

GRE

PROJECT ID: 9160-20-60

WITH: N/A

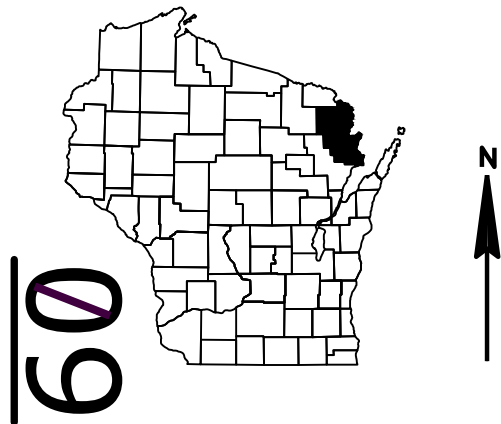
COUNTY: MARINETTE

JUNE 2020

ORDER OF SHEETS

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

TOTAL SHEETS = 66



DESIGN DESIGNATION

A.A.D.T.	2020	=	2500
A.A.D.T.	2040	=	2800
D.H.V.		=	400
D.D.		=	60/40
T.		=	16.0% T(DHV)
DESIGN SPEED		=	55 MPH
ESALS		=	1,100,000

CONVENTIONAL SYMBOLS

PLAN

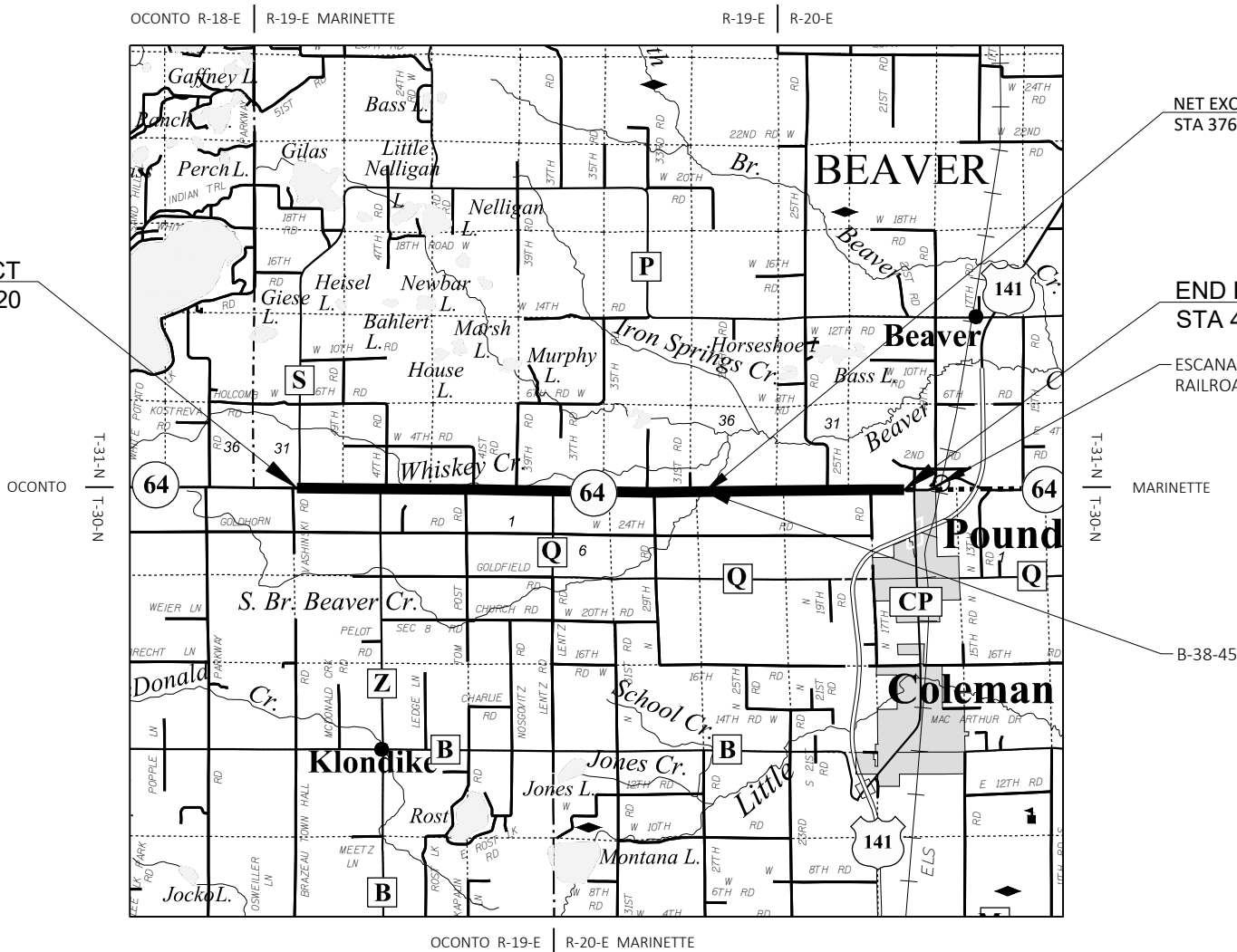
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
MOUNTAIN - POUND
CTH S - USH 141
STH 64
MARINETTE COUNTY

STATE PROJECT NUMBER
9160-20-60



LAYOUT
SCALE 0 2.0 MI
TOTAL NET LENGTH OF CENTERLINE = 6.934 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCORS), MARINETTE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

NET EXCEPTION TO CL LENGTH
STA 376+29.55 - STA 376+64.33

END PROJECT
STA 495+81.28

ESCANABA & LAKE SUPERIOR
RAILROAD CROSSING REPLACEMENT

MARINETTE

B-38-45

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	_____
Designer	_____ E. DANKE
Project Manager	_____ M. TERNES
Regional Examiner	_____
Regional Supervisor	_____ D. SEGERSTROM
APPROVED FOR THE DEPARTMENT	
DATE: 01/30/2020	_____ (Signature)

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GENERAL NOTES

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

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

SAWCUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD.

UTILITIES

DENNIS LAFAVE
NETLEC LLC - COMMUNICATION LINE
1345B NORTH ROAD
GREEN BAY, WI 54313
MOBILE PHONE: (920) 619-9774
dlafave@mi-tech.us

ANDY HEIGL
PACKERLAND BROADBAND - COMMUNICATION LINE
105 KENT STREET
PO BOX 190
IRON MOUNTAIN, MI 49801
OFFICE PHONE: (906) 774-6621
MOBILE PHONE: (906) 221-7536
E-MAIL: Andy.heigl@plbb.net

PETE JOHNSON
CENTURYLINK - COMMUNICATION LINE
2425 MARY STREET
MARINETTE, WI 54143
OFFICE PHONE: (715) 735-0059
MOBILE PHONE: (715) 732-7990
E-MAIL: Peter.s.johnson@centurylink.com

RICK VINCENT
NET LEC LLC - COMMUNICATION LINE
450 SECURITY BOULEVARD
PO BOX 19079
GREEN BAY, WI 54307-9079
PHONE: (920) 617-7316
E-MAIL: rick.vincent@nsight.com

JACK PARDY
OCONTO ELECTRIC COOPERATIVE - ELECTRICITY
7479 REA ROAD
OCONTO FALLS, WI 54154
OFFICE PHONE: (920) 846-2816
MOBILE PHONE: (920) 373-8524
E-MAIL: jpardy@ocontoelectric.com

KEVIN SCHUTTE
POUND VILLAGE OF WATER & SEWER UTILITY - WATER
2002 MAIN ST
POUND, WI 54161
OFFICE PHONE: (920) 897-4307
MOBILE PHONE: (920) 290-2304
E-MAIL: vopks@hotmail.com

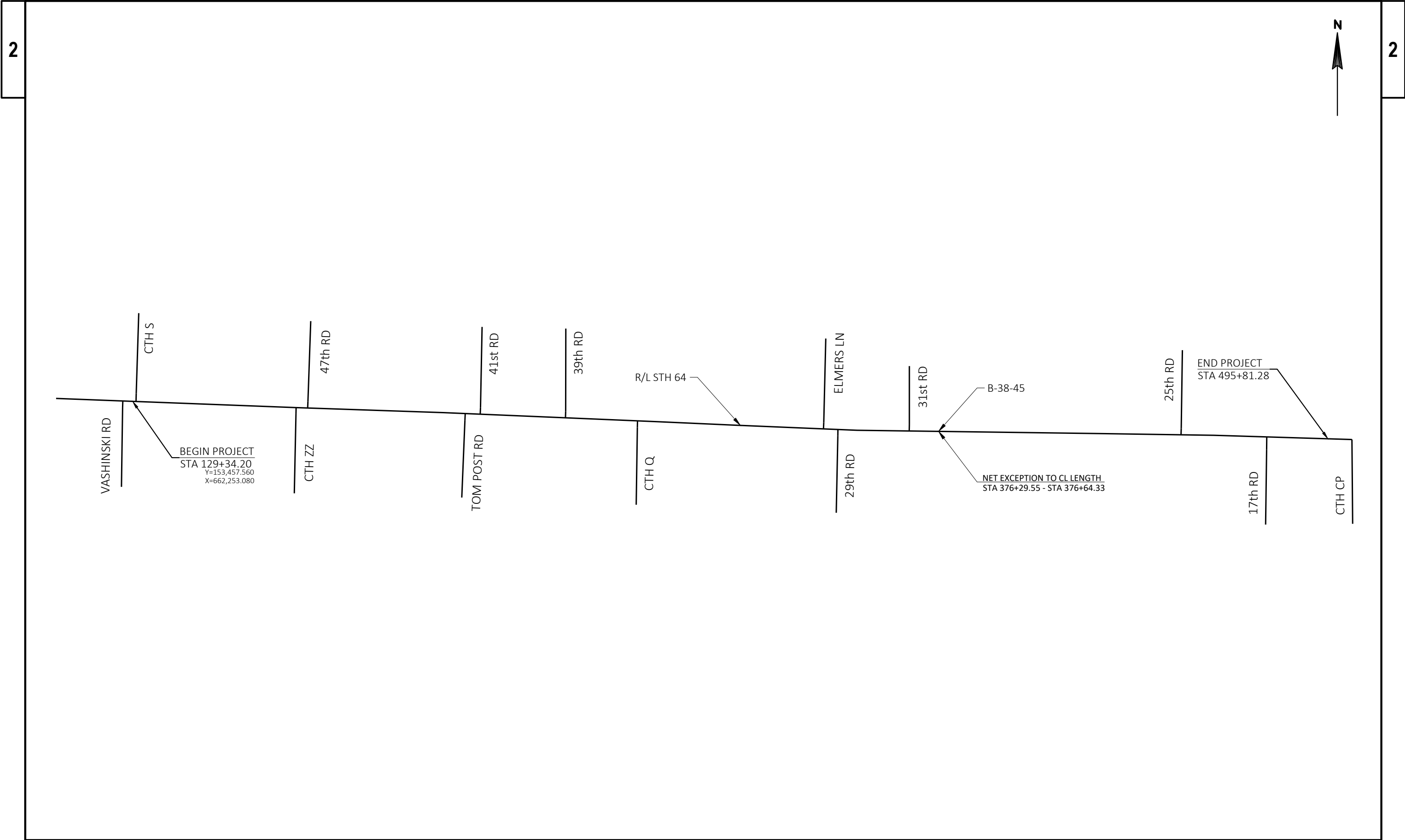
WDNR LIAISON

JIM DOPERALSKI
DNR NORTHEAST REGIONAL HQ
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
PHONE: (920) 412-0165
EMAIL: james.doperalski@wisconsin.gov

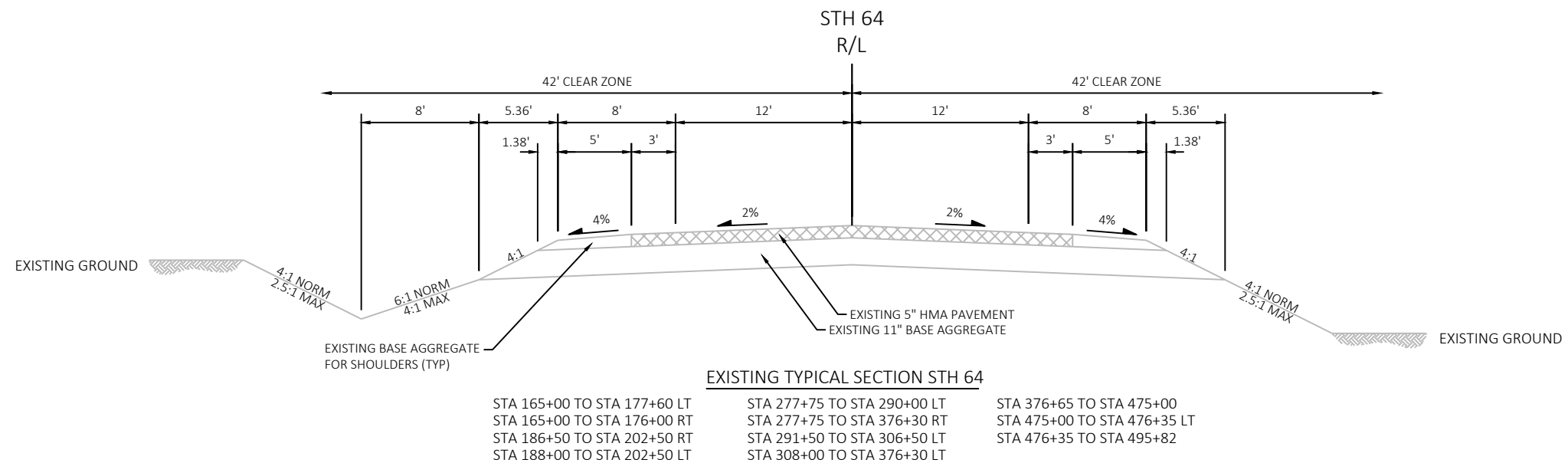
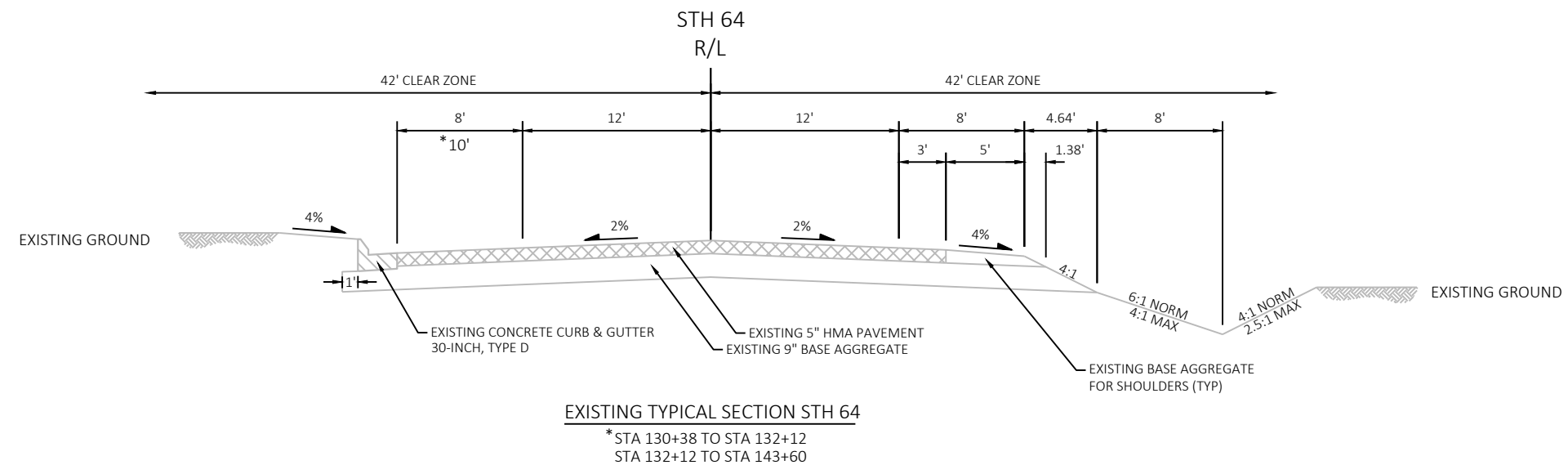
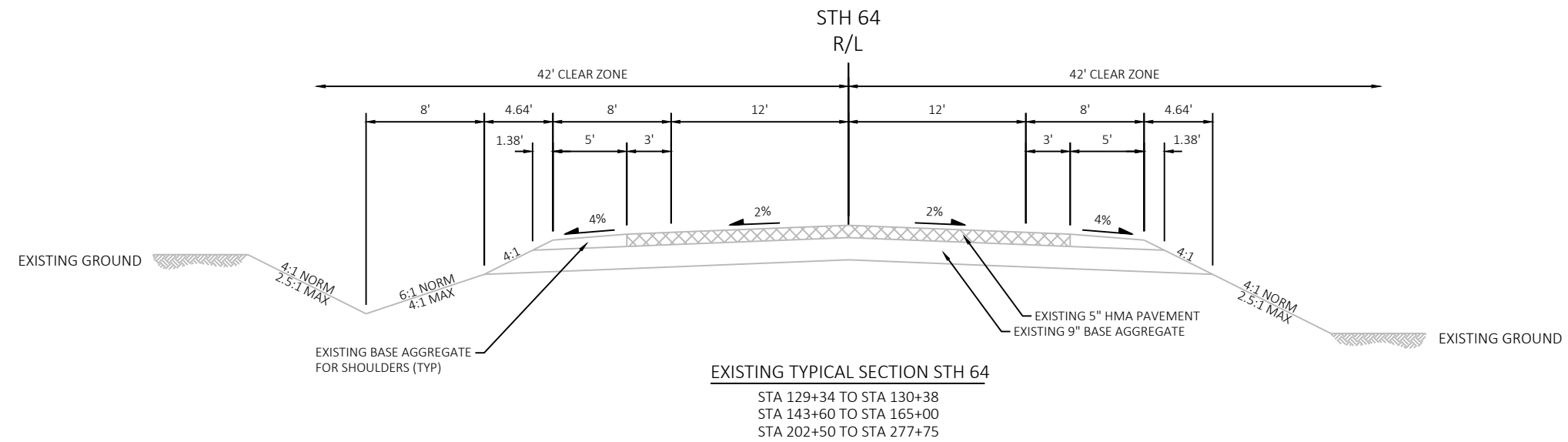
NE REGION SURVEY COORDINATOR

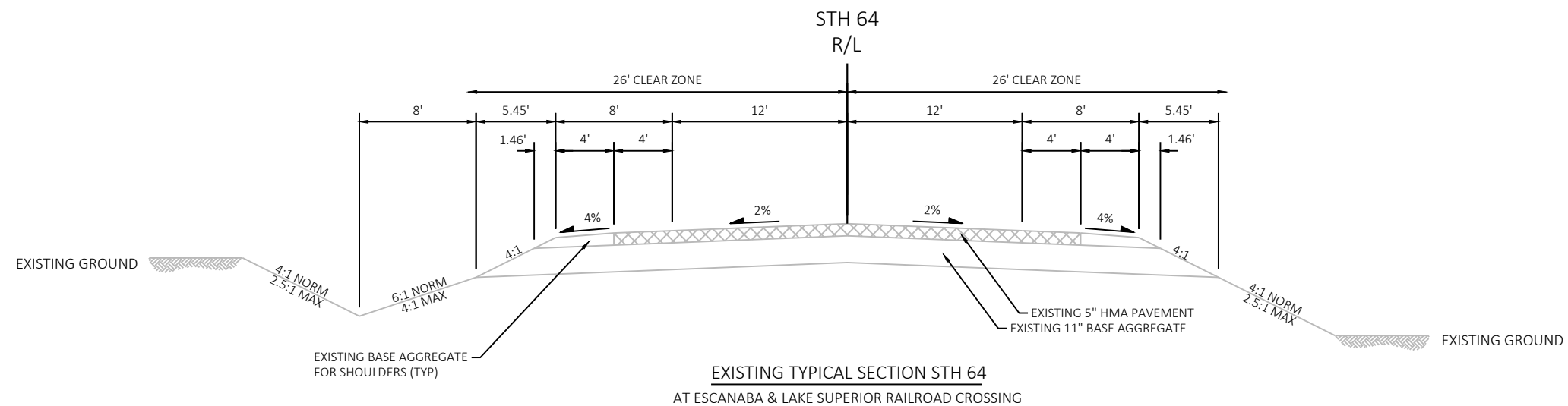
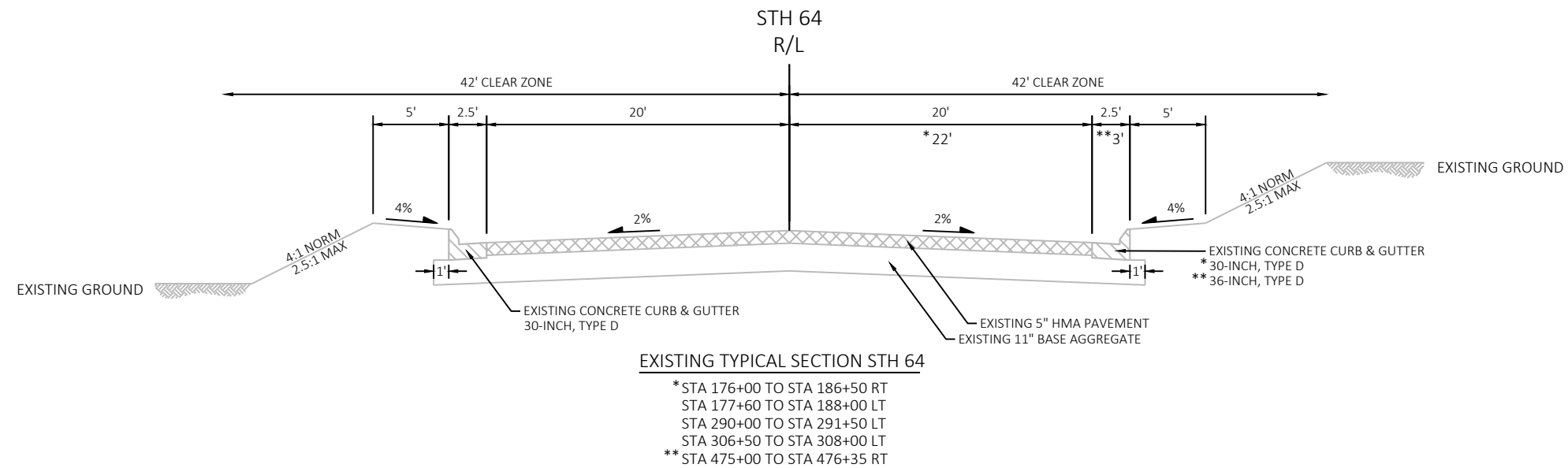
CORMAC MCINNIS, RLS
944 VANDERPERREN WAY
GREEN BAY, WI 54304
PHONE: (920) 492-5638
E-MAIL: cormac.mcinnis@dot.wi.gov

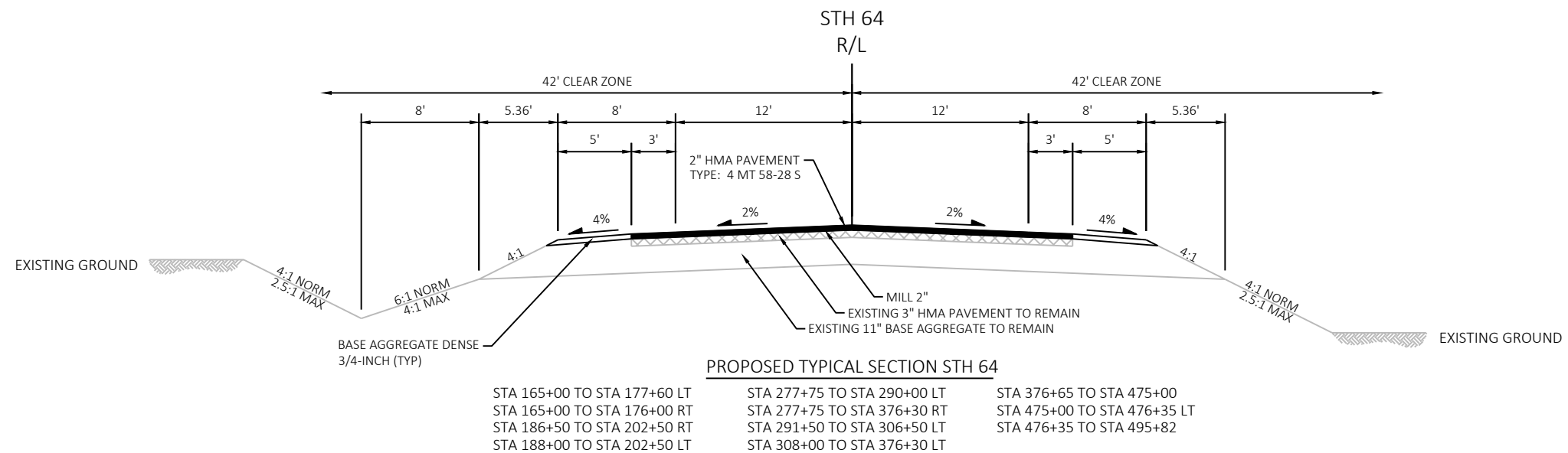
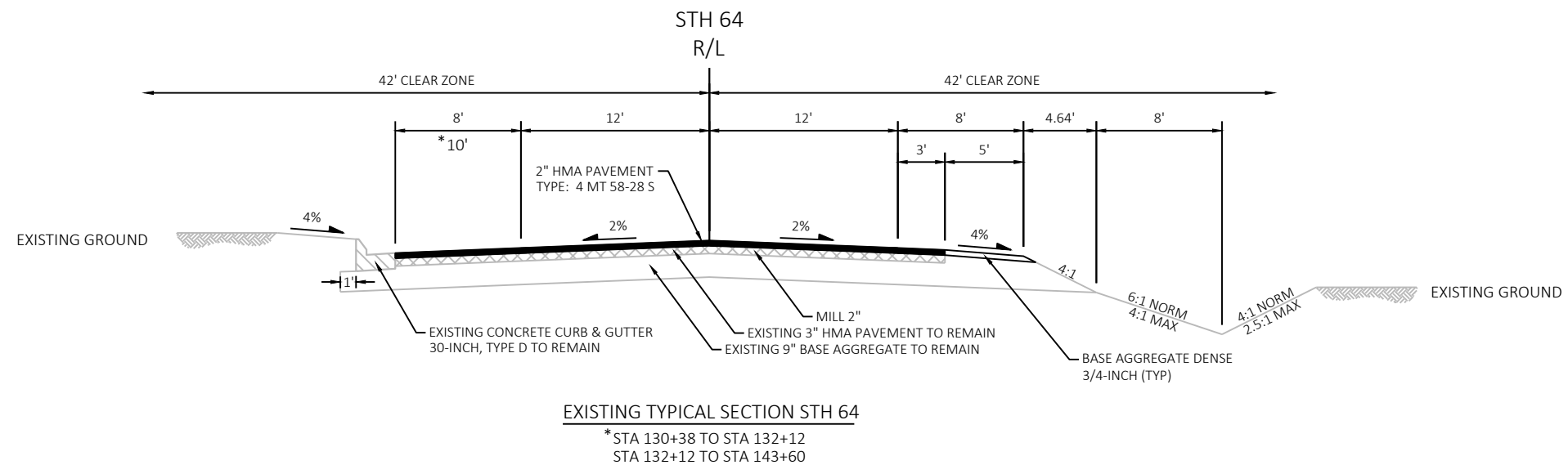
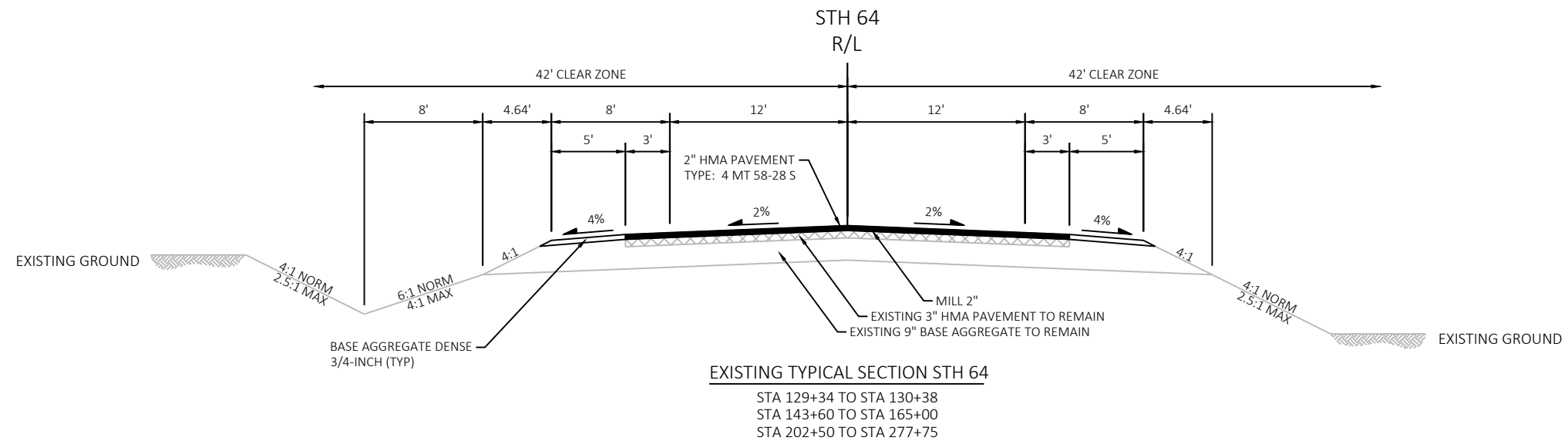


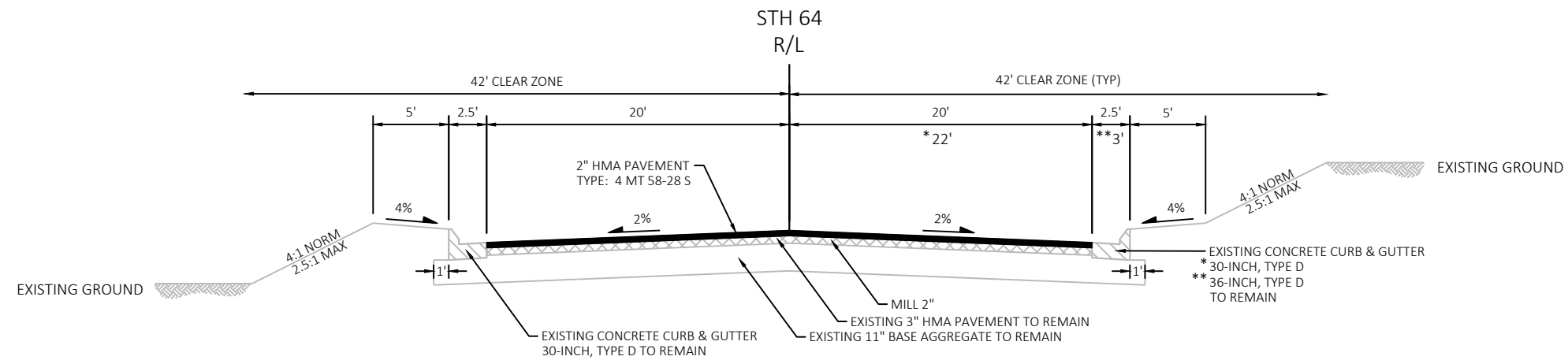


PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	PROJECT OVERVIEW	SHEET	E
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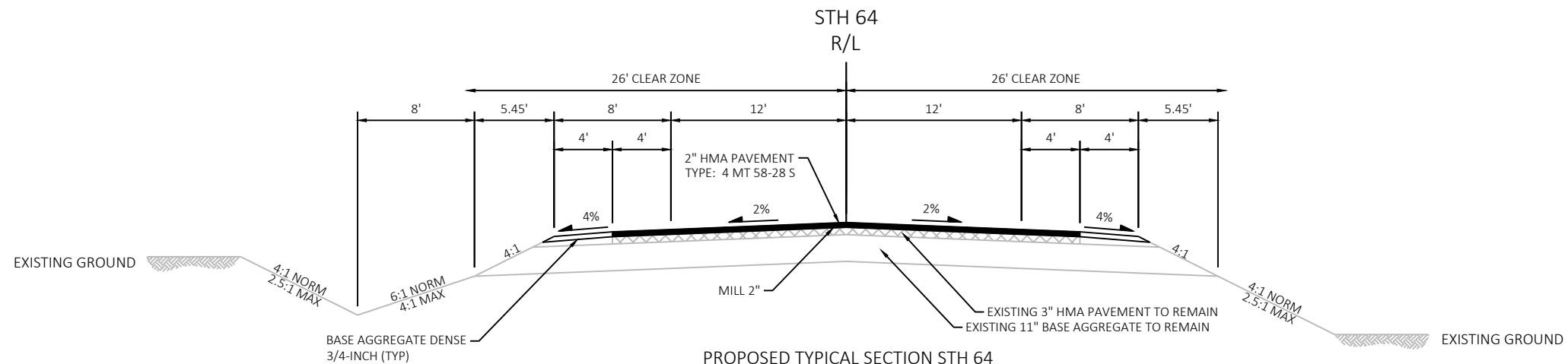




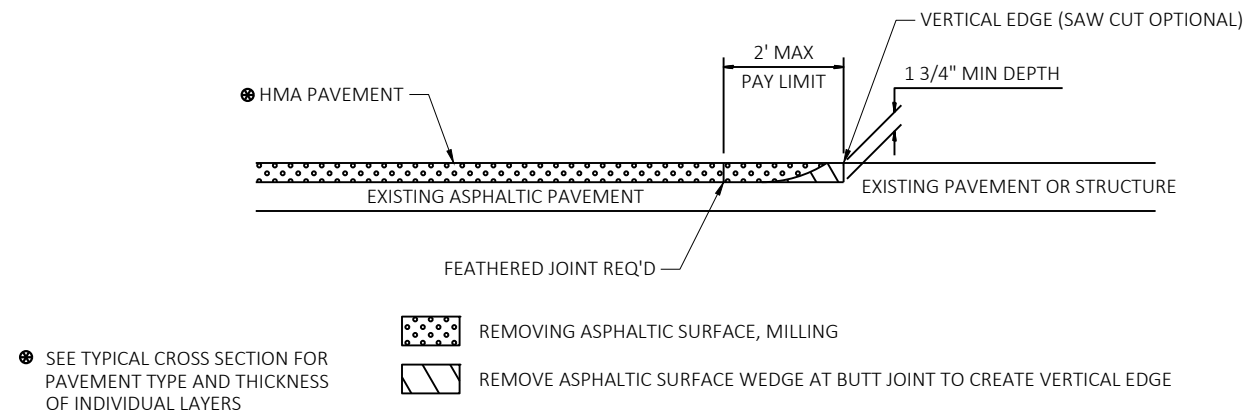


PROPOSED TYPICAL SECTION STH 64

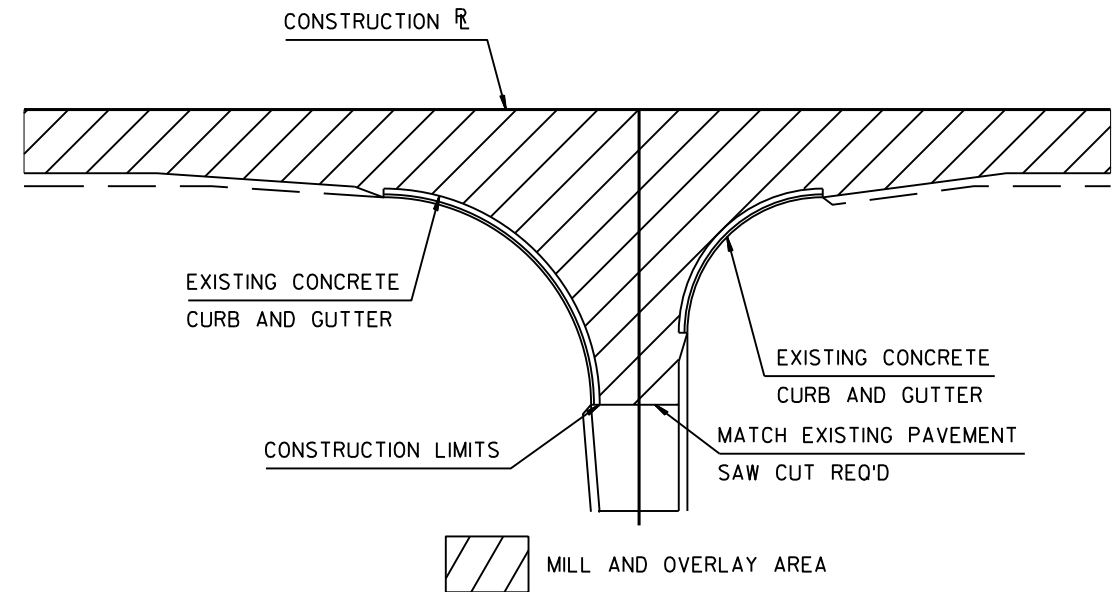
* STA 176+00 TO STA 186+50 RT
STA 177+60 TO STA 188+00 LT
STA 290+00 TO STA 291+50 LT
STA 306+50 TO STA 308+00 LT
** STA 475+00 TO STA 476+35 RT



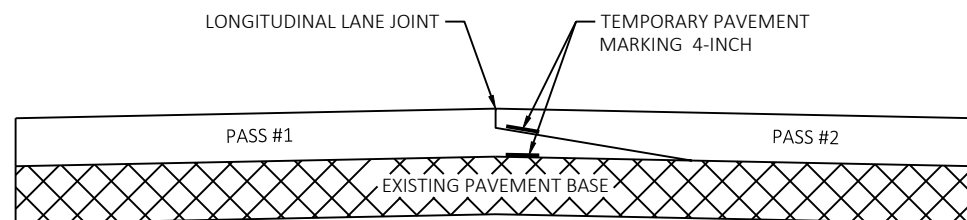
**PROPOSED TYPICAL SECTION STH 64
AT ESCANABA & LAKE SUPERIOR RAILROAD CROSSING**



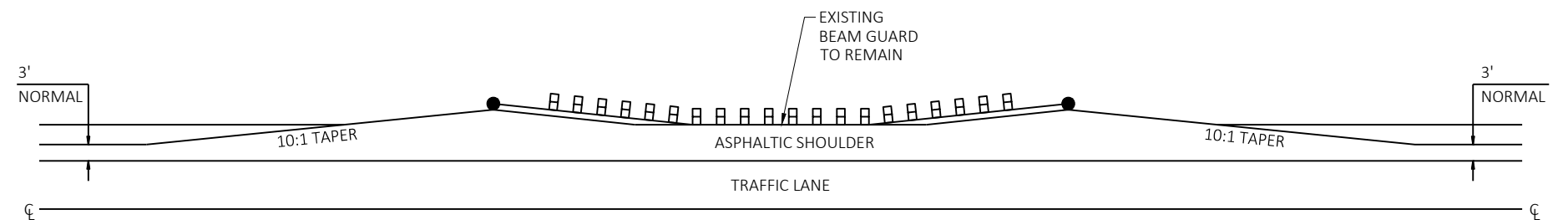
BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



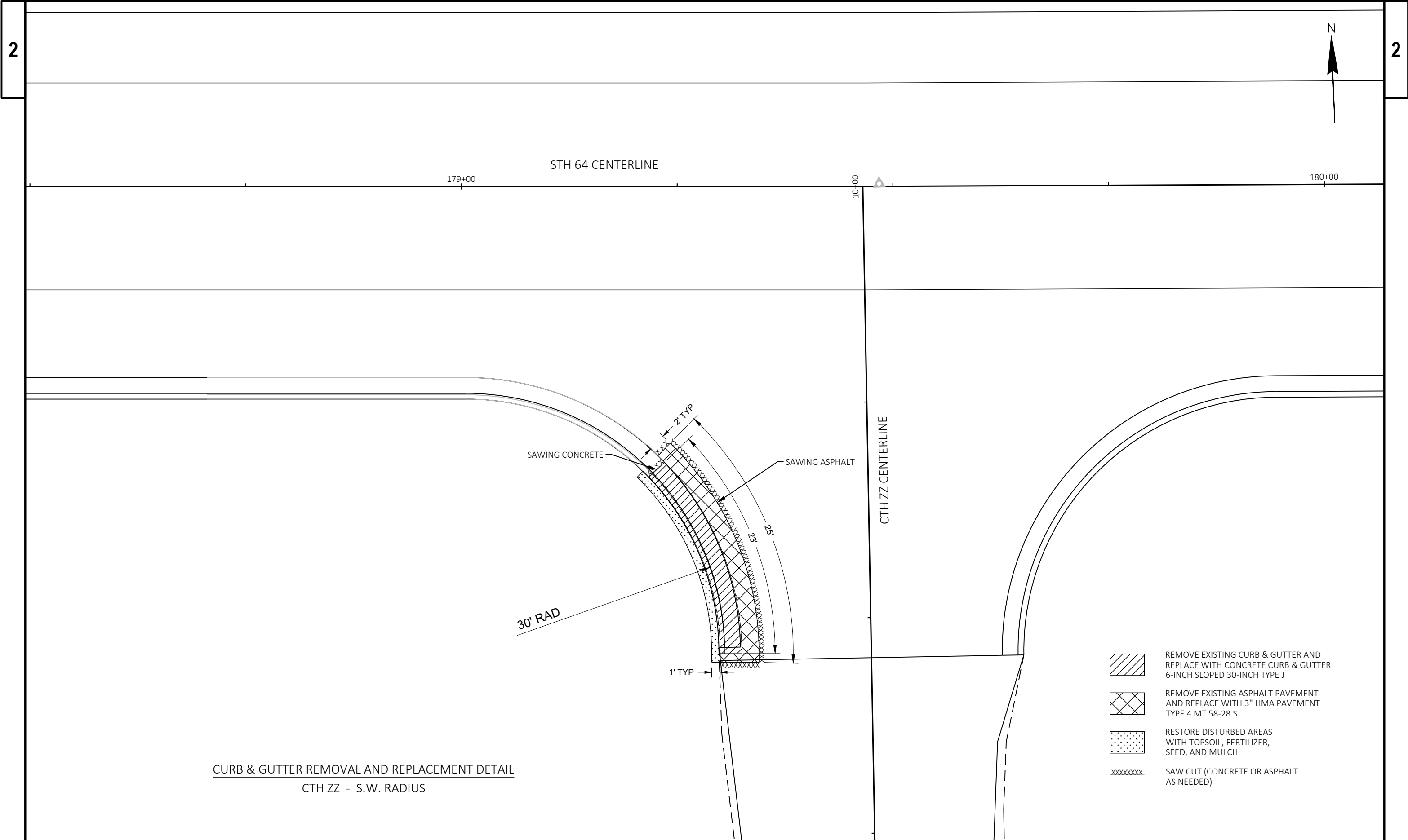
SIDE ROAD CONSTRUCTION LIMITS

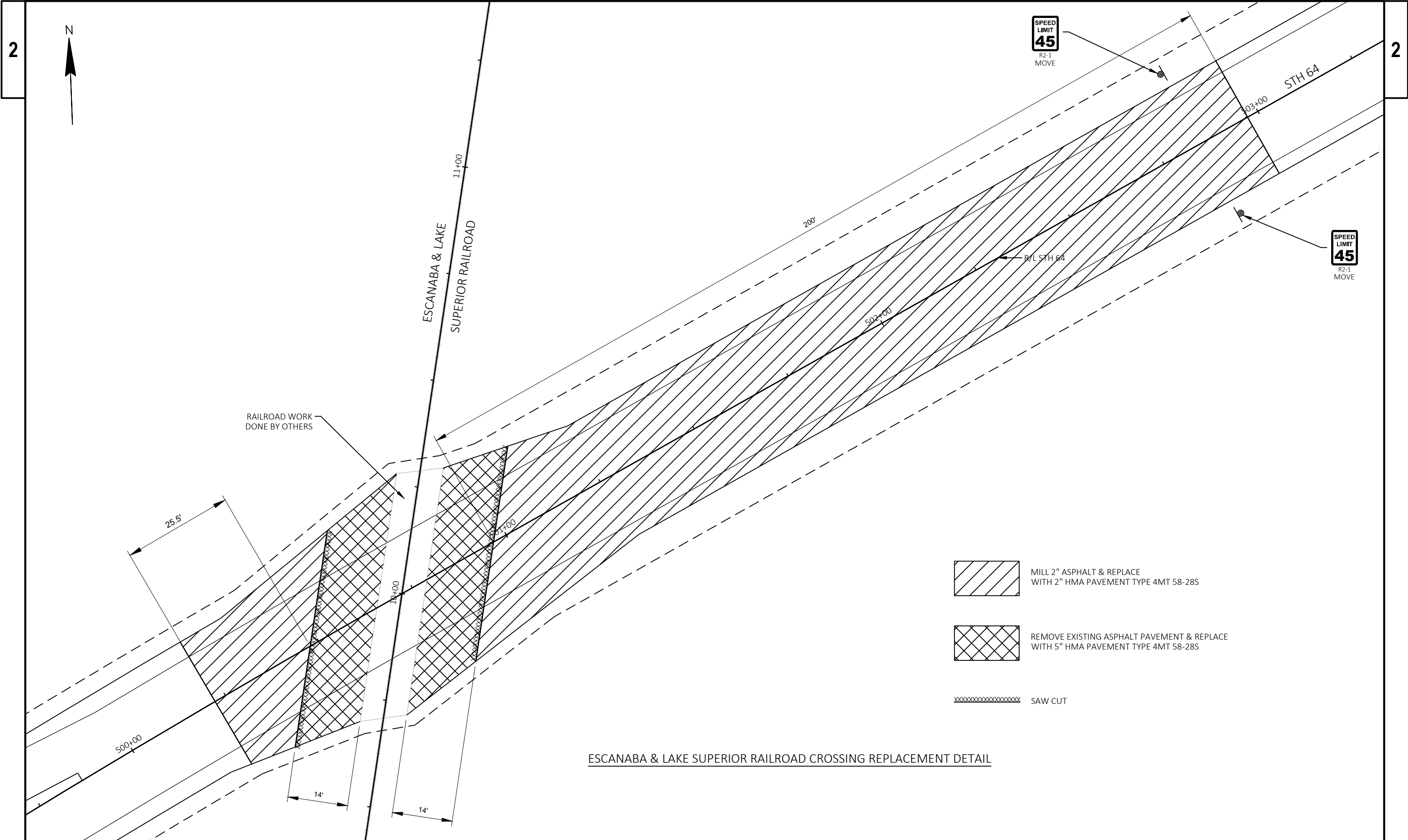


PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS

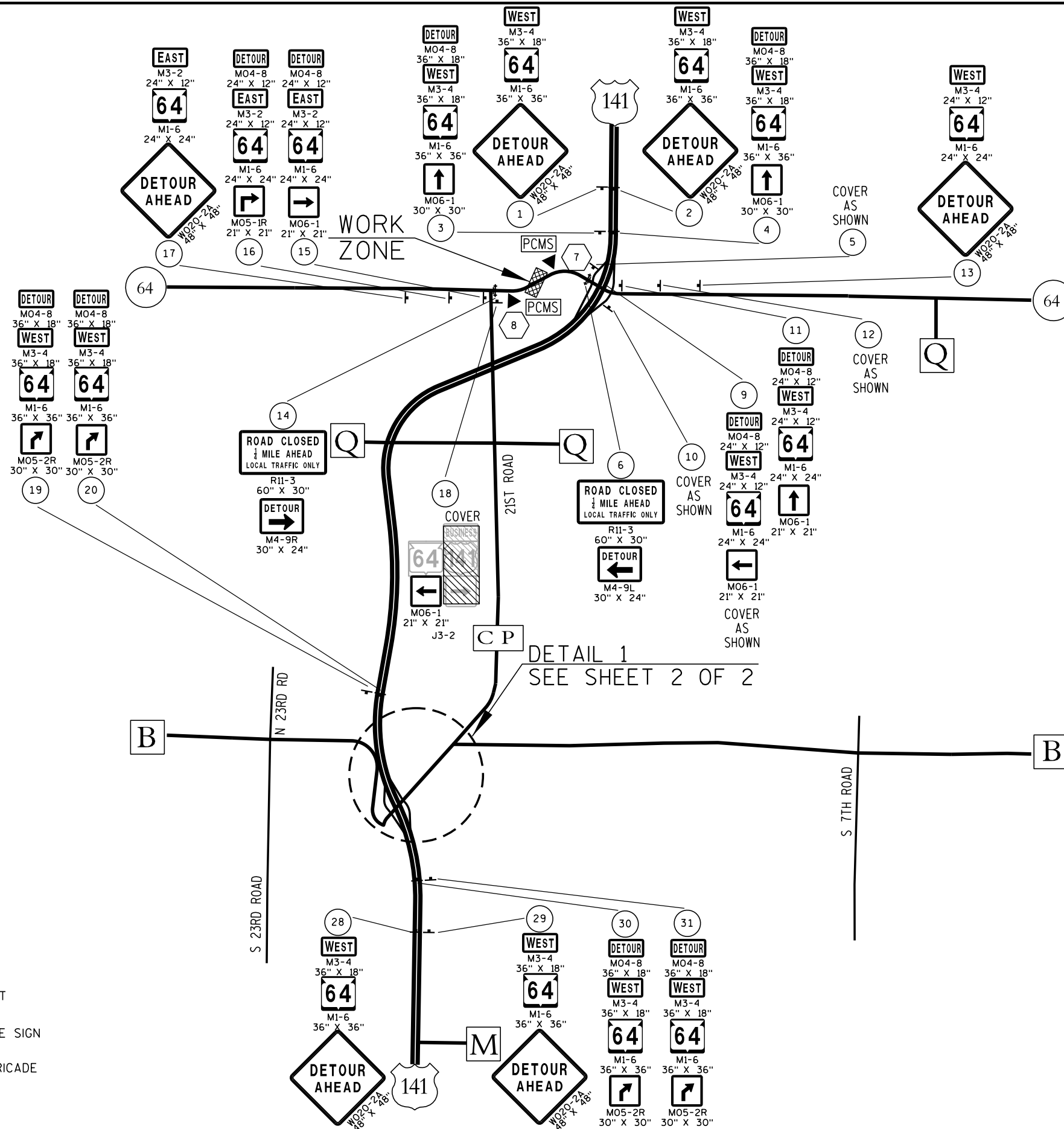


DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD



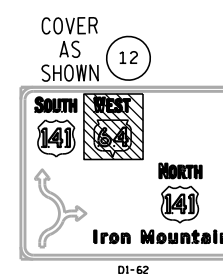
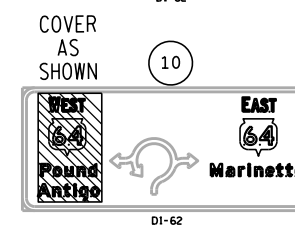
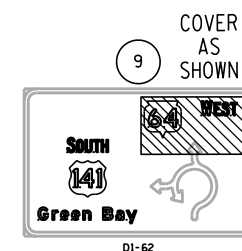
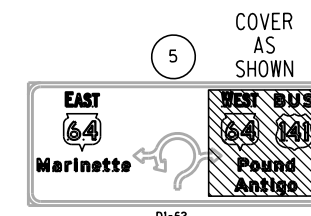


PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	CONSTRUCTION DETAILS	SHEET	E
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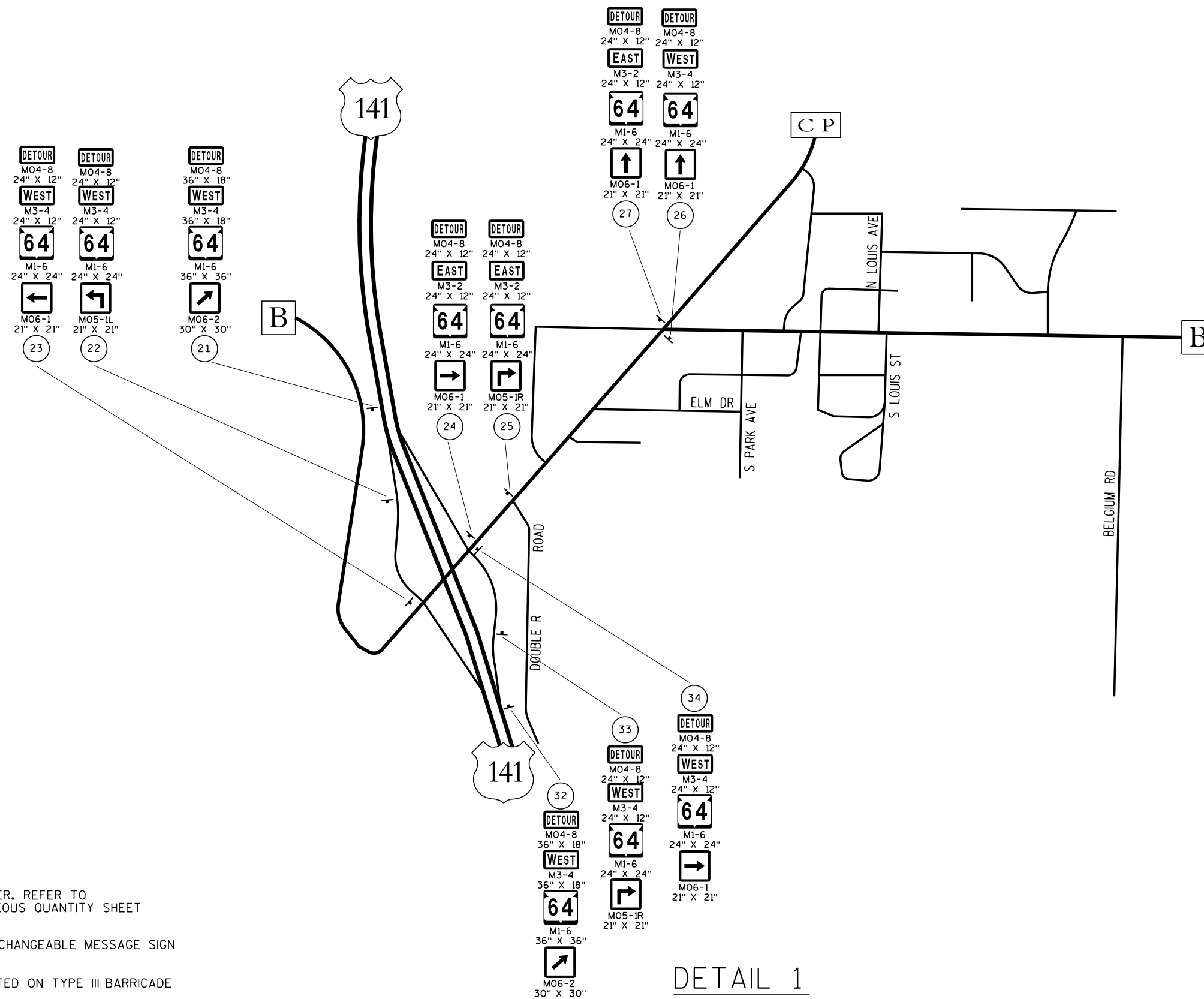
LEGEND

-  SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  SIGN MOUNTED ON TYPE III BARRICADE
-  POST MOUNTED SIGN



SHEET 1 OF 2

PLAN SHEET PRODUCED
BY WISDOT-NE REGION



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- (PCMS) (X) PORTABLE CHANGEABLE MESSAGE SIGN
- ⇄ SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

SHEET 2 OF 2
PLAN SHEET PRODUCED
BY WISDOT-NE REGION

Estimate Of Quantities

9160-20-60					
Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	176.000	176.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	112.000	112.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	130,210.000	130,210.000
0008	204.0150	Removing Curb & Gutter	LF	23.000	23.000
0010	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 9160-20-60	LS	1.000	1.000
0012	213.0100	Finishing Roadway (project) 01. 9160-20-60	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,310.000	3,310.000
0016	455.0605	Tack Coat	GAL	9,136.000	9,136.000
0018	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0020	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0022	460.2005	Incentive Density PWL HMA Pavement	DOL	12,170.000	12,170.000
0024	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	14,640.000	14,640.000
0026	460.2010	Incentive Air Voids HMA Pavement	DOL	16,110.000	16,110.000
0028	460.6224	HMA Pavement 4 MT 58-28 S	TON	16,050.000	16,050.000
0030	465.0110	Asphaltic Surface Patching	TON	300.000	300.000
0032	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	31,062.000	31,062.000
0034	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	23.000	23.000
0036	618.0100	Maintenance And Repair of Haul Roads (project) 01. 9160-20-60	EACH	1.000	1.000
0038	619.1000	Mobilization	EACH	1.000	1.000
0040	624.0100	Water	MGAL	47.500	47.500
0042	628.7015	Inlet Protection Type C	EACH	2.000	2.000
0044	633.5200	Markers Culvert End	EACH	3.000	3.000
0046	638.2102	Moving Signs Type II	EACH	2.000	2.000
0048	642.5001	Field Office Type B	EACH	1.000	1.000
0050	643.0300	Traffic Control Drums	DAY	170.000	170.000
0052	643.0420	Traffic Control Barricades Type III	DAY	70.000	70.000
0054	643.0705	Traffic Control Warning Lights Type A	DAY	100.000	100.000
0056	643.0900	Traffic Control Signs	DAY	1,391.000	1,391.000
0058	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0060	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0062	643.5000	Traffic Control	EACH	1.000	1.000
0064	646.1020	Marking Line Epoxy 4-Inch	LF	30,923.000	30,923.000
0066	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	68,345.000	68,345.000
0068	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	100.000	100.000
0070	646.5320	Marking Railroad Crossings Epoxy	EACH	2.000	2.000
0072	649.0105	Temporary Marking Line Paint 4-Inch	LF	2,912.000	2,912.000
0074	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	30,137.000	30,137.000
0076	650.8000	Construction Staking Resurfacing Reference	LF	36,900.000	36,900.000

Estimate Of Quantities

9160-20-60

Line	Item	Item Description	Unit	Total	Qty
0078	650.9910	Construction Staking Supplemental Control (project) 01. 9160-20-60	LS	1.000	1.000
0080	690.0150	Sawing Asphalt	LF	131.000	131.000
0082	690.0250	Sawing Concrete	LF	3.000	3.000
0084	740.0440	Incentive IRI Ride	DOL	53,120.000	53,120.000
0086	SPV.0060	Special 01. Concrete Curb & Gutter Restoration	EACH	1.000	1.000

REMOVING ASPHALTIC SURFACE

		204.0110	
LOCATION		SY	REMARKS
CATEGORY 0010			
CTH ZZ SW RADIUS		7	SEE CURB & GUTTER REMOVAL AND REPLACEMENT DETAIL
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING		85	WEST OF RAILROAD CROSSING
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING		84	EAST OF RAILROAD CROSSING
PROJECT TOTAL		176	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

				204.0115	
STATION	TO	STATION	LOCATION	SY	REMARKS
CATEGORY 0010					
129+34	-	129+36	STH 64	8	BEGINNING OF PROJECT
367+28	-	376+30	STH 64	8	WEST EDGE OF B-38-045
376+64	-	376+66	STH 64	8	EAST EDGE OF B-38-045
495+79	-	495+81	STH 64	7	END OF PROJECT
10+79	-	10+81	CTH S	7	NORTH OF STH 64
9+45	-	9+47	CTH ZZ	7	SOUTH OF STH 64
10+50	-	10+52	47TH ROAD	7	NORTH OF STH 64
9+20	-	9+22	TOM POST ROAD	5	SOUTH OF STH 64
10+78	-	10+80	41ST ROAD	5	NORTH OF STH 64
10+78	-	10+80	39TH ROAD	5	NORTH OF STH 64
9+19	-	9+21	CTH Q	6	SOUTH OF STH 64
10+78	-	10+80	ELMERS LANE	6	NORTH OF STH 64
9+22	-	9+24	29TH ROAD	5	SOUTH OF STH 64
10+82	-	10+84	31ST ROAD	4	NORTH OF STH 64
10+79	-	10+81	25TH ROAD	5	NORTH OF STH 64
9+21	-	9+23	17TH ROAD	5	SOUTH OF STH 64
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING				7	WEST OF RAILROAD CROSSING
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING				7	EAST OF RAILROAD CROSSING
PROJECT TOTAL				112	

REMOVING CURB & GUTTER

LOCATION		204.0150	REMARKS
		LF	
CATEGORY 0010			
CTH ZZ SW RADIUS		23	SEE CURB & GUTTER REMOVAL AND REPLACEMENT DETAIL
PROJECT TOTAL		23	

REMOVING ASPHALTIC SURFACE MILLING

STATION		TO	STATION	LOCATION	204.0120 SY	REMARKS
CATEGORY 0010						
129+36	-		129+82	STH 64	190	BEGINNING OF PROJECT TO CTH S INTERSECTION
129+82	-		131+12	STH 64	850	CTH S INTERSECTION
131+12	-		179+00	STH 64	17,100	CTH S INTERSECTION TO CTH ZZ INTERSECTION
179+00	-		179+94	STH 64	590	CTH ZZ INTERSECTION
179+94	-		182+55	STH 64	1,220	CTH ZZ INTERSECTION TO 47TH ROAD INTERSECTION
182+55	-		183+49	STH 64	590	47TH ROAD INTERSECTION
183+49	-		230+60	STH 64	16,300	47TH ROAD INTERSECTION TO TOM POST ROAD INTERSECTION
230+60	-		231+84	STH 64	760	TOM POST ROAD INTERSECTION
231+84	-		235+40	STH 64	1,260	TOM POST ROAD INTERSECTION TO 41ST ROAD INTERSECTION
235+40	-		236+64	STH 64	760	41ST ROAD INTERSECTION
236+64	-		261+54	STH 64	8,370	41ST ROAD INTERSECTION TO 39TH ROAD INTERSECTION
261+54	-		262+77	STH 64	760	39TH ROAD INTERSECTION
262+77	-		283+43	STH 64	7,020	39TH ROAD INTERSECTION TO CTH Q INTERSECTION
283+43	-		284+72	STH 64	850	CTH Q INTERSECTION
284+72	-		340+65	STH 64	19,000	CTH Q INTERSECTION TO ELMERS LANE INTERSECTION
340+65	-		341+95	STH 64	820	ELMERS LANE INTERSECTION
341+95	-		344+93	STH 64	1,040	ELMERS LANE INTERSECTION TO 29TH ROAD INTERSECTION
344+93	-		346+16	STH 64	750	29TH ROAD INTERSECTION
346+16	-		367+01	STH 64	7,020	29TH ROAD INTERSECTION TO 31ST ROAD INTERSECTION
367+01	-		368+17	STH 64	720	31ST ROAD INTERSECTION
368+17	-		376+27	STH 64	2,810	31ST ROAD INTERSECTION TO B-38-045
376+67	-		450+26	STH 64	24,600	B-38-045 TO 25TH ROAD INTERSECTION
450+26	-		451+51	STH 64	770	25TH ROAD INTERSECTION
451+51	-		476+35	STH 64	8,420	25TH ROAD INTERSECTION TO 17TH ROAD INTERSECTION
476+35	-		477+58	STH 64	750	17TH ROAD INTERSECTION
477+58	-		495+79	STH 64	6,100	17TH ROAD INTERSECTION TO END OF PROJECT
ESCANABA AND LAKE SUPERIOR RAILROAD CROSSING					100	WEST OF RAILROAD CROSSING
ESCANABA AND LAKE SUPERIOR RAILROAD CROSSING					690	EAST OF RAILROAD CROSSING
PROJECT TOTAL					130,210	

SHOULDER WORK SUMMARY

				BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	WATER 624.0100 MGAL	
STATION	TO	STATION	LOCATION			REMARKS
CATEGORY 0010						
129+34	-	129+82	STH 64 LT	2	0.1	BEGINNING OF PROJECT TO CTH S CURB & GUTTER
143+60	-	157+70	STH 64 LT	65	0.9	CTH S CURB & GUTTER TO PAVED DRIVEWAY
158+10	-	177+52	STH 64 LT	93	1.3	PAVED DRIVEWAY TO 47TH ROAD CURB & GUTTER
188+08	-	195+14	STH 64 LT	34	0.5	47TH ROAD CURB & GUTTER TO PAVED DRIVEWAY
195+46	-	235+40	STH 64 LT	190	2.7	PAVED DRIVEWAY TO 41ST ROAD CURB & GUTTER
236+64	-	261+54	STH 64 LT	110	1.5	41ST ROAD CURB & GUTTER TO 39TH ROAD CURB & GUTTER
262+77	-	290+00	STH 64 LT	130	1.8	39TH ROAD CURB & GUTTER TO FIRST WB STH 64 CURB & GUTTER SECTION
291+58	-	306+50	STH 64 LT	72	1.0	FIRST WB STH 64 CURB & GUTTER SECTION TO SECOND WB STH 64 CURB & GUTTER SECTION
308+00	-	340+93	STH 64 LT	160	2.2	SECOND WB STH 64 CURB & GUTTER SECTION TO ELMERS LANE
341+53	-	345+50	STH 64 LT	18	0.3	ELMERS LANE TO PAVED DRIVEWAY
345+90	-	367+29	STH 64 LT	100	1.4	PAVED DRIVEWAY TO 31ST ROAD
367+75	-	376+41	STH 64 LT	39	0.5	31ST ROAD TO B-38-045
376+74	-	385+97	STH 64 LT	44	0.6	B-38-045 TO PAVED DRIVEWAY
386+33	-	450+26	STH 64 LT	320	4.5	PAVED DRIVEWAY TO 25TH ROAD CURB & GUTTER
451+51	-	474+08	STH 64 LT	110	1.5	25TH ROAD CURB & GUTTER TO FIRST PAVED DRIVEWAY
474+42	-	475+79	STH 64 LT	7	0.1	FIRST PAVED DRIVEWAY TO SECOND PAVED DRIVEWAY
476+21	-	495+81	STH 64 LT	97	1.4	SECOND PAVED DRIVEWAY TO END OF PROJECT.
129+34	-	175+92	STH 64 RT	220	3.1	BEGINNING OF PROJECT TO CTH ZZ CURB & GUTTER
186+58	-	230+52	STH 64 RT	210	2.9	CTH ZZ CURB & GUTTER TO TOM POST ROAD CURB & GUTTER
231+92	-	283+43	STH 64 RT	240	3.4	TOM POST ROAD CURB & GUTTER TO CTH Q CURB & GUTTER
284+72	-	337+88	STH 64 RT	260	3.6	CTH Q CURB & GUTTER TO PAVED DRIVEWAY
338+28	-	344+93	STH 64 RT	32	0.4	PAVED DRIVEWAY TO 29TH ROAD CURB & GUTTER
346+16	-	376+21	STH 64 RT	150	2.1	29TH ROAD CURB & GUTTER TO B-38-045
376+54	-	386+25	STH 64 RT	42	0.6	B-38-045 TO PAVED DRIVEWAY
386+65	-	475+00	STH 64 RT	430	6.0	PAVED DRIVEWAY TO 17TH ROAD CURB & GUTTER
477+58	-	495+81	STH 64 RT	89	1.2	17TH ROAD CURB & GUTTER TO END OF PROJECT
10+62	-	10+81	CTH S LT	1	0.1	CTH S SHOULDER
9+45	-	9+47	CTH ZZ LT	1	0.1	CTH ZZ SHOULDER
9+20	-	9+40	TOM POST ROAD RT	1	0.1	TOM POST ROAD SHOULDER
10+68	-	10+80	41ST ROAD LT	1	0.1	41ST ROAD SHOULDER
10+68	-	10+80	39TH ROAD LT	1	0.1	39TH ROAD SHOULDER
9+19	-	9+37	CTH Q RT	1	0.1	CTH Q SHOULDER
10+32	-	10+80	ELMERS LANE LT	2	0.1	ELMERS LANE SHOULDER
10+38	-	10+80	ELMERS LANE RT	1	0.1	ELMERS LANE SHOULDER
9+22	-	9+31	29TH ROAD RT	1	0.1	29TH ROAD SHOULDER
10+34	-	10+84	31ST ROAD LT	2	0.1	31ST ROAD SHOULDER
10+71	-	10+84	31ST ROAD RT	1	0.1	31ST ROAD SHOULDER
10+59	-	10+81	25TH ROAD LT	1	0.1	25TH ROAD SHOULDER
9+21	-	9+39	17TH ROAD RT	1	0.1	17TH ROAD SHOULDER
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING LT			3	0.1	WEST OF RAILROAD CROSSING SHOULDER	
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING RT			1	0.1	WEST OF RAILROAD CROSSING SHOULDER	
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING LT			13	0.2	EAST OF RAILROAD CROSSING SHOULDER	
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING RT			14	0.2	EAST OF RAILROAD CROSSING SHOULDER	
PROJECT TOTAL				3,310	47.5	

ASPHALTIC MATERIALS SUMMARY						
STATION TO STATION	LOCATION	TACK COAT 455.0605 GAL	HMA PAVEMENT 4 MT 58-28 S			ASPHALTIC SURFACE PATCHING 465.0110 TON
			460.6224 TON	PWL DENSITY INCENTIVE TON#	PWL AIR VOIDS TON##	
CATEGORY 0010						REMARKS
129+34 - 129+82	STH 64	14	24	16	24	BEGINNING OF PROJECT TO CTH S INTERSECTION
129+82 - 131+12	STH 64	60	107	42	107	CTH S INTERSECTION
131+12 - 179+00	STH 64	1,200	2,101	1,558	2,101	CTH S INTERSECTION TO CTH ZZ INTERSECTION
179+00 - 179+94	STH 64	42	74	31	74	CTH ZZ INTERSECTION
179+94 - 182+55	STH 64	86	149	85	149	CTH ZZ INTERSECTION TO 47TH ROAD
182+55 - 183+49	STH 64	42	73	31	73	47TH ROAD INTERSECTION
183+49 - 230+60	STH 64	1,140	2,004	1,533	2,004	47TH ROAD INTERSECTION TO TOM POST ROAD INTERSECTION
230+60 - 231+84	STH 64	54	94	40	94	TOM POST ROAD INTERSECTION
231+84 - 235+40	STH 64	88	153	116	153	TOM POST ROAD INTERSECTION TO 41ST ROAD INTERSECTION
235+40 - 236+64	STH 64	54	93	40	93	41ST ROAD INTERSECTION
236+64 - 261+54	STH 64	586	1,028	810	1,028	41ST ROAD INTERSECTION TO 39TH ROAD INTERSECTION
261+54 - 262+77	STH 64	54	93	40	93	39TH ROAD INTERSECTION
262+77 - 283+43	STH 64	491	862	672	862	39TH ROAD INTERSECTION TO CTH Q INTERSECTION
283+43 - 284+72	STH 64	60	104	42	104	CTH Q INTERSECTION
284+72 - 340+65	STH 64	1,330	2,327	1,819	2,327	CTH Q INTERSECTION TO ELMERS LANE INTERSECTION
340+65 - 341+95	STH 64	58	101	42	101	ELMERS LANE INTERSECTION
341+95 - 344+93	STH 64	73	127	97	127	ELMERS LANE INTERSECTION TO 29TH ROAD INTERSECTION
344+93 - 346+16	STH 64	53	92	40	92	29TH ROAD INTERSECTION
346+16 - 367+01	STH 64	492	863	678	863	29TH ROAD INTERSECTION TO 31ST ROAD INTERSECTION
367+01 - 368+17	STH 64	51	88	38	88	31ST ROAD INTERSECTION
368+17 - 376+29	STH 64	197	346	264	346	31ST ROAD INTERSECTION TO B-38-045
376+64 - 450+26	STH 64	1,720	3,024	2,395	3,024	B-38-045 TO 25TH ROAD INTERSECTION
450+26 - 451+51	STH 64	54	95	40	95	25TH ROAD INTERSECTION
451+51 - 476+35	STH 64	589	1,038	808	1,038	25TH ROAD INTERSECTION TO 17TH ROAD INTERSECTION
476+35 - 477+58	STH 64	53	93	40	93	17TH ROAD INTERSECTION
477+58 - 495+81	STH 64	428	752	593	752	17TH ROAD INTERSECTION TO END OF PROJECT
UNDISTRIBUTED	STH 64					300
	ESCANABA & LAKE SUPERIOR RAILROAD CROSSING	13	37	14	37	WEST OF RAILROAD CROSSING
	ESCANABA & LAKE SUPERIOR RAILROAD CROSSING	54	108	71	108	EAST OF RAILROAD CROSSING
PROJECT TOTAL		9,136	16,050	11,995	16,050	300

NOTES:
TONNAGE IS ELIGIBLE FOR INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005 AND INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010
TONNAGE IS ELIGIBLE FOR INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010 AND DENSITY IS TESTED FOR ACCEPTANCE IN THOSE AREAS

ASPHALT CENTERLINE RUMBLE STRIPS 2-LANE RURAL

				465.0475	
STATION	TO	STATION	LOCATION	LF	REMARKS
CATEGORY 0010					
129+34	-	130+37	STH 64	0	BEGINNING OF PROJECT TO CTH S
130+37	-	179+47	STH 64	3,960	CTH S TO CTH ZZ
179+47	-	183+01	STH 64	0	CTH ZZ TO 47TH ROAD
183+01	-	231+32	STH 64	4,130	47TH ROAD TO TOM POST ROAD
231+32	-	235+92	STH 64	60	TOM POST ROAD TO 41ST ROAD
235+92	-	262+06	STH 64	2,210	41ST ROAD TO 39TH ROAD
262+06	-	284+17	STH 64	1,810	39TH ROAD TO CTH Q
284+17	-	341+20	STH 64	5,300	CTH Q TO ELMERS LANE
341+20	-	345+62	STH 64	42	ELMERS LANE TO 29TH ROAD
345+62	-	367+48	STH 64	1,790	29TH ROAD TO 31ST ROAD
367+48	-	450+77	STH 64	7,850	31ST ROAD TO 25TH ROAD
450+77	-	477+05	STH 64	2,230	25TH ROAD TO 17TH ROAD
477+05	-	495+81	STH 64	1,680	17TH ROAD TO END OF PROJECT
PROJECT TOTAL				31,062	

CURB & GUTTER REPLACEMENT

LOCATION	CONCRETE	CONCRETE	**TOPSOIL	**MULCHING	**FERTILIZER	**SEEDING		
	CURB & GUTTER	CURB & GUTTER						
	6-INCH SLOPED	RESTORATION						
	30-INCH TYPE J	SPV.0060.01						MIXTURE
601.0415			TYPE B	NO. 40				
LF	EACH	SY	SY	CWT	LB		REMARKS	
CATEGORY 0010								
CTH ZZ SW RADIUS	23	1	3	3	0.01	0.05	SEE CURB & GUTTER REMOVAL AND REPLACEMENT DETAIL	
PROJECT TOTAL	23	1	3	3	0.01	0.05		

NOTES:
**ITEMS AND QUANTITIES FOR BID INFORMATION ONLY - ITEMS WILL BE PAID FOR UNDER BID ITEM "CONCRETE CURB & GUTTER RESTORATION"

INLET PROTECTION TYPE C

				628.7015		
STATION	TO	STATION	LOCATION	EACH	REMARKS	
CATEGORY 0010						
47670	-	33.4	STH 64 RT	1	17TH ROAD SW RADIUS	
929	-	14.1	17TH ROAD LT	1	17TH ROAD SW RADIUS	
PROJECT TOTAL				2		

MARKERS CULVERT END

				633.5200	
STATION	TO	STATION	LOCATION	EACH	REMARKS
CATEGORY 0010					
20285	-	31	STH 64 LT	1	24" X 38" RCHECP
27136	-	37	STH 64 LT	1	24" RCCP
36947	-	30	STH 64 LT	1	24" X 38" RCHECP
PROJECT TOTAL				3	

MOVING SIGNS TYPE II

		638.2102	REMARKS
LOCATION		EACH	
CATEGORY 0010			
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING		2	SPEED LIMIT 45
PROJECT TOTAL		2	

TRAFFIC CONTROL SUMMARY

LOCATION/STAGE	APPROX.	DRUMS		BARRICADES TYPE III		WARNING		COVERING		APPROX.	SIGNS PCMS		REMARKS	
	SERVICE	643.0300		643.0420		LIGHTS TYPE A		SIGNS		SERVICE	643.1050			
	PERIOD	NO.	TOTAL	NO.	TOTAL	NO.	TOTAL	NO.	TOTAL	SIGNS	NO.	TOTAL		
	DAYS	REQ'D	DAY	REQ'D	DAY	REQ'D	DAY	REQ'D	DAY	TYPE II	REQ'D	DAY		
CATEGORY 0010														
ADVANCE WARNING														
MAINLINE														
STH 64 WEST PROJECT LIMITS	38							5	190		7	1	7	INSTALL PCMS PRIOR TO START OF CONSTRUCTION
STH 64 EAST PROJECT LIMITS	38							5	190		7	1	7	INSTALL PCMS PRIOR TO START OF CONSTRUCTION
SIDEROADS														
CTH S	38							1	38					
CTH ZZ	38							1	38					
47TH ROAD	38							1	38					
TOM POST ROAD	38							1	38					
41ST ROAD	38							1	38					
39TH ROAD	38							1	38					
CTH Q	38							1	38					
ELMERS LANE	38							1	38					
29TH ROAD	38							1	38					
31ST ROAD	38							1	38					
25TH ROAD	38							1	38					
17TH ROAD	38							1	38					
CURB & GUTTER REMOVAL AND REPLACEMENT														
STH 64 RT	10	17	170					1	10					
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING														
ROAD CLOSURE														
STH 64	5			12	60	16	80	6	30		7	2	14	
DETOUR	5			2	10	4	20	103	515	5				
PROJECT TOTAL		17	170	14	70	20	100	132	1,391	5		4	28	

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX.	SERVICE	SIGNS 643.0900 DAYS	BARRICADES TYPE III 643.0420 DAYS	WARNING	LIGHTS	SIGNS	NO. OF CYCLES	COVERING	REMARKS
					5 DAYS	PERIOD			TYPE A 643.0705 DAYS	PCMS 643.1050 DAYS	SIGNS TYPE II 643.0920 EACH			
CATEGORY 0010														
1	US 141, N. OF STH 64, PLACE 1/4 MILE N. OF STH 64 INTERCHANGE ON RIGHT SHOULDER	M 3-4	36"X18"	1		5	5							
	"	M 1-6	36"X36"	1		5	5							64
	"	WO 20-2A	48"X48"	1		5	5							
2	US 141, N. OF STH 64, PLACE 1/4 MILE N. OF STH 64 INTERCHANGE IN MEDIAN	M 3-4	36"X18"	1		5	5							
	"	M 1-6	36"X36"	1		5	5							64
	"	WO 20-2A	48"X48"	1		5	5							
3	US 141, N. OF STH 64, PLACE 1/4 MILE N. OF STH 64 INTERCHANGE ON RIGHT SHOULDER	MO 4-8	36"X18"	1		5	5							
	"	M 3-4	36"X18"	1		5	5							
	"	M 1-6	36"X36"	1		5	5							64
	"	MO 6-1	30"X30"	1		5	5							AHEAD
4	US 141, N. OF STH 64, PLACE 1/4 MILE N. OF STH 64 INTERCHANGE IN MEDIAN	MO 4-8	36"X18"	1		5	5							
	"	M 3-4	36"X18"	1		5	5							
	"	M 1-6	36"X36"	1		5	5							64
	"	MO 6-1	30"X30"	1		5	5							AHEAD
5	US 141 OFF-RAMP TO STH 64, COVER EXISTING D1-62 SIGN AS SHOWN											1	1	COVER AS SHOWN
6	STH 64, W. OF US 141, PLACE ON RIGHT SHOULDER W. OF SB RAMP INTERSECTION	R 11-3	60"X30"	1		5	5	5	10					1/4 MILE AHEAD
	"	M 4-9L	30"X24"	1		5	5							
7	STH 64, W. OF US 141, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1							7			PLACE IN ADVANCE OF CLOSURE
8	STH 64, E. OF CTH CP, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1							7			PLACE IN ADVANCE OF CLOSURE
9	STH 64, BETWEEN US 141 RAMPS, PLACE/COVER EXISTING D1-62 SIGN AS SHOWN	MO 4-8	24"X12"	1		5	5					1	1	COVER "64 WEST"
	"	M 3-4	24"X12"	1		5	5							
	"	M 1-6	24"X24"	1		5	5							64
	"	MO 6-1	21"X21"	1		5	5							LEFT
10	US 141 OFF-RAMP TO STH 64, COVER EXISTING D1-62 SIGN AS SHOWN											1	1	COVER "WEST 64 POUND ANTIGO"
11	STH 64, E. OF US 141 NB RAMP INTERSECTION, PLACE 150' E. OF NB RAMP INTERSECTION	MO 4-8	24"X12"	1		5	5							
	"	M 3-4	24"X12"	1		5	5							
	"	M 1-6	24"X24"	1		5	5							64
	"	MO 6-1	21"X21"	1		5	5							AHEAD
12	STH 64, E. OF US 141 NB RAMP INTERSECTION, COVER EXISTING D1-62 SIGN AS SHOWN											1	1	COVER SIGN AS SHOWN
13	STH 64, E. OF US 141 NB RAMP INTERSECTION, PLACE 1/4 MILE E. OF US 141 RAMP	M 3-4	24"X12"	1		5	5							
	"	M 1-6	24"X24"	1		5	5							64
	"	WO 20-2A	48"X48"	1		5	5							
14	STH 64, E. OF CTH CP, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF INTERSECTION	R 11-3	60"X30"	1		5	5	5	10					1/4 MILE AHEAD
	"	M 4-9R	30"X24"	1		5	5							
15	STH 64, AT CTH CP, PLACE RIGHT OF EXISTING J3-2 SIGN	MO 4-8	24"X12"	1		5	5							
	"	M 3-2	24"X12"	1		5	5							
	"	M 1-6	24"X24"	1		5	5							64
	"	MO 6-1	21"X21"	1		5	5							RIGHT
PAGE SUBTOTALS				35			165	10	20	14			4	

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	APPROX.	SERVICE	SIGNS	BARRICADES	WARNING	SIGNS	COVERING	REMARKS
				IN	PERIOD		TYPE III	LIGHTS	SIGNS	SIGNS	
				SERVICE	5	643.0900	643.0420	643.0705	643.1050	NO. OF	
CATEGORY 0010											
16	STH 64, W. OF CTH CP, PLACE 750' W. OF CTH CP INTERSECTION	MO 4-8	24"X12"	1	5	5					
	"	M 3-2	24"X12"	1	5	5					
	"	M 1-6	24"X24"	1	5	5					64
	"	MO 5-1R	21"X21"	1	5	5					
17	STH 64, W. OF CTH CP, PLACE 1/4 MILE W. OF CTH CP INTERSECTION	M 3-2	24"X12"	1	5	5					
	"	M 1-6	24"X24"	1	5	5					64
	"	WO 20-2A	48"X48"	1	5	5					
18	CTH CP, AT STH 64, MODIFY/COVER EXISTING J3-2 SIGN AS SHOWN	MO 6-1	21"X21"	1	5	5					
	"									1 1	COVER "BUSINESS 141 RT"
19	US 141, N. OF CTH CP, PLACE 1000' N. OF CTH CP INTERCHANGE ON RIGHT SHOULDER	MO 4-8	36"X18"	1	5	5					
	"	M 3-4	36"X18"	1	5	5					
	"	M 1-6	36"X36"	1	5	5					64
	"	MO 5-2R	30"X30"	1	5	5					
20	US 141, N. OF CTH CP, PLACE 1000' N. OF CTH CP INTERCHANGE IN MEDIAN	MO 4-8	36"X18"	1	5	5					
	"	M 3-4	36"X18"	1	5	5					
	"	M 1-6	36"X36"	1	5	5					64
	"	MO 5-2R	30"X30"	1	5	5					
21	US 141, AT CTH CP EXIT RAMP, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	MO 4-8	36"X18"	1	5	5					
	"	M 3-4	36"X18"	1	5	5					
	"	M 1-6	36"X36"	1	5	5					64
	"	MO 6-2	30"X30"	1	5	5					TILR RIGHT
22	US 141 OFF-RAMP TO CTH CP RAMP, PLACE 600' PRIOR TO CTH CO RAMP INTERSECTION	MO 4-8	24"X12"	1	5	5					
	"	M 3-4	24"X12"	1	5	5					
	"	M 1-6	24"X24"	1	5	5					64
	"	MO 5-1L	21"X21"	1	5	5					
23	US 141 OFF-RAMP TO CTH CP RAMP, PLACE RIGHT OF EXISTING R6-1 AT RAMP INTERSECTION	MO 4-8	24"X12"	1	5	5					
	"	M 3-4	24"X12"	1	5	5					
	"	M 1-6	24"X24"	1	5	5					64
	"	MO 6-1	21"X21"	1	5	5					LEFT
24	CTH CP, AT US 141 NB RAMP, PLACE RIGHT OF EXISTING J3-1 AT RAMP INTERSECTION	MO 4-8	24"X12"	1	5	5					
	"	M 3-2	24"X12"	1	5	5					
	"	M 1-6	24"X24"	1	5	5					64
	"	MO 6-1	21"X21"	1	5	5					RIGHT
25	CTH CP, E. OF US 141, PLACE RIGHT OF EXISTING J2-3 E. OF US 141 INTERSECTION	MO 4-8	24"X12"	1	5	5					
	"	M 3-2	24"X12"	1	5	5					
	"	M 1-6	24"X24"	1	5	5					64
	"	MO 5-1R	21"X21"	1	5	5					
PAGE SUBTOTALS				36		180	0	0	0	1	

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER	SERVICE	SIGNS 643.0900	BARRICADES 643.0420	WARNING	LIGHTS 643.0705	SIGNS	NO. OF CYCLES	COVERING	REMARKS
				IN SERVICE	PERIOD 5 DAYS			SIGNS TYPE III		PCMS		SIGNS TYPE II	
CATEGORY 0010													
26	CTH CP, S. OF CTH B, PLACE 150' S. OF CTH B INTERSECTION	MO 4-8	24"X12"	1	5	5							
		M 3-4	24"X12"	1	5	5							
		M 1-6	24"X24"	1	5	5							
		MO 6-1	21"X21"	1	5	5						64 AHEAD	
27	CTH CP, N. OF CTH B, PLACE 150' N. OF CTH B INTERSECTION	MO 4-8	24"X12"	1	5	5							
		M 3-2	24"X12"	1	5	5							
		M 1-6	24"X24"	1	5	5						64 AHEAD	
		MO 6-1	21"X21"	1	5	5							
28	US 141, S. OF CTH CP, PLACE 2000' S. OF CTH CP INTERCHANGE IN MEDIAN	M 3-4	36"X18"	1	5	5							
		M 1-6	36"X36"	1	5	5						64	
		WO 20-2A	48"X48"	1	5	5							
		M 3-4	36"X18"	1	5	5							
29	US 141, S. OF CTH CP, PLACE 2000' S. OF CTH CP INTERCHANGE ON RIGHT SHOULDER	M 3-4	36"X18"	1	5	5							
		M 1-6	36"X36"	1	5	5						64	
		WO 20-2A	48"X48"	1	5	5							
		MO 4-8	36"X18"	1	5	5							
30	US 141, S. OF CTH CP, PLACE 1/4 MILE S. OF CTH CP INTERCHANGE IN MEDIAN	M 3-4	36"X18"	1	5	5							
		M 1-6	36"X36"	1	5	5						64	
		MO 5-2R	30"X30"	1	5	5							
		MO 4-8	36"X18"	1	5	5							
31	US 141, S. OF CTH CP, PLACE 1/4 MILE S. OF CTH CP INTERCHANGE ON RIGHT SHOULDER	M 3-4	36"X18"	1	5	5							
		M 1-6	36"X36"	1	5	5						64	
		MO 5-2R	30"X30"	1	5	5							
		MO 4-8	36"X18"	1	5	5							
32	US 141, S. OF CTH CP, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	M 3-4	36"X18"	1	5	5							
		M 1-6	36"X36"	1	5	5						64	
		MO 6-2	30"X30"	1	5	5						TILT RIGHT	
		MO 4-8	24"X12"	1	5	5							
33	US 141 OFF-RAMP TO CTH CP, PLACE 600' PRIOR TO CTH CP RAMP INTERSECTION	M 3-4	24"X12"	1	5	5							
		M 1-6	24"X24"	1	5	5						64	
		MO 5-1R	21"X21"	1	5	5							
		MO 4-8	24"X12"	1	5	5							
34	US 141 OFF-RAMP TO CTH CP, PLACE LEFT OF EXISTING J3-3 SIGN ON RAMP	M 3-4	24"X12"	1	5	5							
		M 1-6	24"X24"	1	5	5						64	
		MO 6-1	21"X21"	1	5	5						RIGHT	
PAGE SUBTOTALS				34		170	0	0	0		0		

PAVEMENT MARKING SUMMARY

STATION	TO	STATION	LOCATION	MARKING LINE	MARKING LINE		MARKING	TEMPORARY	TEMPORARY	REMARKS
				EPOXY	GROOVED WET	REFLECTIVE EPOXY	RAILROAD	MARKING LINE	MARKING LINE	
				4-INCH	4-INCH	8-INCH	CROSSINGS	PAINT	EPOXY	
				YELLOW	WHITE	WHITE	EPOXY	YELLOW	YELLOW	
				646.1020	646.1040	646.3040	646.5320	649.0105	649.0120	
				LF	LF	LF	EACH	LF	LF	
CATEGORY 0010										
129+34	-	130+37	STH 64	25	151			8	25	BEGINNING OF PROJECT TO CTH S
130+37	-	179+47	STH 64	4,590	7,960	100		392	4,590	CTH S TO CTH ZZ
179+47	-	183+01	STH 64	708	0			28	708	CTH ZZ TO 47TH ROAD
183+01	-	231+32	STH 64	2,930	8,650			384	2,930	47TH ROAD TO TOM POST ROAD
231+32	-	235+92	STH 64	573	816			36	573	TOM POST ROAD TO 41ST ROAD
235+92	-	262+06	STH 64	3,370	5,010			208	3,370	41ST ROAD TO 39TH ROAD
262+06	-	284+17	STH 64	2,360	4,000			176	2,360	39TH ROAD TO CTH Q
284+17	-	341+20	STH 64	3,540	11,300			456	3,540	CTH Q TO ELMERS LANE
341+20	-	345+62	STH 64	392	610			32	392	ELMERS LANE TO 29TH ROAD
345+62	-	367+48	STH 64	1,640	4,270			172	1,640	29TH ROAD TO 31ST ROAD
367+48	-	450+77	STH 64	5,320	16,400			664	5,320	31ST ROAD TO 25TH ROAD
450+77	-	477+05	STH 64	3,720	4,890			208	3,720	25TH ROAD TO 17TH ROAD
477+05	-	495+81	STH 64	969	3,699			148	969	17TH ROAD TO END OF PROJECT
CTH S				94	19					NORTH OF STH 64
CTH ZZ				48	2					SOUTH OF STH 64
CTH Q				94	18					SOUTH OF STH 64
ESCANABA & LAKE SUPERIOR RAILROAD CROSSIN				550	550		2			
PROJECT TOTAL				30,923	68,345	100	2	2,912	30,137	

CONSTRUCTION STAKING SUMMARY

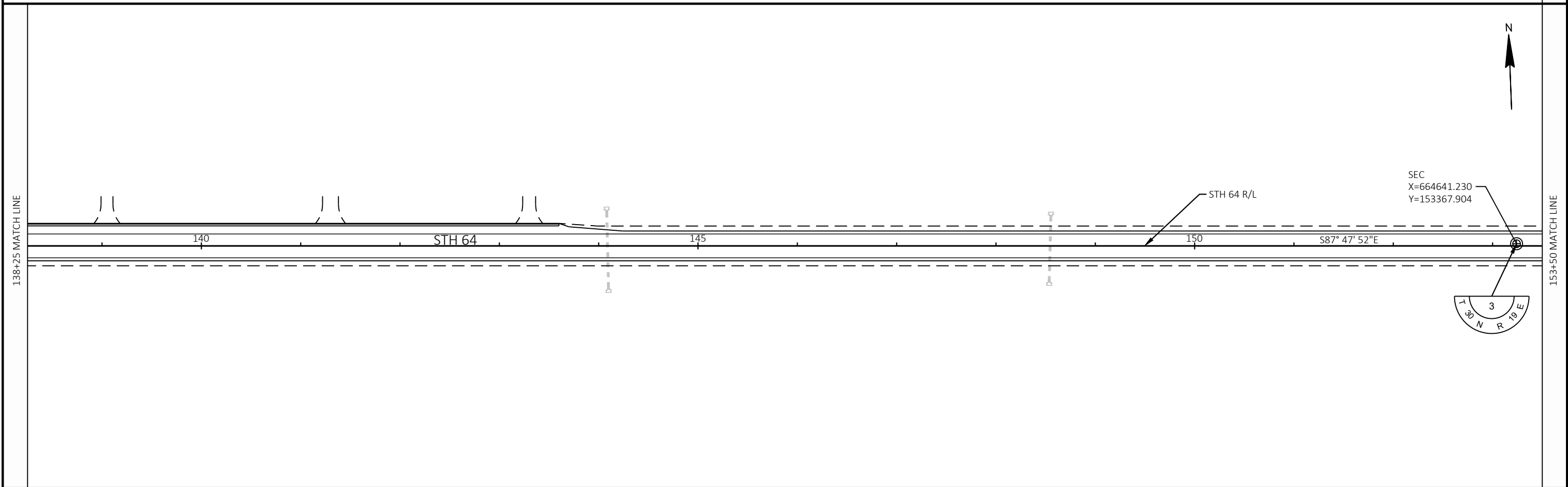
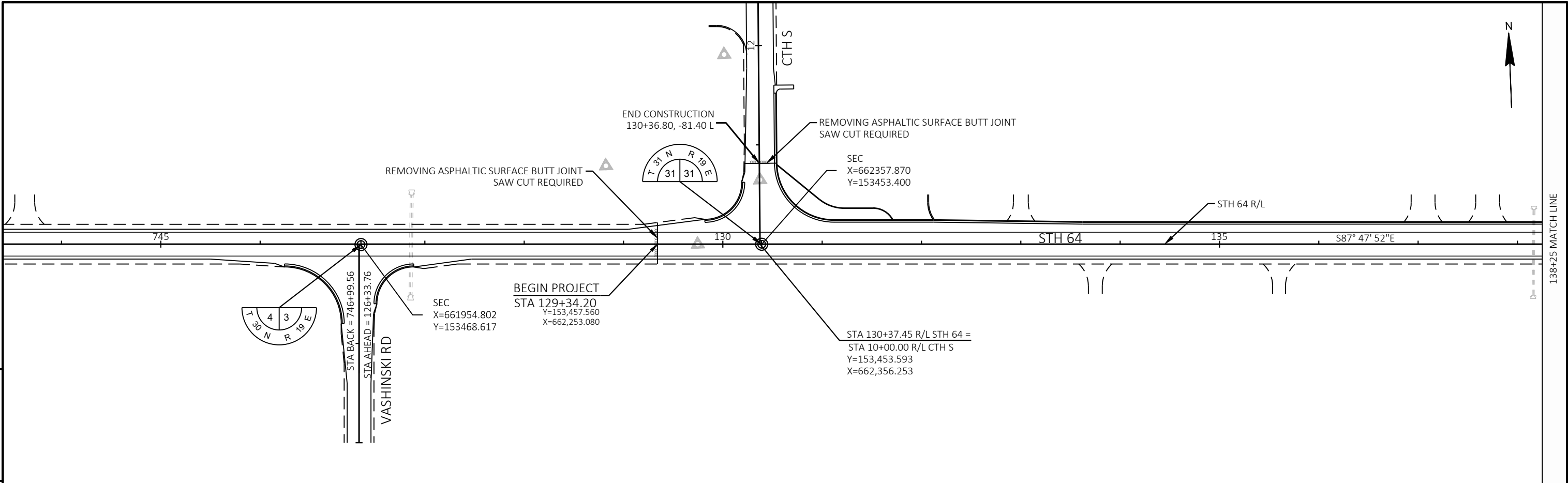
				RESURFACING REFERENCE 650.8000 LF	SUPPLEMENTAL CONTROL 650.9910.01 LS
STATION	TO	STATION	LOCATION		
CATEGORY 0010					
129+34	-	495+81	STH 64	36,600	1
			ESCANABA & LAKE SUPERIOR RAILROAD CROSSING	300	
PROJECT TOTAL				36,900	1

SAWING SUMMARY

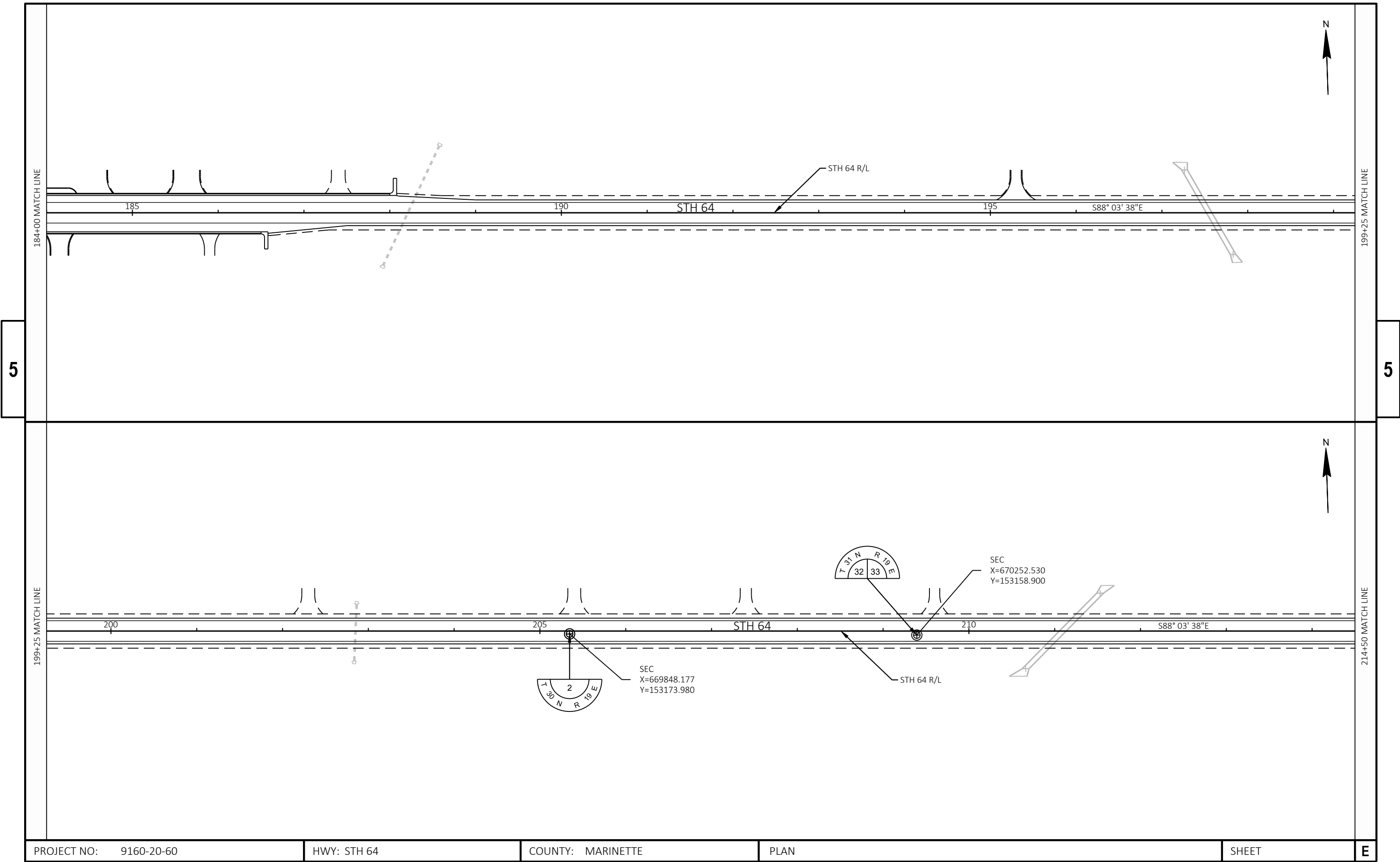
		SAWING ASPHALT 690.0150 LF	SAWING CONCRETE 690.0250 LF	REMARKS
CATEGORY 0010				
CTH ZZ SW RADIUS		31	3	SEE CURB AND GUTTER REMOVAL AND REPLACEMENT DETAIL
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING		50		WEST OF RAILROAD CROSSING
ESCANABA & LAKE SUPERIOR RAILROAD CROSSING		50		EAST OF RAILROAD CROSSING
PROJECT TOTAL		131	3	

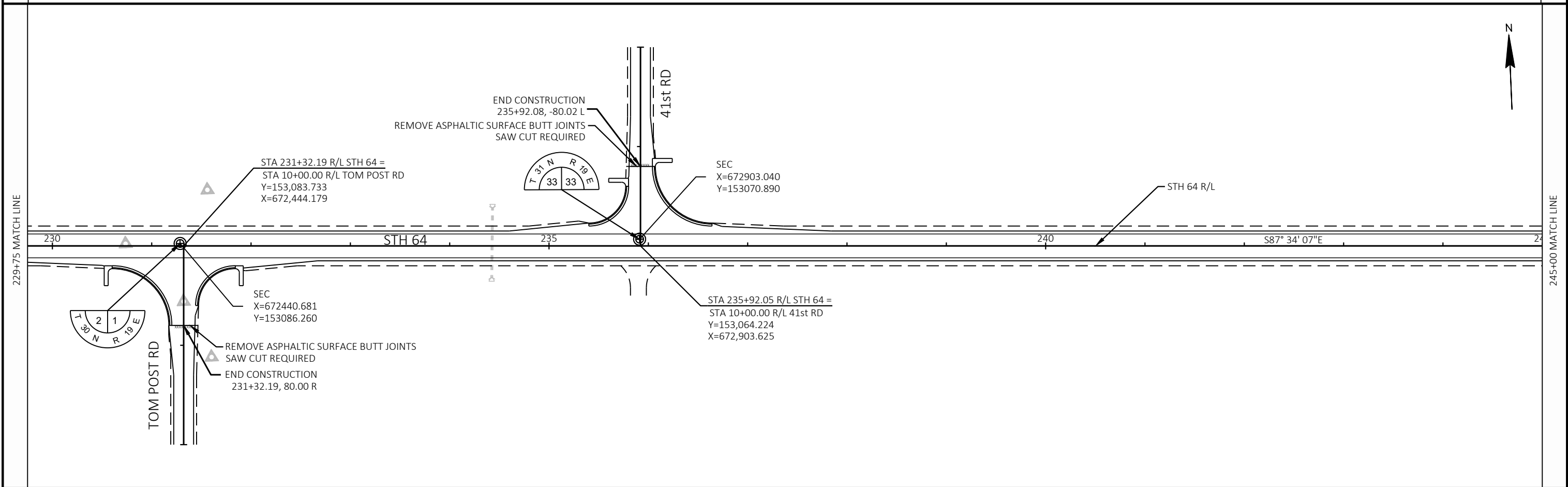
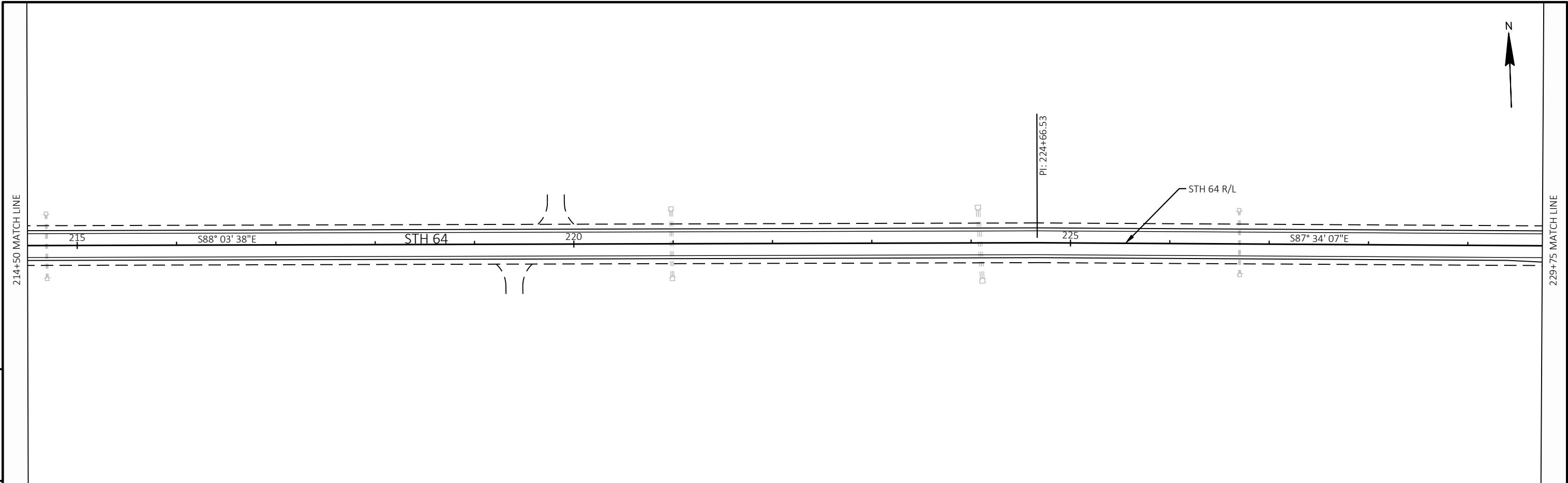
IRI RIDE

STATION TO STATION		LANE	SEGMENT TYPE	LANE LENGTH LF	REMARKS
CATEGORY 0010					
STH 64 WB					
129+34	- 134+34	1	HMA III	500	INTERSECTION
134+34	- 174+34	1	HMA I	4,000	
174+34	- 189+34	1	HMA IV	1,500	SPEED CHANGE
189+34	- 229+34	1	HMA I	4,000	
229+34	- 239+34	1	HMA III	1,000	INTERSECTION
239+34	- 259+34	1	HMA I	2,000	
259+34	- 264+34	1	HMA III	500	INTERSECTION
264+34	- 279+34	1	HMA I	1,500	
279+34	- 289+34	1	HMA III	1,000	INTERSECTION
289+34	- 339+34	1	HMA I	5,000	
339+34	- 349+34	1	HMA III	1,000	INTERSECTION
349+34	- 364+34	1	HMA I	1,500	
364+34	- 369+34	1	HMA III	500	INTERSECTION
369+34	- 449+34	1	HMA I	8,000	
449+34	- 454+34	1	HMA III	500	INTERSECTION
454+34	- 474+34	1	HMA I	2,000	
474+34	- 479+34	1	HMA III	500	INTERSECTION
479+34	- 495+81	1	HMA I	1,647	
STH 64 WB TOTAL				36,647	
STH 64 EB					
129+34	- 134+34	1	HMA III	500	INTERSECTION
134+34	- 174+34	1	HMA I	4,000	
174+34	- 189+34	1	HMA IV	1,500	SPEED CHANGE
189+34	- 229+34	1	HMA I	4,000	
229+34	- 239+34	1	HMA III	1,000	INTERSECTION
239+34	- 259+34	1	HMA I	2,000	
259+34	- 264+34	1	HMA III	500	INTERSECTION
264+34	- 279+34	1	HMA I	1,500	
279+34	- 289+34	1	HMA III	1,000	INTERSECTION
289+34	- 339+34	1	HMA I	5,000	
339+34	- 349+34	1	HMA III	1,000	INTERSECTION
349+34	- 364+34	1	HMA I	1,500	
364+34	- 369+34	1	HMA III	500	INTERSECTION
369+34	- 449+34	1	HMA I	8,000	
449+34	- 454+34	1	HMA III	500	INTERSECTION
454+34	- 474+34	1	HMA I	2,000	
474+34	- 479+34	1	HMA III	500	INTERSECTION
479+34	- 495+81	1	HMA I	1,647	
STH 64 EB TOTAL				36,647	
PROJECT TOTAL				73,294	

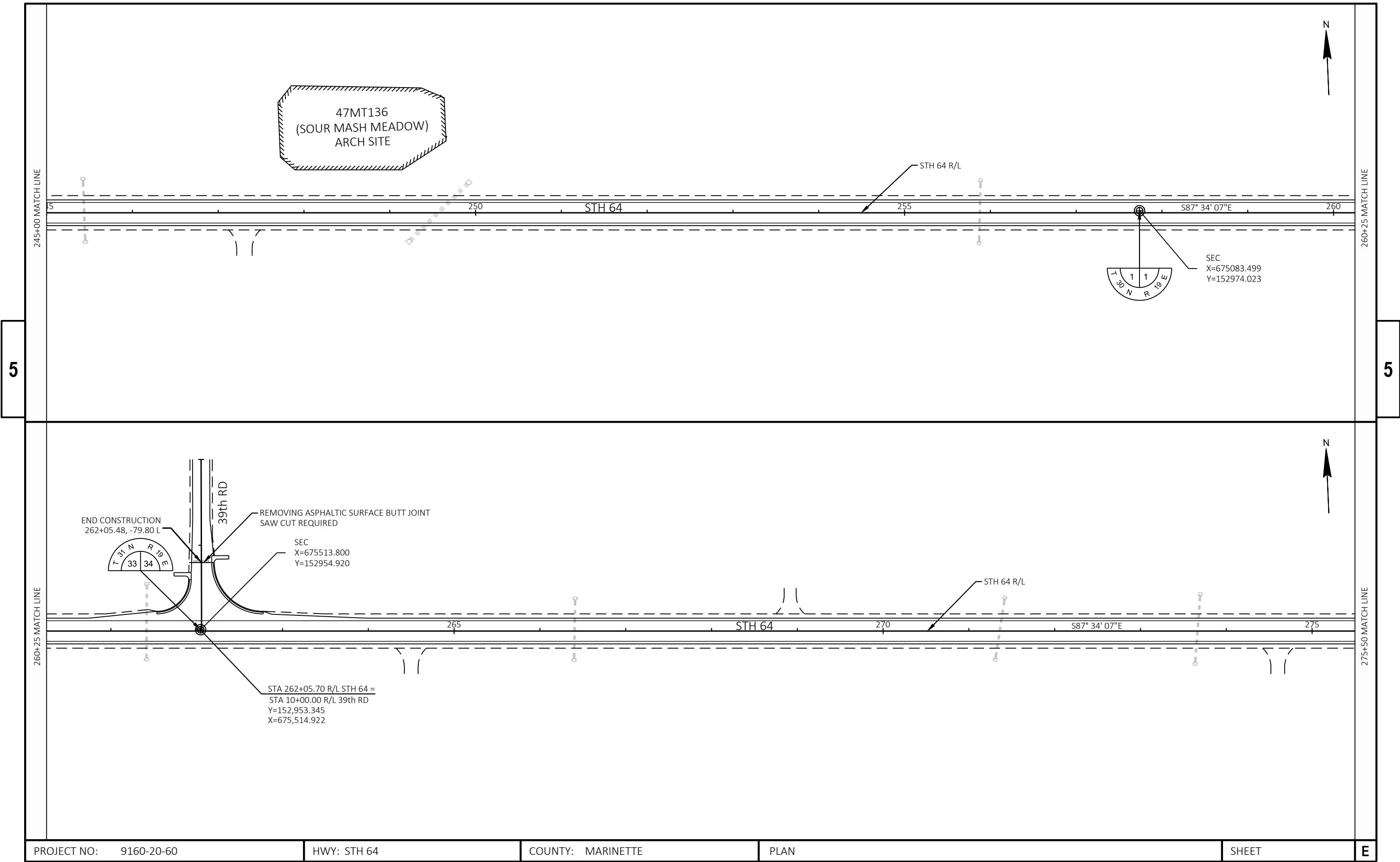


PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	PLAN	SHEET	E
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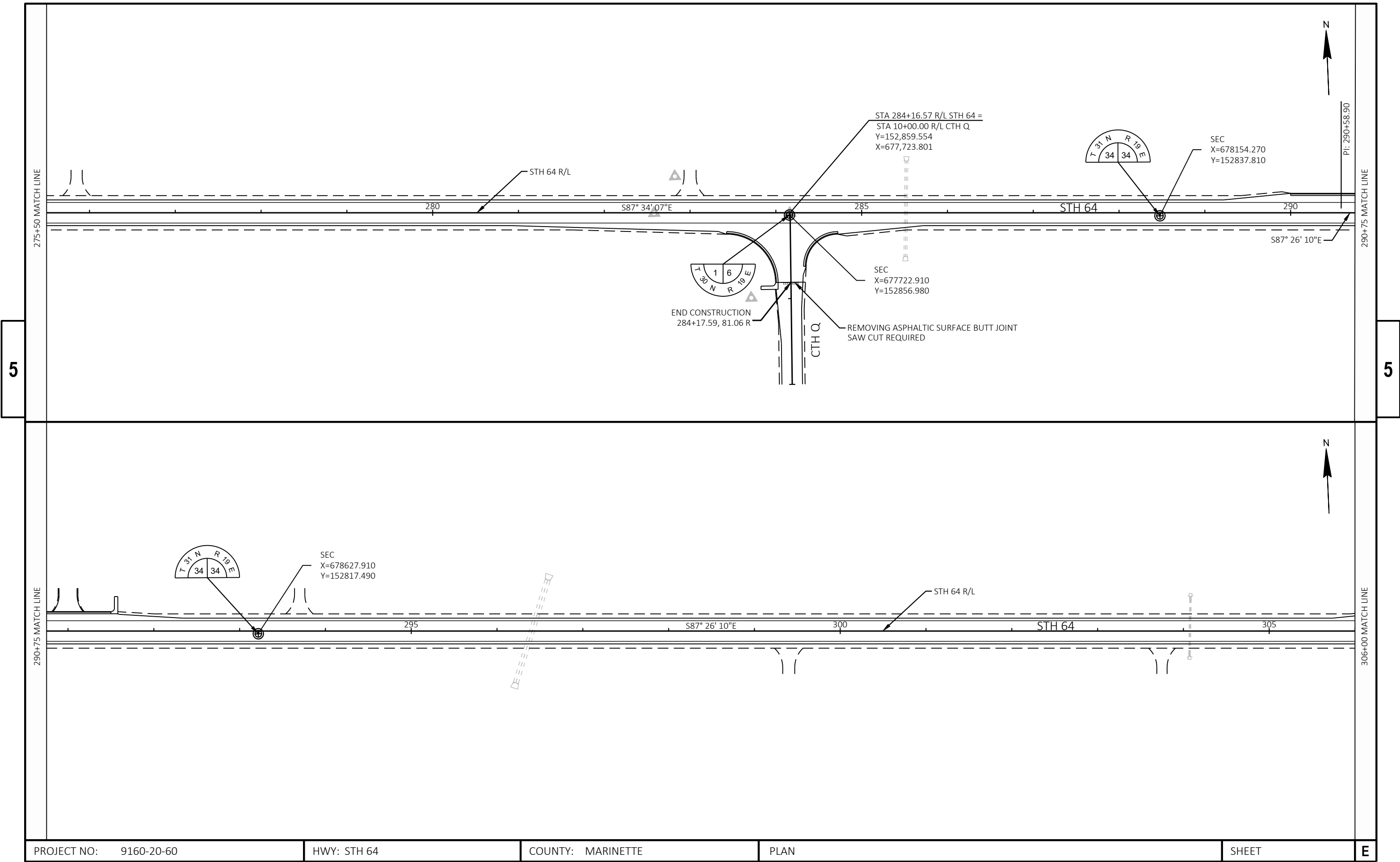
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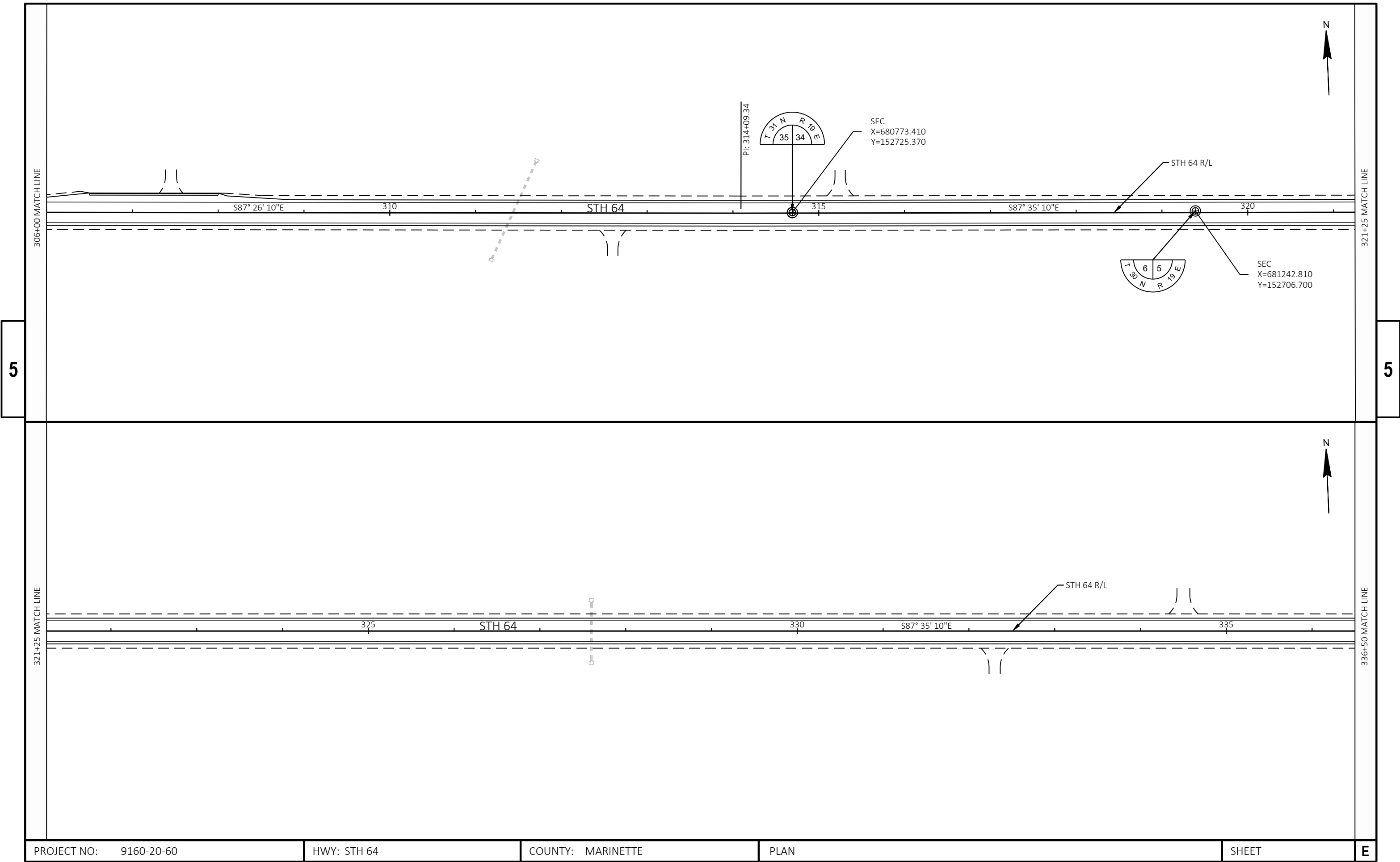


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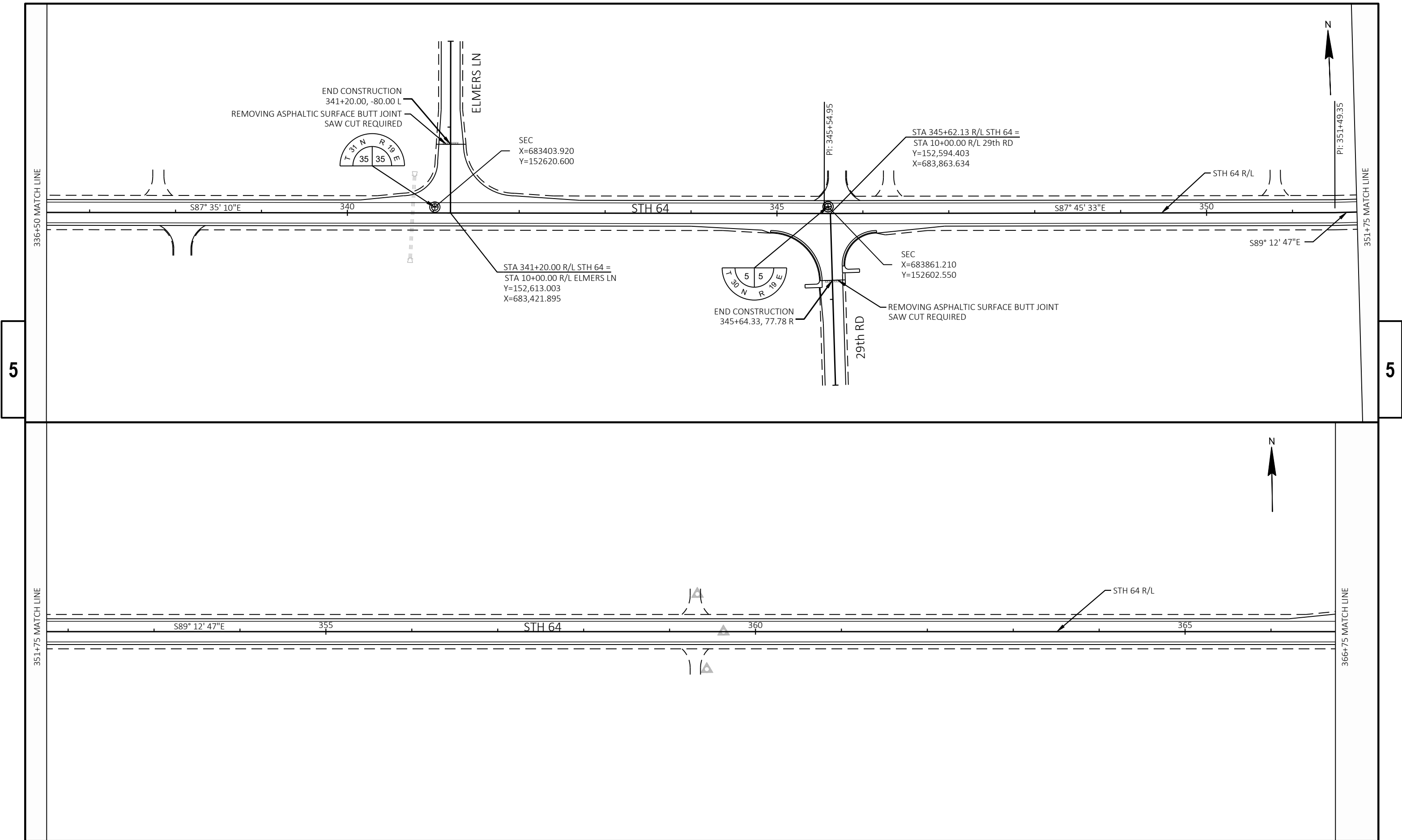
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PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	PLAN	SHEET	E
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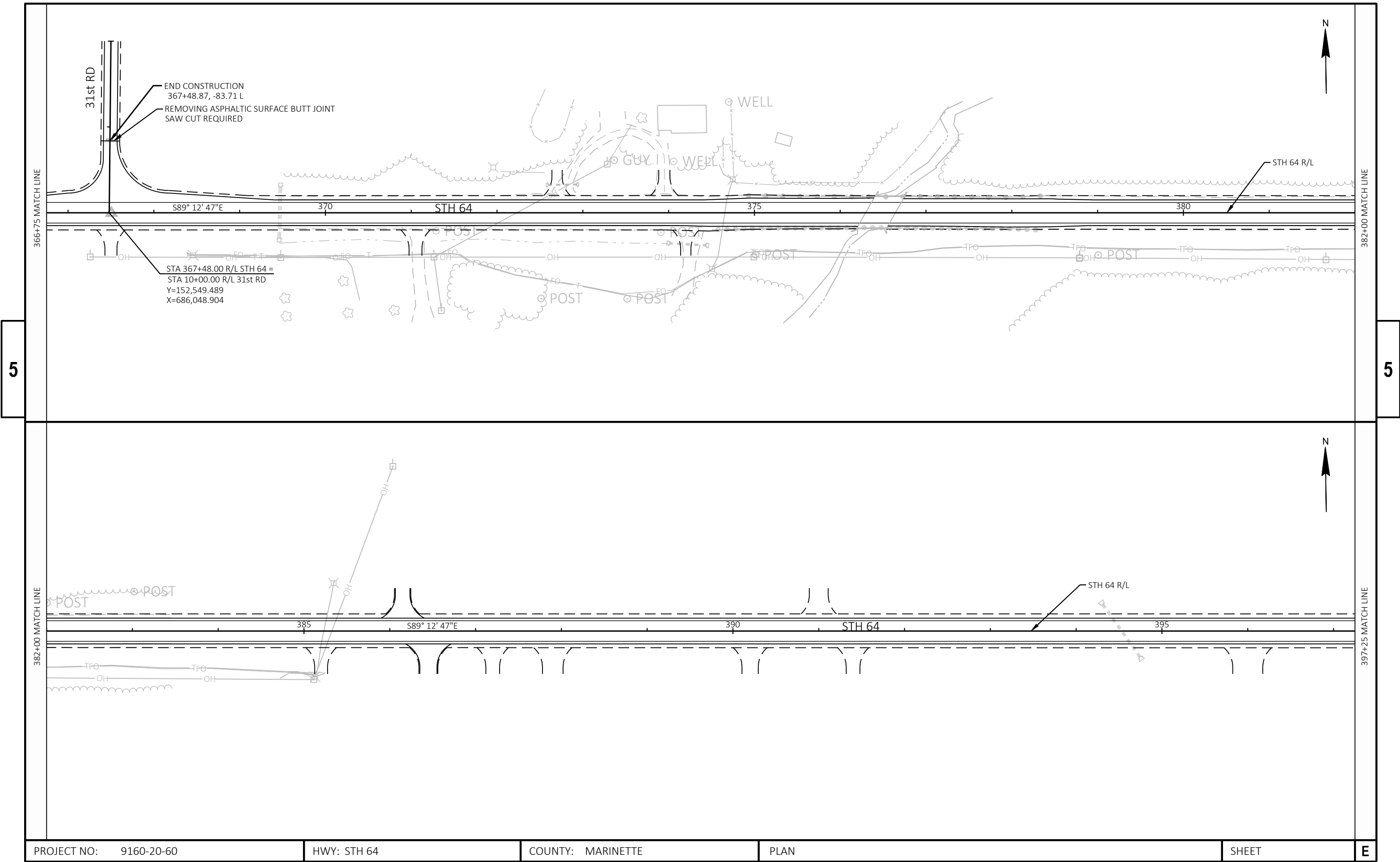
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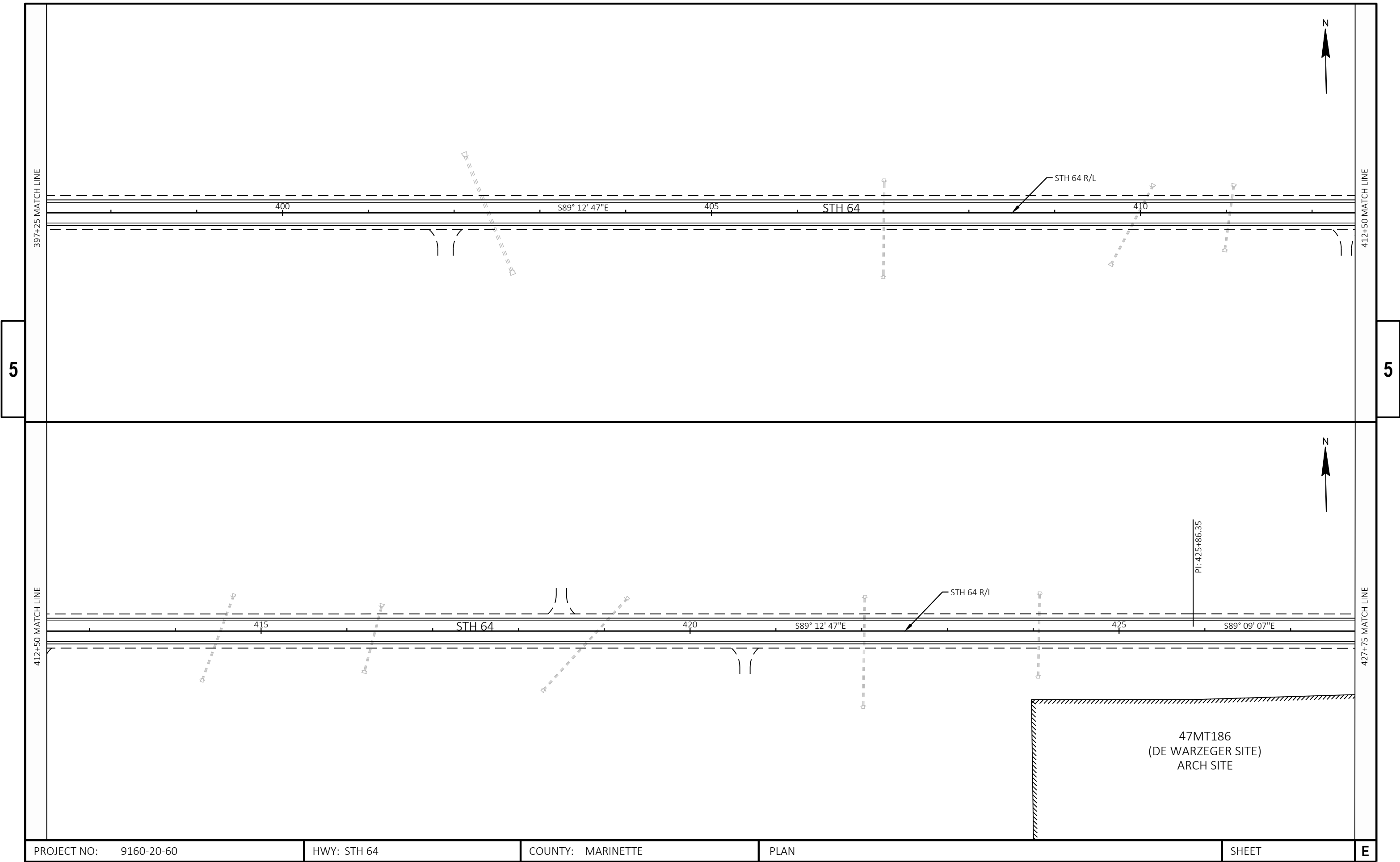
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5

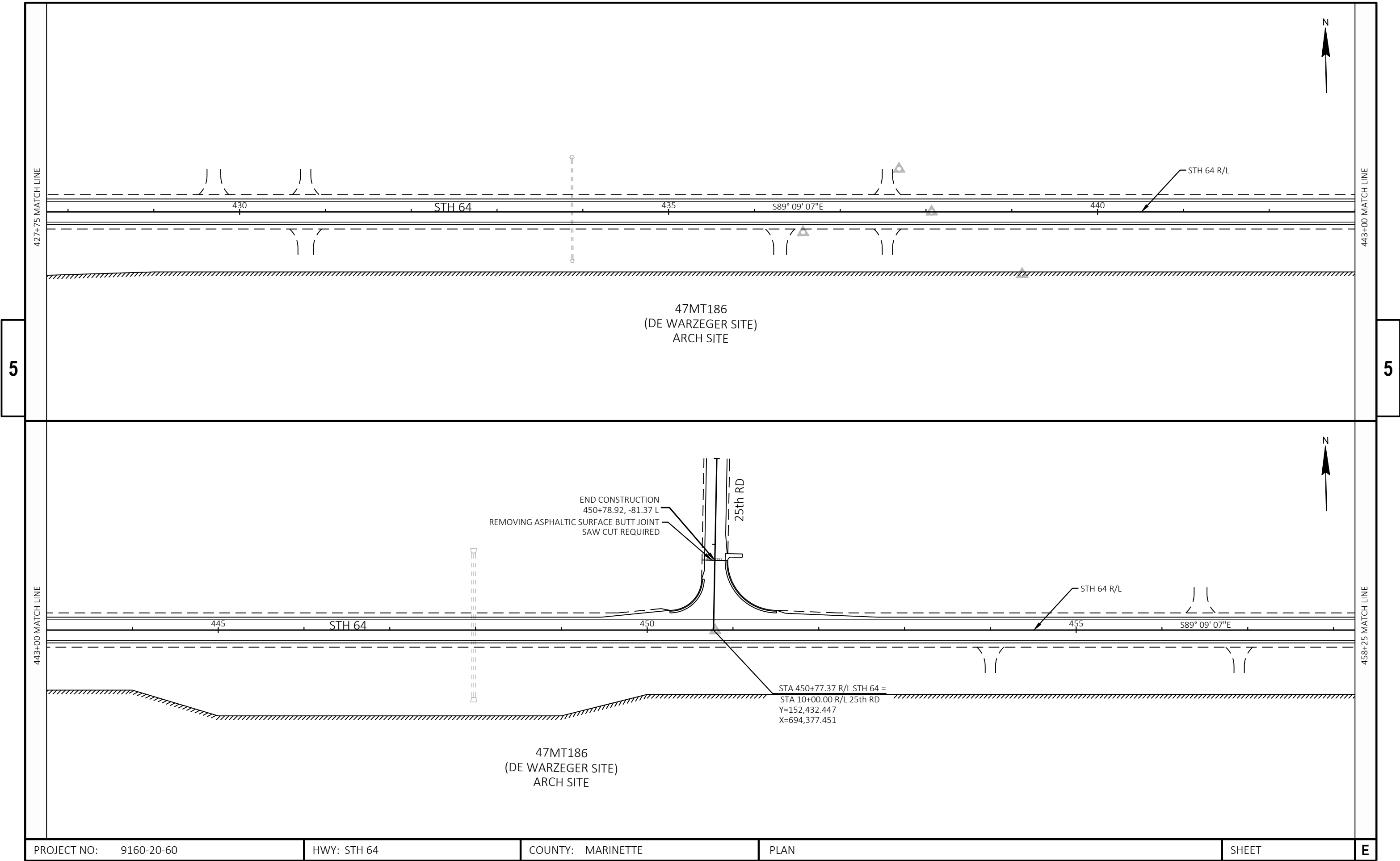
PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	PLAN	SHEET	E
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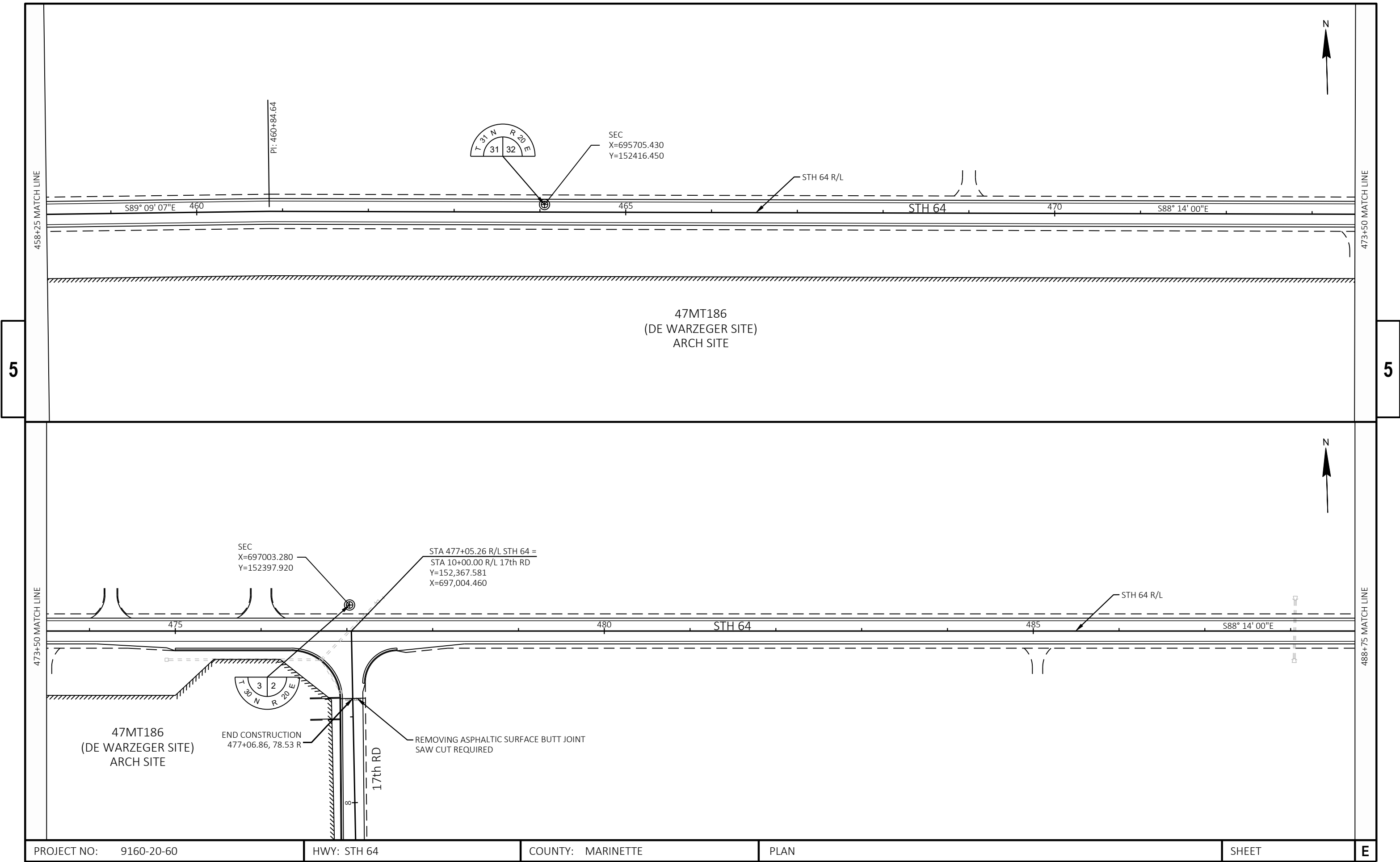
PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	PLAN	SHEET	E
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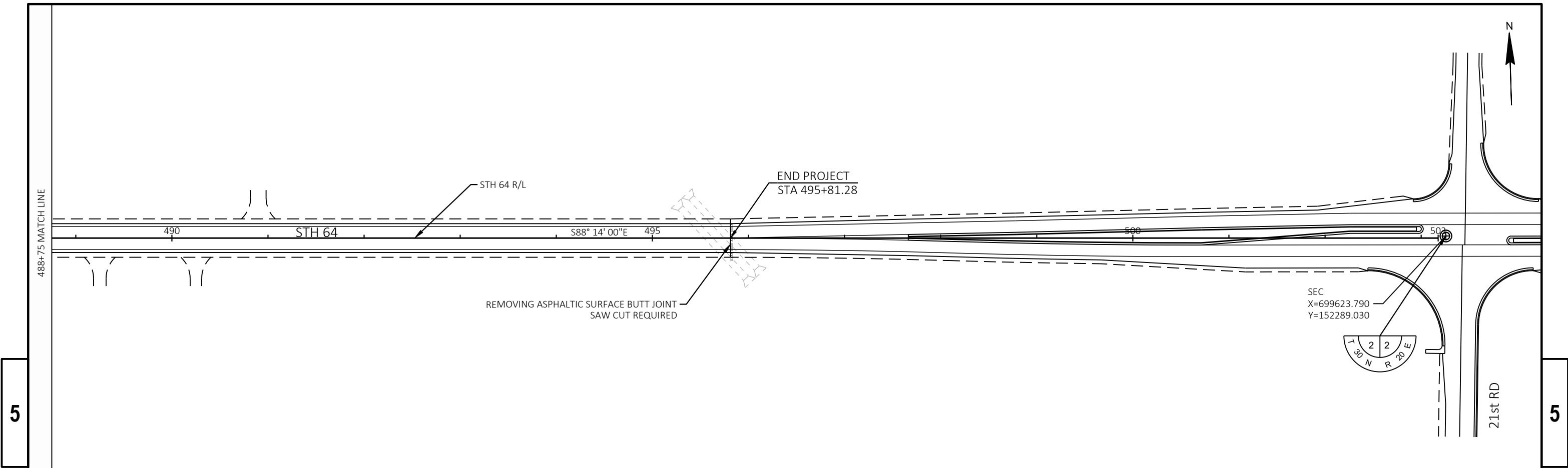
PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	PLAN	SHEET	E
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PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	PLAN	SHEET	E
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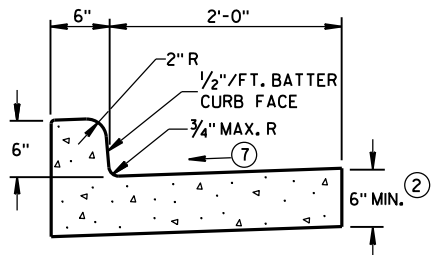


PROJECT NO: 9160-20-60	HWY: STH 64	COUNTY: MARINETTE	PLAN	SHEET	E
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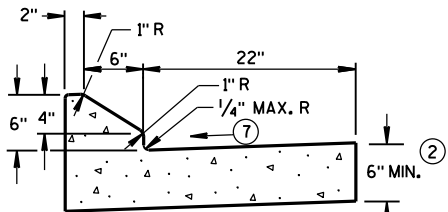


Standard Detail Drawing List

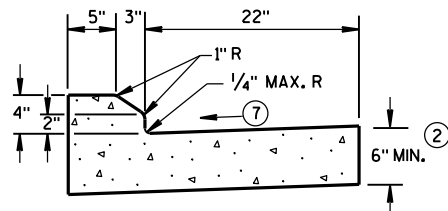
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08E10-02	INLET PROTECTION TYPE A, B, C AND D
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13B01-10	PAVEMENT DETAILS FOR RAILROAD APPROACH
13C19-01	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C09-11A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



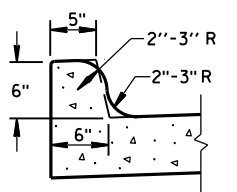
TYPES A^① & D



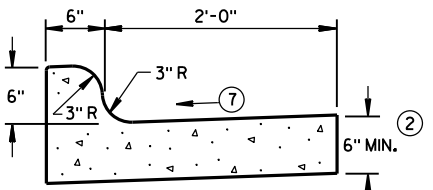
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

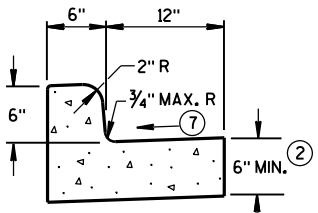


TYPES K^① & L
(OPTIONAL CURB SHAPE)



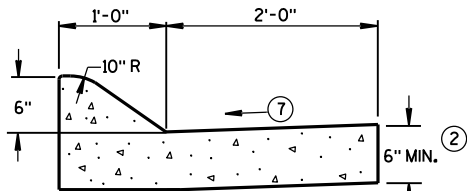
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

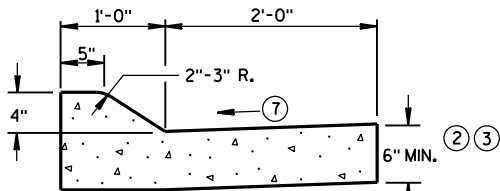


TYPES A^① & D

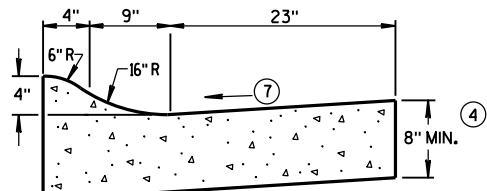
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

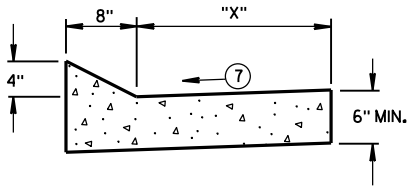


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

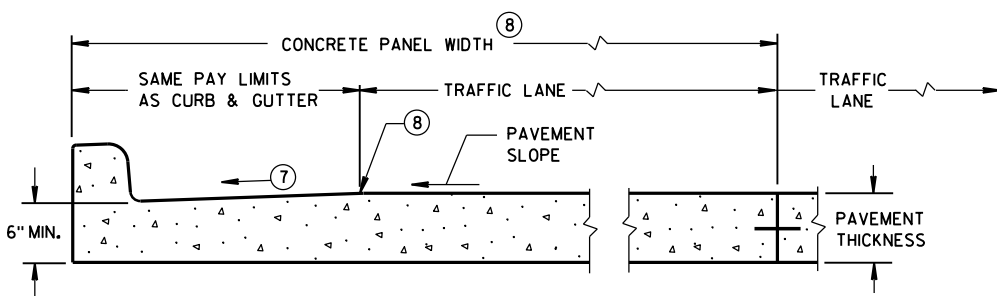
CONCRETE CURB & GUTTER 36"



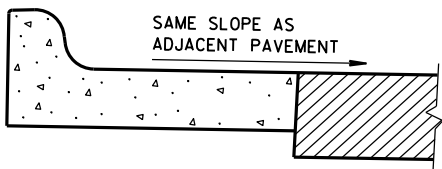
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

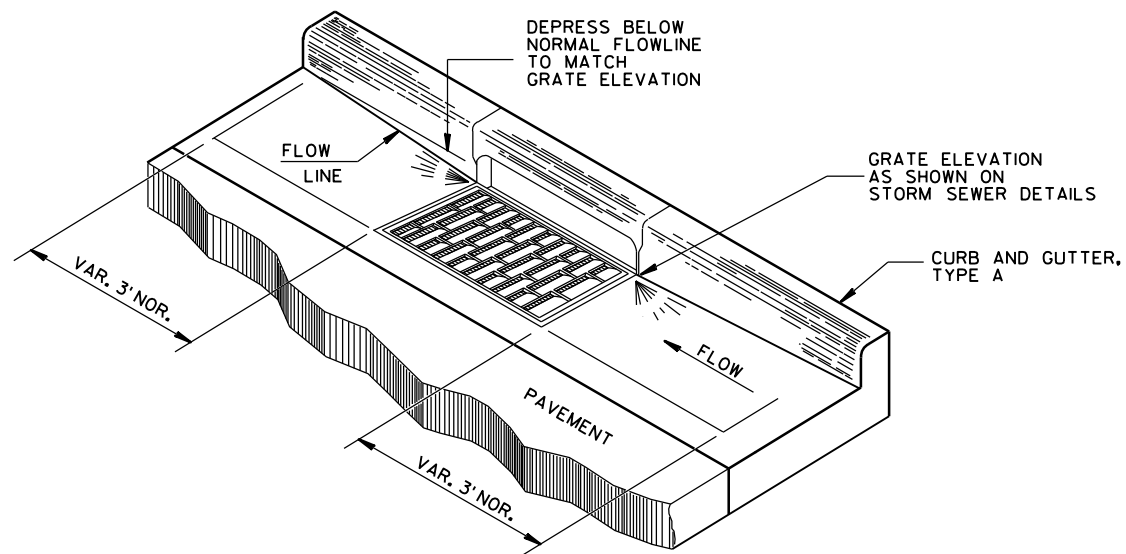
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

* BIKE LANE IS NOT SHOWN.

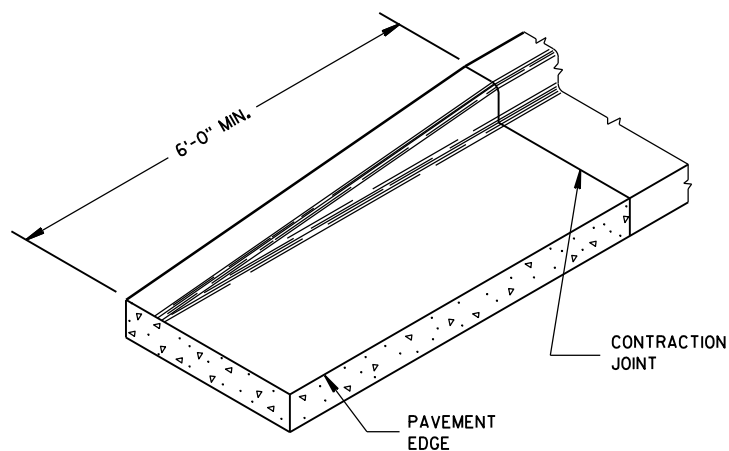
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

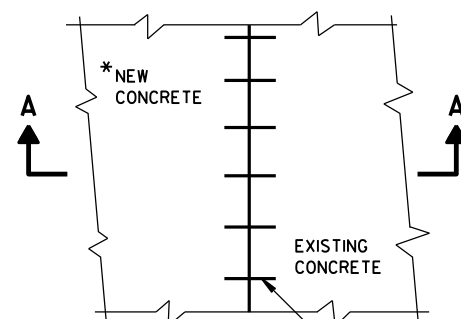


DETAIL OF CURB AND GUTTER AT INLETS

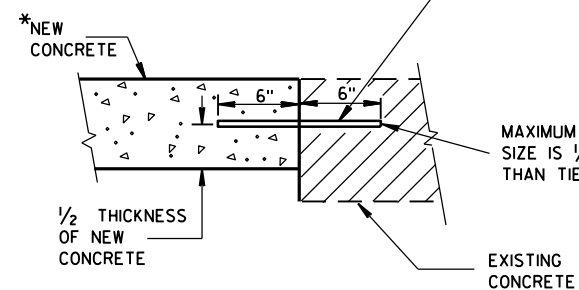
(TYPE H INLET COVER SHOWN)



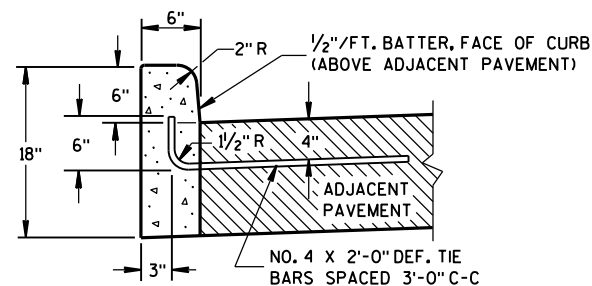
END SECTION CURB & GUTTER



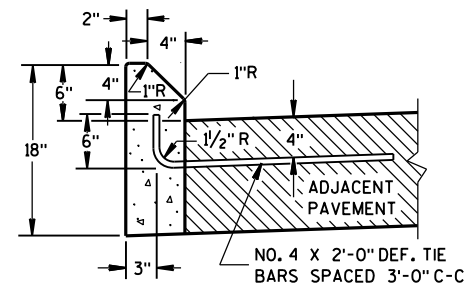
PLAN VIEW



**SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT**



TYPES A^① & D



TYPES G^① & J

GENERAL NOTES

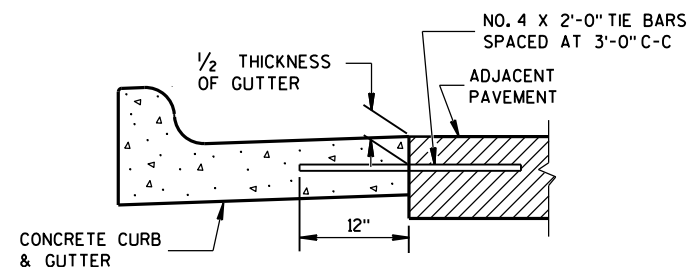
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

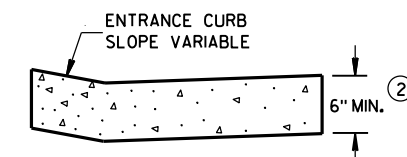
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

CONCRETE CURB



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2017

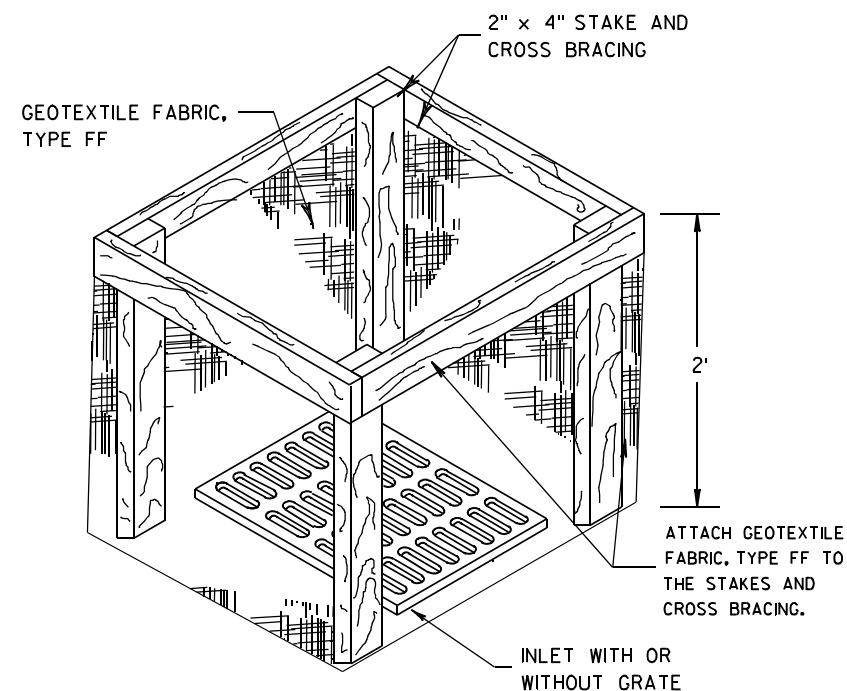
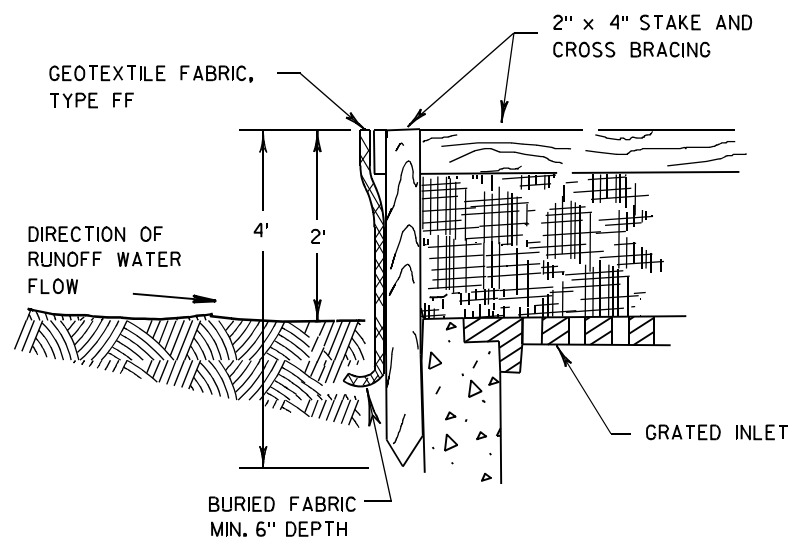
DATE

FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR



INLET PROTECTION, TYPE A

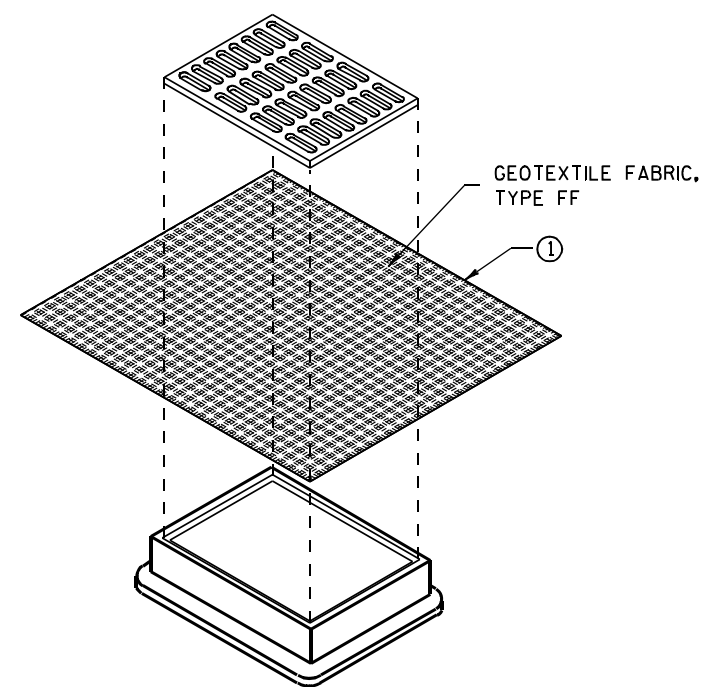
GENERAL NOTES

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

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

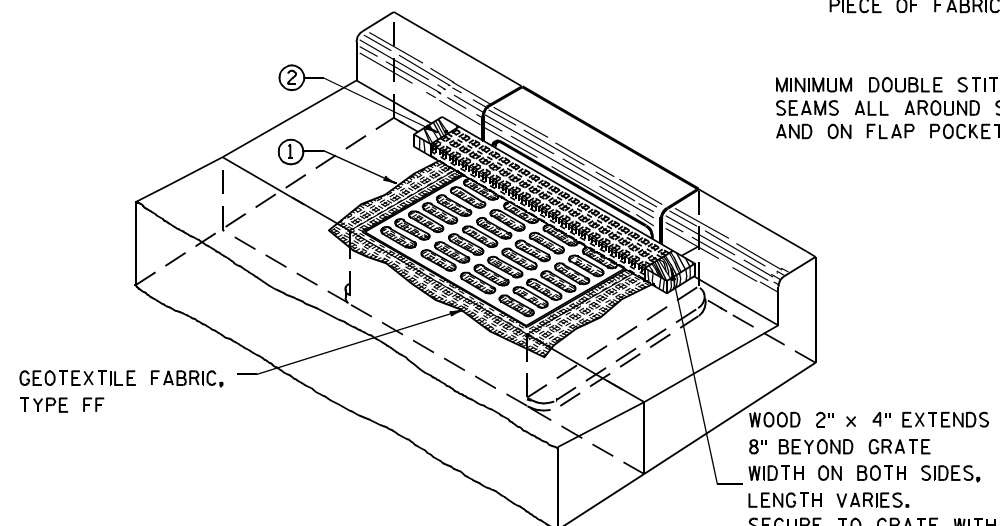
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

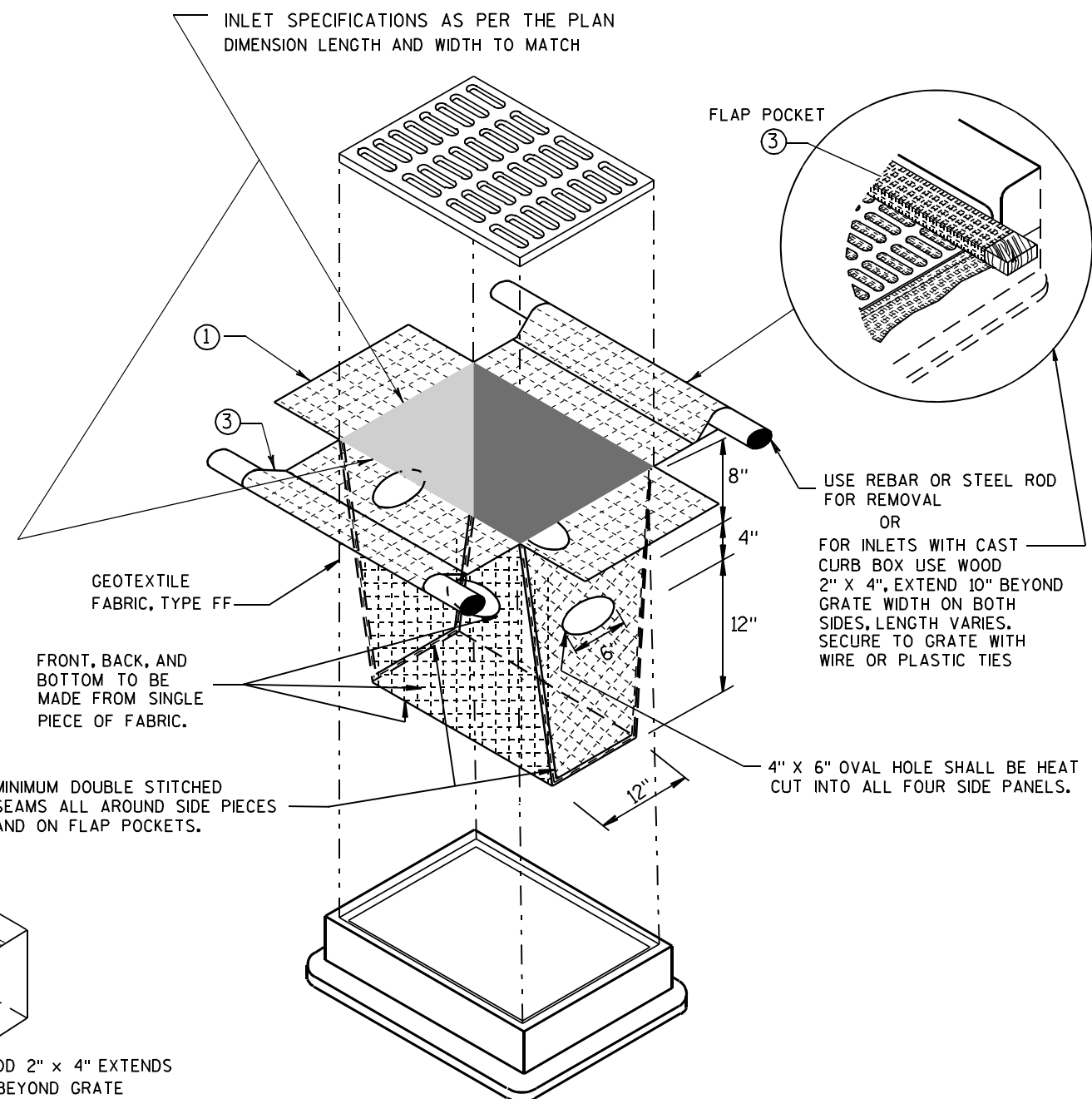
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

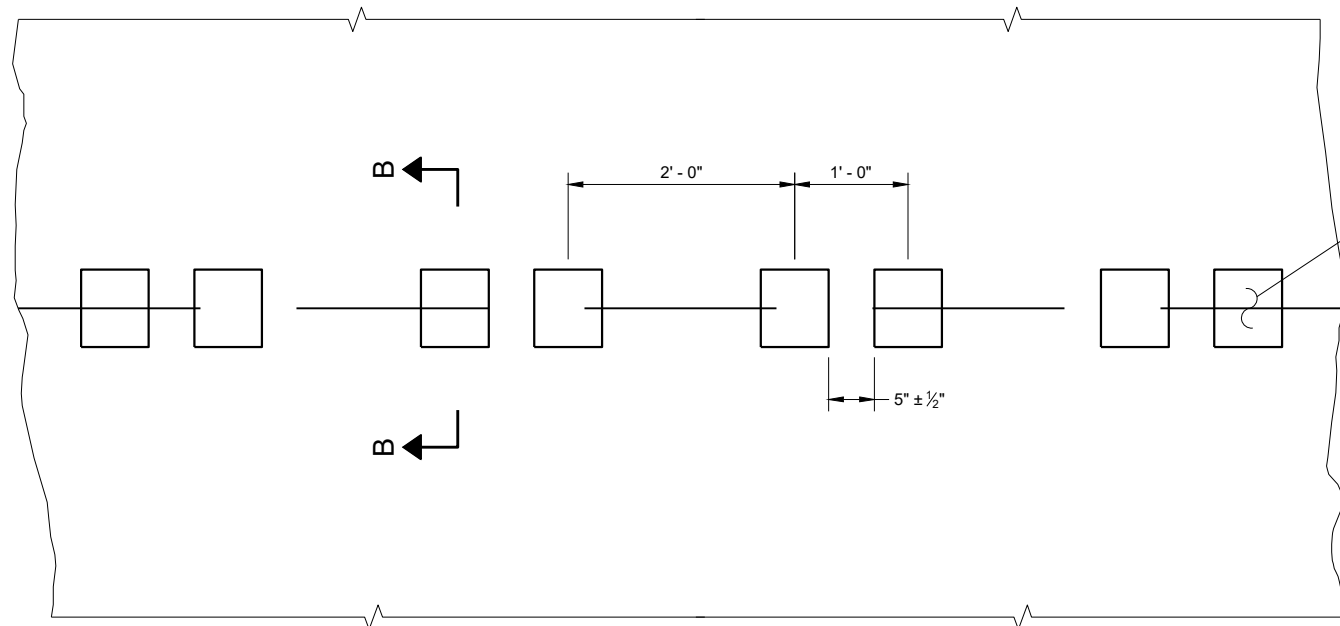
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



INLET PROTECTION, TYPE D

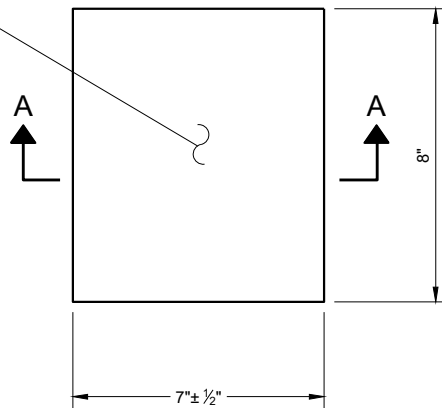
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



PLAN VIEW
SHOULDER WITH GROOVES

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

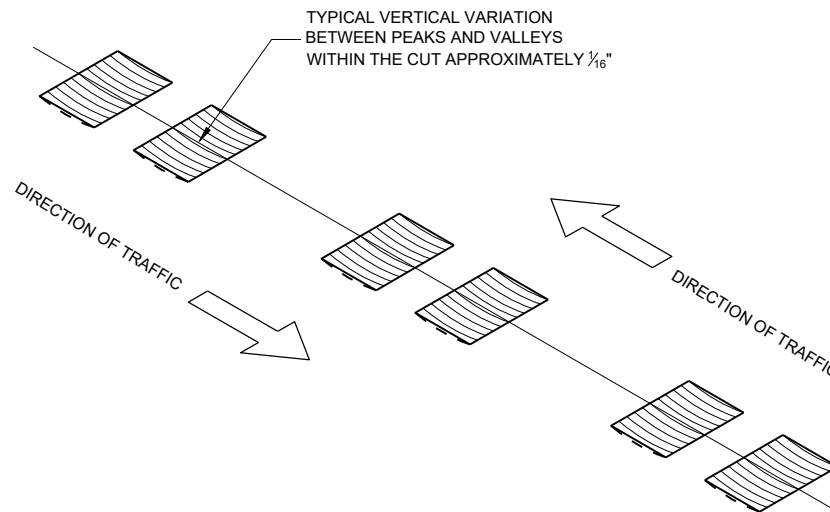
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

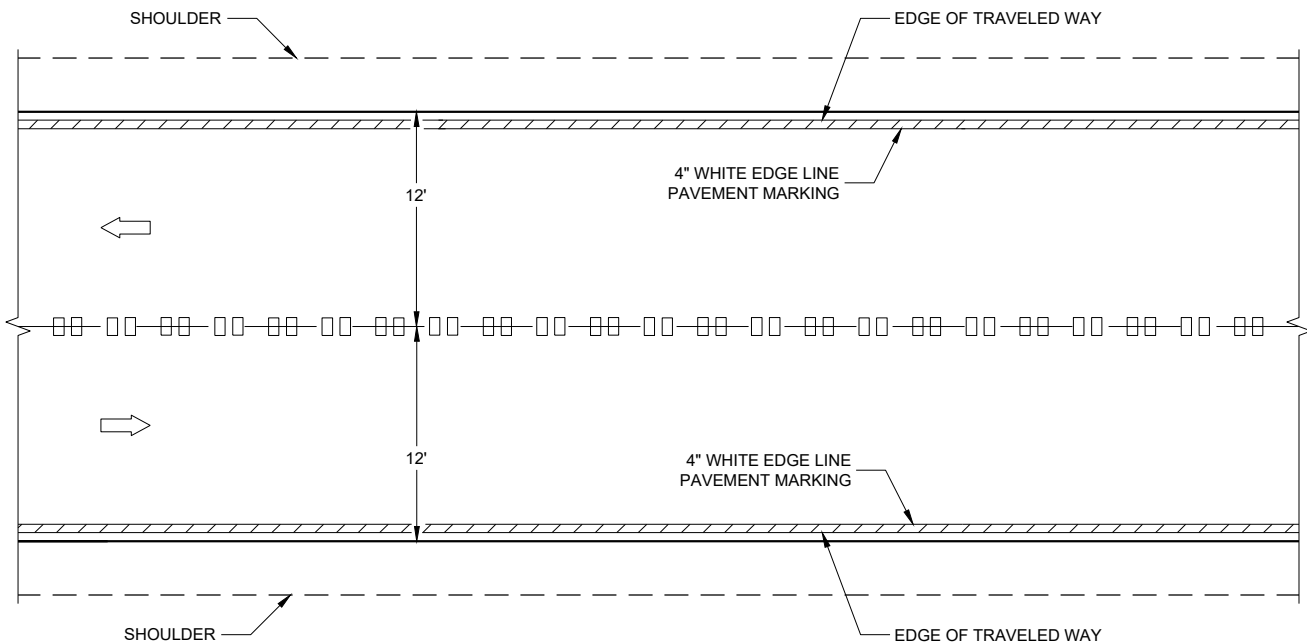
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

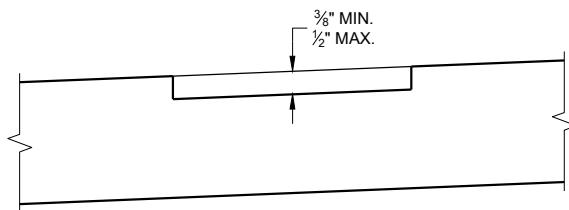
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



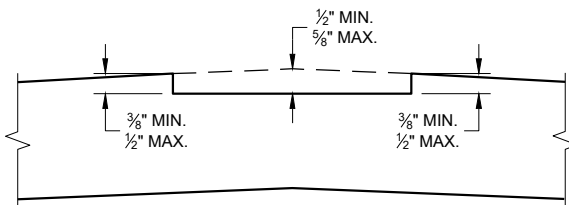
ISOMETRIC



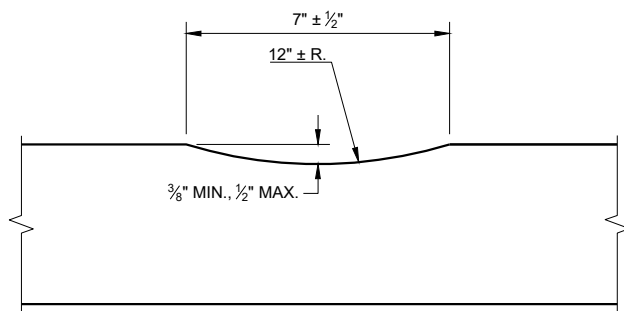
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



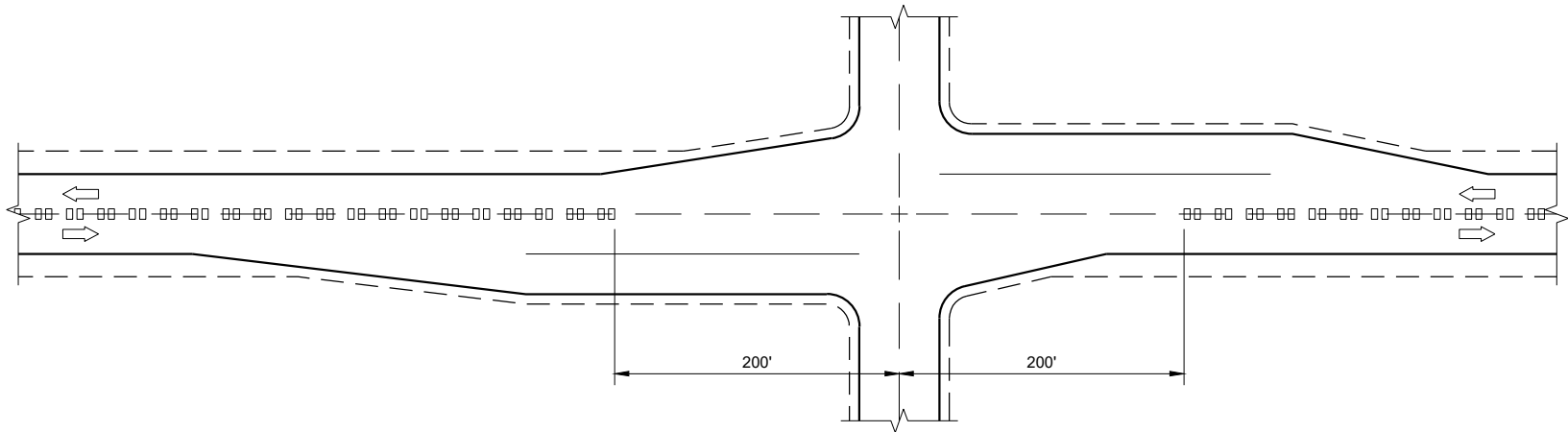
SECTION B - B
CROWNED ROADWAY



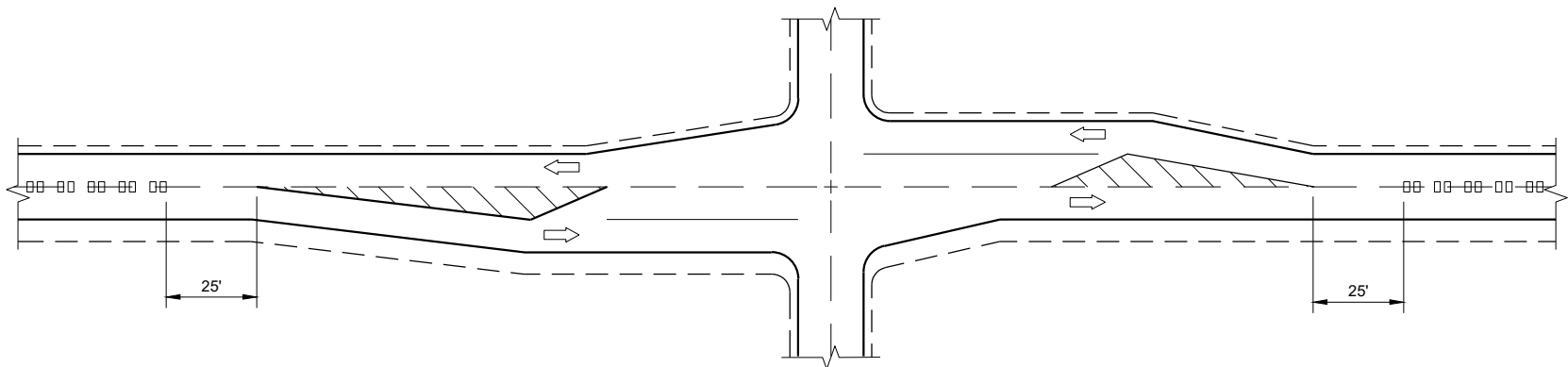
SECTION A - A

**2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING**

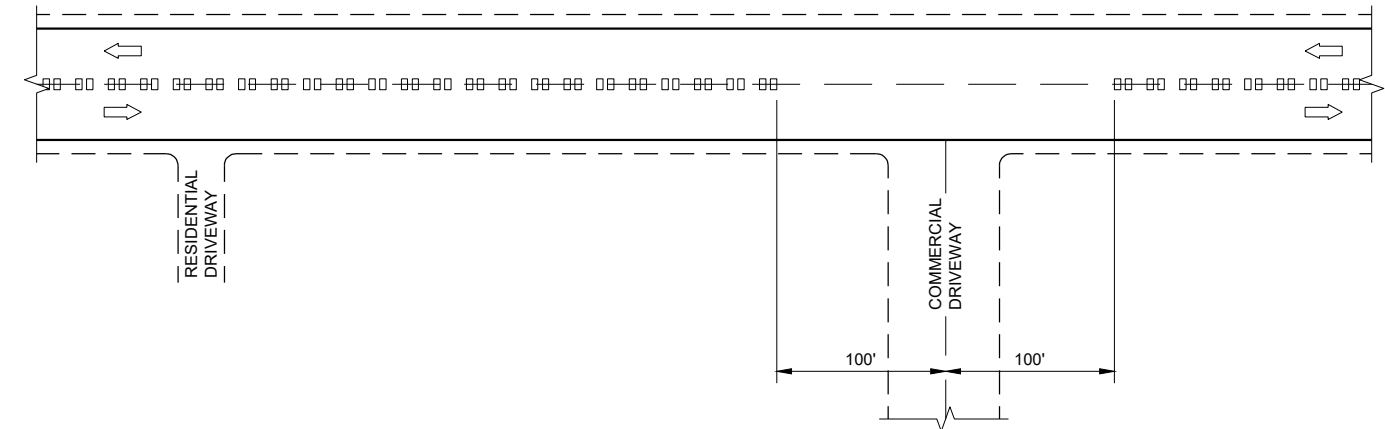
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



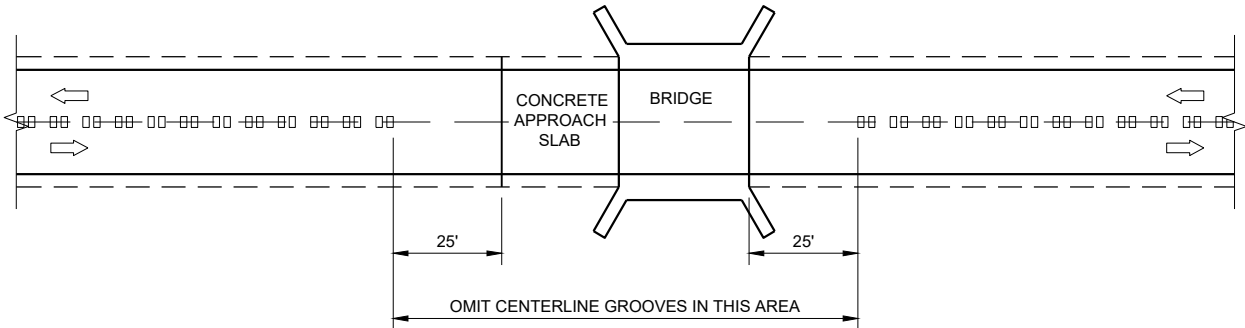
CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)



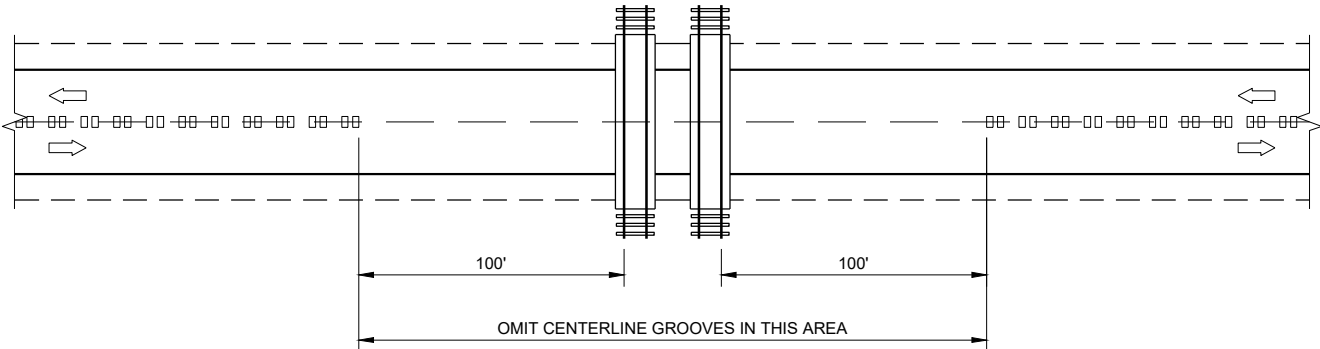
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



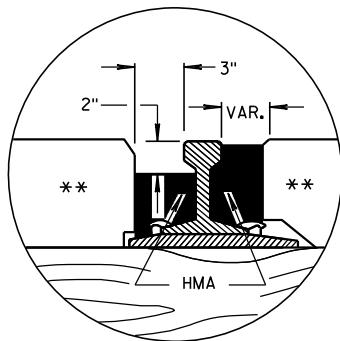
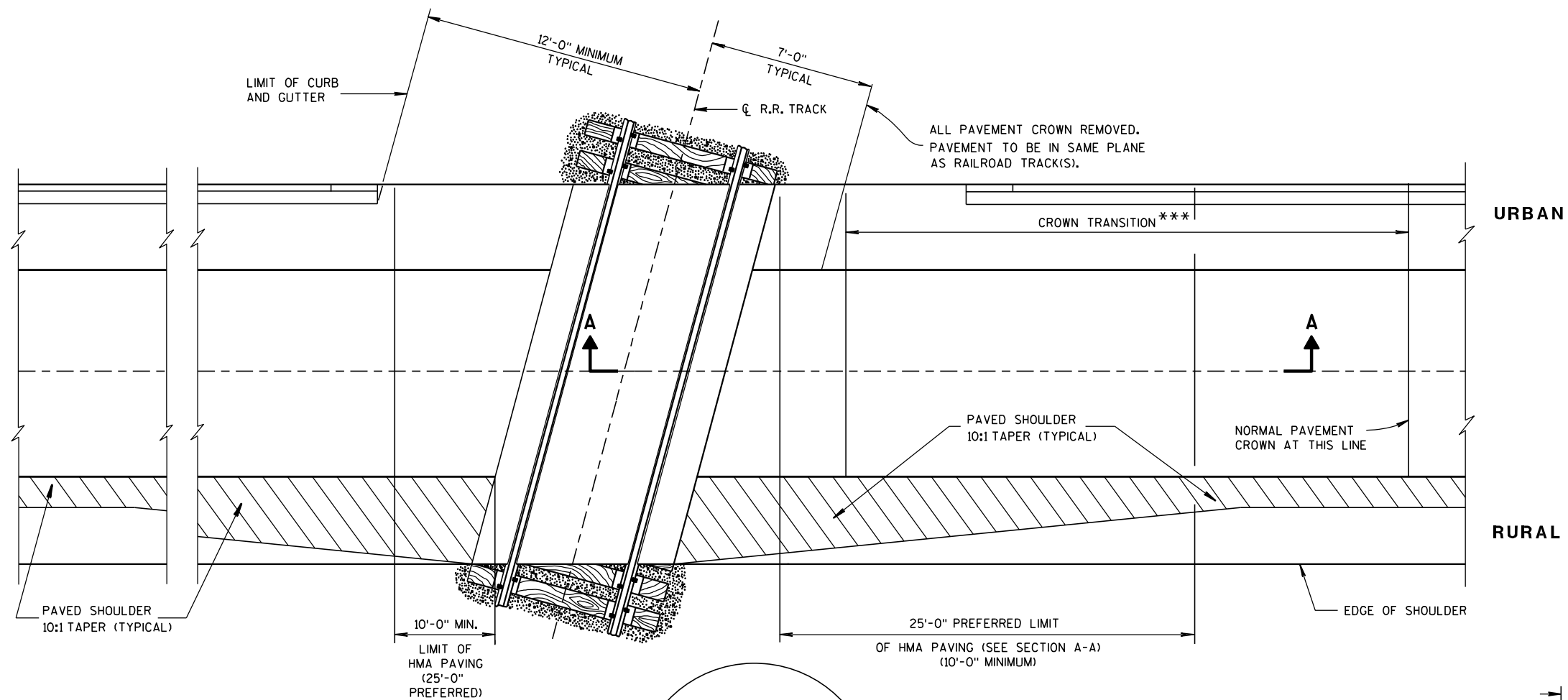
CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL
CENTERLINE RUMBLE STRIP,
MILLING

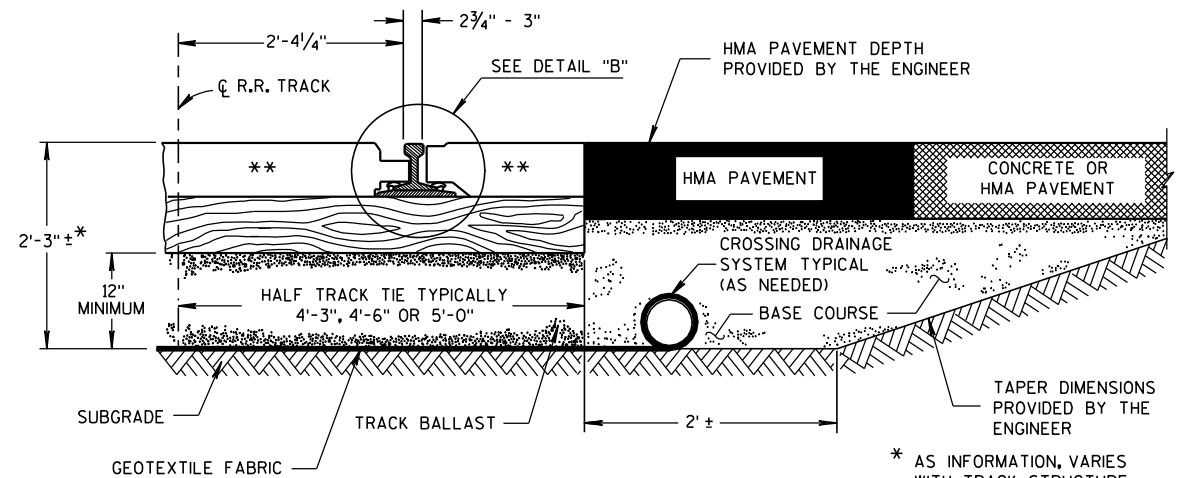
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

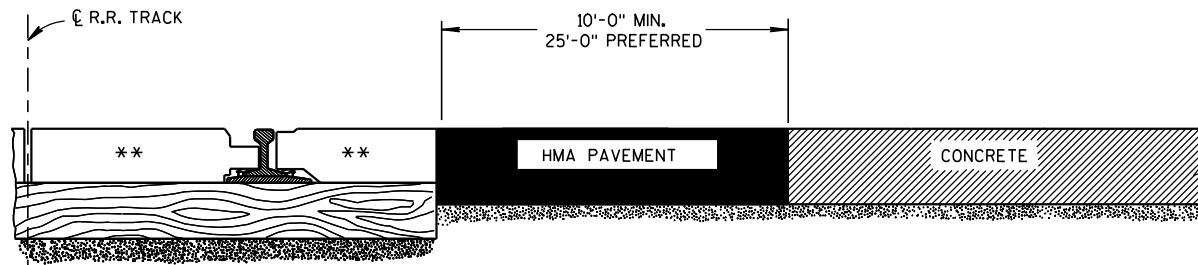
FHWA



DETAIL B
HMA FLANGEWAY
AND FIELD FILLERS



TYPICAL HALF SECTION



SECTION A-A
CONCRETE PAVEMENT APPROACH



SECTION A-A
HMA PAVEMENT APPROACH

EXAMPLES OF PAVEMENT APPROACHES

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.

TIMBER, CONCRETE OR RUBBER CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, GEOTEXTILE FABRIC AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS OTHERWISE PROVIDED.

HMA PAVEMENT APPROACHES AND HMA PAVEMENT CROSSING SURFACES TO BE PLACED BY CONTRACTOR UNLESS OTHERWISE PROVIDED.

HMA FLANGEWAY AND FIELD FILLERS TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR WHEN NOT PROVIDED BY OTHERS. SEE DETAIL B. HMA FILLERS NOT REQUIRED WHEN RUBBER FILLERS ARE PROVIDED.

HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

** CROSSING SURFACE MAY BE TIMBER, RUBBER, CONCRETE, HMA PAVEMENT OR A COMBINATION OF SUCH MATERIALS.

*** CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.

PAVEMENT DETAILS FOR RAILROAD APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-28-09

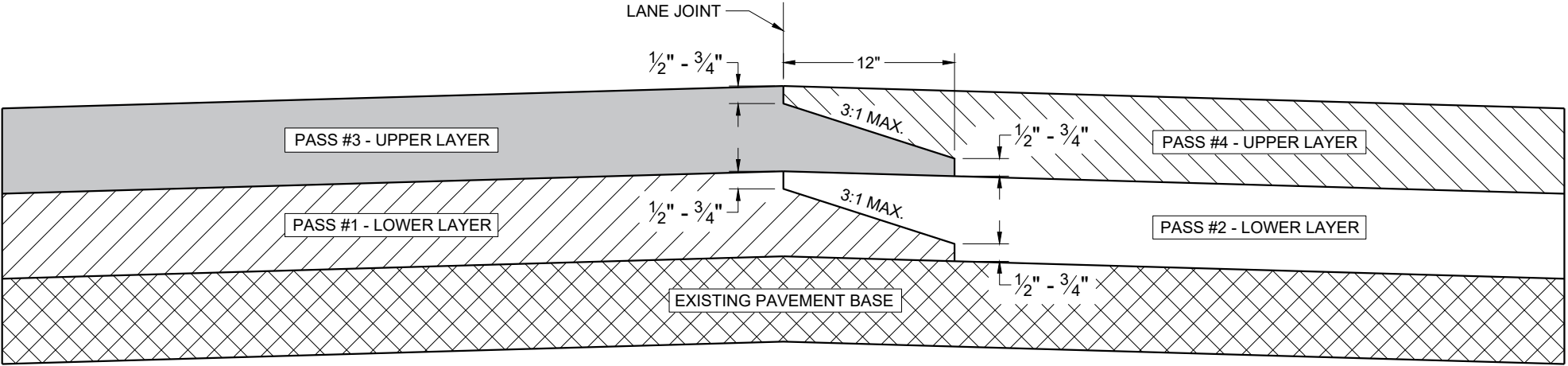
DATE

FHWA

/S/ Ronald E. Adams
CHIEF, RAILROADS & HARBORS SECTION

GENERAL NOTES

CONFORM TO STANDARD SPECIFICATION 450.3.2.8



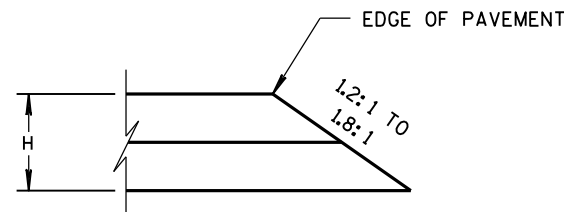
TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINTS

HMA LONGITUDINAL JOINTS

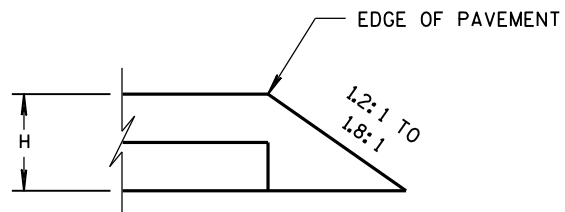
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER

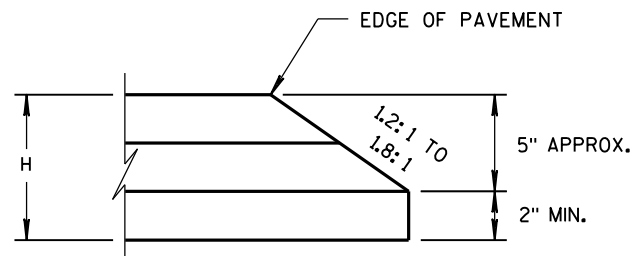
FHWA



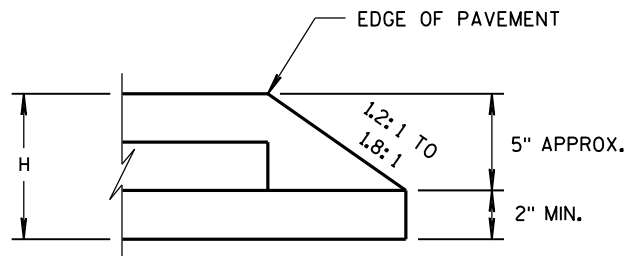
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

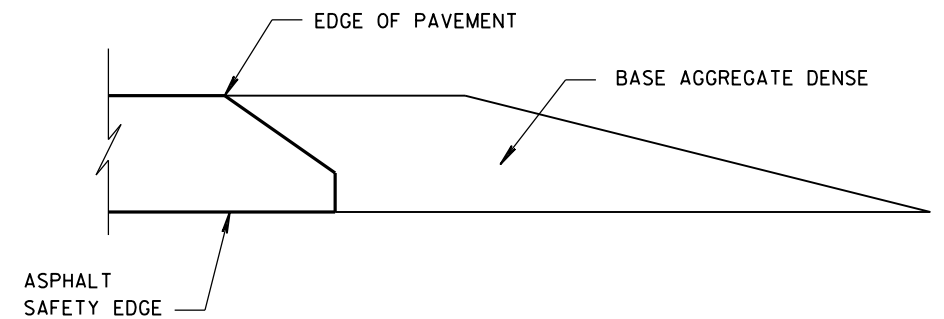


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

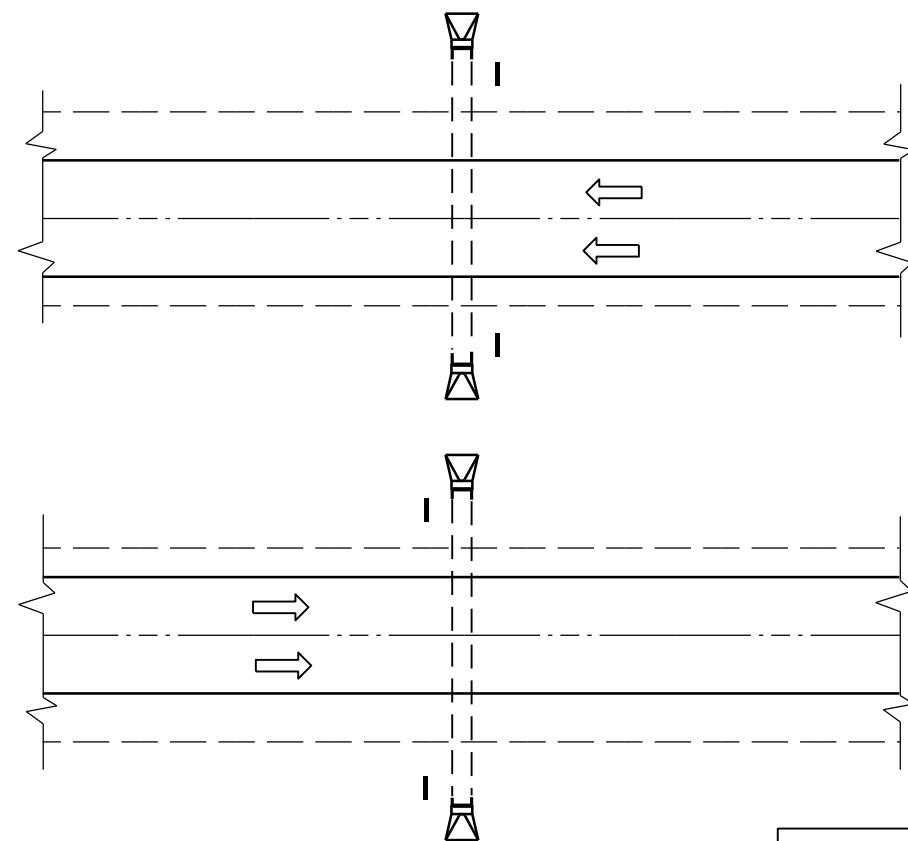
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

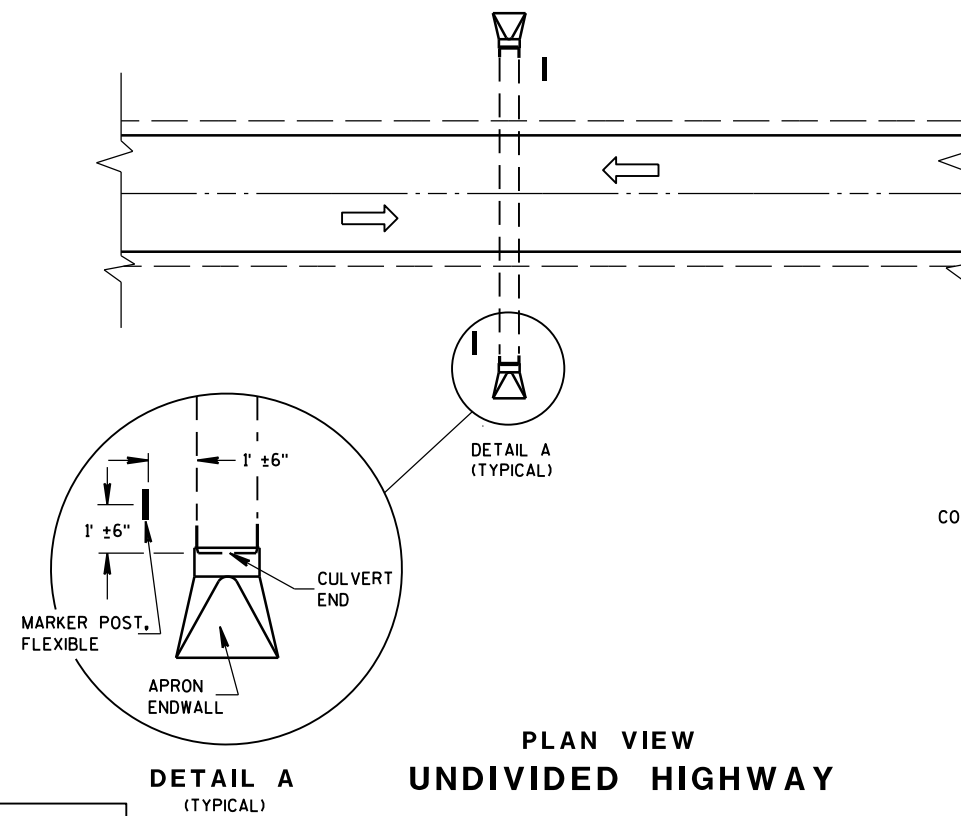
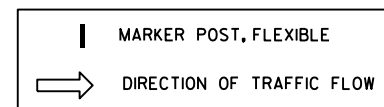
11/30/2012
DATE

FHWA

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



PLAN VIEW
DIVIDED HIGHWAY

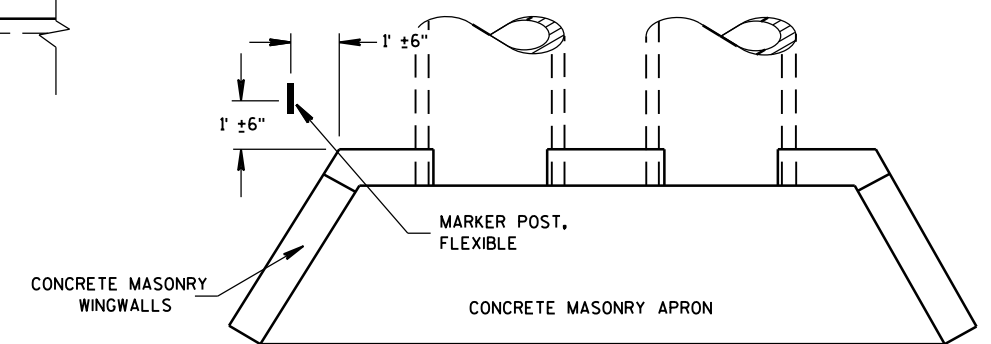


PLAN VIEW
UNDIVIDED HIGHWAY

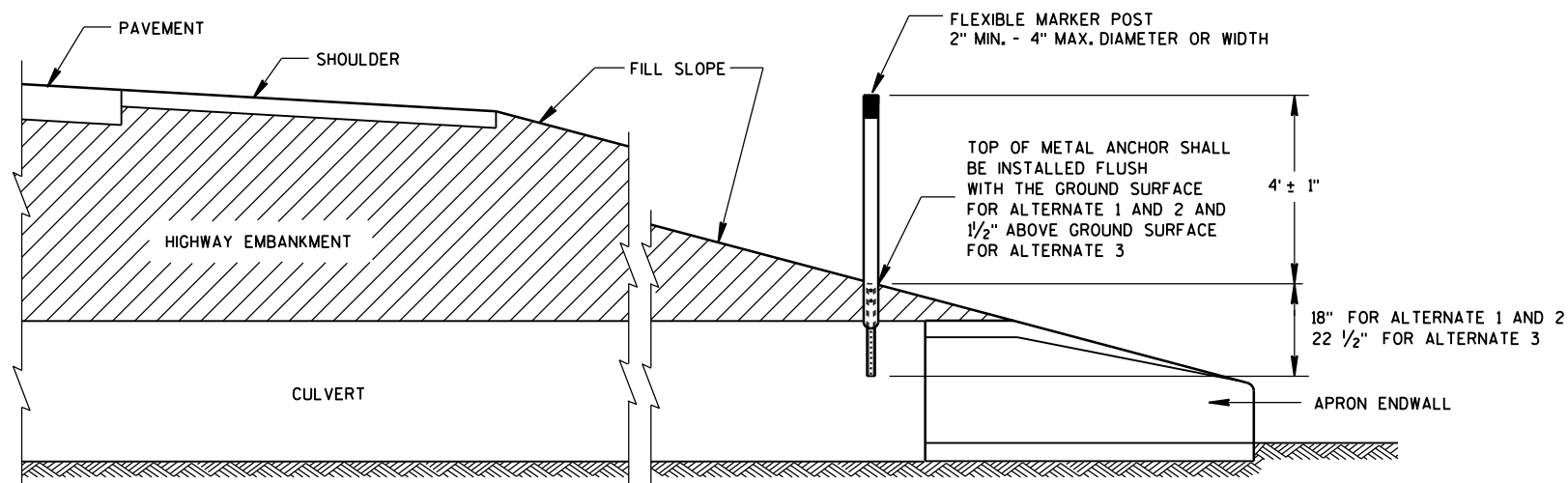
FLEXIBLE MARKER POST LOCATION

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.



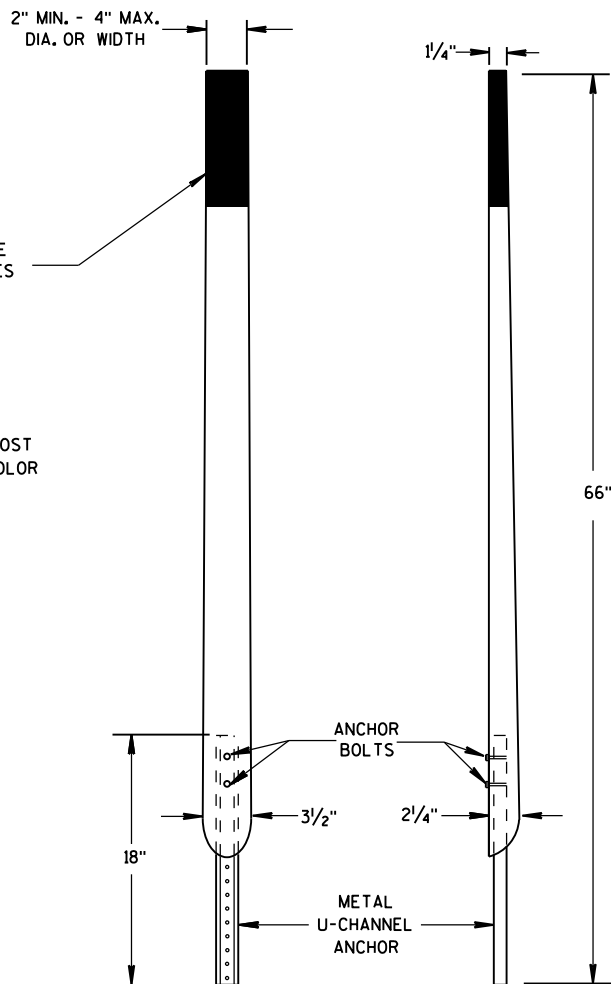
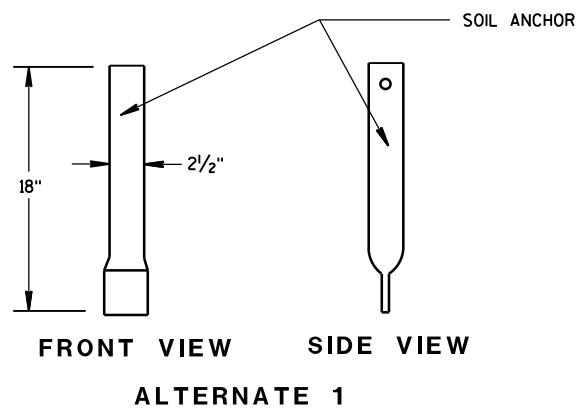
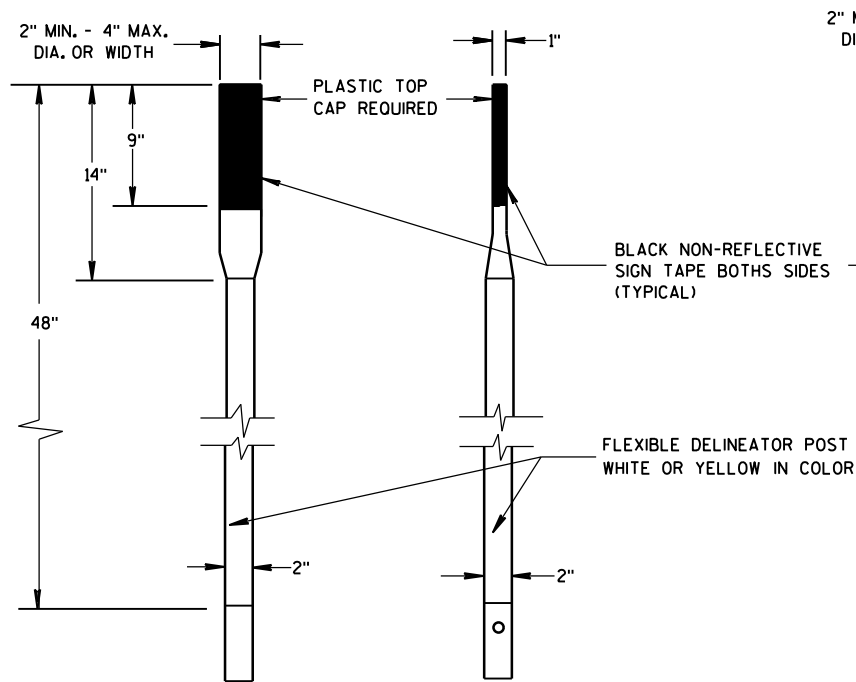
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



CROSS SECTION
FLEXIBLE MARKER POST

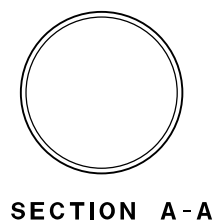
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

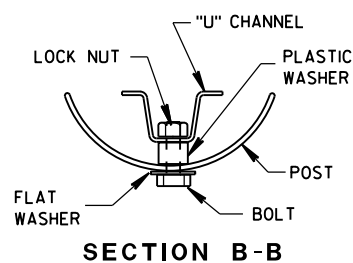
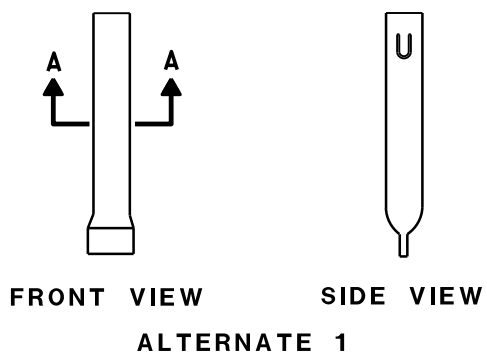


FRONT VIEW SIDE VIEW
ALTERNATE 2

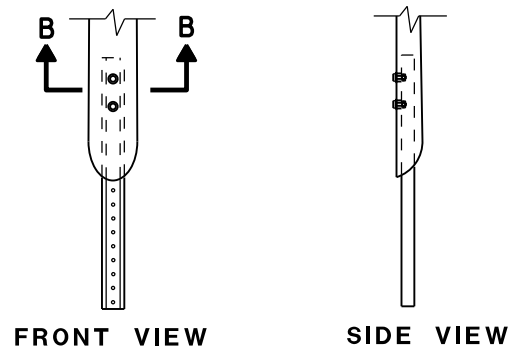
FLEXIBLE MARKER POSTS



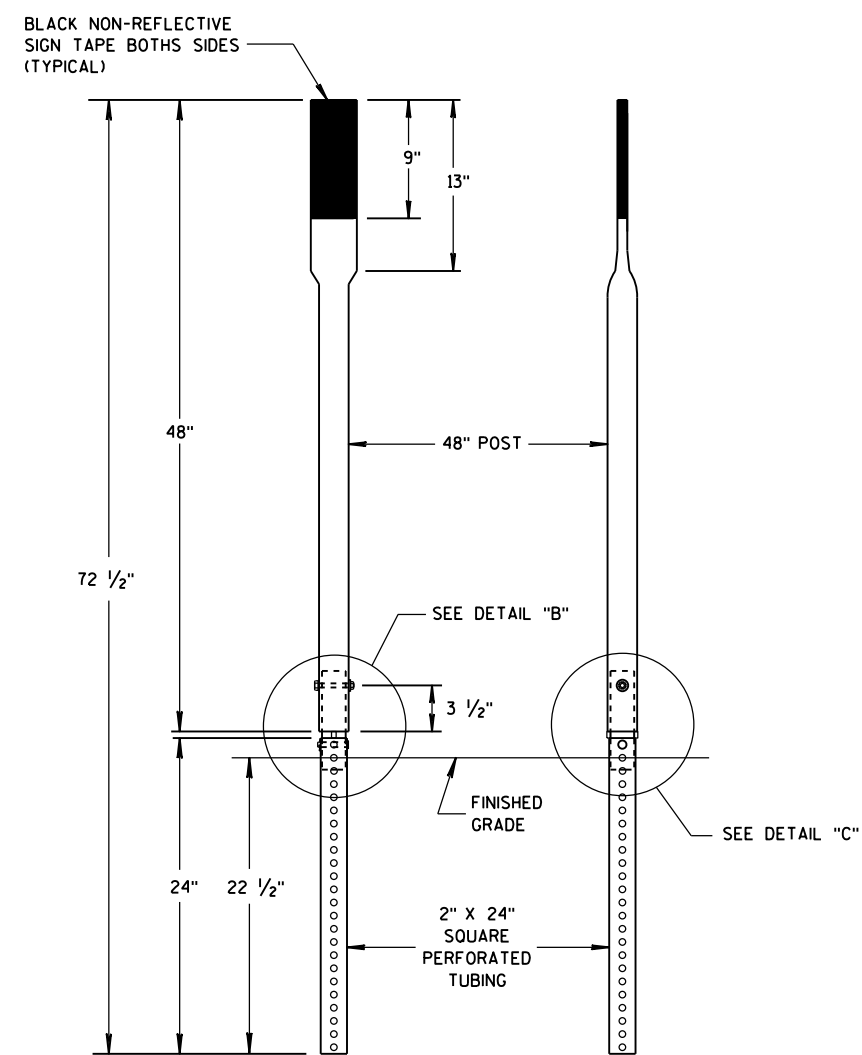
SECTION A-A



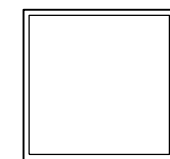
SECTION B-B



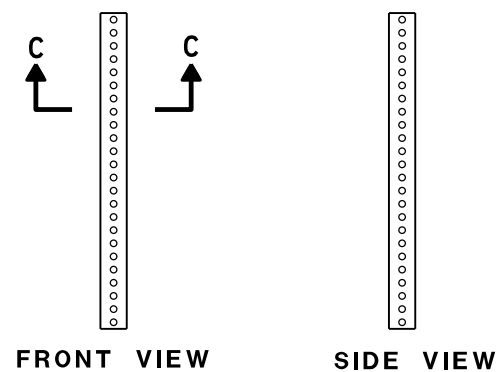
FRONT VIEW SIDE VIEW
ALTERNATE 2
FLEXIBLE MARKER POST ANCHORS



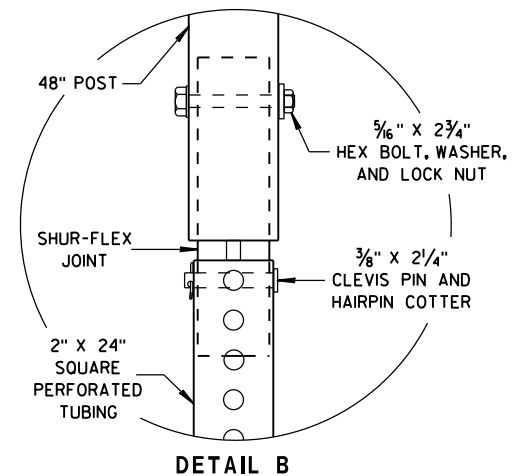
FRONT VIEW SIDE VIEW
ALTERNATE 3



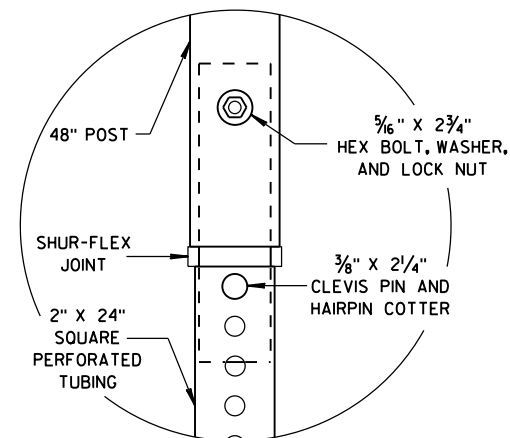
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 3



DETAIL B



DETAIL C

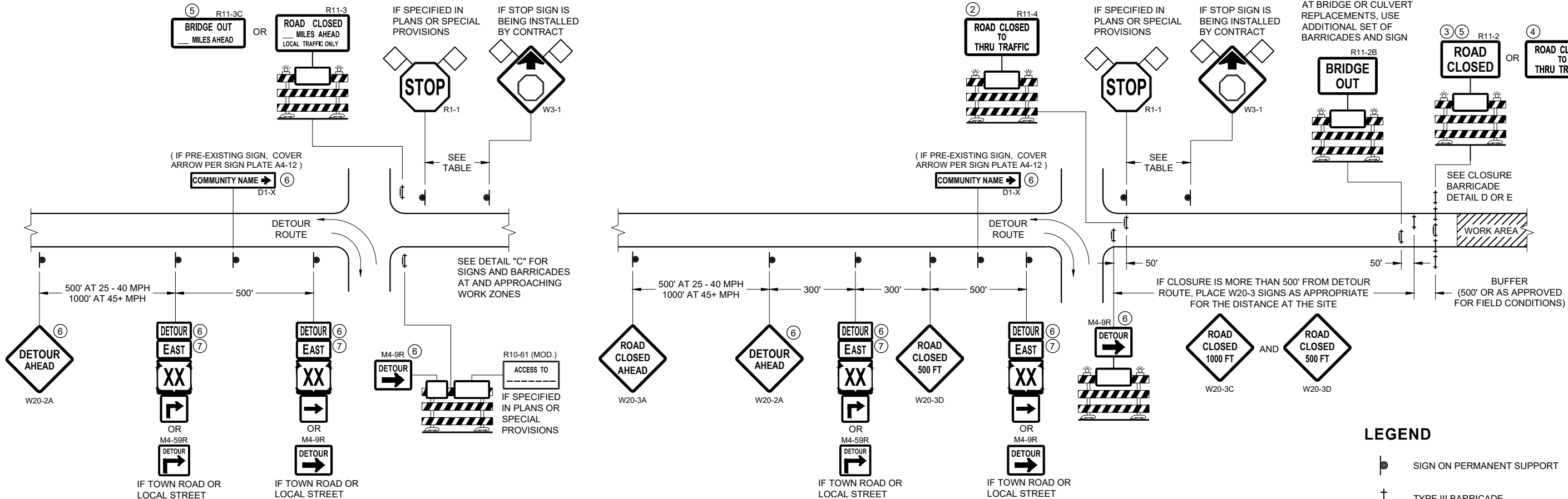
FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012
DATE

FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN



LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

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

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

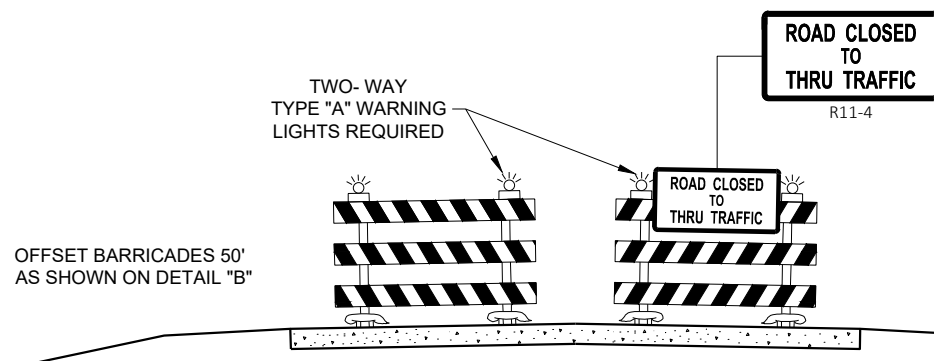
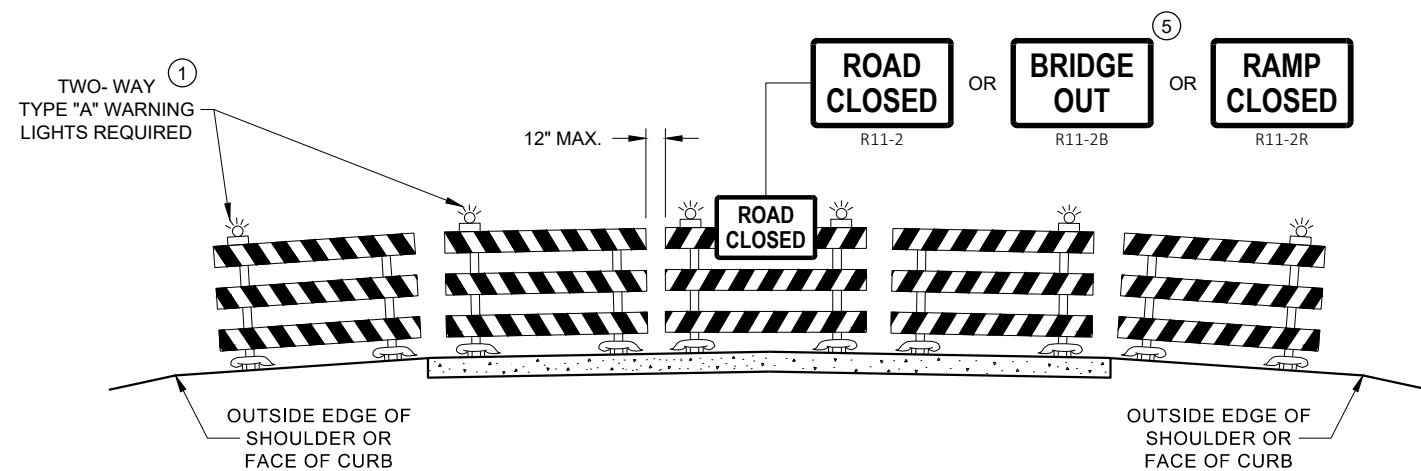
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

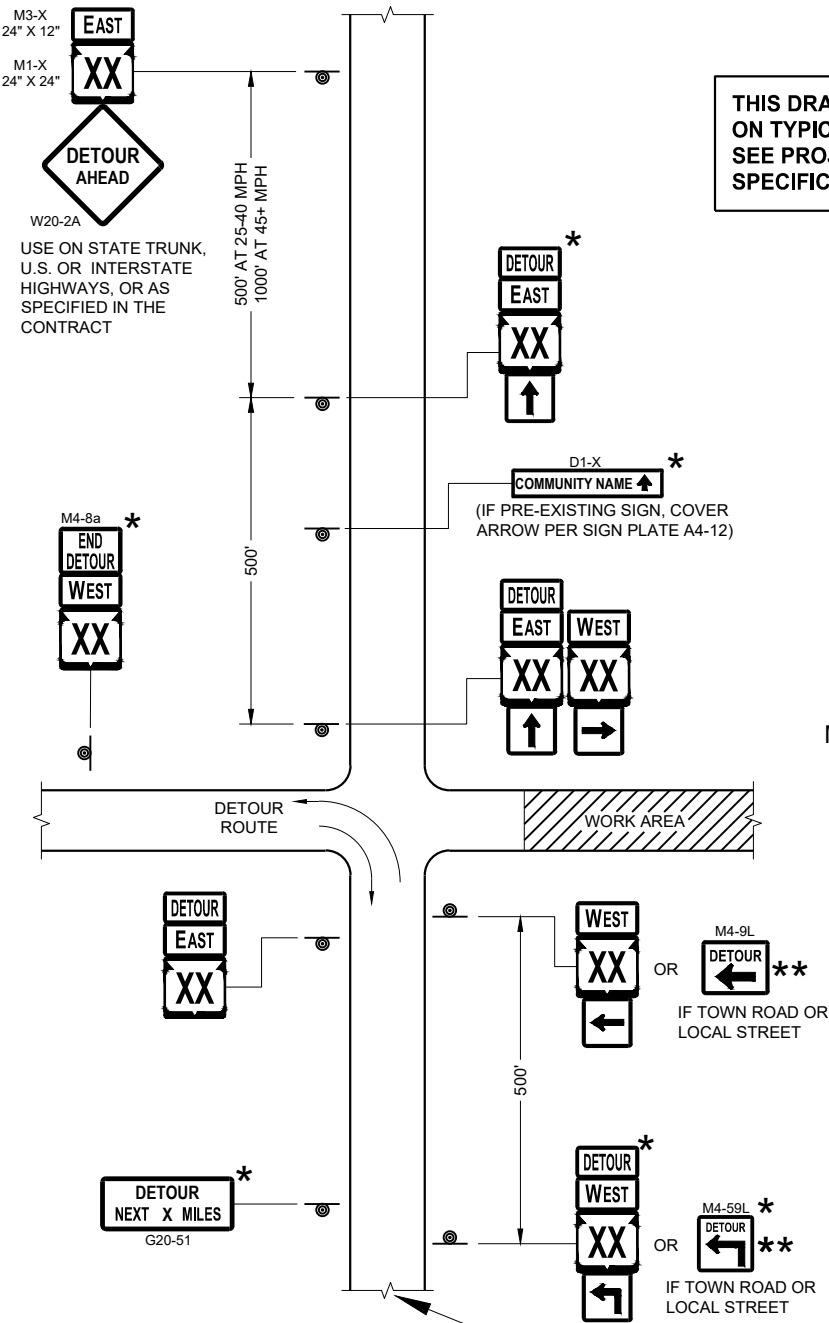
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

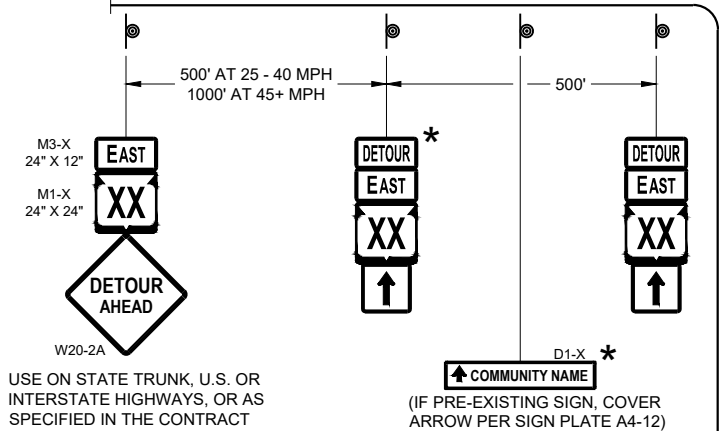
FHWA



SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

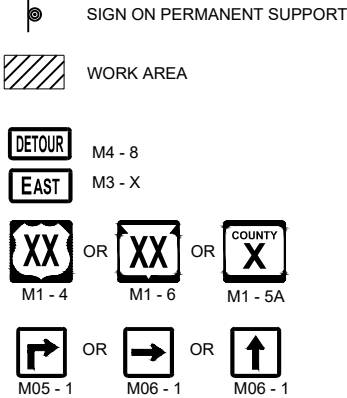
THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F
DETOUR SIGNING

LEGEND



GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

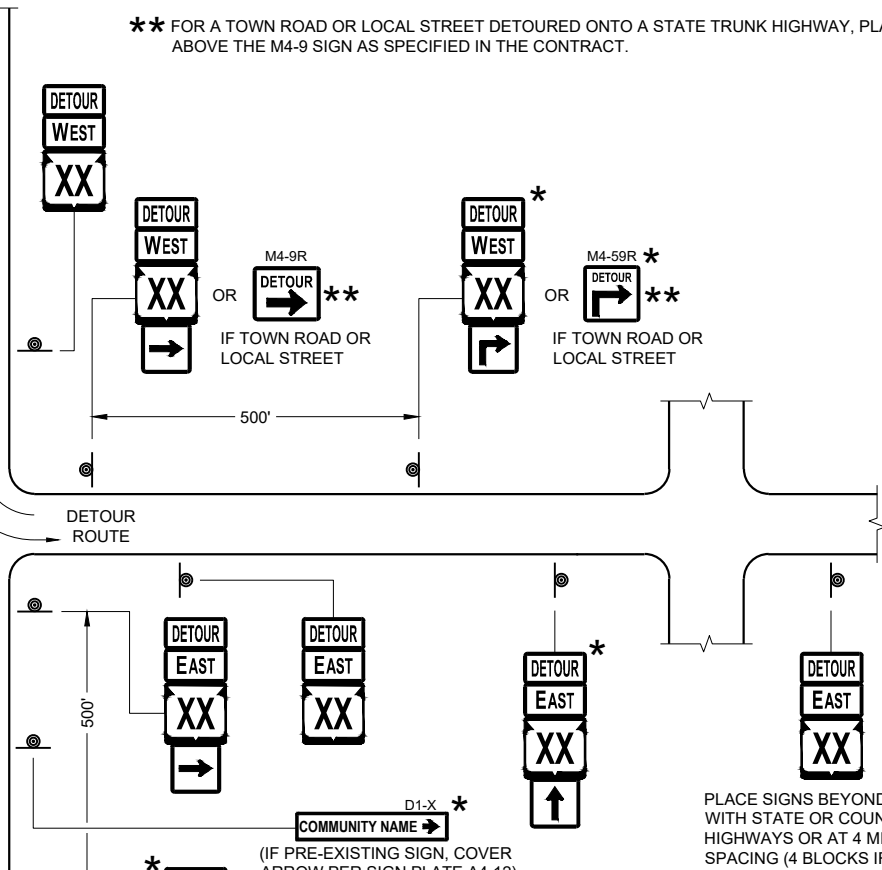
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



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

DETOUR SIGNING
FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

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" X 48" UNLESS OTHERWISE NOTED.

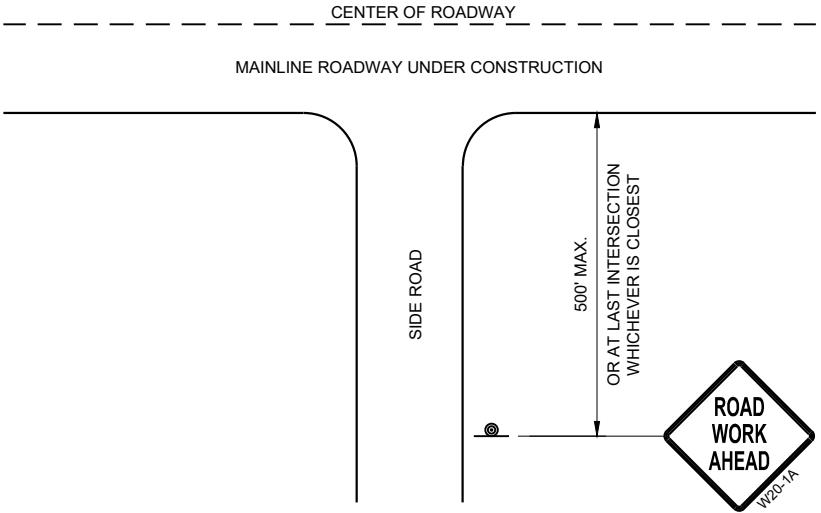
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 REESTABLISHED.

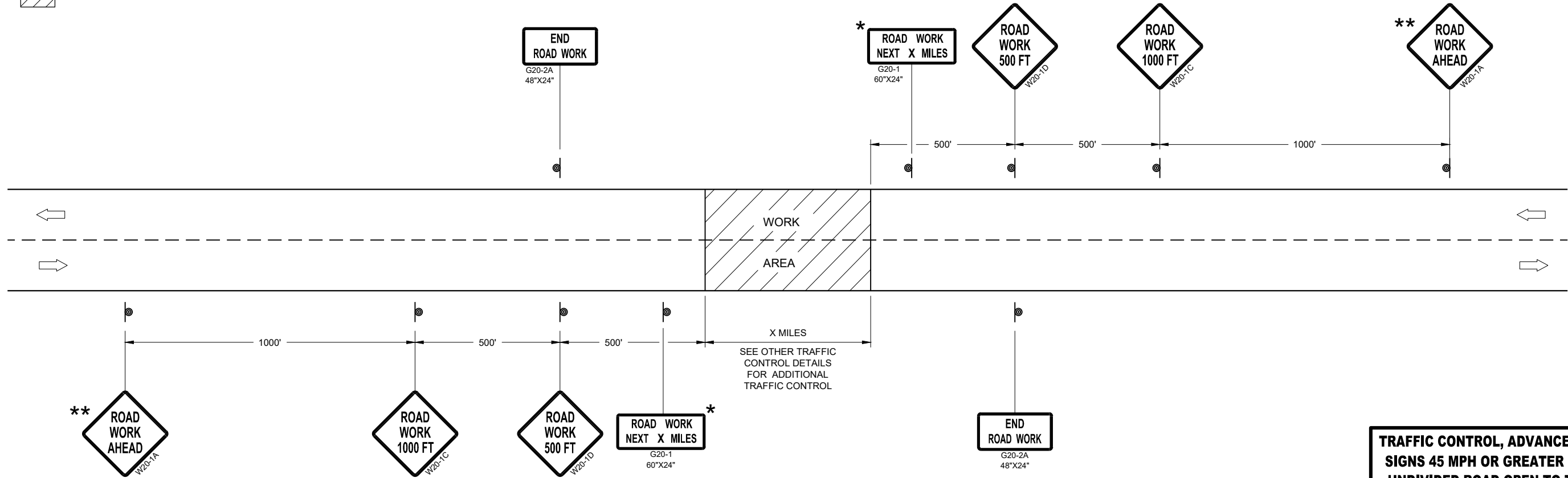
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

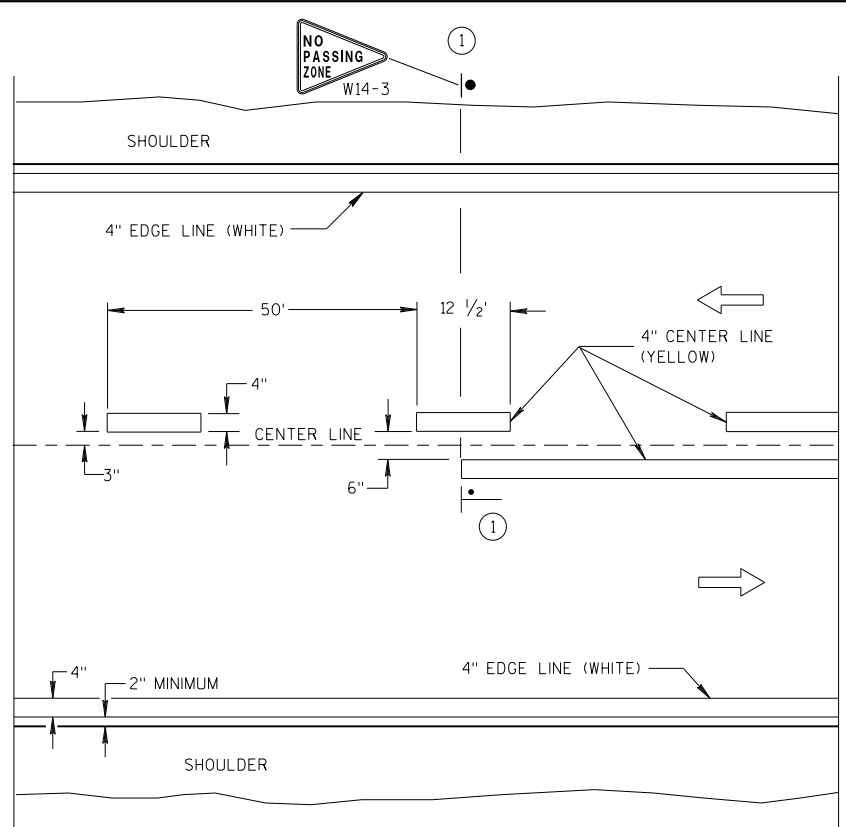


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

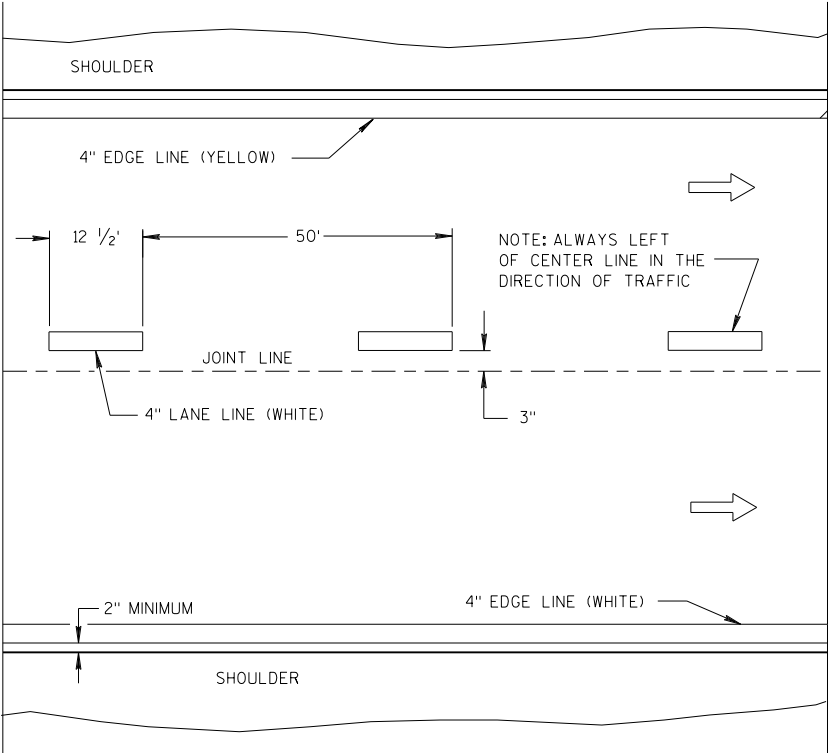
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

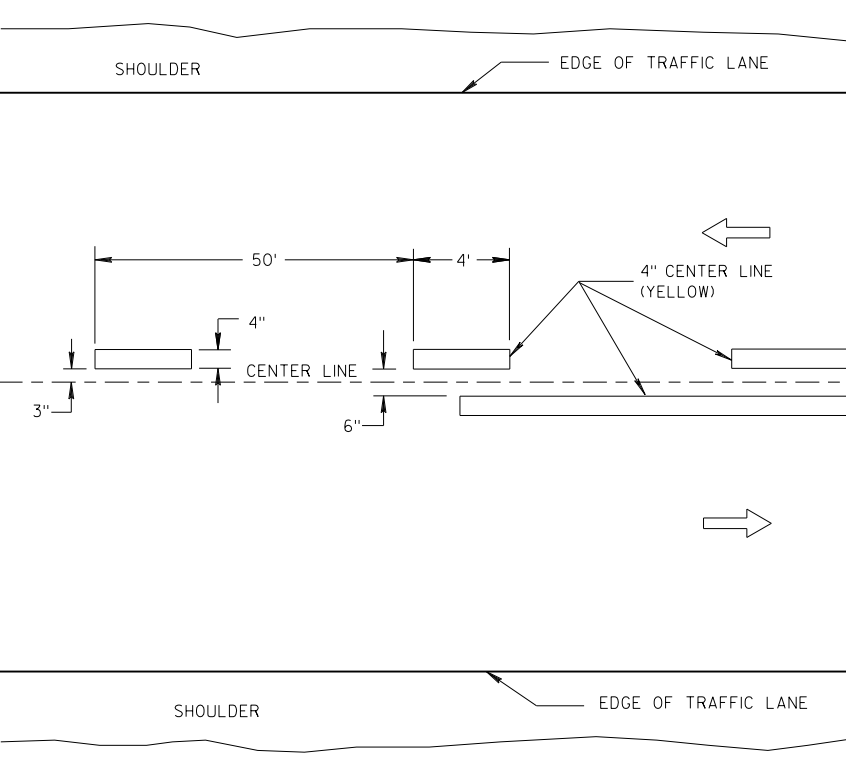


TWO WAY TRAFFIC

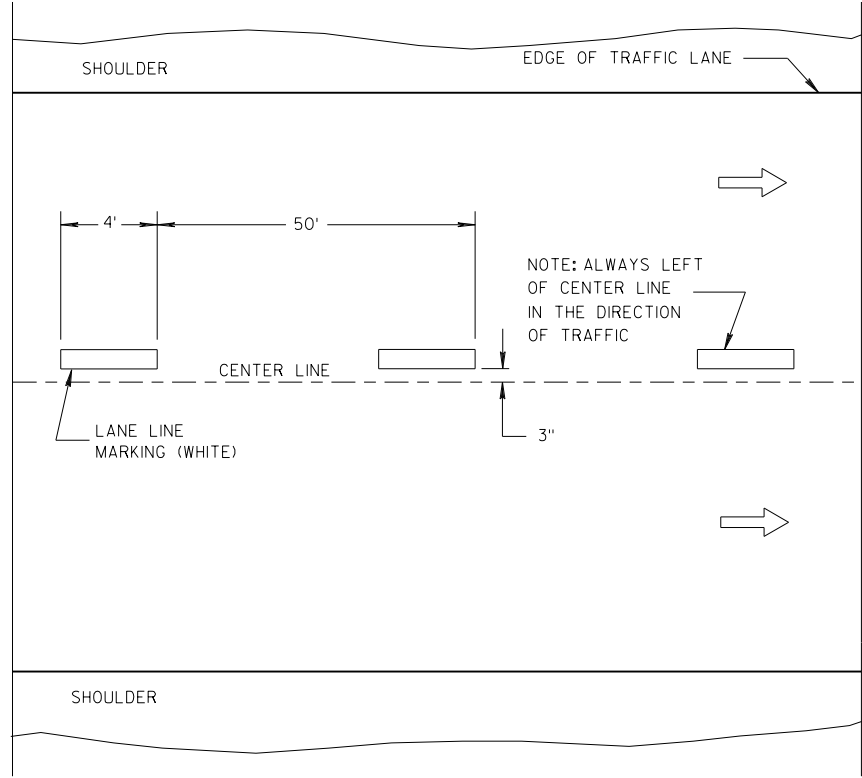


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

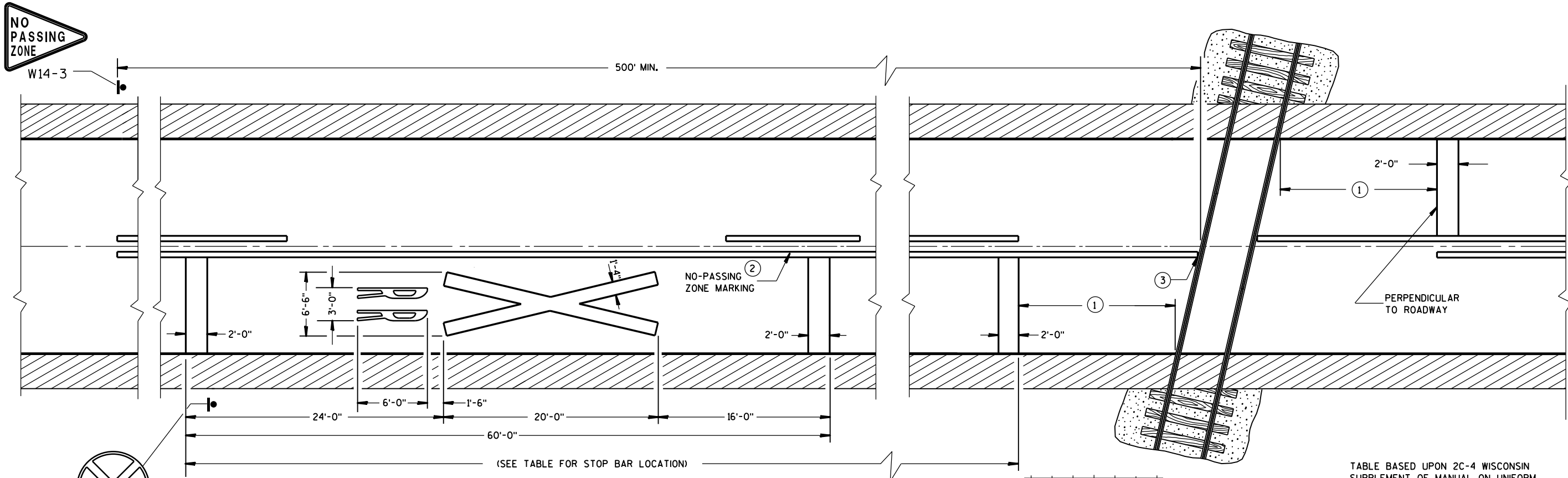
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



PAVEMENT MARKING

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.

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.

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

RETRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

- ① MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
- ② 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
- ③ FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

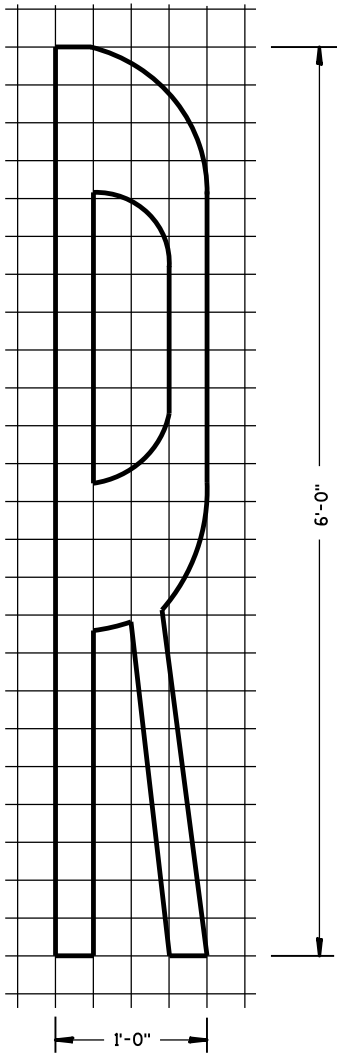


TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

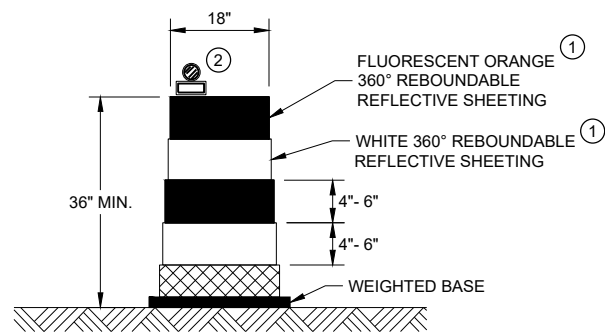
Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150*- 250
30	200*- 300
35	250*- 450
40	300*- 500
45	400*- 650
50	550*- 800
55	750*- 1000
60	1000*- 1250
65	1000*- 1250

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.

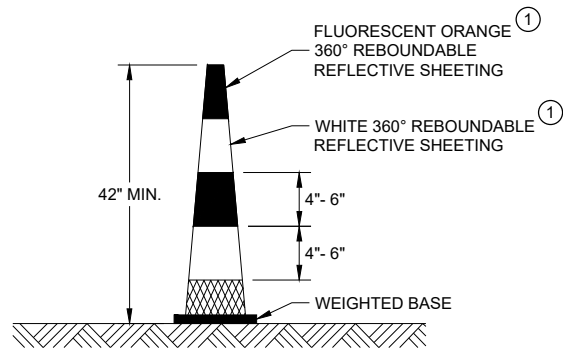
SIGNING AND PAVEMENT MARKING
DETAILS FOR RAILROAD-HIGHWAY
GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

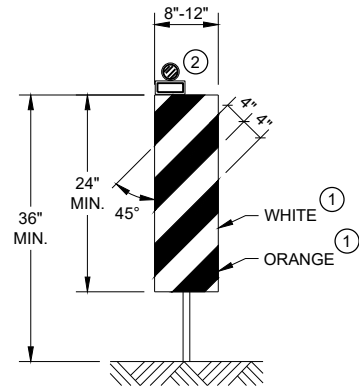


DRUM



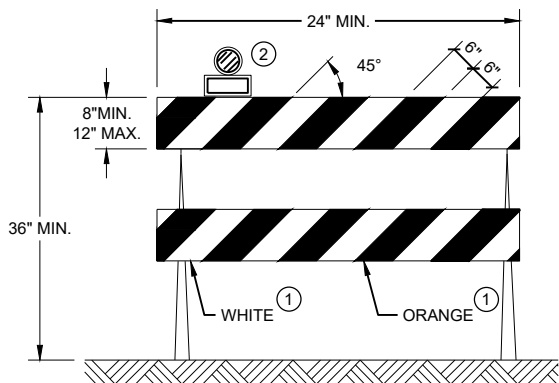
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



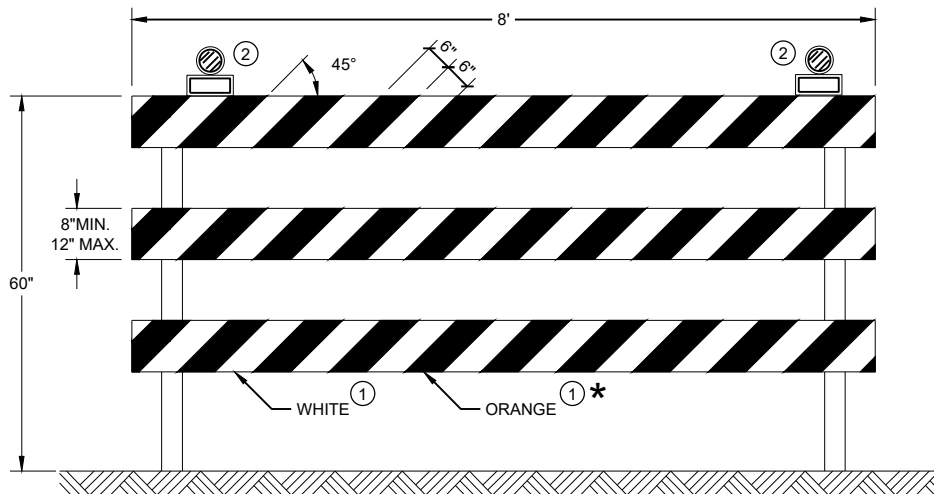
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

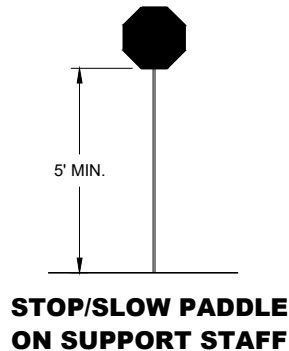
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

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

FLAGGING

- FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
 - SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.
- TEMPORARY PORTABLE RUMBLE STRIPS**
- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

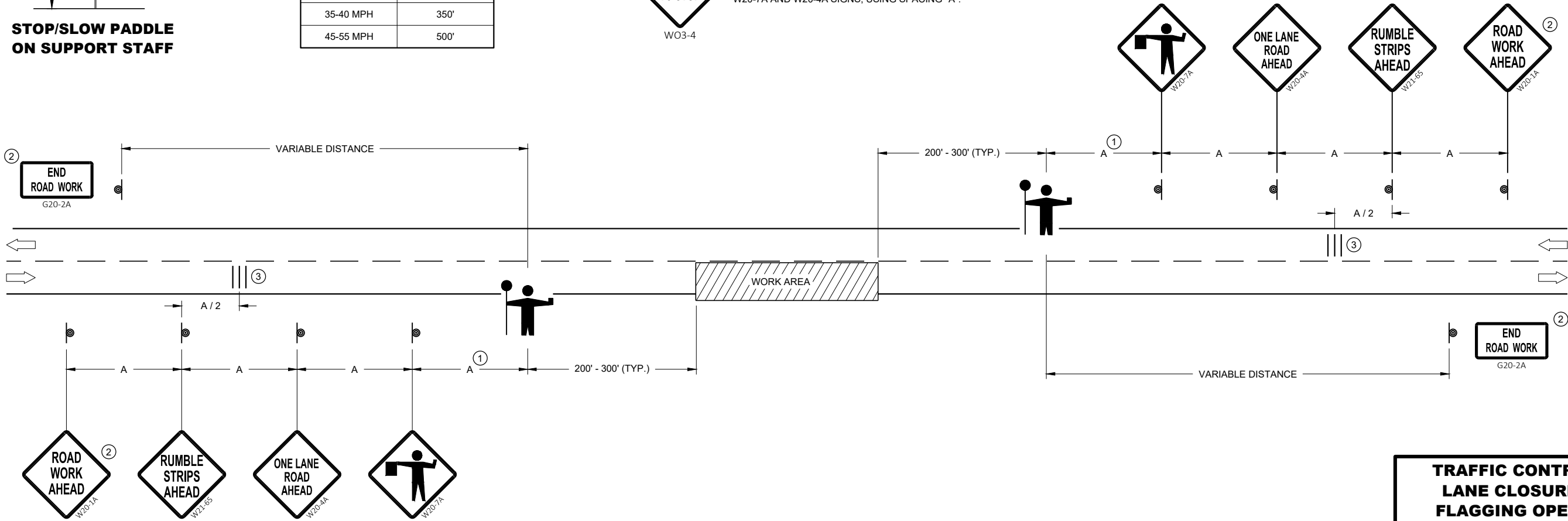


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

LEGEND

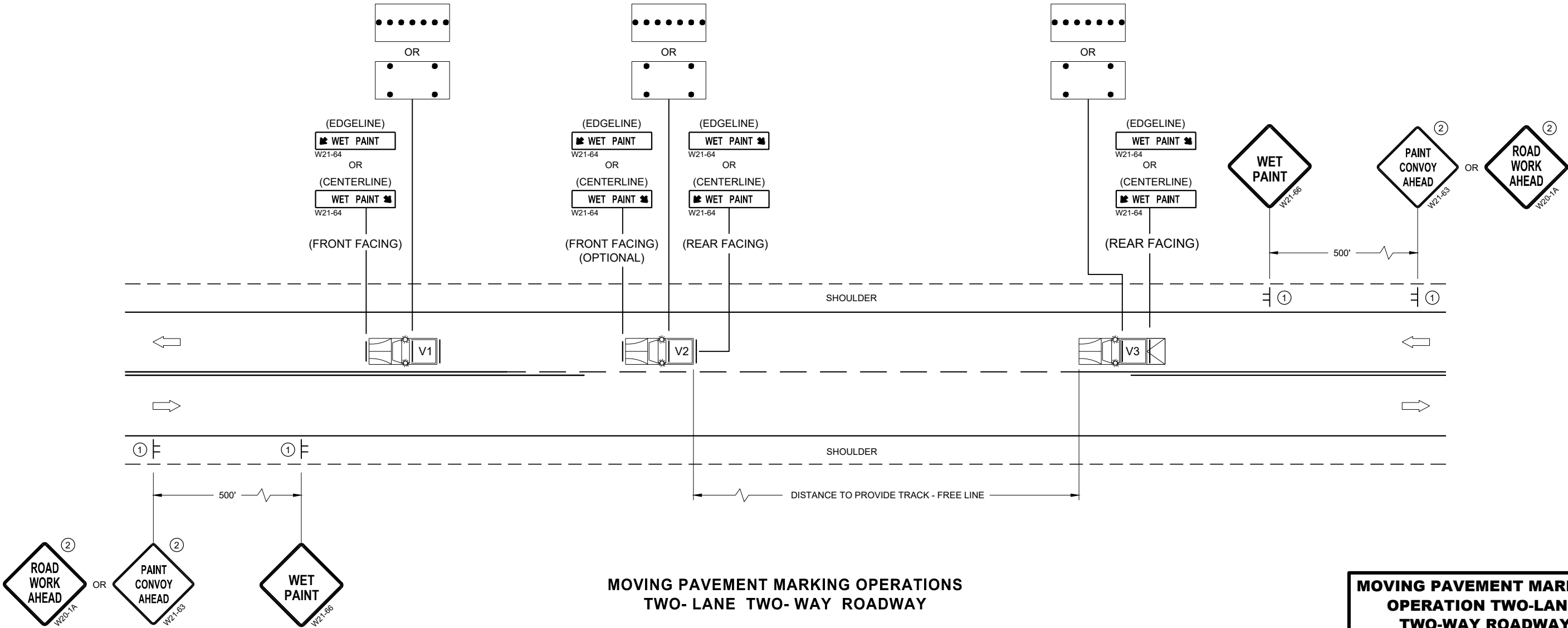
- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.
- DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

- WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.
- CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- CONES SHALL BE A MINIMUM OF 18" FOR WET PAVEMENT MARKING .

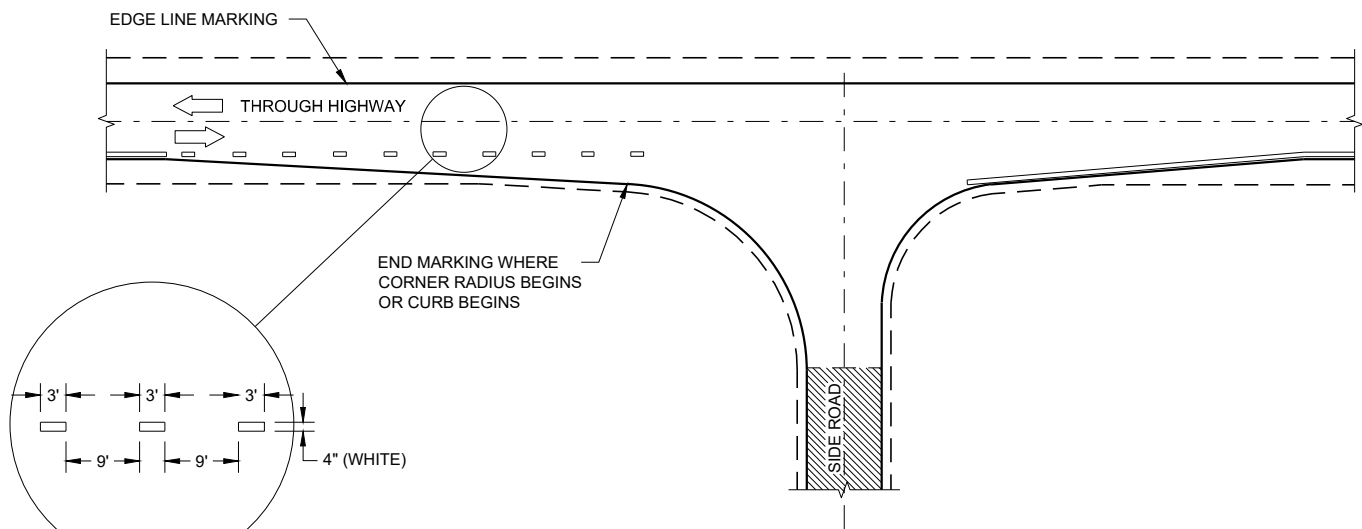
- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



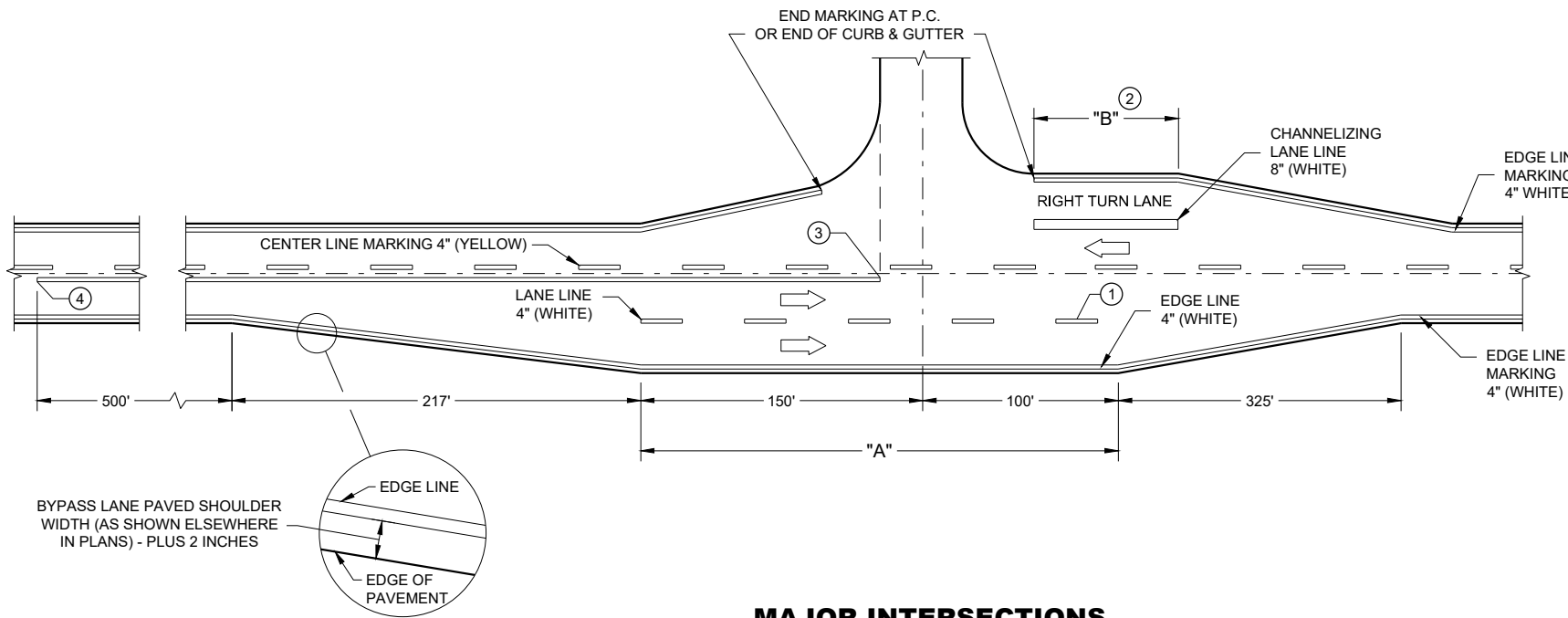
MOVING PAVEMENT MARKING
OPERATION TWO-LANE
TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



MINOR INTERSECTION



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

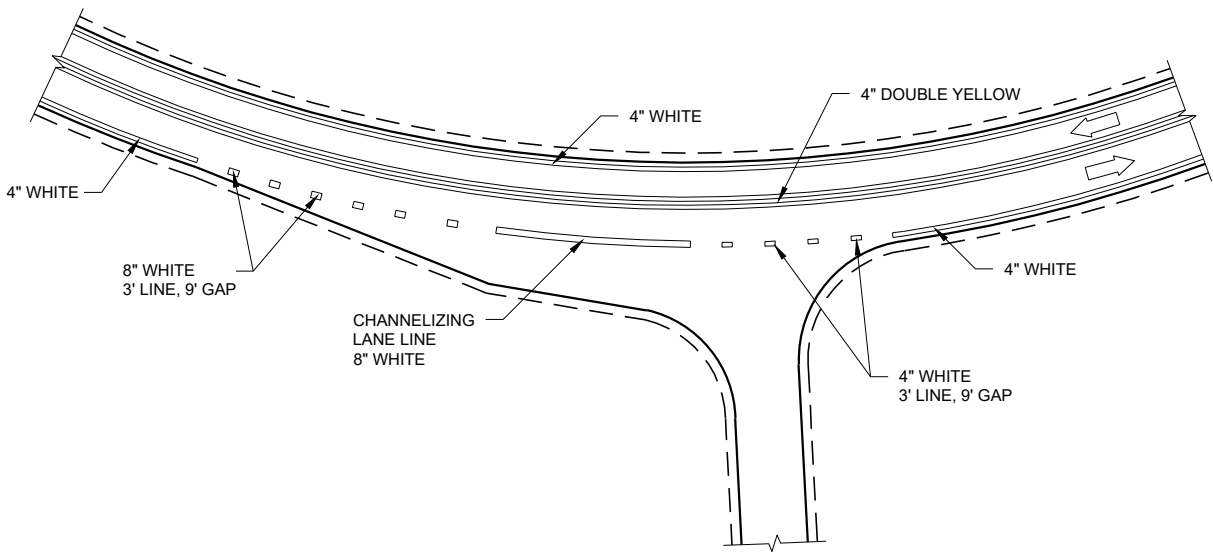
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES 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 BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

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

TABLE A

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

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

TAPER LENGTH

L= WS AT 45 MPH OR GREATER
L = WS² / 60 AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = 1/3L

GENERAL NOTES

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

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

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

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

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

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

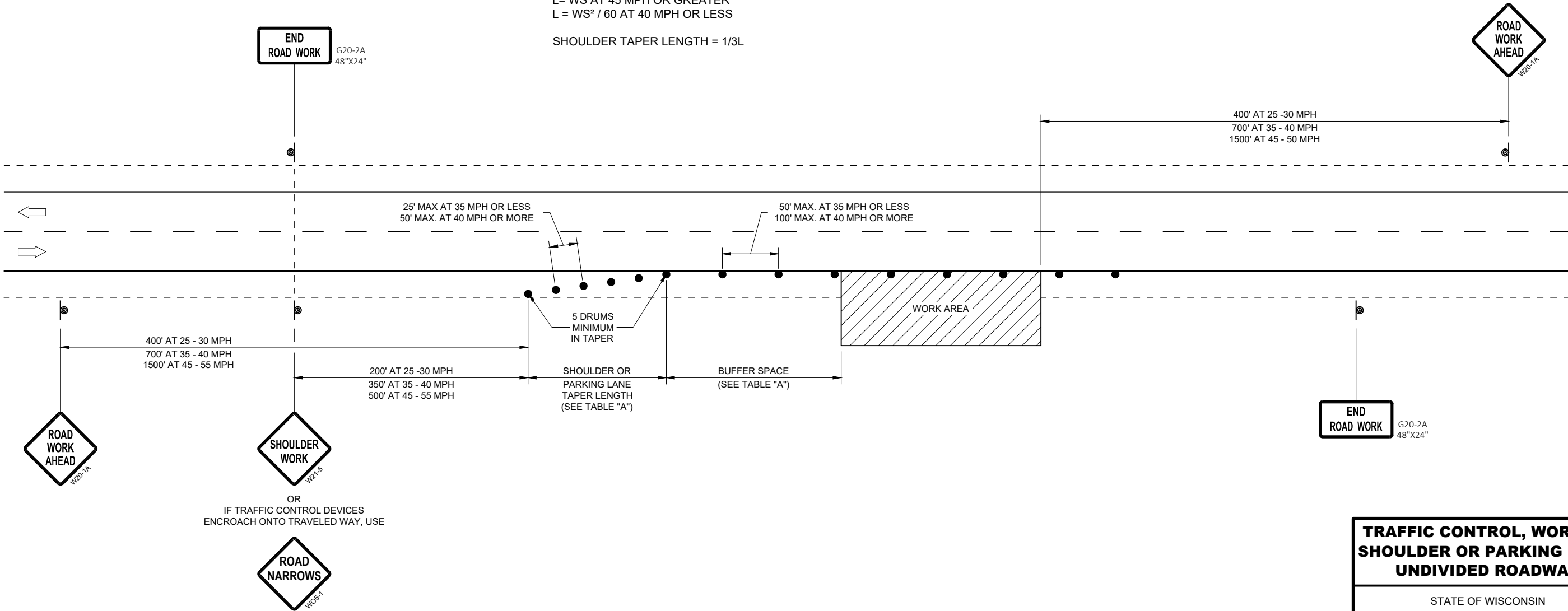
W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY RESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

6

6

SDD 15D28 - 03

SDD 15D28 - 03



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

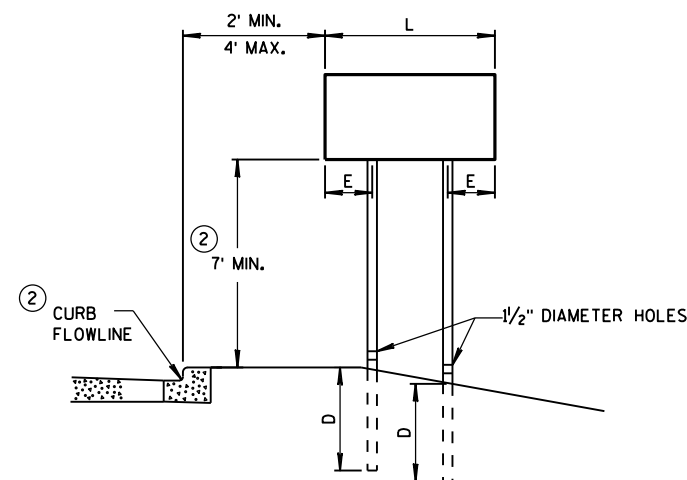
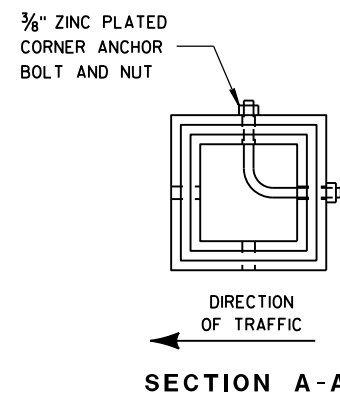
APPROVED
August 2019
DATE /S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER
FHWA



TUBULAR STEEL POSTS

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

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

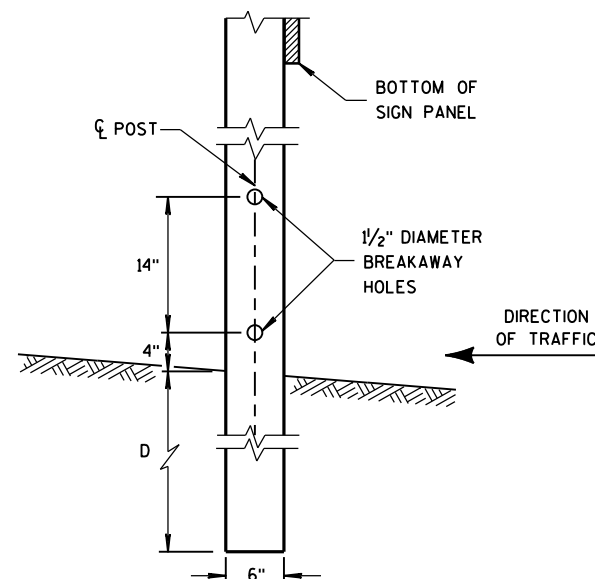


URBAN AREA

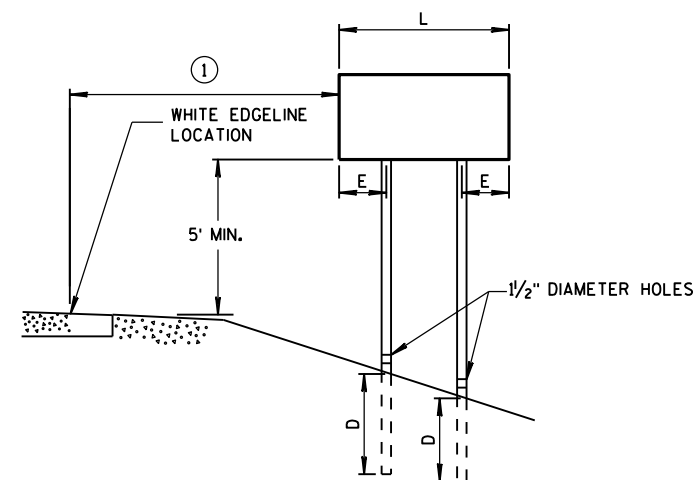
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

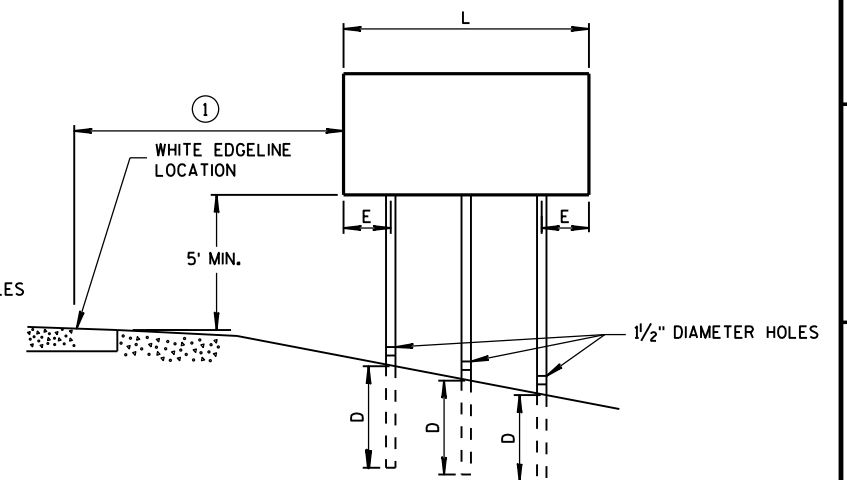
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4" x 6" WOOD POST MODIFICATION



RURAL AREA



GENERAL NOTES

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

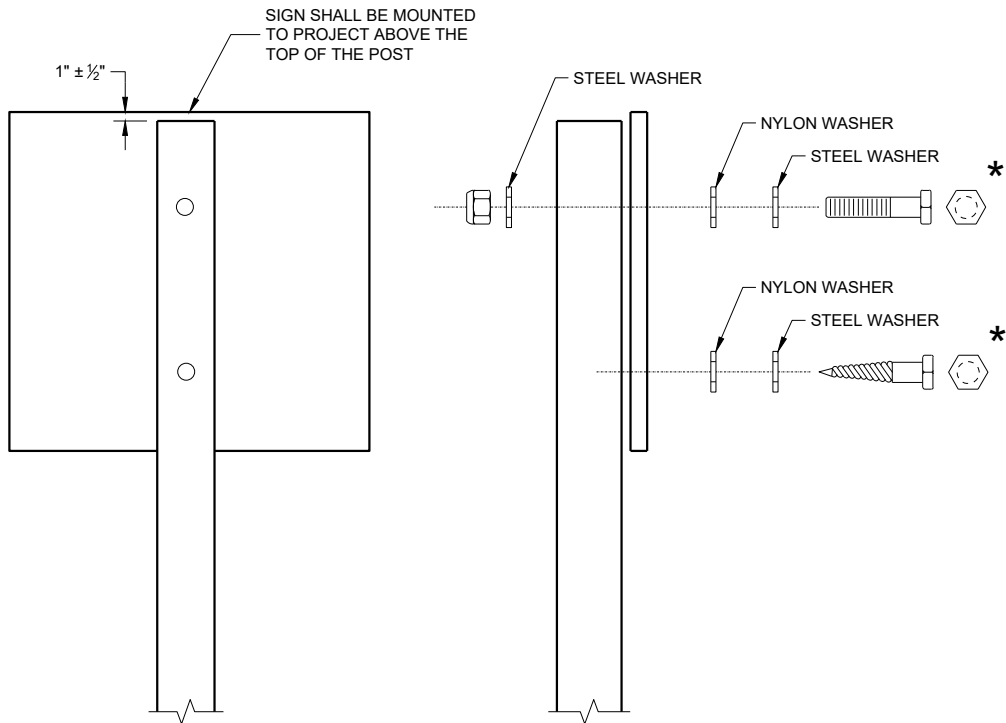
4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

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

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

WOOD POST (4" x 6")
LAG SCREWS - ¾" x 3"
MACHINE BOLTS - ⅝" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ¾" x 3 ¼" LENGTH W/NUTS
RIVETS - ⅝" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x ⅛" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

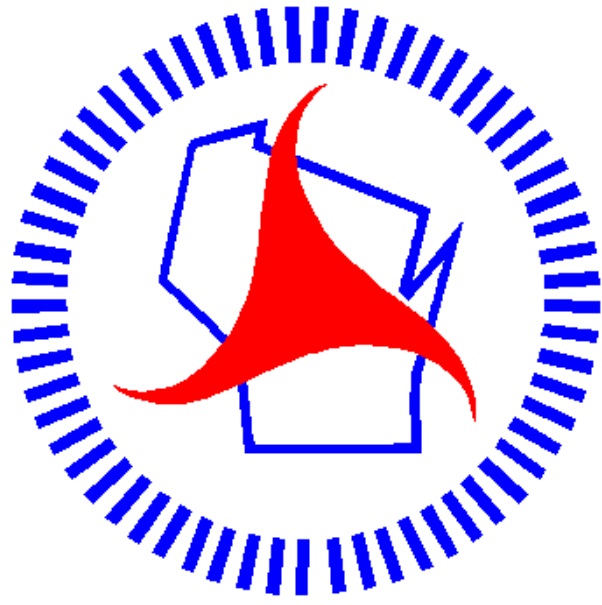
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS
TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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