

# **MONTAGUE CAPITAL IMPROVEMENTS COMMITTEE**

## **MEETING AGENDA**

### **Town Hall Annex Meeting Room One Avenue A, Turners Falls, MA IN PERSON MEETING**

**Wednesday, November 13, 2024 from 3:30 to 5:00 pm**

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

1. Call to Order and Approve any outstanding meeting minutes: 10/30/24
2. Discussion with Selectboard Member Matthew Lord – Long-term financing strategy for capital projects
3. Discuss anticipated FY26 capital project budget
4. Review and approve FY26 capital planning cycle timeline
5. Initial review and discussion of FY26 non-school capital article requests and Winter Special Town Meeting requests
6. Status review of ongoing major capital projects
7. Topics not anticipated in the 48 hour posting requirements
8. Establish next meeting date(s)
9. Adjournment



## 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: Airport Submitted by: Bryan Camden / Airport Commission

Item/Project Cost: \$ 18,000 Date Prepared: 10/01/2024

Item/Project Title: Repalce oil fired heating system with heat pump system (Mini-Split System)

#### 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 **\$24,000**, or any other amount, for the purpose of << >>, 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.)*

I have spent some time reviewing the HVAC systems around the airport this fall. One items that we have been looking at since the purchase of the Pioneer Aviation property is the hot air furnace located inside of Pioneer Aviation office building. The unit was installed in 2001 and is not really the best fit for our heating needs. While functional, it is oversized for the need and has very limited circulation ducting work. We do have the unit services annually, this year it was identified that we should be looking to re-duct the unit if we would like to increase the efficiency, as well as replace the blower unit assembly (motor is overheating and bearings are gone), and reseal the burner chamber. At this time, we have decided it would not be in the best financial interest to invest \$2,000 to \$2,500 into the unit for the recommended repairs / upgrades due to its age and efficiency. We have looked into other options that would combine a new efficient heating system with air conditioning and have gotten several quotes. Afte talking with 4 contractors, the consensus was to install an external heat pump & and internal air handler (mini-split system). We have looked into the rebates from MassSave, and from what we were told we can might be able to recover roughly 60% of the total cost of the unit and installation. Without any rebates, the quotes ranged from \$17,800 to \$29,500, with Nolan Plumbing being the lowest to date at \$18,800. An additional cost of \$5,000 may be needed to upgrade the existing electrical panel and connect the unit.

**Scoping Questions**

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

	Yes	No
Do you have a written estimate or proposal for the scope of work? <i>If yes, attach the estimate</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there a lease option for this expense?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will this item or project replace a capital asset?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will this create ongoing costs or savings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will this leverage grant or other external funding?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is this request identified on the Capital Improvement Plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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 unit would be installed upon approval by the selected vendor. The vendor will have 30 days from approval to complete the project. Once installed, we will seek funds from MassSave to cover part of the total project cost.***

**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.*

We do have a functioning heating system as of right now, and I do think it will operate for the duration of this heating season without much of an issue. Beyond that I am not as confident that the system will continue to operate correctly. Like we typically do, I am looking at the best course of action and best cost for the future operations. This is considered a preventative maintenance and upkeep item that we should address in the next year or so. We did intend in allocating some funds from the FY26 budget to update the system to be more user friendly, as right now we struggle to keep the pilots' training room, restrooms, and lounge warm in the winter and cool in the summer months, but only if the budget would allow.

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

Critical Importance  
○

Highly Important  
○

Moderately Important  
○



ESTIMATE	#653
ESTIMATE DATE	Sep 10, 2024
SERVICE DATE	Sep 3, 2024
<b>TOTAL</b>	<b>\$18,700.00</b>

## Nolan Plumbing And Hvac

Town of Montague MA  
 Town of Montague  
 10 Aviation Way  
 Montague, MA 01376

### CONTACT US

26 Clark St  
 Greenfield, MA 01301

(413) 522-8620  
 airport@montague-ma.gov

(413) 325-8279  
 nolanplumbingandhvac@gmail.com

## ESTIMATE

Services	amount
<b>HVAC INSTALLATION</b>	<b>\$18,700.00</b>
Samsung max heat system installation 1:1 installation of 1 indoor units: 36000 BTU AIRHANDLER  installation of refrigerant lines, drains and communication wire exposed lines will be covered in guard pressure test and evacuation of system system registration and overview outdoor unit will be placed on ground stand and blocks installation of new supply and return trunk runs installation of standard ceiling registers installation of return air box and filter  <b>EQUIPMENT</b> Samsung CXH36SCB / AC036BXSCCH Outdoor Unit Heat Pump Max Heat CAC 36K BTU  Samsung CNH36ZDK / AC036KNZDCH Indoor Unit CAC Multi-Position Air Handler 36K BTU 208/230 Volt 1 Phase  Samsung MWR-WG00UN Controller Advanced Wired 4-3/4L x 3/4W x 4-3/4H Inch Time Synchronization with DMS2.5 Gateways Dual Set Temperature and Quiet and Sleep Modes  Samsung VHK-210A Electric Heater Medium Chassis 10 Kilowatt	

AHRI #207698067

ESTIMATE INCLUDES  
LABOR  
MATERIALS / EQUIPMENT

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**Total**

**\$18,700.00**

**\*\*NOTE\*\***

\*Estimate is subject to a 10%-15% +/- change due to equipment price changes

\*Financing available upon request\*

\*Rebates MAY BE available from mass save all rebates are not guaranteed and subject to change without notice\*

\*NPH can assist to file rebates but holds no responsibility for rebates or amounts\*

\*Energy Audits are required for most rebates must contact and schedule appointment at 866-527-7283\*

Thank you for doing business with us!



## Annual Town Meeting

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Budget Year  
**FY 26**

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***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: Airport Submitted by: Bryan Camden / Airport Commission

Item/Project Cost: \$95,000.00 Date Prepared: 10/01/2024

Item/Project Title: Pave Parking Lot

#### 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 **\$95,000.00**, or any other amount, for the purpose of << >>, 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.)*

This project is to install 4" of pavement in the existing Pioneer Aviation parking lot. The existing parking lot consists of a mixture of failed pavement, sandy soils, and turf. The recent wet summer season caused significant washout issues for the parking lot, and the lack of any permanent freezing for the last 2 winter seasons created maintenance issues. This project would include the removal of all existing materials, grading for drainage, installation of 10" of hard pack base materials, and 4" of asphalt final paving layers. This project will be overseen by the airport on call engineering firm Gale Associates.

<b>Scoping Questions</b>	<b>Yes</b>	<b>No</b>
<i>Please elaborate in the comments box at bottom of the page</i>		
Do you have a written estimate or proposal for the scope of work? <i>If yes, attach the estimate</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there a lease option for this expense?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will this item or project replace a capital asset?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will this create ongoing costs or savings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will this leverage grant or other external funding?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is this request identified on the Capital Improvement Plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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 majority of the project will be overseen by the airport on call engineering firm Gale Associates.***

**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.*

Like other airport projects, this is part of the long term property upgrades and daily upkeep. Due to years of limited or no maintenance prior to the purchase of the property has created a backlog of projects. While many of the projects can be funded from airport revenues and federal grants, some do not qualify for any external funding. Public areas such as parking lots, walkways, and roadways currently do not qualify for state or federal funding. In order to maintain a safe and usable access parking area for the airport users it is critical that we execute this project before additional damages occur with time.

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

Critical Importance  
○

Highly Important  
○

Moderately Important  
○

**Comments and additional information:**



Pioneer Aviation





# Warner Bros., LLC

PO Box 91, Sunderland, MA 01375 · 413.665.7021

<b>To:</b>	Turners Falls Municipal Airport	<b>Contact:</b>	Bryan Camden
<b>Address:</b>	1 Avenue A Turner's Falls, MA 01376	<b>Phone:</b>	
<b>Project Name:</b>	Hanger Turners Falls AP	<b>Bid Number:</b>	Q-360
<b>Project Location:</b>	10 Aviation Way, Turners Falls, MA	<b>Bid Date:</b>	10/23/2024

Item #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
	Reclaim	1,685.00	SY	\$6.75	\$11,373.75
170.	FINE GRADING AND COMPACTING	1,635.00	SY	\$3.95	\$6,458.25
450.	GRAVEL FOR SURFACING	68.00	CY	\$77.75	\$5,287.00
452.	ASPHALT EMULSION FOR TACK COAT	85.00	GAL	\$32.50	\$2,762.50
1635 +/- SY 1.5"	SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)	140.00	TON	\$199.00	\$27,860.00
1635 +/- SY 2.5"	SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0)	230.00	TON	\$169.00	\$38,870.00
<b>Total Bid Price:</b>					<b><u>\$92,611.50</u></b>

- Notes:**
- Please find the attached Standard Conditions document. By signing below, buyer acknowledges and agrees that it has also read and approved Contractor's Standard Conditions, as required included parts of this contract. This contract constitutes the entire agreement between the Contractor and Buyer and may only be modified by a written amendment executed by both parties. This proposal is accepted upon receipt of Buyer's signature, and the Contract is effective as of the date of Contractor's signature tendered to Buyer. Executed by both parties as a sealed instrument.
  - Prices are based upon current liquid asphalt costs, which are not guaranteed by suppliers and, therefore, subject to sudden adjustment during the term of this agreement. The base cost (index) of asphalt for this quote is \$ 560.00 per ton.
  - Prices are based on two mobilization(s). Additional mobilizations which become necessary will be subject to a charge of \$ 3500.00 each.
  - All fees, permits, and engineering will be the responsibility of the buyer unless otherwise noted above. No bonds will be supplied. Above quantities are estimates only and are subject to adjustment determined by Field Measure unless otherwise noted above.
  - Center Line layout & Slope Layout done By general Contractor.
    - Day work quoted in price.
    - All traffic control shall be the responsibility of the General Contractor
    - General Contractor to clean, prep, cover and mask existing surfaces as necessary
    - Temporary Ramps and Removal of Temporary Pavement are not included in price
    - CL Toms and Temp Striping As required By GC
    - ASC To reserve the rights to subcontract Items as needed.
    - QC testing at the plant and the street is included in our pricing. Any Bonus or deduct attributable to the material is to be remitted to All States Construction Based on the installed bid price.
  - Survey control points as required to layout project to be supplied by others. All staking, layout, and establishment of grades to be done by others and clearly marked prior to work. Warner Bros., LLC will not accept responsibility for improper engineering and/ or areas where no grades were indicated prior to work.
  - All Prep for Paving including sweeping and saw cutting are excluded unless stated otherwise herein.
  - Gravel is to be placed by others and fine graded to the required grade, all compaction of sub-base and gravel is to be done by others prior to paving, any and all testing/ in place density tests are to be done by others. Unless specifically included in quoted scope of work. Fine Grading will be from 1" +/- if quoted
  - Projects that are Tax exempt buyer will be responsible to submit exempt certificate with signed contract.
  - All traffic and safety control by others unless stated Herein
  - This is a unit price quotation with quantities to be verified upon completion. Contract amount will be determined by extending verified quantities at quoted unit prices. Customer is responsible to verify all quantities in this proposal.
  - No Credit card payment is allowed unless stated Herein. Approved Credit Card payment will incur a 5% fee.
  - **PLEASE SIGN AND RETURN a copy of this quote by E-Mail, Fax (413-674-2021) to Warner Bros., LLC, if you agree with price, terms, and all conditions, so we may assign a job # to the project and schedule your work. (Work will NOT be scheduled until the quote is signed )**
  - This quote is valid if accepted within 30 days.
  - Loam & Seed by others
  - Line Striping by others
  - Paving after October 31st or when Ambient Temperatures are below 40 degrees will be on the Direction of Owner/ Buyer. Warner Bros., LLC will not accept responsibility for work affected by Temperature. Warner Bros., LLC may require a signed waiver to proceed.

- By others Line painting, Loam & Seed, Tree protection, Sediment Control, New Castings If needed

**Payment Terms:**

Payment terms are net 30 days, no retainage is permitted by Buyer, unless stated above, and subject to credit approval. Contractor may set off past due balances against any amount due or which becomes due to the Buyer from Contractor or any of its affiliates or subsidiaries. Balances not paid within above terms are subject to default interest at 1.5% monthly percentage rate. In such event, Buyer agrees to reimburse Contractor all collection costs including reasonable attorney's fees and court costs. Contractor reserves all rights to file lawfully permitted liens and seek other lawful remedies.

<p><b>ACCEPTED:</b> The above prices, specifications and conditions are satisfactory and hereby accepted.</p> <p><b>Buyer:</b> _____</p> <p><b>Signature:</b> _____</p> <p><b>Date of Acceptance:</b> _____</p>	<p><b>CONFIRMED:</b> <b>WB LLC</b></p> <p style="text-align: right;"><i>James Houle</i></p> <p><b>Authorized Signature:</b></p> <p><b>Estimator:</b> James Houle jimh@asmg.com</p>
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# Annual Town Meeting

## SPECIAL ARTICLE REQUEST – CAPITAL EXPENSE

Budget Year  
**FY 26**

*This form is intended for use with capital article submissions ≥ \$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: CWF Submitted by: Chelsey Little

Item/Project Cost: \$48,500 Date Prepared: 10/28/2024

Item/Project Title: Conference Room/Break Room Renovation (Main Generator Project Phase-Two)

### 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 **\$48,500**, or any other amount, for the purpose of **conducting a conference room and breakroom renovation**, 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.)*

#### Breakroom

Mini-Split:.....	\$5,000
Drop Ceiling:.....	\$3,000
Exterior Wall Repairs (from old louver and double door):.....	\$5,000
New Exterior Insulated Door:.....	\$2,500
Breakroom Kitchen:.....	\$11,500
Tile Floors:.....	\$2,500
Asbestos Removal:.....	\$10,000
<b>Total:.....</b>	<b>\$39,500</b>

#### Conference Room

Conference Table ~120"x48":.....	\$3,000
Chairs x10:.....	\$1,500
File Cabinets x5:.....	\$1800
Paper Plans/Maps Cabinet:.....	\$300
<b>Total:.....</b>	<b>\$6,600</b>

Contingency 5%:.....\$2,305

Grand Total:.....\$48,405 → Rounded to **\$48,500**

**Scoping Questions**

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

**Yes**

**No**

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?

(From Original Project)

**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 CWF will oversee procurement and execution of the project.

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

This project is considered phase two of the Main Generator replacement project, where after the main generator has been removed from the room in the Administration Building, the room will be converted into a useable space for staff.

Converting the old generator room would alleviate two issues by:

- creating a larger updated staff breakroom space
- provide a much-needed conference/meeting room for the facility (Staff currently shares the breakroom as an impromptu meeting room space)

As the old generator room has a larger footprint than the current break room, it will be turned into the new staff breakroom. The old staff breakroom will be converted into a conference/meeting room space with additional file storage.

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

Critical Importance

0

Highly Important



Moderately Important

0

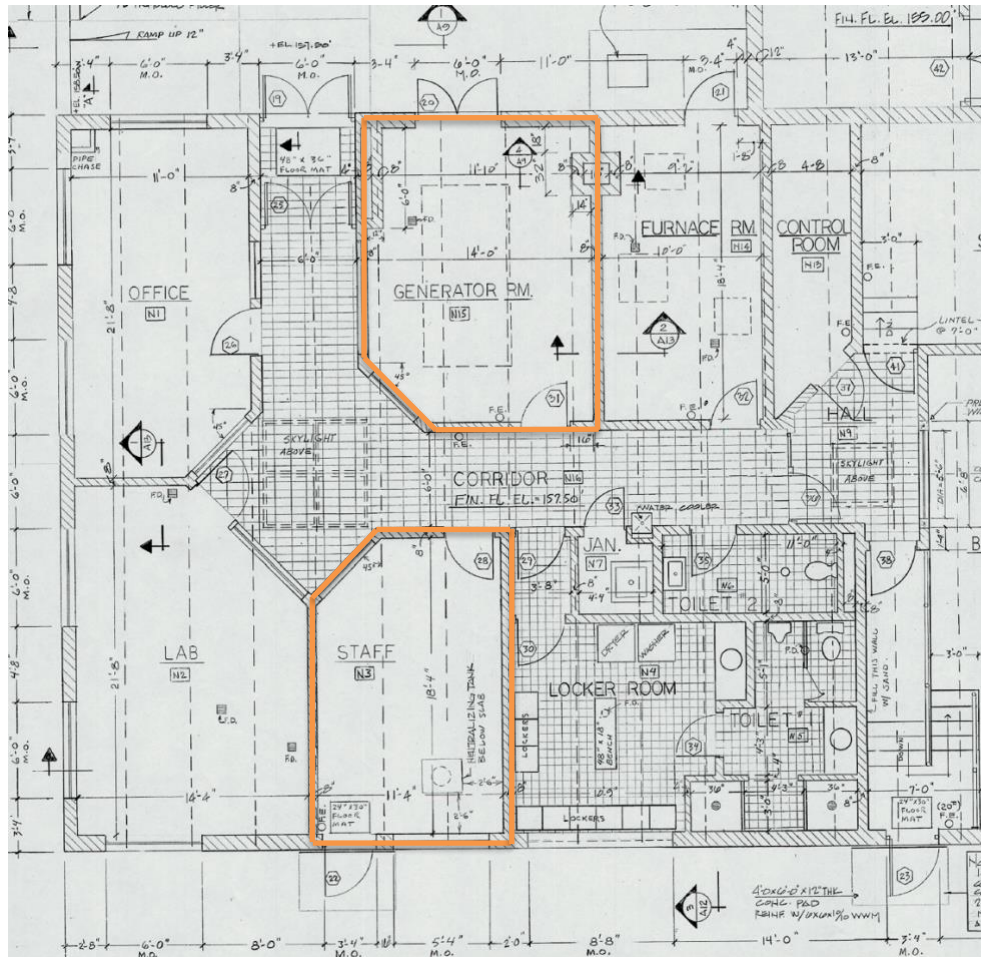
**Comments and additional information:**

Request to fund through retained earnings.

**Supporting Photos/Diagrams/Documents**

**Generator Room → New Break Room**





**Staff Breakroom → Conference Room**



Special Article Request: Capital Expense (rev 9.26.24)



# Annual Town Meeting

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Budget Year  
**FY 26**

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***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: CWF Submitted by: Chelsey Little

Item/Project Cost: \$60,000 Date Prepared: 10/28/2024

Item/Project Title: Excavator (used)

### 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 **procuring an excavator** 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.)*

Mini/Small Excavator (used):.....\$60,000

**Total:.....\$60,000**

**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 CWF will oversee procurement and execution of the project.

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

The CWF performs many on-site and off-site routine updates and special projects requiring the use of an excavator. The facility is also responsible for managing its own groundskeeping, excavation, and lifting work when necessary. The CWF has borrowed other municipal excavators and spent over \$25,000 on the rental of a small excavator to perform site work on multiple projects for calendar year 2024, and would rather invest that money in the future into purchasing a used excavator to have on site consistently.

NOTE: The facility is not looking to purchase a brand-new excavator, as a used/low hour machine will suffice for the required applications.

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

Critical Importance

Highly Important

Moderately Important

0

0



**Comments and additional information:**

Request to fund through retained earnings.



# Supporting Photos/Diagrams/Documents

## Example of Requested Excavator

### 2017 VOLVO ECR88D



USD ▾ **USD \$57,500**

Machine Location: [60 State Rd, Phillipston, Massachusetts 01331](#)

#### Seller Information

**BROOKSIDE EQUIPMENT** (978) 249-4600

Contact: Sales

Phillipston, Massachusetts  
01331



[Hide Thumbnails](#)

#### Description

24" bucket, hydraulic thumb, cab w/ a/c, 7'7" blade, 4 cyl Volvo turbo, roadliner pads, swing boom, 21k lbs



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

Department: CWF Submitted by: Chelsey Little

Item/Project Cost: \$30,000 Date Prepared: 10/28/2024

Item/Project Title: Pump Station Portable Generator Replacement

### 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 **\$30,000**, or any other amount, for the purpose of **replacing the pump station portable generator**, 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.)*

30 kW 3-Phase Portable Generator:.....\$30,000

**Total:.....\$30,000**

**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 CWF will oversee procurement and execution of the project.

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

The current back-up portable generator is circa 1981 and is overdue for replacement. A recent inspection performed by the service technician, PowerGen Technologies LLC, has recommended replacement as parts on the 1981 generators have become obsolete and cannot be replaced if the generators fail. DEP/MGL also requires operable and serviceable generators at all wastewater pumping stations in order to prevent a backup and discharge of untreated sewage during power outages. The portable generator is a redundant back-up power supply to any out of service fixed generators located at any of the eight (8) pump stations.

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

Critical Importance

Highly Important

Moderately Important

0



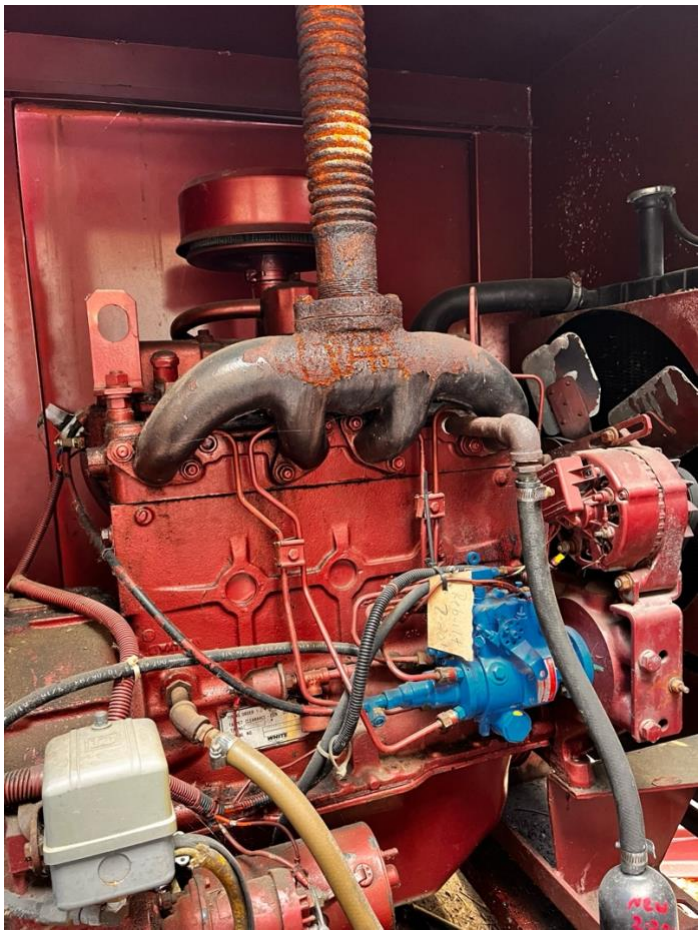
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**Comments and additional information:**

Request to fund through retained earnings.

# Supporting Photos/Diagrams/Documents

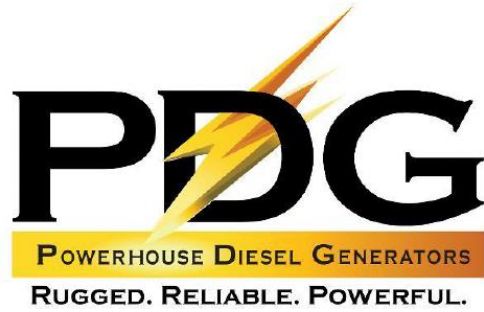
## Current Portable Generator



**Quotation**

**Powerhouse Diesel Generators**

1616 JAMES P RODGERS DR  
 VALDOSTA, GA 31601-7094  
 PHONE: (229)-671-9171  
 WWW.PDGPOWER.COM



**Estimate**

Order #	Date
<b>S15440</b>	10/02/2024

Bill To:
POWERGEN TECHNOLOGIES 44 Hopyard Rd Stafford Springs, CT 06076

Ship To:
POWERGEN TECHNOLOGIES 44 Hopyard Rd Stafford Springs, CT 06076

Customer: POWERGEN TECHNOLOGIES

Contact: POWERGEN TECHNOLOGIES

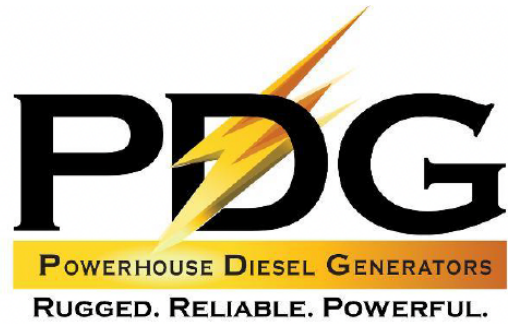
Sales Rep	Carrier	Ship Service	Estimated Tax
Elias Serrano	DELIVER		\$ 0.00

Description	Unit Price	Qty Ordered	Total Price
30 KW 3 PHASE OPEN FRAME GENERATOR - EPA CERTIFIED FOR EMERGENCY STANDBY USE PERKINS 404D-22TG Turbo After Cooled Diesel Engine - 12 Volt System - 1000 Amp Marine Grade Battery - Low Oil Pressure & High Coolant Temp Shutdowns are Standard - CK-4 Spec 15-40 Diesel Oil & 50/50 Engine Coolant Included - Remote Oil Drain Valve Installed with Hose - Industrial Grade Aluminized Exhaust Muffler - Assembled, Wired, & Mounted on Steel Cross Members with Anti-Vibration Motor Mounts	\$12,068.00	1 ea	\$ 12,068.00
THREE PHASE - 208 VOLT	\$0.00	1 ea	\$ 0.00
MAIN DISCONNECT BREAKER - 100 Amp 3 Pole 208 Volt NEMA 1 Installed, Wired	\$389.00	1 ea	\$ 389.00
ComAP AMF5	\$495.00	1 ea	\$ 495.00
REMOTE EMERGENCY STOP BUTTON	\$39.99	1 ea	\$ 39.99
COLD WEATHER PACKAGE 12V 750W - MOBILE Includes: •ComAp 12V Battery InteliCharger •Block Heater 750W •Noco AC Port Receptacle	\$648.00	1 ea	\$ 648.00
ENCLOSURE - LEVEL 1 ACOUSTIC - Industrial Grade Powder Coated Aluminum Enclosure with Steel Skid - UL-94, MVSS 302, & HF-1 Certified, Foil Backed, Level 1 Sound Attenuating Acoustic Foam Installed. - Large Access Doors with Locks for Security and Ease of Maintenance - All Stainless Steel Latches and Hardware - Includes Locking Door for Key Start or Auto Controller	\$3,295.00	1 ea	\$ 3,295.00

A1

**Powerhouse Diesel Generators**

1616 JAMES P RODGERS DR  
 VALDOSTA, GA 31601-7094  
 PHONE: (229)-671-9171  
 WWW.PDGPOWER.COM



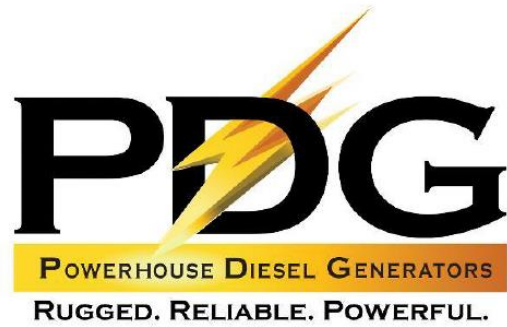
**Estimate**

Order #	Date
S15440	10/02/2024

Description	Unit Price	Qty Ordered	Total Price
<b>RODENT GUARD PACKAGE</b> • Safeguards Generator from Entry and Damage by Rodents, Snakes, and Birds • Protects Intake & Exhaust Ports, Fork Pockets, and Any Points of Entry in the Enclosure or Skid	\$219.00	1 ea	\$ 219.00
<b>DOT FUEL TANK - 50 GALLON SINGLE WALL</b> Sub-Base Fuel Tank Manufactured to DOT Compliant Standards - Industrial Powder Coated 11 Gauge Steel - Reinforced with Internal Structural Supports & Baffles - Forged UL Compliant Fittings - (Pickup, Return, Fill, Vent)	\$2,635.00	1 ea	\$ 2,635.00
Includes 1 quart of DIESEL MATE™ ALL SEASONS ADDITIVE (Treats 250 Gallons)			
External Coolant Drain- Flanged to Pass Through Frame or Skid	\$249.00	1 ea	\$ 249.00
External Oil Drain- Flanged to Pass Through Frame or Skid	\$249.00	1 ea	\$ 249.00
<b>PDG HD GENSET TRAILER - SINGLE AXLE with BRAKES</b> D.O.T. CERTIFIED - Single 5,200# Torsion Axle with Electric Brakes - 2" Ball Receiver - Drop Leg Tongue Jack - 15" Wheels & Tires - Fenders, License Plate Mount, & DOT Compliant Lights - Includes Certificate of Origin / Title  GVWR: 5,200#	\$5,949.00	1 ea	\$ 5,949.00
<b>ESTIMATED OUTBOUND FREIGHT CHARGES - HOTSHOT</b> Shipping Charges are ESTIMATED at Time of Quotation and May be Higher at Time of Shipping. ACTUAL SHIPPING CHARGE will be Finalized at Time of Shipment. Any Difference will be added to Final Invoice.	\$1,595.00	1 ea	\$ 1,595.00
THIS IS A HOTSHOT FREIGHT DELIVERY * YOU MUST HAVE PROPER EQUIPMENT TO SAFELY REMOVE THE GENERATOR FROM THE DELIVERY VEHICLE OR TRAILER AT THE TIME OF ARRIVAL.			
<b>WARRANTY KUBOTA</b> KUBOTA ENGINE WARRANTY 3 YEARS / 3,000 HOURS CONTACT SALES CONSULTANT FOR MORE DETAILS	\$0.00	1 hr	\$ 0.00

**Powerhouse Diesel Generators**

1616 JAMES P RODGERS DR  
 VALDOSTA, GA 31601-7094  
 PHONE: (229)-671-9171  
 WWW.PDGPPOWER.COM



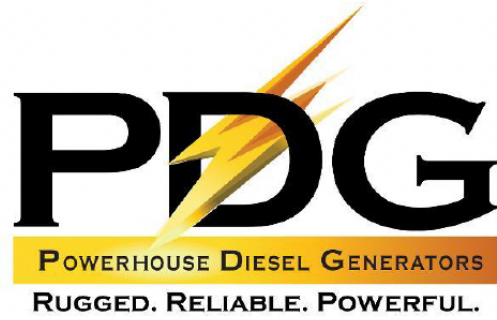
**Estimate**

Order #	Date
S15440	10/02/2024

Description	Unit Price	Qty Ordered	Total Price
PDG EXTRANEIOUS COMPONENTS WARRANTY PDG Industrial - Extraneous Components Warranty PDG warrants the following components for a period of one year from date of delivery to original owner: Enclosures, Fuel Tanks, Meters & Gauges, Timers, Block Heaters, and Auto-Controllers.  This warranty is handled by Powerhouse Diesel Generators LEAD TIME ESTIMATES ARE CALCULATED TO PROJECT BUILD TIME AND APPROXIMATE SHIP DATE. LEAD TIMES DO NOT INCLUDE TRANSIT/DELIVERY TIME. LEAD TIME STARTS UPON RECEIPT OF PAYMENT. Lead time estimates are not guaranteed, and are sometimes at the mercy of our supply chain as well as circumstances beyond our control. Feel free to contact us for a more accurate assessment of production time. -Quotes Are Valid For 30 Days-  13 - 15 WEEKS ESTIMATED PRODUCTION LEAD TIME.	\$0.00	1 hr	\$ 0.00
COVID STATEMENT We have all seen many changes in the status of the coronavirus situation in the past months, weeks, and days. Even though the outbreak is abating, it can and does occasionally have an impact on our supply chains and shipping. PDG, Inc, however, will do everything possible to meet the estimated completion times for your generator.  PDG, Inc will continue to communicate regularly with our suppliers and shippers, to closely monitor all developments and keep you informed of any changes that may impact the delivery of our products. Please understand that problems and delays with supply, production, or shipping related to COVID are beyond our control.  Thank you for your patience in these trying times.  The Staff of Powerhouse Diesel Generators, Inc.	\$0.00	1 hr	\$ 0.00
TERMS: A 50% deposit is required to begin processing your order. Balance is Due 7 Business Days Before Shipping.	\$0.00	1 ea	\$ 0.00

**Powerhouse Diesel Generators**

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VALDOSTA, GA 31601-7094  
PHONE: (229)-671-9171  
WWW.PDGPPOWER.COM



**Estimate**

Order #	Date
S15440	10/02/2024

<b>Subtotal:</b>	<b>\$27,830.99</b>
<b>AVATAX:</b>	<b>\$0.00</b>
<b>Total:</b>	<b>\$27,830.99</b>
<b>Paid:</b>	<b>\$0.00</b>
<b>Balance Due:</b>	<b>\$27,830.99</b>

RECEIPT OF YOUR PAYMENT CONSTITUTES ACCEPTANCE OF THE ITEMS, SPECIFICATIONS, AND TERMS AS DESCRIBED ON THIS INVOICE. . PDG, Inc. does not offer refunds on custom CAD design fees, custom fabrication, powder coating, or custom items that are requested by th  
Approval: \_\_\_\_\_ Date: \_\_\_\_\_





# 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: CWF Submitted by: Chelsey Little

Item/Project Cost: \$37,800 Date Prepared: 10/28/2024

Item/Project Title: Pump Station Generator Replacement

### 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 **\$37,800**, or any other amount, for the purpose of **replacing a pump station generator**, 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.)*

45 kW 3-Phase Generator:.....	\$25,000
Electrical Contractor:.....	\$6,000
Site Work/Demolition:.....	\$5,000
Contingency 5%:.....	\$1,800
<b>Total:.....</b>	<b>\$37,800</b>

**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 CWF will oversee procurement and execution of the project.

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

As part of the planned continuation of the nine (9) pump station generator replacements, this generator serves the Lake Pleasant Rd pump station in Lake Pleasant and is circa 1981. The current generator at this station was originally a portable generator that was made semi-permanent due to a previously failed stationary generator.

An inspection performed by the service technician, PowerGen Technologies LLC, has recommended replacement as parts on the 1981 generators have become obsolete and cannot be replaced if the generators fail. DEP/MGL also requires operable and serviceable generators at all wastewater pumping stations in order to prevent a backup and discharge of untreated sewage during power outages.

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

Critical Importance

Highly Important

Moderately Important



0

0

**Comments and additional information:**

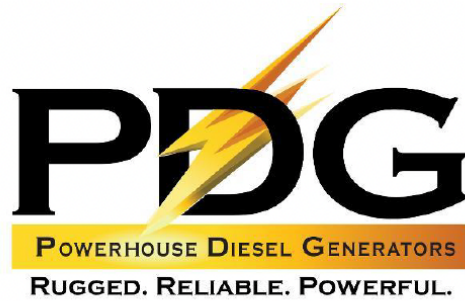
Request to fund through retained earnings.

# Supporting Photos/Diagrams/Documents

## Quotation

### Powerhouse Diesel Generators

1616 JAMES P RODGERS DR  
 VALDOSTA, GA 31601-7094  
 PHONE: (229)-671-9171  
 WWW.PDGPPOWER.COM



## Estimate

Order #	Date
S15439	10/02/2024

Bill To:
POWERGEN TECHNOLOGIES 44 Hopyard Rd Stafford Springs, CT 06076

Ship To:
POWERGEN TECHNOLOGIES 44 Hopyard Rd Stafford Springs, CT 06076

Customer: POWERGEN TECHNOLOGIES

Contact: POWERGEN TECHNOLOGIES

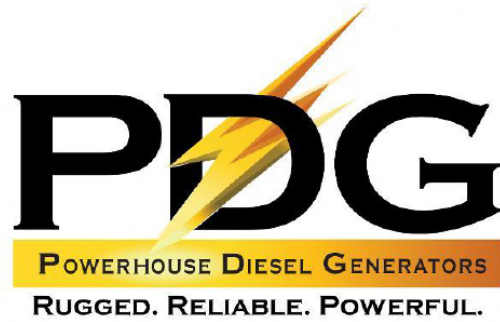
Sales Rep	Carrier	Ship Service	Estimated Tax
Elias Serrano	DELIVER		\$ 0.00

Description	Unit Price	Qty Ordered	Total Price
45 KW 3 PHASE OPEN FRAME GENERATOR - EPA CERTIFIED FOR EMERGENCY STANDBY USE PERKINS 1104D-44TG1 Turbo Diesel Engine - Remote Oil Drain Valve Installed with Hose - CK-4 Spec 15-40 Diesel Oil & 50/50 Engine Coolant Included - 1000 Amp Marine Grade Starting Battery - Residential Grade Aluminized Automotive Muffler - Assembled, Wired, & Mounted on a Steel Skid with Anti-Vibration Motor Mounts - Low Oil Pressure & High Coolant Temp Shutdowns are Standard	\$14,489.00	1 ea	\$ 14,489.00
THREE PHASE - 208 VOLT	\$0.00	1 ea	\$ 0.00
MAIN DISCONNECT BREAKER - 150 Amp 3 Pole 208 Volt NEMA 1	\$935.50	1 ea	\$ 935.50
ComAP AMF5	\$495.00	1 ea	\$ 495.00
REMOTE EMERGENCY STOP BUTTON	\$39.99	1 ea	\$ 39.99
COLD WEATHER PACKAGE 12V 750W - STATIONARY Includes: •ComAp 12V Battery IntelliCharger •Block Heater 750W •20A GFCI Receptacle w/ Nema 3R Cover	\$648.00	1 ea	\$ 648.00
ENCLOSURE - LEVEL 1 ACOUSTIC - Industrial Grade Powder Coated Aluminum Enclosure with Steel Skid - UL-94, MVSS 302, & HF-1 Certified, Foil Backed, Level 1 Sound Attenuating Acoustic Foam Installed. - Large Access Doors with Locks for Security and Ease of Maintenance - All Stainless Steel Latches and Hardware - Includes Locking Door for Key Start or Auto Controller	\$3,489.00	1 ea	\$ 3,489.00

A2

**Powerhouse Diesel Generators**

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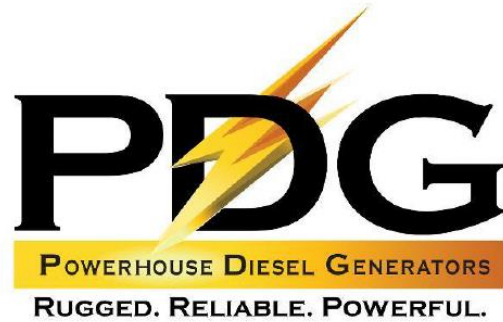
**Estimate**

Order #	Date
S15439	10/02/2024

Description	Unit Price	Qty Ordered	Total Price
RODENT GUARD PACKAGE • Safeguards Generator from Entry and Damage by Rodents, Snakes, and Birds • Protects Intake & Exhaust Ports, Fork Pockets, and Any Points of Entry in the Enclosure or Skid	\$219.00	1 ea	\$ 219.00
FUEL TANK - 50 GALLON DOUBLE WALL Powder Coated 11 Gauge Steel Reinforced with Internal Structural Supports & Baffles Forged UL Compliant Fittings	\$2,389.00	1 ea	\$ 2,389.00
ESTIMATED OUTBOUND FREIGHT CHARGES - HOTSHOT Shipping Charges are ESTIMATED at Time of Quotation and May be Higher at Time of Shipping. ACTUAL SHIPPING CHARGE will be Finalized at Time of Shipment. Any Difference will be added to Final Invoice.  THIS IS A HOTSHOT FREIGHT DELIVERY * YOU MUST HAVE PROPER EQUIPMENT TO SAFELY REMOVE THE GENERATOR FROM THE DELIVERY VEHICLE OR TRAILER AT THE TIME OF ARRIVAL.  DEDICATED HOT SHOT DELIVERY	\$1,395.00	1 ea	\$ 1,395.00
PERKINS ENGINE WARRANTY - STANDBY PERKINS STANDBY ENGINE WARRANTY 3 YEARS UP TO 500 HOURS PER YEAR CONTACT SALES CONSULTANT FOR MORE DETAILS	\$0.00	1 ea	\$ 0.00
PDG EXTRANEIOUS COMPONENTS WARRANTY PDG Industrial - Extraneous Components Warranty PDG warrants the following components for a period of one year from date of delivery to original owner: Enclosures, Fuel Tanks, Meters & Gauges, Timers, Block Heaters, and Auto-Controllers.  This warranty is handled by Powerhouse Diesel Generators	\$0.00	1 hr	\$ 0.00

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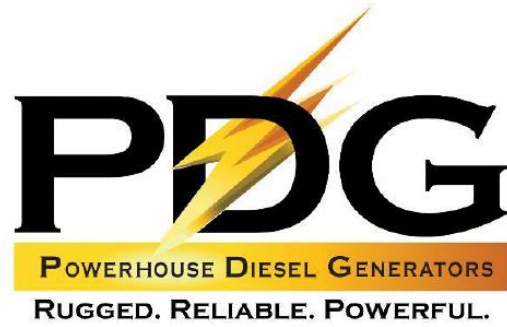
**Estimate**

Order #	Date
S15439	10/02/2024

Description	Unit Price	Qty Ordered	Total Price
<p>LEAD TIME ESTIMATES ARE CALCULATED TO PROJECT BUILD TIME AND APPROXIMATE SHIP DATE. LEAD TIMES DO NOT INCLUDE TRANSIT/DELIVERY TIME. LEAD TIME STARTS UPON RECEIPT OF PAYMENT.</p> <p>Lead time estimates are not guaranteed, and are sometimes at the mercy of our supply chain as well as circumstances beyond our control. Feel free to contact us for a more accurate assessment of production time.</p> <p>-Quotes Are Valid For 30 Days-</p> <p>12 - 14 WEEKS ESTIMATED PRODUCTION LEAD TIME.</p> <p>COVID STATEMENT</p> <p>We have all seen many changes in the status of the coronavirus situation in the past months, weeks, and days. Even though the outbreak is abating, it can and does occasionally have an impact on our supply chains and shipping. PDG, Inc, however, will do everything possible to meet the estimated completion times for your generator.</p> <p>PDG, Inc will continue to communicate regularly with our suppliers and shippers, to closely monitor all developments and keep you informed of any changes that may impact the delivery of our products.</p> <p>Please understand that problems and delays with supply, production, or shipping related to COVID are beyond our control.</p> <p>Thank you for your patience in these trying times.</p> <p>The Staff of Powerhouse Diesel Generators, Inc.</p>	\$0.00	1 hr	\$ 0.00
TERMS: A 50% deposit is required to begin processing your order. Balance is Due 7 Business Days Before Shipping.	\$0.00	1 ea	\$ 0.00

**Powerhouse Diesel Generators**

1616 JAMES P RODGERS DR  
VALDOSTA, GA 31601-7094  
PHONE: (229)-671-9171  
WWW.PDGPPOWER.COM



**Estimate**

Order #	Date
S15439	10/02/2024

<b>Subtotal:</b>	<b>\$24,099.49</b>
<b>AVATAX:</b>	<b>\$0.00</b>
<b>Total:</b>	<b>\$24,099.49</b>
<b>Paid:</b>	<b>\$0.00</b>
<b>Balance Due:</b>	<b>\$24,099.49</b>

RECEIPT OF YOUR PAYMENT CONSTITUTES ACCEPTANCE OF THE ITEMS, SPECIFICATIONS, AND TERMS AS DESCRIBED ON THIS INVOICE. . PDG, Inc. does not offer refunds on custom CAD design fees, custom fabrication, powder coating, or custom items that are requested by th  
Approval:\_\_\_\_\_ Date:\_\_\_\_\_



# Annual Town Meeting

## SPECIAL ARTICLE REQUEST – CAPITAL EXPENSE

Budget Year  
**FY 26**

*This form is intended for use with capital article submissions ≥ \$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: CWF Submitted by: Chelsey Little

Item/Project Cost: \$104,000 Date Prepared: 10/28/2024

Item/Project Title: Thickened Sludge Pumps Replacement x2

### 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 **\$104,000**, or any other amount, for the purpose of **replacing two (2) thickened sludge pumps** 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.)*

(2) Thickened Sludge Pumps/Rotary Press Feed Pumps (20-100GPM):... \$81,045 → rounded up to \$82,000

-includes: sensors, gauges, pressure switches, start-up/training, transportation,  
and recommended spare parts

Stainless Steel Piping and Main Headers Replacement:.....\$10,000

Updated Controls: .....\$7,000

Contingency 5%:.....\$4902.25 → rounded up to \$5,000

**Total:.....\$104,000**

### 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?  Yes  No

*If yes, attach the estimate*

Is there a lease option for this expense?  Yes  No

Will this item or project replace a capital asset?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will this create ongoing costs or savings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will this leverage grant or other external funding?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is this request identified on the Capital Improvement Plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**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 CWF will oversee procurement and execution of the project.

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

The CWF has historically utilized three (3) thickened sludge pumps to pump sludge from the gravity thickener and two (2) sludge holding tanks to feed liquid sludge to the press for dewatering, and/or feed liquid sludge to a 9,000-gallon tanker for disposal. Since the loss of the papermills, the facility no longer needs to utilize all three (3) pumps, needing only the use of two (2). (Redundancy is required as per MGL)

The old pumps are piston style pumps circa 1981 (drives from 2010) and are an outdated and are an extremely dangerous pump style, having exterior rotating parts which pose a death or serious injury safety risk to staff. (Mentioned in a recent Dept of Labor Standards/OSHA inspection February 2024.) This old-style pump also requires higher level of maintenance requirements as opposed to several other pump styles due to its wear parts. The typical life expectancy of a piston pump is 10-20 years, depending on how well it has been maintained and how many hours in operation.

The update will replace two (2) of the pumps with an appropriate pump style, replace some of the deteriorated piping on both the inlet and discharge sides of the pump with stainless steel, and update controls. CWF staff will procure the equipment and perform the demolition and installation of the pumps in-house. The third pump will be completely removed from service and disposed of as per Town Policy/MGL.

If the pumps are not replaced, they face imminent failure, which would prevent the facility from removing sludge/solids, which will in turn cause a significant non-compliance with permitted solids removal requirements with EPA/MA DEP.

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

Critical Importance



Highly Important



Moderately Important





**Comments and additional information:**

Request to fund through retained earnings.

**Supporting Photos/Diagrams/Documents**

**Current Piston Pumps**



Quote for Diaphragm Pump Style Replacement (more expensive type of pump for application)



The World Leader in Free-Disc Pumping Technology



To: Town of Montague, MA	Date: 09/05/2024	Quote No: 24137 Budget
	Project: Montague, MA WWTP	
	Quoted by: Preston Campbell	

Qty	Description	Unit Price	Total Price
	Application: Rotary Press Feed Pump, ~ 2 – 5% solids Duty: 20 – 100GPM @ 10 – 15ft TDH Suction: Flooded on 6" line, approximately 200ft long Discharge: 6" line, 20ft vertical static		
2	6" Model 6DDSX76CNU-MK2 Penn Valley Double Disc Pump™ unit: <ul style="list-style-type: none"> <li>• 6" ASA/ANSI 150# flanged suction and discharge connections</li> <li>• Cast iron housing and neoprene elastomers</li> <li>• Maintain-in-place hinged housing design for ease of maintenance</li> <li>• Two-piece swan neck design with full port rigid check valve</li> <li>• 7.5HP, 1160RPM 230-460/3/60 Severe duty, inverter ready motor</li> <li>• 140RPM Nominal pump speed achieved with V-belt and pulley drive</li> <li>• Suction and Discharge pulsation dampeners</li> <li>• 304SS Welded base with OSHA approved guards and covers</li> <li>• Pump and dampeners coated with industrial primer and topcoat</li> <li>• Per drawing PVD769 Side motor mount</li> </ul>	\$34,950.00	\$69,900.00
2	Model PVP420V Suction vacuum sensor and gauge assembly consisting of: 1" NPT SS316 sensor with EPDM sleeve and 4" (30" Hg-30psi) SS gauge. Mounts to top of dampener to provide indication of line pressure.	\$760.00	\$1,520.00
2	Model PVP420PS Discharge pressure switch assembly consisting of: 1" NPT SS316 sensor w/ EPDM sleeve, NEMA 4X adjustable switch and 4" (0-100psi) SS gauge. Mounts to top of dampener to protect against over pressurization. (Must be wired to pump controls.)	\$1,405.00	\$2,810.00
2	Days of start-up and training services (one-trip), provided by NE3	\$1,300.00	\$2,600.00
1	Estimated transport to site. Estimated weight of shipment is 4,000lbs.	\$725.00	\$725.00
	<b>Optional:</b>		
1	Set of recommended spare parts to include: two (2) discs, two (2) trunnions, one (1) check valve and one (1) set of gaskets	\$3,490.00	\$3,490.00

**Commercial Information:**

1. Shipment is 12 - 14 weeks after receipt of purchase order or approved submittals.
2. Submittals, if required, are 2 – 3 weeks after receipt of purchase order.
3. Freight terms are F.O.B. Factory, Warrington, PA with freight allowed to jobsite.
4. Terms are Net 30 days after receipt of invoice.
5. Quotation is valid for 60 days from date of issue.
6. Warranty is two (2) years from date of shipment for manufacturer's defects in materials and workmanship.

**The following items have not been included:**

- Installation
- Foundations, anchor bolts, grouting and foundation design
- Motor starters, Variable Frequency Drives (VFD's) or Controls



## 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: DPW / Selectboard Submitted by: Chris Nolan-Zeller, Asst. Town Admin.

Item/Project Cost: \$ 3,000,000 Date Prepared: 10/31/2024

Item/Project Title: Phase 2 – Sewer Collection System Rehabilitation

#### 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 **\$3,000,000**, or any other amount, for the purpose of Priority 1 and Priority 2 work identified in the Town's Long-Term Control Plan (LTCP), updated in 2022, 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.)*

As part of the Town's combined sewer overflow (CSO) LTCP update, the Town contracted with the engineering firm Wright-Pierce to develop short and long-term implementation plans for improving the maintenance, operation, and condition of its wastewater collection system. The requested funding is needed to complete the work that has been designated as either Priority 1 or Priority 2 in need of completion. Completing this work within a 10-year period is a condition of the Town's National Pollutant Discharge Elimination System (NPDES) permit, meaning that implementing this rehabilitation is the Town's legal obligation.

This work includes the rehabilitation of 15 pipes (4,867 linear ft.) in Turners Falls, as well as 22 pipes (4,592 linear ft.) in Millers Falls, in addition to the rehabilitation of 74 manholes in Millers Falls. Phase 2 is a continuation of the ongoing Phase 1, which is expected to be completed by Spring 2025, and includes the rehabilitation of 53 manholes. Phase 1 has been funded through a \$500,000 Rural / Small Town Development Grant from the state.

**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 for engineering services. Construction to be procured through bidding process in accordance with MGL c.30 §39M. Initial procurement to be managed by Assistant Town Administrator, with ongoing oversight of contractor to be handled by Public Works Superintendent.

**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 Town is obligated under its NPDES permit to implement the repairs identified in the LTCP. The work identified by the project engineer as being Priority 1 or 2 is essential to the continued functionality of the Town's wastewater collection system, of which much of the current infrastructure is 75-100 years old. Currently, several areas of excessive inflow and infiltration lead to undue strain on operations by increasing the overall volume of water in the system. Especially during heavy rainfall events, this also increases the likelihood of CSO discharges, which are an environmental and health hazard, and can further expose the Town to liability for noncompliance with its NPDES permit.

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

Critical Importance

Highly Important

Moderately Important

**OX**

**O**

**O**

**Comments and additional information:**

October 7, 2024

Mr. Walter Ramsey, Town Administrator  
Town of Montague  
1 Avenue A  
Montague, MA 01376

**SUBJECT: Town of Montague, MA – Proposal for Professional Engineering Services  
Phase 2 Sewer and Manhole Rehabilitation Project**

Dear Walter,

Wright-Pierce has previously conducted two studies of the sewer collection system and provided the following two deliverables to the Town of Montague to summarize the field investigation work and to provide rehabilitation recommendations with a planning level opinion of probable construction cost. The rehabilitation recommendations of sewer manholes and sewer pipes address structural defects and potential sources of infiltration and inflow (I/I) to the Town’s collection system.

1. Turners Falls, Lake Pleasant, and Montague Center Wastewater Collection Study, dated March 3, 2023
2. Millers Falls Wastewater Collection System Study, dated April 14, 2023

The Town of Montague has requested that Wright-Pierce submit a proposed scope and fee to provide design, bidding, and construction administration services to implement the following Priority 1 and Priority 2 recommended rehabilitation in both Turners Falls and Millers Falls. The 51 Priority 1 manholes identified in Turner Falls areas are not included in this Project because they are separately being rehabilitated under the Phase 1 Sewer and Manhole Rehabilitation Project going out to bid in Fall 2024/Winter 2025 and constructed in Spring 2025.

Location	Priority	# of Manholes	# of Pipes	LF of Pipe
Turner Falls	1	51*	11	3,613
Turner Falls	2	0	4	1,254
Millers Falls	1	42	18	3,996
Millers Falls	2	32	4	596
<b>Total</b>	--	<b>74</b>	<b>37</b>	<b>9,459</b>

\*Not included in this project.

10/7/2024

Mr. Walter Ramsey, Town Administrator

Page 2 of 5

The Town of Montague has also requested Wright-Pierce to update the planning level opinion of probable construction cost provided in the two deliverables indicated above separate from this proposal. Our proposed scope and budget for engineering services are presented below.

## Proposed Scope of Work

### Task 1 – Design

Scope of work under this task will include:

1. Wright-Pierce will perform project administration tasks including communicating with the Town, tracking budget and schedule, and preparing and submitting monthly invoices.
2. Wright-Pierce will prepare for and attend an in-person kick-off meeting, with the Town's and Wright-Pierce's project team members. At the kick-off meeting, Wright-Pierce will establish schedules for deliverables and communication protocols.
3. Wright-Pierce will develop a 75 percent submittal that includes bid document/specifications with GIS-based drawings and an opinion of probable construction cost. The front-end specifications will be based on EJCDC 2018 edition. Technical specifications will be prepared using the CSI 16 Division format. The location of the manholes will be shown on GIS-based 11"x17" figures.
  - a. The Bid/Contract documents will be prepared in accordance with MGL Chapter 30, 39M governing public works projects in the Commonwealth of Massachusetts.
  - b. Wright-Pierce will submit an electronic copy (PDF) of the bid document/specifications to the Town and meet with the Town to discuss review comments.
4. Wright-Pierce will address the Town's comments on the 75 percent bid document/specifications within 15 business days of receiving the Town's comments. Wright-Pierce will prepare and submit two hard copies and an electronic version of the 100 percent bid documents/specifications and an opinion of probable construction cost.

### Task 2 – Bidding Assistance

Scope of work under this task will include:

1. Coordinate bidding through the Wright-Pierce bidding platform. The Town shall be responsible for all advertising costs.
2. Respond to bidders' questions.
3. Prepare and distribute up to two addenda to the bid documents.
4. Attend in-person bid opening for the construction contract.
5. Review all bids and prepare bid tabulation.
6. Review the qualifications of the apparent low bidder(s) and compliance with other contract requirements. Report on the results of the reviews and issue a bid summary to the Town.
7. The length of the Bidding Phase is assumed to be approximately 60 days. The length of the Bid Period from Advertisement to Bid Opening is assumed to be approximately 21 days.

10/7/2024

Mr. Walter Ramsey, Town Administrator

Page 3 of 5

### Task 3 – Construction Administration

Scope of work under this task will include:

1. Project Administration and Management
  - a. Perform project administration and management tasks including communications with Town, tracking budget and schedule, and preparing and submitting monthly invoices.
2. Prepare for and attend up to three monthly progress meetings and one preconstruction meeting, with Town, Contractor, and Wright-Pierce's project team members. Progress meetings will include a report on budget, schedule updates, and review of technical aspects. Prepare and distribute minutes of the meetings.
3. Consult with and advise Town and act as Town's representative as provided in the Standard General Conditions and Supplementary Conditions of the Construction Contract. The extent and limitations of the duties, responsibilities, and authority of engineer as assigned in said Standard General Conditions shall not be modified, except as engineer may otherwise agree to in writing. The Town's instructions to Contractor will be issued through Wright-Pierce, who shall have authority to act on behalf of Town in dealings with Contractor to the extent provided in this Agreement and said Standard General and Supplementary Conditions except as otherwise provided in writing.
4. Review shop drawings, diagrams, illustrations, schedules, the results of tests and inspections, which the Contractor is required to submit to demonstrate conformance with the construction Contract Documents. Reject any materials, or other items which do not meet minimum requirements. Review warranties and manufacturers' information for products and materials supplied for the project.
5. Review Town's and/or Contractor's requests for materials substitution for items specified in the Contract Documents.
6. Make visits to the site at appropriate intervals to observe the progress of the construction work. Prepare reports of findings, as necessary.
7. Review field test reports, including those submitted by the Contractor's Independent Testing Laboratory. Attend field tests, as necessary.
8. Review Contractors' draft and final requests for payment and estimate amounts to be paid. Process the final request for payment. It is assumed that four payment requests will be processed for this project.
9. Review and negotiate changes in the scope of work, price, and/or completion time. Prepare change orders which may become necessary due to factors discovered during the progress of the work. Review and provide clarifications and interpretations of the Contract Documents.
10. Monitor work progress for conformance with established schedules and budget.
11. Prepare punch list of uncompleted or unacceptable work.
12. Conduct a Substantial Completion inspection and prepare a Certificate of Substantial Completion.
13. Provide an electronic copy in PDF format showing those deviations from the original drawings during the Construction Phase based on marked-up prints, figures, and other data furnished by the Contractor to Wright-Pierce and that Wright-Pierce considers significant.



10/7/2024

Mr. Walter Ramsey, Town Administrator

Page 4 of 5

## Task 4 – Resident Project Representative

Scope of work under this task will include:

1. Coordinate and provide a Resident Project Representative (RPR) to represent the Town and Wright-Pierce in the field during construction. The assigned RPR will have an active NASSCO Inspector Training Certification Program (ITCP) Cured-in-Place-Pipe (CIPP) certification in observing progress and quality of the Work. Wright-Pierce anticipates the contractor will be onsite for 90 calendar days (13 weeks) to perform the work. Wright-Pierce shall provide a full-time RPR for up to 585 hours based on 9 hours per day for 65 workdays.

### Items Not Included in Proposed Scope of Services and Assumptions

1. A pre-bid conference will not be held.
2. All materials testing specified will be included in the General Contractor's bid.
3. Requirements for meeting M/WBE goals for engineering services.
4. Permits are not anticipated due to the no-dig nature of the work. It is also assumed that the Town will obtain an exemption from its Conservation Commission for a Notice-of-Intent (NOI) because this work is sewer maintenance related and mostly trenchless.
5. Development of permit applications and payment of applicable fees.
6. Topographical and utility location survey; wetland delineation; and subsurface investigation (i.e., borings, probes, etc.) of the project area.
7. Post-construction services.
8. The design will be based on the NASSCO MACP and PACP coding from the field investigation work in 2022. No additional inspections will be performed.
9. Unless otherwise indicated, construction phase services assume a construction timeline of 120 calendar days (17 weeks) from the Notice to Proceed to substantial completion and another 30 calendar days (4 weeks) to final completion.

### Proposed Fee

We propose to provide the scope of services described above based on a time charge basis with a not-to-exceed fee of \$257,900, including labor and reimbursable expenses, for Tasks 1 through 4. Should additional services be required, we will not exceed this fee without written authorization.

10/7/2024

Mr. Walter Ramsey, Town Administrator

Page 5 of 5

Task	Labor	Reimbursable Expenses	Fee
Task 1 – Design	\$69,600	\$700	\$70,300
Task 2 – Bidding	\$13,900	\$600	\$14,500
Task 3 – Construction Administration	\$84,500	\$1,100	\$85,600
Task 4 – Resident Project Representative	\$75,800	\$11,700	\$87,500
<b>Total</b>	<b>\$243,800</b>	<b>\$14,100</b>	<b>\$257,900</b>

If the proposed scope and fee is acceptable, Wright-Pierce will prepare a Task Order under our existing on-call Agreement. We appreciate being considered for this assignment and look forward to working with you and your staff.

Sincerely,

**WRIGHT-PIERCE**



Lisa M. Muscanell-DePaola, PE  
Project Manager

[lisa.muscanell@wright-pierce.com](mailto:lisa.muscanell@wright-pierce.com)



Christopher N. Pierce, PE  
Senior Vice President

[chris.pierce@wright-pierce.com](mailto:chris.pierce@wright-pierce.com)

## Chris Nolan

---

**From:** Lisa Muscanell <lisa.muscanell@wright-pierce.com>  
**Sent:** Wednesday, October 9, 2024 3:48 PM  
**To:** Walter Ramsey  
**Cc:** Chris Nolan; Michael Stein  
**Subject:** RE: Phase 2 Sewer and Mahole Rehabilitation  
**Attachments:** Phase2SewerRehab\_DesignCA\_ProposalLetter\_v2.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Walter,

Attached is the scope and fee proposal letter that you requested by mid-October to assist with budgeting and planning for the Annual Town Meeting in May 2025.

Regards,

Lisa

**Lisa M. Muscanell-DePaola, PE (she/her)**  
Wright-Pierce | Lead Project Engineer | Project Manager  
direct 860.852.1912 | office 860.343.8297



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**From:** Lisa Muscanell  
**Sent:** Tuesday, September 17, 2024 6:15 PM  
**To:** Walter Ramsey <WalterR@montague-ma.gov>  
**Cc:** Chris Nolan <ChrisN@montague-ma.gov>  
**Subject:** Phase 2 Sewer and Mahole Rehabilitation

Walter,

We are having our Vice President QAQC the scope and fee proposal letter for our technical services, however, I wanted to let you know that our budgetary, planning level (10% design) opinion of probable construction cost (including contingencies, technical services (design, construction, inspection etc.), construction contract etc.) is \$2.5Million.

This uses a 25% construction contingency right now and 30% engineering and administrative fees.

If you think this could still pass at \$3M, you may want to use that number especially if this will take a few years to get out to bid and constructed.

Lisa

**Lisa M. Muscanell-DePaola, PE (she/her)**

**Wright-Pierce** | Lead Project Engineer | Project Manager  
**direct** 860.852.1912 | **office** 860.343.8297





## 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: DPW Submitted by: Sam Urkiel

Item/Project Cost: \$365,000 Date Prepared: October 31, 2024

Item/Project Title: 10 Wheel Dump Truck

#### 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 **\$365,000** or any other amount, for the purpose of a 10 wheeled dump truck with wing plow and spreader, 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 truck will be used year-round for highway maintenance including clearing winter roads and hauling construction materials to and from job sites.

**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**

Purchased by DPW, no external oversight needed.

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

Purchase will replace an aging 2003 International 7400 with wing plow and spreader. The truck has undergone significant repairs including replacement of the dump body in 2017. This replacement request follows the capital improvement plan of 20 years for a large dump truck.

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

Critical Importance

Highly Important

Moderately Important

**Comments and additional information:**



# 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: DPW Submitted by: Sam Urkiel

Item/Project Cost: \$325,000 Date Prepared: October 31, 2024

Item/Project Title: Large Dump Truck

### 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 **\$325,000** or any other amount, for the purpose of a large dump truck with spreader, 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 truck will be used year-round for highway maintenance including clearing winter roads and hauling construction materials to and from job sites.

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**

Purchased by DPW, no external oversight needed.

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

Purchase will replace an aging 2002 International 4900 with spreader. This replacement request follows the capital improvement plan of 20 years for a large dump truck.

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

Critical Importance

Highly Important

Moderately Important

**Comments and additional information:**





## Annual Town Meeting

### SPECIAL ARTICLE REQUEST – CAPITAL EXPENSE

Budget Year  
**FY 26**

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***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: DPW Submitted by: Sam Urkiel

Item/Project Cost: \$70,000 Date Prepared: October 31, 2024

Item/Project Title: Sewer CCTV Van

#### 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 **\$70,000** or any other amount, for the purpose of a Sewer CCTV Van, 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 Van will be used for transportation to and from sewer infrastructure around town with CCTV equipment used to inspect the system for condition reports.

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**

Purchased by DPW, no external oversight needed.

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

Purchase will replace a 2001 Ford E450. This replacement request follows the capital improvement plan of 12 years for a truck.

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

Critical Importance

Highly Important

Moderately Important

**Comments and additional information:**



## Annual Town Meeting

### SPECIAL ARTICLE REQUEST – CAPITAL EXPENSE

Budget Year  
**FY 26**

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***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: DPW Submitted by: Sam Urkiel

Item/Project Cost: \$65,000 Date Prepared: October 31, 2024

Item/Project Title: Ford F-150 Pickup

#### 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 **\$65,000** or any other amount, for the purpose of a Ford F-150 Pickup, 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 truck will be used for transportation to and from town buildings with cleaning supplies and equipment. Will also assist with moving of furniture and goods.

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**

Purchased by DPW, no external oversight needed.

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

Purchase will replace an aging 2007 F-150 pickup. This replacement request follows the capital improvement plan of 12 years for a truck.

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

Critical Importance

Highly Important

Moderately Important

**Comments and additional information:**



## 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: DPW Submitted by: Sam Urkiel

Item/Project Cost: \$60,000 Date Prepared: October 31, 2024

Item/Project Title: Oakman St and Country Club Ln Storm Drain Washout Repair Engineering

#### 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 Engineering a method of repair to washouts located on Oakman St and Country Club Ln, 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 slope below storm drainage has begun to washout significantly. Lots of downhill erosion has occurred.

**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**

Engineering work to be done by others with anticipated repairs in house by DPW.

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

If delayed the area of repair could become much larger and include roadway damage or closure. Efforts should be made to reduce the amount of sediment loss to downhill waterways.

**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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**Comments and additional information:**



January 15, 2024  
File: 195189006

**Attention: Mr. Walter Ramsey,**  
Town Assistant Administrator  
Turners Falls Town Office  
1 Avenue A  
Turners Falls, MA 01376

Dear Ramsey,

**Reference: Oakman Street and Country Club Lane Storm Drain Outfall Repairs**

Per your request, we are submitting for your review and approval a proposed scope and fee for to perform preliminary engineering services for the storm drain outfall repair at the corner of Oakman Street and Country Club Lane and for the slope failure at the storm drain outlet to the west of 118 Country Club Lane. A map of the approximate outfall locations is provided as Attachment 'A'. Based on our review of the current outfall and slope failure(s) conditions and our understanding that the Town anticipates performing the repairs for these outfalls, we have developed a preliminary scope of engineering services for the design of repairs to these outfalls to include the following:

Preliminary Engineering:

- Coordinate with existing property owners to obtain access for preliminary engineering.
- Perform wetlands delineation, wetlands flagging, natural resource assessment and develop an associated wetlands and natural resources report in anticipation of permitting for the project limits described in Attachment 'A'.
- Perform a topographic and physical conditions survey for the project limits described in Attachment 'A'. It should be noted that the limits of wetland delineation and survey extend for the entire limits from the golf course and between the two slope failure locations to determine a feasible point of access to minimize existing clearing, disturbance and associated necessary grading for access to perform the two outfall repairs.
- Perform 1-boring to a depth of 55-feet (or refusal) and 1-boring to a depth of 25-feet (or refusal) (assumes two days of borings) to perform a subsurface assessment of the existing soils in proximity to the Oakman Street outfall failure.
- Collect three (3) 5-gallon soil samples at the locations of the existing slope and outfall failures and perform sieve analysis testing on the samples in conformance with ASTM C136.
- Summarize the results of the subsurface investigation, including the borings performed in the field and soil sample analysis in a Geotechnical memorandum summary for the project for the project

**Reference: Oakman Street and Country Club Lane Storm Drain Outfall Repairs**

site(s) to be utilized as the basis of design for the design of the slope reinforcement and scout abatement measures.

- Perform an inspection of the existing drainage structures (two catch basins) and culverts (two culverts) to confirm whether rehabilitation of the existing drainage infrastructure is required as part of the project.
- Develop and analyze a stormwater model for the two outfalls to determine the required culvert size(s), stormwater outfall conditions and design scour abatement measures for the culvert outfalls.
- Perform scour abatement analysis in accordance with the application HEC-RAS standards in conformance with MADEP and MassDOT standards and requirements.
- Create a Hydraulic and Hydrologic and Scour Abatement report in anticipation of the required MADEP wetlands permitting for the proposed improvements.

Preliminary Design:

- Create an AutoCAD base plan for the project limits that will be the basis of the proposed improvements.
- Create site plan sheets with the recommended corrective actions, proposed grading and associated limits of disturbance (Assumes 3 plan sheets)
- Create Construction Details for the recommended corrective action and associated erosion control measures in anticipation of permitting (Assumes 2 plan sheets)
- Prepare two preliminary opinions of probable construction costs based on the town bidding and performing the rehabilitation for the project.
- Submit to the Town draft plans, recommendation letter, cost estimates and reports for review and comment.
- Determine appropriate point of access to perform repairs.
- Coordinate with property owners and obtain right of entry agreements, in anticipation of performing construction in 2024.

Depending on the determined scope of recommended repairs, the Town's review of the submitted plans and reports and determination as to whether the Town would like to proceed with public bidding the required repairs or performing the associated repairs with the DPW forces, Stantec can develop a scope, level of effort and associated fee to perform MADEP wetlands dredge and fill permitting for construction, obtain formal access easement for future system maintenance (if required) and to develop contract documents (plans and specification) for construction, if it is desired by the Town to publicly bid the proposed improvements. .

We anticipate that the project survey and wetlands delineation can be completed in March 2024, weather permitting, and we can complete the remaining scope of engineering services described here-in and provide a rehabilitation recommendation, draft plans, and associated reports to the Town by May 2024.



January 15, 2024  
Mr. Walter Ramsey,  
Page 3 of 3

Reference: **Oakman Street and Country Club Lane Storm Drain Outfall Repairs**

Based on the described scope of work and we can perform the preliminary engineering services at a not to exceed costs of **\$51,881** a breakdown of the anticipated level of effort for each item described in the project scope is detailed in Attachment 'B'.

Should you have any questions or require any additional information please feel free to contact us.

Respectfully Submitted,

**Stantec Consulting Services, Inc.**



**Bryan Ruoff, PE**

Associate

Phone: 603-206-7548

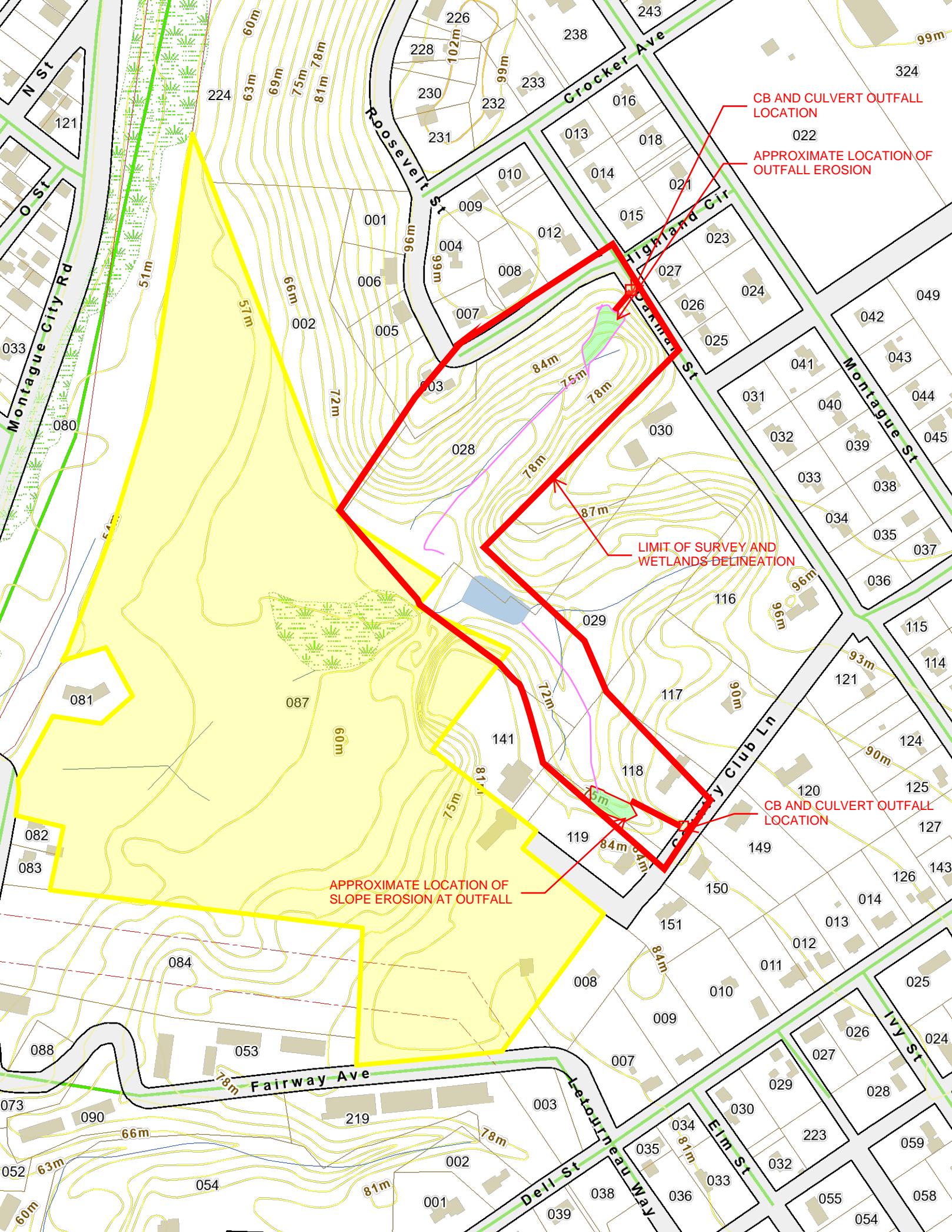
Fax: 603-669-7636

Bryan.Ruoff@stantec.com

Attachment: Level of Effort Summary  
c. Tom Bergeron, Town of Montague, MA  
Rene LaBranche, Stantec

rb document2

**ATTACHMENT A -  
PROJECT LOCATION**



CB AND CULVERT OUTFALL LOCATION

APPROXIMATE LOCATION OF OUTFALL EROSION

LIMIT OF SURVEY AND WETLANDS DELINEATION

CB AND CULVERT OUTFALL LOCATION

APPROXIMATE LOCATION OF SLOPE EROSION AT OUTFALL

**ATTACHMENT B -  
LEVEL OF EFFORT SUMMARY**



# SUMMARY REPORT

<b>Project Company</b>	Stantec US Business Group
<b>Project Currency</b>	US Dollar
<b>Project Type</b>	Time & Material

<b>Project Number</b>	195189005
<b>Project Name</b>	Oakman St and Country Club Lane Outfall Failures
<b>Client Name</b>	Town of Montague, MA
<b>Business Centre</b>	BC-1951 Water-US Northeast
<b>Project Manager</b>	Bryan Ruoff
<b>Project Technical Lead</b>	Bryan Ruoff

Project Summary	Total Fee
Labour	\$31,624.00
Expense	\$360.36
Subs	\$19,897.50
<b>Total</b>	<b>\$51,881.86</b>

Planned Start Date	Planned End Date
2024-01-21	2024-06-10

Name	Role	Billing Rate	Hours	Sub-Total Fee
LaBranche, Rene	Principal in Charge	\$225.00	3.00	\$675.00
Ruoff, Bryan	PM / PTL	\$181.00	44.00	\$7,964.00
Garner, Cyrus	Geotech	\$150.00	42.00	\$6,300.00
Potter, Seth	Inspector	\$125.00	25.00	\$3,125.00
Butts, Sarah	Engineer	\$120.00	66.00	\$7,920.00
Drescher, Bill	Engineer	\$120.00	47.00	\$5,640.00
			<b>227.00</b>	<b>\$31,624.00</b>

Expense	Billing Rate	Units	Sub-Total Fee
Travel	\$0.64	560.00	\$360.36
			<b>\$360.36</b>

Subs	Billing Rate	Units	Sub-Total Fee
Subconsultants	\$1.05	18,950.00	\$19,897.50
			<b>\$19,897.50</b>



## Annual Town Meeting

### SPECIAL ARTICLE REQUEST – CAPITAL EXPENSE

Budget Year  
**FY 26**

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***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: DPW Submitted by: Samuel Urkiel

Item/Project Cost: \$200,000 Date Prepared: 11/13/2024

Item/Project Title: Meadow Rd Guardrail

#### 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 **\$200,000** or any other amount, for the purpose of Meadow Rd Guardrail, 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.)*

Requesting funds to replace and or make improvements to Guardrail along Meadow Rd and other areas in town. The guardrail is unsafe and wouldn't protect any motorist from harm if needed. The wood posts are rotten, broken and missing in many areas. The height of the guardrail is also inconsistent.

**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?*

FRCOG procurement, DPW project management.

**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.*

To protect the public from additional hazards on town roadways.

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

Critical Importance

Highly Important

Moderately Important

○

○

○

**Comments and additional information:**







**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 library director will manage this project with procurement assistance from town administration. Contractors will gain entry to the building with assistance from the DPW.

**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.*

This project was first explored several years ago. Though it was at first designated an FY27 project, town admin agreed to swap this project with the Carnegie roof project, given the likelihood of a major construction project involving that building. Additionally, new flooring was recently installed--it would be prudent to prevent further rain seepage from entering the building and damaging this new flooring.

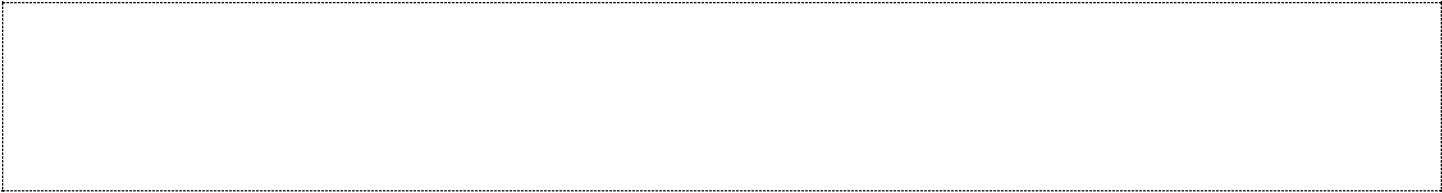
**Relative Priority** : Your assessment of the how important this is to the Town at the present time.

Critical Importance

Highly Important

Moderately Important

**Comments and additional information:**





## 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: Parks & Recreation Submitted by: Jon Dobosz, Director

Item/Project Cost: \$100,000 Date Prepared: 10/20/24

Item/Project Title: Unity Park Playground Pour-in-Place Rubber Surfacing

#### 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 \$70,000\* or any other amount, for the purpose of << >>, 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.)*

This project will include the replacement of the rubber pour-in-place (PIP) surfacing in the Unity Park playground. The current surface is beyond its useful life and has been cracking and pulling up in numerous areas due to high traffic. There is approximately 2,500 sq. feet of PIP surfacing that must be replaced.

#### 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?

Yes

No



*If yes, attach the estimate*

- |   |                                     |                                     |
|---|-------------------------------------|-------------------------------------|
| Is there a lease option for this expense?                   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Will this item or project replace a capital asset?          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Will this create ongoing costs or savings?                  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Will this leverage grant or other external funding?         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Is this request identified on the Capital Improvement Plan? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**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 Parks & Recreation Department will manage procurement and execute the project. The playground surface vendor will be responsible for design, engineering and installation.

**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.*

Unity Park is not only the most popular public park in Montague, but it is also one of the most popular play areas in Franklin County. The playground receives constant patronage, which speaks to the importance of committing to routine maintenance. The life of rubber pour-in-place surfacing is approximately ten years, and the current PIP surface is original to Phase 1 of the Unity Park Improvement Project from 2012, so it is slightly beyond its useful life. The replacement of this surface is not only critical to the safety of our patrons, but it is also completely ADA compliant, making it ideal for those patrons with mobility issues. Attempts have been made in the last couple of years to patch torn areas, but these efforts have resulted in less than adequate results.

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

Critical Importance

Highly Important

Moderately Important

X

O

O

**Comments and additional information:**



# Quotation

M.E. O'Brien & Sons, Inc. is an Affirmative Action/Equal Opportunity Employer AA/EOE and Massachusetts SDO Certified WBE

**Company Address**

**Date** 11/4/2024

PO Box 718, Medway MA 02053-0718  
 TEL 508-359-4200 / FAX 508-533-6342  
 www.obrienandsons.com

**Quotation Expires** 12/4/2024

**Salesperson** Colin Boutin  
**Admin Asst** Breana Anderson

**Customer Name** Jonathan Dobosz, Town of Montague  
**Tel, Email** 413-863-3216 / recdir@montague-ma.gov

**Version #** 2

<b>Job Name</b>	<b>Unity Park, Turners Falls MA</b>
-----------------	-------------------------------------

Salesperson	Email	Pay Terms	Estimated Lead Time
Colin Boutin	colin_boutin@obrienandsons.com	Net 30	TBD

Quantity	Unit	Vendor, Model Number & Description	Unit Price	Taxable?	Amount
		<b>Surface America</b>			
2,746	sq/ft	PlayBound Poured-in-Place Safety Surfacing at a combination of 998 sq/ft at 1.75" thick, 1,167 sq/ft at 3.5" thick, and 581 sq/ft at 5.5" thick, includes turn down of Poured-in-Place into EWF. 50% Color/50% Black speckled mix, includes Aliphatic Binder with 10 Year Warranty (deduct \$9,144 from total price to change to Aromatic Binder with 7 Year Warranty)			
1	lot	Total Furnished, Delivered, and Installed	\$ 78,987.00	No	\$ 78,987.00
		<b>Site Work</b>			
		Remove current damaged Poured-in-Place			
		Confirm existing subbase is intact			
		Dispose of removed materials			
1	lot	Total Site Work	\$ 12,500.00	No	\$ 12,500.00

Subtotal	\$ 91,487.00
Tax Rate	
Sales Tax	\$ -
<b>TOTAL</b>	<b>\$ 91,487.00</b>

If you have any questions concerning this quotation, please contact your salesperson listed above.

2/14/2024

**Please Read the Attached TERMS & CONDITIONS**



## 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

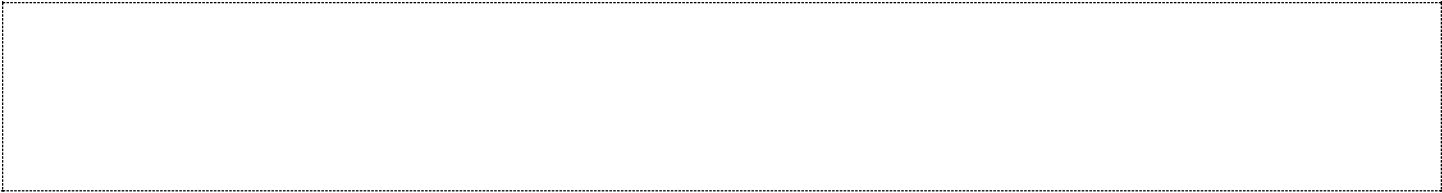
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**Comments and additional information:**





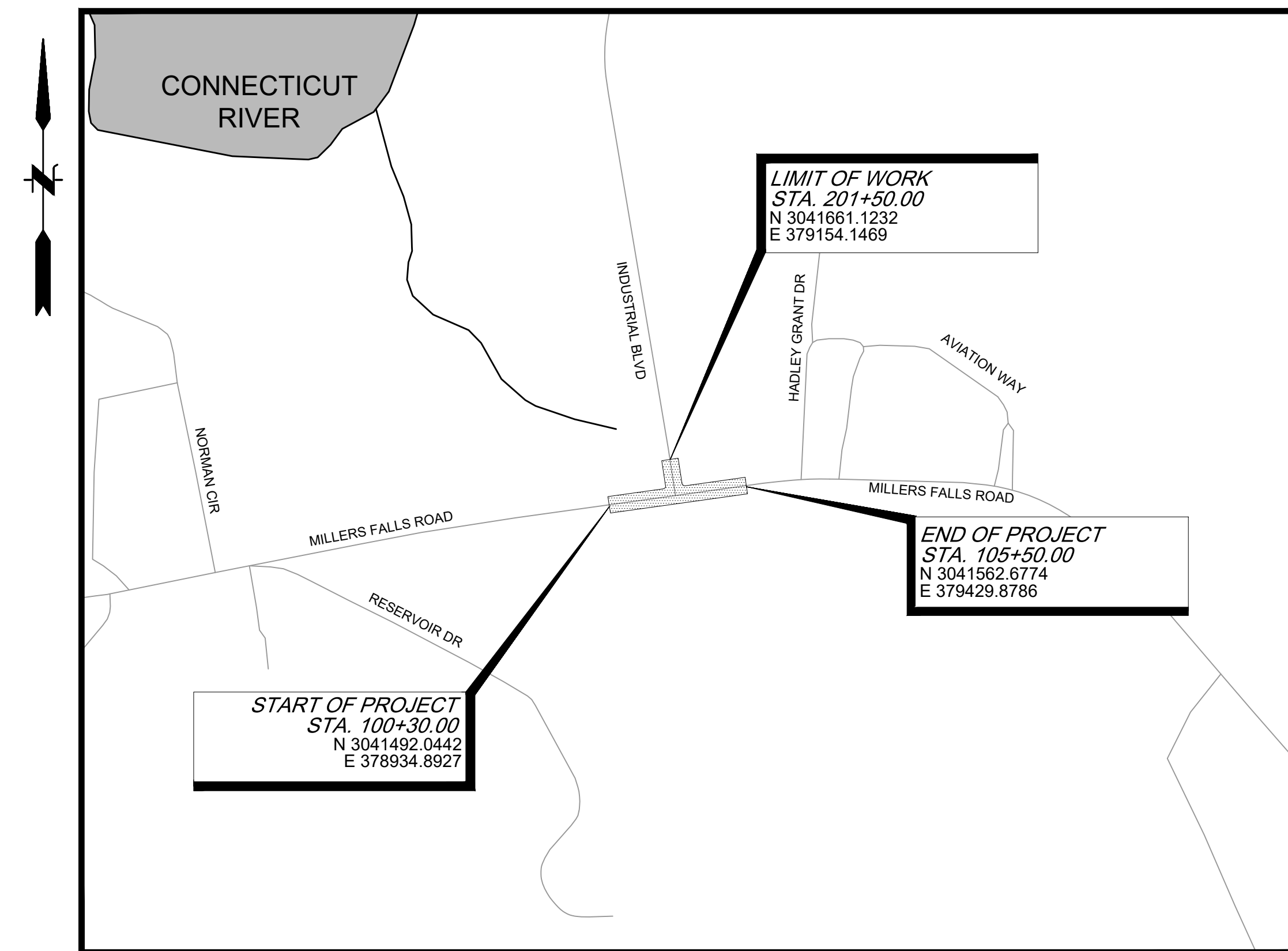
# FRTA – INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS

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

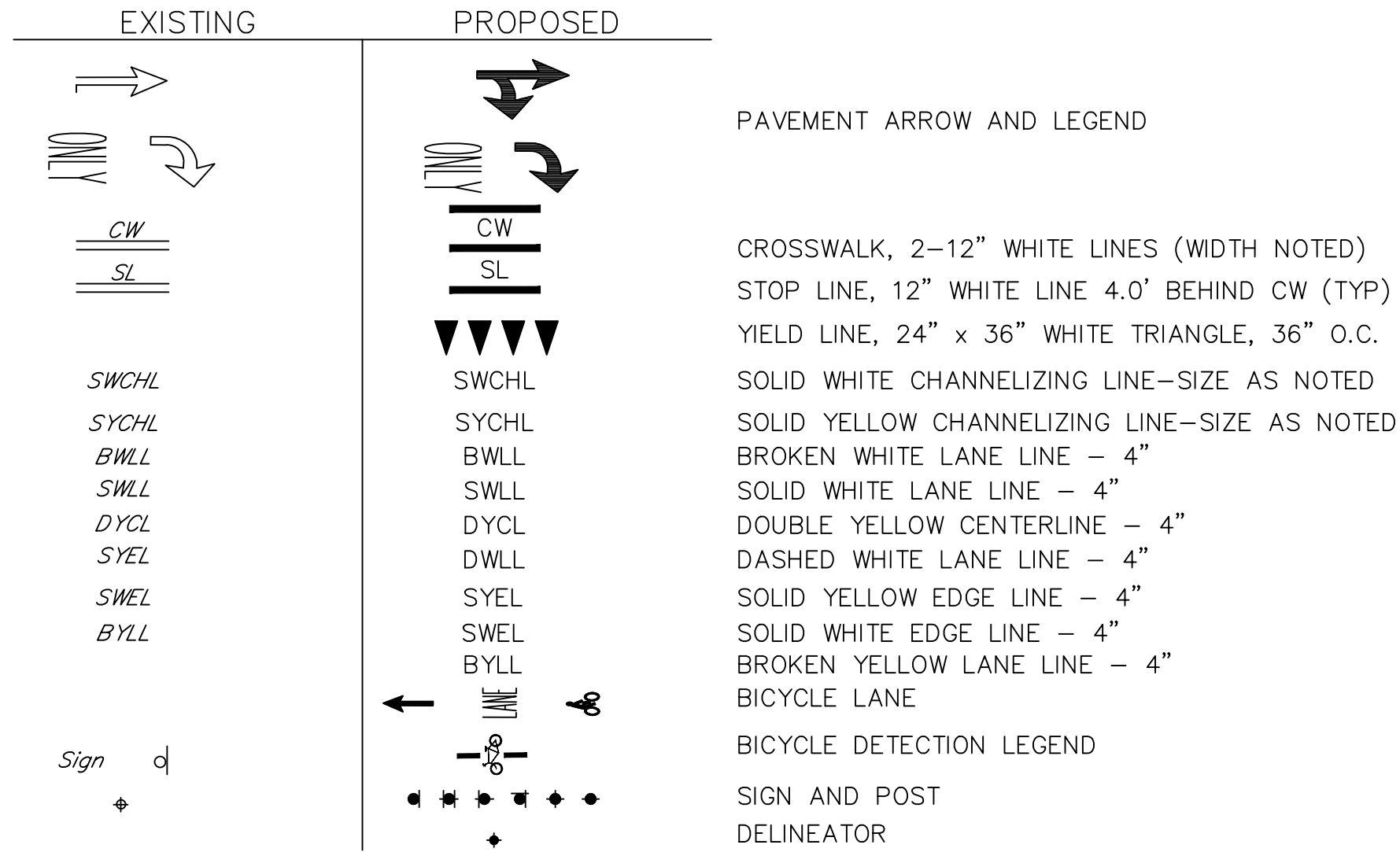
PROJ. No.: 20240059.A10  
 DATE: AUGUST 2024

GI-001

GENERAL SYMBOLS

Table with columns for EXISTING and PROPOSED symbols. Includes categories like Catch Basin, Edge of Road, Electric Handhole, Manholes, Gas Gate, Hydrant, Fire Alarm Box, Drain Pipes, Sewer Main, Electric Duct, Gas Main, Water Main, Telephone Duct, Mail Box, Fence, Highway/Property Bound, State Highway Layout, Easement Line, Property Line, City/Town/County Boundary, State Boundary, Base or Survey Line, Construction Baseline, Tree, Approximate Full Depth Area, Compost Filter Tube, and Bordering Vegetated Wetland.

PAVEMENT MARKINGS AND SIGNING SYMBOLS



REGULATORY REQUIREMENTS

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

ABBREVIATIONS

Table with columns for GENERAL, UTILITIES, ALIGNMENT/GRADING, PROFILES, and TRAFFIC SIGNAL SYSTEMS. Lists various abbreviations and their corresponding full names.

GENERAL NOTES:

- 1. 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.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY LOCAL AND STATE APPROVALS AND PERMITS PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND STRUCTURES.
4. THE ROADWAY IS TO BE GRADED SMOOTHLY AND EVENLY IN ACCORDANCE WITH THE GRADING AND TIE PLANS, PROFILE, AND CROSS SECTIONS.
5. THE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS TO REMOVE ANY PERSONAL ITEMS, LANDSCAPING, PLANT BULBS, PAVERS LOCATED IN THE TEMPORARY EASEMENT AND CITY LAYOUT.
6. 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.
7. HOURS OF WORK SHALL BE DEFINED IN THE CONTRACT DOCUMENTS.
8. ACCESS TO PRIVATE PROPERTIES MUST BE MAINTAINED AT ALL TIMES.
9. INSTALL SEDIMENTATION AND EROSION CONTROL MEASURES PRIOR TO START OF CONSTRUCTION.

MAP REFERENCE

- 1.1. 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.
1.2. HORIZONTAL DATUM REFERS TO THE MASSACHUSETTS COORDINATE SYSTEM, NAD83, MAINLAND ZONE, VERTICAL DATUM IS NAVD88.

File: J:\DWG\2024\0059\A10\_Gen01.dwg Layout: GI-002 Plotted: 2024-08-29 9:53 AM User: Shiraz.Saife

Project information block containing: TOWN OF MONTAGUE, LEGEND & GENERAL NOTES, FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS MASSACHUSETTS, MONTAGUE, FUSS & O'NEILL, 146 HARTFORD ROAD MANCHESTER, CT 06040, PROJ. No.: 20240059.A10, DATE: AUGUST 2024, GI-002, and a table for SEAL, SCALE, DATUM, and DESIGNER/REVIEWER.

**NOTES:**

**PROPOSED CEMENT CONCRETE WALK**

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

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

**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.

**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.**

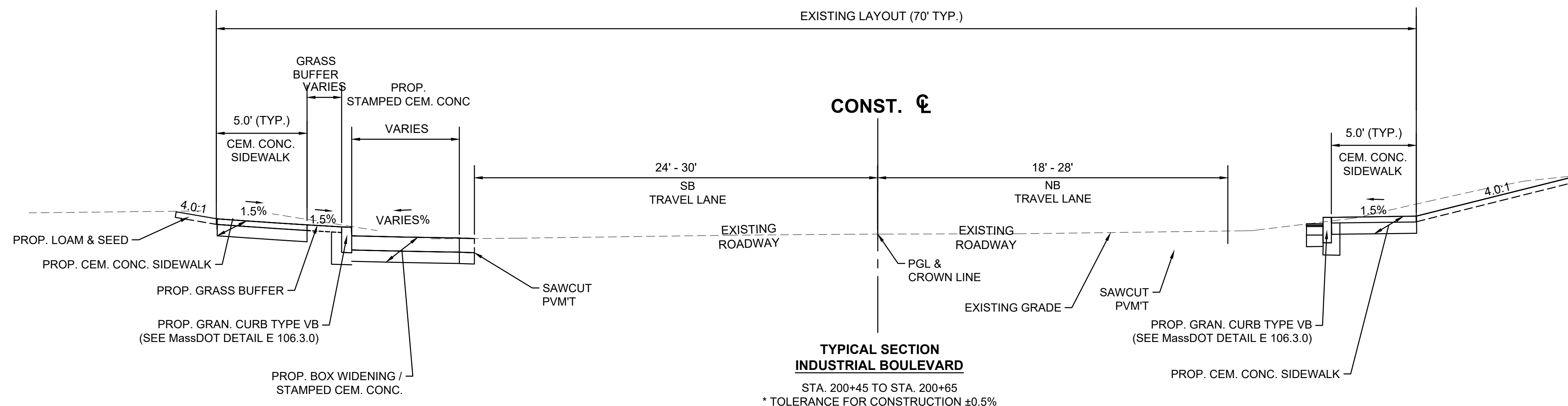
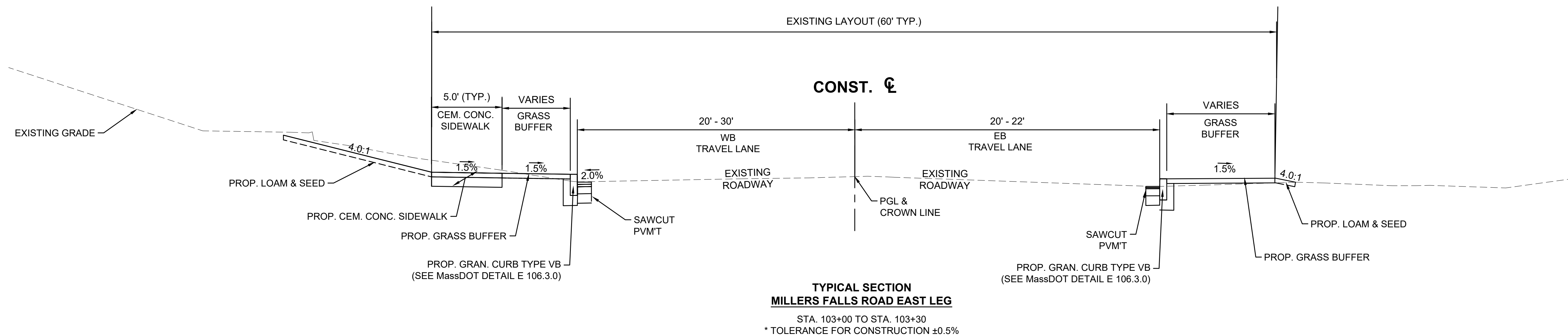
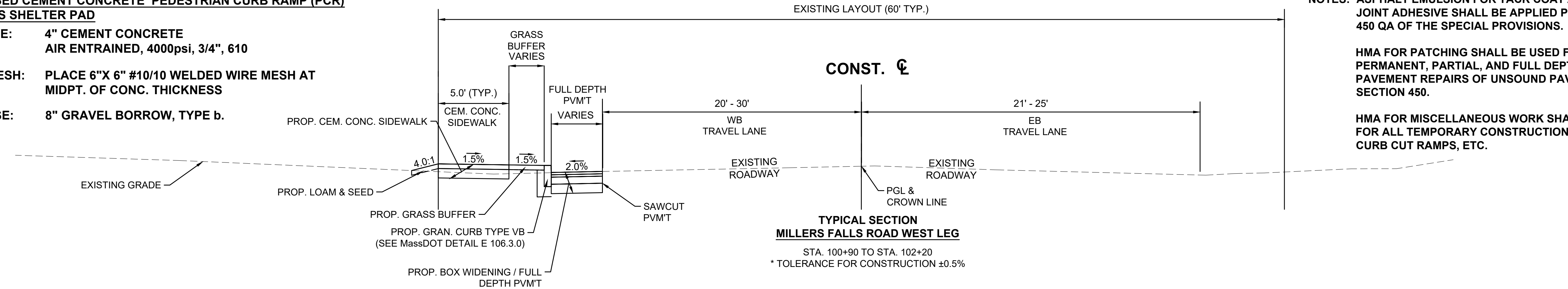
**SURFACE:** 10" CEMENT CONCRETE  
AIR ENTRAINED 5000psi, 3/4", 610

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

**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.



DESIGNER	REVIEWER
DESCRIPTION	DATE
SCALE:	HORIZ.: NOT TO SCALE
VERT.:	
DATUM:	HORIZ.: -
VERT.:	
SEAL	

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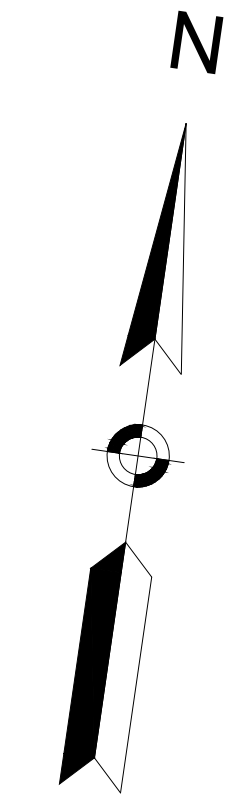
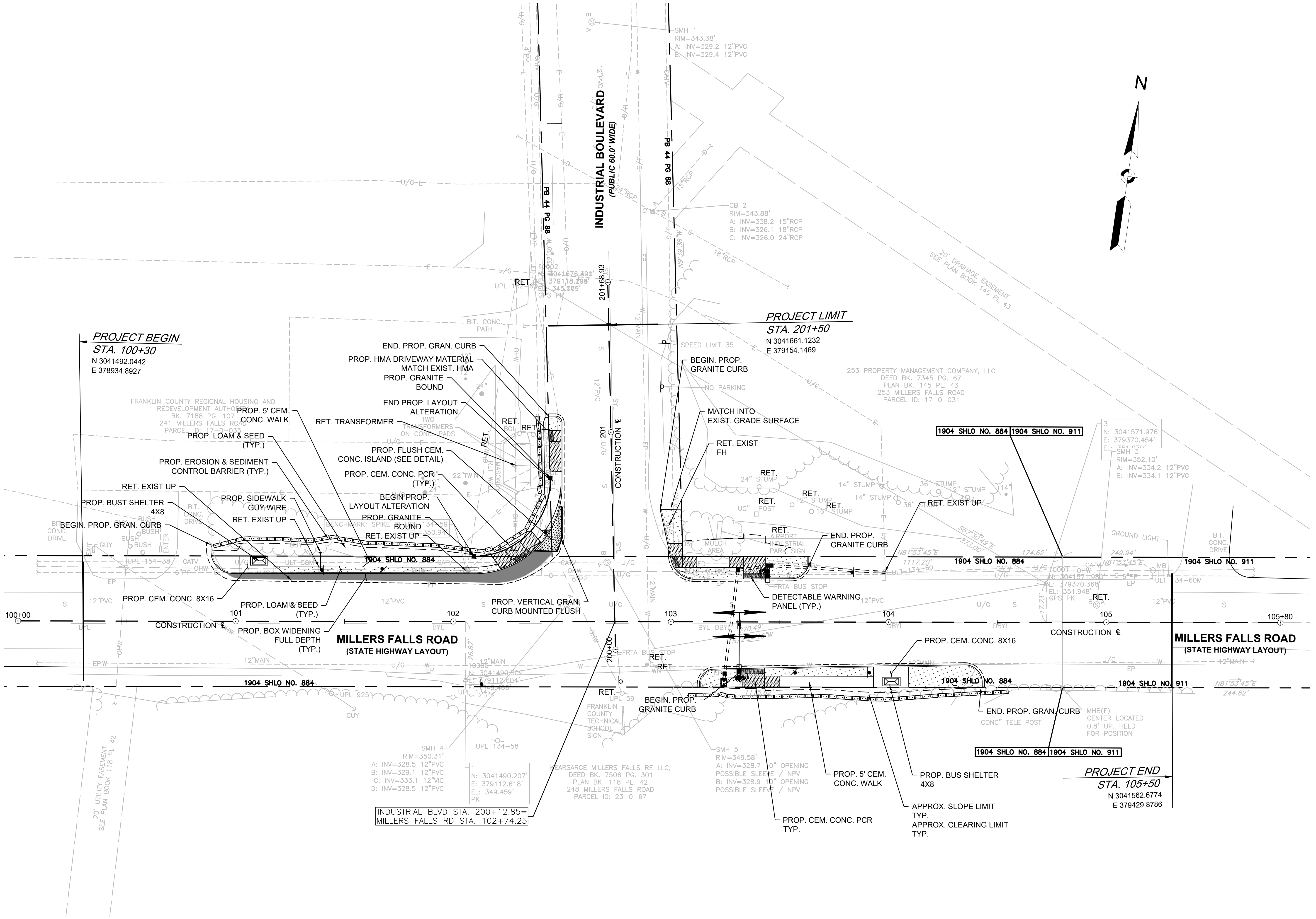
TOWN OF MONTAGUE  
TYPICAL SECTIONS  
FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD  
BUS STOP IMPROVEMENTS MASSACHUSETTS  
MONTAGUE

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

GI-301

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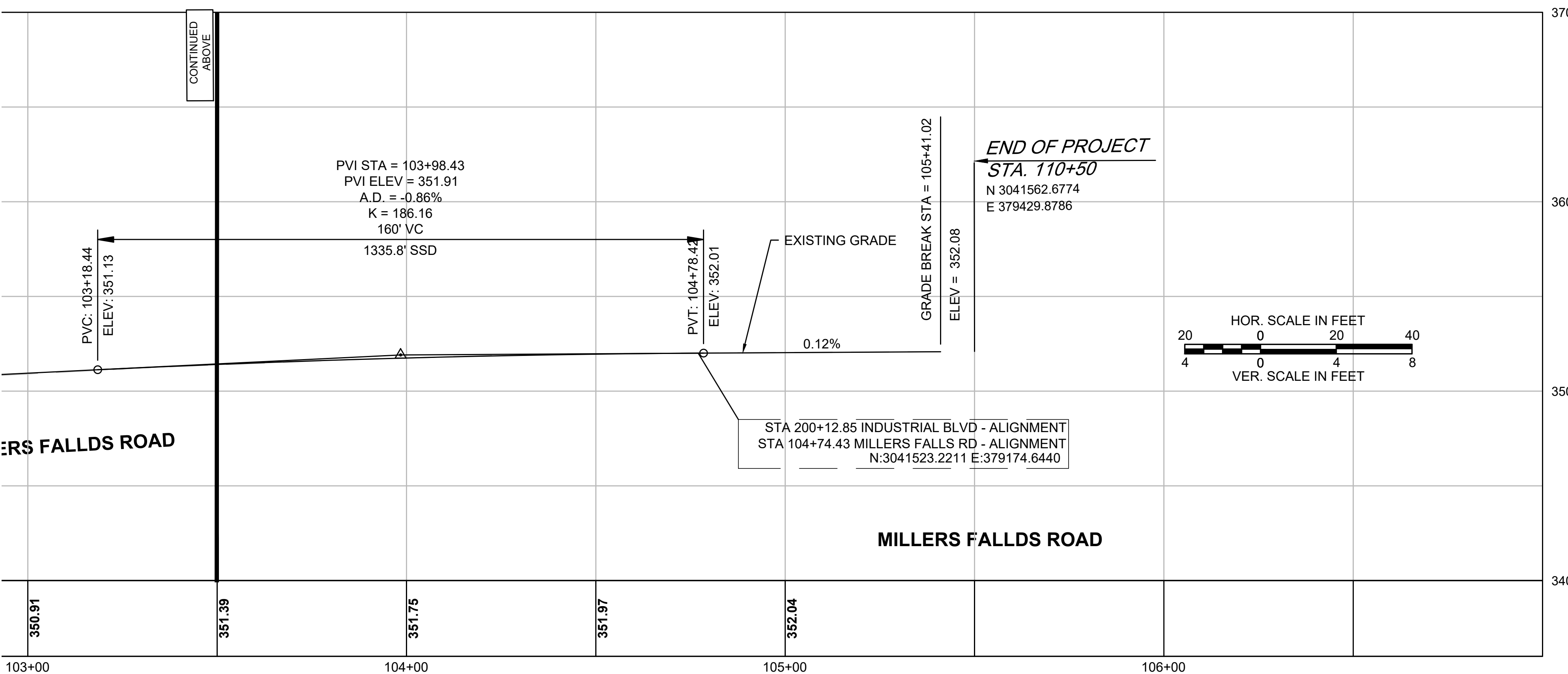
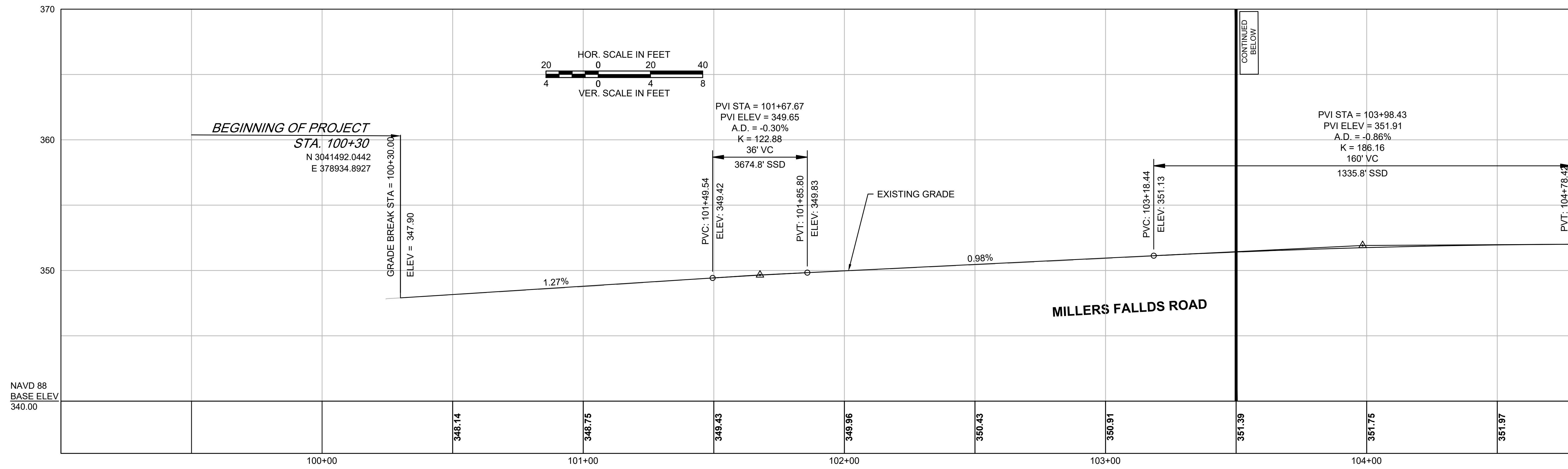
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LAYER STATE:



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

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



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.

No.	DATE	DESCRIPTION	DESIGNER/REVIEWER

SCALE:	HOR.: AS NOTED
	VERT.: -
DATUM:	HOR.: -
	VERT.: -

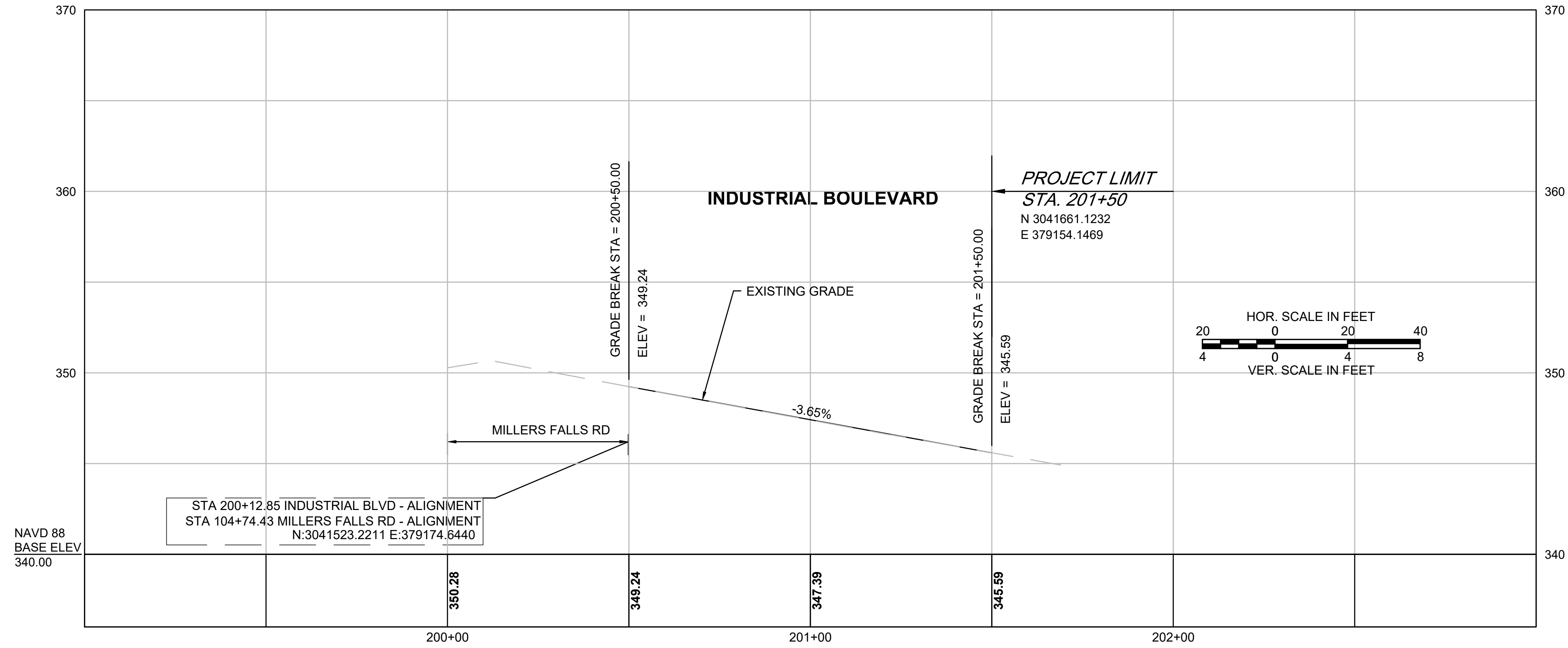

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 413.422.0445  
 www.fossco.com

TOWN OF MONTAGUE  
 ROADWAY PROFILES  
 FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD  
 BUS STOP IMPROVEMENTS - MASSACHUSETTS  
 MONTAGUE

PROJ. No.: 20240059.A10  
 DATE: AUGUST 2024  
  
**CR-201**

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.

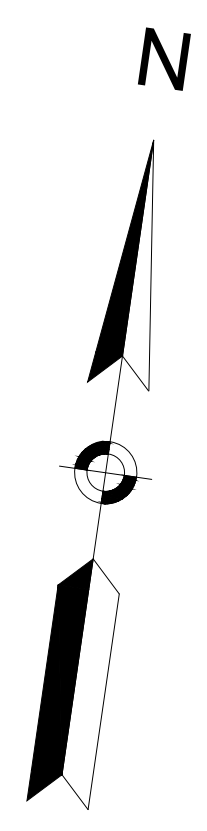
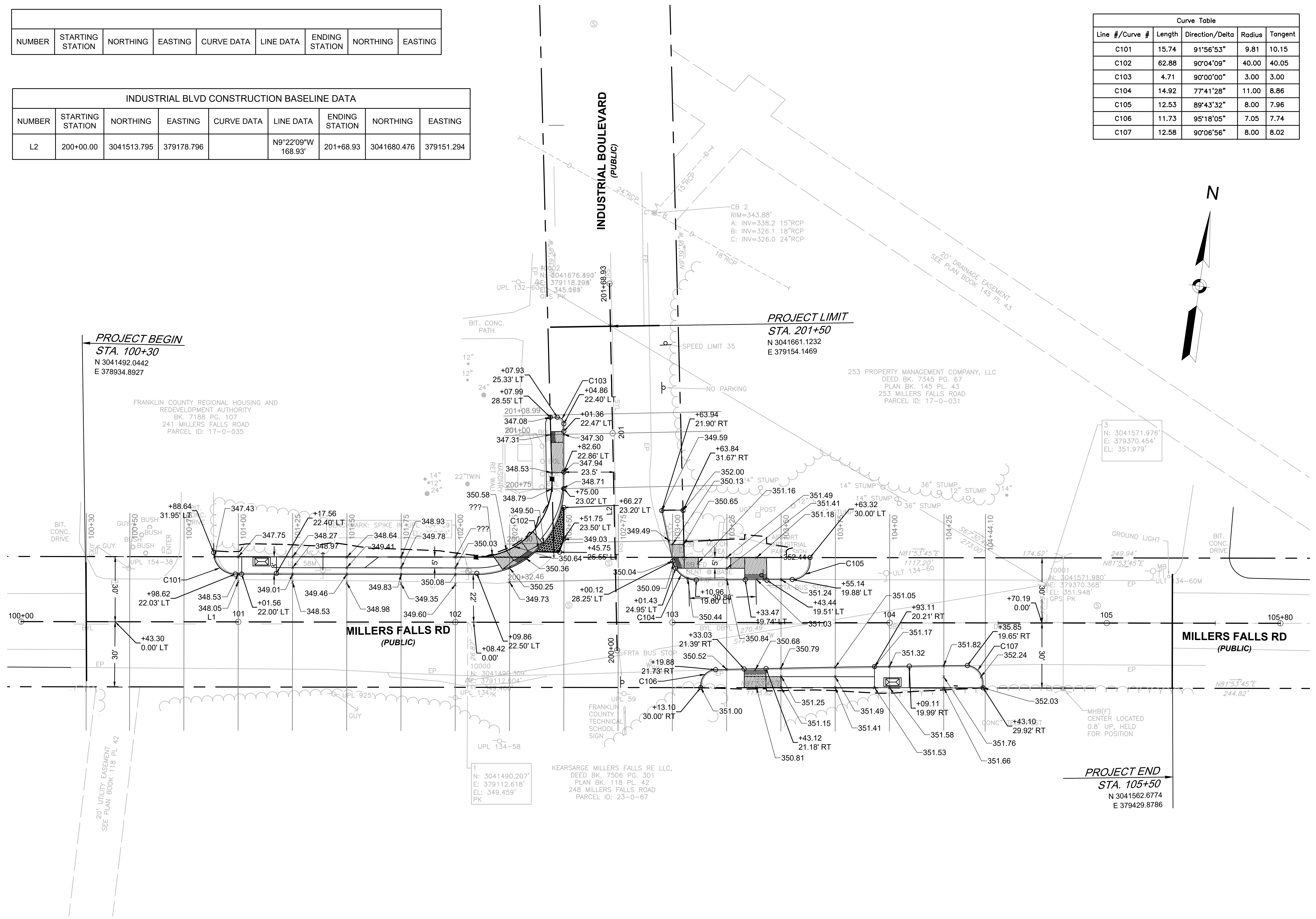


<p><b>FUSS &amp; O'NEILL</b>                  1550 MAIN STREET, SUITE 400                  SPRINGFIELD, MA 01103                  413.462.0446                  www.foss.com</p>	<p><b>TOWN OF MONTAGUE</b>                  ROADWAY PROFILES                  FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP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

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



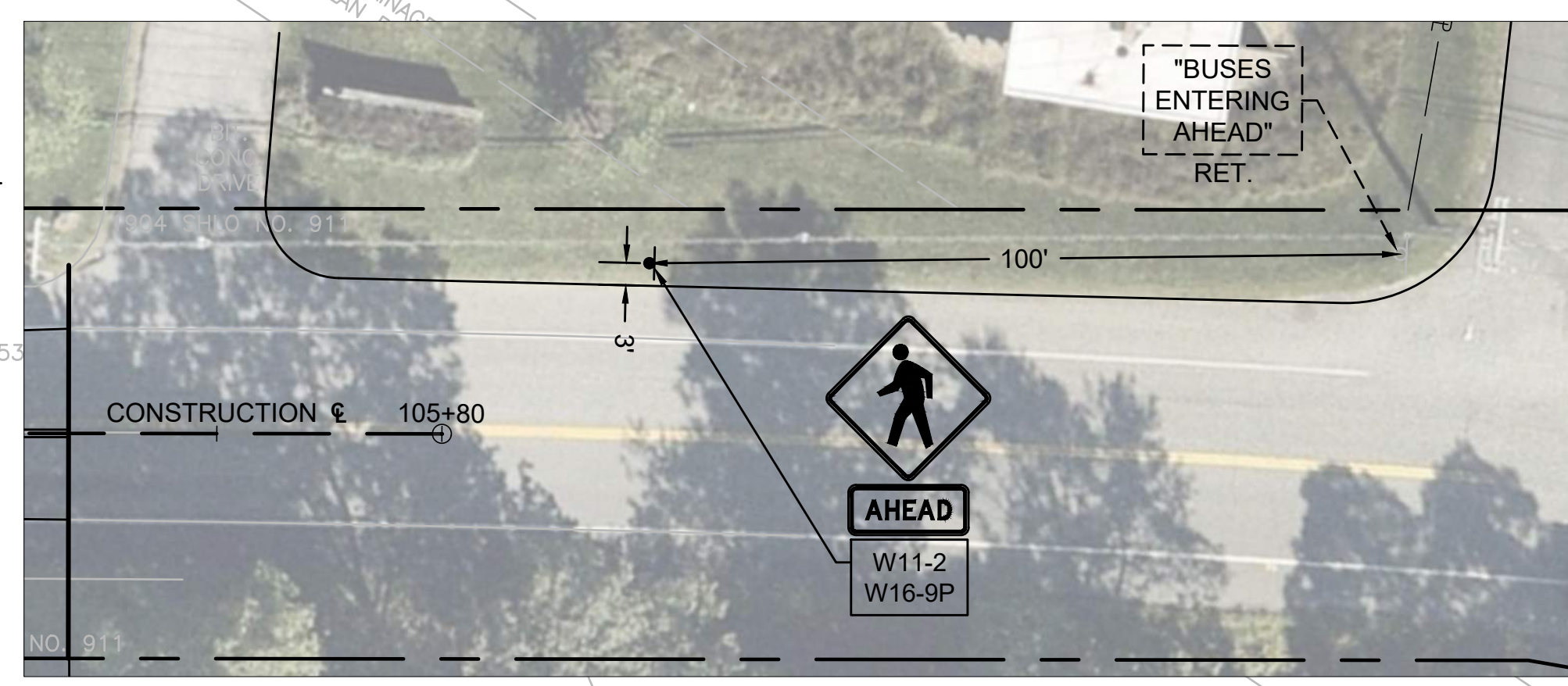
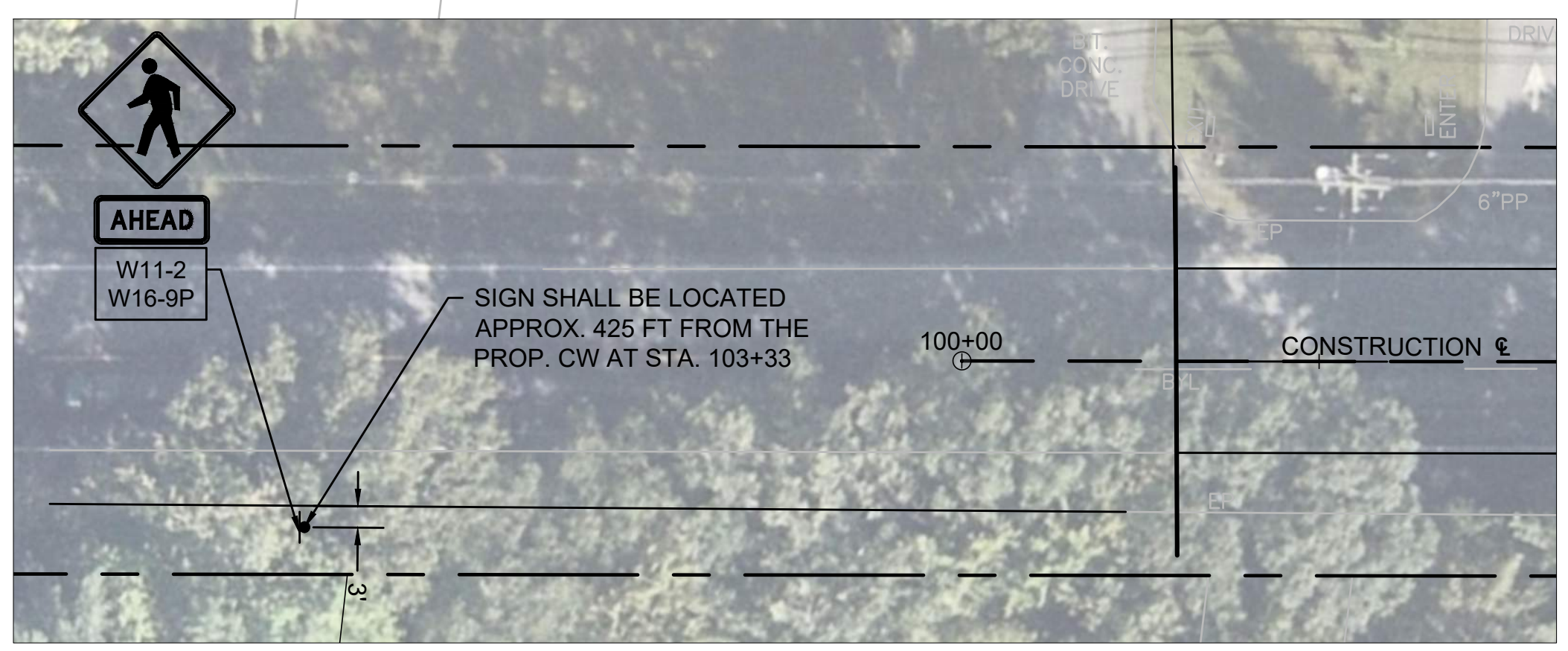
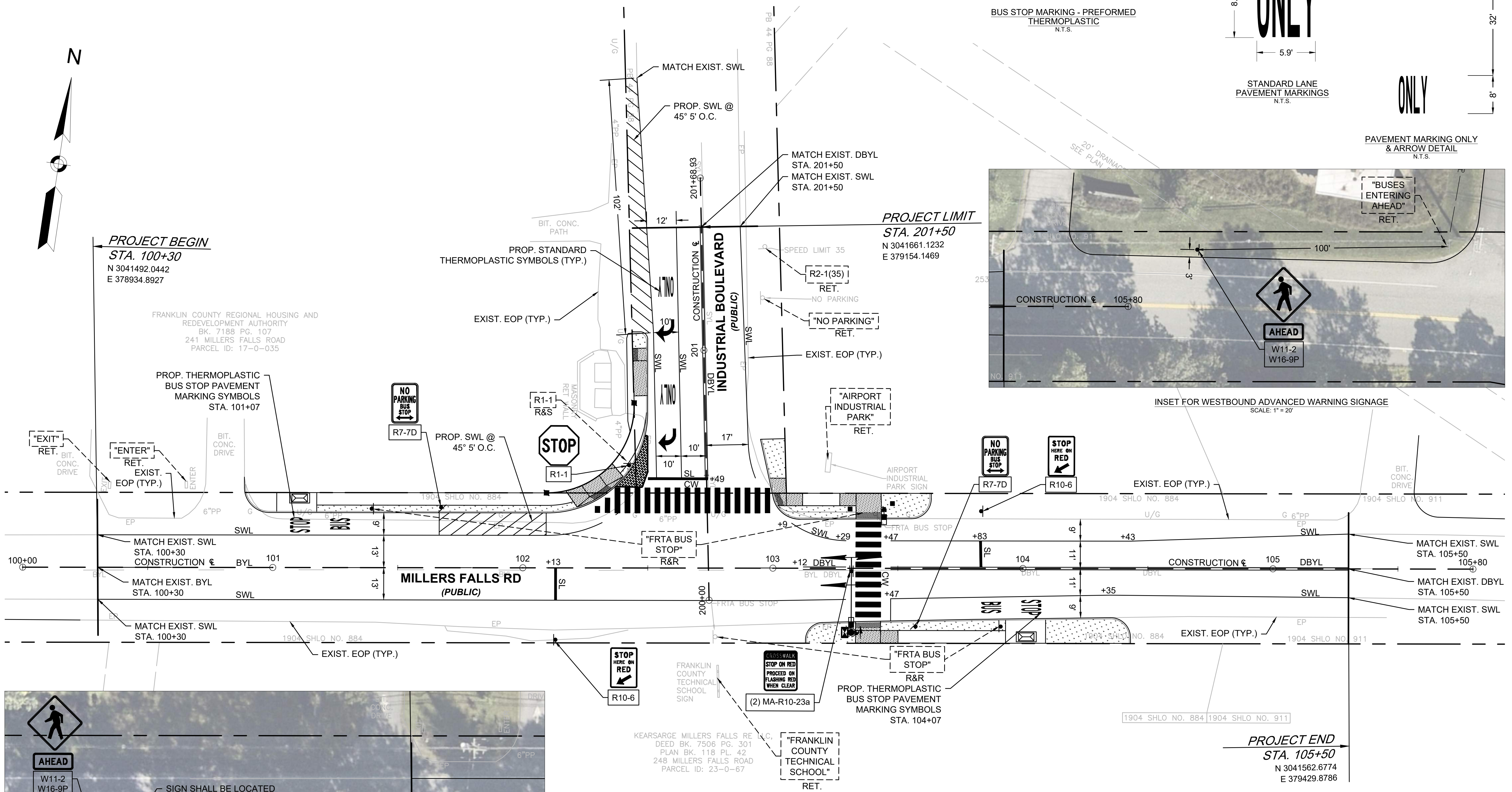
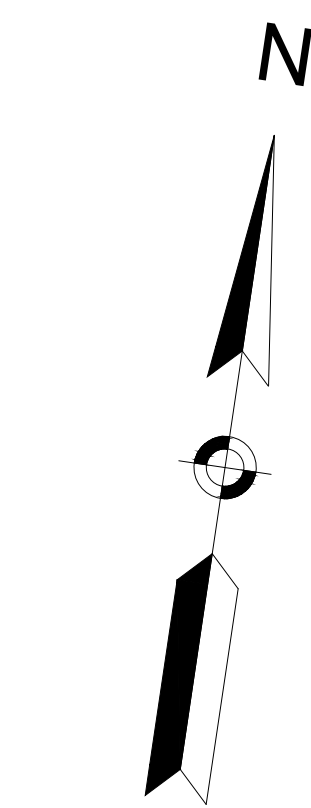
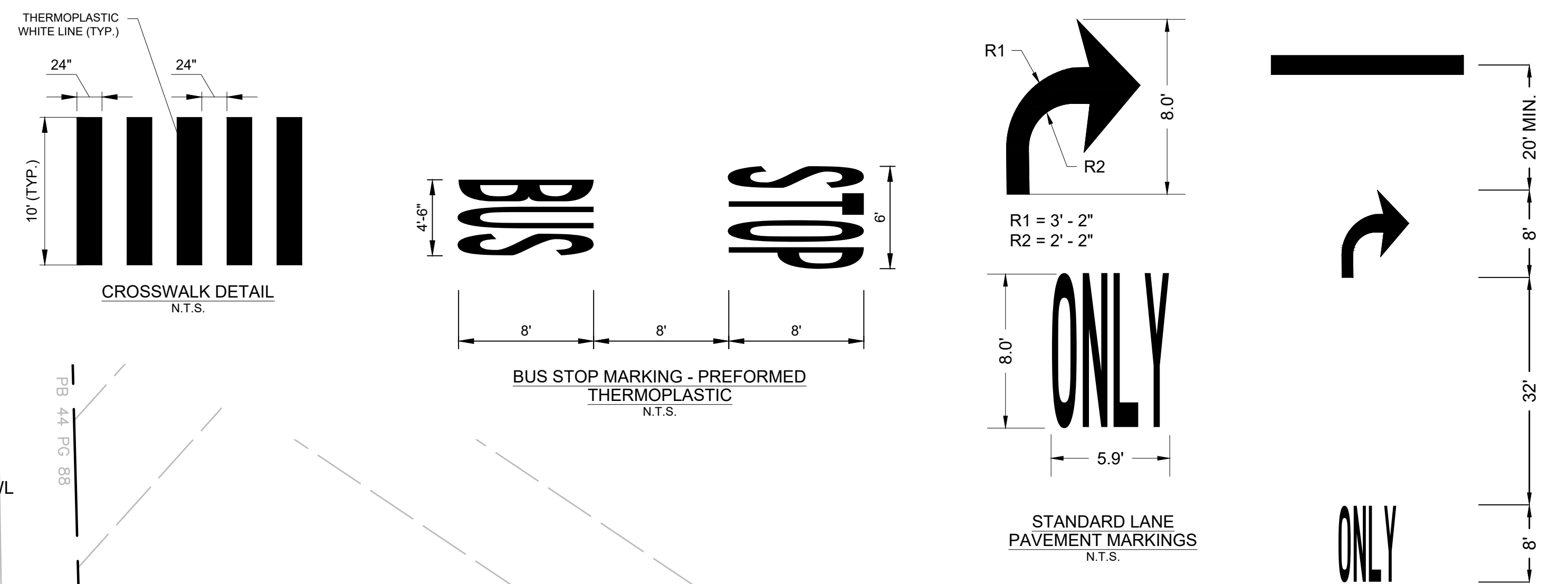
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<p><b>FUSS &amp; O'NEILL</b></p> <p>1550 MAIN STREET, SUITE 400 SPRINGFIELD, MA 01103 www.foss.com</p>	
<p>TOWN OF MONTAGUE</p> <p>GRADING AND BASELINE TIE PLANS</p> <p>FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD</p> <p>BUS STOP IMPROVEMENTS MASSACHUSETTS</p> <p>MONTAGUE</p>	
<p>PROJ. No.: 20240059.A10</p> <p>DATE: AUGUST 2024</p>	
<p>CG-101</p>	

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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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<b>FUSS &amp; O'NEILL</b> 1550 MAIN STREET, SUITE 400 SPRINGFIELD, MA 01103 413.452.0446 www.foss.com	TOWN OF MONTAGUE <b>PAVEMENT MARKING &amp; SIGNING PLANS</b> FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS MASSACHUSETTS MONTAGUE
SCALE: 1" = 20' HORIZ.: 1" = 20' VERT.: 1" = 20' DATUM: - HORIZ.: - VERT.: - GRAPHIC SCALE: 0 10' 20' 40'	DESIGNER REVIEWER DESCRIPTION DATE No.
PROJ. No.: 20240059.A10 DATE: AUGUST 2024	
<b>CT-101</b>	

NOTES:  
 1. HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE 1990 MDPW "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS", AND ALL AMENDMENTS WILL GOVERN.

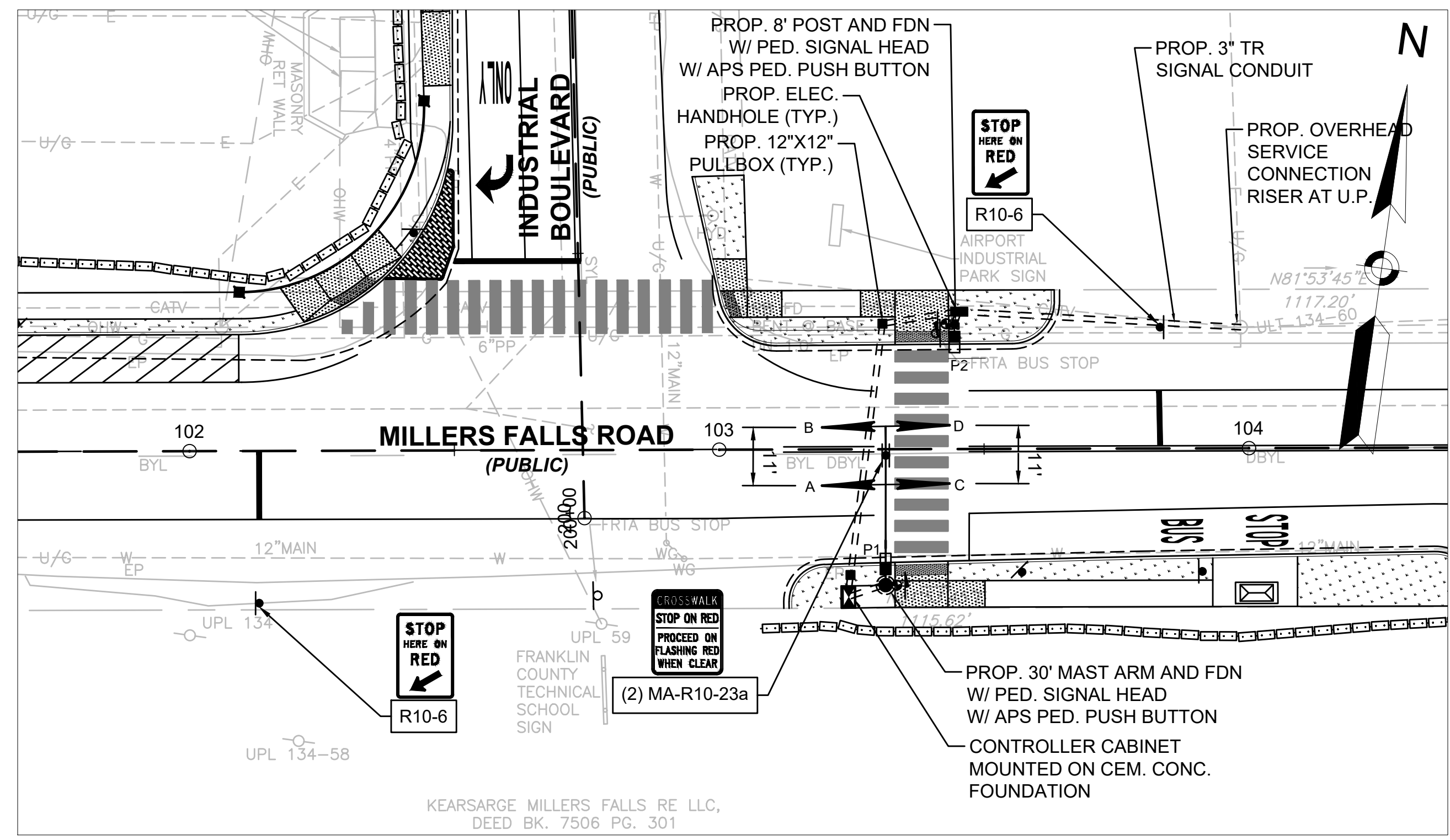
IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			
R1-1	30	30		SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL (ENGLISH VERSION)			1	RED	WHITE	WHITE	P-5 1 REQ'D	6.25	6.25
R10-6	24	36					2	WHITE	BLACK	BLACK	P-5 2 REQ'D	6.00	12.00
W11-2	30	30					2	YELLOW	BLACK	BLACK	P-5 2 REQ'D	6.25	12.50
W16-9P	24	12					2	YELLOW	BLACK	BLACK	MOUNTED W/ W11-2	2.00	4.00
MA-R10-23a	24	30		4C 4C 3.5C 3.5C 3.5C	2.5 3.5 4.5 2 3	N/A	2	YELLOW WHITE	BLACK	BLACK	O'HEAD MOUNT	5.00	10.00
R7-7D	12	18		3C 3B 2C 2C	0.875 0.625 1.5 2	0.75 x 7.75 (ARROW)	2	WHITE	RED	RED	P-5 2 REQ'D	1.50	3.00

SCALE: HORZ.: NOT TO SCALE VERT.: DATUM: HORZ.: - VERT.: -	SEAL	No.	DATE	DESCRIPTION	DESIGNER REVIEWER
<b>FUSS &amp; O'NEILL</b> 1550 MAIN STREET, SUITE 400 SPRINGFIELD, MA 01103 413.426.0446 www.foss.com					
TOWN OF MONTAGUE TRAFFIC SIGN SUMMARY SHEET FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS MASSACHUSETTS					
PROJ. No.: 20240059.A10 DATE: AUGUST 2024					
CT-601					

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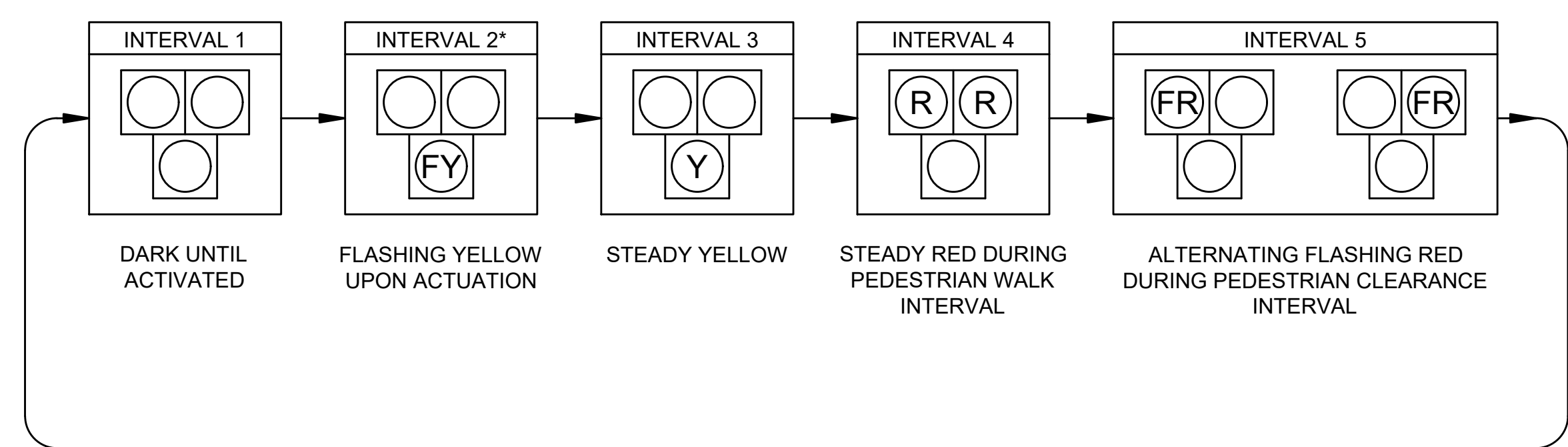
SEQUENCE AND TIMING												
	DIRECTION	HOUSING	Ø/OL	PHASE 1			PHASE 2				FLASH	
				1	2	3	4	5	6	7		
MINIMUM INTERVAL				15								EMERGENCY ONLY
MAXIMUM I				N/A								
MAXIMUM II												
FLASHING YELLOW					4							
STEADY YELLOW						4						
ALL RED							3					
STEADY RED / PED WALK								7				
FLASHING RED / PED CLEAR									12			
BUFFER										4		
MILLERS FALLS ROAD	EB	A,B	2	DARK	FY	Y	R	R	FR	DARK	FY	
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:
- \* UPON PEDESTRIAN PUSH BUTTON ACTUATION
  - FR = ALTERNATING FLASHING RED
  - STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY



SCALE: 1" = 20'

HAWK (PEDESTRIAN) PHASE SEQUENCE



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

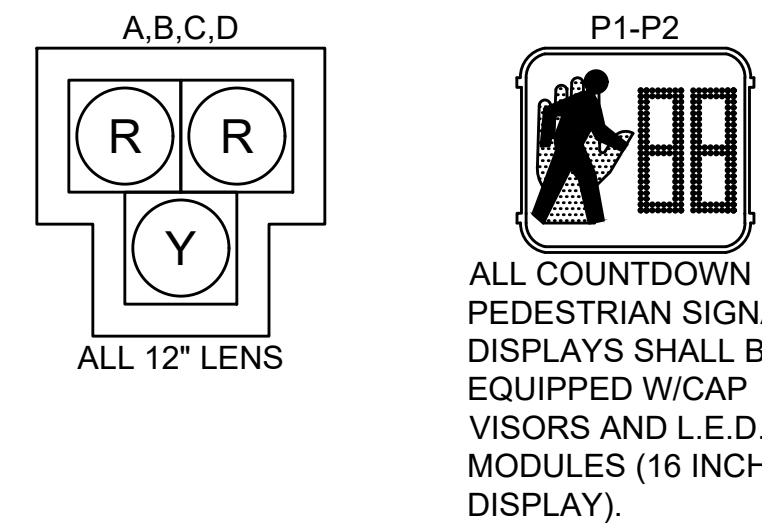
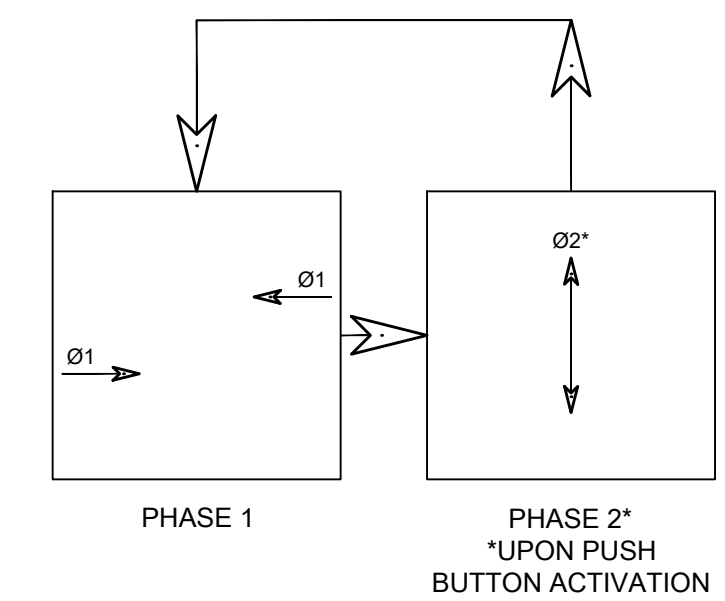
LEGEND	
	PROPOSED MAST ARM & POLE
	PROPOSED SIGNAL POST
	PROPOSED SIGNAL HEAD
	PROPOSED PEDESTRIAN HEAD
	PROPOSED PEDESTRIAN PUSH BUTTON
	PROPOSED 12X12 PULL BOX
	PROPOSED 3" PVC CONDUIT TYPE NM
	PROPOSED CONTROLLER CABINET

CONSTRUCTION NOTES:

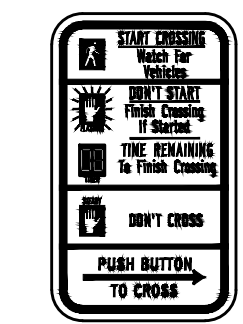
- THE TOP OF ALL MAST ARM FOUNDATIONS IN SIDEWALK AREAS SHALL BE LOCATED FLUSH WITH FINISH GRADE.
- THE TOP OF ALL MAST ARM FOUNDATIONS IN GRASSY AREAS SHALL BE LOCATED 3"± ABOVE FINISHED GRADE.
- TS POST/POLE WITH PEDESTRIAN PUSH BUTTON NOT LOCATED WITHIN A PAVED SURFACE SHALL BE POSITIONED TO PROVIDE 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):

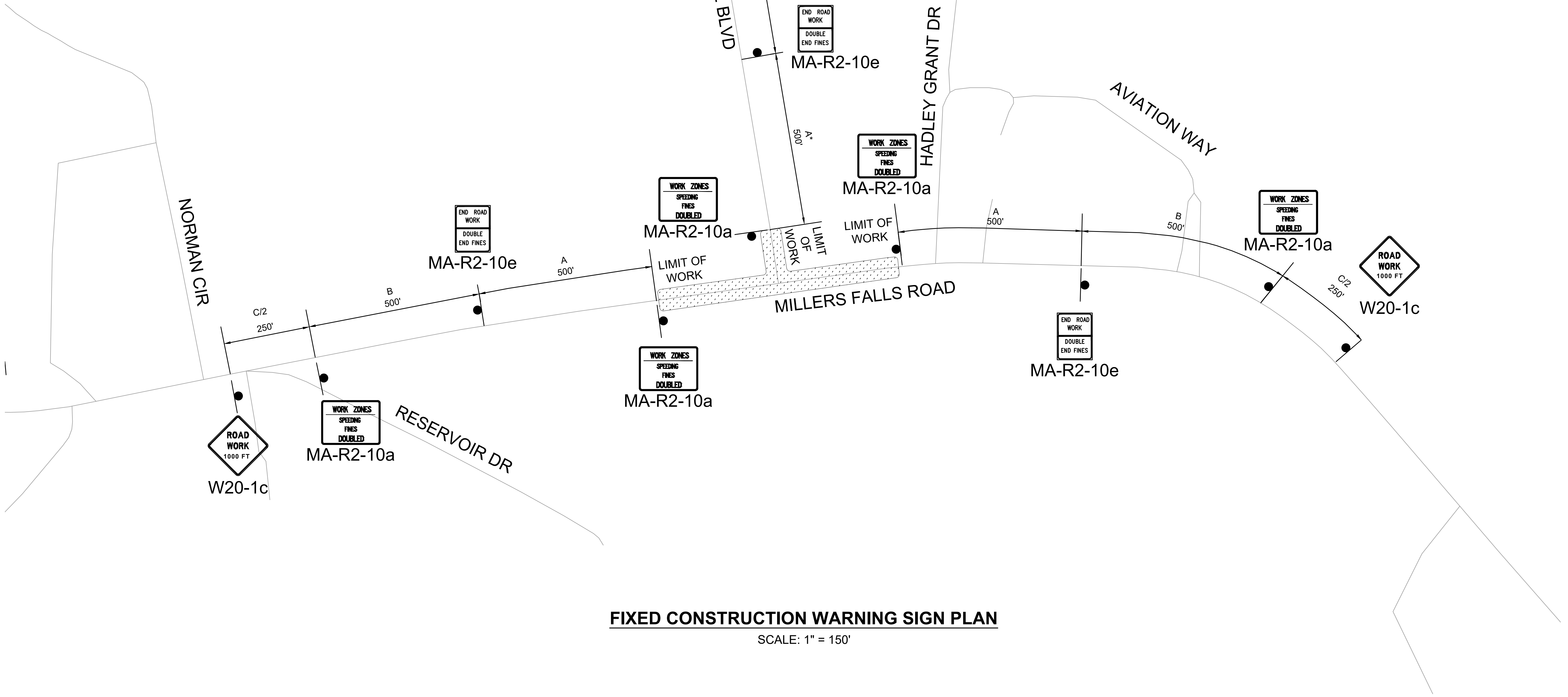
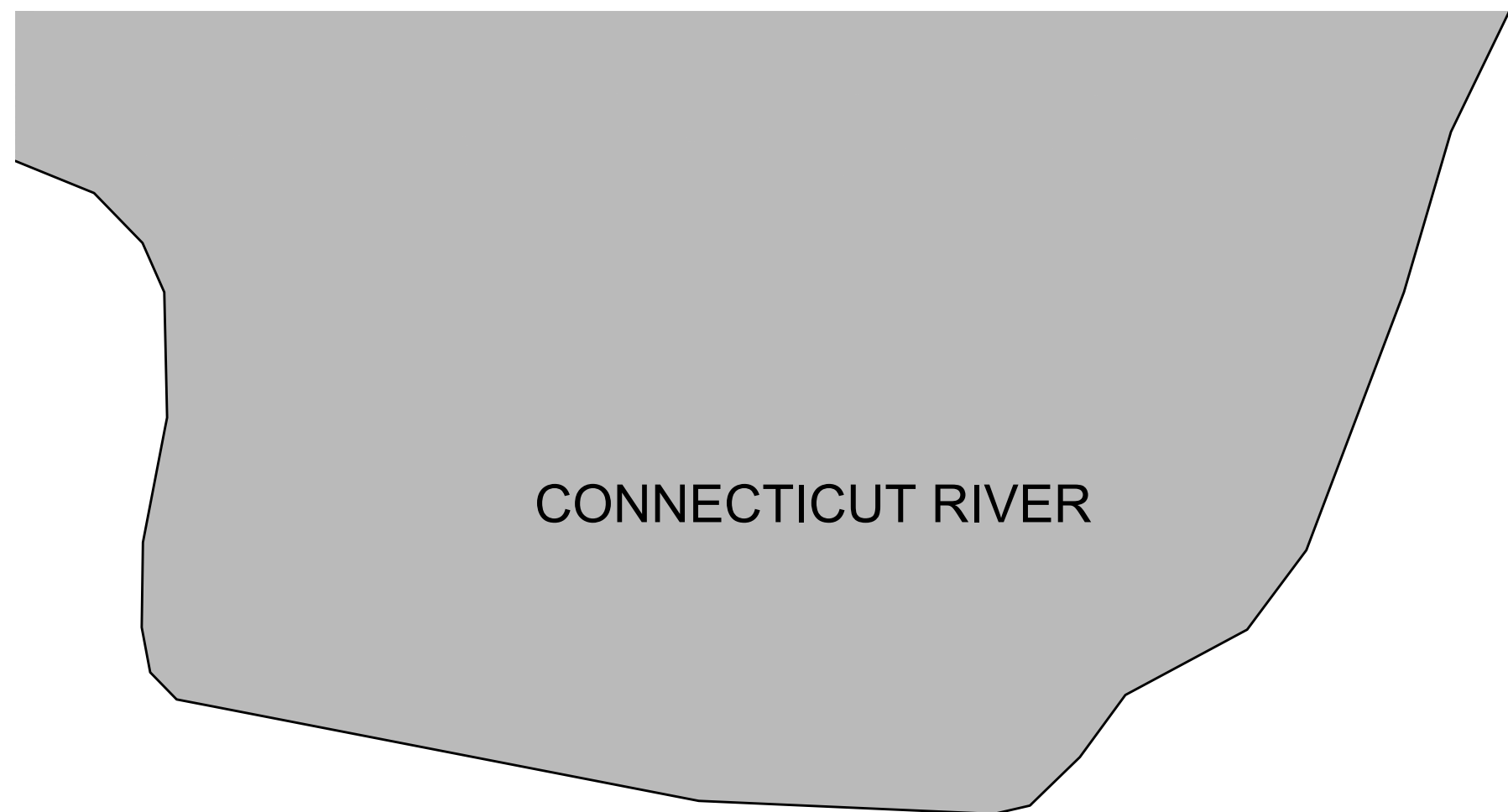
ALL PROPOSED ACCESSIBLE PEDESTRIAN SIGNALS MUST FULLY COMPLY WITH THE UNITED STATES ACCESS BOARD PROWAG SUPPLEMENTAL TECHNICAL REQUIREMENTS UNDER CHAPTER 4. THIS INCLUDES OPERABLE PARTS (R403), CLEAR SPACES (R404), AND REACH RANGES (R406) AS RELATES TO ACCESSIBLE PEDESTRIAN SIGNALS AND PEDESTRIAN PUSH 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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DESCRIPTION	
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TOWN OF MONTAGUE <b>TRAFFIC SIGNAL PLAN</b> FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS MASSACHUSETTS MONTAGUE	
PROJ. No.: 20240059.A10 DATE: AUGUST 2024	
<b>CT-102</b>	

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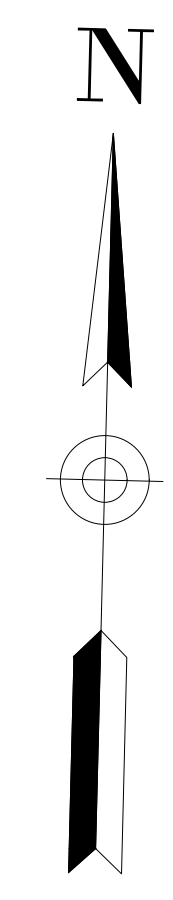


**FIXED CONSTRUCTION WARNING SIGN PLAN**

SCALE: 1" = 150'

**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



SEAL							DESIGNER REVIEWER
SCALE: HORZ.: 1" = 150'	VERT.: -						
DATUM: -	HORZ.: -						
						GRAPHIC SCALE	
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<p>TOWN OF MONTAGUE          TEMP. TRAFFIC MANAGEMENT PLANS          FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD          BUS STOP IMPROVEMENTS MASSACHUSETTS</p>							
<p>PROJ. No.: 20240059.A10          DATE: AUGUST 2024</p>							
CT-103							

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 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

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 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**

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	1,480
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

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 WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS  
 ABBREVIATIONS  
 DATE OF ISSUE: 07/01/2023  
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 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)**

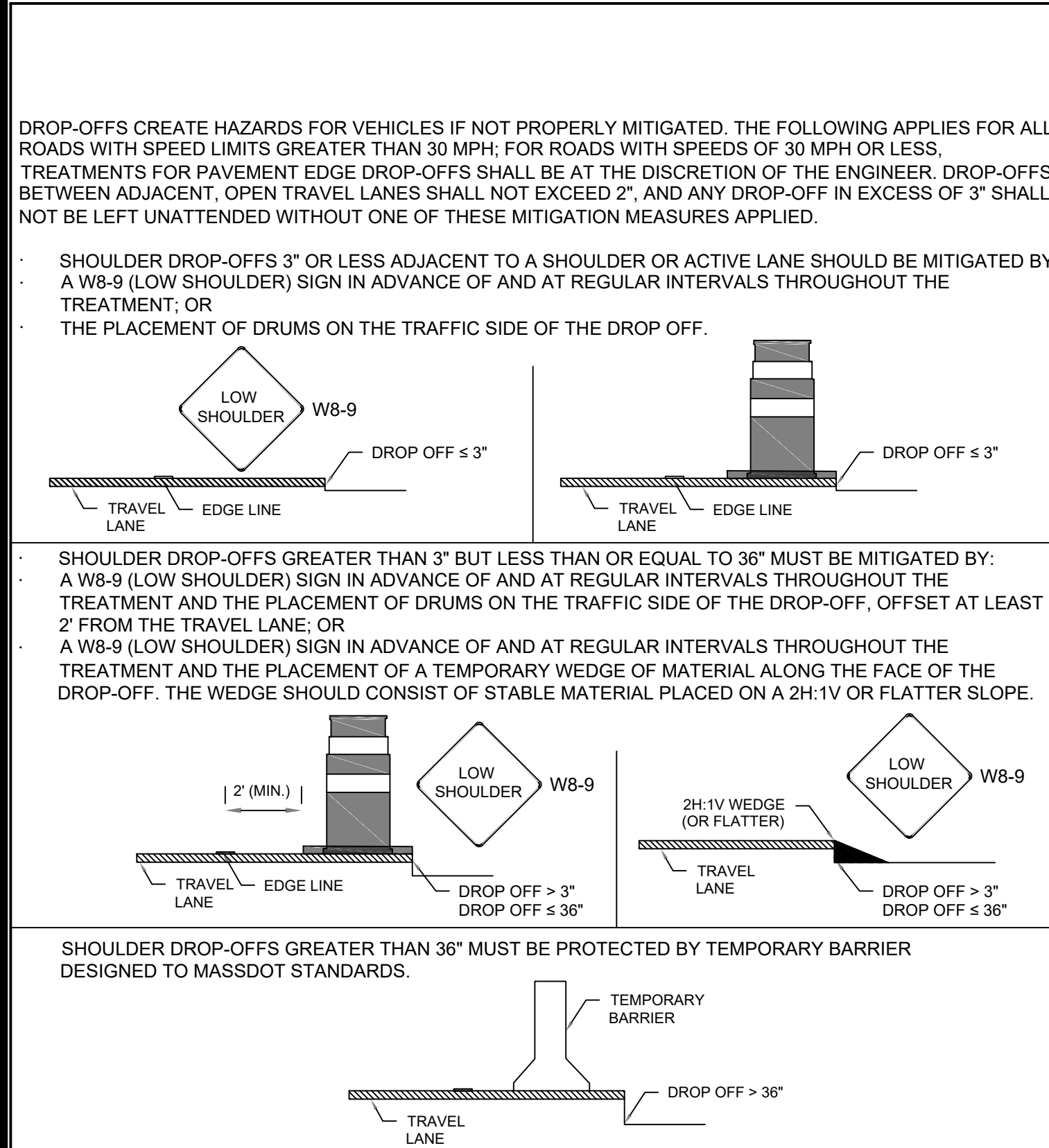
SPEED (S) IN MPH	WIDTH OF OFFSET (W) IN FT.			
	9	10	11	12
25 OR BELOW	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840

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

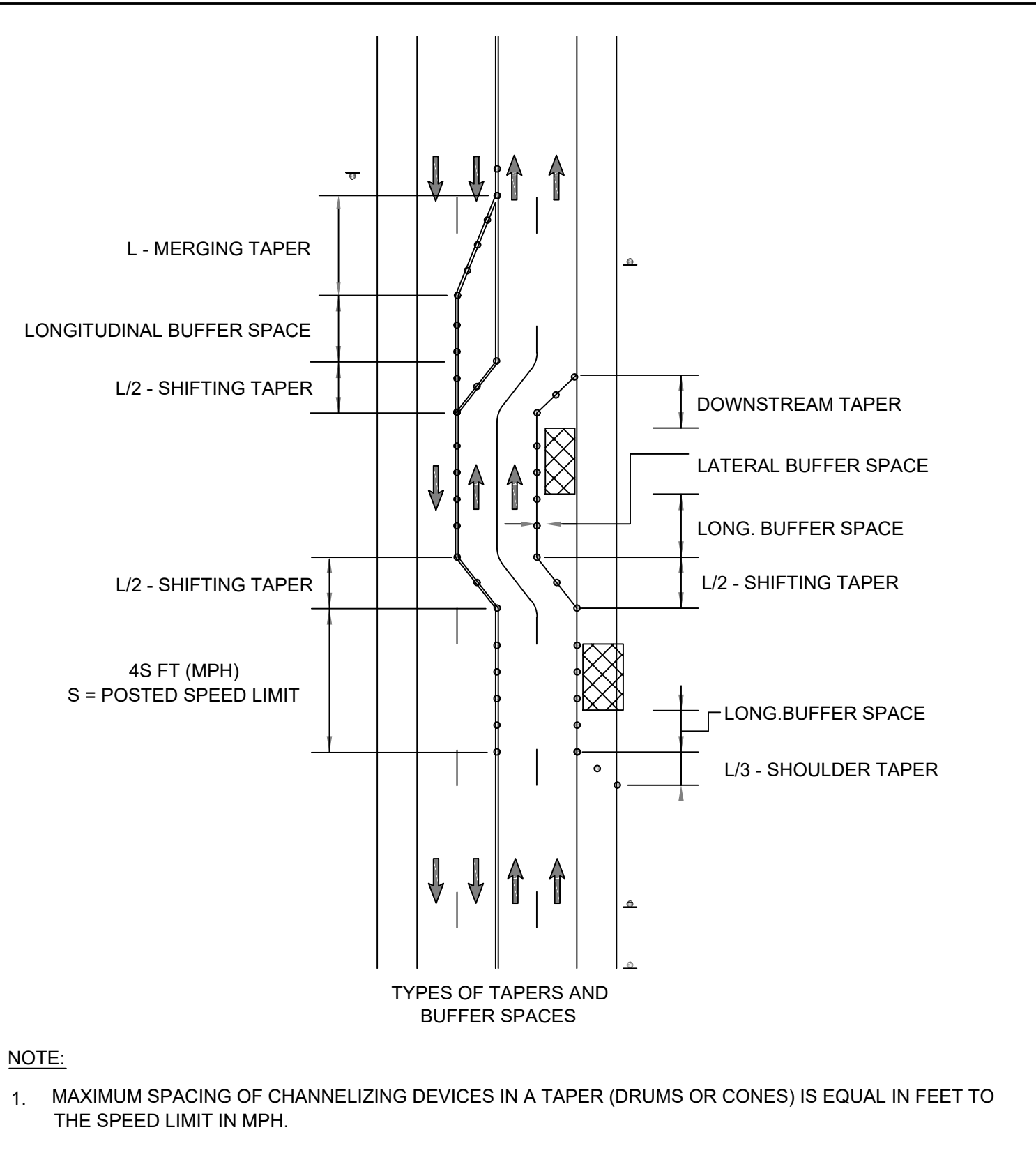
**massDOT** Highway Division  
 WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS  
 TYPICAL COMPONENTS OF A TEMPORARY TRAFFIC CONTROL SETUP  
 DATE OF ISSUE: 07/01/2023  
 REVISIONS:  
 FIGURE NO.: GEN-7

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 1550 MAIN STREET, SUITE 400  
 SPRINGFIELD, MA 01103  
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 www.foss.com  
 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**

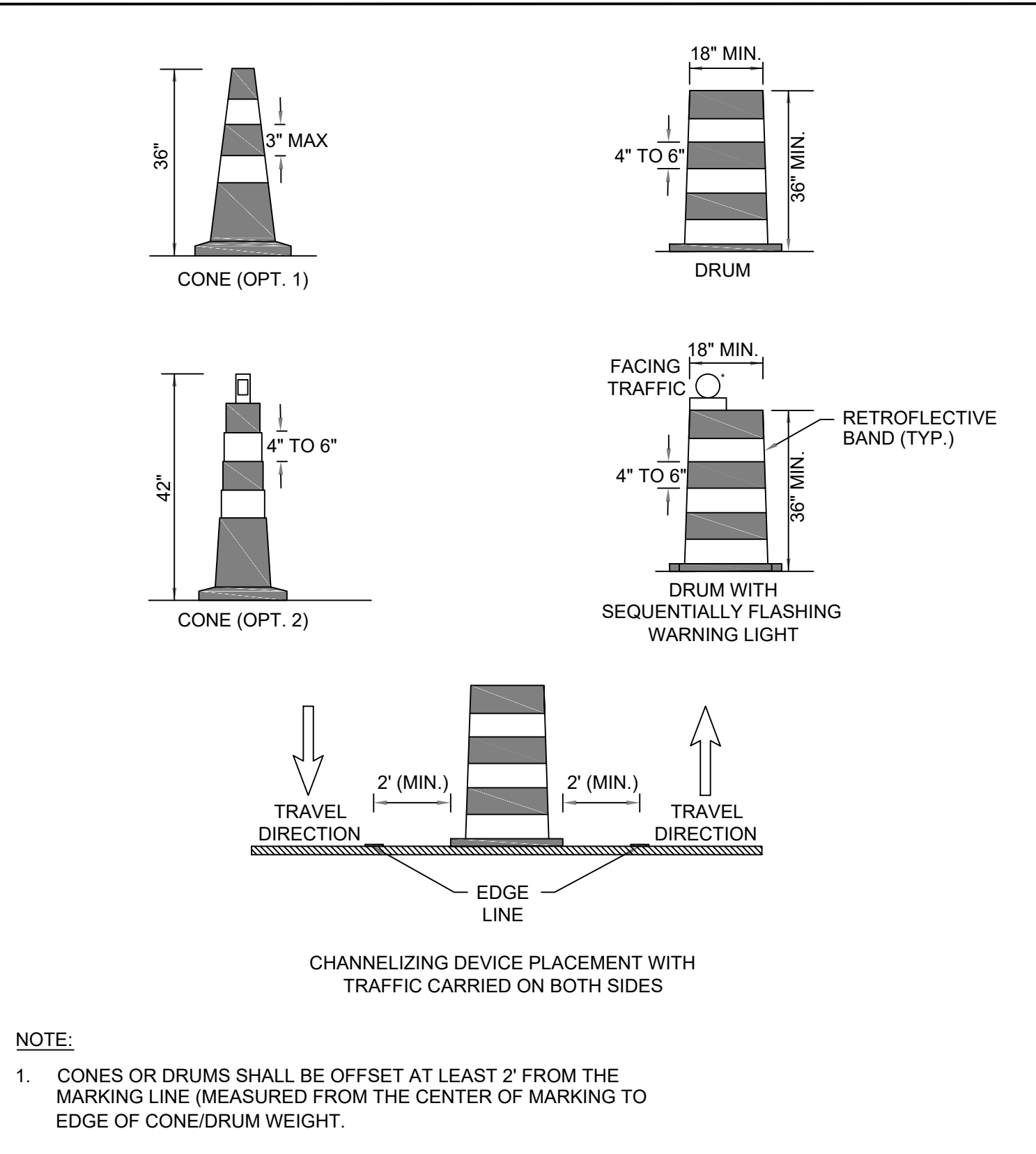
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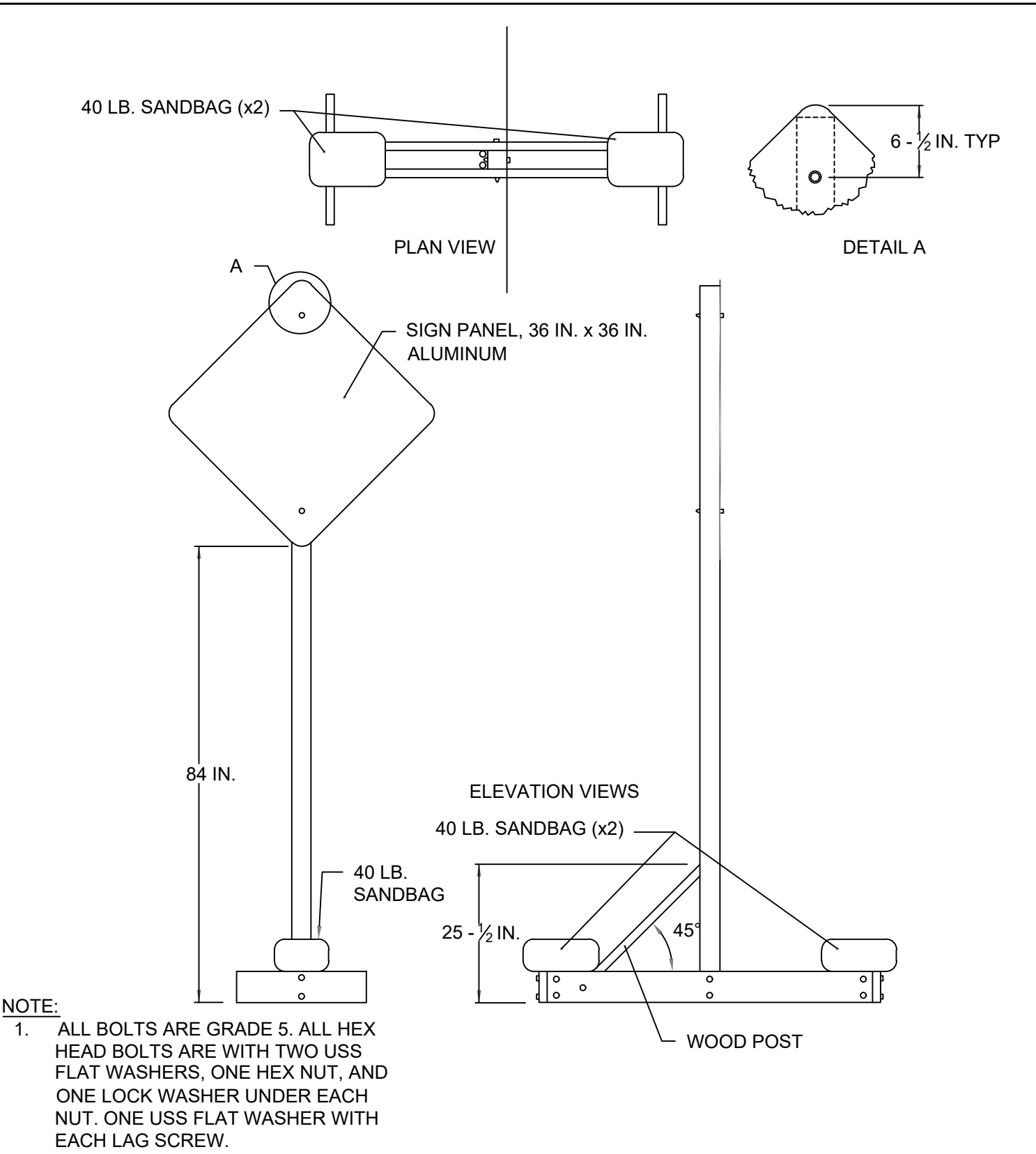
 MASSDOT Massachusetts Department of Transportation Highway Division	PAVEMENT EDGE DROP-OFF GUIDANCE	DATE OF ISSUE	07/01/2023
		REVISED	
WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS		FIGURE NO.	GEN-8



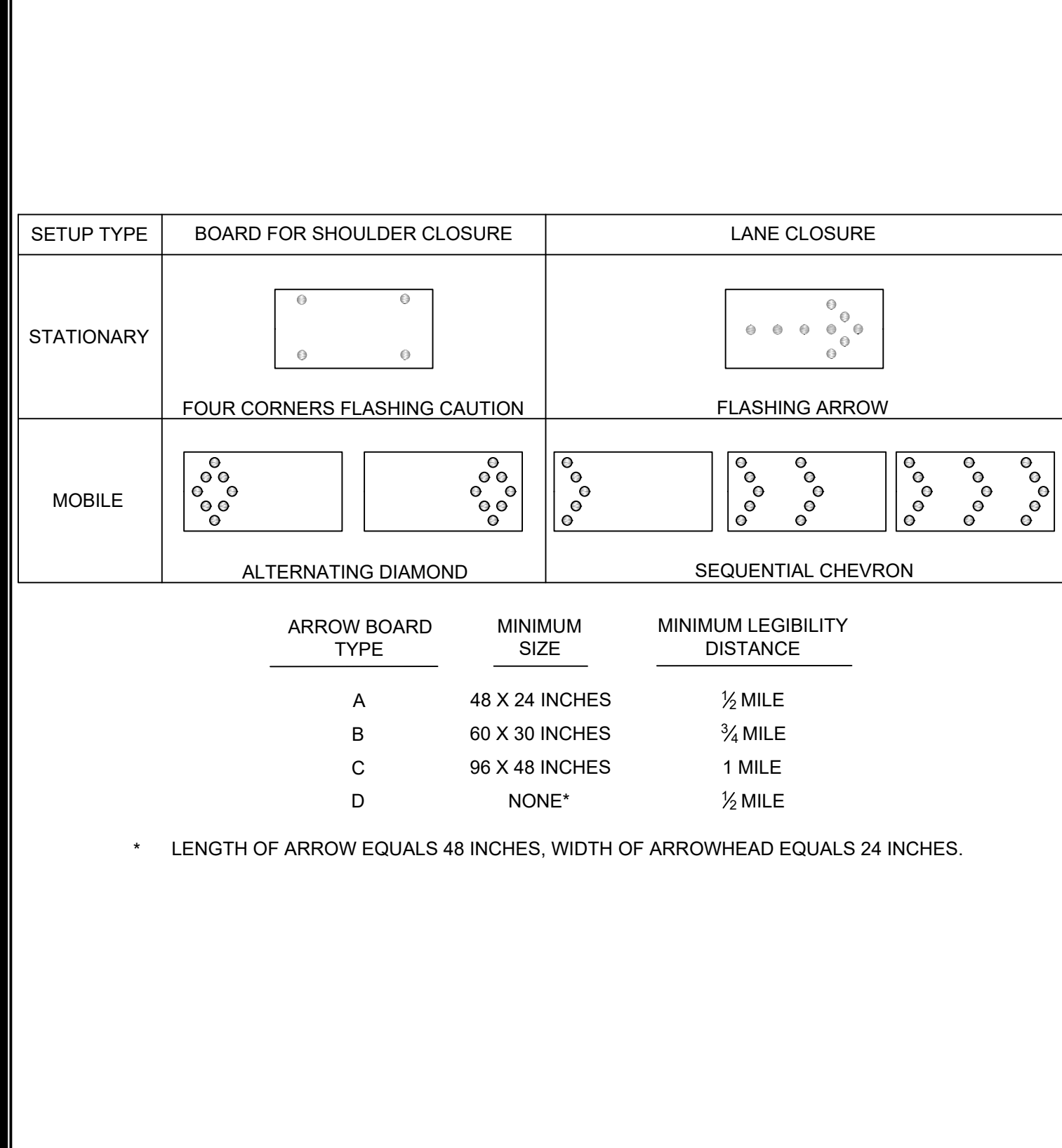
 MASSDOT Massachusetts Department of Transportation Highway Division	CONES & TYPES OF TAPERS AND BUFFER SPACES	DATE OF ISSUE	07/01/2023
		REVISED	
WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS		FIGURE NO.	GEN-11



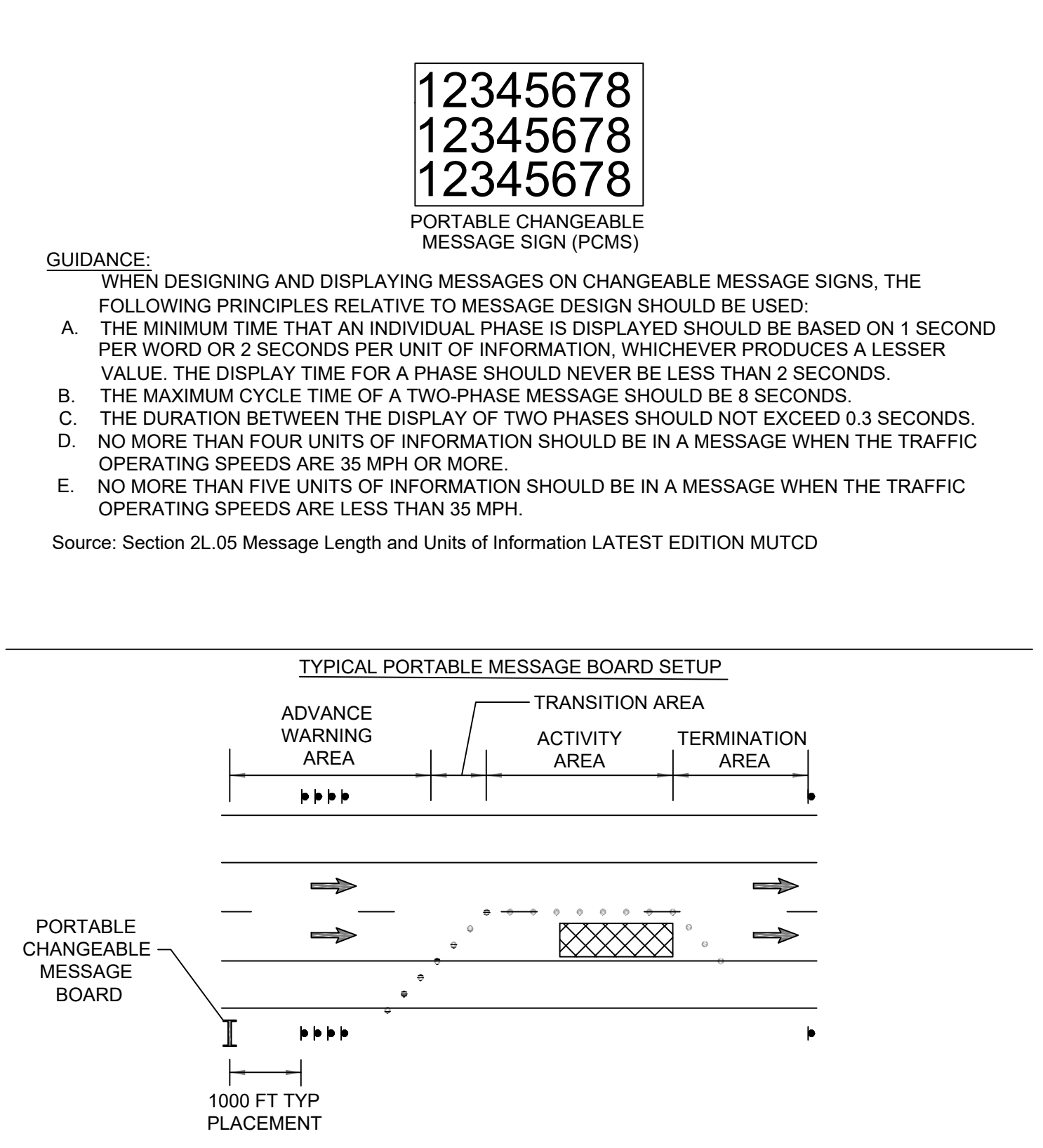
 MASSDOT Massachusetts Department of Transportation Highway Division	CONES & DRUMS	DATE OF ISSUE	07/01/2023
		REVISED	
WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS		FIGURE NO.	GEN-12



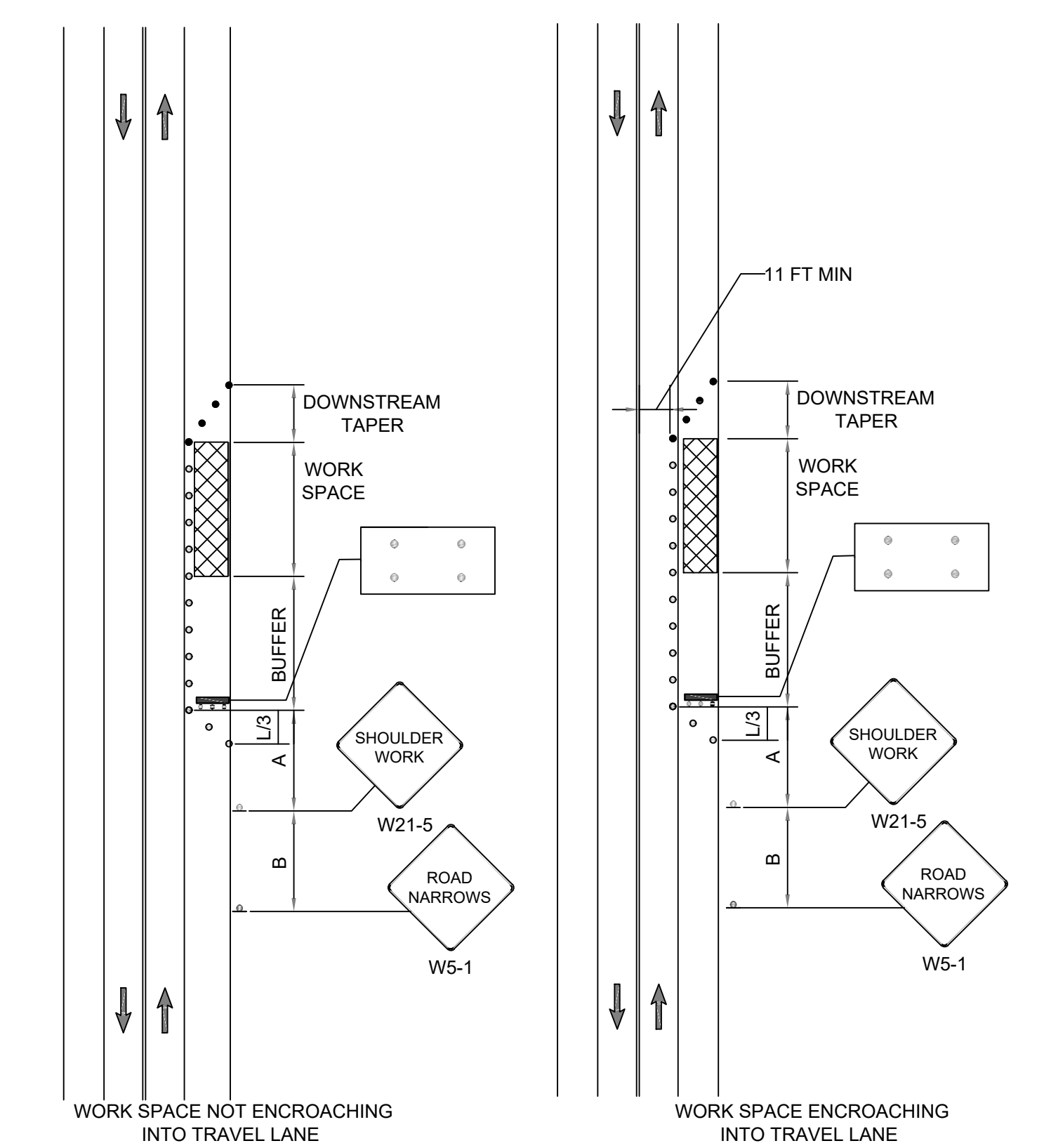
 MASSDOT Massachusetts Department of Transportation Highway Division	GENERIC CRASH TESTED TEMPORARY SIGN STANDS	DATE OF ISSUE	07/01/2023
		REVISED	
WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS		FIGURE NO.	GEN-16



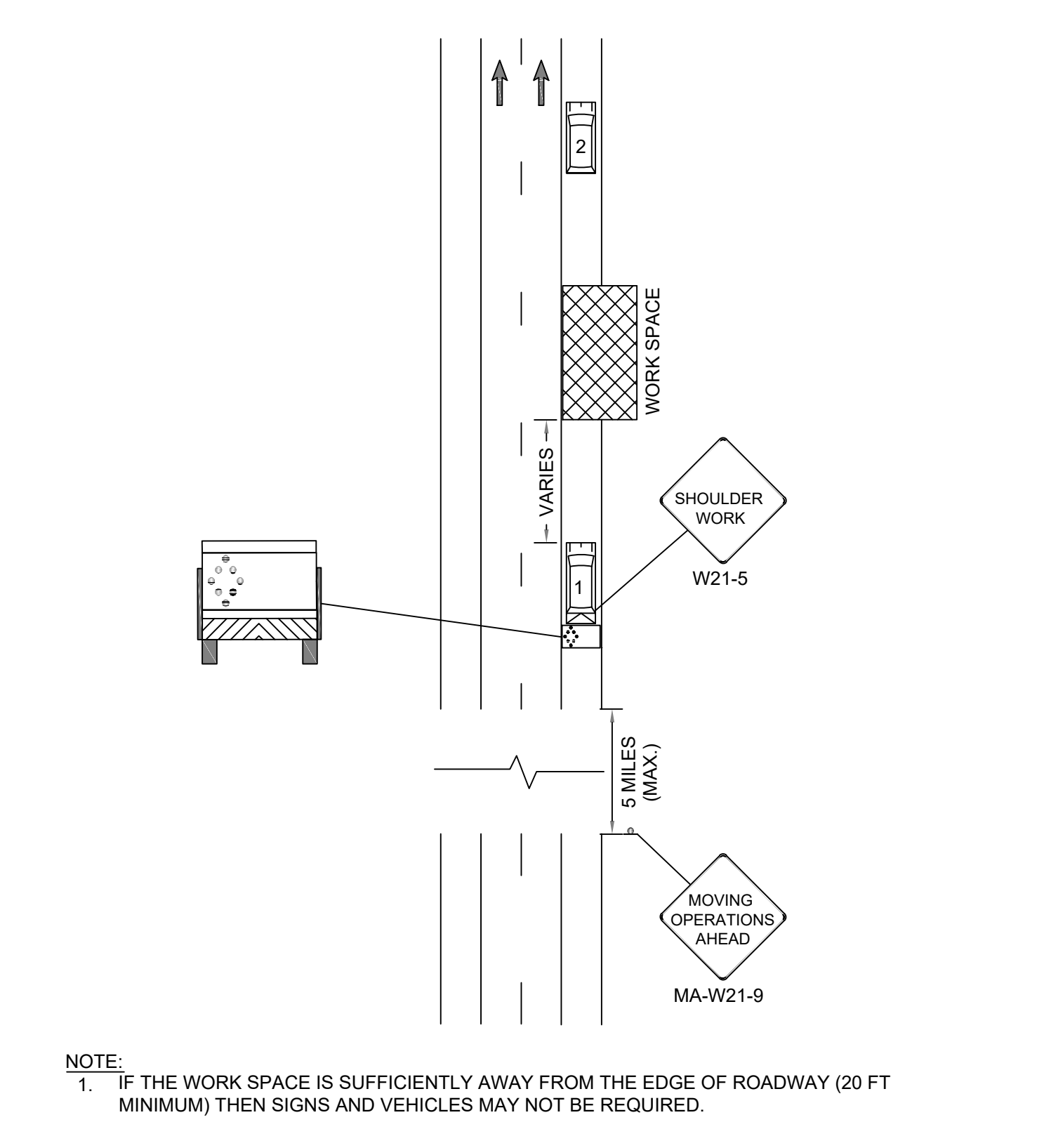
 MASSDOT Massachusetts Department of Transportation Highway Division	ARROW BOARD	DATE OF ISSUE	07/01/2023
		REVISED	
WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS		FIGURE NO.	GEN-18



 MASSDOT Massachusetts Department of Transportation Highway Division	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)	DATE OF ISSUE	07/01/2023
		REVISED	
WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS		FIGURE NO.	GEN-20



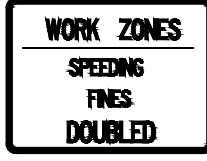





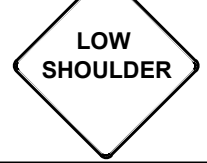
 MASSDOT Massachusetts Department of Transportation Highway Division	TWO LANE UNDIVIDED ROADWAY SHOULDER CLOSED	DATE OF ISSUE	07/01/2023
		REVISED	
WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS		FIGURE NO.	TL-9




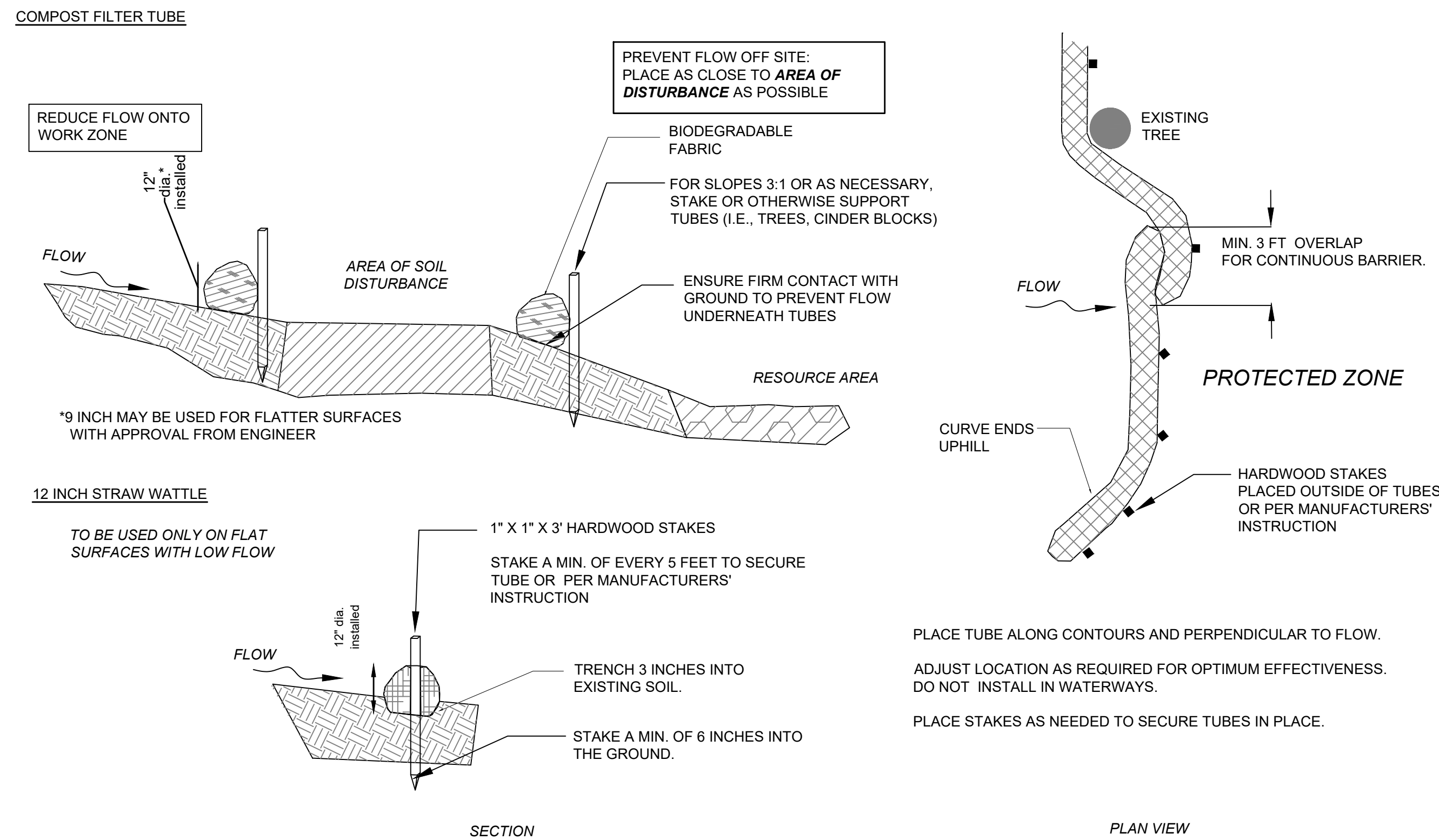
 MASSDOT Massachusetts Department of Transportation Highway Division	MOBILE OPERATIONS ANY ROADWAY - ON OR BEYOND RIGHT SHOULDER	DATE OF ISSUE	07/01/2023
		REVISED	
WORK ZONE SAFETY STANDARD DETAILS AND DRAWINGS		FIGURE NO.	MBL-1

DESIGNER	REVIEWER
DATE	DATE
NO.	NO.
DESCRIPTION	
SEAL	
HORIZ.: NOT TO SCALE	
VERT.:	
DATUM:	
HORIZ.:	
VERT.:	
<b>FUSS &amp; O'NEILL</b> 1550 MAIN STREET, SUITE 400 SPRINGFIELD, MA 01103 413.452.0445 www.fuss.com	
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-105	

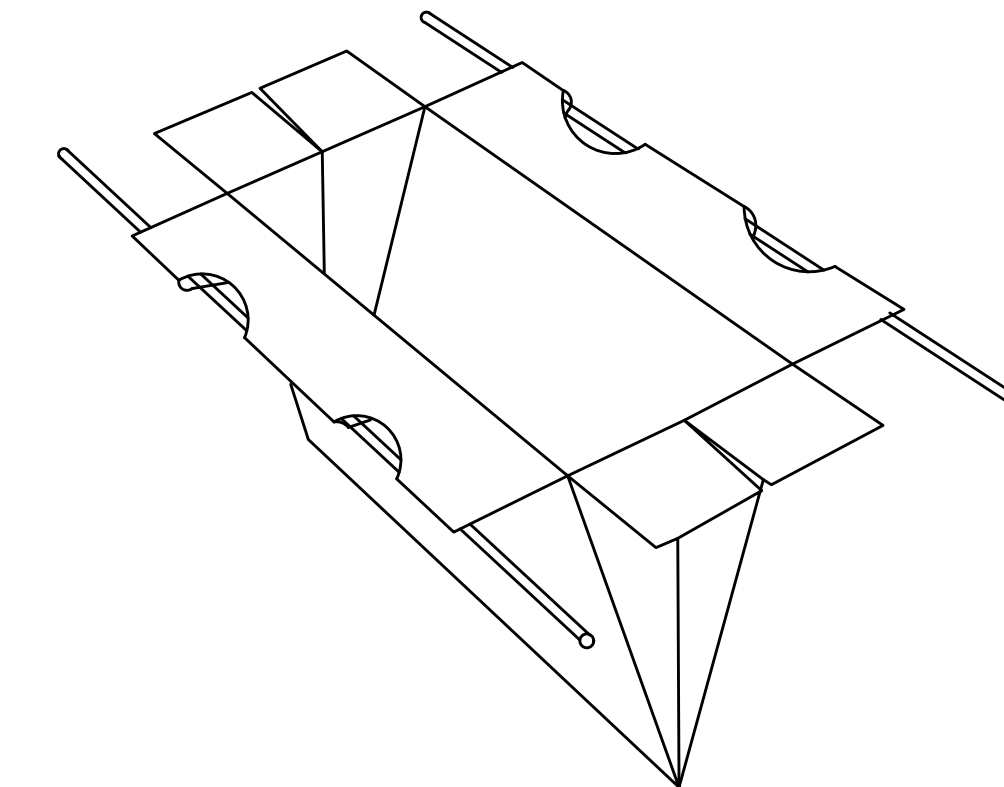
**TYPICAL CONSTRUCTION SIGNING**  
N.T.S.

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			COLOR			SIGN FACE AREA (S.F.)	ESTIMATED QTY
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK- GROUND	LEGEND	BORDER		
MA-R2-10a	48	36		SEE MassDOT 2020 STANDARD SIGNS BOOK			FLOUR. ORANGE WHITE	BLACK	BLACK	12.00	6
MA-R2-10e	36	48					FLOUR. ORANGE WHITE	BLACK	BLACK	12.00	3
MA-W21-9	36	36					FLOUR. ORANGE	BLACK	BLACK	9.00	2
W20-1c	36	36		SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			FLOUR. ORANGE	BLACK	BLACK	9.00	3
W21-5	36	36					FLOUR. ORANGE	BLACK	BLACK	9.00	2
W5-1	36	36					FLOUR. ORANGE	BLACK	BLACK	9.00	3
W8-9	36	36					FLOUR. ORANGE	BLACK	BLACK	9.00	2

SCALE: HORZ.: NOT TO SCALE VERT.: DATUM: HORZ.: - VERT.: -	SEAL	DESIGNER REVIEWER
 1550 MAIN STREET, SUITE 400 SPRINGFIELD, MA 01103 413.426.0446 www.foss.com		
TOWN OF MONTAGUE TEMP. TRAFFIC SIGN SUMMARY SHEET FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS MASSACHUSETTS MONTAGUE		
PROJ. No.: 20240059.A10 DATE: AUGUST 2024		
CT-602		

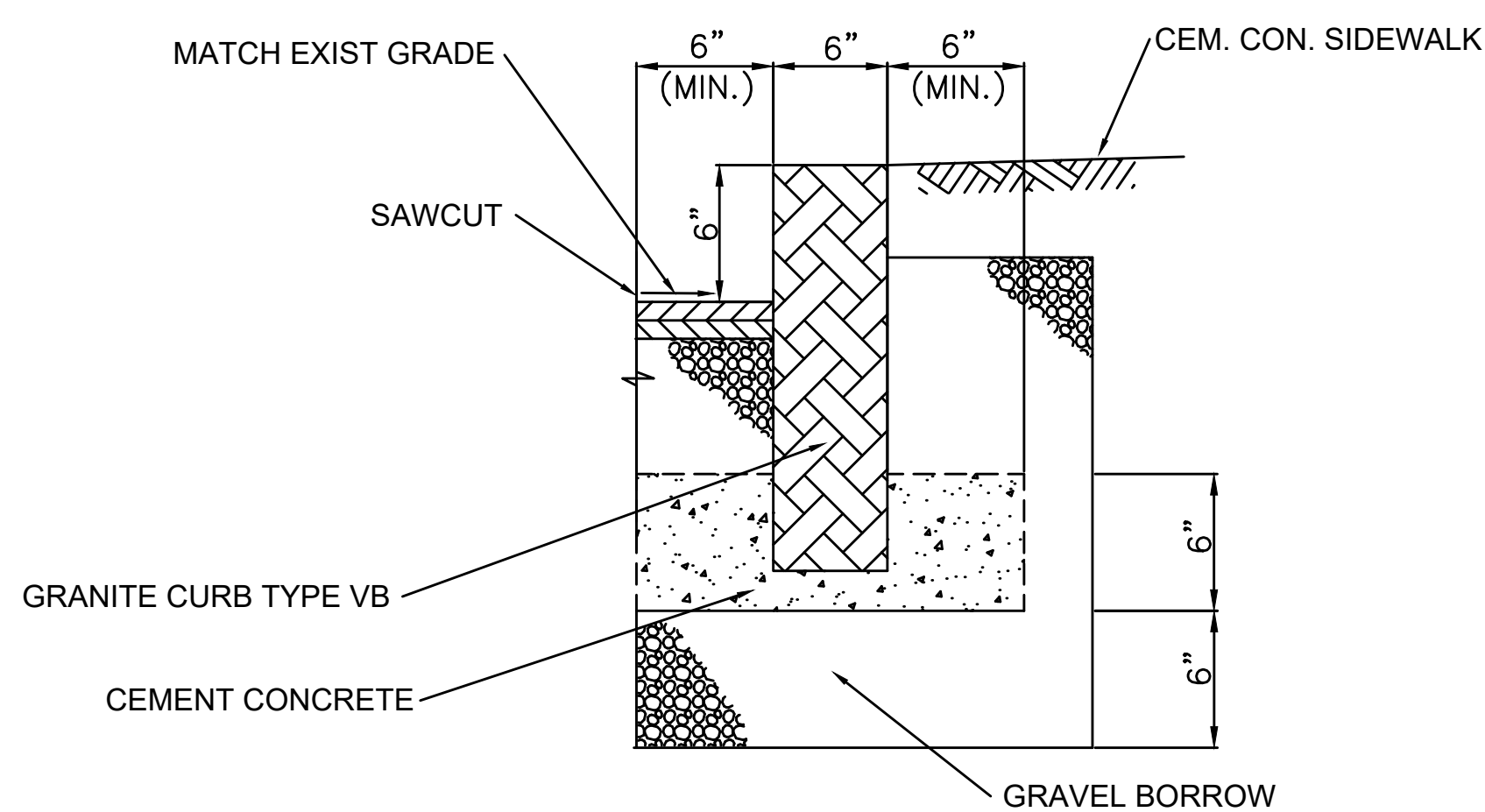


1 SEDIMENT BARRIERS – COMPOST FILTER TUBES  
SCALE: N.T.S.



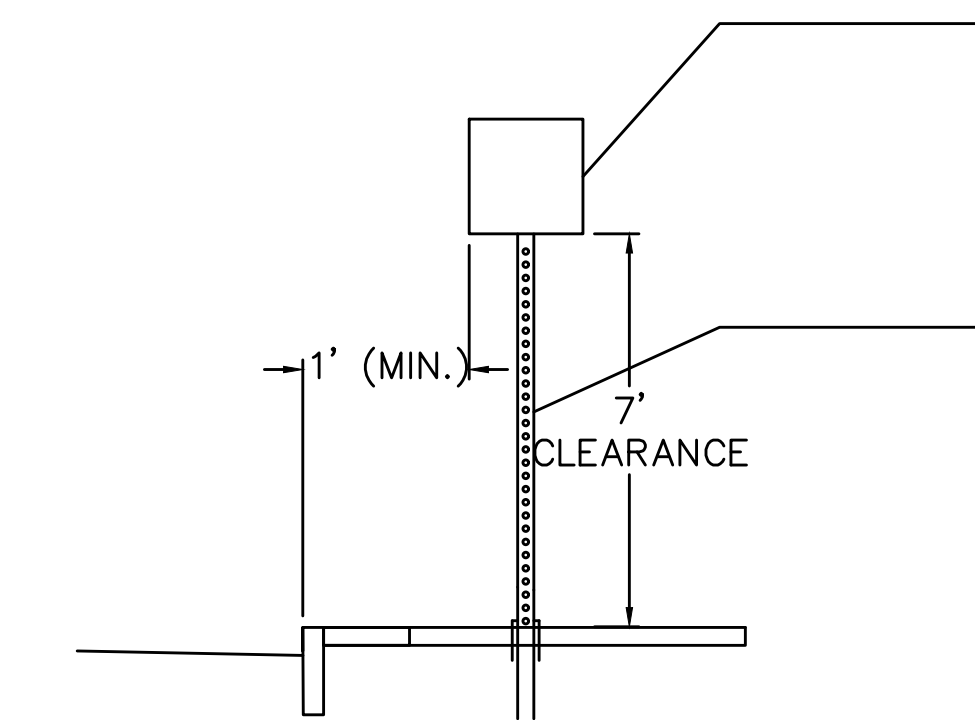
- NOTES:
1. SIZED TO FIT ANY SIZE OR SHAPE CATCH BASIN.
  2. ALL SEAMS DOUBLE STITCHED.
  3. PERMEABILITY - REGULAR FLOW SILTSACK - 40 gal./min./sq. ft.  
HI - FLOW SILTSACK - 200 gal./min./sq. ft.

2 CATCH BASIN SILT SACK  
SCALE: N.T.S.



- NOTES:
1. LENGTH OF CURB VARIES TO FIT RADIUS. 2 FT. MIN.
  2. ENDS SHALL BE SQUARE TO TOP AND RADIAL TO FACE.
  3. BUTT ENDS TOGETHER AS CLOSE AS POSSIBLE. MAXIMUM SPACE OF 1/2" ALLOWED. 8" DOWN FROM TOP. JOINT SHALL BE MORTARED FULL DEPTH.
  4. 1/2" EXPANSION JOINT EVERY 50± FEET.
  5. CURBS TO BE SET ON A RADIUS OF 100 FEET OR LESS SHALL BE CUT TO THE CURVE REQUIRED, AND THEIR ENDS CUT ON RADIAL LINES.
  6. SAWCUT SHALL BE 6" FROM THE PROPOSED FACE OF CURB.

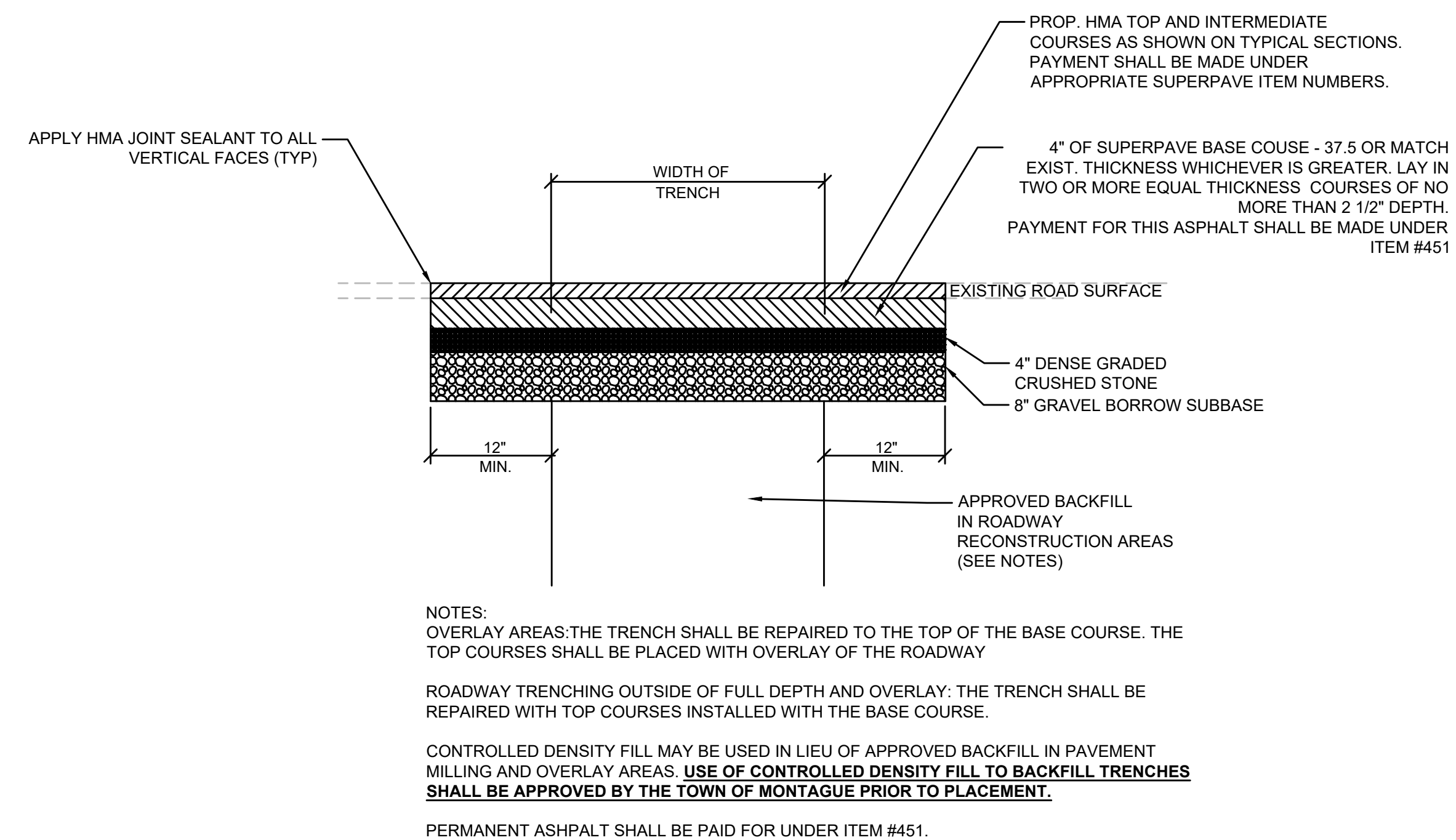
3 GRANITE CURB  
SCALE: N.T.S.



SIGNAGE TYPE AND SIZE PER SIGNING AND PAVEMENT MARKING PLANS

2" P-5 TELESCOPIC POST WITH FACTORY COATED BLACK FINISH. SEE MASSDOT TYPICAL INSTALLATION AND SIGN POST DETAILS TR.1.2 AND TR.1.3

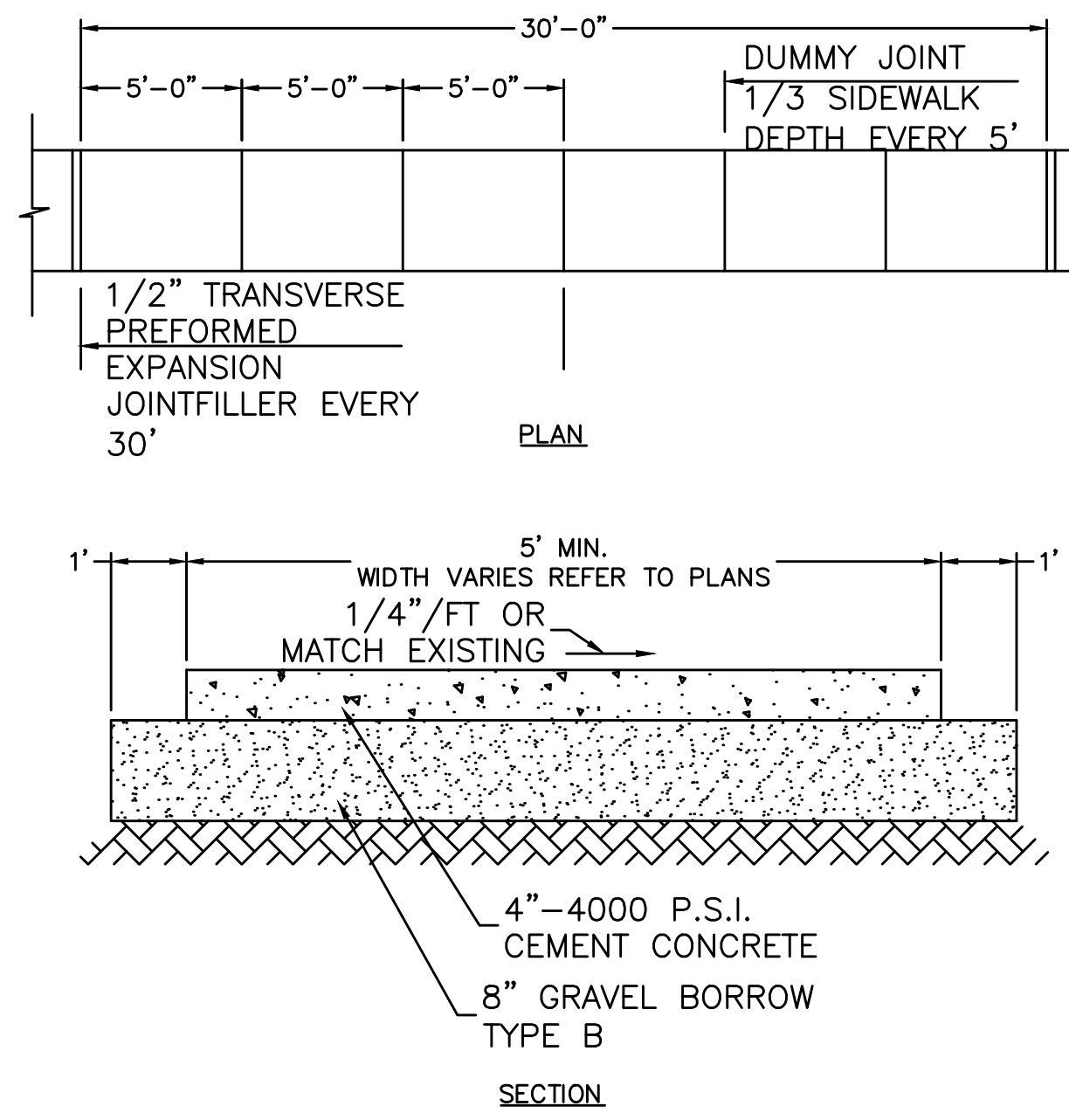
4 TYPICAL SIGN MOUNTING LOCATION  
SCALE: N.T.S.



NOTES:  
OVERLAY AREAS: THE TRENCH SHALL BE REPAIRED TO THE TOP OF THE BASE COURSE. THE TOP COURSES SHALL BE PLACED WITH OVERLAY OF THE ROADWAY  
ROADWAY TRENCHING OUTSIDE OF FULL DEPTH AND OVERLAY: THE TRENCH SHALL BE REPAIRED WITH TOP COURSES INSTALLED WITH THE BASE COURSE.  
CONTROLLED DENSITY FILL MAY BE USED IN LIEU OF APPROVED BACKFILL IN PAVEMENT MILLING AND OVERLAY AREAS. USE OF CONTROLLED DENSITY FILL TO BACKFILL TRENCHES SHALL BE APPROVED BY THE TOWN OF MONTAGUE PRIOR TO PLACEMENT.  
PERMANENT ASPHALT SHALL BE PAID FOR UNDER ITEM #451.

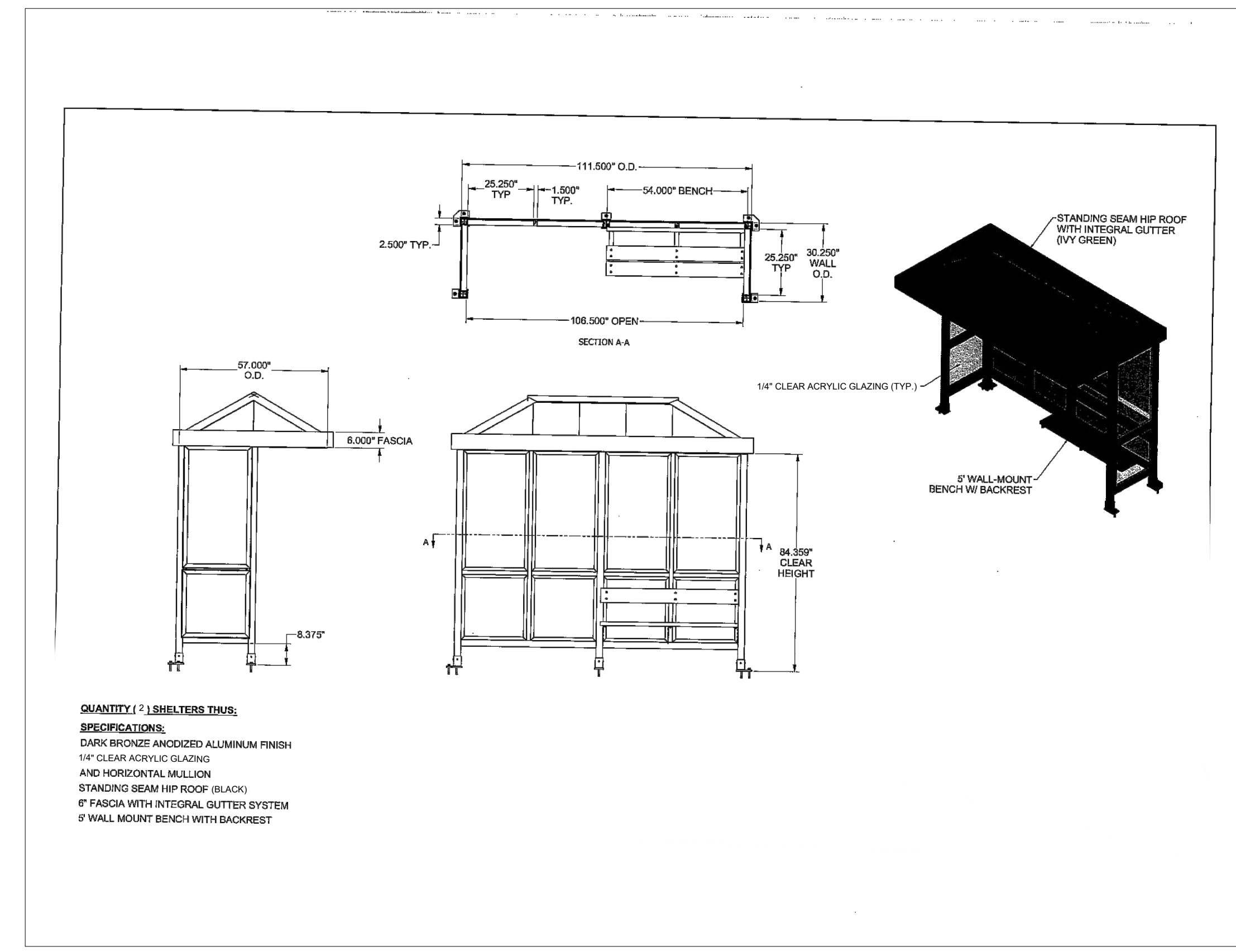
5 PERMANENT PAVEMENT TRENCH REPAIR IN ROADWAYS  
SCALE: N.T.S.





- 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.

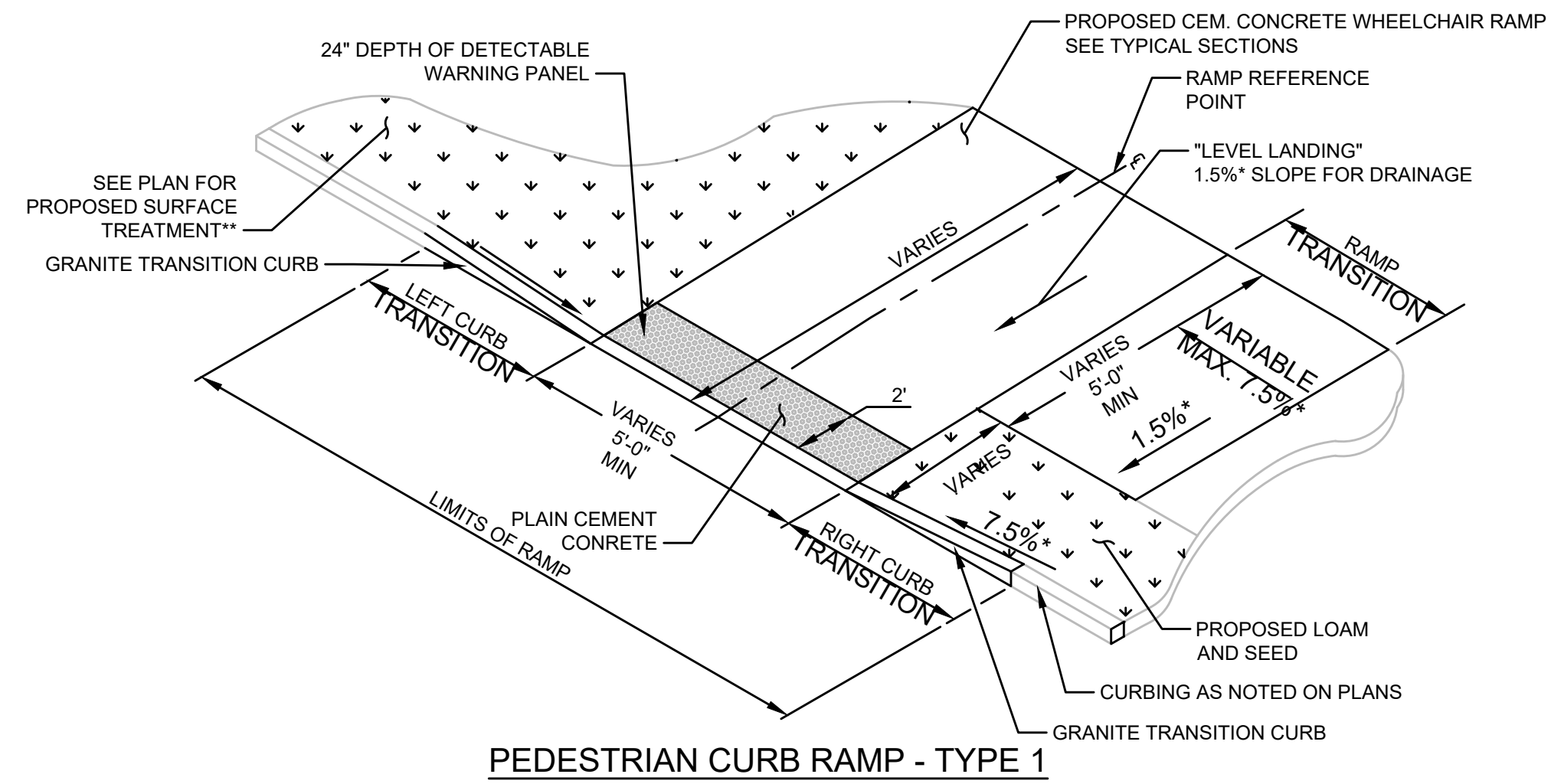


**QUANTITY ( 2 ) SHELTERS THIS:**  
**SPECIFICATIONS:**  
DARK BRONZE ANODIZED ALUMINUM FINISH  
1/4" CLEAR ACRYLIC GLAZING  
AND HORIZONTAL MULLION  
STANDING SEAM HIP ROOF (BLACK)  
6" FASCIA WITH INTEGRAL GUTTER SYSTEM  
9" WALL MOUNT BENCH WITH BACKREST

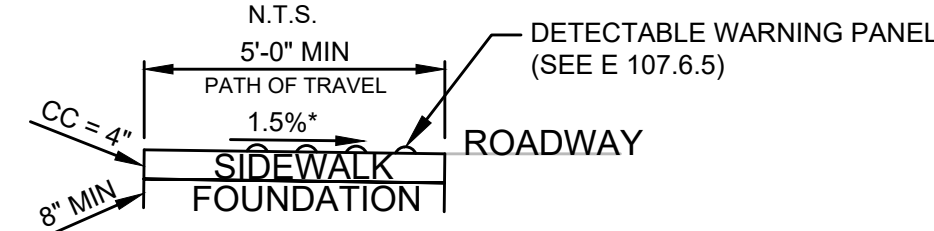
**7** PEDESTRIAN BUS SHELTER  
SCALE: N.T.S.

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

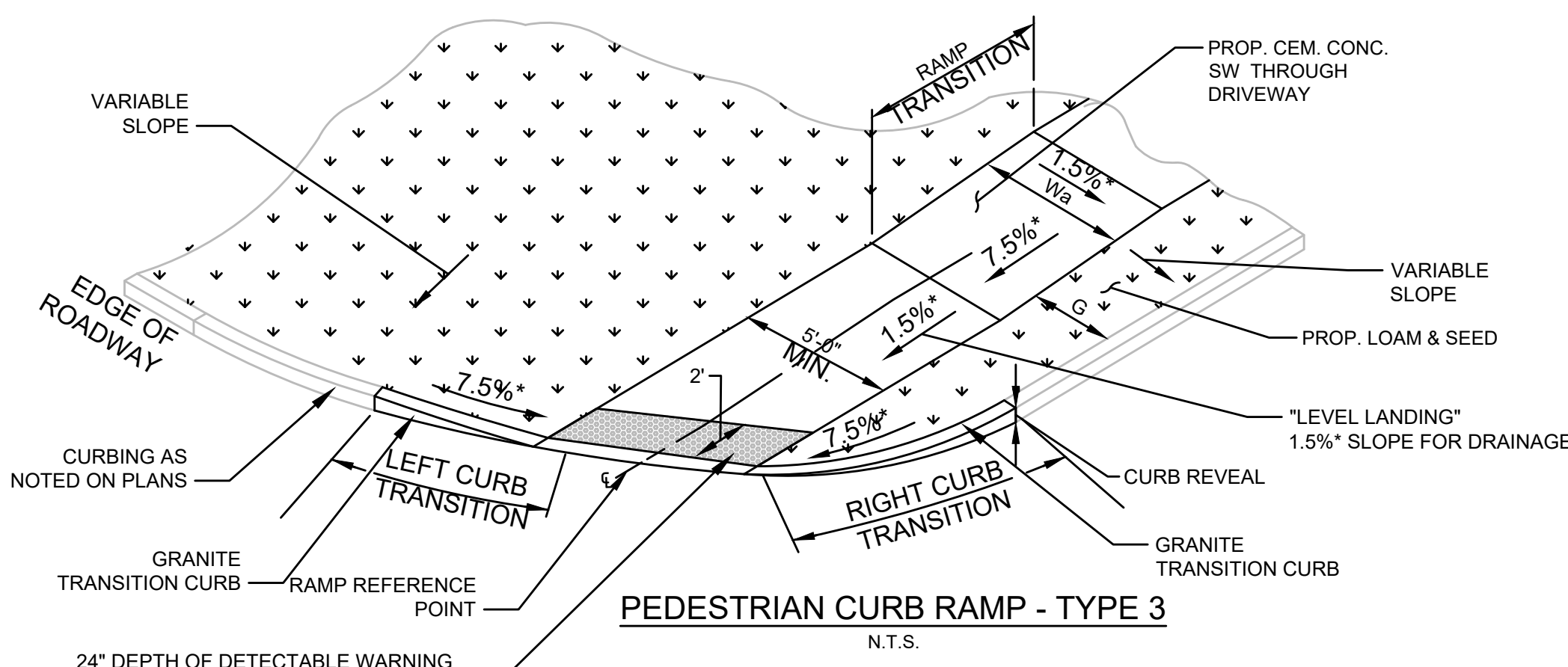
DESIGNER REVIEWER	
DESCRIPTION	
DATE	
No.	
SEAL	
SCALE:	HORZ.: NOT TO SCALE
	VERT.:
DATUM:	HORZ.: -
	VERT.: -
<b>FUSS &amp; O'NEILL</b> 1550 MAIN STREET, SUITE 400 SPRINGFIELD, MA 01103 413.452.0446 www.foss.com	
TOWN OF MONTAGUE CONSTRUCTION DETAILS FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD BUS STOP IMPROVEMENTS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



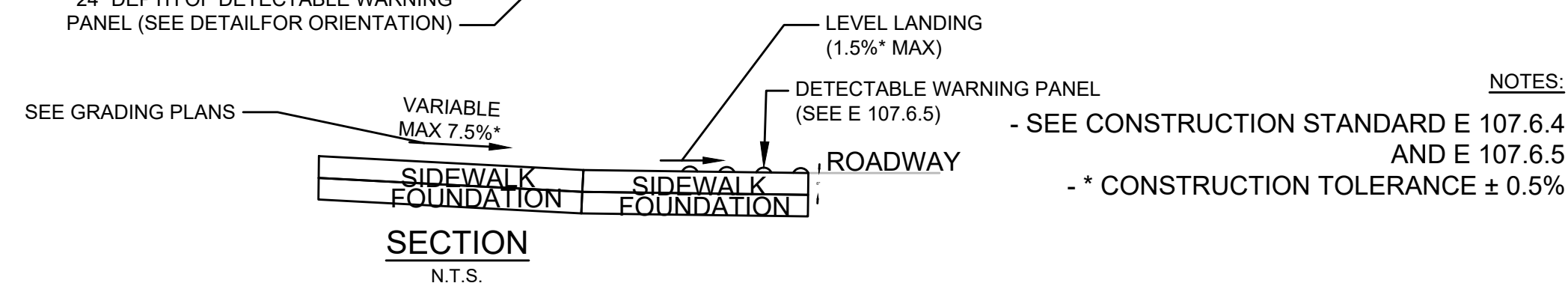
PEDESTRIAN CURB RAMP - TYPE 1



SECTION  
N.T.S.

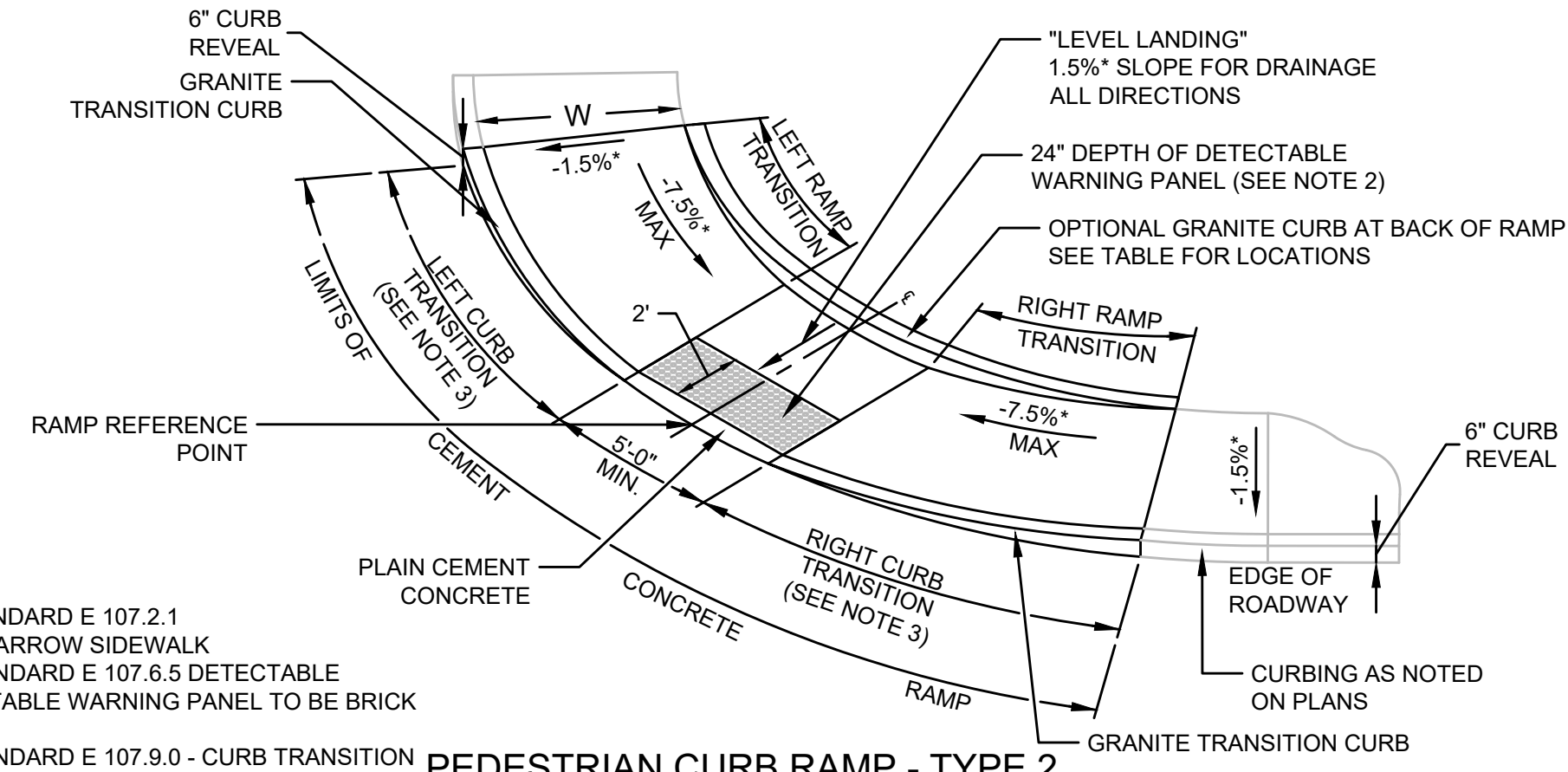


PEDESTRIAN CURB RAMP - TYPE 3

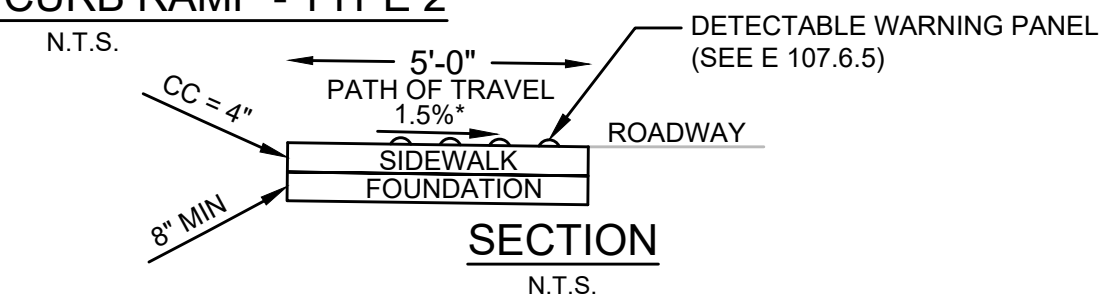


NOTES:

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



PEDESTRIAN CURB RAMP - TYPE 2



SECTION  
N.T.S.

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%

SEAL

SCALE: HORZ.: NOT TO SCALE

VERT.: -

DATUM: HORZ.: -

VERT.: -

SCALE: HORZ.: NOT TO SCALE

VERT.: -

DATUM: HORZ.: -

VERT.: -

TOWN OF MONTAGUE

PEDESTRIAN CURB RAMP DETAILS

FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD  
BUS STOP IMPROVEMENTS

MONTAGUE MASSACHUSETTS

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

CD-503

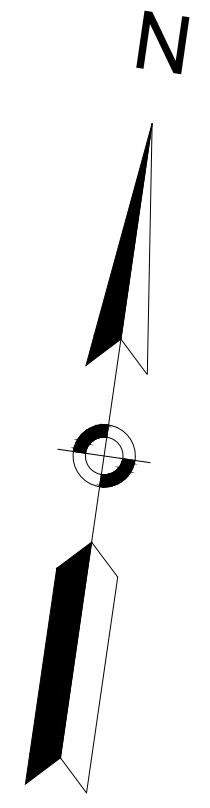
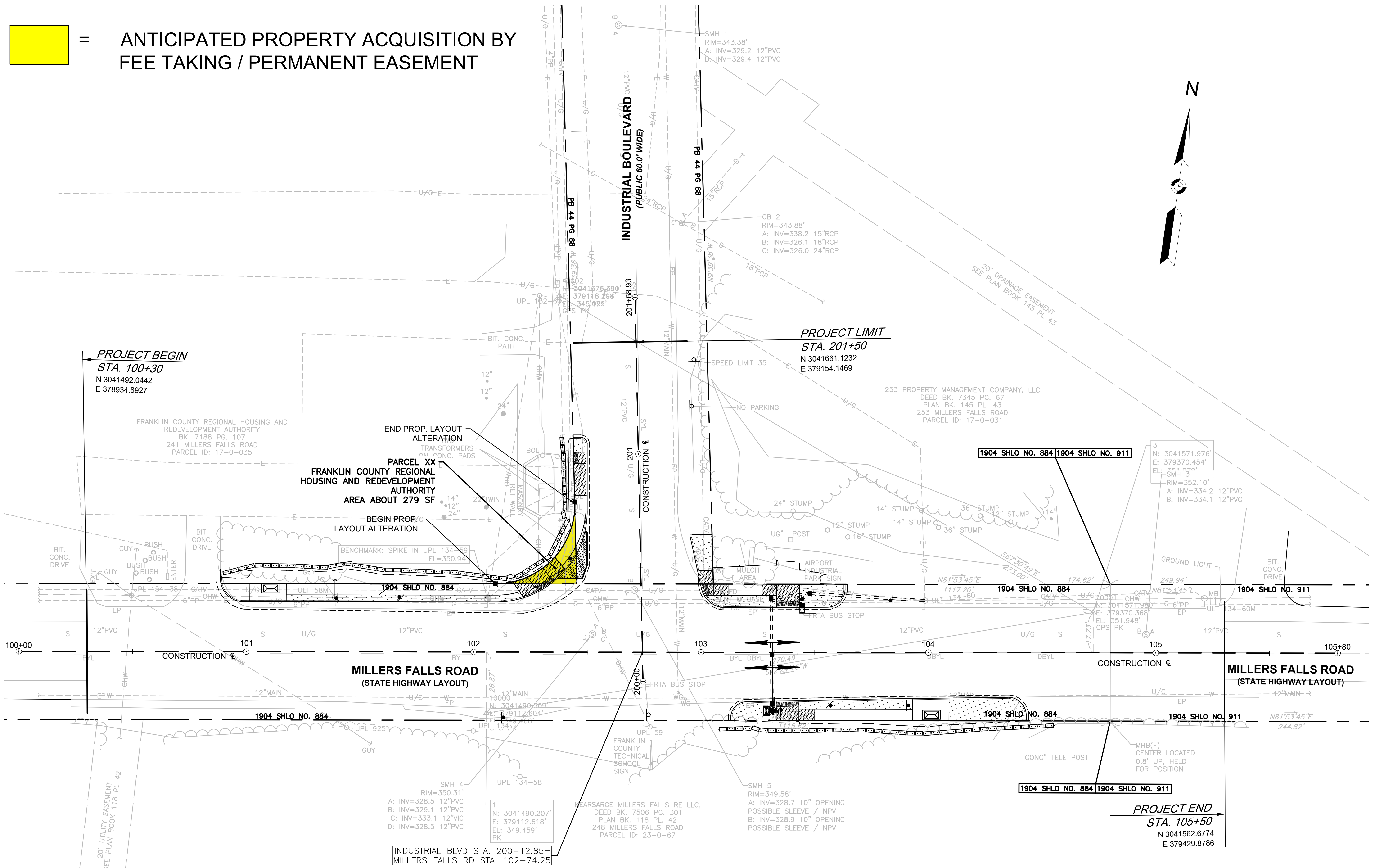
DESIGNER REVIEWER

DESCRIPTION

DATE

No.

 = ANTICIPATED PROPERTY ACQUISITION BY FEE TAKING / PERMANENT EASEMENT



<b>FUSS &amp; O'NEILL</b> 1550 MAIN STREET, SUITE 400 SPRINGFIELD, MA 01103 www.foss.com	<b>TOWN OF MONTAGUE</b> <b>ANTICIPATED ROW OF IMPACT</b> <b>FRTA - INDUSTRIAL BLVD/MILLERS FALLS RD</b> <b>BUS STOP IMPROVEMENTS MASSACHUSETTS</b> MONTAGUE
SCALE: HORZ.: 1" = 20' VERT.: - DATUM: - GRAPHIC SCALE: 0 10' 20' 40'	SEAL No. _____ DATE _____ DESIGNER REVIEWER _____
PROJ. No.: 20240059.A10 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/ SIMME SEATS		\$ 436,831
ALTERNATIVE #4 PEDESTRIAN HYBRID BEACON (HAWK) W/ 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

## 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