

## Signing Materials for 2020

### Statewide Wood Sign Post Contract

Contract # 510087

Delivery 28 calendar days

Expires 12-7-2020

Supplier: Pine River Group (Biewer Lumber)

812 S. Riverside Avenue

St. Clair, MI 48079-5393

Order Placement: Gary Cummins

810-561-5835

[gcummins@pinerivergroup.com](mailto:gcummins@pinerivergroup.com)

OR

Joanna Olmstead

810-815-5854

[jolmstead@pinerivergroup.com](mailto:jolmstead@pinerivergroup.com)

<u>4" x 6" Treated Wood Posts</u>	<u>Species</u>	<u>Grade</u>	<u>Price \$/Post</u>
4" x 6" x 12'	Red Pine	#2 or BTR	\$20.40
4" x 6" x 14'	Red Pine	#2 or BTR	\$23.80
4" x 6" x 16'	Red Pine	#2 or BTR	\$27.20
4" x 6" x 18'	Southern Yellow Pine	#1	\$32.76
4" x 6" x 20'	Southern Yellow Pine	#1	\$38.68
4" x 6" x 22'	Southern Yellow Pine	#1	\$46.42
4" x 6" x 24'	Southern Yellow Pine	#1	\$56.40

### Statewide Rollup Signs

Contract # 510201

Delivery 28 Calendar Days

Expires 1-1-2021

Supplier: Dicke Safety Products

1201 Warren Ave

Downers Grove, IL 60515

Order Placement: Todd Borchardt

630-969-0050

[todd@dicketool.com](mailto:todd@dicketool.com)

<b>PRODUCT</b>	<b>Price \$/Each</b>
Orange 48" x 48" Roll-Up w/ Velcro Loop Side for Overlays (Velcro to allow cover for each word)	\$82.50
Orange 48" x 48" Roll-Up w/o Velcro for Overlays	\$80.00
Orange 48" x 48" Roll-Up Special Text (Messages must be approved by the department)	\$82.50
Orange Roll-Up w/ Other Colors 48" x 48"	\$125.57
Orange 48" x 24" Roll-Up G20-2A	\$49.00
Orange 36" x 36" Roll-Up W21-1A (Only for Adopt-A-Highways)	\$56.31
Orange 30" x 8" Roll-Up Overlay w/ Velcro Hook Side	\$12.37
Pink 48" x 48" Roll-Up (W8-67 only)	\$72.73
White 48" x 60" Roll-Up R2-1 Speed Limit Sign	\$110.17
White 48" x 30" Roll-Up R5-60 "Move Over or Slow Down"	\$98.27
Roll-Up Sign Corner Pocket Kit	\$4.00
Roll-Up Sign 48" Heavy Duty Replacement Frame	\$12.33
Roll-Up Sign 16" Velcro Tie Strap (To roll sign)	\$2.00
Roll-Up Sign 6" Velcro Tie Strap (To secure sign to stand)	\$0.75
Roll-Up Sign Stand	\$89.93
Stop-Slow Paddles	\$44.07
Support Staff for Stop-Slow Paddles	\$8.88

**Statewide Steel Post Contract**

Contract # 510298

Delivery varies

Expires

Supplier: Decker Supply

PO Box 8008

Madison, WI 53708-8008

Order Placement: Greg Frank

608-249-2405

gregfrank@deckersupply.com

Item	Price \$/EACH	Delivery Time
Posts, Tubular Steel, 2x2-Inch x 5-FT	\$16.06	30 Days
Posts, Tubular Steel, 2x2-Inch x 8-FT	\$25.08	30 Days
Posts, Tubular Steel, 2x2-Inch x 9.5-FT	\$31.33	30 Days
Posts, Tubular Steel, 2x2-Inch x 10-FT	\$31.33	30 Days
Posts, Tubular Steel, 2x2-Inch x 11-FT	\$34.46	30 Days
Posts, Tubular Steel, 2x2-Inch x 12-FT	\$37.59	30 Days
Posts, Tubular Steel, 2x2-Inch x 14-FT	\$43.31	30 Days
Posts, Tubular Steel, 2x2-Inch x 16-FT	\$49.50	30 Days
Posts, Tubular Steel, 2x2-Inch x 18-FT	\$55.69	30 Days
Posts, Tubular Steel, 2.25x2.25-Inch x 1.5-FT	\$5.81	30 Days
Posts, Tubular Steel, 2.25x2.25-Inch x 3-FT	\$10.78	30 Days
Posts, Tubular Steel, 2.5x2.5-Inch x 1.5-FT	\$6.28	30 Days
Bracket, 45-degree, Steel Post Hwy Sign	\$2.94	30 Days
Bracket, 90-degree, Steel Post Hwy Sign	\$1.79	30 Days
Rivet, Multi-Grip Telespar #TL062	\$0.68	30 Days
Bolt on Soil Stabilizer #SS10-250-Z	\$14.36	30 Days
Omni-Directional Perforated Soil Stabilizing Sleeve	\$19.83	30 Days
Nut, Hex Jam Telespar #TL3806	\$0.06	30 Days
Bolt, Corner, Steel Posts Hwy Signs	\$0.59	30 Days
Surface Mount Coupler Assembly	\$74.81	30 Days
Replacement Post to Coupler Locking Wedge	\$6.26	30 Days
Replacement Shear Bolt w/Hardware	\$6.05	30 Days
Anchor System, for steel posts, 8" anchor 2.25", 12 Gauge	\$4.61	30 Days
Anchor System, for steel posts, 8" anchor 2.5", 12 Gauge	\$5.04	30 Days
Posts, Channel Steel, Type R/W, 1.12 LB/FT, 6-FT	\$7.14	140 Days
Posts, Channel Steel, Type D, 1.12 LB/FT, 7-FT	\$9.04	140 Days
Posts, Channel Steel, Type D, 1.12 LB/FT, 7.5-FT	\$9.69	140 Days
Posts, Channel Steel, Type D, 2 LB/FT, 7-FT	\$15.04	140 Days
Posts, Channel Steel, Type D, 2 LB/FT, 8'	\$17.19	140 Days
Posts, Channel Steel, Type H, 2.5 LB/FT, 7-FT	\$18.73	140 Days
Posts, Channel Steel, Type H, 2.5 LB/FT, 10-FT	\$26.70	140 Days
Posts, Channel Steel, Type H, 2.5 LB/FT, 12-FT	\$32.11	140 Days
Posts, Channel Steel, Sign Bracing, 1.12 LB/FT, 6-FT	\$7.78	140 Days
Posts, Channel Steel, Sign Bracing, 1.12 LB/FT, 7.5-FT	\$9.73	140 Days
Posts, Channel Steel, Sign Bracing, 1.12 LB/FT, 9-FT	\$11.68	140 Days
Posts, Channel Steel, Sign Bracing, 1.12 LB/FT, 10.5-FT	\$13.62	140 Days

**Statewide Guardrail Delineators Contract**

Contract # 510063  
 Delivery 28 Calendar Day  
 Expires 10-15-2020  
 Supplier: Lightle Enterprises  
 PO Box 329  
 Frankfort, OH 45628

Order Placement: Dave Lightle  
 740-998-5363  
[dlightle@lightleenterprises.com](mailto:dlightle@lightleenterprises.com)

PRODUCT	Price/50
Double Sided Yellow	\$144.00
Single Sided Yellow	\$107.70
Single Sided White	\$107.70

**Statewide Traffic Control Devices Contract**

Contract # 510201  
 Delivery 28 Calendar Days  
 Expires 1-1-2021  
 Supplier: Decker Supply  
 PO Box 8008  
 Madison, WI 53708-8008

Order Placement: Josh Kunz  
 608-557-0900  
[joshkunz@deckersupply.com](mailto:joshkunz@deckersupply.com)

PRODUCT	Price/Each
Trailer Mounted Arrow Board	\$4,181.70
Truck Mounted Arrow Board	\$2,315.00
Orange Drum	\$50.76
Drum Ballast (Per Manufacturer's Requirements)	\$4.58
Type III Barricade	\$297.93
Type III Barricade Replacement Panel	\$95.93
Orange 42-Inch Cone	\$19.62
42-Inch Cone Ballast (Per Manufacturer's Requirements)	\$14.36
Type II Barricade	\$68.28
Type II Barricade Replacement Panel	\$14.91
Flexible Tubular Marker Post	\$18.67
Flexible Tubular Marker Base (Per Manufacturer's	\$5.05
RoadQuake 2 Temp Portable Rumble Strips Array (3 rumble	\$4,929.00
RoadQuake 2F Temp Portable Rumble Strips Array (3 rumble	\$4,929.00
Orange 42-inch Ballast	\$14.36

Supplier: Dicke Safety  
 1201 Warren Ave  
 Downers Grove, IL 60515

Order Placement: Todd Borchardt  
 630-969-0050  
[todd@dicketool.com](mailto:todd@dicketool.com)

PRODUCT	Price \$/Each
Type C Steady Burn Warning Light	\$9.51
Type A Low Intensity Flashing Warning Light	\$9.51

## Pavement Marking Materials for 2020

### Statewide Waterborne Paint Contract

Contract # 510299

Delivery 21 calendar days

Expires 10-31-2020

Supplier: Ennis Flint

4161 Piedmont Pkwy, Ste 370

Greensboro, NC 27410

Order Placement:

Kelli AH-Keen

336-308-3794

KAH-Keen@ennisflint.com

PRODUCT	Color	Size	Price \$/Gal	Price \$/Each
Fast Dry Traffic Paint	White	5 Gal Pail	\$9.12	\$45.61
Fast Dry Traffic Paint	White	55 Gal Drum	\$8.61	\$473.61
Fast Dry Traffic Paint	White	275 Gal Tote	\$7.62	\$2,095.78
Fast Dry Traffic Paint	Yellow	5 Gal Pail	\$8.65	\$43.27
Fast Dry Traffic Paint	Yellow	55 Gal Drum	\$8.15	\$448.47
Fast Dry Traffic Paint	Yellow	275 Gal Tote	\$7.15	\$1,967.35

### Statewide Type I Bead Contract

Contract # 510300

Delivery 21 calendar days

Expires 10-31-2020

Supplier: Potters Industries Inc

PO Box 841

Valley Forge, PA 19482

Order Placement:

Yvonne Harris

610-51-4427

[Yvonne.harris@pottersbeads.com](mailto:Yvonne.harris@pottersbeads.com)

[muscatinecustomerservice@pottersbeads.com](mailto:muscatinecustomerservice@pottersbeads.com)

PRODUCT	Size	Price \$/lb	Price \$/Each
Type I Beads	2000 lb Tote	\$0.32	\$636.00
Type I Beads	50 lb Bag	\$0.39	\$19.50

### Statewide Temporary Raised Pavement Markers Contract

Contract # 510064

Delivery 28 calendar days

Expires 10-15-2020

Supplier: Apex Universal, Inc

PO Box 329

Santa Fe Springs, CA

Order Placement:

Steve Edsinga

562-944-8878

[Sales@apexmarker.com](mailto:Sales@apexmarker.com)

PRODUCT	Price/500
Double Sided Yellow	\$190.00
Single Sided White	\$180.00



**Advanced Placement of Warning Signs**

**Table 2C-4. Guidelines for Advance Placement of Warning Signs**

Posted or 85th-Percentile Speed	Advance Placement Distance <sup>1</sup>								
	Condition A: Speed reduction and lane changing in heavy traffic <sup>2</sup>	Condition B: Deceleration to the listed advisory speed (mph) for the condition <sup>4</sup>							
		0 <sup>3</sup>	10 <sup>4</sup>	20 <sup>4</sup>	30 <sup>4</sup>	40 <sup>4</sup>	50 <sup>4</sup>	60 <sup>4</sup>	70 <sup>4</sup>
20 mph	225 ft	100 ft <sup>6</sup>	N/A <sup>5</sup>	—	—	—	—	—	—
25 mph	325 ft	<del>100 ft<sup>6</sup></del> 150 ft	<del>N/A<sup>5</sup></del> 100 ft <sup>6</sup>	N/A <sup>5</sup>	—	—	—	—	—
30 mph	460 ft	<del>100 ft<sup>6</sup></del> 200 ft	<del>N/A<sup>5</sup></del> 150 ft	<del>N/A<sup>5</sup></del> 100 <sup>6</sup> ft	—	—	—	—	—
35 mph	565 ft	<del>100 ft<sup>6</sup></del> 250 ft	<del>N/A<sup>5</sup></del> 200 ft	<del>N/A<sup>5</sup></del> 175 ft	N/A <sup>5</sup>	—	—	—	—
40 mph	670 ft	<del>125 ft<sup>6</sup></del> 300 ft	<del>100 ft<sup>6</sup></del> 275 ft	<del>100 ft<sup>6</sup></del> 250 ft	<del>N/A<sup>5</sup></del> 175 ft	—	—	—	—
45 mph	775 ft	<del>175 ft</del> 400 ft	<del>125 ft</del> 350 ft	<del>100 ft<sup>6</sup></del> 300 ft	<del>100 ft<sup>6</sup></del> 250 ft	N/A <sup>5</sup>	—	—	—
50 mph	885 ft	<del>250 ft</del> 550 ft	<del>200 ft</del> 425 ft	<del>175 ft</del> 400 ft	<del>125 ft</del> 325 ft	<del>100 ft<sup>6</sup></del> 225 ft	—	—	—
55 mph	990 ft	<del>325 ft</del> 750 ft	<del>275 ft</del> 500 ft	<del>225 ft</del> 475 ft	<del>200 ft</del> 400 ft	<del>125 ft</del> 300 ft	N/A <sup>5</sup>	—	—
60 mph	1,100 ft	<del>400 ft</del> 1000 ft	<del>350 ft</del> 575 ft	<del>325 ft</del> 550 ft	<del>275 ft</del> 500 ft	<del>200 ft</del> 400 ft	<del>100 ft</del> 300 ft	—	—
65 mph	1,200 ft	<del>475 ft</del> 1000 ft	<del>450 ft</del> 650 ft	<del>400 ft</del> 625 ft	<del>350 ft</del> 575 ft	<del>275 ft</del> 500 ft	<del>200 ft</del> 375 ft	100 ft <sup>6</sup>	—
70 mph	1,250 ft	<del>550 ft</del> 1000 ft	<del>525 ft</del> 650 ft	<del>500 ft</del> 625 ft	<del>450 ft</del> 575 ft	<del>375 ft</del> 500 ft	<del>275 ft</del> 375 ft	<del>150 ft</del> 375 ft	—
75 mph	1,350 ft	<del>650 ft</del> 1000 ft	<del>625 ft</del> 650 ft	<del>600 ft</del> 625 ft	<del>550 ft</del> 575 ft	<del>475 ft</del> 500 ft	375 ft	<del>250 ft</del> 375 ft	100 ft <sup>6</sup>

**2-3-30 Speed Reduction Signs (Reduced Speed Ahead)**

March 2016

**SPEED REDUCTION SIGN DISTANCE IN ADVANCE OF SPEED LIMIT SIGN  
 MINIMUM DISTANCES (in feet)**

From Speed Limit	To Speed Limit									
	65	55	50	45	40	35	30	25	20	15
70 -----	700	700	700							
65 -----		700	700	700	-	-	-	-	-	
60 -----		600	600	600	-	-	-	-	-	
55 -----			500	500	500	550	600	600	600	600
50 -----						550	550	600	600	600
45 -----							450	475	500	525
40 -----								425	450	475
35 -----									375	400
30 -----										325

## 2-3-35 Advisory Speed on Curves

July 2012

WisMUTCD Table 2C-5. Horizontal Alignment Sign Selection

Type of Horizontal Alignment Sign	Difference Between Speed Limit and Advisory Speed				
	5 mph	10 mph	15 mph	20 mph	25 mph or more
Turn (W1-1), Curve (W1-2), Reverse Turn (W1-3), Reverse Curve (W1-4), Winding Road (W1-5), and Combination Horizontal Alignment/Intersection (W1-10) (see Section <a href="#">2C.07</a> to determine which sign to use)	Recommended	Required	Required	Required	Required
Advisory Speed Plaque (W13-1P)	Recommended	Required	Required	Required	Required
Chevrons (W1-8) and/or One Direction Large Arrow (W1-6)	Optional	Recommended	Required	Required	Required
Exit Speed (W13-2) and Ramp Speed (W13-3) on exit ramp	Optional	Optional	Recommended	Required	Required

## 2-3-10 Use of Chevrons

February 2018

## CHEVRON ALIGNMENT SIGN SPACING

Posted Advisory Speed (mph)	Maximum Spacing (feet)
15 mph or less	40
20	80
25	80
30	80
35	120
40	120
45	120
50	160
55	160
60	160
65	200

## 2-3-49 Determination of Sight Distance for Warning Signs

June 2015

## Minimum Visibility Distance

<u>Posted or 85<sup>th</sup> Percentile Speed</u>	<u>Minimum Visibility Distance (ft.)</u>
25 MPH	280
30 MPH	335
35 MPH	390
40 MPH	445
45 MPH	500
50 MPH	555
55 MPH	610
60 MPH	665
65 MPH	720
70 MPH	775

2-3-54 School Area Signing

December 2018

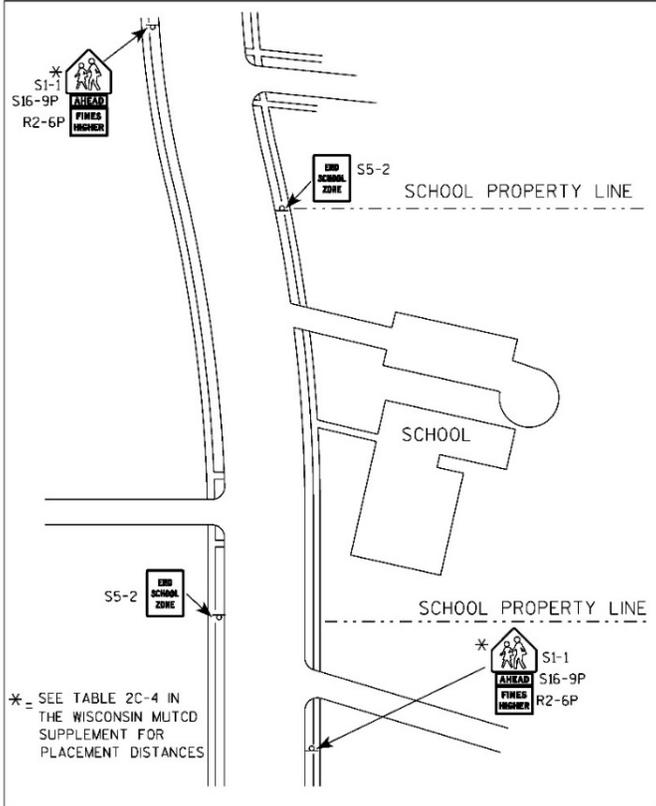


FIG.1 RURAL SCHOOL WITHOUT CROSSING

NOTE: SIGNING IS SHOWN AS TYPICAL SIGN PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGN PLACEMENT.

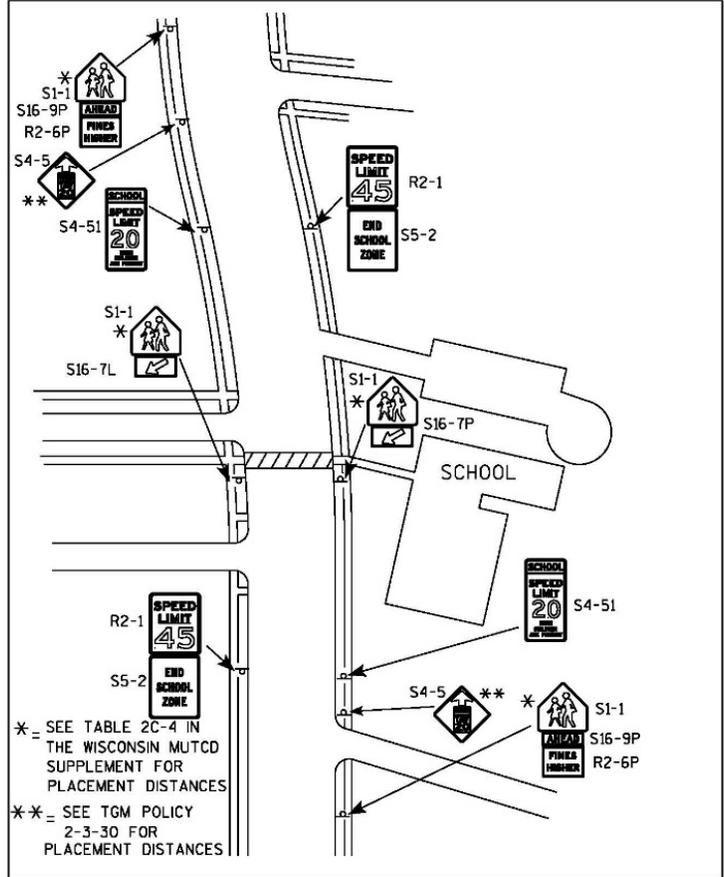


FIG.3 URBAN SCHOOL CROSSING (WITH REDUCED SCHOOL SPEED ZONE SIGNS)

NOTE: SIGNING IS SHOWN AS TYPICAL SIGN PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGN PLACEMENT.

# WISDOT SIGN CODE LISTING

## Explanation of Terms Used in Listing

(Updated July 2, 2019)

1. **Bid Item Numbers have been added to the Sign Code Listing to reflect the new signing bid item structure that will be implemented, beginning with the Dec. 2013 Letting. It should pointed out that some signs have two bid item numbers, because they can be either a Type I or Type II sign. For these signs, it will be important to reference the sign fabrication detail to determine the correct bid item number to use.**

Some signs in the listing do not have a bid item number associated with them. These are typically signs or decals that are not included as part of an improvement project or are incidental to another feature on the project.

Below is an explanation of the Signing Bid Item numbers:

- a. **637.1210 Signs Type I Reflective H**
- b. **637.1220 Signs Type I Reflective SH**
- c. **637.1230 Signs Type I Reflective F**
- d. **637.2110 Signs Type II Non Reflective**
- e. **637.2115 Signs Type II Non Reflective Folding**
- f. **637.2210 Signs Type II Reflective H**
- g. **637.2215 Signs Type II Reflective H Folding**
- h. **637.2220 Signs Type II Reflective SH**
- i. **637.2225 Signs Type II Reflective SH Folding**
- j. **637.2230 Signs Type II Reflective F**
- k. **637.2235 Signs Type II Reflective F Folding**

2. **Sign Sizes**

- a. **Sign Size 1 is minimum**
- b. **Sign Size 2S is standard for single lane conventional highways and multi-lane conventional highways with speeds of 35 mph or less.**
- c. **Sign Size 2M is standard for multi-lane conventional highways with a posted speed of 40 mph.**
- d. **Sign Size 3 is oversize and generally used for multi-lane conventional highways with posted speeds of 45 mph or greater.**
- e. **Sign Size 4 is expressway**
- f. **Sign Size 5 is freeway**

## WISDOT SIGN CODE LISTING

### 3. Sign Code Designations

- a. D = destination signs
- b. E = exit guide signs
- c. I = information signs
- d. M = marker signs
- e. J = J-assembly signs
- f. R = regulatory signs
- g. S = school signs
- h. W = warning signs

### 4. Signs Coded with a “WO-XX” sign code

“WO” codes listed at the end of the listing are fluorescent orange work zone warning signs that the standard sign plate designates as yellow for permanent signs.

- 5. Maintenance Work Zone Roll-up signs are included on the last several pages of the sign code listing and have a “RU” for the last two digits of the code. These signs are primarily ordered and utilized by County Maintenance Forces.
- 6. Portable Stands for Maintenance Work Zone Roll-up signs are shown on page 70 of the sign code listing. These stands are primarily ordered and utilized by County Maintenance Forces.
- 7. Repair Parts for Work Zone Roll-up signs are shown on page 70 of the sign code listing. These parts are primarily ordered and utilized by County Maintenance Forces.

## WISDOT SIGN CODE LISTING

### 8. Arrow Coding for Sign Orders

The following arrow codes should be used by the Regions when ordering signs with arrows on them in WorkDirector.

<u>Description</u>	<u>Arrow Coding to be Used</u>
Left Arrow 	[LA]
Tilt Left Arrow 	[TL]
Up Arrow 	[UA]
Tilt Right Arrow 	[TR]
Right Arrow 	[RA]
Tilt Down Left Arrow 	[DL]
Down Arrow 	[DA]
Tilt Down Right Arrow 	[DR]
Double Arrow 	[DBA]
Ahead and Right Arrow 	[U/RA]
Ahead and Left Arrow 	[U/LA]
Left Turn Arrow 	[LT]
Left Bent Arrow 	[LB]
Right Turn Arrow 	[RT]
Right Bent Arrow 	[RB]
Left and Tilt Right Arrow 	[LA/TR]
Tilt Left and Right Arrow 	[TL/RA]
Ahead and Tilt Left Arrow 	[UA/TL]
Ahead and Tilt Right Arrow 	[UA/TR]

NOTES

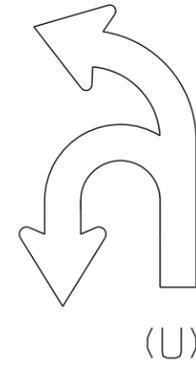
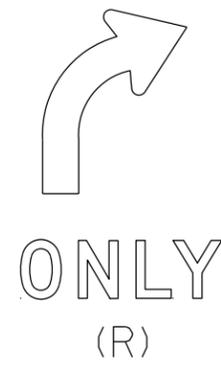
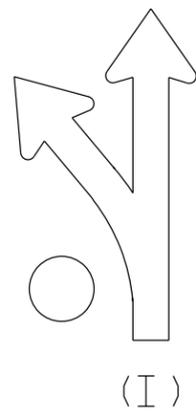
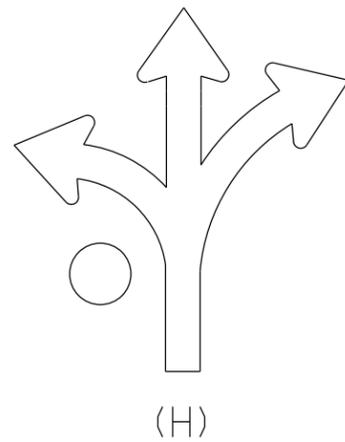
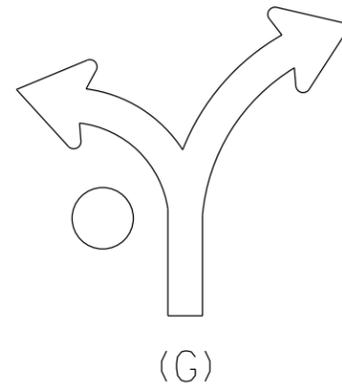
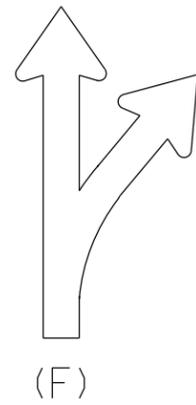
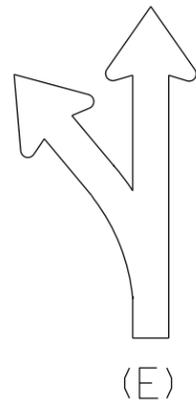
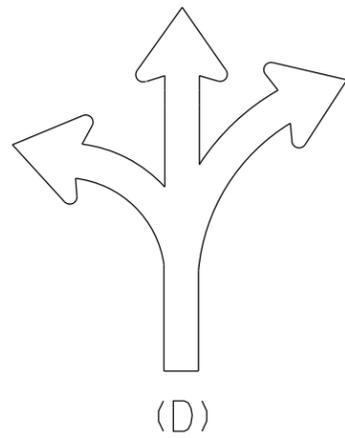
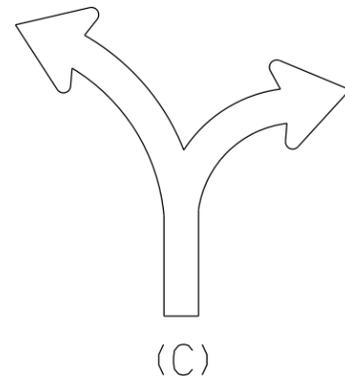
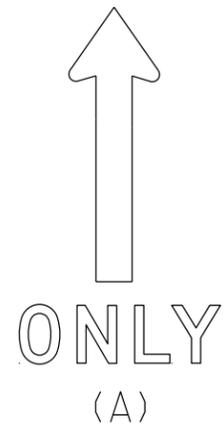
1. Sigs are Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code  
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

- |             |                            |
|-------------|----------------------------|
| 1 Letter =  | 3.75 sq ft for Size 2      |
|             | 6.0 sq ft for Size 3       |
|             | 10.0 sq ft for Size 4 or 5 |
| 2 Letters = | 7.5 sq ft for Size 2       |
|             | 12.0 sq ft for Size 3      |
|             | 20.0 sq ft for Size 4 or 5 |
| 3 Letters = | 11.25 sq ft for Size 2     |
|             | 18.0 sq ft for Size 3      |
|             | 30.0 sq ft for Size 4 or 5 |
| 4 Letters = | 15.0 sq ft for Size 2      |
|             | 24.0 sq ft for Size 3      |
|             | 40.0 sq ft for Size 4 or 5 |
| 5 Letters = | 18.75 sq ft for Size 2     |
|             | 30.0 sq ft for Size 3      |
|             | 50.0 sq ft for Size 4 or 5 |
| 6 Letters = | 22.5 sq ft for Size 2      |
|             | 36.0 sq ft for Size 3      |
|             | 60.0 sq ft for Size 4 or 5 |

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq.Ft. changes.

Add the amounts when these letters are used:

- 1.25 sq ft for Size 2
- 1.5 sq ft for Size 3
- 2.0 sq ft for Size 4 or 5



STANDARD SIGN  
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1



### PURPOSE

This subject was developed to provide guidance to improvement project inspectors as well as Department and County field and maintenance crews for the installation, service and maintenance of all types of highway signs on the State Highway network. The goal for this is to install signs to provide a safe, understandable and efficient system of guidance to the motoring public.

These guidelines are intended to provide a framework of policies and practices for the systematic reporting and handling of signing installation and replacement or sign repair activities done by others under the direction of the Wisconsin Department of Transportation through its Regions. It is inherent these guidelines promote safety of the motorist, safety for the improvement and maintenance crews and standardization of practices toward uniform application and appearance statewide.

Improvement project crews and maintenance crews will perform their operations in accordance with the Wisconsin Manual on Uniform Traffic Control Devices, Traffic Engineering, Operations & Safety Manual and other Department policies as referenced within.

The Department recognizes these guidelines *may* require adjustments and revision as they are implemented.

### SIGN TYPES

There are two types of signs that are installed and maintained for the DOT:

- Type I signs are on an extruded aluminum base material, typically mounted on steel I-beams.
- Type II signs consist of direct applied message sheet aluminum base material, typically mounted on wood or steel posts.

### SIGN CLASSIFICATIONS

Regulatory signs give notice of traffic laws and convey the rules of the road. Regulatory signs typically have a red or white background. Examples are stop signs, speed limit signs, wrong way signs, etc.

Warning signs alert the attention of the driver to special conditions on or adjacent to a roadway that *may* require an important driving decision or action. Warning signs typically have a fluorescent yellow background. Examples include curve warning signs, no passing zone signs, stop ahead signs etc.

School signs are used to alert the motorist to school locations and the posted school speed limit. School Signs typically have a fluorescent yellow/green background.

Guide signs are directional and informational. They are used to direct the motorist to their destination and to inform them about various service facilities and other points of interest along the highway. Guide Signs typically have a green background, and directional assemblies are typically black on white background or white on blue background.

Recreational signs are informative for the traveling public not familiar to an area to get to their destination. Recreational Signs typically have a brown background. Examples are historical marker signs and boat landing signs.

Tourist information signs are informative signs used to guide motorists to service type areas. Tourist Informational Signs typically have a blue background. Examples of these signs are TODS.

### STORAGE & HANDLING OF SIGNS

Signs **shall** be shipped with the sign face protected either by cardboard or slip-sheeting paper taped to the sign. Signs **shall** be stored vertically on edge.

Signs that *may* be stored at County shops:

- Mandatory (max of 6)
  - Stop Signs (30x30 and 36x36)
  - Yield (36x31)

Signs **shall not** be stored at the Region except those necessary for the electricians. Scrap aluminum signs **shall** be returned to the Distribution County. The Distribution County will return all scrap aluminum signs to BSI.

**SIGN VERIFICATION**

Check all signs in against the sign shipper received at the time of delivery. Call and/or email you region rep or BTO Shop Coordinator(DOTBTOSignOrders@dot.wi.gov) with any questions.

a. Acceptable Abbreviations

Highway	Hwy	Circle	Cir	Lane	Ln
Parkway	Pkwy	Road	Rd	Trail	Tr
Boulevard	Blvd	Street	St	Court	Ct
Avenue	Ave	Place	Pl	Drive	Dr
Terrace	Ter				

b. Arrow Abbreviations

Left Arrow		[LA]	Right Arrow		[RA]
Tilt Left Arrow		[TL]	Tilt Right Arrow		[TR]
Up Arrow		[UA]	Double Arrow		[DBA]
Down Left Arrow		[DL]	Down Right Arrow		[DR]
Left Turn Arrow		[LT]	Right Turn Arrow		[RT]
Left Bent Arrow		[LB]	Right Bent Arrow		[RB]
Ahead & Left Arrow		[U/LA]	Ahead & Right Arrow		[U/RA]
Left and Tilt Right		[LA/TR]	Tilt Left and Right		[TL/RA]
Ahead and Tilt Left		[UA/TL]	Ahead and Tilt Right		[UA/TR]
Tilt Down Left and TR		[DL/TR]	TL and Tilt Down Right		[TL/DR]

c. J-panels

How to organize J-panels (Refer to [A2-1s](#) for the correct codes):

1. Direction of arrow:



AND



2. IH, USH, STH, CTH, Business Routes, Alt Routes, To, Tours, Hospitals



Number (lowest number first) **INSTALLING SIGNS**

### County Maintenance Agreements

Counties will be given corridors of the signs and/or posts needing replacement from the Region. For locations of new signs the work order will be provided by a Regional contact, the area then will be staked by the DOT. Crews **shall** contact Digger's Hotline prior to digging. Crews need to check to make sure sign is facing in the proper direction for traffic and at proper heights, offsets and use of proper mounting hardware.

The scheduling of the sign replacements shall be completed within 75-days of receiving the sign or July 1<sup>st</sup> whichever comes later. The region does have discretion to extend this time based on a very high numbers of signs or post replacements.

A detailed breakdown of county costs including county labor, equipment, number of signs, and number of posts **shall** be shown on all invoices.

The following signing activities can be classified into the following county maintenance agreements (XX denotes county unless otherwise noted):

1	Adams	25	Iowa	49	Portage
2	Ashland	26	Iron	50	Price
3	Barron	27	Jackson	51	Racine
4	Bayfield	28	Jefferson	52	Richland
5	Brown	29	Juneau	53	Rock
6	Buffalo	30	Kenosha	54	Rusk
7	Burnett	31	Kewaunee	55	Sawyer
8	Calumet	32	La Crosse	56	Sauk
9	Chippewa	33	Lafayette	57	St. Croix
10	Clark	34	Langlade	58	Shawano
11	Columbia	35	Lincoln	59	Sheboygan
12	Crawford	36	Manitowoc	60	Taylor
13	Dane	37	Marathon	61	Trempealeau
14	Dodge	38	Marinette	62	Vernon
15	Door	39	Marquette	63	Vilas
16	Douglas	40	Milwaukee	64	Walworth
17	Dunn	41	Monroe	65	Washburn
18	Eau Claire	42	Oconto	66	Washington
19	Florence	43	Oneida	67	Waukesha
20	Fond du Lac	44	Outagamie	68	Waupaca
21	Forest	45	Ozaukee	69	Waushara
22	Grant	46	Pepin	70	Winnebago
23	Green	47	Pierce	71	Wood
24	Green Lake	48	Polk	73	Menominee

### Activity Code 081 for Permanent Sign Repair and 085 Temporary/Emergency Sign Repair

- RMA 00XX-01-62 Damaged signs on Interstates **without** a break ticket and Adopt a Highway
- RMA 00XX-01-61 Damaged signs on non-interstate **without** a break ticket and Adopt a Highway
- Damage Claim 0077-0x-00 Damage Claim Damage Claim **with** break ticket (X designates the number for your region)
  1. Madison
  2. Waukesha
  3. Green Bay
  4. Wisconsin Rapids
  5. La Crosse
  6. Eau Claire
  7. Rhinelander
  8. Superior
- 0080-02-63 White Arrowboards\*
- 0080-02-53 TODS Signing\*
- 0080-02-61 Ski Area Signing

### Activity Code 086 Permanent Sign Replacement

- TMA A project number will be provided though MPM
- DMA 00XX-58-22 Discretionary Maintenance Agreements

\*For White Arrowboards and TODS signs the County *should* collect the checks made payable to the Wisconsin Department of Transportation and send the checks to: Wisconsin Department of Transportation, Attn: Casey Amans, 3609 Pierstorff St, Madison, WI 53704. The County *should* only repair damaged White Arrowboards or TODS signs when directed to do so by the sign owner.

### Improvement/Refurbishment Projects

A listing of signs may be provided by the Signing Coordinator to the designer to be included in the construction project plan. The listing *should* identify location on respective improvement project in both directions of travel. A special ID is set up for all improvement projects.

## FIELD OPERATIONS

WisDOT **shall** provide all permanent signs. It **shall** be the responsibility of the County to provide all necessary posts and mounting hardware for installation of the signs, unless other arrangements have been made with the Region. All aluminum signs removed are the property of the DOT and arrangements **shall** be made for the delivery of signs back to the Central Office Sign Shop. Signs **shall** be returned banded on pallets or on red carts. Any signs put on a cart for transport back to Madison **shall** be placed so the back of the sign is against the metal to protect the face of the sign from further damage.

### Routine Maintenance Sign Installation Activities

#### 1. Patrol

Crews generally have a daily work plan, which establishes the route to be traveled each day. Knockdown temporary repairs will be the responsibility of the Counties. **NO CREW SHALL LEAVE THE SITE OF A DOWNED STOP OR YIELD SIGN, A TEMPORARY OR PERMANENT REPAIR SHALL BE MADE IMMEDIATELY.**

Field and maintenance crews *should* be watchful for and report findings to Regional Signing Coordinator and/or CO Sign Shop:

- missing signs
- signs showing face material failures,
- obsolete signs or signs which are not needed
- vandalized signs or posts (defaced, gunshot or broken)
- maintenance or contractor damaged signs or posts
- bent or leaning posts
- correctness of installation (height, offset, location, visibility, plumbness)
- sign meets WMUTCD specifications

#### 2. Installing Signs

Signs are attached to the posts using lag bolts or machine bolts. Signs are to be mounted so as to project 1" to 1-1/2" above the top of the post. All signs **shall** have a nylon washer used under the metal washer to reduce damage caused by the twisting of the sheeting under the pressure of tightening the bolts (See Sign Plate A4-8). Do not over tighten bolts.

Standard signs are fabricated using sheet aluminum. Aluminum signs are usually pre-drilled with mounting holes. Aluminum signs 78" or more in width **shall** have channel steel stringers installed.

Ensure that post is set to the correct depth (see Sign Plate A4-2 through A4-4). Once the post is placed in the hole check to see that the sign is the proper height and the sign is square with the roadway, facing the proper direction for traffic the sign is intended. The posts **shall** be back filled with suitable materials, and tamped in place, using 6" layers while keeping the post plumb. It is recommended that a level be used in this process.

When attaching the sign to the post it is important to keep the sign square on the post. Attach the bolt to the top of the sign first. Then square the sign on to the post before attaching the lower bolt. Pre-drilling of the post while squaring the sign is recommended.

Breakaway holes **shall** be drilled on all 4"x 6" wood posts (see Sign Plate A4-11). The breakaway holes do not need to be drilled if the posts are located behind a concrete barrier or guardrail.

## PRIORITY OF ACTION FOR KNOCKDOWNS

#### 1. STOP and YIELD Signs.

These signs are the most important signs. If a STOP or YIELD sign is reported down it is to be considered life threatening and extreme steps **shall** be taken to get it back up, even if it means using temporary supports. This includes overtime, nighttime, weekends and holidays. Whatever is necessary to get the sign back up as quickly as possible **shall** be done. A temporary repair **shall** be made immediately, and a permanent repair **shall** be made within 10 working days, or as agreed upon with Regional Traffic Section.

#### 2. Regulatory, Warning and School Signs.

Second priority goes to Regulatory, Warning and School Signs. These signs, when reported damaged or knocked down, require prompt scheduling of repairs. Signs that are recognized as being critical to motorist safety are those that require the motorist to be alert to a specific change in the road or a potential hazard. Temporary repair **shall** be made immediately, during normal business hours.

### 3. Guide Signs, Recreational & Tourist Signs

Guide, recreational, and tourist signs are directional and informational type signs. They are less critical with respect to scheduling damage repairs. Temporary repairs are not necessary for these types of signs.

All signs that have been damaged *should* be replaced, contact your Region Sign Coordinator for these signs. All temporary sign repairs **shall** be a WisDOT approved sign post..

## DETOUR AND CONSTRUCTION SIGNING

The majority of detours are planned and will be done by contract. Small and emergency type detours performed by the counties need to be in accordance with the WMUTCD. The Department will provide signs for these detours.

## REPORTING SYSTEMS

Repair Records for Accidents/Broken Posts and Signs are to be filled out and sent to the Regional shops monthly or as agreed upon with your Region.

Annual Sign and Post Replacement List will be given to the Counties. As the County completes the work, they **shall** send an updated copy of the list to the Regional.

The Regions *may* periodically provide the Counties with a new sign and post work order. These forms need to be filled out and sent to the Region upon completion.

Any counties with repair charges for vehicle damage with accident claim tag numbers **shall** fill out the County Charges Worksheet form DT 1785 and send it to the Region as soon as practical. Forms can be obtained from your Regional Signing Coordinator.

Knockdown and Repair Report is a way to record incoming calls for knockdowns or repairs and Diggers Hotline ticket information on a single form. This form is provided for your convenience and does not need to be returned to the Regional Sign Shop.

## REQUIRED NUMBER OF POSTS

4x6 Wood Posts			
Number of Posts	Length (Rectangle/Square)	Area (ft <sup>2</sup> )	Comments
1	L ≤ 48"	A < 20 SF	*Must meet both criteria
2	48" < L ≤ 120"	A ≥ 20 SF	
3	120" < L ≤ 168"	-	Posts spacing <b>shall</b> be > 3.5'

4x6 Wood Posts	
Number of Posts	Diamond
1	24", 30", 36"
2	48"

2x2 Square Steel Posts	
Number of Posts	Area (ft <sup>2</sup> )
1	≤9
2	9 < x ≤ 18
3	18 < x ≤ 27

**EXAMPLES OF CORRECT VS. INCORRECT INSTALLATIONS**

Incorrect	Correct
	
	
	
	
	
	



**CONTACTS**

<b>DOT Contacts</b>			
<b>Region</b>	<b>Contact Person</b>	<b>Number</b>	<b>Email</b>
WisDOT CO Sign Shop 3609 Pierstorff St  Madison, WI 53704	Jon Eldridge Casey Amans Jeannie Silver. Ryan Mayer	608-246-3270 608-245-5344 608-246-5408 608-246-3810	jonathan.eldridge@dot.wi.gov dotbtosignorders@dot.wi.gov casey.amans@dot.wi.gov jeannie.silver@dot.wi.gov ryan.mayer@dot.wi.gov
SW Region- La Crosse 3550 Mormon Coulee Rd. La Crosse, WI 54601	Iver Peterson Kory Keppel	608-785-9060 608-792-6204	iver.peterson@dot.wi.gov kory.keppel@dot.wi.gov
SW Region- Madison 3601 Pierstorff St Madison, WI 53704	Jeff Holloway Timm Punzel	608-246-3268 608-246-5352	jeffrey.holloway@dot.wi.gov timm.punzel@dot.wi.gov
SE Region- West Allis 935 S. 60th St. West Allis, WI 53214	Dennis Newton Jenny Buckett Chuck Saldivar	414-750-0257 414-750-2427 414-750-1682	dennis.newton@dot.wi.gov Jennifer.buckett@dot.wi.gov Chuck.saldivar@dot.wi.gov
NE Region- Green Bay 944 Vander Perren Way Green Bay, WI 54304	Tom Tilleman Mark Janke	920-492-4135 920-492-5981	thomas.tilleman@dot.wi.gov mark.janke@dot.wi.gov
NC Region- Wis Rapids 2841 Industrial St Wis Rapids, WI 54495	Al Smith Chris Stimac	715-421-8364 715-421-7387	alan.smith@dot.wi.gov christopher.stimac@dot.wi.gov
NC Region- Rhinelander Hanson Lake Rd Rhinelander, WI 54501	Al Smith Chris Stimac	715-421-8364 715-421-7387	alan.smith@dot.wi.gov christopher.stimac@dot.wi.gov
NW Region- Spooner W7102 Green Valley Rd Spooner, WI 54801	Steven Allard Gary Eisold	715-577-1259 715-450-9093	steven.allard@dot.wi.gov gary.eisold@dot.wi.gov
NW Region- Eau Claire 5009 USH 53 South Eau Claire, WI 54701	Steven Allard Gary Eisold	715-577-1259 715-450-9093	steven.allard@dot.wi.gov gary.eisold@dot.wi.gov

<b>Sign Distribution County Contacts</b>			
<b>County</b>	<b>Contact Person</b>	<b>Number</b>	<b>Email</b>
Iowa 1215 N. Bequette St. Dodgeville, WI 53533	Randy Sudmeier	608-574-2936	<a href="mailto:randy.sudmeier1@iowacounty.org">randy.sudmeier1@iowacounty.org</a>
Jefferson 1425 S. Wisconsin Drive Jefferson, WI 53549	Tyson Barns	920-674-7390 920-723-7269	<a href="mailto:TysonB@jeffersoncountywi.gov">TysonB@jeffersoncountywi.gov</a>
Washington 900 Lang St. West Bend, WI 53090	Tim Pfeifer Kevin Schweizer	262-335-4440 262-483-3079 262-335-5027	<a href="mailto:tim.pfeifer@co.washington.wi.us">tim.pfeifer@co.washington.wi.us</a> <a href="mailto:Kevin.schweizer@washington.wi.us">Kevin.schweizer@washington.wi.us</a>
Milwaukee 10190 West Watertown Plank Rd Wauwatosa, WI 53226	Douglas Decker	414-333-3291	<a href="mailto:douglas.decker@milwaukeecounty.wi.gov">douglas.decker@milwaukeecounty.wi.gov</a>
Racine 14200 Washington Ave. Sturtevant, WI	David Prott	262-534-6400	<a href="mailto:david.prott@goRacine.org">david.prott@goRacine.org</a>
Winnebago 901 W. CTH Y Oshkosh, WI 54903	Chuck Griedl	920-232-1718 920-420-9412	<a href="mailto:c.griedl@co.winnebago.wi.us">c.griedl@co.winnebago.wi.us</a>
Manitowoc 3500 STH 310 Manitowoc, WI 54220	Greg Grotegut Ryan Drumm Fritz Emme	920-683-4345 920-323-5520 920-683-4351 920-683-4347 920-323-6513	<a href="mailto:Gregorygrotegut@co.manitowoc.wi.us">Gregorygrotegut@co.manitowoc.wi.us</a> <a href="mailto:Ryandrumm@co.manitowoc.wi.us">Ryandrumm@co.manitowoc.wi.us</a> <a href="mailto:Fritzemme@co.manitowoc.wi.us">Fritzemme@co.manitowoc.wi.us</a>
Brown 2198 Glendale Ave Green Bay, WI 54303	Dave Delvaux Andrew Sell	920-662-2176 920-662-2174	<a href="mailto:Delvaux_DJ@co.brown.wi.us">Delvaux_DJ@co.brown.wi.us</a> <a href="mailto:sell_al@co.brown.wi.us">sell_al@co.brown.wi.us</a>
Oconto 202 Van Dyke St Oconto, WI 54153	Vanessa Peters	920-834-6885	<a href="mailto:vanessa.peters@co.oconto.wi.us">vanessa.peters@co.oconto.wi.us</a>
La Crosse 301 Carlson Rd. West Salem, WI 54669	Ron Brueggen Keith Pack	608-792-8053 608-421-8875	<a href="mailto:rbrueggen@lacrossecounty.org">rbrueggen@lacrossecounty.org</a> <a href="mailto:kback@lacrossecounty.org">kback@lacrossecounty.org</a>
Dunn 3303 USH 12 E Menomonie, WI 54751	John Sworski Dustin Binder	715-308-3430 715-556-2293	<a href="mailto:jsworski@co.dunn.wi.us">jsworski@co.dunn.wi.us</a> <a href="mailto:dbinde@co.dunn.wi.us">dbinde@co.dunn.wi.us</a>
Wood 555 17th Ave Wisconsin Rapids, WI	Brandon Dammann Barry Hamm	715-421-9039 715-424-7408 715-213-0856	<a href="mailto:bdammann@co.wood.wi.us">bdammann@co.wood.wi.us</a> <a href="mailto:bhamm@co.wood.wi.us">bhamm@co.wood.wi.us</a>
Washburn 1600 CTH H Spooner, WI 54801	Steve Flach	715-635-4459 715-635-4480	<a href="mailto:sflach@co.washburn.wi.us">sflach@co.washburn.wi.us</a>
Price 704 N Lake Ave Phillips, WI 54555	Chuck Fisher Joe Baratka	715-339-2355	<a href="mailto:chuck.fischer@co.price.wi.us">chuck.fischer@co.price.wi.us</a> <a href="mailto:joe.baratka@co.price.wi.us">joe.baratka@co.price.wi.us</a>

## Sign Distribution Counties



## PERSONAL SAFETY

All Department of Transportation (DOT) personnel **and** any personnel working for the state are required to follow the safety policies stated in the DOT Transportation Administrative Manual (TAM). DOT, county, and contractor personnel **shall** wear:

- Eye Protection: (TAM SD 36)
  - Safety glasses with attached shields
- Foot Protection: Steel-toe boot or shoe (TAM SD30)
- Protective Headgear: (TAM SD 51)
  - Hard hat
- High Visibility Safety Apparel: (TAM SD 57)
  - Reflectorized Safety Vest at all times on or along the roadway
  - Reflectorized Safety Pants during nighttime hours.

Hazard Warning Information - Treated Wood Management (See Exhibit 5)

(Material Safety Data Sheets *should* be requested from the wood post vendor)

## EMPLOYEE RECOMMENDED TRAINING

All agencies doing work for the DOT *should* make sure their employees are properly trained in the following areas:

1. Field Operations Awareness
2. Shop Tools
3. Major Equipment Operations
4. Utilities Locate. Call Diggers Hotline 811
5. Retraining
6. Vehicle Safety and Inspection

## WORK AREA TRAFFIC CONTROL

All traffic control **shall** be in compliance with the WMUTCD and Departmental policies. See Standard detail drawings.

Vehicles used in highway signing operations **shall** be equipped with at least two (2) yellow, high intensity rotating beacons, clearly visible from the front, rear and both sides of the vehicle. These beacons **shall** be placed as high as possible on each vehicle. Vehicles **shall** have all warning lights operating when stopped, or moving slowly along any highway. Warning lights **SHALL NOT** be displayed while the vehicle is traveling at highway speeds or when traveling between jobs.

When conditions are less than ideal, additional advance warning signs or devices *should* be added to the traffic control layouts. In some cases, the work *should* be deferred until the conditions are more favorable.

All lane closures on two lane roadways require flagging of traffic as well as advance signing and cone placement in the work area. Remember that all flaggers **shall** use stop/slow paddles.

An encroachment into a lane of traffic *may* require cones and/or flagging. The amount of encroachment, the volume and speed of passing vehicles will determine traffic control measures required. For example, a cone *may* be sufficient to mark the point where an outrigger makes contact with the pavement outside the overall width of the truck.

## PUBLIC SAFETY

Workers **shall** park vehicles off the road as far as practical. Care *should* be taken to not block the vision of existing traffic control devices such as stop signs and signals. Work activities *should* be performed with an assumption the motorist does not know what the workers are going to do.

## UTILITIES

Utility Locates. Diggers Hotline (811) **shall** be called and located before any work is performed. They *should* be given at least a 3 working day notice.

The following is a five-point plan for utility locates before digging in the highway right-of-way, which covers the routine steps required by Diggers Hotline:

1. Prepare a plan or work location sketch or drawing. Indicate a 25 foot radius around the stake or lath for "MARKING INSTRUCTIONS" for Diggers Hotline.

2. At each locate site, mark with a stake or by painting the pavement or shoulder of the highway. White or pink are the approved colors for ribbons, flags or paint when marking sign locations for utility locates.
3. Identify the exact location by measuring the distance from the nearest intersecting street or highway. Indicate which side of the highway the locate is on.
4. Contact Diggers Hotline to request the area to be located. Retain ticket number for a minimum of six years after work is completed.
5. Investigate the possibility of other utilities having services at the locate site.

Utility Damage Procedure. Damage prevention is the ultimate goal. As stated above it is essential to get clearance from utilities before doing any digging.

- BEFORE YOU DIG, CONFIRM UTILITIES HAVE BEEN LOCATED

**IF UTILITY DAMAGE OCCURS:**

- CALL THE UTILITY FROM A SAFE LOCATION AS SOON AS POSSIBLE.
- CLEAR AREA IF NECESSARY.
- EXTINGUISH ALL FIRE SOURCES; BE MINDFUL OF LOSS OF LIFE.
- NOTIFY EMERGENCY SERVICES (IF NECESSARY).
- NOTIFY SUPERVISOR.
- BE AVAILABLE ON OR NEAR THE SITE UNTIL REPAIR CREW ARRIVES.

**MAJOR EQUIPMENT OPERATIONS**

It is recommended that field operations that involve digger derricks or bucket trucks will NOT be performed with fewer than two crew persons on the job site.

HAVING A UTILITY LOCATE CLEARANCE DOESN'T NECESSARILY MEAN ALL DANGER HAS BEEN REMOVED.

Derrick operators must be aware of overhead lines to be certain the boom or its attachments remain the required distance away from the overhead lines.

**ACRONYMS & DESCRIPTIONS**

HMA - Hot Mix Asphalt

MSDS - Material Safety Data Sheets

PCC - Portland Cement Concrete

PMC - Pavement Marking Coordinator

TMA - Traffic Maintenance Agreement

Type H Sheeting - Prismatic High Intensity

Type F Sheeting - Prismatic High Intensity Fluorescent Sheeting

# March 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 <b>Price Washburn</b>	6	7
8	9	10 <b>Jefferson Iowa</b>	11	12 <b>Racine Washington Milwaukee</b>	13	14
15	16	17	18	19 <b>Winnebago Oconto Brown Manitowoc</b>	20	21
22	23	24	25	26 <b>La Crosse Wood Dunn</b>	27	28
29	30	31	1	2	3	4
5	6	Notes				

# March 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 <b>Price Washburn</b>	6	7
8	9	10 <b>Jefferson Iowa</b>	11	12 <b>Racine Washington Milwaukee</b>	13	14
15	16	17	18	19 <b>Winnebago Oconto Brown Manitowoc</b>	20	21
22	23	24	25	26 <b>La Crosse Wood Dunn</b>	27	28
29	30	31	1	2	3	4
5	6	Notes				

# April 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2 Price Washburn	3	4
5	6	7 Jefferson Iowa	8	9 Racine Washington Milwaukee	10	11
12	13	14	15	16 Winnebago Oconto Brown Manitowoc	17	18
19	20	21	22	23 La Crosse Wood Dunn	24	25
26	27	28	29	30 Price Washburn	1	2
3	4	Notes				

# May 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	1	2
3	4	5 <b>Jefferson Iowa</b>	6	7 <b>Racine Washington Milwaukee</b>	8	9
10	11	12	13	14 <b>Winnebago Oconto Brown Manitowoc</b>	15	16
17	18	19	20	21 <b>La Crosse Wood Dunn</b>	22	23
24	25 Memorial Day	26	27	28 <b>Price Washburn</b>	29	30
31	1	Notes				

# June 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	1	2 Jefferson Iowa	3	4 Racine Washington Milwaukee	5	6
7	8	9	10	11 Winnebago Oconto Brown Manitowoc	12	13
14	15	16	17	18 La Crosse Wood Dunn	19	20
21	22	23	24	25 Price Washburn	26	27
28	29	30 Jefferson Iowa	1	2	3	4
5	6	Notes				

# July 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	1	2 Racine Washington Milwaukee	3	4 Independence Day
5	6	7	8	9 Winnebago Oconto Brown Manitowoc	10	11
12	13	14	15	16 La Crosse Wood Dunn	17	18
19	20	21	22	23 Price Washburn	24	25
26	27	28 Jefferson Iowa	29	30 Racine Washington Milwaukee	31	1
2	3	Notes				

# August 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	1
2	3	4	5	6 Winnebago Oconto Brown Manitowoc	7	8
9	10	11	12	13 La Crosse Wood Dunn	14	15
16	17	18	19	20 Price Washburn	21	22
23	24	25 Jefferson Iowa	26	27 Racine Washington Milwaukee	28	29
30	31	Notes				

# September 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	1	2	3 Winnebago Oconto Brown Manitowoc	4	5
6	7 Labor Day	8	9	10 La Crosse Wood Dunn	11	12
13	14	15	16	17 Price Washburn	18	19
20	21	22 Jefferson Iowa	23	24 Racine Washington Milwaukee	25	26
27	28	29	30	1	2	3
4	5	Notes				

# October 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	1 Winnebago Oconto Brown Manitowoc	2	3
4	5	6	7	8 La Crosse Wood Dunn	9	10
11	12	13	14	15 Price Washburn	16	17
18	19	20 Jefferson Iowa	21	22 Racine Washington Milwaukee	23	24
25	26	27	28	29 Winnebago Oconto Brown Manitowoc	30	31
1	2	Notes				

# December 2020



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1	2	3 <b>Winnebago Oconto Brown Manitowoc</b>	4	5
6	7	8	9	10 <b>La Crosse Wood Dunn</b>	11	12
13	14	15	16	17 <b>Price Washburn</b>	18	19
20	21	22	23	24 Christmas Eve No Deliveries	25 Christmas Day	26
27	28	29	30	31 New Years Eve No Deliveries	1	2
3	4	Notes				

# November 2020



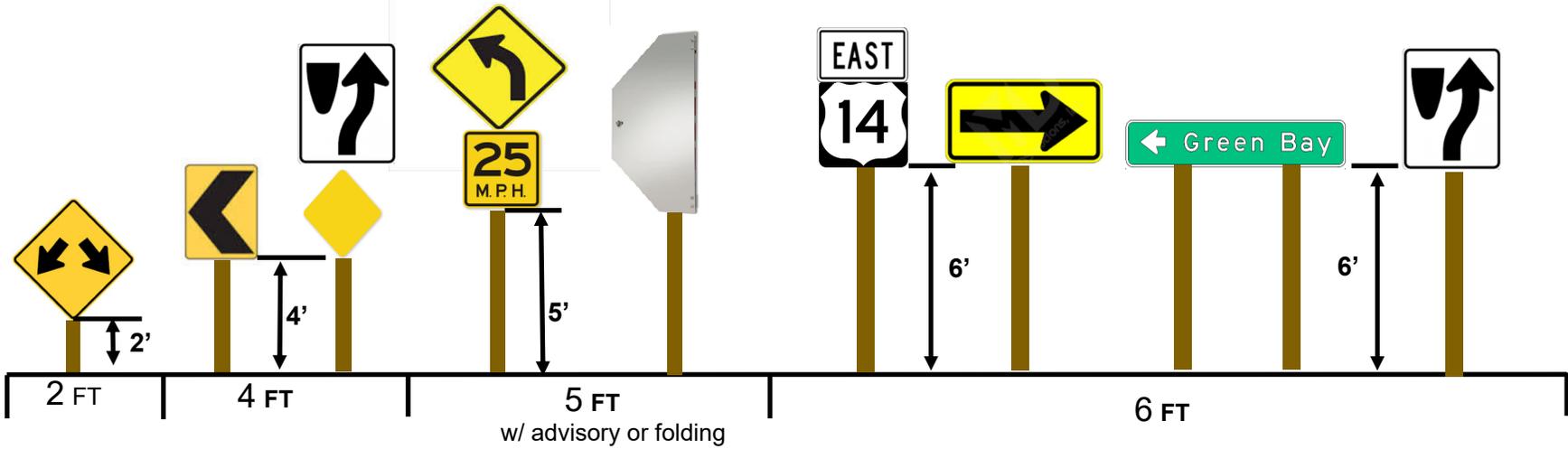
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 <b>La Crosse Wood Dunn</b>	6	7
8	9	10	11	12 <b>Price Washburn</b>	13	14
15	16	17 <b>Jefferson Iowa</b>	18	19 <b>Racine Washington Milwaukee</b>	20	21
22	23	24	25	26 Thanksgiving No Deliveries	27	28
29	30	1	2	3	4	5
6	7	Notes				

# December 2020

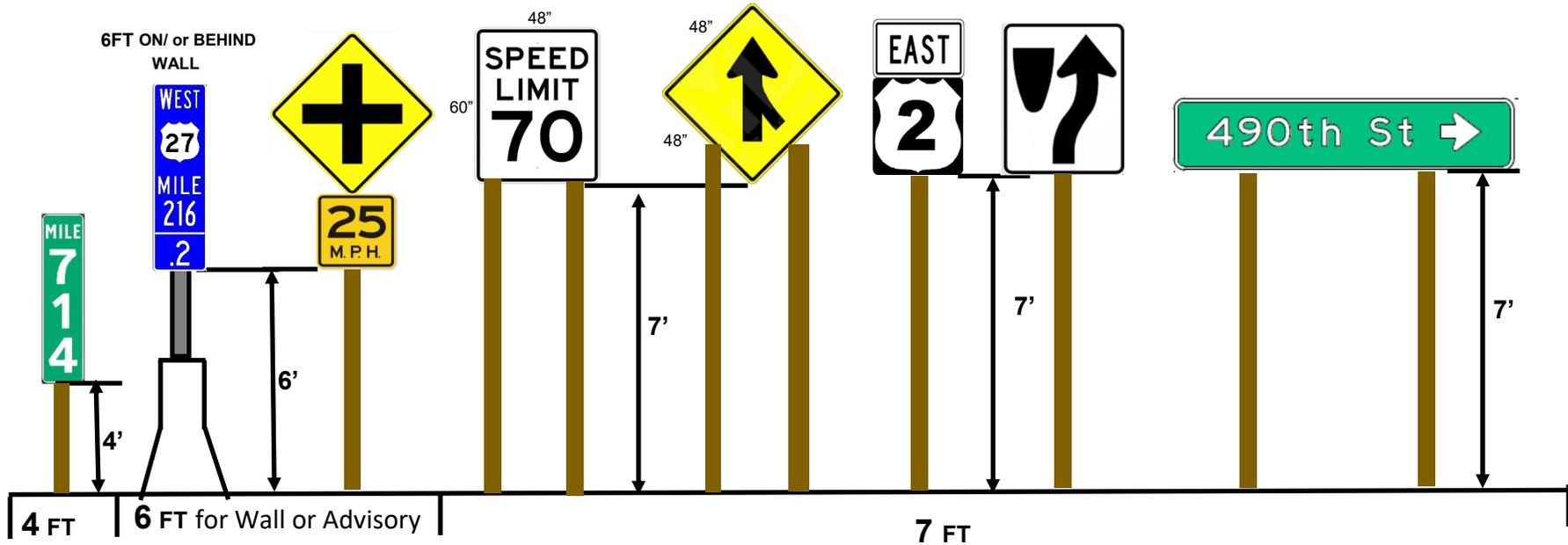


Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1	2	3 <b>Winnebago Oconto Brown Manitowoc</b>	4	5
6	7	8	9	10 <b>La Crosse Wood Dunn</b>	11	12
13	14	15	16	17 <b>Price Washburn</b>	18	19
20	21	22	23	24 Christmas Eve No Deliveries	25 Christmas Day	26
27	28	29	30	31 New Years Eve No Deliveries	1	2
3	4	Notes				

**Standard Installation for Rural Highways**

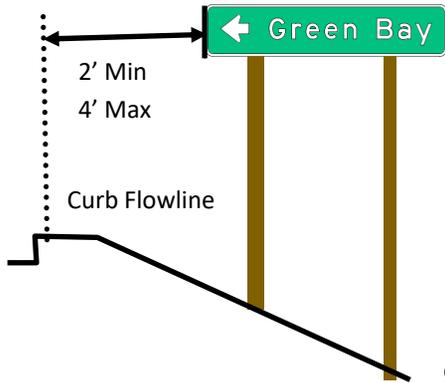


**Standard Installation for Freeways , Expressways & Urban Highways**

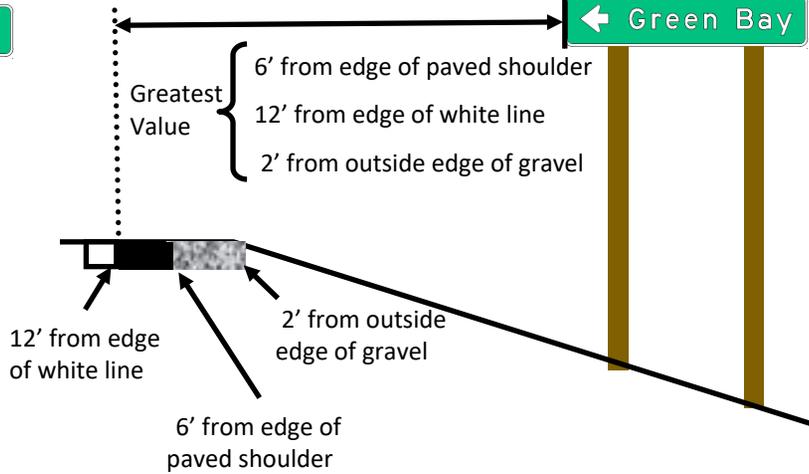


**ALL heights are measured from top of pavement not the ground.**

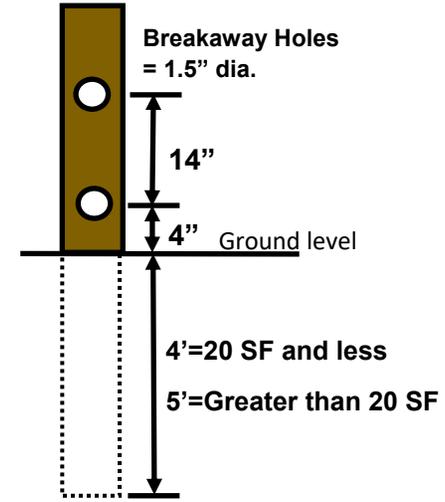
### Urban Area



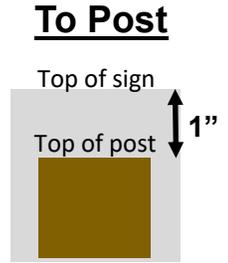
### Rural Area



### Breakaway Holes

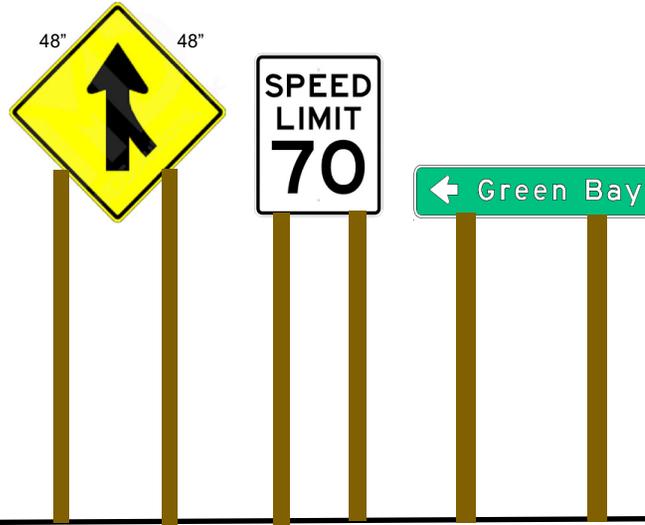


### Mounting Signs To Post

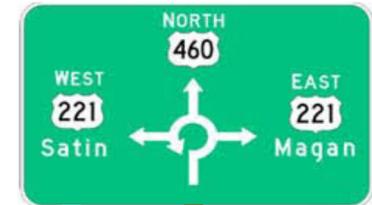


- No Stringers:  $\leq 72$ "**
- 72" Stringers: 78", 84" or 90" Signs**
- 90" Stringers: 96", 102" or 108" Signs**
- 108" Stringers: 114", 120" or 126" Signs**
- 126" Stringers: 132", 138" or 144" Signs**

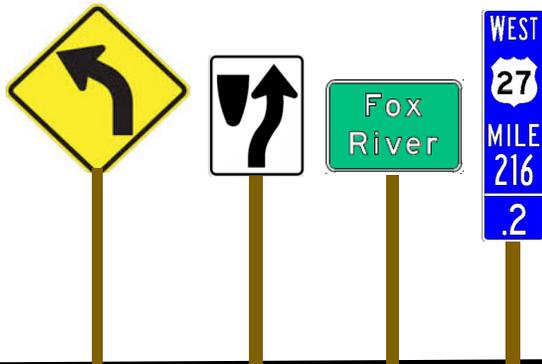
### 2 4x6 Post



### 3 4x6 Posts



### 1 4x6 Post



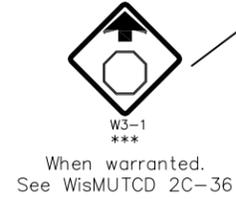
24"/30"/36" Diamonds  
 $< 20$  SF AND  $\leq 48$ "

48" Diamonds  
 $\geq 20$  SF  
 $48$ "  $<$  width  $>$   $108$ "

$\geq 108$ "  
 Minimum of 42" between posts on center



See WisMUTCD Table 2C.4

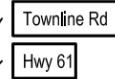


50' Max

500' Typ, 200' Min  
(to nearest D-series sign)



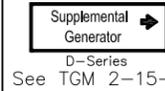
25' - 200'



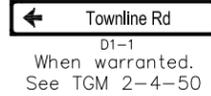
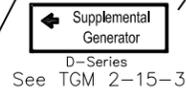
Street Name Signs  
\*\*\*  
Not allowed above WisDOT  
maintained STOP signs



When warranted.  
See TGM 2-4-50



USH 61



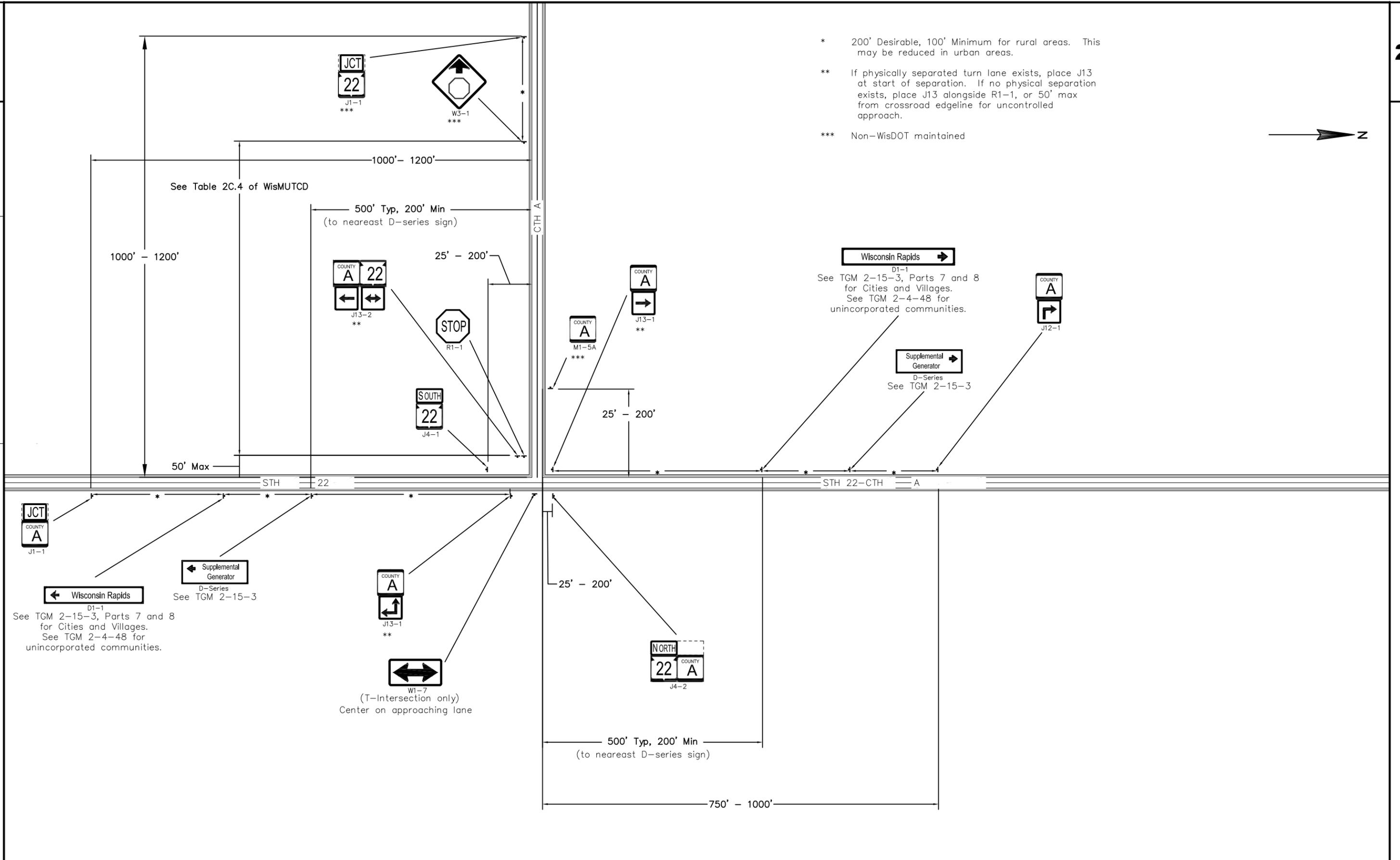
500' Typ, 200' Min  
(to nearest D-series sign)



(T-intersection only)  
Optional.  
Center on approaching  
lane

\* 200' Desirable, 100' Minimum for rural areas. This  
may be reduced in urban areas.

\*\*\* Non-WisDOT maintained



\* 200' Desirable, 100' Minimum for rural areas. This may be reduced in urban areas.

\*\* If physically separated turn lane exists, place J3 at start of separation. If no physical separation exists, place J3 alongside R1-1, or 50' max from crossroad edgeline for uncontrolled approach.



1000' - 1200'

See WisMUTCD Table 2C-4

500' Typ, 200' Min

50' Max

25' - 200'

750' - 1000'

500' Typ, 200' Min  
(to nearest D-series sign)

Bonduel 12  
Eau Claire 45  
D2-2  
See TGM 2-15-36

SPEED LIMIT 55  
R2-1

SOUTH 20  
J4-1

Supplemental Generator  
D-Series  
See TGM 2-15-3

Colfax Bonduel  
D1-2  
See TGM 2-15-5

SOUTH SOUTH 53 20  
J2-2

JCT 53  
J1-1



NORTH NORTH SOUTH 53 20 53  
J2-3

Supplemental Generator  
D-Series  
See TGM 2-15-3

Boscobel Milwaukee  
Colfax  
D1-3  
See TGM 2-15-5

NORTH NORTH SOUTH 53 20 53  
J3-3  
\*\*

SPEED LIMIT 55  
R2-1

Colfax Madison 7 45  
D2-2  
See TGM 2-15-36

SOUTH 53  
J4-1



SOUTH 20  
J3-1  
\*\*

Supplemental Generator  
D-Series  
See TGM 2-15-3

Colfax Bonduel  
D1-2  
See TGM 2-15-5

SOUTH SOUTH 53 20  
J2-2

JCT 20  
J1-1

SOUTH NORTH NORTH 20 53 20  
J2-3

Boscobel Milwaukee  
Bonduel  
D1-3  
See TGM 2-15-5

Supplemental Generator  
D-Series  
See TGM 2-15-3

SOUTH 20  
J3-1  
\*\*

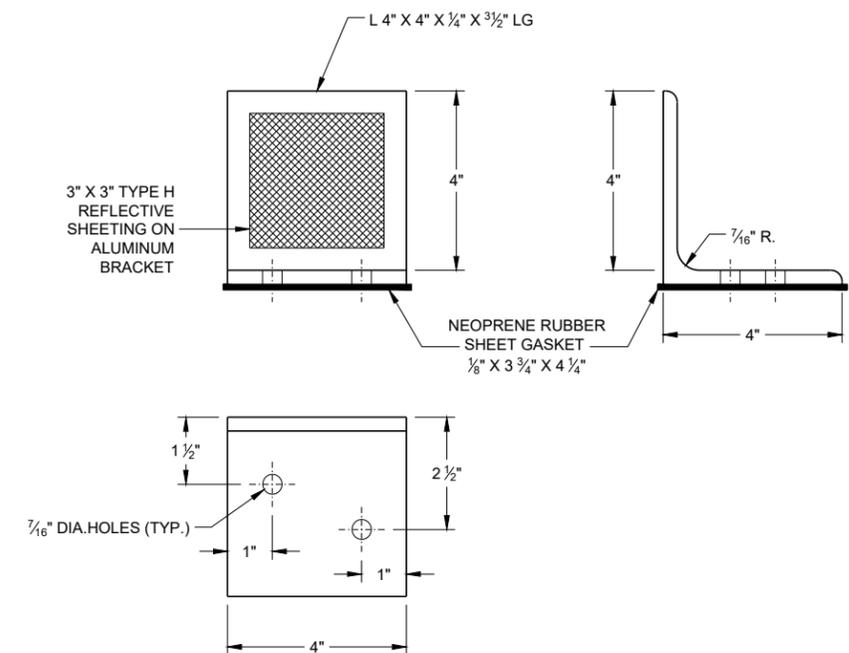
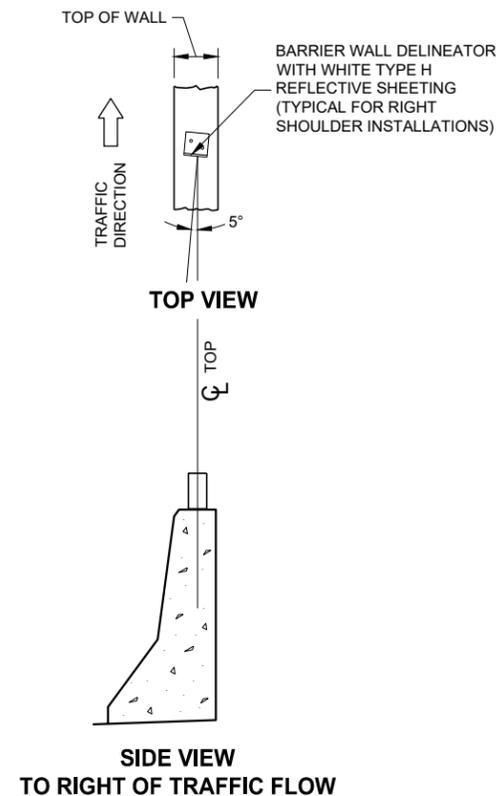
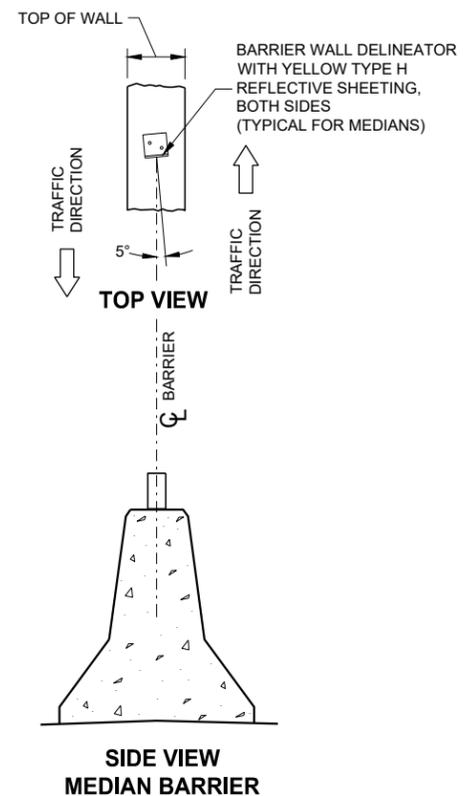
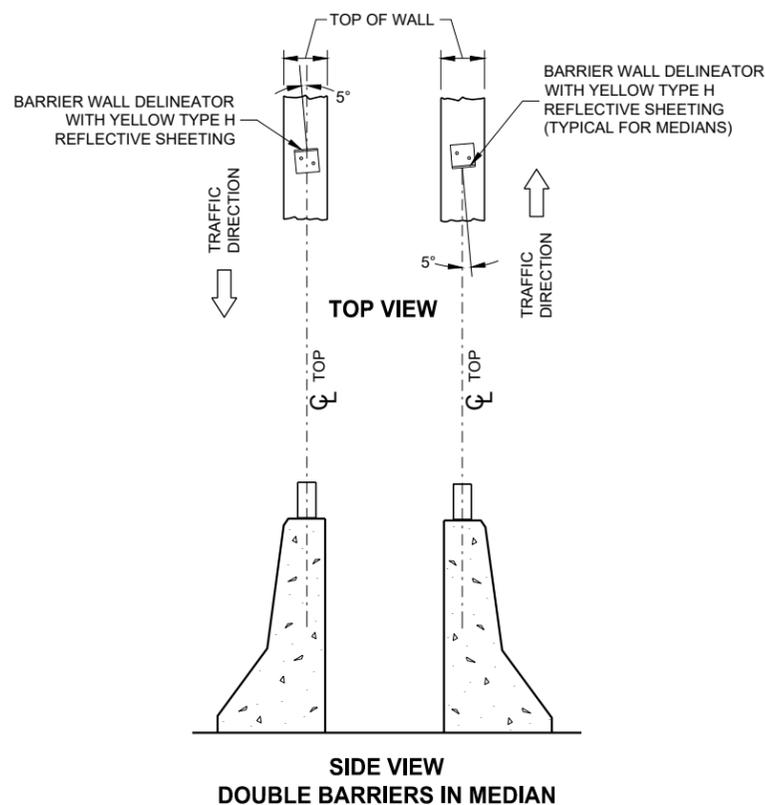
NORTH NORTH 53 20  
J4-2

SPEED LIMIT 55  
R2-1

Boscobel Appleton  
Milwaukee  
D2-3  
See TGM 2-15-36

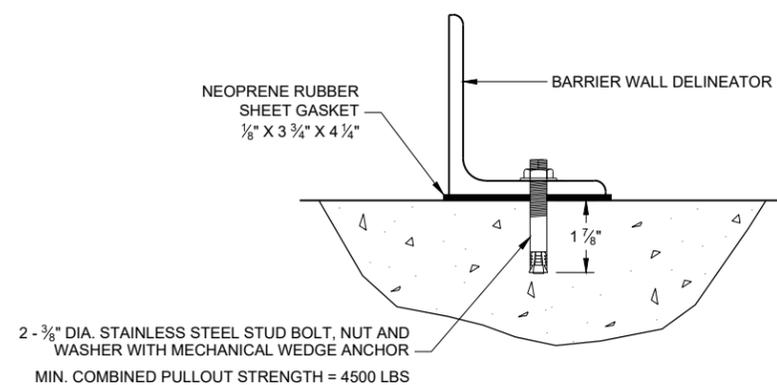


(T-intersection only)  
Center on  
approaching lane



**BARRIER WALL DELINEATOR**

**LOCATION AND AIMING DETAILS FOR BARRIER WALL DELINEATOR MOUNTED ON CONCRETE BARRIERS**



**BARRIER WALL DELINEATOR MOUNTING DETAIL**

**REFLECTOR SPACING TABLE**

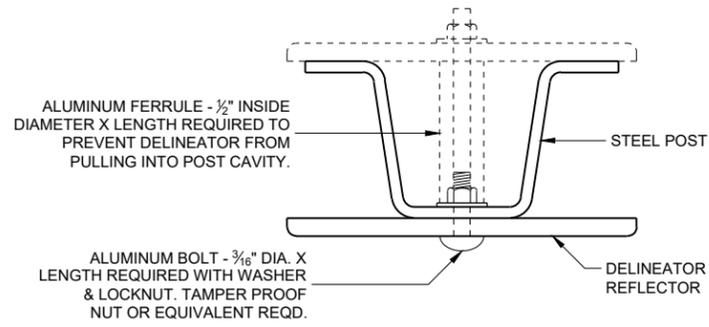
REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

**BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING**

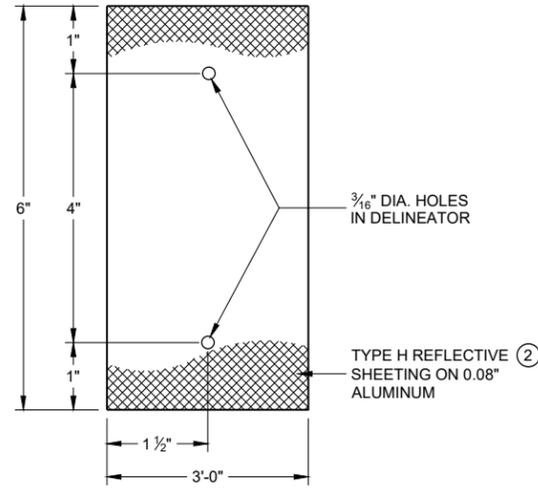
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

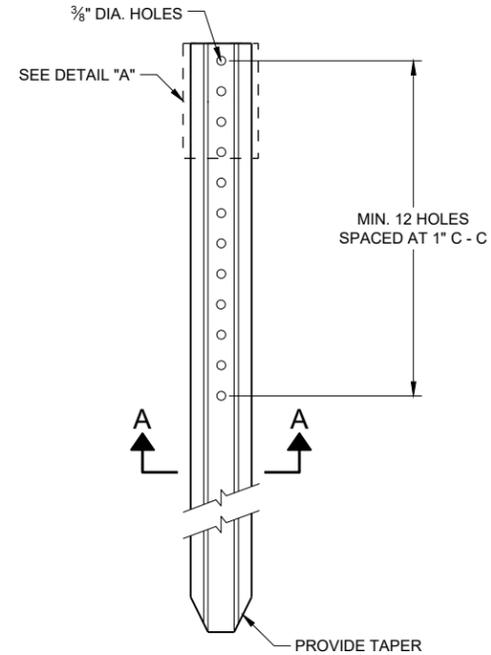
FHWA



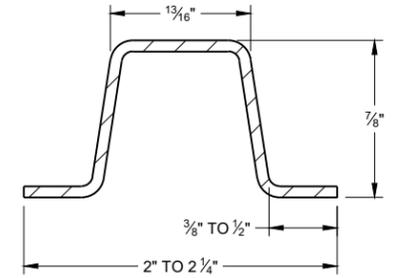
**MOUNTING DETAIL FOR DELINEATOR REFLECTOR**



**DETAIL "A" 3" X 6" DELINEATOR REFLECTOR**



**DELINEATOR POST**



**SECTION A - A**  
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

**REFLECTOR SPACING TABLE**

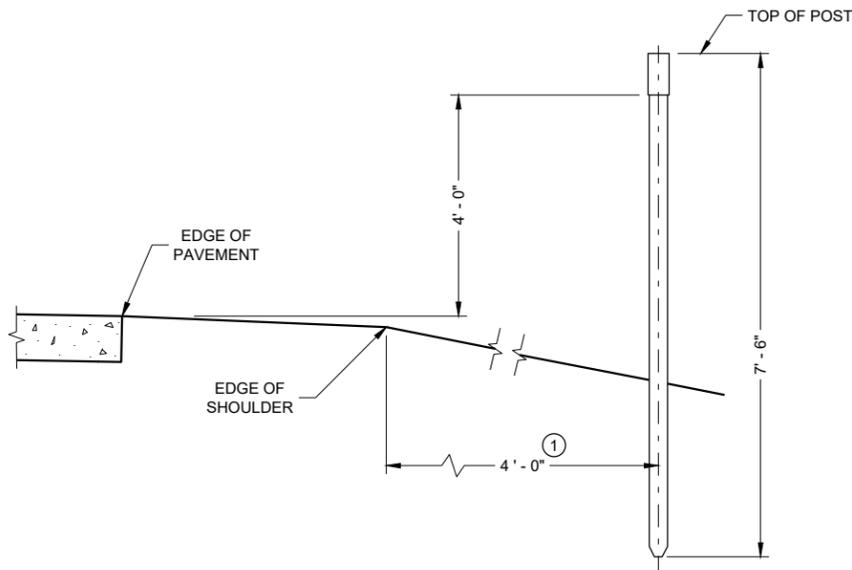
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

\* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER

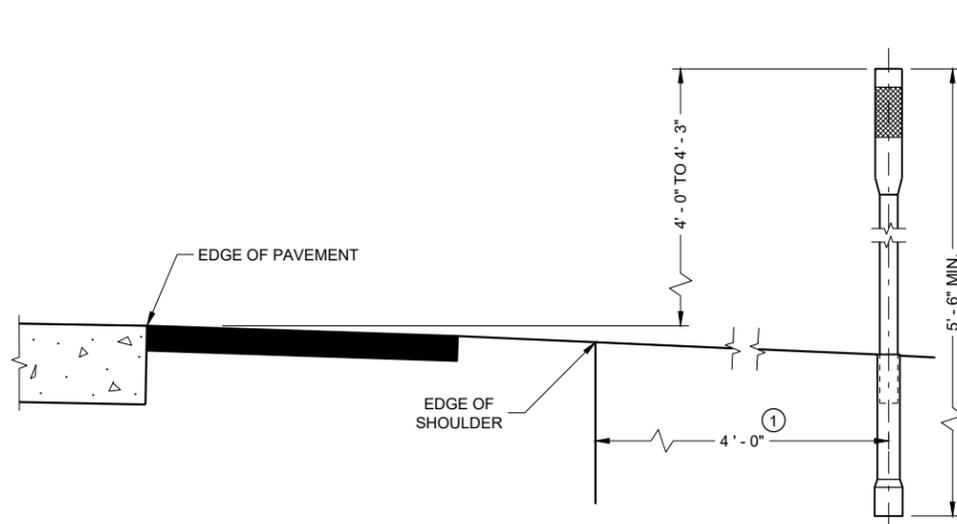
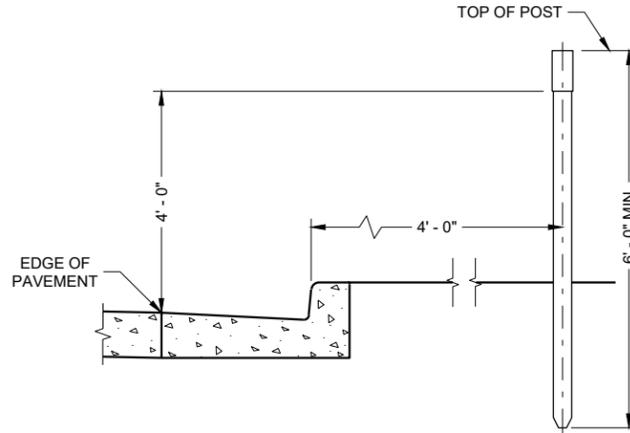
**GENERAL NOTES**

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

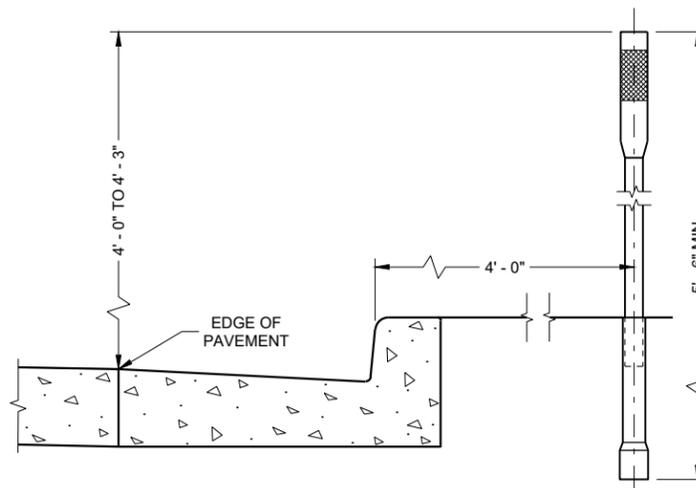
- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
- ② FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.



**TYPICAL INSTALLATIONS OF DELINEATOR POSTS**



**TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS**



**DELINEATOR POST WITH REFLECTIVE SHEETING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

**GENERAL NOTES**

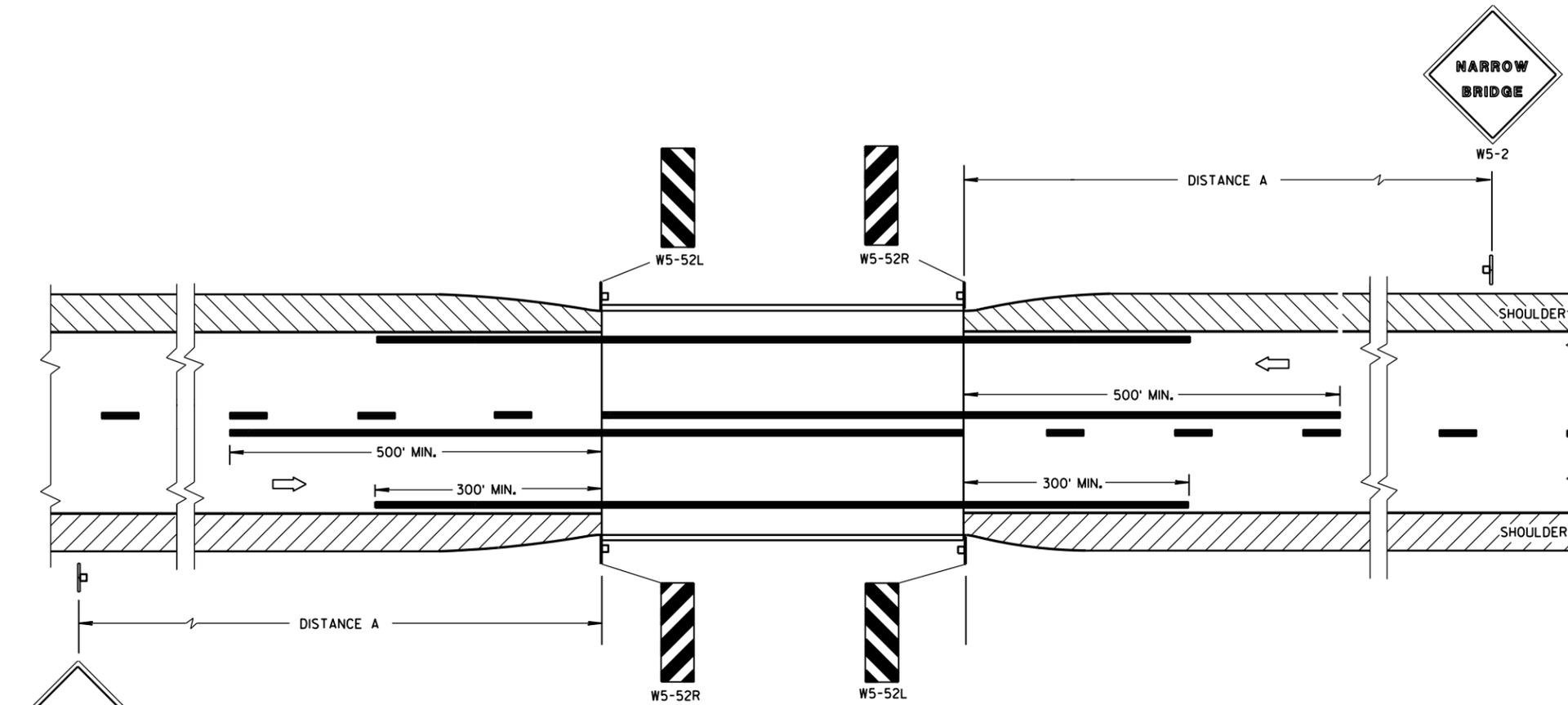
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

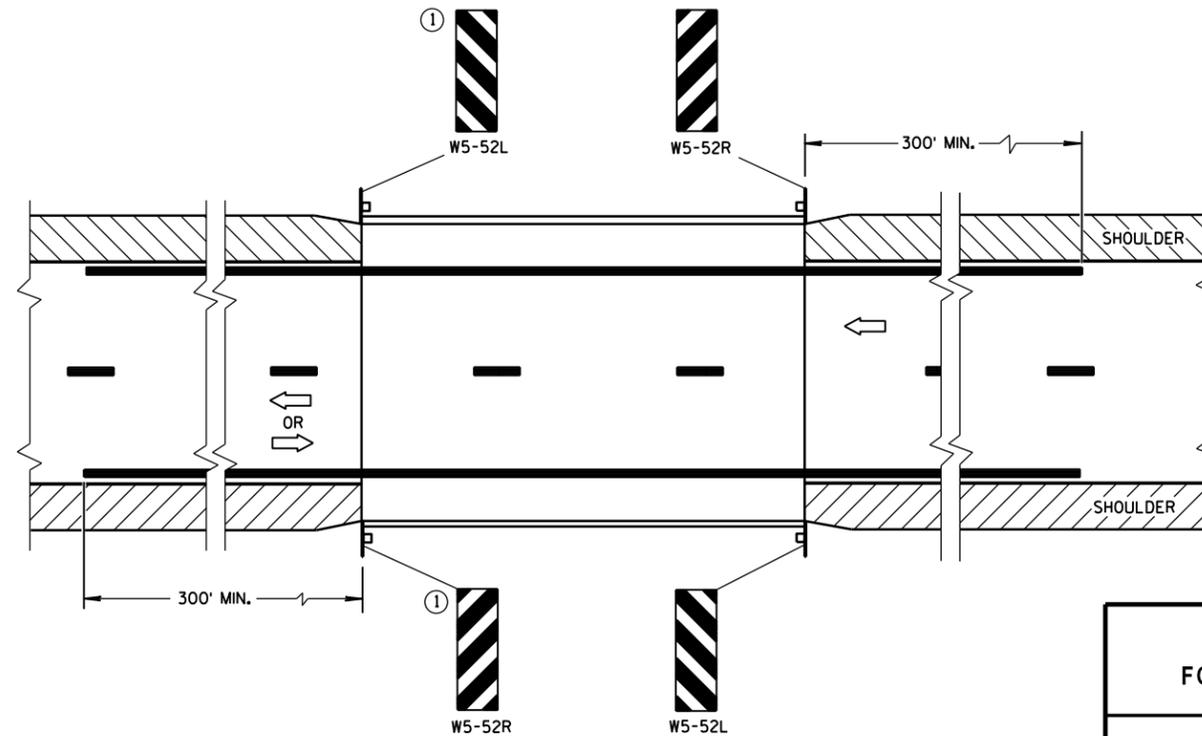
① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



**SITUATION 1**

WARRANTING CRITERIA:  
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



**SITUATION 2**

WARRANTING CRITERIA:  
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND  
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

**DISTANCE TABLE**

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

**SIGNING & MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2017 /S/ Matthew R. Rauch  
DATE STATE SIGNING AND MARKING ENGINEER  
FHWA



# SDD 15C21 Signing and Marking for Two Lane to Four Lane Divided Transitions

## GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

① USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

\* SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT PLACEMENT.

\*\* IF POSTED SPEED IS 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN).

## LEGEND

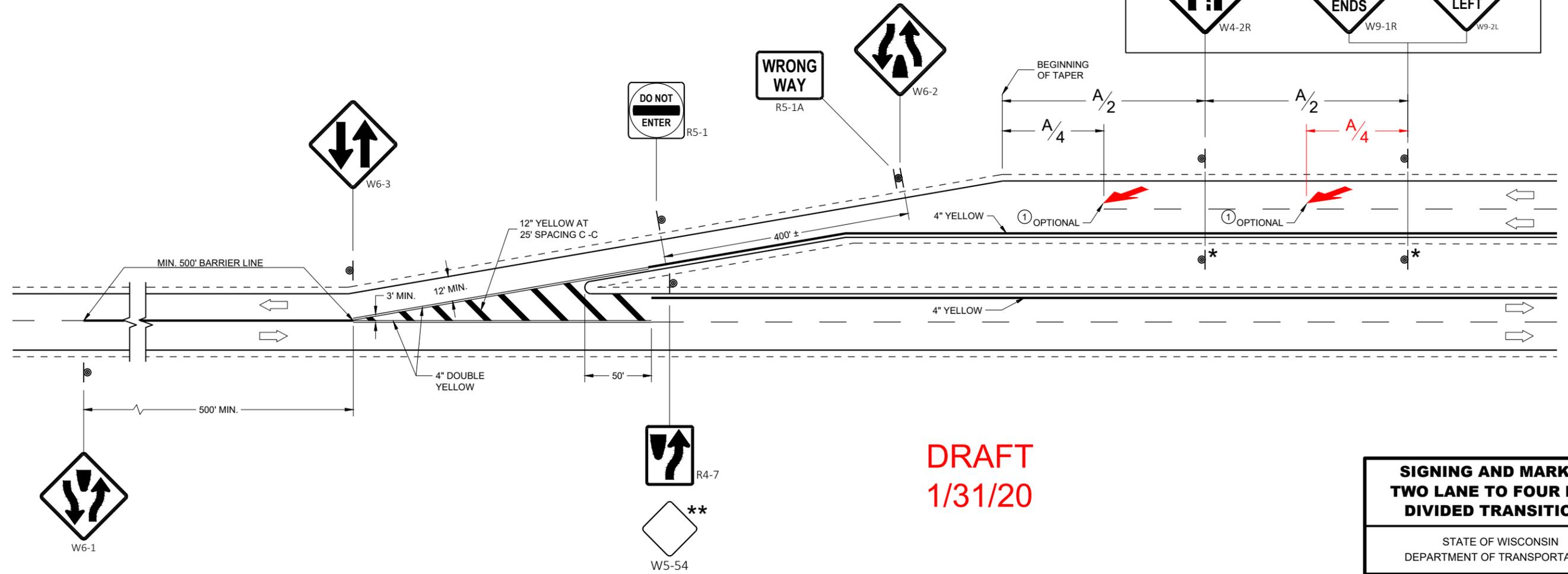
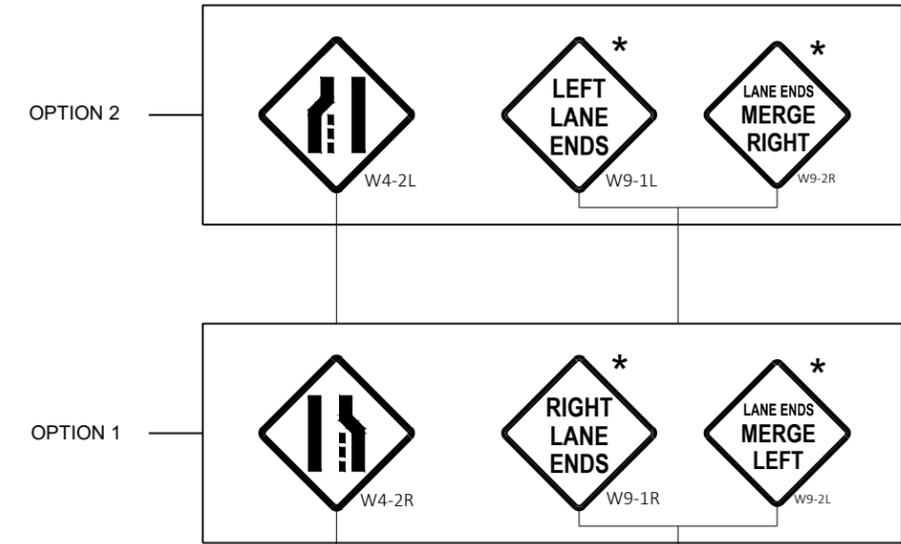
A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

⊙ SIGN MOUNTED ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

## DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	325'
30	460'
35	565'
40	670'
45	775'
50	885'
55	990'
65	1200'
70	1250'



**DRAFT**  
**1/31/20**

SIGNING AND MARKING TWO LANE TO FOUR LANE DIVIDED TRANSITIONS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED _____	/S/ _____
DATE _____	STATE SIGNING AND MARKING ENGINEER
FHWA	

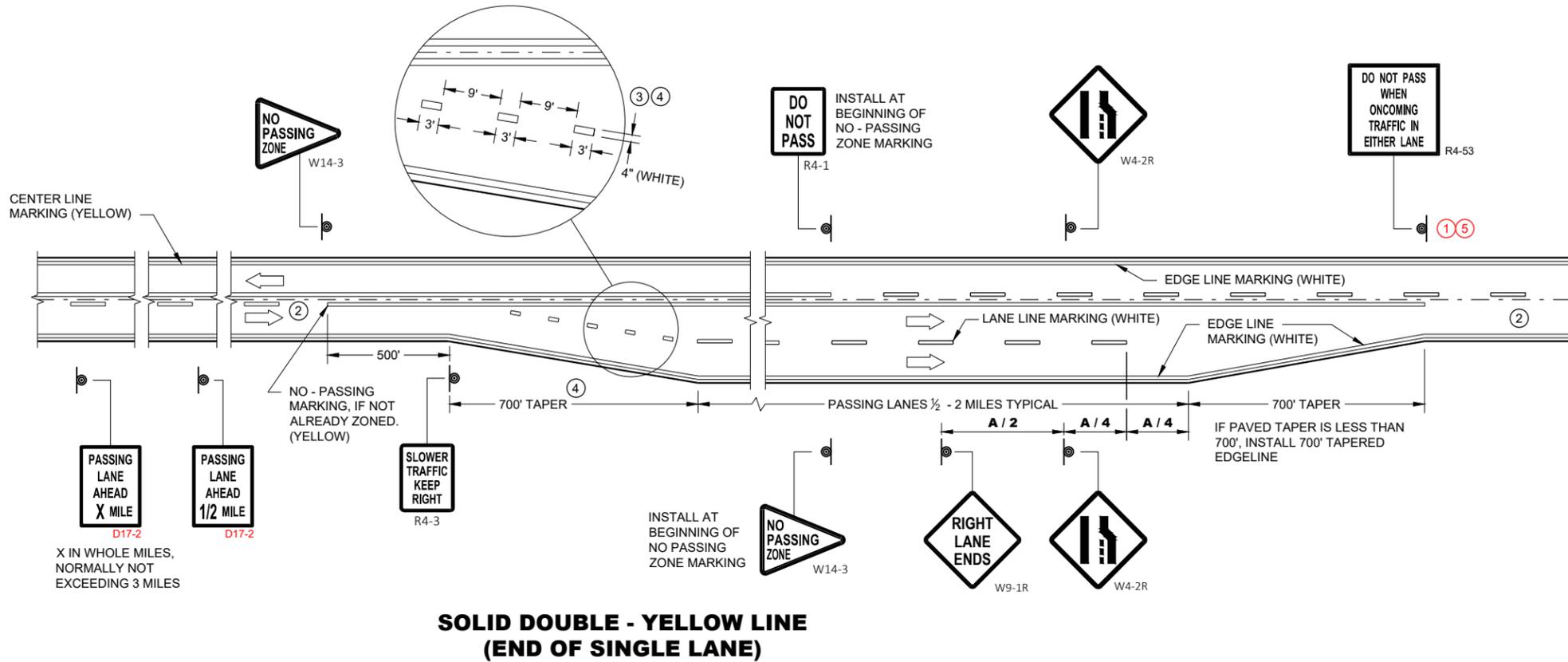
6

6

SDD 15C21 - 10

SDD 15C21 - 10





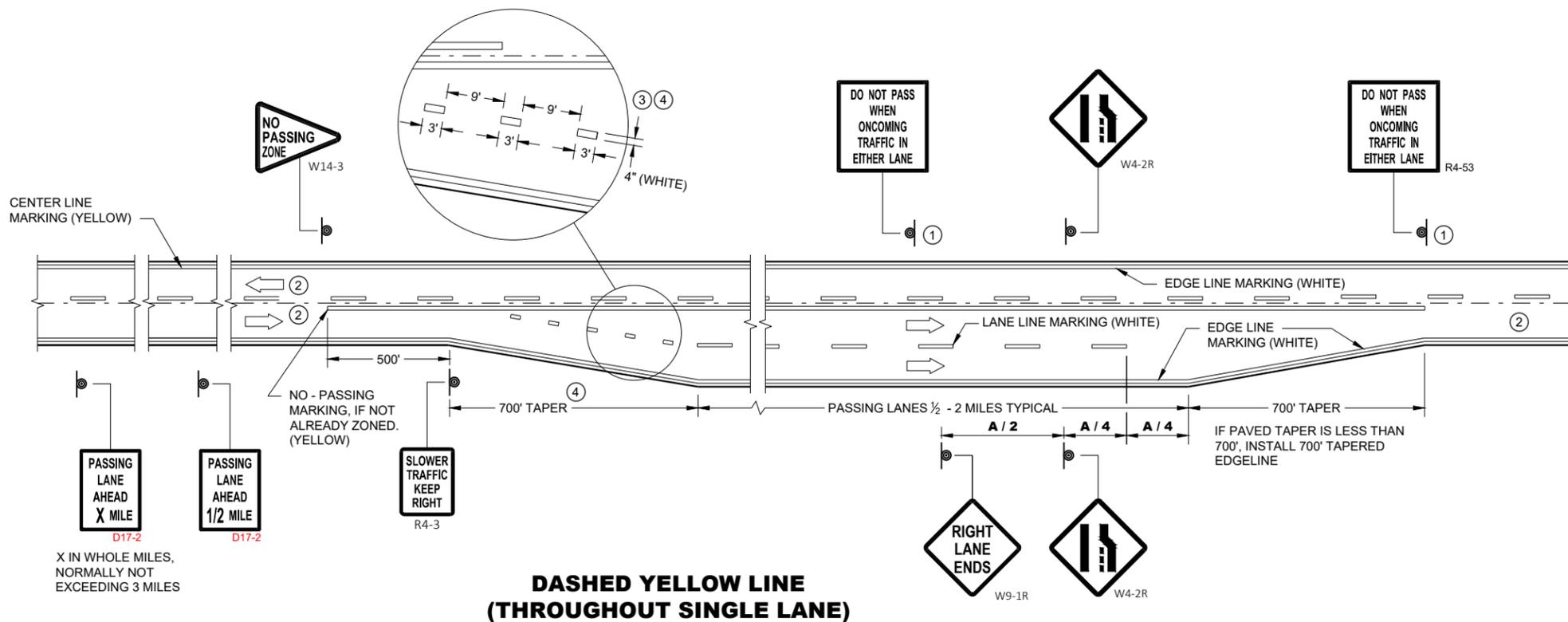
## GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL ( ) SHOWS DIRECTION OF TRAVEL

**DISTANCE TABLE**

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990



**PAVEMNET MARKING & SIGNING  
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

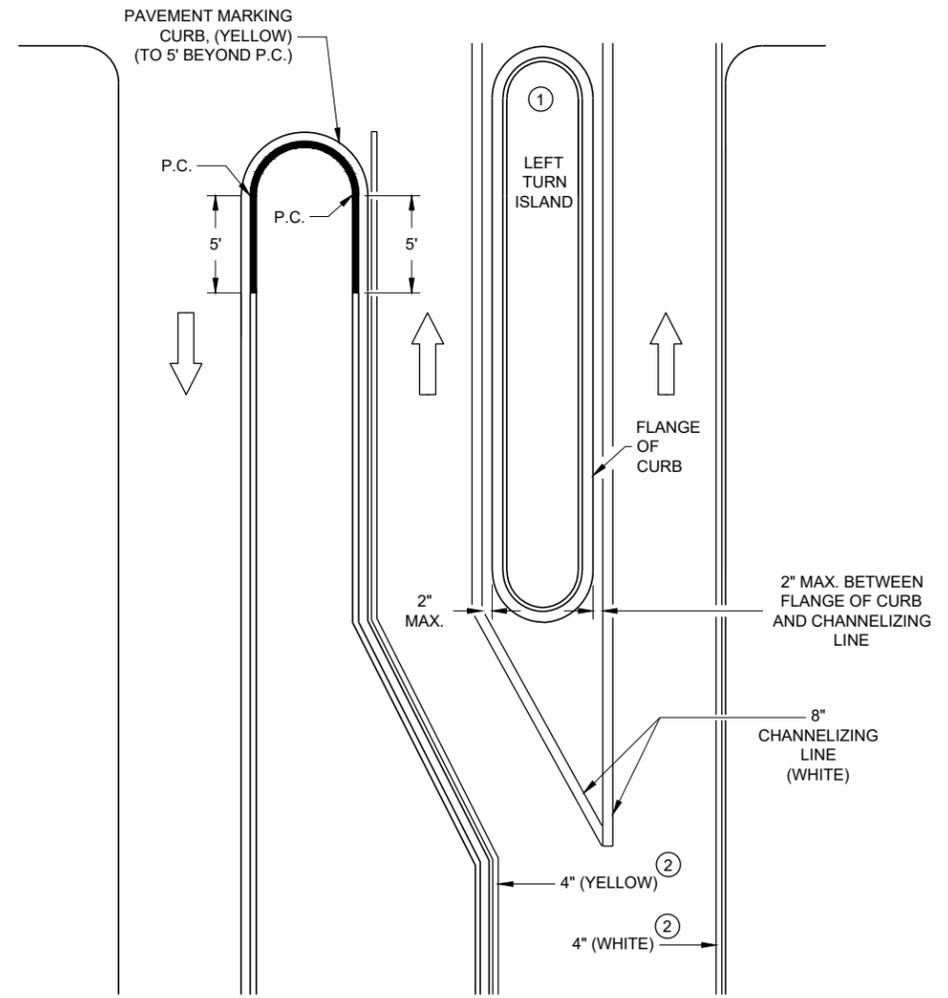
FHWA

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED

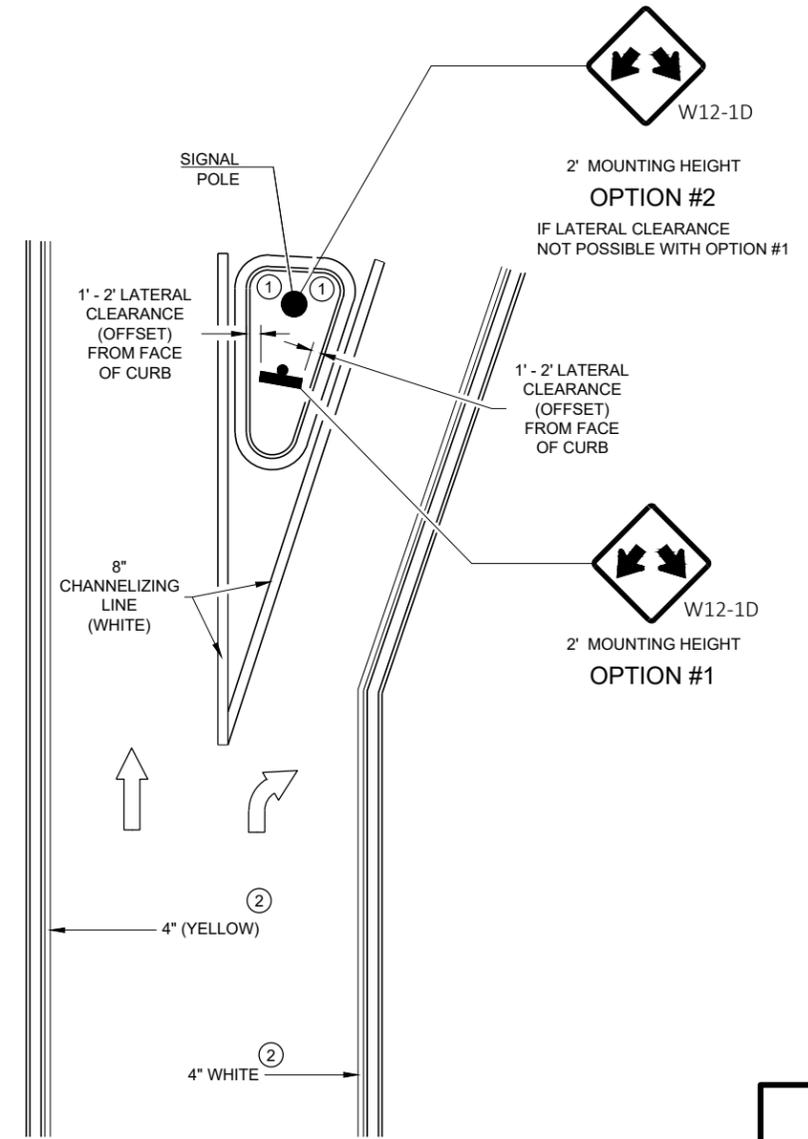
**GENERAL NOTES**

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.  
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.



**LEFT TURN & MEDIAN ISLAND**



**RIGHT TURN ISLAND**

<b>DOUBLE ARROW WARNING SIGN PLACEMENT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 7/2018	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER

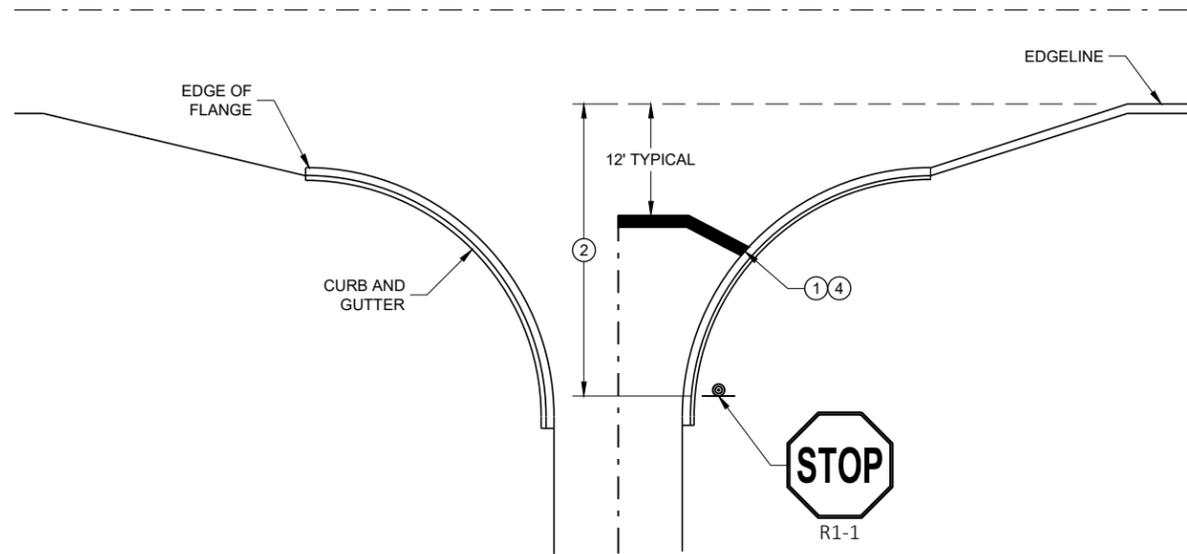


# SDD 15C33 Stop Line and Crosswalk Pavement Marking

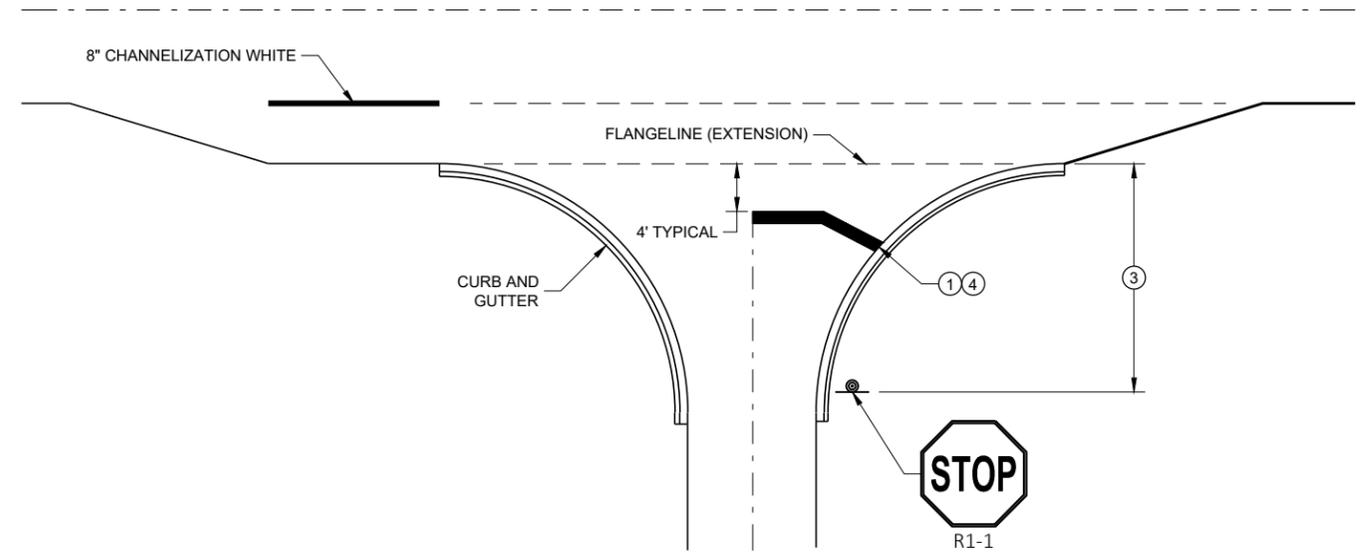
## GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

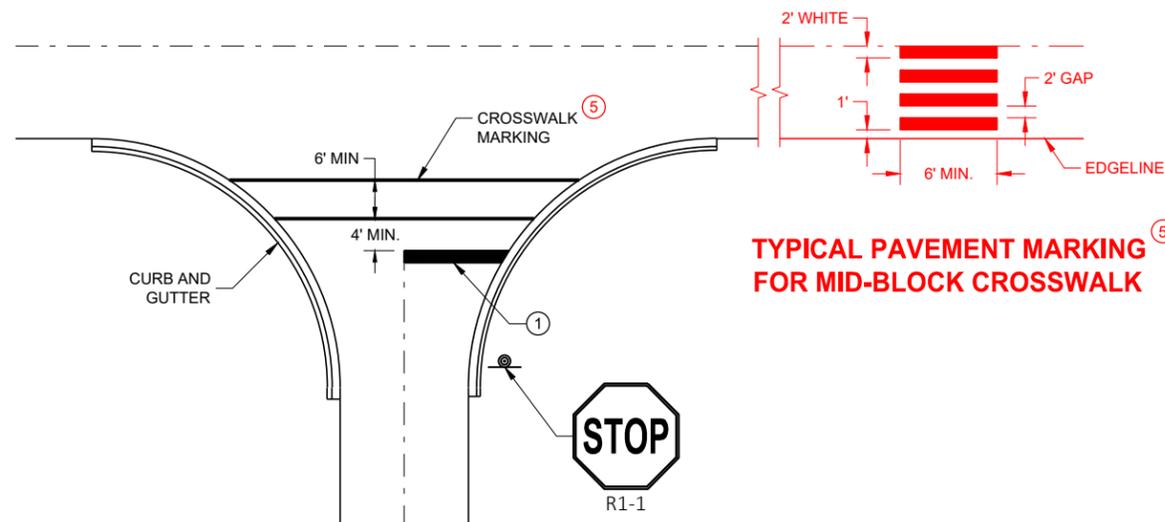
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

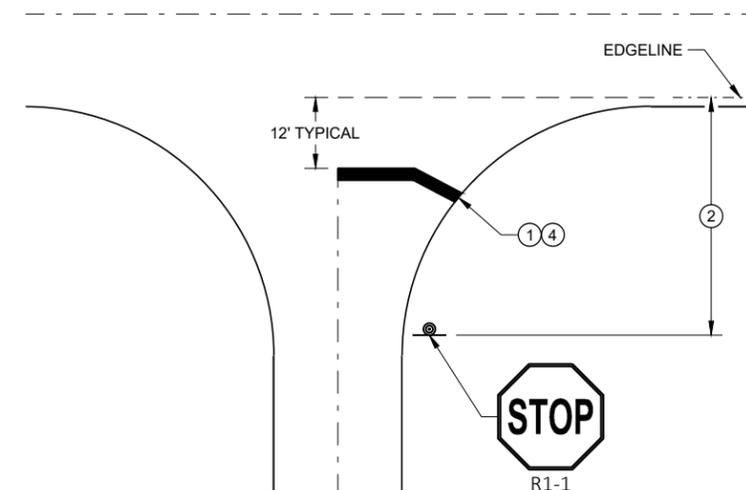


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



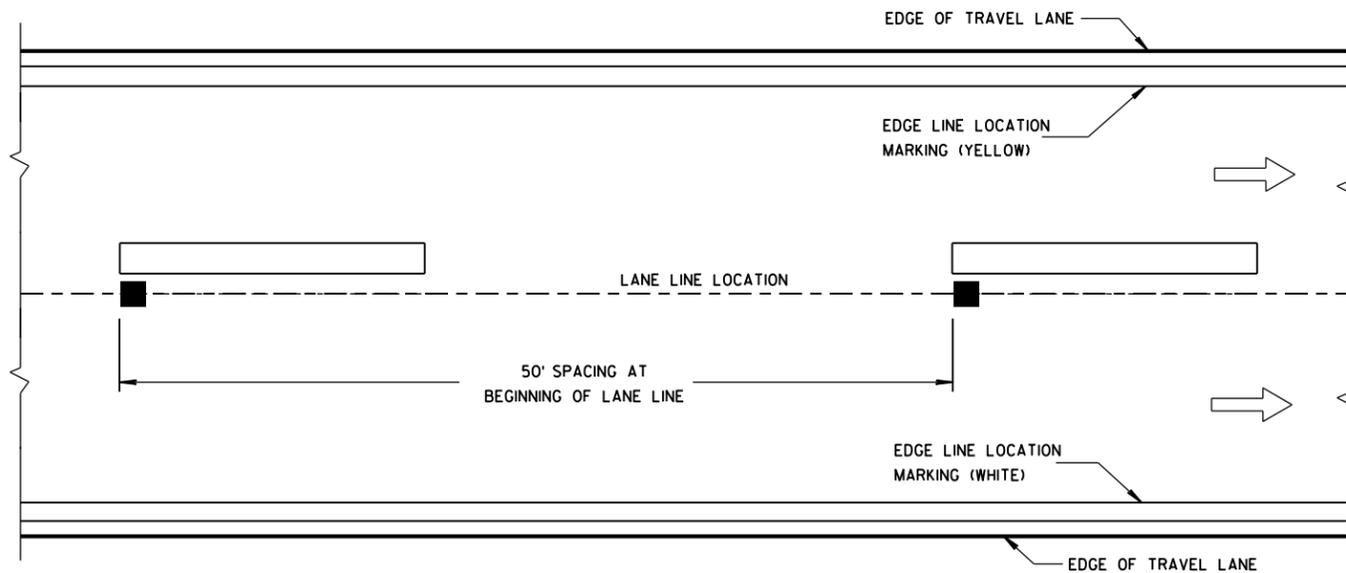
TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

## STOP LINE AND CROSSWALK PAVEMENT MARKING

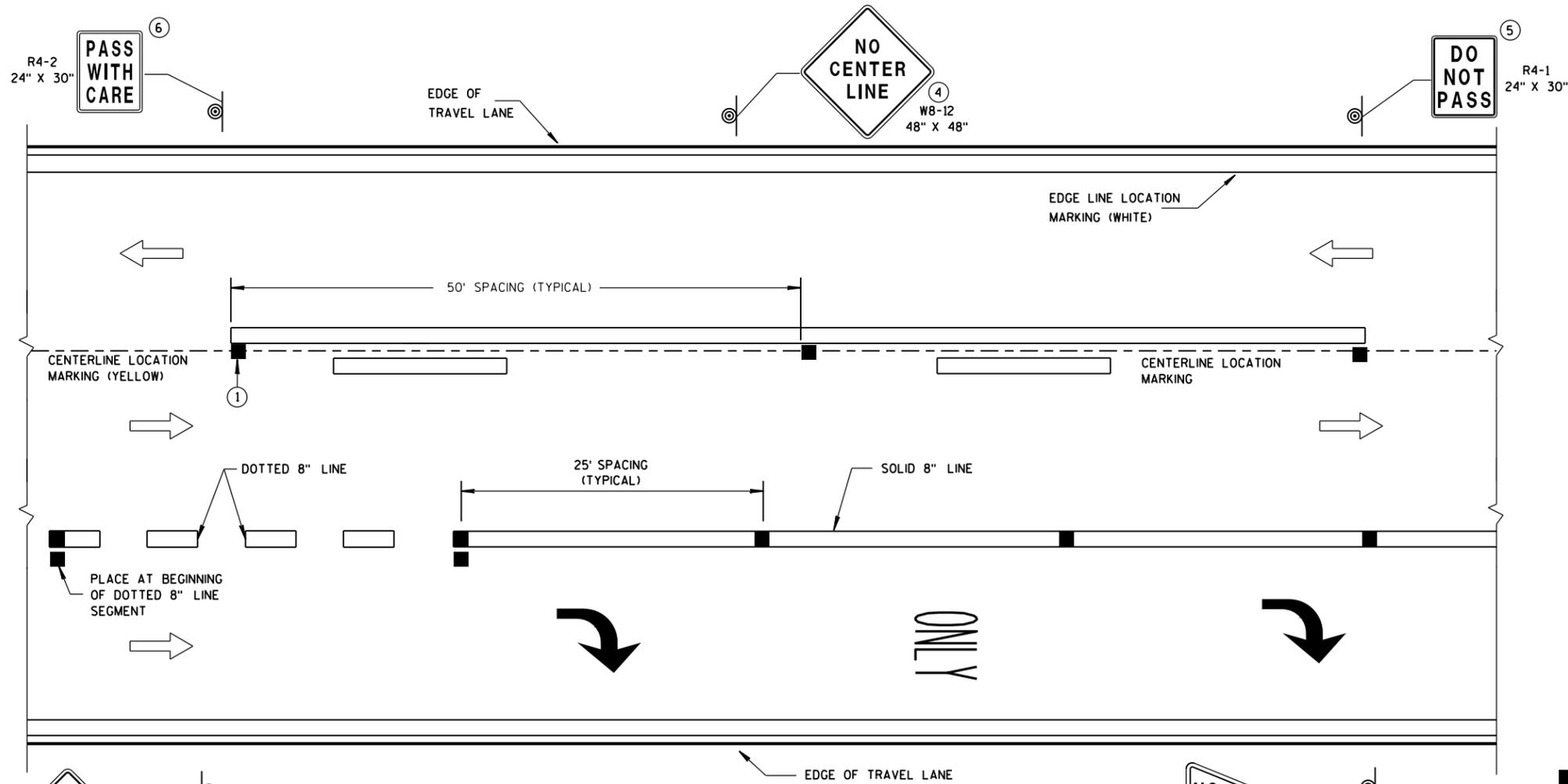
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING  
ENGINEER

FHWA



LONGITUDINAL PLACEMENT 4-INCH LANE LINE



LONGITUDINAL PLACEMENT 4-INCH CENTERLINE AND 8-INCH CHANNEL LINE

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

COLOR OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II SHALL MATCH THE COLOR OF THE MARKING THEY SUPPLEMENT.

PLACEMENT OF TEMPORARY RAISED PAVEMENT MARKERS ON EDGE LINES ARE OPTIONAL. IF PLACED ON EDGE LINES, MAXIMUM SPACING SHALL BE 50 FEET.

PROVIDE SINGLE OR MULTI-COVER TEMPORARY RAISED PAVEMENT MARKERS AS SHOWN ON PLAN.

MARK T's ON PAVEMENT FOR RE-ESTABLISHING NO PASSING ZONES.

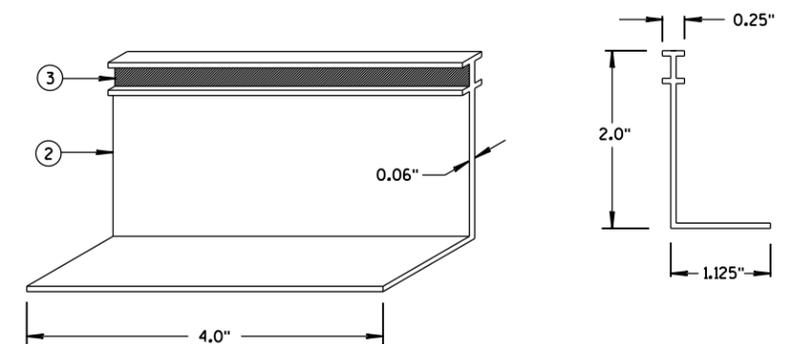
SAME DAY TEMPORARY PAVEMENT MARKING MAY BE USED IN LIEU OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF TEMPORARY SAME DAY PAVEMENT MARKING IS USED, ENSURE PROPOSED PAVEMENT MARKINGS ARE PLACED IN THE EXACT LOCATIONS AS THE EXISTING MARKINGS, USING A MINIMAL AMOUNT OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II OR OTHER METHODS AS APPROVED BY THE ENGINEER.

IF ROADWAY IS DETOURED DURING CONSTRUCTION, THE DO NOT PASS, PASS WITH CARE AND NO CENTERLINE SIGNS MAY BE OMITTED, PROVIDED A LIQUID MARKING IS INSTALLED BEFORE THE ROADWAY IS REOPENED TO TRAFFIC.

- ① FOR DOUBLE SOLID YELLOW, PLACE THE MARKERS BETWEEN THE LINES.
- ② MARKERS SHALL BE OF POLYURETHANE MATERIAL.
- ③ MARKERS SHALL HAVE A MINIMUM SIZE REFLECTIVE SURFACE OF 4 INCH WIDTH X 0.25 INCH HEIGHT.
- ④ NO CENTER LINE SIGNS SHALL BE PLACED AT THE BEGINNING OF PROJECT, AT TWO-MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS.
- ⑤ DO NOT PASS SIGNS SHALL BE INSTALLED AT THE BEGINNING OF NO PASSING ZONES. ADDITIONAL DO NOT PASS SIGNS SHALL BE INSTALLED AT ONE MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS WITHIN THE NO PASSING ZONE.
- ⑥ PASS WITH CARE SIGNS SHALL BE PLACED AT THE DOWNSTREAM END OF NO PASSING ZONES.



ISOMETRIC VIEW

SIDE VIEW

TEMPORARY RAISED PAVEMENT MARKER, TYPE II

LEGEND

- TEMPORARY RAISED PAVEMENT MARKER, TYPE II
- ⊙ SIGN ON PORTABLE OR PERMANENT SUPPORT
- ➔ DIRECTION OF TRAVEL

STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKERS, TYPE II

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 6-2017 /S/ Matthew R. Rauch  
DATE STATE SIGNING AND MARKING ENGINEER  
FHWA

6

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# SDD 15D14 Traffic Control, Two Lane Closure on Freeway or Expressway, Short Term (Less Than 24 Hours)

## LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

## GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1E AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS.

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

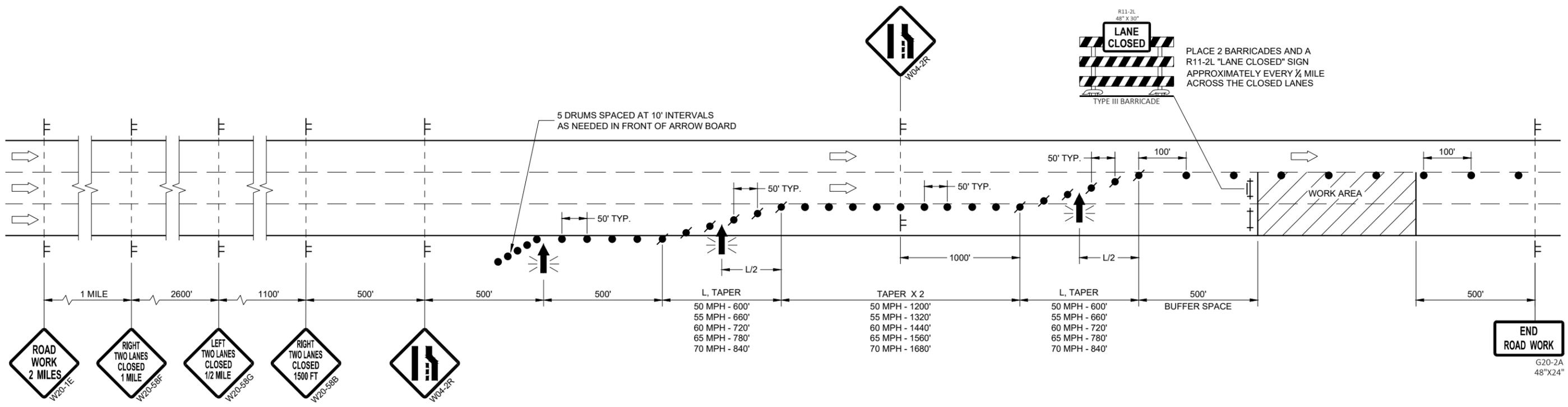
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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SDD 15D14 - 03

SDD 15D14 - 03

**TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT TERM (LESS THAN 24 HOURS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2015 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA



# SDD 15D27 Traffic Control, Shoulder Closure on Divided Roadway, Speeds Greater Than 40 MPH

## LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW BOARD
-  WORK AREA

## GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

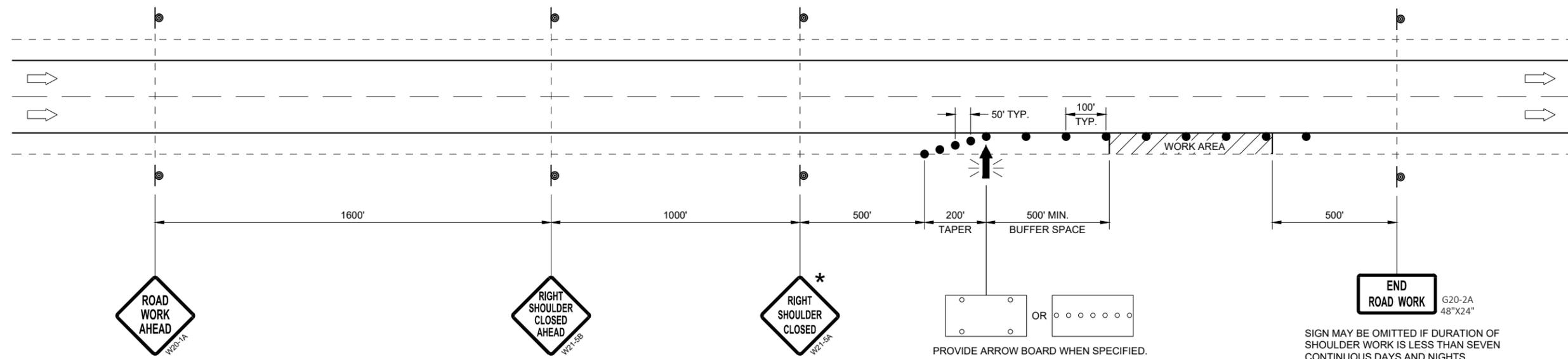
WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

\* FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR THE W21-5A SIGN MAY BE OMITTED.



SIGN MAY BE OMITTED IF DURATION OF SHOULDER WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

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SDD 15D27 - 03

SDD 15D27 - 03

<b>TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Andrew Heidtke STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



# SDD 15D28 Traffic Control, Work on Shoulder or Parking Lane, Undivided Roadway

## LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

### TABLE A

SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

W = SHOULDER WIDTH (FEET)  
 S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER  
 L = WS<sup>2</sup> / 60 AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = 1/3L

## GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

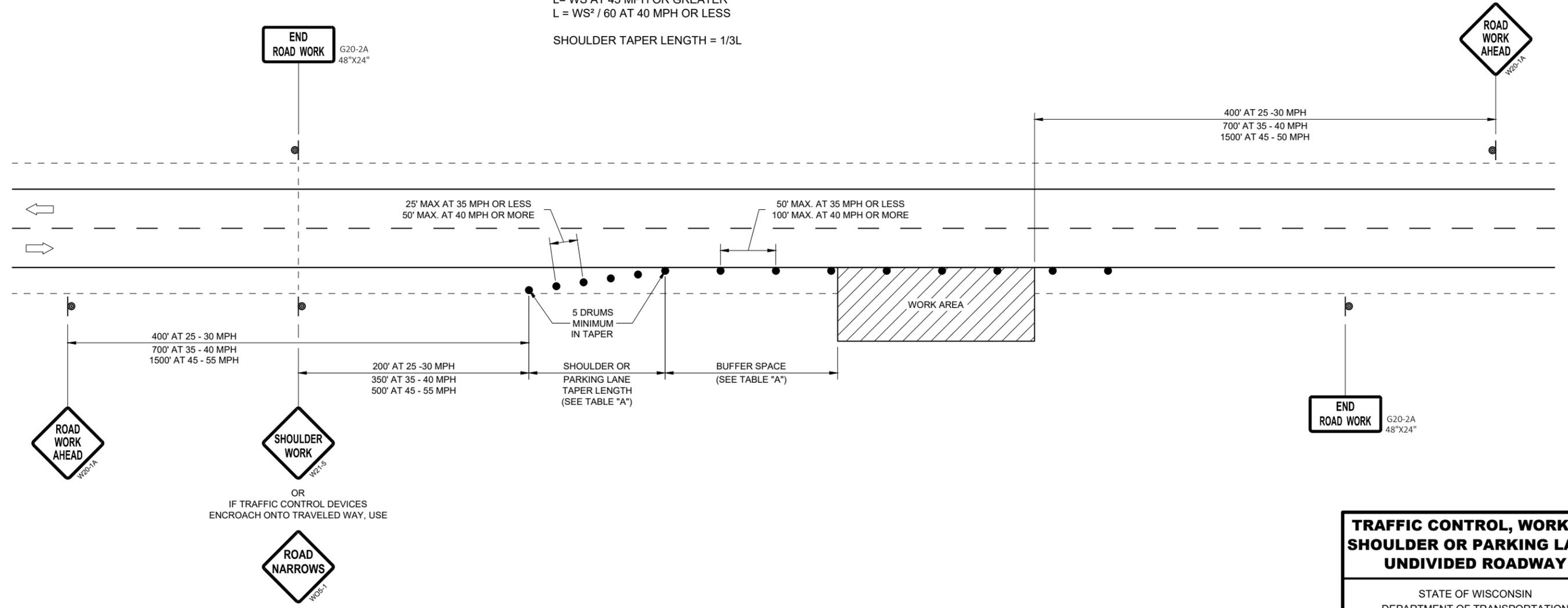
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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SDD 15D28 - 03

SDD 15D28 - 03

**TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2019 DATE /S/ Andrew Heidtke  
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA



# SDD 15C12 Traffic Control for Lane Closure With Flagging Operation

## LEGEND

- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TEMPORARY PORTABLE RUMBLE STRIP ARRAY
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

## GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

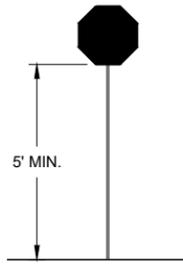
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

## FLAGGING

- FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
  - SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

## TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



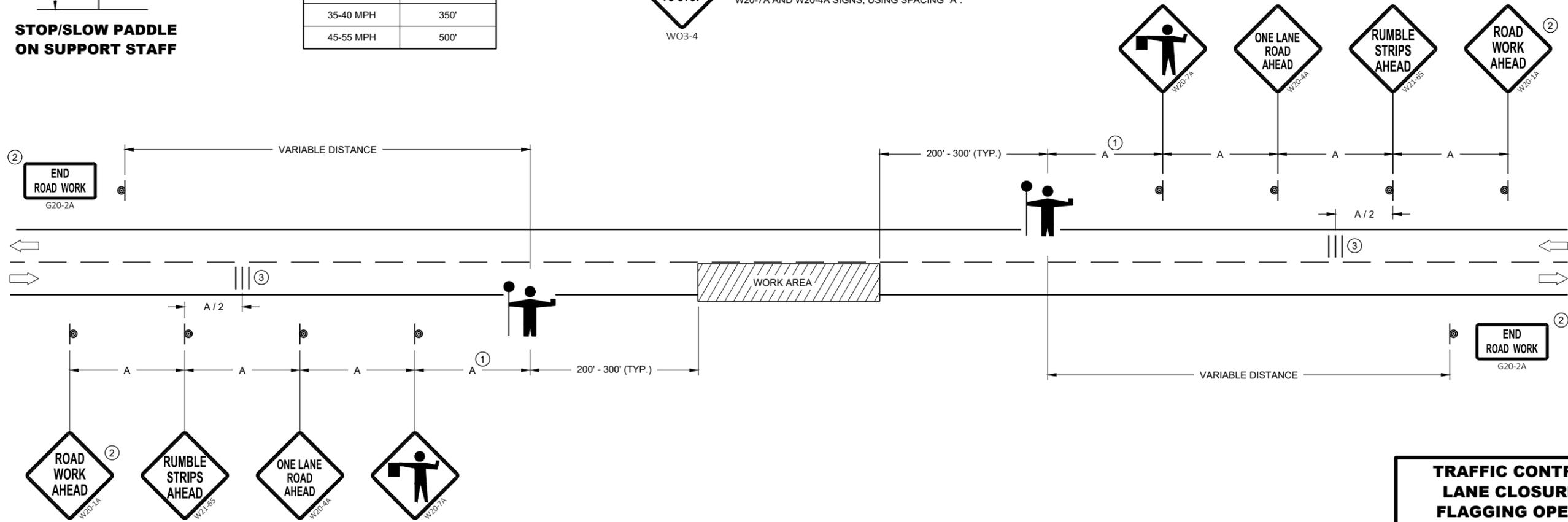
STOP/SLOW PADDLE ON SUPPORT STAFF

## SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



## TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

### TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

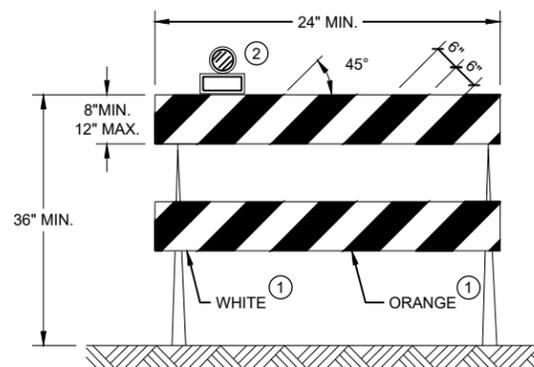
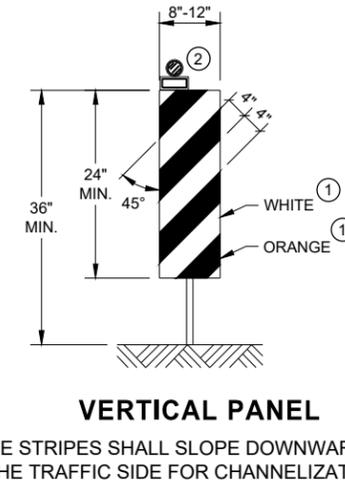
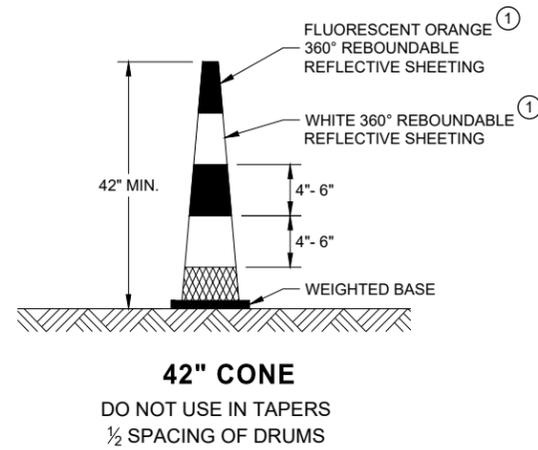
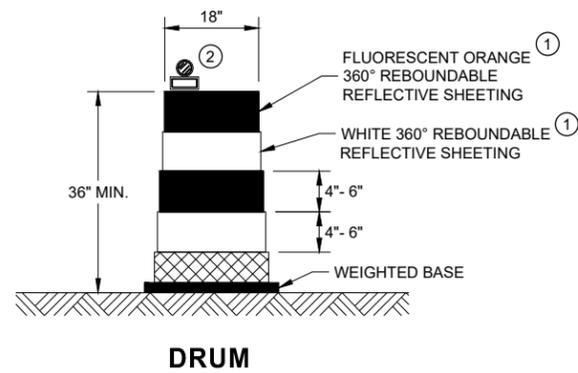
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2019 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

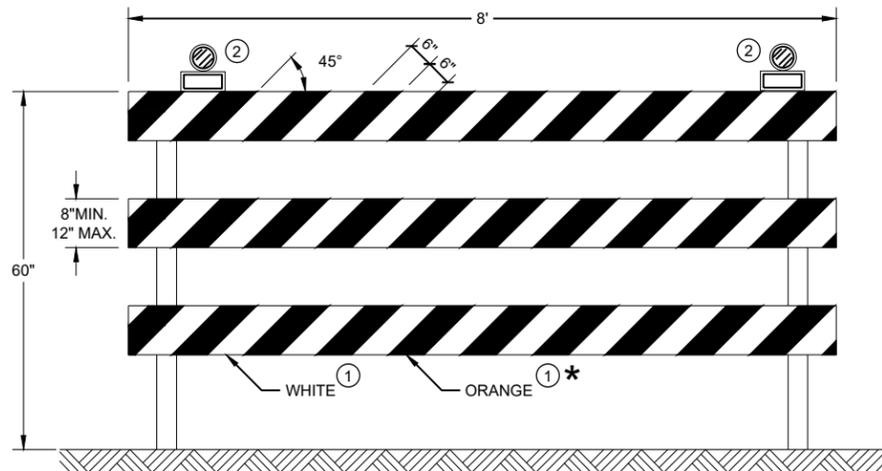
FHWA

## GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

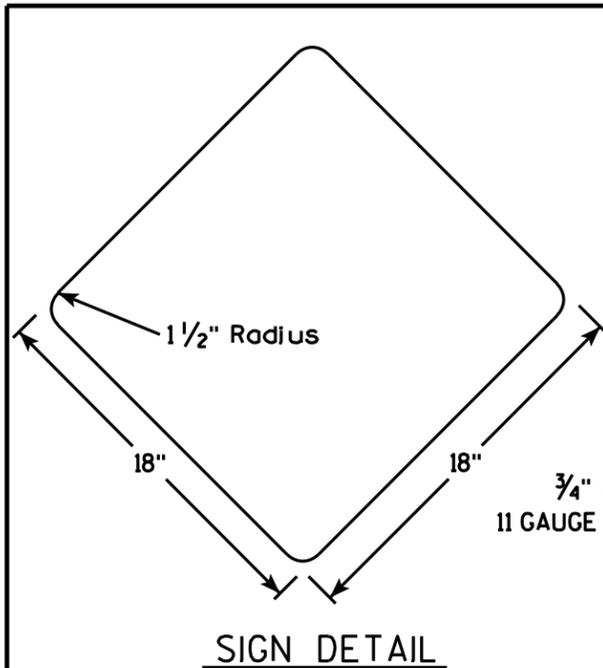


**TYPE II BARRICADE**  
FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

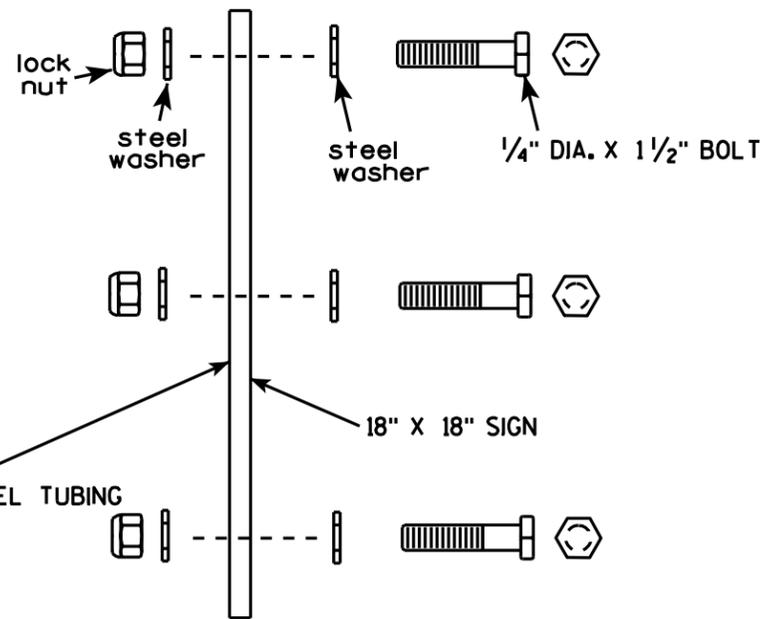


**TYPE III BARRICADE**  
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.  
\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

<b>CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



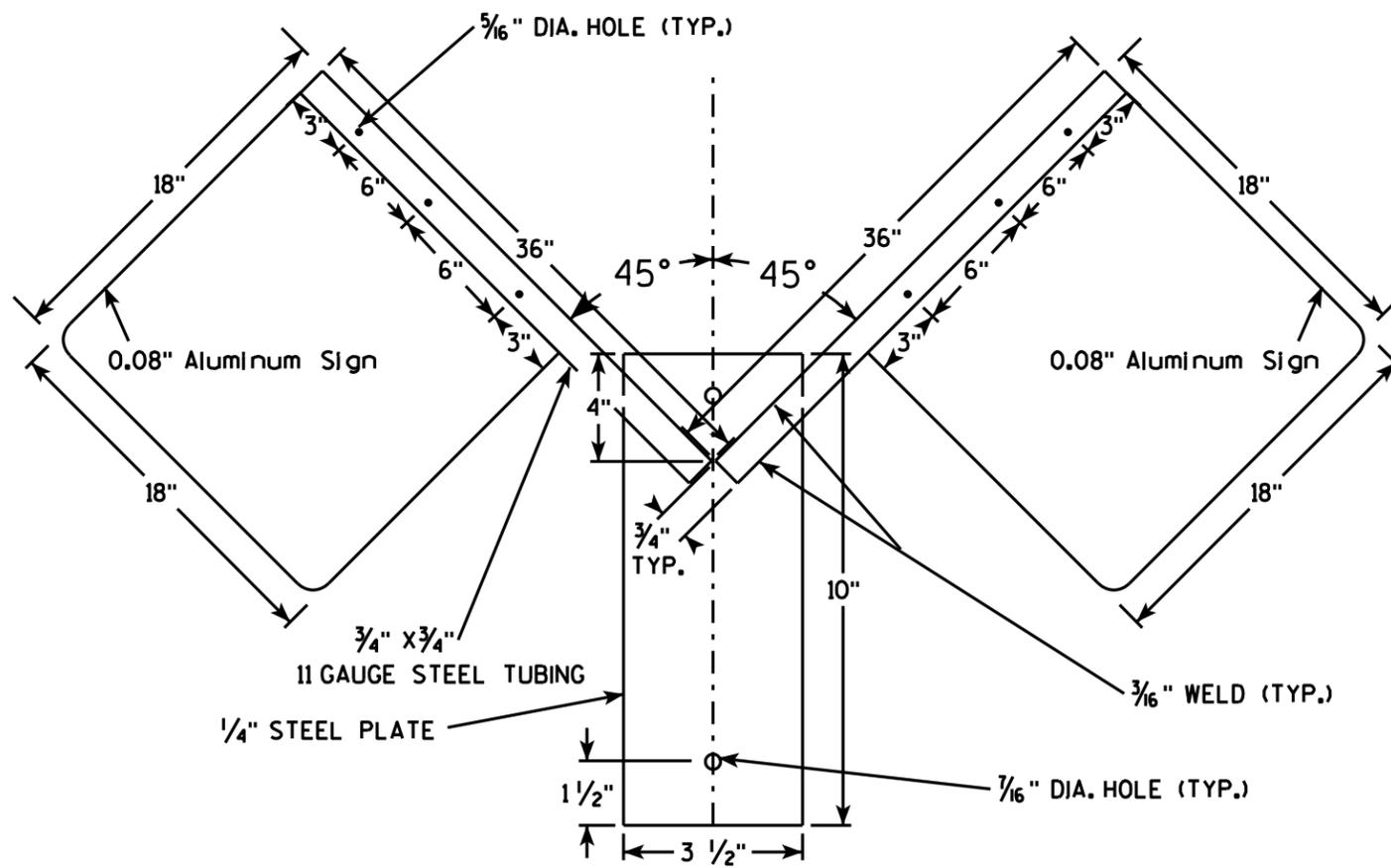
SIGN DETAIL



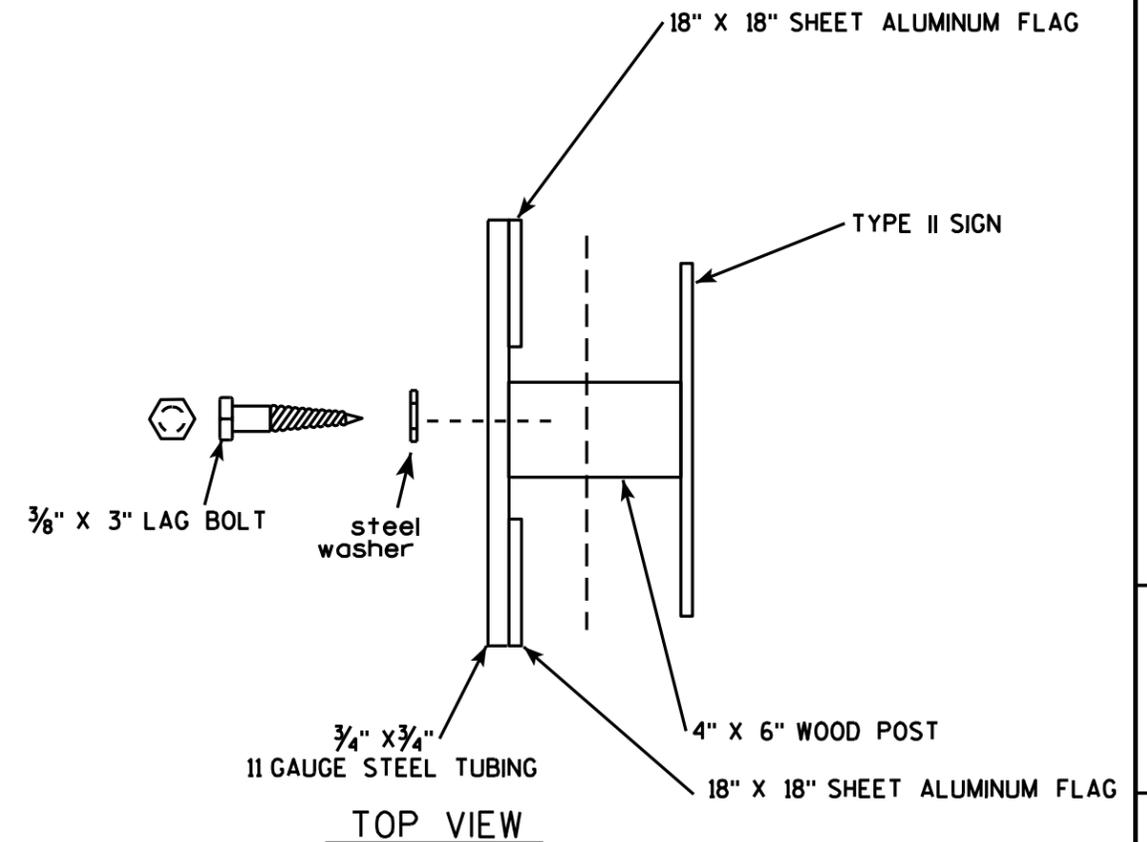
FLAG BOLTING PROCEDURE

GENERAL NOTES

1. ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION.
2. SEE SIGN PLATE A4-8 FOR HARDWARE REQUIREMENTS.
3. SIGN IS TYPE II, TYPE F REFLECTIVE- REFERENCE WISDOT STANDARD SPECIFICATION FOR HIGHWAY AND STRUCTURE CONSTRUCTION LATEST EDITION.
4. SIGN COLOR - ORANGE
5. SIGN CORNERS SHALL BE ROUNDED
6. BRACKET SHALL BE ENTIRELY PRIMED AND PAINTED WITH TWO COATS OF A BLACK POWDER COATED ENAMEL PAINT.



BACK VIEW



TOP VIEW

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGN FLAGS

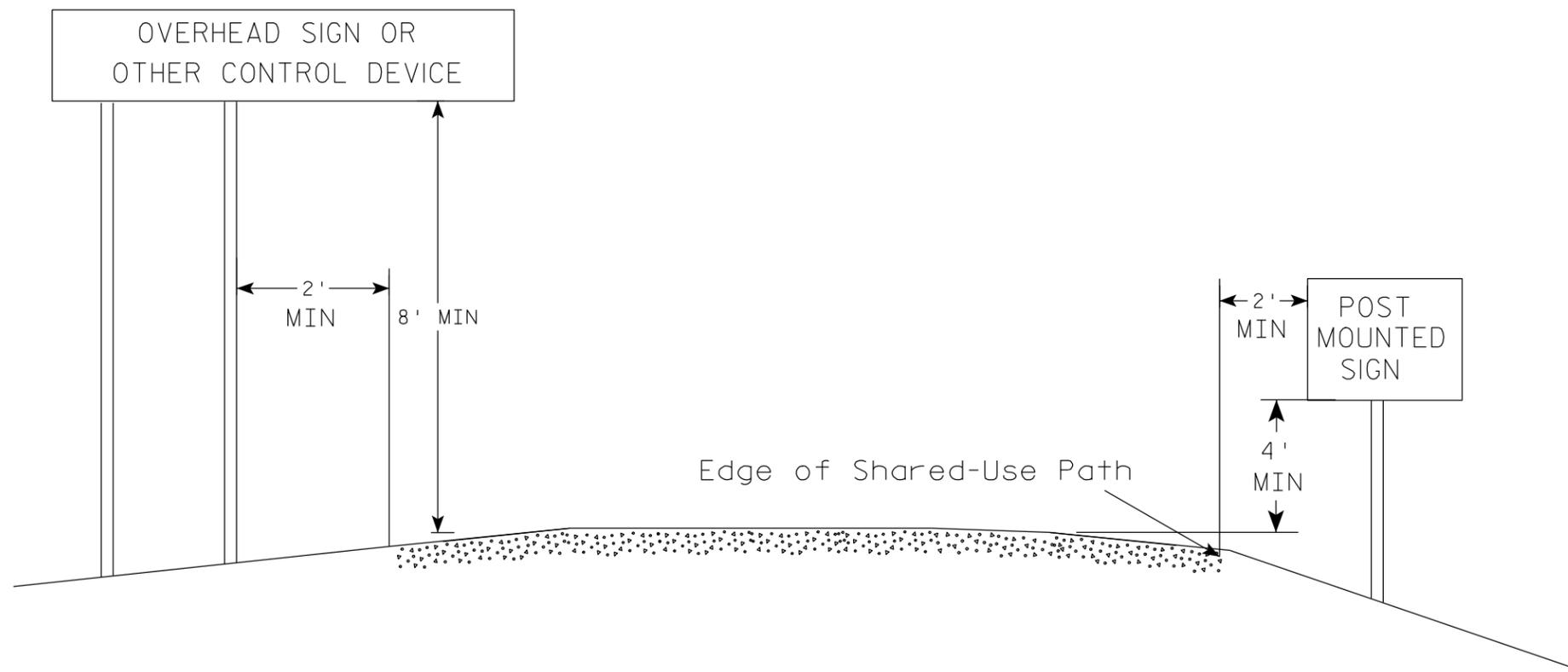
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/15/13 PLATE NO. A4-15.3

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. Offset distance shall be consistent with existing signs or consistent throughout length of project.



POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

7

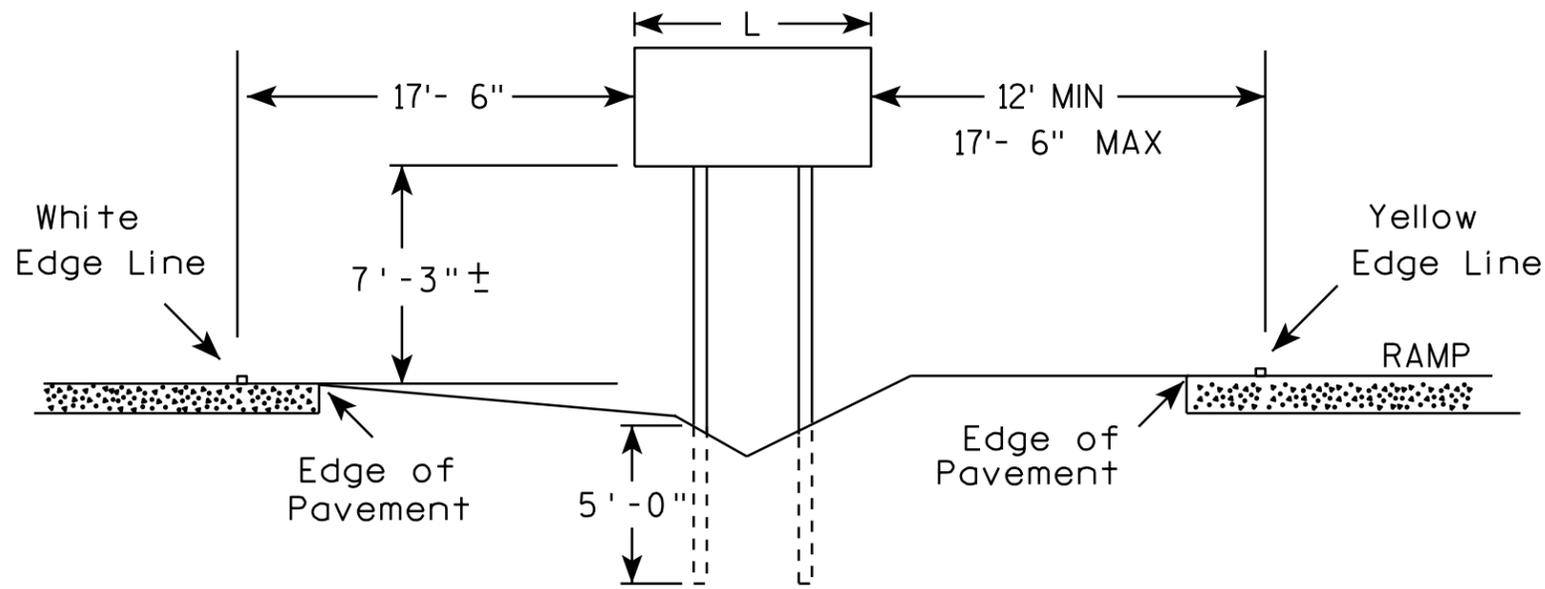
7

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON MULTI USE PATHS

WISCONSIN DEPT OF TRANSPORTATION

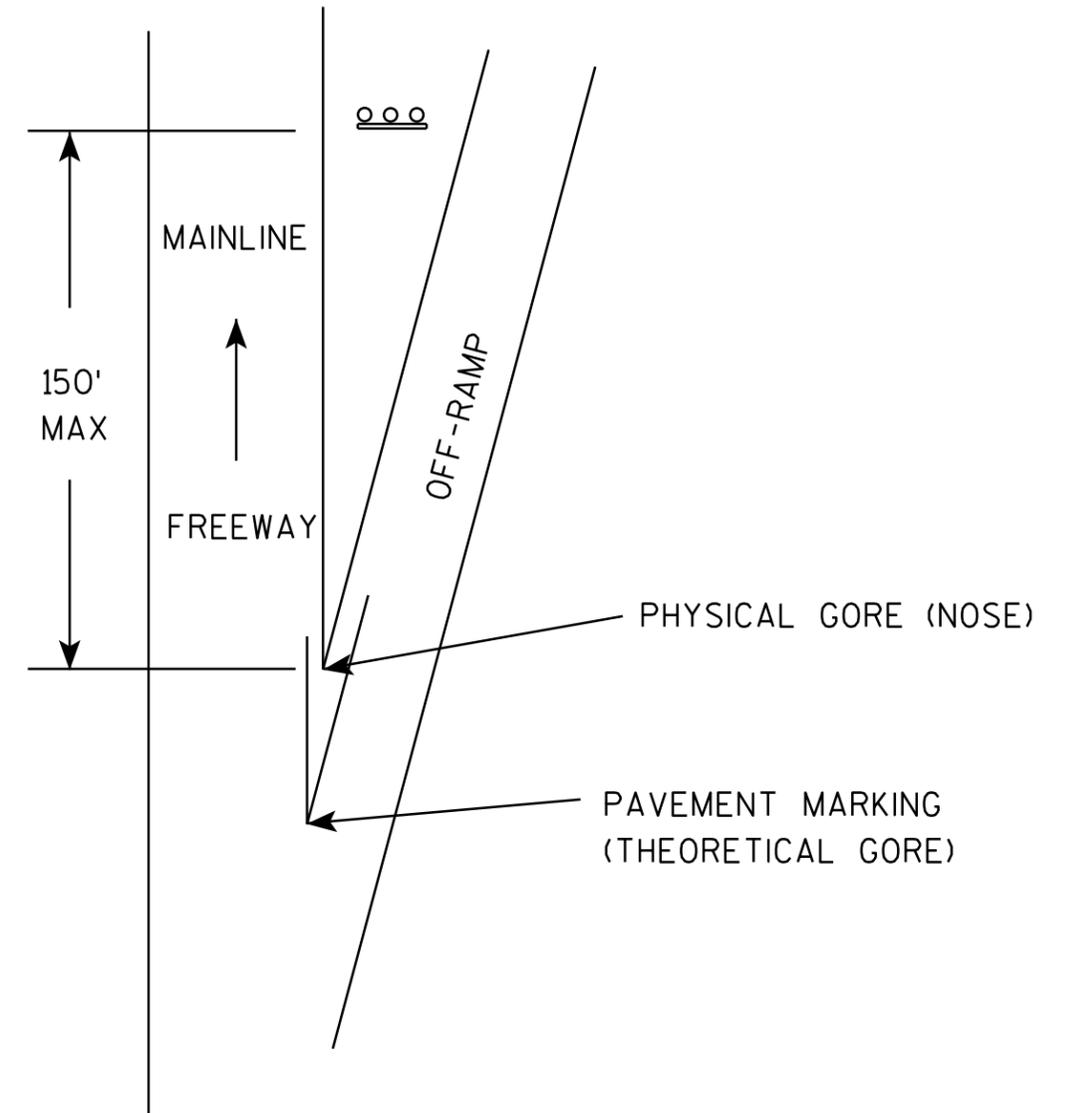
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/5/2012 PLATE NO. A4-3S.1



GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The ( $\bar{\pm}$ ) tolerance for the mounting height is 3 inches.

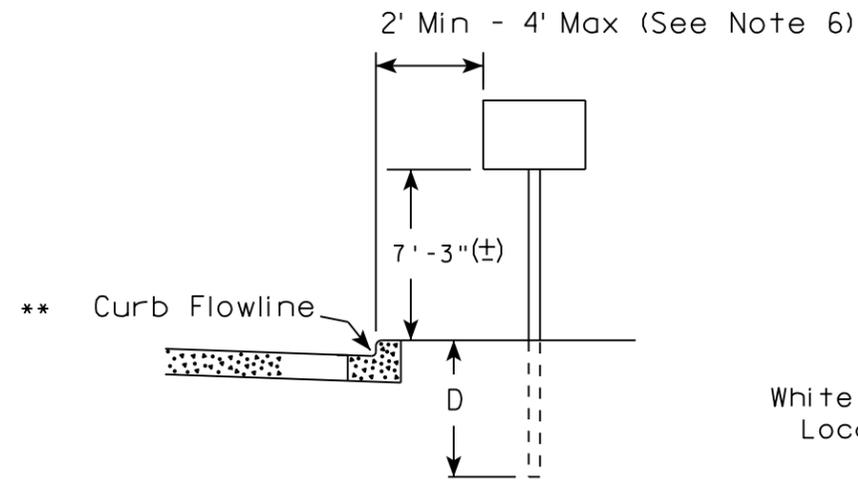


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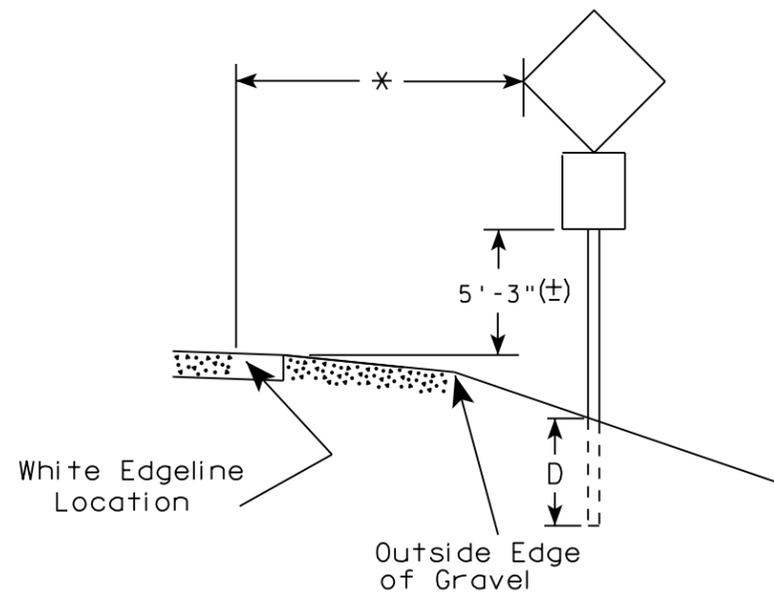
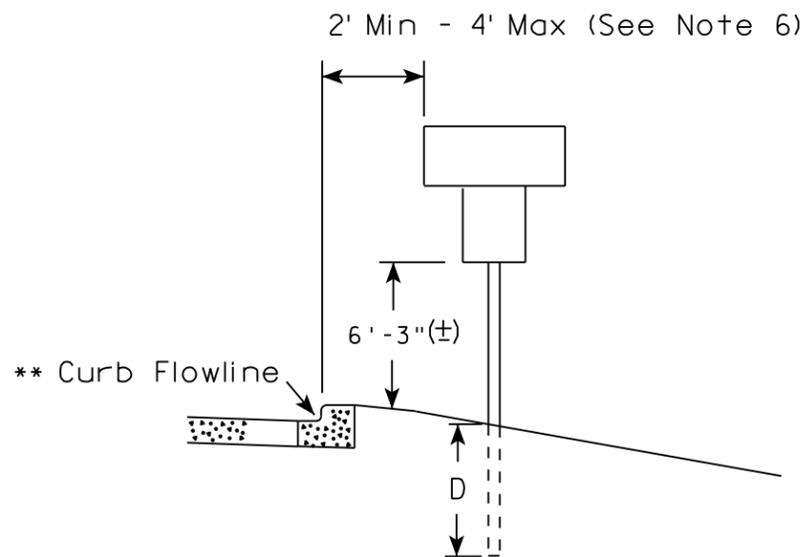
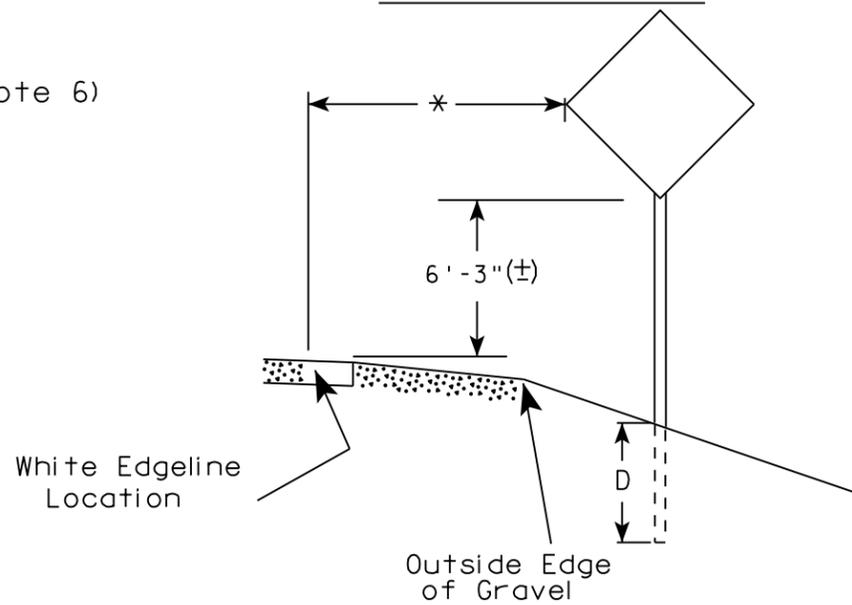
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TYPICAL INSTALLATION OF TYPE II SIGNS ON WOOD POSTS IN GORE	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Raush</i> for State Traffic Engineer
DATE 2/06/14	PLATE NO. A4-2.3

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

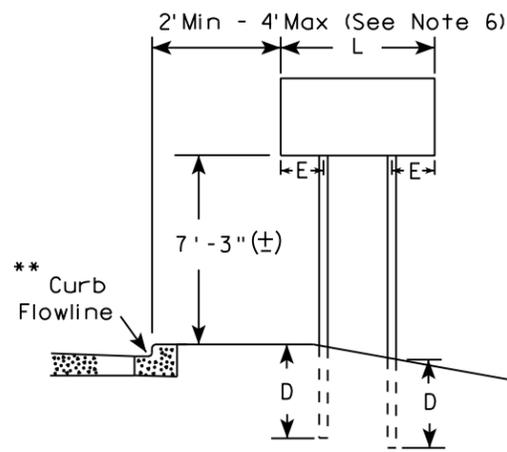
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

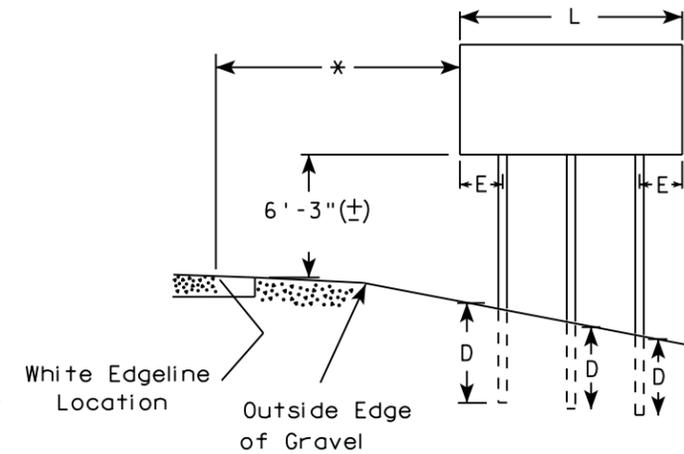
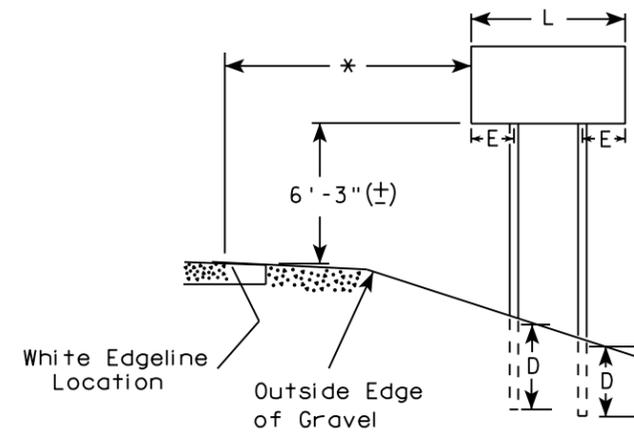
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

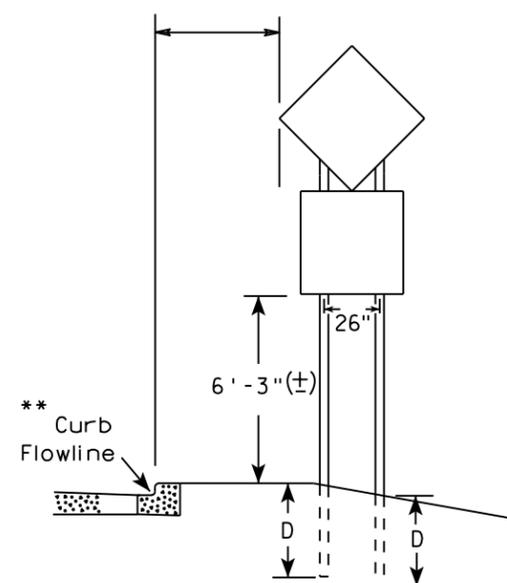
URBAN AREA



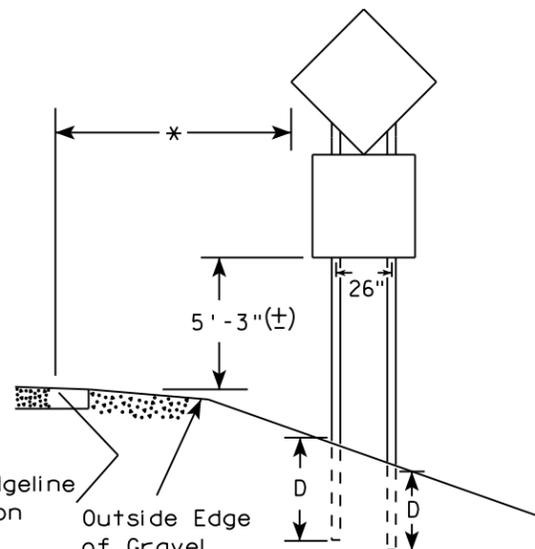
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

\*\*\*

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

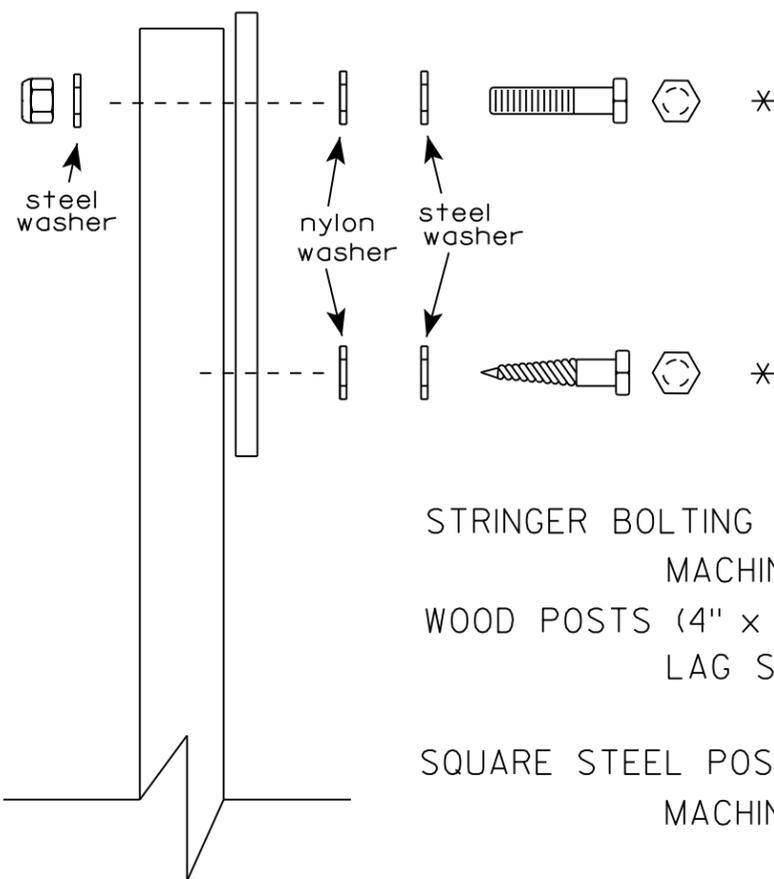
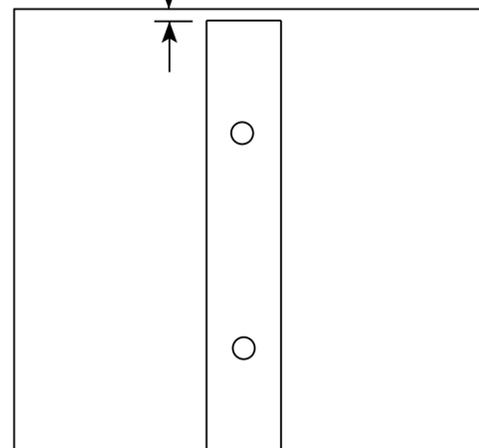
Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION  
 APPROVED *Matthew R. Rauch*  
 For State Traffic Engineer  
 DATE 8/21/17 PLATE NO. A4-4.15

1"± 1/2"

SIGN SHALL BE MOUNTED TO PROJECT ABOVE THE TOP OF THE POST



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)  
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

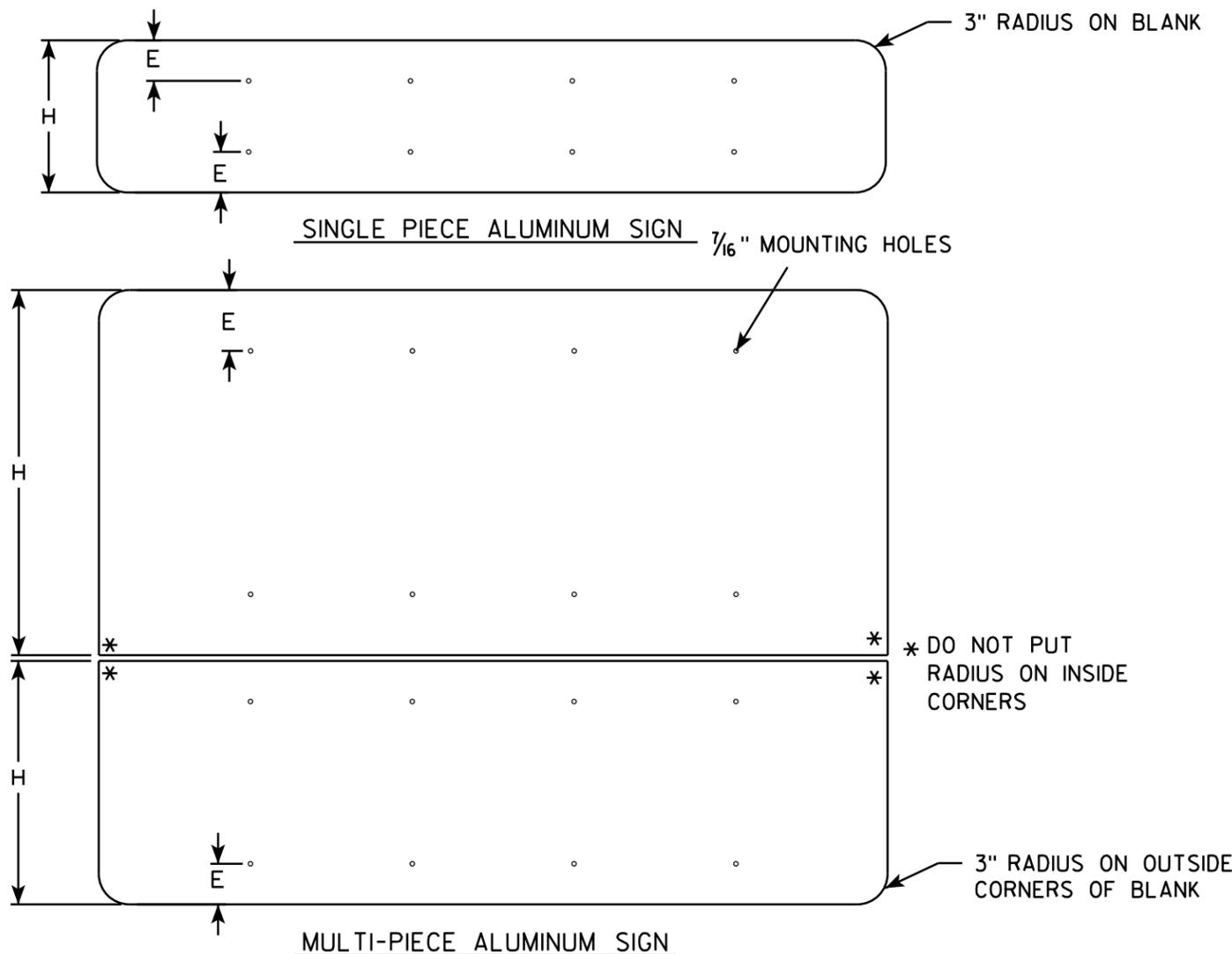
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

7



### GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

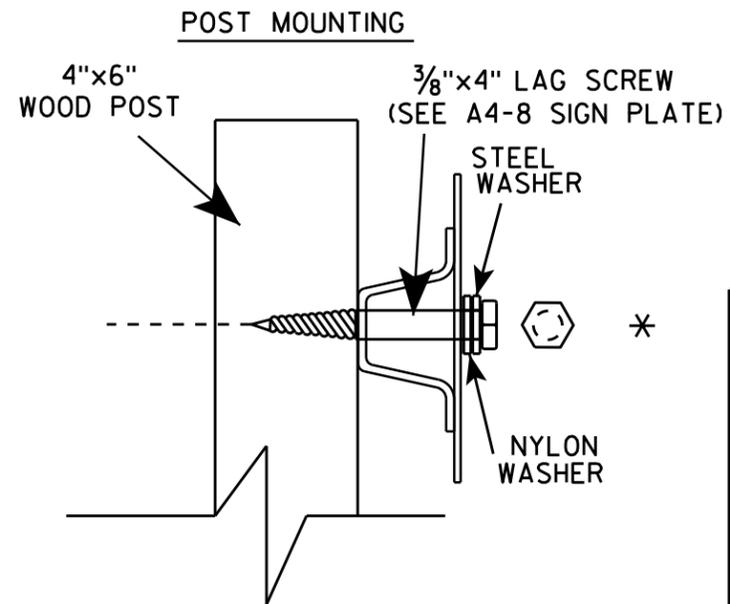
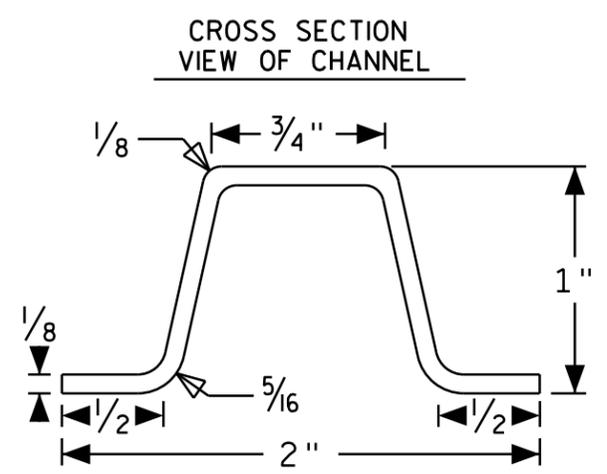
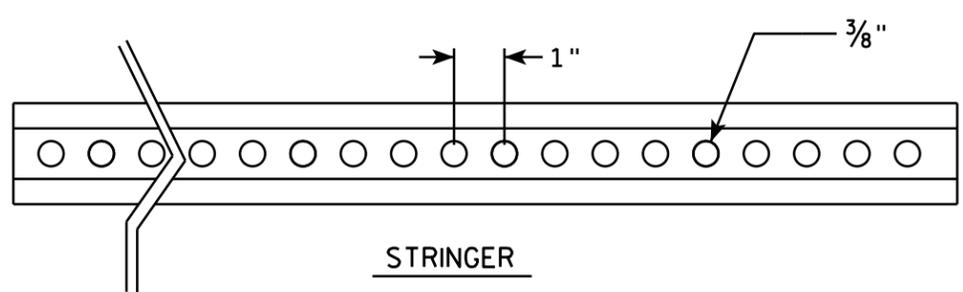
SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16 1/2" 33 1/2" 50 1/2" 67 1/2"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19 1/2" 38 1/2" 57 1/2" 76 1/2"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22 1/2" 43 1/2" 64 1/2" 85 1/2"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

\* DO NOT PUT RADIUS ON INSIDE CORNERS

3" RADIUS ON OUTSIDE CORNERS OF BLANK

7

7

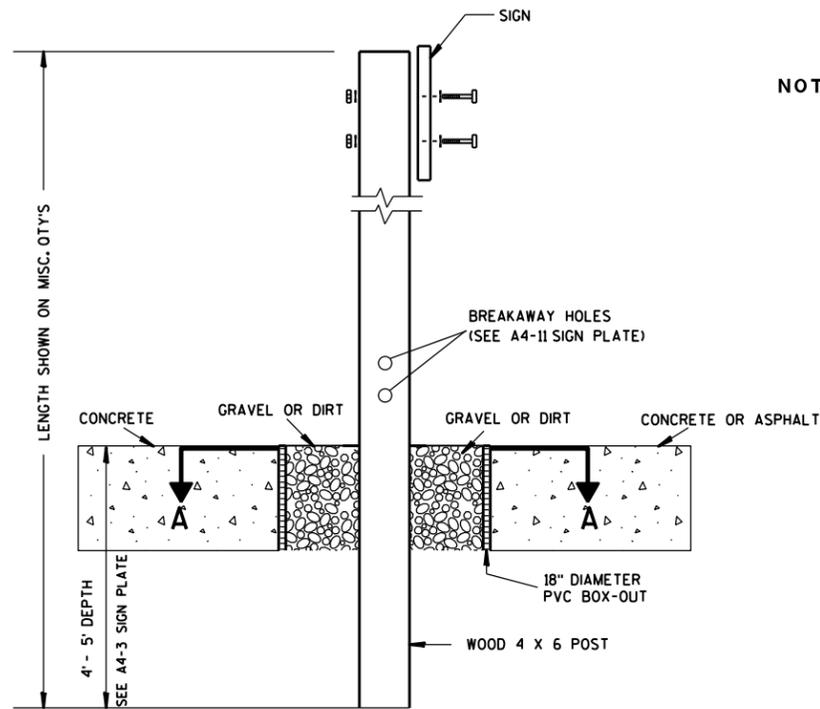


**SIGN STRINGER MOUNTING REQUIREMENTS**

WISCONSIN DEPT OF TRANSPORTATION

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for State Traffic Engineer

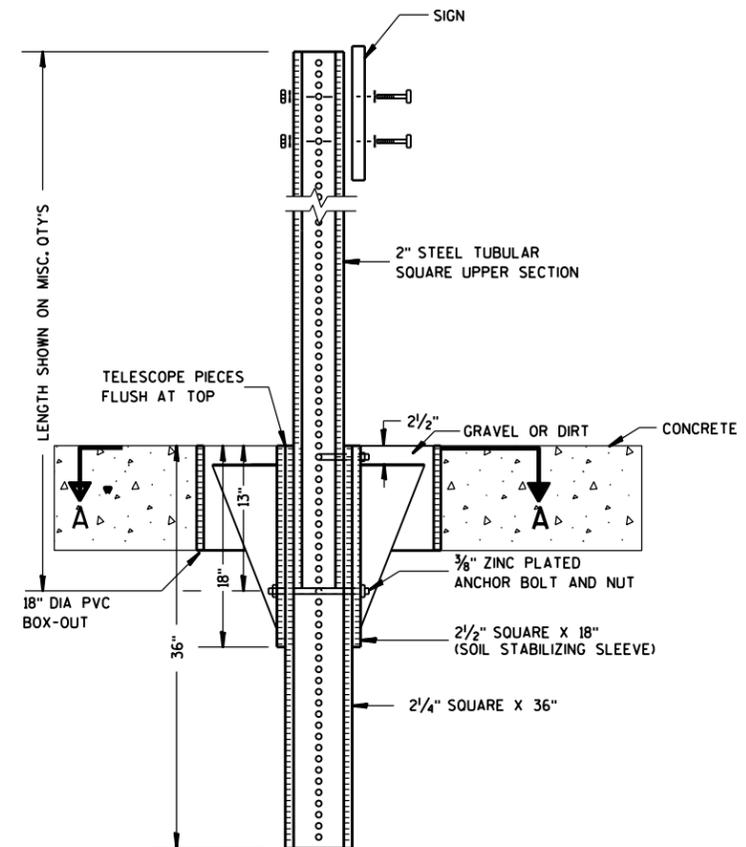
DATE 4/26/16 PLATE NO. A4-18.1



**ELEVATION VIEW**

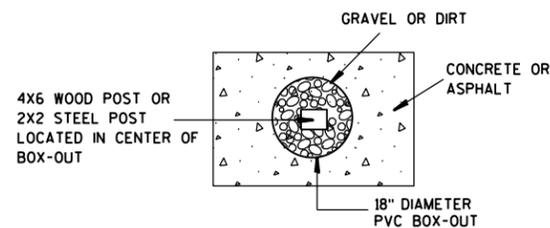
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
  2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
  3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**



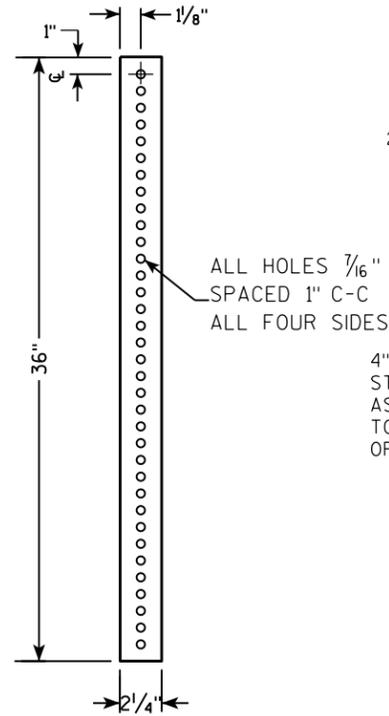
**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

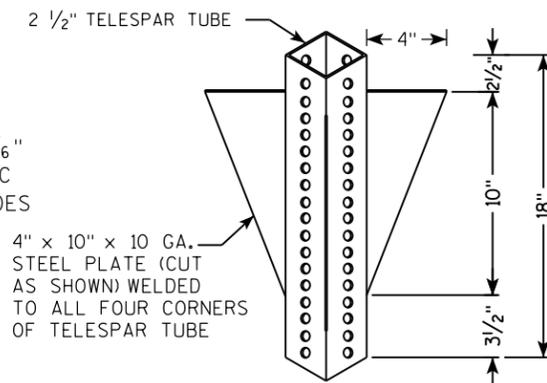
<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

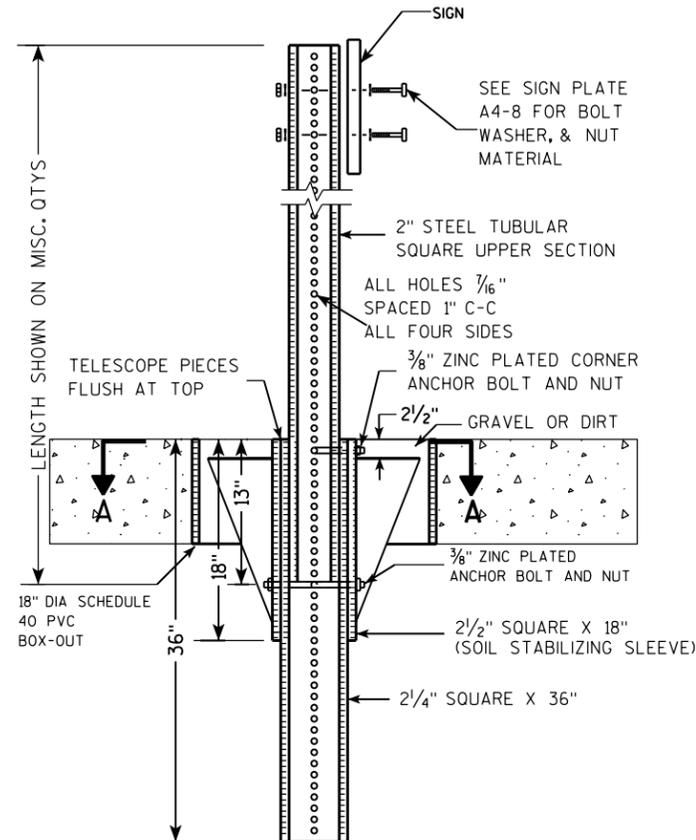
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



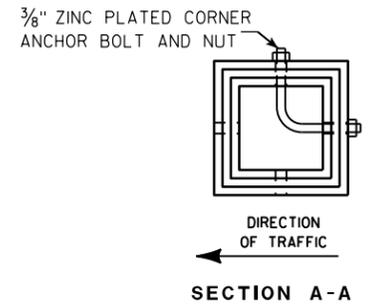
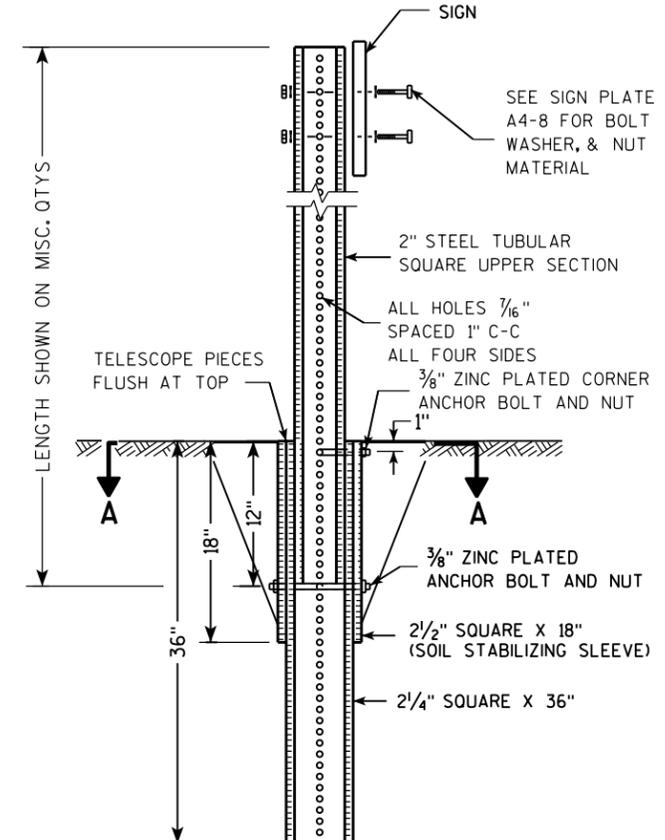
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

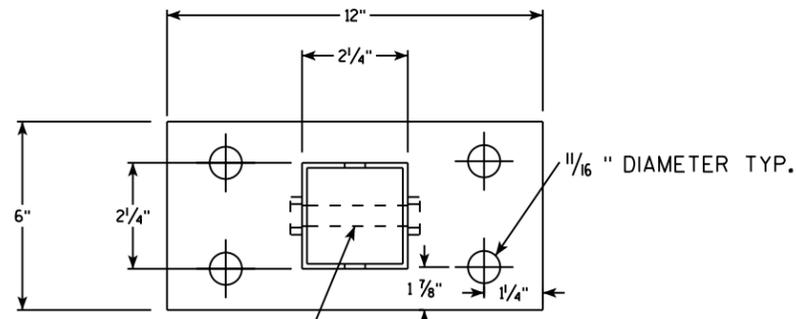
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

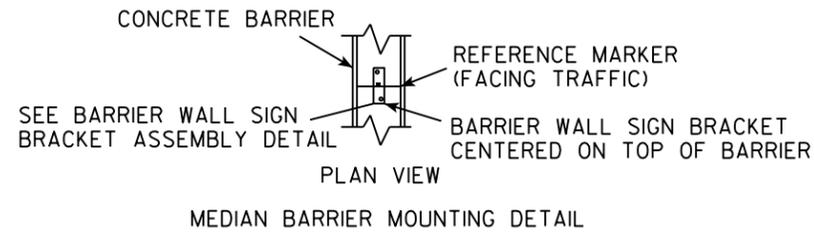
# TYPICAL BARRIER WALL SIGN PLACEMENT DETAILS

## TYPICAL REFERENCE MARKER MOUNTING DETAILS

BARRIER WALL SIGN BRACKET ASSEMBLY  
NOT TO SCALE

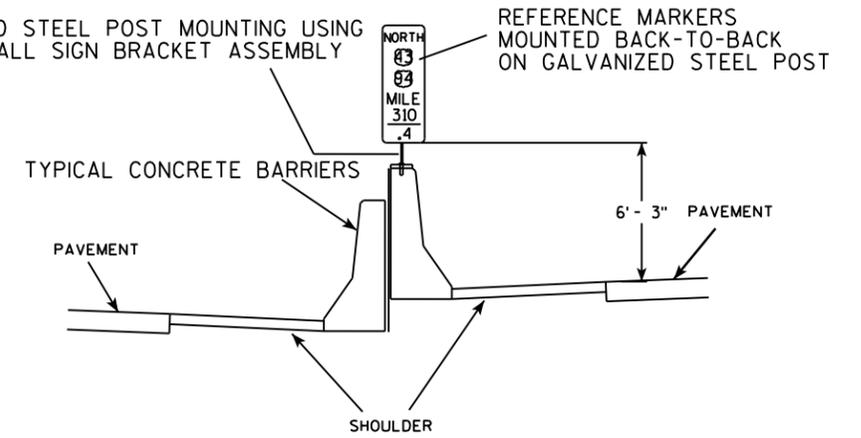


3 1/2" x 3/8" GALVANIZED STEEL BOLT & HARDWARE  
PLAN VIEW

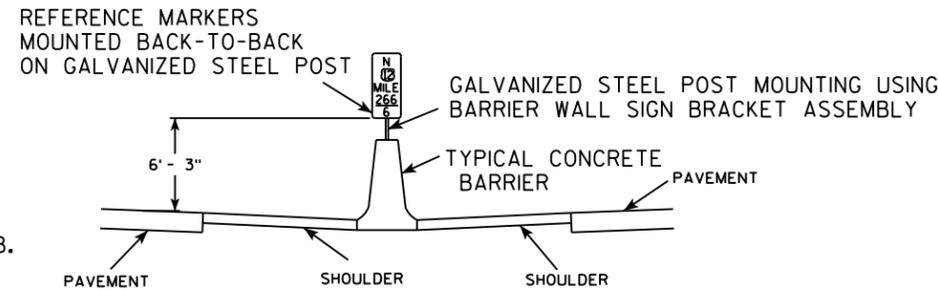


MEDIAN BARRIER MOUNTING DETAIL

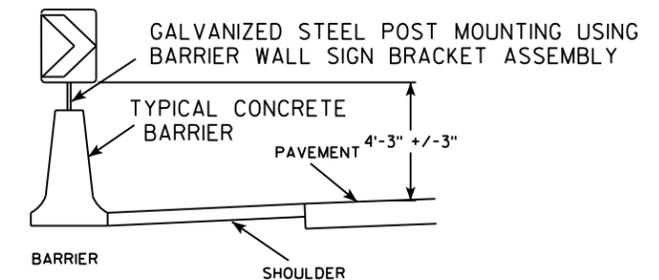
GALVANIZED STEEL POST MOUNTING USING  
BARRIER WALL SIGN BRACKET ASSEMBLY



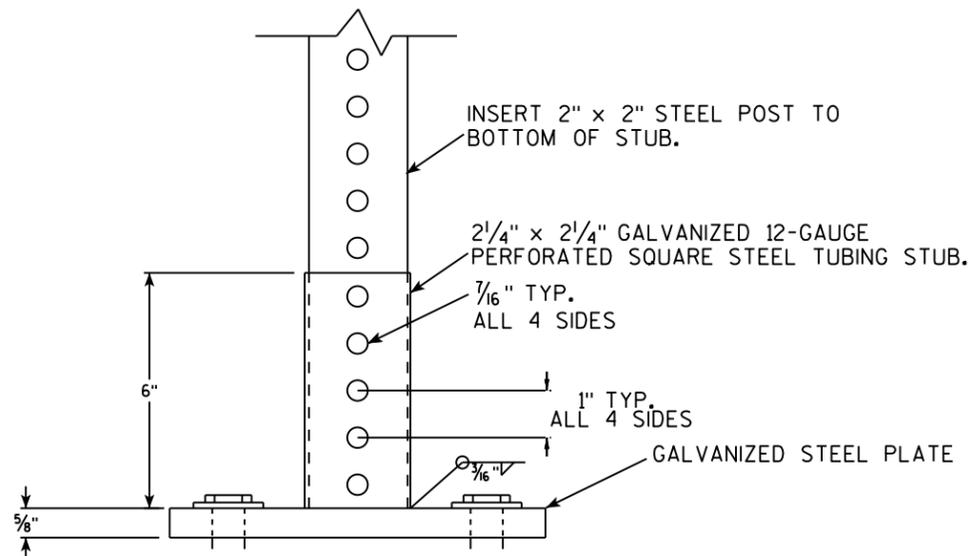
TYPICAL ENHANCED REFERENCE  
MARKER PLACEMENT ON DOUBLE MEDIAN BARRIER



TYPICAL ENHANCED REFERENCE  
MARKER PLACEMENT ON SINGLE MEDIAN BARRIER



TYPICAL CHEVRON MARKER PLACEMENT



SIDE VIEW

### NOTES

- 1) ALL MATERIAL TO BE APPROVED BY ENGINEER BEFORE INSTALLATION
- 2) SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS.

## SIGN MOUNTING ON BARRIER WALL

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/16/15 PLATE NO. A4-10.4

PROJECT NO:

HWY:

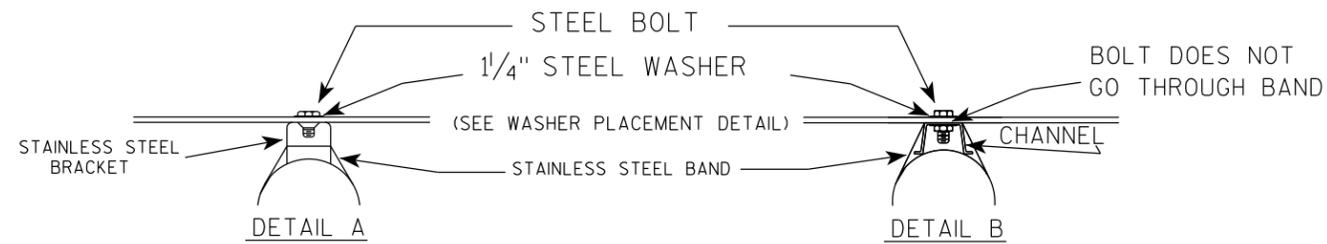
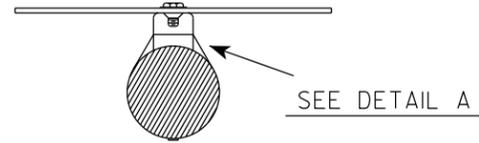
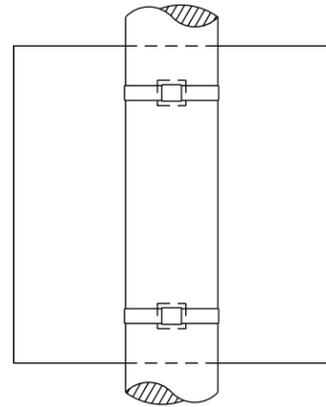
COUNTY:

SHEET NO:

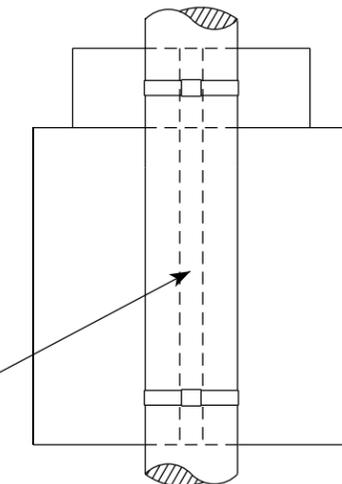
E

# BANDING

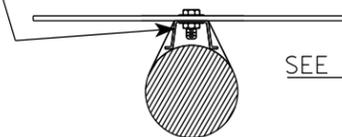
SINGLE SIGN



"J" ASSEMBLY

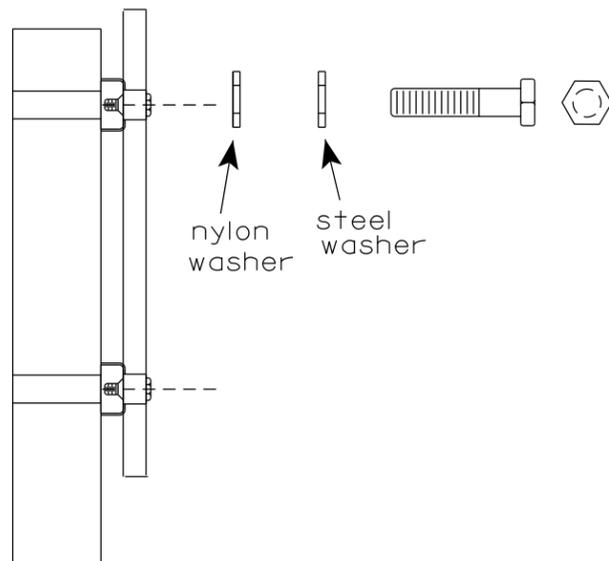


CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



- GENERAL NOTES**
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
  2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
  3. Banding and assembly bracket shall be stainless steel. All bands shall be  $\frac{3}{4}$ " in width and 0.025" thickness.
  4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
    - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
    - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

WASHER PLACEMENT



WASHERS (ALL POSTS) -  
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
 FOR ALL TYPE H SIGNS

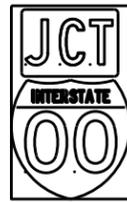
STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

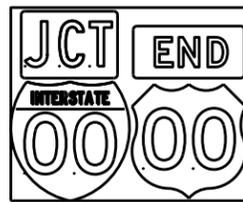
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

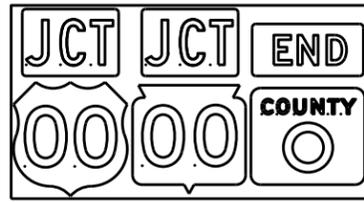
**TYPICAL ASSEMBLIES**



J1-1



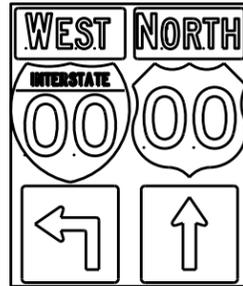
J1-2



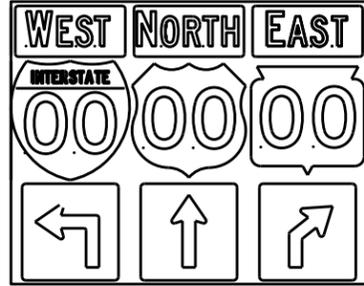
J1-3



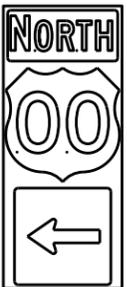
J2-1



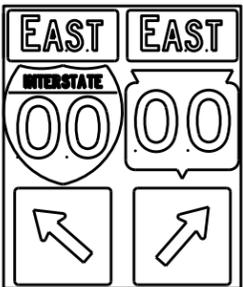
J2-2



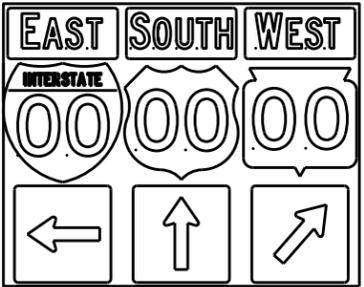
J2-3



J3-1



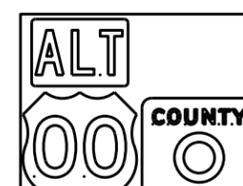
J3-2



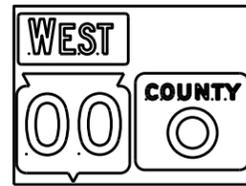
J3-3



J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

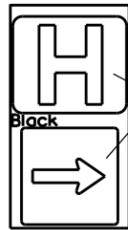


J22-1



JV

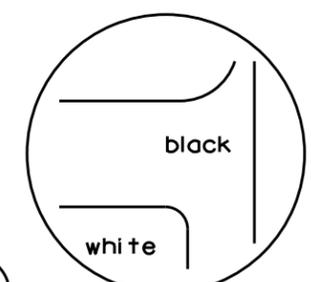
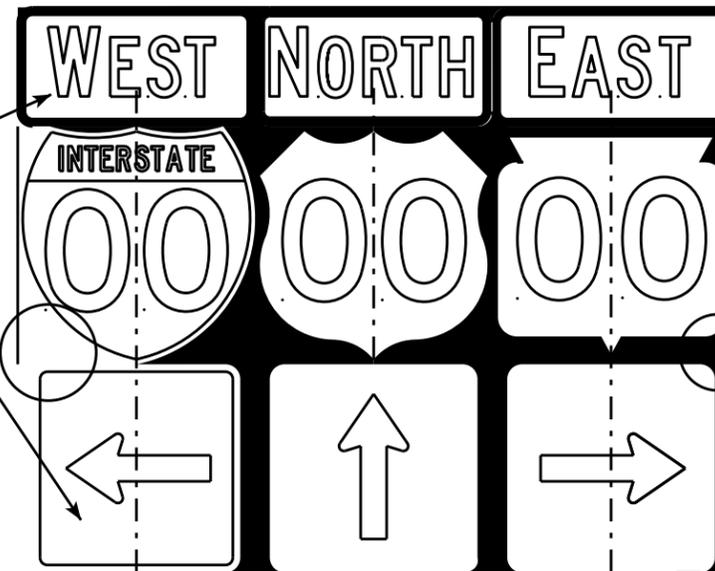
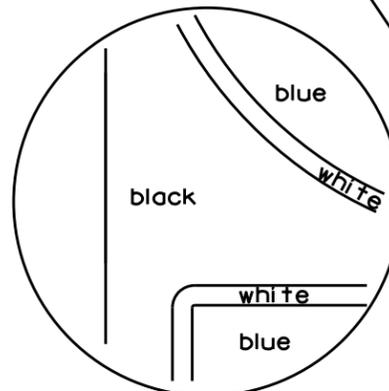
(Typical Vertical J-Assembly  
See Note 10 and 11)



JH-1

Blue Background

[blue background with interstate]



[black background]

**NOTES**

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - Black Non-reflective  
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an MI-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

<b>ROUTE MARKERS &amp; COMPONENTS IN TYPICAL ASSEMBLIES</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 2/06/14	PLATE NO. A2-1S.8