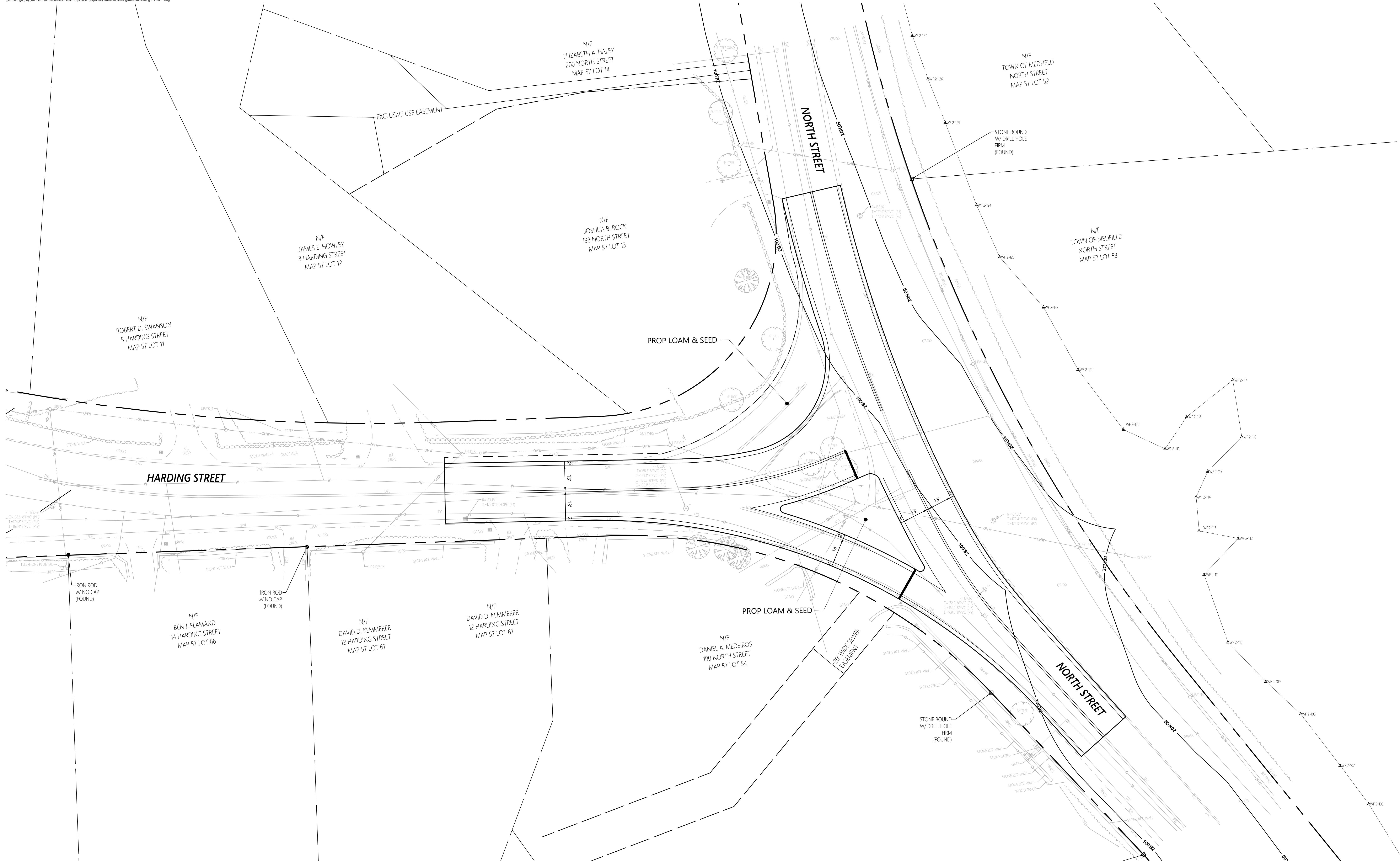




Select Board Meeting  
Meeting Packet  
January 7, 2025



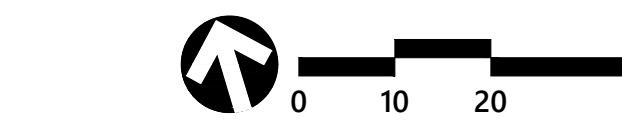




## Harding St at North St - Option 1 - Harding St EB Stop Cont

# Planning Starts Now for Offsite Improvements at Medfield State Hospital

## Medfield, MA





## CONCEPTUAL CONSTRUCTION COST ESTIMATE

FULL BUILD OUT

**North at Harding - Option 1**

**Conceptual Estimate**

**Medfield, MA**

**Job Number:** 15677.00  
**Date:** December 10, 2024  
**Preparer:** BMM  
**Checked by:** DMK

Description	Unit Price	Quantity	Total Cost
Full Depth Pavement	\$141.00 /SY	2074 SY	\$292,432.43
Loam & Seed	\$38.00 /SY	421 SY	\$15,986.60
Granite Curbing	\$1,000.00 /LS	1 LS	\$1,000.00
Signing & Striping	\$3,900.00 /LS	1 LS	\$3,900.00
		Subtotal:	\$313,319.03
		Mobilization (3%):	\$9,399.57
		Construction Staking (3%):	\$9,399.57
		Design/Construction Contingencies (25%):	\$78,329.76
		Construction Staging/Traffic Management (15%):	\$46,997.86
		Traffic Police (5%):	\$15,665.95
		Escalation (4% each year for 2 years):	\$25,566.83
		Total:	\$498,678.57

**SAY: \$500,000.00**



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## ASSUMPTIONS

The following is an Order of Magnitude Cost Estimate.

The estimate prepared is for construction costs only.

*Additionally, The following assumptions were made in preparing the estimate:*

---

Where practical, costs are based on MassDOT's weighted average bid prices on state projects during the past 6 months in District 3.

Refer to concept plans for limits of work included in this estimate.

### **Milling & Overlay**

Assume no Milling & Overlay.

### **Full Depth Pavement**

Assume that full depth pavement includes: 1<sup>3</sup>/<sub>4</sub>" superpave surface course, 2" superpave intermediate course, 4" superpave base course, 4" dense graded crushed stone sub-base, and 8" gravel borrow

### **Cement Concrete PCR**

Assume no PCR's due to lack of existing/proposed sidewalks.

### **Loam & Seed**

Assume 4" loam and seed is used for all areas outside of pavement that is graded to meet existing.

### **Sidewalks**

Assume no proposed sidewalks.

### **Sawcutting**

Assume sawcuts are included in the respective items per the MassDOT 2024 Standard Specifications.

### **Granite Curbing**

Assume no proposed granite curb, and assume all existing curb is to be removed and discarded.



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### **Storm Drainage**

Assume that existing drainage structures and pipes within the project limits will be retained, adjusted, remodeled or rebuilt, and only additional structures will be added in to system.

### **Utilities**

Assume that the existing utilities will be retained.

### **Signing & Striping**

Assume removal and disposal or stacking of existing signs are covered in contingencies.

Assume all new signs will be required for the project.

Assume all new striping on the roadway within the project limit will be thermoplastic.

### **Miscellaneous**

Work not listed above or on the Conceptual Construction Cost Estimate are considered part of contingencies.

This estimate does not include costs associated with design, permitting, coordination with utility companies, providing a resident engineer, Town labor or right of way acquisitions.



## **ORDER OF MAGNITUDE COST ESTIMATE**

### **Full Depth Pavement (Superpave)**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Superpave Surface Course (Item 450.22)	1.75	0.0560 Ton/SY*in	\$182.00 /Ton	\$17.84
Superpave Intermediate Course (Item 450.31)	2	0.0560 Ton/SY*in	\$175.00 /Ton	\$19.60
Superpave Base Course (Item 450.42)	4	0.0560 Ton/SY*in	\$155.00 /Ton	\$34.72
Dense Graded Crushed Stone For Sub-Base (Item 402.)	4	0.0278 CY/in	\$90.00 /CY	\$10.01
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	16	0.0278 CY/in	\$70.00 /CY	\$30.65
Asphalt Emulsion for Tack Coat (Item 452.)	Apply 2	0.050 Gal/SY	\$8.75 /Gal	\$0.88
Calcium Chloride for Dust Control (Item 440.)	Apply 2	1.5 LB/SY	\$0.50 /LB	\$1.50
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
		per SY Total=		\$140.83
		<b><u>Full Depth Pavement COST PER SY=</u></b>	<b><u>\$141.00</u></b>	

### **Loam Borrow and Seed**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Loam Borrow (Item 751)	4	0.0278 Yd/in	\$100.00 /CY	\$11.12
Seed (Item 765)			\$3.00 /SY	\$3.00
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
		per SY Total=		\$37.47
		<b><u>Loam Borrow and Seed COST PER SY=</u></b>	<b><u>\$38.00</u></b>	



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### **ORDER OF MAGNITUDE COST ESTIMATE**

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**Granite Curbing**

Granite Curb R&amp;D (Item 594)

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
	\$14.00 /FT	52 FT	\$728.00
			\$728.00
<b><u>Granite Curbing SAY=</u></b>			<b><u>\$1,000.00</u></b>

**Signing & Striping**

Stop Sign

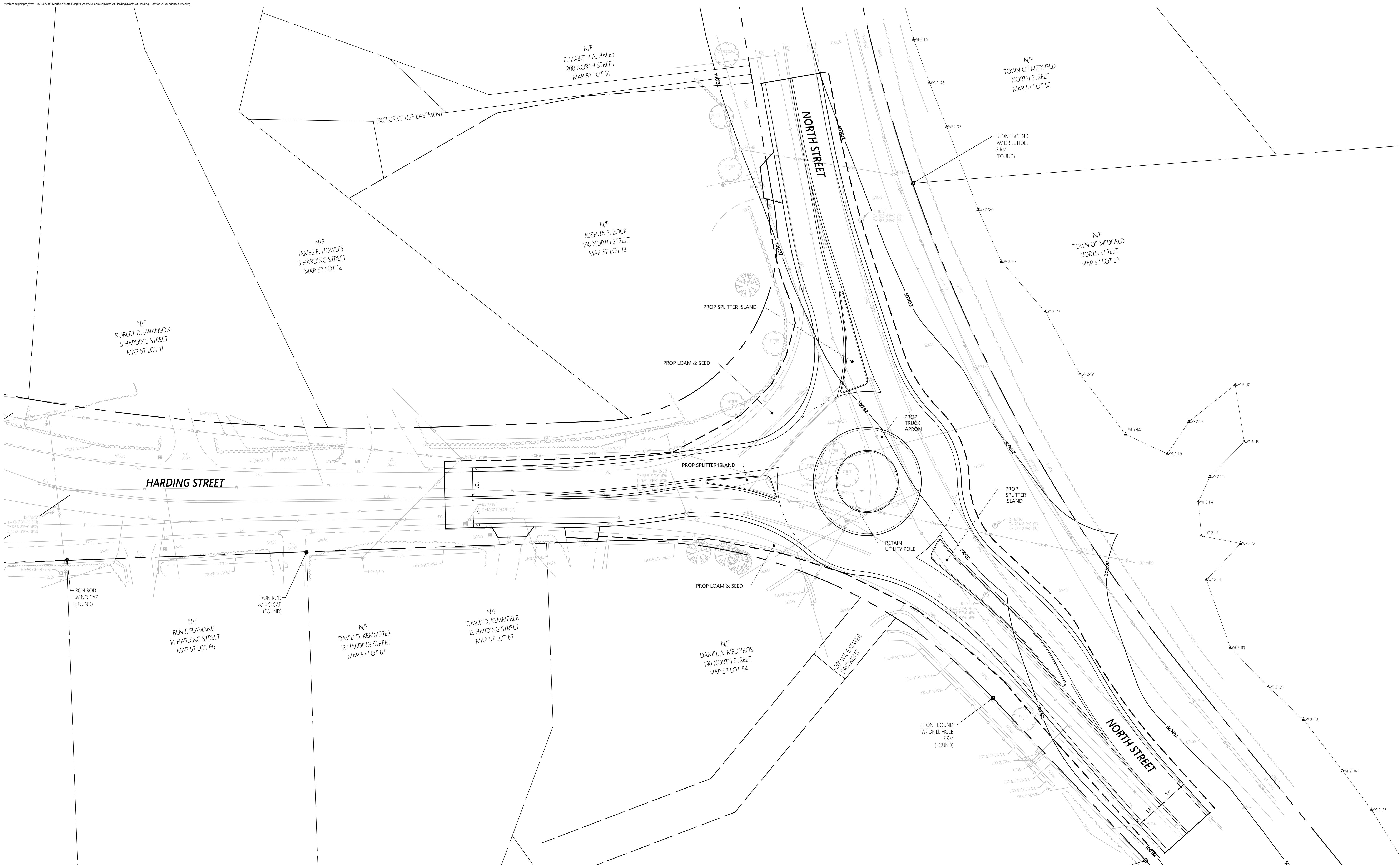
Sign Post

6" Yellow Thermoplastic (Item 867.106)

6" White Thermoplastic (Item 866.106)

12" White Thermoplastic (Item 866.112)

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
	\$20.00 /SF	5.18 SF	\$103.60
	\$60.00 /EA	1 EA	\$60.00
	\$1.65 /FT	971.74 FT	\$1,603.37
	\$1.65 /FT	1199.25 FT	\$1,978.77
	\$6.25 /FT	15.50 FT	\$96.88
			\$3,842.62
<b><u>Total Signing &amp; Striping SAY=</u></b>			<b><u>\$3,900.00</u></b>



**Harding St at North St - Option 2 - Roundabout**  
Medfield State Hospital - Offsite Improvements

Medfield, MA

Source:  
Prepared for:  
Date:





## CONCEPTUAL CONSTRUCTION COST ESTIMATE

FULL BUILD OUT

**North at Harding - Option 2 - Roundabout**

**Conceptual Estimate**

**Medfield, MA**

**Job Number:** 15677.00  
**Date:** December 10, 2024  
**Preparer:** BMM  
**Checked by:** DMK

Description	Unit Price	Quantity	Total Cost
Full Depth Pavement	\$141.00 /SY	2400 SY	\$338,409.71
Stamped Cem Conc Truck Apron	\$274.00 /SY	171 SY	\$46,745.92
Cem Conc Splitter Island	\$150.00 /SY	129 SY	\$19,289.00
HMA Drive	\$105.00 /SY	39 SY	\$4,127.67
Loam & Seed	\$38.00 /SY	725 SY	\$27,558.87
Granite Curbing	\$61,000.00 /LS	1 LS	\$61,000.00
Signing & Striping	\$6,900.00 /LS	1 LS	\$6,900.00
		Subtotal:	\$504,031.17
		Mobilization (3%):	\$15,120.94
		Construction Staking (3%):	\$15,120.94
		Design/Construction Contingencies (25%):	\$126,007.79
		Construction Staging/Traffic Management (15%):	\$75,604.68
		Traffic Police (5%):	\$25,201.56
		Escalation (4% each year for 2 years):	\$41,128.94
		Total:	\$802,216.01

**SAY: \$810,000.00**



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## ASSUMPTIONS

The following is an Order of Magnitude Cost Estimate.

The estimate prepared is for construction costs only.

*Additionally, The following assumptions were made in preparing the estimate:*

---

Where practical, costs are based on MassDOT's weighted average bid prices on state projects during the past 6 months in District 3.

Refer to concept plans for limits of work included in this estimate.

### **Milling & Overlay**

Assume no Milling & Overlay.

### **Full Depth Pavement**

Assume that full depth pavement includes: 1<sup>3</sup>/<sub>4</sub>" superpave surface course, 2" superpave intermediate course, 4" superpave base course, 4" dense graded crushed stone sub-base, and 8" gravel borrow

### **Cement Concrete PCR**

Assume no PCR's due to lack of existing/proposed sidewalks.

### **Loam & Seed**

Assume 4" loam and seed is used for all areas outside of pavement that is graded to meet existing.

### **Sidewalks**

Assume no proposed sidewalks.

### **Sawcutting**

Assume sawcuts are included in the respective items per the MassDOT 2024 Standard Specifications.

### **Granite Curbing**

Assume Granite Curb quantities include all straight curb and curved curb. Assume transition pieces (for driveways), splayed ends & curb inlets for drainage structures will not be required.

Assume 50% of existing granite curbing can be re-used and 50% discarded.



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### **Storm Drainage**

Assume that existing drainage structures and pipes within the project limits will be retained, adjusted, remodeled or rebuilt, and only additional structures will be added in to system.

### **Utilities**

Assume that the existing utilities will be retained.

### **Signing & Striping**

Assume removal and disposal or stacking of existing signs are covered in contingencies.

Assume all new signs will be required for the project.

Assume all new striping on the roadway within the project limit will be thermoplastic.

### **Miscellaneous**

Work not listed above or on the Conceptual Construction Cost Estimate are considered part of contingencies.

This estimate does not include costs associated with design, permitting, coordination with utility companies, providing a resident engineer, Town labor or right of way acquisitions.



## ORDER OF MAGNITUDE COST ESTIMATE

### **Full Depth Pavement (Superpave)**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Superpave Surface Course (Item 450.22)	1.75	0.0560 Ton/SY*in	\$182.00 /Ton	\$17.84
Superpave Intermediate Course (Item 450.31)	2	0.0560 Ton/SY*in	\$175.00 /Ton	\$19.60
Superpave Base Course (Item 450.42)	4	0.0560 Ton/SY*in	\$155.00 /Ton	\$34.72
Dense Graded Crushed Stone For Sub-Base (Item 402.)	4	0.0278 CY/in	\$90.00 /CY	\$10.01
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	16	0.0278 CY/in	\$70.00 /CY	\$30.65
Asphalt Emulsion for Tack Coat (Item 452.)	Apply 2	0.050 Gal/SY	\$8.75 /Gal	\$0.88
Calcium Chloride for Dust Control (Item 440.)	Apply 2	1.5 LB/SY	\$0.50 /LB	\$1.50
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$140.83
			<b>Full Depth Pavement COST PER SY=</b>	<b>\$141.00</b>

### **Stamped Cem Conc Truck Apron**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Stamped Concrete Truck Apron	6.00	N/A	\$220.00 /SY	\$220.00
Gravel Borrow (Item 151.)	8.00	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	14	0.0278 CY/in	\$70.00 /CY	\$27.24
Calcum Chloride for Roadway Dust Control (Item 440.)	Apply 1	1.500 LB/SY	\$0.50 /LB	\$0.50
Fine Grading and Compacting (Item 170.1)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$273.09
			<b>Full Depth Pavement COST PER SY=</b>	<b>\$274.00</b>

### **Cem Conc Splitter Island**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Cem Conc Walk (Item 701.)	4	N/A	\$100.00 /SY	\$100.00
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$149.00
			<b>Cem Conc Walk COST PER SY=</b>	<b>\$150.00</b>



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### **ORDER OF MAGNITUDE COST ESTIMATE**

#### **Loam Borrow and Seed**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Loam Borrow (Item 751)	4	0.0278 Yd/in	\$100.00 /CY	\$11.12
Seed (Item 765)			\$3.00 /SY	\$3.00
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
			per SY Total=	\$37.47
			<b><u>Loam Borrow and Seed COST PER SY=</u></b>	<b><u>\$38.00</u></b>

#### **HMA Driveway**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
HMA Sidewalk or Driveway (Item 702.)	4	0.0560 Ton/SY*in	\$250.00 /TON	\$56.00
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$105.00
			<b><u>HMA Driveway COST PER SY=</u></b>	<b><u>\$105.00</u></b>



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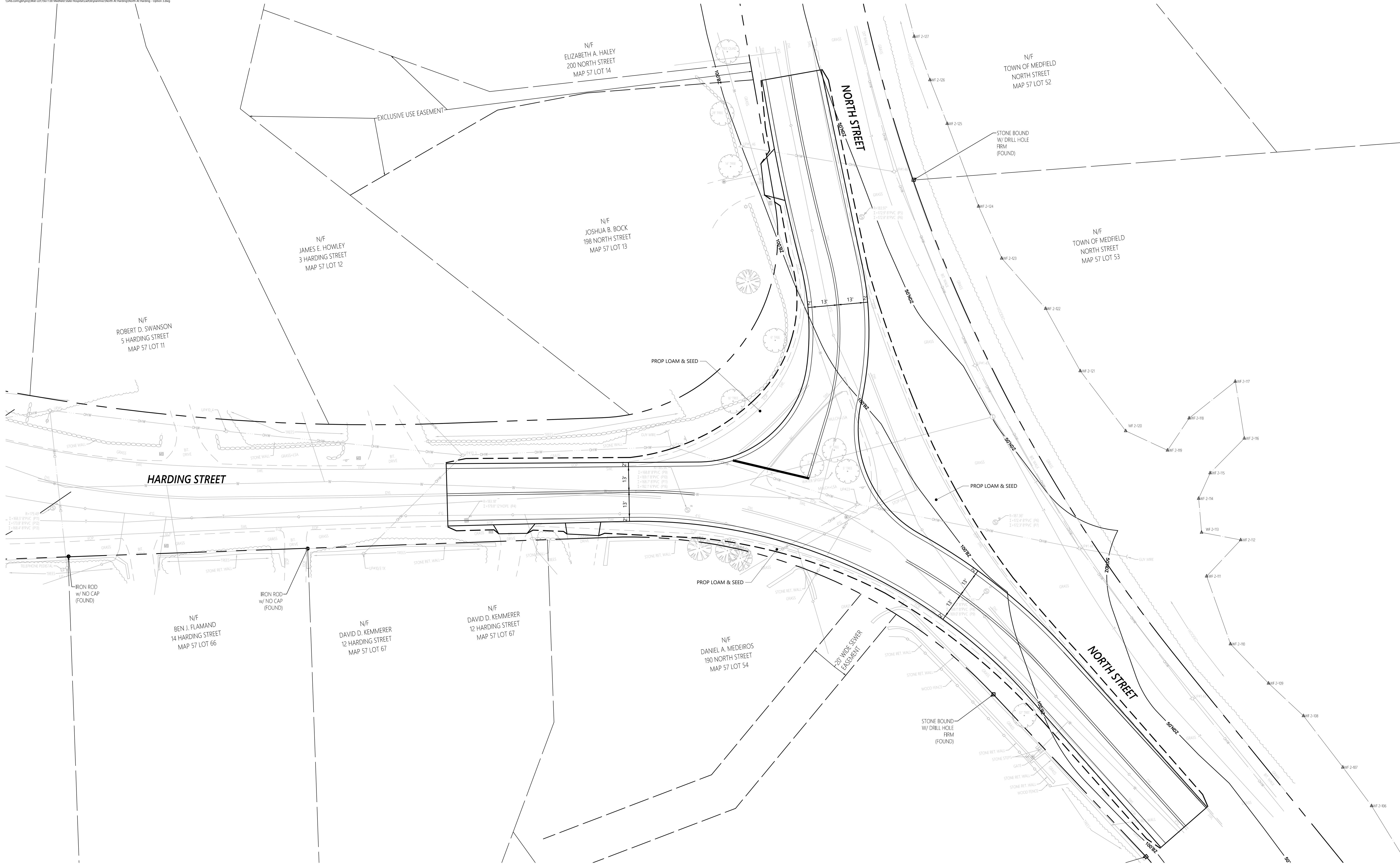
### **ORDER OF MAGNITUDE COST ESTIMATE**

**Granite Curbing**

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Granite Curb (Items 504, 504.1)	\$67.00 /FT	467 FT	\$31,319.15
Granite Curb Type T-100 (Item 507.1)	\$165.00 /FT	170 FT	\$27,991.59
Granite Curb R&R (Item 580.)	\$35.00 /FT	26 FT	\$908.25
Granite Curb R&D (Item 594.)	\$14.00 /FT	26 FT	\$363.30
			<hr/> \$60,582.29
			<b><u>Granite Curbing SAY= \$61,000.00</u></b>

**Signing & Striping**

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Sign (Item 832.)	\$20.00 /SF	69.5 SF	\$1,389.00
Sign Post (Item 847.1)	\$60.00 /EA	15 EA	\$900.00
6" Yellow Thermoplastic (Item 867.106)	\$1.65 /FT	1,400 FT	\$2,310.00
6" White Thermoplastic (Item 866.106)	\$1.65 /FT	1,340 FT	\$2,211.00
			<hr/> \$6,810.00
			<b><u>Total Signing &amp; Striping SAY= \$6,900.00</u></b>



## Harding St at North St - Option 3 - North Street SB Stop Cont

# Medfield State Hospital - Offsite Improvements

## Medfield, MA

Source

Source





## CONCEPTUAL CONSTRUCTION COST ESTIMATE

FULL BUILD OUT

**North at Harding - Option 3**  
**Conceptual Estimate**  
**Medfield, MA**

**Job Number:** 15677.00  
**Date:** December 9, 2024  
**Preparer:** BMM  
**Checked by:** DMK

Description	Unit Price	Quantity		Total Cost
Full Depth Pavement	\$141.00 /SY	2261	SY	\$318,857.87
HMA Drive	\$105.00 /SY	39	SY	\$4,127.67
Loam & Seed	\$38.00 /SY	907	SY	\$34,464.31
Granite Curbing	\$1,000.00 /LS	1	LS	\$1,000.00
Signing & Striping	\$4,600.00 /LS	1	LS	\$4,600.00
		Subtotal:		\$363,049.85
		Mobilization (3%):		\$10,891.50
		Construction Staking (3%):		\$10,891.50
		Design/Construction Contingencies (25%):		\$90,762.46
		Construction Staging/Traffic Management (15%):		\$54,457.48
		Traffic Police (5%):		\$18,152.49
		Escalation (4% each year for 2 years):		\$29,624.87
		Total: <hr/>		\$577,830.14

**SAY:** **\$580,000.00**



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## ASSUMPTIONS

The following is an Order of Magnitude Cost Estimate.

The estimate prepared is for construction costs only.

*Additionally, The following assumptions were made in preparing the estimate:*

---

Where practical, costs are based on MassDOT's weighted average bid prices on state projects during the past 6 months in District 3.

Refer to concept plans for limits of work included in this estimate.

### **Milling & Overlay**

Assume no Milling & Overlay.

### **Full Depth Pavement**

Assume that full depth pavement includes: 1<sup>3</sup>/<sub>4</sub>" superpave surface course, 2" superpave intermediate course, 4" superpave base course, 4" dense graded crushed stone sub-base, and 8" gravel borrow

### **Cement Concrete PCR**

Assume no PCR's due to lack of existing/proposed sidewalks.

### **Loam & Seed**

Assume 4" loam and seed is used for all areas outside of pavement that is graded to meet existing.

### **Sidewalks**

Assume no proposed sidewalks.

### **Sawcutting**

Assume sawcuts are included in the respective items per the MassDOT 2024 Standard Specifications.

### **Granite Curbing**

Assume no proposed granite curb, and assume all existing curbing is to be removed and discarded.



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### **Storm Drainage**

Assume that existing drainage structures and pipes within the project limits will be retained, adjusted, remodeled or rebuilt, and only additional structures will be added in to system.

### **Utilities**

Assume utility pole and overhead modifications will be required. Assume all other utilites will be retained.

### **Signs & Striping**

Assume removal and disposal or stacking of existing signs are covered in contingencies.

Assume all new signs will be required for the project.

Assume all new striping on the roadway within the project limit will be thermoplastic.

### **Miscellaneous**

Work not listed above or on the Conceptual Construction Cost Estimate are considered part of contingencies.

This estimate does not include costs associated with design, permitting, coordination with utility companies, providing a resident engineer, Town labor or right of way acquisitions.



## ORDER OF MAGNITUDE COST ESTIMATE

### **Full Depth Pavement (Superpave)**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Superpave Surface Course (Item 450.22)	1.75	0.0560 Ton/SY*in	\$182.00 /Ton	\$17.84
Superpave Intermediate Course (Item 450.31)	2	0.0560 Ton/SY*in	\$175.00 /Ton	\$19.60
Superpave Base Course (Item 450.42)	4	0.0560 Ton/SY*in	\$155.00 /Ton	\$34.72
Dense Graded Crushed Stone For Sub-Base (Item 402.)	4	0.0278 CY/in	\$90.00 /CY	\$10.01
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	16	0.0278 CY/in	\$70.00 /CY	\$30.65
Asphalt Emulsion for Tack Coat (Item 452.)	Apply 2	0.050 Gal/SY	\$8.75 /Gal	\$0.88
Calcium Chloride for Dust Control (Item 440.)	Apply 2	1.5 LB/SY	\$0.50 /LB	\$1.50
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$140.83
			<b><u>Full Depth Pavement COST PER SY=</u></b>	<b><u>\$141.00</u></b>

### **Loam Borrow and Seed**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Loam Borrow (Item 751)	4	0.0278 Yd/in	\$100.00 /CY	\$11.12
Seed (Item 765)			\$3.00 /SY	\$3.00
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
			per SY Total=	\$37.47
			<b><u>Loam Borrow and Seed COST PER SY=</u></b>	<b><u>\$38.00</u></b>

### **HMA Driveway**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
HMA Sidewalk or Driveway (Item 702.)	4	0.0560 Ton/SY*in	\$250.00 /TON	\$56.00
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$105.00
			<b><u>HMA Driveway COST PER SY=</u></b>	<b><u>\$105.00</u></b>



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### **ORDER OF MAGNITUDE COST ESTIMATE**

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**Granite Curbing**

Granite Curb R&amp;D (Item 594.)

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
	\$14.00 /FT	52 FT	\$728.00
			\$728.00
<b><u>Granite Curbing SAY=</u></b>			<b><u>\$1,000.00</u></b>

**Signing & Striping**

Sign  
Sign Post  
6" Yellow Thermoplastic (Item 867.106)  
6" White Thermoplastic (Item 866.106)  
12" White Thermoplastic (Item 866.112)

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
	\$20.00 /SF	11.7 SF	\$234.00
	\$60.00 /EA	3 EA	\$180.00
	\$1.65 /FT	1,050 FT	\$1,732.50
	\$1.65 /FT	1,225 FT	\$2,021.25
	\$6.25 /FT	65 FT	\$406.25
			\$4,574.00
<b><u>Total Signing &amp; Striping SAY=</u></b>			<b><u>\$4,600.00</u></b>

**Medfield State Hospital Redevelopment**  
**Off-Site Intersection Analysis - Harding Street at North Street**  
**Alternatives Ranking Matrix**

	Right-of-Way Impacts	Environmental Resource Area Impacts	Traffic Operations / Capacity	Safety	Constructability	Construction Cost	Total Average Weighted Score (Out of 5)	Ranking
Alternative 1 - Harding St Stop	5	4	3	3	4	4	3.83	2
Alternative 2 - Roundabout	5	4	5	5	3	2	4.00	1
Alternative 2 - North St Stop	5	4	2	3	4	4	3.67	3

*Ranking 1-5, with 5 as high (favorable) and 1 as low (unfavorable).*

*note: The alternatives ranking matrix has been prepared as a preliminary comparison tool to assist the Town in evaluating each of the concepts according to various criteria. Please note, the scoring for each alternative shown in the matrices is subjective and is based on evaluation of the site conditions and how each concept is anticipated to meet the project's goals.*



## West St at Harding St - Option 1 - Harding Street Stop Cont.

# West State Housing Options Medfield State Hospital - Offsite Improvements

## Medfield, MA

Source:

Source:  
Prepared for:  
Date:





## CONCEPTUAL CONSTRUCTION COST ESTIMATE

FULL BUILD OUT

**West at Harding - Option 1**  
**Conceptual Estimate**  
**Medfield, MA**

**Job Number:** 15677.00  
**Date:** December 10, 2024  
**Preparer:** BMM  
**Checked by:** DMK

Description	Unit Price	Quantity		Total Cost
Full Depth Pavement	\$141.00 /SY	1559	SY	\$219,779.83
HMA Drive	\$105.00 /SY	30	SY	\$3,196.67
Loam & Seed	\$38.00 /SY	211	SY	\$8,015.04
Signing & Striping	\$2,700.00 /LS	1	LS	\$2,700.00
		Subtotal:		\$233,691.54
		Mobilization (3%):		\$7,010.75
		Construction Staking (3%):		\$7,010.75
		Design/Construction Contingencies (25%):		\$58,422.89
		Construction Staging/Traffic Management (15%):		\$35,053.73
		Traffic Police (5%):		\$11,684.58
		Escalation (4% each year for 2 years):		\$19,069.23
		Total:		\$371,943.46

**SAY: \$380,000.00**



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## ASSUMPTIONS

The following is an Order of Magnitude Cost Estimate.

The estimate prepared is for construction costs only.

*Additionally, The following assumptions were made in preparing the estimate:*

---

Where practical, costs are based on MassDOT's weighted average bid prices on state projects during the past 6 months in District 3.

Refer to concept plans for limits of work included in this estimate.

### **Milling & Overlay**

Assume no Milling & Overlay.

### **Full Depth Pavement**

Assume that full depth pavement includes: 1<sup>3</sup>/<sub>4</sub>" superpave surface course, 2" superpave intermediate course, 4" superpave base course, 4" dense graded crushed stone sub-base, and 8" gravel borrow

### **Cement Concrete PCR**

Assume no PCR's due to lack of existing/proposed sidewalks.

### **Loam & Seed**

Assume 4" loam and seed is used for all areas outside of pavement that is graded to meet existing.

### **Sidewalks**

Assume no proposed sidewalks.

### **Sawcutting**

Assume sawcuts are included in the respective items per the MassDOT 2024 Standard Specifications.

### **Granite Curbing**

Assume no proposed granite curbing.

### **Guardrail**

Assume existing guardrail can be retained.



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### **Storm Drainage**

Assume that existing drainage structures and pipes within the project limits will be retained, adjusted, remodeled or rebuilt, and only additional structures will be added in to system.

### **Utilities**

Assume that the existing utilities will be retained.

### **Signing & Striping**

Assume removal and disposal or stacking of existing signs are covered in contingencies.

Assume all new signs will be required for the project.

Assume all new striping on the roadway within the project limit will be thermoplastic.

### **Miscellaneous**

Work not listed above or on the Conceptual Construction Cost Estimate are considered part of contingencies.

This estimate does not include costs associated with design, permitting, coordination with utility companies, providing a resident engineer, Town labor or right of way acquisitions.



## ORDER OF MAGNITUDE COST ESTIMATE

### **Full Depth Pavement (Superpave)**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Superpave Surface Course (Item 450.22)	1.75	0.0560 Ton/SY*in	\$182.00 /Ton	\$17.84
Superpave Intermediate Course (Item 450.31)	2	0.0560 Ton/SY*in	\$175.00 /Ton	\$19.60
Superpave Base Course (Item 450.42)	4	0.0560 Ton/SY*in	\$155.00 /Ton	\$34.72
Dense Graded Crushed Stone For Sub-Base (Item 402.)	4	0.0278 CY/in	\$90.00 /CY	\$10.01
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	16	0.0278 CY/in	\$70.00 /CY	\$30.65
Asphalt Emulsion for Tack Coat (Item 452.)	Apply 2	0.050 Gal/SY	\$8.75 /Gal	\$0.88
Calcium Chloride for Dust Control (Item 440.)	Apply 2	1.5 LB/SY	\$0.50 /LB	\$1.50
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$140.83
			<b>Full Depth Pavement COST PER SY=</b>	<b>\$141.00</b>

### **Loam Borrow and Seed**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Loam Borrow (Item 751)	4	0.0278 Yd/in	\$100.00 /CY	\$11.12
Seed (Item 765)			\$3.00 /SY	\$3.00
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
			per SY Total=	\$37.47
			<b>Loam Borrow and Seed COST PER SY=</b>	<b>\$38.00</b>

### **HMA Driveway**

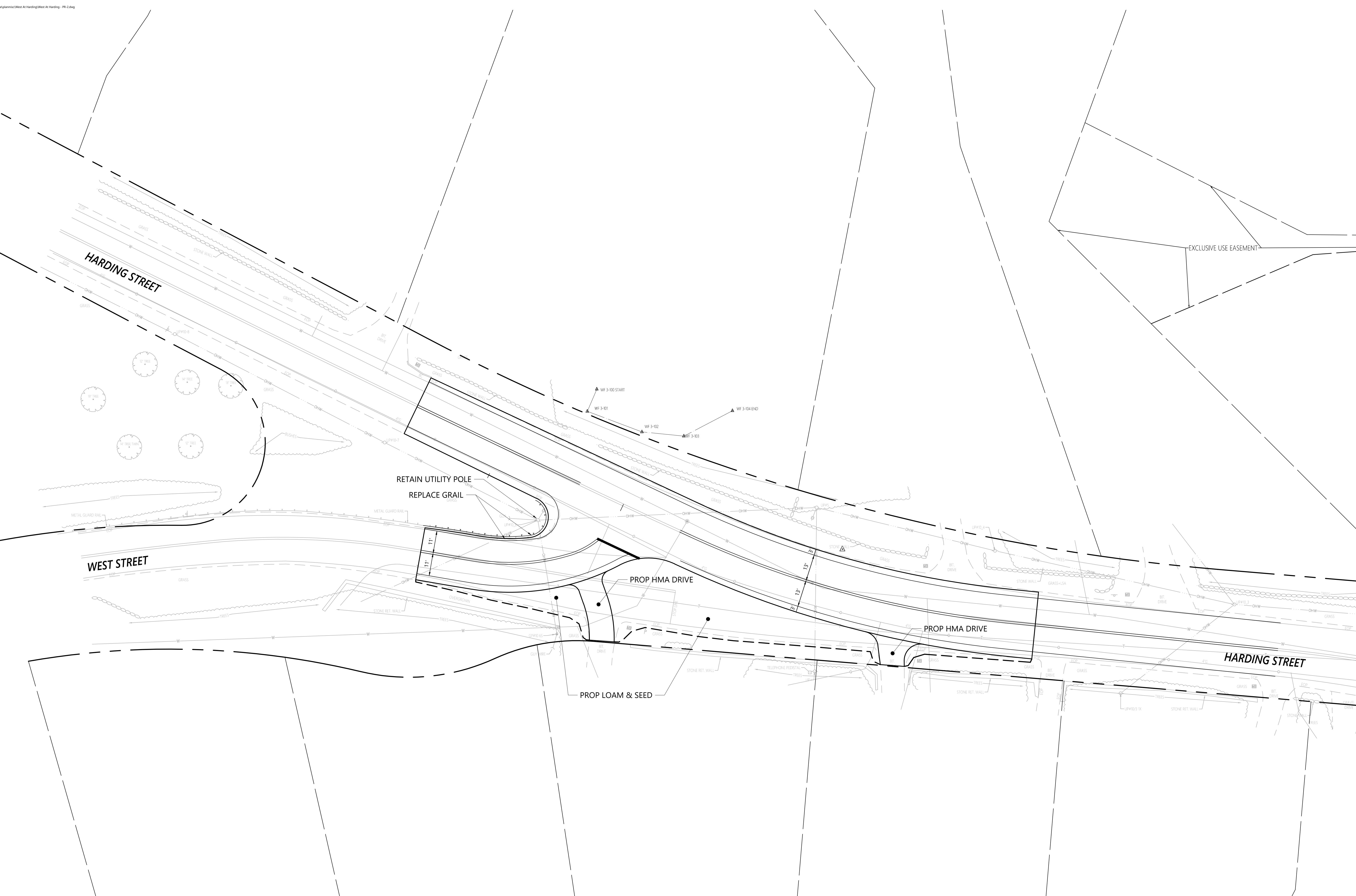
	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
HMA Sidewalk or Driveway (Item 702.)	4	0.0560 Ton/SY*in	\$250.00 /TON	\$56.00
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$105.00
			<b>HMA Driveway COST PER SY=</b>	<b>\$105.00</b>



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### **ORDER OF MAGNITUDE COST ESTIMATE**

<b><u>Signing &amp; Striping</u></b>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Stop Sign	\$20.00 /SF	5.18 SF	\$103.60
Sign Post	\$60.00 /EA	1 EA	\$60.00
6" Yellow Thermoplastic (Item 867.106)	\$1.65 /FT	593 FT	\$978.79
6" White Thermoplastic (Item 866.106)	\$1.65 /FT	746 FT	\$1,231.61
12" White Thermoplastic (Item 866.112)	\$6.25 /FT	40 FT	\$247.79
			<hr/>
			\$2,621.79
		<b><u>Total Signing &amp; Striping SAY=</u></b>	<b><u>\$2,700.00</u></b>



**West St at Harding St - Option 2 - West Street Stop Control**

Medfield State Hospital - Offsite Improvements

Medfield, MA



## CONCEPTUAL CONSTRUCTION COST ESTIMATE

FULL BUILD OUT

**West at Harding - Option 2**

**Conceptual Estimate**

**Medfield, MA**

**Job Number:** 15677.00  
**Date:** December 10, 2024  
**Preparer:** BMM  
**Checked by:**

Description	Unit Price	Quantity		Total Cost
Full Depth Pavement	\$141.00 /SY	1426	SY	\$201,047.20
HMA Drive	\$105.00 /SY	64	SY	\$6,716.50
Loam & Seed	\$38.00 /SY	422	SY	\$16,043.18
Signing & Striping	\$2,800.00 /LS	1	LS	\$2,800.00
Guardrail	\$10,900.00 /LS	1	LS	\$10,900.00
				Subtotal: \$237,506.88
				Mobilization (3%): \$7,125.21
				Construction Staking (3%): \$7,125.21
				Design/Construction Contingencies (25%): \$59,376.72
				Construction Staging/Traffic Management (15%): \$35,626.03
				Traffic Police (5%): \$11,875.34
				Escalation (4% each year for 2 years): \$19,380.56
				Total: \$378,015.95

**SAY: \$380,000.00**



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## ASSUMPTIONS

The following is an Order of Magnitude Cost Estimate.

The estimate prepared is for construction costs only.

*Additionally, The following assumptions were made in preparing the estimate:*

---

Where practical, costs are based on MassDOT's weighted average bid prices on state projects during the past 6 months in District 3.

Refer to concept plans for limits of work included in this estimate.

### **Milling & Overlay**

Assume no Milling & Overlay.

### **Full Depth Pavement**

Assume that full depth pavement includes: 1<sup>3</sup>/<sub>4</sub>" superpave surface course, 2" superpave intermediate course, 4" superpave base course, 4" dense graded crushed stone sub-base, and 8" gravel borrow

### **Cement Concrete PCR**

Assume no PCR's due to lack of existing/proposed sidewalks.

### **Loam & Seed**

Assume 4" loam and seed is used for all areas outside of pavement that is graded to meet existing.

### **Sidewalks**

Assume no proposed sidewalks.

### **Sawcutting**

Assume sawcuts are included in the respective items per the MassDOT 2024 Standard Specifications.

### **Granite Curbing**

Assume no proposed granite curbing.



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### **Storm Drainage**

Assume that existing drainage structures and pipes within the project limits will be retained, adjusted, remodeled or rebuilt, and only additional structures will be added in to system.

### **Utilities**

Assume that the existing utilities will be retained.

### **Signing & Striping**

Assume removal and disposal or stacking of existing signs are covered in contingencies.

Assume all new signs will be required for the project.

Assume all new striping on the roadway within the project limit will be thermoplastic.

### **Miscellaneous**

Work not listed above or on the Conceptual Construction Cost Estimate are considered part of contingencies.

This estimate does not include costs associated with design, permitting, coordination with utility companies, providing a resident engineer, Town labor or right of way acquisitions.



## ORDER OF MAGNITUDE COST ESTIMATE

### **Full Depth Pavement (Superpave)**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Superpave Surface Course (Item 450.22)	1.75	0.0560 Ton/SY*in	\$182.00 /Ton	\$17.84
Superpave Intermediate Course (Item 450.31)	2	0.0560 Ton/SY*in	\$175.00 /Ton	\$19.60
Superpave Base Course (Item 450.42)	4	0.0560 Ton/SY*in	\$155.00 /Ton	\$34.72
Dense Graded Crushed Stone For Sub-Base (Item 402.)	4	0.0278 CY/in	\$90.00 /CY	\$10.01
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	16	0.0278 CY/in	\$70.00 /CY	\$30.65
Asphalt Emulsion for Tack Coat (Item 452.)	Apply 2	0.050 Gal/SY	\$8.75 /Gal	\$0.88
Calcium Chloride for Dust Control (Item 440.)	Apply 2	1.5 LB/SY	\$0.50 /LB	\$1.50
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	<u>\$10.00</u>
			per SY Total=	\$140.83
			<b><u>Full Depth Pavement COST PER SY=</u></b>	<b><u>\$141.00</u></b>

### **Loam Borrow and Seed**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Loam Borrow (Item 751)	4	0.0278 Yd/in	\$100.00 /CY	\$11.12
Seed (Item 765)			\$3.00 /SY	\$3.00
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	<u>\$23.35</u>
			per SY Total=	\$37.47
			<b><u>Loam Borrow and Seed COST PER SY=</u></b>	<b><u>\$38.00</u></b>

### **HMA Driveway**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
HMA Sidewalk or Driveway (Item 702.)	4	0.0560 Ton/SY*in	\$250.00 /TON	\$56.00
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	<u>\$10.00</u>
			per SY Total=	\$105.00
			<b><u>HMA Driveway COST PER SY=</u></b>	<b><u>\$105.00</u></b>



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### **ORDER OF MAGNITUDE COST ESTIMATE**

**Signing & Striping**

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Stop Sign	\$20.00 /SF	5.18 SF	\$103.60
Sign Post	\$60.00 /EA	1 EA	\$60.00
6" Yellow Thermoplastic (Item 867.106)	\$1.65 /FT	713 FT	\$1,176.42
6" White Thermoplastic (Item 866.106)	\$1.65 /FT	757 FT	\$1,249.56
12" White Thermoplastic (Item 866.112)	\$6.25 /FT	20 FT	\$126.98
			<hr/>
			\$2,716.56
		<b><u>Total Signing &amp; Striping SAY=</u></b>	<b><u>\$2,800.00</u></b>

**Guardrail**

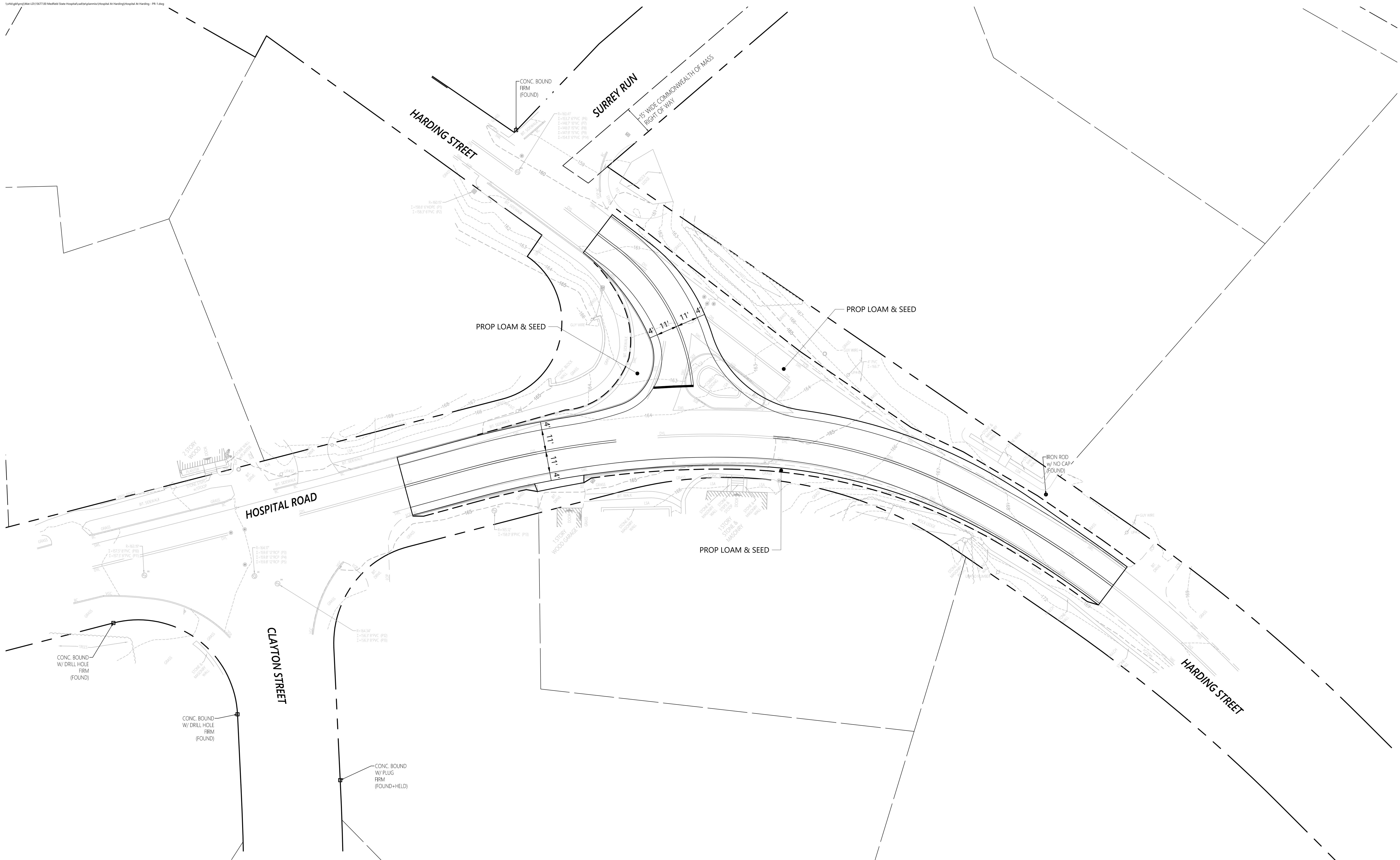
	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Tangent End (Item 627.82)	\$6,000.00 /EA	1 EA	\$6,000.00
Steel w-beam (Item 620.12, 620.32)	\$52.00 /FT	45 FT	\$2,340.00
R&D Exist Guardrail (Item 630.2)	\$6.00 /FT	68 FT	\$408.00
Transition to NCHRP (Item 628.21)	\$2,100.00 /EA	1 EA	\$2,100.00
			<hr/>
			\$10,848.00
		<b><u>Total Guardrail SAY=</u></b>	<b><u>\$10,900.00</u></b>

**Medfield State Hospital Redevelopment**  
**Off-Site Intersection Analysis - Harding Street at West Street**  
**Alternatives Ranking Matrix**

	Right-of-Way Impacts	Environmental Resource Area Impacts	Traffic Operations / Capacity	Safety	Constructability	Construction Cost	Total Average Weighted Score (Out of 5)	Ranking
Alternative 1 - Harding St Stop	5	4	2	3	4	4	3.67	2
Alternative 2 - West St Stop	5	4	4	4	4	4	4.17	1

*Ranking 1-5, with 5 as high (favorable) and 1 as low (unfavorable).*

*note: The alternatives ranking matrix has been prepared as a preliminary comparison tool to assist the Town in evaluating each of the concepts according to various criteria. Please note, the scoring for each alternative shown in the matrices is subjective and is based on evaluation of the site conditions and how each concept is anticipated to meet the project's goals.*



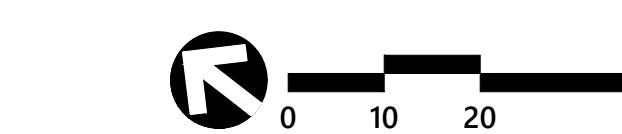
## Harding St at Hospital St - Option 1 - Harding Street SB Stop Cont

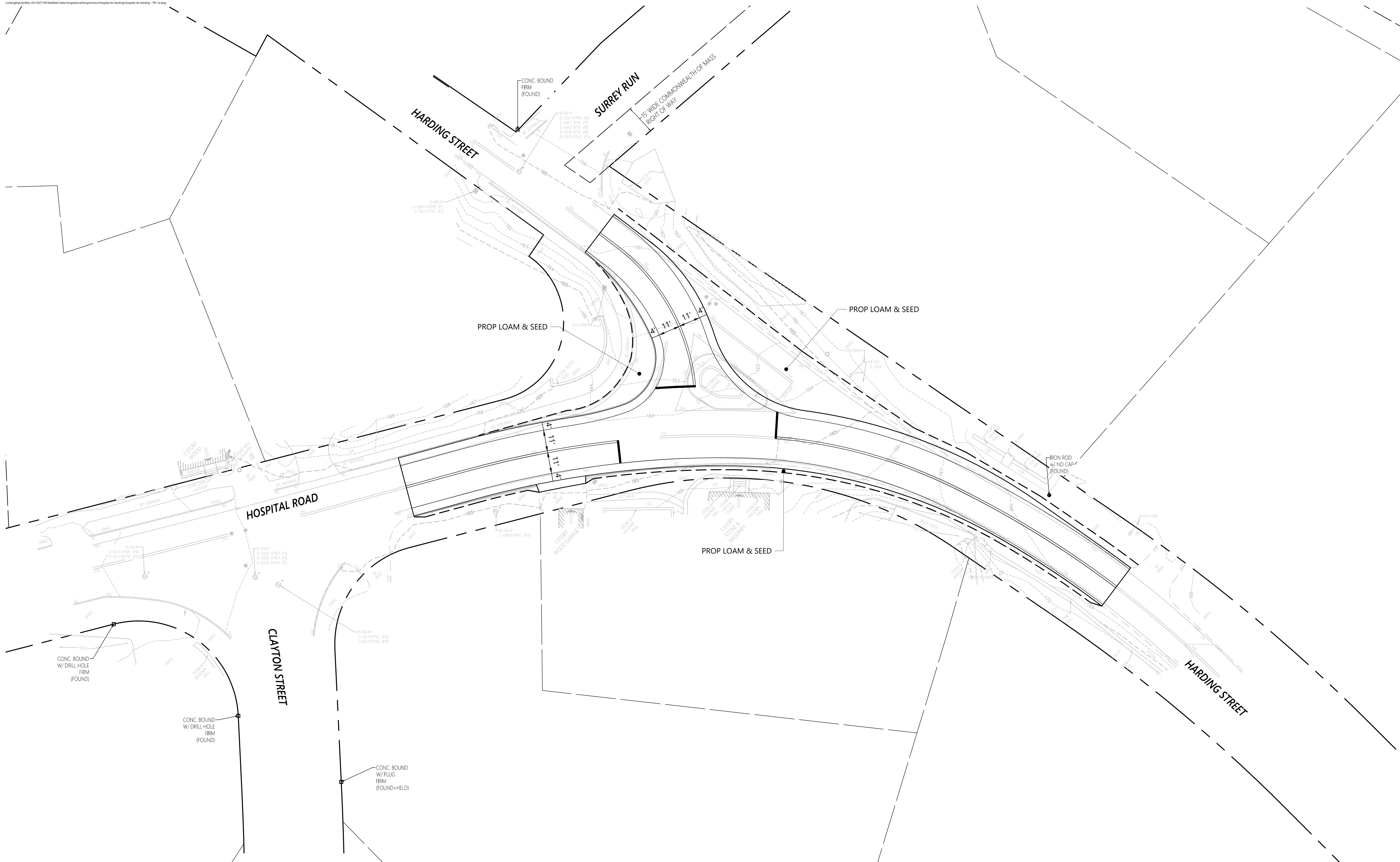
# Planning Study Presented by Options Medfield State Hospital - Offsite Improvements

## Medfield, MA

Source:

Source.  
Prepared for:





## Harding St at Hospital St - Option 1a - 3-Way Stop Control

# Planning Study at Hospital Site Options

## Medfield State Hospital - Offsite Improvements

## Medfield, MA

## Media

Source  
Prepared for





## CONCEPTUAL CONSTRUCTION COST ESTIMATE

FULL BUILD OUT

**Hospital at Harding - Option 1**  
**Conceptual Estimate**  
**Medfield, MA**

**Job Number:** 15677.00  
**Date:** December 10, 2024  
**Preparer:** BMM  
**Checked by:** DMK

Description	Unit Price	Quantity		Total Cost
Full Depth Pavement	\$141.00 /SY	1591	SY	\$224,318.47
HMA Drive	\$105.00 /SY	11	SY	\$1,131.67
Loam & Seed	\$38.00 /SY	516	SY	\$19,608.55
Granite Curbing	\$26,000.00 /LS	1	LS	\$26,000.00
Signing & Striping	\$3,600.00 /LS	1	LS	\$3,600.00
		Subtotal:		\$274,658.68
		Mobilization (3%):		\$8,239.76
		Construction Staking (3%):		\$8,239.76
		Design/Construction Contingencies (25%):		\$68,664.67
		Construction Staging/Traffic Management (15%):		\$41,198.80
		Traffic Police (5%):		\$13,732.93
		Escalation (4% each year for 2 years):		\$22,412.15
		Total: <b>437,146.76</b>		\$437,146.76

**SAY: \$440,000.00**



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## ASSUMPTIONS

The following is an Order of Magnitude Cost Estimate.

The estimate prepared is for construction costs only.

*Additionally, The following assumptions were made in preparing the estimate:*

---

Where practical, costs are based on MassDOT's weighted average bid prices on state projects during the past 6 months in District 3.

Refer to concept plans for limits of work included in this estimate.

### **Milling & Overlay**

Assume no Milling & Overlay.

### **Full Depth Pavement**

Assume that full depth pavement includes: 1<sup>3</sup>/<sub>4</sub>" superpave surface course, 2" superpave intermediate course, 4" superpave base course, 4" dense graded crushed stone sub-base, and 8" gravel borrow

### **Cement Concrete PCR**

Assume no PCR's due to lack of existing/proposed sidewalks.

### **Loam & Seed**

Assume 4" loam and seed is used for all areas outside of pavement that is graded to meet existing.

### **Sidewalks**

Assume no proposed sidewalks.

### **Sawcutting**

Assume sawcuts are included in the respective items per the MassDOT 2024 Standard Specifications.

### **Granite Curbing**

Assume Granite Curb quantities include all straight curb, curved curb, transition pieces (for driveways), splayed ends & curb inlets for drainage structures.

Assume 50% of existing granite curbing can be re-used and 50% discarded.



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### **Storm Drainage**

Assume that existing drainage structures and pipes within the project limits will be retained, adjusted, remodeled or rebuilt, and only additional structures will be added in to system.

### **Utilities**

Assume that the existing utilities will be retained.

### **Signing & Striping**

Assume removal and disposal or stacking of existing signs are covered in contingencies.

Assume all new signs will be required for the project.

Assume all new striping on the roadway within the project limit will be thermoplastic.

### **Miscellaneous**

Work not listed above or on the Conceptual Construction Cost Estimate are considered part of contingencies.

This estimate does not include costs associated with design, permitting, coordination with utility companies, providing a resident engineer, Town labor or right of way acquisitions.



## ORDER OF MAGNITUDE COST ESTIMATE

### **Full Depth Pavement (Superpave)**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Superpave Surface Course (Item 450.22)	1.75	0.0560 Ton/SY*in	\$182.00 /Ton	\$17.84
Superpave Intermediate Course (Item 450.31)	2	0.0560 Ton/SY*in	\$175.00 /Ton	\$19.60
Superpave Base Course (Item 450.42)	4	0.0560 Ton/SY*in	\$155.00 /Ton	\$34.72
Dense Graded Crushed Stone For Sub-Base (Item 402.)	4	0.0278 CY/in	\$90.00 /CY	\$10.01
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	16	0.0278 CY/in	\$70.00 /CY	\$30.65
Asphalt Emulsion for Tack Coat (Item 452.)	Apply 2	0.050 Gal/SY	\$8.75 /Gal	\$0.88
Calcium Chloride for Dust Control (Item 440.)	Apply 2	1.5 LB/SY	\$0.50 /LB	\$1.50
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$140.83
			<b>Full Depth Pavement COST PER SY=</b>	<b>\$141.00</b>

### **Loam Borrow and Seed**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Loam Borrow (Item 751)	4	0.0278 Yd/in	\$100.00 /CY	\$11.12
Seed (Item 765)			\$3.00 /SY	\$3.00
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
			per SY Total=	\$37.47
			<b>Loam Borrow and Seed COST PER SY=</b>	<b>\$38.00</b>

### **HMA Driveway**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
HMA Sidewalk or Driveway (Item 702.)	4	0.0560 Ton/SY*in	\$250.00 /TON	\$56.00
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$105.00
			<b>HMA Driveway COST PER SY=</b>	<b>\$105.00</b>



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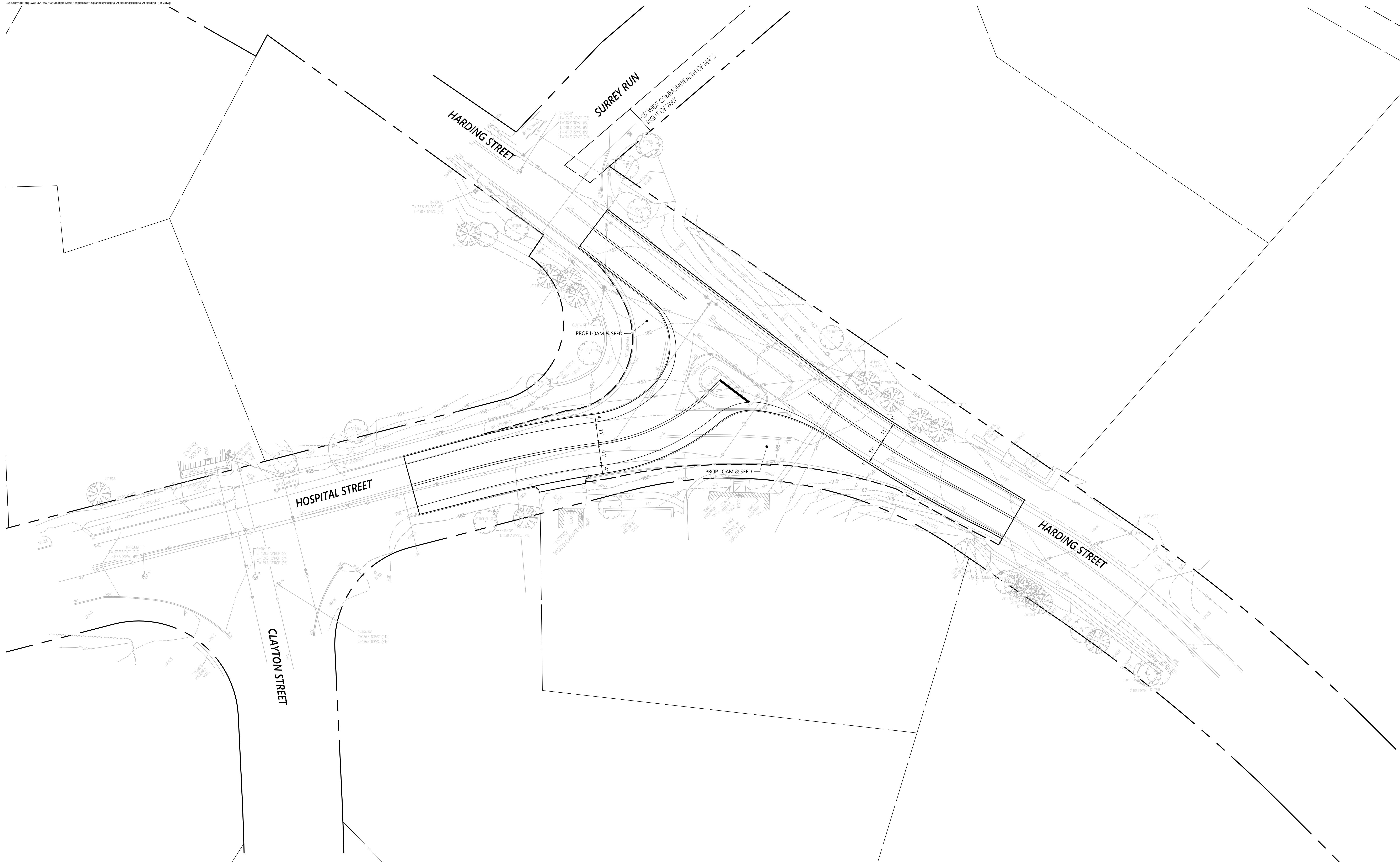
### **ORDER OF MAGNITUDE COST ESTIMATE**

**Granite Curbing**

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Granite Curb (Items 504, 504.1, 509, 509.1)	\$67.00 /FT	219 FT	\$14,644.55
Granite Curb R&R (Item 580.)	\$35.00 /FT	175 FT	\$6,109.40
Granite Curb R&D (Item 594.)	\$14.00 /FT	175 FT	\$2,443.76
Granite Edging R&D (Item 597.)	\$20.00 /FT	110 FT	\$2,200.00
			<hr/>
			\$25,397.71
		<b><u>Granite Curbing SAY=</u></b>	<b><u>\$26,000.00</u></b>

**Signing & Striping**

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Stop Sign	\$20.00 /SF	15.54 SF	\$310.80
Sign Post	\$60.00 /EA	3 EA	\$180.00
6" Yellow Thermoplastic (Item 867.106)	\$1.65 /FT	782.18 FT	\$1,290.59
6" White Thermoplastic (Item 866.106)	\$1.65 /FT	915.02 FT	\$1,509.78
12" White Thermoplastic (Item 866.112)	\$6.25 /FT	49.03 FT	\$306.46
			<hr/>
			\$3,597.63
		<b><u>Signing &amp; Striping SAY=</u></b>	<b><u>\$3,600.00</u></b>



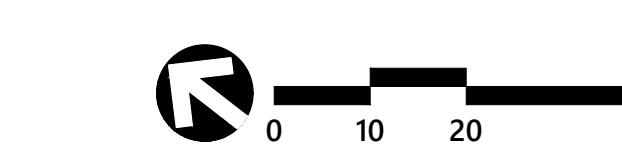
## Harding St at Hospital St - Option 2 - Hospital Street Stop Control

# Planning Study for Offsite Improvements Medfield State Hospital - Offsite Improvements

## Medfield, MA

Source

Prepared for





## CONCEPTUAL CONSTRUCTION COST ESTIMATE

FULL BUILD OUT

**Hospital at Harding - Option 2**  
**Conceptual Estimate**  
**Medfield, MA**

**Job Number:** 15677.00  
**Date:** December 10, 2024  
**Preparer:** BMM  
**Checked by:** DMK

Description	Unit Price	Quantity	Total Cost
Full Depth Pavement	\$141.00 /SY	1360 SY	\$191,792.90
HMA Drive	\$105.00 /SY	10 SY	\$1,009.17
Loam & Seed	\$38.00 /SY	377 SY	\$14,337.40
Granite Curbing	\$39,000.00 /LS	1 LS	\$39,000.00
Signing & Striping	\$3,300.00 /LS	1 LS	\$3,300.00
		Subtotal:	\$249,439.47
		Mobilization (3%):	\$7,483.18
		Construction Staking (3%):	\$7,483.18
		Design/Construction Contingencies (25%):	\$62,359.87
		Construction Staging/Traffic Management (15%):	\$37,415.92
		Traffic Police (5%):	\$12,471.97
		Escalation (4% each year for 2 years):	\$20,354.26
		Total:	\$397,007.86

**SAY:** **\$400,000.00**



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## ASSUMPTIONS

The following is an Order of Magnitude Cost Estimate.

The estimate prepared is for construction costs only.

*Additionally, The following assumptions were made in preparing the estimate:*

---

Where practical, costs are based on MassDOT's weighted average bid prices on state projects during the past 6 months in District 3.

Refer to concept plans for limits of work included in this estimate.

### **Milling & Overlay**

Assume no Milling & Overlay.

### **Full Depth Pavement**

Assume that full depth pavement includes: 1<sup>3</sup>/<sub>4</sub>" superpave surface course, 2" superpave intermediate course, 4" superpave base course, 4" dense graded crushed stone sub-base, and 8" gravel borrow

### **Cement Concrete PCR**

Assume no PCR's due to lack of existing/proposed sidewalks.

### **Loam & Seed**

Assume 4" loam and seed is used for all areas outside of pavement that is graded to meet existing.

### **Sidewalks**

Assume no proposed sidewalks.

### **Sawcutting**

Assume sawcuts are included in the respective items per the MassDOT 2024 Standard Specifications.

### **Granite Curbing**

Assume Granite Curb quantities include all straight curb, curved curb, transition pieces (for driveways), splayed ends & curb inlets for drainage structures.

Assume 50% of existing granite curbing can be re-used and 50% discarded.



---

### **Storm Drainage**

Assume that existing drainage structures and pipes within the project limits will be retained, adjusted, remodeled or rebuilt, and only additional structures will be added in to system.

### **Utilities**

Assume that the existing utilities will be retained.

### **Signing & Striping**

Assume removal and disposal or stacking of existing signs are covered in contingencies.

Assume all new signs will be required for the project.

Assume all new striping on the roadway within the project limit will be thermoplastic.

### **Miscellaneous**

Work not listed above or on the Conceptual Construction Cost Estimate are considered part of contingencies.

This estimate does not include costs associated with design, permitting, coordination with utility companies, providing a resident engineer, Town labor or right of way acquisitions.



## ORDER OF MAGNITUDE COST ESTIMATE

### **Full Depth Pavement (Superpave)**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Superpave Surface Course (Item 450.22)	1.75	0.0560 Ton/SY*in	\$182.00 /Ton	\$17.84
Superpave Intermediate Course (Item 450.31)	2	0.0560 Ton/SY*in	\$175.00 /Ton	\$19.60
Superpave Base Course (Item 450.42)	4	0.0560 Ton/SY*in	\$155.00 /Ton	\$34.72
Dense Graded Crushed Stone For Sub-Base (Item 402.)	4	0.0278 CY/in	\$90.00 /CY	\$10.01
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	16	0.0278 CY/in	\$70.00 /CY	\$30.65
Asphalt Emulsion for Tack Coat (Item 452.)	Apply 2	0.050 Gal/SY	\$8.75 /Gal	\$0.88
Calcium Chloride for Dust Control (Item 440.)	Apply 2	1.5 LB/SY	\$0.50 /LB	\$1.50
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$140.83
			<b>Full Depth Pavement COST PER SY=</b>	<b>\$141.00</b>

### **Loam Borrow and Seed**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
Loam Borrow (Item 751)	4	0.0278 Yd/in	\$100.00 /CY	\$11.12
Seed (Item 765)			\$3.00 /SY	\$3.00
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
			per SY Total=	\$37.47
			<b>Loam Borrow and Seed COST PER SY=</b>	<b>\$38.00</b>

### **HMA Driveway**

	<u>Depth (in)</u>	<u>Conversion</u>	<u>Unit Cost</u>	
HMA Sidewalk or Driveway (Item 702.)	4	0.0560 Ton/SY*in	\$250.00 /TON	\$56.00
Gravel Borrow (Item 151.)	8	0.0278 CY/in	\$69.00 /CY	\$15.35
Unclassified Excavation (Item 120.1)	12	0.0278 CY/in	\$70.00 /CY	\$23.35
Water For Roadway Dust Control (Item 443.)	N/A	0.003 MGL/SY	\$100.00 /MGL	\$0.30
Fine Grading and Compacting (Item 170.)	N/A	N/A	\$10.00 /SY	\$10.00
			per SY Total=	\$105.00
			<b>HMA Driveway COST PER SY=</b>	<b>\$105.00</b>



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### **ORDER OF MAGNITUDE COST ESTIMATE**

**Granite Curbing**

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Granite Curb (Items 504, 504.1, 509, 509.1)	\$67.00 /FT	423 FT	\$28,364.79
Granite Curb R&R (Item 580.)	\$35.00 /FT	175 FT	\$6,109.40
Granite Curb R&D (Item 594.)	\$14.00 /FT	175 FT	\$2,443.76
Granite Edging R&D (Item 597.)	\$15.00 /FT	110 FT	\$1,650.00
			<hr/>
			\$38,567.95
		<b><u>Granite Curbing SAY=</u></b>	<b><u>\$39,000.00</u></b>

**Signing & Striping**

	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total</u>
Stop Sign (Item 832.)	\$20.00 /SF	15.54 SF	\$310.80
Sign Post (Item 847.1)	\$60.00 /EA	3 EA	\$180.00
6" Yellow Thermoplastic (Item 867.106)	\$1.65 /FT	693.07 FT	\$1,143.57
6" White Thermoplastic (Item 866.106)	\$1.65 /FT	806.97 FT	\$1,331.51
12" White Thermoplastic (Item 866.112)	\$6.25 /FT	44.47 FT	\$277.96
			<hr/>
			\$3,243.83
		<b><u>Total Signing &amp; Striping SAY=</u></b>	<b><u>\$3,300.00</u></b>

**Medfield State Hospital Redevelopment**  
**Off-Site Intersection Analysis - Harding Street at Hospital Road**  
**Alternatives Ranking Matrix**

	Right-of-Way Impacts	Environmental Resource Area Impacts	Traffic Operations / Capacity	Safety	Constructability	Construction Cost	Total Average Weighted Score (Out of 5)	Ranking
Alternative 1 - Harding St Stop	5	5	5	3	4	4	4.33	3
Alternative 1a - 3-Way Stop	5	5	4	5	4	4	4.50	1
Alternative 2 - Hospital St Stop	5	5	5	4	4	4	4.50	1

*Ranking 1-5, with 5 as high (favorable) and 1 as low (unfavorable).*

*note: The alternatives ranking matrix has been prepared as a preliminary comparison tool to assist the Town in evaluating each of the concepts according to various criteria. Please note, the scoring for each alternative shown in the matrices is subjective and is based on evaluation of the site conditions and how each concept is anticipated to meet the project's goals.*



**Select Board**  
Eileen M. Murphy, Chair  
Gustave H. Murby, Clerk  
Osler L. Peterson, Member



**Kristine Trierweiler**  
*Town Administrator*  
**Frank Gervasio**  
*Assistant Town Administrator*

## **TOWN OF MEDFIELD**

### ***Office of the Select Board***

Town House • 459 Main Street • Medfield, Massachusetts 02052-0315

Phone: 508-906-3011 • [www.town.medfield.net](http://www.town.medfield.net)

January 7, 2025

Ms. Brona Simon, State Historic Preservation Officer  
Massachusetts Historical Commission  
220 Morrissey Boulevard  
Boston, MA 02125

Re: Medfield State Hospital, Medfield, MA

Dear Ms. Simon,

I am writing on behalf of the Medfield Select Board to support Trinity Acquisitions proposed adaptive reuse of the Medfield State Hospital using state and federal historic tax credits. Preservation and rehabilitation of the historic property has been a top priority for the campus since it closed completely, 20 years ago. The project will rehabilitate 27 buildings and create 334 units of mixed income housing.

The proposed project incorporates the priorities of the Town of Medfield identified in the Medfield State Hospital 2018 Strategic Master Plan for reuse of the property, including maintaining and enhancing the character of the Town, addressing Town housing needs, achieving reasonable economic and financial benefits for Medfield residents and Town service, and celebrating history. The proposed residential use of 27 campus buildings complements the proposed Cultural Alliance of Medfield's plan for cultural and arts uses in the former Lee Chapel and the Infirmary.

The project also incorporates new public open spaces, which will provide significant recreational and ecological amenities for the new residents and Medfield community. With passive and active programs, the new campus landscape will be crafted to engage residents and neighbors in social spaces while providing "productive landscape" services. The objective of the "productive landscape" is to create an open space that provides ecological resources (such as wildlife habitat enhancement, stormwater treatment, native seed spreading, and passive cooling) while also providing recreational opportunities for the community.

This project will revitalize the Medfield State Hospital campus and buildings to the proper rehabilitation standards while restoring an underutilized and vacant asset for the community.



**TOWN OF MEDFIELD**  
**DOWNTOWN WAYFINDING SIGNAGE PROJECT**  
 Medfield, MA

December 13, 2024

Maria De La Fuente  
 Medfield Director of Land Use and Planning  
 459 Main Street  
 Medfield, MA 02052

Dear Maria,

Thank for the opportunity to present our proposal for this exciting project! Outlined below is a proposed scope of work and fees for wayfinding signage design services that omloop may provide to the Town of Medfield.

**PROJECT UNDERSTANDING**

Based on the information provided in the request for proposal, we understand the scope to be planning, conceptual design, and final design intent details for wayfinding signage for the downtown area of the Town of Medfield. The final deliverable will provide details, specifications and sign location diagrams that will allow the town to competitively bid and award the project to a qualified signage contractor. We understand that bidding support and contract administration services are not in this scope.



**SIGNAGE TYPES**

Specific sign types are not listed in the request for proposal. Based on our experience with municipal wayfinding, we anticipate that the following signs will be required:

- Vehicular directional signs
- Downtown gateway markers
- Public parking identity
- Information kiosks
- Pedestrian wayfinding
- Parks and public open spaces identification
- Downtown Medfield visitor map (for use on kiosks)

This list of sign types will be finalized in the Programming and Assessment phase.

**PROJECT APPROACH**

**1. Programming and Assessment**

- Review current town branding and communication materials
- Kick-off meeting with the working group
- Identify town bylaws, ordinances, rights-of-way and property ownership affecting signage
- Review approval process and parties involved (Select Board, public works, historic council)
- Conduct driving and walking photo survey of project area
- Prepare sign location plan: circulation, users, information needs, sign types and locations
- Discuss intended audience
- Gather historic resources; imagery, text

Assemble design flavor and inspiration palette; gather precedent imagery as needed  
Work-session with working group to confirm program and assessment  
Refine programming and design vocabulary

DELIVERABLES:

Survey and audience observations  
Signage location plan  
Sign types and quantities tabulation  
Sign bylaws assessment  
Design vocabulary

MEETINGS:

One on-site meeting  
Meetings as needed by Zoom/web-conference

## **2. Concept Exploration**

Based on preferred design vocabulary, prepare three initial design alternatives  
Indicate colors, materials, finishes, and mounting  
Illustrate in context, using Photoshop drop-ins with site views  
Work-session with Select Board; obtain feedback  
Refine concepts as required; update sign plans, types and quantities  
Illustrate entire signage hierarchy with preferred concept  
Obtain budget cost estimates on concept designs  
Update approved concepts with all comments

DELIVERABLES:

Approved line-up of all signage to be designed  
Budget estimate provided by sign fabricator  
Updated sign location plan

MEETINGS:

One on-site meeting with Select Board  
Meetings as needed by Zoom/web-conference

## **3. Design Development**

Based on concept approval, refine design of each sign type  
Work-session with working group; revise as required  
Coordinate production of several full-size mock-ups  
(*mock-ups are temporary and fabricated by sign vendor*)  
Review mock-ups on-site with Select Board  
Obtain revised budget cost estimates  
Update sign plans and sign messaging

DELIVERABLES:

Mock-up coordination  
Basic detailing and specifications  
Context elevations  
Updated budget estimate provided by sign vendor

**MEETINGS:**

One on-site meeting with Select Board to review mock-ups  
Meetings as needed by Zoom/web-conference

**4. Final Design and Specifications**

Final design revisions based on mock-up review  
Final details and specifications  
Sign panel layouts and graphic artwork  
Visitor map artwork  
Performance specifications

**DELIVERABLES:**

Design intent package suitable for obtaining competitive cost quotes and award of project  
(Adobe Illustrator, PDF files)

**MEETINGS:**

Meetings as needed by Zoom/web-conference

**COMPENSATION**

Our estimated fees for the above services are as follows:

1. Programming and Assessment .....	\$7,000
2. Concept Exploration .....	\$8,500
3. Design Development.....	\$9,500
4. Final Design and Specifications.....	\$8,500
<b>Total Fees .....</b>	<b>\$33,500</b>

Expenses ..... \$1,500  
(estimated not to exceed)

**ADDITIONAL SERVICES AND COSTS**

Items not included in this scope of work are as follows:

*Costs for the fabrication and installation of permanent signs*

*Costs for the fabrication and installation of temporary signs, mock-ups and prototypes*

*Work by other trades, such as site-work, mill-work, electrical, wall construction, painting, etc.*

*Shop-drawings, or shop-drawing-level detailing (typically by signage contractor)*

*Signage beyond the stated limits of the project*

*Meetings beyond those identified in the project work-plan*

*Artists fees for original artwork contracted or commissioned for project*

*Content creation for interpretive displays (i.e., new copy writing or new photography)*

*Content creation for website or mobile device use*

*Design and final artwork for interpretive/historic exhibit panels*

*Securing of and cost for signage permits (typically by signage contractor)*

*Structural engineering and stamping (typically by signage contractor)*

*Electrical design (typically by signage contractor)*

*Professional surveys or professional as-built condition assessment*

*Dimensioned location drawings for exterior sign locations (typically by landscape architect)*

*Coordination and connection of signs with existing site utilities (typically by project electrician)*

*Professional lighting design and specification and cost of fixtures*

*Cost of project fonts purchased*

*Cost of stock photography and / or clip-art purchased  
Cost of full-size paper prints or foam-core mock-ups*

**AGREED AND ACCEPTED**

If you are in agreement with this proposal, please sign and return one copy to omloop LLC, our receipt of which will be our notice to proceed.

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AUTHORIZED SIGNATURE AND DATE  
Town of Medfield

---

AUTHORIZED SIGNATURE AND DATE  
Brian Pearce, omloop LLC



December 16, 2024

# Town of Medfield, MA

Signage & Wayfinding Master Plan



## Contents.

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**Fees & Terms.**

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**Project Samples.**

Maria De La Fuente  
Medfield Director of Land Use and Planning  
459 Main Street  
Medfield, MA 02052  
(508) 906-3027  
mdelafuente@medfield.net

**Re: Town of Medfield Wayfinding**

Dear Maria,

Selbert Perkins Design (SPD) is pleased to submit a proposal for the Town of Medfield's Signage and Wayfinding project. We are very excited at the opportunity to collaborate with the Town to provide design, planning, and analysis services. SPD has extensive experience providing clear and compelling Master Plans that have transformed civic organizations throughout the region. As a multidisciplinary team, we offer a range of creative and technical services that meet the project goals.

SPD understands the unique challenges of the Town's future and will address them through a clear and compelling Signage and Wayfinding Master Plan. The SPD design team is prepared to meet all goals for this project within the budget and schedule as outlined in the request for proposals.

I again thank you for your consideration. We are confident that we can provide the efficiency and creativity you need to bring this project to life. SPD looks forward to developing a long-term relationship with the Town to bring the project goals to fruition. We look forward to collaborating with you to make this project a resounding success.

Best regards,



Matthew Grieci  
Director, Business Development  
Selbert Perkins Design

1

# About.



# About Selbert Perkins Design

**Every place has a story,  
every story has a place.™**

**Selbert Perkins Design** (SPD) is a multidisciplinary, WBE international design firm specializing in wayfinding, placemaking, and place branding. SPD has offices in Boston, Chicago, Los Angeles, and Shanghai, with a combined staff of 40.

We collaborate with cities to help them thrive in today's hyper competitive marketplace where municipalities must be smarter and more creative than ever about how they communicate with, engage, and connect with residents, visitors, and regional audiences. From "logos to landmarks," we create everything from brand identities and marketing communication plans, to advertising campaigns and placemaking. We are known for our strategic approach to creative excellence, transforming cities and driving positive results, and for solving our clients' most challenging problems.

## Design Services

- Wayfinding Systems
- Signage Design
- Murals and Graphics
- Print and Digital Mapping
- Media Integration
- Master Planning
- Community Engagement
- Digital Surveys and Focus Groups
- Branding and Identity Design
- Brand Roll-outs
- Marketing Materials
- Print and Digital Graphic Design
- Placemaking
- Public Art & Sculpture

## Firm History

- 1982 - Clifford Selbert Design office opened Cambridge, Massachusetts office
- 1992 - Opened California office
- 1996 - Incorporated as Selbert Perkins Design Collaborative
- 2003 - LA office becomes certified WBE firm
- 2006 - Chicago office opened
- 2008 - Shanghai office opened
- 2023 - Boston office becomes certified WBE firm

## Contacts

Matthew Grieci  
Director, Business Development  
[mgrieci@selbertperkins.com](mailto:mgrieci@selbertperkins.com)

Visit us at: [SelbertPerkins.com](http://SelbertPerkins.com)

# Civic Experience Summary

Selbert Perkins Design has extensive civic branding and signage experience and integrates the local community and culture into every project to tell the story of the communities we serve. Whether it's creating a new brand identity, helping travelers find parking and explore downtown, or envisioning an active and sustainable streetscape - SPD believes its work should create a memorable experience that serves the greater good.

## Civic Clients (Partial List)

- Abu Dhabi Municipality
- City of Anaheim, California
- City of Garden Grove, California
- City of Everett, Massachusetts
- City of Indio, California
- City of Lancaster, California
- City of Long Beach, California
- City of Las Vegas, Nevada
- Port of Los Angeles, California
- City of Louisville, Kentucky
- City of Manhattan Beach, California
- City of Marina del Rey, California
- City of Placentia, California
- City of Urbana, Illinois
- City of Santa Monica, California
- City of Watsonville, California
- City of West Hollywood, California
- City of Worcester, Massachusetts
- Kailua Village, Hawaii
- Los Angeles World Airports, California

## Civic Wayfinding Experience

- Analyze architectural, urban design and/or site master plans for opportunities
- Preparation of multi-modal wayfinding plans
- Design temporary and permanent engagement strategies that allow a broad range of the community to participate and feel a sense of ownership
- Provide clear and simple wayfinding and furniture systems that attract and guide visitors to key destinations, where to park, and walking time to destinations.
- Create a flexible kit of parts with components that are cost-effective, easily built upon, maintained, and installed

## Branding & Digital Communications Experience

- Storytelling with a unique brand identity for municipalities, trails, and parks
- Develop district identity systems with unified visual and verbal language
- Design branded elements including banners, vehicle wraps, bus shelters, billboards, etc.
- Design marketing materials for all digital and print communication methods
- Develop valuation plans for revenue generating digital art and advertising programs

## Placemaking & Environmental Graphics Experience

- Develop placemaking master plans for the public realm that can be built on over time as funds become available
- Design gateways and landmarks that express a memorable and authentic sense of place
- Create streetscape improvement plans with sculpture, lighting, and digital elements
- Design signage, graphics, or murals to enhance storefronts and building facades

# Project Team

The SPD team includes executive management overview, as well as strategic and design management staff that direct daily project activities. The assigned team has specific knowledge of municipal wayfinding and signage projects, including the latest in design, fabrication, and project management practices.



## **Sheri Bates** Principal

Sheri Bates brings the ability to turn verbal concepts into powerful graphic identities and dynamic branded communications programs for a broad spectrum of clients. She brings over 25 years of experience including oversight of collaborative, multi-disciplinary teams for a wide range of projects including: higher education, cultural, civic, corporate, mixed-use, retail, hospitality and healthcare. Sheri's work includes: research and analysis, brand strategy, design development, messaging and related conceptual and creative efforts. Sheri will lead the team and lead all branding efforts.



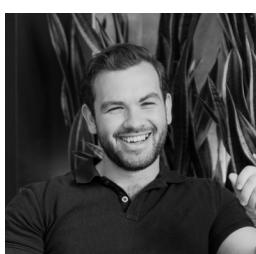
## **Cory DePasquale** Design Director, Project Manager

As Design Director with SPD, Cory utilizes his strong design, management, and leadership skills while successfully working on projects in the educational, civic, transportation, and healthcare sectors, to name a few. Cory's enthusiasm and presence at the office, on job sites, and with our partners helps our team do their best work each day. Cory specializes in brand identity development, signage and wayfinding design, CAD, digital marketing strategy, and project management.



## **Lauren Cowe** Senior Designer

Lauren is a designer with experience in brand identity and editorial design. Lauren has an eye for detail and works collaboratively to bring the client's vision to life. With a background in graphic design and photography, Lauren will work with project teams to create beautiful, functional design solutions for companies, organizations, and placemaking initiatives.



## **Mike Suazo** Designer

Mike has an eye for detail and works collaboratively to bring the client's vision to life. He collaborates with interior designers, architects, and graphic design colleagues to generate informed concepts that work through to complete, final designs. Mike's areas of expertise spans from digital tools through contemporary design strategy and modern placemaking and design concepts.



## Sheri Bates

Principal / Creative Director

Sheri Bates brings over 30 years of experience creating branded communications programs for a broad spectrum of clients. Sheri oversees collaborative, multi-disciplinary teams on a wide range of projects including law, higher education, healthcare, corporate, civic, cultural, mixed-use, retail and hospitality. Her work includes: research and analysis, brand strategy and development, print and interactive communications, interactive technology, and branded environments.

### Education

Massachusetts College of Art and Design - Bachelor of Fine Arts, Graphic Design

### Years of Experience

26 Years with SPD

34 Years Total

### Relevant Experience

- City of Lancaster, CA
- City of Worcester, MA
- City of Everett, MA
- City of Lowell, MA
- River Valley Transit, Middletown, CT
- Urban Park at Kendall Center, Cambridge, MA
- The Battle Road Scenic Byway, Arlington, Concord, Lexington, and Lincoln, MA
- University Park at MIT, Cambridge, MA
- Massachusetts Institute of Technology, Cambridge, MA
- MIT Political Science Department, Cambridge, MA
- MIT Sloan School of Management, Cambridge, MA
- Motor Cities National Heritage Trail, Detroit, MI
- Municipal Finance Bank (MuniFi), Lancaster, CA
- New England Botanic Garden at Tower Hill, Boylston, MA
- Hood Park, Charlestown, MA
- Blue Cross Blue Shield of Massachusetts, Boston, Quincy, Hingham, MA
- Boston Children's Hospital, Boston MA
- Fenway Cultural District, Boston, MA
- Antelope Valley Medical Center, Lancaster, CA
- Somerville Public Library, Somerville, MA
- Lancaster Museum of Art & History (MOAH), Lancaster, CA
- Phillips Academy, Oliver Wendell Homes Library, Andover, MA
- Skyline College, San Bruno, CA



## Cory dePasquale

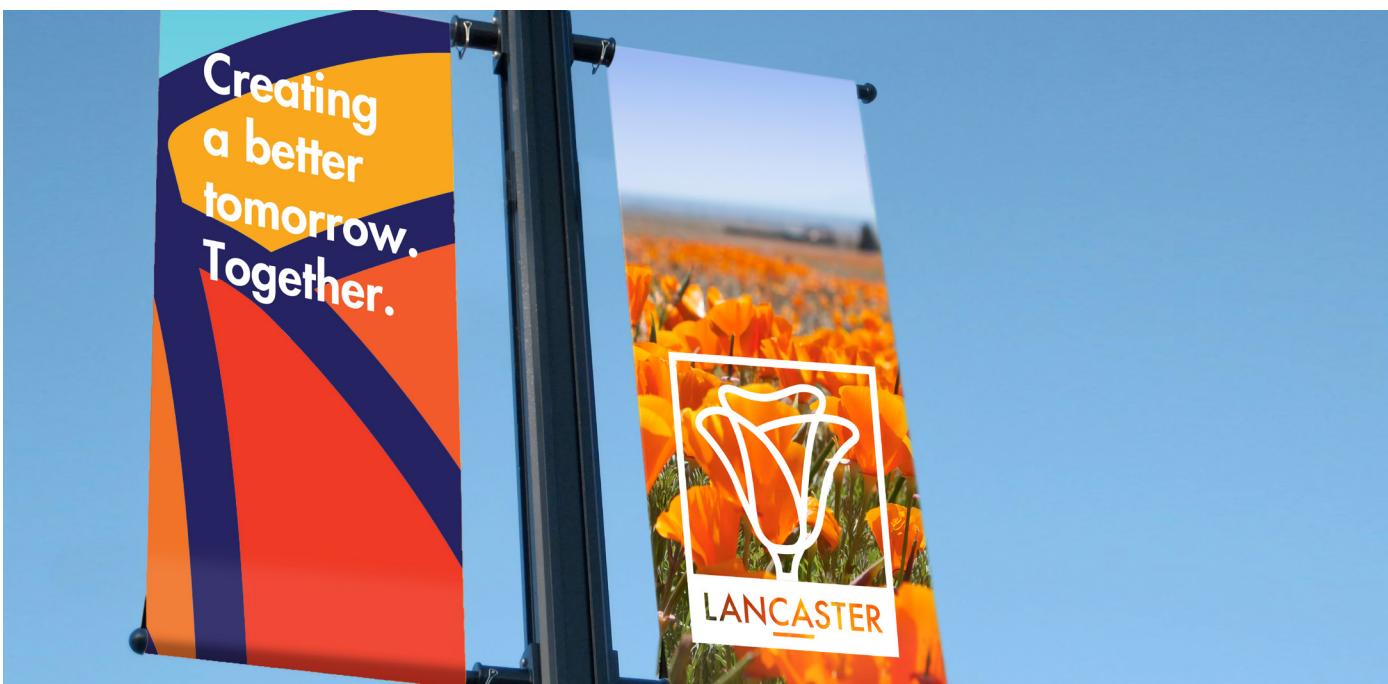
Design Director

As Design Director with SPD, Cory dePasquale utilizes his strong design, management, and leadership skills while successfully working on projects in the civic, transportation, education, and healthcare sectors, to name a few. Cory's enthusiasm and presence at the office, on job sites, and with our partners helps our team do their best work each day. Cory specializes in brand identity development, signage and wayfinding design, CAD, digital marketing strategy, and project management. Leveraging his industry experience and a 3D technical/engineering background, he brings clarity to complex design challenges.

### Relevant Experience

- City of Everett, MA
- City of Lancaster, CA
- City of Lowell, MA
- City of Melrose, MA
- City of Pittsfield, MA
- City of Gloucester, MA
- City of Saco, ME
- Columbia University, New York, NY
- DHCD Massachusetts Downtown Initiative, Rapid Recovery Plan, MA
- Hood Park, Charlestown, MA
- Lehigh University, Bethlehem, PA
- New England Botanic Garden at Tower Hill, Boylston, MA
- River Valley Transit, Middletown, CT
- Skyline College, San Bruno, CA
- South Bay Harbor Trail, Boston, MA
- Willard Beach, South Portland, ME
- The Wyss Institute, Boston, MA
- Affini-T Therapeutics Headquarters, Watertown, MA
- Blue Cross Blue Shield of Massachusetts, Boston, Quincy, Worcester & Hingham, MA
- Beth Israel Lahey Health, Boston, MA
- Princeton Schmidt Hall, Princeton, NJ
- Jewish Youth Center, Toronto, Canada

**Town of Medfield, MA - Signage & Wayfinding**



## Lauren Cowe

Senior Designer

Lauren has an eye for detail and works collaboratively to bring the client's vision to life. With a background in graphic design, brand identity, editorial design, and photography, Lauren will work with senior designers to create beautiful, functional design solutions for companies, organizations, experiential branding and placemaking initiatives.

### Education

The Art Institute of Boston at Lesley University - BFA, Design; Minor in Photography

### Years of Experience

2 Years with SPD

4 Years Total

### Affiliations

American Institute of Graphic Arts (AIGA) Member

### Relevant Experience

- City of Lancaster, Lancaster, CA
- City of South Portland, South Portland, ME
- Lancaster City Hall, CA
- Lancaster Performing Arts Center, Lancaster, CA
- MBTA, High Frequency Transit, Boston, MA
- Western Greenway, Waltham, Lexington, Belmont, MA
- Worcester Madison, Worcester, MA
- Museum of Art and History, Lancaster, CA
- New England Botanic Garden at Tower Hill, Boylston, MA
- River Valley Transit District, Various, CT
- Sacramento Regional Transit (SacRT), CA
- Antelope Valley Hospital, Lancaster, CA
- Beth Israel Lahey Health, Various, MA
- Blue Cross Blue Shield of Massachusetts, Boston, MA
- Dartmouth Health Medical Center, Lebanon, NH
- Green Garage at Kendall Center, Cambridge, MA
- Hood Park, Charlestown, MA
- Medical Main Street, Lancaster, CA
- MuniFi Bank, Lancaster, CA
- Skyline College, San Bruno, CA
- SSTAR, Fall River, MA
- Tocci/PreFix, Woburn, MA
- Tradesman, Charlestown, Boston, MA
- Novus Place, Tempe, AZ



## Mike Suazo

Designer

Mike brings seven years of expertise to Selbert Perkins Design in all areas of experiential design including print, advertising, web, interactive technology and environmental graphic design. Based in the Boston office, Mike's experience in signage & wayfinding, environmental graphics, and concept rendering make him a valuable team member for both 2D and 3D projects.

### Education

Wentworth Institute of Technology -  
Bachelor of Science,  
Industrial Design

### Years of Experience

1 Year with SPD

7 Years Total

### Relevant Experience

- 100 Arlington, Boston, MA
- Boston Children's Hospital, Boston, MA
- City of Everett, Everett, MA
- City of Saco, Saco, ME
- Columbia University Russ Berrie Extension, New York, NY
- HBRE Edgewater Drive Campus, Wakefield, MA
- FM Global Norwood Campus, Boston, MA
- Honolulu Transportation System, Honolulu, HI
- Melrose Milano Park, Melrose, MA
- Novo Nordisk Campus, Waltham, MA
- One Seaport, Boston, MA
- Princeton University Schmidt Hall, Princeton, NJ

# 2

# Approach.

# Project Understanding

Our project team is proposing to develop a Signage and Wayfinding Master Plan for the downtown area in the Town of Medfield, Massachusetts. Our scope of work includes vehicular and pedestrian signage and wayfinding within the downtown area. SPD will create a unique Master Plan that drives engagement and builds brand equity for the Town. Our goal will be to create a Signage and Wayfinding Master Plan that can enhance navigation, improve pedestrian experiences, and overcome a perceived lack of parking for visitors to Medfield's downtown district.

Based on our understanding of the project, the following sign types may be included in the Signage and Wayfinding Master Plan:

## **Signage and Wayfinding Master Plan**

### **Direction**

- Vehicular & Pedestrian Directional/Wayfinding to All Major Destinations & Trails (Parking/Retail, Transit, Etc)

### **Information**

- Directory/Map Sign
- Parking (Signage to Town Owned-Lots Only)

### **Exclusions**

- Regulatory and Code Required Signage Naming & Numbering Systems
- Branding
- Donor Programs
- Digital Communications
- Print Communications
- Advertising/Revenue Generation Program
- Public Art Consulting & Program Management

# Scope of Work

## Analysis and Research

**Meetings:** (3) with project team

**Schedule:** 4 weeks

1. Hold kick-off meeting with the project team and relevant project stakeholders to review project needs, concerns, goals. Review pertinent project plans, plan and potential design revision, all related architectural elevations, landscape plan, any existing brand identity and brand criteria, applicable sign code ordinances and regulations, to confirm requirements.
2. Review and assess the Town's inventory of wayfinding signage. SPD will conduct an on-site analysis of the Town's existing vehicle and pedestrian signage conditions of key entrance locations and the travel routes leading to it. This analysis is to include recommendations for the consolidation, removal, or other solutions to make all signage more effective.
3. Review and assess the potential wayfinding destinations within the Downtown area, taking into account its unique characteristics and demands. Evaluate potential and existing site and building locations including site entries/edges/corners, vehicular and pedestrian circulation routes, decision points and destination generators, land and building uses, ingress and egress points to destinations, lines of sight, environmental factors, building materials, and interrelationships.
4. Identify user groups, specific needs and potential wayfinding difficulties (e.g., affecting individuals with disabilities, senior citizens and visitors). Hold up to (3) stakeholder interviews, with no more than (5) participants per interview.

## Deliverables

- Assessment Report
- User Needs and Difficulties Analysis
- Interview summary and recommendations
- Minutes from meetings and teleconferences

# Scope of Work

## Concept Design

**Meetings:** (2) with project team

**Schedule:** 4 weeks

1. Prepare and confirm Signage and Wayfinding Master Plan outline of required elements.
2. Present Signage and Wayfinding Master Plan outline to project team. Refine as needed per comments received.
3. Develop (2) conceptual approaches based on the confirmed Signage and Wayfinding Master Plan outline of sign types. Design approaches will include visual approach, dimensions, font sizes and styles, symbols, colors, and preliminary materials for sign types.
4. Develop preliminary location plans and sign type counts.
5. Present preliminary signage & wayfinding concepts to client team. The presentation will include preliminary Schematic design for signage elements, preliminary location plans. Client team to select (1) direction to refine.
6. Based on client approval, develop Concept Design Package. This includes visual approaches with plans and sketches indicating locations, typography, image, color, materials, size, shape, and structure, including initial costing estimates. Submit to client for further refinement in Design Development. Present approved Concept Design package to Medfield Select Board.

### Concept Design Deliverables:

- Concept design package
- Preliminary sign location plans and recommendations
- Minutes from meetings and teleconferences

# Scope of Work

## Design Development

**Meetings:** (3) with project team

**Schedule:** 6 weeks

1. Based on the approved Concept Design Package, develop and refine signage and wayfinding elements. Prepare elevations, plans, perspective sketches, sufficient to describe the size, shape, and character of all major design elements. Specify materials, color palette, typefaces, iconography and lighting that will be used in the system.
2. Update sign location plans and provide sign counts. Develop message schedule template.
3. Present refined signage and wayfinding design elements and updated sign location plans to client team for approval. Presentation will include visual approaches with plans and sketches indicating locations, typography, image, color, materials, size, shape, and structure. Obtain team input on final design.
4. Prepare Design Development Package to include drawings of each design element showing scale, critical dimensions, elevations, sections, details, and specifications. Upon client approval, present approved Design Development package to Select Board.

### Design Development Deliverables:

- Design Development package
- Updated sign location plans and message schedule template
- Minutes from meetings and teleconferences

# Scope of Work

## Design Intent Documents

**Meetings:** (2) with project team

**Schedule:** 4 weeks

1. Confirm elements from Design Development for documentation.
2. Prepare final sign location plans for each element.
3. Prepare final Design Intent documents and specifications to include; notes for connections/ mounting details, final drawings of each communication element showing scale, critical dimensions, elevations, cross sections, details, and specifications (indicating the final intent for each sign type including color and material call-outs). Final shop drawings and message schedule to be completed by fabricator, including engineering if required.
4. Prepare electronic artwork of elements, as required.
5. Assemble Design Intent Documents package, sign location plans and message schedule.

### Design Intent Documents Deliverables:

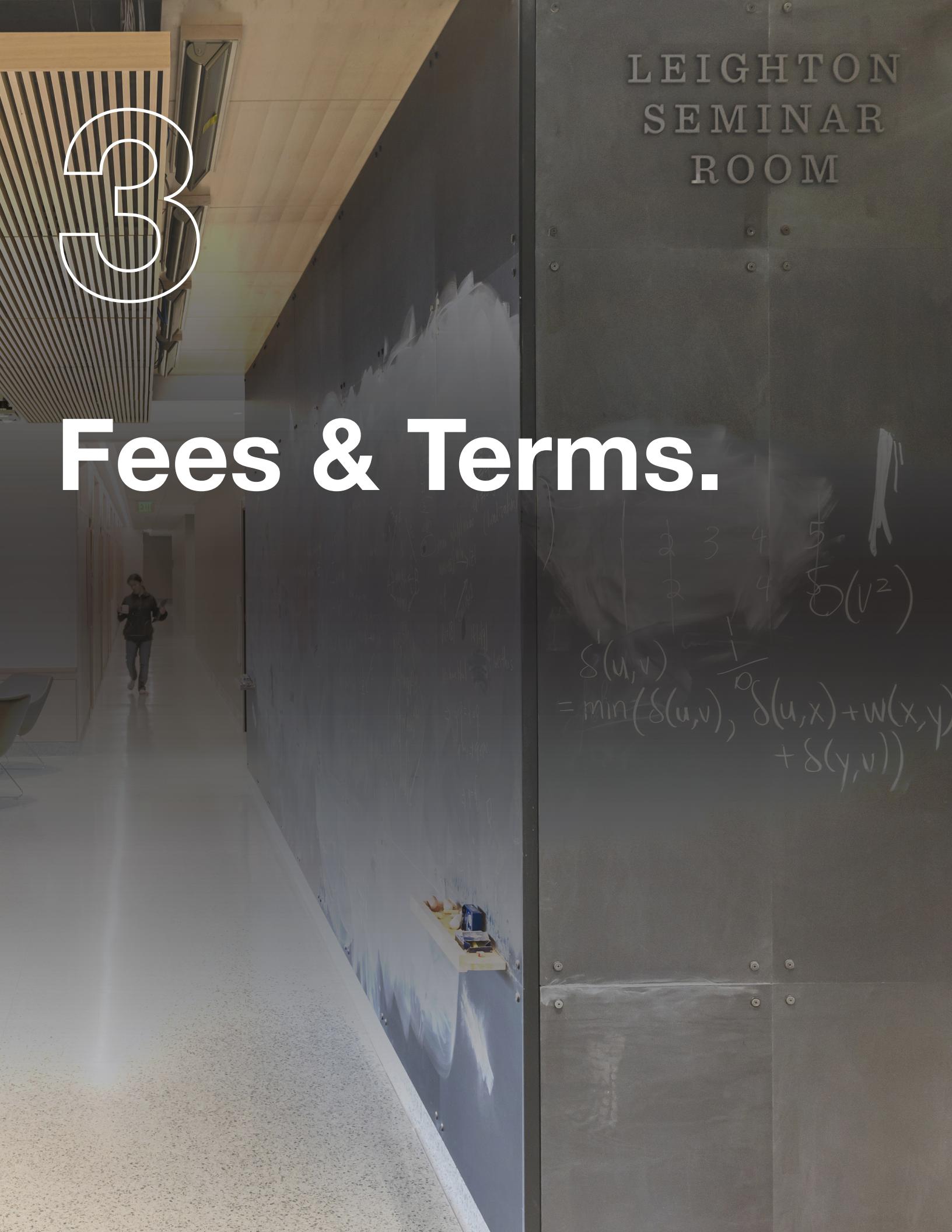
- Design Intent documents package, including specifications & detailed drawings
- Final sign location plans & message schedule template
- Minutes from meetings and teleconferences

LEIGHTON  
SEMINAR  
ROOM

3

# Fees & Terms.

$$\begin{aligned} & 2 \quad 3 \quad 4 \quad 5 \\ & 2 \quad 4 \\ & \delta(u, v) \\ & = \min(\delta(u, v), \delta(u, x) + w(x, y) \\ & \quad + \delta(y, v)) \end{aligned}$$



# Fee Proposal

Scope of Work	Schedule	Fee
Analysis and Research	4 weeks	\$5,000
Concept Design	4 weeks	\$15,000
Design Development	6 weeks	\$10,000
Construction Documents	4 weeks	\$5,000
<b>Total</b>		<b>\$35,000 + expenses</b>

## Expenses

All expenses such as color copies, material samples, travel and related costs, etc. are additional, and will be billed at cost without mark-up.

## Payment Schedule

SPD invoices fees and expenses monthly. Terms are net 30.

## Authorization & Acceptance

We require your signature in order to begin work. Please complete and return the following:

by ..... date ..... /...../.....  
**Selbert Perkins Design, Inc.**

by ..... date ..... /...../.....  
**Town of Medfield, MA**

# Terms & Conditions

## Hourly Rates

Partner	\$250	Senior CAD Designer	\$150
Principal	\$200	CAD Specialist/Designer	\$135
Design Director	\$175	Designer	\$135
Project Manager	\$160	Administrators	\$100
Senior Designer	\$150		

## Payment/Billing

Invoices for services rendered will be submitted in accordance with the project payment schedule, previously outlined. Payment is due upon receipt, unless otherwise agreed to in advance by SPD. If the Client disputes any charges, written notice of such disputed charges must be submitted to SPD within 10 days of receipt of invoice. SPD reserves the right to stop project work and withhold presentation materials if payments are not received when due. There is a finance charge of 2% a month for overdue invoices.

## Expenses

Expenses are in addition to project fees. The Client will reimburse SPD for all out-of-pocket expenses incurred in connection with this project. These expenses include but are not limited to: professional photography, illustration and copywriting/editing, printing, fabricating, photo-retouching/manipulation, copies, model-making and model materials, postage and delivery charges. When travel is required in connection with the project, the Client will reimburse SPD for travel, transportation, living expenses, and related coordination. SPD requires two people to attend all international meetings. Reimbursable expenses will be billed at cost.

## Cancellation/Postponement

In the event of the Client's cancellation or postponement of the project while it is in progress, all fees and expenses, incurred in the interest of the project to date of postponement or cancellation shall be paid by the Client within 10 days of the date that notice is given to SPD, unless otherwise agreed to in advance by SPD. SPD may withdraw from the project at any time for good cause which includes the Client's breach of this agreement, refusal to cooperate with SPD, or failure to pay SPD's fees or expenses according to agreed upon payment terms.

## Releases

For editorial copy, artwork (including illustration and photography), etc. provided by the Client, and for use rights negotiated by the Client for editorial copy, artwork, talent etc., the Client will indemnify SPD against all claims and expenses, including reasonable attorneys' fees and costs, due to uses for which no release was requested of SPD in writing by the Client or for uses by the Client which exceed the authority granted by a release. Conversely, for editorial copy, artwork (including illustration and photography), talent etc. provided by SPD, and for use rights negotiated by SPD for editorial copy, artwork, etc., SPD will indemnify the Client against all claims and expenses, including reasonable attorneys' fees and costs, due to uses for which no release was requested of the Client in writing or for uses which exceed the authority granted by a release.

## Approvals

SPD requires written documentation of ALL requests for changes, including to designs and copy. Documentation may be in the form of an e-mail. The Client will proofread and approve all copy before production of final piece; review and approve finished design elements and artwork before release to printers or fabricators; and review and approve all design intent, construction documents and related sign message schedules prior to release to qualified fabricators. The signature of the Client's authorized representative will be conclusive as to the Client's approval of all the above items prior to their release for printing, fabrication or installation.

### **Third Party Contracts**

When possible, all outside vendors will be contracted directly by the Client and the Client will pay the outside vendor directly for services. When it is not possible for the Client to contract directly with outside vendors, SPD may contract with others to provide creative services such as writing, photography, illustration, media placement, print and audio/video production, and fabrication. The Client agrees to be bound by any terms and conditions, including required credits, with respect to reproduction of such materials as may be imposed on SPD by such third parties and shall pay for the outside vendors' services upon presentation of an invoice. Such payment shall be made by the Client either to the outside vendor or directly to SPD, at SPD's option. Usage rights for photography and illustration will be negotiated with vendors by the Client directly.

### **Estimates**

SPD has no direct control over printing and fabrication costs or vendors' prices. Cost estimates are made by SPD on the basis of preliminary specifications and SPD cannot and does not guarantee that vendors' proposals and bids of costs will not vary from those estimates.

### **Ownership/Use**

Upon payment of all amounts owing to SPD, SPD shall transfer copies of all relevant electronic files generated for the production of the project to Client for Client's use and enjoyment. Notwithstanding Client's possession of such materials, SPD shall retain the sole and exclusive ownership of all rights, title, and interest (including without limitation all copyrights, trademarks, trade dress, and patents) related to the project, excluding any intellectual property that constitutes the Client's pre-existing property. For the avoidance of doubt, the use by Client of the project and all materials related thereto shall be granted as a non-exclusive license revocable for cause. Cause shall be found in the event Client grants or attempts to grant to any third parties the right to use the project or materials without first obtaining consent in writing from SPD. Client's failure to obtain SPD's prior, written consent shall render any such grant of rights null and void ab initio. SPD may deny any such grant in its sole discretion. If SPD approves any such proposed uses, additional compensation shall be paid to SPD in an amount to be negotiated in good faith between SPD and Client. All rights not expressly granted herein remain the sole property of SPD, and Client agrees never to challenge any such rights.

### **Project Storage**

Project and electronic files will be stored at SPD for one (1) year at no cost. However, SPD cannot be held responsible for loss or damage of stored files.

### **Credit**

SPD has the right to include a credit line on the completed designs or any visual representations such as drawings, models or photographs and the Client agrees to include this same credit in any publication of the design by the Client. SPD maintains the right to use any samples and/or photographs for publication, exhibition and promotional purposes.

### **Enforcement**

If SPD incurs attorneys' fees or related costs to enforce this agreement or because of a breach of this agreement by the Client, SPD shall be entitled to recover all of its costs and expenses, including but not limited to, its reasonable attorneys' fees and court costs from the Client.

### **Indemnification**

The Client will indemnify and hold harmless SPD, its officers, directors, employees, and agents that have contributed information to or provided services for this project, against any and all direct or indirect losses, claims, demands, expenses (including attorneys' fees and court costs) or liabilities of any kind arising in connection therewith, except for claims found to be gross negligence or a breach of this agreement by SPD.

### **State of Massachusetts**

This agreement shall be governed by the laws of the State of Massachusetts. If either party hereto is a corporation, trust, or general or limited partnership, each individual executing agreements on behalf of such entity represents and warrants that he or she is duly authorized to do so on behalf of said entity.

**Town of Medfield, MA - Signage & Wayfinding**

# 4

# Project Samples.





# City of Worcester

Worcester, Massachusetts

**Dates:**

2009 – 2015

**Client:**

City of Worcester

**Services Provided:**

Brand Identity

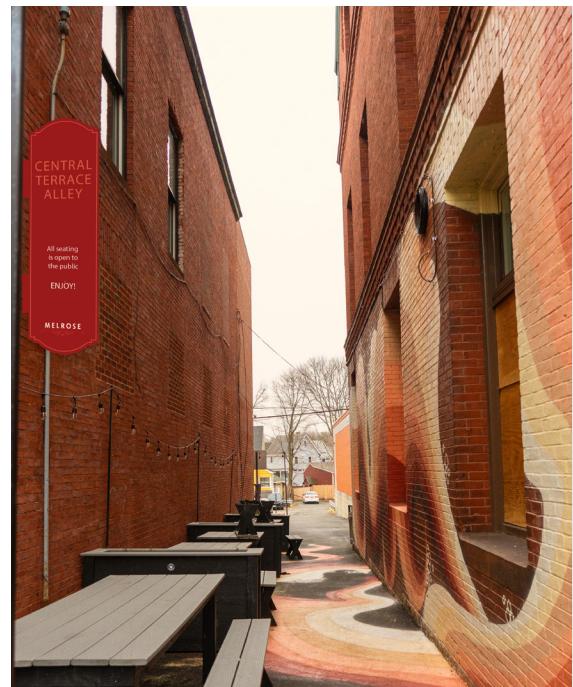
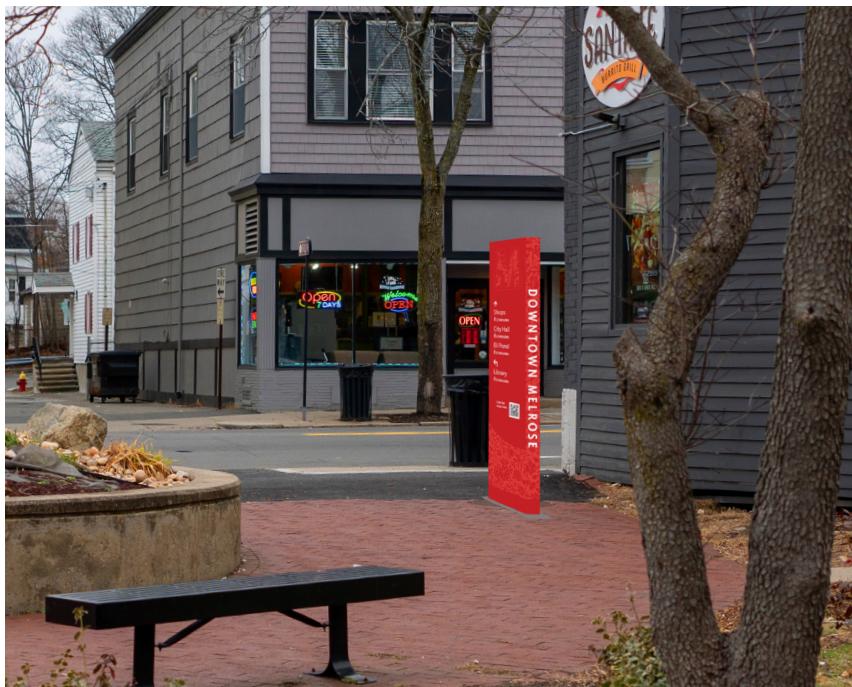
Signage & Wayfinding  
Master Plan

Mapping

Monuments

SPD created the logo and wayfinding master plan for the City of Worcester, including a comprehensive analysis of their brand identity and wayfinding signs, recommendations, and design concepts. SPD collaborated with the project team to increase awareness and tourism, and to improve the overall image of the City by creating a functional wayfinding system for visitors and residents. Worcester has implemented a small selection of signs and landmarks within the new system to raise capital.





# City of Melrose

Melrose, Massachusetts

**Dates:**

2020 – ongoing

**Client:**

City of Melrose

**Services Provided:**

Signage & Wayfinding  
Master Plan

Public Art

Selbert Perkins Design created a wayfinding and creative placemaking master plan, call-for-art, and art program identity for the City of Melrose, MA. SPD worked directly with a diverse group of stakeholders in the community, including small business owners, women-owned organizations, and artists from a variety of backgrounds, to gather and analyze information that contributed to the city's exciting new art program. Building on the wayfinding master plan, SPD has developed a pedestrian and vehicular wayfinding signage program for the city with a focus on walkability.





# City of Melrose, Wayfinding Master Plan

Melrose, Massachusetts

**Dates:**

2020 – ongoing

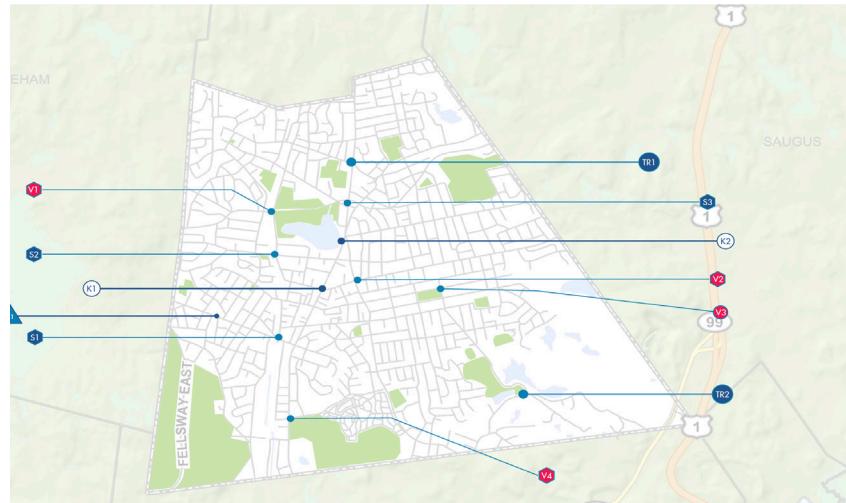
**Client:**

City of Melrose

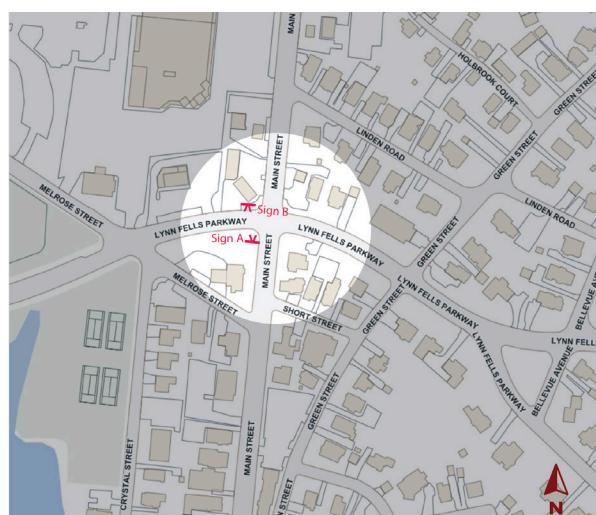
**Services Provided:**

Signage & Wayfinding  
Master Plan

Public Art



**NOTES:**  
Add to existing street lamp posts.



We deeply appreciate your prior awards for this project and we strongly encourage your continued favorable consideration. Please feel free to contact Kristine Trierweiler, Medfield Town Administrator, should you have any questions.

Sincerely,

Eileen Murphy,  
Chair, Medfield Select Board

cc:

Kristine Trierweiler, Medfield Town Administrator  
Todd Trehubenko, Chair, Medfield State Hospital Development Committee  
Abby Goldenfarb, Trinity Acquisitions LLC  
Jean Mineo, Bellforge Arts Center





## **TOWN OF MEDFIELD, MASSACHUSETTS**

### **AGREEMENT**

**CONTRACT # DPW 2024-17**

**STATE CONTRACT # (if applicable) \_\_\_\_\_**

This contract is made this 7<sup>th</sup> day of January, 2025, by and between the Town of Medfield, a Municipal Corporation, duly organized under the laws of the Commonwealth of Massachusetts and having a usual place of business at the Town House Building, 459 Main Street in said Medfield, MA 02052 herein referred to as the "Town" and Trojan Technologies Group ULC, having a usual place of business at 3020 Gore Road, London, ON Canada N5V 4T7 referred to as "Contractor."

### **WITNESSED:**

Whereas, the Contractor submitted a Proposal to furnish and deliver a new WWTP Ultra-Violet (UV) Disinfection System, hereinafter referred to as "Program"; and

Whereas, the Town has decided to award the contract therefore to the Contractor based on the bid sent to the Town of Medfield in the amount of three hundred twenty-four thousand seven hundred and twenty dollars (\$324,720.00).

NOW, THEREFORE, the Town and the Contractor agree as follows:

1. **Contract Documents.** The Contract Documents consist of this Agreement and the proposal for pricing, equipment specifications and contract addendum from the contractor to the Town of Medfield, (Attachment A); Contractor's Terms and Conditions of Sale are expressly excluded. The contract documents constitute the entire Agreement between the parties concerning the services and all are as fully a part of this Agreement as if attached hereto. In the event of conflicting provisions, the language of this Agreement shall govern provided that if the conflict relates to quantity or quality of goods or services, the greater quantity or higher quality specified shall be required.
2. **Goods / Services.** The Contractor shall furnish all product and services related to the Program in accordance with the bid specifications provided in the attached documents (Attachment A). Risk of loss or damage during transit is assumed by contractor.
3. **Performance of Work.** The Contractor shall furnish all equipment, staffing and materials to deliver a new WWTP Ultra-Violet (UV) Disinfection System in strict conformity with the specifications and requirements contained in the contract and all applicable Federal, State, and local laws, each of which is incorporated by reference and shall be responsible for obtaining all necessary approvals / permits as required for the performance of the Program.

The Town will require a signed change order in advance of any additions or deletions to this agreement.

4. **Warranties.** The Contractor warrants that the new WWTP Ultra-Violet (UV) Disinfection System, and all components and attachments have been constructed / assembled in strict conformity with the specifications and requirements set out in the contract. In addition to express warranties required of the contractor, Contractor warrants that the goods sold are merchantable; that they are fit for the purpose for which they are being purchased; that they are of uniform quality and consistency and absent from any latent defects and that they are in conformity with any sample, which may have been presented to the Town. The Contractor warrants that all work will be performed in a good and workmanlike manner and in strict conformity with the Contract Documents. The Contractor shall replace, repair, or make good, without cost to the Town, any defects or faults arising within one (1) year after date of Town's acceptance of articles furnished hereunder (acceptance not to be unreasonably delayed) resulting from imperfect or defective work done or materials furnished by the Contractor. Except as otherwise expressly set forth in this agreement, there are no other warranties.
5. **Delivery.** The Contractor shall deliver onsite, the new WWTP Ultra-Violet (UV) Disinfection System FOB Medfield Wastewater Treatment Plant, 99 Olde Bridge Street, Medfield, MA 02052 or to another location within the Town of Medfield, as Town may direct in writing.
6. **Contract Term:** The Contract Term is as follows: January 7, 2025 with delivery no later than December 31, 2025.
7. **Payment for Work.** The Town shall pay the Contractor based on the bid submitted to the Town of Medfield (Attachment A, see payment milestones) in the amount of \$324,720.00 after delivery, testing, and acceptance of equipment in accordance with the terms and conditions in the contract. The Town shall make payments within thirty (30) days after its receipt.
8. **Performance.** The contractor shall furnish the new WWTP Ultra-Violet (UV) Disinfection System and deliver it to the Town in accordance with the terms and conditions in the contract.
9. **Indemnification of the Town.** The Town's liability hereunder shall be limited to the amounts due the Contractor for services actually rendered. The Contractor shall defend, indemnify and hold harmless the Town, its officers, boards, agents and employees to maximum extent permitted by law from any liability loss, damage, cost, charge, or expense resulting from any employees or third party contractor or suppliers claim for payment for wages, labor, materials, goods or services rendered to Contractor or from any claim for injury to person or property, which may be made as a result of any act, omission or default on the part of the Contractor, or any of its agents or employees and will pay promptly on demand all costs and expenses of the investigation thereof, including attorney's fees and expenses. If any such claim is made, the Town may retain out of any payments, then or thereafter due to the Contractor a sufficient amount to protect the Town against such claims, costs and expenses.
10. **Contractor's Standard of Care.** In providing services under this Agreement, the Contractor will endeavor to perform in a manner consistent with that degree of care and skill ordinarily

exercised by members of the Ultra-Violet (UV) Disinfection System industry currently practicing under similar circumstances. Upon notice to the Contractor and by mutual agreement between the parties, the Contractor will, without additional compensation, correct those services not meeting such a standard.

11. Contractor's Personnel. The Contractor shall utilize only its employees and shall not utilize any third-party contractors without prior written approval of the Town.
12. Insurance. The Contractor shall provide a Certificate of Insurance showing evidence of General Liability, and Automobile Liability with a minimum of \$2,000,000, aggregate, each and, in case of General Liability, naming the Town of Medfield as an additional insured for this Project, as well as Worker's Compensation per Statute.
13. Independent Contractor. The Contractor is an independent contractor and is not an agent or employee of the Town and is not authorized to act on behalf of the Town. The Town will not withhold Federal, State or payroll taxes of any kind, on behalf of the Contractor or the employees of the Contractor. The Contractor is not eligible for, and shall not participate in, any employee pension, health or other fringe benefit plan of the Town.
14. Successors and Assigns. This Agreement is binding upon the parties hereto, their successors, assigns and legal representatives. Neither the Town nor the Contractor shall assign or transfer any interest in the Agreement without the written consent of the other.
15. Inspection and Reports. The Town shall have the right at any time to inspect the records of the Contractor relative to the services provided to the Town pursuant to this Agreement. This shall include the right to enter upon any property owned or occupied by the Contractor, whether situated within or beyond the limits of the Town. Upon request the Contractor shall immediately furnish to the Town any and all written reports relative to such services arising out of its operations under this Contract during and/or after the termination of the contract.
16. Termination.

- a. For Cause - The Town shall have the right to terminate this Agreement if (i) the Contractor's neglects or fails to perform or observe any of its obligations hereunder and a cure is not effected by the Contractor within seven (7) days next following its receipt of a termination notice issued by the Town, (ii) if an order is entered against the Contractor approving a petition for an arrangement, liquidation, dissolution or similar relief relating to bankruptcy or insolvency and such order remains unvacated for thirty (30) days; or (iii) immediately if the Contractor shall file a voluntary petition in bankruptcy or any petition or answer seeking any arrangement, liquidation or dissolution relating to bankruptcy, insolvency or other relief for debtors or shall seek or consent or acquiesce in appointment of any trustee, receiver or liquidation of any of the Contractor's property.

The Town shall pay all reasonable and supportable costs incurred prior to termination, which payment shall not exceed the value of services provided.

- b. For Convenience - The Town may terminate this Agreement at any time for any reason upon submitting to the Contractor thirty (30) days prior a written notice of its intention to terminate. Upon receipt of such notice, the Contractor shall immediately cease to incur expenses pursuant to this Agreement unless otherwise directed in the Town's termination notice. The Contractor shall promptly notify the Town of costs incurred to date of termination and the Town shall pay all such reasonable and supportable costs which payment shall not exceed the unpaid balance due on this Agreement.
- c. Return of Property - Upon termination, the Contractor shall immediately return to the Town, without limitation, all documents and items of any nature whatever, supplied to Contractor by the Town or developed by the Contractor in accordance with this Agreement.

17. Notice. Any and all notices, or other communications required or permitted under this Contract, shall be in writing and delivered by hand or mailed postage prepaid, return receipt requested, be registered or certified mail or by other reputable delivery service, to the parties at the address set forth on Page 1 or furnished from time to time in writing hereafter by one party to the other party. Any such notice or correspondence shall be deemed given when so delivered by hand, if so mailed, when deposited with the U.S. Postal Service or, if sent by private overnight or other delivery service.

18. Severability. If any term of this Contract or application thereof shall to any extent be held invalid, illegal or unenforceable by the court of competent jurisdiction, legality, and enforceability of the remaining terms and conditions of the Contract shall not be deemed affected thereby unless one or both parties would be substantially or materially prejudiced.

19. Governing Law. The performance of this Contract shall be governed, construed and enforced in accordance with the laws of the Commonwealth of Massachusetts. Claims and Disputes and Resolution Procedure, Claims, Disputes, or other matters in question with the Town and Contractor or any other party claiming rights under this agreement relating to or arising from the Project, the Work, or interpretation of any terms of the Contract or Contract documents shall be resolved only by a civil action commenced in the Commonwealth of Massachusetts in either Superior Court Department, Norfolk County, or the District Court Department, Dedham Division, of Massachusetts Trial County; in the alternative , private arbitration or mediation may be employed if the parties mutually agree in writing to do so.

20. Entire Agreement. This Contract, including all documents incorporated herein by reference, constitutes the entire integrated agreement between the parties with respect to the matters described. This Contract supersedes all prior agreements; negotiations, either written or oral and it shall not be modified or amended except by a written document executed by the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on this day and year first above written.

*(Contractor)*

Medfield Select Board

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

\_\_\_\_\_

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

Approved as to Form: \_\_\_\_\_

Town of Medfield, MA

---

Mark G. Cerel, Town Attorney

---

Kristine Trierweiler, Town Administrator

### **CERTIFICATION OF GOOD FAITH**

The undersigned certifies under pains and penalties of perjury that this contract has been obtained in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

The Contractor by:

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title/Authority

### **CERTIFICATE OF STATE TAX COMPLIANCE**

Pursuant to Massachusetts General Laws, Chapter 62C, Section 49A

\_\_\_\_\_  
name of signatory

\_\_\_\_\_  
name of contractor

principal place of business is at \_\_\_\_\_,  
\_\_\_\_\_  
\_\_\_\_\_  
name of contractor

Massachusetts taxes and has complied with all laws of the Commonwealth of Massachusetts relating to taxes,  
reporting of employees and contractors, and withholding and remitting child support.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## EXAMPLE CLERK'S CERTIFICATE

Action of Shareholders  
Written Consent  
(Date)

The undersigned, being the Shareholders of \_\_\_\_\_, a Massachusetts Corporation (the "Corporation") entitled to vote on the action, hereby consent to the adoption of the following votes:

VOTED: That the [President and/or the Vice President or named individual], each of them acting singly is, authorized to execute any and all contract documents and to enter into and negotiate the terms of all contracts and to accomplish same and to execute any and all documents, instruments, and agreements in order to effectuate the transaction and that said transaction shall be valid, binding, effective, and legally enforceable.

VOTED: That the officers are, and each of them acting singly is, authorized, from time to time, in the name and on behalf of the Corporation to take or cause to be taken all such action(s) as s/he or they, as the case may be, deem necessary, appropriate or advisable to effect the foregoing votes, as may be shown by the officer or officers execution or performance which shall be conclusive evidence that the same is authorized by the directors of this Corporation.

VOTED: That the officers are, and each of them acting singly is, authorized, from time to time, in the name and on behalf of this Corporation, under its corporate seal, if desired, attested by an appropriate officer, if desired, to execute, make oath to, acknowledge, deliver and file any and all of the agreements, instruments, certificates and documents referred to or related to the foregoing votes.

VOTED: That the officers are, and each of them acting singly is, authorized, from time to time and on behalf of this Corporation, under its corporate seal, if desired, to execute, acknowledge and deliver any and all agreements, instruments, certificates and documents referred to or related to the foregoing votes, with such changes as the officer or officers so acting may deem necessary or desirable, and the signature of such officer or officers to be conclusive evidence that the same is authorized by the directors of this Corporation.

Clerk of Corporation Certificate

I, \_\_\_\_\_ the Clerk of the foregoing corporation, do hereby certify that the above vote was taken at a duly called meeting of the shareholders of the Corporation on \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Clerk of Corporation

SEAL

# ATTACHMENT

A

**BID FORM:**



To: Town of Medfield  
Town Offices  
459 Main Street  
Medfield, MA 02052-2009

This proposal is to "Furnish and Deliver a new WWTP Ultra-Violet (UV) Disinfection System" for the Town of Medfield, Massachusetts Department of Public Works in accordance with the specifications hereto attached.

The undersigned, as bidder, declares to the Town of Medfield that this proposal is made without collusion with any other person, firm or corporation; that he has carefully and thoroughly examined the bidding requirements and all the Contract Documents and that he understands and is familiar with all the requirements of the work; and that he proposes and agrees, if his proposal is accepted to contract with the Town of Medfield for various items of construction equipment along with operators for same, and to perform related construction functions, all in accordance with the requirements of the Contract Documents, and that he will take in full payment therefore the following unit prices and allowances, to wit:

THE CONTRACT ASSOCIATED WITH THIS BID WILL BE A TWO YEAR CONTRACT BEGINNING December 3, 2024.

the undersigned, having become thoroughly familiar with the terms and conditions of the proposed Contract Documents and with local conditions affecting the performance and cost(s) of the Bid Item(s) where applicable, hereby proposes and agrees to fully execute the Bid Item(s) within the time stated and in strict accordance with the proposed Contract Documents, for the following sum of money:

Total Bid Price (\$)

WWTP ULTRA-VIOLET (UV) DISINFECTION SYSTEM, SUPPLY AND DELIVERY	\$	
		324,720

The award of the bid will be based on the lowest total price of all items combined.

END OF BID ITEMS

All Alternate Bid No. 1

No Bid

Note: If bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of all partners; and, if an individual, give residential address if different from business address.

Date:   

Name of Bidder:

TROJAN TECHNOLOGIES

Address

3020 GORE ROAD, LONON, ON, CANADA

Telephone

519-457-3400

Email

RJANSEN@TROJANTECHNOLOGIES.COM

Signed By

Josh Richardson

Title

Director of Sales

Note: Bidder is to execute and submit with its bid the following documents:

Non-Collusion Affidavit of Bidder

State Tax Return Affidavit

#### CERTIFICATION OF GOOD FAITH

The undersigned certifies under pains and penalties of perjury that this contract has been obtained in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

The Contractor by:

Josh Richardson

Print Name

Director of Sales

Title/Authority



**SCOPE OF SUPPLY FOR MEDFIELD REPLACEMENT  
ULTRAVIOLET DISINFECTION EQUIPMENT – TROJANUVSigna™**

**Prepared for:**

**Specification Section:** UV & Related Sections

**Addendum:** 03

**Trojan Quote:** 238174

**Design Criteria:** Current Peak Design Flow: 5 MGD(US)  
Average Flow: 1.50 MGD(US)

UV Transmission: 65% minimum  
Total Suspended Solids: 10 mg/L (30 Day Average, grab sample)  
Minimum Dose: 30 mJ/cm<sup>2</sup> MS2 Red RED  
Discharge Limit: 409 E.coli /100 mL (1 Day Max)

We are pleased to submit the following scope of equipment based on the above criteria.

**The purchaser is responsible for reading all information contained in this Supply Contract. Trojan will not be held accountable for the supply of equipment not specifically detailed in this document. Detailed installation instructions are provided with the shop drawings and are available earlier upon request. Changes to this Scope of Supply that affect selling price will be handled through a change order.**

**Please refer inquiries to Trojan Manufacturer's Representative:**

Representative: Mike Patrick, PE  
Covering ME, NH, VT and Northern MA  
Phone: Cell: 978-621-1266  
Email: [mpatrick@theMAHERcorp.com](mailto:mpatrick@theMAHERcorp.com)

This proposal has been respectfully submitted by,  
**Trojan Technologies**

Rob Jansen  
Regional Sales Manager

## GENERAL CONFIGURATION

The TrojanUVSigna equipment described in this Scope of Supply consists of equipment for 1 channel with 2 duty and 0 redundant UV banks in each channel.

Unless otherwise indicated in this proposal all anchor bolts, conduit, conductors, local disconnects and transformers (if required) are the responsibility of the Installation Contractor and are not included in Trojan's Scope of Supply. Specific cable types listed below are for reference only. Selecting cables that are appropriate for the installation environmental conditions and in compliance with local code is the responsibility of the Installation Contractor.

Site to provide approved (engineered) anchor points for personnel to use as part of their fall restraint system around open channels. The anchor points must be positioned so that the preferred retractable lifeline of 8 ft (2.4 m) is of sufficient length to access the work at the channel. Refer to local safety regulation.

## UV BANKS

### ***Trojan's Responsibility:***

Each bank supplied will consist of TrojanUV Solo Lamps™, quartz sleeves, supporting structures, ActiClean™ chemical/mechanical cleaning system and an automatic bank lifting mechanism. UV lamps are powered from an individual electric feed from a lamp driver located in a Power Distribution Center (PDC).

<b>Model and Make:</b>	TrojanUVSigna™
<b>Quantity:</b>	2 UV Banks / Channel
<b>Rating:</b>	Each bank will be supplied with 8 UV lamps and quartz sleeves, one (1) UV intensity sensor, one (1) ActiClean chemical-mechanical wiping system and one (1) automatic bank lifting mechanism
<b>Bank Frame:</b>	Type 6P / IP68 (lamp sleeve assemblies)
<b>Lamp Cables Length:</b> <i>(available routing distance)</i>	One (1) frame with included hardware is provided for up to two (2) banks Lamp Cable Length 30m (98') (refer to Trojan layout drawing for
<b>Approximate Weight:</b>	8 Lamp - 370 lbs

### ***Installation Contractor's Responsibility:***

The Installation Contractor shall install, align, secure, and seal (grout) each UV bank frame in the channel per the instructions provided. The Installation Contractor shall provide solid grating downstream of the UV bank to block out UV light. Please refer to the supplied Trojan-supplied drawings for details.

## SYSTEM CONTROL CENTER

### ***Trojan's Responsibility:***

A System Control Center (SCC) shall be supplied to monitor and control the UV disinfection System. Trojan will provide a PLC I/O and soft address map to aid the Installation Contractor with integration of the UV PLC and SCADA system. The UV SCC shall consist of the following:

<b>Quantity Supplied:</b>	1 SCC
<b>Location:</b>	PLC Wall Mount
<b>Controller Type:</b>	CompactLogix
<b>Operator Interface:</b>	Custom / Other (Add to Additional Equipment)
<b>Material / Rating:</b>	304 Stainless Steel (Type 4X, IP 66)
<b>Approximate Weight:</b>	200 lbs - Wall mount
<b>SCADA:</b>	EtherNet/IP
<b>Surge Protection:</b>	TVSS
<b>Panel UPS:</b>	15 min via 24VDC

***Installation Contractor's Responsibility:***

The Installation Contractor is responsible for mounting the SCC as indicated on the drawings. Unless otherwise indicated, the Installation Contractor is also responsible for the supply, installation and connection of the following at the SCC:

1. One (1) 110-240V, 50/60 Hz, 1 Phase, 2 Wire + GND, 1.5 kVA (minimum)
2. One (1) bond link to plant ground, in accordance with applicable codes and standards
3. One (1) Modbus communication link per UV channel, Belden 3106A (or equivalent), to PDCs and HSCs (daisy chained)
4. One (1) Cat 5ecommunication link to SCADA
5. One (1) 4-20 mA analog shielded twisted pair from plant flow meter
6. One (1) 4-20 mA analog shielded twisted pair from online UV Transmittance monitor
7. One (1) 24V DC, 2 conductors + GND, power to the Level Sensor Monitor
8. One (1) 4-20 mA analog shielded twisted pair from the Level Sensor Monitor

**POWER DISTRIBUTION CENTER(S)**

***Trojan's Responsibility:***

The Power Distribution Center (PDC) distributes power to the UV lamps and shall consist of the following:

<b>Quantity Supplied:</b>	1 PDC(s)
<b>Method of Cooling:</b>	Air-conditioning (with a heater included)
<b>Material / Rating:</b>	304 Stainless Steel – Type 4X (IP66)
<b>Approximate Weight:</b>	AC Included
<b>Surge Protection:</b>	48 Lamp PDC (Single Wide) – 1213 lbs None

***Installation Contractor's Responsibility:***

The Installation Contractor is responsible for setting in place and bolting the PDC in location. The Installation Contractor is also responsible for the supply, installation and connection of the following at each PDC:

1. One (1) 480 / 277V, 50/60 Hz, 3 phase, 4 wire + GND, 18.9 kVA power feed with local disconnect (provided by others)
2. One (1) bond link to plant ground in accordance with applicable codes and standards (to underside of panel)
3. One (1) bond link from each UV bank to the corresponding PDC in accordance with the applicable drawings, specifications, codes, and standards
4. One (1) bank-in-place sensor cable (by Trojan) from each UV bank to the corresponding PDC
5. One (1) UV intensity sensor cable (by Trojan) from each UV bank to the corresponding PDC
6. One (1) Modbus communication link, Belden 3106A (or equivalent) from the SCC, daisy-chained to all HSC(s) and PDC(s)
7. One (1) discrete 2 conductor cable, from Level Control Panel for low water level signal
8. Installation and termination of lamp cables from the UV banks to each PDC. (Qty: 8 per UV Bank – supplied by Trojan)

**HYDRAULIC SYSTEM CENTER(S)**

***Trojan's Responsibility:***

The Hydraulic System Center (HSC) houses the ancillary equipment required to operate the quartz sleeve cleaning system and automatic bank lifting mechanism.

<b>Quantity Supplied:</b>	1 HSC(s)
<b>Materials / Rating:</b>	304 Stainless Steel (Type 4X, IP 66)
<b>Hydraulic Fluid:</b>	Mineral Oil
<b>Approximate Weight:</b>	500 lbs

**Surge Protection:** None  
**Hydraulic Hoses Length:** Hose Kit 6.0m (20') (refer to *Trojan layout drawing for available routing distances*)

***Installation Contractor's Responsibility:***

The Installation Contractor is responsible for setting in place and bolting the HSC(s) as shown on the Trojan drawings. The Installation Contractor is responsible for the supply, connection and installation of the following at each HSC:

1. One (1) 480V 60Hz, 3 Phase, 3 Wire + Ground, 2.5 kVA power feed with local disconnect
2. One (1) bond link to plant ground, in accordance with applicable codes and standards
3. One (1) Modbus communication link per UV channel, Belden 3106A (or equivalent) from the SCC, daisy-chained to all HSC(s) and PDC(s)
4. Cut and crimp hydraulic hoses (hoses and connections supplied by Trojan)
5. Connection of the hydraulic hoses, total of four (4) per UV bank

**WATER LEVEL CONTROLLER(S)**

***Trojan's Responsibility:***

A level control device is required to maintain and control the effluent level in UV channel, regardless of flow rate.

**Quantity Supplied:** 1 Fixed Weir  
**Material of Construction:** 304 Stainless Steel

***Installation Contractor's Responsibility:***

The Installation Contractor is responsible for setting in place, bolting, grouting and sealing each level control weir trough as per Trojan's and Engineer's drawings.

**LOW WATER LEVEL SENSOR(S)**

***Trojan's Responsibility:***

A Gems-Warrick discrete probe Low Water Level Sensor is required downstream of the UV System to generate a low water level signal that will shut down and protect the UV System if the water level in the channel drops too low.

**Quantity Supplied:** One (1) of Electrode type water level sensor per UV channel  
**Approximate Weight:** 10 lbs (panel)

***Installation Contractor's Responsibility:***

The Installation Contractor is responsible for setting in place and bolting the water level sensor panel to the effluent channel wall as per Trojan's and Engineer's drawings.

**LEVEL CONTROL PANEL**

***Trojan's Responsibility:***

Trojan will provide a wall mounted Level Control Panel to provide power and relays for level sensors.

**Quantity Supplied:** One (1) Level Control Panel (LCP) per UV channel  
**Controller Dimensions:** 24 x 14 x 6 in (61 x 36 x 15 cm)  
**Materials / Rating:** 304 Stainless Steel (Type 4X)  
**Approximate Weight:** 40 lbs

***Installation Contractor's Responsibility:***

The Installation Contractor is responsible for mounting the Level Control Panel (LCP) as indicated on the drawings. The Installation Contractor is also responsible for supplying mounting hardware, watertight conduit and for the supply, installation and connection of the following at each LCP:

1. One (1) 120 Volt, 1 phase, 2 wire + GND 0.12 kVA power supply
2. One (1) discrete, 2 conductor cable from the Low-Level Sensor to the LCP
3. One (1) discrete, 2 conductor cable from the LCP to each PDC (for low water level signal)

**UV TRANSMISSION MONITOR**

***Trojan's Responsibility:***

An on-line UV Transmission Monitor will be supplied to provide a UVT measurement of the source water.

<b>Description:</b>	One (1) Hach UVASsc UVT monitor including <ul style="list-style-type: none"><li>• One (1) submersible probe with mounting kit</li><li>• One (1) sc4500 Controller</li><li>• 25 ft (7.6 m) cable between the probe and the controller</li></ul>
<b>Enclosure Rating:</b>	Type 4X
<b>Controller Dimensions:</b>	12 x 12 x 4 in (30 x 30 x 10 cm)
<b>Approximate Weight:</b>	30 pounds (includes probe and Controller)
<b>Probe Immersion Depth:</b>	up to 6 ft (1.8 m)

***Installation Contractor's Responsibility:***

The Installation Contractor is responsible for setting in place and mounting the Controller panel and the probe. The Installation Contractor is also responsible for the supply, installation and connection of the following at each Controller:

1. One (1) 120 Volt, 1 phase, 2 wire + GND, 0.2 kVA power supply from Distribution Panel
2. One (1) 4-20mA analog shielded twisted pair to the SCC
3. Installation of sensor communication cable (by Trojan) between the probe and Controller
4. Anchor bolts as required for mounting Controller and probe to the channel edge

**STREAM™ CONNECTION**

***Trojan's Responsibility:***

Stream™ Connection is a digital support tool that provides our Technical Assistance Center with instant access to the UV system to quickly diagnose and resolve UV issues. The Stream connection is a free service throughout the warranty period to streamline technical support requests. Stream provides secure and encrypted connection external to the SCADA network and configured in the UV System Control Center.

**SPARE PARTS AND ADDITIONAL EQUIPMENT**

***Trojan's Responsibility:***

The following equipment will be supplied with the UV system:

Description	Qty
908081-003 1000W Solo Lamp	4
916841 2kW Solo Lamp Driver	1
338229G 1000W Solo Sleeve	4
337743 Signa 2 Row - Single Wiper Seal (Need 2 per Lamp, Seals Only)	4

906049-4122 TrojanUVSigna Operator Kit (with  
Wiping)

1

### **NOTES AND CLARIFICATIONS TO SPECIFICATION**

All Exceptions and Clarifications were addressed by WSE Inc.

### **DOCUMENTATION (SHOP DRAWINGS AND O&M MANUALS)**

The following documentation will be supplied by Trojan per the following schedule:

- One (1) electronic copy of Trojan Shop Drawing Submittals within a minimum 4 – 6 weeks after receipt of written purchase order. **Note that Submittals will not be issued externally until PO is fully executed.**
- One (1) electronic copy of Trojan Standard O&M manuals at time of equipment delivery (hardcopies available upon request)

### **DELIVERY, START-UP AND TRAINING**

- Equipment shipment to be within 20 - 22 weeks after approval of Shop Drawings.

#### ***Trojan's Responsibility:***

The following start-up services will be provided by Trojan-certified technicians:

- Installation assistance as required by phone or fax. Technical Assistance Center 1-866-388-0488 or [tac@trojantechologies.com](mailto:tac@trojantechologies.com)
- Up to 9 days in 6 trips for:
  - inspection of the final installation prior to start-up
  - start-up, testing of the installed UV equipment and classroom and/or jobsite training for operations staff
    - Note that If the Trojan's Certified Service Technician determines the Contractor work is not complete and the start-up cannot be completed in the allotted time a return visit will be scheduled at the Contractors expense.
    - If trainees are not available a return visit will be scheduled at the Contractors expense.

#### ***Installation Contractor's Responsibility:***

The Contractor is responsible for:

- Unloading of the components supplied by Trojan, storage of all components, if required in a clean dry environment including ActiClean™ Gel. *Note the ActiClean gel must be stored in a climate-controlled area to prevent freezing.*
- Installing the equipment outlined in the scope of Supply in accordance with contract drawings, Trojan's shop drawings, instructions and installation checklist(s).
- Supplying all conduits and conductors and components per the sites state regulations and components indicated as supplied by others.
- Completing and submitting the Checklist at least two (2) weeks prior to date requested for commissioning.
- Trojan panels with forced-air cooling design require installation in an environmentally controlled room suitable for electrical distribution or motor drive equipment.

## WARRANTY

Trojan will warrant the equipment and parts for 12 months from the date of Substantial Completion. Warranty does not cover labor, consumables and/or wear components. Refer to attached Terms and Conditions for additional details.

- UV lamps shall be warranted for 15,000 hours prorated after 9,000 hours.
- Lamp drivers shall be warranted for 10 years, prorated after 1 year.
- UV Intensity sensors shall be warranted for 10 years, prorated after 1 year.
- Quartz Sleeves shall be warranted for 5 years, prorated after 1 year.

## SELLING PRICE

### \$ 324 720 USD

- Selling price does not include any duties or taxes that may be applicable.
- Freight included if destination is within North America.
- Incoterms 2020, Ex Works (EXW), Insurance and Freight (CIF) to destination or port will apply for all other destinations.

\* This price is valid for 90 days from the date of this letter.

## PAYMENT TERMS AND INVOICING MILESTONE BREAKDOWN

Net 30 Days \*\*

- 10% upon Award of PO
- 40% upon Completion of Submittal package by Seller
- 45% upon Shipment or 30 days after Notice to Ship (whichever comes first)
- 5% upon Equipment Acceptance or 180 days after Shipment (whichever occurs first)

Please note that if UV System start-up is required within 30 days of equipment shipment, Trojan requires 95% payment unless agreed upon in writing before authorizing system Start-up.

**\*\* In the event payments are not made or not made in a timely manner, Trojan reserves the right to charge interest on the outstanding balance at a rate of 1.5% per month or the maximum rate permitted by law, if lower, for each month or part thereof that there is an outstanding balance plus applicable storage charges and/or inventory carrying charges.**

## TERMS AND CONDITIONS - ATTACHED

Trojan appreciates the opportunity to submit this proposal. Our proposal is submitted subject to and based on Trojan's standard terms and conditions, which we have attached as part of our proposal. We believe these terms and conditions are customary in the trade and respectfully reserve the opportunity to negotiate, fair and reasonable contract terms acceptable to both parties, if Trojan is selected for this project.

**Contract Addendum to Contract #DPW 2024-17**  
**Medfield Replacement – UV Disinfection System (the “Project”)**

**Parties:** **Town of Medfield (“Customer”)**  
**Trojan Technologies Group, ULC (“Supplier”)**

**Date: December 17, 2024**

**Recitals:** Customer and Supplier are entering into a contract for the Project and, for convenience, are using Customer's standard contract forms ("Customer's Base Contract") for the purchase of Supplier's goods and/or services ("Goods" and/or "Services"). This Addendum is intended to provide reasonable revisions to Customer's Base Contract to enable the parties to enter a contract for the Project without prolonged or complex negotiations over terms and conditions. Accordingly, the parties incorporate this Addendum into the Customer's Base Contract and make it an integral part thereof, taking precedence over any contrary or related terms or conditions that may be contained therein, in any purchase orders, or in any other writings, addenda or exhibits constituting part of the agreement between the parties (collectively, the "Agreement"). Supplier expressly acknowledges that Customer Town of Medfield's exclusive source of funding for this purchase is its receipt of ARPA Funds from the United States Government and, accordingly, that Customer's legal and financial obligations to Supplier under both Agreement and this Contract Addendum are conditioned upon the continuing availability of said ARPA Funds; Customer's legal or financial liability to Supplier shall cease, in the event that said ARPA Funds cease to be available to Customer.

**Revisions:** Notwithstanding anything to the contrary contained in the Agreement, the following provisions and rules of construction apply:

**1. Services.** The Services shall be limited to those services specifically described herein. For the avoidance of doubt, and without limitation, Supplier has no responsibility for the supervision or actions of Customer's employees or contractors or for non-Supplier items (e.g., chemicals or equipment) and disclaims all liability and responsibility for any loss or damage that may be suffered as a result of such actions or items, or any other actions or items not under Supplier's control. Work to be performed in accordance with Supplier's Quote #238174.

**2. Indemnification.** Any and all indemnification obligations imposed upon Supplier are limited to the extent of those damages proportionately caused by Supplier's breach of the Agreement, negligence, wrongful conduct, or violations of law. In no case is Supplier liable for any damages caused by negligence, misuse or misapplication of goods by others. For non-government customers, Supplier's indemnification obligations are provided on the condition that Customer defends, indemnifies and holds harmless Supplier against those damages to the extent proportionately caused by misuse or misapplication of goods, negligence, wrongful conduct, or violations of law by the Customer, its affiliates, or those in privity with them.

**3. Limitation on Liability.** Supplier shall take on the liability customary to the suppliers of goods and services, but it shall not take on construction-type liability. The total liability of Supplier and its subsidiaries, affiliates, employees, directors, officers, and agents arising out of performance, nonperformance, or obligations in connection with the design, manufacture, sale, delivery, and/or use of Goods and/or Services in no circumstance includes any liquidated, penalty, incidental or consequential damages of any kind, nor exceed the total amount of compensation actually paid to Supplier under the Agreement, except only in the case of damages arising due to Supplier's willful misconduct.

**4. Warranty.** Supplier warrants the Goods in accordance with Supplier's Quote #238174, covering the specific Goods ordered, generally under which Supplier warrants to the Customer that during the period ending 18 months after the delivery date or 12 months after the start-up date, whichever occurs first, Goods which are manufactured by Supplier will be free from defects in material and workmanship and will function in accordance with the specifications specified in any quotation. If Supplier breaches this warranty and the Customer notifies Supplier of such breach within 30 days of the end of the applicable warranty period, Supplier will, at its option, either replace or repair the nonconforming Goods, or re-perform any nonconforming Services, or refund the amounts paid by Customer to Supplier for the nonconforming Goods and/or Services. Supplier's warranty contains the exclusive remedies for any breach of warranty. Supplier expressly disclaims any remedies of "cover" and any warranties implied by law, including but not limited to any warranty of merchantability or fitness for a particular purpose.

**5. Intellectual Property; Information Technology; Privacy.** Supplier retains all rights in and to any intellectual property and confidential information created or procured by it or its representatives at any time, and Customer receives licenses to use such intellectual property and information only to the extent provided by implied license under applicable law. No Customer information technology requirements apply, except the extent such requirements specifically apply to equipment being sold to Customer. To help ensure mutual compliance with applicable privacy laws, Customer will not provide to or share with Company any personal data or personally identifiable information.

**6. Performance Guarantees.** All product warranties and performance guarantees shall only be enforceable if (a) all equipment is properly installed, inspected regularly and is in good working order, (b) all operations are consistent with Supplier recommendations, (c)

operating conditions at the Customer site have not materially changed and remain within anticipated specifications, and (d) no reasonably unforeseeable circumstances exist or arise.

**7. Acceptance and Set-off.** Subject to a 10-day inspection period, all Goods and Services are deemed accepted upon delivery. The foregoing statements shall not negate Supplier's responsibilities under the testing and acceptance criteria of the applicable specifications, nor Customer's right to claim under the applicable warranties. All payments are due Net 30 days from Supplier's invoice and pay-when-paid clauses shall not apply. Any set-off rights in the Agreement notwithstanding, Customer bears the customary burden of proof with respect to any amounts invoiced by Supplier but not paid by the invoice due date. Customer shall pay Supplier interest on the outstanding balance at a rate of 1.5% per month or the maximum rate permitted by law, if lower, for each month or part thereof that there is an outstanding balance.

Payment milestones shall apply as follows:

- 5% upon award of purchase order
- 10% upon completion of submittal package by Supplier
- 10% upon shipment or 30 days after notice to ship (whichever occurs first)
- 75% upon equipment acceptance or 180 days after shipment (whichever occurs first)

**8. Funds Transfers (Payments).** The parties both recognize that there is a risk of banking fraud when individuals impersonating a business demand payment under new banking or mailing instructions. To avoid this risk, Buyer must verbally confirm any new bank or mailing instructions by calling Supplier and speaking with Supplier's accounts receivable contact before mailing or transferring any monies using the new instructions. Both parties agree that they will not institute mailing or bank transfer instruction changes and require immediate payment under the new instructions but will instead provide a ten (10) day grace period to verify any payment instruction changes before any new or outstanding payments are due using the new instructions.

**9. Force Majeure.** Supplier is excused from performance of its obligations under this Agreement to the extent caused by acts or omissions that are beyond its control, including but not limited to Government embargoes, blockages, seizures or freezing of assets, delays, or refusals to grant an export or import license, or the suspension or revocation thereof, or any other acts of any Government; fires, floods, severe weather conditions, or any other acts of God; quarantines; epidemics and pandemics; labor strikes or lockouts; riots; strife; insurrections; civil disobedience or acts of criminals or terrorists; war; material shortages or delays in deliveries to Supplier by third parties. In the event of the existence of any force majeure circumstances, the period of time for delivery, payment terms, and payments under any letters of credit will be extended for a period of time equal to the period of delay. If the force majeure circumstances extend for six months, Supplier may, at its option, terminate this Agreement without penalty and without being deemed in default or in breach thereof.

**10. Miscellaneous.** Except to the extent signed by a duly authorized representative of an affiliate of Supplier, the Agreement does not bind any affiliates of Supplier. Supplier is not subject to any audit rights in favor of the Customer, except for audit rights (under reasonable conditions) directly related to Supplier's compliance with laws and regulations (e.g., safety) which are directly applicable to Supplier's Goods and/or Services purchased under this Agreement. Supplier is not obligated to purchase or carry Professional Liability or E&O Insurance coverage, provide copies of Supplier's policies, or provide waivers of subrogation. Supplier may include Customer and their Affiliates as an Additional Insured party. Nothing in the Agreement supersedes or nullifies this Addendum. Upon thirty (30) days prior written notice, Customer may terminate this Agreement. Should Customer elect to terminate this Agreement, Customer shall pay Supplier reasonable cancellation charges in an amount determined by both parties, which will include recovery of costs plus reasonable profit. Supplier's obligations under the Agreement will only be modified by written agreement of Supplier through the same duly authorized representative who signed this Addendum, or such person's duly authorized successor. Except as provided herein, neither party agrees to any contractual clause or provision, that waives such party's ordinary and standard rights, including, but not limited to, the right to retain party's own counsel and each party's right to determine facts and circumstances in the event of a dispute.

IN WITNESS WHEREOF, the Parties have caused this Addendum to be executed by their duly authorized representatives, intending thereby to be legally bound.

**Town of Medfield**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**Trojan Technologies Group, ULC**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_