

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

## STATEWIDE TYPE I SIGN REPLACEMENT

LOCATION ON STN PER ANNUAL PLAN

### VAR HWY STATEWIDE

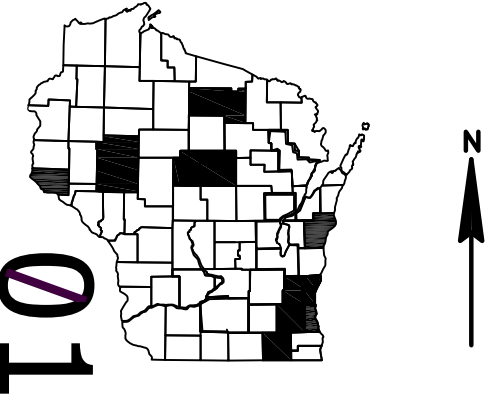
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1000-20-82	_____	---

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
<del>Section No. 4</del>	<del>Right of Way Plot</del>
<del>Section No. 5</del>	<del>Plan and Profile</del>
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
<del>Section No. 8</del>	<del>Structure Plans</del>
<del>Section No. 9</del>	<del>Computer Earthwork Data</del>
<del>Section No. 9</del>	<del>Gross Sections</del>

TOTAL SHEETS = 76

STATE PROJECT NUMBER
1000-20-82



#### DESIGN DESIGNATION

- A.A.D.T. =
- A.A.D.T. =
- D.H.V. =
- D.D. =
- T. =
- DESIGN SPEED =
- ESALS =

#### CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

LAYOUT  
SCALE 0

TOTAL NET LENGTH OF CENTERLINE =

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, COUNTY COUNTY, NAD83 (YEAR), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

#### STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor \_\_\_\_\_

Designer JEANNIE SILVER

Project Manager \_\_\_\_\_

Regional Examiner \_\_\_\_\_

Regional Supervisor MATT RAUCH

APPROVED FOR THE DEPARTMENT

DATE: 11/01/2022 Matthew R. Rauch  
(Signature)

E

PROJECT ID: 1000-20-82

COUNTY: STATEWIDE

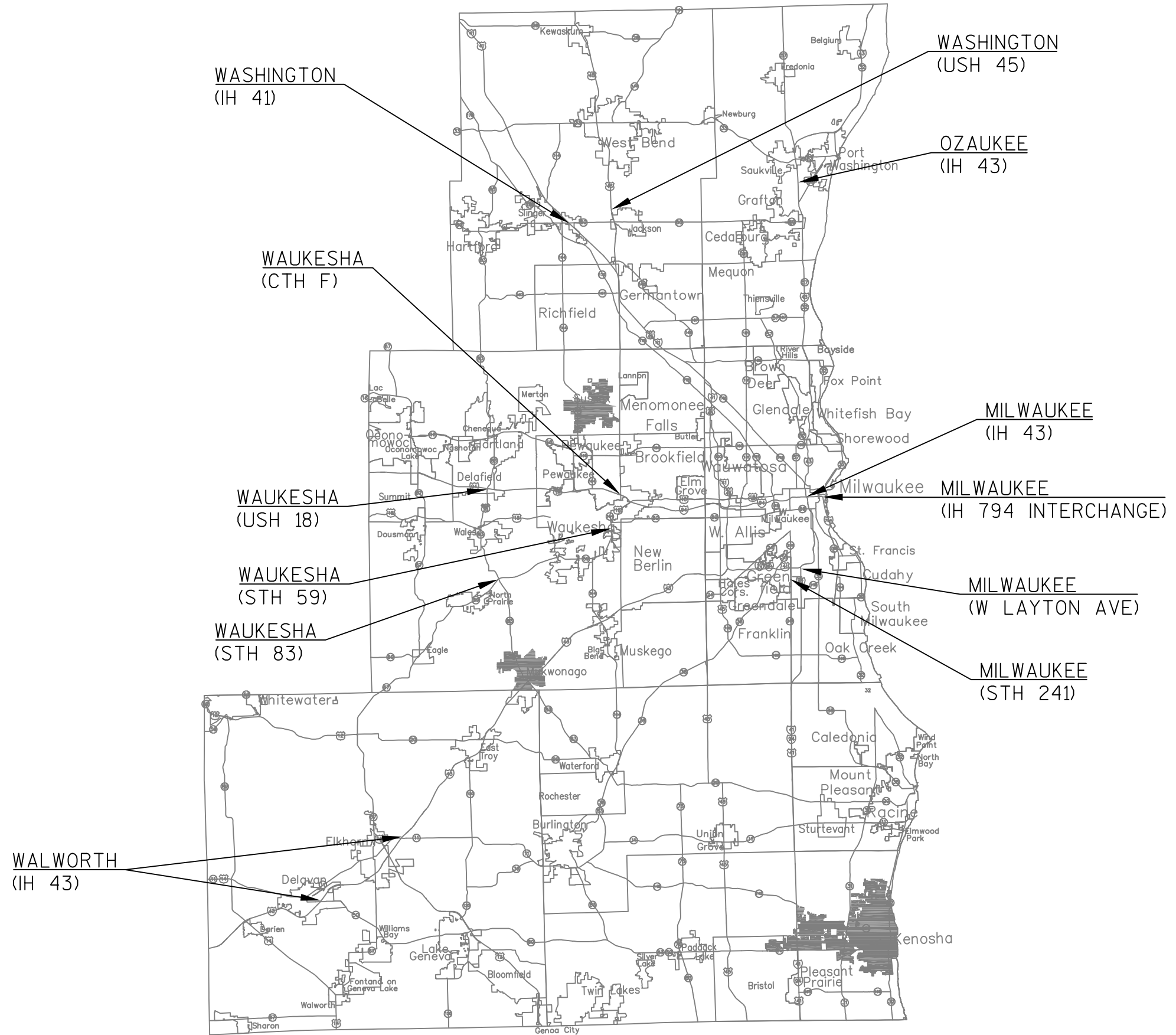
GENERAL NOTES

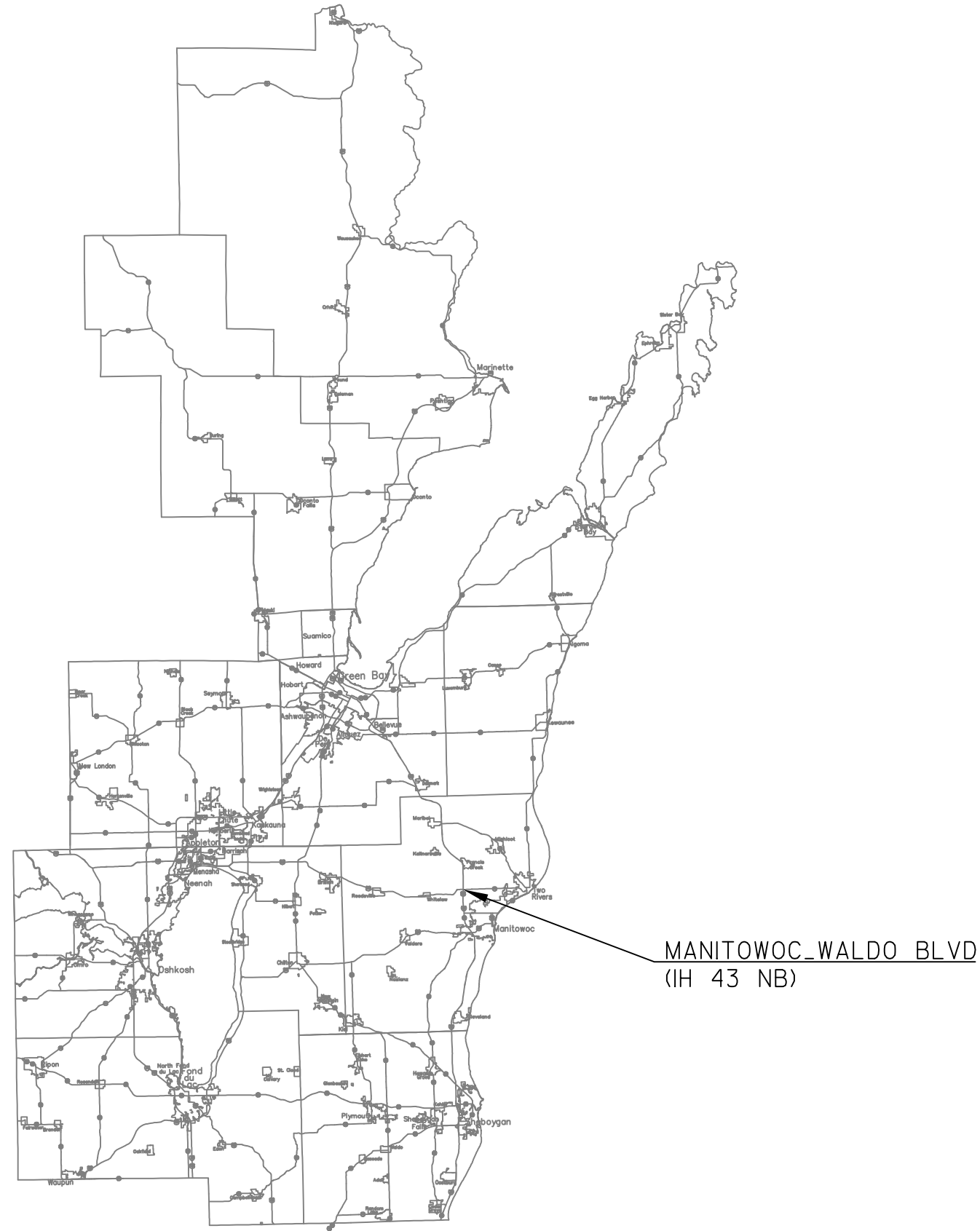
THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

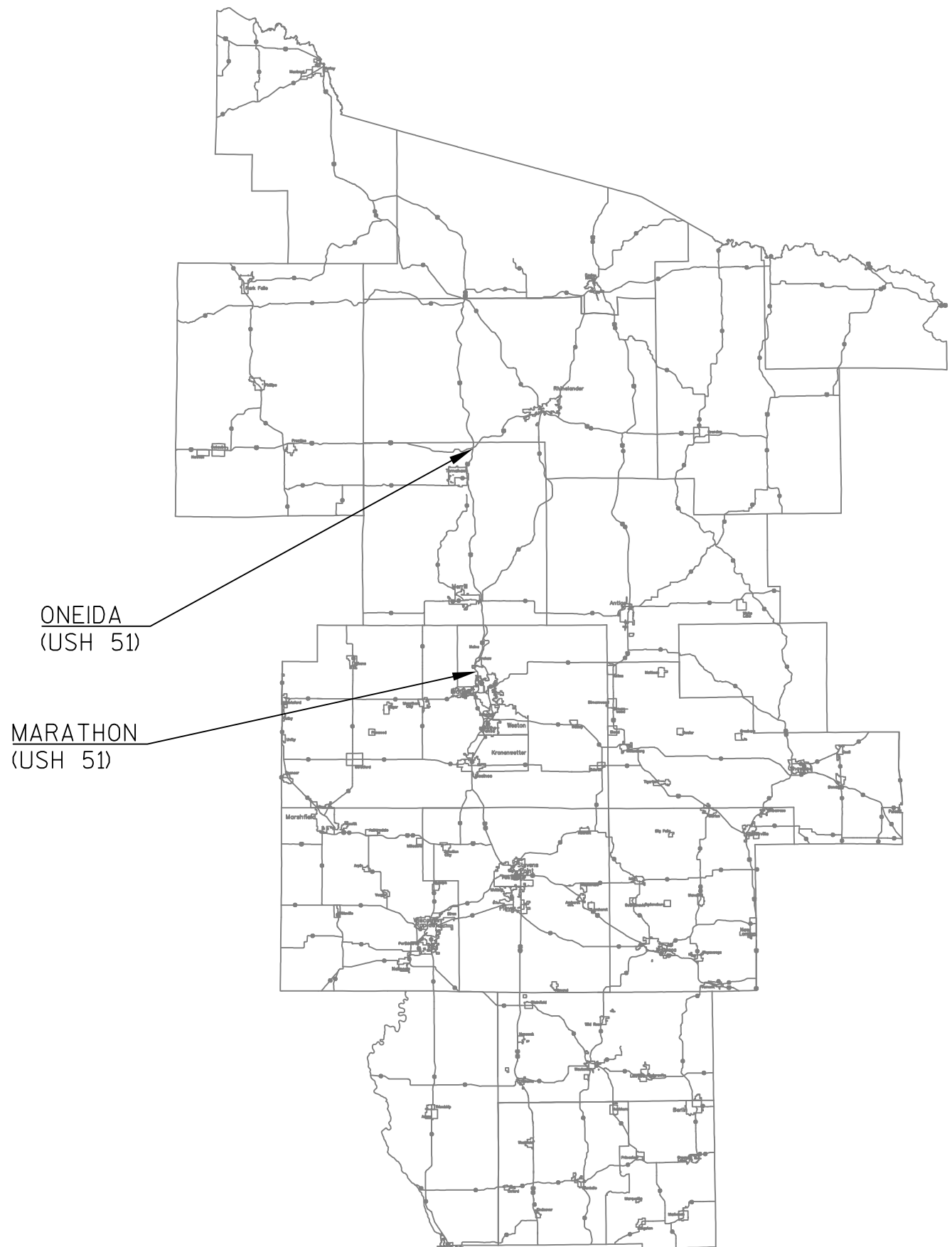


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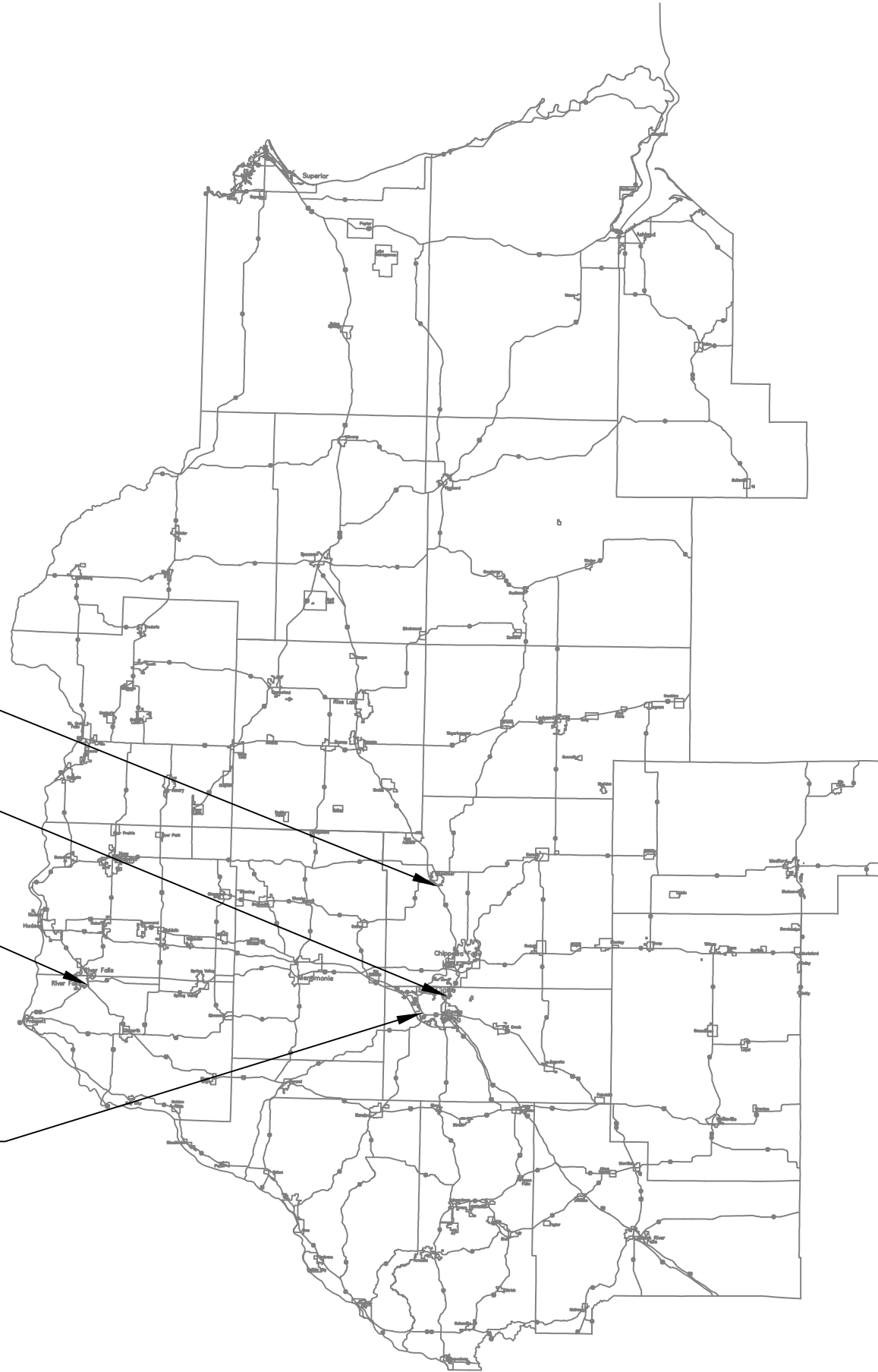


CHIPPEWA  
(USH 53)

EAU CLAIRE  
(USH 53)

PIERCE  
(STH 29)

EAU CLAIRE  
(IH 94)



Estimate Of Quantities

1000-20-82

Line	Item	Item Description	Unit	Total	Qty
0002	203.0220	Removing Structure (structure) Removing Structure	EACH	1.000	1.000
0004	531.1100	Concrete Masonry Ancillary Structures Type NS	CY	23.600	23.600
0006	531.1140	Steel Reinforcement HS Ancillary Structures Type NS	LB	3,364.000	3,364.000
0008	531.2024	Drilling Shaft 24-Inch	LF	206.000	206.000
0010	619.1000	Mobilization	EACH	1.000	1.000
0012	635.0200	Sign Supports Structural Steel HS	LB	13,166.420	13,166.420
0014	635.9010.S	Sign Supports Shorten Structural Steel	EACH	4.000	4.000
0016	635.9020.S	Sign Supports Replacing Base Connection Bolts Legacy System	EACH	44.000	44.000
0018	637.1220	Signs Type I Reflective SH	SF	12,084.000	12,084.000
0020	637.1230	Signs Type I Reflective F	SF	250.000	250.000
0022	637.2220	Signs Type II Reflective SH	SF	275.250	275.250
0024	638.2601	Removing Signs Type I	EACH	79.000	79.000
0026	638.2602	Removing Signs Type II	EACH	15.000	15.000
0028	638.3100	Removing Structural Steel Sign Supports	EACH	20.000	20.000
0030	638.3610	Erecting State Owned Signs Type I	EACH	1.000	1.000
0032	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	3.000	3.000
0034	SPV.0060	Special 01. Traffic Control	EACH	1.000	1.000

### Oneida USH 51

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH
NC-51-1	USH 51 Northbound	Mile Marker 233	Right	E3-1 Destination - Next Right - Exit Number	228	84	Rhineland-Oneida County Airport Exit 234	133	1	1
NC-51-2	USH 51 Southbound	CTH L	Right	E3-1 Destination - Next Right - Exit Number	228	84	Rhineland-Oneida County Airport Exit 234	133	1	1
<b>SUBTOTALS</b>								266	2	2

### Marathon USH 51

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH
NC-51-3	USH 51 Northbound	STH 29	Right	E10-61 144W x 54H Hospital Exit [000]	144	54	HOSPITAL EXIT 193	54	1	1
<b>SUBTOTALS</b>								54	1	1



**Manitowoc IH 43**

Sign Number	Route	Location	Sign Code and Description	Width	Height	Order Lines	531.1100 Concrete Masonry Ancillary Structures Type NS CY	531.1140 Steel Reinforcement HS Ancillary Structures Type NS LBS	531.2024 Drilling Shaft 24-Inch LF	635.0200 Sign Supports Structural Steel HS LBS	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	638.3100 Removing Structural Steel Sign Supports EACH	638.3610 Erecting State Owned Signs Type I EACH	Comments
NE-43-1	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, ___ Mile	108 204	30 156	EXIT 152 East 10 JJ Waldo Blvd 1 1/4 Miles	3.6	540	30	2518.6	22.5 221	1	2		Longest beam cannot be longer than 29'. If so please contact the PM 3 W12x26
NE-43-2	IH 43 Northbound	Right	E3-1 Destination - Next Right - Exit Number			Waldo blvd Exit 152						1	2		Remove
NE-43-3	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 240	30 120	Exit 152 East 10 JJ Waldo Blvd [TR]	2.4	360	20	1336.2	22.5 200	1	2		2 W12x26
NE-43-4	IH 43 Southbound	Right	E3-1 Destination - Next Right - Exit Number	216	84	Wisconsin Maritime Museum Exit 152	2	220	16	826		1	2	1	move sign to Waldo Blvd Exit 152 Location 2 W8x21
NE-43-5	IH 43 Southbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, ___ Mile	108 204	30 156	Exit 152 East 10 JJ Waldo Blvd 1 1/4 Miles	2.4	360	20	1353	22.5 221	1	2		2 W12x26
NE-43-6	IH 43 Southbound	Right	E3-1 Destination - Next Right - Exit Number			42 South AHEAD						1	2		Remove
NE-43-7	IH 43 Southbound	Right	E3-1 Destination - Next Right - Exit Number			Waldo blvd Exit 152						1	2		Remove
NE-43-8	IH 43 Southbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 240	30 120	EXIT 152 East 10 JJ [TR] Waldo Blvd	3.6	540	30	2194.62	22.5 200	1	2		3 W12x26
<b>SUBTOTALS</b>							14	2020	116	8228.42	932	8	16	1	

**Chippewa USH 53**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	Comments
NW-53-1	USH 53 Northbound	STH 40	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 204	30 132	EXIT 110 40 Bloomer [TR] Cofax	22.5 187	1	1	
NW-53-2	USH 53 Northbound	STH 64	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, __ Mile	108 264	30 162	EXIT 112 64 Cornell New Richmond 1 MILE	22.5 297	1	1	
NW-53-3	USH 53 Southbound	STH 40	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, __ Mile	108 156	30 162	EXIT 110 40 Bloomer Cofax 1 MILE	22.5 175.5	1	1	
NW-53-4	USH 53 Southbound	STH 40	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 204	30 132	EXIT 110 40 Bloomer [TR] Cofax	22.5 187	1	1	
NW-53-5	USH 53 Southbound	CTH B	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, __ Mile	108 132	30 120	EXIT 102 B Tilden 1 Mile	22.5 110	1	1	
<b>SUBTOTALS</b>								1069	5	5	

**Eau Claire USH 53**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	531.1100 Concrete Masonry Ancillary Structures Type NS CY	531.1140 Steel Reinforcement HS Ancillary Structures Type NS LBS	531.2024 Drilling Shaft 24-Inch CY	635.0200 Sign Supports Structural Steel HS LBS	637.1220 Sign Type I Reflective SH SF	637.1230 Sign Type I Reflective F SF	638.2601 Removing Signs Type I EACH	638.3100 Removing Structural Steel Sign Supports EACH	203.0250 Removing Structure EACH	Comments
NW-53-6	USH 53 Northbound	NB Hastings Way/S of 312	Right	E1-1-A Advance Exit Guide Sign, __ Mile	216	114	312 North Crossing EXIT 1/2 MILE	2	302	17	1038	171		1	2		2 W10x22 Replace Corten Beams
NW-53-7	USH 53 Northbound	NB Hastings Way/S of 312	Overhead	E6-51 Advanced Exit Guide Sign (Overhead)	252	84	312 To 94 West North Crossing TR					147		1			s-18-24
NW-53-8R	USH 53 Southbound	NB Hastings Way/S of 312	Overhead	E6-51 Advanced Exit Guide Sign(Overhead)	-	-	312 To West 94 North Crossign Second Right Exit Only							1		1	Remove structure and bases S-18-46
NW-53-9	USH 53 Southbound	SB on Hastings Way N of 312	Overhead	E6-51 Advanced Exit Guide Sign (Overhead)	216	114	312 TO 94 WEST North Crossing 1/4 MILE					171		1			S-18-38
NW-53-10R	USH 53 Southbound	SB on Hastings Way N of 312	Overhead	E6-51 Advanced Exit Guide Sign (Overhead)	216	36	E11-1 Exit [DA] ONLY  BLANK TO BUS EAST 53 94 AHEAD						54				Remove Only S-18-35
NW-53-11	USH 53 Southbound	SB on Hastings Way N of 312	Overhead	E6-1 Exit Gore Sign (Overhead) E11-1D Exit [TR] Only	216 216	78 42	312 TO 94 WEST North Crossing EXIT [TR] ONLY					117		1			S-18-35
NW-53-12	USH 53 Southbound	SB on Hastings Way Ramp to Clairemont	Overhead	E6-54-L Overhead Roundabout Guide Sign Left Arrows	84	90	12 EAST Altoona ONLY [LC]					52.5		1			S-18-84
NW-53-13	USH 53 Southbound	SB on Hastings Way Ramp to	Overhead	E6-51 Advanced Exit Guide Sign (Overhead)	180	54	London Rd [DA] [DA]					67.5		1			S-18-84
NW-53-14	USH 53 Southbound	SB on Hastings Way Ramp to Clairemont	Overhead	E6-54-R Overhead Roundabout Guide Sign Right Arrows	156	90	12 WEST Clairemont Ave ONLY [RC]					97.5		1			S-18-34
<b>SUBTOTALS</b>								2	302	17	1038	823.5	117	9	2	1	

### Eau Claire IH 94

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	Comments
NW-94-1											
NW-94-2	IH 94 Eastbound	STH 93	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, __ Mile	108 204	30 162	EXIT 68 93 Eleva EAU CLAIRE 1 MILE	22.5 229.5	1	1	
NW-94-3	IH 94 Eastbound	STH 93	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 228	30 132	EXIT 68 93 Eleva [TR] EAU CLAIRE	22.5 209	1	1	
NW-94-4	IH 94 Westbound	STH 93	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, __ Mile	108 204	30 162	EXIT 68 93 Eleva EAU CLAIRE 3/4 MILE	22.5 229.5	1	1	
NW-94-5	IH 94 Westbound	STH 93	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 228	30 132	EXIT 68 93 Eleva [TR] EAU CLAIRE	22.5 209	1	1	
<b>SUBTOTALS</b>								967	4	4	

### Pierce Co STH 29

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	Comments
NW-29-1	STH 29 Eastbound	River Falls RAB	Overhead	E6-52 Overhead Roundabout Guide Sign Multiple Arrows	240	96	830th Ave East North North South 29 35 65 65	160	1		S-47-10
NW-29-2	STH 29 Westbound	River Falls RAB	Overhead	E6-52 Overhead Roundabout Guide Sign Ahead/Left Arrow	108	96	South 65 830th [UA/LA] Ave	72	1		S-47-09
NW-29-3	STH 29 Westbound	River Falls RAB	Overhead	E6-54R Overhead Roundabout Guide Sign Right Arrow	84	78	West South 29 35 [RA]	45.5	1		S-47-09
<b>SUBTOTALS</b>								277.5	3	0	

**Washington IH 41**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	531.1100 Concrete Masonry Ancillary Structures Type NS CY	531.1140 Steel Reinforcement HS Ancillary Structures Type NS LBS	531.2024 Drilling Shaft 24-Inch CY	635.0200 Sign Supports Structural Steel HS LBS	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	638.3100 Removing Structural Steel Sign Supports EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	Comments
SE-41-1	IH 41 Northbound		Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, ___ Mile	156 156	30 162	Exits 64 A - B 60 Jackson Slinger 1 MILE					32.5 175.5	1		1	
SE-41-2	IH 41 Northbound	STH 145	Right	E3-1 Destination - Next Right - Exit Number	120	60	Hartford Exit 64 B					50	1		1	
SE-41-3	IH 41 Northbound	STH 145	Right	E3-1 Destination - Next Right - Exit Number	216	114	Slinger East East 64A Downtown Slinger Exit 64B	3.6	540	30	1840.5	171				Longest beam cannot be longer than 30', If so please contact the PM 3 W12x26
SE-41-4	IH 41 Northbound		Overhead	E1-5-P Exit Number for E1-1 & E4-1 E6-1 Exit Gore Sign (Overhead)	132 216	30 114	Exit 64 A 60 East Slinger East Jackson [TR]					27.5 171	1			
<b>SUBTOTAL</b>								3.6	540	30	1840.5	627.5	3	0	2	

**Washington USH 45**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	531.1100 Concrete Masonry Ancillary Structures Type NS CY	531.1140 Steel Reinforcement HS Ancillary Structures Type NS LBS	531.2024 Drilling Shaft 24-Inch CY	635.0200 Sign Supports Structural Steel HS LBS	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	638.3100 Removing Structural Steel Sign Supports EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	Comments
SE-45-1	USH 45 Northbound		Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, ___ Mile	108 156	30 162	Exit 63 60 Slinger Jackson 1 Mile	2.4	360	30	1561	22.5 175.5	1	2		2 W12x26
SE-45-2	USH 45 Northbound	Sherman Rd	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 192	30 132	Exit 63 60 Slinger Jackson [TR]					22.5 176	1		1	
SE-45-3	USH 45 Northbound	STH 60	Exit Ramp Overhead	D15-1R Lane Use/Destination Guide Sign (One Direction)	84	96	60 EAST Jackson RA					56	1			S-66-233
SE-45-4	USH 45 Northbound	STH 60	Exit Ramp Overhead	D15-1L Lane Use/Destination Guide Sign (One Direction)	84	96	60 WEST Slinger LA					56	1			S-66-233
SE-45-5	USH 45 Southbound	STH 60	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, ___ Mile	108 156	30 162	Exit 63 60 Slinger Jackson 1 MILE					22.5 175.5	1		1	
SE-45-6	USH 45 Southbound	STH 60	Right	E3-1 Destination - Next Right - Exit Number	120	60	Hartford Exit 63	1.6	142	13	498.5	50				New Sign 800' North of Hartford Second Right 2 W6x15
SE-45-7	USH 45 Southbound	STH 60	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 192	30 132	Exit 63 60 Slinger [TR] Jackson					22.5 176	1		1	
SE-45-8	USH 45 Southbound	STH 60	Exit Ramp Overhead	D15-1L Lane Use/Destination Guide Sign (One Direction)	84	96	60 EAST Jackson LA					56	1			S-66-232
SE-45-9	USH 45 Southbound	STH 60	Exit Ramp Overhead	D15-1R Lane Use/Destination Guide Sign (One Direction)	84	96	60 WEST Slinger RA					56	1			S-66-232
<b>SUBTOTALS</b>								4	502	43	2059.5	1067	8	2	3	

PROJECT NO: 1000-20-82

HWY: VARIOUS

COUNTY: SE REGION

MISCELLANEOUS QUANTITIES

SHEET:

E

3

3

**Milwaukee IH 43**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	637.1230 Sign Type I Reflective F SF	637.2220 Sign Type II Reflective SH SF	638.2601 Removing Signs Type I EACH	638.2602 Removing Signs Type II EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	659.5000.S Lamp, Ballast LED, Switch Disposal by Contractor EACH	Comments
SE-43-1	IH 43 Northbound	On from 241 North	Overhead	W9-63 72W x 90H Lane Ends 3/4 Mile	72	90	LANE ENDS 500 FT [DA]		45			1			remove Type II replace with Type I
SE-43-2	IH 43 Northbound	Off to Plankinton Ave	Overhead	E6-51 Advanced Exit Guide Sign (Overhead)	144	120	794 EAST Lakefront [DA]	120			1				
				E11-1 MOD	144	24	40 MPH		24						
SE-43-3	IH 43 Northbound	Off to Plankinton Ave	Exit Ramp Overhead	E1-5-P Exit Number for E1-1 & E4-1	96	30	Exit 1D	20			1				
				E6-1 Overhead Exit Sign	204	72	Plankinton [TR] Ave	102							
SE-43-4	IH 43 Southbound	Off to 94 West	Exit Ramp Right	E1-5-P Exit Number for E1-1 & E4-1	132	30	EXIT 309 B	27.5					1		
				E1-1-A Advance Exit Guide Sign, ___ Mile	180	96	Clybourn St 25th St 3/4 MILE	120							
SE-43-5	IH 43 Southbound	794	Overhead	E6-51 Advanced Exit Guide Sign (Overhead)	240	144	43 94 Airport Symbol Beloit Chicago DA DA	240			1			1	Remove Lighting. /S-40-513
SE-43-6	IH 43 Southbound	794	Overhead	E1-5-P Exit Number for E1-1 & E4-1	120	30	Exit 72D	25							
				E6-51 Advanced Exit Guide Sign (Overhead)	192	108	94 East Madison 40 MPH	144			1			1	Remove Lighting. /S-40-513
				E11-1E [TR] Exit Only [TR]	192	48	TR Exit TR Only		64						
SE-43-7	IH 43 Southbound	794	Overhead	E1-5-P Exit Number for E1-1 & E4-1 E6-51 Advanced Exit Guide Sign (Overhead)	120 144	30 120	Exit 72B 794 East Lakefront DA	25 120			1			1	Remove Lighting. /S-40-513
<b>SUBTOTALS</b>								943.5	133	0	6	1	1	3	

**Ozaukee IH 43**

Sign Number	Route	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	Comments
SE-43-8	IH 43 Northbound	Right	E3-1 Destination - Next Right - Exit Number	156	102	Luxembourg American Museum Exit 107	110.5	1	1	
SE-43-9	IH 43 Southbound	Right	E3-1 Destination - Next Right - Exit Number	156	102	Luxembourg American Museum Exit 107	110.5	1	1	
SE-43-10	IH 43 Southbound	Right	E3-1 Destination - Next Right - Exit Number	216	84	HISTORIC DOWNTOWN Port Washington EXIT 100	126	1	1	
<b>SUBTOTALS</b>							347	3	3	

**Walworth IH 43 NORTHBOUND**

Sign Number	Route	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	Comments
SE-43-11	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	96	30	EXIT 15 14	20			
			E1-1-A Advance Exit Guide Sign, __ Mile	204	162	Darien Whitewater 1 MILE	229.5	1	1	
SE-43-12	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	96	30	EXIT 15 14	20			
			E4-1-A Exit Direction Sign with Arrow	240	132	Darien [TR] Whitewater	220	1	1	
SE-43-13	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	96	30	EXIT 17 X	20			
			E1-1-A Advance Exit Guide Sign, __ Mile	156	120	Delavan 1 Mile	130	1	1	
SE-43-14	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	96	30	EXIT 17 X	20			
			E4-1-A Exit Direction Sign with Arrow	192	84	Delavan [TR]	112	1	1	
SE-43-15	IH 43 Northbound	Right	E8-1-A Seq. Sign - City Name - Name-Highways - __ Miles	192	90	50 2 Elkhorn 7 Milwaukee46	120	1	1	
SE-43-16	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	96	30	EXIT 21 50	20			
			E1-1-A Advance Exit Guide Sign, __ Mile	228	162	Delavan Lake Geneva 1 MILE	256.5	1	1	
SE-43-17	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	96	30	EXIT 21 50	20			
			E4-1-A Exit Direction Sign with Arrow	264	132	Delavan [TR] Lake Geneva	242	1	1	
SE-43-18	IH 43 Northbound	Right	D2-3 Destination/Distance (Three) with Die Cut Letters	192	84	Elkhorn 4 East Troy 14 Milwaukee 43	112	1	1	
SE-43-19	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	108	30	EXIT 25 67	22.5			
			E1-1-A Advance Exit Guide Sign, __ Mile	240	162	Elkhorn Williams Bay 1 MILE	270	1	1	
SE-43-20	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	108	30	EXIT 25 67	22.5			
			E4-1-A Exit Direction Sign with Arrow	276	132	Elkhorn [TR] Williams Bay	253	1	1	
SE-43-21	IH 43 Northbound	Right	E1-5-P Exit Number for E1-1 & E4-1	156	30	EXITS 27 A-B 12	32.5			
			E1-1-A Advance Exit Guide Sign, __ Mile	228	162	Lake Geneva Madison 3/4 MILE	256.5	1	1	
SE-43-22	IH 43 Northbound	Right	E10-61 144W x 54H Hospital Exit [000]	144	54	Hospital EXIT 27A	54	1	1	
SE-43-23	IH 43 Northbound	Right	E3-1 Destination - Next Right - Exit Number	132	60	Elkhorn EXIT 27A	55	1	1	
SE-43-24	IH 43 Northbound	Right	E3-1 Destination - Next Right - Exit Number	192	102	Gateway Tech College Elkhorn Campus EXIT 27 A	136	1	1	
SE-43-25	IH 43 Northbound	Overhead	E1-5-P Exit Number for E1-1 & E4-1	120	30	EXIT 27 B 12 West	25			
			E6-51 Overhead Advance Exit Guide Sign, __ Mile	132	114	Madison 1/4 Mile	104.5	1		S6415
SE-43-26	IH 43 Northbound	Overhead	E1-5-P Exit Number for E1-1 & E4-1 E6-1 Overhead Exit Direction Sign with Arrow	120 228	30 90	EXIT 27 A 12 East [TR] Lake Geneva	25 142.5	1		S6415
<b>SUBTOTALS</b>							2941	16	14	

**Walworth IH 43 SOUTHBOUND**

Sign Number	Route	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	638.2601 Removing Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	Comments
SE-43-27	IH 43 Southbound	Right	E3-1 Destination - Next Right - Exit Number	192	102	Gateway Tech College Elkhorn Campus EXIT 27A	136	1	1	
SE-43-28	IH 43 Southbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	108 276	30 132	EXIT 25 67 Elkhorn [TR] Williams Bay	22.5 253	1	1	
SE-43-29	IH 43 Southbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, __ Mile	96 156	30 126	EXIT 21 50 Delavan 1 Mile	20 136.5	1	1	
SE-43-30	IH 43 Southbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	96 192	30 96	EXIT 21 50 Delavan [TR]	20 128	1	1	
SE-43-31	IH 43 Southbound	Right	D2-3 Destination/Distance (Three) with Die Cut Letters	156	84	Hwy X 2 Clinton 13 Beloit 18	91	1	1	
SE-43-32	IH 43 Southbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, __ Mile	96 156	30 156	EXIT 17 X Delavan Darien 3/4 MILE	20 169	1	1	
SE-43-33	IH 43 Southbound	Overhead	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	96 168	30 108	EXIT 17 X Delavan [TR] Darien	20 126	1		S-64-11
SE-43-34	IH 43 Southbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E1-1-A Advance Exit Guide Sign, __ Mile	96 192	30 162	EXIT 15 14 Darien Janesville 1 MILE	20 216	1	1	
SE-43-35	IH 43 Southbound	Right	E1-5-P Exit Number for E1-1 & E4-1 E4-1-A Exit Direction Sign with Arrow	96 228	30 132	EXIT 15 14 Darien [TR] Janesville	20 209	1	1	
SE-43-36	IH 43 Southbound	Right	D2-3 Destination/Distance (Three) with Die Cut Letters	144	90	Clinton 7 Beloit 12 39 90 14	90	1	1	
<b>SUBTOTALS</b>							1697	10	9	

**Milwaukee IH 241**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.1220 Sign Type I Reflective SH SF	637.1230 Sign Type I Reflective F SF	637.2220 Sign Type II Reflective SH SF	638.2601 Removing Signs Type I EACH	638.2602 Removing Signs Type II EACH	Comments
SE-241-1	STH 241 Northbound	CTH Y	Overhead	D16-1L Lane Use/Destination Guide Sign (One Direction)	36	60	WEST Layton Ave ONLY [LB]			15		1	S-40-753
SE-241-2	STH 241 Northbound	CTH Y	Overhead	D16-1L Lane Use/Destination Guide Sign (One Direction)	36	60	WEST Layton Ave ONLY [LB]			15		1	S-40-753
SE-241-3	STH 241 Southbound	CTH Y	Overhead	D16-2L Lane Use/Destination Guide Sign (Two Directions)	144	72	To 94 East Layton Ave [LB] Only [LB]	72			1		S-40-754
<b>SUBTOTALS</b>								72	0	30	1	2	

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**Waukesha USH 18**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.2220 Sign Type II Reflective SH SF	638.2602 Removing Signs Type II EACH	Comments
SE-18-1	USH 18 Westbound	CTH Y	Overhead	D16-1A Lane Use/Destination Guide Sign (One Direction)	36	60	WEST 94 [DA]	15	1	S-67-298
<b>SUBTOTALS</b>								15	1	

**Waukesha STH 59**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.2220 Sign Type II Reflective SH SF	638.2602 Removing Signs Type II EACH	Comments
SE-59-1	STH 59 Eastbound	Big Bend Rd	Overhead	D16-1R Lane Use/Destination Guide Sign (One Direction)	54	60	Big Bend Rd Only [RB]	22.5	1	S-67-925
<b>SUBTOTALS</b>								22.5	1	

**Waukesha STH 83**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.2220 Sign Type II Reflective SH SF	638.2602 Removing Signs Type II EACH	Comments
SE-83-1	STH 83 Northbound	CTH ES	Overhead	D16-1R Lane Use/Destination Guide Sign (One Direction)	36	60	ES ONLY [RB]	15	1	S-67-927
SE-83-2	STH 83 Northbound	CTH ES	Overhead	D16-1A Lane Use/Destination Guide Sign (One Direction)	36	72	NORTH 83 ONLY [UA]	15	1	S-67-927
SE-83-3	STH 83 Southbound	I-43	Overhead	D16-1A Lane Use/Destination Guide Sign (One Direction)	36	72	NORTH 43 Only [DA]	18	1	S-67-229
<b>SUBTOTALS</b>								48	3	



**Waukesha CTH F**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.2220 Sign Type II Reflective SH SF	638.2602 Removing Signs Type II EACH	Comments
SE-F-1	CTH F Southbound	I-94	Overhead	D16-1L Lane Use/Destination Guide Sign (One Direction)	36	72	EAST 94 Only [LB]	18	1	S-67-908
<b>SUBTOTALS</b>								18	1	

**Milwaukee Layton Ave**

Sign Number	Route	Interchange	Location	Sign Code and Description	Width	Height	Order Lines	637.2220 Sign Type II Reflective SH SF	638.2602 Removing Signs Type II EACH	Comments
SE-Layton-1	W Layton Ave Eastbound	STH 241	Overhead	D16-1L Lane Use/Destination Guide Sign (One Direction)	42	90	TO 43 894 [LB]	26.25	1	S-40-749
SE-Layton-2	W Layton Ave Eastbound	STH 241	Overhead	D16-1L Lane Use/Destination Guide Sign (One Direction)	60	72	NORTH 241 27TH ST [LB]	30	1	S-40-749
SE-Layton-3	W Layton Ave Eastbound	I-41	Overhead	D16-1A Lane Use/Destination Guide Sign (One Direction)	72	66	NORTH WEST 43-94 [DA]	33	1	S-40-751
SE-Layton-4	W Layton Ave Westbound	I-41	Overhead	D16-1A Lane Use/Destination Guide Sign (One Direction)	36	66	East 94 [DA]	16.5	1	S-40-752
SE-Layton-5	W Layton Ave Westbound	STH 241	Overhead	D16-1L Lane Use/Destination Guide Sign (One Direction)	48	54	S 27th St Only [LB]	18	1	S40-750
SE-Layton-6	W Layton Ave Westbound	STH 241	Overhead	D16-1L Lane Use/Destination Guide Sign (One Direction)	48	54	S 27th St Only [LB]	18	1	S40-750
<b>SUBTOTALS</b>								141.75	6	

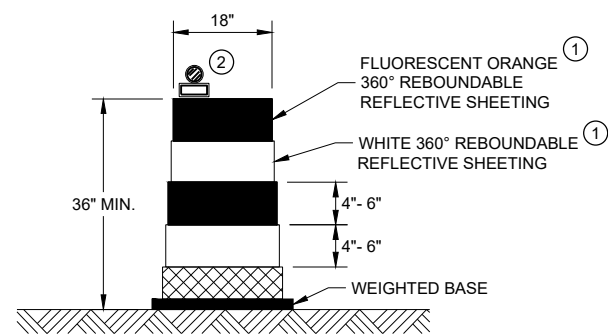
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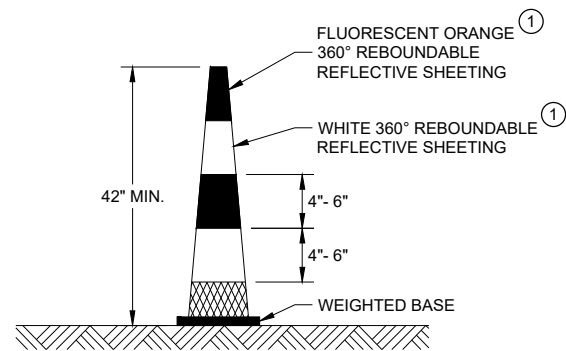
Location	531.1100 Concrete Masonry Ancillary Structures Type NS CY	531.1140 Steel Reinforcement HS Ancillary Structures Type NS LBS	531.2024 Drilling Shaft 24-Inch CY	635.0200 Sign Supports Structural Steel HS LBS	637.1220 Sign Type I Reflective SH SF	637.1230 Sign Type I Reflective F SF	637.2220 Sign Type II Reflective SH SF	638.2601 Removing Signs Type I EACH	638.2602 Removing Signs Type II EACH	638.3100 Removing Structural Steel Sign Supports EACH	638.3610 Erecting State Owned Signs Type I EACH	635.9020.S Sign Supports Replacing Base Connection Bolts Legacy System EACH	635.9010.S Sign Supports Shorten Structural Steel EACH	203.0220 Removing Structure EACH	659.5000.S Lamp, Ballast, LED, Swich Disposal by Contractor EACH	SPV.0060.01 Traffic Control EACH	619.1000 Mobilization EACH
Oneida USH 51					266			2				2					
Marathon USH 51					54			1				1					
Manitowoc IH 43	14	2020	116	8228.42	932			8		16	1						
Chippewa USH 53					1069			5				5					
Eau Claire USH 53	2	302	17	1038	823.5	117		9		2				1			
Eau Claire IH 94					967			4				4					
Pierce STH 29					277.5			3									
Washington IH 41	3.6	540	30	1840.5	627.5			3				2					
Washington USH 45	4	502	43	2059.5	1067			8		2		3					
Milwaukee IH 43					943.5	133		6	1			1			3		
Ozaukee IH 43					347			3				3					
Walworth IH 43					4638			26				23					
Milwaukee IH 241					72		30	1	2								
Waukesha USH 18							15		1								
Waukesha STH 59							22.5		1								
Waukesha STH 83							48		3								
Waukesha CTH F							18		1								
Milwaukee Layton Ave							141.75		6								
Projectwide													4			1	1
<b>Total</b>	<b>23.6</b>	<b>3364</b>	<b>206</b>	<b>13166.42</b>	<b>12084</b>	<b>250</b>	<b>275.25</b>	<b>79</b>	<b>15</b>	<b>20</b>	<b>1</b>	<b>44</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>

## Standard Detail Drawing List

15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15D12-10E	TRAFFIC CONTROL, LANE CLOSURE, TRAFFIC QUEUE WARNING SYSTEM
15D14-04	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D15-06A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-06C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-05	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-06A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D20-06B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-06C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D37-03	TRAFFIC CONTROL, 2-LANE ROUNDABOUT
15D40-04A	TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D40-04B	TRAFFIC CONTROL, FULL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D40-04C	TRAFFIC CONTROL, PARTIAL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D40-04D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D50-02A	TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT
15D50-02B	TRAFFIC CONTROL, ADDED LANE CLOSURE WITH LANE SHIFT

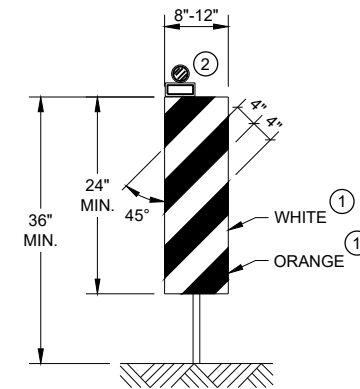


**DRUM**



**42" CONE**

DO NOT USE IN TAPERS  
 1/2 SPACING OF DRUMS

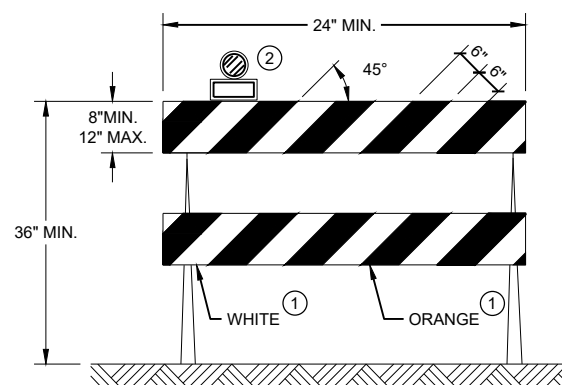


**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO  
 THE TRAFFIC SIDE FOR CHANNELIZATION.

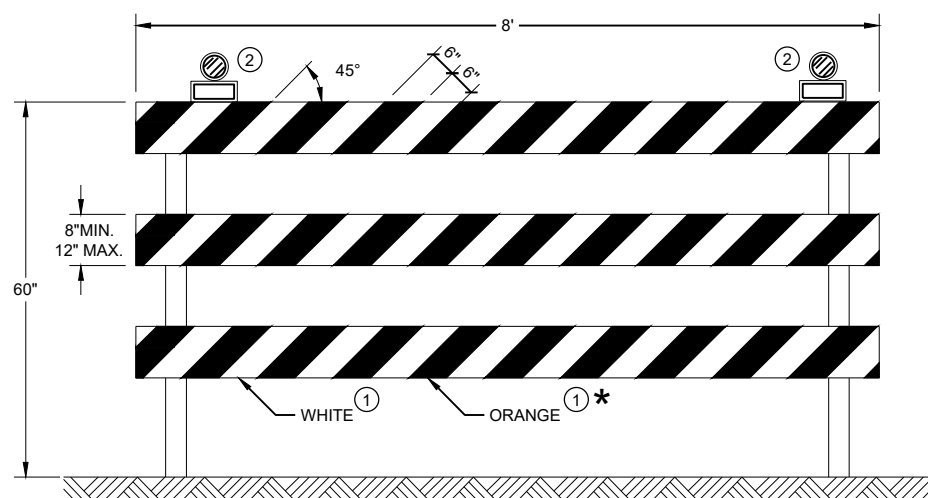
**GENERAL NOTES**

- 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 May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

**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.

- ① 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.
- ② 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.

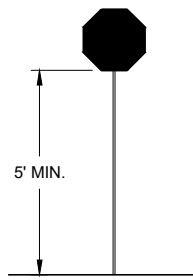
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM 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**

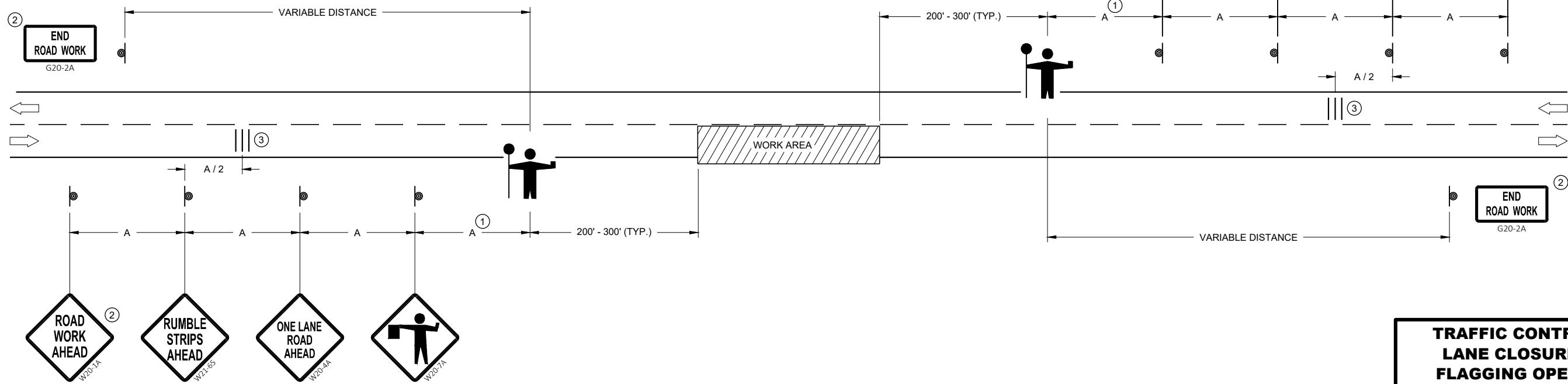
**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

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



W03-4

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**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

**GENERAL NOTES**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL CONE 42-INCH
-  TRAFFIC CONTROL DRUM
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  **AFAD** AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

**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**

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, 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.

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.

- ① SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ② IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

**TEMPORARY PORTABLE RUMBLE STRIPS**

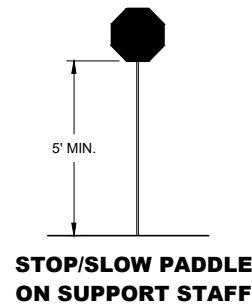
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

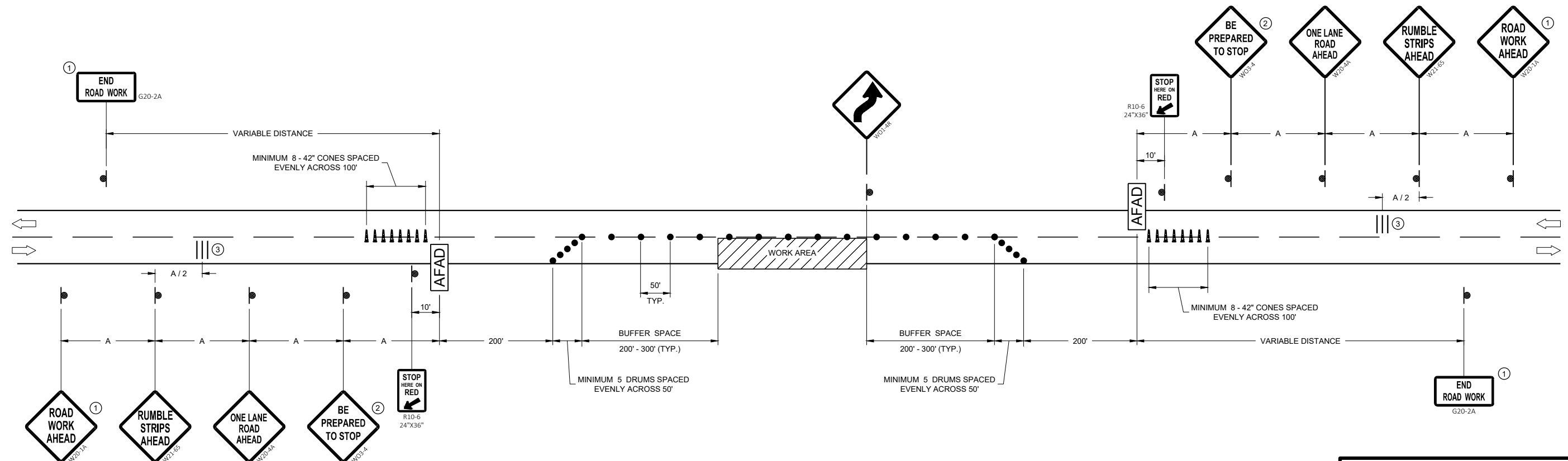
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

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



**TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA












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SDD 15D12 - 09b

SDD 15D12 - 09b

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  PORTABLE TRAFFIC SENSOR (PTS)

**GENERAL NOTES**

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

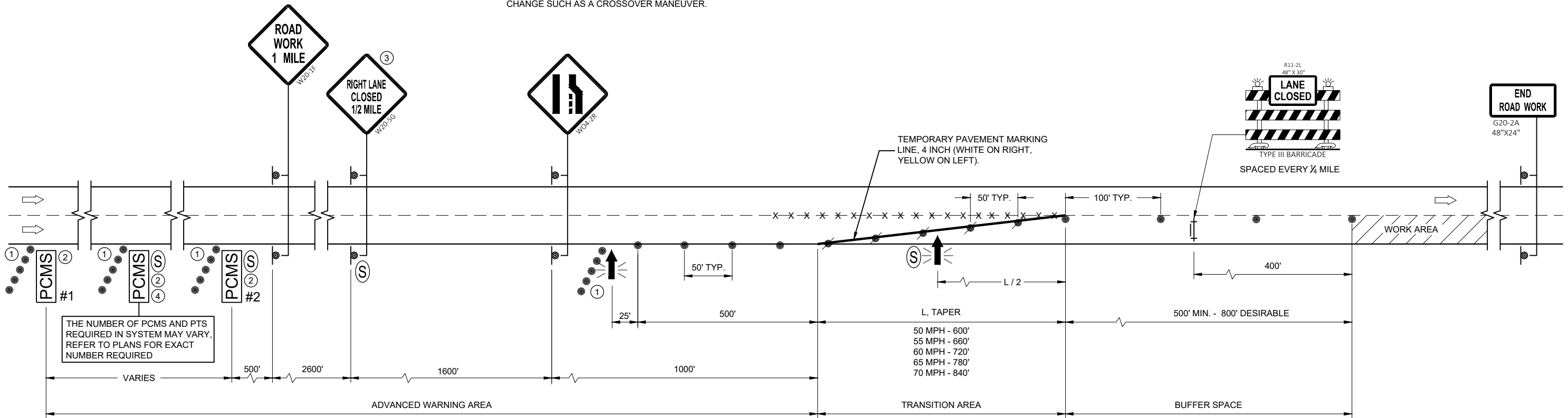
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

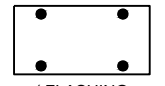
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON PCMS, ARROW BOARD OR OTHER TRAILER DEVICES.

- ① 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.
- ② IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE PCMS ON BOTH SIDES OF THE ROADWAY.
- ③ IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.
- ④ PLACE PCMS EVERY ONE MILE BETWEEN PCMS #1 AND PCMS #2, OR AS THE ENGINEER DIRECTS. THE NUMBER OF PCMS MAY BE MORE THAN SHOWN ON THIS DETAIL.
- ⑤ PCMS SHALL FOLLOW ARROW BOARD STANDARDS WHEN DISPLAYING FLASHING FOUR CORNER CAUTION MODE OR FLASHING ARROW MERGE MODE.



⑤ PCMS MESSAGING










SPEEDS 0 MPH TO 19 MPH		SPEEDS 20 MPH TO 39 MPH		SPEEDS 40 MPH AND GREATER
FRAME 1	FRAME 2	FRAME 1	FRAME 2	
STOPPED TRAFFIC AHEAD	EXPECT DELAYS	SLOW TRAFFIC AHEAD	PREPARE TO STOP	 ( FLASHING CAUTION MODE)

**TRAFFIC CONTROL, LANE CLOSURE, TRAFFIC QUEUE WARNING SYSTEM**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 /S/ Erin Schwark  
DATE WORK ZONE ENGINEER  
FHWA

**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
-  TYPE "A" WARNING LIGHT (FLASHING)
-  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.

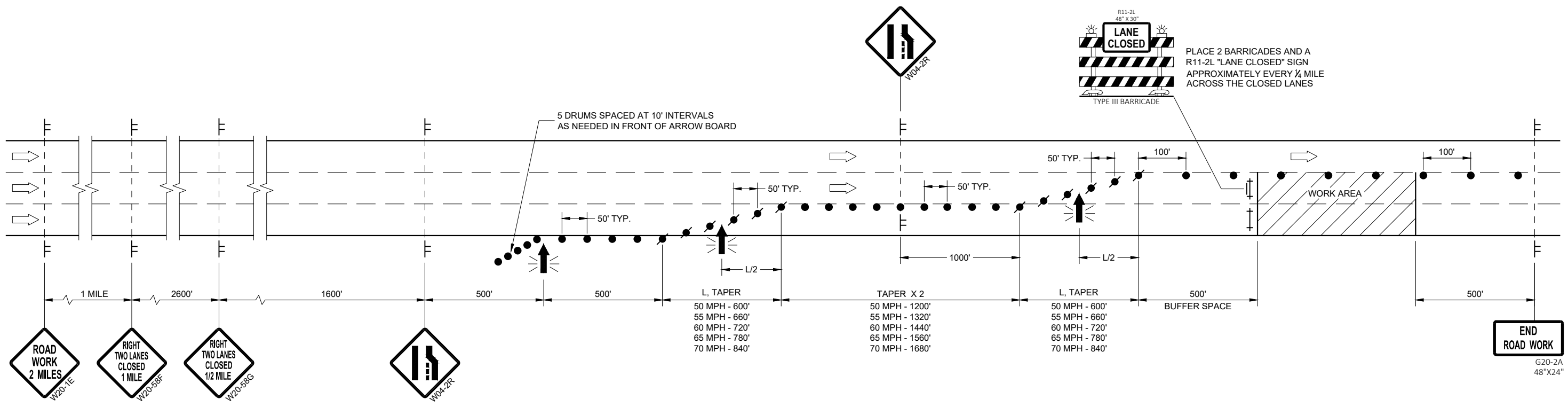
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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 - 04

SDD 15D14 - 04

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA



**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC

**GENERAL NOTES**

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

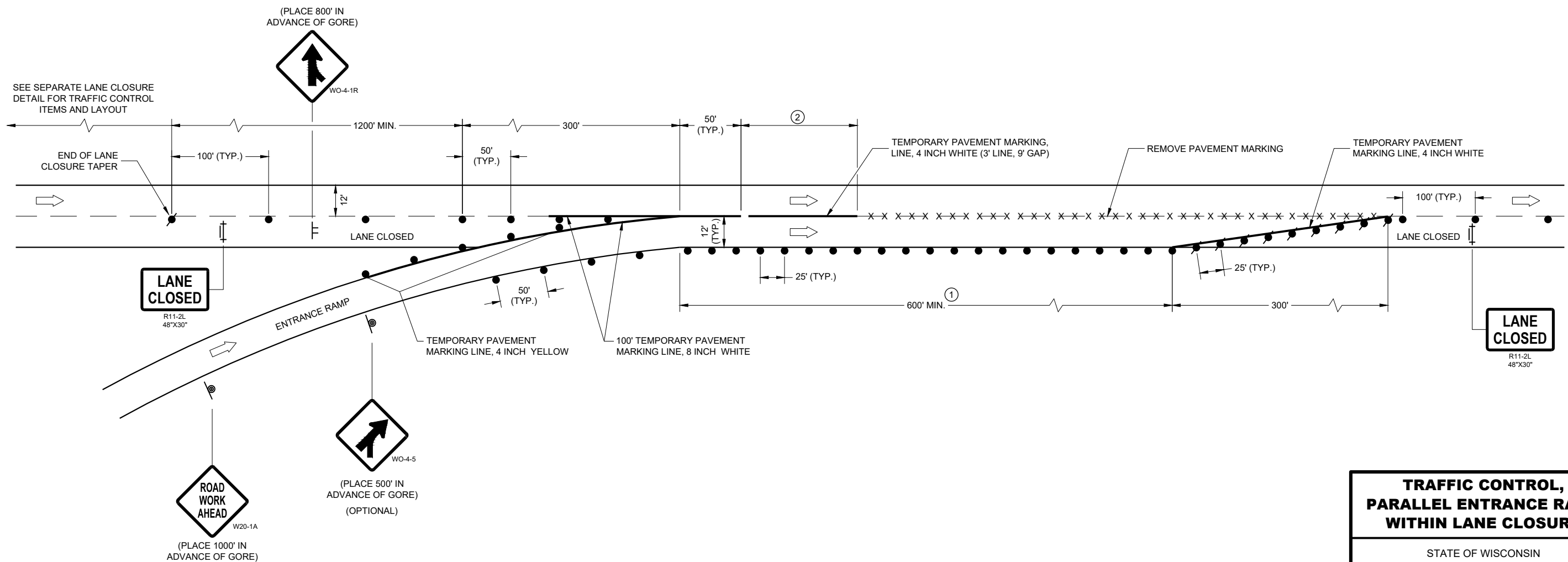
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.









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

- ① EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.
- ② END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



<b>TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC

**GENERAL NOTES**

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

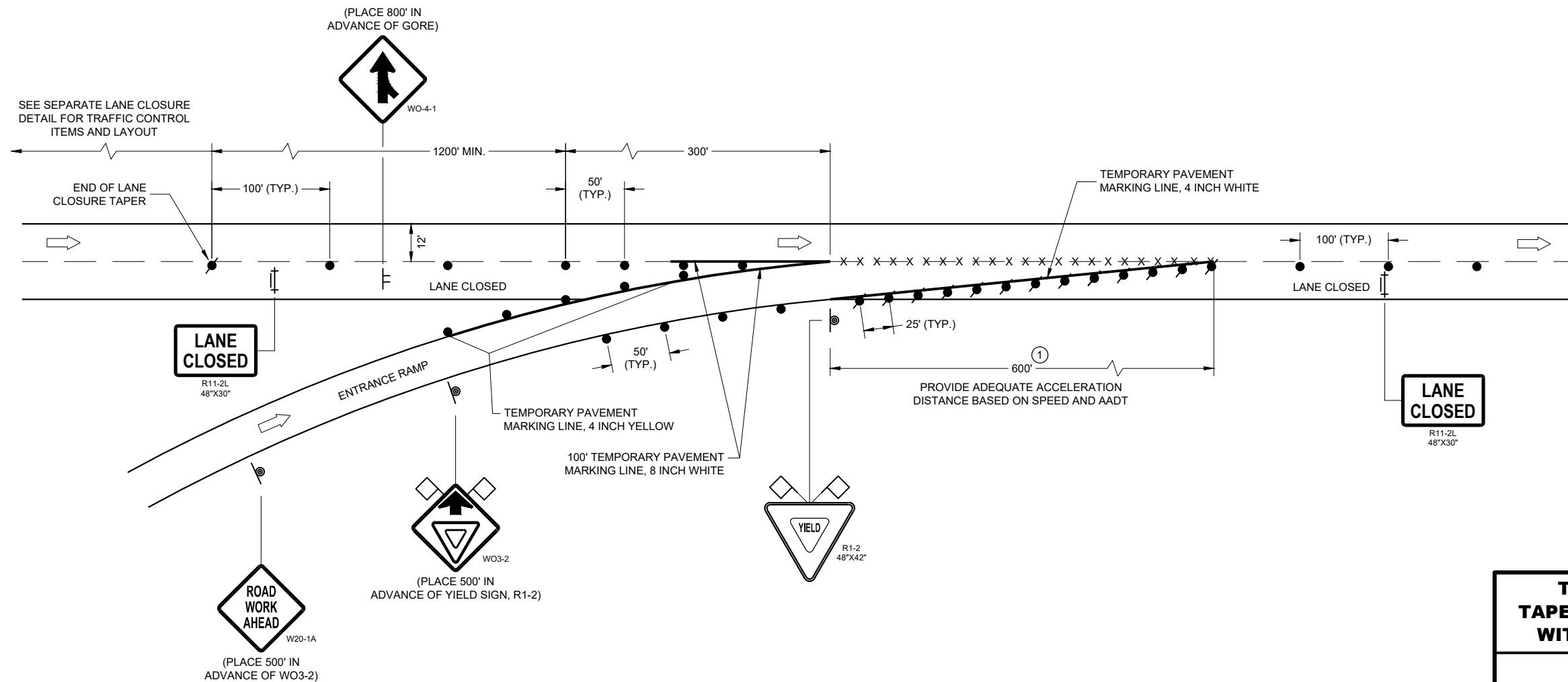
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

① CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



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SDD 15D15 - 06C

SDD 15D15 - 06C

<b>TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

- † TYPE III BARRICADE
- †† TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- ➔ DIRECTION OF TRAFFIC

**GENERAL NOTES**

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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 SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

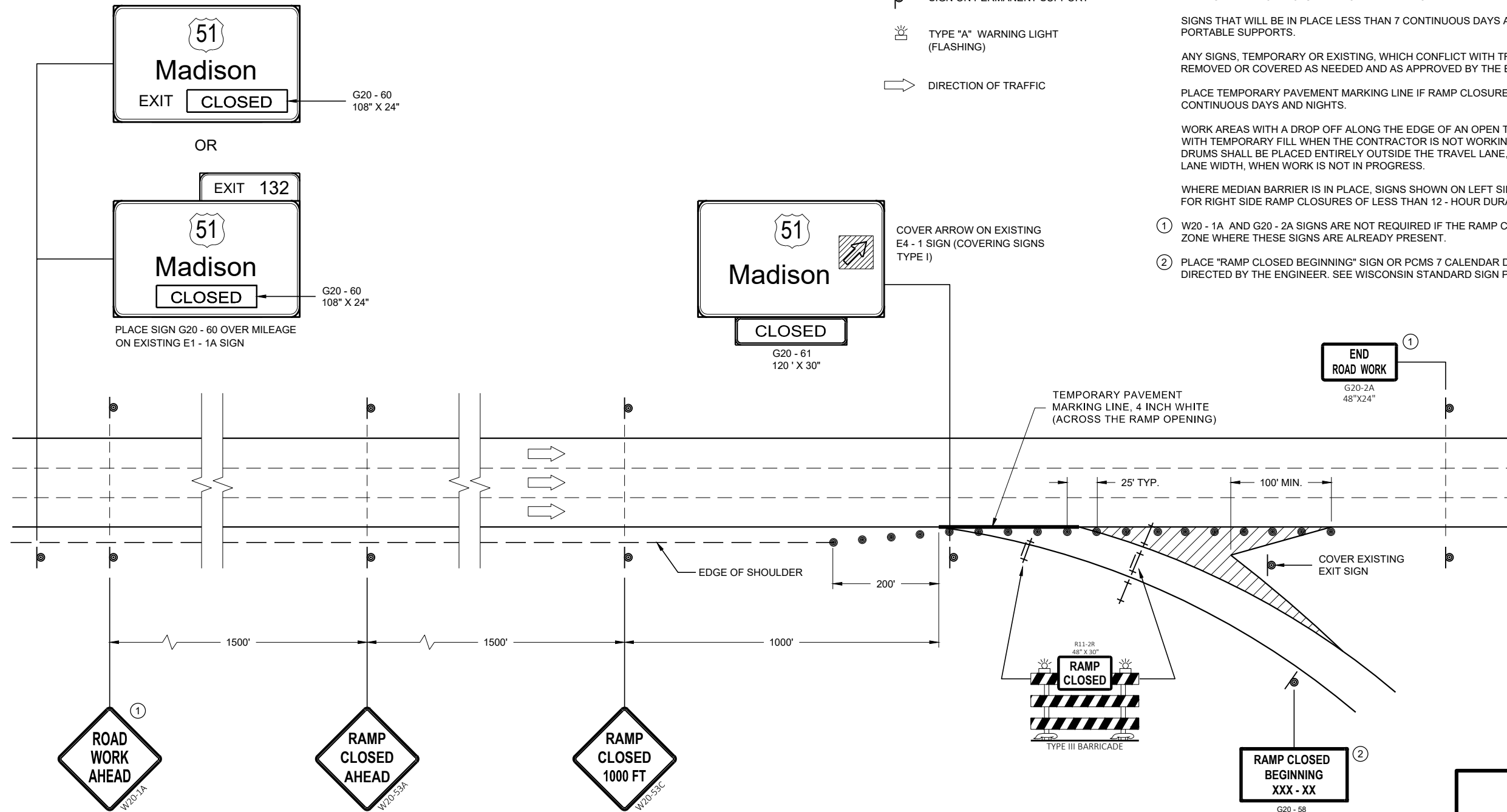
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

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

② PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX










**TRAFFIC CONTROL,  
EXIT RAMP CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 DATE /S/ Andrew Heidtke  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

**GENERAL NOTES**

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 REGIONAL TRAFFIC UNIT.

"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.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

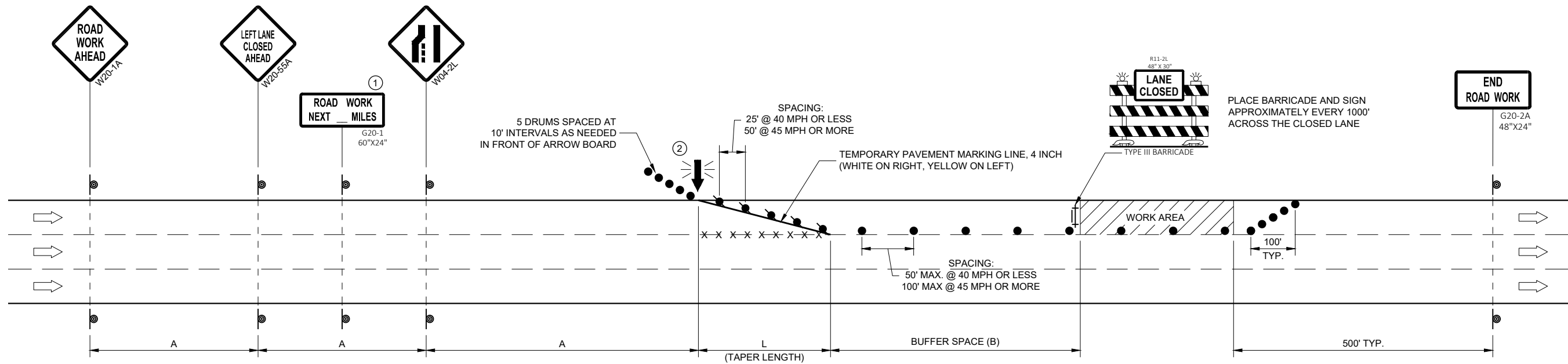
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'










**TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

**GENERAL NOTES**

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 REGIONAL TRAFFIC UNIT.

"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.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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.

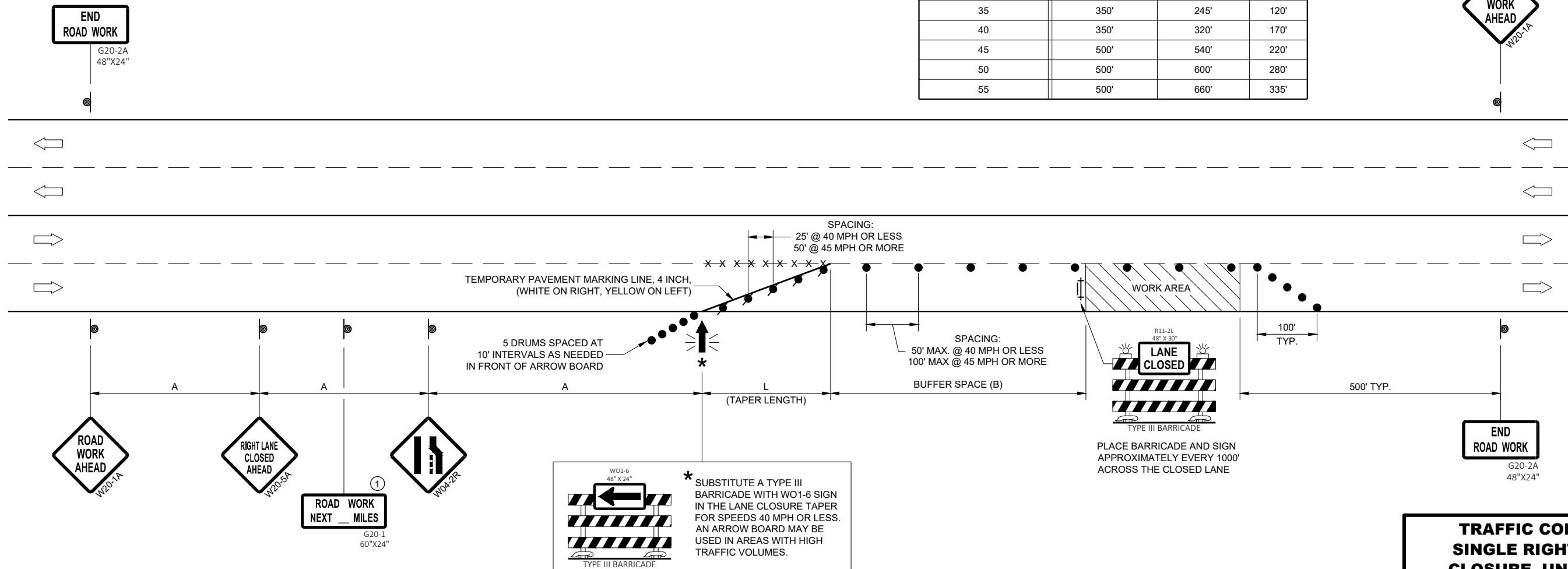
① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



6

6



SDD 15D20 - 06b

SDD 15D20 - 06b










**TRAFFIC CONTROL,  
SINGLE RIGHT LANE  
CLOSURE, UNDIVIDED  
NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

**GENERAL NOTES**

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 REGIONAL TRAFFIC UNIT.

"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.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

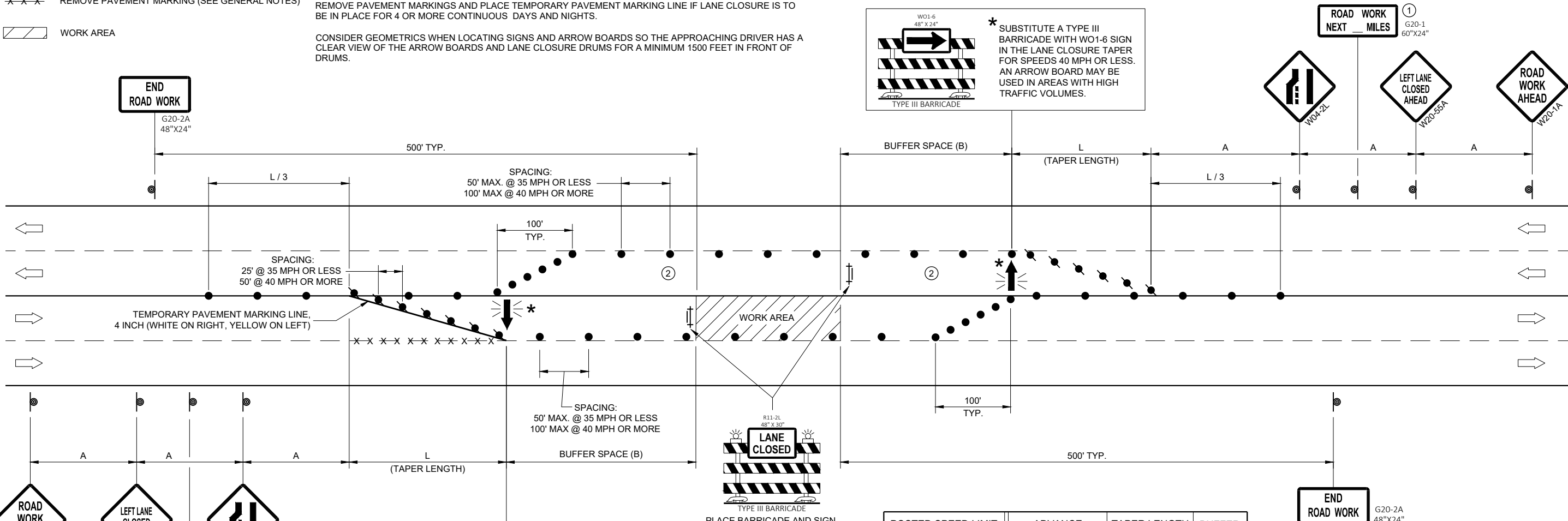
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

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.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



**\* SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.**

**\* SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.**

**R11-2L 48"X30"**

PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

**TRAFFIC CONTROL,  
SINGLE LEFT LANE  
CLOSURE, UNDIVIDED  
NON-FREWAY/EXPRESSWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

### 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.

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

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

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

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

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

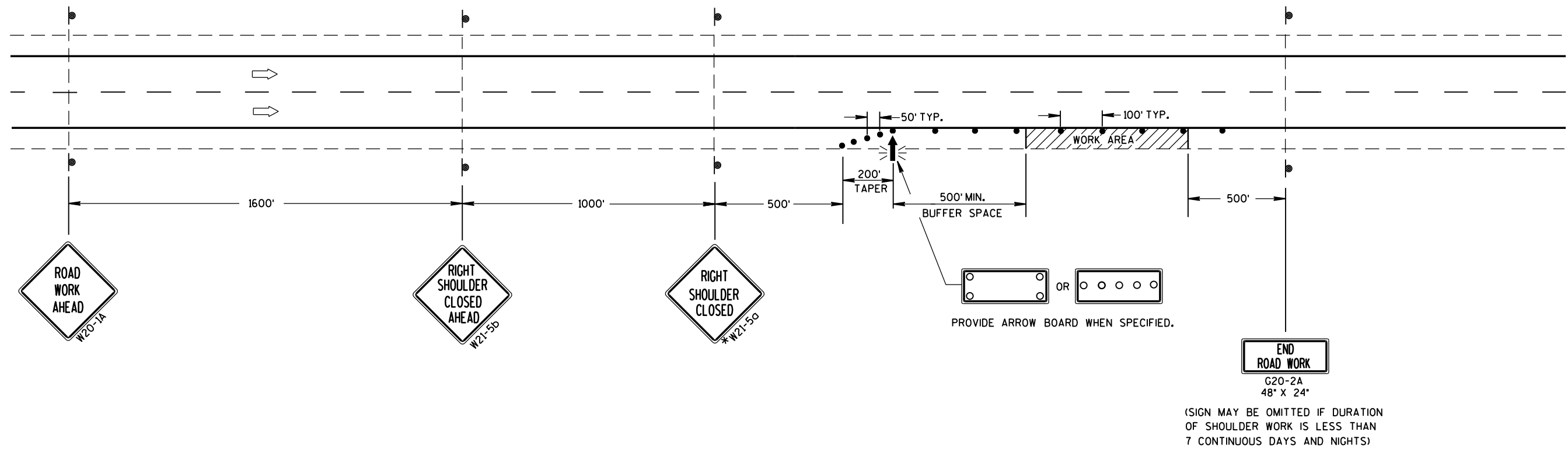
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A 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.

\*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-50 SIGN MAY BE OMITTED.

### LEGEND





- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡ FLASHING ARROW BOARD
- ▨ WORK AREA



(SIGN MAY BE OMITTED IF DURATION OF SHOULDER WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS)

<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/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

**LEGEND**

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

**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" 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.

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

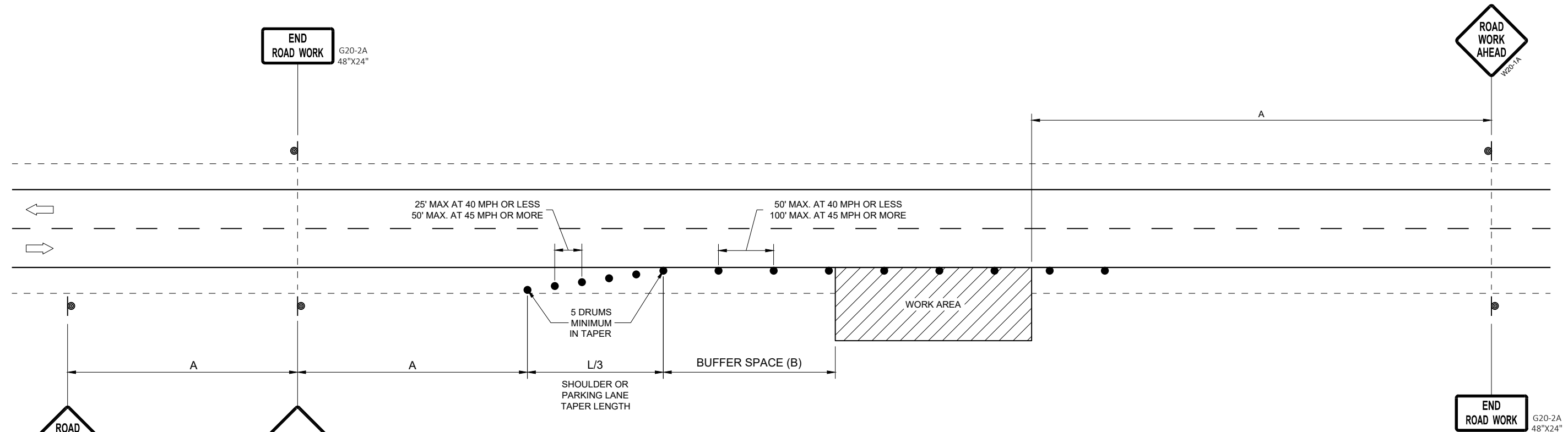
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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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POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

OR  
IF TRAFFIC CONTROL DEVICES  
ENCROACH ONTO TRAVELED WAY, USE



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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER







FHWA

SDD 15D28 - 04

SDD 15D28 - 04



**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

**GENERAL NOTES**

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

"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.

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

ONLY ONE QUADRANT OF TRAFFIC SHALL BE RELEASED AT A TIME.

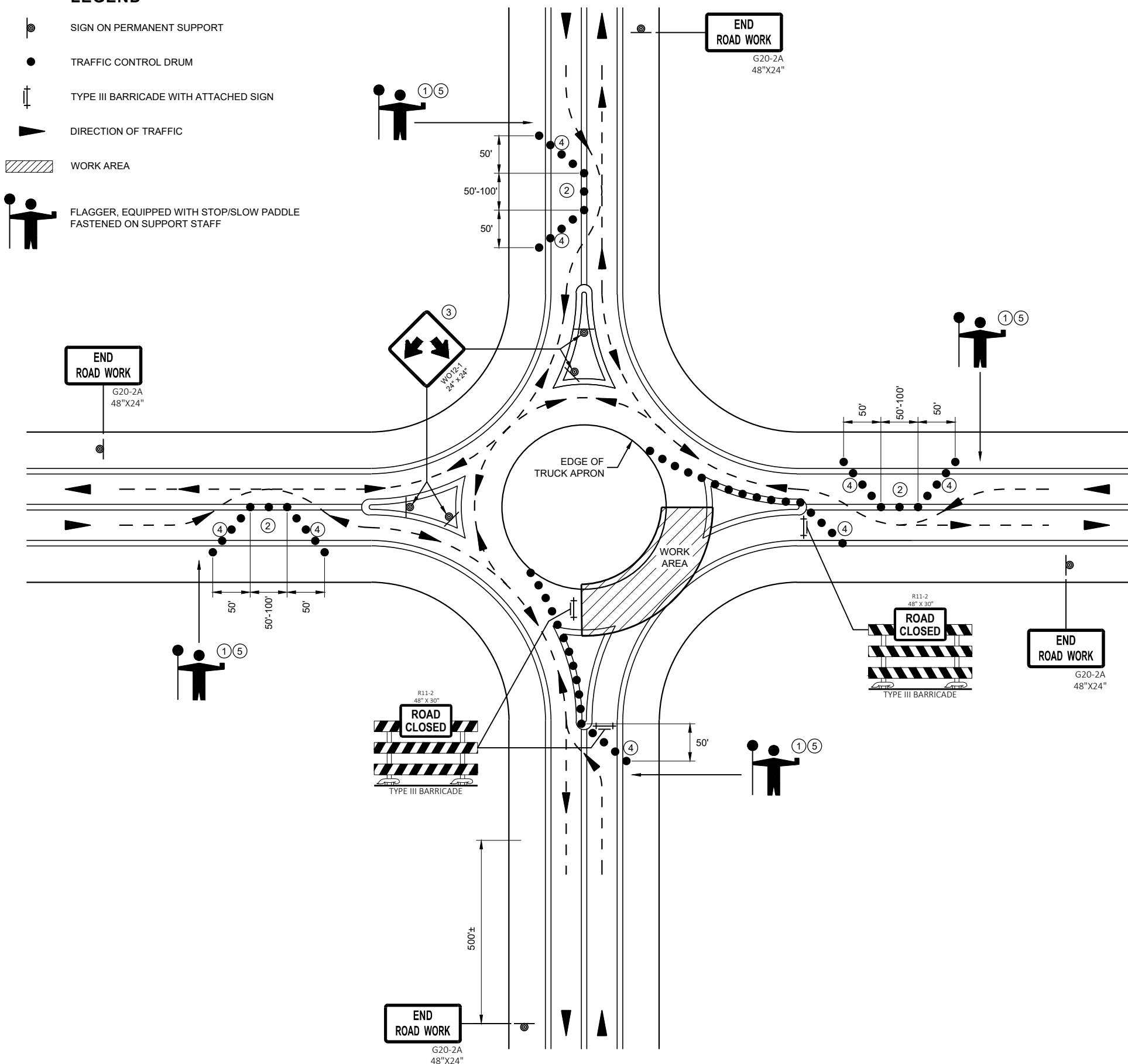
FLAGGERS SHALL CONTROL TRAFFIC ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. ONE FLAGGER SHALL BE DESIGNATED LEAD FLAGGER.

NIGHT TIME WORK REQUIRES ADDITIONAL LIGHTING AT FLAGGER STATION(S).

- ① FLAGGERS SHALL BE IN DIRECT RADIO CONTACT AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.
- ② ADJUST CHANNELIZING DEVICES TO ACCOMMODATE FOR TURNING RADIUS OF LARGE VEHICLES AS DIRECTED BY THE ENGINEER.
- ③ GUIDE SIGN WITH ROAD NAMES MAY BE USED IN LIEU OF THE DOUBLE ARROW (WO12-1) SIGN.
- ④ THE TWO- WAY TAPER SHOULD BE 50 FEET USING 5 EQUALLY SPACED DRUMS.
- ⑤ FOLLOW SDD 15C12 FOR FLAGGING AND ADVANCE WARNING.

**RECOMMENDED REDUCED DRUM SPACING WITHIN ROUNDABOUT**

MPH	DRUM SPACING (FT)
0-40	25
45-55	50



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SDD 15D37 - 03

SDD 15D37 - 03








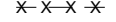

**TRAFFIC CONTROL, FLAGGING OPERATION, ROUNDABOUT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

**GENERAL NOTES**

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

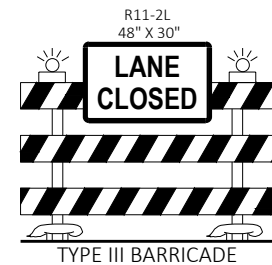
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

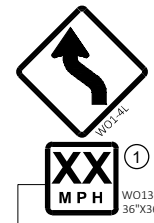
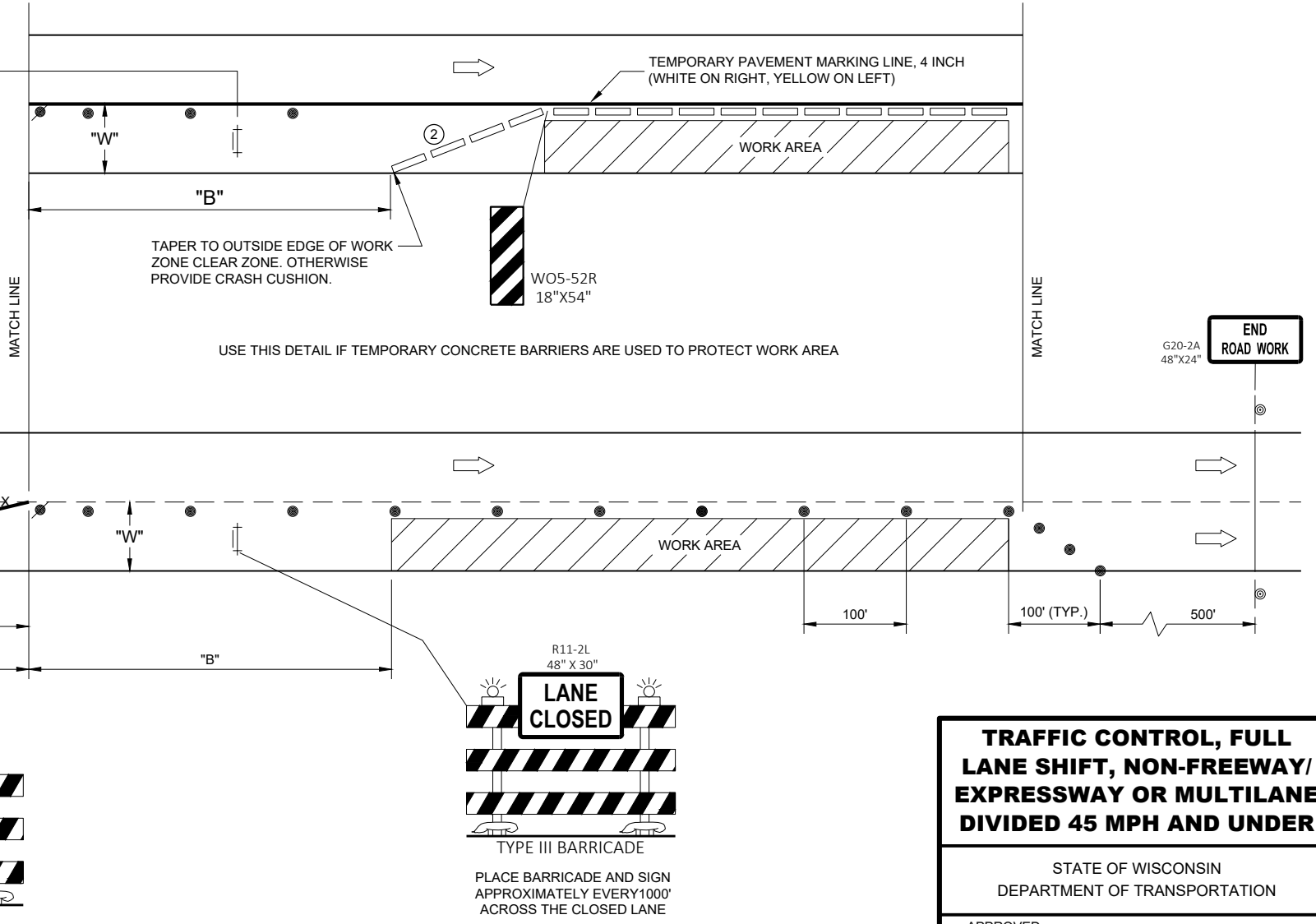
① USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

② BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS  
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER $\frac{L}{2}$ W, LATERAL OFFSET (FT)					BUFFER SPACE (B) FEET
		10	11	12	13	14	
25	200	52	57	63	68	73	55
30	200	75	83	90	98	105	85
35	350	102	112	123	133	143	120
40	350	133	147	160	173	187	170
45	500	225	248	270	293	315	220



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE



6

6

SDD 15D40 - 04a

SDD 15D40 - 04a







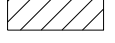


**TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

**GENERAL NOTES**

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

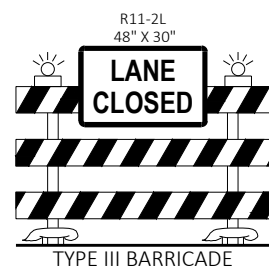
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

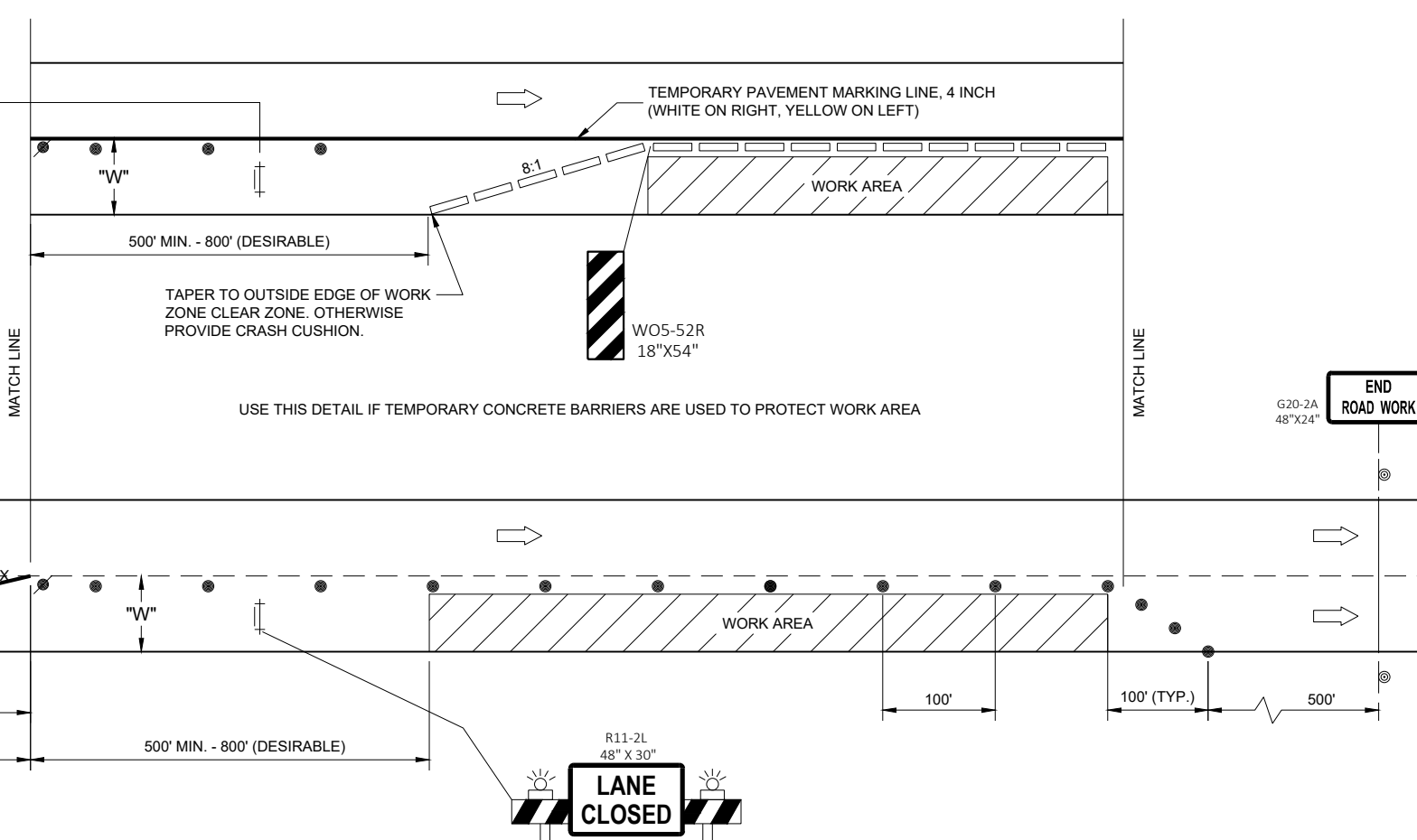
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

- ① USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ② IF BEGINNING OF LANE SHIFT IS 1200' OF LESS FROM THE END OF THE LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER 1/2				
	W, LATERAL OFFSET (FT)				
	10	11	12	13	14
50	250	275	300	325	350
55	275	303	330	358	385
60	300	330	360	390	420
65	325	358	390	423	455
70	350	385	420	455	490



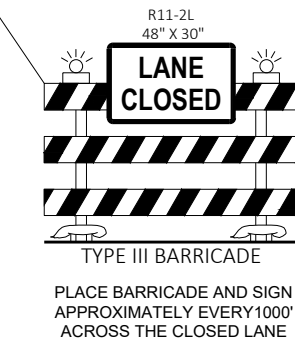
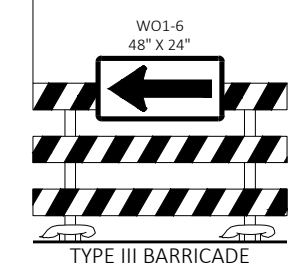
PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE



TEMPORARY PAVEMENT MARKING LINE, 4 INCH (WHITE ON RIGHT, YELLOW ON LEFT)

TAPER TO OUTSIDE EDGE OF WORK ZONE CLEAR ZONE. OTHERWISE PROVIDE CRASH CUSHION.

USE THIS DETAIL IF TEMPORARY CONCRETE BARRIERS ARE USED TO PROTECT WORK AREA



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE

**TRAFFIC CONTROL, FULL LANE SHIFT, MULTI-LANE DIVIDED 50 MPH AND OVER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA










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SDD 15D40 - 04b

SDD 15D40 - 04b

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

**GENERAL NOTES**

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

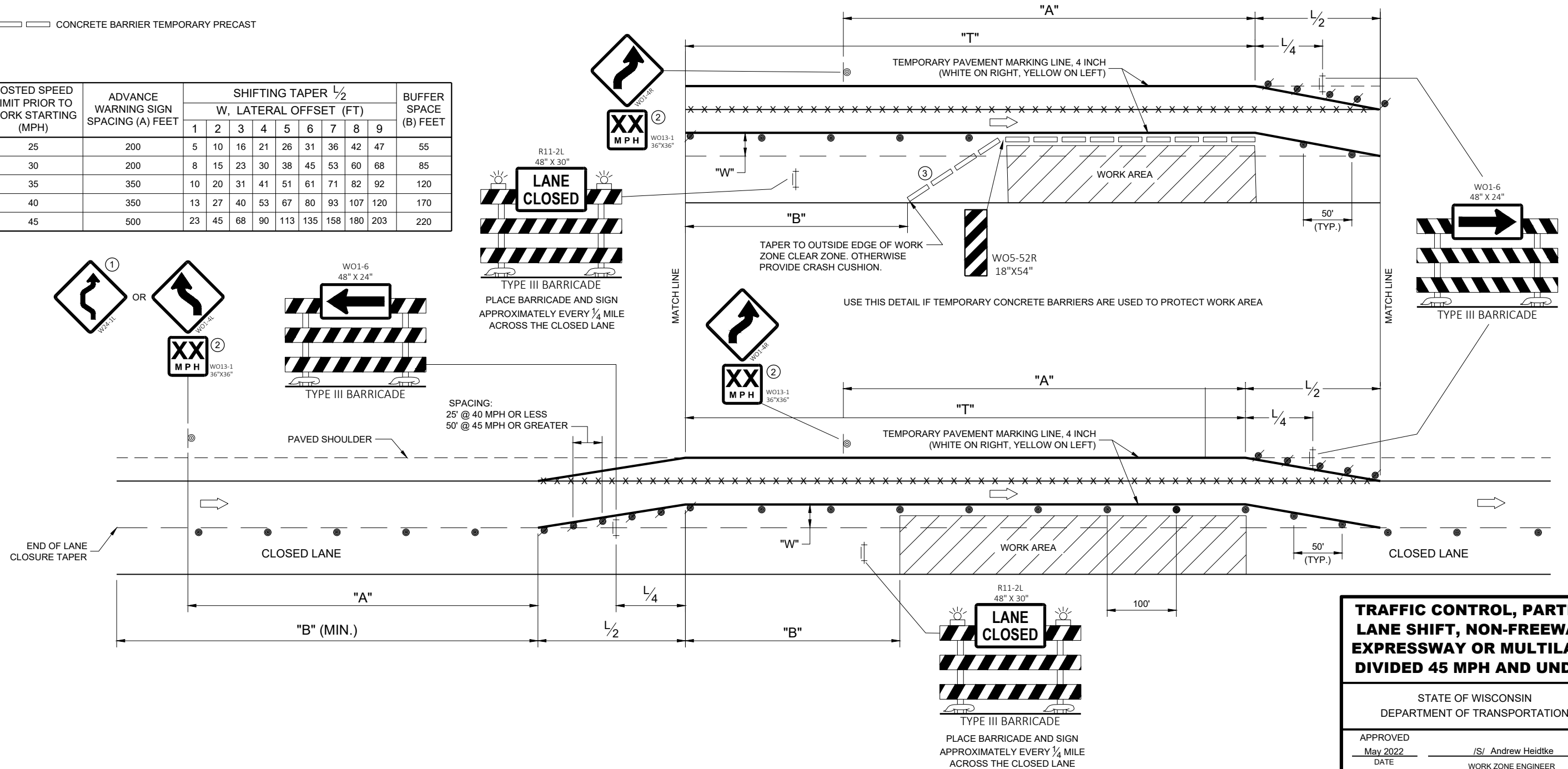
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

- ① USE ONLY WHEN T<600', OMIT WO1-4R.
- ② IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ③ BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS  
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER 1/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
		1	2	3	4	5	6	7	8	9	
25	200	5	10	16	21	26	31	36	42	47	55
30	200	8	15	23	30	38	45	53	60	68	85
35	350	10	20	31	41	51	61	71	82	92	120
40	350	13	27	40	53	67	80	93	107	120	170
45	500	23	45	68	90	113	135	158	180	203	220



**TRAFFIC CONTROL, PARTIAL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION










APPROVED  
May 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

SDD 15D40 - 04c

SDD 15D40 - 04c

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

**GENERAL NOTES**

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

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

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

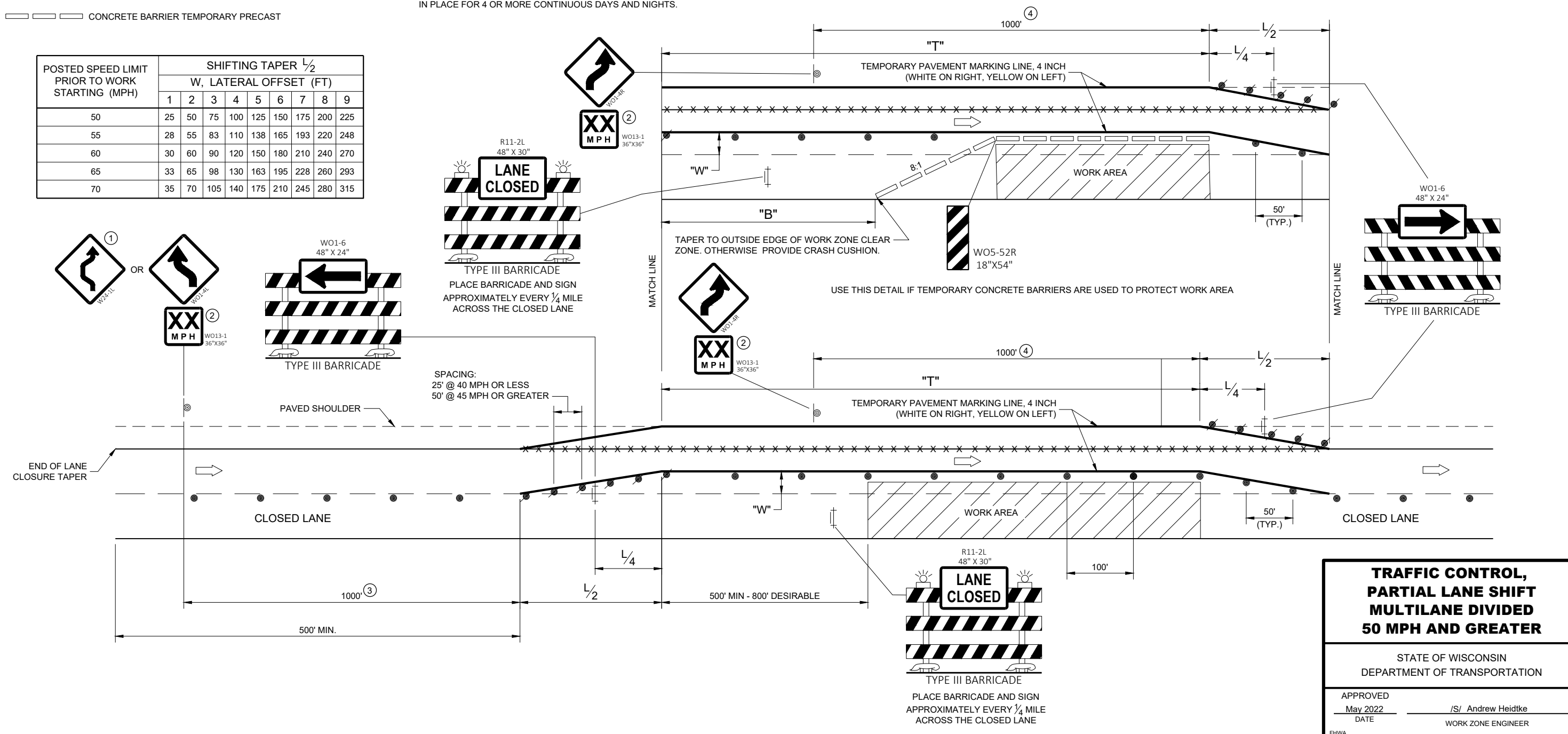
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

- ① USE ONLY WHEN T<600', OMIT WO1-4R.
- ② IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ③ IF THE BEGINNING OF LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.
- ④ IF THE BEGINNING OF THE SECOND LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF THE FIRST LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE FIRST LANE CLOSURE TAPER.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER 1/2 W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
50	25	50	75	100	125	150	175	200	225
55	28	55	83	110	138	165	193	220	248
60	30	60	90	120	150	180	210	240	270
65	33	65	98	130	163	195	228	260	293
70	35	70	105	140	175	210	245	280	315



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SDD 15D40 - 04d

SDD 15D40 - 04d








**TRAFFIC CONTROL,  
PARTIAL LANE SHIFT  
MULTILANE DIVIDED  
50 MPH AND GREATER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED \_\_\_\_\_  
DATE May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER $L/2$					
		W, LATERAL OFFSET (FT)					
		3	4	5	6	7	8
25	200	10	14	17	21	24	28
30	200	15	20	25	30	35	40
35	350	20	27	34	40	47	54
40	350	26	35	44	53	62	70
45	500	45	59	74	89	104	119
50	500	50	66	83	99	116	132
55	500	54	73	91	109	127	145

**GENERAL NOTES**

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

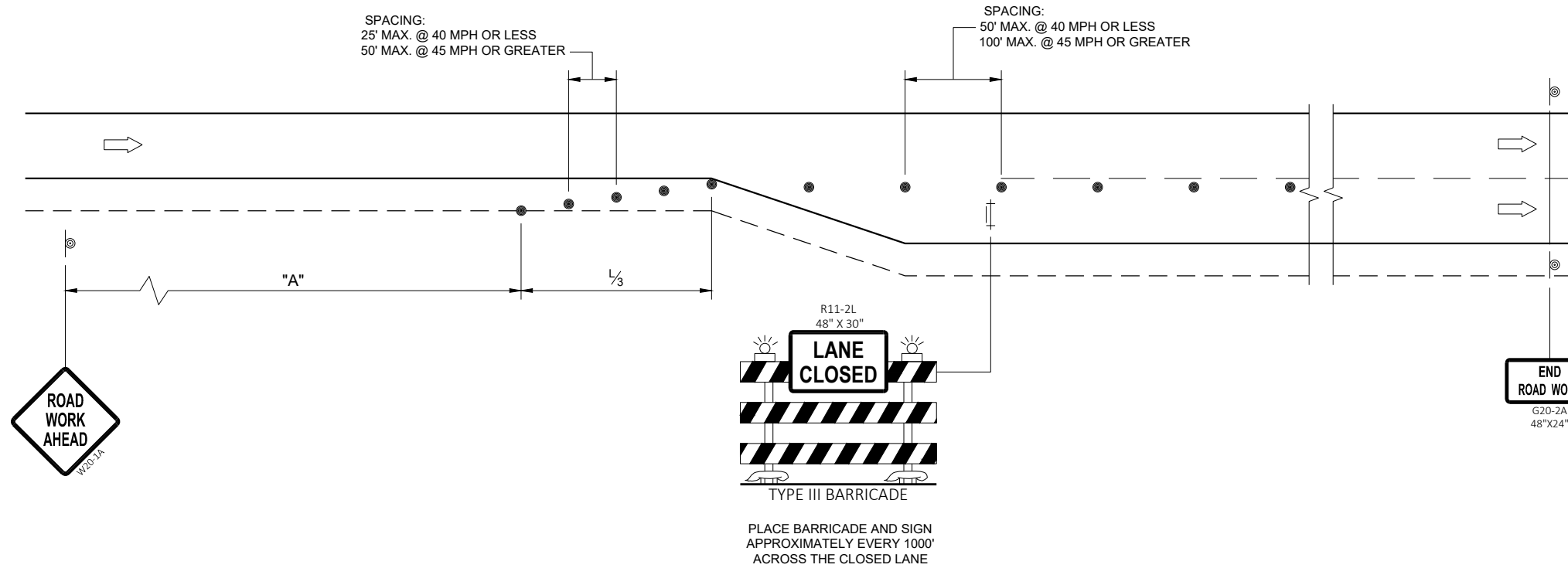
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

W20-1 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 WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.



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





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SDD 15D50 - 02a

SDD 15D50 - 02a

<b>TRAFFIC CONTROL ADDED LANE CLOSURE WITHOUT LANE SHIFT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER (L/2) FEET
25	200	60
30	200	90
35	350	120
40	350	160
45	500	270
50	500	300
55	500	330

**GENERAL NOTES**

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

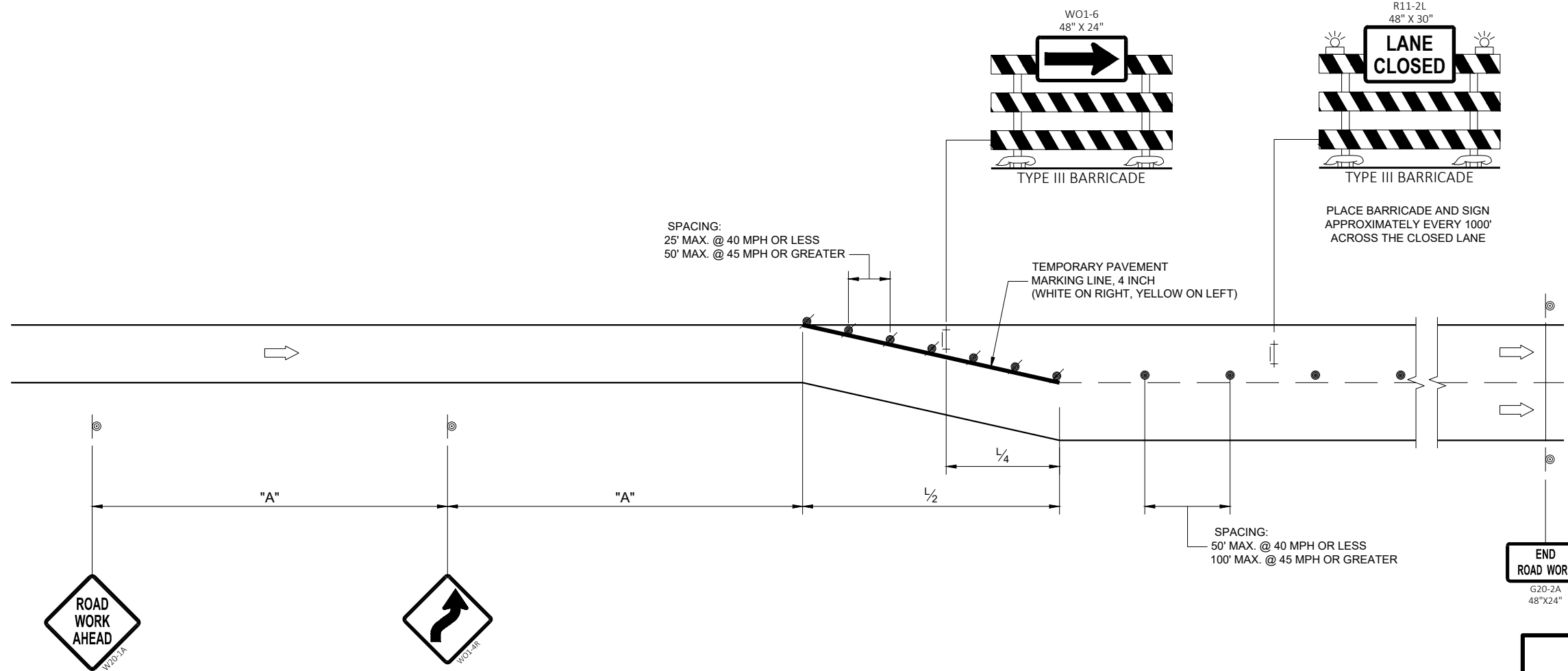
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1 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 WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

PLACE TEMPORARY PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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SDD 15D50 - 02b

SDD 15D50 - 02b

**TRAFFIC CONTROL,  
ADDED LANE CLOSURE  
WITH LANE SHIFT**

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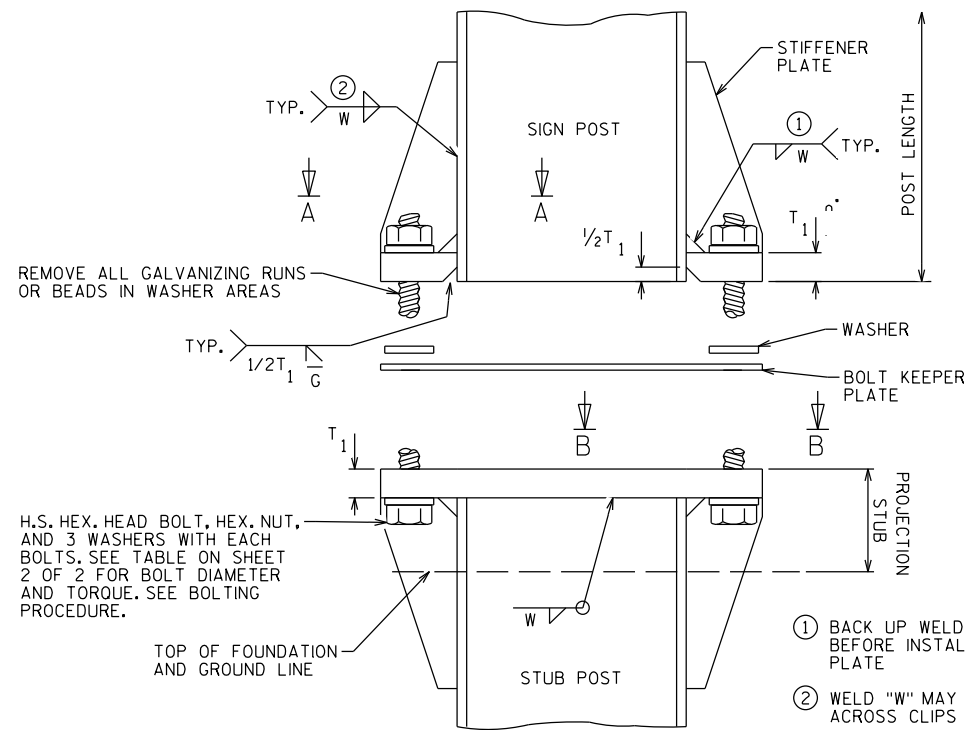
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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APPROVED  
February 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

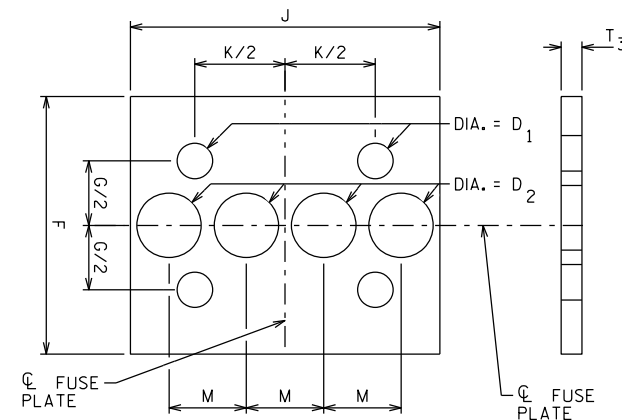
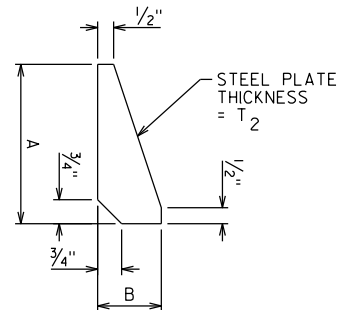
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FHWA



SIGN POST & STUB POST ELEVATION

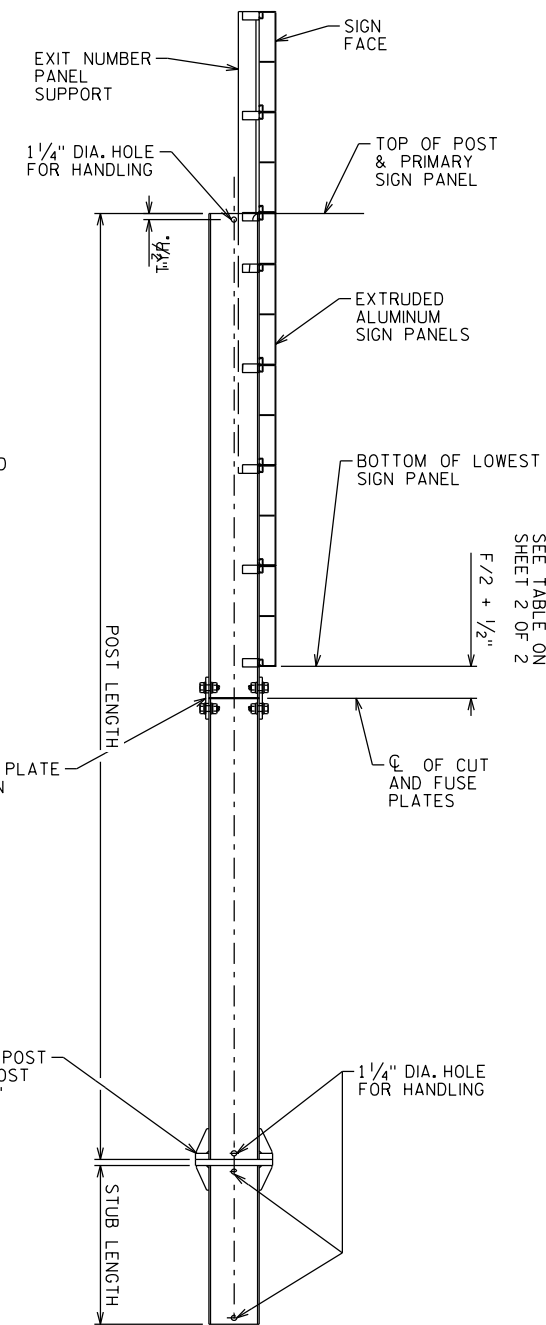
STIFFENER PLATE DETAIL  
(REFER TO TABLE ON SHEET 2 OF 2 FOR DIMENSIONS)



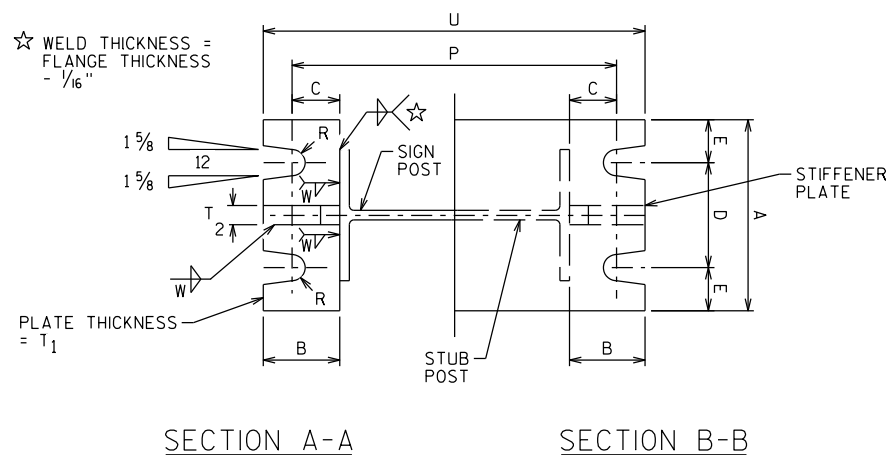
PERFORATED FUSE PLATE DETAIL

USE H.S. HEX HEAD BOLTS, HEX HEAD NUT AND FLAT WASHER UNDER NUT. INSTALL BOLTS PER THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION SECTION 506.3.12.3.

ALL HOLES SHALL BE DRILLED, SUB-PUNCHED AND REAMED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS. HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36, ASTM A572 GRADE 50 OR ASTM A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. MILL TEST REPORTS SHALL BE SUBMITTED FOR FUSE PLATES. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.

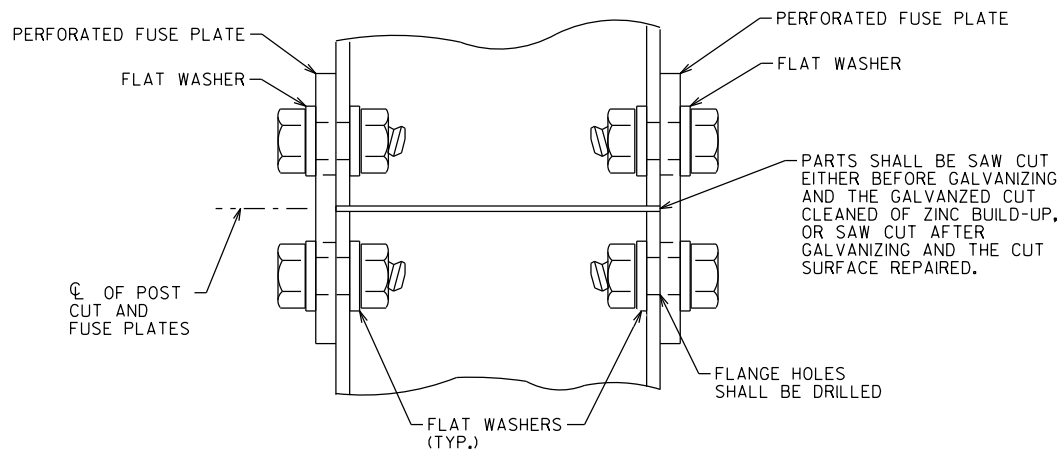


POST DETAIL

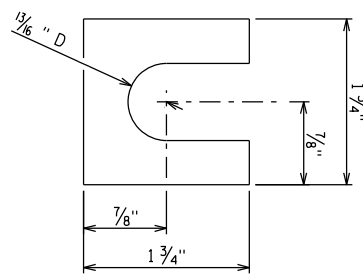


SECTION A-A

SECTION B-B

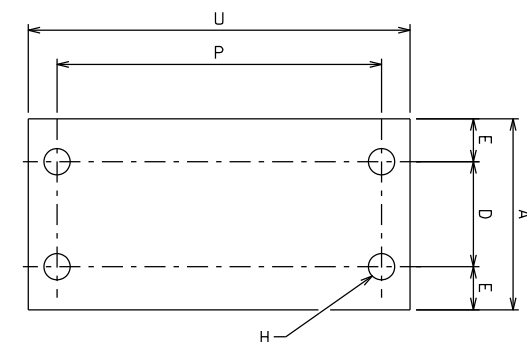


FUSE PLATE CONNECTION DETAIL



SHIM DETAIL

FURNISH TWO .012"± THICK AND TWO .032"± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO ASTM B36.



BOLT KEEPER PLATE DETAIL

30 GA GALVANIZED SHEET STEEL

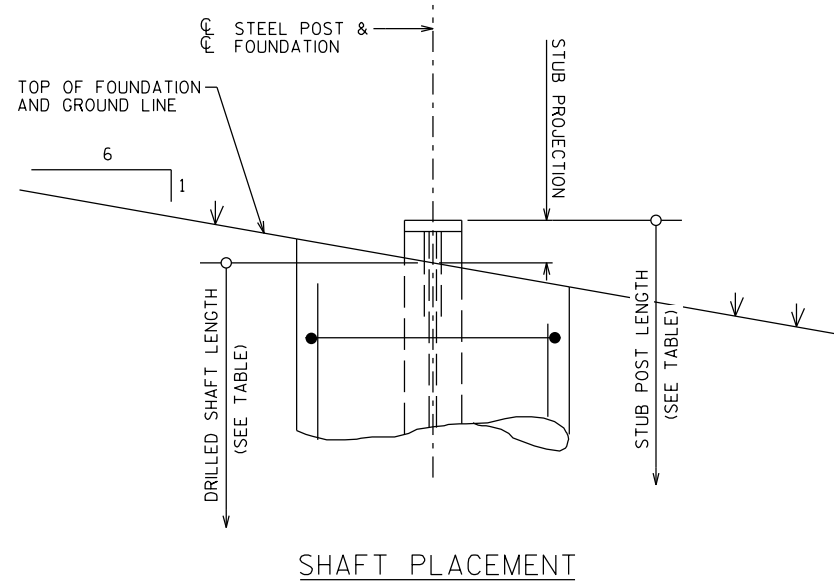
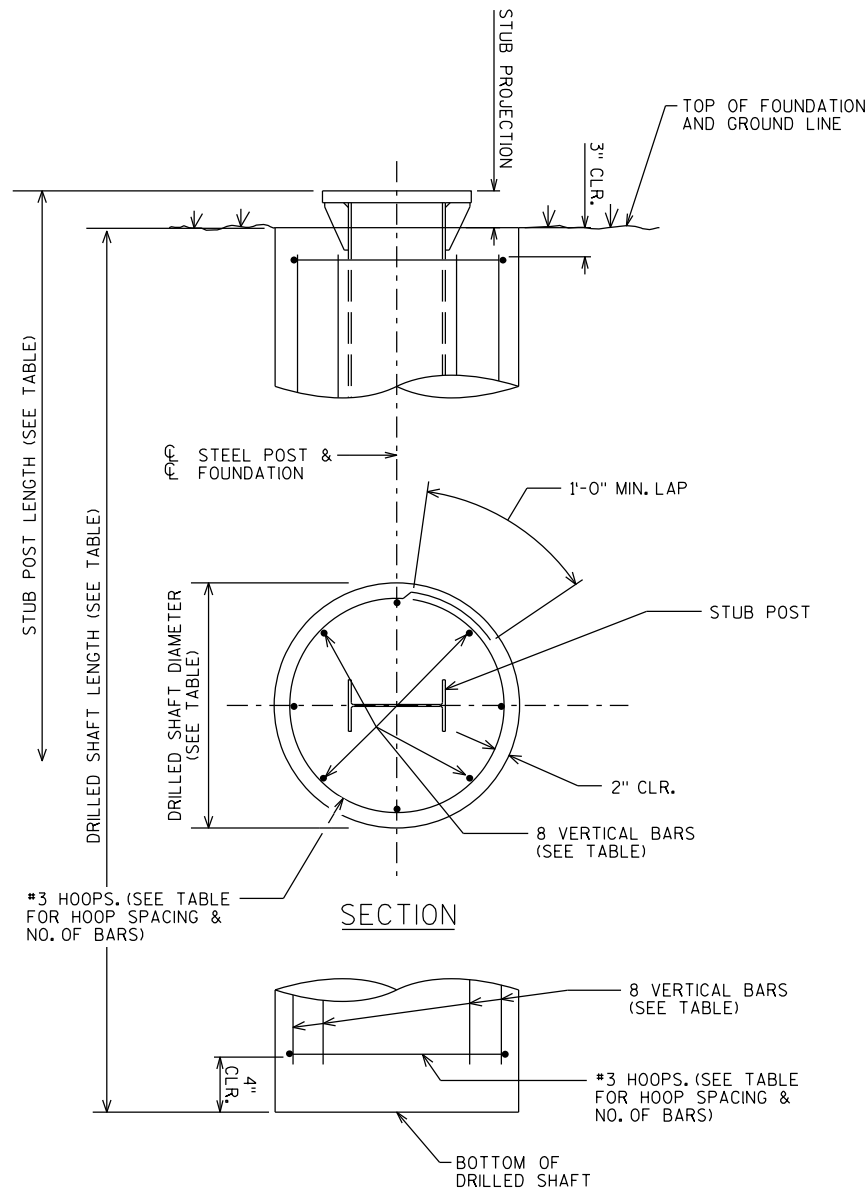
$H = \text{BOLT DIA.} + 1/8"$

**BOLTING PROCEDURE FOR BASE CONNECTION**

1. ASSEMBLE SIGN POST, BOLT KEEPER PLATE, AND STUB POST WITH BOLTS AND THREE FLAT WASHERS PER BOLT AS SHOWN.
2. SHIM AS REQUIRED TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING, LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH A 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS.
5. LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PERSCRIBED TORQUE. (SEE TABLE FOR PERSCRIBED TORQUE). DO NOT OVER-TIGHTEN.
6. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE BTO TYPE I SIGNS			
		DRAWN BY	PLANS CK'D.
CONNECTION & FOUNDATION DETAILS 1 OF 2			SHEET A3-120





**FOUNDATION DATA TABLE**

POST SHAPE	STUB LENGTH	STUB PROJECTION	DRILLED SHAFT DIAMETER	DRILLED SHAFT LENGTH	VERTICAL BARS		HOOPS		CONCRETE VOLUME	TOTAL REINF. WEIGHT
					SIZE	LENGTH	MAX SPA.	NO.		
W6X15	2'-6"	3"	24"	6'-6"	#5	5'-11"	10"	9	0.8 CY	71 LB
W8X18	2'-6"	3"	24"	7'-6"	#6	6'-11"	12"	8	0.9 CY	102 LB
W8X21	3'-0"	2 1/2"	24"	8'-0"	#6	7'-5"	12"	9	1.0 CY	110 LB
W10X22	3'-0"	2 1/2"	24"	8'-6"	#7	7'-11"	12"	9	1.0 CY	151 LB
W12X26	3'-0"	2 1/2"	24"	10'-0"	#7	9'-5"	12"	11	1.2 CY	180 LB

◆ QUANTITIES SHOWN ARE FOR ONE DRILLED SHAFT

**BASE CONNECTION & FUSE PLATE DATA TABLE**

POST SHAPE	WEIGHT PER FOOT	BOLT SIZE & TORQUE	BASE CONNECTION DATA										BOLT KEEPER PLATE DATA		PERFORATED FUSE PLATE DATA										BOLT LENGTH	V
			A	B	C	D	E	T1	T2	W	R	P	U	F	G	J	K	M	D1	D2	T3	BOLT DIA.	WGT. EA. LBS			
W6X15	15 LB	5/8" DIA. X 4"	5"	2"	1/4"	2 3/4"	1/8"	1/4"	1/2"	1/4"	1/32"	8 1/2"	10"	5"	2 1/2"	6"	3 1/2"	1 1/2"	1/16"	1/4"	3/8"	5/8"	2.4	2	73.0 LB	
W8X18	18 LB	3/4" DIA. X 4"	5"	2"	1/4"	2 3/4"	1/8"	1/4"	1/2"	1/4"	1/32"	10 5/8"	12 1/8"	5"	2 1/2"	5 1/4"	2 3/4"	1 1/4"	1/16"	1/16"	3/8"	5/8"	2.0	2	83.0 LB	
W8X21	21 LB	3/4" DIA. X 4 3/4"	6"	2 1/4"	1 3/8"	3 1/2"	1/4"	1/2"	3/4"	5/16"	1/32"	11"	12 3/4"	5 1/2"	2 1/2"	5 1/4"	2 3/4"	1 1/4"	1/16"	1"	1/2"	3/4"	3.1	2 1/4"	124.0 LB	
W10X22	22 LB	3/4" DIA. X 4 3/4"	6"	2 1/4"	1 3/8"	3 1/2"	1/4"	1/2"	3/4"	5/16"	1/32"	12 7/8"	14 5/8"	6"	3"	5 3/4"	2 3/4"	1 3/8"	1/16"	1/8"	1/2"	3/4"	3.9	2 1/4"	134.0 LB	
W12X26	26 LB	3/4" DIA. X 4 3/4"	6"	2 1/4"	1 3/8"	3 1/2"	1/4"	1/2"	3/4"	5/16"	1/32"	15"	16 3/4"	6"	3"	6 1/2"	3 1/2"	1 5/8"	1/16"	1 5/16"	1/2"	3/4"	4.5	2 1/4"	152.0 LB	

◆ TOTAL STRUCTURAL CARBON STEEL WEIGHT FOR ONE POST = V + (POST LENGTH X POST WEIGHT PER FOOT)

"V" INCLUDES STUB POST, BASE PLATES, STIFFENER PLATES, PERFORATED FUSE PLATES, BOLTS, NUTS, AND WASHERS.

**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED

MATERIALS SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506, UNLESS NOTED OTHERWISE.

FABRICATION SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506.

ALL POST, POST STUBS & ATTACHMENTS SHALL BE ASTM A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.

THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST, FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.

H.S. BOLTS, WASHERS, & NUTS SHALL BE A325 GALVANIZED.

**FOUNDATION MATERIAL PROPERTIES**

CONCRETE MASONRY F'C = 3,500 P.S.I.

BAR STEEL REINFORCEMENT (UNCOATED), GRADE 60 F<sub>y</sub> = 60,000 P.S.I.

**DESIGN DATA**

DESIGN CONFORMS TO AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 1ST EDITION 2015 (WITH 2017 & 2018 INTERIM REVISIONS).

- DEAD LOADS (DL):**
- STEEL POST SELF WEIGHT
  - SIGN PANEL WEIGHT = 3 PSF
- WIND LOADS (WL):**
- WIND LOADS WERE APPLIED TO THE PROJECTED AREAS OF THE SIGN PANELS AND THE STEEL SIGN POSTS.
- BASIC WIND SPEED = 76 MPH
  - MEAN RECURRENT INTERVAL (MRI) = 10 YEARS
  - HEIGHT & EXPOSURE FACTOR = 1.00
  - DIRECTIONALITY FACTOR = 0.85
  - GUST EFFECT FACTOR = 1.14
- WIND LOAD CASES:**
- WL CASE 1: 1.0 X NORMAL WIND
  - WL CASE 2: 1.0 X TRANSVERSE WIND
  - WL CASE 3: 0.75 X NORMAL WIND + 0.75 X TRANSVERSE WIND

**LOAD COMBINATIONS:**

LOAD COMBINATION	TYPE	DL FACTOR	WL FACTOR
STRENGTH I	GRAVITY	1.25	-
EXTREME I	WIND	1.10	1.0
		0.9	1.0
SERVICE I	DEFLECTION	1.0	1.0

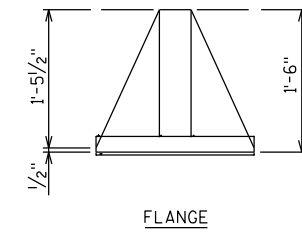
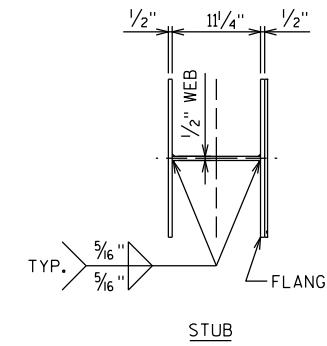
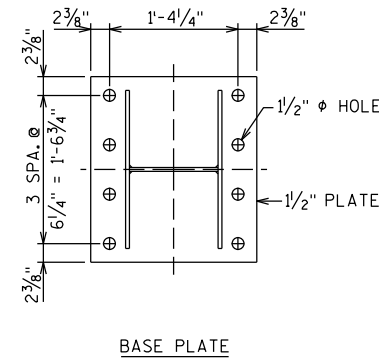
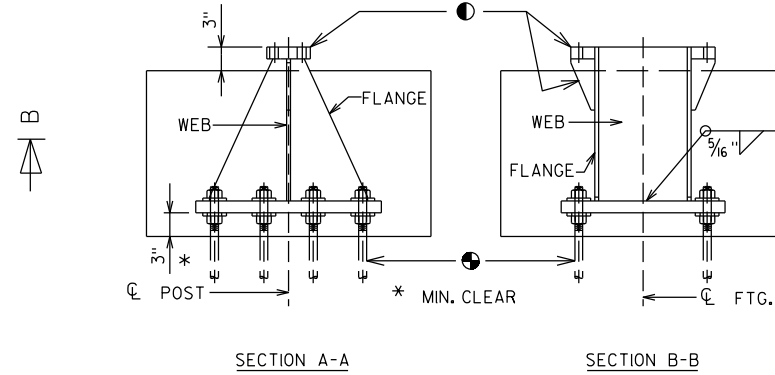
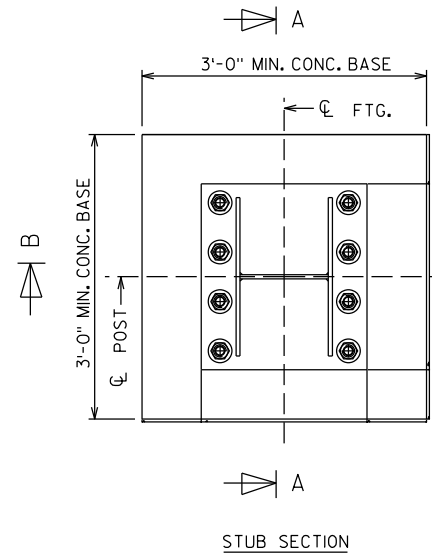
**FOUNDATION DESIGN DATA**

THE FOUNDATION DESIGN ASSUMED COHESIONLESS SOILS (LOOSE SAND) ABOVE THE WATER TABLE WITH THE FOLLOWING PROPERTIES:

- SOIL UNIT WEIGHT = 115 PCF
- ANGLE OF INTERNAL FRICTION = 24 DEGREES
- SOIL MODULUS PARAMETER = 25 LB/IN<sup>3</sup>

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE BTO TYPE I SIGNS			
DRAWN BY		PLANS CK'D.	
CONNECTION & FOUNDATION DETAILS 2 OF 2		SHEET A3-1.20	

STUB AND ADHESIVE ANCHOR DETAILS



- SEE BASE CONNECTION DETAILS ON "CONNECTIONS & FOUNDATION DETAILS" SHEETS.
- ADHESIVE ANCHORS 1/4"-INCHES. ALLOWABLE PULL OUT CAPACITY = 15 KIPS. EMBED 1'-3" INTO ROCK.

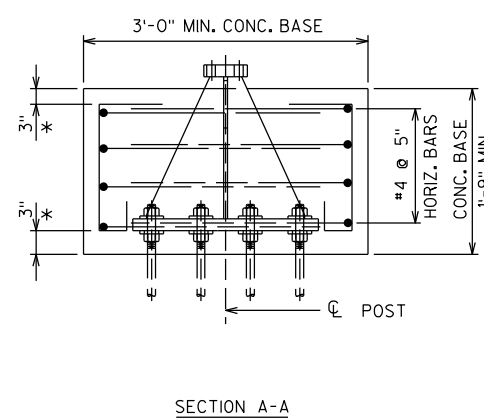
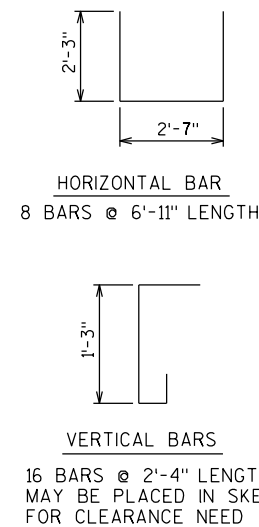
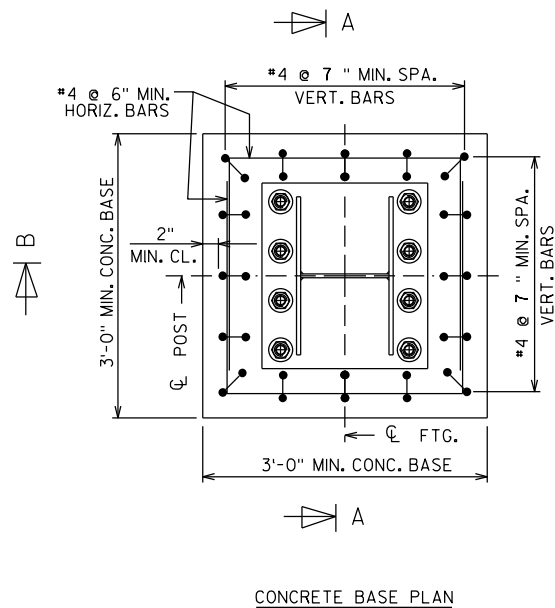
GENERAL NOTES:

QUANTITIES PER BASE:  
 REINFORCING STEEL = 62 LB  
 CONCRETE = 0.6 CY  
 STRUCTURAL STEEL = 335 LB

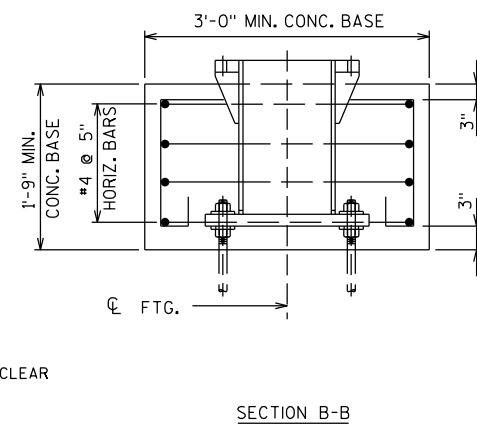
ALL MATERIALS, EXCEPT FOR ANCHOR ROD, NUTS, AND WASHERS, SHALL BE ASTM A709 GRADE 50. ALL MATERIALS TO BE GALVANIZED AFTER FABRICATION.

IF ROCK IS ENCOUNTERED PRIOR TO REACHING THE MINIMUM DRILLED SHAFT EMBEDMENT DEPTH DEFINED ON THE FOUNDATION DATA TABLE OF THE "CONNECTIONS & FOUNDATION DETAILS 2 OF 2" SHEET, THE CONTRACTOR SHALL INSTALL A TEST ADHESIVE ANCHOR AND DETERMINE THE PULL-OUT CAPACITY. IF THE FIELD TEST RESULTS IN A PULL-OUT CAPACITY GREATER THAN OR EQUAL TO 15 KIPS, THE CONTRACTOR MAY INSTALL THE ALTERNATE CONCRETE BASE AND BREAK-WAY STUB PER THE DETAILS ON THIS SHEET.

CONCRETE BASE DETAILS



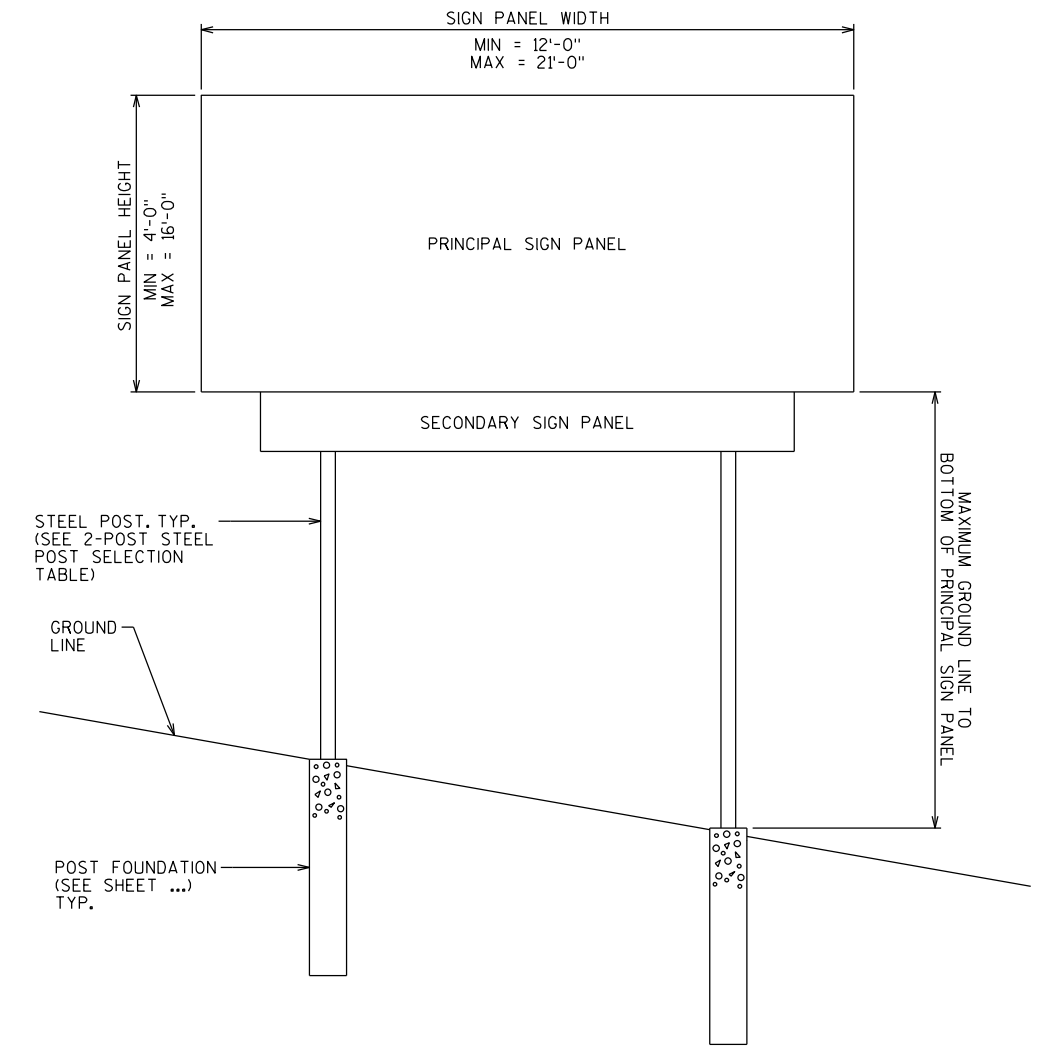
\* MIN. CLEAR



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE BTO TYPE I SIGNS			
		DRAWN BY	PLANS CK'D.
ALTERNATE BREAK-AWAY BASE ON ROCK			SHEET A3-1M.2

2-POST STEEL POST SELECTION TABLE

		MAXIMUM GROUND LINE TO BOTTOM OF PRINCIPAL SIGN PANEL												SIGN PANEL WIDTH													
		16'	15'	14'	13'	12'	11'	10'	9'	8'	7'	6'	5'	4'	3'	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"
SIGN PANEL HEIGHT	14'	15'	16'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	13'	14'	15'	16'	-	-	-	-	-	-	-	-	-	-	W12X26	-	-	-	-	-	-	-	-	-	-	-	-
	12'	13'	14'	15'	16'	-	-	-	-	-	-	-	-	-	W12X26	W12X26	W12X26	-	-	-	-	-	-	-	-	-	-
	11'	12'	13'	14'	15'	16'	-	-	-	-	-	-	-	-	W12X26	W12X26	W12X26	W12X26	-	-	-	-	-	-	-	-	-
	10'	11'	12'	13'	14'	15'	16'	-	-	-	-	-	-	-	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	-	-	-	-	-	-	-
	9'	10'	11'	12'	13'	14'	15'	16'	-	-	-	-	-	-	W10X22	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	-	-	-	-	-
	8'	9'	10'	11'	12'	13'	14'	15'	16'	16'	16'	16'	16'	16'	W8X21	W10X22	W10X22	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	-	-	
	7'	8'	9'	10'	11'	12'	13'	14'	15'	15'	15'	15'	15'	15'	W8X21	W8X21	W8X21	W10X22	W10X22	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	-	
	6'	7'	8'	9'	10'	11'	12'	13'	14'	14'	14'	14'	14'	14'	W8X21	W8X21	W8X21	W8X21	W10X22	W10X22	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	
	5'	6'	7'	8'	9'	10'	11'	12'	13'	13'	13'	13'	13'	13'	W8X18	W8X18	W8X21	W8X21	W10X22	W10X22	W10X22	W12X26	W12X26	W12X26	W12X26	W12X26	
	4'	5'	6'	7'	8'	9'	10'	11'	12'	12'	12'	12'	12'	12'	W6X15	W8X18	W8X18	W8X18	W8X21	W10X22	W10X22	W10X22	W12X26	W12X26	W12X26	W12X26	
	-	4'	5'	6'	7'	8'	9'	10'	11'	11'	11'	11'	11'	11'	W6X15	W6X15	W8X18	W8X18	W8X21	W8X21	W10X22	W10X22	W10X22	W12X26	W12X26	W12X26	
	-	-	4'	5'	6'	7'	8'	9'	10'	10'	10'	10'	10'	10'	W6X15	W6X15	W8X18	W8X18	W8X18	W8X21	W8X21	W10X22	W10X22	W10X22	W12X26	W12X26	
	-	-	-	4'	5'	6'	7'	8'	9'	9'	9'	9'	9'	9'	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X21	W8X21	W10X22	W10X22	W10X22	W12X26	
	-	-	-	-	4'	5'	6'	7'	8'	8'	8'	8'	8'	8'	W6X15	W6X15	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X21	W8X21	W10X22	W10X22	
	-	-	-	-	-	4'	5'	6'	7'	7'	7'	7'	7'	7'	W6X15	W6X15	W6X15	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X21	W8X21	W10X22	
-	-	-	-	-	-	4'	5'	6'	6'	6'	6'	6'	6'	W6X15	W6X15	W6X15	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X21	W8X21	W10X22		
-	-	-	-	-	-	-	4'	5'	5'	5'	5'	5'	5'	W6X15	W6X15	W6X15	W6X15	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X21	W8X21		
-	-	-	-	-	-	-	-	4'	4'	4'	4'	4'	4'	W6X15	W6X15	W6X15	W6X15	W6X15	W6X15	W6X15	W6X15	W8X18	W8X18	W8X18	W8X18		



STEEL POST SELECTION NOTES:

USE PROPOSED SIGN PANEL DIMENSIONS AND THE MAXIMUM HEIGHT FROM THE GROUND LINE TO THE BOTTOM OF THE PRINCIPAL SIGN PANEL TO DETERMINE THE MINIMUM REQUIRED STEEL POST SIZE.

"-" INDICATES THAT THERE IS NO STANDARD STEEL POST DESIGN FOR THE PROPOSED SIGN CONFIGURATION. CONTACT THE WISDOT BUREAU OF STRUCTURES TO REQUEST AN ANALYSIS AND DESIGN FOR THE PROPOSED SIGN CONFIGURATION.

IF THE MAXIMUM PROPOSED HEIGHT FROM THE GROUND LINE TO BOTTOM OF SIGN PANEL IS NOT IN A 1-FOOT INCREMENT, SELECT THE MINIMUM REQUIRED STEEL POST SIZE BASED ON THE NEXT LARGEST 1-FOOT INCREMENT. (FOR EXAMPLE, IF THE PROPOSED GROUND LINE TO BOTTOM OF SIGN PANEL HEIGHT IS 14'-2", SELECT THE POST SIZE BASED ON A GROUND LINE TO BOTTOM OF SIGN PANEL HEIGHT OF 15'-0").

IF A PROPOSED SIGN PANEL HEIGHT DIMENSION IS IN A 6" INCREMENT, SELECT THE MINIMUM REQUIRED STEEL POST SIZE THAT FALLS WITHIN THE NEXT LARGEST 1-FOOT INCREMENT. (FOR EXAMPLE, IF THE REQUIRED SIGN PANEL HEIGHT IS 12'-6", SELECT THE POST SIZE BASED ON A SIGN PANEL HEIGHT OF 13'-0")

FOR PROPOSED SIGN CONFIGURATIONS WHERE THE POST HEIGHTS VARY, SELECT THE STEEL POST SIZE BASED ON THE MAXIMUM DIMENSION FROM THE GROUND LINE TO THE BOTTOM OF PRINCIPAL SIGN PANEL. (FOR EXAMPLE, IF THE DIMENSION FROM THE GROUND LINE TO THE BOTTOM OF THE PRINCIPAL SIGN PANEL IS 8- FEET FOR ONE POST AND 10- FEET FOR THE SECOND POST, SELECT THE POST SIZE BASED ON THE 10- FOOT DIMENSION.)

2-POST SIGN CONFIGURATION

7

7

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE BTO TYPE I SIGNS			
DRAWN BY		PLANS CKD.	
2-POST SIGN CONFIGURATION		SHEET A3-2.7	

3-POST STEEL POST SELECTION TABLE

SIGN PANEL HEIGHT	MAXIMUM GROUND LINE TO BOTTOM OF PRINCIPAL SIGN PANEL										SIGN PANEL WIDTH																									
	14'	13'	12'	11'	10'	9'	8'	7'	6'	5'	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"	22'-0"	23'-0"	24'-0"	25'-0"	26'-0"	27'-0"	28'-0"	29'-0"	30'-0"	31'-0"	32'-0"	33'-0"	34'-0"	35'-0"	36'-0"	
16'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15'	16'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14'	15'	16'	-	-	-	-	-	-	-	-	W12X26	W12X26	W12X26	W12X26	W12X26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13'	14'	15'	16'	-	-	-	-	-	-	-	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12'	13'	14'	15'	16'	-	-	-	-	-	-	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11'	12'	13'	14'	15'	16'	-	-	-	-	-	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10'	11'	12'	13'	14'	15'	16'	-	-	-	-	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26		
9'	10'	11'	12'	13'	14'	15'	16'	-	-	-	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	
8'	9'	10'	11'	12'	13'	14'	15'	16'	-	-	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	
7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	-	W10X22	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	
6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	-	W10X22	W10X22	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26	W12X26
5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	-	W8X21	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22
4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	-	W8X21	W8X21	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22
-	4'	5'	6'	7'	8'	9'	10'	11'	12'	-	W8X18	W8X21	W8X21	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	
-	-	4'	5'	6'	7'	8'	9'	10'	11'	-	W8X18	W8X18	W8X21	W8X21	W8X21	W8X21	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	
-	-	-	4'	5'	6'	7'	8'	9'	10'	-	W8X18	W8X18	W8X18	W8X18	W8X21	W8X21	W8X21	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	W10X22	
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-	-	-	-	-	4'	5'	6'	7'	8'	-	W6X15	W6X15	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	W8X18	

SEE "2-POST SIGN CONFIGURATION" SHEET

STEEL POST SELECTION NOTES:

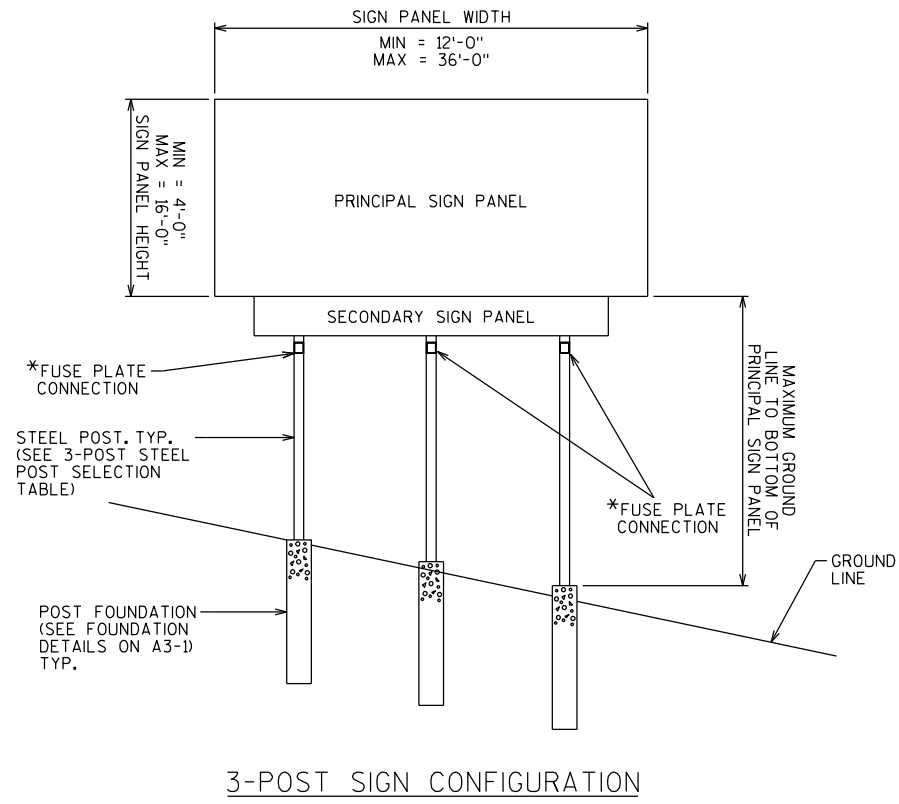
USE PROPOSED SIGN PANEL DIMENSIONS AND THE MAXIMUM HEIGHT FROM THE GROUND LINE TO THE BOTTOM OF THE PRINCIPAL SIGN PANEL TO DETERMINE THE MINIMUM REQUIRED STEEL POST SIZE.

"-" INDICATES THAT THERE IS NO STANDARD STEEL POST DESIGN FOR THE PROPOSED SIGN CONFIGURATION. CONTACT THE WISDOT BUREAU OF STRUCTURES TO REQUEST AN ANALYSIS AND DESIGN FOR THE PROPOSED SIGN CONFIGURATION.

IF A PROPOSED SIGN PANEL HEIGHT DIMENSION IS IN A 6" INCREMENT, SELECT THE MINIMUM REQUIRED STEEL POST SIZE THAT FALLS WITHIN THE NEXT LARGEST 1-FOOT INCREMENT. (FOR EXAMPLE, IF THE REQUIRED SIGN PANEL HEIGHT IS 12'-6", SELECT THE POST SIZE BASED ON A SIGN PANEL HEIGHT OF 13'-0")

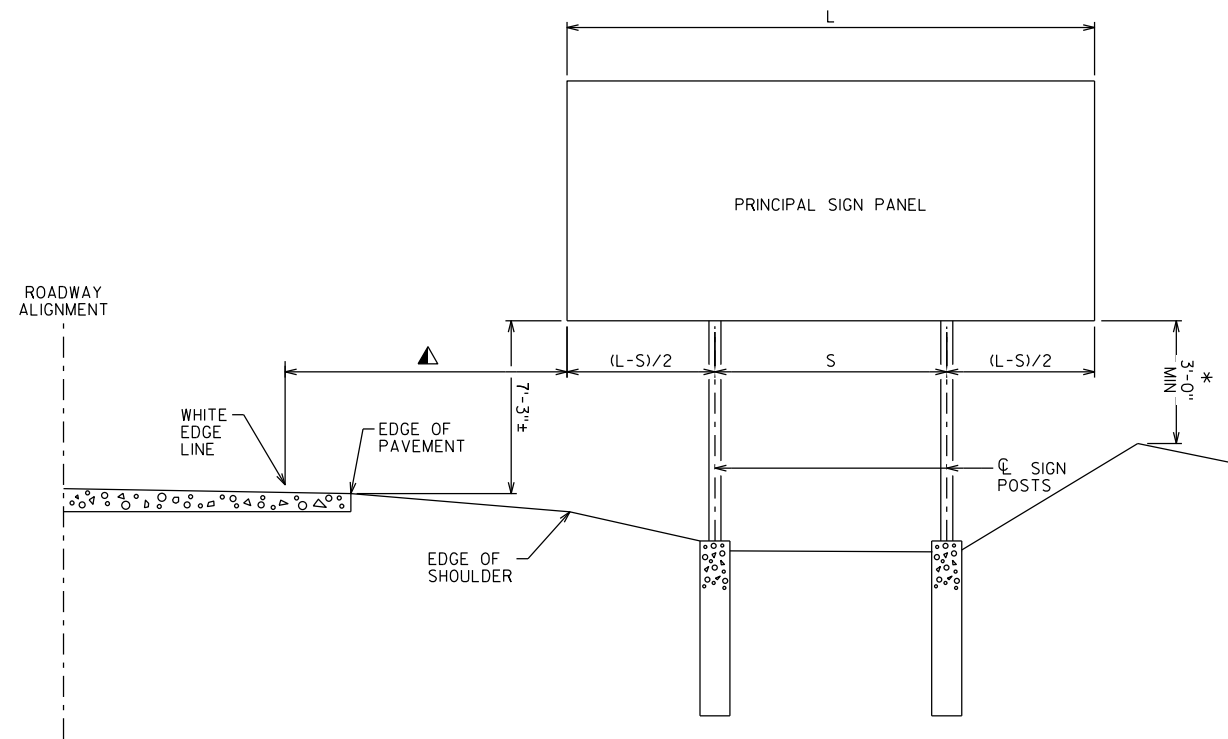
FOR PROPOSED SIGN CONFIGURATIONS WHERE THE POST HEIGHTS VARY, SELECT THE STEEL POST SIZE BASED ON THE MAXIMUM DIMENSION FROM THE GROUND LINE TO THE BOTTOM OF PRINCIPAL SIGN PANEL. (FOR EXAMPLE, IF THE DIMENSION FROM THE GROUND LINE TO THE BOTTOM OF THE PRINCIPAL SIGN PANEL IS 8- FEET FOR ONE POST AND 10- FEET FOR THE SECOND POST, SELECT THE POST SIZE BASED ON THE 10- FOOT DIMENSION.)

\*FUSE PLATE INSTALLED BELOW LOWEST SIGN PANEL AS SHOWN IN "POST DETAIL" IN A3-1.

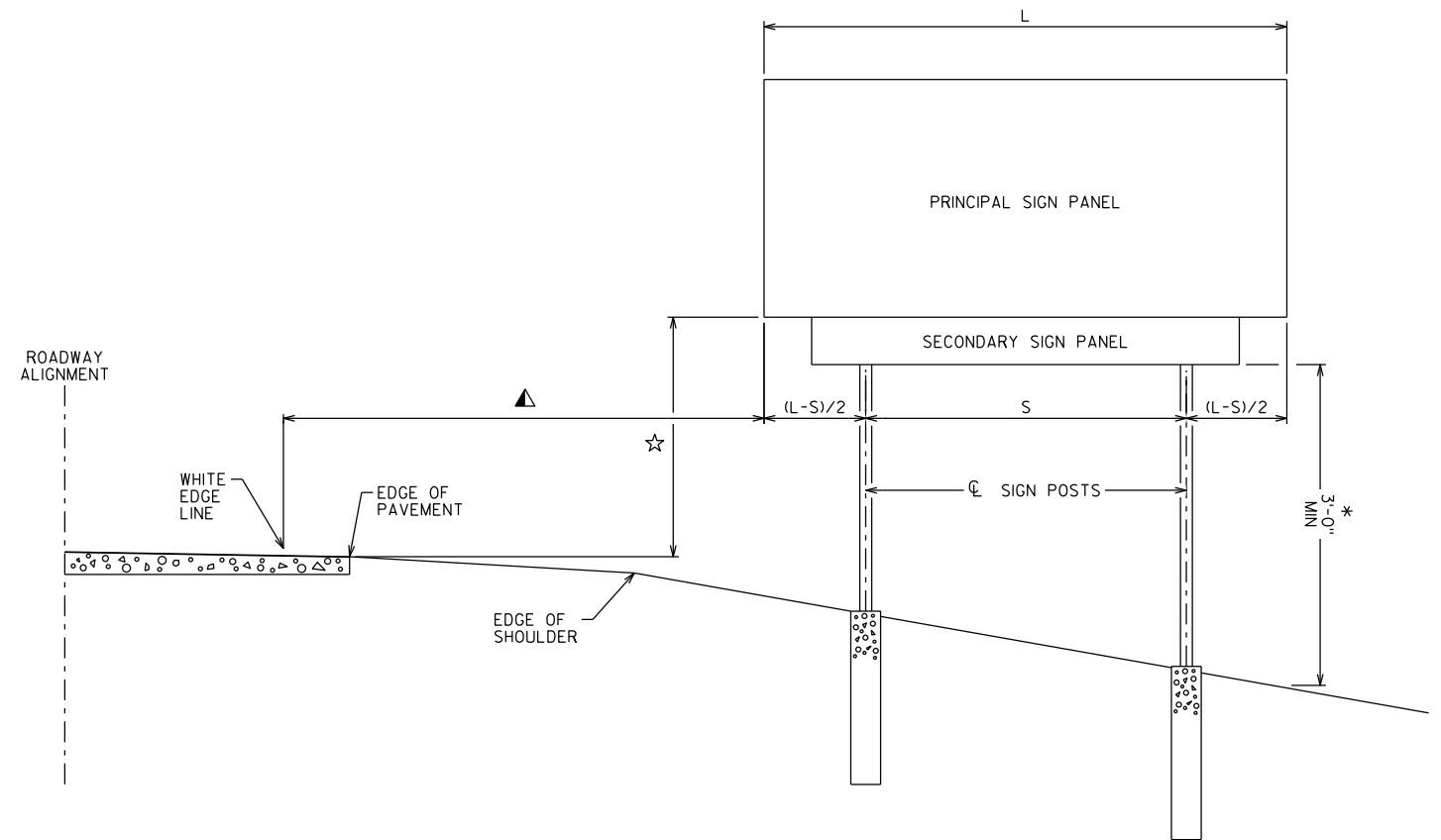


3-POST SIGN CONFIGURATION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE BTO TYPE I SIGNS			
DRAWN BY		PLANS CK'D.	
3-POST SIGN CONFIGURATION			SHEET A3-3.3



INSTALLATION WITHOUT SECONDARY SIGN



INSTALLATION WITH SECONDARY SIGN

TYPE 1 SIGN INSTALLATION NOTES:

FOR A 2-POST INSTALLATION, "S" EQUALS  $3L/5$ , BUT SHALL NOT BE LESS THAN 6'-0".

FOR A 3-POST INSTALLATION, "S" EQUALS  $5L/7$ , BUT SHALL NOT BE LESS THAN 12'-0". THE SPACING BETWEEN ANY TWO POSTS SHALL NOT BE LESS THAN 6'-0".

▲ UNLESS NOTED IN THE PLANS, THE SIGN OFFSET DISTANCE SHALL BE A MINIMUM OF 17'-6" FROM THE WHITE EDGE LINE, DESIRABLE 30'-0".

THE ± TOLERANCE SHOWN ON THIS SHEETS IS 3".

THE VERTICAL SIGN HEIGHT CLEARANCES SHOWN ON THIS SHEET ARE MEASURED FROM THE BOTTOM OF THE SIGN PANEL TO THE NEAR EDGE OF PAVEMENT.

☆ THE VERTICAL CLEARANCE SHALL BE 8'-3"± WHEN THE SECONDARY SIGN HEIGHT IS 3'-0" OR LESS, FOR SECONDARY SIGN HEIGHTS LARGER THAN 3'-0", THE VERTICAL CLEARANCE TO THE BOTTOM OF THE SECONDARY SIGN PANEL SHALL BE 5'-3"±.

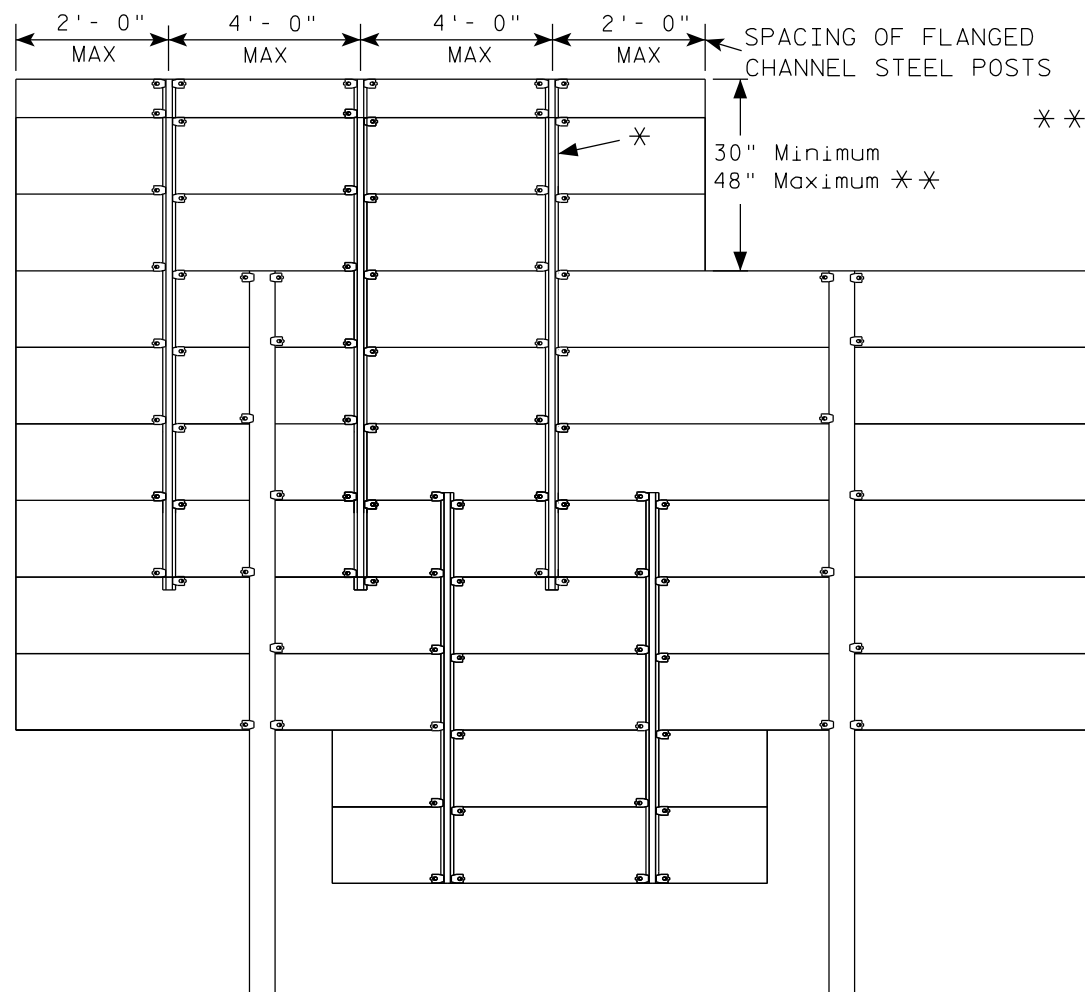
\* THE VERTICAL SIGN GROUND CLEARANCE ON RIGHT END OF SIGN SHALL BE A MINIMUM OF 3'-0"±.

POST LENGTHS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE ESTIMATED LENGTHS. THE CONTRACTOR SHALL VERIFY POST LENGTHS AT THE TIME OF FINAL GRADING.

REFER TO THE TRAFFIC ENGINEERING OPERATIONS AND SAFETY MANUAL FOR FURTHER GUIDANCE ON MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE BTO TYPE I SIGNS			
DRAWN BY		PLANS CK'D.	
TYPICAL TYPE I SIGN INSTALLATION			SHEET A4-1.10

# GROUND MOUNTED SIGN



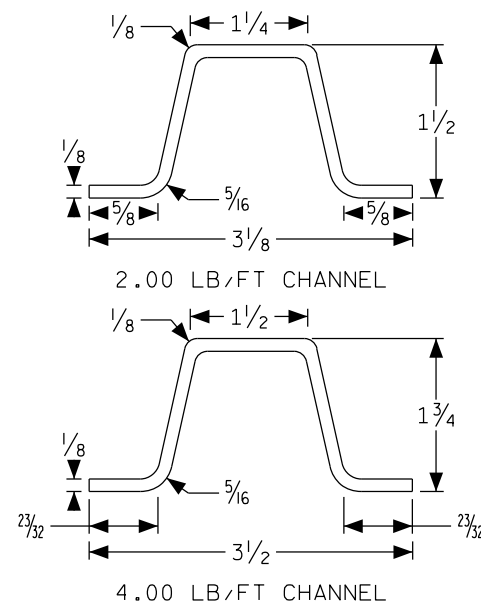
\* = 2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

\* \* = FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

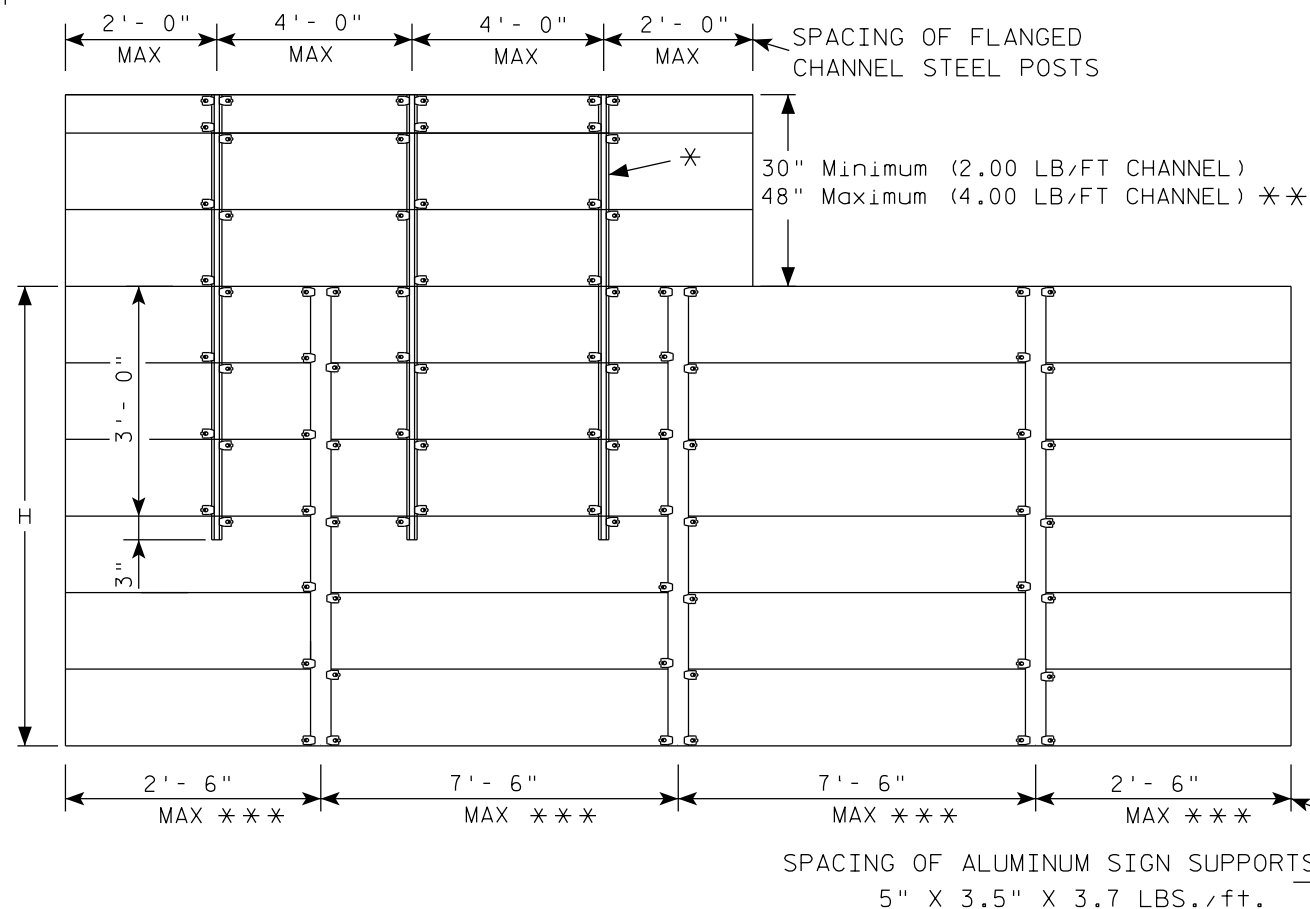
\* \* \* THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

## FLANGE CHANNEL DETAILS

NOT TO SCALE



# SIGN BRIDGE MOUNTED SIGN



## GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:  
 PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS  
 PANEL LENGTH 9'-0" - 12'-0" = 3 CHANNELS  
 PANEL LENGTH 13'-0" OR MORE = 4 CHANNELS  
 If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

## ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
 For State Traffic Engineer

DATE 1/07/20

PLATE NO. A4-6.12

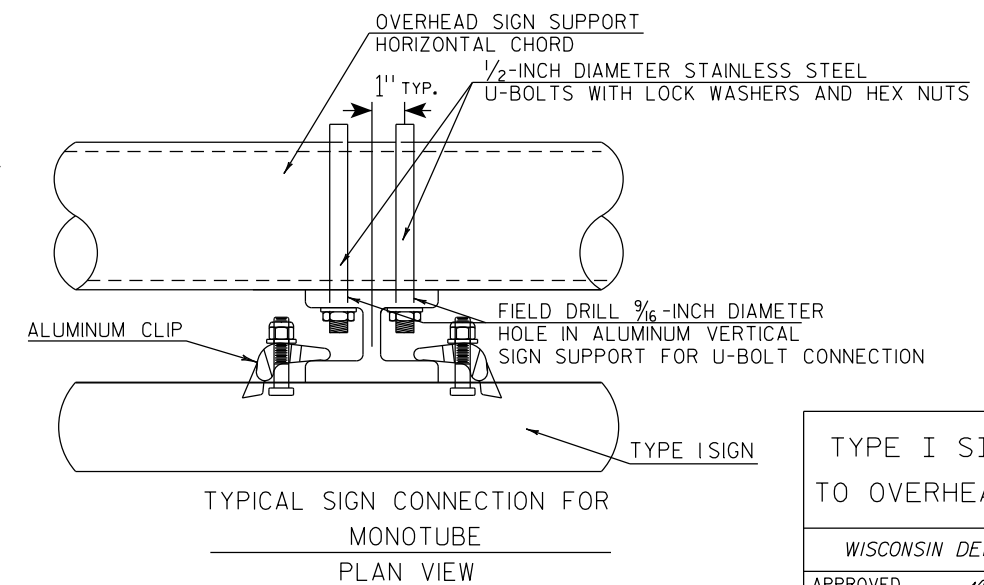
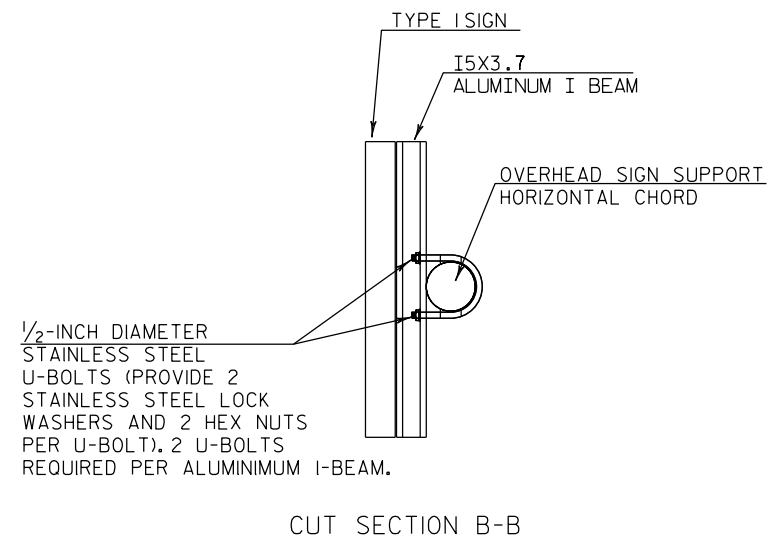
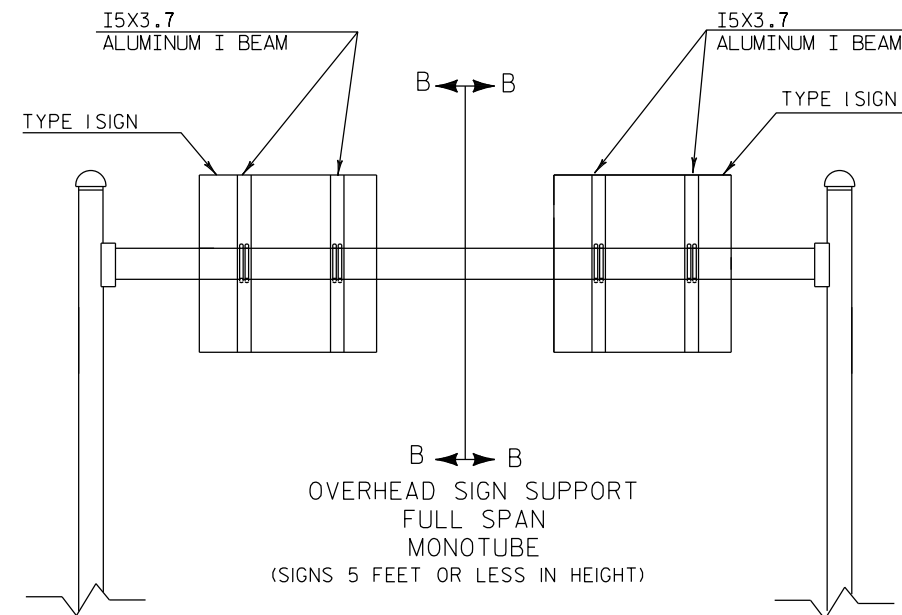
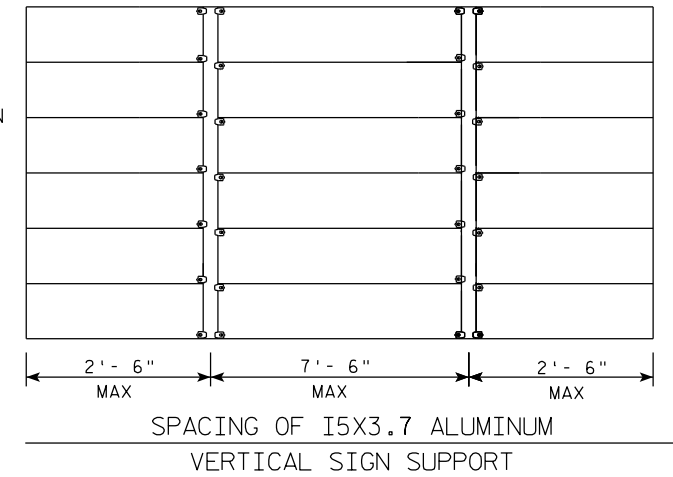
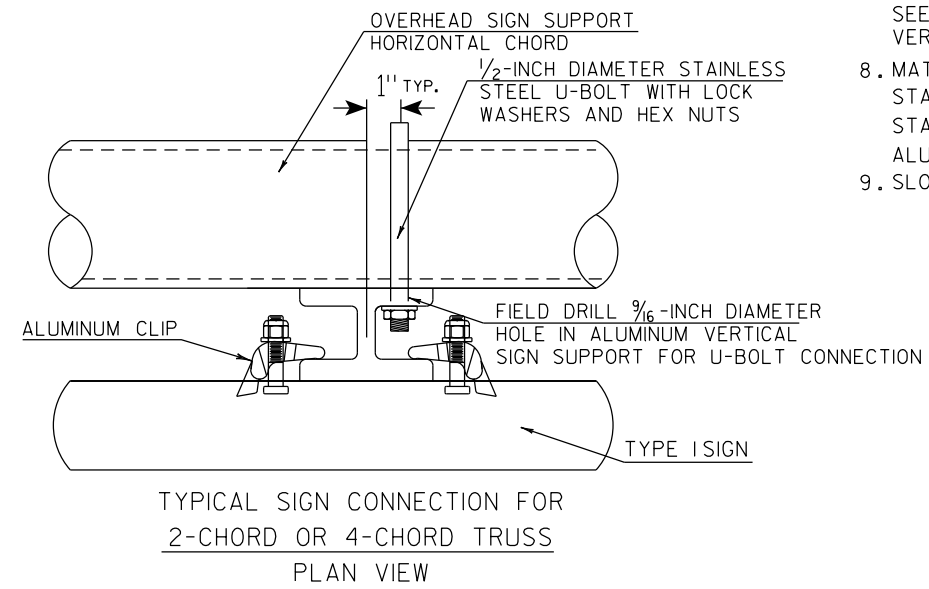
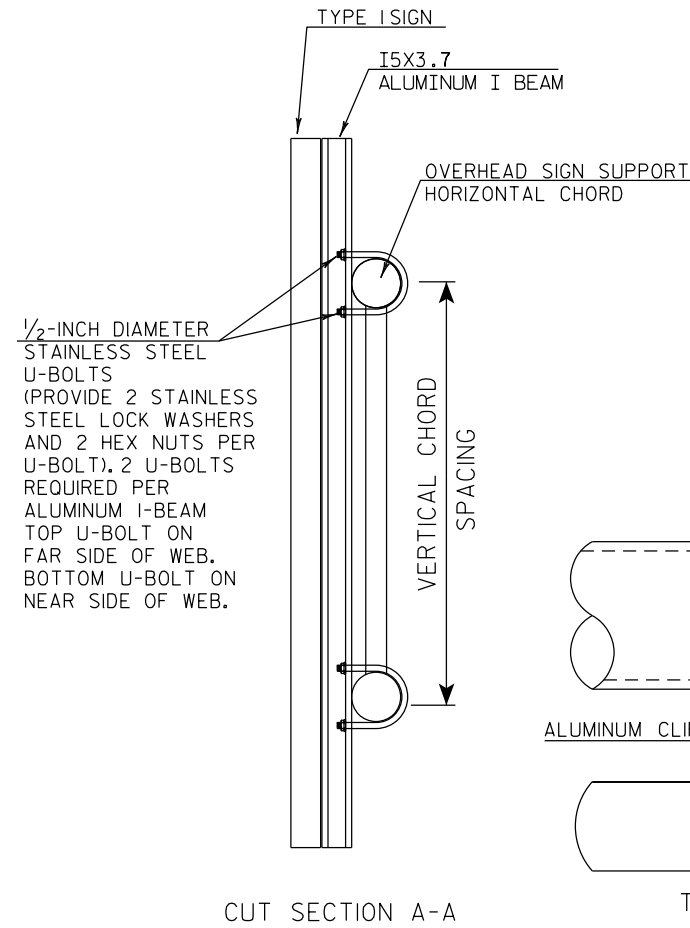
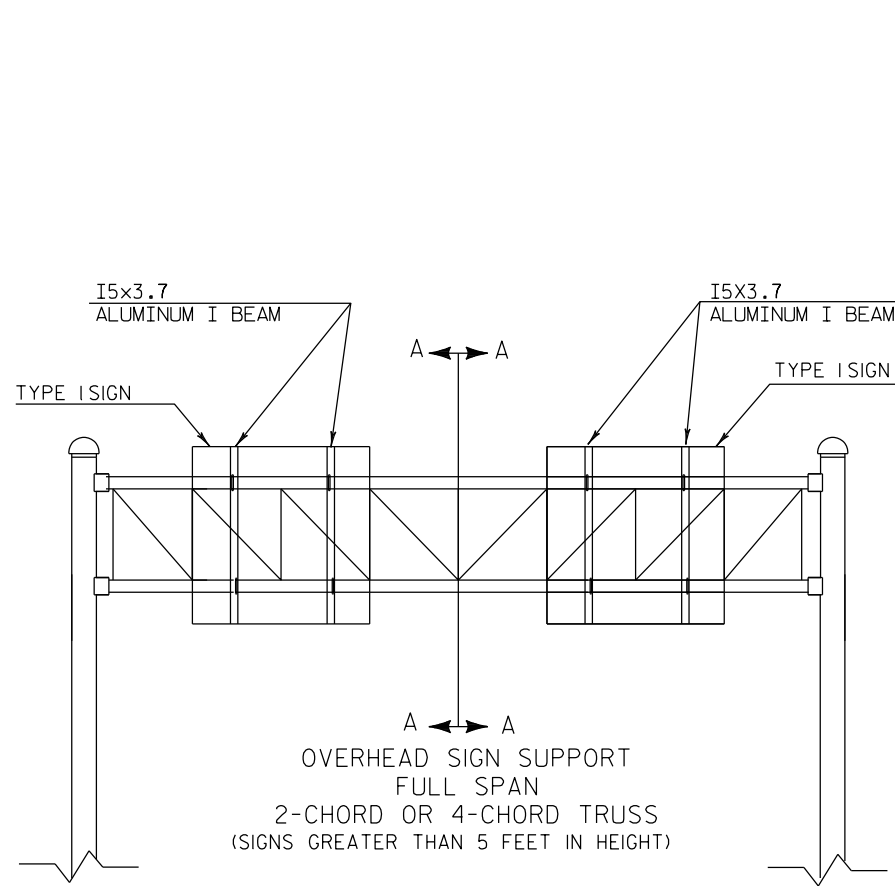
PROJECT NO:

SHEET NO:

E

GENERAL NOTES

1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:  
STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.  
STAINLESS STEEL HEX NUTS ASTM A276.  
ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

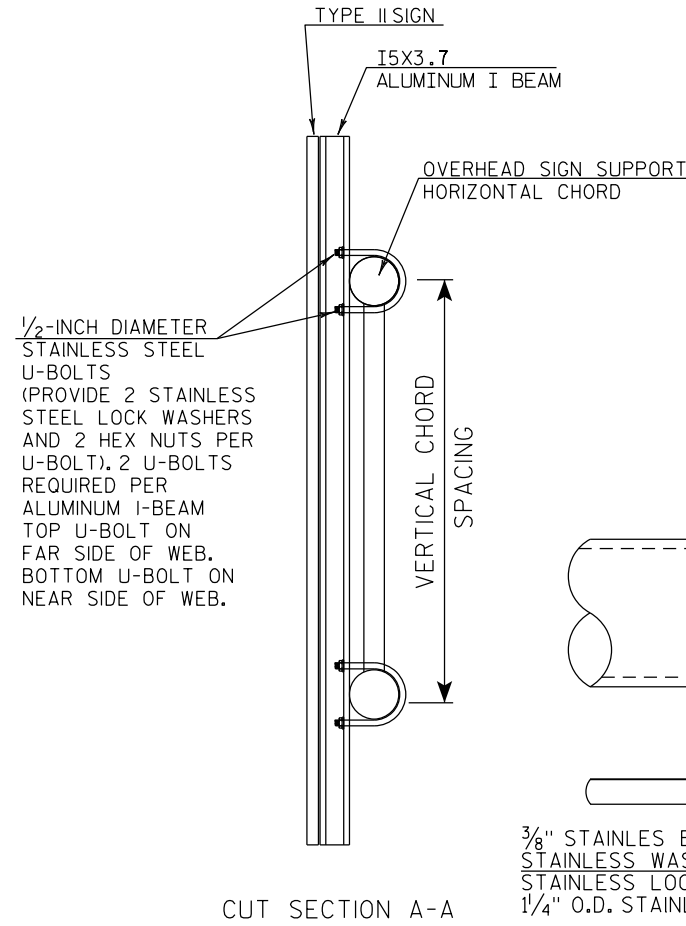
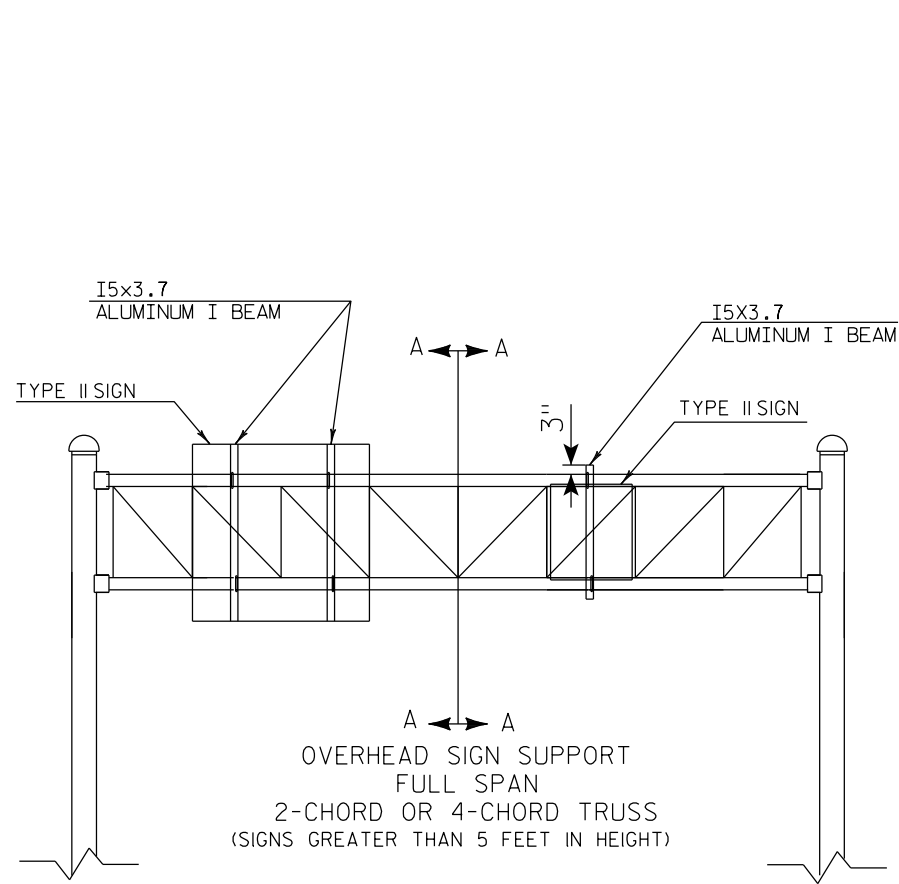
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
State Traffic Engineer

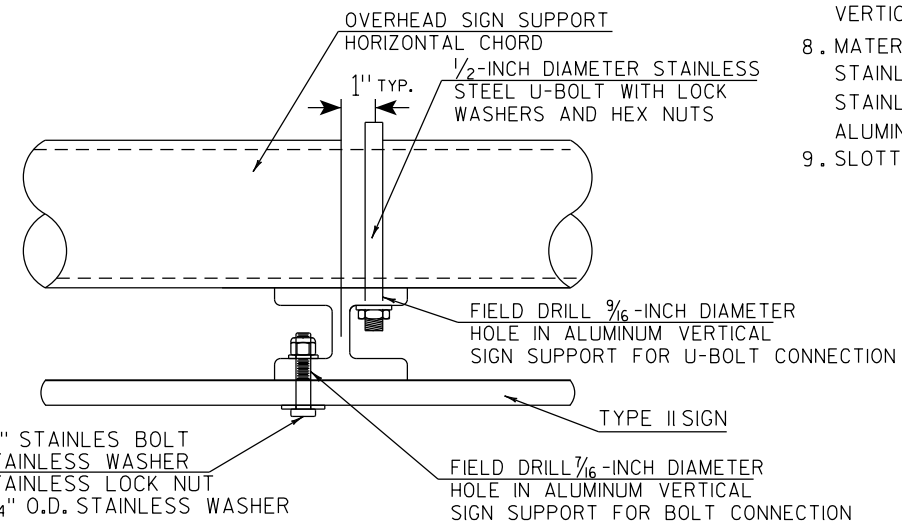
DATE 1/07/20 PLATE NO. A4-7A.1

GENERAL NOTES

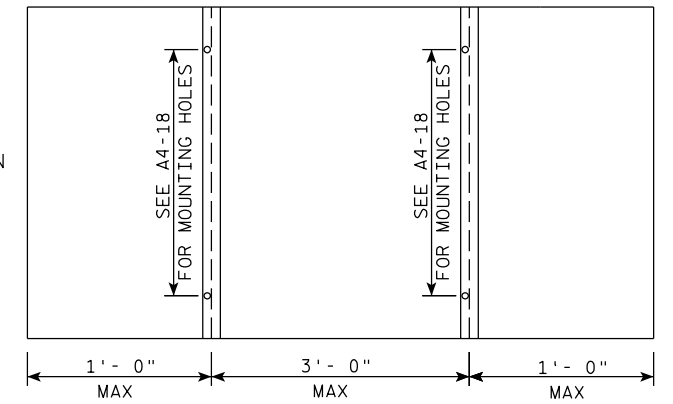
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE STAINLESS BOLTS AT BOLT HOLES IN SIGN PANEL PER SIGN PLATE A4-18.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:  
STAINLESS STEEL U-BOLTS, BOLTS, AND LOCKWASHERS ASTM 304.  
STAINLESS STEEL HEX NUTS ASTM A276.  
ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



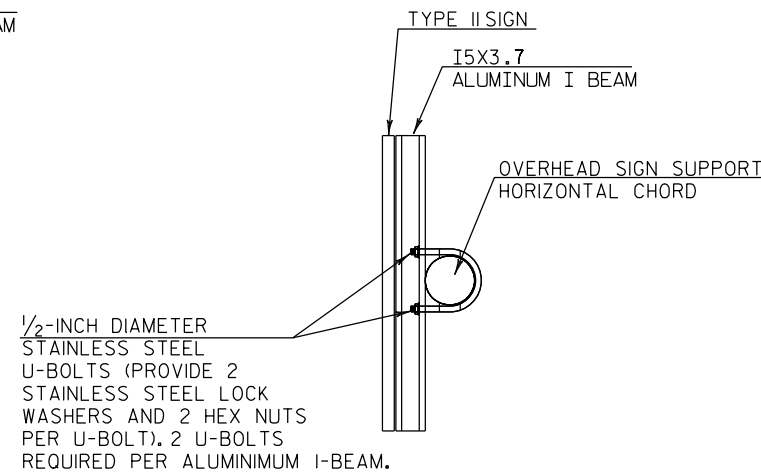
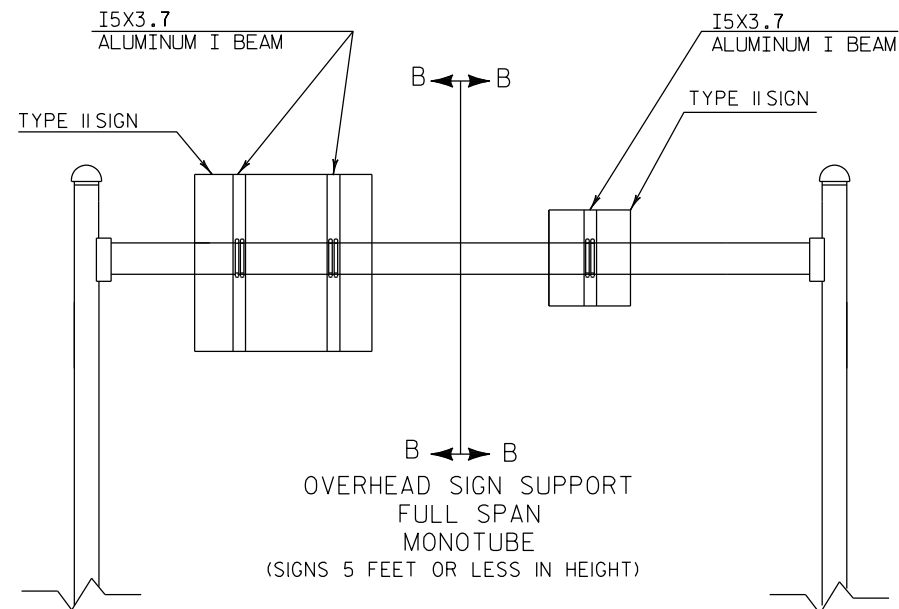
CUT SECTION A-A



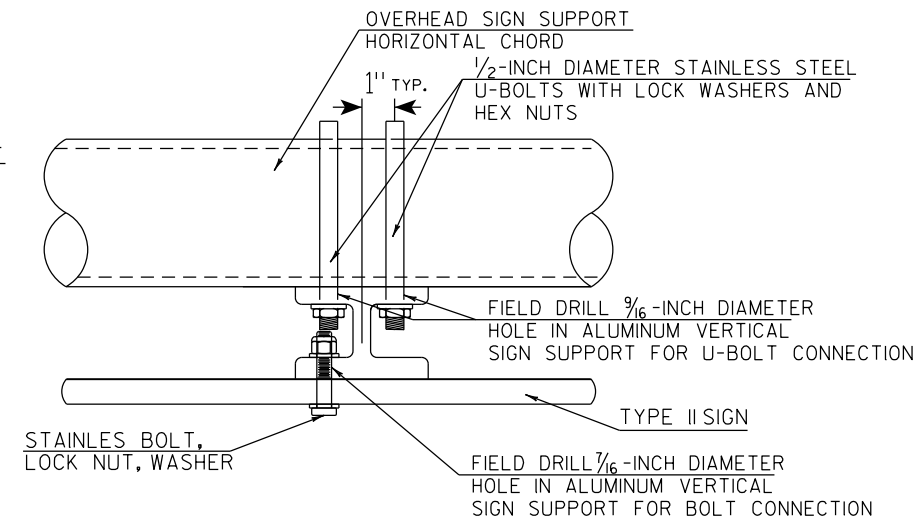
TYPICAL SIGN CONNECTION FOR 2-CHORD OR 4-CHORD TRUSS PLAN VIEW



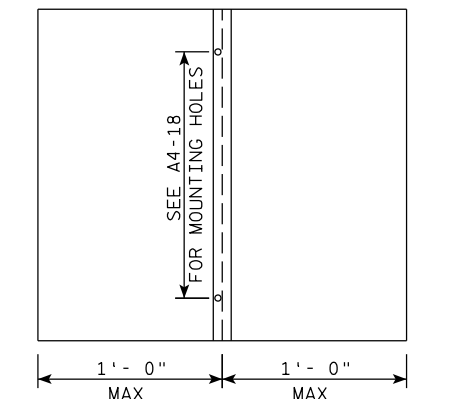
SPACING OF I5X3.7 ALUMINUM MULTIPLE VERTICAL SIGN SUPPORTS



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR MONOTUBE PLAN VIEW



SPACING OF I5X3.7 ALUMINUM SINGLE VERTICAL SIGN SUPPORT

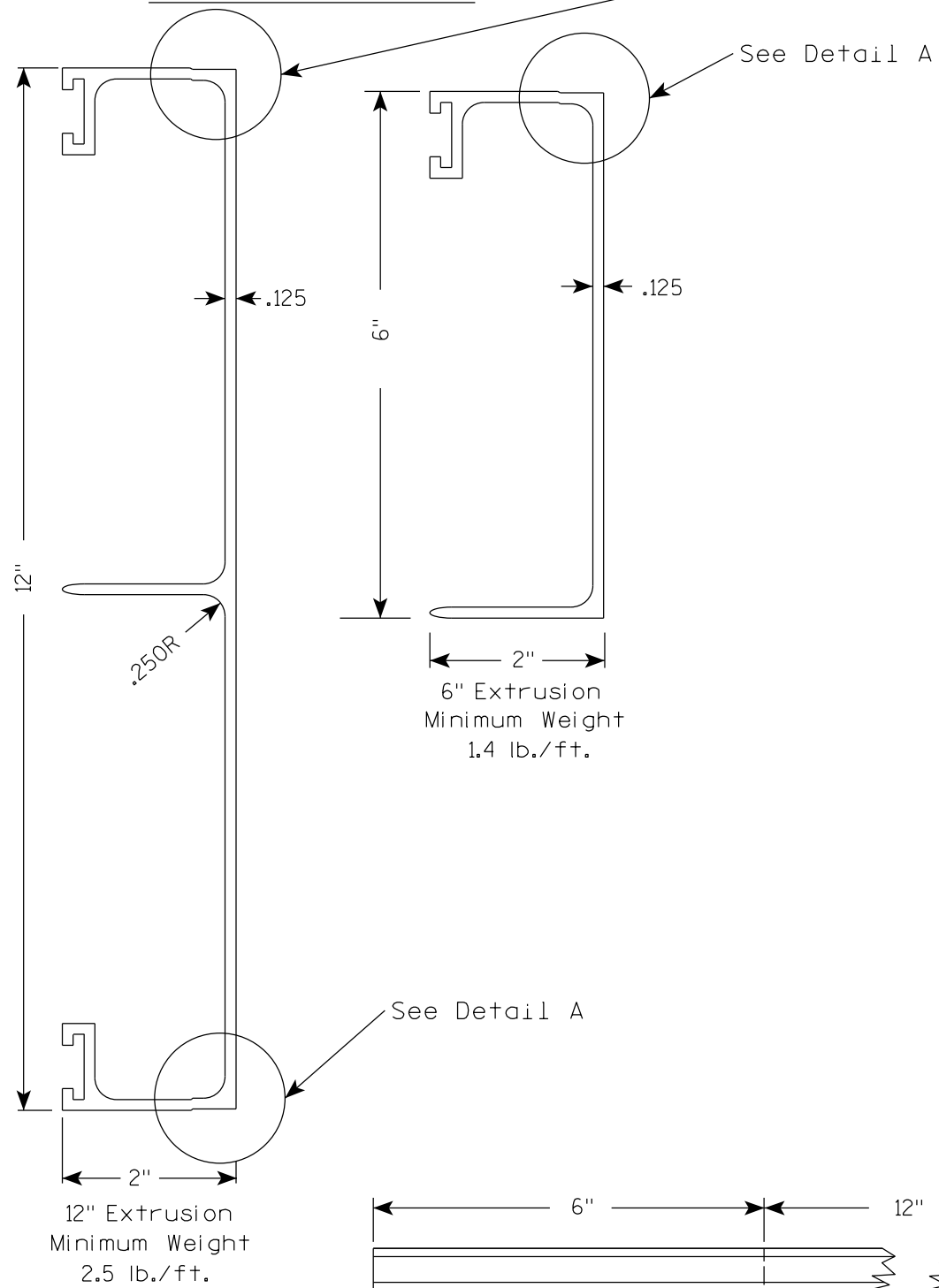
TYPE II SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION  
 APPROVED *Matthew R. Rauch*  
 For State Traffic Engineer  
 DATE 1/07/20 PLATE NO. A4-7B.1



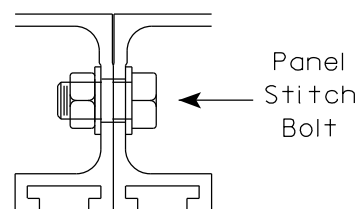
Extruded Shape

Hardware



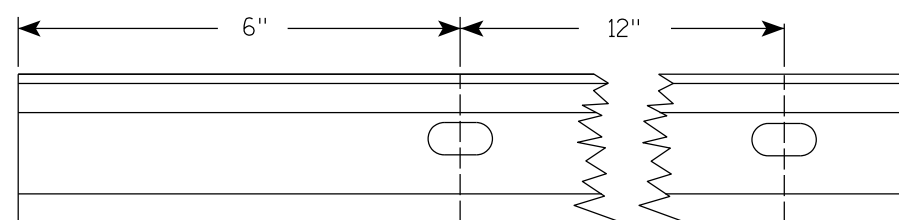
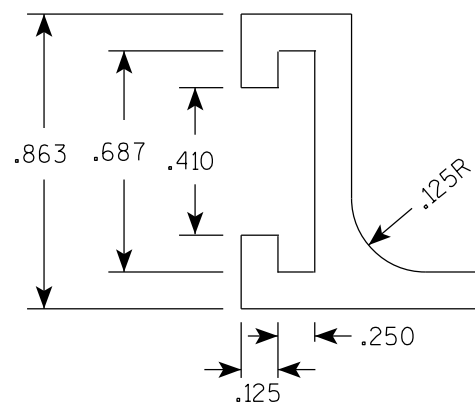
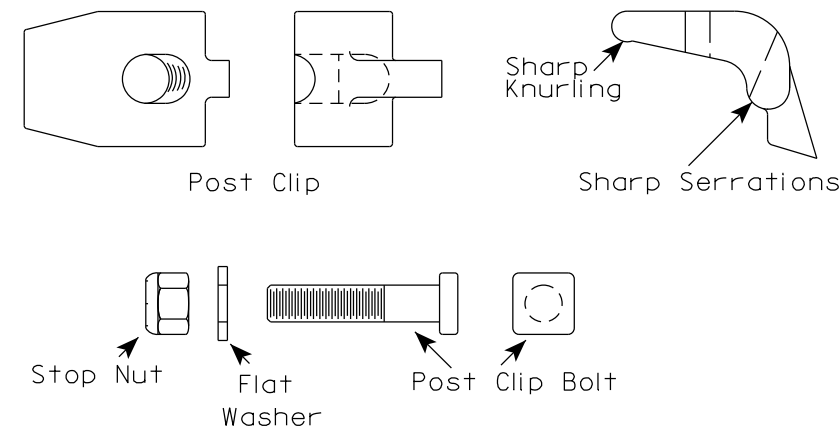
STITCH BOLT, WASHER & NUT

The hardware includes:  
 3/8" - 16 X 3/4" Economy Bolt 2024-T4 alloy  
 3/8" - Stainless steel stop nut  
 3/8" X .064 Flat Washers, Alclad 2024-T4 alloy

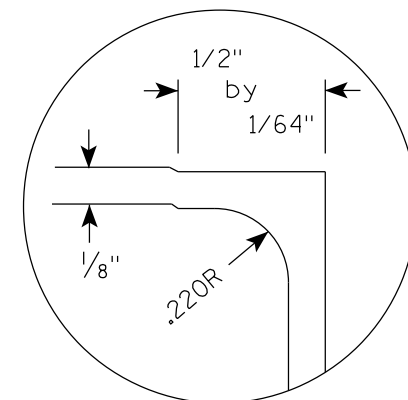


POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6  
 Post Clip Bolt shall be Stainless Steel.  
 Flat washer shall be 3/8" X .091, Stainless Steel.  
 Stop nut shall be stainless steel.



Punch 7/16" x 7/8" ovalholes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.



DETAIL A (EDGE WRAP JOINT)

NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.

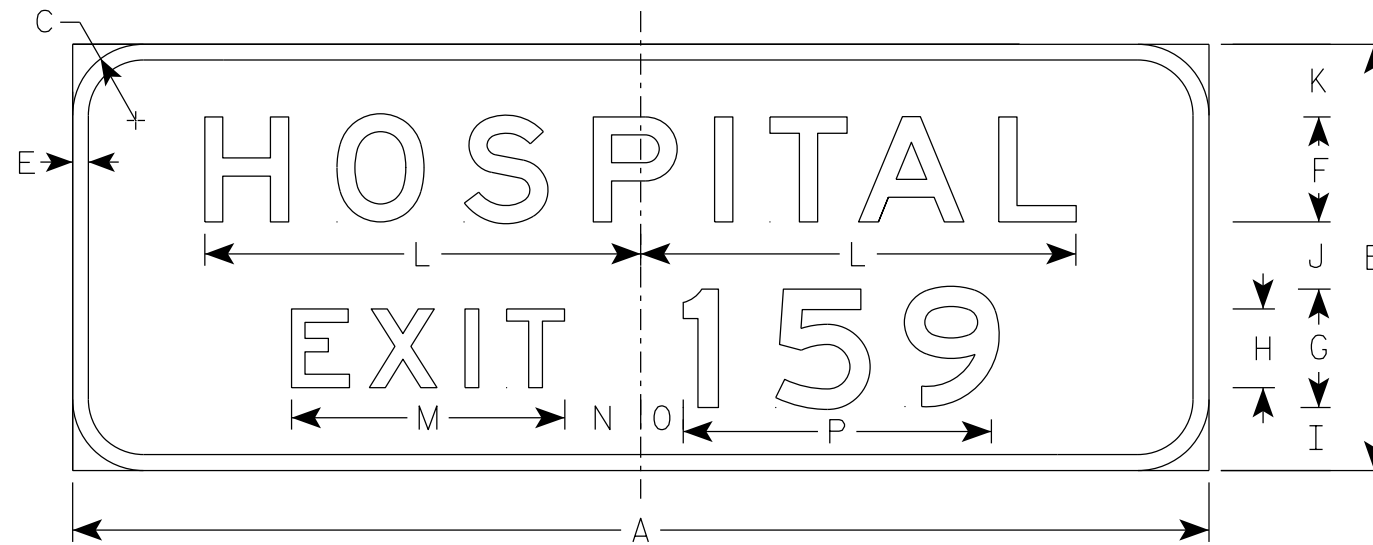
ALUMINUM EXTRUSIONS FOR  
TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
 For State Traffic Engineer  
 DATE 1/07/20 PLATE NO. A5-2.10

NOTES

1. Sign is Type I - Type SH Reflective
2. Color:  
Background - Blue  
Message - White
3. Message Series - E
4. Apply proper Exit Numbers and letters, optically center to adjust spacing to achieve proper balance.



E10-61

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	54	9		2	13 3/8	15	10	8	8 1/2	9 1/4	55 1/4	34 5/8	9 5/8	5 3/8	39											54.0
5	144	54	9		2	13 3/8	15	10	8	8 1/2	9 1/4	55 1/4	34 5/8	9 5/8	5 3/8	39											54.0

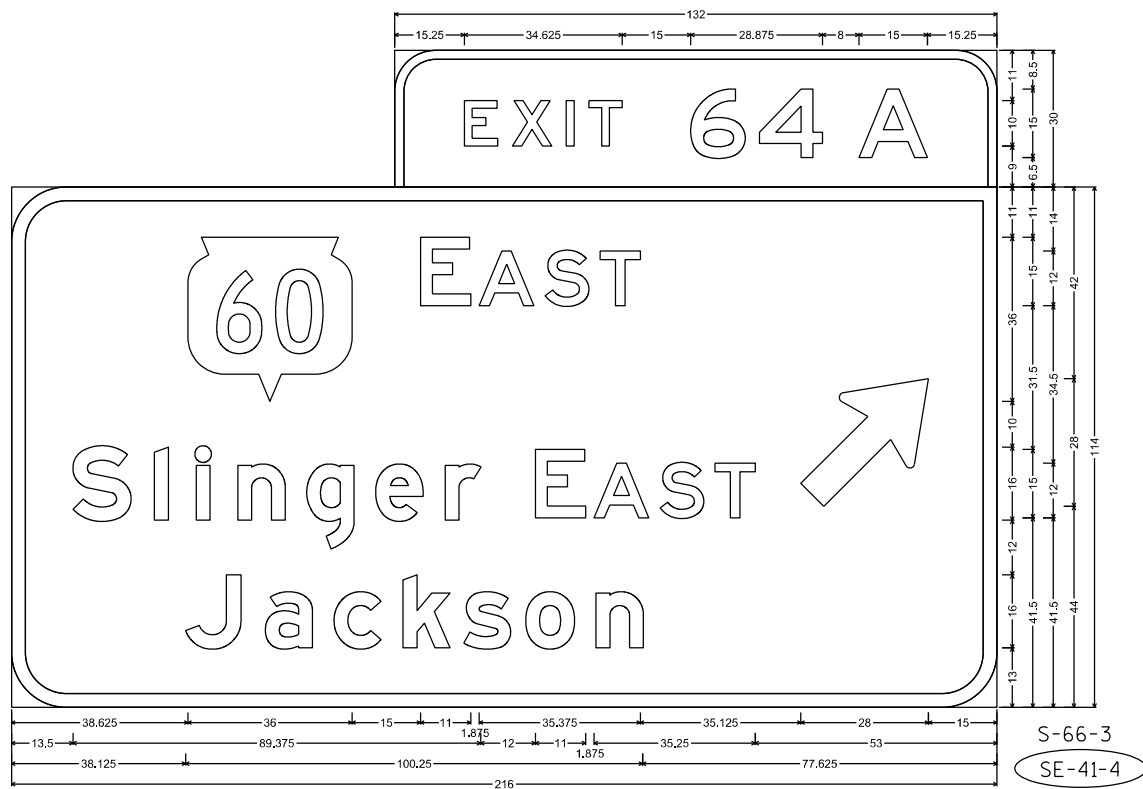
TYPICAL SIGNS  
E10-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 11/5/2020 PLATE NO. E10-61.4

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

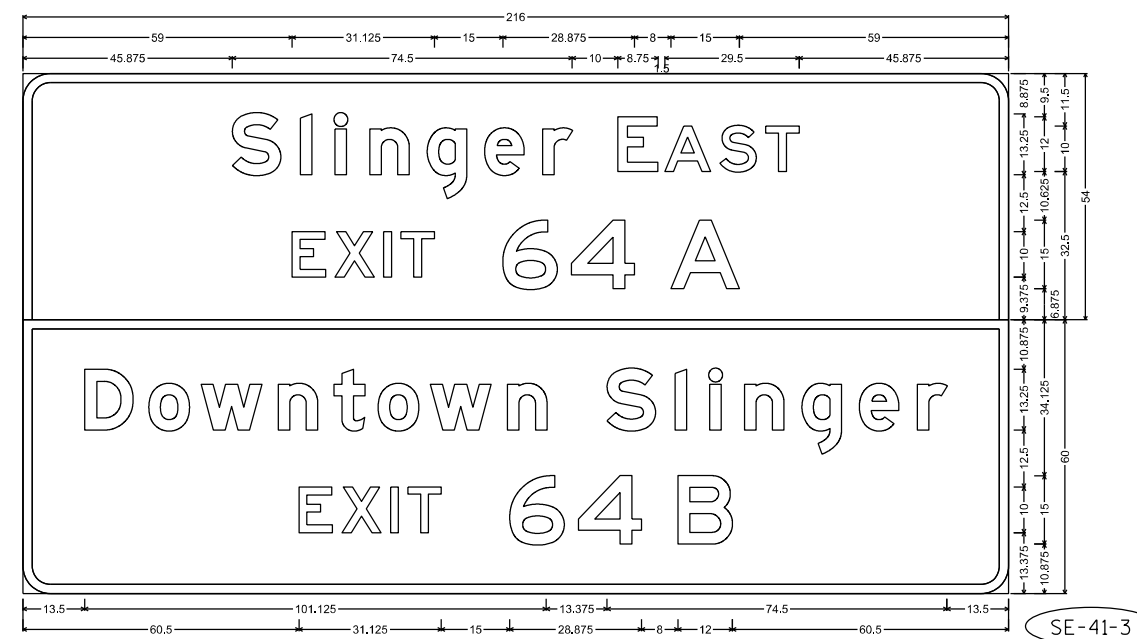


E1-5P: 9.000" Radius, 2.000" Border  
E6-1: 12.000" Radius, 3.000" Border

S-66-3  
SE-41-4

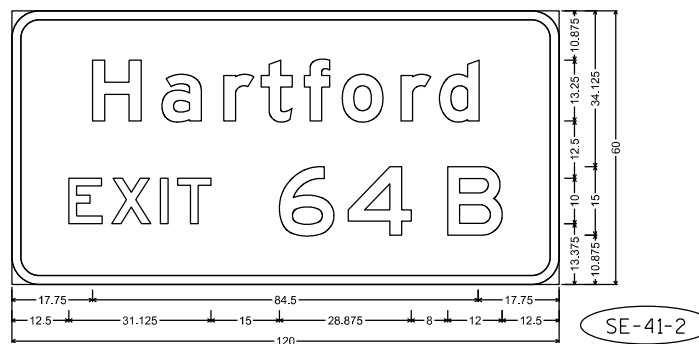
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E

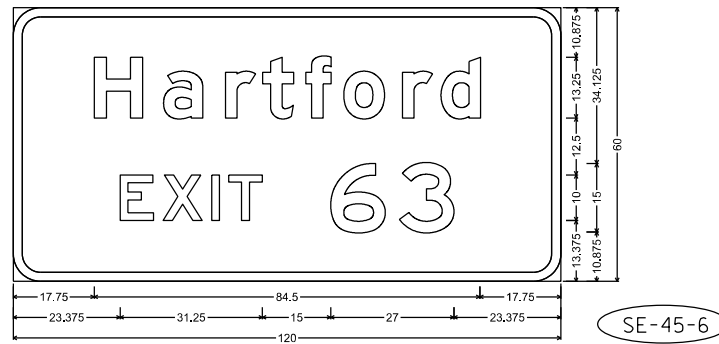


E3-1: 6.000" Radius, 2.000" Border  
E3-1: 6.000" Radius, 2.000" Border

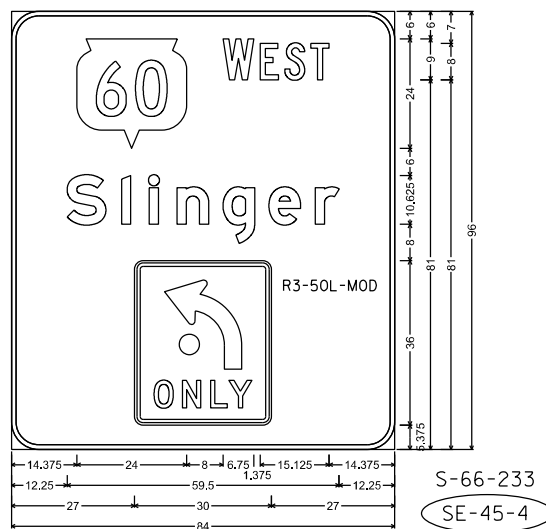
SE-41-3



SE-41-2

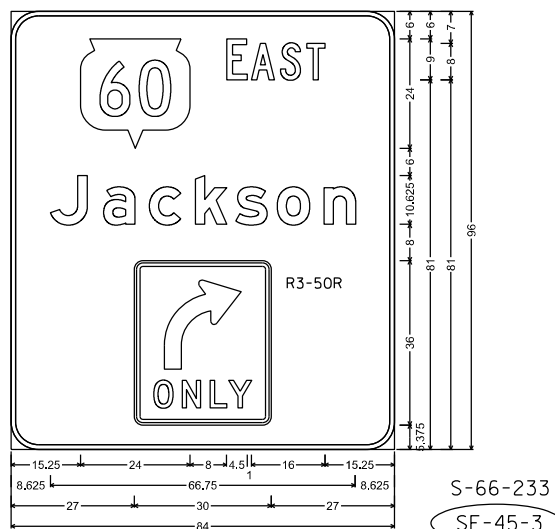


SE-45-6



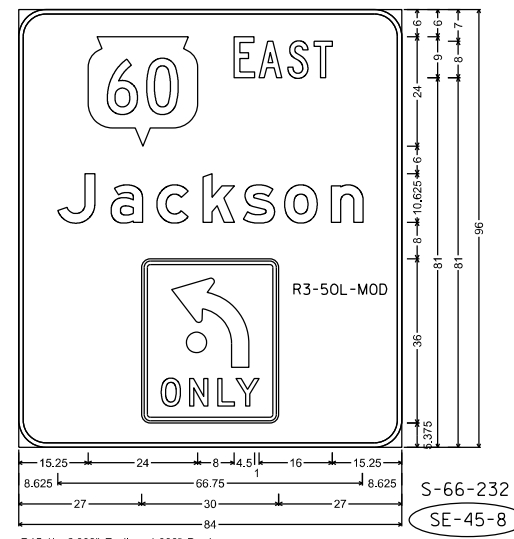
S-66-233  
SE-45-4

D15-1L: 6.000" Radius, 1.000" Border  
"WEST", C



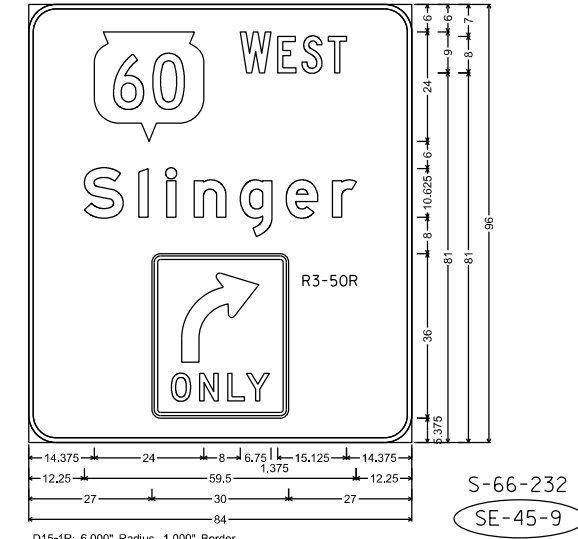
S-66-233  
SE-45-3

D15-1R: 6.000" Radius, 1.000" Border  
"EAST", C



S-66-232  
SE-45-8

D15-1L: 6.000" Radius, 1.000" Border  
"EAST", C



S-66-232  
SE-45-9

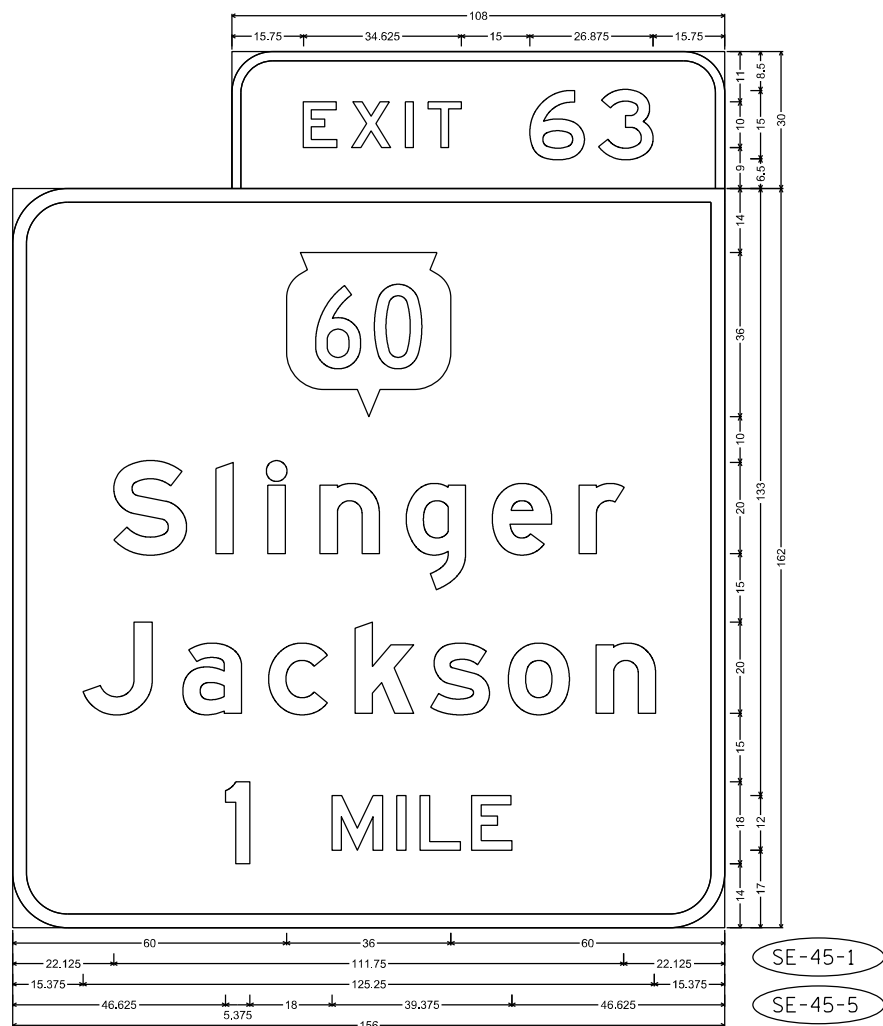
D15-1R: 6.000" Radius, 1.000" Border  
"WEST", C

7

7

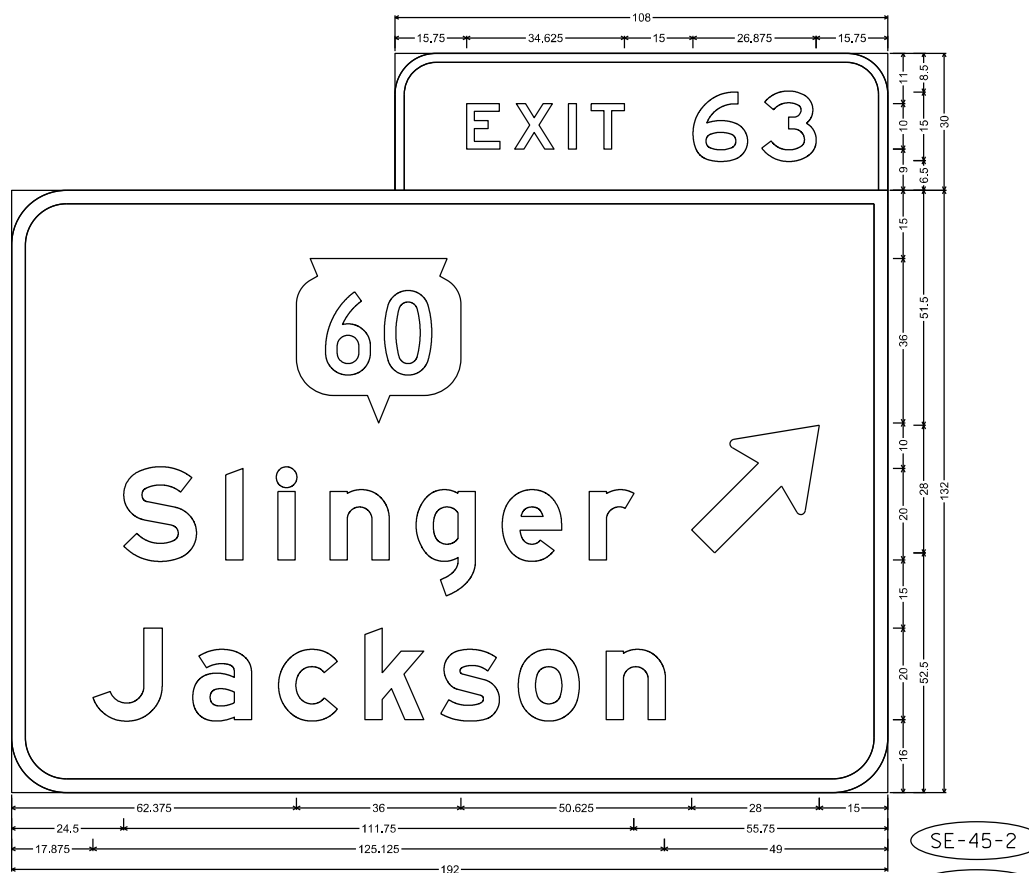
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



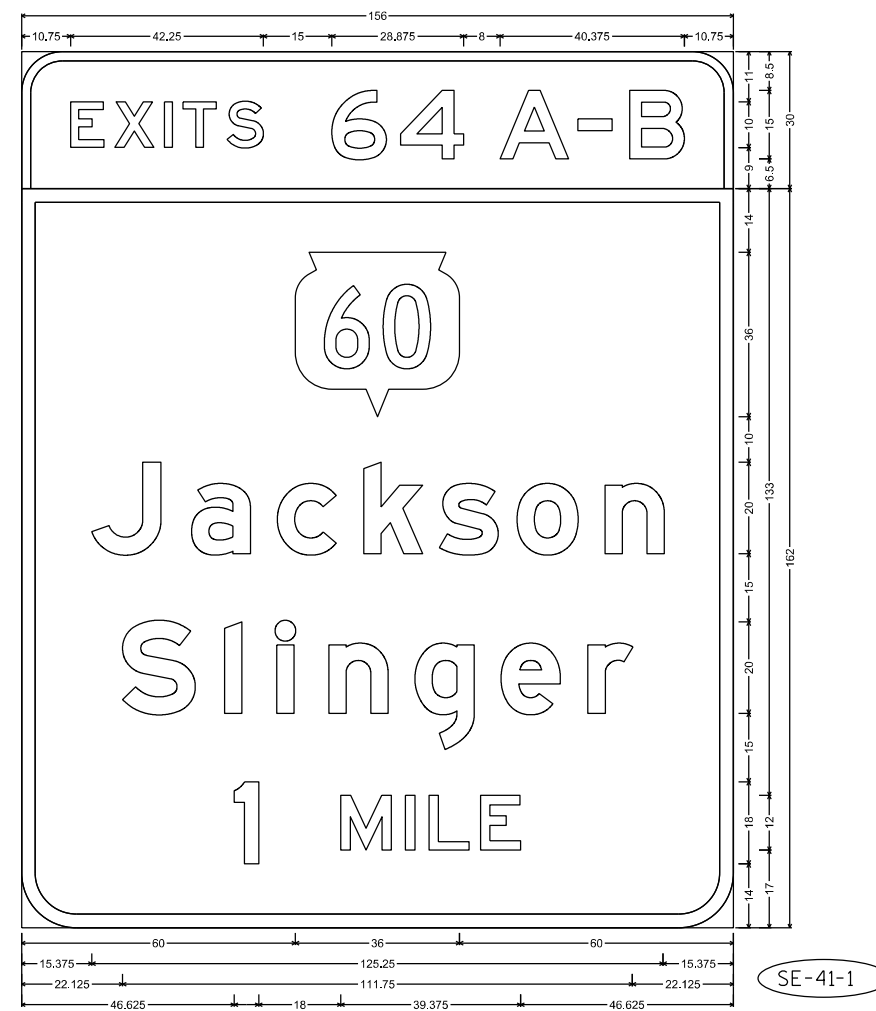
SE-45-1  
SE-45-5

E1-5P: 9.000" Radius, 2.000" Border  
E1-1A: 12.000" Radius, 3.000" Border



SE-45-2  
SE-45-7

E1-5P: 9.000" Radius, 2.000" Border  
E4-1A: 12.000" Radius, 3.000" Border



SE-41-1

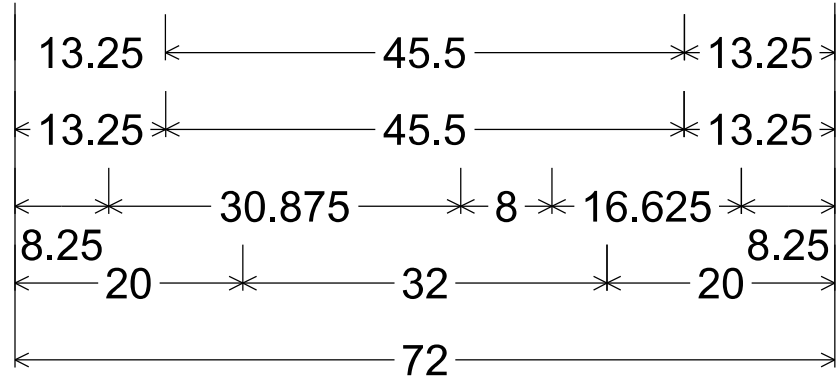
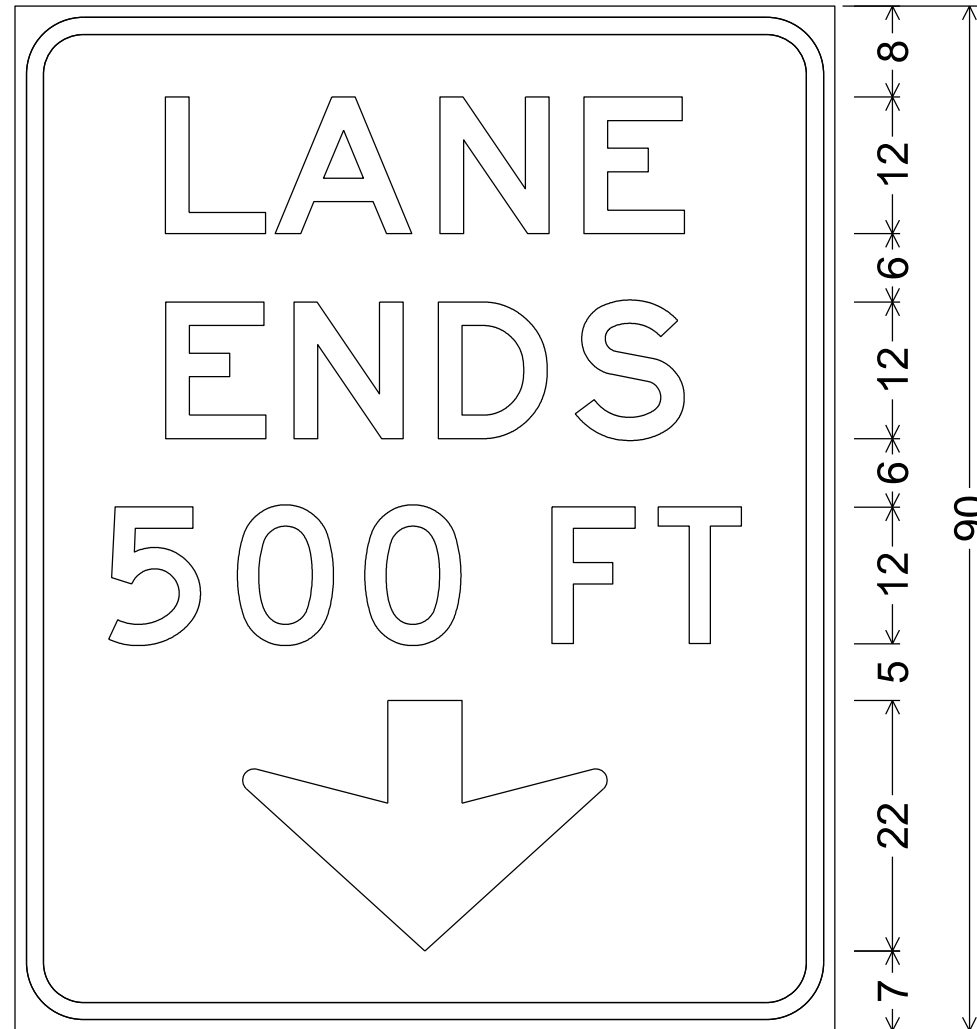
E1-5P: 9.000" Radius, 2.000" Border  
E1-1A: 12.000" Radius, 3.000" Border

7

7

NOTES

1. Sign is Type I - Type SH Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - E or as noted



S-40-584  
SE-43-1

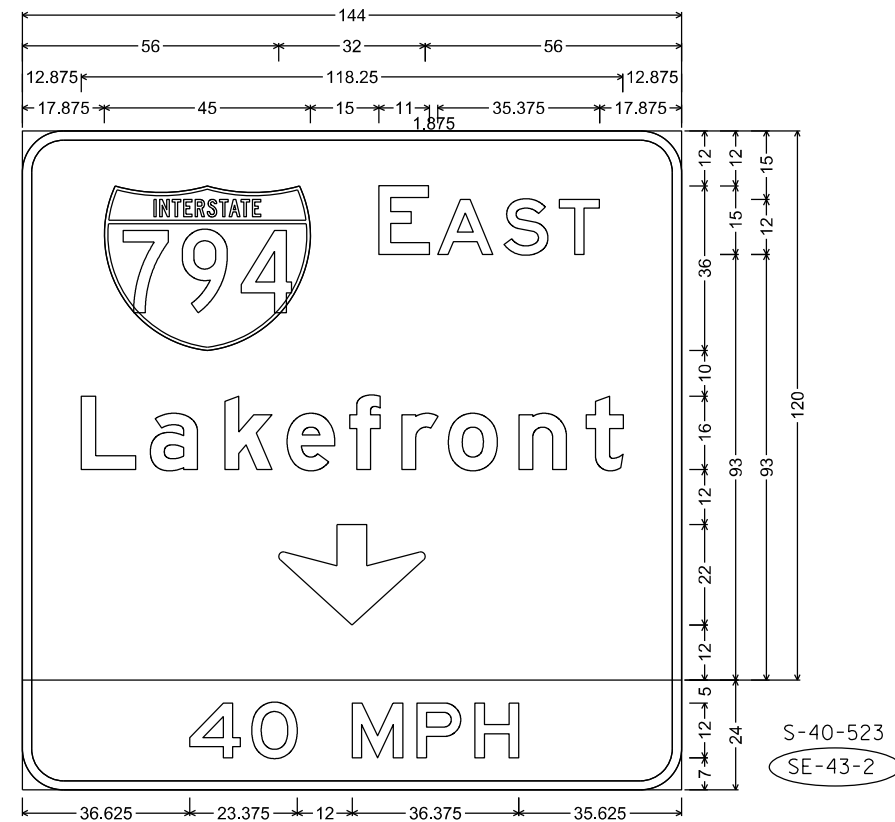
W9-63 (MOD); 6.000" Radius, 1.500" Border, 1.000" Indent  
"LANE", E; "ENDS", E; "500", D; "FT", D

7

7

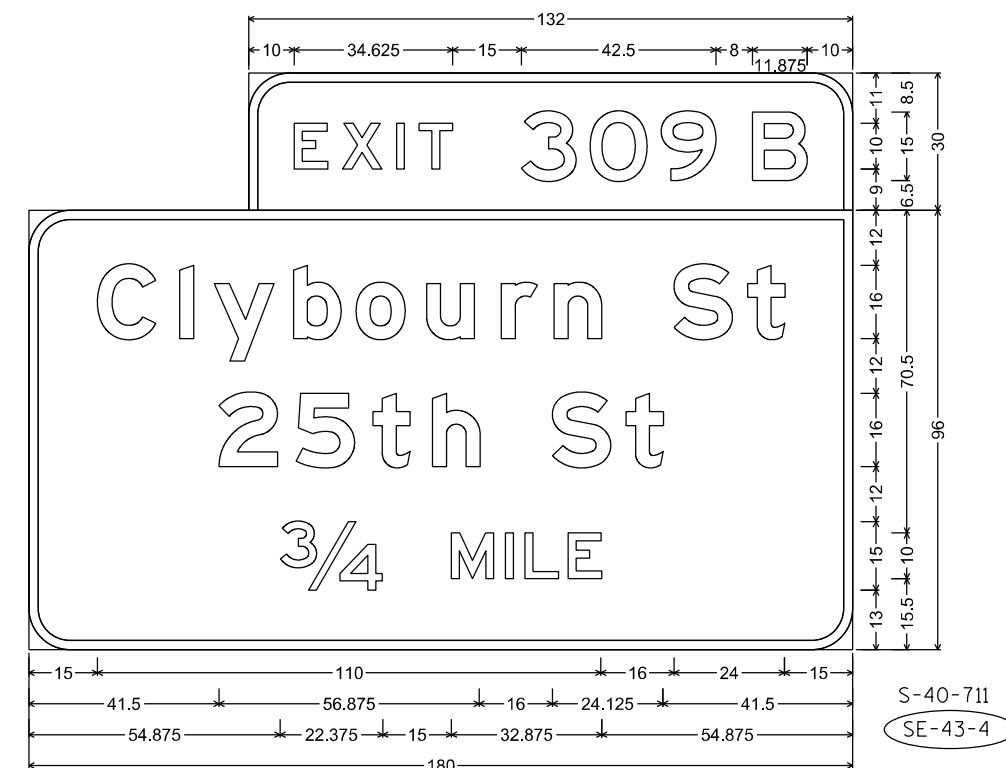
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E
4. Exit Only Panel on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



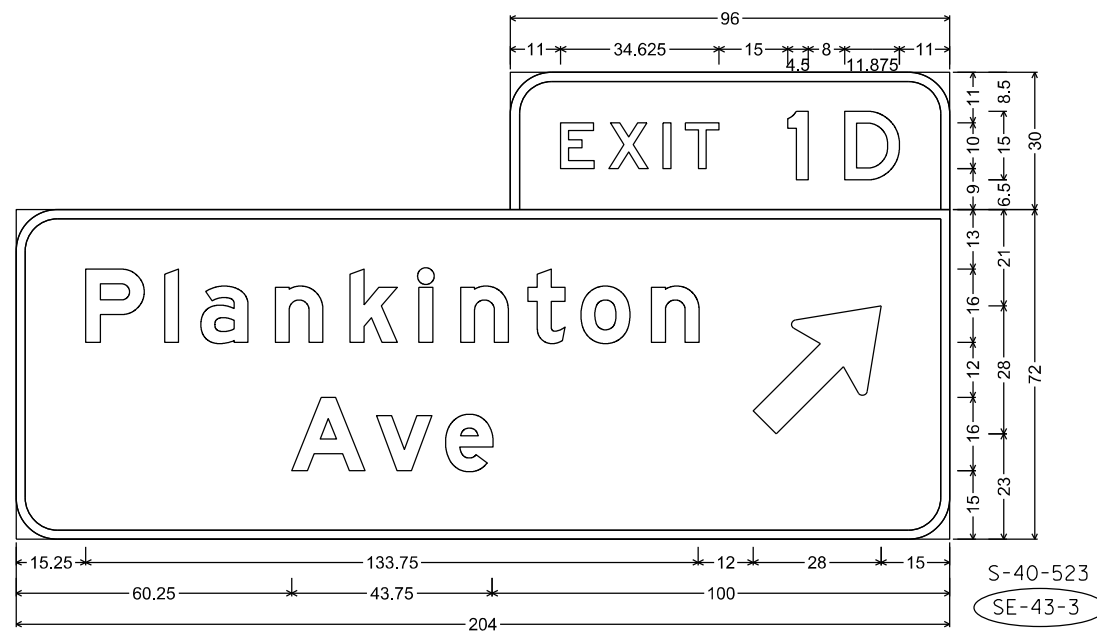
E6-51; 9.000" Radius, 2.000" Border  
9.000" Radius, 2.000" Border, Black on, Yellow;  
"40", E; "MPH", E;

S-40-523  
SE-43-2



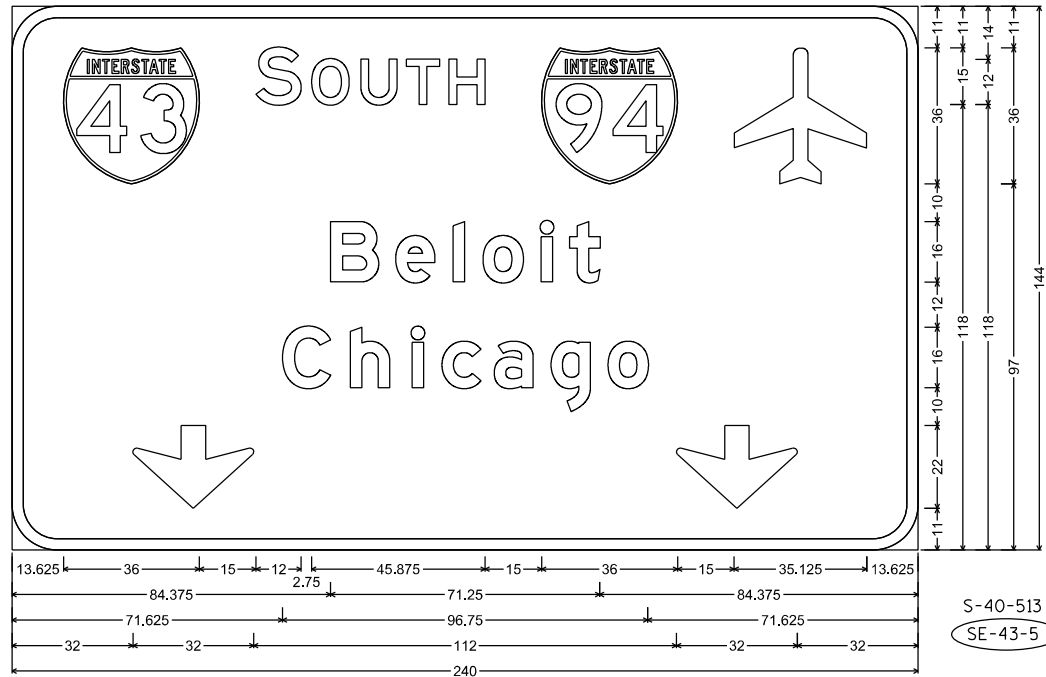
E1-5P; 9.000" Radius, 2.000" Border  
E6-51; 9.000" Radius, 2.000" Border

S-40-711  
SE-43-4



E1-5P; 9.000" Radius, 2.000" Border  
E6-1; 9.000" Radius, 2.000" Border

S-40-523  
SE-43-3

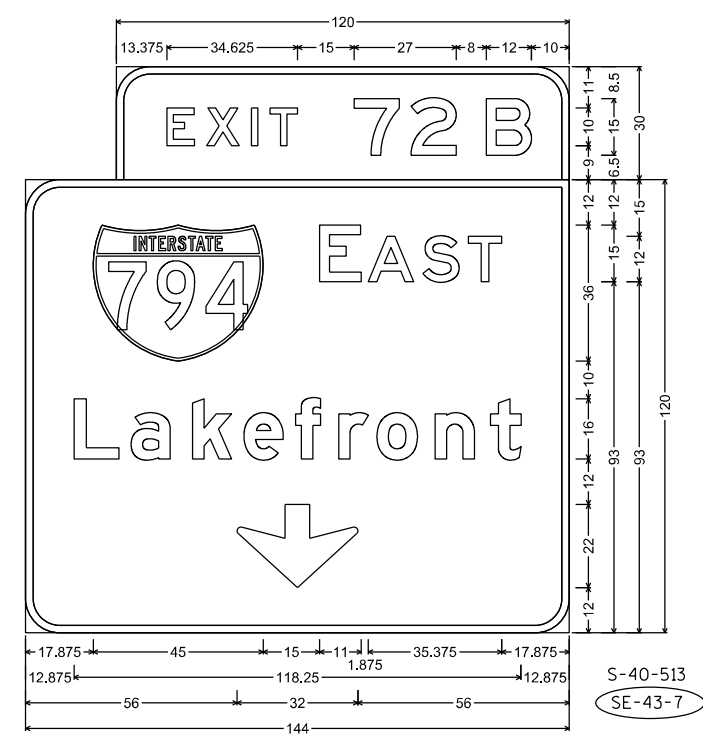


E6-51 MOD: 12,000" Radius, 3,000" Border

S-40-513  
SE-43-5

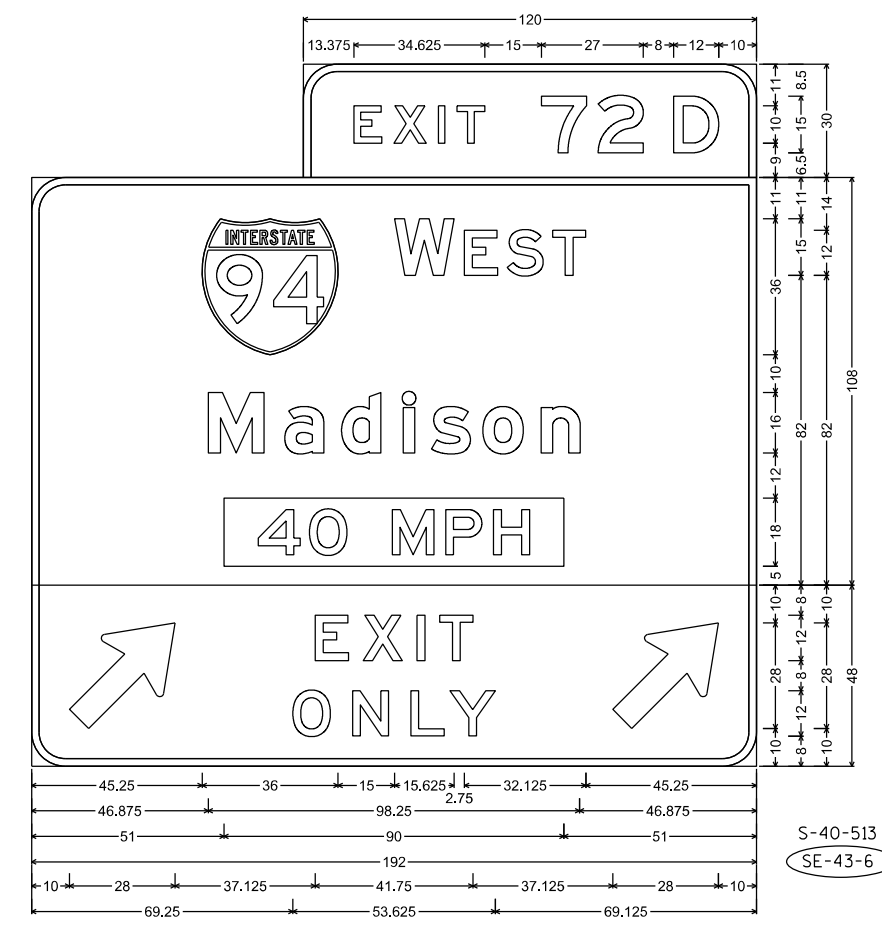
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E
4. Exit Only Panel on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



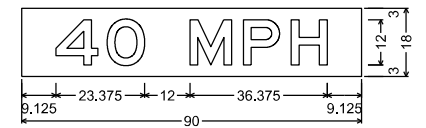
E1-5P: 9,000" Radius, 2,000" Border  
E6-51: 9,000" Radius, 2,000" Border

S-40-513  
SE-43-7



S-40-513  
SE-43-6

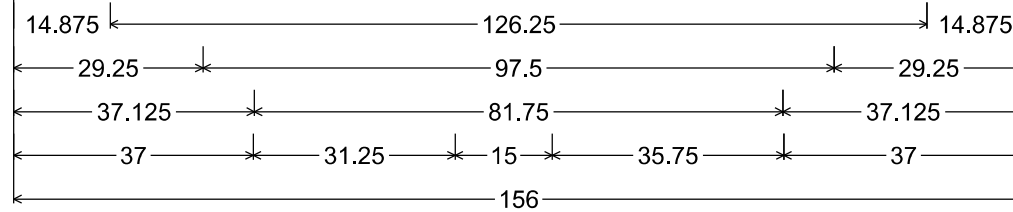
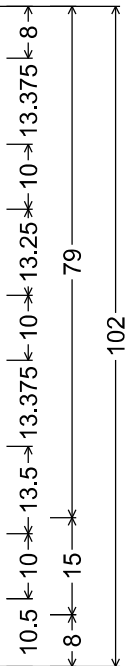
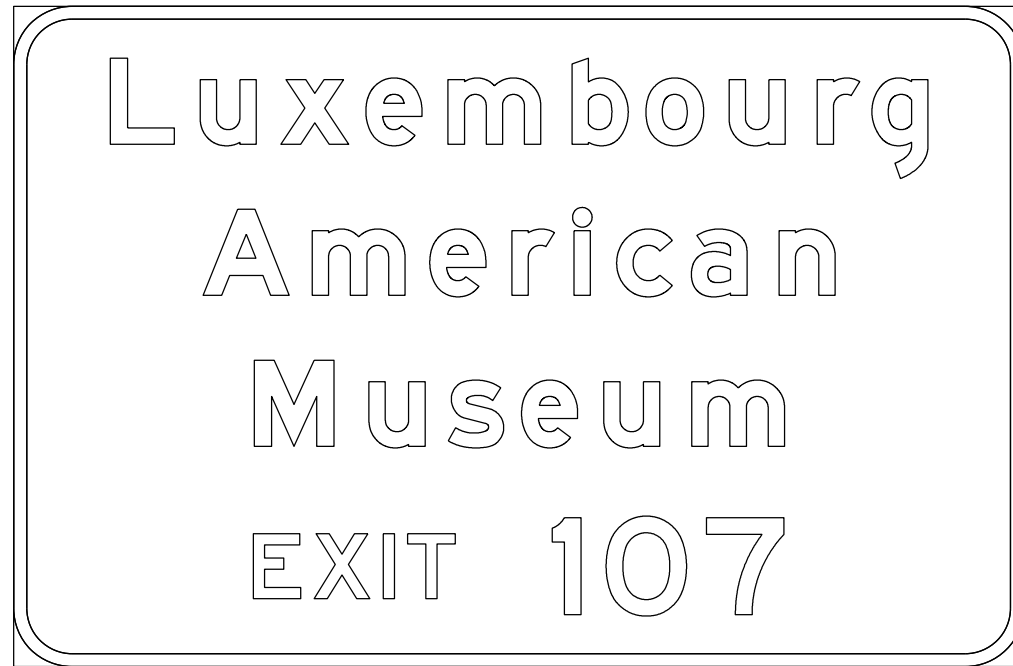
E1-5P: 9,000" Radius, 2,000" Border  
E6-51 MOD: 9,000" Radius, 2,000" Border  
E11-1E: 9,000" Radius, 2,000" Border, Black on, Yellow



No border, Black on, Yellow;  
"40" Black, E; "MPH" Black, E;

7

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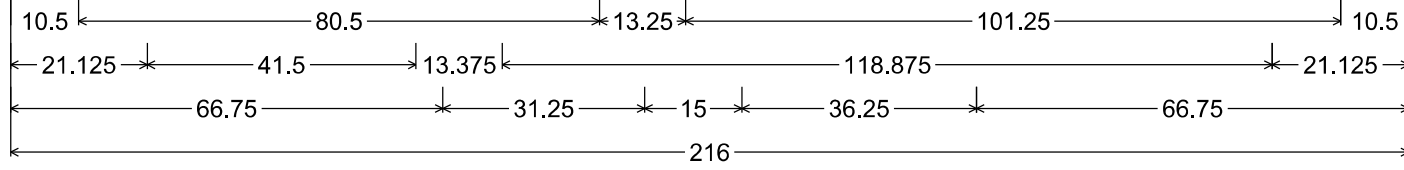
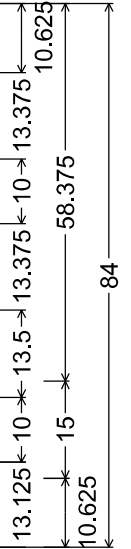
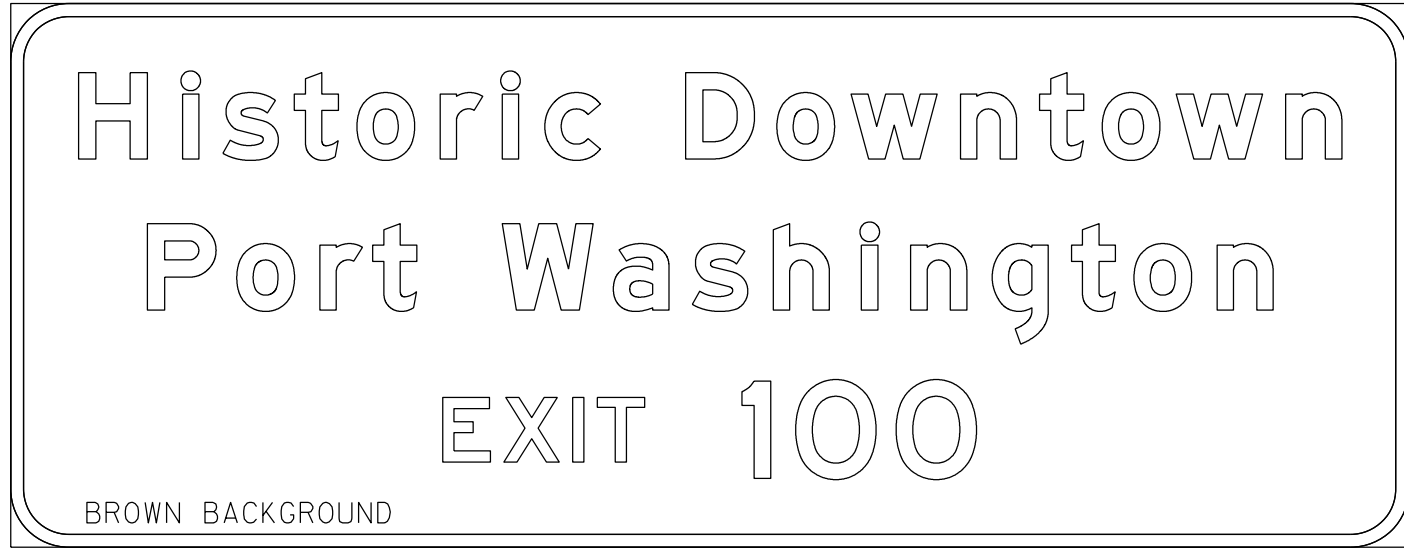


SE-43-8  
SE-43-9

E3-1; 9.000" Radius, 2.000" Border (Qty. 2);

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green or as noted  
Message - White
3. Message Series - E Modified except all CAP words Series E



SE-43-10

E3-1; 9.000" Radius, 2.000" Border, White on Brown

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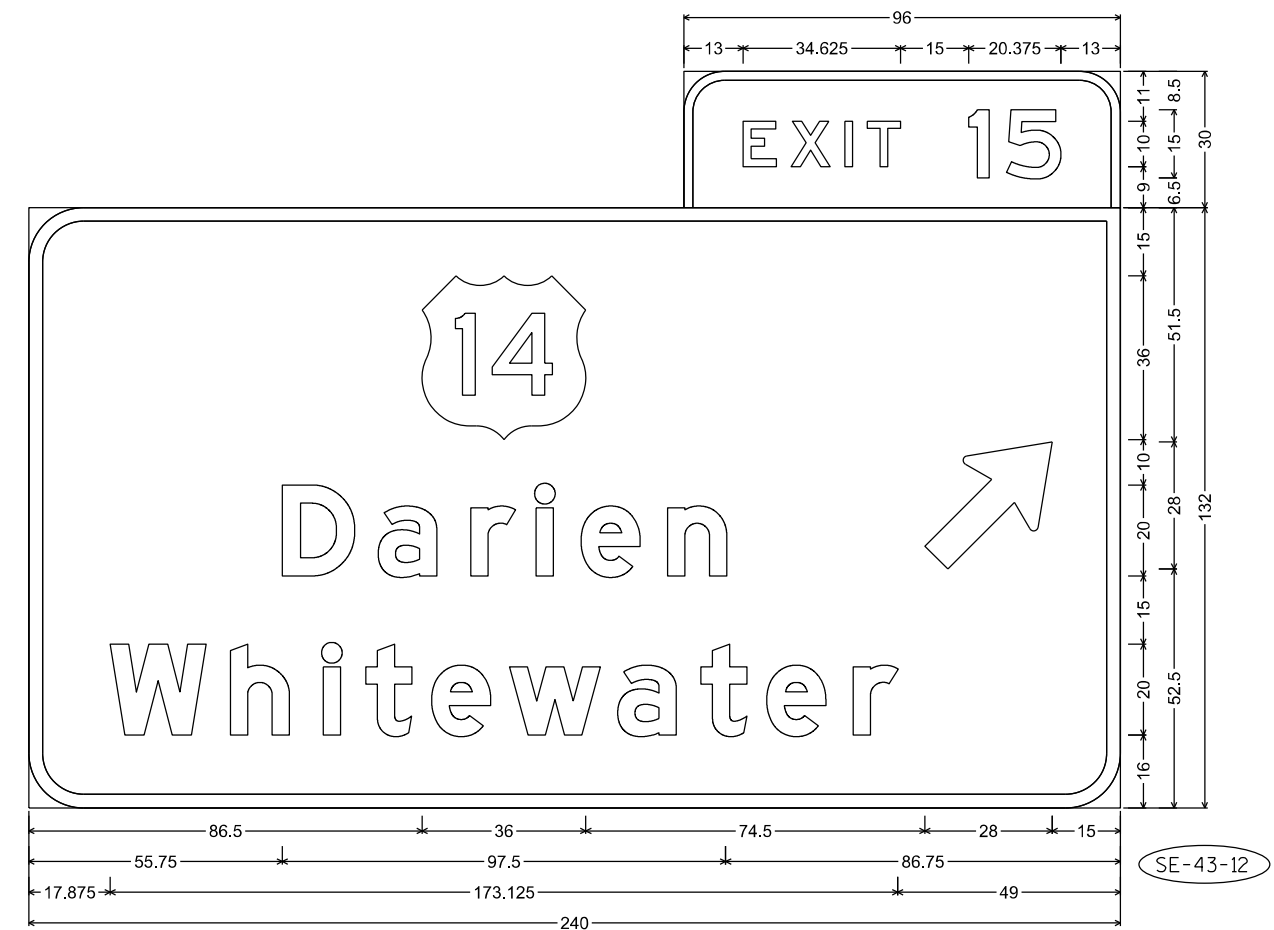


E1-5P; 9.000" Radius, 2.000" Border  
 E1-1A; 12.000" Radius, 3.000" Border

SE-43-11

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
 Background - Green  
 Message - White
3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border  
 E4-1A; 12.000" Radius, 3.000" Border

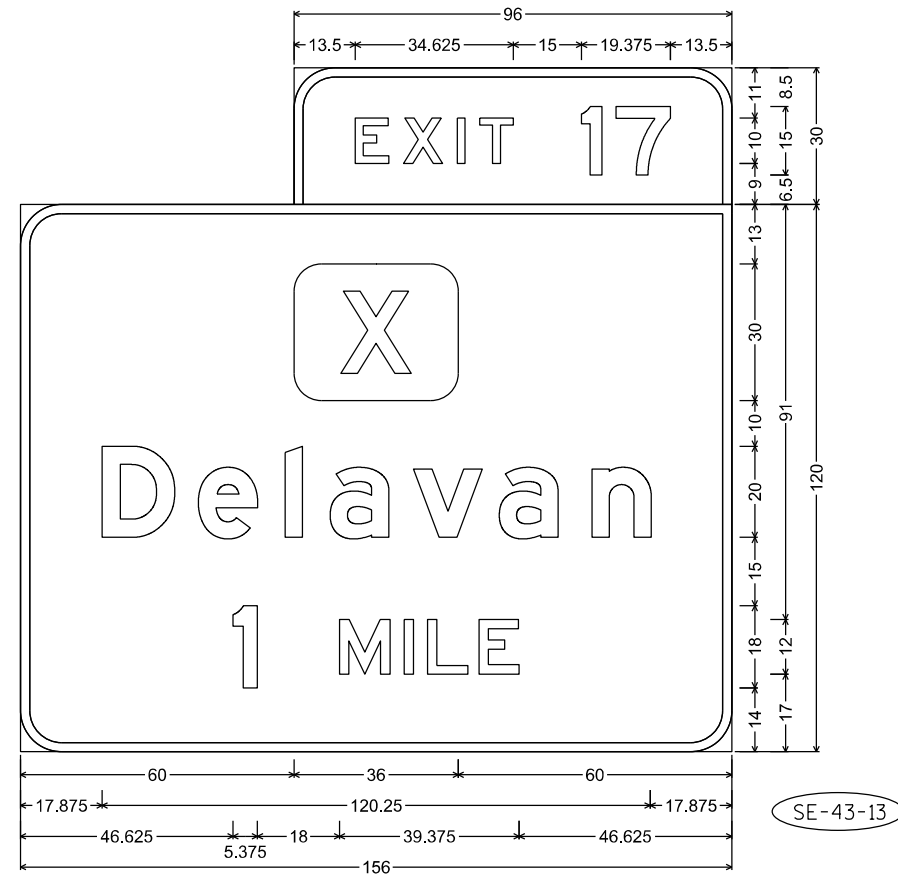
SE-43-12

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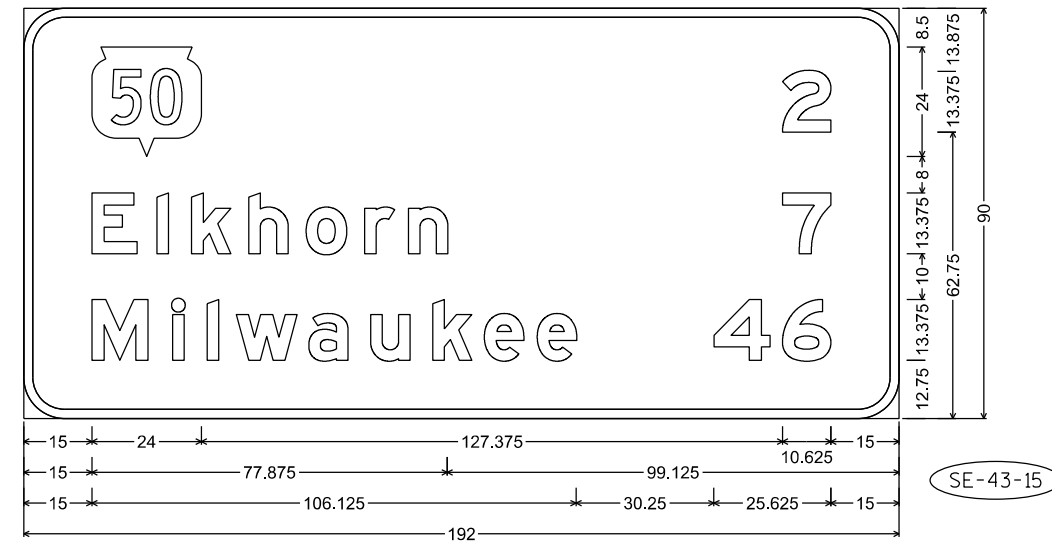
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



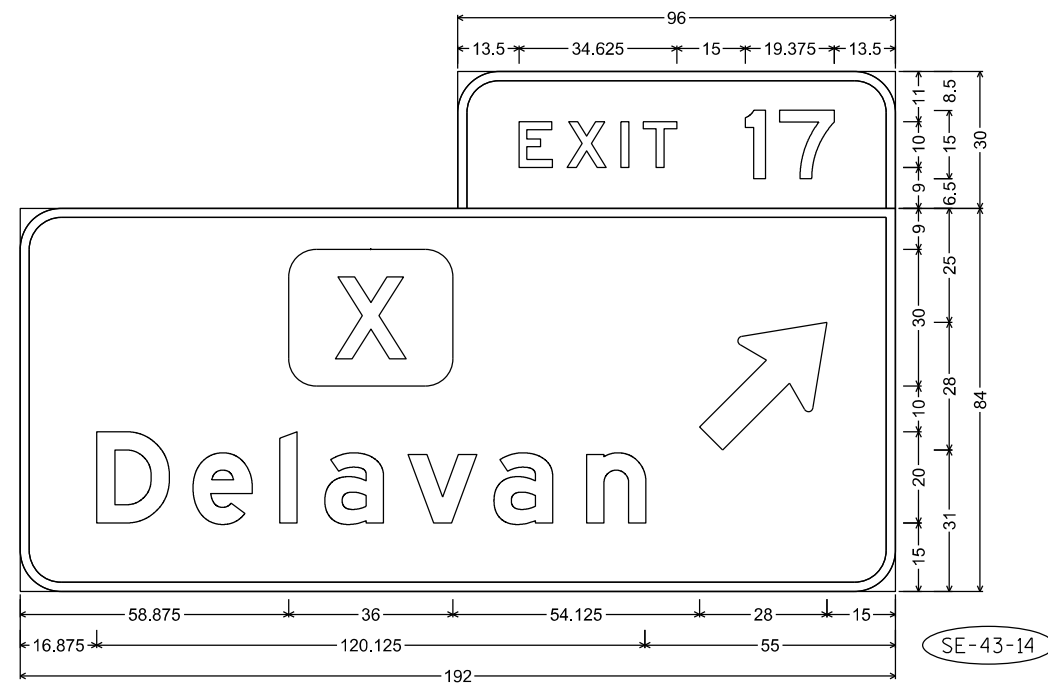
SE-43-13

E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 9.000" Radius, 2.000" Border



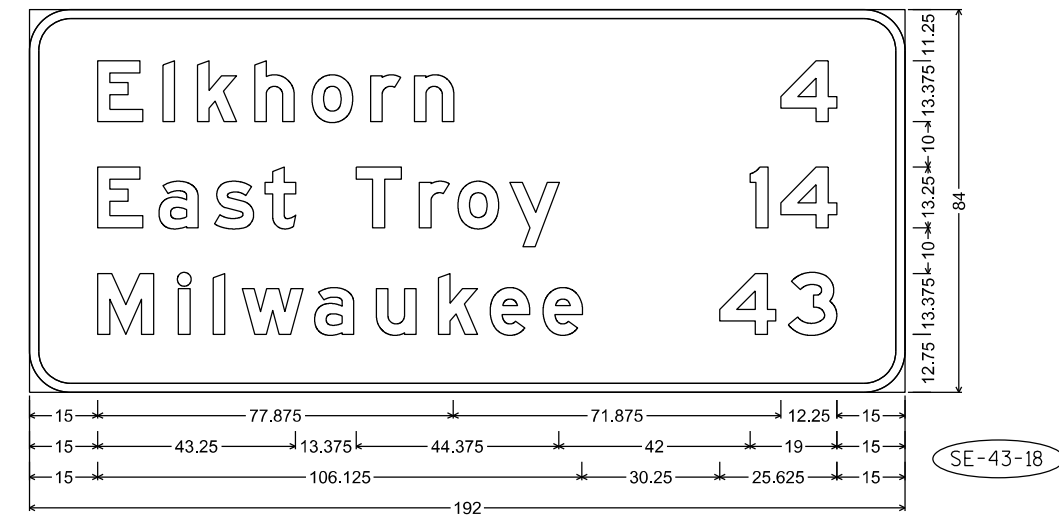
SE-43-15

D2-3; 9.000" Radius, 2.000" Border



SE-43-14

E1-5P; 9.000" Radius, 2.000" Border  
E4-1A; 9.000" Radius, 2.000" Border

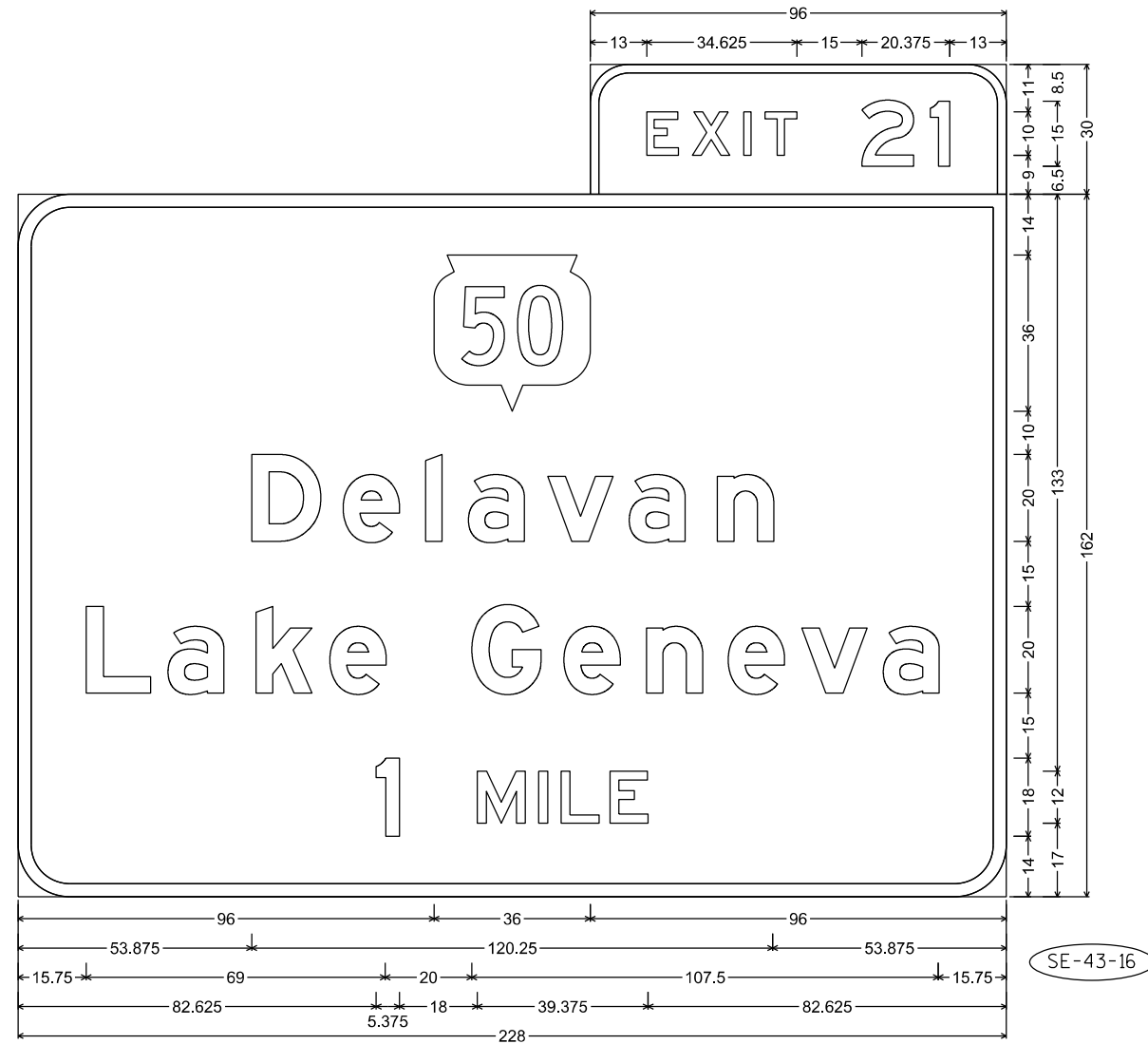


SE-43-18

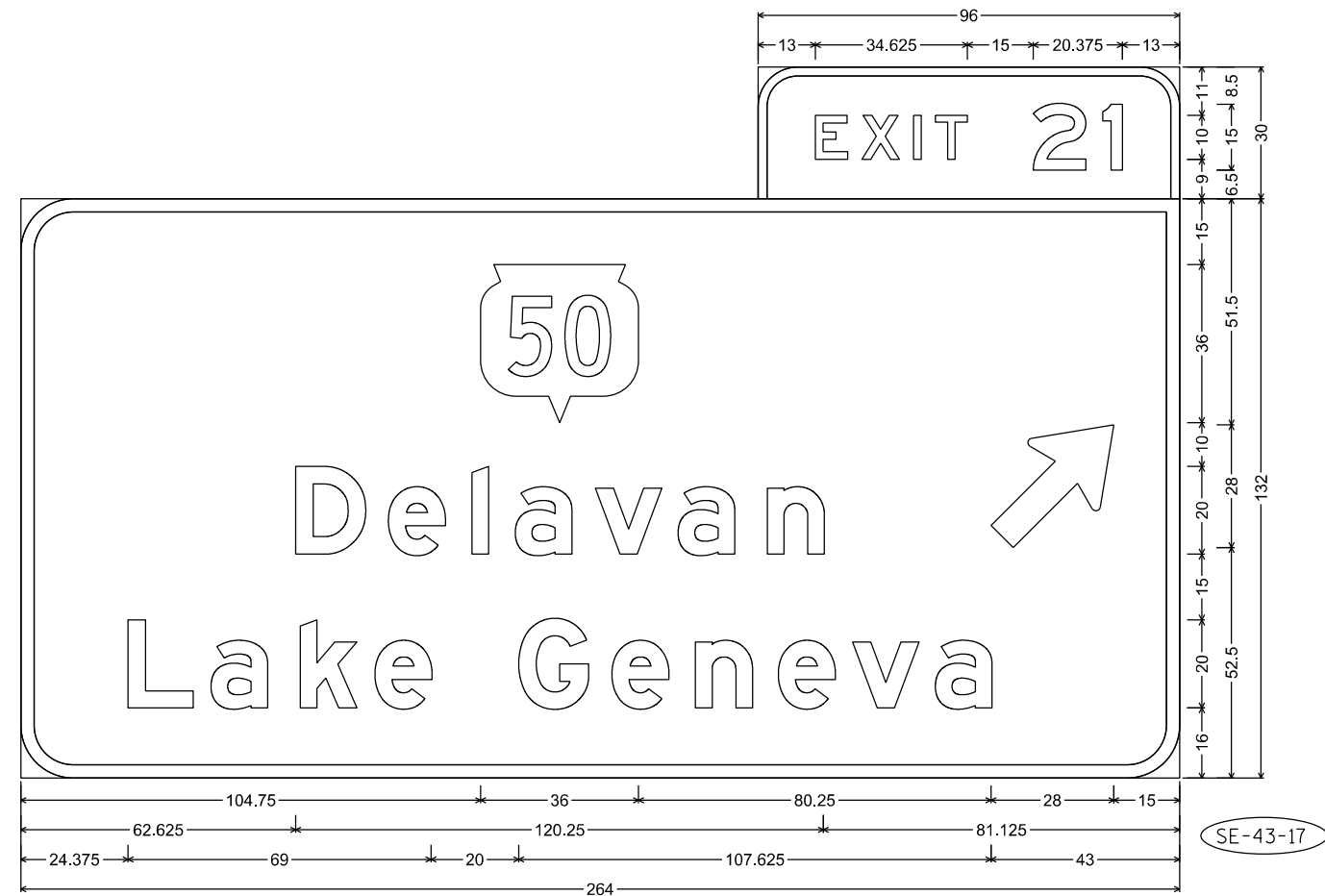
D2-3; 9.000" Radius, 2.000" Border

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



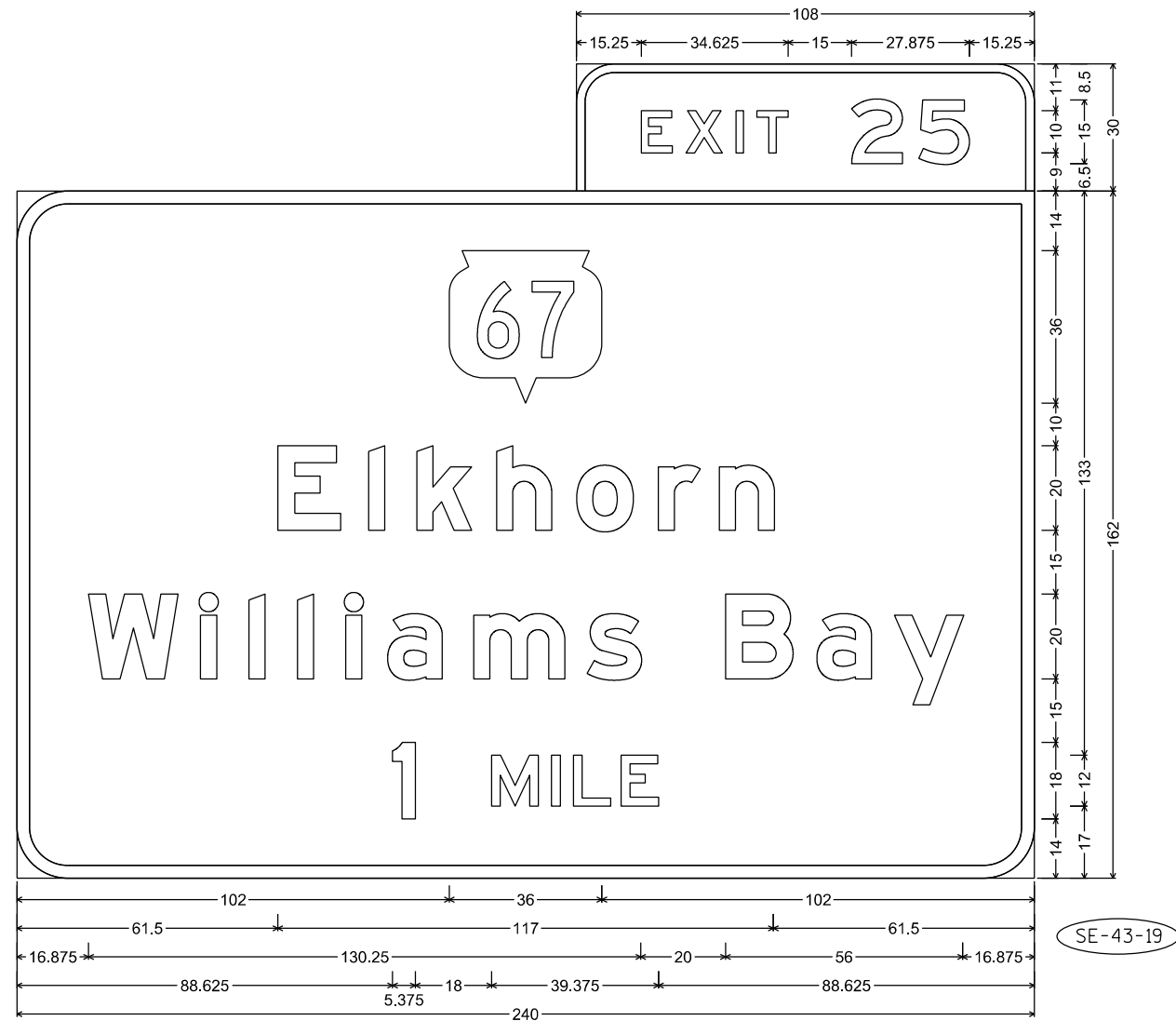
E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border



E1-5P; 9.000" Radius, 2.000" Border  
E4-1A; 12.000" Radius, 3.000" Border

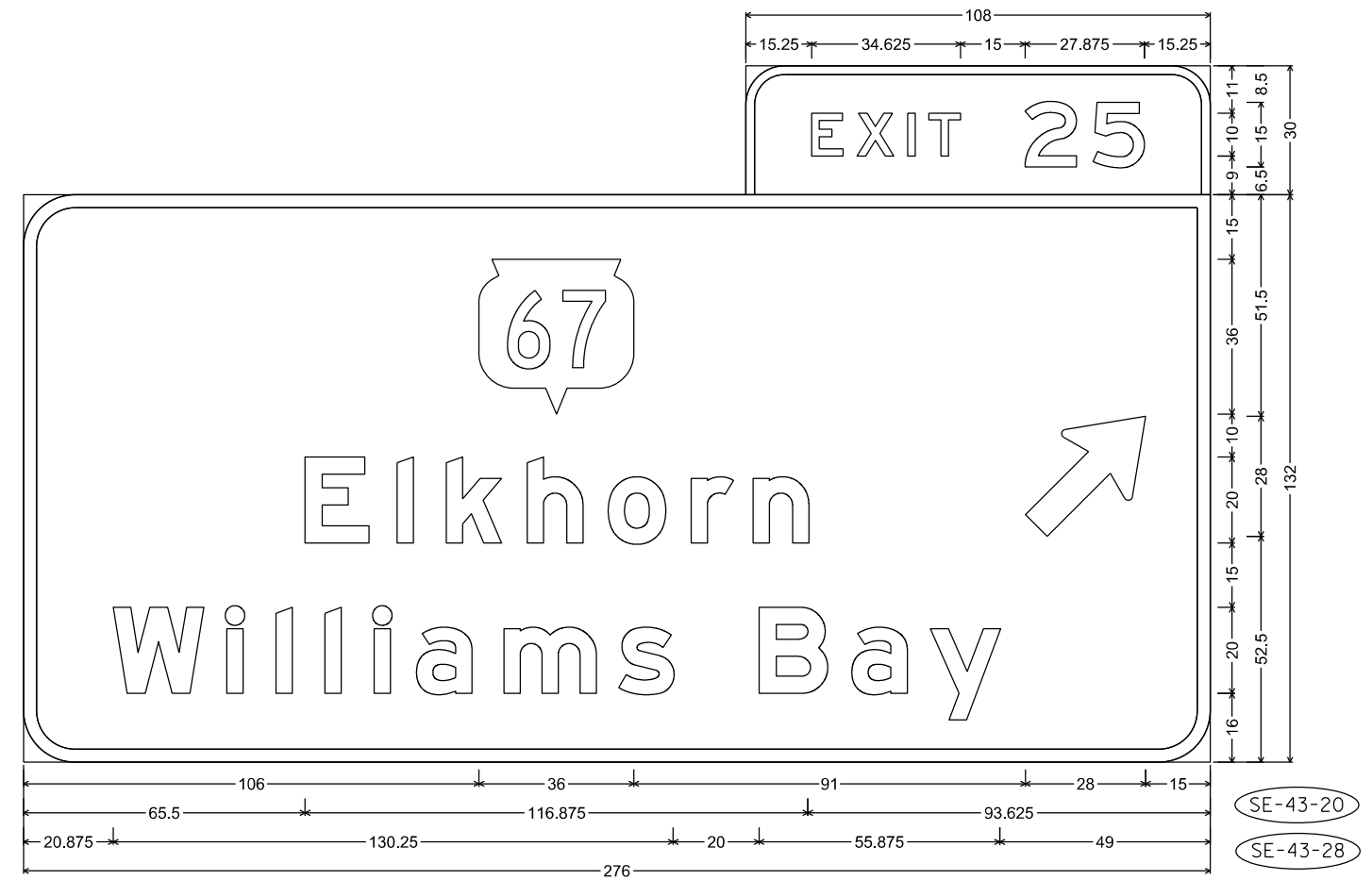
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border

SE-43-19



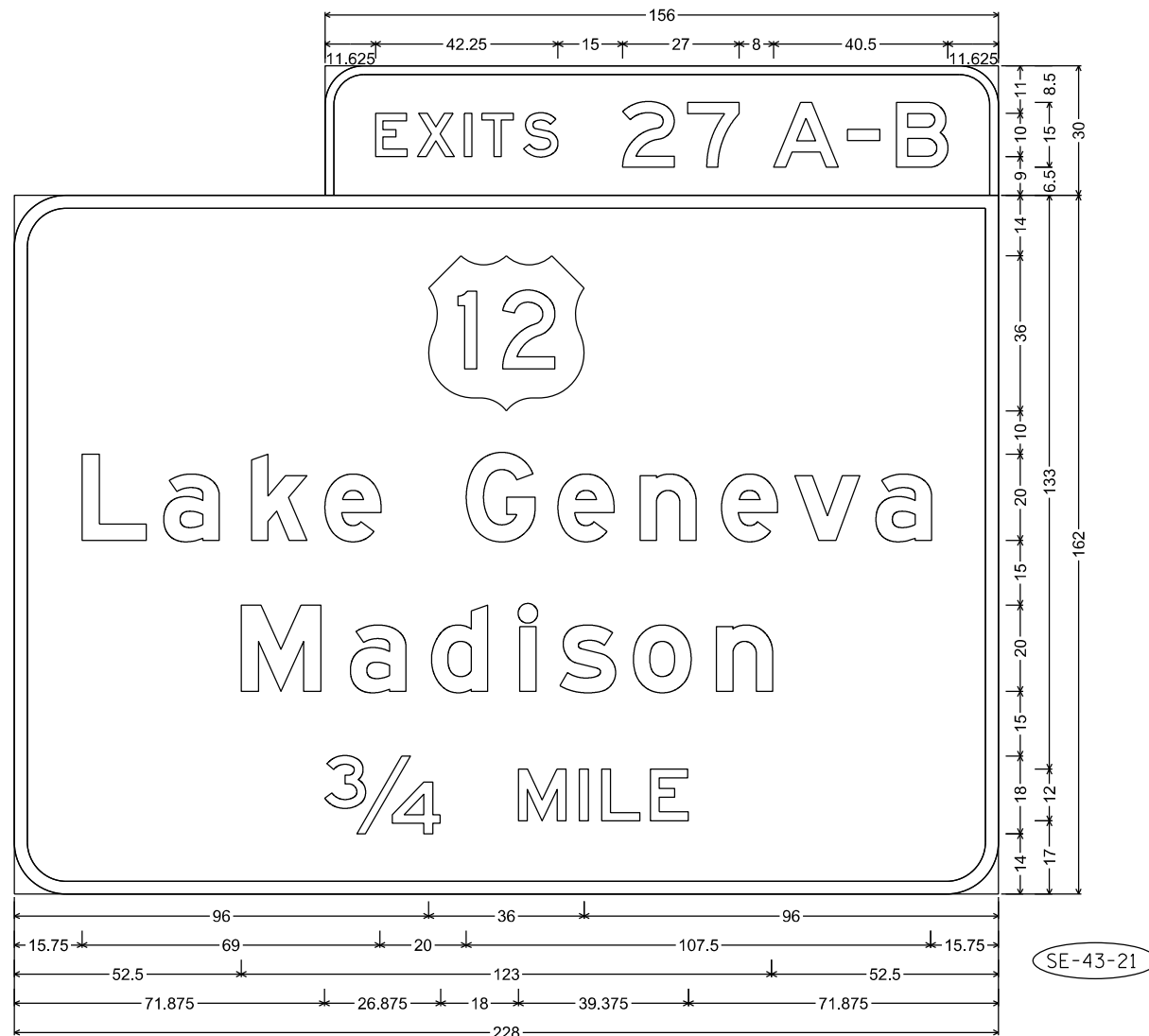
E1-5P; 9.000" Radius, 2.000" Border  
E4-1A; 12.000" Radius, 3.000" Border

SE-43-20

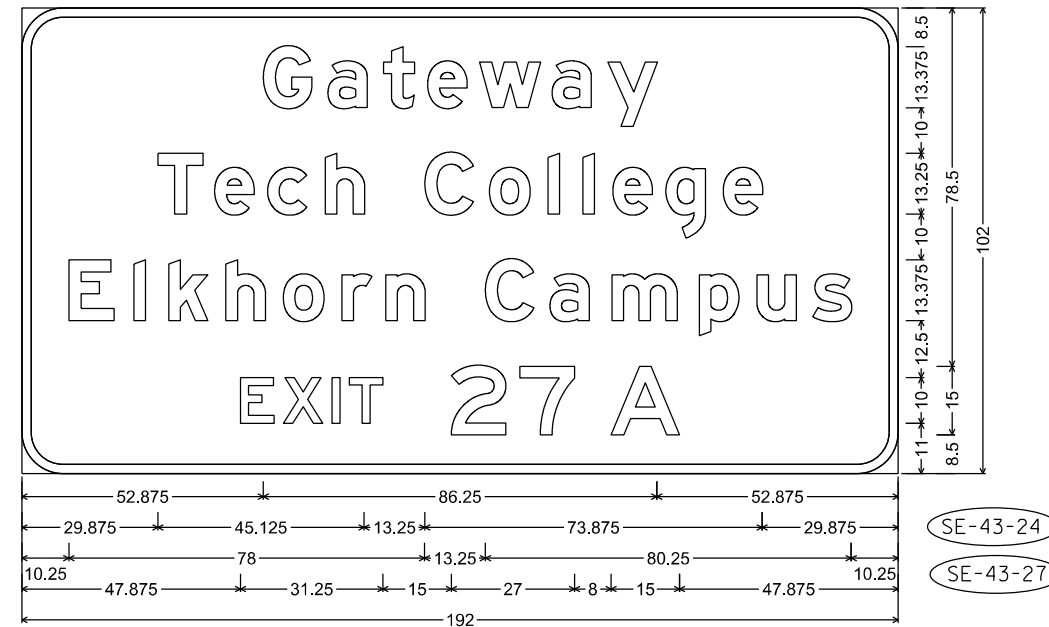
SE-43-28

NOTES

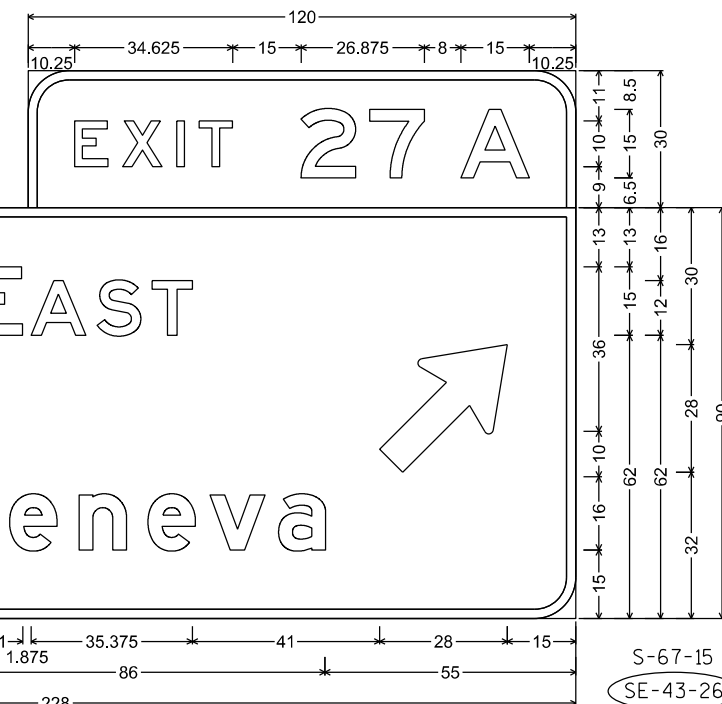
1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



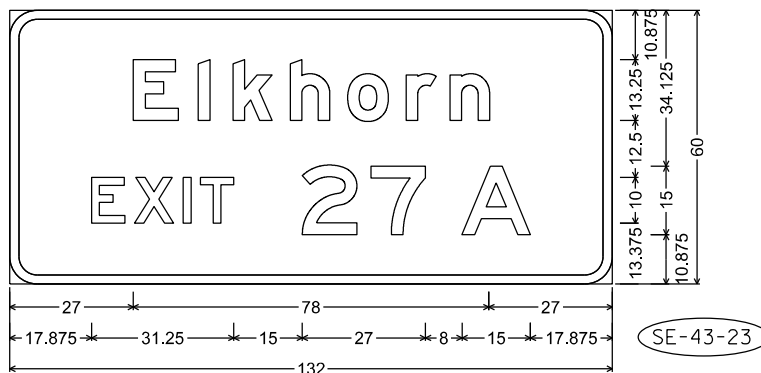
E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border



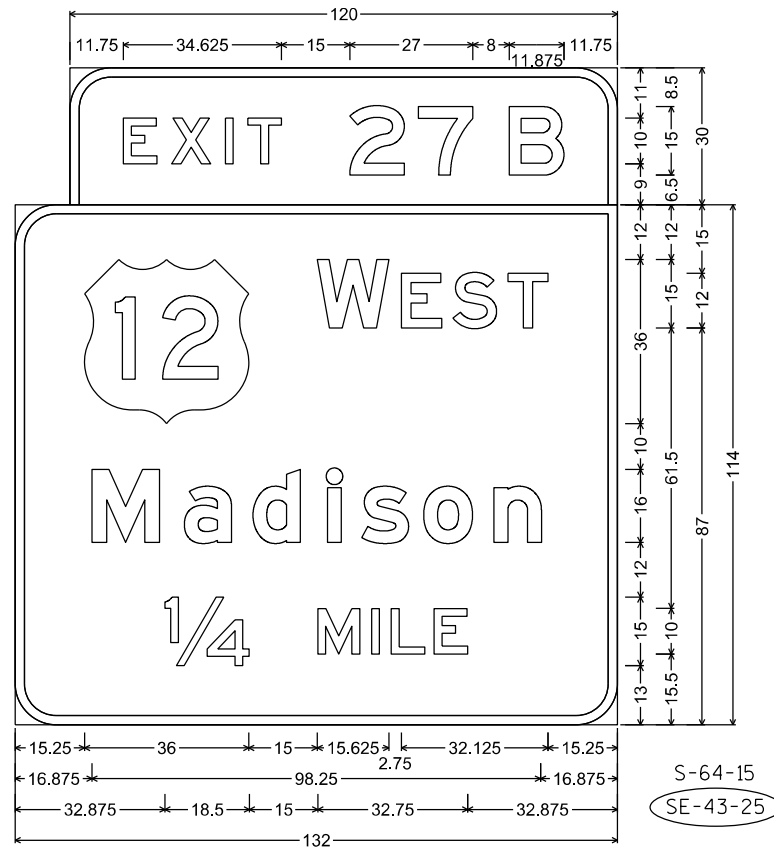
E3-1; 9.000" Radius, 2.000" Border



E1-5P; 9.000" Radius, 2.000" Border  
E6-1; 9.000" Radius, 2.000" Border



E3-1;  
6.000" Radius, 2.000" Border, White on, Green;  
"Elkhorn", E Mod; "EXIT", E; "27", E; "A", E;

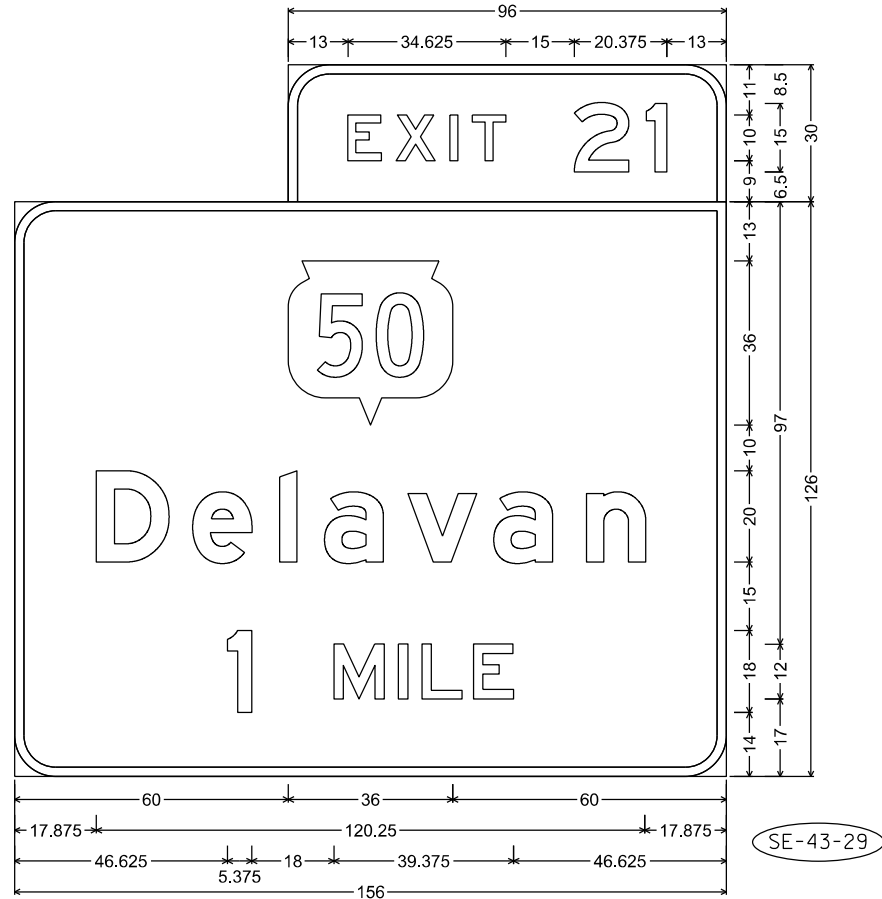


S-64-15  
SE-43-25

E1-5P; 9.000" Radius, 2.000" Border  
E6-51; 9.000" Radius, 2.000" Border

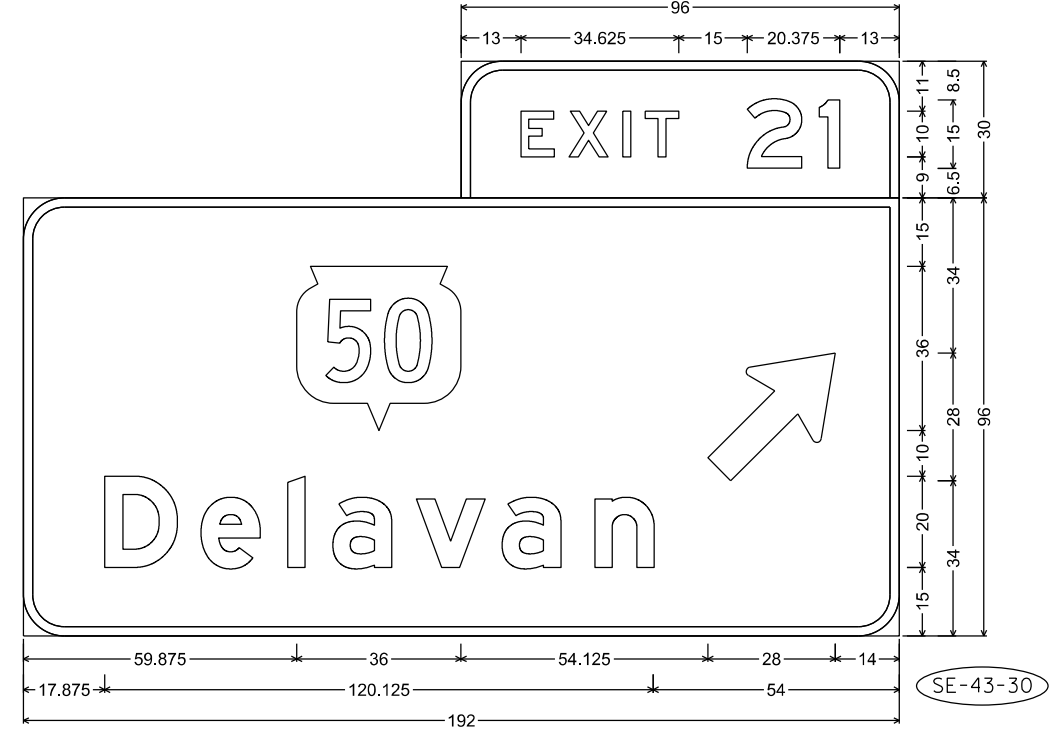
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



SE-43-29

E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 9.000" Radius, 2.000" Border



SE-43-30

E1-5P; 9.000" Radius, 2.000" Border  
E4-1A; 9.000" Radius, 2.000" Border

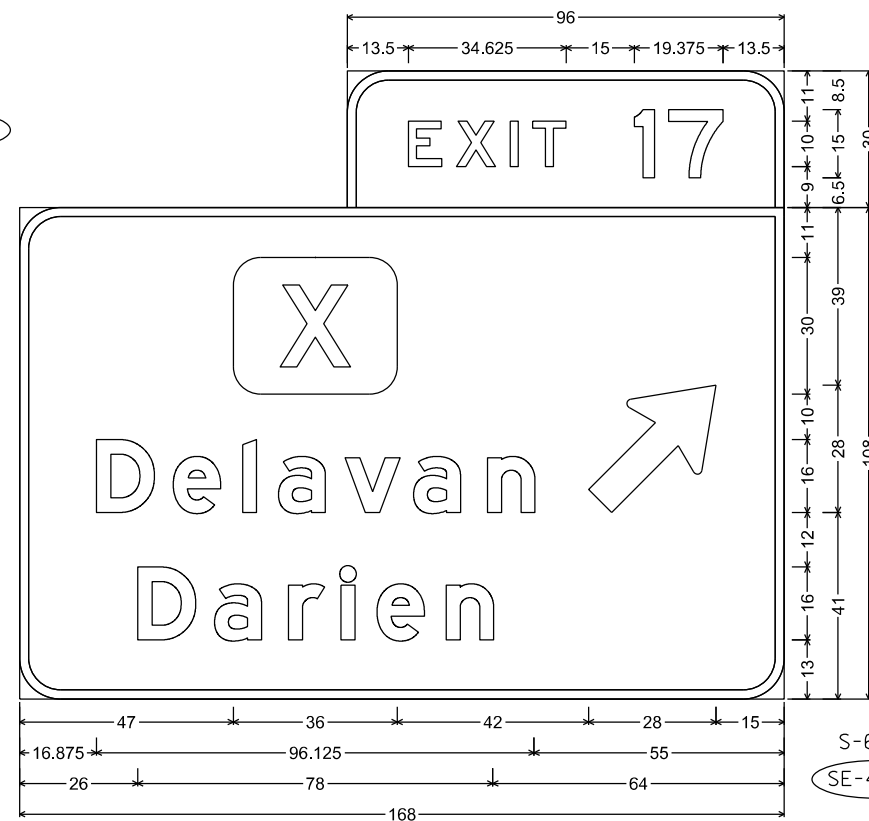
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border

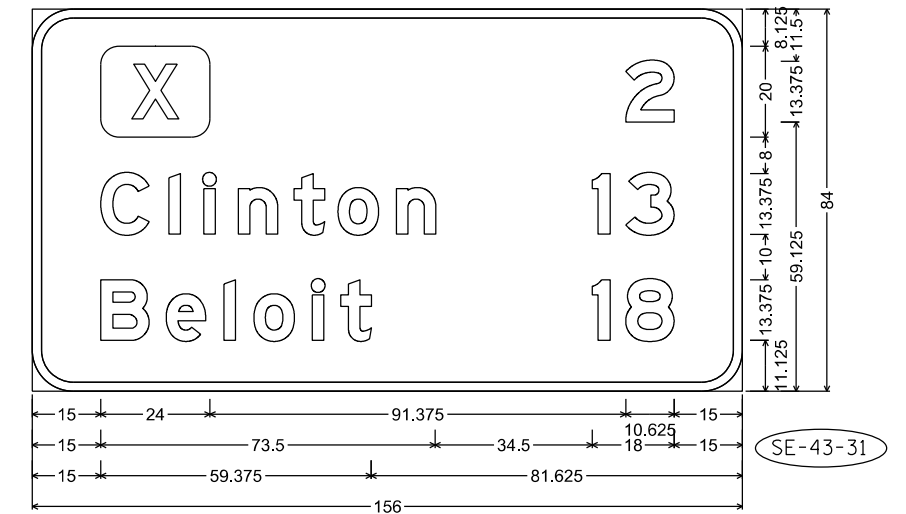
SE-43-32



E1-5P; 9.000" Radius, 2.000" Border  
E6-1; 9.000" Radius, 2.000" Border

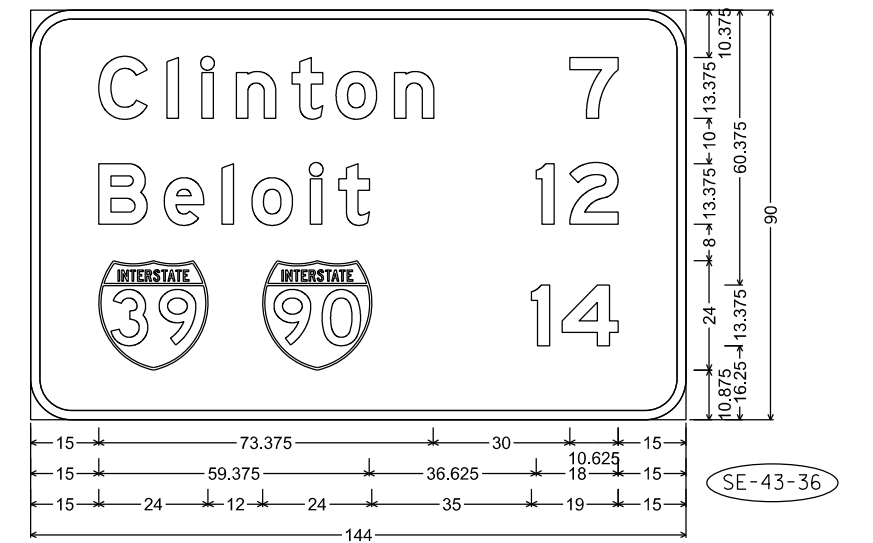
S-64-11

SE-43-33



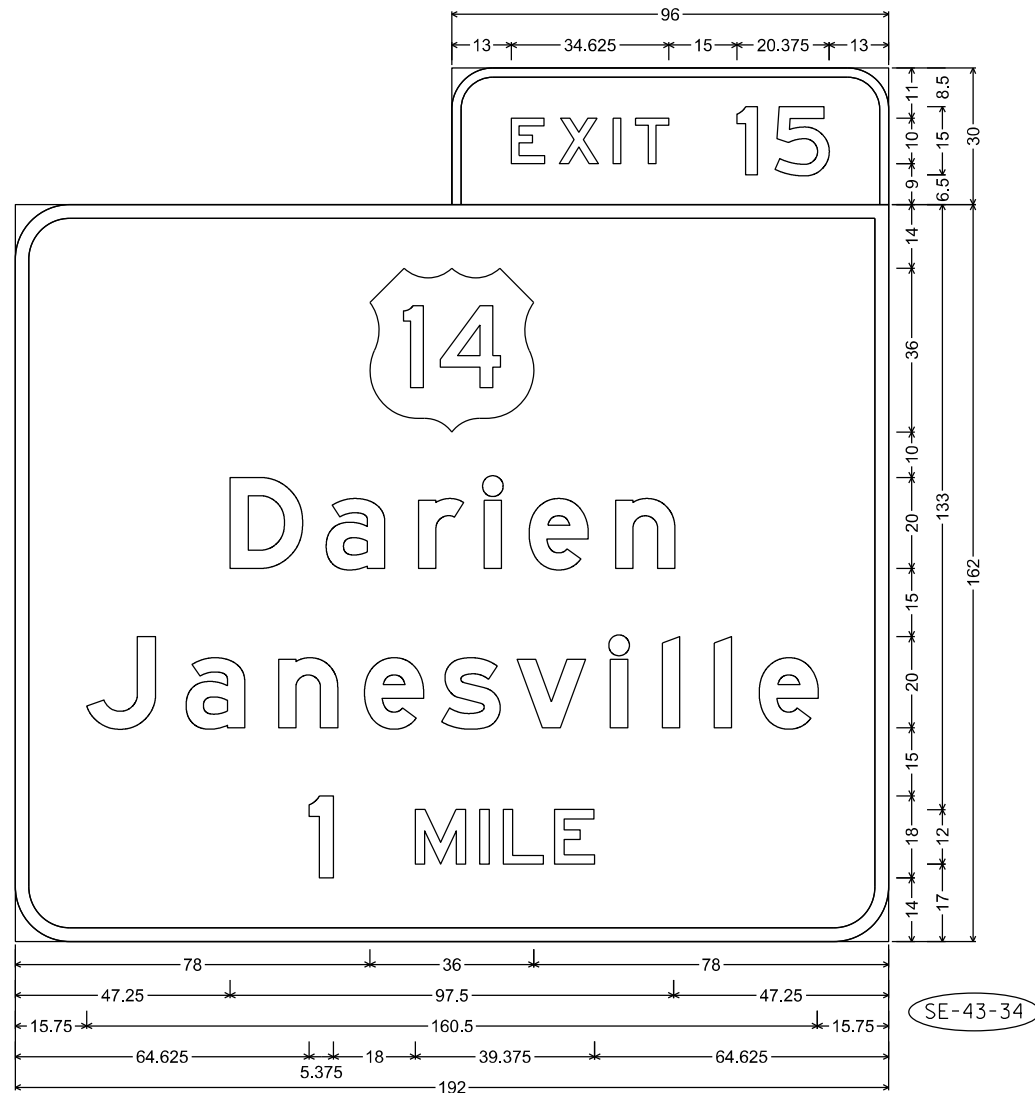
D2-3; 9.000" Radius, 2.000" Border

SE-43-31



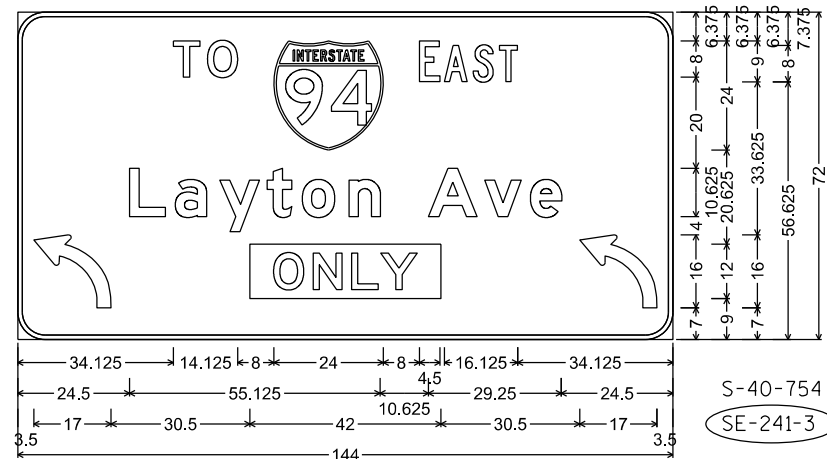
D2-3; 9.000" Radius, 2.000" Border

SE-43-36



E1-5P; 9.000" Radius, 2.000" Border  
 E1-1A; 12.000" Radius, 3.000" Border

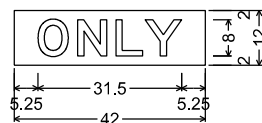
SE-43-34



D16-1; 6.000" Radius, 1.000" Border  
 "TO", E; "EAST", C;

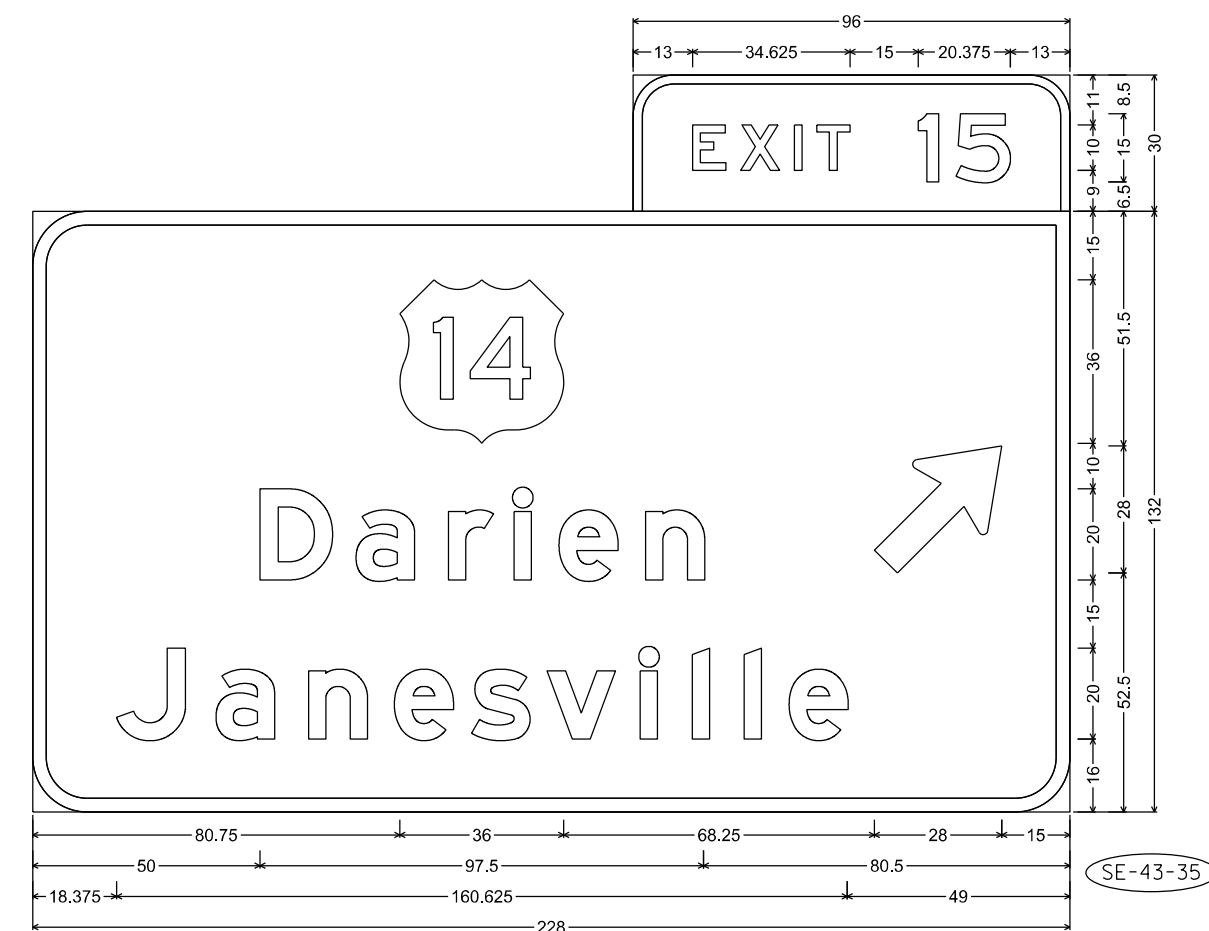
S-40-754

SE-241-3



No border, Black on, Fluorescent yellow;  
 "ONLY", E;

- NOTES
1. All Signs Type I - Type SH Reflective
  2. Color:  
 Background - Green  
 Message - White
  3. Message Series - E Modified except all CAP words Series E



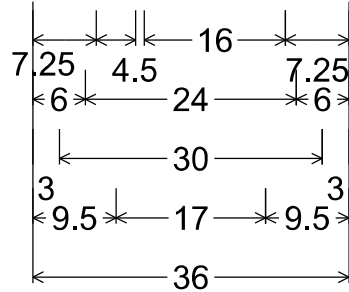
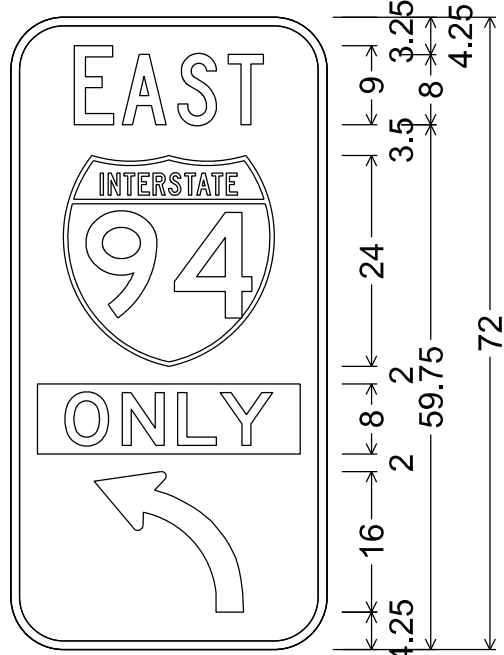
E1-5P; 9.000" Radius, 2.000" Border  
 E4-1A; 12.000" Radius, 3.000" Border

SE-43-35

7

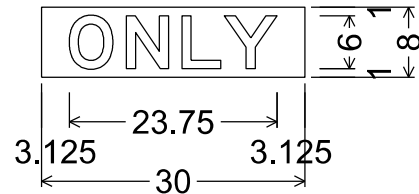
7



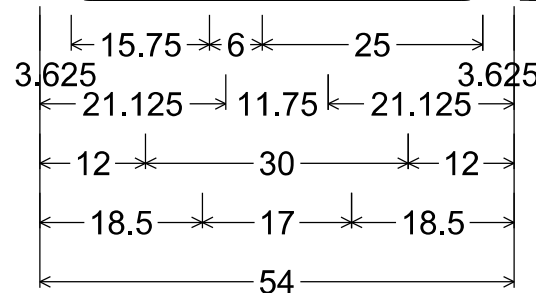
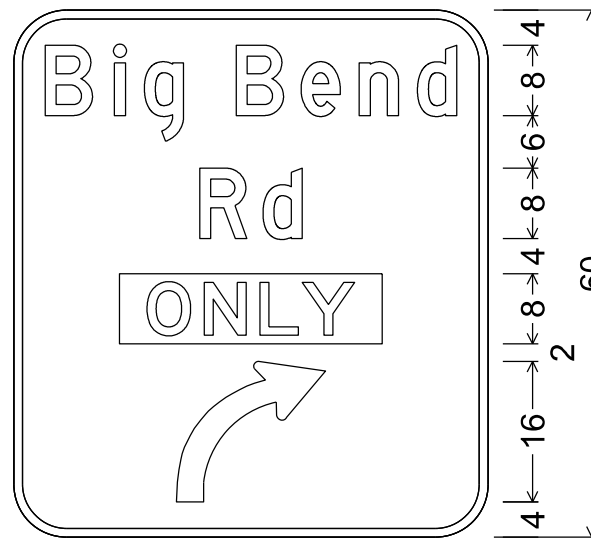


D16-1L; 6.000" Radius, 1.000" Border  
"EAST", C

S-67-908  
SE-F-1

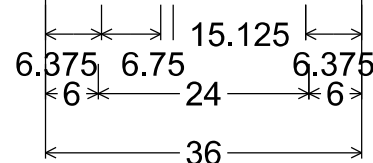
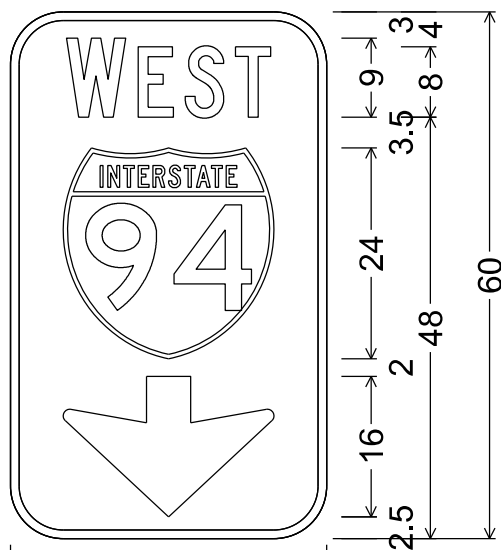


No border, Black on, Fluorescent yellow;  
"ONLY" Black, E;



D16-1 ; 6.000" Radius, 1.000" Border  
"Big", D; "Bend", D; "Rd", D

S-67-925  
SE-59-1

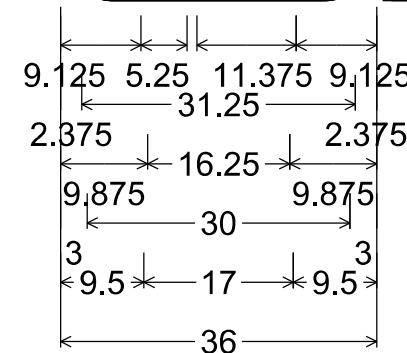
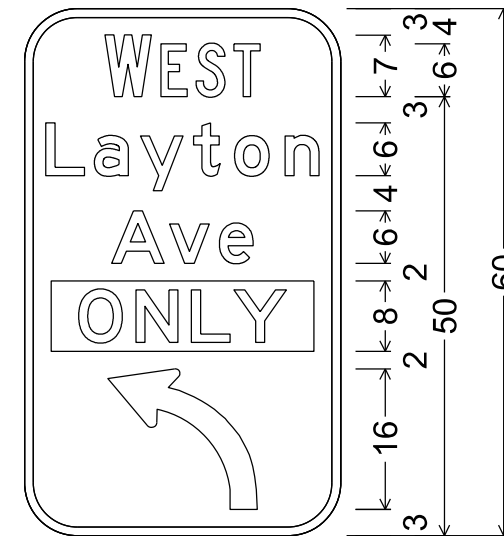


D16-1; 6.000" Radius, 1.000" Border  
"WEST", C

S-67-298  
SE-18-1

NOTES

1. All Signs Type II - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - as noted
4. ONLY Plaque background on Yellow Type F Reflective Sheeting with Black Non-Reflective Message

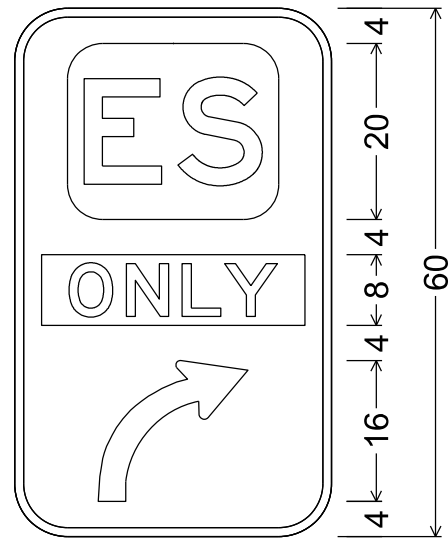


D15-1; 6.000" Radius, 1.000" Border (Qty. 2)  
6.000" Radius, 1.000" Border, White on, Green;  
"WEST", C; "Layton", E; "Ave", E

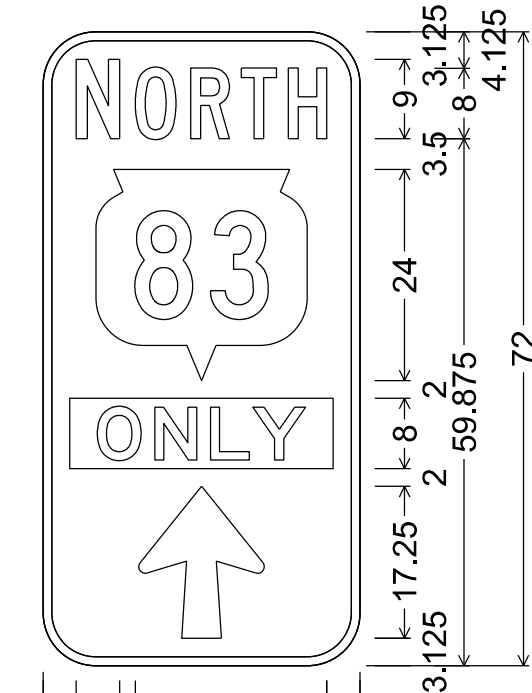
S-40-753  
SE-241-1  
SE-241-2

NOTES

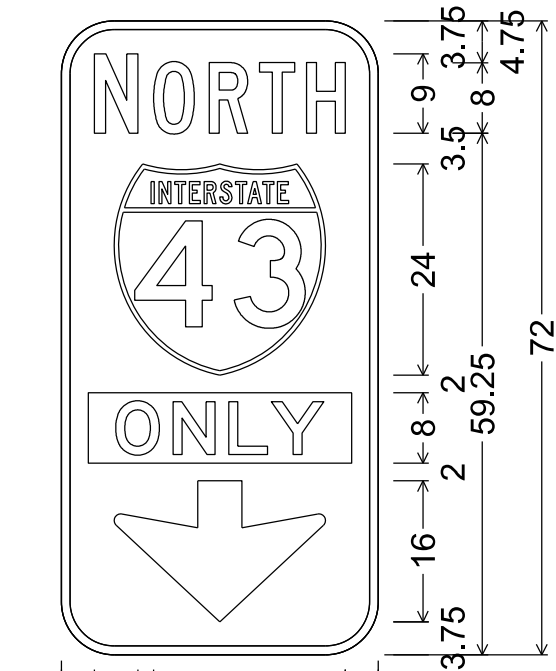
1. All Signs Type II - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - as noted
4. ONLY Plaque background on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



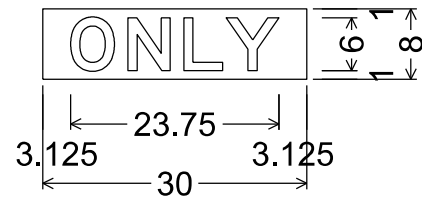
S-67-927  
SE-83-1  
D16-1R; 6.000" Radius, 1.000" Border



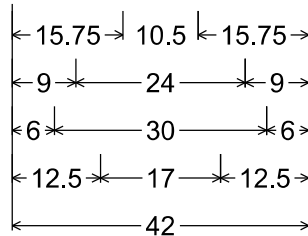
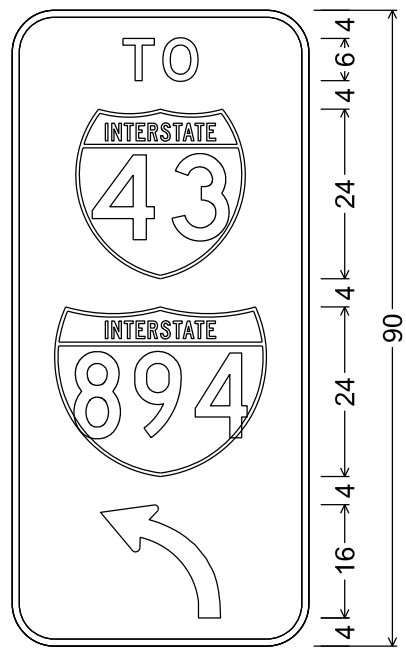
S-67-927  
SE-83-2  
D16-1; 6.000" Radius, 1.000" Border  
"NORTH", C



S-67-229  
SE-83-3  
D16-1; 6.000" Radius, 1.000" Border  
"NORTH", C;

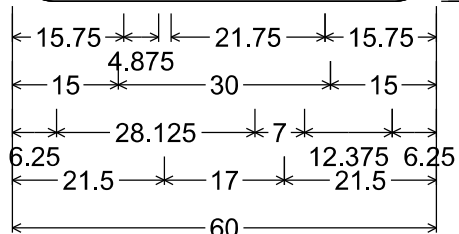
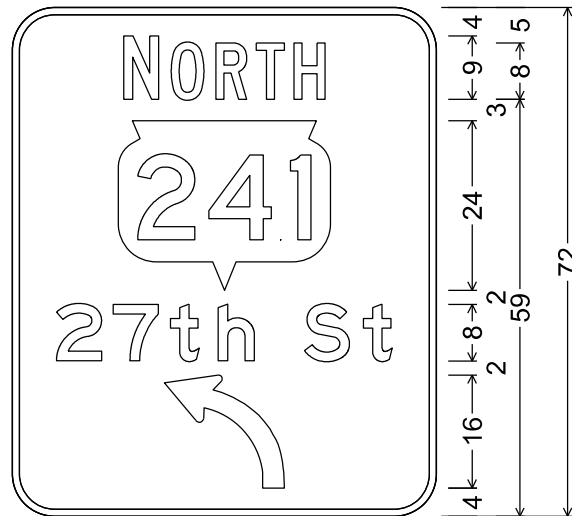


No border, Black on, Fluorescent yellow;  
"ONLY" Black, E;



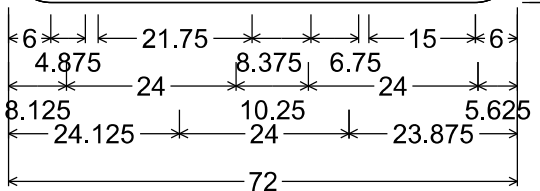
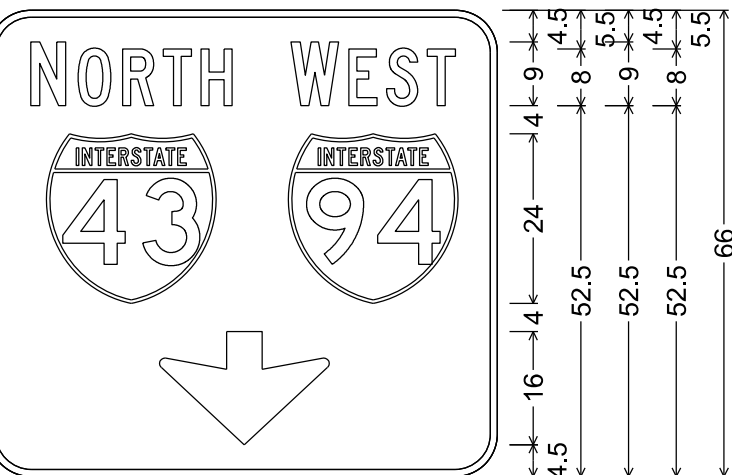
S-40-749  
SE-LAYTON-1

D16-1 MOD; 6.000" Radius, 1.000" Border  
"TO", E



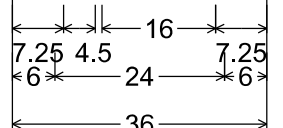
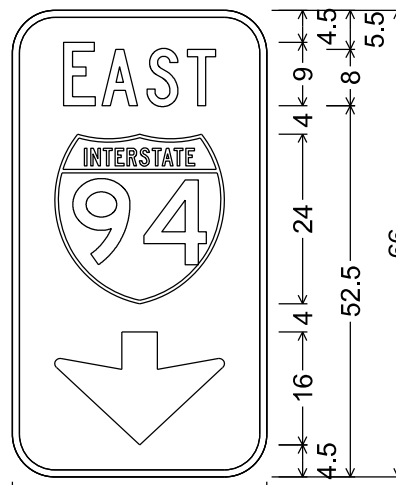
S-40-749  
SE-LAYTON-2

D16-1R; 6.000" Radius, 1.000" Border  
"NORTH", C; "27th", E; "St", E



S-40-751  
SE-LAYTON-3

D16-1 MOD; 6.000" Radius, 1.000" Border  
"NORTH", C; "WEST", C

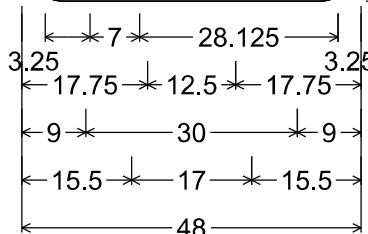
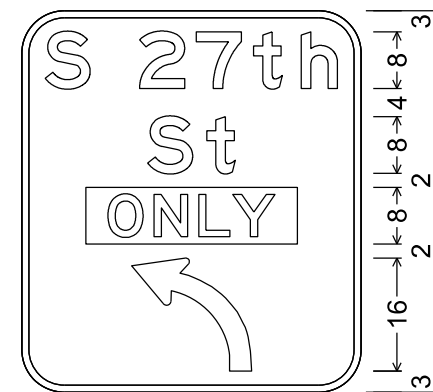


S-40-752  
SE-LAYTON-4

D16-1 MOD; 6.000" Radius, 1.000" Border  
"EAST", C

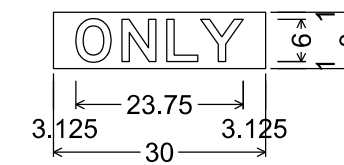
NOTES

1. All Signs Type II - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - as noted
4. ONLY Plaque background on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



S-40-750  
SE-LAYTON-5  
SE-LAYTON-6

D16-1 MOD; 6.000" Radius, 1.000" Border (Qty. 2);  
"S", E; "27th", E; "St", E



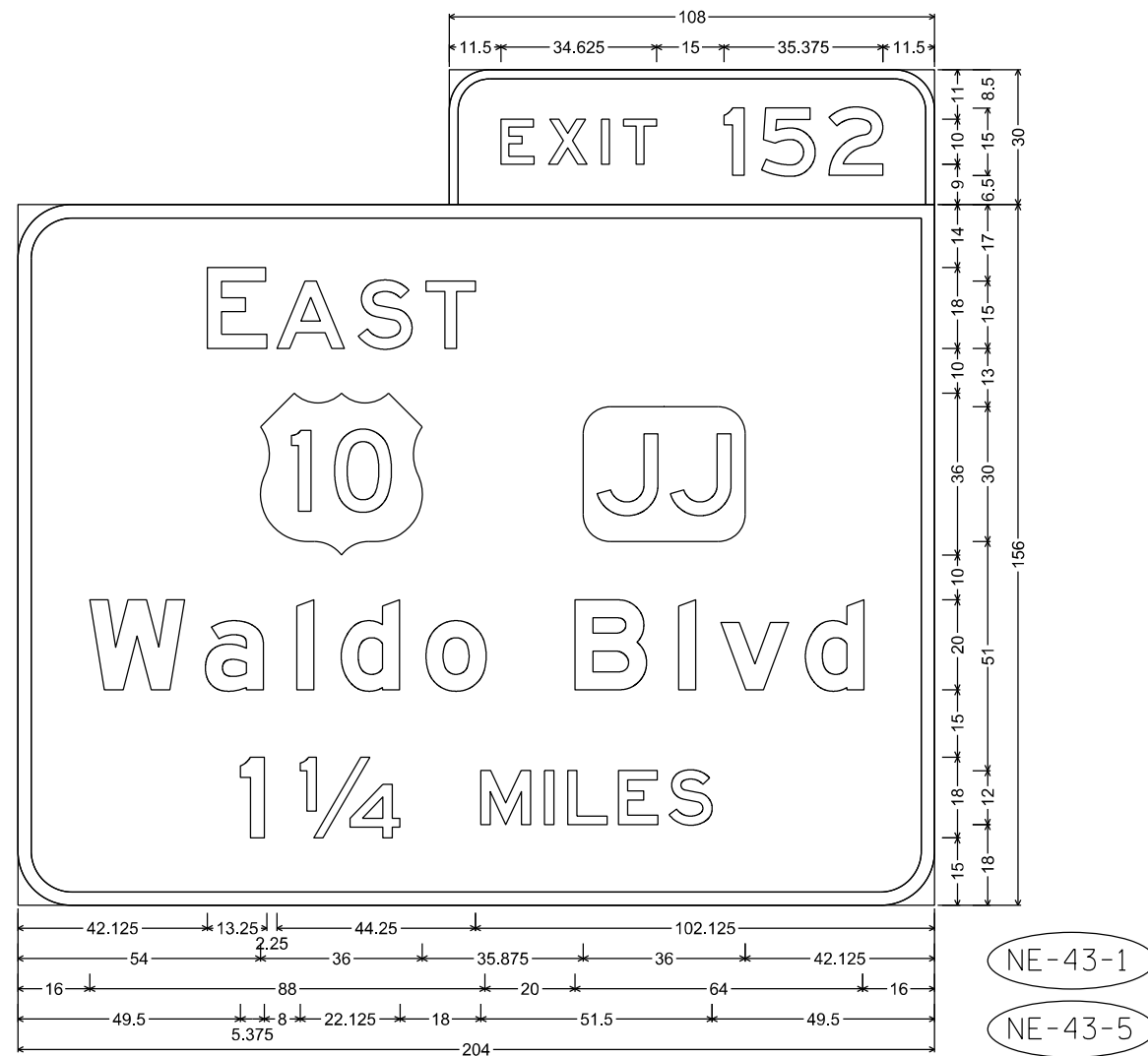
No border, Black on, Fluorescent yellow;  
"ONLY" Black, E;

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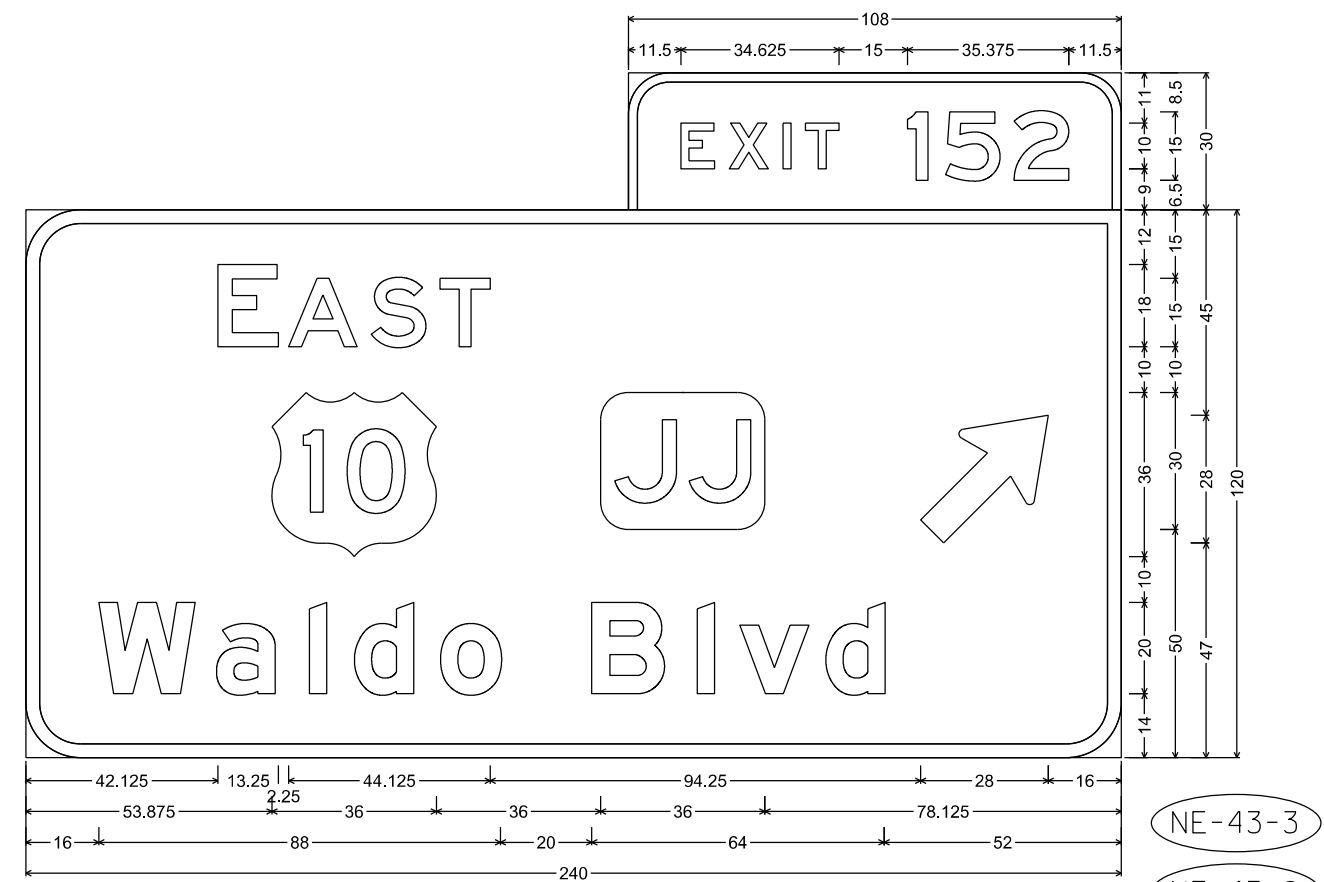
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border

NE-43-1  
NE-43-5



E1-5P; 9.000" Radius, 2.000" Border  
E4-1A; 12.000" Radius, 3.000" Border

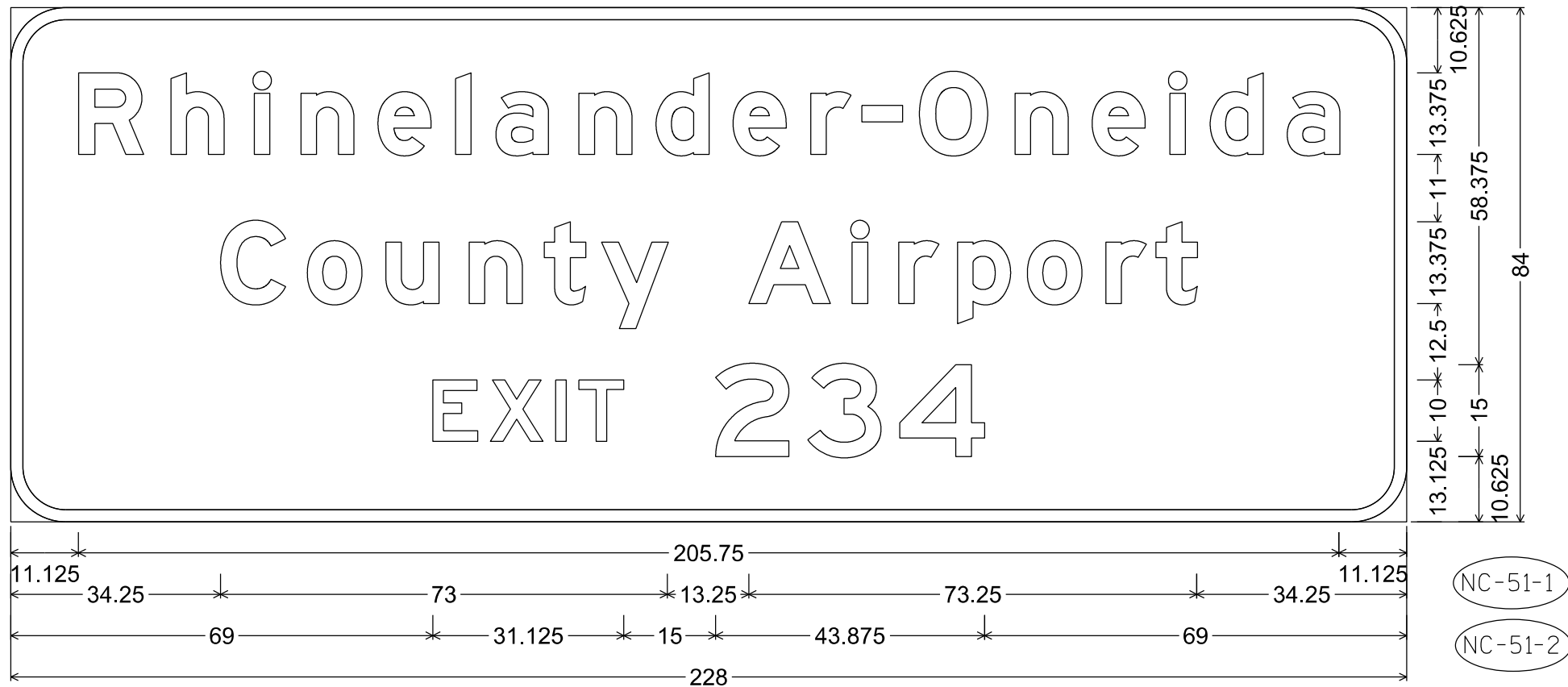
NE-43-3  
NE-43-8

7

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NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E

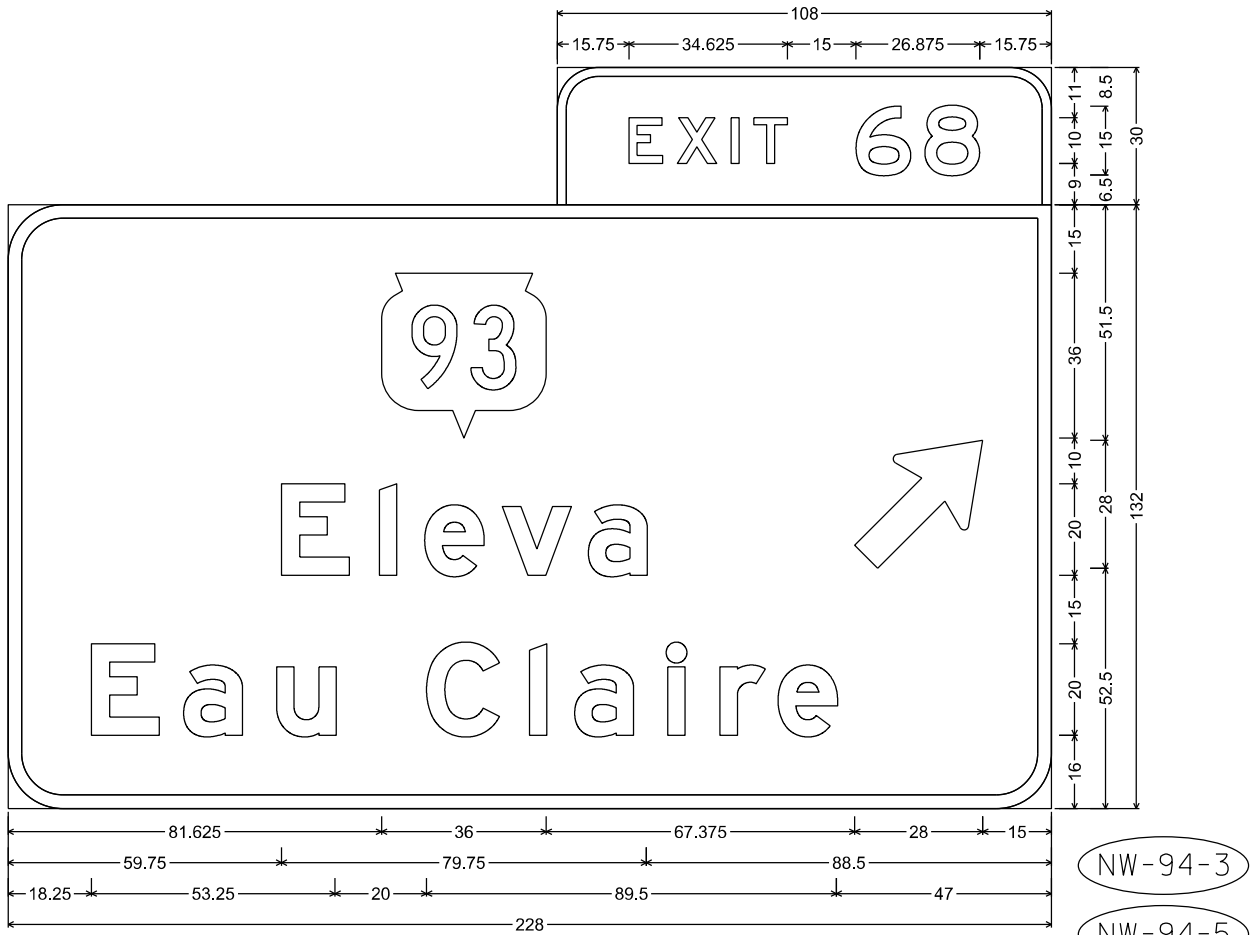


E3-1; 9.000" Radius, 2.000" Border

7

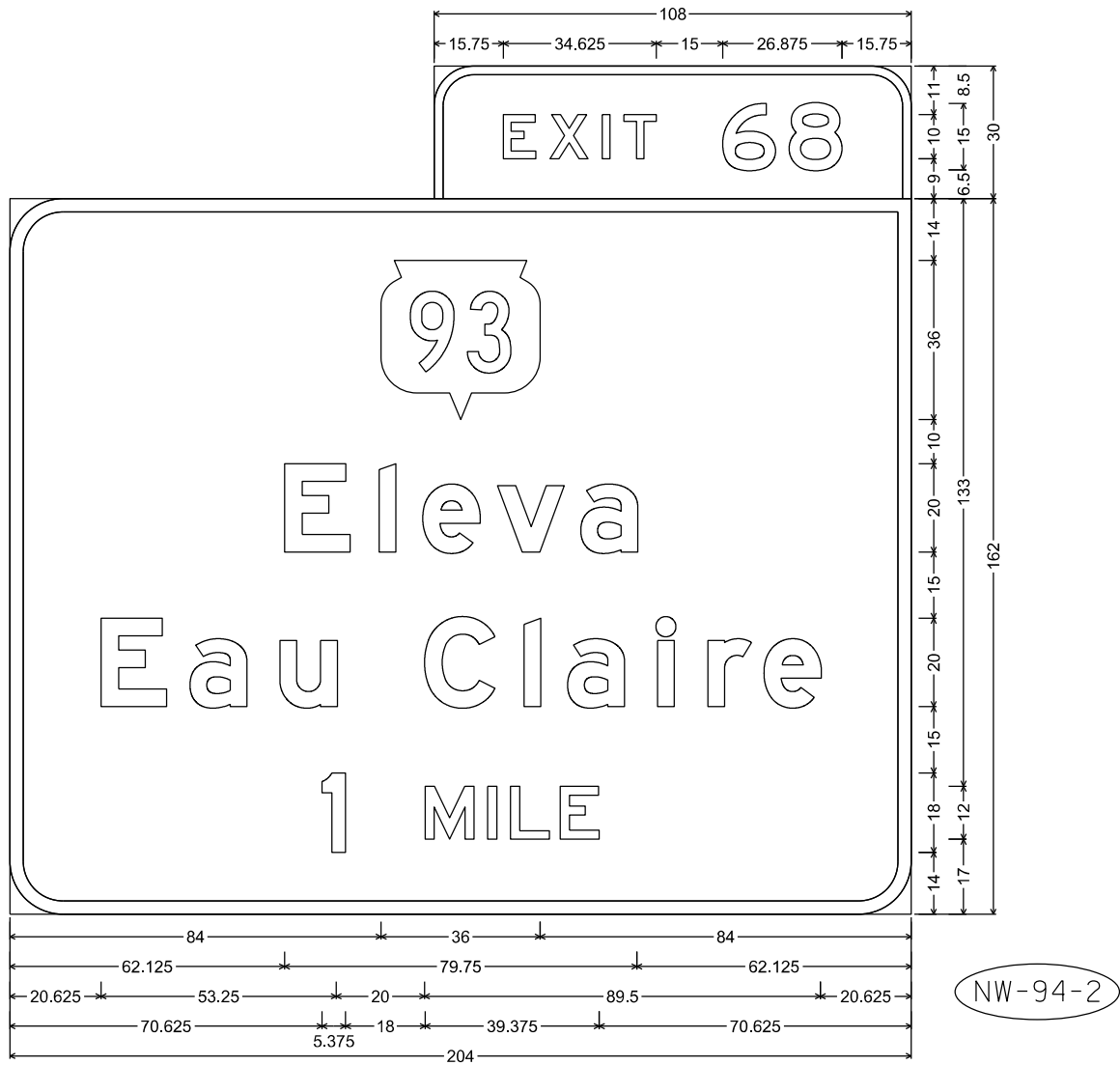
7

- NOTES
1. All Signs Type I - Type SH Reflective
  2. Color:  
Background - Green  
Message - White
  3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border  
E4-1A; 12.000" Radius, 3.000" Border

NW-94-3  
NW-94-5



E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border

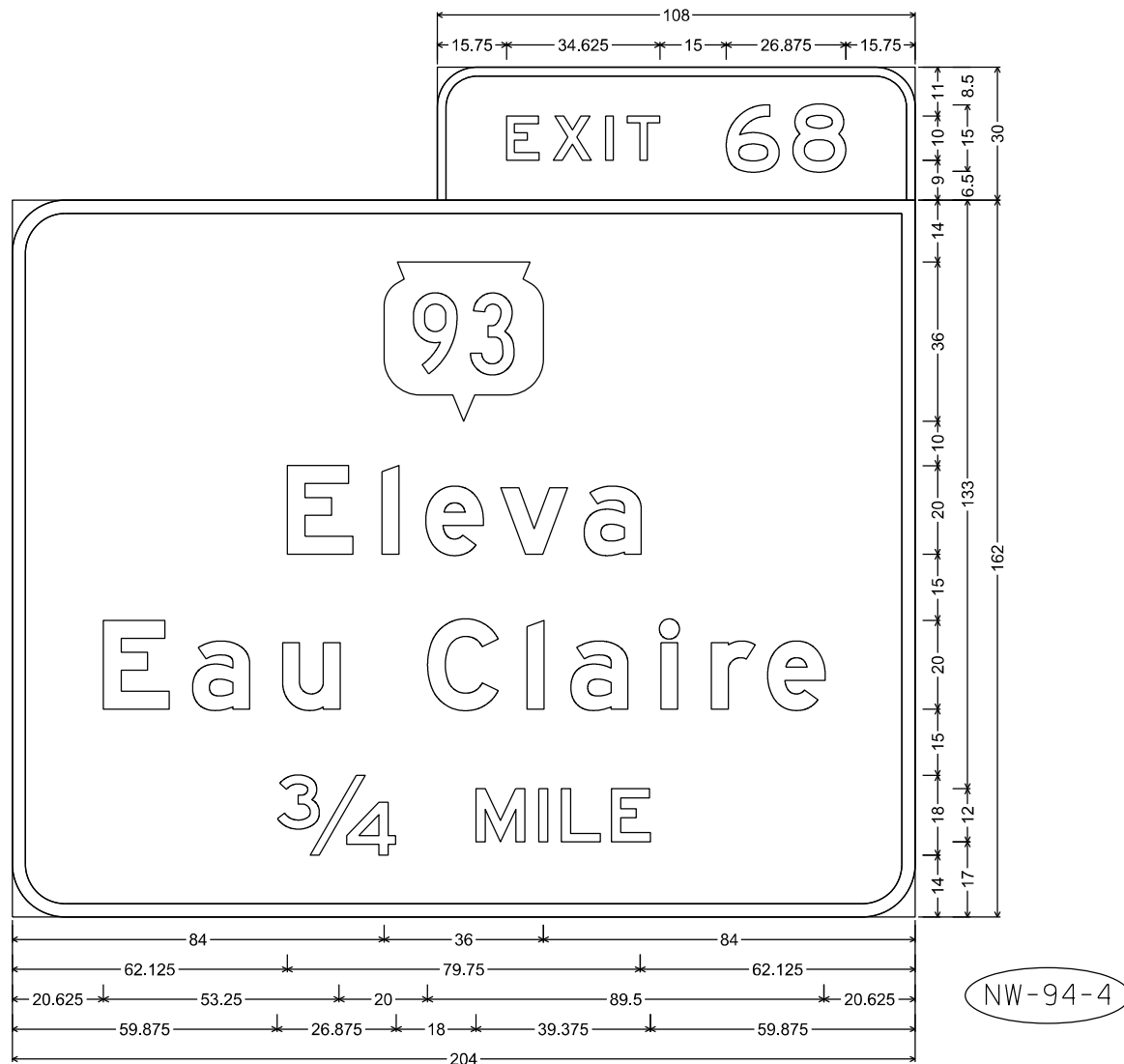
NW-94-2

7

7

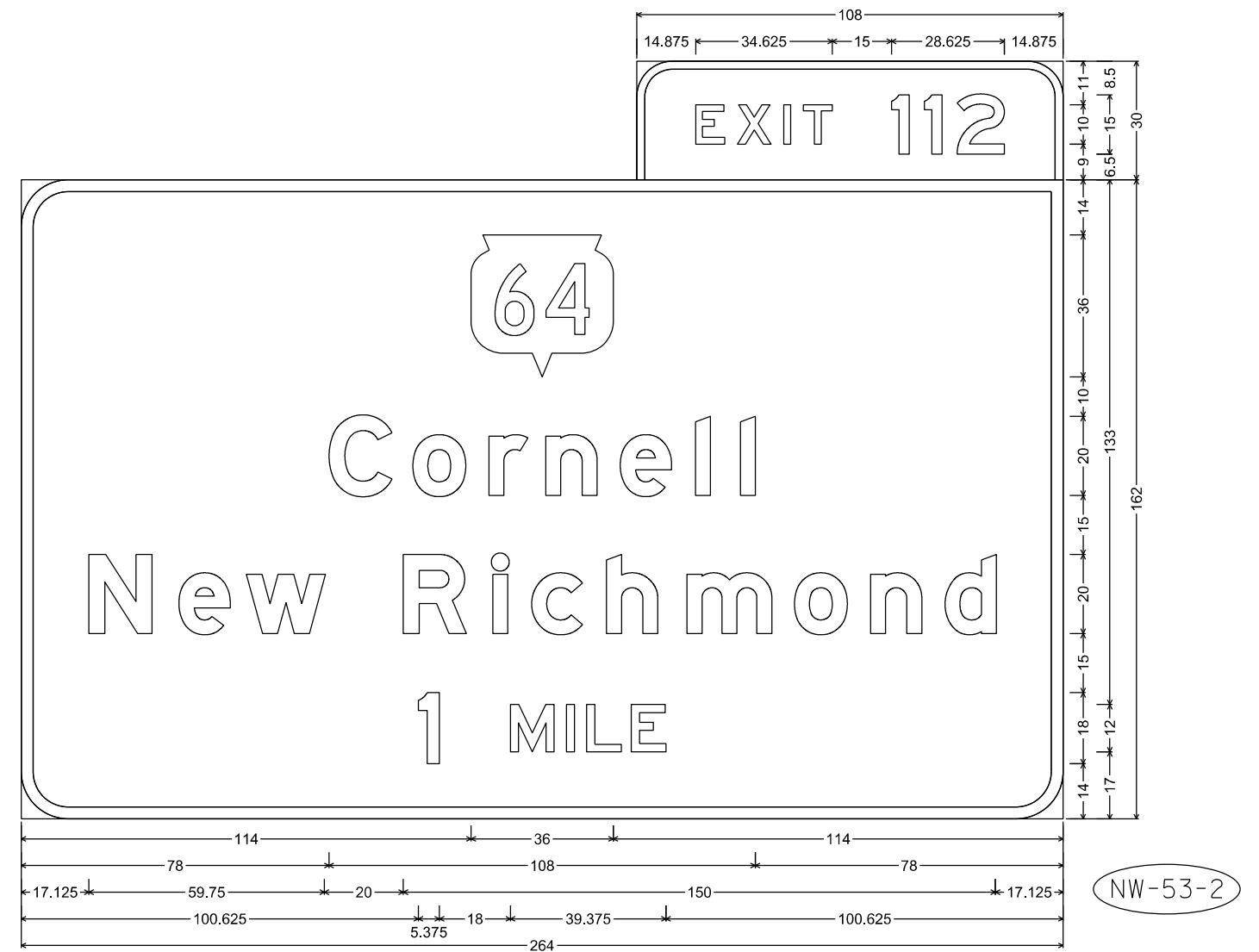
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border

NW-94-4



E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border

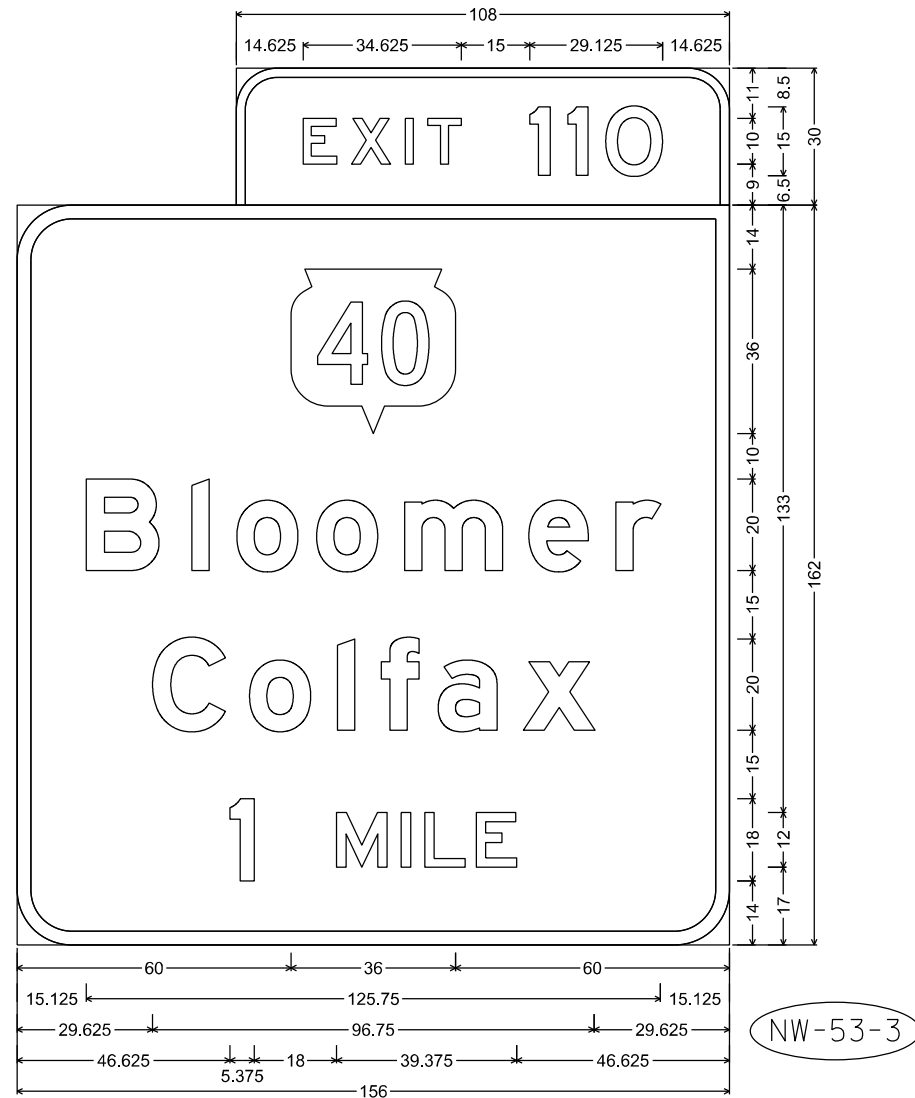
NW-53-2

7

7

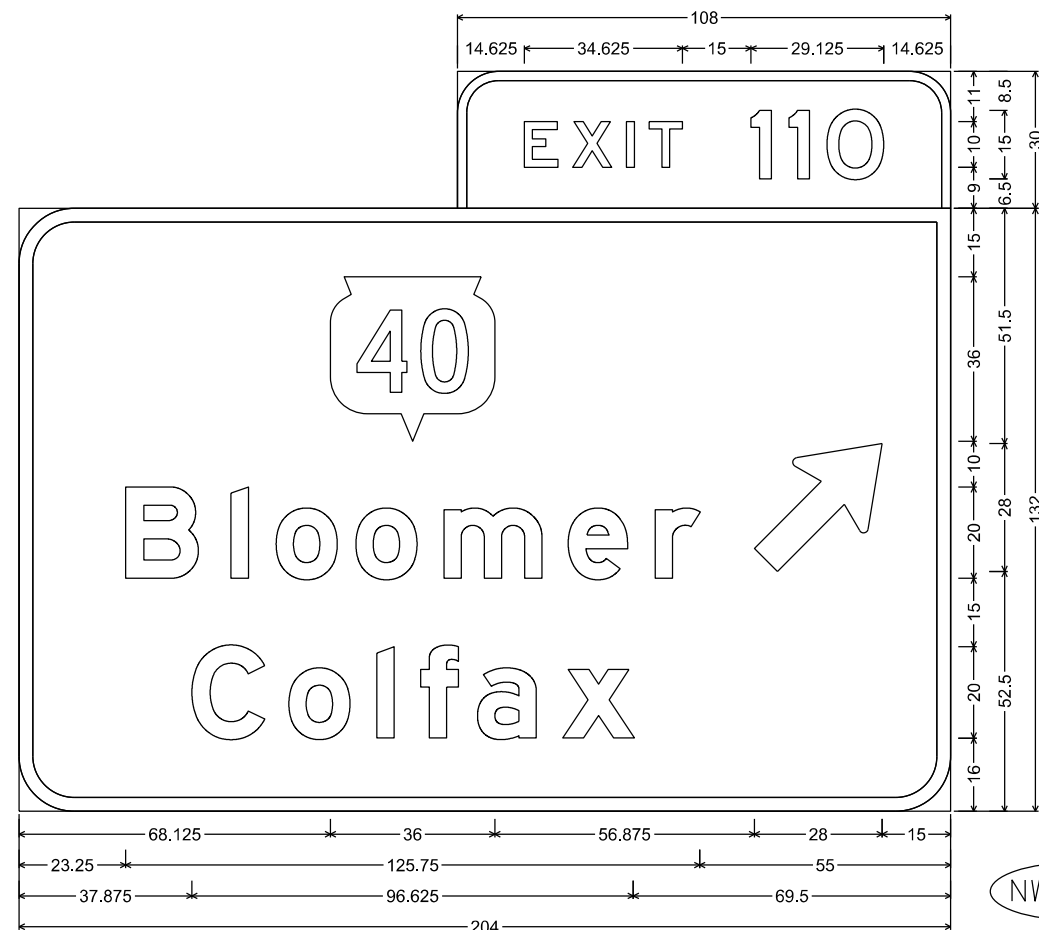
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E



NW-53-3

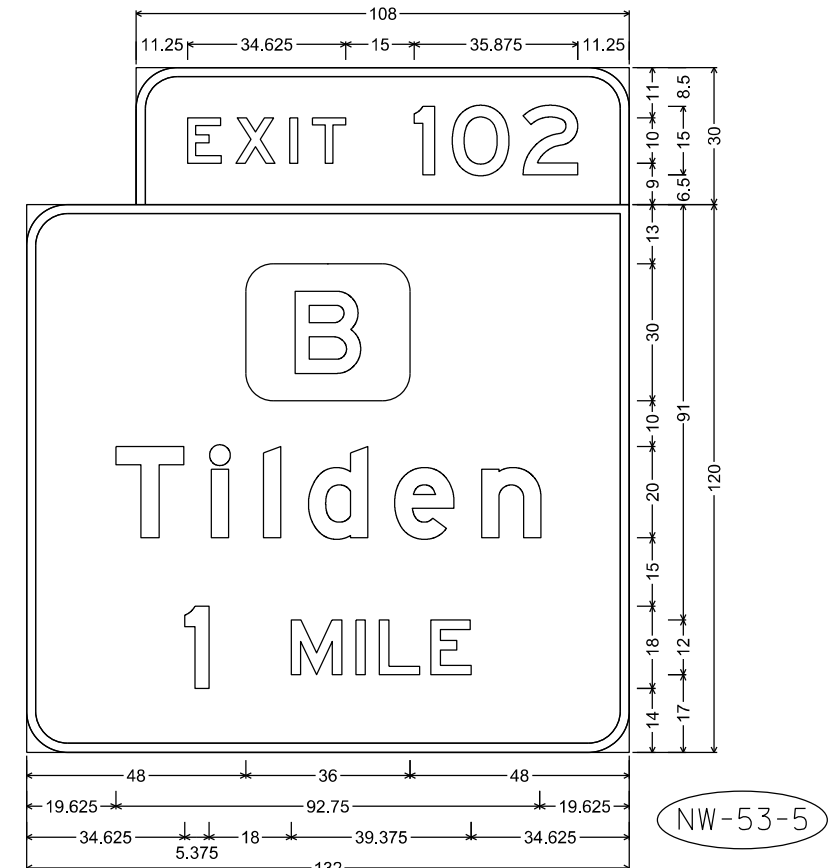
E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 12.000" Radius, 3.000" Border



NW-53-1

NW-53-4

E1-5P; 9.000" Radius, 2.000" Border  
E4-1A; 12.000" Radius, 3.000" Border



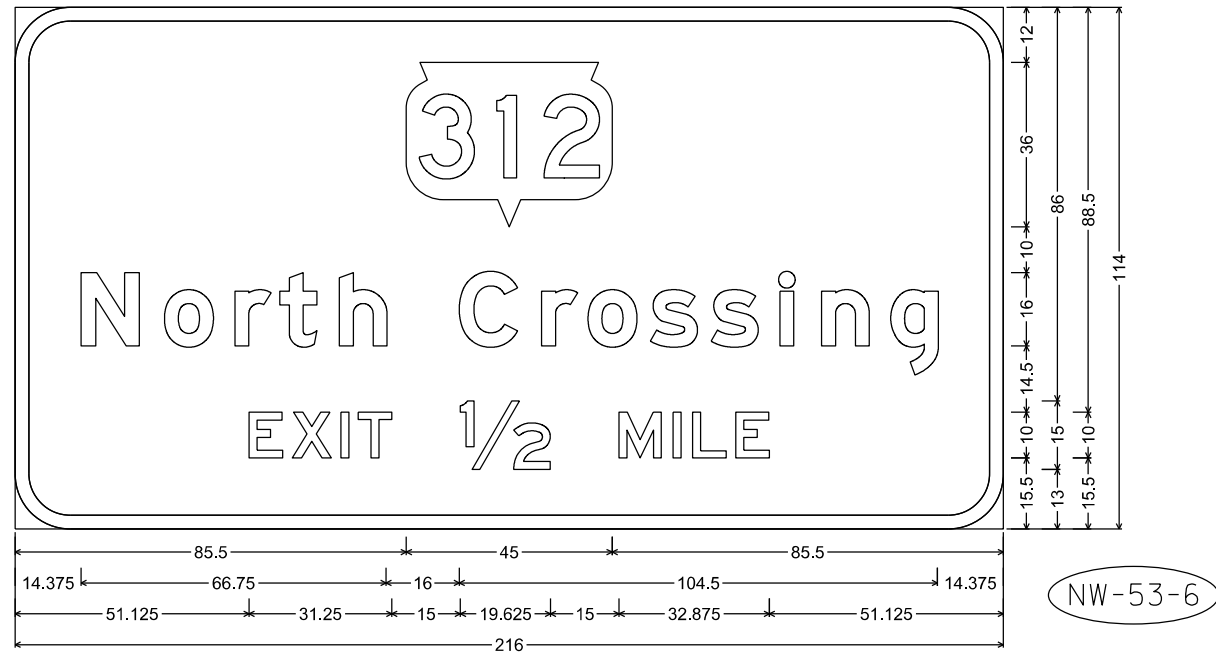
NW-53-5

E1-5P; 9.000" Radius, 2.000" Border  
E1-1A; 9.000" Radius, 2.000" Border



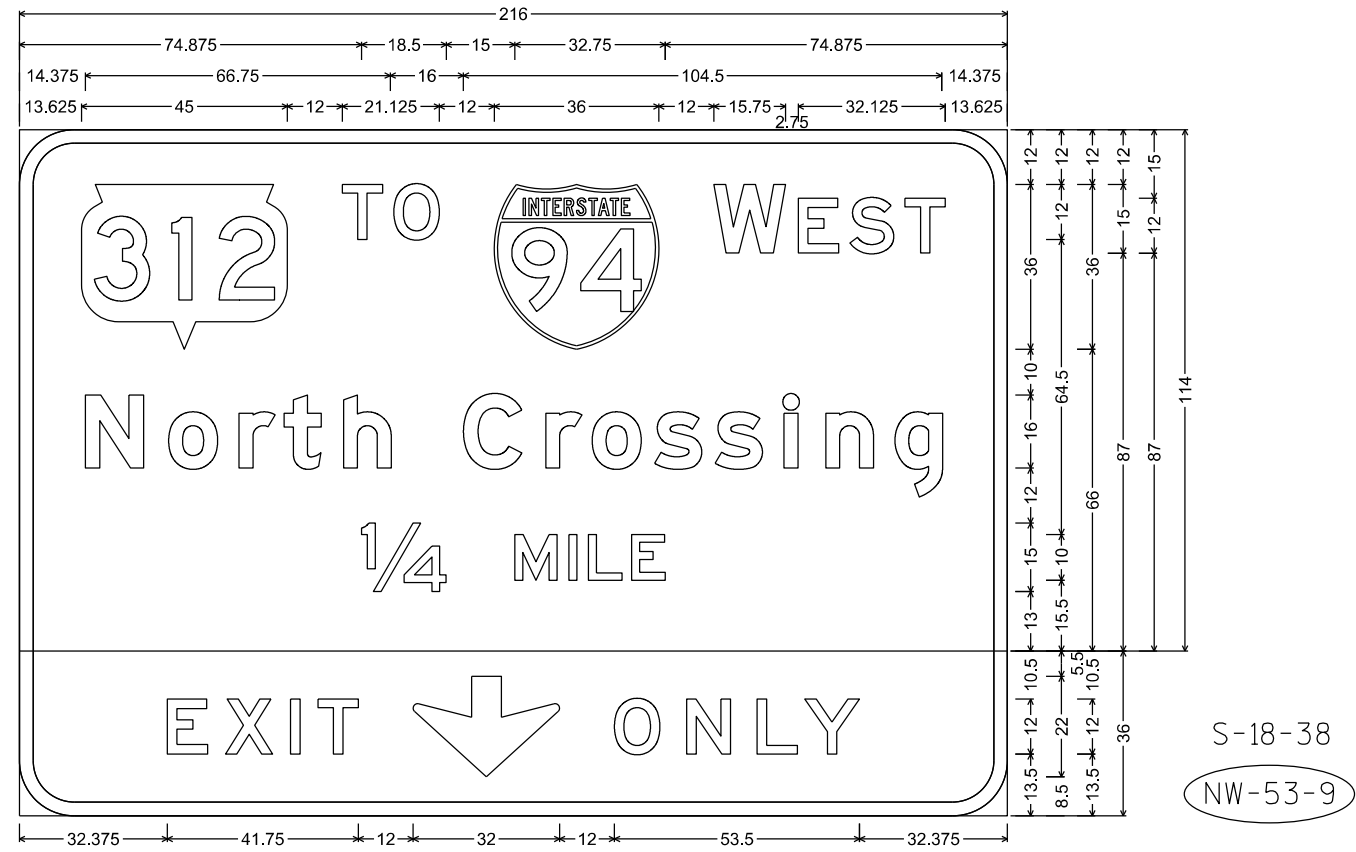
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E or as noted
4. EXIT ONLY Panel on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



E6-51; 12.000" Radius, 3.000" Border

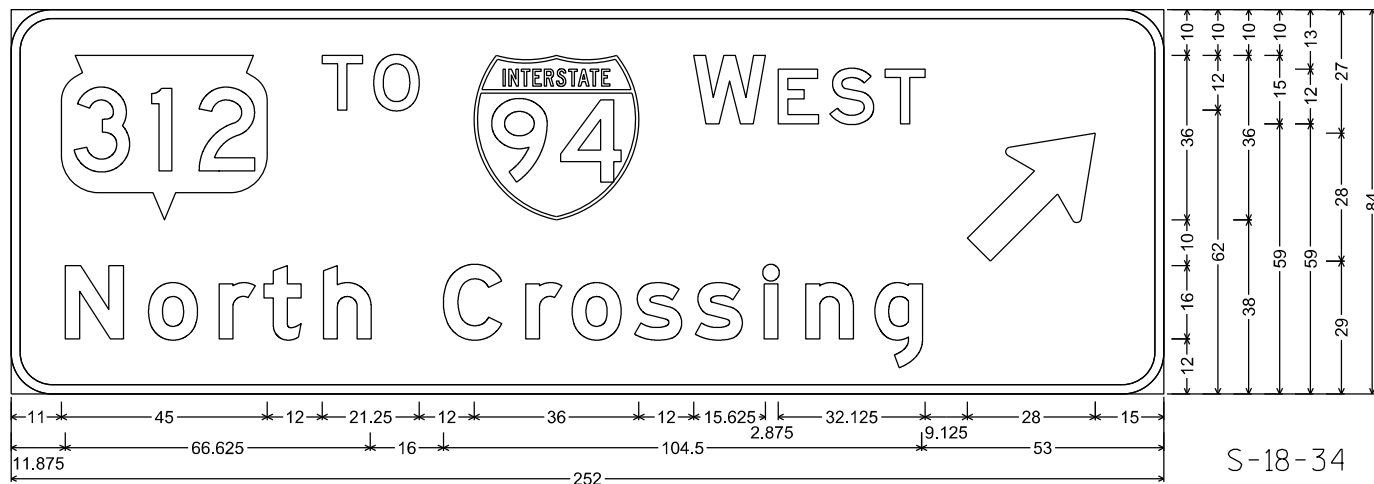
NW-53-6



E6-51; 12.000" Radius, 3.000" Border  
E11-1; 12.000" Radius, 3.000" Border, Black on, Yellow

S-18-38

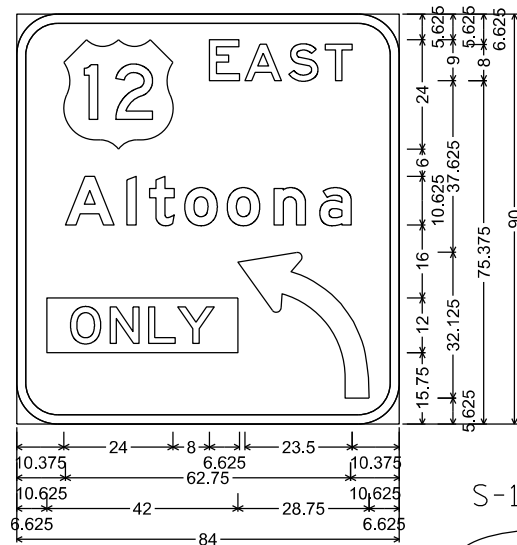
NW-53-9



E6-51; 9.000" Radius, 2.000" Border

S-18-34

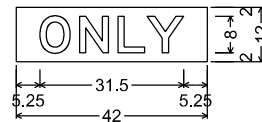
NW-53-7



S-18-84

NW-53-12

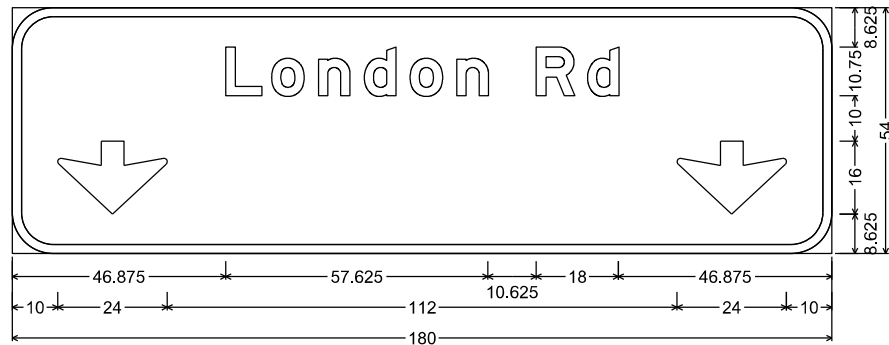
E6-54L (MOD); 9.000" Radius, 2.000" Border



No border, Black on, Fluorescent yellow; "ONLY", E;

NOTES

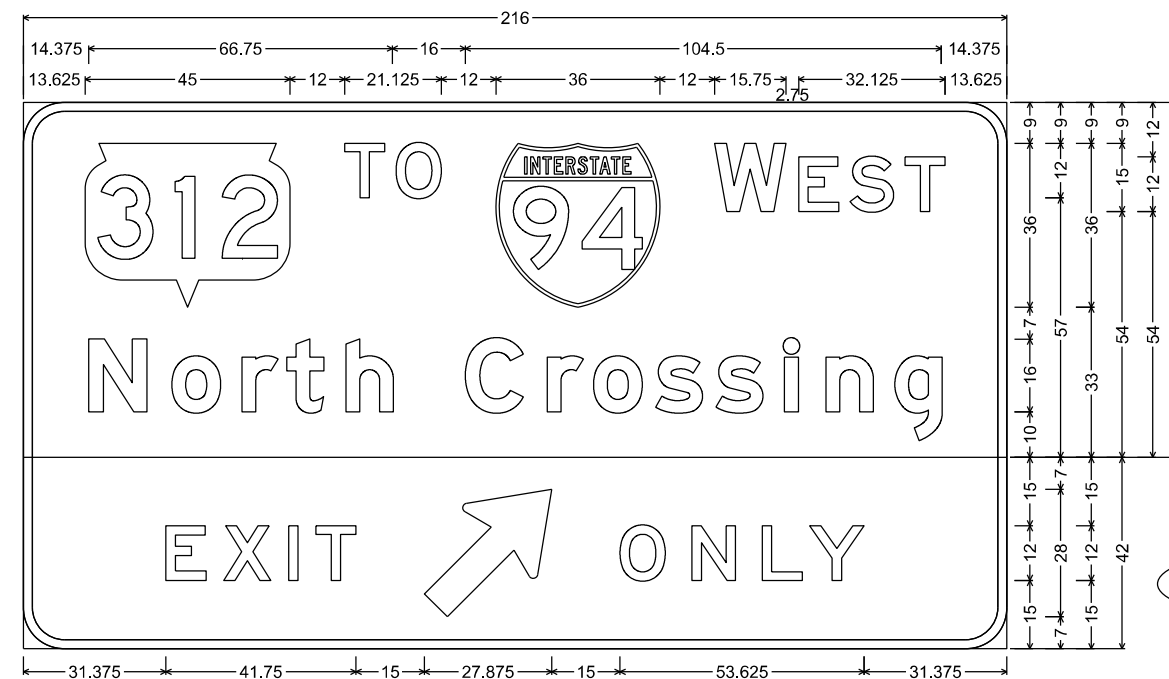
1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E or as noted
4. ONLY Plaque on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



S-18-84

NW-53-13

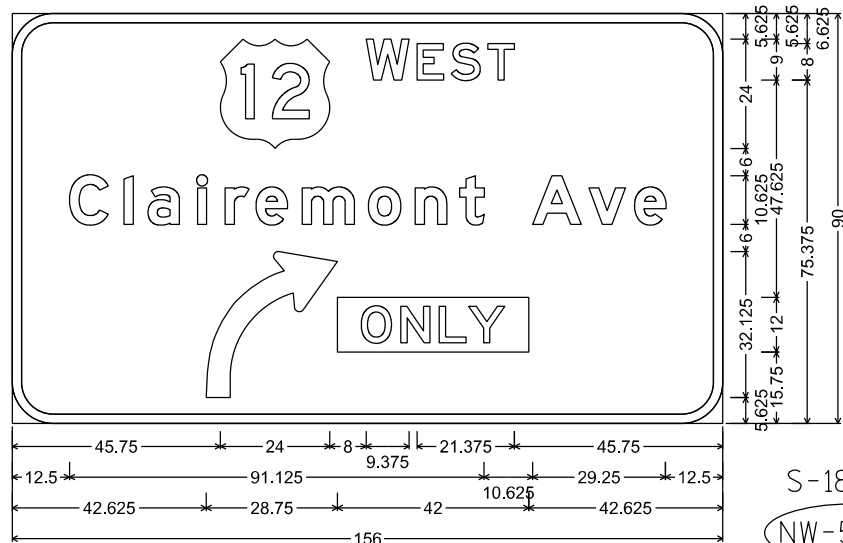
E6-51; 9.000" Radius, 2.000" Border



S-18-35

NW-53-11

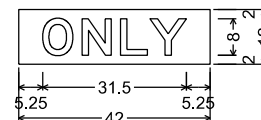
E6-51; 9.000" Radius, 2.000" Border  
E11-1D; 9.000" Radius, 2.000" Border, Black on, Yellow



S-18-84

NW-53-14

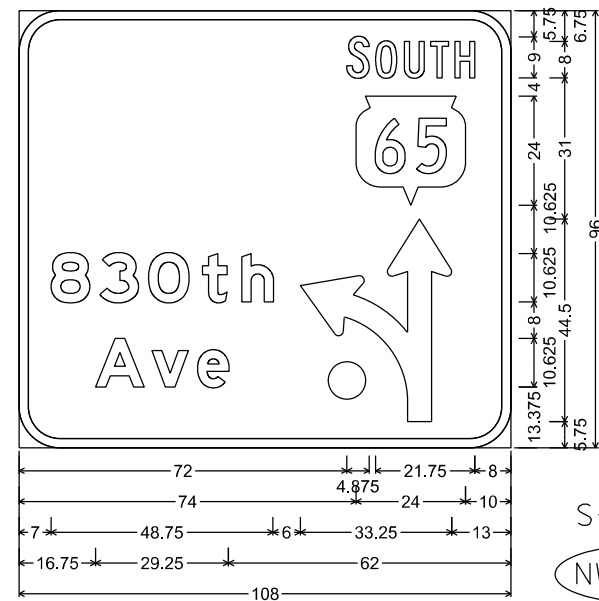
E6-54R (MOD); 9.000" Radius, 2.000" Border



No border, Black on, Fluorescent yellow; "ONLY", E;

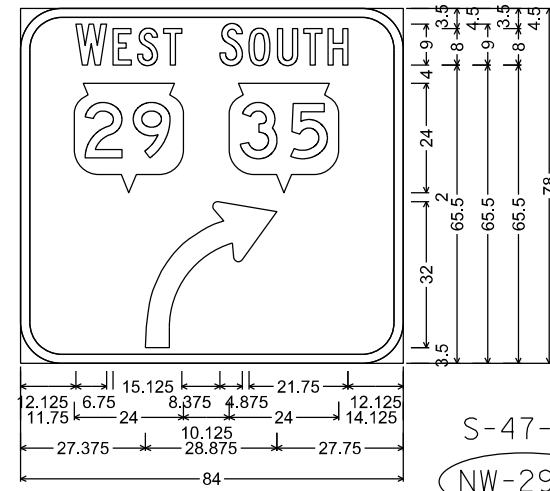
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - E Modified except all CAP words Series E or as noted



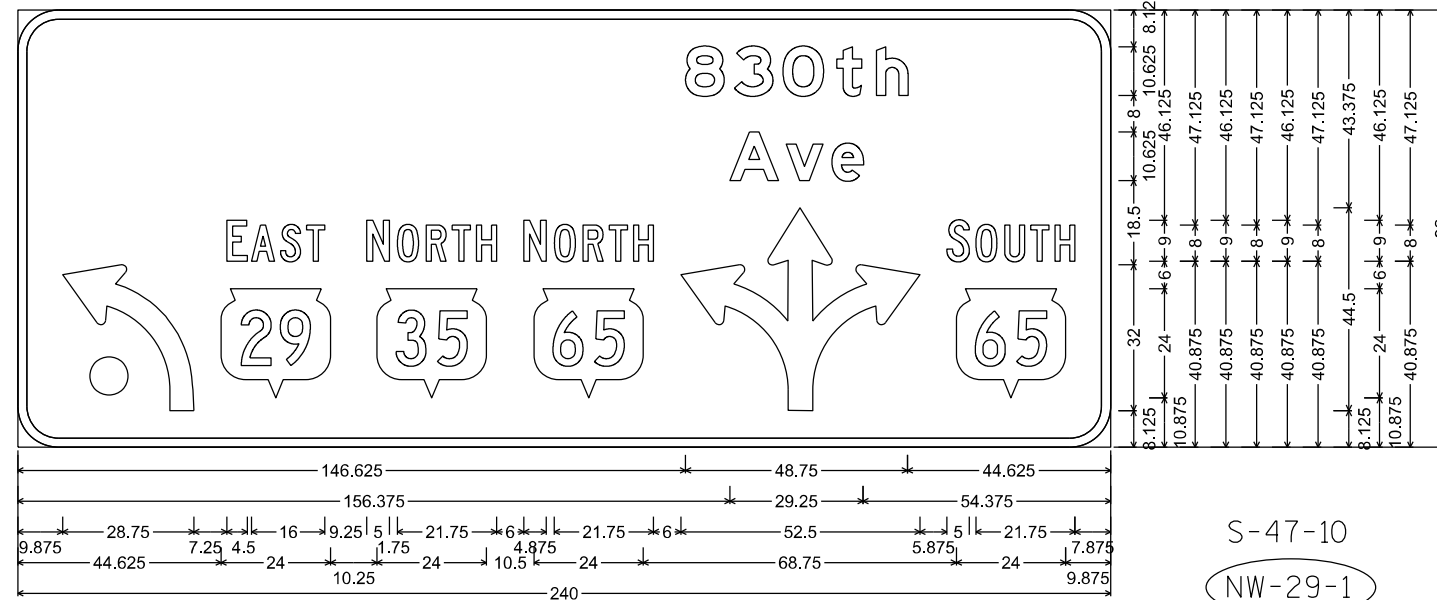
9.000" Radius, 2.000" Border  
 "SOUTH", C; State Highway 65 M1-56; "830th", E Mod;  
 "Ave", E Mod;

S-47-09  
 NW-29-2



E6-54R; 9.000" Radius, 2.000" Border  
 "WEST", C; "SOUTH", C;

S-47-09  
 NW-29-3



E6-52; 9.000" Radius, 2.000" Border  
 "830th", E Mod; "Ave", E Mod; C; "NORTH", C; "NORTH", C;

S-47-10  
 NW-29-1

7

7



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