

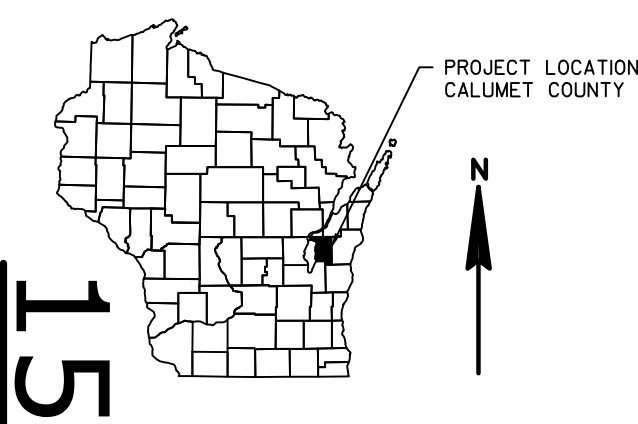
GRE PROJECT ID: 1500-55-71 WITH: COUNTY: CALUMET

MAY 2017

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
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 110



DESIGN DESIGNATION STH 114

A.A.D.T.	2017	=	8,250
A.A.D.T.	2037	=	11,200
D.H.V.		=	965
D.D.		=	60/40
T.		=	5.8%
DESIGN SPEED		=	60 MPH
ESALS		=	1,500,000

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
	STORM SEWER
MARSH AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
WOODED OR SHRUB AREA	TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT

MENASHA - SHERWOOD

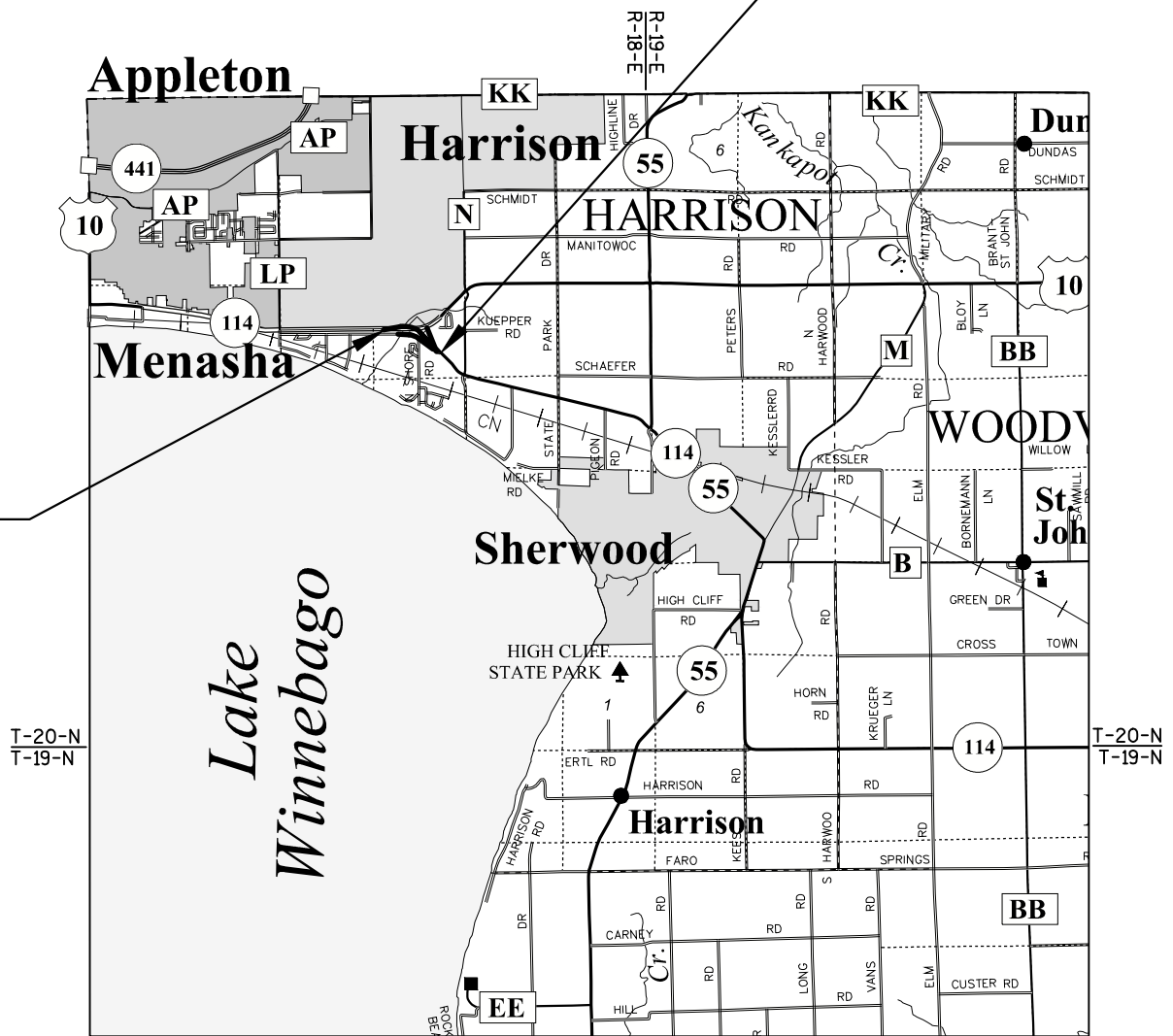
USH 10 & STH 114 INTERCHANGE

USH 10
CALUMET COUNTY

STATE PROJECT NUMBER
1500-55-71

END PROJECT
STA 203+75

BEGIN PROJECT
STA 169+46
Y=542519.371
X=844986.251



LAYOUT
SCALE 0 2 MILES
TOTAL NET LENGTH OF CENTERLINE = 0.6494

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, CALUMET COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1500-55-71	WISC 2017271	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT NORTHEAST REGION
Designer	JOHN SPIELMACHER
Project Manager	TIMOTHY VERHAGEN
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	CHARLES KAROW

APPROVED FOR THE DEPARTMENT

DATE: 1/24/16

(Signature)

E

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD88(2012)

LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

ANY MESH MATERIAL THAT IS FOUND IN EXISTING PAVEMENT WILL BE INCIDENTAL TO THE REMOVAL OF THE PAVEMENT ITEM IN THAT SECTION. EXISTING PAVEMENT DEPTHS ARE BASED ON AS-BUILT DATA AND MAY VARY IN THE FIELD.

RAISED PAVEMENT MARKERS LOCATED IN CONCRETE PAVEMENT TO BE REMOVED DURING CONCRETE BASE PATCHING OPERATIONS ARE INCIDENTAL TO THE WORK.

COMPLETE A FIELD REVIEW OF CONCRETE REPAIR LOCATIONS WITH ENGINEER PRIOR TO CONSTRUCTION TO VERIFY QUANTITIES.

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- JOINT DETAIL
- PERMANENT SIGNING
- TRAFFIC CONTROL
- DETOUR PLAN
- ALIGNMENT PLAN

UTILITY CONTACTS

NET LEC LLC - COMMUNICATION LINE
RICK VINCENT
450 SECURITY BLVD
P.O. BOX 19079
GREEN BAY, WI 54307-9079
(920) 617-7316
RICK.VINCENT@NSIGHT.COM

TIME WARNER CABLE - COMMUNICATION LINE
KURT LITTLE
3520 E DESTINATION DR
APPLETON, WI 54915
(920) 831-9227
KURT.LITTLE@TWCABLE.COM

WE ENERGIES - ELECTRICITY
LATROY BRUMFIELD
333 WEST EVERETT ST, ROOM A299
MILWAUKEE, WI 53203
(414) 221-5617
LATROY.BRUMFIELD@WE-ENERGIES.COM

WE ENERGIES - GAS/PETROLEUM
LATROY BRUMFIELD
333 WEST EVERETT ST, ROOM A299
MILWAUKEE, WI 53203
(414) 221-5617
LATROY.BRUMFIELD@WE-ENERGIES.COM

DNR LIASION

MATT SCHAEVE
DEPARTMENT OF NATURAL RESOURCES
NORTHEAST REGION
2984 SHAWANO AVE
GREEN BAY, WI 54313
920-662-5472
MATTHEW.SCHAEVE@WISCONSIN.GOV

CALUMET COUNTY COMMISSIONER

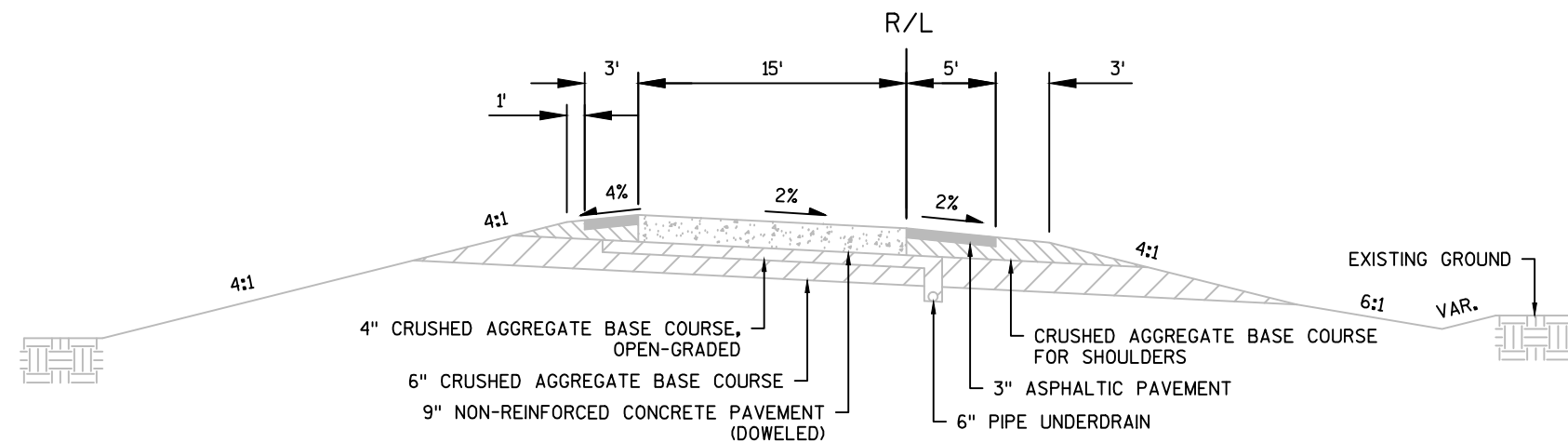
BRIAN GLAESER
HIGHWAY COMMISSIONER
241 E. CHESTNUT ST
CHILTON, WI 53014
920-849-1434
Glaeser.Brian@co.calumet.wi.us

NE REGION SURVEY COORDINATOR

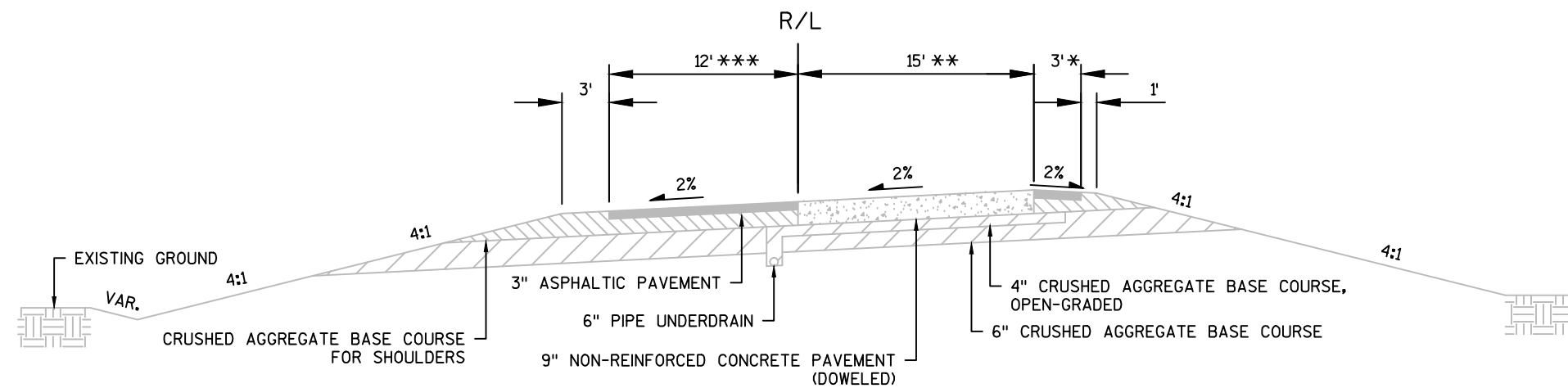
CORMAC MCINNIS, RLS
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920)492-5638
cormac.mcinnis@dot.wi.gov







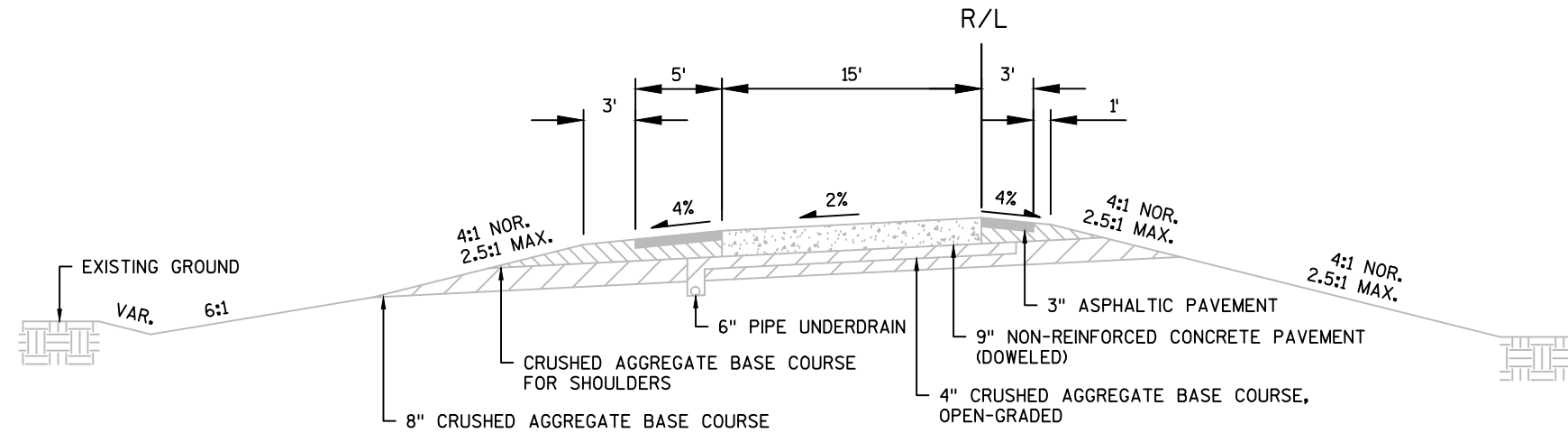
EXISTING TYPICAL SECTION FOR S.W. RAMP
STA 177+43 TO STA 200+56



EXISTING TYPICAL SECTION FOR S.E. RAMP
STA 188+05 TO STA 200+56

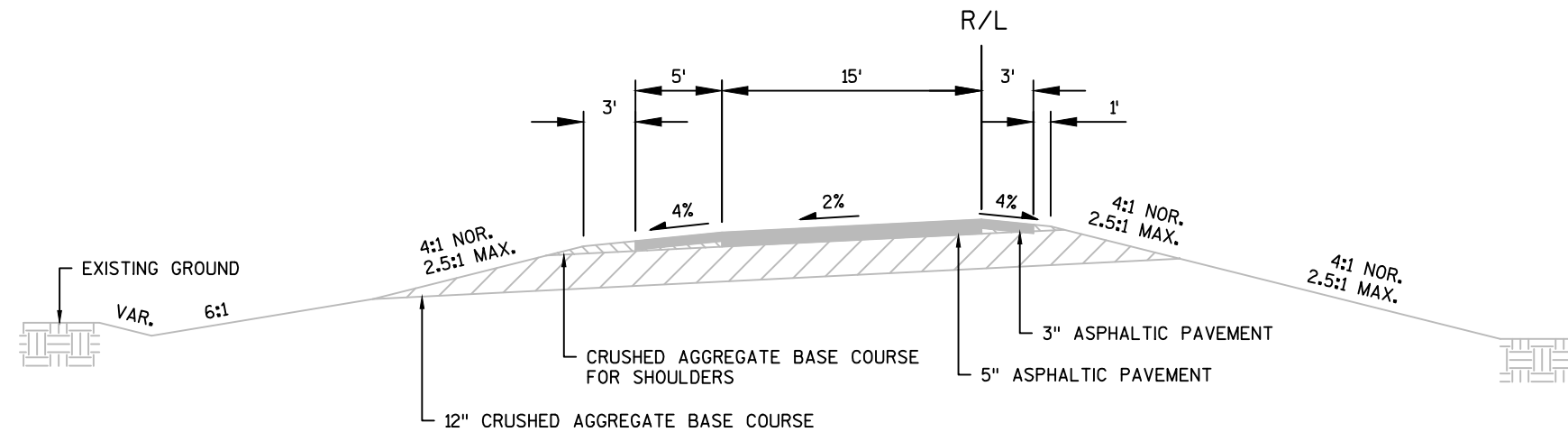
*VARIES
3'-12' FROM STA 188+05 TO STA 188+99
12'-5' FROM STA 197+44 TO STA 199+48
5' FROM STATION 199+48 TO STA 200+56

**VARIES 60' TO 15' FROM STA 188+05 TO STA 189+00
***SHOULDER ENDS STA 196+22 (STH 114 CONNECTOR GORE)



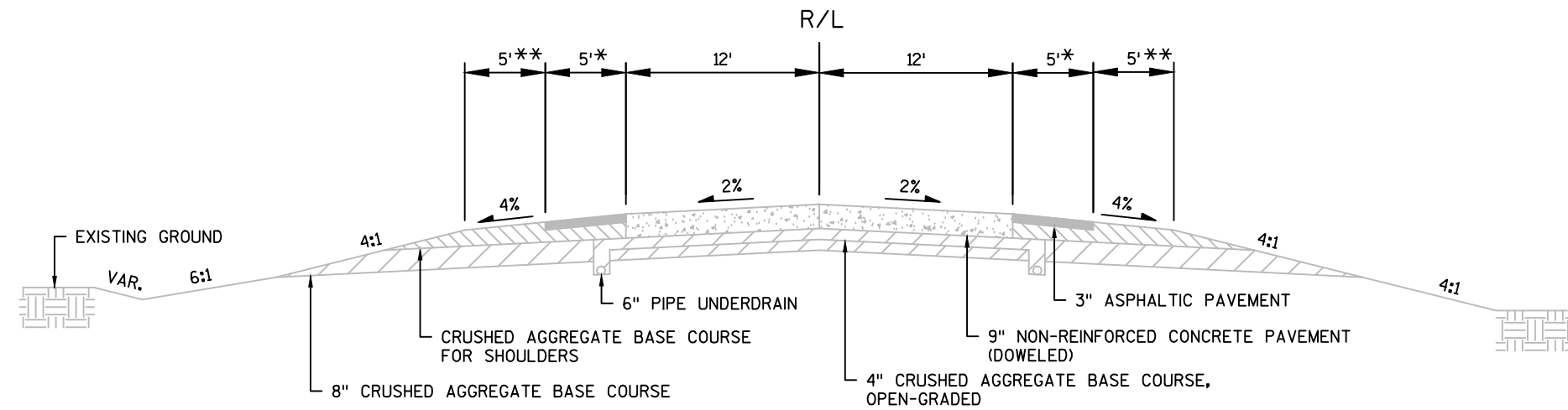
EXISTING TYPICAL SECTION FOR STH 114 CONNECTOR

STA 169+46 TO STA 178+87
STA 191+14 TO STA 202+00



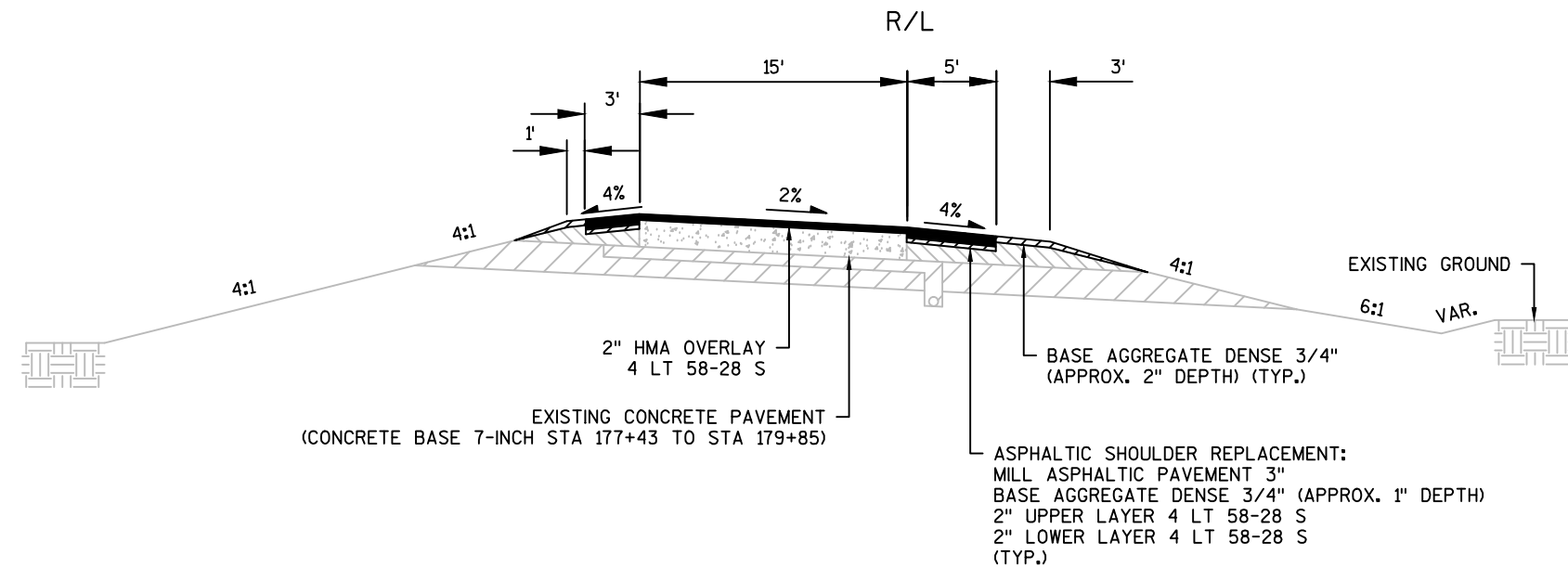
EXISTING TYPICAL SECTION FOR STH 114 CONNECTOR AT STRUCTURE B-8-31 APPROACHES

STA 178+87 TO STA 184+43
STA 187+11 TO STA 191+14

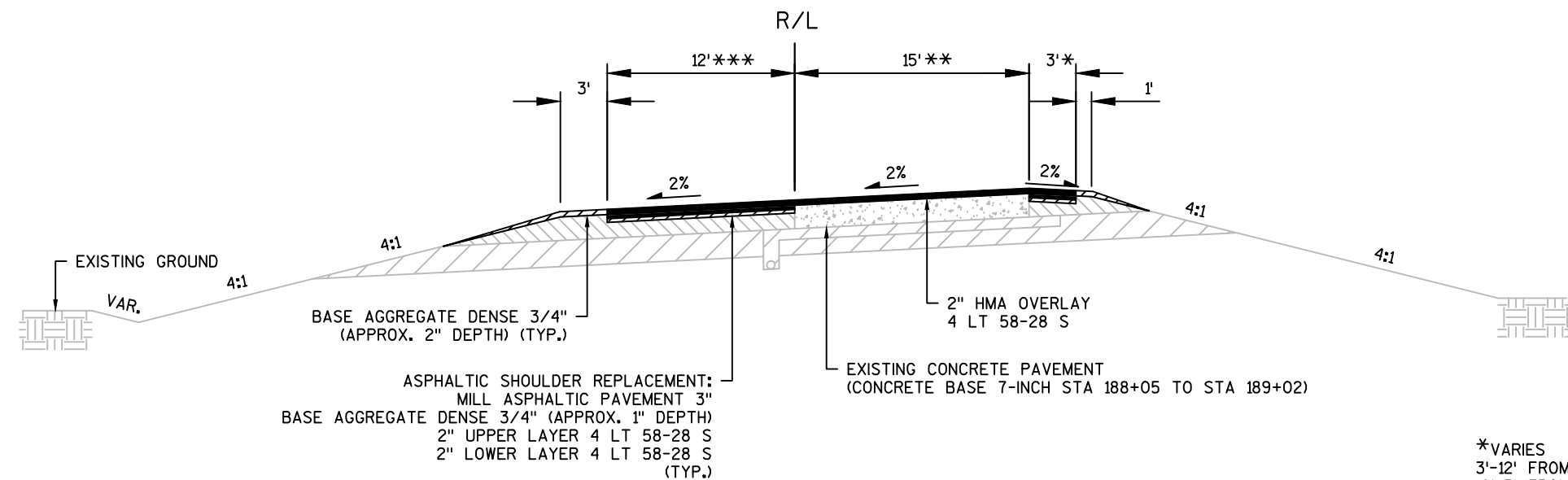


EXISTING TYPICAL SECTION FOR STH 114
STA 200+56 TO STA 203+75

*VARIES FROM 5' TO 11' FROM STA 202+00 TO STA 203+75
**VARIES FROM 5' TO 3' FROM STA 202+00 TO STA 203+75



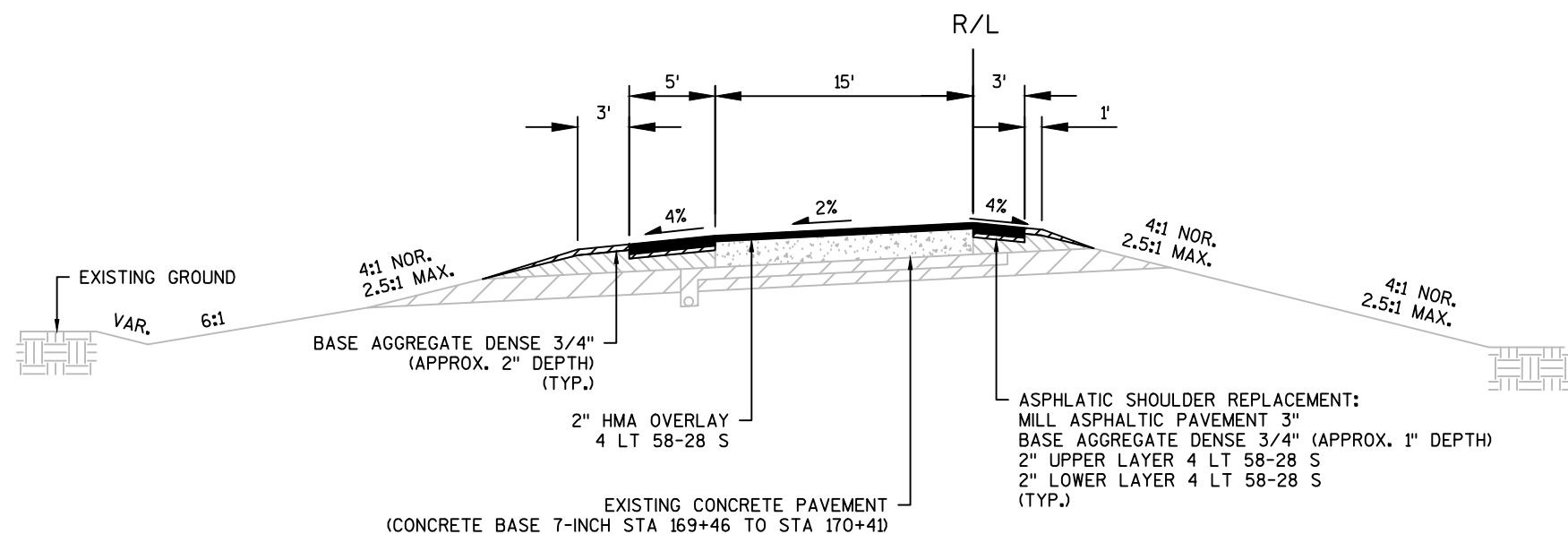
TYPICAL FINISHED SECTION FOR S.W. RAMP
STA 177+43 TO STA 200+56



TYPICAL FINISHED SECTION FOR S.E. RAMP
STA 188+05 TO STA 200+56

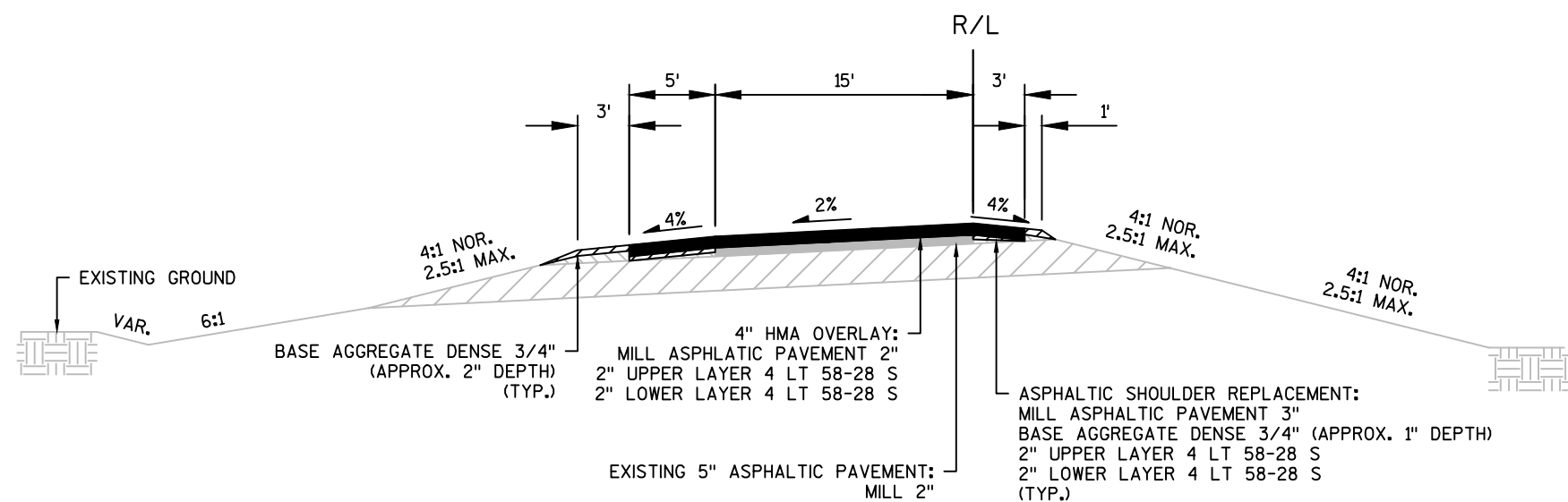
*VARIES
3'-12' FROM STA 188+05 TO STA 188+99
12'-5' FROM STA 197+44 TO STA 199+48
5' FROM STATION 199+48 TO STA 200+56

**VARIES 60' TO 15' FROM STA 188+05 TO STA 189+00
***SHOULDER ENDS STA 196+22 (STH 114 CONNECTOR GORE)



TYPICAL FINISHED SECTION FOR STH 114 CONNECTOR

STA 169+46 TO STA 178+87
STA 191+14 TO STA 200+56



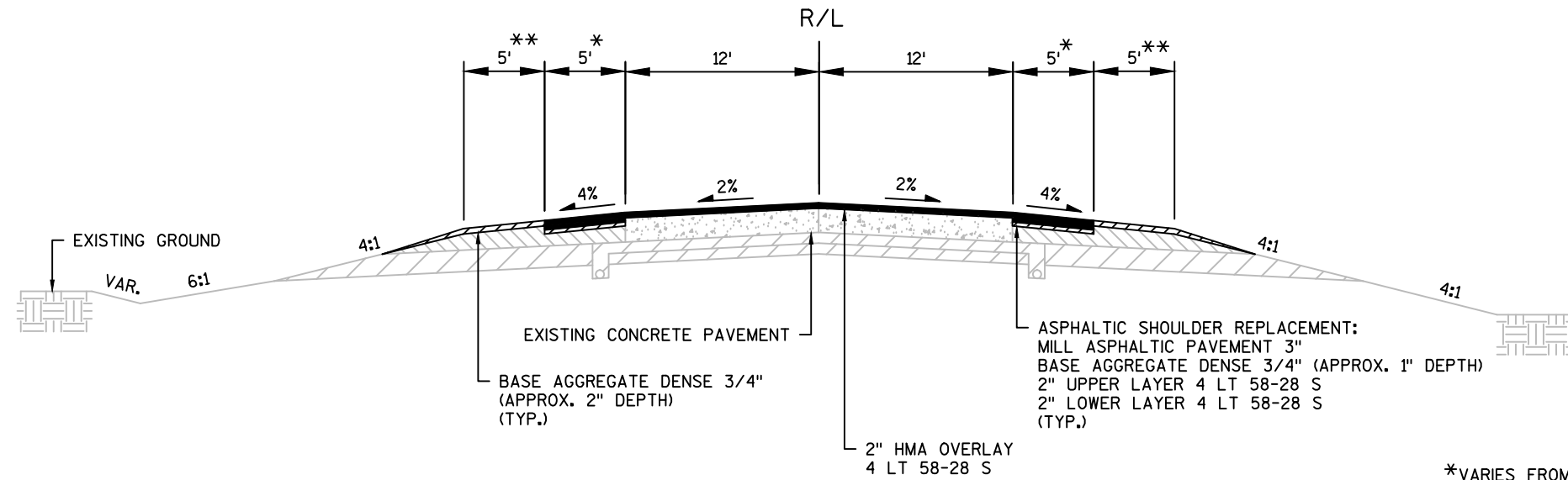
TYPICAL FINISHED SECTION FOR STH 114 CONNECTOR AT STRUCTURE B-8-31 APPROACHES

STA 178+87 TO STA 184+43*
STA 187+11 TO STA 191+14*

* FULL DEPTH (5") MILL WITH 7" HMA
AT THE FOLLOWING LOCATIONS:

STA 180+23 TO STA 180+64
STA 188+53 TO STA 189+03

7" HMA:
2" UPPER LAYER 4 LT 58-28 S
2 - 2½" LOWER LAYERS 4 LT 58-28 S



TYPICAL FINISHED SECTION FOR STH 114
STA 200+56 TO STA 203+75

*VARIES FROM 5' TO 11' FROM STA 202+00 TO STA 203+75
**VARIES FROM 5' TO 3' FROM STA 202+00 TO STA 203+75

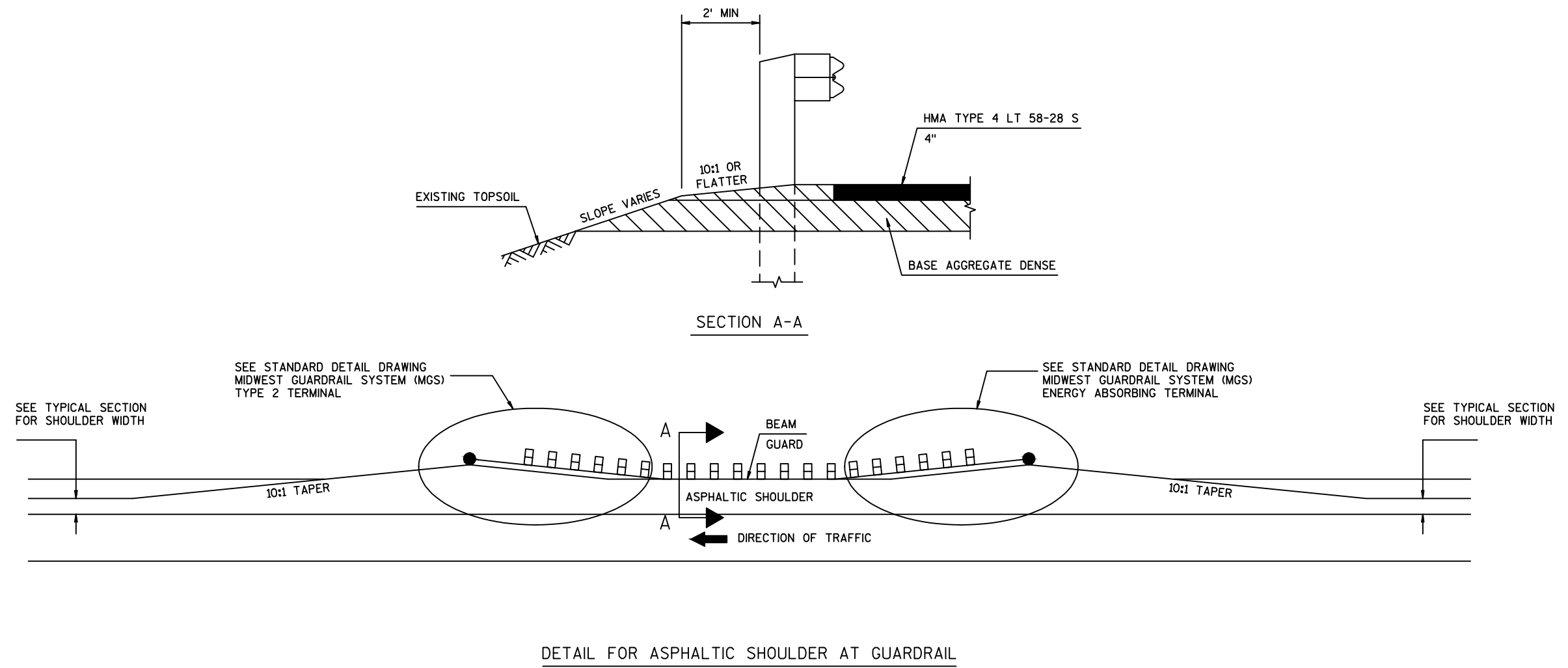
STA 202+00 IS BEGINNING OF TAPER FOR OLD HIGHWAY ROAD INTERSECTION (RT) AND BYPASS LANE (LT). SIDEROAD IS BEYOND PROJECT LIMITS. MATCH EXISTING TAPERS.

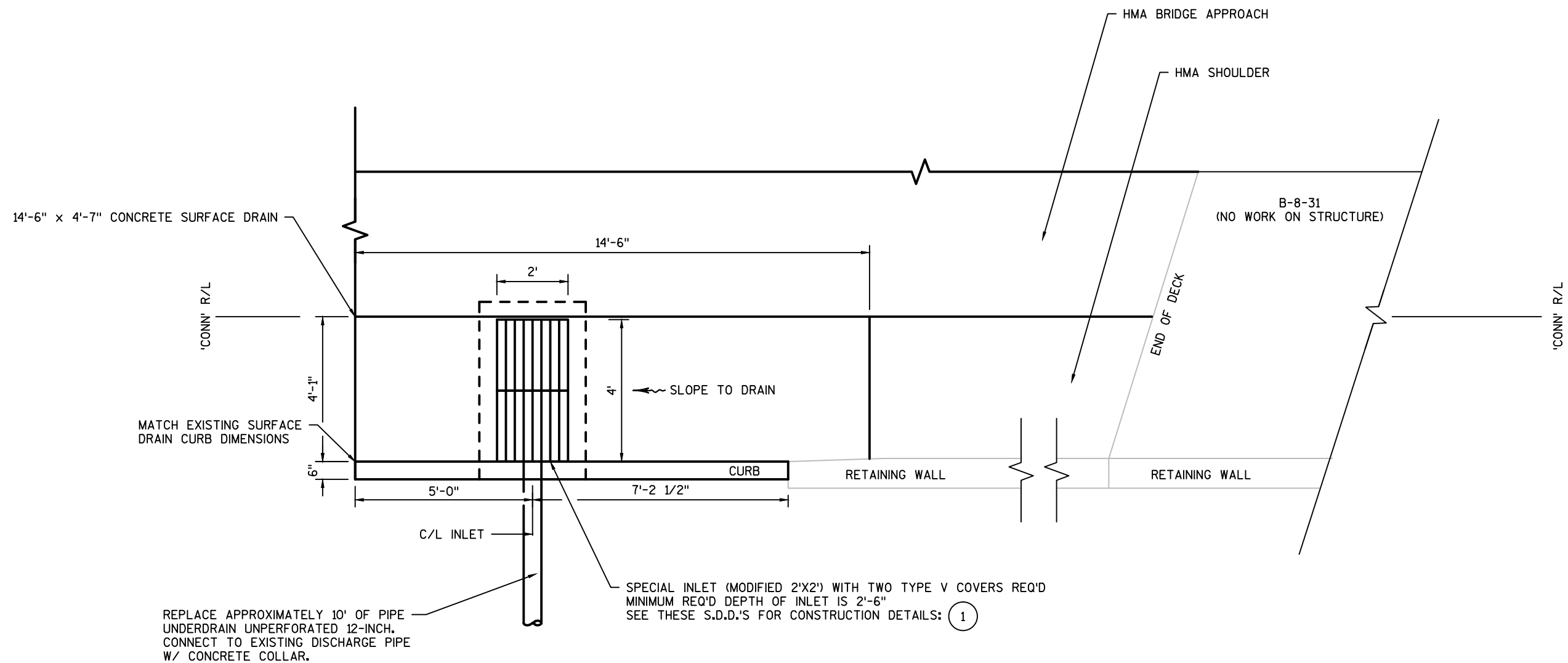


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      * MAINLINE & RAMPS
      ** SIDEROADS
      *** PRIVATE ENTRANCES

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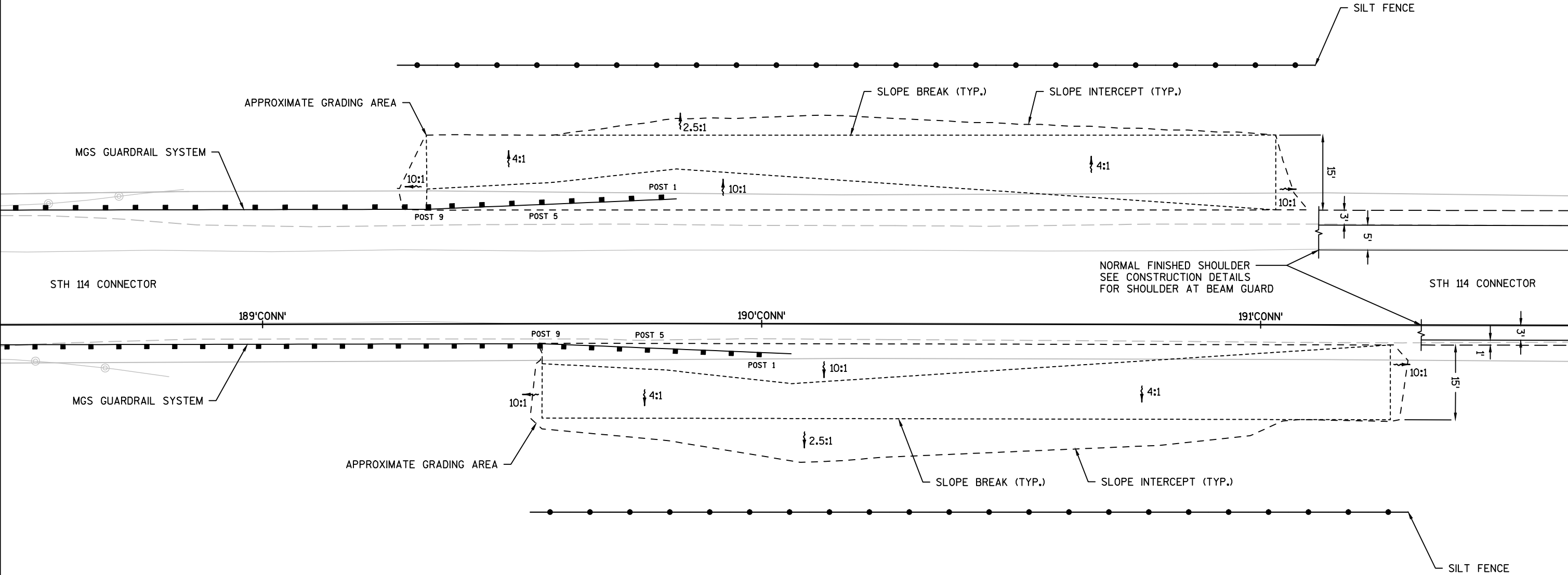
CONCRETE SURFACE DRAIN REPLACEMENT
STA 181'CONN'+13

- 1
- S.D.D. 8A5: INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
 - S.D.D. 8C7: INLETS 2x2-FT
 - S.D.D. 8D3: CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
 - S.D.D. 8F4: JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

NOTE: SEE MISCELLANEOUS QUANTITIES FOR ASSOCIATED EROSION CONTROL/FINISHING ITEMS

BARRIER SYSTEM GRADING, SHAPING AND FINISHING*						
STA - STA	COMMON EXCAVATION, CY	BORROW, CY	SALVAGED TOPSOIL, SY	FERTILIZER TYPE B, CWT	SEEDING MIXTURE NO. 30, LB	MULCH, SY
189+27 - 191+10 LT	0	44	330	0.20	6	330
189+53 - 191+30 RT	3	49	385	0.25	7	385
TOTAL	3	93	715	0.45	13	715

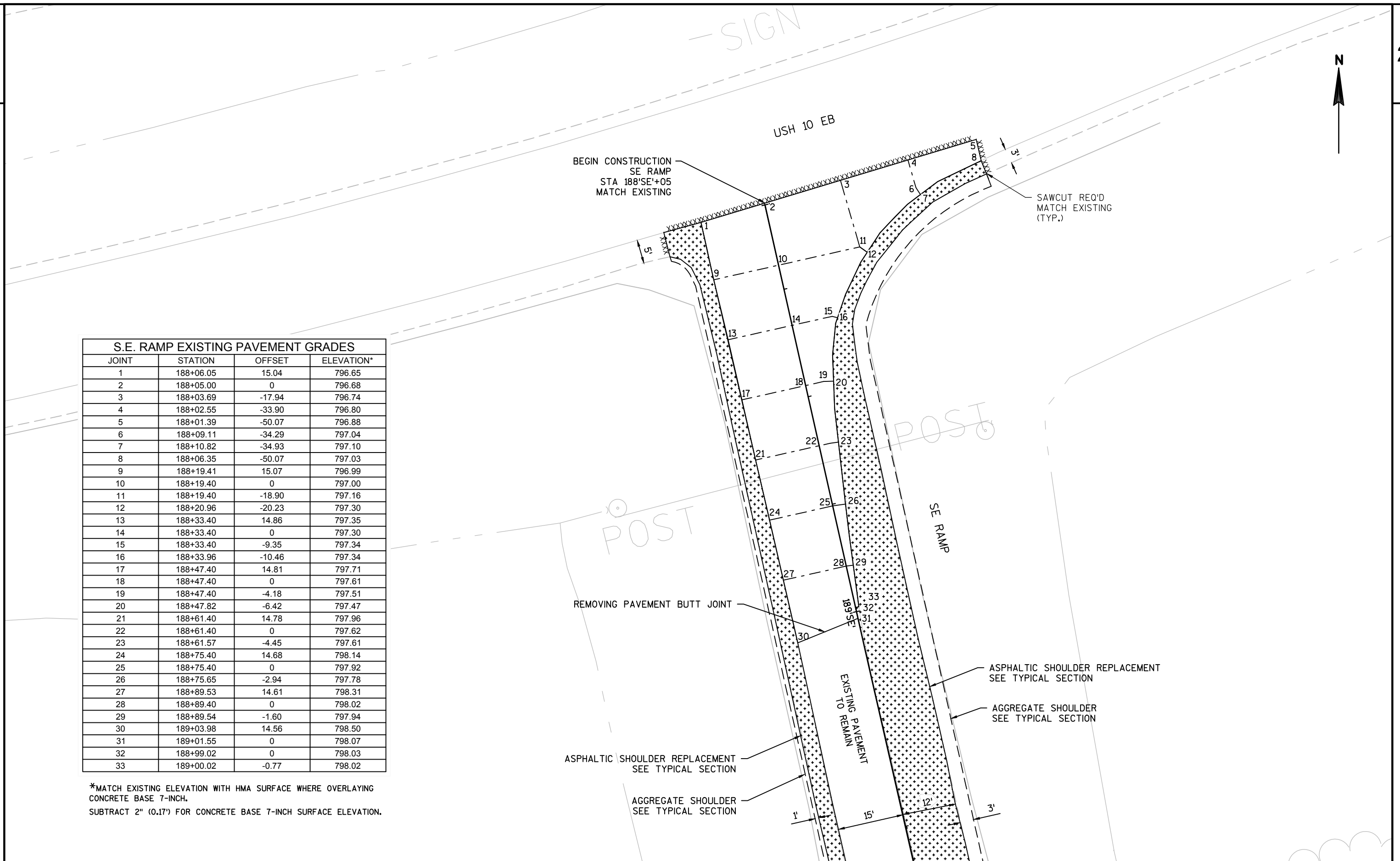
* ITEMS AND APPROXIMATE QUANTITES LISTED FOR BID INFORMATION ONLY



MGS E.A.T. CRITICAL POST LOCATIONS (SEE S.D.D. MIDWEST GUARDRAIL SYSTEM E.A.T. & CROSS SECTIONS)		
POST 1	POST 5	POST 9
STA 189'CONN' + 83 OFFSET 26.13' LT	189'CONN' + 58 OFFSET 25.17' LT	189'CONN' + 33 OFFSET 24.21' LT
190'CONN' + 06 OFFSET 7.36' RT	189'CONN' + 81 OFFSET 6.42' RT	189'CONN' + 56 OFFSET 5.38' RT

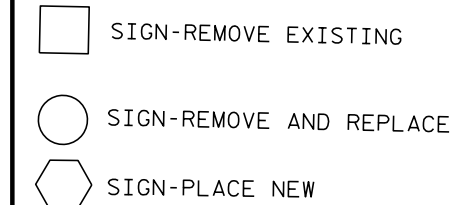
S.E. RAMP EXISTING PAVEMENT GRADES			
JOINT	STATION	OFFSET	ELEVATION*
1	188+06.05	15.04	796.65
2	188+05.00	0	796.68
3	188+03.69	-17.94	796.74
4	188+02.55	-33.90	796.80
5	188+01.39	-50.07	796.88
6	188+09.11	-34.29	797.04
7	188+10.82	-34.93	797.10
8	188+06.35	-50.07	797.03
9	188+19.41	15.07	796.99
10	188+19.40	0	797.00
11	188+19.40	-18.90	797.16
12	188+20.96	-20.23	797.30
13	188+33.40	14.86	797.35
14	188+33.40	0	797.30
15	188+33.40	-9.35	797.34
16	188+33.96	-10.46	797.34
17	188+47.40	14.81	797.71
18	188+47.40	0	797.61
19	188+47.40	-4.18	797.51
20	188+47.82	-6.42	797.47
21	188+61.40	14.78	797.96
22	188+61.40	0	797.62
23	188+61.57	-4.45	797.61
24	188+75.40	14.68	798.14
25	188+75.40	0	797.92
26	188+75.65	-2.94	797.78
27	188+89.53	14.61	798.31
28	188+89.40	0	798.02
29	188+89.54	-1.60	797.94
30	189+03.98	14.56	798.50
31	189+01.55	0	798.07
32	188+99.02	0	798.03
33	189+00.02	-0.77	798.02

*MATCH EXISTING ELEVATION WITH HMA SURFACE WHERE OVERLAYING
CONCRETE BASE 7-INCH.
SUBTRACT 2" (0.17') FOR CONCRETE BASE 7-INCH SURFACE ELEVATION.



WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT
ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE
REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND
ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE
SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN
ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE
DETERMINED IN THE FIELD.

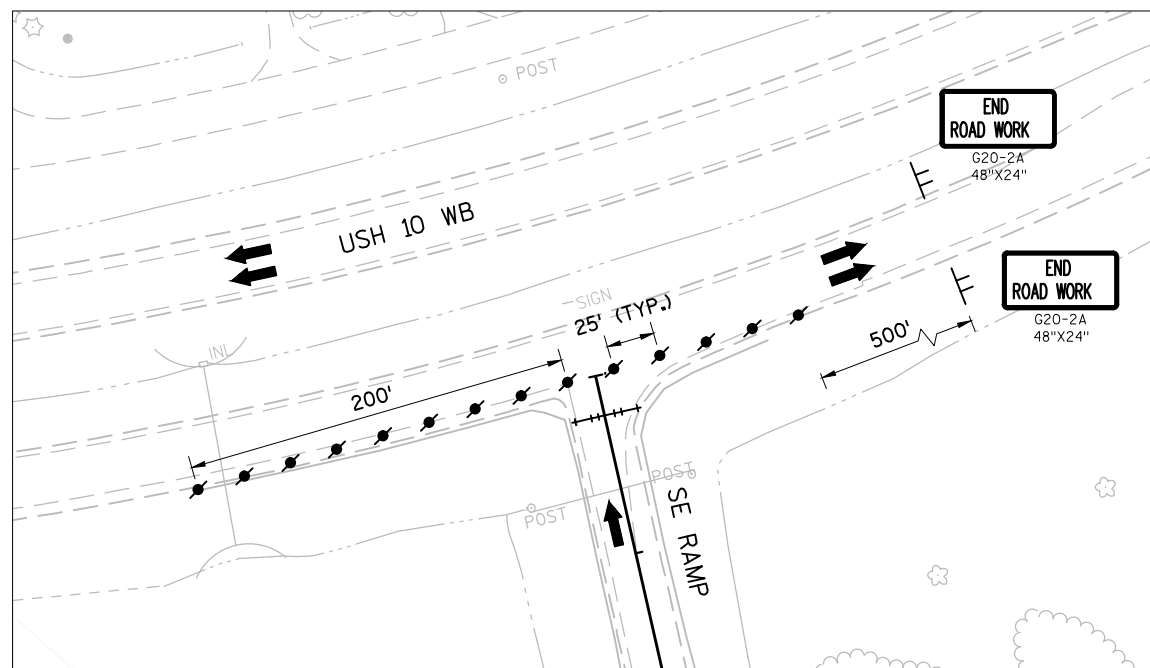


BEGIN PROJECT
 STH 114 CONNECTOR
 STA 169'CONN'+46
 SEE NOTE 2 & DETAIL

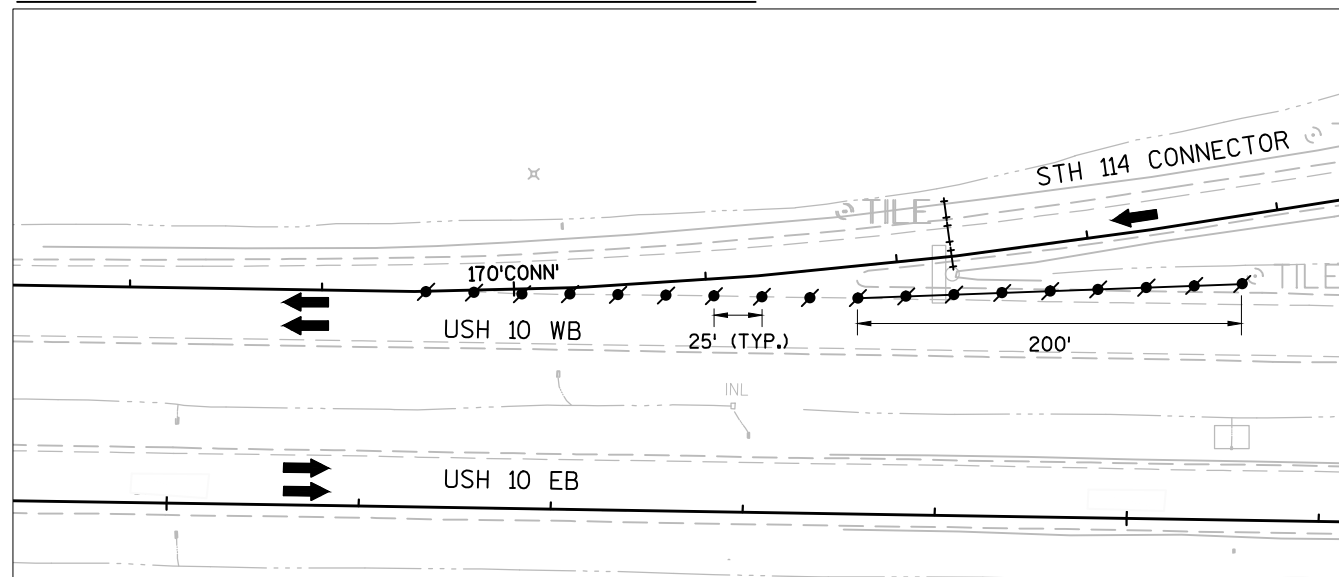
BEGIN CONSTRUCTION
 SW RAMP
 STA 177'SW'+43
 SEE NOTES 1 & 2

BEGIN CONSTRUCTION
 SE RAMP
 STA 188'SE'+05
 SEE NOTE 2 & DETAIL

TRAFFIC CONTROL AT SE RAMP ENTRY TO USH 10



TRAFFIC CONTROL AT STH 114 CONNECTOR ENTRY TO USH 10



LEGEND

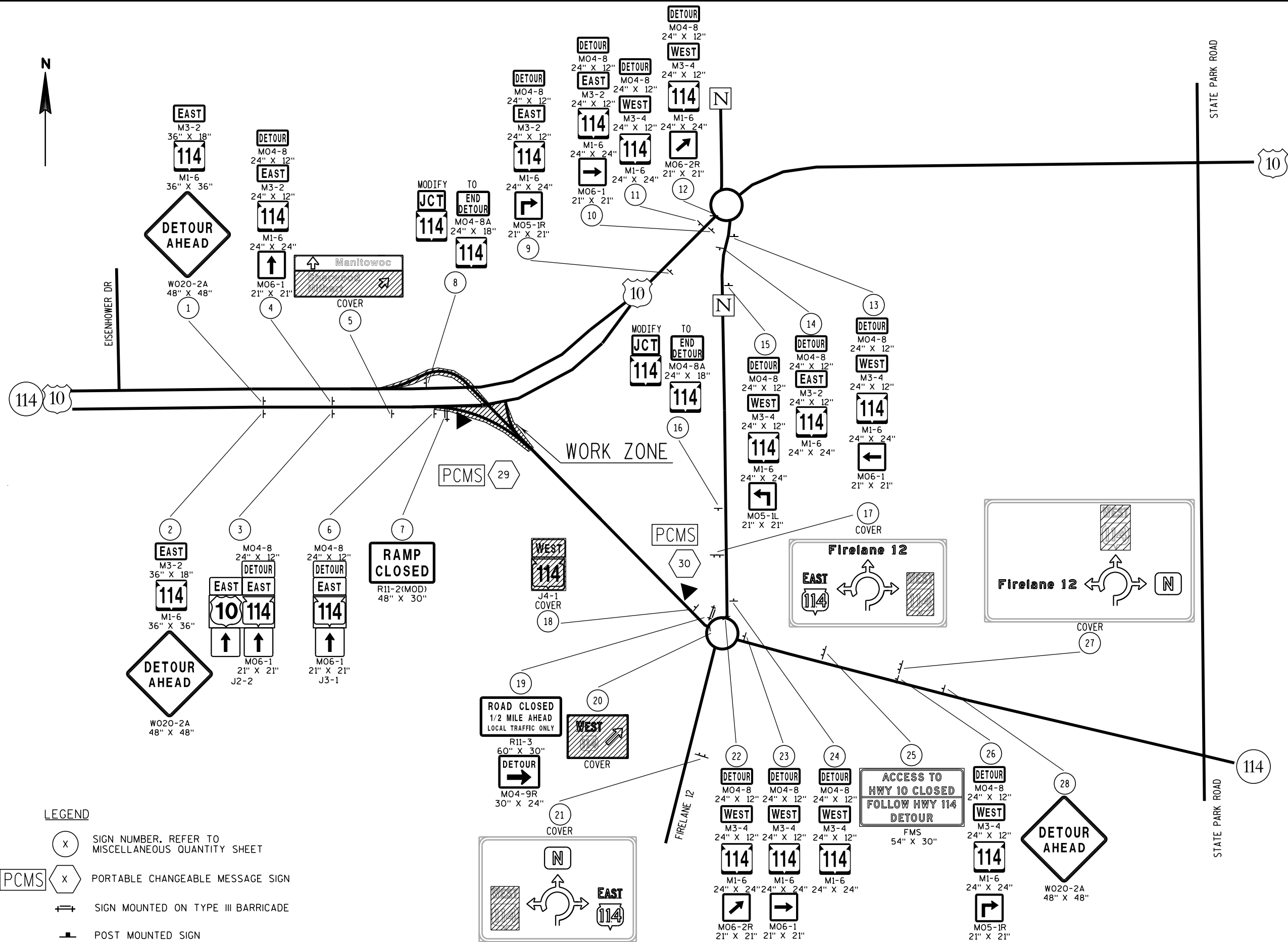
- † TYPE III BARRICADE
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ⌋ SIGN ON TEMPORARY SUPPORT
- ➔ DIRECTION OF TRAFFIC

NOTES:

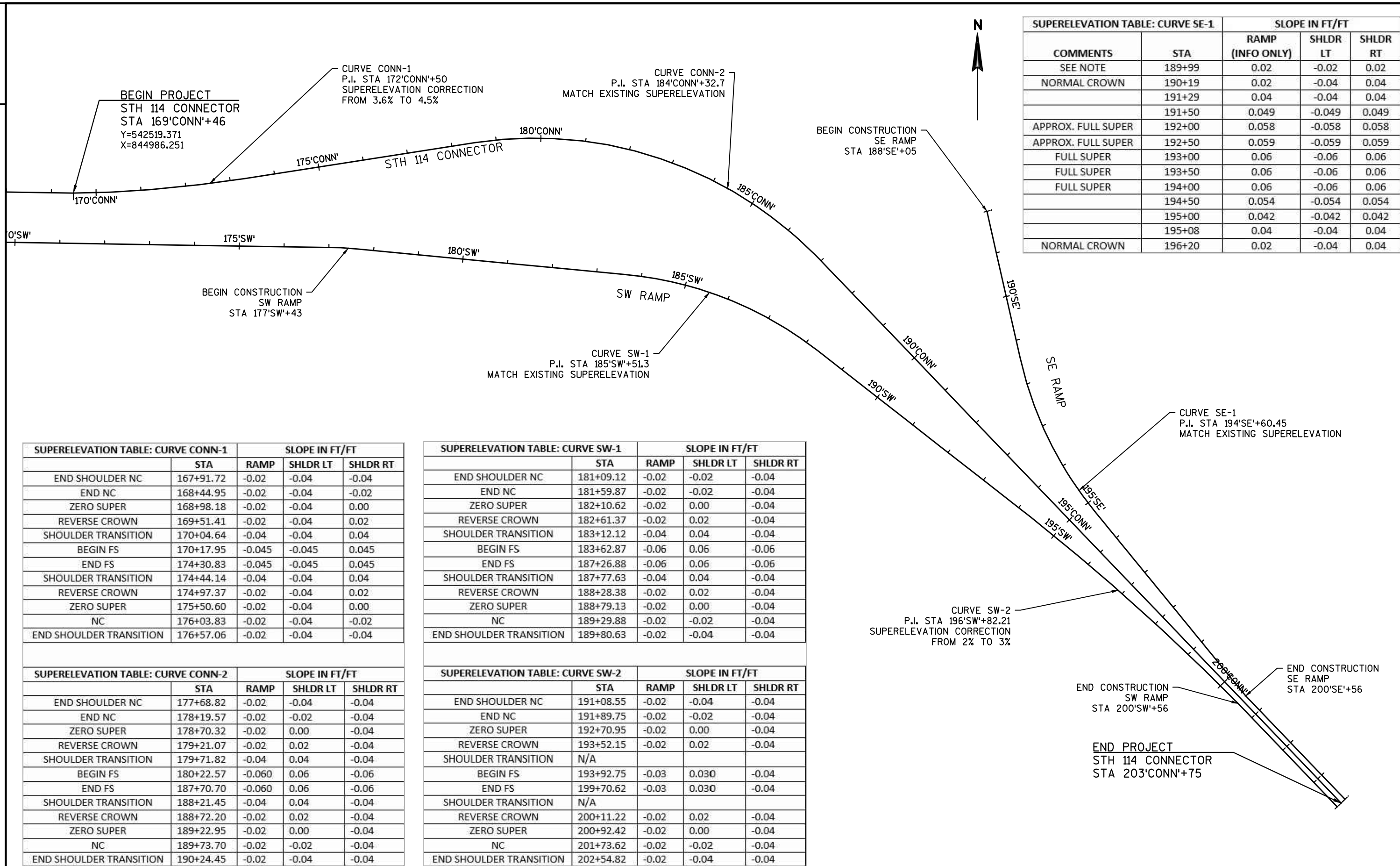
1. USE SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE"
2. USE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR WORK ON OR ALONG USH 10 MAINLINE. SEE SPECIAL PROVISIONS FOR ALLOWABLE DURATION.
- USE SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH" FOR WORK ON OR ALONG USH 10 SHOULDER.
3. USE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" (DETAIL D)

END PROJECT
 STH 114 CONNECTOR
 STA 203'CONN'+75
 SEE NOTE 3





SHEET 1 OF 1
PLAN SHEET PRODUCED
BY WISDOT-NE REGION



Estimate Of Quantities

1500-55-71

Line	Item	Item Description	Unit	Total	Qty
0010	204.0105	Removing Pavement Butt Joints	SY	225.000	225.000
0020	204.0110	Removing Asphaltic Surface	SY	7,042.000	7,042.000
0030	204.0115	Removing Asphaltic Surface Butt Joints	SY	136.000	136.000
0040	204.0120	Removing Asphaltic Surface Milling	SY	1,650.000	1,650.000
0050	204.0165	Removing Guardrail	LF	1,589.000	1,589.000
0060	204.0180	Removing Delineators and Markers	EACH	19.000	19.000
0070	204.0190	Removing Surface Drains	EACH	1.000	1.000
0080	204.0220	Removing Inlets	EACH	1.000	1.000
0090	204.0245	Removing Storm Sewer (size) 12-INCH	LF	10.000	10.000
0100	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1500-55-71	LS	1.000	1.000
0110	213.0100	Finishing Roadway (project) 01. 1500-55-71	EACH	1.000	1.000
0120	305.0110	Base Aggregate Dense 3/4-Inch	TON	752.000	752.000
0130	305.0500	Shaping Shoulders	STA	119.000	119.000
0140	320.0135	Concrete Base 7-Inch	SY	691.000	691.000
0150	390.0303	Base Patching Concrete	SY	2,506.000	2,506.000
0160	416.0610	Drilled Tie Bars	EACH	209.000	209.000
0170	416.0620	Drilled Dowel Bars	EACH	4,047.000	4,047.000
0180	416.1010	Concrete Surface Drains	CY	1.000	1.000
0190	455.0605	Tack Coat	GAL	1,359.000	1,359.000
0200	460.2000	Incentive Density HMA Pavement	DOL	3,393.000	3,393.000
0210	460.5224	HMA Pavement 4 LT 58-28 S	TON	3,393.000	3,393.000
0220	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0230	611.0654	Inlet Covers Type V	EACH	2.000	2.000
0240	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	10.000	10.000
0250	614.0010	Barrier System Grading Shaping Finishing	EACH	4.000	4.000
0260	614.2300	MGS Guardrail 3	LF	1,800.000	1,800.000
0270	614.2500	MGS Thrie Beam Transition	LF	156.000	156.000
0280	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0290	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000	2.000
0300	619.1000	Mobilization	EACH	1.000	1.000
0310	624.0100	Water	MGAL	8.000	8.000
0320	628.1504	Silt Fence	LF	390.000	390.000
0330	628.1520	Silt Fence Maintenance	LF	390.000	390.000
0340	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0350	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0360	628.2004	Erosion Mat Class I Type B	SY	50.000	50.000
0370	628.7010	Inlet Protection Type B	EACH	3.000	3.000
0380	628.7015	Inlet Protection Type C	EACH	3.000	3.000
0390	629.0210	Fertilizer Type B	CWT	0.030	0.030

Estimate Of Quantities

1500-55-71

Line	Item	Item Description	Unit	Total	Qty
0400	630.0130	Seeding Mixture No. 30	LB	1.000	1.000
0410	633.0100	Delineator Posts Steel	EACH	70.000	70.000
0420	633.0500	Delineator Reflectors (White)	EACH	83.000	83.000
0430	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	3.000	3.000
0440	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	22.000	22.000
0450	637.2210	Signs Type II Reflective H	SF	298.420	298.420
0460	637.2230	Signs Type II Reflective F	SF	52.000	52.000
0470	638.2602	Removing Signs Type II	EACH	20.000	20.000
0480	638.3000	Removing Small Sign Supports	EACH	21.000	21.000
0490	642.5201	Field Office Type C	EACH	1.000	1.000
0500	643.0300	Traffic Control Drums	DAY	4,430.000	4,430.000
0510	643.0420	Traffic Control Barricades Type III	DAY	1,495.000	1,495.000
0520	643.0705	Traffic Control Warning Lights Type A	DAY	1,440.000	1,440.000
0530	643.0715	Traffic Control Warning Lights Type C	DAY	2,655.000	2,655.000
0540	643.0800	Traffic Control Arrow Boards	DAY	20.000	20.000
0550	643.0900	Traffic Control Signs	DAY	1,415.000	1,415.000
0560	643.0910	Traffic Control Covering Signs Type I	EACH	3.000	3.000
0570	643.0920	Traffic Control Covering Signs Type II	EACH	3.000	3.000
0580	643.1000	Traffic Control Signs Fixed Message	SF	11.250	11.250
0590	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0600	643.2000	Traffic Control Detour (project) 01. 1500-55-71	EACH	1.000	1.000
0610	643.3000	Traffic Control Detour Signs	DAY	2,745.000	2,745.000
0620	646.0106	Pavement Marking Epoxy 4-Inch	LF	12,203.000	12,203.000
0630	646.0790.S	Removing Raised Pavement Markers	EACH	1.000	1.000
0640	646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-Inch	LF	1,368.000	1,368.000
0650	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	200.000	200.000
0660	650.4000	Construction Staking Storm Sewer	EACH	1.000	1.000
0670	650.8000	Construction Staking Resurfacing Reference	LF	6,993.000	6,993.000
0680	690.0150	Sawing Asphalt	LF	140.000	140.000
0690	690.0250	Sawing Concrete	LF	8,046.000	8,046.000
0700	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0710	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0720	SPV.0060	Special 01. Inlet Special	EACH	1.000	1.000

REMOVING SURFACES									
				204.0110	204.0120	204.0105	204.0115		
				REMOVING ASPHALTIC	REMOVING ASPHALTIC	REMOVING PAVEMENT	REMOVING ASPHALTIC		
				SURFACE	SURFACE MILLING	BUTT JOINTS	SURFACE BUTT JOINTS		
STA	TO	STA	LOCATION	SY	SY	SY	SY	REMARKS	
179+85	--	179+85	SW RAMP			75		ADJACENT TO CONC. BASE 7-IN	
170+41	--	170+41	114 CONN			75		ADJACENT TO CONC. BASE 7-IN	
189+02	--	189+02	SE RAMP			75		ADJACENT TO CONC. BASE 7-IN	
179+56	--	181+11	SW RAMP LT	155				USH 10 GORE AREA	
181+11	--	197+05	SW RAMP LT	531				USH 10 GORE TO STH 114 CONN GORE	
197+05	--	198+27	SW RAMP LT	129				STH 114 CONN GORE AREA	
177+43	--	200+56	SW RAMP RT	1,285				BEGIN RAMP TO END RAMP	
169+46	--	174+74	114 CONN LT	262				BEGINNING OF RAMP TO BEAMGUARD TERMINAL	
174+74	--	178+87	114 CONN LT	341				BEAMGUARD TERMINAL TO WEST APPROACH	
178+87	--	184+74	114 CONN LT	443	978		9	WEST STRUCTURE APPROACH	
187+11	--	191+14	114 CONN LT	224	672		7	EAST STRUCTURE APPROACH	
191+14	--	196+22	114 CONN LT	275				EAST APPROACH TO 114 CONN GORE	
196+22	--	198+00	114 CONN LT	180				114 CONN/SE RAMP GORE AREA	
170+31	--	171+79	114 CONN RT	158				114 CONN/USH 10 GORE AREA	
171+79	--	178+18	114 CONN RT	212				END GORE TO BEAMGUARD TERMINAL	
178+18	--	181+13	114 CONN RT	126				BEAMGUARD TERMINAL TO WEST SURFACE DRAIN	
181+28	--	184+42	114 CONN RT	147				WEST SURFACE DRAIN TO STRUCTURE	
187+37	--	197+03	114 CONN RT	370				EAST SURFACE DRAIN TO SW RAMP GORE	
200+55	--	202+00	STH 114 LT	81				BEGIN MAINLINE TO BEGIN TAPER	
202+00	--	203+75	STH 114 LT	162			60	BEGIN TAPER TO PROJECT LIMITS	
200+55	--	202+00	STH 114 RT	81				BEGIN MAINLINE TO BEGIN TAPER	
202+00	--	203+75	STH 114 RT	151			60	BEGIN TAPER TO PROJECT LIMITS	
188+05	--	188+99	SE RAMP LT	78				TERMINAL RADIUS TO BEGIN FULL LEFT SHOULDER	
188+99	--	197+44	SE RAMP LT	1,127				FULL LEFT SHOULDER	
197+44	--	199+48	SE RAMP LT	193				SHOULDER TAPER FROM 12' TO 5'	
199+48	--	200+56	SE RAMP LT	60				5' SHOULDER	
188+05	--	196+22	SE RAMP RT	272				BEGINNING OF RAMP TO 114 CONN GORE	
TOTAL				7,042	1,650	225	136		

CONCRETE SURFACE DRAIN REPLACEMENT									
		204.0190	204.0220	204.0245	416.1010	520.8000	612.0212	611.0654	SPV.0060.01
		REMOVING	REMOVING	REMOVING STORM	CONCRETE	CONCRETE COLLARS	PIPE UNDERDRAIN	INLET COVERS	INLET SPECIAL
		SURFACE DRAINS	INLETS	SEWER (12-INCH)	SURFACE DRAINS	FOR PIPE	UNPERFORATED 12-INCH	TYPE V	
STA	LOCATION	EACH	EACH	LF	CY	EACH	LF	EACH	EACH
181+13	114 CONN RT	1	1	10	1	1	10	2	1
TOTAL		1	1	10	1	1	10	2	1

PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT 1500-55-71)

211.0100					
STA	TO	STA	LOCATION	LS	REMARKS
177+43	--	200+56	SW RAMP	---	ASPHALTIC SHOULDERS
169+46	--	203+75	114 CONN	---	ASPHALTIC SHOULDERS
180+23	--	180+64	114 CONN	---	FULL DEPTH MILL MAINLINE
188+53	--	189+03	114 CONN	---	FULL DEPTH MILL MAINLINE
188+05	--	200+56	SE RAMP	---	ASPHALTIC SHOULDERS
TOTAL				1	
<u>WATER</u>					
					624.0100
					WATER
STA	TO	STA	LOCATION		MGAL
169+46	--	200+56	114 CONN		3
200+56	--	203+75	STH 114		1
177+43	--	200+56	SW RAMP		2
188+05	--	200+56	SE RAMP		2
TOTAL					8
<u>SAWING ASPHALT</u>					
					690.0150
					SAWING ASPHALT
STA	TO	STA	LOCATION		LF
169+46	--	169+46	114 CONN LT		4
171+79	--	171+79	114 CONN RT		8
180+23	--	180+23	114 CONN LT		15
180+64	--	180+64	114 CONN LT		15
188+53	--	188+53	114 CONN LT		15
189+03	--	189+03	114 CONN LT		15
203+75	--	203+75	STH 114 LT, RT		46
177+43	--	177+43	SW RAMP RT		6
181+15	--	181+15	SW RAMP LT		6
188+05	--	188+11	SE RAMP RT		6
188+06	--	188+10	SE RAMP LT		4
TOTAL					140

CONCRETE BASE AND BASE PATCHING										
				320.0135	390.0303	416.0610	416.0620	690.0250		
				CONCRETE BASE 7-INCH	BASE PATCHING CONCRETE	DRILLED TIE BARS	DRILLED DOWEL BARS	SAWING CONCRETE		
STA	TO	STA	LOCATION	SY	SY	EACH	EACH	LF	REMARKS	
169+46	--	170+41	114 CONN	148	-	28	106	174	SEE SDD FOR JOINT LAYOUT	
170+41	--	173+84	114 CONN	-	190	-	422	690	JOINT REPAIR - 19 CONSECUTIVE	
174+00	--	174+18	114 CONN	-	31	-	22	63	PANEL	
174+35	--	174+41	114 CONN	-	10	-	22	36	JOINT REPAIR	
174+57	--	174+76	114 CONN	-	31	-	22	63	PANEL	
174+91	--	175+91	114 CONN	-	60	-	132	216	JOINT REPAIR - 6 CONSECUTIVE	
176+05	--	176+22	114 CONN	-	29	-	22	63	PANEL	
176+38	--	177+94	114 CONN	-	90	-	198	324	JOINT REPAIR - 9 CONSECUTIVE	
178+08	--	178+87	114 CONN	-	132	-	53	209	4 PANELS	
191+36	--	195+68	114 CONN	-	240	-	528	864	JOINT REPAIR - 24 CONSECUTIVE	
114 CONN SUBTOTAL				148	813	28	1,527	2,702		
201+00	--	201+06	STH 114 RT	-	8	-	16	30	JOINT REPAIR	
201+19	--	201+25	STH 114 RT	-	8	-	16	30	JOINT REPAIR	
201+75	--	201+81	STH 114 RT	-	8	-	16	30	JOINT REPAIR	
201+92	--	201+98	STH 114 RT	-	8	-	16	30	JOINT REPAIR	
202+30	--	202+36	STH 114 RT	-	8	-	16	30	JOINT REPAIR	
202+84	--	202+90	STH 114 RT	-	8	-	16	30	JOINT REPAIR	
203+04	--	203+10	STH 114 RT	-	8	-	16	30	JOINT REPAIR	
STH 114 SUBTOTAL				0	56	0	112	210		
177+42	--	179+85	SW RAMP	256	-	72	130	628	SEE SDD FOR JOINT LAYOUT	
180+95	--	181+35	SW RAMP	-	66	-	36	114	2 PANELS	
181+90	--	182+09	SW RAMP	-	31	-	22	49	PANEL	
182+62	--	190+00	SW RAMP	-	410	-	902	1,476	JOINT REPAIR - 41 CONSECUTIVE	
190+32	--	193+50	SW RAMP	-	180	-	396	648	JOINT REPAIR 18 CONSECUTIVE	
193+62	--	194+02	SW RAMP	-	67	-	36	115	2 PANELS	
194+18	--	194+24	SW RAMP	-	10	-	22	36	JOINT REPAIR	
194+36	--	194+42	SW RAMP	-	10	-	22	36	JOINT REPAIR	
194+56	--	194+76	SW RAMP	-	33	-	22	65	PANEL	
195+10	--	195+72	SW RAMP	-	40	-	88	144	JOINT REPAIR - 4 CONSECUTIVE	
197+14	--	197+20	SW RAMP	-	10	-	22	36	JOINT REPAIR	
198+11	--	198+29	SW RAMP	-	32	7	22	63	PANEL	
198+65	--	198+84	SW RAMP	-	38	-	22	64	PANEL	
199+00	--	199+61	SW RAMP	-	10	-	88	144	JOINT REPAIR - 4 CONSECUTIVE	
199+90	--	199+96	SW RAMP	-	10	-	20	36	JOINT REPAIR	
200+11	--	200+17	SW RAMP	-	9	-	18	36	JOINT REPAIR	
SW RAMP SUBTOTAL				256	956	79	1,868	3,690		
188+05	--	189+02	SE RAMP	287	-	73	136	400	16 PANELS	
190+12	--	190+31	SE RAMP	-	31	-	22	64	PANEL	
190+49	--	190+68	SE RAMP	-	31	-	22	64	PANEL	
191+24	--	191+77	SE RAMP	-	90	-	50	157	3 PANELS	
192+10	--	192+16	SE RAMP	-	10	-	22	36	JOINT REPAIR	
192+89	--	193+63	SE RAMP	-	295	-	64	209	4 PANELS	
194+67	--	195+21	SE RAMP	-	91	-	50	159	3 PANELS	
195+90	--	195+96	SE RAMP	-	10	-	22	36	JOINT REPAIR	
196+09	--	196+15	SE RAMP	-	10	-	22	36	JOINT REPAIR	
196+56	--	196+93	SE RAMP	-	62	-	36	112	2 PANELS	
197+57	--	197+63	SE RAMP	-	10	14	22	36	JOINT REPAIR	
198+76	--	199+13	SE RAMP	-	30	15	36	87	2 PANELS	
199+88	--	200+27	SE RAMP	-	11	-	36	48	2 PANELS	
SE RAMP SUBTOTAL				287	681	102	540	1,444		
TOTAL				691	2,506	209	4,047	8,046		

ASPHALTIC MATERIALS								
			460.5224			455.0605		
			HMA PAVEMENT 4 LT 58-28 S			TACK COAT		
STA	TO	STA	LOCATION	TON		GAL		REMARKS
169+46	--	178+87	114 CONN - SHLDR LT	138		42		BEGIN RAMP TO WEST APPROACH
"	--	"	114 CONN - RAMP		188	110		"
"	--	"	114 CONN - SHLDR RT		91	28		BEGIN RAMP TO W APPROACH INCL. USH 10 GORE
178+87	--	184+74	114 CONN - SHLDR LT	111		34		WEST STRUCTURE APPROACH
"	--	"	114 CONN - RAMP		225	68		"
"	--	"	114 CONN - SHLDR RT		45	14		"
180+23	--	180+64	114 CONN - RAMP		11	5		W APPROACH - FULL DEPTH ADDITIONAL
187+11	--	191+14	114 CONN - SHLDR LT	167		51		EAST STRUCTURE APPROACH
"	--	"	114 CONN - RAMP		154	47		"
"	--	"	114 CONN - SHLDR RT		100	31		"
188+53	--	189+03	114 CONN - RAMP		14	6		E APPROACH - FULL DEPTH ADDITIONAL
191+14	--	196+22	114 CONN - SHLDR LT	66		19		E APPROACH TO SE RAMP GORE
191+14	--	200+56	114 CONN - RAMP		190	110		E APPROACH TO STH 114 MAINLINE
191+14	--	197+04	114 CONN - SHLDR RT		49	14		E APPROACH TO SW RAMP GORE
196+22	--	198+00	114 CONN - SHLDR LT	41		13		114 CONN/SE RAMP GORE
SUBTOTAL, SHLDR LT				523		159		
SUBTOTAL, RAMP					782	346		
SUBTOTAL, SHLDR RT					285	87		
114 CONN SUBTOTAL					1,590	592		
200+56	--	203+75	STH 114 SHLDR LT	55		17		BEGIN MAINLINE TO PROJECT LIMITS
"	--	"	STH 114 MAINLINE		102	60		"
"	--	"	STH 114 SHLDR RT		55	17		"
STH 114 SUBTOTAL					212	94		
177+43	--	200+56	SW RAMP - SHLDR LT	137		41		BEGIN RAMP TO END RAMP
"	--	"	SW RAMP - RAMP		450	261		"
"	--	"	SW RAMP - SHLDR RT		291	88		"
179+56	--	181+11	SW RAMP - SHLDR LT	37		11		USH 10 GORE AREA
197+05	--	198+27	SW RAMP - SHLDR LT	30		9		STH 114 CONN GORE AREA
SUBTOTAL, SHLDR LT				204				
SW RAMP SUBTOTAL					945	410		
188+05	--	200+56	SE RAMP - SHLDR LT	336		102		BEGIN RAMP TO END RAMP
188+05	--	200+56	SE RAMP - RAMP		238	139		"
188+05	--	196+22	SE RAMP - SHLDR RT		72	22		"
SE RAMP SUBTOTAL					646	263		
TOTAL					3,393	1,359		

REMOVING GUARDRAIL

BARRIER SYSTEM GRADING SHAPING FINISHING

204.0165 REMOVING GUARDRAIL				
STA	TO	STA	LOCATION	LF
174+74	--	184+64	114 CONN LT	990
178+18	--	181+28	114 CONN RT	310
187+26	--	188+83	114 CONN RT	157
187+53	--	188+85	114 CONN LT	132
TOTAL				1589

614.0010 BARRIER SYSTEM		
STA	LOCATION	EACH
174+75	114 CONN LT	1
175+57	114 CONN RT	1
187+56	114 CONN RT	1
187+53	114 CONN LT	1
TOTAL		4

GUARDRAIL SUMMARY

				614.2300 MGS GUARDRAIL 3	614.2500 MGS THRIE BEAM TRANSITION	614.2610 MGS GUARDRAIL TERMINAL EAT	614.2620 MGS GUARDRAIL TERMINAL TYPE 2
STA	TO	STA	LOCATION	L.F.	L.F.	EACH	EACH
174+75	--	174+75	114 CONN LT				1
174+75	--	184+25	114 CONN LT	950			
184+25	--	184+64	114 CONN LT		39		
175+57	--	175+57	114 CONN RT				1
175+57	--	180+82	114 CONN RT	525			
180+82	--	181+21	114 CONN RT		39		
187+26	--	187+65	114 CONN RT		39		
187+65	--	189+53	114 CONN RT	188			
189+53	--	190+06	114 CONN RT			1	
187+53	--	187+92	114 CONN LT		39		
187+92	--	189+30	114 CONN LT	138			
189+30	--	189+83	114 CONN LT			1	
TOTAL				1800	156	2	2

EROSION CONTROL

				628.1504	628.1520	628.7010	628.7015	ASSOCIATED WORK
				SILT FENCE	SILT FENCE	INLET PROTECTION	INLET PROTECTION	
STA	TO	STA	LOCATION	LF	MAINTENANCE LF	TYPE B EACH	TYPE C EACH	
181+13	--	181+13	114 CONN RT	30	30	2	2	SURFACE DRAIN REPLACEMENT
187+33	--	187+33	114 CONN RT	--	--	1	1	N/A - EXISTING SURFACE DRAIN
189+27	--	191+10	114 CONN LT	183	183	--	--	BEAMGUARD E.A.T. GRADING
189+53	--	191+30	114 CONN RT	177	177	--	--	BEAMGUARD E.A.T. GRADING
TOTAL				390	390	3	3	

FINISHING

				628.2004	629.0210	630.0130	ASSOCIATED WORK
				EROSION MAT	FERTILIZER	SEEDING MIXTURE	
STA	TO	STA	LOCATION	CLASS 1 TYPE B SY	TYPE B CWT	NO. 30 LB	
181+05	--	181+25	114 CONN RT	50	0.03	1	SURFACE DRAIN REPLACEMENT
TOTAL				50	0.03	1	

DELINEATORS

204.0180					633.0100	633.0500	
REMOVING DELINEATORS AND MARKERS					DELINEATOR POSTS	DELINEATOR REFLECTORS	
STA	TO	STA	LOCATION	EACH	STEEL EACH	(WHITE) EACH	REMARKS
177+43	--	200+56	SW RAMP	7	32	36	
169+46	--	184+64	114 CONN	---	16	20	TO PARAPET
187+52	--	195+85	114 CONN	---	9	9	TO GORE WITH SE RAMP
188+05	--	200+56	SE RAMP	12	13	18	
TOTAL				19	70	83	

PROJECT TRAFFIC CONTROL

				643.0300		643.0420*	643.0705*	643.0715	649.0400			
				APPROX. DURATION	DRUMS	BARRICADES	WARNING LIGHTS	WARNING LIGHTS	643.0800	643.0900	TEMPORARY PAVEMENT MARKING	
STA	TO	STA	LOCATION	DAYS	EACH	TYPE III	TYPE A	TYPE C	ARROW BOARDS	SIGNS	REMOVABLE TAPE 4-INCH	
						EACH	EACH	EACH	EACH	EACH	LF	REMARKS
181+13	--	181+13	SE RAMP	45	14	6	--	14	--	2	--	AT USH 10 ENTRY
177+43	--	177+43	SW RAMP	45	25	6	12	--	--	6	200	AT USH 10 EXIT
187+33	--	187+33	114 CONN RT	45	18	4	--	18	--	--	--	AT USH 10 ENTRY
200+56		200+56	STH 114	45	--	8	16	--	--	--	--	E PROJECT LIMITS
145+00	--	168+00	USH 10	45	27	7	--	27	--	11	--	MEDIAN
	--		PROJECT	10	15	--	--	--	1	6	--	SHOULDER CLOSURES
	--		PROJECT	10	50	1	--	--	1	50	--	SINGLE LANE CLOSURES
TOTAL					4,430	1,405	1,260	2,655	20	1,415	200	

* SEE TRAFFIC CONTROL DETOUR SIGN SUMMARY FOR ADDITIONAL QUANTITIES

				646.0106	646.0883.S	
				PAVEMENT MARKING		PAVEMENT MARKING
				EPOXY 4-INCH	GROOVED WET REFLECTIVE 8-INCH	
STA	TO	STA	LOCATION	WHITE L.F.	YELLOW L.F.	WHITE L.F.
181+60	--	196+55	SW RAMP LT		1,495	
177+43	--	200+56	SW RAMP RT	2,313		
179+56		181+60	USH 10 GORE			408
195+91		197+03	114 CONN GORE			224
169+49	--	196+22	114 CONN LT		2,673	
172+29	--	196+53	114 CONN RT	2,424		
169+49		172+29	USH 10 GORE			280
200+55	--	202+00	STH 114 LT	145	290	
202+00	--	203+75	STH 114 LT	175	350	
200+55	--	202+00	STH 114 RT	145	---	
202+00	--	203+75	STH 114 RT	175	---	
195+72		198+00	114 CONN GORE			456
188+05	--	200+56	SE RAMP LT	1,251		
188+05	--	195+72	SE RAMP RT		767	
SUBTOTAL				6,628	5,575	
TOTAL				12,203		1,368

REMOVING RAISED PAVEMENT MARKERS

646.0790.S REMOVING RAISED PAVEMENT MARKERS		
STA	LOCATION	EACH
190+75	114 CONN LT	1
TOTAL		1

CONSTRUCTION STAKING

650.8000 RESURFACING REFERENCE				
STA	TO	STA	LOCATION	LF
169+46	--	200+56	114 CONN	3,110
200+56	--	203+75	STH 114	319
177+43	--	200+56	SW RAMP	2,313
188+05	--	200+56	SE RAMP	1,251
TOTAL				6,993

ERECTION & REMOVAL OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1A	USH 10, W. OF STH 114 RAMP	J3-1	72" X 84"	42.00	---	---	2	---	---	SEE PLAN SHEET
1B	"	J3-1	72" X 84"	42.00	---	---	2	1	1	SEE PLAN SHEET
1	STH 114 CONNECTOR	W4-2R	36" X 36"	---	9.00	---	1	1	1	
2	"	R3-3	36" X 36"	9.00	---	---	1	1	1	
3A	STH 114, SOUTHWEST RAMP	J3-1	36" X 84"	21.00	---	---	1	1	1	SEE PLAN SHEET
3	"	J3-1	36" X 84"	21.00	---	---	1	1	1	SEE PLAN SHEET
4	"	J3-1	36" X 84"	21.00	---	---	1	---	---	SEE PLAN SHEET
5	STH 114 CONNECTOR	W1-2L	30" X 30"	---	6.25	---	1	1	1	
6	"	W13-1	18" X 18"	---	2.25	---	---	---	---	MOUNT BELOW SIGN 5, PART OF SIGN 5 REMOVAL, SPEED TO BE DETERMINED IN THE FIELD
7	"	W1-2L	30" X 30"	---	6.25	---	1	1	1	SEE PLAN SHEET
8	"	W13-1	18" X 18"	---	2.25	---	---	---	---	MOUNT BELOW SIGN 7, PART OF SIGN 7 REMOVAL, SPEED TO BE DETERMINED IN THE FIELD
9	"	R5-1A	36" X 24"	6.00	---	1	---	1	1	
10	"	R5-1A	36" X 24"	6.00	---	1	---	1	1	
11	"	W6-3	36" X 36"	---	9.00	---	1	1	1	
12	"	R5-1A	36" X 36"	9.00	---	---	---	---	---	MOUNT TO BACK OF SIGN 11, PART OF SIGN 11 REMOVAL
13	"	R4-7	36" X 48"	12.00	---	---	1	1	1	
14	STH 114, SOUTHEAST RAMP	W3-1	36" X 36"	---	9.00	---	1	1	1	
15	"	J3-2	72" X 57"	28.50	---	---	2	1	1	SEE PLAN SHEET
16	"	J2-1	24" X 57"	9.50	---	---	1	---	---	SEE PLAN SHEET
17	"	R5-1A	36" X 24"	6.00	---	---	---	1	1	MOUNT TO BACK OF SIGN 16
18	"	R5-1A	36" X 24"	6.00	---	---	1	1	1	
19		R3-2	36" X 36"	9.00	---	---	1	---	---	
20		R5-1	36" X 36"	9.00	---	---	---	1	1	MOUNT TO BACK OF SIGN 19
21		R1-1	36" X 36"	7.46	---	---	1	1	1	
22		R6-1R	36" X 12"	3.00	---	---	---	---	---	MOUNT ABOVE SIGN 25
23		W1-6	48" X 24"	---	8.00	1	---	---	---	
24		R6-2R	---	---	---	---	---	1	2	
25		R1-1	36" X 36"	7.46	---	---	1	1	1	
26		R3-53R	24" X 30"	5.00	---	---	---	---	---	PART OF SIGN 25 REMOVAL
27		R5-1	36" X 36"	9.00	---	---	1	1	1	
28		J3-1	24" X 57"	9.50	---	---	---	---	---	MOUNT TO BACK OF SIGN 27, PART OF SIGN 27 REMOVAL
PROJECT TOTALS				298.42	52.00	3	22	20	21	

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 45 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	US 10/STH 114, E. OF EAST STH 114 MEDIAN TURNAROUND	M 3-2	36"X18"	1	45	45								
	"	M 1-6	36"X36"	1	45	45								114
	"	WO 20-2A	48"X48"	1	45	45								
2	US 10/STH 114, E. OF EAST STH 114 MEDIAN TURNAROUND	M 3-2	36"X18"	1	45	45								
	"	M 1-6	36"X36"	1	45	45								114
	"	WO 20-2A	48"X48"	1	45	45								
3	US 10/STH 114, E. OF EAST STH 114 MEDIAN TURNAROUND, MODIFY AS SHOWN	MO 4-8	24"X12"	1	45	45								
	"	MO 6-1	21"X21"	1	45	45								AHEAD
4	US 10/STH 114, E. OF EAST STH 114 MEDIAN TURNAROUND, IN MEDIAN OPPOSITE J3-1 SIGN	MO 4-8	24"X12"	1	45	45								
	"	M 3-2	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
	"	MO 6-1	21"X21"	1	45	45								AHEAD
5	US 10/STH 114, W. OF 10/114 SPLIT, COVER AS SHOWN										1		1	COVER "SHERWOOD-HILBERT"
6	US 10/STH 114, W. OF 10/114 SPLIT, MODIFY AS SHOWN	MO 4-8	24"X12"	1	45	45								
	"	MO 6-1	21"X21"	1	45	45								AHEAD
7	STH 114 RAMP, AT US 10 SPLIT, PLACE IN MIDDLE OF ROADWAY	R 11-2(MOD)	48"X30"	1	45	45	45	90						
8	US 10 WB, W. OF STH 114 OVERPASS, MODIFY AS SHOWN	MO 4-8A	24"X18"	1	45	45								
9	US 10 EB, W. OF CTH N ROUNDABOUT, PLACE RIGHT OF D1-62 SIGN	MO 4-8	24"X12"	1	45	45								
	"	M 3-2	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
	"	MO 5-1R	21"X21"	1	45	45								
10	US 10 EB, AT CTH N ROUNDABOUT, PLACE 150' PRIOR TO RAB	MO 4-8	24"X12"	1	45	45								
	"	M 3-2	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
	"	MO 6-1	21"X21"	1	45	45								RIGHT
11	US 10 WB, W. OF CTH N ROUNDABOUT, PLACE TO RIGHT OF EXISTING J4-1 SIGN	MO 4-8	24"X12"	1	45	45								
	"	M 3-4	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
12	US 10 WB, AT CTH N ROUNDABOUT, MOUNT ABOVE EXISTING SPLITTER ISLAND SIGN	MO 4-8	24"X12"	1	45	45								
	"	M 3-4	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
	"	MO 6-2R	21"X21"	1	45	45								
13	CTH N, S. OF US 10 RAB, PLACE 150' PRIOR TO RAB	MO 4-8	24"X12"	1	45	45								
	"	M 3-4	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
	"	MO 6-1	21"X21"	1	45	45								LEFT
14	CTH N, S. OF US 10 RAB, PLACE 100' S. OF RAB	MO 4-8	24"X12"	1	45	45								
	"	M 3-2	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								
15	CTH N, S. OF US 10 RAB, PLACE 750' PRIOR TO RAB	MO 4-8	24"X12"	1	45	45								
	"	M 3-4	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
	"	MO 5-1L	21"X21"	1	45	45								
16	CTH N, N. OF STH 114 RAB, MODIFY EXISTING J1-1 AS SHOWN	MO 4-8A	24"X18"	1	45	45								
17	CTH N, N. OF STH 114 RAB, COVER EXISTING D1-62 AS SHOWN										1	1	1	COVER "WEST STH 114"
PAGE SUBTOTALS				43		1,935	45	90	0	0				

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

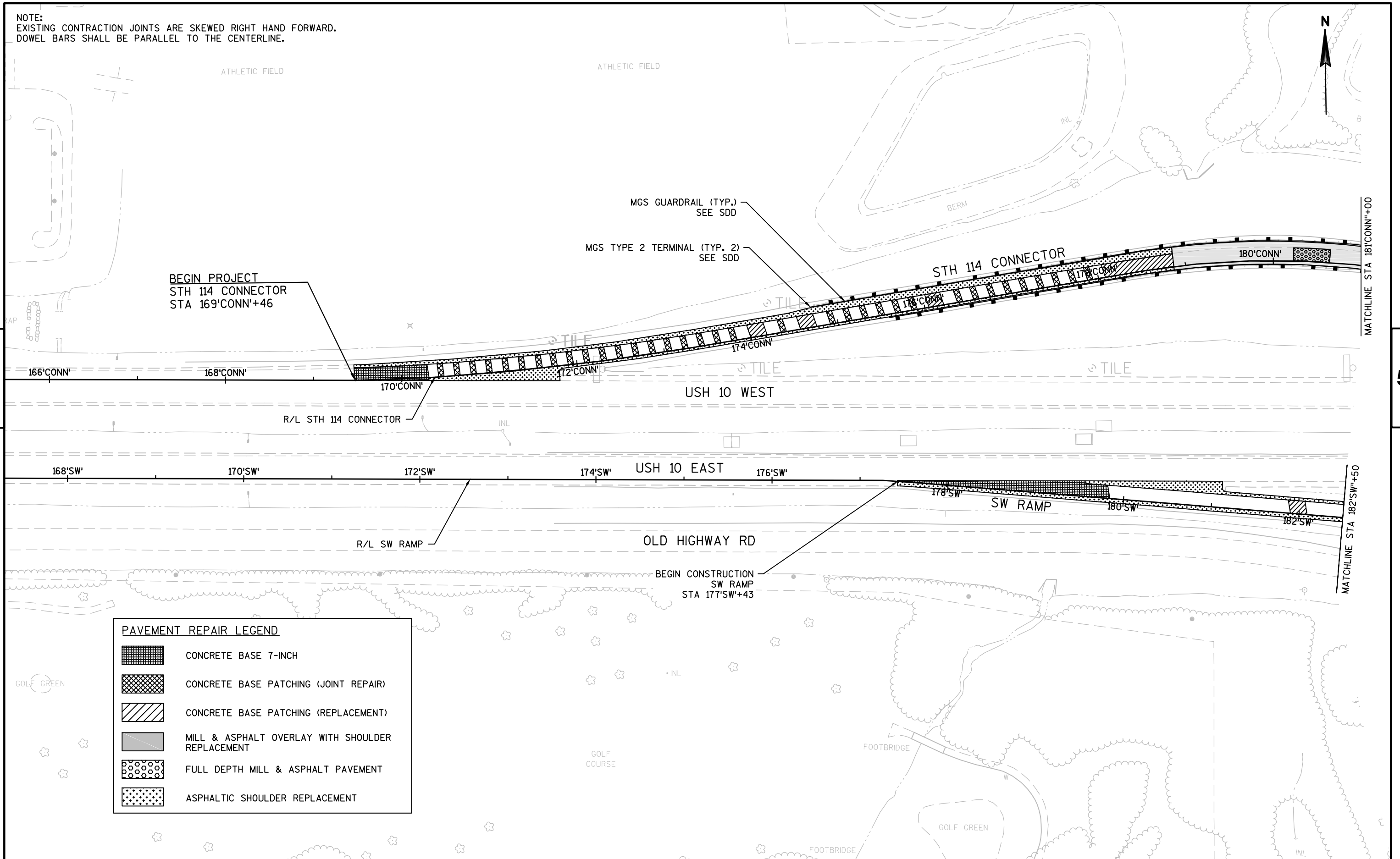
TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 45 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS*	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
18	STH 114, W. OF CTH N RAB, COVER EXISTING J4-1 AS SHOWN										1		1	COVER "WEST STH 114"
19	STH 114, AT CTH N RAB, PLACE IN NW QUADRANT ON SHOULDER	R 11-3	60"X30"	1	45	45	45	90						1/2 MILE AHEAD
	"	MO 4-9R	30"X24"	1	45	45								
20	STH 114, AT CTH N RAB, COVER D1-1 SPLITTER ISLAND SIGN AS SHOWN										1		1	COVER "WEST STH 114"
21	FIRELANE 12, S. OF STH 114 RAB, COVER EXISTING D1-62 AS SHOWN										1	1		COVER "WEST STH 114"
22	CTH N, AT STH 114 RAB, MOUNT ABOVE EXISTING SPLITTER ISLAND SIGN	MO 4-8	24"X12"	1	45	45								
	"	M 3-4	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								
	"	MO 6-2R	21"X21"	1	45	45								
23	STH 114, E. OF CTH N RAB, PLACE 150' PRIOR TO RAB	MO 4-8	24"X12"	1	45	45								
	"	M 3-4	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
	"	MO 6-1	21"X21"	1	45	45								RIGHT
24	CTH N, N. OF STH 114, PLACE 75' N. OF RAB	MO 4-8	24"X12"	1	45	45								
	"	M 3-4	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
25	STH 114, E. OF CTH N RAB, PLACE 450' PRIOR TO RAB	FMS	54"X30"	1					11.25					
26	STH 114, E. OF CTH N RAB, PLACE TO LEFT OF EXISTING D1-62 SIGN	MO 4-8	24"X12"	1	45	45								
	"	M 3-4	24"X12"	1	45	45								
	"	M 1-6	24"X24"	1	45	45								114
	"	MO 5-1R	21"X21"	1	45	45								
27	STH 114, E. OF CTH N RAB, COVER EXISTING D1-62 SIGN AS SHOWN										1	1		COVER "WEST STH 114"
28	STH 114, E. OF CTH N RAB, PLACE 1400' PRIOR TO RAB	WO 20-2A	48"X48"	1	45	45								
29	STH 114 EB RAMP FROM US 10, PLACE IMMEDIATELY AFTER TAPER, FIELD DETERMINED	PCMS								7				
30	STH 114 WB, W. OF CTH N RAB, FIELD DETERMINED	PCMS								7				
PAGE SUBTOTALS				19		810	45	90	11.25	14		2	2	
PROJECT TOTALS				62		2,745	90	180	11.25	14		3	3	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

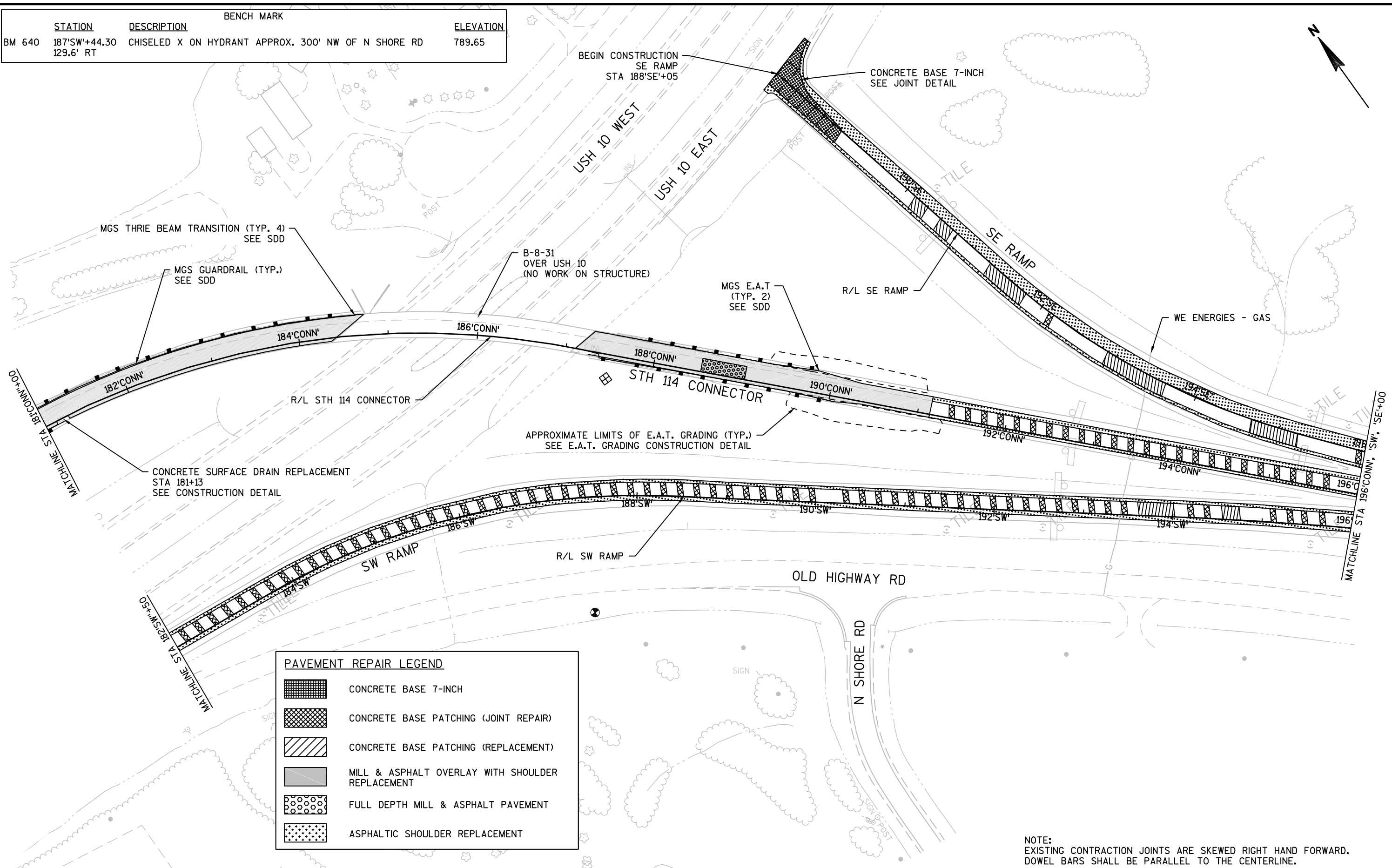
*NOTE: INSTALL PORTABLE CHANGEABLE MESSAGE SIGNS SEVEN (7) DAYS PRIOR TO DETOUR

NOTE:
EXISTING CONTRACTION JOINTS ARE SKEWED RIGHT HAND FORWARD.
DOWEL BARS SHALL BE PARALLEL TO THE CENTERLINE.



PAVEMENT REPAIR LEGEND	
	CONCRETE BASE 7-INCH
	CONCRETE BASE PATCHING (JOINT REPAIR)
	CONCRETE BASE PATCHING (REPLACEMENT)
	MILL & ASPHALT OVERLAY WITH SHOULDER REPLACEMENT
	FULL DEPTH MILL & ASPHALT PAVEMENT
	ASPHALTIC SHOULDER REPLACEMENT

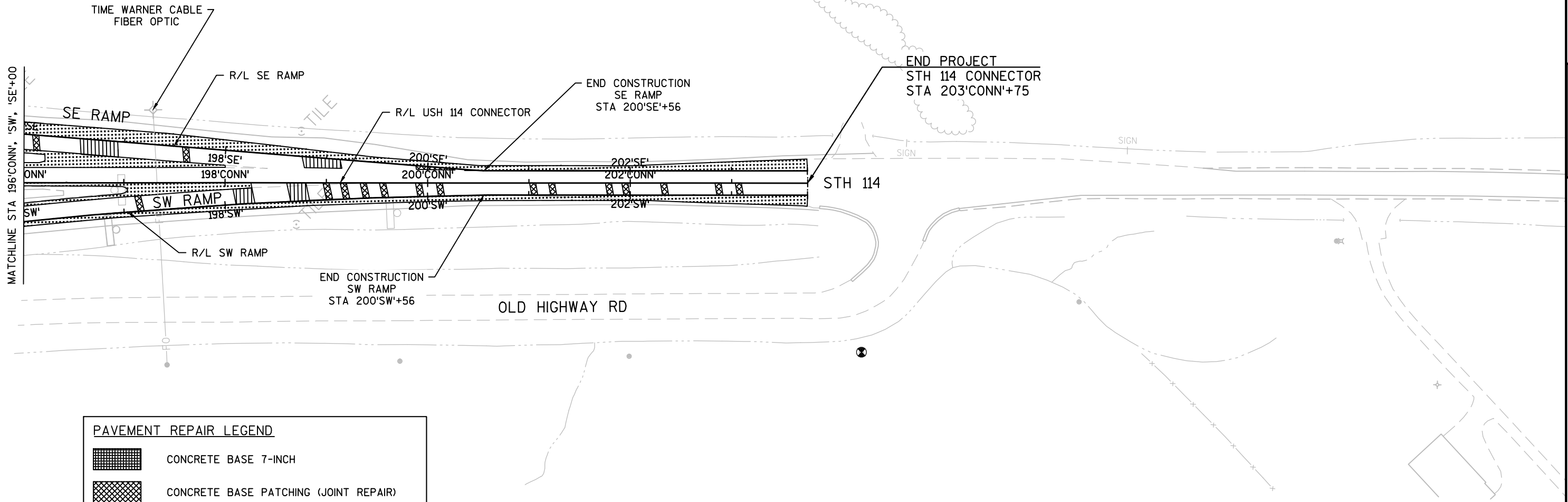
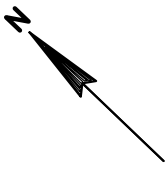
	STATION	DESCRIPTION	BENCH MARK	ELEVATION
BM 640	187'SW'+44.30 129.6' RT	CHISELED X ON HYDRANT APPROX. 300' NW OF N SHORE RD		789.65



PAVEMENT REPAIR LEGEND	
	CONCRETE BASE 7-INCH
	CONCRETE BASE PATCHING (JOINT REPAIR)
	CONCRETE BASE PATCHING (REPLACEMENT)
	MILL & ASPHALT OVERLAY WITH SHOULDER REPLACEMENT
	FULL DEPTH MILL & ASPHALT PAVEMENT
	ASPHALTIC SHOULDER REPLACEMENT

NOTE:
EXISTING CONTRACTION JOINTS ARE SKEWED RIGHT HAND FORWARD.
DOWEL BARS SHALL BE PARALLEL TO THE CENTERLINE.

	STATION	DESCRIPTION	BENCH MARK	ELEVATION
BM 639	204'SW'+28.3	RR SPIKE IN PP# 11-02415		802.20
	167' RT	APPROX. 170' SW OF OLD HWY RD/STH 114 INTERSECTION		

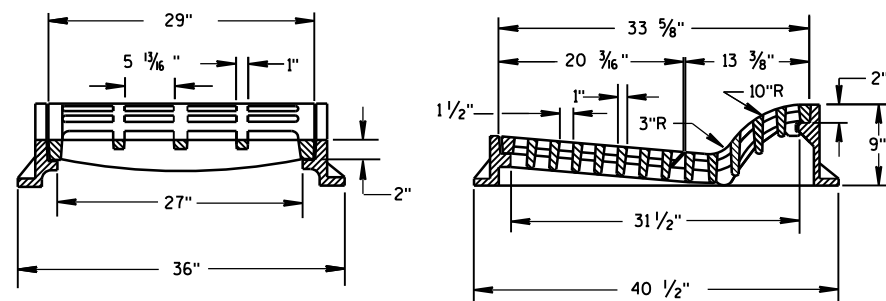
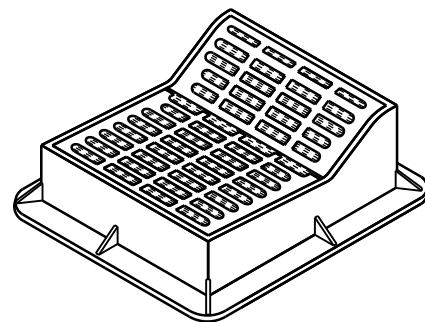


PAVEMENT REPAIR LEGEND	
	CONCRETE BASE 7-INCH
	CONCRETE BASE PATCHING (JOINT REPAIR)
	CONCRETE BASE PATCHING (REPLACEMENT)
	MILL & ASPHALT OVERLAY WITH SHOULDER REPLACEMENT
	FULL DEPTH MILL & ASPHALT PAVEMENT
	ASPHALTIC SHOULDER REPLACEMENT

NOTE:
EXISTING CONTRACTION JOINTS ARE SKEWED RIGHT HAND FORWARD.
DOWEL BARS SHALL BE PARALLEL TO THE CENTERLINE.

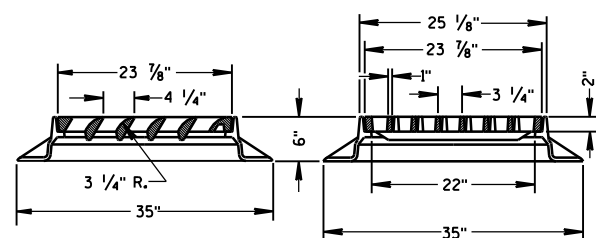
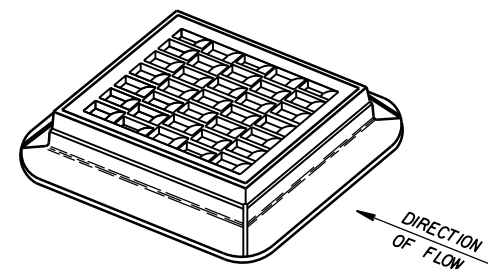
Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D03-06	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13C14-06A	BASE PATCHING CONCRETE
13C14-06B	BASE PATCHING CONCRETE
13C14-06C	BASE PATCHING CONCRETE
13C15-06A	CONCRETE BASE
13C15-06B	CONCRETE BASE
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A04-02	FLEXIBLE DELINEATOR POST
15A06-02	DELINEATOR LAYOUT
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C31-02A	PAVEMENT MARKING (RAMPS AND GORES)
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

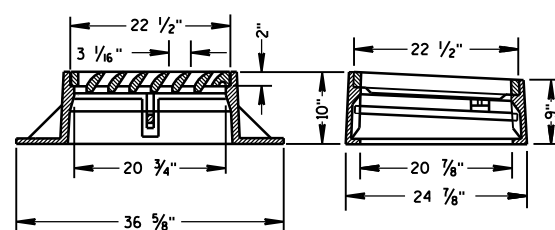
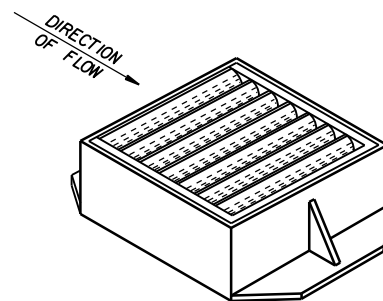


TYPE "F"

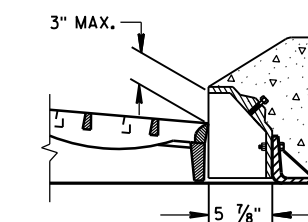
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



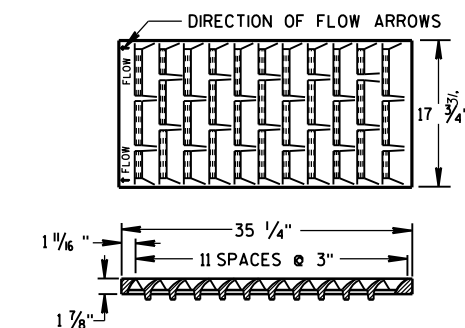
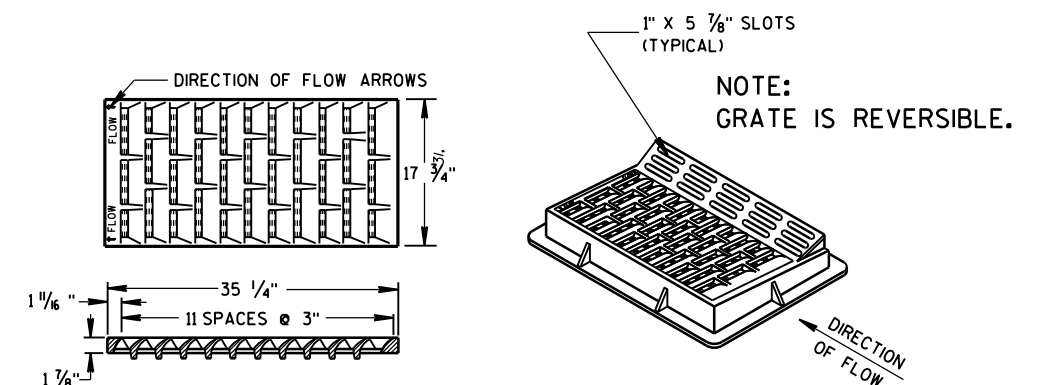
TYPE "S"



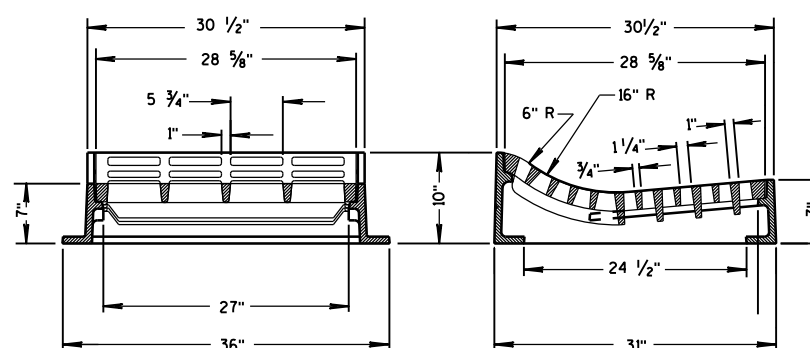
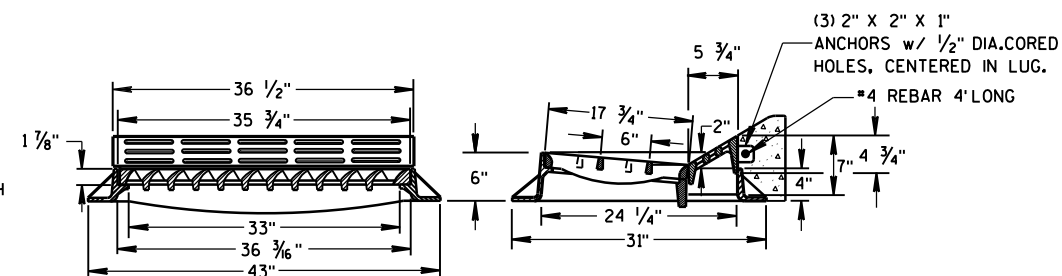
TYPE "V"

ALTERNATIVE CURB BOX
FOR TYPE "HM" COVERUSE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLENOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

GENERAL NOTES

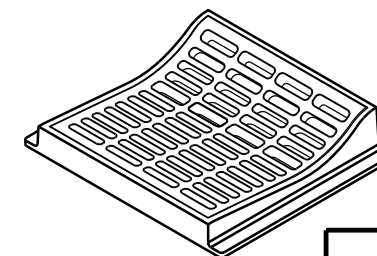
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING
SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND
THE APPLICABLE SPECIAL PROVISIONS.DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED
TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION
FOR EQUIVALENT CAPACITY AND STRENGTH.

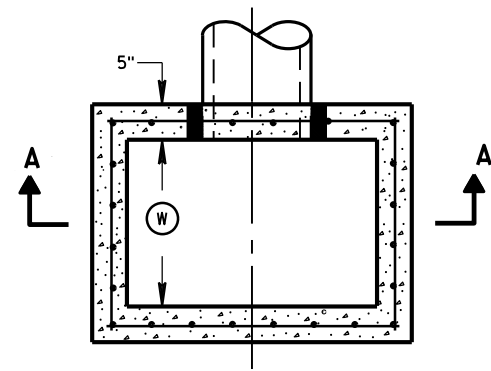
TYPE "HM"

USE WITH TYPES A & D CONCRETE
CURB & GUTTER, 36 INCH.NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE

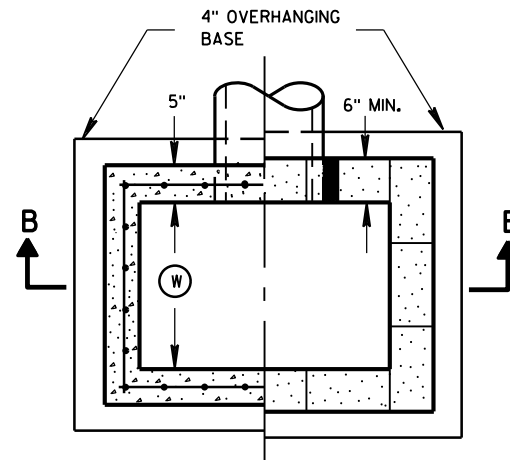
TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

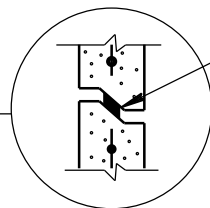
INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-SSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
11/27/2013
DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



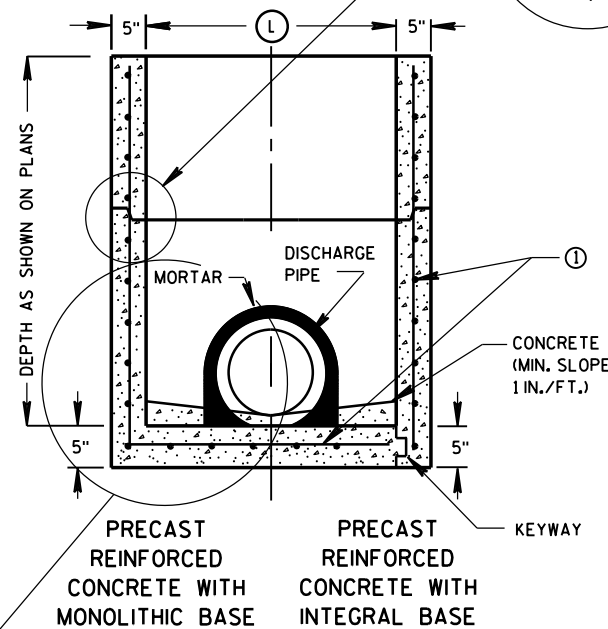
PLAN VIEW



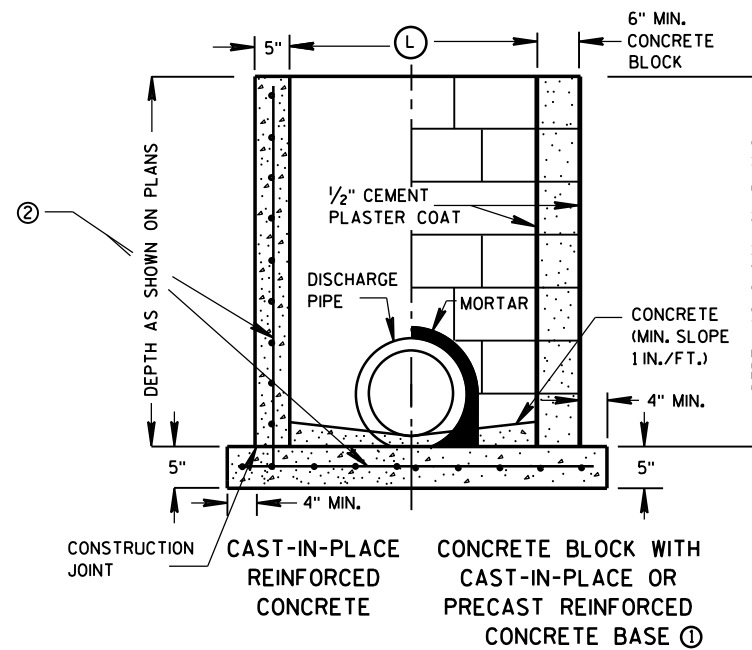
PLAN VIEW



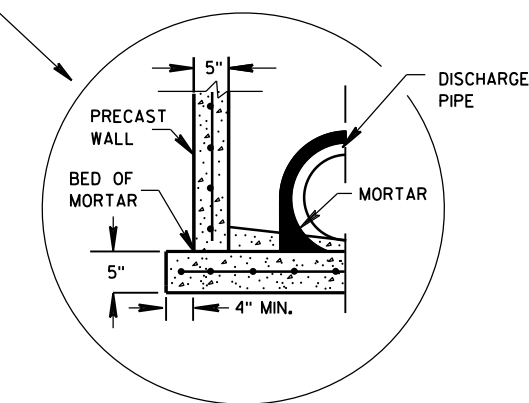
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

GENERAL NOTES

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

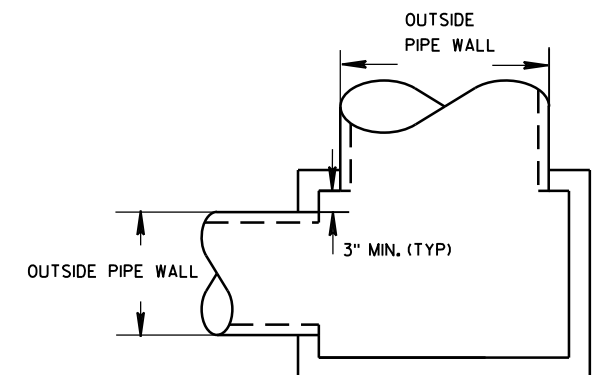
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH ① (FT)	LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



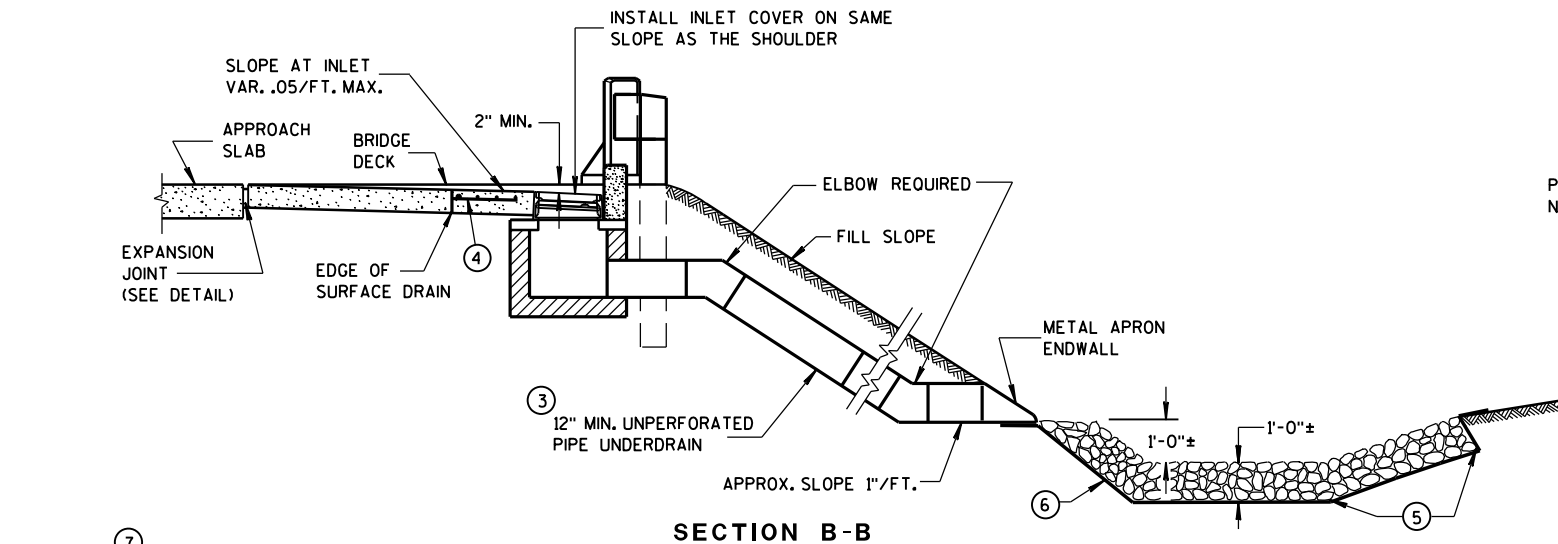
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT,
2X3-FT AND 2.5X3-FT

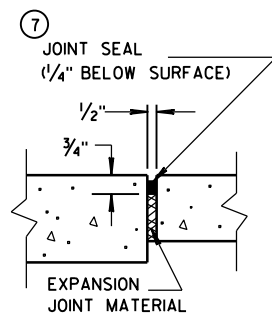
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

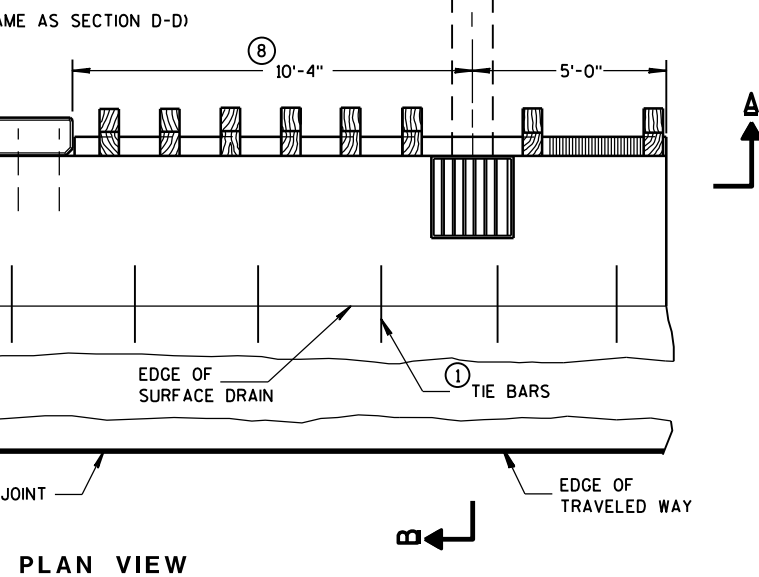
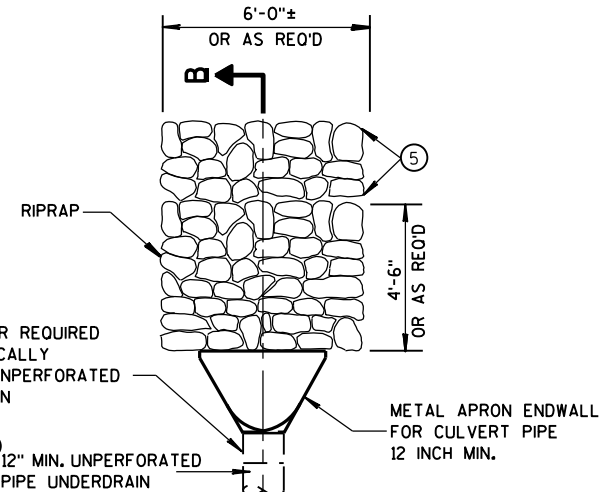
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR



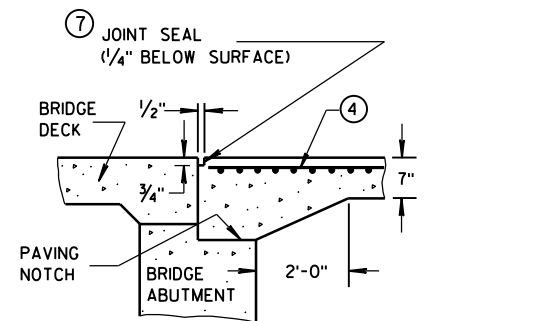
SECTION B-B



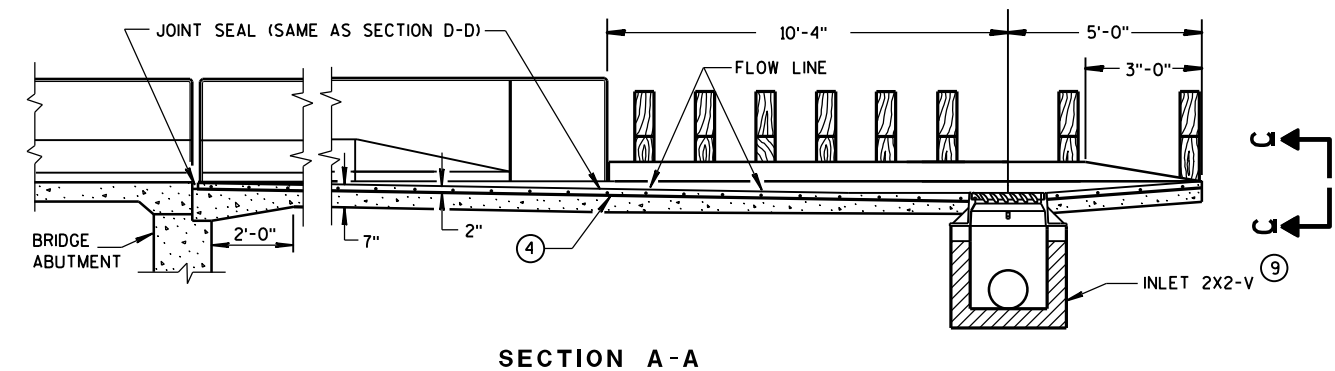
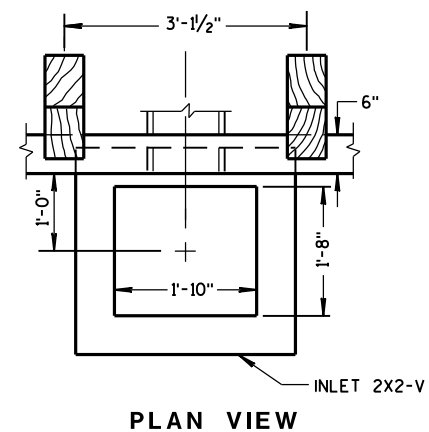
EXPANSION JOINT DETAIL



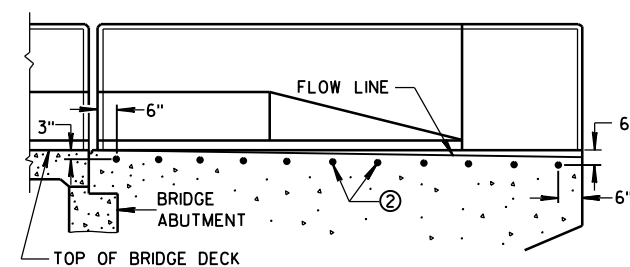
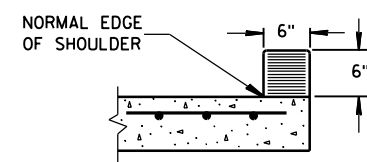
PLAN VIEW



SECTION D-D



SECTION A-A

LOCATION OF
TIE BARS IN WINGWALL

SECTION C-C

GENERAL NOTES

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

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.
- ④ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑤ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑥ GEOTEXTILE FABRIC, TYPE 'R'
- ⑦ HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.
- ⑧ THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1/2".
- ⑨ SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.

CONCRETE SURFACE DRAINS
DROP INLET TYPE
AT STRUCTURES

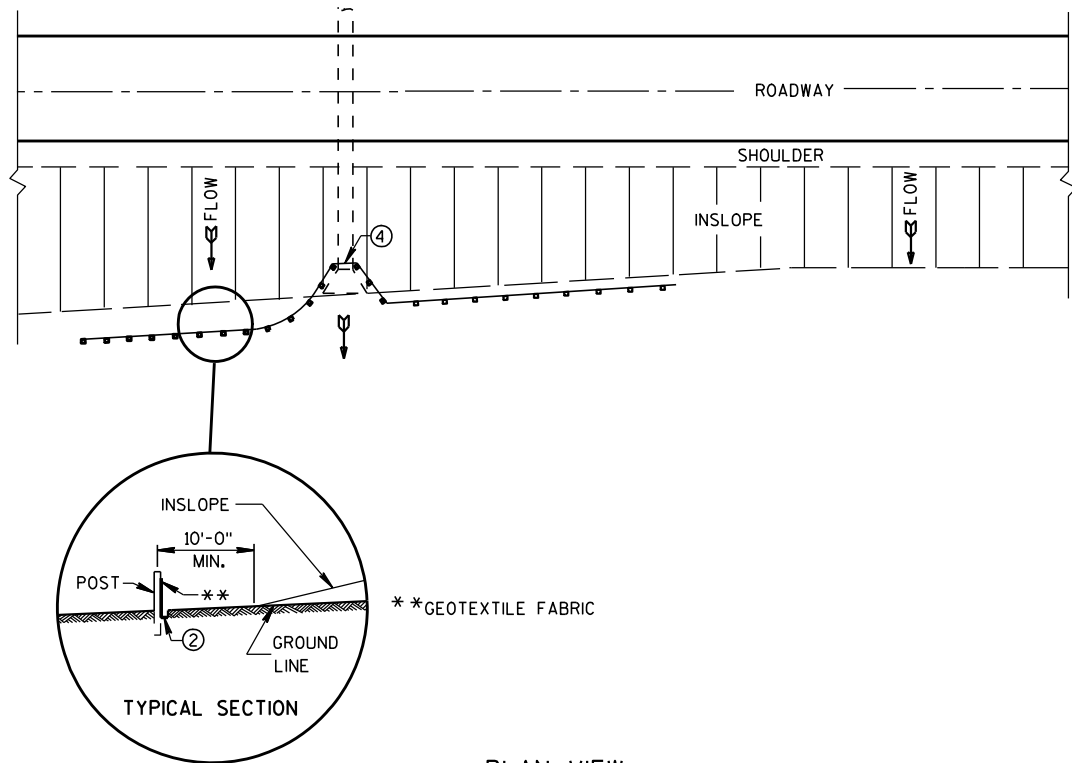
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE

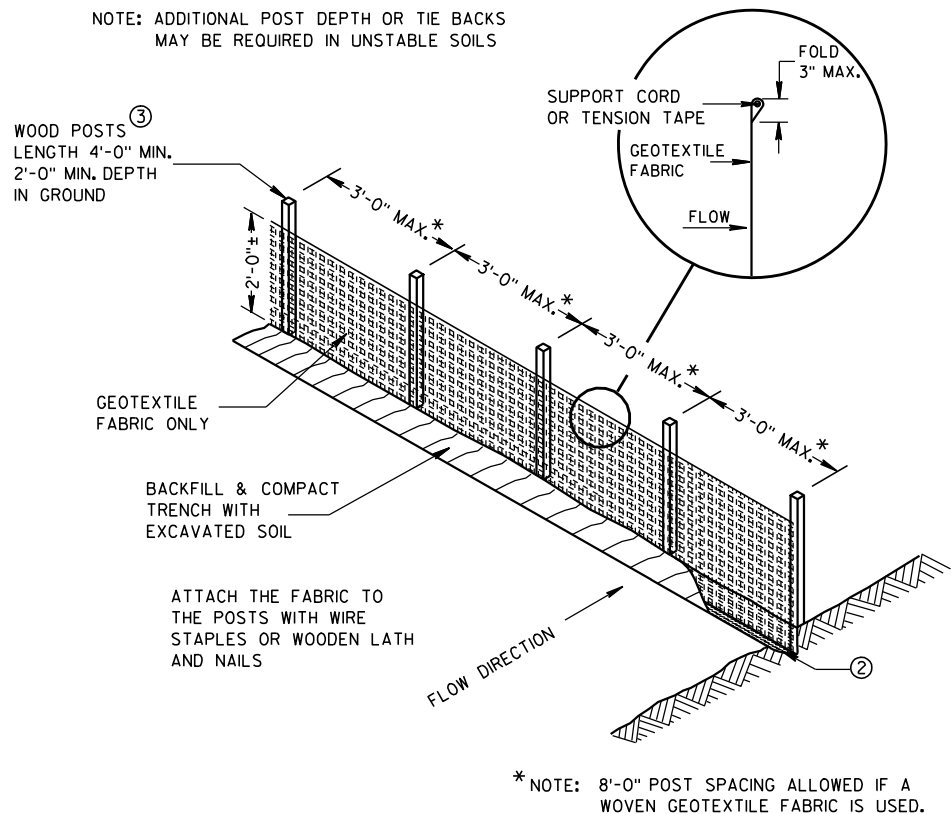
9/4/08

FHWA

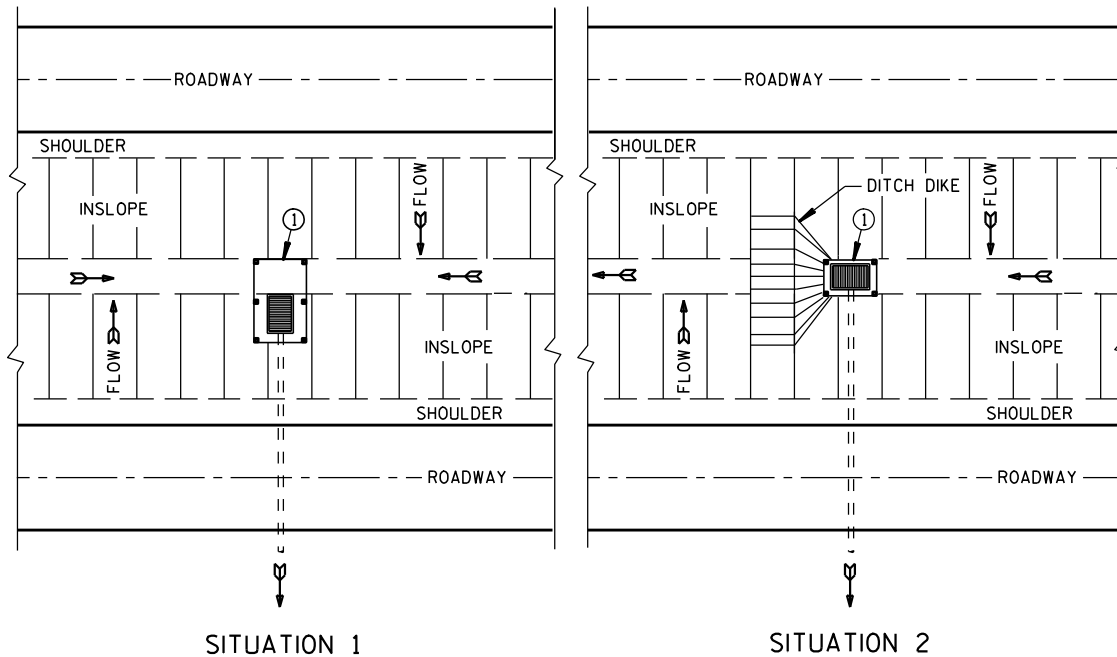
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



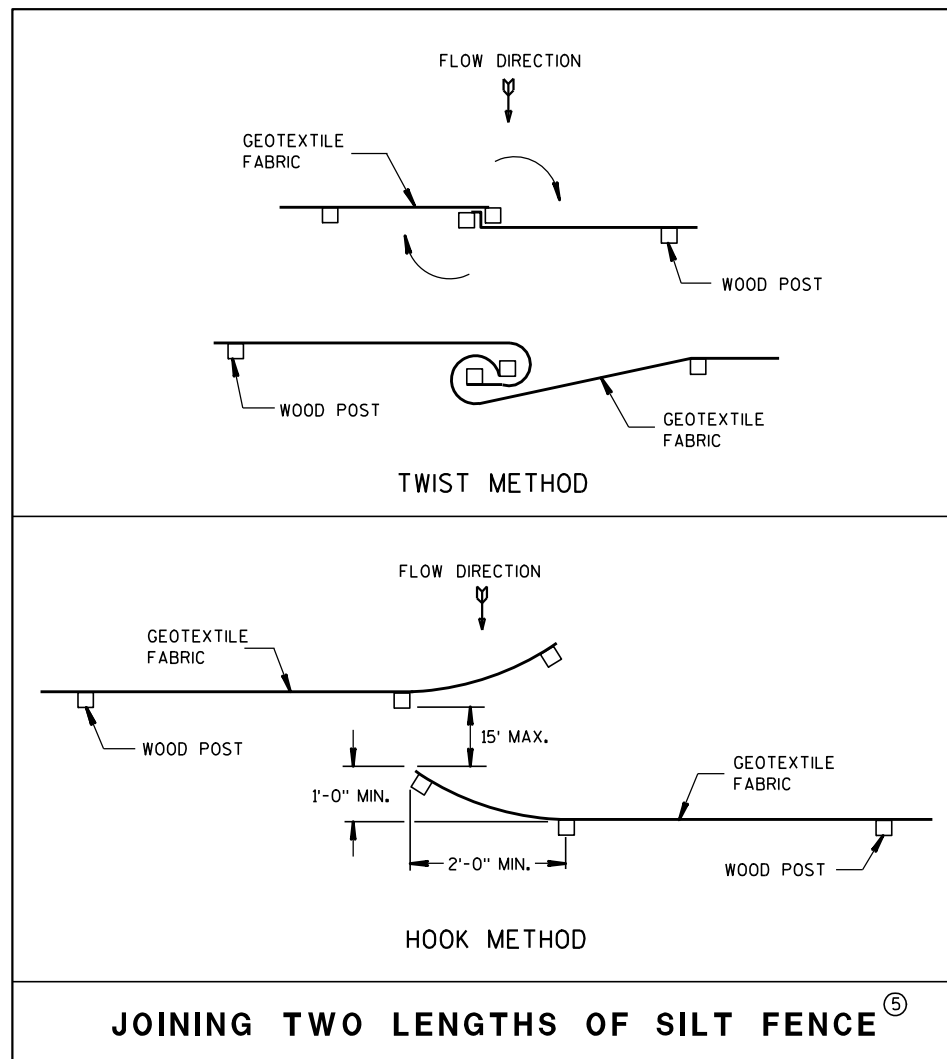
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

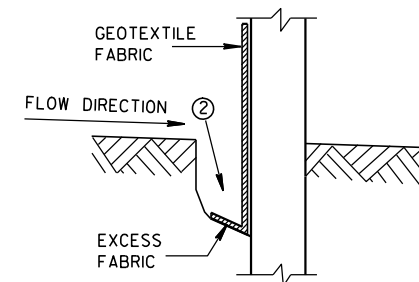


JOINING TWO LENGTHS OF SILT FENCE

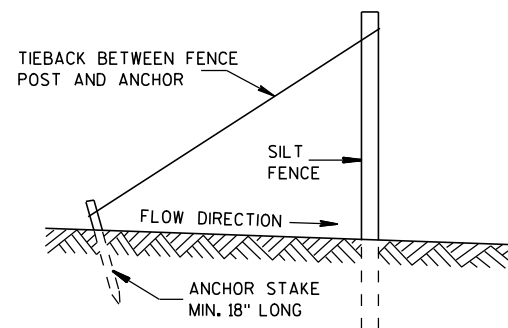
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

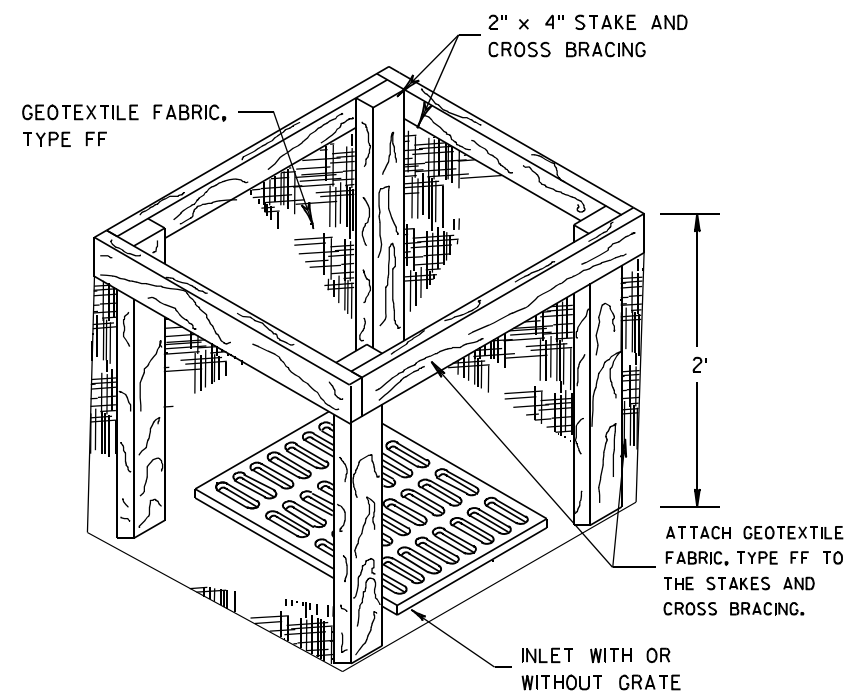
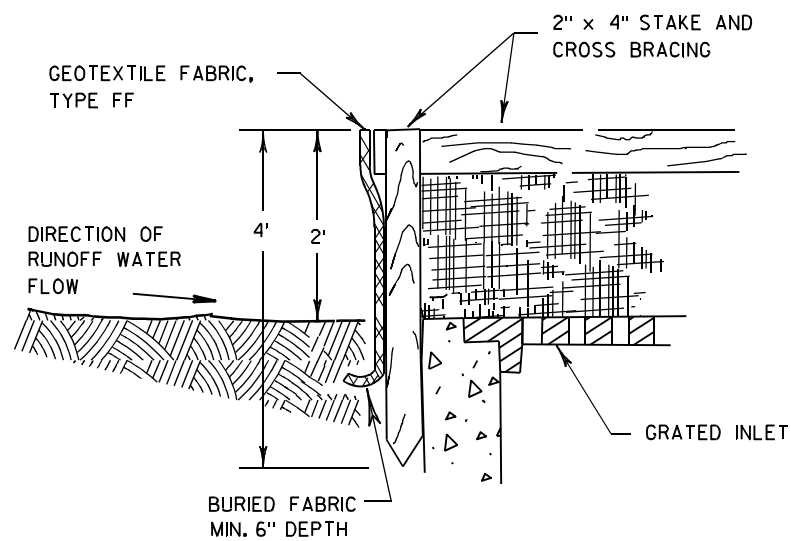


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



INLET PROTECTION, TYPE A

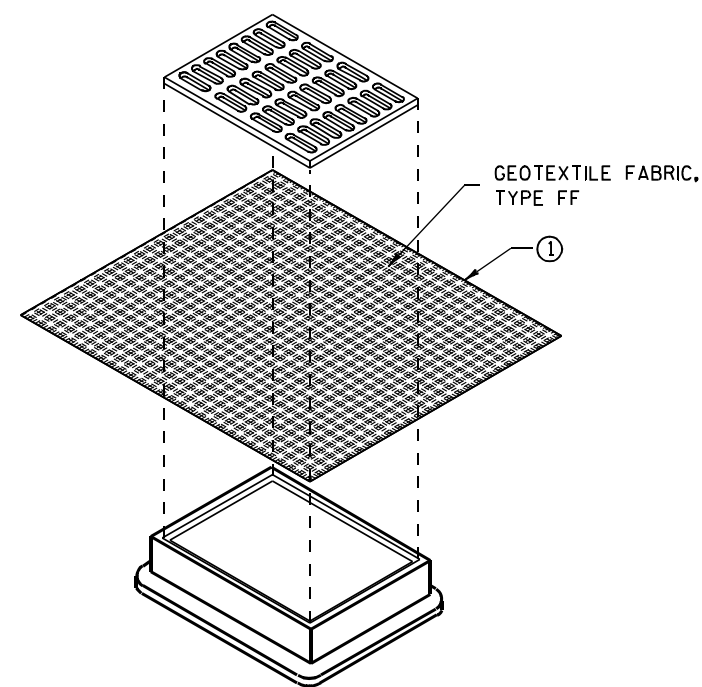
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

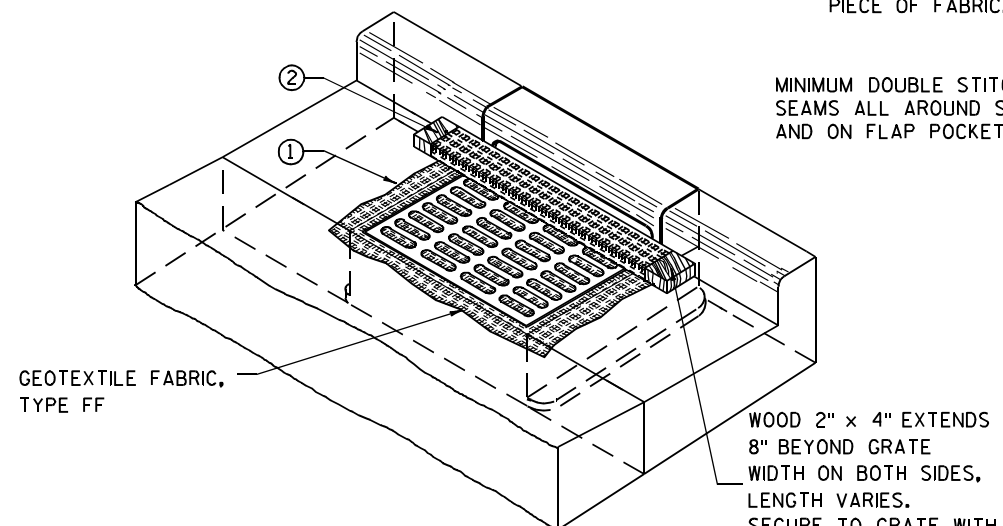
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

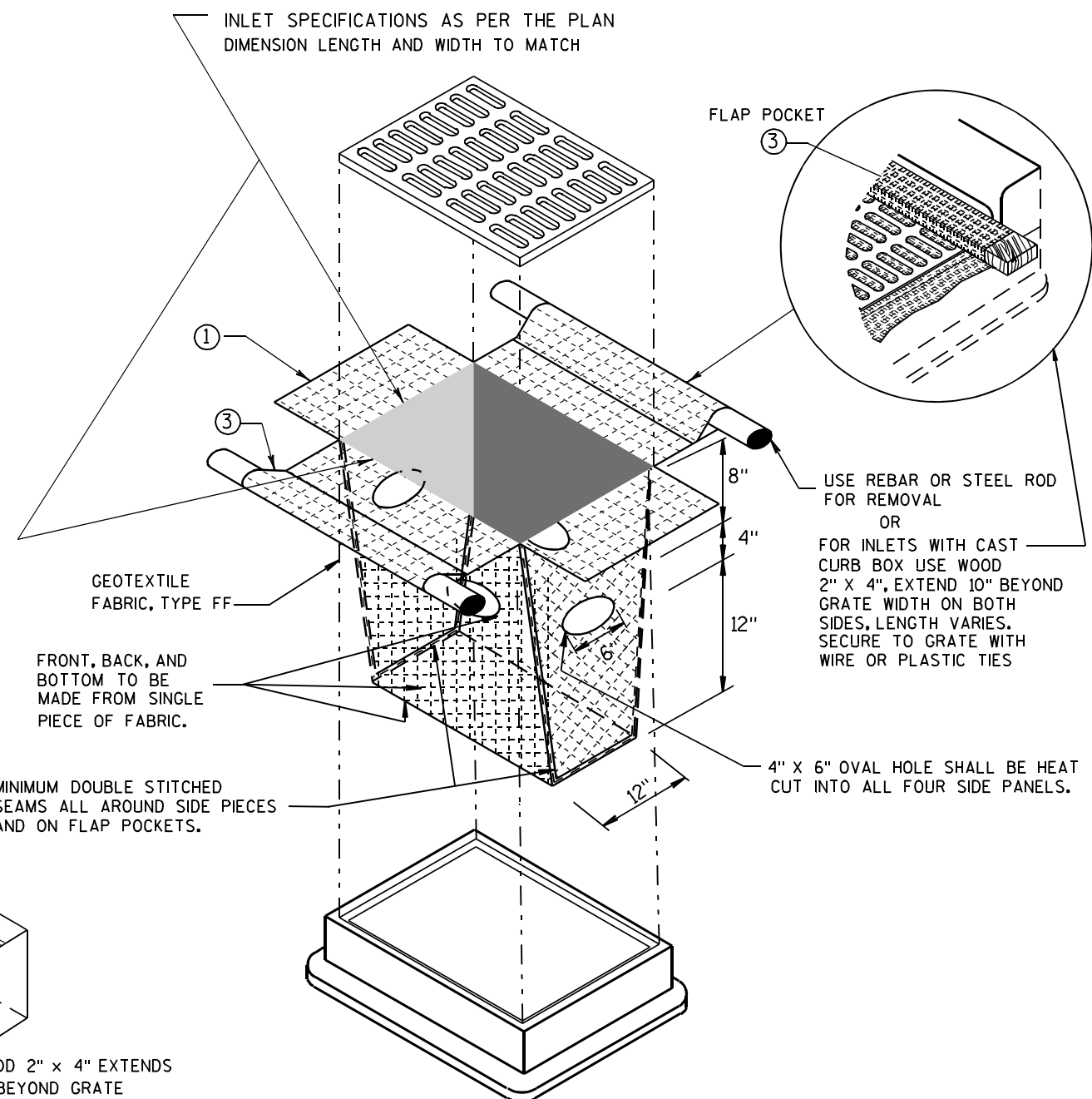
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



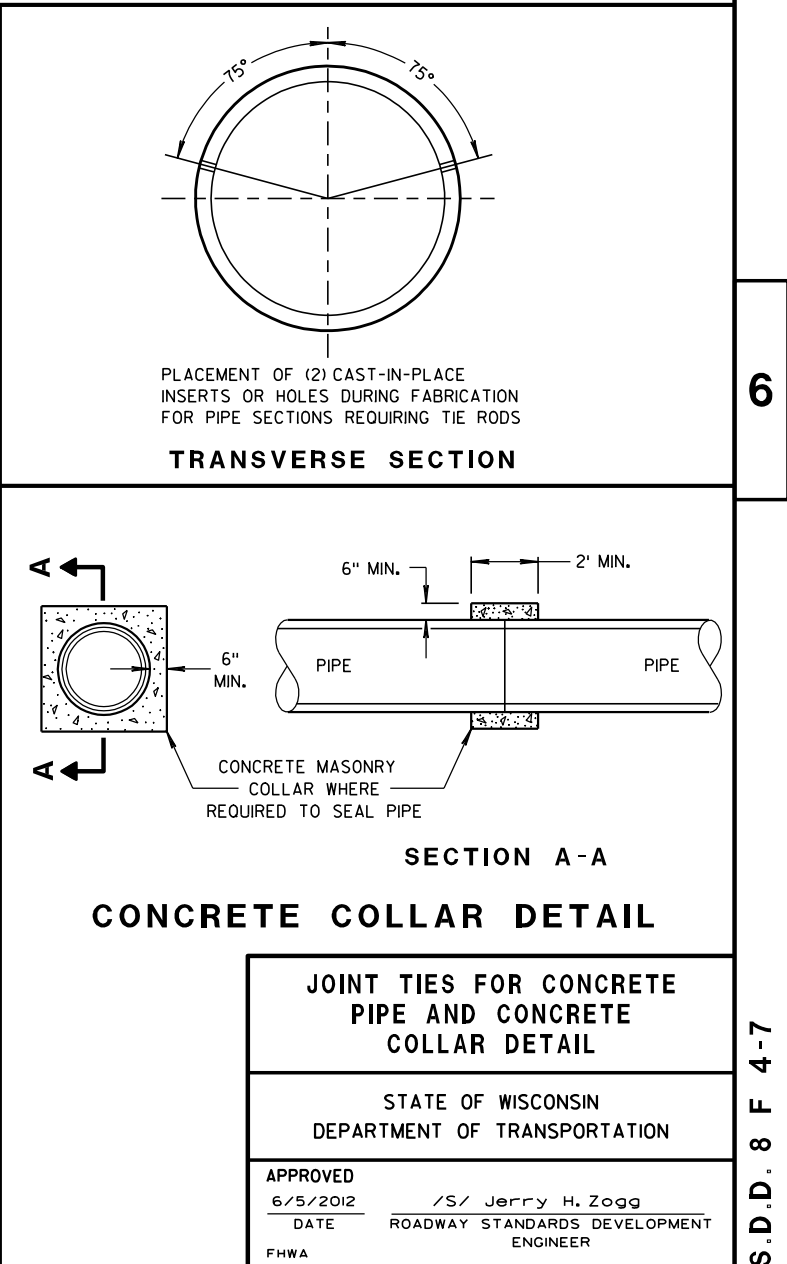
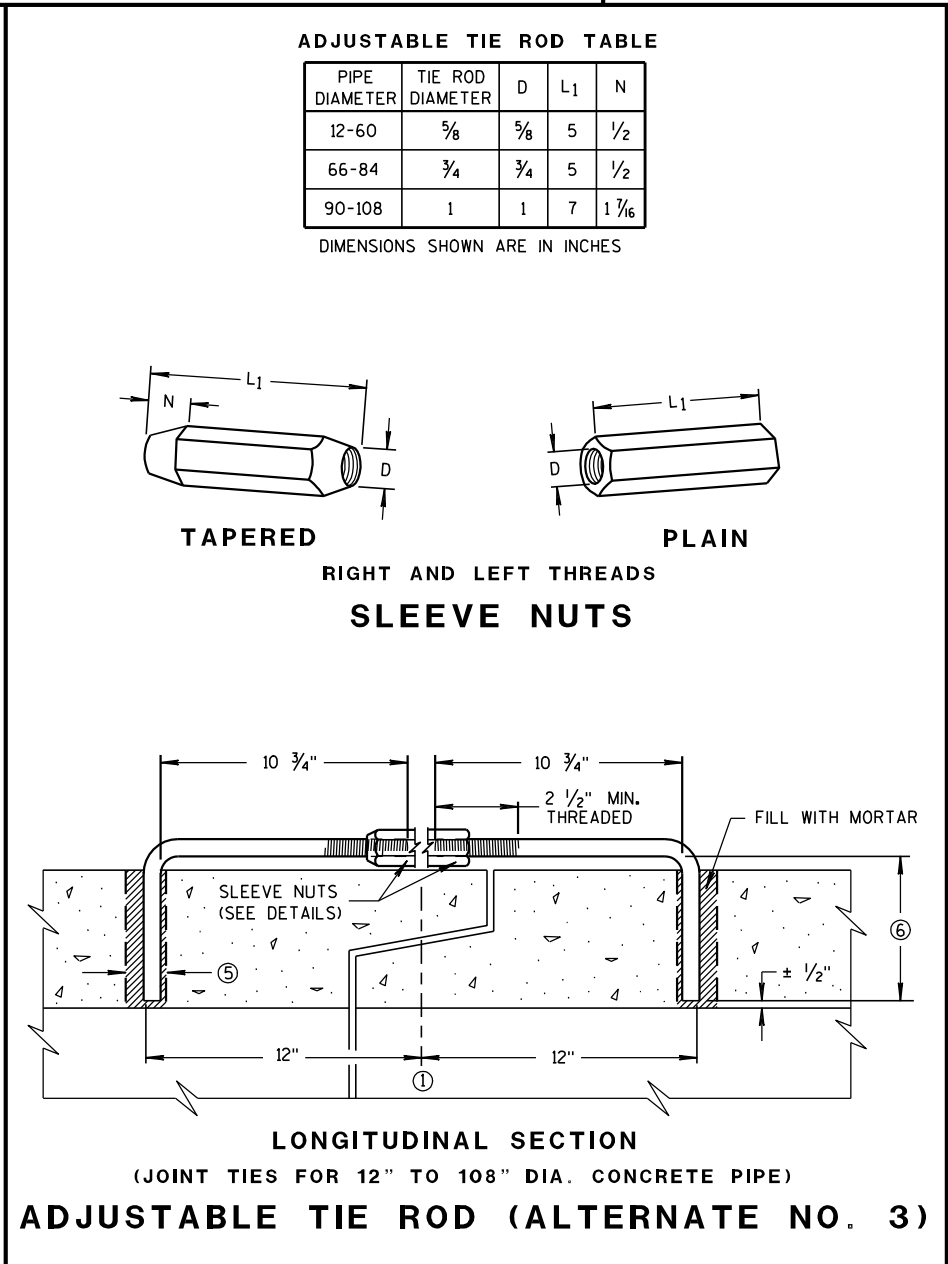
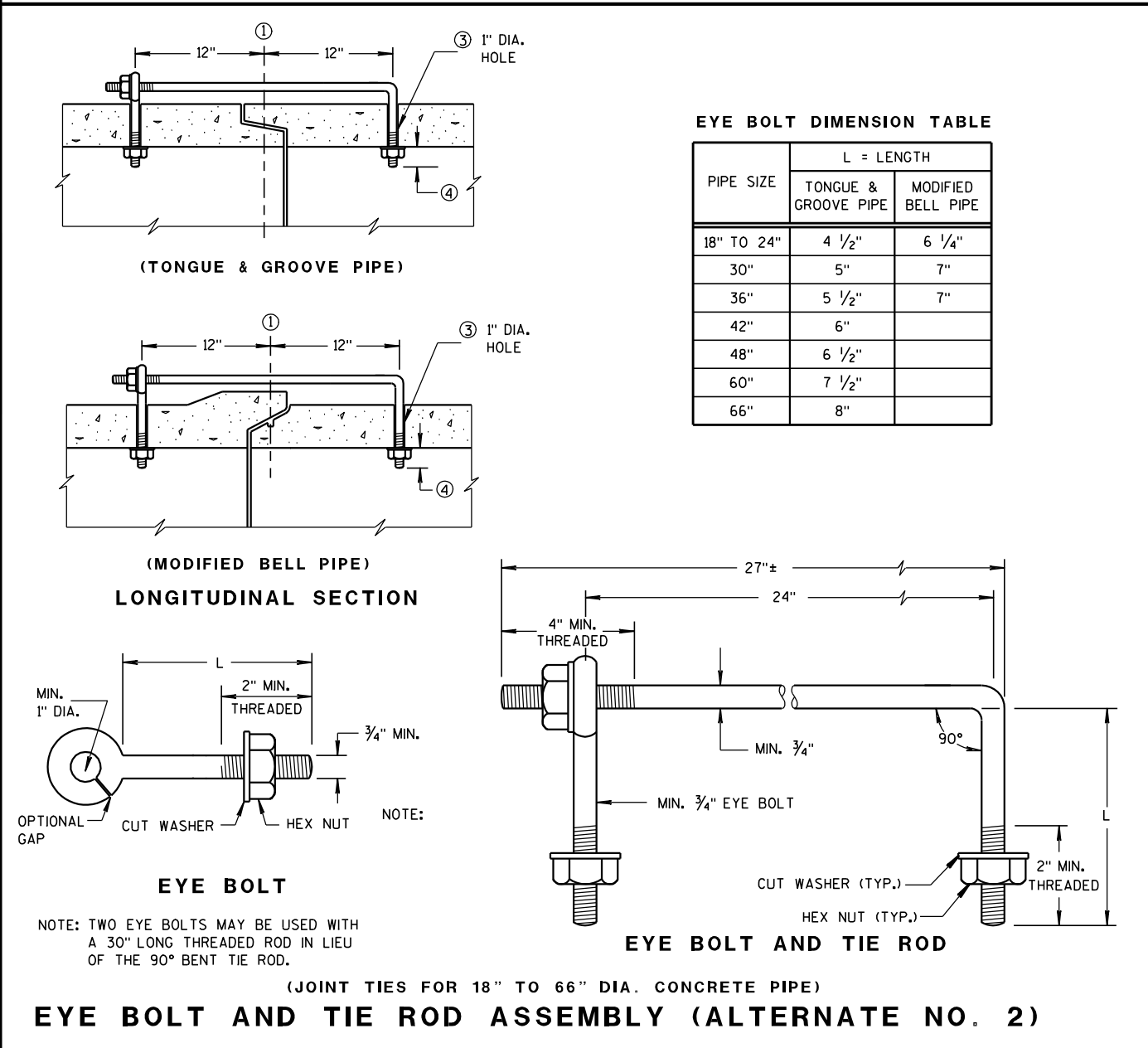
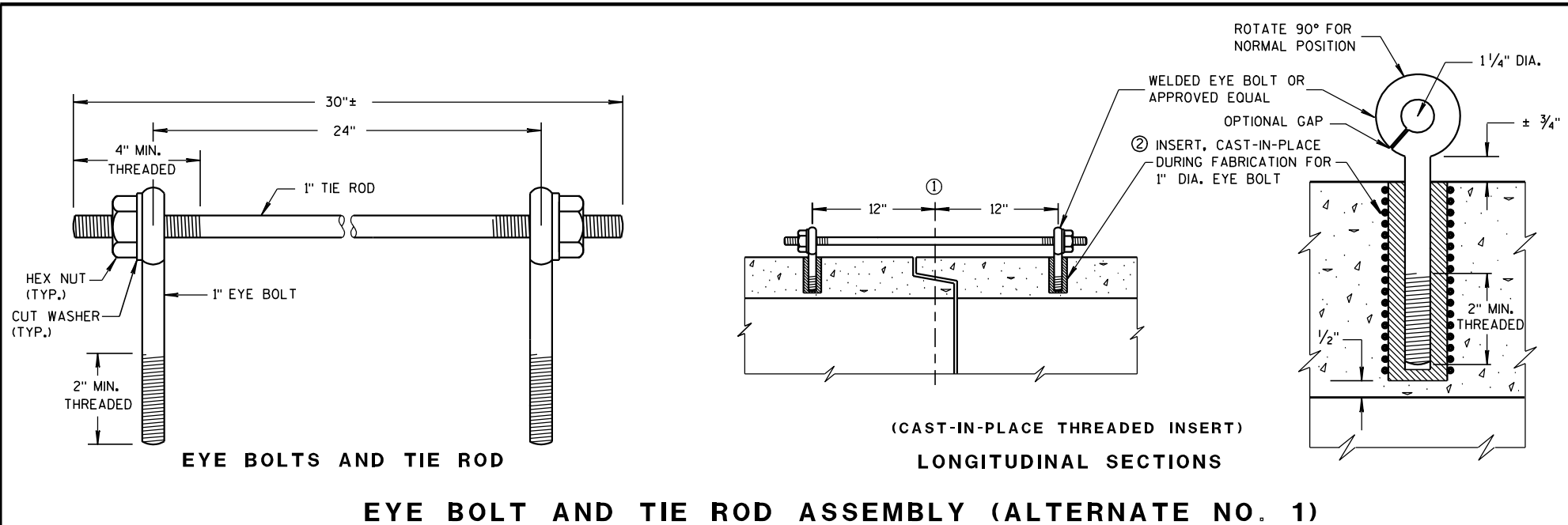
INLET PROTECTION, TYPE D

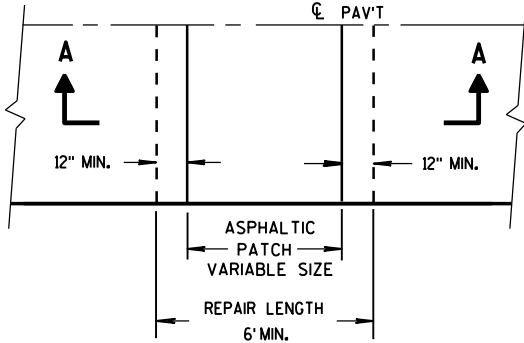
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

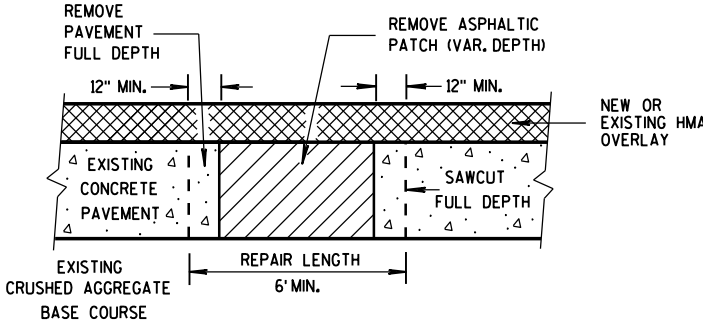
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



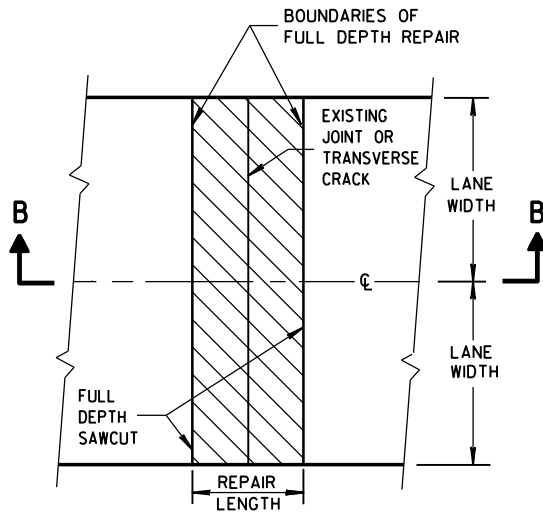


PLAN VIEW

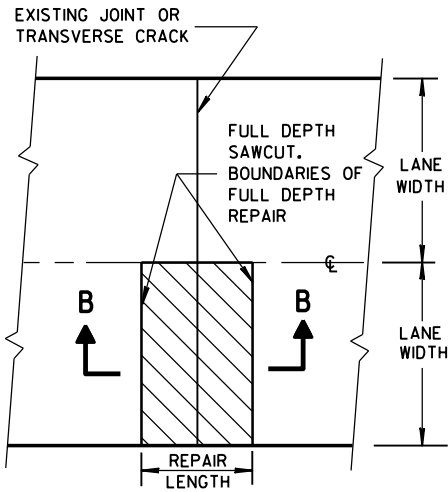


SECTION A-A

HMA PATCH REMOVAL

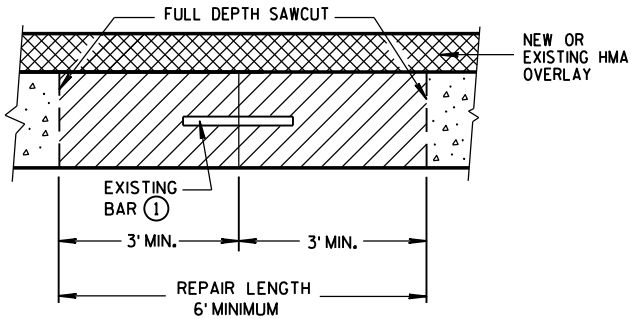


PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B-B
CONCRETE REMOVAL

GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

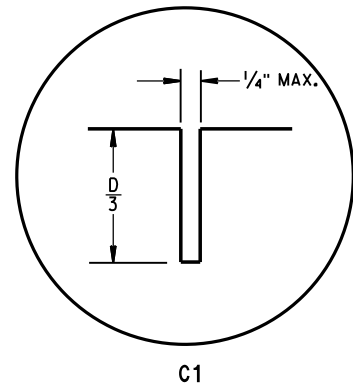
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

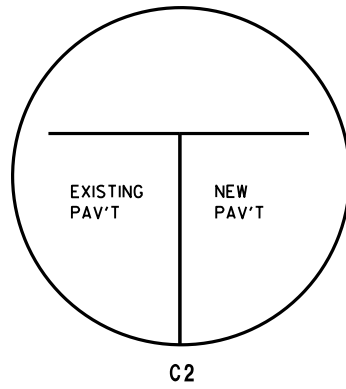
① DOWEL BARS MIGHT NOT EXIST.

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

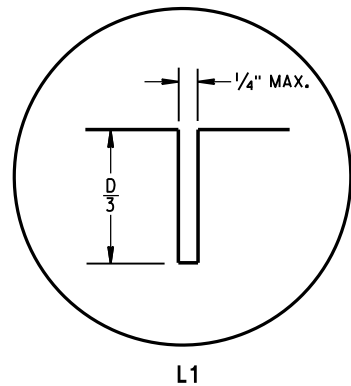


C1

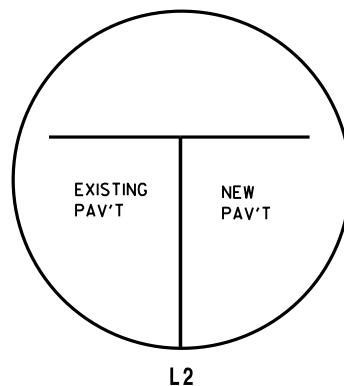


C2

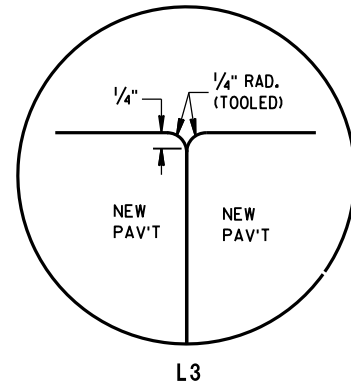
TRANSVERSE JOINTS



L1

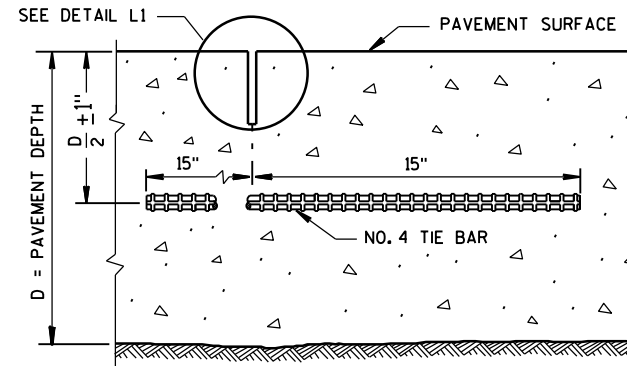


L2

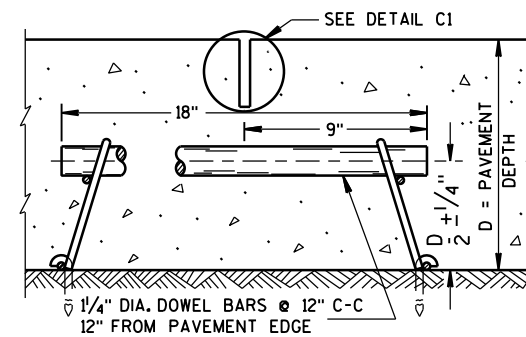


L3

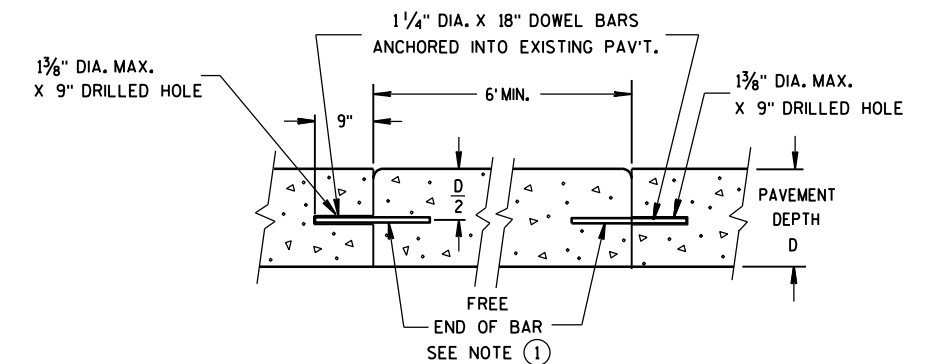
LONGITUDINAL JOINTS



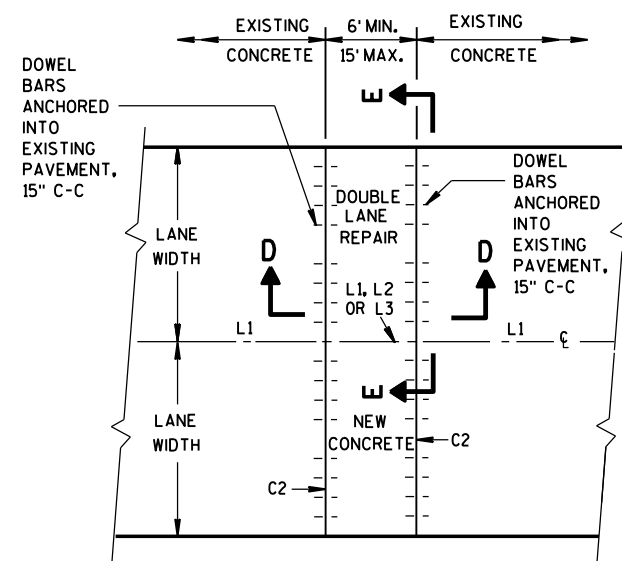
SECTION C-C
SAWED LONGITUDINAL JOINT



SECTION F-F
CONTRACTION JOINT

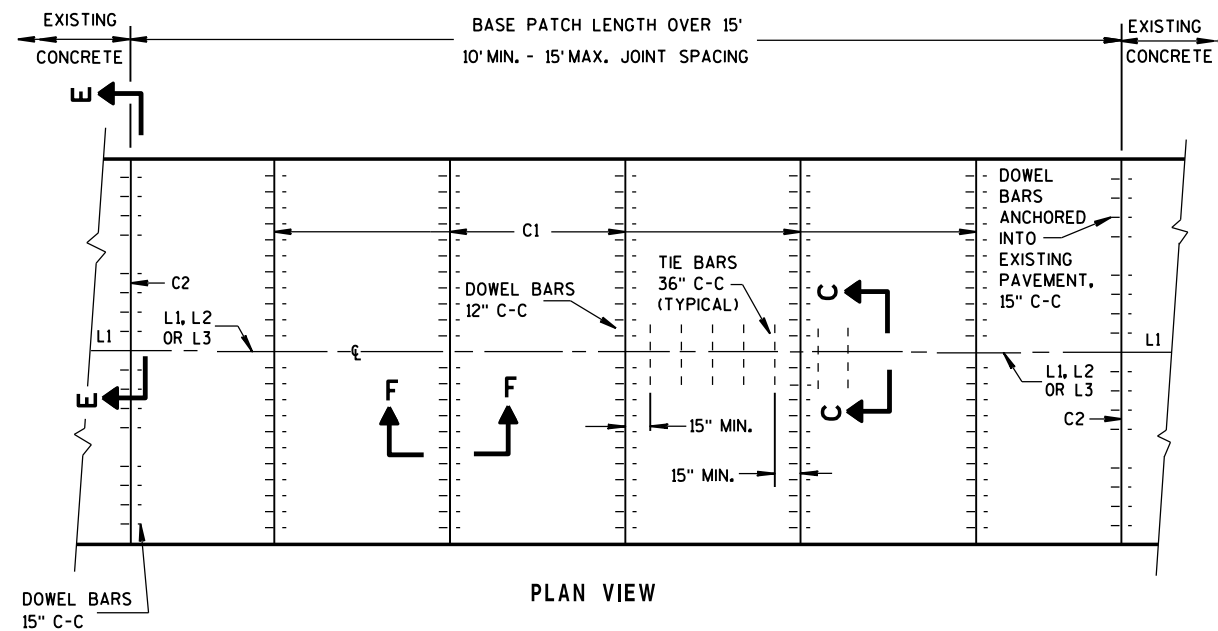


SECTION D-D



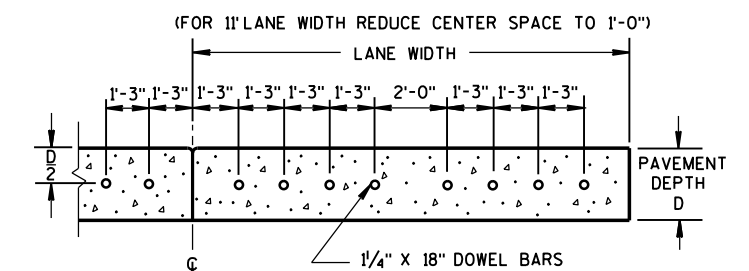
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW

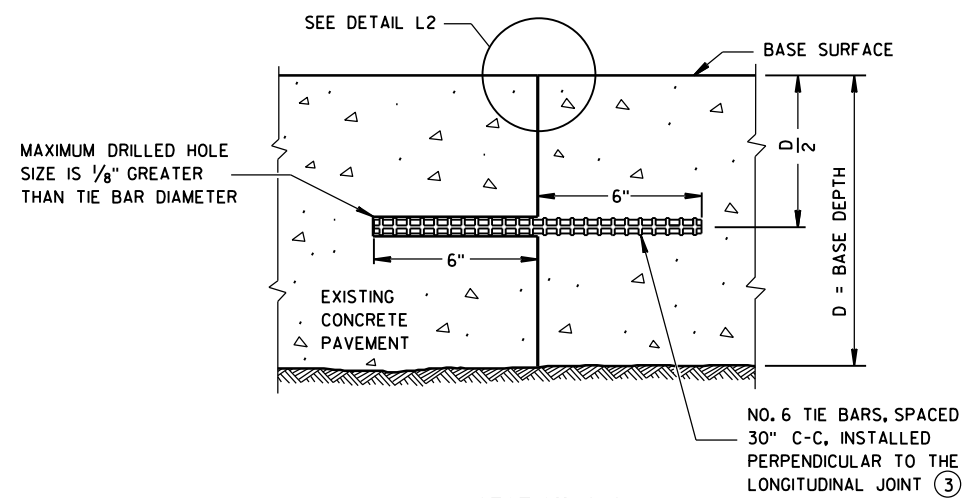
MULTI-LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH



SECTION E-E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

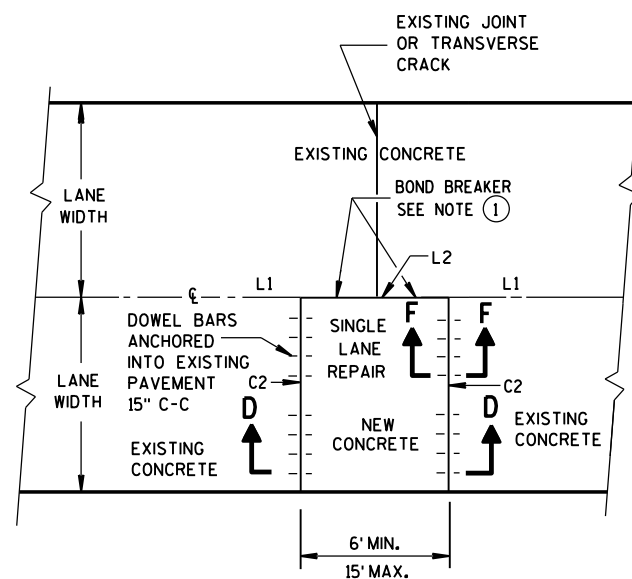
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



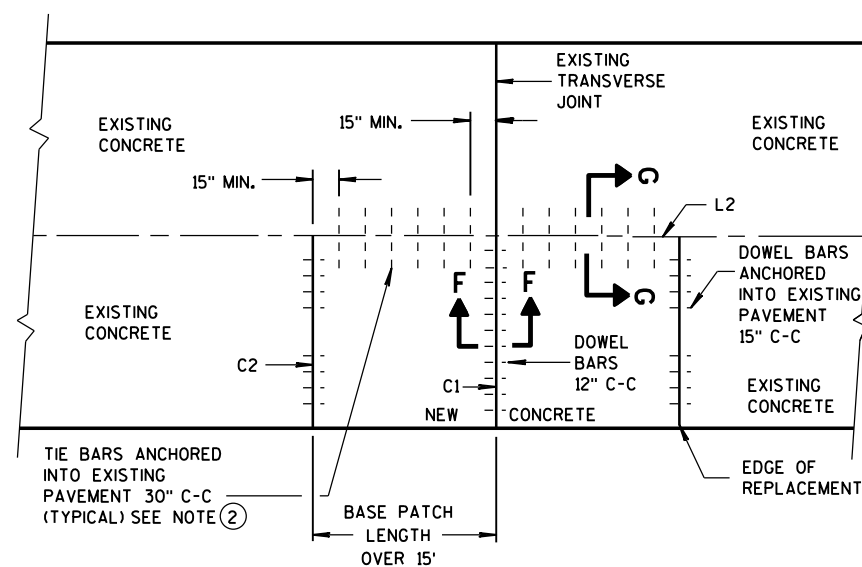
SECTION G-G
TIE BARS ANCHORED
INTO EXISTING PAVEMENT

GENERAL NOTES

- ① USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.
- ② WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH

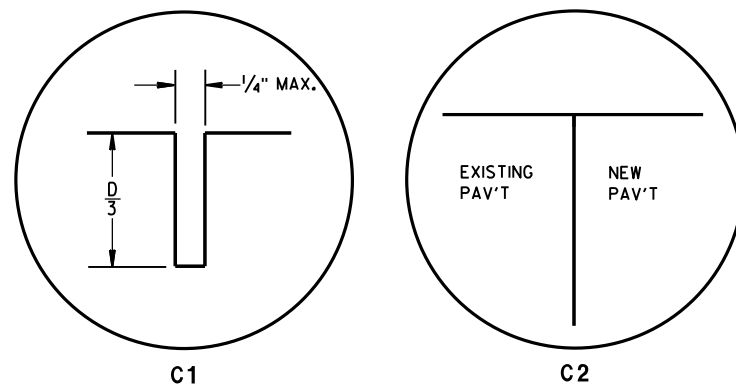


PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH

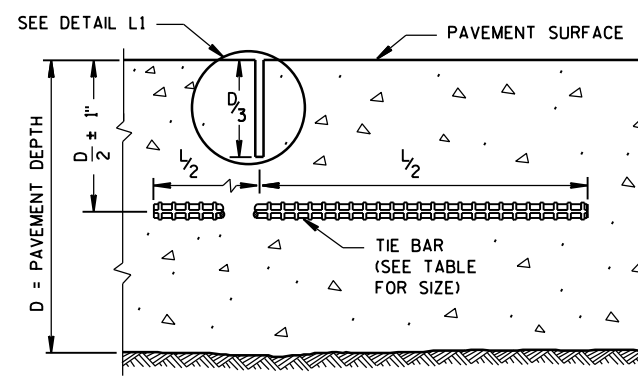
BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

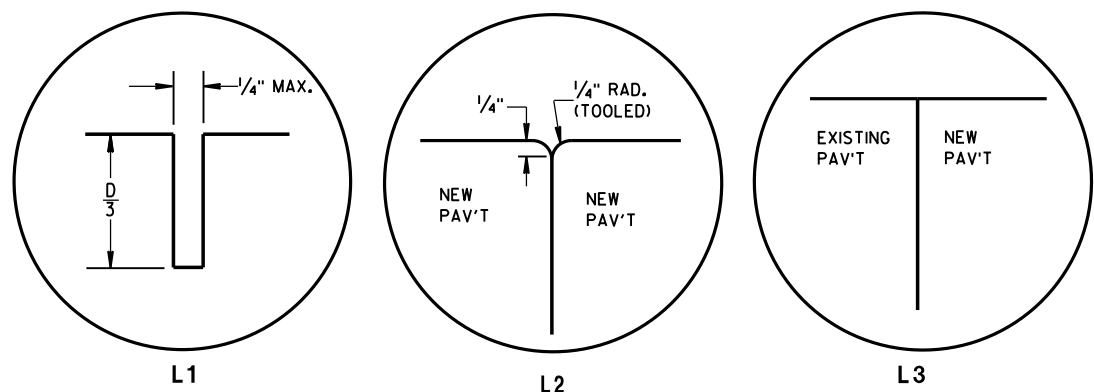
APPROVED
DATE: Sept., 2015 /S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR
FHWA



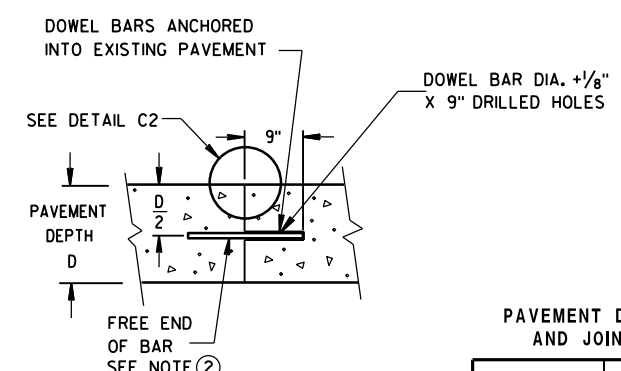
TRANSVERSE JOINTS



SECTION C-C
SAWED JOINT



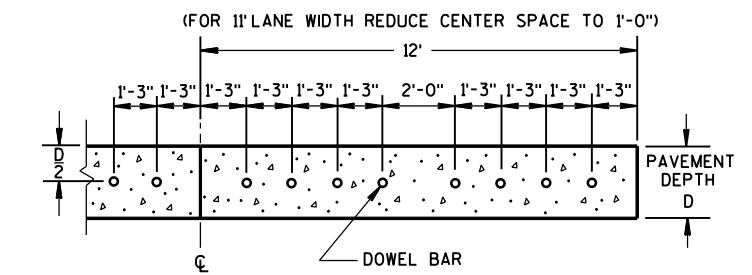
LONGITUDINAL JOINTS



SECTION D-D

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6, 6 1/2"	NONE	12'
7, 7 1/2"	1"	14'
8, 8 1/2"	1 1/4"	15'
9, 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'



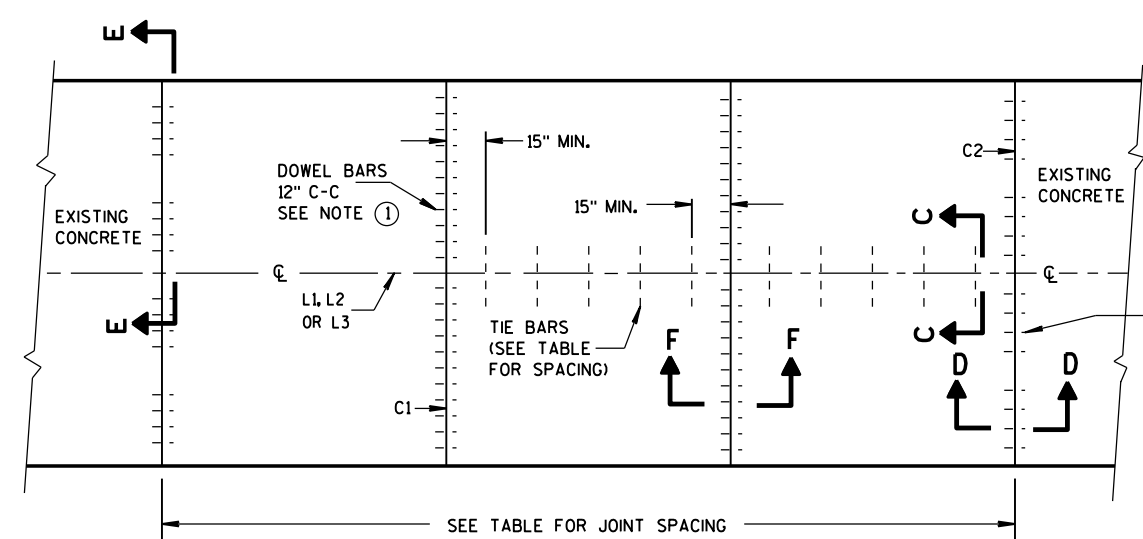
SECTION E-E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

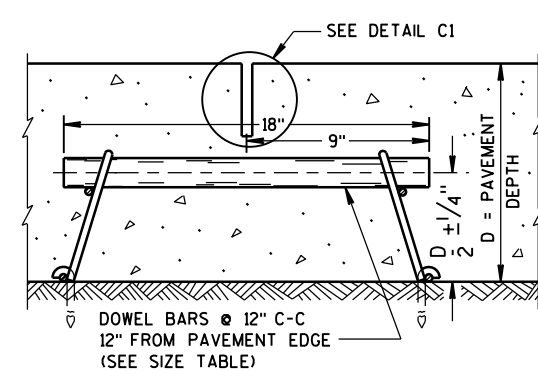
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

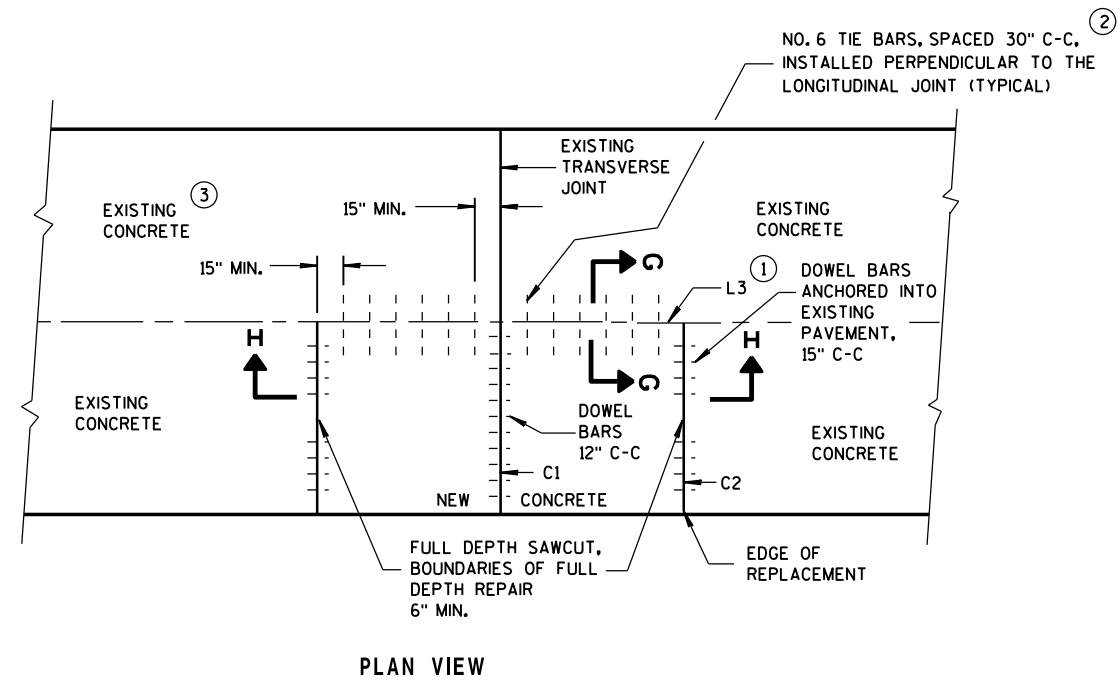


PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS

DOWEL BARS ANCHORED INTO EXISTING PAVEMENT, 15" C-C



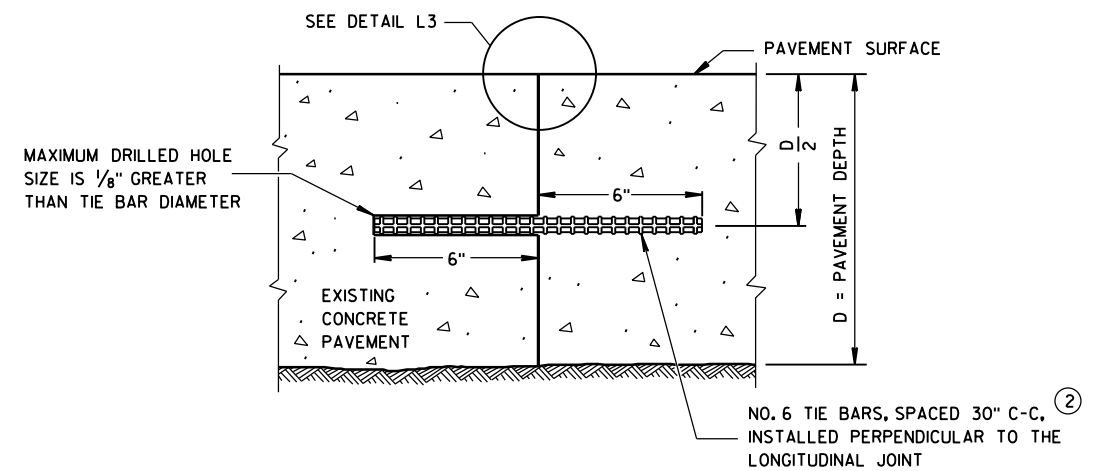
SECTION F-F
CONTRACTION JOINT



SINGLE LANE CONCRETE BASE REPAIR

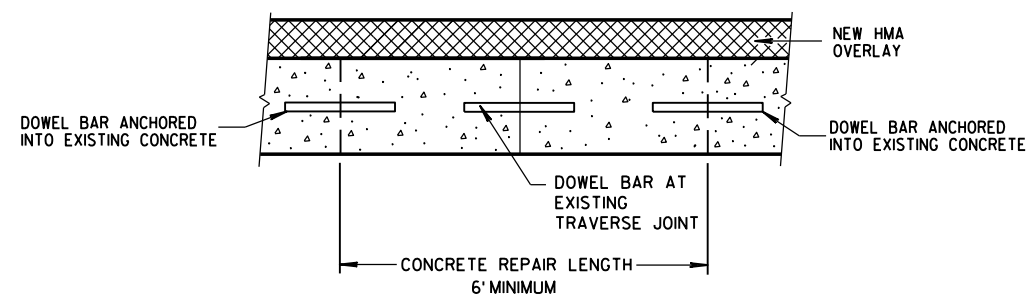
GENERAL NOTES

- (1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
- (2) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- (3) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

CONCRETE BASE

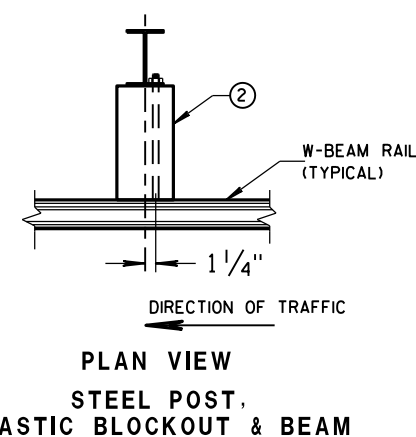
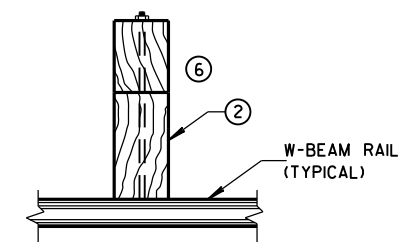
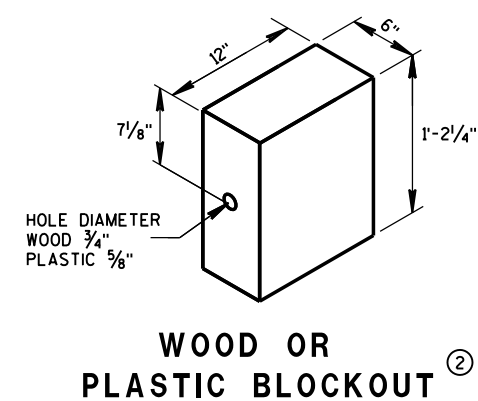
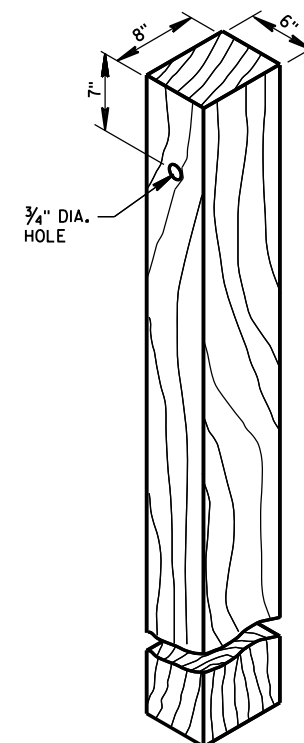
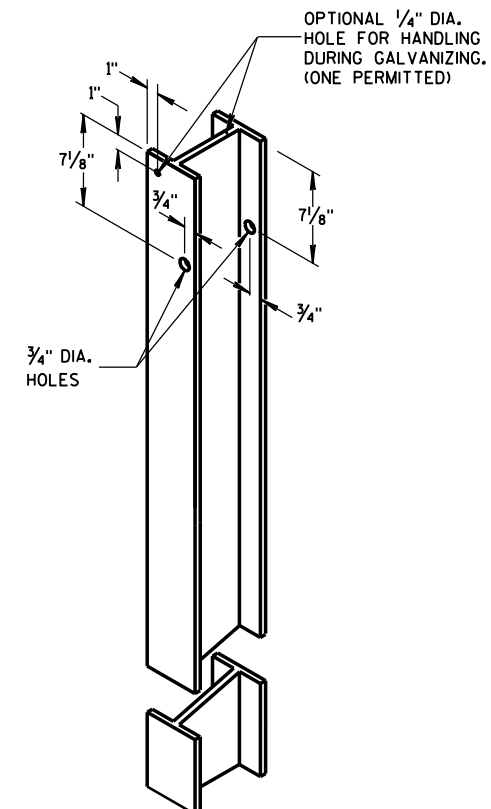
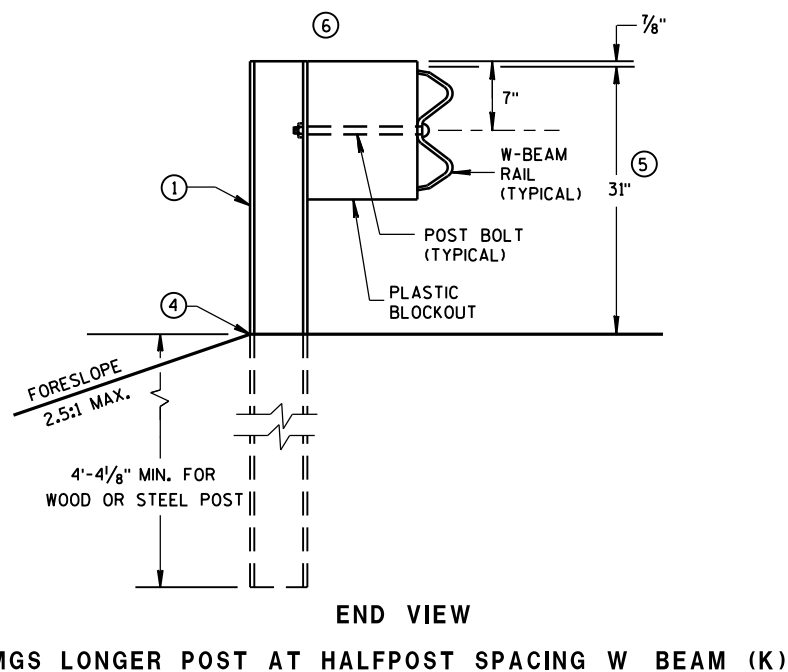
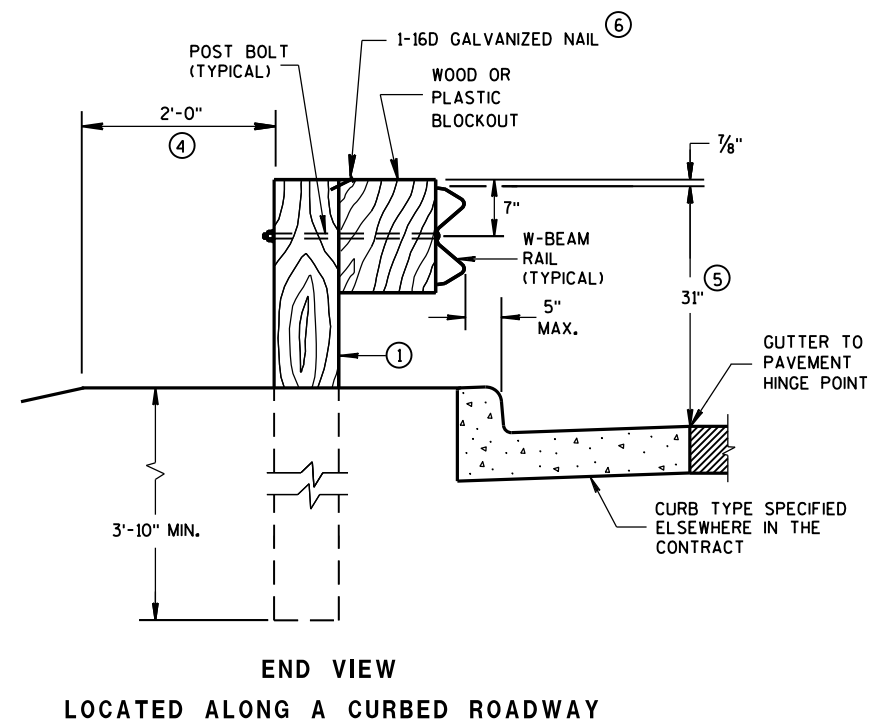
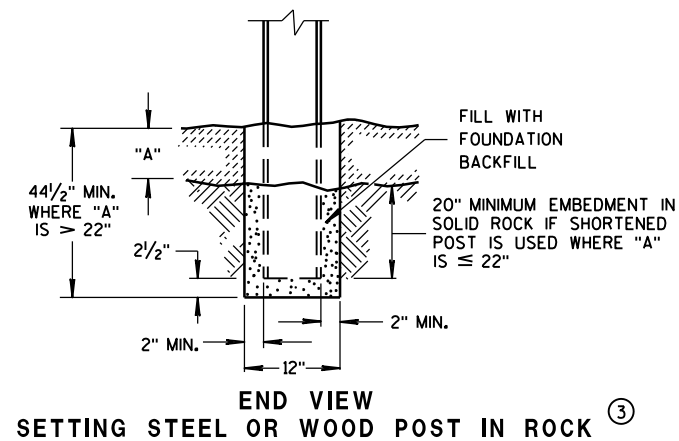
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015
DATE/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR

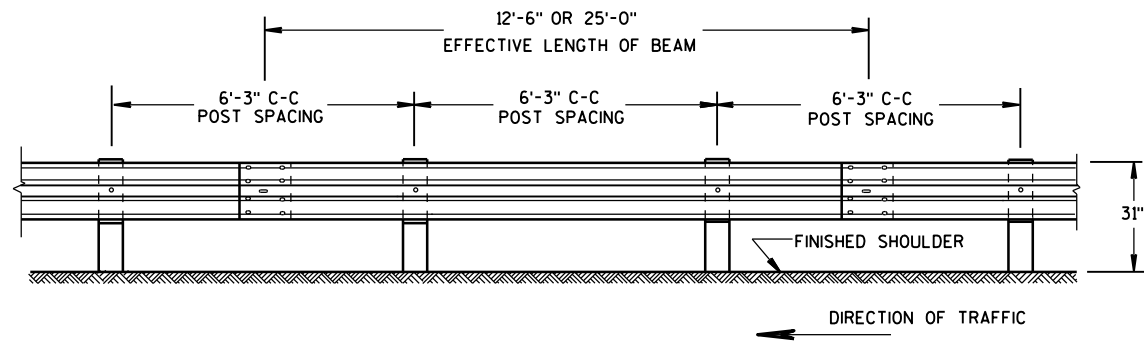
FHWA

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS TO THE LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



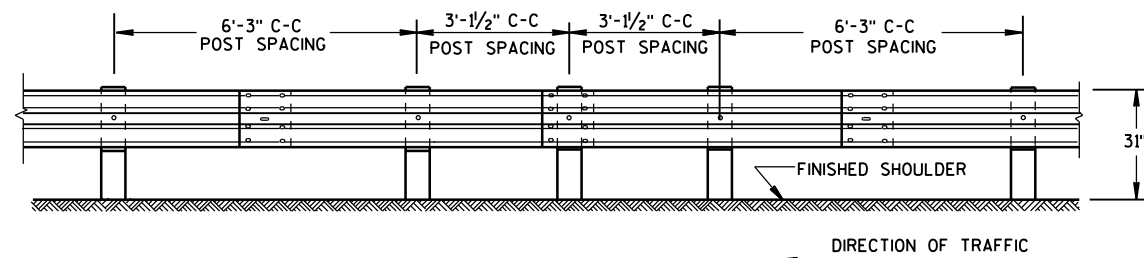
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



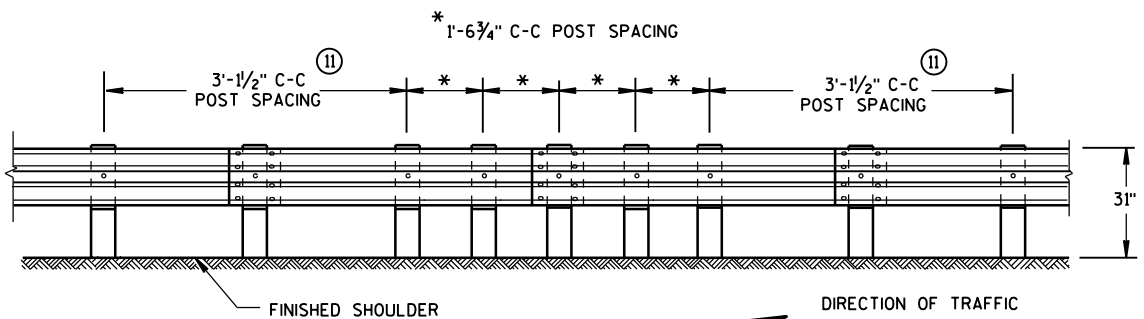
FRONT VIEW

POST SPACING STANDARD INSTALLATION



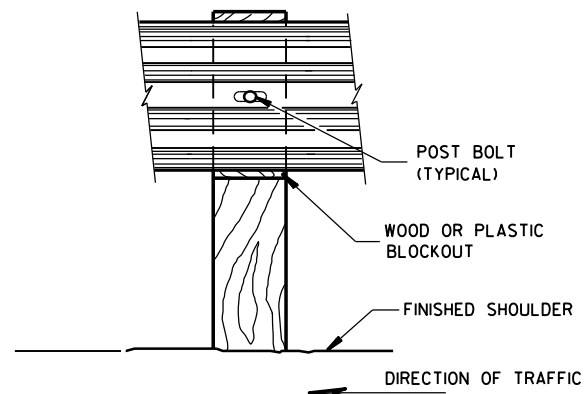
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

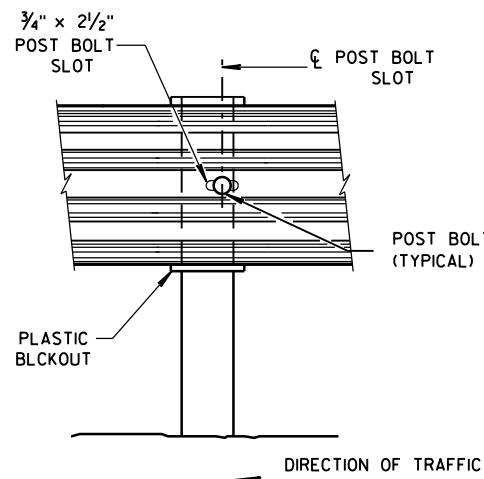


FRONT VIEW

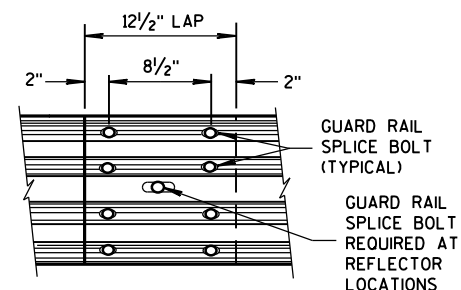
QUARTER POST SPACING (QS)



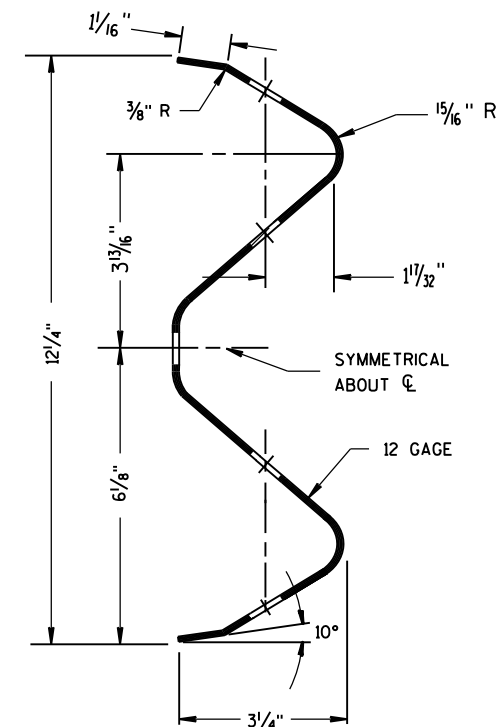
FRONT VIEW AT WOOD POST



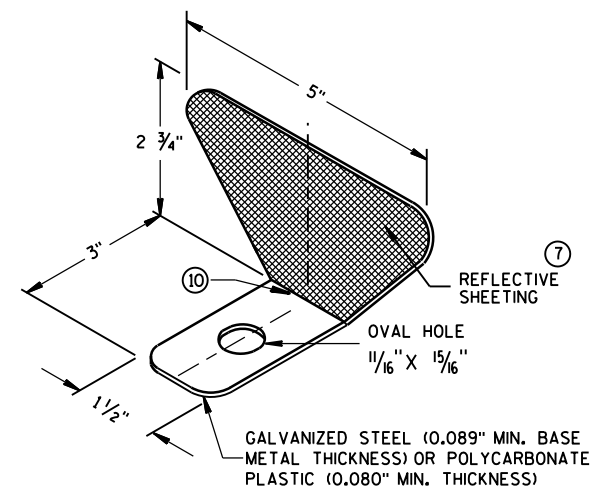
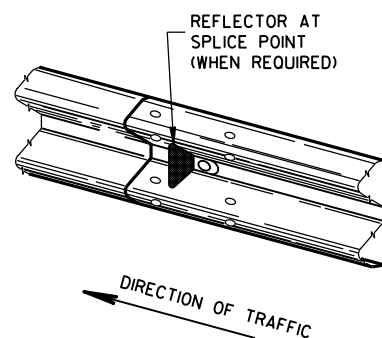
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

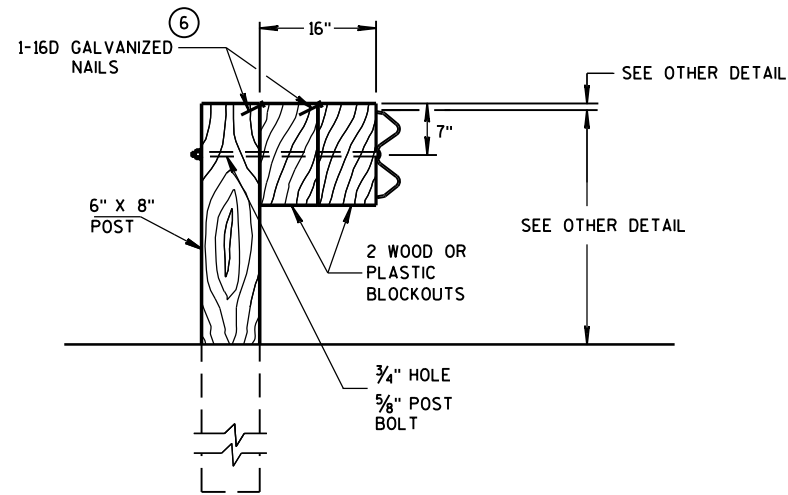
- ⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
 - ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
 - ⑩ PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
 - ⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑨	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ⑩	3
	> 200'	100' C-C	2	

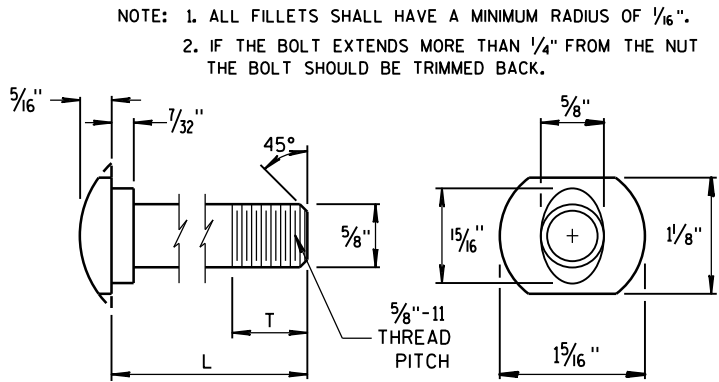
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

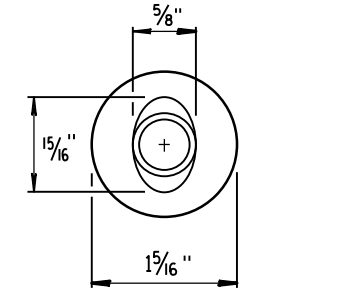


DETAIL FOR 16" BLOCKOUT DEPTH

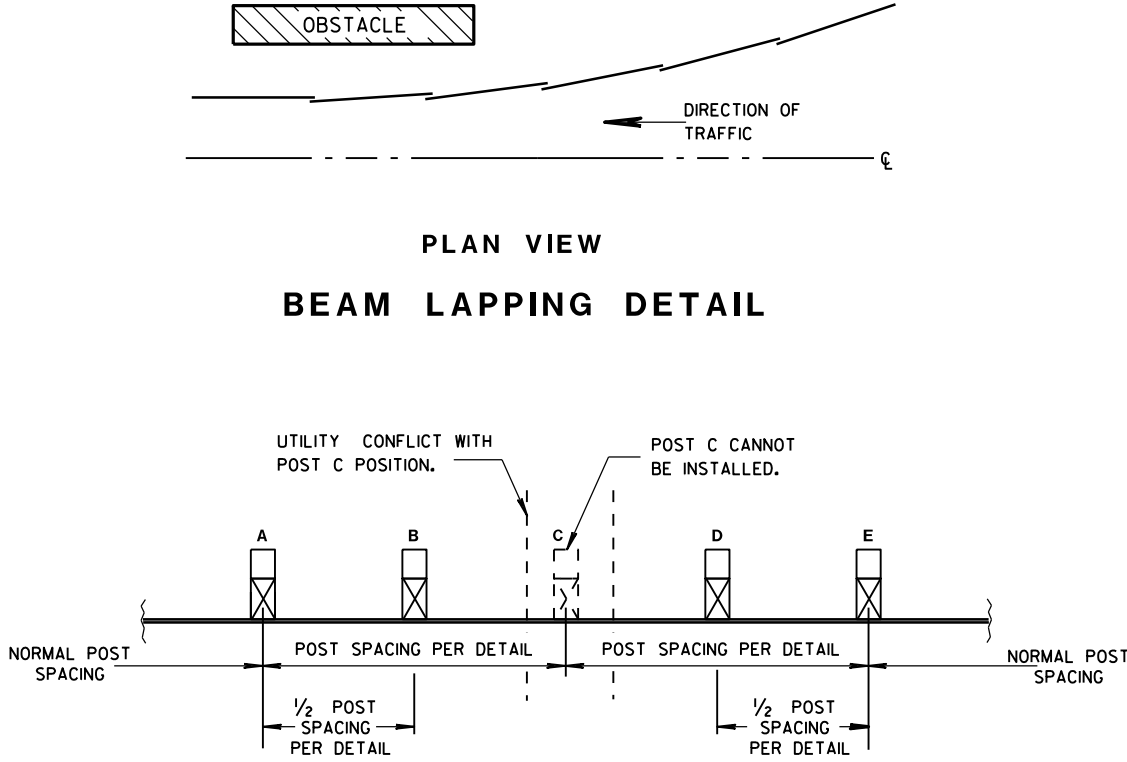
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



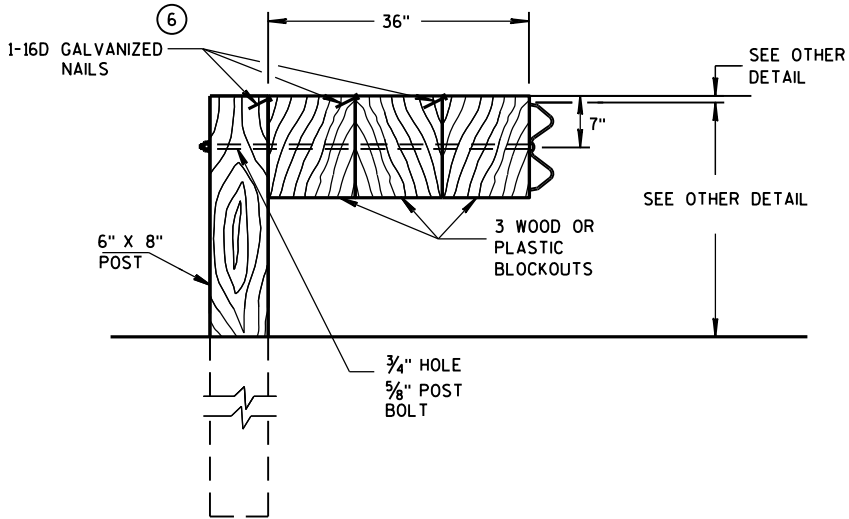
POST BOLT TABLE



ALTERNATE BOLT HEAD



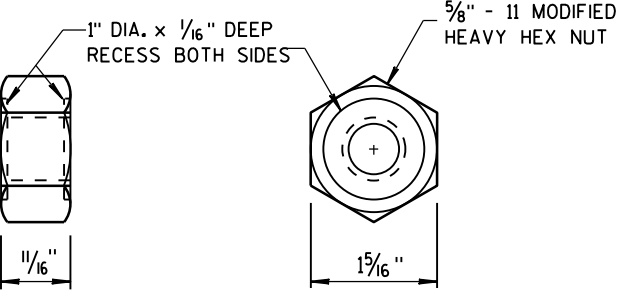
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



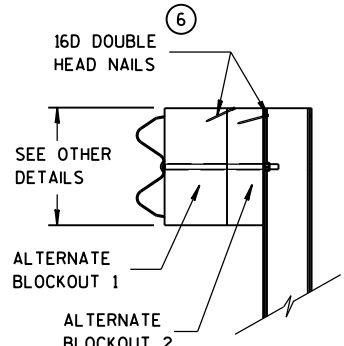
DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

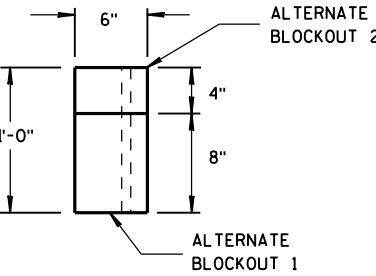
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.
- (G) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

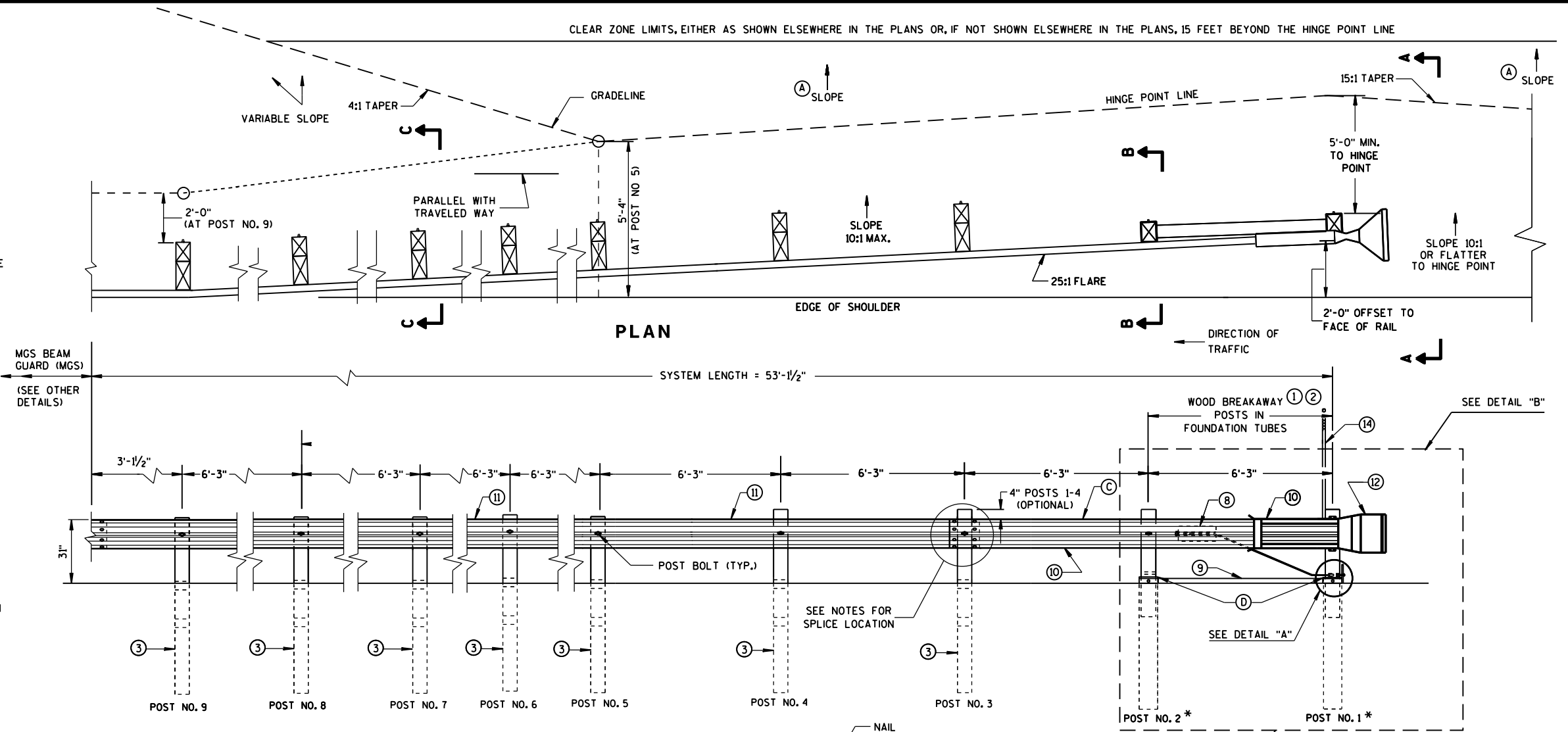
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

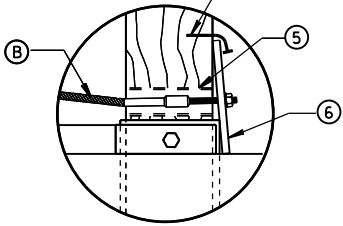
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

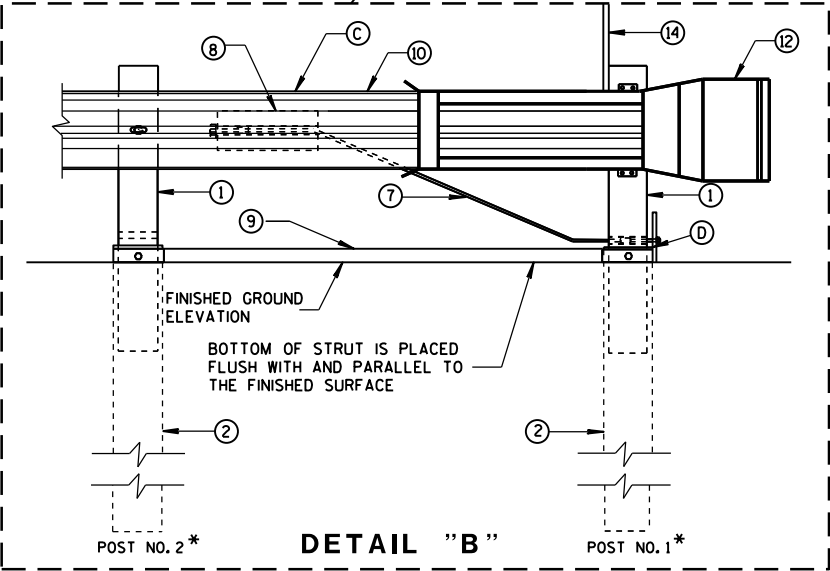
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



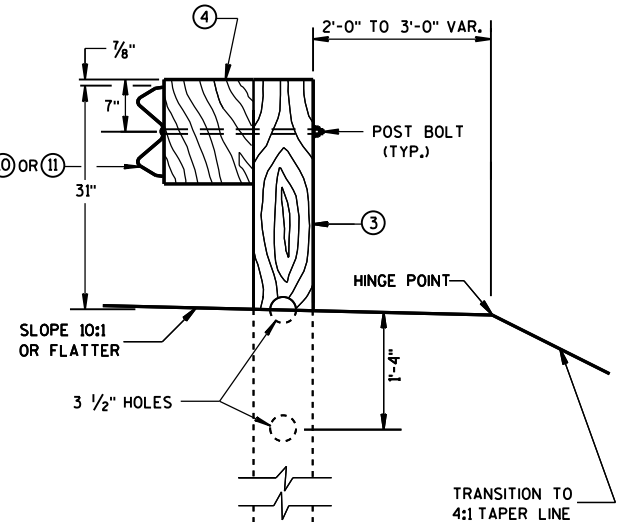
ELEVATION



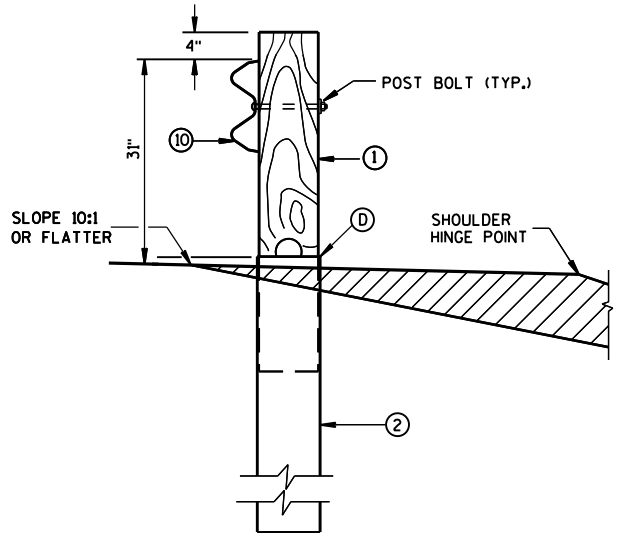
DETAIL "A"



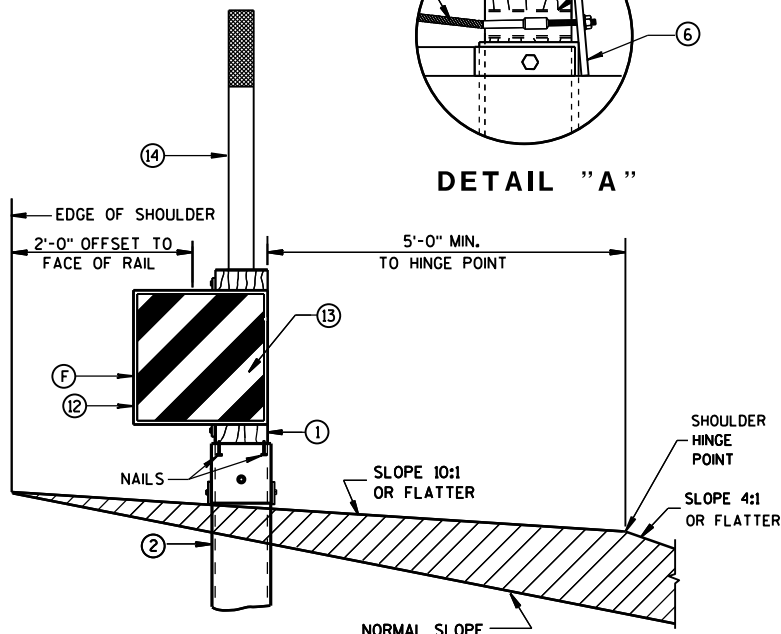
DETAIL "B"



SECTION C-C
TYPICAL AT POST NOS. 3-9



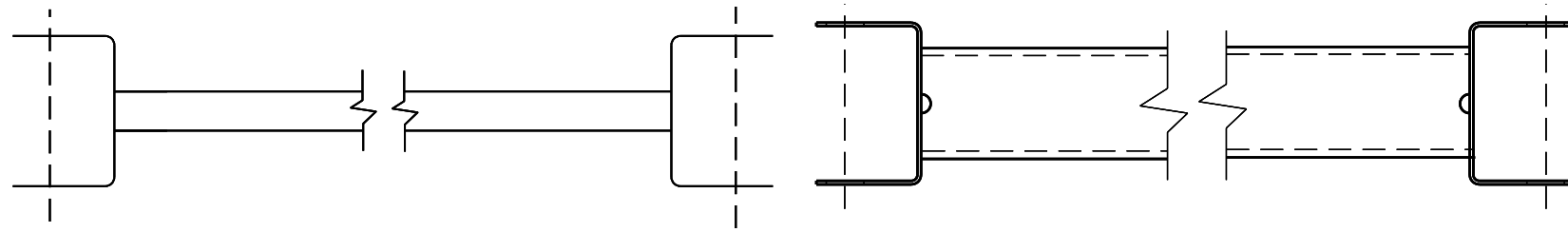
SECTION B-B
TYPICAL AT POST NO. 2*



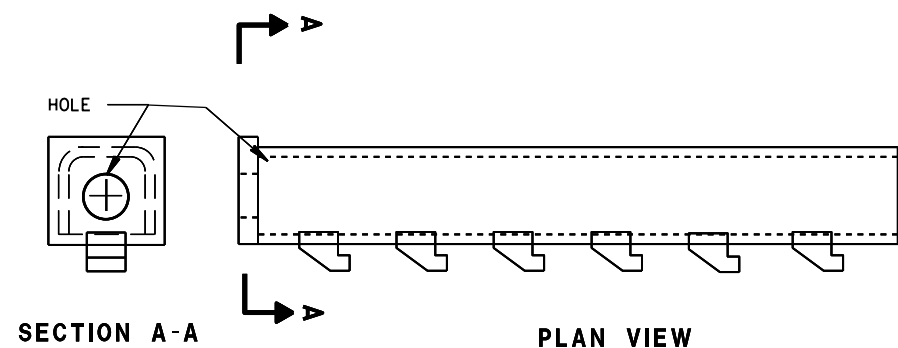
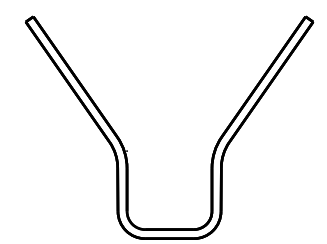
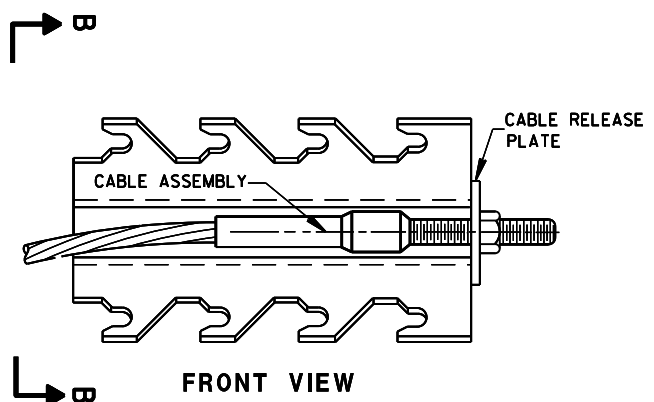
SECTION A-A
TYPICAL AT POST NO. 1*

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



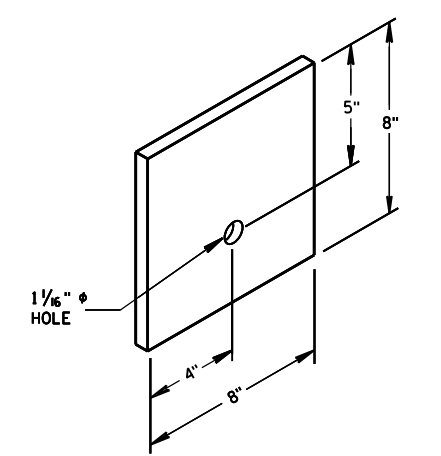
9 H
GENERIC GROUND STRUT



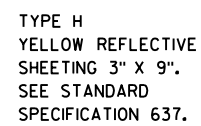
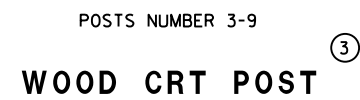
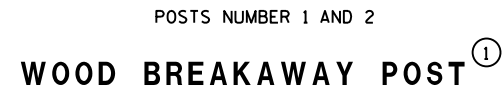
8 H
GENERIC ANCHOR CABLE BOX

BILL OF MATERIALS

PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



6
BEARING PLATE



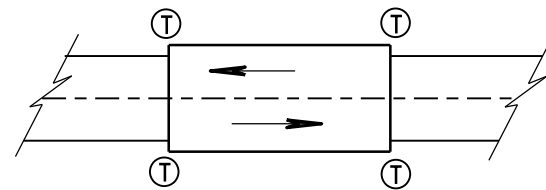
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

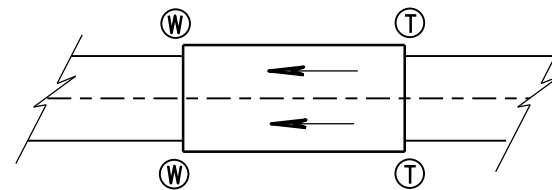
APPROVED
June 2014 /s/ Jerry H. Zogg

DATE **ROADWAY STANDARDS DEVELOPMENT**

FHWA **ENGINEER**



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

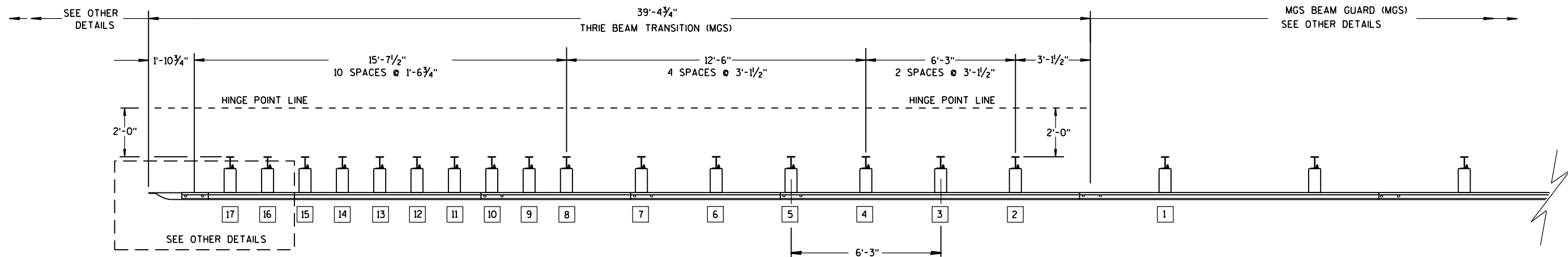
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

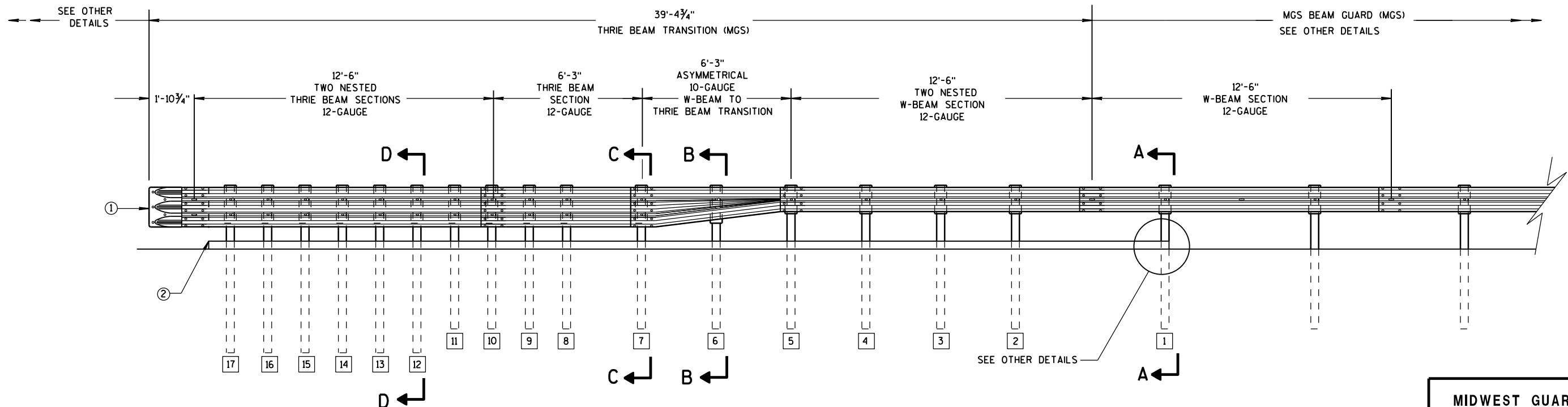
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



PLAN VIEW



ELEVATION VIEW

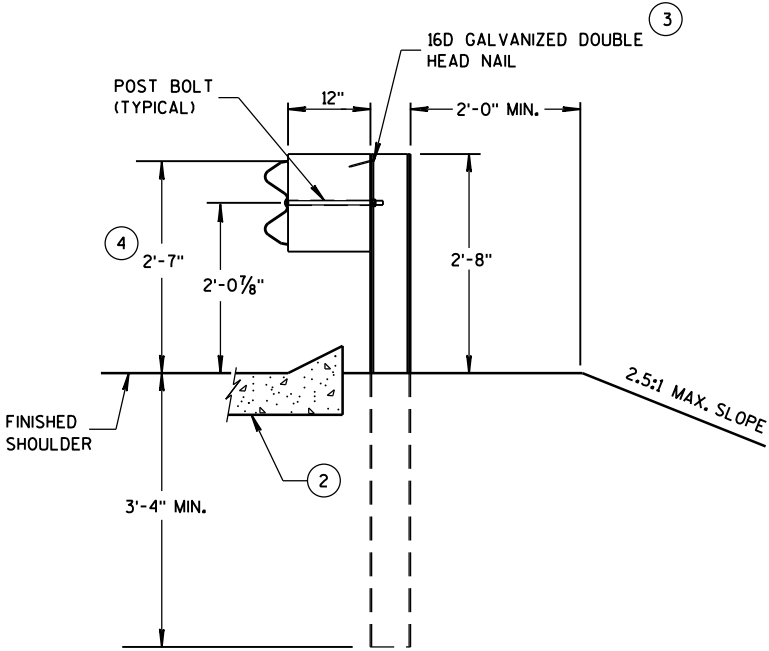
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

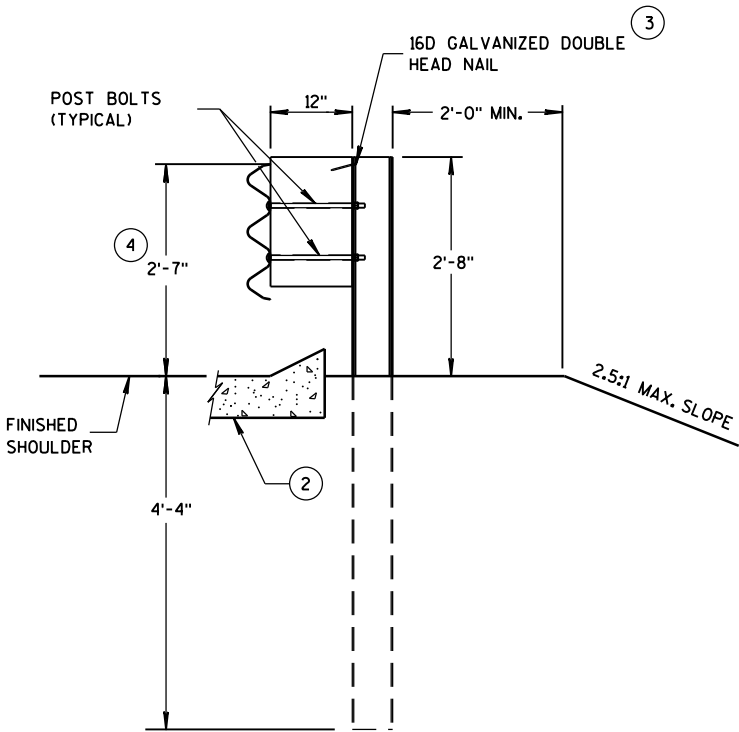
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

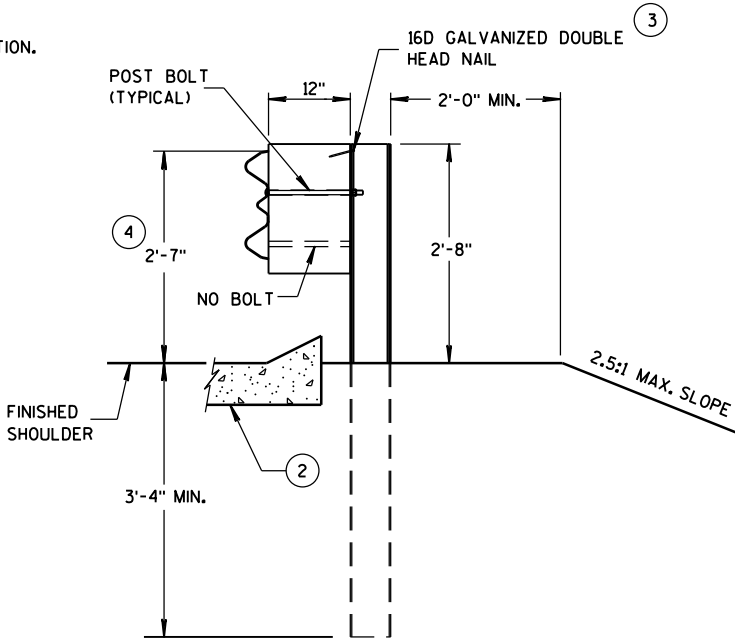
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.



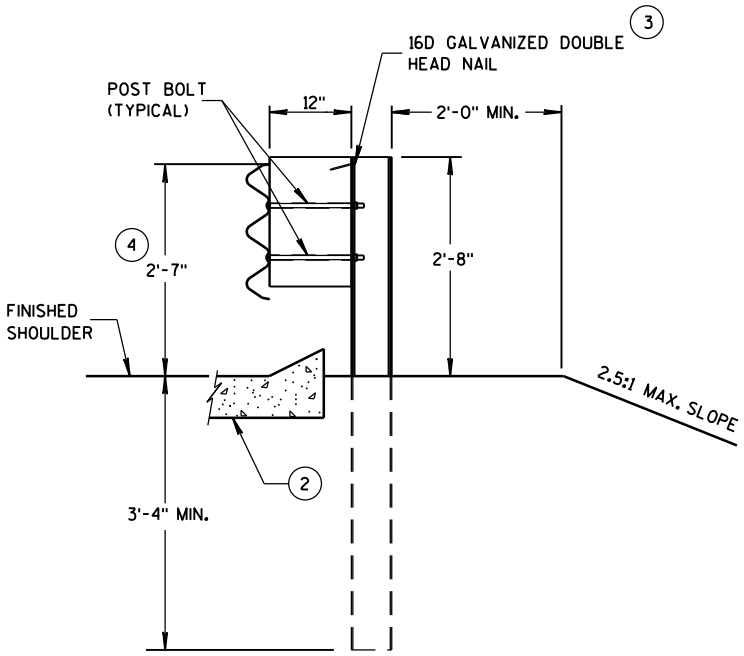
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

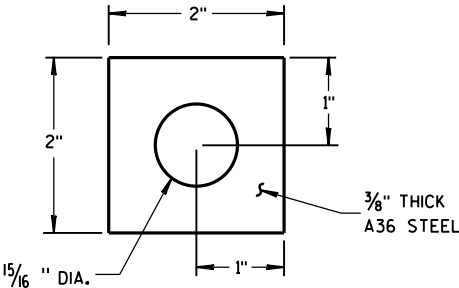
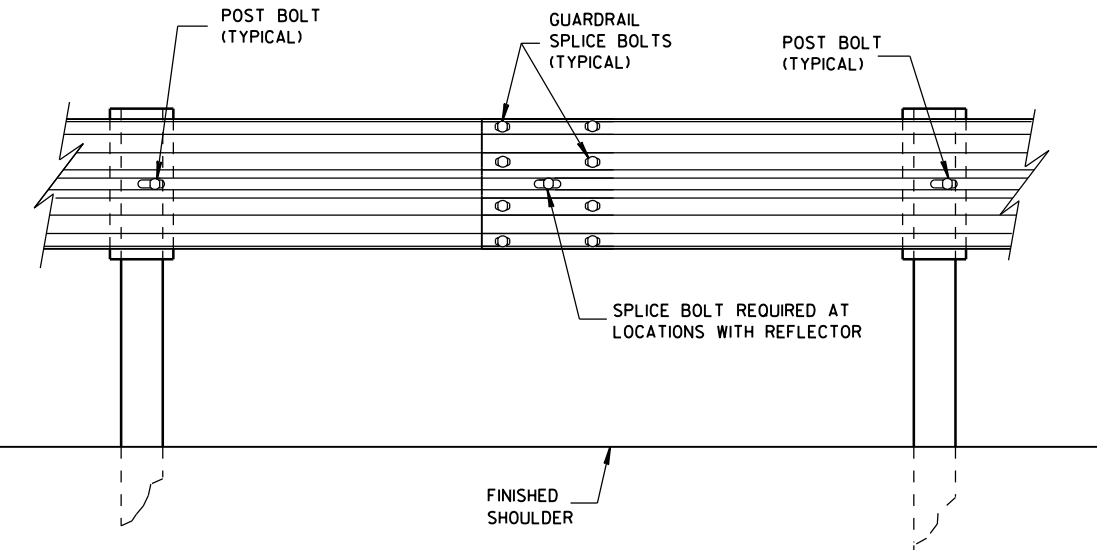
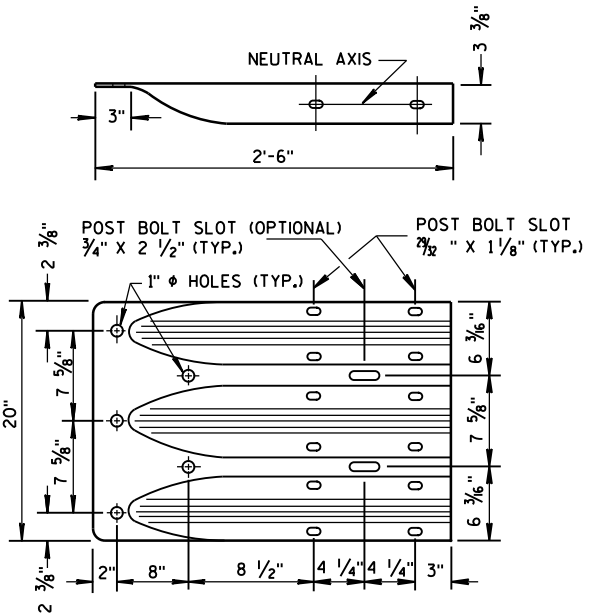


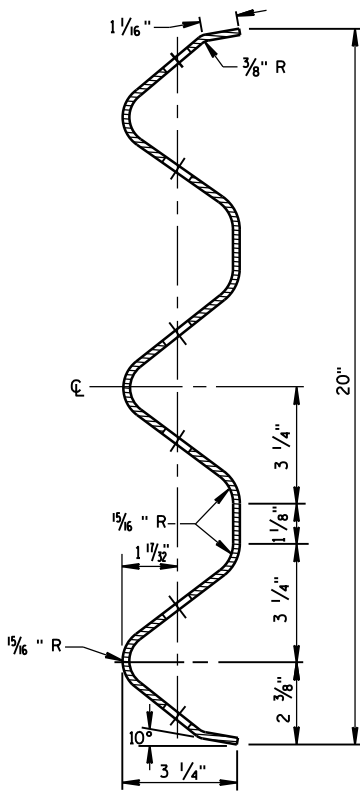
PLATE WASHER DETAIL



SPlice DETAIL



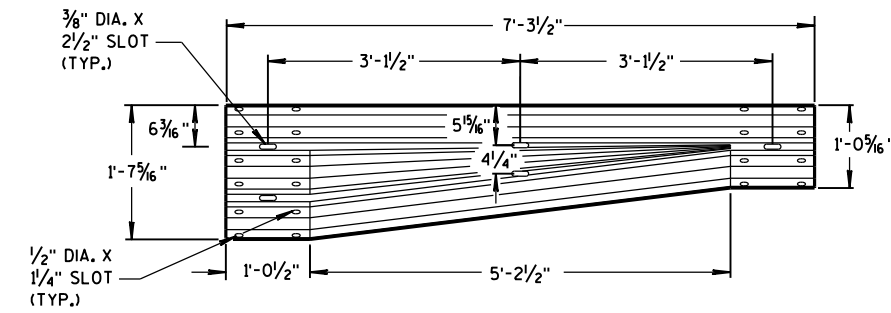
THRIE BEAM
TERMINAL CONNECTOR



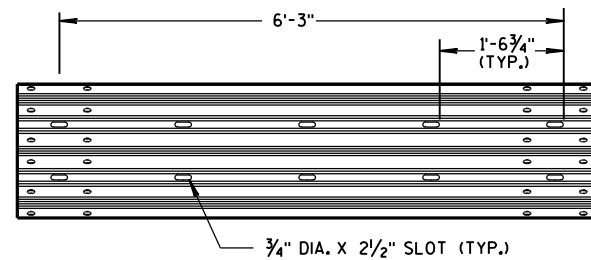
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

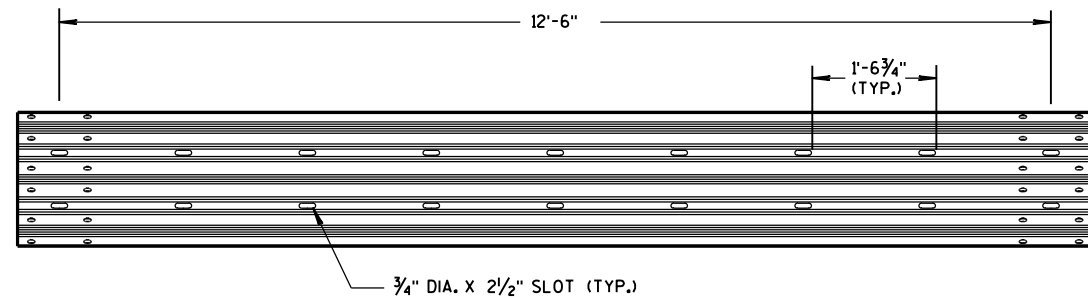
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



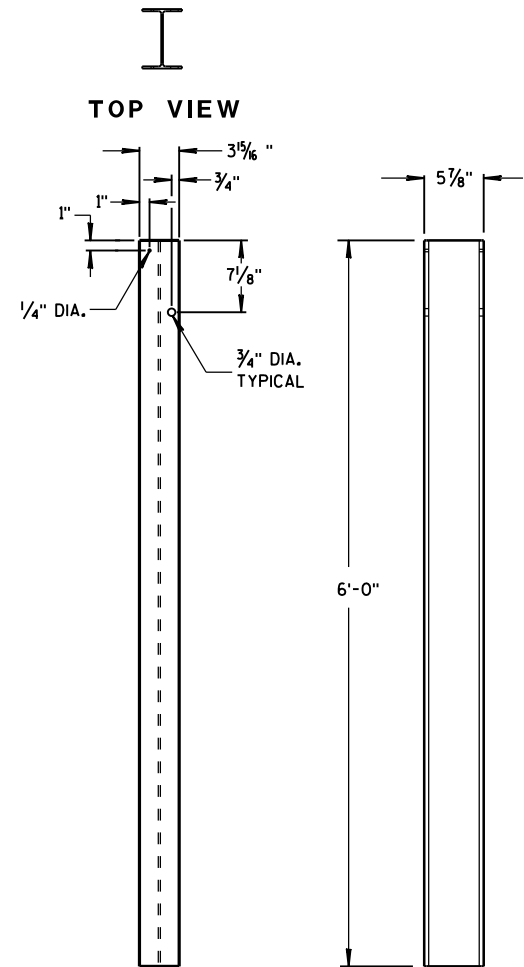
W-BEAM TO THRIE BEAM TRANSITION SECTION



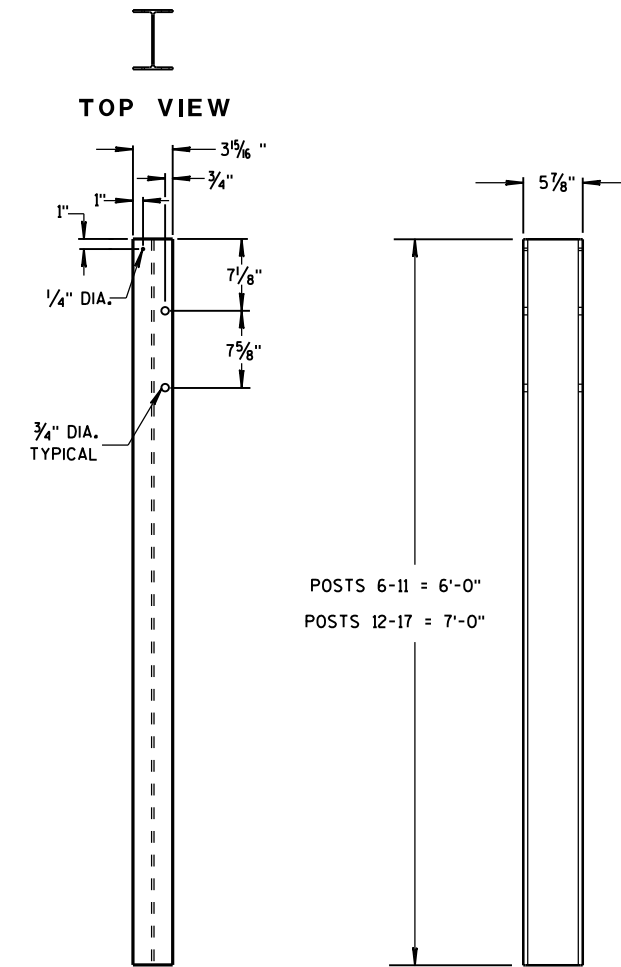
6'-3" THRIE BEAM SECTION



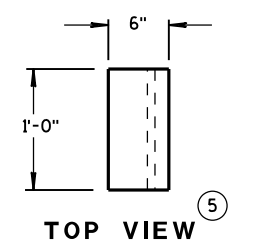
12'-6" THRIE BEAM SECTION



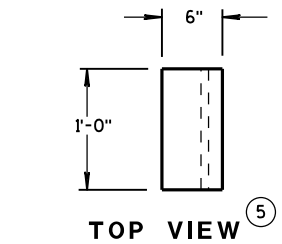
STEEL POSTS 1-5



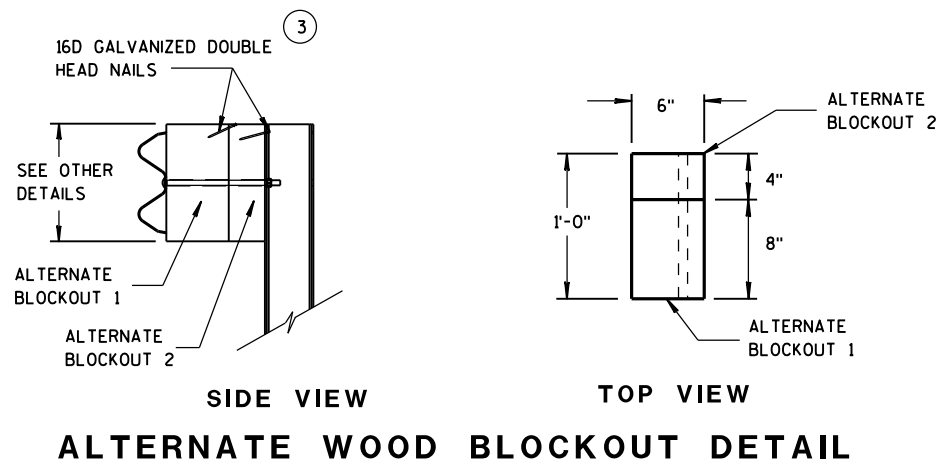
STEEL POSTS 6-17



BLOCKOUT POSTS 1-5



BLOCKOUT POSTS 6-17



GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

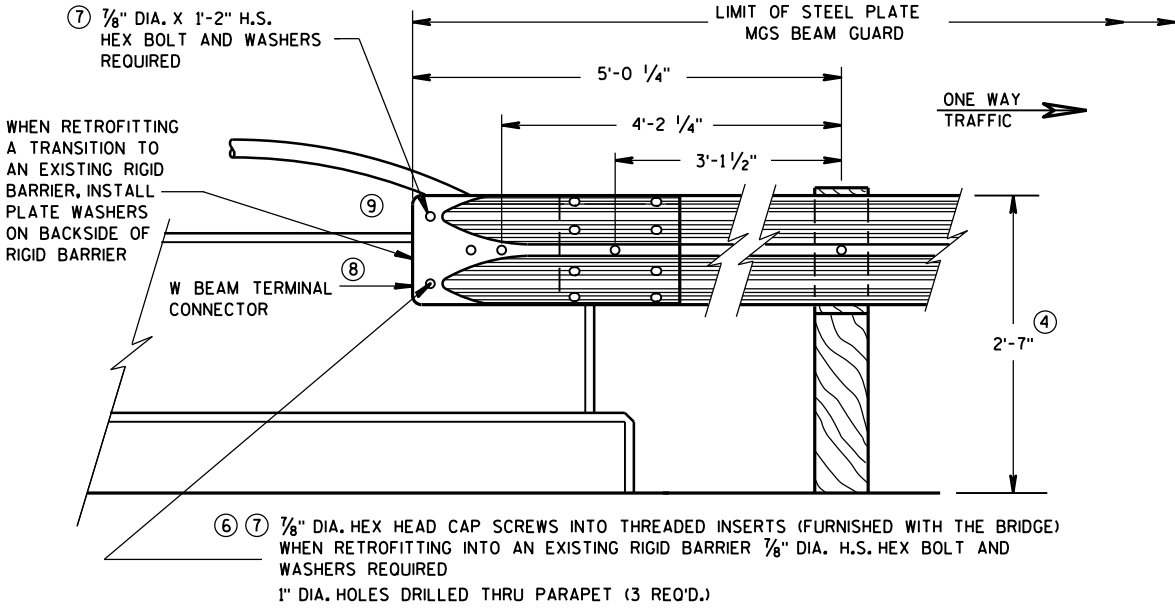
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

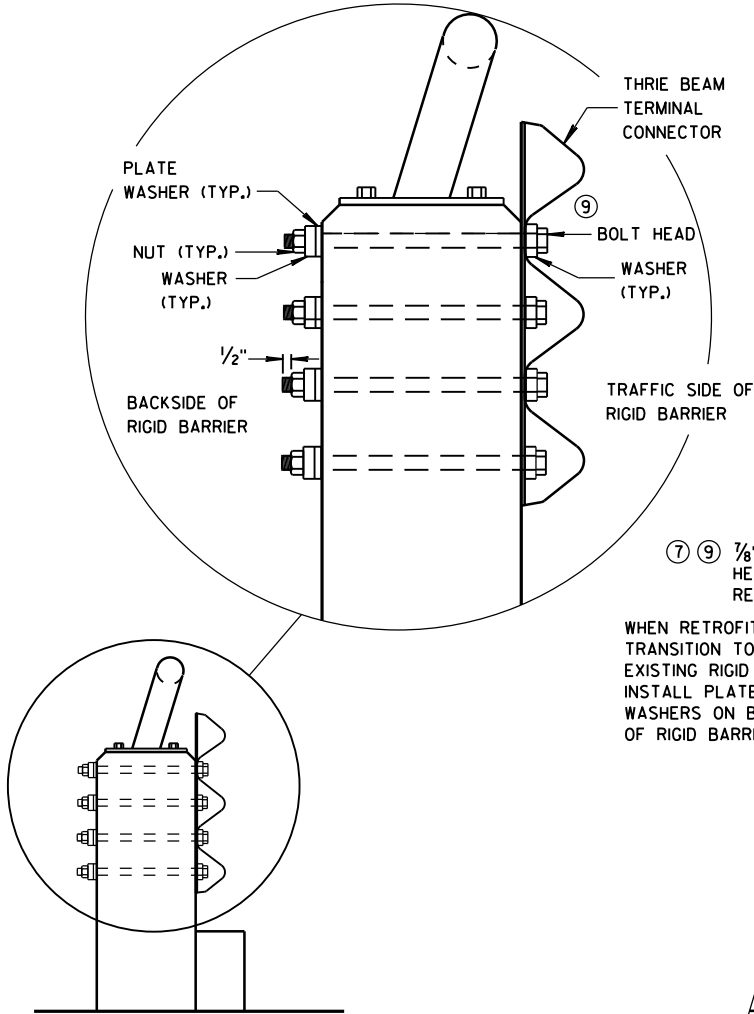
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

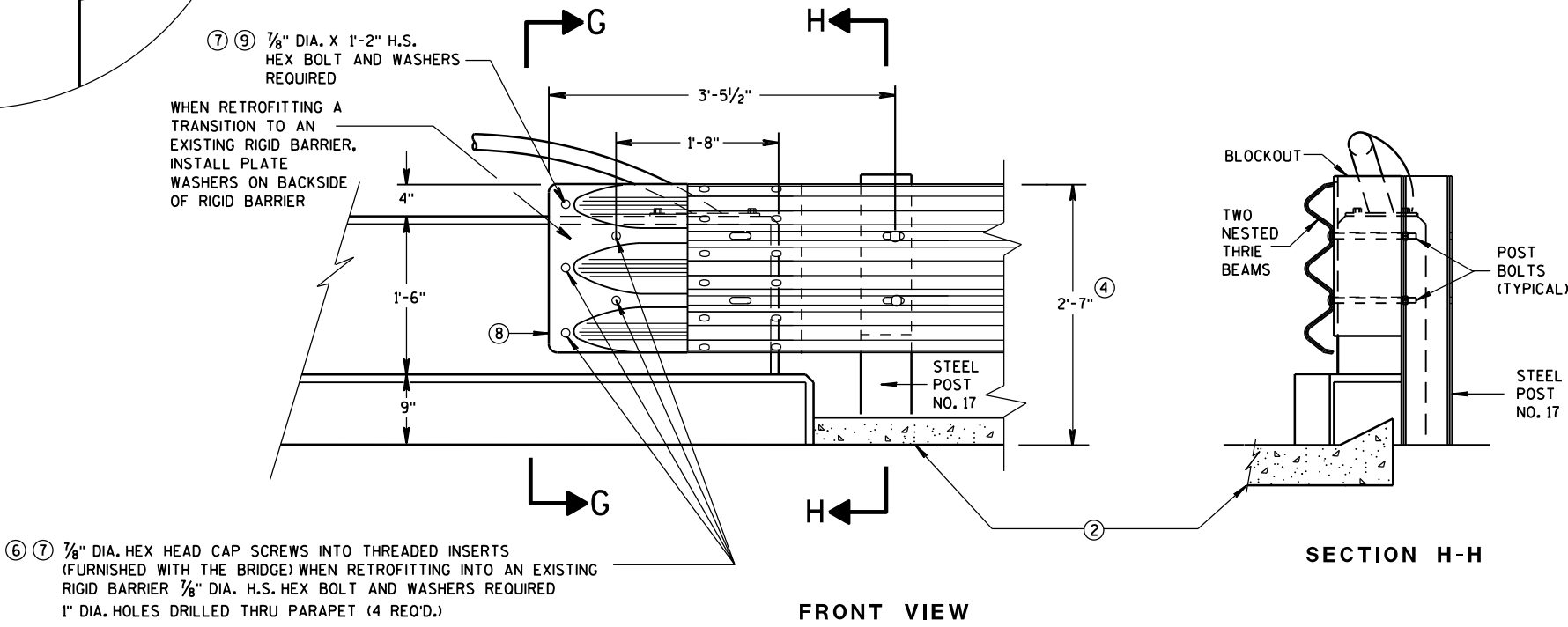
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X $\frac{5}{8}"$ THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 $\frac{1}{2}"$.
- ⑨ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



FRONT VIEW
W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION G-G



FRONT VIEW
THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

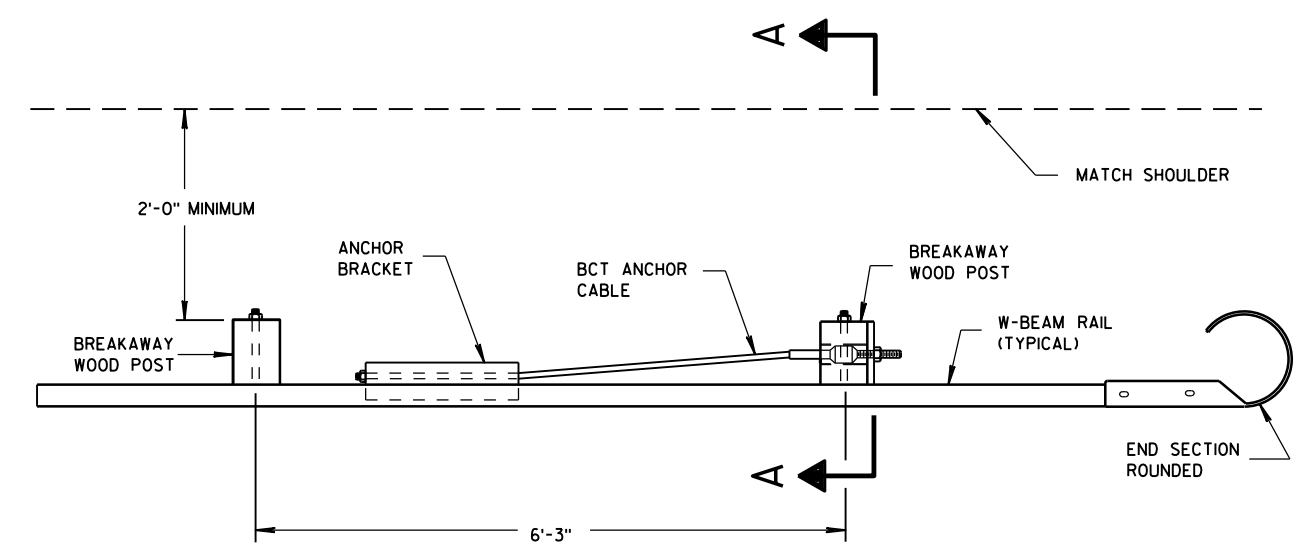
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

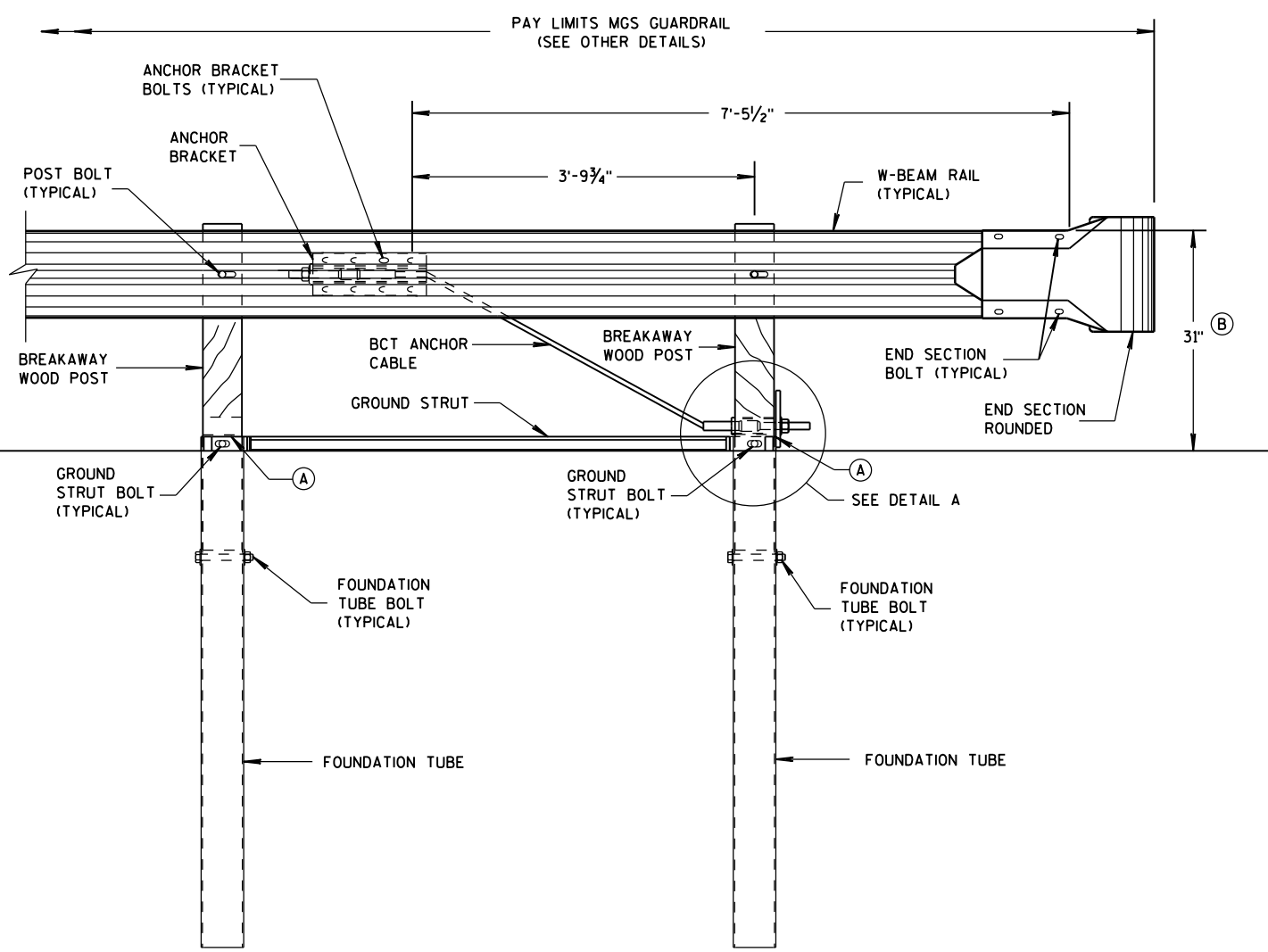
APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

6

S.D.D. 14 B 47-2a

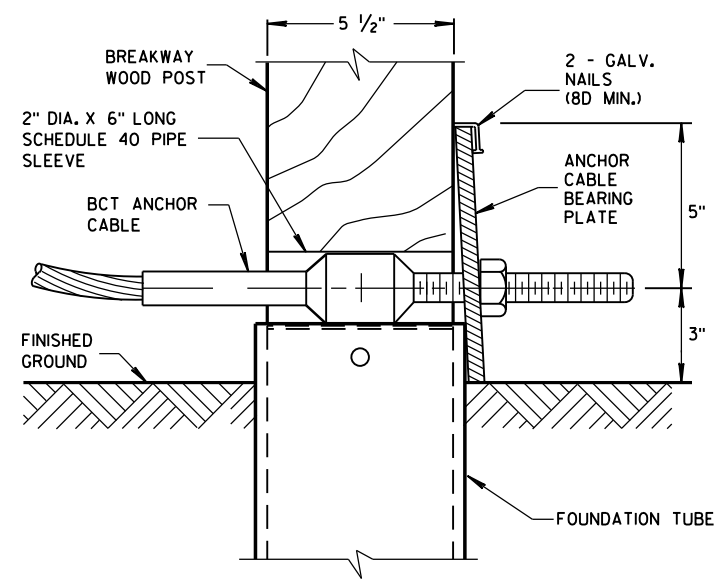


PLAN VIEW



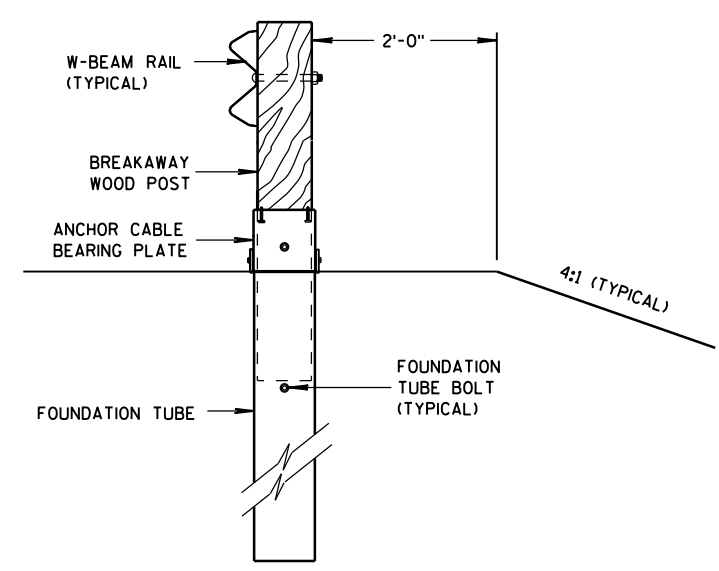
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

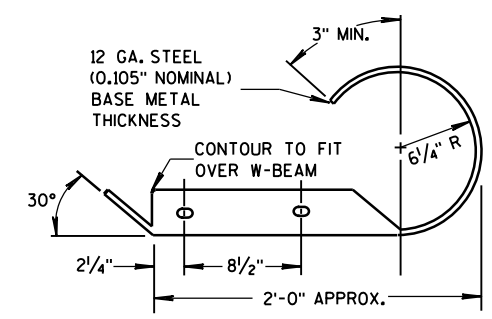
END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

FOUNDATION TUBE BOLTS ARE 7/8" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 7/8" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

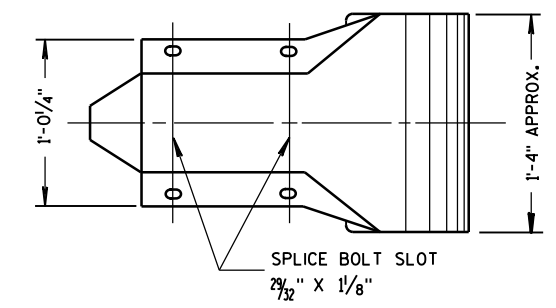
ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A 5/8" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 5/8" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

- (A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.
- (B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27 3/4" TO 32" ± 1".



PLAN VIEW



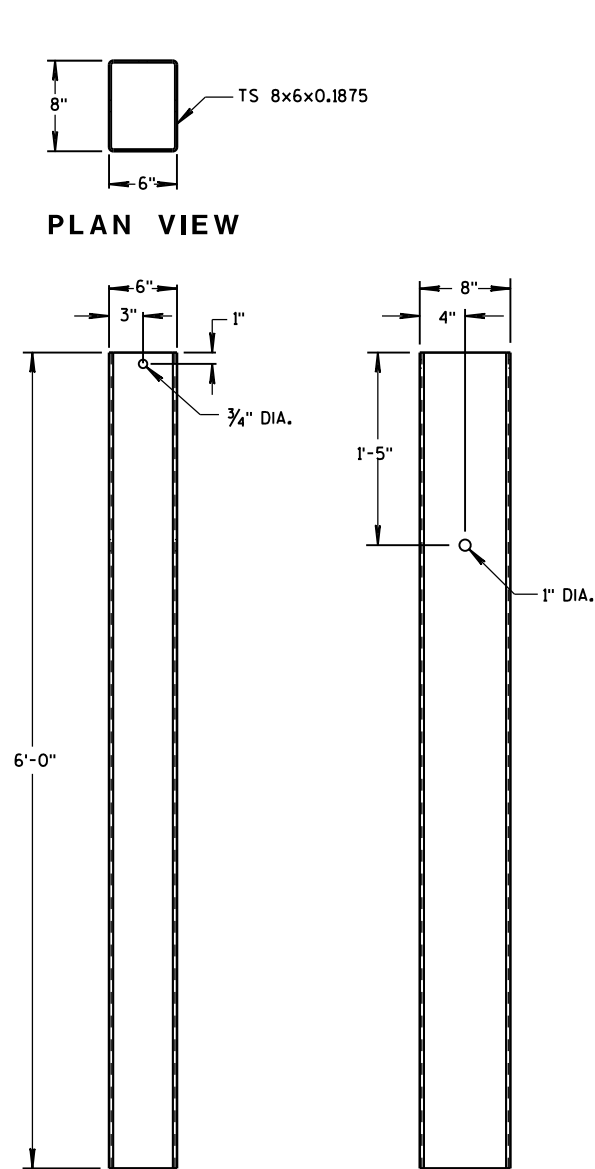
FRONT VIEW

W BEAM END
SECTION ROUNDED

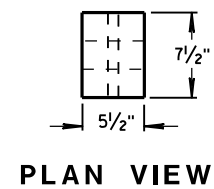
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

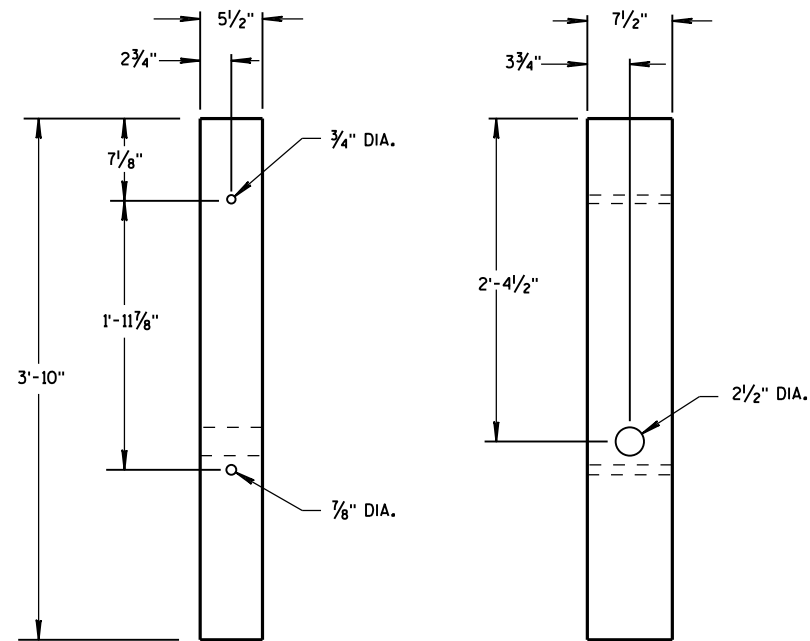
S.D.D. 14 B 47-2a



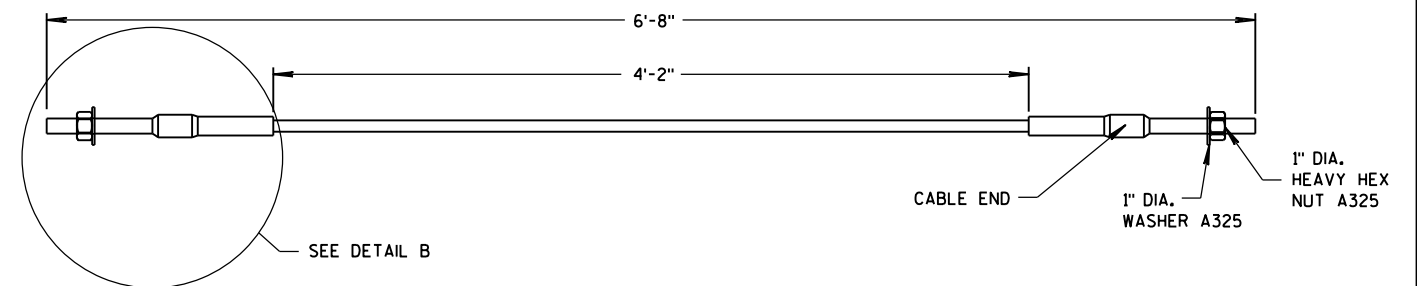
FRONT VIEW SIDE VIEW
FOUNDATION TUBE



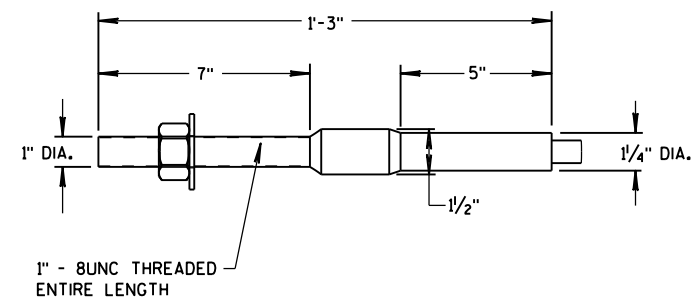
PLAN VIEW



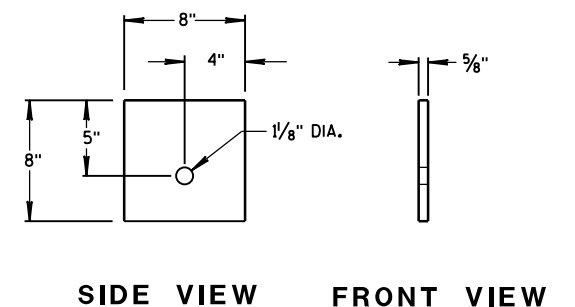
FRONT VIEW SIDE VIEW
BREAKAWAY WOOD POST



BCT ANCHOR CABLE



DETAIL B



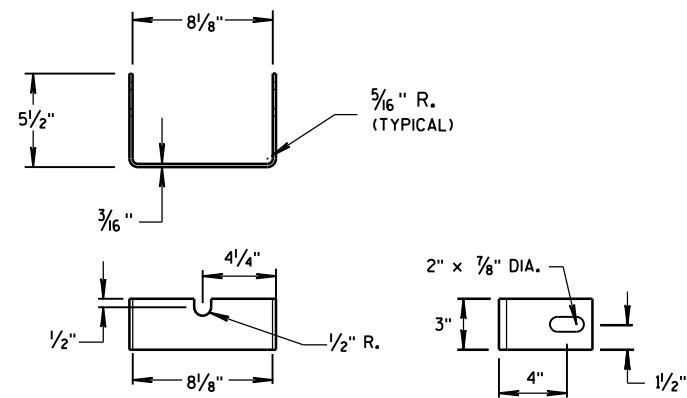
SIDE VIEW FRONT VIEW
ANCHOR CABLE BEARING PLATE

GENERAL NOTES

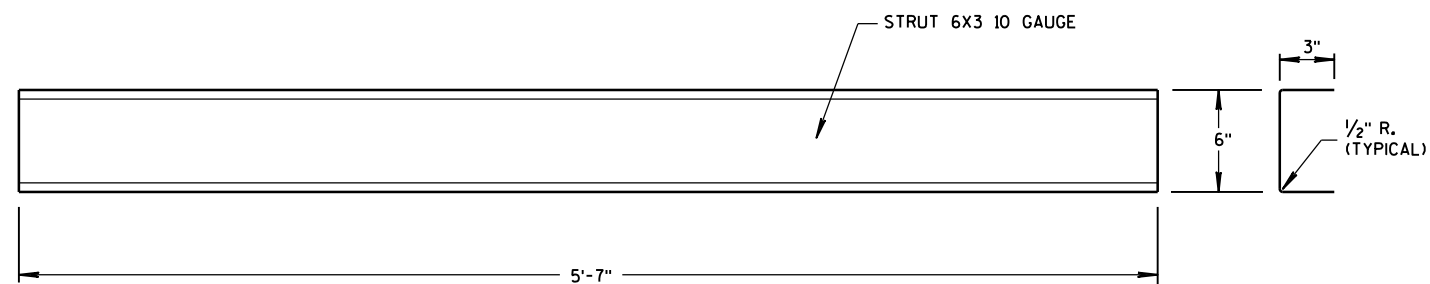
BCT ANCHOR CABLE IS A $\frac{3}{4}$ " DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

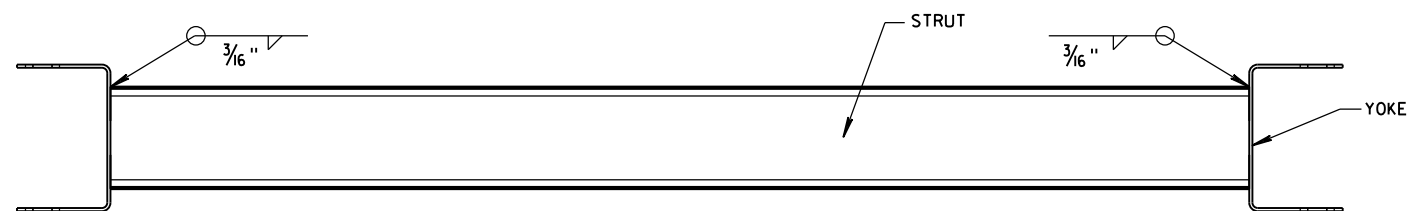
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



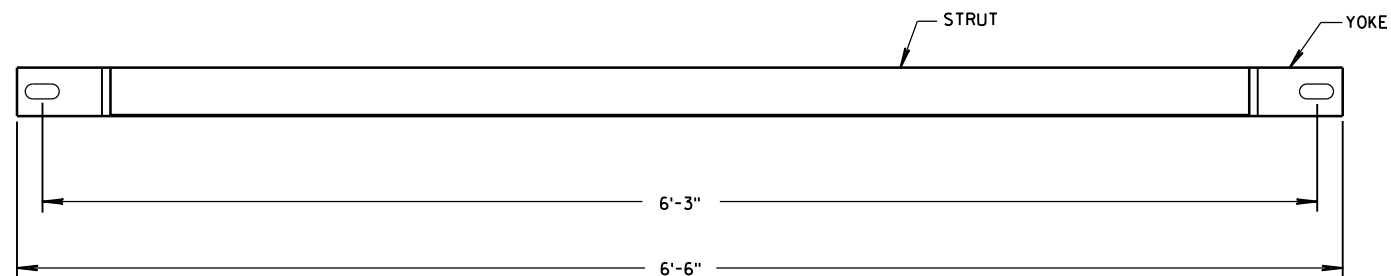
YOKE DETAIL



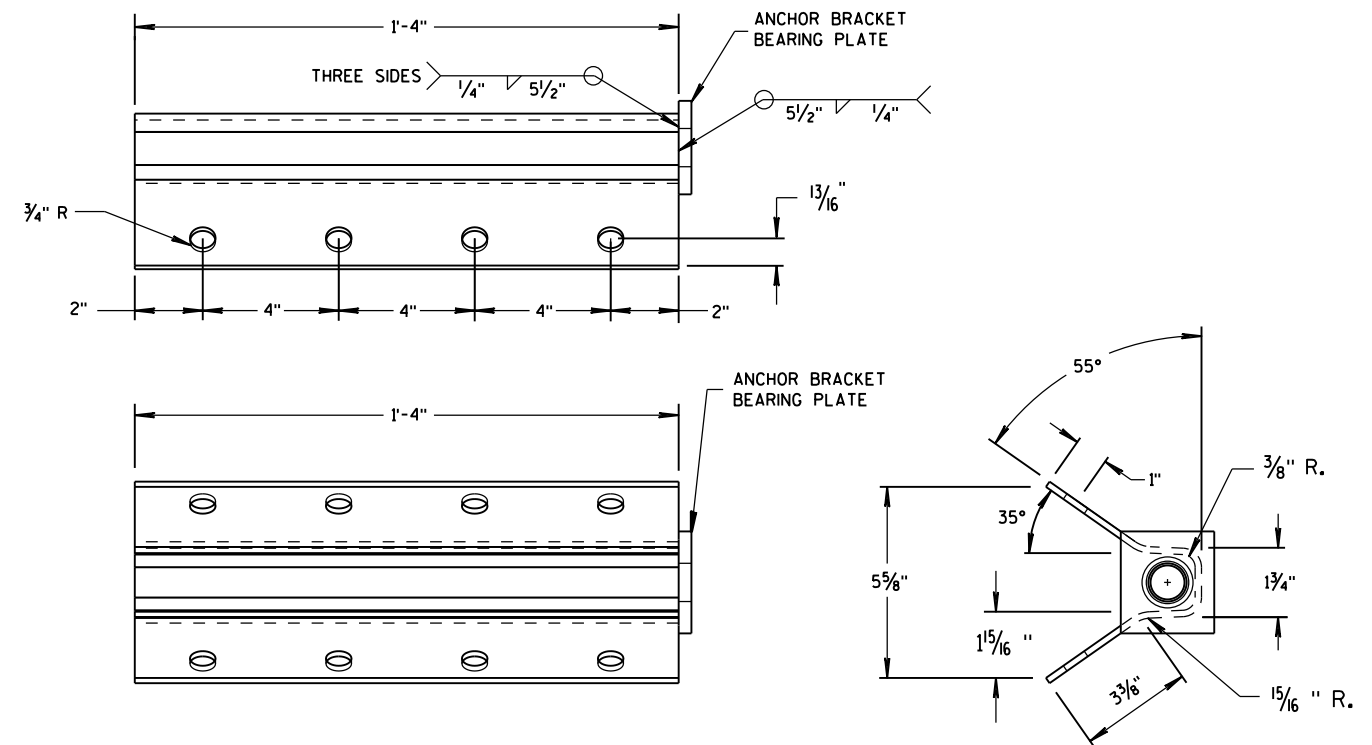
STRUT DETAIL



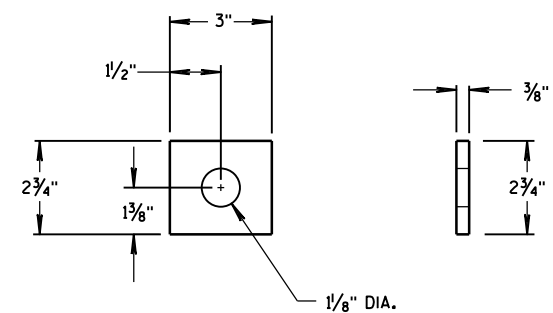
PLAN VIEW



FRONT VIEW
GROUND STRUT DETAIL



ANCHOR BRACKET

ANCHOR BRACKET
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

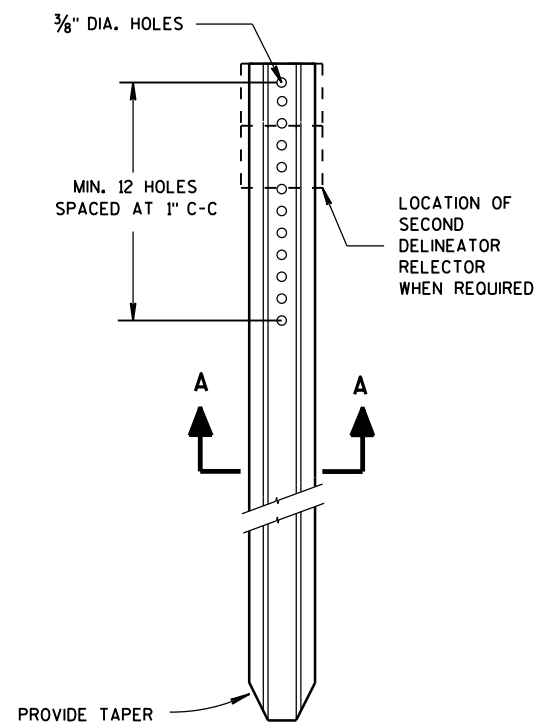
June 2014

DATE

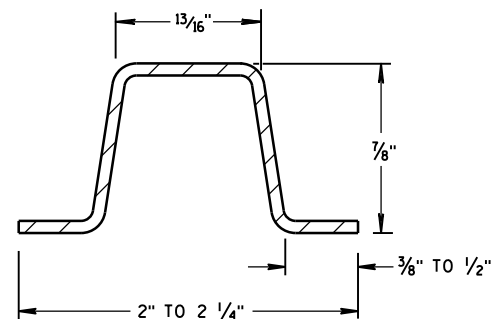
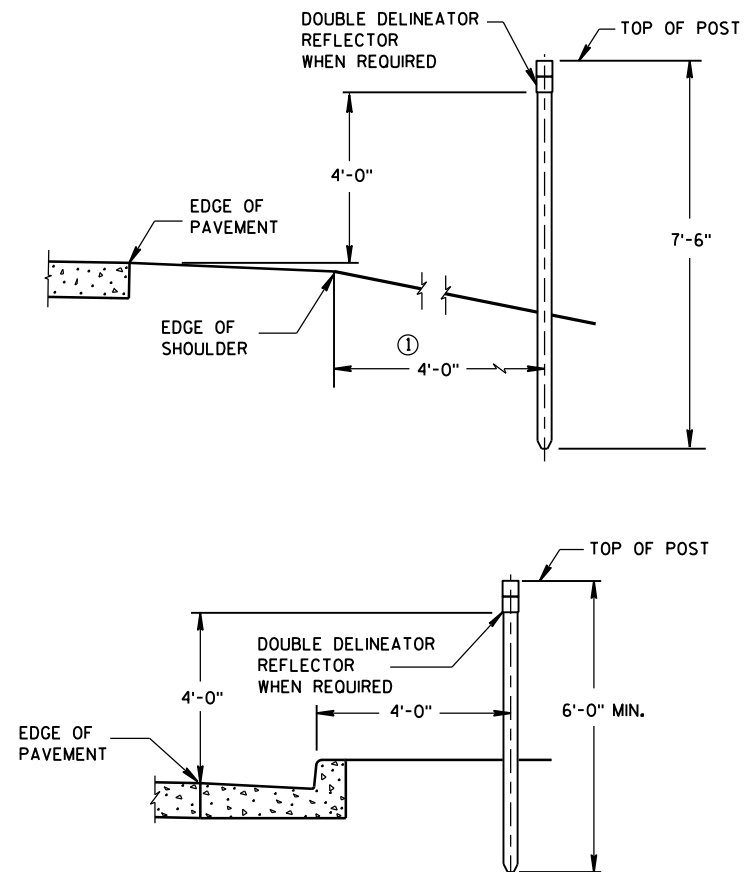
FHWA

/S/ Jerry H. Zogg

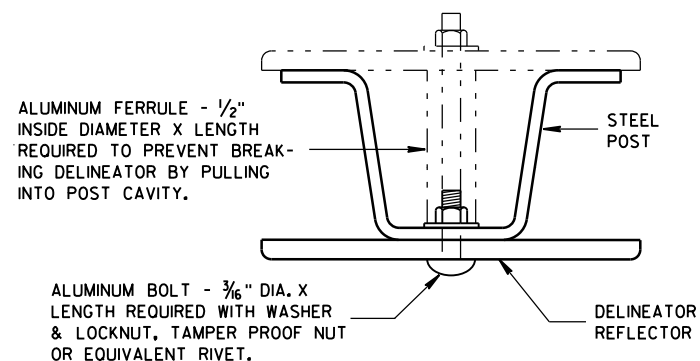
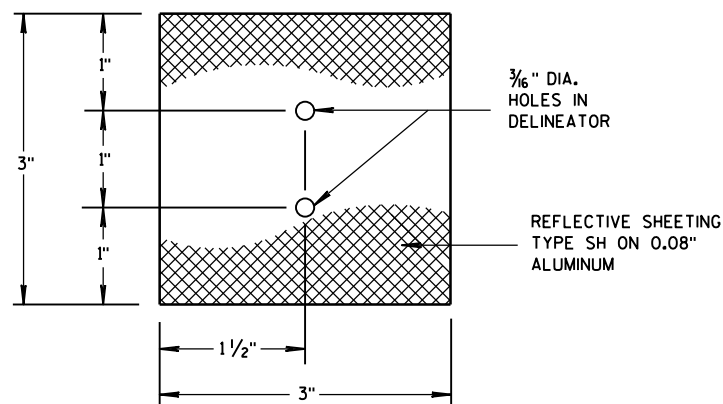
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



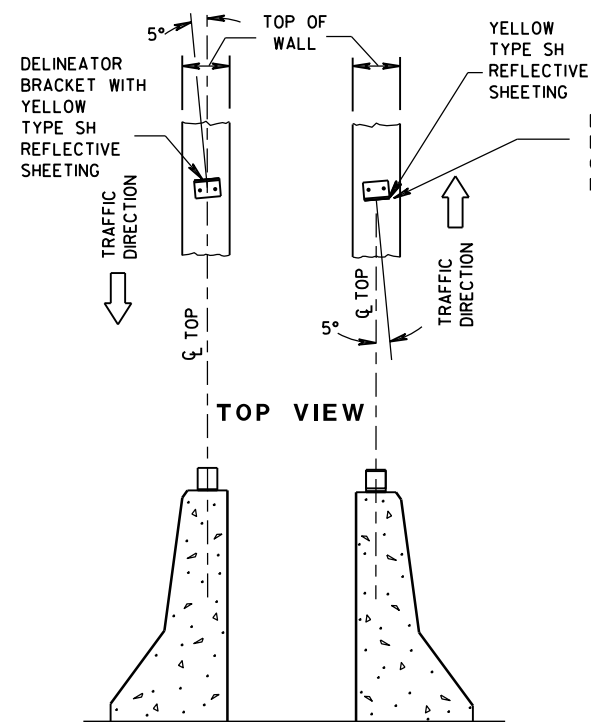
DELINEATOR POST

SECTION A-A
WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

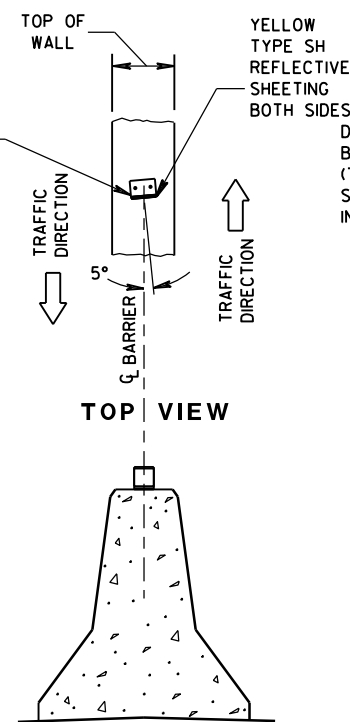
TYPICAL INSTALLATIONS OF DELINEATOR POSTS

MOUNTING DETAIL
FOR DELINEATOR REFLECTOR

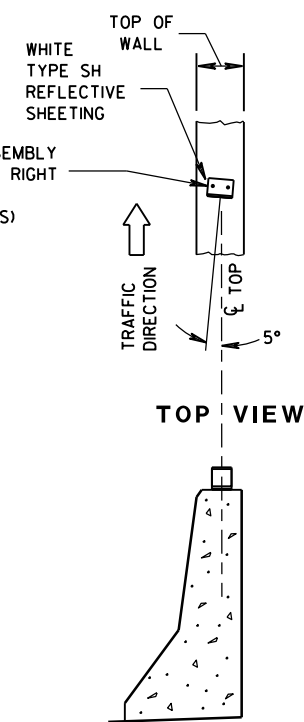
3" x 3" DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN



MEDIAN BARRIER

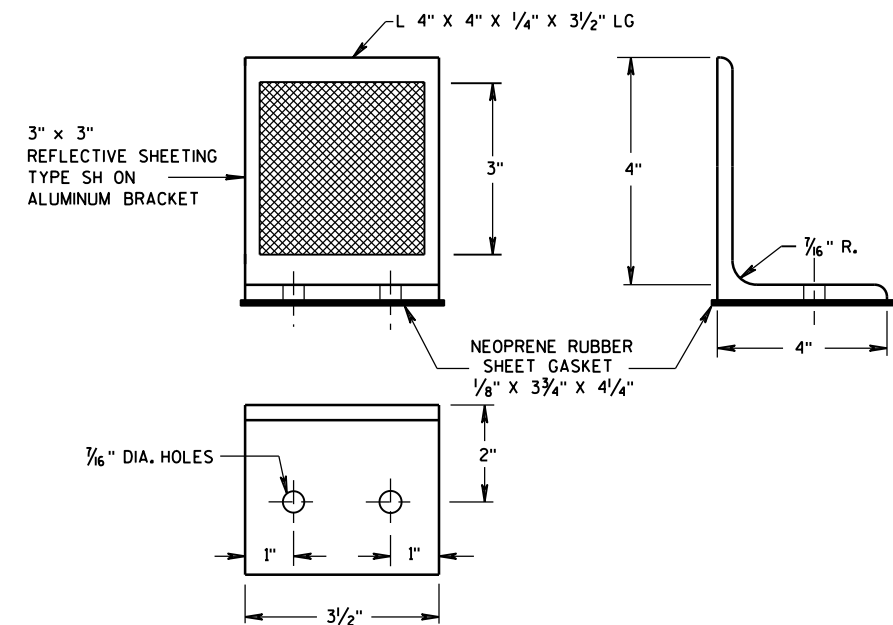
BARRIER LOCATED
TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS

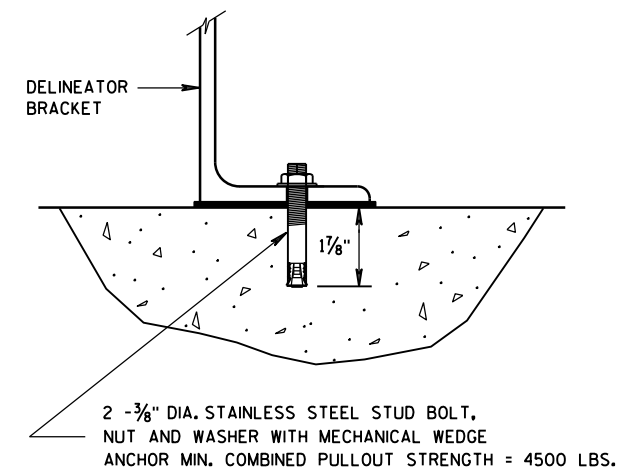
GENERAL NOTES

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

- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



DELINEATOR BRACKET

DELINEATOR BRACKET
MOUNTING DETAIL

DELINEATOR POST,
DELINEATOR REFLECTOR AND
DELINEATOR BRACKET
WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

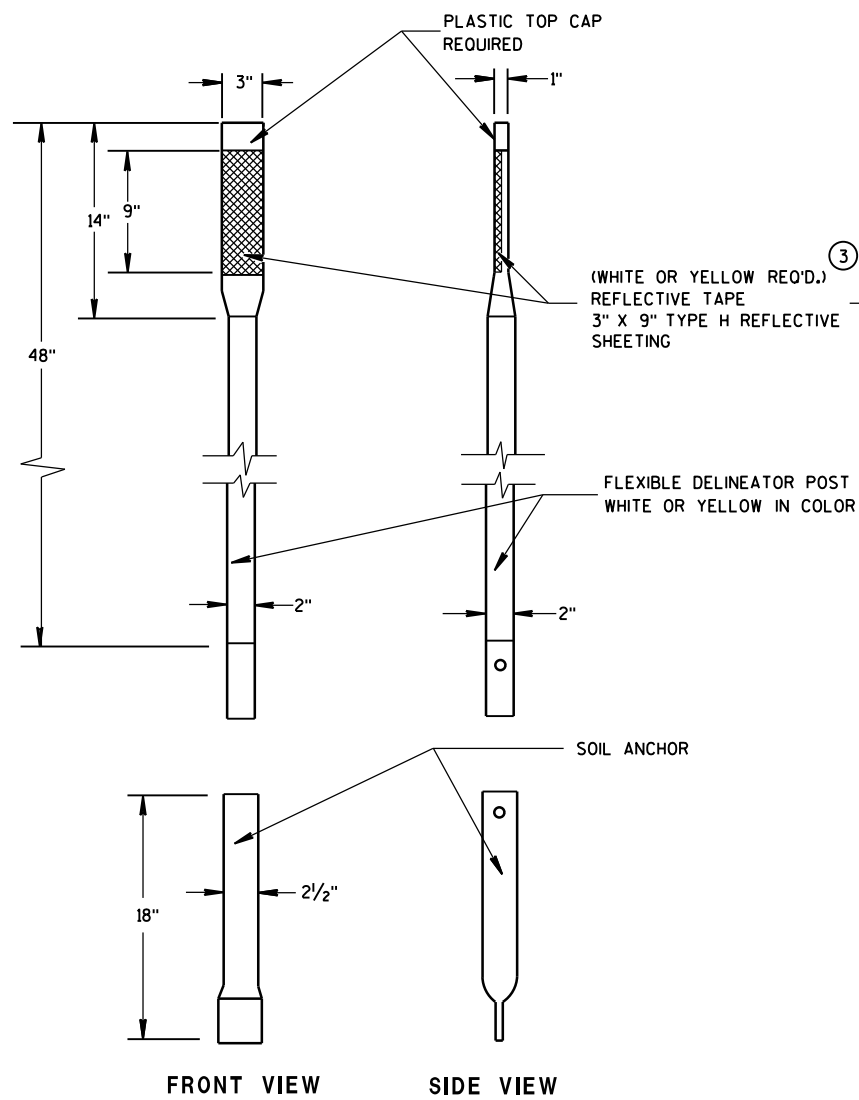
APPROVED

4-18-16

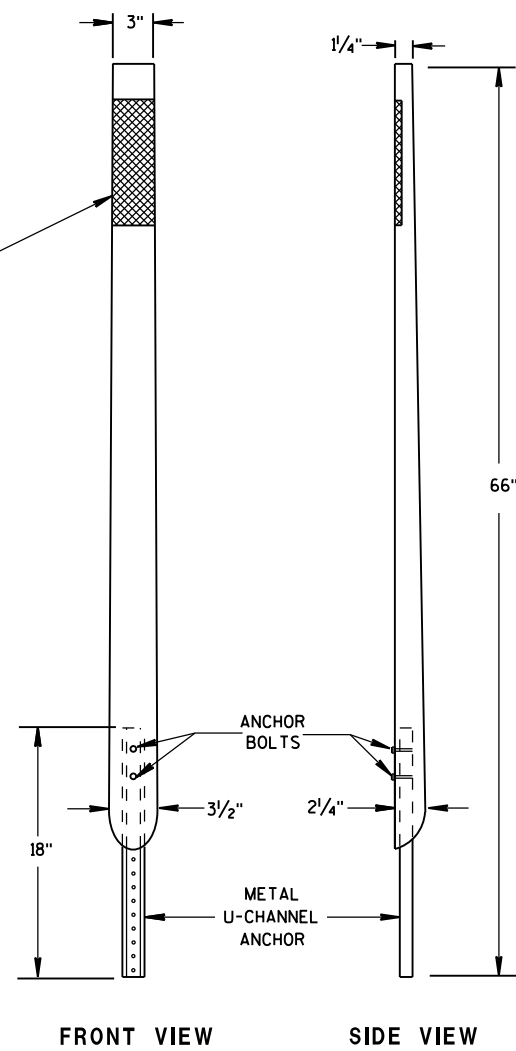
DATE

FHWA

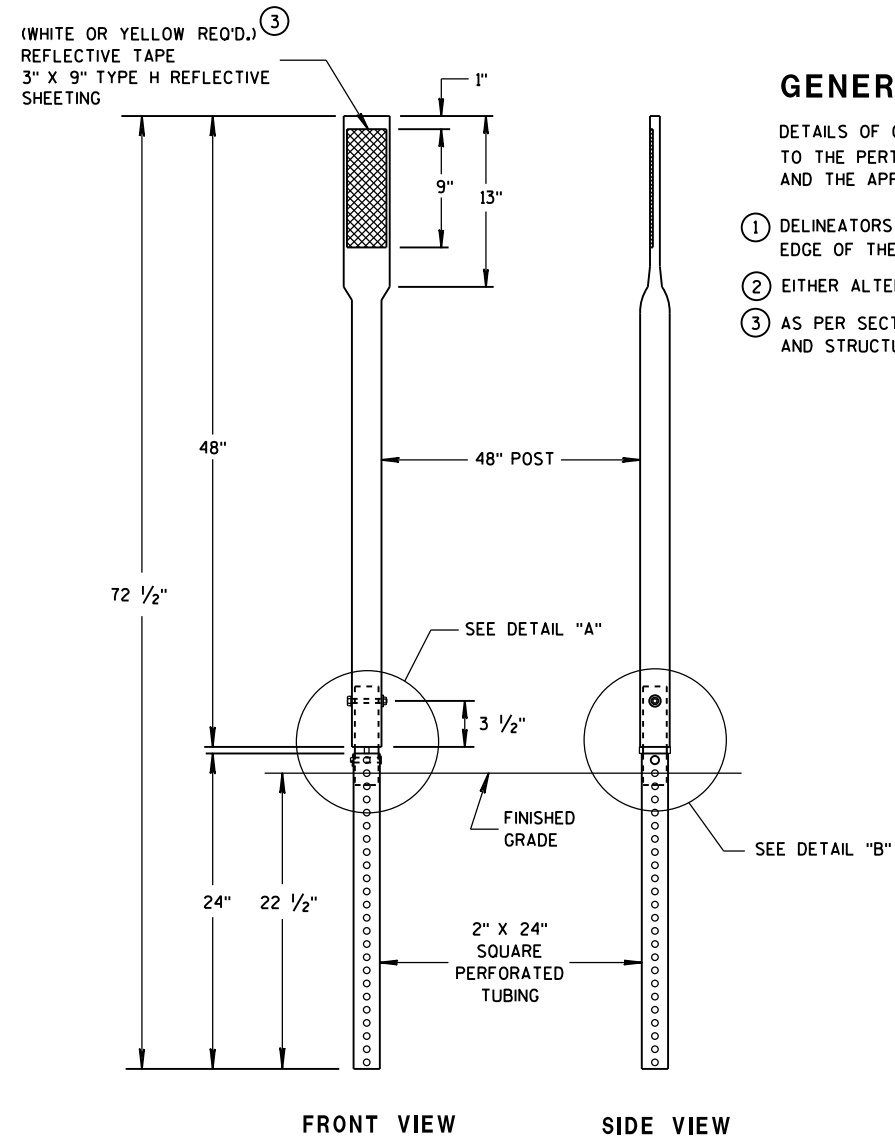
/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER



ALTERNATE 1



ALTERNATE 2

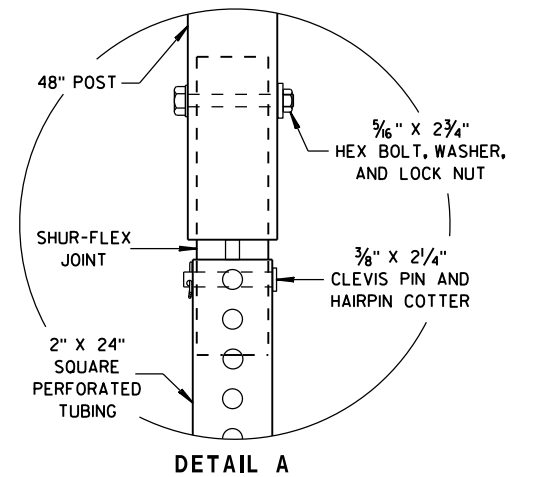


ALTERNATE 3

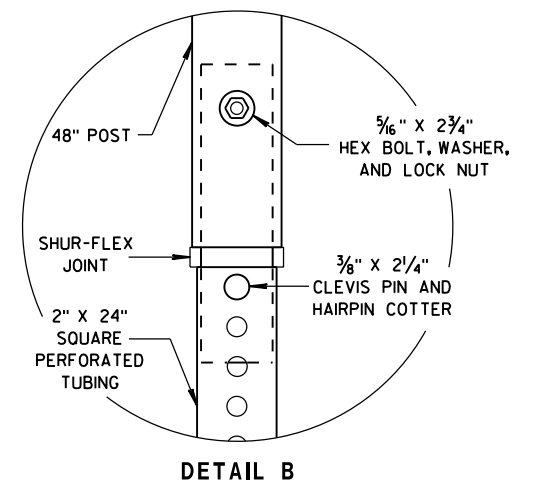
GENERAL NOTES

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

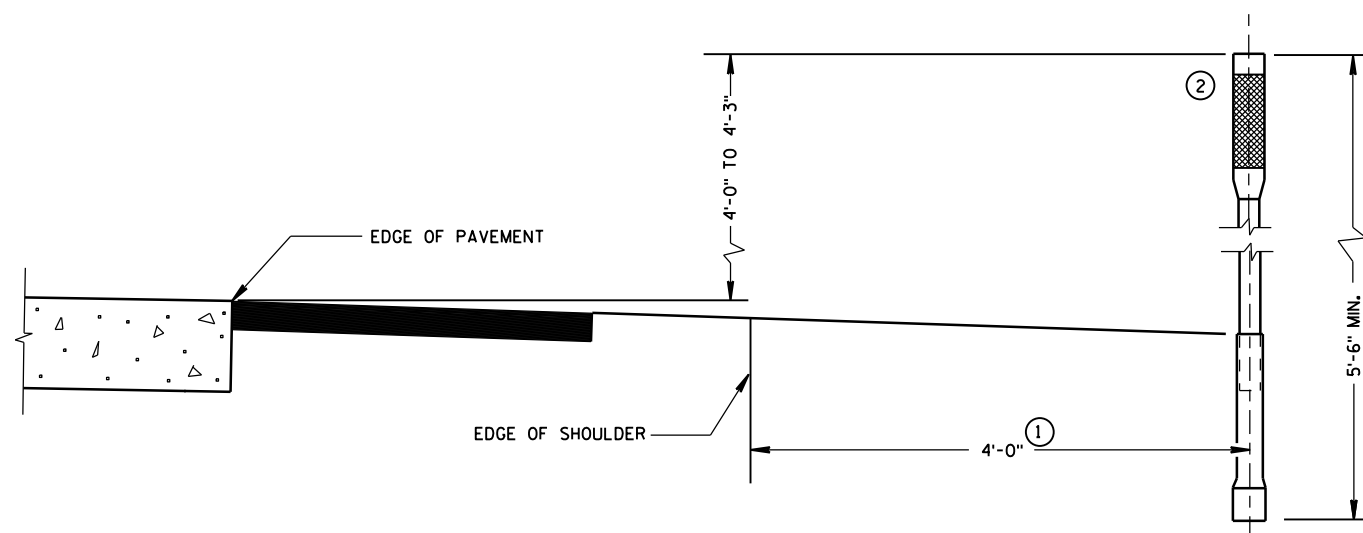
- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
- ② EITHER ALTERNATE NO.1, NO.2 OR NO.3 MAY BE FURNISHED.
- ③ AS PER SECTION 637.2.2.2. OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.



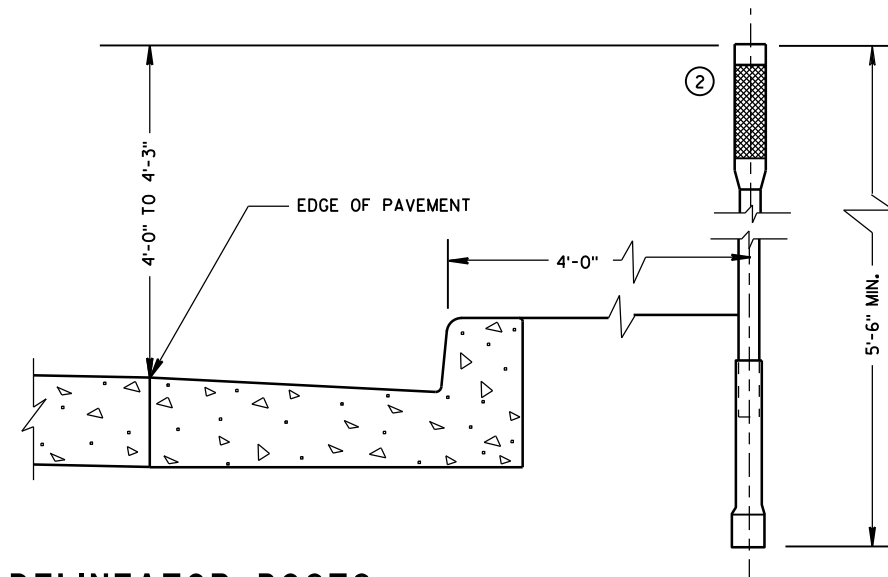
DETAIL A



DETAIL B



TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

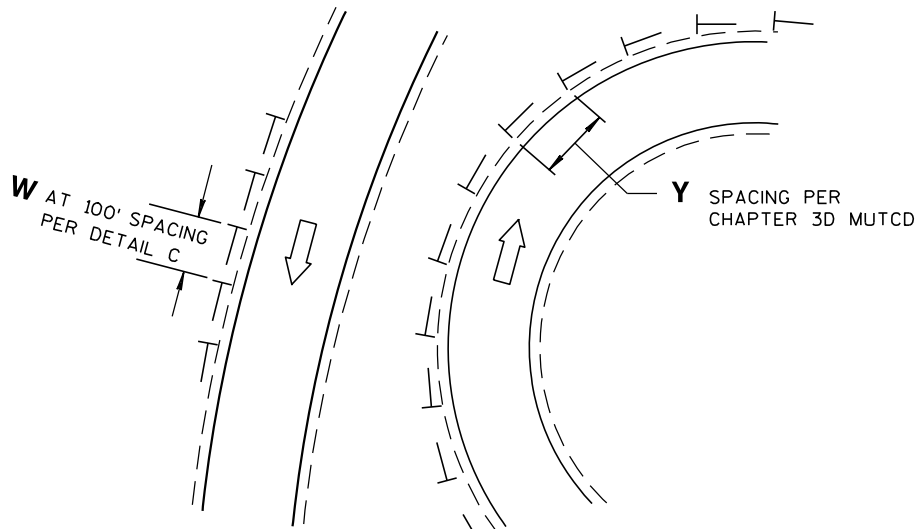


FLEXIBLE DELINEATOR POST

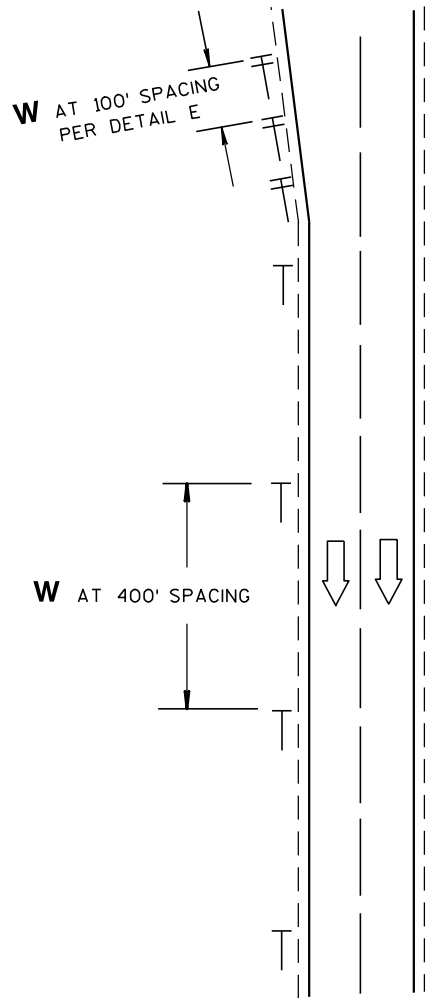
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-26-2012
DATE
FHWA

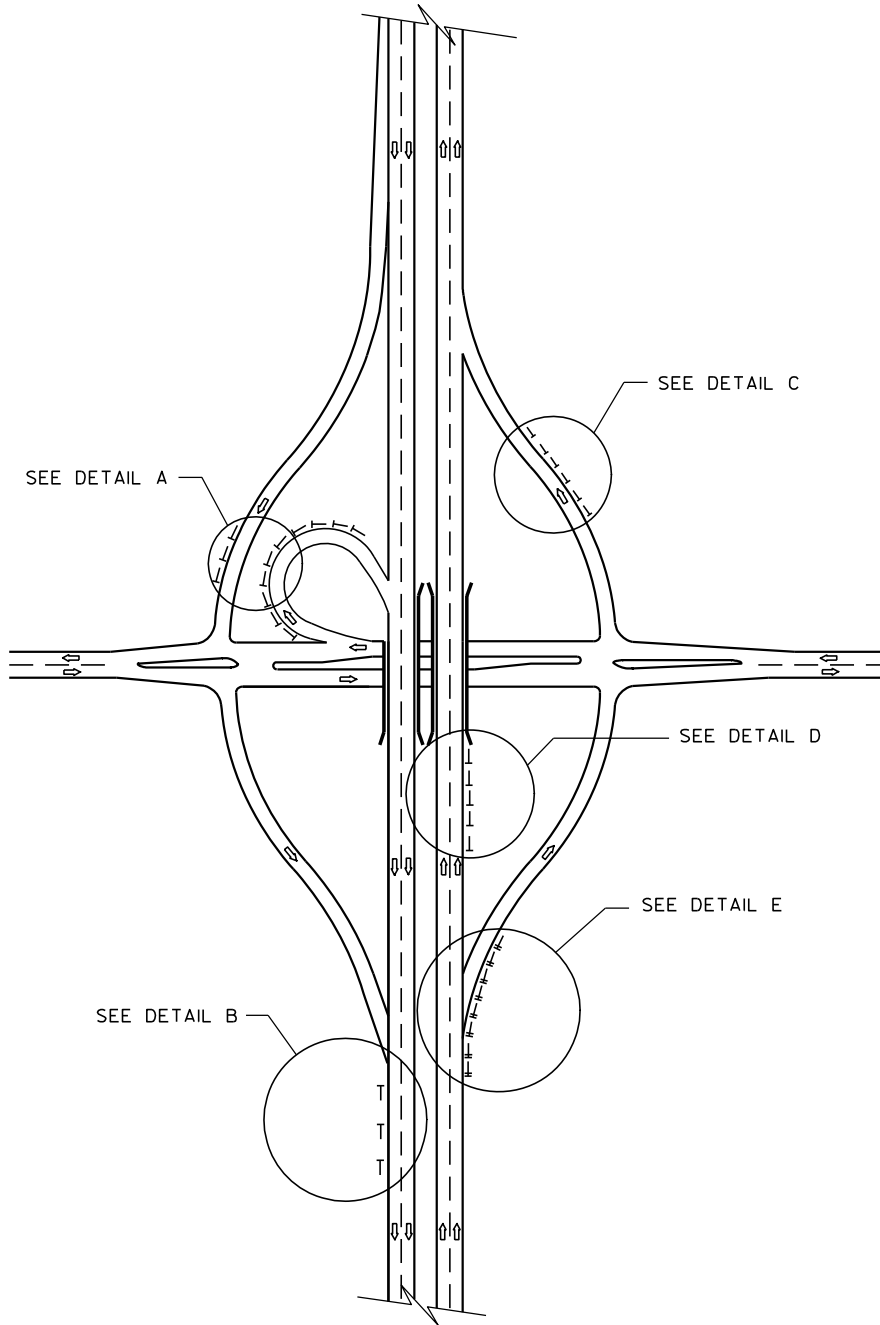
/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN



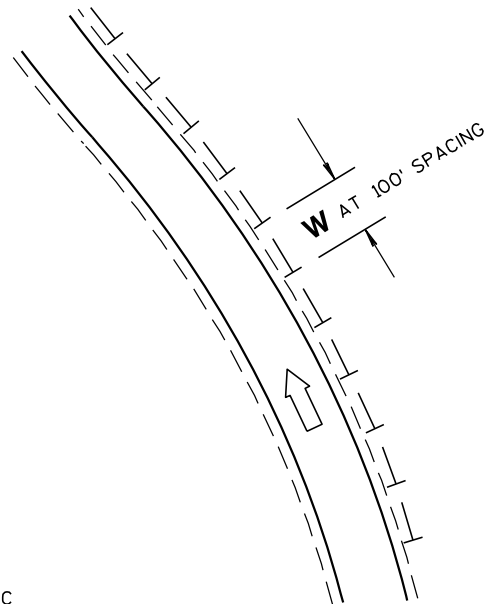
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



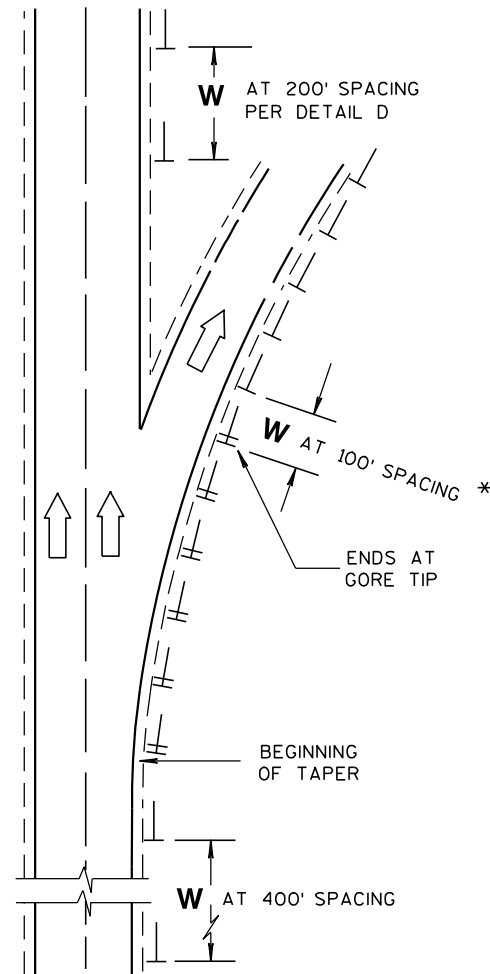
DETAIL B
DELINEATOR LAYOUT
ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL C
DELINEATOR LAYOUT ALONG RAMP



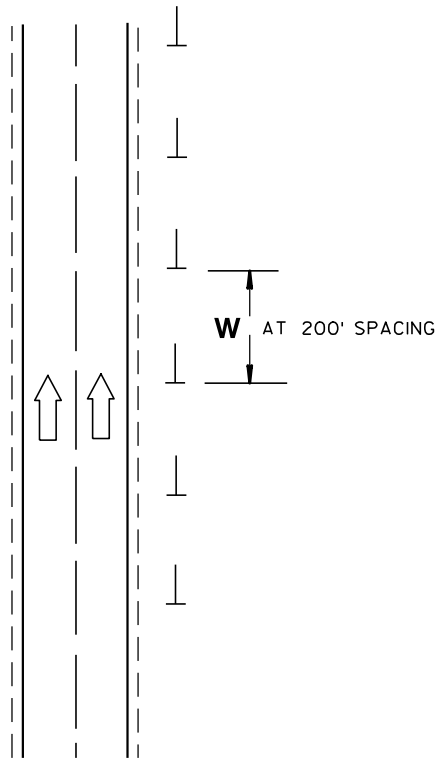
DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION
- DECELERATION LANES AND TAPERS AT RAMPS

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS.
USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.

LEGEND

-  DIRECTION OF TRAFFIC FLOW
-  SINGLE DELINEATOR
-  DOUBLE DELINEATOR
- W** WHITE
- Y** YELLOW

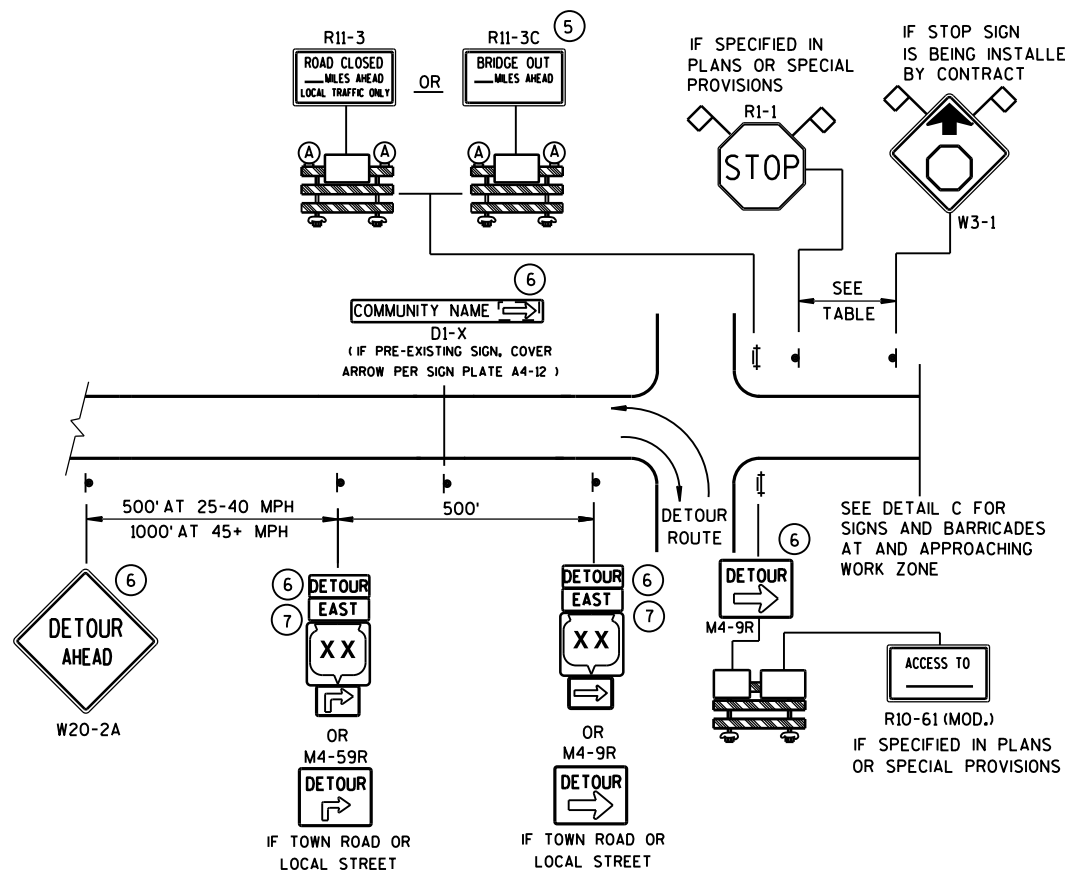


DETAIL D
DELINEATOR LAYOUT
BETWEEN INTERCHANGE RAMPS

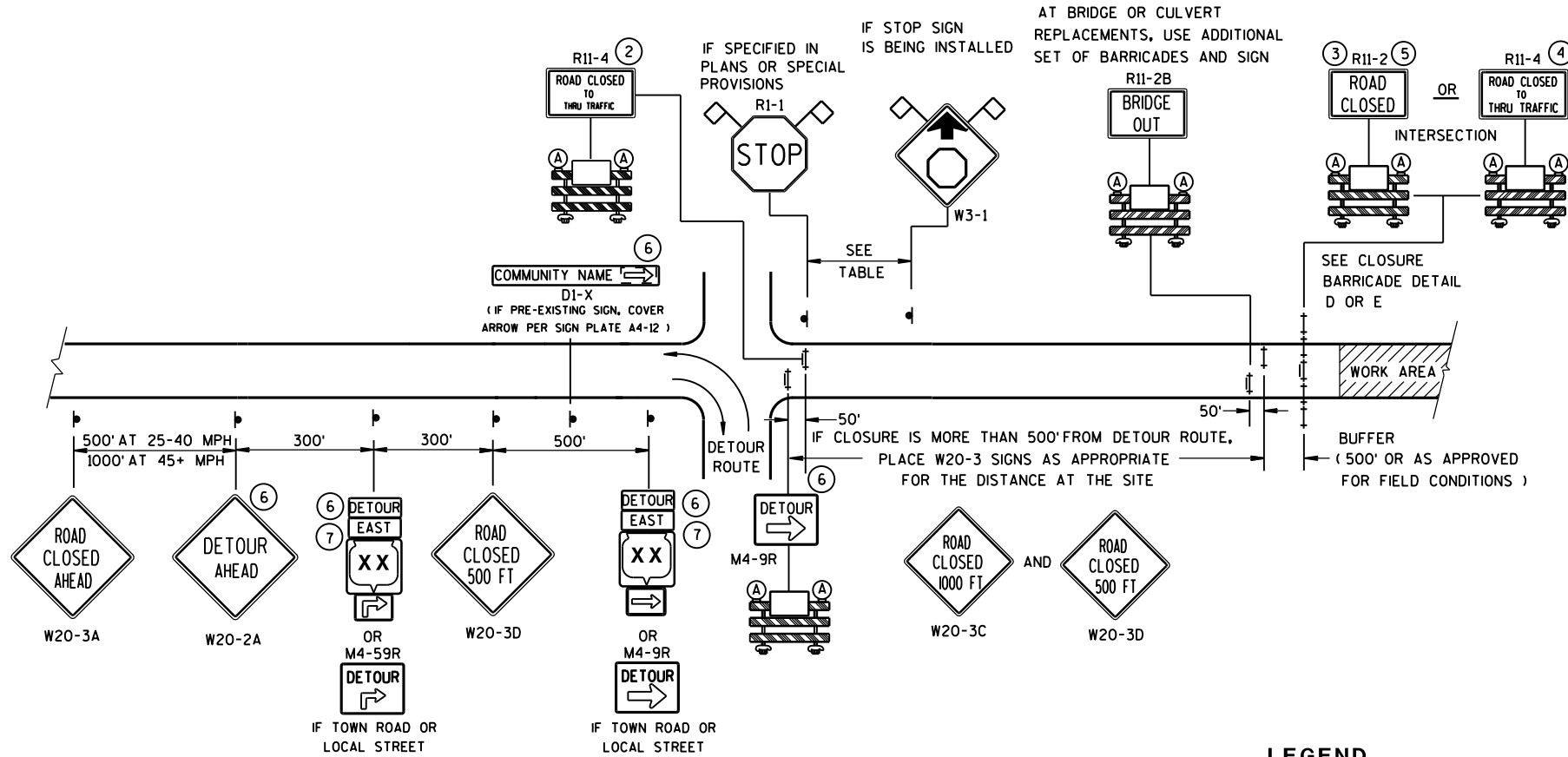
DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

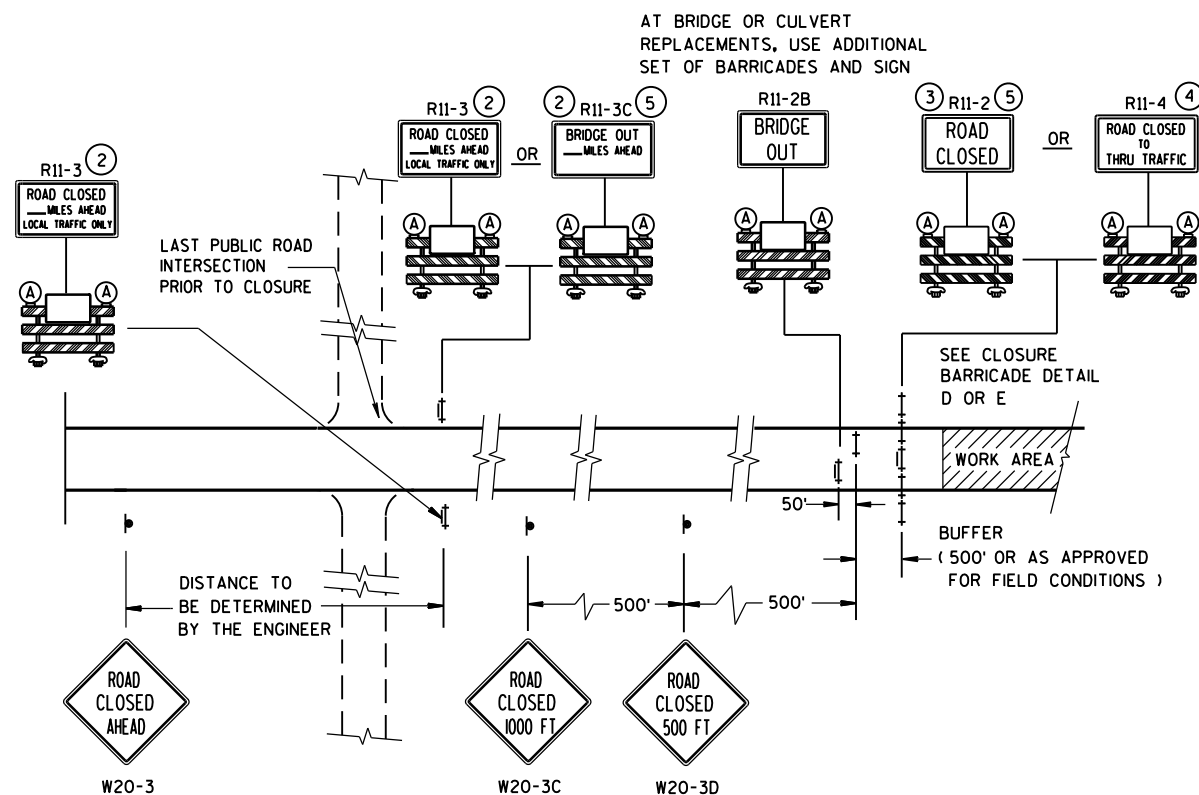
APPROVED
2/5/09 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

DETOUR EAST M4-8 M3-X
XX OR COUNTY XX OR XX
M1-4 M1-5A M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

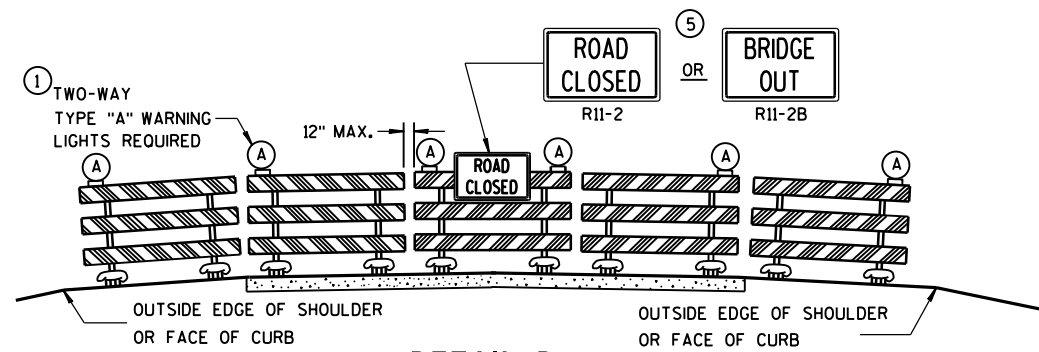
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

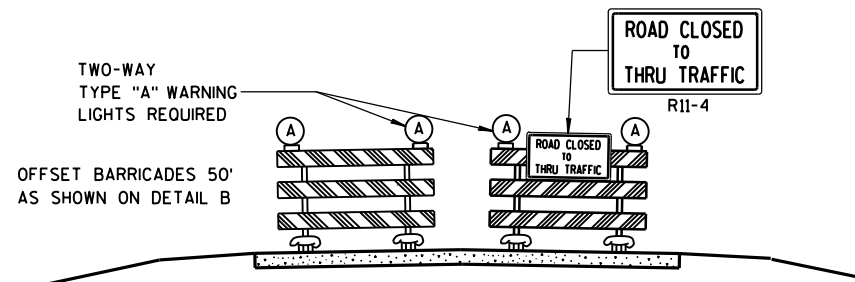
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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.

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

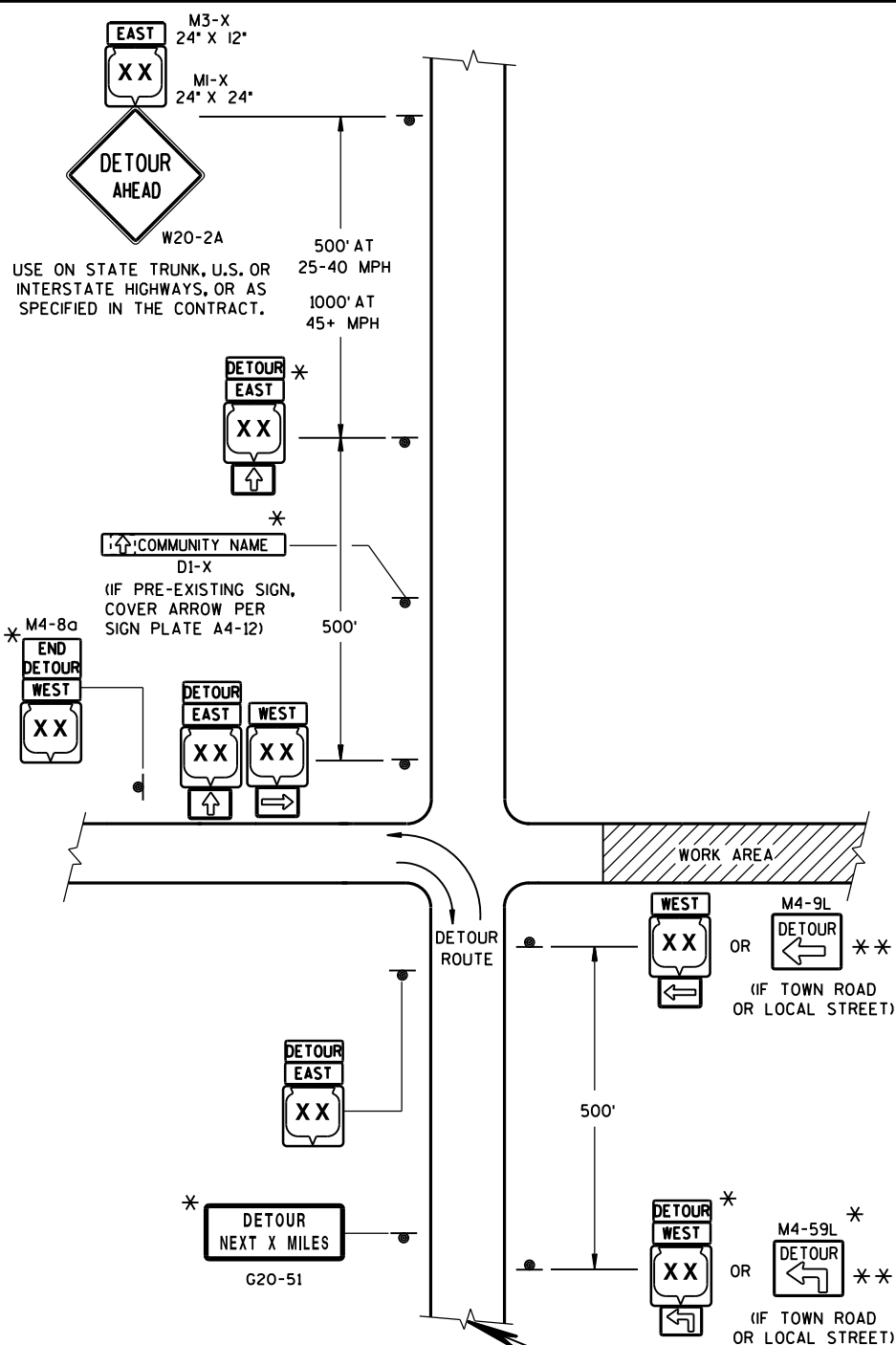
R1-1 SHALL BE 36" X 36".

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



LEGEND

SIGN ON PERMANENT SUPPORT

WORK AREA

M4-8
M3-X

OR OR
MI-4 MI-5A MI-6

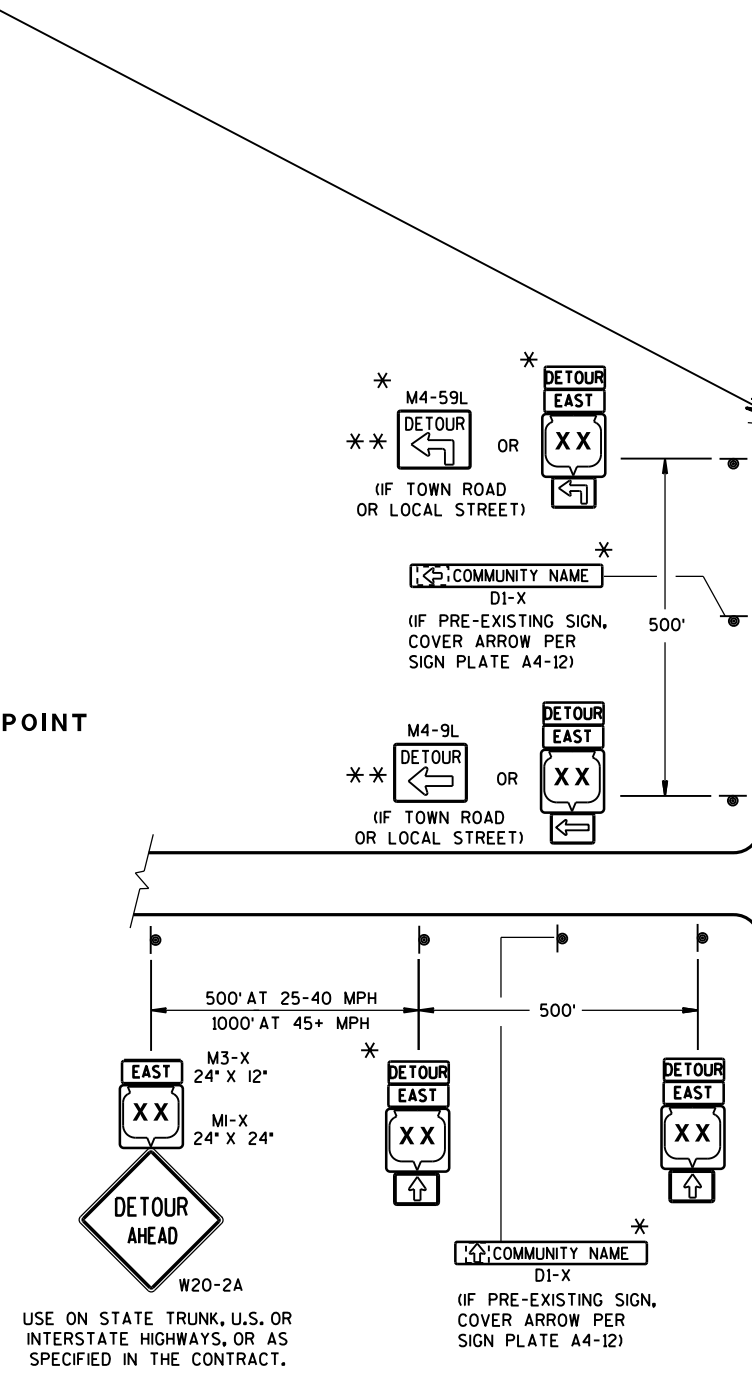
OR OR
M05-1 M06-1 M06-1

SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD 15C2-SHEET "a"

THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

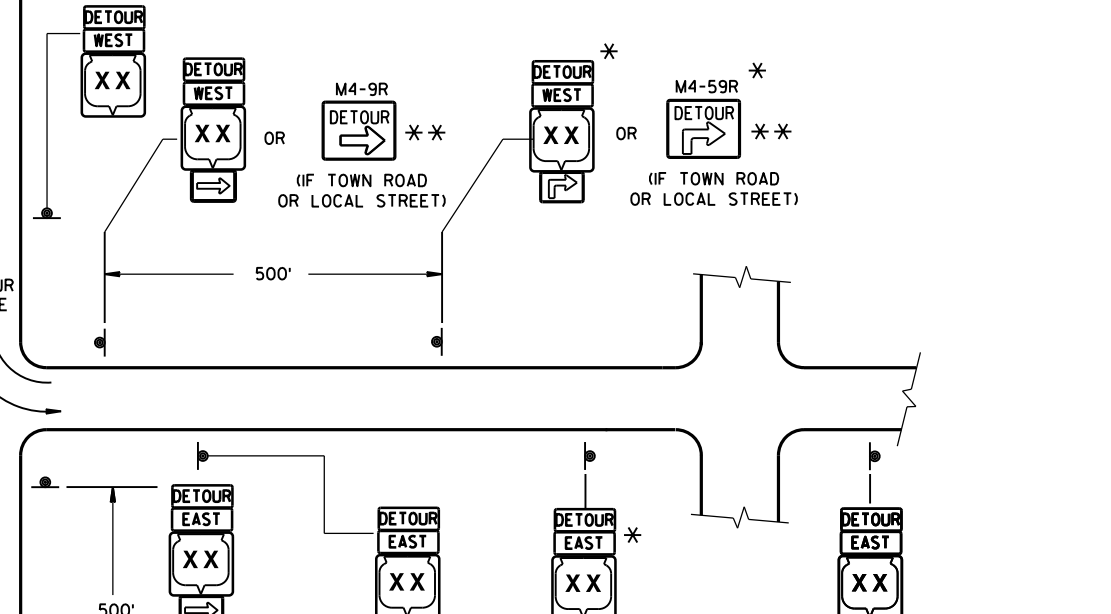
MATCH POINT

DETAIL F
DETOUR SIGNING



GENERAL NOTES

- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS, MODIFY EXISTING SIGNS WHERE POSSIBLE.
- THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- 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.
- SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- SIGN SIZES SHALL BE AS FOLLOWS:
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
 - MI-4, MI-5A, AND MI-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
 - M4-9 SHALL BE 30" X 24".
 - M4-8a SHALL BE 24" X 18".
 - G20-51 SHALL BE 60" X 24".
 - W20-2 SHALL BE 48" X 48".
 - D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

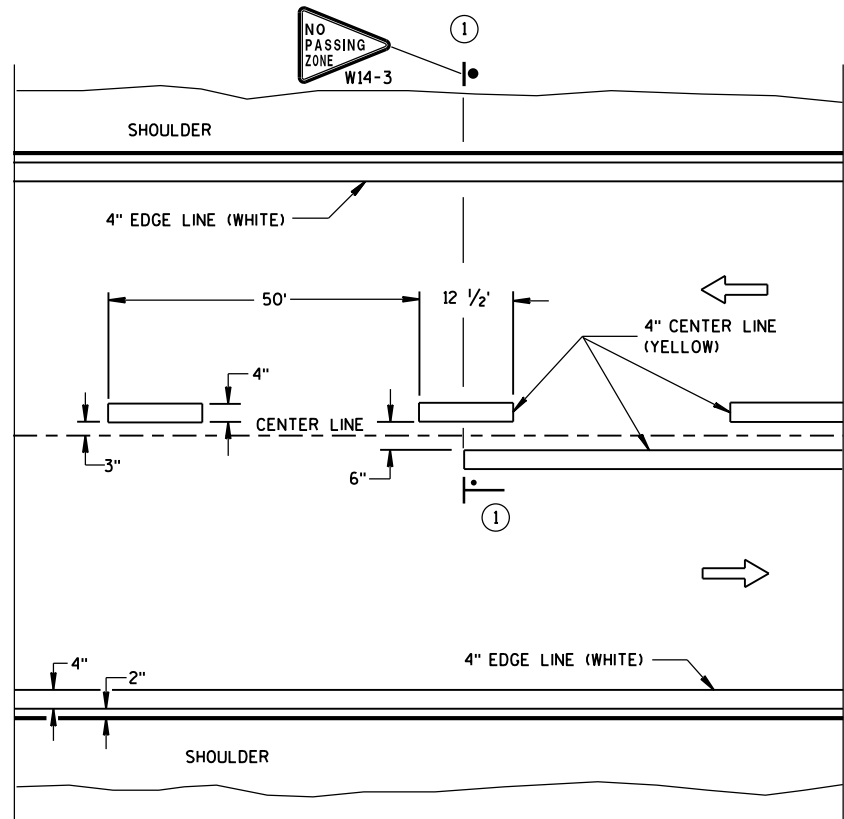


PLACE SIGNS BEYOND INTERSECTIONS WITH
STATE OR COUNTY TRUNK HIGHWAYS OR
AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF
URBAN AREA.)

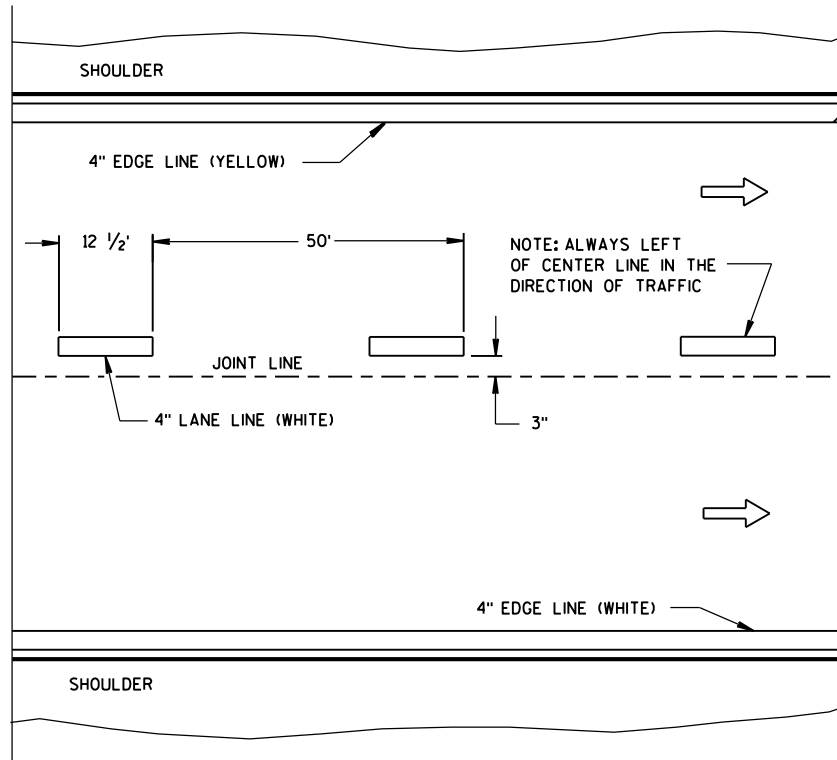
**DETOUR SIGNING FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE Sept. 2015 /S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER
FHWA

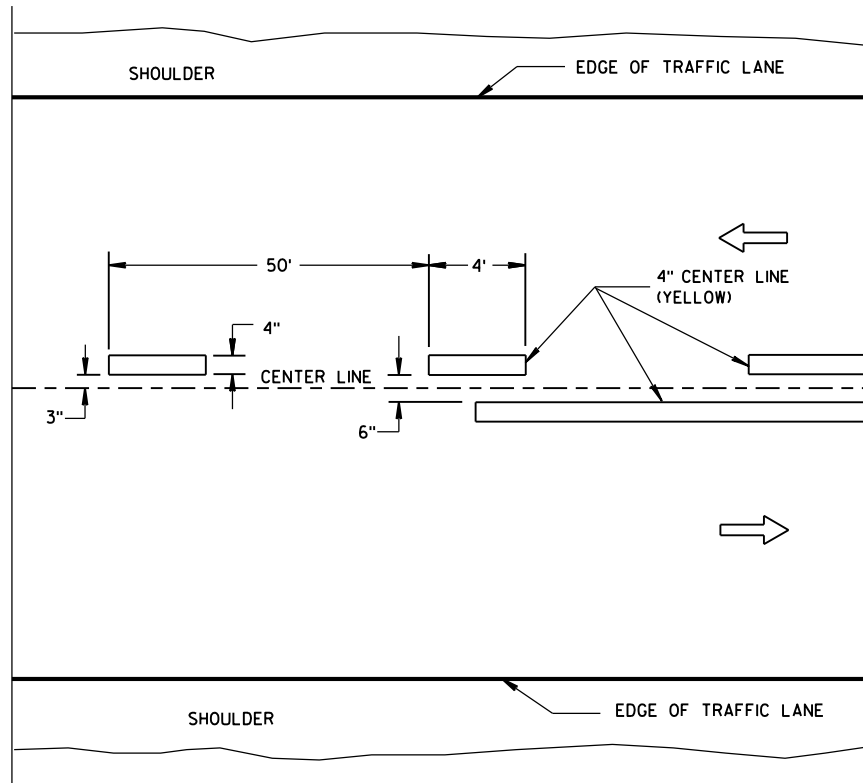


TWO WAY TRAFFIC

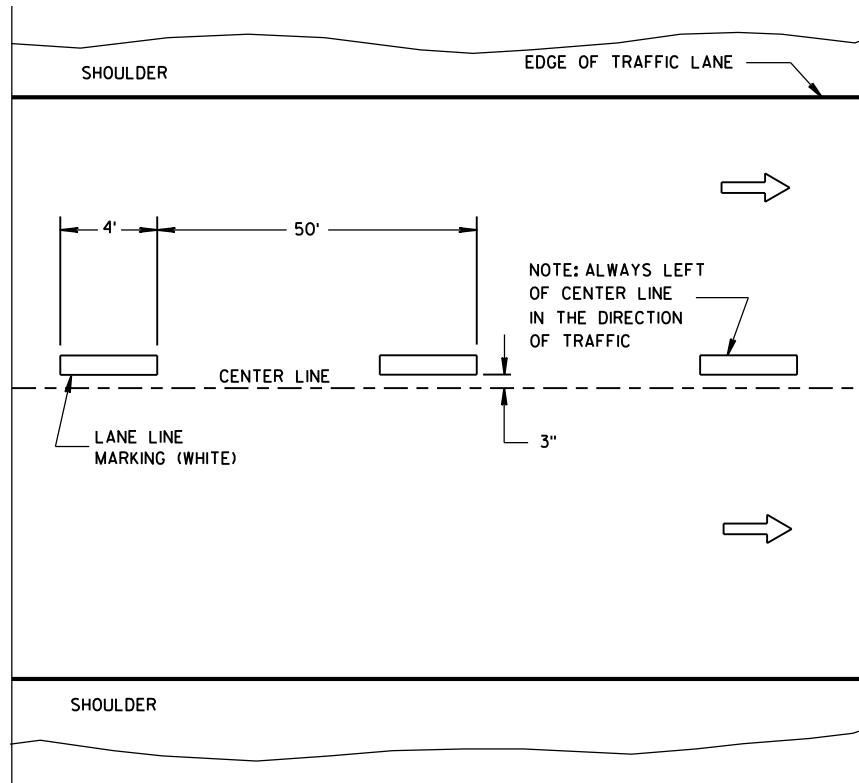


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

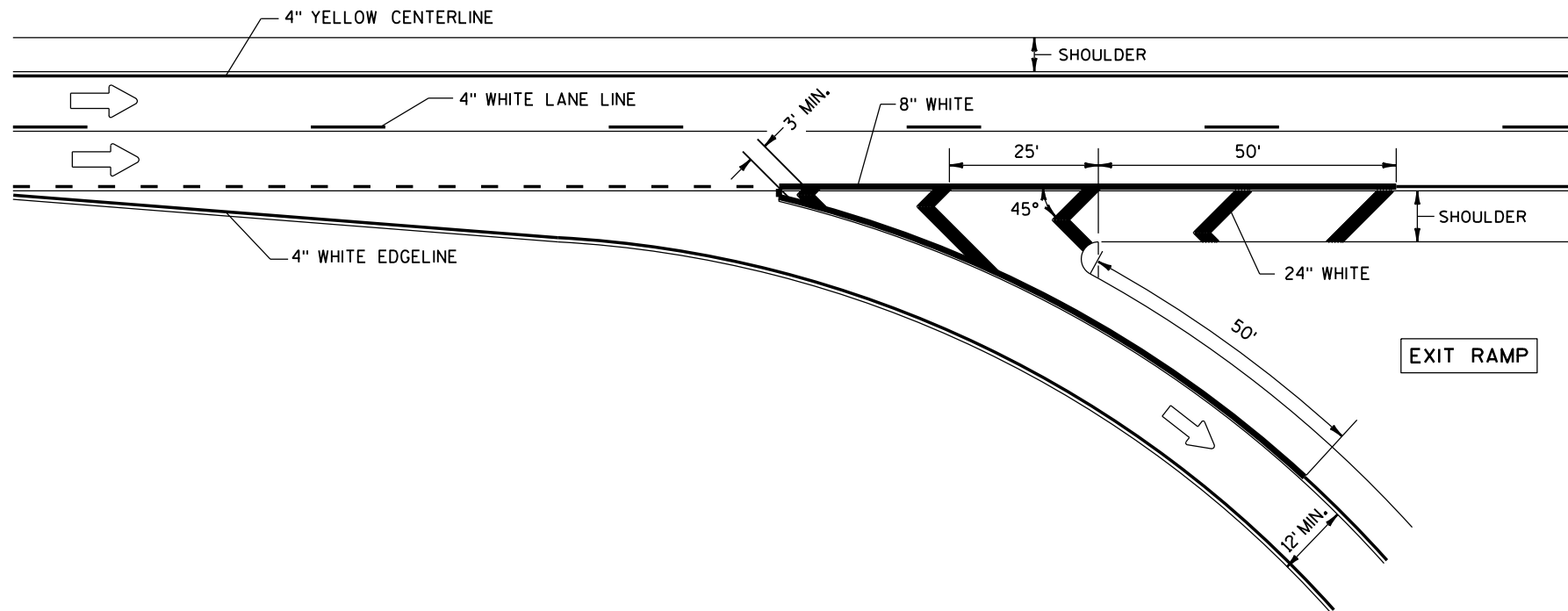
├── "T" MARKING

● POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



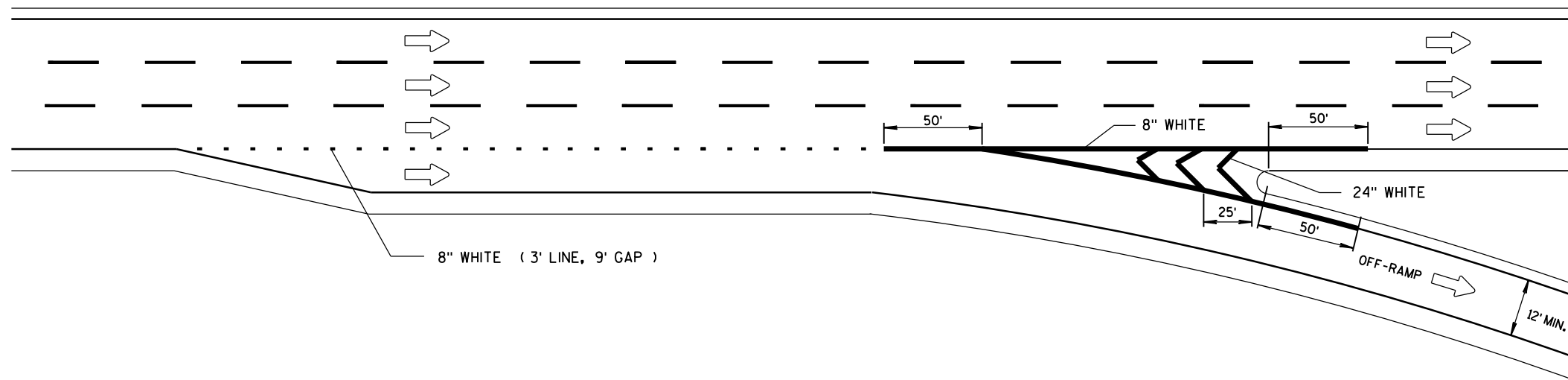
PAVEMENT MARKING FOR EXIT RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

→ DIRECTION OF TRAVEL



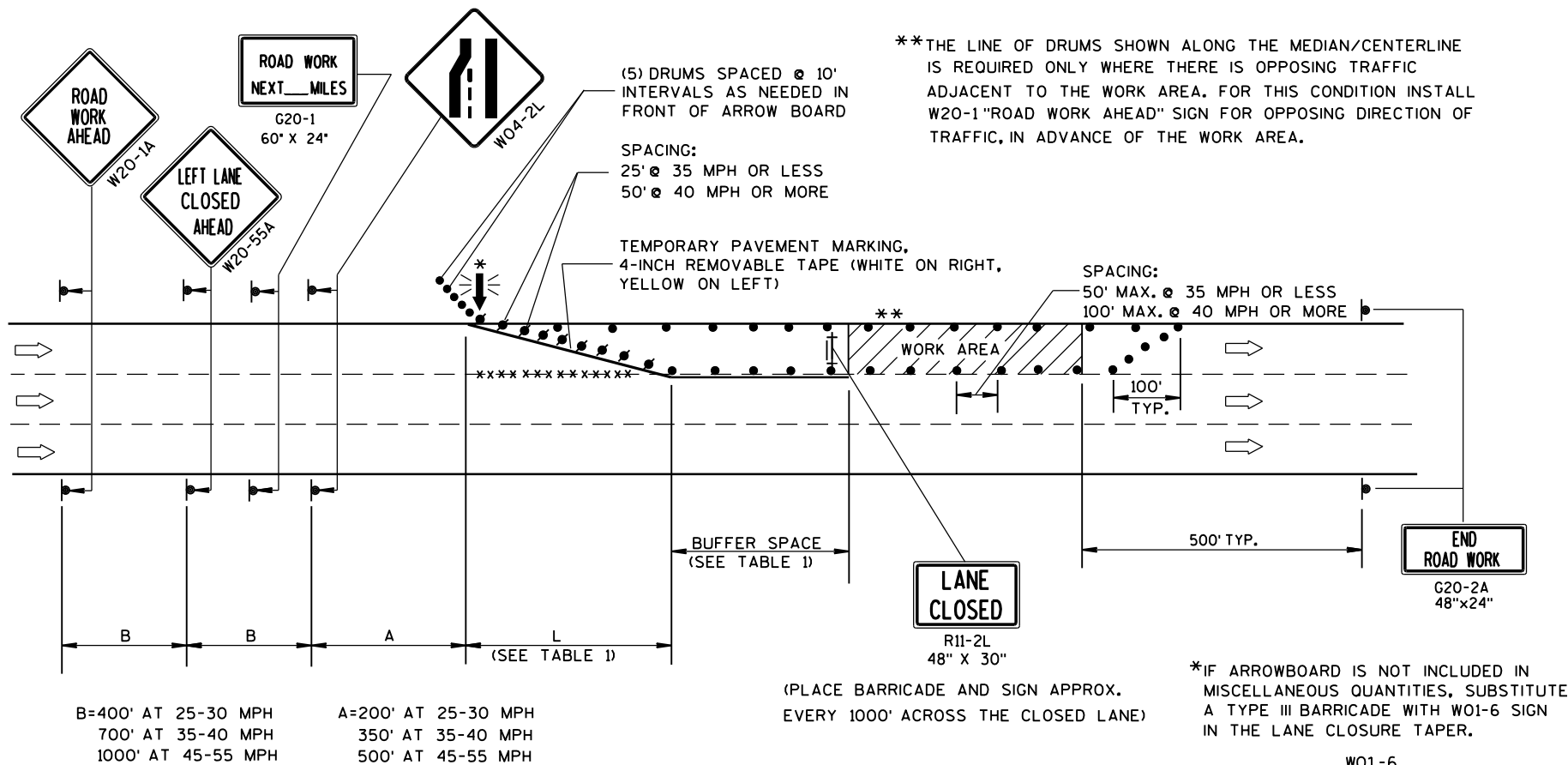
SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING
(RAMPS AND GOES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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





GENERAL NOTES

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.

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 DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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 DISTRICT TRAFFIC UNIT.

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

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 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.

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

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.

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

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

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

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

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

LEGEND

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

GENERAL NOTES

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

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

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.

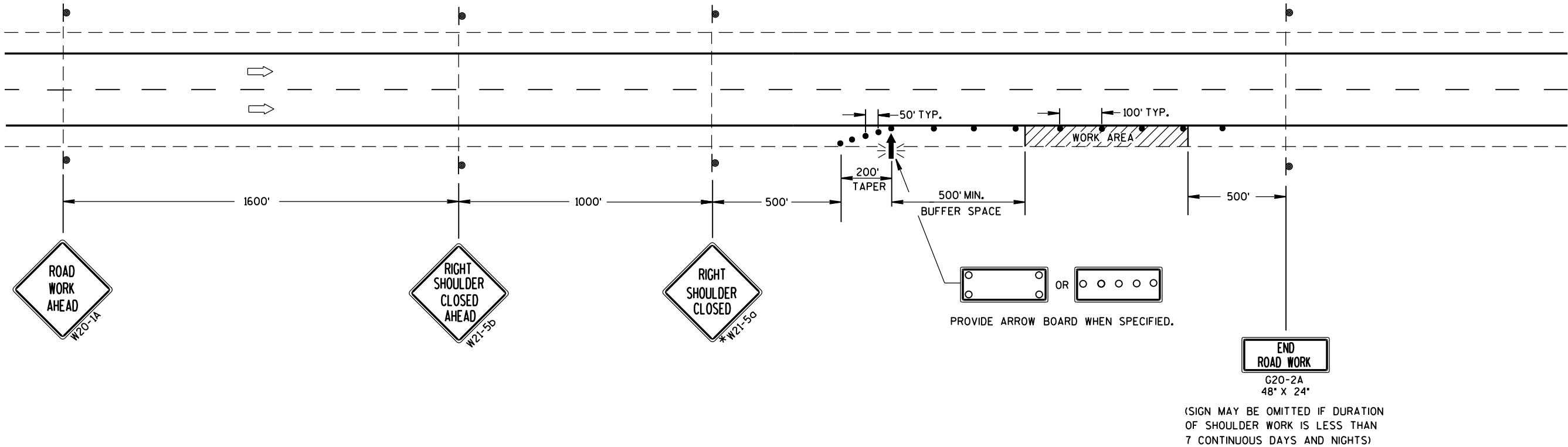
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

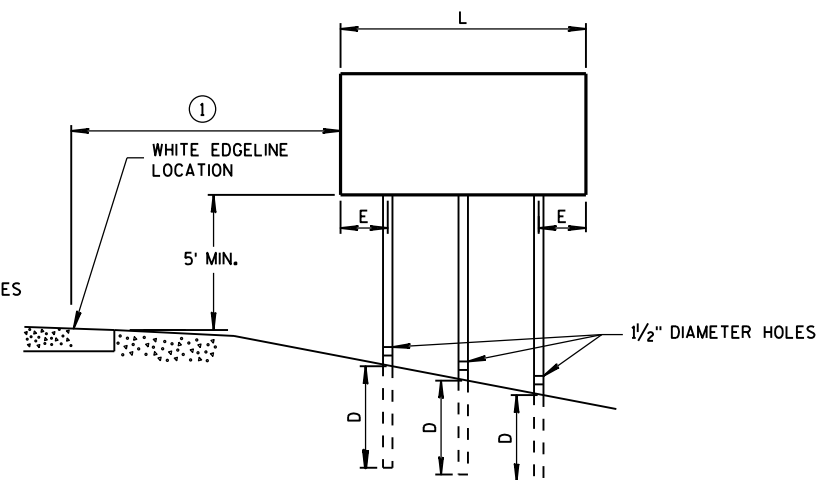
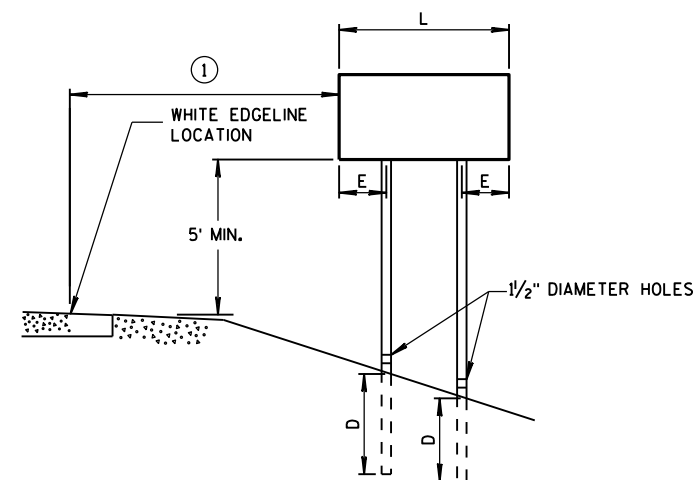
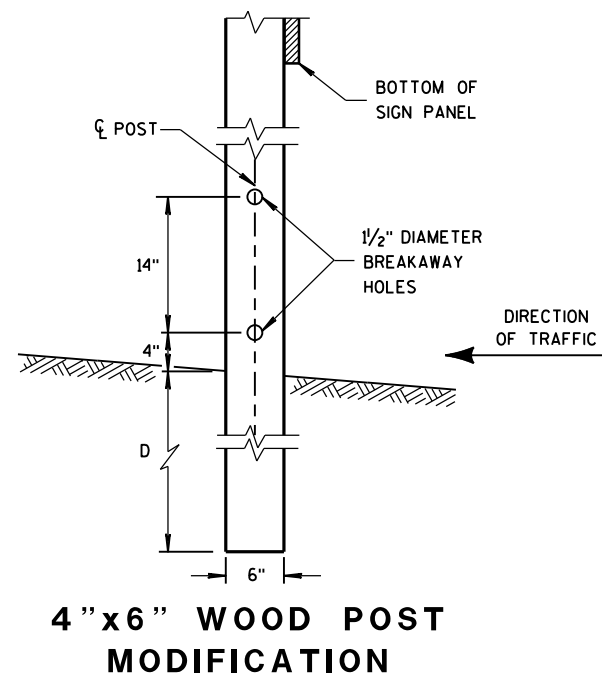
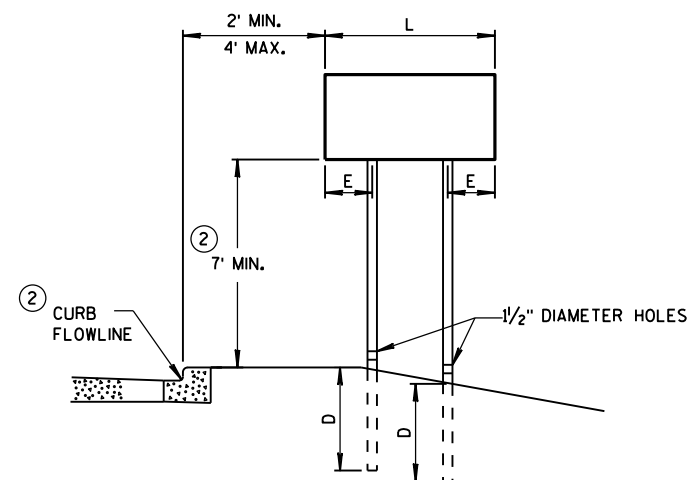
*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



- ## GENERAL NOTES
- 1 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
 - 2 THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
 - 3 FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

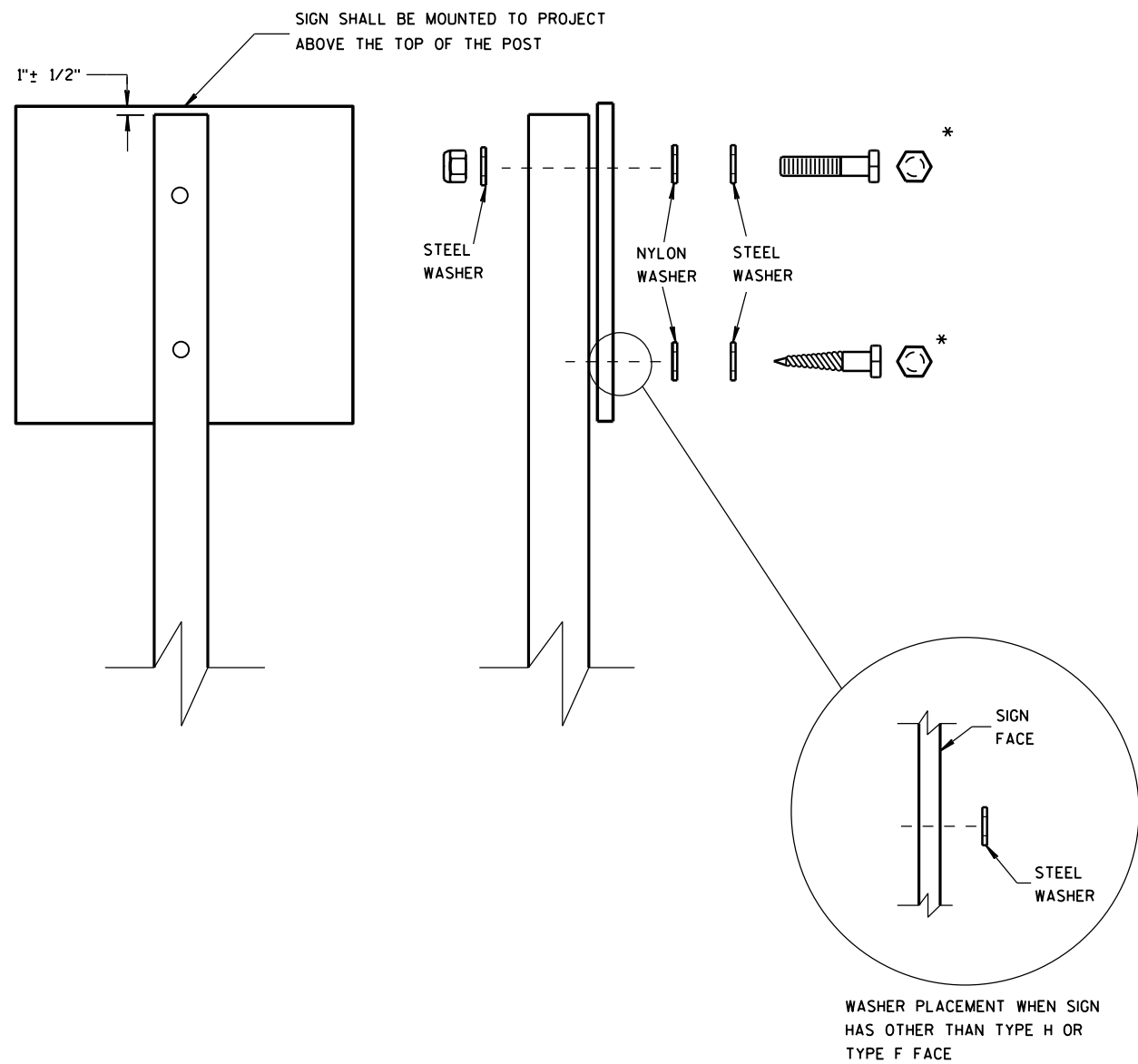
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
 - MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

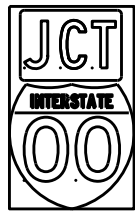
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

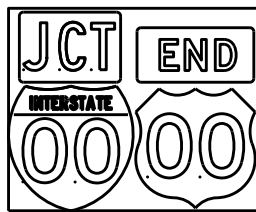
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Feb. 2015 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

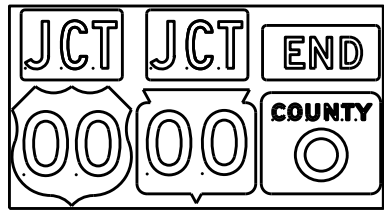
TYPICAL ASSEMBLIES



J1-1



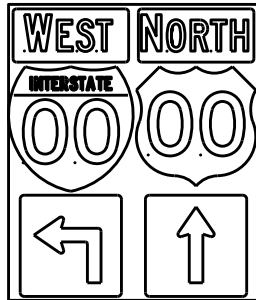
J1-2



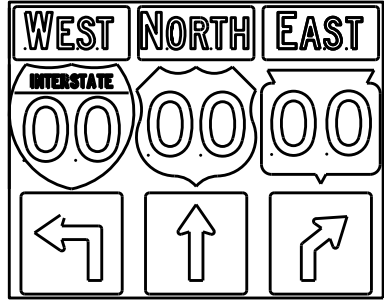
J1-3



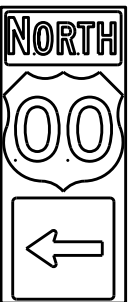
J2-1



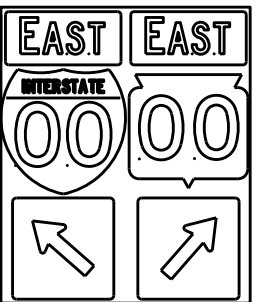
J2-2



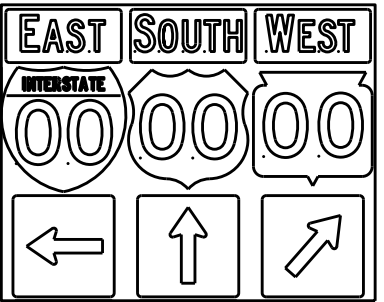
J2-3



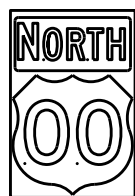
J3-1



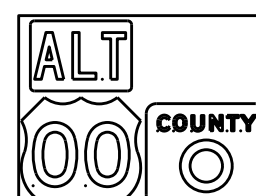
J3-2



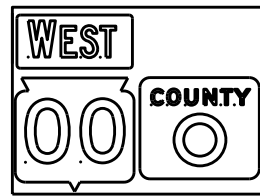
J3-3



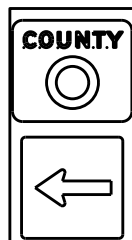
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

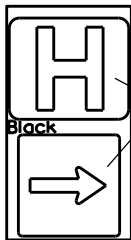


J22-1



JV

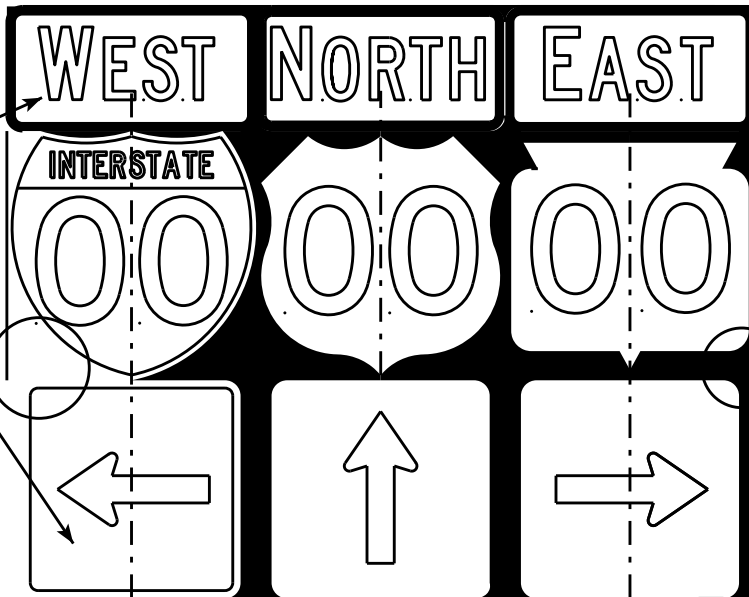
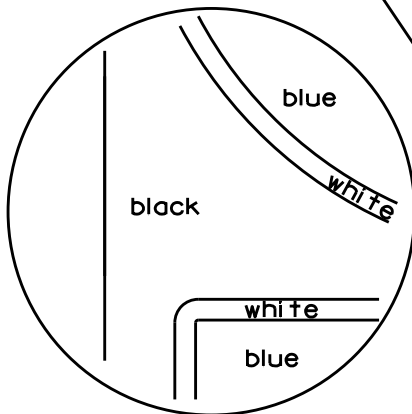
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

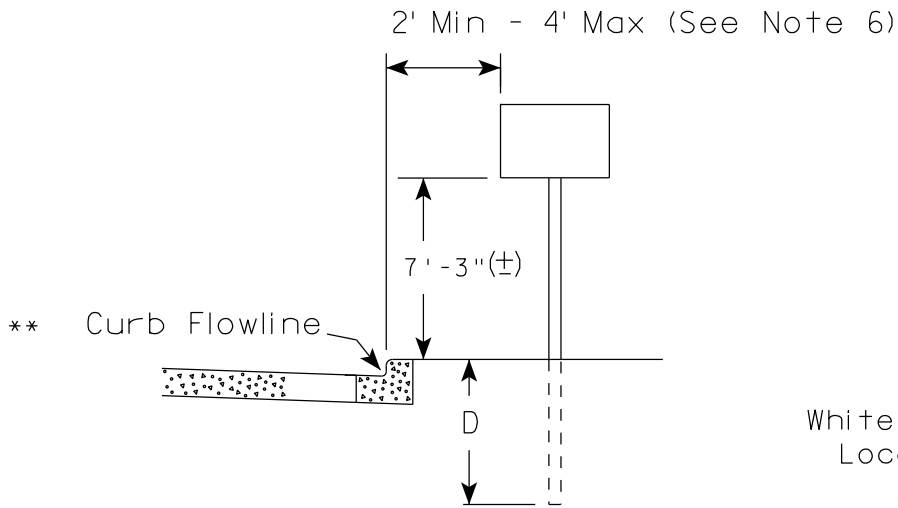
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

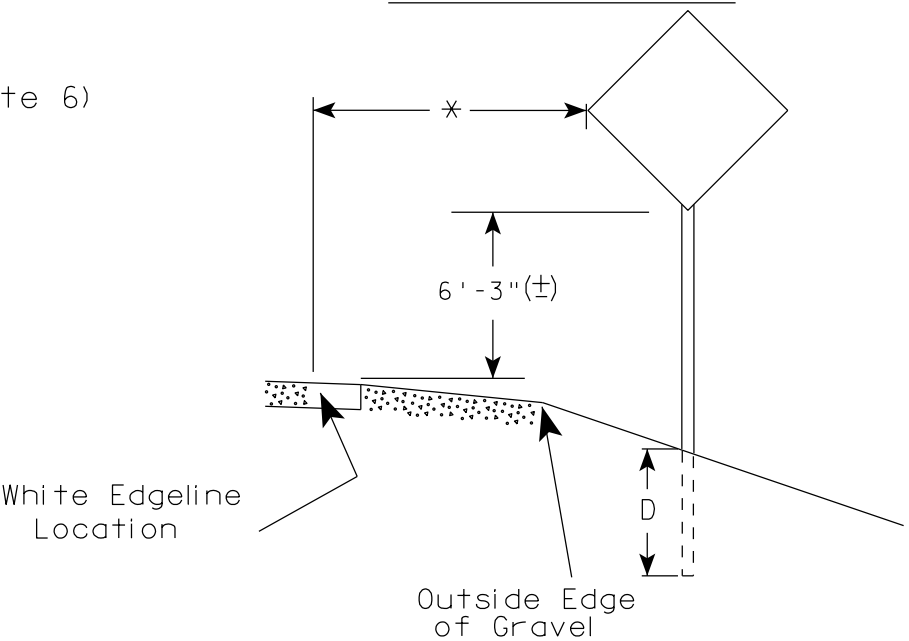
NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

URBAN AREA

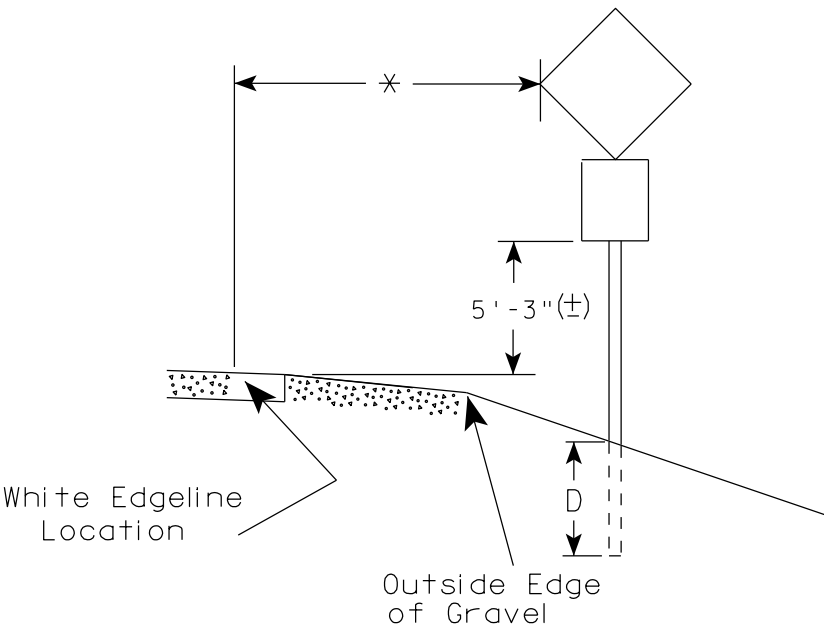
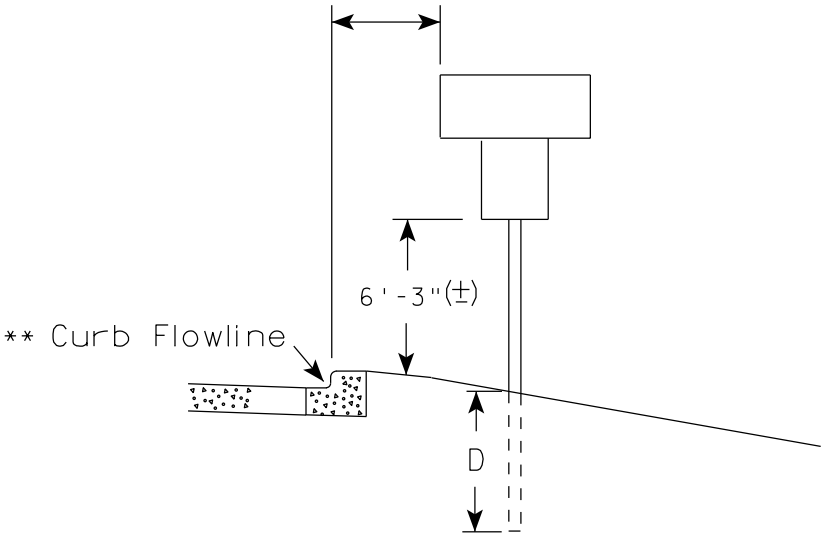


RURAL AREA (See Note 2)



- GENERAL NOTES
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
 2. If signs are mounted on barrier wall, see A4-10 sign plate.
 3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
 4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. The (±) tolerance for mounting height is 3 inches.
 8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

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



POST EMBEDMENT DEPTH

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

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

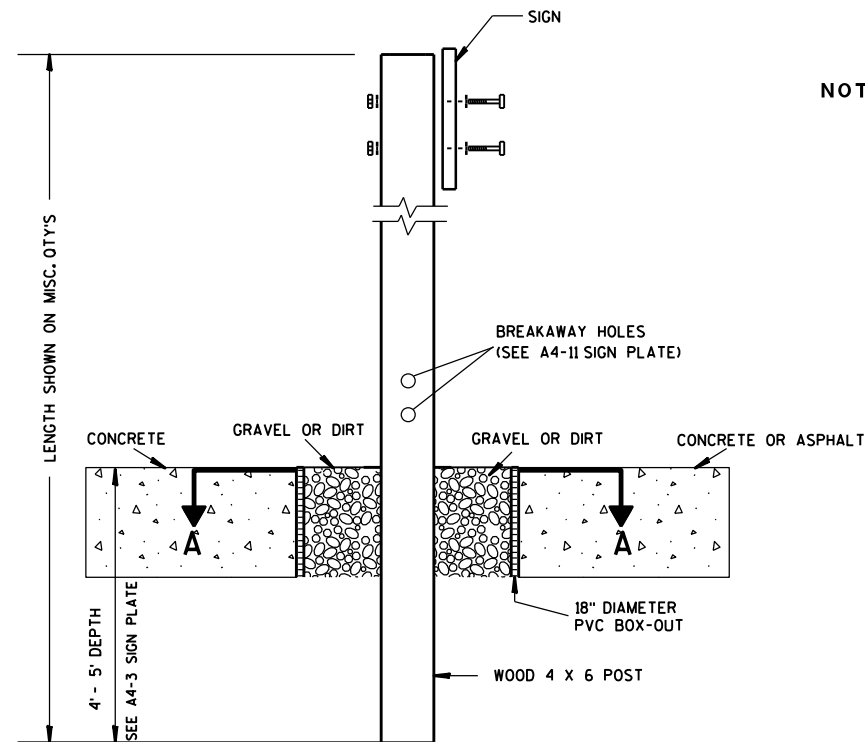
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

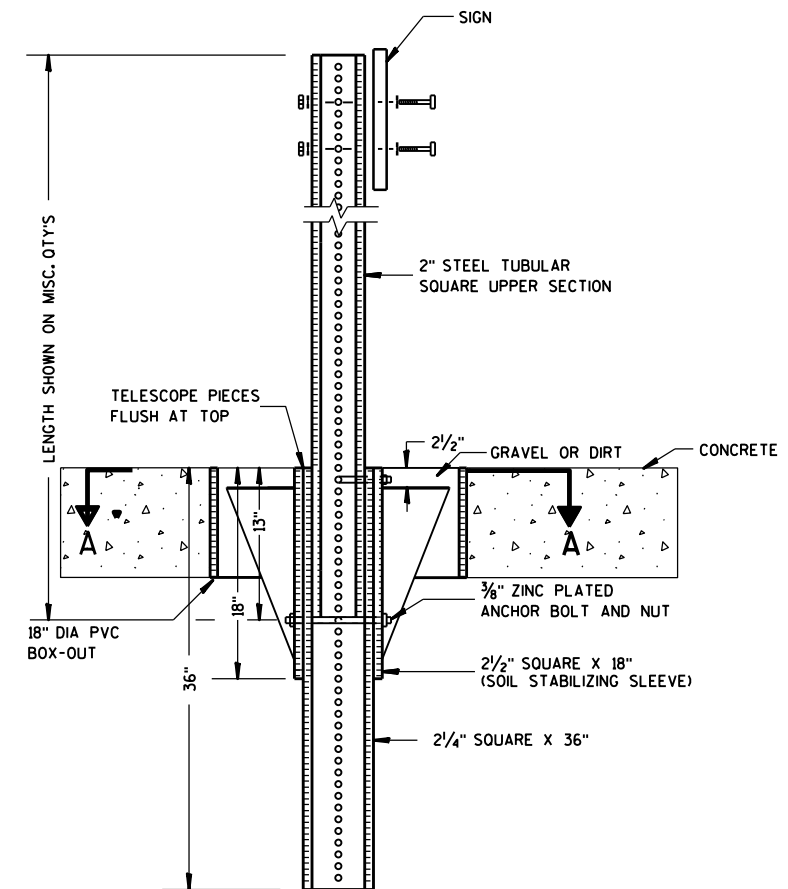
DATE 7/23/15 PLATE NO. A4-3.20



ELEVATION VIEW

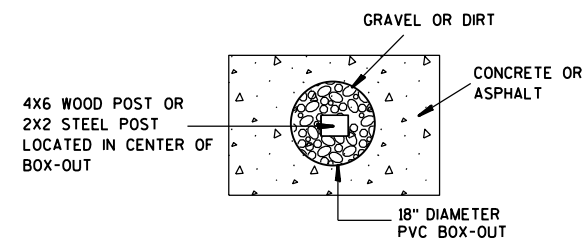
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

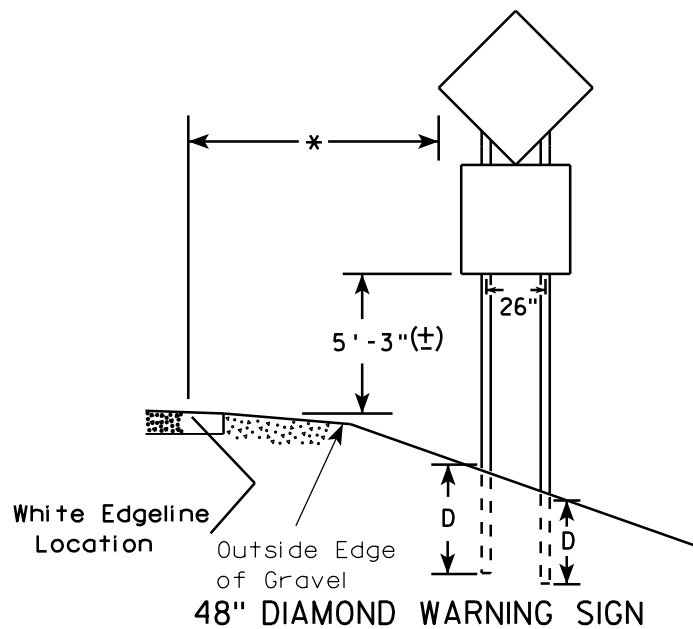
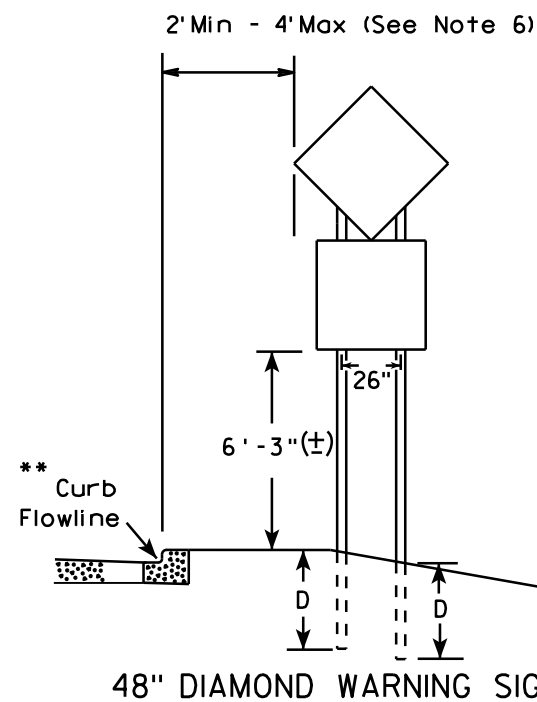
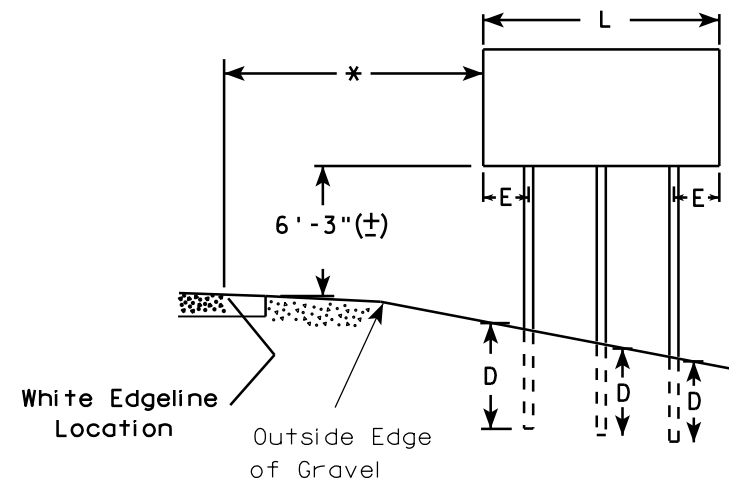
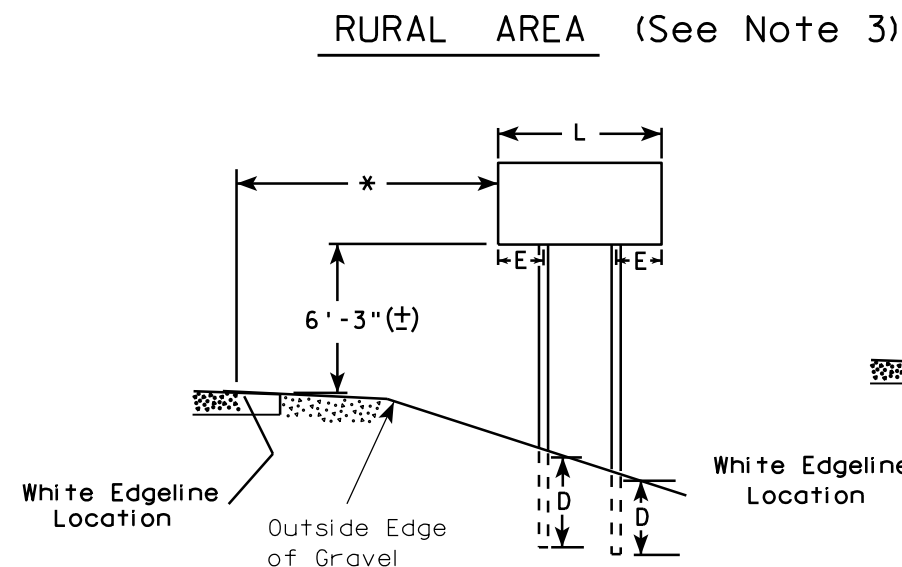
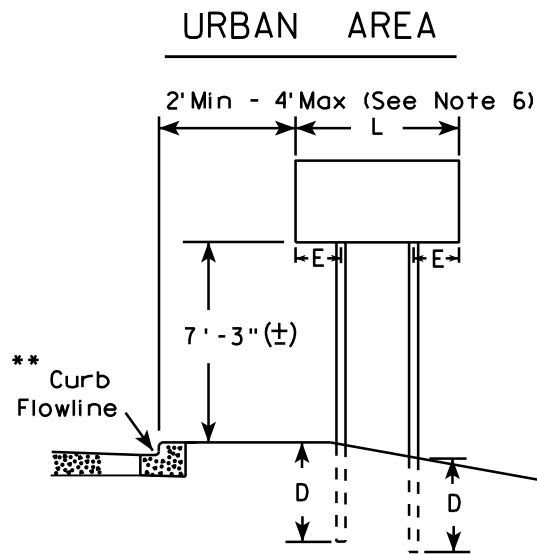
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



- GENERAL NOTES**
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

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

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

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

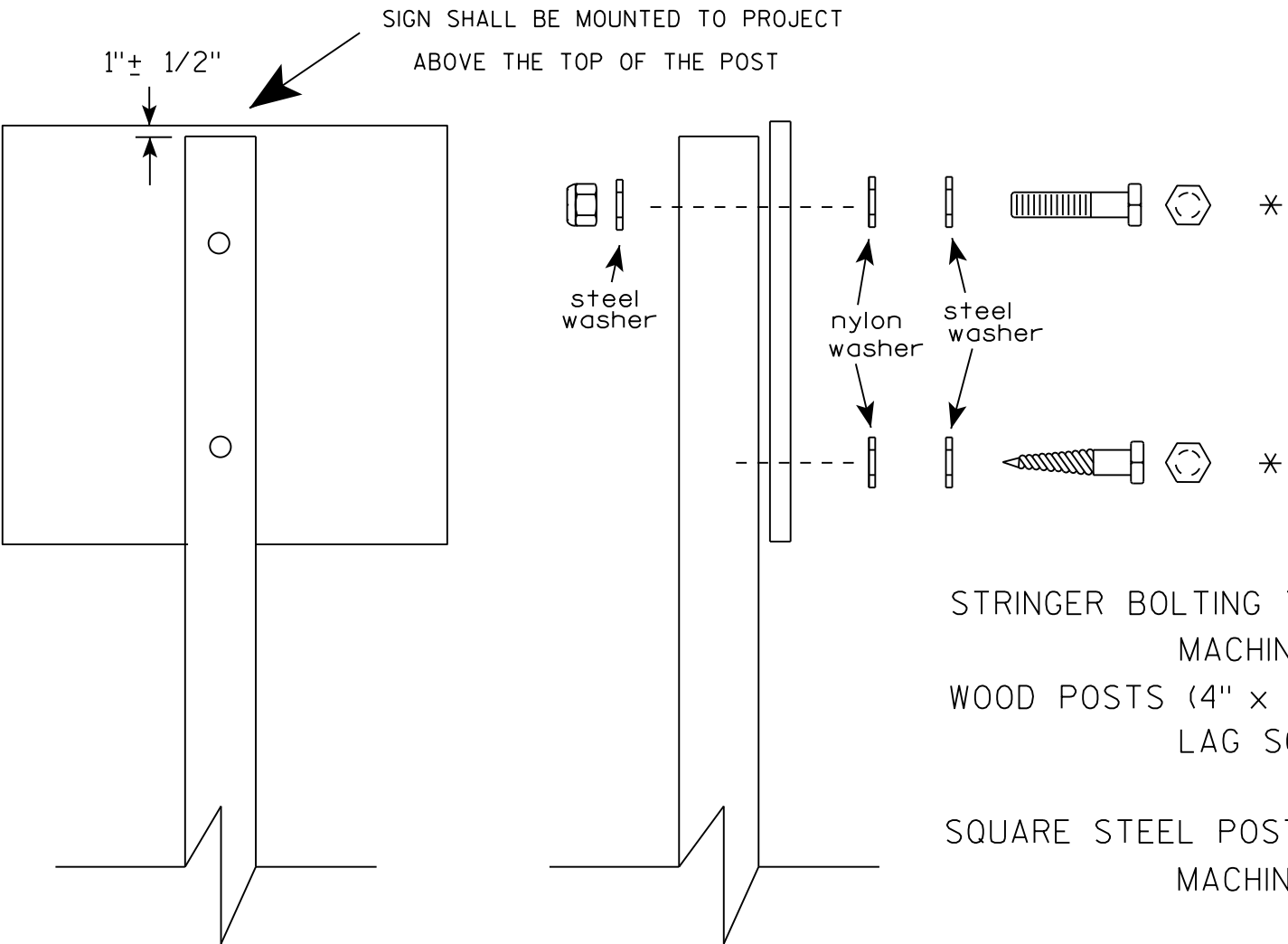
SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/23/15	PLATE NO. A4-4.14



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

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

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

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
 - 3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

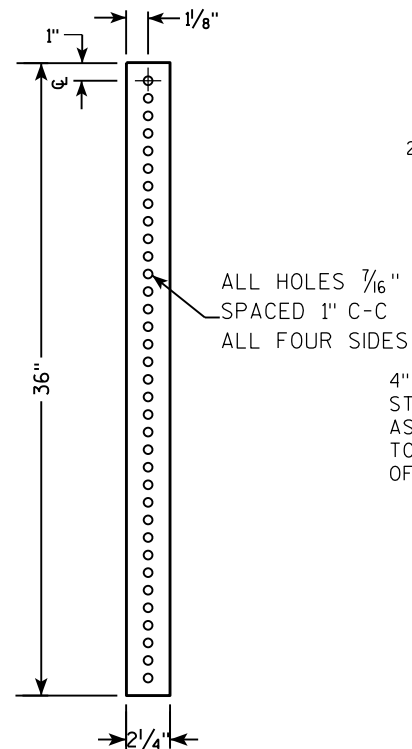
ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

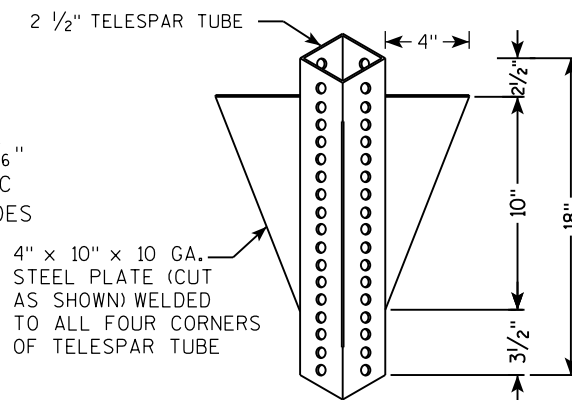
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



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



LENGTH SHOWN ON MISC. Q'TYS

18" DIA SCHEDULE 40 PVC BOX-OUT

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

2 1/2" GRAVEL OR DIRT

36"

13"

18"

2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

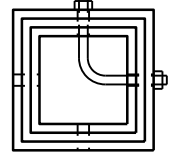
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

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

PROJECT NO:

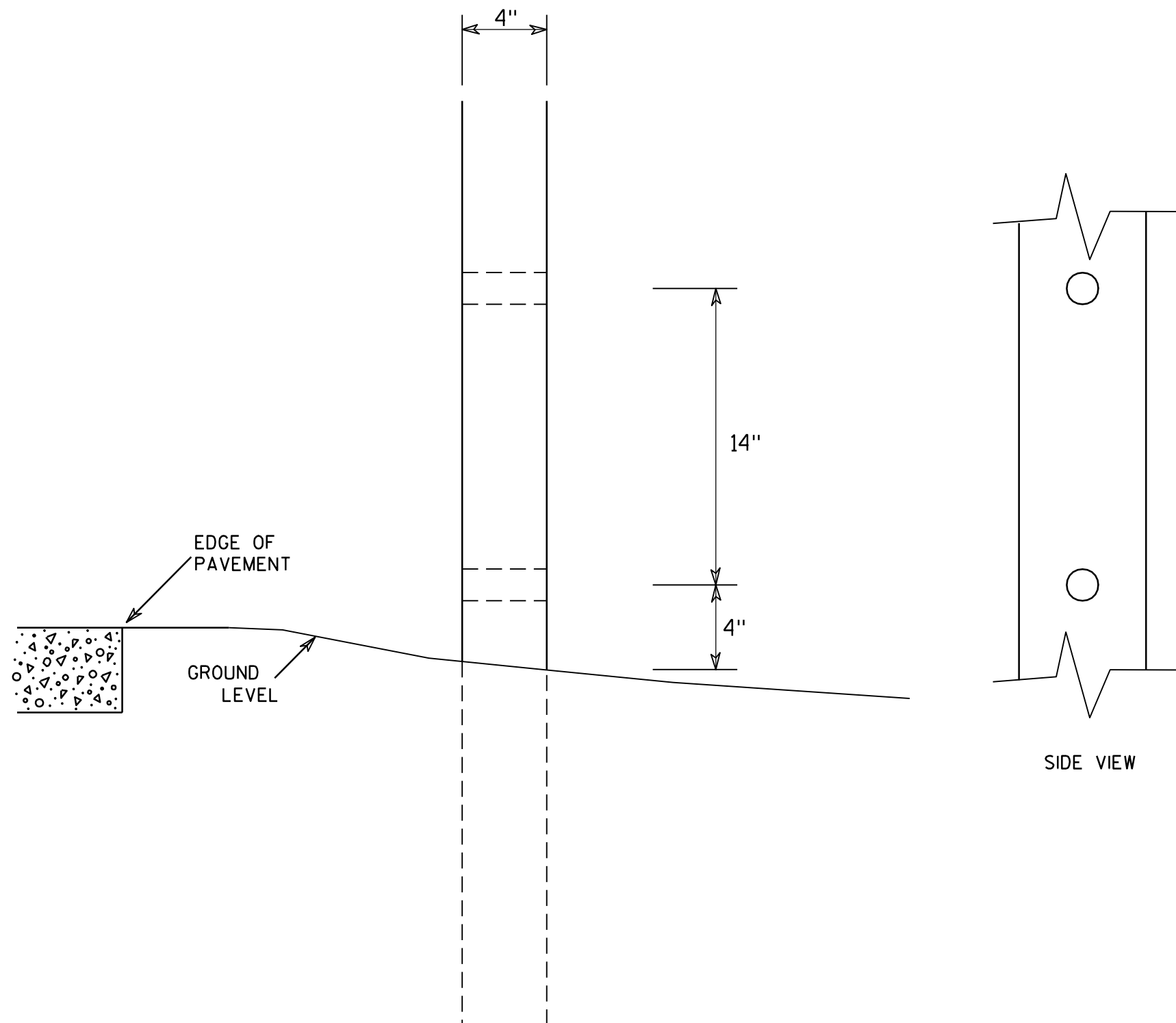
HWY:

COUNTY:

SHEET NO:

11

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

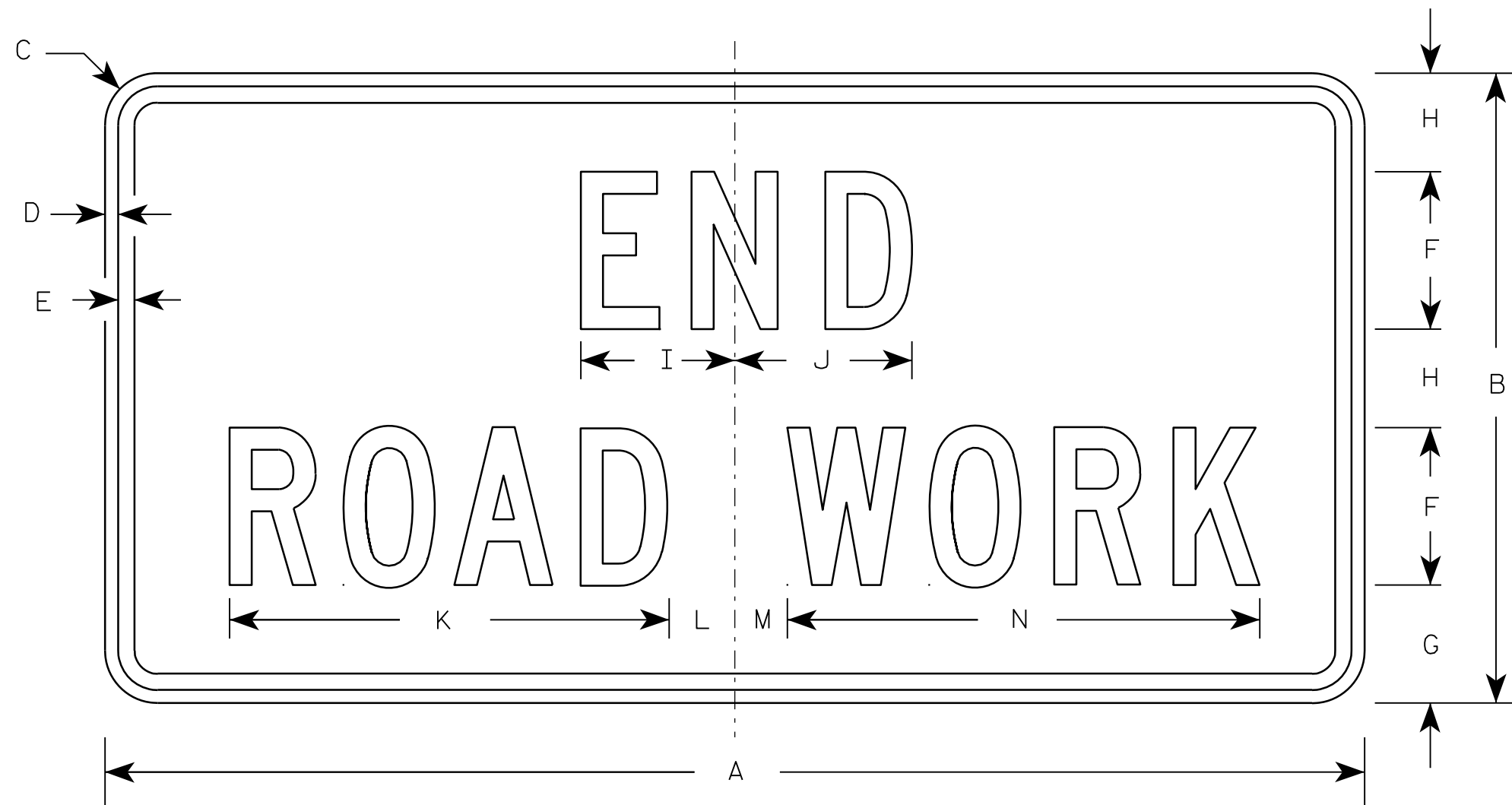
HWY:

COUNTY:

SHEET NO:

E

7



G20-2A

Metric equivalent
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area m ²
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

PROJECT NO:

HWY:

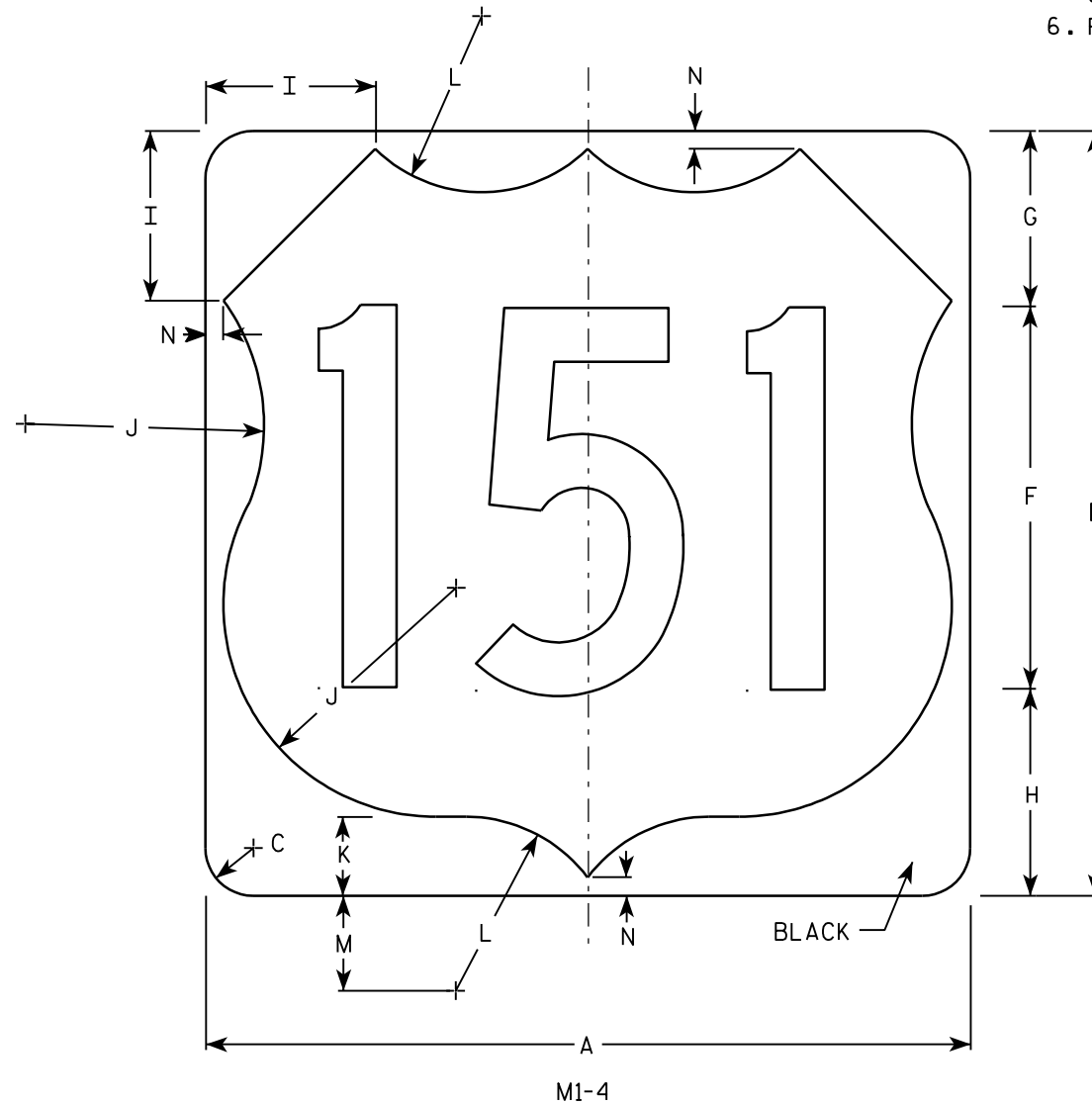
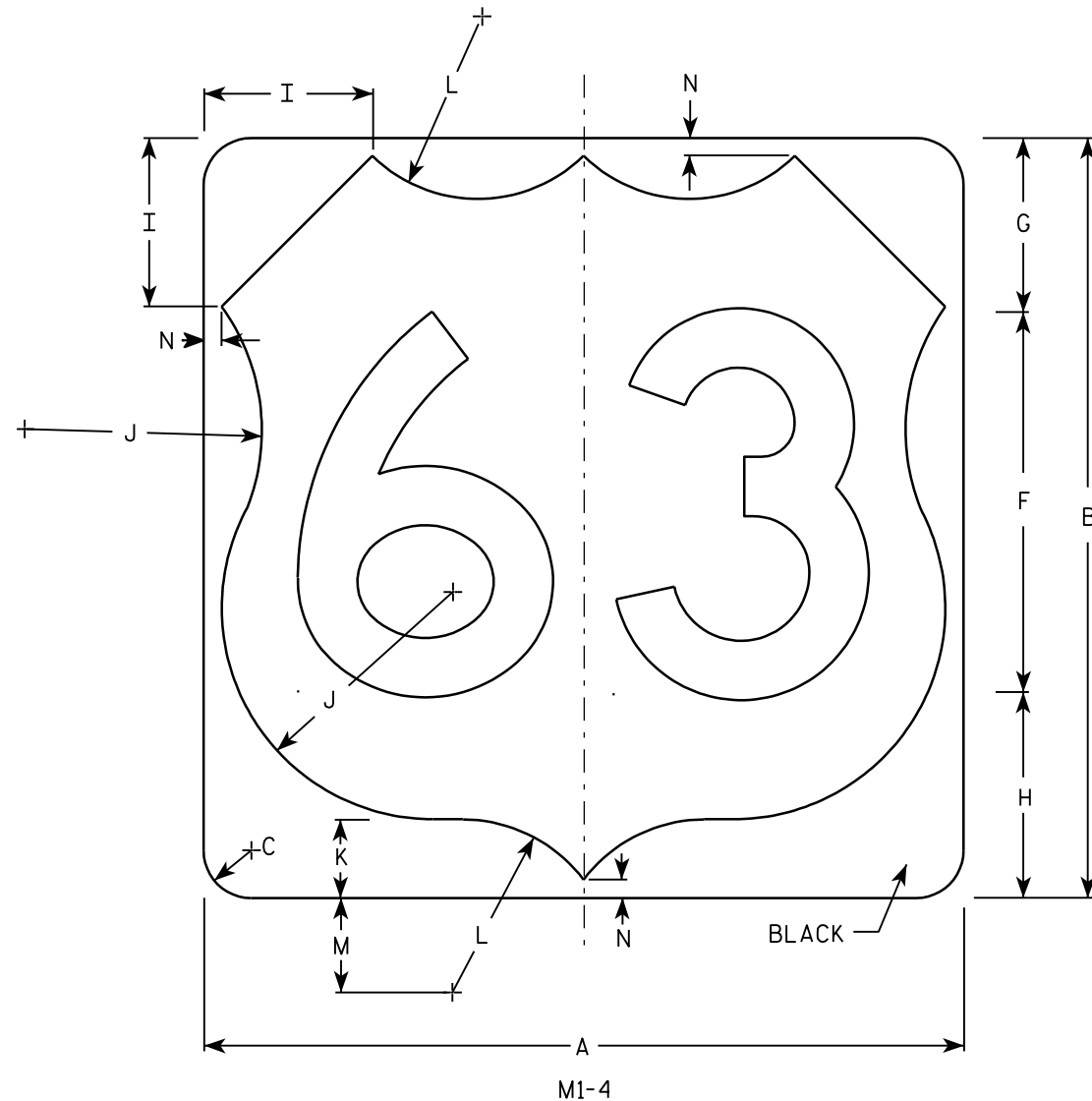
COUNTY:

SHEET NO:

E

NOTES

- Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White & Black - See Note 6
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Substitute appropriate numerals and adjust spacing as per Plate A10-1.
- Permanent Signs
Background - Type H Reflective
Detour or other temporary signs
Background - Reflective



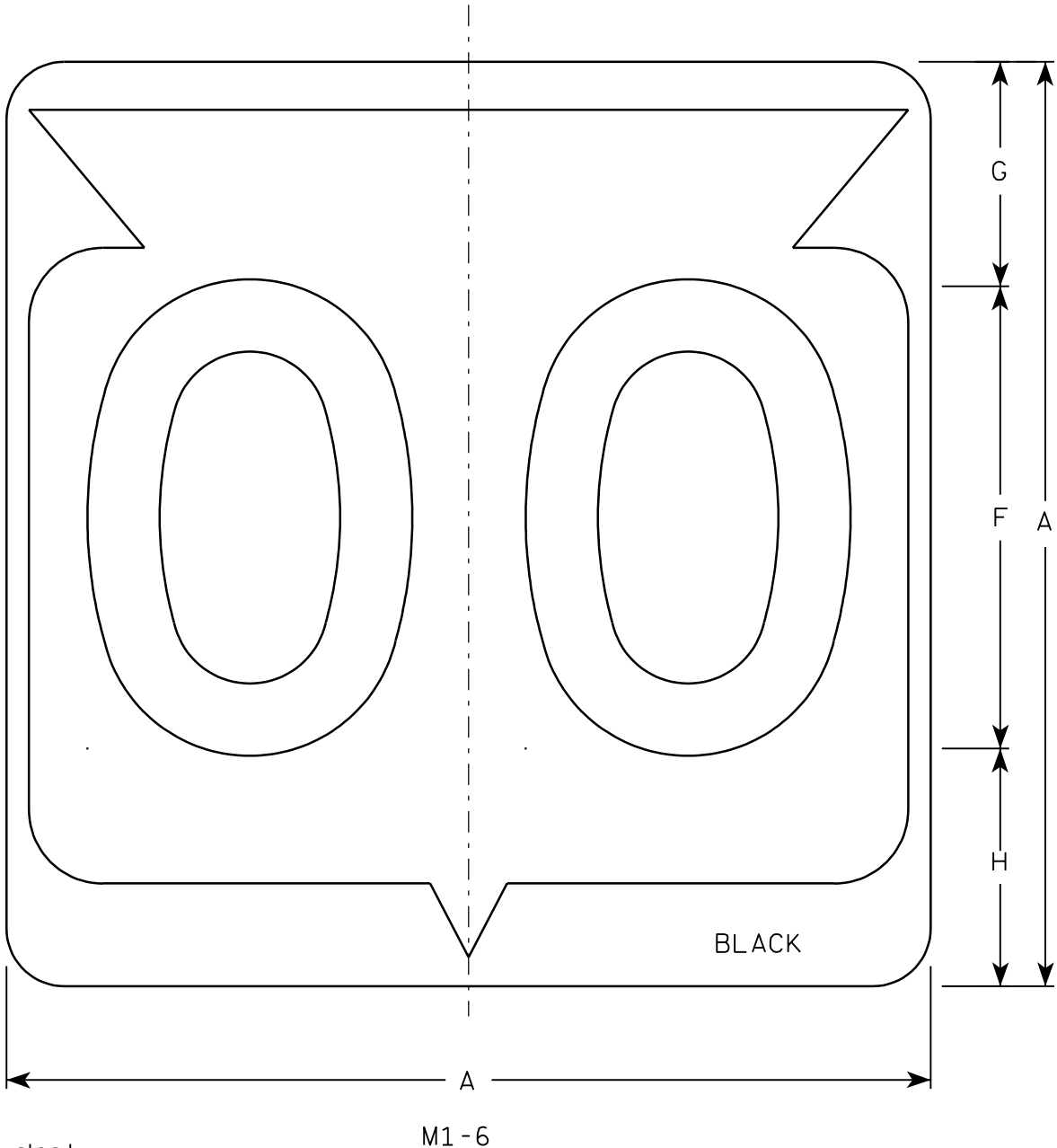
Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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	Areq sq. ft.	Areq m ²
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

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

7



Metric equivalent
for this sign is:

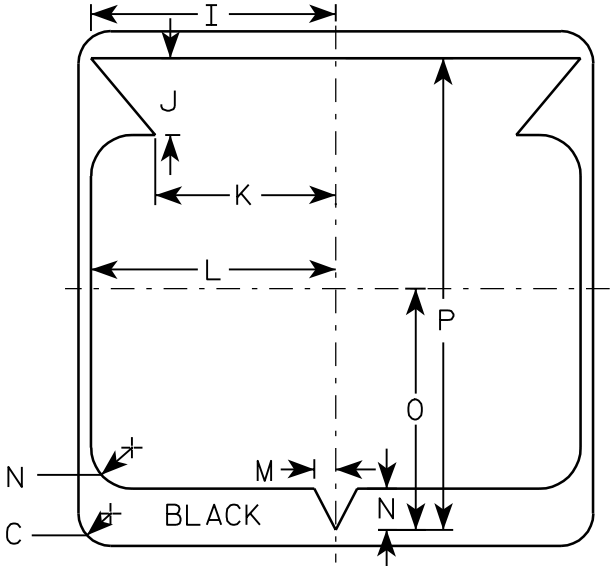
SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

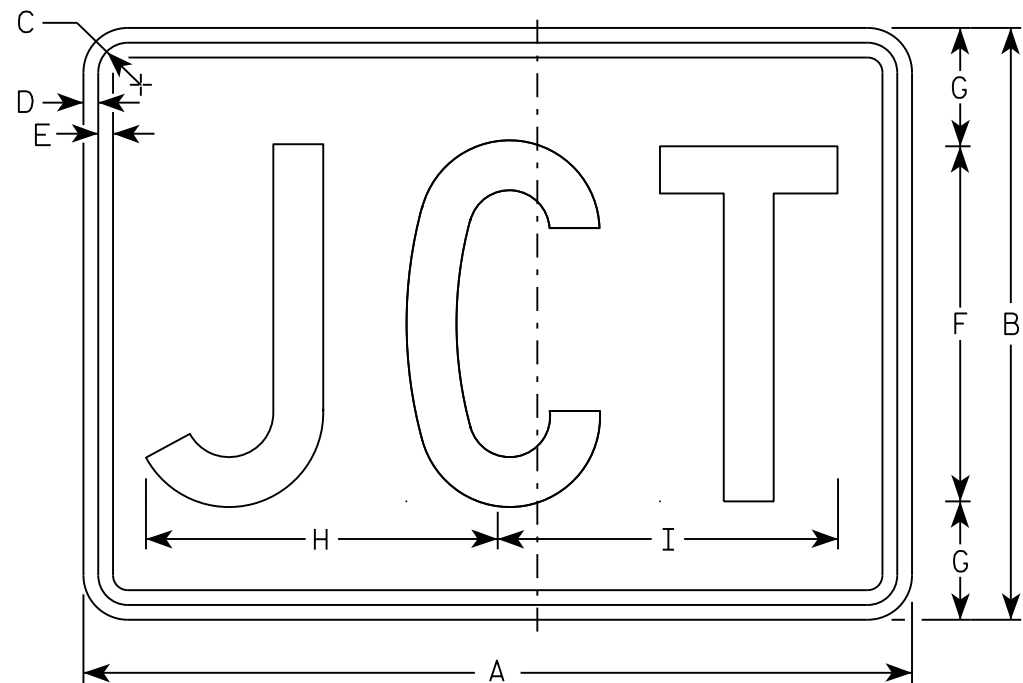
PROJECT NO:				HWY:				COUNTY:																SHEET NO:				E
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NOTES

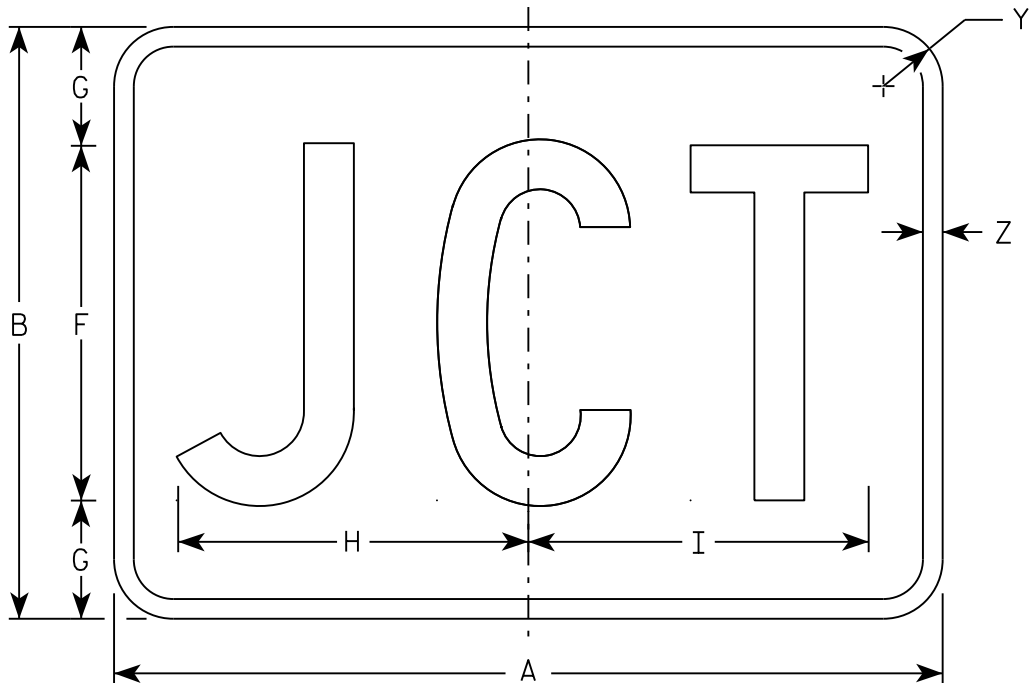
- Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White & Black - See Note 6
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
- Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

- 1. Sign is Type II - Type H
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M2-1 Background - White
Message - Black
MB2-1 Background - Blue
Message - White
MK2-1 Background - Green
Message - White
MM2-1 Background - White
Message - Green
MN2-1 Background - Brown
Message - White
MP2-1 Background - White
Message - Blue
MR2-1 Background - Brown
Message - Yellow

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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

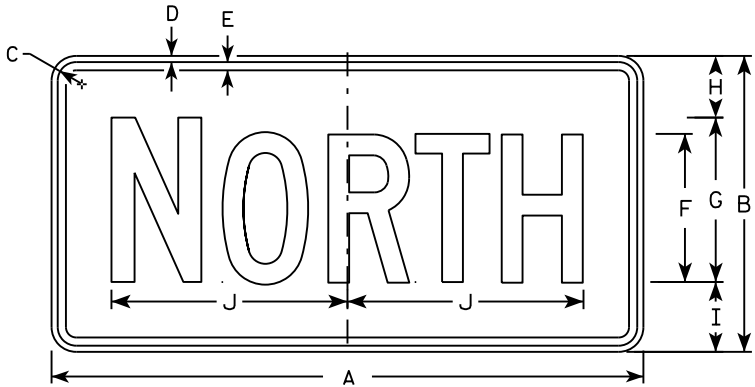
APPROVED

Matthew R. Rauch

For State Traffic Engineer

DATE 10/15/15

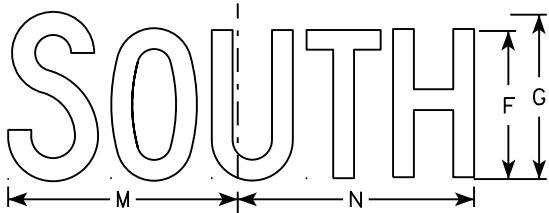
PLATE NO. M2-1.12



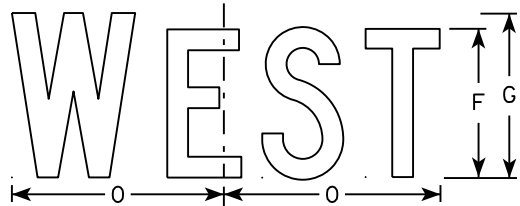
M3-1
MM3-1
MP3-1



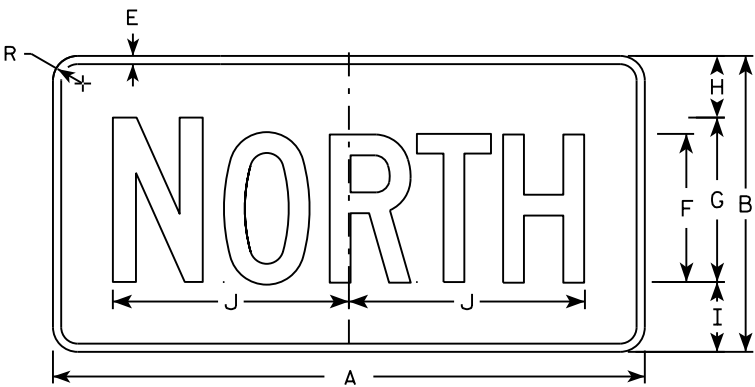
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MM3-2
MP3-2



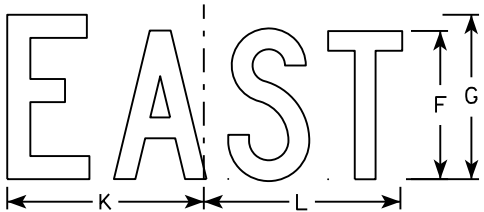
M3-3
MM3-3
MP3-3



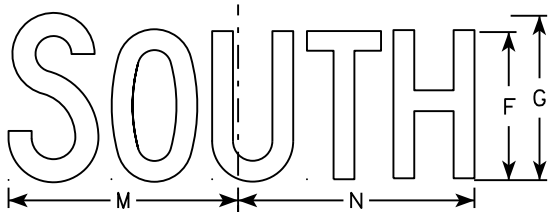
M3-4
MM3-4
MP3-4



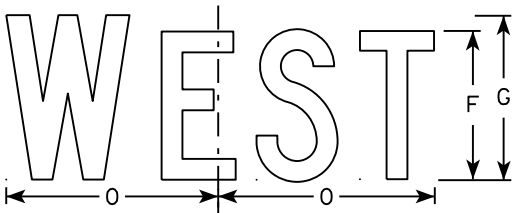
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

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	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

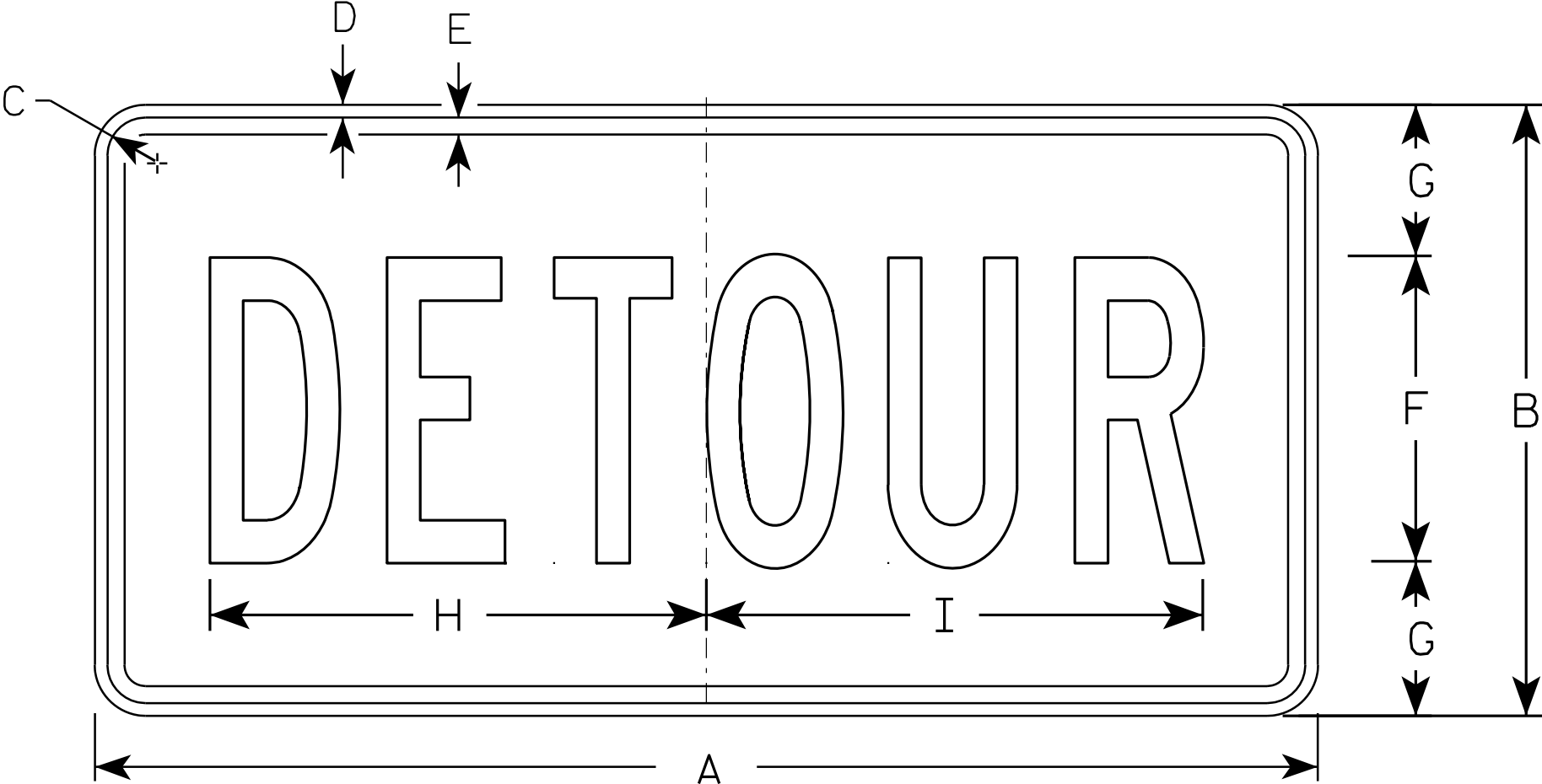
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



M4 - 8

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	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4 - 8

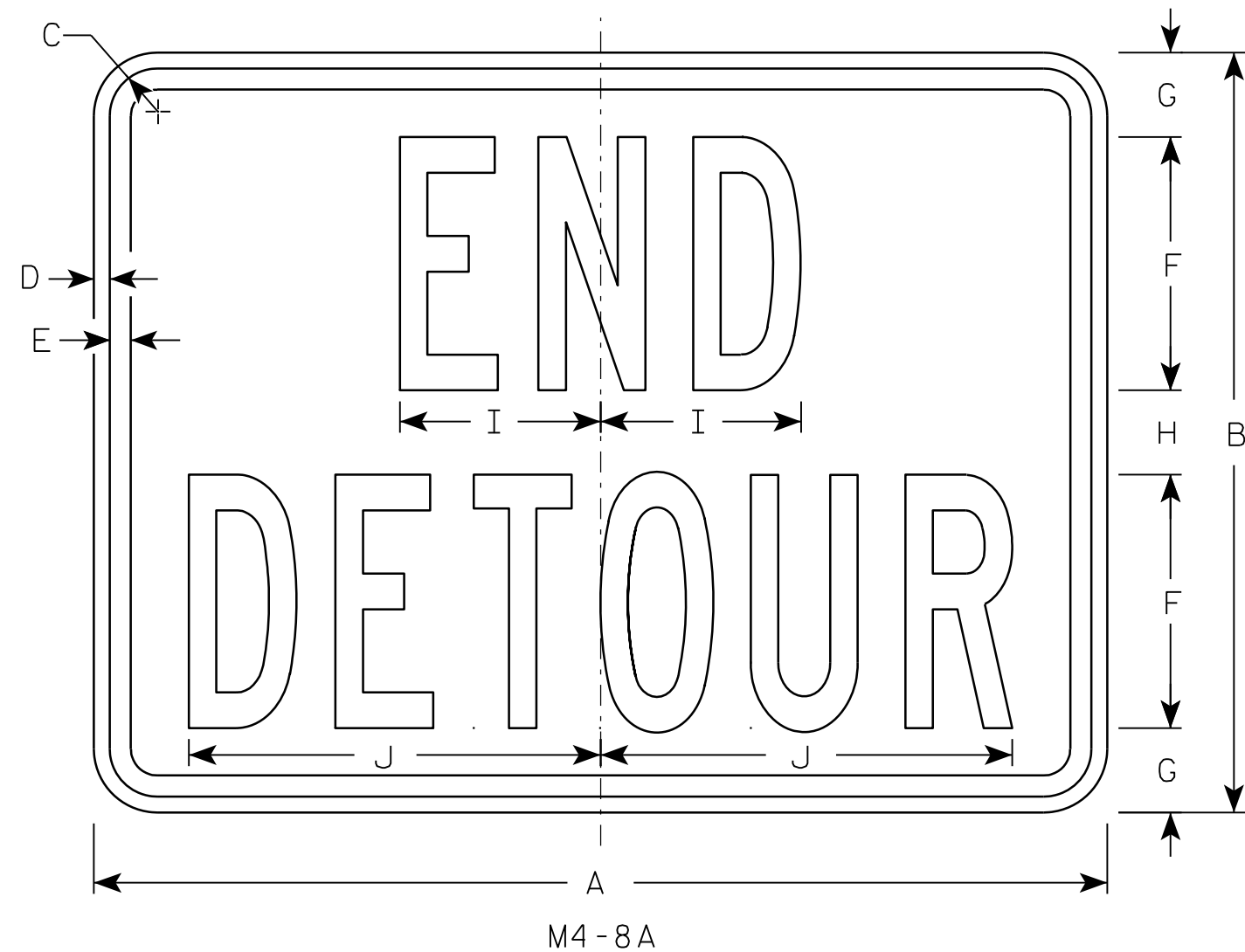
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

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	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

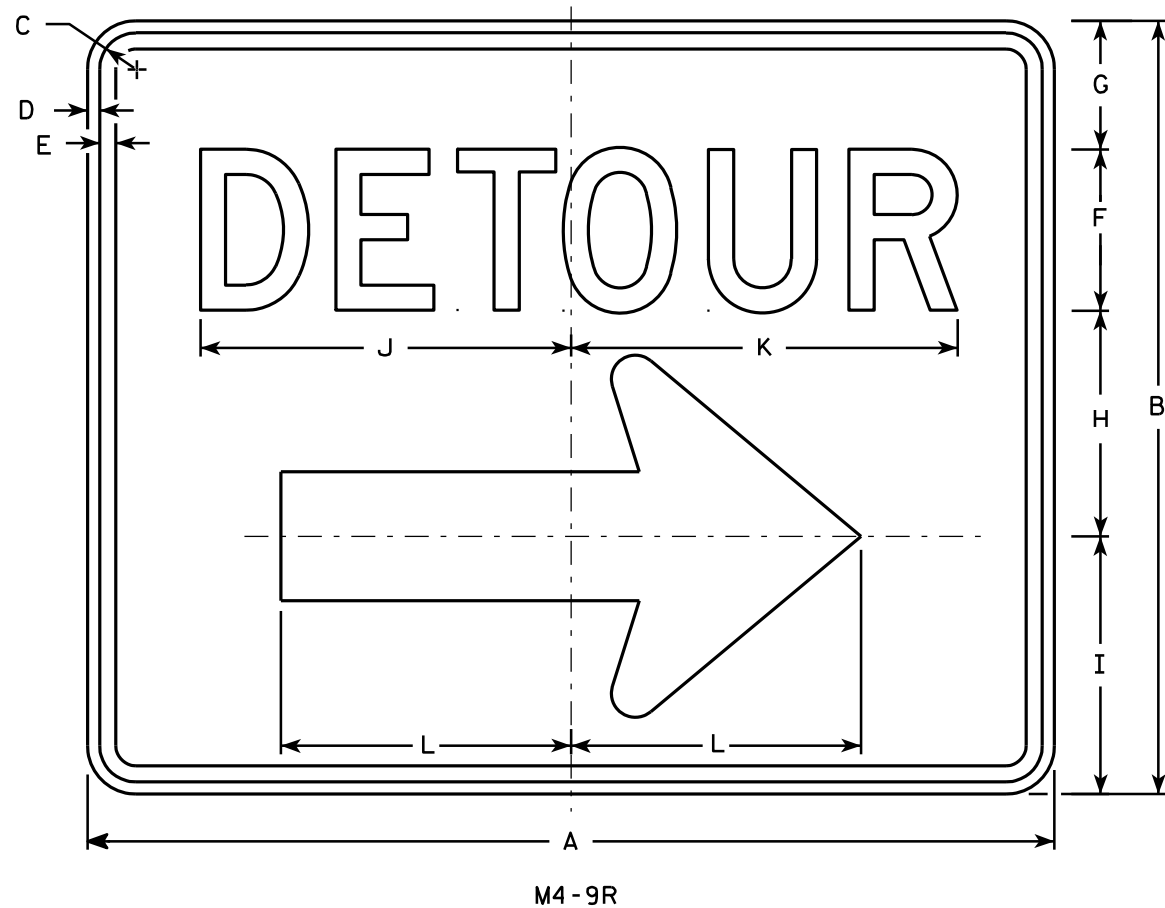
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M4-8A

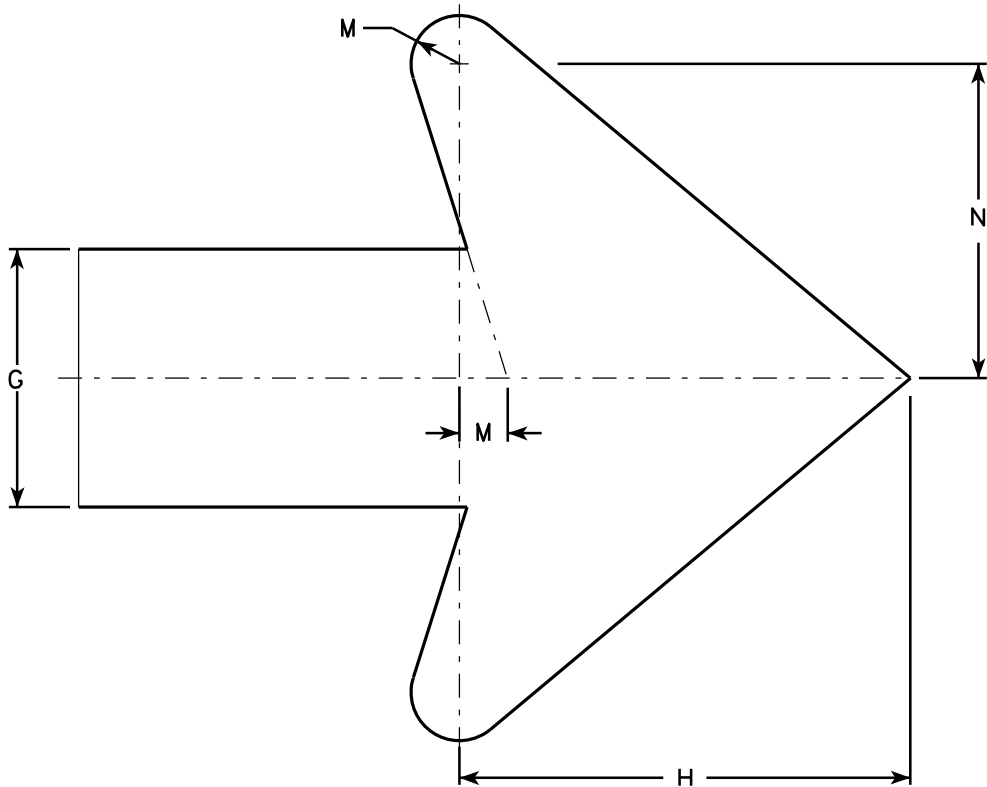
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2



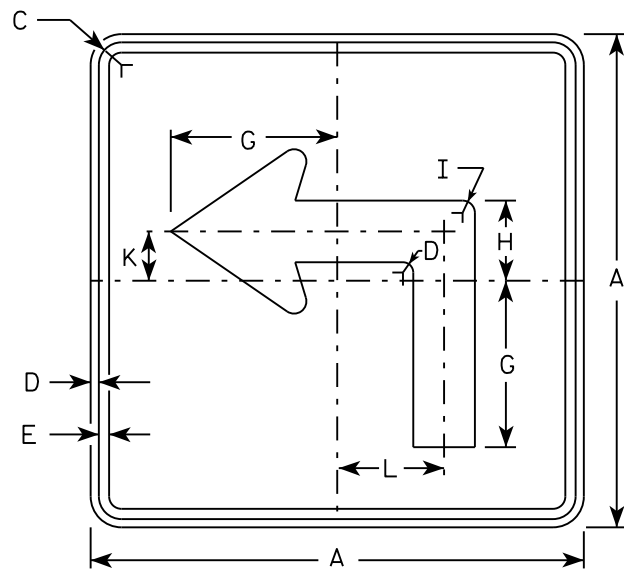
- NOTES**
- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 - 2. Color:
Background - Orange
Message - Black
 - 3. Message Series - D
 - 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - 5. M4-9L is the same as M4-9R except the arrow is reversed.



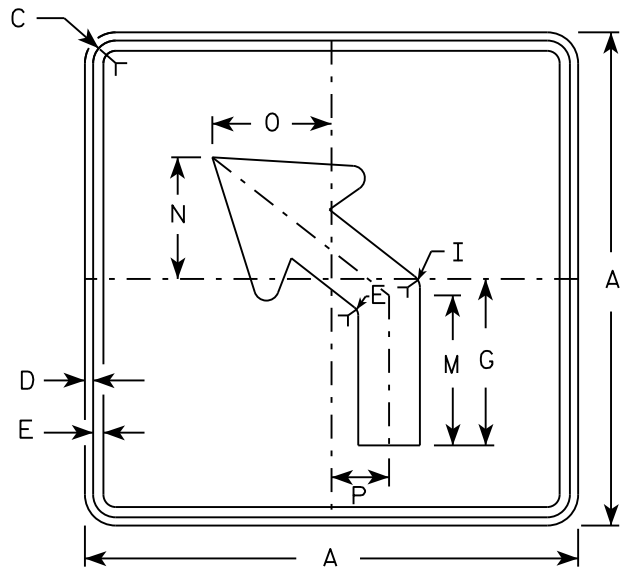
Arrow Detail

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	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

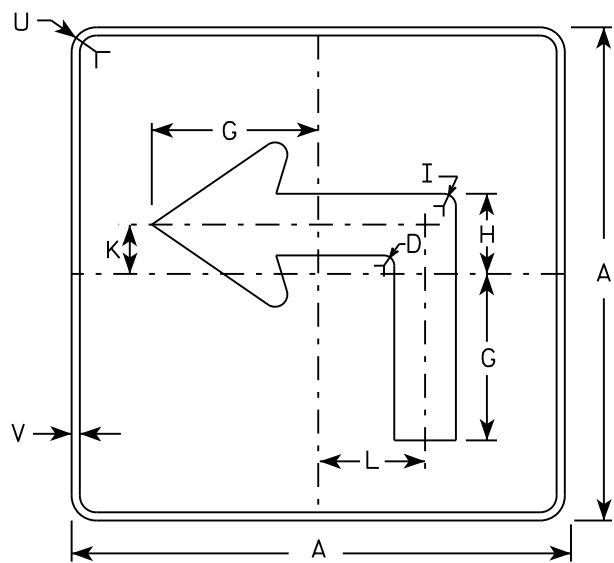
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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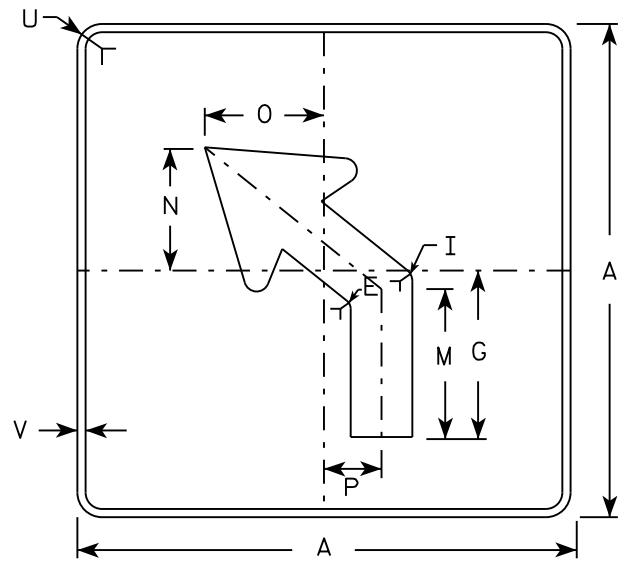
M5-1L
MM5-1L
M05-1L
MP5-1L



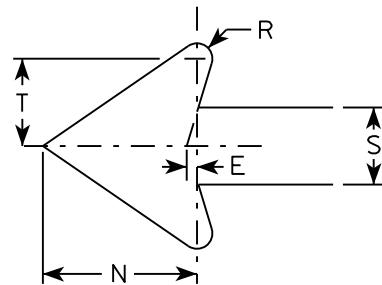
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | |
|-----------------|---|
| M5-1 and M5-2 | Background - White |
| | Message - Black |
| MB5-1 and MB5-2 | Background - Blue |
| | Message - White |
| MK5-1 and MK5-2 | Background - Green |
| | Message - White |
| MM5-1 and MM5-2 | Background - White |
| | Message - Green |
| MN5-1 and MN5-2 | Background - Brown |
| | Message - White |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
| | Message - Black |
| MP5-1 and MP5-2 | Background - White - Type H Reflective |
| | Message - Blue |
| MR5-1 and MR5-2 | Background - Brown |
| | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

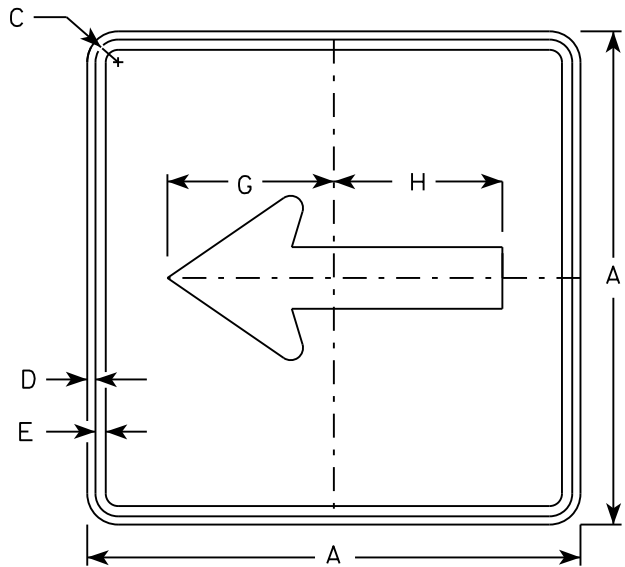
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

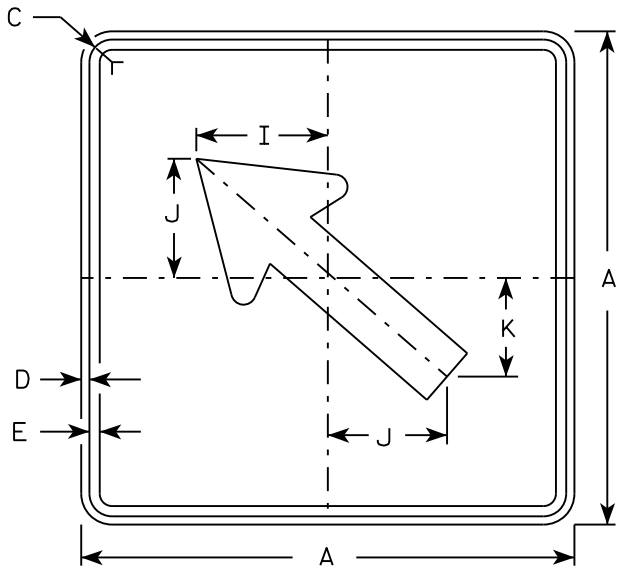
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

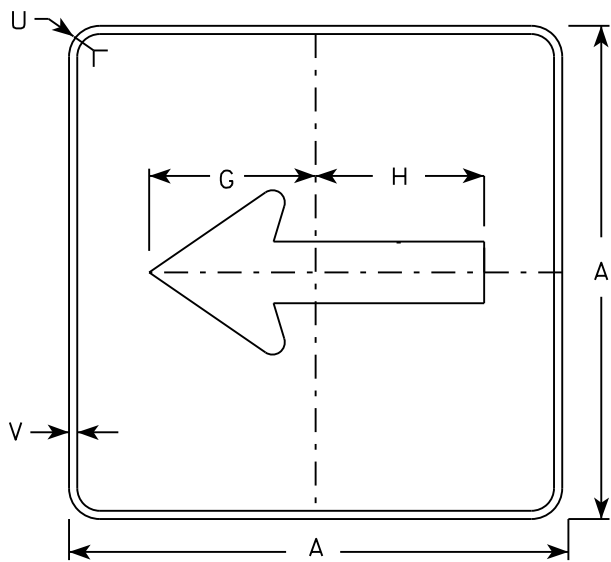
DATE 10/15/15 PLATE NO. M5-1.13



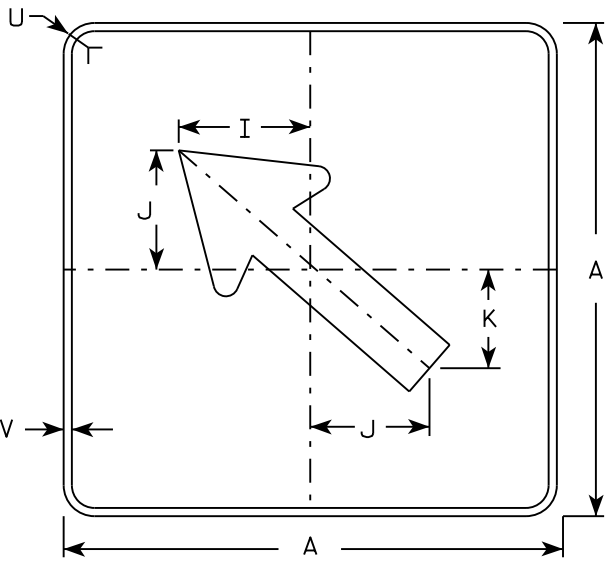
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



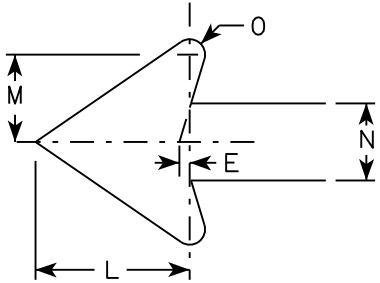
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



MB6 - 1
MK6 - 1
MN6 - 1
MR6 - 1



MB6 - 2
MK6 - 2
MN6 - 2
MR6 - 2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

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	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

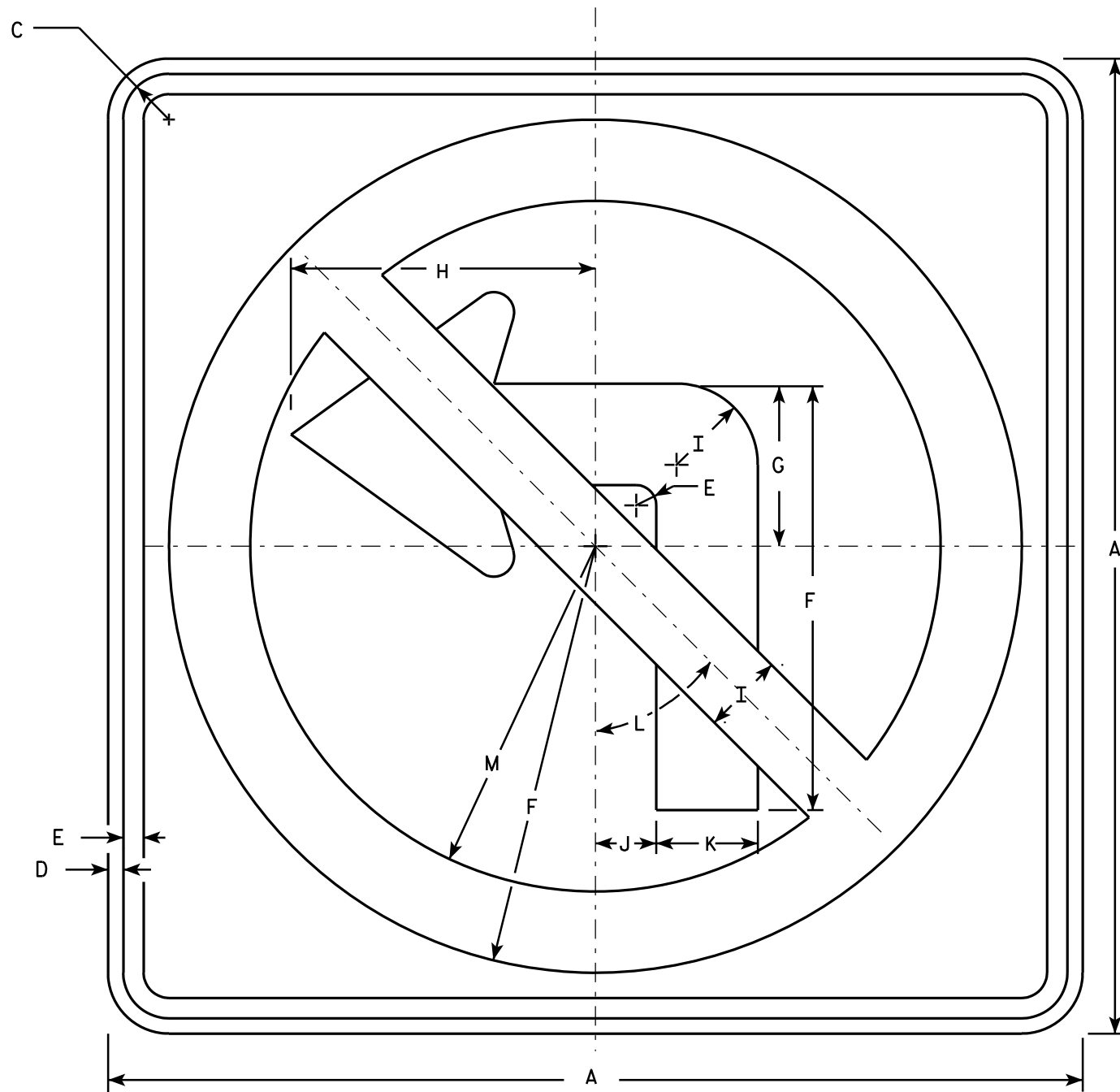
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

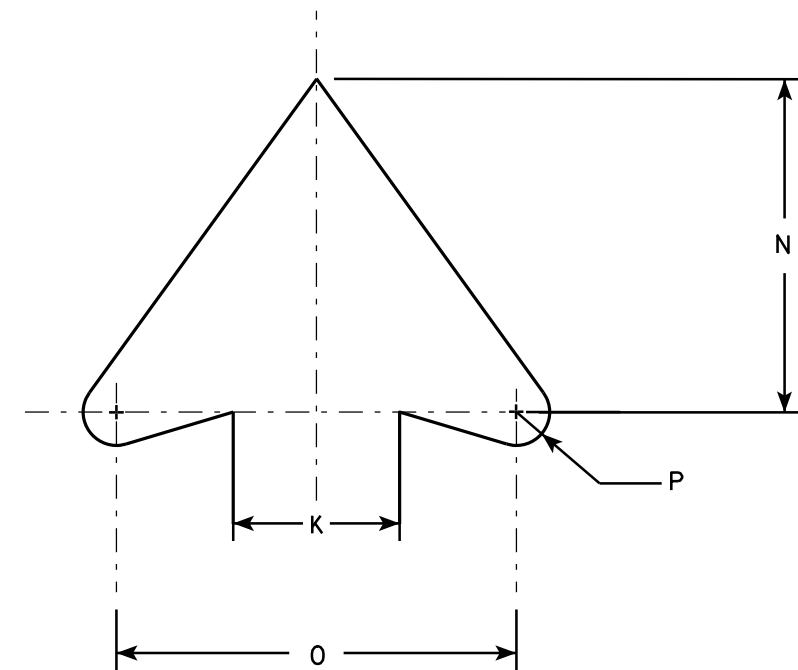
DATE 10/15/15 PLATE NO. M6-1.15



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

STANDARD SIGN R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

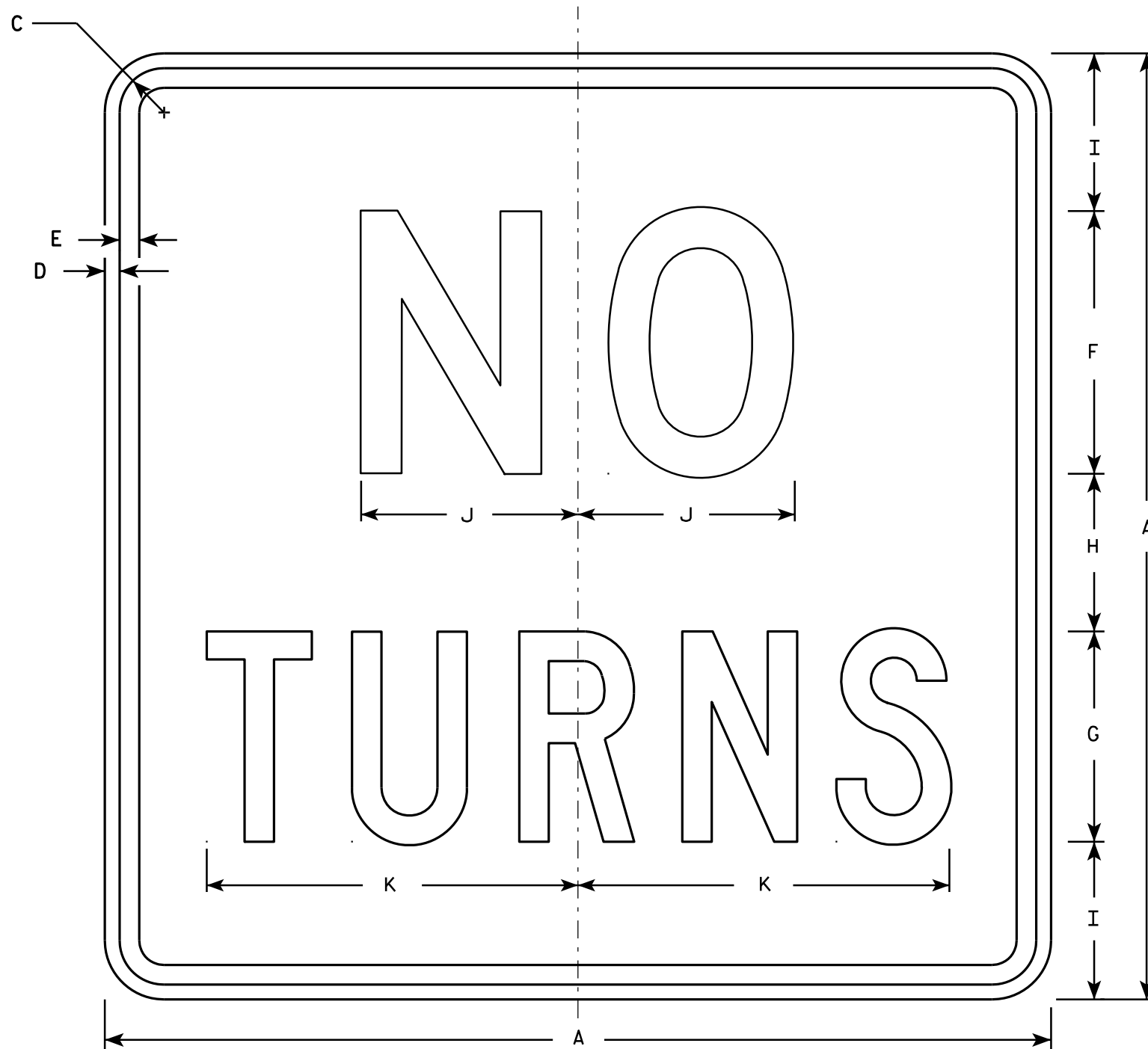
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



R3-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D and Line 2 is Series C.

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																											
2S	24		1 1/8	3/8	1/2	6	5	4	4 1/2	5 1/8	8 3/4																4.0
2M	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
3	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
4	36		1 5/8	5/8	3/4	10	8	6	6	8 1/4	14 1/8																9.0
5	48		2 1/4	3/4	1	12	10	8	9	10 1/4	17 5/8																16.0

STANDARD SIGN R3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-3.10

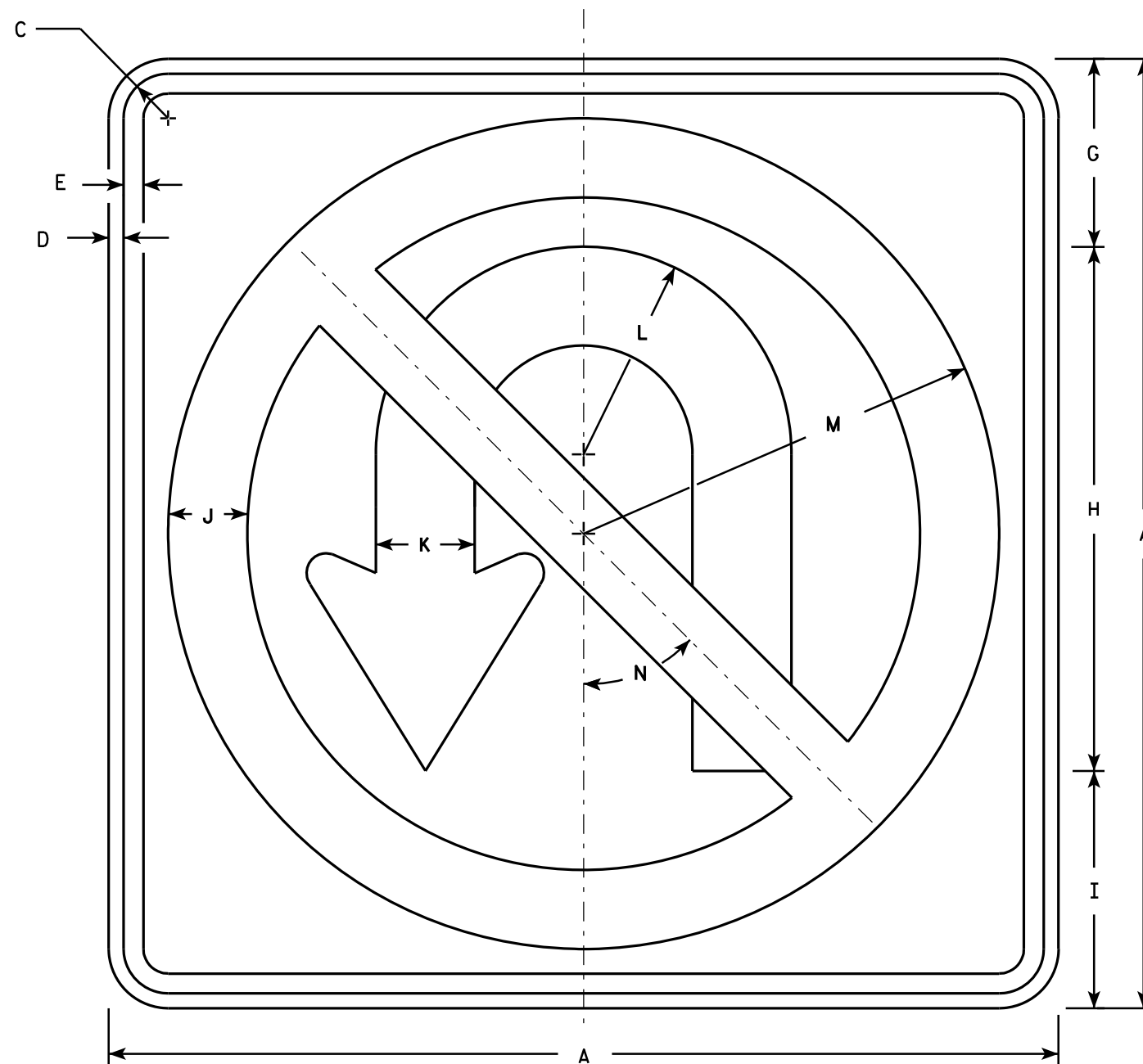
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

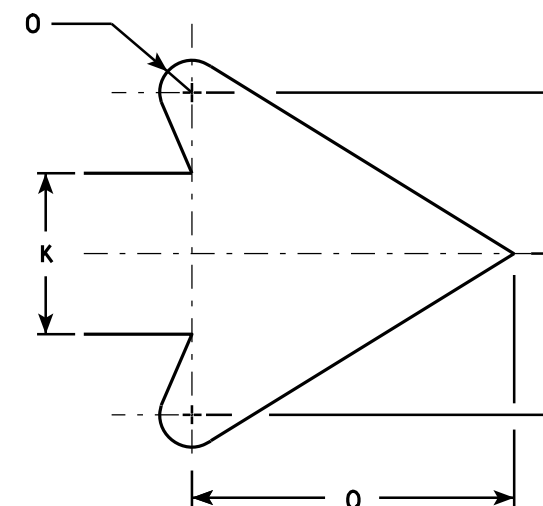
E



R3-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

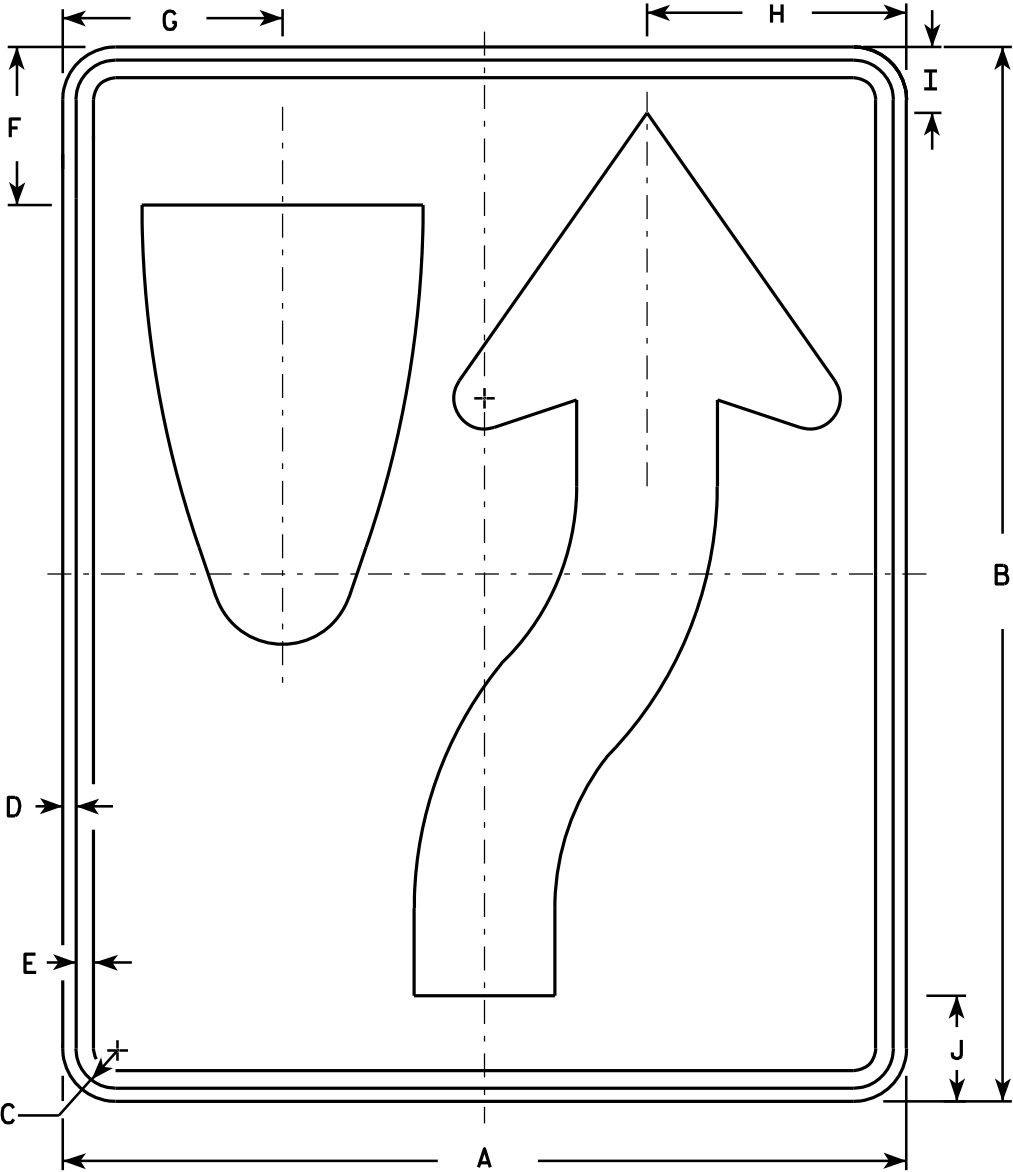
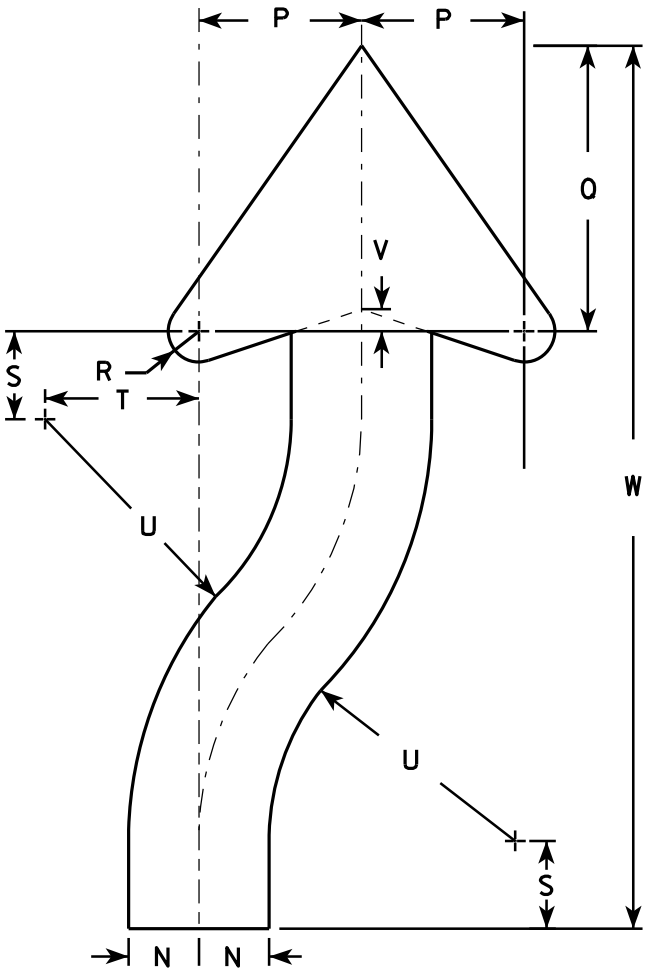
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

STANDARD SIGN R3-4	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/08/10	PLATE NO. R3-4.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
Background - White
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

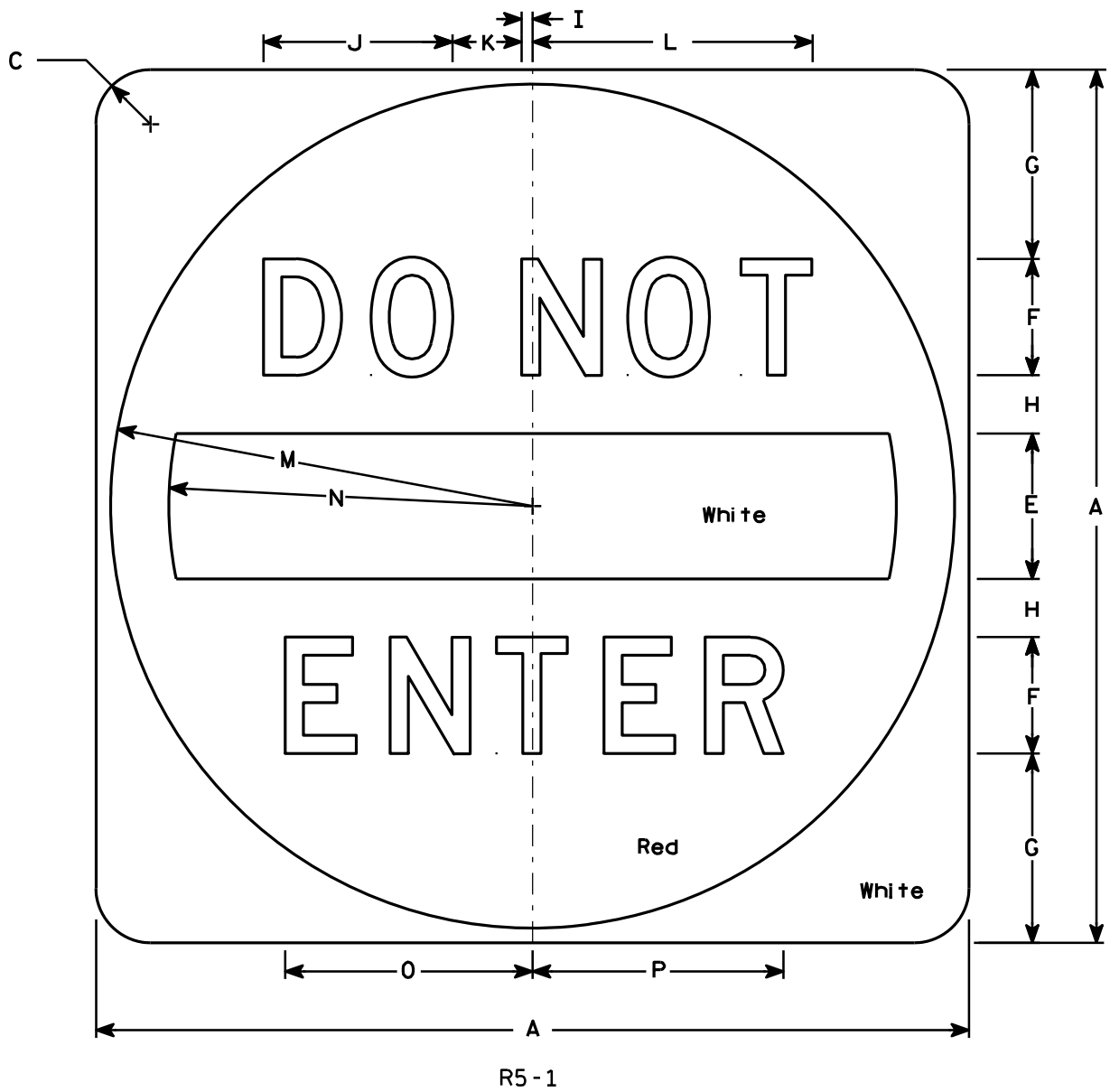
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - See detail
 - Message - White - Type H Reflective
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but when base material is metal, the corners shall be rounded.



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																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN

R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

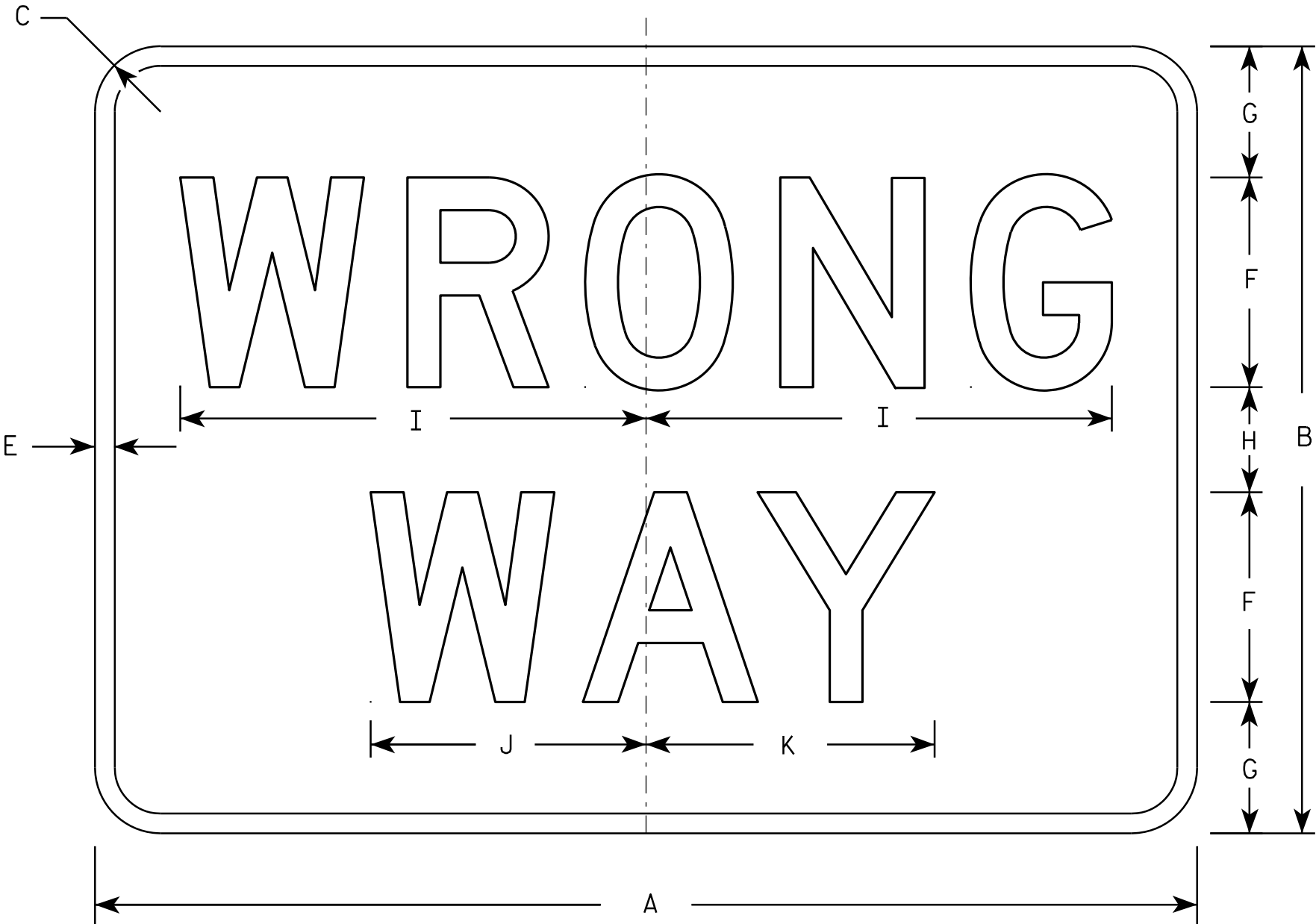
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

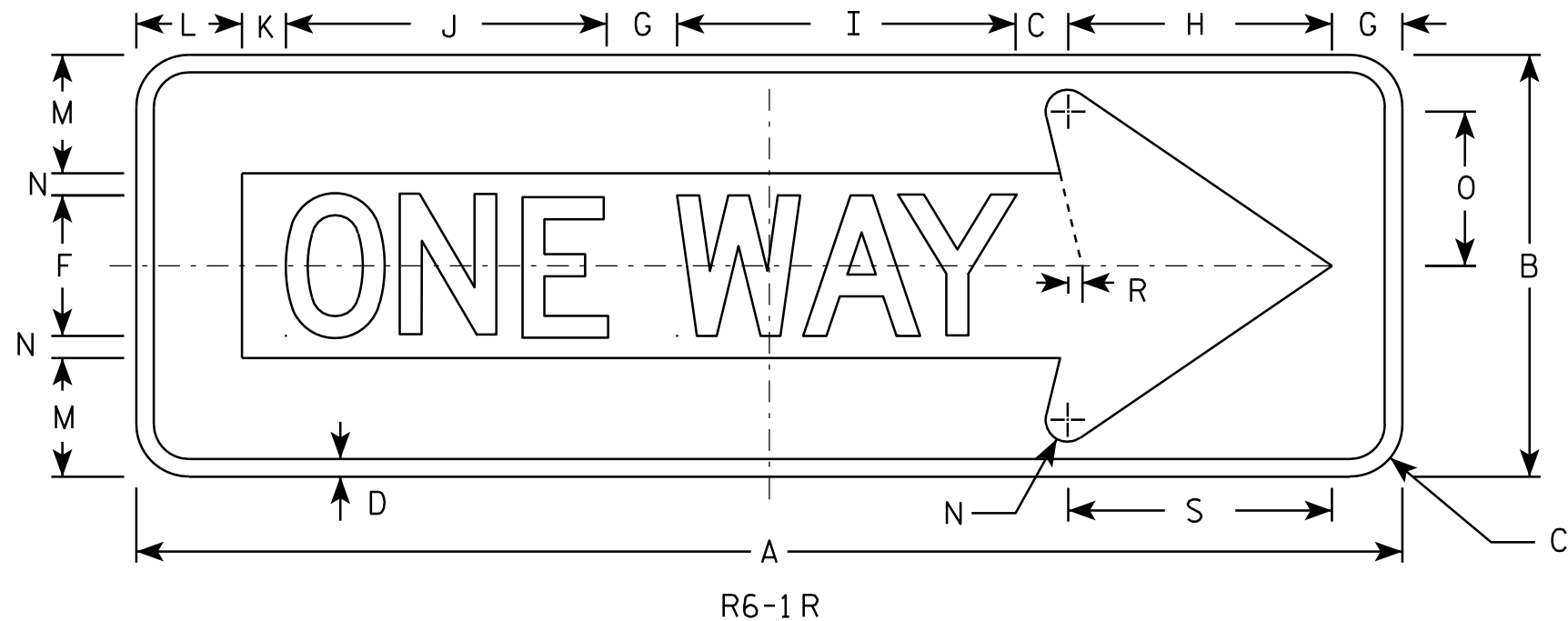
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

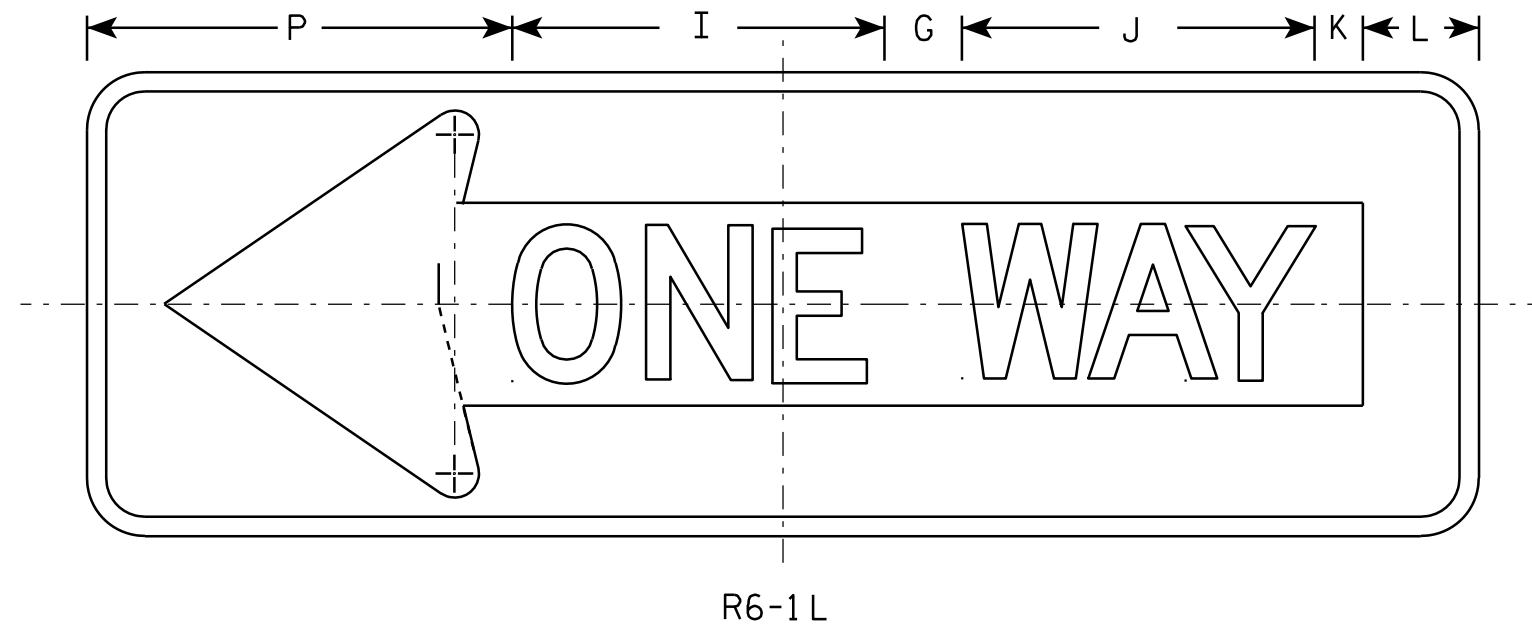
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2



NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - BLACK
Message - BLACK LEGEND & WHITE ARROW & BORDER
- Message Series - D
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2								3.0
2M	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
3	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
4	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
5																											

STANDARD SIGN R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

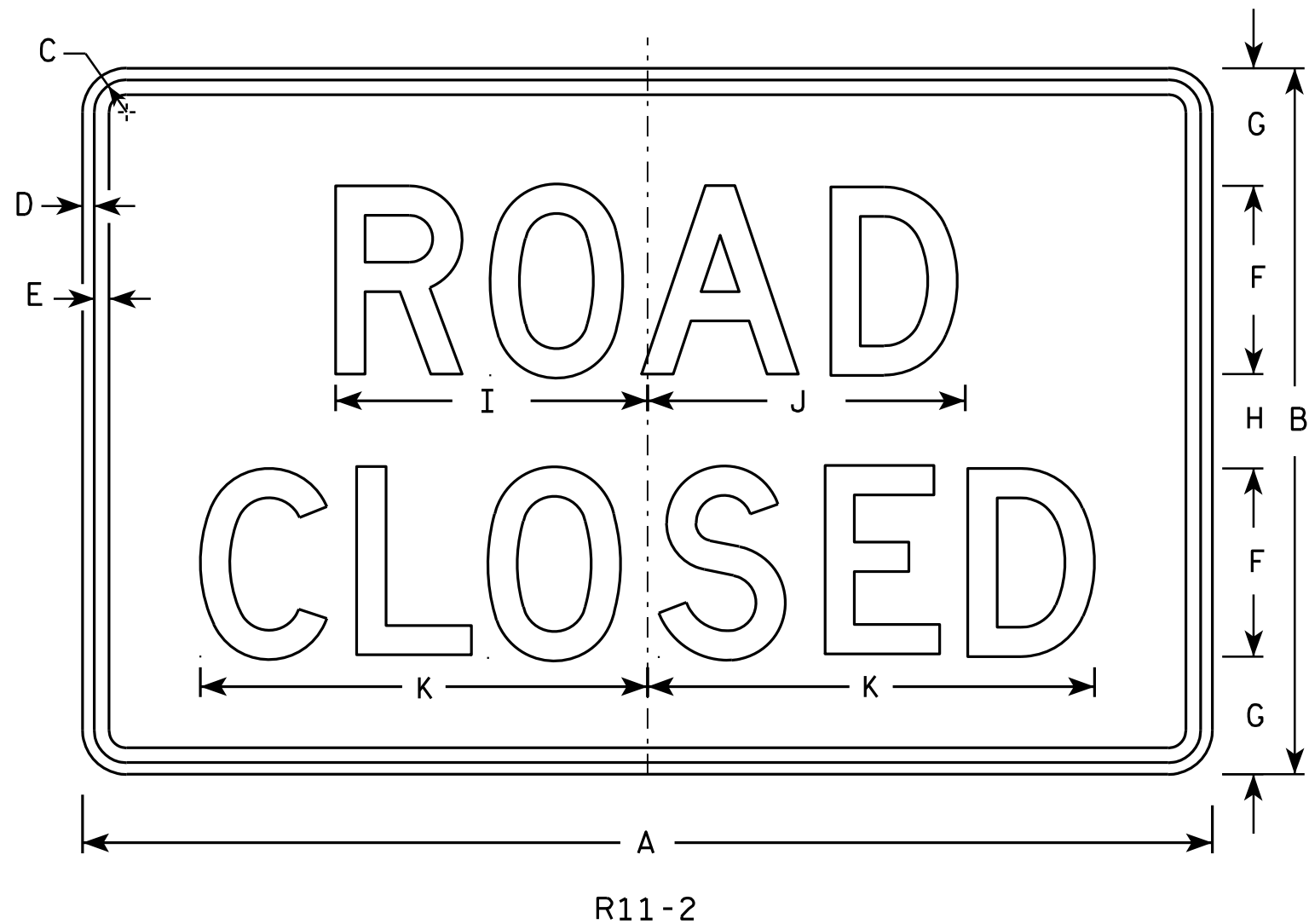
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

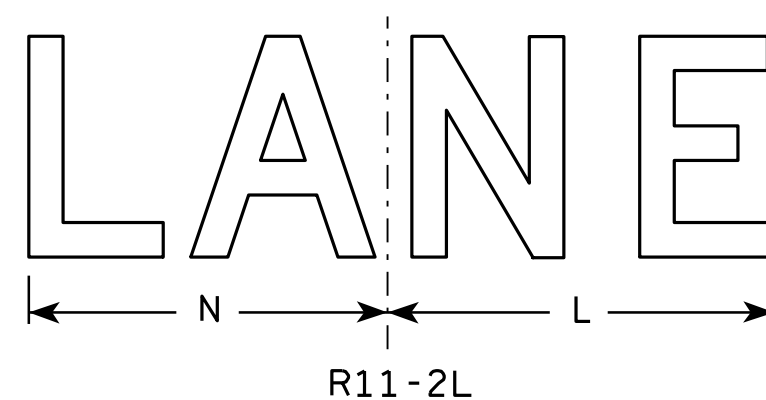
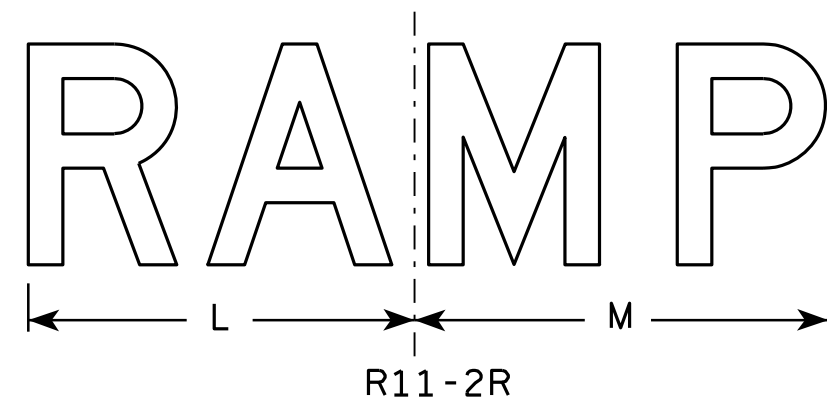
PROJECT NO:

SHEET NO:

E

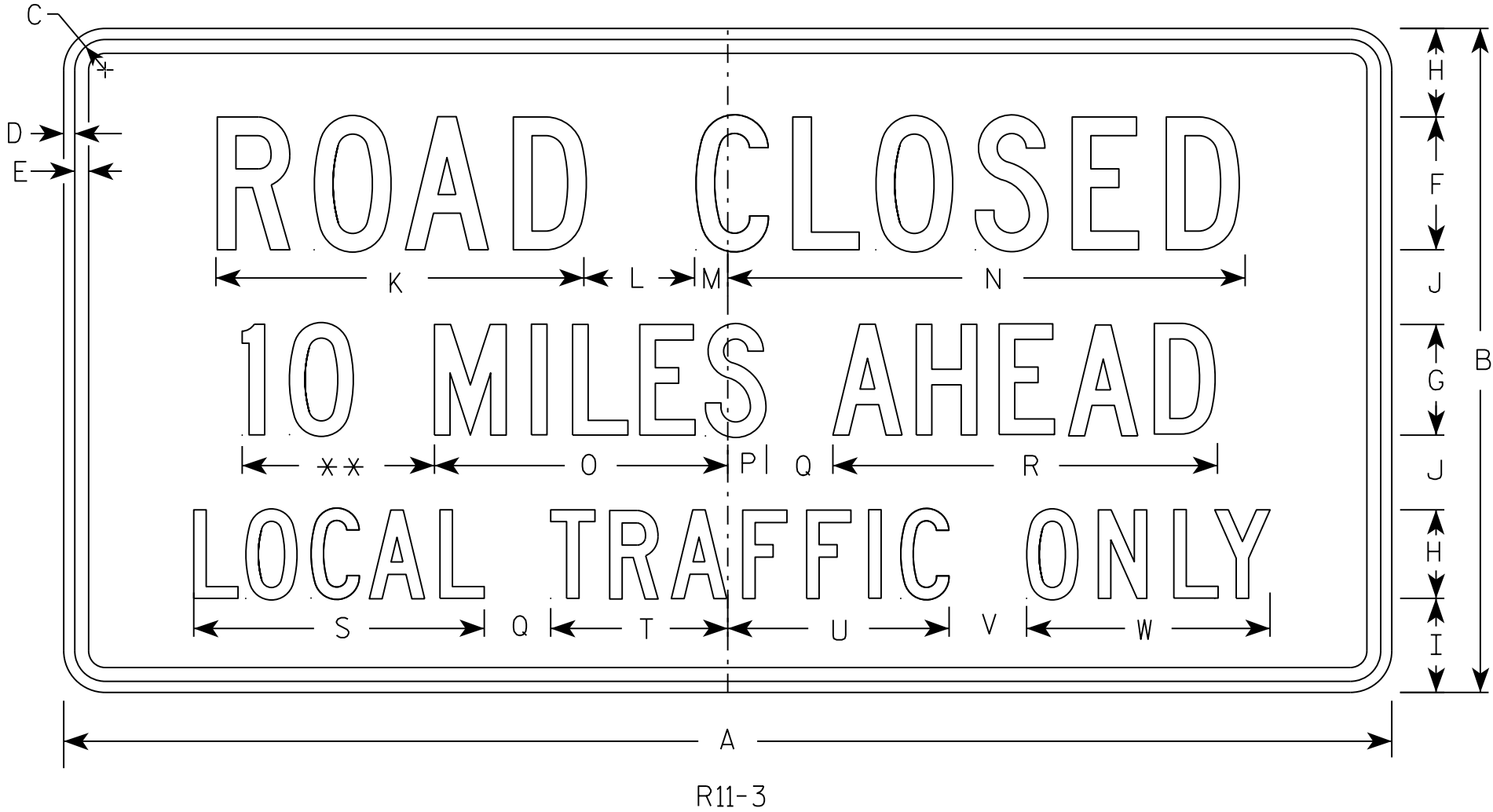


- NOTES**
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify the message as required.



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																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN	
R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE <u>4/1/11</u>	PLATE NO. <u>R11-2.10</u>



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.

** See Note 5

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	36	18	1 ³ / ₈	¹ / ₂	⁵ / ₈	4	3	2 ¹ / ₂	2	2	11 ¹ / ₈	3	1 ¹ / ₈	15 ¹ / ₄	8	1 ¹ / ₂	2	10 ³ / ₄	8 ³ / ₈	4 ³ / ₄	6 ¹ / ₂	2	6 ³ / ₄				4.5
2S	60	30	1 ³ / ₈	¹ / ₂	⁵ / ₈	6	5	4	4 ¹ / ₄	3 ³ / ₈	16 ⁵ / ₈	5	1 ¹ / ₂	23	13 ¹ / ₄	1 ³ / ₄	3	17 ³ / ₈	13 ¹ / ₈	8	10	3 ¹ / ₂	11				12.5
2M	60	30	1 ³ / ₈	¹ / ₂	⁵ / ₈	6	5	4	4 ¹ / ₄	3 ³ / ₈	16 ⁵ / ₈	5	1 ¹ / ₂	23	13 ¹ / ₄	1 ³ / ₄	3	17 ³ / ₈	13 ¹ / ₈	8	10	3 ¹ / ₂	11				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

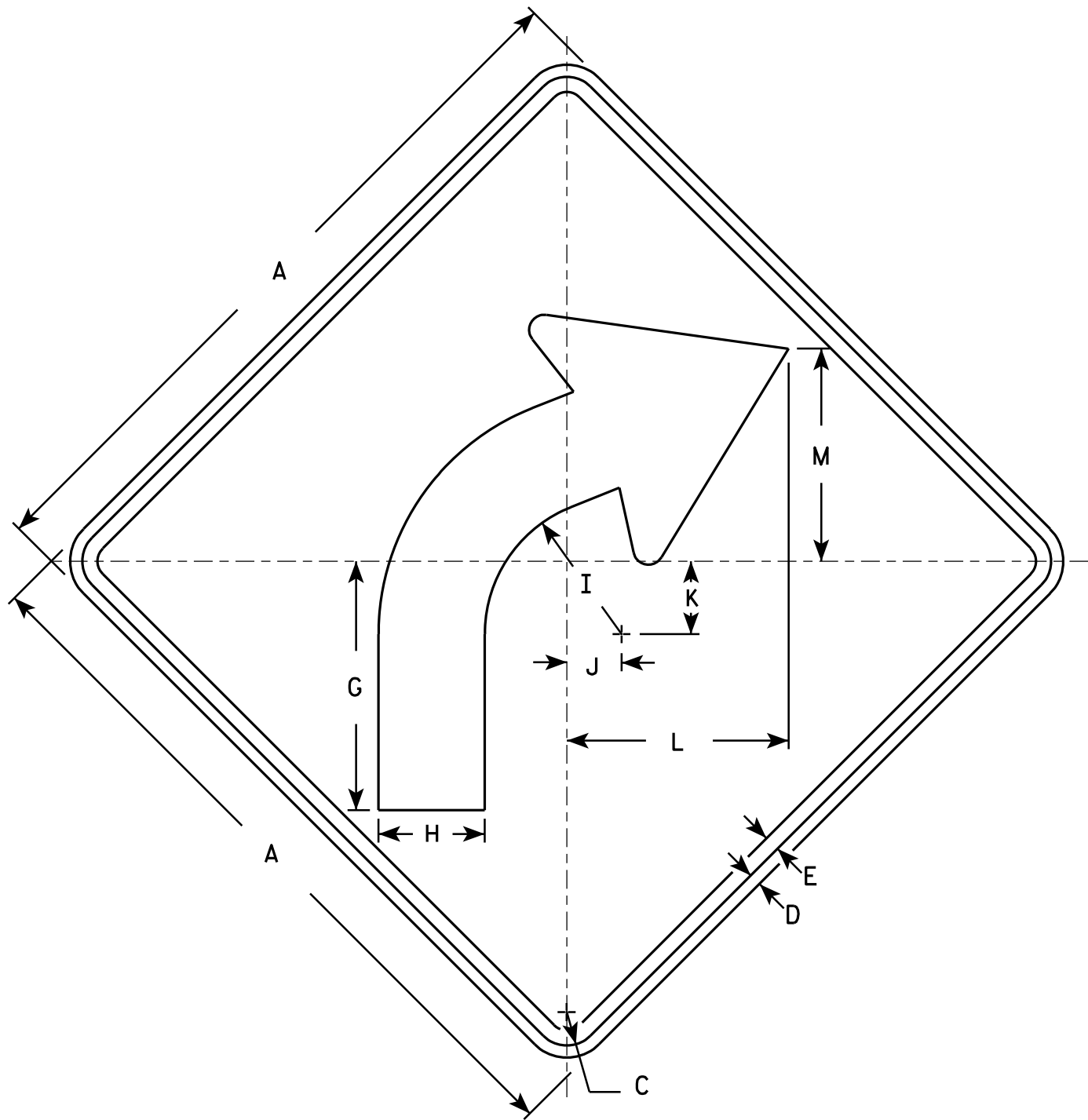
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

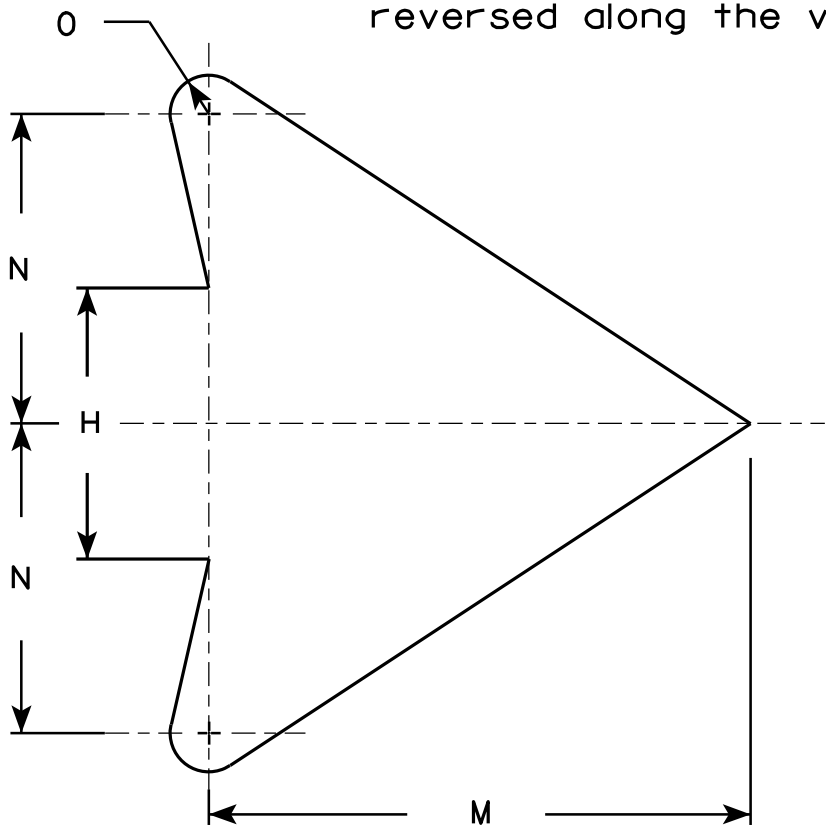
DATE 7/28/16 PLATE NO. R11-3.7

NOTES

1. Sign is Type II - Type F Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is
reversed along the vertical centerline.



W1-2R



ARROW DETAIL

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	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN
W1-2

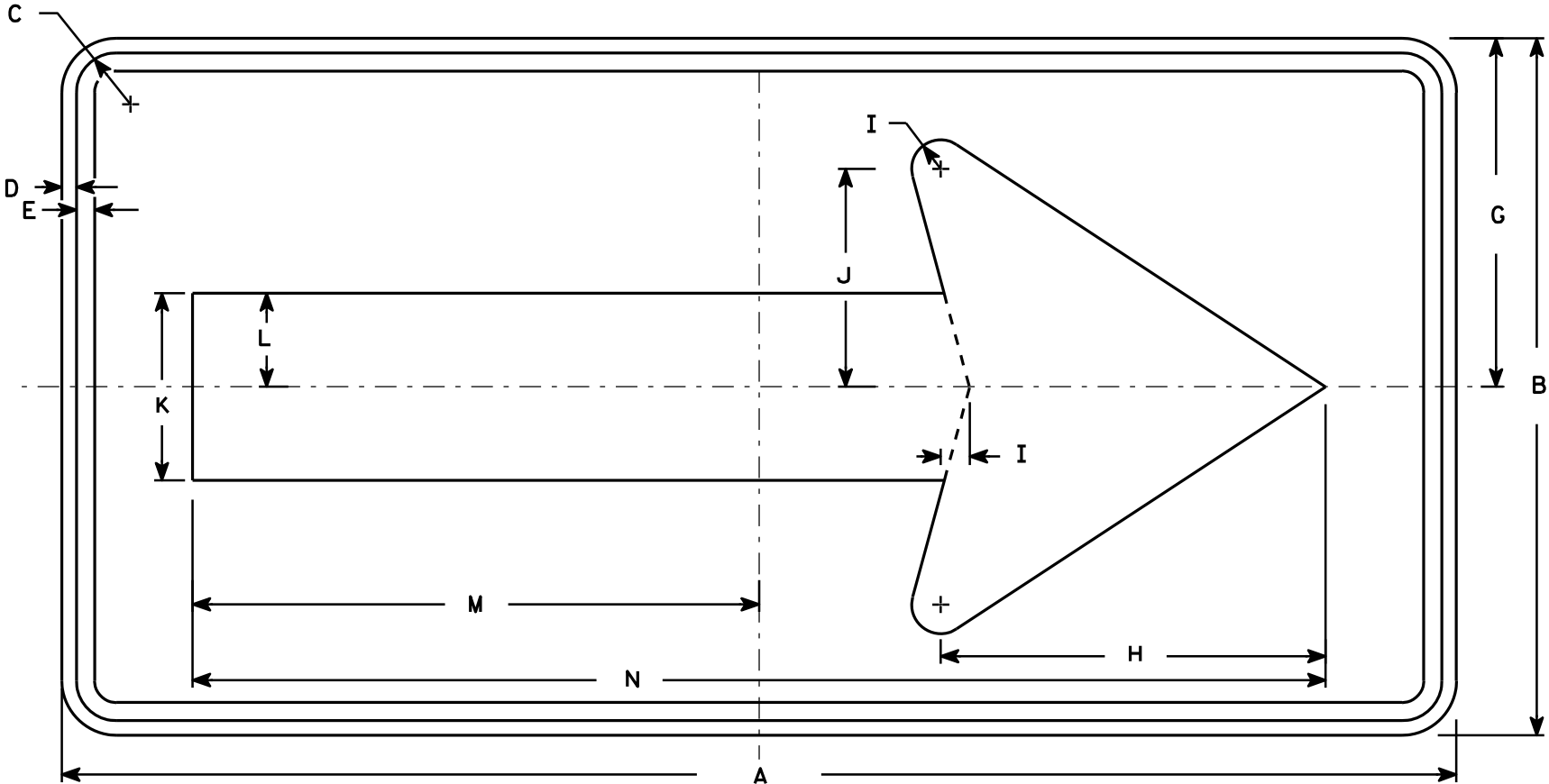
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

NOTES

1. Sign is Type II - Type F Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.



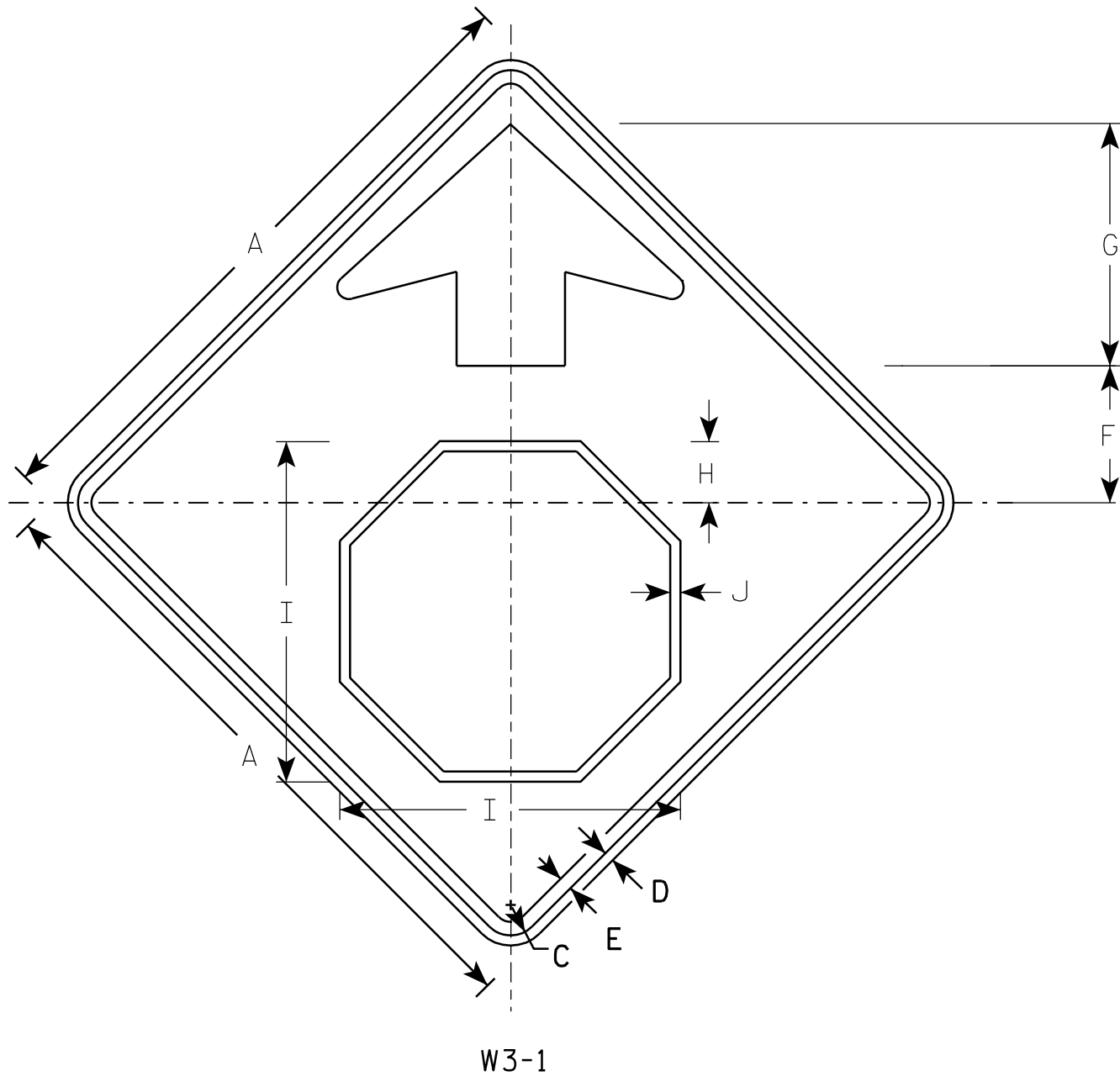
W1-6

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	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

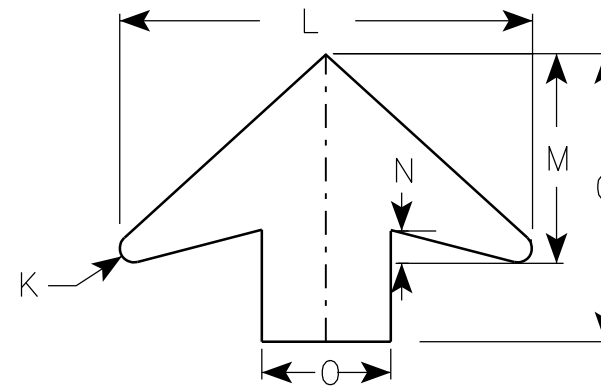
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W1-6.8



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Arrow & Border - BLACK
Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

PROJECT NO:																											SHEET NO:	E
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STANDARD SIGN

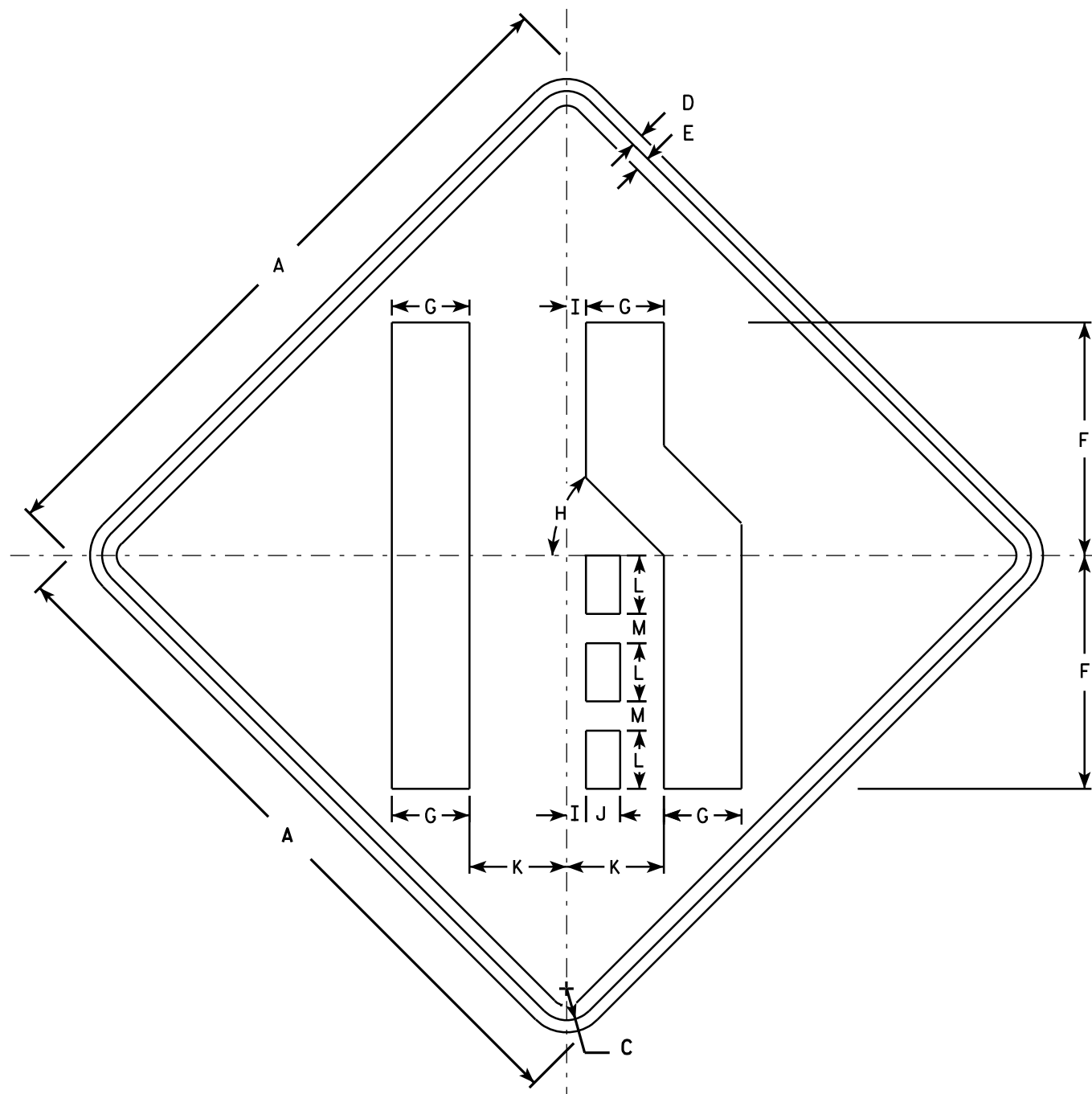
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbols is reversed along the vertical centerline.

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	30		1 3⁄8	1⁄2	5⁄8	10	3 3⁄8	45°	7⁄8	1 1⁄2	4 1⁄4	2 1⁄2	1 1⁄4														6.25
2S	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
2M	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
3	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
4	48		2 1⁄4	3⁄4	1	16	5 3⁄8	45°	1 1⁄4	2 3⁄8	6 3⁄4	4	2														16.0
5	48		2 1⁄4	3⁄4	1	16	5 3⁄8	45°	1 1⁄4	2 3⁄8	6 3⁄4	4	2														16.0

STANDARD SIGN W4-2

WISCONSIN DEPT OF TRANSPORTATION

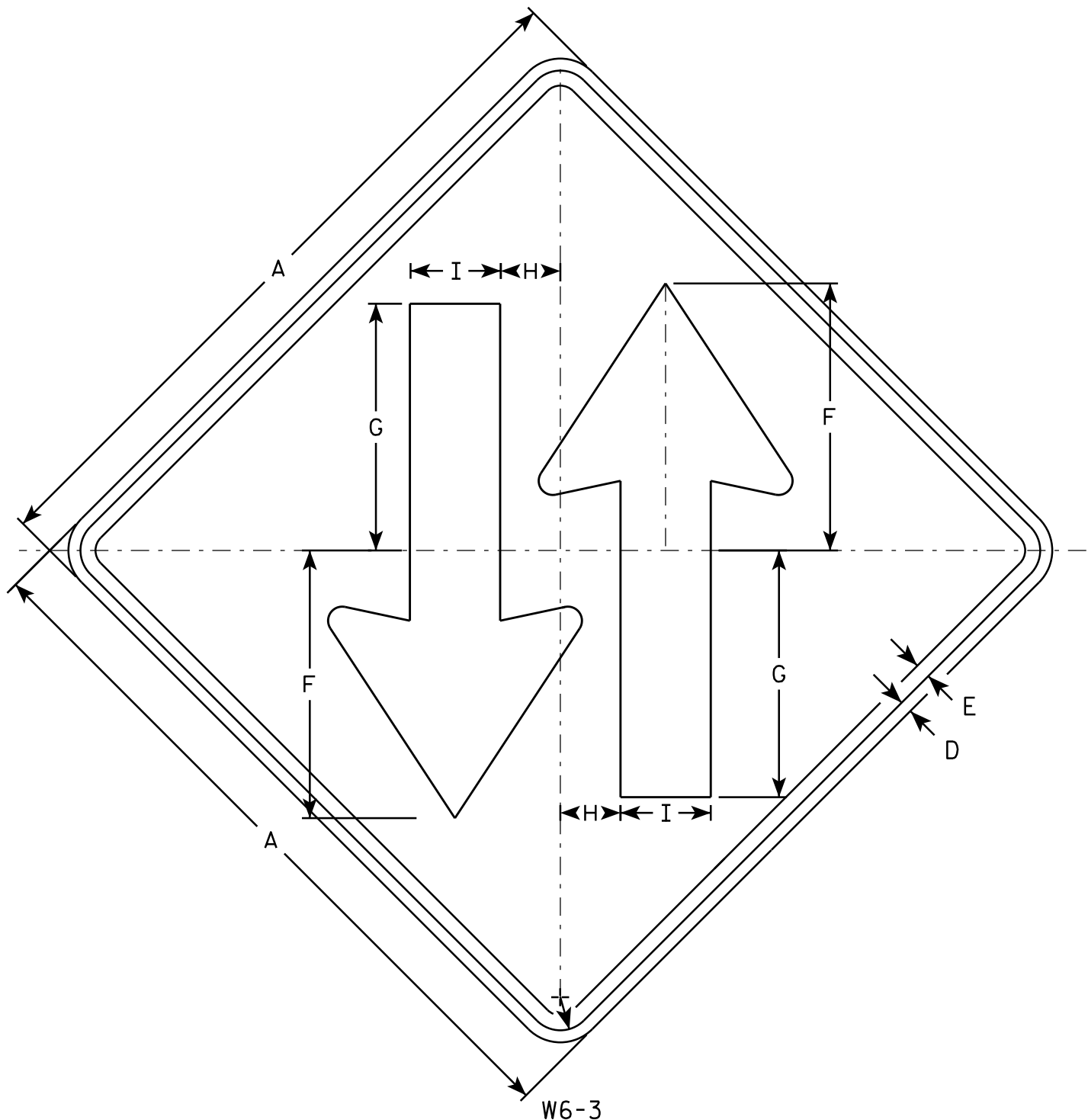
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

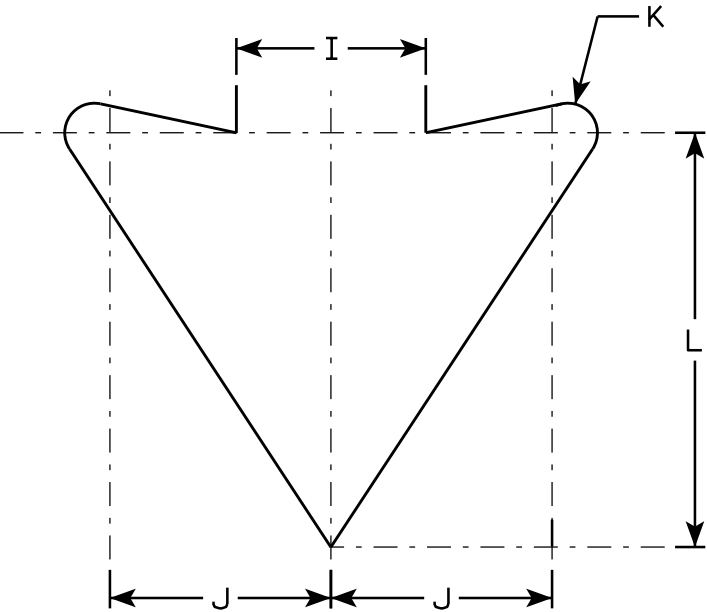
SHEET NO:

E



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

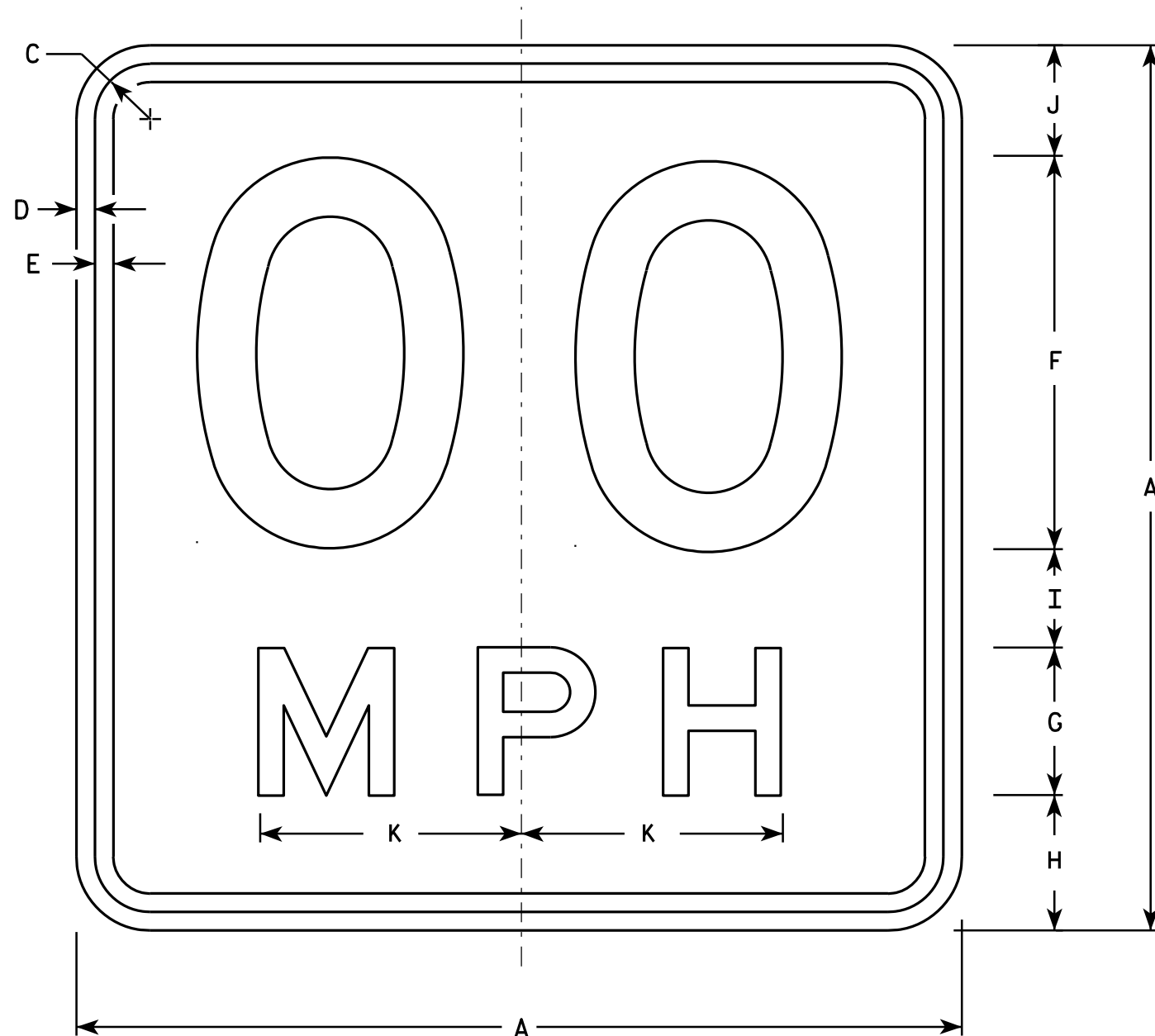
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 1/8	10 1/4	2 1/2	3 3/4	4 3/8	5/8	8 1/4															6.25
2S	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
2M	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
3																											
4	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0
5	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0

STANDARD SIGN
W6-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/10/16 PLATE NO. W6-3.11



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

W13-1

- * For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN

W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

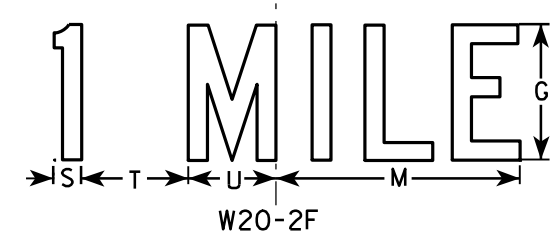
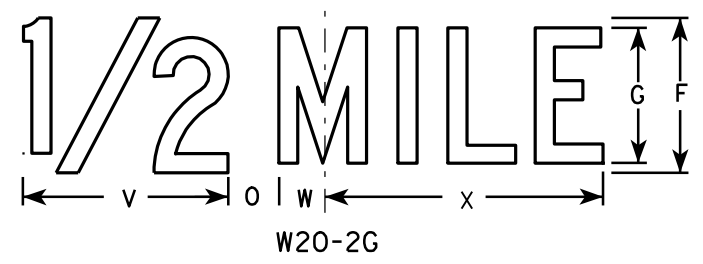
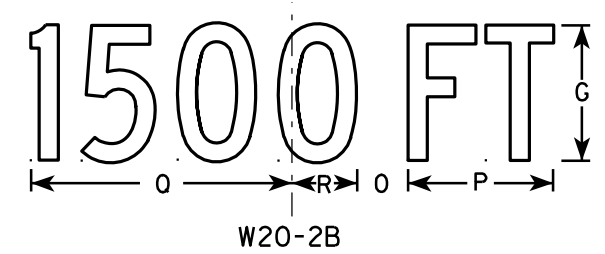
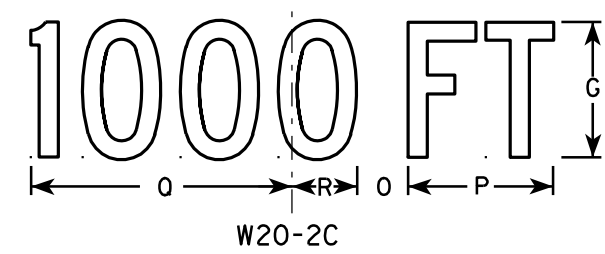
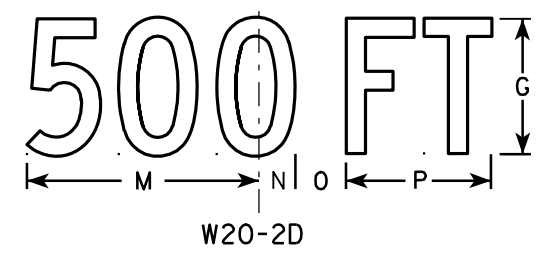
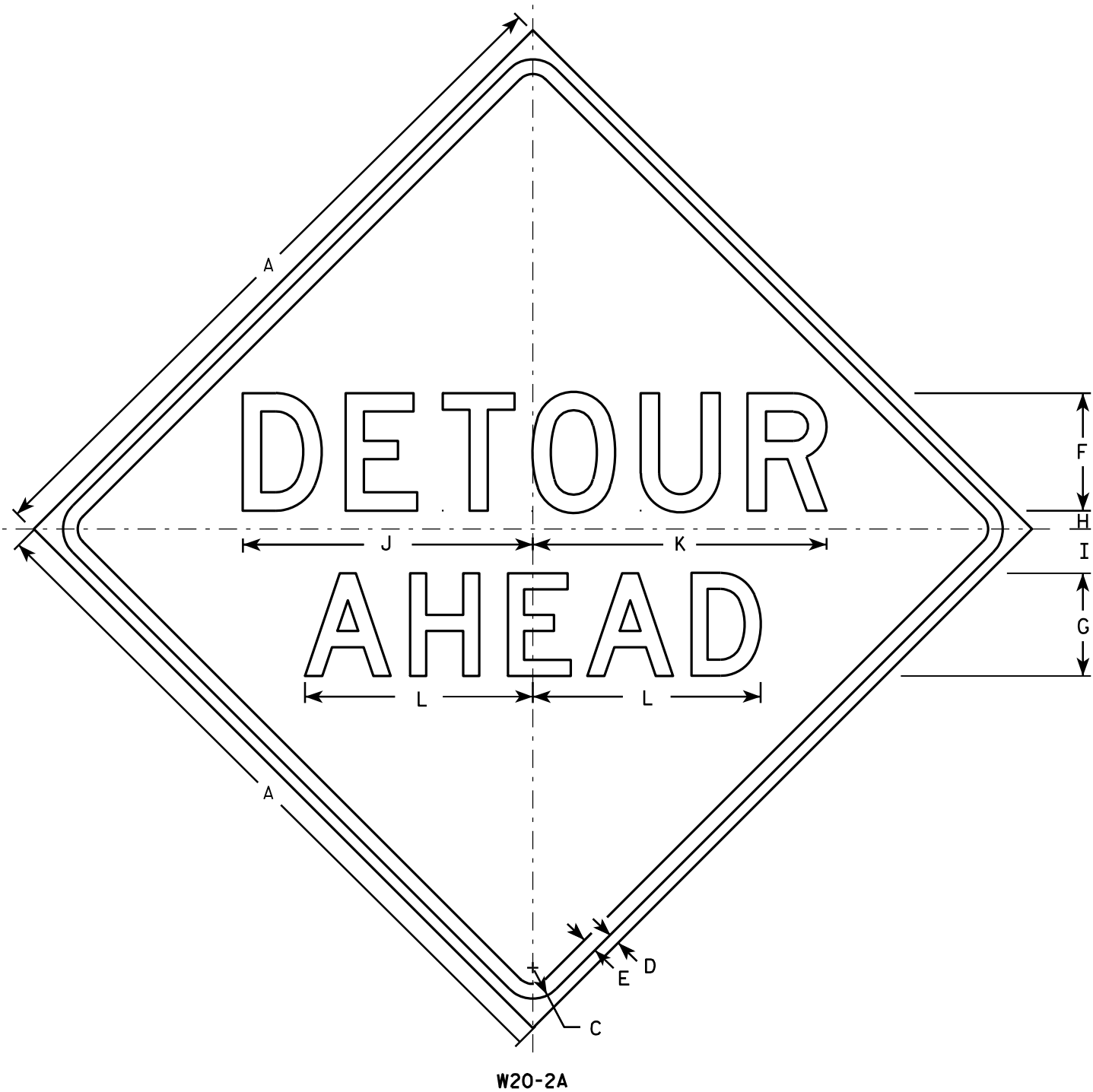
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

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	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch* for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO:

HWY:

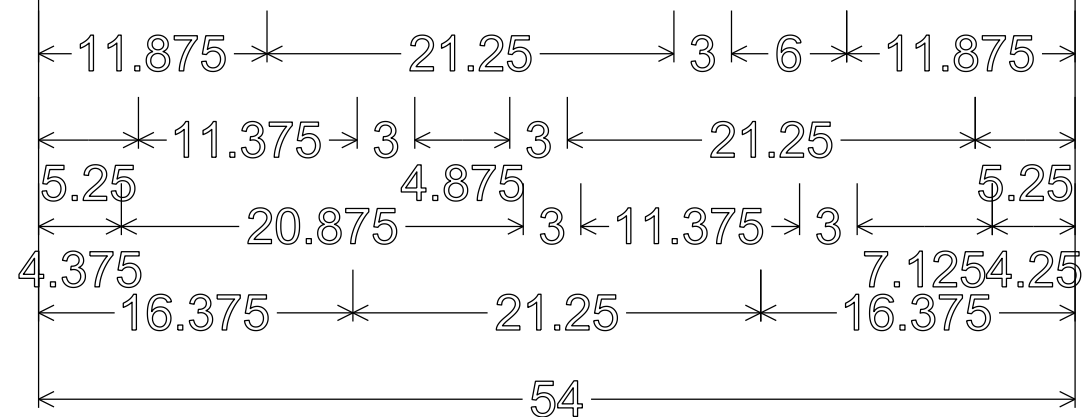
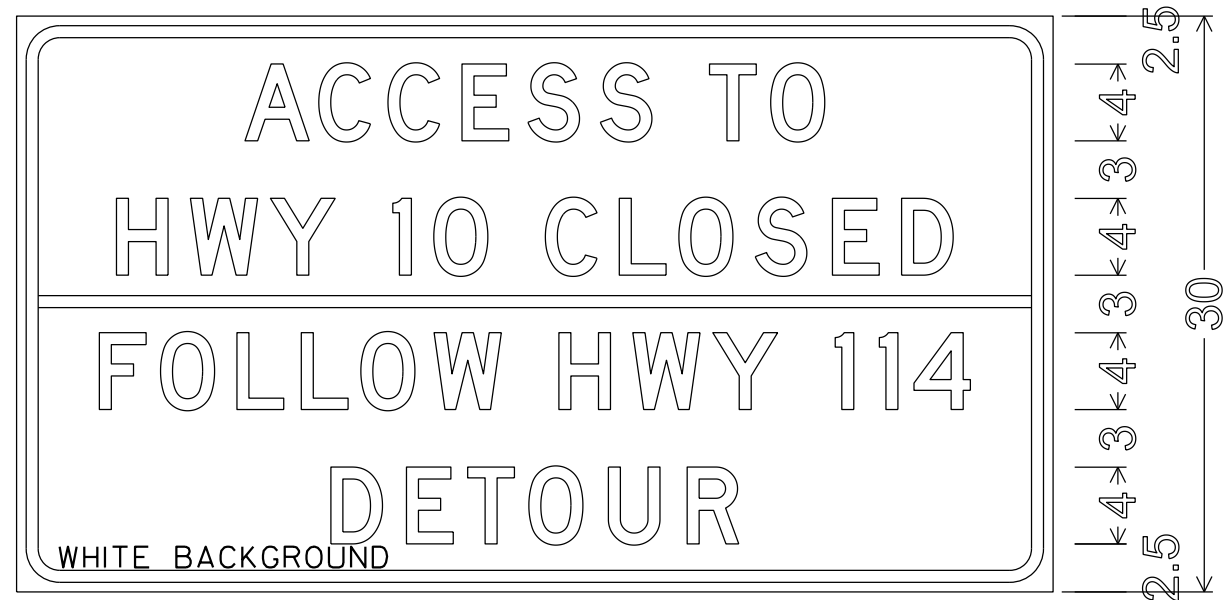
COUNTY:

SHEET NO:

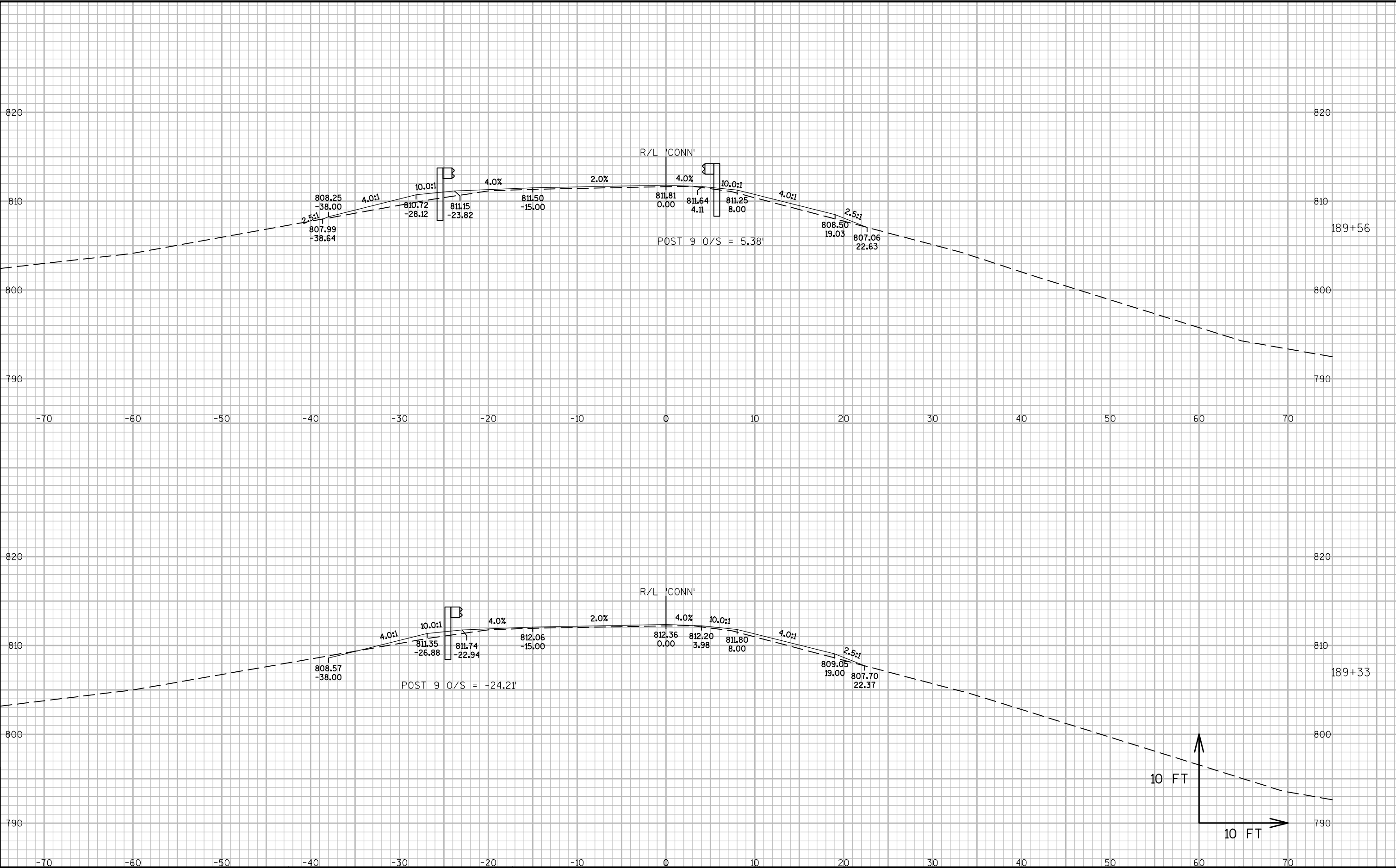
E

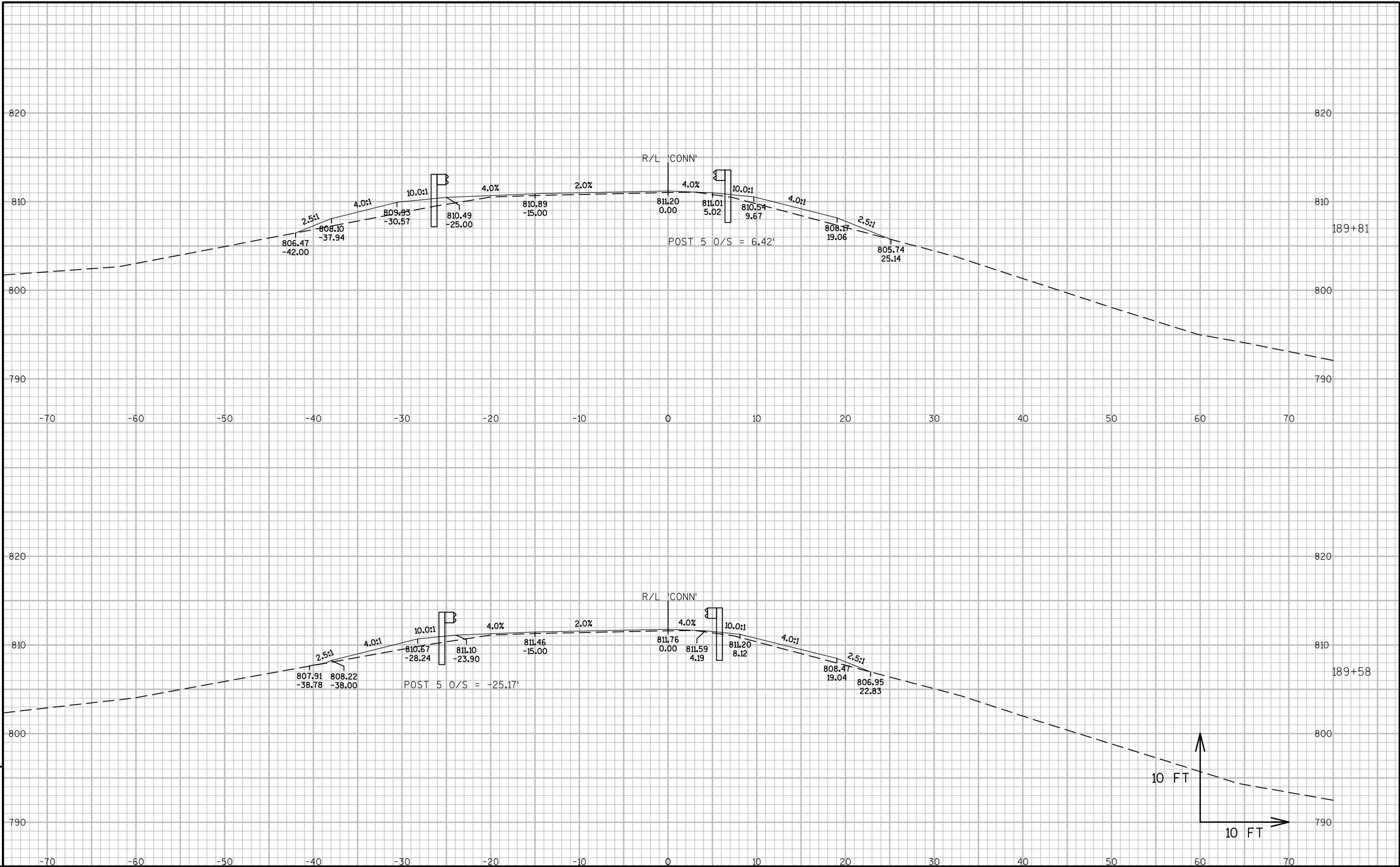
NOTES

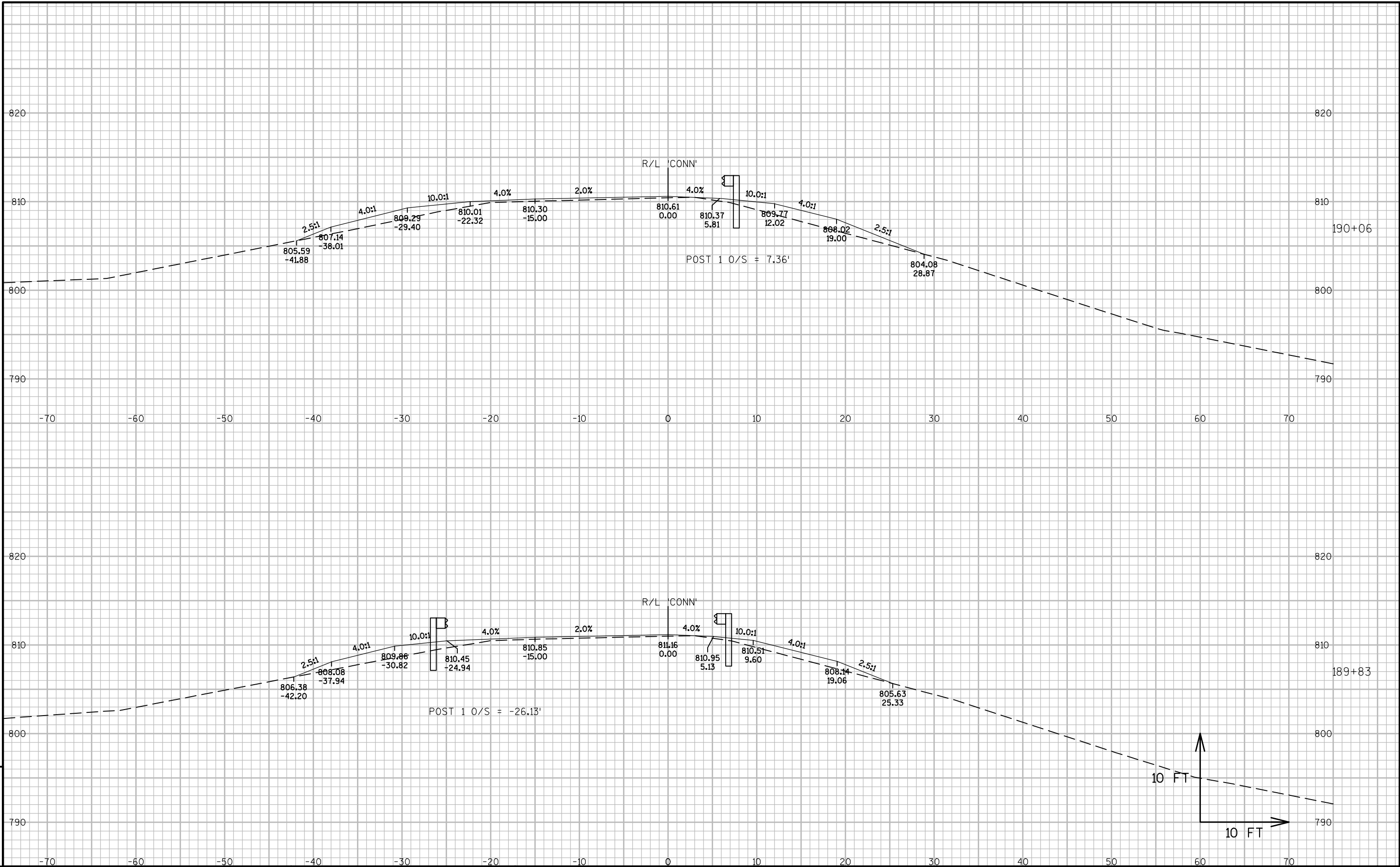
1. All Signs Type II - Type F Reflective
2. Color:
Background - Orange
Message -Black
3. Message Series - D

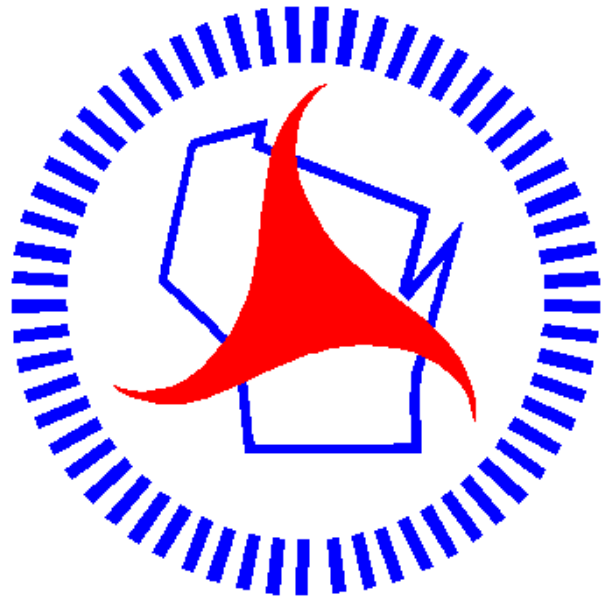


2.250" Radius, 0.625" Border, 0.500" Indent









Wisconsin Department of Transportation

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through innovation and exceptional service.

<http://www.dot.wisconsin.gov>