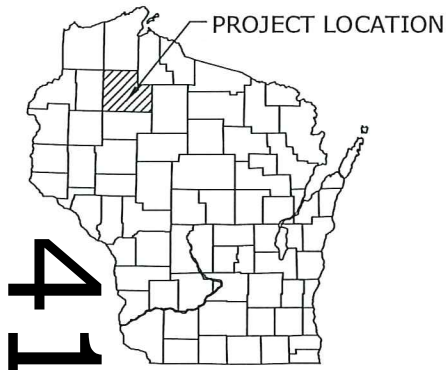


SUP
PROJECT ID: 8150-20-60
WITH:

COUNTY: SAWYER

APR 2016		
ORDER OF SHEETS		
Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plan)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.		Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.		Structure Plans
Section No.		Computer Earthwork Data
Section No.		Cross Sections
TOTAL SHEETS = 70		



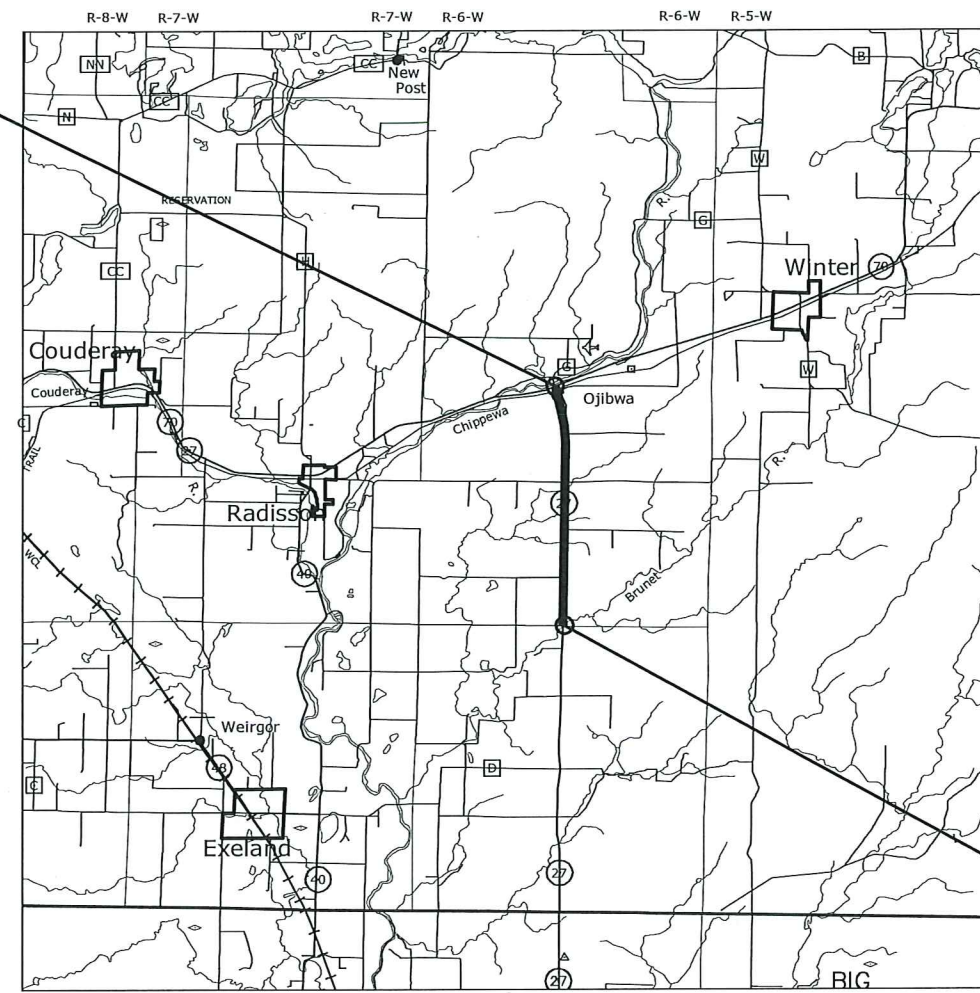
DESIGN DESIGNATION	
A.D.T. (2014)	= 1500
A.D.T. (2034)	= 1900
D.H.V. (2034)	= 340
D.D.	= 50%
T. (A.D.T.)	= 15%
DESIGN SPEED	= 60 MPH
ESALS	= 562,100

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
LADYSMITH TO OJIBWA
BRUNET RIVER - STH 70
STH 27
SAWYER COUNTY
STATE PROJECT NUMBER
8150-20-60

END PROJECT
STA 1176+75
X = 711,050 ± 200'
Y = 358,812 ± 200'



BEGIN PROJECT
STA. 912+74
X = 712,326 ± 200'
Y = 332,583 ± 200'

COORDINATE NOTE:
COORDINATES ARE REFERENCED TO THE
WISCONSIN COUNTY COORDINATE SYSTEM,
SAWYER COUNTY.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8150-20-60		

PREPARED BY

WISCONSIN PROFESSIONAL ENGINEER
AARON SCHARF
E-37704
RICE LAKE
WI
1/25/16

COOPER ENGINEERING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	COOPER ENGINEERING
Designer	COOPER ENGINEERING
Regional Examiner	MICHAEL PEARSON
Regional Supervisor	DAVID OSTROWSKI
C.O. Examiner	

APPROVED FOR DEPARTMENT

DATE: 1/26/16

1/26/16

E

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT	LT.	LEFT
AC	ACRES	LS	LUMP SUM
AGG	AGGREGATE	MH	MANHOLE
AH	AHEAD	N	NORTH
ADT	AVERAGE DAILY TRAFFIC	NC	NORMAL CROWN
		PAVT	PAVEMENT
AVG.	AVERAGE	PC	POINT OF CURVATURE
ASPH	ASPHALTIC	PE	PRIVATE ENTRANCE
BK.	BACK	PI	POINT OF INTERSECTION
BM	BENCHMARK	PL	PROPERTY LINE
Δ	CENTRAL ANGLE OR DELTA	PP	POWER POLE
℄ , C/L	CENTERLINE	PT	POINT OF TANGENCY
C & G	CURB AND GUTTER	R	RANGE , RADIUS
CABC	CRUSHED AGGREGATE	RCCP	REINFORCED CONCRETE
	BASE COURSE		CULVERT PIPE
CONC.	CONCRETE	RD	ROAD
		REBAR	REINFORCEMENT BAR
COR	CORNER	REQD	REQUIRED
CORR	CORRUGATED	RDWY	ROADWAY
CSCP	CORRUGATED STEEL	RHF	RIGHT HAND FORWARD
	CULVERT PIPE	RL, R/L	REFERENCE LINE
CSPA	CORRUGATED STEEL	RR	RAILROAD
	PIPE ARCH	RT.	RIGHT
CTH	COUNTY TRUNK HIGHWAY	R/W	RIGHT-OF-WAY
CP.	CULVERT PIPE	S	SOUTH
CY	CUBIC YARD	SAN S	SANITARY SEWER
CWT.	HUNDREDWEIGHT	SDD	STANDARD DETAIL DRAWING
DIA	DIAMETER	SE	SUPER ELEVATION
D	DEGREE OF CURVE	SF.	SQUARE FEET
DHV	DESIGN HOURLY VOLUME	SHLDR	SHOULDER
DWY	DRIVEWAY	SPECS	SPECIFICATIONS
EBS	EXC. BELOW SUB GRADE	SQ.	SQUARE
ELEV., EL	ELEVATION	SS.	STORM SEWER
ELEC.	ELECTRIC	SY.	SQUARE YARD
EXC	EXCAVATION	STH	STATE TRUNK HIGHWAY
EXIST	EXISTING	ST.	STREET
E	EAST	STA.	STATION
FE	FIELD ENTRANCE	SW	SIDEWALK
FF.	FACE TO FACE	T	TANGENT
FL, F/L	FLOW LINE	TC	TOP OF CURB
FS	FULL SUPERELEVATION	℄ , T/L	TRANSIT LINE
G	GARAGE	TEL	TELEPHONE
GN	GRID NORTH	TEMP	TEMPORARY
H	HOUSE	TLE	TEMPORARY LIMITED EASEMENT
		TYP	TYPICAL
HYD	HYDRANT	USH	UNITED STATES HIGHWAY
I	INTERSECTION ANGLE	UG	UNDERGROUND
INTERS	INTERSECTION	V	DESIGN SPEED
INV.	INVERT	VAR.	VARIABLE
IP	IRON PIN OR PIPE	VERT	VERTICAL
LC	LONG CHORD OF CURVE	YD	YARD
LF	LINEAR FOOT		
LHF	LEFT HAND FORWARD		
L	LENGTH OF CURVE		

UTILITY CONTACTS

ELECTRIC

NORTH CENTRAL POWER COMPANY
ATTN.: MIKE HEATH
3661 NORTH CLARK STREET
RADISSON, WI 54867
TEL.: (715) 945-2630

TELEPHONE

CENTURYLINK
ATTN.: BRIAN HUHN
400 W 9TH STREET N., SUITE #5
LADYSMITH, WI 54848
TEL.: (715) 532-0023
EMAIL: BRIAN.HUHN@CENTURYLINK.COM

TELEPHONE

INDIANHEAD TELEPHONE COMPANY
ATTN.: STEPHEN ROBERTSON
N3767 4TH STREET
WEYERHAEUSER, WI
TEL.: (715) 353-2434
EMAIL: itc@indianheadtel.net

ALL UTILITIES LISTED ARE MEMBERS OF DIGGERS HOTLINE



Dial 811 or (800)242-8511

www.DiggersHotline.com

2040 W. WISCONSIN AVE.
SUITE 10
MILWAUKEE, WI 53233

OTHER CONTACTS

DESIGN CONSULTANT

COOPER ENGINEERING CO. INC.
2600 COLLEGE DRIVE
RICE LAKE, WI. 54868
PHONE (715) 234-7008

DNR NORTHERN REGIONAL HQ

DNR/DOT LIAISON
ATTN.: BILL CLARK
810 W. MAPLE ST.
SPOONER, WI 54801
TEL.: (715) 635-4226
EMAIL: WILLIAMH.CLARK@WISCONSIN.GOV

WISDOT NW REGION - SUPERIOR

DESIGN CONTACT
ATTN.: MATT DICKENSON
1701 N 4TH STREET
SUPERIOR, WI 54880
TEL.: (715) 395-3022
EMAIL: MATTHEW.DICKENSON@DOT.WI.GOV

GENERAL NOTES:

SUPER ELEVATIONS SHALL MATCH EXISTING ROADWAY.

NO TREES OR SHRUBS SHALL BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE BEEN DESIGNATED FOR REMOVAL BY THE ENGINEER.

ACCESS TO ALL RESIDENCES SHALL BE MAINTAINED DURING CONSTRUCTION.

THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOW SHOWN..

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE DENSE IS MEASURED BY THE TON, THE DEPTH OR THICKNESS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

REMOVE ANY REMAINING RUBBER CRACK FILL MATERIAL TO AT LEAST 1-INCH BELOW THE SURFACE MILL UNDER THE "PREPARATION OF FOUNDATION FOR ASPHALTIC PAVING" BID ITEM.

AREAS THAT FAIL DURING OR AFTER THE SURFACE MILL SHALL BE REPAIRED BY MEANS OF LEVELLING/WEDGING AND SPOT LANE REPAIR USING THE ASPHALTIC SURFACE BID ITEM.

RESTORE SIDEROAD INTERSECTIONS AND PRIVATE ENTRANCES TO EXISTING CONDITIONS UNLESS OTHERWISE SHOWN.

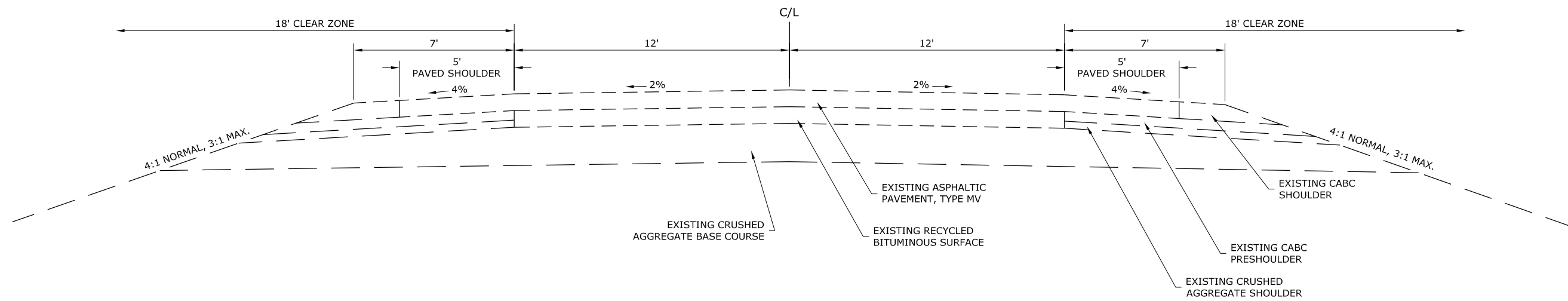
THE EXACT CONSTRUCTION LIMITS OF PRIVATE ENTRANCES SHALL BE COORDINATED WITH THE ENGINEER IN THE FIELD.

PAVEMENT MARKING SHALL MEET MUTCD STANDARDS.

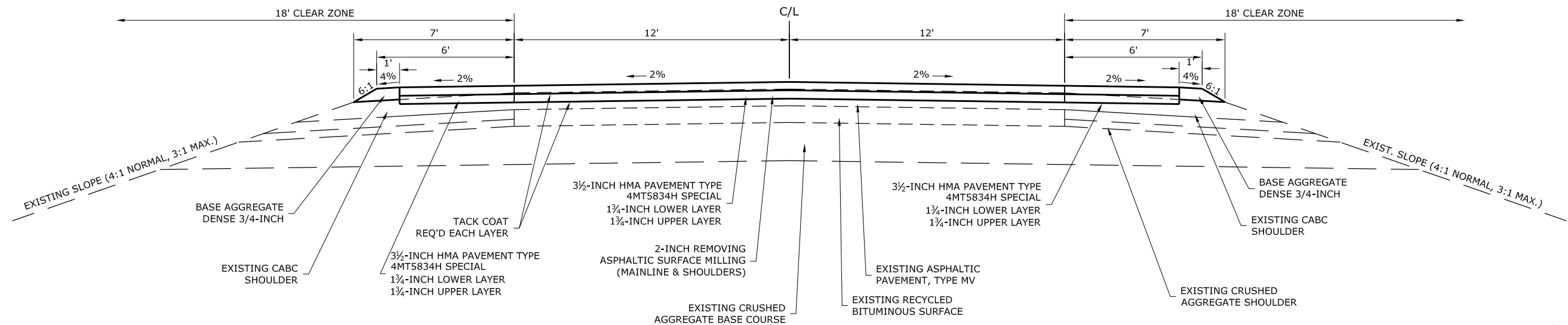
RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (%)			SLOPE RANGE (%)			SLOPE RANGE (%)			SLOPE RANGE (%)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

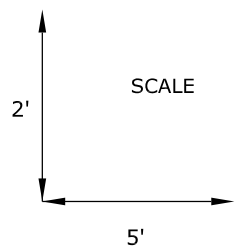
TOTAL PROJECT AREA = 24 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 24 ACRES

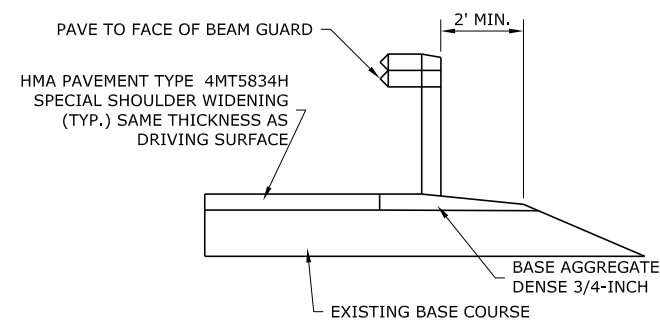
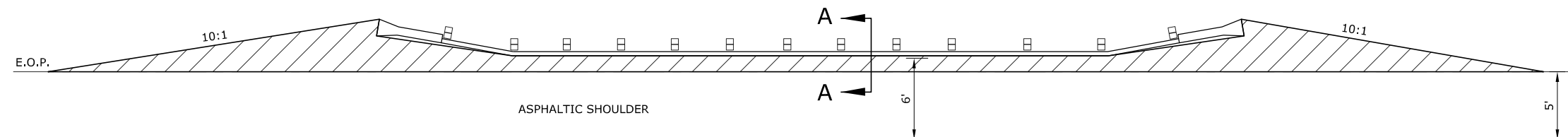
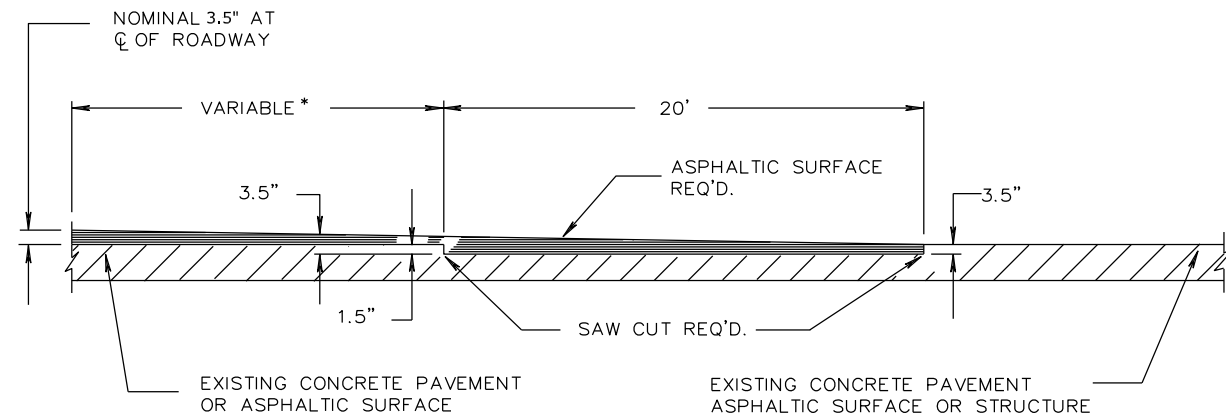


TYPICAL EXISTING SECTION
STA. 912+74 TO 1176+75



TYPICAL FINISHED SECTION
STA. 912+74 TO 1176+75



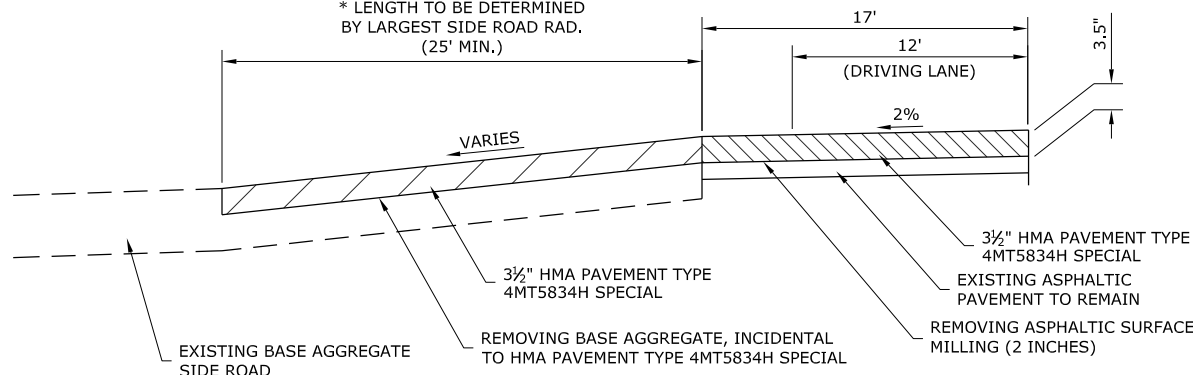


SECTION A-A

DETAIL FOR ASPHALTIC SHOULDERS AT BEAM GUARD/ E.A.T.'S
(NOT TO SCALE)

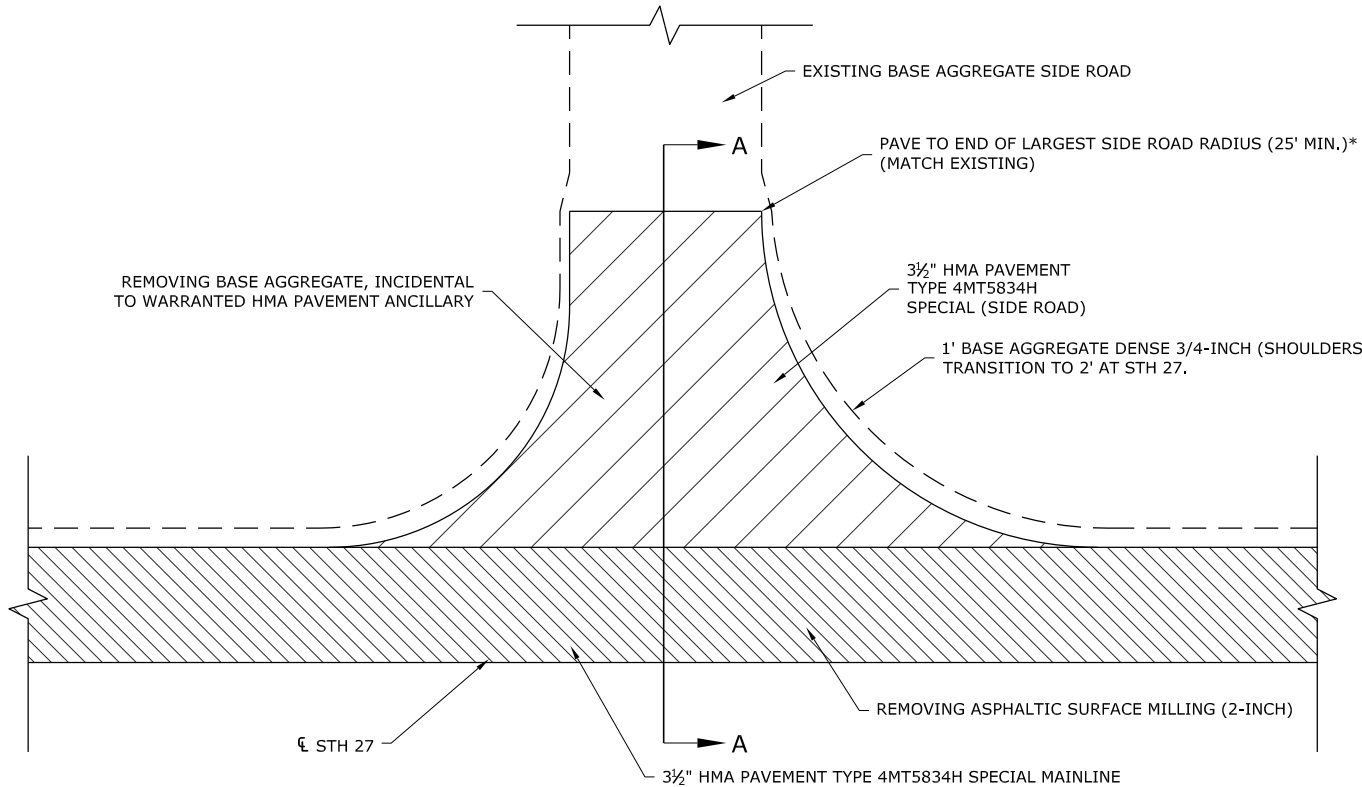
PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	CONSTRUCTION DETAILS	SHEET NO:	E
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2



SECTION A - A
NOT TO SCALE

* LIMITS AS DIRECTED
BY THE ENGINEER

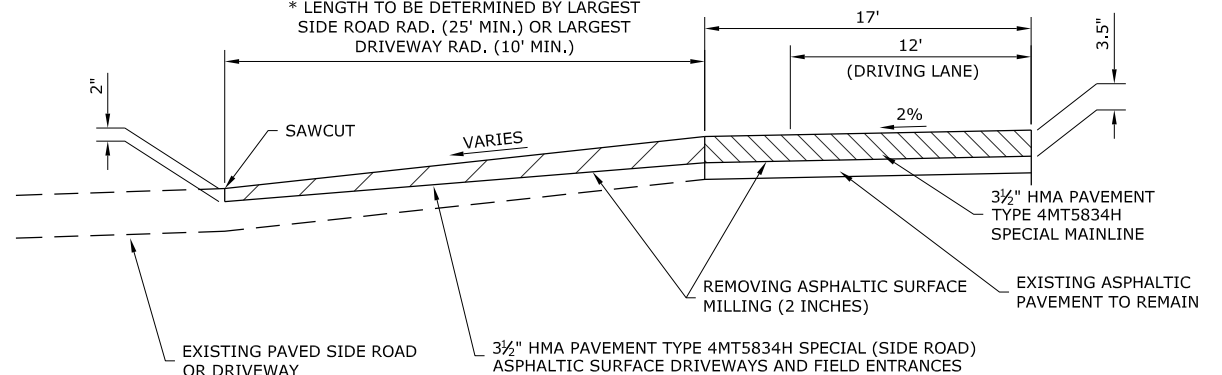


NOTE: TRANSITION SHOULDER SLOPE TO MATCH SIDEWALK
ROAD PROFILE PRIOR TO INTERSECTION

DETAIL FOR RURAL BASE AGGREGATE SIDE ROAD

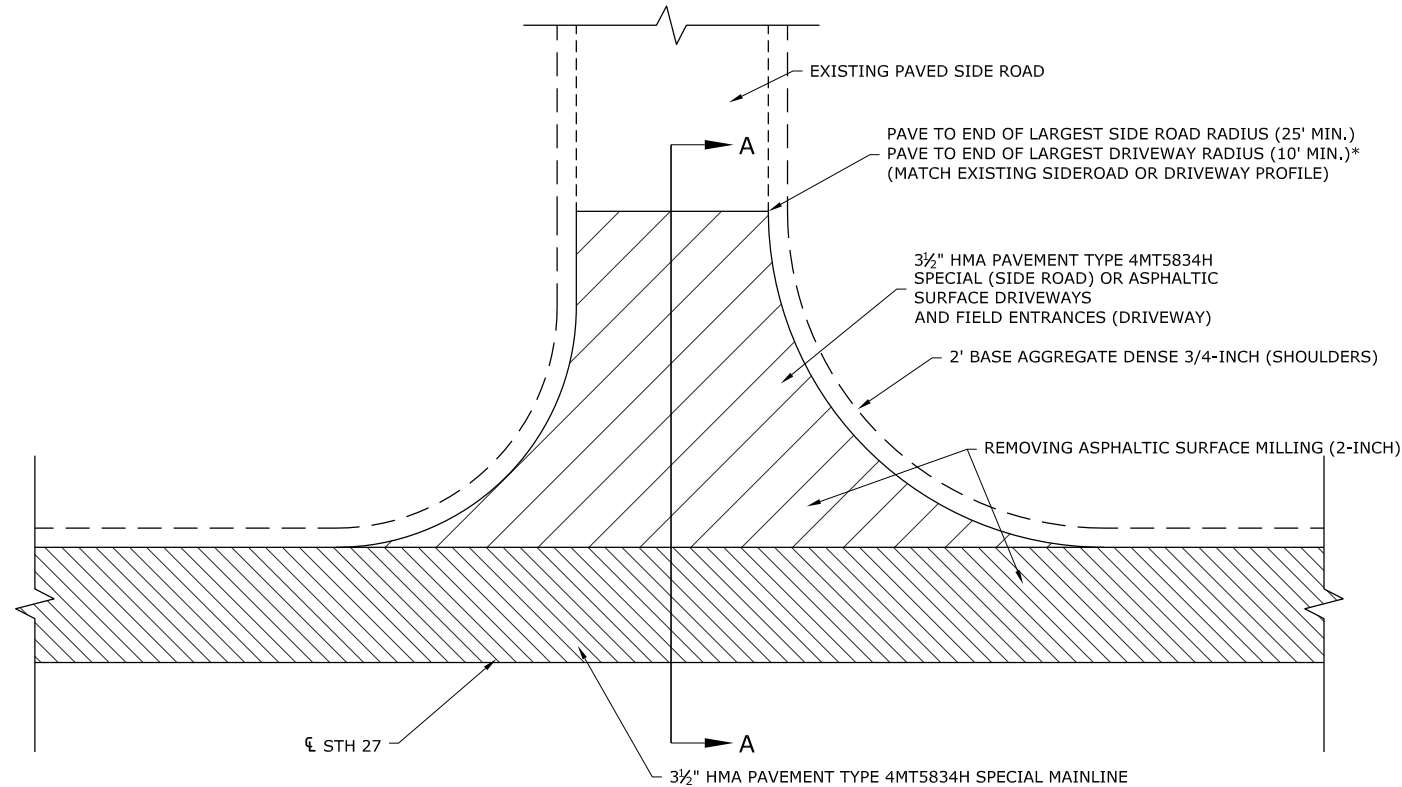
NOT TO SCALE

2



SECTION A -
NOT TO SCALE

* LIMITS AS DIRECTED BY THE ENGINEER

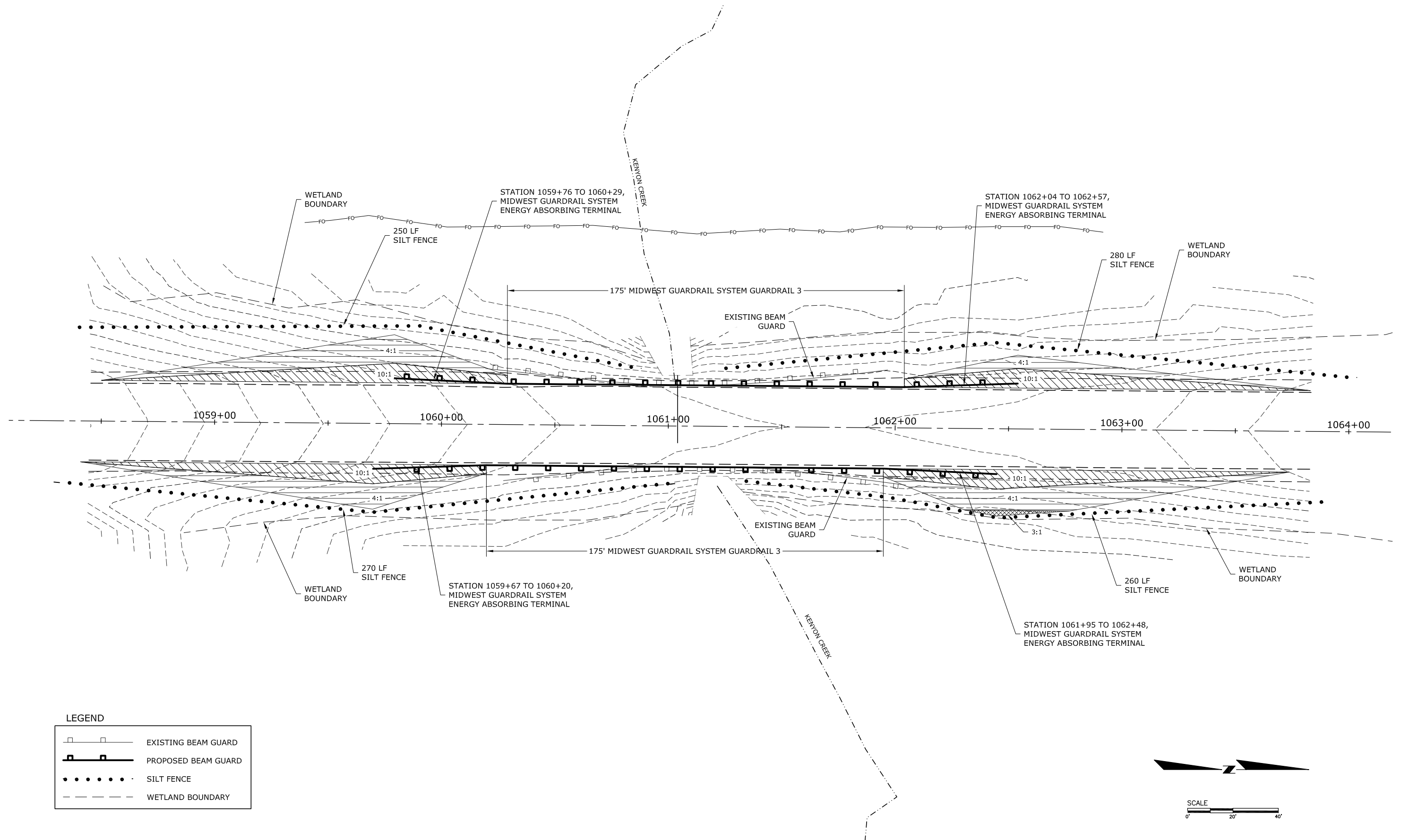


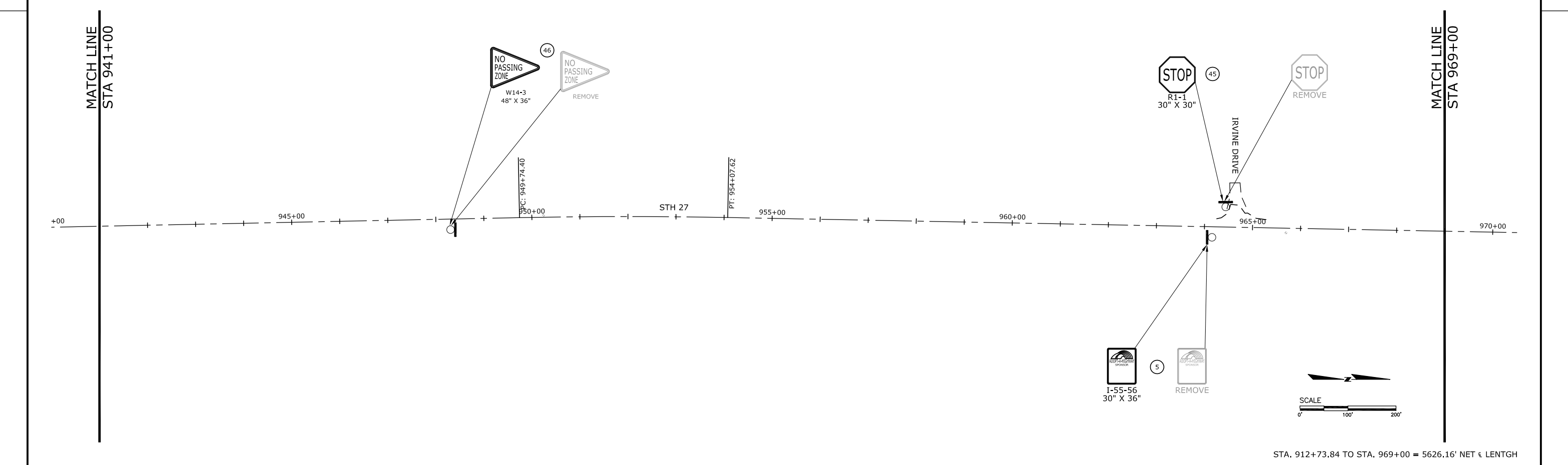
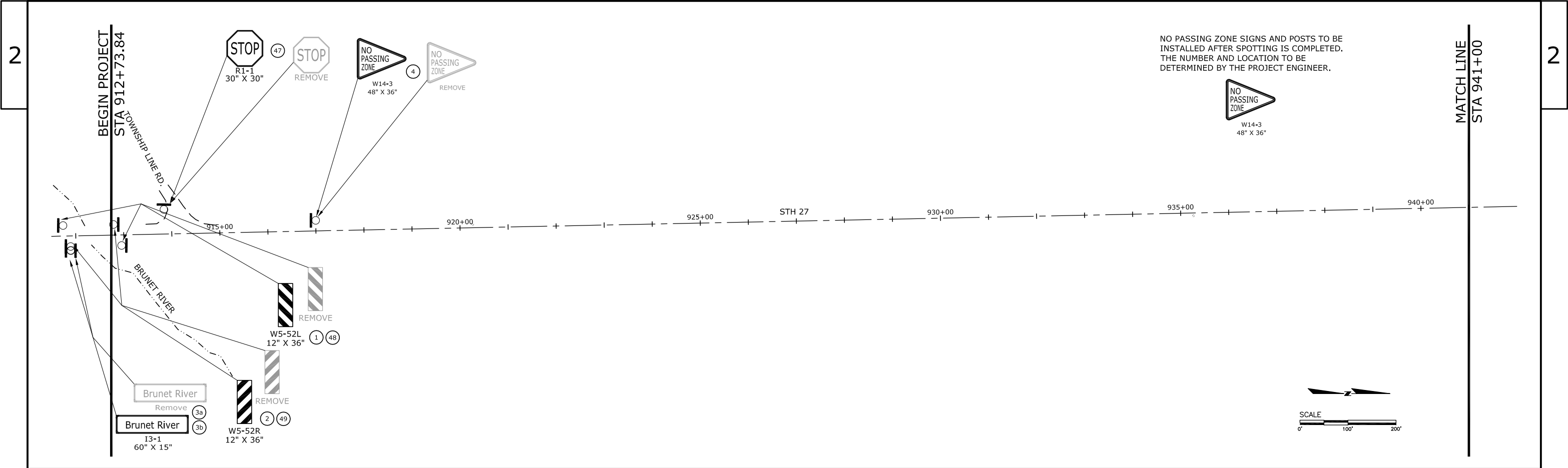
NOTE: TRANSITION SHOULDER SLOPE TO MATCH SIDE
ROAD PROFILE PRIOR TO INTERSECTION

DETAIL FOR RURAL PAVED SIDE ROAD & DRIVEWAY

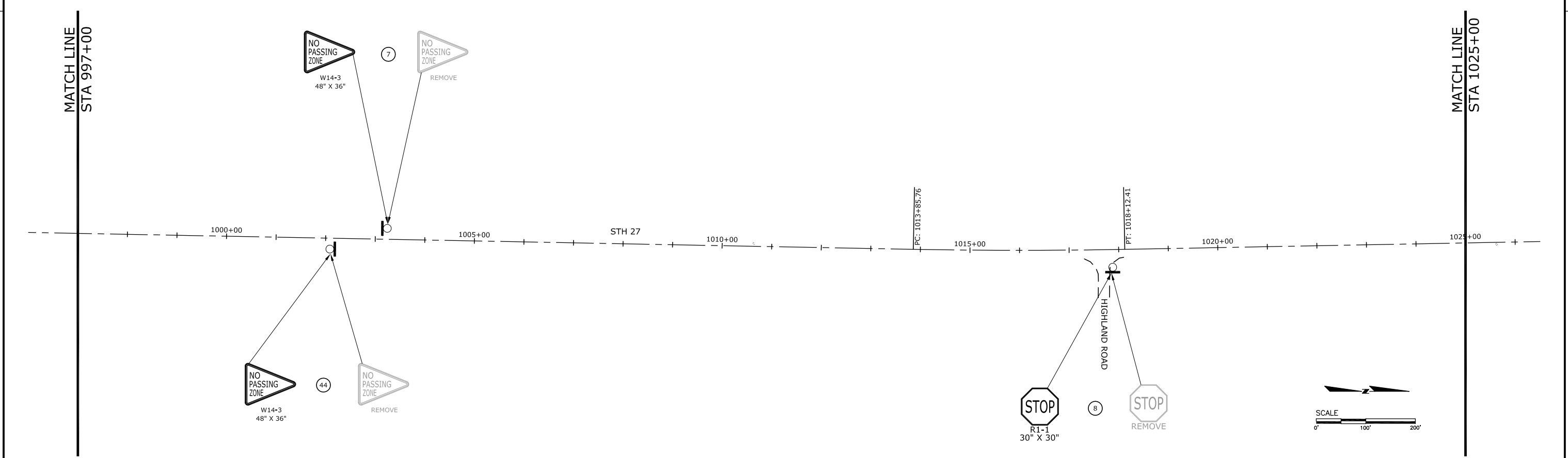
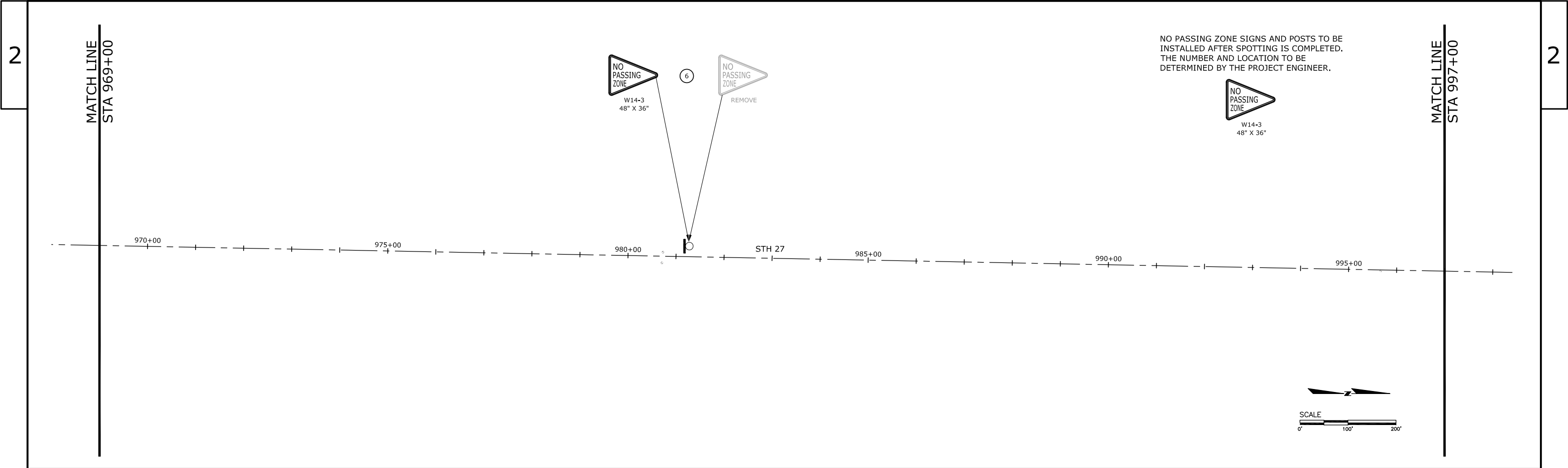
NOT TO SCALE

PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	INTERSECTION DETAILS	SHEET NO:	E
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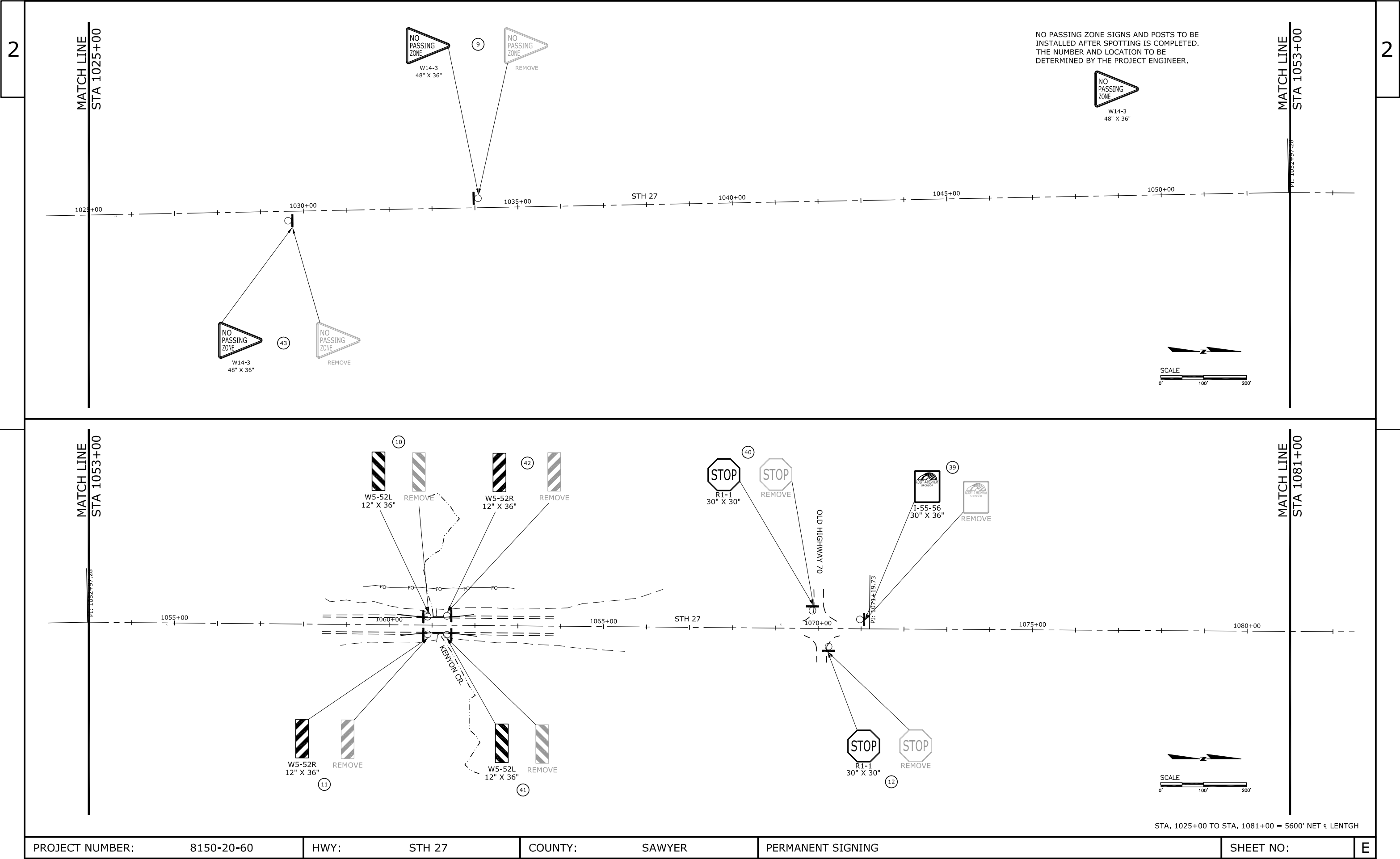


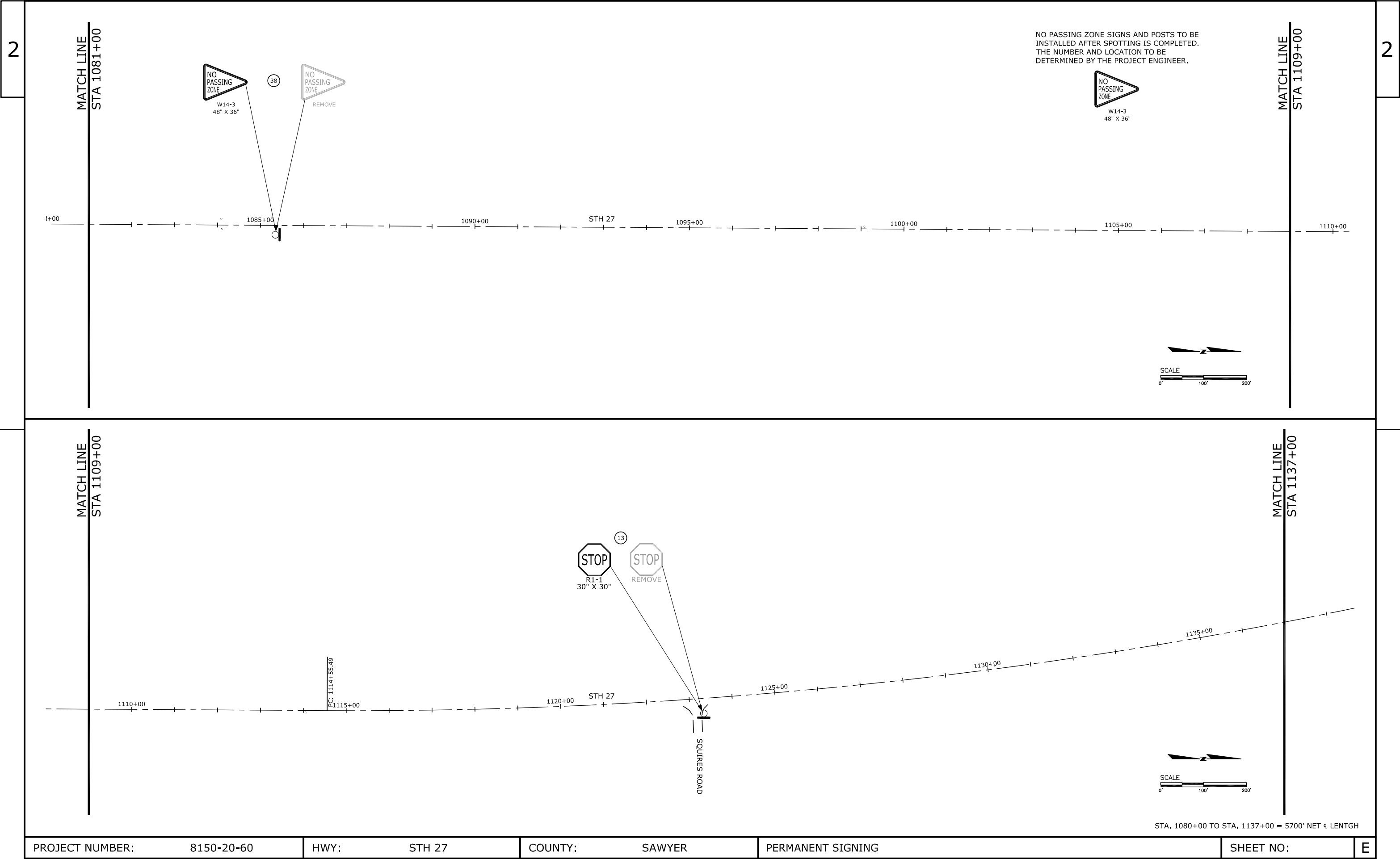


PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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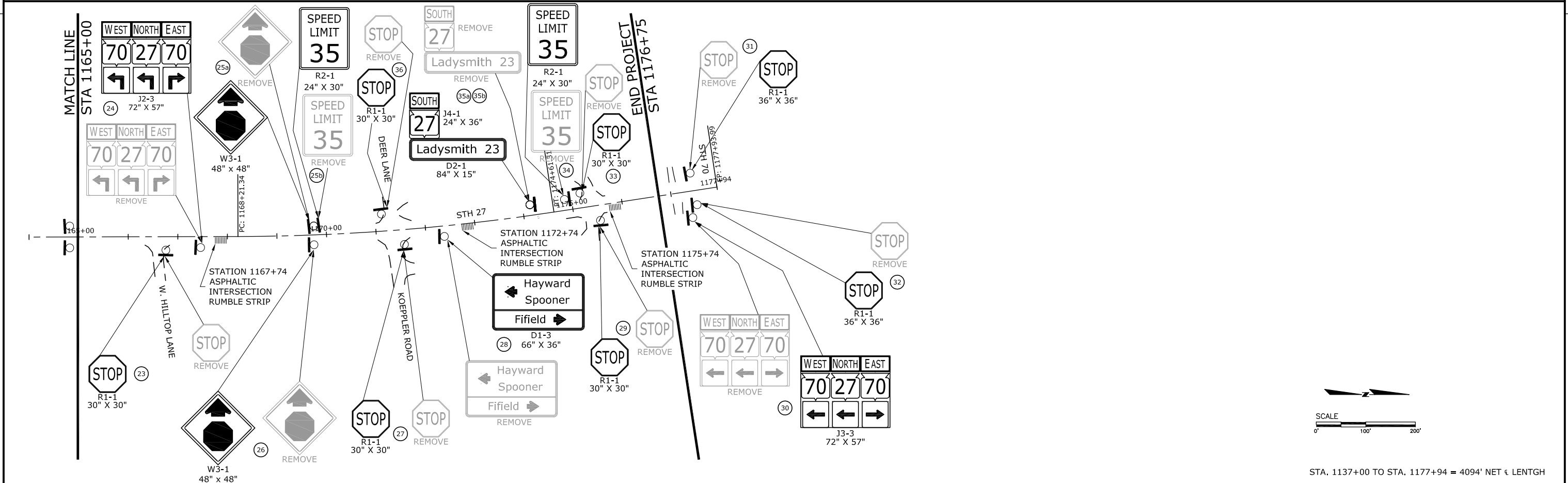
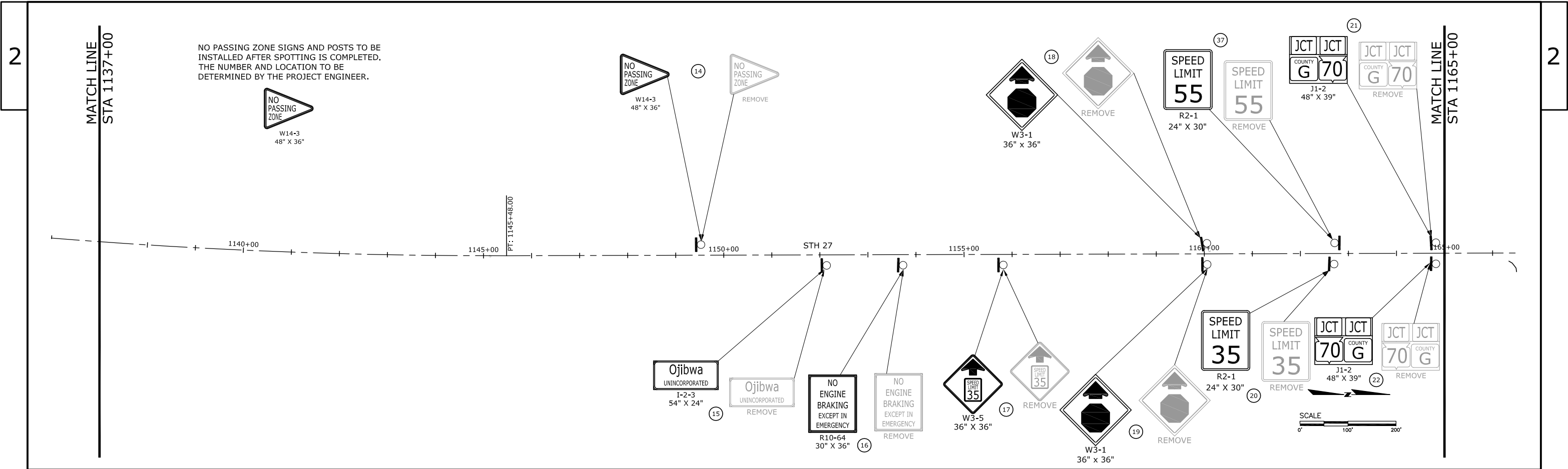


STA. 969+00 TO STA. 1025+00 = 5600' NET & LENTGH										
PROJECT NUMBER: 8150-20-60		HWY: STH 27		COUNTY: SAWYER		PERMANENT SIGNING			SHEET NO:	E





PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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DATE 15FEB16		E S T I M A T E O F Q U A N T I T I E S			
LINE					8150-20-60
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTI TY
0010	204.0115	Removing Asphalt ic Surface Butt Joints	SY	150.000	150.000
0020	204.0120	Removing Asphalt ic Surface Milling	SY	101,500.000	101,500.000
0030	204.0165	Removing Guardrail	LF	360.000	360.000
0040	211.0100	Prepare Foundation for Asphalt ic Paving (project) 01. 8150-20-60	LS	1.000	1.000
0050	211.0400	Prepare Foundation for Asphalt ic Shoulders	STA	8.000	8.000
0060	213.0100	Finishing Roadway (project) 01. 8150-20-60	EACH	1.000	1.000
0070	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,450.000	2,450.000
0080	305.0500	Shapi ng Shoulders	STA	528.000	528.000
0090	440.4410	Incentive IRI Ride	DOL	13,200.000	13,200.000
0100	455.0605	Tack Coat	GAL	10,050.000	10,050.000
0110	460.2000	Incentive Densi ty HMA Pavement	DOL	15,960.000	15,960.000
0120	465.0105	Asphal ti c Surface	TON	150.000	150.000
0130	465.0110	Asphal ti c Surface Patching	TON	50.000	50.000
0140	465.0120	Asphal ti c Surface Driveways and Fiel d Entrances	TON	150.000	150.000
0150	465.0425	Asphal ti c Shoul der Rumble Strips 2-Lane Rural	LF	49,000.000	49,000.000
0160	465.0450	Asphal ti c Intersection Rumble Strips	SY	75.000	75.000
0170	465.0475	Asphal t Center Line Rumble Strips 2-Lane Rural	LF	23,200.000	23,200.000
0180	614.0010	Barrier System Grading Shaping Fini shing	EACH	4.000	4.000
0190	614.2300	MGS Guardrail 3	LF	125.000	125.000
0200	614.2340	MGS Guardrail 3 L	LF	225.000	225.000
0210	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0220	619.1000	Mobilization	EACH	1.000	1.000
0230	628.1504	Silt Fence	LF	1,060.000	1,060.000
0240	628.1520	Silt Fence Maintenance	LF	1,060.000	1,060.000
0250	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0260	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0270	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	57.000	57.000
0280	637.2210	Signs Type II Reflective H	SF	249.520	249.520
0290	637.2230	Signs Type II Reflective F	SF	137.000	137.000
0300	638.2602	Removing Signs Type II	EACH	52.000	52.000
0310	638.3000	Removing Small Sign Supports	EACH	57.000	57.000
0320	642.5001	Field Office Type B	EACH	1.000	1.000
0330	643.0100	Traffi c Control (project) 01. 8150-20-60	EACH	1.000	1.000
0340	643.0300	Traffi c Control Drums	DAY	150.000	150.000
0350	643.0900	Traffi c Control Signs	DAY	1,325.000	1,325.000
0360	646.0106	Pavement Marking Epoxy 4-Inch	LF	77,600.000	77,600.000
0370	646.0406	Pavement Marking Same Day Epoxy 4-Inch	LF	24,900.000	24,900.000
0380	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	190.000	190.000
0390	648.0100	Locating No-Passing Zones	MI	5.000	5.000
0400	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	49,800.000	49,800.000
0410	650.8000	Construction Staking Resurfacing Reference	LF	26,400.000	26,400.000
0420	650.9910	Construction Staking Supplemental Control (project) 01. 8150-20-60	LS	1.000	1.000
0430	690.0150	Sawi ng Asphal t	LF	500.000	500.000
0440	SPV.0090	Speci al 01. Reheating HMA Pavement Longi tudinal Joints Speci al	LF	26,400.000	26,400.000
0450	SPV.0105	Speci al 01. Material Transfer Vehi cle	LS	1.000	1.000

DATE 15FEB16		E S T I M A T E O F Q U A N T I T I E S					
LINE		8150-20-60					
NUMBER	ITEM	ITEM DESCRIPTION				UNIT	TOTAL
0460	SPV. 0195	Speci al 01. HMA Pavement Type 4MT5834H				TON	19,950.000
		Speci al					19,950.000

3

614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING						
STATION LOCATION (ANCHORAGE POST #1)	SIDE	* FILL	* SALV. TOPSOIL	* FERT. TYPE B	* SEEDING MIXTURE NO. 30	* MULCHING
		CY	SY	CWT	LB	SY
						EACH
1059+90	LT	37	240	0.14	4	240
1059+73	RT	34	230	0.13	4	230
1062+45	LT	26	170	0.10	3	170
1062+48	RT	40	260	0.15	4	260
TOTAL		137	900	1	15	900
*ITEMS & QUANTITIES LISTED FOR INFORMATION ONLY. ITEMS ARE INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING.						

3

CATEGORY	STATION	TO	STATION	BASE AGGREGATE DENSE 3/4-INCH	SHAPING SHOULDERS	ASPHALTIC SHOULDER RUMBLE STRIP 2-LANE RURAL	ASPHALTIC INTERSECTION RUMBLE STRIP 2-LANE RURAL	ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL	REMARKS
0010	912+74	-	1176+75	2,450	528	49000		23200	
0010			1176+75				75		STH 70 INTERSECTION
TOTAL				2,450	528	49,000	75	23,200	

					PAVEMENT MARKING EPOXY 4-INCH	PAVEMENT MARKING SAME DAY EPOXY 4-INCH	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LOCATING NO-PASSING ZONES	TEMPORARY PAVEMENT MARKING PAINT 4-INCH	REMARKS
CATEGORY	STATION	TO	STATION	SIDE	646.0106 LF	646.0406 LF	647.0566 LF	648.0100 MI	649.0402 LF	
0010	912+74	-	916+84	LT/RT	-	101	-	0.08	201	DASHED
0010	912+74	-	1176+75	LT	26400	-	-	-	-	EDGE LINE
0010	912+74	-	1176+75	RT	26400	-	-	-	-	EDGE LINE
0010	914+00			LT	-	-	20	-	-	TOWNSHIP LINE ROAD
0010	916+84	-	927+75	LT/RT	1364	1364	-	0.21	2728	DASHED LT, SOLID RT
0010	927+75	-	933+55	LT/RT	1160	1160	-	0.11	2320	DOUBLE YELLOW
0010	933+55	-	947+81	LT/RT	1783	1783	-	0.27	3565	SOLID LT, DASHED RT
0010	947+81	-	980+55	LT/RT	819	819	-	0.62	1637	DASHED
0010	964+60			LT	-	-	15	-	-	IRVINE ROAD
0010	980+55	-	987+41	LT/RT	858	858	-	0.13	1715	DASHED LT, SOLID RT
0010	987+41	-	992+69	LT/RT	132	132	-	0.10	264	DASHED
0010	992+69	-	1001+67	LT/RT	1123	1123	-	0.17	2245	SOLID LT, DASHED RT
0010	1001+67	-	1003+25	LT/RT	40	40	-	0.03	79	DASHED
0010	1003+25	-	1016+98	LT/RT	1715	1715	-	0.26	3431	DASHED LT, SOLID RT
0010	1016+98	-	1029+12	LT/RT	1518	1518	-	0.23	3035	SOLID LT, DASHED RT
0010	1017+80			LT	-	-	15	-	-	HIGHLAND ROAD
0010	1029+12	-	1033+87	LT/RT	119	119	-	0.09	238	DASHED
0010	1033+87	-	1048+13	LT/RT	1783	1783	-	0.27	3565	DASHED LT, SOLID RT
0010	1048+13	-	1071+36	LT/RT	4645	4645	-	0.44	9290	DOUBLE YELLOW
0010	1070+00			LT	-	-	15	-	-	OLD HIGHWAY 70
0010	1070+20			RT	-	-	15	-	-	OLD HIGHWAY 70
0010	1071+36	-	1085+09	LT/RT	1716	1716	-	0.26	3433	SOLID LT, DASHED RT
0010	1085+09	-	1149+51	LT/RT	1611	1611	-	1.22	3221	DASHED
0010	1123+20			RT	-	-	15	-	-	SQUIRES ROAD
0010	1149+51	-	1163+24	LT/RT	1715	1715	-	0.26	3431	DASHED LT, SOLID RT
0010	1163+24	-	1176+75	LT/RT	2702	2702	-	0.26	5404	DOUBLE YELLOW
0010	1166+60			RT	-	-	15	-	-	W. HILLTOP LANE
0010	1171+20			LT	-	-	15	-	-	DEER LANE
0010	1171+40			LT	-	-	15	-	-	KOEPLER ROAD.
0010	1175+30			LT	-	-	15	-	-	FRONTAGE ROAD
0010	1175+50			RT	-	-	15	-	-	FRONTAGE ROAD
0010	1177+40			RT	-	-	20	-	-	STH 27 AT STH 70
TOTAL					77600	24900	190	5.00	49800	

CATEGORY	STATION	TO	STATION	SIDE	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF
0010	1058+35	-	1060+85	LT	250	250
0010	1058+35	-	1061+05	RT	270	270
0010	1061+25	-	1064+05	LT	280	280
0010	1061+35	-	1063+95	RT	260	260
TOTAL					1060	1060

CATEGORY	DAYS	#DRUMS	DAYS	# SIGNS	DAYS
0010	5	30	150	4	20
0010	40			9	360
0010	45			21	945
		TOTAL		150	1,325

				CONSTRUCTION STAKING RESURFACING REFERENCE 650.8000 LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 650.9910 LS
0010	912+74	-	1176+75	26400	1
TOTAL				26400	1

3

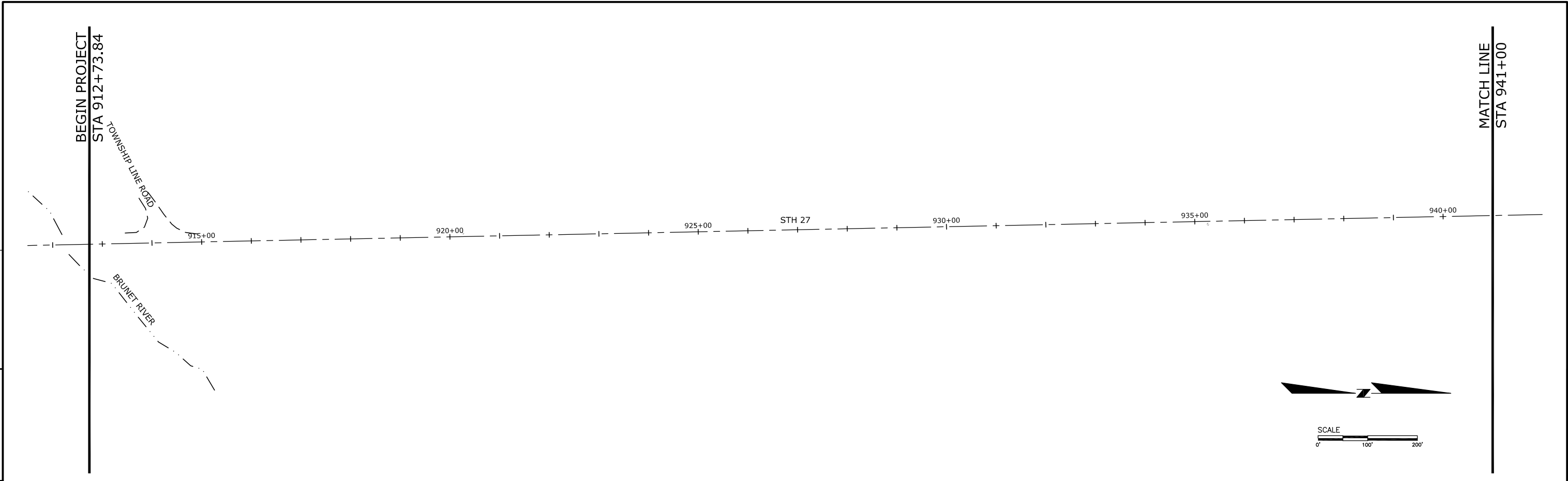
		Station	Position	Code	Description	Width	Height	Area		Line Order 1	Line Order 2	Line Order 3	POSTS WOOD 4X6-INCH X 18-FT	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS
Category	Sign #	Station	Side	Sign Code	Description	Width	Height	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F	Sign Message			634.0618	638.2602	638.3000
		Northbound						SF	SF	Line Order 1	Line Order 2	Line Order 3	EA	EA	EA
0010	1	911+74	Left	W5-52-L	Clearance Striper Down Right	12	36		3.00	Brunet River			1	1	1
0010	2	911+89	Right	W5-52-R	Clearance Striper Down Left	12	36		3.00				1	1	1
0010	3a	911+89	Right	I-3-1	Lake or River Name - Stencil Message	60	15	6.25					2	1	2
0010	4	917+00	Left	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	5	964+15	Right	I-55-56	Adopt-A-Highway [Sponsor]	30	36	7.50					1	1	1
0010	6	981+27	Left	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	7	1003+24	Left	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	8	1017+87	Right	R1-1	Stop	30	30	5.18					1	1	1
0010	9	1034+07	Left	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	10	1060+90	Left	W5-52-L	Clearance Striper Down Right	12	36		3.00				1	1	1
0010	11	1060+90	Right	W5-52-R	Clearance Striper Down Left	12	36		3.00				1	1	1
0010	12	1070+25	Right	R1-1	Stop	30	30	5.18					1	1	1
0010	13	1123+31	Right	R1-1	Stop	30	30	5.18					1	1	1
0010	14	1149+53	Left	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	15	1152+14	Right	I-2-3	Community Population Name Sign	54	24	9.00		Ojibwa	Unincorporated		2	1	2
0010	16	1153+72	Right	R10-64	No Engine Breaking Except in Emergency	30	36	7.50		Ojibwa			1	1	1
0010	17	1155+81	Right	W3-5	Speed Limit _ Ahead [Arrow]	36	36		9.00	35			1	1	1
0010	18	1160+06	Left	W3-1	Stop Ahead	36	36		9.00				1	1	1
0010	19	1160+06	Right	W3-1	Stop Ahead	36	36		9.00				1	1	1
0010	20	1162+70	Right	R2-1	Speed Limit _ MPH	24	30	5.00		35			1	1	1
0010	21	1164+82	Left	J1-2	Junction or End Assembly (2 Headed Panel)	48	39	13.00		Jct Jct	G 70		1	1	1
0010	22	1164+82	Right	J1-2	Junction or End Assembly (2 Headed Panel)	48	39	13.00		Jct Jct	70 G		1	1	1
0010	23	1166+75	Right	R1-1	Stop	30	30	5.18					1	1	1
0010	24	1167+46	Right	J2-3	Directional Assembly (3 Headed Panel)	72	57	28.50		WEST NORTH EAST	70 27 70	(LT) (LT) (RT)	1	1	1
0010	25a	1169+74	Left	W3-1	Stop Ahead	48	48		16.00				2	1	2
0010	26	1169+74	Right	W3-1	Stop Ahead	48	48		16.00				2	1	2
0010	27	1171+55	Right	R1-1	Stop	30	30	5.18					1	1	1
0010	28	1172+36	Right	D1-3	Triple Destination/Arrow	66	36	16.50		(LA) Hayward	(LA) Spooner	Fifield (RA)	1	1	1
0010	29	1175+51	Right	R1-1	Stop	30	30	5.18					1	1	1
0010	30	1177+47	Right	J3-3	Directional Assembly (3 Headed Panel)	72	57	28.50		West North East	70 27 70	(LA) (LA) (RA)	2	1	2
0010	31	1177+49	Left	R1-1	Stop	36	36	7.46					2	1	2
0010	32	1177+49	Right	R1-1	Stop	36	36	7.46					2	1	2
		Southbound													
0010	33	1175+18	Left	R1-1	Stop	30	30	5.18					1	1	1
0010	34	1174+86	Left	R2-1	Speed Limit _ MPH	24	30	5.00		35			1	1	1
0010	35a	1174+15	Left	D2-1	Destination/Distance (One) with Die Cut Letters	78	15	8.12		Ladysmith 23			2	1	2
0010	35b	1174+15	Left	J4-1	Reassurance Assembly (1 head route panel)	24	36	6.00		South	27		0	1	0
0010	36	1171+13	Left	R1-1	Stop	30	30	5.18					1	1	1
0010	25b	1169+74	Left	R2-1	Speed Limit _ MPH	24	30	5.00		35			0	1	0
0010	37	1162+70	Left	R2-1	Speed Limit _ MPH	24	30	5.00		55			1	1	1
0010	38	1085+34	Right	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	39	1070+97	Left	I-55-56	Adopt-A-Highway [Sponsor]	30	36	7.50					1	1	1
0010	40	1069+86	Left	R1-1	Stop	30	30	5.18					1	1	1
0010	41	1061+34	Right	W5-52-L	Clearance Striper Down Right	12	36		3.00				1	1	1
0010	42	1061+34	Left	W5-52-R	Clearance Striper Down Left	12	36		3.00				1	1	1
0010	43	1029+64	Right	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	44	1002+09	Right	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	45	964+43	Left	R1-1	Stop	30	30	5.18					1	1	1
0010	46	948+30	Right	W14-3	No Passing Zone	48	36		6.00				1	1	1
0010	47	913+84	Left	R1-1	Stop	30	30	5.18					1	1	1
0010	48	912+95	Right	W5-52-L	Clearance Striper Down Right	12	36		3.00				1	1	1
0010	49	912+79	Left	W5-52-R	Clearance Striper Down Left	12	36		3.00				1	1	1
0010	3b	911+89	Right	I-3-1	Lake or River Name - Stencil Message	60	15	6.25		Brunet River			0	1	0
TOTAL								249.52	137.00				57.00	52.00	57.00

NOTE: STATIONING SHOWN FOR ALL SIGNS IS APPROXIMATE, LAYOUT AND ACTUAL PLACEMENT SHALL BE DONE BY THE CONTRACTOR IN ACCORDANCE WITH THE MUTCD.

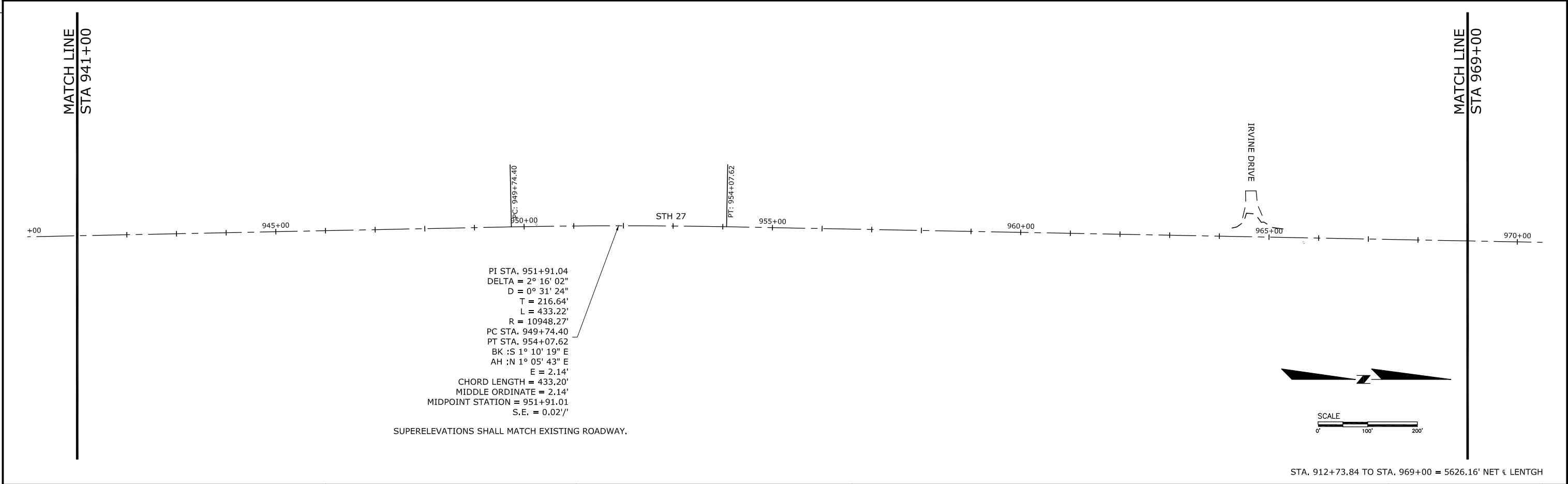
PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	MISCELLANEOUS QUANTITIES	SHEET NO:	E
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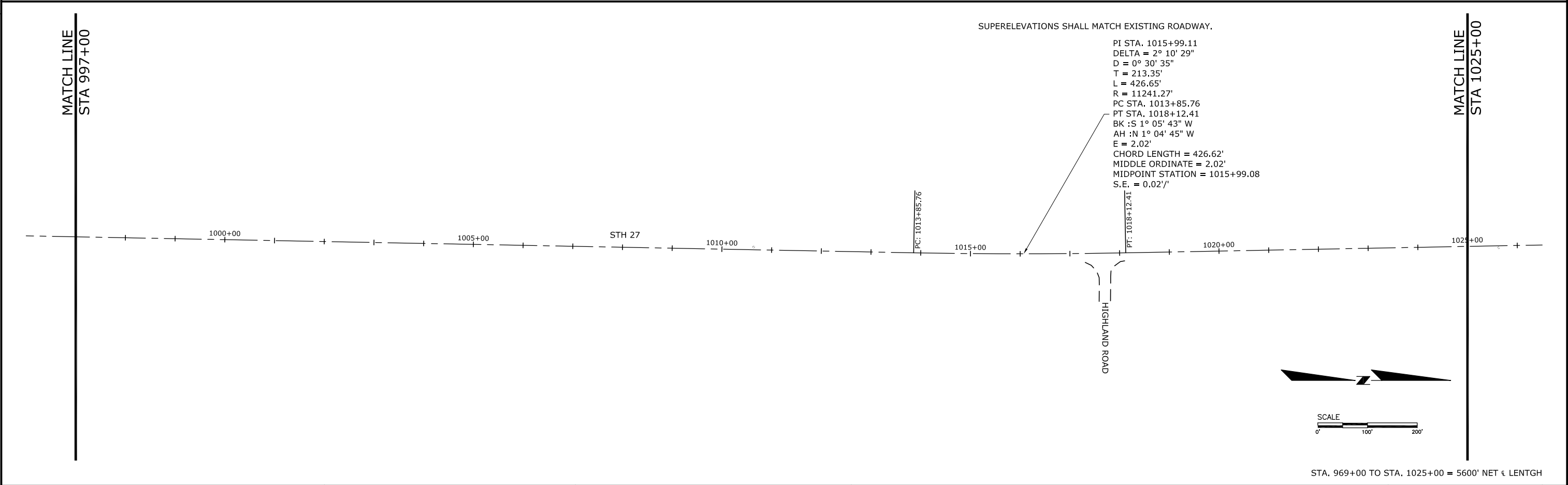
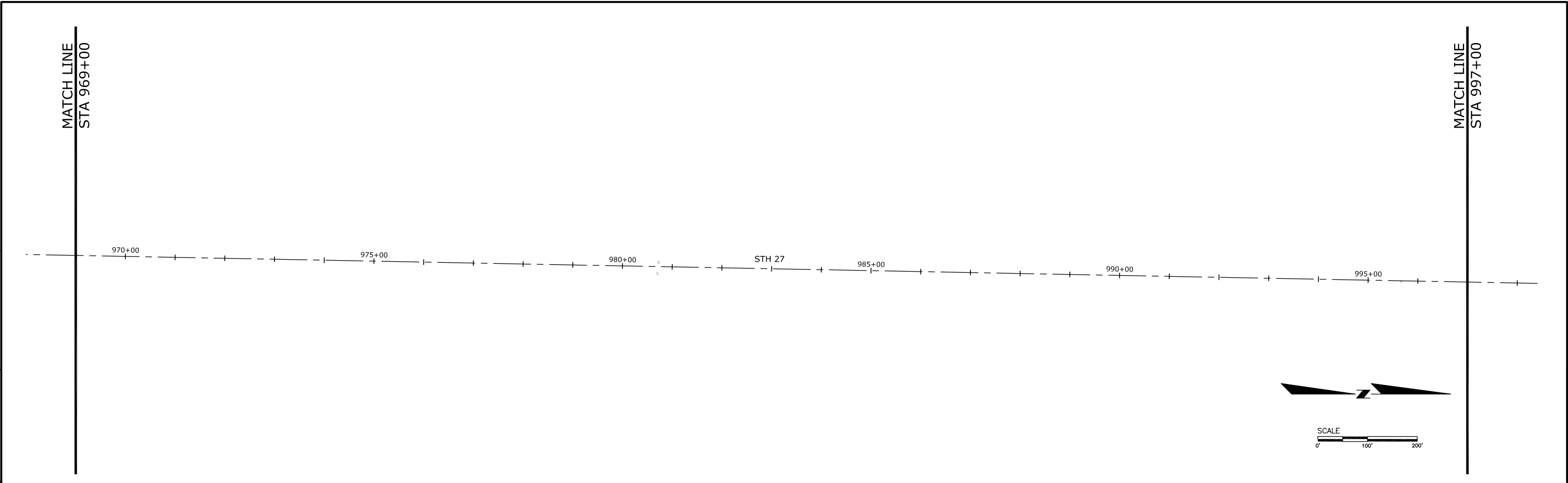


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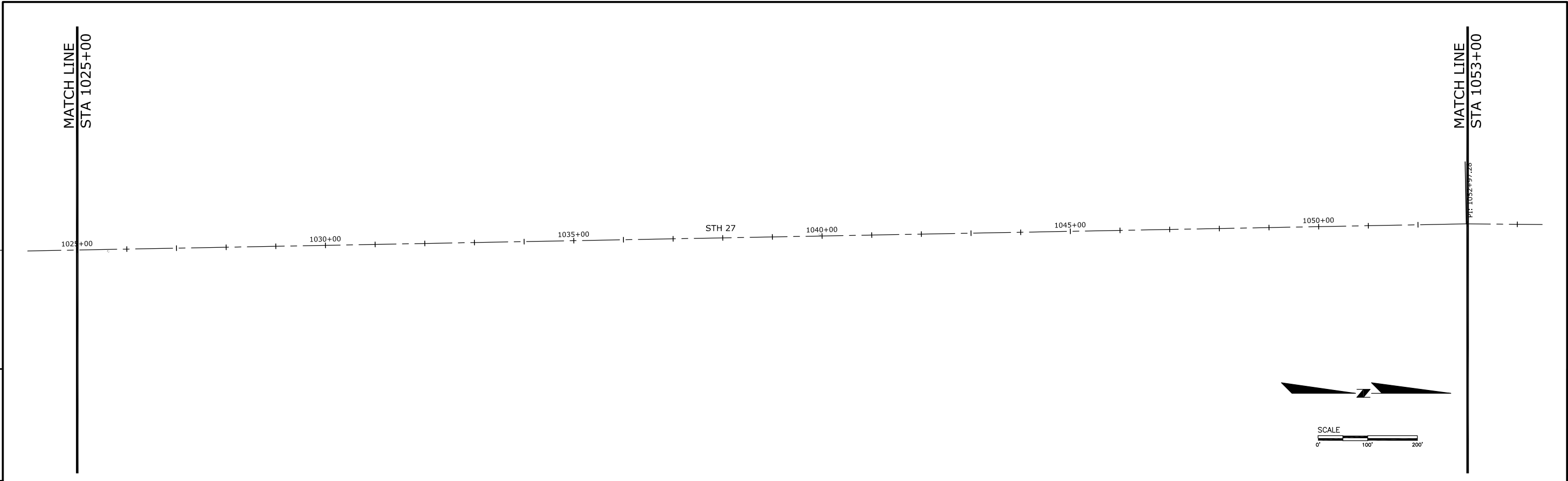
STA. 912+73.84 TO STA. 969+00 = 5626.16' NET & LENTGH

PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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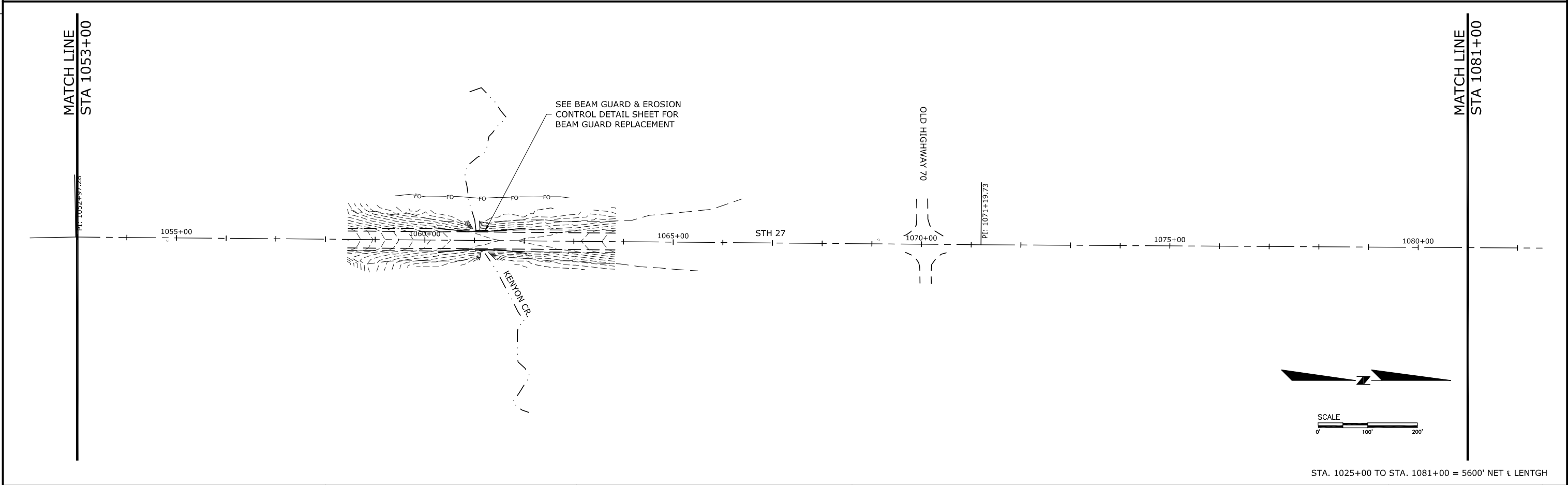


PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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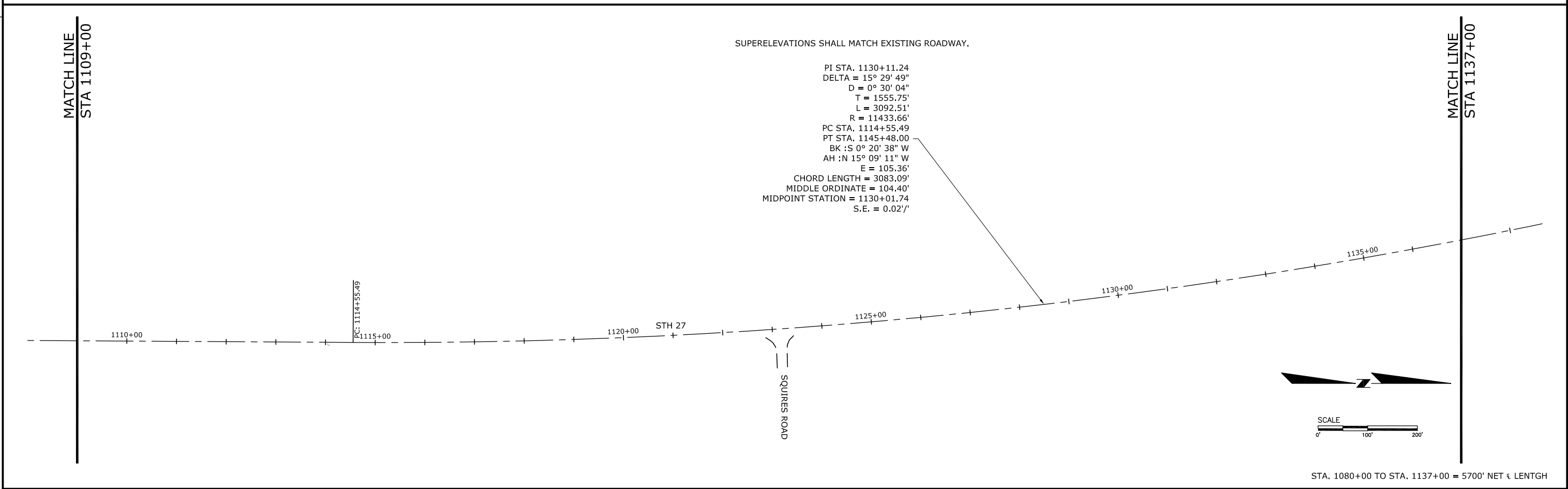
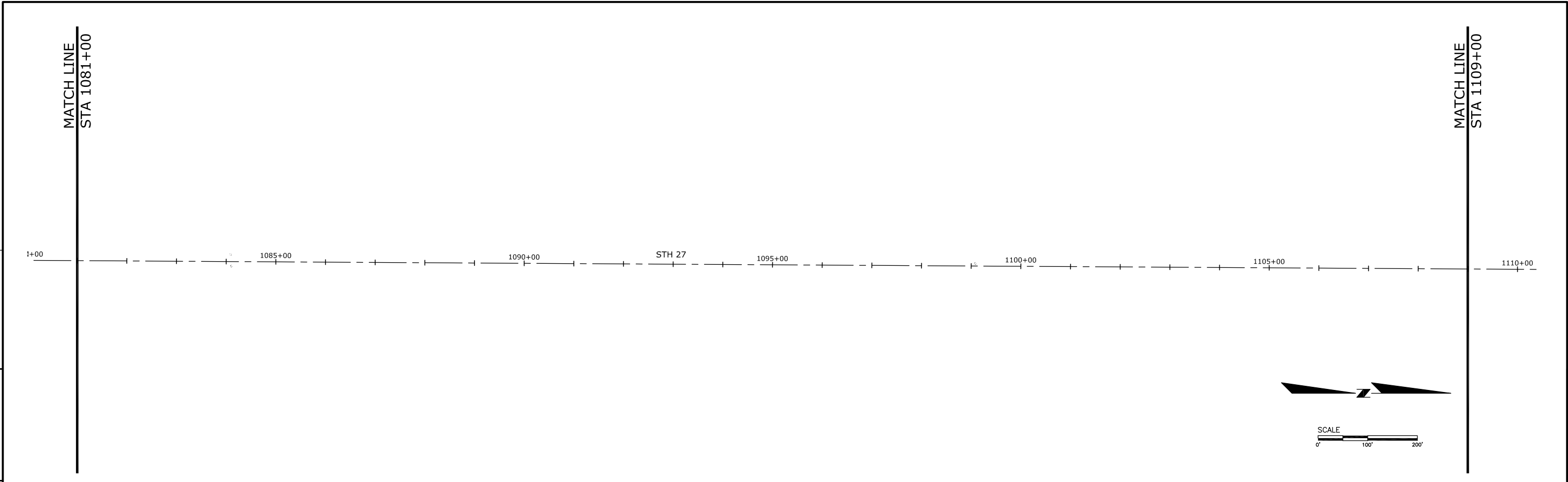
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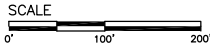
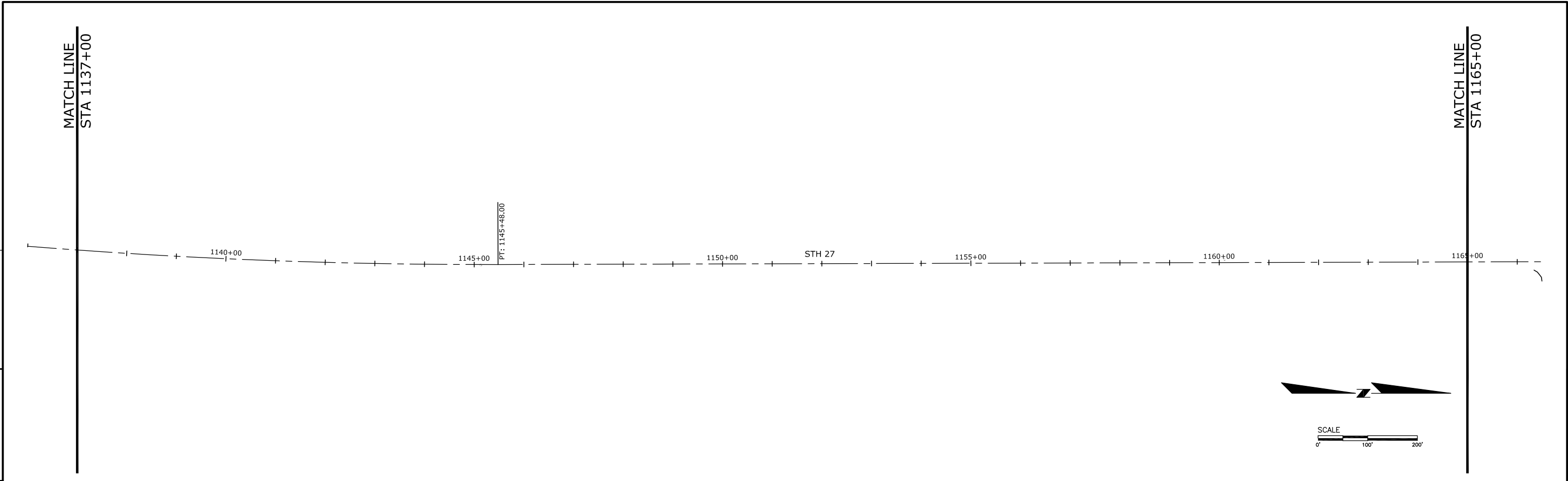


PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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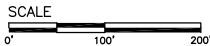
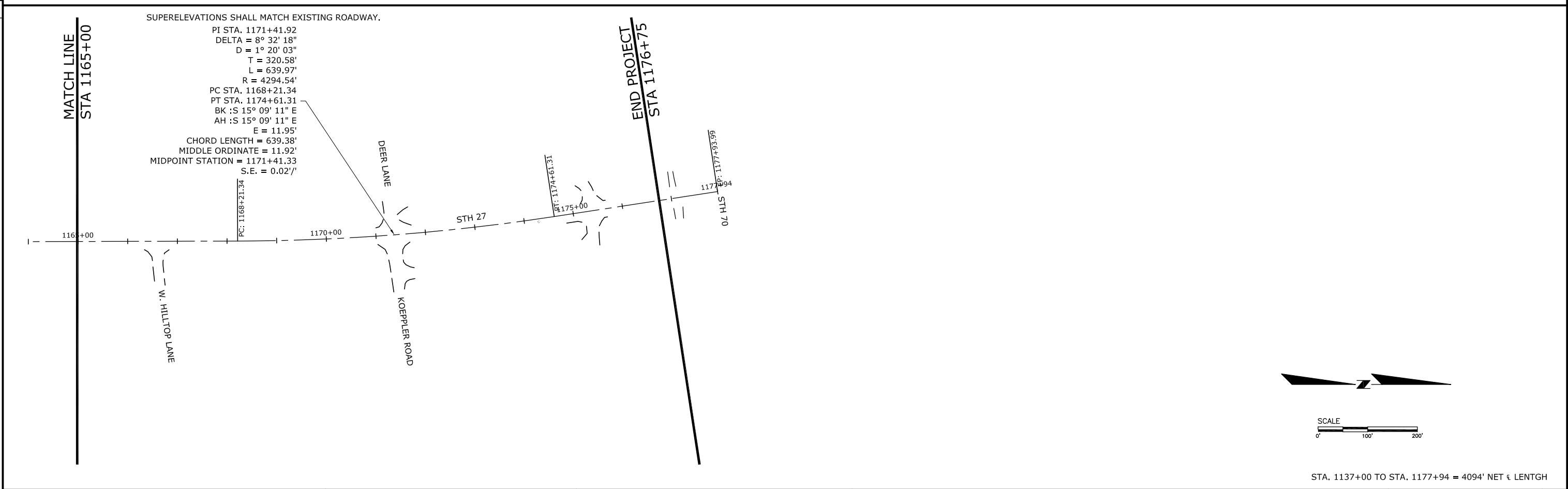


PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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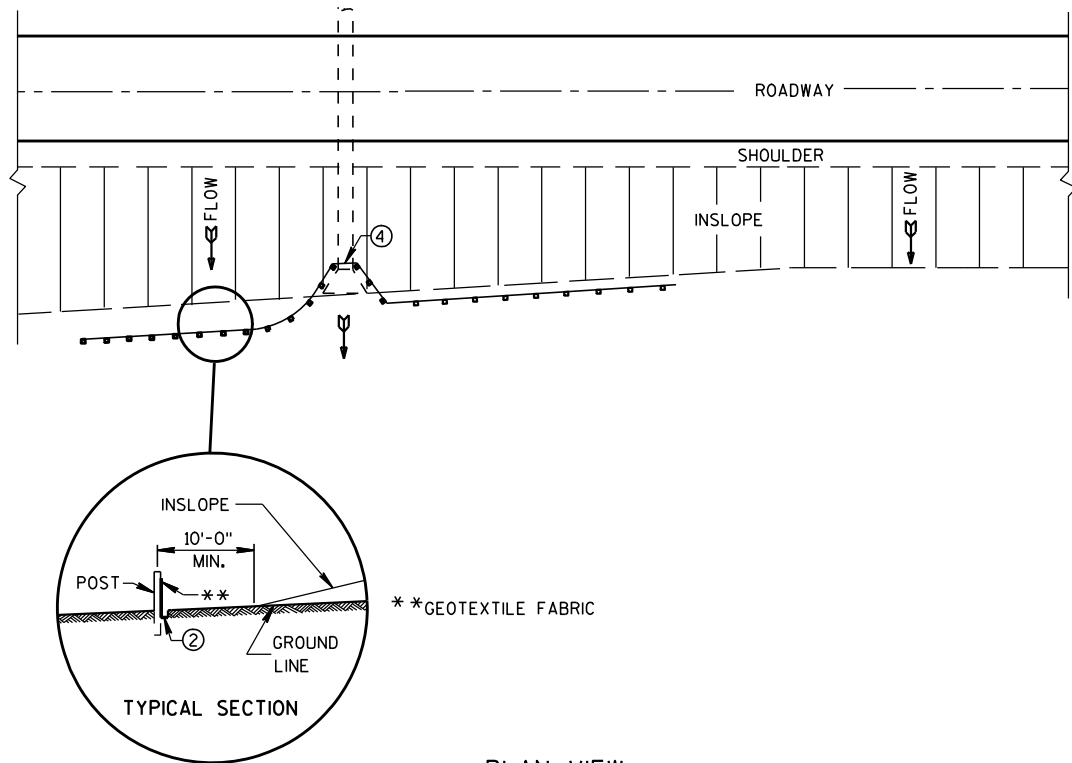


STA. 1137+00 TO STA. 1177+94 = 4094' NET & LENTGH

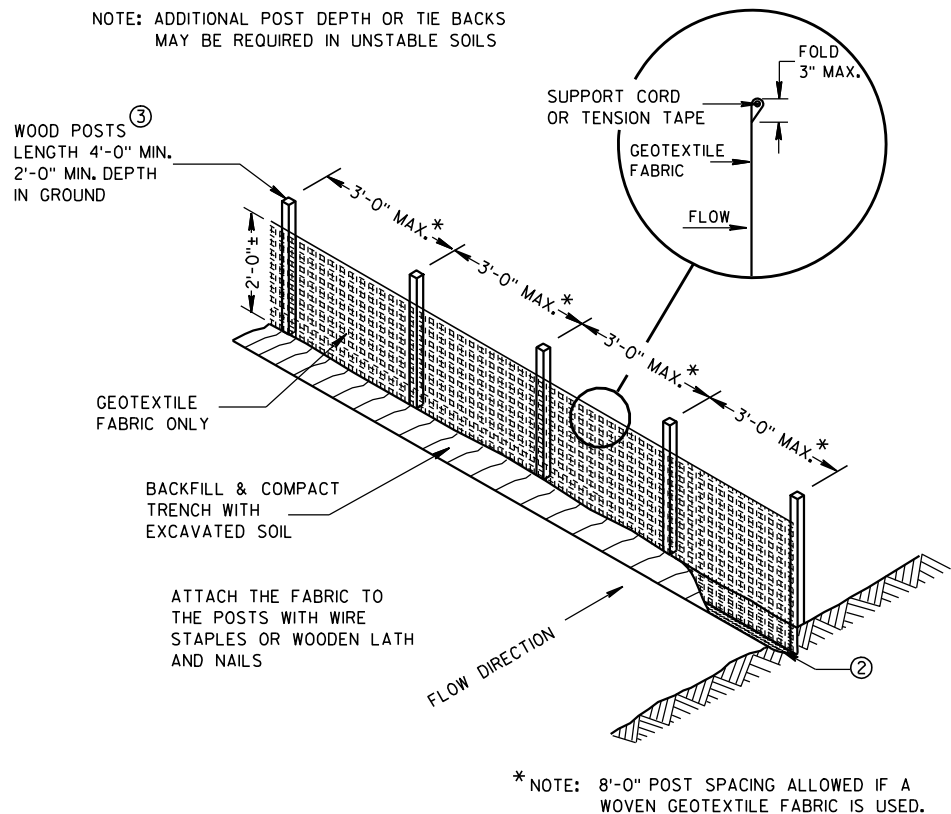
PROJECT NUMBER:	8150-20-60	HWY:	STH 27	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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Standard Detail Drawing List

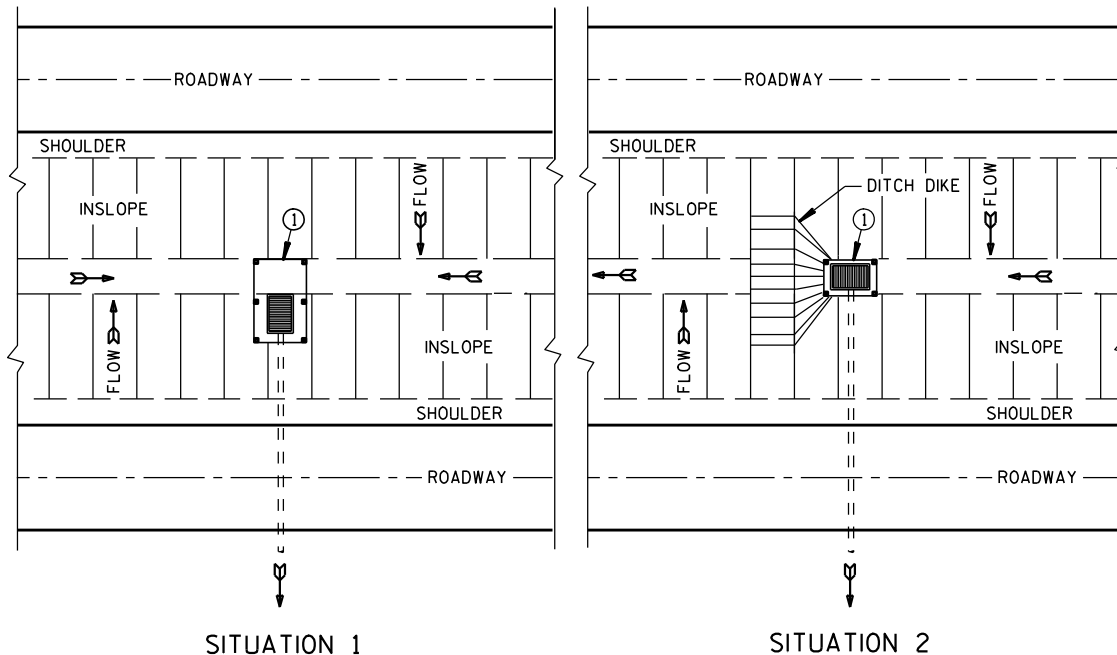
08E09-06	SILT FENCE
13A08-01	ASPHALTIC RUMBLE STRIPS AT INTERSECTION
13A10-01A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-03A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
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)
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-03	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



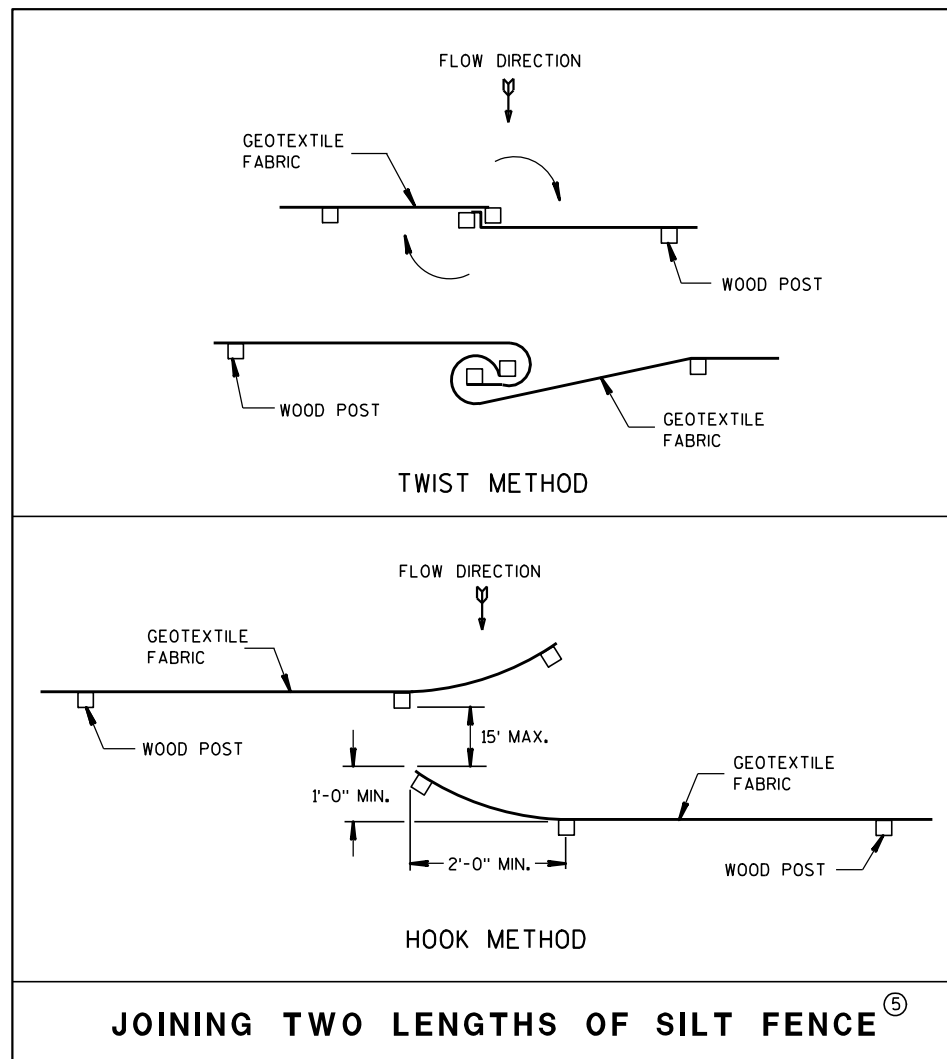
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

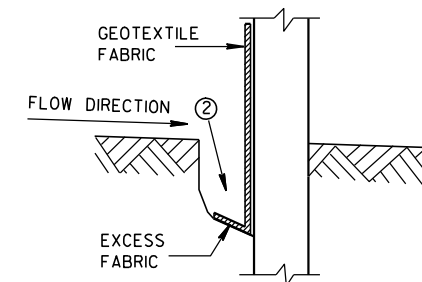


JOINING TWO LENGTHS OF SILT FENCE ⑤

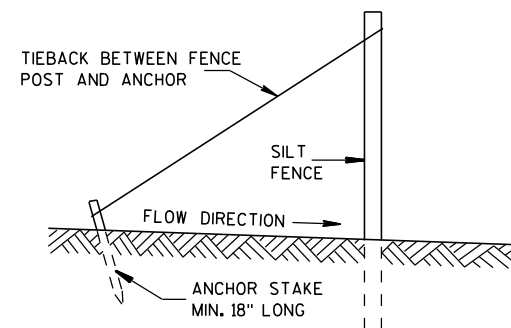
GENERAL NOTES

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.

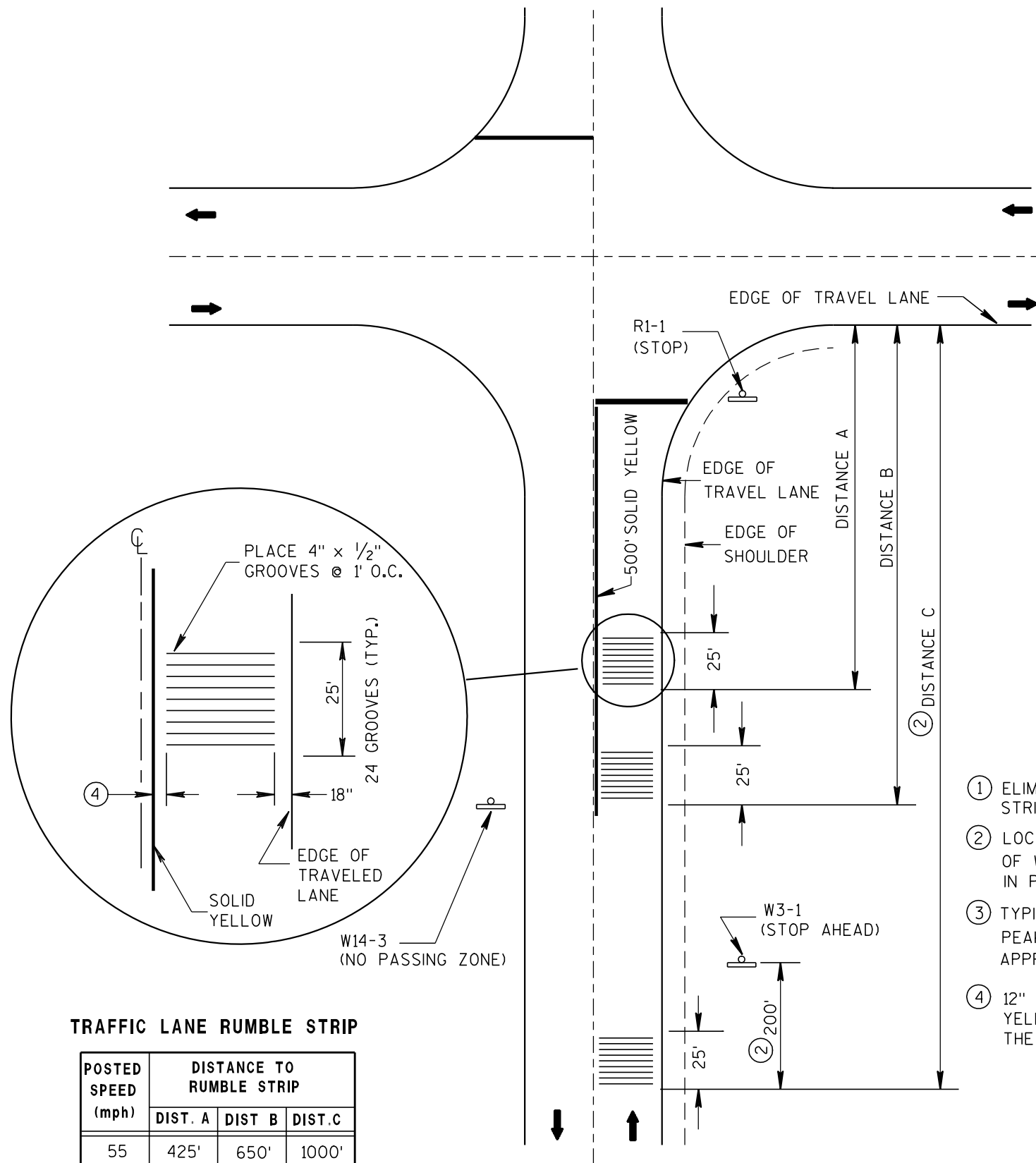


TRENCH DETAIL



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	



TRAFFIC LANE RUMBLE STRIP

POSTED SPEED (mph)	DISTANCE TO RUMBLE STRIP		
	DIST. A	DIST. B	DIST. C
55	425'	650'	1000'
50	325'	450'	800'
45	275'	400'	650'
40	225'	①	550'
35	175'	①	475'
≤ 30	125'	①	425'

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

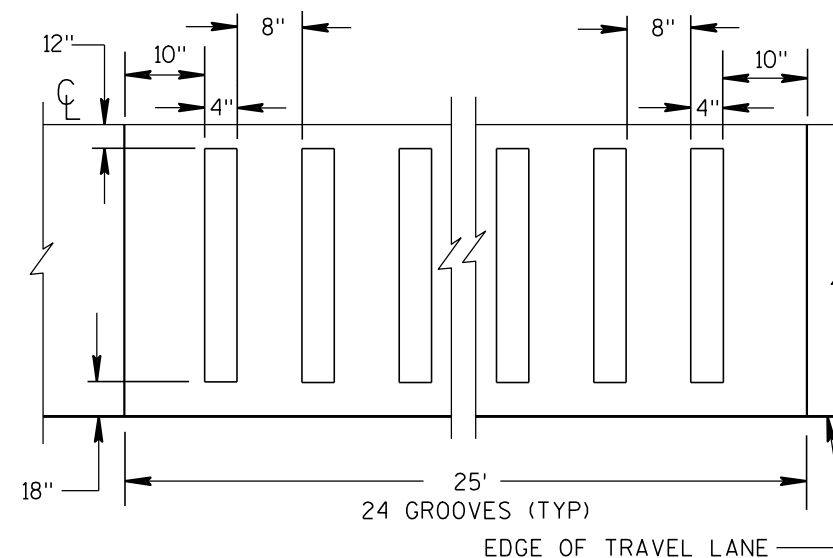
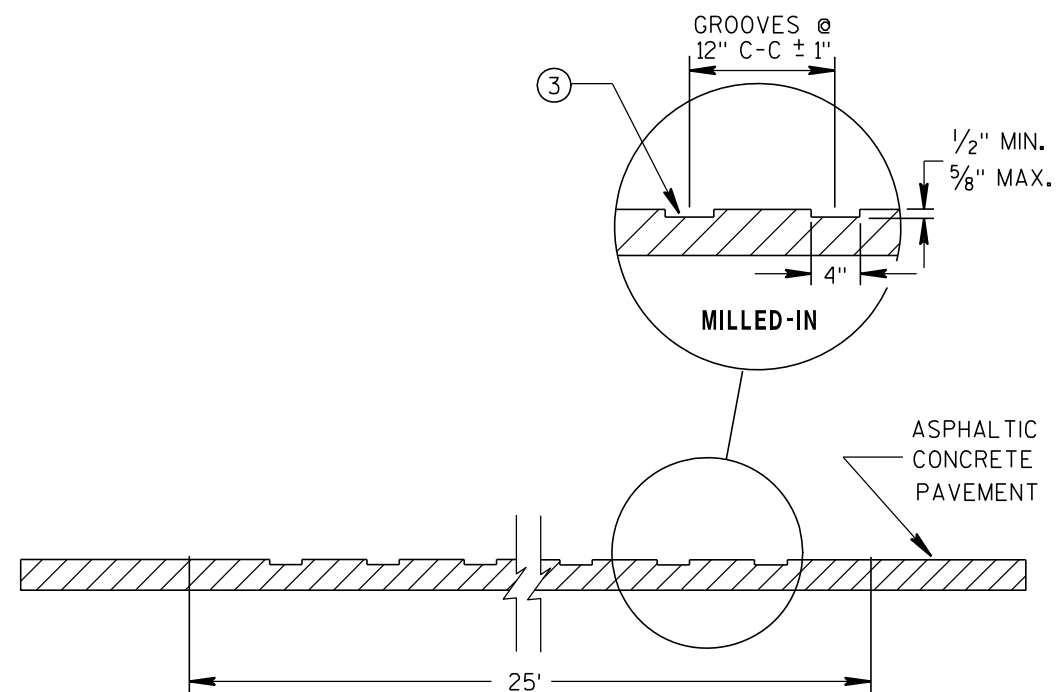
- ① ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.
- ② LOCATE RUMBLE STRIP 200' IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE C.
- ③ TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY $\frac{1}{16}$ "
- ④ 12" CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.

GENERAL NOTES

CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.

WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.

PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

ASPHALTIC RUMBLE STRIPS
AT INTERSECTIONSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/17/2011

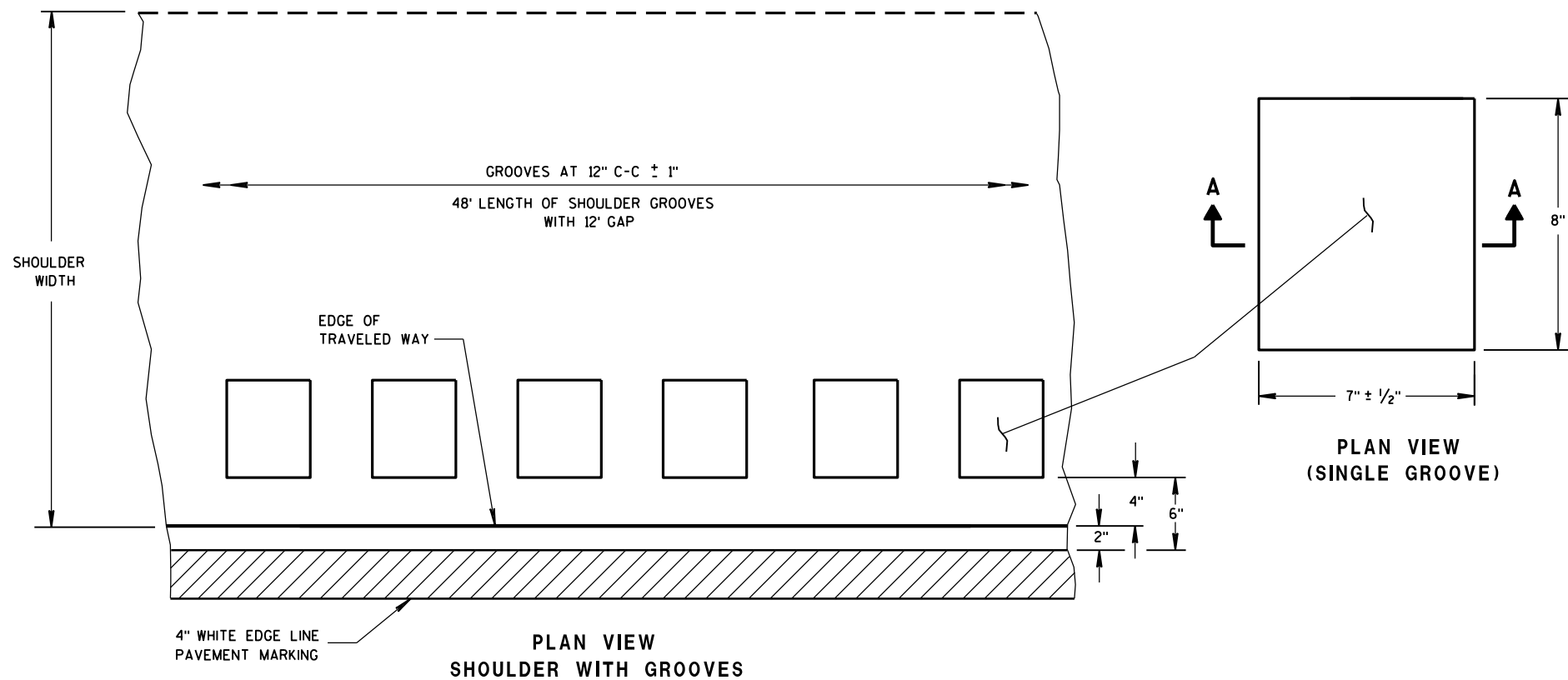
DATE

FHWA

/S/ Jerry H. Zogg

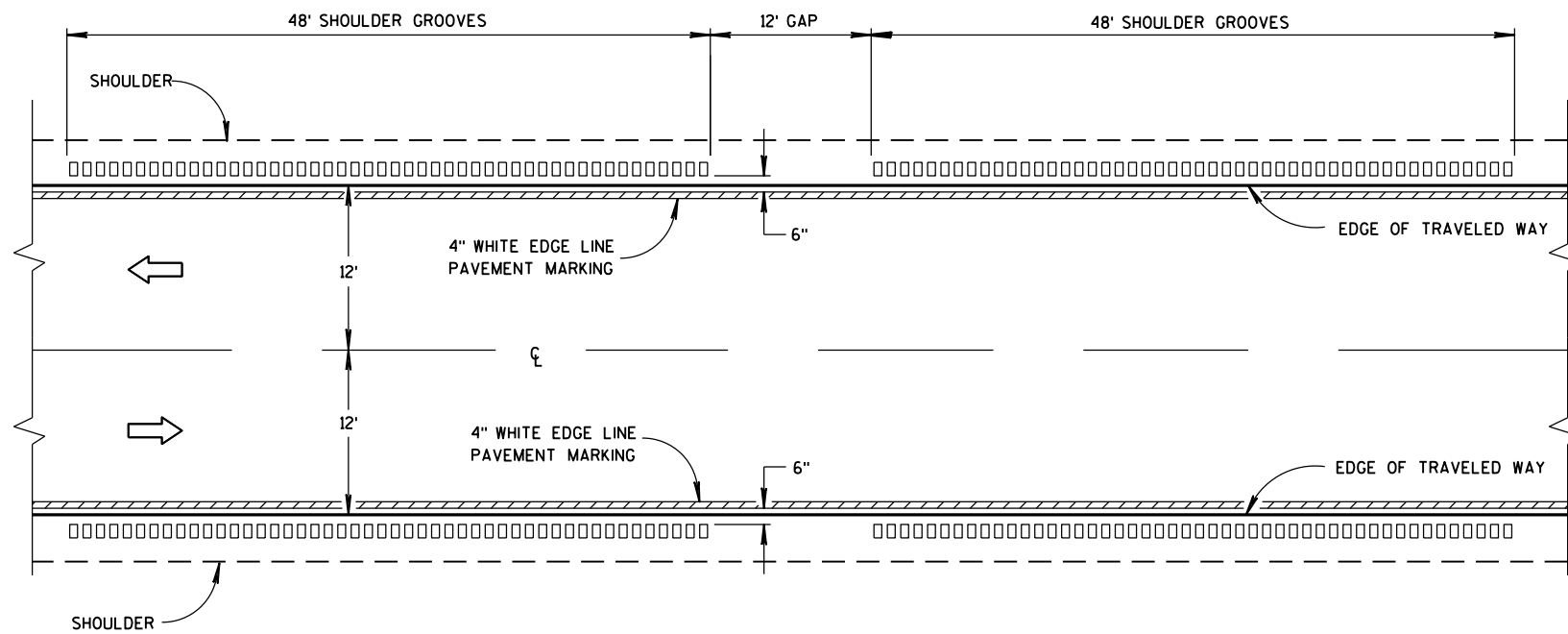
ROADWAY STANDARDS DEVELOPMENT

ENGINEER



6

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

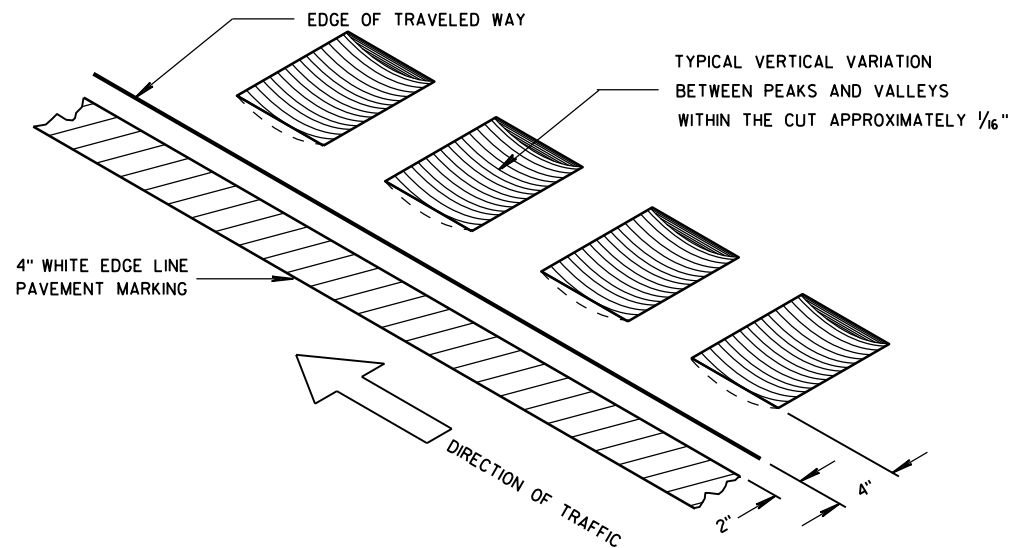


TYPE 1
2-LANE SHOULDER RUMBLE STRIP

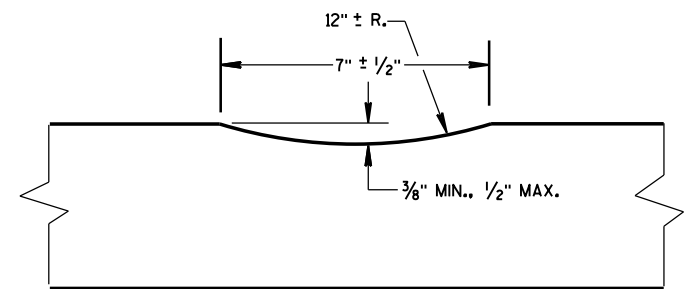
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



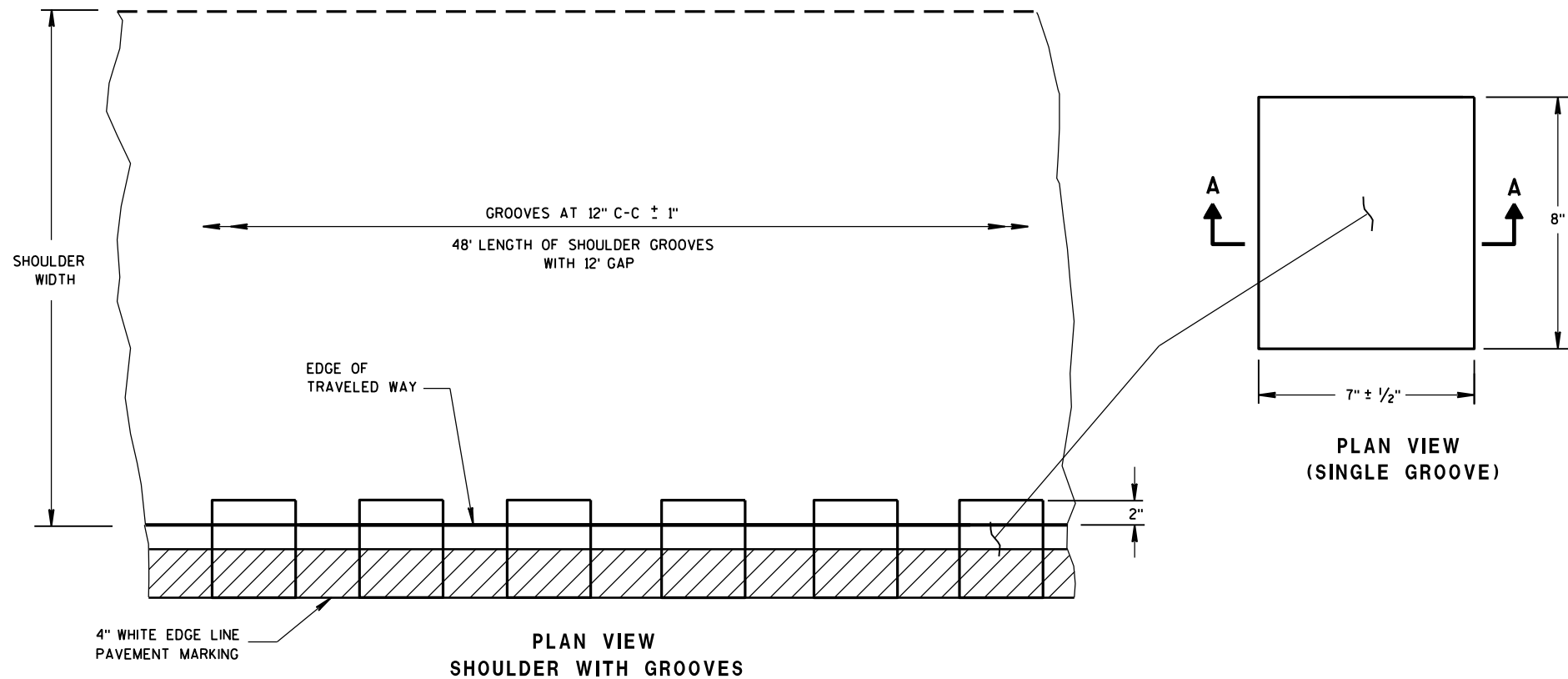
ISOMETRIC



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

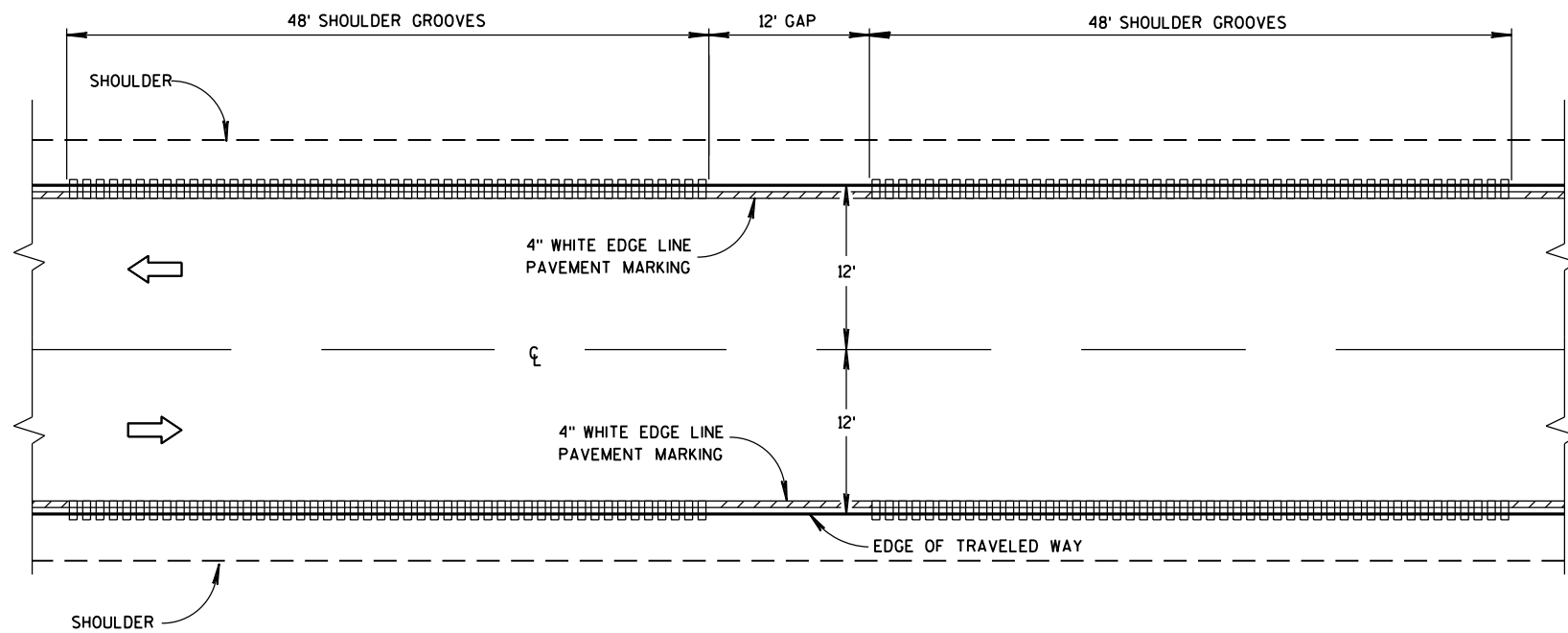
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

6
PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP

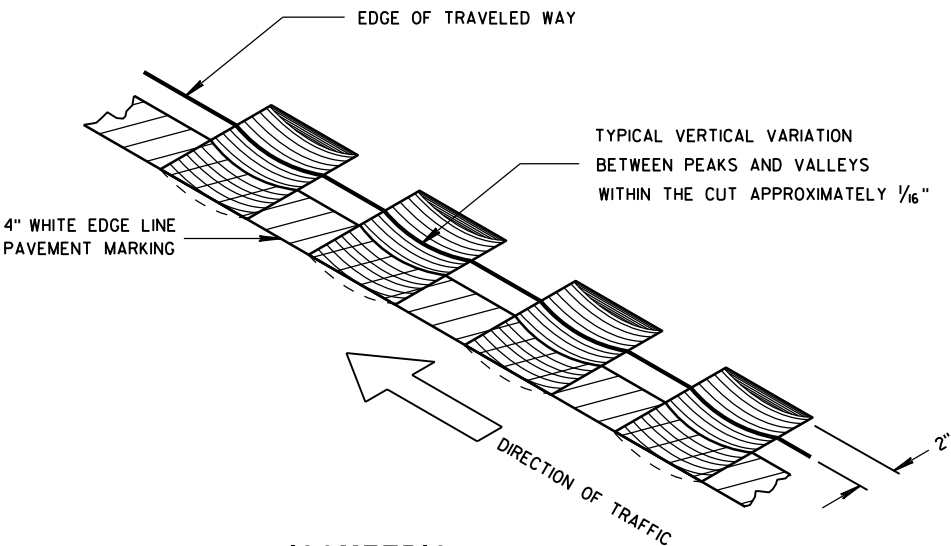


TYPE 2
2-LANE SHOULDER RUMBLE STRIP

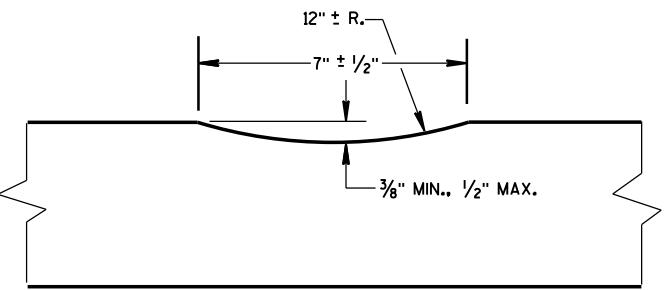
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



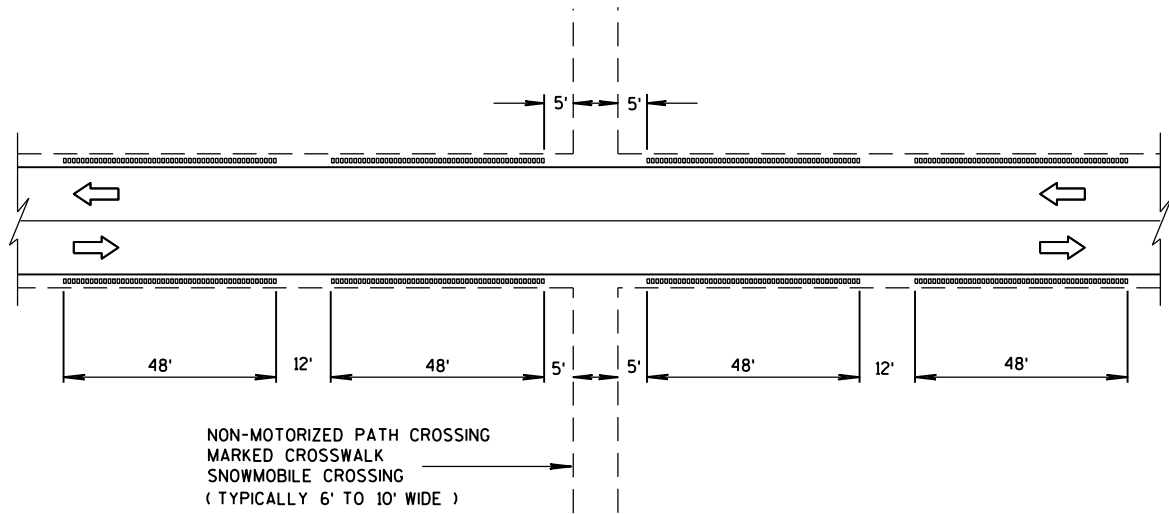
ISOMETRIC



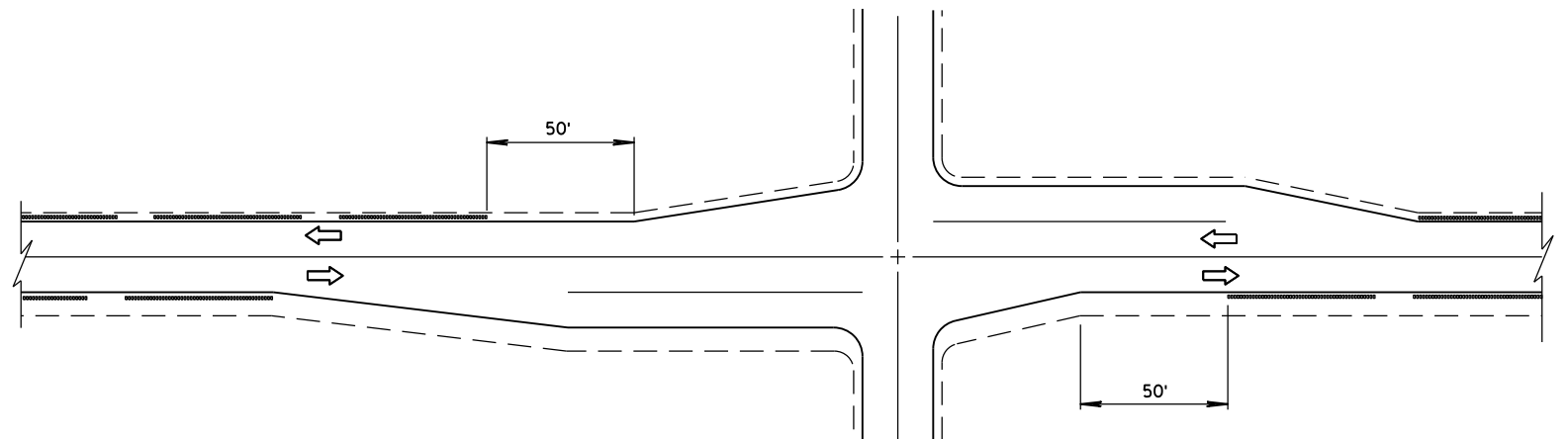
SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

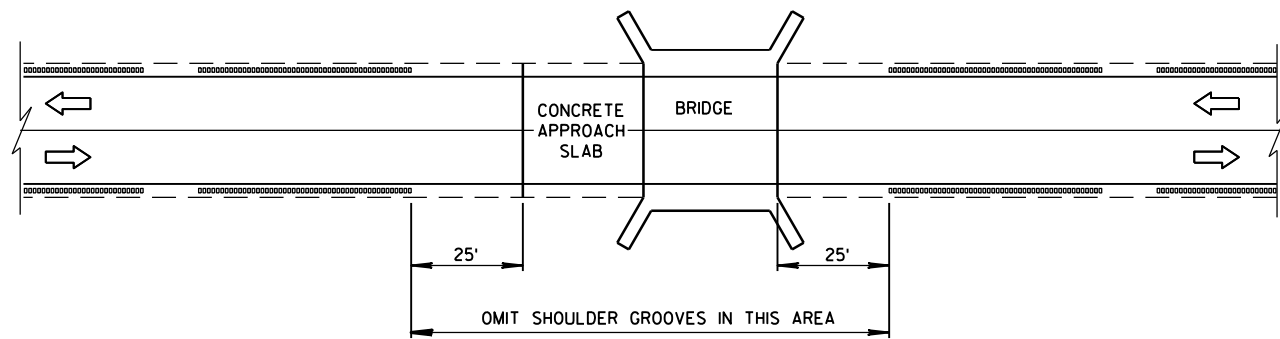
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



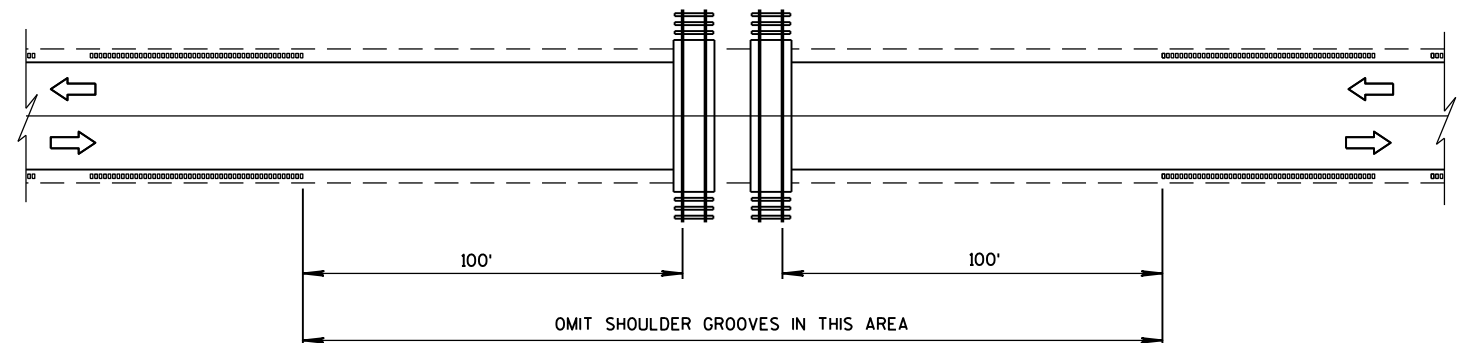
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



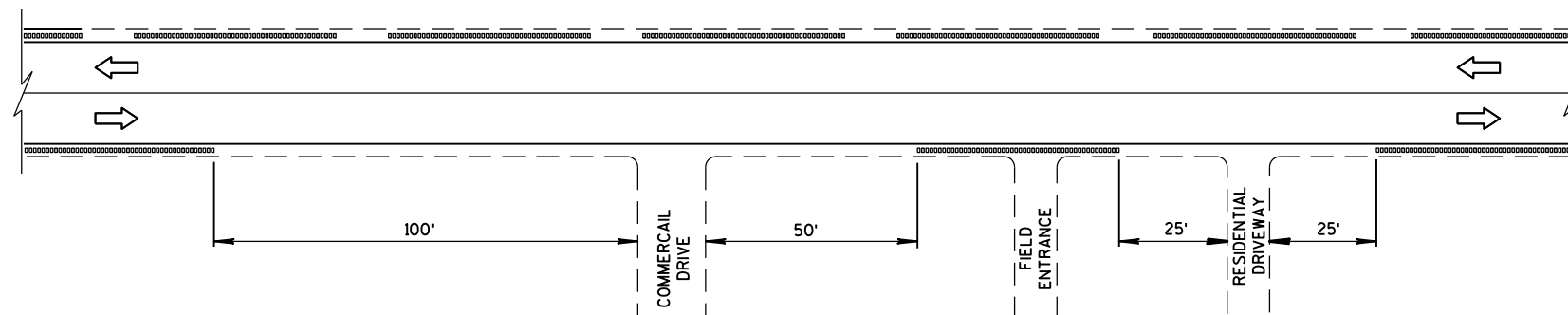
SHOULDER GROOVES AT INTERSECTIONS



SHOULDER GROOVES AT BRIDGES



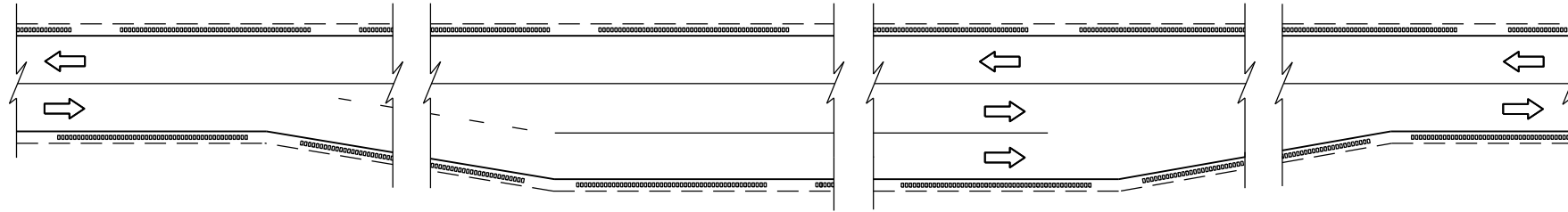
SHOULDER GROOVES AT RAILROADS



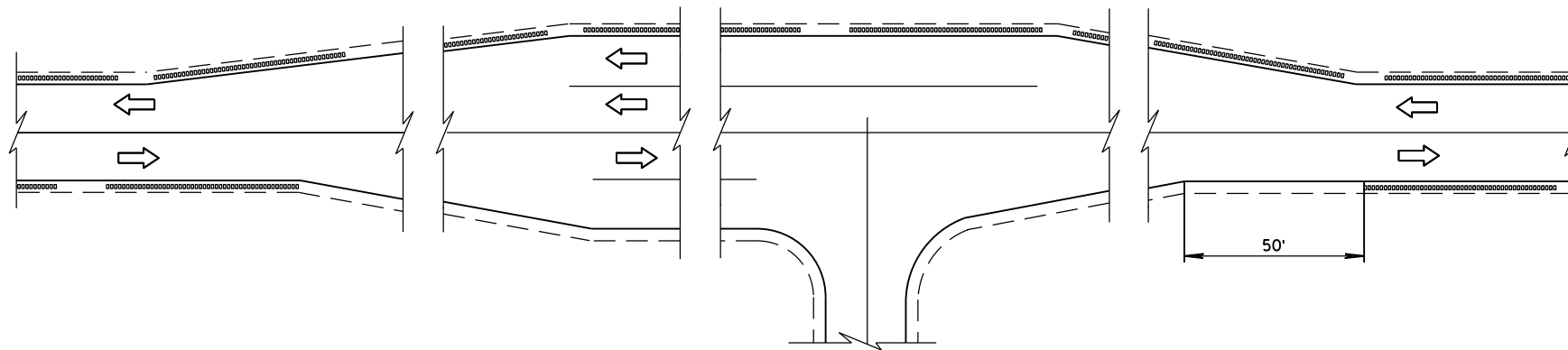
SHOULDER GROOVES AT DRIVEWAYS^①

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 12/17/2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

GENERAL NOTES

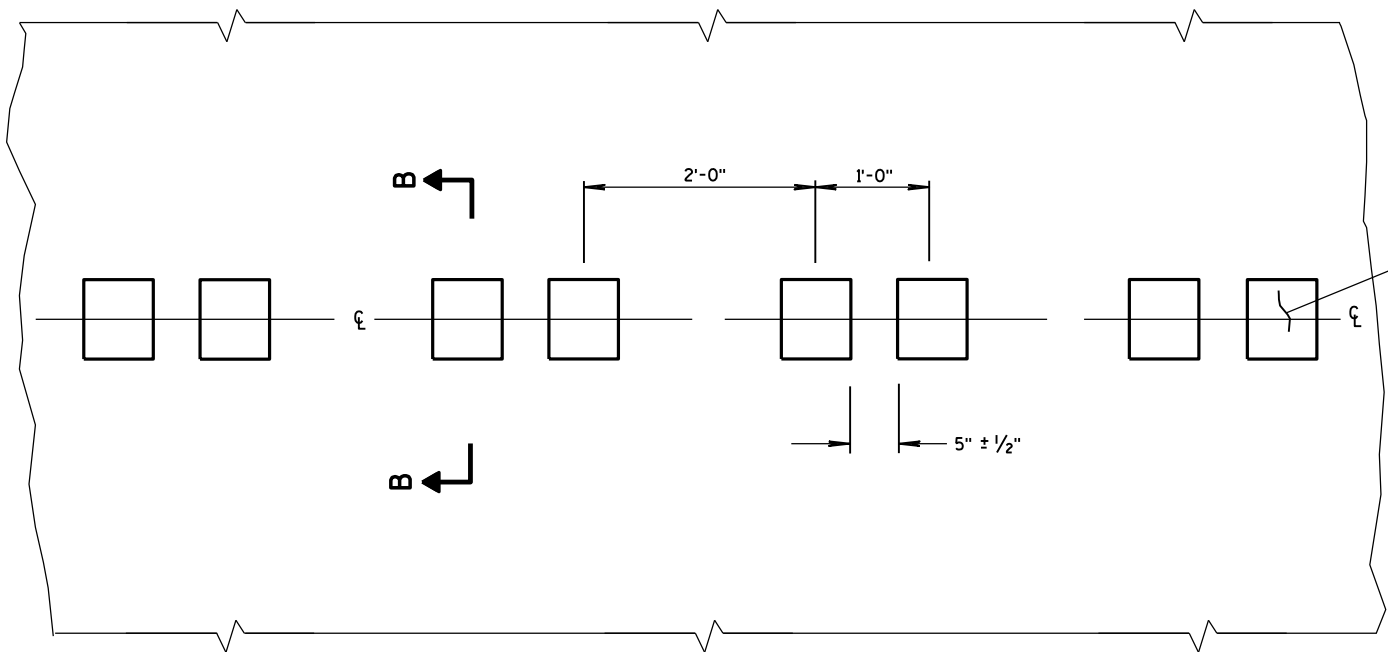
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

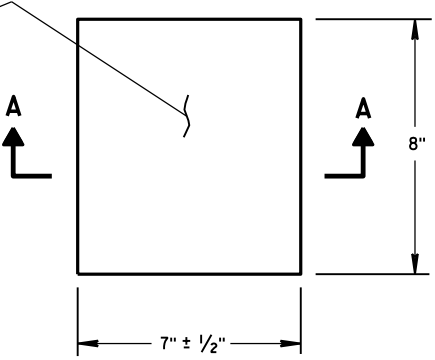
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

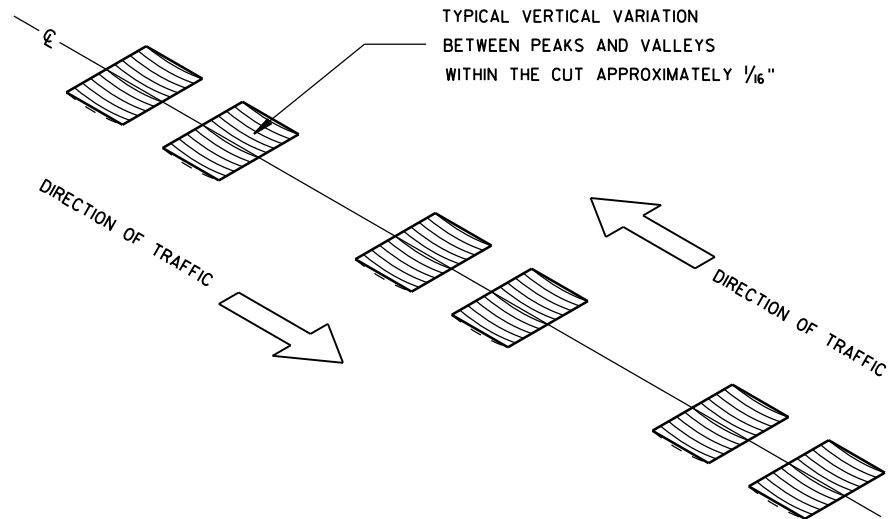
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



PLAN VIEW
CENTER LINE WITH GROOVES

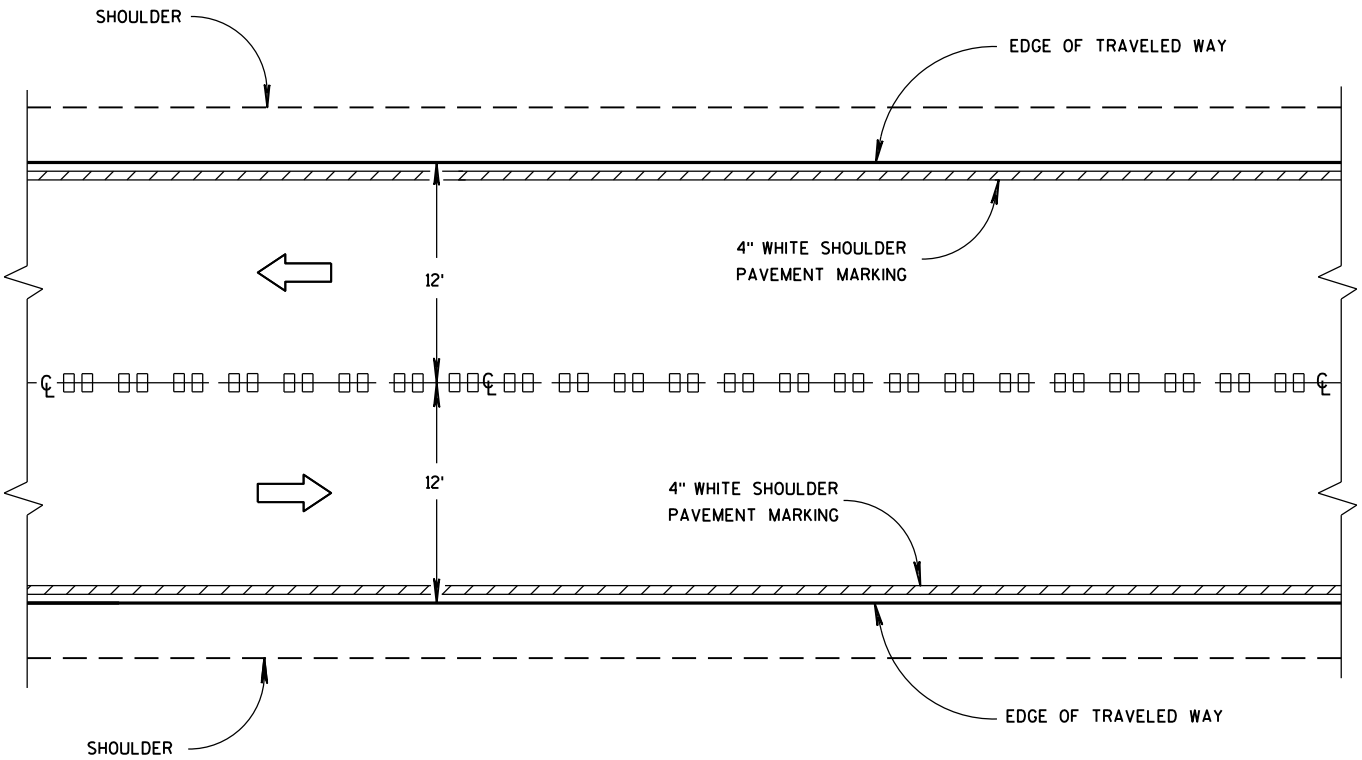


PLAN VIEW
(SINGLE GROOVE)

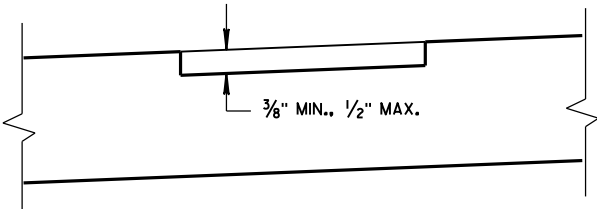


ISOMETRIC

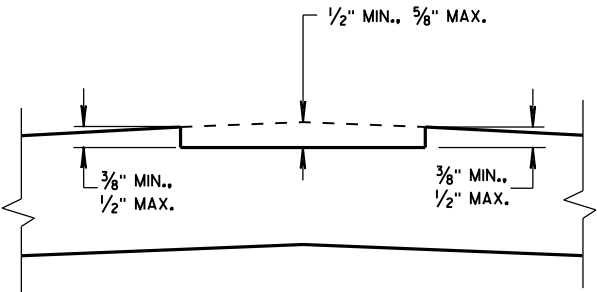
PLACEMENT DETAIL FOR MILLED RUMBLE STRIP



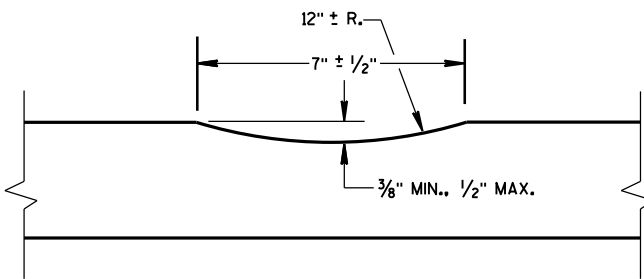
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



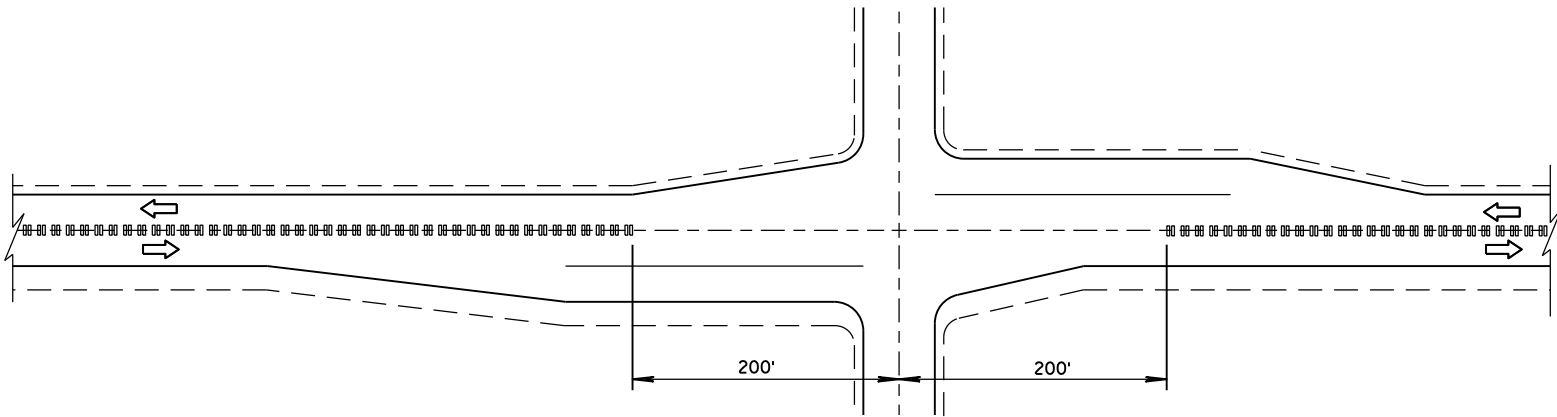
SECTION B-B
CROWNED ROADWAY



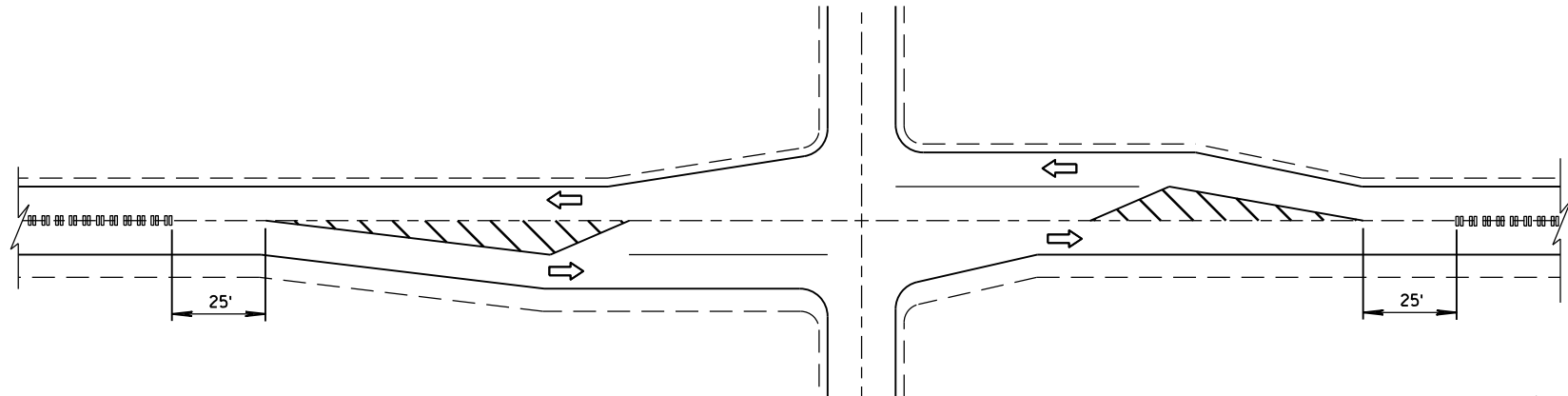
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

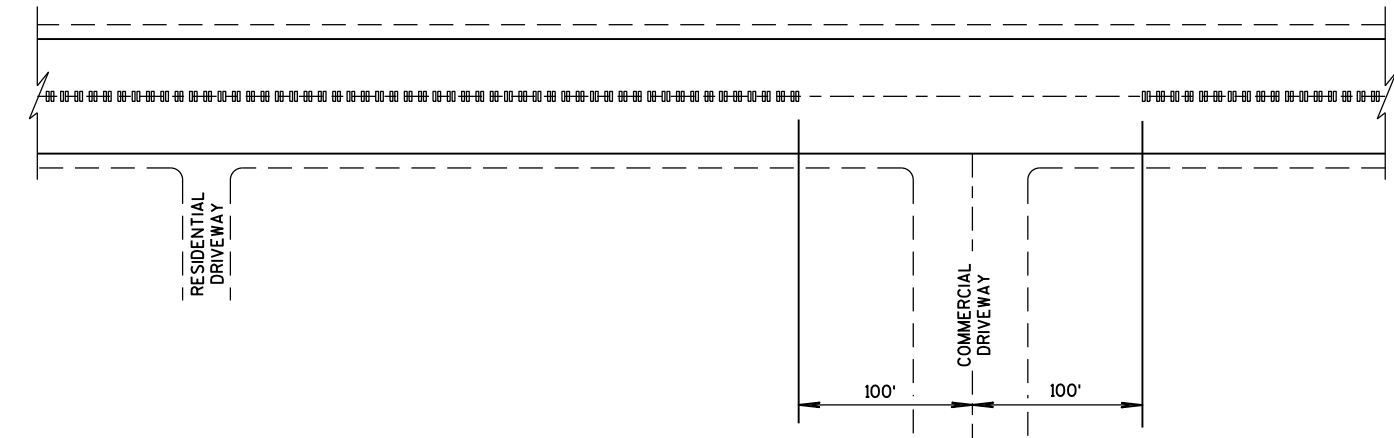
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

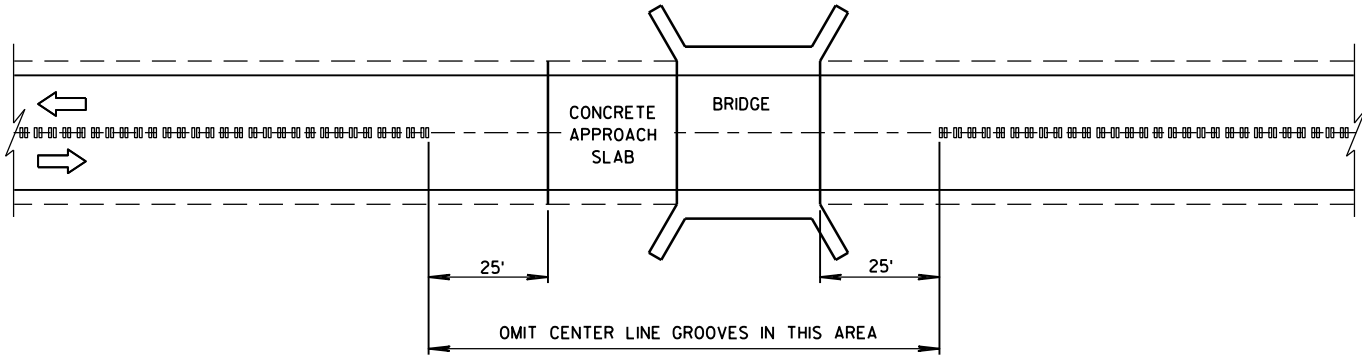


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

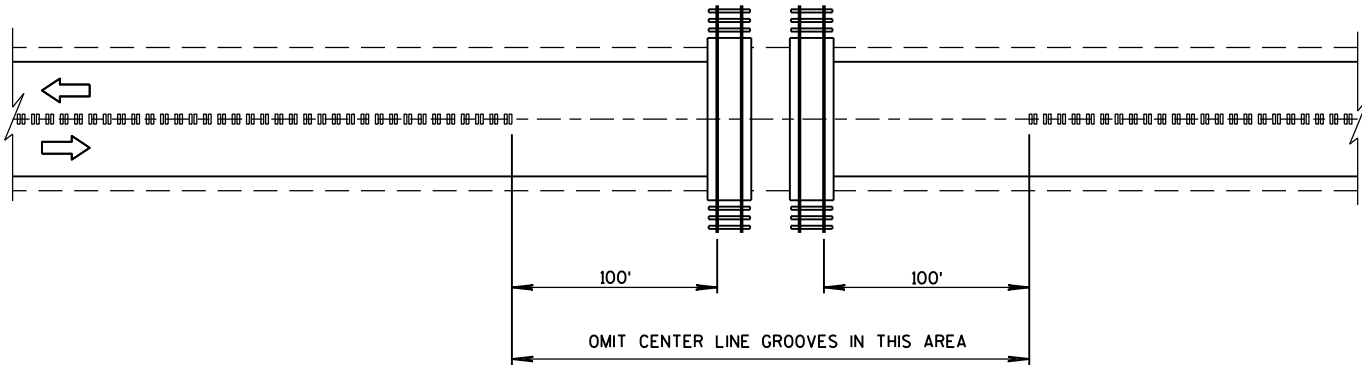


CENTER LINE GROOVES AT DRIVEWAYS^①

① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/15/2013 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

6

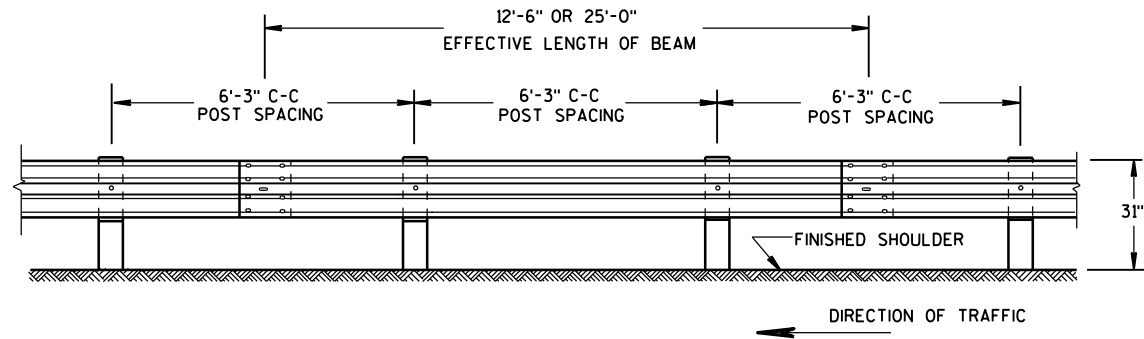
- S.D.D. 14 B 42-3a**



S.D.D. 14 B 42-3a

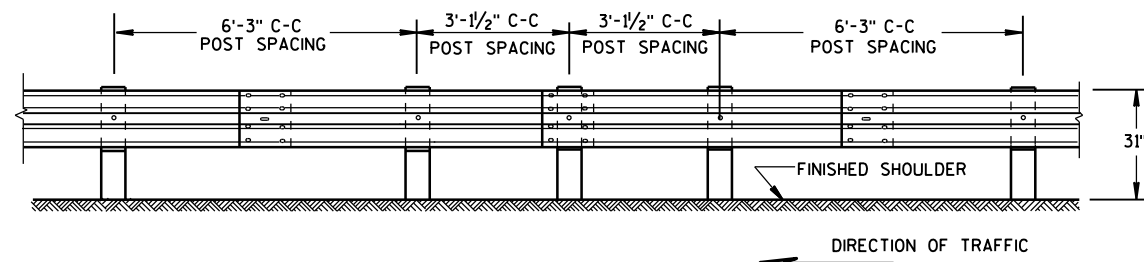


S.D.D. 14 B 42-3a



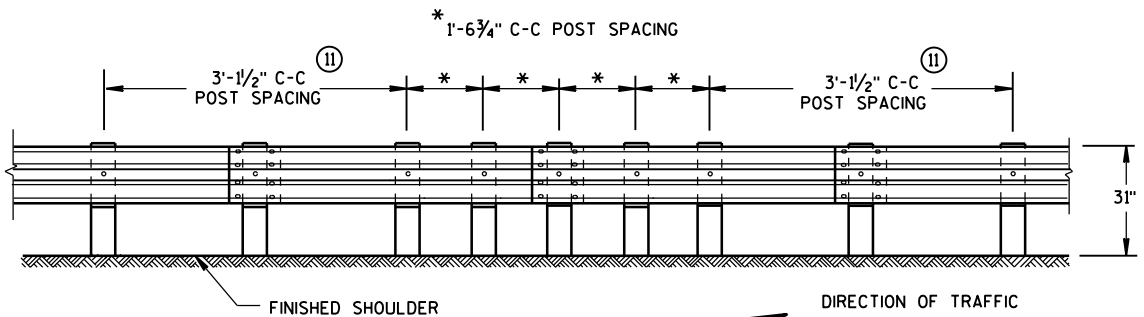
FRONT VIEW

POST SPACING STANDARD INSTALLATION



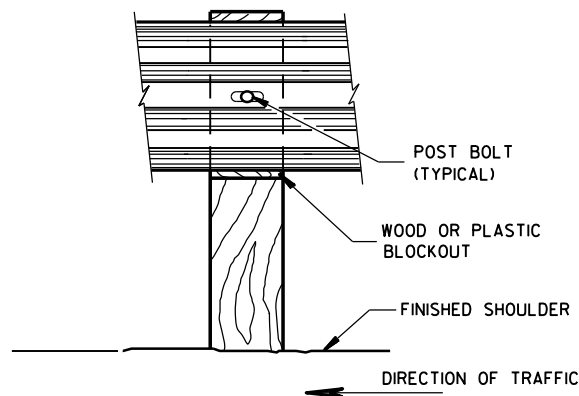
FRONT VIEW

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

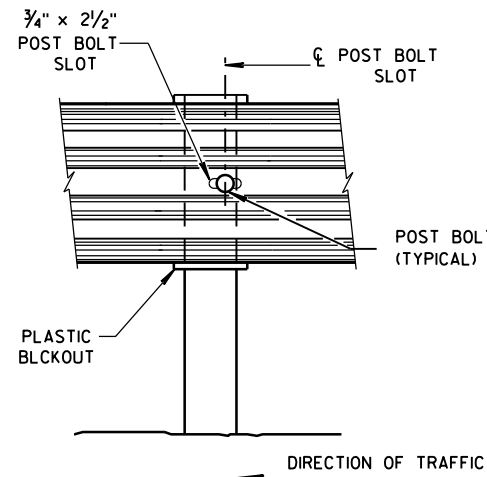


FRONT VIEW

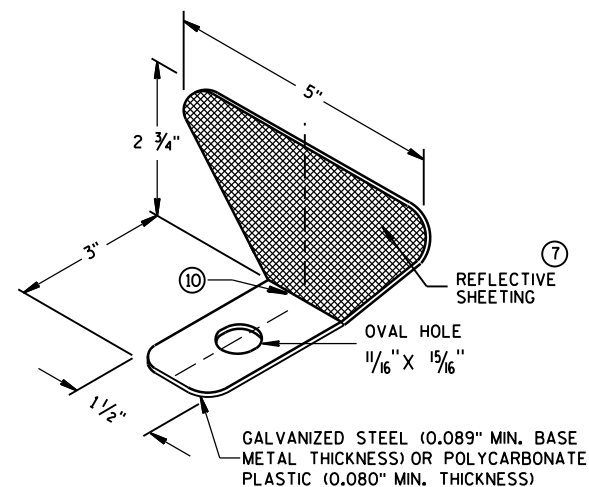
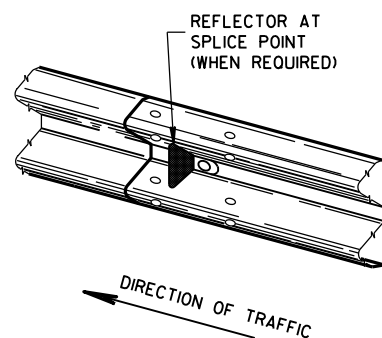
QUARTER POST SPACING (QS)



FRONT VIEW AT WOOD POST



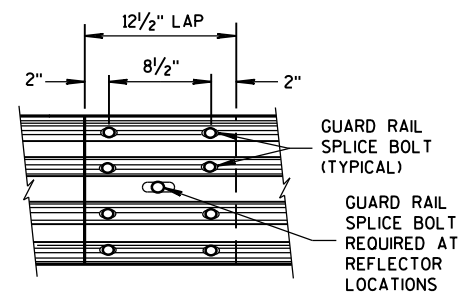
FRONT VIEW AT STEEL POST



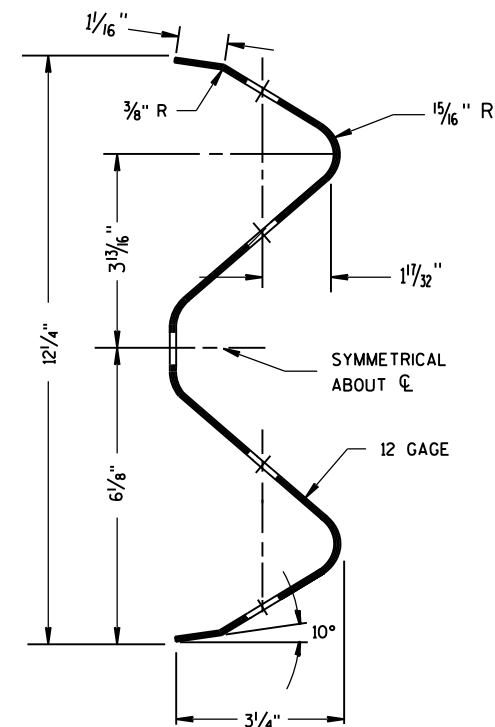
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

- 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.



FRONT VIEW
MID-SPAN BEAM SPLICE



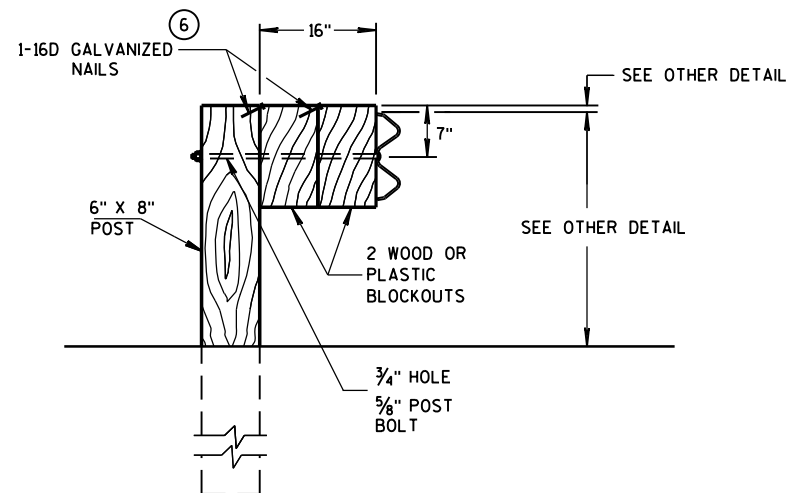
SECTION THRU W-BEAM RAIL

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	

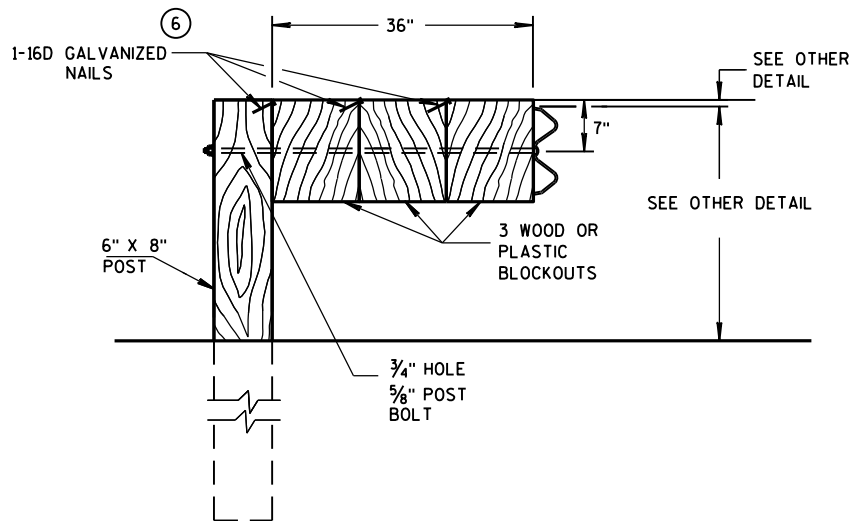
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

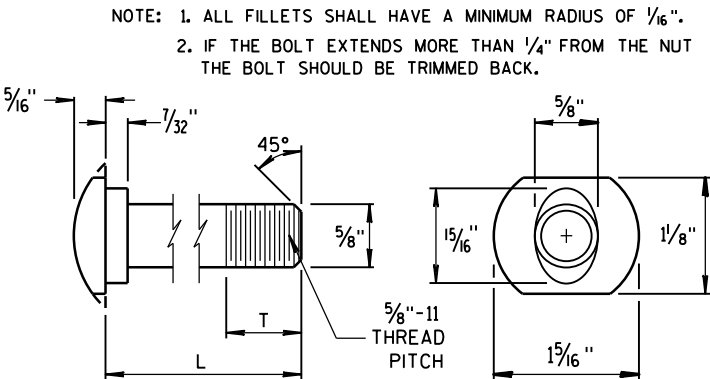
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



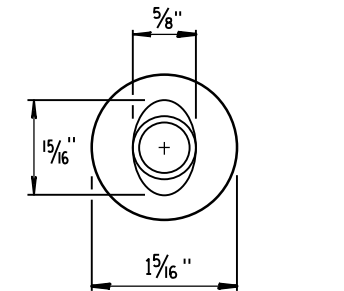
DETAIL FOR 36" BLOCKOUT DEPTH

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.

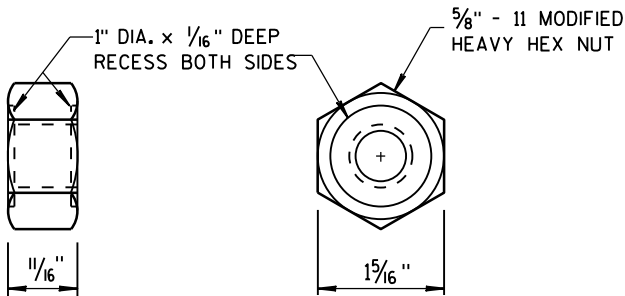
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



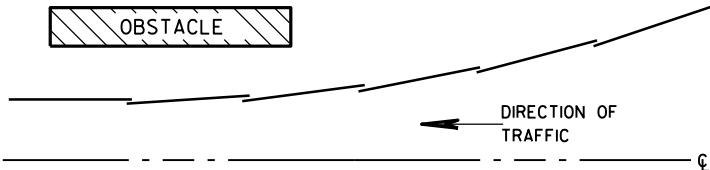
POST BOLT TABLE



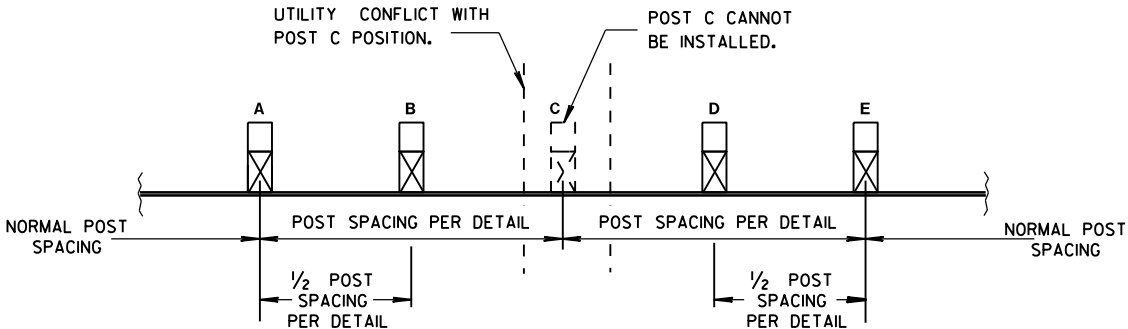
ALTERNATE BOLT HEAD



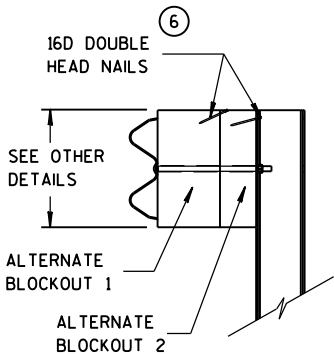
POST BOLT AND RECESS NUT



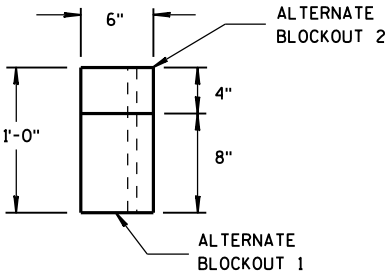
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

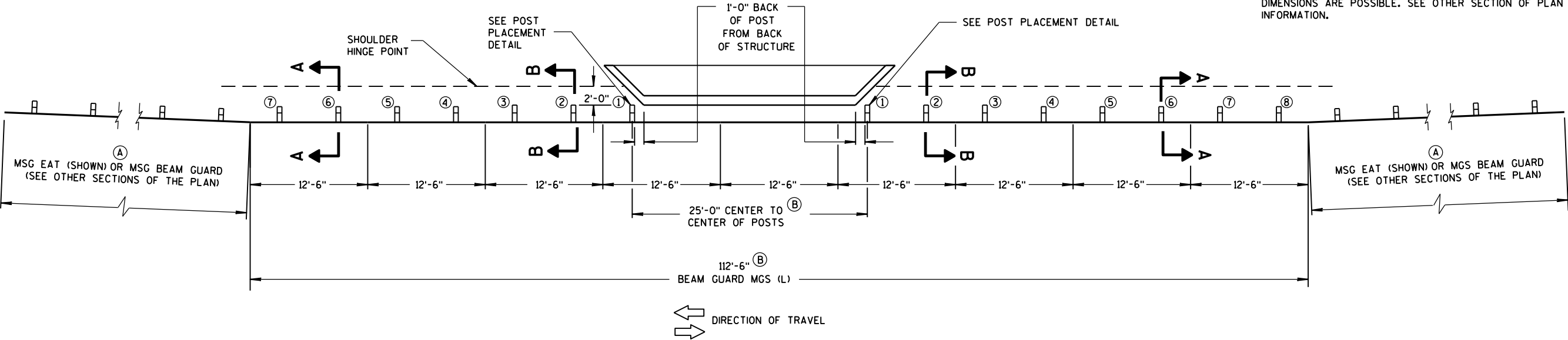
APPROVED
June 2014
DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

GENERAL NOTES

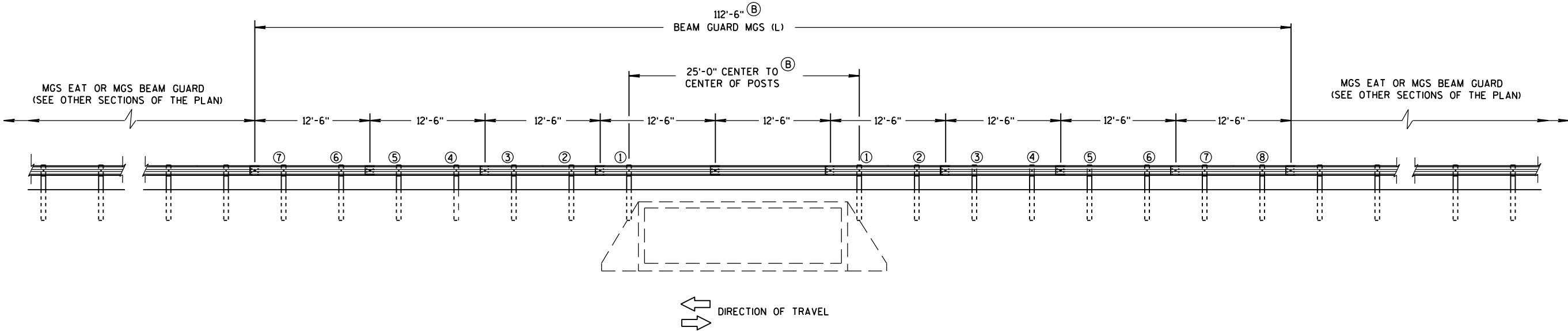
POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

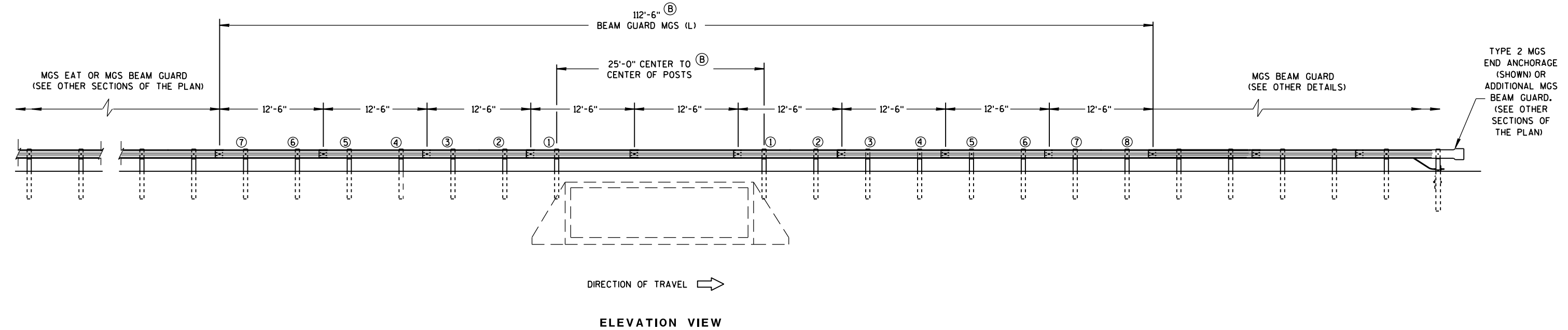
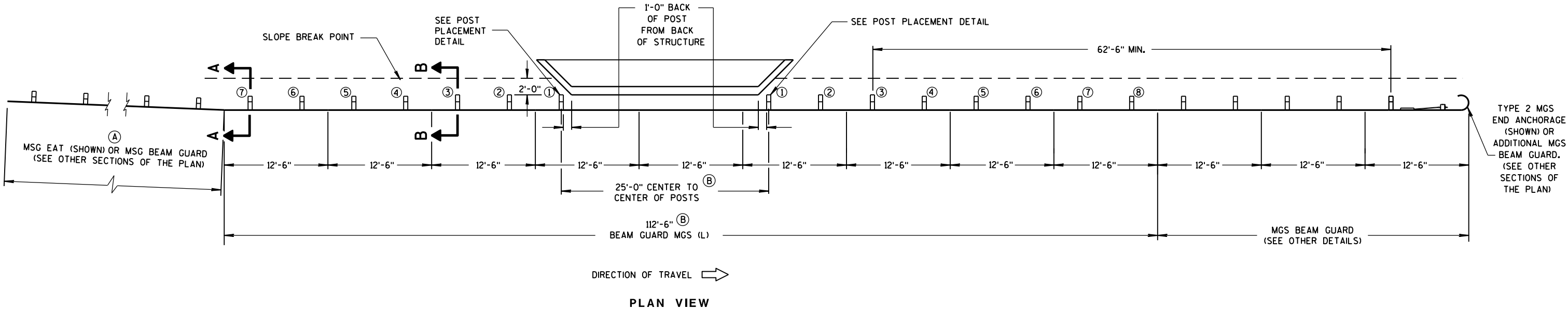
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

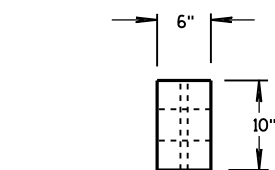
- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



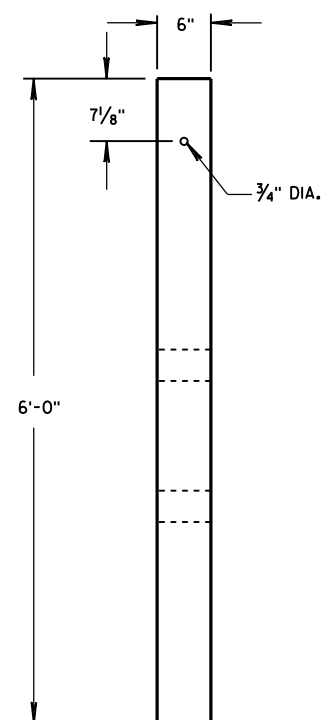
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

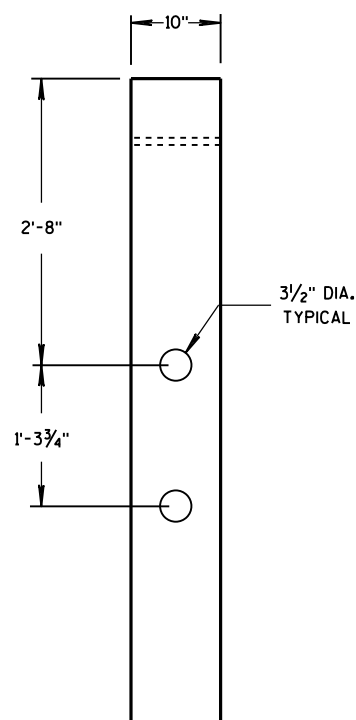


PLAN VIEW

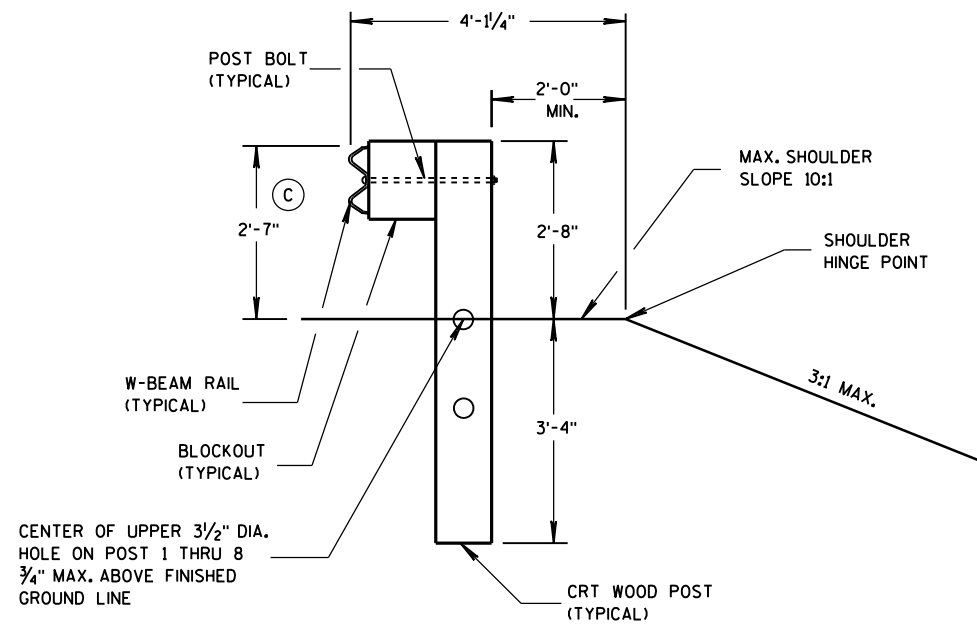


FRONT VIEW

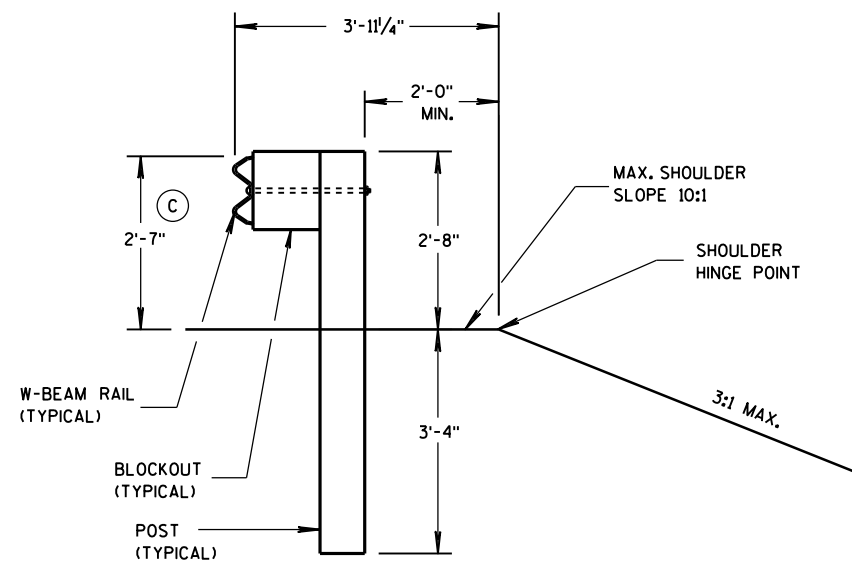
CRT WOOD POST



SIDE VIEW

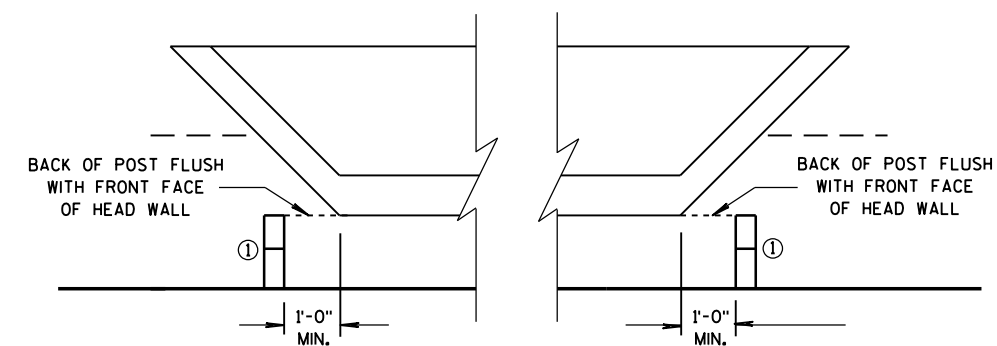
SECTION B-B
POSTS NO. 1-3

SEE OTHER DETAILS

SECTION A-A
POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.

POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
5/10/2013
DATE
FHWA/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

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- S.D.D. 14 B 44-23**

THE CENTER OF THE UPPER 3 1/2" 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.

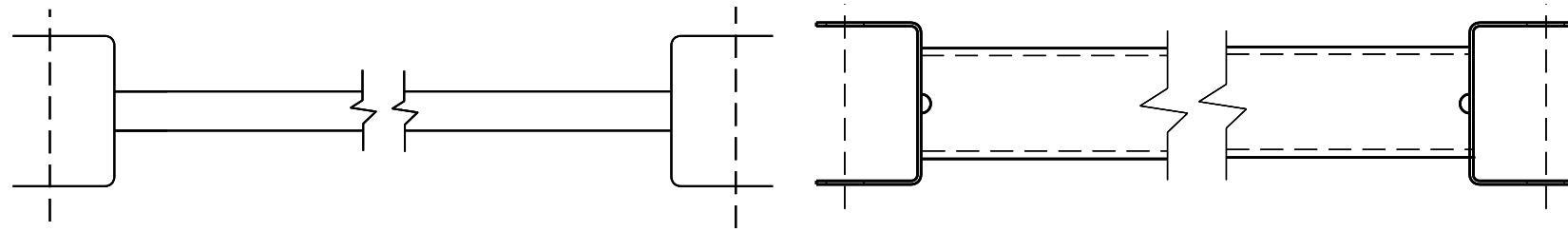


SECTION A-A

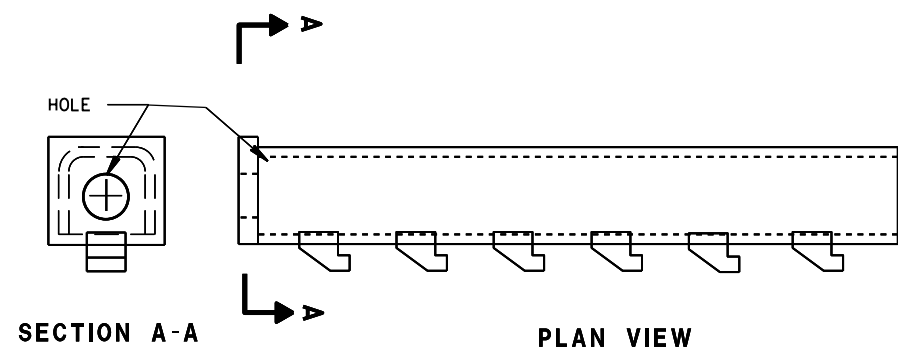
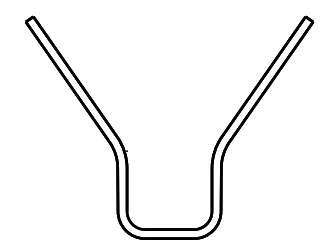
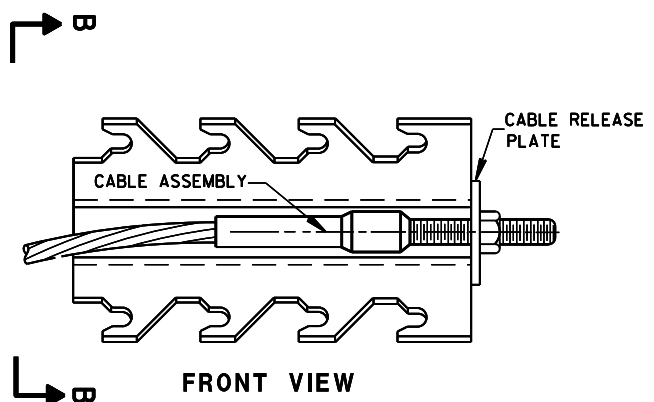
TYPICAL AT POST NO. 1*



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



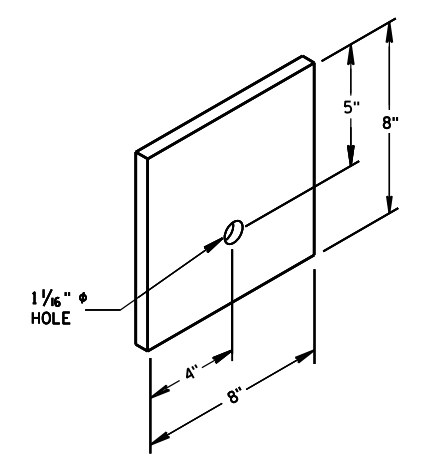
9 H
GENERIC GROUND STRUT



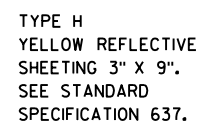
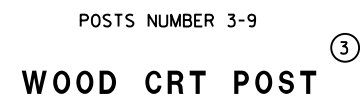
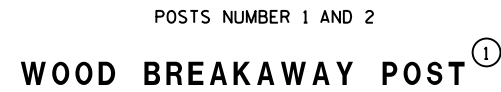
8 H
GENERIC ANCHOR CABLE BOX

BILL OF MATERIALS

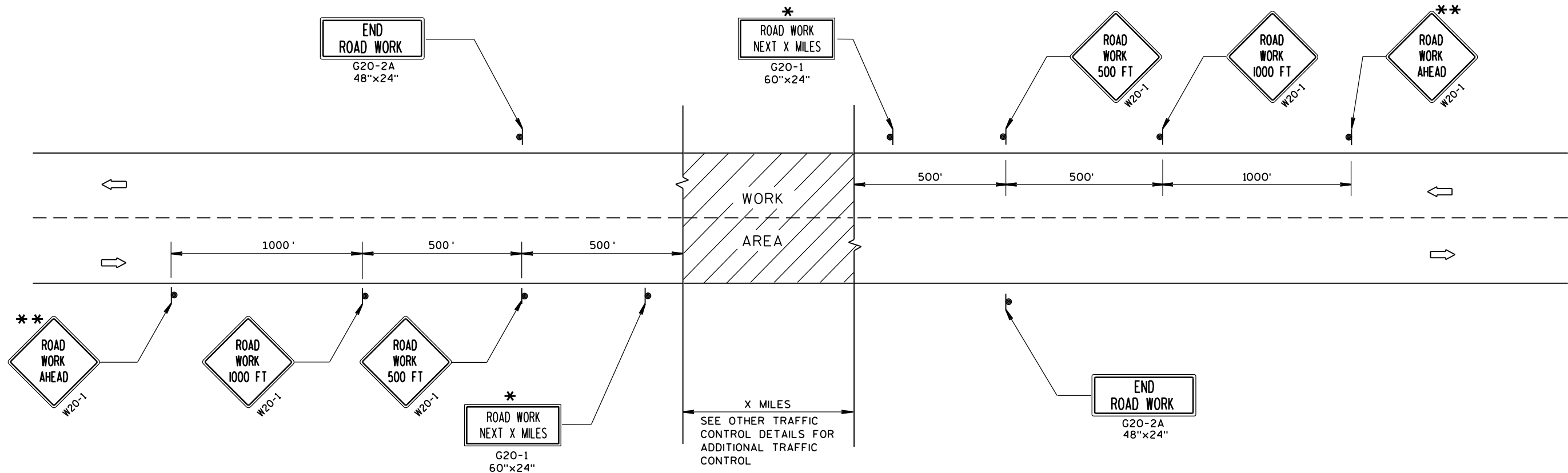
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND 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	<i>/s/ Jerry H. Zogg</i>
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

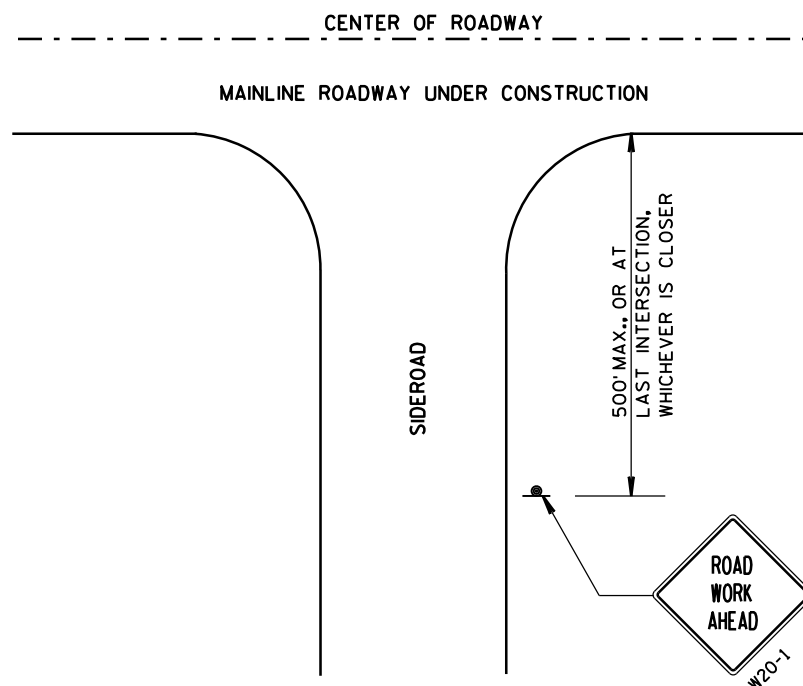
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

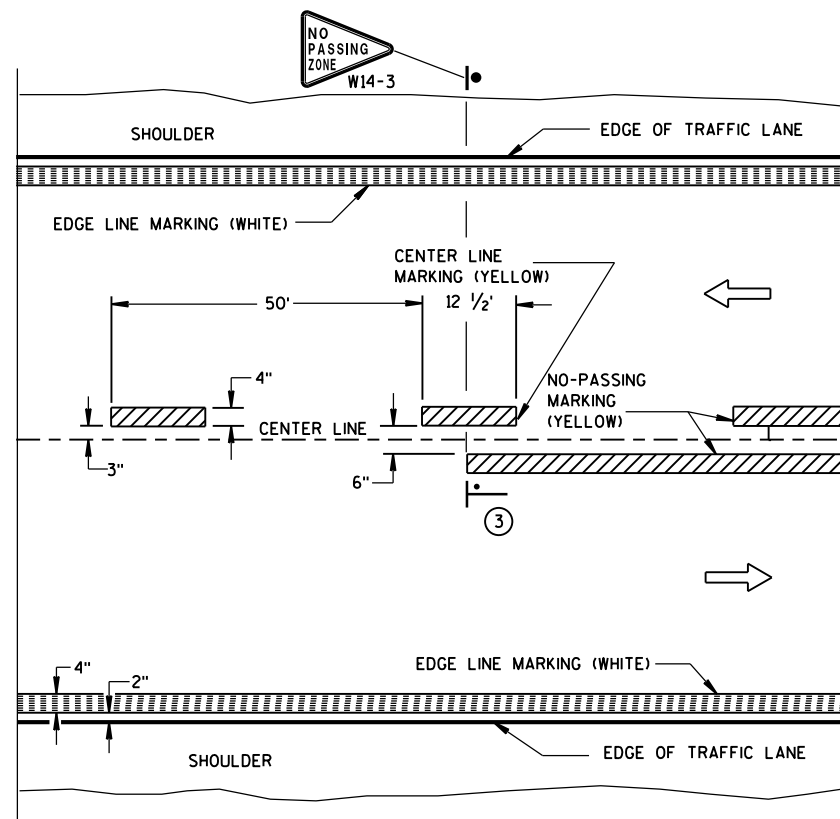
8/2013

DATE

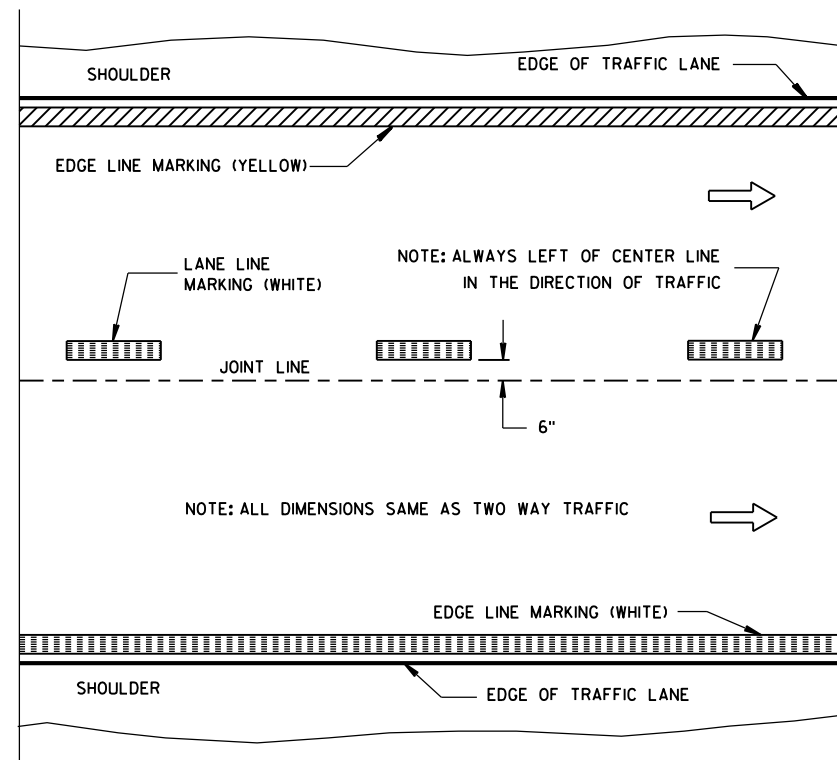
FHWA

/S/ Travis Feltes

STATE TRAFFIC ENGINEER OF DESIGN

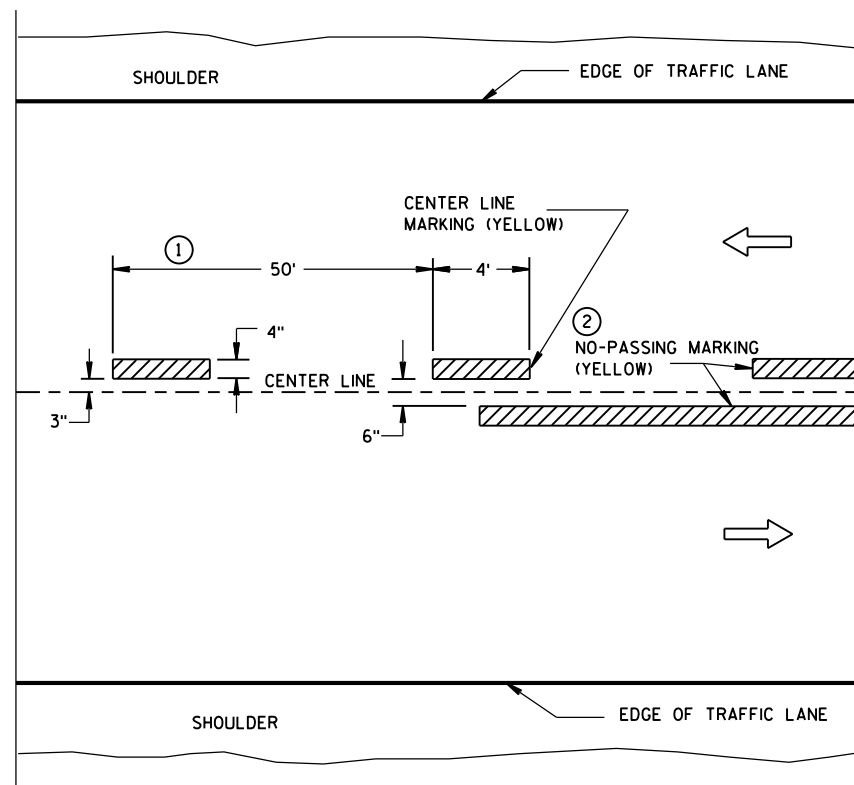


TWO WAY TRAFFIC

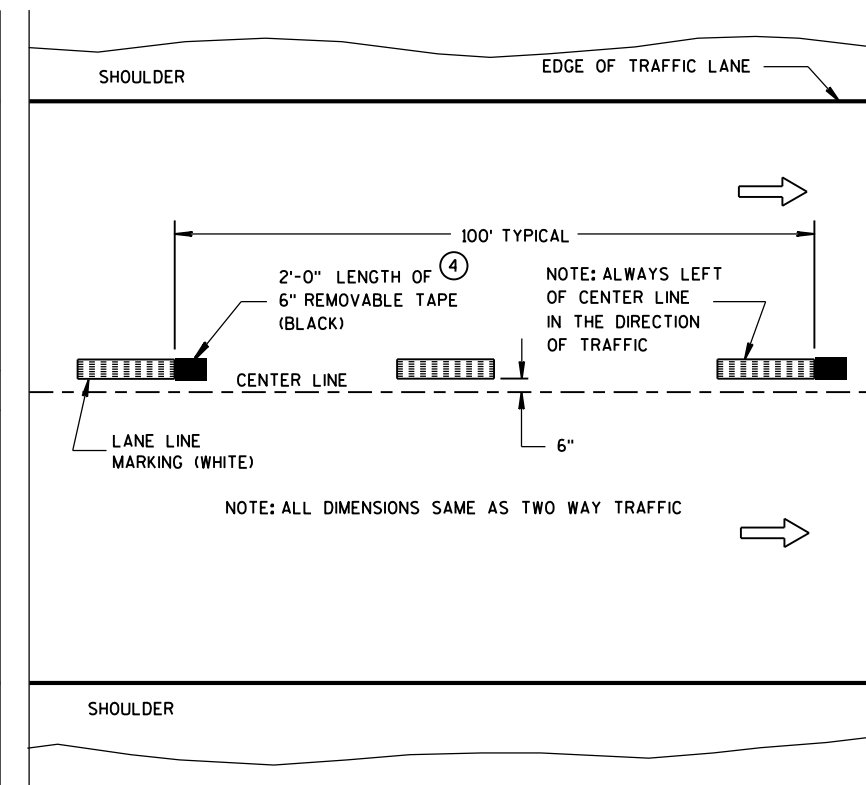


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

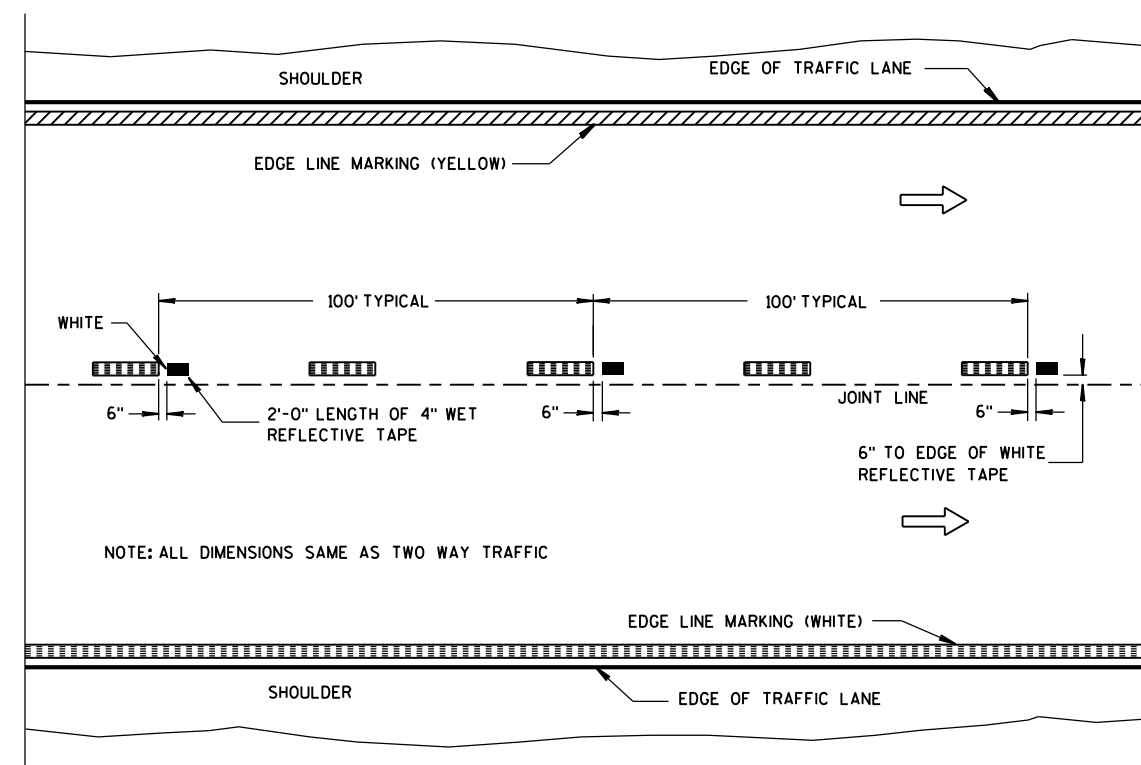
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

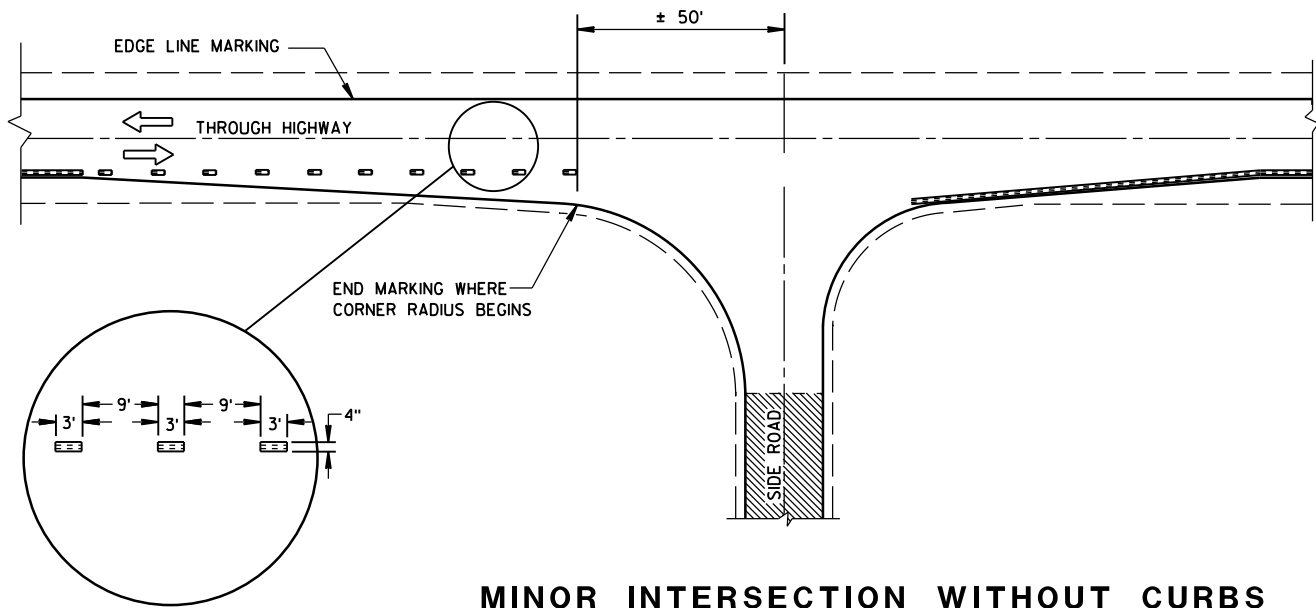
- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

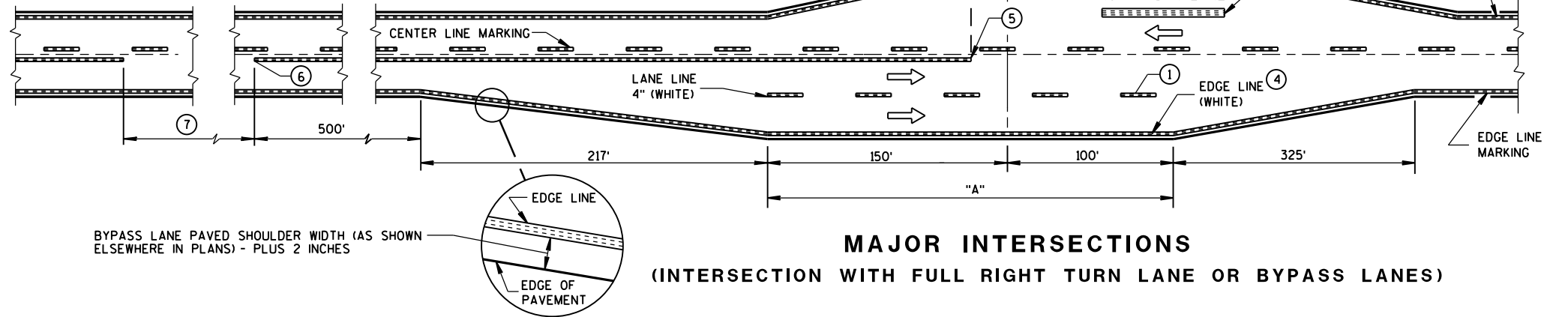
APPROVED
5-13-2013
DATE
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER



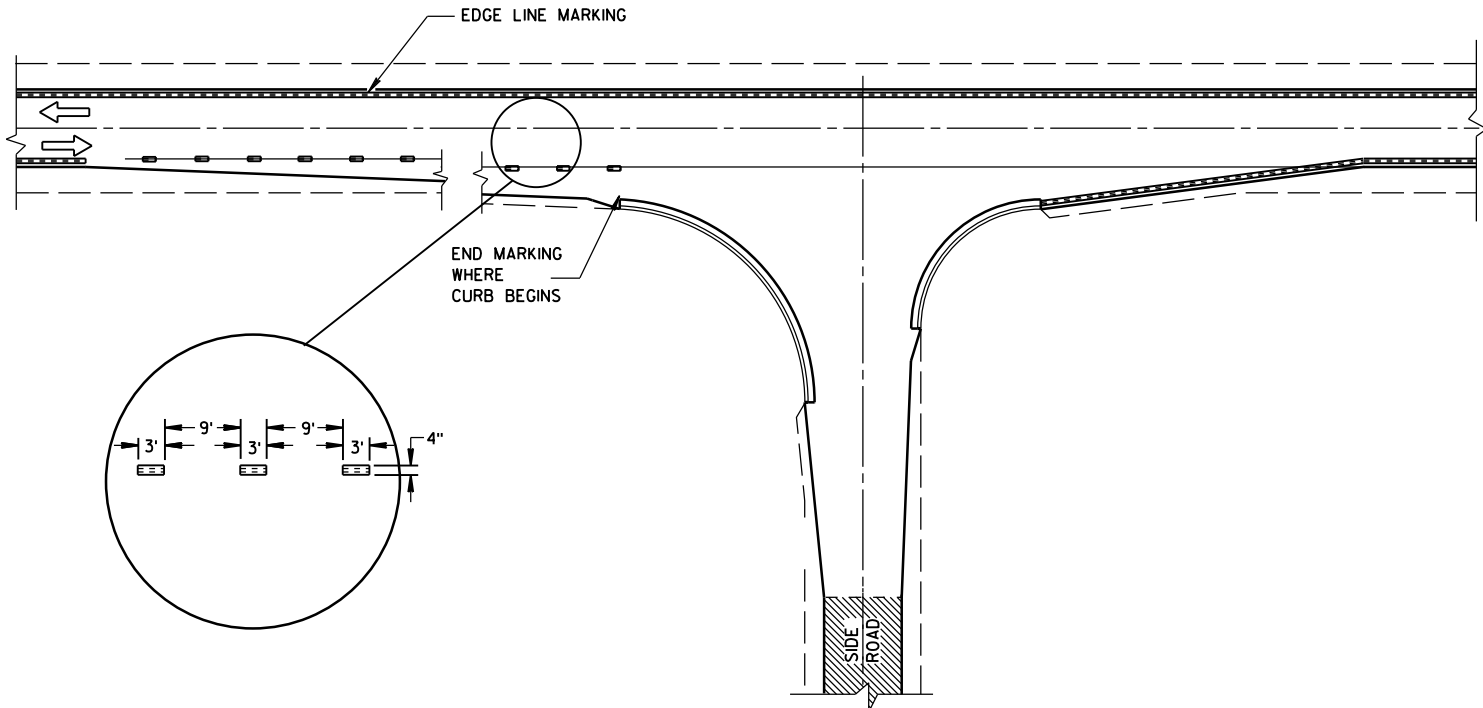
MINOR INTERSECTION WITHOUT CURBS

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792

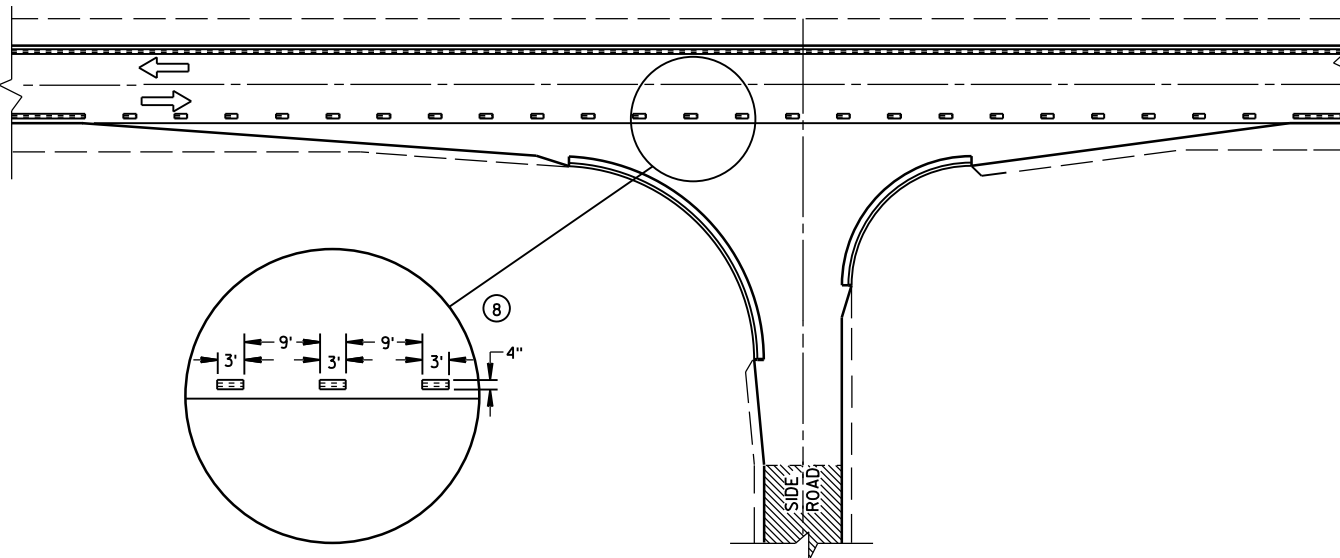


MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS
(FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
- ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.





- ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
- ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
- ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

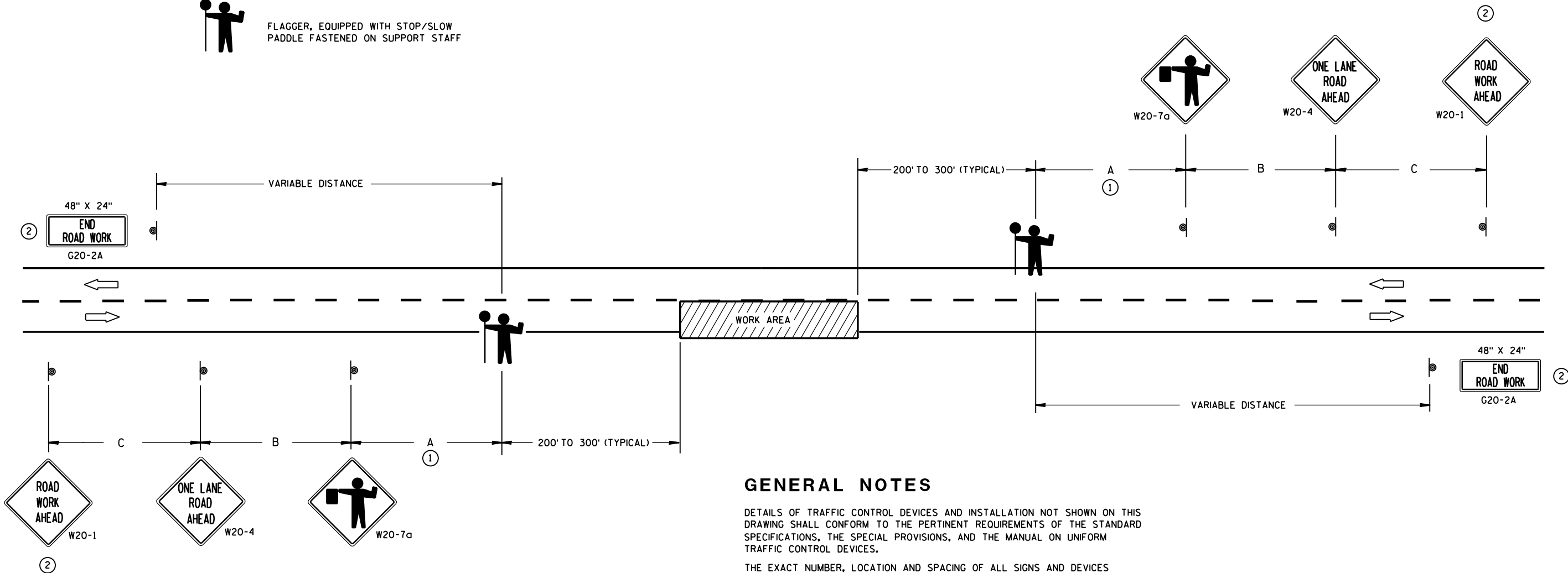
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

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

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

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

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

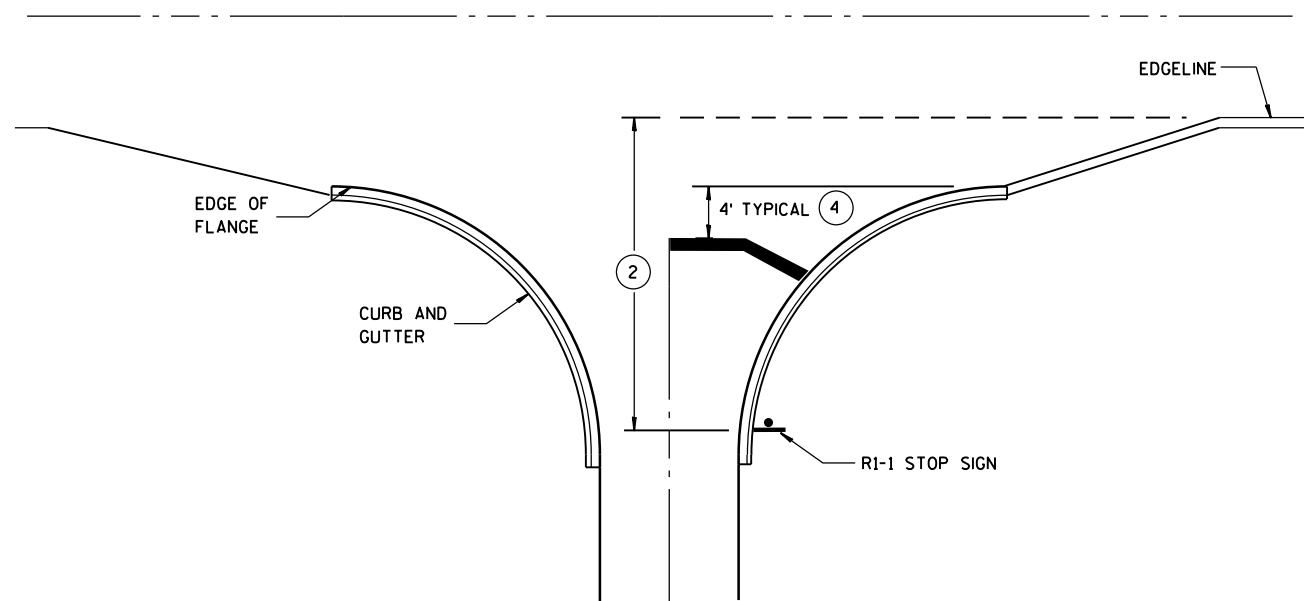
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

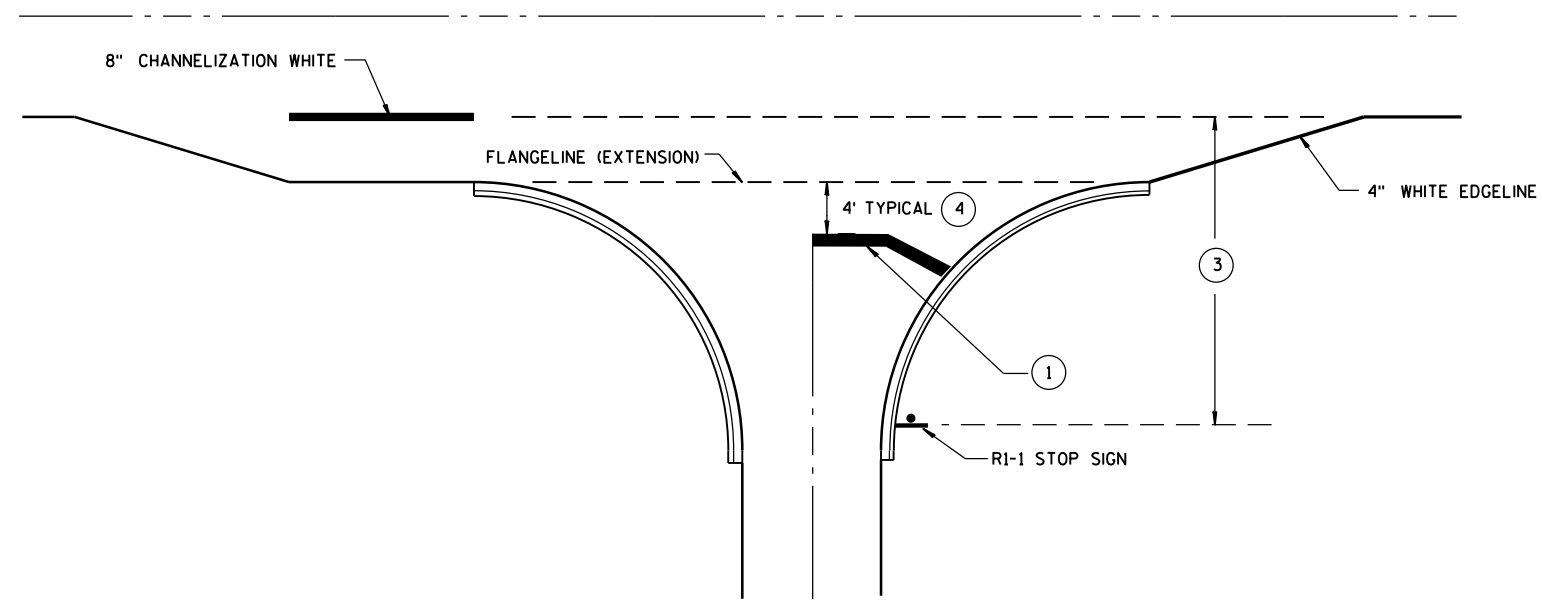
TRAFFIC CONTROL FOR LANE
CLOSURE (SUITABLE FOR
MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

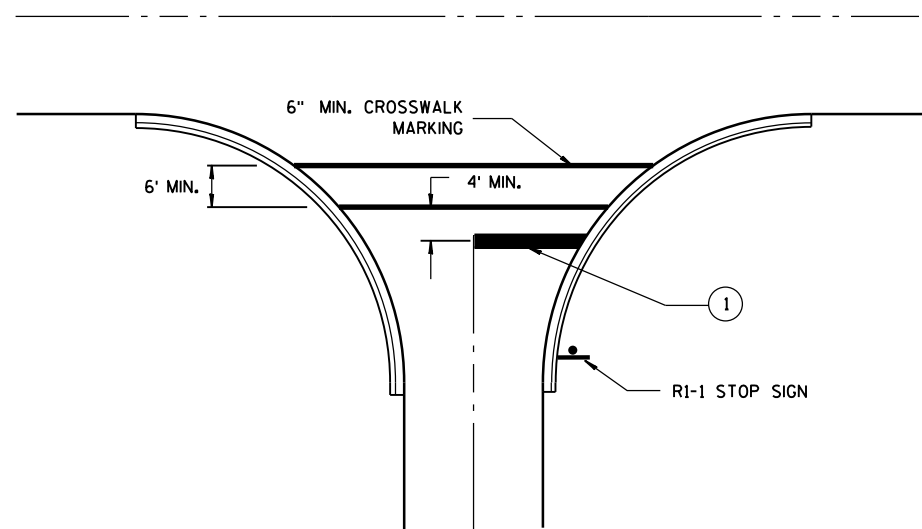
APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



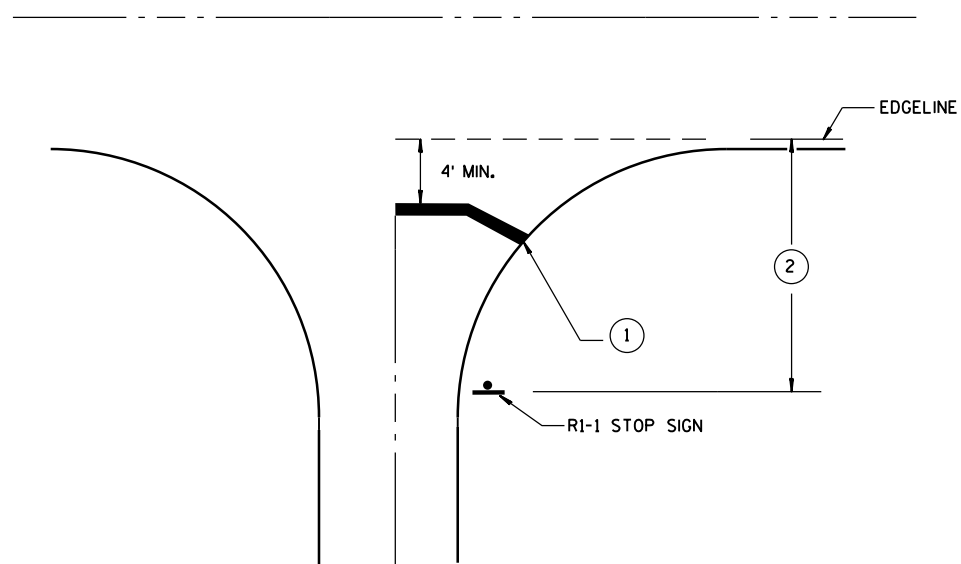
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER**

GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THEN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THEN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

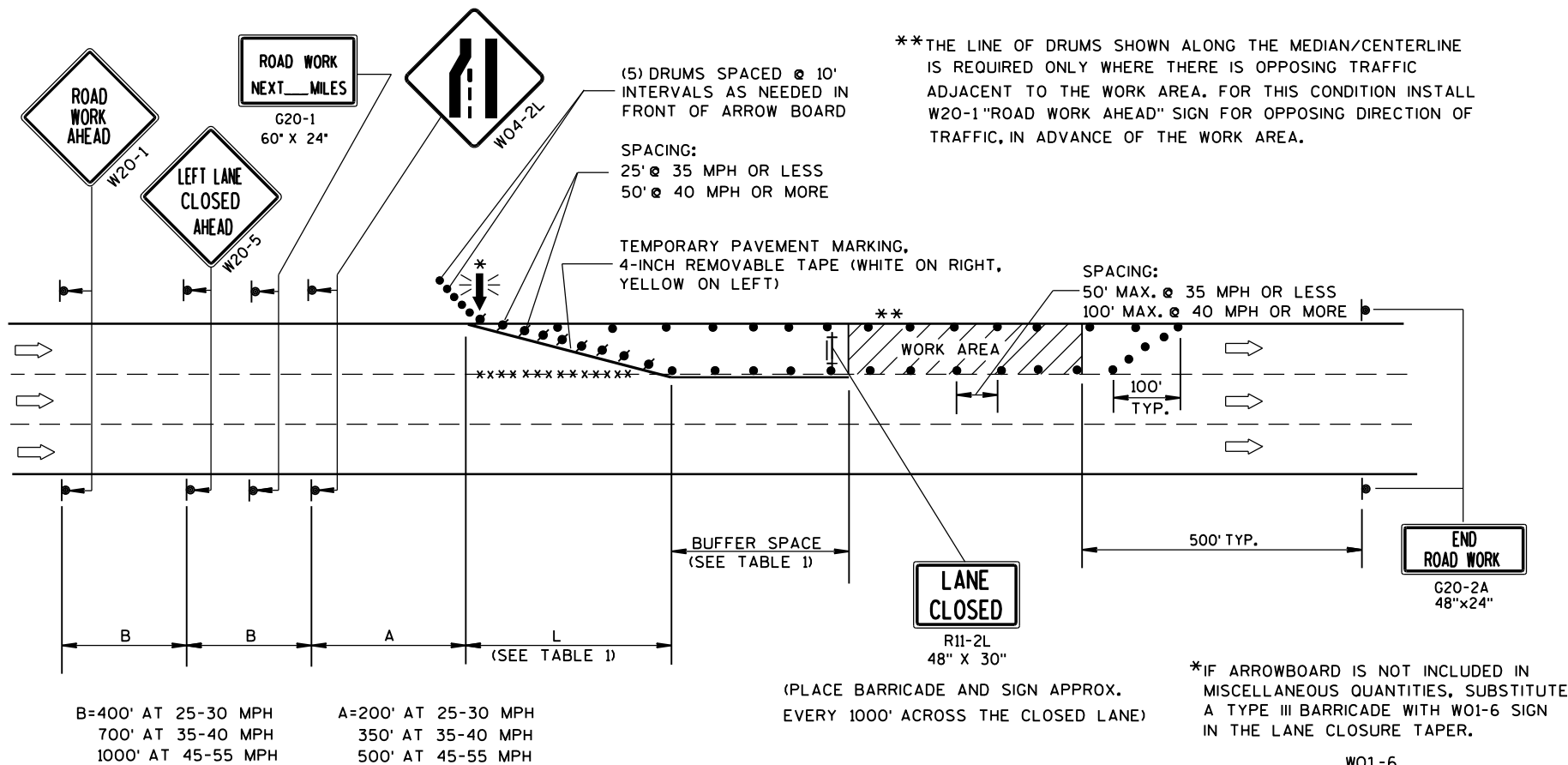
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

FHWA

/S/ Travis Feltz
STATE TRAFFIC ENGINEER



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.

W20-1, 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 Feb. 2015	/S/ Travis Feltes
DATE	STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" 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 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.

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

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

TABLE A

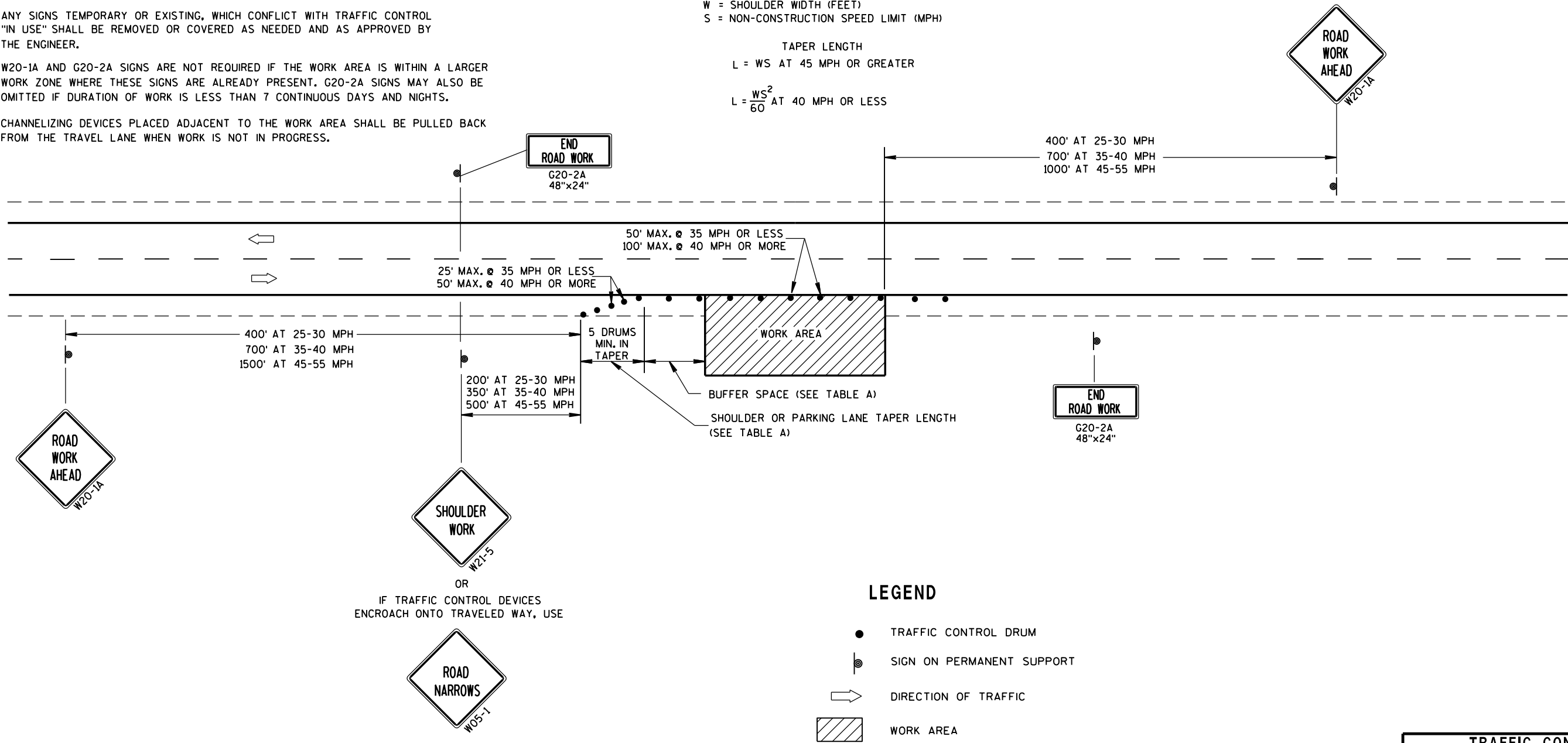
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S	W	4	6	8	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

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

TAPER LENGTH
L = WS AT 45 MPH OR GREATER

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

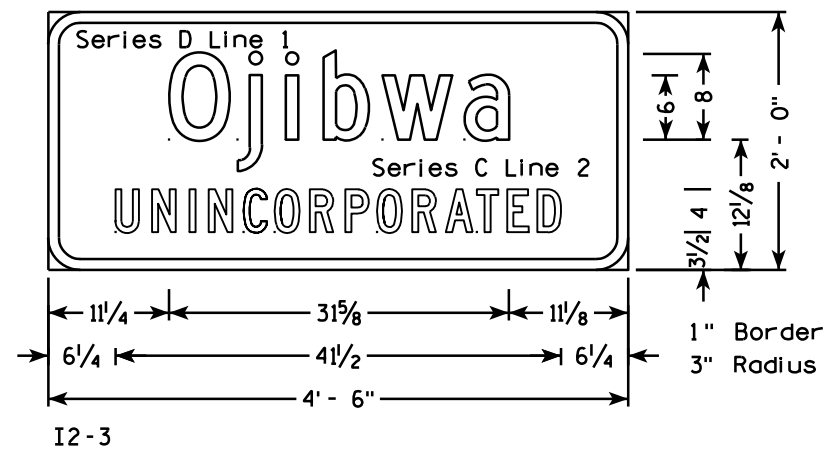
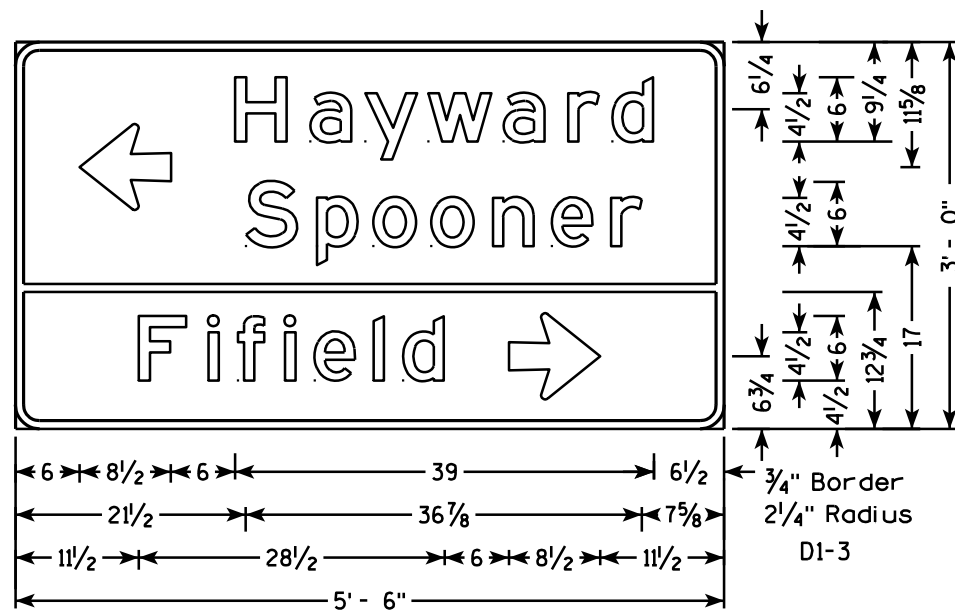
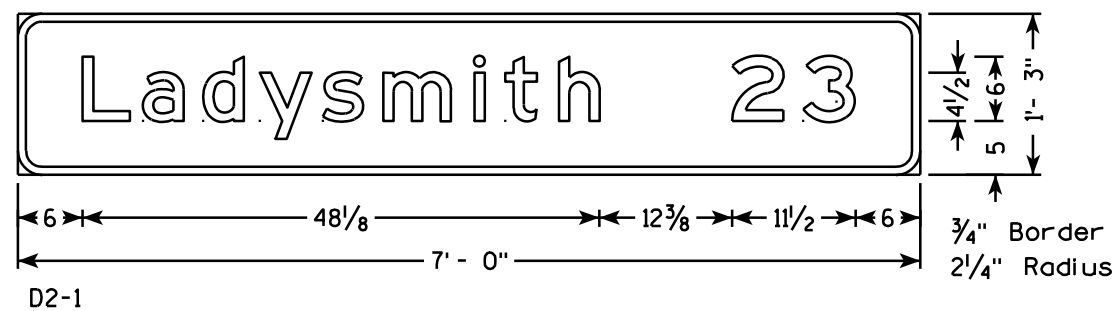
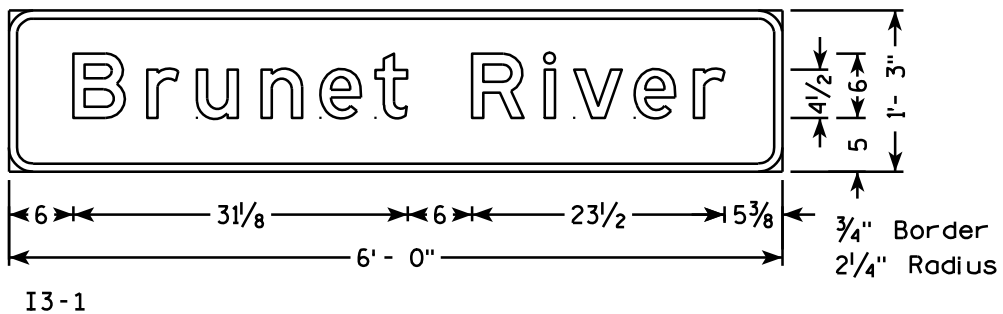
SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

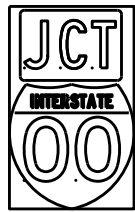
TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



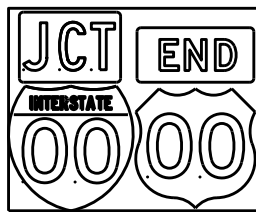
NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E except as shown

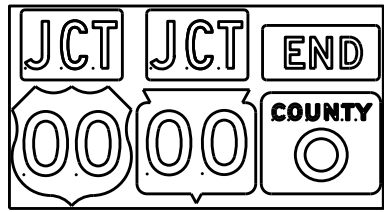
TYPICAL ASSEMBLIES



J1-1



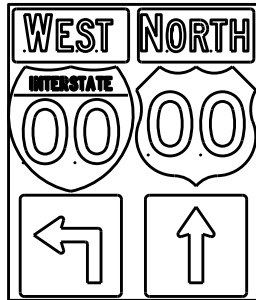
J1-2



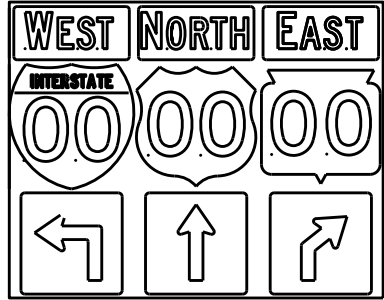
J1-3



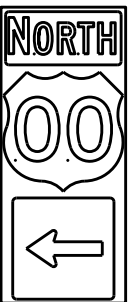
J2-1



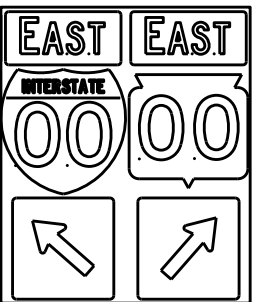
J2-2



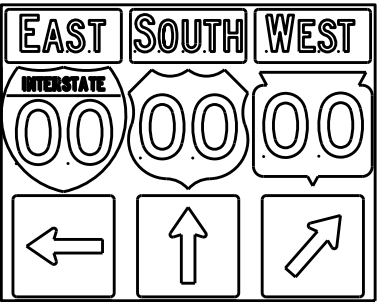
J2-3



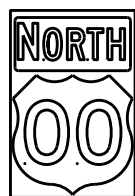
J3-1



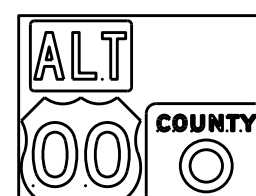
J3-2



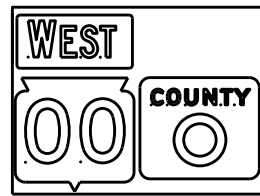
J3-3



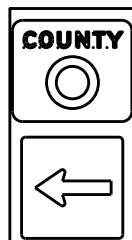
J4-1



J4-2



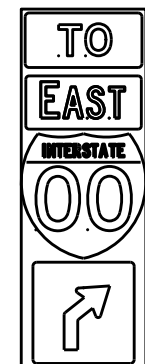
J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

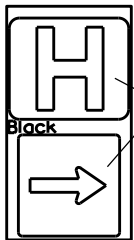


J22-1



JV

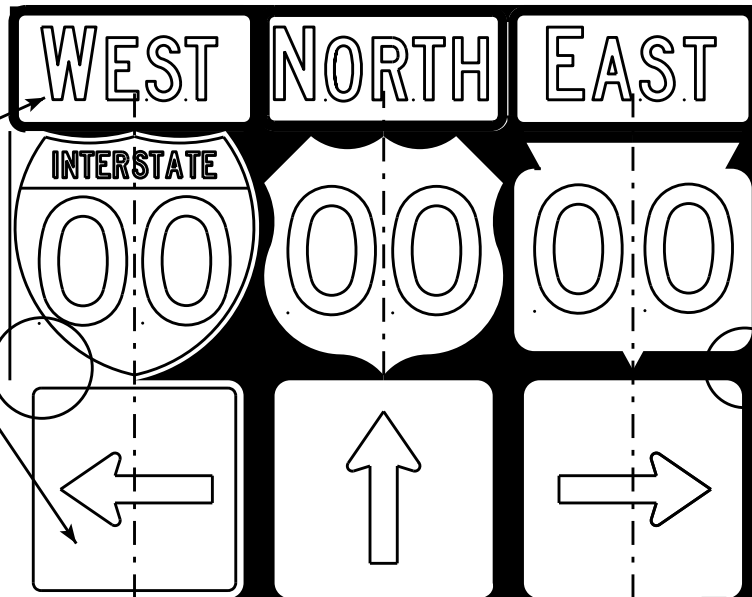
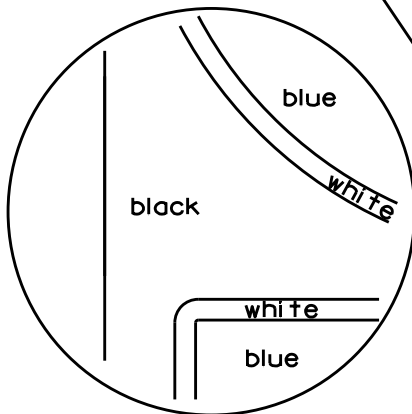
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

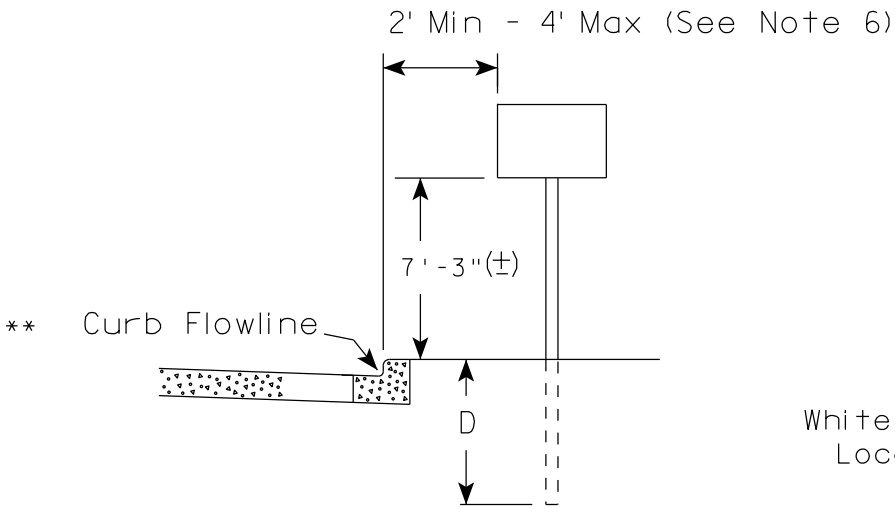
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

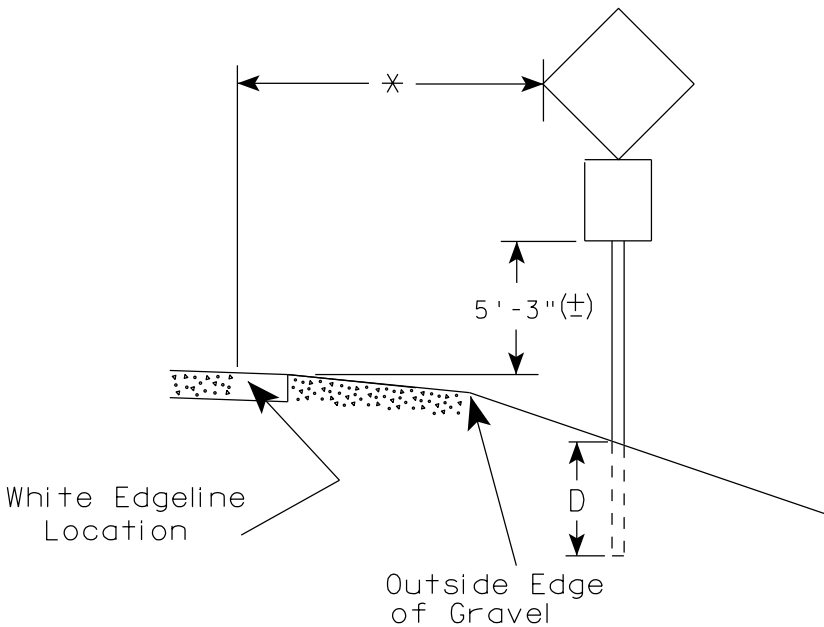
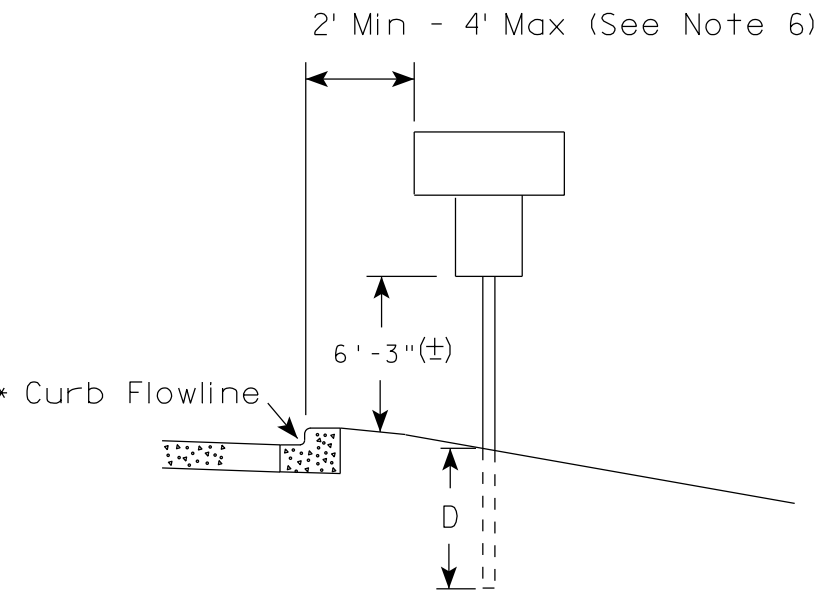
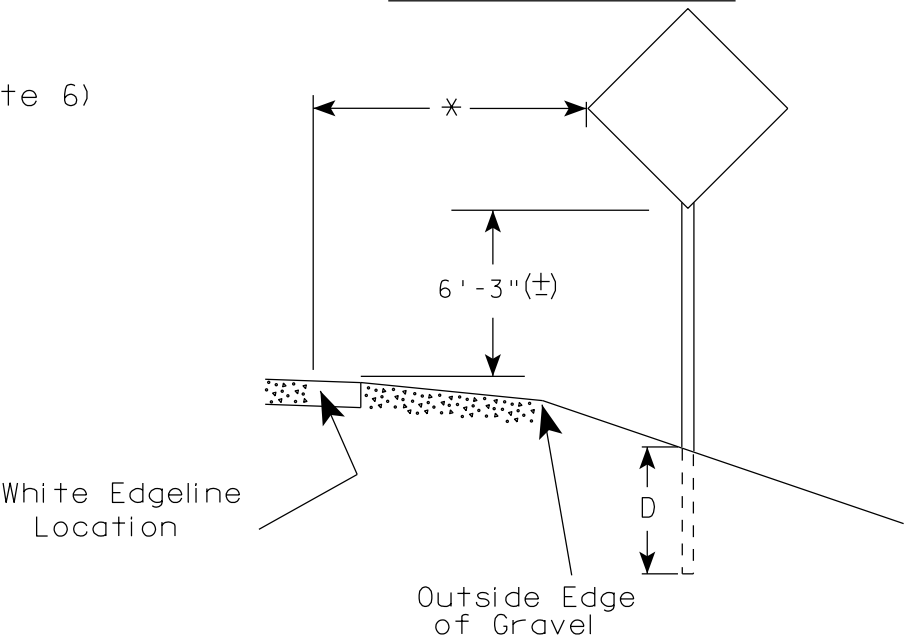
NOTES

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" (±).

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

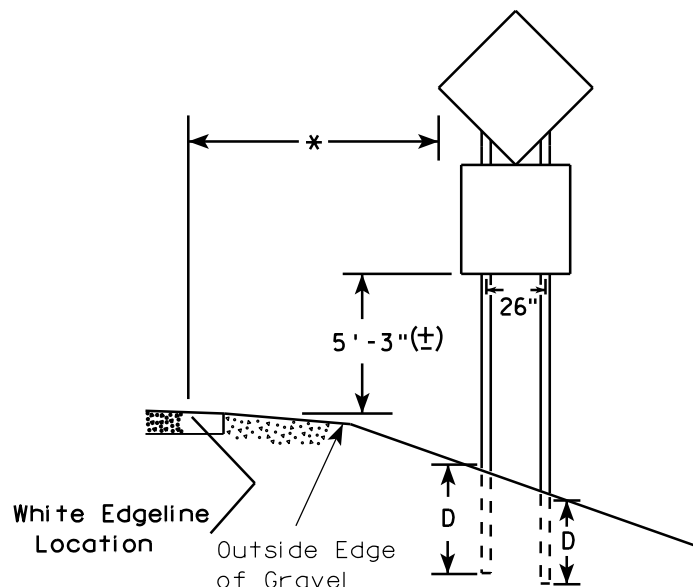
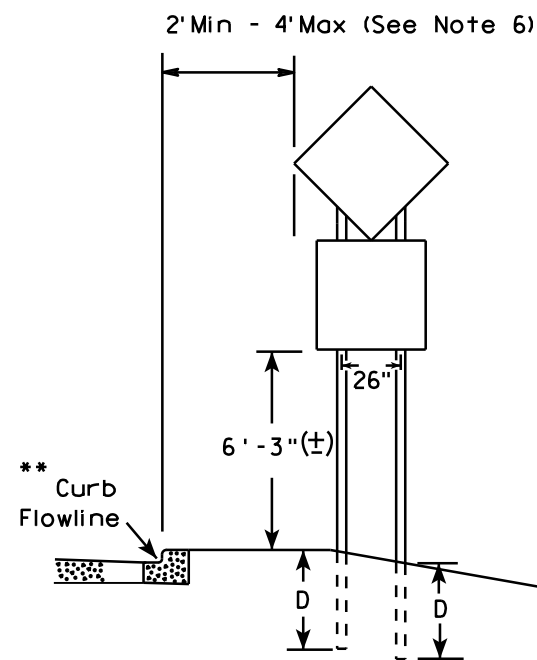
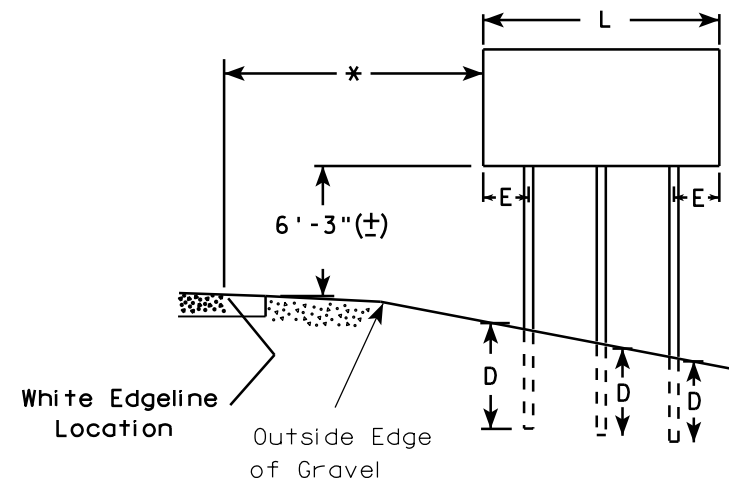
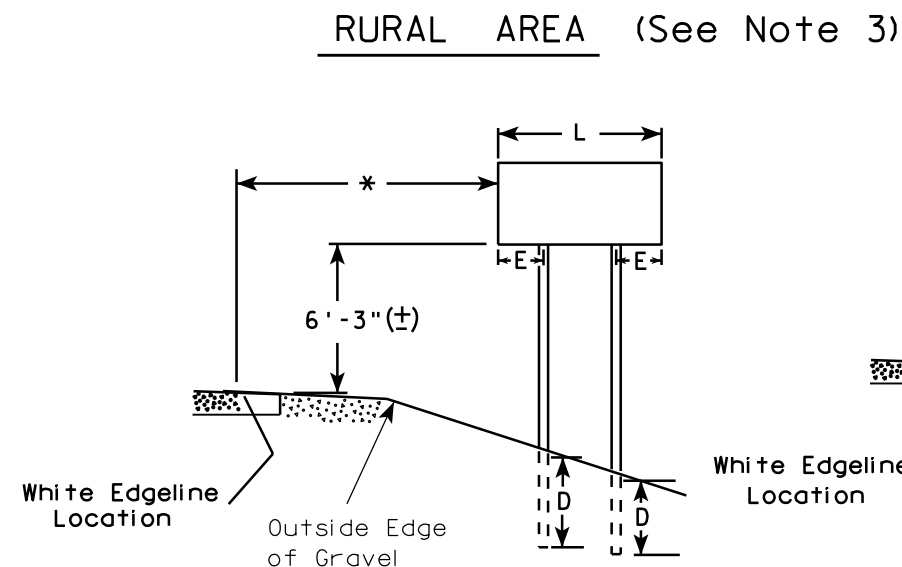
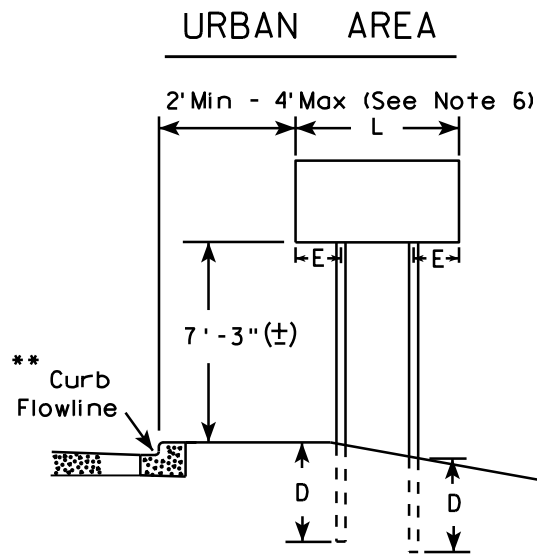
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

- 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.

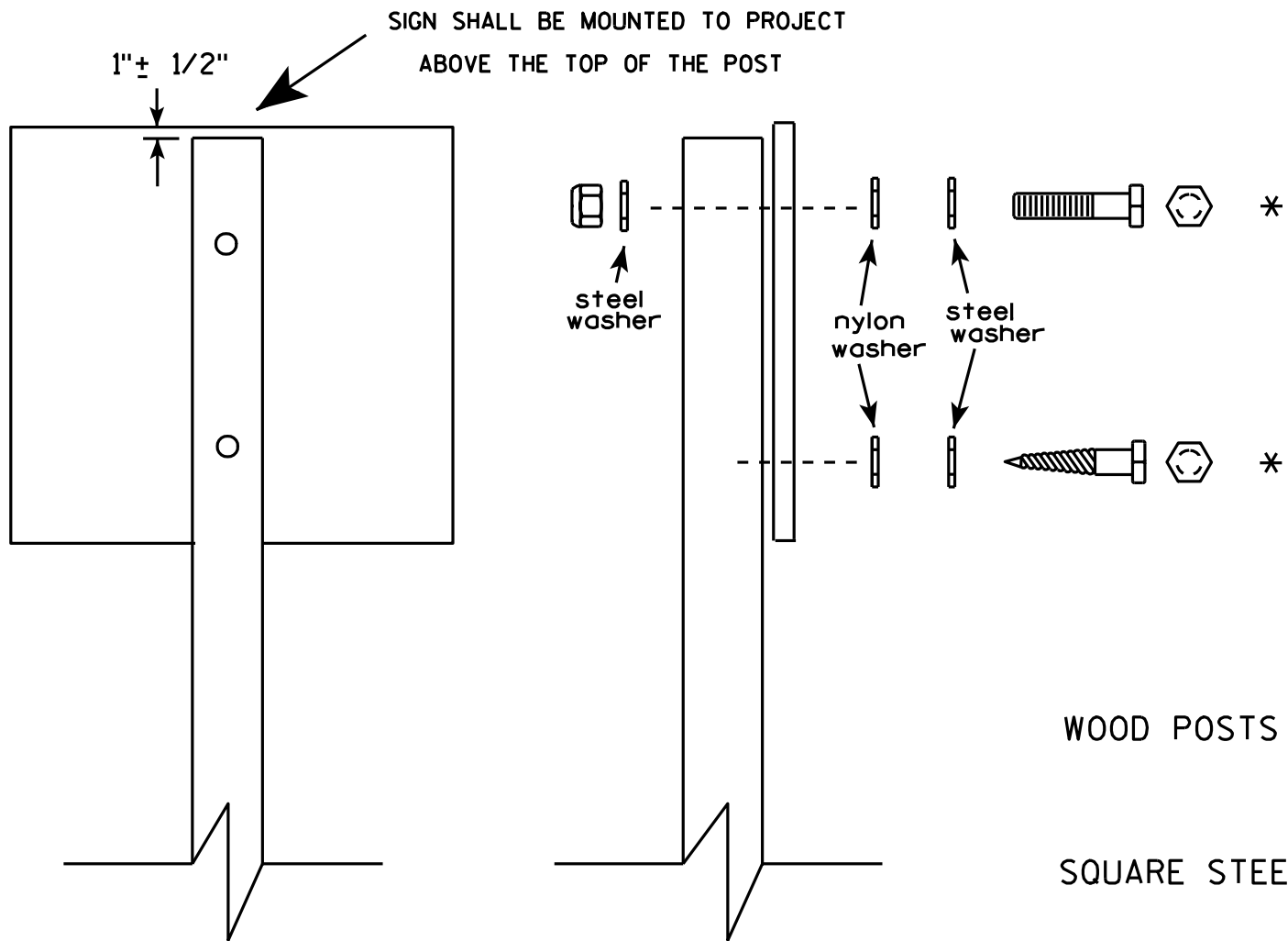
SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

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

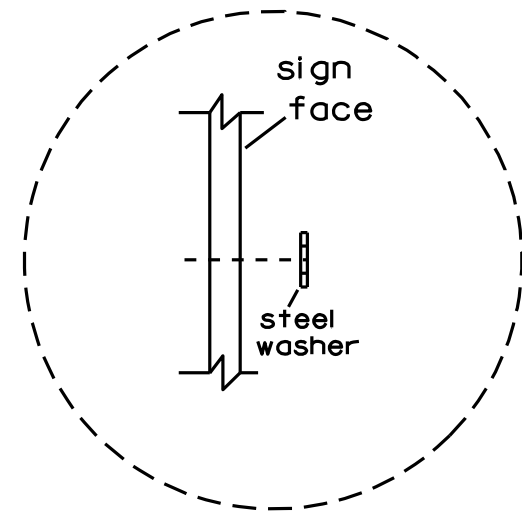


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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.

- 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.

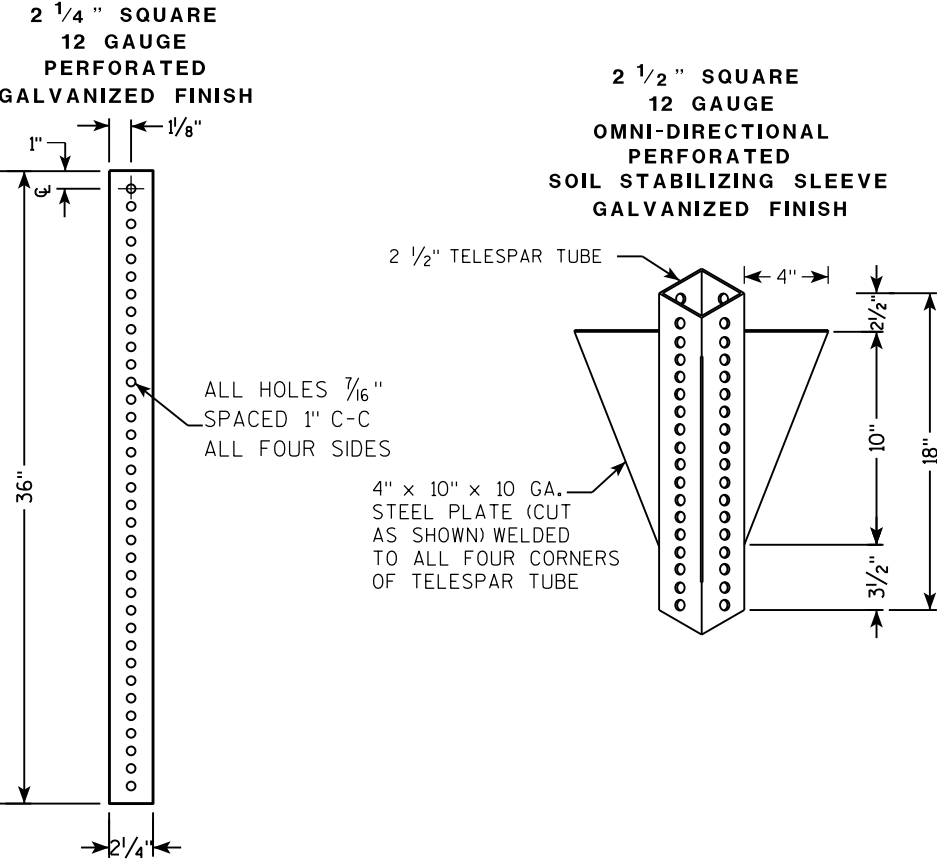


Washer Placement when Sign Has Other Than Type H or Type F Face

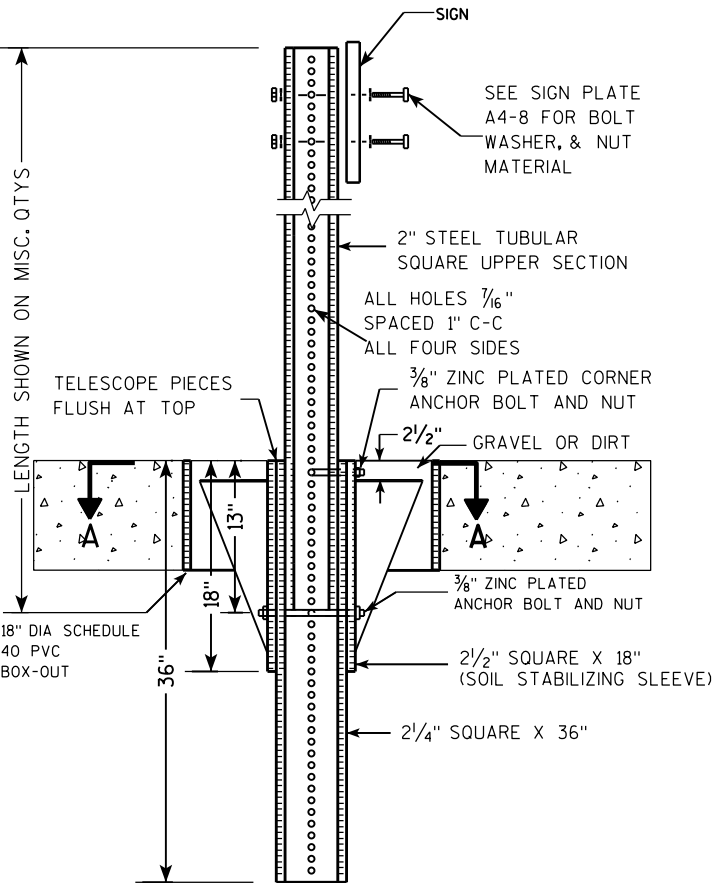
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

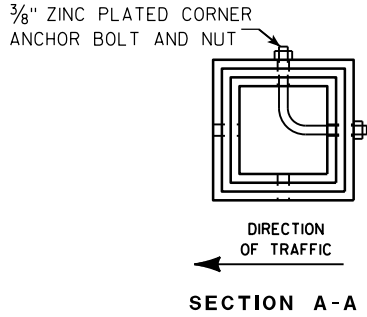
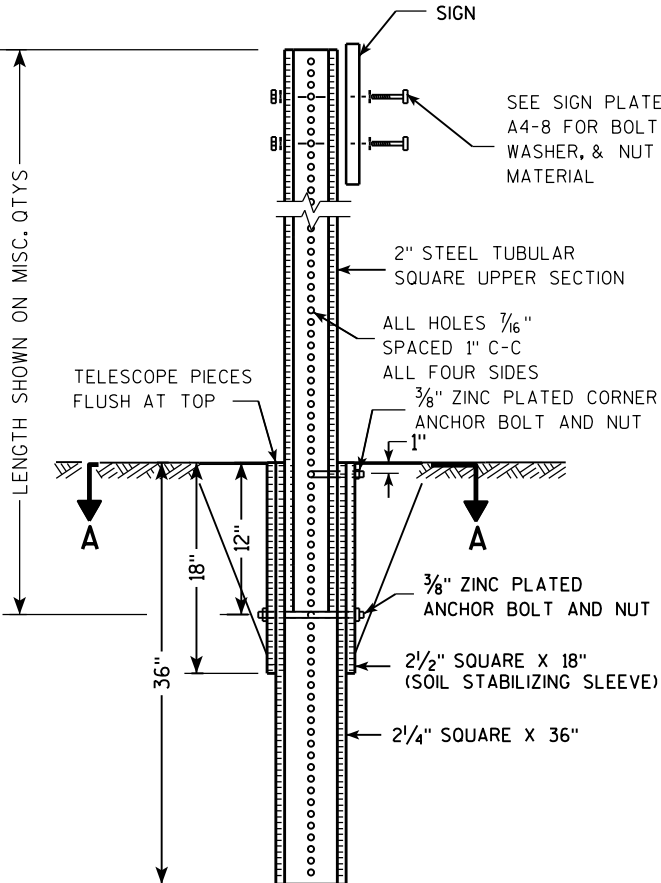
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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



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



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

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

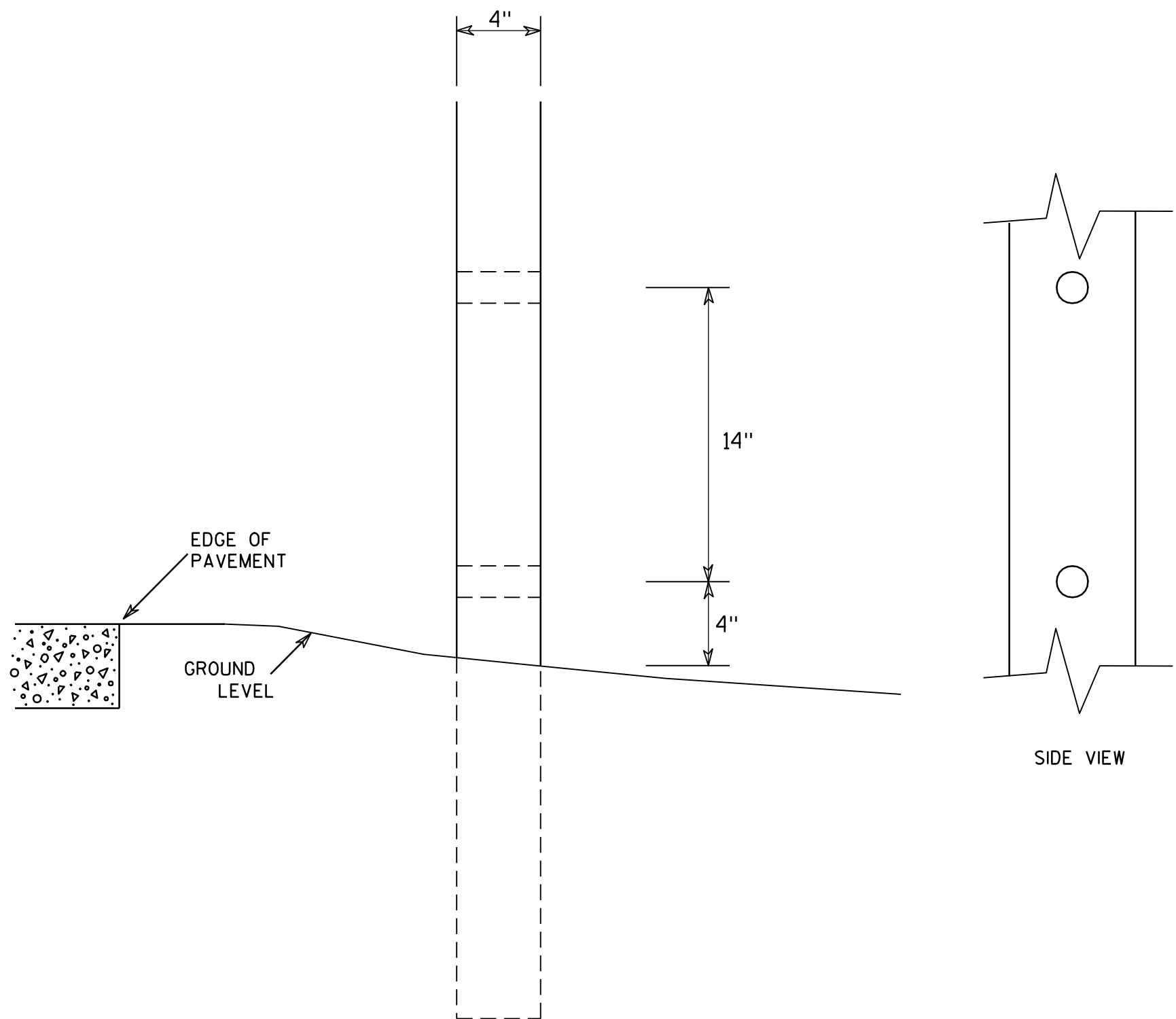
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" 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

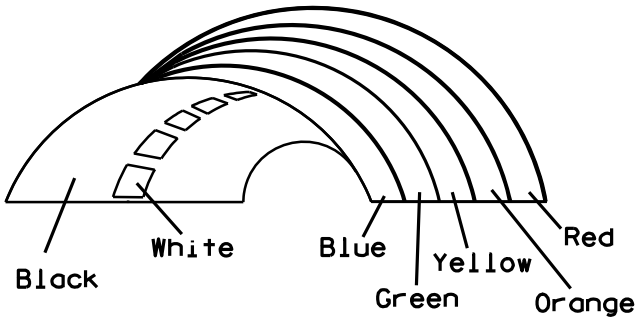
DATE 3/27/97 PLATE NO. A4-11.2

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

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

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 5)
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. Border - Blue
Line 1 - Red
Line 2 - Black
Line 3-5 - Blue
6. Line 1 - Dutch 8011L
Line 2 - Series E
Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign 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	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

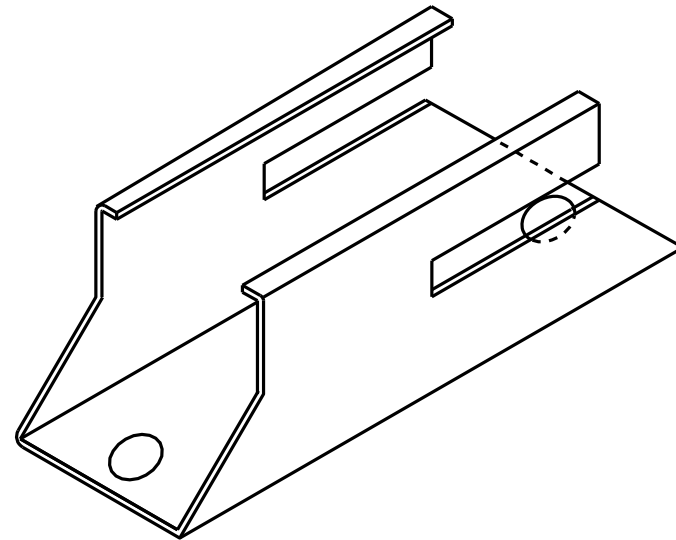
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

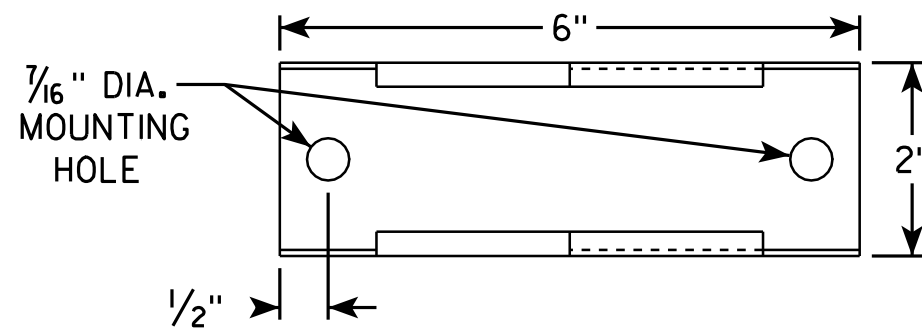
APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 4/27/11 PLATE NO. I55-56.3

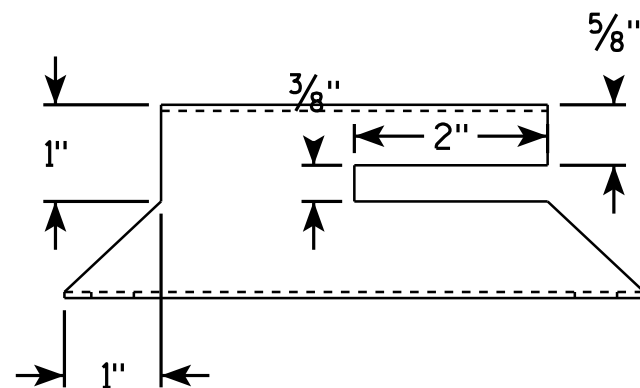
ISOMETRIC VIEW



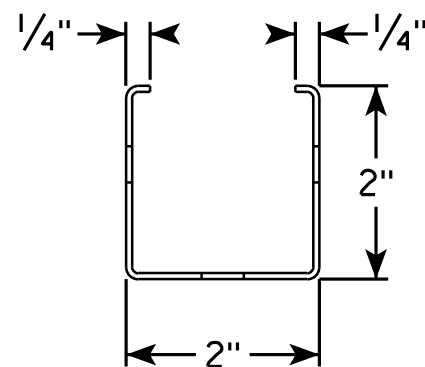
TOP VIEW



SIDE VIEW



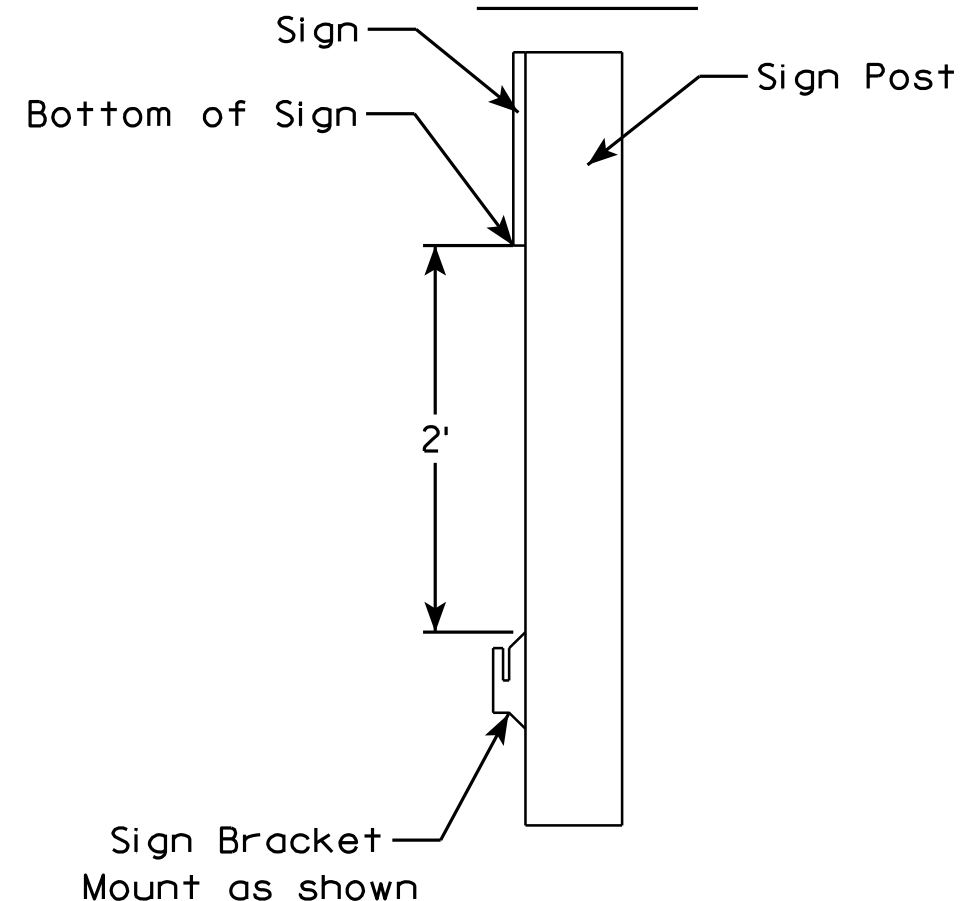
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/5/10 PLATE NO. I55-56B.1

PROJECT NO:

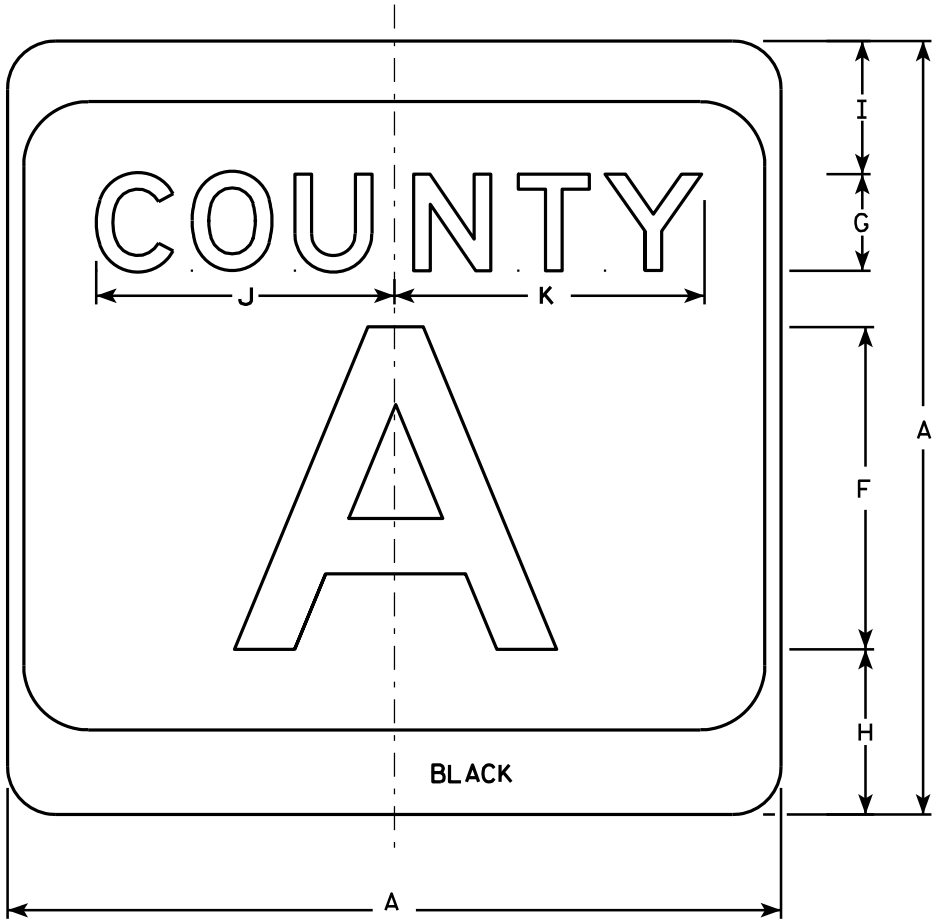
HWY:

COUNTY:

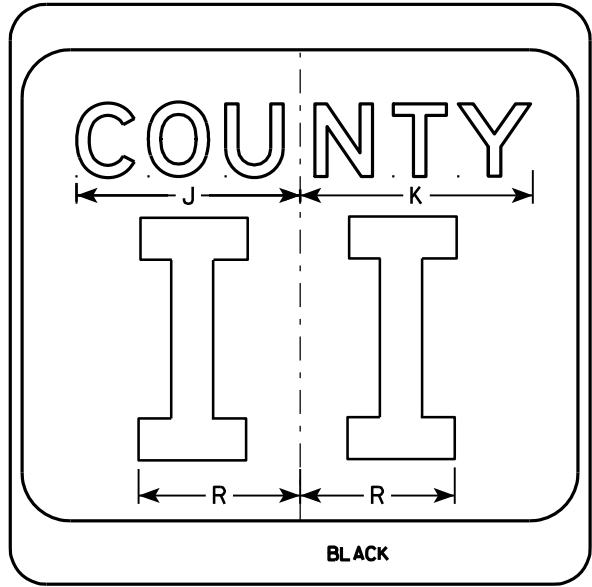
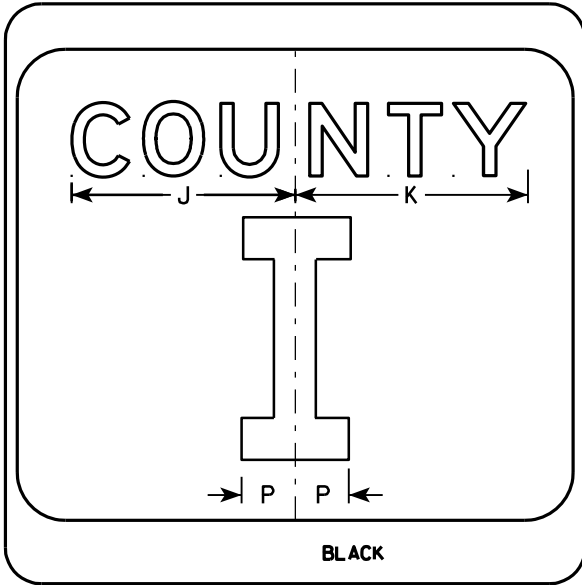
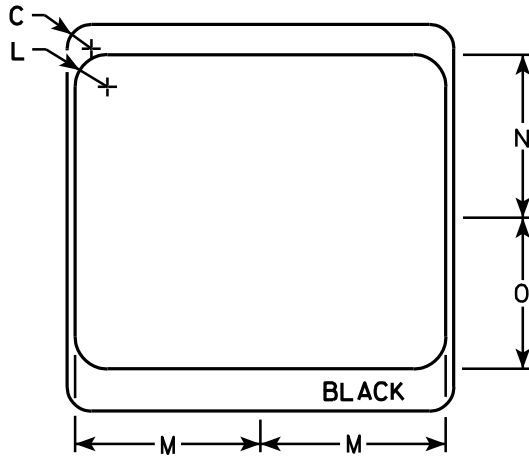
SHEET NO:

E

7



M1-5A



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
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. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

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		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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CTH MARKER

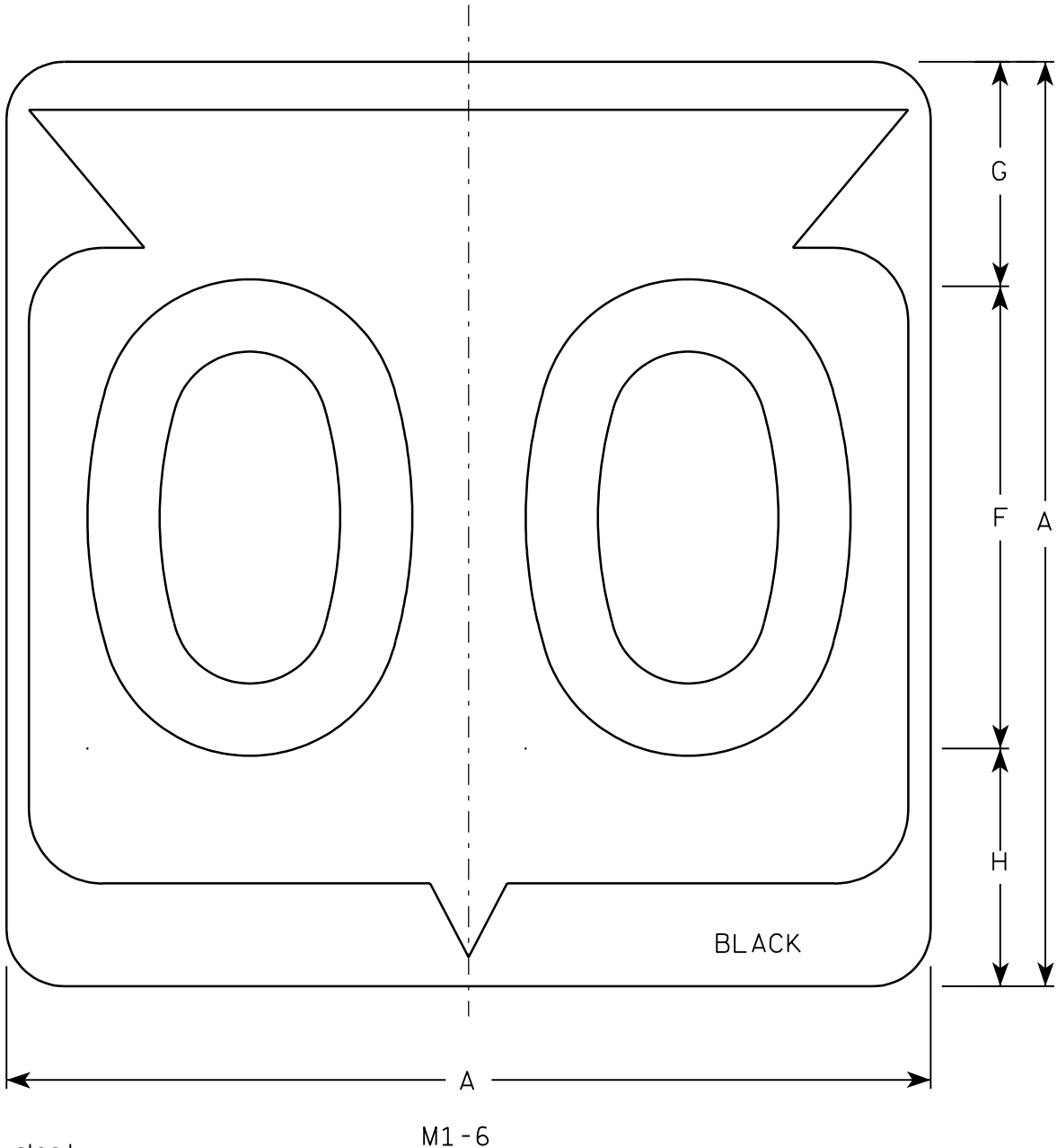
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

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:

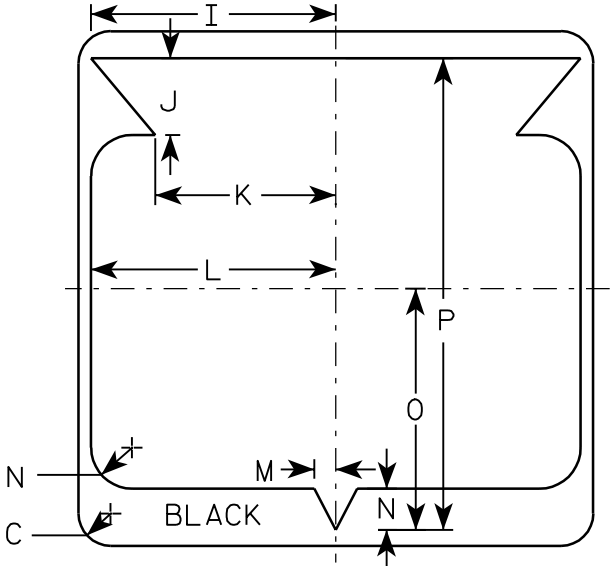
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
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. Substitute appropriate Series numerals and
adjust spacing as per plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

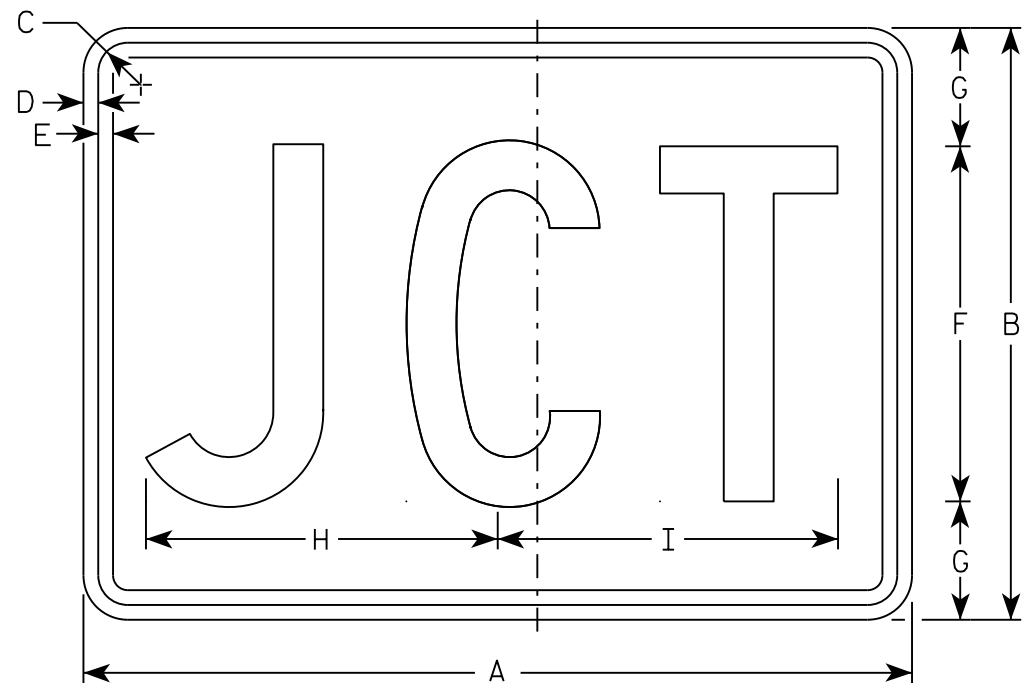
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

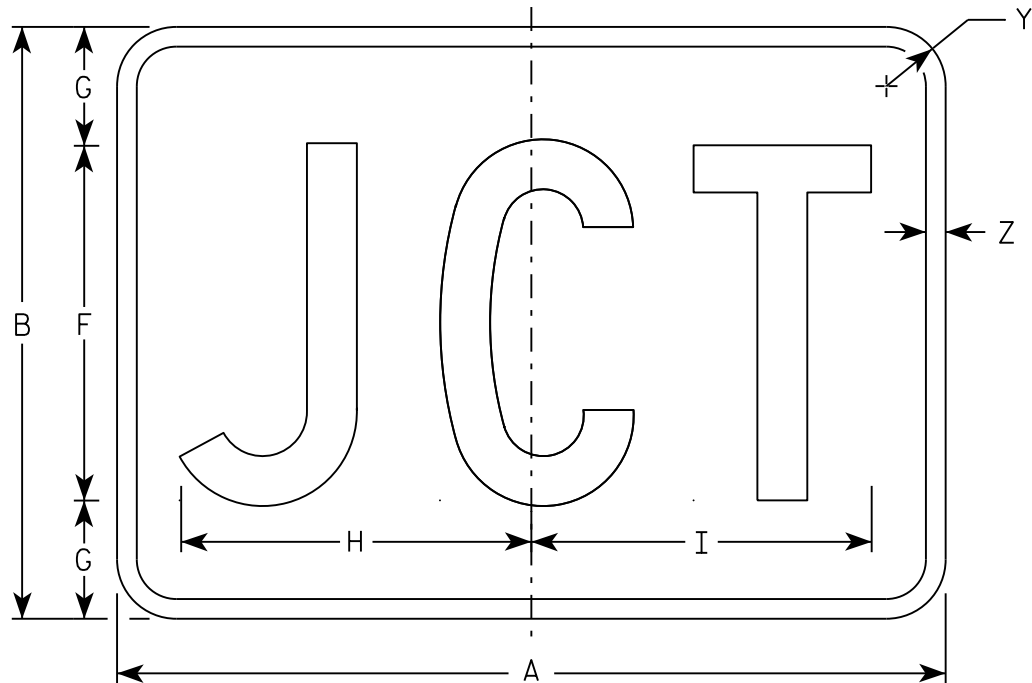

for State Traffic Engineer

DATE 3/20/02

PLATE NO. M1-6.9



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

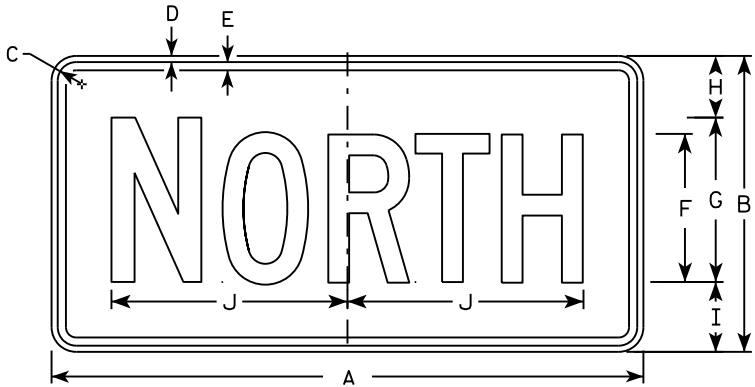
APPROVED

Matthew R. Rauch

For State Traffic Engineer

DATE 10/15/15

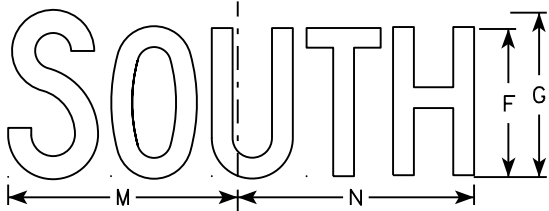
PLATE NO. M2-1.12



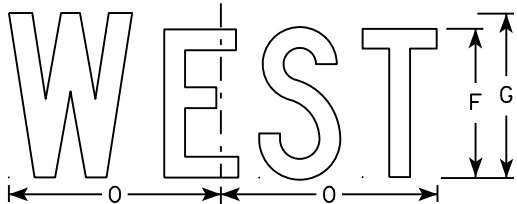
M3-1
MM3-1
MP3-1



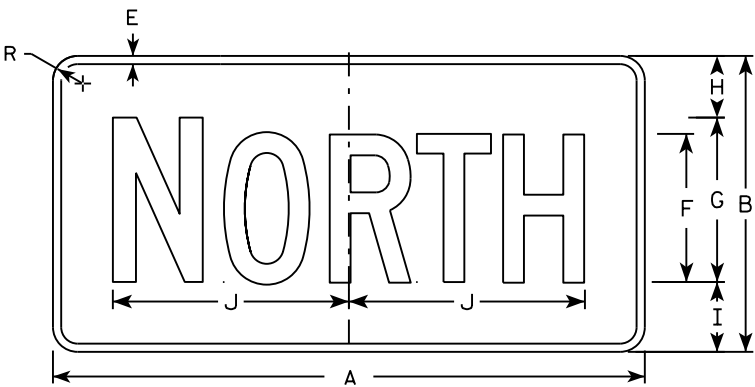
M3-2
MM3-2
MP3-2



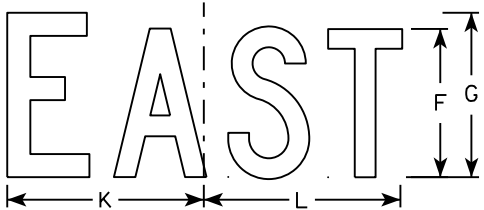
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MM3-3
MP3-3



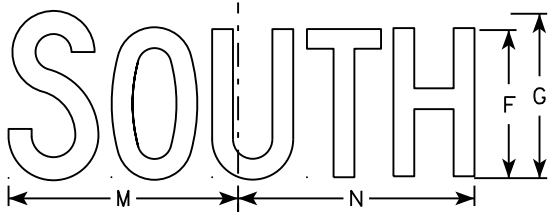
M3-4
MM3-4
MP3-4



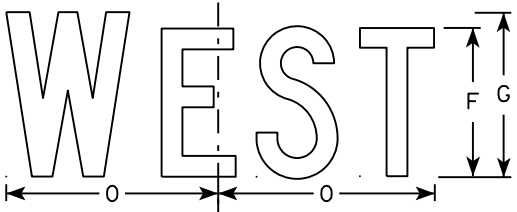
MB3-1
MK3-1
MN3-1



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.

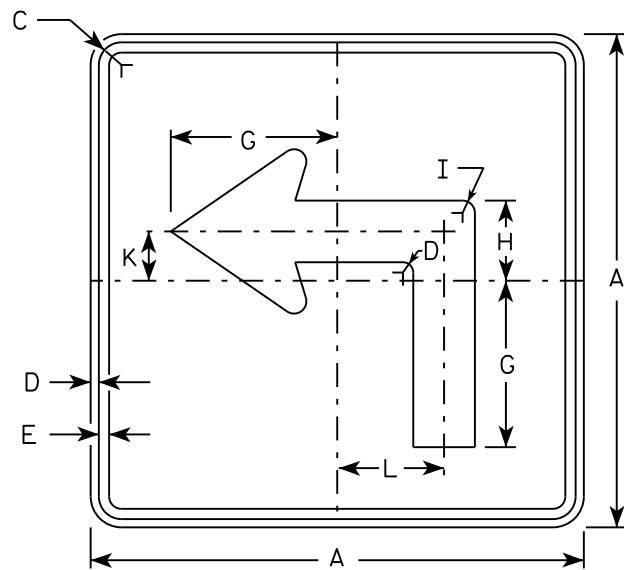
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	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

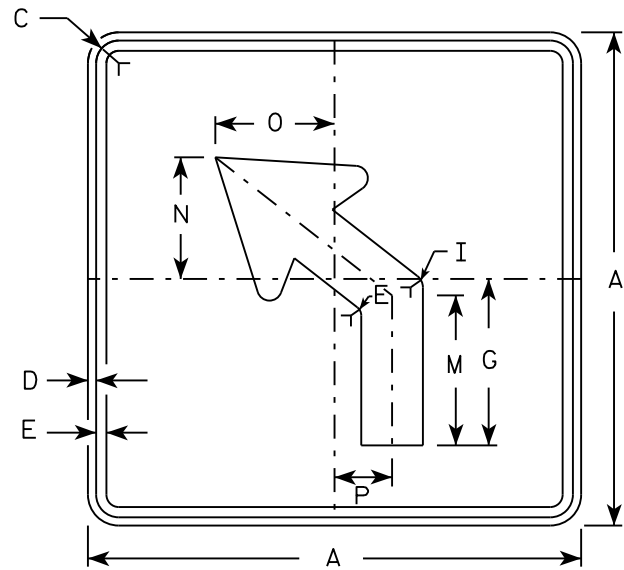
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

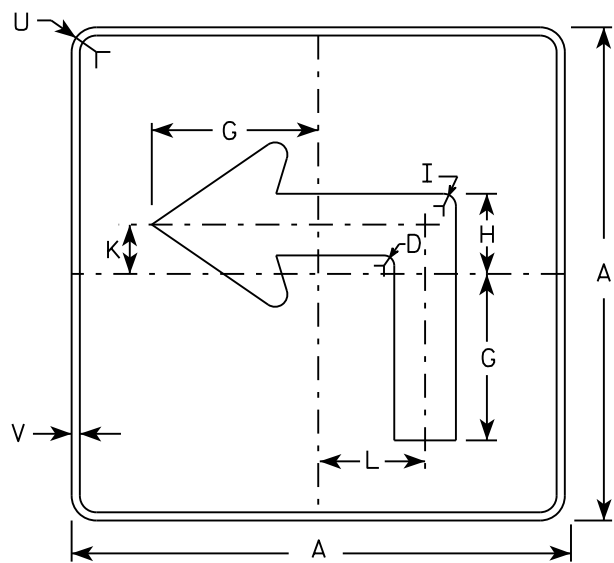
DATE 10/15/15 PLATE NO. M3-1.14



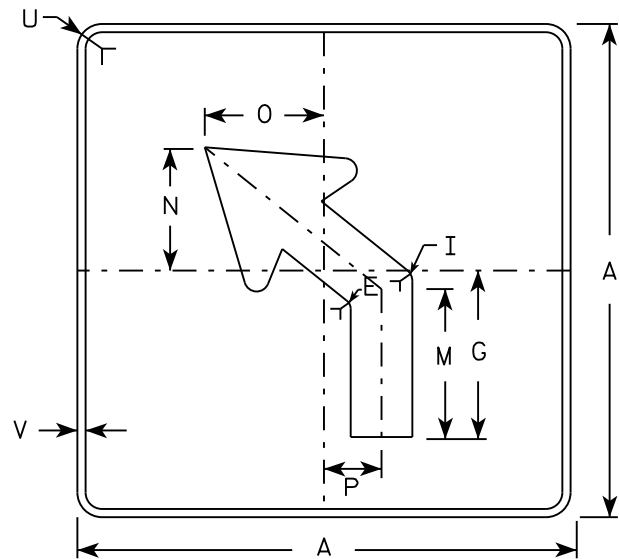
M5-1L
MM5-1L
M05-1L
MP5-1L



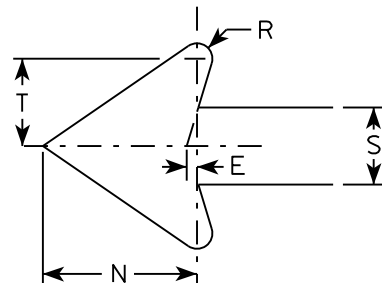
M5-2L
MM5-2L
M05-2L
MP5-2L



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

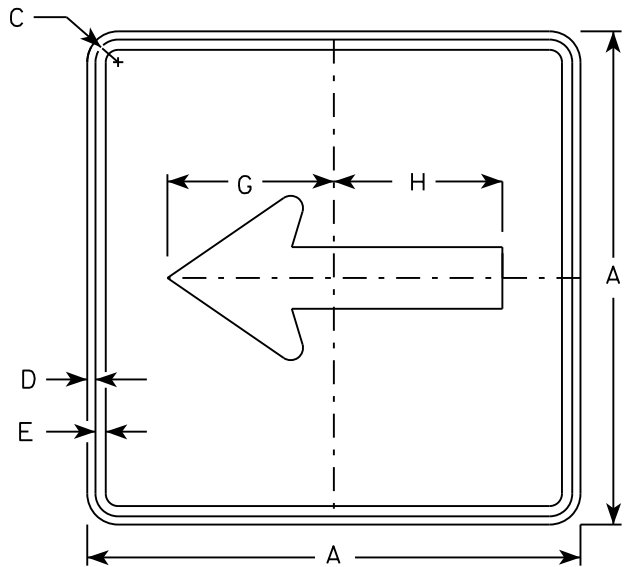
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M5-1 & M5-2

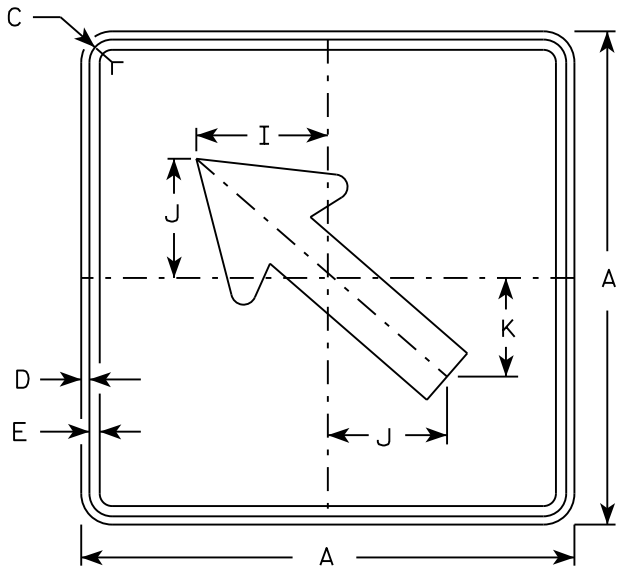
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

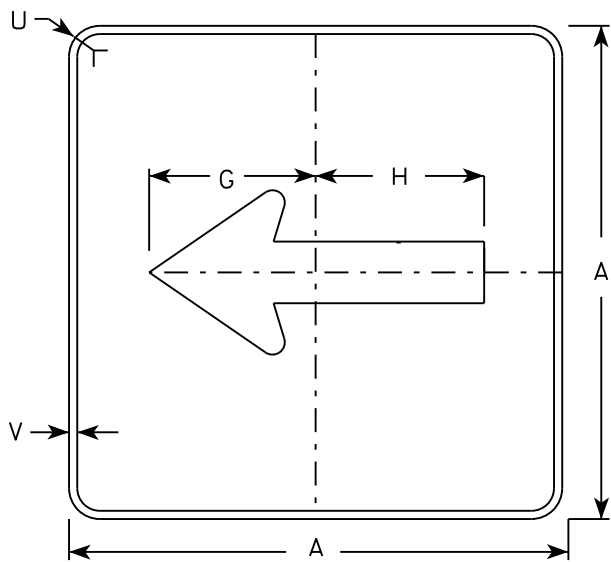
DATE 10/15/15 PLATE NO. M5-1.13



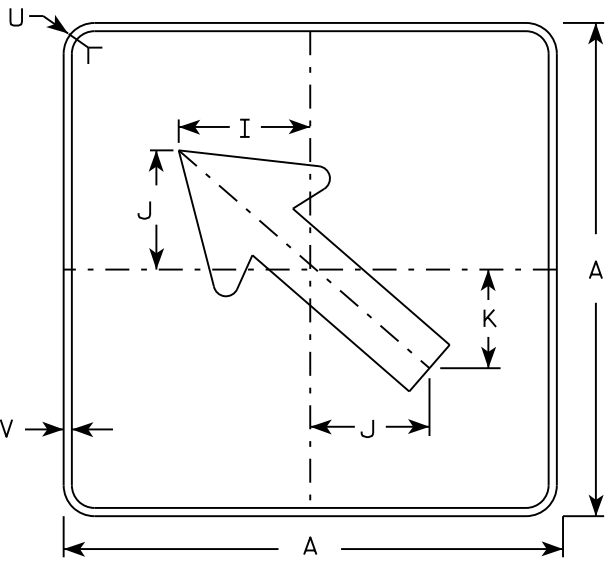
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



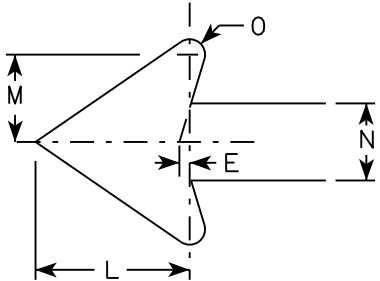
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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:

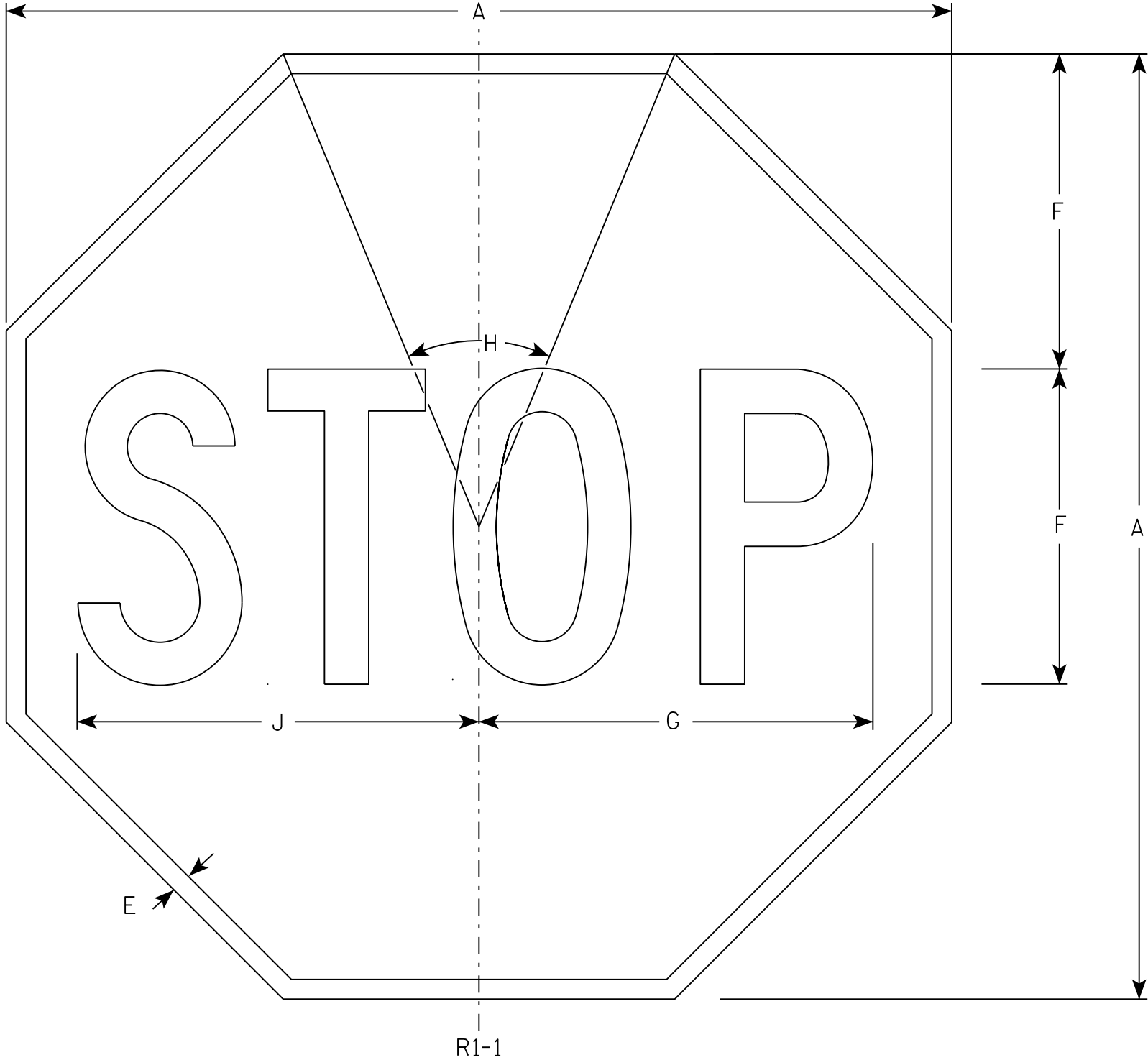
E

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



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 - 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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

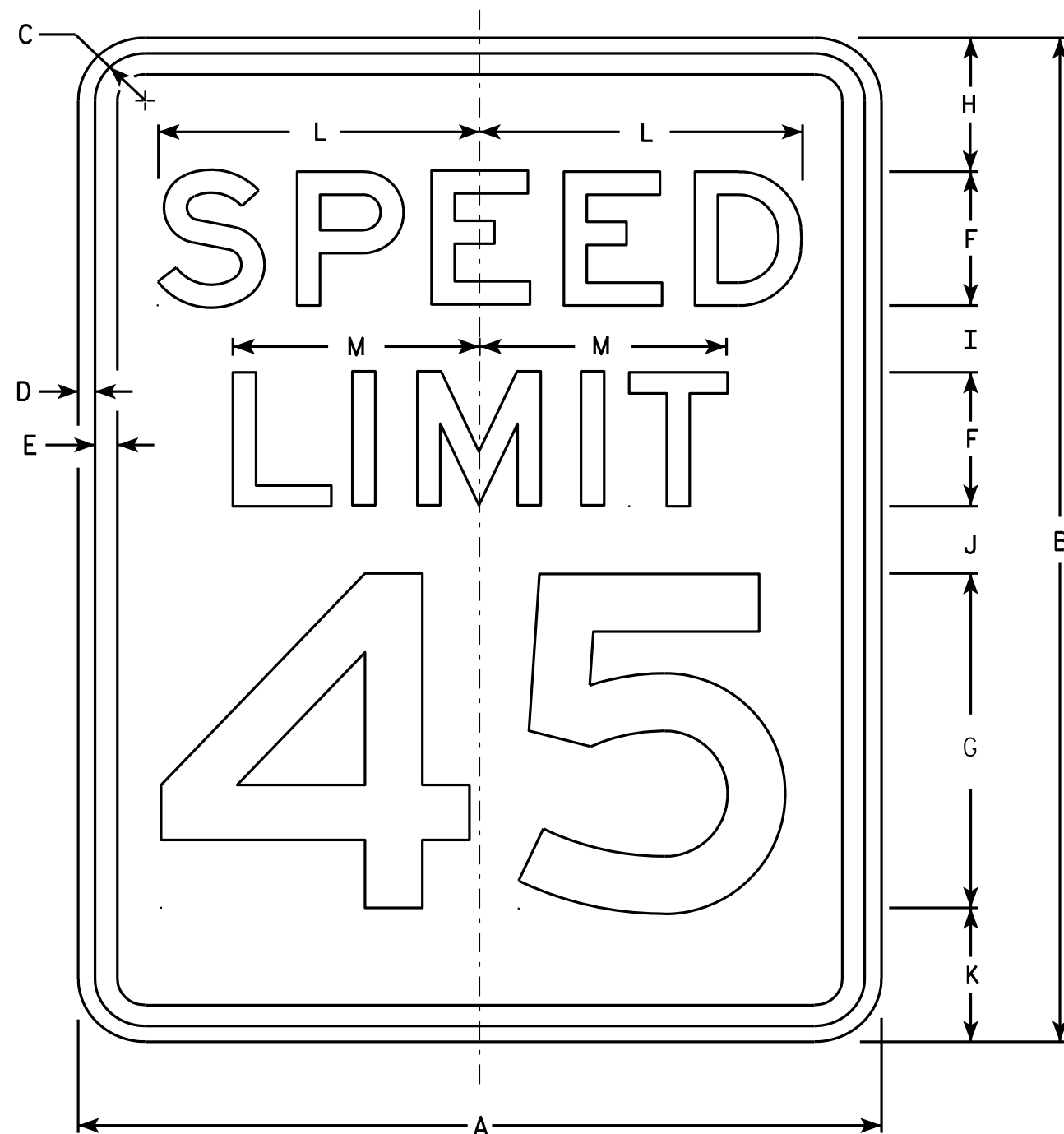
STANDARD SIGN

R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



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 - E
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 adjust spacing to achieve proper balance.

R2-1

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	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

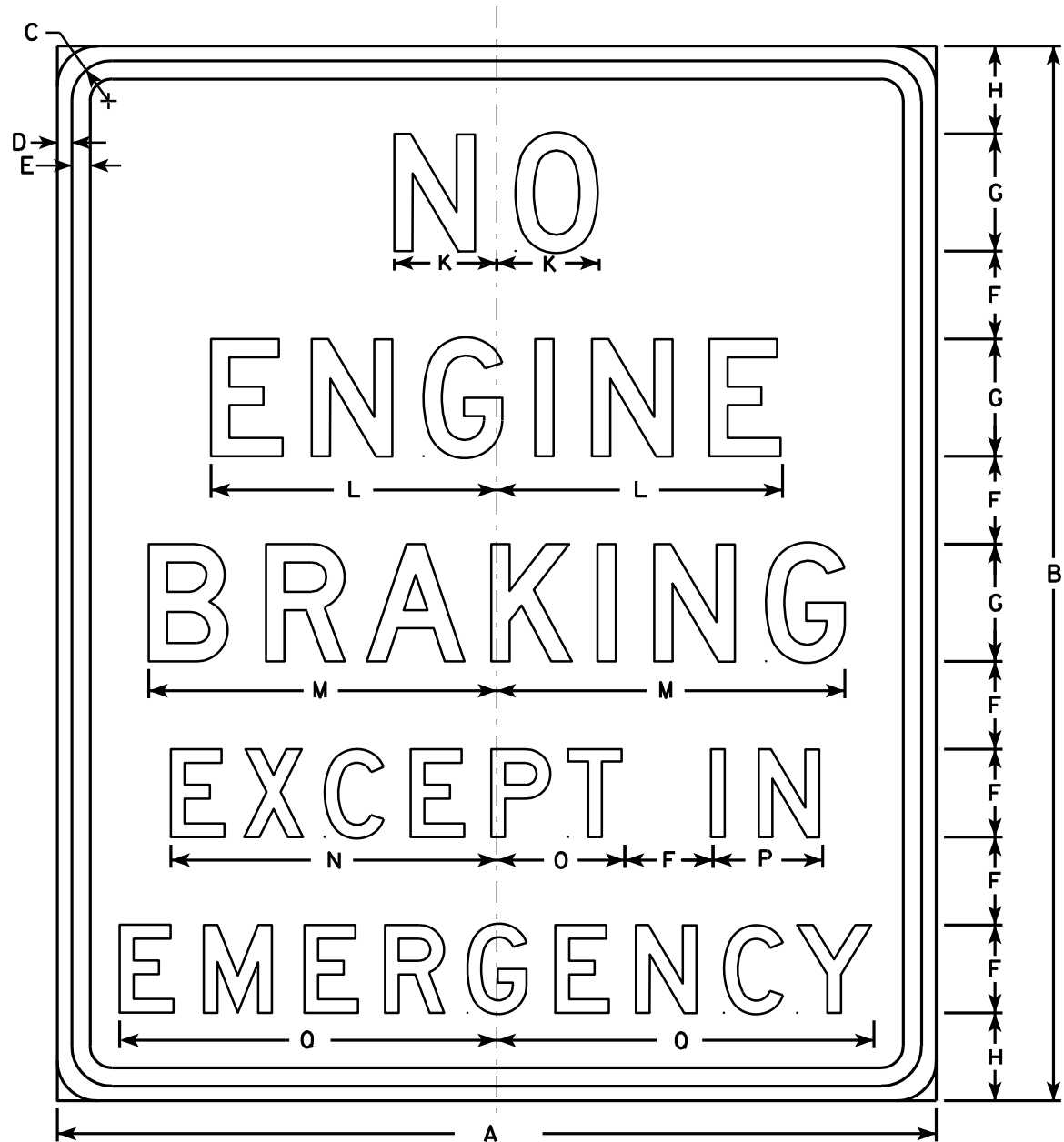
PROJECT NO:

HWY:

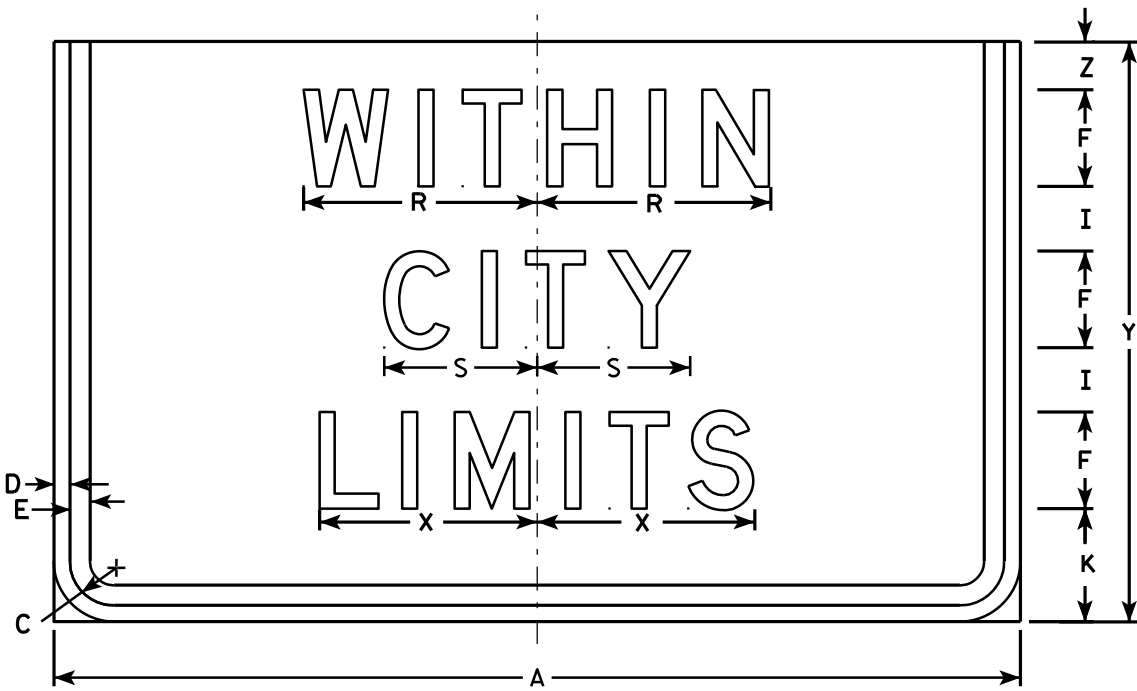
COUNTY:

SHEET NO:

E

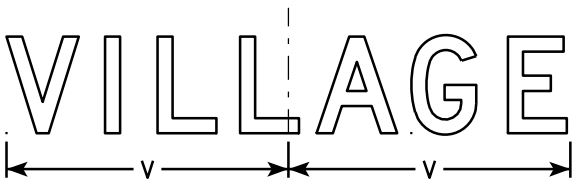


R10-64



R10-64F

Area sq. ft.
3.75
7.0



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	30	36	1 3⁄8	1⁄2	5⁄8	3	4	3	2		3 1⁄2	9 3⁄4	11 7⁄8	11 1⁄8	4 3⁄8	3 3⁄4	12 7⁄8	7 1⁄4	4 3⁄4		8 1⁄4	8 3⁄4	5⁄8	6 3⁄4	18	1 1⁄2	7.5
2S	30	36	1 3⁄8	1⁄2	5⁄8	3	4	3	2		3 1⁄2	9 3⁄4	11 7⁄8	11 1⁄8	4 3⁄8	3 3⁄4	12 7⁄8	7 1⁄4	4 3⁄4		8 1⁄4	8 3⁄4	5⁄8	6 3⁄4	18	1 1⁄2	7.5
2M	30	36	1 3⁄8	1⁄2	5⁄8	3	4	3	2		3 1⁄2	9 3⁄4	11 7⁄8	11 1⁄8	4 3⁄8	3 3⁄4	12 7⁄8	7 1⁄4	4 3⁄4		8 1⁄4	8 3⁄4	5⁄8	6 3⁄4	18	1 1⁄2	7.5
3	42	48	1 3⁄8	1⁄2	5⁄8	4	5	4 1⁄2	3		4	12 1⁄4	14 7⁄8	14 1⁄8	5 1⁄4	4 3⁄4	16 1⁄4	9	6		11	11 1⁄4	1 1⁄2	8 1⁄2	24	2	14.0
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

NOTES

1. Signs are 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 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 2 of R10-64F is Series C for "TOWNSHIP" Only

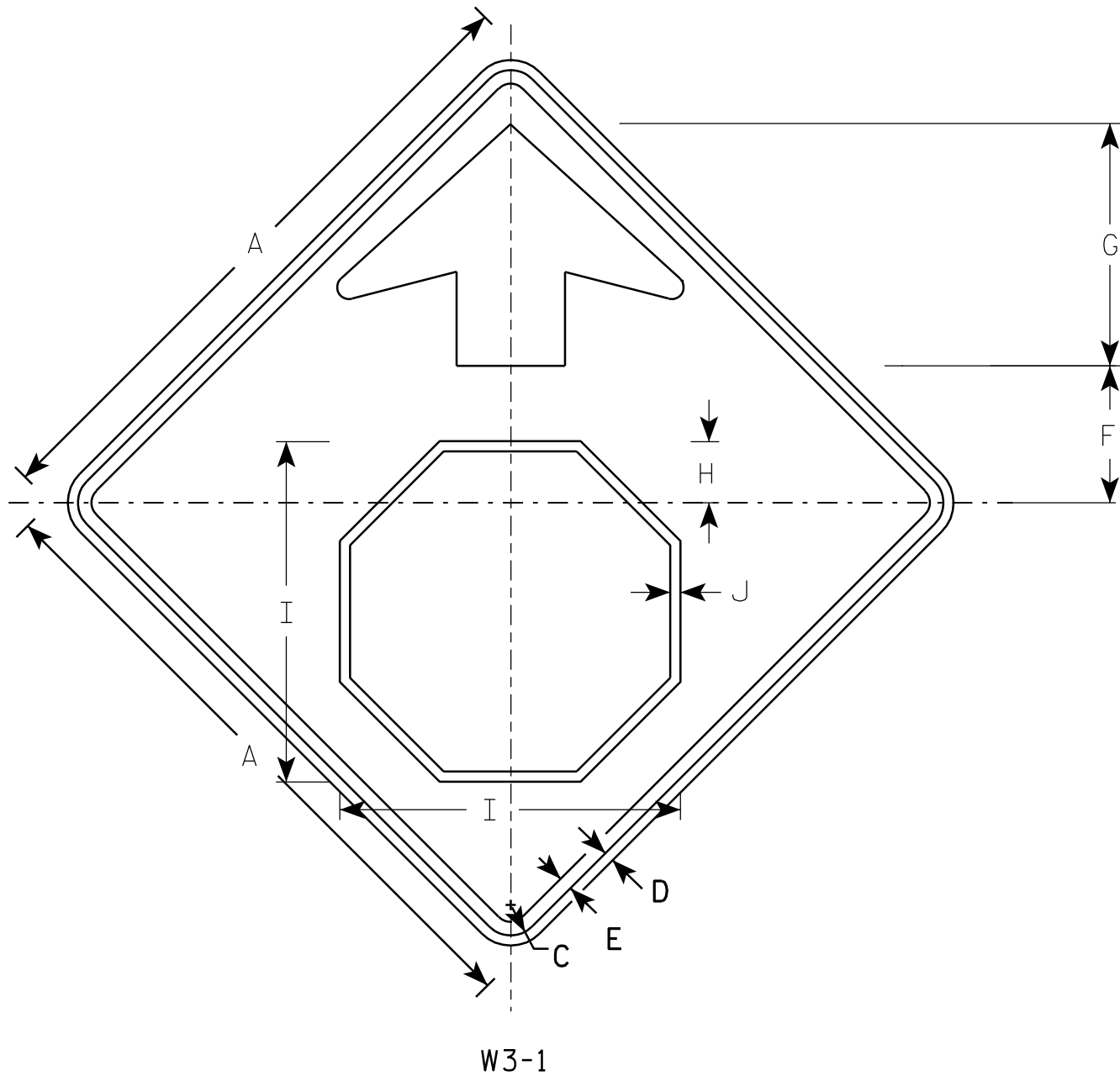
STANDARD SIGN

R10-64 & R10-64F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

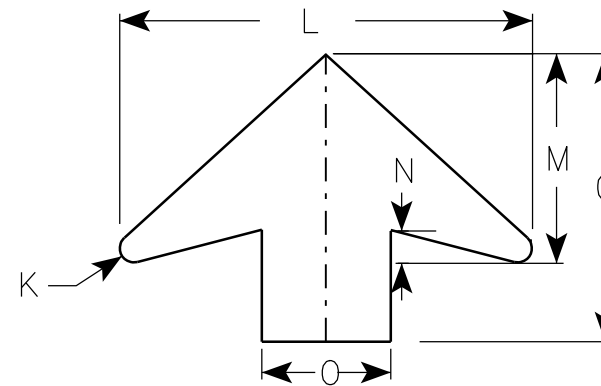
DATE 4/4/11 PLATE NO. R10-64.7



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

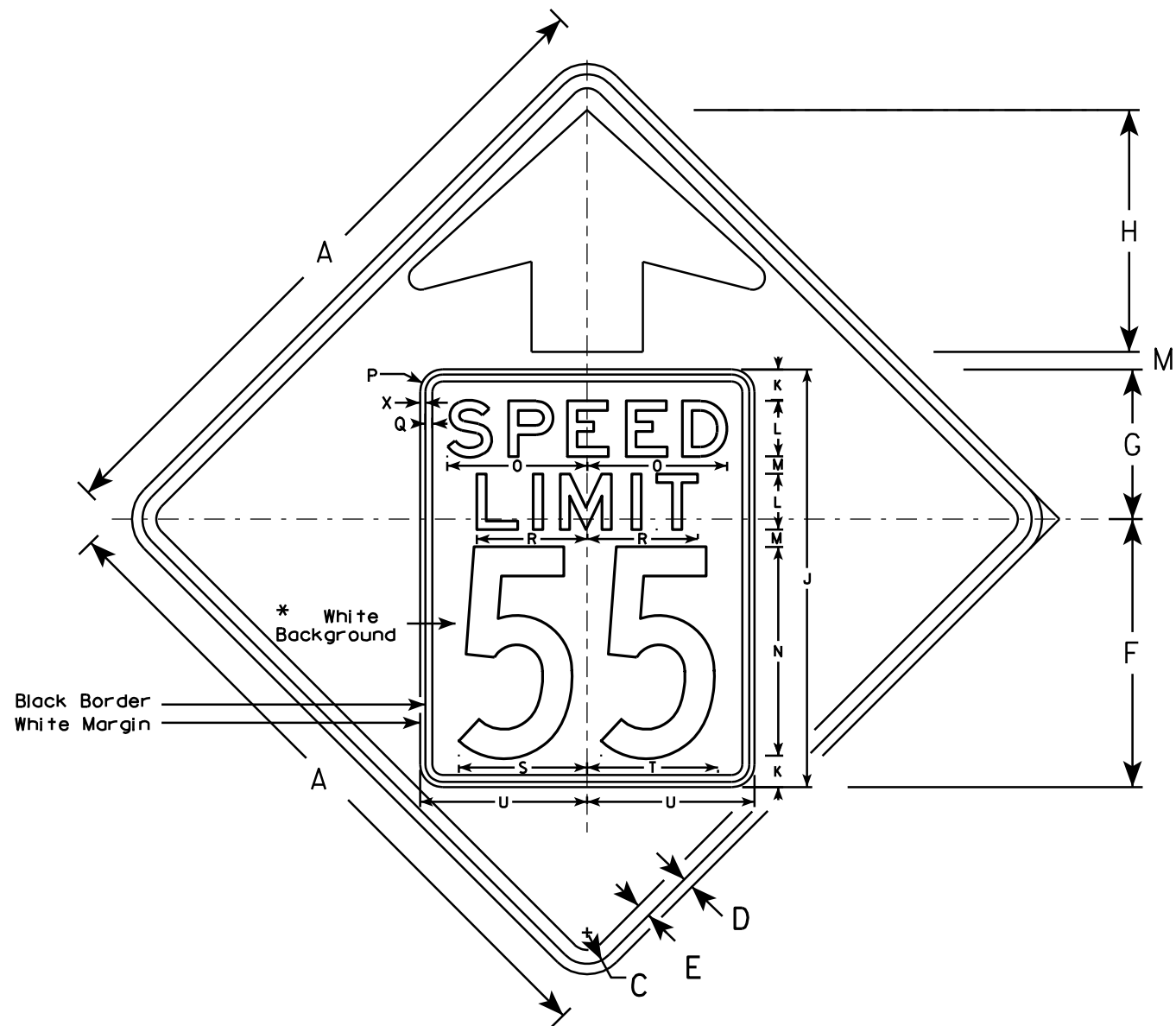
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

for State Traffic Engineer

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

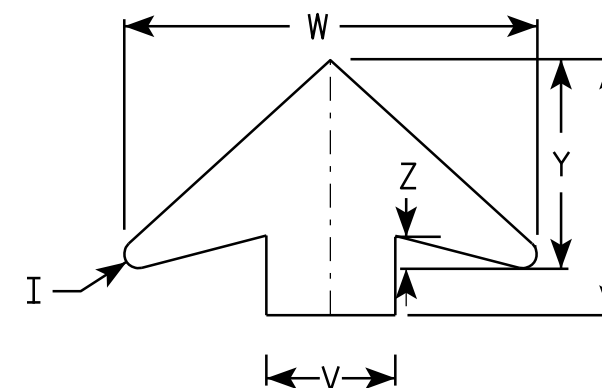


W3-5

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 - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White 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																											
2S	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
2M	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
3	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
4	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 3⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 1⁄4	9 3⁄8	12	8	25 5⁄8	3⁄8	13	2	16.0
5	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 3⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 1⁄4	9 3⁄8	12	8	25 5⁄8	3⁄8	13	2	16.0

STANDARD SIGN

W3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

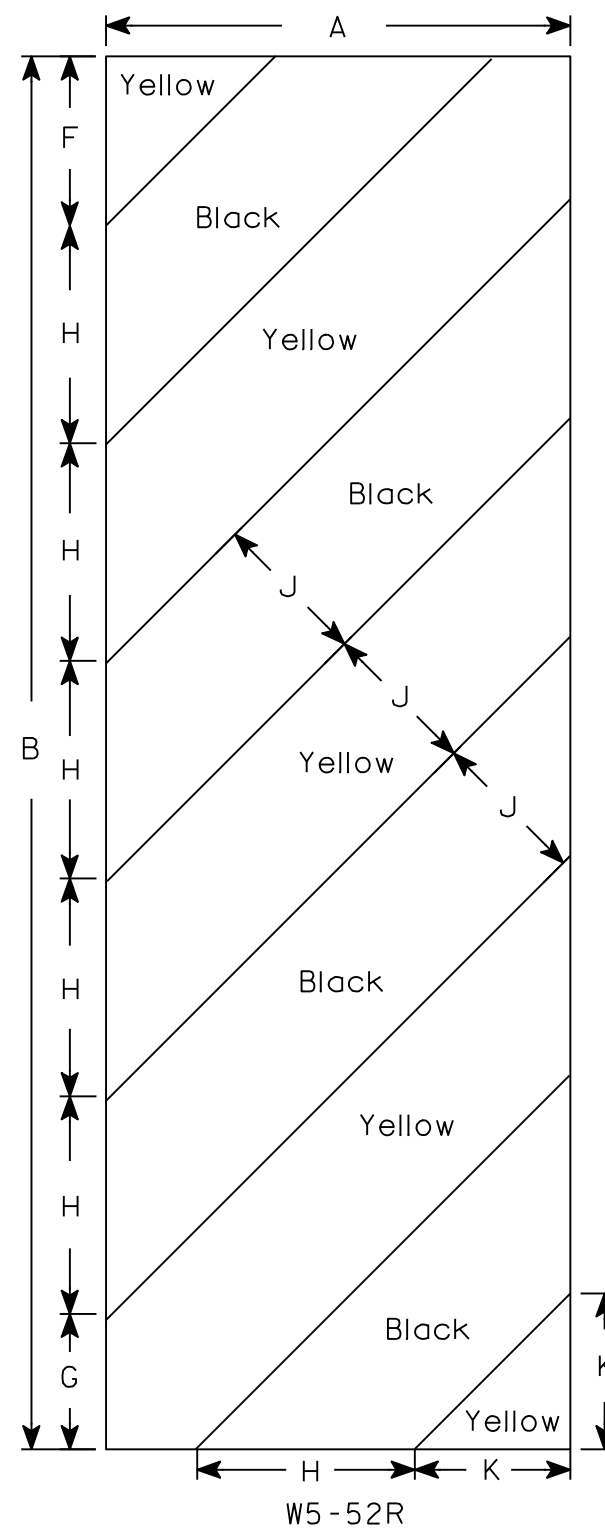
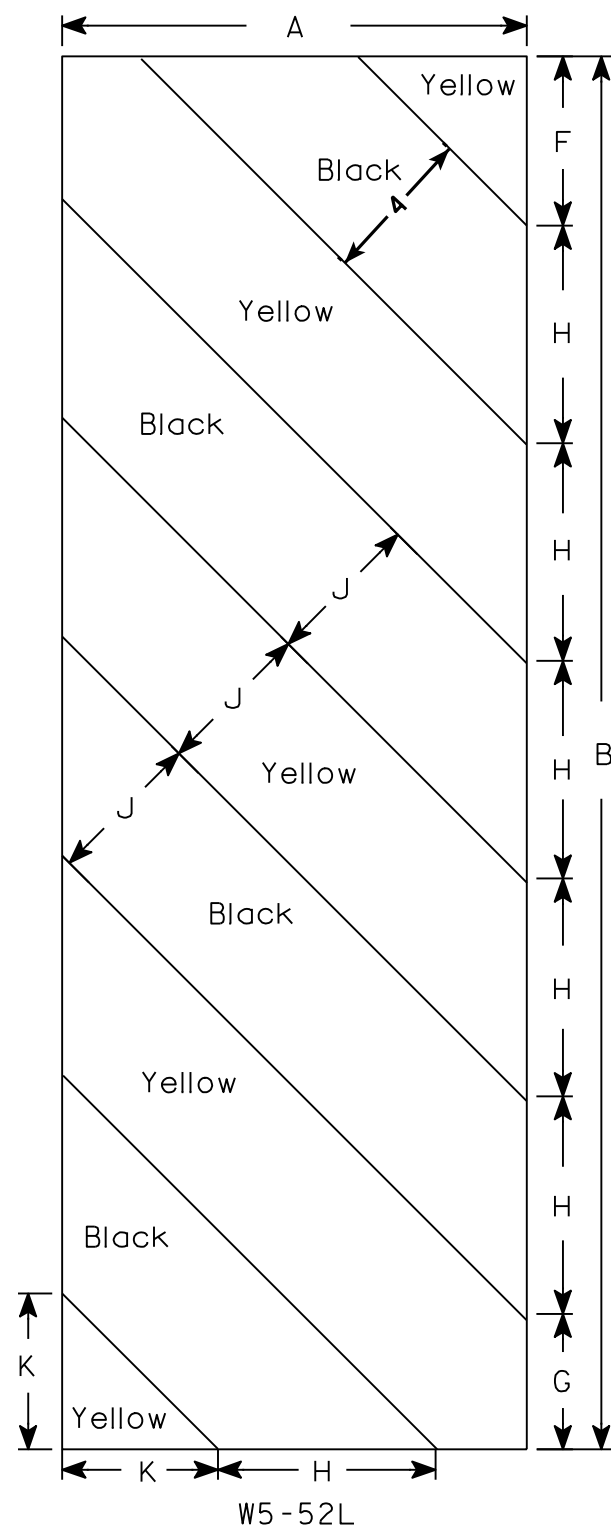
DATE 5/29/12

PLATE NO. W3-5.5

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.
4. Alternate colors of stripes as shown.

[illegible]

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:

HWY:

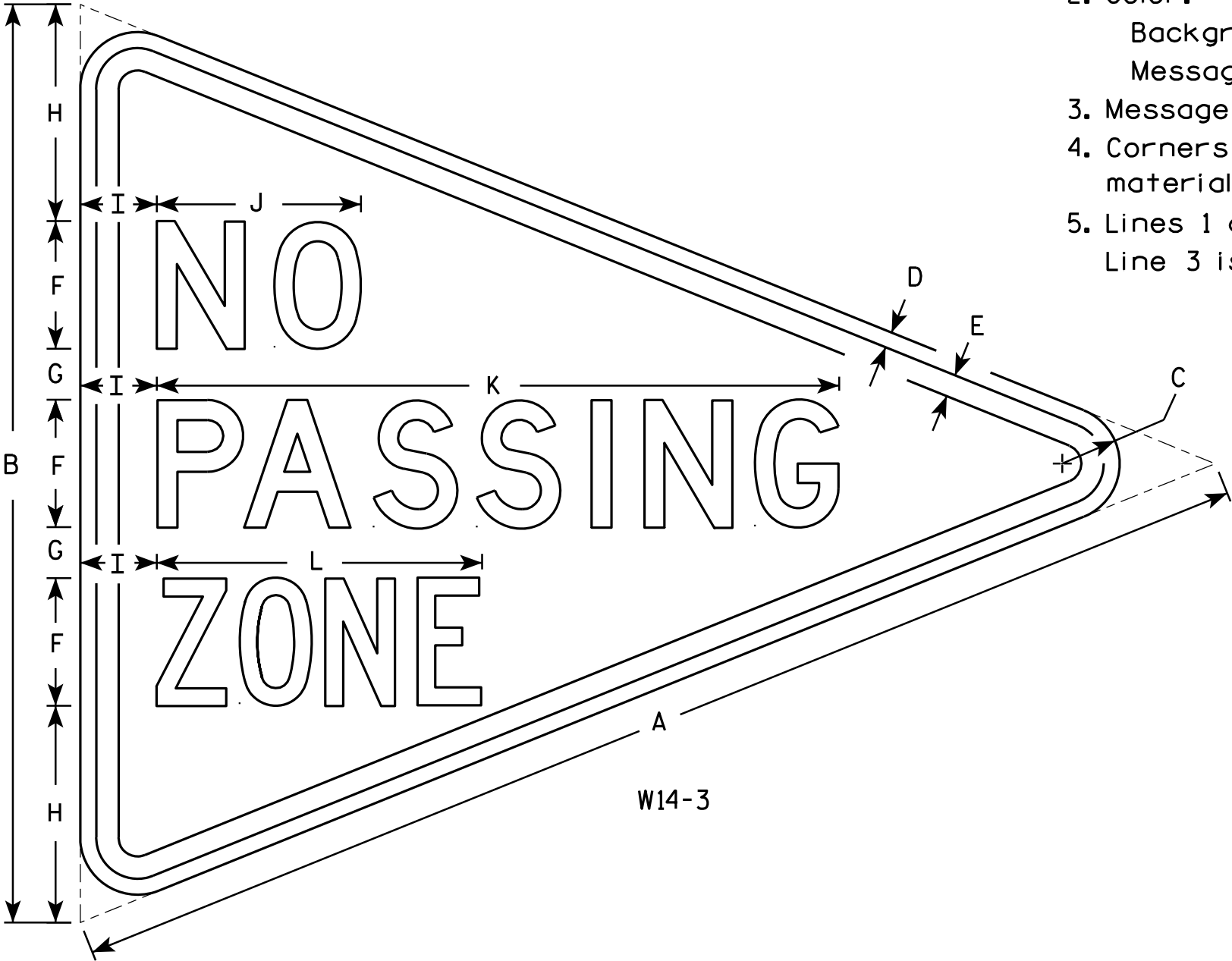
COUNTY:

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 - Yellow
Message - Black
- 3. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

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	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

Notes



Wisconsin Department of Transportation

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