over Muddy Brook
MassDOT Bridge W-05-012 (ONE)

Town of Ware

Ware, Massachusetts

MARK	DATE	DESCRIPTION
PROJECT NO:	W2133-030	
DATE:	MAY 2023	
FILE:	W2133-030-S-100_101.dwg	
DRAWN BY:	BJP	
DESIGNED/CHECKED BY:	BJP, JI	
APPROVED BY:	DSH	

STRUCTURAL
BRIDGE GIRDER REPAIRS
PLAN AND SECTIONS

SCALE: AS SHOWN

S-101
SHEET 9 OF 9

APPENDIX C

Photographic Log

Client: Town of Ware

Job Number: W-2133-030

Site: Repairs to North Street over Muddy Brook Project

Photograph No.: 1	Date: 5/8/2023	Direction Taken: North
Description: View of the North Street Bridge from downstream. Photo taken from Flag 2A-3.		
		

Photograph No.: 2	Date: 5/8/2023	Direction Taken: Northeast
Description: View of Muddy Brook looking upstream from the North Street Bridge.		
		

Photographic Log

Client: Town of Ware

Job Number: W-2133-030

Site: Repairs to North Street over Muddy Brook Project



Photographic Log

Client: Town of Ware

Job Number: W-2133-030

Site: Repairs to North Street over Muddy Brook Project

Photograph No.: 5	Date: 5/8/2023	Direction Taken: South
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Description: View of BVW 2C from Flag 2C-1.



Photograph No.: 6	Date: 5/8/2023	Direction Taken: Southwest
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Description: View of BVW 1C from Flag 1A-6. North Street Bridge visible in the background.



NOTIFICATION TO ABUTTERS UNDER THE MASSACHUSETTS WETLAND PROTECTION ACT AND OF WARE WETLAND BYLAW REGULATIONS

This is a notification required by Law. You are receiving this notification because you have been identified as the owner of land abutting another parcel of land for which certain activities are proposed. Those activities require a permit under the Massachusetts Wetland Protection Act, M.G.L. c. 131, §40. In accordance with the second paragraph of Massachusetts Wetlands Protection Act, and CMR10.05(4)(a) of the Wetland Regulations, you are hereby notified that:

- A. The applicant has filed a Notice of Intent seeking permission to remove, fill, dredge, or alter an area subject to protection under the Wetlands Protection Act (MGL c. 131, § 40), and/or the Town of Ware Wetland Bylaws.
- B. Brief Description of proposed project: _____

- C. The name of the applicant is: _____
- D. The address of the lot(s) where the activity is proposed is: _____

- D. Copies of the application may be examined at the office of the Ware Conservation Commission, located within the Building Department, Town Hall, 126 Main Street, Ware, MA between the hours of 8:00 am to 4:00 pm on Monday through Friday or by calling telephone number (413) 967-9648.
- E. Copies of the application may be obtained from either ☐ the Applicant, or ☐ the Applicant's representative, by calling telephone number _____ between the hours of _____ to _____ on the following days of the week _____.
An administration fee may be applied for providing copies of the application.
- F. Information regarding the date, time and place of the public hearing may be obtained from the Ware Conservation Commission, telephone number (413) 967-9648. If available from the Applicant, check here ☐ and see information available in E.

NOTE: The notice of the public hearing, including the date, time and place will be posted in the Town Hall not less than forty-eight (48) hours in advance and Town of Ware website www.townofware.com.

NOTE: The notice of the public hearing, including the date, time and place will be published at least five business days in advance, in the local paper – Ware River News.

NOTE: You may contact the Ware Conservation Commission Office or the Department of Environmental Protection Western Regional Office at (413) 784-1100 with questions regarding the Notice of Intent application process or the Wetland Protection Act.



300 foot Abutters List Report

Ware, MA
May 11, 2023

Subject Properties:

Parcel Number: 29-0-49
CAMA Number: 29-0-49
Property Address: UPPER NORTH ST

Mailing Address: MOULTON ERIC J MOULTON ROBERT A
221 UPPER NORTH ST STE 1
WARE, MA 01082

Parcel Number: 29-68-2
CAMA Number: 29-68-2
Property Address: 230 UPPER NORTH ST

Mailing Address: MARCOTTE, JASON
230 UPPER NORTH ST
WARE, MA 01082

Abutters:

Parcel Number: 29-0-46
CAMA Number: 29-0-46
Property Address: UPPER NORTH ST

Mailing Address: WARE TOWN OF TOWN FOREST
126 MAIN ST
WARE, MA 01082

Parcel Number: 29-0-47
CAMA Number: 29-0-47
Property Address: UPPER NORTH ST

Mailing Address: WILLIAMS DONALD
870 UNION ST
EAST BRIDGEWATER, MA 02333

Parcel Number: 29-0-48
CAMA Number: 29-0-48
Property Address: 28 SHEEHY RD

Mailing Address: MOULTON GARY C MOULTON LORNA J
28 SHEEHY RD
WARE, MA 01082

Parcel Number: 29-0-50
CAMA Number: 29-0-50
Property Address: 221 UPPER NORTH ST

Mailing Address: MOULTON ERIC J MOULTON ROBERT A
221 UPPER NORTH ST STE1
WARE, MA 01082

Parcel Number: 29-0-51
CAMA Number: 29-0-51
Property Address: 205 UPPER NORTH ST

Mailing Address: DEMERS HERVE A LIFE ESTATE
DEMERS LEO H & LINDA
205 NORTH ST
WARE, MA 01082

Parcel Number: 29-0-65
CAMA Number: 29-0-65
Property Address: 200 UPPER NORTH ST

Mailing Address: LEDUC LAURIE E
200 UPPER NORTH ST
WARE, MA 01082

Parcel Number: 29-0-67
CAMA Number: 29-0-67
Property Address: UPPER NORTH ST

Mailing Address: WARE TOWN OF
126 MAIN ST
WARE, MA 01082

Parcel Number: 29-0-68
CAMA Number: 29-0-68
Property Address: 238 UPPER NORTH ST

Mailing Address: SWETT MARK J SWETT DOREEN C
23 E MAIN ST
WARE, MA 01082

Parcel Number: 29-0-72
CAMA Number: 29-0-72
Property Address: GREENWICH RD

Mailing Address: WARE TOWN OF
126 MAIN ST
WARE, MA 01082



www.cai-tech.com

Data shown on this report 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 report.

5/11/2023

Page 1 of 2



300 foot Abutters List Report

Ware, MA
May 11, 2023

Parcel Number: 29-48-1
CAMA Number: 29-48-1
Property Address: SHEEHY RD

Mailing Address: WARE TOWN OF
126 MAIN ST
WARE, MA 01082



www.cai-tech.com

5/11/2023

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AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

I, Melissa Coady, hereby certify under the pains and penalties of perjury that on May 19, 2023 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, in connection with the following matter:

On behalf of the Town of Ware, a Notice of Intent filed under the Massachusetts Wetlands Protection Act by Tighe & Bond with the Ware Conservation Commission on 5/19/2023.

The form of the notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.



Name: Melissa Coady Date: 5/19/23

Notice by: Certified Mail X Certificates of Mailing Hand Delivery



MASSWILDLIFE

DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581

p: (508) 389-6300 | f: (508) 389-7890

MASS.GOV/MASSWILDLIFE

April 21, 2023

Melissa Coady
Tighe & Bond
53 Southampton Road
Westfield, Massachusetts 01085

RE: Project Location: North Street over Muddy Brook
Town: Ware
Heritage Hub Form ID: IR-54885

NHESP Tracking No.: -

To Whom It May Concern:

Thank you for contacting the Natural Heritage and Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife (the "Division") for information regarding state-listed species in the vicinity of the above referenced site. Based on the information provided, this project site or a portion thereof is located **within** the current *Massachusetts Natural Heritage Atlas*. The following state-listed species are mapped for either *Priority Habitat (PH)* alone, or for both *Priority Habitat (PH)* and *Estimated Habitat (EH)*, as indicated in the following table:

<u>Scientific Name</u>	<u>Common Name</u>	<u>Taxonomic Group</u>	<u>State Status</u>	<u>EH</u>	<u>PH</u>
<i>Glyptemys insculpta</i>	Wood Turtle	Reptile	Special Concern	876	1335

The species listed above is protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the Massachusetts Wetlands Protection Act (WPA) (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for most state-listed species can be found on our website (www.mass.gov/nhesp).

Please note that projects and activities located within Priority and/or Estimated Habitat **must** be reviewed by the Division for compliance with the state-listed species protection provisions of MESA (321 CMR 10.00) and/or the WPA (310 CMR 10.00).

Wetlands Protection Act (WPA)

If the project site is within Estimated Habitat and a Notice of Intent (NOI) is required, then a copy of the NOI must be submitted to the Division so that it is received at the same time as the local conservation commission. If the Division determines that the proposed project will adversely affect the actual Resource Area habitat of state-protected wildlife, then the proposed project may not be permitted (310 CMR 10.37, 10.58(4)(b) & 10.59). In such a case, the project proponent may request a consultation with the Division to discuss potential project design

MASSWILDLIFE

modifications that would avoid adverse effects to state-listed wildlife habitat.

A streamlined joint MESA/WPA review process is available. When filing an NOI, the applicant may file concurrently under the MESA and qualify for a 30-day streamlined joint review. Please visit our website for filing instructions: www.mass.gov/regulatory-review.

MA Endangered Species Act (MESA)

If the proposed project is located within Priority Habitat and is not exempt from review (see 321 CMR 10.14), then project plans, a fee, and other required materials must be submitted to the Division to determine whether a Take under the MA Endangered Species Act would occur (321 CMR 10.18). Please note that all proposed and anticipated development must be disclosed, as MESA does not allow project segmentation (321 CMR 10.16). Please visit our website for filing instructions: www.mass.gov/regulatory-review.

We recommend that state-listed species habitat concerns be addressed during the project design phase prior to submission of a formal MESA filing, as avoidance and minimization of impacts to state-listed species and their habitats is likely to expedite regulatory review. Please visit our website for more information on how to request a pre-filing consultation with the Division: www.mass.gov/how-to/request-a-pre-filing-consultation

This evaluation is based on the most recent information available in the NHESP database, which is constantly being expanded and updated through ongoing research and inventory. If the purpose of your inquiry is to generate a species list to fulfill the federal Endangered Species Act (16 U.S.C. 1531 et seq.) information requirements for a permit, proposal, or authorization of any kind from a federal agency, we recommend that you use the NOAA Fisheries Greater Atlantic Region ESA Section 7 Mapper (<https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=1bc332edc5204e03b250ac11f9914a27>) and the U.S. Fish and Wildlife Service's Information for Planning and Conservation website (<https://ecos.fws.gov/ipac>). If you have any questions regarding this letter please contact Melany Cheeseman, Endangered Species Review Assistant, at Melany.Cheeseman@mass.gov.

Sincerely,



Everose Schlüter, Ph.D.
Assistant Director



Assessors Map - North Street Crossing Muddy Brook

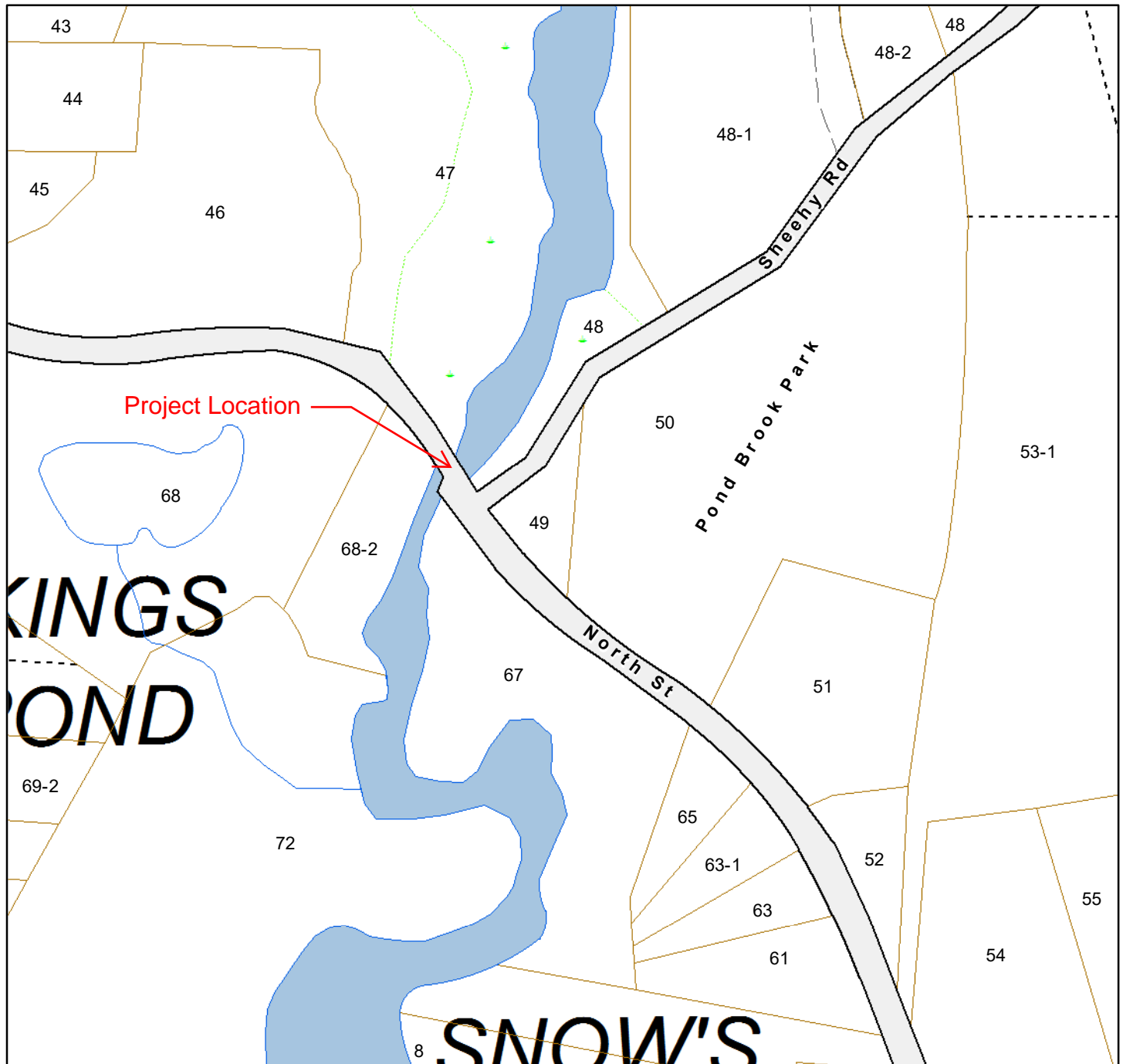
Ware, MA



May 11, 2023

1 inch = 250 Feet

www.cai-tech.com



PWater	Tract Line	Wet Areas
Property Line	Wetland	Water-poly
Public Road	WaterLines	
Right of Way	Right of Ways	

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.

