

# **MONTAGUE CAPITAL IMPROVEMENTS COMMITTEE**

## **REVISED MEETING AGENDA**

### **Meeting Accessible Via Zoom Only**

<https://us02web.zoom.us/j/83065170159?pwd=Z7ioCPjgbTdgoW0p6jUGAIDGL9WZAI.1> or Phone: (646) 931-3860

**Meeting ID: 830 6517 0159 Passcode: 853626**

**Wednesday, January 29, 2025 from 3:30 to 5:00 pm**

#### **Votes May Be Taken**

1. Call to Order and Approve any outstanding meeting minutes: 1/22/25
2. Review of Committee report to February 12, 2025 Special Town Meeting
3. Review of Selectboard Capital Article Requests to Annual Town Meeting
  - a. FRTA bus stop improvements (Industrial Blvd/Millers Falls Rd) (\$60,000)
  - b. **Montague Center Complete Streets Design (\$91,200)**
4. Review slate of all capital requests: updates and discussion
5. Next steps in the FY26 Capital Planning Cycle
6. Topics not anticipated in the 48 hour posting requirements
7. Set next meeting date and time
8. Adjournment

# MONTAGUE CAPITAL IMPROVEMENTS COMMITTEE

## Meeting Minutes

### Meeting Accessible Via Zoom Only

<https://us02web.zoom.us/j/82139538190?pwd=jscrkx3TWIOxKPaiyw0MaAxZB8dhc.1> or  
Phone: (646) 931-3860

**Meeting ID: 821 3953 8190 Passcode: 025405**

#### **In Attendance:**

CIC Members: Gregory Garrison (GG), Chris Menegoni (CM), Ariel Elan (AE), Lynn Reynolds (LR), Jason Burbank (JB) (arrived at 4:02 PM)

Town Staff: Christopher Nolan-Zeller (CNZ)- Assistant Town Administrator, Jon Dobosz (JD) – Director of Parks & Recreation, Caitlin Kelley (CK) – Library Director, Tricia Perham (TP) – Library Trustee

#### **Meeting called to order 3:31PM, GG Presiding**

1. Call to Order and Approve any outstanding meeting minutes: 1/15/25

*MOTION to approve the minutes of 1/15/25, by GG, LR Seconded. CM-AYE, GG- AYE, LR- AYE, AE-ABSTAIN, JB-ABSENT. MOTION PASSED*

2. **3:30 PM:** Review of Parks & Recreation Capital Article Requests for Annual Town Meeting (Director of Parks & Recreation Jon Dobosz, invited)
  - a. Unity Park playground improvements (\$125,000)

JD explained that his request includes the installation of new pour-in-place surfacing, as well as replacement of a tube slide. The current pour-in-place is from 2012, with a typical life expectancy of 10-12 years. The Department has worked with DPW to patch where possible, but this has not consistently been feasible. Pour-in-place is expensive, but vital for providing an ADA-accessible facility, providing far better accessibility than wood fiber, and helping the park to receive and accessibility award 10 years ago. The tube slide is the playground's most popular feature. It dates back to 2000 and is showing its age. Unfortunately, no known grant sources are available to fund these improvements, with the Town's PARC and CDBG awards being used on other projects.

GG asked whether the slide was attached to a structure, and what the cost for each of these improvements was. JD responded that the slide was freestanding, and the estimates for pour-in-place and the new tube slide were \$100,000 and \$25,000, respectively.

AE asked whether there was any issue with how the old infrastructure was installed, and whether any alternative surfaces to pour-in-place were available that were not petroleum-based. JD responded that the infrastructure had been installed well, but was merely nearing the end of its useful life, and that he was not aware of any feasible surfacing that is not petroleum-based, with artificial turf no longer being permissible due to its pellets, and rubberized matting not being feasible in our climate due to frost heaving.

3. **4:00 PM:** Review of Public Libraries Capital Article Requests for Annual Town Meeting (Library Director Caitlin Kelley, invited)
  - a. Millers Falls Library storefront renovation (\$39,000)

CK discussed that she had chosen to advance this project instead of the Carnegie Library roof replacement, despite the latter being listed first on previous versions of the Capital Improvement Plan, due to the uncertain future of the Carnegie building. The storefront is the last section of the Millers Falls Library to see improvements, currently dating back to the 50s-60s. A regular building façade would be preferable. TP provided specifications. Replacing the ceiling was originally added, but would almost double the cost, with the ceiling alone being estimated at another \$34,000.

GG asked about the current age of the ceiling. TP responded that it likely dates back to when the building served as an appliance store. GG noted that the ceiling would need to be dealt with eventually, with TP noting it could have benefits for heating and cooling, but explaining that renovating the storefront is a higher priority.

AE recommended the two improvements be submitted as two separate articles, and that she would be interested in hearing JB's interpretation of the importance of replacing the ceiling from a heating conservation standpoint.

GG asked if drawings were available. TP responded that they were not yet, but Renaissance Builders had discussed recommendations and cost estimates. They proposed keeping the layout the same, but with two fixed casement windows for light, with more privacy and wall space than the current arrangement. An ADA-compliant door and improved energy efficiency would also be included.

CM asked whether replacing the Carnegie roof was still a high priority. CK responded that it was not, and can realistically wait until the future of that building is more known.

JB and TP discussed different ceiling materials.

GG explained that the requests would be split for additional review, and recommended to CK that the updated requests cite the energy savings advantages of both projects.

AE added that rudimentary sketches should be included for review at Town Meeting. TP responded that these would be included.

JB asked about how the newly-renovated Carnegie basement was holding up in the cold. CK responded that the new mini-splits take a while to heat up, but do well once they get going, noting that the HVAC subcontractor did a great job.

4. Review of Committee report to February 12, 2025 Special Town Meeting

GG expressed approval with most of the report, but requested that a piece be added about the fact that CWF staff would be providing in-house labor for the breakroom renovation project. LR and CM expressed agreement. AE requested that some of the conditional language be changed to reflect more present tense.

5. Status review of ongoing major capital projects

CNZ provided updates on the following projects

- a. Avenue A Streetscape improvements  
Construction is set to begin in mid-late March, starting with the block of storefronts on the even side between 2<sup>nd</sup> and 3<sup>rd</sup> Street.
- b. Turners Falls Manhole Rehabilitation  
The contract has been awarded, and a construction kickoff meeting with the contractor, engineer, and Town staff will be taking place in the next two weeks. All work must be completed by June 30, 2025.
- c. Strathmore Mill Demolition design  
The project remains in design, with the Town aiming for a late Spring-Summer bidding period.
- d. CWF fine bubble aerators/diffusers  
The contract for materials has been awarded, and the Town will be installing these prior to a grant-required deadline of June 30, 2025.

6. Topics not anticipated in the 48 hour posting requirements

None.

7. Establish next meeting date(s)

The next meeting would be virtual at 3:30PM on 1/29.

8. Adjournment

*MOTION to close the meeting at 4:32PM by CM, JB Seconded. CM-AYE, GG-AYE, LR-AYE, AE-AYE, JB-AYE. MOTION PASSED*

Respectfully Submitted,

Christopher Nolan-Zeller



## Annual Town Meeting

### SPECIAL ARTICLE REQUEST – CAPITAL EXPENSE

Budget Year  
**FY 26**

*This form is intended for use with capital article submissions  $\geq$  \$25,000 with a lifespan of 5+ years. For major building projects, please consult the Town Administrator.*

***Please complete this form in its entirety! Initial Submission due 10/31/2024.***

Check Here if this an expedited request for Winter 2024 Special Town Meeting

Department: Selectboard Submitted by: Chris Nolan-Zeller, Asst. Town Admin.

Item/Project Cost: \$60,000 Date Prepared: 11/06/2024

Item/Project Title: Millers Falls Rd and Industrial Blvd – FRTA Bus Stop Improvements

#### Proposed Article Wording:

To see if the Town will vote to raise and appropriate, transfer from available funds, borrow, or otherwise provide the sum of **\$60,000**, or any other amount, for the purpose of supplementing grant funds received by the Franklin Regional Transit Authority for bus stop improvements at Millers Falls Road and Industrial Boulevard, including any and all incidental and related costs, or pass any vote or votes in relation thereto.

#### Detailed Description for Background Materials: *(Provide a full description of the item or service. Use attachments as needed.)*

The Franklin Regional Transit Authority (FRTA) was awarded a grant from MassDOT’s Shared Streets and Spaces program in the amount of \$178,376 to fund improvements to the two bus stops on either side of Millers Falls Road at the intersection with Industrial Boulevard. Proposed improvements included four possible alternates, consisting of either Rectangular Rapid Flashing Beacons (RRFB) or HAWK Beacons for pedestrian crossing, and of either Simme-Seats or bus shelters for the comfort and convenience of transit users.

A deficit of \$57,287 exists between the grant award and the project engineer’s opinion of probable cost for the least expensive of the four alternates, which includes RRFBs and Simme-Seats. As a result, the FRTA is now approaching the Town and other stakeholder organizations, such as the Franklin Regional Housing and Redevelopment Authority (FCRHRA), to request assistance with funding this shortfall.

**Scoping Questions**

*Please elaborate in the comments box at bottom of the page*

Do you have a written estimate or proposal for the scope of work?

*If yes, attach the estimate*

Yes

No

Is there a lease option for this expense?

Will this item or project replace a capital asset?

Will this create ongoing costs or savings?

Will this leverage grant or other external funding?

Is this request identified on the Capital Improvement Plan?

**Describe how the project/ purchase will be managed**

*Who will manage procurement and execution of the project? Will external resources be required for design, engineering, procurement, or construction oversight?*

The project will be fully managed and administered by the FRTA.

**Why is it essential that the Town makes this investment now?**

*Make your argument for why this project is necessary and timely. Articulate the benefits of the project. If necessary, describe the consequences of inaction.*

If the FRTA is unable to secure sufficient additional funds to support the project, there is a risk that the grant funds would need to be surrendered and the project would not move forward. The project as designed would improve safety for all users at a bus stop location served by two bus routes (23, 32), at an intersection which becomes quite busy during peak hours.

**Relative Priority** : Your assessment of the how important this is to the Town at the present time.

Critical Importance

Highly Important

Moderately Important

O

O

OX

**Comments and additional information:**





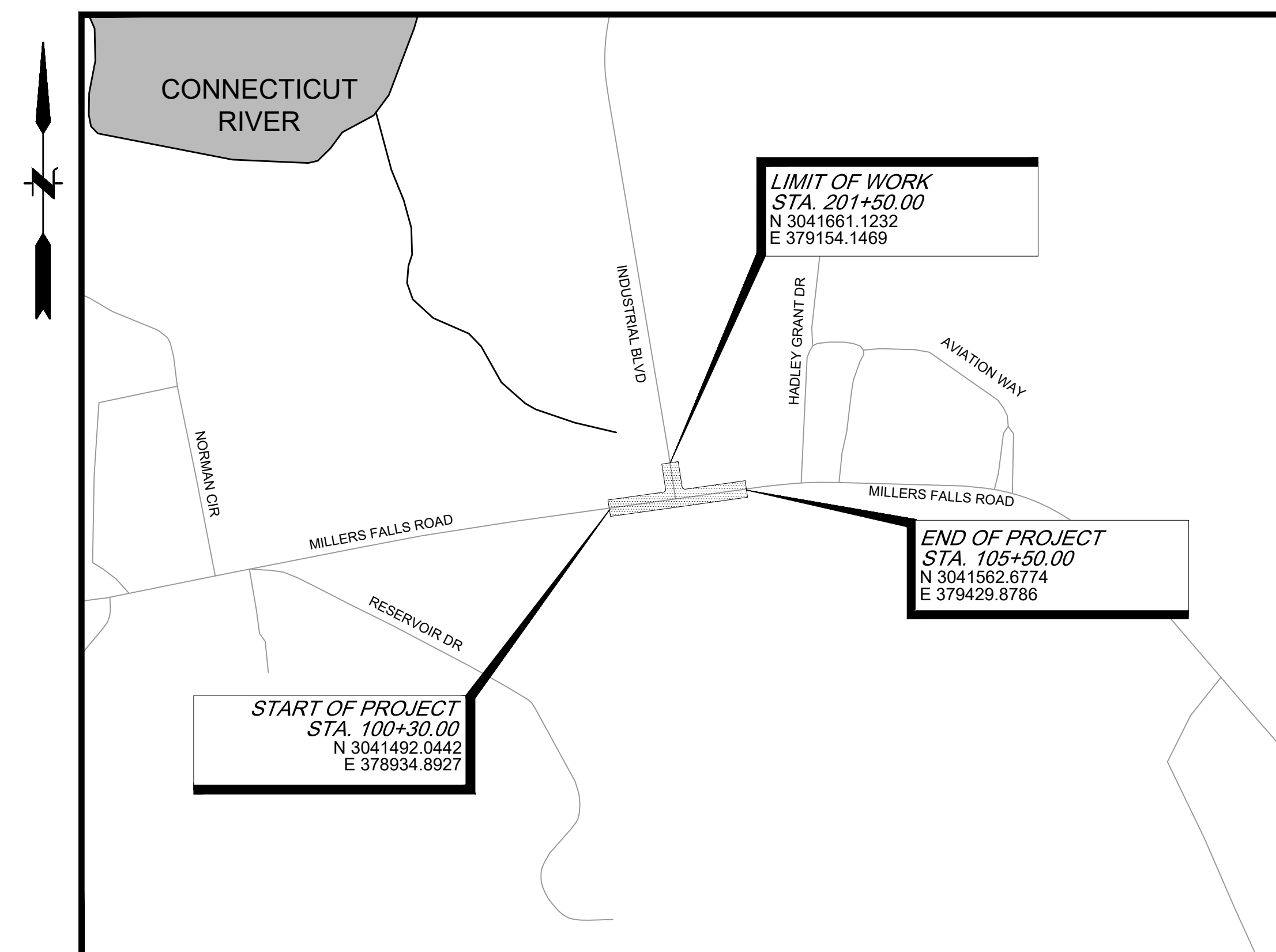
# FRTA – INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS

MONTAGUE · MASSACHUSETTS  
**PRELIMINARY DESIGN SUBMITTAL**  
**NOT FOR CONSTRUCTION**

AUGUST 2024

## SHEET INDEX

| Page no. | Sheet no.  | Sheet Title                         |
|----------|------------|-------------------------------------|
| 1        | GI-001     | COVER SHEET                         |
| 2        | GI-002     | LEGEND & GENERAL NOTES              |
| 3        | GI-301     | TYPICAL SECTIONS                    |
| 4        | CS-101     | CONSTRUCTION PLANS                  |
| 5-6      | CR-201-202 | ROADWAY PROFILES                    |
| 7        | CG-101     | GRADING & BASELINE TIE PLANS        |
| 8        | CT-101     | PAVEMENT MARKING & SIGNING PLANS    |
| 9        | CT-601     | STANDARD TRAFFIC SIGN SUMMARY SHEET |
| 10       | CT-102     | TRAFFIC SIGNAL PLANS                |
| 11-13    | CT-103-105 | TEMP. TRAFFIC MANAGEMENT PLANS      |
| 14       | CT-602     | TEMP. TRAFFIC SIGN SUMMARY SHEET    |
| 15-17    | CD-501-503 | CONSTRUCTION DETAILS                |
| 18       | RW-101     | ANTICIPATED ROW OF WAY IMPACT       |



LOCATION MAP

SCALE: 1" = 400'

LENGTH OF PROJECT = 580 FEET = 0.1098 MILES

PREPARED BY

**FUSS &  
O'NEILL**

1550 MAIN STREET, SUITE 400  
 SPRINGFIELD, MA 01103  
 413.452.0445  
 www.fando.com

PREPARED FOR

**FRANKLIN REGIONAL  
 TRANSIT AUTHORITY**  
 12 OLIVE STREET  
 GREENFIELD, MA 01301

PROJ. No.: 20240059.A10  
 DATE: AUGUST 2024

GI-001

GENERAL SYMBOLS

| EXISTING | PROPOSED |   |
|----------|----------|---|
|          |          | CATCH BASIN (OR GUTTER INLET, OR LEACHING BASIN)            |
|          |          | CATCH BASIN (OR GUTTER INLET) WITH CURB INLET (GUTTERMOUTH) |
|          |          | EDGESTONE-TYPE NOTED  |
|          |          | EDGE OF ROAD  |
|          |          | ELECTRIC HANDHOLE (NUMBER AS NOTED)                         |
|          |          | ELECTRIC MANHOLE  |
|          |          | TELEPHONE MANHOLE   |
|          |          | WATER MANHOLE   |
|          |          | SEWER MANHOLE   |
|          |          | DRAINAGE MANHOLE  |
|          |          | GAS GATE  |
|          |          | WATER GATE  |
|          |          | CURB STOP   |
|          |          | HYDRANT   |
|          |          | FIRE ALARM BOX  |
|          |          | PARKING METER   |
|          |          | STREET LIGHT POLE   |
|          |          | UTILITY POLE  |
|          |          | GUY POLE  |
|          |          | DRAIN PIPE (UNDER 24")                                      |
|          |          | DRAIN PIPE (DOUBLE LINE 24" AND OVER)                       |
|          |          | SEWER MAIN  |
|          |          | ELECTRIC DUCT   |
|          |          | GAS MAIN  |
|          |          | WATER MAIN  |
|          |          | TELEPHONE DUCT  |
|          |          | MAIL BOX  |
|          |          | HIGHWAY GUARD (TYPE NOTED)                                  |
|          |          | FENCE (SIZE AND TYPE NOTED)                                 |
|          |          | HIGHWAY/PROPERTY BOUND (TYPE NOTED)                         |
|          |          | CITY, TOWN, OR COUNTY LAYOUT                                |
|          |          | STATE HIGHWAY LAYOUT (S.H.L.O.)                             |
|          |          | EASEMENT LINE   |
|          |          | PROPERTY LINE   |
|          |          | CITY, TOWN, OR COUNTY BOUNDARY                              |
|          |          | STATE BOUNDARY  |
|          |          | BASE OR SURVEY LINE   |
|          |          | CONSTRUCTION BASELINE                                       |
|          |          | TREE (SIZE AND TYPE NOTED)                                  |
|          |          | APPROXIMATE FULL DEPTH AREA                                 |
|          |          | COMPOST FILTER TUBE   |
|          |          | BORDERING VEGETATED WETLAND                                 |
|          |          | 50' BUFFER TO WETLAND                                       |
|          |          | 100' BUFFER TO WETLAND                                      |
|          |          | 100' INNER RIPARIAN   |
|          |          | 200' RIVERFRONT BUFFER                                      |
|          |          | MAJOR CONTOUR   |
|          |          | MINOR CONTOUR   |

PAVEMENT MARKINGS AND SIGNING SYMBOLS

| EXISTING | PROPOSED |  |
|----------|----------|--|
|          |          | PAVEMENT ARROW AND LEGEND                      |
|          |          | CROSSWALK, 2-12" WHITE LINES (WIDTH NOTED)     |
|          |          | STOP LINE, 12" WHITE LINE 4.0' BEHIND CW (TYP) |
|          |          | YIELD LINE, 24" x 36" WHITE TRIANGLE, 36" O.C. |
|          |          | SOLID WHITE CHANNELIZING LINE-SIZE AS NOTED    |
|          |          | SOLID YELLOW CHANNELIZING LINE-SIZE AS NOTED   |
|          |          | BROKEN WHITE LANE LINE - 4"                    |
|          |          | SOLID WHITE LANE LINE - 4"                     |
|          |          | DOUBLE YELLOW CENTERLINE - 4"                  |
|          |          | DASHED WHITE LANE LINE - 4"                    |
|          |          | SOLID YELLOW EDGE LINE - 4"                    |
|          |          | SOLID WHITE EDGE LINE - 4"                     |
|          |          | BROKEN YELLOW LANE LINE - 4"                   |
|          |          | BICYCLE LANE                                   |
|          |          | BICYCLE DETECTION LEGEND                       |
|          |          | SIGN AND POST                                  |
|          |          | DELINEATOR                                     |

REGULATORY REQUIREMENTS

- ALL WORK SHALL CONFORM WITH THE ORDER OF CONDITIONS (OOC) ISSUED FOR THE PROJECT.
- NOTIFY CITY OF EASTHAMPTON CONSERVATION COMMISSION A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.
- FIELD INSPECTOR SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION.
- POST DEP SIGN NUMBER ASSIGNED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
- APPROVED PLANS SHALL BE ON SITE AT ALL TIMES.
- WITHIN LOCAL RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.

GENERAL NOTES:

- INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. NO GUARANTEE TO THE ACCURACY OF THE EXISTING UTILITIES FACILITIES SHOWN IN THIS PROJECT IS EXPRESSED OR IMPLIED UNLESS OTHERWISE NOTED. CONTRACTOR SHALL CONTACT "Mass DIG-SAFE", 1-888-344-7233. CONTRACTOR SHALL MAINTAIN MARKINGS WHERE NEEDED DURING PROJECT. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION. THE CONTRACTOR SHALL VERIFY LOCATIONS OF UTILITIES AND SERVICE LATERALS PRIOR TO CONSTRUCTION. ANY CONFLICTS WITH LOCATIONS OF LIGHT POLES, TREES, ETC. SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY LOCAL AND STATE APPROVALS AND PERMITS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CONFORM TO ALL REQUIREMENTS OF THE LOCAL AND STATE AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES REQUIRED FOR THIS WORK INCLUDING BUT NOT LIMITED TO TOWN SIDEWALK AND EXCAVATION PERMITS AND ASSOCIATED BONDING.
- THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND STRUCTURES. THOSE OF WHICH HAVE BEEN DAMAGED SHALL BE PROMPTLY REPAIRED TO EXISTING OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE ROADWAY IS TO BE GRADED SMOOTHLY AND EVENLY IN ACCORDANCE WITH THE GRADING AND TIE PLANS, PROFILE, AND CROSS SECTIONS. THE CONTRACTOR IS RESPONSIBLE FOR INSURING A POSITIVE DRAINAGE FLOW TO ALL CATCH BASINS WITHOUT CREATING ANY FLAT SPOTS THAT WILL RESULT IN STANDING WATER.
- THE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS TO REMOVE ANY PERSONAL ITEMS, LANDSCAPING, PLANT BULBS, PAVERS LOCATED IN THE TEMPORARY EASEMENT AND CITY LAYOUT.
- ANY PUBLIC OR PRIVATE PROPERTY DISTURBED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED AS QUICKLY AS POSSIBLE AND TO THE SATISFACTION OF THE ENGINEER.
- HOURS OF WORK SHALL BE DEFINED IN THE CONTRACT DOCUMENTS. THE TOWN RESERVES THE RIGHT TO ADJUST THESE HOURS IN THE INTEREST OF PUBLIC SAFETY.
- ACCESS TO PRIVATE PROPERTIES MUST BE MAINTAINED AT ALL TIMES. FOR SECURITY REASONS ALL PRIVATELY OWNED FENCING THAT IS TO BE REMOVED SHALL BE REPLACED WITHIN 72 HOURS OF REMOVAL.
- INSTALL SEDIMENTATION AND EROSION CONTROL MEASURES PRIOR TO START OF CONSTRUCTION. EXISTING AND PROPOSED CATCH BASINS DOWNGRADE OF ALL WORK AREAS SHALL UTILIZE SILT SACKS DURING CONSTRUCTION.

MAP REFERENCE

- EXISTING CONDITIONS DEPICTED ON THIS PLAN ARE COMPILED FROM SURVEY PERFORMED BY SHERMAN & FRYDRYK, BETWEEN JULY 12, 2024 AND JULY 15, 2024, AN AUTOCAD FILE PROVIDED BY THE SHERMAN & FRYDRYK ON AUGUST 21, 2024, AND FUSS & O'NEILL SITE INVESTIGATIONS ON JULY 9, 2024.
- HORIZONTAL DATUM REFERS TO THE MASSACHUSETTS COORDINATE SYSTEM, NAD83, MAINLAND ZONE, VERTICAL DATUM IS NAVD88. BOTH DATUMS ARE ESTABLISHED AT THE SITE BY LOCAL GPS OBSERVATION ON THE MASSCORS NETWORK.

ABBREVIATIONS

| GENERAL |                  |       |                    | UTILITIES |                                      | ALIGNMENT/GRADING |                         | PROFILES |  | TRAFFIC SIGNAL SYSTEMS |  |
|---------|------------------|-------|--------------------|-----------|--------------------------------------|-------------------|-------------------------|----------|--|------------------------|--|
| ABAN    | ABANDON          | NTS   | NOT TO SCALE       | ACOMP     | ASPHALT COATED CORRUGATED METAL PIPE | CC                | CENTER OF CURVE         | AD       | ALGEBRAIC DIFFERENCE IN RATES OF GRADE | R                      | STEADY CIRCULAR RED                              |
| ADJ     | ADJUST           | PGL   | PROFILE GRADE LINE | CAP       | CORRUGATED ALUMINUM PIPE             | HP                | HIGH POINT              | ELEV     | ELEVATION                              | Y                      | STEADY CIRCULAR YELLOW                           |
| APPROX  | APPROXIMATE      | PROP  | PROPOSED           | CIP       | CAST IRON PIPE                       | LP                | LOW POINT               | HSD      | HORIZONTAL SIGHT DISTANCE              | G                      | STEADY CIRCULAR GREEN                            |
| BIT     | BITUMINOUS       | PVM'T | PAVEMENT           | CIT       | CHANGE IN TYPE                       | PC                | POINT OF CURVE          | K        | RATE OF VERTICAL CURVATURE             | FR                     | FLASHING CIRCULAR RED                            |
| BOS     | BOTTOM OF SLOPE  | REM   | REMOVE             | COND      | CONDUIT                              | PI                | POINT OF INTERSECTION   | PVI      | POINT OF VERTICAL INTERSECTION         | -FR->                  | FLASHING RED ARROW                               |
| (B.O.)  | BY OTHERS        | REMOD | REMODEL            | DIP       | DUCTILE IRON PIPE                    | PNT               | POINT                   | PVC      | POINT OF VERTICAL CURVE                | FY                     | FLASHING CIRCULAR YELLOW                         |
| CLF     | CHAINLINK FENCE  | RET   | RETAIN             | FES       | FLARED END SECTION                   | PCC               | POINT OF COMPOUND CURVE | PVT      | POINT OF VERTICAL TANGENT              | -FY->                  | FLASHING YELLOW ARROW                            |
| CONC    | CONCRETE         | R&D   | REMOVE AND DISCARD | F&G       | FRAME AND GRATE                      | PRC               | POINT OF REVERSE CURVE  | PVRC     | POINT OF VERTICAL REVERSE CURVE        |                        | STEADY VERTICAL GREEN ARROW                      |
| ELEV    | ELEVATION        | R&R   | REMOVE AND RESET   | HDPE      | HIGH DENSITY POLYETHYLENE PIPE       | PT                | POINT OF TANGENT        | PVCC     | POINT OF VERTICAL COMPOUND CURVE       |                        | STEADY LEFT ARROW (RED, YELLOW OR GREEN PREFIX)  |
| EOP     | EDGE OF PAVEMENT | R&S   | REMOVE AND STACK   | HW        | HEADWALL                             | 25.45             | SPOT ELEVATION          | SSD      | STOPPING SIGHT DISTANCE                |                        | STEADY RIGHT ARROW (RED, YELLOW OR GREEN PREFIX) |
| EXIST   | EXISTING         | RT    | RIGHT              | HYD       | HYDRANT                              |                   |                         | VC       | VERTICAL CURVE                         | W                      | STEADY WALK-WHITE                                |
| FND     | FOUNDATION       | STA   | STATION            | INV       | INVERT                               |                   |                         |          |  | DW                     | STEADY DON'T WALK-PORTLAND ORANGE                |
| GRAN    | GRANITE          | TEMP  | TEMPORARY          | PVC       | POLYVINYLCHLORIDE PIPE               |                   |                         |          |  | FDW                    | FLASHING DON'T WALK-PORTLAND ORANGE              |
| HMA     | HOT MIX ASPHALT  | TOS   | TOP OF SLOPE       | PWW       | PAVED WATER WAY                      |                   |                         |          |  |                        |  |
| LOAM    | LOAM BORROW      | TYP   | TYPICAL            | RCP       | REINFORCED CONCRETE PIPE             |                   |                         |          |  |                        |  |
| LT      | LEFT             |       |                    | TSV&B     | TAPPING SLEEVE VALVE AND BOX         |                   |                         |          |  |                        |  |
| MAX     | MAXIMUM          |       |                    | UP        | UTILITY POLE                         |                   |                         |          |  |                        |  |
| MIN     | MINIMUM          |       |                    |           |                                      |                   |                         |          |  |                        |  |

DESIGNER REVIEWER

DESCRIPTION

DATE

No.

SEAL

SCALE: HORZ.: NOT TO SCALE VERT.: VERT.: DATUM: HORZ.: VERT.:

**FUSS & O'NEILL**  
146 HARTFORD ROAD  
MANCHESTER, CT 06040  
800.962.2469  
www.foss.com

TOWN OF MONTAGUE  
LEGEND & GENERAL NOTES  
FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD  
BUS STOP IMPROVEMENTS MASSACHUSETTS  
MONTAGUE

PROJ. No.: 20240059.A10  
DATE: AUGUST 2024

**GI-002**

**NOTES:**

**PROPOSED CEMENT CONCRETE WALK**

**SURFACE:** 4" CEMENT CONCRETE  
AIR ENTRAINED, 4000psi, 3/4", 610

**SUBBASE:** 8" GRAVEL BORROW, TYPE b.

**PROP. BOX WIDENING / FULL DEPTH**

**SURFACE:** 2" SUPERPAVE SURFACE COURSE - 9.5 OVER

**INTERMEDIATE:** 2" SUPERPAVE COURSE - 12.5 OVER  
6" HIGHLY EARLY CEMENT  
CONCRETE BASE COURSE - 4000psi, 610, 3/4" OVER

**SUBBASE:** 8" GRAVEL BORROW, TYPE b.

**PROP STAMPED CEM. CONC.**

**SURFACE:** 10" CEMENT CONCRETE  
AIR ENTRAINED 5000psi, 3/4", 610

**FOUNDATION:** 8" MIN. GRAVEL BORROW, TYPE b.  
(GRAVEL LINE TO MEET BOTTOM OF ADJACENT ROADWAY GRAVEL)

**PROPOSED CEMENT CONCRETE PEDESTRIAN CURB RAMP (PCR) AND BUS SHELTER PAD**

**SURFACE:** 4" CEMENT CONCRETE  
AIR ENTRAINED, 4000psi, 3/4", 610

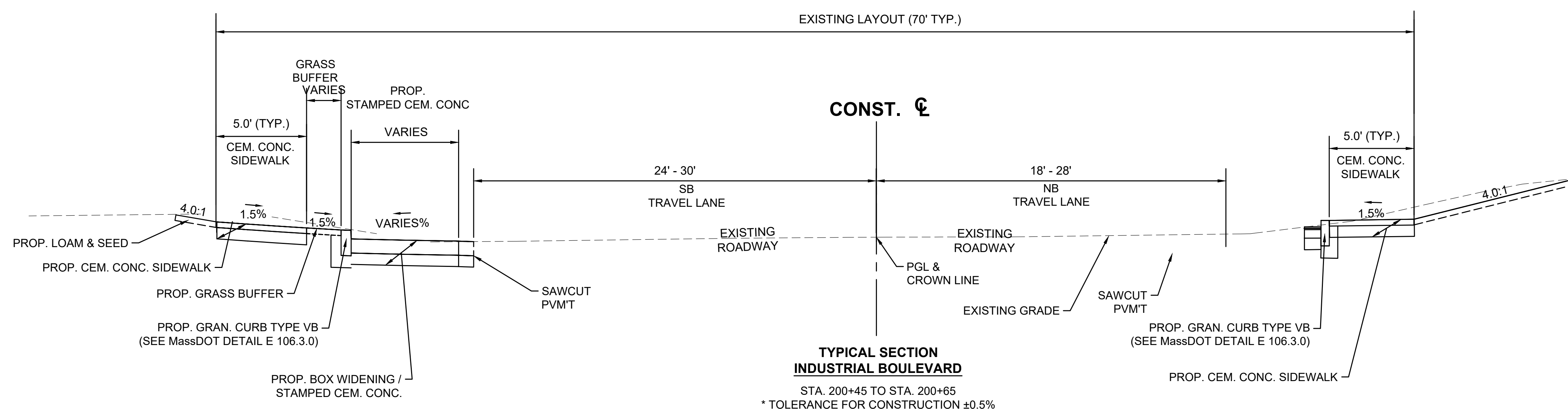
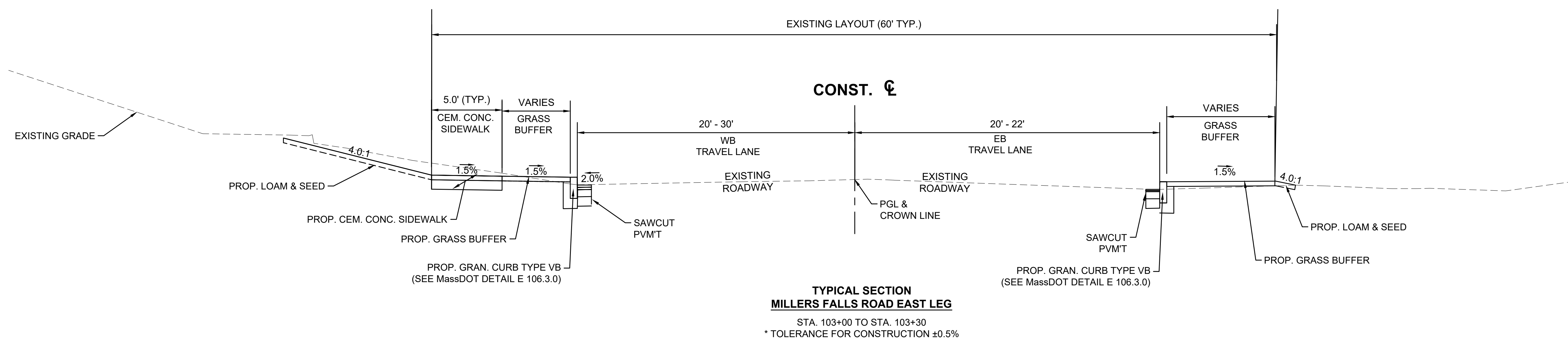
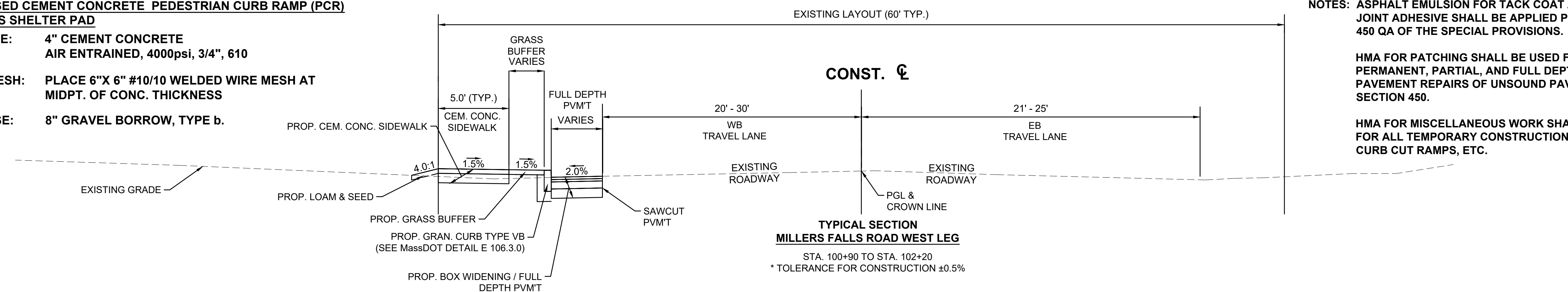
**WIRE MESH:** PLACE 6"X 6" #10/10 WELDED WIRE MESH AT MIDPT. OF CONC. THICKNESS

**SUBBASE:** 8" GRAVEL BORROW, TYPE b.

NOTES: ASPHALT EMULSION FOR TACK COAT AND HMA JOINT ADHESIVE SHALL BE APPLIED PER SECTION 450 QA OF THE SPECIAL PROVISIONS.

HMA FOR PATCHING SHALL BE USED FOR ALL PERMANENT, PARTIAL, AND FULL DEPTH PAVEMENT REPAIRS OF UNSOUND PAVEMENT PER SECTION 450.

HMA FOR MISCELLANEOUS WORK SHALL BE USED FOR ALL TEMPORARY CONSTRUCTION, RAMPS, CURB CUT RAMPS, ETC.



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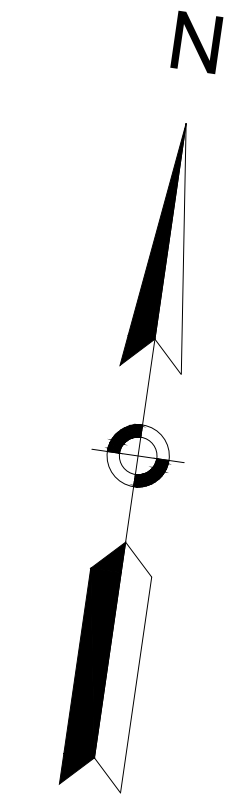
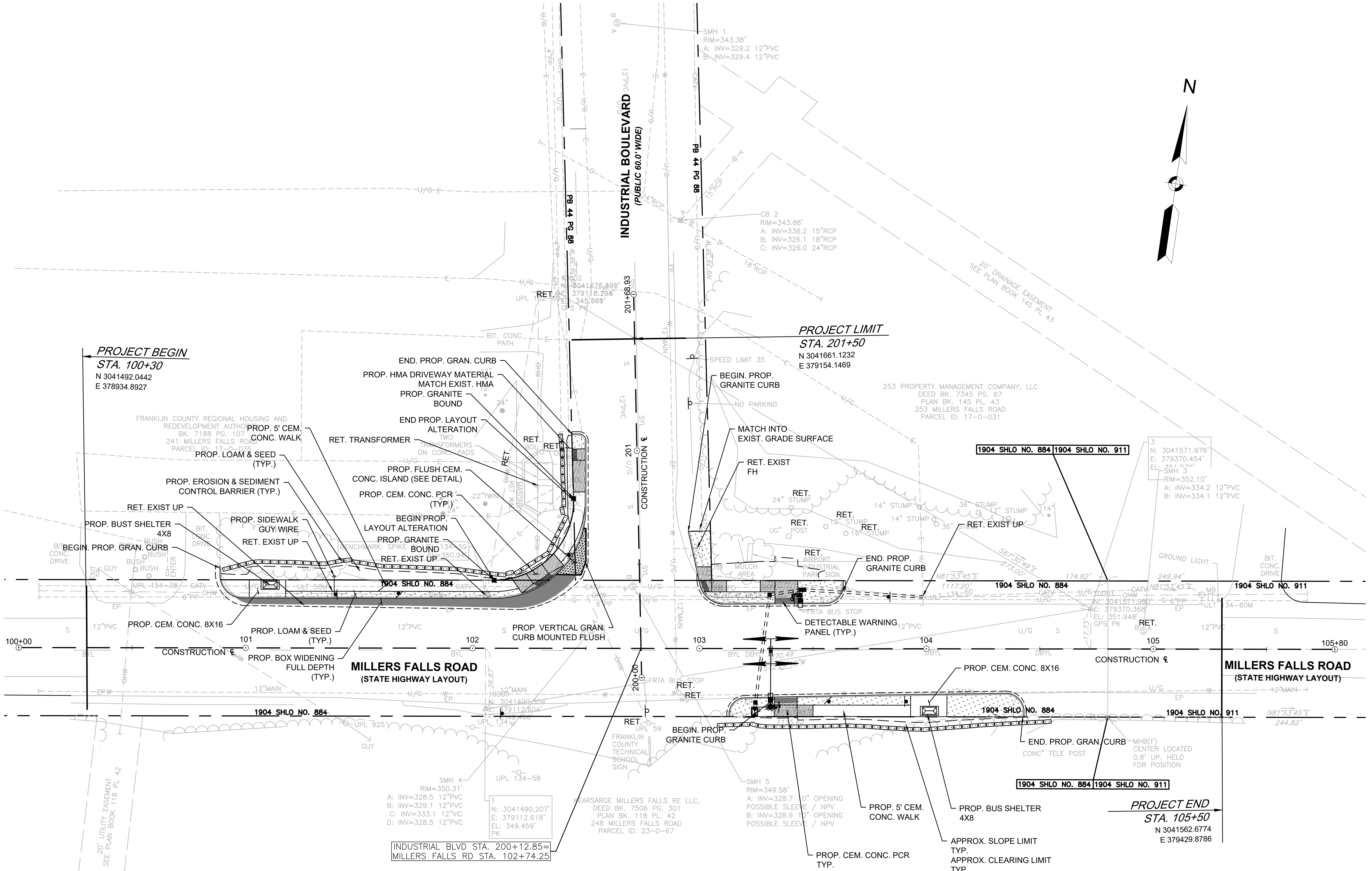
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TOWN OF MONTAGUE  
 TYPICAL SECTIONS  
 FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD  
 BUS STOP IMPROVEMENTS MASSACHUSETTS

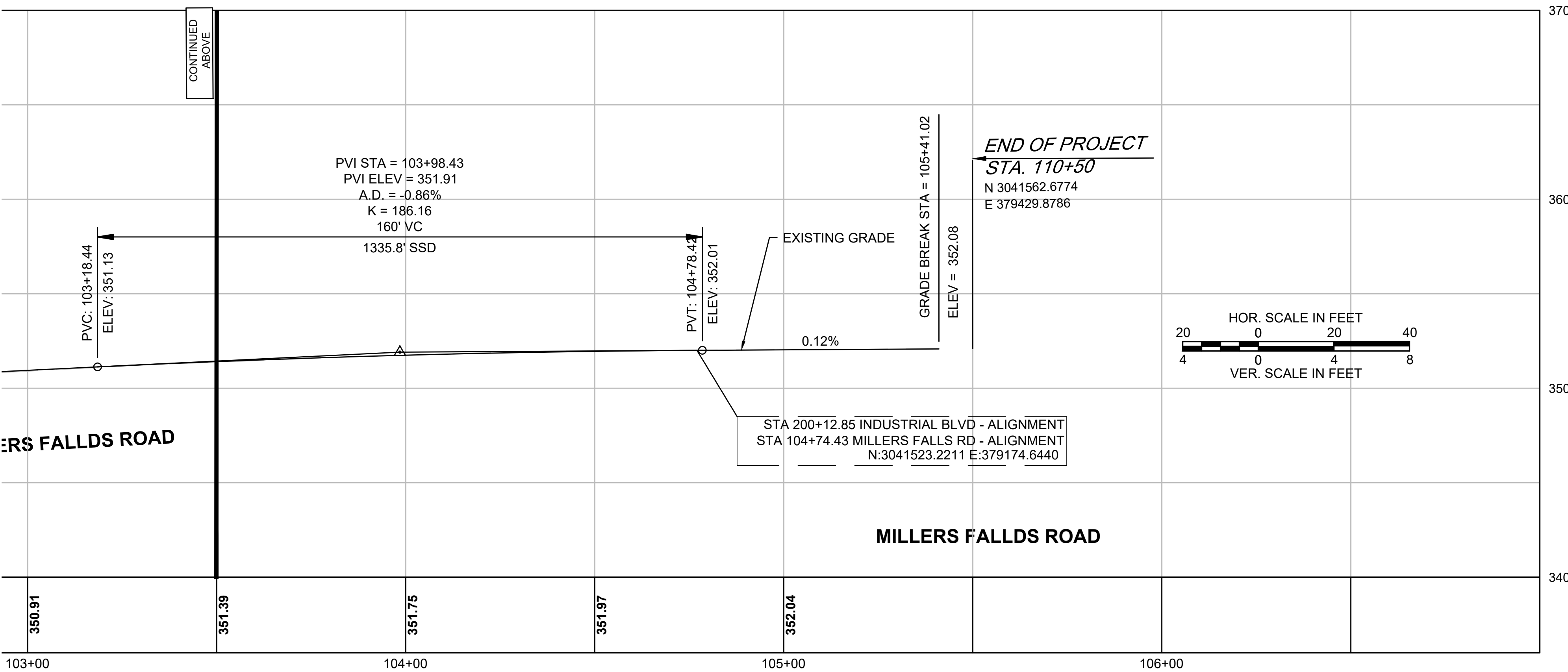
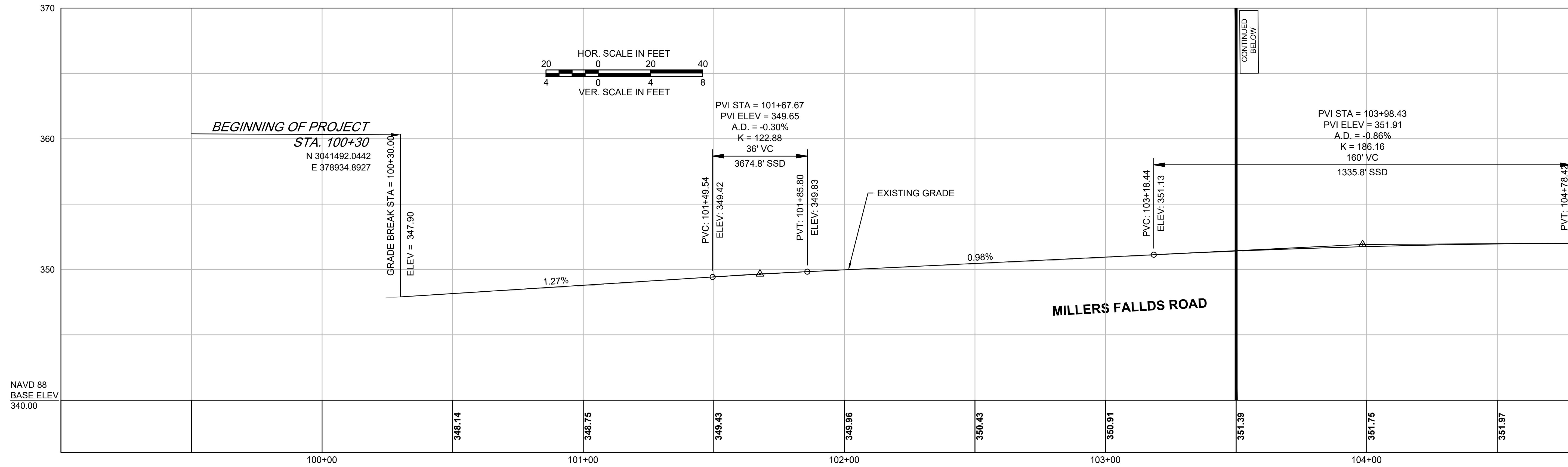
PROJ. No.: 20240059.A10  
 DATE: AUGUST 2024

**GI-301**

File: J:\DWG\2024\0059\A10\Civil\Plan\20240059\_A10\_HD(Construction Plan).dwg Layout: CS-101 Plotted: 2024-08-11 3:11 AM Saved: 2024-08-11 3:09 AM User: aaron.keegan  
 PC3: AUTOCAD PDF (GENERAL DOCUMENTATION) PC3: STB/CTB: MADOT-D.STB  
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|--|--|
| <b>FUSS &amp; O'NEILL</b><br>1550 MAIN STREET, SUITE 400<br>SPRINGFIELD, MA 01103<br>www.foss.com        | <b>TOWN OF MONTAGUE</b><br><b>CONSTRUCTION PLANS</b><br>FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD<br>BUS STOP IMPROVEMENTS MASSACHUSETTS |
| SCALE: HORIZ.: 1" = 20'<br>VERT.: -<br>DATUM: -<br>HORIZ.: -<br>VERT.: -<br>GRAPHIC SCALE: 0 10' 20' 40' | SEAL<br>No. _____<br>DATE _____<br>DESIGNER REVIEWER _____   |
| PROJ. No.: 20240059.A10<br>DATE: AUGUST 2024   |  |
| CS-101   |  |



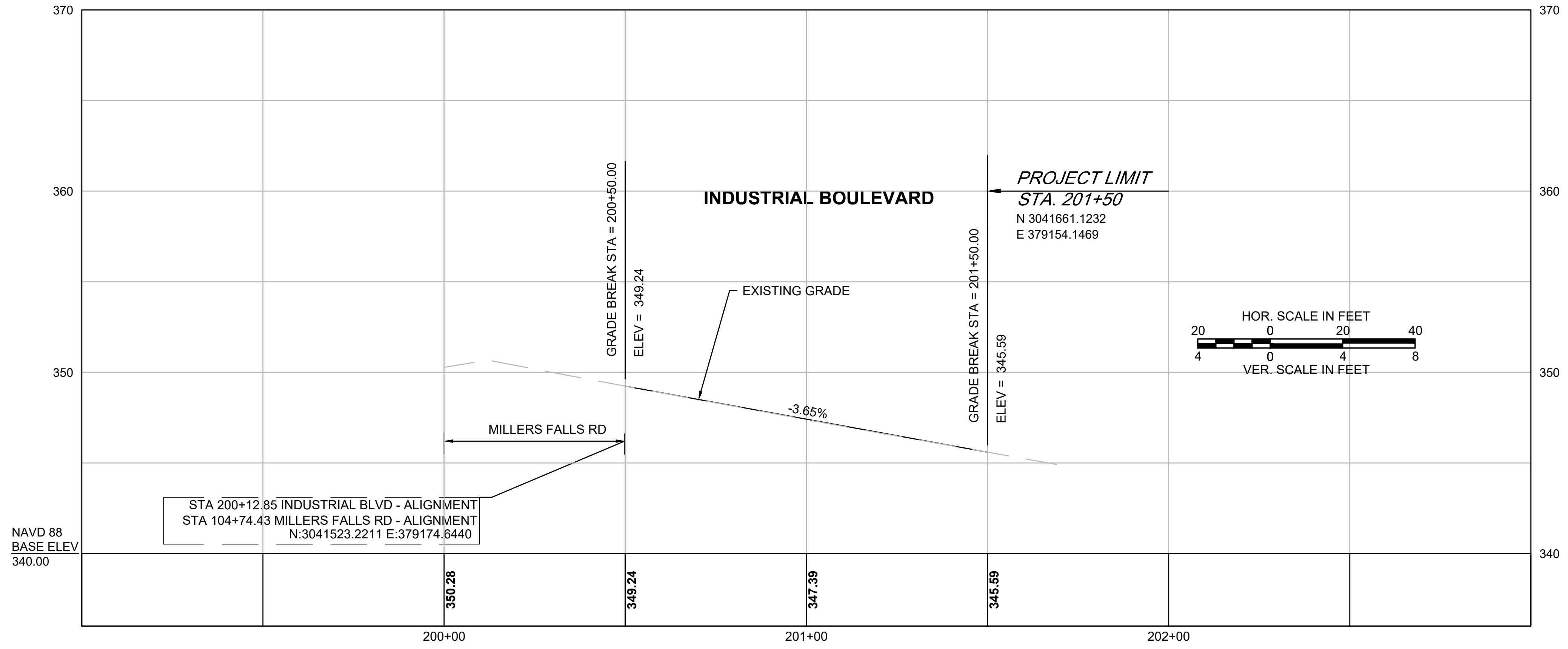
NOTES:

1. THE ROADWAY PROFILE WILL REMAIN UNCHANGED. THE PROPOSED BOX WIDENING WILL MATCH THE EXISTING GRADE EXACTLY.
2. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE ELEVATION OF WIDENED SECTION ALIGNS SEAMLESSLY WITH THE CURRENT ROADWAY GRADE, WITH NO CHANGES TO EXISTING ROADWAY PROFILE.

|   |   |
|---|---|
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| <p>TOWN OF MONTAGUE<br/>         ROADWAY PROFILES<br/>         FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD<br/>         BUS STOP IMPROVEMENTS MASSACHUSETTS<br/>         MONTAGUE</p> | <p>SCALE:    HORZ.: AS NOTED<br/>                   VERT.:           <br/>         DATUM:    HORZ.: -<br/>                   VERT.: -</p> |
| <p>DESIGNER REVIEWER</p>  | <p>DESCRIPTION</p>  |
| <p>No.</p>  | <p>DATE</p>   |
| <p>PROJ. No.: 20240059.A10<br/>         DATE: AUGUST 2024</p>   |   |
| <p><b>CR-201</b></p>  |   |

NOTES:

1. THE ROADWAY PROFILE WILL REMAIN UNCHANGED.  
THE PROPOSED BOX WIDENING WILL MATCH THE  
EXISTING GRADE EXACTLY.
2. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE  
ELEVATION OF WIDENED SECTION ALIGNS  
SEAMLESSLY WITH THE CURRENT ROADWAY GRADE,  
WITH NO CHANGES TO EXISTING ROADWAY PROFILE.

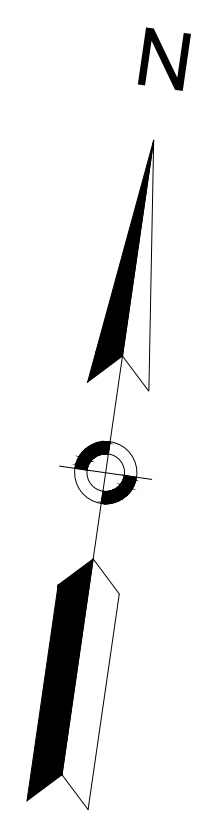
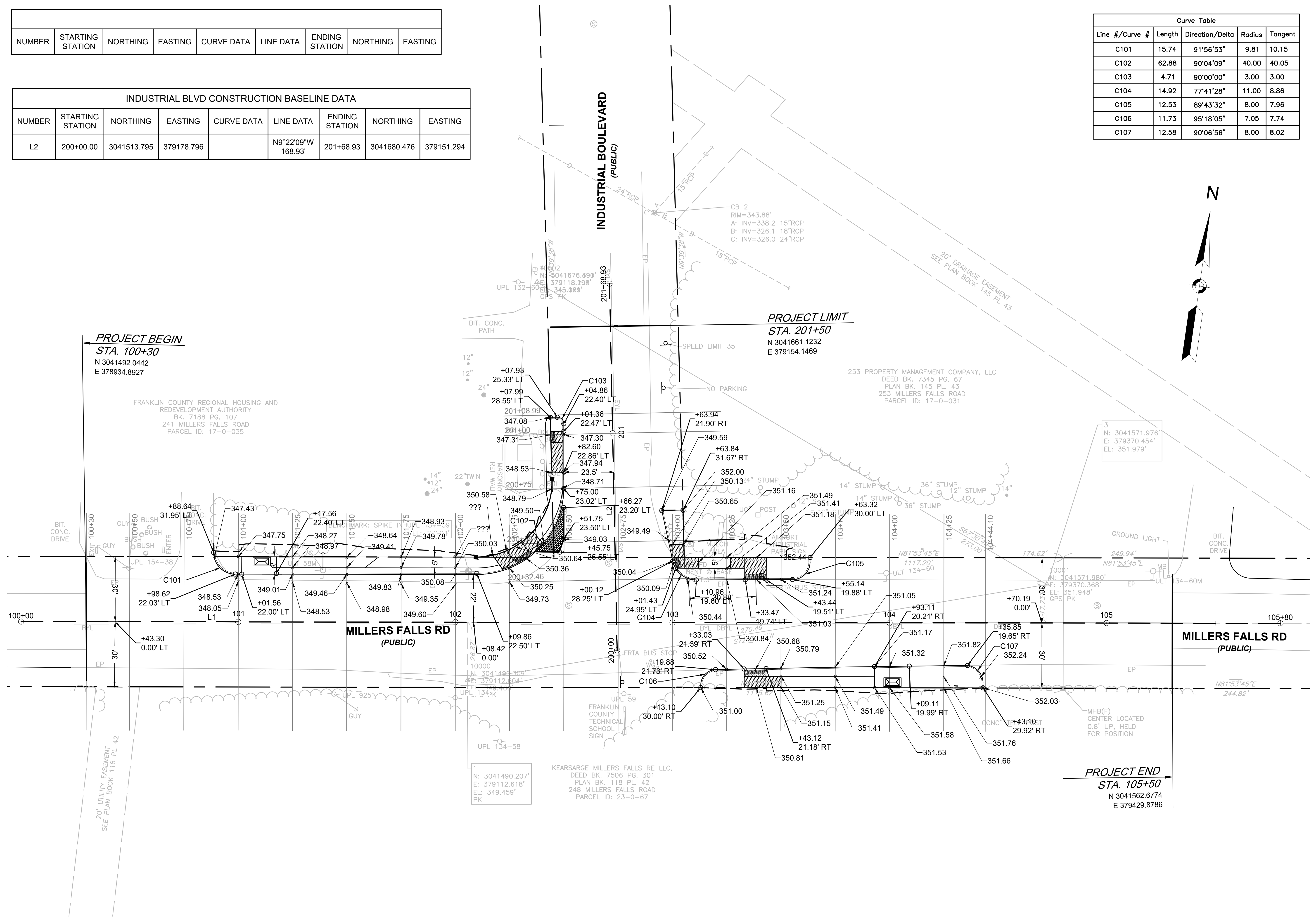


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| SCALE:   | HORZ.: AS NOTED<br>VERT.:<br>DATUM:<br>HORZ.: -<br>VERT.: - |
| <b>FUSS &amp; O'NEILL</b><br><small>1550 MAIN STREET, SUITE 400<br/>                 SPRINGFIELD, MA 01103<br/>                 413.462.0446<br/>                 www.foss.com</small> |   |
| TOWN OF MONTAGUE   | ROADWAY PROFILES  |
| FRTA – INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS MASSACHUSETTS  |   |
| MONTAGUE   |   |
| PROJ. No.: 20240059.A10  |   |
| DATE: AUGUST 2024  |   |
| CR-202   |   |

| NUMBER | STARTING STATION | NORTHING | EASTING | CURVE DATA | LINE DATA | ENDING STATION | NORTHING | EASTING |
|--------|------------------|----------|---------|------------|-----------|----------------|----------|---------|
|--------|------------------|----------|---------|------------|-----------|----------------|----------|---------|

| INDUSTRIAL BLVD CONSTRUCTION BASELINE DATA |                  |             |            |            |                       |                |             |            |
|--|------------------|-------------|------------|------------|-----------------------|----------------|-------------|------------|
| NUMBER                                     | STARTING STATION | NORTHING    | EASTING    | CURVE DATA | LINE DATA             | ENDING STATION | NORTHING    | EASTING    |
| L2   | 200+00.00        | 3041513.795 | 379178.796 |            | N9°22'09"W<br>168.93' | 201+68.93      | 3041680.476 | 379151.294 |

| Curve Table    |        |                 |        |         |
|----------------|--------|-----------------|--------|---------|
| Line #/Curve # | Length | Direction/Delta | Radius | Tangent |
| C101           | 15.74  | 91°56'53"       | 9.81   | 10.15   |
| C102           | 62.88  | 90°04'09"       | 40.00  | 40.05   |
| C103           | 4.71   | 90°00'00"       | 3.00   | 3.00    |
| C104           | 14.92  | 77°41'28"       | 11.00  | 8.86    |
| C105           | 12.53  | 89°43'32"       | 8.00   | 7.96    |
| C106           | 11.73  | 95°18'05"       | 7.05   | 7.74    |
| C107           | 12.58  | 90°06'56"       | 8.00   | 8.02    |

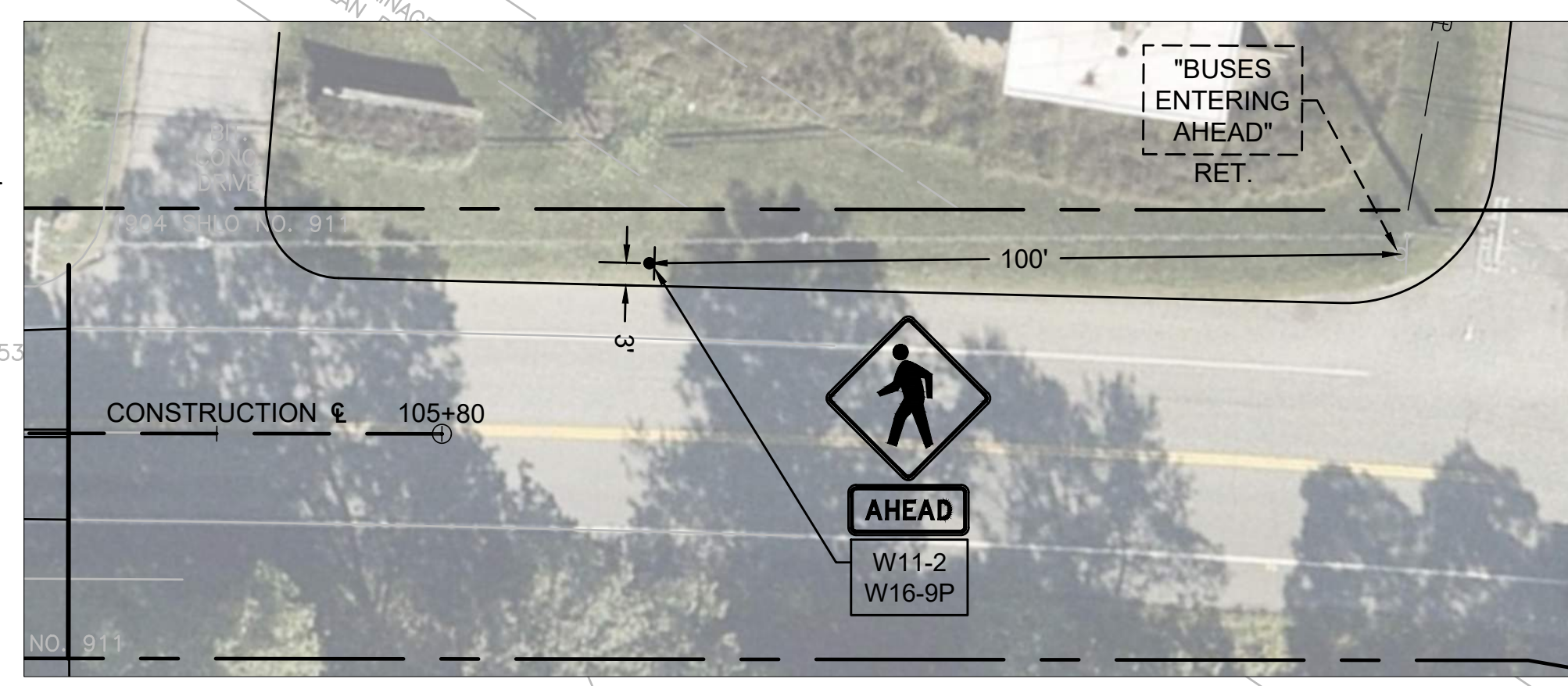
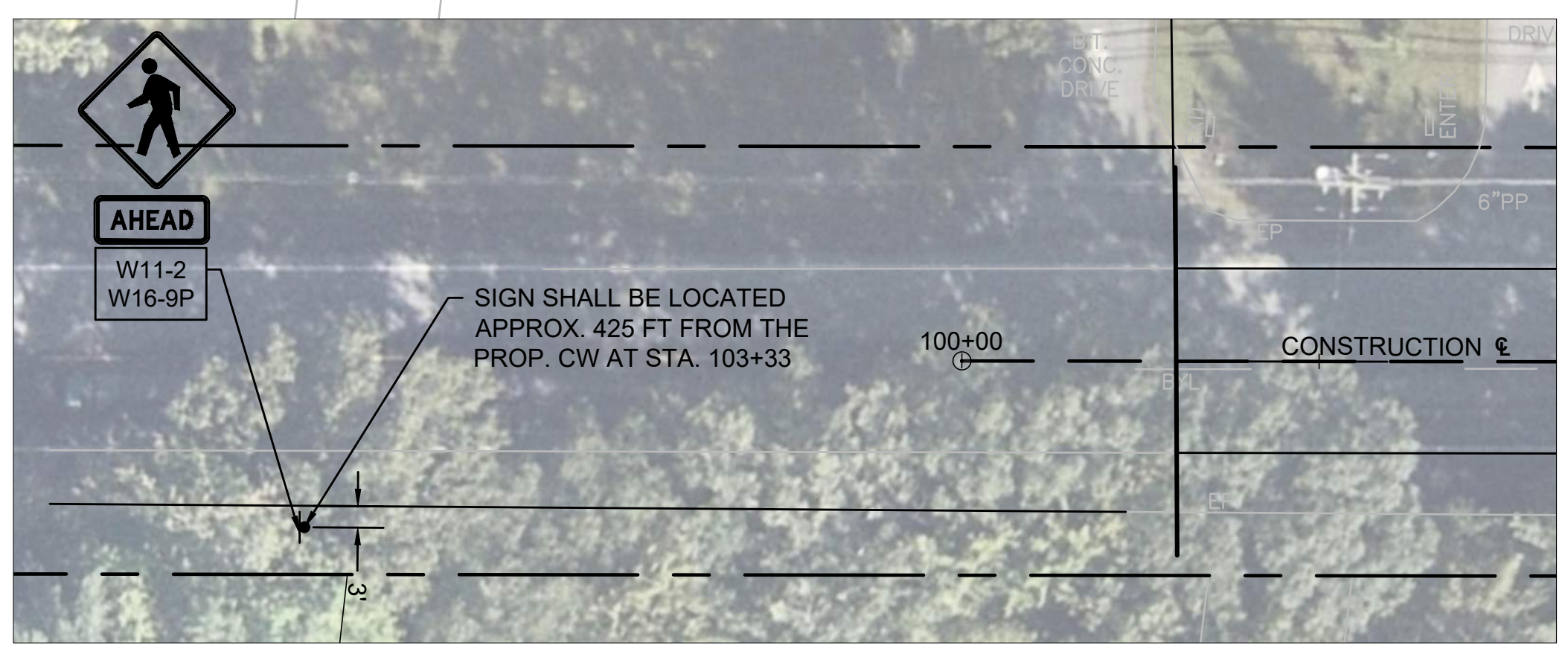
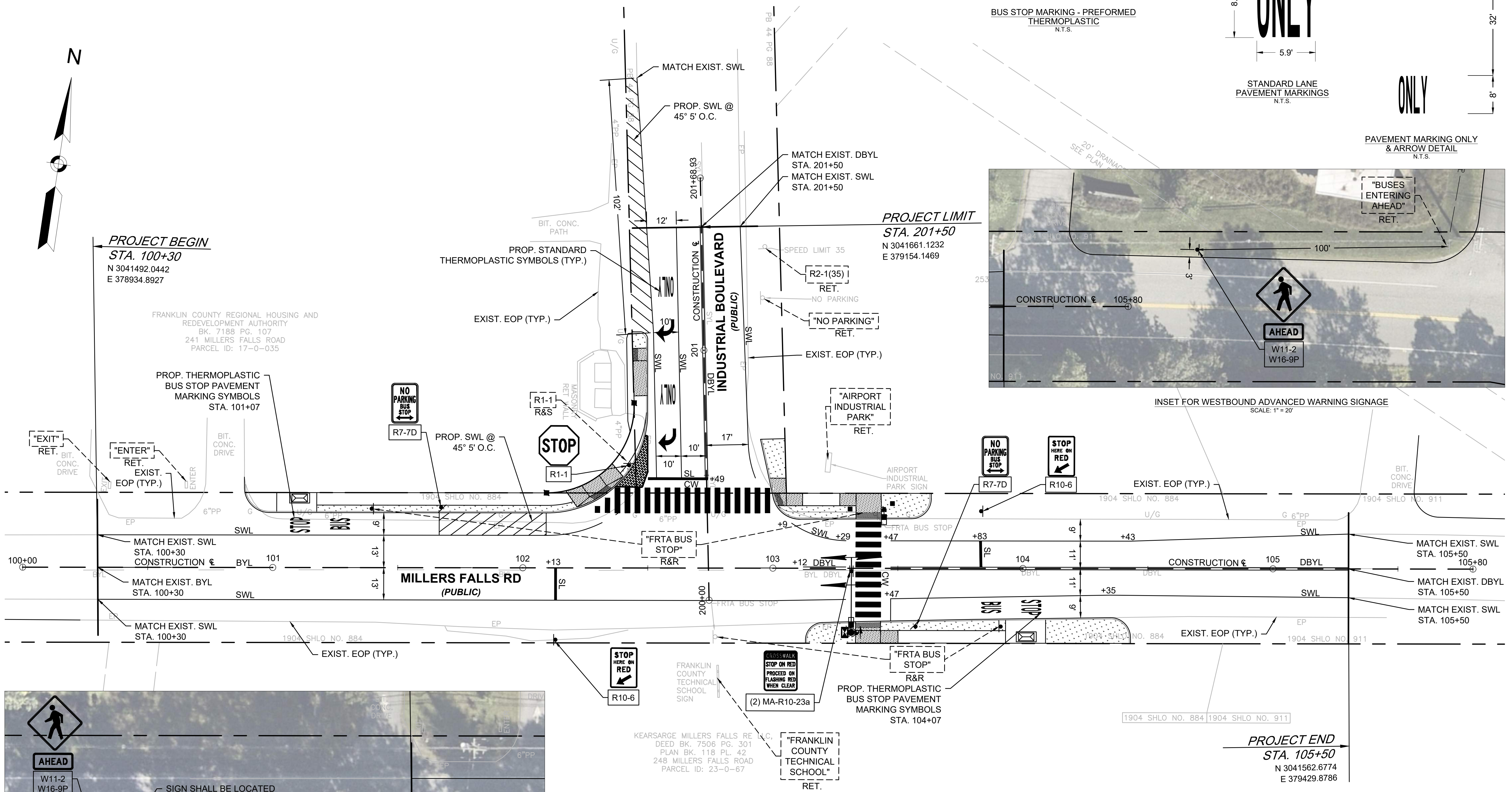
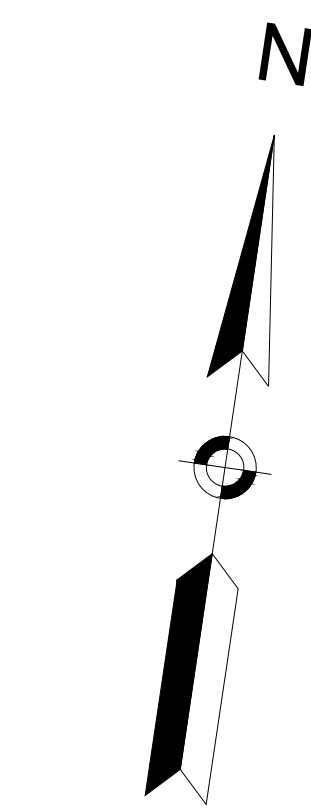
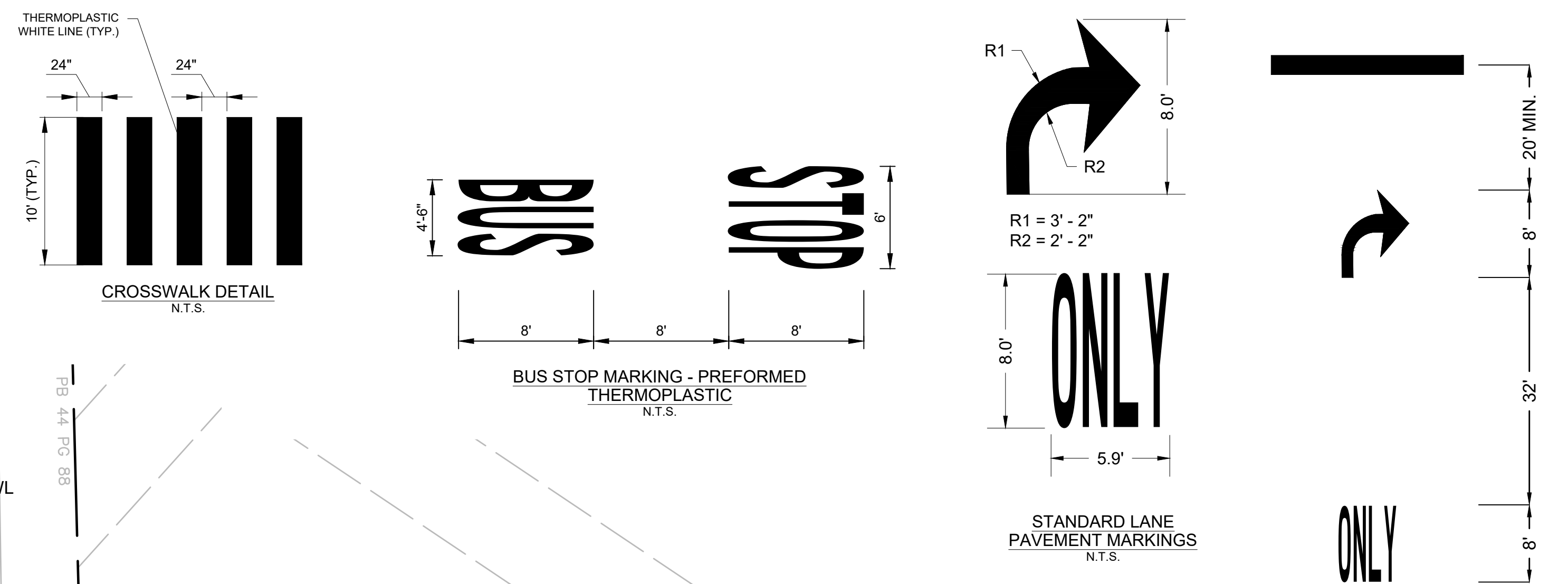


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| <b>FUSS &amp; O'NEILL</b><br>1550 MAIN STREET, SUITE 400<br>SPRINGFIELD, MA 01103<br>www.foss.com | <b>TOWN OF MONTAGUE</b><br><b>GRADING AND BASELINE TIE PLANS</b><br><b>FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD</b><br><b>BUS STOP IMPROVEMENTS MASSACHUSETTS</b><br>MONTAGUE |
| SCALE: HORZ.: 7" = 77'<br>VERT.: 1" = 10'<br>DATUM: NAD 83<br>VERT.: 77'<br>GRAPHIC SCALE         | SEAL<br>No. _____<br>DATE _____<br>DESIGNER REVIEWER _____   |
| PROJ. No.: 20240059.A10<br>DATE: AUGUST 2024  |  |
| CG-101  |  |

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 MS VIEW: PC3: AUTOCAD PDF (GENERAL DOCUMENTATION)PC3: STB/CTB: MADOT-D.STB

| MARKING LEGEND |  |
|----------------|--|
| ▬              | PROPOSED SIGN  |
| SL             | PROPOSED 12" WHITE STOP LINE                         |
| CW             | PROPOSED 24" WHITE CROSS WALK                        |
| SWL            | PROPOSED 6" SOLID WHITE LINE                         |
| DBYL           | PROPOSED 6" DOUBLE YELLOW LINE                       |
| BYL            | PROPOSED 6" BROKEN YELLOW LINE (10' MARK - 30' SKIP) |
| XXXX           | PROPOSED SIGN DESIGNATION                            |
| XXXX           | EXISTING SIGN DESIGNATION                            |

- NOTES:
1. ALL STANDARD P-5 SIGN POSTS SHALL BE GALVANIZED.
  2. ALL EXISTING SIGNS TO REMAIN UNLESS OTHERWISE NOTED ON PLANS.
  3. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED.
  4. WHITE GORE LINES SHALL FORM AN ANGLE OF APPROXIMATELY 45 DEGREES WITH THE LONGITUDINAL LINES THAT THEY INTERSECT. SPACING OF GORE LINES SHALL BE APPROXIMATELY 10 FEET.
  5. PROPOSED TRAFFIC SIGNS SHALL BE MOUNTED PERPENDICULAR (90°) TO THE ROADWAY, WITH THE EXCEPTION OF R7 SERIES (NO PARKING) SIGNS, WHICH SHALL BE INSTALLED AT A 45° ANGLE RELATIVE TO THE ROADWAY.



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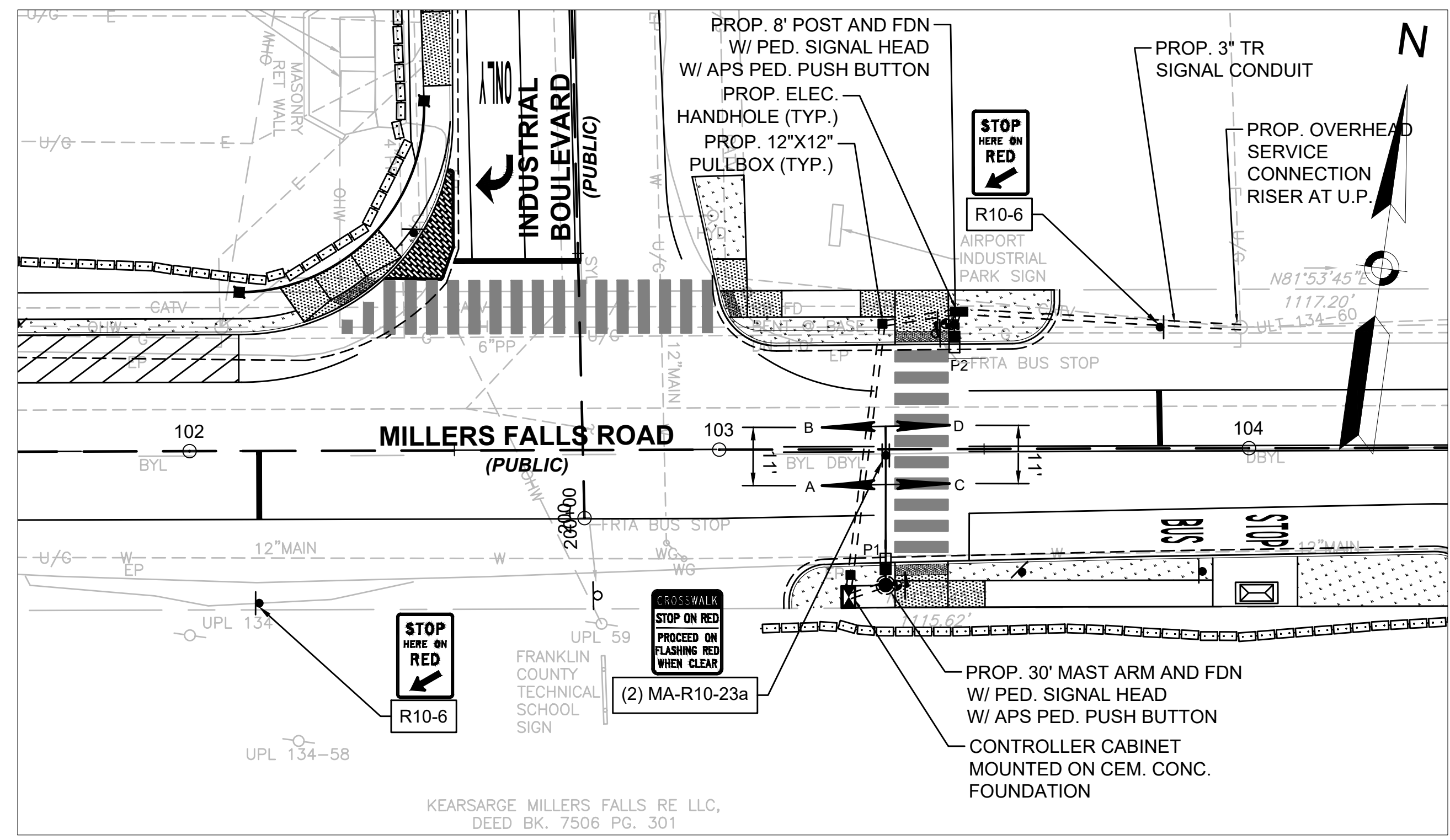
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| <b>FUSS &amp; O'NEILL</b><br>1550 MAIN STREET, SUITE 400<br>SPRINGFIELD, MA 01103<br>413.462.0446<br>www.foss.com                                  | <b>DESIGNER REVIEWER</b><br><br><b>DESCRIPTION</b><br><br><b>DATE</b><br><br><b>No.</b>  |
| TOWN OF MONTAGUE<br>PAVEMENT MARKING & SIGNING PLANS<br>FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD<br>BUS STOP IMPROVEMENTS MASSACHUSETTS<br>MONTAGUE | SEAL<br><br>SCALE: 1" = 20'<br>HORIZ.: 1" = 20'<br>VERT.: -<br>DATUM: -<br>HORIZ.: -<br>VERT.: -<br>GRAPHIC SCALE<br>0 10' 20' 40' |
| PROJ. No.: 20240059.A10<br>DATE: AUGUST 2024   |  |
| CT-101   |  |



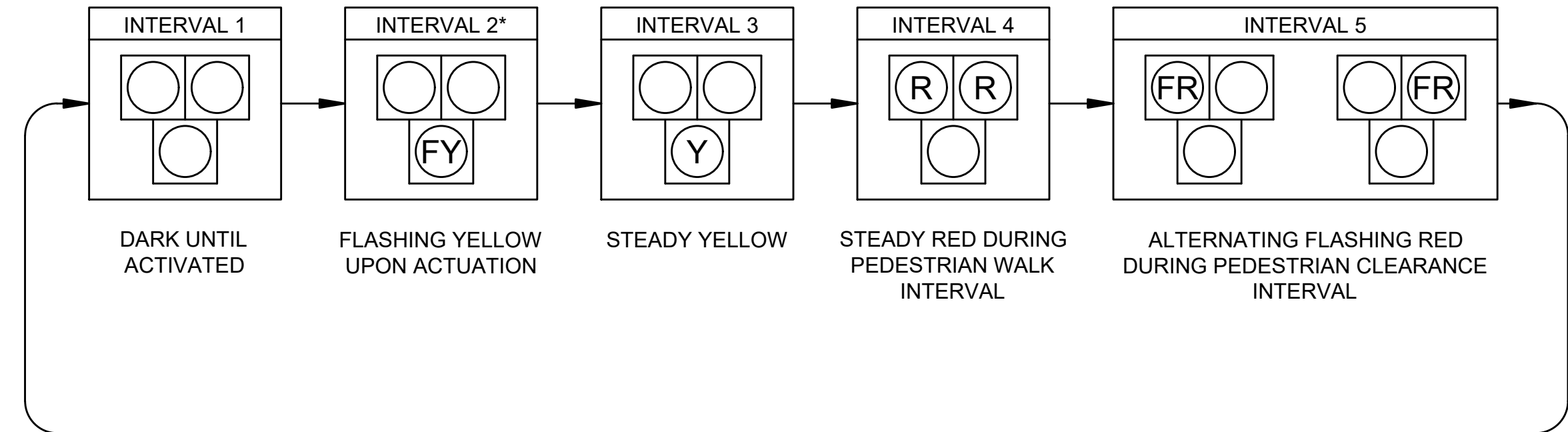


| SEQUENCE AND TIMING                     |           |         |        |         |      |    |         |   |     |      |                |
|---|-----------|---------|--------|---------|------|----|---------|---|-----|------|----------------|
|   | DIRECTION | HOUSING | Ø/OL   | PHASE 1 |      |    | PHASE 2 |   |     |      | FLASH          |
|   |           |         |        | 1       | 2    | 3  | 4       | 5 | 6   | 7    |                |
| MINIMUM INTERVAL                        |           |         |        | 15      |      |    |         |   |     |      | EMERGENCY ONLY |
| MAXIMUM I                               |           |         |        | N/A     |      |    |         |   |     |      |                |
| MAXIMUM II                              |           |         |        |         |      |    |         |   |     |      |                |
| FLASHING YELLOW                         |           |         |        |         | 4    |    |         |   |     |      |                |
| STEADY YELLOW                           |           |         |        |         |      | 4  |         |   |     |      |                |
| ALL RED                                 |           |         |        |         |      |    | 3       |   |     |      |                |
| STEADY RED / PED WALK                   |           |         |        |         |      |    |         | 7 |     |      |                |
| FLASHING RED / PED CLEAR                |           |         |        |         |      |    |         |   | 12  |      |                |
| BUFFER                                  |           |         |        |         |      |    |         |   |     | 4    |                |
| MILLERS FALLS ROAD                      | EB        | A,B     | 2      | DARK    | FY   | Y  | R       | R | FR  | DARK |                |
| MILLERS FALLS ROAD                      | WB        | C,D     | 6      | DARK    | FY   | Y  | R       | R | FR  | DARK | FY             |
| PEDESTRIAN                              | N&S       | P1,P2   | 4      | DW      | DW   | DW | DW      | W | FDW | DW   | OUT            |
|   |           |         | RECALL | YES     | NONE |    |         |   |     |      |                |
| FLASHING OPERATION PER MUTCD SEC. 4D-12 |           |         |        |         |      |    |         |   |     |      |                |

- NOTES:  
 1. \* UPON PEDESTRIAN PUSH BUTTON ACTUATION  
 2. FR = ALTERNATING FLASHING RED  
 3. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY



HAWK (PEDESTRIAN) PHASE SEQUENCE



- \* UPON PEDESTRIAN PUSH BUTTON ACTUATION  
 R = STEADY RED  
 FR = FLASHING RED  
 Y = STEADY YELLOW  
 FY = FLASHING YELLOW

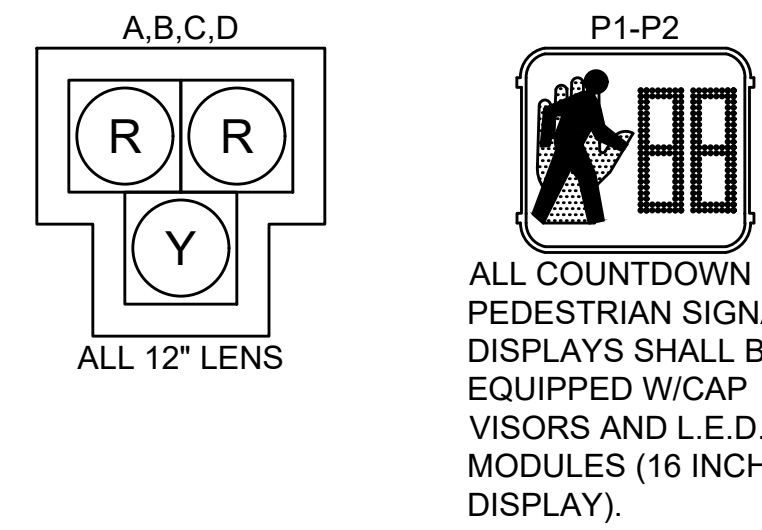
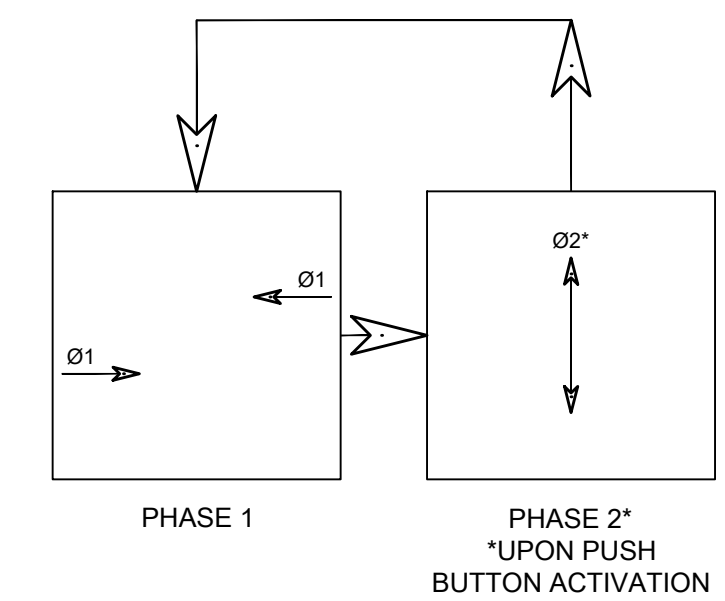
| LEGEND |                                 |
|--------|---------------------------------|
|        | PROPOSED MAST ARM & POLE        |
|        | PROPOSED SIGNAL POST            |
|        | PROPOSED SIGNAL HEAD            |
|        | PROPOSED PEDESTRIAN HEAD        |
|        | PROPOSED PEDESTRIAN PUSH BUTTON |
|        | PROPOSED 12X12 PULL BOX         |
|        | PROPOSED 3" PVC CONDUIT TYPE NM |
|        | PROPOSED CONTROLLER CABINET     |

CONSTRUCTION NOTES:

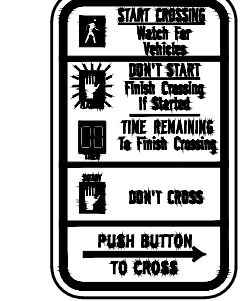
- THE TOP OF ALL MAST ARM FOUNDATIONS IN SIDEWALK AREAS SHALL BE LOCATED FLUSH WITH FINISH GRADE.
- THE TOP OF ALL MAST ARM FOUNDATIONS IN GRASSY AREAS SHALL BE LOCATED 3"± ABOVE FINISHED GRADE.
- TS POST/POLE WITH PEDESTRIAN PUSH BUTTON NOT LOCATED WITHIN A PAVED SURFACE SHALL BE POSITIONED TO PROVIDE A 10" MAX CLEAR REACH ZONE BETWEEN THE PEDESTRIAN PUSH BUTTON AND THE PAVED SURFACE PER 521 CMR AND AS SHOWN IN THE CONSTRUCTION DETAILS.

| MAJOR ITEMS REQUIRED  |  |   |
|---|--|---|
| PAY ITEM  | QUANTITY   | ITEM  |
| 804.3   | 150  | 3 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC (UL)              |
| 811.31  | 2  | 12" X 12" PULL BOX (SD2-031)                                  |
| 811.22  | 1  | ELECTRIC HANDHOLE - SD2.022                                   |
| 815.1   | 1  | SERVICE CONNECTION  |
|   | 1  | SIGNAL POST & BASE STANDARD - 8" INCL FOUNDATION              |
|   | 1  | 30' MAST ARM - STEEL, INCL BASE & FOUNDATION                  |
|   | 4  | SIGNAL HEAD 1 WAY - 3 SECTION 12" LED LENS                    |
|   | 2  | 16" LED PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN                 |
|   | 2  | ACCESSIBLE PEDESTRIAN SIGNAL WITH PUSHBUTTON, SIGN AND SADDLE |
| 1   | TRAFFIC SIGNAL CONTROLLER AND CABINET ENCLOSURE MOUNTED ON CEM. CONC. FOUNDATION |   |
| PLUS ALL WIRE, CABLE, MOUNTING HARDWARE, EQUIPMENT & MATERIALS NECESSARY TO COMPLETE THE INSTALLATION |  |   |

PREFERENTIAL PHASE SEQUENCE



PROPOSED R10-3E



TO BE MOUNTED WITH EACH PROPOSED ACCESSIBLE PEDESTRIAN SIGNAL.

PROPOSED SIGNAL INDICATIONS

ALL SIGNAL HEADS SHALL BE RIGID MOUNTED & EQUIPPED WITH CAP VISORS AND ±5° NON-LOUVERED BACKPLATES WITH 3" YELLOW REFLECTIVE BORDERS.

\*\*\*\*ALL PROPOSED MAST ARMS, SIGNAL POSTS, BASES, BACKPLATES, AND BRACKETS SHALL BE FACTORY COATED BLACK\*\*\*\*

ACCESSIBLE PEDESTRIAN SIGNALS (APS):

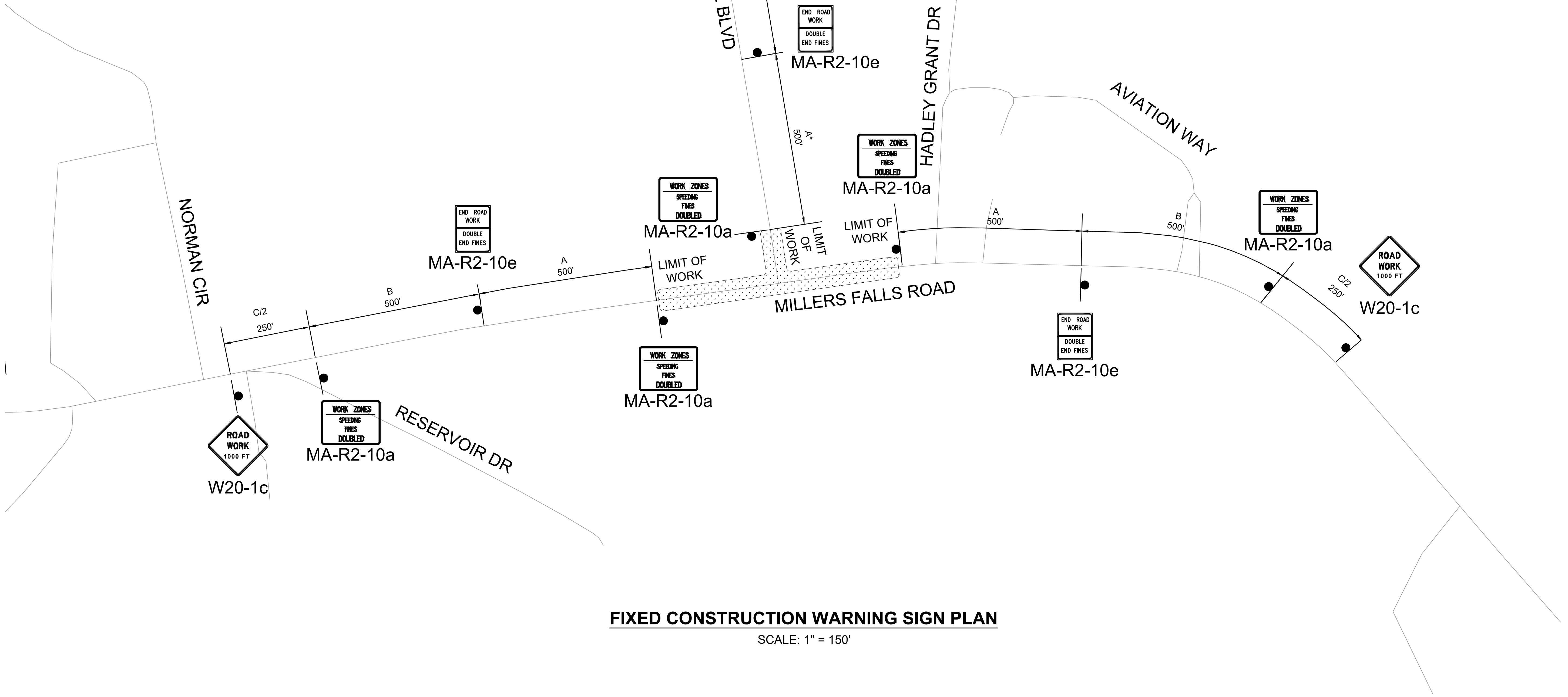
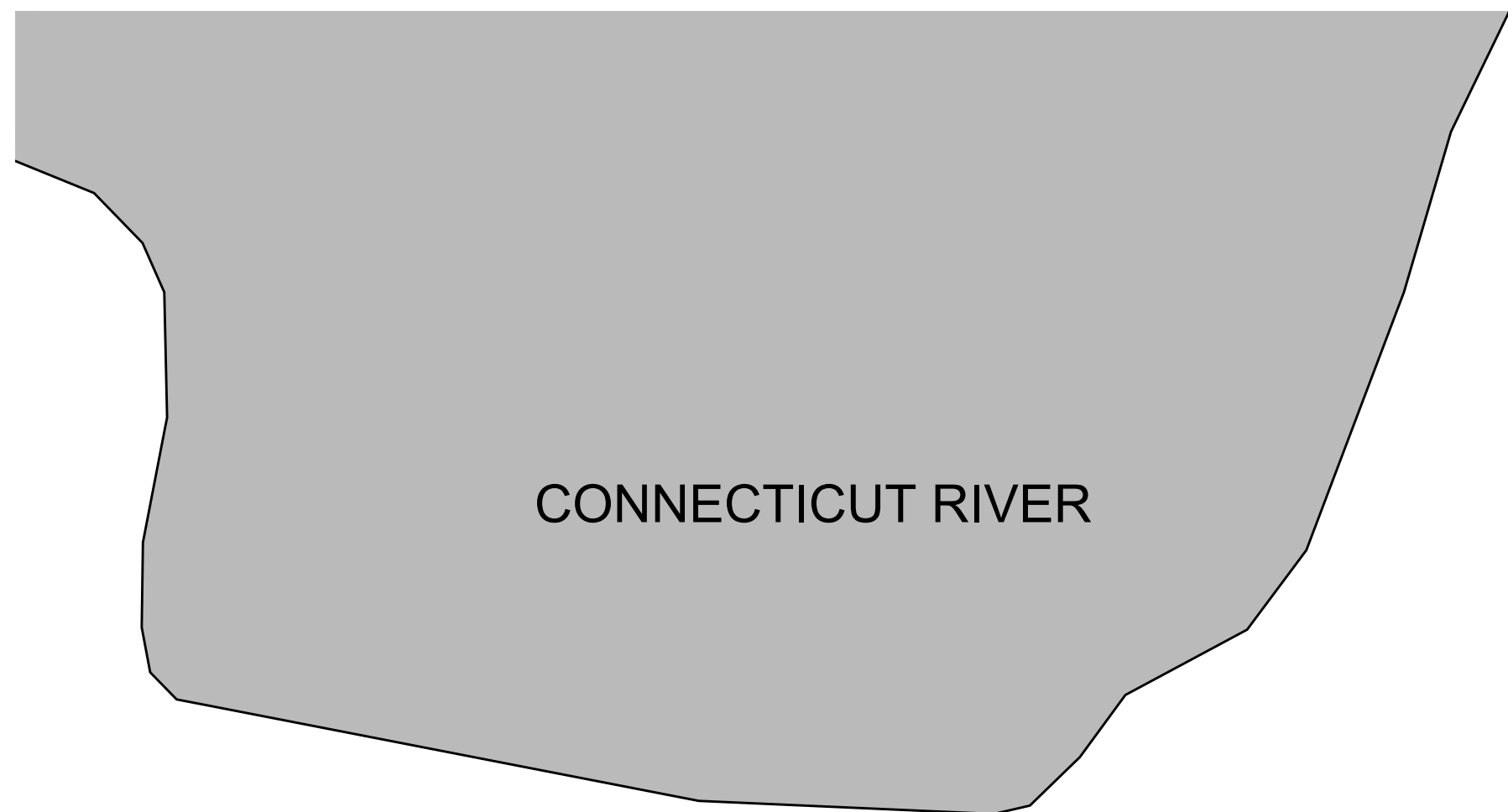
ALL PROPOSED ACCESSIBLE PEDESTRIAN SIGNALS MUST FULLY COMPLY WITH THE UNITED STATES ACCESS BOARD PROWAG SUPPLEMENTAL TECHNICAL REQUIREMENTS UNDER CHAPTER 4. THIS INCLUDES OPERABLE PARTS (R403), CLEAR SPACES (R404), AND REACH RANGES (R406) AS RELATES TO ACCESSIBLE PEDESTRIAN SIGNALS AND PEDESTRIAN PUSH BUTTONS.

ACCESSIBLE PEDESTRIAN SIGNALS (APS) SPEECH MESSAGE NOTE:

ALL PUSH BUTTONS AT THIS INTERSECTION SHALL BE PROGRAMMED WITH THE APPROPRIATE SPEECH MESSAGE FOR WALK INDICATING THE STREET CROSSING.

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| <p>TOWN OF MONTAGUE<br/>                 TRAFFIC SIGNAL PLAN<br/>                 FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD<br/>                 BUS STOP IMPROVEMENTS MASSACHUSETTS<br/>                 MONTAGUE</p> |  |
| <p>PROJ. No.: 20240059.A10<br/>                 DATE: AUGUST 2024</p>  |  |
| <p>CT-102</p>  |  |

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 MS VIEW: PC3: AUTOCAD PDF (GENERAL DOCUMENTATION) PC3: STE/CTB: MADOT-D.STB



**NOTES:**

- 1) FOR DISTANCES SEE TABLE ON SHEET CT-105. THE DIMENSIONS FOR A,B, & C MAY REQUIRE FIELD ADJUSTMENTS DUE TO THE URBAN NATURE OF THE PROJECT AREA.
- 2) ALL SIGNS SHOWN ON THIS PLAN SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT

**FIXED CONSTRUCTION WARNING SIGN PLAN**

SCALE: 1" = 150'

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| DATUM: -   |               |
| HORZ.: -   | GRAPHIC SCALE |
| VERT.: -   |               |
| <b>FUSS &amp; O'NEILL</b><br>1550 MAIN STREET, SUITE 400<br>SPRINGFIELD, MA 01103<br>www.foss.com                                    |               |
| TOWN OF MONTAGUE<br>TEMP. TRAFFIC MANAGEMENT PLANS<br>FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD<br>BUS STOP IMPROVEMENTS MASSACHUSETTS |               |
| PROJ. No.: 20240059.A10<br>DATE: AUGUST 2024   |               |
| <b>CT-103</b>  |               |

File: J:\DWG\2024\059\A10\_Civil\Plan\2024059\_A10\_TMP01.dwg Layout: CT-104 Plotted: 2024-08-30 6:52 PM Saved: 2024-08-30 6:50 PM User: aaron.keegan  
 PC3: AUTOCAD PDF (GENERAL DOCUMENTATION) PC3\_STB\CTB: MADOT-D.STB  
 LAYER STATE:

**NOTES:**

- TEMPORARY TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE MASSACHUSETTS AMENDMENTS TO THE MUTCD.
- TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- REMOVE OR COVER ALL TEMPORARY DEVICES WHEN THEY ARE NO LONGER REQUIRED FOR CONTROL OF TRAFFIC.
- ABUTTERS SHALL BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS TO THEIR BUSINESS, RESIDENCE, AND/OR PROPERTY.
- THE FIRST TEN PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIALLY FLASHING LIGHTS WHEN USED FOR NIGHT WORK BETWEEN DUSK AND DAWN.
- DISTANCES SHOWN IN THIS DOCUMENT MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER DUE TO SITE CONSTRAINTS.
- 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 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.

**LEGEND:**

|  |  |  |                      |  |                                    |
|--|--|--|----------------------|--|------------------------------------|
|  | REFLECTORIZED PLASTIC DRUM OR 36" CONE |  | ARROW BOARD          |  | MEDIAN BARRIER WITH WARNING LIGHTS |
|  | POLICE DETAIL                          |  | WORK SPACE           |  | WORK VEHICLE                       |
|  | FLAGGER DETAIL                         |  | DIRECTION OF TRAFFIC |  | TRUCK MOUNTED ATTENUATOR           |
|  | TYPE III BARRICADE                     |  | IMPACT ATTENUATOR    |  | TRAFFIC OR PEDESTRIAN SIGNAL       |
|  | CHANGEABLE MESSAGE SIGN                |  | MEDIAN BARRIER       |  | SIGN                               |

**massDOT** Highway Division  
 WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS  
 GENERAL NOTES  
 DATE OF ISSUE: 07/01/2023  
 REVISIONS:  
 FIGURE NO.: GEN-1

| ROAD TYPE                 | DISTANCE   |            |            |          |
|---------------------------|------------|------------|------------|----------|
|                           | A          | B          | C          | D        |
| URBAN (30 MPH OR LESS)    | 100 FEET   | 100 FEET   | 100 FEET   | 100 FEET |
| URBAN (35 MPH OR GREATER) | 350 FEET   | 350 FEET   | 350 FEET   | 350 FEET |
| RURAL                     | 500 FEET   | 500 FEET   | 500 FEET   | 500 FEET |
| EXPRESSWAY/FREEWAY        | 1,000 FEET | 1,500 FEET | 2,640 FEET | 500 FEET |

**massDOT** Highway Division  
 WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS  
 SUGGESTED WORK ZONE WARNING SIGN SPACING  
 DATE OF ISSUE: 07/01/2023  
 REVISIONS:  
 FIGURE NO.: GEN-2

**MEASURED AVERAGE WORK ZONE CAPACITIES**

| NUMBER OF LANES<br>NORMAL (EXISTING) | OPEN (TO TRAFFIC) | AVERAGE CAPACITY  |                            |
|--------------------------------------|-------------------|-------------------|----------------------------|
|                                      |                   | VEHICLES PER HOUR | VEHICLES PER HOUR PER LANE |
| 3                                    | 1                 | 1,170             | 1,170                      |
| 2                                    | 1                 | 1,340             | 1,340                      |
| 5                                    | 2                 | 2,740             | 1,370                      |
| 4                                    | 2                 | 2,980             | 1,490                      |
| 3                                    | 2                 | 2,980             | 1,490                      |
| 4                                    | 3                 | 4,560             | 1,520                      |

THE IDEAL CAPACITY OF A MAJOR HIGHWAY IS GENERALLY CONSIDERED TO BE 1900 PASSENGER CARS PER HOUR PER LANE (PCPHPL). IN WORK ZONES ON A MULTI-LANE DIVIDED HIGHWAY, THE FOLLOWING VOLUME GUIDELINES HAVE BEEN SUGGESTED:

**STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED**

| SPEED* (mph) | DISTANCE (ft) |
|--------------|---------------|
| 20           | 115           |
| 25           | 155           |
| 30           | 200           |
| 35           | 250           |
| 40           | 305           |
| 45           | 360           |
| 50           | 425           |
| 55           | 495           |
| 60           | 570           |
| 65           | 645           |
| 70           | 730           |
| 75           | 820           |

\*POSTED SPEED, OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED  
 THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.  
 THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

**massDOT** Highway Division  
 WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS  
 MEASURED AVERAGE WORK ZONE CAPACITIES & STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED  
 DATE OF ISSUE: 07/01/2023  
 REVISIONS:  
 FIGURE NO.: GEN-3

- GENERAL NOTES:**
- ONE LANE OF TRAFFIC SHALL BE MAINTAINED AS OPEN IN EACH APPROACH DIRECTION AT ALL TIMES. THE CONTRACTOR MAY DEPLOY LANE SHIFTS. NO DETOURS ARE ANTICIPATED TO BE NEEDED. ANY PROPOSED DETOUR MUST BE APPROVED BY THE ENGINEER AND TOWN OF MONTAGUE.
  - ALL TRAFFIC MANAGEMENT CONFIGURATIONS SHALL CONFORM TO THE STANDARD MassDOT DETAILS ON THE FOLLOWING SHEETS AND APPLY TO ALL LOCATIONS INCLUDED IN THE CONTRACT.
  - THE CONTRACTOR SHALL BE PERMITTED TO PERFORM TEMPORARY ROADWAY OR LANE CLOSURES FROM 7:00 A.M. TO 3:30 P.M. CHANGES TO THESE TIMES REQUIRE APPROVAL FROM THE TOWN OF MONTAGUE.
  - ALL TRENCHES IN THE ROADWAY SHALL EITHER BE BACKFILLED AND PATCHED WITH HOT MIX ASPHALT, COVERED WITH BEVELED EDGES STEEL PLATES, OR HOT MIX ASPHALT AROUND STEEL PLATES BEFORE REOPENING THE ROADWAY TO TRAFFIC. UNBEVELED STEEL PLATE MAY BE USED IF HMA WEDGES ARE PLACED IN ACCORDANCE WITH THE LONGITUDINAL DROP OFF DETAIL.
  - COVER ALL EXISTING SIGNAGE THAT CONFLICTS WITH THE TRAFFIC MANAGEMENT SETUP IN PLACE.
  - PORTABLE CHANGEABLE MESSAGE BOARDS (PCMB) SHALL BE USED ON THE PROJECT SITE; THESE SIGNS SHALL ADVISE MOTORISTS TO EXPECT DELAYS, AND ADVISE TRAILER TRUCKS OF RESTRICTED LANE WIDTHS (AND POSSIBLE DETOUR ROUTES) ON SPECIFIC APPROACHES DURING CERTAIN STAGES OF CONSTRUCTION.
  - THE CONTRACTOR SHALL PLACE TWO PORTABLE CHANGEABLE MESSAGE BOARDS (PCMB) ON THE PROJECT SITE, FOR SEVEN DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
  - ALL ADVANCED SIGNAGE SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
  - IF FLAGGERS ARE USED FOR TRAFFIC CONTROL, THE FLAGGER SIGN (W20-7a) SHALL BE SUBSTITUTED FOR THE POLICE OFFICER AHEAD (W20-7b) SIGN.

| VARIABLES | DEFINITION                                       |
|-----------|--|
| A         | WORK ZONE WARNING SIGN SPACING (SEE SHEET GEN-2) |
| B         | WORK ZONE WARNING SIGN SPACING (SEE SHEET GEN-2) |
| C         | WORK ZONE WARNING SIGN SPACING (SEE SHEET GEN-2) |
| D         | WORK ZONE WARNING SIGN SPACING (SEE SHEET GEN-2) |
| L         | LENGTH IN FEET                                   |
| S         | SPEED LIMIT                                      |
| W         | WIDTH OF OFFSET IN FEET                          |
| T         | TANGENT LENGTH, AT LEAST 2L                      |

**massDOT** Highway Division  
 WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS  
 ABBREVIATIONS  
 DATE OF ISSUE: 07/01/2023  
 REVISIONS:  
 FIGURE NO.: GEN-4

**TAPER AND TANGENT LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES**

| TYPE                            | LENGTH*                         |
|---------------------------------|---------------------------------|
| MERGING TAPER                   | AT LEAST L                      |
| SHIFTING TAPER                  | AT LEAST 0.5L                   |
| SHOULDER TAPER                  | AT LEAST 0.33L                  |
| ONE-LANE, TWO-WAY TRAFFIC TAPER | 50 FT MIN. 100 FT MAX.          |
| DOWNSTREAM TAPER                | 50 FT MIN. 100 FT MAX. PER LANE |
| TANGENT LENGTH**                | AT LEAST 2L                     |

\* Use Table 6C-4 to calculate L  
 \*\* Tangent Length Measured Between Two Tapers  
 Source: Table 6C-3 MUTCD LATEST EDITION

**FORMULAS FOR DETERMINING TAPER LENGTHS**

| SPEED (S)      | TAPER LENGTH (L) IN FEET |
|----------------|--------------------------|
| 40 MPH OR LESS | L = WS <sup>2</sup> / 60 |
| 45 MPH OR MORE | L = WS                   |

WHERE: L = TAPER LENGTH IN FEET  
 W = WIDTH OF OFFSET IN FEET  
 S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH  
 Source: Table 6C-4 MUTCD LATEST EDITION

**TYPICAL TAPER LENGTHS (L)**

| SPEED (S) IN MPH | WIDTH OF OFFSET (W) IN FT. |     |     |     |
|------------------|----------------------------|-----|-----|-----|
|                  | 9                          | 10  | 11  | 12  |
| 25 OR BELOW      | 95                         | 105 | 115 | 125 |
| 30               | 135                        | 150 | 165 | 180 |
| 35               | 185                        | 205 | 225 | 245 |
| 40               | 240                        | 270 | 295 | 320 |
| 45               | 405                        | 450 | 495 | 540 |
| 50               | 450                        | 500 | 550 | 600 |
| 55               | 495                        | 550 | 605 | 660 |
| 60               | 540                        | 600 | 660 | 720 |
| 65               | 585                        | 650 | 715 | 780 |
| 70               | 630                        | 700 | 770 | 840 |

**massDOT** Highway Division  
 WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS  
 TAPER GUIDANCE  
 DATE OF ISSUE: 07/01/2023  
 REVISIONS:  
 FIGURE NO.: GEN-6

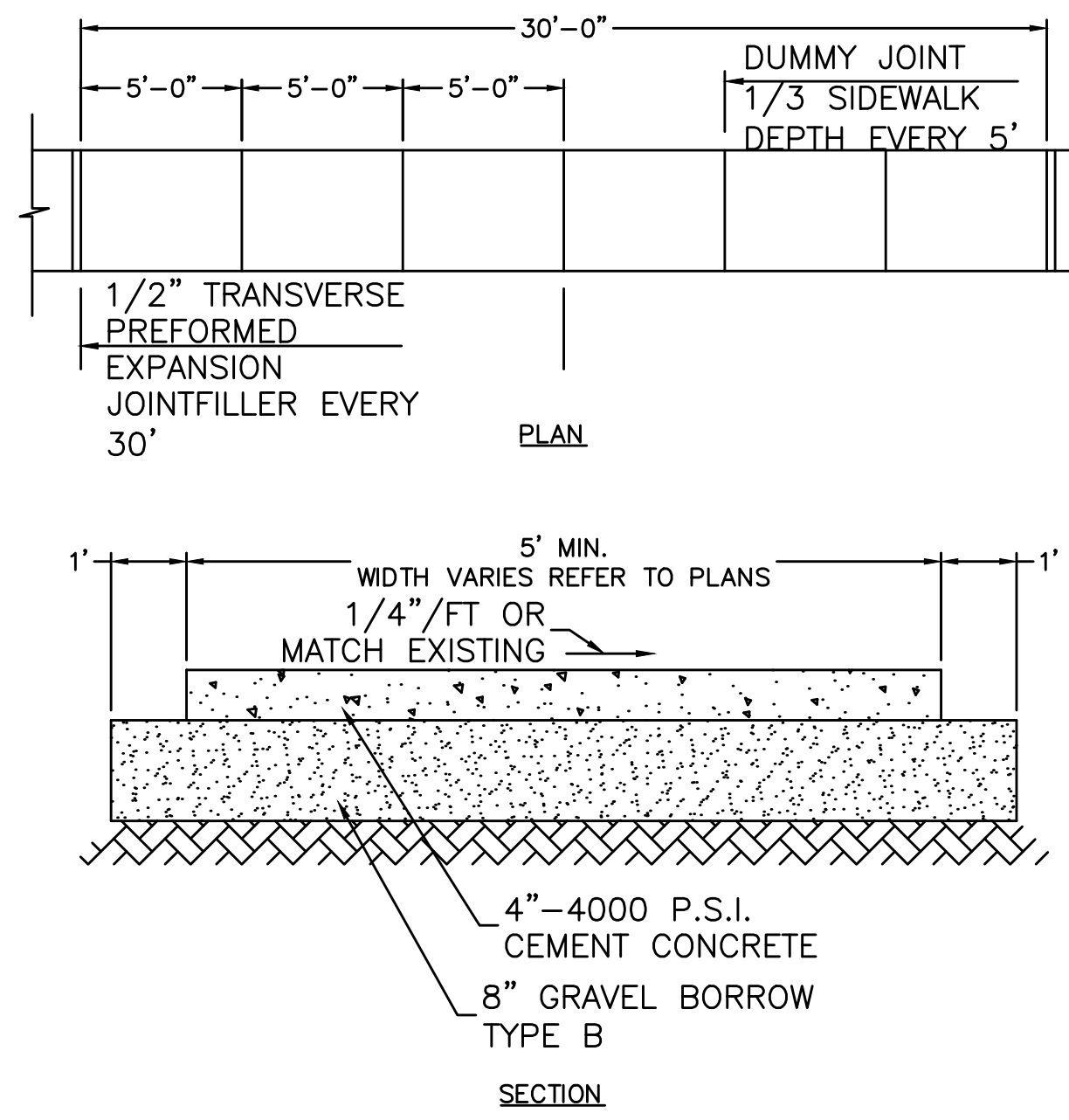
**massDOT** Highway Division  
 WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS  
 TYPICAL COMPONENTS OF A TEMPORARY TRAFFIC CONTROL SETUP  
 DATE OF ISSUE: 07/01/2023  
 REVISIONS:  
 FIGURE NO.: GEN-7

DESIGNER REVIEWER  
 DATE  
 No.  
 DESCRIPTION  
 SEAL  
 SCALE: HORZ.: NOT TO SCALE VERT.:  
 DATUM: HORZ.: VERT.:  
**FUSS & O'NEILL**  
 1550 MAIN STREET, SUITE 400  
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 413.482.0446  
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 TOWN OF MONTAGUE  
 TEMP. TRAFFIC MANAGEMENT PLANS  
 FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD  
 BUS STOP IMPROVEMENTS MASSACHUSETTS  
 MONTAGUE  
 PROJ. No.: 20240059.A10  
 DATE: AUGUST 2024  
**CT-104**



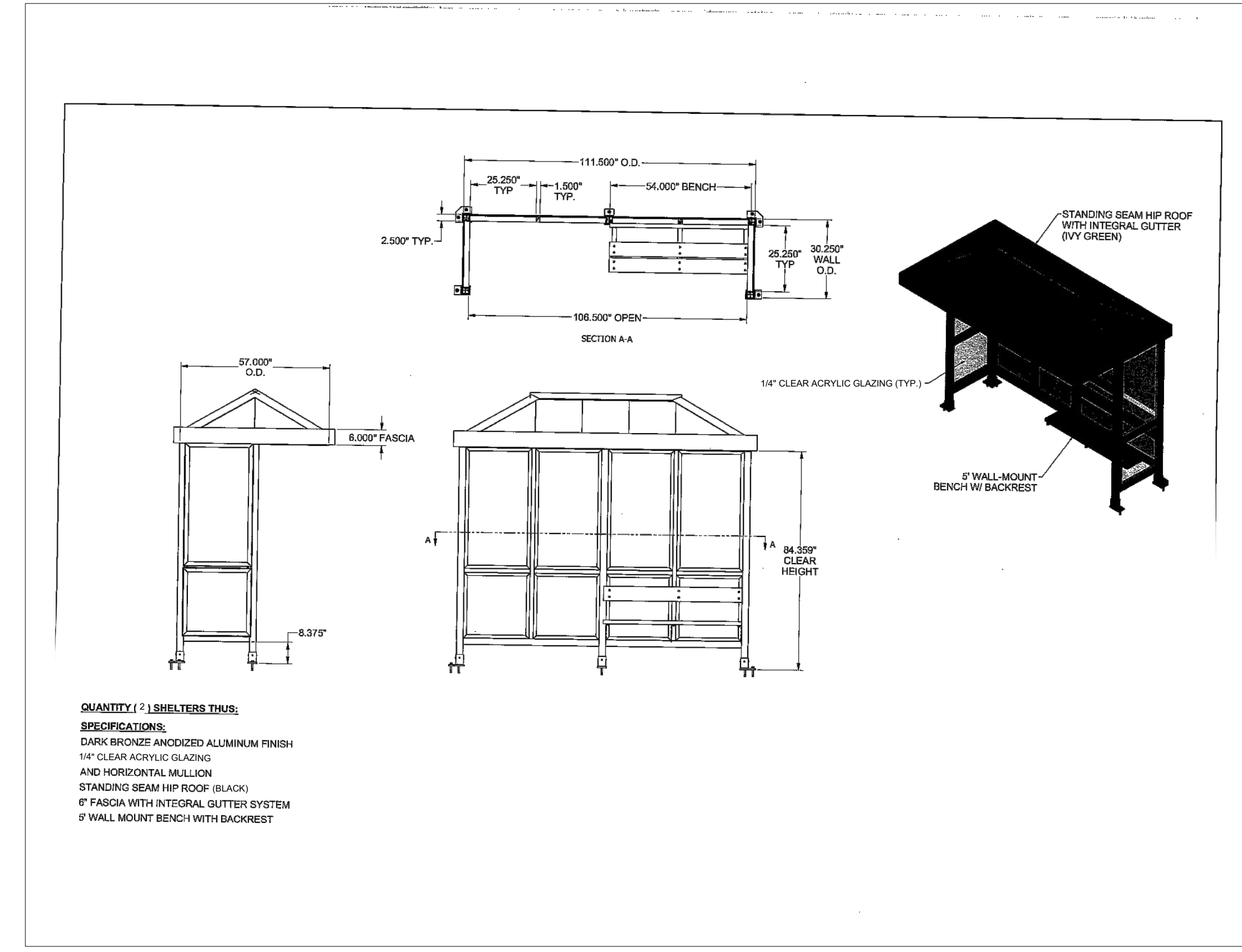






- NOTES:**
1. PROVIDE DEEP DUMMY JOINT EVERY 5' (1/3 DEPTH OF SLAB)
  2. REPLACE 1/2" EXPANSION JOINT IF EXISTING JOINT FALLS WITHIN RECONSTRUCTION.
  3. SMOOTH TROWEL EDGE, MARGINS, JOINTS TYP.
  4. MEDIUM BROOM FINISH, DIRECTION OF FINISH TO BE PERPENDICULAR TO THE LONGITUDINAL DIRECTION OF PAVEMENT: UNLESS, OTHERWISE NOTED ON PLANS. REFLECTANCE RATING OF 0.3 MINIMUM

**6** STANDARD CONCRETE SIDEWALK—NO REINFORCEMENT  
SCALE: N.T.S.



**QUANTITY ( 2 ) SHELTERS THIS:**  
**SPECIFICATIONS:**  
DARK BRONZE ANODIZED ALUMINUM FINISH  
1/4" CLEAR ACRYLIC GLAZING  
AND HORIZONTAL MULLION  
STANDING SEAM HIP ROOF (BLACK)  
6" FASCIA WITH INTEGRAL GUTTER SYSTEM  
9" WALL MOUNT BENCH WITH BACKREST

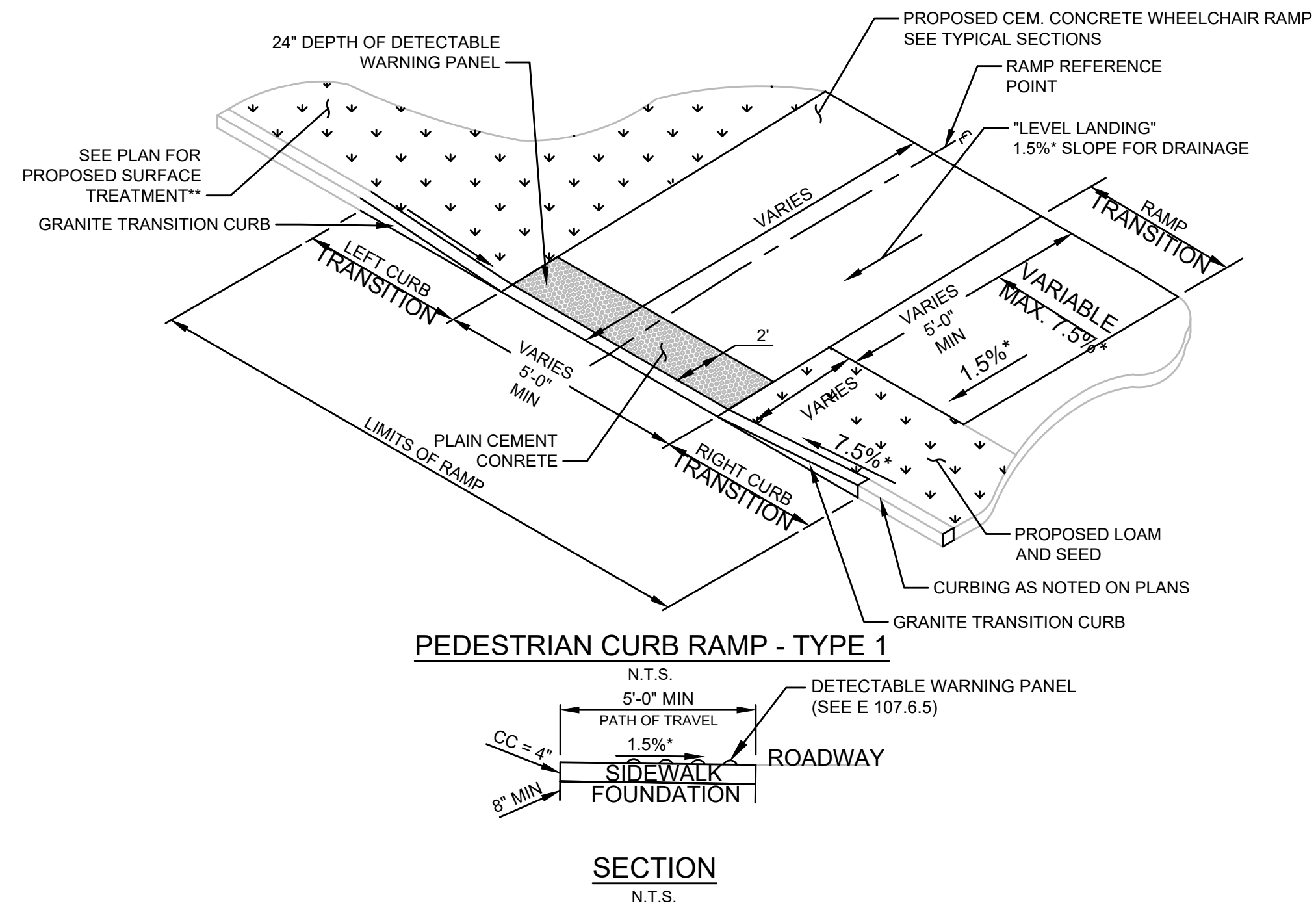
**7** PEDESTRIAN BUS SHELTER  
SCALE: N.T.S.

File: J:\DWG\2024\0059\A10\Civil\Details\20240059\_A10\_DET01.dwg Layout: CD-502 Plotted: 2024-08-30 2:09 PM Saved: 2024-08-29 3:29 PM User: John.Parenteau  
PC3: AUTOCAD PDF (GENERAL DOCUMENTATION) PC3\_STB/CTB: MADOT-D.STB  
LAYER STATE:

|  |                     |
|--|---------------------|
| DESIGNER REVIEWER  |                     |
| DESCRIPTION  |                     |
| DATE   |                     |
| No.  |                     |
| SEAL   |                     |
| SCALE:   | HORZ.: NOT TO SCALE |
|  | VERT.:              |
| DATUM:   | HORZ.: -            |
|  | VERT.: -            |
| <b>FUSS &amp; O'NEILL</b><br>1550 MAIN STREET, SUITE 400<br>SPRINGFIELD, MA 01103<br>413.452.0446<br>www.foss.com          |                     |
| TOWN OF MONTAGUE<br>CONSTRUCTION DETAILS<br>FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD<br>BUS STOP IMPROVEMENTS MASSACHUSETTS |                     |
| PROJ. No.: 20240059.A10<br>DATE: AUGUST 2024   |                     |
| <b>CD-502</b>  |                     |



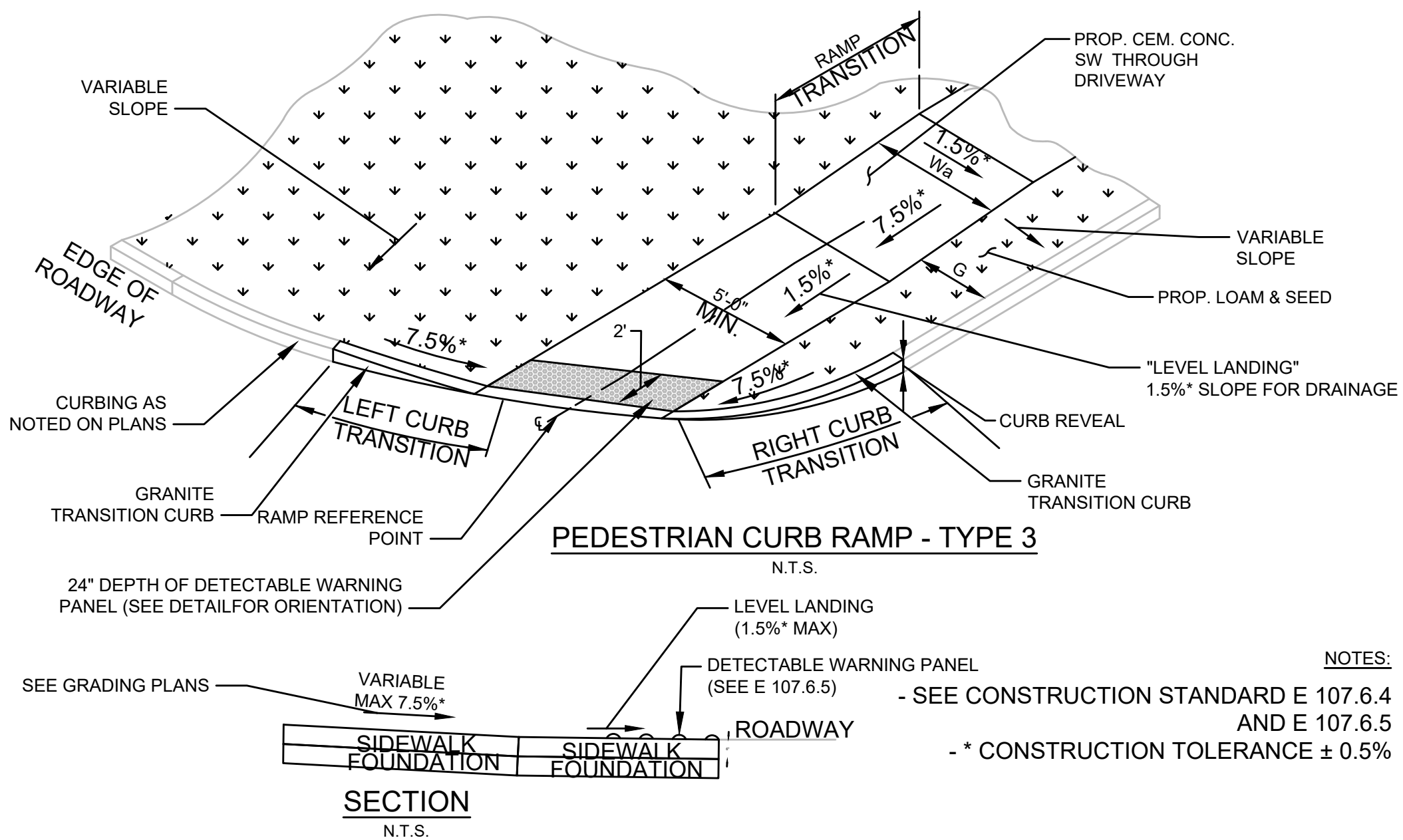
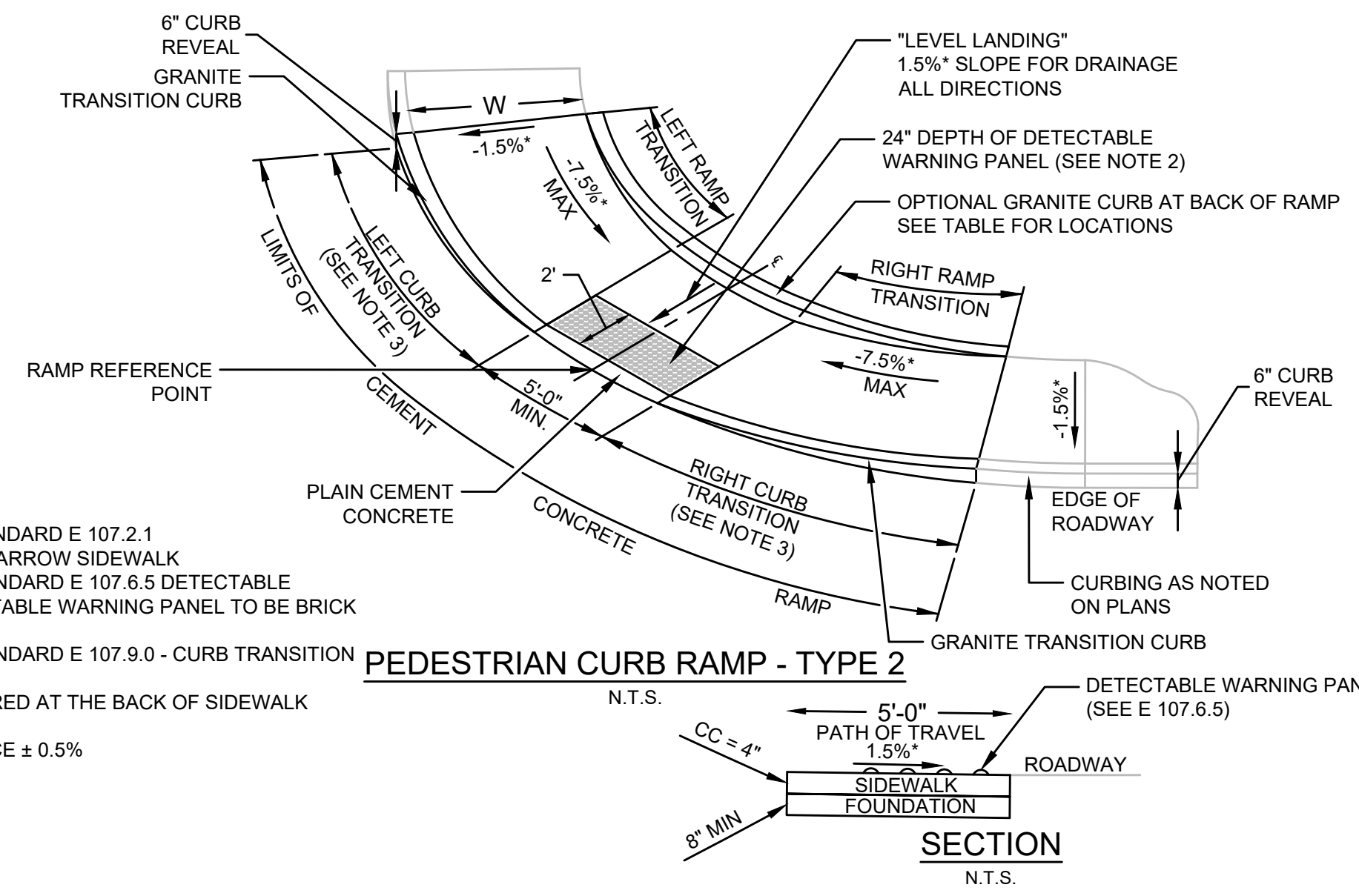
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 MS VIEW: PC3: AUTOCAD PDF (GENERAL DOCUMENTATION)PC3\_STB/CTB\_MADOT-D.STB



**NOTES:**

- 1.) SEE CONSTRUCTION STANDARD E 107.2.1 WHEELCHAIR RAMP ON NARROW SIDEWALK
- 2.) SEE CONSTRUCTION STANDARD E 107.6.5 DETECTABLE WARNING PANEL. DETECTABLE WARNING PANEL TO BE BRICK RED
- 3.) SEE CONSTRUCTION STANDARD E 107.9.0 - CURB TRANSITION LENGTH
- 4.) RAMP LENGTH IS MEASURED AT THE BACK OF SIDEWALK

\* CONSTRUCTION TOLERANCE ± 0.5%



**NOTES:**

- SEE CONSTRUCTION STANDARD E 107.6.4 AND E 107.6.5
- \* CONSTRUCTION TOLERANCE ± 0.5%

| No. | DATE | DESCRIPTION | DESIGNER/REVIEWER |
|-----|------|-------------|-------------------|
|     |      |             |                   |
|     |      |             |                   |
|     |      |             |                   |
|     |      |             |                   |

|        |                      |
|--------|----------------------|
| SCALE: | HORIZ.: NOT TO SCALE |
|        | VERT.: -             |
| DATUM: | HORIZ.: -            |
|        | VERT.: -             |

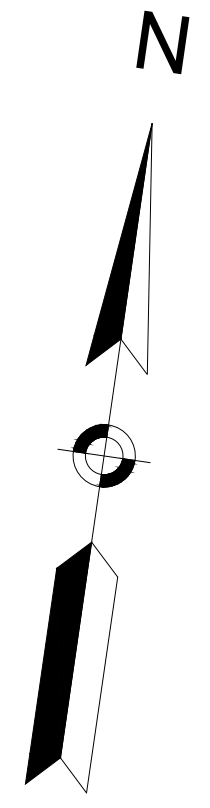
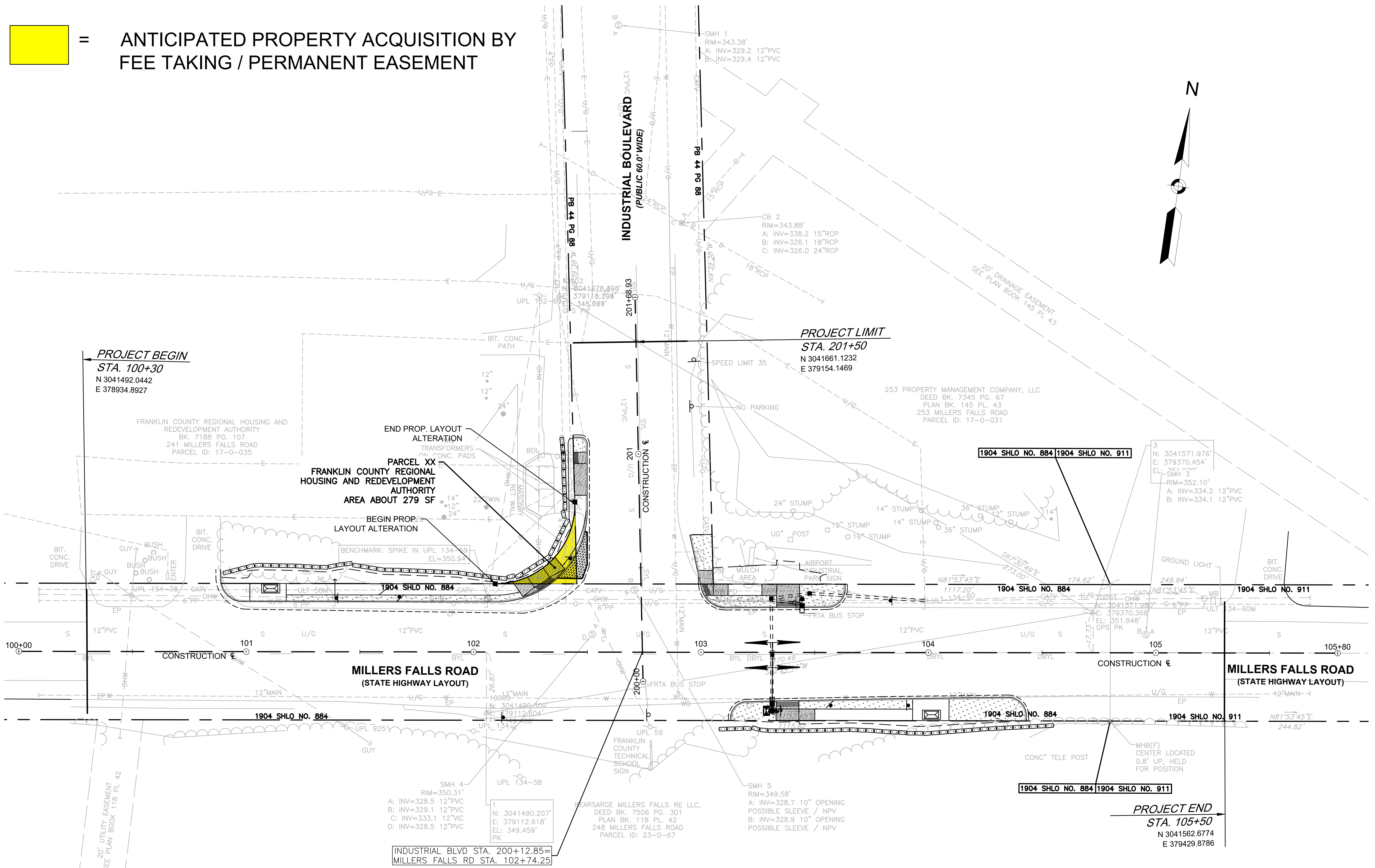
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TOWN OF MONTAGUE  
 PEDESTRIAN CURB RAMP DETAILS  
 FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD  
 BUS STOP IMPROVEMENTS MASSACHUSETTS  
 MONTAGUE

PROJ. No.: 20240059.A10  
 DATE: AUGUST 2024

**CD-503**

 = ANTICIPATED PROPERTY ACQUISITION BY FEE TAKING / PERMANENT EASEMENT



|   |   |
|---|---|
| <b>FUSS &amp; O'NEILL</b><br>1550 MAIN STREET, SUITE 400<br>SPRINGFIELD, MA 01103<br>www.foss.com | <b>TOWN OF MONTAGUE</b><br><b>ANTICIPATED ROW OF IMPACT</b><br><b>FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD</b><br><b>BUS STOP IMPROVEMENTS MASSACHUSETTS</b><br>MONTAGUE |
| SCALE: HORZ.: 1" = 20'<br>VERT.: -<br>DATUM: -<br>GRAPHIC SCALE: 0 10' 20' 40'                    | SEAL<br>No. _____<br>DATE _____<br>DESIGNER REVIEWER _____  |
| PROJ. No.: 20240059.A10<br>DATE: AUGUST 2024  |   |
| <b>RW-101</b>   |   |

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 PC3: AUTOCAD PDF (GENERAL DOCUMENTATION) PC3 STB/CTB: MADOT-D.STB  
 MS VIEW: LAYER STATE:

# FUSS & O'NEILL

FRTA – Industrial Blvd/Millers Falls Rd Bus Stop Improvements

Montague, MA

Preliminary Design Estimate

9/11/2024

## PRELIMINARY DESIGN COST ESTIMATE SUMMARY

| <u>CONCEPT STAGE</u>                         | <u>DATE</u> | <u>TOTAL</u> |
|--|-------------|--------------|
| KITTLESON CONCEPT OPINION OF COST            | March 2022  | \$ 178,376   |
| KITTLESON CONCEPT OPINION INFLATION ADJUSTED | Sept 2024   | \$ 223,375   |

### PRELIMINARY DESIGN ALTERNATIVE

|   |           |            |
|---|-----------|------------|
| ALTERNATIVE #1 OVERHEAD RRFB W/ SIMME SEATS                       | Sept 2024 | \$ 235,663 |
| ALTERNATIVE #2 OVERHEAD RRFB W/ BUS SHELTERS                      |           | \$ 343,453 |
| ALTERNATIVE #3 PEDESTRIAN HYBRID BEACON (HAWK) W/<br>SIMME SEATS  |           | \$ 436,831 |
| ALTERNATIVE #4 PEDESTRIAN HYBRID BEACON (HAWK) W/<br>BUS SHELTERS |           | \$ 544,818 |

# FUSS & O'NEILL

**FRTA – Industrial Blvd/Millers Falls Rd Bus Stop Improvements  
Montague, MA  
Preliminary Design Estimate  
9/11/2024  
ALTERNATIVE #1 OVERHEAD RRFB W/ SIMME SEATS**

| ITEM NO. | PART. QUANTITY | UNIT | DESCRIPTION   | UNIT PRICE  | PART. COST  | TOTAL    |
|----------|----------------|------|---|-------------|-------------|----------|
| 100      | 1              | LS   | SCHEDULE OF OPERATIONS - FIXED PRICE \$7000                         | \$7,000.00  | \$7,000.00  | \$7,000  |
| 102.1    | 0              | FT   | TREE TRIMMING   | \$14.25     | \$0.00      | \$0      |
| 120.     | 70             | CY   | EARTH EXCAVATION  | \$40.00     | \$2,800.00  | \$2,800  |
| 141.101* | 10             | CY   | TEST PIT FOR EXPLORATION-VACUUM TRUCK                               | \$250.00    | \$2,500.00  | \$2,500  |
| 151.     | 50             | CY   | GRAVEL BORROW   | \$66.75     | \$3,337.50  | \$3,338  |
| 170.     | 225            | SY   | FINE GRADING AND COMPACTING - SUBGRADE AREA                         | \$6.00      | \$1,350.00  | \$1,350  |
| 450.22   | 7              | TON  | SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)                          | \$320.00    | \$2,240.00  | \$2,240  |
| 450.23   | 7              | TON  | SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5)                        | \$267.82    | \$1,874.74  | \$1,875  |
| 482.3    | 210            | FT   | SAWCUTTING ASPHALT PAVEMENT   | \$5.50      | \$1,155.00  | \$1,155  |
| 506.     | 310            | FT   | GRANITE CURB TYPE VB - STRAIGHT                                     | \$117.50    | \$36,425.00 | \$36,425 |
| 506.1    | 80             | FT   | GRANITE CURB TYPE VB - CURVED                                       | \$145.00    | \$11,600.00 | \$11,600 |
| 509.     | 40             | FT   | GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT        | \$96.00     | \$3,840.00  | \$3,840  |
| 509.1    | 50             | FT   | GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - CURVED          | \$118.00    | \$5,900.00  | \$5,900  |
| 697.1    | 1              | EA   | SILT SACK   | \$165.00    | \$165.00    | \$165    |
| 701.*    | 150            | SY   | CEMENT CONCRETE SIDEWALK  | \$85.00     | \$12,750.00 | \$12,750 |
| 701.2*   | 70             | SY   | CEMENT CONCRETE PEDESTRIAN CURB RAMP                                | \$140.00    | \$9,800.00  | \$9,800  |
| 701.3    | 15             | SY   | STAMPED & COLORED CEMENT CONCRETE                                   | \$105.00    | \$1,575.00  | \$1,575  |
| 745.01   | 2              | EA   | SIMME SEAT BENCH  | \$2,000.00  | \$4,000.00  | \$4,000  |
| 748.     | 1              | LS   | MOBILIZATION  | \$5,968.68  | \$5,968.68  | \$5,969  |
| 751.     | 50             | CY   | LOAM FOR ROADSIDES  | \$120.00    | \$6,000.00  | \$6,000  |
| 756.*    | 1              | LS   | NPDES STORMWATER POLLUTION PREVENTION PLAN                          | \$10,500.00 | \$10,500.00 | \$10,500 |
| 765.     | 200            | SY   | SEEDING   | \$2.00      | \$400.00    | \$400    |
| 767.121  | 370            | FT   | SEDIMENT CONTROL BARRIER  | \$6.50      | \$2,405.00  | \$2,405  |
| 815.1    | 1              | LS   | TRAFFIC CONTROL SIGNAL LOCATION NO. 1- OVERHEAD RRFB                | \$30,000.00 | \$30,000.00 | \$30,000 |
| 832.     | 50             | SF   | WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)       | \$22.50     | \$1,125.00  | \$1,125  |
| 847.12*  | 7              | EA   | SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL (BLACK) | \$250.00    | \$1,750.00  | \$1,750  |
| 851.1    | 70             | DAY  | TRAFFIC CONES FOR TRAFFIC MANAGEMENT                                | \$125.00    | \$8,750.00  | \$8,750  |
| 852.     | 220            | SF   | SAFETY SIGNING FOR TRAFFIC MANAGEMENT                               | \$30.00     | \$6,600.00  | \$6,600  |
| 854.1    | 740            | SF   | PAVEMENT MARKING REMOVAL  | \$3.05      | \$2,257.00  | \$2,257  |
| 856.     | 120            | DAY  | ARROW BOARD   | \$17.00     | \$2,040.00  | \$2,040  |
| 856.12   | 120            | DAY  | PORTABLE CHANGEABLE MESSAGE SIGN                                    | \$30.00     | \$3,600.00  | \$3,600  |
| 859.     | 2,921          | DAY  | REFLECTORIZED DRUM  | \$1.00      | \$2,921.00  | \$2,921  |
| 864.04   | 200            | SF   | PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC)     | \$8.40      | \$1,680.00  | \$1,680  |
| 865.*    | 560            | SF   | CROSS WALKS REFLECTORIZED WHITE (THERMOPLASTIC)                     | \$7.00      | \$3,920.00  | \$3,920  |
| 866.106  | 1,800          | FT   | 6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)                     | \$2.15      | \$3,870.00  | \$3,870  |
| 866.112  | 50             | FT   | 12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)                    | \$6.85      | \$342.50    | \$343    |
| 867.106  | 700            | FT   | 6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC)                    | \$2.18      | \$1,526.00  | \$1,526  |
| 874.     | 2              | EA   | STREET NAME SIGN  | \$170.00    | \$340.00    | \$340    |
| 874.2    | 2              | EA   | TRAFFIC SIGN REMOVED AND RESET                                      | \$265.09    | \$530.18    | \$530    |
| 874.4    | 1              | EA   | TRAFFIC SIGN REMOVED AND STACKED                                    | \$87.00     | \$87.00     | \$87     |

**Subtotal: \$204,925 \$204,925**

**Uniformed Traffic Officer Control: \$10,246 \$10,246**

**10% Construction Contingency: \$20,492 \$20,492**

**Grand Total: \$235,663 \$235,663**

Preliminary Construction Cost  
Estimate Prepared For:

FRTA



# FUSS & O'NEILL

**FRTA – Industrial Blvd/Millers Falls Rd Bus Stop Improvements  
Montague, MA  
Preliminary Design Estimate  
9/11/2024  
ALTERNATIVE #2 OVERHEAD RRFB W/ BUS SHELTERS**

| ITEM NO. | PART. QUANTITY | UNIT | DESCRIPTION   | UNIT PRICE  | TOTAL    |
|----------|----------------|------|---|-------------|----------|
| 100      | 1              | LS   | SCHEDULE OF OPERATIONS - FIXED PRICE \$7000                         | \$7,000.00  | \$7,000  |
| 102.1    | 0              | FT   | TREE TRIMMING   | \$14.25     | \$0      |
| 120.     | 70             | CY   | EARTH EXCAVATION  | \$40.00     | \$2,800  |
| 141.101* | 10             | CY   | TEST PIT FOR EXPLORATION-VACUUM TRUCK                               | \$250.00    | \$2,500  |
| 151.     | 50             | CY   | GRAVEL BORROW   | \$66.75     | \$3,338  |
| 170.     | 225            | SY   | FINE GRADING AND COMPACTING - SUBGRADE AREA                         | \$6.00      | \$1,350  |
| 450.22   | 7              | TON  | SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)                          | \$320.00    | \$2,240  |
| 450.23   | 7              | TON  | SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5)                        | \$267.82    | \$1,875  |
| 482.3    | 210            | FT   | SAWCUTTING ASPHALT PAVEMENT   | \$5.50      | \$1,155  |
| 506.     | 310            | FT   | GRANITE CURB TYPE VB - STRAIGHT                                     | \$117.50    | \$36,425 |
| 506.1    | 80             | FT   | GRANITE CURB TYPE VB - CURVED                                       | \$145.00    | \$11,600 |
| 509.     | 40             | FT   | GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT        | \$96.00     | \$3,840  |
| 509.1    | 50             | FT   | GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - CURVED          | \$118.00    | \$5,900  |
| 697.1    | 1              | EA   | SILT SACK   | \$165.00    | \$165    |
| 701.*    | 150            | SY   | CEMENT CONCRETE SIDEWALK  | \$85.00     | \$12,750 |
| 701.2*   | 70             | SY   | CEMENT CONCRETE PEDESTRIAN CURB RAMP                                | \$140.00    | \$9,800  |
| 701.3    | 15             | SY   | STAMPED & COLORED CEMENT CONCRETE                                   | \$105.00    | \$1,575  |
| 745.     | 2              | EA   | PEDESTRIAN BUS SHELTER  | \$47,500.00 | \$95,000 |
| 748.     | 1              | LS   | MOBILIZATION  | \$8,698.68  | \$8,699  |
| 751.     | 50             | CY   | LOAM FOR ROADSIDES  | \$120.00    | \$6,000  |
| 756.*    | 1              | LS   | NPDES STORMWATER POLLUTION PREVENTION PLAN                          | \$10,500.00 | \$10,500 |
| 765.     | 200            | SY   | SEEDING   | \$2.00      | \$400    |
| 767.121* | 370            | FT   | SEDIMENT CONTROL BARRIER  | \$6.50      | \$2,405  |
| 815.1    | 1              | LS   | TRAFFIC CONTROL SIGNAL LOCATION NO. 1- OVERHEAD RRFB                | \$30,000.00 | \$30,000 |
| 832.     | 50             | SF   | WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)       | \$22.50     | \$1,125  |
| 847.12*  | 7              | EA   | SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL (BLACK) | \$250.00    | \$1,750  |
| 851.1    | 70             | DAY  | TRAFFIC CONES FOR TRAFFIC MANAGEMENT                                | \$125.00    | \$8,750  |
| 852.     | 220            | SF   | SAFETY SIGNING FOR TRAFFIC MANAGEMENT                               | \$30.00     | \$6,600  |
| 854.1    | 740            | SF   | PAVEMENT MARKING REMOVAL  | \$3.05      | \$2,257  |
| 856.     | 120            | DAY  | ARROW BOARD   | \$17.00     | \$2,040  |
| 856.12   | 120            | DAY  | PORTABLE CHANGEABLE MESSAGE SIGN                                    | \$30.00     | \$3,600  |
| 859.     | 2,921          | DAY  | REFLECTORIZED DRUM  | \$1.00      | \$2,921  |
| 864.04   | 200            | SF   | PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC)     | \$8.40      | \$1,680  |
| 865.*    | 560            | SF   | CROSS WALKS REFLECTORIZED WHITE (THERMOPLASTIC)                     | \$7.00      | \$3,920  |
| 866.106  | 1,800          | FT   | 6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)                     | \$2.15      | \$3,870  |
| 866.112  | 50             | FT   | 12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)                    | \$6.85      | \$343    |
| 867.106  | 700            | FT   | 6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC)                    | \$2.18      | \$1,526  |
| 874.     | 2              | EA   | STREET NAME SIGN  | \$170.00    | \$340    |
| 874.2    | 2              | EA   | TRAFFIC SIGN REMOVED AND RESET                                      | \$265.09    | \$530    |
| 874.4    | 1              | EA   | TRAFFIC SIGN REMOVED AND STACKED                                    | \$87.00     | \$87     |

**Subtotal: \$298,655**

**Uniformed Traffic Officer Control: \$14,933**

**10% Construction Contingency: \$29,865**

**Grand Total: \$343,453**

Preliminary Construction  
Cost Estimate Prepared For:

FRTA



# FUSS & O'NEILL

**FRTA – Industrial Blvd/Millers Falls Rd Bus Stop Improvements  
Montague, MA  
Preliminary Design Estimate  
9/11/2024**

**ALTERNATIVE #3 PEDESTRIAN HYBRID BEACON (HAWK) W/SIMME SEATS**

| ITEM NO. | PART. QUANTITY | UNIT | DESCRIPTION   | UNIT PRICE   | PART. COST   | TOTAL     |
|----------|----------------|------|---|--------------|--------------|-----------|
| 100      | 1              | LS   | SCHEDULE OF OPERATIONS - FIXED PRICE \$7000                         | \$7,000.00   | \$7,000.00   | \$7,000   |
| 102.1    | 0              | FT   | TREE TRIMMING   | \$14.25      | \$0.00       | \$0       |
| 120.     | 70             | CY   | EARTH EXCAVATION  | \$40.00      | \$2,800.00   | \$2,800   |
| 141.101* | 10             | CY   | TEST PIT FOR EXPLORATION-VACUUM TRUCK                               | \$250.00     | \$2,500.00   | \$2,500   |
| 151.     | 50             | CY   | GRAVEL BORROW   | \$66.75      | \$3,337.50   | \$3,338   |
| 170.     | 225            | SY   | FINE GRADING AND COMPACTING - SUBGRADE AREA                         | \$6.00       | \$1,350.00   | \$1,350   |
| 450.22   | 7              | TON  | SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)                          | \$320.00     | \$2,240.00   | \$2,240   |
| 450.23   | 7              | TON  | SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5)                        | \$267.82     | \$1,874.74   | \$1,875   |
| 482.3    | 210            | FT   | SAWCUTTING ASPHALT PAVEMENT   | \$5.50       | \$1,155.00   | \$1,155   |
| 506.     | 310            | FT   | GRANITE CURB TYPE VB - STRAIGHT                                     | \$117.50     | \$36,425.00  | \$36,425  |
| 506.1    | 80             | FT   | GRANITE CURB TYPE VB - CURVED                                       | \$145.00     | \$11,600.00  | \$11,600  |
| 509.     | 40             | FT   | GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT        | \$96.00      | \$3,840.00   | \$3,840   |
| 509.1    | 50             | FT   | GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - CURVED          | \$118.00     | \$5,900.00   | \$5,900   |
| 697.1    | 1              | EA   | SILT SACK   | \$165.00     | \$165.00     | \$165     |
| 701.*    | 150            | SY   | CEMENT CONCRETE SIDEWALK  | \$85.00      | \$12,750.00  | \$12,750  |
| 701.2*   | 70             | SY   | CEMENT CONCRETE PEDESTRIAN CURB RAMP                                | \$140.00     | \$9,800.00   | \$9,800   |
| 701.3    | 15             | SY   | STAMPED & COLORED CEMENT CONCRETE                                   | \$105.00     | \$1,575.00   | \$1,575   |
| 745.01   | 2              | EA   | SIMME SEAT BENCH  | \$2,000.00   | \$4,000.00   | \$4,000   |
| 748.     | 1              | LS   | MOBILIZATION  | \$11,063.68  | \$11,063.68  | \$11,064  |
| 751.     | 50             | CY   | LOAM FOR ROADSIDES  | \$120.00     | \$6,000.00   | \$6,000   |
| 756.*    | 1              | LS   | NPDES STORMWATER POLLUTION PREVENTION PLAN                          | \$10,500.00  | \$10,500.00  | \$10,500  |
| 765.     | 200            | SY   | SEEDING   | \$2.00       | \$400.00     | \$400     |
| 767.121  | 370            | FT   | SEDIMENT CONTROL BARRIER  | \$6.05       | \$2,238.50   | \$2,239   |
| 815.1    | 1              | LS   | TRAFFIC CONTROL SIGNAL LOCATION NO. 1- OVERHEAD PHB (HAWK)          | \$200,000.00 | \$200,000.00 | \$200,000 |
| 832.     | 50             | SF   | WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)       | \$22.50      | \$1,125.00   | \$1,125   |
| 847.12*  | 7              | EA   | SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL (BLACK) | \$250.00     | \$1,750.00   | \$1,750   |
| 851.1    | 70             | DAY  | TRAFFIC CONES FOR TRAFFIC MANAGEMENT                                | \$125.00     | \$8,750.00   | \$8,750   |
| 852.     | 220            | SF   | SAFETY SIGNING FOR TRAFFIC MANAGEMENT                               | \$30.00      | \$6,600.00   | \$6,600   |
| 854.1    | 740            | SF   | PAVEMENT MARKING REMOVAL  | \$3.05       | \$2,257.00   | \$2,257   |
| 856.     | 120            | DAY  | ARROW BOARD   | \$17.00      | \$2,040.00   | \$2,040   |
| 856.12   | 120            | DAY  | PORTABLE CHANGEABLE MESSAGE SIGN                                    | \$30.00      | \$3,600.00   | \$3,600   |
| 859.     | 2,921          | DAY  | REFLECTORIZED DRUM  | \$1.00       | \$2,921.00   | \$2,921   |
| 864.04   | 200            | SF   | PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC)     | \$8.40       | \$1,680.00   | \$1,680   |
| 865.*    | 560            | SF   | CROSS WALKS REFLECTORIZED WHITE (THERMOPLASTIC)                     | \$7.00       | \$3,920.00   | \$3,920   |
| 866.106  | 1,800          | FT   | 6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)                     | \$2.15       | \$3,870.00   | \$3,870   |
| 866.112  | 50             | FT   | 12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)                    | \$6.85       | \$342.50     | \$343     |
| 867.106  | 700            | FT   | 6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC)                    | \$2.18       | \$1,526.00   | \$1,526   |
| 874.     | 2              | EA   | STREET NAME SIGN  | \$170.00     | \$340.00     | \$340     |
| 874.2    | 2              | EA   | TRAFFIC SIGN REMOVED AND RESET                                      | \$265.09     | \$530.18     | \$530     |
| 874.4    | 1              | EA   | TRAFFIC SIGN REMOVED AND STACKED                                    | \$87.00      | \$87.00      | \$87      |

Preliminary Construction Cost  
Estimate Prepared For:

FRTA

|   |                  |                  |
|---|------------------|------------------|
| <b>Subtotal:</b>                          | <b>\$379,853</b> | <b>\$379,853</b> |
| <b>Uniformed Traffic Officer Control:</b> | <b>\$18,993</b>  | <b>\$18,993</b>  |
| <b>10% Construction Contingency:</b>      | <b>\$37,985</b>  | <b>\$37,985</b>  |
| <b>Grand Total:</b>                       | <b>\$436,831</b> | <b>\$436,831</b> |

FUSS & O'NEILL

# FUSS & O'NEILL

## FRTA – Industrial Blvd/Millers Falls Rd Bus Stop Improvements

Montague, MA

Preliminary Design Estimate

9/11/2024

### ALTERNATIVE #4 PEDESTRIAN HYBRID BEACON W/ BUS SHELTERS

| ITEM NO. | PART. QUANTITY | UNIT | DESCRIPTION   | UNIT PRICE   | TOTAL     |
|----------|----------------|------|---|--------------|-----------|
| 100      | 1              | LS   | SCHEDULE OF OPERATIONS - FIXED PRICE \$7000                         | \$7,000.00   | \$7,000   |
| 102.1    | 0              | FT   | TREE TRIMMING   | \$14.25      | \$0       |
| 120.     | 70             | CY   | EARTH EXCAVATION  | \$40.00      | \$2,800   |
| 141.101* | 10             | CY   | TEST PIT FOR EXPLORATION-VACUUM TRUCK                               | \$250.00     | \$2,500   |
| 151.     | 50             | CY   | GRAVEL BORROW   | \$66.75      | \$3,338   |
| 170.     | 225            | SY   | FINE GRADING AND COMPACTING - SUBGRADE AREA                         | \$6.00       | \$1,350   |
| 450.22   | 7              | TON  | SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)                          | \$320.00     | \$2,240   |
| 450.23   | 7              | TON  | SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5)                        | \$267.82     | \$1,875   |
| 482.3    | 210            | FT   | SAWCUTTING ASPHALT PAVEMENT   | \$5.50       | \$1,155   |
| 506.     | 310            | FT   | GRANITE CURB TYPE VB - STRAIGHT                                     | \$117.50     | \$36,425  |
| 506.1    | 80             | FT   | GRANITE CURB TYPE VB - CURVED                                       | \$145.00     | \$11,600  |
| 509.     | 40             | FT   | GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT        | \$96.00      | \$3,840   |
| 509.1    | 50             | FT   | GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - CURVED          | \$118.00     | \$5,900   |
| 697.1    | 1              | EA   | SILT SACK   | \$165.00     | \$165     |
| 701.*    | 150            | SY   | CEMENT CONCRETE SIDEWALK  | \$85.00      | \$12,750  |
| 701.2*   | 70             | SY   | CEMENT CONCRETE PEDESTRIAN CURB RAMP                                | \$140.00     | \$9,800   |
| 701.3    | 15             | SY   | STAMPED & COLORED CEMENT CONCRETE                                   | \$105.00     | \$1,575   |
| 745      | 2              | EA   | PEDESTRIAN BUS SHELTER  | \$47,500.00  | \$95,000  |
| 748.     | 1              | LS   | MOBILIZATION  | \$13,798.68  | \$13,799  |
| 751.     | 50             | CY   | LOAM FOR ROADSIDES  | \$120.00     | \$6,000   |
| 756.*    | 1              | LS   | NPDES STORMWATER POLLUTION PREVENTION PLAN                          | \$10,500.00  | \$10,500  |
| 765.     | 200            | SY   | SEEDING   | \$2.00       | \$400     |
| 767.121  | 370            | SY   | SEDIMENT CONTROL BARRIER  | \$6.50       | \$2,405   |
| 815.1    | 1              | LS   | TRAFFIC CONTROL SIGNAL LOCATION NO. 1- OVERHEAD PHB (HAWK)          | \$200,000.00 | \$200,000 |
| 832.     | 50             | SF   | WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)       | \$22.50      | \$1,125   |
| 847.12*  | 7              | EA   | SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL (BLACK) | \$250.00     | \$1,750   |
| 851.1    | 70             | DAY  | TRAFFIC CONES FOR TRAFFIC MANAGEMENT                                | \$125.00     | \$8,750   |
| 852.     | 220            | SF   | SAFETY SIGNING FOR TRAFFIC MANAGEMENT                               | \$30.00      | \$6,600   |
| 854.1    | 740            | SF   | PAVEMENT MARKING REMOVAL  | \$3.05       | \$2,257   |
| 856.     | 120            | DAY  | ARROW BOARD   | \$17.00      | \$2,040   |
| 856.12   | 120            | DAY  | PORTABLE CHANGEABLE MESSAGE SIGN                                    | \$30.00      | \$3,600   |
| 859.     | 2,921          | DAY  | REFLECTORIZED DRUM  | \$1.00       | \$2,921   |
| 864.04   | 200            | SF   | PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC)     | \$8.40       | \$1,680   |
| 865.*    | 560            | SF   | CROSS WALKS REFLECTORIZED WHITE (THERMOPLASTIC)                     | \$7.00       | \$3,920   |
| 866.106  | 1,800          | FT   | 6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)                     | \$2.15       | \$3,870   |
| 866.112  | 50             | FT   | 12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)                    | \$6.85       | \$343     |
| 867.106  | 700            | FT   | 6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC)                    | \$2.18       | \$1,526   |
| 874.     | 2              | EA   | STREET NAME SIGN  | \$170.00     | \$340     |
| 874.2    | 2              | EA   | TRAFFIC SIGN REMOVED AND RESET                                      | \$265.09     | \$530     |
| 874.4    | 1              | EA   | TRAFFIC SIGN REMOVED AND STACKED                                    | \$87.00      | \$87      |

**Subtotal: \$473,755**

**Uniformed Traffic Officer Control: \$23,688**

**10% Construction Contingency: \$47,375**

**Grand Total: \$544,818**

Preliminary Construction  
Cost Estimate Prepared For:

FRTA

FUSS & O'NEILL



## Annual Town Meeting

### SPECIAL ARTICLE REQUEST – CAPITAL EXPENSE

Budget Year  
**FY 26**

*This form is intended for use with capital article submissions  $\geq$  \$25,000 with a lifespan of 5+ years. For major building projects, please consult the Town Administrator.*

***Please complete this form in its entirety! Initial Submission due 10/31/2024.***

Check Here if this an expedited request for Winter 2024 Special Town Meeting

Department: Selectboard/Planning Submitted by: Christopher Nolan-Zeller

Item/Project Cost: \$91,200 Date Prepared: January 27, 2025

Item/Project Title: Montague Center Complete Streets Design

#### Proposed Article Wording:

To see if the Town will vote to raise and appropriate, transfer from available funds, borrow, or otherwise provide the sum of **\$91,200**, or any other amount, for the purpose of final design, project specifications, and bid documents/bid tabs for the Montague Center Complete Streets projects, including any and all incidental and related costs, or pass any vote or votes in relation thereto.

#### Detailed Description for Background Materials: *(Provide a full description of the item or service. Use attachments as needed.)*

The Town applied for and was awarded the sum of \$499,682.80 from MassDOT's Complete Streets program to support three improvements in Montague Center. These include North Street/Main Street/Town Common improvements, bicycle accommodations on Main Street, and improvements at the FRTA bus stop on Main Street in Montague Center. While the grant is eligible to fund construction phase services, including administration and oversight, other necessary expenses must come from other sources.

The Town has received a quote to provide the additional services that are necessary for the projects to move forward. Items that require funding include Final Design (\$74,400), Project Specifications (\$6,400), and Bid Documents and Bid Tabs (\$10,400), totaling \$91,200.



**Scoping Questions**

**Yes**

**No**

*Please elaborate in the comments box at bottom of the page*

Do you have a written estimate or proposal for the scope of work?

*If yes, attach the estimate*

Is there a lease option for this expense?

Will this item or project replace a capital asset?

Will this create ongoing costs or savings?

Will this leverage grant or other external funding?

Is this request identified on the Capital Improvement Plan?

**Describe how the project/ purchase will be managed**

*Who will manage procurement and execution of the project? Will external resources be required for design, engineering, procurement, or construction oversight?*

The Town will contract with the engineering firm VHB, who assisted the Town in the development of its successful Complete Streets application, and who have agreed to provide construction administrative and oversight services. No need for grant-ineligible outside services is anticipated beyond what is included in VHB's 1/15/25 proposal to the Town. The Assistant Town Administrator will serve as the Town's project manager.

**Why is it essential that the Town makes this investment now?**

*Make your argument for why this project is necessary and timely. Articulate the benefits of the project. If necessary, describe the consequences of inaction.*

The substantial award from MassDOT for these three projects in Montague Center presents a rare opportunity to leverage outside resources for improving vehicular, pedestrian, and bicyclist safety in the village center. Allowing these projects to advance presents significant cost savings as compared to the Town relying on its own capital funds to cover nearly \$500,000 worth of construction costs on these essential improvements. This area has been the subject of several discussions related to local traffic safety in recent years, with community input identifying traffic calming and bike/pedestrian safety improvements in this neighborhood as top priorities.

**Relative Priority** : Your assessment of the how important this is to the Town at the present time.

Critical Importance

Highly Important

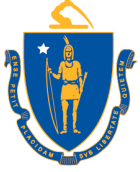
Moderately Important

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**XOX**

**Comments and additional information:**



Maura Healey, Governor  
Kimberley Driscoll, Lieutenant Governor  
Monica Tibbits-Nutt, Secretary & CEO  
Jonathan L. Gulliver, Highway Administrator



January 14, 2025

Maureen Pollock  
Town Planner  
1 Avenue A  
Montague, MA 01376

Via email: [mpollock@montague-ma.gov](mailto:mpollock@montague-ma.gov)

Dear Maureen Pollock:

Thank you for your Tier 3 submission to the Complete Streets Funding Program during Round 2 of the Fiscal Year 2025 application solicitation. We received many applications and had a very competitive application pool from which to select. I am pleased to notify you that Montague's application has been approved for \$499,682.80.

Awarded municipalities will enter into a contract with MassDOT for the completion of approved work. A member of the Community Grants Group will reach out shortly to gather all necessary information to begin the contracting process. It is anticipated that the Notice to Proceed (NTP) will be issued by April 1, 2025, and the deadline for construction will be December 31, 2026. MassDOT-funded work may not proceed until the NTP is issued.

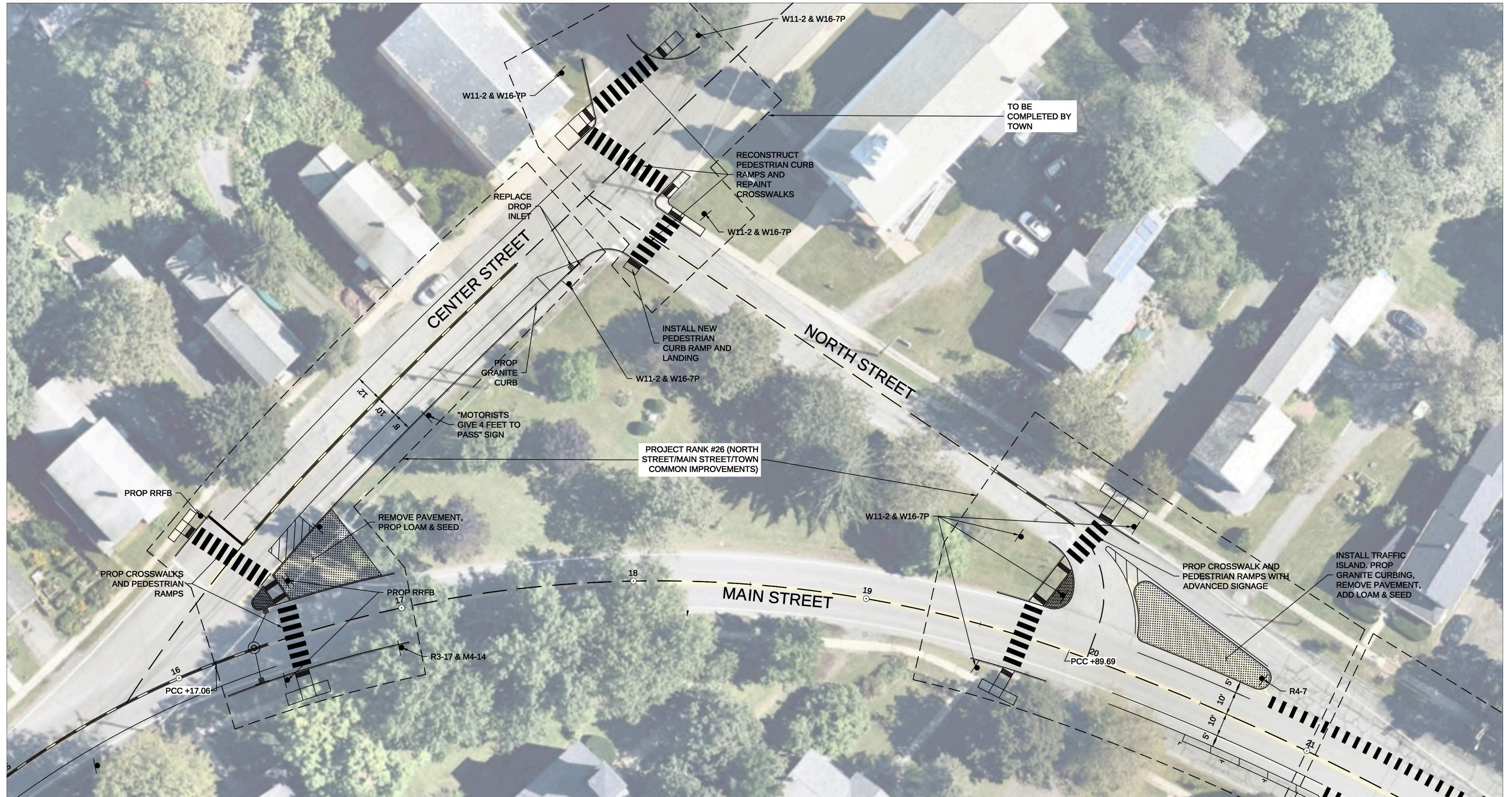
Please note that as detailed in the Program Guidance, design is not an eligible grant cost. Design work for this project may begin at any time and must be completed by a MassDOT Prequalified Contractor. Construction funds awarded through this program are paid via the reimbursement of approved costs. Reimbursement requests are processed by your District State Aid Engineer in the same manner as Chapter 90 projects on Grant Central.

Please email [CompleteStreetsProgram@dot.state.ma.us](mailto:CompleteStreetsProgram@dot.state.ma.us) with questions related to this award. Thank you for your commitment to improving safety, access, and mobility for all roadway users in your community and for your participation in the Complete Streets Funding Program. MassDOT looks forward to working with you on this important project.

Sincerely,

Jonathan L. Gulliver  
Highway Administrator

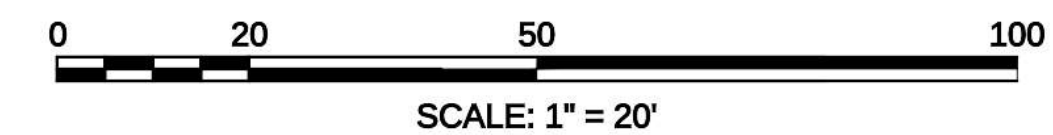
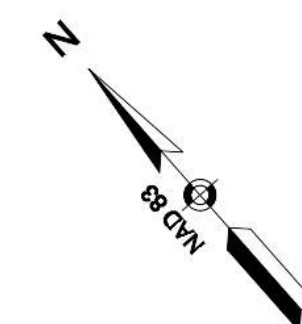
cc: Kristen Rebelo, MassDOT Community Grants Program Administrator  
Patricia Leavenworth, MassDOT District 2 Highway Director  
Walter Ramsey, Montague Town Administrator

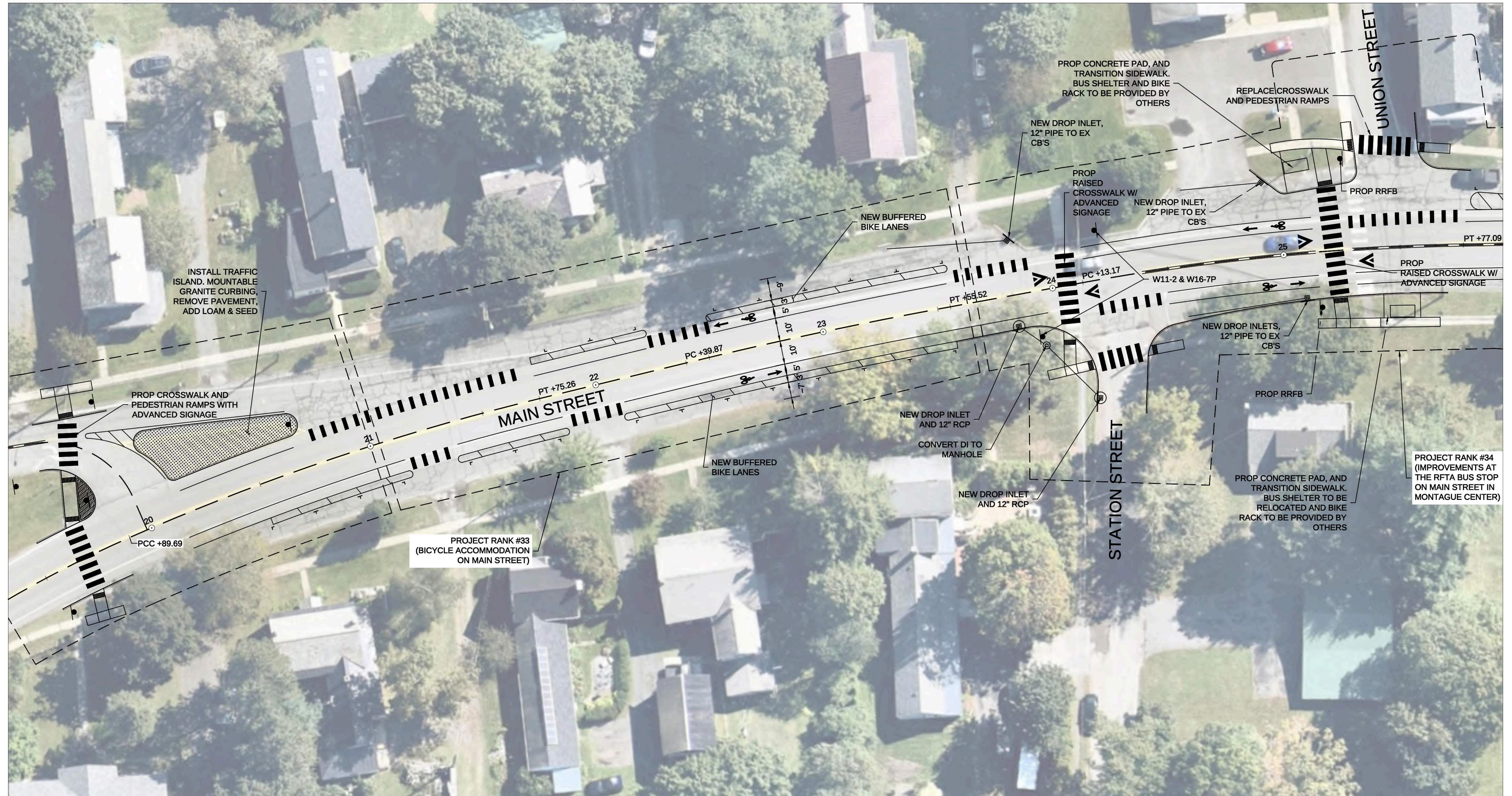


# SHEET 1 OF 3

## COMPLETE STREETS

### MONTAGUE, MA

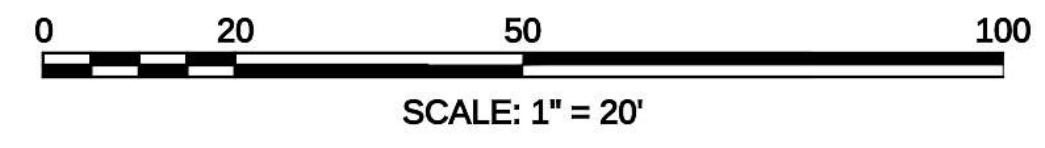
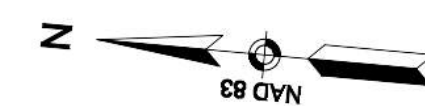




# SHEET 2 OF 3

## COMPLETE STREETS

### MONTAGUE, MA

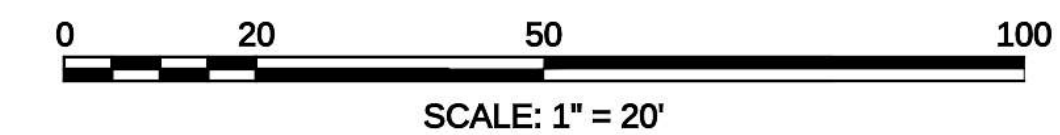




# SHEET 3 OF 3

## COMPLETE STREETS

### MONTAGUE, MA





**Complete Streets Funding Program  
Exhibit B: Preliminary Estimate Form**

Municipality: Montague

Date: 29-Sep-24

Project Name: North Street/Main Street/Town Common Improvements

Project Rank: 26 Please use one tab per project. Delete unused tabs.

| Item #       | Item Description  | Unit | Quantity | Unit Price                                     | Total Cost           |
|--------------|---|------|----------|--|----------------------|
| 120.1        | Unclassified Excavation                                       | CY   | 138      | \$ 60.00                                       | \$ 8,280.00          |
| 151          | Gravel Borrow   | CY   | 30       | \$ 65.00                                       | \$ 1,950.00          |
| 170          | Fine Grading and Compacting - Subgrade Area                   | SY   | 130      | \$ 8.00  | \$ 1,040.00          |
| 209.1        | Drop Inlet Type DF  | EA   | 3        | \$ 5,000.00                                    | \$ 15,000.00         |
| 222.3        | Frame and Grate (or cover) - Municipal Standard               | EA   | 3        | \$ 1,200.00                                    | \$ 3,600.00          |
| 227.3        | Removal of Drainage Structure Sediment                        | CY   | 6        | \$ 13.00                                       | \$ 78.00             |
| 241.12       | 12 Inch Reinforced Concrete Pipe Class III                    | LF   | 25       | \$ 130.00                                      | \$ 3,250.00          |
| 433          | Water for Roadway Dust Control                                | MGL  | 1.35     | \$ 100.00                                      | \$ 135.00            |
| 452          | Asphalt Emulsion for Tack Coat                                | GAL  | 2        | \$ 16.00                                       | \$ 32.00             |
| 482.3        | Sawcutting Asphalt Pavement                                   | FT   | 400      | \$ 7.00  | \$ 2,800.00          |
| 506          | Granite Curb Type VB- Straight                                | LF   | 100      | \$ 96.00                                       | \$ 9,600.00          |
| 506.1        | Granite Curb Type VB- Curved                                  | LF   | 280      | \$ 108.00                                      | \$ 30,240.00         |
| 509          | Granite Transition Curb For Pedestrian Curb Ramps - Straight  | LF   | 36       | \$ 100.00                                      | \$ 3,600.00          |
| 509.1        | Granite Transition Curb For Pedestrian Curb Ramps - Curved    | LF   | 16       | \$ 100.00                                      | \$ 1,600.00          |
| 451          | Hot Mix Asphalt for Patching                                  | TON  | 5        | \$ 285.00                                      | \$ 1,425.00          |
| 570          | Hot Mix Asphalt Berm - Option                                 | LF   | 200      | \$ 40.00                                       | \$ 8,000.00          |
| 701          | Cement Concrete Sidewalk                                      | SY   | 25       | \$ 90.00                                       | \$ 2,250.00          |
| 701.2        | Cement Concrete Pedestrian Curb Ramp                          | SY   | 100      | \$ 138.00                                      | \$ 13,800.00         |
| 751          | Loam For Roadsides  | CY   | 50       | \$ 91.00                                       | \$ 4,550.00          |
| 765          | Seeding   | SY   | 26       | \$ 3.00  | \$ 78.00             |
| 825.2        | RRFB (2-Post Assembly System) Solar                           | EA   | 1        | \$ 30,000.00                                   | \$ 30,000.00         |
| 832          | Warning-Regulatory and Route Marker - Aluminum Panel (Type A) | SF   | 69       | \$ 20.00                                       | \$ 1,380.00          |
| 847.1        | Sign Sup (N/Guide)+RTE MKR W/1 Brkway Post Assembly - Steel   | EA   | 11       | \$ 275.00                                      | \$ 3,025.00          |
| 854.1        | Pavment Marking Removal                                       | SF   | 800      | \$ 5.00  | \$ 4,000.00          |
| 860.104      | 4 Inch Reflectorized White Line (Painted)                     | FT   | 400      | \$ 3.00  | \$ 1,200.00          |
| 860.112      | 12 Inch Reflectorized White Line (Painted)                    | FT   | 690      | \$ 12.00                                       | \$ 8,280.00          |
| 861.104      | 4 Inch Reflectorized Yellow Line (Painted)                    | FT   | 200      | \$ 3.00  | \$ 600.00            |
| 864          | Pavement Arrow and Legends Reflectorized White (Painted)      | SF   | 150      | \$ 15.00                                       | \$ 2,250.00          |
| 874.2        | Traffic Sign Removed and Reset                                | EA   | 2        | \$ 190.00                                      | \$ 380.00            |
|              | <b>SUB-TOTAL</b>  |      |          |  | <b>\$ 162,423.00</b> |
|              | Construction Contingency (10%)                                |      |          |  | \$ 16,242.30         |
|              | Traffic Police (5%)   |      |          |  | \$ 8,121.15          |
|              | Construction Engineering/Oversight (0%)                       |      |          |  |                      |
|              | Mobilization (3%)   |      |          |  | \$ 4,872.69          |
| <b>TOTAL</b> |   |      |          | <b>MassDOT request not to exceed \$500,000</b> | <b>\$ 191,659.14</b> |

[When developing cost estimates, municipalities may use the State Aid Reimbursable Programs Estimating Tool \(SARPET\) found online at www.mass.gov/state-aid-reimbursable-programs-estimating-tool.](https://www.mass.gov/state-aid-reimbursable-programs-estimating-tool)

Do not exceed MassDOT Allowances for Contingency, Construction Engineering Oversight, Mobilization, or Police.

See MassDOT Standard Allowances tab of this document.

Standard MassDOT Item numbers can be found at <https://hwy.massdot.state.ma.us/CPE/ItemSearch.aspx>.



## Complete Streets Funding Program Exhibit B: Preliminary Estimate Form

Municipality: Montague Date: 29-Sep-24  
 Project Name: Bicycle Accommodation on Main Street  
 Project Rank: 33 Please use one tab per project. Delete unused tabs.

| Item #  | Item Description  | Unit | Quantity | Unit Price | Total Cost          |
|---------|---|------|----------|------------|---------------------|
| 832     | Warning-Regulatory and Route Marker - Aluminum Panel (Type A) | SF   | 25       | \$ 20.00   | \$ 500.00           |
| 847.1   | Sign Sup (N/Guide)+RTE MKR W/1 Brkway Post Assembly - Steel   | EA   | 4        | \$ 275.00  | \$ 1,100.00         |
| 854.1   | Pavment Marking Removal                                       | SF   | 2400     | \$ 5.00    | \$ 12,000.00        |
| 860.104 | 4 Inch Reflectorized White Line (Painted)                     | FT   | 3,555    | \$ 3.00    | \$ 10,665.00        |
| 861.104 | 4 Inch Reflectorized Yellow Line (Painted)                    | FT   | 3555     | \$ 3.00    | \$ 10,665.00        |
| 863.1   | High Friction Green Bicycle Facility Surface Treatment        | SF   | 535      | \$ 11.00   | \$ 5,885.00         |
| 864     | Pavement Arrow and Legends Reflectorized White (Painted)      | SF   | 360      | \$ 15.00   | \$ 5,400.00         |
|         | SUB-TOTAL   |      |          |            | \$ 46,215.00        |
|         | Construction Contingency (10%)                                |      |          |            | \$ 4,621.50         |
|         | Traffic Police (5%)   |      |          |            | \$ 2,310.75         |
|         | Construction Engineering/Oversight (0%)                       |      |          |            |                     |
|         | Mobilization (3%)   |      |          |            | \$ 1,386.45         |
| TOTAL   | <b>MassDOT request not to exceed \$500,000</b>                |      |          |            | <b>\$ 54,533.70</b> |

[When developing cost estimates, municipalities may use the State Aid Reimbursable Programs Estimating Tool \(SARPET\) found online at www.mass.gov/state-aid-reimbursable-programs-estimating-tool.](#)  
 Do not exceed MassDOT Allowances for Contingency, Construction Engineering Oversight, Mobilization, or Police.  
 See MassDOT Standard Allowances tab of this document.  
 Standard MassDOT Item numbers can be found at <https://hwy.massdot.state.ma.us/CPE/ItemSearch.aspx>.

HED-614 (R)

\_\_\_\_\_  
Supervisor/Foreman Date





**Complete Streets Funding Program  
Exhibit B: Preliminary Estimate Form**

Municipality: Montague Date: 29-Sep-24  
 Project Name: Improvements at the FRTA Bus Stop on Main Street in Montague Center  
 Project Rank: 34 Please use one tab per project. Delete unused tabs.

| Item #       | Item Description  | Unit | Quantity | Unit Price                                     | Total Cost           |
|--------------|---|------|----------|--|----------------------|
| 120.1        | Unclassified Excavation                                       | CY   | 61       | \$ 60.00                                       | \$ 3,660.00          |
| 151          | Gravel Borrow   | CY   | 103      | \$ 65.00                                       | \$ 6,695.00          |
| 170          | Fine Grading and Compacting - Subgrade Area                   | SY   | 220      | \$ 8.00  | \$ 1,760.00          |
| 209.1        | Drop Inlet Type DF  | EA   | 5        | \$ 5,000.00                                    | \$ 25,000.00         |
| 220.3        | Drainage Structure Change in Type                             | EA   | 2        | \$ 2,000.00                                    | \$ 4,000.00          |
| 223.2        | Frame and Grate/Cover R&D                                     | EA   | 2        | \$ 100.00                                      | \$ 200.00            |
| 222.3        | Frame and Grate (or cover) - Municipal Standard               | EA   | 7        | \$ 1,200.00                                    | \$ 8,400.00          |
| 227.3        | Removal of Drainage Structure Sediment                        | CY   | 10       | \$ 13.00                                       | \$ 130.00            |
| 241.12       | 12 Inch Reinforced Concrete Pipe Class III                    | LF   | 188      | \$ 130.00                                      | \$ 24,440.00         |
| 415.3        | Pavement Micro Milling  | SY   | 350      | \$ 27.00                                       | \$ 9,450.00          |
| 433          | Water for Roadway Dust Control                                | MGL  | 1.4      | \$ 100.00                                      | \$ 140.00            |
| 452          | Asphalt Emulsion for Tack Coat                                | GAL  | 35       | \$ 16.00                                       | \$ 560.00            |
| 460.23       | Superpave Surface Course - 12.5 (SIC -12.5)                   | TON  | 70       | \$ 180.00                                      | \$ 12,600.00         |
| 460.53       | Superpave Leveling Course - 12.5 (SIC -12.5)                  | TON  | 30       | \$ 200.00                                      | \$ 6,000.00          |
| 482.3        | Sawcutting Asphalt Pavement                                   | FT   | 220      | \$ 7.00  | \$ 1,540.00          |
| 506          | Granite Curb Type VB- Straight                                | LF   | 230      | \$ 96.00                                       | \$ 22,080.00         |
| 506.1        | Granite Curb Type VB- Curved                                  | LF   | 180      | \$ 108.00                                      | \$ 19,440.00         |
| 509          | Granite Transition Curb For Pedestrian Curb Ramps - Straight  | LF   | 16       | \$ 100.00                                      | \$ 1,600.00          |
| 509.1        | Granite Transition Curb For Pedestrian Curb Ramps - Curved    | LF   | 8        | \$ 100.00                                      | \$ 800.00            |
| 451          | Hot Mix Asphalt for Patching                                  | TON  | 5        | \$ 285.00                                      | \$ 1,425.00          |
| 570          | Hot Mix Asphalt Berm - Option                                 | LF   | 40       | \$ 40.00                                       | \$ 1,600.00          |
| 701          | Cement Concrete Sidewalk                                      | SY   | 60       | \$ 90.00                                       | \$ 5,400.00          |
| 701.2        | Cement Concrete Pedestrian Curb Ramp                          | SY   | 100      | \$ 138.00                                      | \$ 13,800.00         |
| 734          | Sign Removed and Reset  | EA   | 1        | \$ 650.00                                      | \$ 650.00            |
| 751          | Loam For Roadsides  | CY   | 12       | \$ 91.00                                       | \$ 1,092.00          |
| 765          | Seeding   | SY   | 100      | \$ 3.00  | \$ 300.00            |
| 825.2        | RRFB (2-Post Assembly System) Solar                           | EA   | 1        | \$ 30,000.00                                   | \$ 30,000.00         |
| 832          | Warning-Regulatory and Route Marker - Aluminum Panel (Type A) | SF   | 50       | \$ 20.00                                       | \$ 1,000.00          |
| 847.1        | Sign Sup (N/Guide)+RTE MKR W/1 Brkway Post Assembly - Steel   | EA   | 2        | \$ 275.00                                      | \$ 550.00            |
| 854.1        | Pavement Marking Removal                                      | SF   | 100      | \$ 5.00  | \$ 500.00            |
| 860.112      | 12 Inch ReflectORIZED White Line (Painted)                    | FT   | 560      | \$ 12.00                                       | \$ 6,720.00          |
| 863.1        | High Friction Green Bicycle Facility Surface Treatment        | SF   | 120      | \$ 11.00                                       | \$ 1,320.00          |
| 864          | Pavement Arrow and Legends ReflectORIZED White (Painted)      | SF   | 120      | \$ 12.00                                       | \$ 1,440.00          |
| 874.2        | Traffic Sign Removed and Reset                                | EA   | 2        | \$ 190.00                                      | \$ 380.00            |
| 874.4        | Traffic Sign Removed and Stacked                              | EA   | 2        | \$ 75.00                                       | \$ 150.00            |
|              | SUB-TOTAL   |      |          |  | \$ 214,822.00        |
|              | Construction Contingency (10%)                                |      |          |  | \$ 21,482.20         |
|              | Traffic Police (5%)   |      |          |  | \$ 10,741.10         |
|              | Construction Engineering/Oversight (0%)                       |      |          |  |                      |
|              | Mobilization (3%)   |      |          |  | \$ 6,444.66          |
| <b>TOTAL</b> |   |      |          | <b>MassDOT request not to exceed \$500,000</b> | <b>\$ 253,489.96</b> |

[When developing cost estimates, municipalities may use the State Aid Reimbursable Programs Estimating Tool \(SARPET\) found online at www.mass.gov/state-aid-reimbursable-programs-estimating-tool.](https://www.mass.gov/state-aid-reimbursable-programs-estimating-tool)

Do not exceed MassDOT Allowances for Contingency, Construction Engineering Oversight, Mobilization, or Police.

See MassDOT Standard Allowances tab of this document.

Standard MassDOT Item numbers can be found at <https://hwy.massdot.state.ma.us/CPE/ItemSearch.aspx>.



Engineers | Scientists | Planners | Designers

One Federal Street, Building 103-3B, Springfield, Massachusetts 01105

P 413.747.7113 F 413.747.0916 www.vhb.com

# Client Authorization

New Contract

Date: January 15, 2025

Amendment No.

Project No. 87437.24

Project Name: Montague Complete Streets Design

To: Maureen Pollock  
Town Planner  
Town of Montague  
1 Avenue A  
Turners Falls, MA 01376

Email: [mpolluck@montague-ma.gov](mailto:mpolluck@montague-ma.gov)

Phone No: (413) 863-3200

Estimated Date of Completion: Eighteen (18) months from notice to proceed

|              | Cost Estimate |                     |
|--------------|---------------|---------------------|
|              | Amendment     | Contract Total      |
| Labor        |               | \$151,400.00        |
| Expenses     |               |                     |
| <b>TOTAL</b> |               | <b>\$151,400.00</b> |

- Lump Sum  Time & Expenses  
 Cost + Fixed Fee  Labor Multiplier

At the request of the Town of Montague (the "Town"), VHB is providing this proposal for professional engineering services for the final design and part-time construction phase services for three (3) Complete Streets projects. The project sketches for these projects were prepared under a Complete Streets Review contract with the Town dated July 29, 2024. The following scope will advance the design of these sketches and will consist of survey, final design, preparation of final bid documents and part-time construction phase services; permitting is not anticipated nor included.

## PROJECT LOCATIONS

The project locations are based on the sketches VHB completed as part of the previous Complete Streets contract with the town. These sketches were submitted with the October 1, 2024, grant application and will be used as the basis for this scope of services. The following summarizes the three (3) project locations:

- 1.) Tier 2 Complete Street Project Priority #26 - North Street/Main Street/Town Common Improvements
- 2.) Tier 2 Complete Street Project Priority #33 - Bicycle Accommodations on Main Street
- 3.) Tier 2 Complete Street Project Priority #34 - Improvements at the FRTA Bus Stop on Main Street in Montague Center

### Task 1 – Survey and Base Plan Development

VHB will coordinate with a local (in Palmer) MassDOT qualified surveyor (Hancock Associates, previously Sherman Frydryk, LLC) to prepare an existing conditions base plan for the three (3) Project locations. The following summarizes the goal of survey for each project:

- The surveyed base plan for Project Priority #26 and #34 will obtain ground surface features, underground utilities based on record and field observed information, rim and inverts of storm and sanitary sewer structures, approximate right-of-way locations, spot grades and existing contours will be developed.
- Survey obtained for Project Priority #33 will be limited to features within the roadway curb to curb, line painting, and visible surface utility structures. This is proposed as a cost saving measure since the work will be limited to the removal and installation of pavement markings and signage only.
- A section of North Street between Main Street and Center Street that is not part of the three (3) projects will also be surveyed to obtain right-of way lines, pavement markings, surface utilities and sidewalk

location. The purpose of this is to complete the right-of-way layout for the Common and abutting roadways and provide a seamless transition between the proposed improvements and existing conditions. This information can also be used by the Town for future projects and improvements since this area has not been documented.

The Hancock Associates survey scope is attached to this Agreement for more details. Under this task VHB has budgeted time to conduct a field walk to review existing conditions base plans prepared by Hancock Associates and the surrounding area prior to advancing final design. The improvements for these three (3) locations assume that construction will be within the existing Town Layout so it is anticipated that right-of-way (easements, takings, or other) will not be need. It is assumed the town will work with abutters to advise on the potential work to be completed outside the roadway layout (such as grading or other tie ins), this includes right-of-entries or other information to document approval.

### **Task 2 – Montague Historical Commission Coordination**

The project area encompassing the three (3) projects is within the Montague Center Historic District. The Montague Village Common is identified on the National Register of Historic Places (NRHP) and is identified as Article 97 land owned by the Town. The improvements propose extensions of the Common's grass area at the apex of the Main Street intersections with Center Street and North Street to accommodate new crosswalks. Proposed new curbing and re-establishing the deteriorated grass area along the south side of Center Street (north side of the Common) will help protect the Montague Village Common Watering Trough also identified on the NRHP. The Montague Village Common War Memorial within the Common will not be impacted by the proposed improvements. These improvements are not anticipated have adverse effects to the historical characteristics of the Common and are assumed to be considered acceptable on this land. The buildings along Main Street, Center Street and North Street are listed on the NRHP, and the proposed design is not anticipated to impact this area.

VHB will assist Town Staff in coordinating with the local Historic Commission. VHB will attend meetings, make minor adjustments to the design based on comments received from the Historic Commission. VHB anticipating having to identify improvements that may need approval from the commission such as ornamental traffic signal post bases, material type for sidewalk, and colors of pedestrian detectable warning panels. VHB will provide photos and specifications for up to four (4) items within the project limits that fall under the jurisdiction of the commission. If an application needs to be prepared for commission approval, VHB has assumed that the town will prepare any applications needed with the information provided by VHB.

VHB has budgeted one (1) virtual meeting with Town staff and one (1) virtual meeting with the Montague Historical Commission with up to two (2) VHB staff in attendance. VHB has not budgeted for coordinating with the Massachusetts Historic Commission (MHC) or other Agencies that may have jurisdiction within the project area. Color 2D or 3D renderings are not anticipated to be needed and therefore are not included in this Agreement.

### **Task 3 – Final Design**

Using the existing conditions surveyed base plan from Task 1, and the conceptual sketches that were prepared by VHB, final design plans will be provided for the three (3) locations. Plans will provide general information, details, and notes to construct the project. Since the three locations are connected and two of them overlap, the design will be prepared and bid as one (1) project. The plans will incorporate critical information such as spot grading, designed pedestrian curb ramps, raised crosswalks, new curb locations and the design of one (1) transit shelter pad where related amenities will be placed. The rectangular rapid flashing beacons (RRFBs) proposed will be solar powered, the feasibility of solar power will be coordinated with a vendor at this stage. If solar power is not feasible, and the design needs to accommodate electrical power, an Amendment to this Agreement will be required.

Plans will be presented in a format using 24"x36" sheets and plans will be prepared at a 1"=20' scale. VHB will update the previously prepared itemized construction cost estimates. There will be three (3) estimates prepared and then combined into one (1) for bidding purposes. Combining the three will occur under Task 4. VHB will submit the design to the Town for review and VHB will address agreed upon comments before finalizing the design.

Three (3) virtual meetings are budgeted with the Town to review plan progress prior to finalizing this task, up to two (2) VHB staff in attendance.

#### **Task 4 – Project Specifications**

VHB will prepare project related special provisions based on the latest editions of the MassDOT Standard Specifications for Highways and Bridges and Supplemental Specifications for the appropriate items in the itemized estimate. Special provisions are anticipated to be drafted for a specific or unique activity that needs to be performed by the contractor.

VHB will also combine the itemized estimate prepared in Task 3 above. Finally, VHB will perform a final internal review of the plans, specifications, and estimate.

#### **Task 5 – Bid Documents and Bid Tabs**

This task anticipates that the town will compile the bid package utilizing the above task deliverables prepared by VHB. It is also expected that the town will coordinate the bidding process, advertisement, issuance of plans, issuance of addendum, and will award the project. VHB will assist the Town in this process and more specifically provide the following:

- Final bid documents with plans and specifications that address agreed upon comments from the town.
- Bid tabs using the items in the construction cost estimate. VHB will coordinate combining the items from each of the project cost estimates into one bid tab and identify if add alternatives need to be coordinated due to budget constraints. VHB is budgeting for up to two (2) add alternates in the bid package in the event that the final construction cost estimate is higher than the preliminary.
- Provide support to the town once the project is out to bid (budget 21 hours):
  - Review/answer questions from contractors related to VHB's design during bidding.
  - Provide specifics to the town related to VHB's design for town issuance of addendum(s).
  - Review high and low bids received by the town and make recommendation of award.

#### **Task 6 – Construction Phase Services (Part-Time)**

VHB will provide part-time construction phase services. It is anticipated that construction will take no more than four (4) months. Limitation of Responsibilities: VHB will not supervise or have control over site safety and the Contractor's safety precautions or programs in connection with the work, nor for the Contractors' work, construction ways, means, methods, techniques, sequences or procedures selected by the Contractors in connection with the Work. VHB will not be responsible for the acts or omissions of any Contractor, or of any subcontractor or supplier, or any of the Contractor(s), or subcontractor's or supplier's agents or employees, or any other persons (except VHB's own employees and agents) at the site or otherwise furnishing or performing any of the Contractor(s)'s work. VHB has budgeted 172 hours for the following:

- Review up to five (5) Highway Shop Drawings.
- Review Request for Information (RFI) from the contractor. VHB has budgeted for up to four (4) RFIs.

- Attend the following four (4) meetings with up to two (2) VHB staff in attendance.
  - One (1) in-person Pre-Construction Meeting.
  - Two (2) virtual meetings with the Town to answer questions and review construction status.
  - One (1) in-person meeting is budgeted to close out the project with the town and the contractor.
- Perform one field visit bi-weekly to conduct field checks during construction reviewing the contractor's progress. This is not full-time (daily) construction observations, and each field visit is anticipated to take no more than two (2) hours. VHB will use these limited field visits to coordinate with the town and document the construction progress. The timing of these meetings with the contractor will need to be coordinated.
- Perform one (1) traffic signal and Rectangular Rapid Flashing Beacon (RRFB) Inspection.
- Develop a punch list letter summary for the town and contractor once the project is substantially complete.

### **SERVICES NOT INCLUDED**

The following services are not anticipated and, therefore, not included in this proposal at this time:

- As-built survey or updates to the design plans post construction.
- Pavement testing (cores, test pits, probes, etc.) and/or pavement design.
- Abutter coordination or outreach meetings for the work to be performed.
- Full-time construction phase services.
- Requesting and obtaining State prevailing wages.
- Evaluate conditions or design of retaining walls, fencing, bridges, bollards, or other structural aspects.
- Design and sizing of storm and sanitary sewer mains. Minor drainage work proposed will tie into the existing roadway drainage system.
- Coordination of hearings for tree removals or other permitting associated with the proposed improvements.
- Right-of-Way (ROW) plans will not be prepared. Work will be proposed within the existing Town ROW to the maximum extent practicable. If this changes, VHB will advise during Task 2, as the survey will confirm property boundaries vs. the proposed improvements.
- Alterations to the roadway layouts will not be developed. It is assumed that the extension of the grassed area at the Main Street and Center Street intersection will be done within the existing roadway layout and not require new property bounds for the Town Common.
- Article 97 permitting and coordination of any kind, coordination with the Massachusetts Historical Commission, or the National Register of Historic Places (NRHP).
- Subsurface Utility Engineering (SUE) level A and B will not be collected as part of this project.
- Design reviews will be conducted only by the Town and there will be no reviews or involvement by the Massachusetts Department of Transportation (MassDOT) or other state or federal agency.
- Electrical design for traffic control device connections.
- Testing for or disposal calculations for contaminated soils.
- Police protection services.

Should services be required in these areas, or areas not previously described, VHB will provide a proposal or Amendment, at the Town's written request, that contains the Scope of Services, Compensation, and Schedule to complete the unanticipated services.



**COMPENSATION FOR VHB SERVICES**

- VHB will perform the Scope of Services contained in this Agreement on a Lump Sum fee basis which includes expenses. The Limit for Labor and Expenses for this Scope of Services is \$ 151,400.00, allocated approximately as follows:

|   | <b>Labor Fees</b>    |
|---|----------------------|
| <b>Task 1 – Survey and Base Plan Development</b>            | <b>\$ 18,800.00</b>  |
| <b>Task 2 – Montague Historical Commission Coordination</b> | <b>\$ 6,800.00</b>   |
| <b>Task 3 – Final Design</b>                                | <b>\$ 74,400.00</b>  |
| <b>Task 4 – Project Specifications</b>                      | <b>\$ 6,400.00</b>   |
| <b>Task 5 – Bid Documents and Bid Tabs</b>                  | <b>\$ 10,400.00</b>  |
| <b>Task 6 – Construction Phase Services (Part-Time)</b>     | <b>\$ 33,600.00</b>  |
| <hr/>   |                      |
| <b>TOTAL CONTRACT VALUE:</b>                                | <b>\$ 151,400.00</b> |

Costs for expenditures made specifically for this project such as printing and copies, travel and mileage, and shipping/postage are included with the tasks above.

- The total Lump Sum Fee for services rendered in Tasks 1 thru 6 (as stated above) will be invoiced monthly as a percentage of completion.
- VHB will not exceed the total estimated Lump Sum Fee or estimated direct costs as stated herein without the written approval of the Town.
- The schedule is dependent upon when survey is completed (weather dependent), the project is advertised by the Town and then awarded, and on the contractor's schedule to build the project. VHB estimates 12 to 18 months.
- The fees in this proposal may be subject to change if not accepted within 60 days from the date of issue.

Prepared by: James J Czach, PE  
 Reviewed By: MJC

Document Approval: Robert Penfield, PE

Please execute this Client Authorization for VHB to proceed with the above scope of services at the stated estimated costs. No services will be provided until it is signed and returned to VHB.

Subject to attached terms & conditions

Subject to terms & conditions in our original agreement dated

**VANASSE HANGEN BRUSTLIN, INC. AUTHORIZATION**

**CLIENT AUTHORIZATION (Please sign original and return)**

By: \_\_\_\_\_

By: \_\_\_\_\_

Print: \_\_\_\_\_

Print: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

| Montague FY26 Capital Cycle Requests As of January 27, 2025     |   |                             |                     |                |          |            |            |   |   |
|---|---|-----------------------------|---------------------|----------------|----------|------------|------------|---|---|
| Submitted by  | Project Description   | On Cap Plan                 | Amount Requested    | Quote Received | CIC Vote | Winter STM | Annual ATM | Funding Source  | Notes/Comments  |
| CWF   | Admin building break room/meeting room rehab                  | YES (from original project) | \$48,500            | NO             | 5 Y      | X          |            | \$21,218.40 from unexpended past articles; \$27,281.60 from CWF Retained Earnings |   |
| CWF   | Purchase used mini-excavator                                  | NO                          | \$60,000            | YES            |          |            |            | CWF Retained Earnings   |   |
| CWF   | Portable emergency generator                                  | YES                         | \$30,000            | YES            |          |            |            | CWF Retained Earnings   |   |
| CWF   | Lake Pleasant station generator                               | YES                         | \$37,800            | YES            |          |            |            | CWF Retained Earnings   |   |
| CWF   | Thickened sludge pump replacement (x2)                        | YES                         | \$104,000           | YES            |          |            |            | CWF Capital Stabilization   |   |
| DPW/Selectboard   | Phase 2 - Sewer Collection System Rehabilitation              | YES                         | \$3,000,000         | YES            |          |            |            | Debt - split between Town and CWF   |   |
| DPW   | Replace 2003 International 7400 10 wheel dump truck           | YES                         | \$365,000           | NO             |          |            |            |   |   |
| DPW   | Replace 2002 International 4900 dump truck                    | YES                         | \$325,000           | NO             |          |            |            |   |   |
| DPW   | Replace 2001 Ford E450 camera van                             | YES                         | \$70,000            | NO             |          |            |            |   |   |
| DPW   | Replace 2007 Ford F-150 pickup                                | YES                         | \$65,000            | NO             |          |            |            |   |   |
| DPW   | Oakman St slope stabilization                                 | NO                          | \$60,000            | YES            |          |            |            |   |   |
| DPW   | Meadow Rd guardrail/culvert work                              | NO                          | \$200,000           | NO             |          |            |            | Possible DER Culvert Grant  |   |
| DPW   | Equipment and major repairs (Discretionary)                   | YES                         | \$100,000           | n/a            |          |            |            |   | Amount will be decreased based on fund balance as of 3/1/25 |
| DPW   | Alley and non-Ch90 road paving                                | YES                         | \$30,000            | n/a            |          |            |            |   |   |
| Library   | Millers Falls Library storefront renovation                   | YES                         | \$39,000            | YES            |          |            |            |   |   |
| Parks & Recreation  | Unity Park playground improvements                            | YES                         | \$125,000           | YES            |          |            |            |   |   |
| Selectboard/Planning  | FRTA bus stop improvements (Industrial Blvd/Millers Falls Rd) | NO                          | \$60,000            | YES            |          |            |            | Cannabis Impact Fees  |   |
| Selectboard/Planning  | Montague Center Complete Streets Design                       | NO                          | \$91,200            | YES            |          |            |            |   |   |
| <b>Total</b>  |   |                             | <b>\$4,810,500</b>  |                |          |            |            |   |   |
| <b>Capital Projects in development (not ready for FY26 ATM)</b> |   |                             | <b>On CIP</b>       |                |          |            |            | <b>Current Funding Source Balances (11/13/2024)</b>                               |   |
| Selectboard   | Town Hall Annex buildout                                      |                             | YES                 |                |          |            |            | Town Capital Stab.  | \$2,510,430   |
| GMRSD   | Sheffield Admin repointing/exterior work                      |                             | YES                 |                |          |            |            | CWF Capital Stab.   | \$269,469   |
| GMRSD   | Sheffield Admin window replacements                           |                             | YES                 |                |          |            |            | CWF Retained Earnings   | \$337,395   |
| GMRSD   | Sheffield Admin ADA restrooms                                 |                             | YES                 |                |          |            |            | Cannabis Impact Fees  | \$234,301   |
| GMRSD   | MSBA New Elem School Feasibility Study                        |                             | YES                 |                |          |            |            |   |   |
| CWF   | Secondary and primary clarifiers upgrade                      |                             | YES                 |                |          |            |            | <b>Key Dates for Capital Planning</b>   |   |
| DPW/Selectboard   | Off-road sewer lines relining                                 |                             | YES                 |                |          |            |            | 12/11/2024  | Vote STM articles   |
| DPW/Selectboard   | Swamp Road bridge rehab match                                 |                             | YES                 |                |          |            |            | 1/29/2025   | Finalize Draft CIC report to STM, Vote ATM articles         |
| DPW   | Avenue A traffic signal replacements (2)                      |                             | YES                 |                |          |            |            | 2/12/2025   | Winter Special Town Meeting                                 |
|   |   |                             |                     |                |          |            |            | 2/26/2025   | CIC meets with FinComm to review capital article slate      |
|   |   |                             |                     |                |          |            |            | 3/3/2025  | CIC meets with Selectboard to review capital article slate  |
|   |   |                             |                     |                |          |            |            | 3/12/2025   | CIC capital article report to FinComm / Selectboard         |
|   |   |                             |                     |                |          |            |            | 5/7/2025  | Annual Town Meeting   |
| <b>FY26 Grant funded capital projects</b>                       |   |                             | <b>grant value</b>  | <b>On CIP</b>  |          |            |            |   |   |
| Congressional Earmark   | Avenue A streetscape improvements                             |                             | \$960,000           | YES            |          |            |            |   |   |
| Rural/Small Town Development                                    | Phase 1 - sewer collection system rehab                       |                             | \$500,000           | YES            |          |            |            |   |   |
| Site Readiness  | Strathmore Demo Design  |                             | \$132,700           | YES            |          |            |            |   |   |
| EPA Brownfields & DCR earmark                                   | Strathmore Mill demolition                                    |                             | \$9,920,000         | YES            |          |            |            |   |   |
| Comm Dev Block Grant  | Downtown parking lots (3rd and 4th St)                        |                             | \$125,953           | YES            |          |            |            |   |   |
| DEP GAP II  | CWF fine bubble aerators/diffusers                            |                             | \$150,000           | YES            |          |            |            |   |   |
| USDA Rural Dev.   | Screw Pump Replacement  |                             | \$860,000           | YES            |          |            |            |   |   |
| State Earmark   | COA infrastructure improvements                               |                             | \$50,000            | YES            |          |            |            |   |   |
| Complete Streets  | Montague Center traffic safety improvements                   |                             | \$499,682           | NO             |          |            |            |   |   |
|   |   |                             | <b>\$13,198,335</b> |                |          |            |            |   |   |

Dear Town Meeting Members,

As Chairman of the Capital Improvements Committee (CIC) for the Town of Montague, I am pleased to address you as we consider the capital improvement articles for approval. Over the past decade, and particularly during my tenure as Chairman for the last four years, I have witnessed a significant and positive shift toward proactive measures and interdepartmental cooperation. These efforts have allowed the town to address numerous pressing capital projects while saving Montague taxpayers and ratepayers hundreds of thousands of dollars.

Two departments, in particular, stand out for their resourcefulness and dedication: the Montague Department of Public Works (DPW) and the Montague Clean Water Facility (CWF). Their staff have undertaken complex projects in-house, resulting in substantial cost savings and stabilized ratepayer costs. I want to commend Superintendent Sam Urkiel (and previously Tom Bergeron) of the DPW, as well as Chelsey Little of the CWF, for their exceptional leadership and contributions.

Highlighted projects managed by the CWF include:

- **Industrial Blvd Pump Station Rehab:** Funded by a \$169,000 RST Development Grant, saving over \$330,000 by avoiding external contractor costs.
- **Main Generator and Transfer Switch Replacement:** Supported by \$310,544 from the Enterprise Fund and \$100,000 from the Commonwealth of Massachusetts, with site work by CWF staff saving approximately \$75,000.
- **G St and J St Pump Station Generator Replacements:** Funded by \$95,000 from the Enterprise Fund, with staff efforts saving \$10,000-\$20,000.
- **Septage Receiving Station Upgrades:** Funded by \$264,000 from ARPA, with in-house work saving \$50,000.
- **HVAC Stabilization Repairs:** Managed by the CWF mechanic, manufacturing parts in-house for a cost avoidance of approximately \$50,000.

The DPW has similarly excelled, completing:

- The **24-inch asbestos concrete culvert on S Ferry Rd was replaced** with a precast box culvert, meeting stream crossing standards and ensuring aquatic passage.
- Pavement overlays are being installed on multiple roads, including E Mineral Rd, W Mineral Rd, School St, Lyman St, Grand Ave, and N Park St.
- Sidewalk replacement on Masonic Ave (in progress).

These achievements exemplify the value of the leadership provided by these two departments. Additionally, I would like to acknowledge the department heads and staff who collaborate across departments to minimize costs and the tremendous efforts of Walter Ramsey, Maureen Pollock, Chris Nolan-Zeller, and others in securing tens of millions of dollars in grants to support our town.



The town's department leaders continuously support these initiatives, which reflect a shared commitment to Montague's progress and fiscal responsibility.

Sincerely,

Gregory Garrison  
Chairman, Capital Improvements Committee