

SUP
PROJECT ID: 8213-02-60
WITH:
COUNTY: RUSK

OCT 26 2010

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 5	Plan
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans

TOTAL SHEETS =

68

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY REHABILITATION-MAINTENANCE PROJECT

THORP - INGRAM

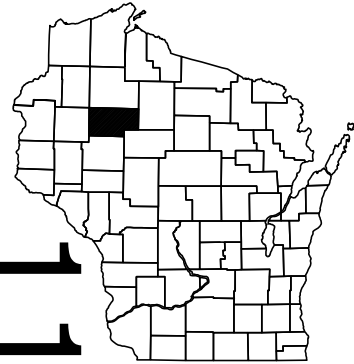
SOUTH COUNTY LINE TO USH 8

STH 73

RUSK COUNTY

STATE PROJECT NUMBER

8213-02-60

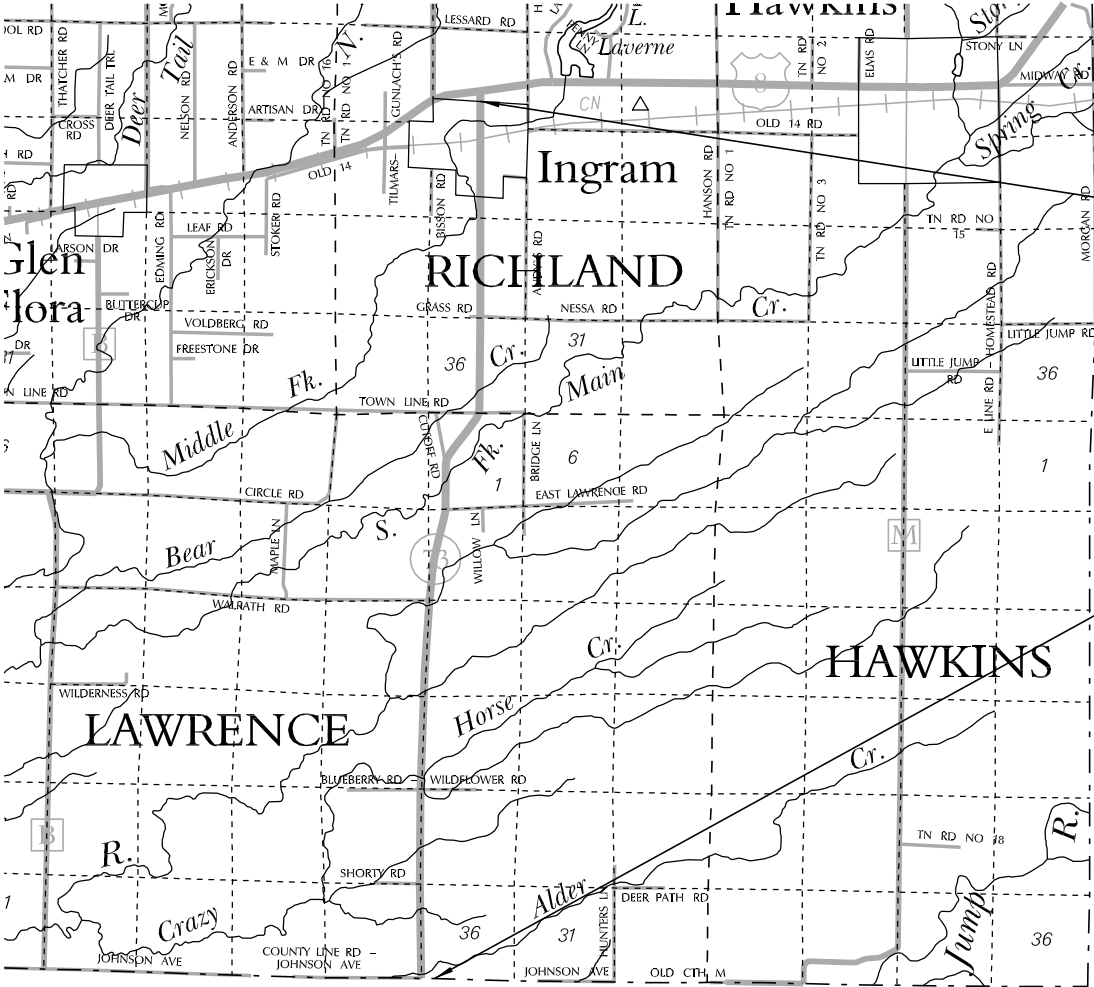


DESIGN DESIGNATION

A.A.D.T. 2009	=	470
A.A.D.T. 2029	=	500
D.H.V.	=	
D.D.	=	
T.	=	10.0%
DESIGN SPEED	=	55 mph
ESALS	=	102,200

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
REFERENCE LINE	
COMBUSTIBLE FLUIDS	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	



LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE =9.435 MI.

Coordinates on this plan are referenced to the Wisconsin State Plane Coordinate System (WSPCS), Central Zone

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8213-02-60	WISC 2010852	1



END PROJECT 8213-02-60

STA. 998+17.28

Y:581219.76
X:887271.22

BEGIN PROJECT 8213-02-60

STA. 500+00

Y:432052.49
X:884661.02

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	KRECH OJARD & ASSOCIATES
Surveyor	
Designer	WILLIAM WILLS
Project Manager	PHILIP KEPPERS
Regional Examiner	DAN OJIBWAY
Regional Supervisor	DAVID OSTROWSKI
C.O. Examiner	Carl Waganawatsi

APPROVED FOR THE DEPARTMENT
DATE: 11/30/09
(Signature)

E

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

WHEN THE QUANTITY OF DENSE AGGREGATE BASE AND ASPHALTIC PAVEMENT ARE MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

WARRANTED HMA FUNCTIONAL ANCILLARY ARE DEFINED BY FINISHED TYPICAL SECTION AND CONSTRUCTION DETAIL

UTILITIES

CENTURY TEL
JIM ARQUETTE
5604 MAIN ST.
P.O. BOX 13
SHELDON, WI 54766
715 452-5168
715 563-8295

JUMP RIVER ELECTRIC COOPERATIVE
HANK LEW
1102 W. 9TH ST. N.
LADYSMITH, WI. 54848
715 532-5524

XCEL ENERGY
NANCY DOTSON
1414 W. HAMILTON AVE.
P.O. BOX 8
EAU CLAIRE, WI 54702

CANADIAN NATIONAL RAILROAD
ATTN: JACKIE MODER
1625 DEPOT STREET
STEVENS POINT, WI
715-345-2503

WISCONSIN DEPARMENT OF NATURAL RESOURCES

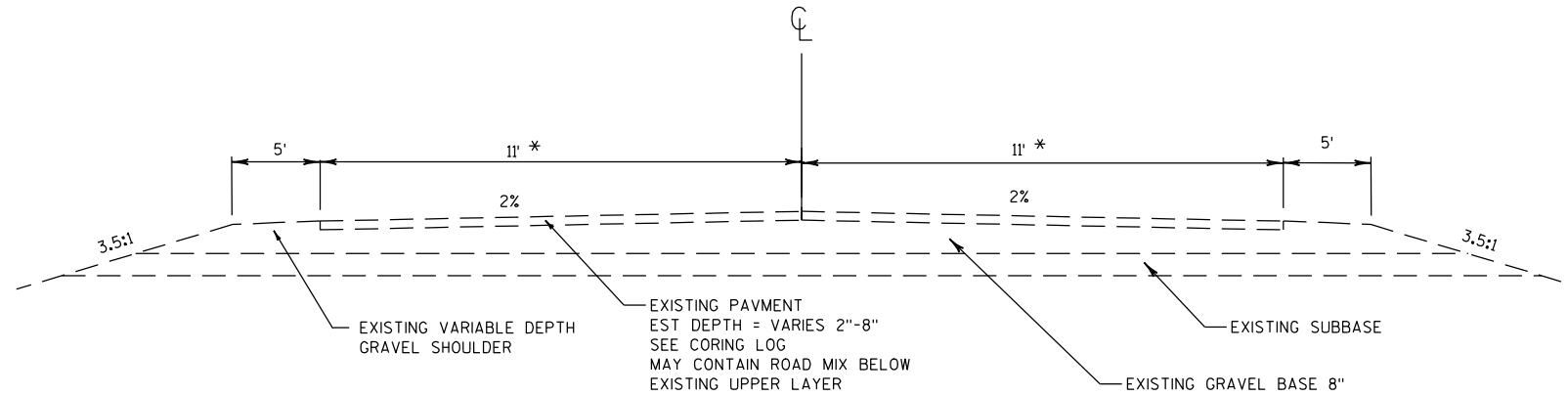
ATTN: SHAWN HASELEU
810 WEST MAPLE STREET
SPOONER, WI. 54801
PHONE: 715 635-4228
FAX: 715 635-4105



TOLL FREE (800) 242-8511
MILWAUKEE AREA (414) 259-1181
HEARING IMPAIRED TDD (800) 542-2289
WWW.DIGGERSHOTLINE.COM

CORING LOG

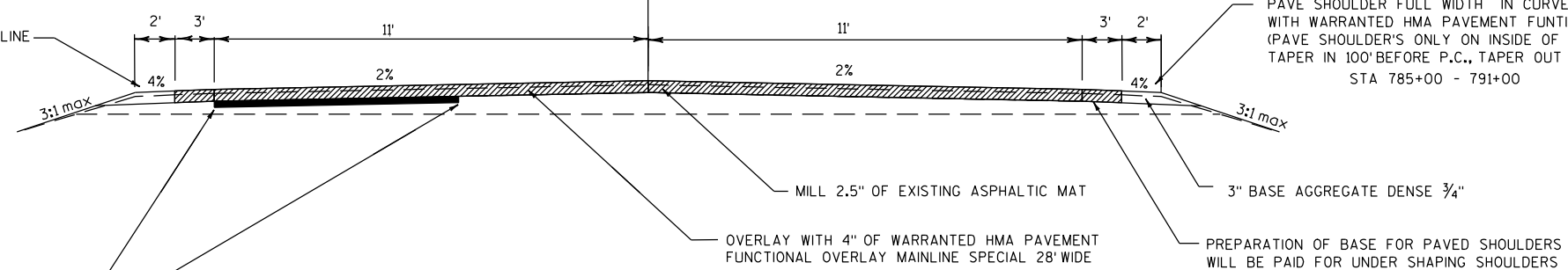
STA	LOCATION	DEPTH
515+00	6' RIGHT OF CENTERLINE	2.50
530+00	6' LEFT OF CENTERLINE	2.25
545+00	6' RIGHT OF CENTERLINE	2.25
560+00	6' LEFT OF CENTERLINE	5.00
575+00	6' RIGHT OF CENTERLINE	2.00
590+00	6' LEFT OF CENTERLINE	6.00
605+00	6' RIGHT OF CENTERLINE	6.00
620+00	6' LEFT OF CENTERLINE	4.50
635+00	6' RIGHT OF CENTERLINE	7.00
650+00	6' LEFT OF CENTERLINE	5.25
665+00	6' RIGHT OF CENTERLINE	4.50
680+00	6' LEFT OF CENTERLINE	4.75
695+00	6' RIGHT OF CENTERLINE	5.50
710+00	6' LEFT OF CENTERLINE	4.75
725+00	6' RIGHT OF CENTERLINE	5.75
740+00	6' LEFT OF CENTERLINE	4.25
755+00	6' RIGHT OF CENTERLINE	3.75
770+00	6' LEFT OF CENTERLINE	6.75
785+00	6' RIGHT OF CENTERLINE	7.75
800+00	6' LEFT OF CENTERLINE	7.00
815+00	6' RIGHT OF CENTERLINE	6.75
830+00	6' LEFT OF CENTERLINE	6.25
845+00	6' RIGHT OF CENTERLINE	3.75
860+00	6' LEFT OF CENTERLINE	4.75
875+00	6' RIGHT OF CENTERLINE	5.50
890+00	6' LEFT OF CENTERLINE	7.00
905+00	6' RIGHT OF CENTERLINE	7.50
920+00	6' LEFT OF CENTERLINE	7.50
935+00	6' RIGHT OF CENTERLINE	6.75
950+00	6' LEFT OF CENTERLINE	8.00
965+00	6' RIGHT OF CENTERLINE	3.25
980+00	6' LEFT OF CENTERLINE	3.00
995+00	6' RIGHT OF CENTERLINE	3.25



* 12' PAVED LANES IN ENGRAM

TYPICAL EXISTING SECTION
STA. 500+00 TO STA. 998+17.28

PAVE SHOULDER FULL WIDTH IN CURVE AREAS *
WITH WARRANTED HMA PAVEMENT FUNCTIONAL OVERLAY MAINLINE
(PAVE SHOULDER'S ONLY ON INSIDE OF CURVES;
TAPER IN 100' BEFORE P.C., TAPER OUT 100' AFTER P.T.)
STA 816+00 - 823+00



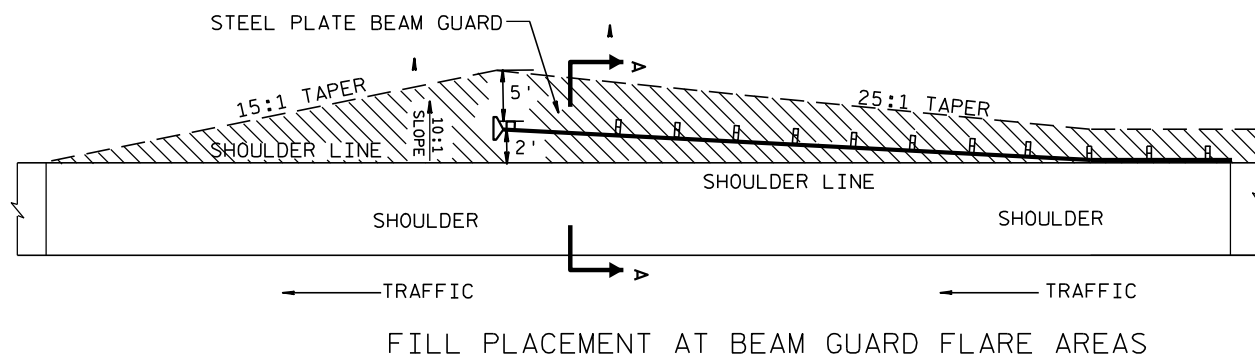
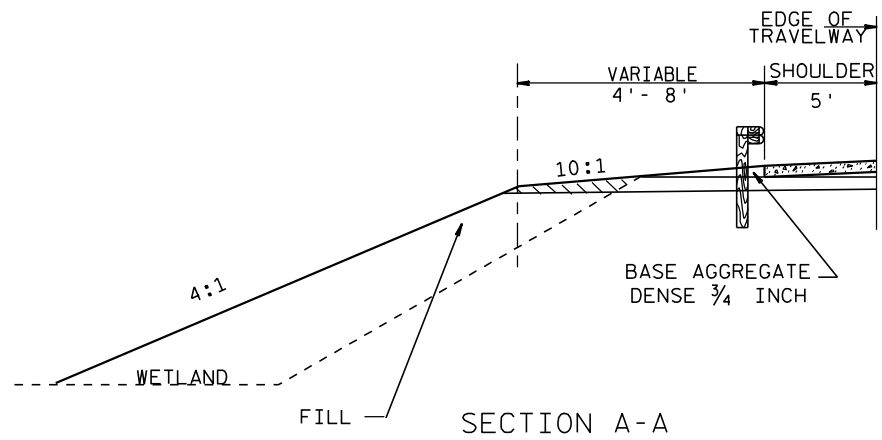
PAVE SHOULDER FULL WIDTH IN CURVE AREAS *
WITH WARRANTED HMA PAVEMENT FUNCTIONAL OVERLAY MAINLINE
(PAVE SHOULDER'S ONLY ON INSIDE OF CURVES;
TAPER IN 100' BEFORE P.C., TAPER OUT 100' AFTER P.T.)
STA 785+00 - 791+00

AFTER FULL WIDTH 2.5" DEPTH MILL,
MILL ADDITIONAL 2" DEPTH AT AREAS
DETERMINED BY THE ENGINEER. PAVE
THESE AREAS WITH 2" WARRANTED HMA
PAVEMENT FUNCTIONAL OVERLAY MAINLINE
SPECIAL BEFORE PLACING LOWER LAYER
OF FULL WIDTH WARRANTED HMA PAVEMENT
FUNCTIONAL OVERLAY MAINLINE SPECIAL.
THE WIDTH OF THESE AREAS WILL BE
VARIABLE WITH 6' TO 11' WIDTH TYPICAL.

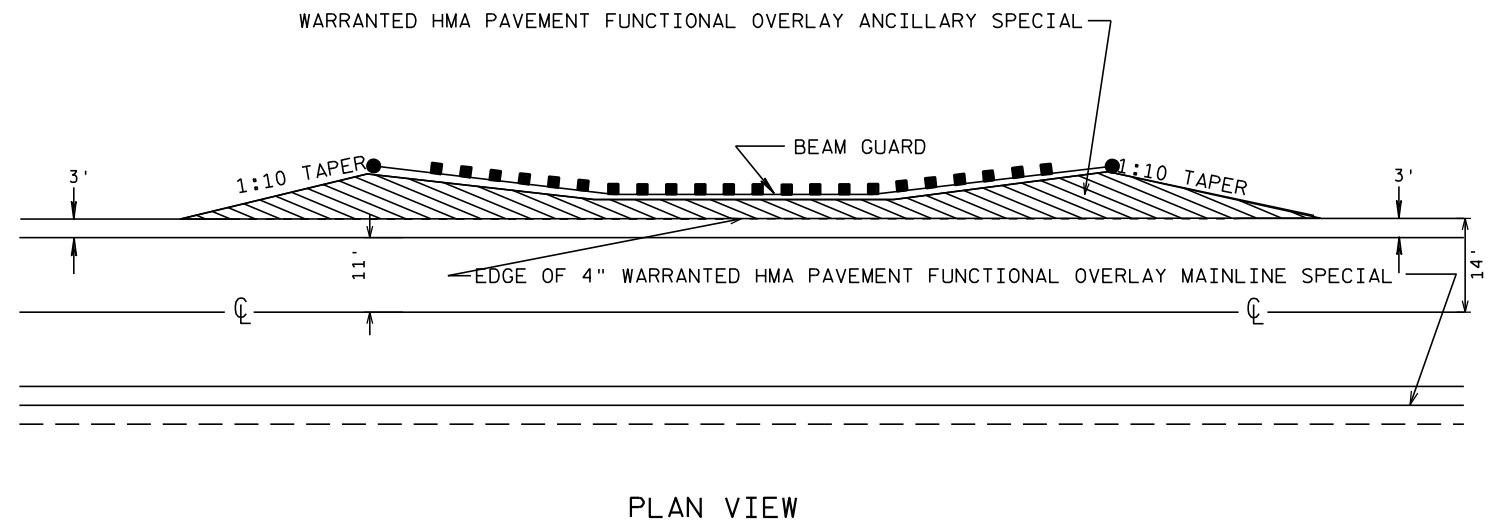
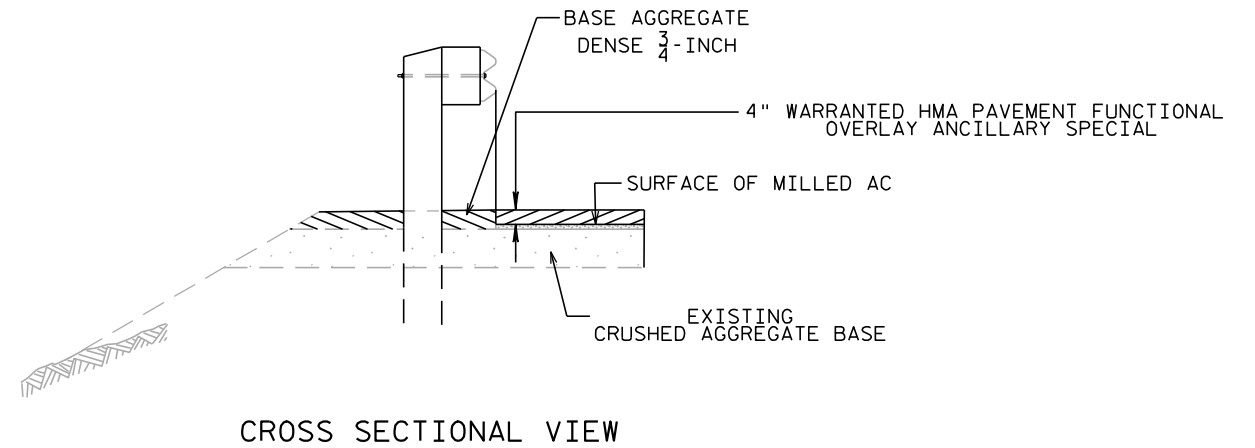
* MILL TO A DEPTH OF 4" ON MAINLINE FROM STA 982+50 - 985+80

FINISHED TYPICAL SECTION

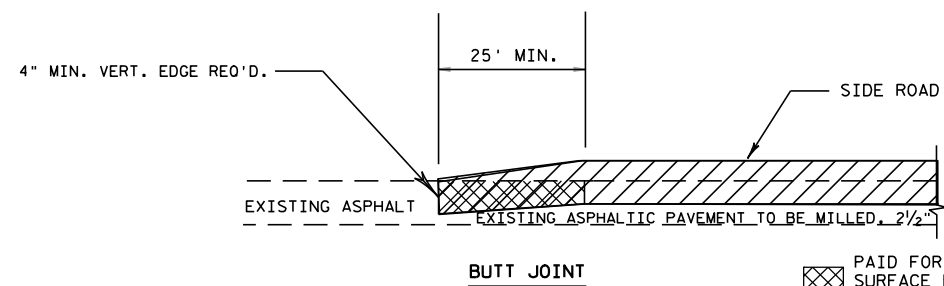
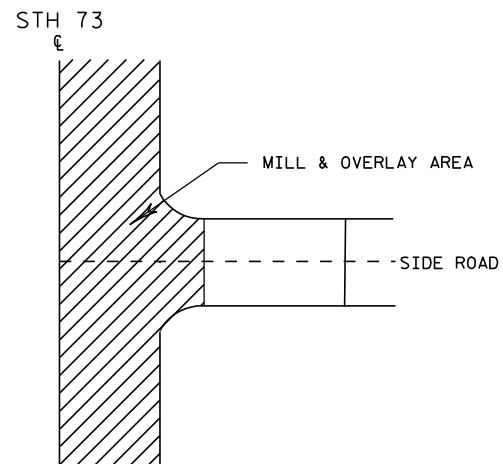
STA. 500+00 TO STA. 998+17.28



**DETAIL FOR GRADING AT
GUARDRAIL TERMINALS**



DETAIL FOR ASPHALTIC SHOULDER AT GUARDRAIL



REQUIRED AT BEGIN AND END
PAVING LOCATIONS

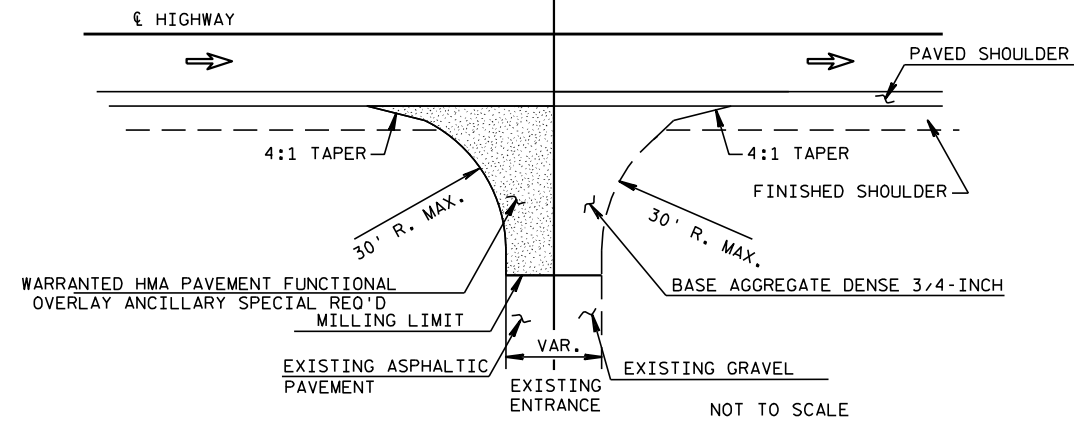
NOTE: IF THE EXISTING SIDEROAD
CONSISTS OF A BASE AGGREGATE
SURFACE, NEW PAVEMENT
SHALL BE PLACED TO THE ENDS
OF THE EXISTING SIDEROAD
RADIUS.

PAID FOR AS REMOVING ASPHALTIC
SURFACE BUTT JOINTS

NOTE: ANY SAWCUT USED IN THIS OPERATION
CONSIDERED INCIDENTAL TO
THIS ITEM

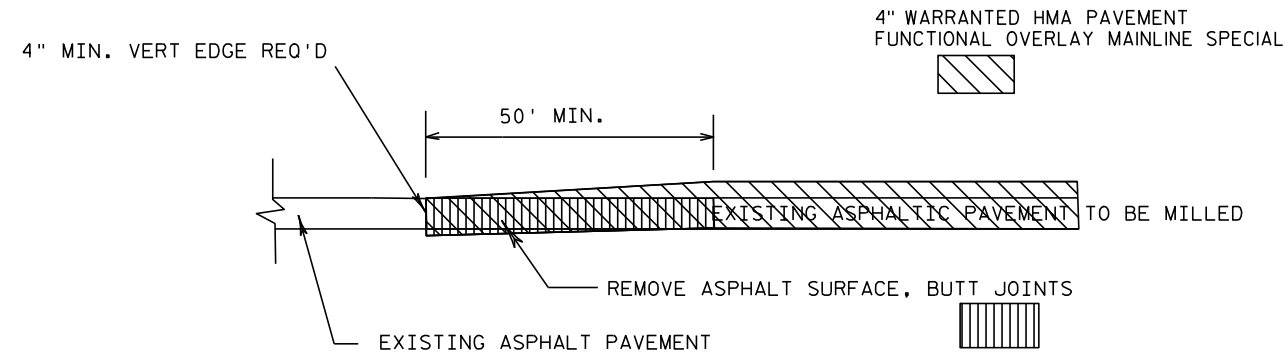
WARRANTED HMA PAVEMENT FUNCTIONAL OVERLAY ANCILLARY SPECIAL

P.E. ENTRANCE

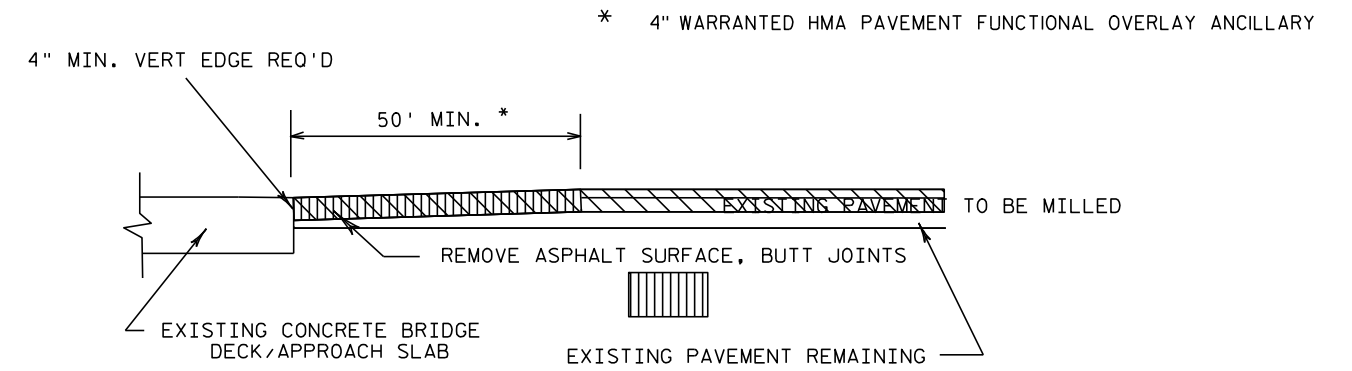


PE DETAIL

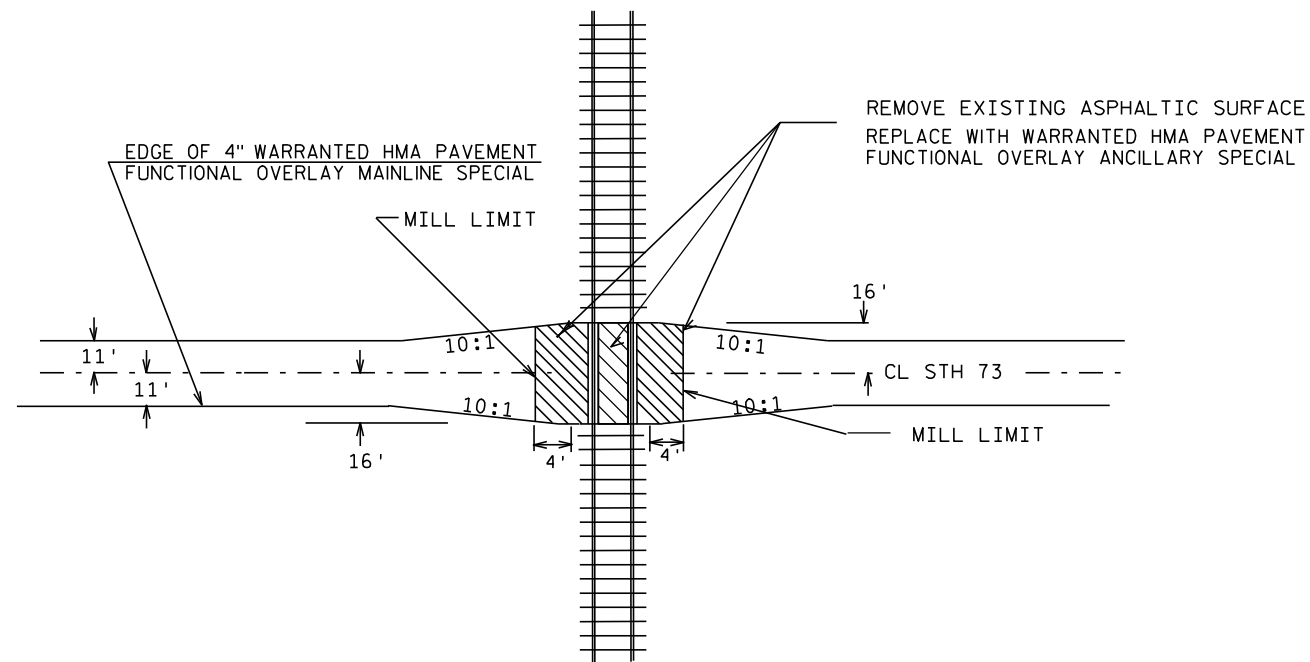
Milling limits on private driveways - Typ. 20' min. 10' max. 30'



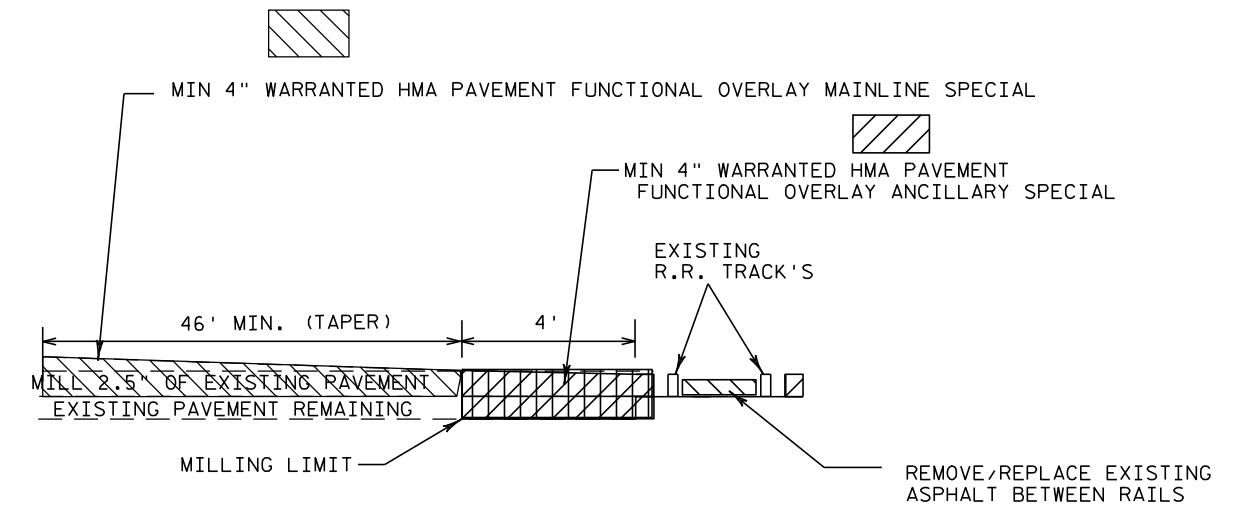
DETAIL FOR PROJECT ENDS



DETAIL FOR BRIDGE DECK JOINTS



DETAIL FOR RAILROAD CROSSING ASPHALT REPLACEMENT

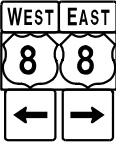


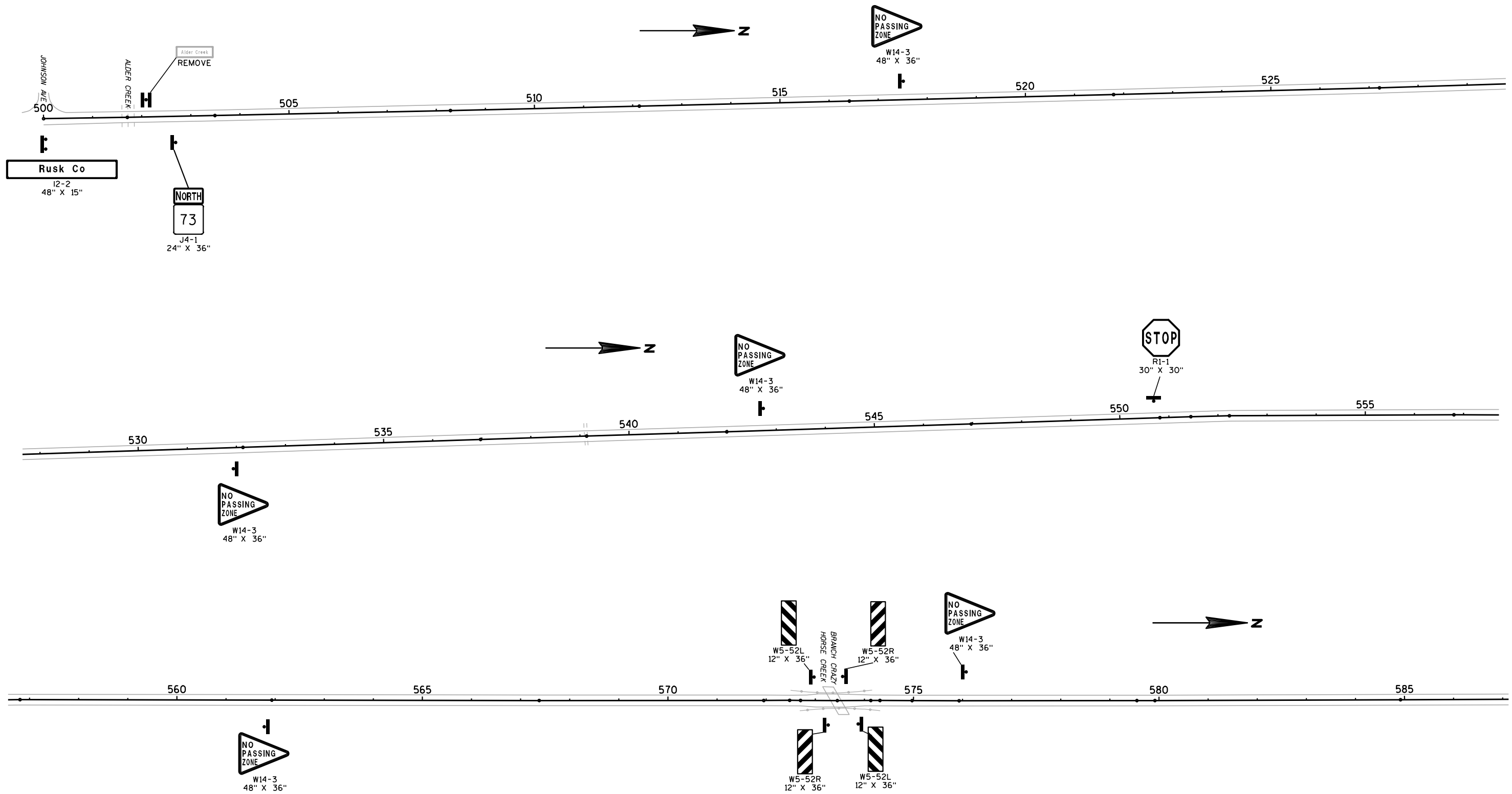
DETAIL FOR RAILROAD CROSSING BUTT JOINT

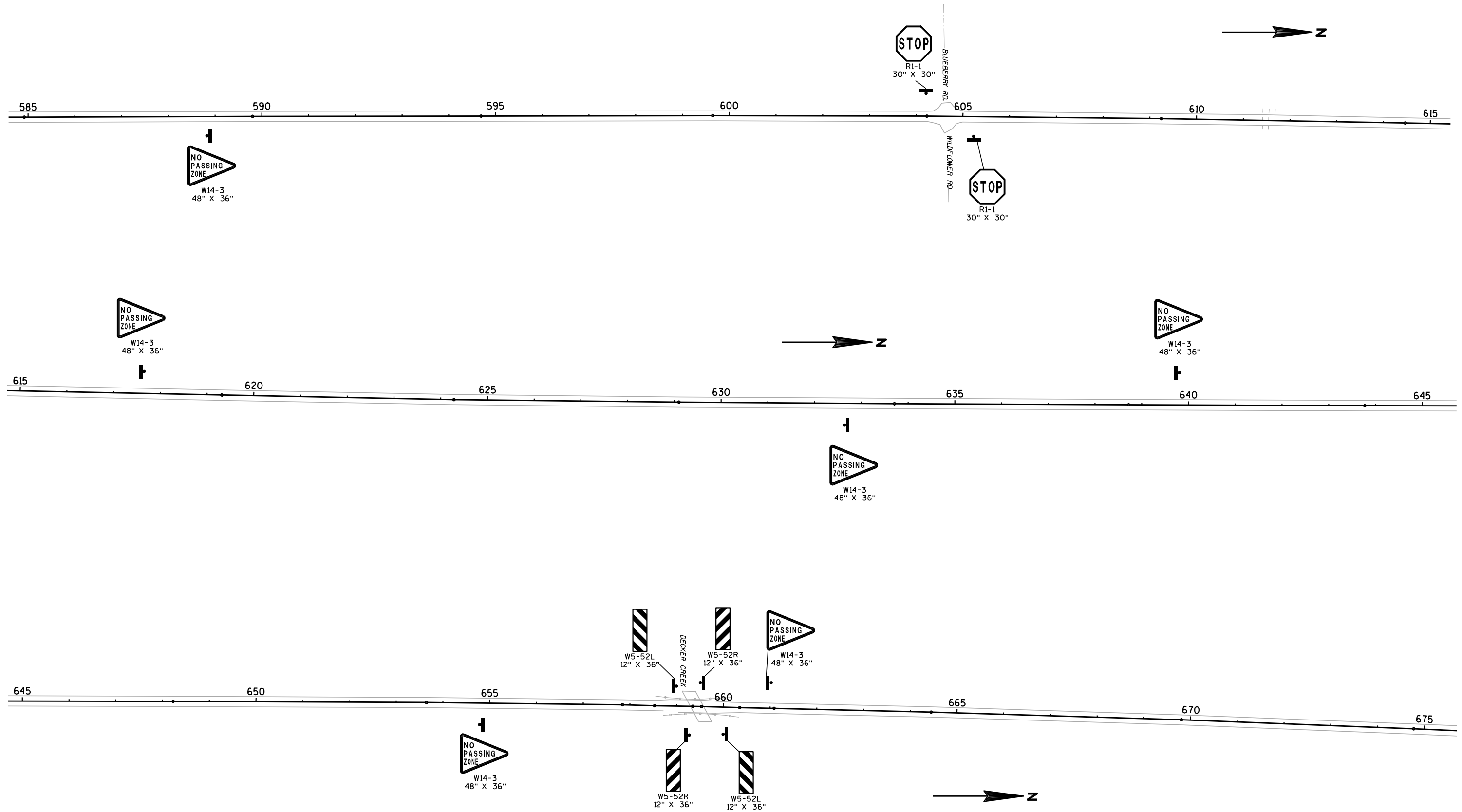
(FOR EACH SIDE OF TRACKS)

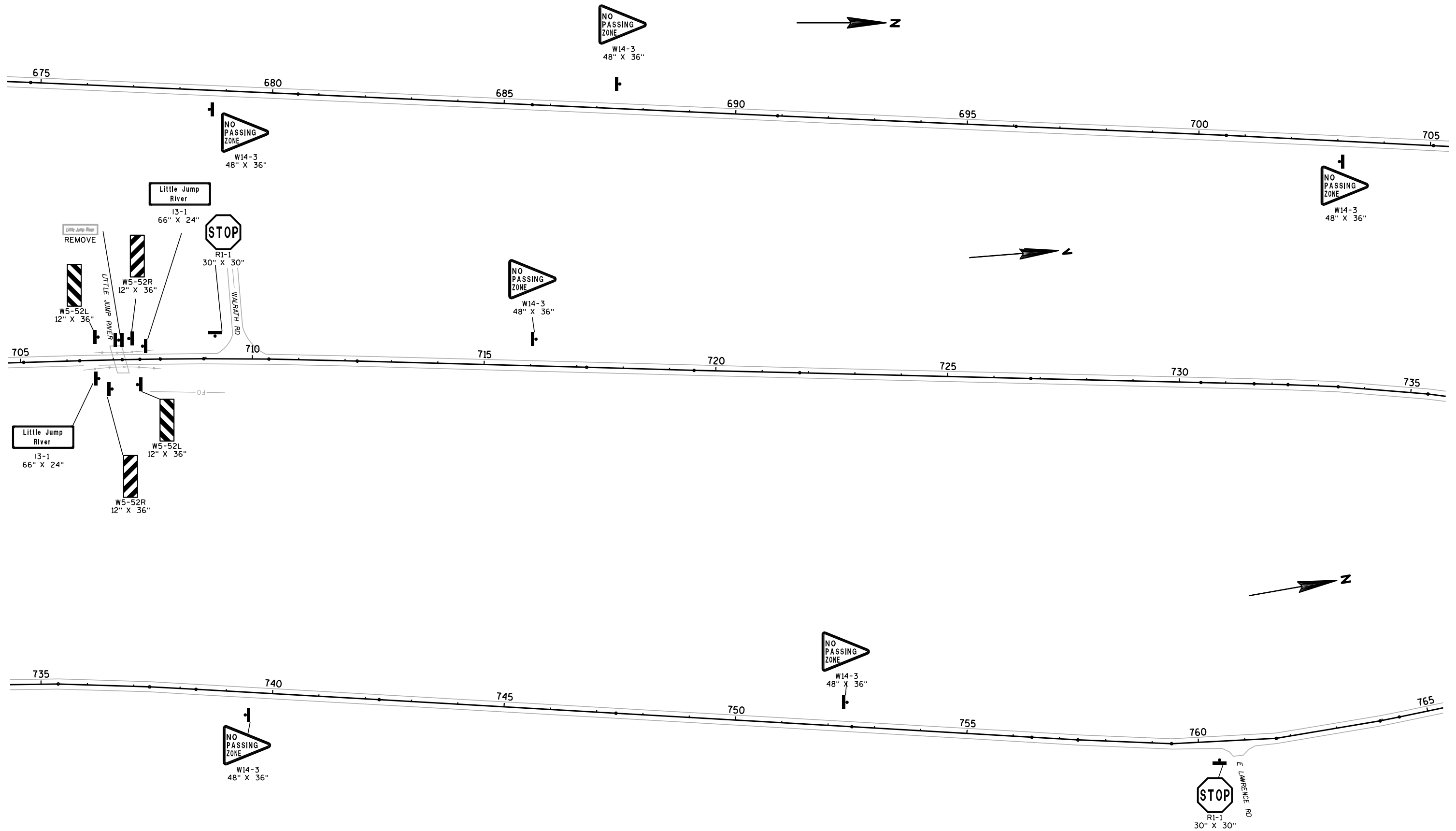
REMOVE MATERIAL UNDER ITEM "REMOVING ASPHALT SURFACE"

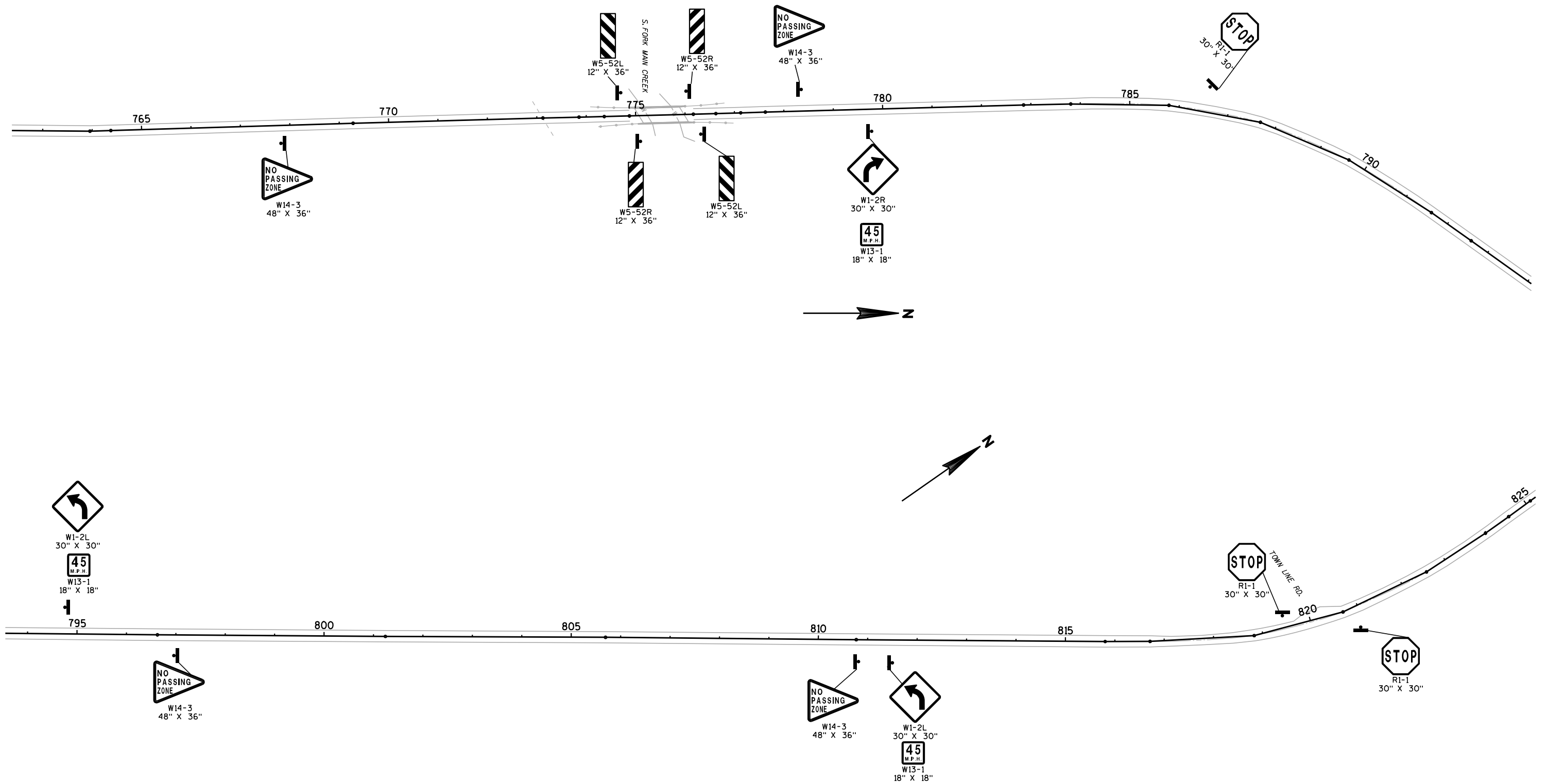
No more than 3" vertical change within 30' of center of each rail

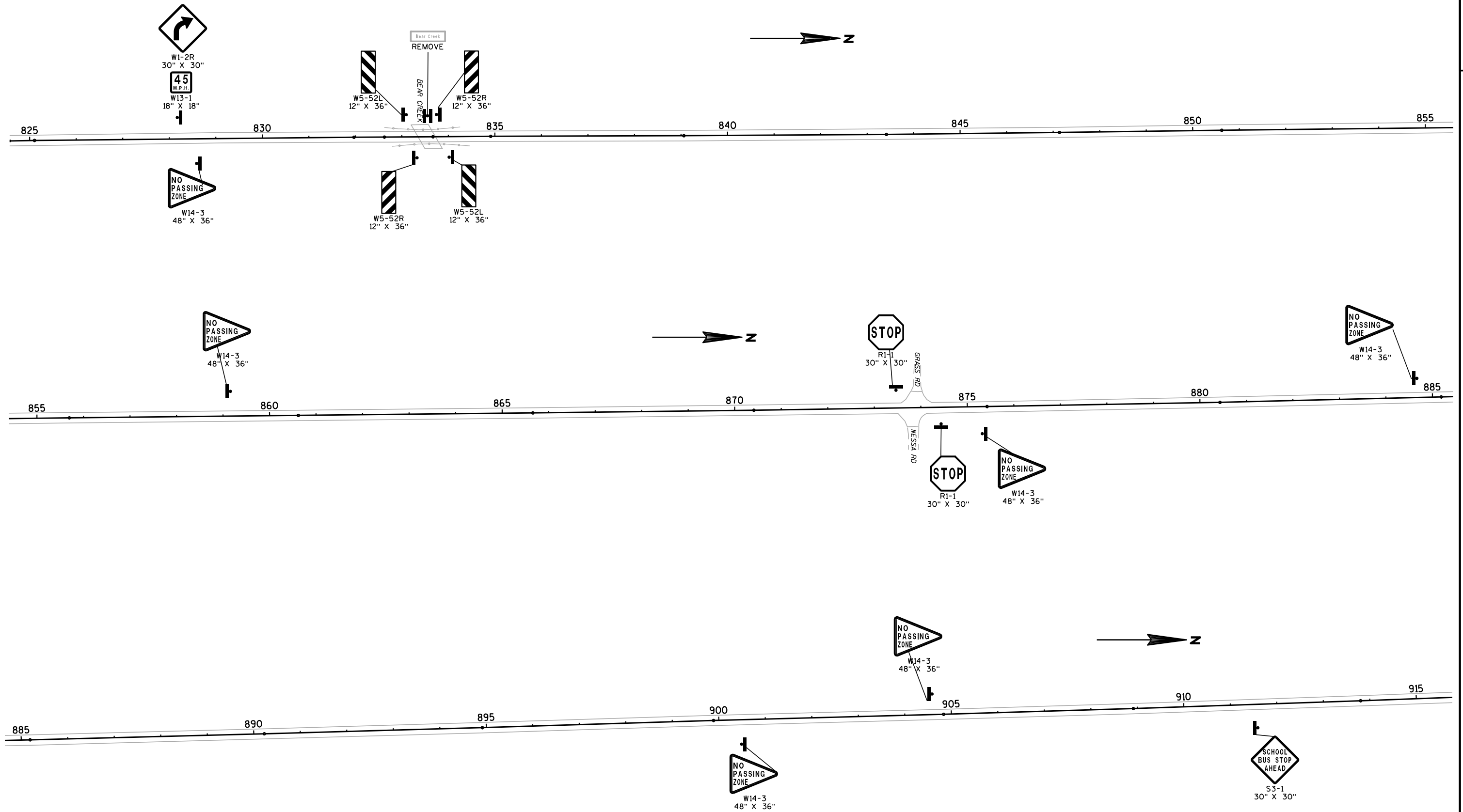
BILL OF MATERIALS															
ESTIMATE OF QUANTITIES FOR PERMANENT SIGNING															
SIGN	SIGN CODE	SIGN SIZE	NO REQ'D.	SIGN	SIGN CODE	SIGN SIZE	NO REQ'D.	SIGN	SIGN CODE	SIGN SIZE	NO REQ'D.	SIGN	SIGN CODE	SIGN SIZE	NO REQ'D.
(Ladysmith/Prentice Destination signing)	D1-2	72"X30"	1		J1-1	24"X39"	1		R7-1L	24"X30"	1		W13-1	18"X18"	4
(Thorp Destination/ Distance signing)	D2-1	60"X15"	1		J4-1	24"X36"	1		R7-1R	24"X30"	1		W14-3	48"X36"	31
	I2-2	48"X15"	1		J4-1	24"X36"	1		S3-1	30"X30"	1		W3-1	36"X36"	2
	I2-3	60"X24"	2		R1-1	30"X30"	18		W10-1	36"X36"	2		W3-5	36"X36"	1
	I3-1	66"X24"	2		R2-1	24"X30"	4		W11-6	30"X30"	1		W5-52L	12"X36"	12
	J3-2	48"X57"	1		R2-1	24"X30"	2		W1-2L	30"X30"	2		W5-52R	12"X36"	12
	M1-4	24"X24"	1		R7-ID	24"X30"	1		W1-2R	30"X30"	2				

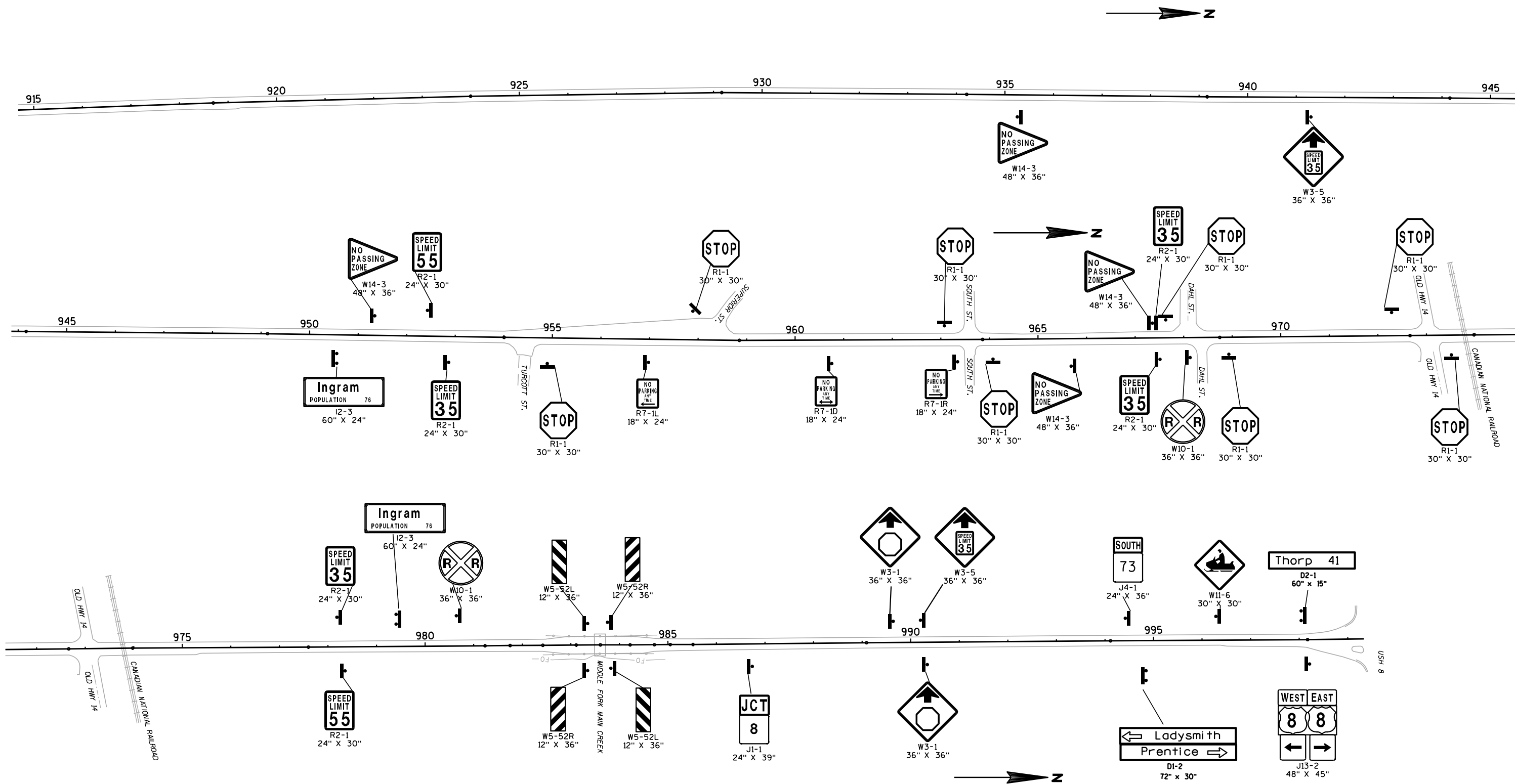












DATE 20JUL10		E S T I M A T E O F Q U A N T I T I E S			
LINE				8213-02-60	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	202.0105	ROADSIDE CLEARING	STA	477.000	477.000
0020	204.0110	REMOVING ASPHALTIC SURFACE	SY	43.000	43.000
0030	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	1,084.000	1,084.000
0040	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	158,169.000	158,169.000
0050	204.0165	REMOVING GUARDRAIL	LF	1,625.000	1,625.000
0060	205.9006.S	GRADING SHAPING & FINISHING FOR BARRIER TERMINALS	EACH	20.000	20.000
0070	211.0100	PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 01. 8213-02-60	LS	1.000	1.000
0080	213.0100	FINISHING ROADWAY (PROJECT) 01. 8213-02-60	EACH	1.000	1.000
0090	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	13,849.000	13,849.000
0100	305.0500	SHAPING SHOULDERS	STA	499.000	499.000
0110	440.4410.S	INCENTIVE IRI RIDE	DOL	37,740.000	37,740.000
0120	465.0110	ASPHALTIC SURFACE PATCHING	TON	100.000	100.000
0130	465.0450	ASPHALTIC INTERSECTION RUMBLE STRIP	SY	71.000	71.000
0140	614.0200	STEEL THRIE BEAM STRUCTURE APPROACH	LF	84.000	84.000
0150	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	900.000	900.000
0160	614.0370	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	EACH	20.000	20.000
0170	616.0700.S	FENCE SAFETY	LF	300.000	300.000
0180	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 8213-02-60	EACH	1.000	1.000
0190	619.1000	MOBILIZATION	EACH	1.000	1.000
0200	628.1504	SILT FENCE	LF	4,000.000	4,000.000
0210	628.1520	SILT FENCE MAINTENANCE	LF	4,000.000	4,000.000
0220	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	5.000	5.000
0230	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0240	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	110.000	110.000
0250	637.0202	SIGNS REFLECTIVE TYPE II	SF	593.960	593.960
0260	638.2602	REMOVING SIGNS TYPE II	EACH	113.000	113.000
0270	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	98.000	98.000
0280	642.5001	FIELD OFFICE TYPE B 01. 8213-02-60	EACH	1.000	1.000
0290	643.0100	TRAFFIC CONTROL (PROJECT) 01. 8213-02-60	EACH	1.000	1.000
0300	643.0300	TRAFFIC CONTROL DRUMS	DAYS	1,200.000	1,200.000
0310	643.0900	TRAFFIC CONTROL SIGNS	DAYS	2,880.000	2,880.000
0320	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	99,690.000	99,690.000
0330	646.0406	PAVEMENT MARKING SAME DAY EPOXY 4-INCH	LF	43,700.000	43,700.000
0340	647.0110	PAVEMENT MARKING RAILROAD CROSSINGS EPOXY	EACH	2.000	2.000
0350	648.0100	LOCATING NO-PASSING ZONES	MI	9.440	9.440
0360	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	71,560.000	71,560.000
0370	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	49,817.000	49,817.000
0380	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 8213-02-60	LS	1.000	1.000
0390	690.0150	SAWING ASPHALT	LF	32.000	32.000
0400	ASP.1T0A.100N-THE-JOB TRAINING APPRENTICE AT \$10.00/HR		HRS	2,000.000	2,000.000
0410	ASP.1T0G.100N-THE-JOB TRAINING GRADUATE AT \$10.00/HR		HRS	630.000	630.000
0420	SPV.0060	SPECIAL 01. CONSTRUCTION STAKING BARRIERS TERMINALS	EACH	20.000	20.000
0430	SPV.0195	SPECIAL 01. WARRANTED HMA PAVEMENT FUNCTIONAL OVERLAY MAINLINE SPECIAL	TON	38,782.000	38,782.000

DATE 20JUL10			E S T I M A T E O F Q U A N T I T I E S		
LINE			8213-02-60		
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0440	SPV.0195	SPECIAL 02. WARRANTED HMA PAVEMENT FUNCTIONAL OVERLAY ANCILLARY SPECIAL	TON	856.000	856.000
0450	SPV.0195	SPECIAL 03. ASPHALTIC MATERIAL FOR WARRANTED HMA PAVEMENT FUNCTIONAL OVERLAY	TON	2,378.200	2,378.200

3

ROADSIDE CLEARING (STATION)			
CAL.	STATION TO STATION	LOCATION	202.0105 SIA
0010	500+00 ** 668+00	SEE PLAN	168
0010	669+00 ** 954+00	SEE PLAN	285
0010	975+00 ** 999+00	SEE PLAN	24
TOTAL 0010			477
REMOVING ASPHALTIC SURFACE			
CAL.	STATION TO STATION	LOCATION	204.0110 SY
0010	973+80 ** 974+00	RAIL ROAD CROSSING	43
TOTAL 0010			43
REMOVING ASPHALTIC SURFACE BUTT JOINTS			
CAL.	STATION TO STATION	LOCATION	204.0115 SY
0010	500+00 ** 500+50	BEGINNING OF PROJECT	122
0010	997+67 ** 998+17	END OF PROJECT	122
0010	500+00 ** 998+17	SIDE ROAD BUTT JOINTS	840
TOTAL 0010			1084
REMOVING ASPHALTIC SURFACE MILLING			
CAL.	STATION TO STATION	LOCATION	204.0120 SY
0010	500+00 ** 998+17	MAINLINE	122454
0010	500+00 ** 998+17	OUTSIDE 6' TO 11'	35715
TOTAL 0010			158169

3

REMOVING GUARDRAIL				
				204.0165
CAL.	STATION TO	STATION	LOCATION	LE
0010	572+70	** 574+32	RIGHT	162
0010	572+48	** 574+16	LEFT	168
0010	658+71	** 660+35	RIGHT	164
0010	658+53	** 660+18	LEFT	165
0010	706+65	** 708+01	RIGHT	136
0010	706+58	** 707+88	LEFT	130
0010	774+08	** 774+98	LEFT	90
0010	774+25	** 775+16	RIGHT	91
0010	776+07	** 776+98	RIGHT	91
0010	775+90	** 776+82	LEFT	92
0010	832+62	** 834+30	LEFT	168
0010	832+79	** 834+47	RIGHT	168
TOTAL 0010				1625

Grading, Shaping and Finishing for Beam Guard Anchorages

station	Each	Fill	Salv. Topsoil	Fert Type B	Seeding # 10	Mulching
		CY.	SY.	CWT.	L.B.	SY.
574+24 - 574+58	4	170	700	0.7	22	700
658+24 - 660+60	4	170	700	0.7	22	700
706+08 - 708+19	4	170	700	0.7	22	700
774+02 - 774+86	4	170	700	0.7	22	700
832+39 - 834+66	4	170	700	0.7	22	700
TOTALS	20	850	3500	3.5	110	3500

Items & Quantities listed for Bid Information Only

PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT)				
				211.0100
CAL.	STATION TO	STATION	LOCATION	LS
0010	500+00	** 998+17	PROJECT	1
TOTAL 0010				1

3

FINISHING ROADWAY (PROJECT)				
CAT.	STATION TO	STATION	LOCATION	213.0100 EACH
0010	500+00	** 998+17	PROJECT	1
TOTAL 0010				1

BASE AGGREGATE DENSE 3/4-INCH				
CAT.	STATION TO	STATION	LOCATION	305.0110 TON
0010	500+00	** 998+17	SHOULDERS	12454
0010	500+00	** 998+17	SIDE ROADS/DRIVEWAYS	1395
TOTAL 0010				13849

SHAPING SHOULDERS				
CAT.	STATION TO	STATION	LOCATION	305.0500 STA
0010	500+00	** 998+17	SHOULDERS	499
TOTAL 0010				499

WARRANTED HMA PAVEMENT FUNCTIONAL OVERLAY MAINLINE SPECIAL					
CAT.	STATION TO STATION		LOCATION	SPV 0195.01 TON	SPV 0195.03 TON
0010	500+00	** 998+17	MAINLINE PAVING	34782	2086.9
0010	500+00	** 998+17	OUTSIDE 6' TO 11'	4000	240.0
TOTAL 0010				38782	2326.9

WARRANTED HMA PAVEMENT FUNTIONAL OVERLAY ANCILLARY SPECIAL					
CAT.	STATION TO	STATION	LOCATION	SPV.0195.02 TON	SPV 0195.03 TON
0010	774+50	** 776+50	BRIDGE APPROACHES	68	4.1
0010	973+15	** 974+35	RAILROAD CROSSING	84	5.0
0010	500+00	** 998+17	BEAM GUARD BUMPOUTS	235	14.1
0010	500+00	** 998+17	RIDEROADS / DRIVEWAYS	469	28.1
TOTAL 0010				856	51.3

ASPHALTIC SURFACE PATCHING				
CATEGORY	STATION TO	STATION	LOCATION	465.0110 TON
0010	500+00	** 998+17	PROJECT	100
TOTAL 0010				100

ASPHALTIC INTERSECTION RUMBLE STRIP				
CAT.	STATION TO	STATION	LOCATION	465.0450 SY
0010	983+00	** 995+00	NB LANE	71
TOTAL 0010				71

STEEL THRIE BEAM STRUCTURE APPROACH				
CAT.	STATION TO	STATION	LOCATION	614.0200 LE
0010	774+77	** 774+98	LEFT	21
0010	774+95	** 775+16	RIGHT	21
0010	776+07	** 776+28	RIGHT	21
0010	775+90	** 776+11	LEFT	21
TOTAL 0010				84

3

3

STEEL PLATE BEAM GUARD CLASS A

CAT.	STATION TO	STATION	LOCATION	614.0305 LE
0010	573+08	** 574+08	RIGHT	100
0010	572+74	** 573+74	LEFT	100
0010	659+10	** 660+10	RIGHT	100
0010	658+74	** 659+74	LEFT	100
0010	706+69	** 707+69	RIGHT	100
0010	706+58	** 707+58	LEFT	100
0010	774+52	** 774+77	LEFT	25
0010	774+70	** 774+95	RIGHT	25
0010	776+28	** 776+53	RIGHT	25
0010	776+11	** 776+36	LEFT	25
0010	833+16	** 834+16	RIGHT	100
0010	832+89	** 833+89	LEFT	100
TOTAL 0010				900

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

CAT.	STATION TO	STATION	LOCATION	614.0370 EACH
0010	572+58	** 573+08	Right	1
0010	574+08	** 574+58	Right	1
0010	572+24	** 572+74	Left	1
0010	573+74	** 574+24	Left	1
0010	658+60	** 659+10	Right	1
0010	660+10	** 660+60	Right	1
0010	658+24	** 658+74	Left	1
0010	659+74	** 660+24	Left	1
0010	706+19	** 706+69	Right	1
0010	707+69	** 708+19	Right	1
0010	706+08	** 706+58	Left	1
0010	707+58	** 708+08	Left	1
0010	774+02	** 774+52	Left	1
0010	774+20	** 774+70	Right	1
0010	776+53	** 777+03	Right	1
0010	776+36	** 776+86	Left	1
0010	832+66	** 833+16	Right	1
0010	834+16	** 834+66	Right	1
0010	832+39	** 832+89	Left	1
0010	833+89	** 834+39	Left	1
TOTAL 0010				20

FENCE SAFETY

CAT.	STATION TO	STATION	LOCATION	616.0700.S LE
0010	695+50	** 698+50	left	300
TOTAL 0010				300

MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT 8213-02-60)

CAT.	STATION TO	STATION	LOCATION	618.0100 EACH
0010	500+00	** 998+17	project	1
TOTAL 0010				1

MOBILIZATION

CAT.	STATION TO	STATION	LOCATION	619.1000 EACH
0010	500+00	** 998+17	project	1
TOTAL 0010				1

SILT FENCE

CAT.	STATION TO	STATION	LOCATION	628.1504 LE
0010	500+00	** 998+17	Beam Guard Bumpouts	4000
TOTAL 0010				4000

3

SILT FENCE MAINTENANCE

CAT.	STATION TO STATION	LOCATION	628.1520 LE
0010	500+00 ** 998+17	Beam Guard Bumpouts	4000
TOTAL 0010			4000

MOBILIZATIONS EROSION CONTROL

CAT.	STATION TO STATION	LOCATION	628.1905 EACH
0010	500+00 ** 998+17	project	5
TOTAL 0010			5

MOBILIZATIONS EMERGENCY EROSION CONTROL

CAT.	STATION TO STATION	LOCATION	628.1910 EACH
0010	500+00 ** 998+17	project	2
TOTAL 0010			2

POSTS WOOD 4X6-INCH X 16-FT

CAT.	STATION TO STATION	LOCATION	634.0616 EACH
0010	500+00 ** 998+17	See Sign Plan	110
TOTAL 0010			110

SIGNS REFLECTIVE TYPE II

CAT.	STATION TO STATION	LOCATION	637.0202 SE
0010	500+00 ** 998+17	See Sign Plan	585
TOTAL 0010			585

REMOVING SIGNS TYPE II

CAT.	STATION TO STATION	LOCATION	638.2602 EACH
0010	500+00 ** 998+17	See Sign Plan	113
TOTAL 0010			113

REMOVING SMALL SIGN SUPPORTS

CAT.	STATION TO STATION	LOCATION	638.3000 EACH
0010	500+00 ** 998+17	See Sign Plan	98
TOTAL 0010			98

FIELD OFFICE TYPE B (PROJECT)

CAT.	STATION TO STATION	LOCATION	642.5001 EACH
0010	500+00 ** 998+17	Project	1
TOTAL 0010			1

3

TRAFFIC CONTROL (PROJECT)				
CAT.	STATION TO	STATION	LOCATION	643.0100 EACH
0010	500+00	** 998+17	Project	1
TOTAL 0010				1

PAVEMENT MARKING SAME DAY EPOXY 4-INCH				
CAT.	STATION TO	STATION	LOCATION	646.0406 LE
0010	500+00	** 998+17	Center line	43700
TOTAL 0010				43700

3

TRAFFIC CONTROL DRUMS				
CAT.	STATION TO	STATION	LOCATION	643.0300 DAYS
0010	500+00	** 998+17	As Needed at Bumpouts	1200
TOTAL 0010				1200

PAVEMENT MARKING RAILROAD CROSSINGS EPOXY				
CAT.	STATION TO	STATION	LOCATION	647.0110 EACH
0010	973+00	** 976+00	driving lane	2
TOTAL 0010				2

TRAFFIC CONTROL SIGNS				
CAT.	STATION TO	STATION	LOCATION	643.0900 DAYS
0010	500+00	** 998+17	Project	2880
TOTAL 0010				2880

LOCATING NO-PASSING ZONES				
CAT.	STATION TO	STATION	LOCATION	648.0100 MI
0010	500+00	** 998+17	Project	9.44
TOTAL 0010				9.44

PAVEMENT MARKING EPOXY 4-INCH				
CAT.	STATION TO	STATION	LOCATION	646.0106 LE
0010	500+00	** 998+17	Edge Line	99690
TOTAL 0010				99690

TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH				
CAT.	STATION TO	STATION	LOCATION	649.0200 LE
0010	500+00	** 998+17	center line	35780
0010	500+00	** 998+17	center line	35780
TOTAL 0010				71560

3

CONSTRUCTION STAKING RESURFACING REFERENCE

CAT.	STATION TO STATION	LOCATION	650.8000 LE
0010	500+00 ** 998+17	project	49817
TOTAL 0010			49817

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)

CATEGORY	STATION TO STATION	LOCATION	650.9910 LS
0010	500+00 ** 998+17	project	1
TOTAL 0010			1

SAWING ASPHALT

CAT.	STATION TO STATION	LOCATION	690.0150 LE
0010	973+80 ** 974+00	Railroad Crossing	32
TOTAL 0010			32

3

CONSRUCTION STAKING BARRIER TERMINALS

CATEGORY	STATION TO STATION	LOCATION	SPV.0060.01 EACH
0010	572+24 ** 574+58	LEFT AND RIGHT	4
0010	658+24 ** 660+60	LEFT AND RIGHT	4
0010	706+08 ** 708+19	LEFT AND RIGHT	4
0010	774+02 ** 774+86	LEFT AND RIGHT	4
0010	832+39 ** 834+66	LEFT AND RIGHT	4
TOTAL 0010			20

APPROX								637.0202	634.0616	638.2602	638.3000	
STATION	CODE	CODE DESCRIPTION	LOCATION	W	x	H	VARIABLE NAME	NOTE	SF	4X6 - INCH X 16 FT. EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
500+00	I-2-2	County Line Name	RT	15	x	54	Rusk Co		5.62	2	1	1
500+27	I-3-1	Lake or River Name - Stencil Message	LT	9	x	30	Alder Creek	Remove Sign	1.88	0	1	0
501+58	I-3-1	Lake or River Name - Stencil Message	LT	9	x	30	Alder Creek	Remove Sign & Post	1.88	0	1	1
502+64	M3-1	NORTH Cardinal Route Marker	RT	12	x	24			2	0	1	0
502+64	M1-6	State Route Marker	RT	24	x	24	73	Change to J4-1 24" x 36	4	1	1	1
517+41	W14-3	No Passing Zone	LT	36	x	48			6	1	1	1
531+95	W14-3	No Passing Zone	RT	36	x	48			6	1	1	1
542+74	W14-3	No Passing Zone	LT	36	x	48			6	1	1	1
550+43	R1-1	Stop	LT	30	x	30			5.18	1	1	1
561+51	W14-3	No Passing Zone	RT	36	x	48			6	1	1	1
573+23	W5-52-R	Clearance Striper Down Left	LT	36	x	12			3	1	1	1
573+40	W5-52-L	Clearance Striper Down Right	RT	36	x	12			3	1	1	1
573+50	W5-52-L	Clearance Striper Down Right	LT	36	x	12			3	1	1	1
573+62	W5-52-R	Clearance Striper Down Left	RT	36	x	12			3	1	1	1
575+99	W14-3	No Passing Zone	LT	36	x	48			6	1	1	1
588+97	W14-3	No Passing Zone	RT	36	x	48			6	1	1	1
604+23	R1-1	Stop	LT	30	x	30			5.18	1	1	1
605+01	R1-1	Stop	RT	30	x	30			5.18	1	1	1
617+68	W14-3	No Passing Zone	LT	36	x	48			6	1	1	1
632+79	W14-3	No Passing Zone	RT	36	x	48			6	1	1	1
639+84	W14-3	No Passing Zone	LT	36	x	48			6	1	1	1
654+97	W14-3	No Passing Zone	RT	36	x	48			6	1	1	1
659+20	W5-52-R	Clearance Striper Down Left	LT	36	x	12			3	1	1	1
659+40	W5-52-L	Clearance Striper Down Right	RT	36	x	12			3	1	1	1
659+50	W5-52-L	Clearance Striper Down Right	LT	36	x	12			3	1	1	1
659+68	W5-52-R	Clearance Striper Down Left	RT	36	x	12			3	1	1	1
660+95	W14-3	No Passing Zone	LT	36	x	48			6	1	1	1
678+73	W14-3	No Passing Zone	RT	36	x	48			6	1	1	1
687+33	W14-3	No Passing Zone	LT	36	x	48			6	1	1	1
703+02	W14-3	No Passing Zone	RT	36	x	48			6	1	1	1
706+95	W5-52-R	Clearance Striper Down Left	LT	36	x	12			3	1	1	1
706+95	I-3-1	Lake or River Name - Stencil Message	LT	24	x	66	Little Jump River		11	2	1	0
707+08	W5-52-L	Clearance Striper Down Right	RT	36	x	12			3	1	1	1
707+22	W5-52-L	Clearance Striper Down Right	LT	36	x	12			3	1	1	1
707+31	I-3-1	Lake or River Name - Stencil Message	LT	24	x	66	Little Jump River	New Size	11	2	1	1
707+31	W5-52-R	Clearance Striper Down Left	RT	36	x	12			3	1	1	1
709+19	R1-1	Stop	LT	30	x	30			5.18	1	1	1
716+04	W14-3	No Passing Zone	LT	36	x	48			6	1	1	1
739+45	W14-3	No Passing Zone	RT	36	x	48			6	1	1	1
SHEET TOTAL								180.98	39.00	39.00	36.00	

APPROX							637.0202	634.0616	638.2602	638.3000	
STATION	CODE	CODE DESCRIPTION	LOCATION	W	x	H VARIABLE NAME	NOTE	SIGNS TYPE II SF	WOOD POST 4X6-INCH X 16 FT. EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
752+24	W14-3	No Passing Zone	LT	36	x	48		6	1	1	1
760+35	R1-1	Stop	RT	30	x	30		5.18	1	1	1
767+96	W14-3	No Passing Zone	RT	36	x	48		6	1	1	1
774+83	W5-52-R	Clearance Striper Down Left	LT	36	x	12		3	1	1	1
775+03	W5-52-L	Clearance Striper Down Right	LT	36	x	12		3	1	1	1
776+03	W5-52-L	Clearance Striper Down Right	RT	36	x	12		3	1	1	1
776+18	W5-52-R	Clearance Striper Down Left	RT	36	x	12		3	1	1	1
778+10	W14-3	No Passing Zone	LT	36	x	48		6	1	1	1
779+68	W13-1	Advisory Speed Plate (Yellow Back)	RT	18	x	18 45		2.25	0	1	0
779+68	W1-2-R	Right Curve	RT	30	x	30		6.25	1	1	1
786+44	R1-1	Stop	LT	30	x	30		5.18	1	1	1
794+89	W13-1	Advisory Speed Plate (Yellow Back)	LT	18	x	18 45		2.25	0	1	0
794+89	W1-2-L	Left Curve	LT	30	x	30		6.25	1	1	1
797+00	W14-3	No Passing Zone	RT	36	x	48		6	1	1	1
810+82	W14-3	No Passing Zone	LT	36	x	48		6	1	1	1
811+34	W1-2-L	Left Curve	RT	30	x	30		6.25	1	1	1
811+34	W13-1	Advisory Speed Plate (Yellow Back)	RT	18	x	18 45		2.25	0	1	0
819+46	R1-1	Stop	LT	30	x	30		5.18	1	1	1
820+84	R1-1	Stop	RT	30	x	30		5.18	1	1	1
828+15	W13-1	Advisory Speed Plate (Yellow Back)	LT	18	x	18 45		2.25	0	1	0
828+15	W1-2-R	Right Curve	LT	30	x	30		6.25	1	1	1
828+68	W14-3	No Passing Zone	RT	36	x	48		6	1	1	1
833+28	W5-52-R	Clearance Striper Down Left	LT	36	x	12		3	1	1	1
833+28	I-3-1	Lake or River Name - Stencil Message	LT	9	x	30 Bear Creek	Remove Sign	1.88	0	1	0
833+42	W5-52-L	Clearance Striper Down Right	RT	36	x	12		3	1	1	1
833+63	W5-52-L	Clearance Striper Down Right	LT	36	x	12		3	1	1	1
833+78	W5-52-R	Clearance Striper Down Left	RT	36	x	12		3	1	1	1
833+78	I-3-1	Lake or River Name - Stencil Message	LT	9	x	30 Bear Creek	Remove Sign & Post	1.88	0	1	1
859+03	W14-3	No Passing Zone	LT	36	x	48		6	1	1	1
873+54	R1-1	Stop	LT	30	x	30		5.18	1	1	1
874+67	R1-1	Stop	RT	30	x	30		5.18	1	1	1
875+15	W14-3	No Passing Zone	RT	36	x	48		6	1	1	1
884+69	W14-3	No Passing Zone	LT	36	x	48		6	1	1	1
900+49	W14-3	No Passing Zone	RT	36	x	48		6	1	1	1
904+60	W14-3	No Passing Zone	LT	36	x	48		6	1	1	1
911+61	S3-1	School Bus Stop Ahead	RT	30	x	30		6.25	1	1	1
935+34	W14-3	No Passing Zone	RT	36	x	48		6	1	1	1
941+16	W3-5	Speed Limit - Ahead ² Arrow ³	RT	36	x	36 35		9	1	1	1
950+66	I-2-3	Community Population Name Sign	RT	24	x	60 Ingram		10	2	1	1
SHEET TOTAL								190.09	34.00	39.00	34.00

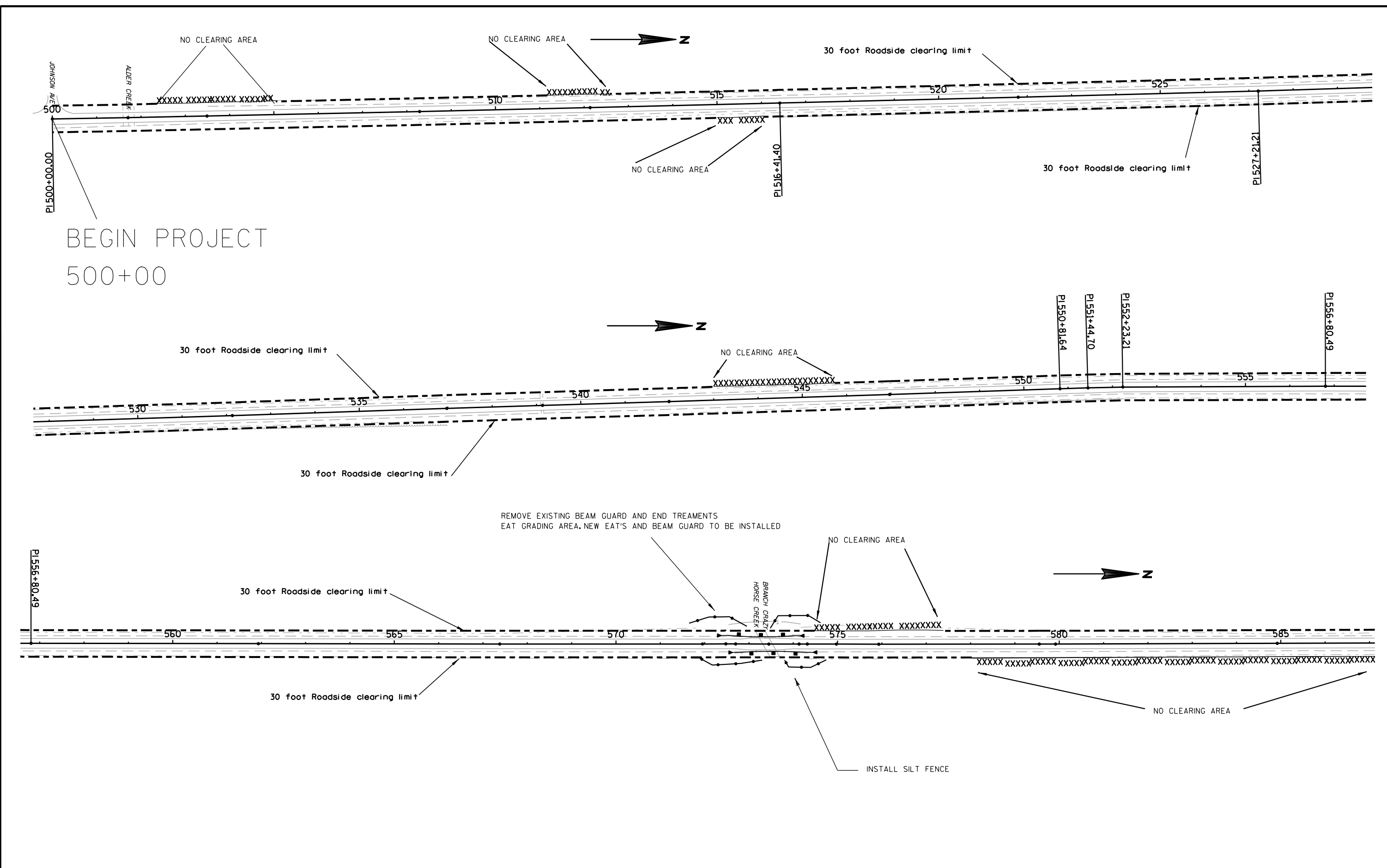
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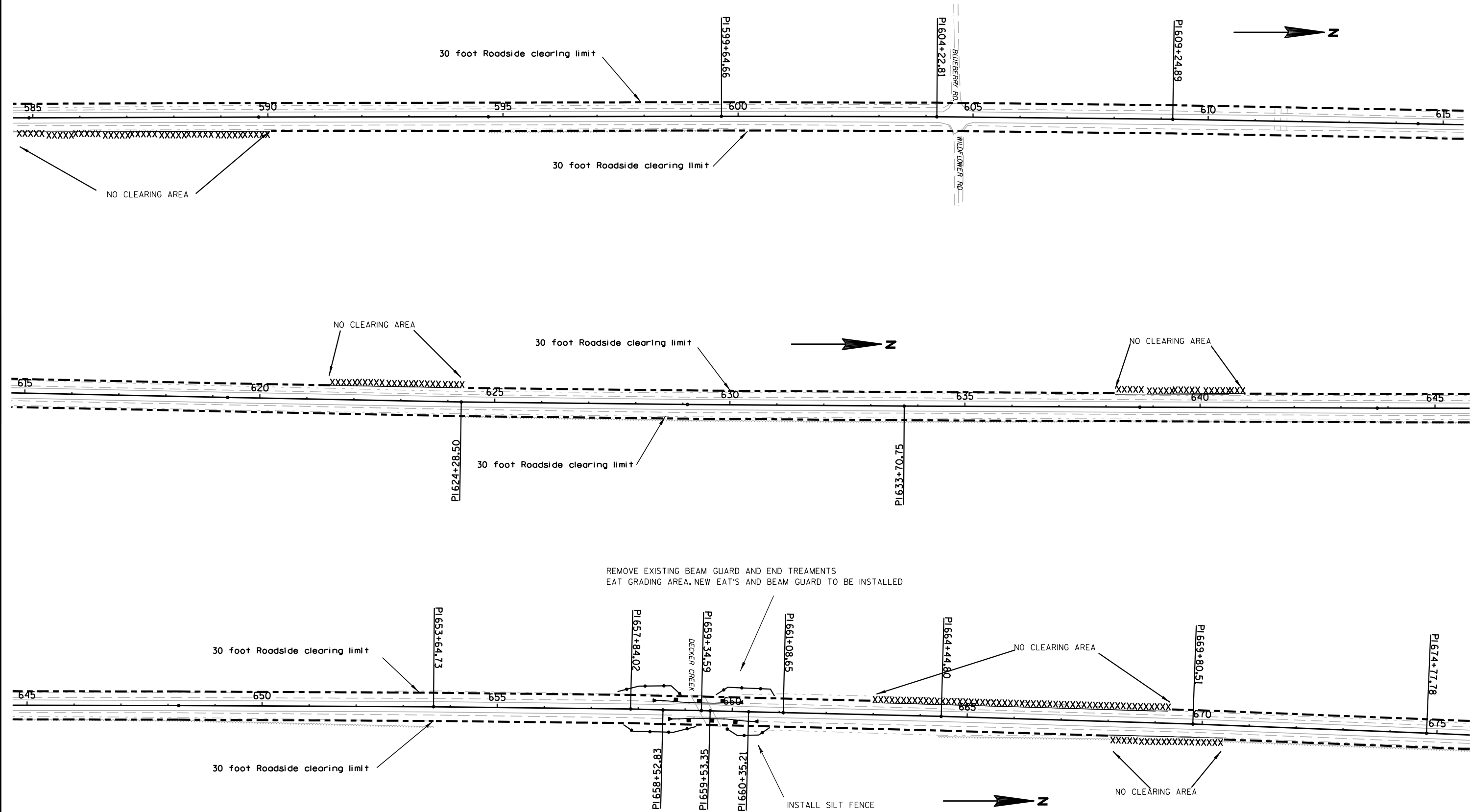
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						SIGNS TYPE II	WOOD POST	REMOVING SIGNS	REMOVING SMALL	
							4X6-INCH X 16 FT.	TYPE II	SIGN SUPPORTS	
APPROX STATION	CODE	CODE DESCRIPTION	LOCATION	W	x H VARIABLE NAME	NOTE	SF	EACH	EACH	EACH
951+18	W14-3	No Passing Zone	LT	36	x 48		6	1	1	1
952+48	R2-1	Speed Limit - MPH	LT	30	x 24 55		5	1	1	1
952+83	R2-1	Speed Limit - MPH	RT	30	x 24 35		5	1	1	1
954+89	R1-1	Stop	RT	30	x 30		5.18	1	1	1
956+99	R7-1-L	No Parking Any Time - LEFT Arrow	RT	30	x 24		5	1	1	1
959+10	R1-1	Stop	LT	30	x 30		5.18	1	1	1
960+68	R7-1-D	No Parking Any Time - Double Arrow	RT	30	x 24		5	1	1	1
963+32	R7-1-R	No Parking Any Time - RIGHT Arrow	RT	30	x 24		5	1	1	1
963+08	R1-1	Stop	LT	30	x 30		5.18	1	1	1
964+06	R1-1	Stop	RT	30	x 30		5.18	1	1	1
965+96	W14-3	No Passing Zone	RT	36	x 48		6	1	1	1
966+49	R2-1	Speed Limit - MPH	RT	30	x 24 35		5	1	1	1
967+54	W14-3	No Passing Zone	LT	36	x 48		6	1	1	1
967+55	R2-1	Speed Limit - MPH	LT	30	x 24 35	ON Back of NPZ	5	0	1	0
968+07	W10-1	Railroad Crossing	RT	36	x 36		7.07	1	1	1
967+81	R1-1	Stop	LT	30	x 30		5.18	1	1	1
969+00	R1-1	Stop	RT	30	x 30		5.18	1	1	1
972+85	R1-1	Stop	LT	30	x 30		5.18	1	1	1
973+30	R1-1	Stop	RT	30	x 30		5.18	1	1	1
978+10	R2-1	Speed Limit - MPH	RT	30	x 24 55	Missing	5	1	1	0
978+11	R2-1	Speed Limit - MPH	LT	30	x 24 35		5	1	1	1
979+69	I-2-3	Community Population Name Sign	LT	24	x 60 Ingram	Missing	10	2	1	0
980+75	W10-1	Railroad Crossing	LT	36	x 36		7.07	1	1	1
983+48	W5-52-R	Clearance Striper Down Left	LT	36	x 12	Added new	3	1	0	0
983+48	W5-52-L	Clearance Striper Down Right	RT	36	x 12	Added new	3	1	0	0
983+71	W5-52-L	Clearance Striper Down Right	LT	36	x 12	Added new	3	1	0	0
983+71	W5-52-R	Clearance Striper Down Left	RT	36	x 12	Added new	3	1	0	0
986+54	M1-4	US Route Marker	RT	24	x 24 8	Change to J1-1 24" x 3	4	1	1	1
986+54	M2-1	Junction Marker	RT	15	x 21		2.19	0	1	0
989+19	R2-5-A	Reduced Speed Ahead	LT	30	x 24	Change to W3-5 36" x 3	9	1	1	0
989+71	W3-1	Stop Ahead	LT	36	x 36		9	1	1	1
990+23	W3-1	Stop Ahead	RT	36	x 36		9	1	1	1
990+25	W13-1-W	Advisory Speed - WHITE Back	LT	18	x 18 35			0	1	0
994+47	M3-3	SOUTH Cardinal Route Marker	LT	12	x 24		2	0	1	0
994+47	M1-6	State Route Marker	LT	24	x 24 73	Change to J4-1 24" x 3	4	1	1	1
994+98	D1-2	Two Destinations (Arrows)	RT	30	x 78 (LA) Ladysmith	Prentice (RA)	16.25	1	1	1
996+59	W11-6	Snowmobile Crossing Symbol	LT	30	x 30		6.25	1	1	1
998+15	J3-2	Directional Assembly (Two Headed)	RT	57	x 48 West East	8 8 (LA) (R	15	1	1	1
998+17	D2-1	Destination/Distance (One) with Die Cut		15	x 54 Thorp 41		5.62	2	1	1
SHEET TOTAL							222.89	37.00	35.00	28.00
ITEM TOTALS =							593.96	110.00	113.00	98.00

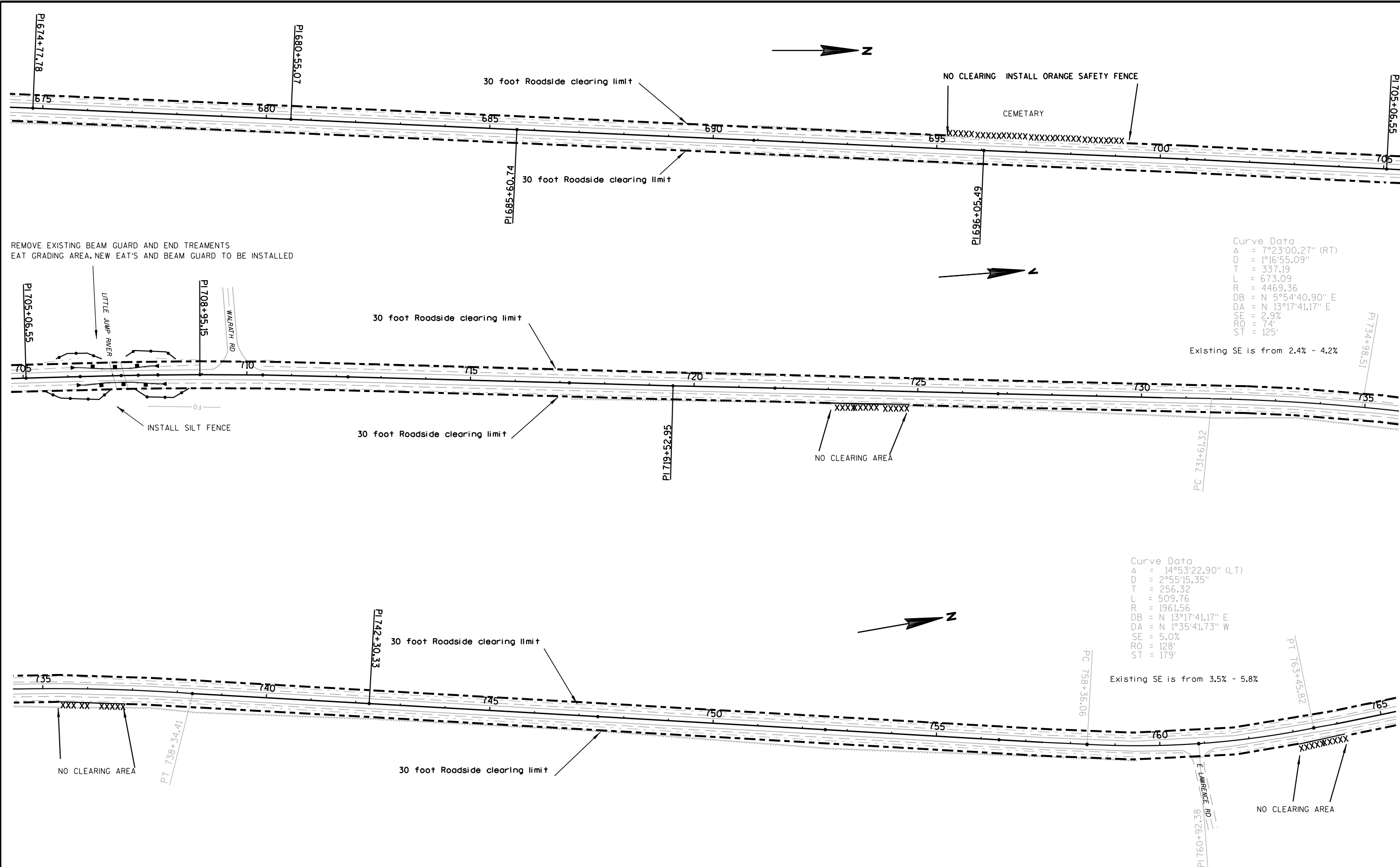
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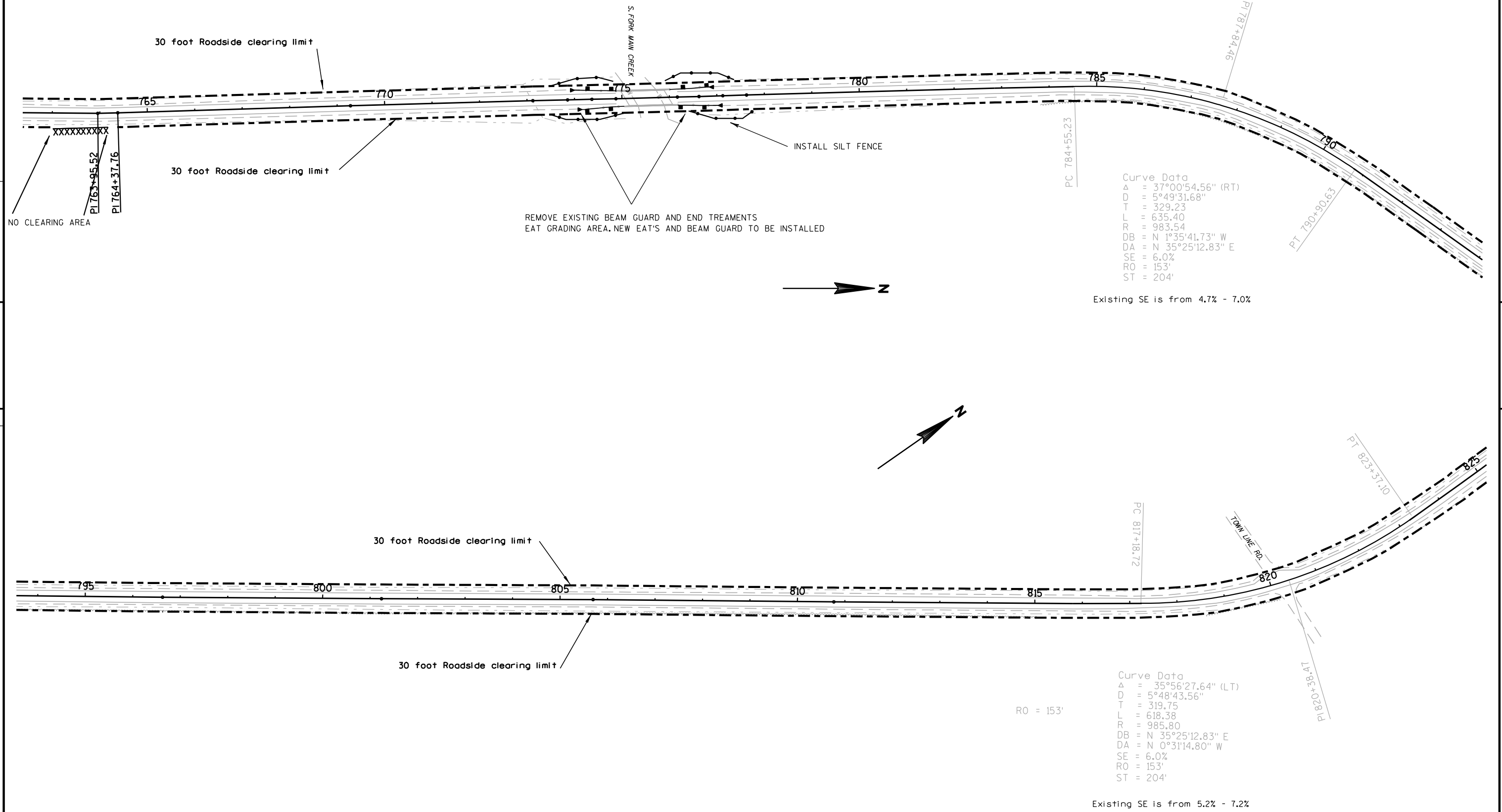
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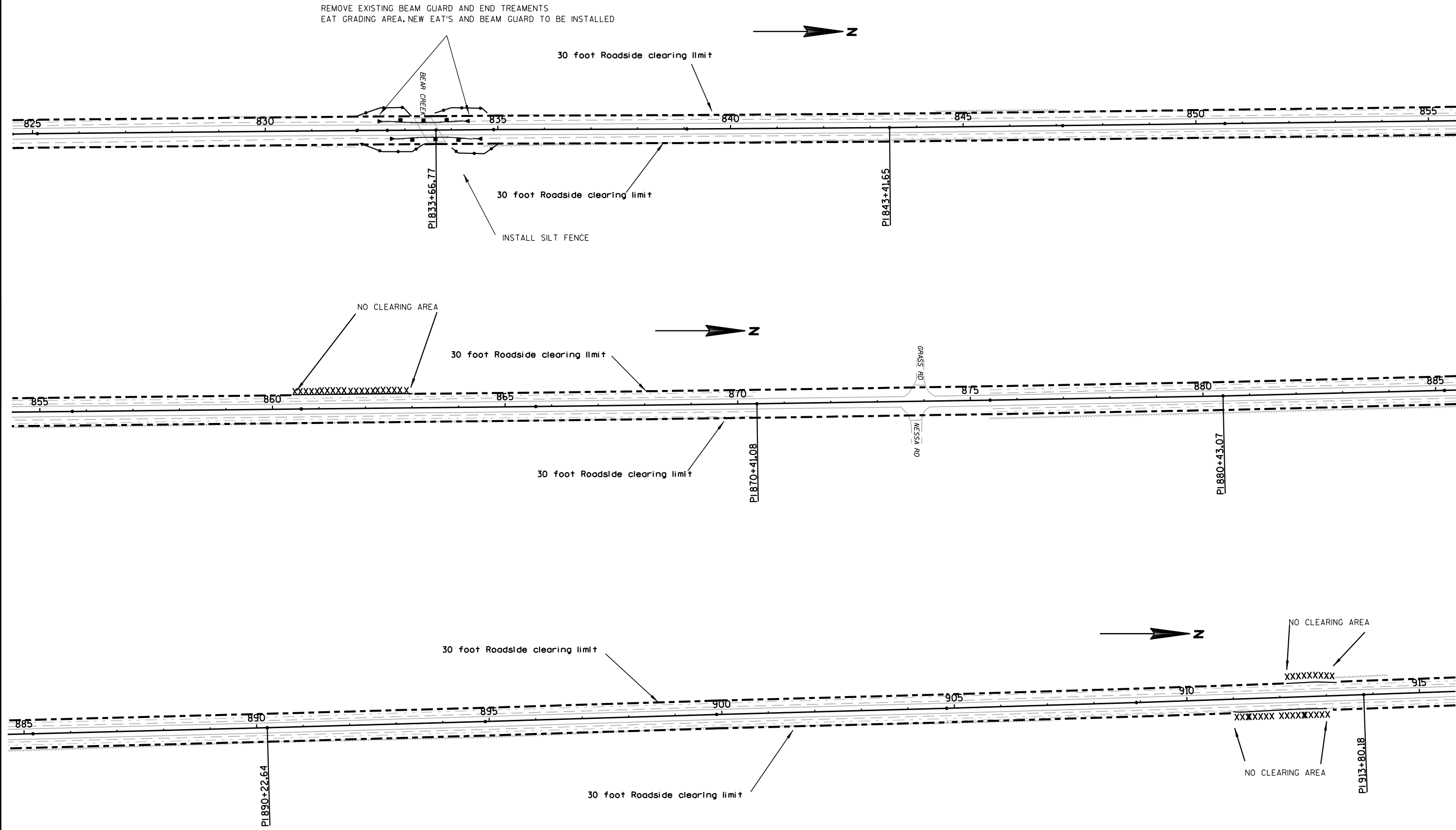
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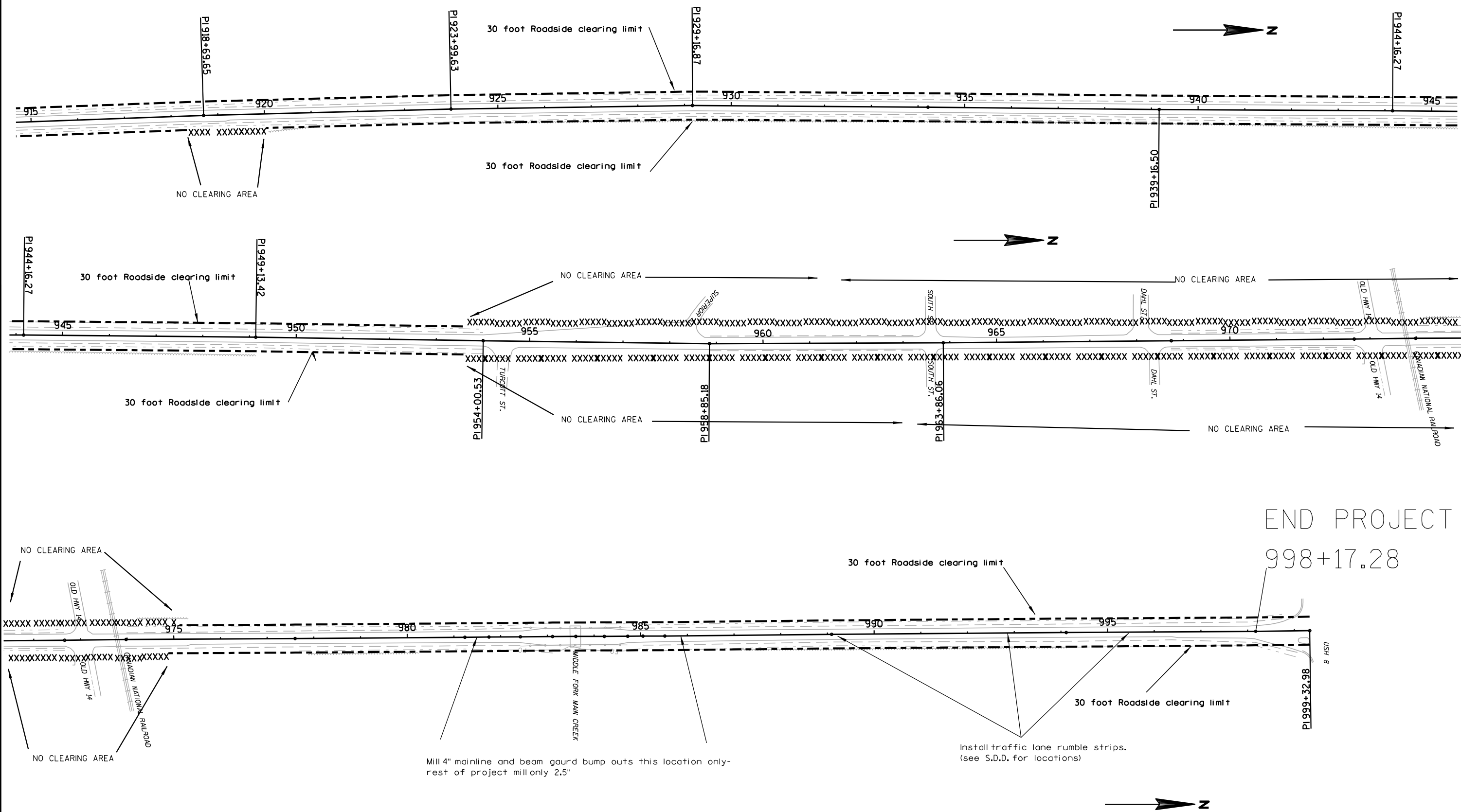












Standard Detail Drawing List

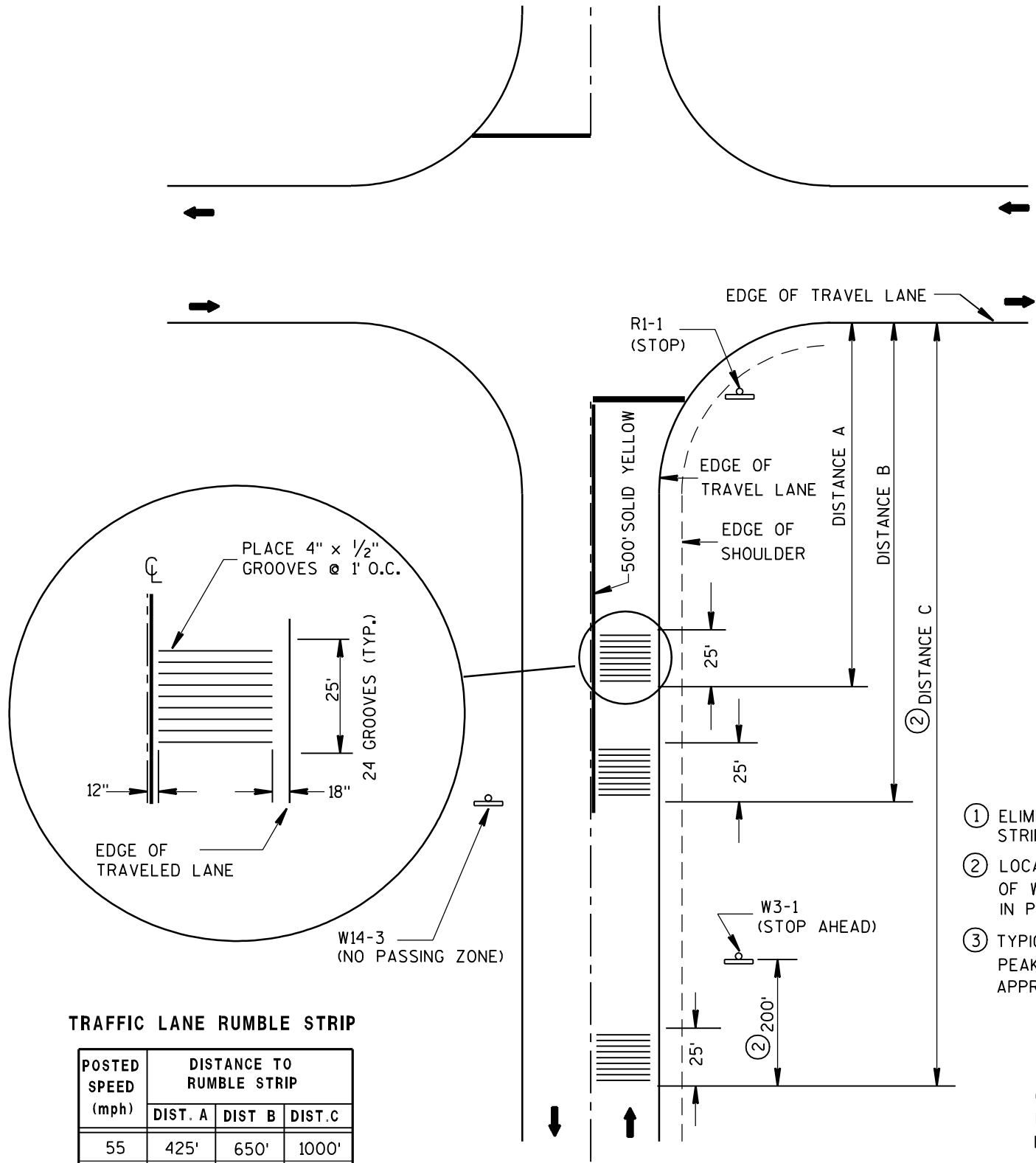
08E9-6	SILT FENCE
13A6-2	RUMBLE STRIPS AT INTERSECTION
14B15-6A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-6B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-6C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-6A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-7A	STEEL THRIE BEAM STRUCTURE APPROACH
14B24-6A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-6B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-6C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
15C4-1	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C8-12A	PAVEMENT MARKING (MAINLINE)
15C8-12B	PAVEMENT MARKING (INTERSECTIONS)
15C9-7A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C12-3	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)



- 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.



S.D.D. 8 E 9-6

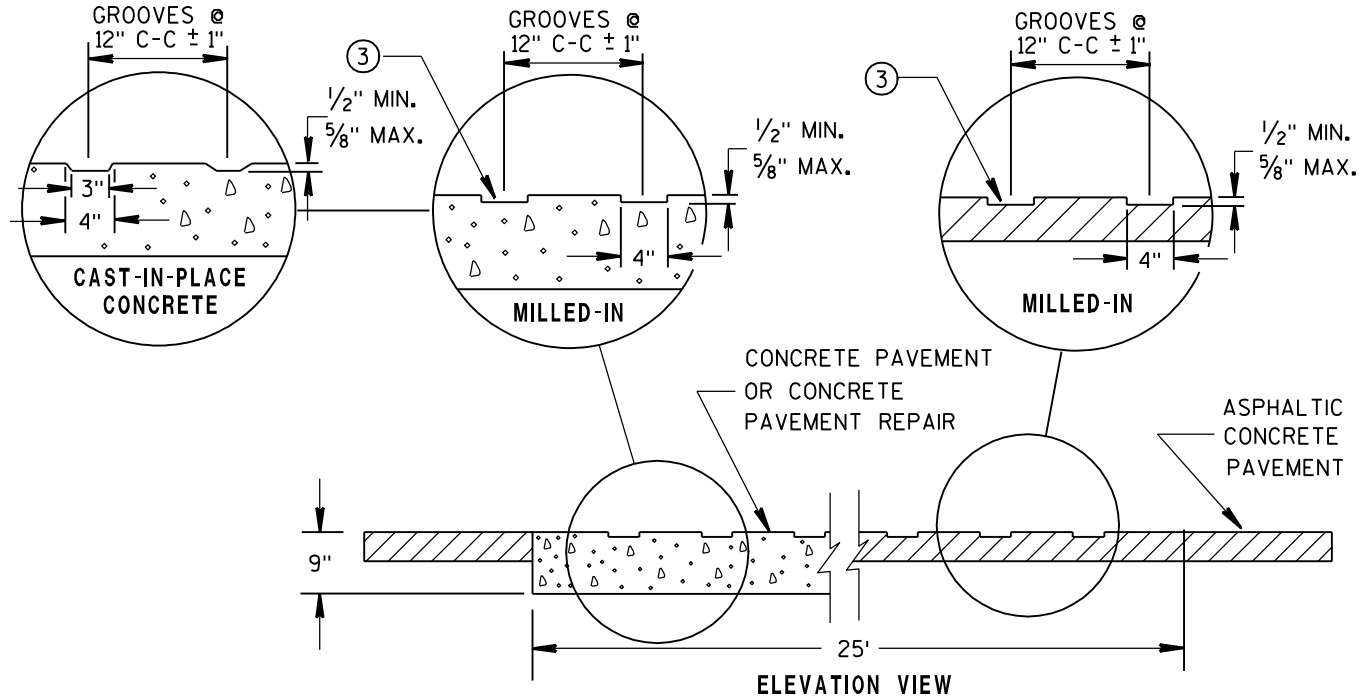


TRAFFIC LANE RUMBLE STRIP

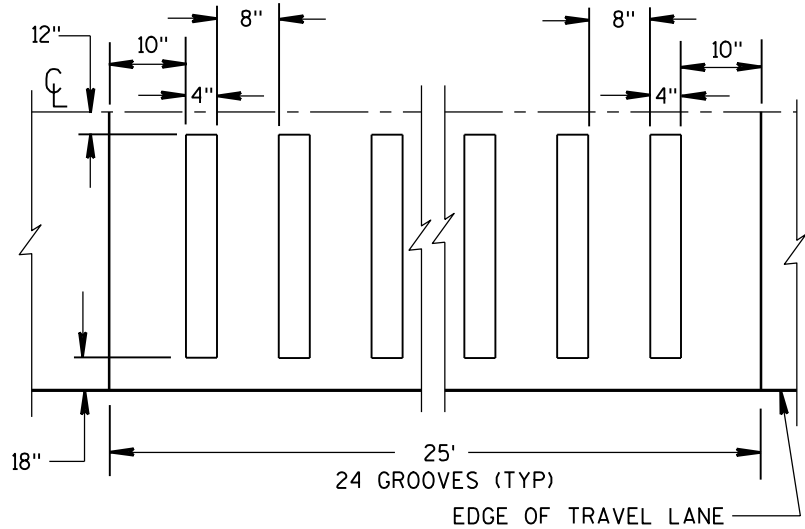
POSTED SPEED (mph)	DISTANCE TO RUMBLE STRIP		
	DIST. A	DIST. B	DIST. C
55	425'	650'	1000'
50	325'	450'	800'
45	275'	400'	650'
40	225'	①	550'
35	175'	①	475'
≤ 30	125'	①	425'

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

PLAN VIEW
RUMBLE STRIP LOCATION



ELEVATION VIEW



CONCRETE PAVEMENT
MILLED-IN OR CAST-IN-PLACE

ASPHALTIC PAVEMENT
MILLED-IN

- 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 1/16"

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 CONCRETE PAVEMENT IS INSTALLED IN THE RUMBLE STRIP AREA, THE CONCRETE SHALL EXTEND FROM THE CL TO THE EDGE OF TRAVEL WAY.

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.

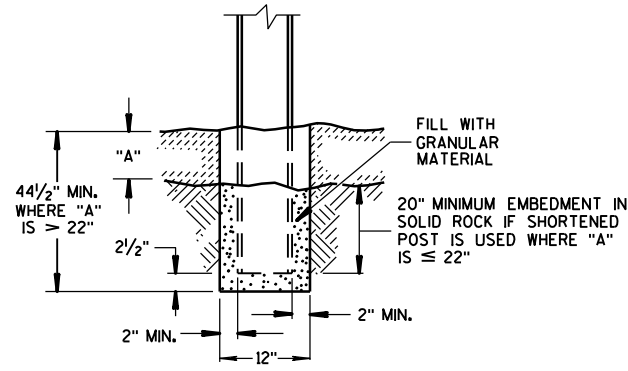
RUMBLE STRIPS AT INTERSECTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/22/01 DATE FWHA	 CHIEF ROADWAY DEVELOPMENT ENGINEER

GENERAL NOTES

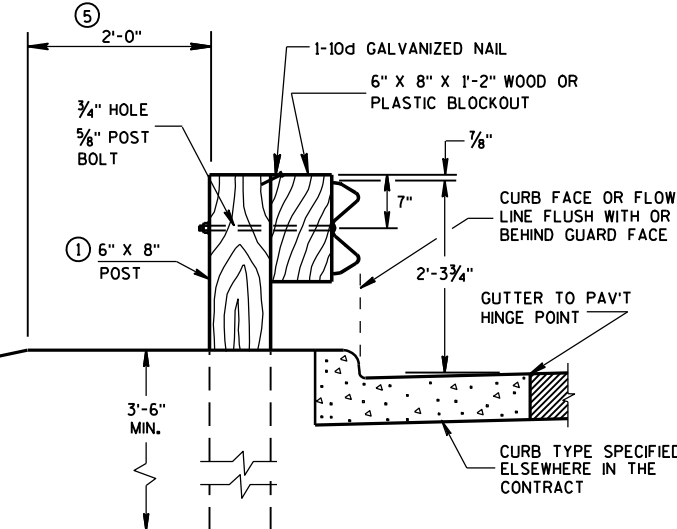
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, AND THE APPLICABLE SPECIAL PROVISIONS.

- ① W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS. DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- ② USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
- ③ INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ④ USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- ⑤ IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- ⑥ IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.

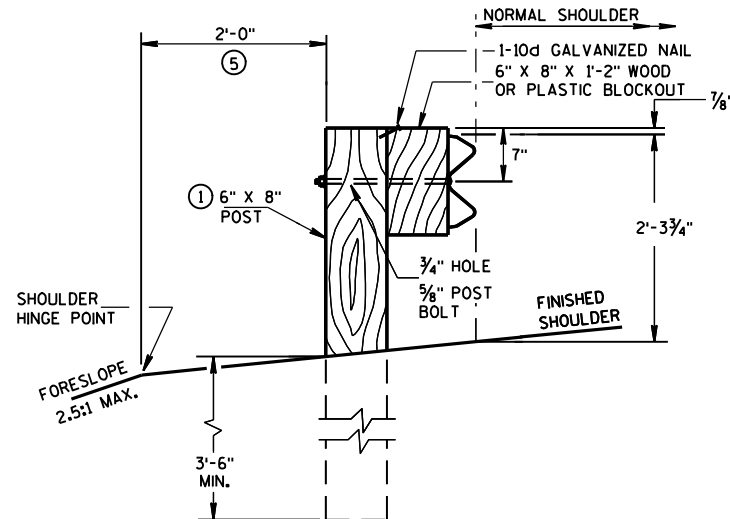
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



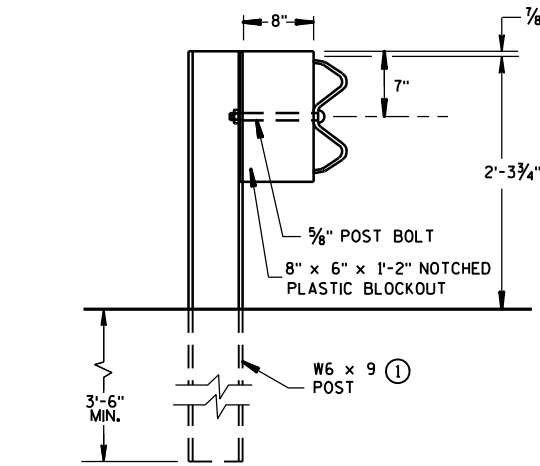
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



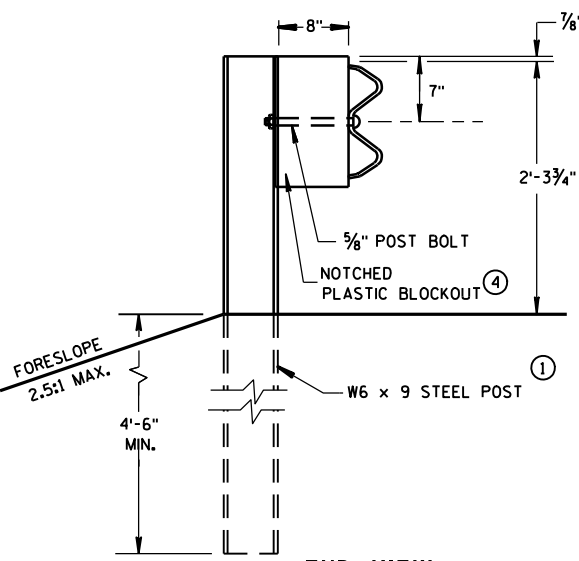
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

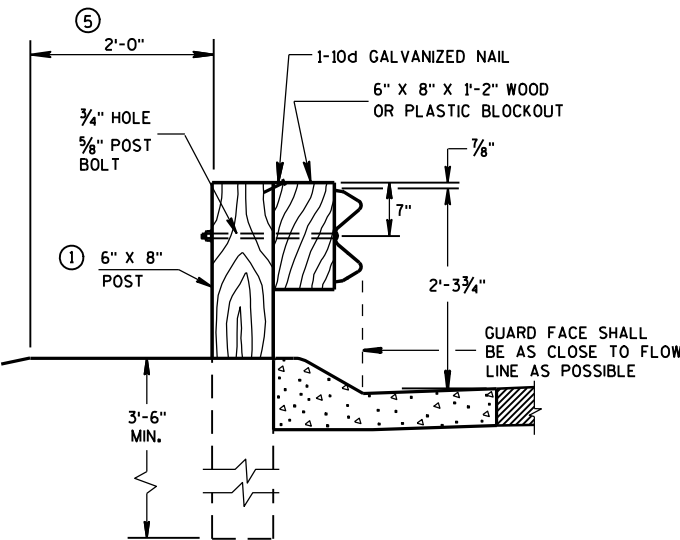


END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION

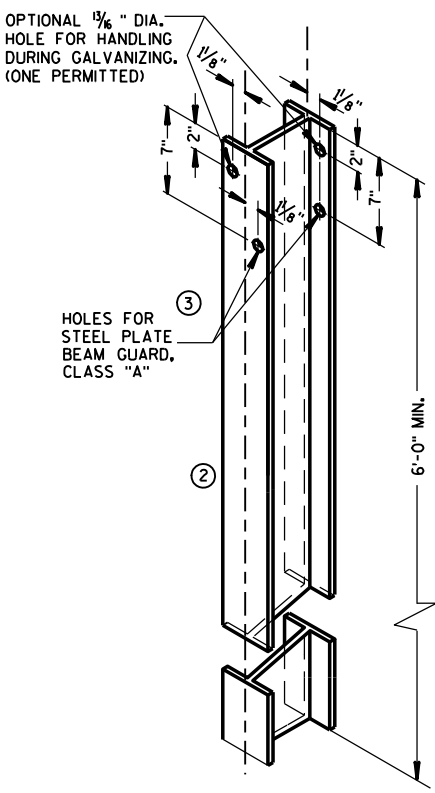


END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

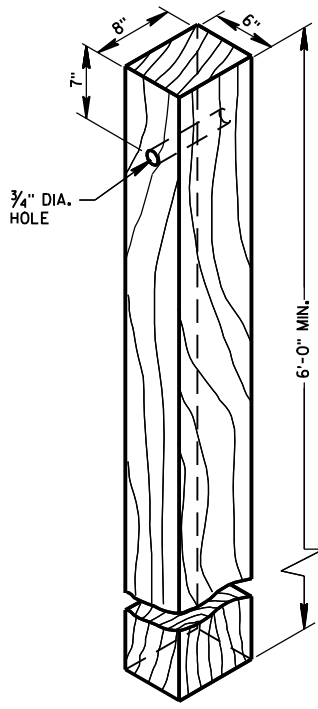
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD



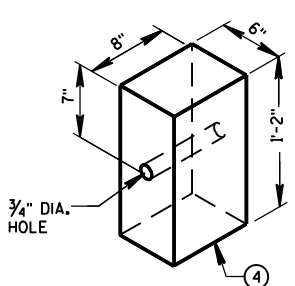
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



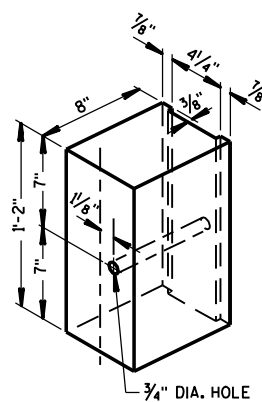
STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①
ALL HOLES 1/8" DIAMETER EXCEPT AS NOTED



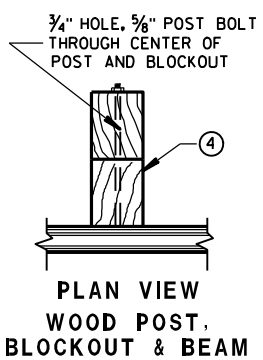
WOOD POST
(6" X 8") NOMINAL



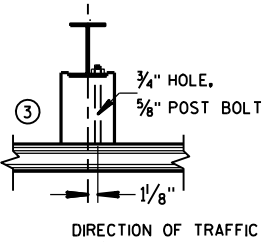
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED
PLASTIC BLOCKOUT ①
FOR STEEL POSTS



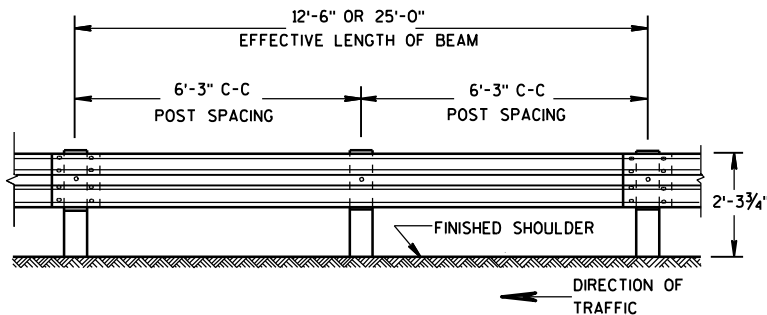
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



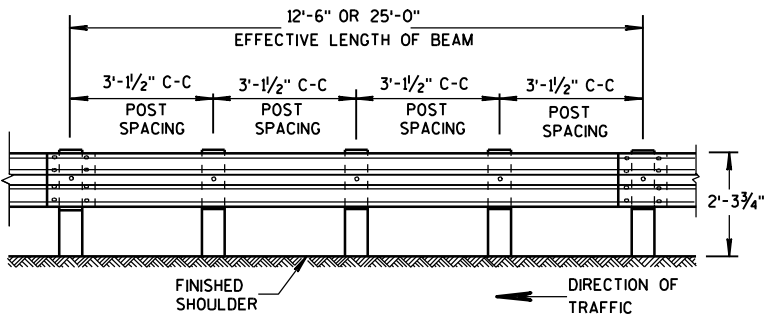
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD,
CLASS 'A'
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW
POST SPACING STANDARD INSTALLATION

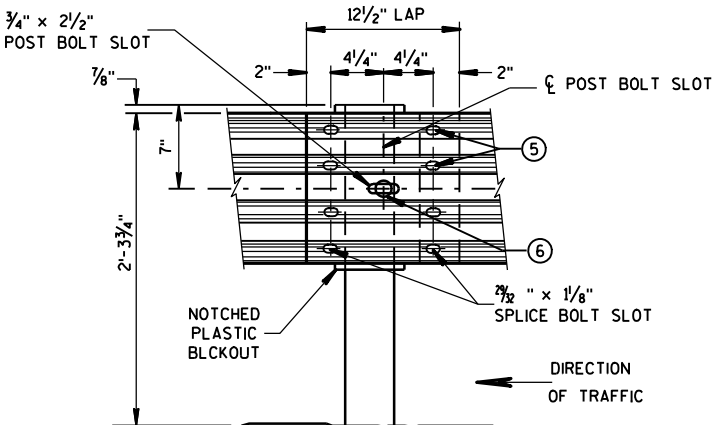
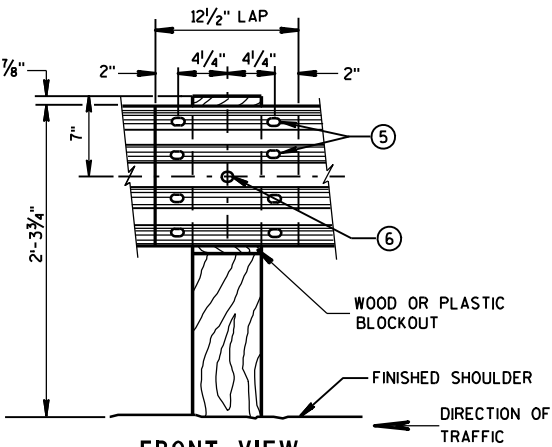
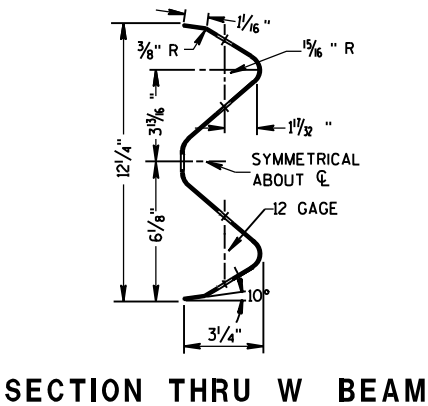


FRONT VIEW
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)

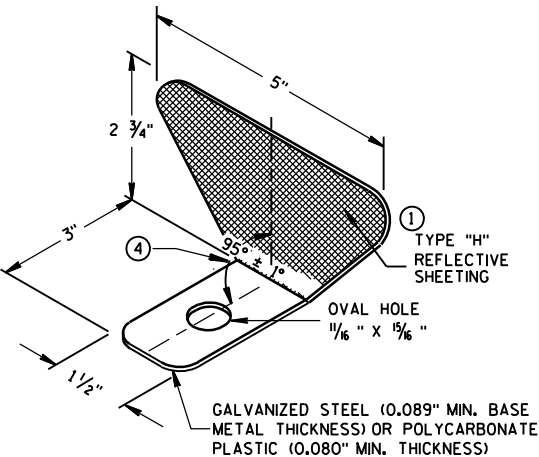
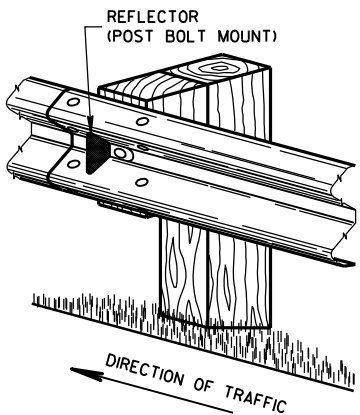
REFLECTOR SPACING^②

	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 ^③	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ^④	3
	> 200'	100' C-C	2	

ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION^①

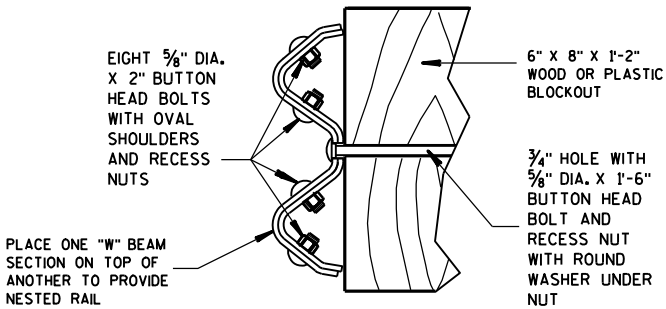


FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPLICING DETAILS
OF STEEL PLATE BEAM GUARD



GENERAL NOTES

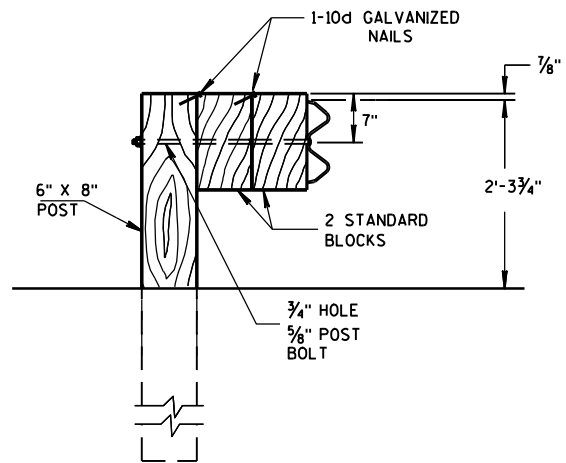
- ① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
- ② DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- ③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- ④ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
- ⑤ 8 - 5/8" Ø X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑥ 5/8" Ø X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



NESTED W BEAM (NW)
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

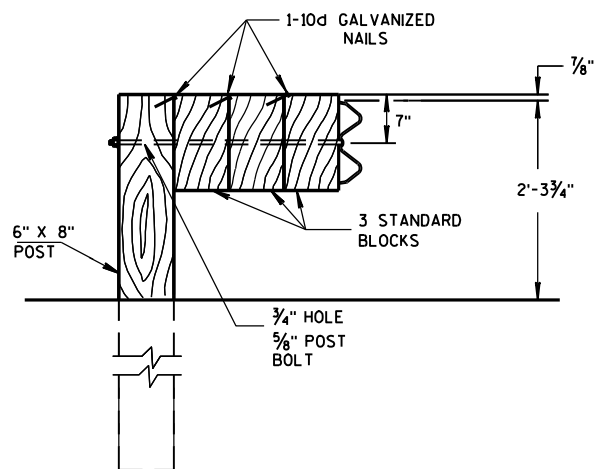
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS
WITHIN A BARRIER RUN IS UNLIMITED

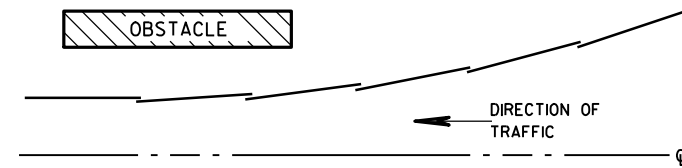


DETAIL FOR TRIPLE BLOCKS

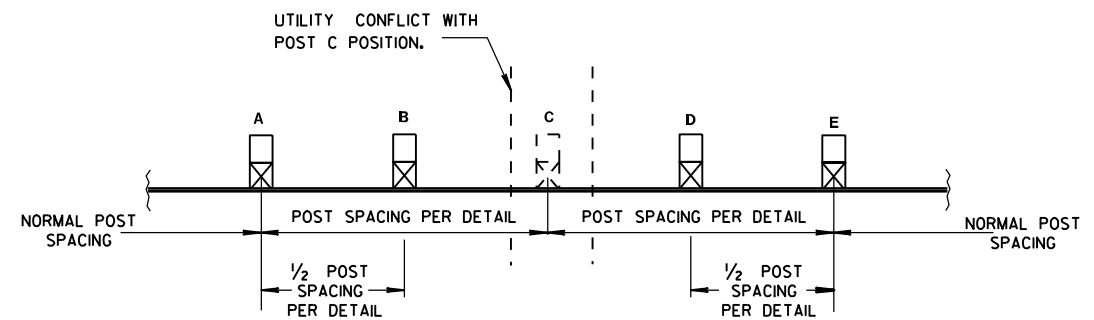
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES
PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.



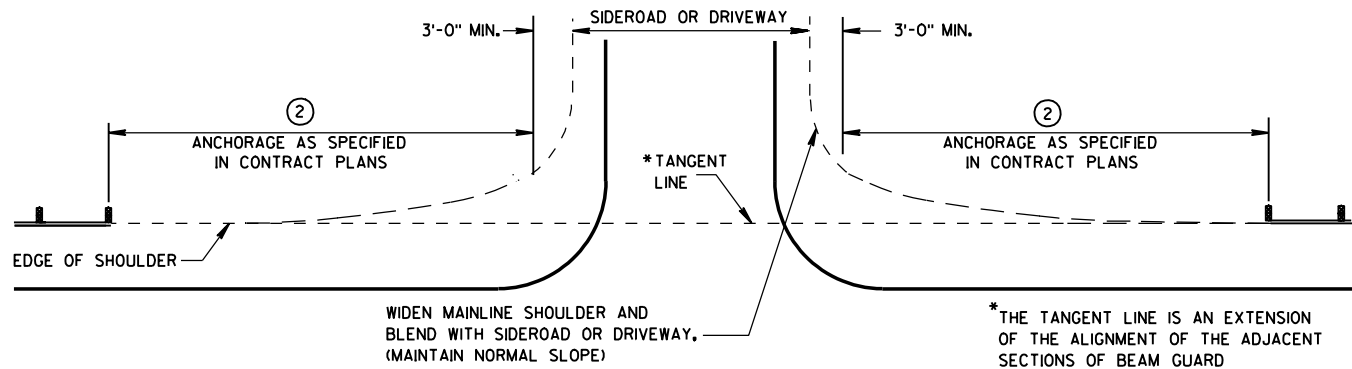
PLAN VIEW BEAM LAPPING DETAIL



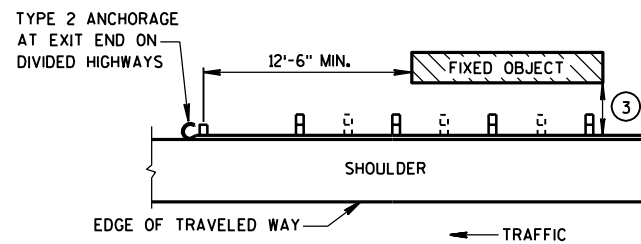
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

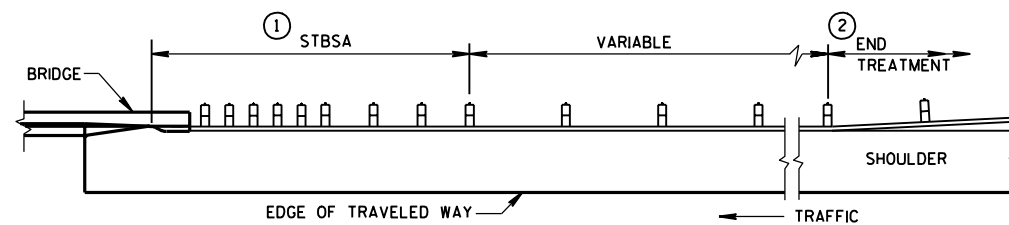
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



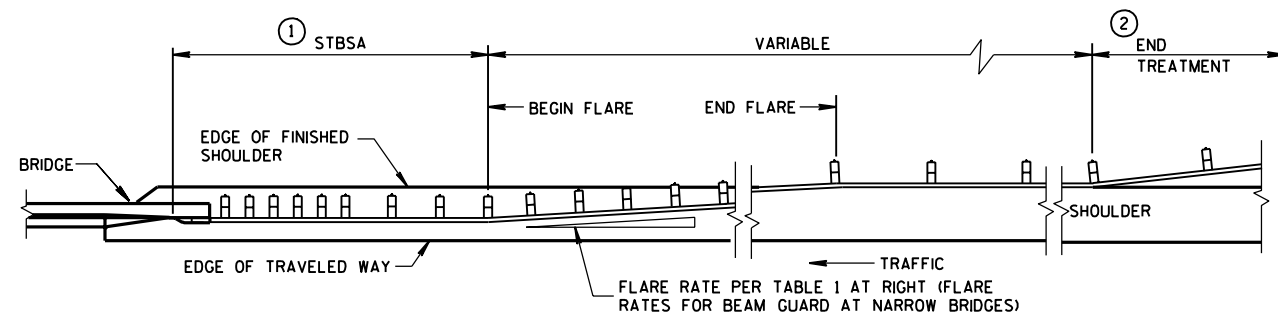
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC



BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT NARROW BRIDGES (FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

GENERAL NOTES

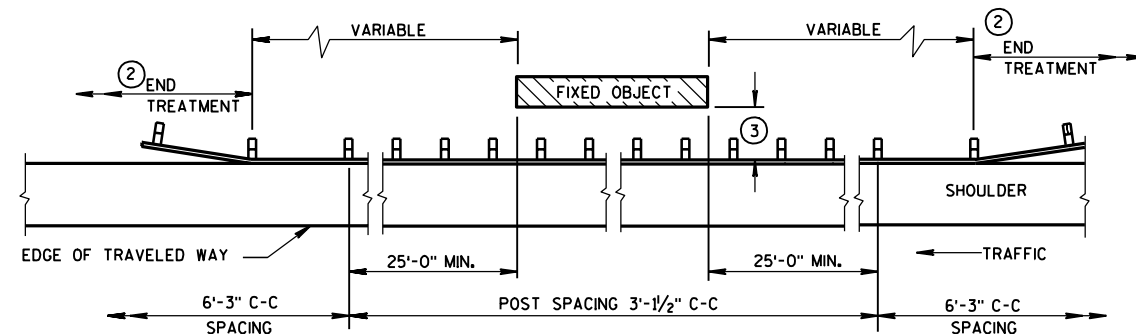
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

- ① STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
- ② USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1½"
4'-6"	6' - 3"



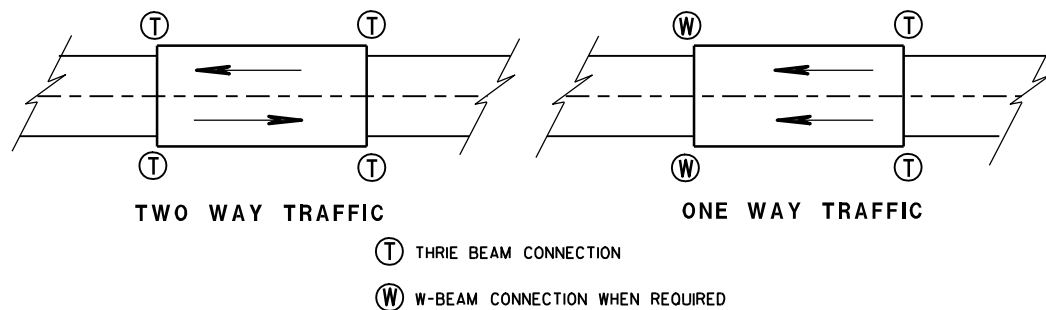
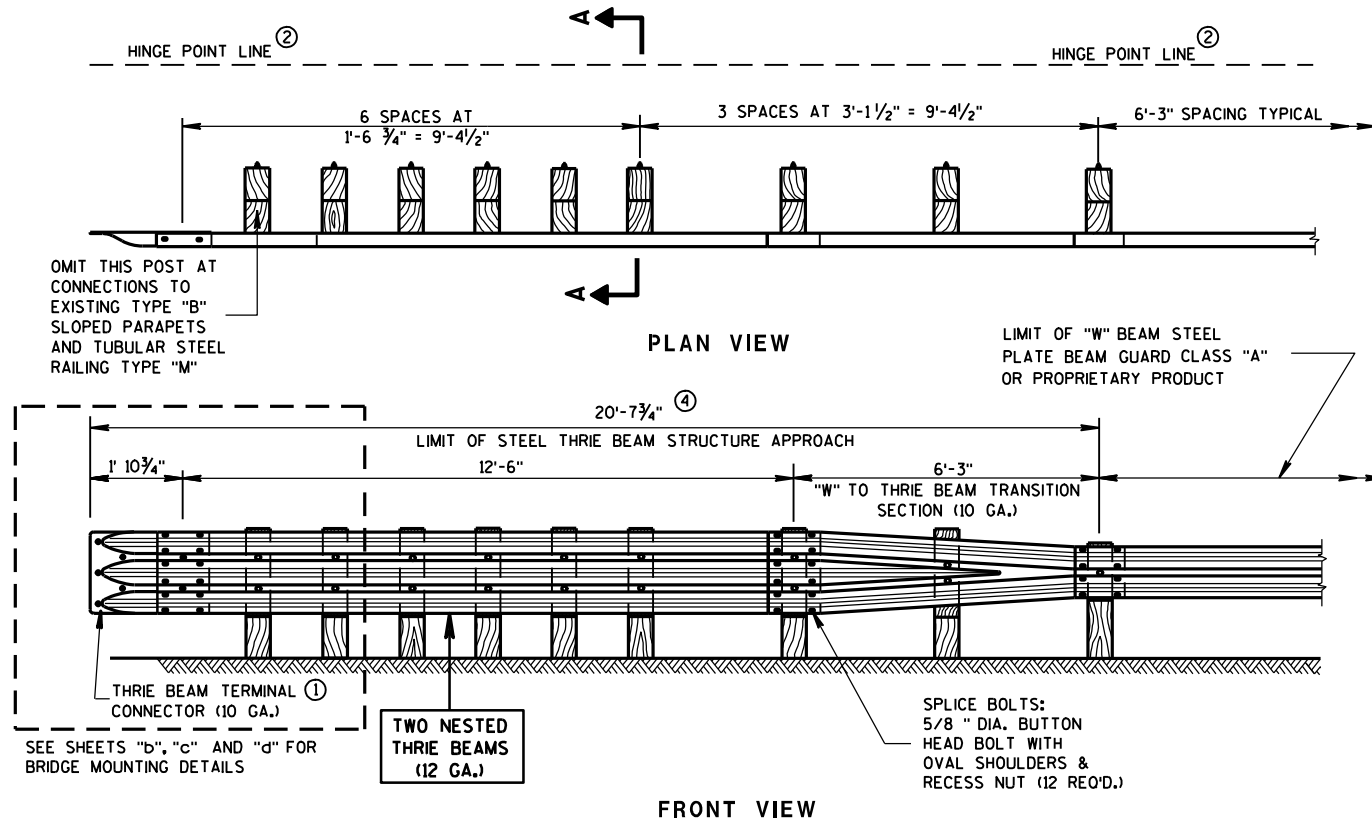
BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")

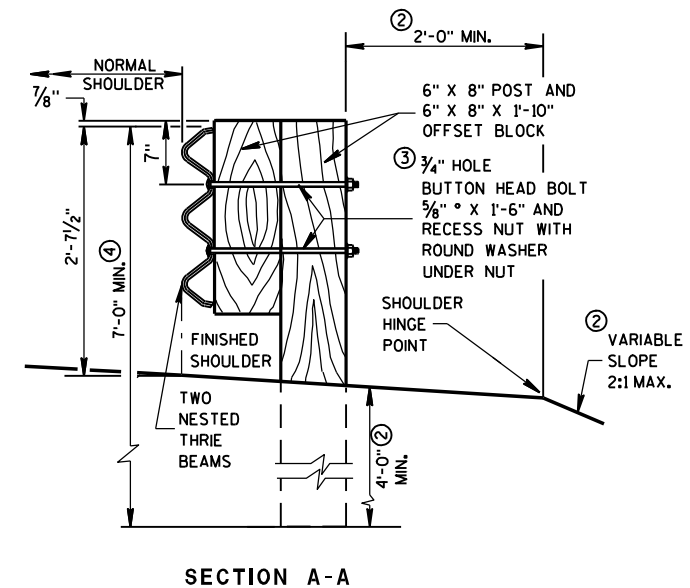
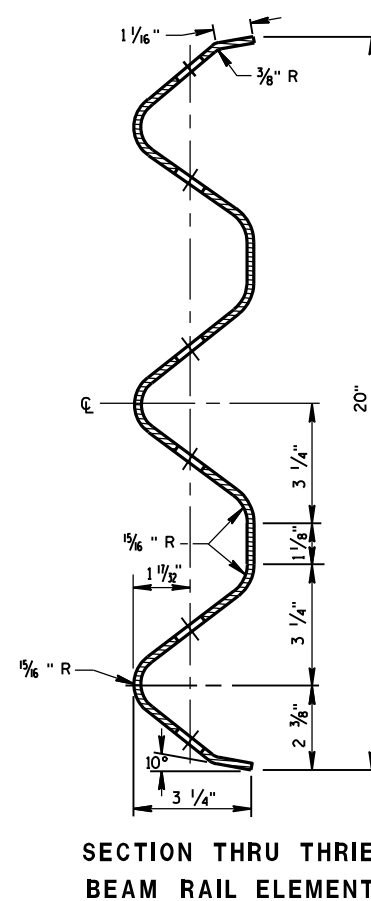
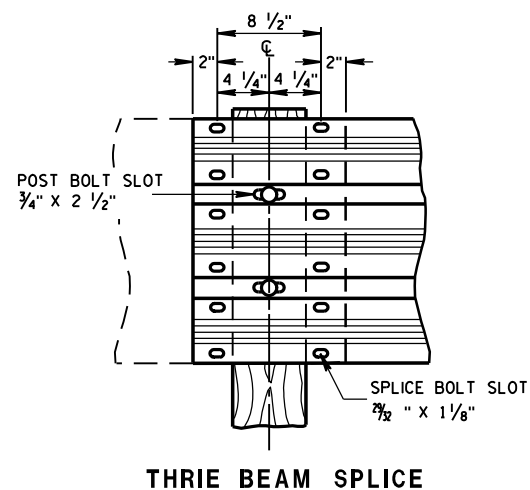
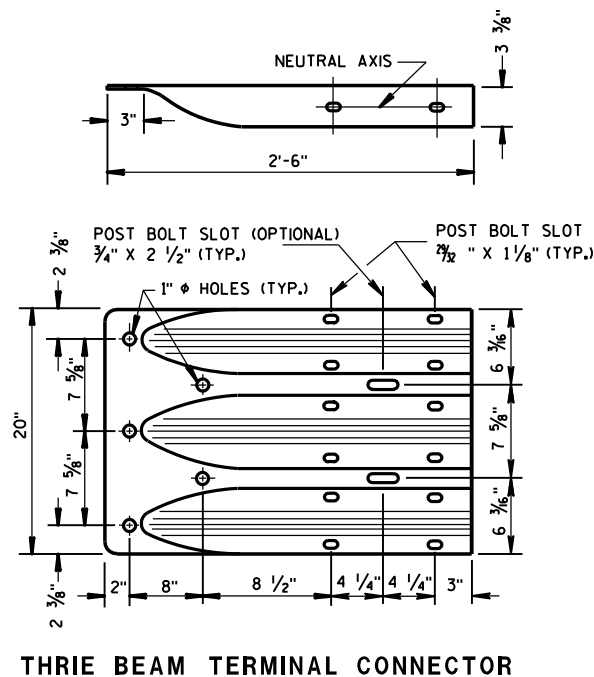
TABLE 1
FLARE RATES FOR BEAM
GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8-21-07 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER



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



GENERAL NOTES

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

FURNISH AND CONSTRUCT THRIE BEAM STRUCTURAL APPROACH ACCORDING TO THE REQUIREMENTS OF SECTION 614 OF THE STANDARD SPECIFICATIONS. THRIE BEAM SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M180, CLASS "A", TYPE 2.

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 $\frac{1}{2}$ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY, (SEE SDD 14 B 15-40).

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.
- ③ BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F-1554, GRADE 55. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-563 DH.
- ④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/18/09

DATE

FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

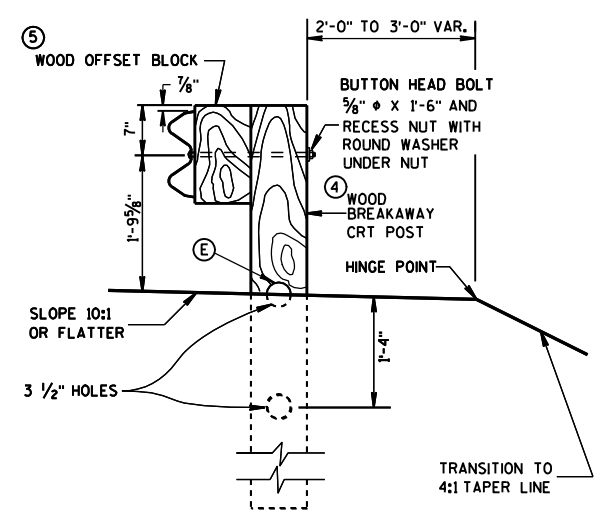
ENGINEER

BILL OF MATERIALS

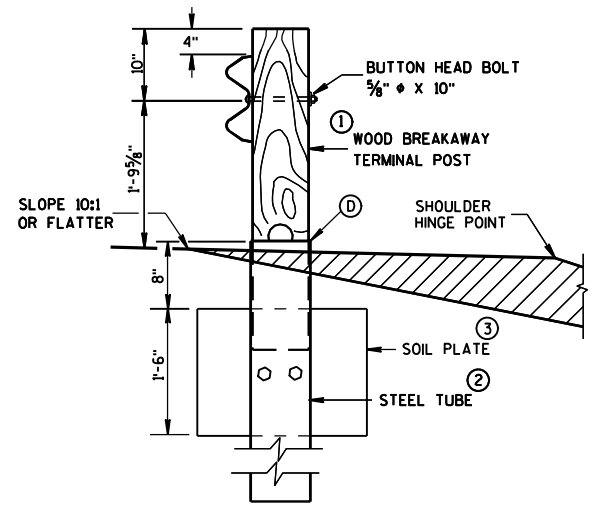
NOTE NO.	QTY.	DESCRIPTION
①	4	WOOD BREAKAWAY TERMINAL POST: 5 1/2" X 7 1/2" X 3'-9"
②	4	STEEL TUBE: TS 8" X 6" X 0.188", 4'-6" LONG OR 6'-0" LONG **
③	3	SOIL PLATE: 2'-0" X 1'-6" X 1/4" **
④	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	1	PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE
⑦	1	BEARING PLATE
⑧	1	BCT CABLE ASSEMBLY
⑨	1	CABLE ANCHOR BOX
⑩	1	STRUT & YOKE
⑪	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6 1/2" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
⑫	3	STEEL PLATE BEAM: 12 GA. 13'-6 1/2"
⑬	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
⑭	1	REFLECTIVE SHEETING TYPE H: 18" X 18"
⑮	1	E.A.T. MARKER POST

GENERAL NOTES

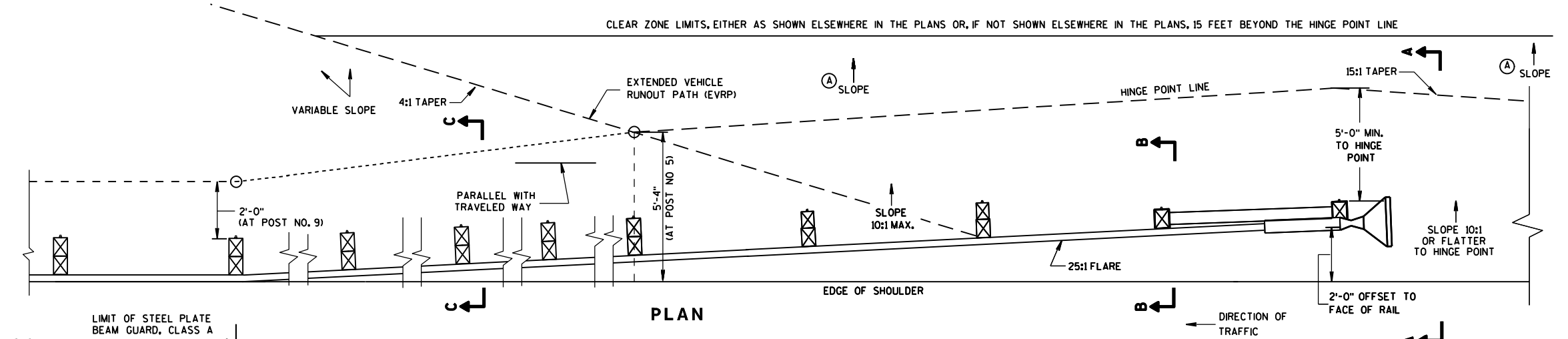
- FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL 5/8" ϕ X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.
- ** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATE INSTALLED ON POST 1 THROUGH POST 3. POST 4 DOES NOT REQUIRE A SOIL PLATE. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 4 - 72 INCH STEEL TUBES ON POST 1 THROUGH POST 4, WITHOUT SOIL PLATES.
- (A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.
- (D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE 3/4" ABOVE THE FINISHED GROUND LINE.
- (F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER OF E.A.T. STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.
- DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- * DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



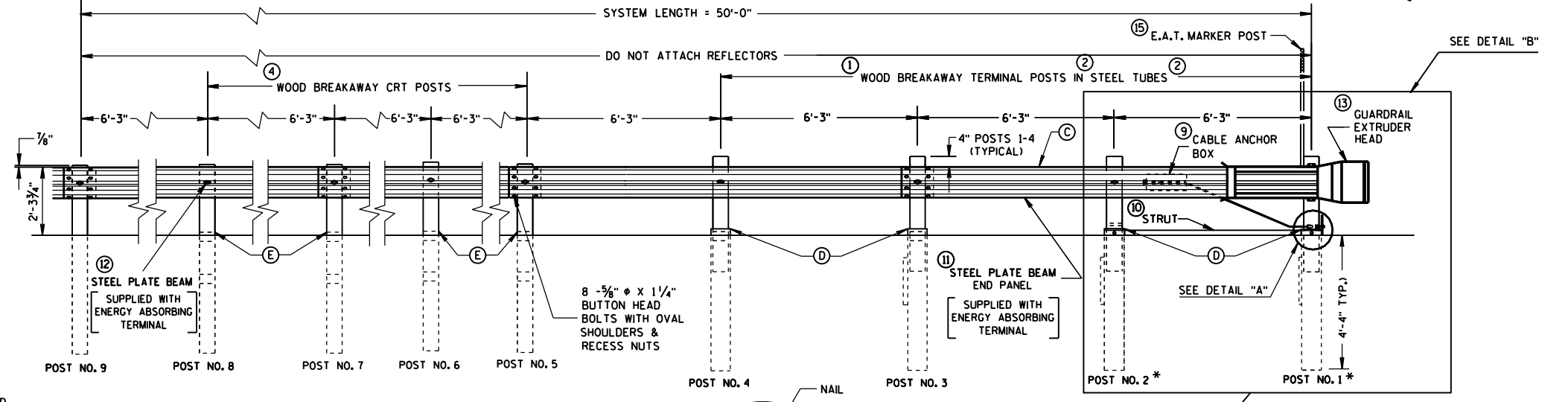
SECTION C-C
TYPICAL AT POST NOS. 6, 8



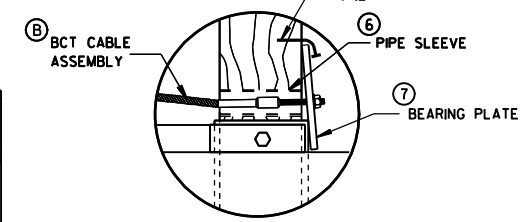
SECTION B-B
TYPICAL AT POST NO. 2*



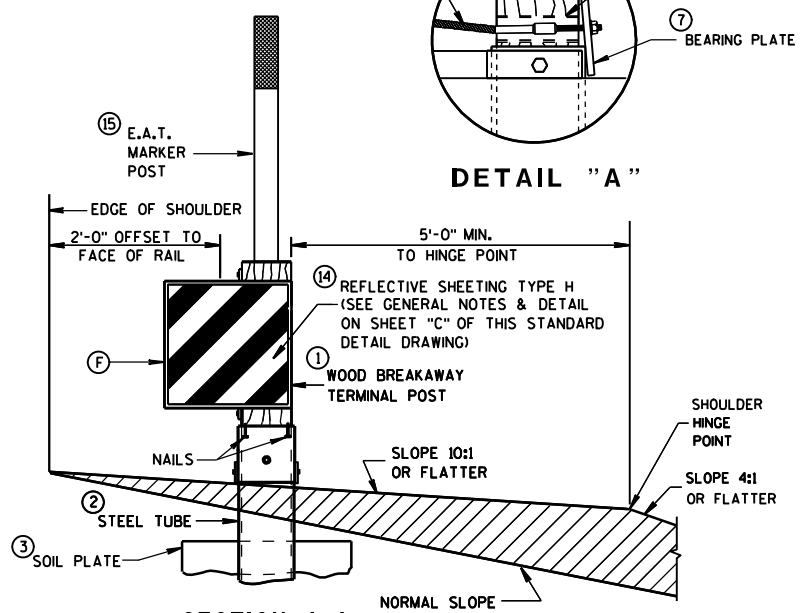
PLAN



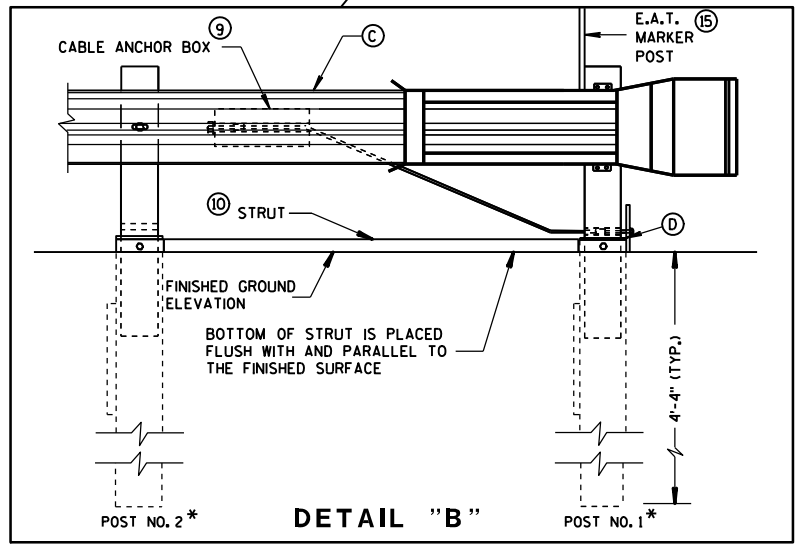
ELEVATION



DETAIL "A"



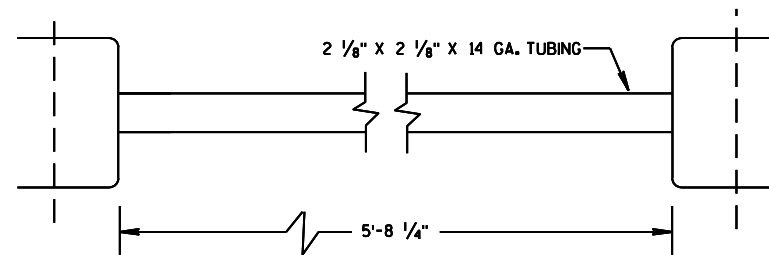
SECTION A-A
TYPICAL AT POST NO. 1*



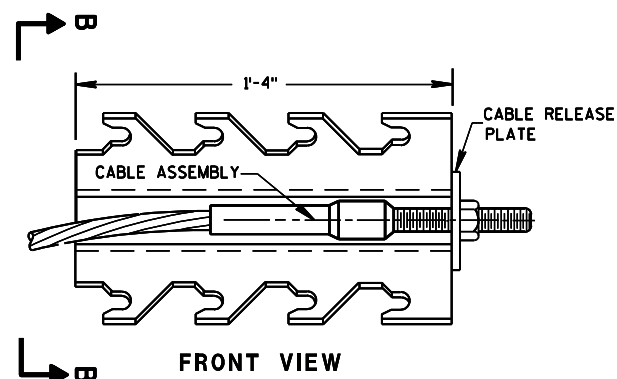
DETAIL "B"

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

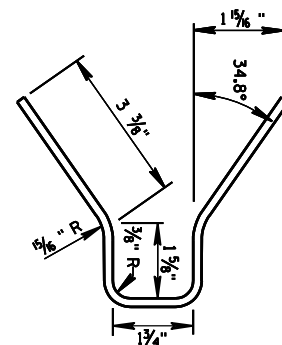
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



⑩ STRUT DETAIL (SKT-350)



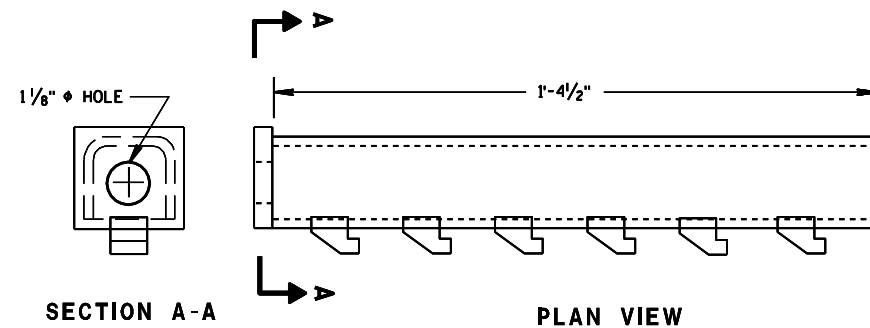
FRONT VIEW



SECTION B-B

⑨ CABLE ANCHOR BOX (SKT-350)

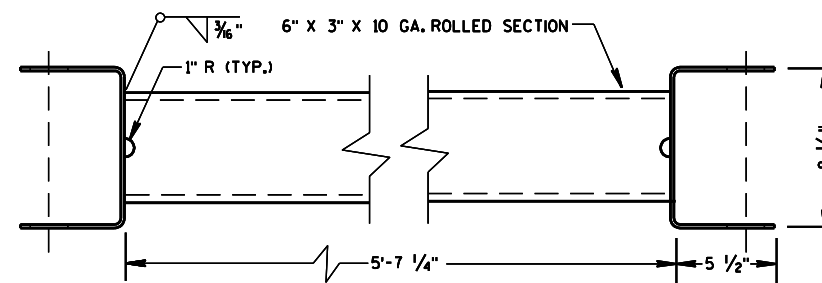
(SKT-350)



SECTION A-A

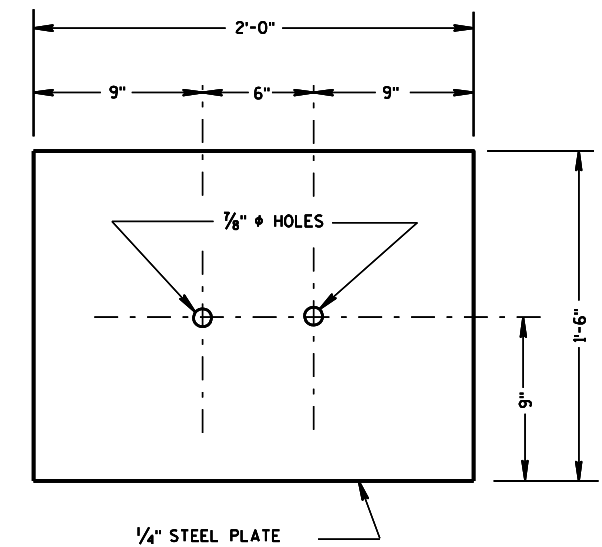
PLAN VIEW

⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)

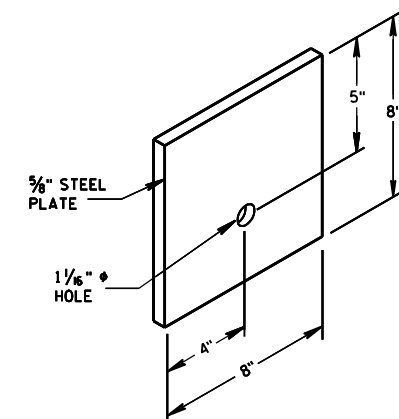


⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



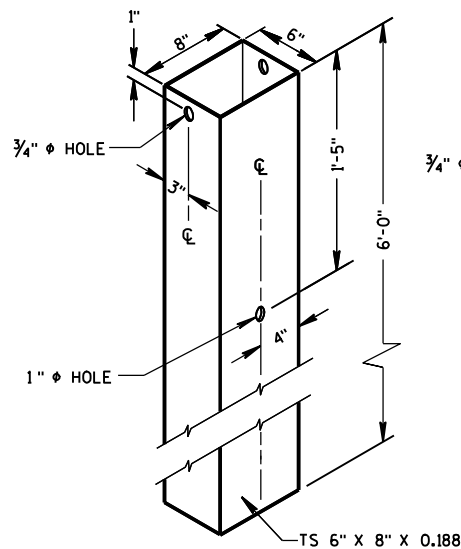
③ SOIL PLATE
(SKT-350, ET-2000/ET-2000 PLUS)



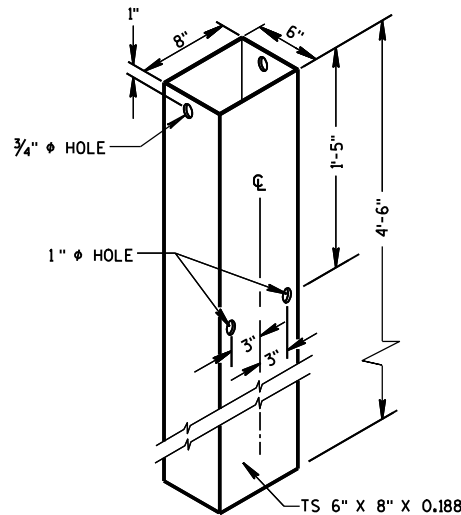
⑦ STEEL BEARING PLATE
(SKT-350, ET-2000/ET-2000 PLUS)

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

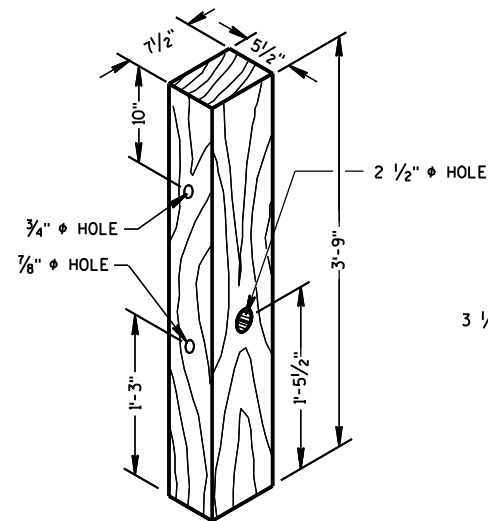
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



② 72" STEEL TUBE
(POSTS NO. 1-4)

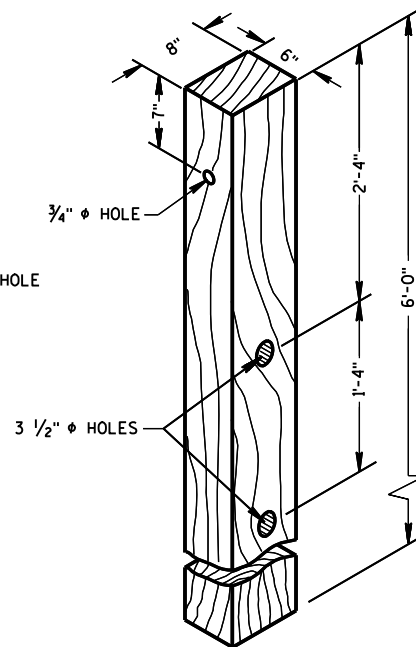


② 54" STEEL TUBE
(POSTS NO. 1-4)

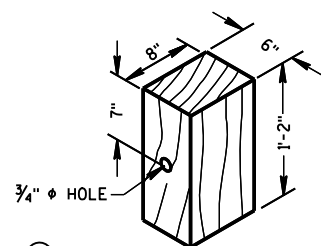


① TERMINAL POST
(POSTS NO. 1-4)

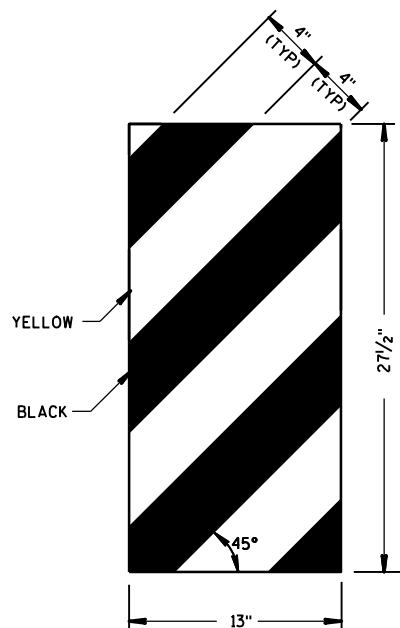
WOOD BREAKAWAY POSTS



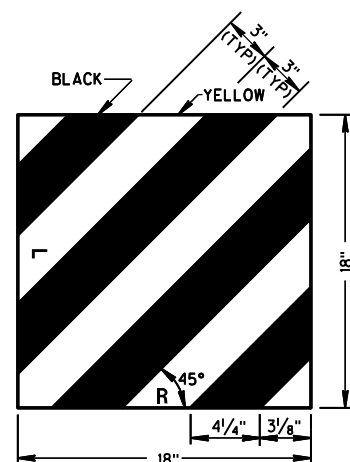
④ CRT POST
(POSTS NO'S 5-8)



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



ET-2000 PLUS ONLY

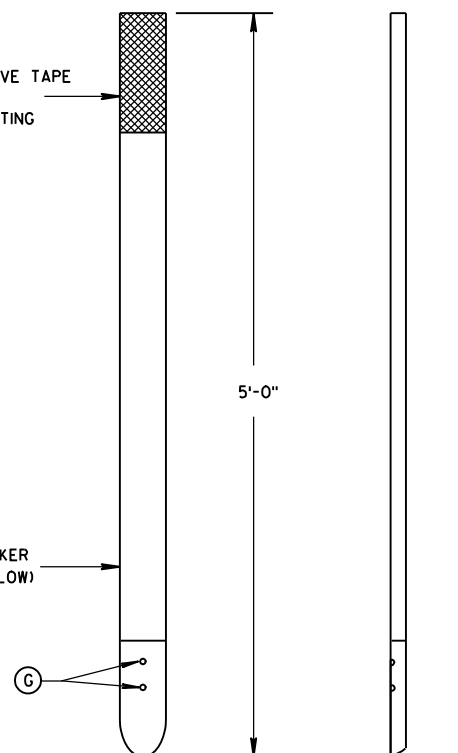


ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

YELLOW REFLECTIVE TAPE
3" X 9" TYPE H
REFLECTIVE SHEETING

E.A.T. MARKER
POST (YELLOW)



FRONT VIEW

SIDE VIEW

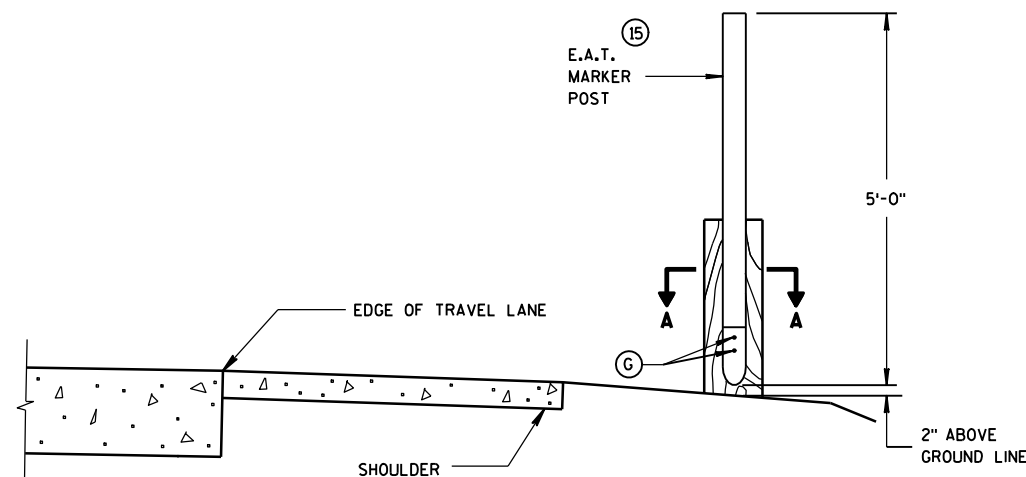
⑮ E.A.T. MARKER POST

GENERAL NOTES

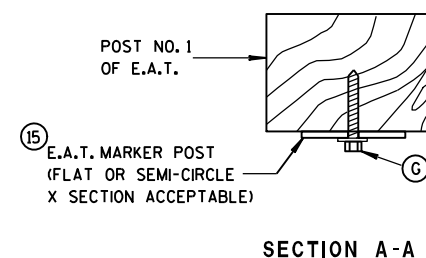
STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

⑮ 1/2" DIA. X 3" LAG BOLT WITH WASHER.



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6-18-09

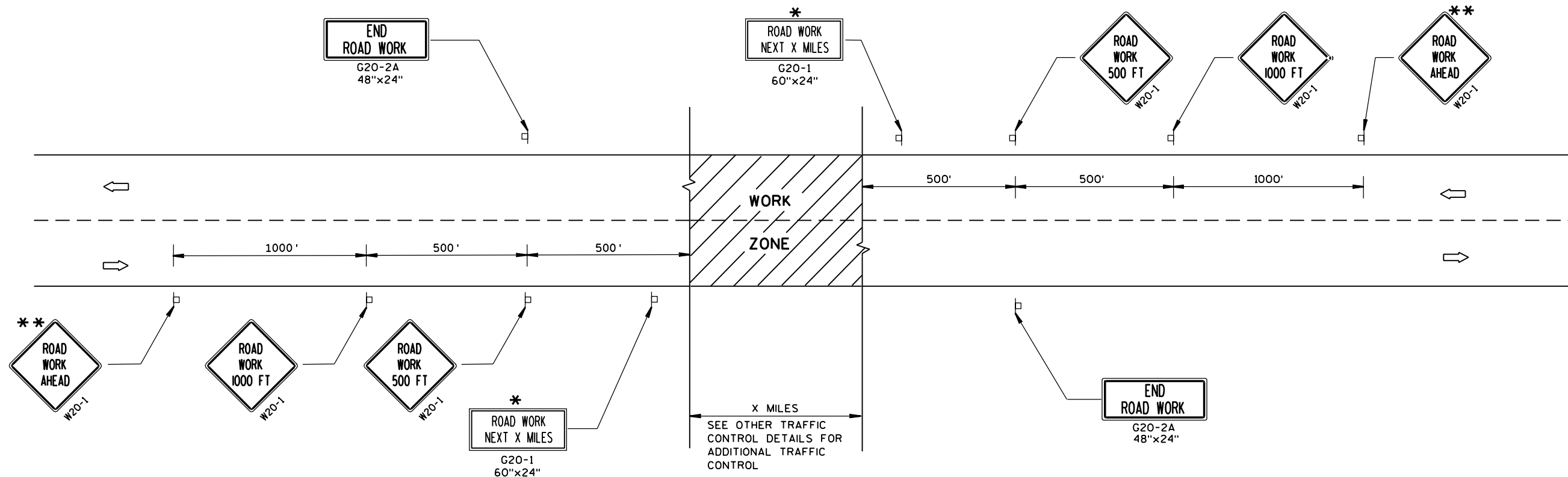
DATE

FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER



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.

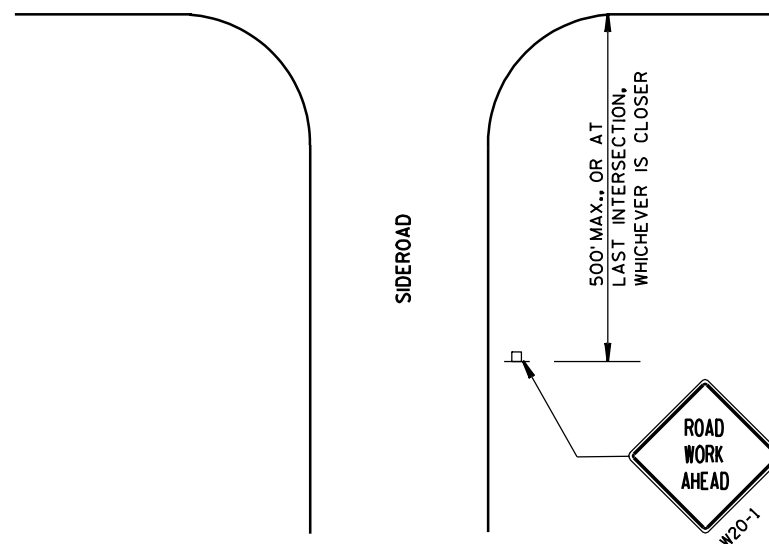
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 OR SIGNING.

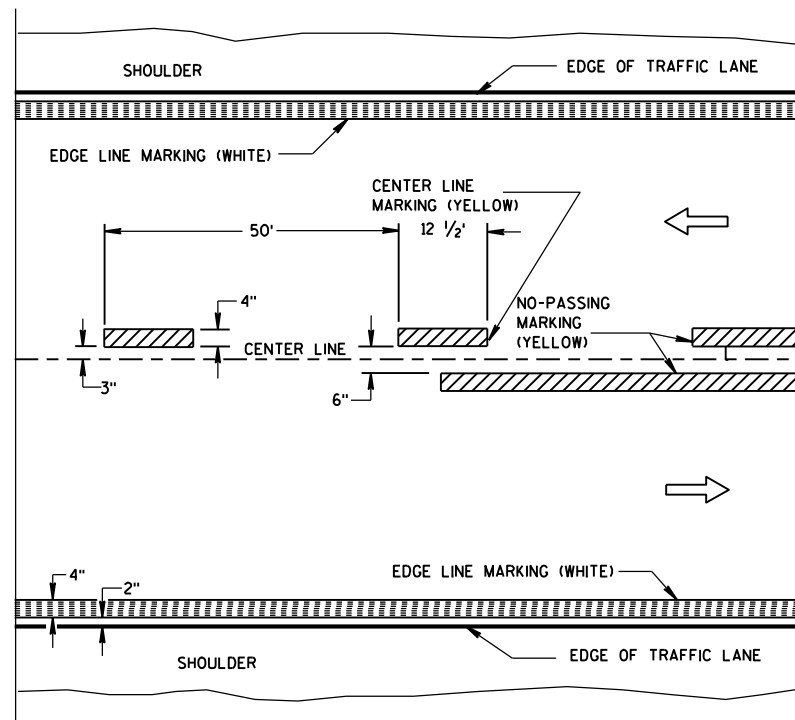
CENTER OF ROADWAY
MAINLINE ROADWAY UNDER CONSTRUCTION



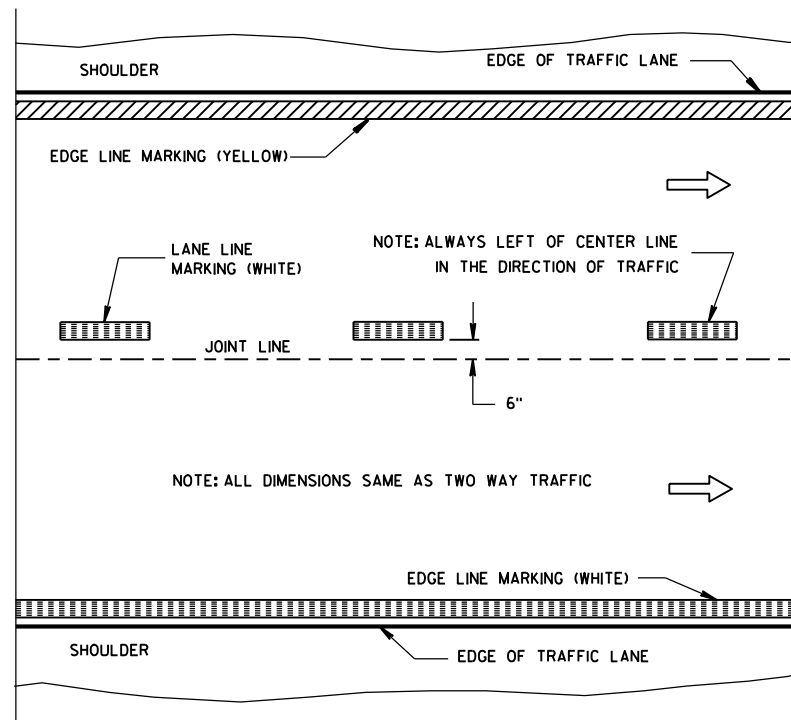
LEGEND

- POST MOUNTED SIGN
- ➡ DIRECTION OF TRAFFIC FLOW

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 5/23/00 DATE FHWA	<i>Chetan J. Spang</i> CHIEF SIGNS AND MARKING ENGINEER

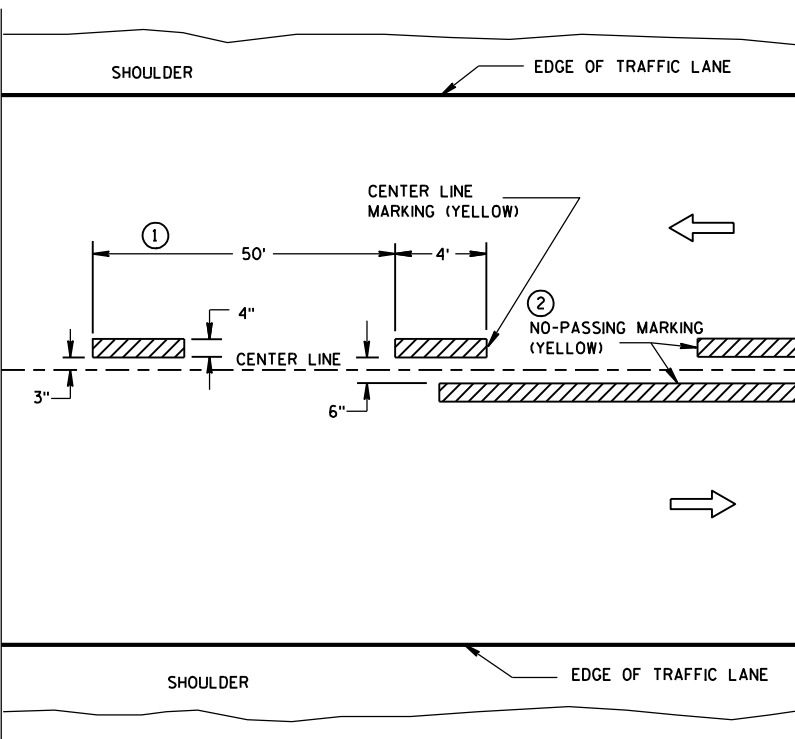


TWO WAY TRAFFIC

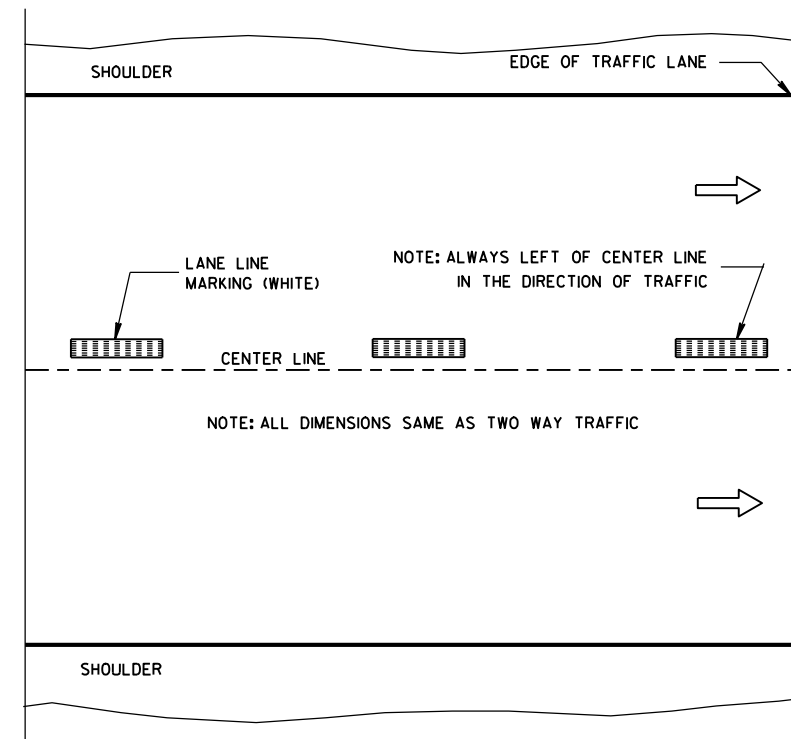


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

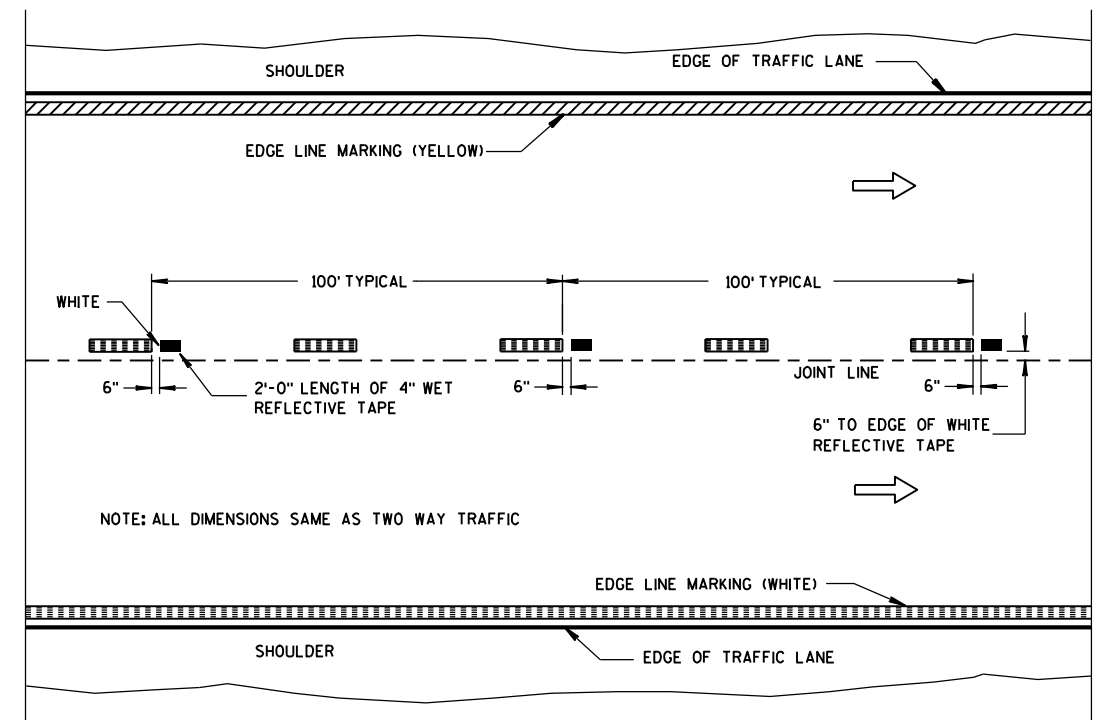
GENERAL NOTES

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.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

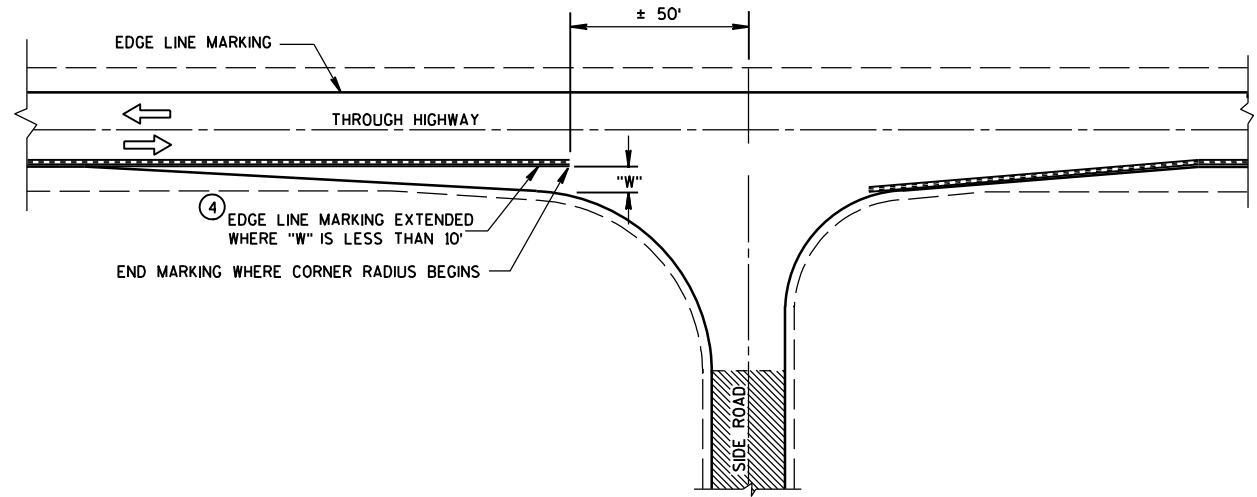


WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

PAVEMENT MARKING
(MAINLINE)

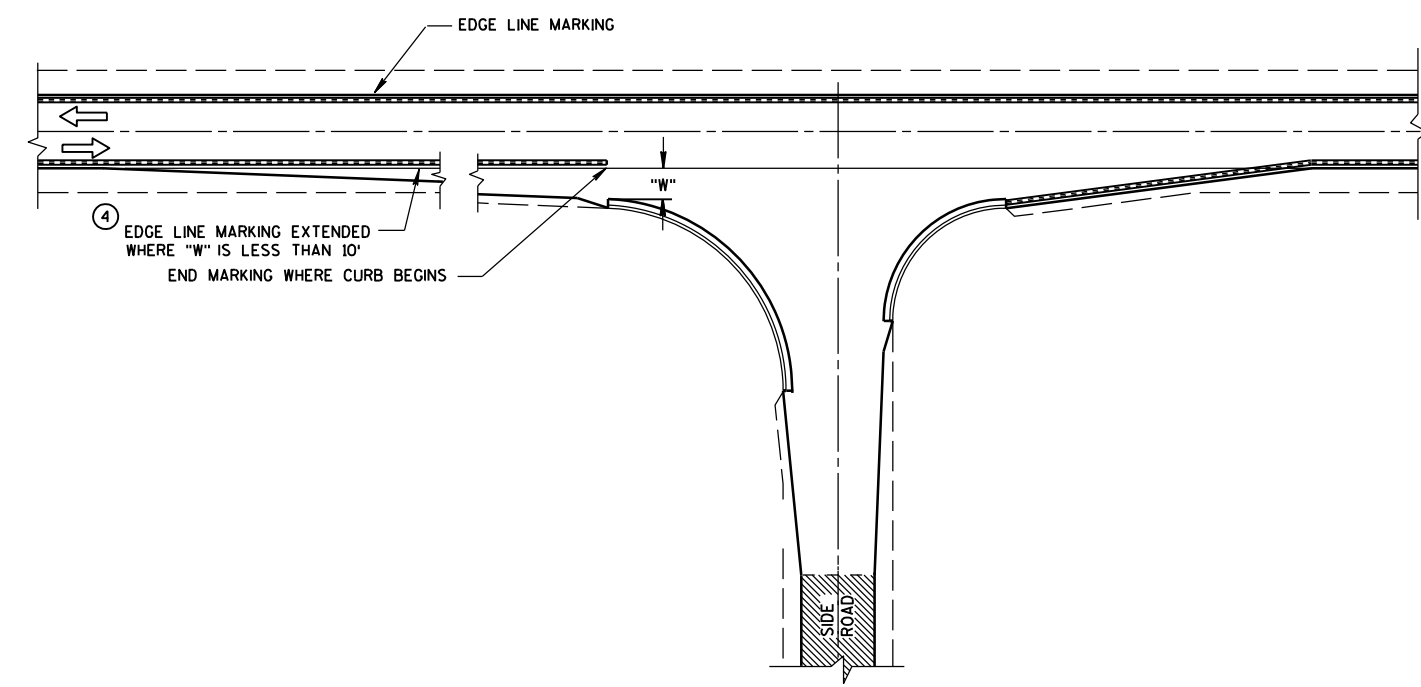
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-20-09 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



MINOR INTERSECTION WITHOUT CURBS

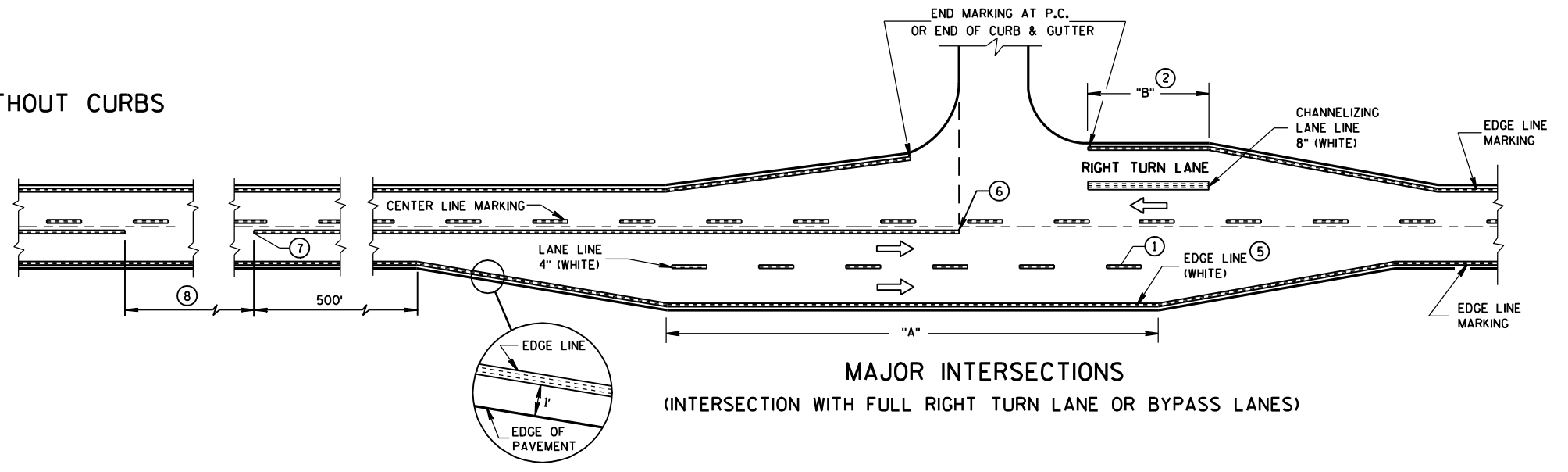
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



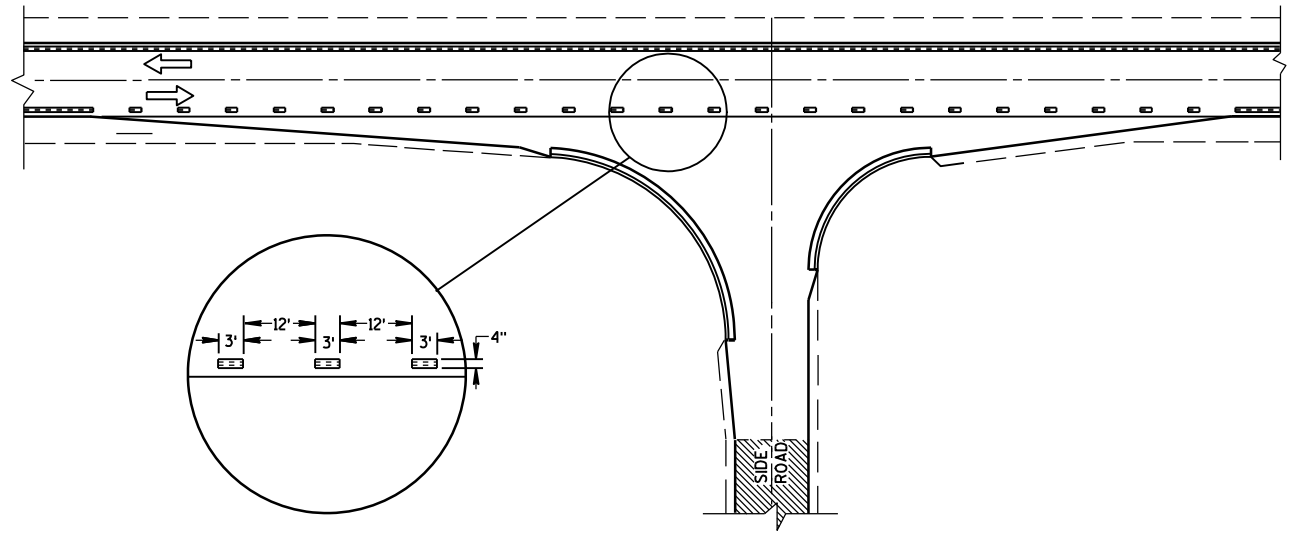
MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)

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 LOCATE THE EDGE LINE ALONG THE TAPER WHERE "W" IS 10' OR MORE.
 - 5 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.
 - 6 BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - 7 BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - 8 IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



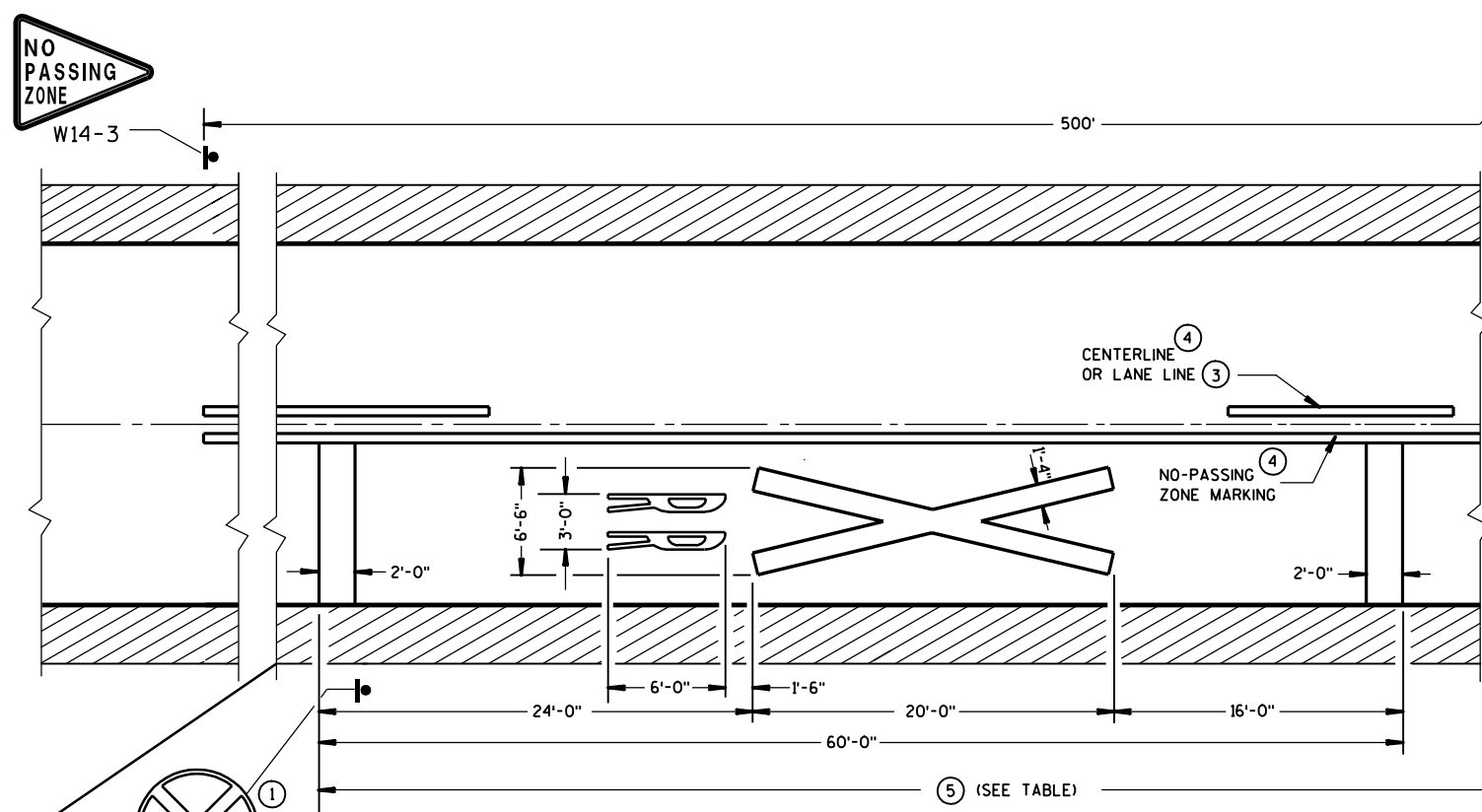
MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



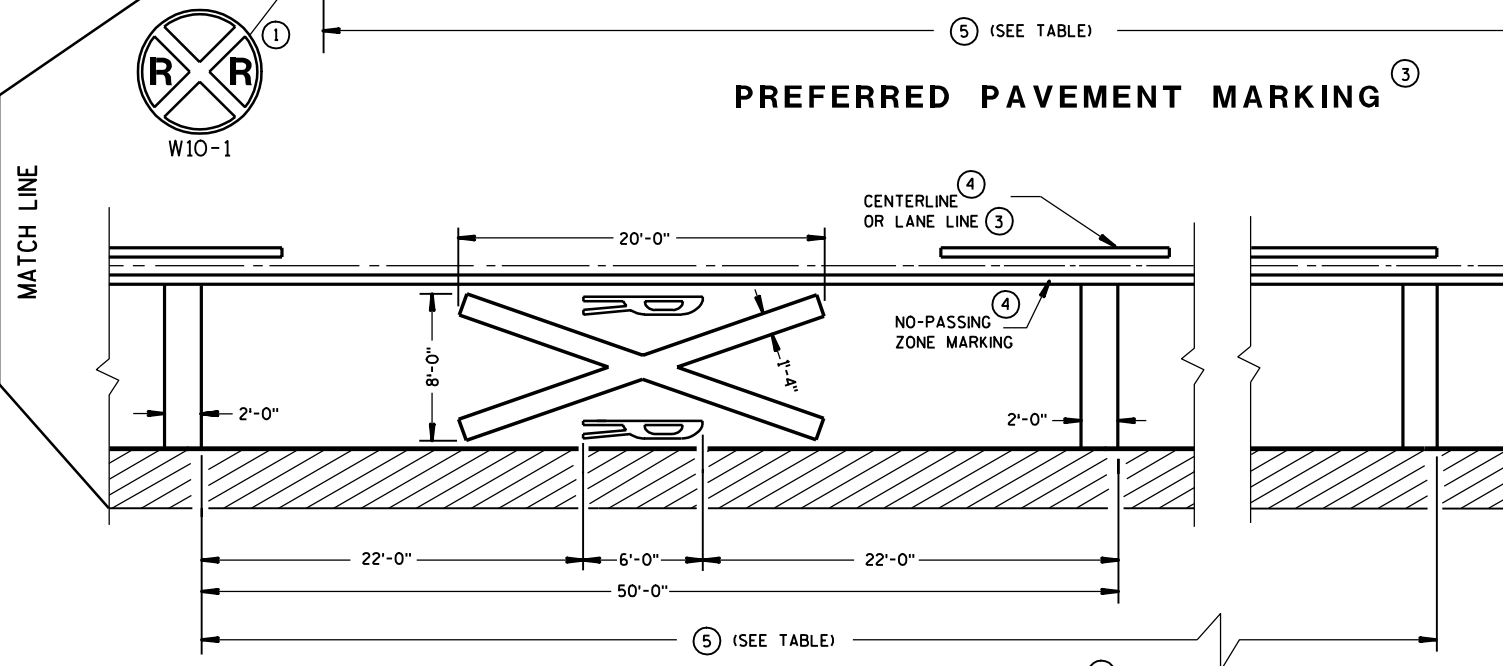
MINOR INTERSECTION WITH CURBS
(FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

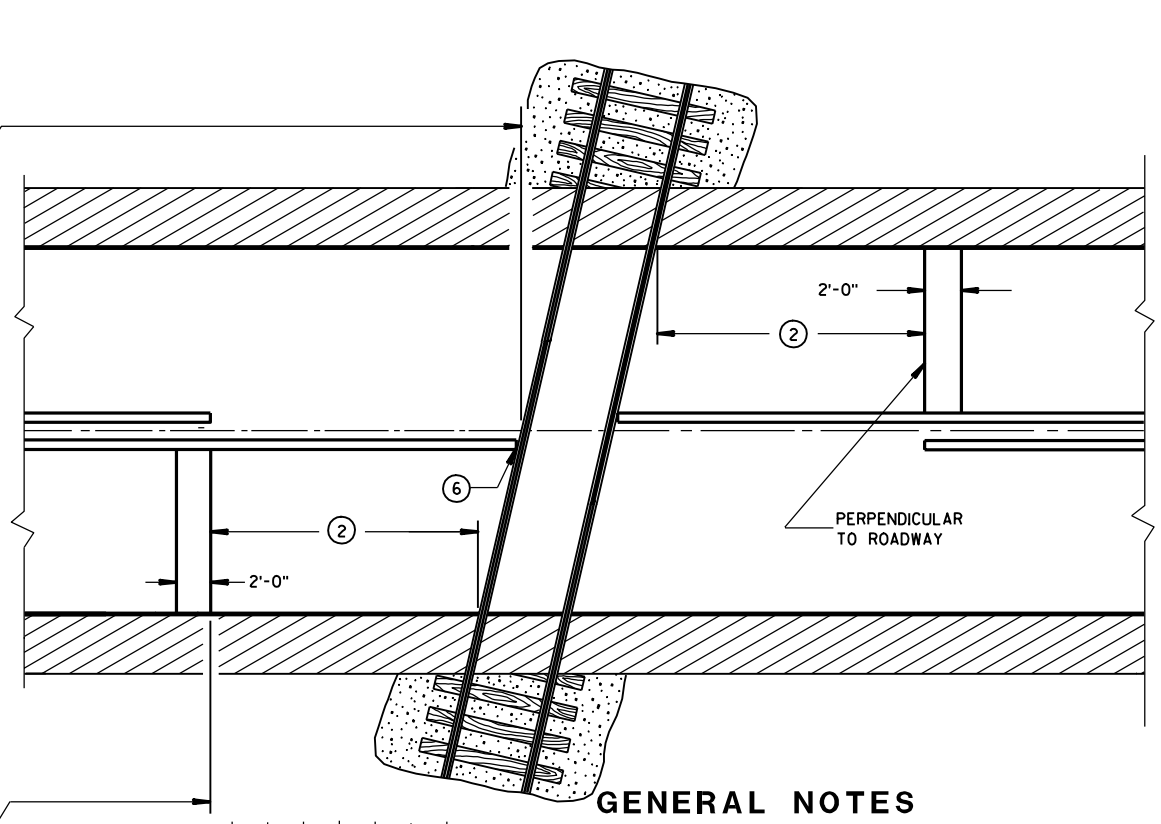


PREFERRED PAVEMENT MARKING (3)



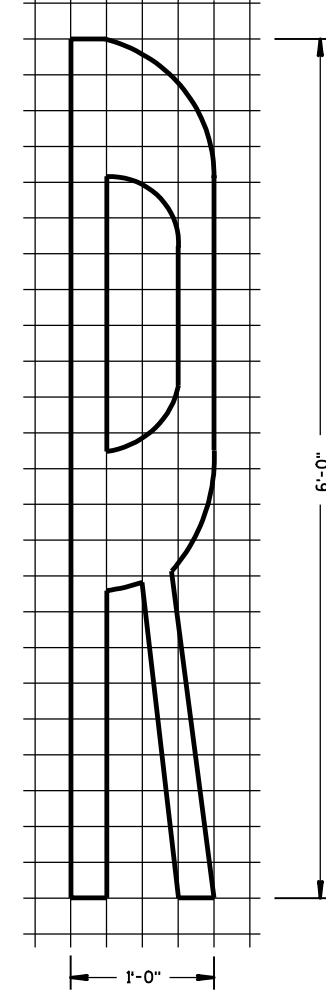
ALTERNATE PAVEMENT MARKING (3)

Posted Speed (M.P.H.)	Minimum Dimension (Feet)
25	150
30	200
35	250
40	300
45	400
50	550
55	750
60	1000
65	1000



GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.
- ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).
- CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.
- 1 A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).
 - 2 MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
 - 3 REFLECTIVE WHITE.
 - 4 REFLECTIVE YELLOW 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
 - 5 TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - 6 FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.



**SIGNING AND PAVEMENT MARKING
DETAILS FOR RAILROAD-HIGHWAY
GRADE CROSSINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/7/06 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

TWO-LANE ROADWAY

SYMBOLS



WORK AREA



FLAGGER, EQUIPPED WITH STOP/SLOW
PADDLE FASTENED ON SUPPORT STAFF

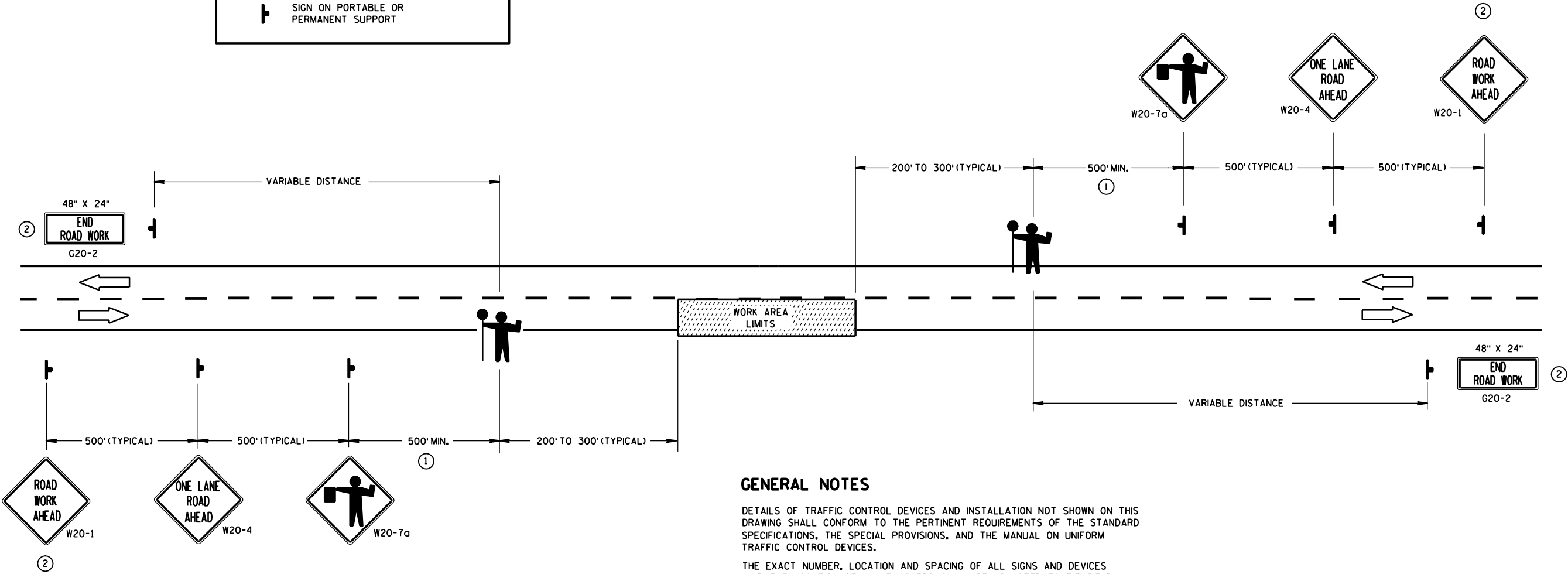


SIGN ON PORTABLE OR
PERMANENT SUPPORT



W3-4

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.



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, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

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

- 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.

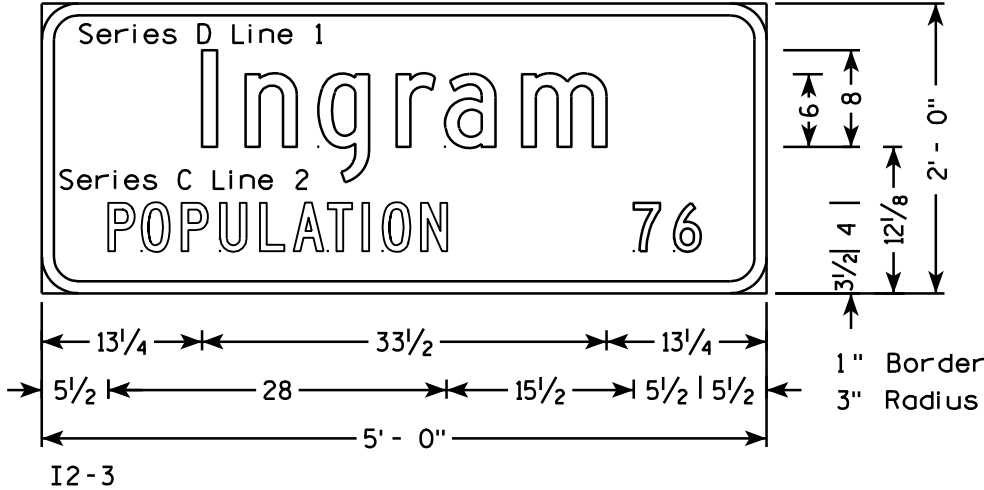
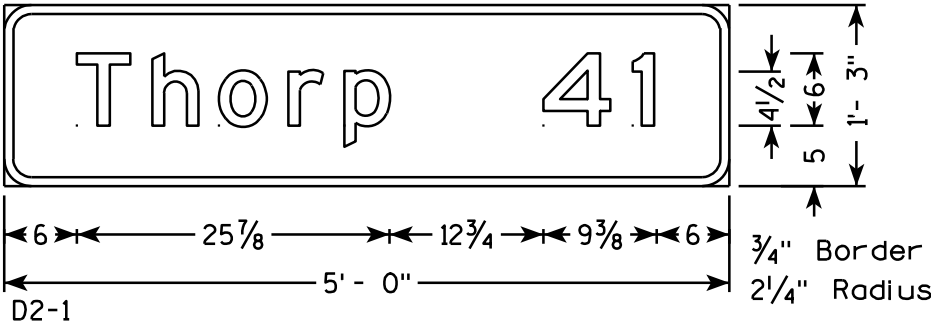
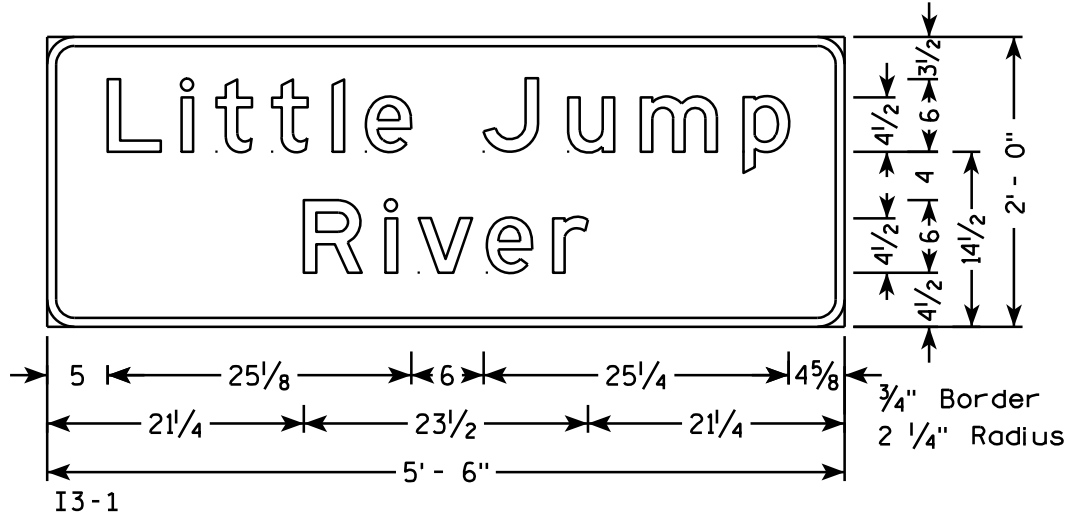
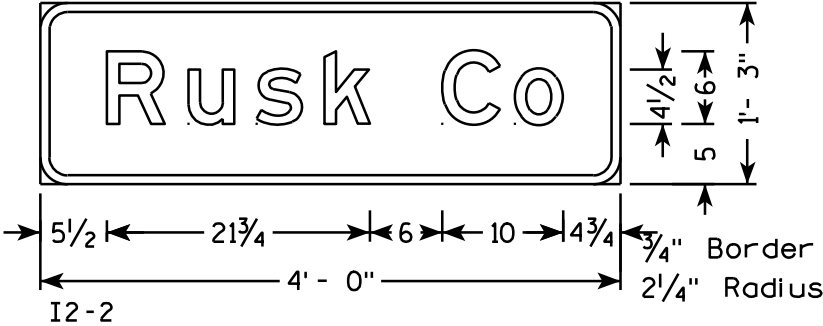
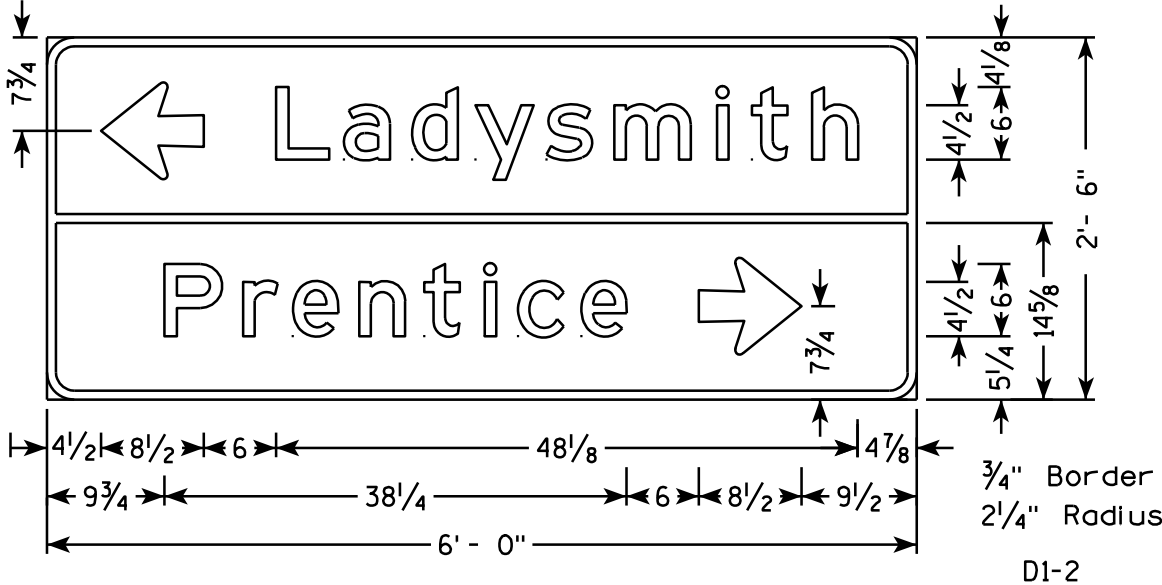
TRAFFIC CONTROL FOR LANE
CLOSURE (SUITABLE FOR
MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

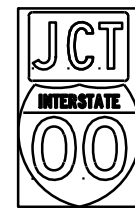
APPROVED
9/5/06 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

NOTES

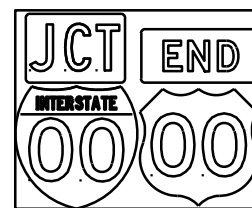
- 1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - GREEN
Message - WHITE
- 3. Message Series - E except as noted



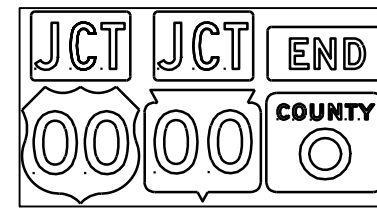
TYPICAL ASSEMBLIES



J1-1



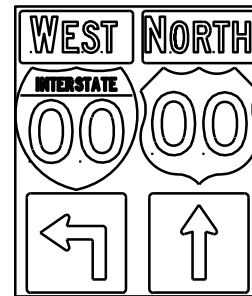
J1-2



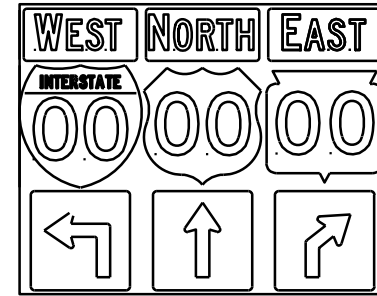
J1-3



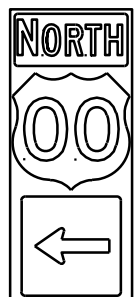
J2-1



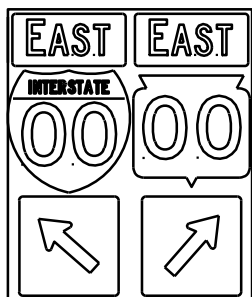
J2-2



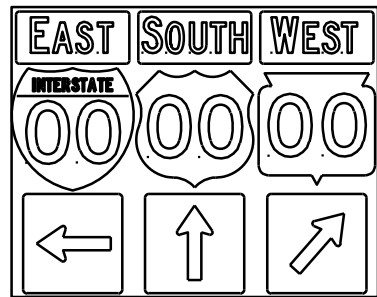
J2-3



J3-1



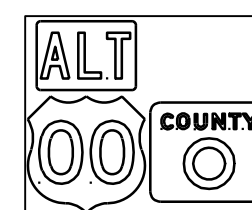
J3-2



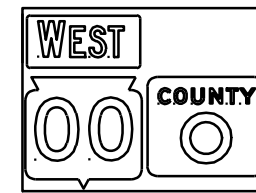
J3-3



J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1



J22-1

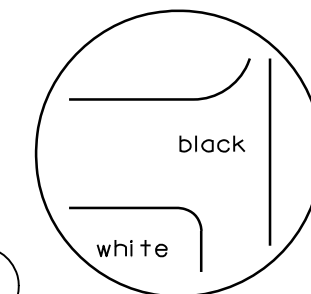
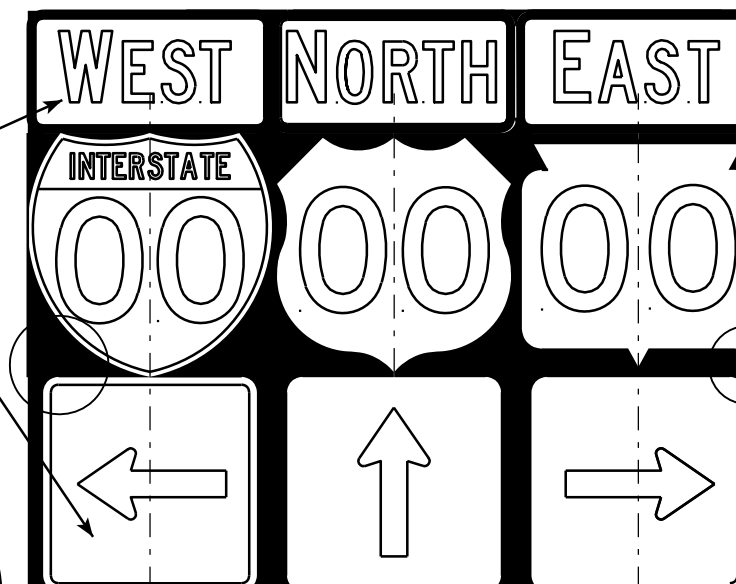
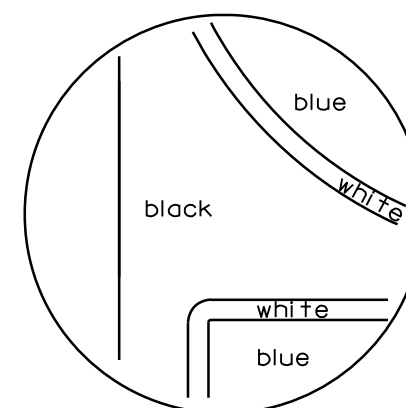


JV

NOTES

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

[blue background with interstate]



[black background]

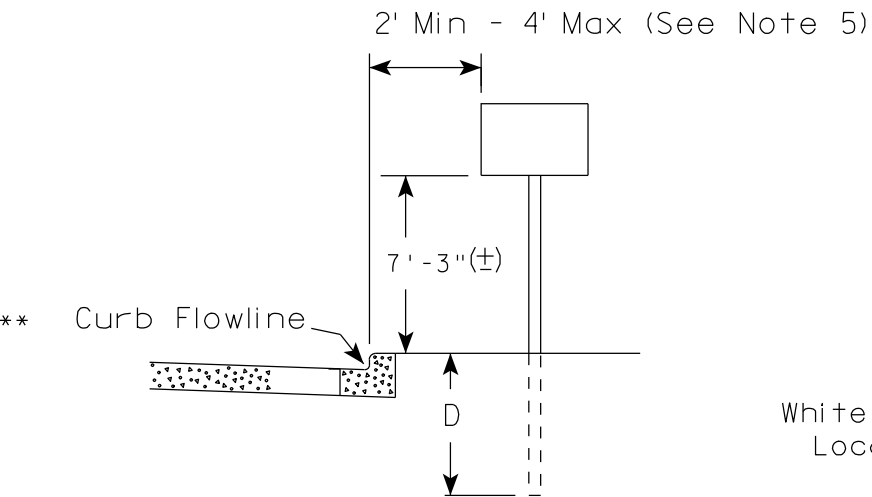
ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 10/21/09	PLATE NO. A2-1S.6

PROJECT NO:

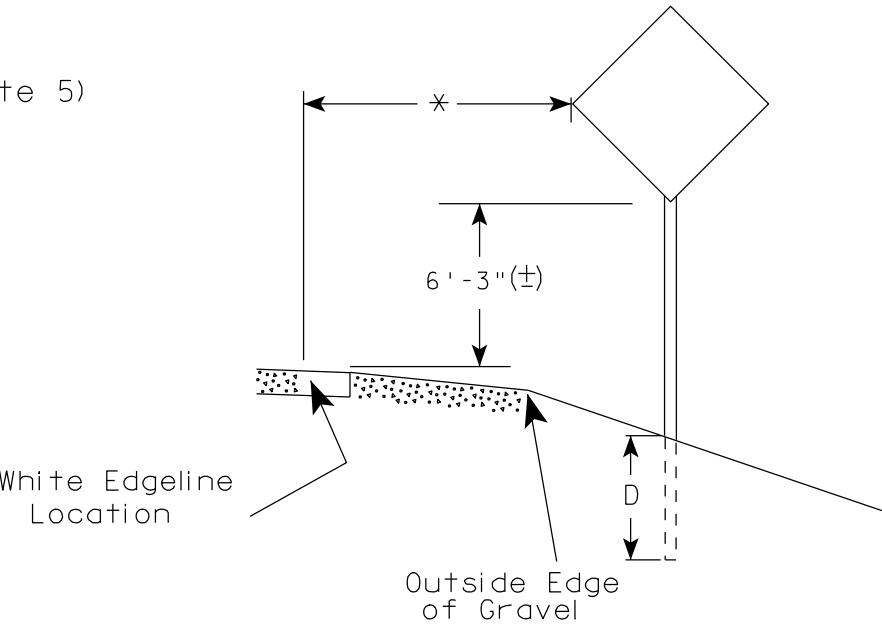
SHEET NO:

E

URBAN AREA

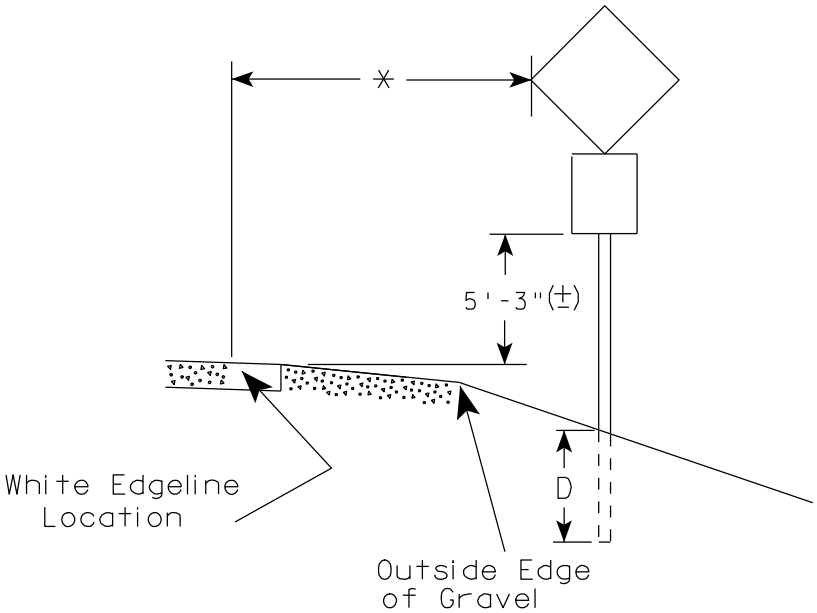
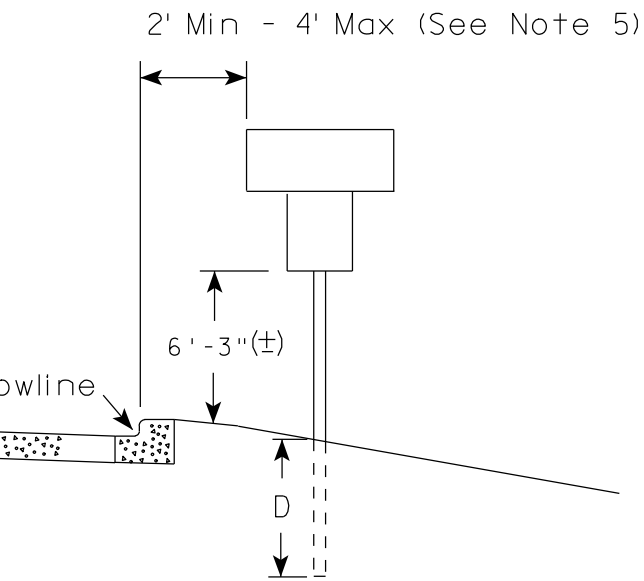


RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. 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 (A4-5) 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 stop signs (R1-1F) 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 (W1-8A), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) 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 9/30/09 PLATE NO. A4-3.15

GENERAL NOTES

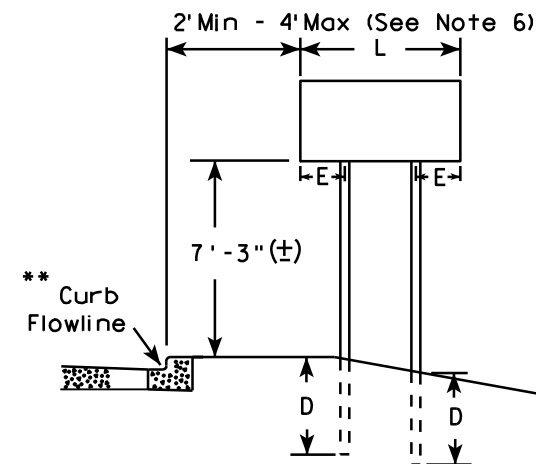
- For multiple post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (W1-8A), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) 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.

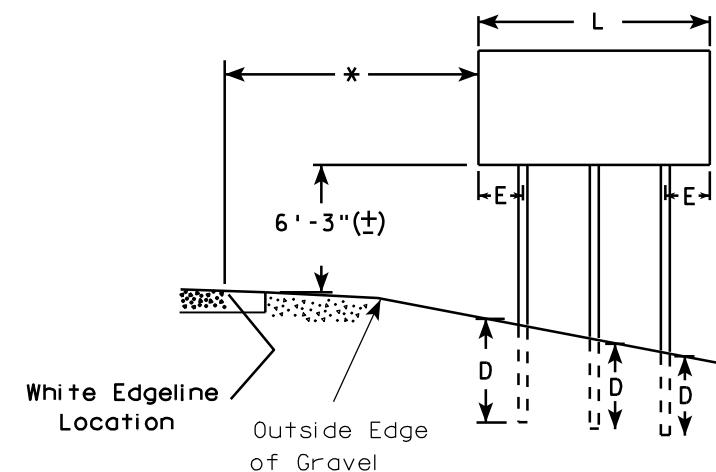
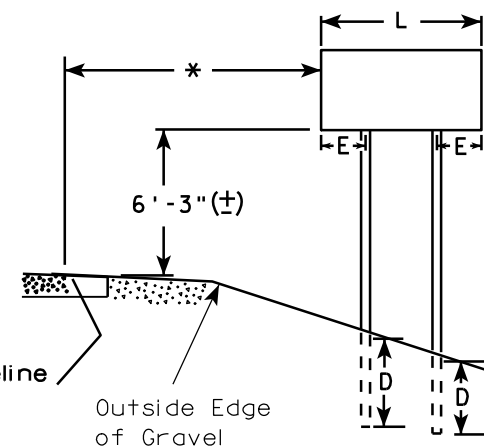
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

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

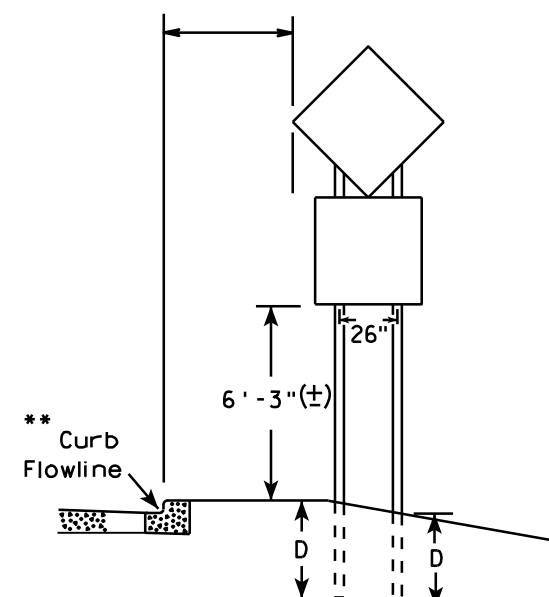
URBAN AREA



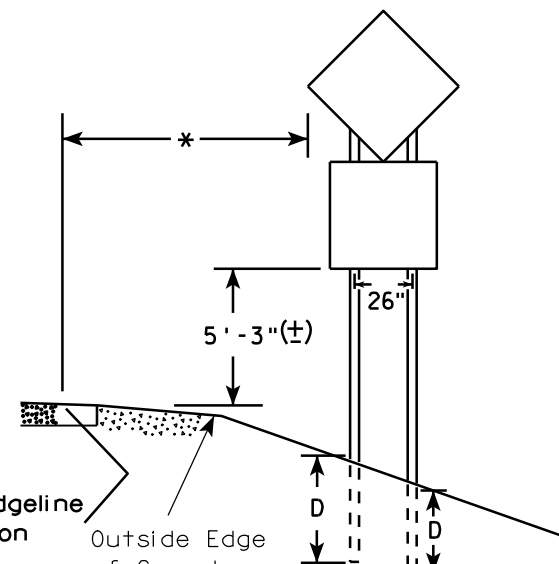
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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 *Matthew R. Rauch*
For State Traffic Engineer

DATE 9/30/09 PLATE NO. A4-4.10

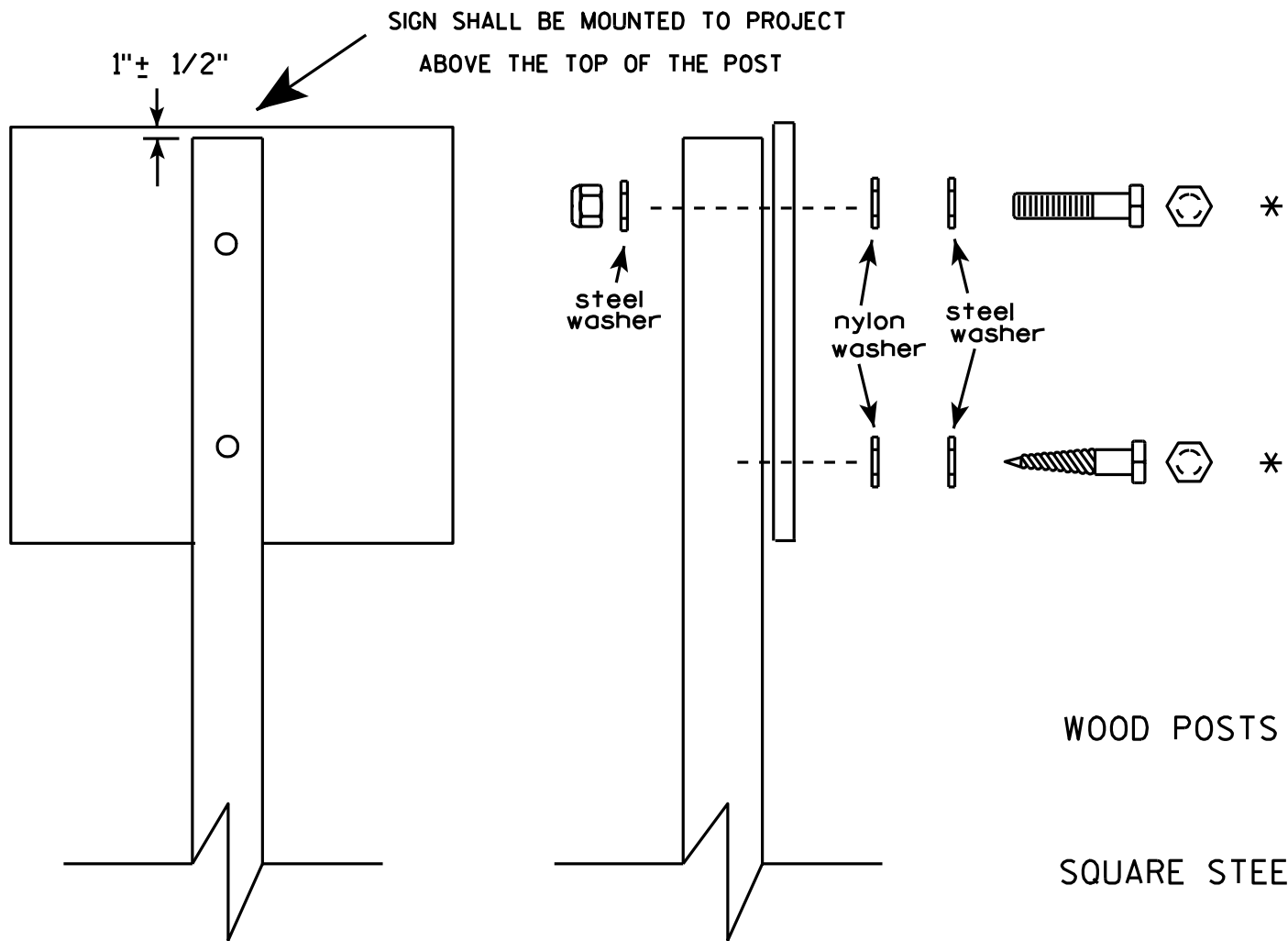
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

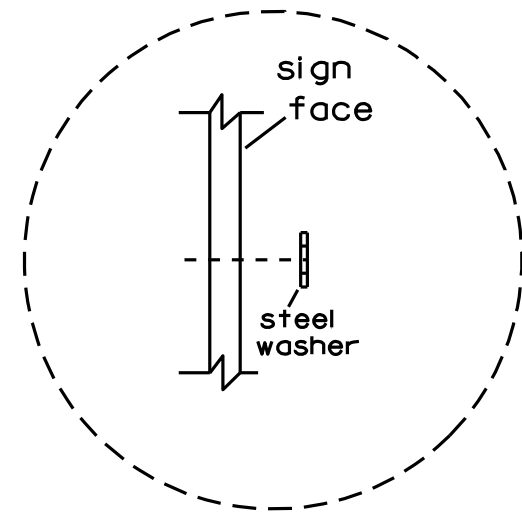


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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.

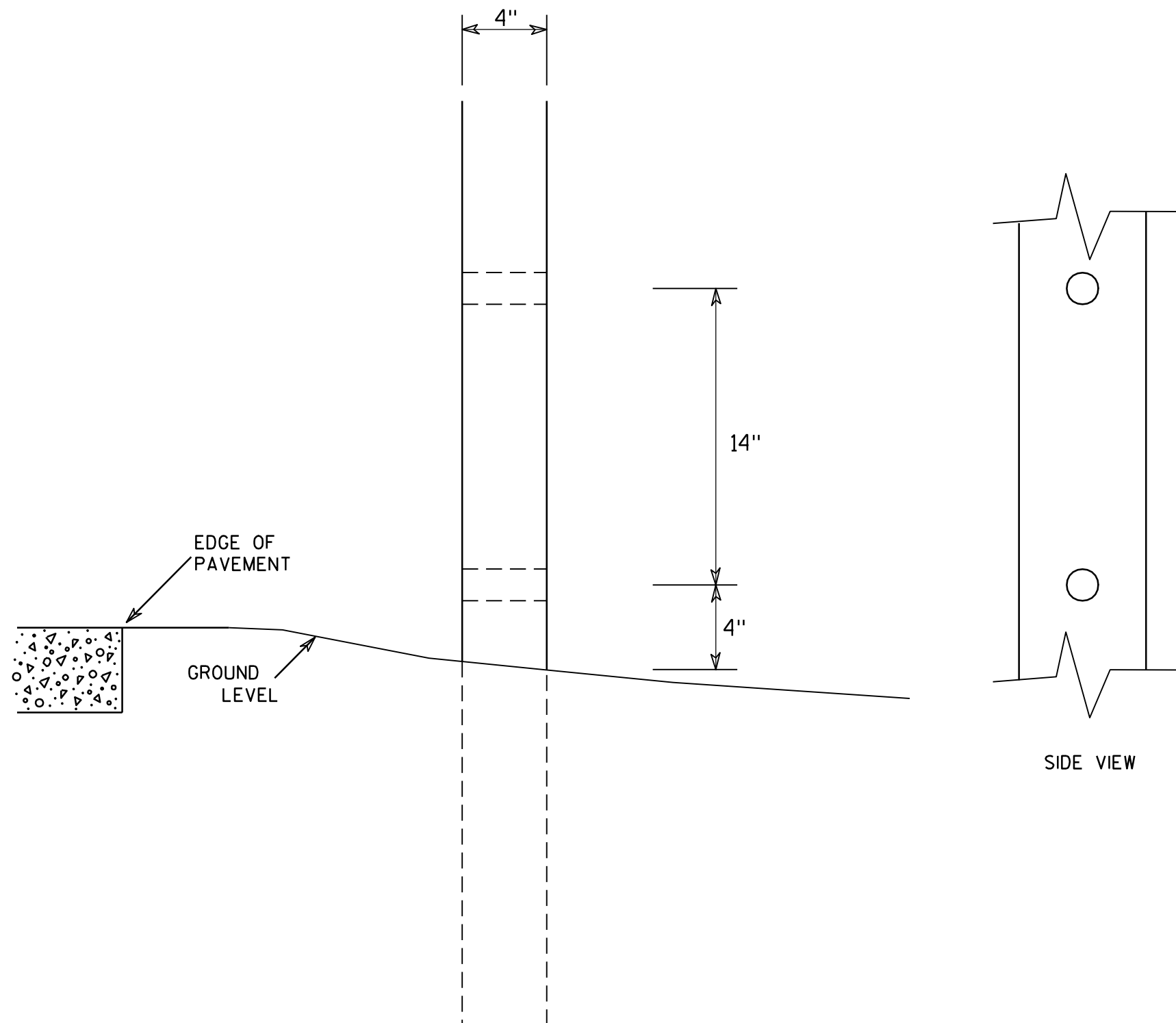


Washer Placement when Sign Has Other Than Type H or Type F Face

* 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

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

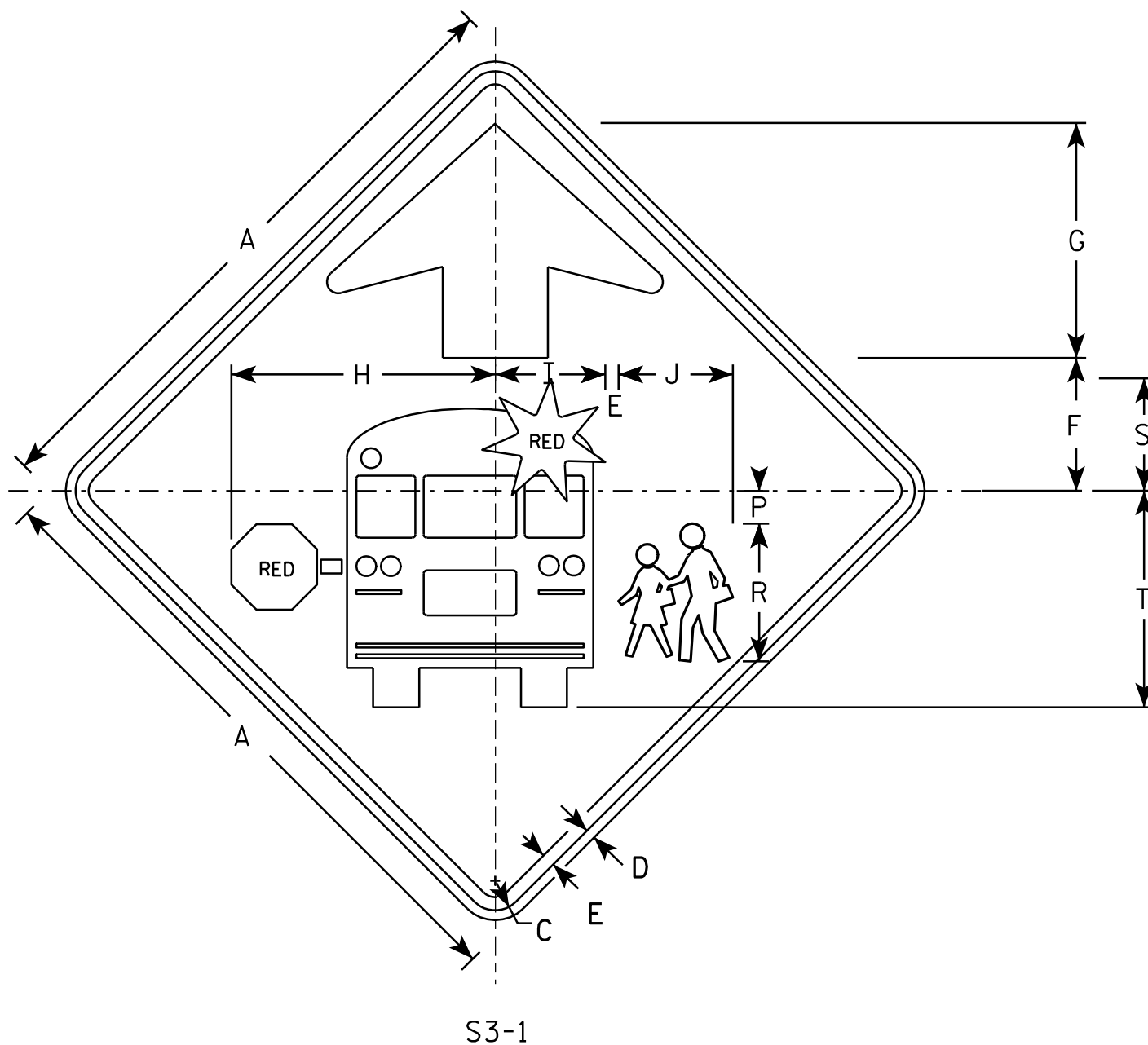
PROJECT NO:

HWY:

COUNTY:

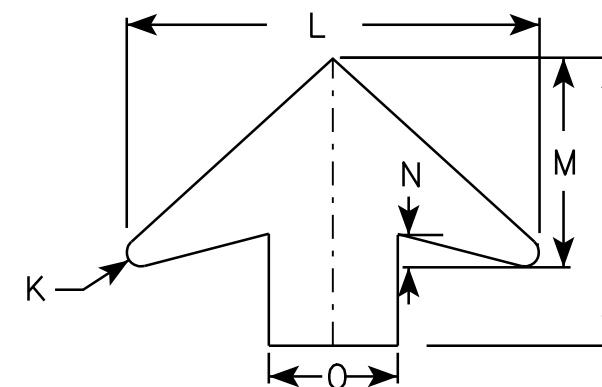
SHEET NO:

E

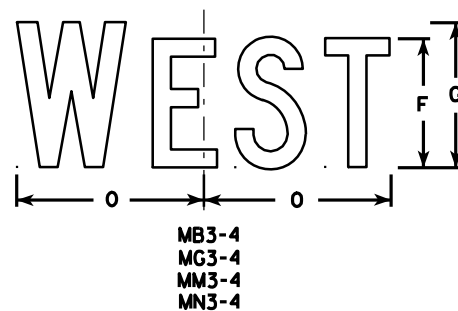
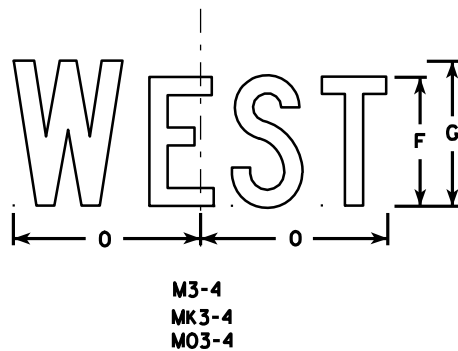
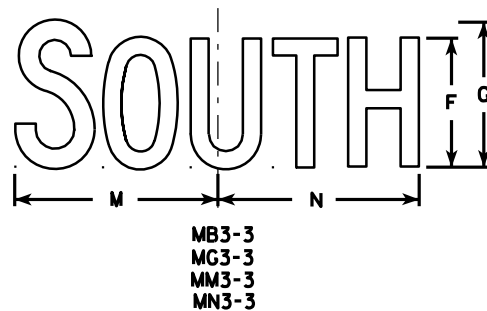
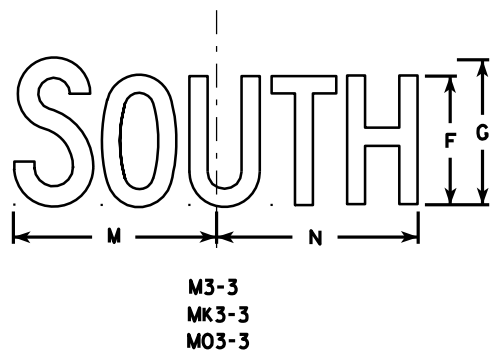
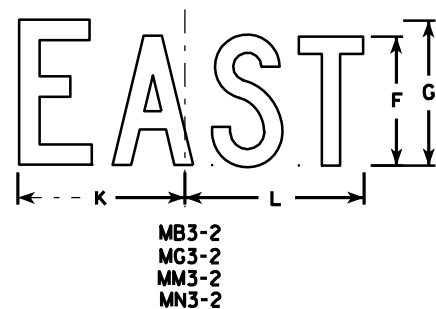
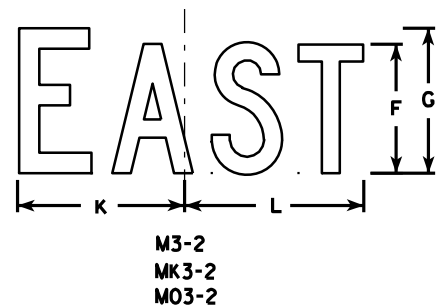
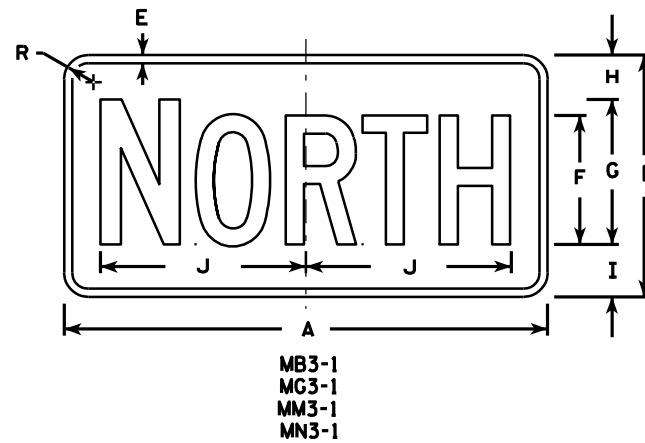
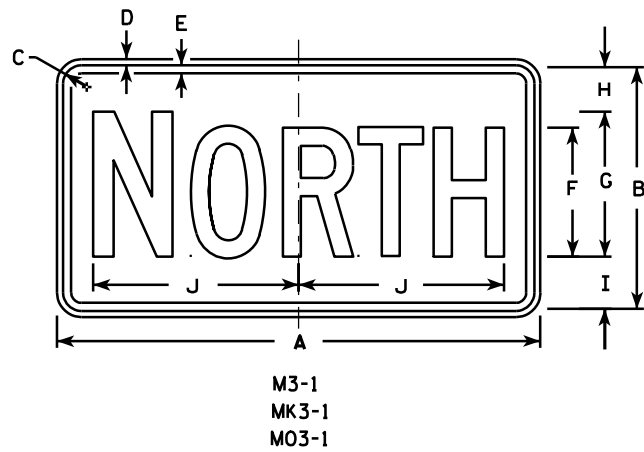


NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 - Background - YELLOW-GREEN
 - Message - BLACK except as noted
 - Circles except PEDS- RED BACKGROUND
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.

[illegible]

STANDARD SIGN	
S3-1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R. Rauch</u> for State Traffic Engineer
DATE <u>6/8/10</u>	PLATE NO. <u>S3-16</u>



NOTES

- All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4
 - Background - White - Type H Reflective (Detour or temporary signs - Reflective)
 - Message - Black
 - MB3-1 thru MB3-4
 - Background - Blue
 - Message - White - Type H Reflective (Detour or temporary signs - Reflective)
 - MG3-1 thru MG3-4
 - Background - Green
 - Message - White - Type H Reflective
 - MK3-1 thru MK3-4
 - Background - Green
 - Message - White - Type H Reflective
 - MM3-1 thru MM3-4
 - Background - White - Type H Reflective
 - Message - Green
 - MN3-1 thru MN3-4
 - Background - Brown
 - Message - White - Type H Reflective
 - M03-1 thru M03-4
 - Background - Orange - Reflective
 - Message - Black
- Note the first letter of each direction is larger than the remainder of the message.

Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 300 mm
3	750 mm X 375 mm
4	750 mm X 375 mm
5	750 mm X 375 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 m2
1																												
2	24	12	1 1/8	3/8	1/2	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	0.18
3	30	15	1 1/8	3/8	1/2	8	9	2 3/4	3 1/4	12 3/4	10 3/8	11 1/8	12 5/8	12 1/2	11 5/8			1 1/2									3.13	0.28
4	30	15	1 1/8	3/8	1/2	8	9	2 3/4	3 1/4	12 3/4	10 3/8	11 1/8	12 5/8	12 1/2	11 5/8			1 1/2									3.13	0.28
5	30	15	1 1/8	3/8	1/2	8	9	2 3/4	3 1/4	12 3/4	10 3/8	11 1/8	12 5/8	12 1/2	11 5/8			1 1/2									3.13	0.28

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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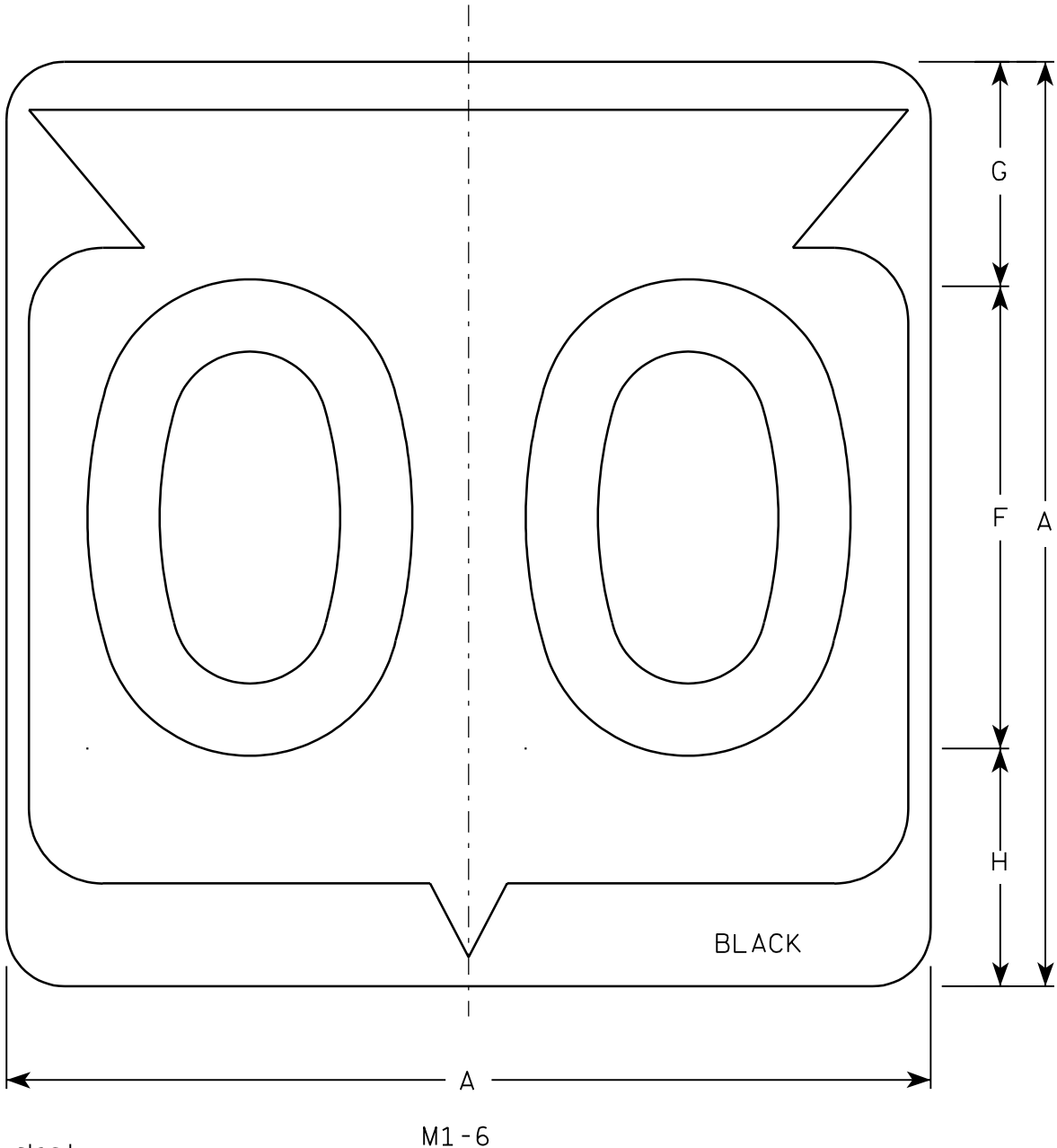
STANDARD SIGNS M3-1 thru M3-4 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M3-1.11

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:

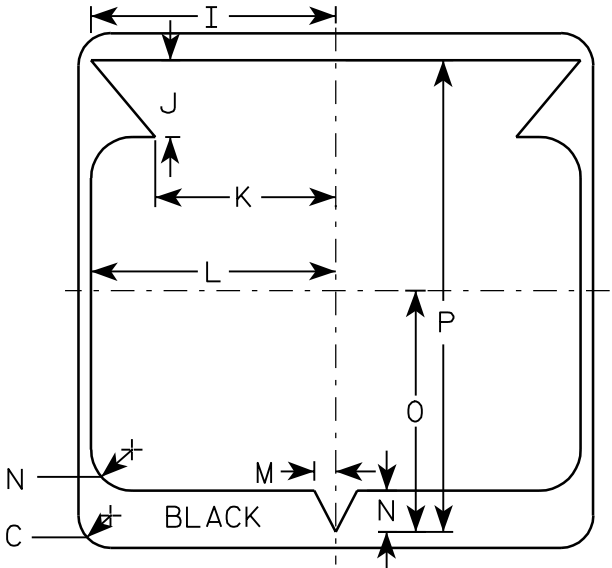
COUNTY:

SHEET NO:

E

NOTES

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



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

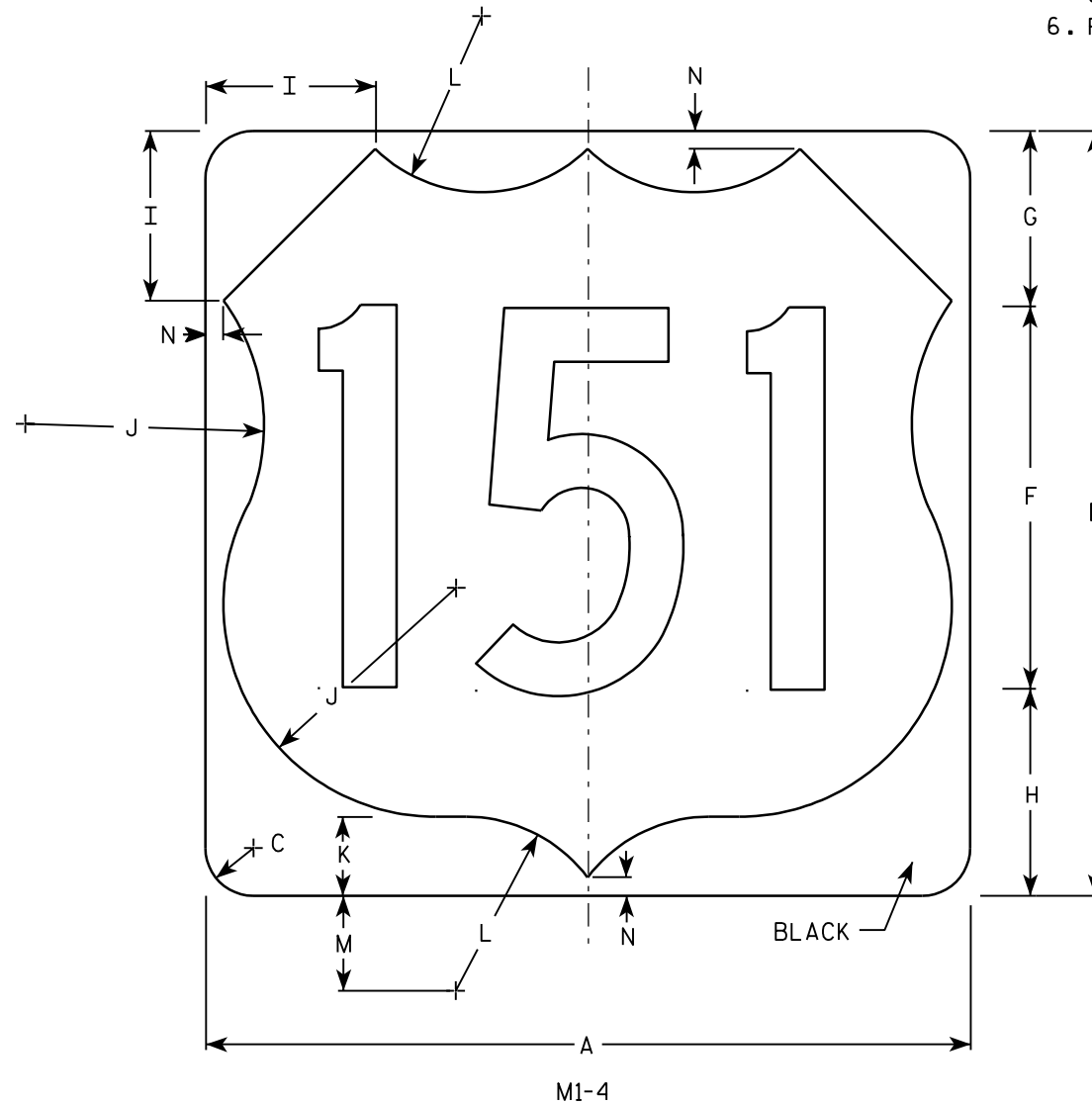
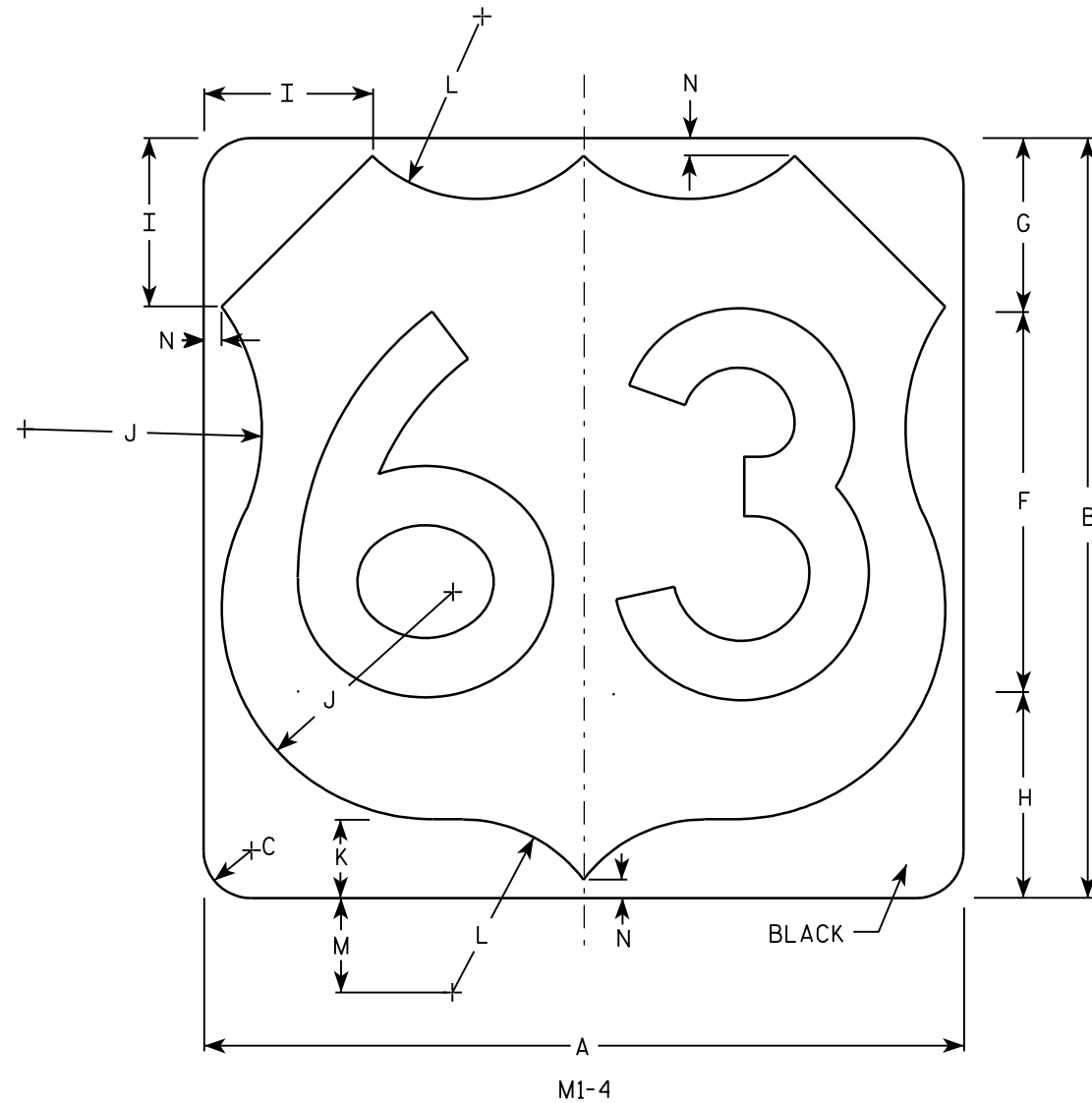
Chester J. Spang
for State Traffic Engineer

DATE 3/20/02

PLATE NO. M1-6.9

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 numerals and adjust
spacing as per Plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or other temporary signs
Background - Reflective



Metric equivalent
for this sign is:

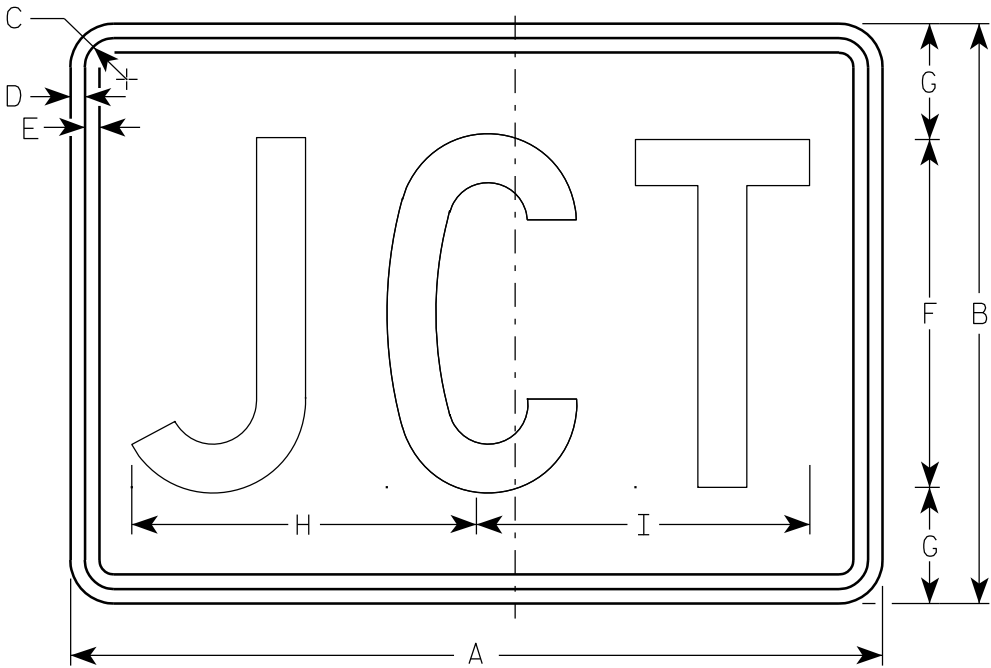
SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Areq sq. ft.	Areq m ²
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

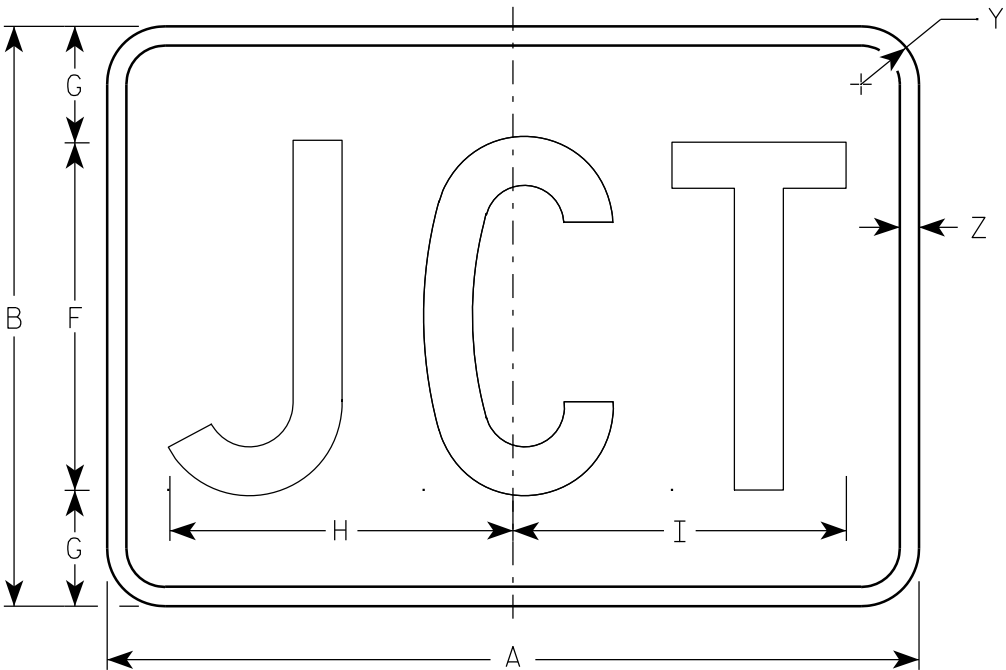
PROJECT NO: HWY: COUNTY: SHEET NO: E

NOTES

1. Sign is Type II - See Note 5 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB2-1 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG2-1 Background - Green
Message - White - Type H Reflective
MK2-1 Background - Green
Message - White - Type H Reflective
MM2-1 Background - White - Type H Reflective
Message - Green
MN2-1 Background - Brown
Message - White - Type H Reflective
MR2-1 Background - Brown
Message - Yellow - Type H Reflective



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
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	0.20
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	0.20
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	0.20

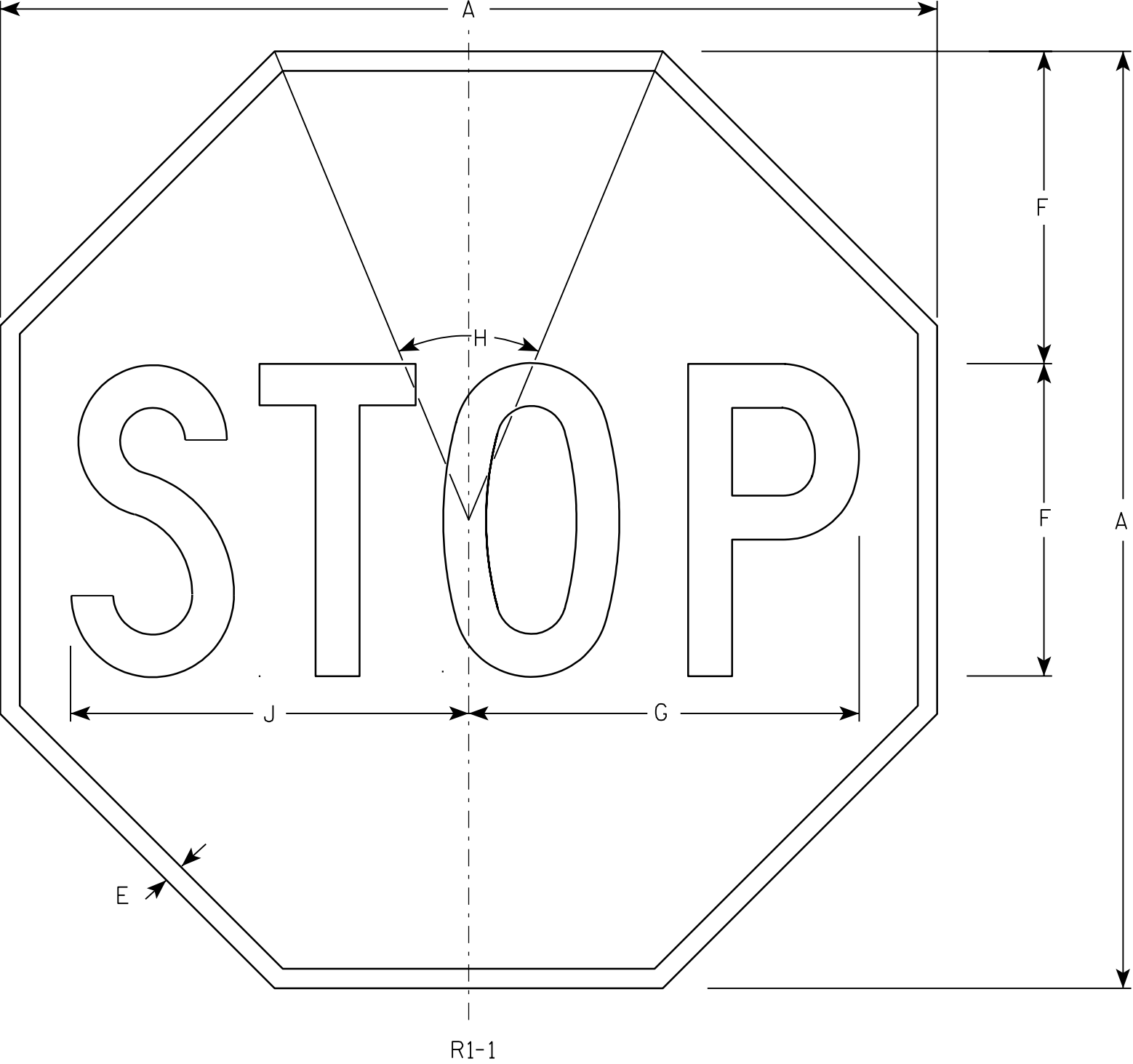
STANDARD SIGN
M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10

7



- 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

Metric equivalent
for this sign is:

SIZE	
1	600 mm X 600 mm
2	750 mm X 750 mm
3	900 mm X 900 mm
4	1200 mm X 1200 mm
5	1200 mm X 1200 mm
6	450 mm X 450 mm
7	300 mm X 300 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	24				$\frac{3}{8}$	8	10	45°		10 $\frac{1}{4}$																	3.31	0.31
2	30				$\frac{5}{8}$	10	12 $\frac{1}{2}$	45°		12 $\frac{3}{4}$																	5.18	0.48
3	36				$\frac{3}{4}$	12	15	45°		15 $\frac{3}{8}$																	7.46	0.69
4	48				1	16	20	45°		20 $\frac{1}{2}$																	13.25	1.23
5	48				1	16	20	45°		20 $\frac{1}{2}$																	13.25	1.23
6	18				$\frac{3}{8}$	6	7 $\frac{3}{4}$	45°		7 $\frac{3}{4}$																	1.86	0.17
7	12				$\frac{1}{4}$	4	5	45°		5 $\frac{1}{8}$																	0.78	0.07

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Chester J. Spang
for State Traffic Engineer

DATE 10/15/98 PLATE NO. R1-1.11

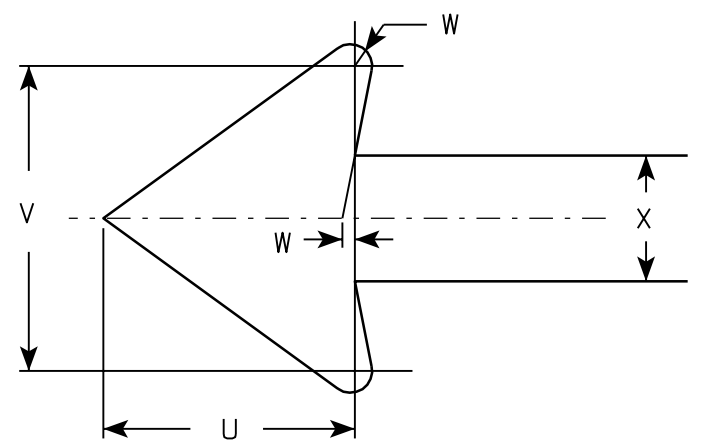
7



R7-1

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 - Red
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. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)



Metric equivalent
for this sign is:

SIZE	
1	300 mm X 450 mm
2	450 mm X 600 mm
3	600 mm X 750 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5	0.14
2	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0	0.27
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0	0.45
4																												
5																												

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Christa J. Spang*
for State Traffic Engineer

DATE 2/7/02 PLATE NO. R7-1.8

PROJECT NO:

HWY:

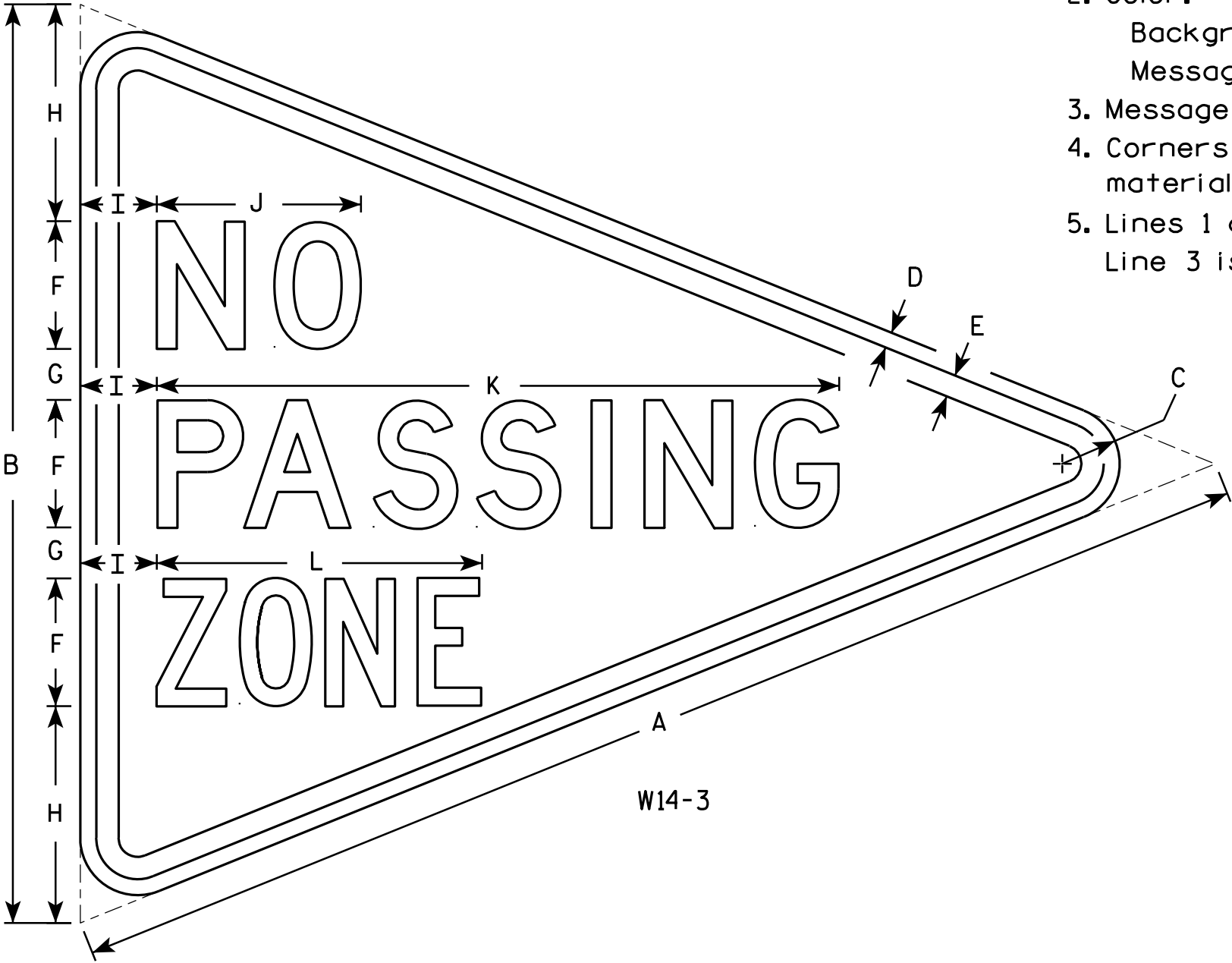
COUNTY:

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

Metric equivalent
for this sign is:

SIZE	
1	
2	300 mm X 900 mm
3	450 mm X 1350 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0	0.27
3	18	54				6	5 1⁄2	8 1⁄2	45°	6	6 5⁄6																6.75	0.61
4																												
5																												

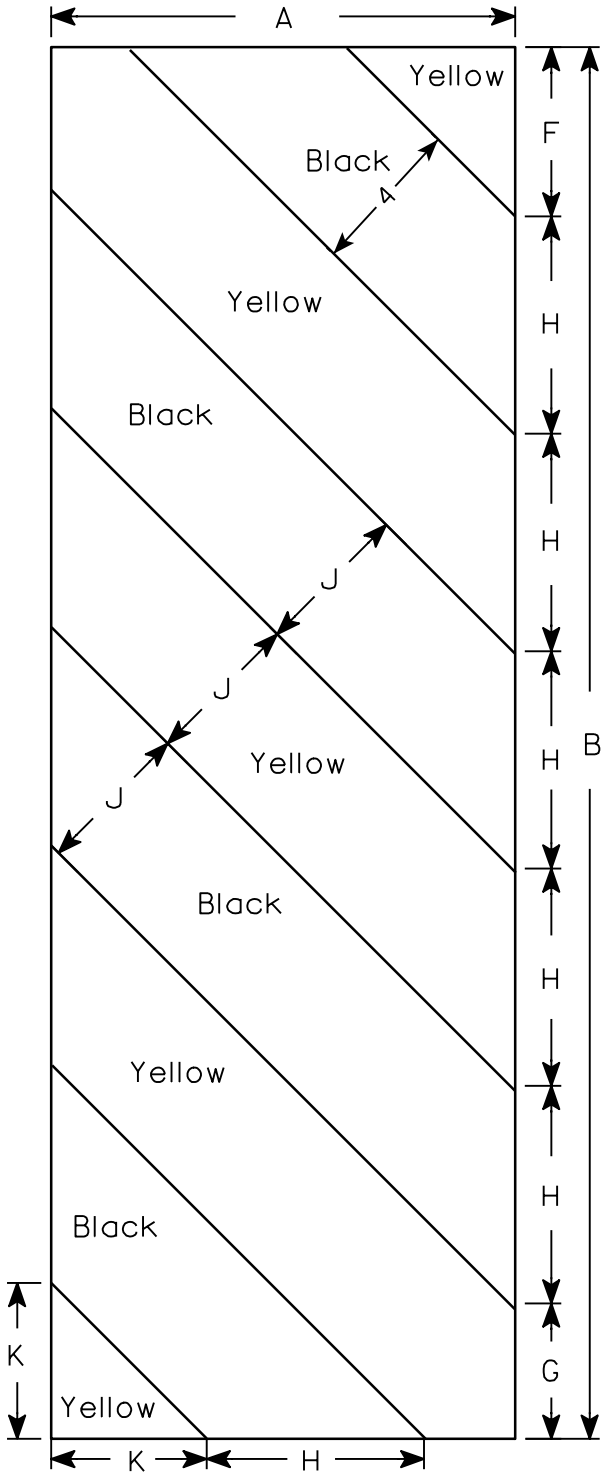
PROJECT NO:

HWY:

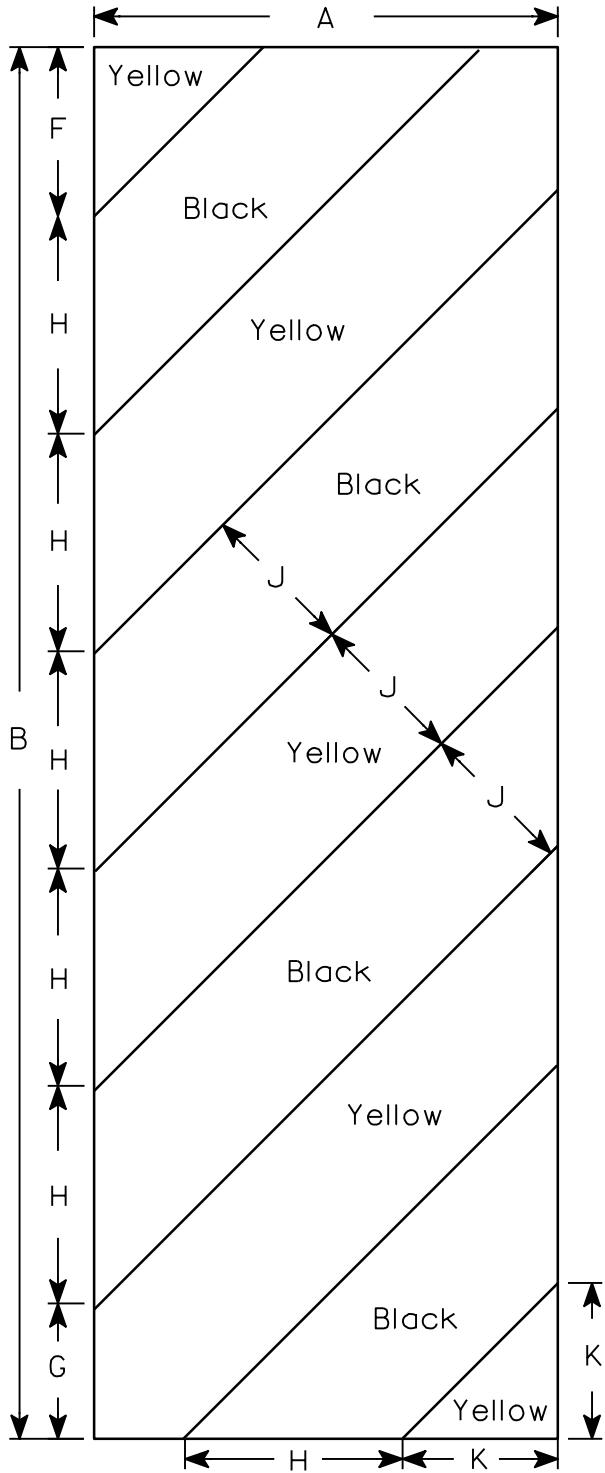
COUNTY:

SHEET NO:

E



W5-52L



W5-52R

NOTES

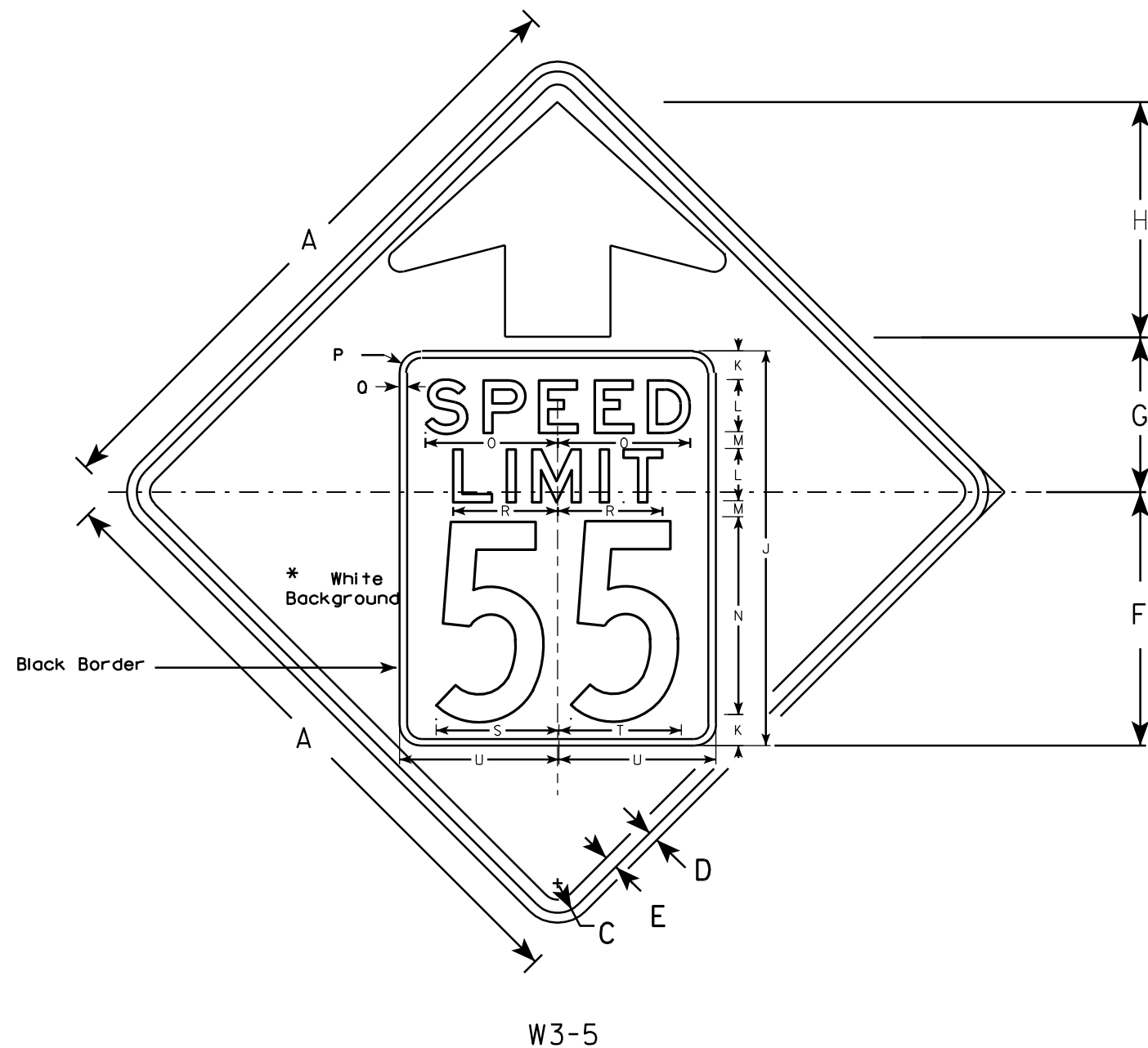
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material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

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED 
for State Traffic Engineer

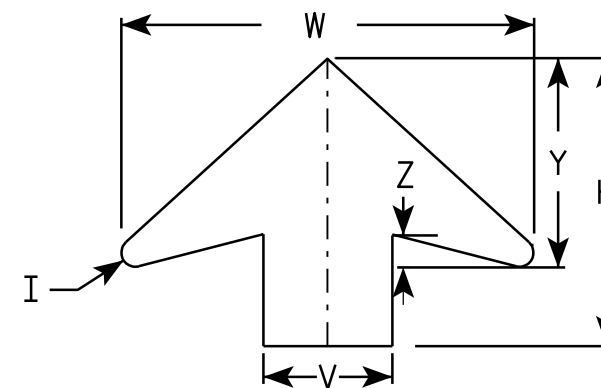
DATE 8/13/97 PLATE NO. W5-52.7



NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
Background - YELLOW*
Message - BLACK
3. Message Series - E
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	15	9	13 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		9 3⁄4	1 5⁄8	9.0
2M	36		1 5⁄8	5⁄8	3⁄4	15	9	13 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		9 3⁄4	1 5⁄8	9.0
3	36		1 5⁄8	5⁄8	3⁄4	15	9	13 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		9 3⁄4	1 5⁄8	9.0
4	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 7⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 3⁄8	9 1⁄4	12	8	25 5⁄8		13	2	16.0
5	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 7⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	8 1⁄4	8	12	8	25 5⁄8		13	2	16.0

STANDARD SIGN W3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-5.2

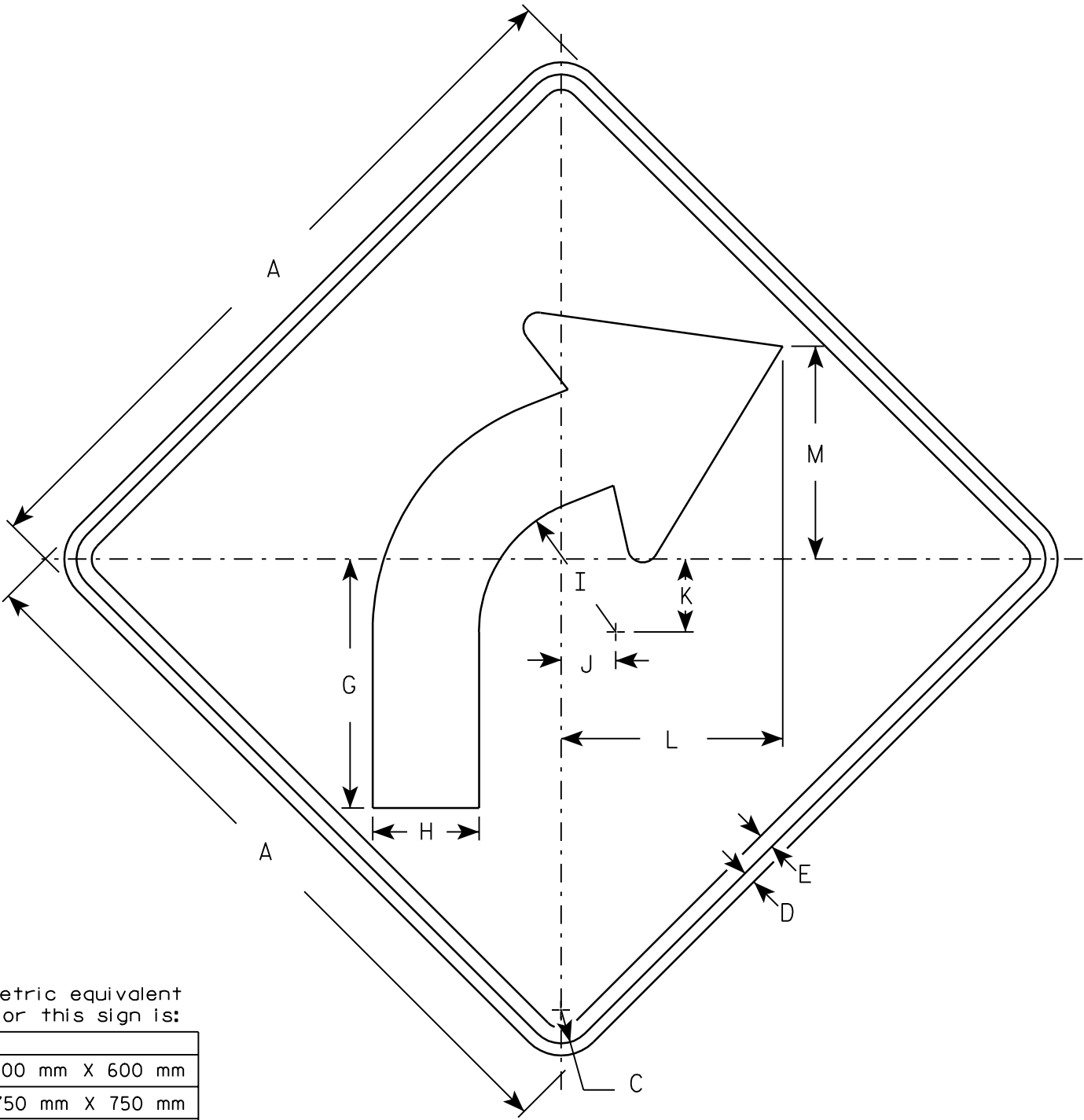
PROJECT NO:

SHEET NO:

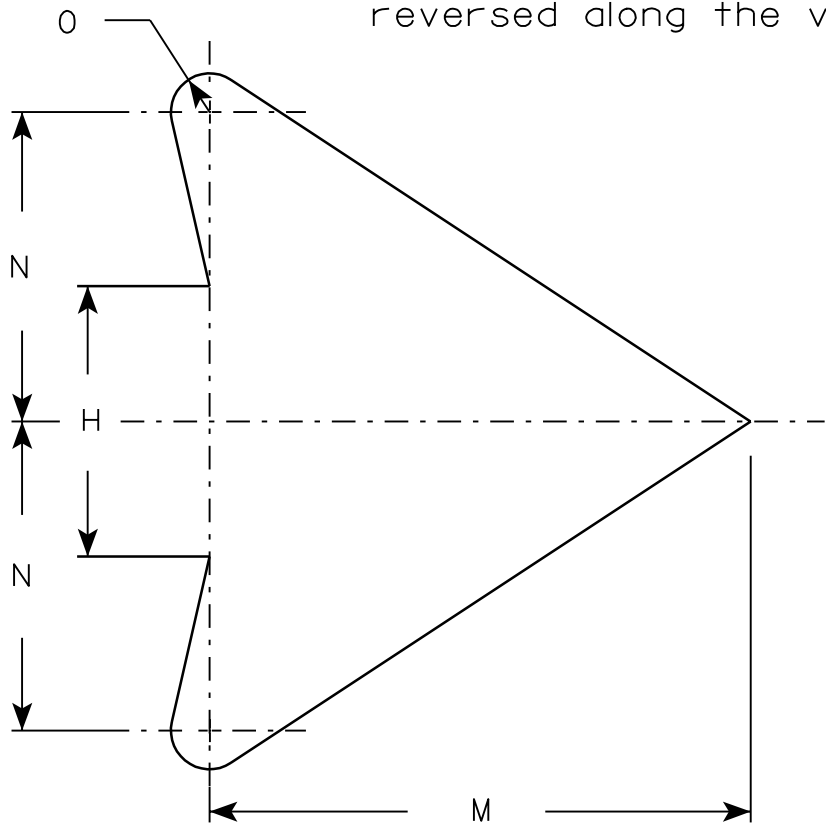
E

NOTES

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



W1-2R



ARROW DETAIL

Metric equivalent
for this sign is:

SIZE	
1	600 mm X 600 mm
2	750 mm X 750 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	1200 mm X 1200 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	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0	0.36
2	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25	0.56
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0	0.81
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0	0.81
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0	1.44

STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Christa J. Spang
for State Traffic Engineer

DATE 01/14/02

PLATE NO. W1-2.8

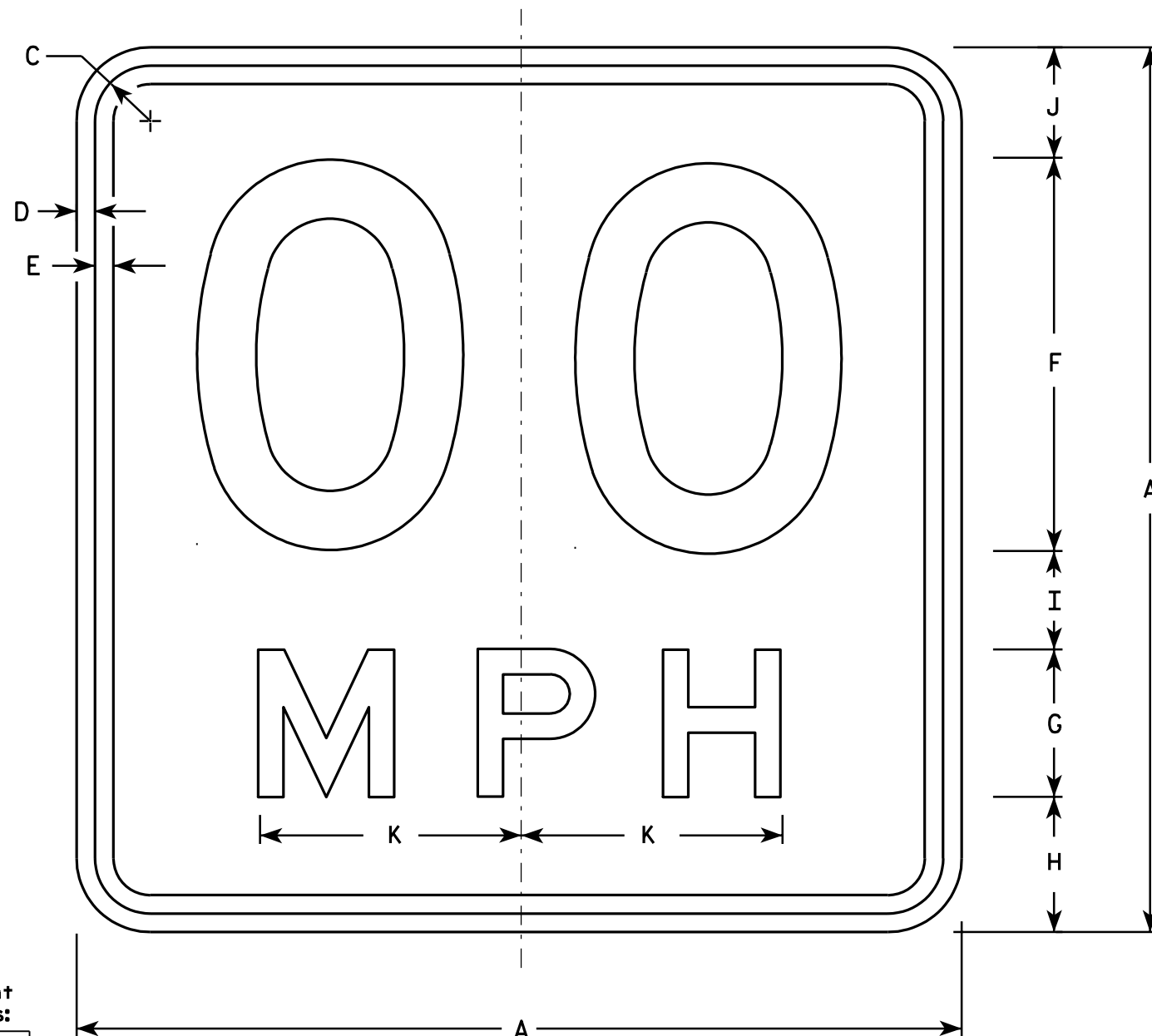
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

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

Metric equivalent
for this sign is:

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

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq.
1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25	0.20
2*	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25	0.20
2*	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00	0.36
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00	0.36
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00	0.81
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00	0.81

STANDARD SIGN W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/05/06 PLATE NO. W13-1.14

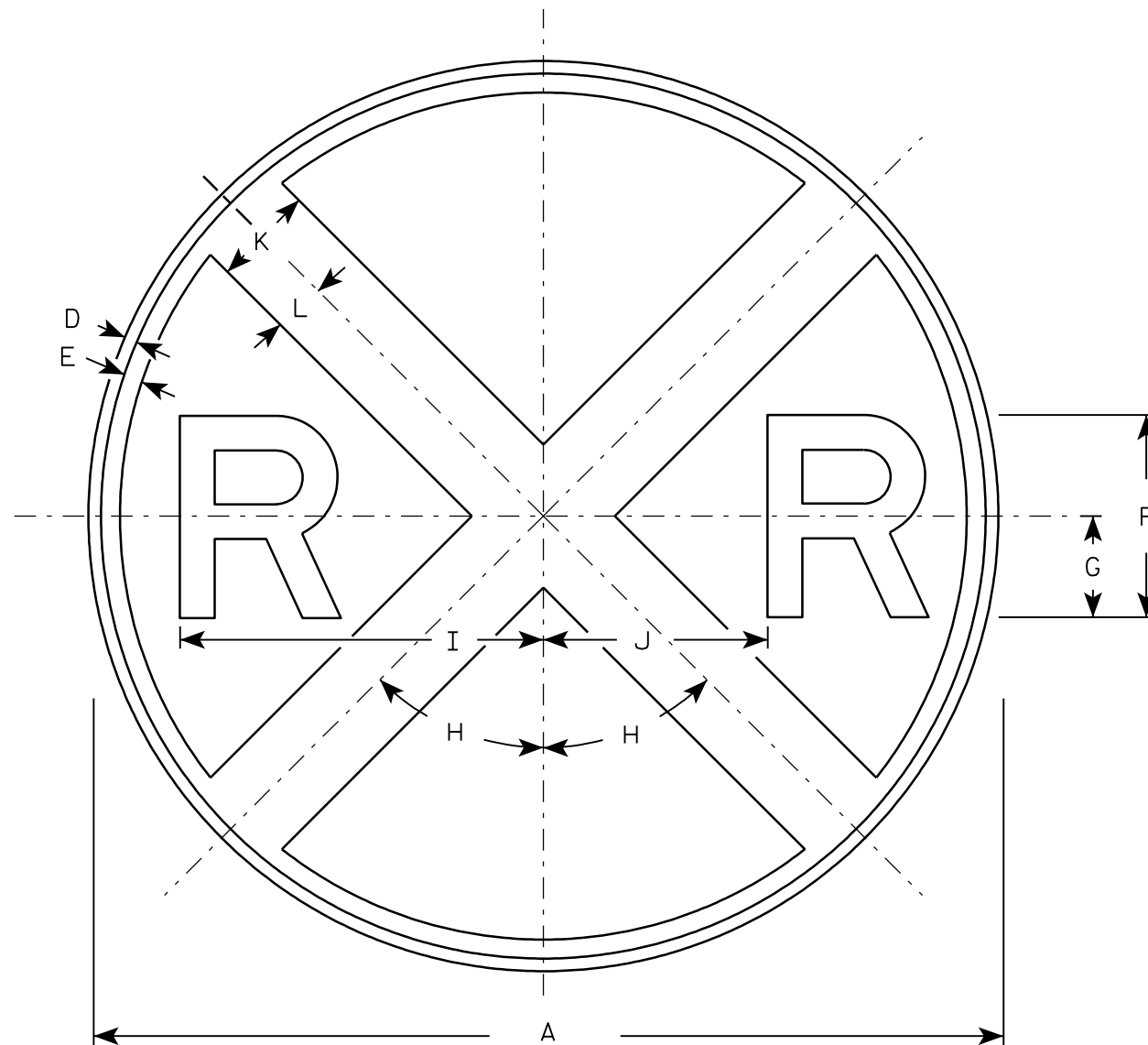
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



W10-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - E

7

Metric equivalent
for this sign is:

SIZE	
1	750 mm
2	900 mm
3	
4	1200 mm
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	30			$\frac{3}{8}$	$\frac{5}{8}$	7	3 $\frac{1}{2}$	45°	12 $\frac{3}{8}$	7 $\frac{1}{8}$	3	1 $\frac{1}{2}$														4.91	0.44	
2	36			$\frac{5}{8}$	$\frac{3}{4}$	8	4	45°	14 $\frac{3}{8}$	8 $\frac{5}{8}$	4	2														7.07	0.64	
3																												
4	48			$\frac{3}{4}$	1 $\frac{1}{4}$	10	5	45°	18 $\frac{3}{8}$	11 $\frac{5}{8}$	5	2 $\frac{1}{2}$														12.57	1.13	
5																												

STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 10/3/97

PLATE NO. W10-1.6

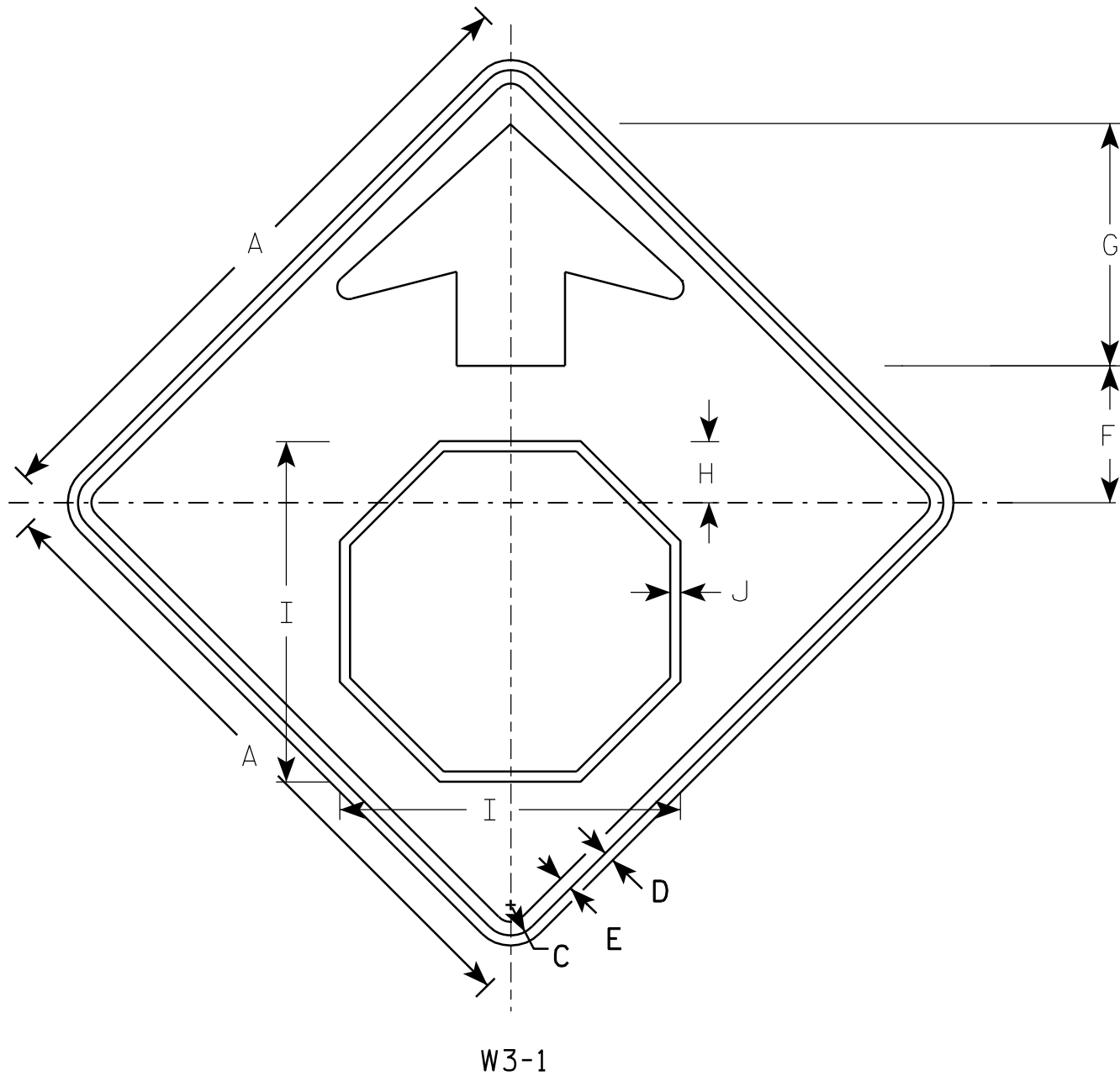
PROJECT NO:

HWY:

COUNTY:

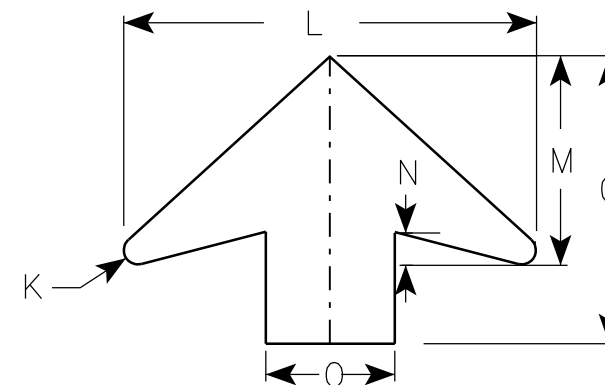
SHEET NO:

E



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:

STANDARD SIGN
W3-1

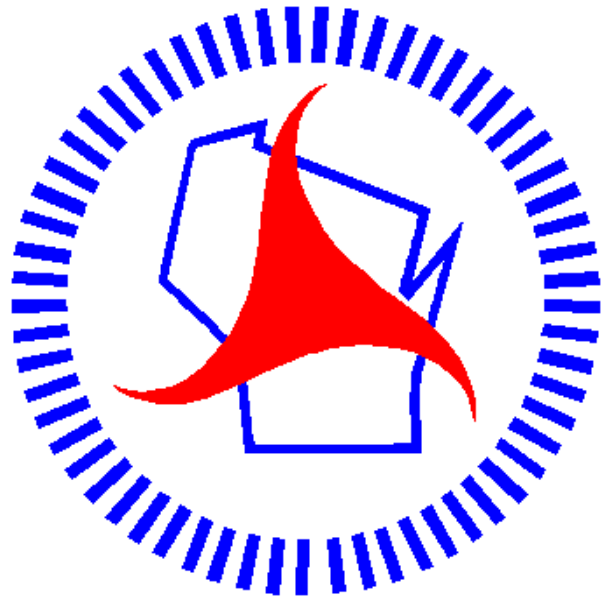
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W3-1.12

SHEET NO:

E

Notes



Wisconsin Department of Transportation

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