

GRE
PROJECT ID:
WITH: 4010-29-71

4010-28-71

COUNTY:
SHEBOYGAN

SHEBOYGAN

FEBRUARY 2026

ORDER OF SHEETS

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

TOTAL SHEETS = 252



DESIGN DESIGNATION

A.A.D.T.	2026	=	8510
A.A.D.T.	2046	=	10110
D.H.V.		=	
D.D.		=	50/50
T.		=	7.1%
DESIGN SPEED		=	55 MPH
ESALS		=	1,500,000

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	



WALDO - SHEBOYGAN FALLS

ONION RIVER TRIBUTARY

STH 28

SHEBOYGAN COUNTY

WALDO - SHEBOYGAN

STH 57-CTH A

STH 28

SHEBOYGAN COUNTY

STATE PROJECT NUMBER
4010-28-71

STATE PROJECT NUMBER
4010-29-71

END EXCEPTION TO NET
C/L LENGTH 4010-29-71
END PROJECT 4010-28-71
STA 883+21.44
Y= 153,859.233
X= 164,952.900

BEGIN PROJECT 4010-28-71
BEGIN EXCEPTION TO NET
C/L LENGTH 4010-29-71
STA 881+82.10
Y= 153,828.361
X= 164,817.021

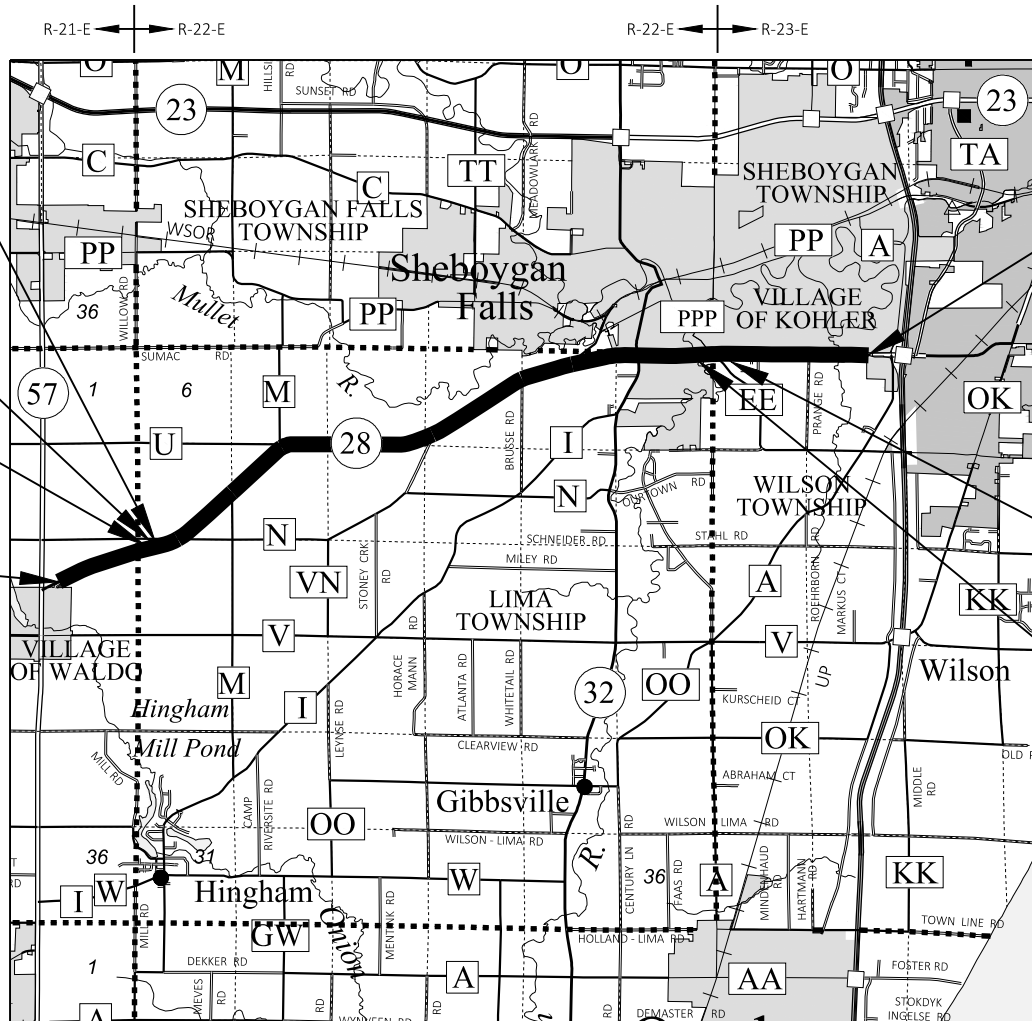
BEGIN PROJECT 4010-29-71
STA 825+90.49
Y= 151,926.381
X= 159,577.352

B-59-322

END PROJECT 4010-29-71
STA 1312+19.79
Y= 164,472.724
X= 204,670.572

END EXCEPTION TO NET C/L LENGTH 4010-29-71
STA 1232+38.42
Y= 164,539.714
X= 196,689.486

BEGIN EXCEPTION TO NET C/L LENGTH 4010-29-71
STA 1216+70.54
Y= 164,482.266
X= 195,123.018



LAYOUT
SCALE 0 2 MI

4010-28-71 NET LENGTH OF CENTERLINE = 0.026 MILES
4010-29-71 NET LENGTH OF CENTERLINE = 8.887 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), SHEBOYGAN 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.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4010-28-71	WISC2026189	1
4010-29-71	WISC2026190	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	NE REGION
Surveyor	NE REGION
Designer	E. HOEFFERLE
Project Manager	N. Uitenbroek
Regional Examiner	NE REGION
Regional Supervisor	R. WAGNER

APPROVED FOR THE DEPARTMENT
DATE: _____
Nicholas S. Uitenbroek
Digitally signed by Nicholas S. Uitenbroek
DN: c=US, o=Wisconsin Department of Transportation, ou=DOTSD - Northeast Region (PDS), cn=Nicholas S. Uitenbroek
Date: 2025.12.18 14:09:58-0600

2

GENERAL NOTES

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

CURVE DATA IS BASED ON THE ARC DEFINITION.

THE PROPOSED SHOULDER WIDTH SHOWN IN THE TYPICAL SECTIONS ARE MINIMUM WIDTH. PERPETUATE EXISTING SHOULDERS THAT ARE WIDER THAN WHAT IS SHOWN IN THE TYPICAL SECTIONS.

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
PLAN DETAILS
EROSION CONTROL
DETOUR SIGNING DETAILS

CONTACTS

WISCONSIN DNR LIAISON

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(414) 588-7648 (MOBILE)
bradley.engnath@we-energies.com

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 44.0 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.3 ACRES

DIGGERSHOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

PROJECT NO: 4010-28-71 & 4010-29-71

HWY: STH 28

COUNTY: SHEBOYGAN

GENERAL NOTES

SHEET 2

E

FILE NAME : N:\PDS\C3D\40102900\SHEETSPLAN\020101-GN.DWG
LAYOUT NAME - 020101-gn

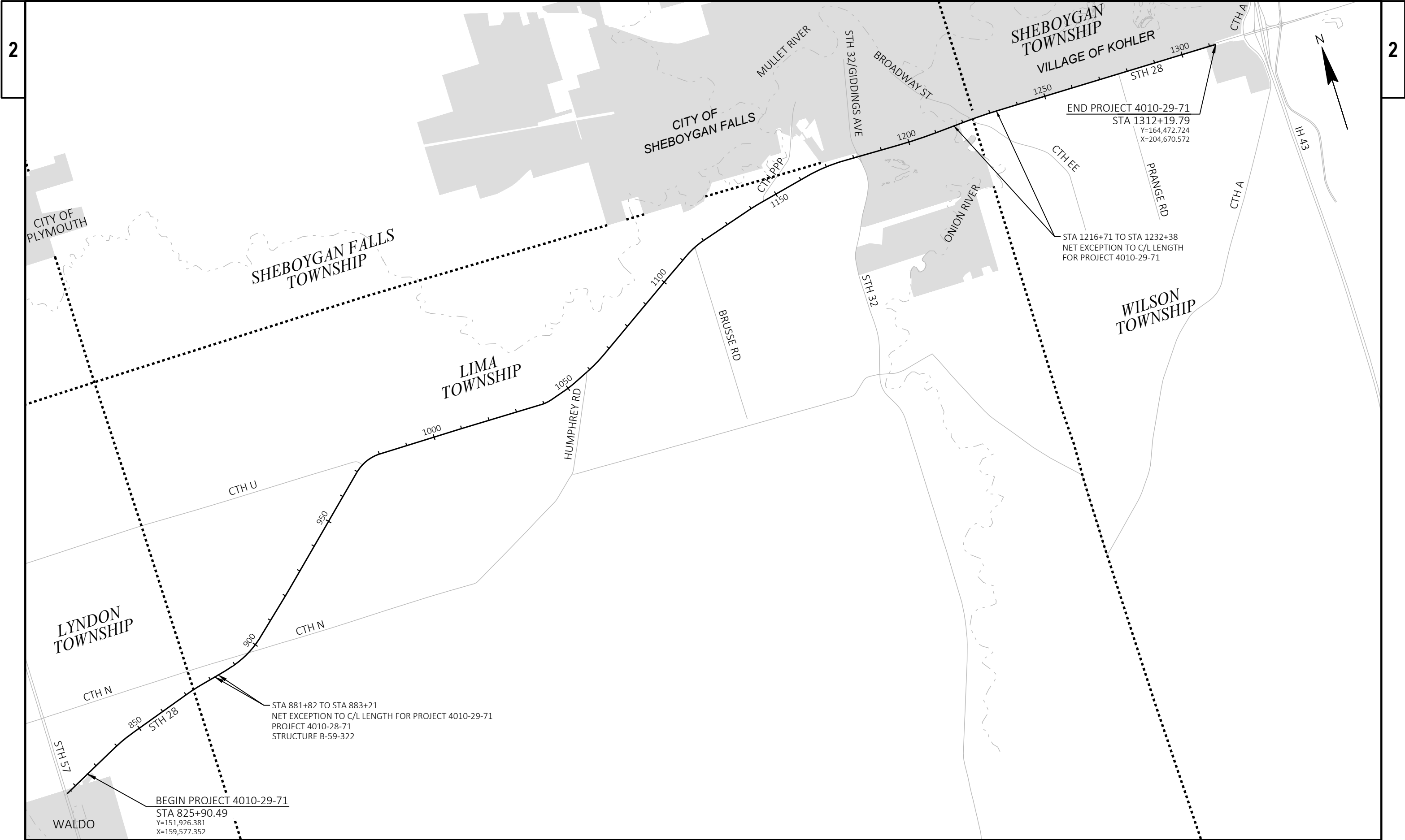
PLOT DATE : 12/4/2025 10:16 AM

PLOT BY : MARTIN, THOMAS S

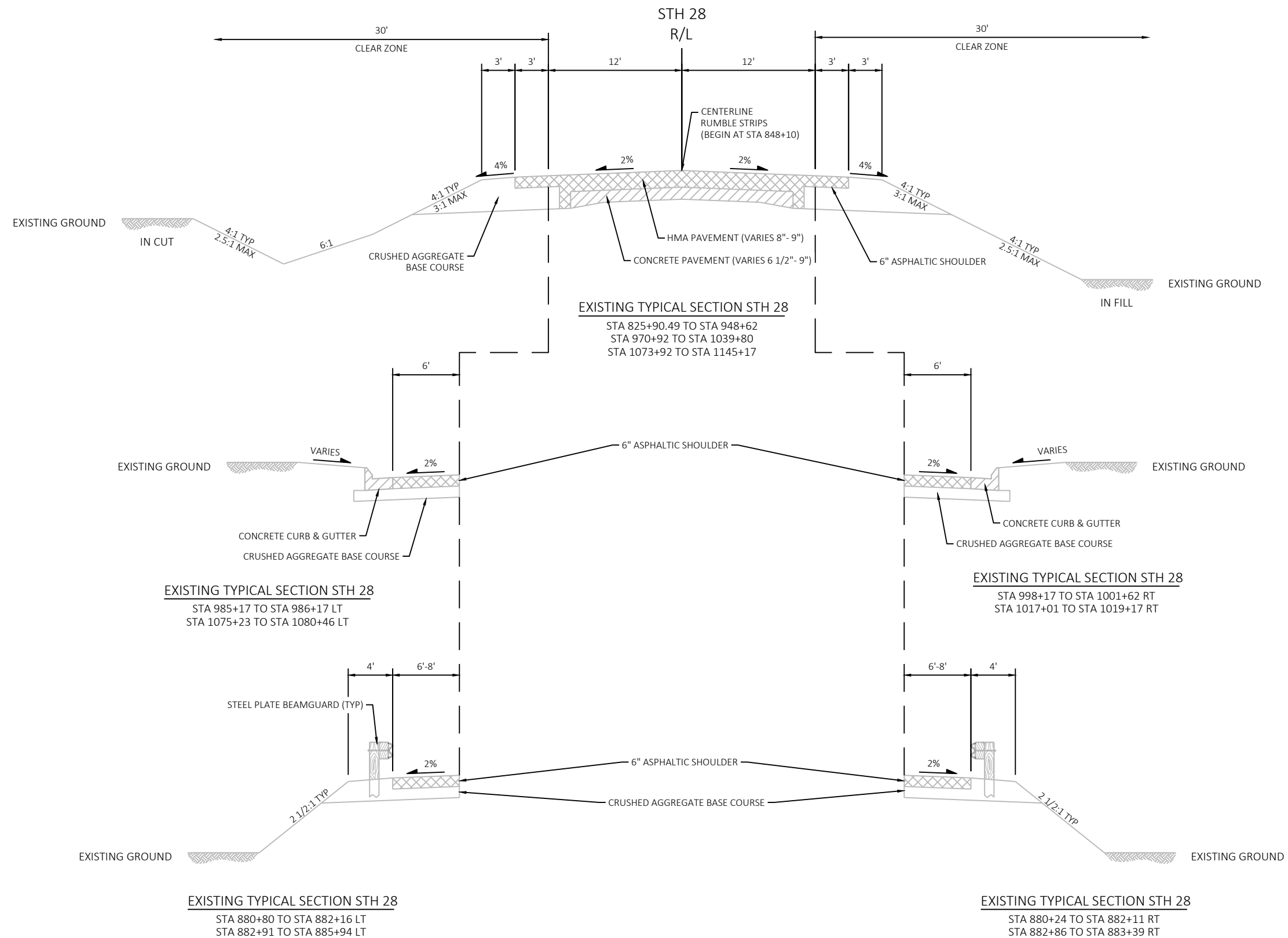
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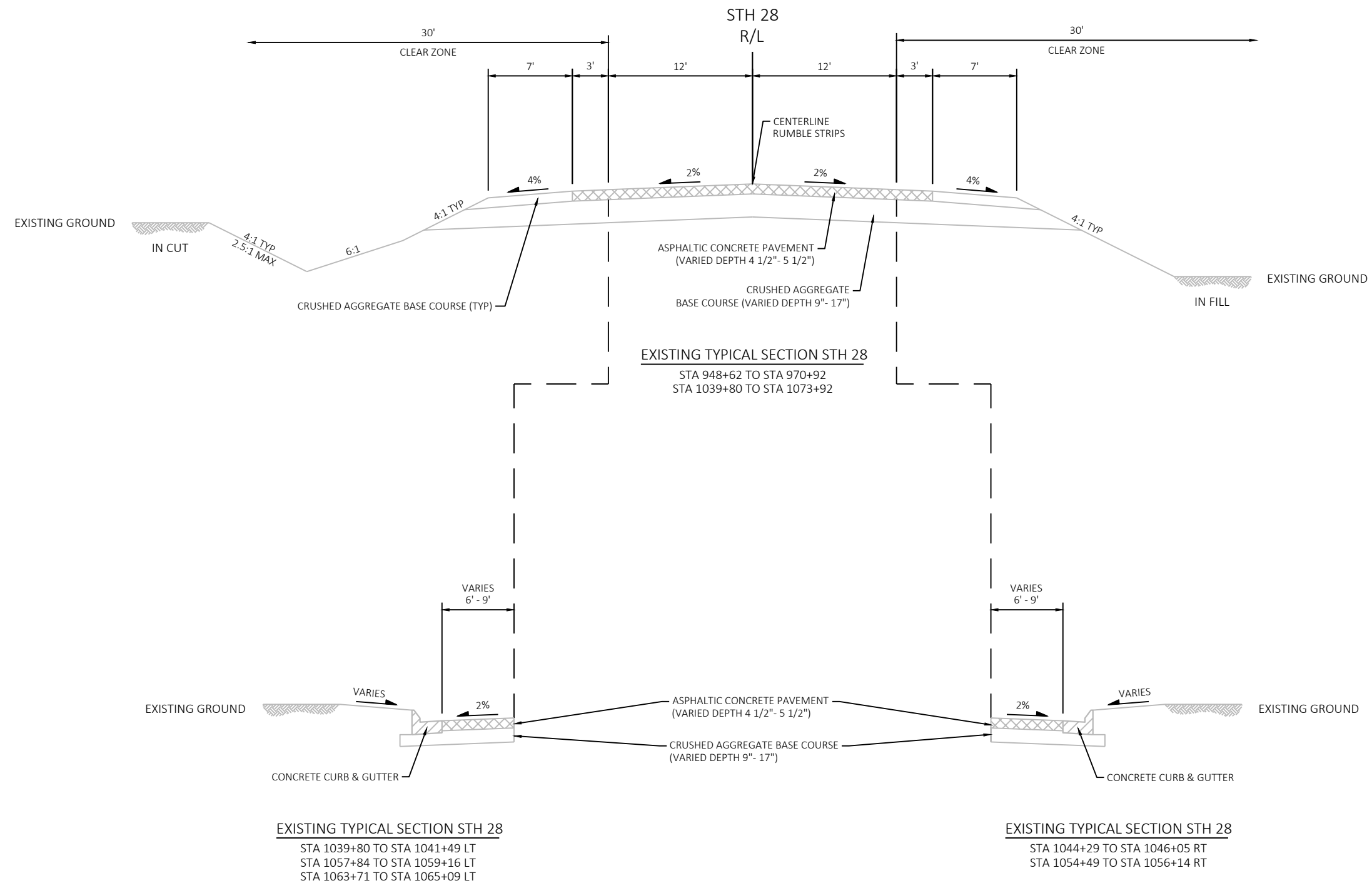
PLOT SCALE : 1:1

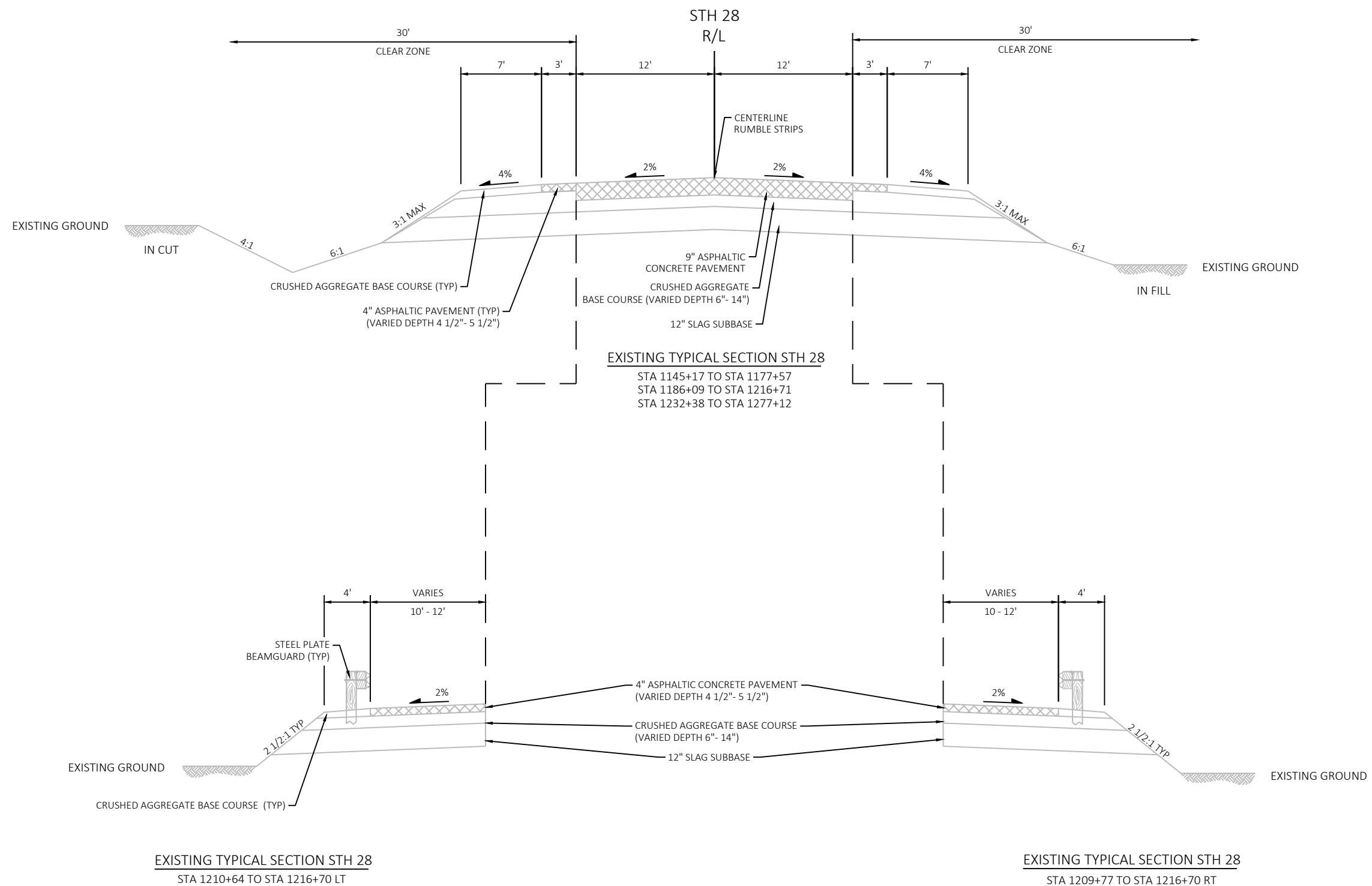
WISDOT/CADDs SHEET 42



PROJECT NO: 4010-28-71 & 4010-29-71	HWY: STH 28	COUNTY: SHEBOYGAN	PROJECT OVERVIEW	SHEET 3	E
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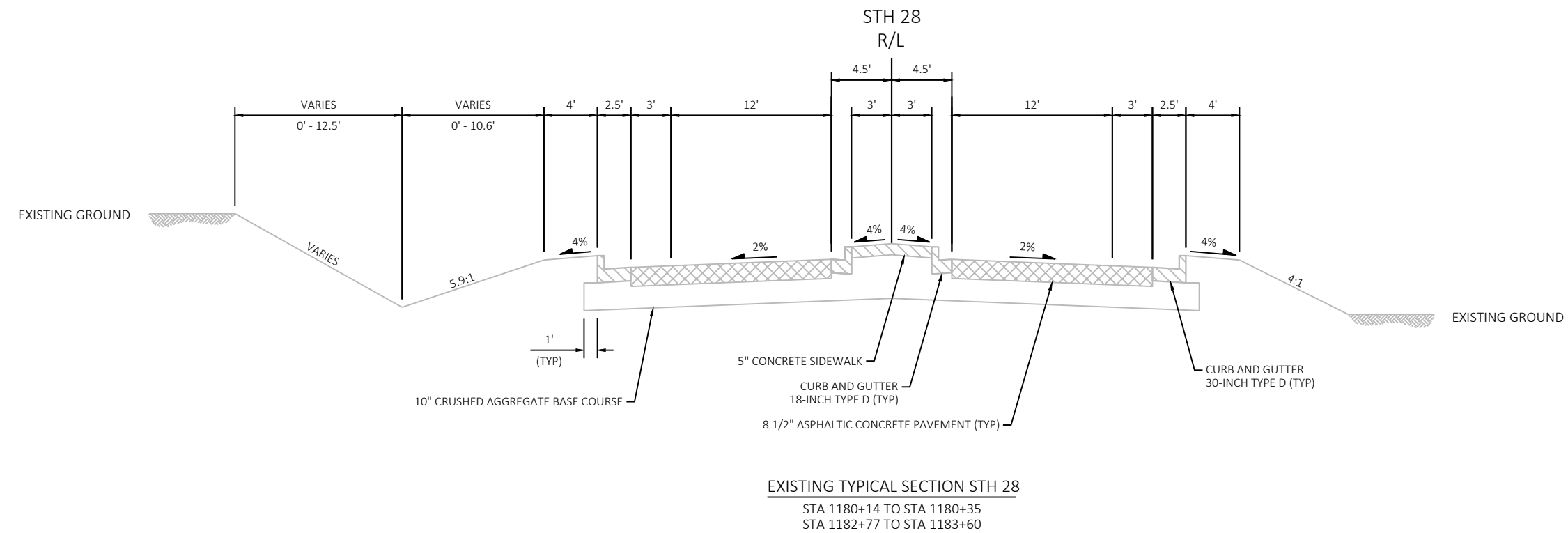
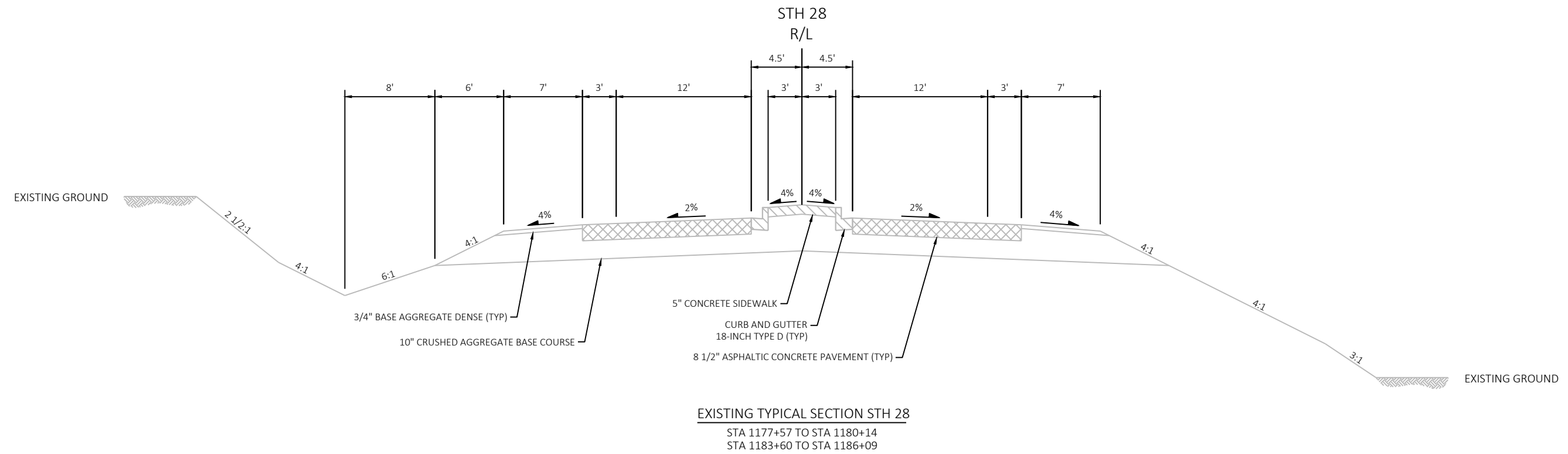


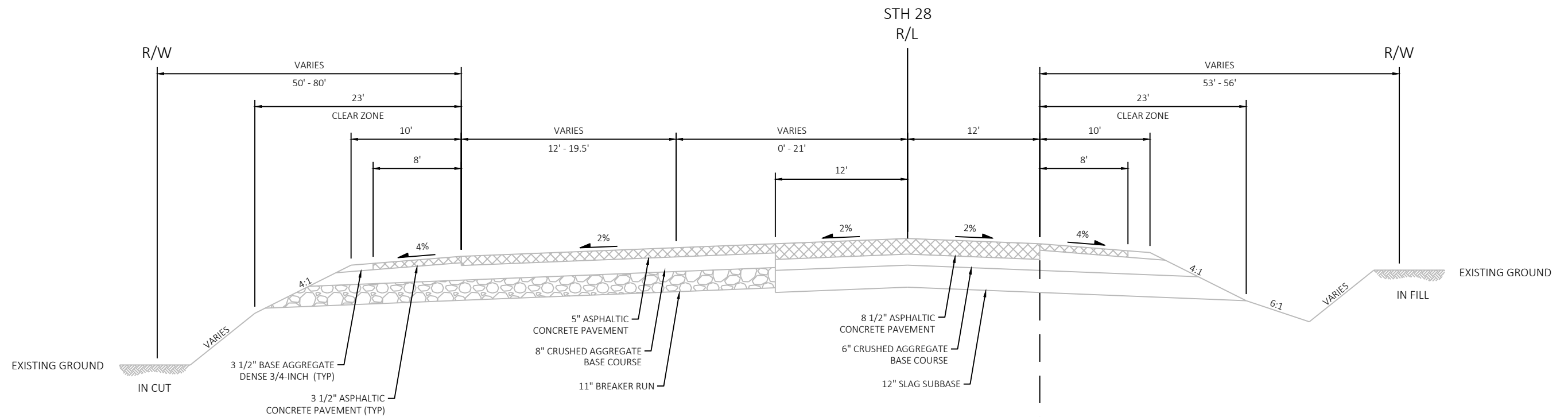




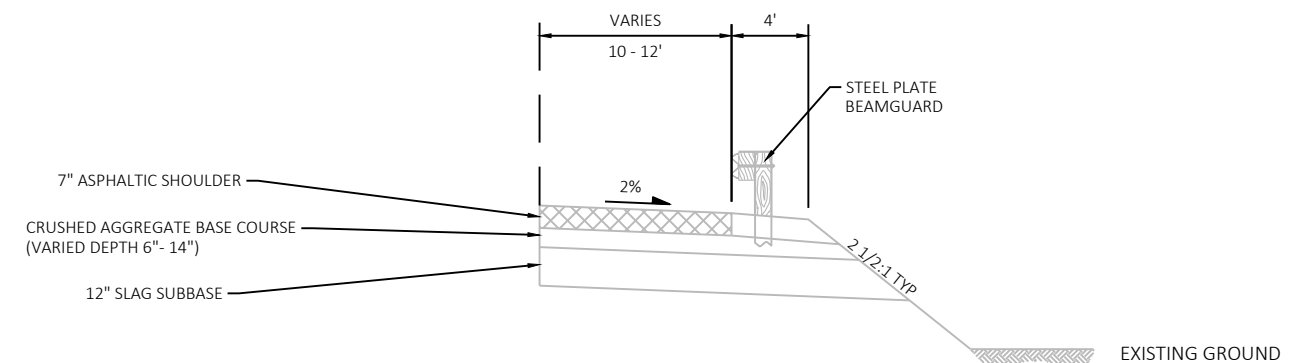
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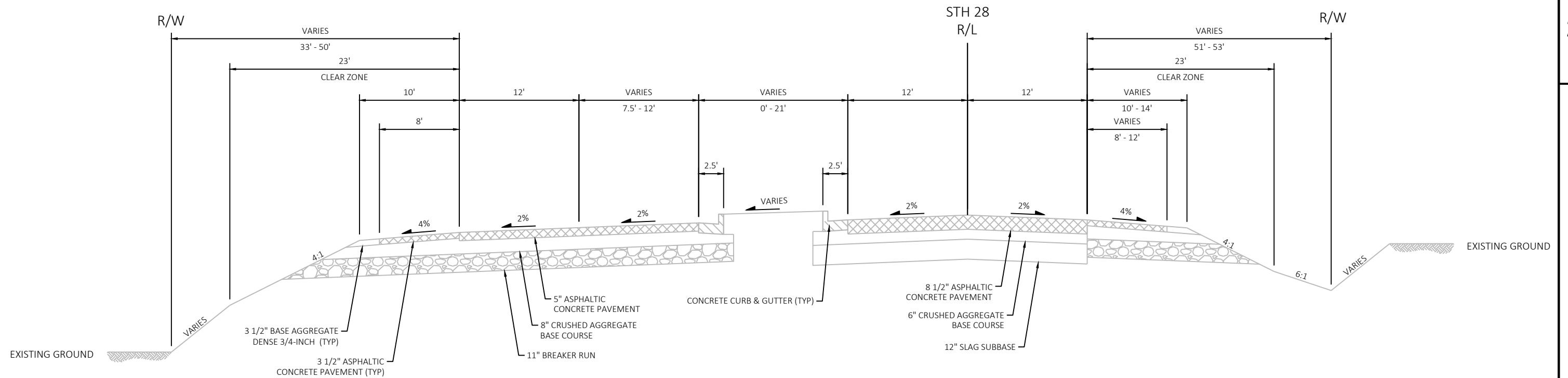




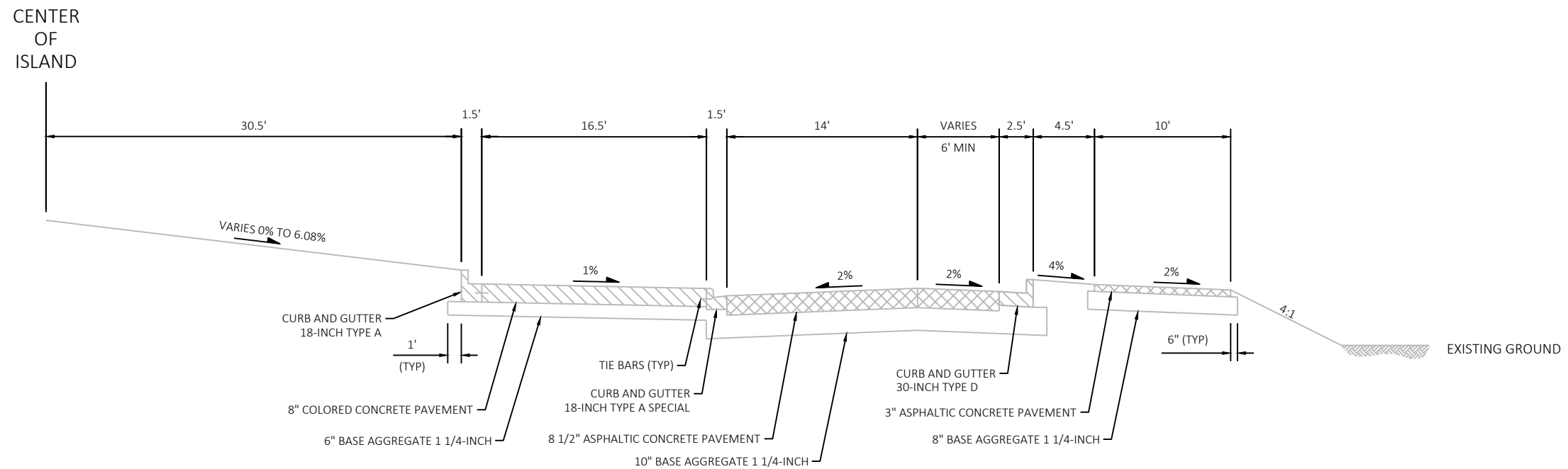
EXISTING TYPICAL SECTION STH 28
STA 1302+79 TO STA 1308+71



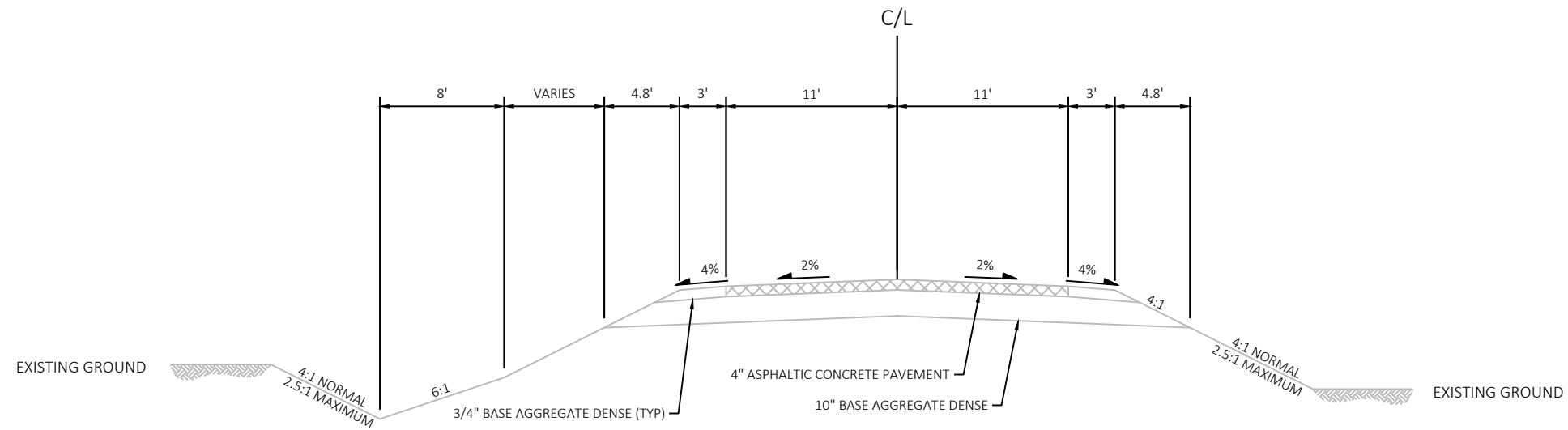
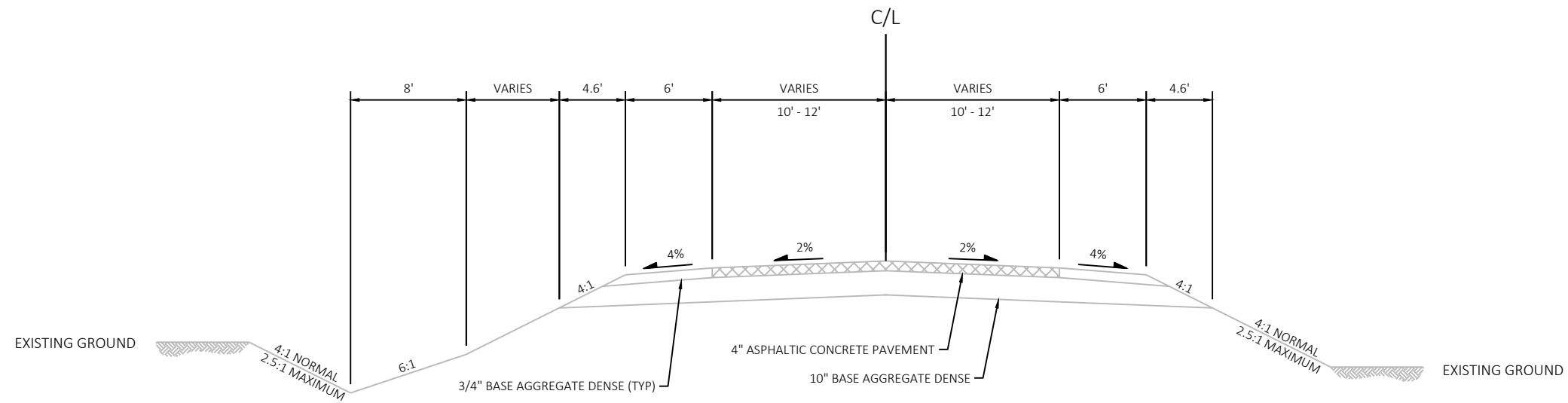
EXISTING TYPICAL SECTION STH 28
STA 1302+79 TO STA 1304+89 RT

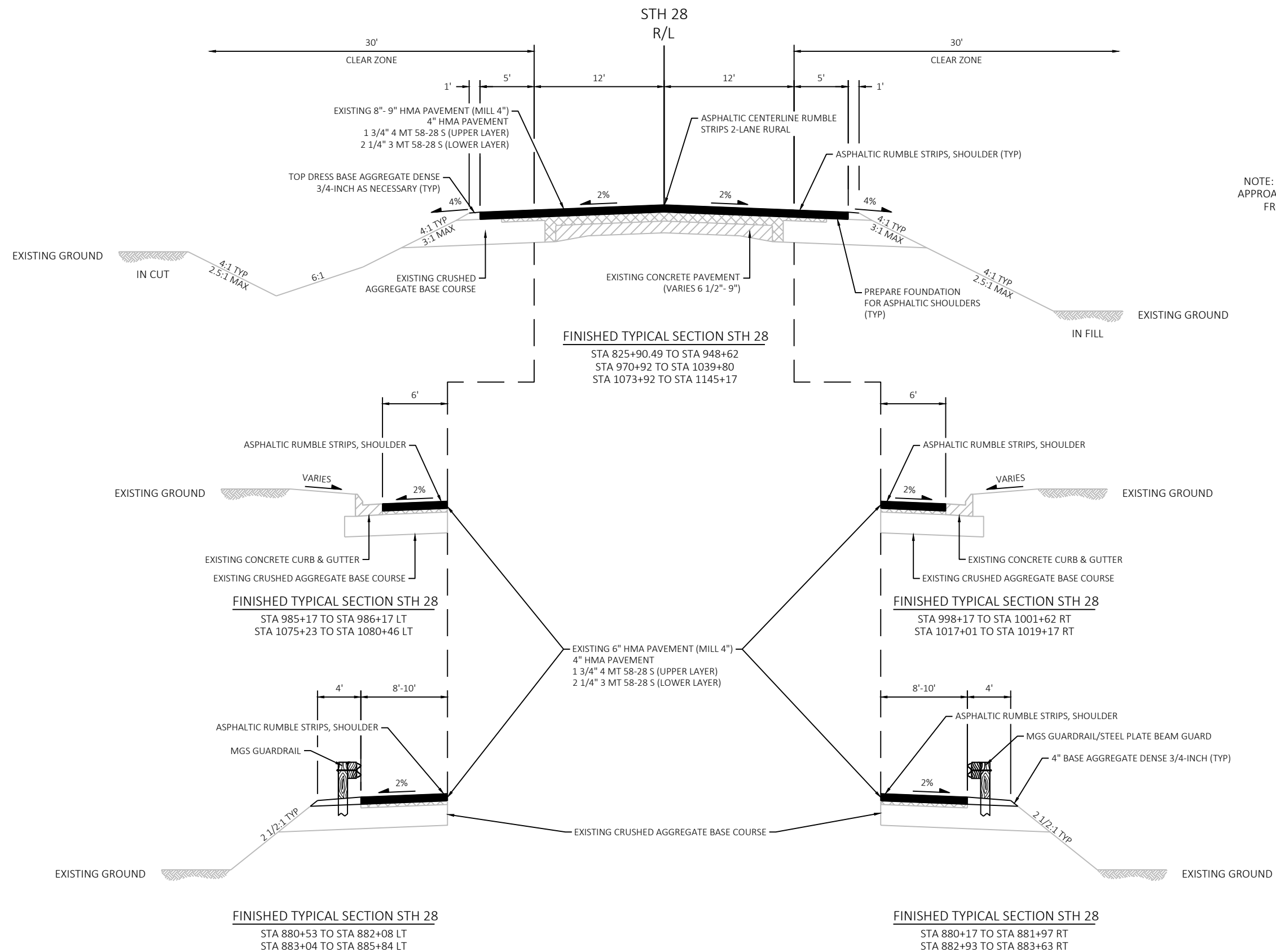


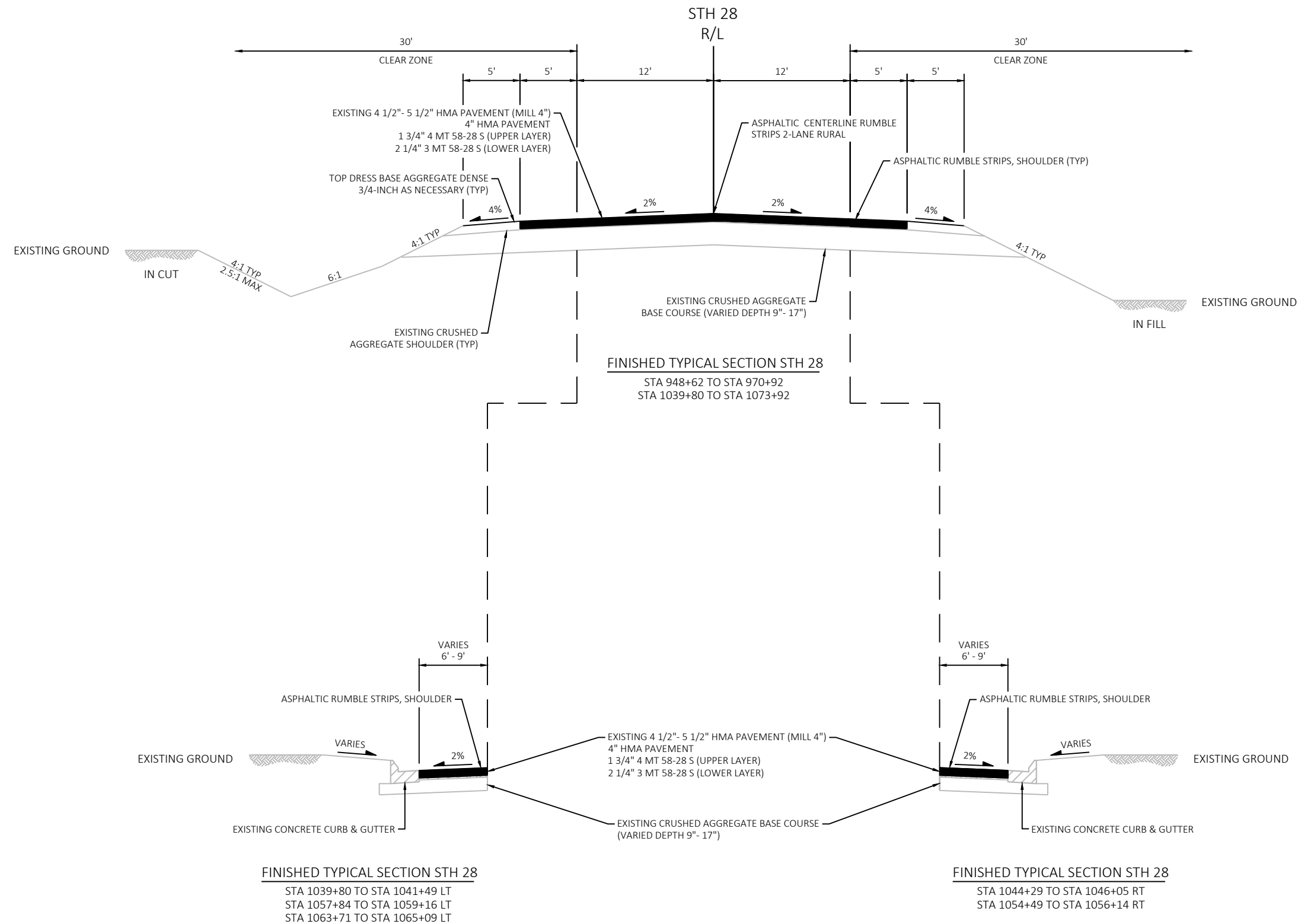
EXISTING TYPICAL SECTION STH 28
STA 1308+71 TO STA 1312+19

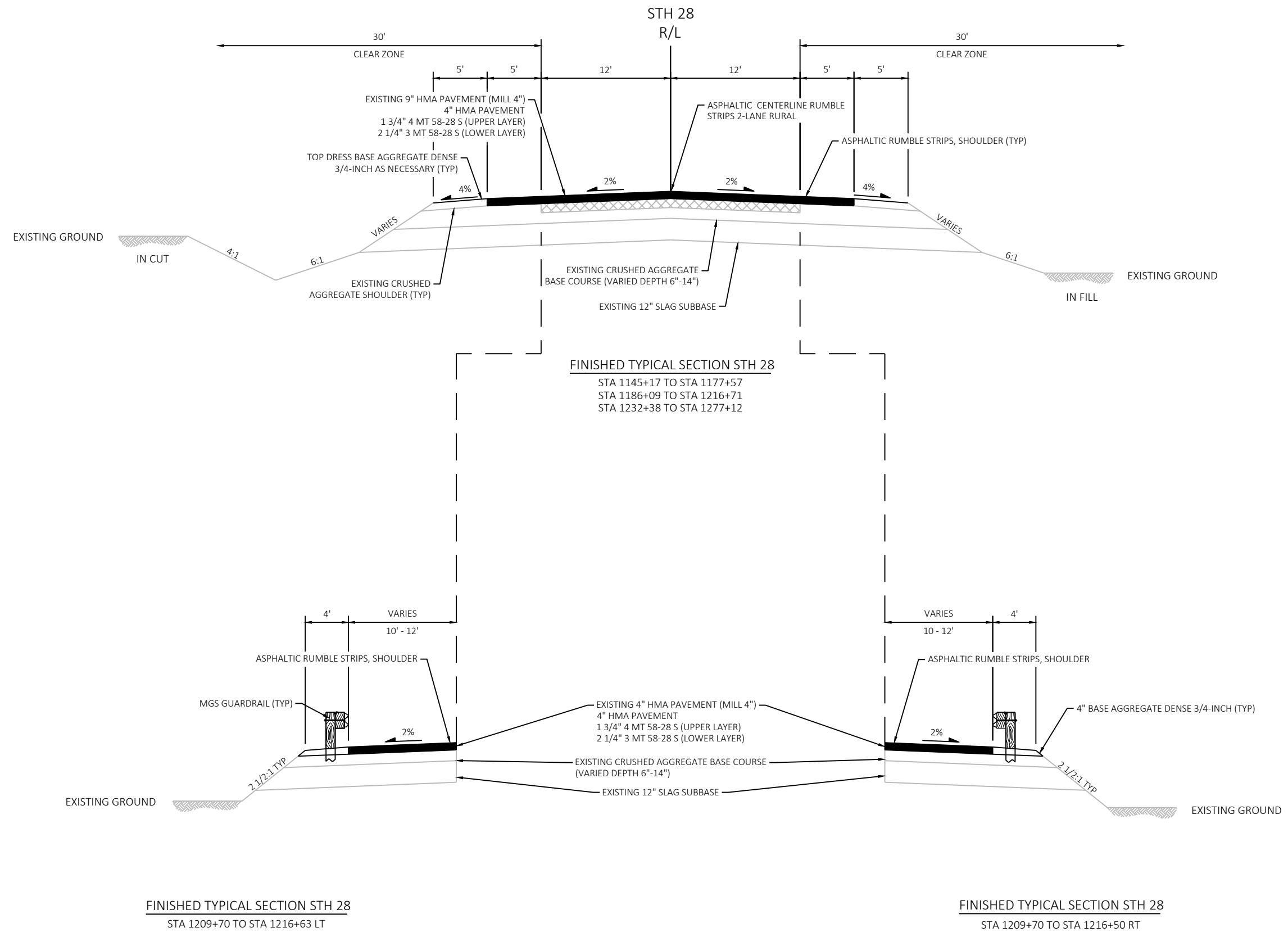


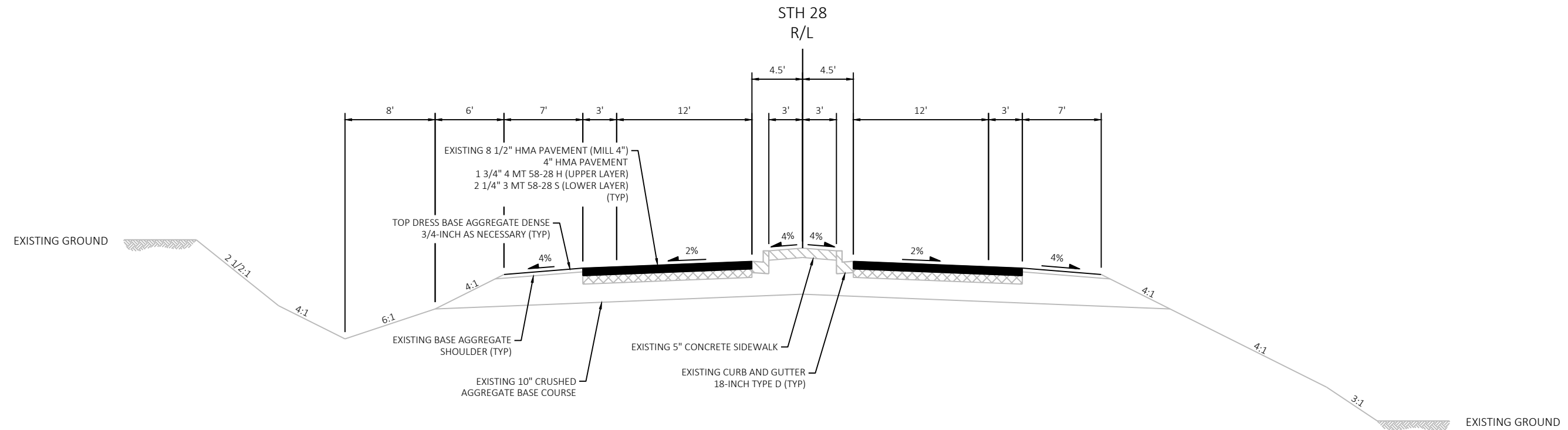
EXISTING TYPICAL SECTION STH 28
CIRCULATORY ROADWAY AT STH 32
STA 1180+35 TO STA 1182+77



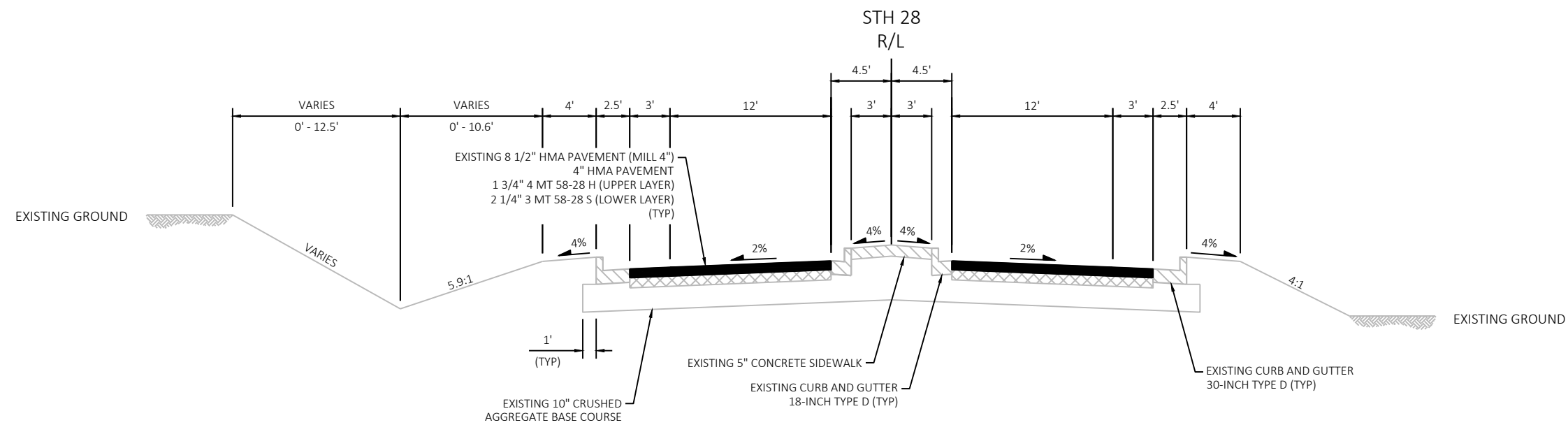






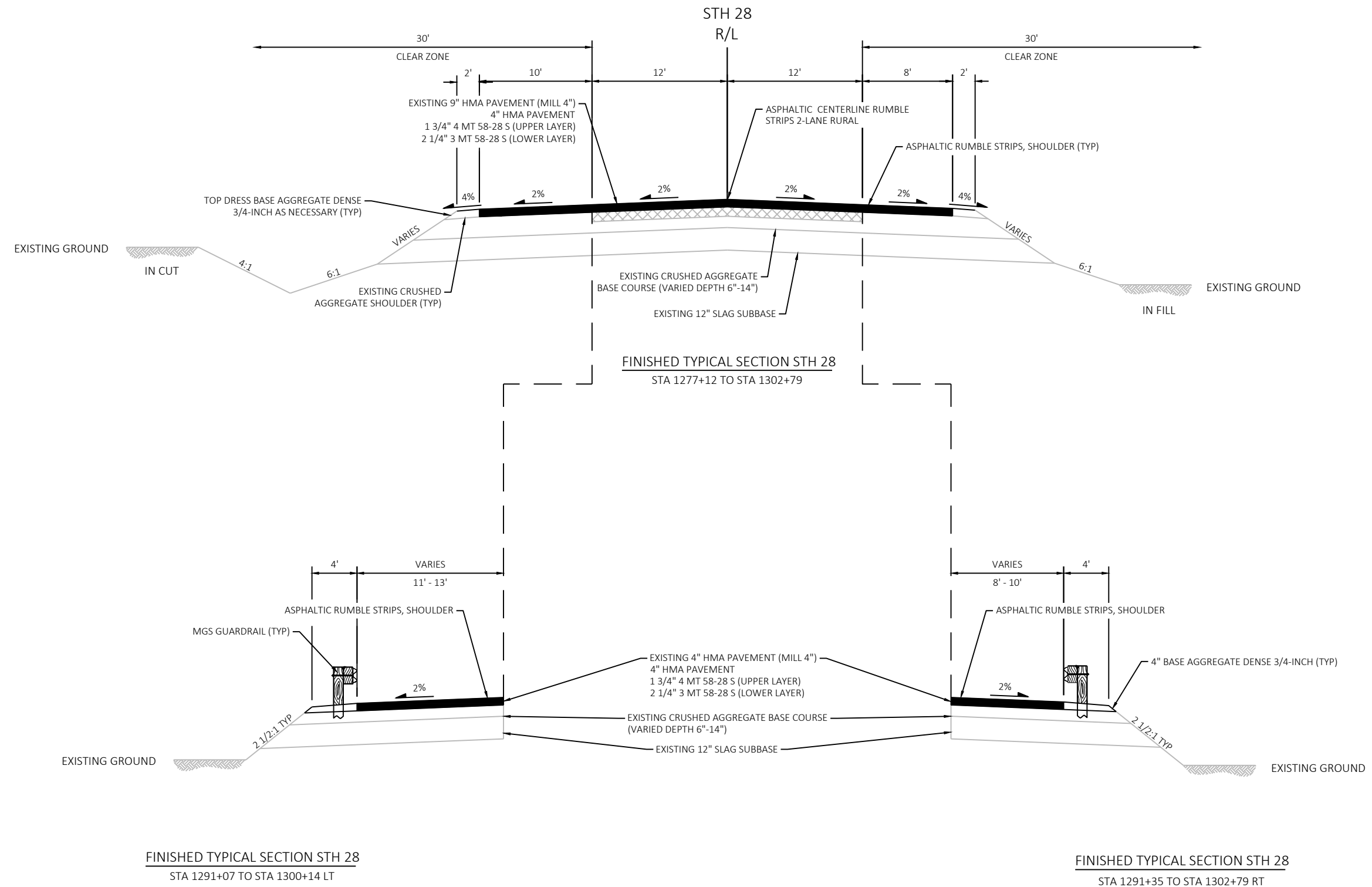


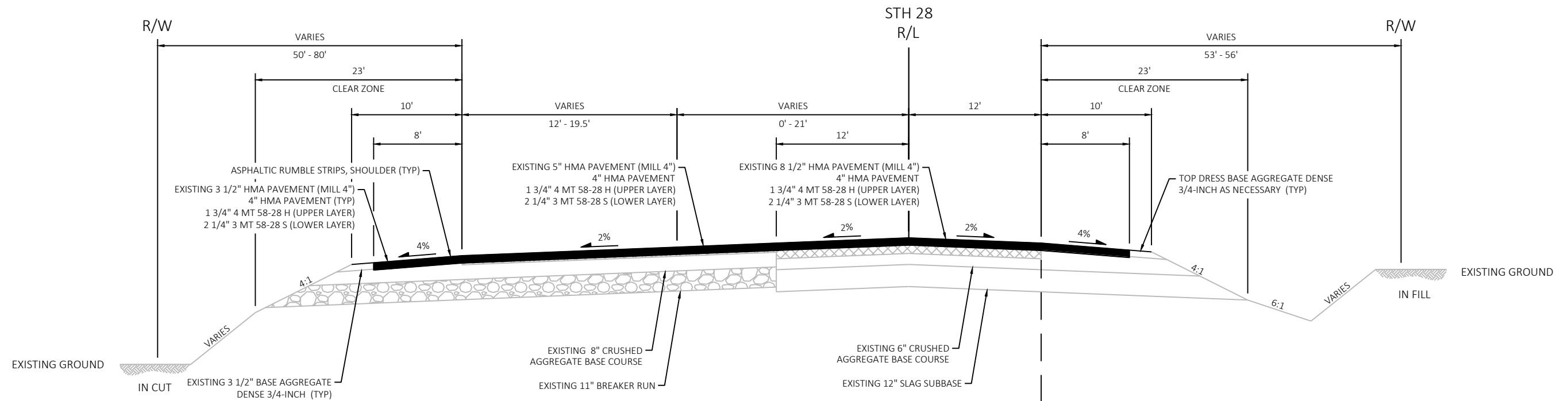
FINISHED TYPICAL SECTION STH 28

STA 1177+57 TO STA 1180+14
STA 1183+60 TO STA 1186+09

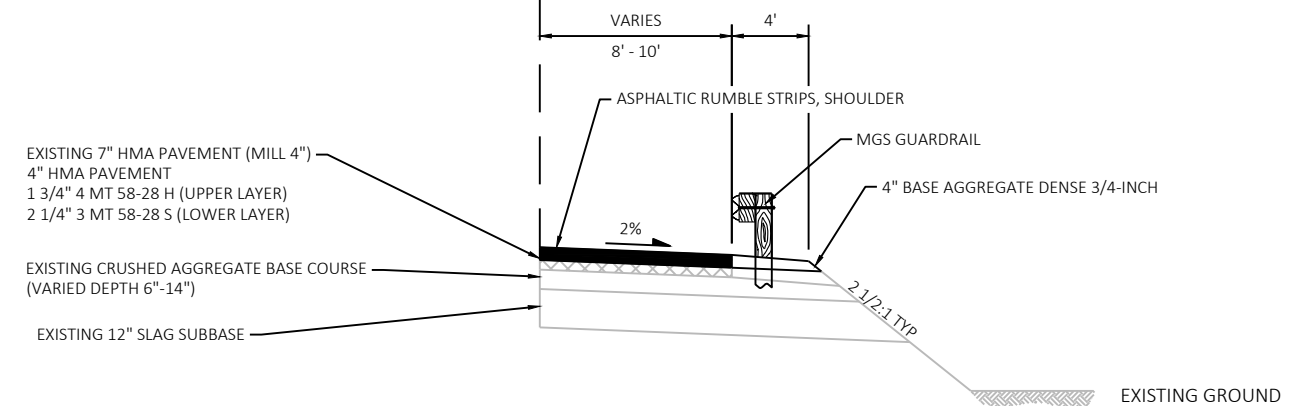
FINISHED TYPICAL SECTION STH 28

STA 1180+14 TO STA 1180+35
STA 1182+77 TO STA 1183+60

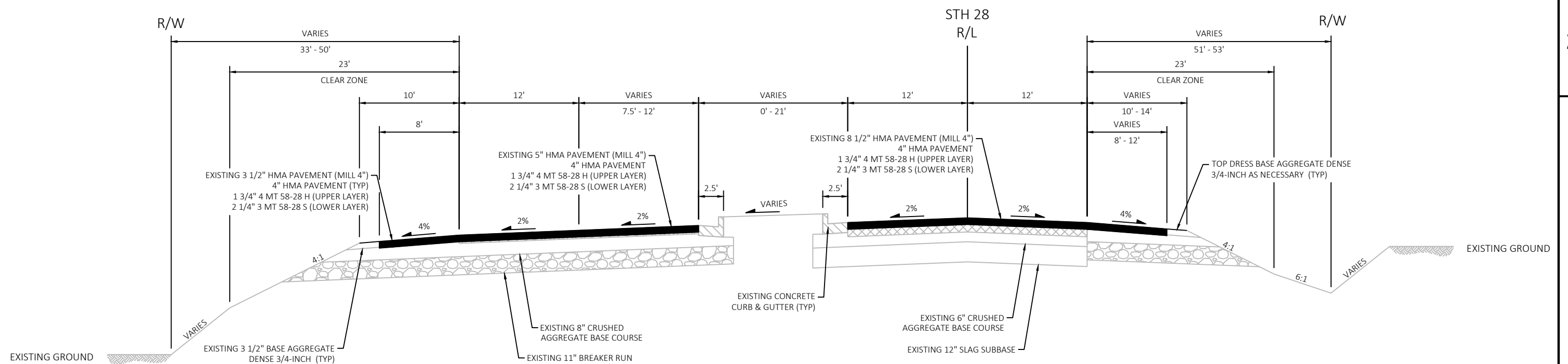




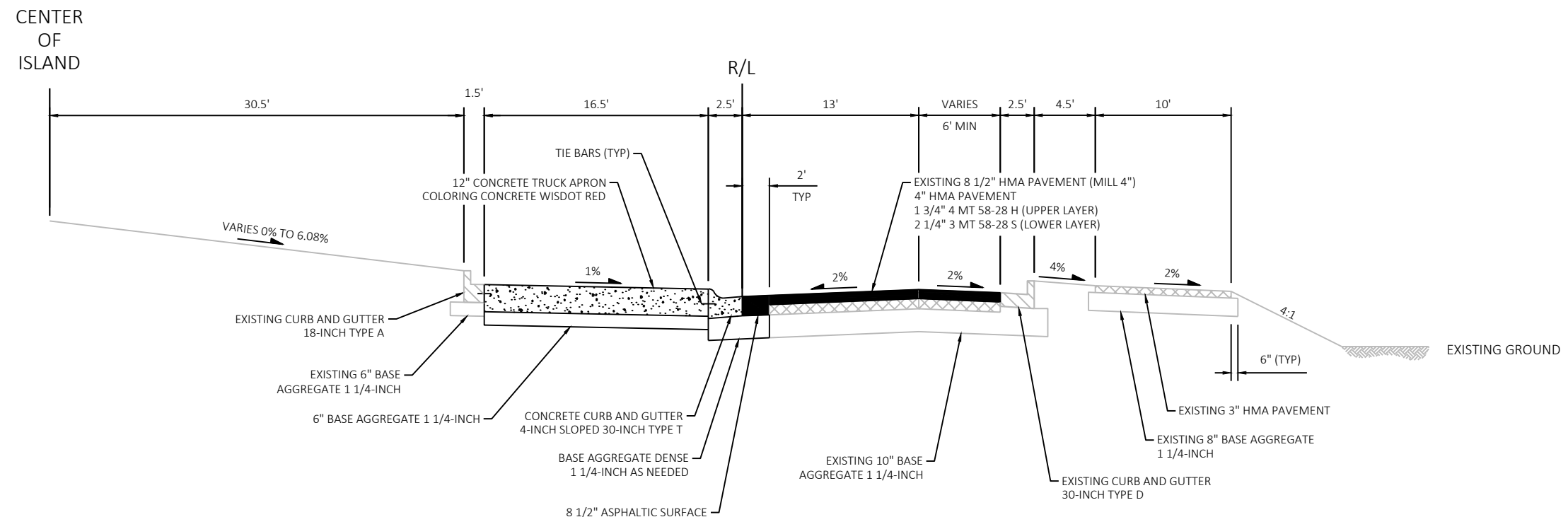
FINISHED TYPICAL SECTION STH 28
STA 1302+79 TO STA 1308+71



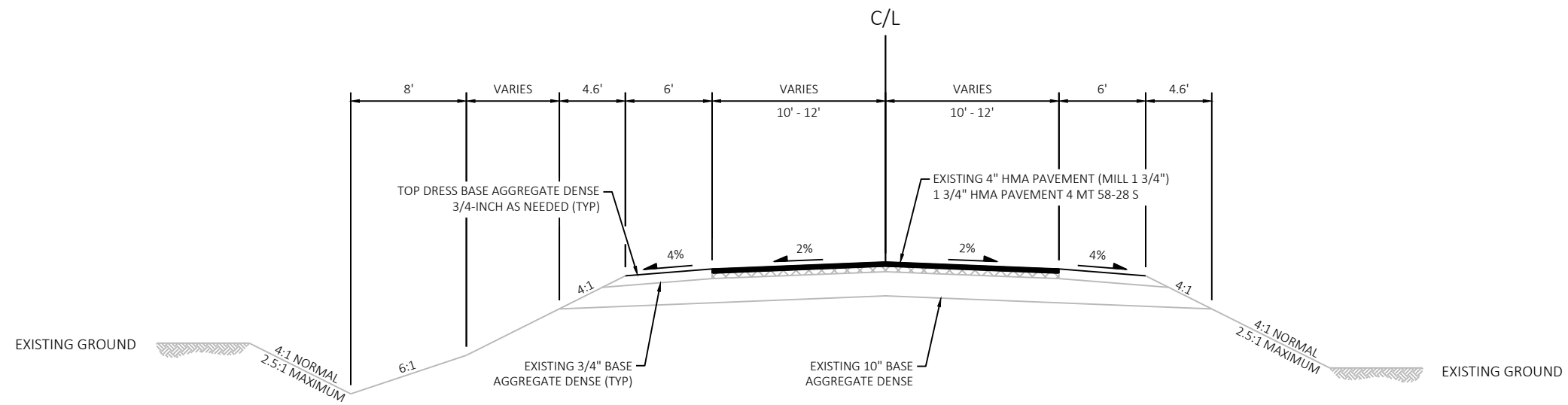
FINISHED TYPICAL SECTION STH 28
STA 1302+79 TO STA 1303+90 RT



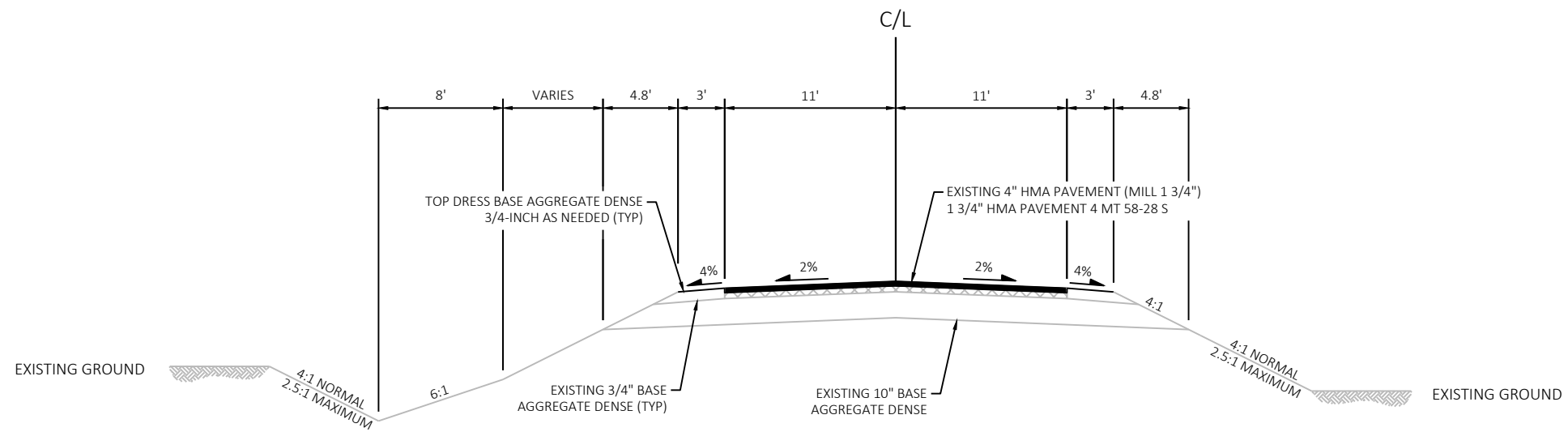
FINISHED TYPICAL SECTION STH 28
STA 1308+71 TO STA 1312+19



FINISHED TYPICAL SECTION STH 28
CIRCULATORY ROADWAY AT STH 32
STA 1180+35 TO STA 1182+77

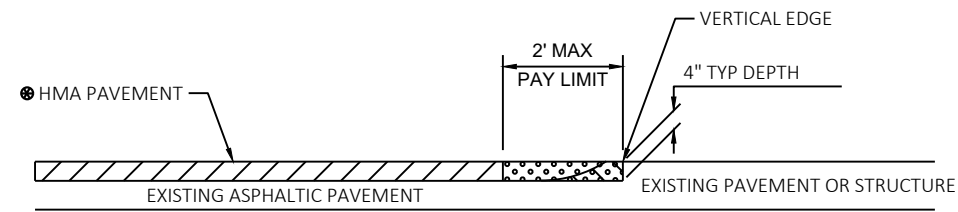


FINISHED TYPICAL SECTION CTH M, CTH N & CTH U



FINISHED TYPICAL SECTION FOR TOWN ROADS

HUMPHREY ROAD
BRUSSE ROAD
PRANGE ROAD

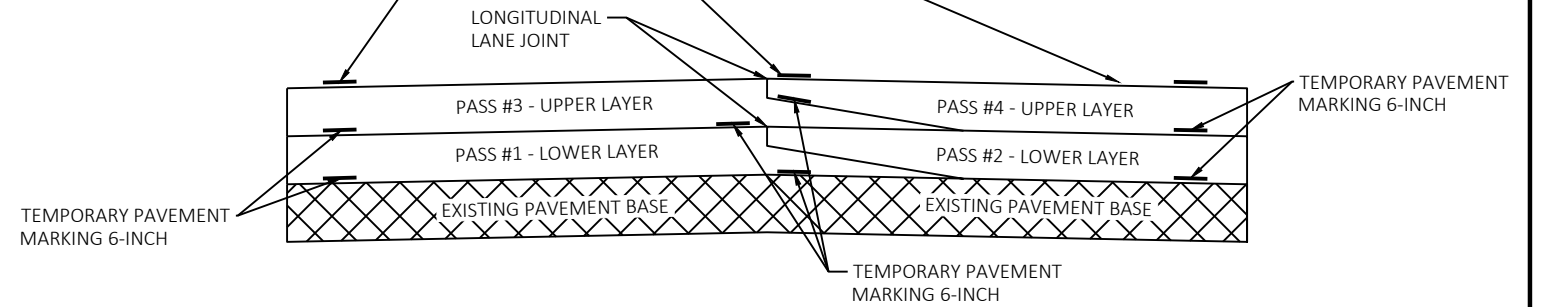


SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

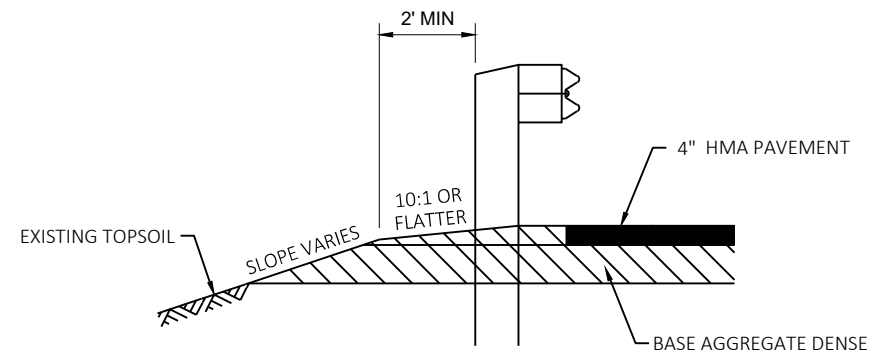
- REMOVING ASPHALTIC SURFACE, MILLING
- REMOVING ASPHALTIC SURFACE, BUTT JOINTS
- REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)

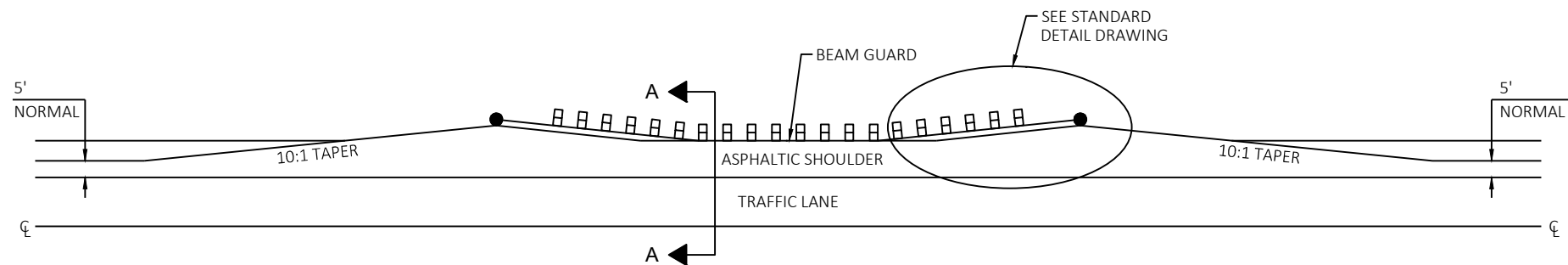
TEMPORARY PAVEMENT MARKING 6-INCH (FOLLOW PERMANENT MARKING LAYOUT)



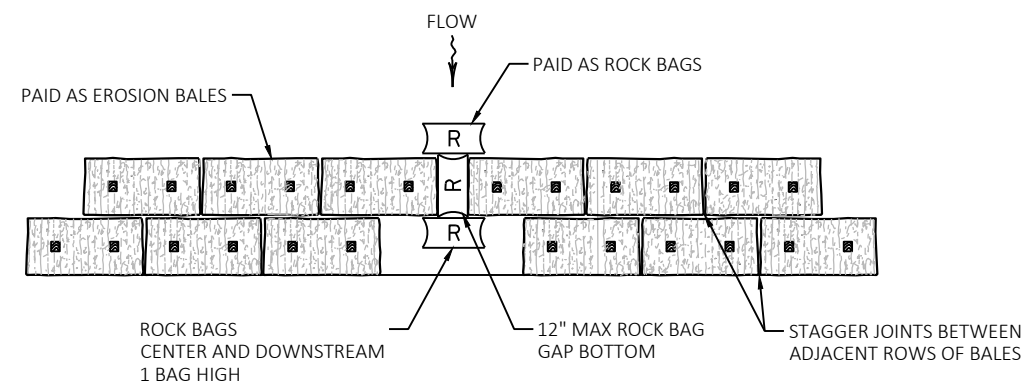
PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS



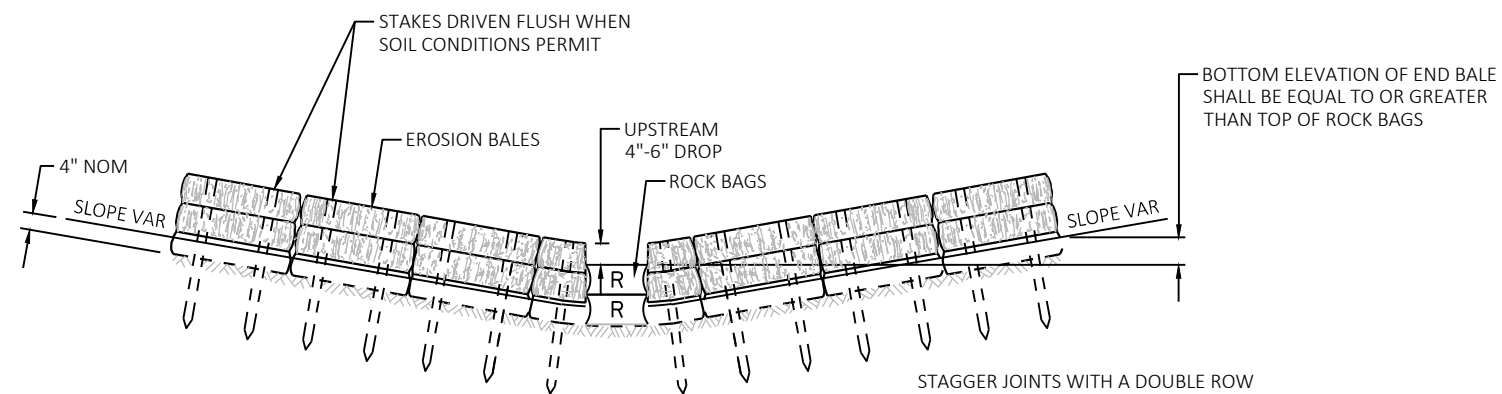
SECTION A-A



DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD



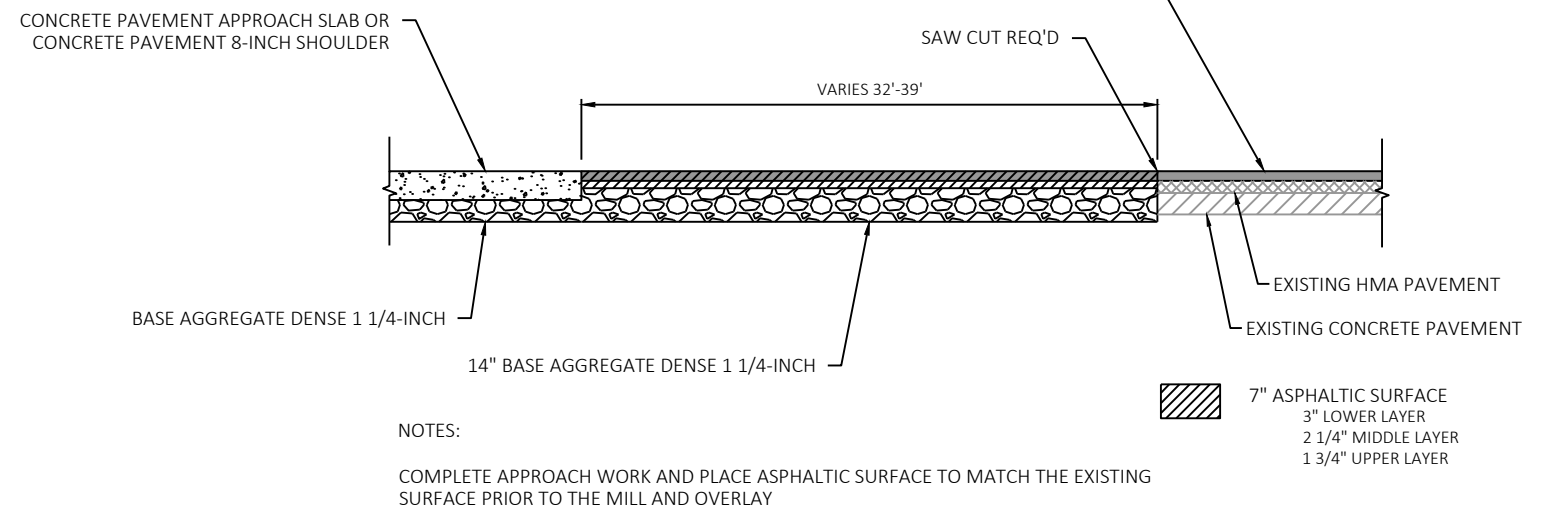
PLAN VIEW



FRONT ELEVATION

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

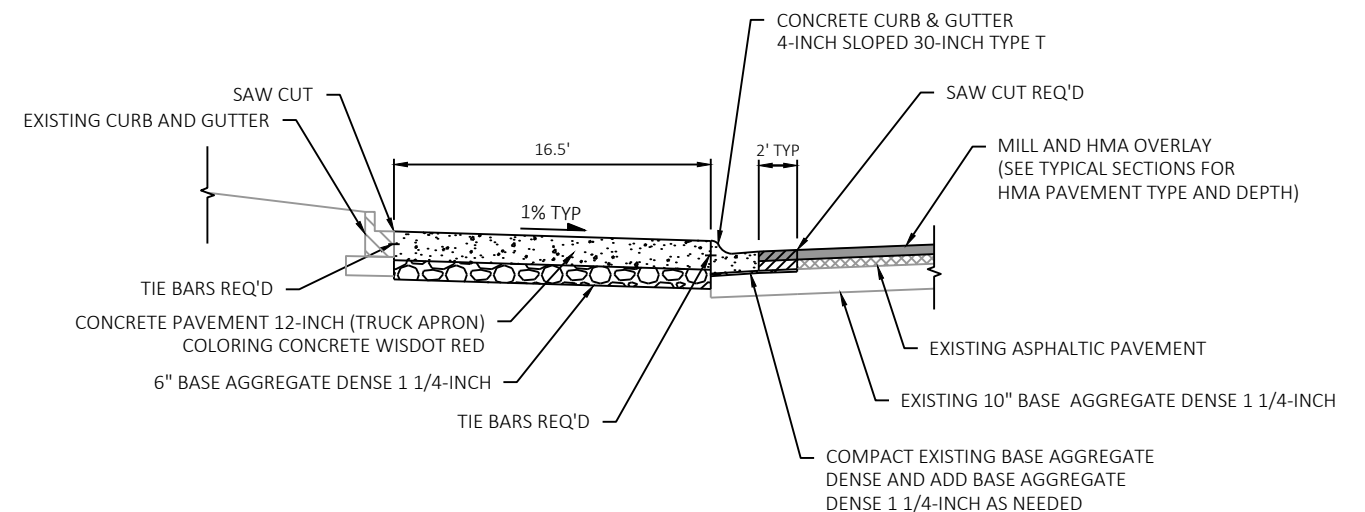
EROSION BALES WITH ROCK BAG RELIEF



NOTES:

COMPLETE APPROACH WORK AND PLACE ASPHALTIC SURFACE TO MATCH THE EXISTING SURFACE PRIOR TO THE MILL AND OVERLAY

BRIDGE APPROACH ASPHALT PATCHING DETAIL - B-59-322

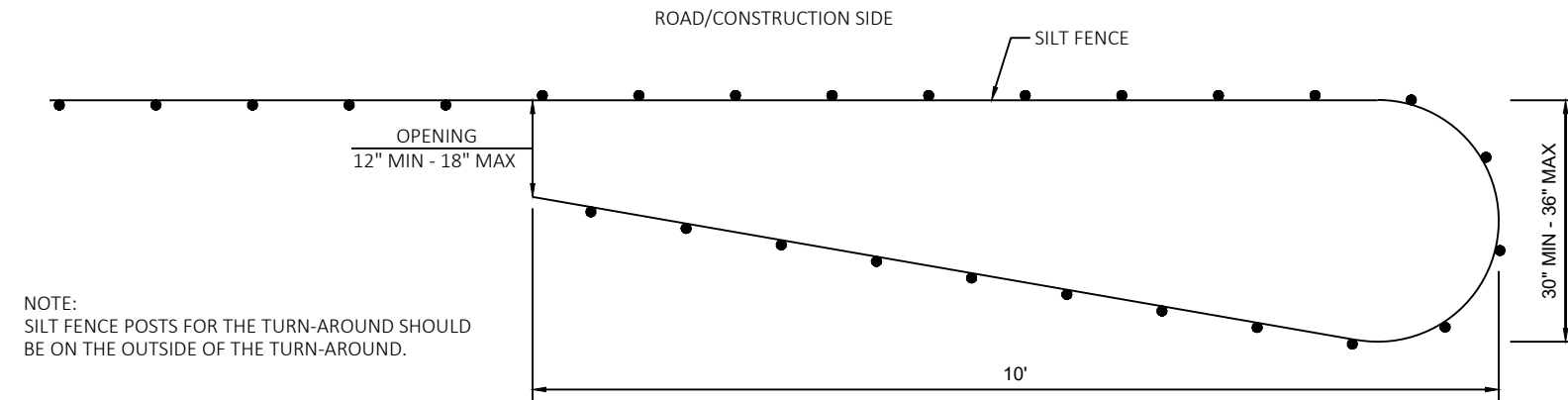


NOTES:

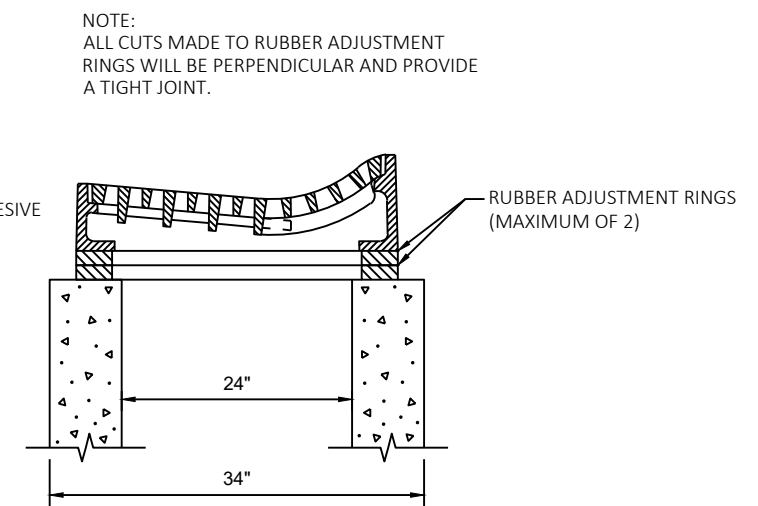
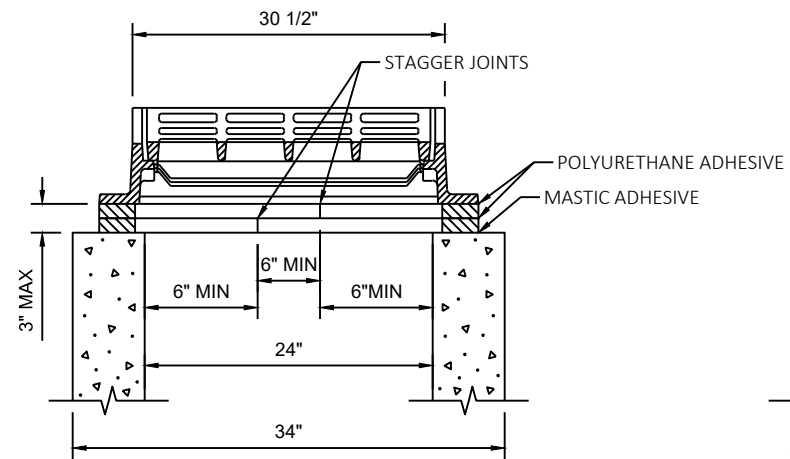
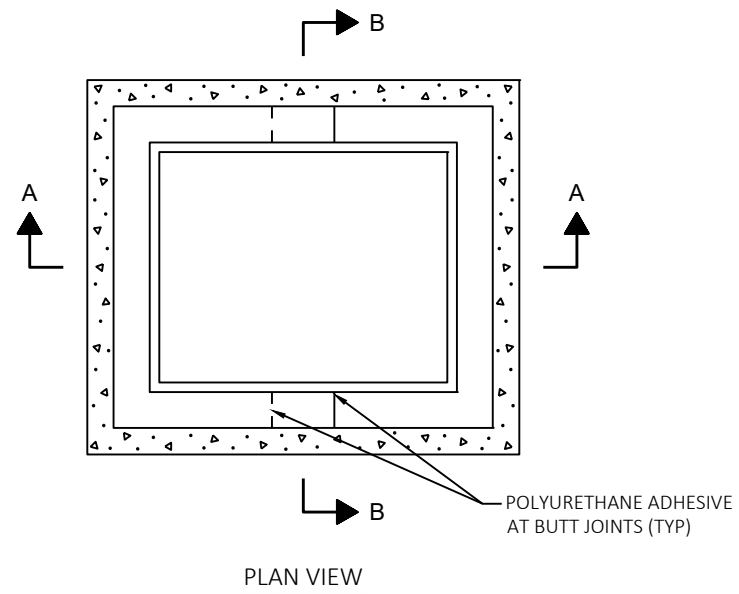
COMPLETE REPLACEMENTS AND PLACE ASPHALTIC SURFACE TO MATCH THE EXISTING SURFACE PRIOR TO THE MILL AND OVERLAY

FOR DETAILS NOT SHOWN, SEE SDD "CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES"
FOR ADDITIONAL INFORMATION.

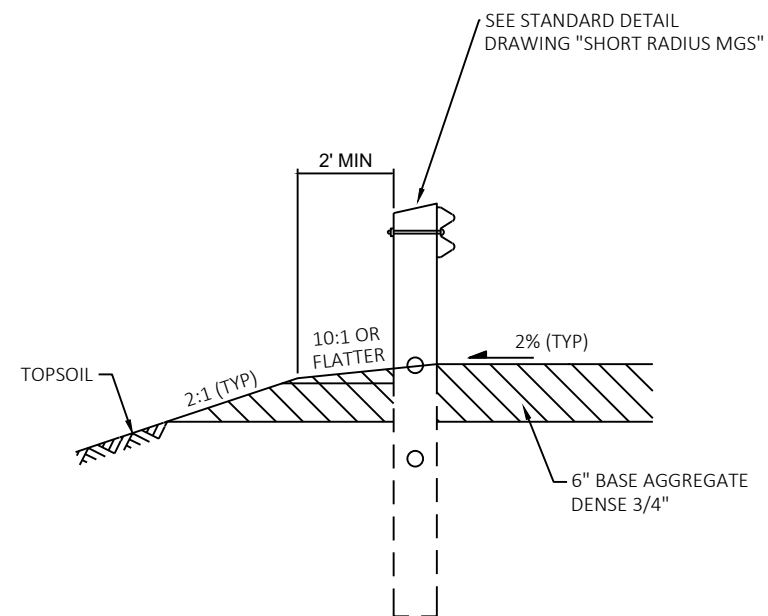
CONCRETE CURB & GUTTER REPLACEMENT DETAIL - ROUNDABOUT CENTRAL ISLAND



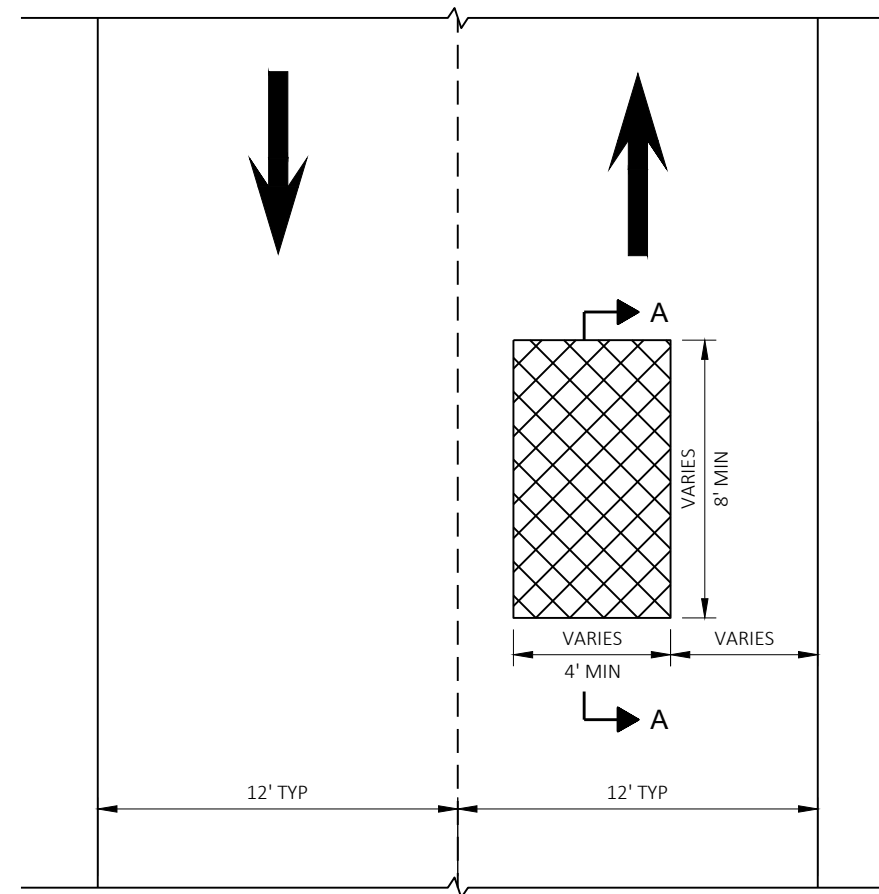
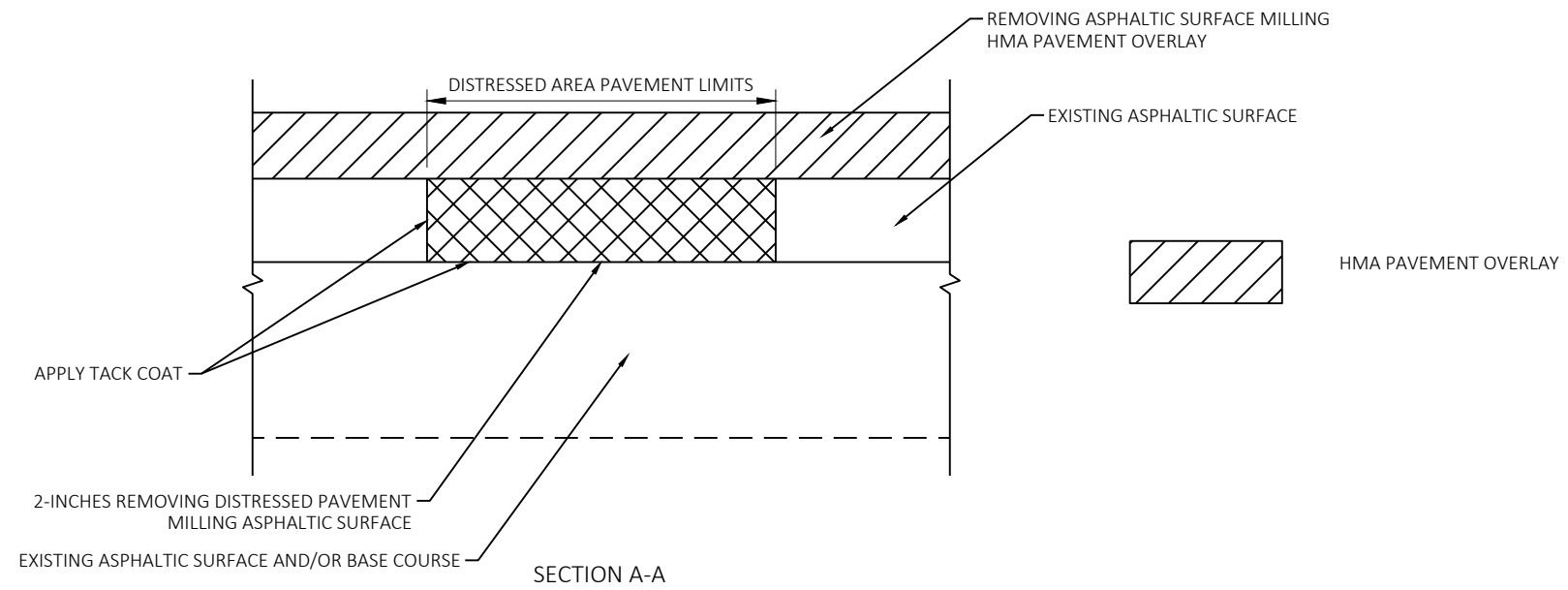
SILT FENCE TURN-AROUND DETAIL



RUBBER RING CUTTING DETAIL FOR TYPE 1 INLET



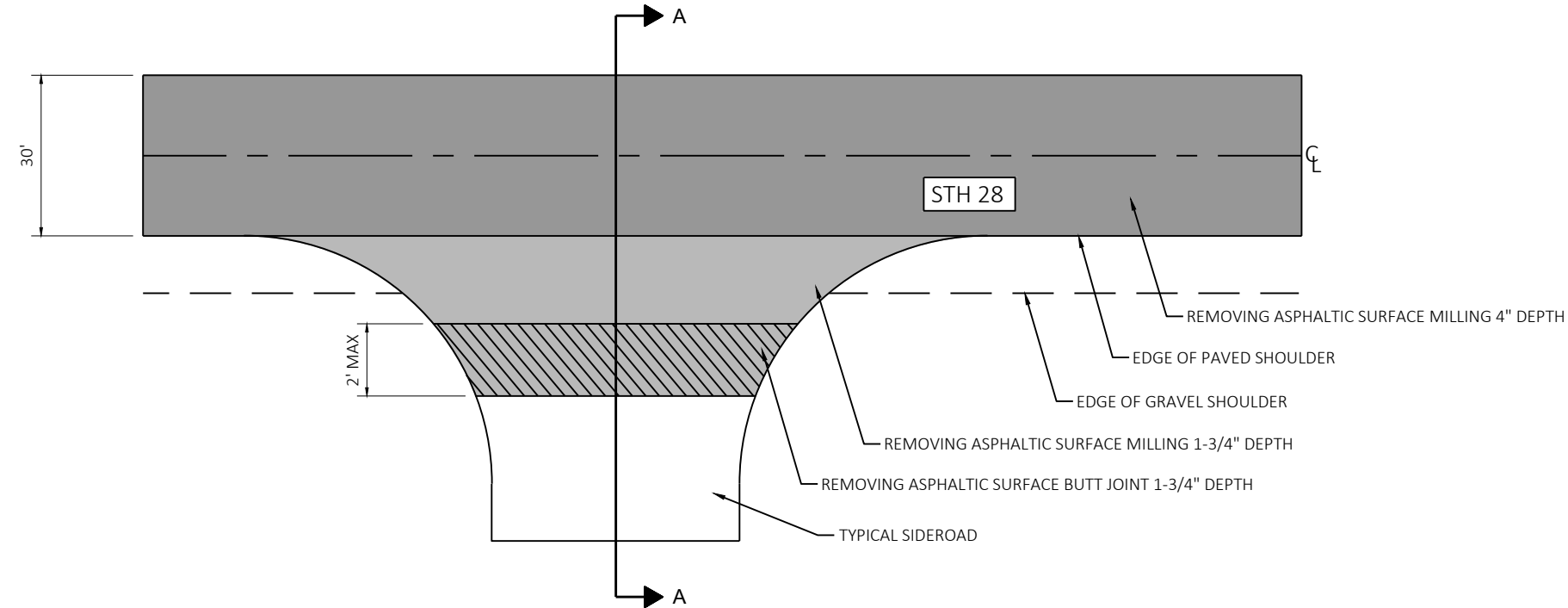
DETAIL FOR SHORT RADIUS BEAM GUARD AT STA 883+70



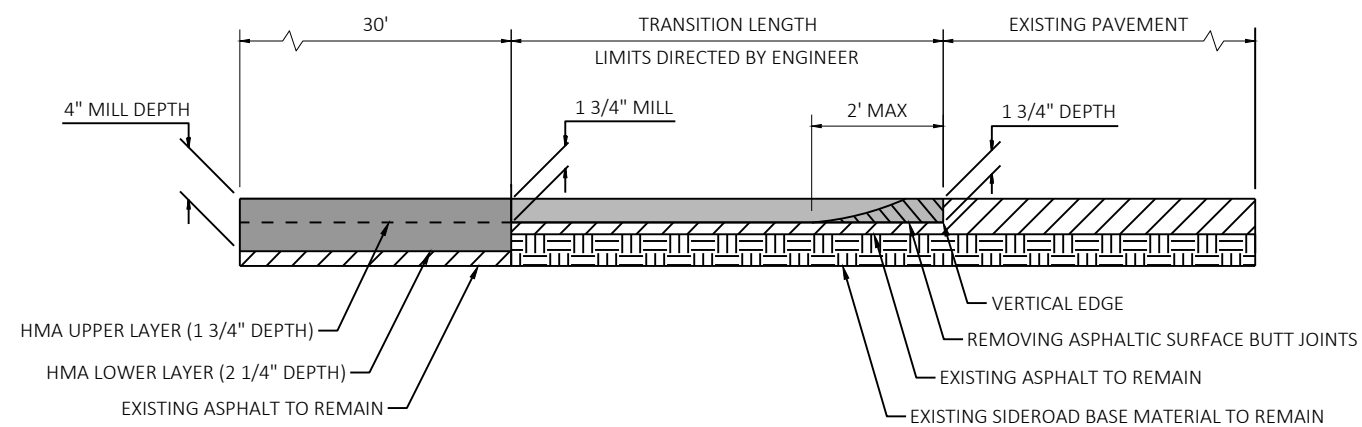
PLAN VIEW

REMOVING DISTRESSED PAVEMENT MILLING

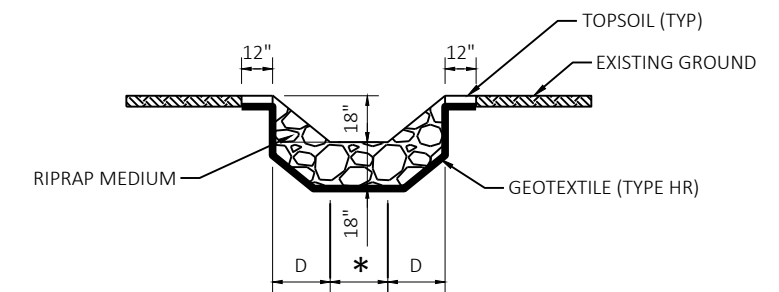
EXACT LOCATION AND LIMITS OF REMOVING DISTRESSED PAVEMENT MILLING TO BE DETERMINED BY THE ENGINEER IN THE FIELD.



PLAN VIEW

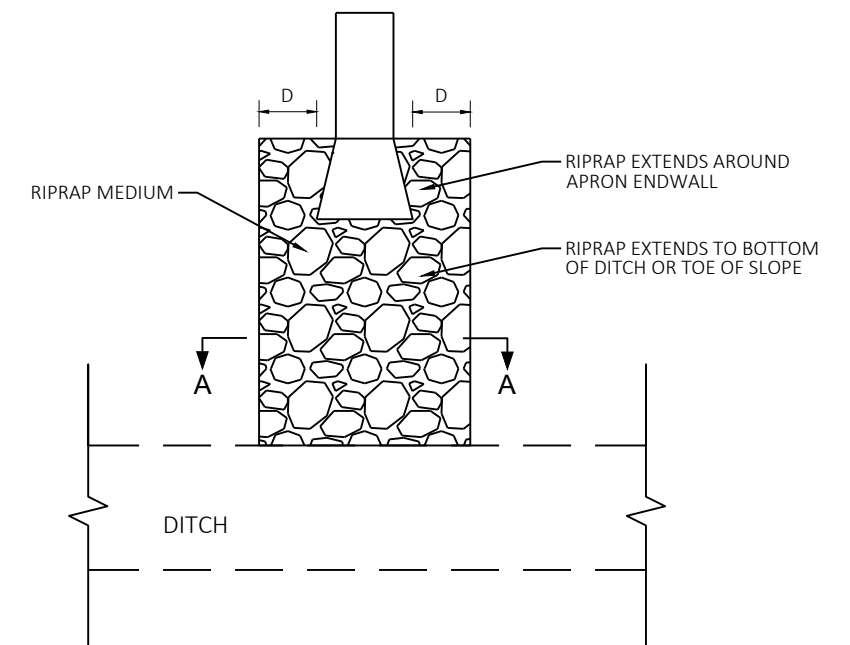


SECTION A-A

TRANSITION FROM MAINLINE MILL TO SIDEROAD MILL

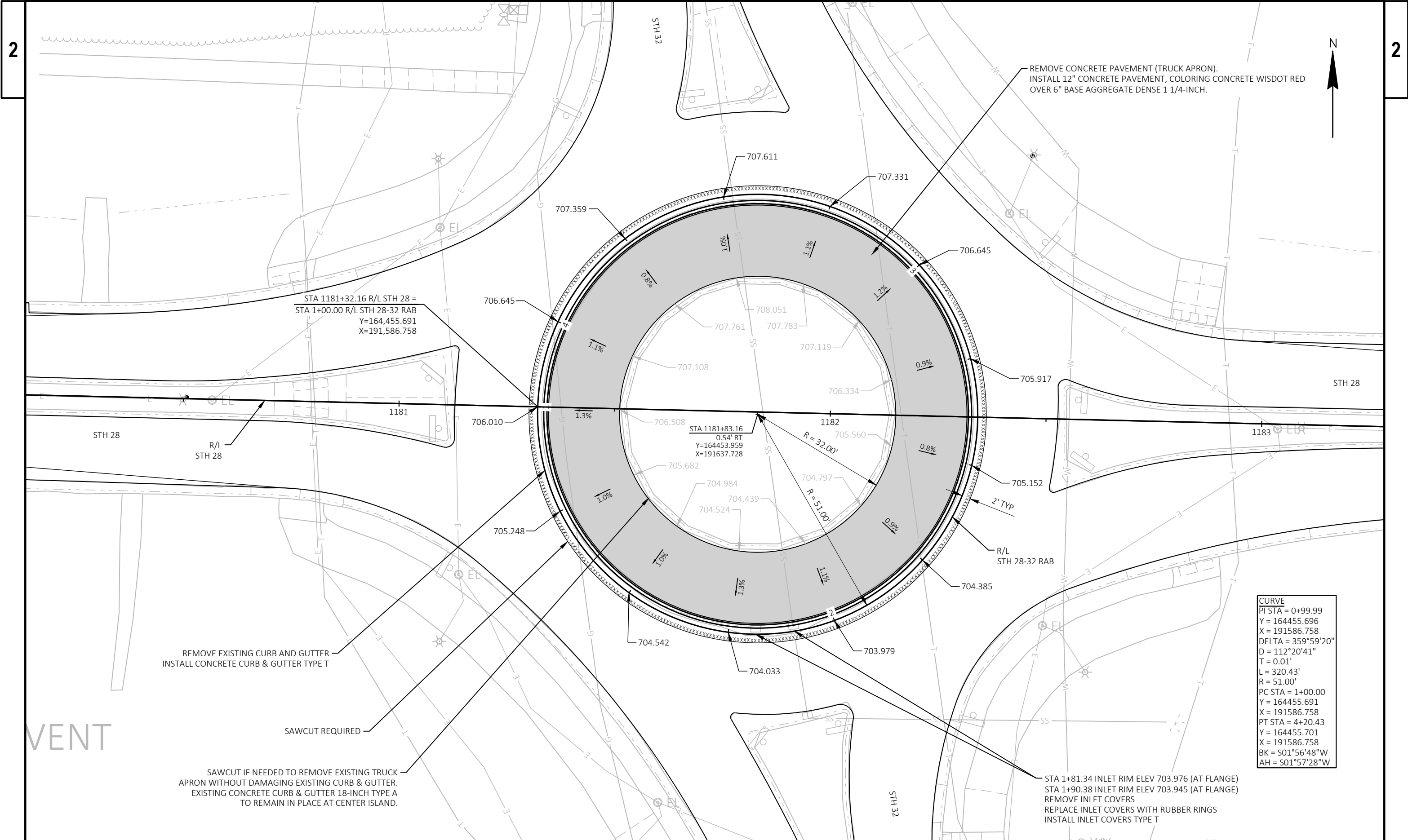
SECTION A-A

* APRON ENDWALL WIDTH
D = PIPE DIAMETER



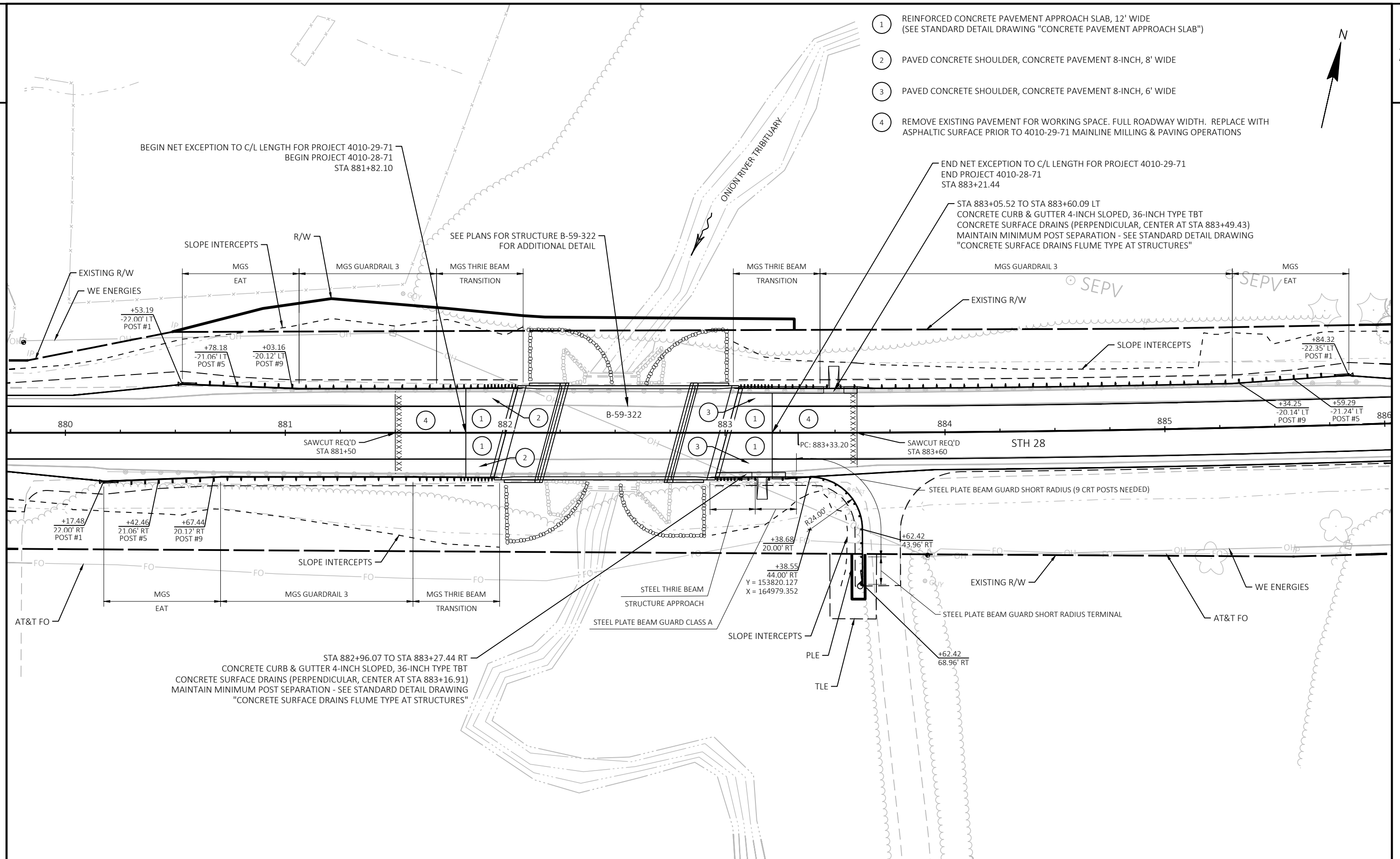
PLAN VIEW

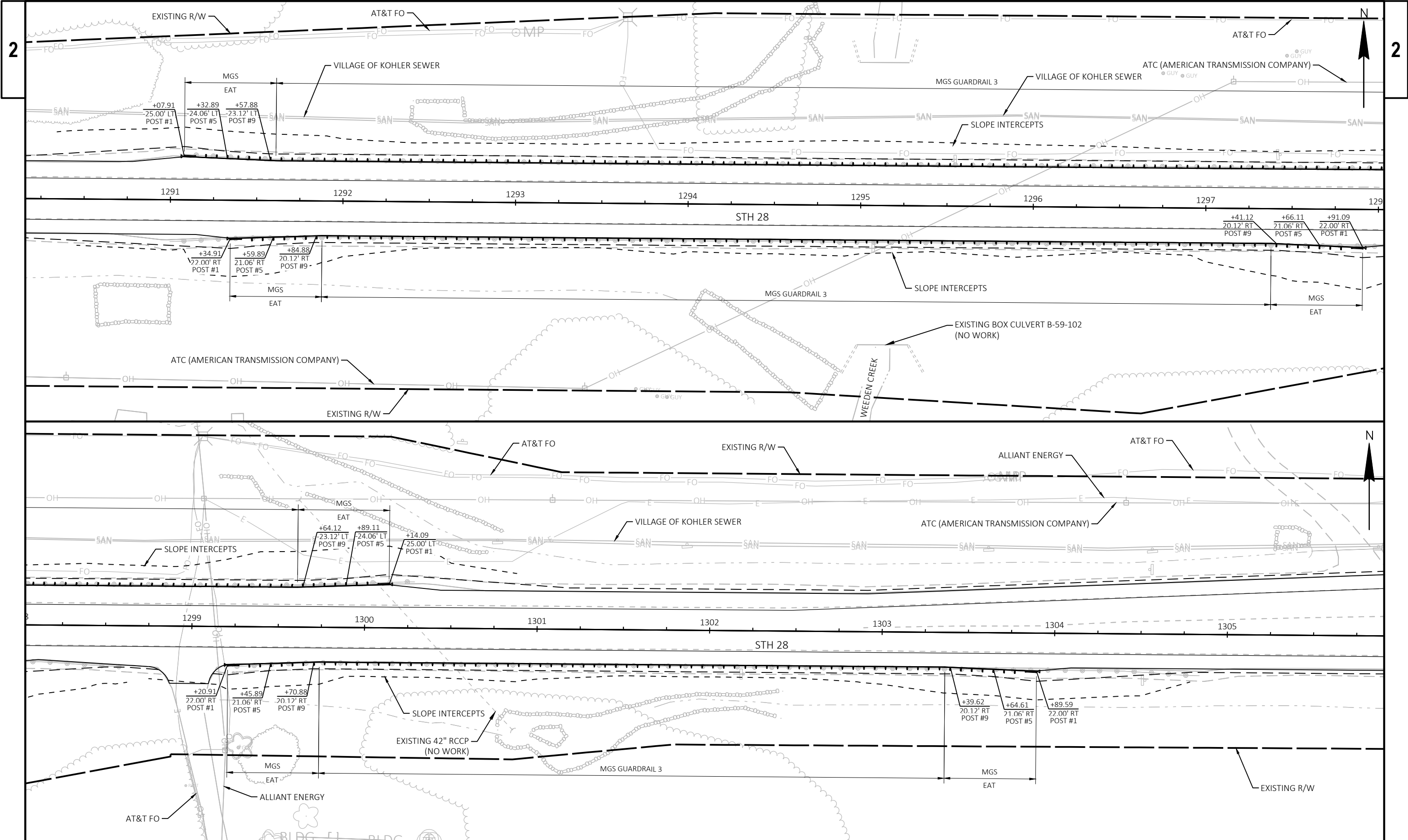
RIPRAP TREATMENT AT CULVERT OUTFALLS

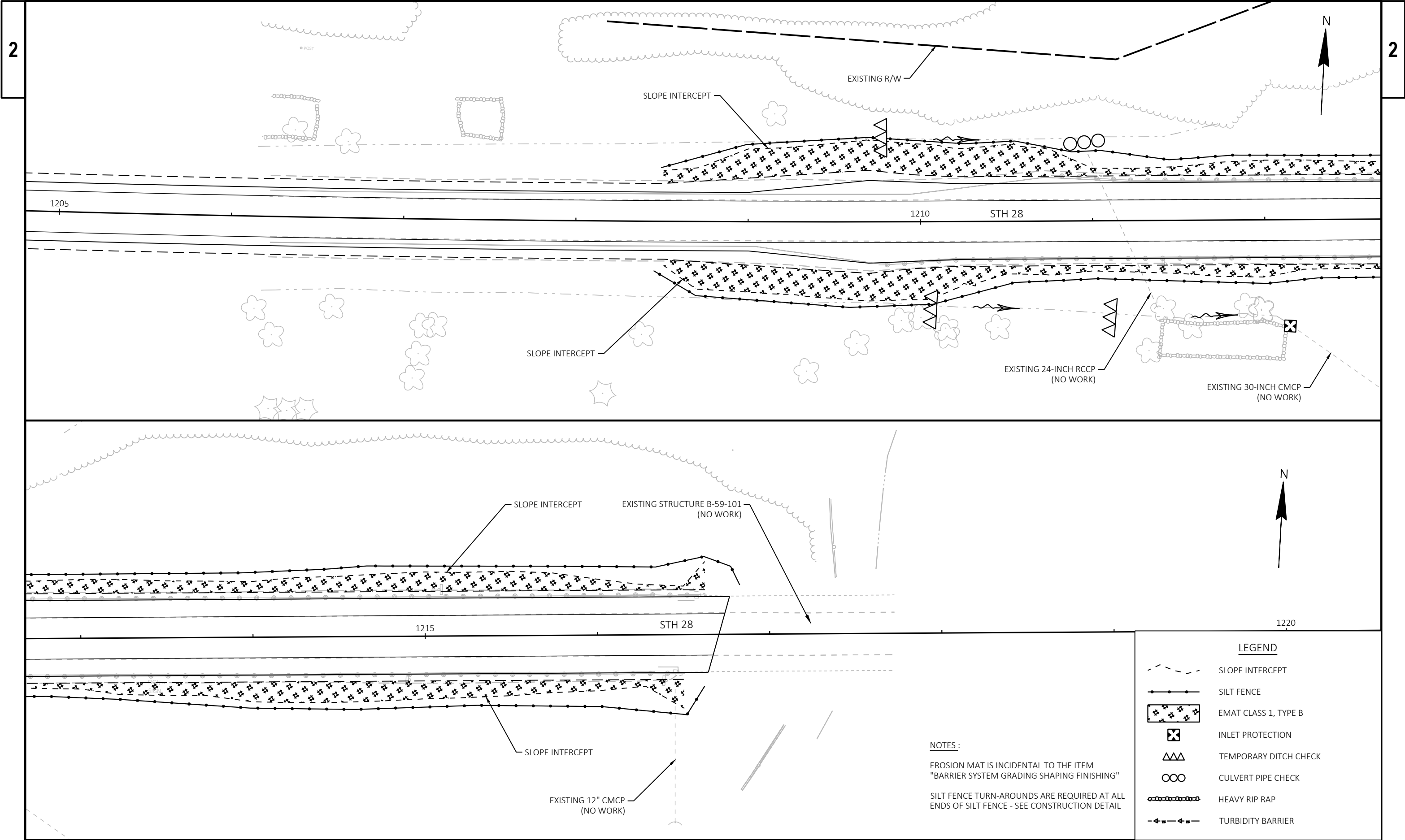


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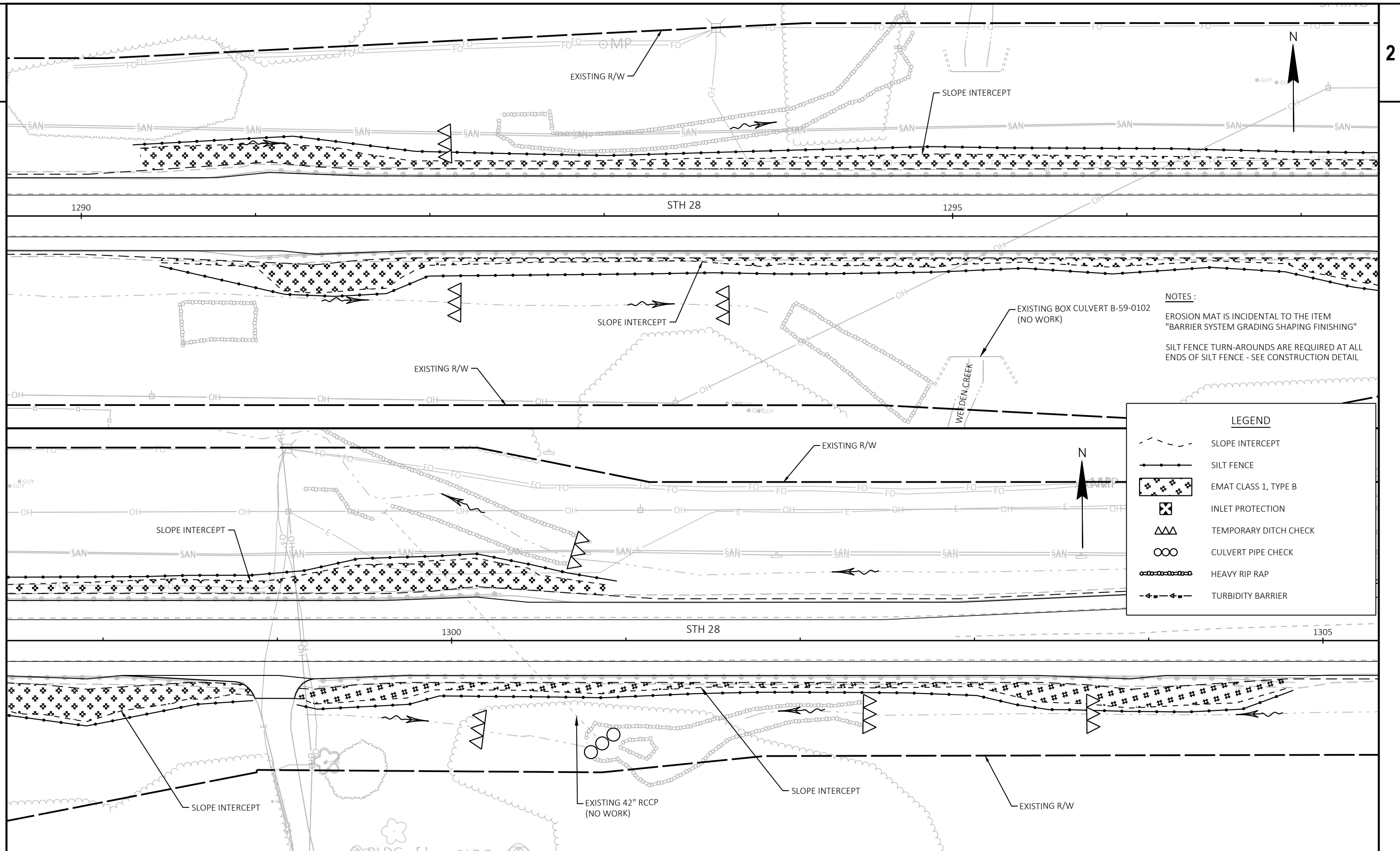
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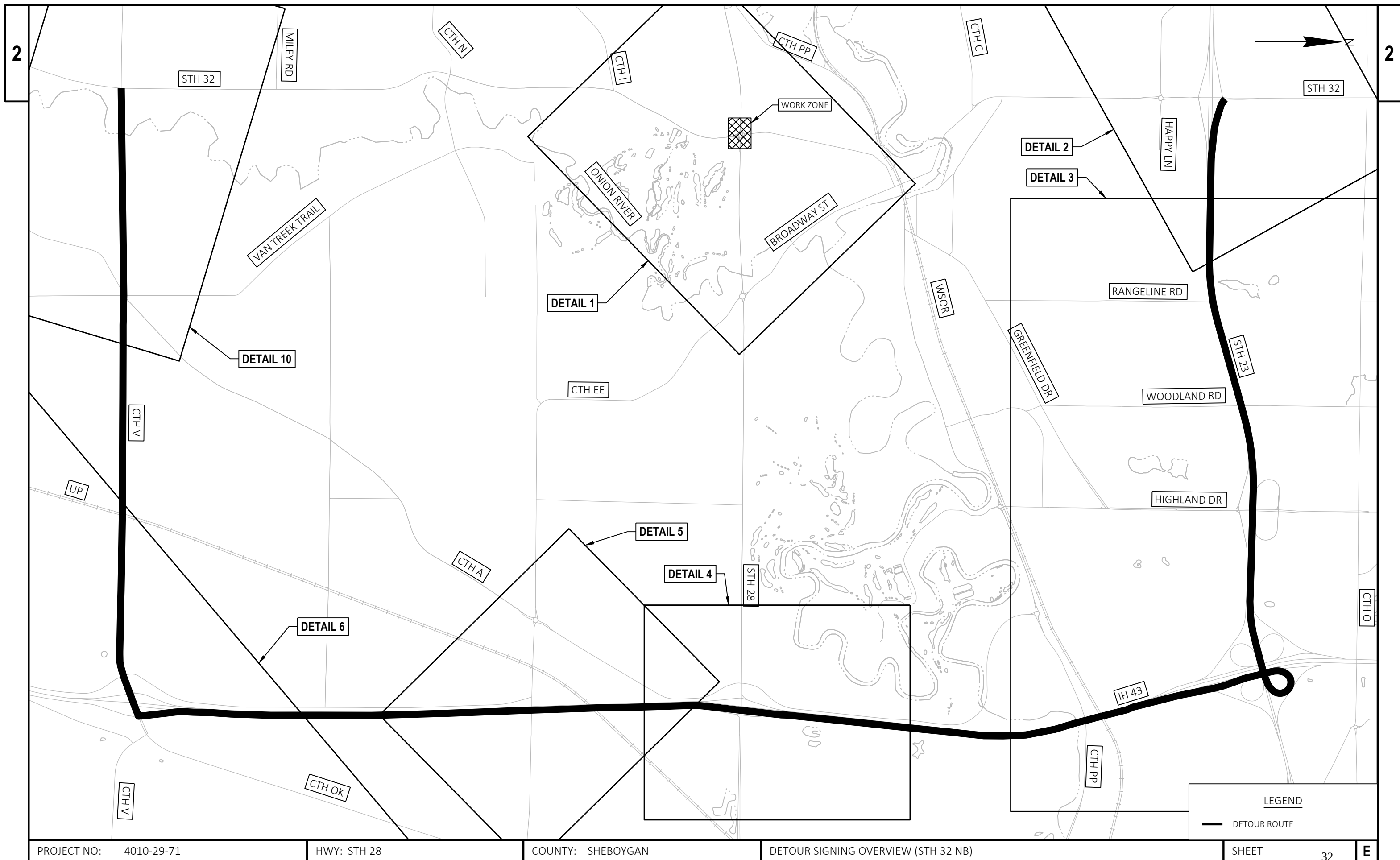


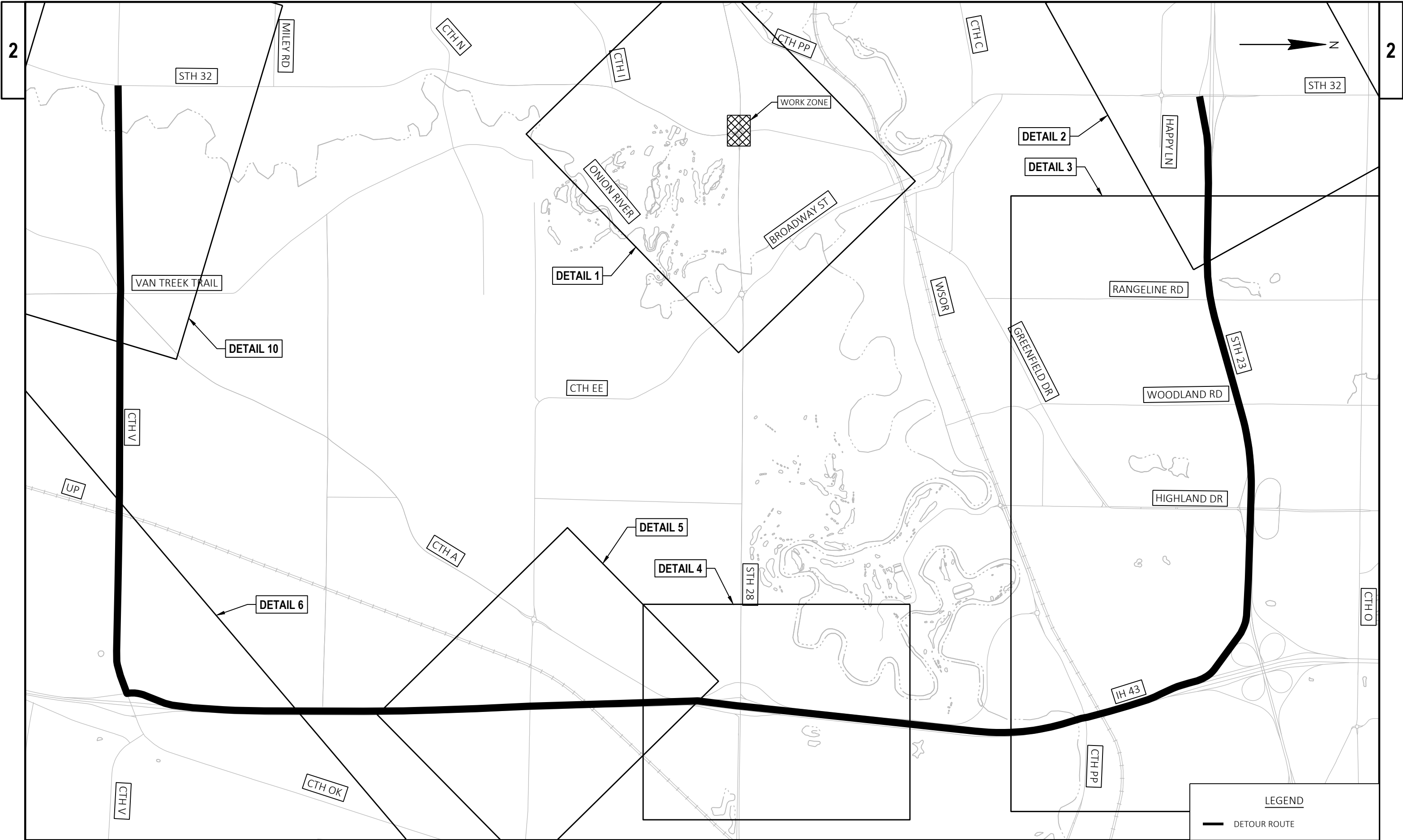
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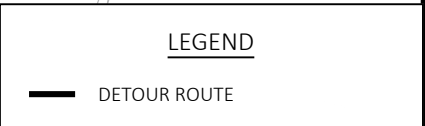


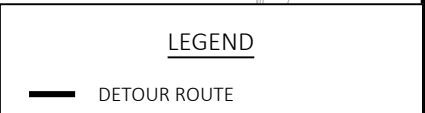
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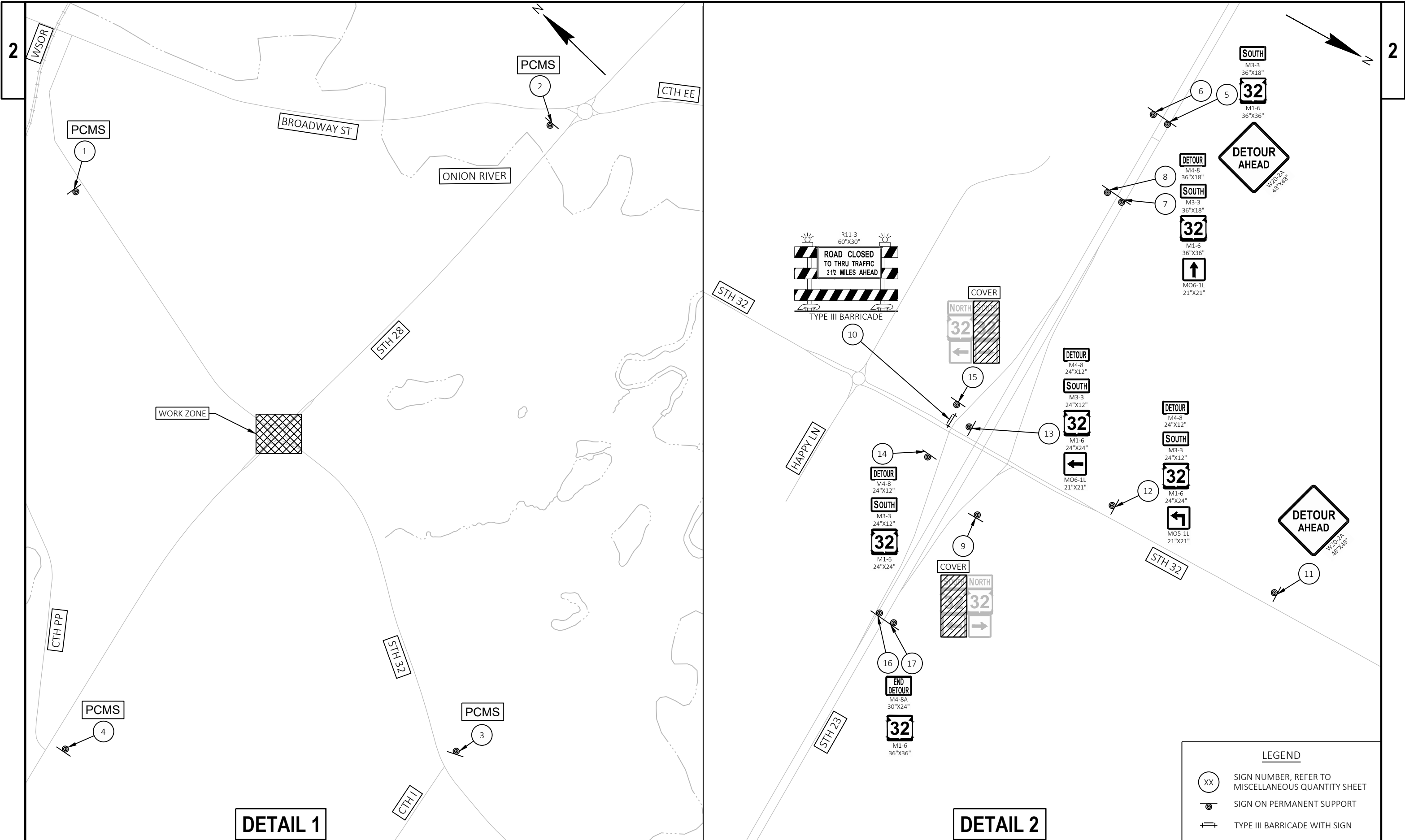
WISDOT/CADDS SHEET 44

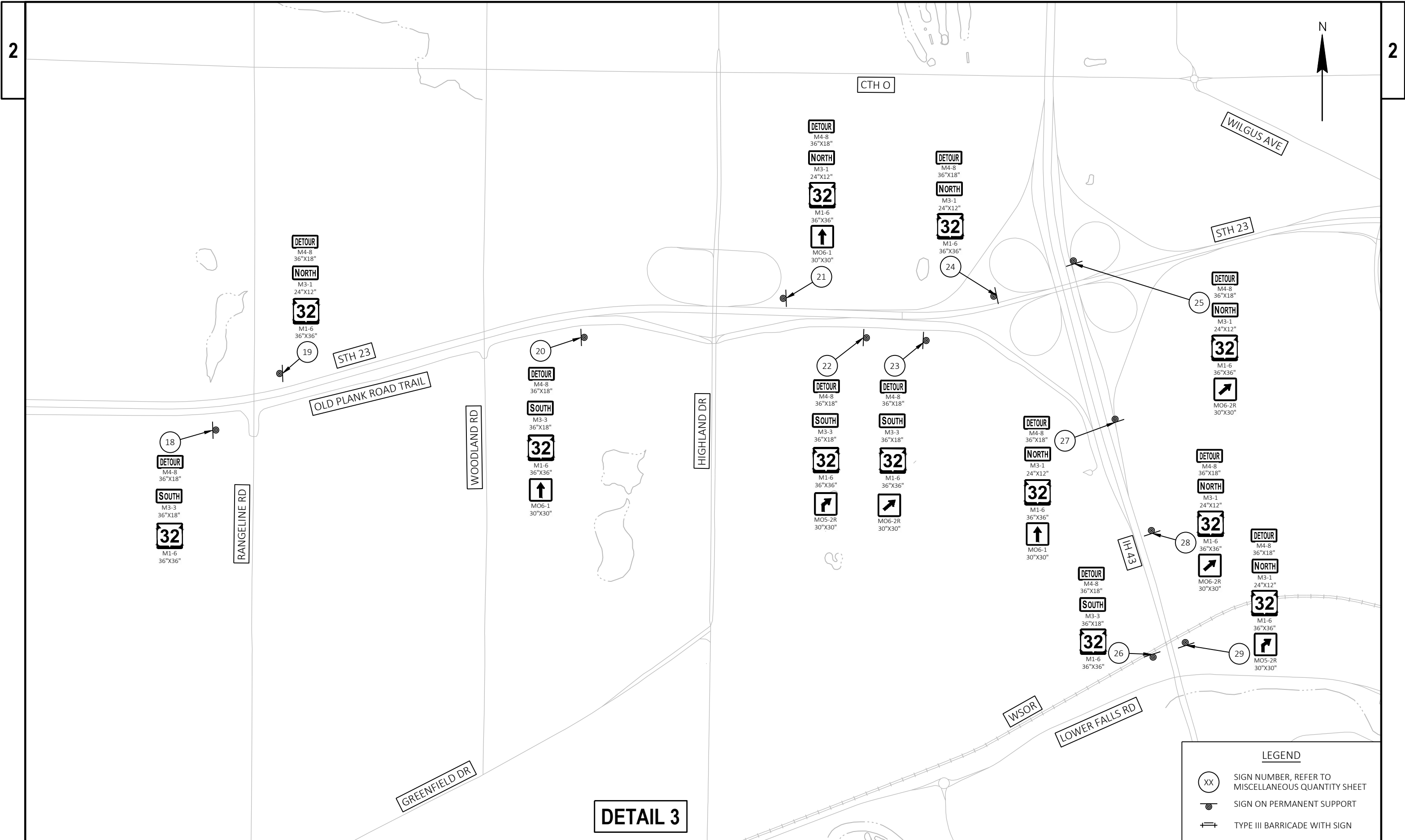


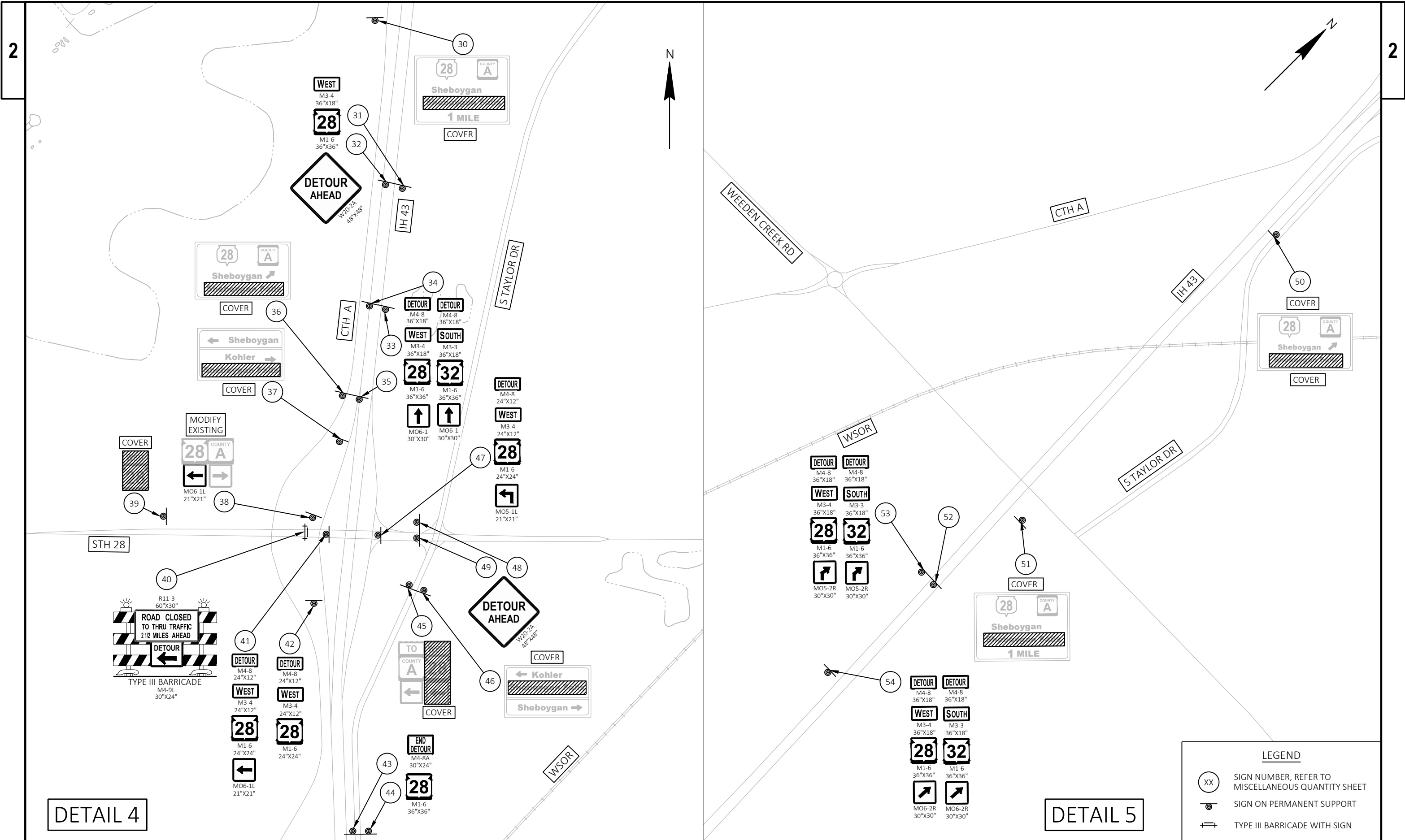


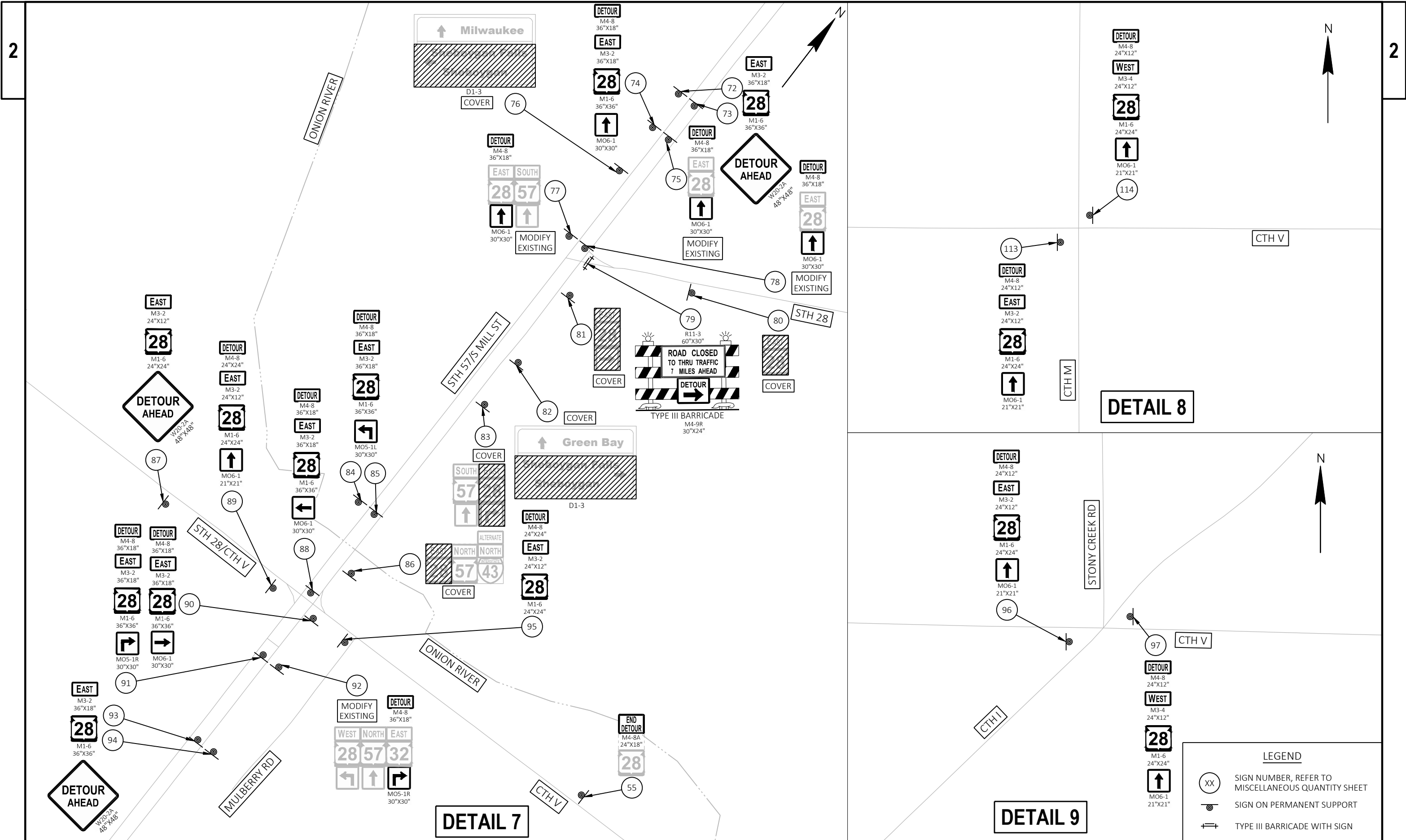




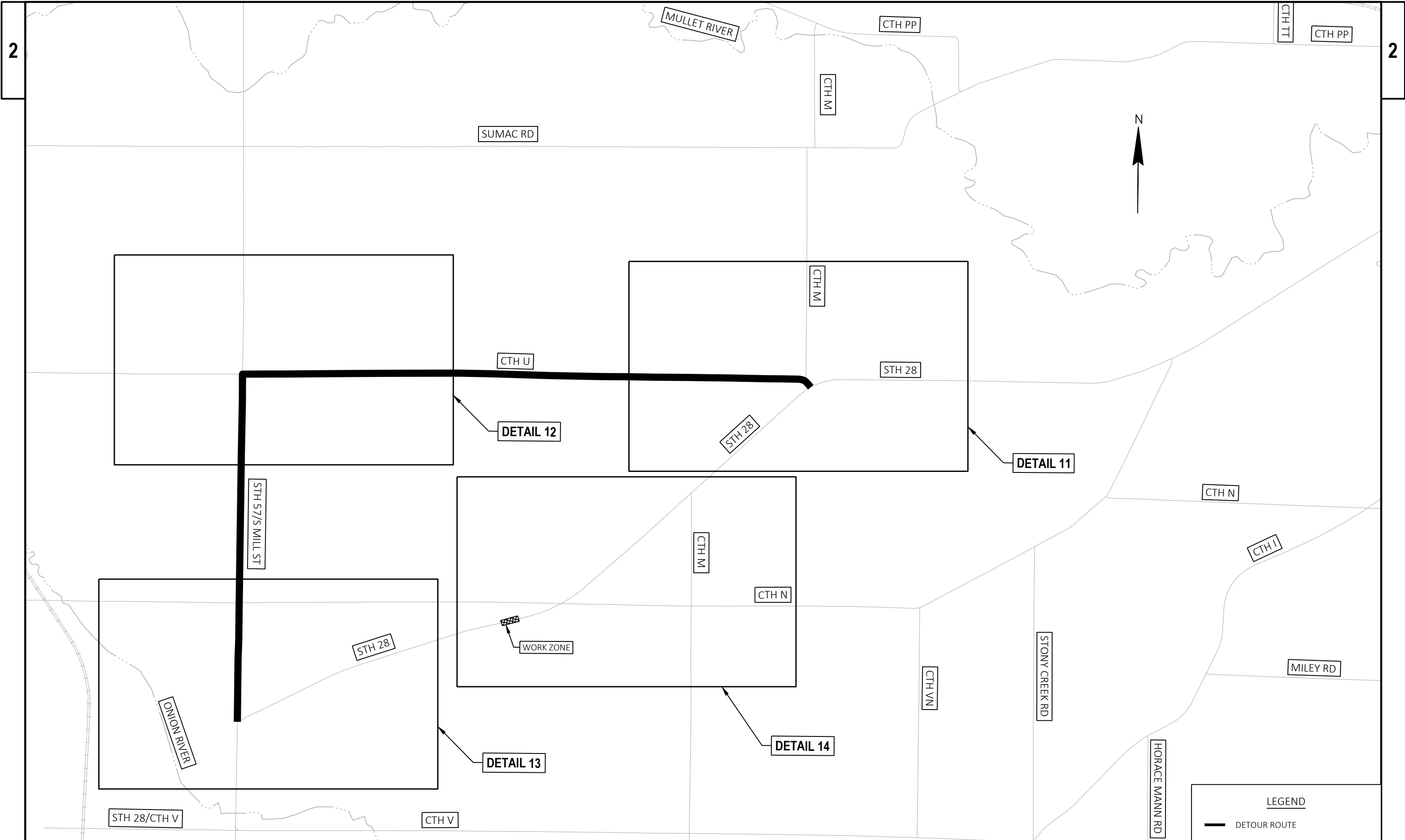


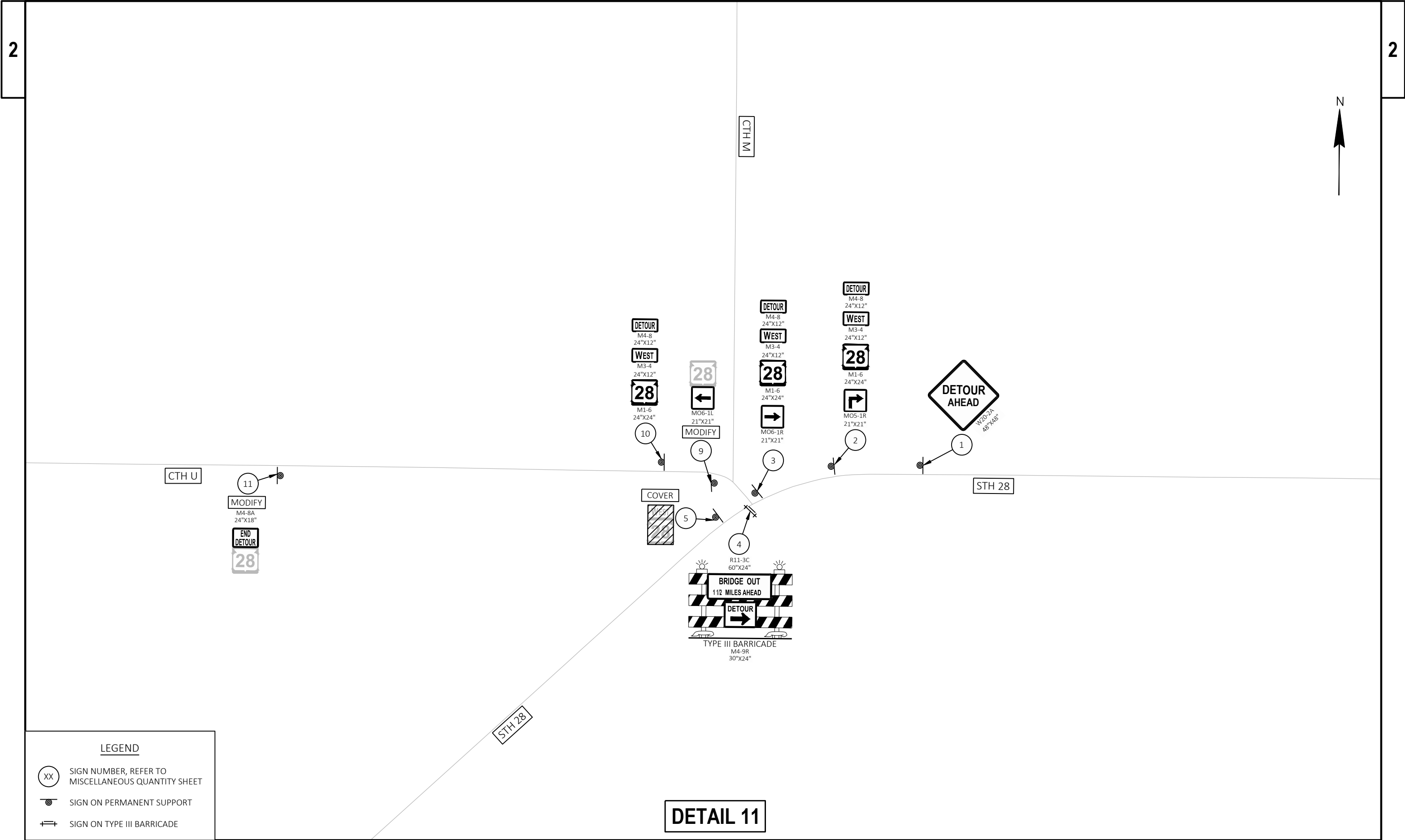










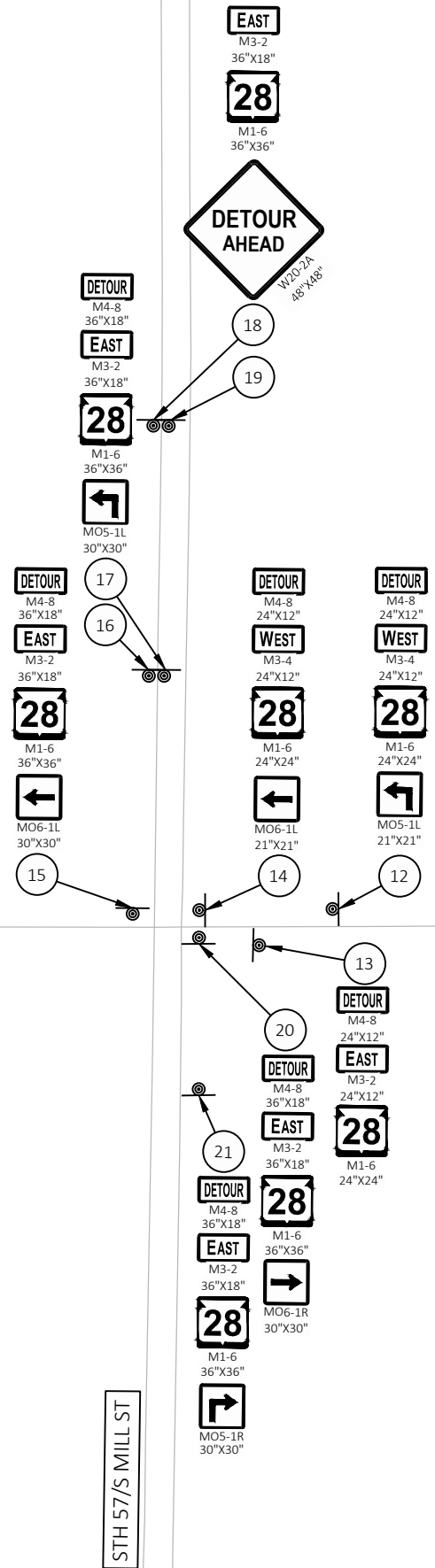


LEGEND

-  SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TYPE III BARRICADE

2

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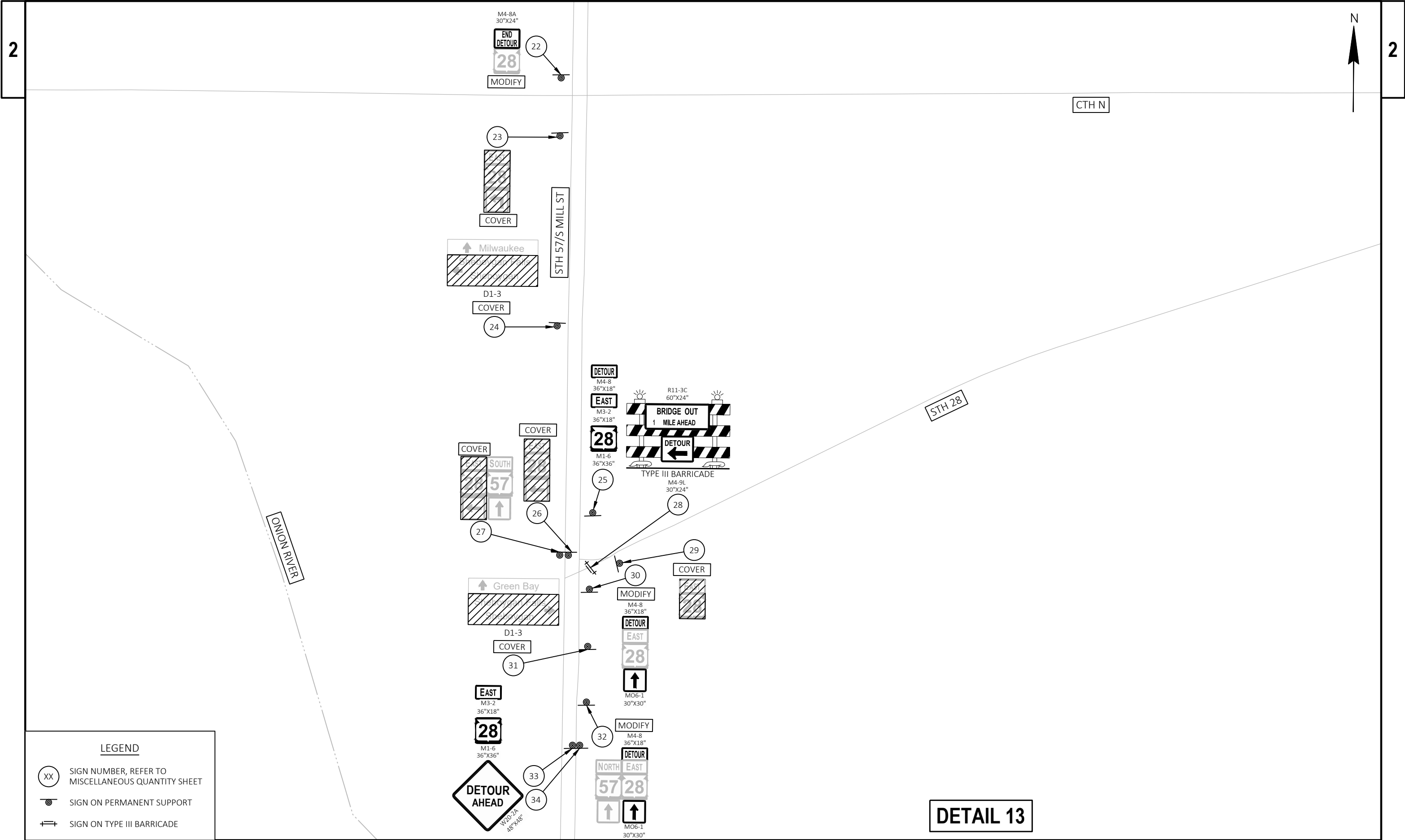


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LEGEND

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|---|--|
|  | SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET |
|  | SIGN ON PERMANENT SUPPORT |
|  | SIGN ON TYPE III BARRICADE |

DETAIL 12



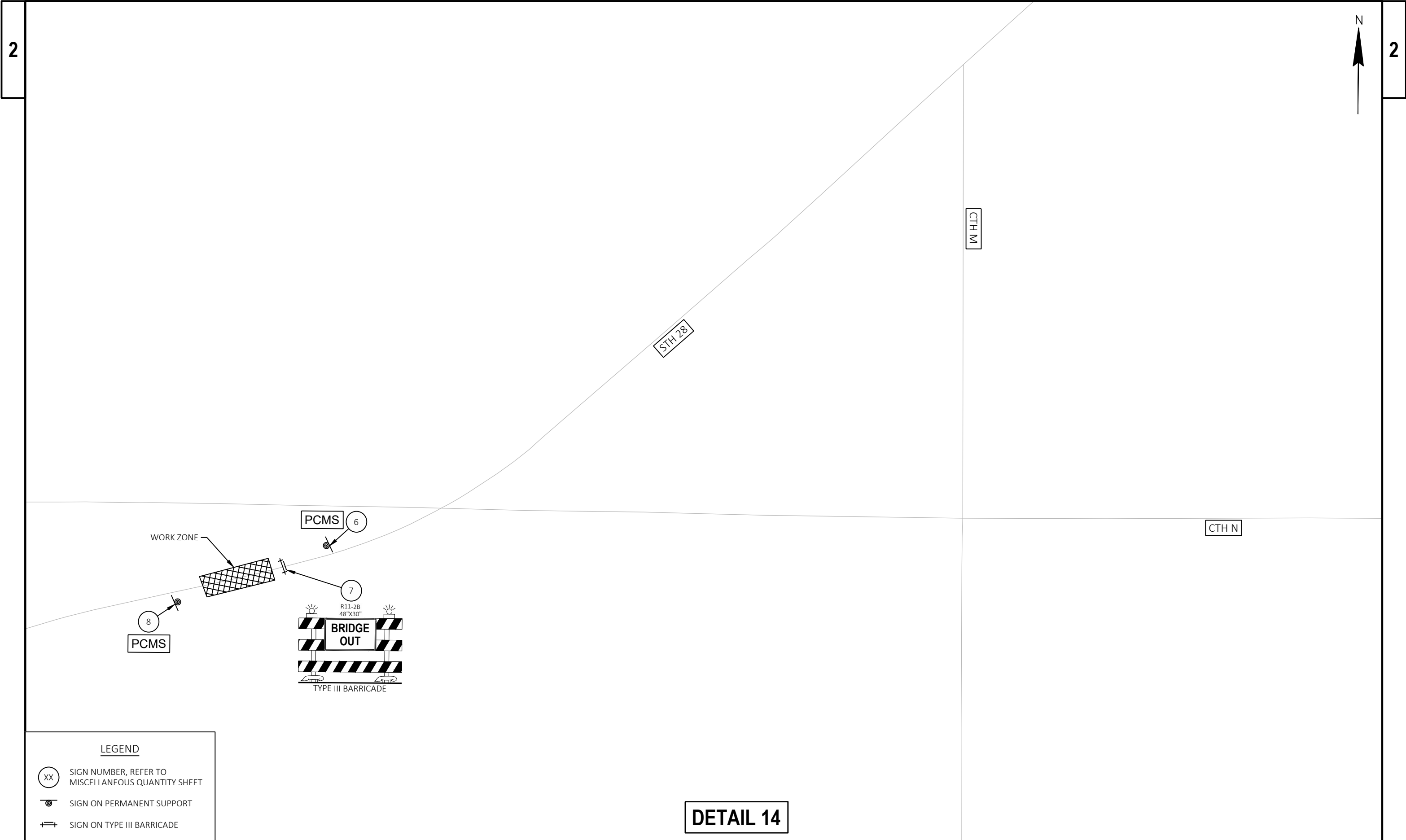
LEGEND

XX

SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET

SIGN ON PERMANENT SUPPORT

SIGN ON TYPE III BARRICADE



Estimate Of Quantities

				4010-28-71	4010-29-71
Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	7.000	7.000
0004	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. C-59-116	EACH	1.000	1.000
0006	204.0100	Removing Concrete Pavement	SY	707.000	243.000
0008	204.0110	Removing Asphaltic Surface	SY	141.000	141.000
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	136.000	136.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	174,999.000	174,999.000
0014	204.0150	Removing Curb & Gutter	LF	308.000	308.000
0016	204.0165	Removing Guardrail	LF	4,330.000	821.000
0018	204.0220	Removing Inlets	EACH	2.000	2.000
0020	205.0100	Excavation Common	CY	512.000	280.000
0022	206.1001	Excavation for Structures Bridges (structure) 01. B-59-322	EACH	1.000	1.000
0024	210.1500	Backfill Structure Type A	TON	284.000	284.000
0026	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 4010-28-71	EACH	1.000	1.000
0028	211.0101	Prepare Foundation for Asphaltic Paving (project) 02. 4010-29-71	EACH	1.000	1.000
0030	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	827.000	827.000
0032	213.0100	Finishing Roadway (project) 01. 4010-28-71	EACH	1.000	1.000
0034	213.0100	Finishing Roadway (project) 02. 4010-29-71	EACH	1.000	1.000
0036	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,236.000	2,236.000
0038	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	765.000	610.000
0040	305.0500	Shaping Shoulders	STA	931.000	931.000
0042	405.0100	Coloring Concrete WisDOT Red	CY	155.000	155.000
0044	415.0080	Concrete Pavement 8-Inch	SY	61.000	61.000
0046	415.0410	Concrete Pavement Approach Slab	SY	103.000	103.000
0048	415.2010	Concrete Truck Apron 12-inch	SY	464.000	464.000
0050	416.0610	Drilled Tie Bars	EACH	101.000	101.000
0052	450.4000	HMA Cold Weather Paving	TON	11,102.000	11,102.000
0054	455.0605	Tack Coat	GAL	23,079.000	29.000
0056	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0058	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0060	460.2000	Incentive Density HMA Pavement	DOL	1,040.000	1,040.000
0062	460.2005	Incentive Density PWL HMA Pavement	DOL	28,510.000	28,510.000
0064	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	18,060.000	18,060.000
0066	460.2010	Incentive Air Voids HMA Pavement	DOL	42,800.000	42,800.000
0068	460.6223	HMA Pavement 3 MT 58-28 S	TON	25,561.000	25,561.000
0070	460.6224	HMA Pavement 4 MT 58-28 S	TON	17,823.000	17,823.000
0072	460.6424	HMA Pavement 4 MT 58-28 H	TON	1,024.000	1,024.000
0074	465.0105	Asphaltic Surface	TON	521.000	116.000
0076	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	10.000	10.000
0078	465.0520	Asphaltic Rumble Strips, Shoulder	LF	78,071.000	78,071.000
0080	465.0560	Asphaltic Rumble Strips, Centerline	LF	40,785.000	40,785.000
0082	465.0580	Asphaltic Rumble Strips, Transverse	SY	25.000	25.000
0084	502.0100	Concrete Masonry Bridges	CY	357.000	357.000
0086	502.3200	Protective Surface Treatment	SY	473.000	473.000
0088	502.3210	Pigmented Surface Sealer	SY	100.000	100.000
0090	503.0137	Prestressed Girder Type I 36W-Inch	LF	236.000	236.000
0092	505.0400	Bar Steel Reinforcement HS Structures	LB	5,130.000	5,130.000
0094	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	46,110.000	46,110.000
0096	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	1,430.000	1,430.000
0098	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000

Estimate Of Quantities

					4010-28-71	4010-29-71
Line	Item	Item Description	Unit	Total	Qty	Qty
0100	506.4000	Steel Diaphragms (structure) 01. B-59-322	EACH	3.000	3.000	
0102	516.0500	Rubberized Membrane Waterproofing	SY	25.000	25.000	
0104	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	324.000	324.000	
0106	601.0583	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type T	LF	312.000		312.000
0108	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	86.000	86.000	
0110	602.3010	Concrete Surface Drains	CY	3.000	3.000	
0112	606.0200	Riprap Medium	CY	35.000	15.000	20.000
0114	606.0300	Riprap Heavy	CY	433.000	433.000	
0116	611.0652	Inlet Covers Type T	EACH	2.000		2.000
0118	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	210.000	210.000	
0120	614.0010	Barrier System Grading Shaping Finishing	EACH	12.000	4.000	8.000
0122	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000	
0124	614.0200	Steel Thrie Beam Structure Approach	LF	21.000	21.000	
0126	614.0305	Steel Plate Beam Guard Class A	LF	19.000	19.000	
0128	614.0345	Steel Plate Beam Guard Short Radius	LF	56.000	56.000	
0130	614.0390	Steel Plate Beam Guard Short Radius Terminal	EACH	1.000	1.000	
0132	614.2300	MGS Guardrail 3	LF	3,238.000	338.000	2,900.000
0134	614.2500	MGS Thrie Beam Transition	LF	195.000	117.000	78.000
0136	614.2610	MGS Guardrail Terminal EAT	EACH	11.000	3.000	8.000
0138	618.0100	Maintenance and Repair of Haul Roads (project) 01. 4010-28-71	EACH	1.000	1.000	
0140	618.0100	Maintenance and Repair of Haul Roads (project) 02. 4010-29-71	EACH	1.000		1.000
0142	619.1000	Mobilization	EACH	1.000	0.250	0.750
0144	624.0100	Water	MGAL	40.600	5.100	35.500
0146	628.1504	Silt Fence	LF	6,852.000	1,514.000	5,338.000
0148	628.1520	Silt Fence Maintenance	LF	6,852.000	1,514.000	5,338.000
0150	628.1905	Mobilizations Erosion Control	EACH	6.000	3.000	3.000
0152	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	1.000	1.000
0154	628.6005	Turbidity Barriers	SY	169.000	169.000	
0156	628.7005	Inlet Protection Type A	EACH	1.000		1.000
0158	628.7504	Temporary Ditch Checks	LF	340.000	150.000	190.000
0160	628.7555	Culvert Pipe Checks	EACH	12.000		12.000
0162	642.5001	Field Office Type B	EACH	1.000	0.250	0.750
0164	643.0300	Traffic Control Drums	DAY	5,355.000		5,355.000
0166	643.0420	Traffic Control Barricades Type III	DAY	859.000	680.000	179.000
0168	643.0705	Traffic Control Warning Lights Type A	DAY	1,411.000	1,088.000	323.000
0170	643.0900	Traffic Control Signs	DAY	14,097.000	4,896.000	9,201.000
0172	643.0910	Traffic Control Covering Signs Type I	EACH	4.000		4.000
0174	643.0920	Traffic Control Covering Signs Type II	EACH	20.000	7.000	13.000
0176	643.1000	Traffic Control Signs Fixed Message	SF	120.000		120.000
0178	643.1050	Traffic Control Signs PCMS	DAY	56.000	14.000	42.000
0180	643.3165	Temporary Marking Line Paint 6-Inch	LF	498,039.000		498,039.000
0182	643.5000	Traffic Control	EACH	1.000	0.250	0.750
0184	645.0111	Geotextile Type DF Schedule A	SY	78.000	78.000	
0186	645.0120	Geotextile Type HR	SY	817.000	763.000	54.000
0188	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	147,798.000		147,798.000
0190	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	897.000		897.000
0192	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	125.000		125.000
0194	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	36,950.000		36,950.000
0196	646.7120	Marking Diagonal Epoxy 12-Inch	LF	424.000		424.000

Estimate Of Quantities

				4010-28-71	4010-29-71
Line	Item	Item Description	Unit	Total	Qty
0198	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	286.000	286.000
0200	646.8120	Marking Curb Epoxy	LF	54.000	54.000
0202	646.8220	Marking Island Nose Epoxy	EACH	5.000	5.000
0204	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	398.000	86.000 312.000
0206	650.6501	Construction Staking Structure Layout (structure) 01. B-59-322	EACH	1.000	1.000
0208	650.8000	Construction Staking Resurfacing Reference	LF	47,061.000	47,061.000
0210	650.9911	Construction Staking Supplemental Control (project) 01. 4010-28-71	EACH	1.000	1.000
0212	650.9911	Construction Staking Supplemental Control (project) 02. 4010-29-71	EACH	1.000	1.000
0214	690.0150	Sawing Asphalt	LF	387.000	31.000 356.000
0216	690.0250	Sawing Concrete	LF	241.000	40.000 201.000
0218	715.0502	Incentive Strength Concrete Structures	DOL	2,142.000	2,142.000
0220	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	300.000	150.000 150.000
0222	740.0440	Incentive IRI Ride	DOL	71,200.000	71,200.000
0224	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	7,200.000	7,200.000
0226	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	12,600.000	12,600.000
0228	SPV.0060	Special 01. Adjusting Inlet Covers with Rubber Rings	EACH	2.000	2.000
0230	SPV.0180	Special 01. Removing Distressed Asphaltic Surface Milling	SY	3,036.000	3,036.000

GRUBBING SUMMARY

					201.0205	REMARKS
CATEGORY	STATION	TO	STATION	LOCATION	GRUBBING STA	
0010	880+00	-	883+60	STH 28 RT	4	CLEARING COMPLETED BY OTHERS
0010	881+60	-	883+60	STH 28 LT	3	CLEARING COMPLETED BY OTHERS
PROJECT 4010-28-71					7	

REMOVING ASPHALTIC SURFACE

*									
					204.0110	204.0115	204.0120		
					REMOVING ASPHALTIC SURFACE	REMOVING ASPHALTIC SURFACE BUTT JOINTS	REMOVING ASPHALTIC SURFACE MILLING		
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	SY	REMARKS	
0010	825+90	-	881+82	STH 28	-	-	18,910	BEGIN PROJECT - STRUCTURE B-59-322	
0010	883+21	-	1177+57	STH 28	-	-	106,039	B-59-322 STRUCTURE - STH 28/32 ROUNDABOUT	
0010	1177+57	-	1186+09	STH 28 & STH 32	-	-	4,329	STH 28/STH 32 ROUNDABOUT	
0010	1186+09	-	1216+71	STH 28	-	-	11,408	STH 28/32 ROUNDABOUT - ONION RIVER BRIDGE	
0010	1232+38	-	1312+20	STH 28	-	-	34,313	1232+52.63 - END PROJECT	
0010	825+90	-	825+92	STH 28	-	7	-	BEGIN PROJECT LIMITS BUTT JOINT	
0010	827+74	-	827+98	STH 28 & HIGH ST	-	5	-	(STH 28 RT) SIDE ROAD BUTT JOINT	
0010	881+80	-	881+82	STH 28	-	9	-	B-59-322 APPROACH SLAB BUTT JOINT	
0010	883+21	-	883+23	STH 28	-	8	-	B-59-322 APPROACH SLAB BUTT JOINT	
0010	894+89	-	895+03	STH 28 & CTH N	-	6	-	(STH 28 LT) SIDE ROAD BUTT JOINT	
0010	897+68	-	897+81	STH 28 & CTH N	-	5	-	(STH 28 RT) SIDE ROAD BUTT JOINT	
0010	934+84	-	935+01	STH 28 & CTH M	-	5	-	(STH 28 RT) SIDE ROAD BUTT JOINT	
0010	972+74	-	973+03	STH 28 & CTH M	-	7	-	(STH 28 LT) SIDE ROAD BUTT JOINT	
0010	1057+65	-	1057+90	STH 28 & HUMPHREY RD	-	6	-	(STH 28 RT) SIDE ROAD BUTT JOINT	
0010	1115+72	-	1115+99	STH 28 & BRUSSE RD	-	6	-	(STH 28 RT) SIDE ROAD BUTT JOINT	
0010	1145+77	-	1146+00	STH 28 & CTH PPP	-	8	-	(STH 28 LT) SIDE ROAD BUTT JOINT	
0010	1181+39	-	1181+72	STH 28 & STH 32	-	7	-	(STH 28 LT) INTERSECTION BUTT JOINT	
0010	1182+06	-	1182+45	STH 28 & STH 32	-	9	-	(STH 28 RT) INTERSECTION BUTT JOINT	
0010	1216+69	-	1216+71	STH 28	-	10	-	ONION RIVER BRIDGE BUTT JOINT	
0010	1232+38	-	1232+40	STH 28	-	8	-	1232+38.42 MATCH IN BUTT JOINT	
0010	1248+57	-	1248+93	STH 28 & PARADISE LANE	-	8	-	(STH 28 RT) SIDE ROAD BUTT JOINT	
0010	1276+74	-	1277+00	STH 28 & PRANGE RD	-	6	-	(STH 28 RT) SIDE ROAD BUTT JOINT	
0010	1298+76	-	1299+21	STH 28 DRIVEWAY RT	33	-	-	DRIVEWAY REPLACEMENT	
0010	1312+18	-	1312+20	STH 28	-	7	-	(STH 28 LT) WB END PROJECT LIMIT	
0010	1312+18	-	1312+20	STH 28	-	9	-	(STH 28 RT) EB END PORJECT UMIT	
PROJECT 4010-29-71					33	136	174,999		

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ROUNDABOUT WORK SUMMARY

					*	*		*	*		*	*		*	*	*		*		
				204.0100 REMOVING CONCRETE PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0150 REMOVING CURB & GUTTER LF	204.0220 REMOVING INLETS EACH	205.0100 EXCAVATION COMMON CY	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	405.0100 COLORING CONCRETE WISDOT RED CY	415.2010 CONCRETE TRUCK APRON 12-INCH SY	416.0610 DRILLED TIE BARS EACH	601.0583 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE T LF	611.0652 INLET COVERS TYPE T EACH	624.0100 WATER MGAL	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	SPV.0060.01 ADJUSTING INLET COVERS WITH RUBBER RINGS EACH		
CATEGORY	STATION	TO	STATION	LOCATION															REMARKS	
0010	1181+51	-	1182+15	STH 28 & STH 32 ROUNDABOUT	464	-	-	-	232	155	155	464	101	-	-	2.3	-	201	-	TRUCK APRON
0010	1181+30	-	1182+36	STH 28 & STH 32 ROUNDABOUT	-	108	308	2	-	-	-	-	-	312	2	-	333	-	2	ROADWAY
PROJECT 4010-29-71					464	108	308	2	232	155	155	464	101	312	2	2.3	333	201	2	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING GUARDRAIL

204.0165 REMOVING GUARDRAIL						
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	1209+76	-	1216+51	STH 28 RT	675	STRUCTURE B-59-101
0010	1210+76	-	1216+63	STH 28 LT	588	STRUCTURE B-59-101
0010	1291+00	-	1298+61	STH 28 RT	761	STRUCTURE B-59-102
0010	1299+23	-	1304+84	STH 28 LT	561	STRUCTURE B-59-102
0010	1291+05	-	1300+29	STH 28 RT	924	STRUCTURE B-59-102

PROJECT 4010-29-71 3,509

0010	880+19	-	883+36	STH 28 RT	317	STRUCTURE B-59-322
0010	880+85	-	885+90	STH 28 LT	504	STRUCTURE B-59-322

PROJECT 4010-28-71 821

PREPARE FOUNDATION SHOULDER

211.0400
PREPARE
FOUNDATION FOR
ASPHALTIC
SHOULDERS

CATEGORY	STATION	TO	STATION	LOCATION	STA
0010	825+90	-	881+82	STH 28 LT	57
0010	883+21	-	894+08	STH 28 LT	12
0010	899+40	-	971+96	STH 28 LT	73
0010	975+54	-	985+02	STH 28 LT	11
0010	986+27	-	1039+36	STH 28 LT	54
0010	1041+86	-	1057+57	STH 28 LT	17
0010	1059+56	-	1063+38	STH 28 LT	5
0010	1065+36	-	1074+92	STH 28 LT	10
0010	1080+64	-	1143+81	STH 28 LT	64
0010	1150+24	-	1176+56	STH 28 LT	27
0010	1187+29	-	1216+77	STH 28 LT	30
0010	1232+38	-	1276+53	STH 28 LT	45
0010	1290+70	-	1300+70	STH 28 LT	11
0010	825+90	-	827+46	STH 28 RT	3
0010	828+37	-	881+82	STH 28 RT	54
0010	883+21	-	893+64	STH 28 RT	11
0010	897+99	-	932+57	STH 28 RT	36
0010	936+86	-	969+64	STH 28 RT	34
0010	976+58	-	997+98	STH 28 RT	22
0010	1001+65	-	1016+91	STH 28 RT	16
0010	1019+06	-	1043+85	STH 28 RT	25
0010	1046+32	-	1054+04	STH 28 RT	9
0010	1058+52	-	1115+02	STH 28 RT	58
0010	1117+25	-	1141+86	STH 28 RT	25
0010	1147+62	-	1175+59	STH 28 RT	29
0010	1187+70	-	1216+64	STH 28 RT	30
0010	1232+38	-	1247+06	STH 28 RT	16
0010	1249+88	-	1275+42	STH 28 RT	27
0010	1290+64	-	1305+04	STH 28 RT	16

PROJECT 4010-29-71 827

BRIDGE APPROACH SUMMARY

				*	*	*			*	*	*	*	*	*			
				204.0100	205.0100	305.0120	415.0080	415.0410	601.0588	602.3010	606.0200	624.0100	645.0120	690.0150	690.0250		
				REMOVING CONCRETE PAVEMENT	EXCAVATION COMMON	BASE AGGREGATE DENSE 1 1/4- INCH	CONCRETE PAVEMENT 8- INCH	CONCRETE PAVEMENT APPROACH SLAB	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT	CONCRETE SURFACE DRAINS	RIPRAP MEDIUM	WATER	GEOTEXTILE TYPE HR	SAWING ASPHALT	SAWING CONCRETE		
CATEGORY	STATION	TO	STATION	LOCATION	SY	CY	TON	SY	SY	LF	CY	CY	MGAL	SY	LF	LF	REMARKS
0010	881+50	-	882+00	STH 28	112	128	156	34	49	-	-	-	2.3	-	17	20	STRUCTURE B-59-322 WEST APPROACH
0010	883+01	-	883+60	STH 28	131	152	184	27	55	86	3	15	2.8	48	14	20	STRUCTURE B-59-322 EAST APPROACH
PROJECT 4010-28-71				243	280	340	61	103	86	3	15	5.1	48	31	40		

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

SHOULDER AGGREGATE SUMMARY

					305.0110	*	305.0500	REMARKS
					BASE AGGREGATE	624.0100	SHAPING	
CATEGORY	STATION	TO	STATION	LOCATION	DENSE 3/4-INCH	WATER	SHOULDERS	
					TON	MGAL	STA	
0010	825+90	-	879+04	STH 28 LT	41	0.6	54	1" DEPTH ASSUMED
0010	879+04	-	882+08	STH 28 LT	44	0.7	4	4" DEPTH ASSUMED, GUARDRAIL AT B-59-322
0010	883+04	-	887+12	STH 28 LT	57	0.9	4	4" DEPTH ASSUMED, GUARDRAIL AT B-59-322
0010	887+12	-	894+88	STH 28 LT	6	0.1	8	1" DEPTH ASSUMED
0010	895+01	-	895+86	STH 28 LT	1	-	1	1" DEPTH ASSUMED, INTERSECTION WITH CTH N
0010	896+12	-	948+20	STH 28 LT	40	0.6	52	1" DEPTH ASSUMED
0010	948+20	-	972+46	STH 28 LT	81	1.2	25	1" DEPTH ASSUMED
0010	973+64	-	985+12	STH 28 LT	9	0.1	13	1" DEPTH ASSUMED
0010	986+17	-	1039+76	STH 28 LT	42	0.6	54	1" DEPTH ASSUMED
0010	1041+46	-	1057+81	STH 28 LT	55	0.8	17	1" DEPTH ASSUMED
0010	1059+16	-	1063+67	STH 28 LT	14	0.2	5	1" DEPTH ASSUMED
0010	1065+06	-	1075+23	STH 28 LT	34	0.5	11	1" DEPTH ASSUMED
0010	1080+46	-	1144+44	STH 28 LT	50	0.7	64	1" DEPTH ASSUMED
0010	1144+89	-	1145+78	STH 28 LT	1	-	2	1" DEPTH ASSUMED, INTERSECTION WITH CTH PPP
0010	1145+77	-	1146+01	STH 28 LT	1	-	-	1" DEPTH ASSUMED, INTERSECTION WITH CTH PPP
0010	1146+15	-	1149+12	STH 28 LT	2	0.1	3	1" DEPTH ASSUMED
0010	1149+12	-	1180+14	STH 28 LT	99	1.5	32	1" DEPTH ASSUMED
0010	1183+61	-	1208+51	STH 28 LT	81	1.2	26	1" DEPTH ASSUMED
0010	1208+51	-	1216+64	STH 28 LT	113	1.7	8	4" DEPTH ASSUMED, GUARDRAIL AT B-59-101
0010	1232+38	-	1276+53	STH 28 LT	150	2.3	45	1" DEPTH ASSUMED
0010	1276+53	-	1290+04	STH 28 LT	19	0.3	13	1" DEPTH ASSUMED
0010	1290+04	-	1301+18	STH 28 LT	149	2.2	11	4" DEPTH ASSUMED, GUARDRAIL AT B-59-102
0010	1301+18	-	1312+20	STH 28 LT	16	0.2	12	1" DEPTH ASSUMED
0010	825+90	-	827+46	STH 28 RT	1	-	3	1" DEPTH ASSUMED
0010	828+32	-	878+68	STH 28 RT	39	0.6	51	1" DEPTH ASSUMED
0010	878+68	-	881+97	STH 28 RT	53	0.8	3	4" DEPTH ASSUMED, GUARDRAIL AT B-59-322
0010	882+94	-	883+43	STH 28 RT	6	0.1	1	4" DEPTH ASSUMED, GUARDRAIL AT B-59-322
0010	883+43	-	884+07	STH 28 RT	44	0.7	1	4" DEPTH ASSUMED, GUARDRAIL AT B-59-322/DRIVEWAY
0010	884+07	-	896+18	STH 28 RT	9	0.1	12	1" DEPTH ASSUMED
0010	896+42	-	897+70	STH 28 RT	1	-	2	1" DEPTH ASSUMED, INTERSECTION WITH CTH N
0010	897+32	-	897+82	STH 28 RT	1	-	-	1" DEPTH ASSUMED, INTERSECTION WITH CTH N
0010	897+45	-	935+13	STH 28 RT	29	0.4	38	1" DEPTH ASSUMED
0010	934+83	-	935+31	STH 28 RT	1	-	-	1" DEPTH ASSUMED, INTERSECTION WITH CTH M
0010	935+00	-	935+75	STH 28 RT	1	-	-	1" DEPTH ASSUMED, INTERSECTION WITH CTH M
0010	936+16	-	947+87	STH 28 RT	9	0.1	12	1" DEPTH ASSUMED
0010	947+87	-	970+01	STH 28 RT	74	1.1	22	1" DEPTH ASSUMED
0010	970+01	-	998+08	STH 28 RT	22	0.3	29	1" DEPTH ASSUMED
0010	1001+54	-	1017+01	STH 28 RT	12	0.2	17	1" DEPTH ASSUMED
0010	1018+96	-	1039+36	STH 28 RT	16	0.2	21	1" DEPTH ASSUMED
0010	1039+36	-	1044+25	STH 28 RT	16	0.2	6	1" DEPTH ASSUMED
0010	1045+92	-	1054+44	STH 28 RT	28	0.4	10	1" DEPTH ASSUMED
0010	1056+10	-	1057+42	STH 28 RT	1	-	1	1" DEPTH ASSUMED, INTERSECTION WITH HUMPHREY RD
0010	1057+90	-	1058+15	STH 28 RT	1	-	1	1" DEPTH ASSUMED, INTERSECTION WITH HUMPHREY RD
0010	1058+55	-	1073+97	STH 28 RT	52	0.8	16	1" DEPTH ASSUMED
0010	1073+97	-	1115+46	STH 28 RT	32	0.5	41	1" DEPTH ASSUMED
0010	1115+98	-	1116+17	STH 28 RT	1	-	1	1" DEPTH ASSUMED, INTERSECTION WITH BRUSSE RD
0010	1116+53	-	1146+56	STH 28 RT	23	0.3	31	1" DEPTH ASSUMED
0010	1146+56	-	1180+13	STH 28 RT	107	1.6	34	1" DEPTH ASSUMED
0010	1183+55	-	1208+51	STH 28 RT	80	1.2	26	1" DEPTH ASSUMED
0010	1208+51	-	1216+50	STH 28 RT	112	1.7	8	4" DEPTH ASSUMED, GUARDRAIL AT B-59-101
0010	1232+38	-	1247+99	STH 28 RT	52	0.8	16	1" DEPTH ASSUMED
0010	1249+31	-	1276+17	STH 28 RT	90	1.3	28	1" DEPTH ASSUMED
0010	1277+45	-	1290+00	STH 28 RT	18	0.3	13	1" DEPTH ASSUMED
0010	1290+00	-	1298+81	STH 28 RT	115	1.7	9	4" DEPTH ASSUMED, GUARDRAIL AT B-59-102
0010	1299+12	-	1304+79	STH 28 RT	75	1.1	6	4" DEPTH ASSUMED, GUARDRAIL AT B-59-102
0010	1304+79	-	1312+20	STH 28 RT	10	0.2	8	1" DEPTH ASSUMED

PROJECT 4010-29-71 2,236 33.2 931

PROJECT NO: 4010-29-71

HWY: STH 28

COUNTY: SHEBOYGAN

MISCELLANEOUS QUANTITIES

SHEET

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HMA SUMMARY												
				450.4000	455.0605	460.6223	460.6224	460.6424	465.0105	465.0120		
				HMA COLD	TACK COAT	HMA PAVEMENT 3	HMA PAVEMENT 4	HMA PAVEMENT 4	ASPHALTIC	ASPHALTIC SURFACE		
				WEATHER PAVING		MT 58-28 S	MT 58-28 S	MT 58-28 H	SURFACE	DRIVEWAYS AND		
				TON	GAL	TON	TON	TON	TON	FIELD ENTRANCES		
CATEGORY	STATION	TO	STATION	LOCATION	TON	GAL	TON	TON	TON	TON		
0010	825+90	-	881+82	STH 28	1,244	2,551	2,892	2,084	-	-	-	BEGIN PROJECT LIMITS - STRUCTURE B-59-322
0010	827+40	-	828+37	STH 28 & HIGH ST	4	11	-	17	-	-	-	SIDE ROAD INTERSECTION (STH 28 RT)
0010	883+21	-	1177+57	STH 28	6,702	13,748	15,581	11,228	-	-	-	B-59-322 STRUCTURE - STH 28/32 ROUNDABOUT
0010	894+88	-	896+12	STH 28 & CTH N	8	21	-	32	-	-	-	SIDE ROAD INTERSECTION (STH 28 LT)
0010	896+18	-	897+45	STH 28 & CTH N	12	31	-	49	-	-	-	SIDE ROAD INTERSECTION (STH 28 RT)
0010	935+13	-	936+16	STH 28 & CTH M	10	27	-	42	-	-	-	SIDE ROAD INTERSECTION (STH 28 RT)
0010	972+46	-	973+64	STH 28 & CTH M	8	21	-	32	-	-	-	SIDE ROAD INTERSECTION (STH 28 LT)
0010	1057+40	-	1058+51	STH 28 & HUMPHREY RD	9	23	-	35	-	-	-	SIDE ROAD INTERSECTION (STH 28 RT)
0010	1115+46	-	1116+53	STH 28 & BRUSSE RD	7	19	-	29	-	-	-	SIDE ROAD INTERSECTION (STH 28 RT)
0010	1144+44	-	1146+15	STH 28 & CTH PPP	26	67	-	104	-	-	-	SIDE ROAD INTERSECTION (STH 28 LT)
0010	1177+57	-	1186+09	STH 28 & STH 32	254	522	591	-	426	-	-	STH 28 & STH 32 ROUNDABOUT
0010	1186+09	-	1216+71	STH 28	728	1,493	1,692	1,219	-	-	-	STH 28/32 ROUNDABOUT - ONION RIVER BRIDGE
0010	1232+38	-	1302+79	STH 28	1,710	3,507	3,975	2,864	-	-	-	1232+38.42 MATCH IN START - BEGIN MEDIAN SPLIT
0010	1248+02	-	1249+31	STH 28 & PARADISE LN	8	20	-	30	-	-	-	SIDE ROAD INTERSECTION (STH 28 RT)
0010	1276+17	-	1277+04	STH 28 & PRANGE RD	15	38	-	58	-	-	-	SIDE ROAD INTERSECTION (STH 28 RT)
0010	1302+79	-	1312+20	STH 28	357	732	830	-	598	-	-	BEGIN MEDIAN SPLIT - END PROJECT LIMITS
0010	1181+30	-	1182+36	STH 28	-	7	-	-	-	35	-	STH 28/STH 32 ROUNDABOUT WORK
0010	1298+11	-	1299+21	STH 28	-	-	-	-	-	-	10	DRIVEWAY REPLACEMENT
PROJECT 4010-29-71					11,102	22,838	25,561	17,823	1,024	35	10	

0010	881+50	-	881+82	STH 28	-	14	-	-	-	56	-	B-59-322 APPROACH WORK
0010	883+21	-	883+60	STH 28	-	15	-	-	-	60	-	B-59-322 APPROACH WORK
PROJECT 4010-28-71					0	29	0	0	0	116	0	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TEST STRIPS							
				460.0105.S	460.0110.S		
				HMA PERCENT	HMA PERCENT		
				WITHIN LIMITS	WITHIN LIMITS		
				(PWL) TEST STRIP	(PWL) TEST STRIP		
				VOLUMETRICS	DENSITY		
CATEGORY	STATION	TO	STATION	LOCATION	EACH	EACH	REMARKS
0010	825+90	-	1312+20	STH 28	1	1	3 MT 58-28 S
0010	825+90	-	1312+20	STH 28	1	1	4 MT 58-28 S
PROJECT 4010-29-71					2	2	

DISTRESSED PAVEMENT SUMMARY								
				*	*			
				455.0605	465.0105	SPV.0180.01		
				TACK COAT	ASPHALTIC	REMOVING DISTRESSED		
				GAL	SURFACE	PAVEMENT MILLING		
CATEGORY	STATION	TO	STATION	LOCATION	TON	SY	REMARKS	
0010	948+62	-	970+92	STH 28 RT & LT	137	239	1,962	REMOVE/REPLACE AS DIRECTED BY ENGINEER
0010	1069+33	-	1073+92	STH 28 RT & LT	28	49	404	REMOVE/REPLACE AS DIRECTED BY ENGINEER
0010	1303+79	-	1312+20	STH 28 LT ONLY	47	82	670	REMOVE/REPLACE AS DIRECTED BY ENGINEER
PROJECT 4010-29-71					212	370	3,036	
*ADDITIONAL QUANTITIES SHOWN ELSEWHERE								

PWL MIXTURE TABLE								
THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT:								
DESCRIPTION	STATION/LOCATION	MIXTURE	MIXTURE USE:	UNDERLYING SURFACE:	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12-FT DRIVING LANE	825+90 - 881+82, 883+21 - 1177+57, 1186+09 - 1216+71, 1232+38 - 1312+20	3 MT 58-28 S	LOWER LAYER	MILLED EXISTING HMA SURFACE	16,709	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12-FT DRIVING LANE	825+90 - 881+82, 883+21 - 1177+57, 1186+09 - 1216+71, 1232+38 - 1302+79	4 MT 58-28 S	UPPER LAYER	3 MT 58-28 S	11,794	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
5-FT TYP. SHOULDER; TURN LANES; PASSING LANES	825+90 - 881+82, 883+21 - 1177+57, 1186+09 - 1216+71, 1232+38 - 1312+20	3 MT 58-28 S	LOWER LAYER	MILLED EXISTING HMA SURFACE	8,261	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE
5 -FT TYP. SHOULDER; TURN LANES; PASSING LANES	825+90 - 881+82, 883+21 - 1177+57, 1186+09 - 1216+71, 1232+38 - 1302+79	4 MT 58-28 S	UPPER LAYER	3 MT 58-28 S	5,601	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE
INTERSECTIONS	HIGH ST, CTH N, CTH M, HUMPHREY RD, BRUSSE RD, CTH PPP, PARADISE LN, PRANGE RD	4 MT 58-28 S	UPPER LAYER	MILLED EXISTING HMA SURFACE	428	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE
STH 28 & 32 ROUNDABOUT	1177+57 - 1186+09	3 MT 58-28 S	LOWER LAYER	MILLED EXISTING HMA SURFACE	591	2 1/4"	QMP (SS 460.2.8)	INCENTIVE DENSITY HMA PAVEMENT 460.2000
STH 28 & 32 ROUNDABOUT	1177+57 - 1186+09	4 MT 58-28 H	UPPER LAYER	3 MT 58-28 S	426	1 3/4"	QMP (SS 460.2.8)	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12-FT DRIVING LANE; 5-FT TYP. SHOULDER; TURN LANES	1302+79 - 1312+20	4 MT 58-28 H	UPPER LAYER	3 MT 58-28 S	598	1 3/4"	QMP (SS 460.2.8)	INCENTIVE DENSITY HMA PAVEMENT 460.2000
BRIDGE APPROACH, C&G REPLACEMENT WORK, DISTRESSED PAVEMENT AREAS	881+50 - 881+82, 883+21 - 883+60, 1181+30 - 1182+36, VARIOUS LOCATIONS	ASPHALTIC SURFACE	PATCHING	BASE AGGREGATE	521	7" - 8 1/2"	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)

SHOULDER RUMBLE STRIPS

465.0520 ASPHALTIC RUMBLE STRIPS, SHOULDER LF					
CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	825+90	-	830+12	STH 28 LT	422
0010	830+78	-	836+14	STH 28 LT	537
0010	836+83	-	837+30	STH 28 LT	47
0010	837+97	-	838+43	STH 28 LT	46
0010	839+05	-	848+80	STH 28 LT	977
0010	849+43	-	854+92	STH 28 LT	550
0010	855+55	-	873+32	STH 28 LT	1,778
0010	873+94	-	874+52	STH 28 LT	59
0010	875+13	-	876+17	STH 28 LT	104
0010	876+81	-	877+27	STH 28 LT	46
0010	877+88	-	881+57	STH 28 LT	369
0010	883+46	-	886+79	STH 28 LT	332
0010	888+07	-	893+51	STH 28 LT	542
0010	899+44	-	904+82	STH 28 LT	536
0010	905+45	-	909+80	STH 28 LT	435
0010	910+42	-	919+21	STH 28 LT	879
0010	919+88	-	928+69	STH 28 LT	881
0010	929+37	-	929+96	STH 28 LT	59
0010	930+65	-	971+17	STH 28 LT	4,053
0010	976+01	-	980+84	STH 28 LT	486
0010	981+45	-	983+00	STH 28 LT	155
0010	983+65	-	984+69	STH 28 LT	103
0010	986+37	-	989+09	STH 28 LT	272
0010	989+74	-	998+64	STH 28 LT	890
0010	1000+09	-	1007+81	STH 28 LT	772
0010	1008+44	-	1009+58	STH 28 LT	114
0010	1011+01	-	1015+87	STH 28 LT	486
0010	1016+49	-	1017+33	STH 28 LT	84
0010	1017+95	-	1031+88	STH 28 LT	1,393
0010	1032+54	-	1040+89	STH 28 LT	834
0010	1041+55	-	1058+26	STH 28 LT	1,668
0010	1058+90	-	1066+49	STH 28 LT	758
0010	1067+14	-	1077+35	STH 28 LT	1,020
0010	1077+95	-	1079+43	STH 28 LT	148
0010	1080+06	-	1091+74	STH 28 LT	1,167
0010	1092+43	-	1102+30	STH 28 LT	987
0010	1102+99	-	1123+86	STH 28 LT	2,090
0010	1125+61	-	1135+10	STH 28 LT	950
0010	1135+77	-	1136+88	STH 28 LT	110
0010	1138+23	-	1138+84	STH 28 LT	60
0010	1140+78	-	1141+61	STH 28 LT	83
0010	1142+21	-	1143+19	STH 28 LT	98
0010	1151+26	-	1175+90	STH 28 LT	2,467
0010	1188+41	-	1216+48	STH 28 LT	2,806
0010	1232+38	-	1250+10	STH 28 LT	1,771
0010	1250+78	-	1276+50	STH 28 LT	2,573
0010	1277+24	-	1312+20	STH 28 LT	3,497

LT SUBTOTAL 40,494

NOTE: STATION ARE APPROXIMATE - SEE SDD 13A10 - 03G,H

465.0520
ASPHALTIC
RUMBLE STRIPS,
SHOULDER
LF

CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	825+90	-	826+40	STH 28 RT	50
0010	828+87	-	830+10	STH 28 RT	123
0010	830+72	-	835+98	STH 28 RT	527
0010	836+68	-	841+38	STH 28 RT	469
0010	842+05	-	849+79	STH 28 RT	773
0010	850+43	-	856+43	STH 28 RT	600
0010	857+12	-	871+79	STH 28 RT	1,467
0010	872+43	-	879+42	STH 28 RT	699
0010	880+06	-	881+57	STH 28 RT	151
0010	884+04	-	887+18	STH 28 RT	314
0010	887+81	-	892+98	STH 28 RT	518
0010	898+82	-	931+99	STH 28 RT	3,319
0010	937+52	-	949+11	STH 28 RT	1,159
0010	949+79	-	954+63	STH 28 RT	484
0010	955+29	-	963+28	STH 28 RT	799
0010	963+96	-	969+44	STH 28 RT	548
0010	976+83	-	981+66	STH 28 RT	480
0010	982+29	-	984+00	STH 28 RT	171
0010	984+70	-	998+10	STH 28 RT	1,341
0010	1001+66	-	1008+65	STH 28 RT	699
0010	1009+26	-	1017+31	STH 28 RT	805
0010	1019+09	-	1034+24	STH 28 RT	1,515
0010	1034+86	-	1039+62	STH 28 RT	477
0010	1040+27	-	1044+53	STH 28 RT	428
0010	1045+80	-	1054+04	STH 28 RT	826
0010	1059+56	-	1068+79	STH 28 RT	925
0010	1069+48	-	1070+49	STH 28 RT	101
0010	1071+16	-	1073+22	STH 28 RT	206
0010	1073+90	-	1075+68	STH 28 RT	178
0010	1076+33	-	1087+47	STH 28 RT	1,114
0010	1088+13	-	1089+61	STH 28 RT	148
0010	1090+23	-	1090+94	STH 28 RT	71
0010	1091+58	-	1101+93	STH 28 RT	1,034
0010	1102+57	-	1108+61	STH 28 RT	604
0010	1109+34	-	1112+68	STH 28 RT	334
0010	1113+35	-	1114+45	STH 28 RT	110
0010	1117+87	-	1132+98	STH 28 RT	1,511
0010	1133+60	-	1134+74	STH 28 RT	113
0010	1136+10	-	1138+44	STH 28 RT	233
0010	1139+09	-	1141+30	STH 28 RT	220
0010	1149+33	-	1175+59	STH 28 RT	2,623
0010	1188+88	-	1216+41	STH 28 RT	2,754
0010	1232+38	-	1236+17	STH 28 RT	378
0010	1236+86	-	1238+11	STH 28 RT	125
0010	1238+83	-	1239+53	STH 28 RT	70
0010	1241+28	-	1246+99	STH 28 RT	570
0010	1251+06	-	1252+93	STH 28 RT	187
0010	1253+63	-	1275+17	STH 28 RT	2,154
0010	1278+74	-	1298+11	STH 28 RT	1,937
0010	1299+35	-	1310+70	STH 28 RT	1,135

RT SUBTOTAL 37,577

PROJECT 4010-29-71 78,071

CENTERLINE RUMBLE STRIPS

465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF					
CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	829+89	-	881+57	STH 28	5,168
0010	883+46	-	894+16	STH 28	1,070
0010	898+15	-	933+66	STH 28	3,551
0010	937+66	-	971+03	STH 28	3,338
0010	975+05	-	1056+00	STH 28	8,095
0010	1060+00	-	1114+06	STH 28	5,406
0010	1118+06	-	1123+49	STH 28	543
0010	1125+49	-	1143+16	STH 28	1,768
0010	1147+16	-	1175+75	STH 28	2,858
0010	1188+65	-	1216+45	STH 28	2,780
0010	1232+38	-	1246+74	STH 28	1,435
0010	1250+74	-	1274+90	STH 28	2,416
0010	1278+90	-	1302+47	STH 28	2,357
PROJECT 4010-29-71					40,785

NOTE: STATION ARE APPROXIMATE - SEE SDD 13A11-04D

TRANSVERSE RUMBLE STRIPS

465.0580 TRANSVERSE RUMBLE STRIPS, ASPHALTIC SY			
CATEGORY	STATION	LOCATION	SY
0010	830+18	STH 28	25
PROJECT 4010-29-71			25

NOTE: STATION ARE APPROXIMATE - SEE SDD 13A08-02

RIP RAP SUMMARY

				* 606.0200 RIPRAP MEDIUM CY	* 645.0120 GEOTEXTILE TYPE HR SY	REMARKS	
CATEGORY	STATION	TO	STATION	LOCATION			
0010	1143+81	-	1143+96	STH 28 LT	20	54	CULVERT PIPE ENDWALL
				PROJECT 4010-29-71	20	54	

BEAM GUARD SUMMARY

				614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0345 STEEL PLATE BEAM GUARD SHORT RADIUS LF	614.0390 STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL EACH	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	** EXCAVATION COMMON CY	** BORROW CY	** TOPSOIL SY	** EROSION MAT CLASS I TYPE B SY	** EROSION MAT URBAN CLASS I TYPE B SY	** FERTILIZER TYPE B CWT	** SEEDING MIXTURE NO. 30 LB	** SEED WATER MGAL	** CONSTRUCTION STAKING SLOPE STAKES LF
CATEGORY	STATION	TO	STATION	LOCATION																
0010	1208+51	-	1216+50	STH 28 RT	1	-	-	-	588	39	1	298	74	789	789	-	0.5	35	17.7	799
0010	1208+51	-	1216+63	STH 28 LT	1	-	-	-	600	39	1	300	96	904	904	-	0.6	41	20.3	812
0010	1290+00	-	1298+49	STH 28 RT	2	-	-	-	550	-	2	280	66	621	621	-	0.4	28	13.9	849
0010	1290+04	-	1301+18	STH 28 LT	2	-	-	-	800	-	2	441	124	977	977	-	0.6	44	21.9	1114
0010	1298+63	-	1304+79	STH 28 RT	2	-	-	-	363	-	2	199	46	396	396	-	0.2	18	8.9	616
PROJECT 4010-29-71				8	0	0	0	0	2,900	78	8	1,518	406	3,687	3,687	0	2.3	166	82.8	4190
0010	878+68	-	881+97	STH 28 RT	1	-	-	-	88	39	1	83	128	405	-	405	0.3	18	9.1	329
0010	879+04	-	882+08	STH 28 LT	1	-	-	-	63	39	1	85	142	578	-	578	0.4	26	13.0	304
0010	882+94	-	884+07	STH 28 RT	1	21	19	56	1	-	-	12	15	190	-	190	0.1	9	4.3	113
0010	883+04	-	887+12	STH 28 LT	1	-	-	-	188	39	1	121	33	386	-	386	0.2	17	8.7	408
PROJECT 4010-28-71				4	21	19	56	1	338	117	3	301	318	1,559	0	1,559	1.0	70	35.0	1154

** ITEMS FOR INFORMATION ONLY

EROSION CONTROL SUMMARY

				628.1504	628.1520	628.1905	628.1910	628.6005	628.7005	628.7504	628.7555		
						MOBILIZATIONS							
						EROSION		EROSION		INLET			
						CONTROL		CONTROL		PROTECTION TYPE			
						EACH		EACH		A			
CATEGORY	STATION	TO	STATION	LOCATION	SILT FENCE	SILT FENCE	EROSION	EROSION	TURBIDITY	PROTECTION TYPE	TEMPORARY	CULVERT PIPE	REMARKS
					LF	MAINTENANCE	CONTROL	CONTROL	BARRIERS	EACH	DITCH CHECKS	CHECKS	
						LF	EACH	EACH	SY		LF	EACH	
0010	825+90	-	1312+20	STH 28 LT & RT	-	-	2	1	-	-	-	-	PROJECT WIDE MOBILIZATIONS
0010	1208+45	-	1216+62	STH 28 RT	833	833	-	-	-	-	-	-	STRUCTURE B-59-101 GUARDRAIL GRADING AREA
0010	1208+49	-	1216+83	STH 28 LT	845	845	-	-	-	-	-	-	STRUCTURE B-59-101 GUARDRAIL GRADING AREA
0010	1209+81	-	1209+81	STH 28 LT	-	-	-	-	-	-	15	-	STRUCTURE B-59-101 GUARDRAIL GRADING AREA
0010	1210+09	-	1210+09	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-101 GUARDRAIL GRADING AREA
0010	1210+95	-	1210+95	STH 28 LT	-	-	-	-	-	-	-	3	STRUCTURE B-59-101 GUARDRAIL GRADING AREA
0010	1211+13	-	1211+13	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-101 GUARDRAIL GRADING AREA
0010	1212+14	-	1212+14	STH 28 RT	-	-	-	-	-	1	-	-	STRUCTURE B-59-101 GUARDRAIL GRADING AREA
0010	1290+30	-	1300+95	STH 28 LT	1,069	1,069	-	-	-	-	-	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1290+45	-	1298+86	STH 28 RT	848	848	-	-	-	-	-	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1292+12	-	1292+12	STH 28 LT	-	-	-	-	-	-	15	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1292+18	-	1292+18	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1293+72	-	1293+72	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1299+11	-	1304+83	STH 28 RT	575	575	-	-	-	-	-	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1300+19	-	1300+19	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1300+70	-	1300+70	STH 28 LT	-	-	-	-	-	-	15	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1300+86	-	1300+86	STH 28 RT	-	-	-	-	-	-	-	6	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1302+36	-	1302+36	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	1303+64	-	1303+64	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-102 GUARDRAIL GRADING AREA
0010	825+90	-	1312+20	STH 28 LT & RT	100	100	-	-	-	-	-	-	SILT FENCE TURN-AROUNDS
0010				UNDISTRIBUTED QUANTITIES	1,068	1,068	1	-	-	-	40	3	
PROJECT 4010-29-71					5,338	5,338	3	1	0	1	190	12	
0010	878+75	-	887+00	STH 28 LT & RT	-	-	2	1	-	-	-	-	PROJECT WIDE MOBILIZATIONS
0010	878+97	-	882+09	STH 28 LT	319	319	-	-	-	-	-	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	879+06	-	879+66	STH 28 RT	64	64	-	-	-	-	-	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	879+82	-	882+08	STH 28 RT	228	228	-	-	-	-	-	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	880+30	-	880+30	STH 28 LT	-	-	-	-	-	-	15	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	880+64	-	880+64	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	881+95	-	881+95	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	882+06	-	882+06	STH 28 LT	-	-	-	-	-	-	15	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	882+33	-	882+75	STH 28 LT & RT	-	-	-	-	169	-	-	-	STRUCTURE B-59-322/ONION CREEK TRIBUTARY
0010	882+94	-	883+63	STH 28 RT	99	99	-	-	-	-	-	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	883+00	-	886+94	STH 28 LT	401	401	-	-	-	-	-	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	883+00	-	882+99	STH 28 RT	-	-	-	-	-	-	15	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	883+13	-	883+13	STH 28 LT	-	-	-	-	-	-	15	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	884+48	-	884+48	STH 28 LT	-	-	-	-	-	-	15	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	885+78	-	885+78	STH 28 LT	-	-	-	-	-	-	15	-	STRUCTURE B-59-322 GUARDRAIL GRADING AREA
0010	878+75	-	887+00	STH 28 LT & RT	100	100	-	-	-	-	-	-	SILT FENCE TURN-AROUNDS
0010				UNDISTRIBUTED QUANTITIES	303	303	1	-	-	-	30	-	
PROJECT 4010-28-71					1,514	1,514	3	1	169	0	150	0	

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 68 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 PORTABLE CHANGEABLE MESSAGE SIGN EACH	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 28, E. OF CTH U, PLACE 1000' E. OF CTH U INTERSECTION	W 20-2A	48"X48"	1	68	68						
2	STH 28, E. OF CTH U, PLACE 500' E. OF CTH U INTERSECTION	MO 4-8	24"X12"	1	68	68						
	"	M 3-4	24"X12"	1	68	68						
	"	M 1-6	24"X24"	1	68	68						28
	"	MO 5-1R	21"X21"	1	68	68						
3	STH 28, AT CTH U, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"X12"	1	68	68						
	"	M 3-4	24"X12"	1	68	68						
	"	M 1-6	24"X24"	1	68	68						28
	"	MO 6-1	21"X21"	1	68	68						RIGHT
4	STH 28, AT CTH U, PLACE IN SW QUADRANT AT CTH U INTERSECTION	R 11-3B	60"X30"	1	68	68	68	136				1 1/2 MILES AHEAD
	"	M 4-9R	30"X24"	1	68	68						
5	STH 28, W. OF CTH U, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
6	STH 28, E. OF CTH N, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
7	STH 28, AT CTH N, PLACE IN MIDDLE OF ROADWAY ON WEST SIDE OF CTH N INTERSECTION	R 11-2B	48"X30"	1	68	68	68	136				
8	STH 28, W. OF CTH N, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1					7			PLACE IN ADVANCE OF CLOSURE
9	CTH U, AT STH 28, MODIFY EXISTING J13-1 SIGN AS SHOWN	MO 6-1	21"X21"	1	68	68						LEFT
10	CTH U, W. OF STH 28, PLACE 250' W. OF STH 28 INTERSECTION	MO 4-8	24"X12"	1	68	68						
	"	M 3-4	24"X12"	1	68	68						
	"	M 1-6	24"X24"	1	68	68						28
11	CTH U, W. OF STH 28, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	68	68						
12	CTH U, E. OF STH 57, PLACE 500' E. OF STH 57 INTERSECTION	MO 4-8	24"X12"	1	68	68						
	"	M 3-4	24"X12"	1	68	68						
	"	M 1-6	24"X24"	1	68	68						28
	"	MO 5-1L	21"X21"	1	68	68						
13	CTH U, E. OF STH 57, PLACE 250' E. OF STH 57 INTERSECTION	MO 4-8	24"X12"	1	68	68						
	"	M 3-2	24"X12"	1	68	68						
	"	M 1-6	24"X24"	1	68	68						28
14	CTH U, AT STH 57, PLACE RIGHT OF EXISTING R1-1 SIGN AT STH 57 INTERSECTION	MO 4-8	24"X12"	1	68	68						
	"	M 3-4	24"X12"	1	68	68						
	"	M 1-6	24"X24"	1	68	68						28
	"	MO 6-1	21"X21"	1	68	68						LEFT
15	STH 57, AT CTH U, PLACE LEFT OF EXISTING J13-1 SIGN IN MEDIAN	MO 4-8	36"X18"	1	68	68						
	"	M 3-2	36"X18"	1	68	68						
	"	M 1-6	36"X36"	1	68	68						28
	"	MO 6-1	30"X30"	1	68	68						LEFT
16	STH 57, N. OF CTH U, PLACE 750' N. OF CTH U INTERSECTION ON RIGHT SHOULDER	MO 4-8	36"X18"	1	68	68						
	"	M 3-2	36"X18"	1	68	68						
	"	M 1-6	36"X36"	1	68	68						28
	"	MO 5-1L	30"X30"	1	68	68						
17	STH 57, N. OF CTH U, PLACE 750' N. OF CTH U INTERSECTION IN MEDIAN	MO 4-8	36"X18"	1	68	68						
	"	M 3-2	36"X18"	1	68	68						
	"	M 1-6	36"X36"	1	68	68						28
	"	MO 5-1L	30"X30"	1	68	68						

PAGE SUBTOTALS

42

2,720

136

272

14

1

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 68 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 PORTABLE CHANGEABLE MESSAGE SIGN EACH	NO OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
18	STH 57, N. OF CTH U, PLACE 1500' N. OF CTH U INTERSECTION ON RIGHT SHOULDER	M 3-2	36"x18"	1	68	68						
	"	M 1-6	36"x36"	1	68	68						28
	"	W 20-2A	48"x48"	1	68	68						
19	STH 57, N. OF CTH U, PLACE 1500' N. OF CTH U INTERSECTION IN MEDIAN	M 3-2	36"x18"	1	68	68						
	"	M 1-6	36"x36"	1	68	68						28
	"	W 20-2A	48"x48"	1	68	68						
20	STH 57, AT CTH U, PLACE RIGHT OF EXISTING J13-1 SIGN ON RIGHT SHOULDER	MO 4-8	36"x18"	1	68	68						
	"	M 3-2	36"x18"	1	68	68						
	"	M 1-6	36"x36"	1	68	68						28
	"	MO 6-1	30"x30"	1	68	68						RIGHT
21	STH 57, S. OF CTH U, PLACE 750' S. OF CTH U ON RIGHT SHOULDER	MO 4-8	36"x18"	1	68	68						
	"	M 3-2	36"x18"	1	68	68						
	"	M 1-6	36"x36"	1	68	68						28
	"	MO 5-1R	30"x30"	1	68	68						
22	STH 57, N. OF CTH N, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	30"x24"	1	68	68						
23	STH 57, S. OF CTH N, COVER EXISTING J3-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
24	STH 57, S. OF CTH N, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "SHEBOYGAN FALLS-SHEBOYGAN"
25	STH 57, N. OF STH 28, PLACE RIGHT OF EXISTING J4-1 SIGN	MO 4-8	36"x18"	1	68	68						
	"	M 3-2	36"x18"	1	68	68						
	"	M 1-6	36"x36"	1	68	68						28
26	STH 57, AT STH 28, COVER EXISTING J3-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
27	STH 57, AT STH 28, COVER EXISTING J3-1 SIGN AS SHOWN									1	1	COVER "EAST 28 LT"
28	STH 28, AT STH 57, PLACE IN SE QUADRANT OF INTERSECTION	R 11-3B	60"x30"	1	68	68	68	136				1 MILE AHEAD
	"	M 4-9L	30"x24"	1	68	68						
29	STH 28, E. OF STH 57, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
30	STH 57/28, ST STH 28 SPLIT,	MO 4-8	36"x18"	1	68	68						
	"	MO 6-1	30"x30"	1	68	68						AHEAD
31	STH 57/28, S. OF STH 28 SPLIT, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "SHEBOYGAN FALLS-SHEBOYGAN"
32	STH 57/28, S. OF STH 28 SPLIT, MODIFY EXISTING J2-2 SIGN AS SHOWN	MO 4-8	36"x18"	1	68	68						
	"	MO 6-1	30"x30"	1	68	68						AHEAD
33	STH 57/28, S. OF STH 28 SPLIT, PLACE 1000' S. OF STH 28 IN MEDIAN	M 3-2	36"x18"	1	68	68						
	"	M 1-6	36"x36"	1	68	68						28
	"	W 20-2A	48"x48"	1	68	68						
34	STH 57/28, S. OF STH 28 SPLIT, PLACE 1000' S. OF STH 28 ON RIGHT SHOULDER	M 3-2	36"x18"	1	68	68						
	"	M 1-6	36"x36"	1	68	68						28
	"	W 20-2A	48"x48"	1	68	68						
PAGE SUBTOTALS				30		2,040	68	136	0		6	
DETOUR TOTALS				72		4,760	204	408	14		7	

PLAN SHEET PRODUCED
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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 32, N. OF STH 28, PLACE ON RIGHT SHOULDER, FIELD DETERMINED	PCMS		1						7				PLACE 7 DAYS IN ADVANCE
2	STH 28, E. OF STH 32, PLACE ON RIGHT SHOULDER, FIELD DETERMINED	PCMS		1						7				PLACE 7 DAYS IN ADVANCE
3	STH 32, S. OF STH 28, PLACE ON RIGHT SHOULDER, FIELD DETERMINED	PCMS		1						7				PLACE 7 DAYS IN ADVANCE
4	STH 28, W. OF STH 32, PLACE ON RIGHT SHOULDER, FIELD DETERMINED	PCMS		1						7				PLACE 7 DAYS IN ADVANCE
5	STH 23, W. OF STH 32, PLACE 1000' W. OF STH 32 OFF-RAMP IN MEDIAN	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	W 20-2A	48"x48"	1	12	12								
6	STH 23, W. OF STH 32, PLACE 1000' W. OF STH 32 OFF-RAMP ON RIGHT SHOULDER	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	W 20-2A	48"x48"	1	12	12								
7	STH 23, W. OF STH 32, PLACE 250' W. OF STH 32 OFF-RAMP IN MEDIAN	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-1	30"x30"	1	12	12								AHEAD
8	STH 23, W. OF STH 32, PLACE 250' W. OF STH 32 OFF-RAMP ON RIGHT SHOULDER	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-1	30"x30"	1	12	12								AHEAD
9	STH 23 OFF-RAMP TO STH 32, PRIOR TO RAMP TERMINI INTERSECTION, COVER EXISTING J3-2 AS SHOWN										1		1	COVER "SOUTH-32-RIGHT"
10	STH 32, AT STH 23 OFF-RAMP INTERSECTION, PLACE ON RIGHT SHOULDER IN SW QUADRANT	R 11-3	60"x30"	1	12	12	12	24						2 1/2 MILES AHEAD
11	STH 32, N. OF STH 23, PLACE 250' N. OF STH 23 WB RAMP INTERSECTION	W 20-2A	48"x48"	1	12	12								
12	STH 32, AT STH 23, PLACE ON RIGHT UNDERNEATH STH 23	MO 4-8	24"x12"	1	12	12								
	"	M 3-3	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 5-1L	21"x21"	1	12	12								
13	STH 32, AT STH 23 OFF-RAMP INTERSECTION, PLACE IN MEDIAN NEXT TO EXISTING J3-2 SIGN	MO 4-8	24"x12"	1	12	12								
	"	M 3-3	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								LEFT
14	STH 32 ON-RAMP TO STH 23, PLACE 150' E. OF RAMP TERMINI INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-3	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								
15	STH 23 OFF-RAMP TO STH 32, PRIOR TO RAMP TERMINI INTERSECTION, COVER EXISTING J3-2 AS SHOWN										1		1	COVER "SOUTH-32-LEFT"
16	STH 23, E. OF STH 32, PLACE 250' E. OF STH 32 OFF-RAMP ON RIGHT SHOULDER	M 4-8A	30"x24"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
17	STH 23, E. OF STH 32, PLACE 250' E. OF STH 32 OFF-RAMP IN MEDIAN	M 4-8A	30"x24"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
18	STH 23, W. OF RANGELINE RD, PLACE 200' W. OF RANGELINE RD OVERPASS	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
PAGE SUBTOTALS				38		408	12	24	0	28		0	2	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. SEE "TRAFFIC CONTROL ITEMS" TABLE.

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
19	STH 23, E. OF RANGELINE RD, PLACE 200' E. OF RANGELINE RD OVERPASS	MO 4-8	36"x18"	1	12	12								
	"	M 3-1	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
20	STH 23, W. OF CTH Y, PLACE 200' W. OF CTH Y OFF-RAMP	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-1	30"x30"	1	12	12								AHEAD
21	STH 23, E. OF CTH Y, PLACE 600' E. OF CTH Y OVERPASS	MO 4-8	36"x18"	1	12	12								
	"	M 3-1	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-1	30"x30"	1	12	12								AHEAD
22	STH 23, W. OF I-43, PLACE 600' W. OF I-43 OFF-RAMP	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 5-2R	30"x30"	1	12	12								
23	STH 23, W. OF I-43, PLACE 100' W. OF I-43 OFF-RAMP	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-2	30"x30"	1	12	12								TILT RIGHT
24	STH 23, W. OF I-43, PLACE 350' W. OF I-43 SB	MO 4-8	36"x18"	1	12	12								
	"	M 3-1	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
25	I-43 CD ROADWAY, AT STH 23 WB OFF-RAMP, PLACE RIGHT OF S-59-03 SIGN STRUCTURE	MO 4-8	36"x18"	1	12	12								
	"	M 3-1	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-2	30"x30"	1	12	12								TILT RIGHT
26	I-43, S. OF STH 23, PLACE 300' N. OF RAILROAD BRIDGE	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
27	I-43 CD ROADWAY, AT STH 23 OFF-RAMP SPLIT, PLACE ON LEFT SIDE	MO 4-8	36"x18"	1	12	12								
	"	M 3-1	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-1	30"x30"	1	12	12								AHEAD
28	I-43, S. OF STH 23, PLACE AT OFF-RAMP TO STH 23	MO 4-8	36"x18"	1	12	12								
	"	M 3-1	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-2	30"x30"	1	12	12								TILT RIGHT
29	I-43, S. OF STH 23, PLACE 750' S. OF SIGN #28	MO 4-8	36"x18"	1	12	12								
	"	M 3-1	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 5-2R	30"x30"	1	12	12								
30	I-43, N. OF STH 28, COVER EXISTING TYPE I GROUND MOUNT SIGN AS SHOWN										1	1		COVER "SHEBOYGAN FALLS"
31	I-43, N. OF STH 28, PLACE 1/2 MILE N. OF STH 28 OFF-RAMP	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								
32	I-43, N. OF STH 28, PLACE 1/2 MILE N. OF STH 28 OFF-RAMP	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								

PAGE SUBTOTALS

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*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. SEE "TRAFFIC CONTROL ITEMS" TABLE.

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

PROJECT NUMBER: 4010-29-71

HWY: STH 28

COUNTY: SHEBOYGAN

MISCELLANEOUS QUANTITIES

SHEET 61

E

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
33	I-43, N. OF STH 28, PLACE 1/4 MILE N. OF STH 28 OFF-RAMP	MO 4-8	36"X18"	1	12	12								
	"	M 3-4	36"X18"	1	12	12								
	"	M 1-6	36"X36"	1	12	12								28
	"	MO 6-1	30"X30"	1	12	12								AHEAD
	"	MO 4-8	36"X18"	1	12	12								
	"	M 3-3	36"X18"	1	12	12								
	"	M 1-6	36"X36"	1	12	12								32
	"	MO 6-1	30"X30"	1	12	12								AHEAD
34	I-43, N. OF STH 28, PLACE 1/4 MILE N. OF STH 28 OFF-RAMP	MO 4-8	36"X18"	1	12	12								
	"	M 3-4	36"X18"	1	12	12								
	"	M 1-6	36"X36"	1	12	12								28
	"	MO 6-1	30"X30"	1	12	12								AHEAD
	"	MO 4-8	36"X18"	1	12	12								
	"	M 3-3	36"X18"	1	12	12								
	"	M 1-6	36"X36"	1	12	12								32
	"	MO 6-1	30"X30"	1	12	12								AHEAD
35	I-43, N. OF STH 28, PLACE LEFT OF EXISTING TYPE I EXIT SIGN AT STH 28 OFF-RAMP	MO 4-8	36"X18"	1	12	12								
	"	M 3-4	36"X18"	1	12	12								
	"	M 1-6	36"X36"	1	12	12								28
	"	MO 6-1	30"X30"	1	12	12								AHEAD
	"	MO 4-8	36"X18"	1	12	12								
	"	M 3-3	36"X18"	1	12	12								
	"	M 1-6	36"X36"	1	12	12								32
	"	MO 6-1	30"X30"	1	12	12								AHEAD
36	I-43, N. OF STH 28, COVER EXISTING TYPE I GROUND MOUNT SIGN AS SHOWN										1	1		COVER "SHEBOYGAN FALLS"
37	I-43 OFF-RAMP TO STH 28, COVER EXISTING D1-3 SIGN AS SHOWN										1		1	COVER "SHEBOYGAN FALLS"
38	I-43 OFF-RAMP TO STH 28, AT STH 28 RAMP INTERSECTION, COVER EXISTING D1-3 SIGN AS SHOWN	MO 6-1	21"X21"	1	12	12								LEFT
39	STH 28, W. OF CTH A, COVER EXISTING J4-1 SIGN AS SHOWN										1		1	COVER ENTIRE SIGN
40	STH 28, AT I-43 RAMP INTERSECTION, PLACE IN MEDIAN	R 11-3	60"X30"	1	12	12	12	24						2 3/4 MILES AHEAD
41	STH 28, AT I-43 RAMP INTERSECTION, PLACE IN MEDIAN	MO 4-9L	30"X24"	1	12	12								
	"	M 3-4	24"X12"	1	12	12								
	"	M 1-6	24"X24"	1	12	12								28
	"	MO 6-1	21"X21"	1	12	12								LEFT
42	STH 28 ON-RAMP TO I-43, PLACE 200' S. OF RAMP INTERSECTION	MO 4-8	24"X12"	1	12	12								
	"	M 3-4	24"X12"	1	12	12								
	"	M 1-6	24"X24"	1	12	12								28
43	I-43, S. OF STH 28, PLACE ACROSS FROM IN MEDIAN OF EXISTING TYPE I GROUND MOUNT SIGN	M 4-8A	30"X24"	1	12	12								
	"	M 1-6	36"X36"	1	12	12								28
44	I-43, S. OF STH 28, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	M 4-8A	30"X24"	1	12	12								
	"	M 1-6	36"X36"	1	12	12								28
45	I-43 OFF-RAMP TO STH 28, COVER EXISTING J3-2 SIGN AS SHOWN										1		1	COVER "WEST 28 LEFT"
46	I-43 OFF-RAMP TO STH 28, COVER EXISTING D1-3 SIGN AS SHOWN										1		1	COVER "SHEBOYGAN FALLS"
47	STH 28, BETWEEN RAMP INTERSECTIONS, PLACE AT OUTSIDE PIER COLUMN FOR I-43 NB	MO 4-8	24"X12"	1	12	12								
	"	M 3-4	24"X12"	1	12	12								
	"	M 1-6	24"X24"	1	12	12								28
	"	MO 5-1L	21"X21"	1	12	12								
48	STH 28, W. OF TAYLOR ST, PLACE 200' W. OF TAYLOR ST ON RIGHT	W 20-2A	48"X48"	1	12	12								
49	STH 28, W. OF TAYLOR ST, PLACE 200' W. OF TAYLOR ST IN MEDIAN	W 20-2A	48"X48"	1	12	12								
50	I-43, S. OF STH 28, COVER EXISTING TYPE I GROUND MOUNT SIGN AS SHOWN										1	1		COVER "SHEBOYGAN FALLS"
51	I-43, S. OF STH 28, COVER EXISTING TYPE I GROUND MOUNT SIGN AS SHOWN										1	1		COVER "SHEBOYGAN FALLS"

PAGE SUBTOTALS

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*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. SEE "TRAFFIC CONTROL ITEMS" TABLE.

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

PROJECT NUMBER: 4010-29-71

HWY: STH 28

COUNTY: SHEBOYGAN

MISCELLANEOUS QUANTITIES

SHEET 62

E

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
52	I-43, N. OF CTH V, PLACE 1/4 MILE N. OF CTH V OFF-RAMP ON RIGHT	MO 4-8	36"x18"	1	12	12								
	"	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 5-2R	30"x30"	1	12	12								
	"	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 5-2R	30"x30"	1	12	12								
53	I-43, N. OF CTH V, PLACE 1/4 MILE N. OF CTH V OFF-RAMP IN MEDIAN	MO 4-8	36"x18"	1	12	12								
	"	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 5-2R	30"x30"	1	12	12								
	"	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 5-2R	30"x30"	1	12	12								
54	I-43, N. OF CTH V, PLACE LEFT OF EXISTING TYPE I GROUND MOUNT SIGN AT EXIT	MO 4-8	36"x18"	1	12	12								
	"	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 6-2	30"x30"	1	12	12								TILT RIGHT
	"	MO 4-8	36"x18"	1	12	12								
	"	M 3-3	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								32
	"	MO 6-2	30"x30"	1	12	12								TILT RIGHT
55	CTH V, E. OF STH 57, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"x18"	1	12	12								
56	I-43 OFF-RAMP TO CTH V, PLACE 750' FROM RAMP INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 5-1R	21"x21"	1	12	12								
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-3	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 5-1R	21"x21"	1	12	12								
57	I-43 OFF-RAMP TO CTH V, PLACE RIGHT OF EXISTING J13-2 SIGN	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								RIGHT
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-3	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								RIGHT
58	CTH V, BETWEEN I-43 RAMP AND FRONTAGE RD, PLACE RIGHT OF EXISTING PARK AND RIDE SIGN	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-3	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								AHEAD

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*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. SEE "TRAFFIC CONTROL ITEMS" TABLE.

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
59	CTH V, W. OF FRONTAGE RD, PLACE 200' W. OF FRONTAGE RD	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								AHEAD
60	CTH V, W. OF I-43 SB RAMP, PLACE 175' W. OF I-43 SB RAMP INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								AHEAD
61	CTH V, E. OF I-43, PLACE RIGHT OF EXISTING J3-1 SIGN IN MEDIAN	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								LEFT
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								LEFT
62	I-43 OFF-RAMP TO CTH V, PLACE LEFT OF EXISTING R5-1 SIGN AT INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								LEFT
63	CTH V, BETWEEN RAMP INTERSECTIONS, PLACE RIGHT OF EXISTING J2-1 SIGN	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 5-1L	21"x21"	1	12	12								
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 5-1L	21"x21"	1	12	12								
64	I-43 OFF-RAMP TO CTH V, PLACE 400' PRIOR TO RAMP INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 5-1L	21"x21"	1	12	12								
65	I-43, AT CTH V EXIT, PLACE TO LEFT OF EXISTING TYPE I GROUND MOUNT SIGN	MO 4-8	36"x18"	1	12	12								
	"	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 6-2	30"x30"	1	12	12								TILT RIGHT
66	I-43, S. OF CTH V, PLACE 1/4 MILE S. OF CTH V OFF-RAMP IN MEDIAN	MO 4-8	36"x18"	1	12	12								
	"	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 5-2R	30"x30"	1	12	12								

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*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. SEE "TRAFFIC CONTROL ITEMS" TABLE.

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
67	I-43, S. OF CTH V, PLACE 1/4 MILE S. OF CTH V OFF-RAMP ON RIGHT SHOULDER	MO 4-8	36"x18"	1	12	12								
	"	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 5-2R	30"x30"	1	12	12								
68	I-43, S. OF CTH V, PLACE 1/2 MILE S. OF CTH V OFF-RAMP IN MEDIAN	FMS		1					60					
69	I-43, S. OF CTH V, PLACE 1/2 MILE S. OF CTH V OFF-RAMP ON RIGHT SHOULDER	FMS		1					60					
70	I-43, S. OF CTH V, PLACE 3/4 MILE S. OF CTH V OFF-RAMP IN MEDIAN	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								
71	I-43, S. OF CTH V, PLACE 3/4 MILE S. OF CTH V OFF-RAMP ON RIGHT SHOULDER	M 3-4	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								
72	STH 57, N. OF STH 28, PLACE 1/4 MILE N. OF STH 28 ON RIGHT SHOULDER	M 3-2	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								
73	STH 57, N. OF STH 28, PLACE 1/4 MILE N. OF STH 28 IN MEDIAN	M 3-2	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								
74	STH 57, N. OF STH 28, PLACE RIGHT OF EXISTING J2-2 SIGN	MO 4-8	36"x18"	1	12	12								
	"	M 3-2	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 6-1	30"x30"	1	12	12								AHEAD
75	STH 57, N. OF STH 28, MODIFY EXISTING J2-1 SIGN AS SHOWN	MO 4-8	36"x18"	1	12	12								
	"	MO 6-1	30"x30"	1	12	12								
76	STH 57, N. OF STH 28, COVER EXISTING D1-3 SIGN AS SHOWN										1		1	COVER "SHEB FALLS-SHEB"
77	STH 57, AT STH 28, MODIFY EXISTING J3-2 SIGN AS SHOWN	MO 4-8	36"x18"	1	12	12								AHEAD
	"	MO 6-1	30"x30"	1	12	12								
78	STH 57, AT STH 28, MODIFY EXISTING J3-2 SIGN AS SHOWN	MO 4-8	36"x18"	1	12	12								AHEAD
	"	MO 6-1	30"x30"	1	12	12								
79	STH 28, AT STH 57, PLACE ON RIGHT SHOULDER IN SE QUADRANT OF INTERSECTION	R 11-3	60"x30"	1	12	12	12	24						7 MILES AHEAD
	"	MO 4-9R	30"x24"	1	12	12								
80	STH 28, E. OF STH 57, COVER EXISTING J4-1 SIGN AS SHOWN										1		1	COVER ENTIRE SIGN
81	STH 57/STH 28, S. OF STH 28 SPLIT, COVER EXISTING J3-1 SIGN AS SHOWN										1		1	COVER ENTIRE SIGN
82	STH 57/STH 28, S. OF STH 28 SPLIT, COVER EXISTING D1-3 SIGN AS SHOWN										1		1	COVER "SHEB FALLS-SHEB"
83	STH 57/STH 28, S. OF STH 28 SPLIT, COVER EXISTING J3-2 SIGN AS SHOWN										1		1	COVER "EAST 28 ADV RT"
84	STH 57/STH 28, N. OF STH 28 SPLIT, PLACE 750' N. OF CTH V INTERSECTIONON RIGHT SHOULDER	MO 4-8	36"x18"	1	12	12								
	"	M 3-2	30"x30"	1	12	12								
	"	M 1-6	36"x18"	1	12	12								28
	"	MO 5-1L	30"x30"	1	12	12								
85	STH 57/STH 28, N. OF STH 28 SPLIT, PLACE 750' N. OF CTH V INTERSECTION IN MEDIAN	MO 4-8	36"x18"	1	12	12								
	"	M 3-2	30"x30"	1	12	12								
	"	M 1-6	36"x18"	1	12	12								28
	"	MO 5-1L	30"x30"	1	12	12								
86	STH 57/STH 28, N. OF STH 28 SPLIT, COVER EXISTING J4-3 SIGN AS SHOWN										1		1	COVER "EAST 28"
87	STH 28, W. OF STH 57, PLACE 1000' W. OF STH 57 INTERSECTION	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								

PAGE SUBTOTALS 41 468 12 24 120 0 0 6

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. SEE "TRAFFIC CONTROL ITEMS" TABLE.

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
88	STH 57, AT CTH V, PLACE LEFT OF EXISTING J3-1 SIGN AT CTH V INTERSECTION	MO 4-8	36"x18"	1	12	12								
	"	M 3-2	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 6-1	30"x30"	1	12	12								LEFT
89	STH 28, AT STH 57, PLACE 100' W. OF STH 57 INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
90	STH 57, AT CTH V, PLACE RIGHT OF EXISTING J3-2 SIGN S. OF CTH V INTERSECTION	MO 4-8	36"x18"	1	12	12								
	"	M 3-2	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 6-1	30"x30"	1	12	12								RIGHT
91	STH 57, S. OF CTH V, PLACE ACROSS FROM EXISTING J2-3 SIGN IN MEDIAN	MO 4-8	36"x18"	1	12	12								
	"	M 3-2	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	MO 5-1R	30"x30"	1	12	12								
92	STH 57, S. OF CTH V, MODIFY EXISTING J2-3 SIGN ON RIGHT	MO 4-8	36"x18"	1	12	12								
	"	MO 5-1R	30"x30"	1	12	12								
93	STH 57, S. OF CTH V, PLACE 1/2 MILE S. OF CTH V INTERSECTION IN MEDIAN	M 3-2	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								
94	STH 57, S. OF CTH V, PLACE 1/2 MILE S. OF CTH V INTERSECTION ON RIGHT SHOULDER	M 3-2	36"x18"	1	12	12								
	"	M 1-6	36"x36"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								
95	CTH V, E. OF STH 57, PLACE LEFT OF EXISTING J4-1 SIGN AT STH 57 INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
96	CTH V, AT CTH I, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH I INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
97	CTH V, AT CTH I, PLACE 150' E. OF CTH I INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
98	CTH V, W. OF STH 32, PLACE 1000' W. OF STH 32 INTERSECTION	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	W 20-2A	48"x48"	1	12	12								
99	CTH V, W. OF STH 32, PLACE 500' W. OF STH 32 INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								AHEAD
100	CTH V, AT STH 32, MODIFY EXISTING J13-2 SIGN AT STH 32 INTERSECTION	MO 6-6	21"x21"	1	12	12								
101	CTH V, AT STH 32, PLACE RIGHT OF EXISTING J13-2 SIGN AT STH 32 INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD

PAGE SUBTOTALS 47 564 0 0 0 0 0 0 0 0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. SEE "TRAFFIC CONTROL ITEMS" TABLE.

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 12 DAYS	643.0900* SIGNS DAYS	643.0420* BARRICADES TYPE III DAYS	643.0705* WARNING LIGHTS TYPE A DAYS	643.1000 SIGNS FIXED MESSAGE SF	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO OF CYCLES	643.0910 COVERING SIGNS TYPE I EACH	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
102	STH 32, S. OF CTH V, PLACE 1000' S. OF CTH V INTERSECTION	W 20-2A	48"x48"	1	12	12								
103	STH 32, S. OF CTH V, PLACE 500' S. OF CTH V INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 5-1R	21"x21"	1	12	12								
104	STH 32, S. OF CTH V, PLACE RIGHT OF EXISTING J3-2 SIGN AS SHOWN	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								RIGHT
105	STH 32, AT CTH V, PLACE IN NE QUADRANT OF INTERSECTION ON RIGHT SHOULDER	R 11-3	60"x30"	1	12	12	12	24						3 MILES AHEAD
106	STH 32, N. OF CTH V, COVER EXISTING J4-1 SIGN AS SHOWN										1		1	COVER ENTIRE SIGN
107	CTH V, AT STH 32, PLACE RIGHT OF EXISTING J13-2 SIGN AT STH 32 INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
108	CTH V, AT STH 32, MODIFY EXISTING J13-2 SIGN AT STH 32 INTERSECTION AS SHOWN	MO 6-1	21"x21"	1	12	12								LEFT
109	CTH V, E. OF STH 32, PLACE 100' E. OF STH 32 INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
110	CTH V, E. OF STH 32, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"x18"	1	12	12								
111	CTH V, W. OF CTH A, PLACE 300' W. OF CTH A INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-1	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								AHEAD
112	CTH V, E. OF CTH A, PLACE 300' E. OF CTH A INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
	"	MO 4-8	24"x12"	1	12	12								
	"	M 3-3	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								32
	"	MO 6-1	21"x21"	1	12	12								AHEAD
113	CTH V, W. OF CTH M, PLACE 100' W. OF CTH M INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-2	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
114	CTH V, E. OF CTH M, PLACE 100' E. OF CTH M INTERSECTION	MO 4-8	24"x12"	1	12	12								
	"	M 3-4	24"x12"	1	12	12								
	"	M 1-6	24"x24"	1	12	12								28
	"	MO 6-1	21"x21"	1	12	12								AHEAD
PAGE SUBTOTALS				43		516	12	24	0	0		0	1	
*ADDITIONAL QUANTITIES SHOWN ELSEWHERE. SEE "TRAFFIC CONTROL ITEMS" TABLE.														
TRAFFIC CONTROL DETOUR SIGN TOTALS				357		4,212	48	96	120	28		4	13	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

3

	*	*	*	*	
643.0300	643.0420	643.0705	643.0900	643.1050	643.5000

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

643.3165	646.2040	646.4040	646.6466
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PROJECT 4010-29-71	498,039	147,798	897	36,950
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646.6320	646.7120	646.7420	646.8120	646.8220
MARKING DOTTED EXTENSION EPOXY		MARKING CROSSWALK EPOXY		
18-INCH	MARKING DIAGONAL EPOXY 12-INCH	TRANSVERSE LINE 6- INCH	MARKING CURB EPOXY	MARKING ISLAND NOSE EPOXY
WHITE	YELLOW	WHITE	YELLOW	YELLOW
1F	1F	1F	1F	EACH

PROJECT 4010-29-71	125	424	286	54	5
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3

3

CATEGORY	STATION	TO	STATION	LOCATION	650.5500	650.6501.01	650.8000	650.9911.01	650.9911.02	REMARKS
					CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	CONSTRUCTION STAKING STRUCTURE LAYOUT (B-59-322) EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (4010-28-71) EACH	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (4010-29-71) EACH	
0010	825+90	-	1312+20	STH 28	312	-	47,061	-	1	BROADWAY ST/CTH EE RAB AREA OMITTED
PROJECT 4010-29-71					312	0	47,061	0	1	
0010	881+50	-	883+60	STH 28	86	1	-	1	-	
PROJECT 4010-28-71					86	1	0	1	0	

CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	1298+76	-	1299+21	STH 28 DRIVEWAY RT	23	DRIVEWAY REPLACEMENT
PROJECT 4010-29-71					23	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
4010-28-21
WALDO - SHEBOYGAN FALLS
ONION RIVER TRIBUTARY

STH 28
SHEBOYGAN COUNTY

END PROJECT

CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	•
QUARTER LINE	---	SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	---	GEODETIC SURVEY MONUMENT		FOUND IRON PIN (1-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE	---	SIXTEENTH CORNER MONUMENT		OFF-PREMISE SIGN	
NEW R/W LINE	---	SIGN		COMPENSABLE	
EXISTING R/W OR HE LINE	---	ELECTRIC POLE		NON-COMPENSABLE	
PROPERTY LINE	---	TELEPHONE POLE			
LOT, TIE & OTHER MINOR LINES	---	PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)			
SLOPE INTERCEPT	---	ACCESS RESTRICTED BY ACQUISITION			
CORPORATE LIMITS	---	NO ACCESS (BY STATUTORY AUTHORITY)			
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	---	ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)			
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---	NO ACCESS (NEW HIGHWAY)			
TEMPORARY LIMITED EASEMENT AREA	---	PARCEL NUMBER		UTILITY NUMBER	
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---	PARALLEL OFFSETS			
TRANSMISSION STRUCTURES	---				
BUILDING					
TO BE REMOVED					
BRIDGE					
CULVERT					

CONVENTIONAL ABBREVIATIONS

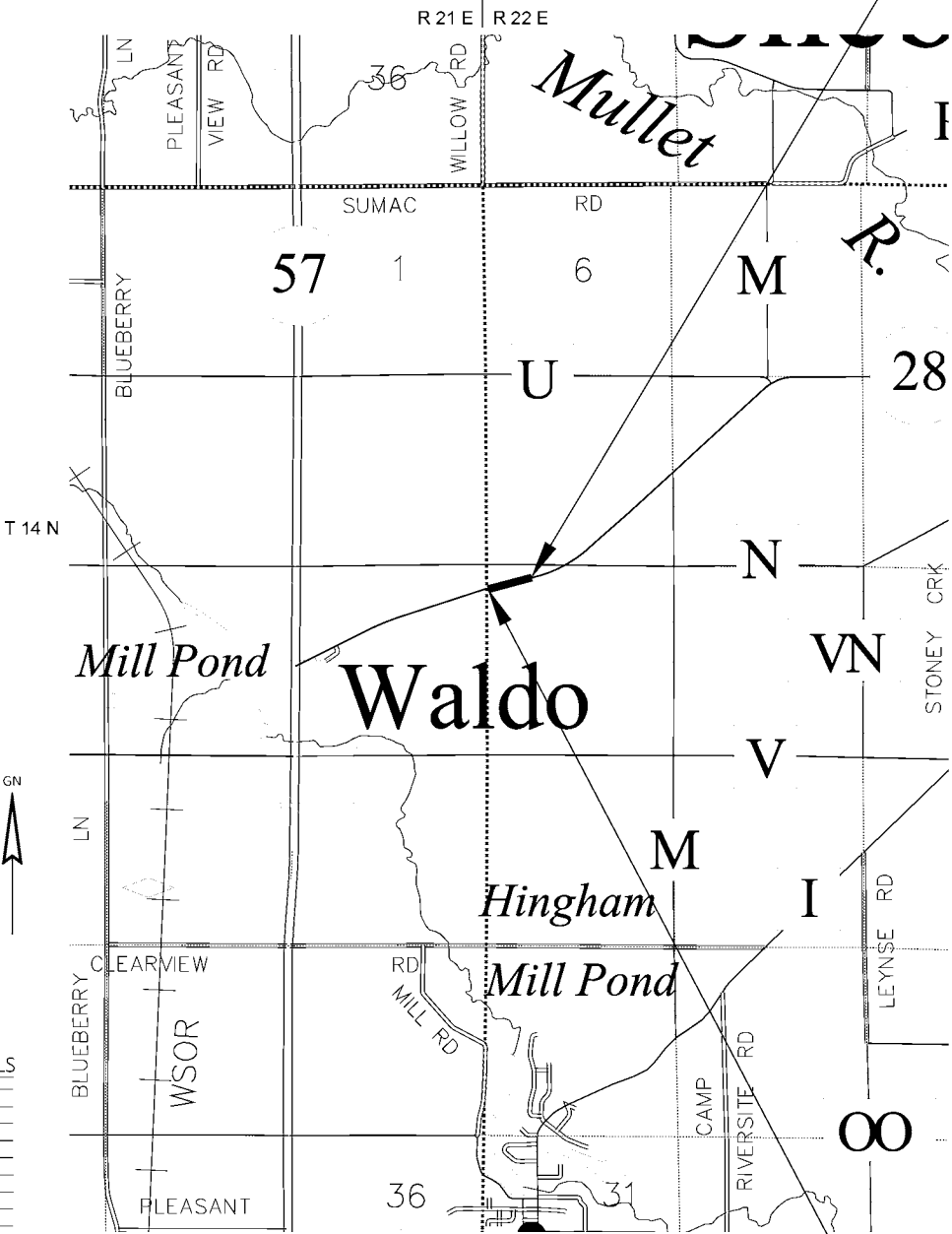
ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS	(100')
AND OTHERS	ET AL	REEL / IMAGE	R/I
BACK	BK	REFERENCE LINE	R/L
BLOCK	BLK	REMAINING	REM
CENTERLINE	C/L	RESTRICTIVE DEVELOPMENT	RDE
CERTIFIED SURVEY MAP	CSM	EASEMENT	
CONCRETE	CONC	RIGHT	RT
COUNTY	CO	RIGHT OF WAY	R/W
COUNTY TRUNK HIGHWAY	CTH	SECTION	SEC
DISTANCE	DIST	SEPTIC VENT	SEPV
CORNER	COR	SQUARE FEET	SF
DOCUMENT NUMBER	DOC	STATE TRUNK HIGHWAY	STH
EASEMENT	EASE	STATION	STA
EXISTING	EX	TELEPHONE PEDESTAL	TP
GAS VALVE	GV	TEMPORARY LIMITED	TLE
GRID NORTH	GN	EASEMENT	
HIGHWAY EASEMENT	HE	TRANSPORTATION PROJECT PLAT	TPP
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		

CURVE DATA ABBREVIATIONS

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

WATER	---
GAS	---
TELEPHONE	---
OVERHEAD TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---
ELECTRIC TOWER	---



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 4010-28-21

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), SHEBOYGAN COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLES) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES. PLE'S ARE FOR MAINTENANCE OF THE BEAM GUARD AND DRIVEWAY IF THEY GET DAMAGED AND ARE MONUMENTED.

PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS AND/OR EXISTING OCCUPATIONAL LINES.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

PROJECT NUMBER 4010-28-21 - 4.01
SHEET 2 OF 2

TRANSPORTATION PROJECT PLAT NO: 4010-28-21-4.01

THAT PART OF LOT 1, VOLUME 20 OF CERTIFIED SURVEY MAPS, ON PAGE 52, AS DOCUMENT NUMBER 1708762, LOCATED IN AND INCLUDING PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 18, TOWNSHIP 14 NORTH, RANGE 22 EAST, TOWN OF LIMA, SHEBOYGAN COUNTY, WISCONSIN

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTERESTS REQUIRED	FEE R/W (SF)			
			NEW	EXISTING	TOTAL	PLE
1	SAMUEL D BROWN AND ERIN L NELSON	FEE	1729	8041	9770	---
2	ANTHONY R AND JOYCE E WATSON	FEE	525	---	525	---
3	LEROY AND LESLIE WINTER	PLE & TLE	---	---	---	552

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT. PURPOSE OF ALL THE TLES ARE FOR GRADING, UNLESS NOTED.

RELOCATION ORDER STH 28, WALDO - SHEBOYGAN FALLS, ONION RIVER TRIBUTARY, SHEBOYGAN COUNTY TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

2164928
SHEBOYGAN COUNTY WI
RECORDED ON
06/14/2024 10:33 AM
ELLEN R. SCHLEICHER
REGISTER OF DEEDS
PLAT FEE: 25.00
Cashier ID: 7
Vol.: 1 Page(s): 220/221
Electronically Recorded.
Returned to Submitter.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4010-28-21-4.01
SHEET 1 OF 2

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), SHEBOYGAN COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

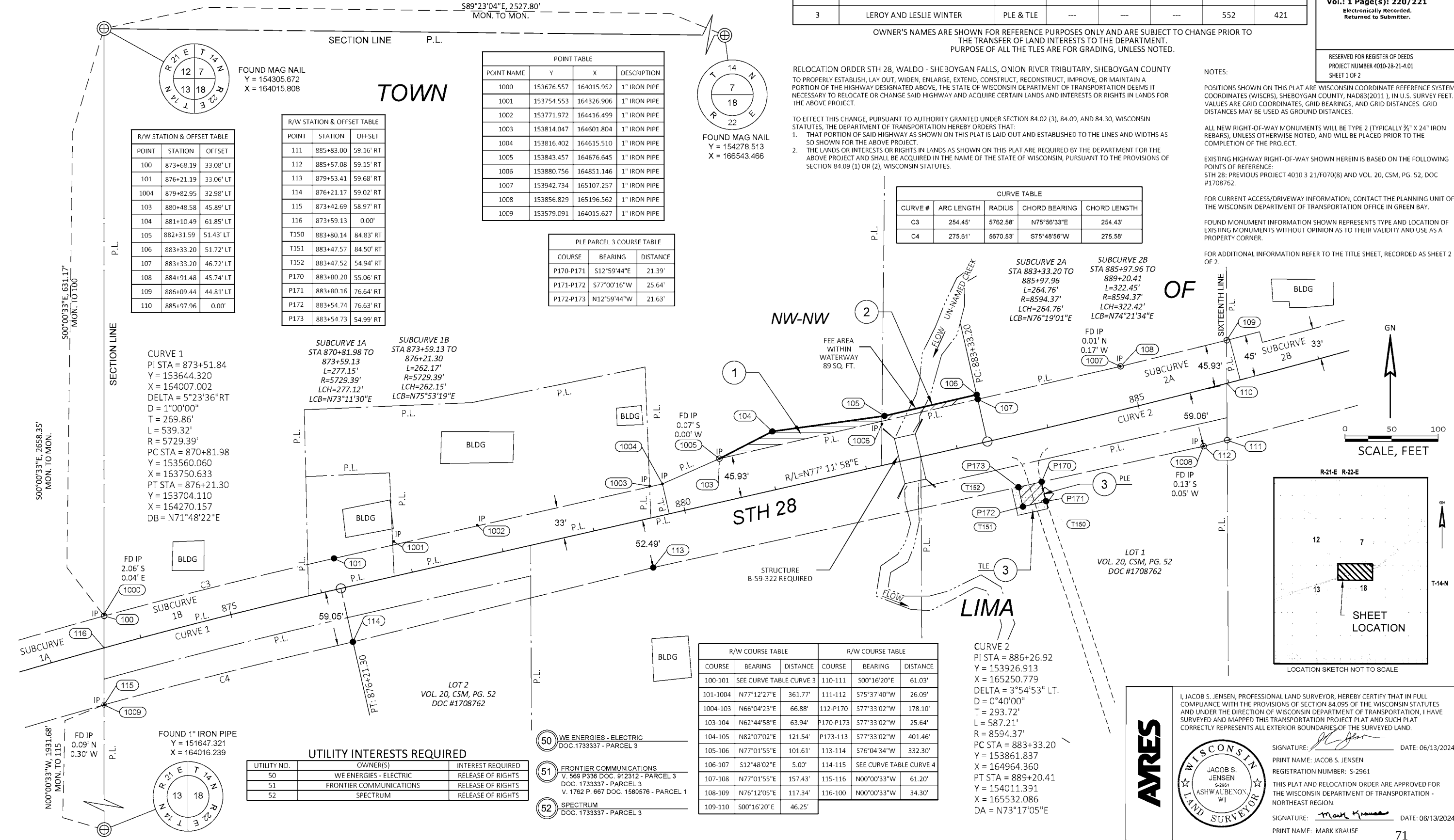
ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

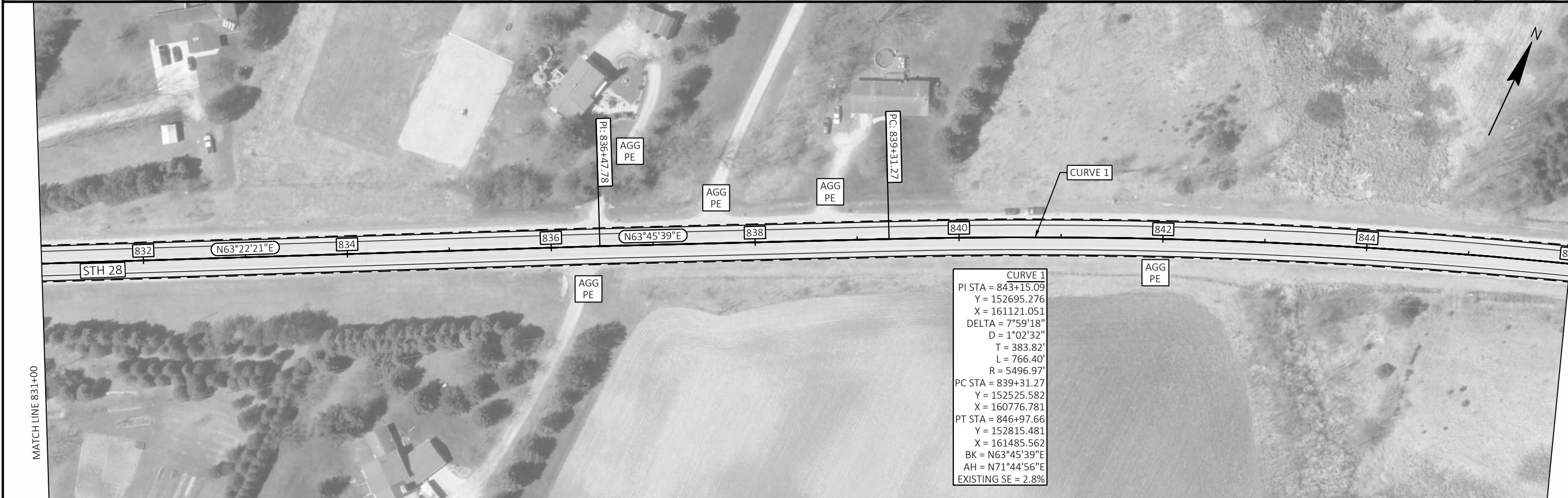
EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
STH 28: PREVIOUS PROJECT 4010 3 21/F070(8) AND VOL. 20, CSM, PG. 52, DOC #1708762.

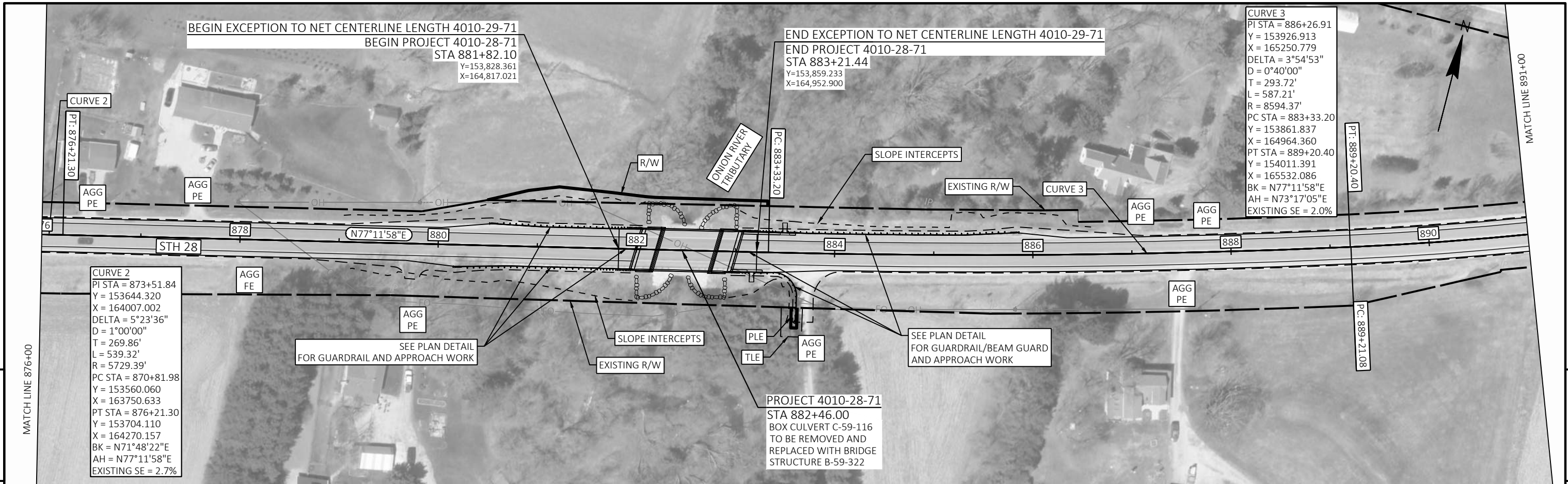
FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY.

FOUND MONUMENT INFORMATION SHOWN REPRESENTS TYPE AND LOCATION OF EXISTING MONUMENTS WITHOUT OPINION AS TO THEIR VALIDITY AND USE AS A PROPERTY CORNER.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2.







PROJECT NO:	4010-28-71 & 4010-29-71	HWY:	STH 28	COUNTY:	SHEBOYGAN	PLAN SHEETS	SHEET	74	E
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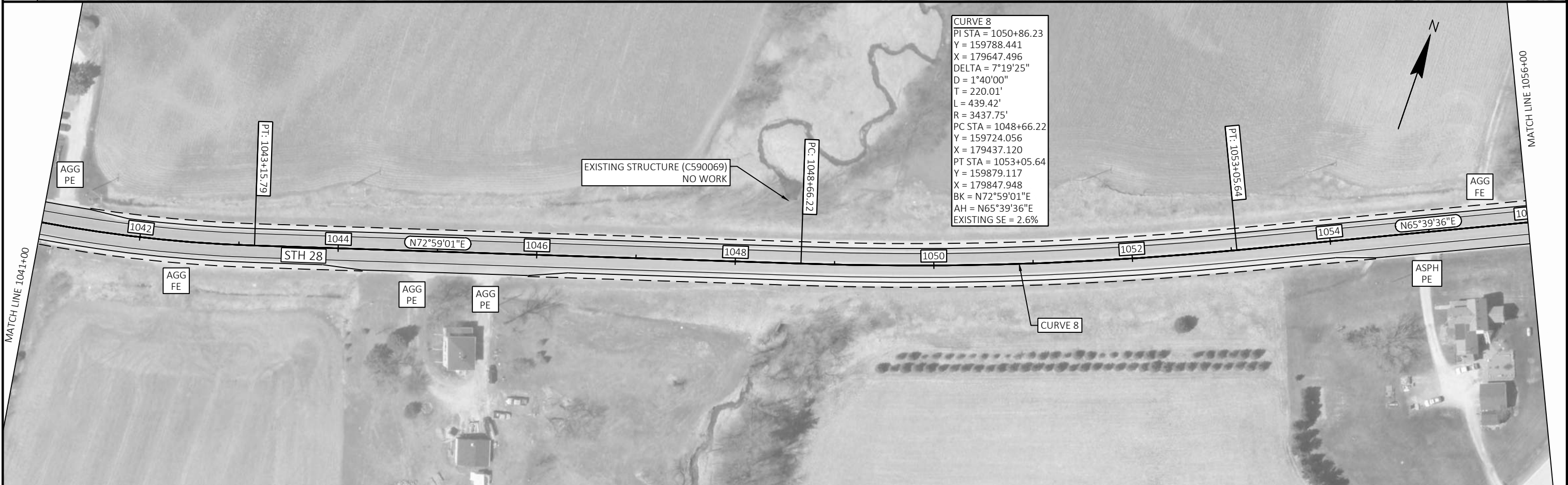




PROJECT NO: 4010-29-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 76	E
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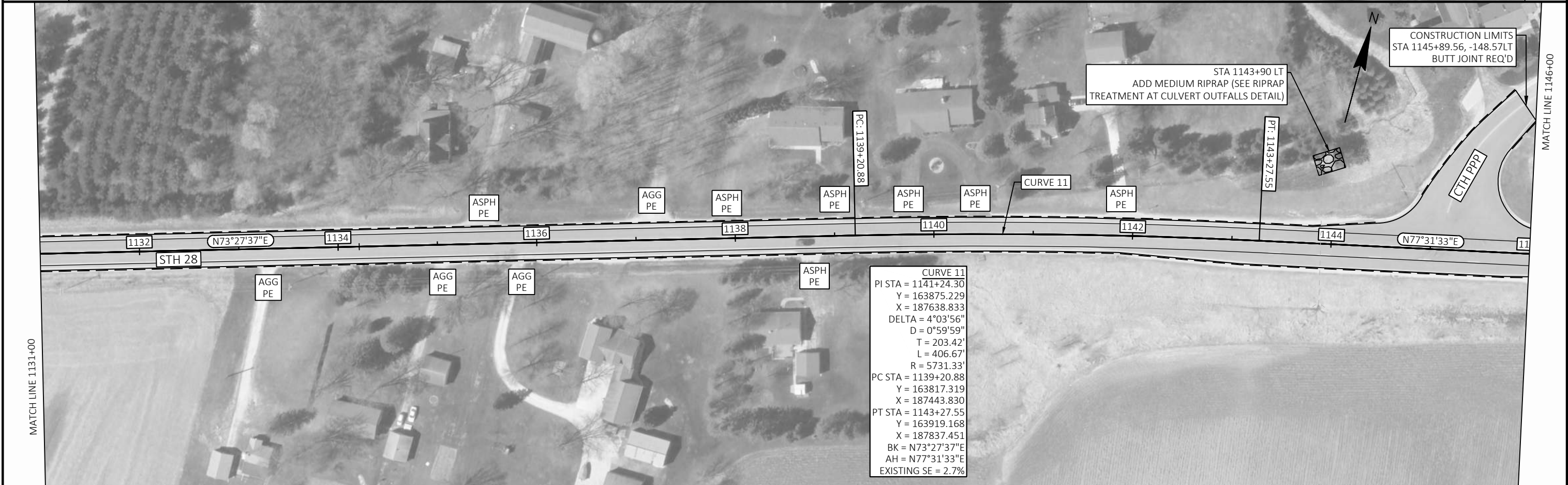


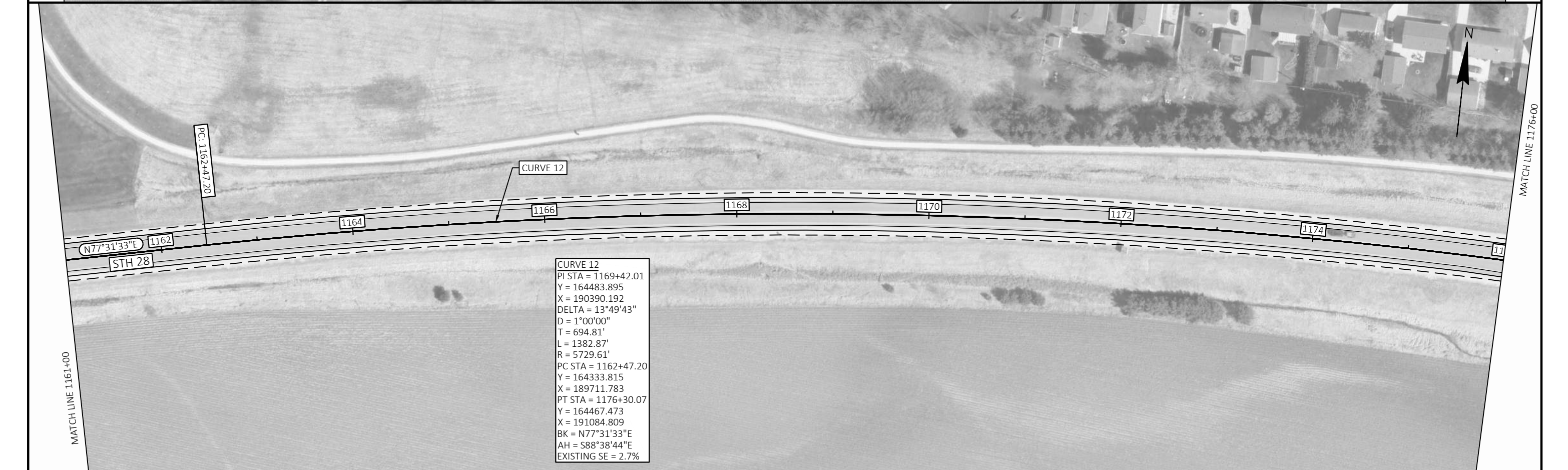












PROJECT NO: 4010-29-71

HWY: STH 28

COUNTY: SHEBOYGAN

PLAN SHEETS

SHEET

83

E

FILE NAME : N:\PDS\C3D\40102900\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050212-pn

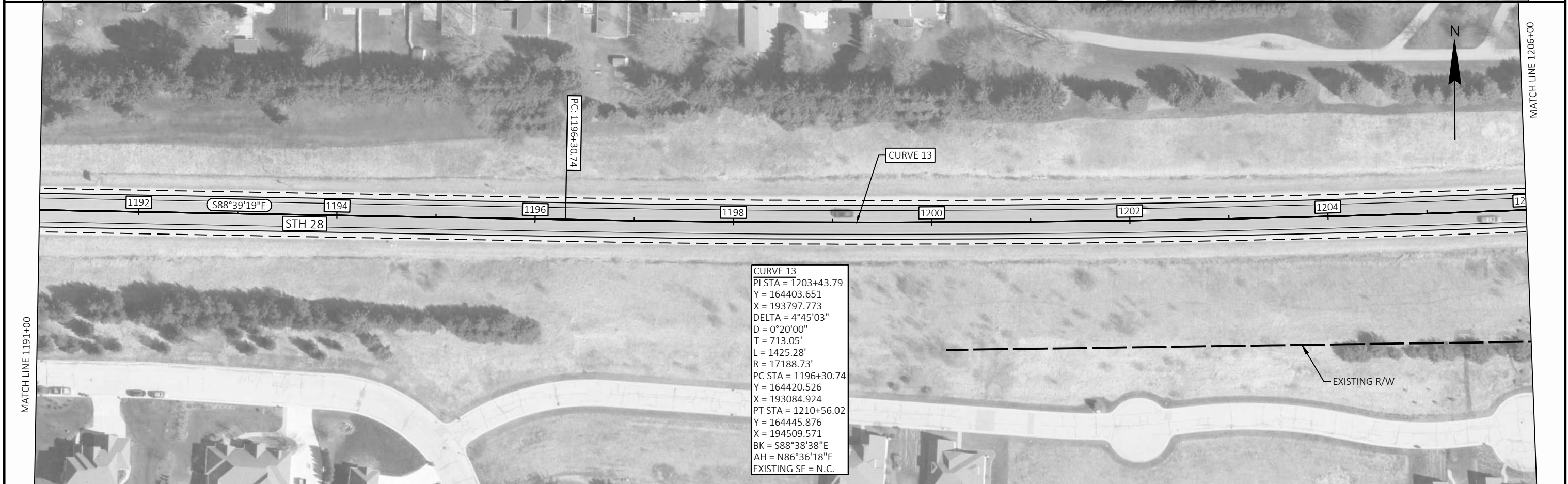
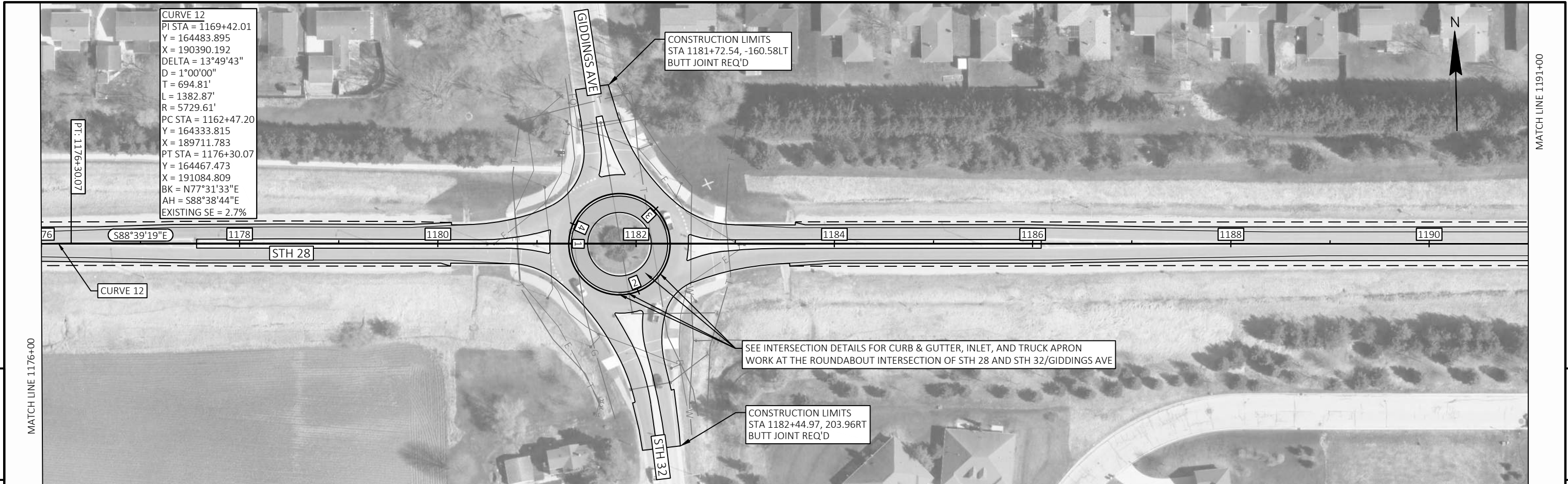
PLOT DATE : 10/28/2025 3:56 PM

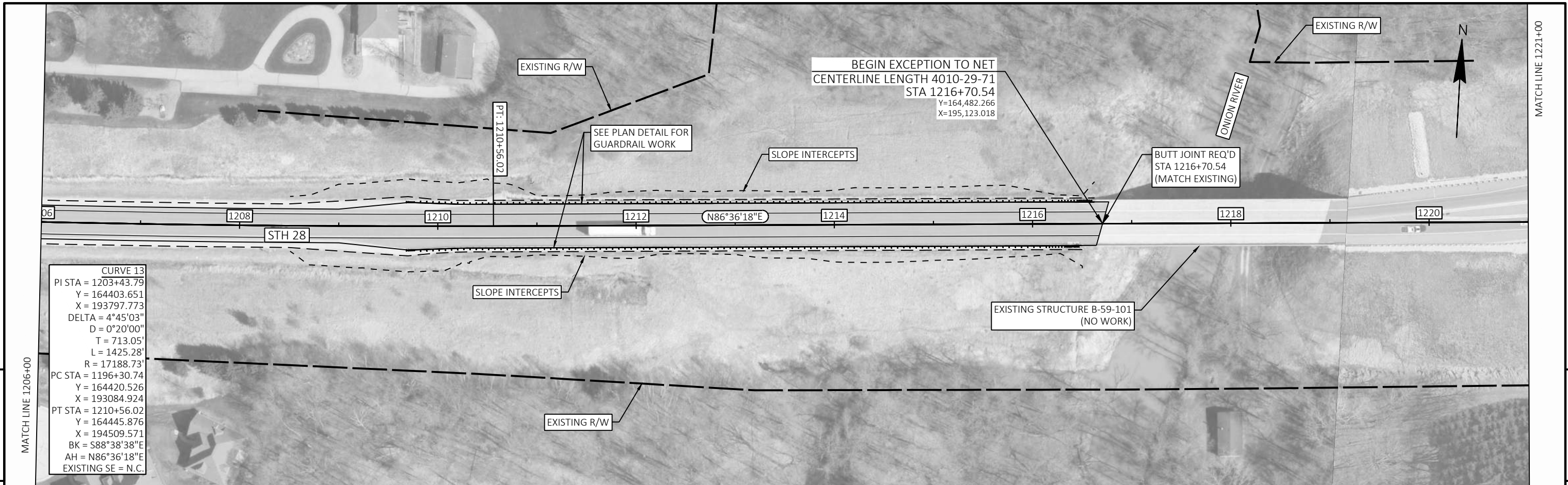
PLOT BY : DANA, SHARON T

PLOT NAME :

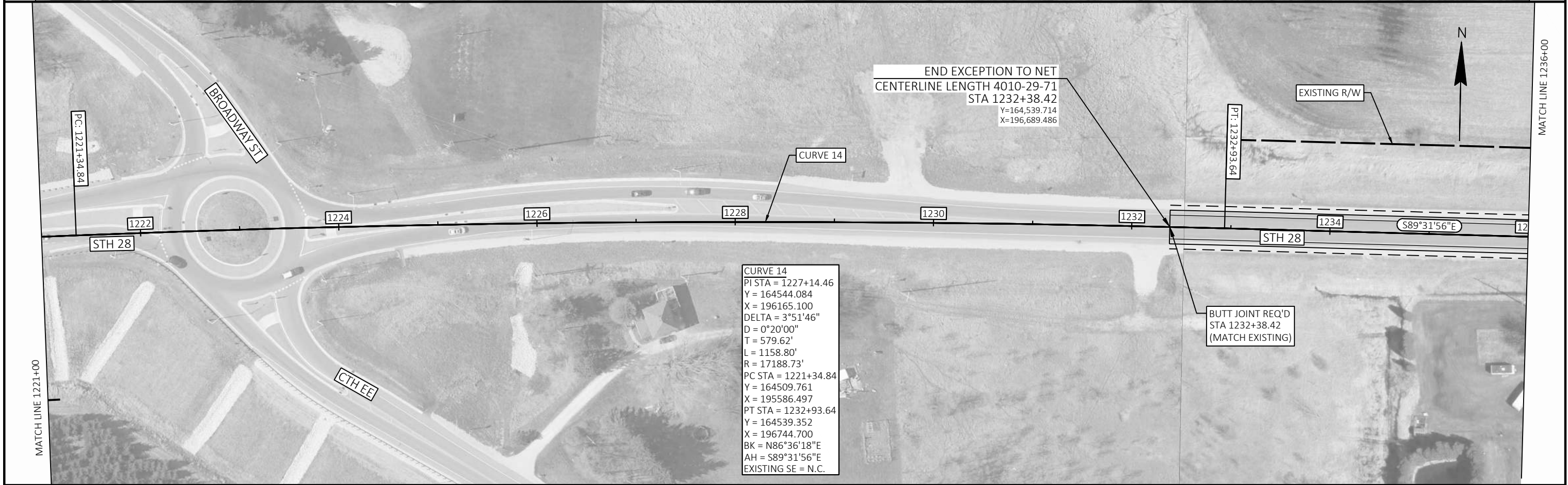
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 44





CURVE 13
PI STA = 1203+43.79
Y = 164403.651
X = 193797.773
DELTA = 4°45'03"
D = 0°20'00"
T = 713.05'
L = 1425.28'
R = 17188.73'
PC STA = 1196+30.74
Y = 164420.526
X = 193084.924
PT STA = 1210+56.02
Y = 164445.876
X = 194509.571
BK = S88°38'38"E
AH = N86°36'18"E
EXISTING SE = N.C.

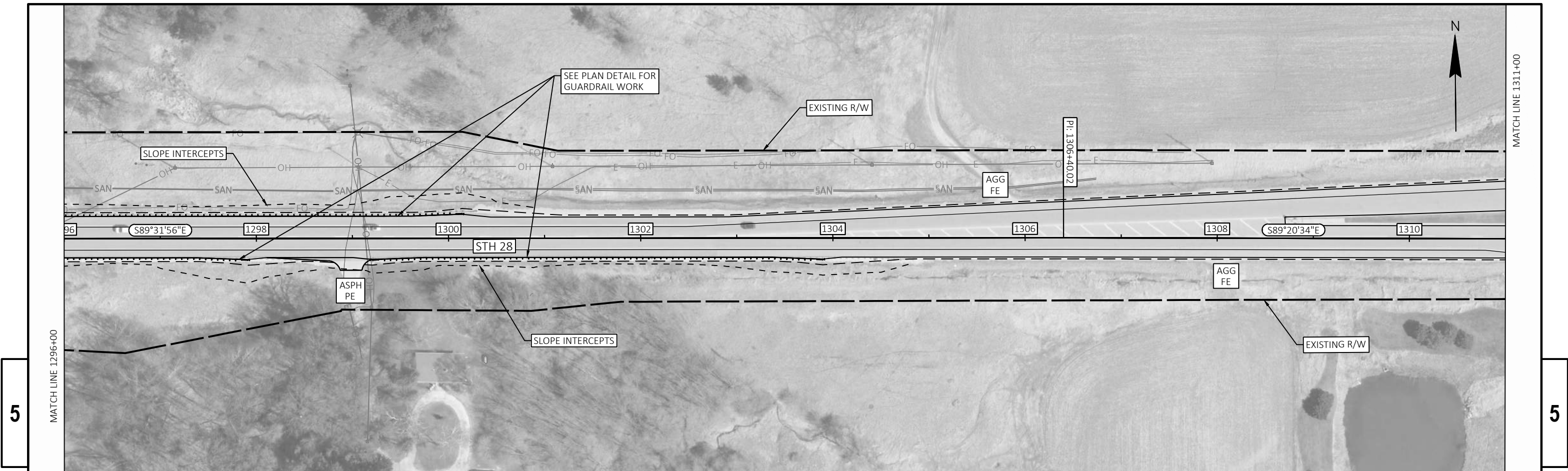


CURVE 14
PI STA = 1227+14.46
Y = 164544.084
X = 196165.100
DELTA = 3°51'46"
D = 0°20'00"
T = 579.62'
L = 1158.80'
R = 17188.73'
PC STA = 1221+34.84
Y = 164509.761
X = 195586.497
PT STA = 1232+93.64
Y = 164539.352
X = 196744.700
BK = N86°36'18"E
AH = S89°31'56"E
EXISTING SE = N.C.



PROJECT NO: 4010-29-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 86	E
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PROJECT NO: 4010-29-71	HWY: STH 28	COUNTY: SHEBOYGAN	PLAN SHEETS	SHEET 88	E
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Standard Detail Drawing List

08A05-22C	INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13A08-02	TRANSVERSE RUMBLE STRIPS, ASPHALTIC
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13A10-03B	SHOULDER RUMBLE STRIPS - CONCRETE
13A10-03C	SHOULDER RUMBLE STRIPS - ASPHALT SINUSOIDAL
13A10-03D	SHOULDER RUMBLE STRIPS - CONCRETE SINUSOIDAL
13A10-03E	EDGE LINE RUMBLE STRIPS - ASPHALT
13A10-03F	EDGE LINE RUMBLE STRIPS - CONCRETE
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04B	CENTERLINE RUMBLE STRIPS - CONCRETE
13A11-04C	CENTERLINE RUMBLE STRIPS - ASPHALT, SINUSOIDAL
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C19-03	HMA LONGITUDINAL JOINTS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-12A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-12B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09D	ON RAMP LANE CLOSURE
15C02-09E	OFF RAMP LANE CLOSURE
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-24C	PAVEMENT MARKING (TURN LANES)
15C08-24D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-09A	MEDIAN ISLAND PAVEMENT MARKINGS
15C18-09B	PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

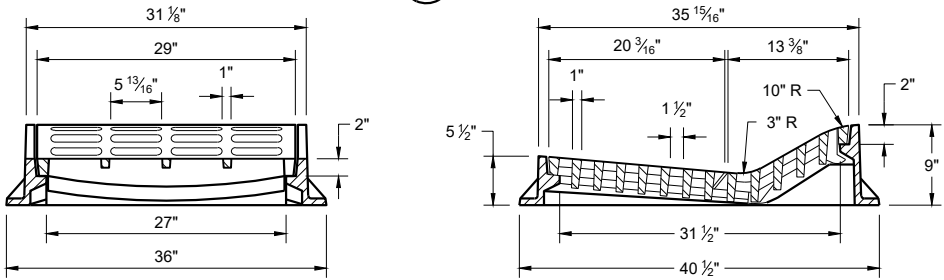
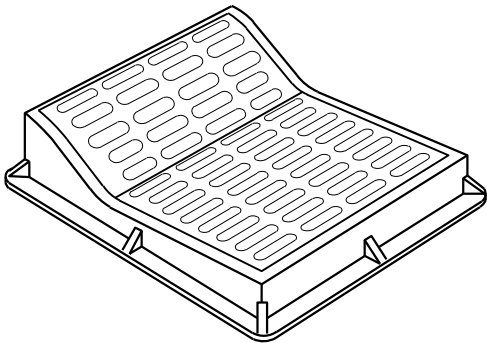
Standard Detail Drawing List

15C18-09C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C19-10A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-10B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-10C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C22-01	DOTTED EXTENSION FOR ROUNDABOUT
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15C35-06B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-06C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

GENERAL NOTES

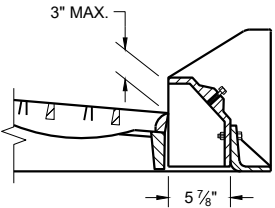
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

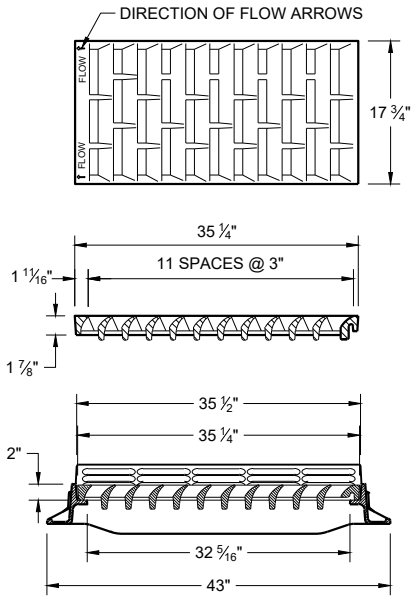


ALTERNATIVE CURB BOX
FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

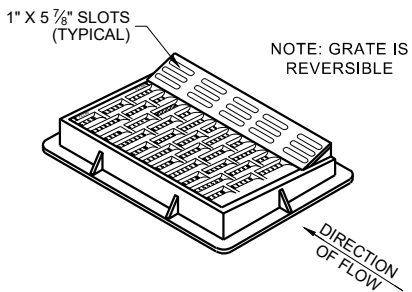
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.

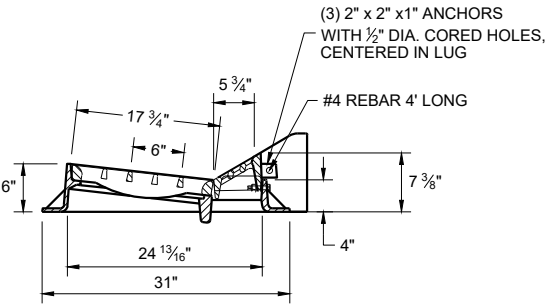


TYPE "HM"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

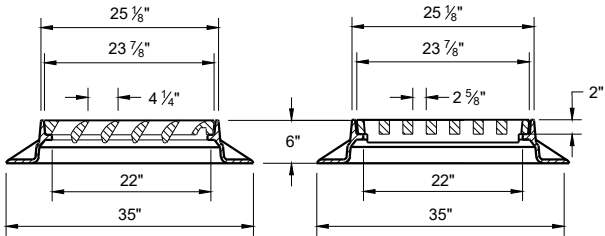
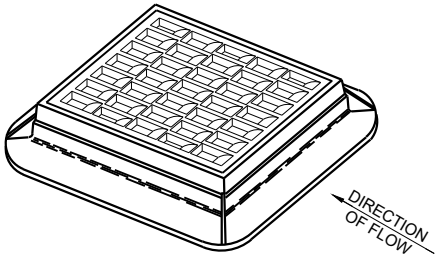


NOTE: GRATE IS REVERSIBLE

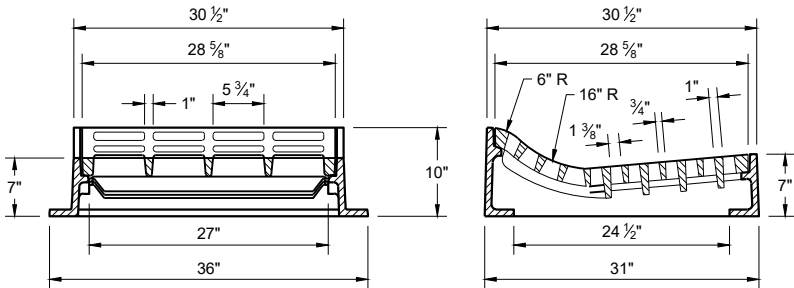
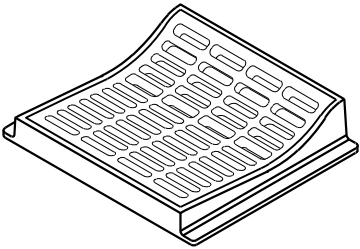


NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



TYPE "S"



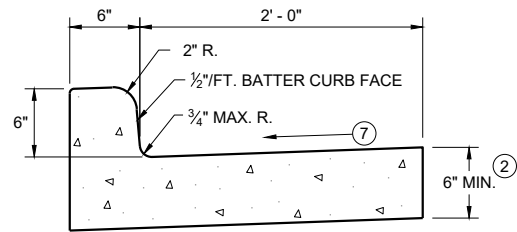
TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

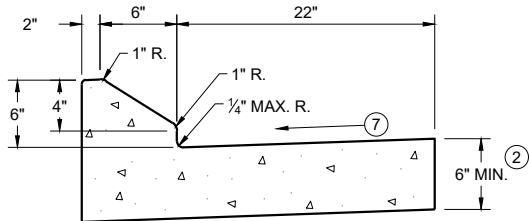
INLET COVERS
TYPES F, HM, HM-S, S, T,
HM-GJ AND HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

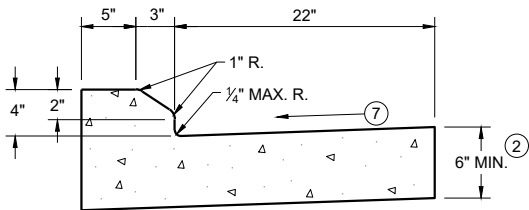
APPROVED
February 2025 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



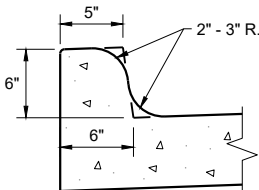
TYPES A^① & D



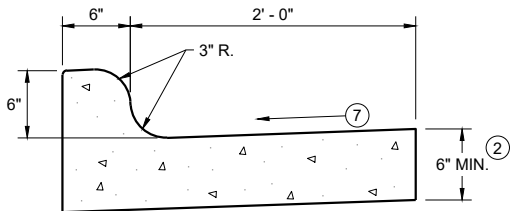
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

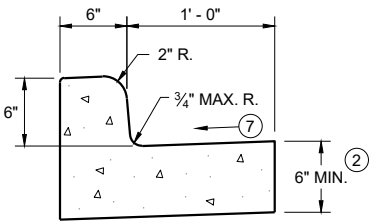


TYPES K^① & L
(OPTIONAL CURB SHAPE)



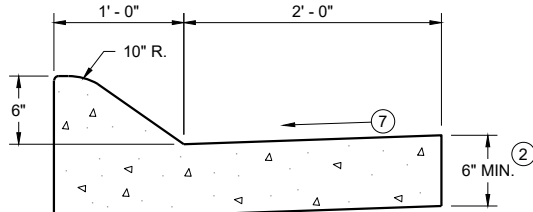
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

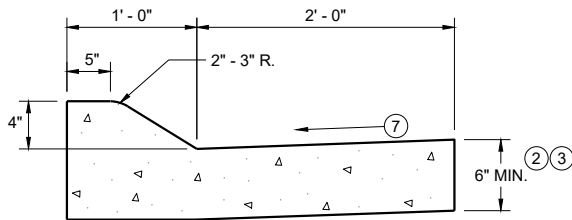


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

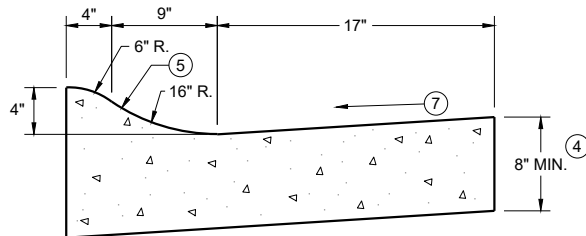


6" SLOPED CURB TYPES A^① & D



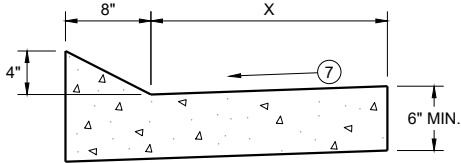
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T
CONCRETE CURB AND GUTTER 30"

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

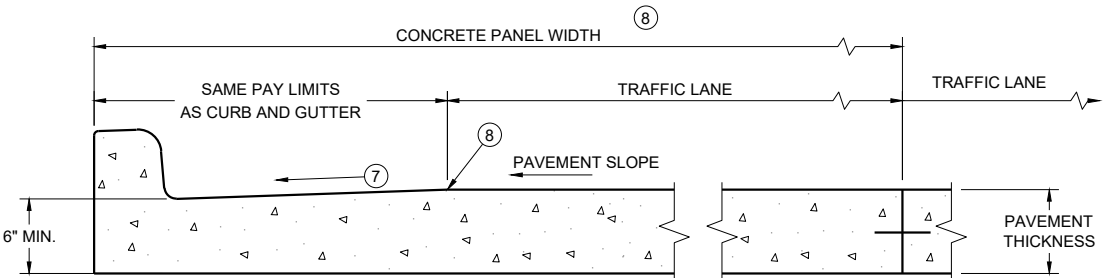


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

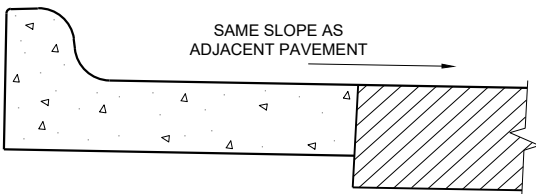
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

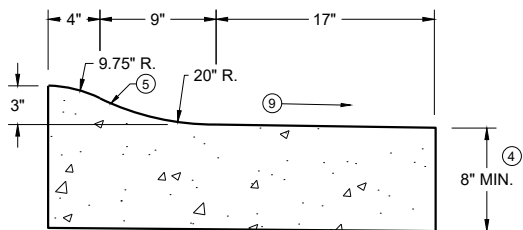


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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



3" SLOPED CURB TYPES R^① & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

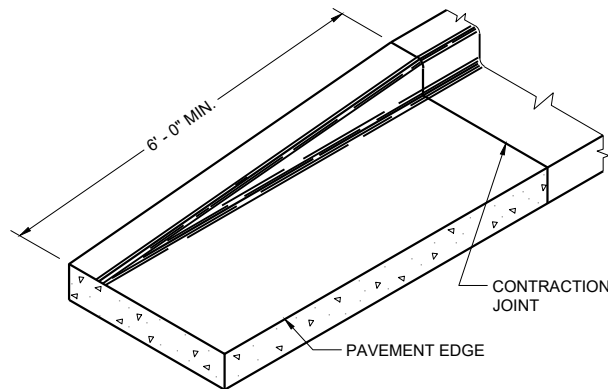
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

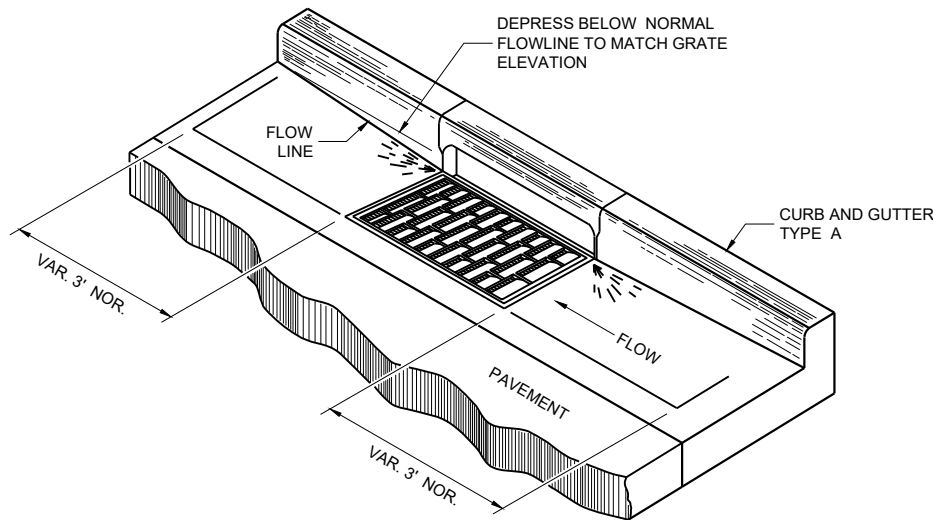
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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 GUTTERS 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 UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES 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.
- ⑨ SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY

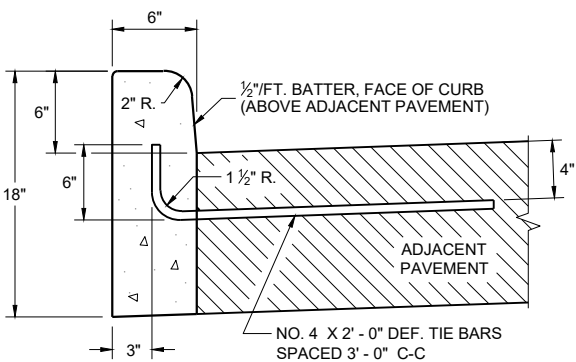


END SECTION CURB AND GUTTER

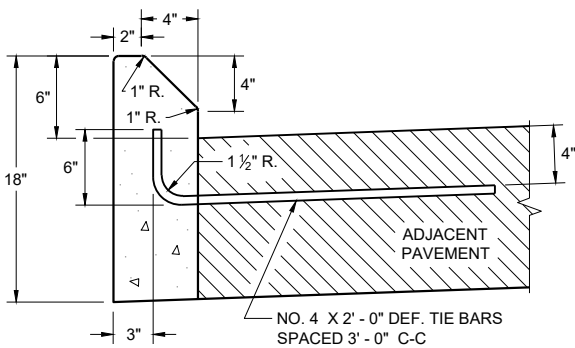


DETAIL OF CURB AND GUTTER AT INLETS

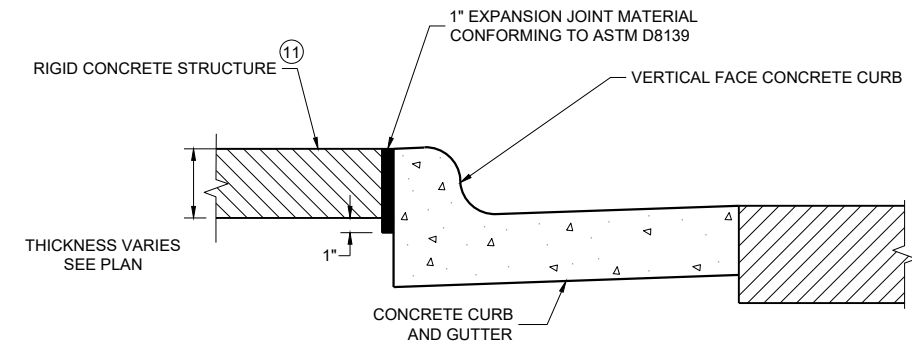
(TYPICAL H INLET COVER SHOWN)



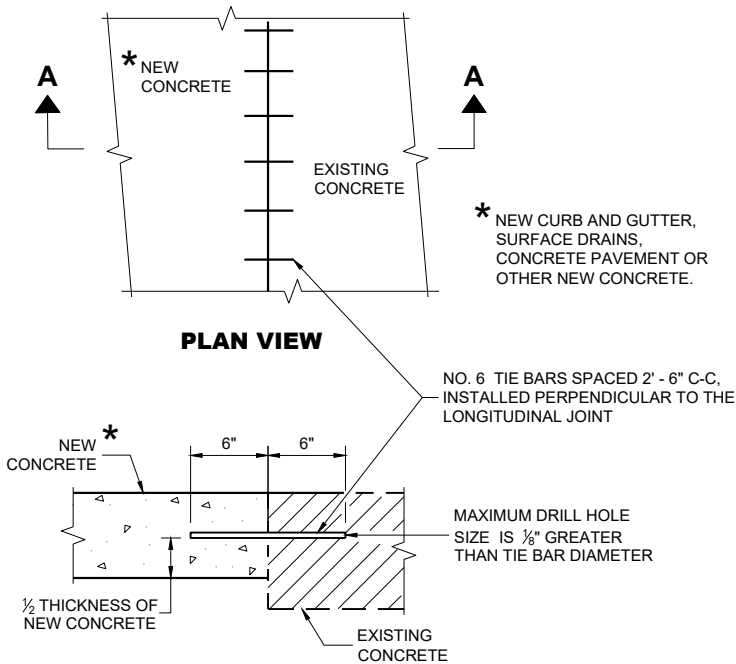
TYPES A^① & D



TYPES G^① & J
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

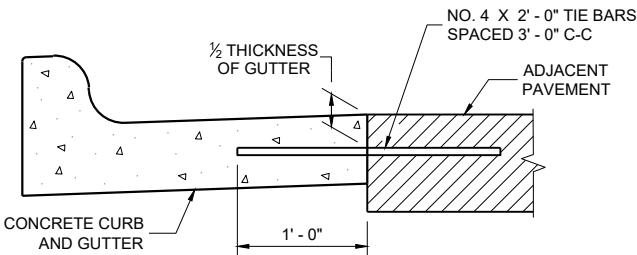
GENERAL NOTES

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

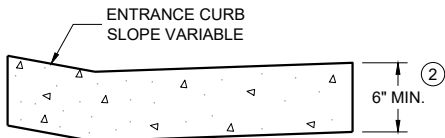
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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 GUTTERS 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.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

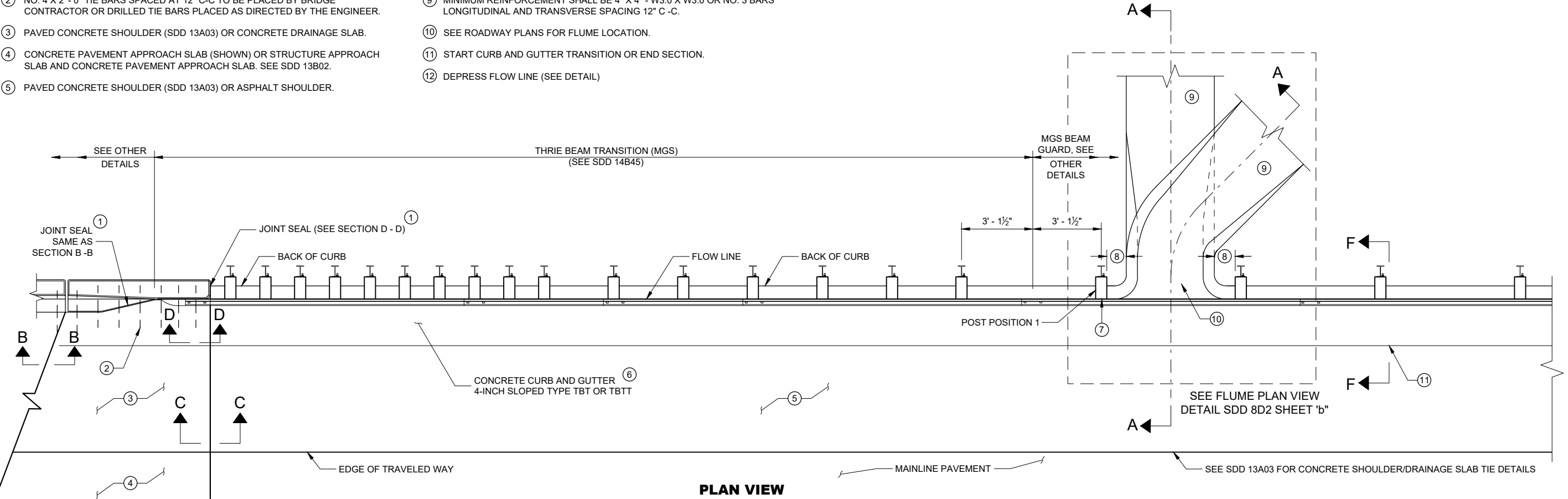
GENERAL NOTES

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

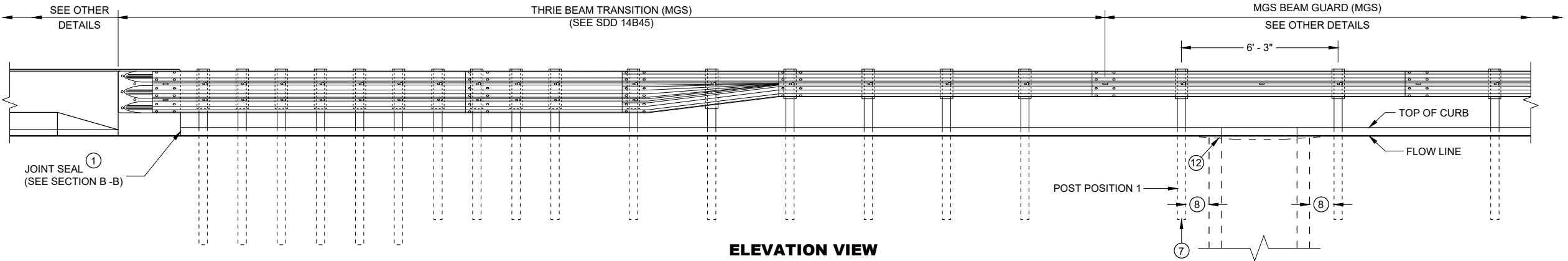
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- 1 USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- 2 NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- 3 PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- 4 CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- 5 PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

- 6 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- 7 PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- 8 CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- 9 MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- 10 SEE ROADWAY PLANS FOR FLUME LOCATION.
- 11 START CURB AND GUTTER TRANSITION OR END SECTION.
- 12 DEPRESS FLOW LINE (SEE DETAIL)



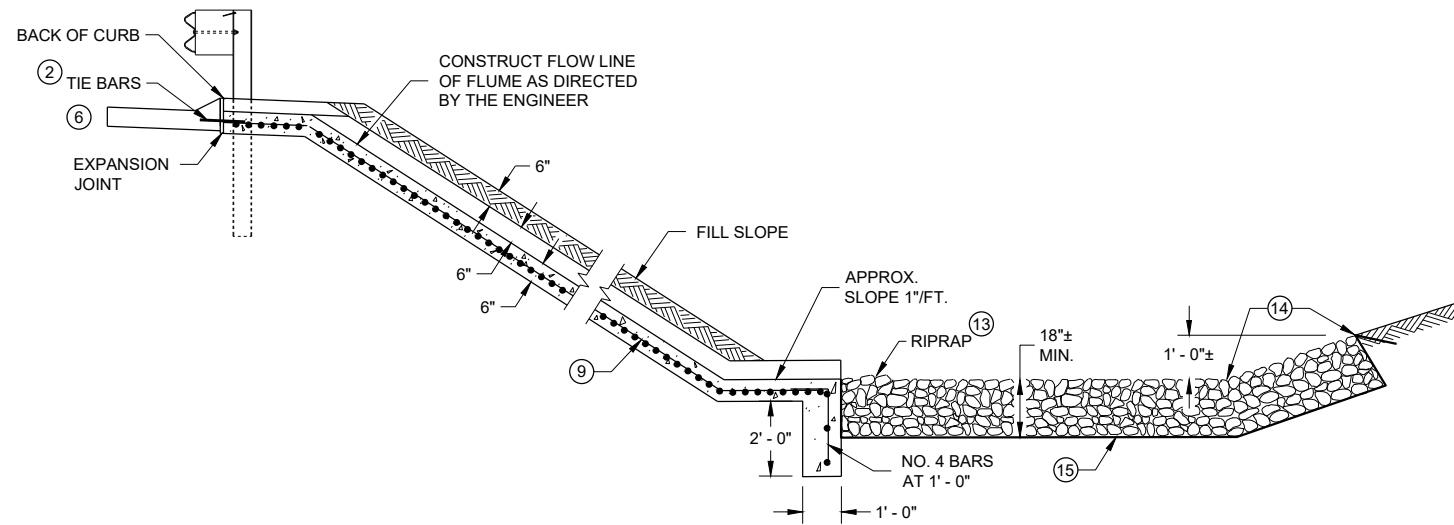
PLAN VIEW



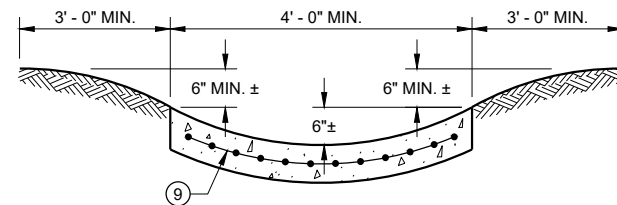
ELEVATION VIEW

CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES

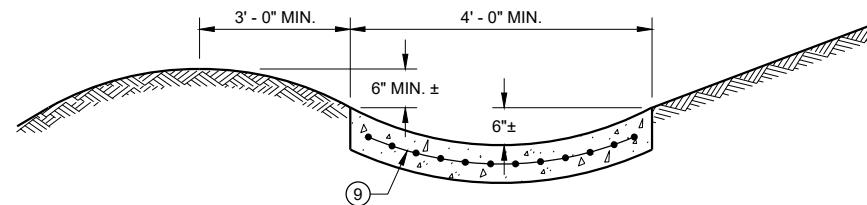
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



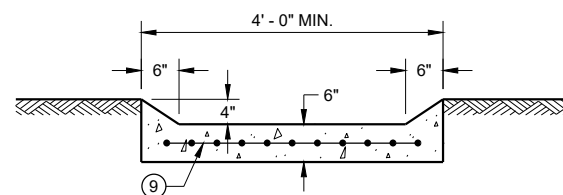
SECTION A - A



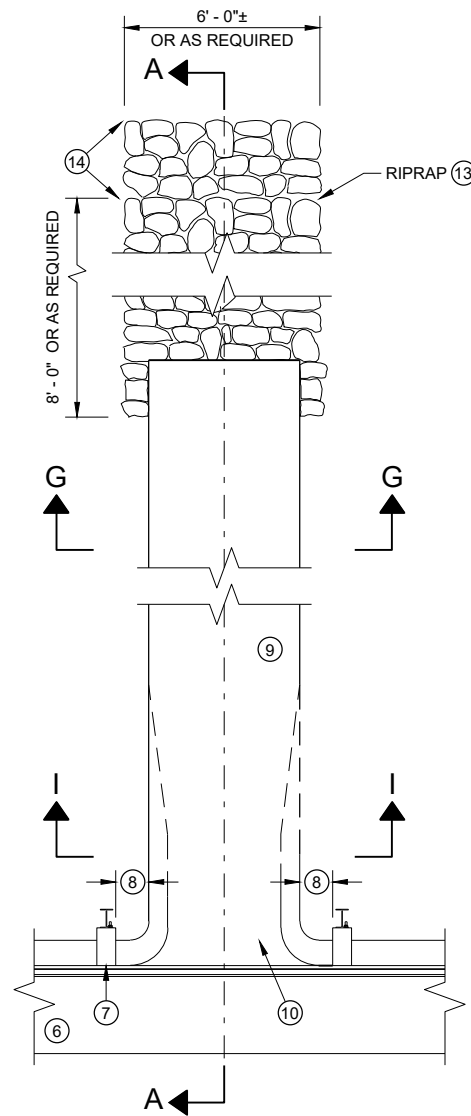
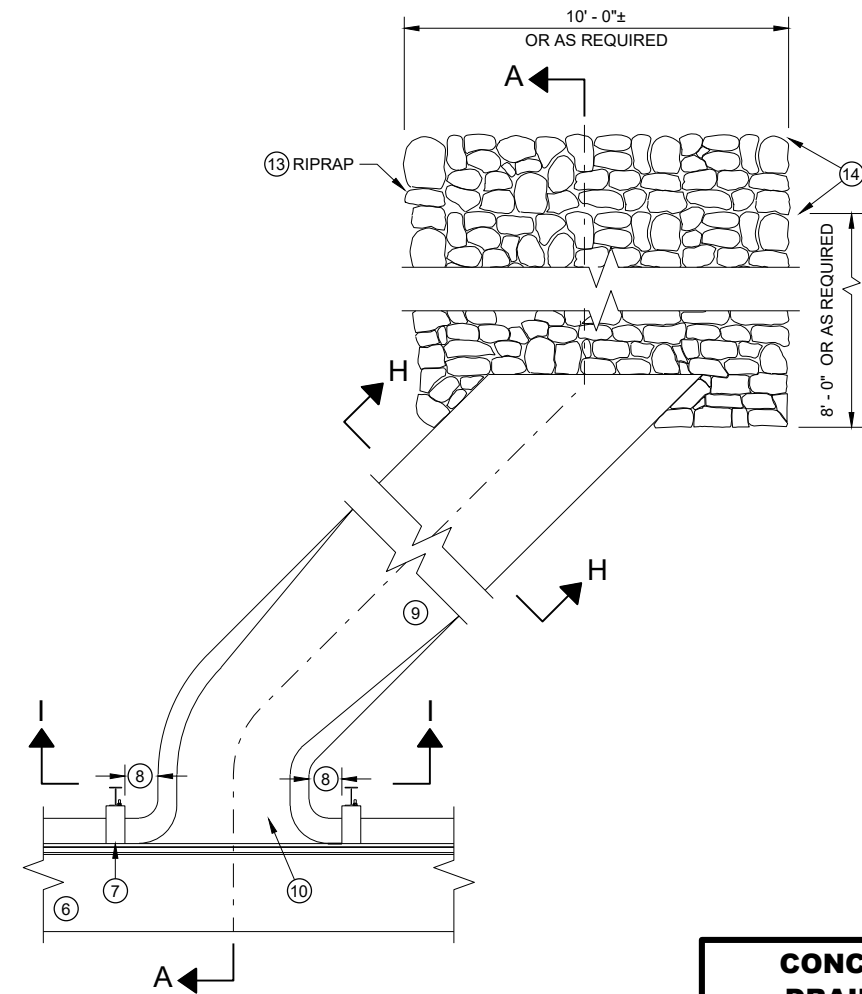
SECTION G - G



SECTION H - H



SECTION I - I

PLAN VIEW
PERPENDICULAR FLUMEPLAN VIEW
SKEWED FLUME

GENERAL NOTES

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

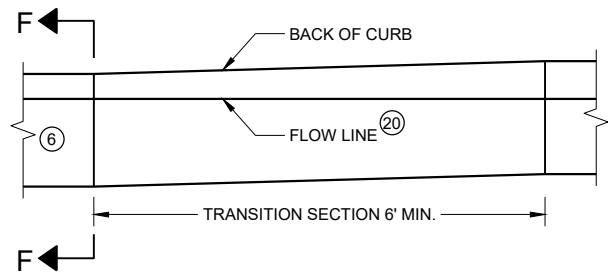
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
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- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBT. USE TYPE TBT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

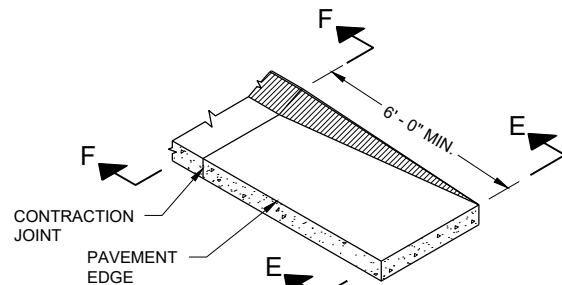
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

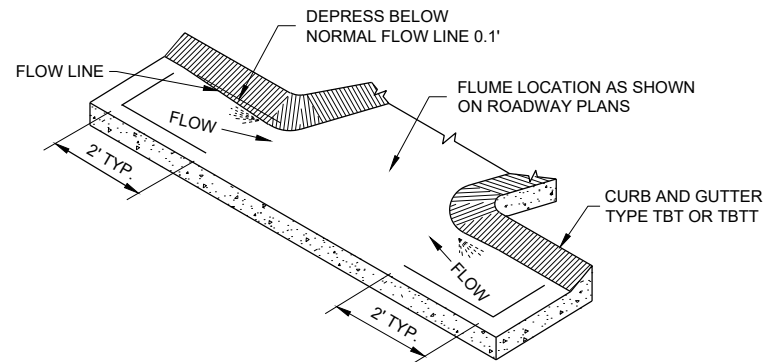
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



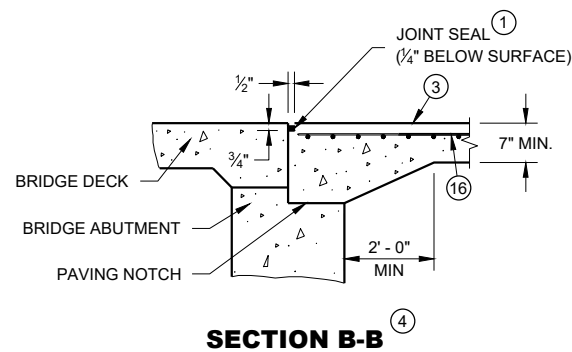
**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



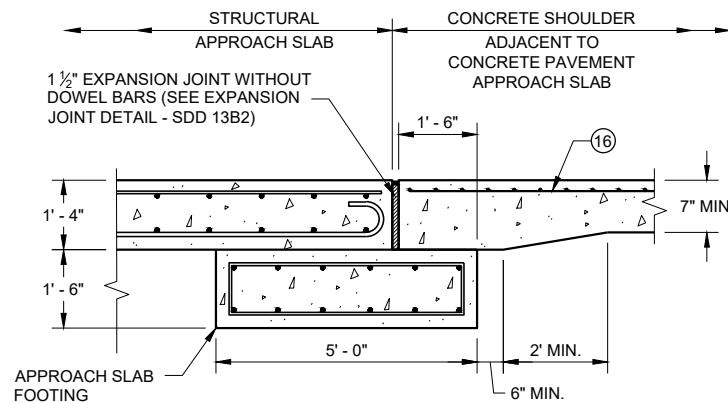
**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



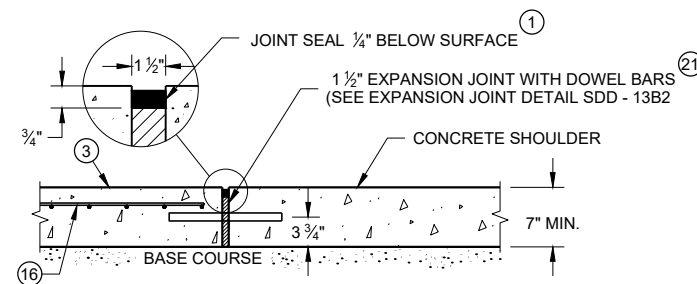
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**



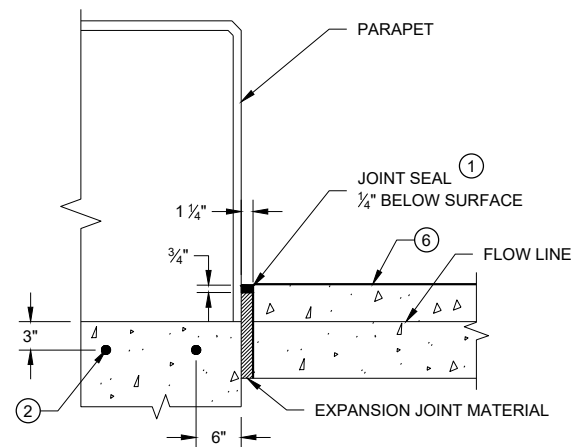
SECTION B-B



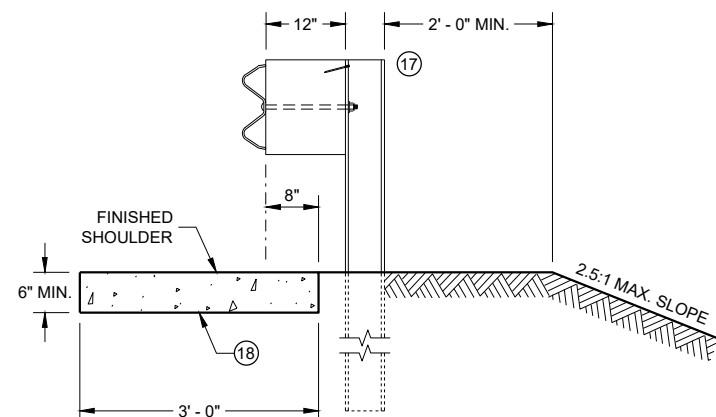
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



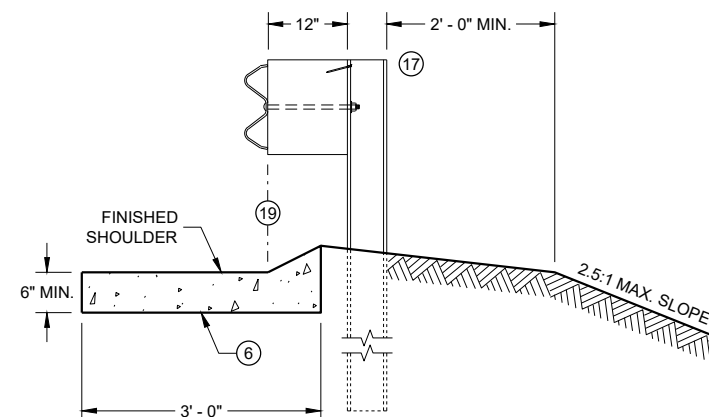
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

GENERAL NOTES

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

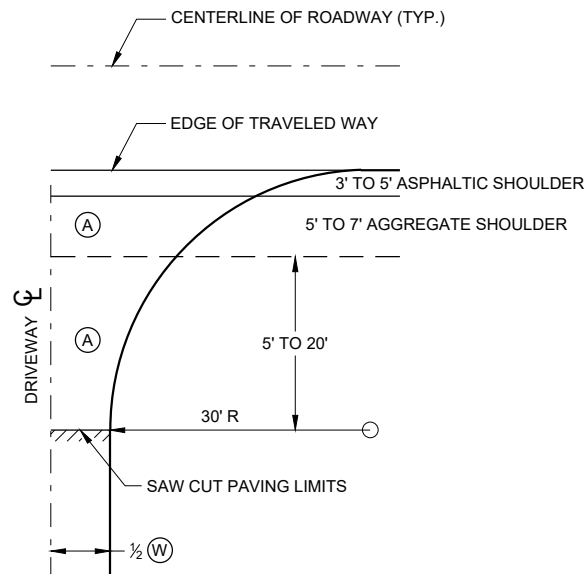
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
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- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
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- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

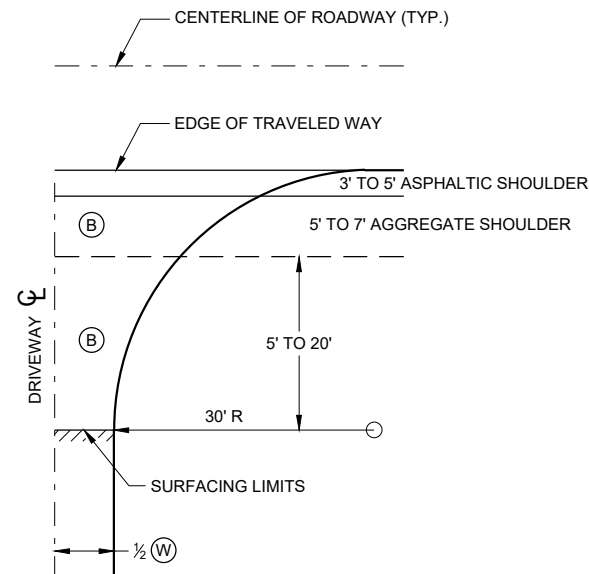
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVE 96
ENGINEER
FHWA

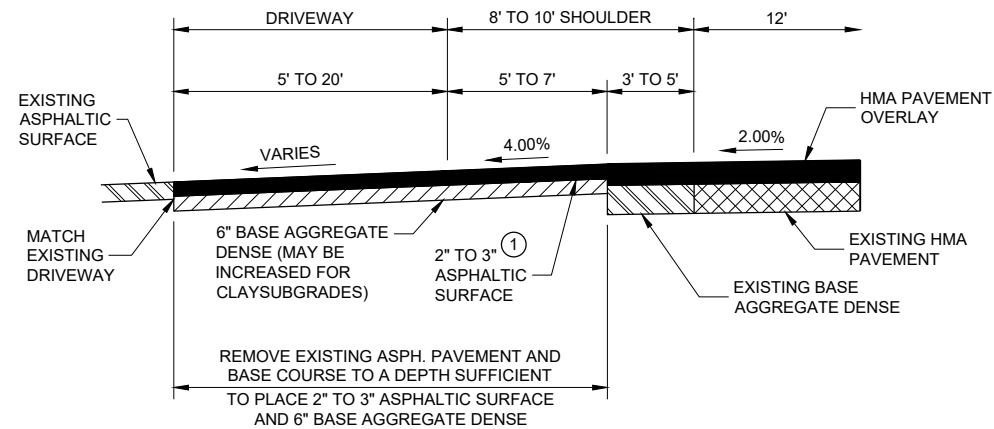


PLAN VIEW
HALF SECTION

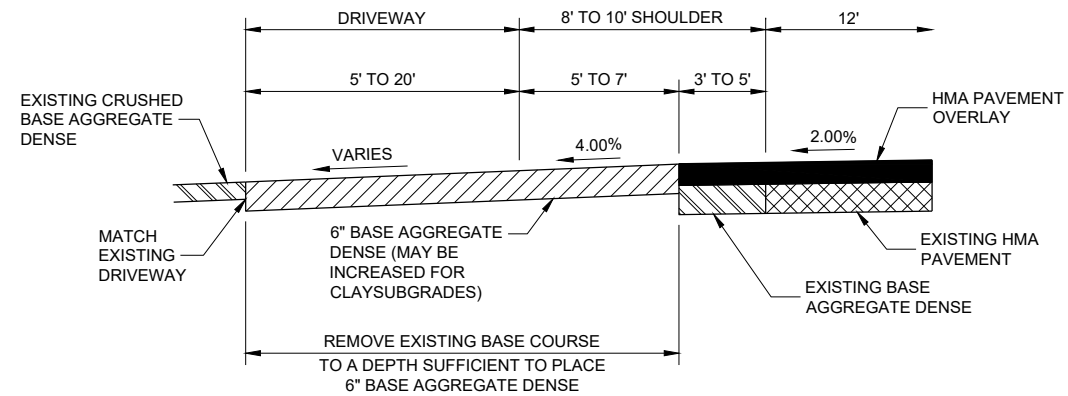
- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- (B) : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- (W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



PLAN VIEW
HALF SECTION



PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS



PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

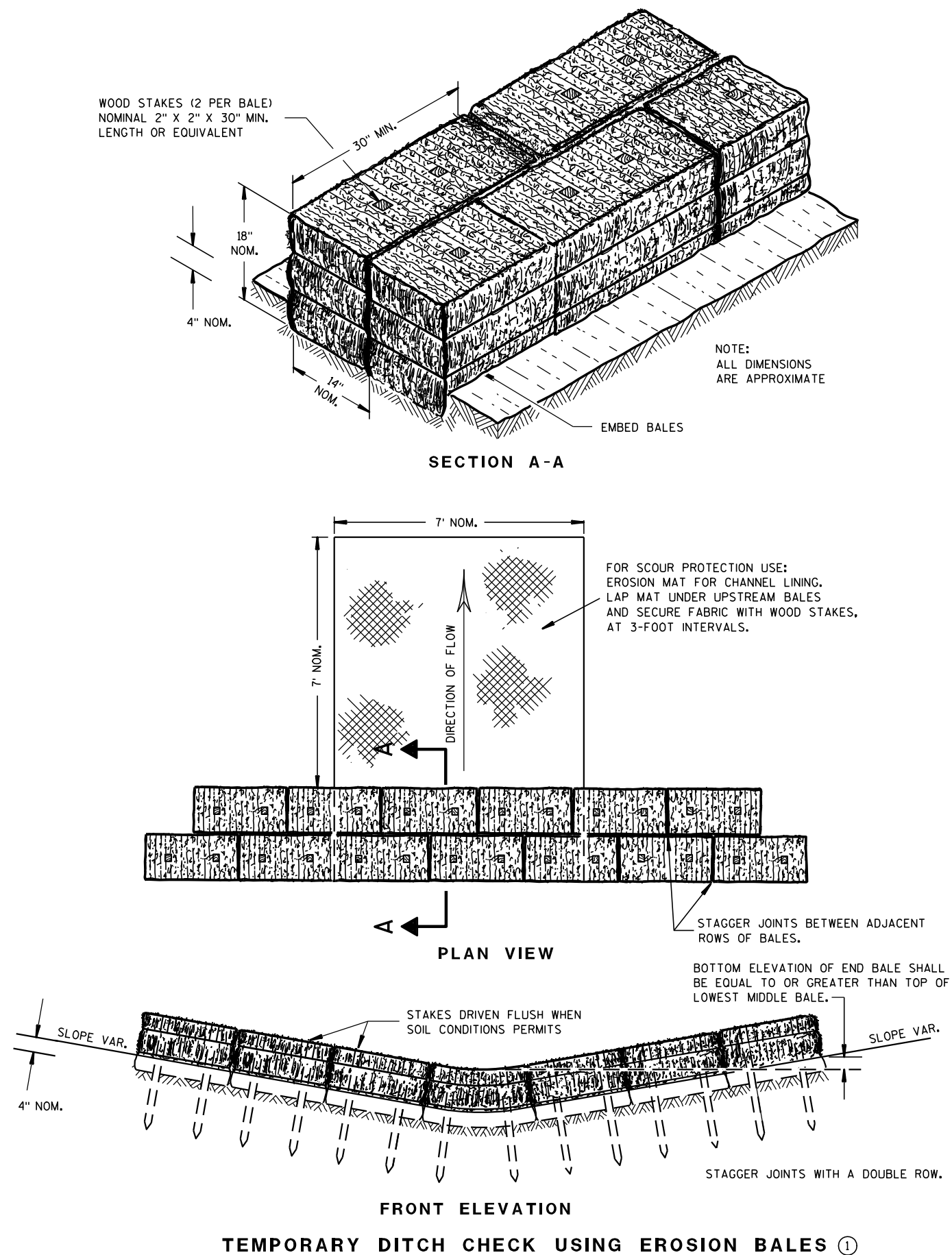
GENERAL NOTES

- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.

DRIVEWAYS WITHOUT CURB
AND GUTTER RESURFACING
PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

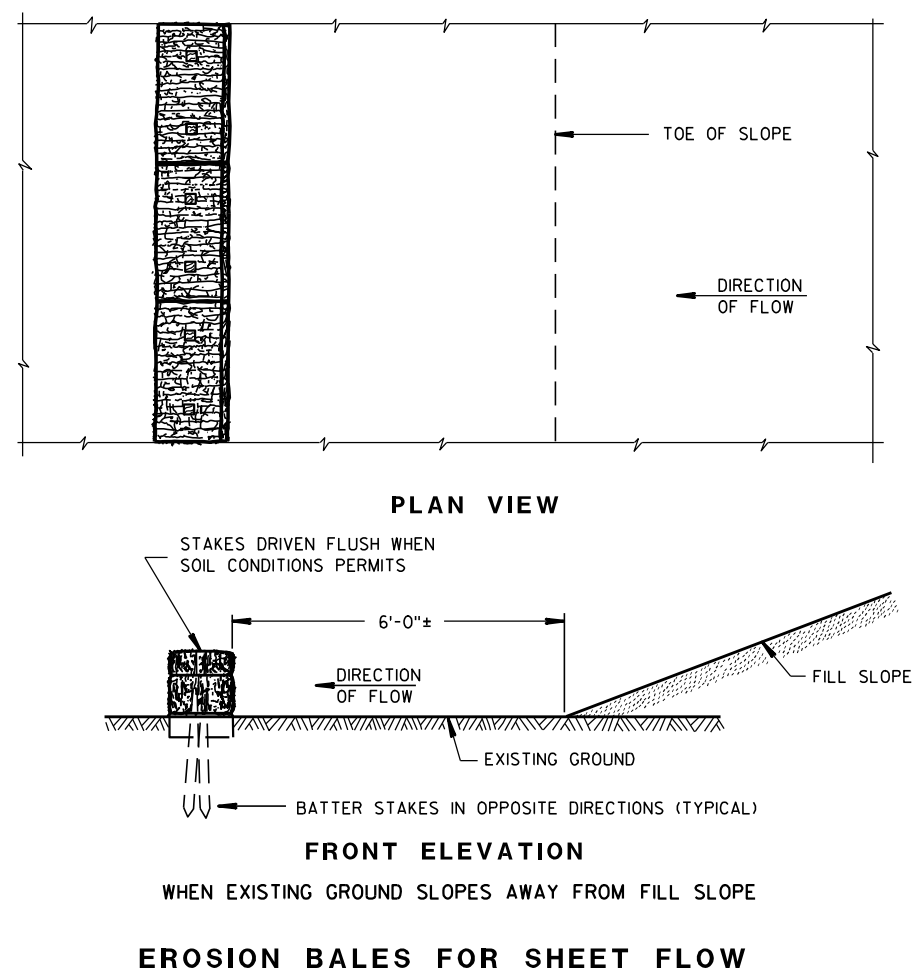
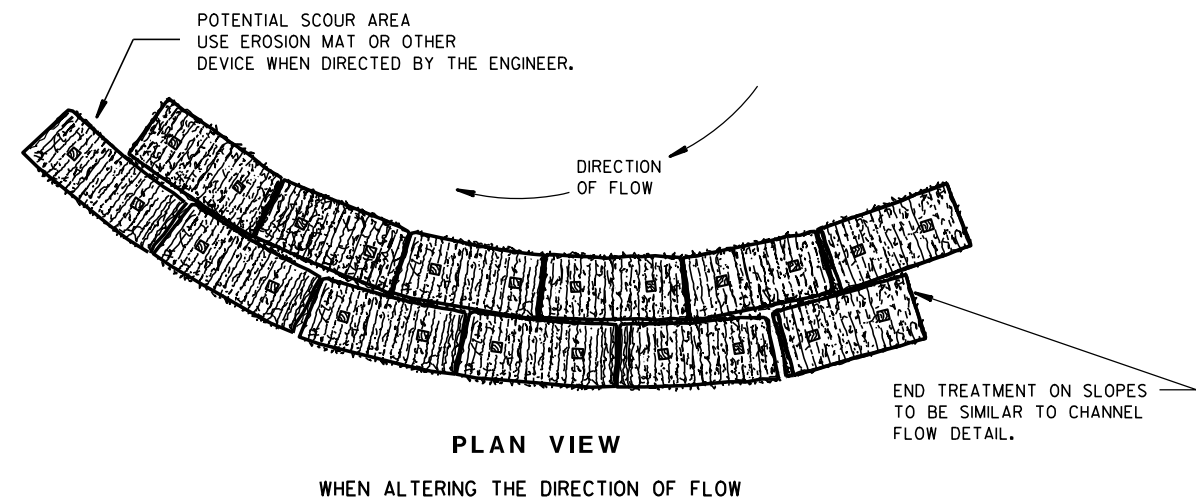
APPROVED
December 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 97
FHWA



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 TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.



TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

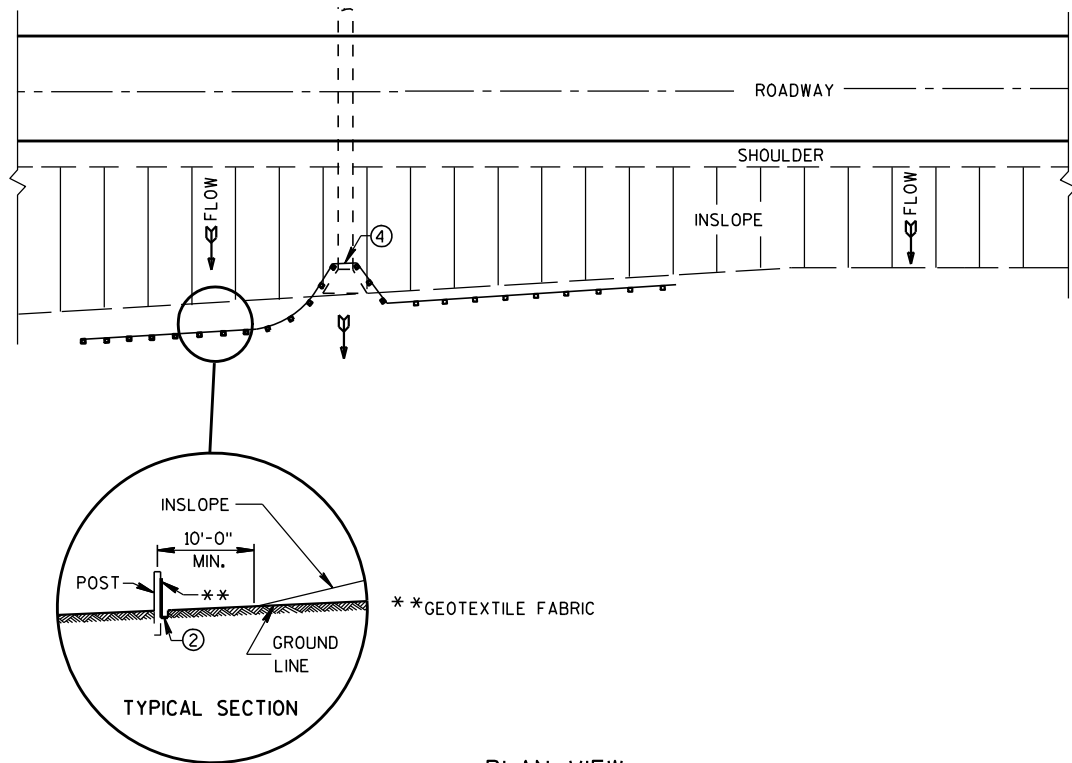
APPROVED

6/04/02
DATE

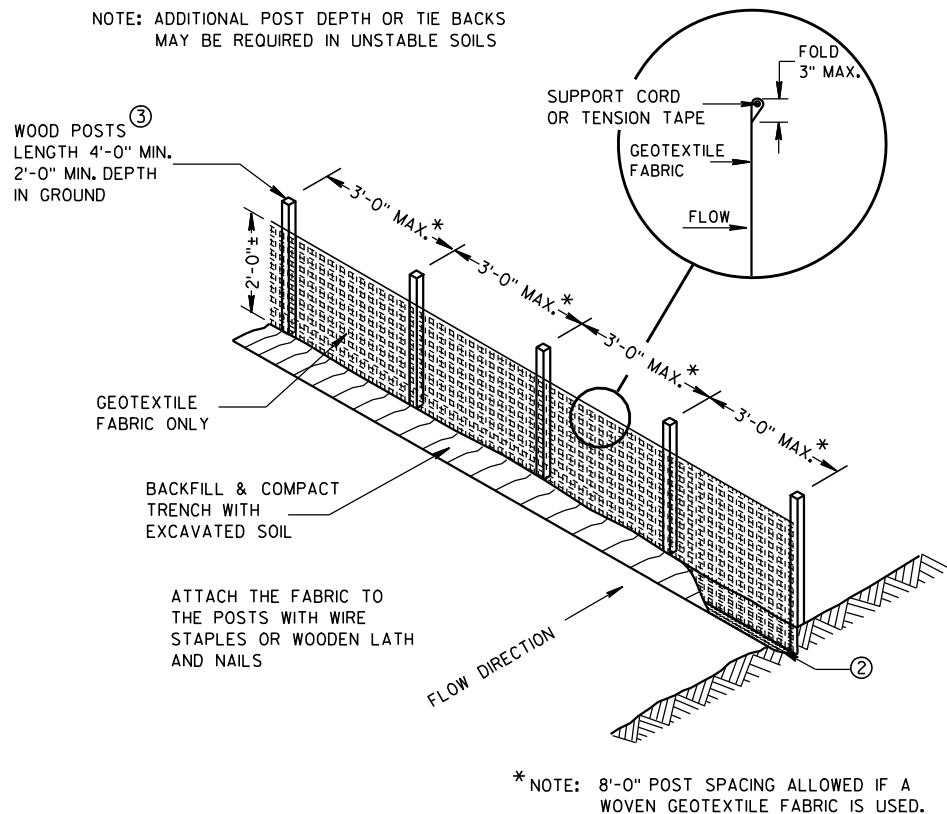
/S/ Beth Connolly
CHIEF ROADWAY DEVELOPER

ENGINEER

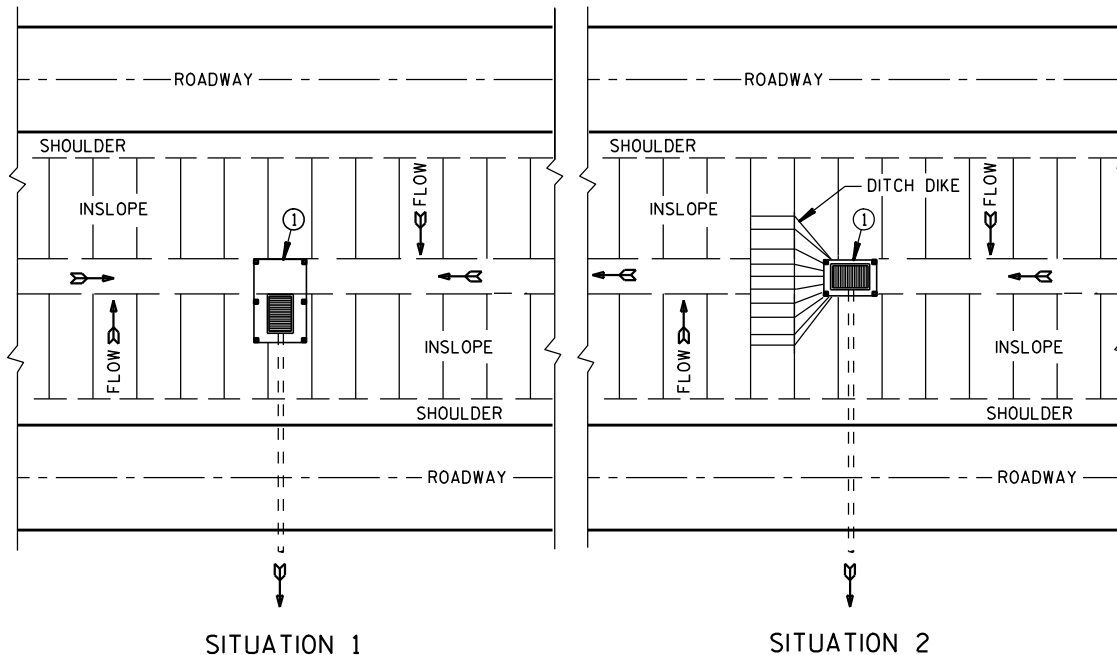
FHWA



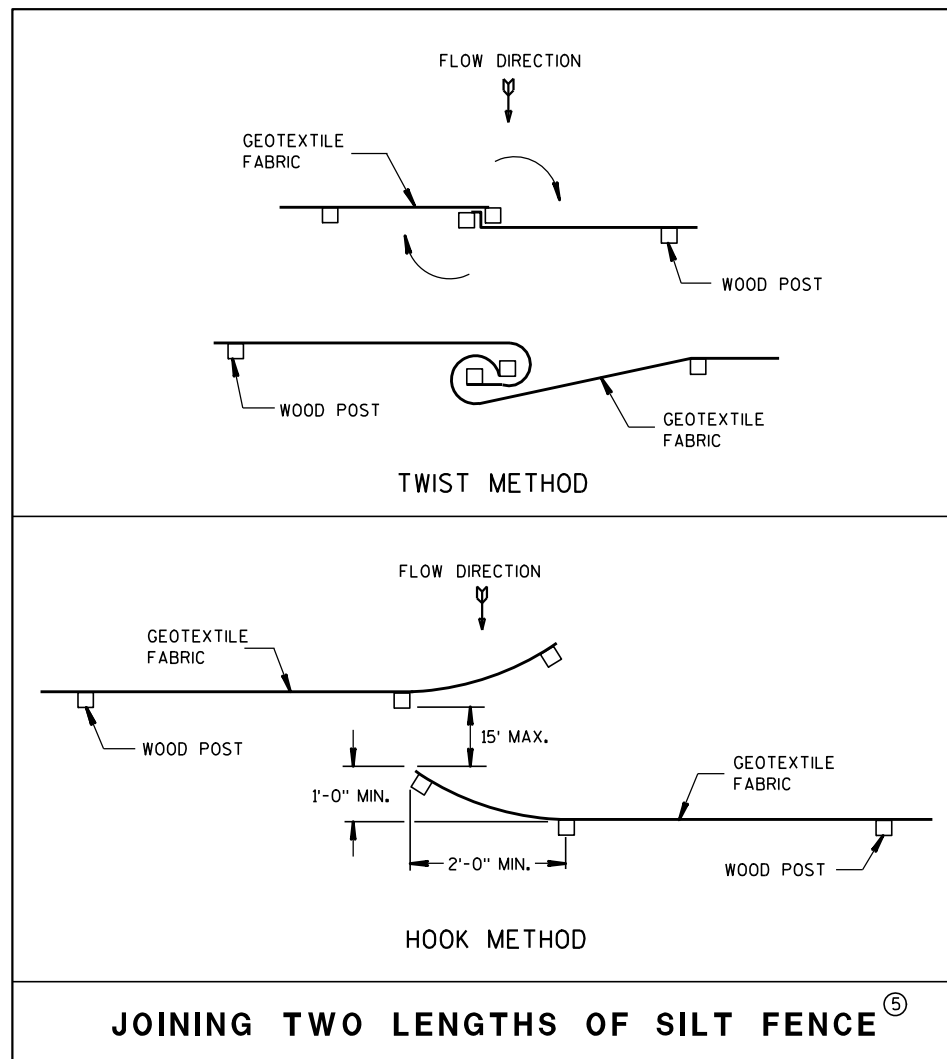
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

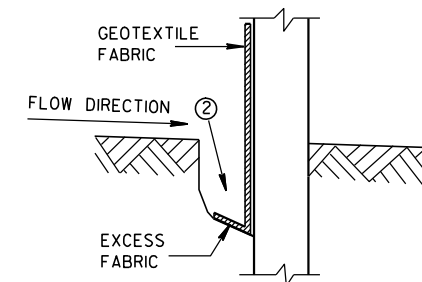


JOINING TWO LENGTHS OF SILT FENCE (5)

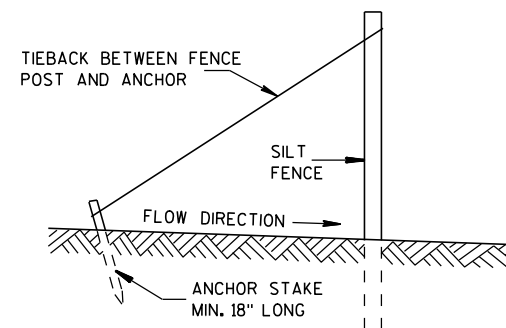
GENERAL NOTES

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

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

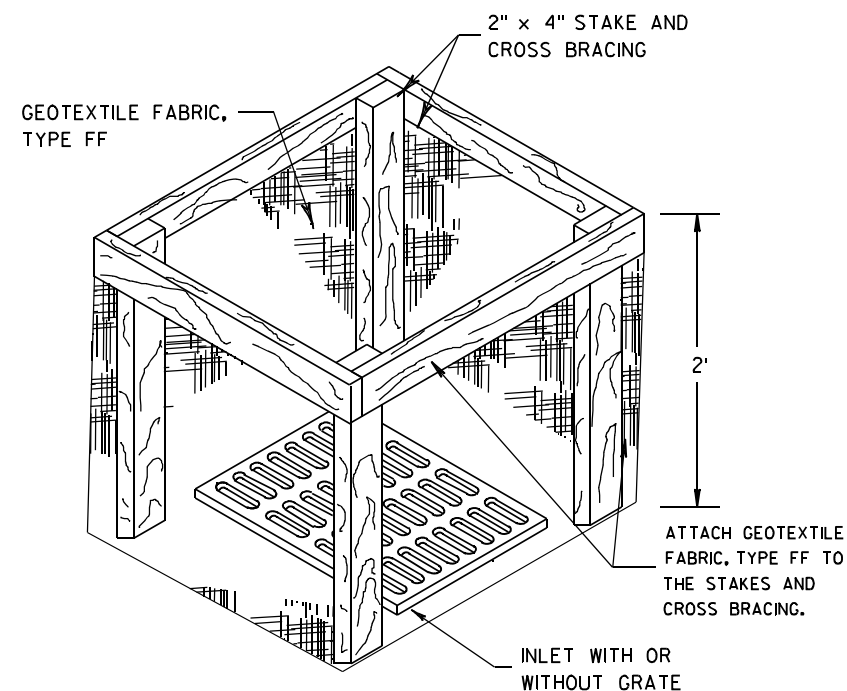
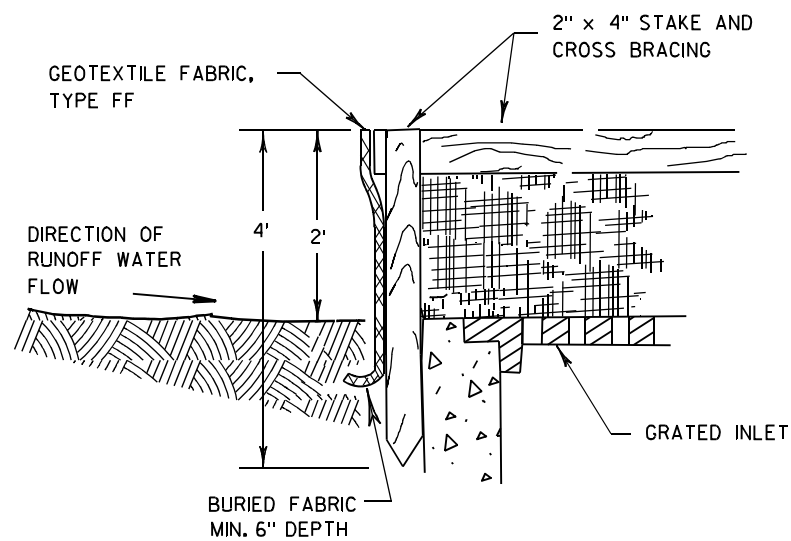


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Conn CHIEF ROADWAY DEVELOPER 99 ENGINEER
FHWA	



INLET PROTECTION, TYPE A

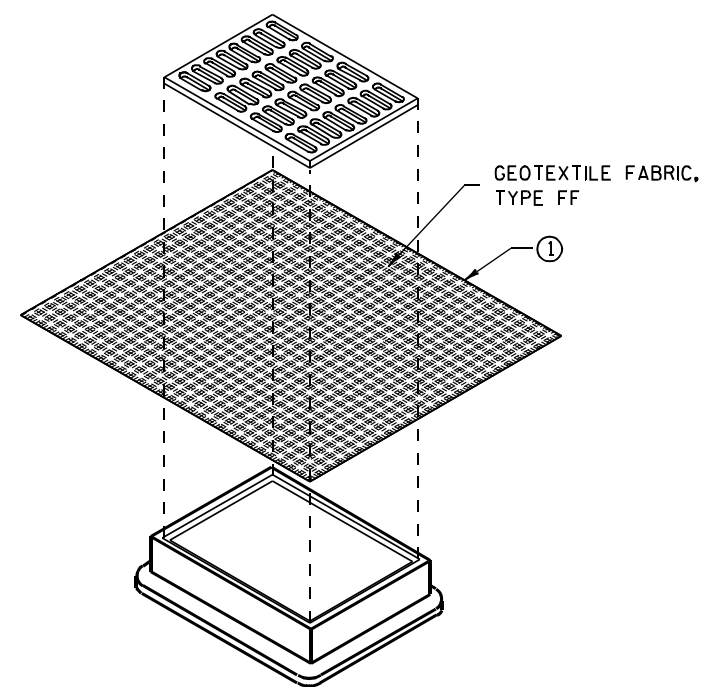
GENERAL NOTES

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

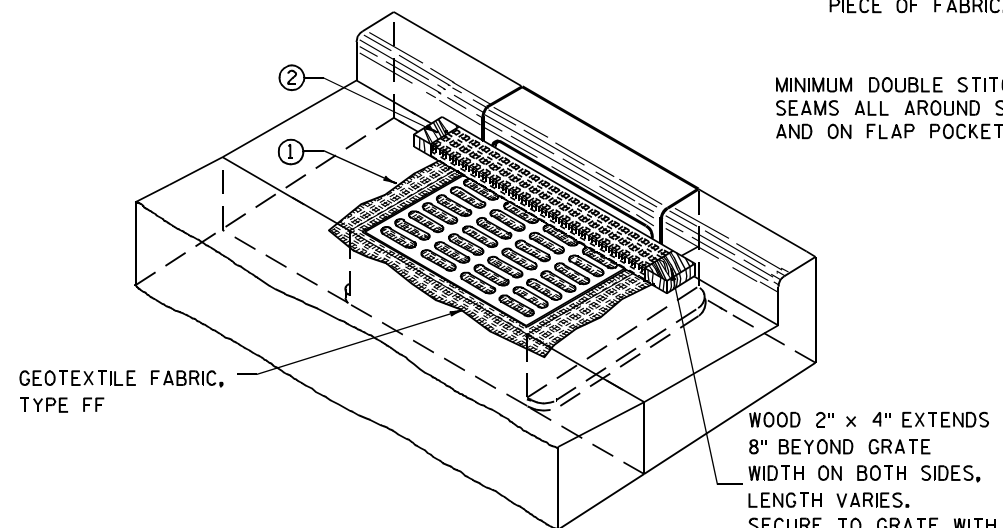
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

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

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



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

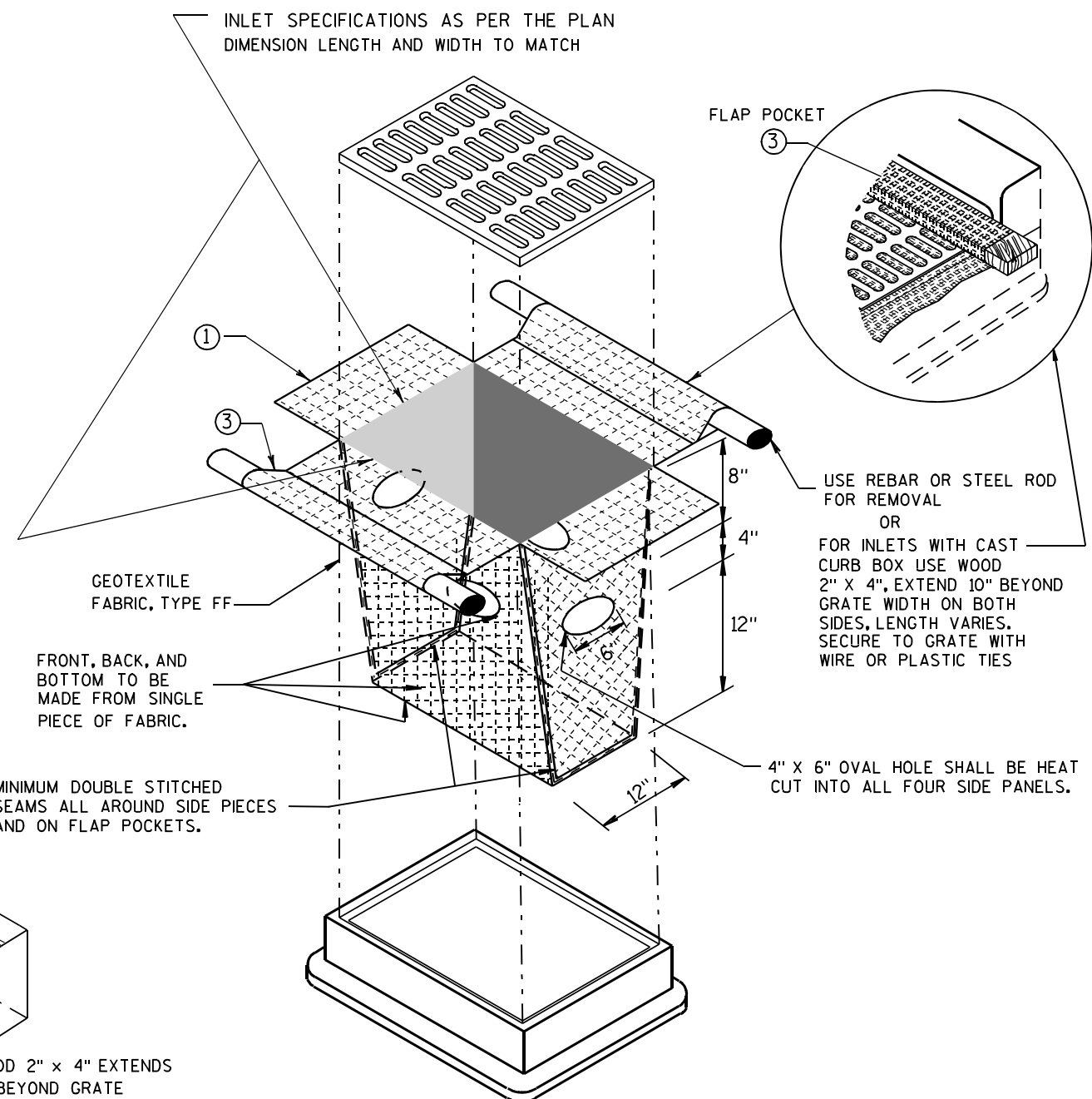
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



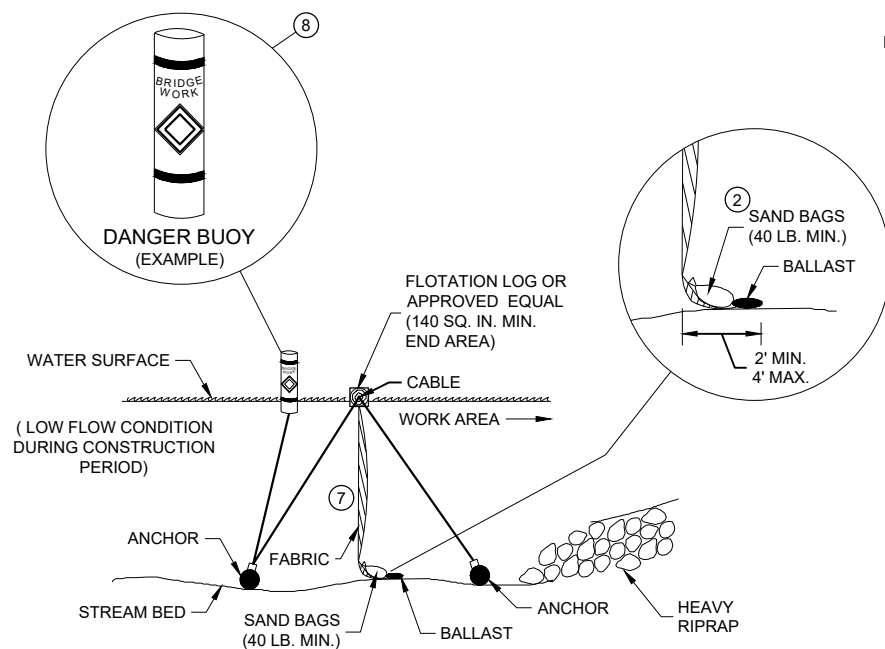
INLET PROTECTION, TYPE D

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

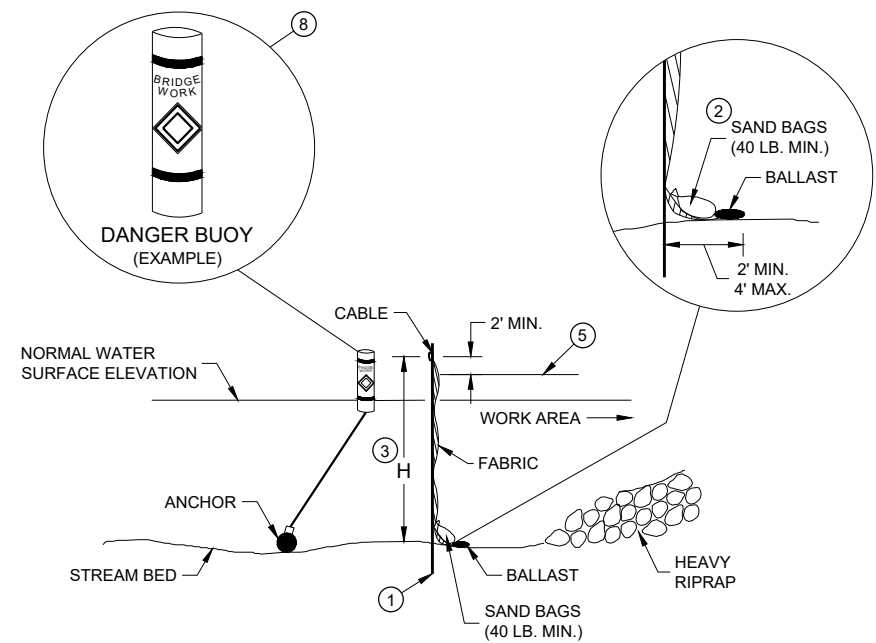
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

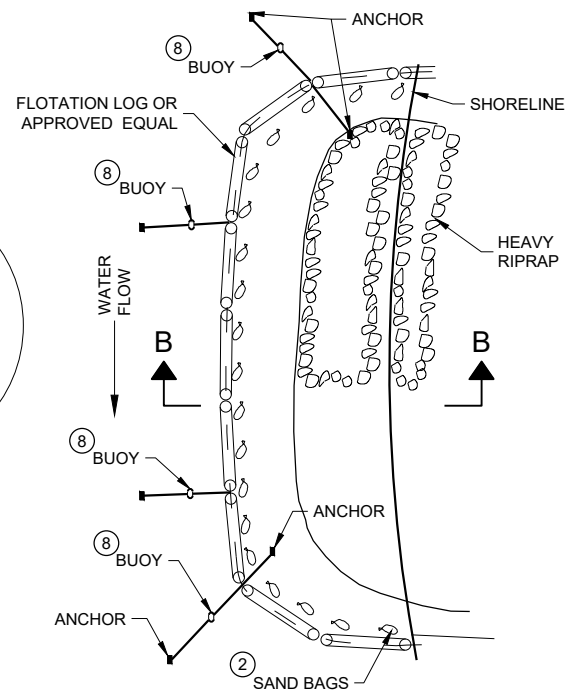
APPROVED
10/16/02 /S/ Beth Connolly
DATE 100
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



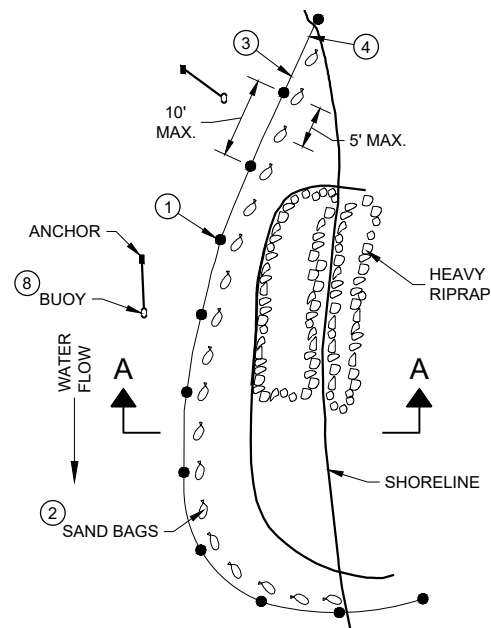
SECTION B - B

**TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6**

SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION

PLAN VIEW



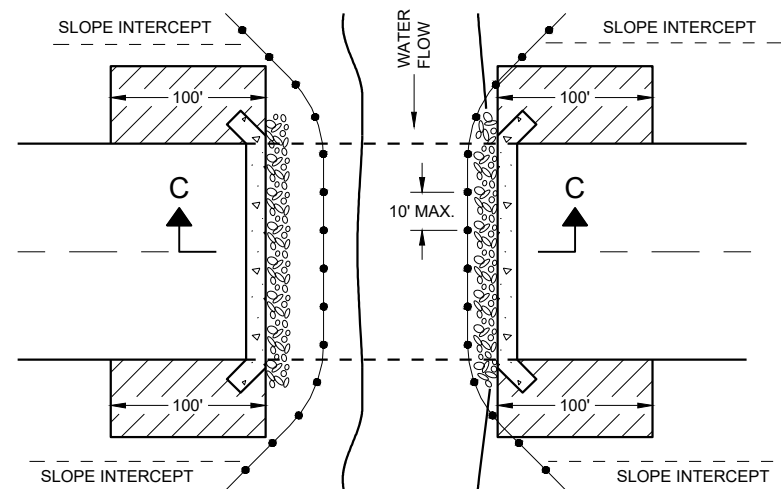
PLAN VIEW

TURBIDITY BARRIER PLACEMENT DETAILS**GENERAL NOTES**

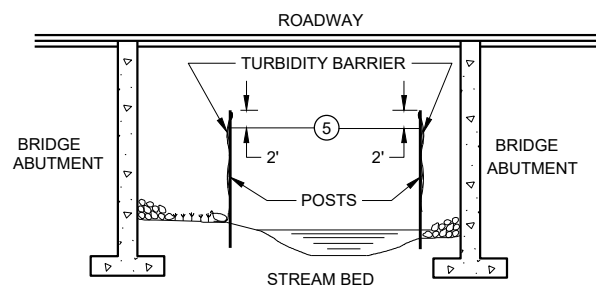
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

- 1 DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- 2 SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- 3 WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.
- 4 IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- 5 ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- 6 FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.
- 7 ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- 8 USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



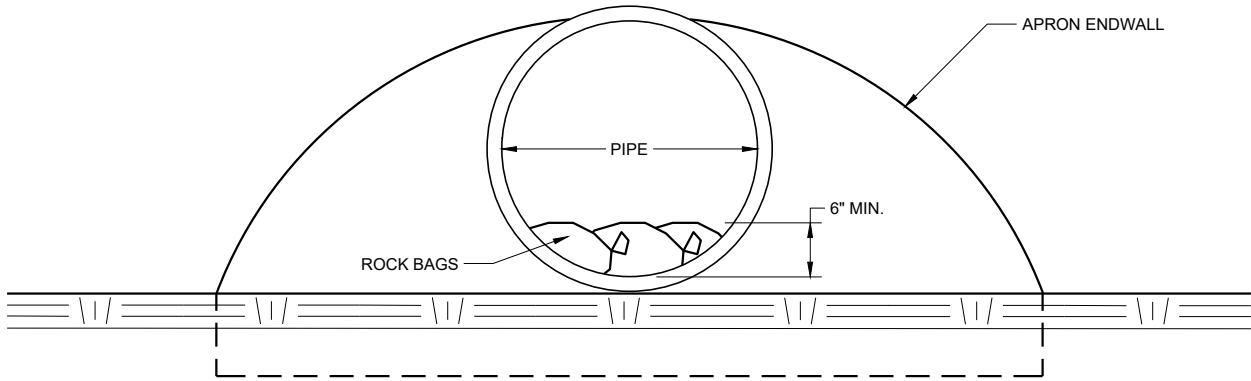
SECTION C - C

**TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES****TURBIDITY BARRIER**

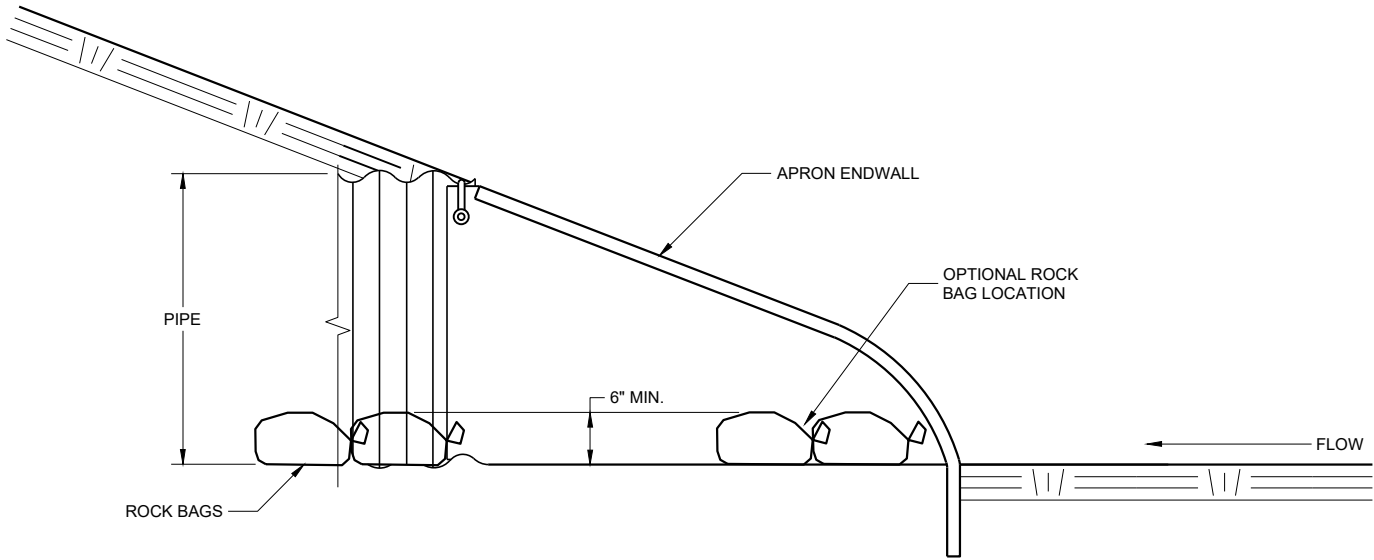
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02 DATE /S/ Beth Cannestra
CHIEF ROADWAY DEVELOPER
ENGINEER 101

FHWA



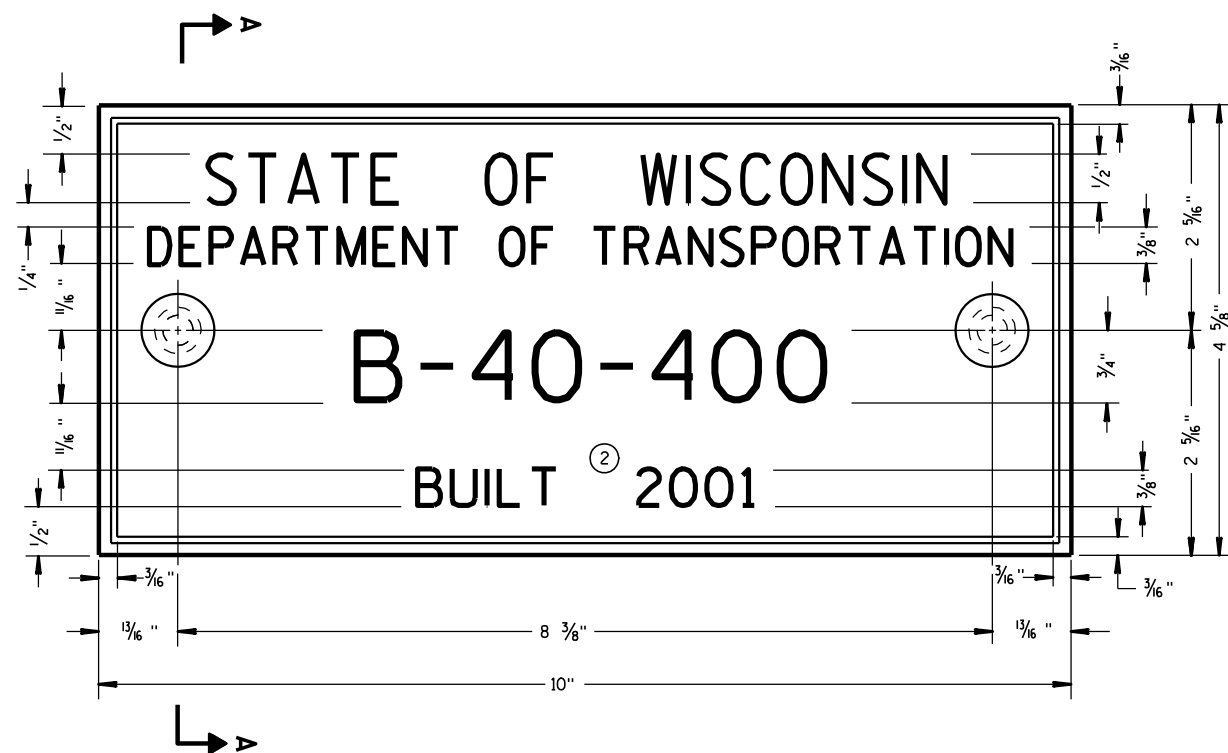
END VIEW



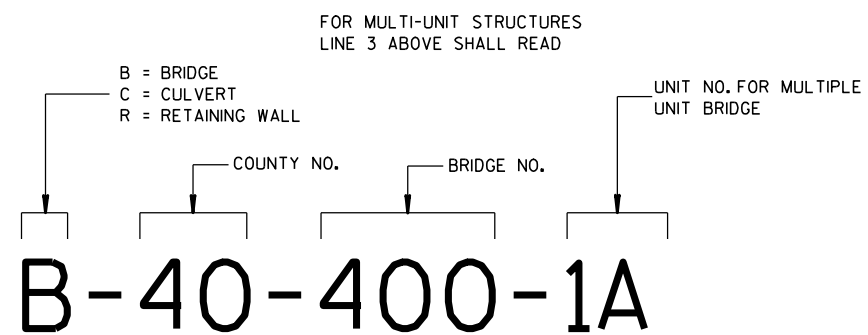
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI 102
FHWA	



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



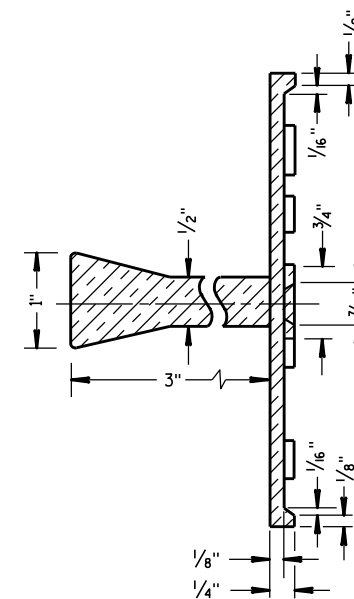
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

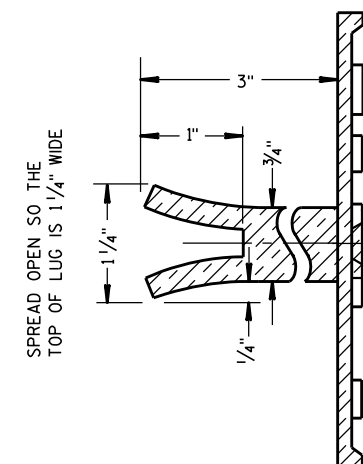
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

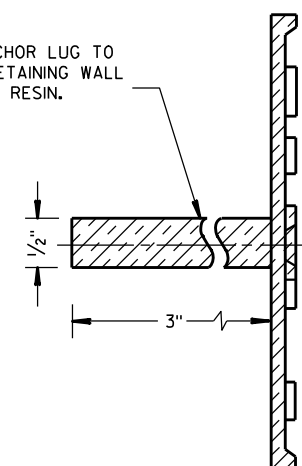


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

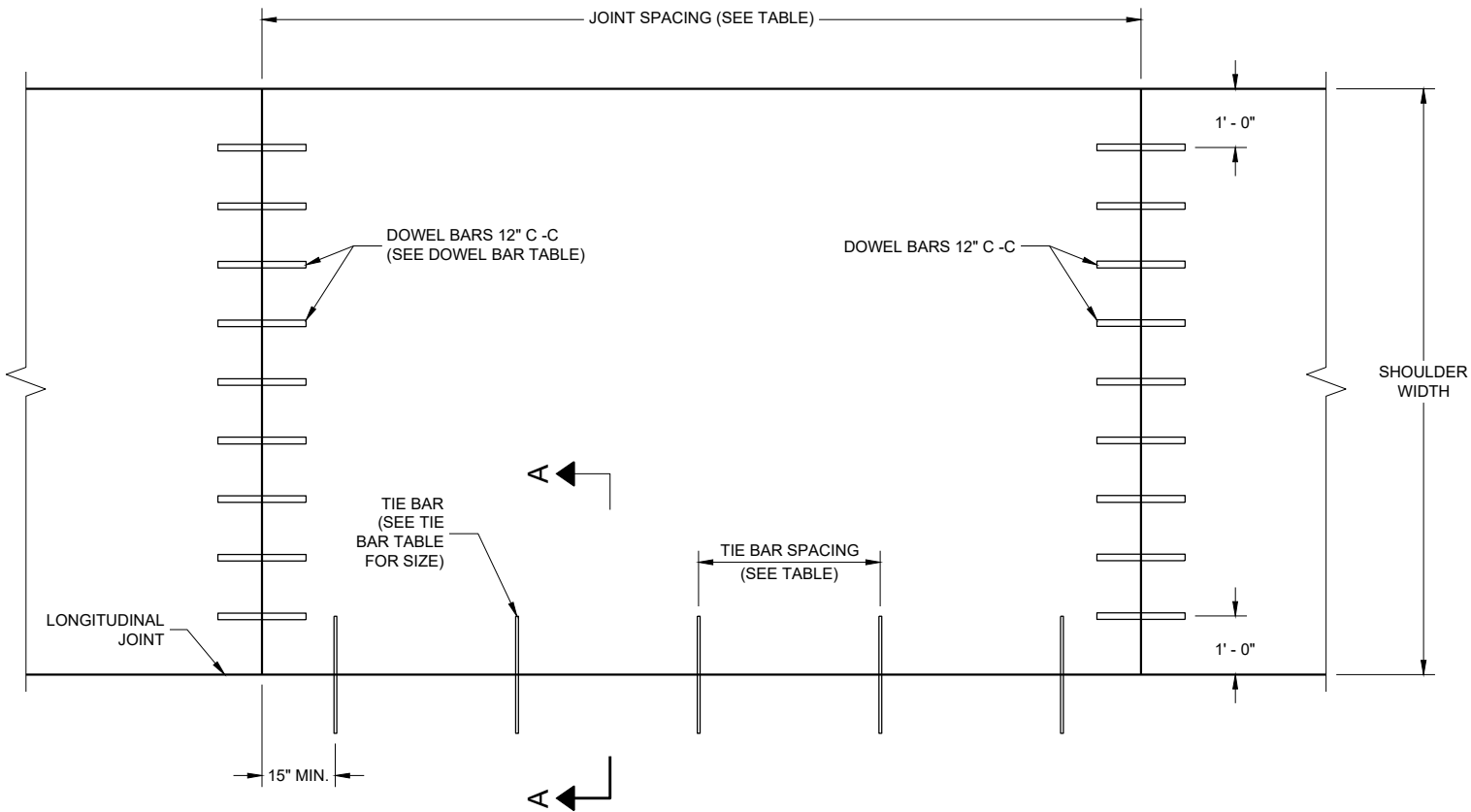
3/26/10
DATE

FHWA

/S/ Scot Beck
CHIEF STRUCTURAL DEVELOPER

103

JEER



PLAN VIEW
CONCRETE PAVEMENT SHOULDER

TIE BAR TABLE

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

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

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

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

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

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

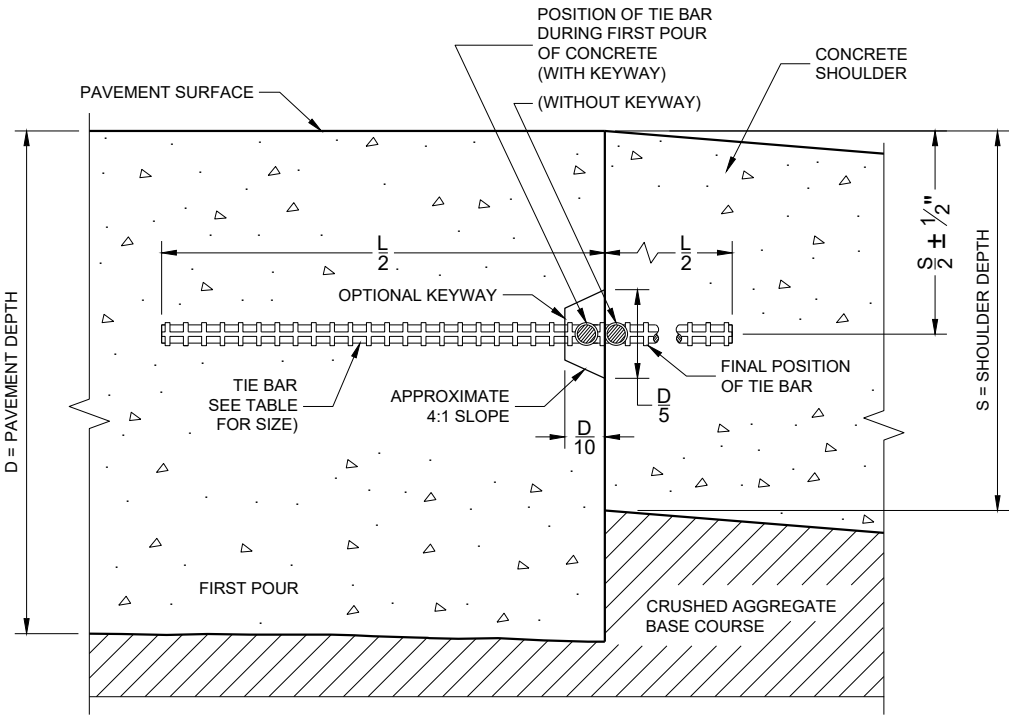
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A - A
LONGITUDINAL CONSTRUCTION JOINT

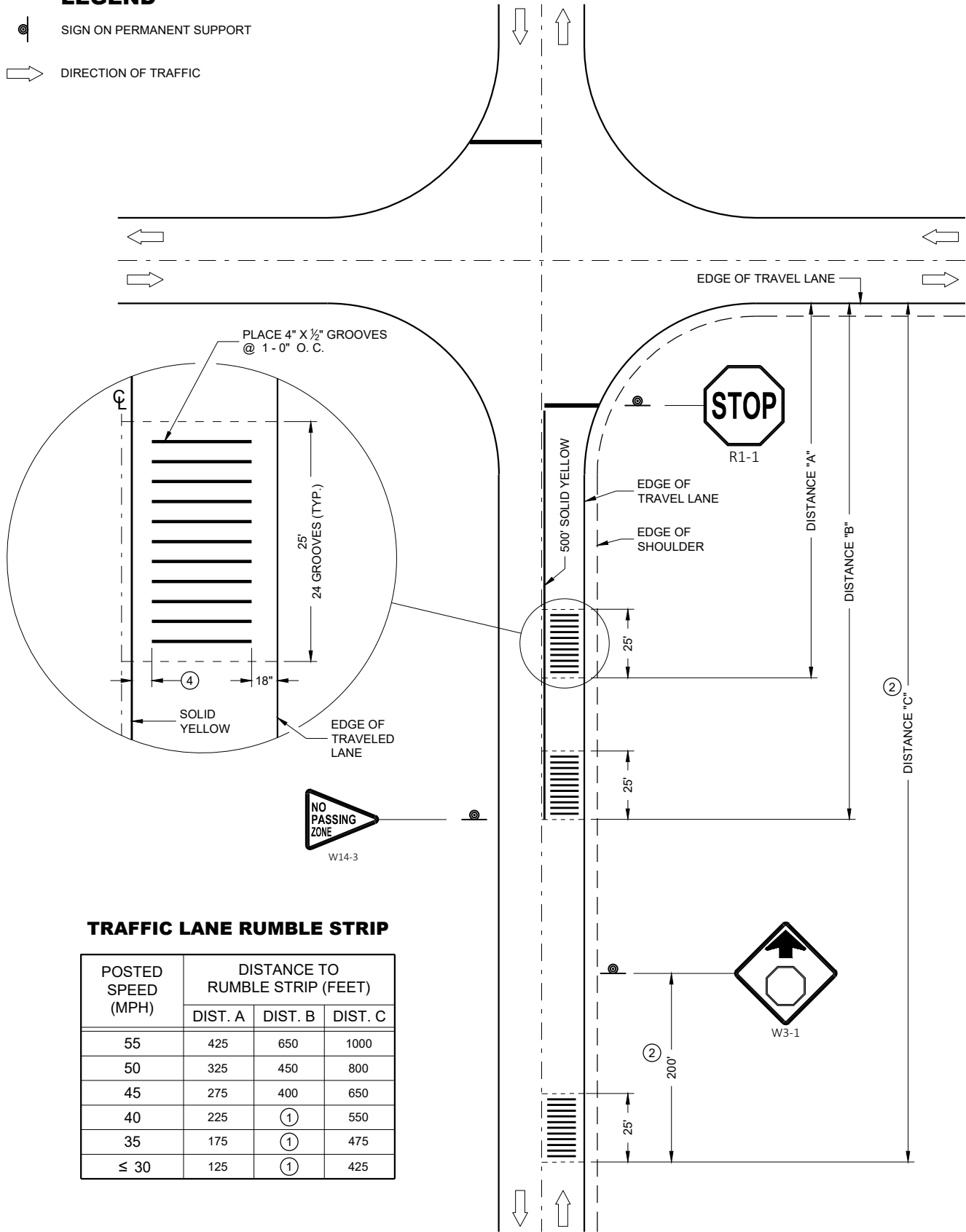
CONCRETE PAVEMENT
SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Peter Kemp
DATE PAVEMENT SUPERVISOR 104
FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC



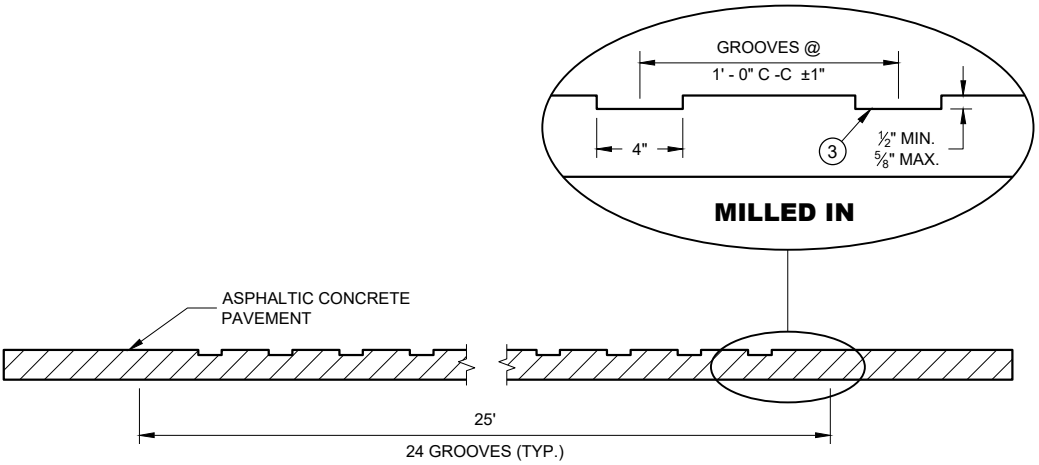
TRAFFIC LANE RUMBLE STRIP

POSTED SPEED (MPH)	DISTANCE TO RUMBLE STRIP (FEET)		
	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

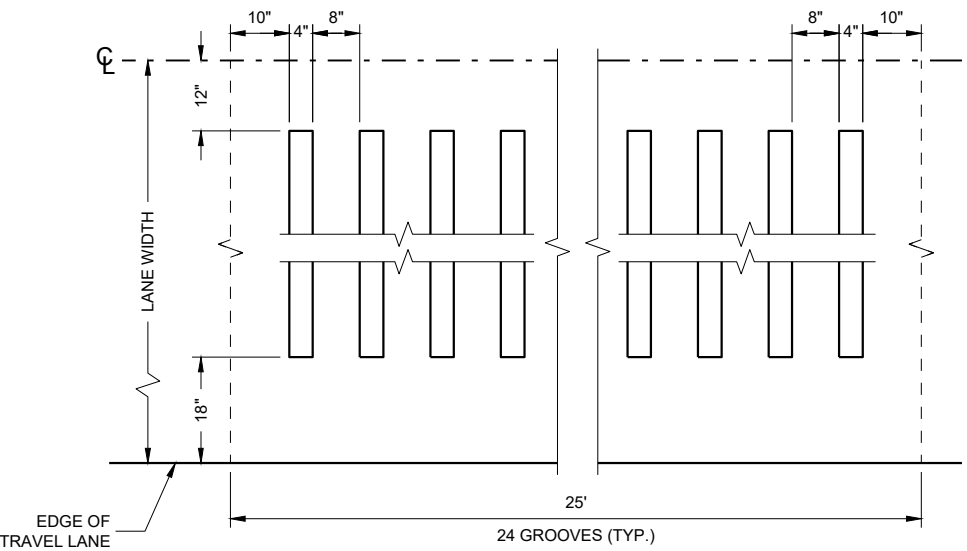
RUMBLE STRIP LOCATION

GENERAL NOTES

- CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.
- WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA, THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.
- PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDE ELSEWHERE IN THE CONTRACT.
- ① ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.
 - ② LOCATE RUMBLE STRIP 200 FEET IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE "C".
 - ③ TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY $\frac{1}{16}$ ".
 - ④ 12 INCH CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.



ELEVATION VIEW



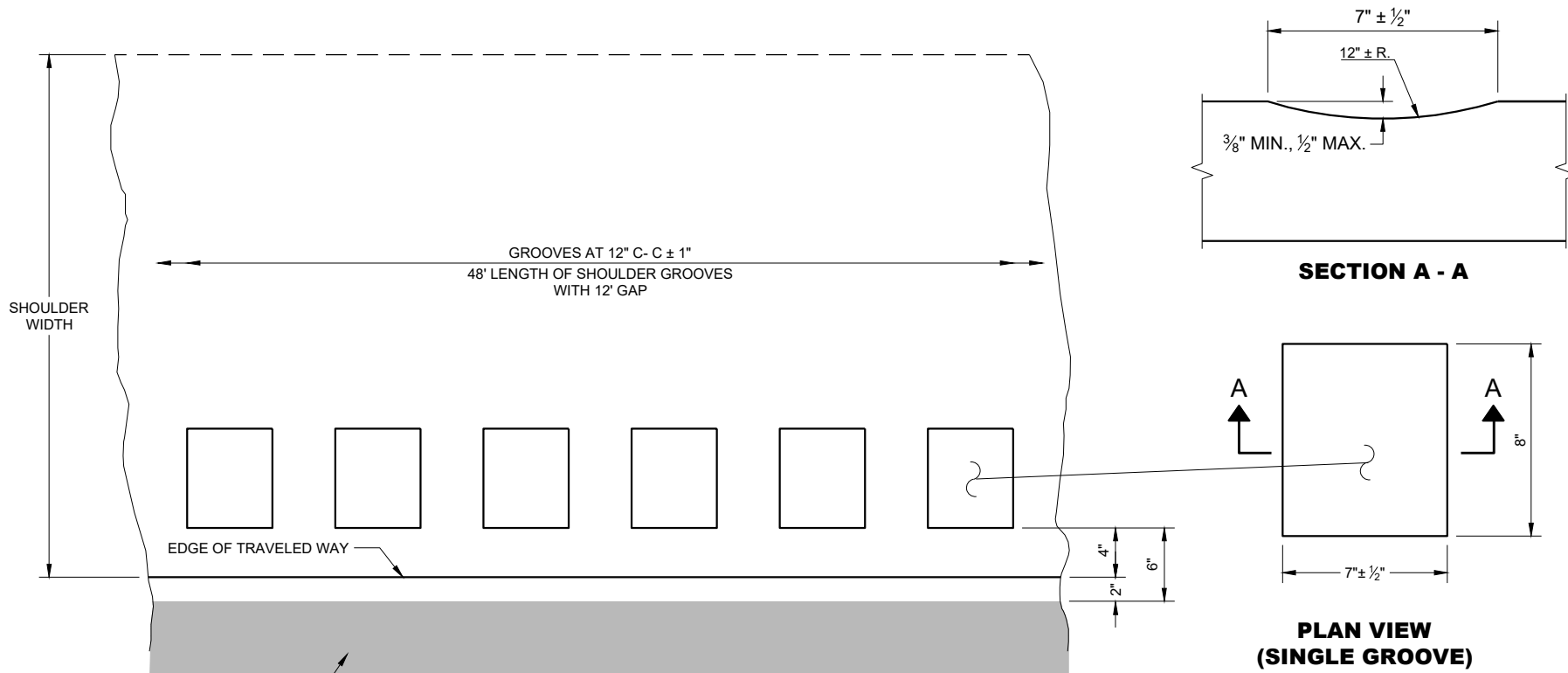
PLAN VIEW

ASPHALTIC PAVEMENT MILLED IN

TRANSVERSE RUMBLE STRIPS, ASPHALTIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Rodney Taylor
ROADWAY DESIGN STAFF
UNIT SUPERVISOR 105
FHWA

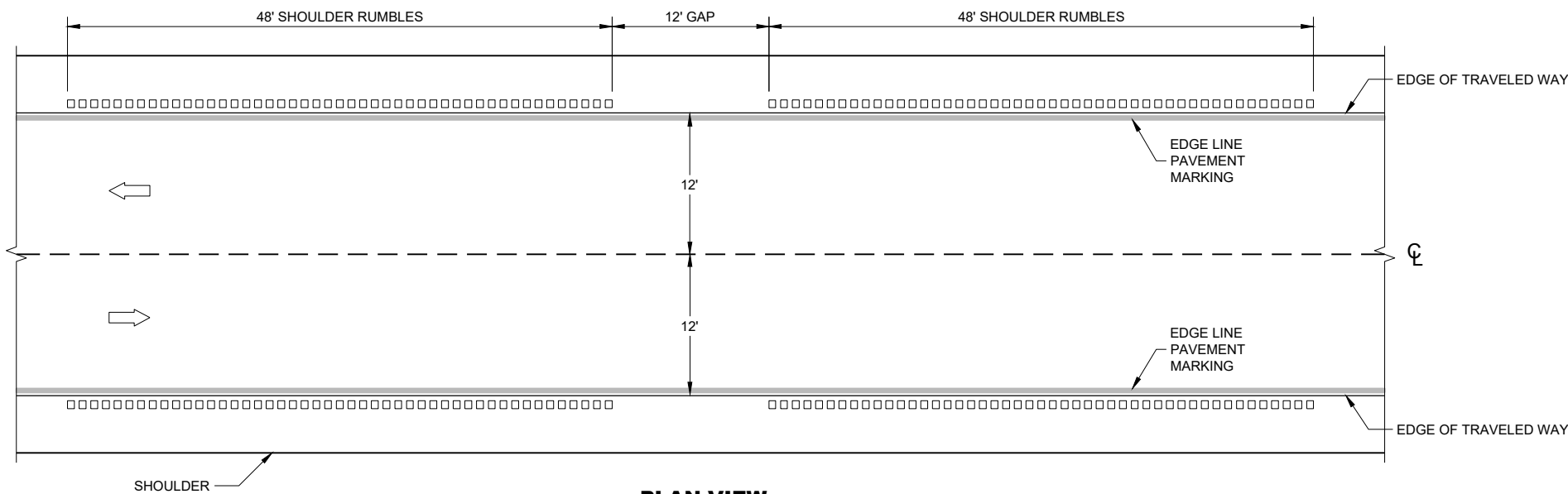
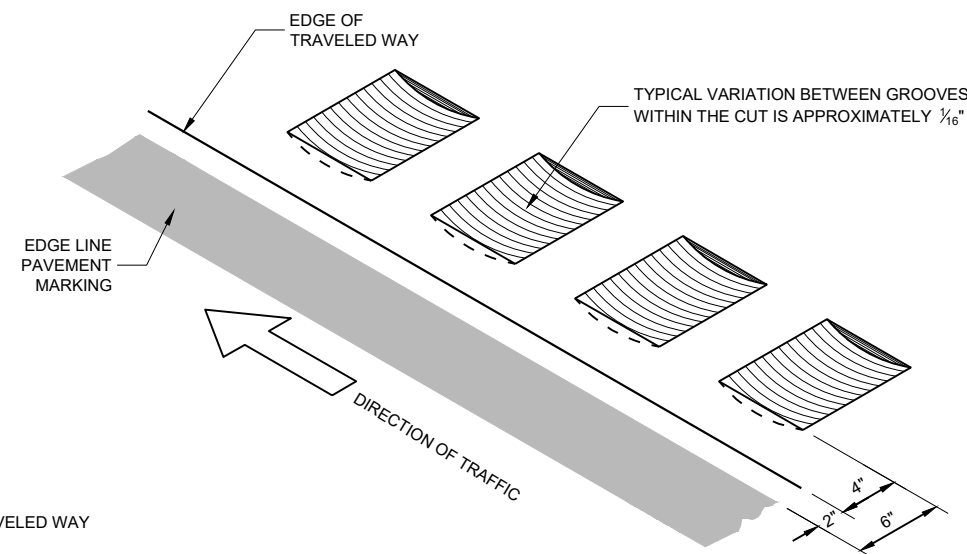


PLAN DETAIL VIEW
SHOULDER WITH GROOVES

GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

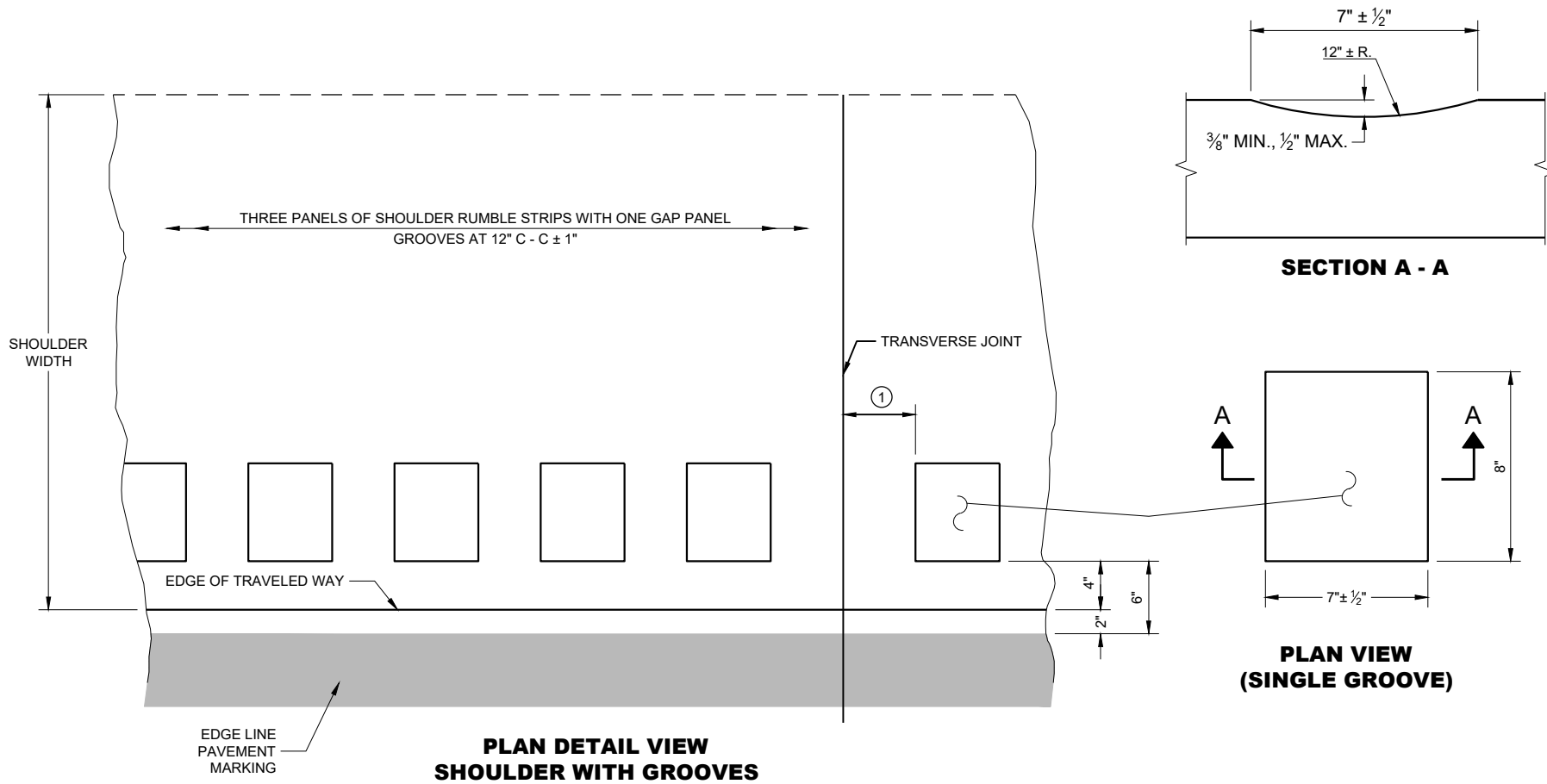
SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



SHOULDER RUMBLE STRIPS - ASPHALT

SHOULDER RUMBLE
STRIPS ASPHALT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 106

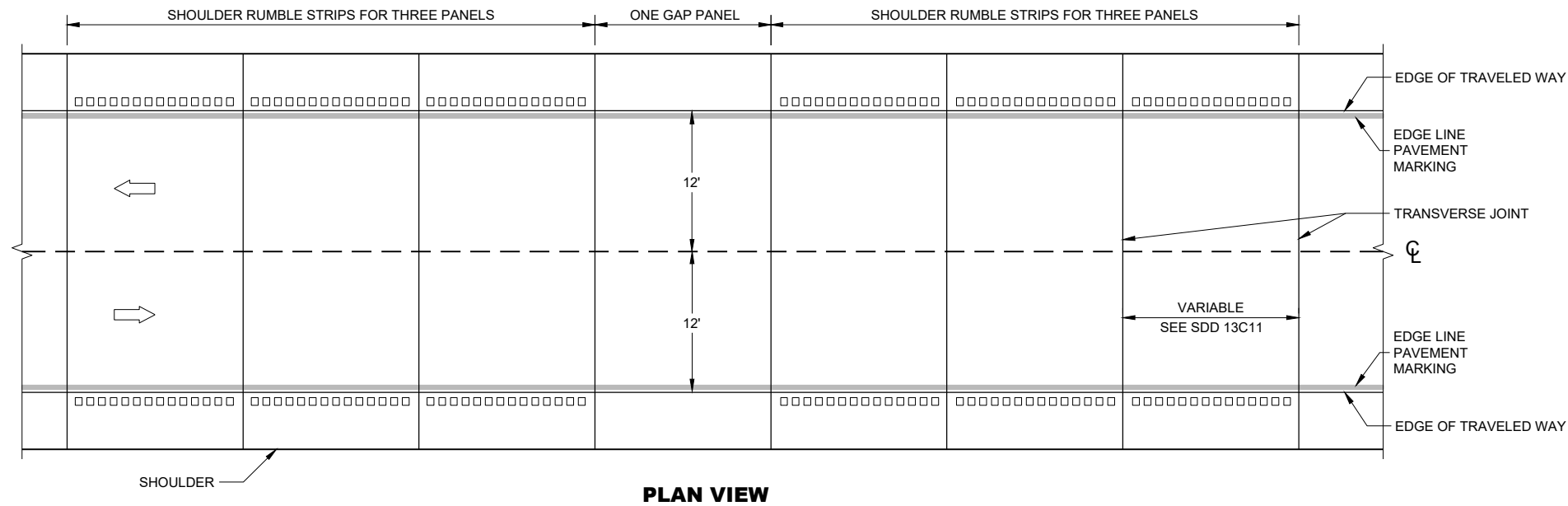
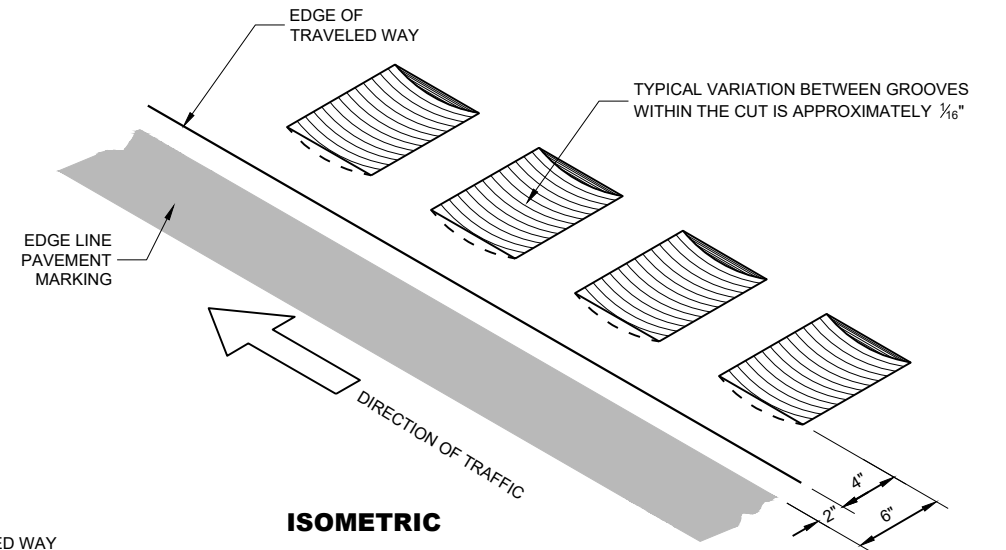


GENERAL NOTES

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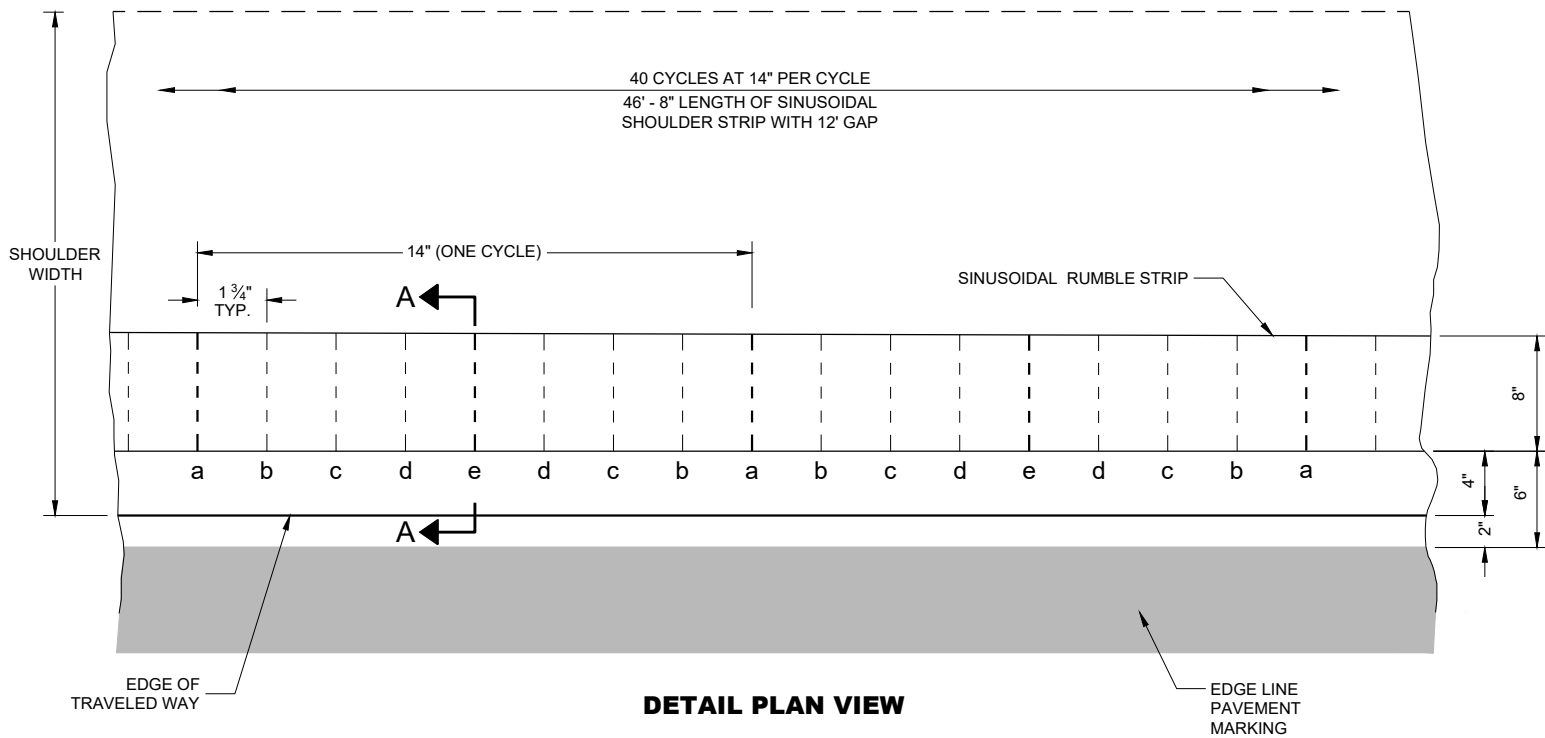
- ① FOR CONCRETE PAVEMENTS, RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES FROM TRANSVERSE JOINTS.



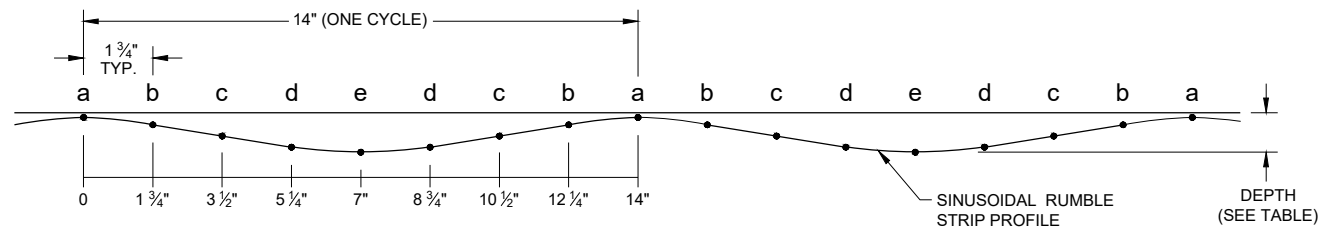
SHOULDER RUMBLE STRIPS - CONCRETE

SHOULDER RUMBLE STRIPS - CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 107



DETAIL PLAN VIEW



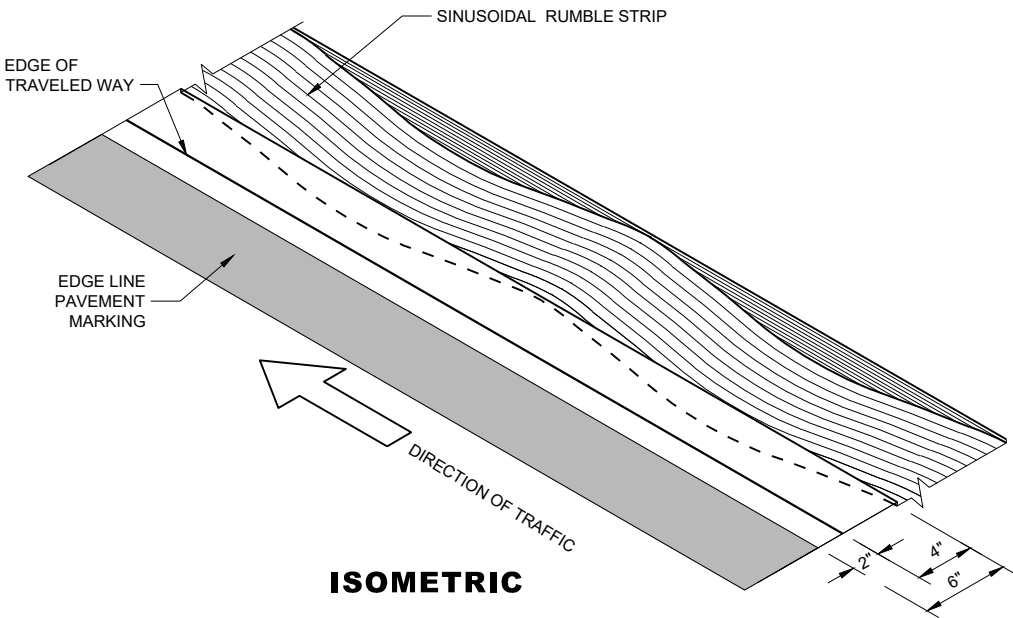
PROFILE VIEW

LOCATION	DEPTH (INCHES)
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"

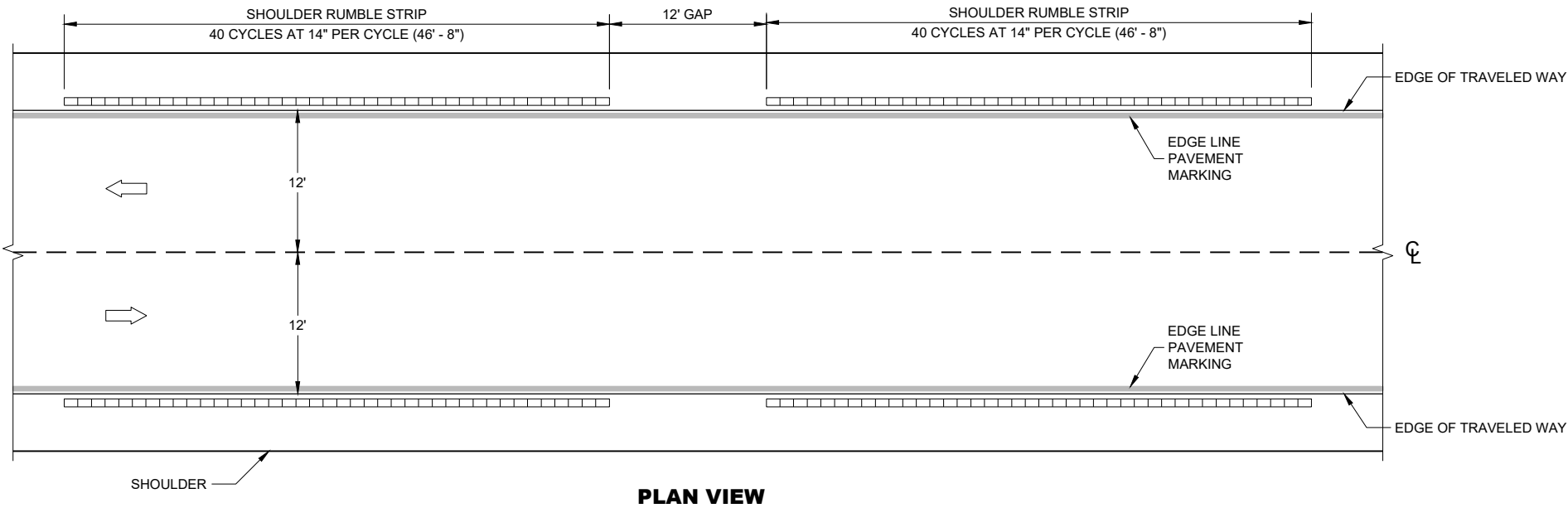
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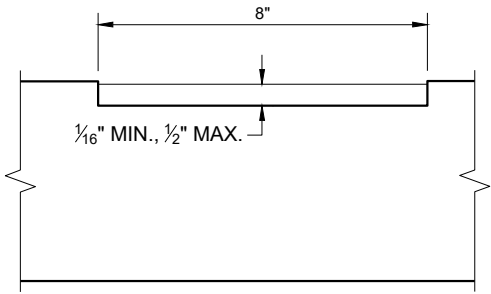


ISOMETRIC



PLAN VIEW

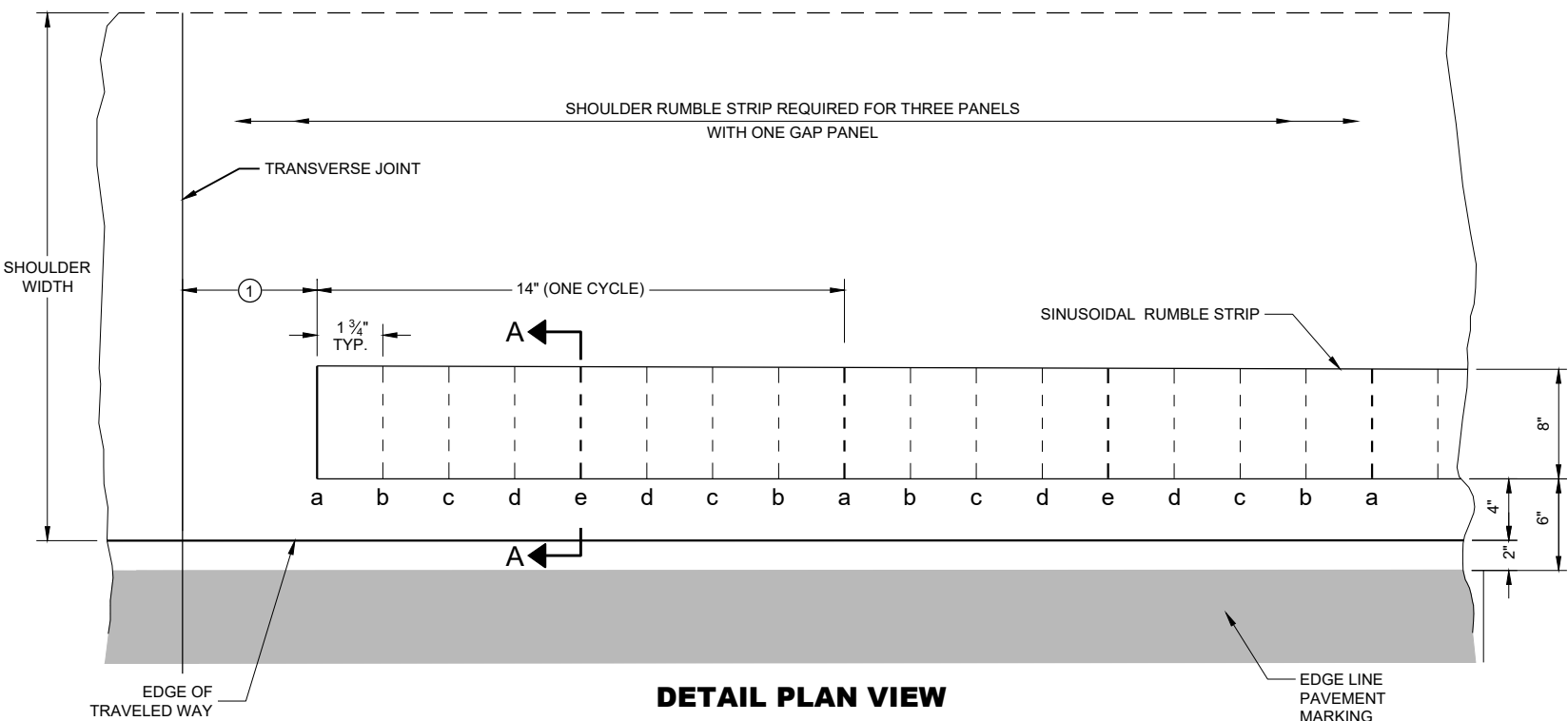
SHOULDER RUMBLE STRIPS - ASPHALT, SINUSOIDAL



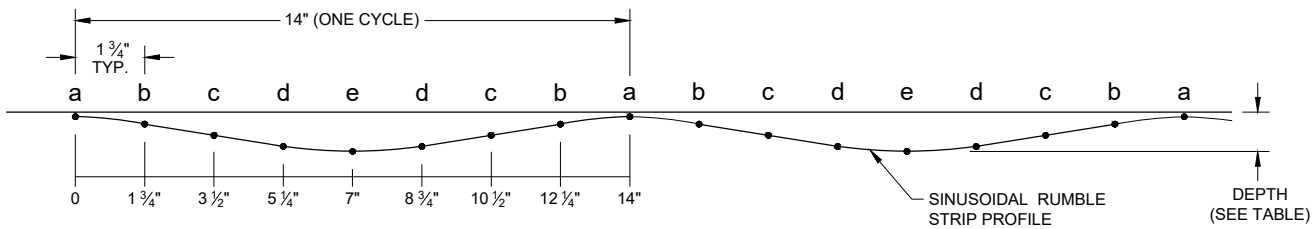
SECTION A - A

SHOULDER RUMBLE STRIPS - ASPHALT, SINUSOIDAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL PLAN VIEW



DETAIL PROFILE VIEW

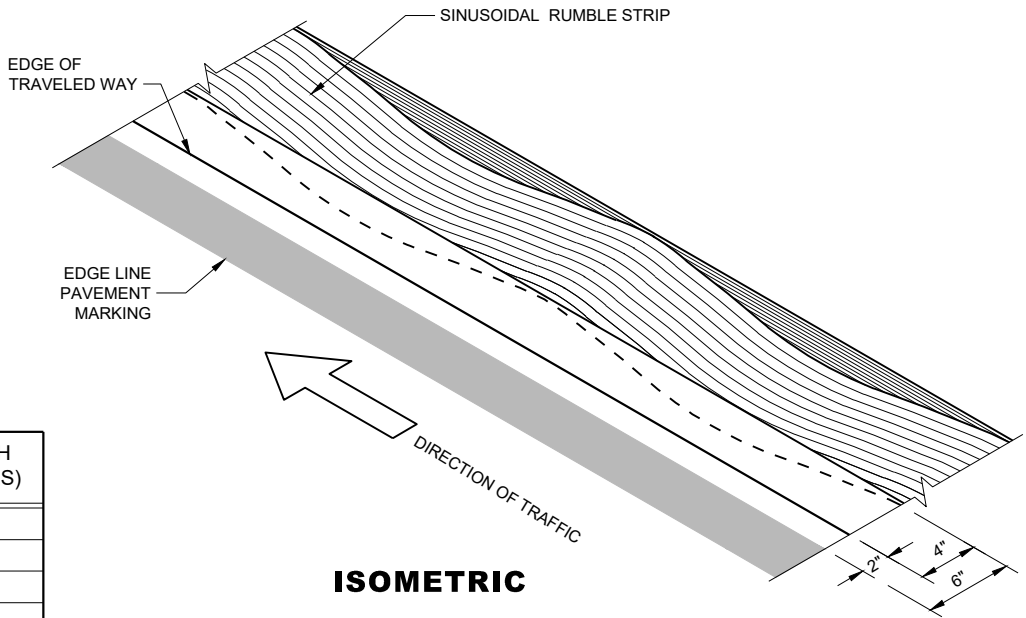
LOCATION	DEPTH (INCHES)
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"

GENERAL NOTES

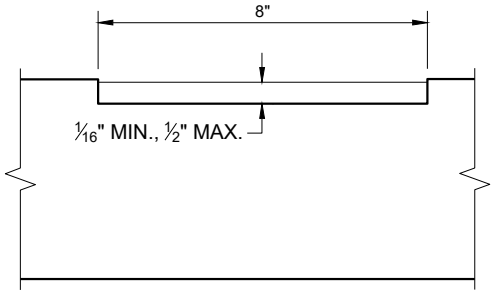
DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

SHOULDER RUMBLE STRIPS MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.

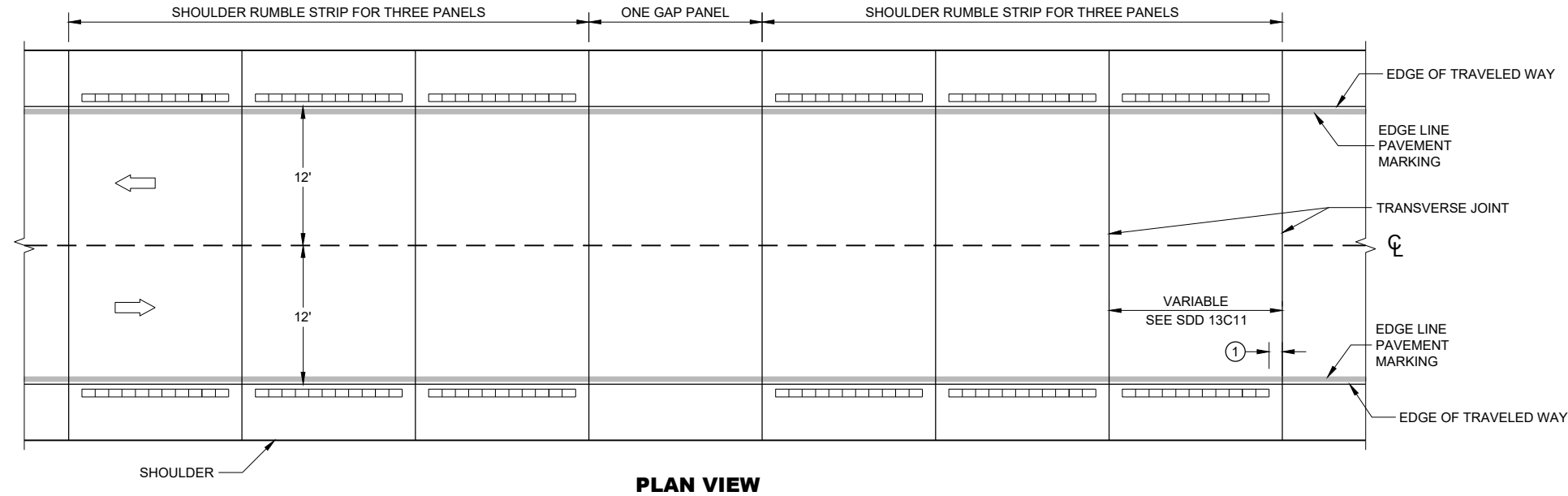
① FOR CONCRETE PAVEMENTS, RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM A TRANSVERSE JOINT.



ISOMETRIC



SECTION A - A

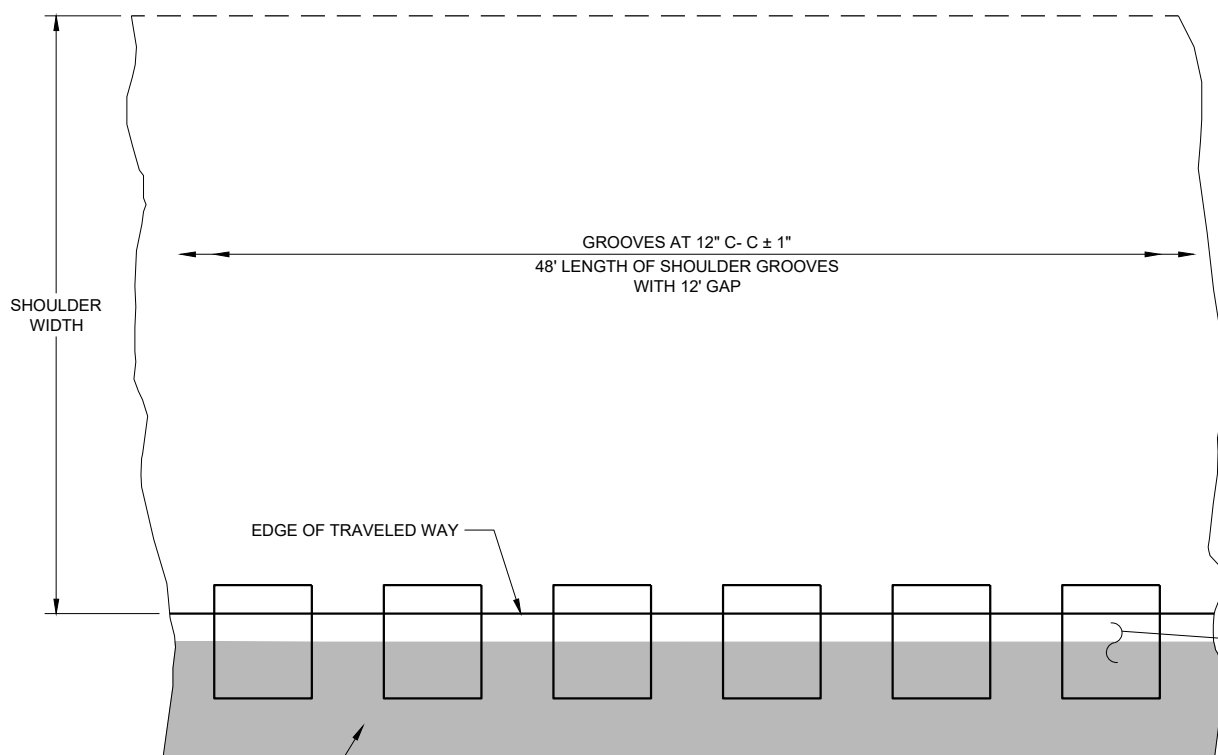


PLAN VIEW

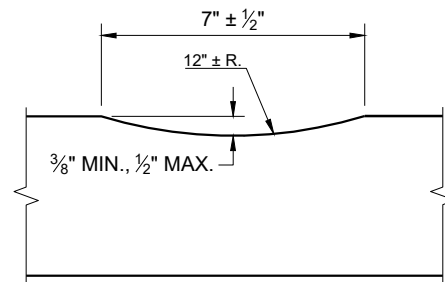
SHOULDER RUMBLE STRIPS - CONCRETE, SINUSOIDAL

SHOULDER RUMBLE STRIPS - CONCRETE, SINUSOIDAL

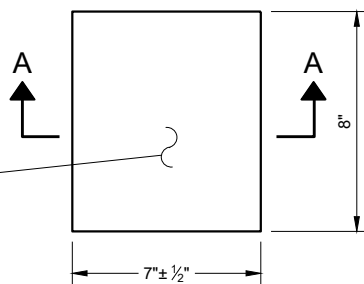
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 109



PLAN DETAIL VIEW
SHOULDER WITH GROOVES



SECTION A - A

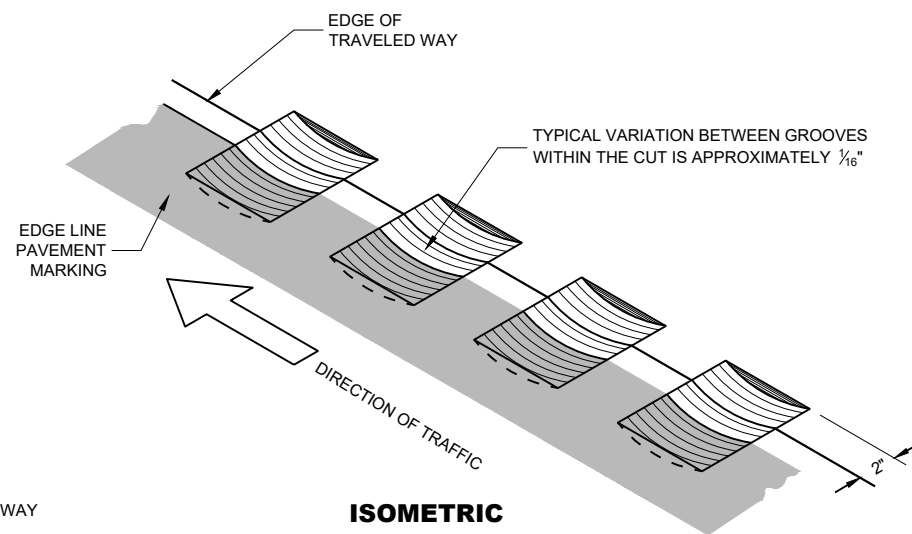


PLAN VIEW
(SINGLE GROOVE)

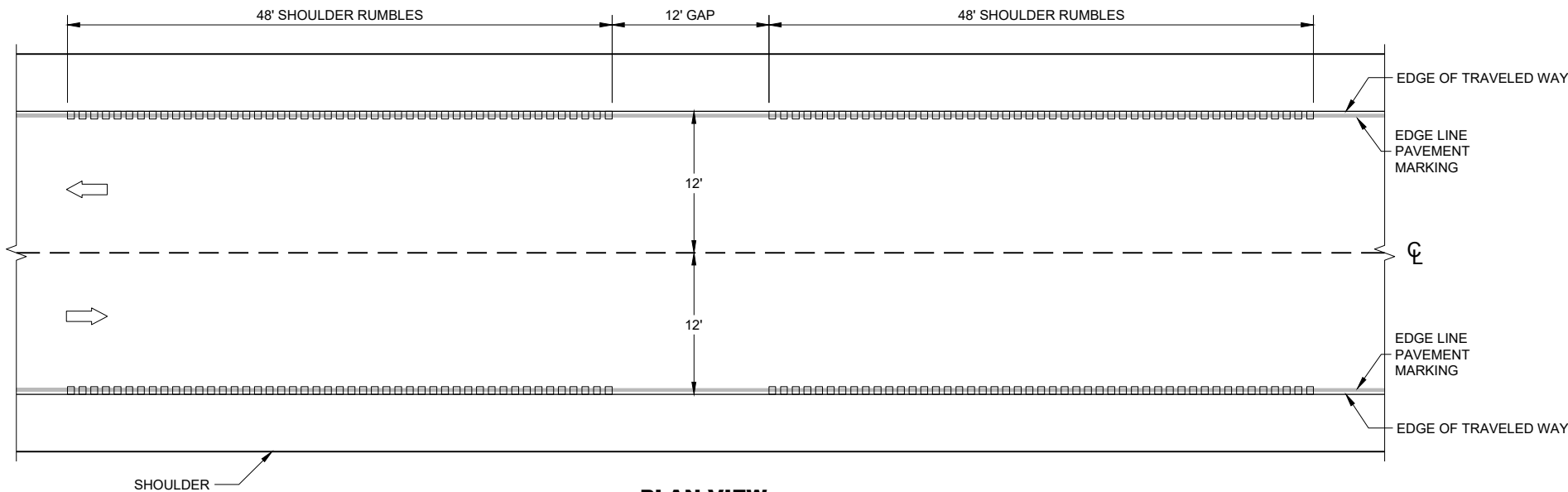
GENERAL NOTES

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



ISOMETRIC

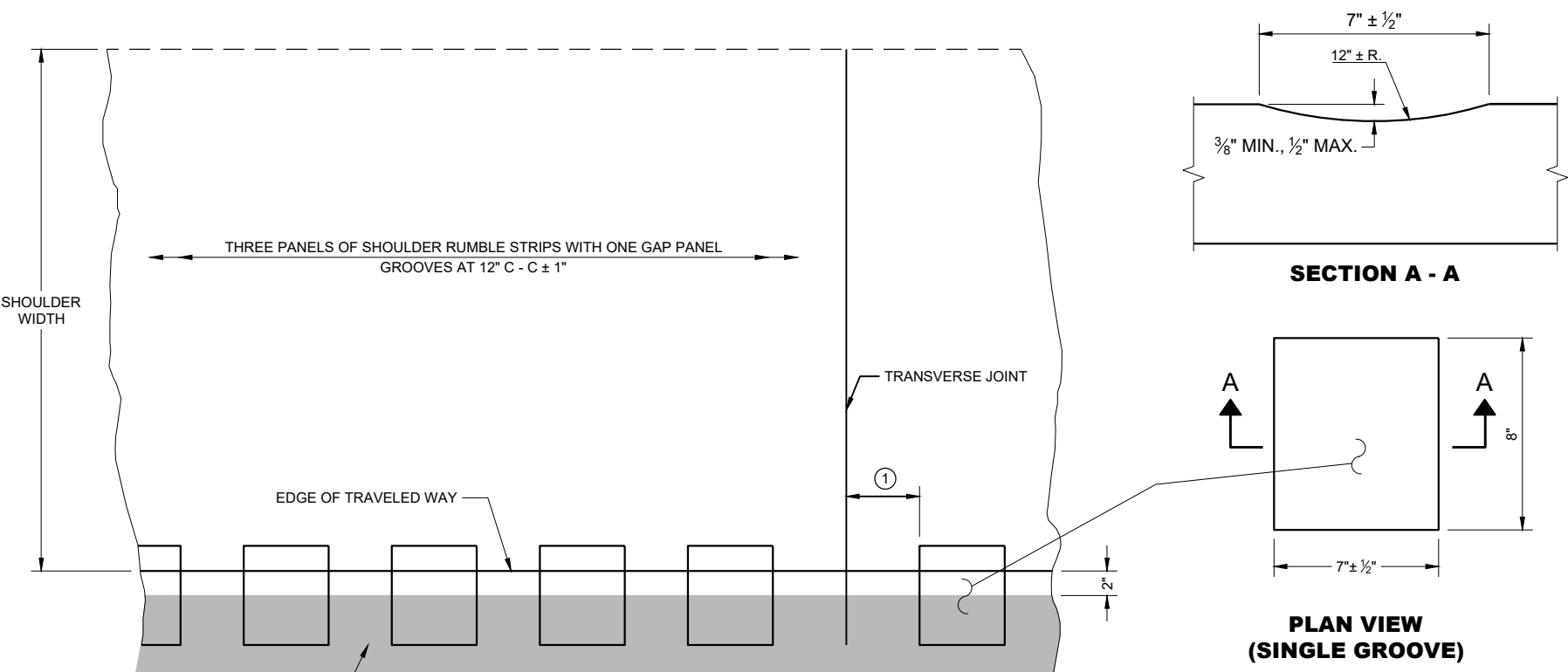


PLAN VIEW

EDGE LINE RUMBLE STRIPS - ASPHALT

EDGE LINE RUMBLE
STRIPS - ASPHALT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 110



SECTION A - A

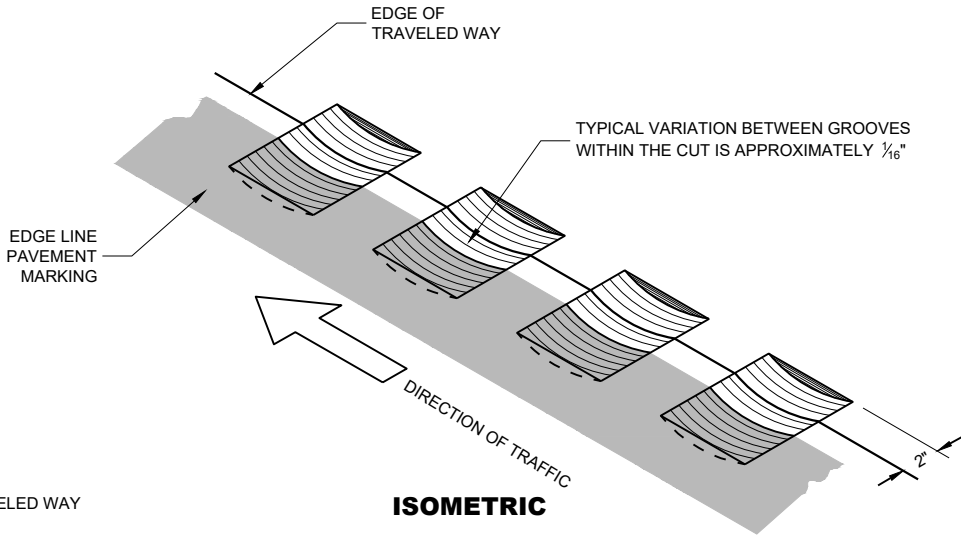
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

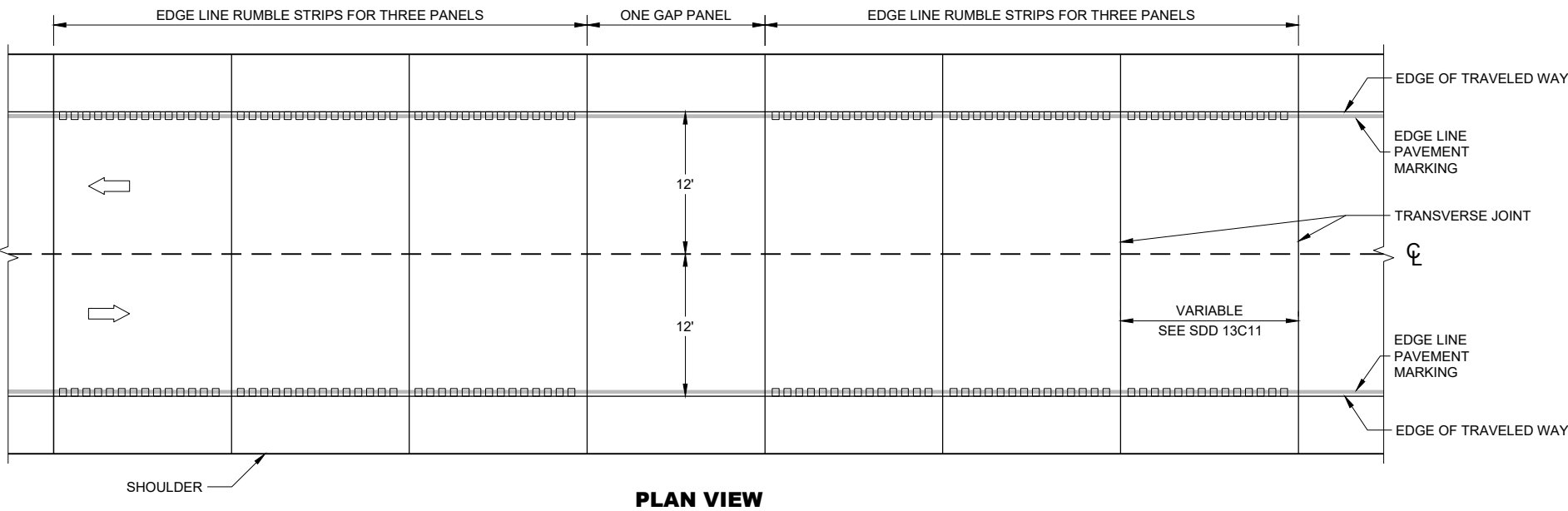
DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

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

① FOR CONCRETE PAVEMENTS, RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM A TRANSVERSE JOINT.



ISOMETRIC

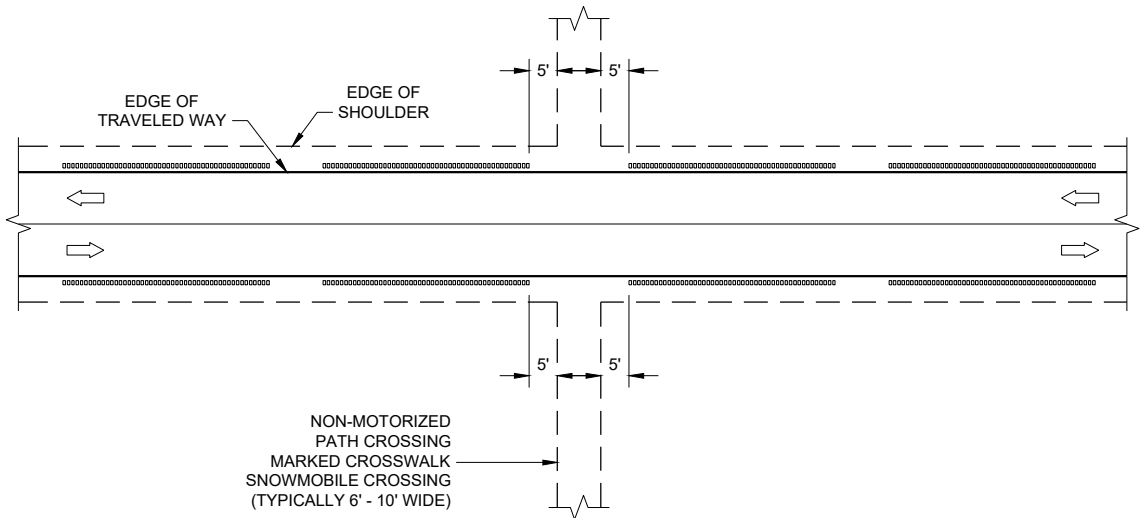


PLAN VIEW

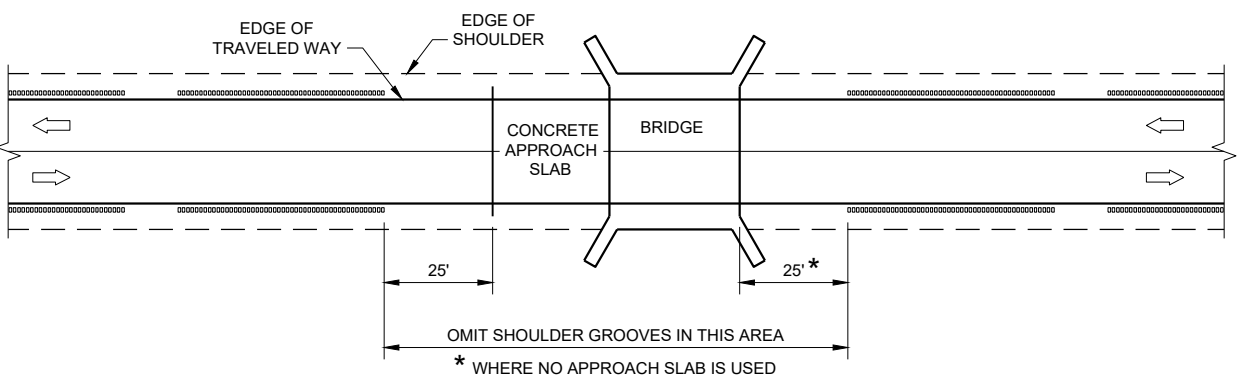
EDGE LINE RUMBLE STRIPS - CONCRETE

EDGE LINE RUMBLE STRIPS - CONCRETE

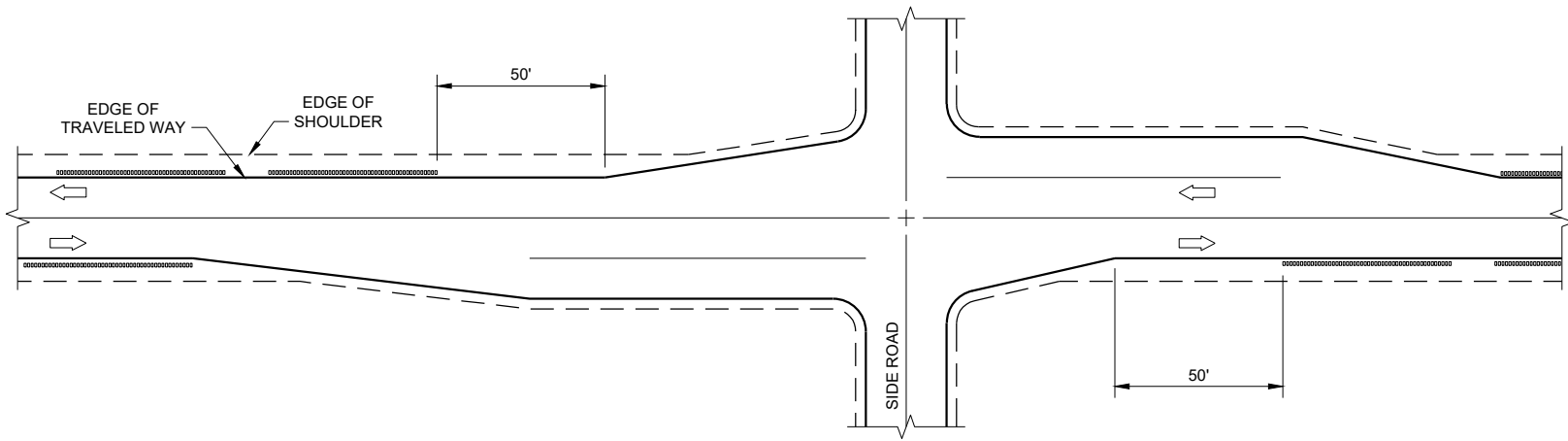
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



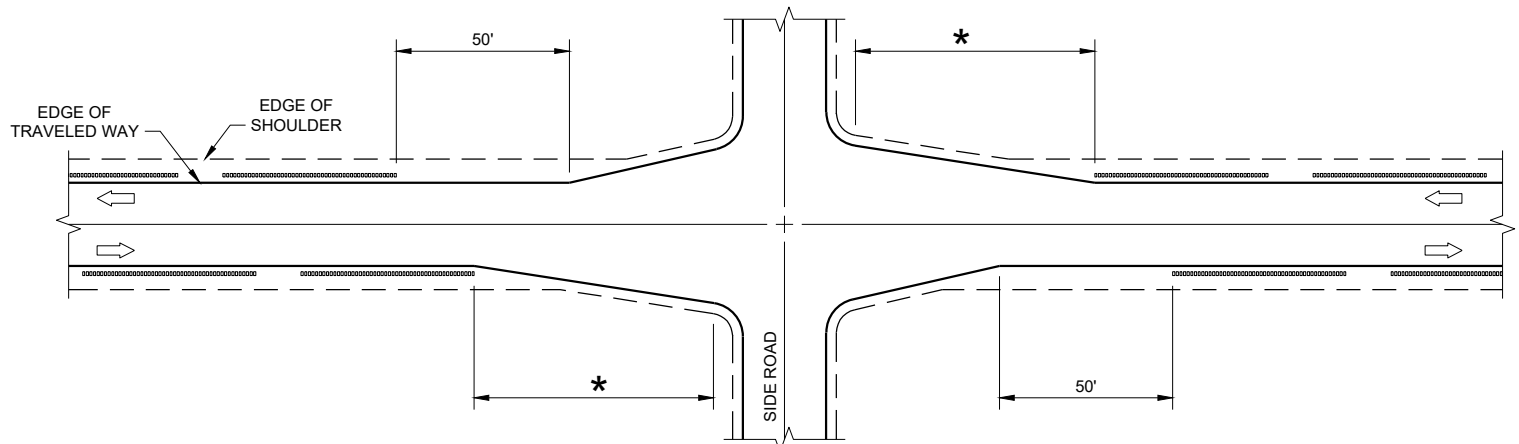
GROOVES AT MISCELLANEOUS CROSSINGS



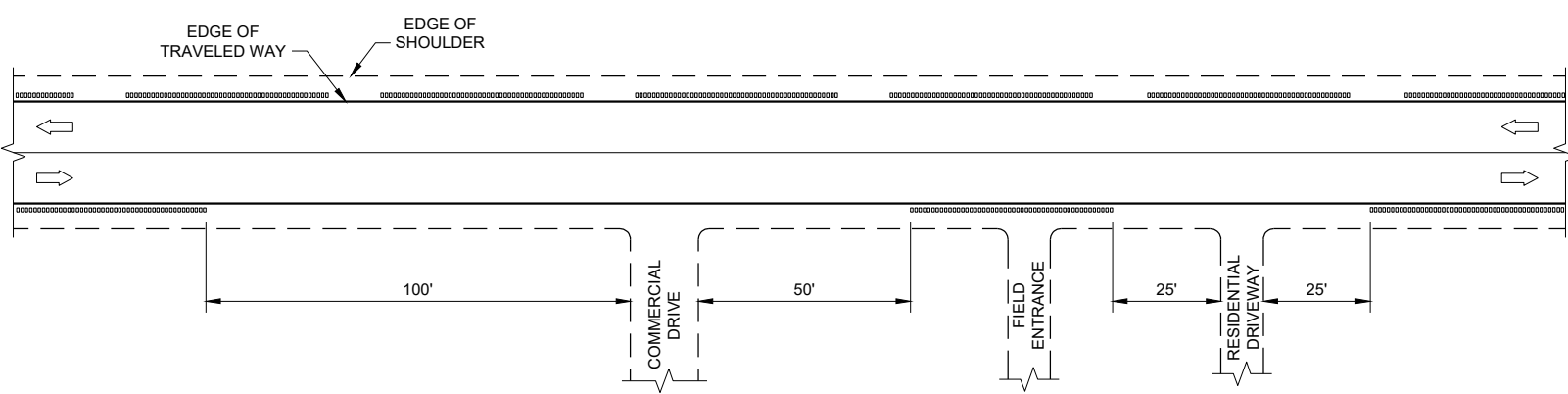
GROOVES AT BRIDGES



GROOVES AT RIGHT TURN LANE



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



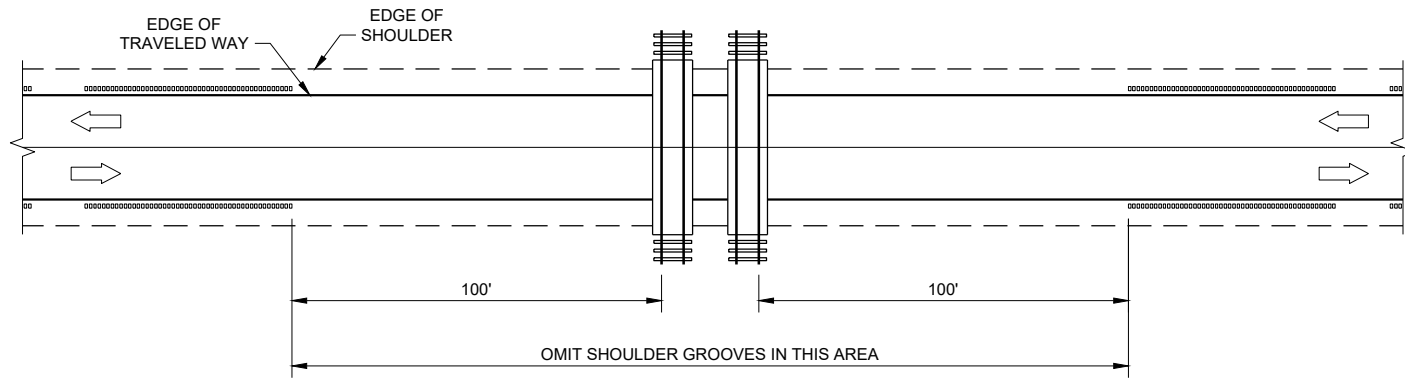
GROOVES AT DRIVEWAYS

GENERAL NOTES

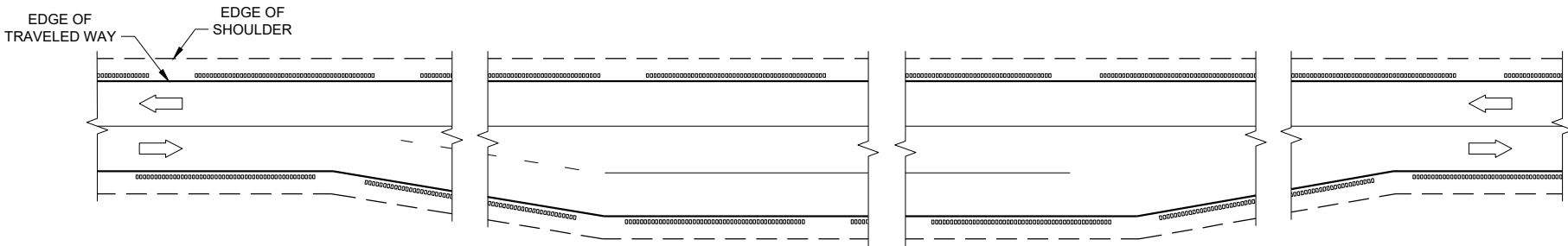
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

SHOULDER AND EDGE LINE
RUMBLE STRIPS
CROSSINGS, INTERSECTIONS,
BRIDGES, DRIVEWAYS

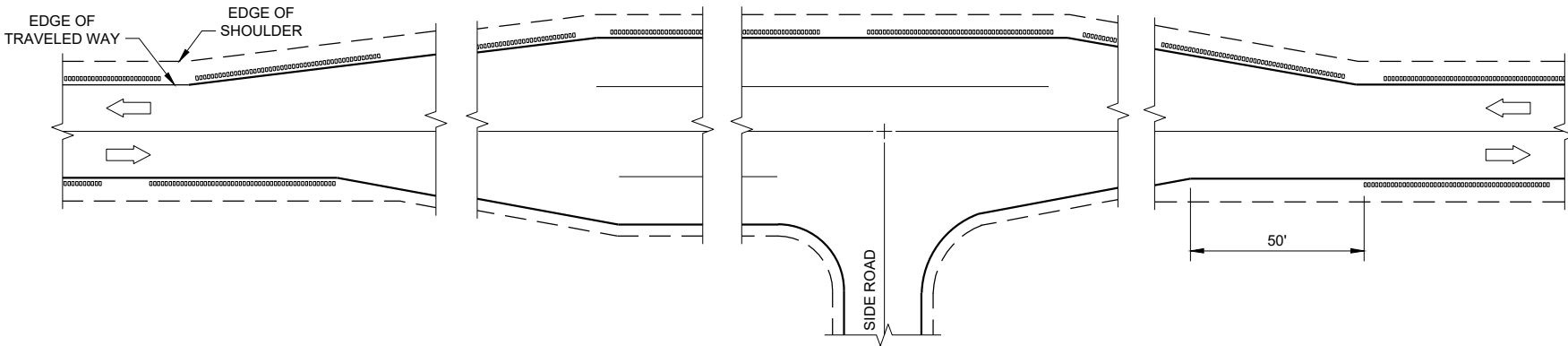
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GROOVES AT RAILROADS



GROOVES AT PASSING AND CLIMBING LANES



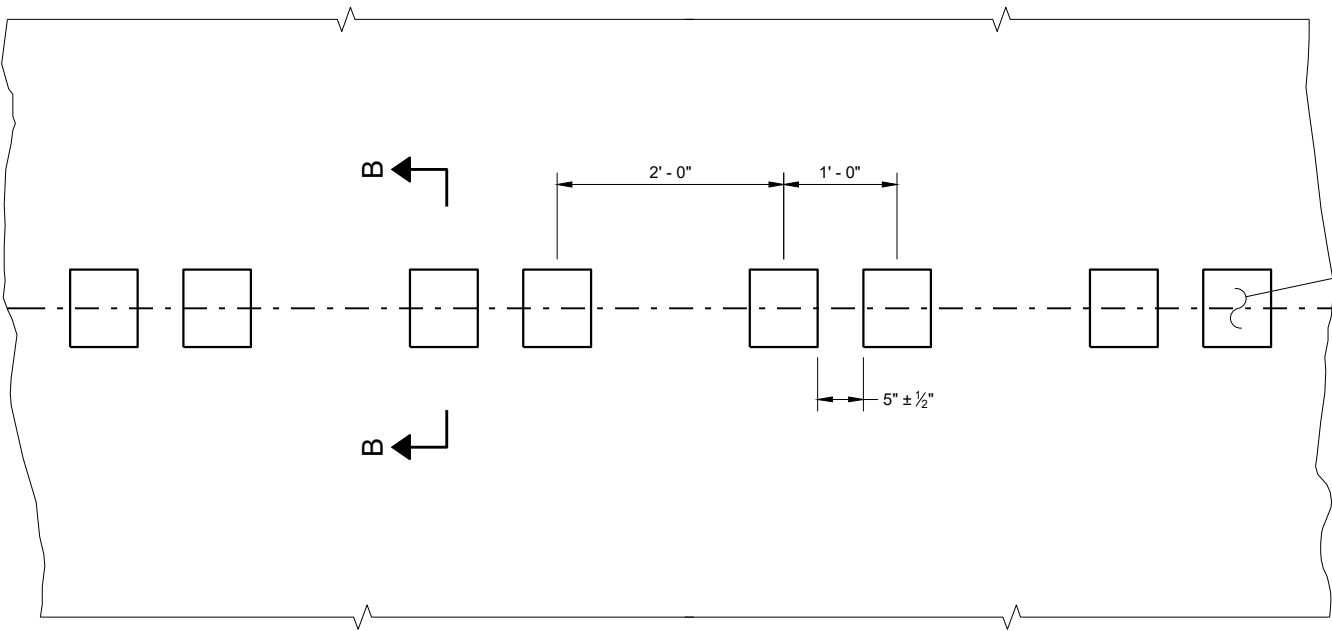
GROOVES AT BYPASS LANES

**SHOULDER AND EDGE LINE
RUMBLE STRIPS -
RAILROAD, PASSING,
CLIMBING AND BYPASS LANES**

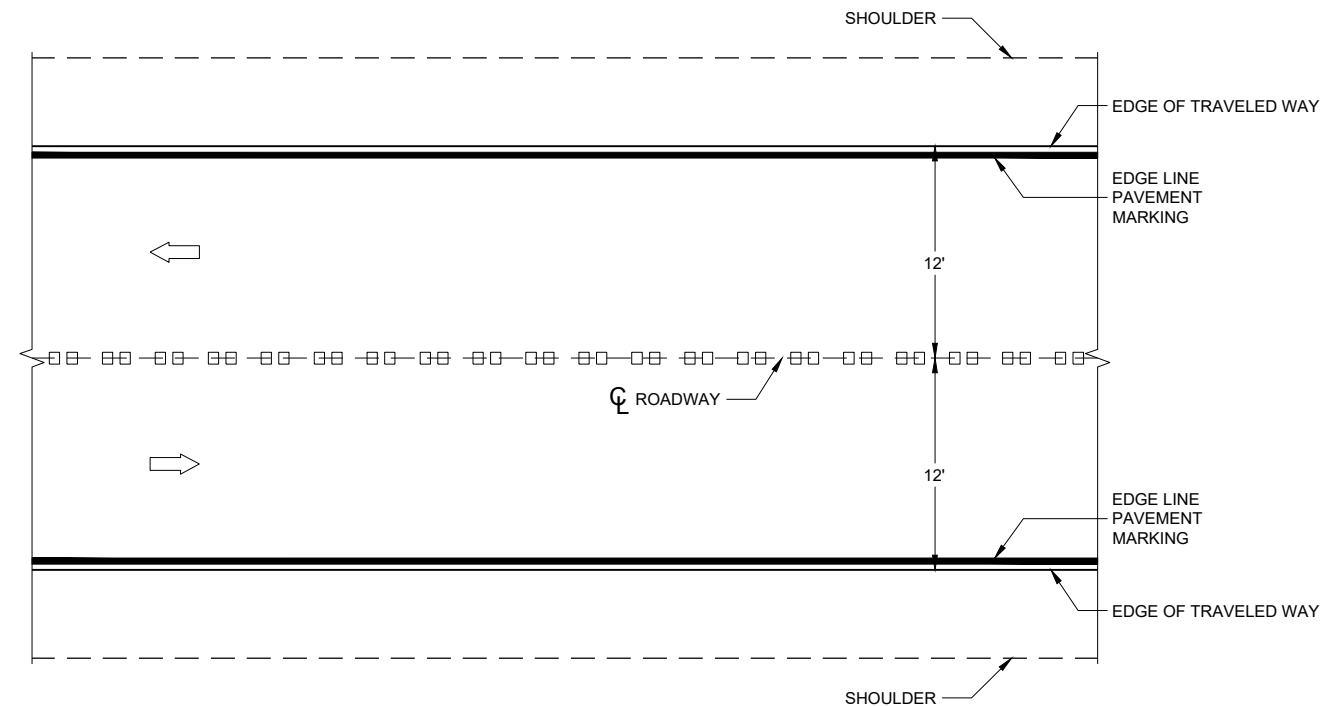
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ John Jenkins
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 113

FHWA

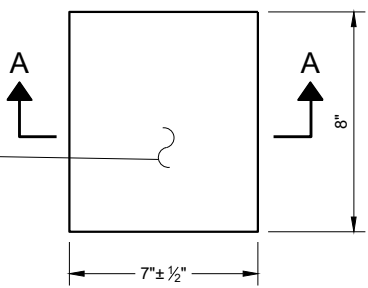


PLAN DETAIL VIEW

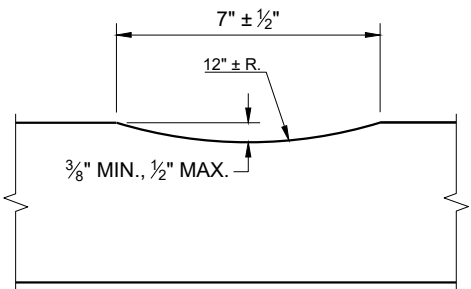


PLAN VIEW

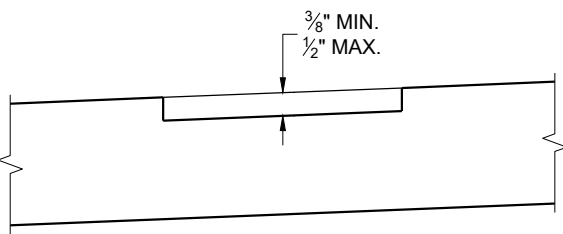
CENTERLINE RUMBLE STRIPS - ASPHALT



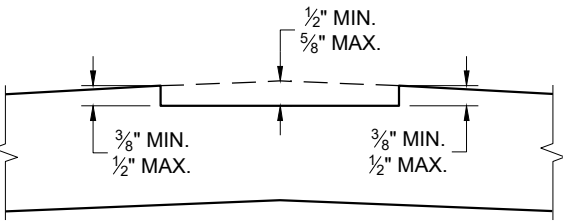
PLAN VIEW
(SINGLE GROOVE)



SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY

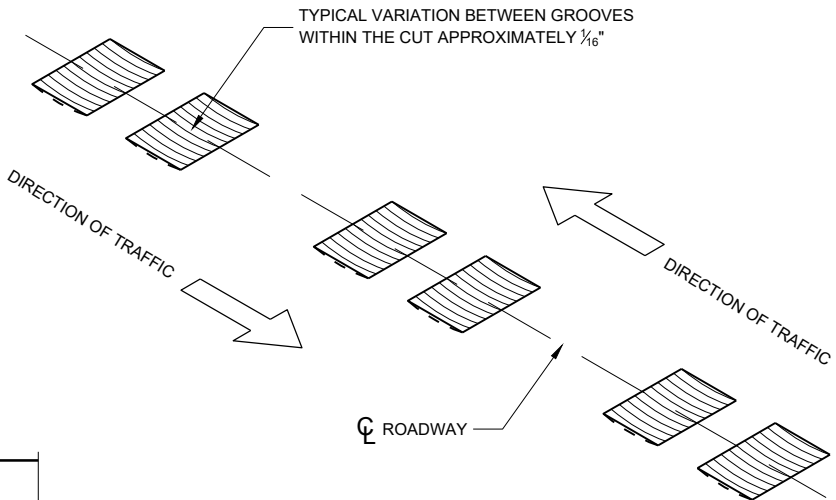


SECTION B - B
CROWNED ROADWAY

GENERAL NOTES

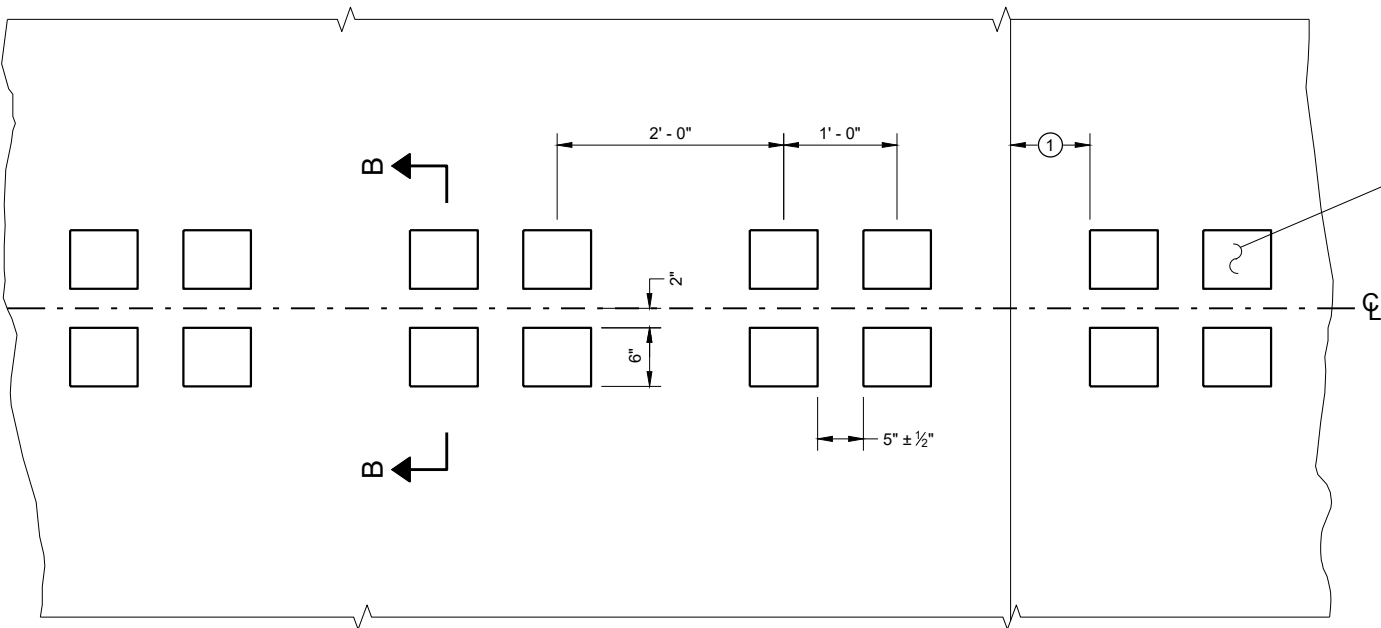
DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

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

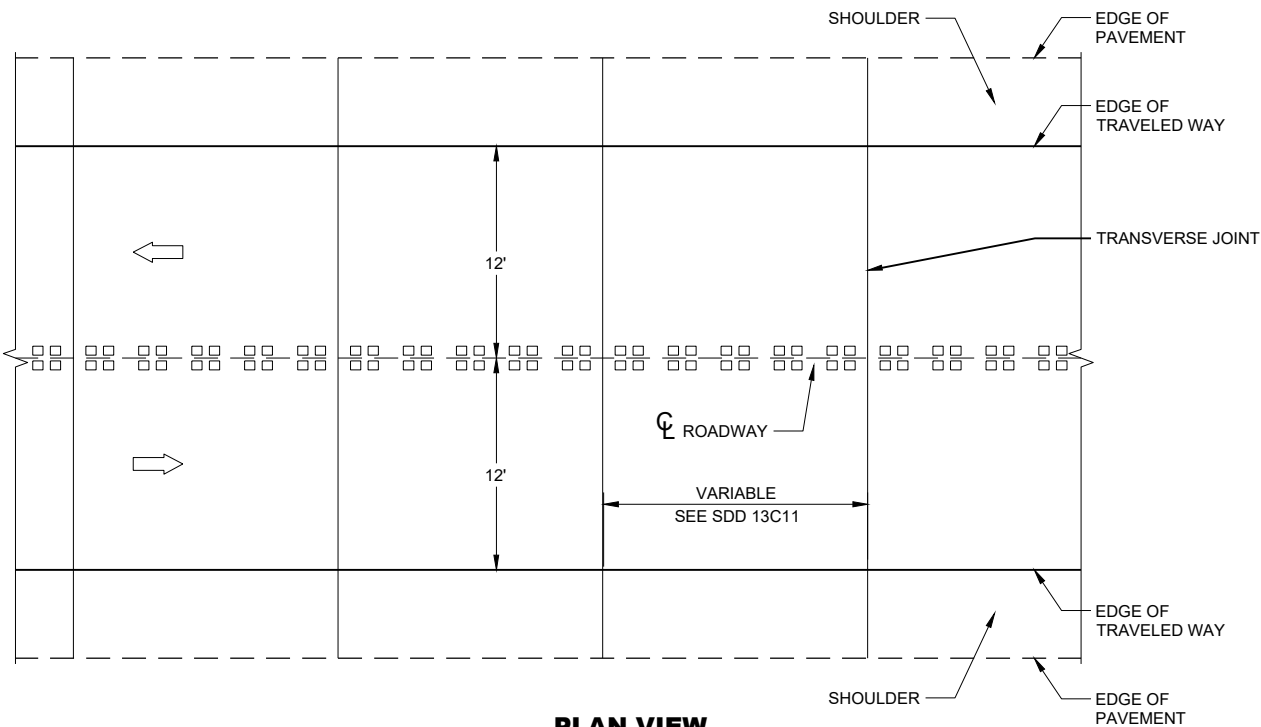


CENTERLINE RUMBLE STRIPS - ASPHALT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

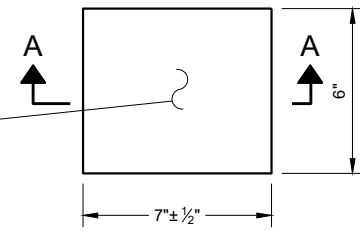


PLAN DETAIL VIEW

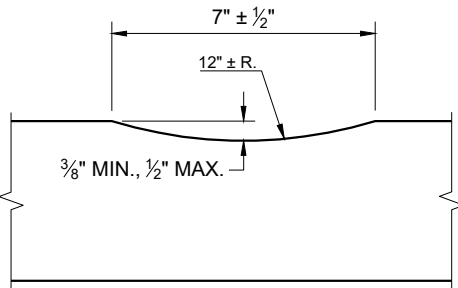


PLAN VIEW

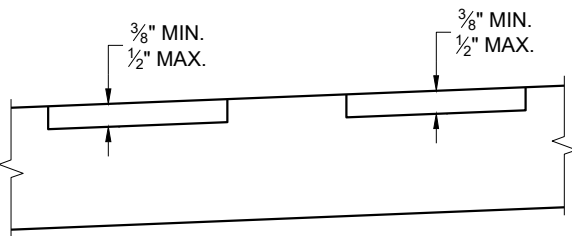
CENTERLINE RUMBLE STRIPS - CONCRETE



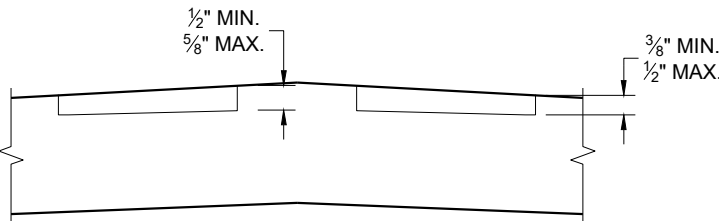
PLAN VIEW
(SINGLE GROOVE)



SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY

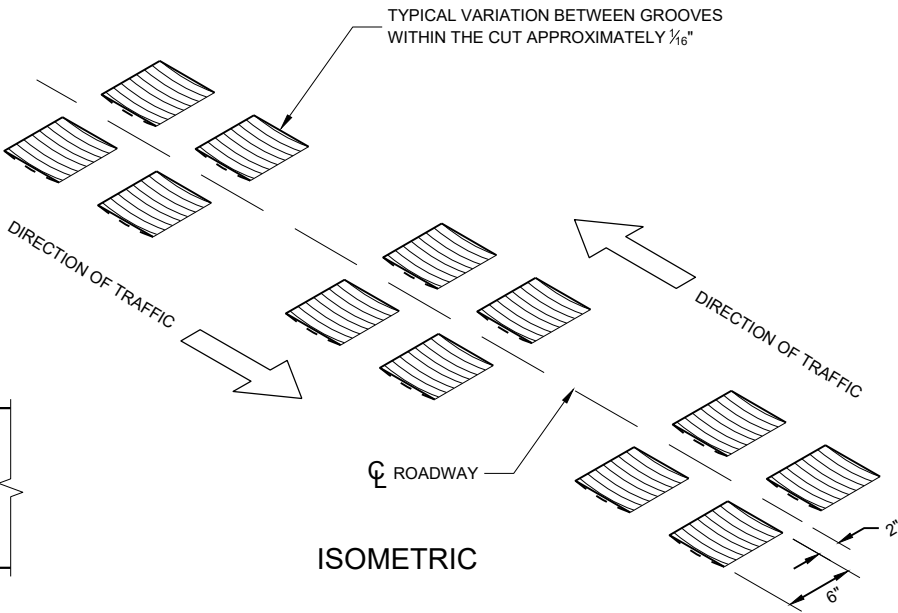
GENERAL NOTES

SDD 13A11, SHEET "d" SHOWS THE LOCATION OF RUMBLE STRIPS AT INTERSECTIONS, INTERSECTIONS WITH LEFT TURN LANES, BRIDGES, COMMERCIAL AND RESIDENTIAL DRIVEWAYS AND RAILROAD CROSSINGS.

TEMPORARY PAVEMENT MARKINGS ARE TYPICALLY PLACED PRIOR TO RUMBLE STRIP INSTALLATION. PERMANENT MARKINGS ARE INSTALLED AFTER RUMBLE STRIP INSTALLATION.

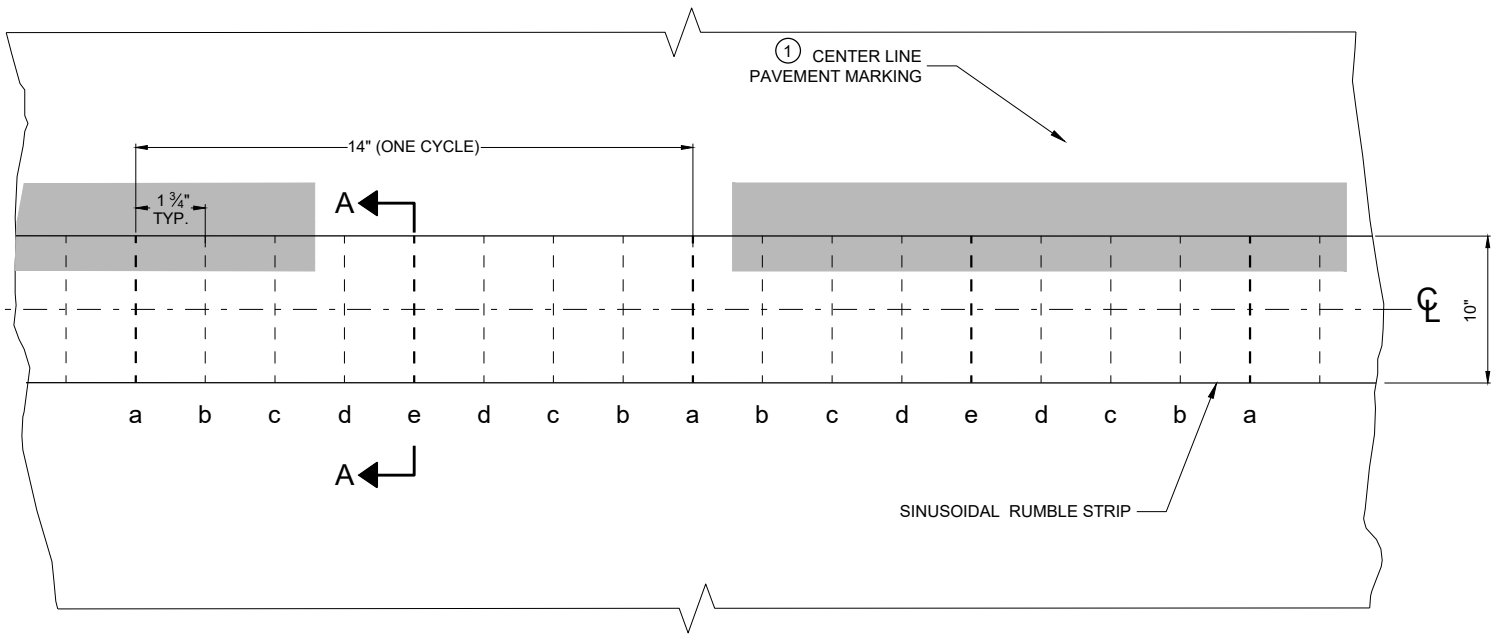
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.

① CONCRETE PAVEMENT RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES FROM TRANSVERSE JOINTS.

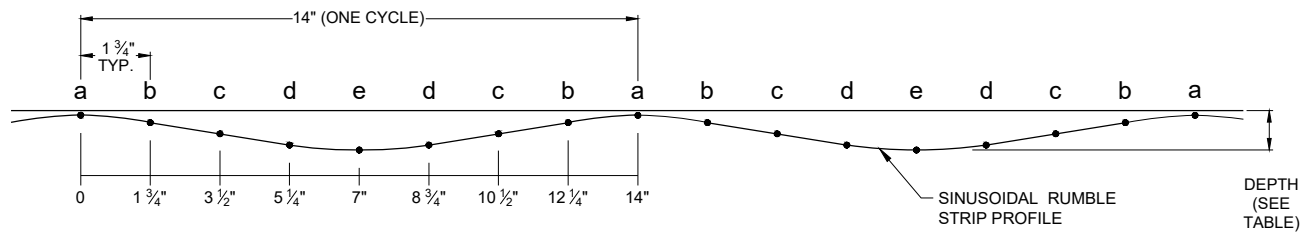


CENTERLINE RUMBLE STRIPS - CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 115

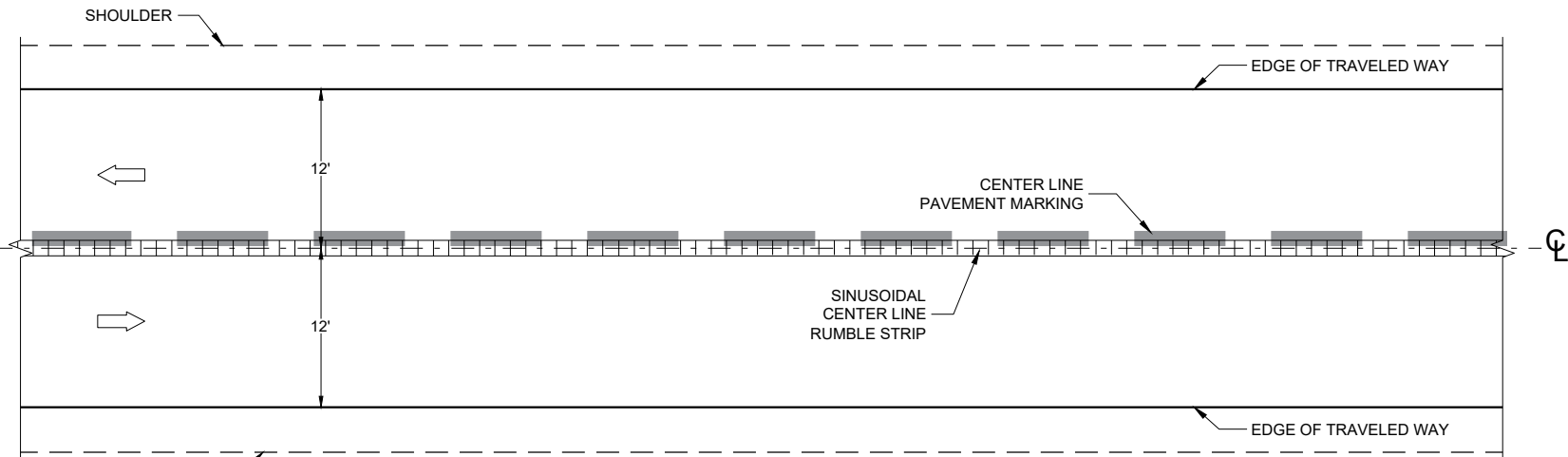


PLAN DETAIL VIEW

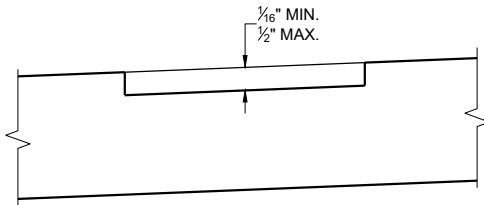


PROFILE VIEW
SINUSOIDAL CENTERLINE RUMBLE STRIPS

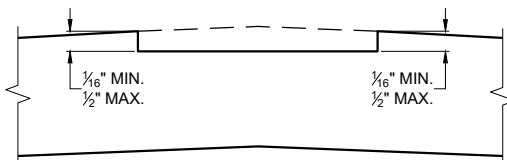
LOCATION	DEPTH (INCHES)
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"



CENTERLINE RUMBLE STRIPS - ASPHALT,
SINUSOIDAL



SECTION A - A
SUPERELEVATED ROADWAY



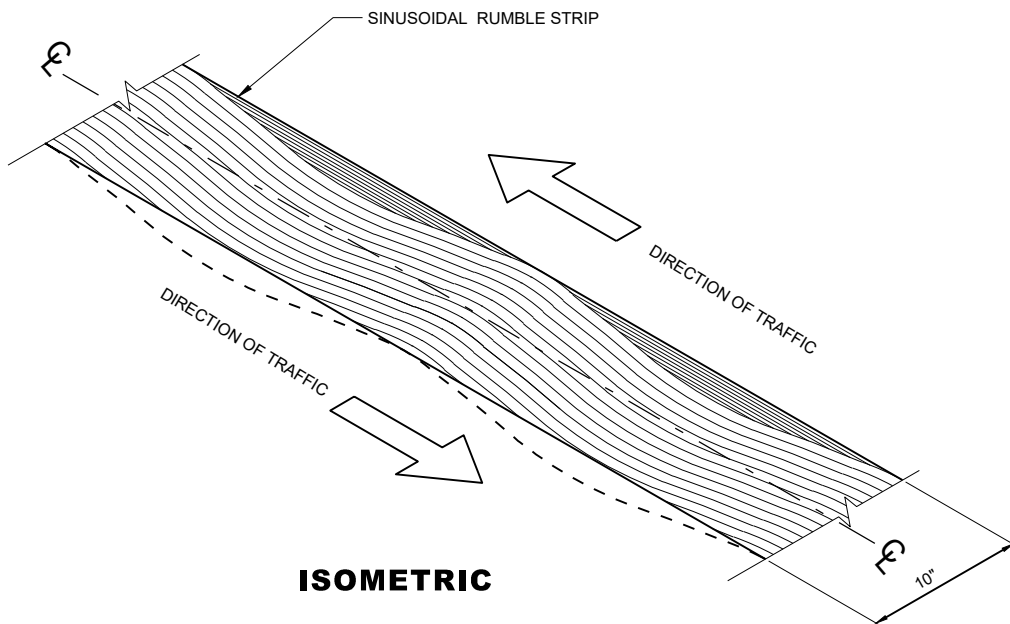
SECTION A - A
CROWNED ROADWAY

GENERAL NOTES

SDD 13A11, SHEET "d" SHOWS THE LOCATIONS OF RUMBLE STRIPS AT INTERSECTIONS, INTERSECTIONS WITH LEFT TURN LANES, BRIDGES, COMMERCIAL AND RESIDENTIAL DRIVEWAYS AND RAILROAD CROSSINGS.

SHOULDER RUMBLE STRIPS MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.

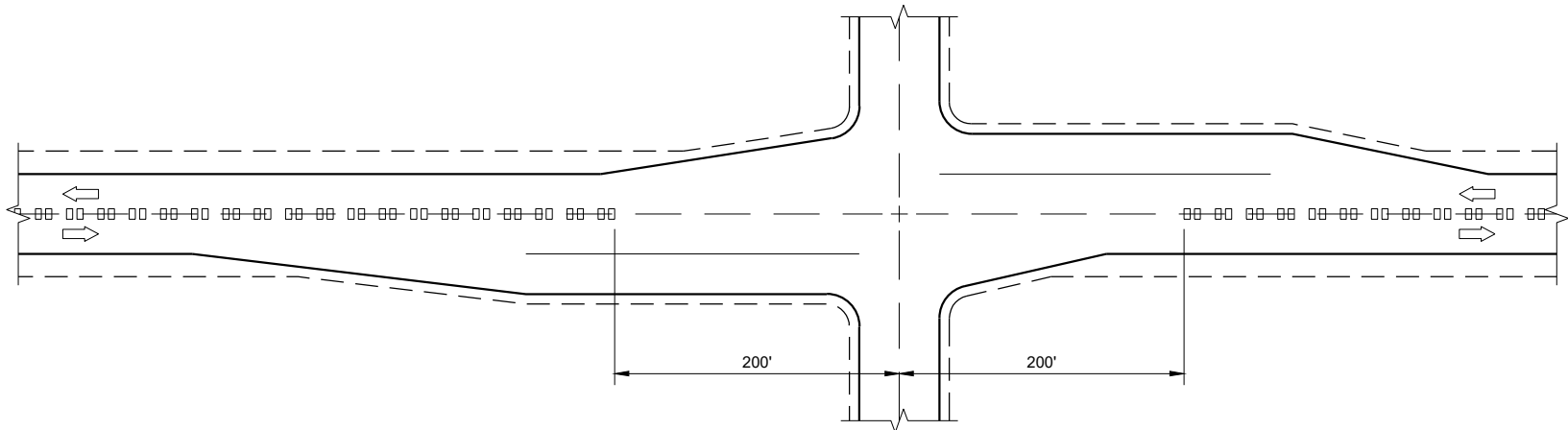
- ① CENTERLINE PAVEMENT MARKINGS SHALL BE PLACED PARTIALLY IN RUMBLE STRIP GROOVE AND PARTIALLY OUT OF THE RUMBLE STRIP GROOVE.



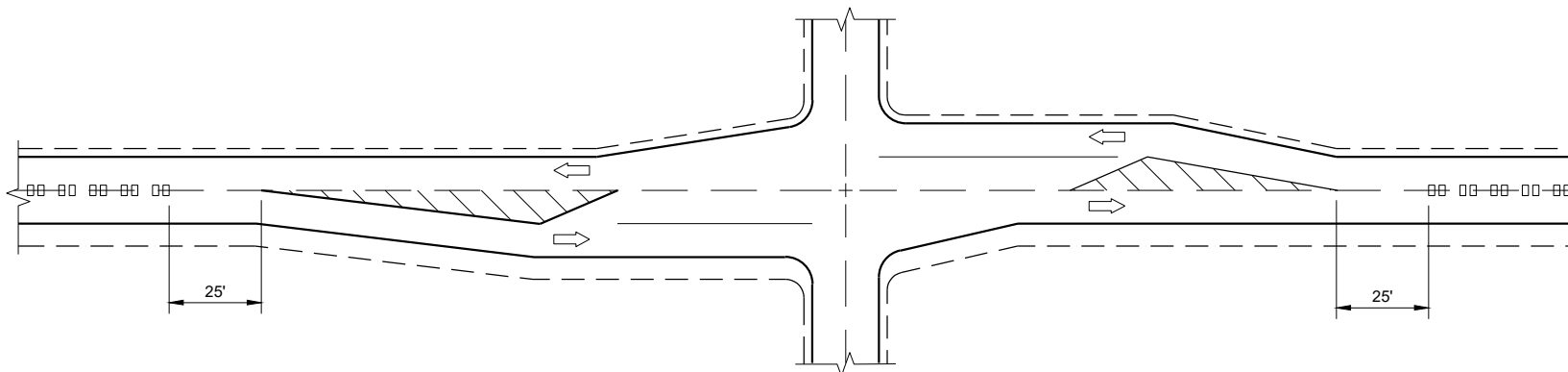
ISOMETRIC

CENTERLINE
RUMBLE STRIPS - ASPHALT,
SINUSOIDAL

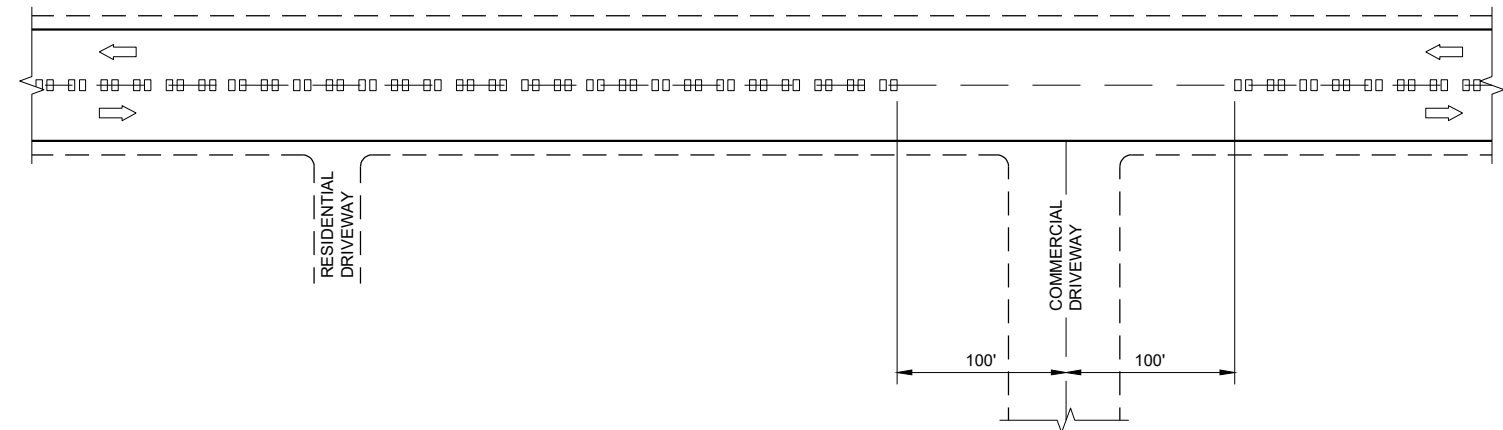
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 116



CENTERLINE GROOVES AT INTERSECTIONS



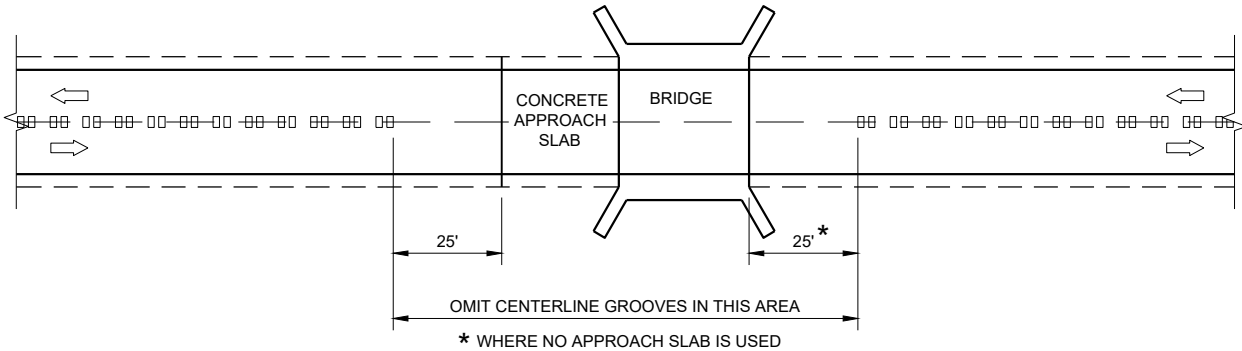
CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)



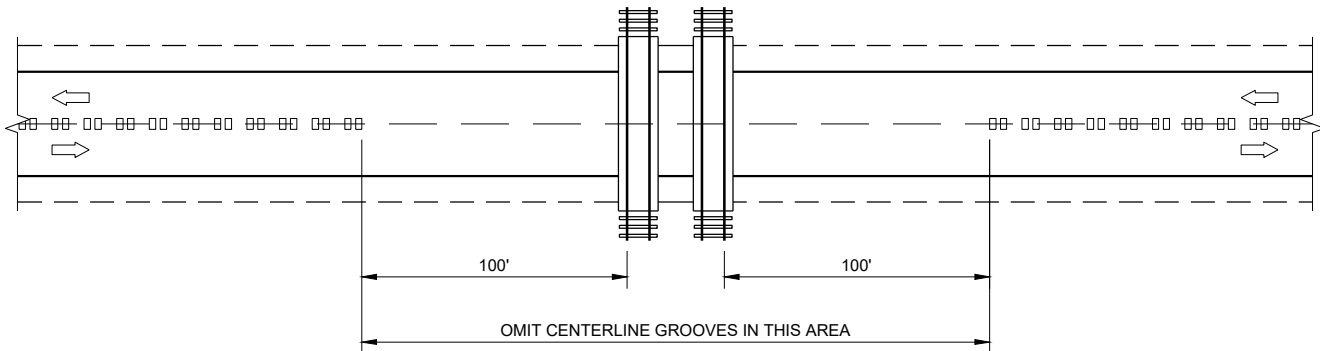
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES



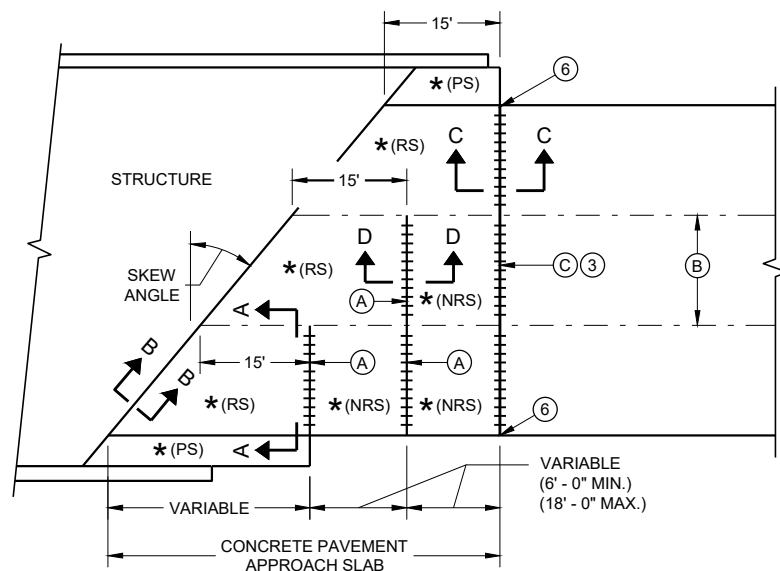
CENTERLINE GROOVES AT RAILROADS

CENTER LINE
RUMBLE STRIPS -
INTERSECTIONS, DRIVEWAYS,
BRIDGES, RAIL ROADS

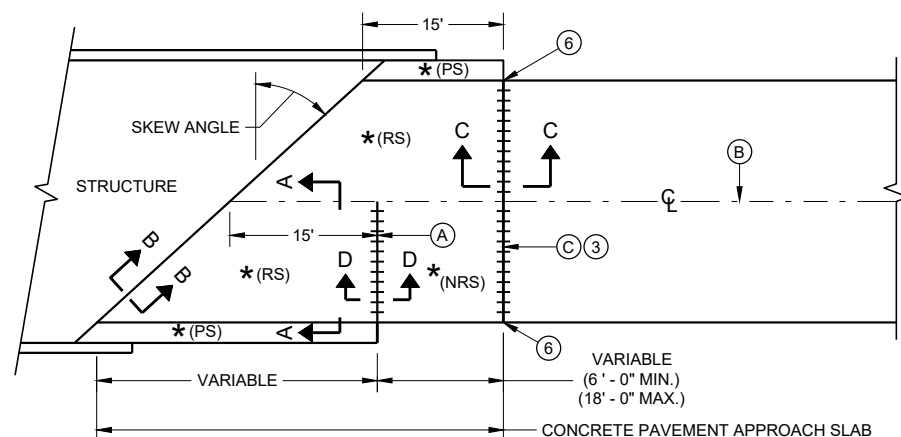
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ John Jenkins
ROADWAY STANDARDS DEVELOPMENT ENGINEER
117

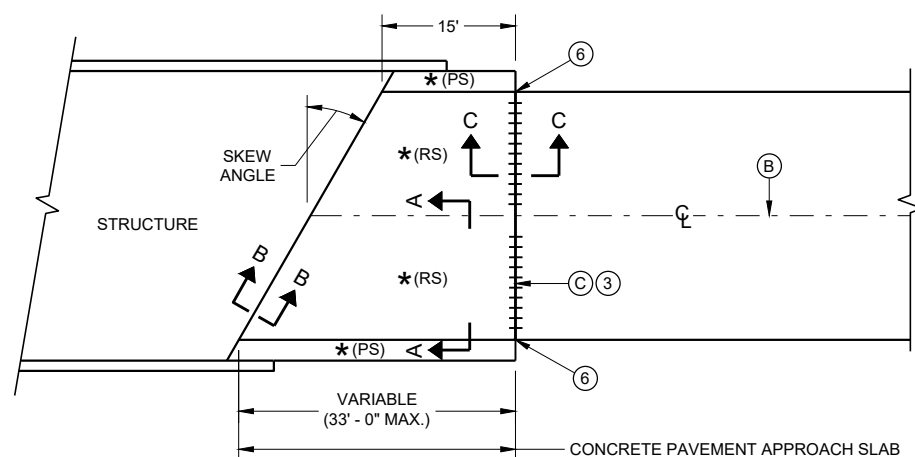
FHWA



**SKewed APPROACH
(PAVEMENT MORE THAN TWO LANES)**



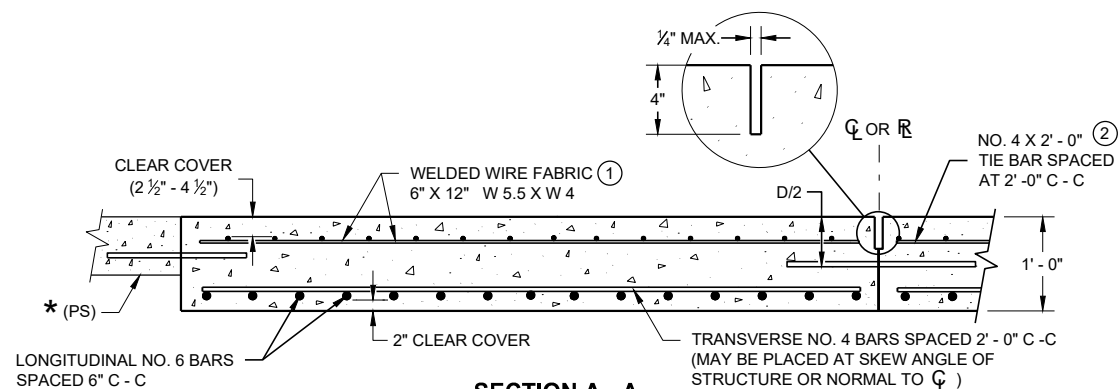
**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**



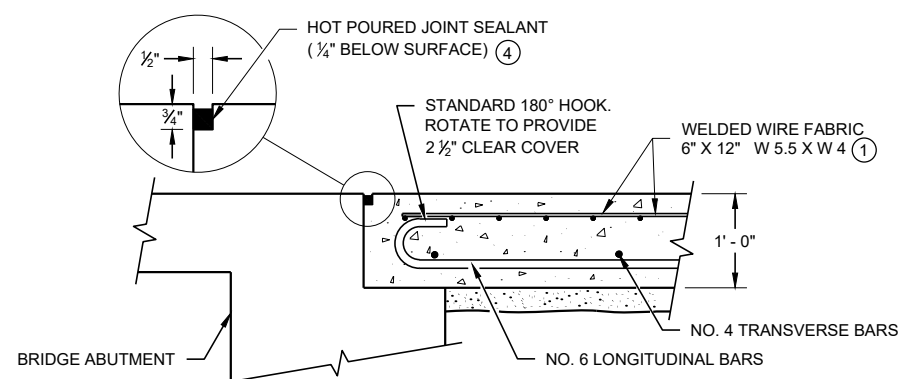
**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')**

APPROACH SLAB AND ADJACENT PAVEMENT

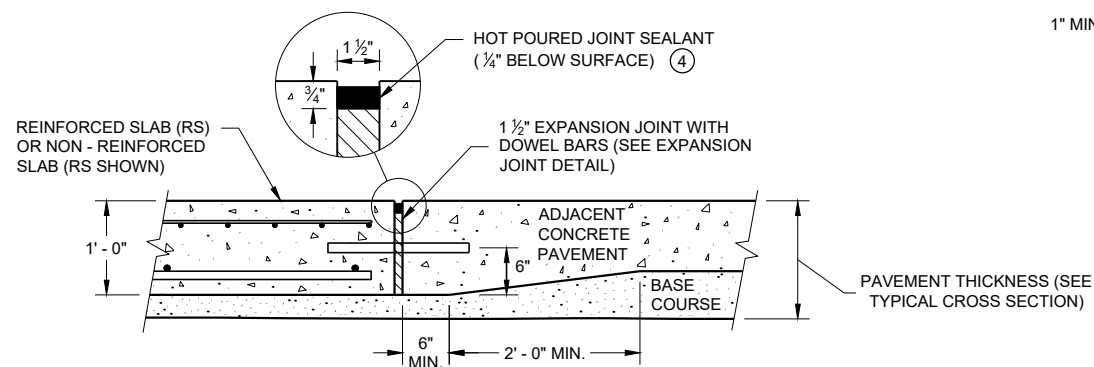
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



**SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT**



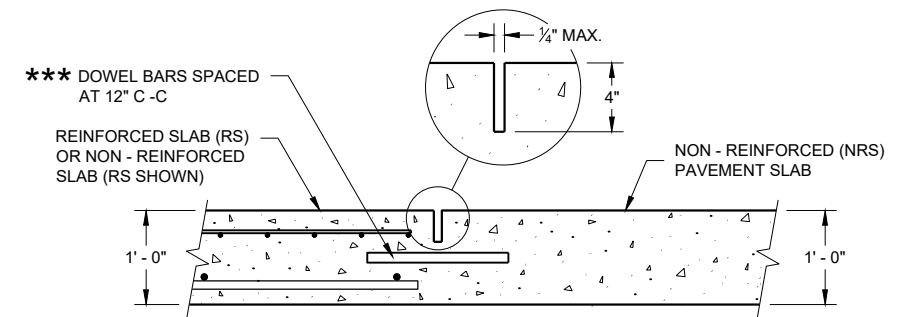
**SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**

GENERAL NOTES

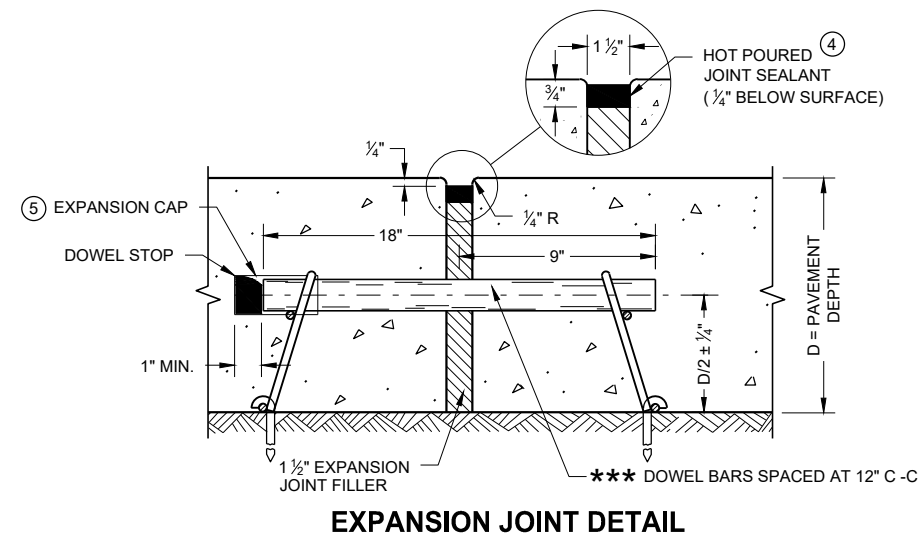
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
- ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- A STANDARD CONTRACTION JOINT NORMAL TO $\mathcal{C}$ OR $\mathcal{R}$.
- B STANDARD LONGITUDINAL JOINT WITH TIE BARS.
- C 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO $\mathcal{C}$ OR $\mathcal{R}$.



**SECTION D - D
CONTRACTION JOINT**

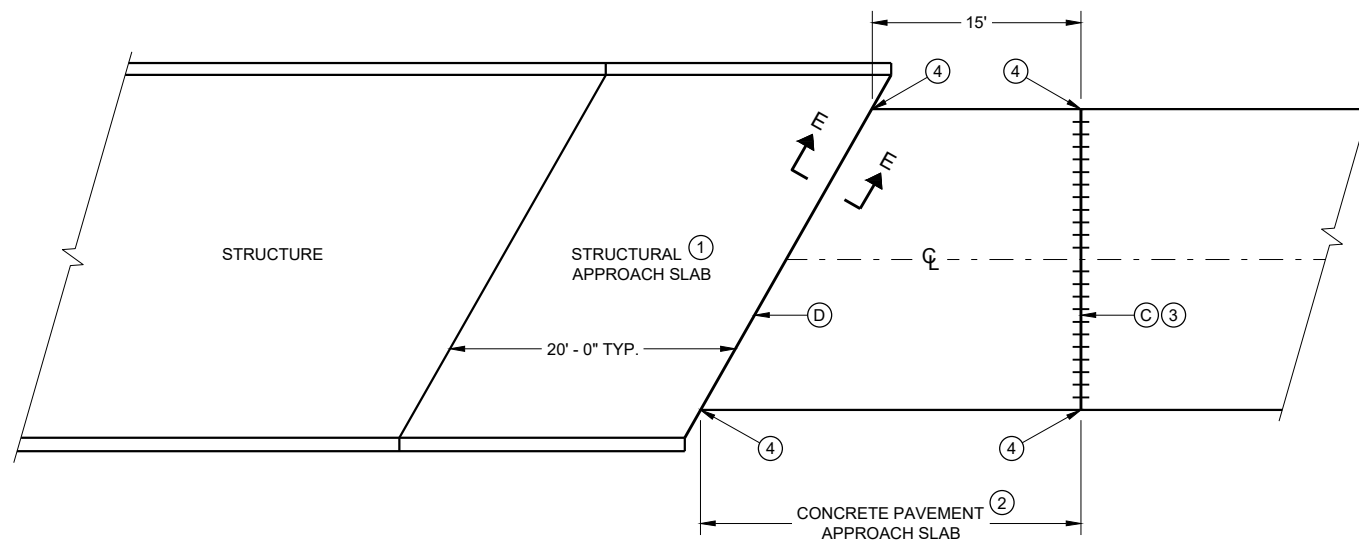


EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR 118
FHWA

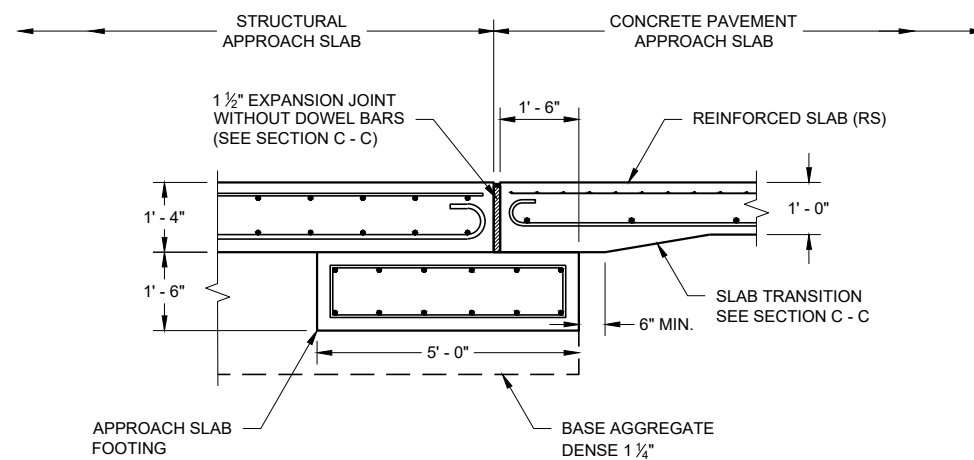


GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

- ① SEE BRIDGE PLAN.
- ② CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- Ⓒ 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO $\overline{CL}$ OR $\overline{RL}$.
- Ⓓ 1 ½" EXPANSION JOINT (NO DOWELS)

BRIDGE APPROACHES

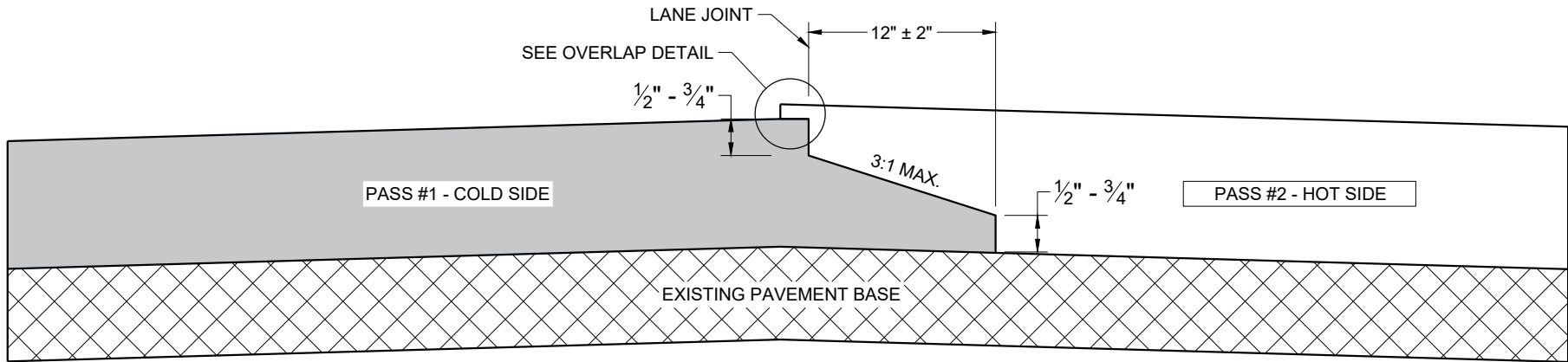


SECTION E - E FOOTING DETAIL STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

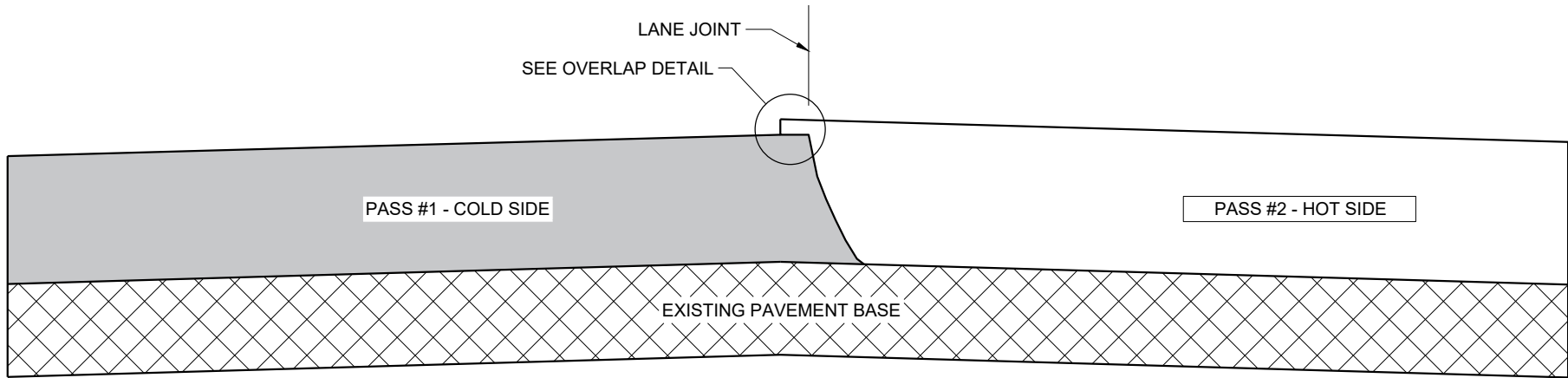
STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

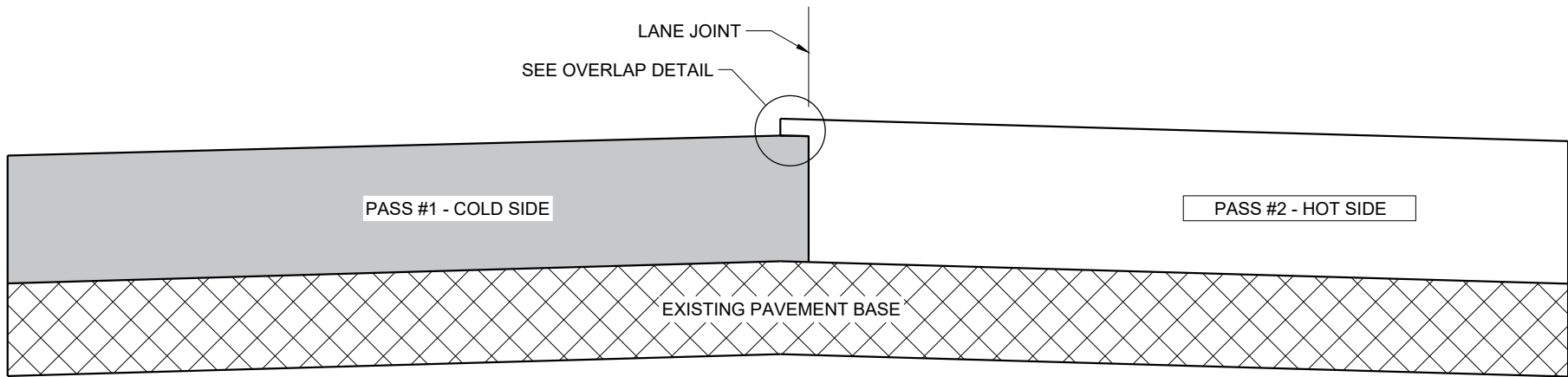
APPROVED
November 2018 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPERVISOR 119
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

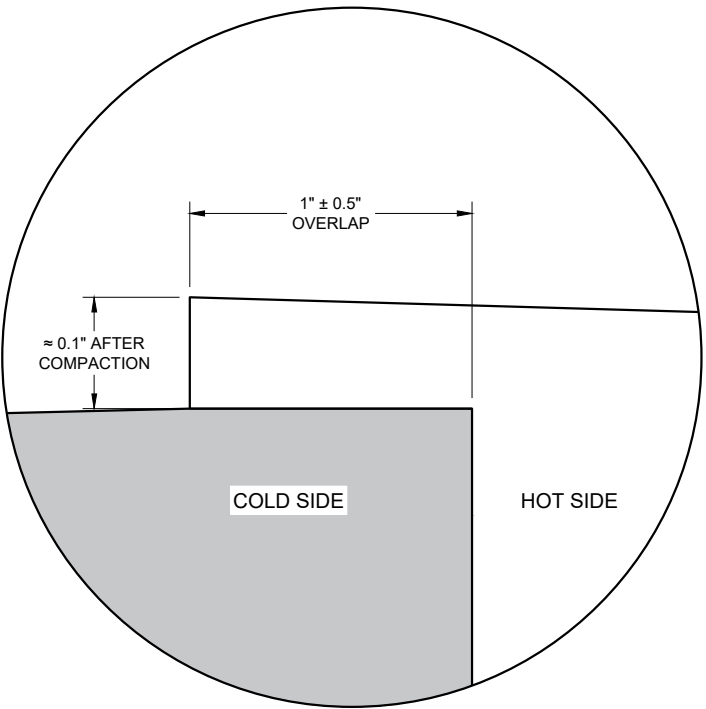
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY $0.1"$ AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO $2"$ FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 120

FHWA



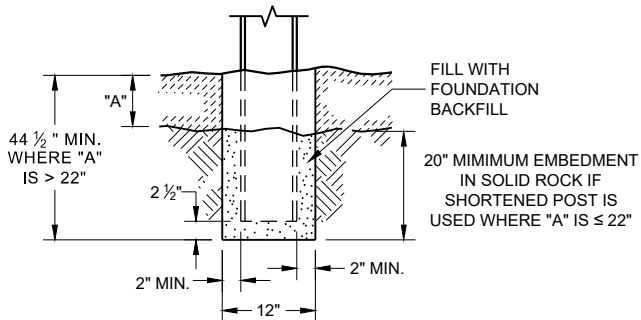
SDD 14B15a Steel Plate Beam Guard, Class "A", Installation and Elements

GENERAL NOTES

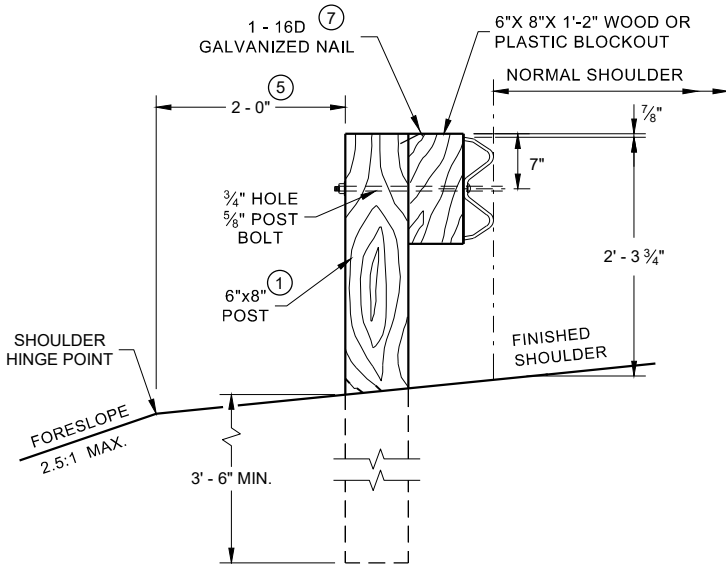
- WOOD OR STEEL POSTS (w6X9 OR w6X8.5) AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6"x8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS. DO NOT MIX STEEL AND WOOD POSTS IN A SINGLE INSTALLATION.
- 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 DAMAGE SPALTER COATING ON GALVANIZED POSTS.
- INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- IF THE DISTANCE FROM BACK OF POST TO SHOULDER HIGHE POINT IS LESS THAN 2 FEET, INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCHES IN DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT ADEQUATELY.
- WHEN USING STEEL POSTS AND WOOD BLOCKOUTS, INSTALL FOUR 16d GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

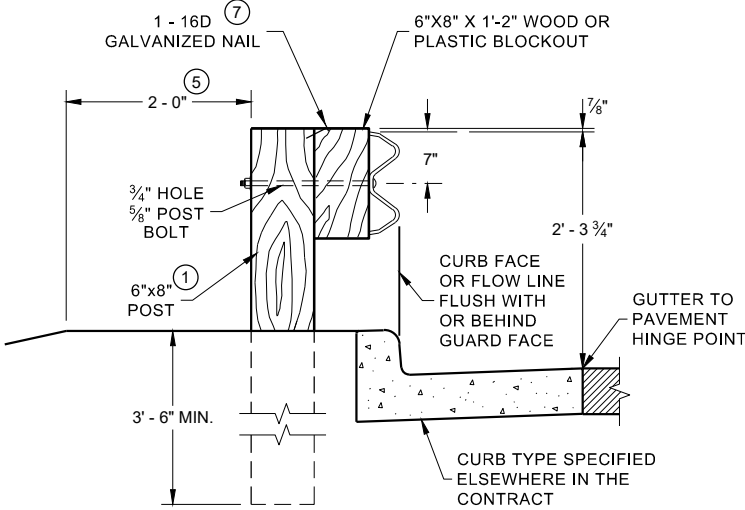
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



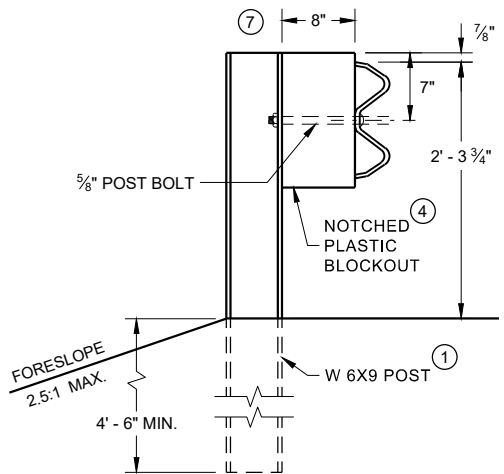
**END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥**



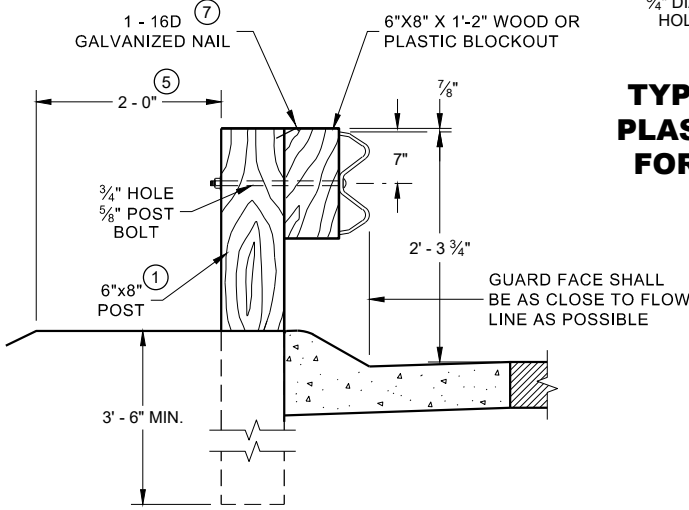
**END VIEW
LOCATED ALONG A ROADWAY
SHOULDER STANDARD INSTALLATION**



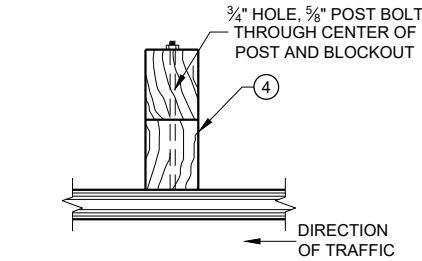
**END VIEW
LOCATED ALONG A CURBED ROADWAY**



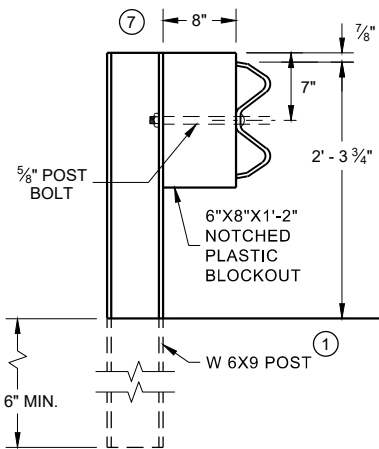
**END VIEW
LONGER POST AT HALF POST
SPACING W BEAM (LHW)**



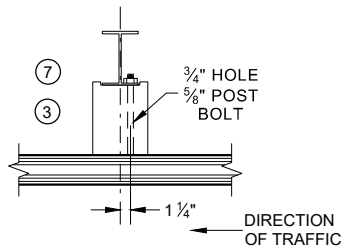
**END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY**



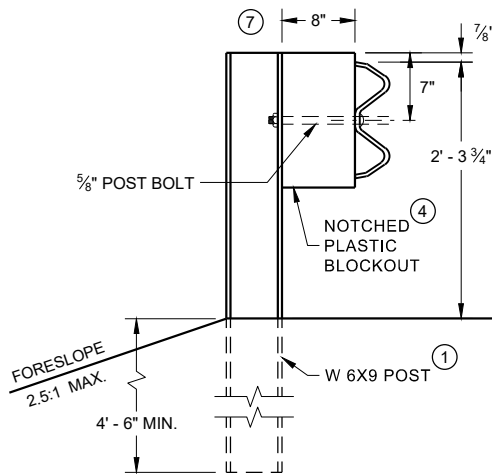
**PLAN VIEW
WOOD POST, BLOCKOUT
AND BEAM**



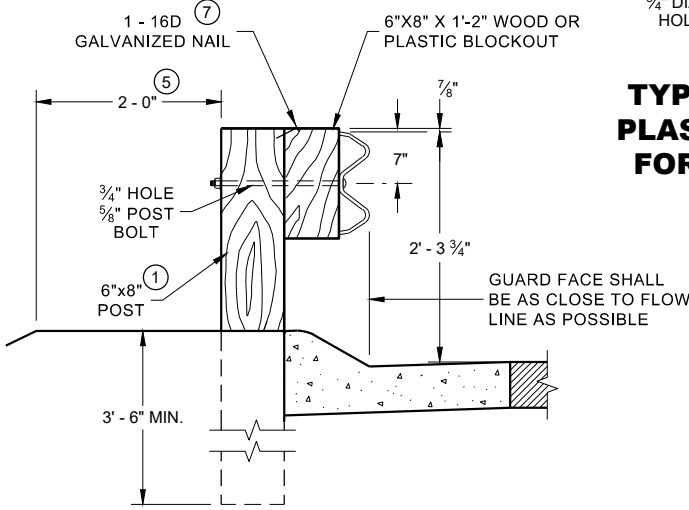
**END VIEW
STEEL POST AND NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION**



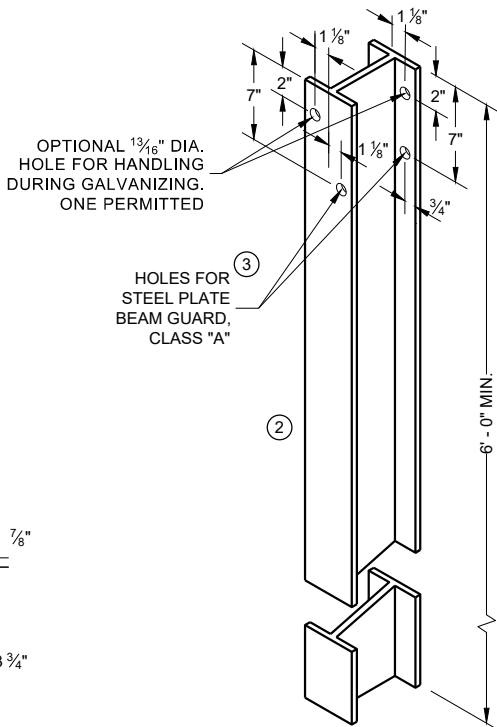
**PLAN VIEW
WOOD POST, BLOCKOUT
AND BEAM**



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

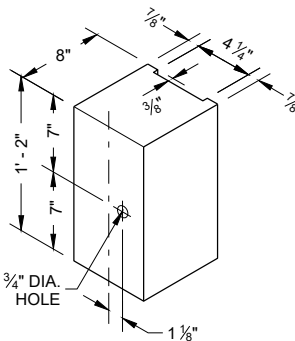


**END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY**

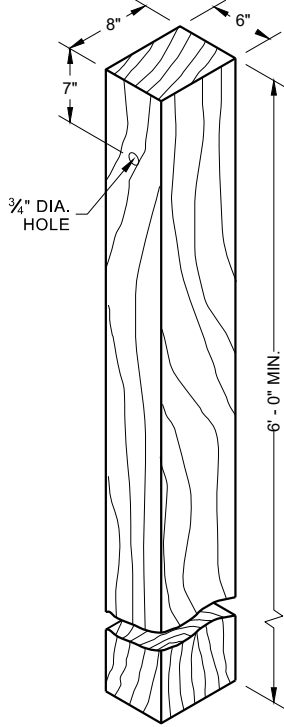


**STEEL POST & HOLE
PUNCHING DETAIL
(W 6 X 9) ①**

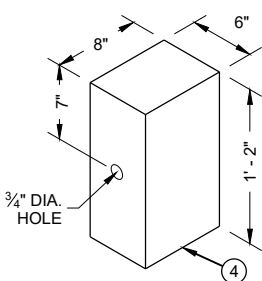
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



**TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS**



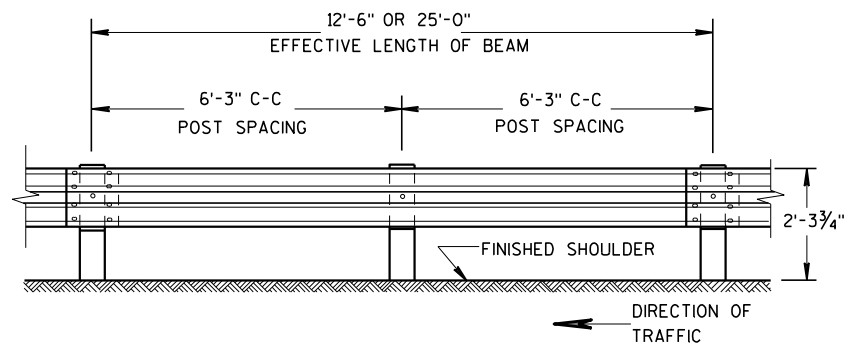
**WOOD POST
(6" X 8") NOMINAL ①**



**WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS**

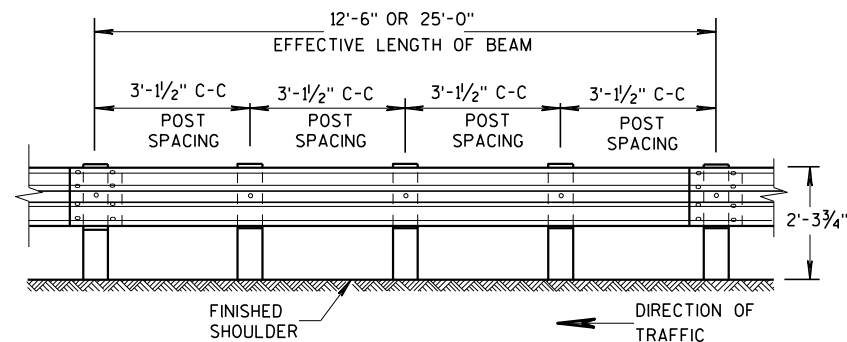
**STEEL PLATE BEAM GUARD,
CLASS "A" INSTALLATION
AND ELEMENTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 121



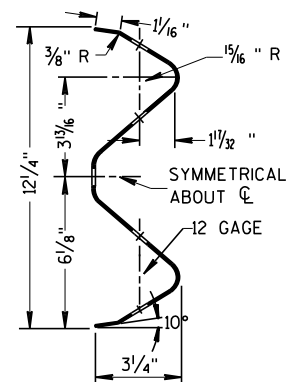
FRONT VIEW

POST SPACING STANDARD INSTALLATION

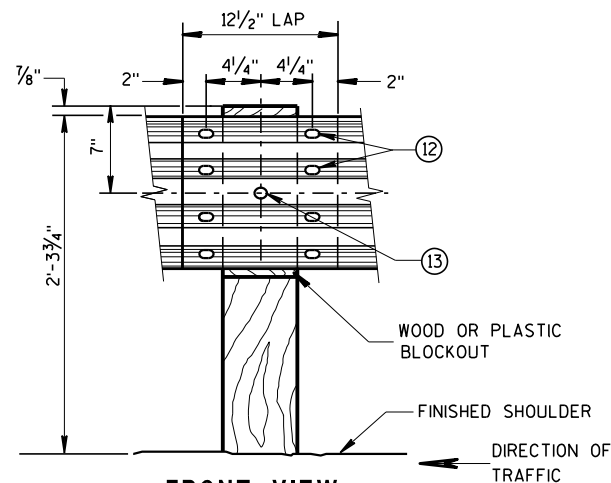


FRONT VIEW

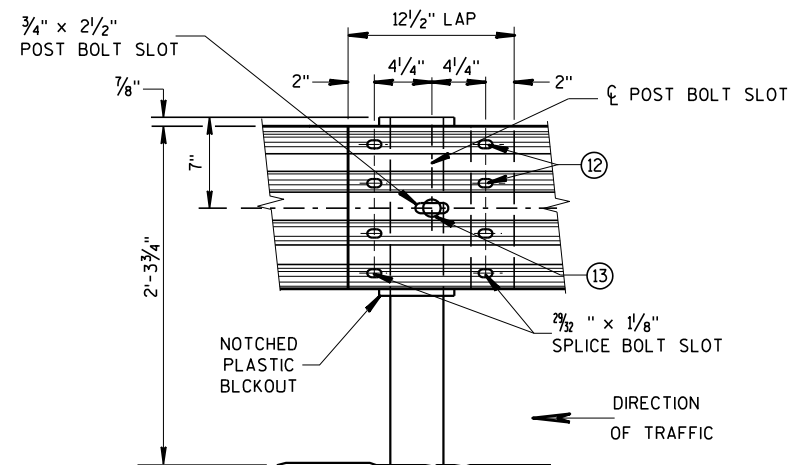
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)



SECTION THRU W BEAM



FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL



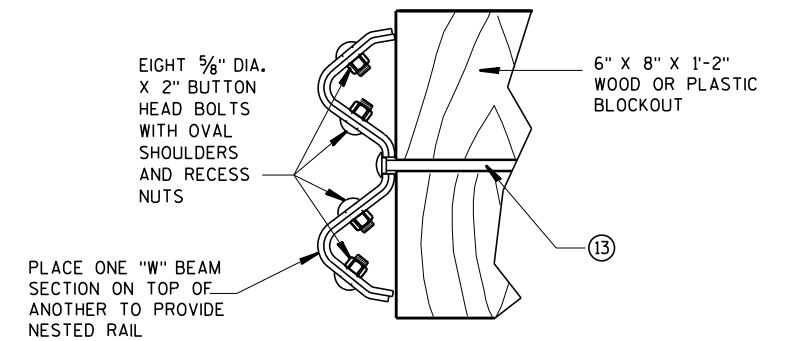
FRONT VIEW
BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS
OF STEEL PLATE BEAM GUARD

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

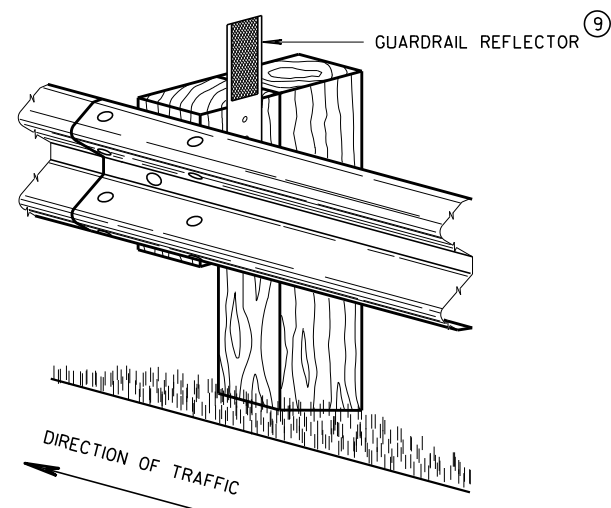
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



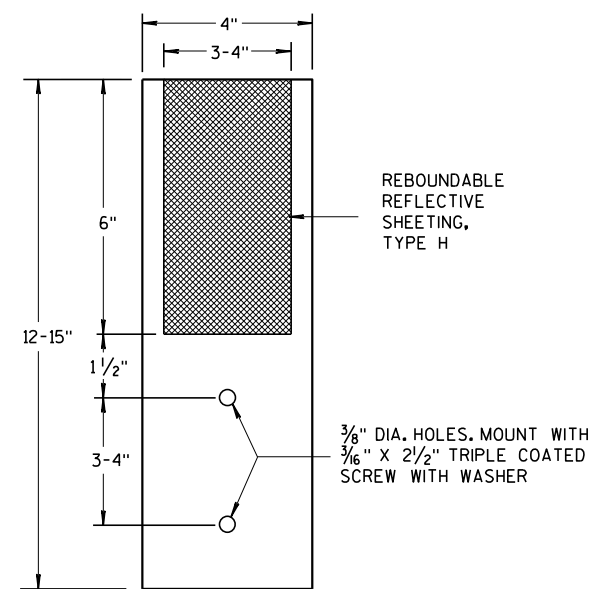
NESTED W BEAM (NW)

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

* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



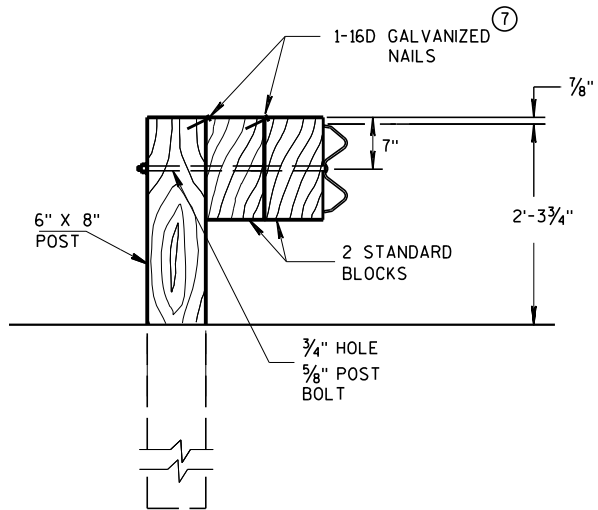
4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

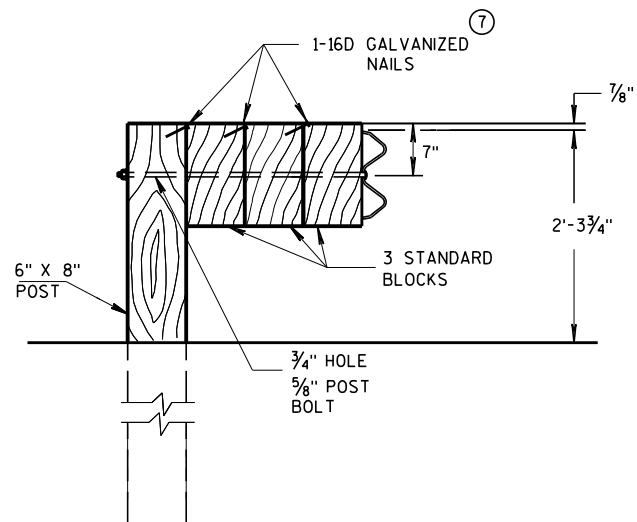
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

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

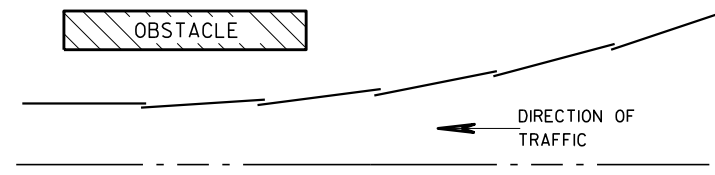


DETAIL FOR TRIPLE BLOCKS

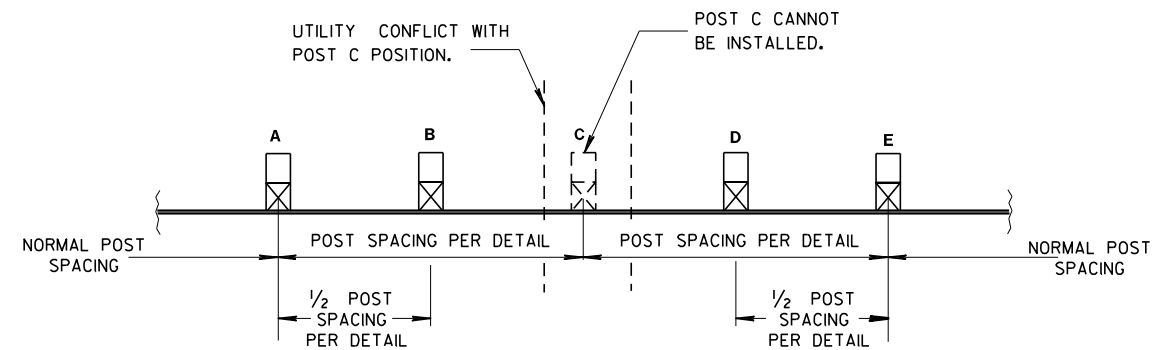
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

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

APPROVED
June 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS 123 UNIT SUPERVISOR
FHWA

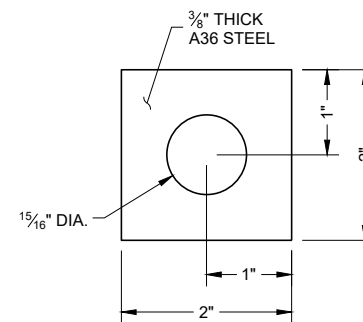
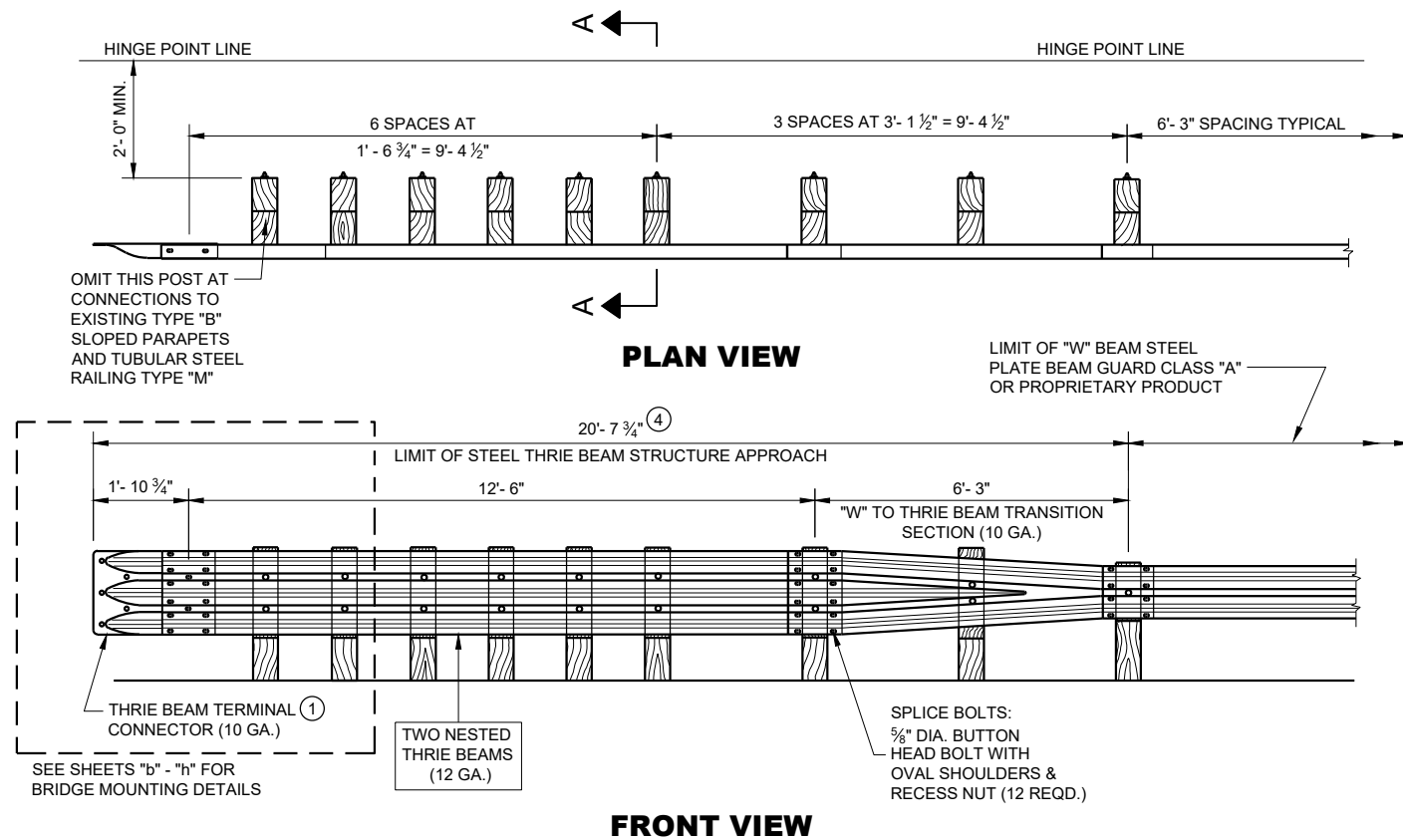


PLATE WASHER DETAIL

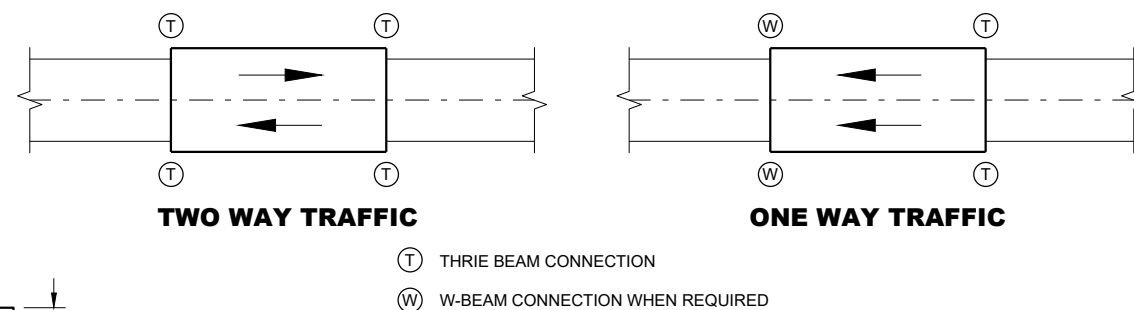
GENERAL NOTES

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".

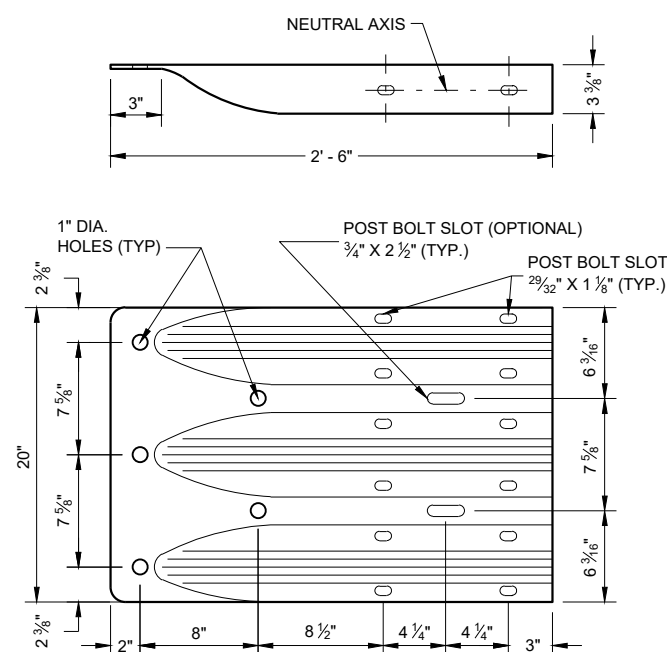
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

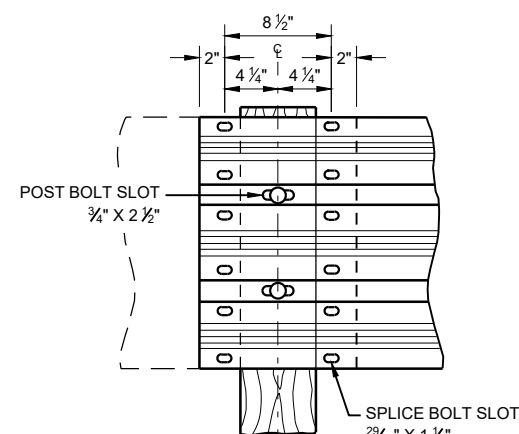
- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② MINIMUM EMBEDMENT SHALL BE 4'-0".
- ③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
- ④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



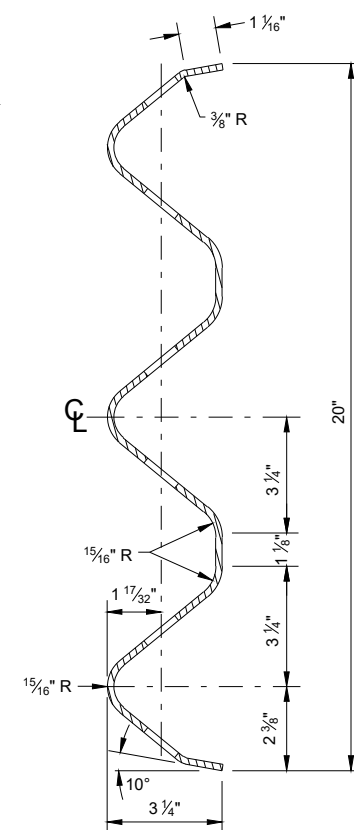
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



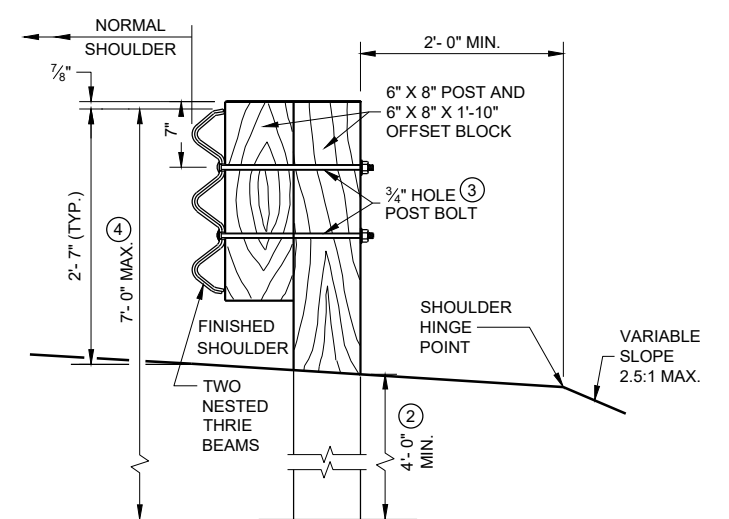
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU BEAM RAIL ELEMENT

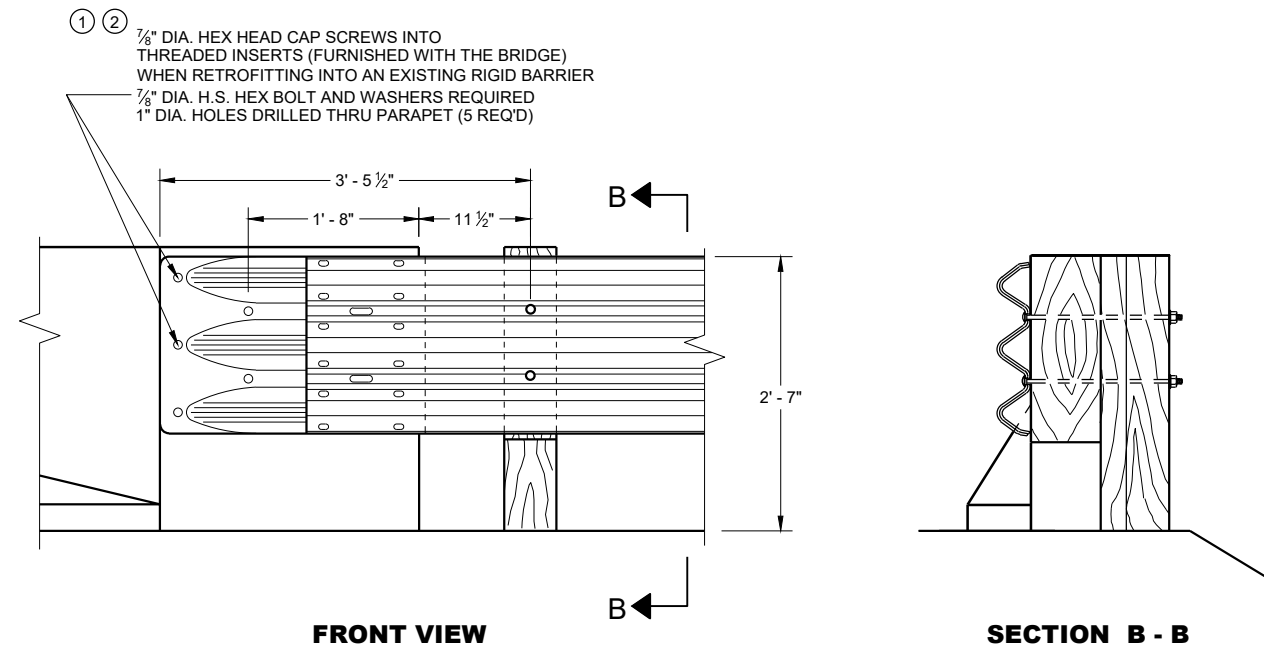


SECTION A-A

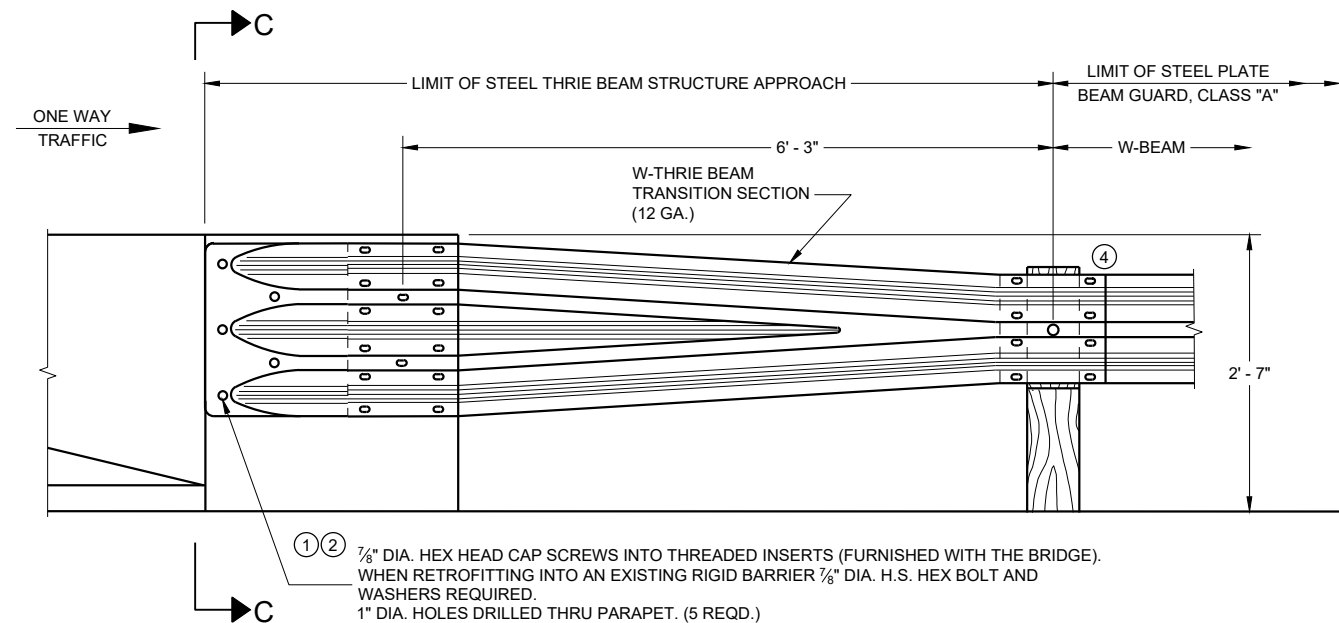
STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 124
FHWA



THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGE)

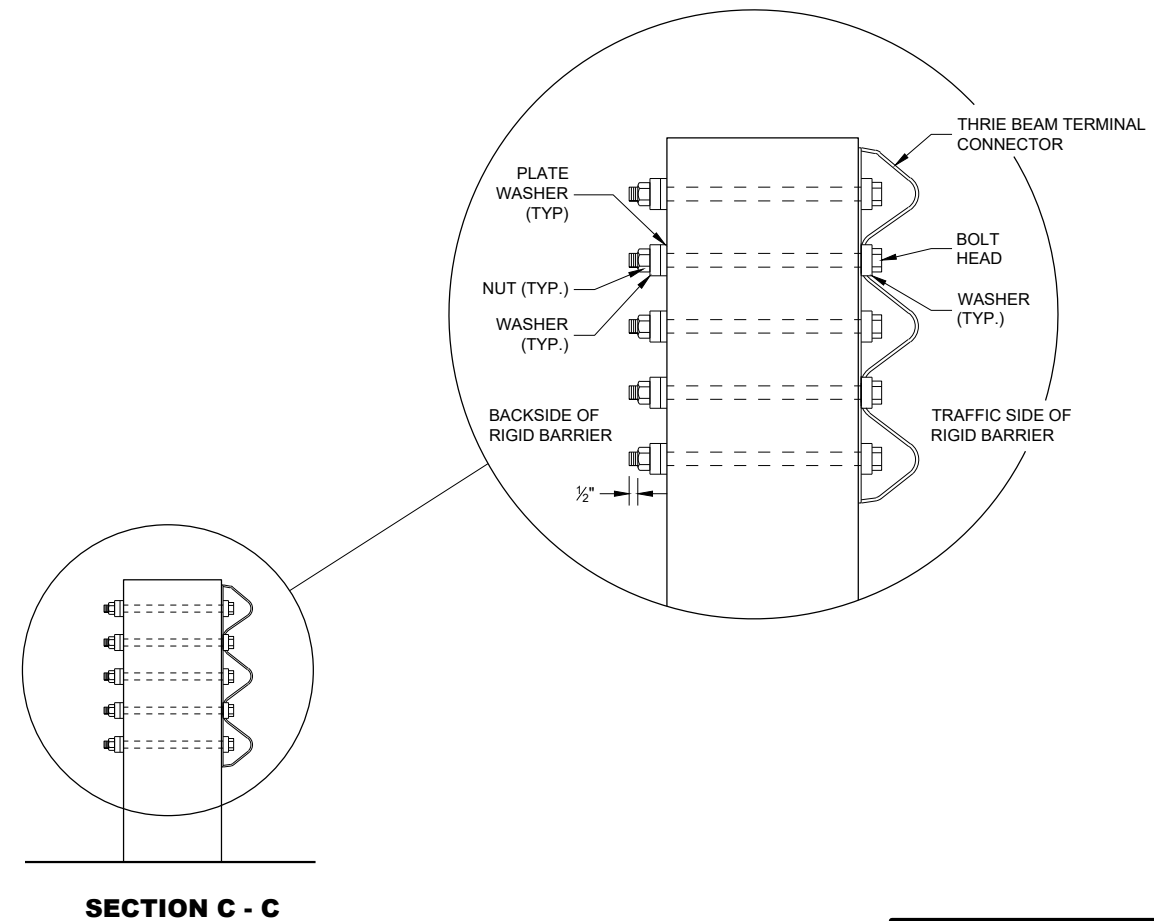
GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X $\frac{5}{8}$ " THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 $\frac{1}{2}$ ".
- ④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

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.



STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

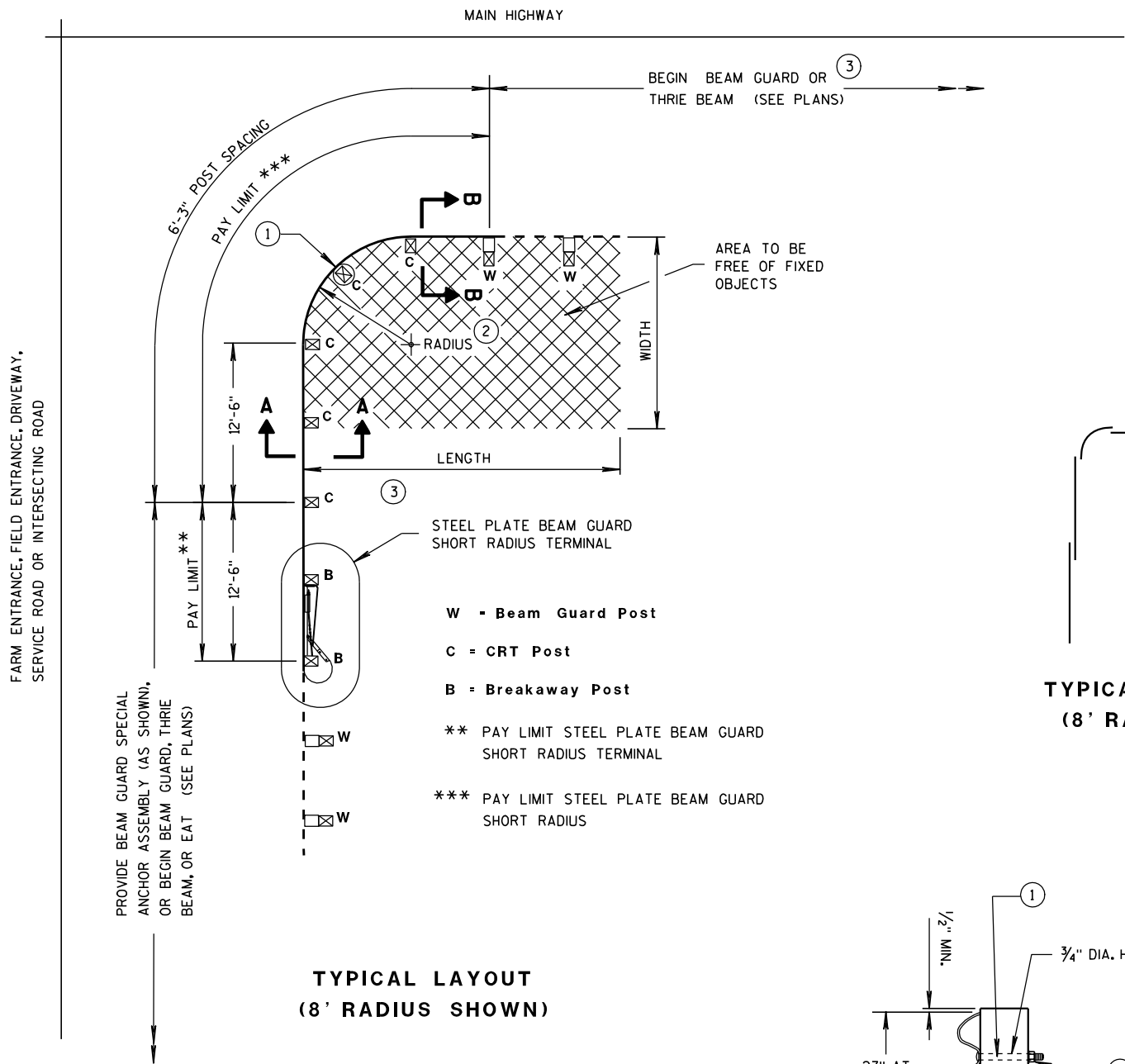
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

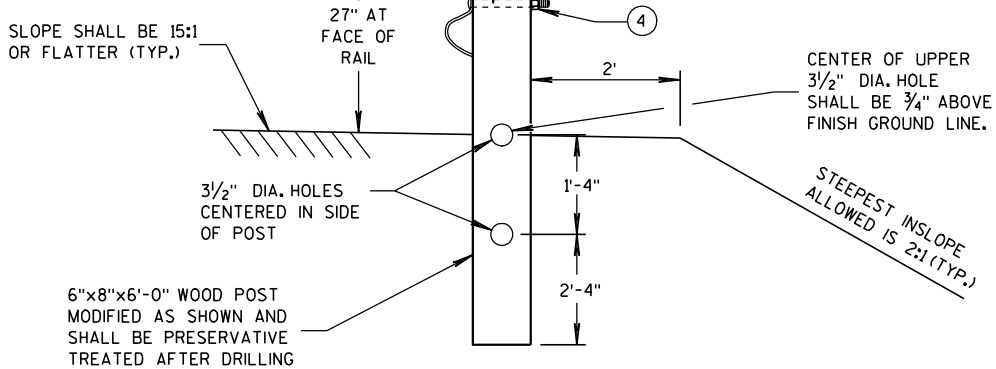
125

FHWA



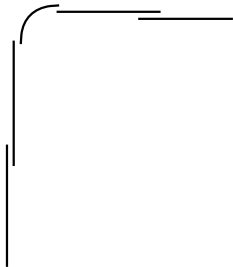
TYPICAL LAYOUT
(8' RADIUS SHOWN)

- W - Beam Guard Post
C = CRT Post
B = Breakaway Post
** PAY LIMIT STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
*** PAY LIMIT STEEL PLATE BEAM GUARD SHORT RADIUS



SECTION A-A
(CRT POST)

TYPICAL LAP SPLICES
(8' RADIUS SHOWN)



GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2, UNLESS NOTED OTHERWISE.

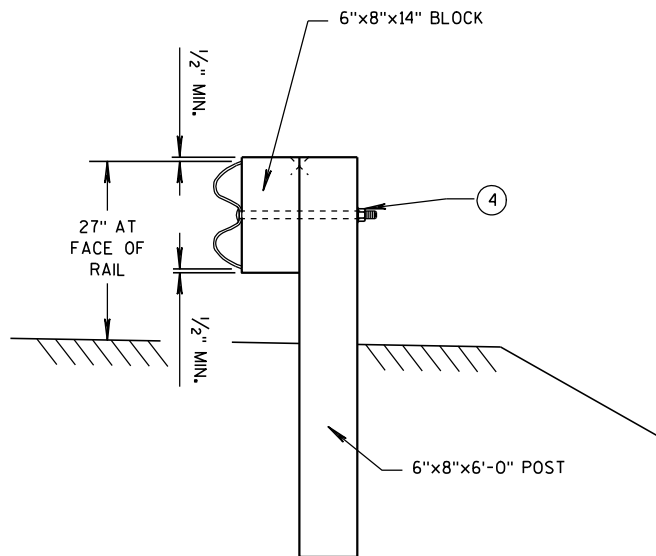
SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

- ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.
- RADIUS FROM 8' - 36'. SEE PLAN.
- HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.
- 5/8" Ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION B-B
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD
SHORT RADIUS TERMINAL

STATE OF WISCONSIN
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GENERAL NOTES

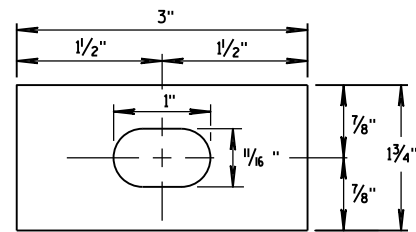
-
- Diagram illustrating a structural tube assembly. The assembly consists of a vertical structural tube (labeled $2\frac{1}{2}" \times 2\frac{1}{2}" \times \frac{1}{4}" \times 8'$) and a horizontal steel plate (labeled $2\frac{1}{2}" \times 2\frac{1}{2}" \times \frac{1}{4}"$). The steel plate is welded to the structural tube. A 1" diameter nut and a 1" diameter jam nut are shown on a 1" diameter x 4" threaded stud, which is welded to the structural tube. The diagram also indicates that the structural tube should be welded prior to galvanizing.
- Labels in the diagram include:
- $2\frac{1}{2}" \times 2\frac{1}{2}" \times \frac{1}{4}"$ STEEL PLATE WITH $\frac{1}{16}"$ DIA. HOLE
 - TACK WELD STEEL PLATE TO STEEL TUBE
 - STRUCTURAL TUBE
 - WELD PRIOR TO GALVANIZING
 - 1" DIA. NUT
 - 1" JAM NUT
 - 1" DIA. x 4" STUD THREADED FULL LENGTH

DETAIL A

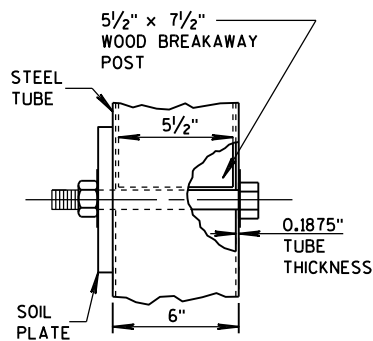


STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

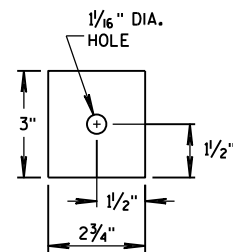
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



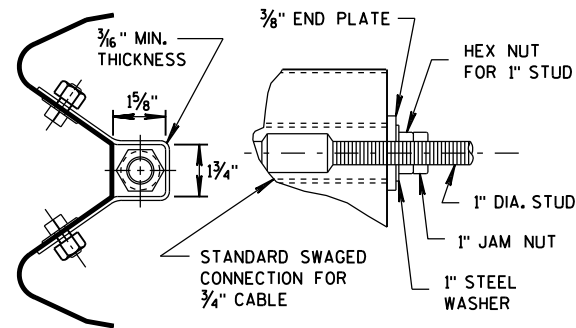
**RECTANGULAR
PLATE WASHER**



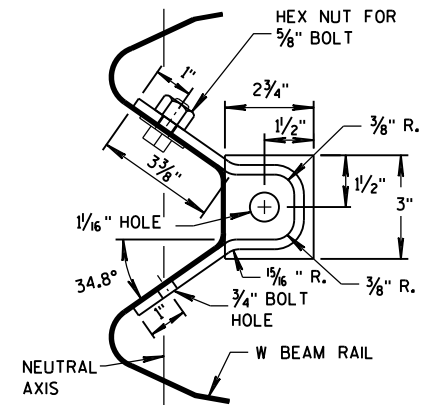
DETAIL D



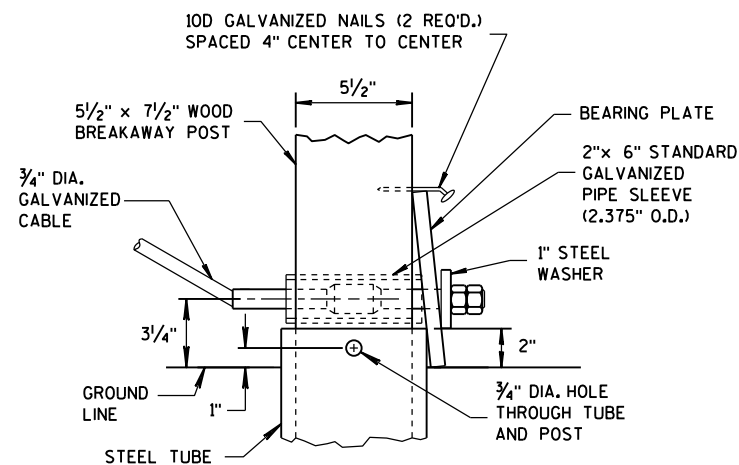
END PLATE



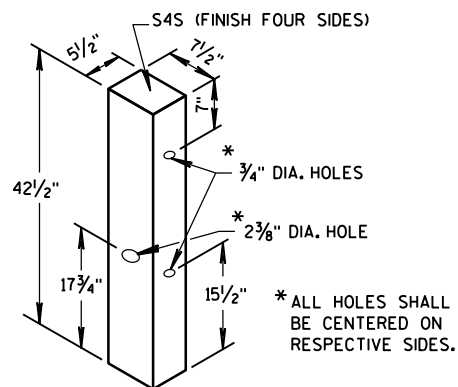
**SECTION C-C
(END PLATE REMOVED)**



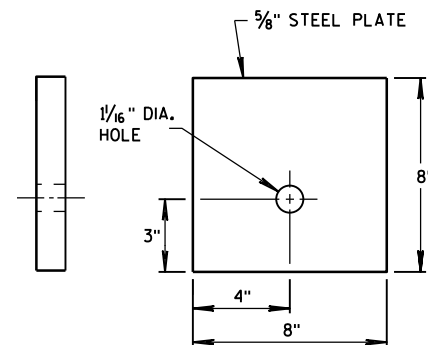
ANCHOR BRACKET



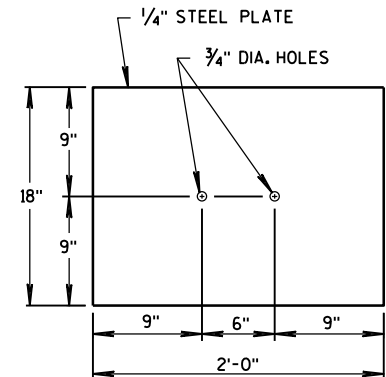
DETAIL C



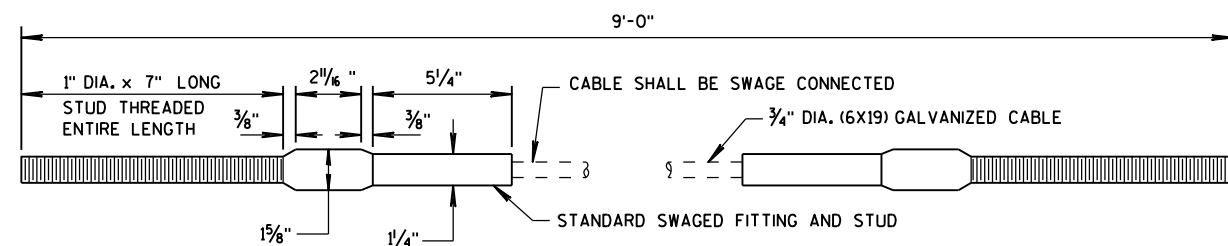
WOOD BREAKAWAY POST



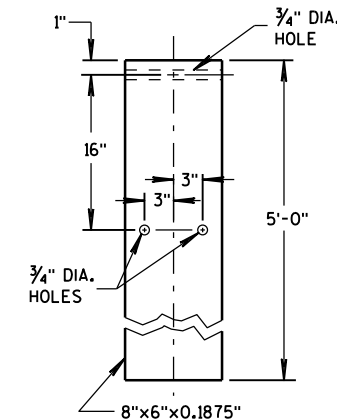
BEARING PLATE



SOIL PLATE



CABLE ASSEMBLY



STEEL TUBE

**STEEL PLATE BEAM GUARD
SHORT RADIUS TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

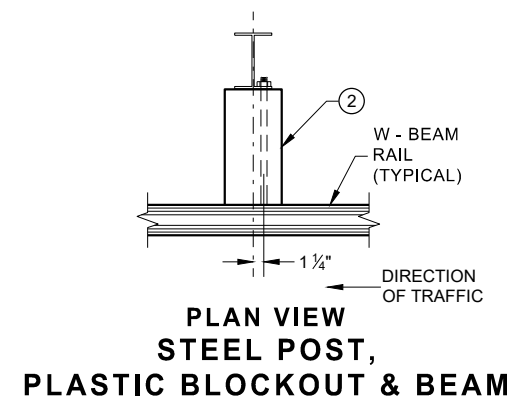
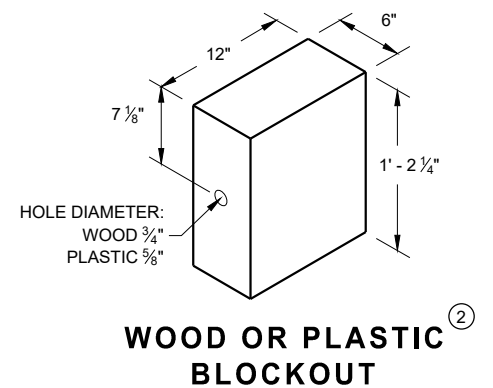
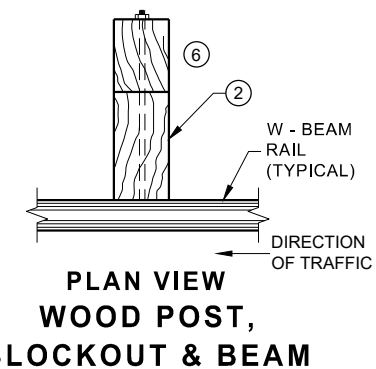
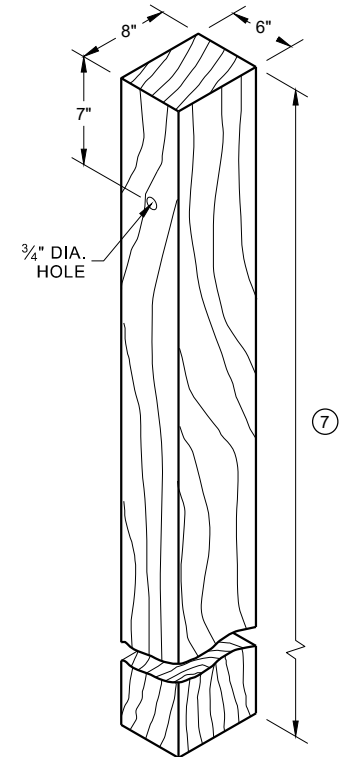
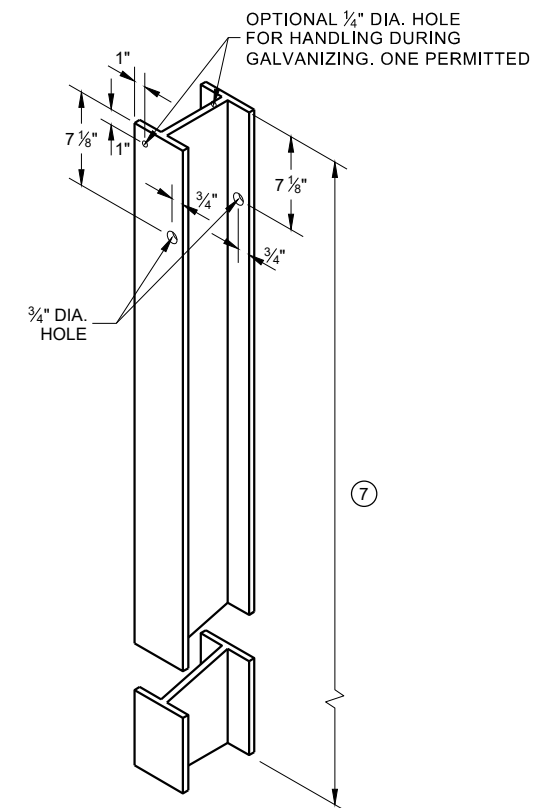
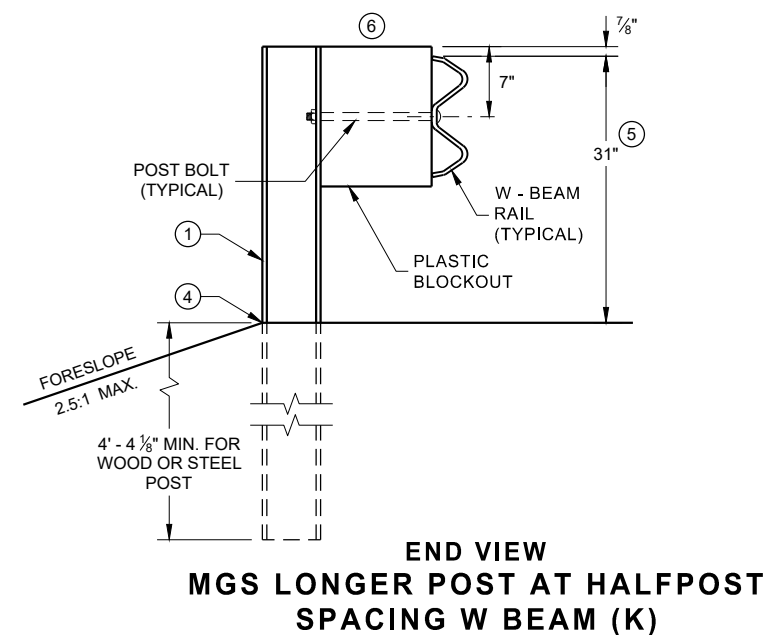
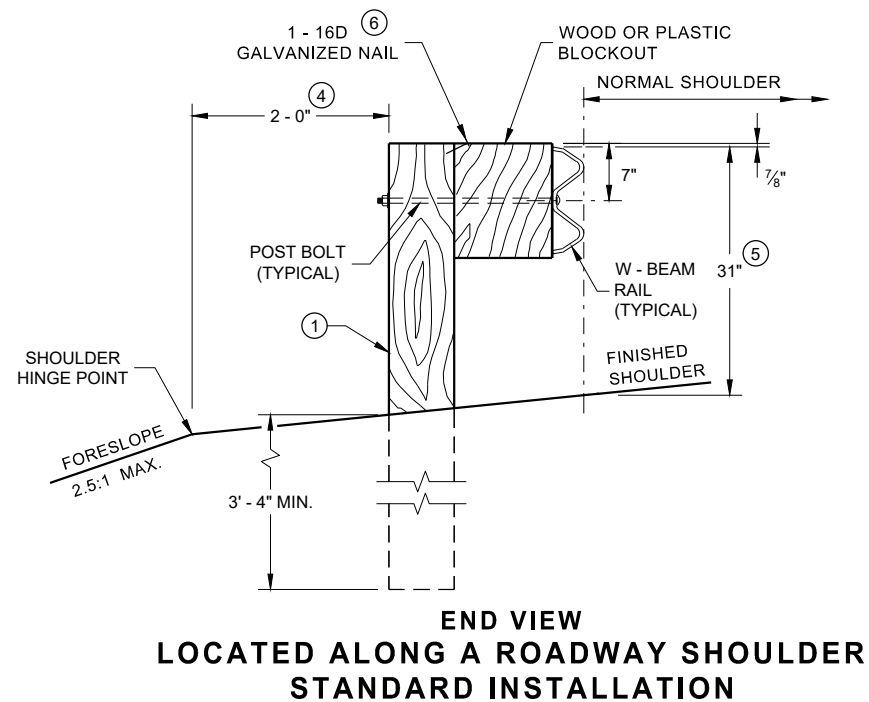
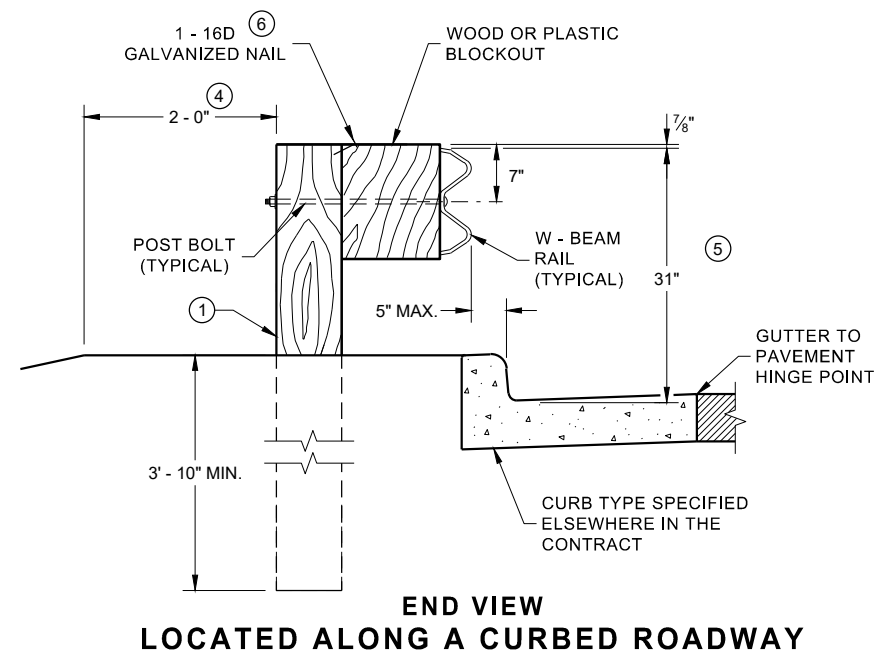
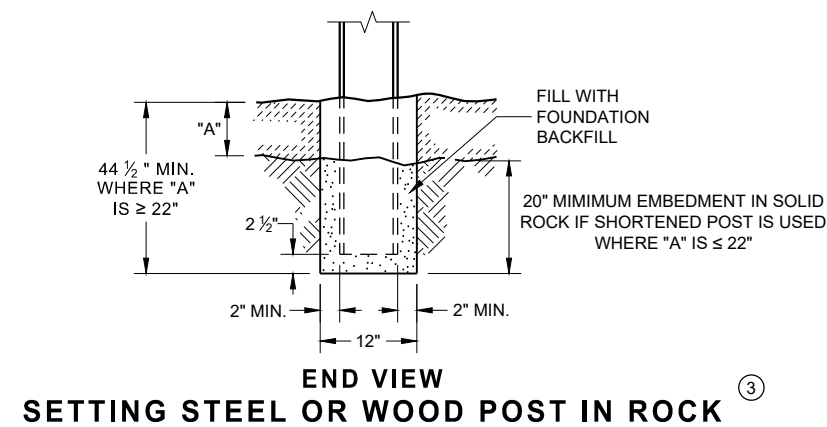
12/18/08
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

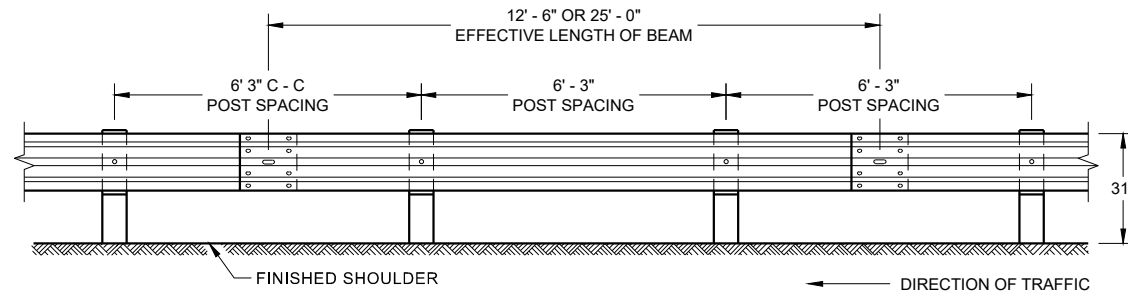
128 NT

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0". TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".

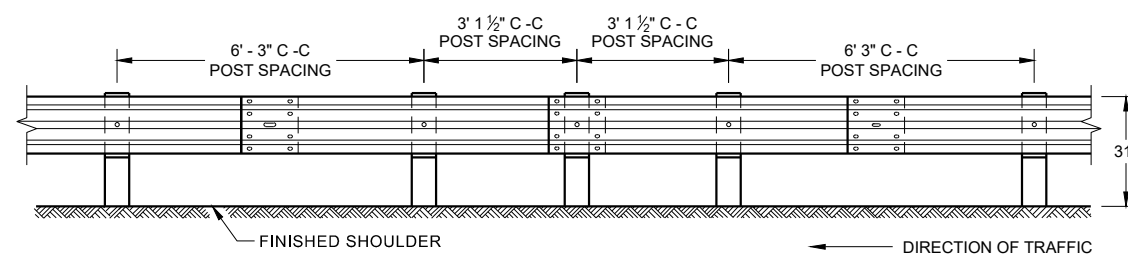


**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

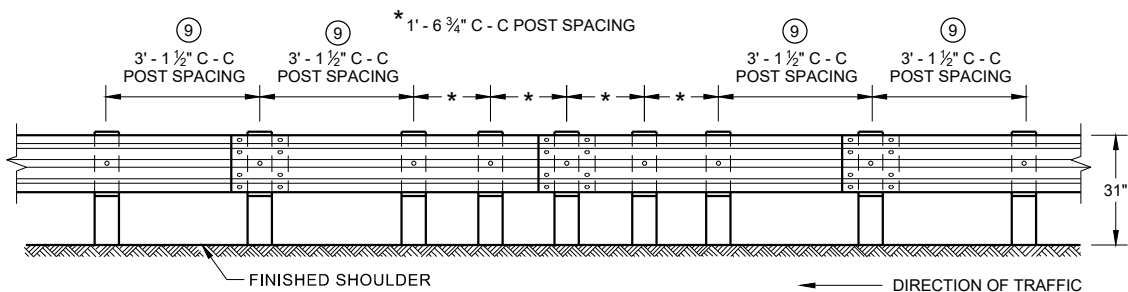
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 129



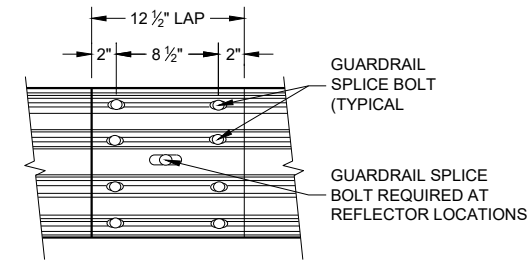
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



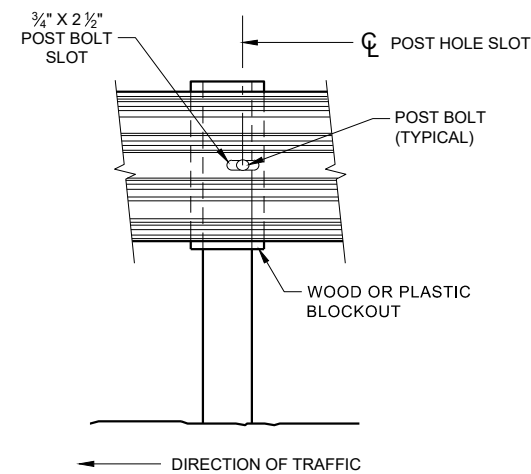
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



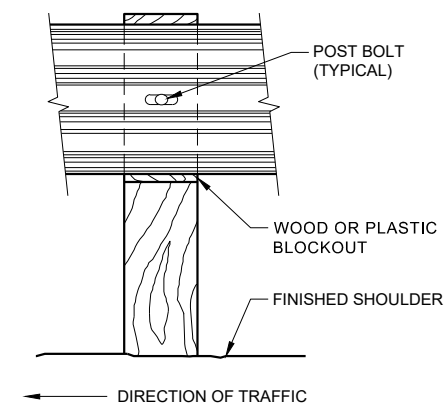
**FRONT VIEW
QUARTER POST SPACING (QS)**



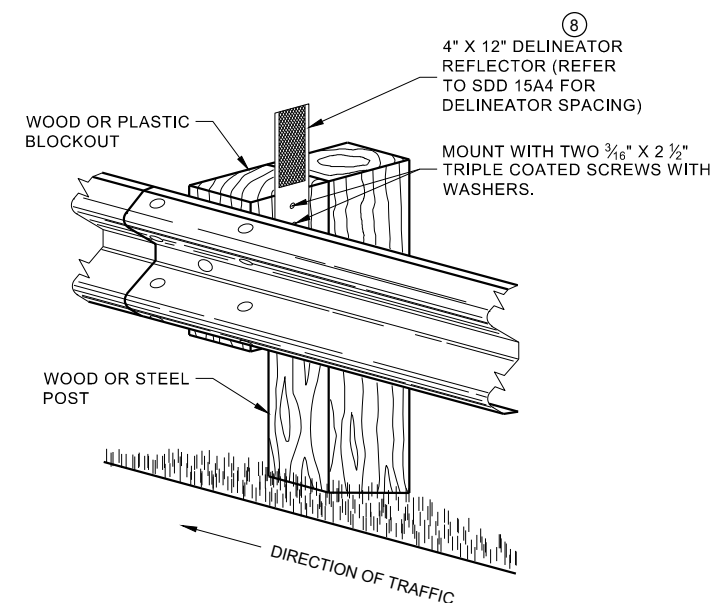
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



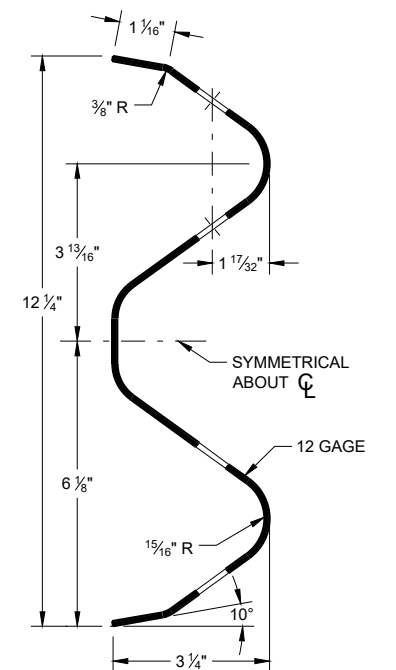
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

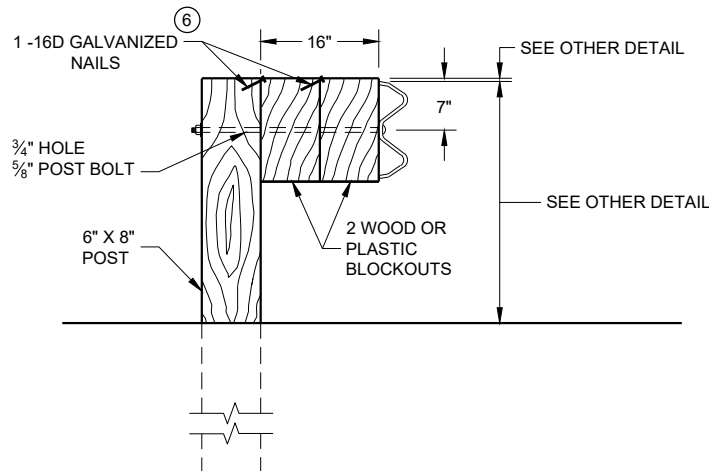
GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

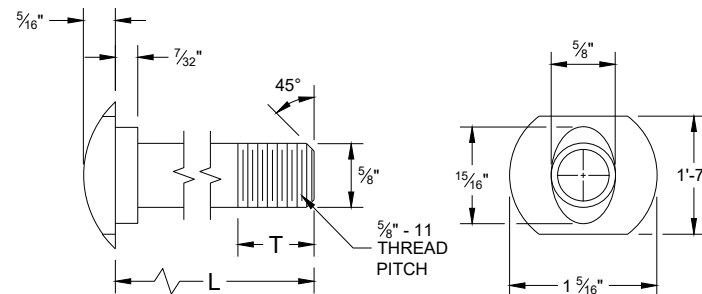
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

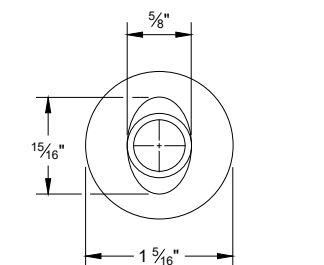
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

- NOTE:
1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
 2. IF THE BOLT EXTENDS MORE THAN $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

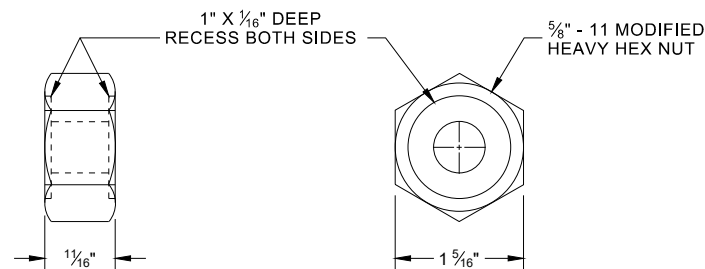


POST BOLT TABLE

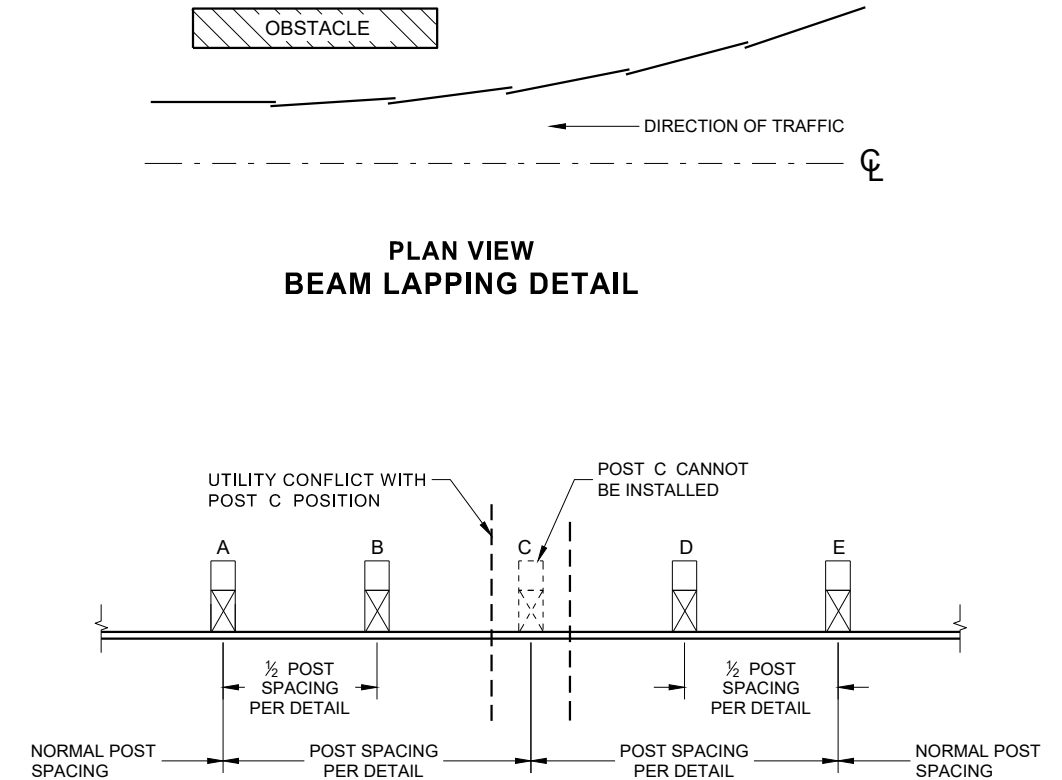
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



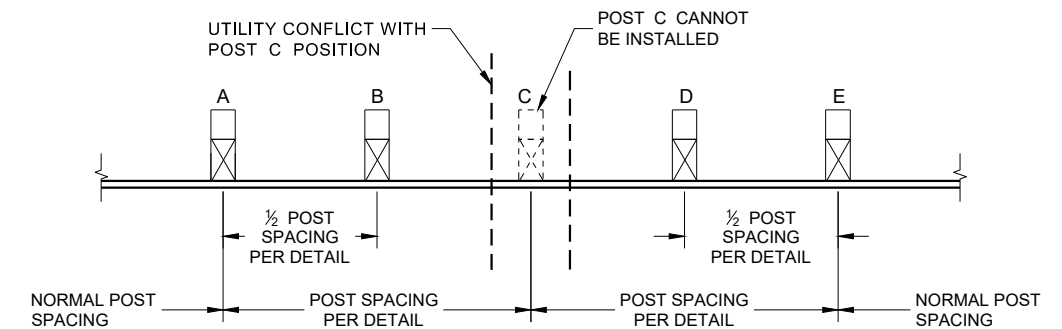
ALTERNATE BOLT HEAD



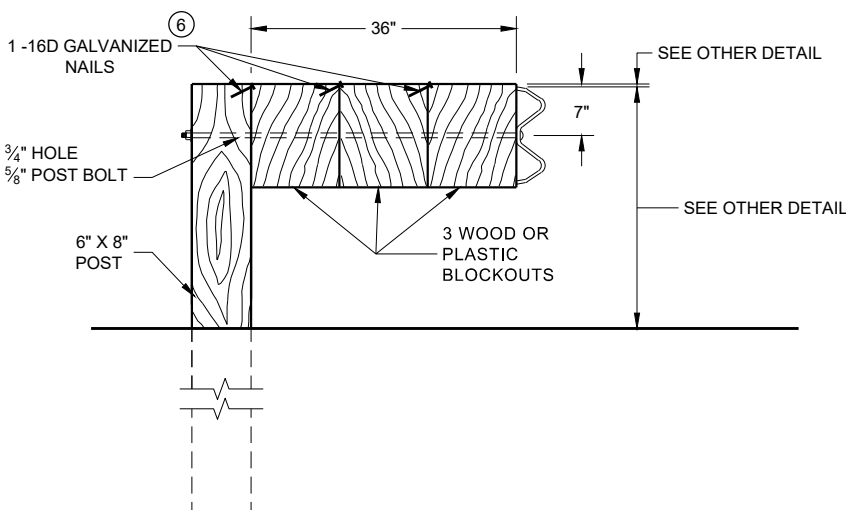
POST BOLT, SPLICE BOLT AND RECESS NUT



PLAN VIEW
BEAM LAPPING DETAIL



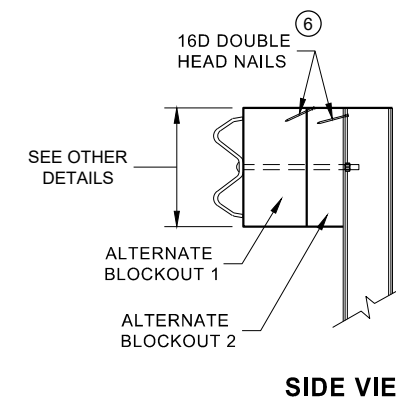
POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



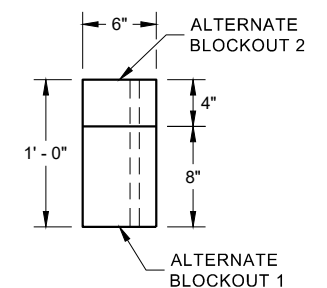
DETAIL FOR 36" BLOCKOUT DEPTH

- NOTES:
- UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
- DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



SIDE VIEW

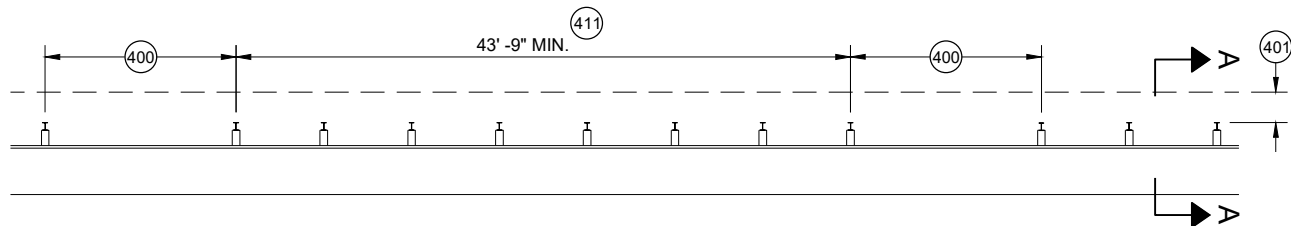


PLAN VIEW

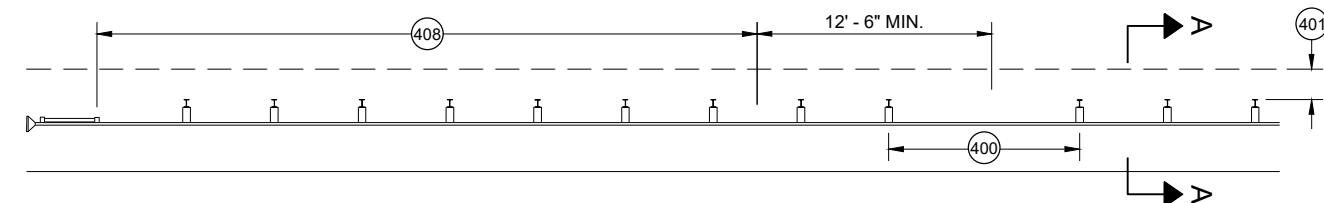
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

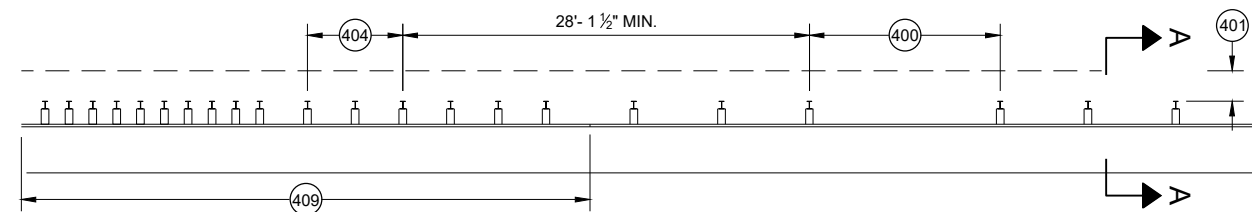
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 131



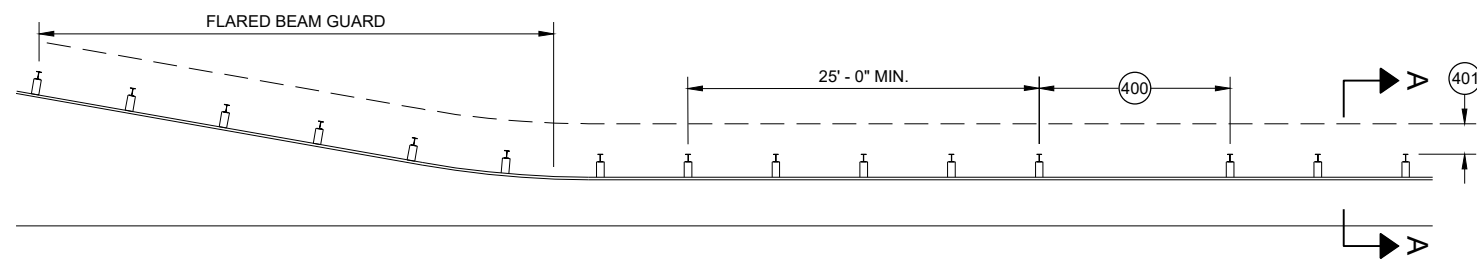
MISSING POST IN MGS GUARDRAIL



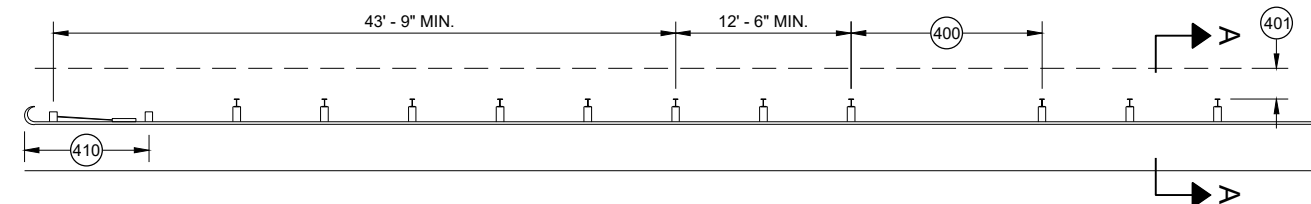
MISSING POST IN MGS GUARDRAIL NEAR EAT



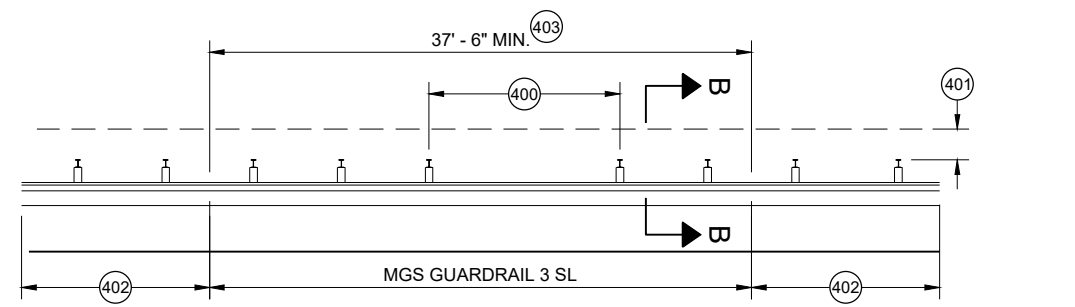
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

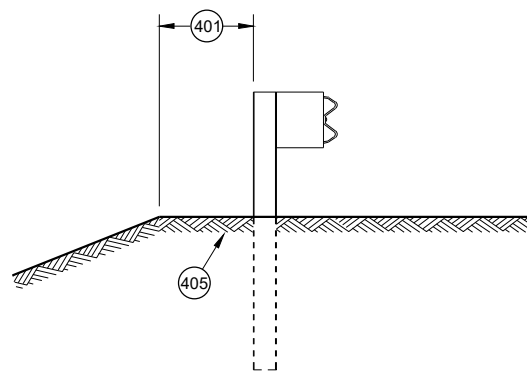


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

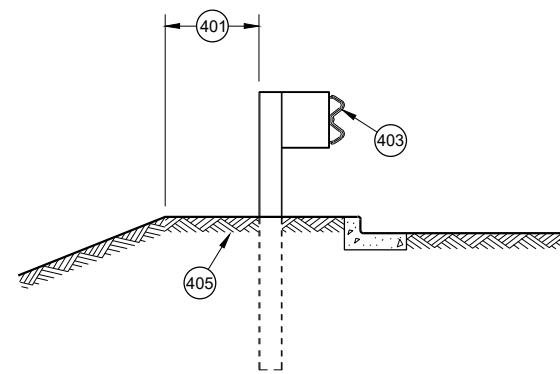


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
 - (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
 - (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
 - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
 - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

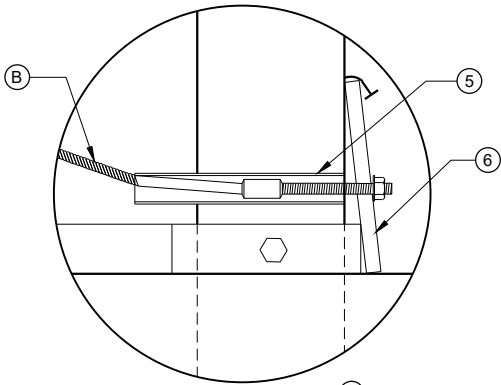
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

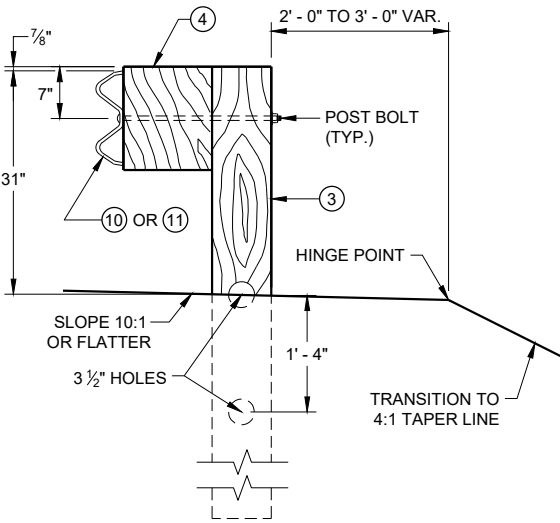
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

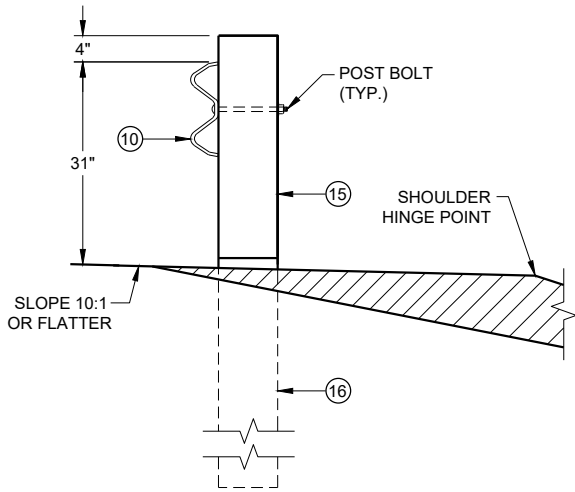
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



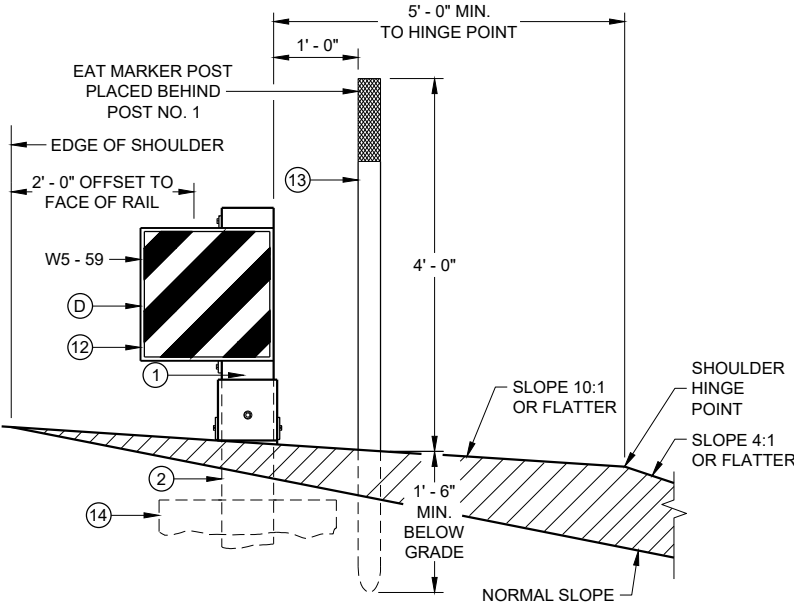
DETAIL "A"



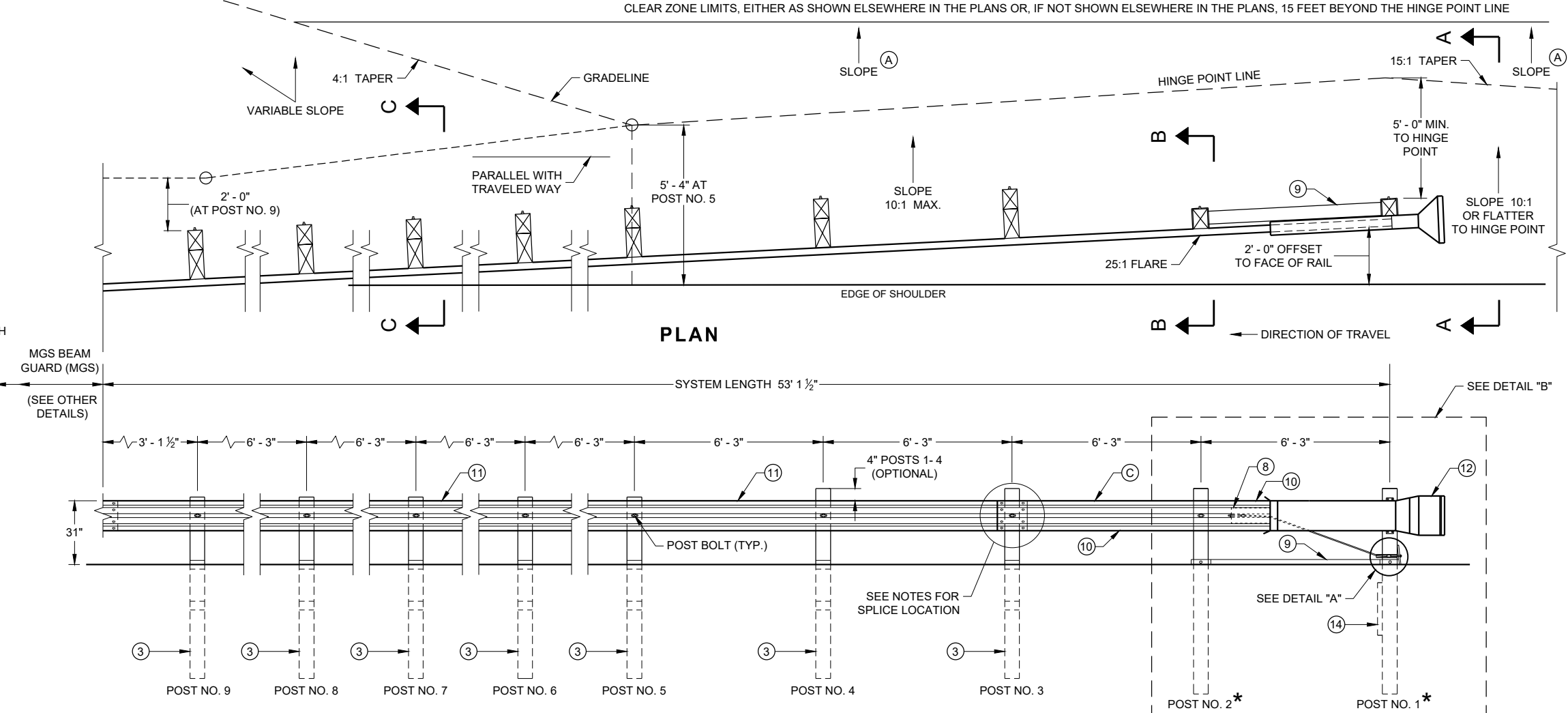
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*

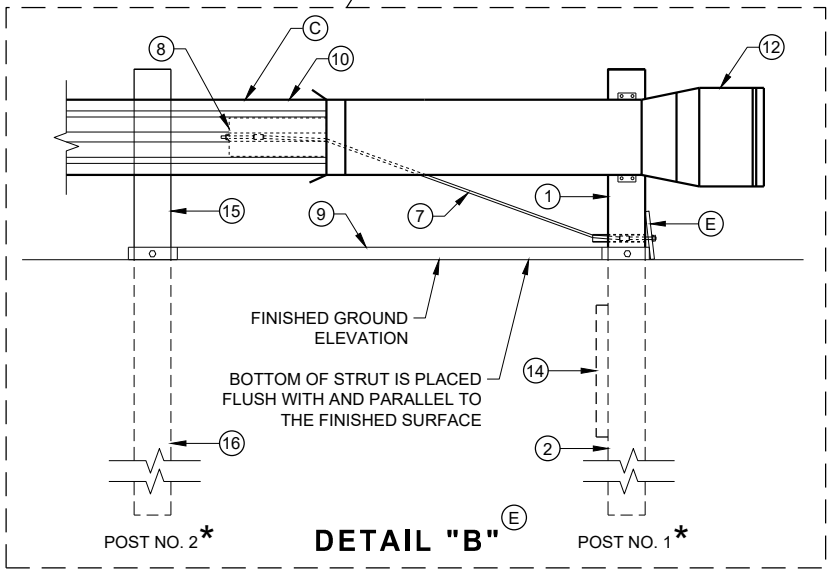


SECTION A - A
TYPICAL AT POST NO. 1*



PLAN

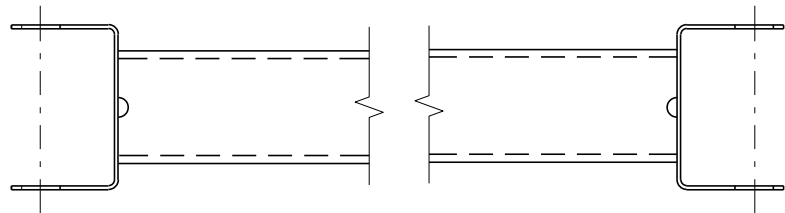
ELEVATION



DETAIL "B"

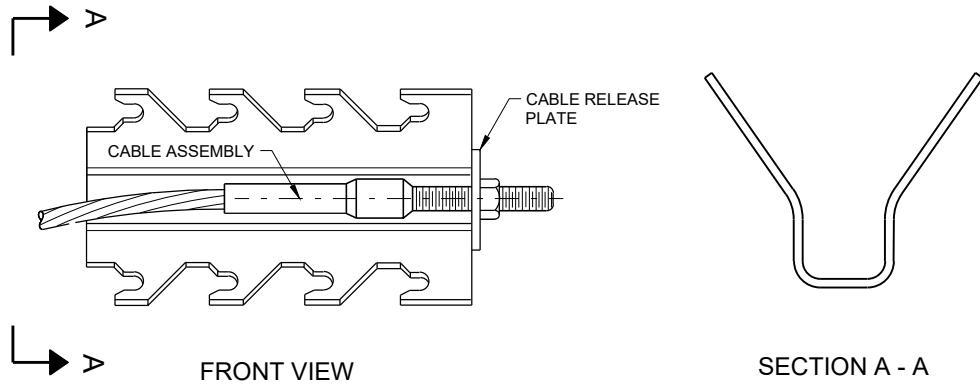
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

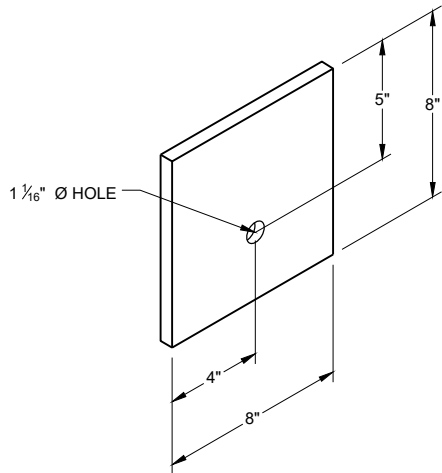


GENERIC GROUND STRUT^⑨ [Ⓔ]

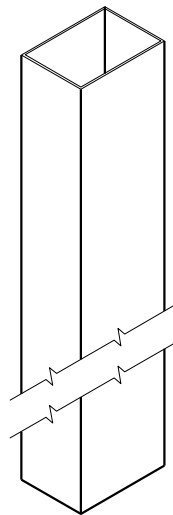
BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



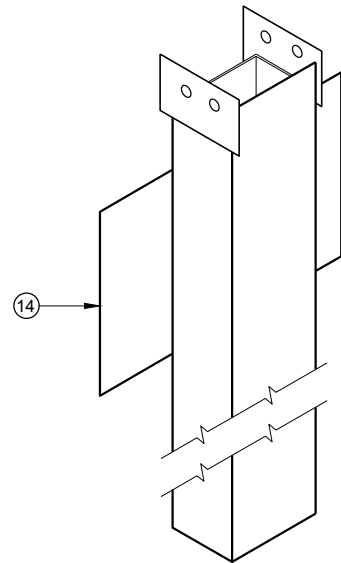
GENERIC ANCHOR CABLE BOX^⑨ [Ⓔ]



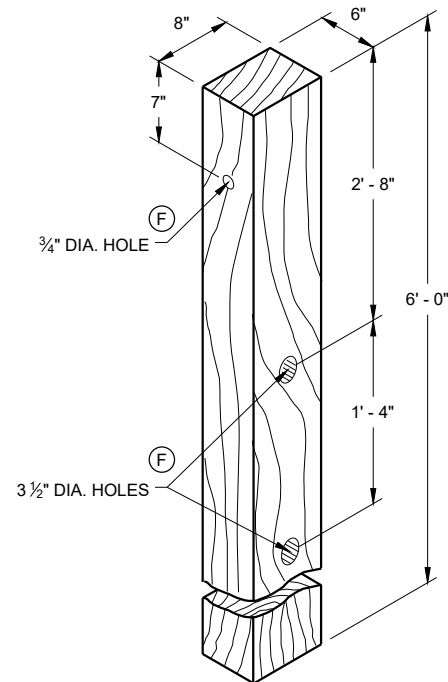
BEARING PLATE^⑥ [Ⓔ]



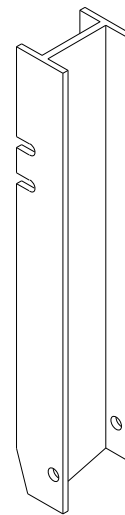
UPPER POST NO. 1 ⁽¹⁾ (E)



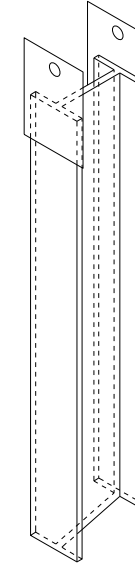
LOWER POST NO. 1 ⁽²⁾ (E)



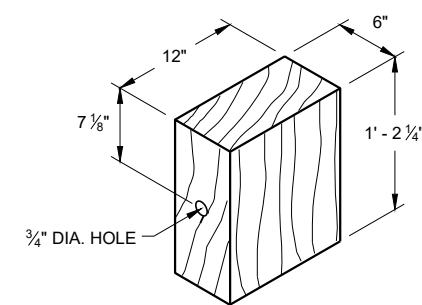
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



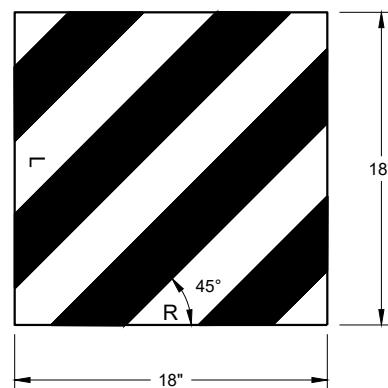
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



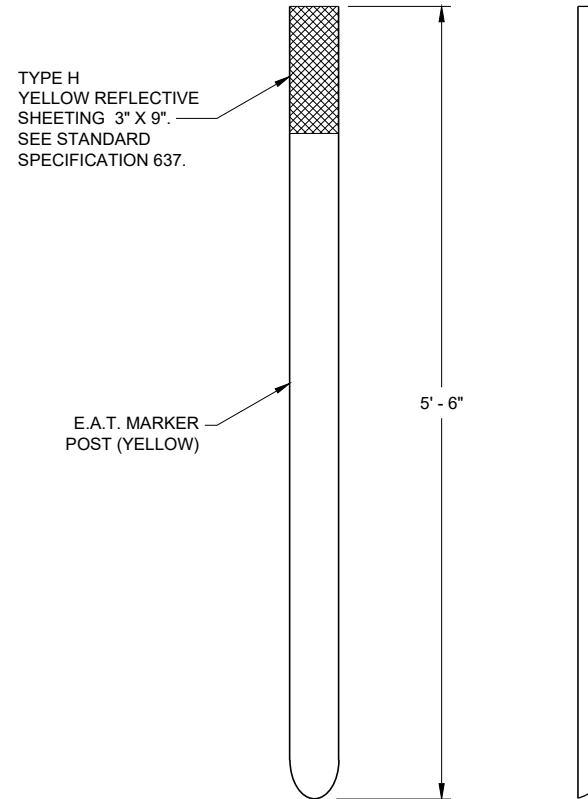
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



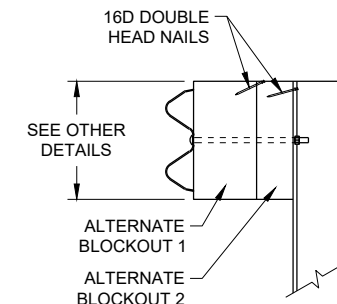
WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



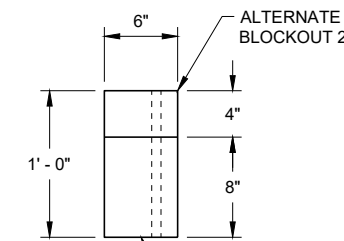
REFLECTIVE SHEETING DETAIL ^(E)



E.A.T. MARKER POST ⁽¹³⁾



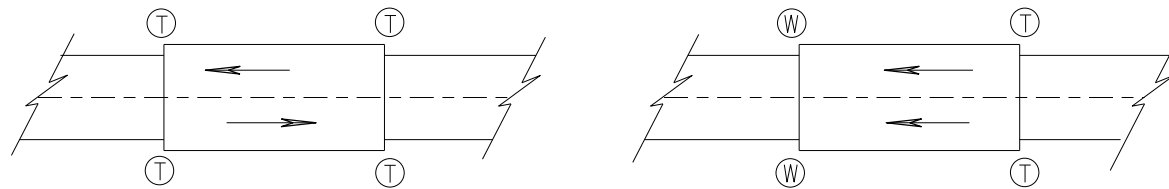
SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR 135
FHWA	



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

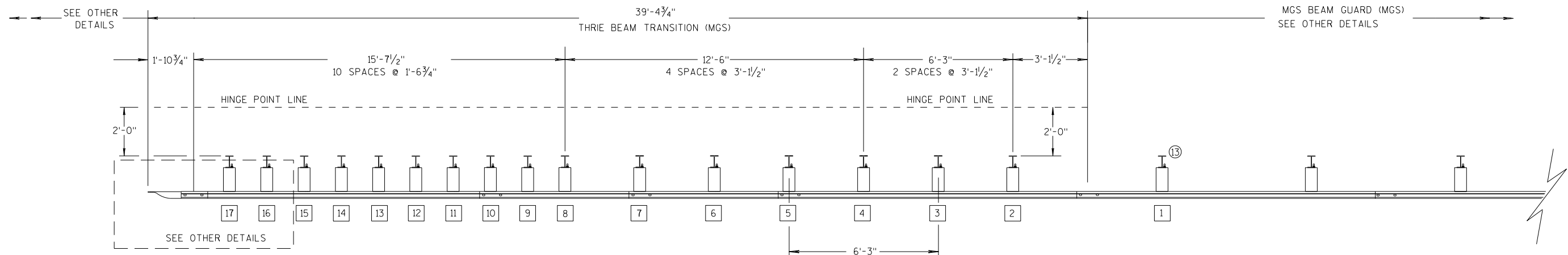
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

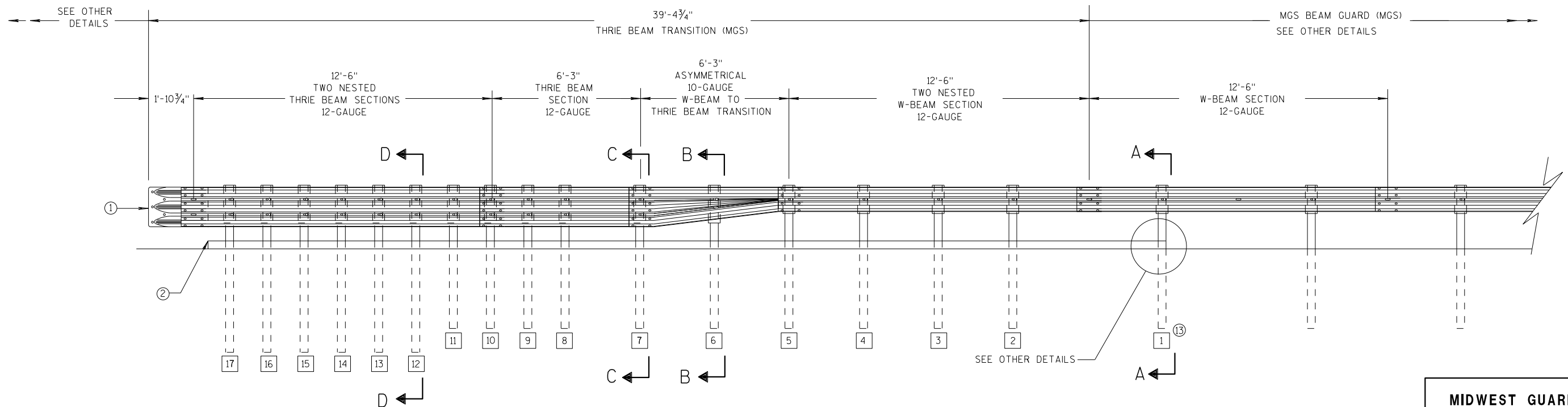
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

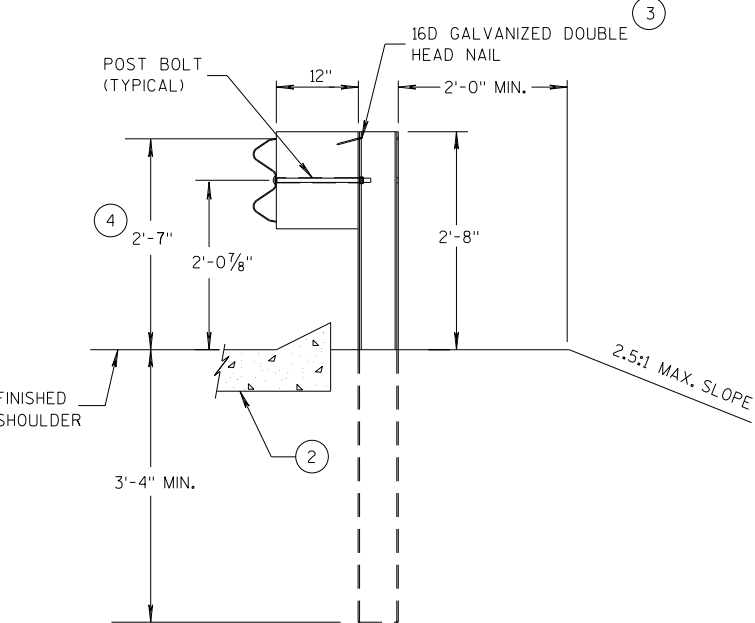
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

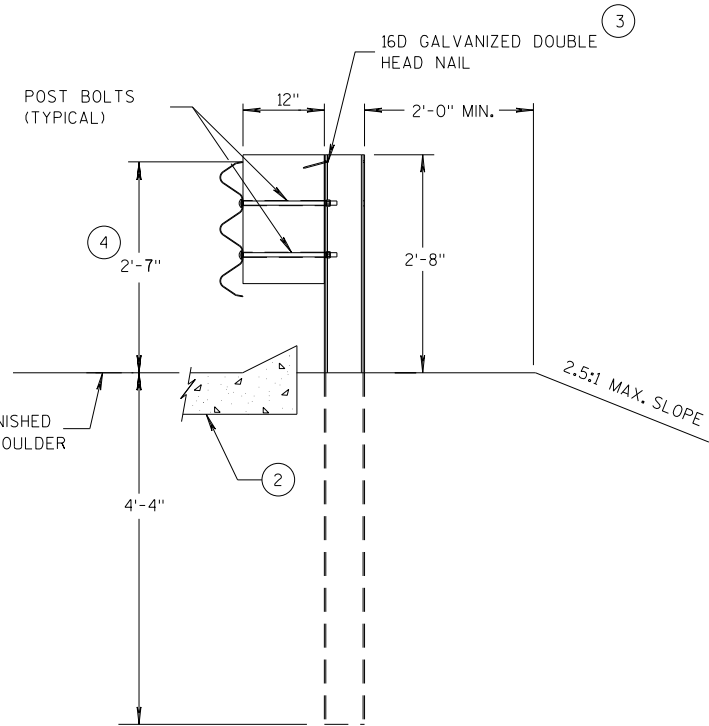
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 136

GENERAL NOTES

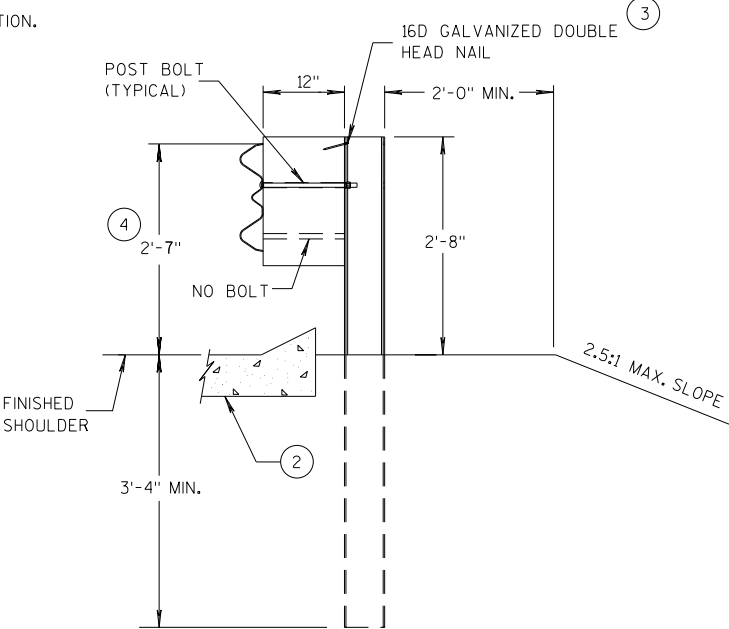
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".
- 13 STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



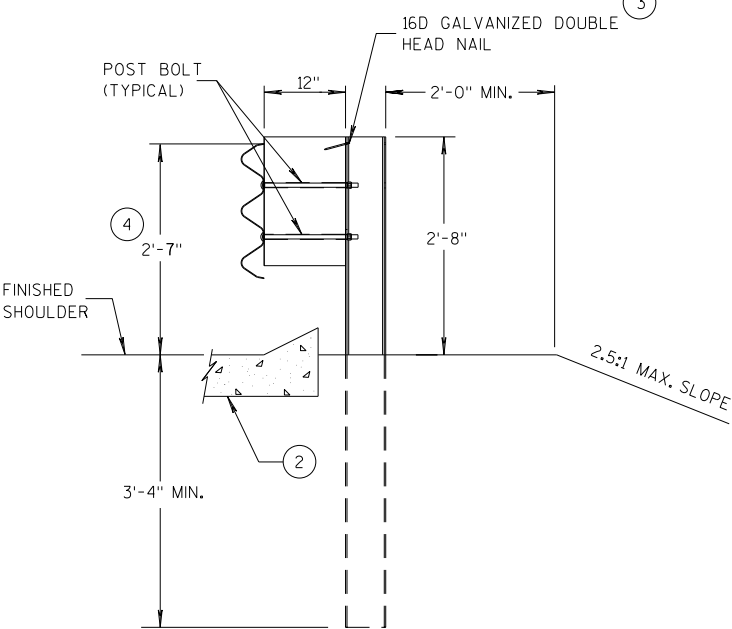
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

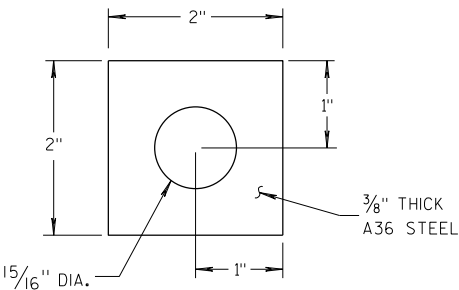
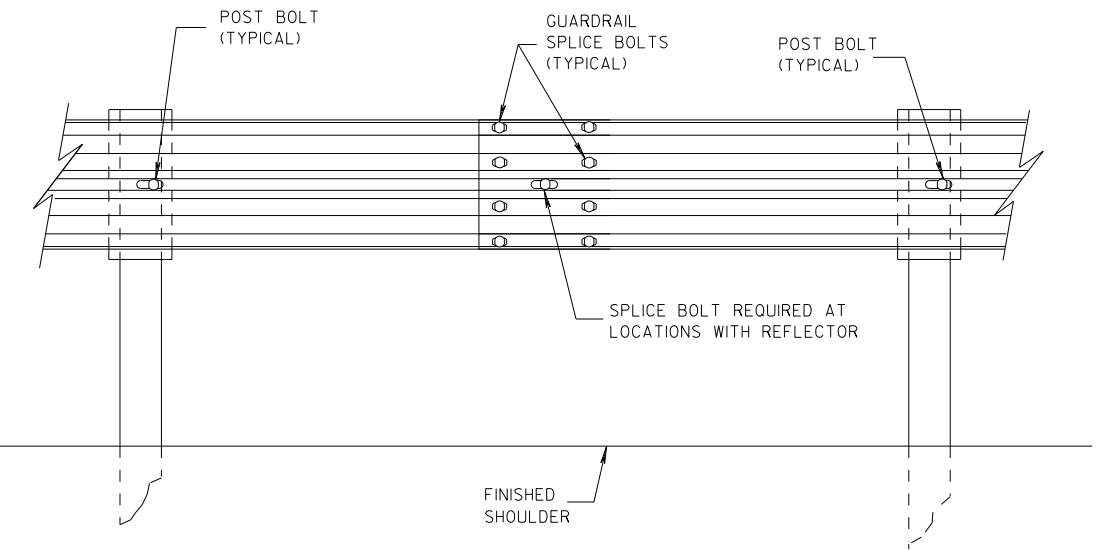
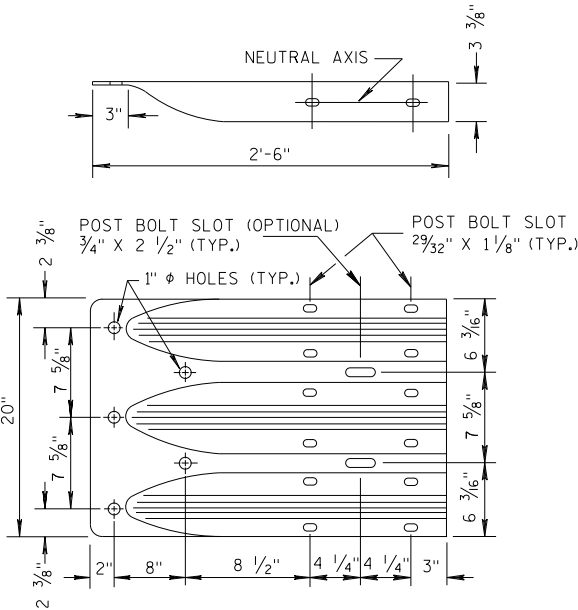


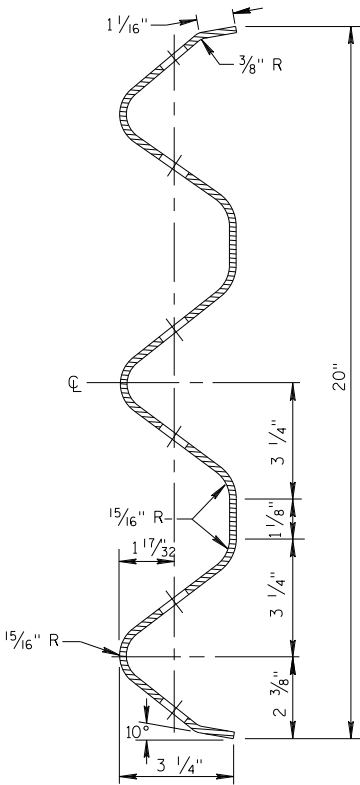
PLATE WASHER DETAIL



SPlice DETAIL



THRIE BEAM
TERMINAL CONNECTOR

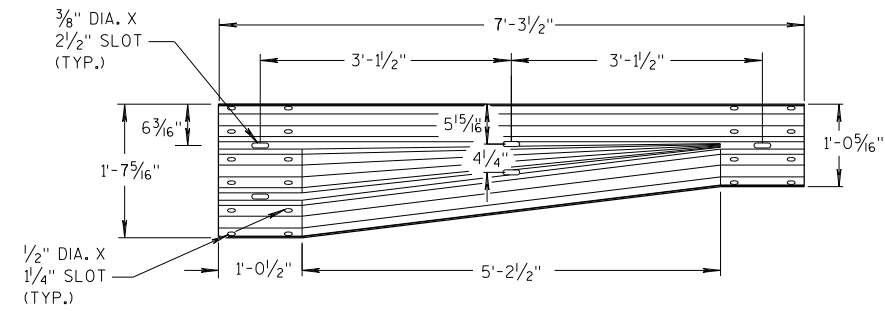


SECTION THRU THRIE
BEAM RAIL ELEMENT

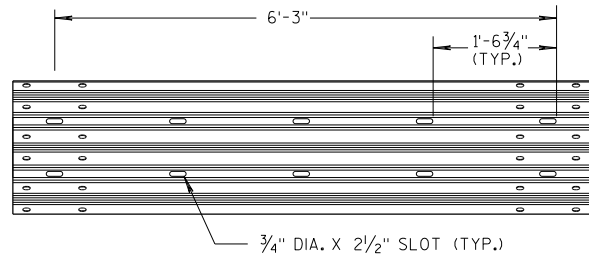
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

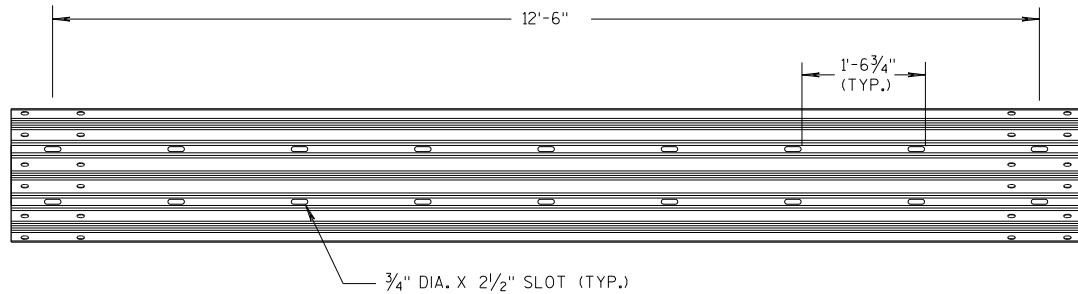
137



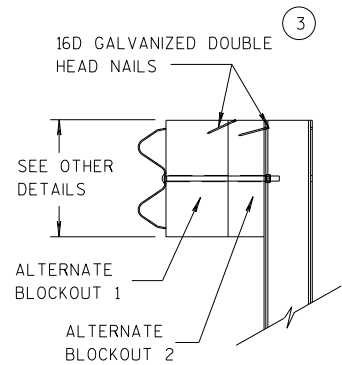
W-BEAM TO THRIE BEAM TRANSITION SECTION



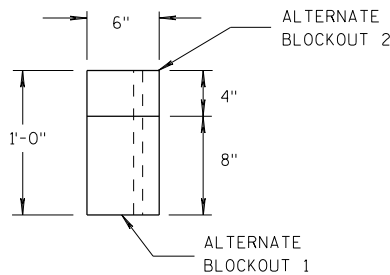
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

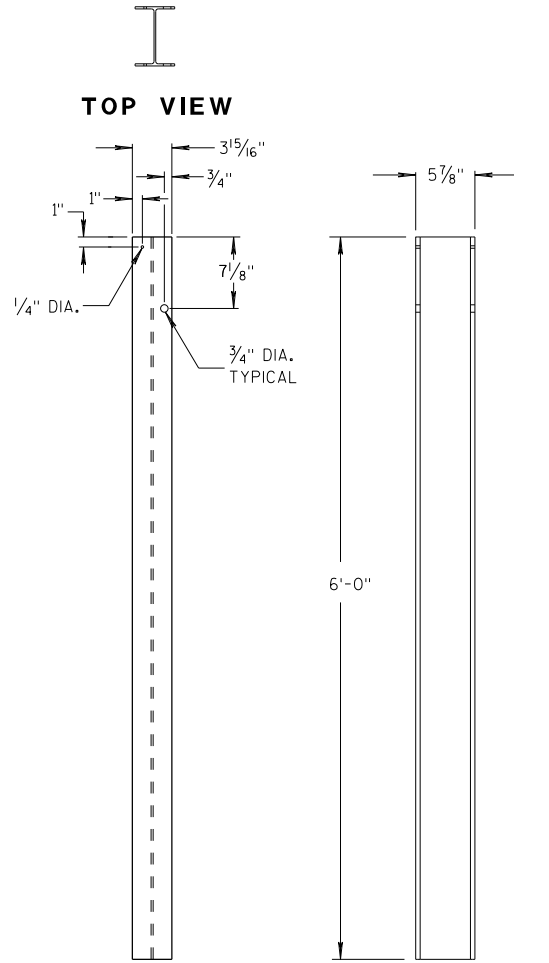


SIDE VIEW



TOP VIEW

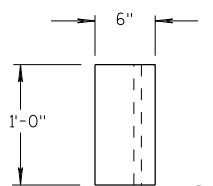
ALTERNATE WOOD BLOCKOUT DETAIL



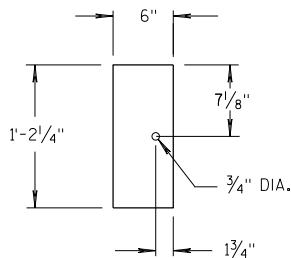
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

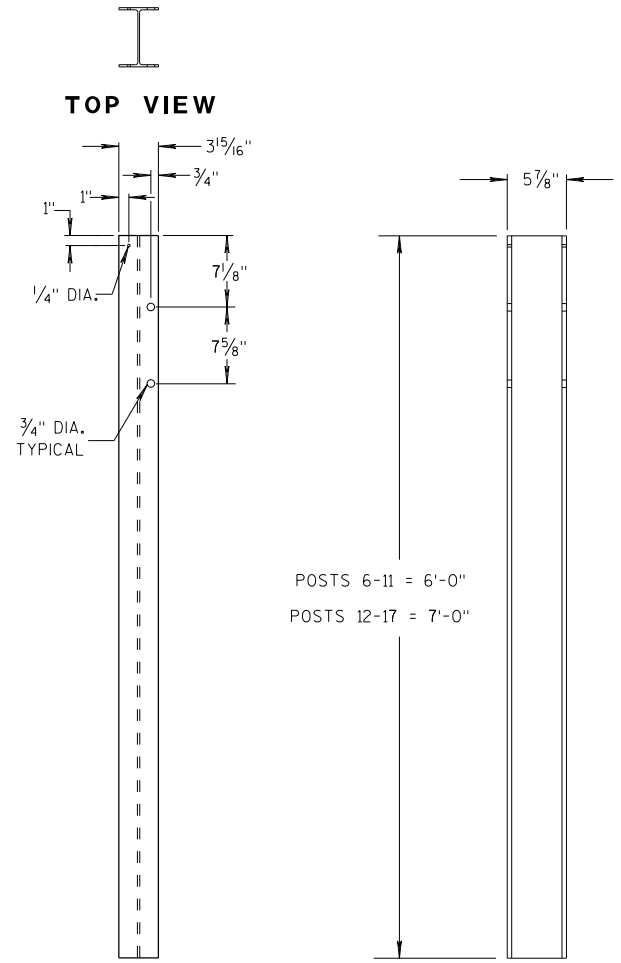


TOP VIEW



FRONT VIEW

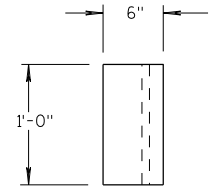
BLOCKOUT POSTS 1-5



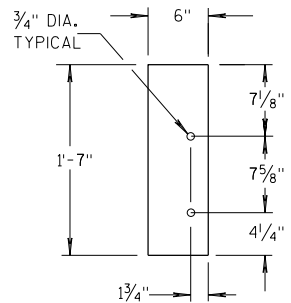
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-17



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

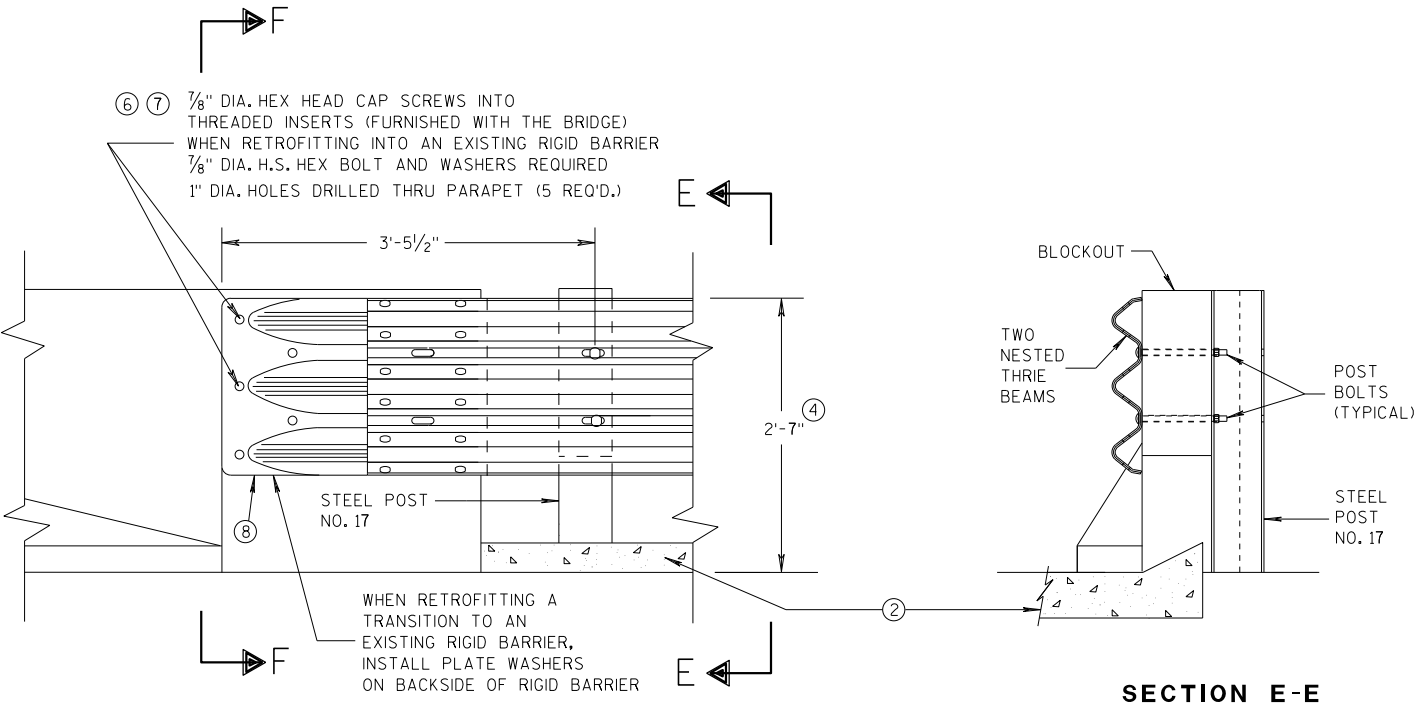
③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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

⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

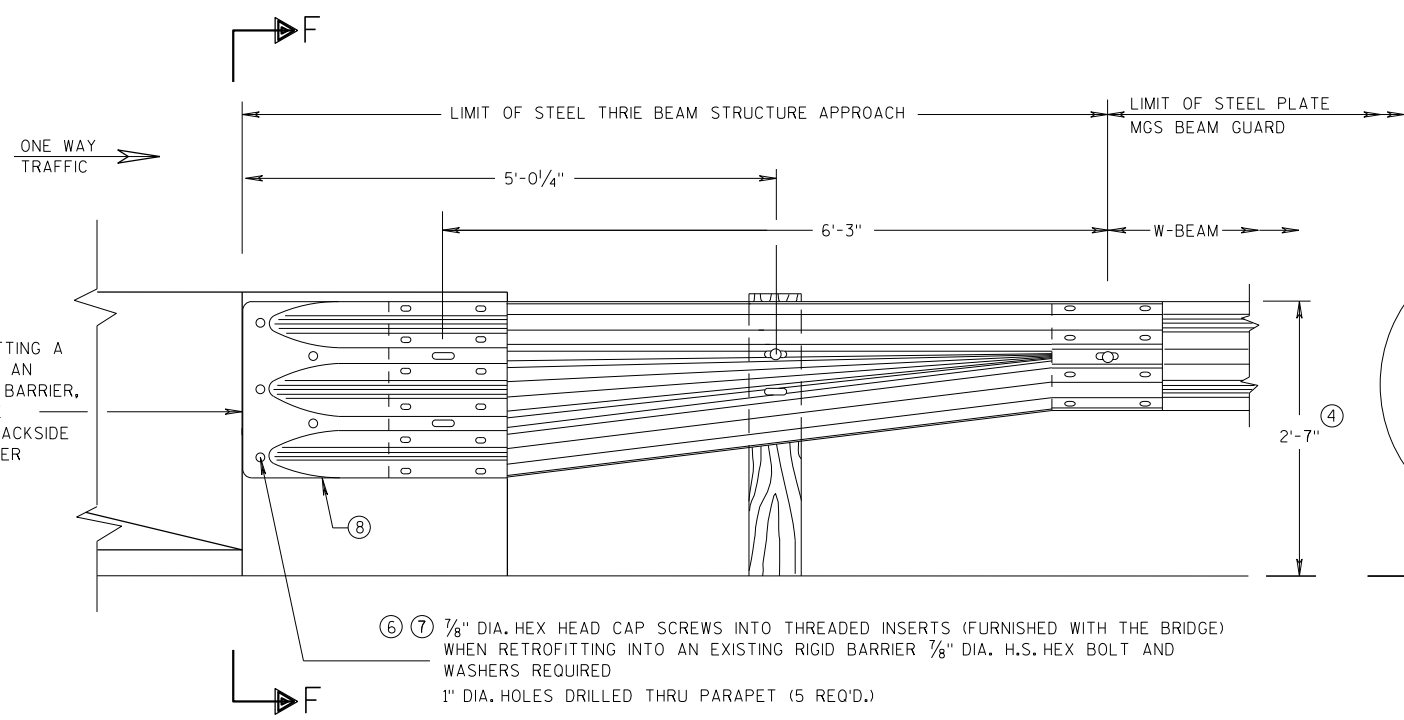
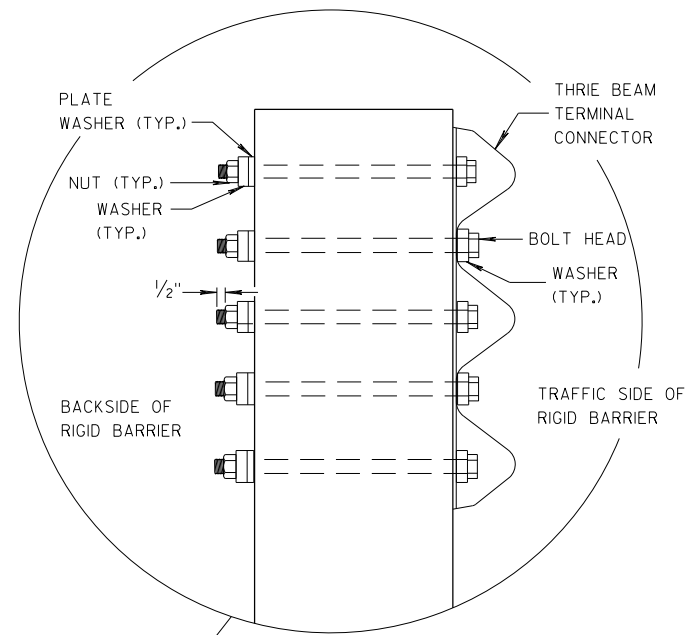
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

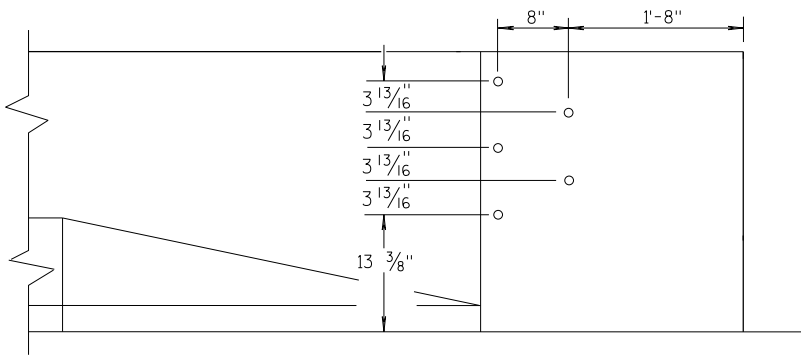


GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

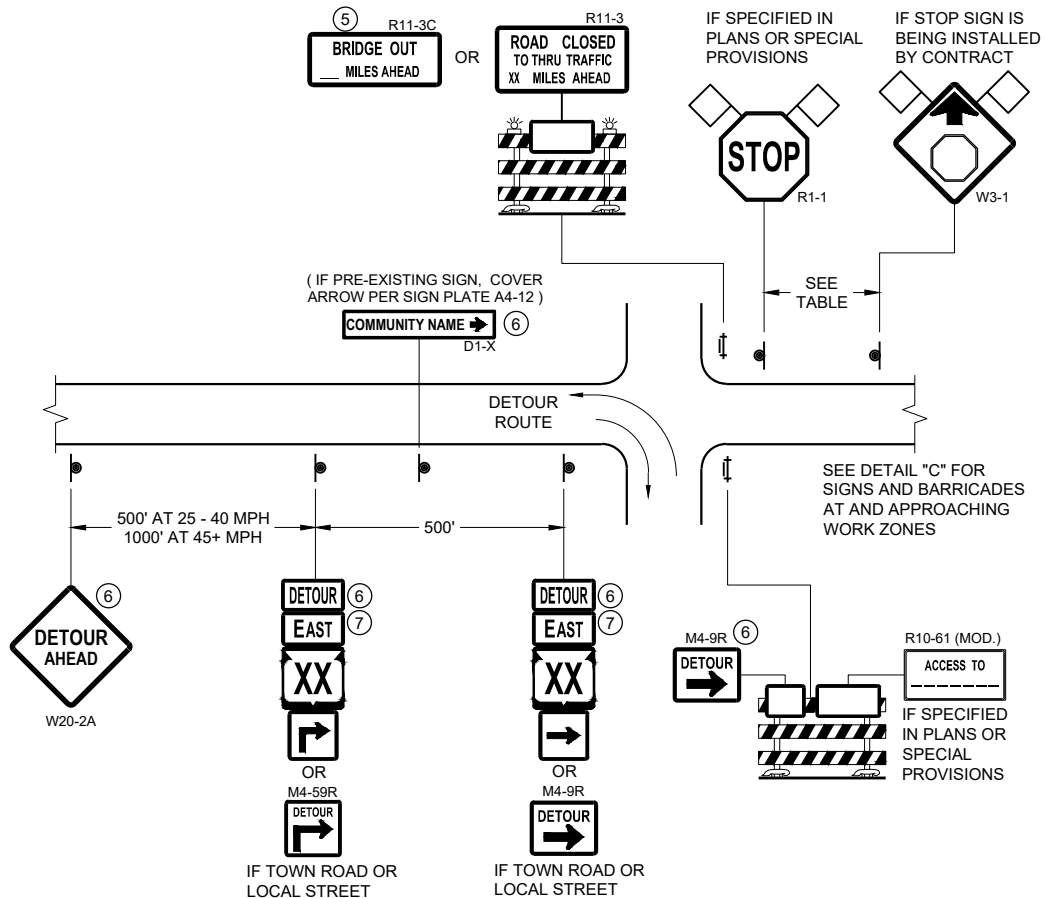


SECTION F-F

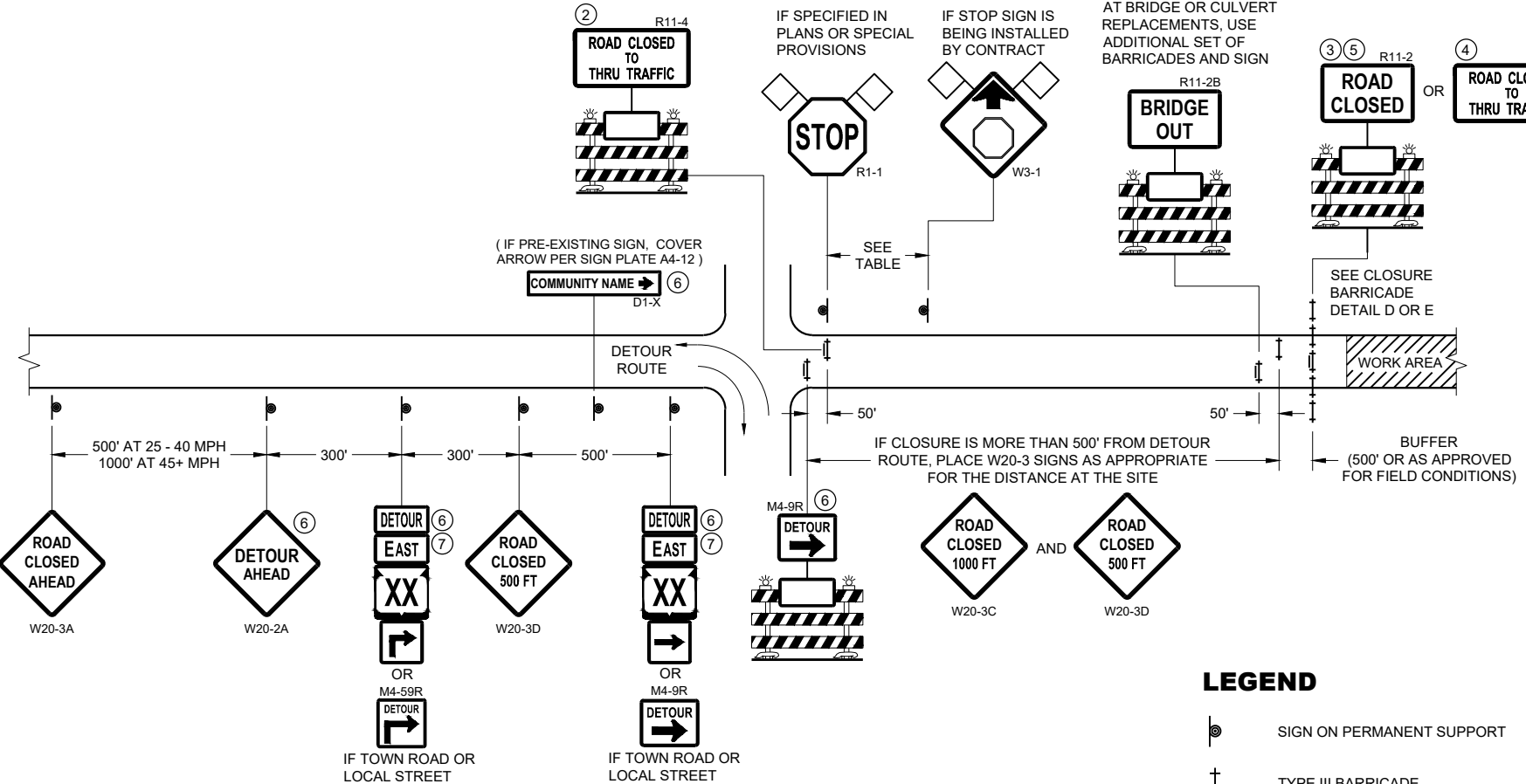


DRILL HOLE LOCATION

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS UNIT SUPERVISOR		
FHWA	139	NT	



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



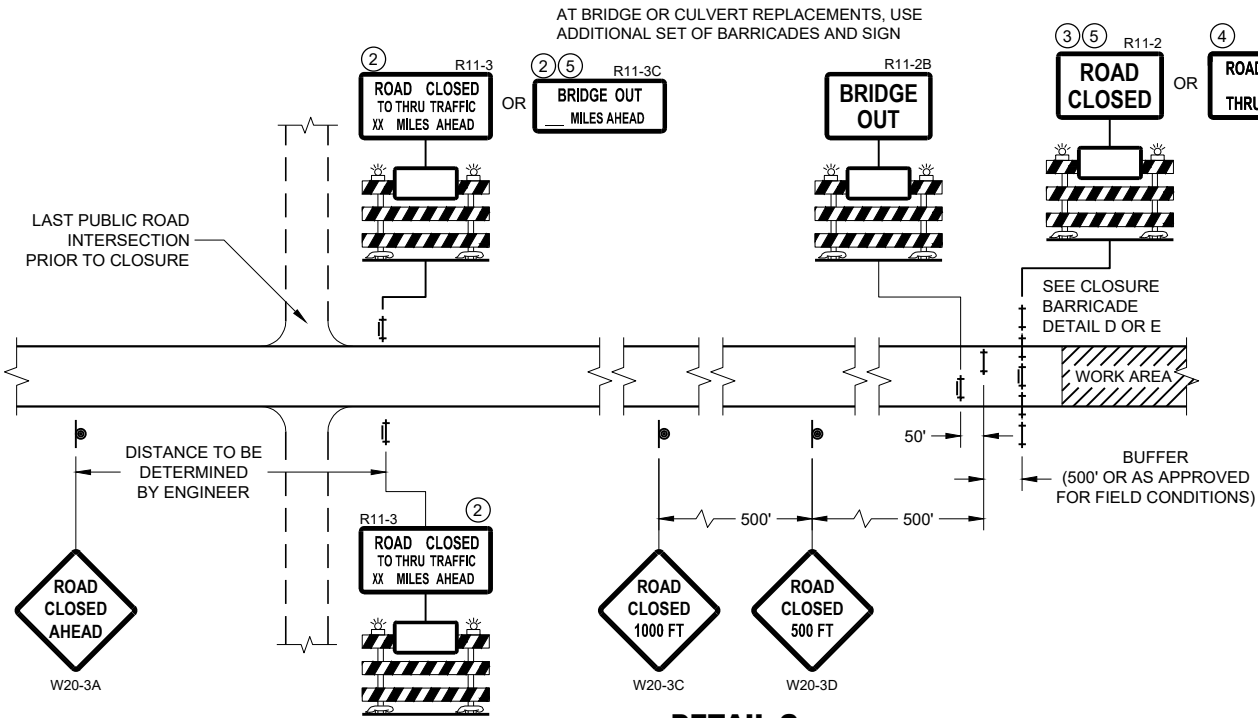
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

- 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)

- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- OR M05 - 1 OR M06 - 1

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 140

FHWA



SEE SDD 15C2 - SHEET "a" FOR LEGEND

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.

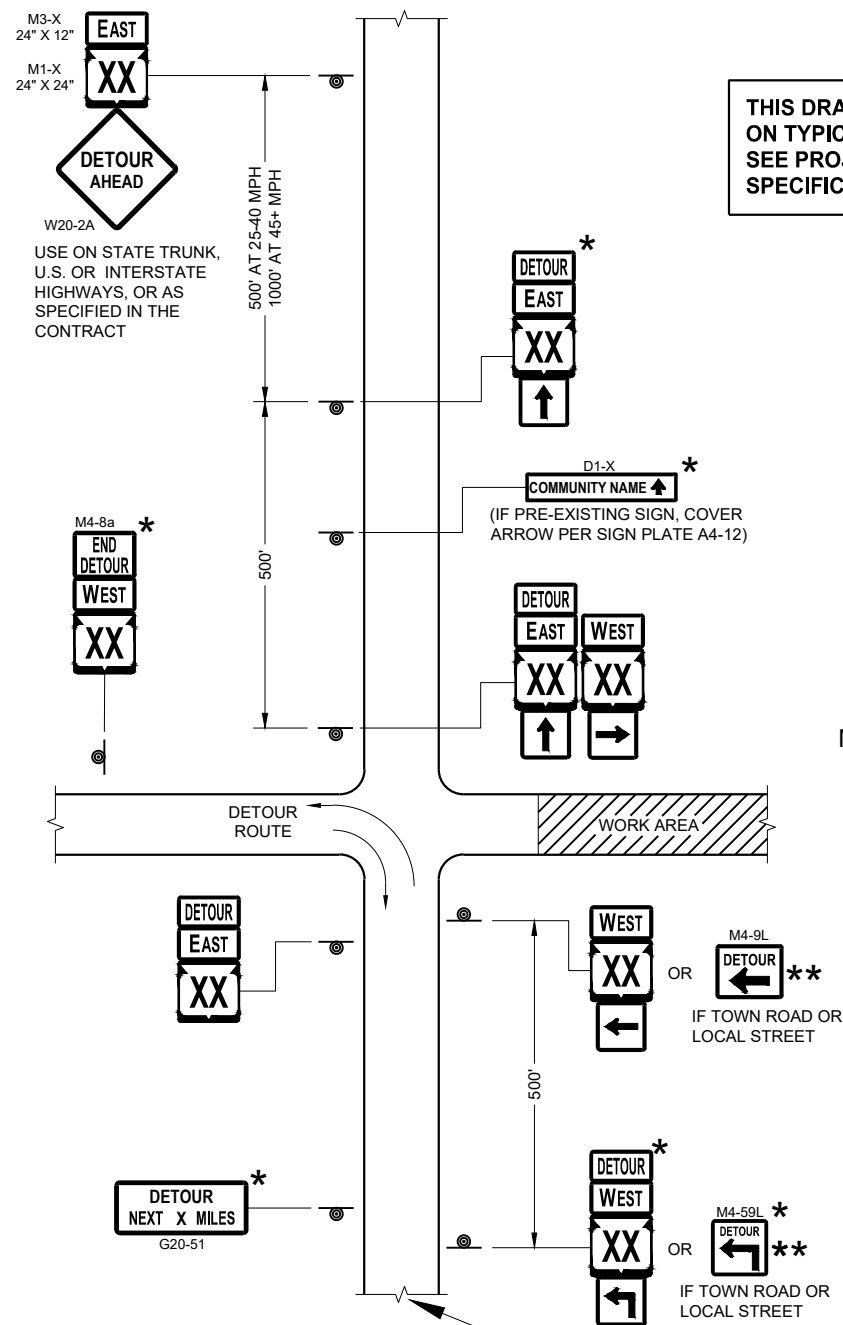
THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

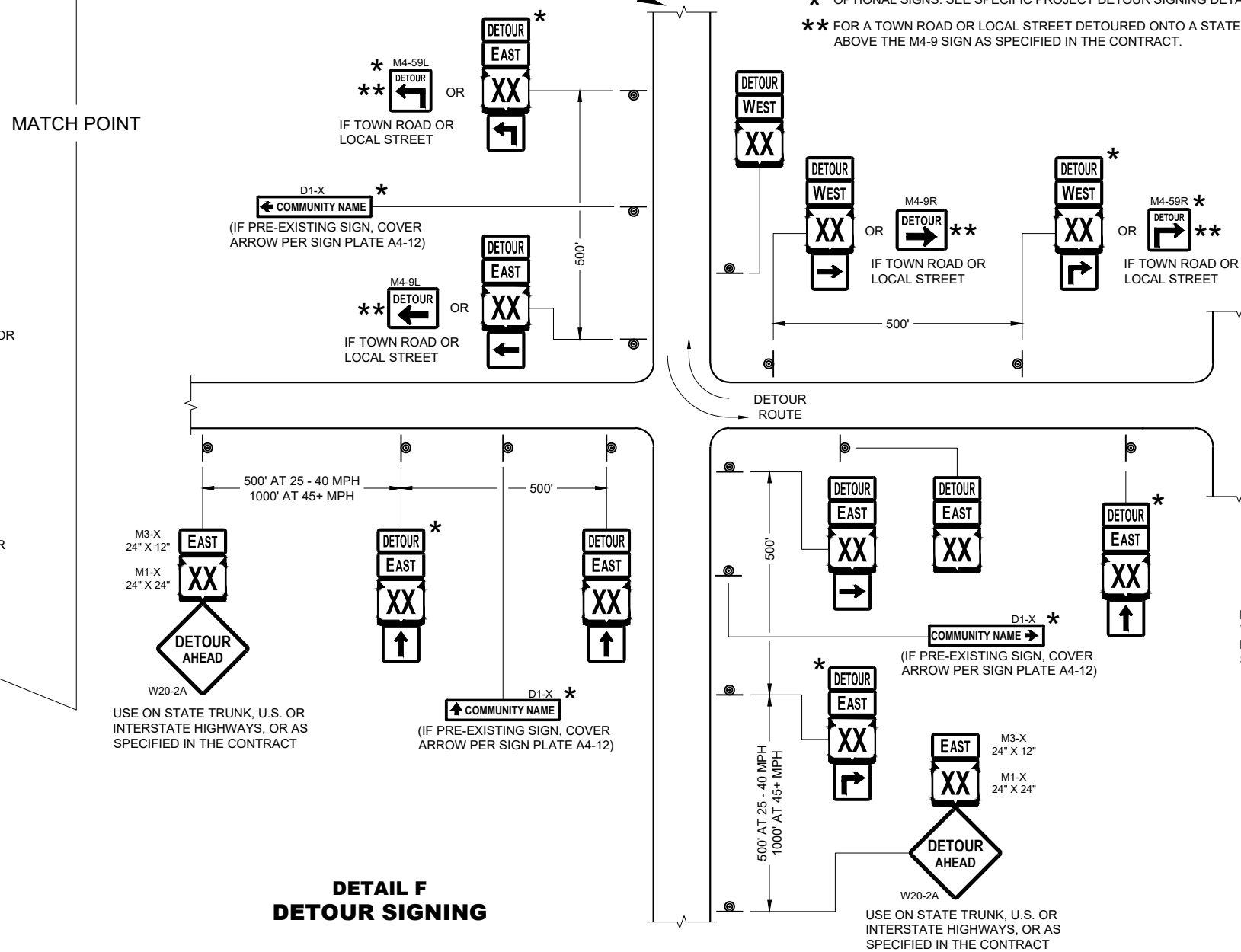
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

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.



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



DETAIL F DETOUR SIGNING

GENERAL NOTES

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

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

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

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

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

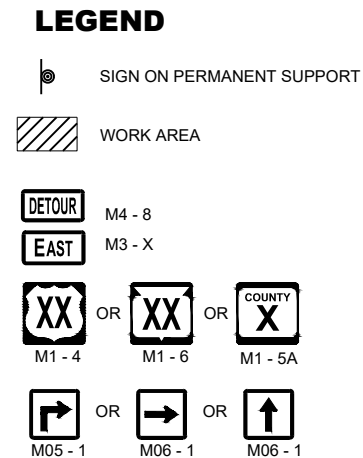
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M4-8 SHALL BE 24" X 12" (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)
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.**



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

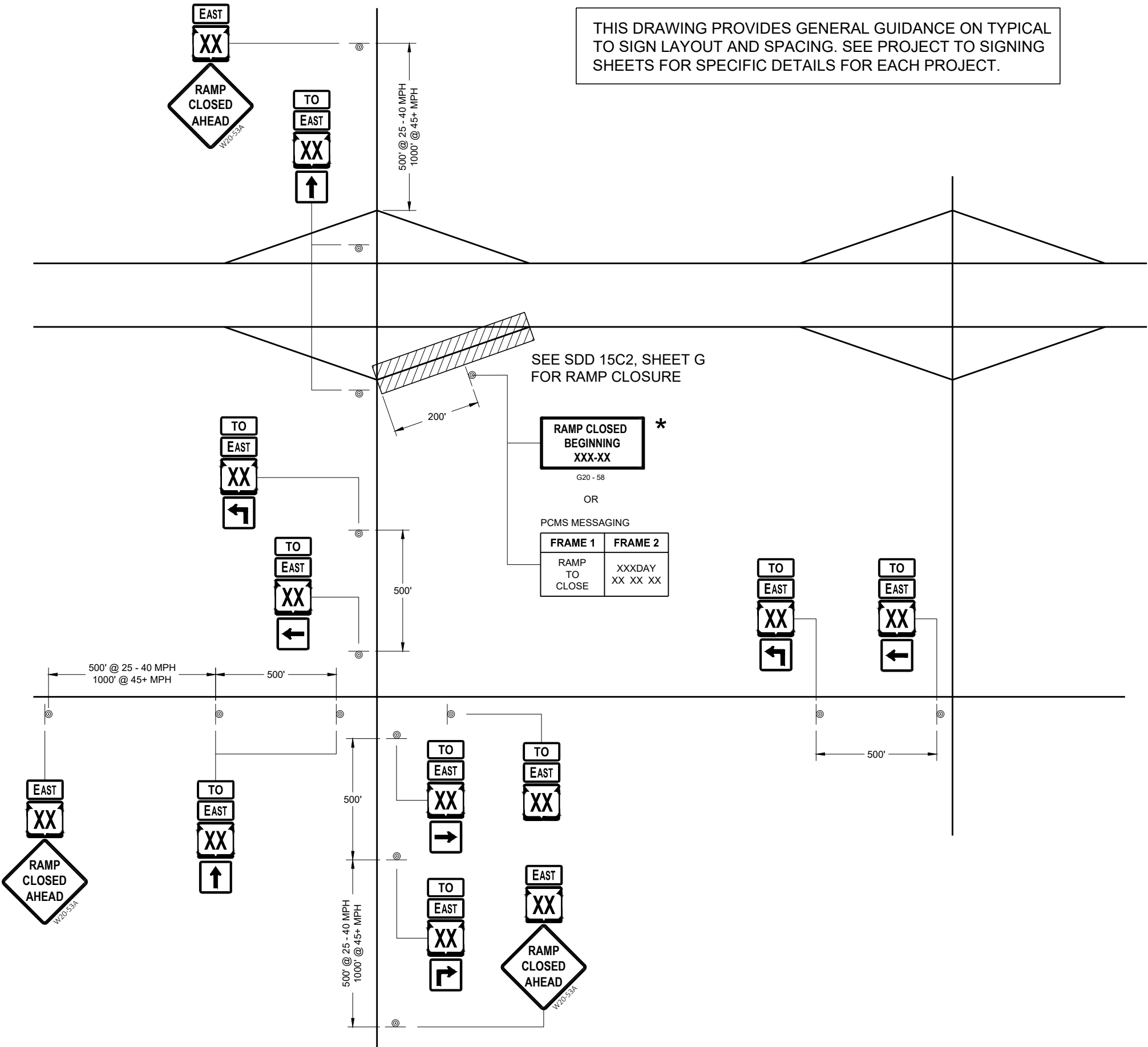
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER 142

FHWA



LEGEND

⊙ SIGN ON PERMANENT SUPPORT

TO EAST MO4 - 5 M3 - X

XX M1 - 6 OR XX M1 - 4 OR INTERSTATE XX M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

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 ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.
- THE SPACING BETWEEN TRAFFIC CONTROL AND TO 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 SHALL 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 FOLLOW:
M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
W20 - 53A SHALL BE 48" X 48"

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

ON RAMP LANE CLOSURE

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DEPARTMENT OF TRANSPORTATION

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THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

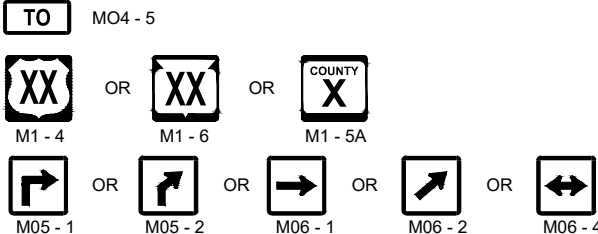
LEGEND



SIGN ON PERMANENT SUPPORT



PORTABLE CHANGEABLE MESSAGE SIGN



GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 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 SHALL 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 FOLLOW:

MO4 - 5 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, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

- ① ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

OFF RAMP LANE CLOSURE

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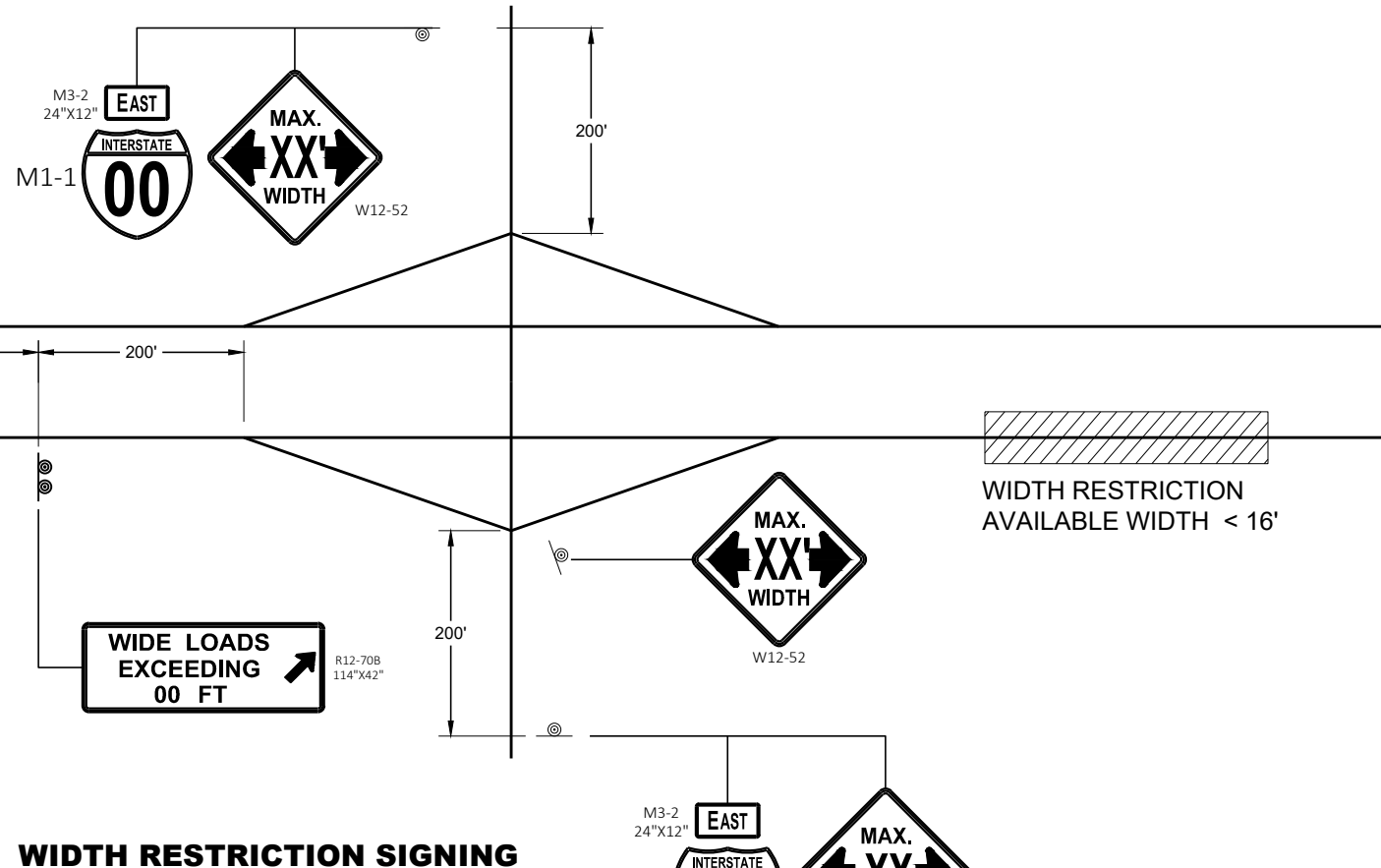
WORK ZONE ENGINEER 144

6

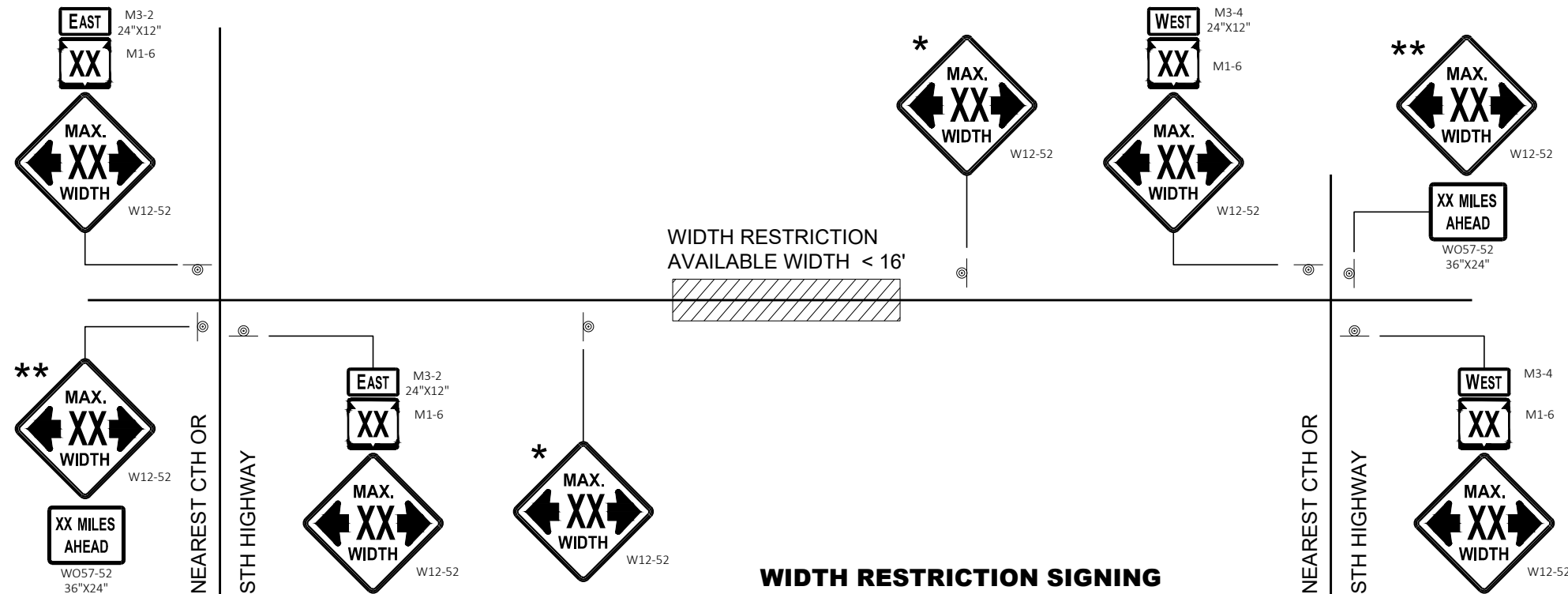
SDD 15C02 - 09e

6

SDD15C02 - 09e



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A 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.

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

- * PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.
- ** SIGN SHALL BE VISIBLE FROM ROADWAY.
- *** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

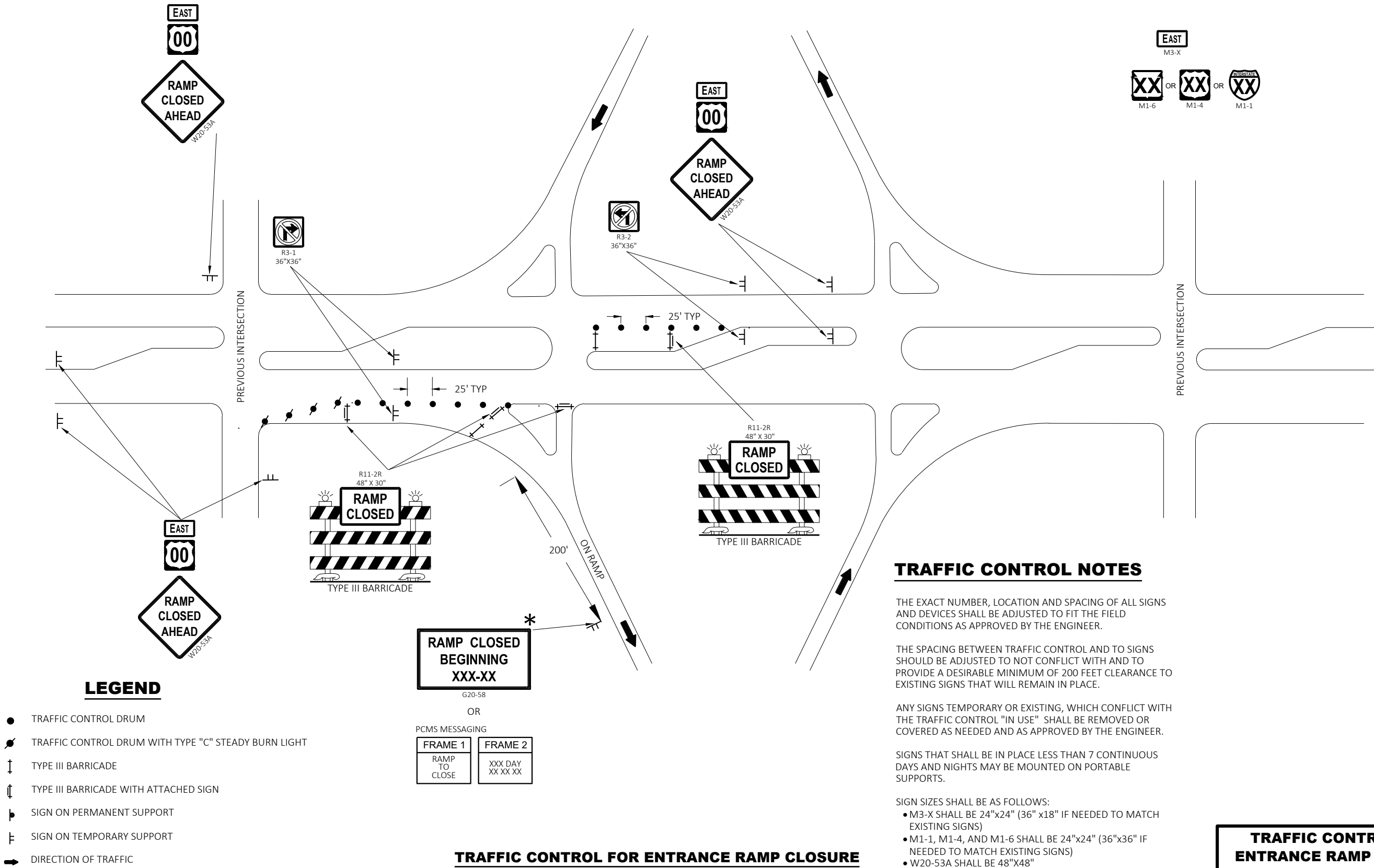


WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH
RESTRICTION SIGNING

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TRAFFIC CONTROL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL AND TO 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 THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

- SIGN SIZES SHALL BE AS FOLLOWS:
- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
 - M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
 - W20-53A SHALL BE 48"x48"

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

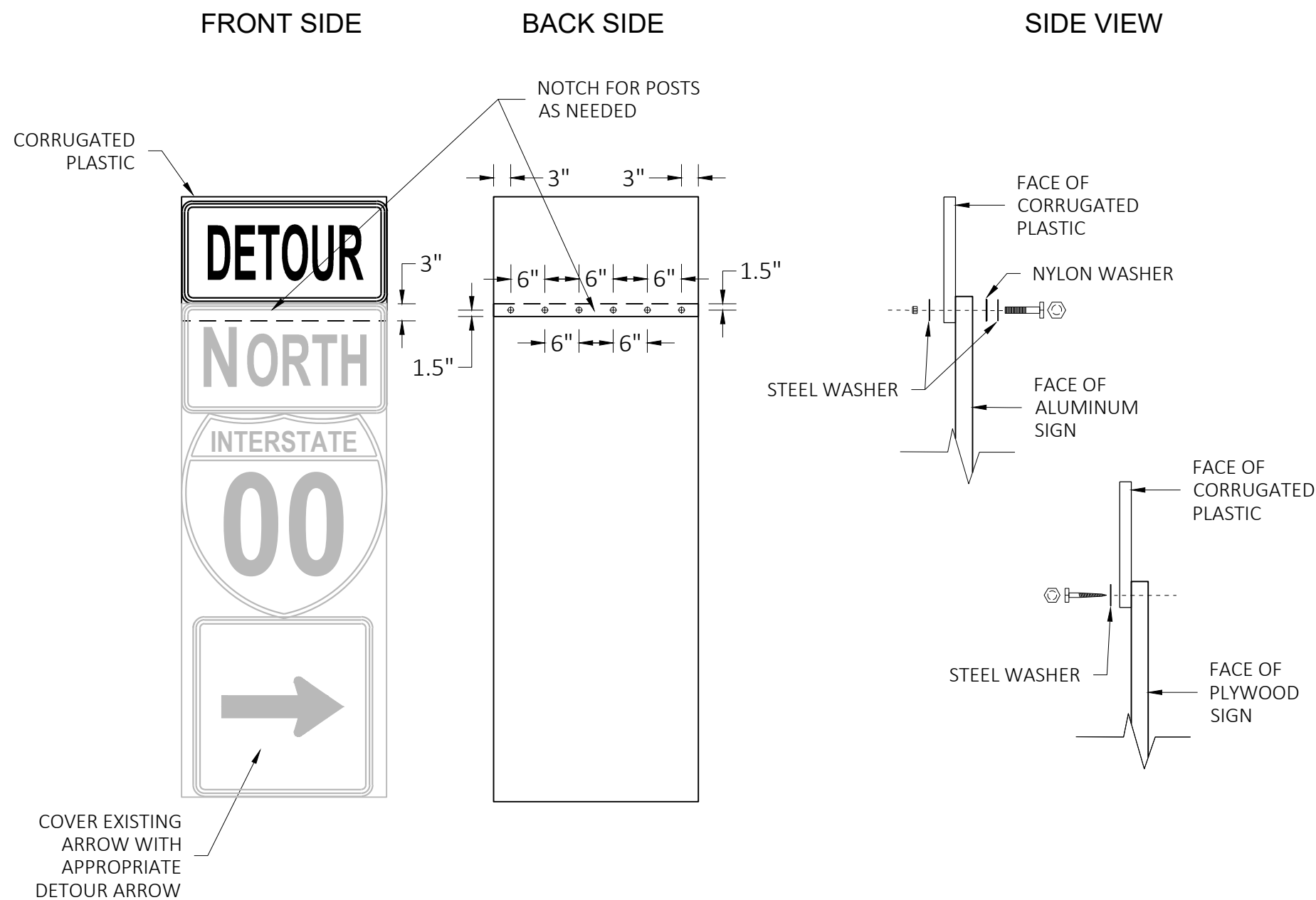
TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE 146

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GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.

FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.

FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.

METAL WASHERS, NUTS, BOLTS AND LAGS 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, SC3

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.

PLYWOOD SIGNS:

LAG SCREWS - 5/16" x 1"

ALUMINUM SIGNS:

MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS

WASHERS:

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

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

147

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.

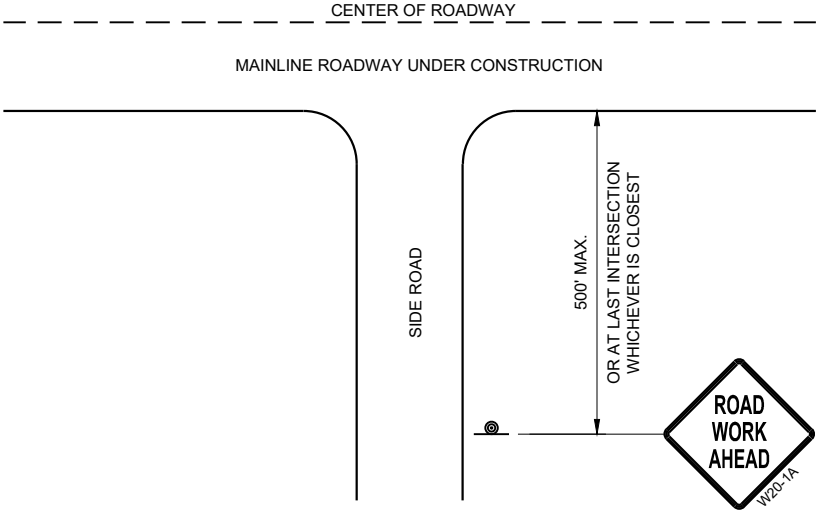
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

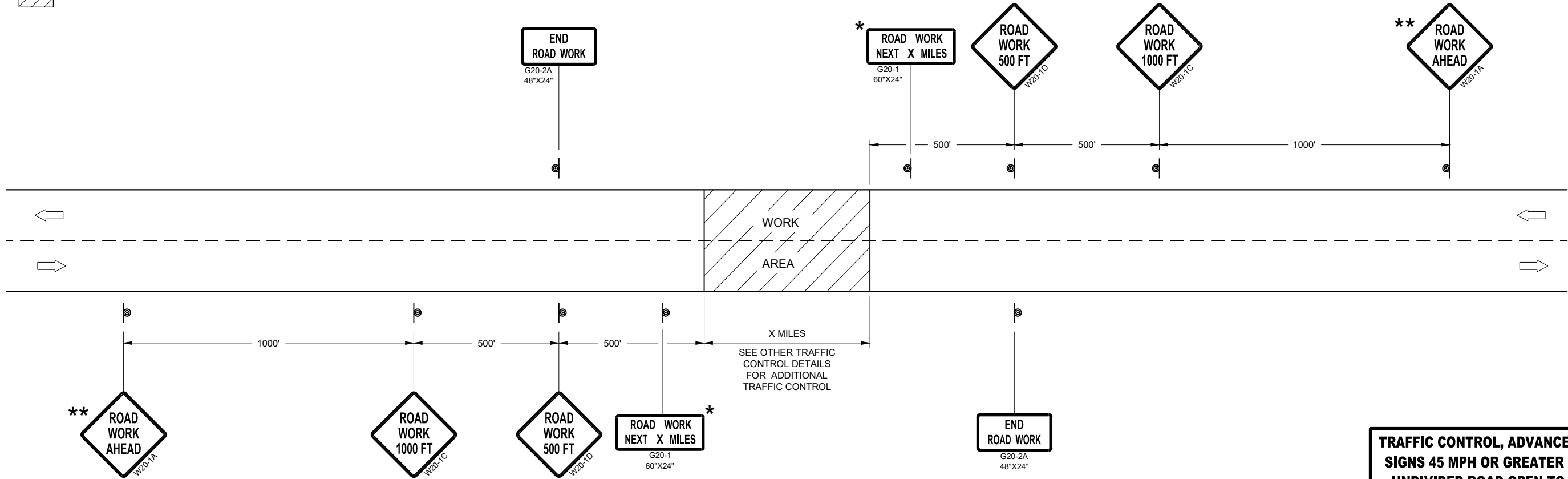
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

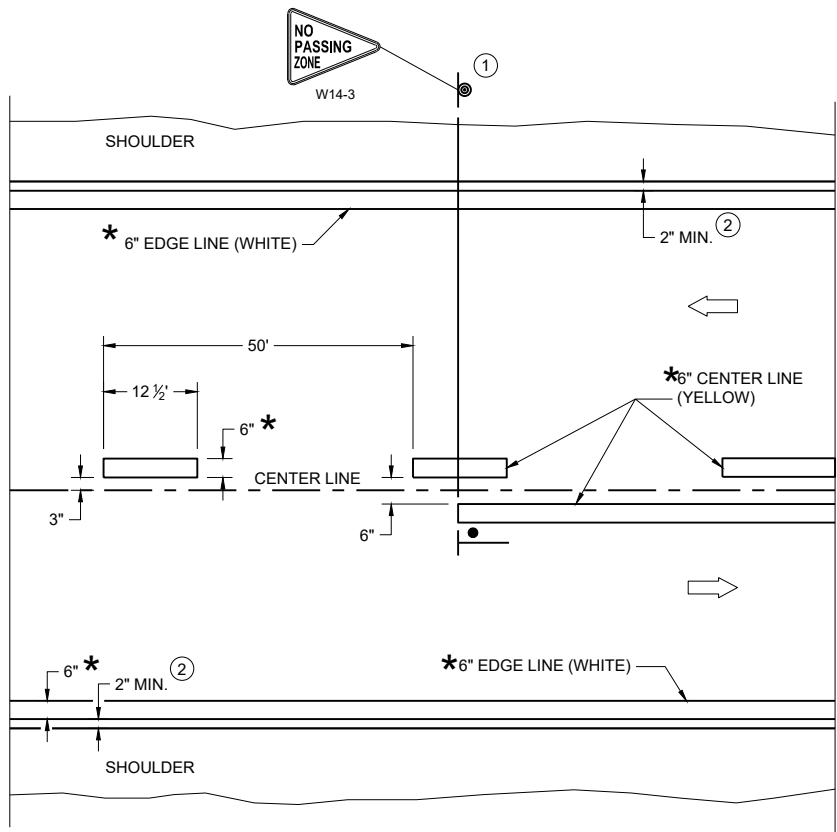


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

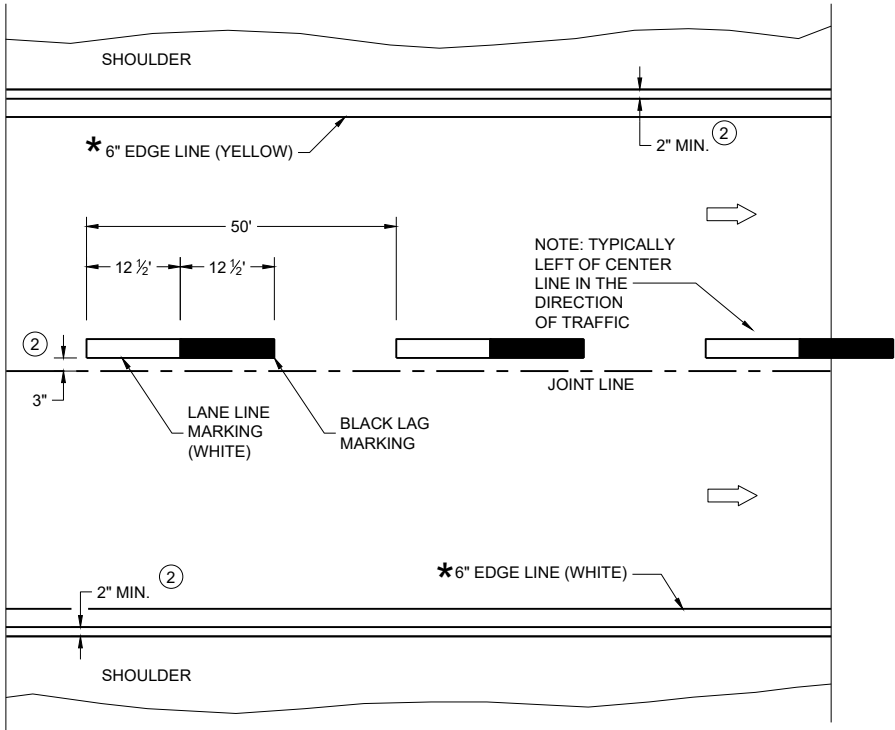
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 148
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

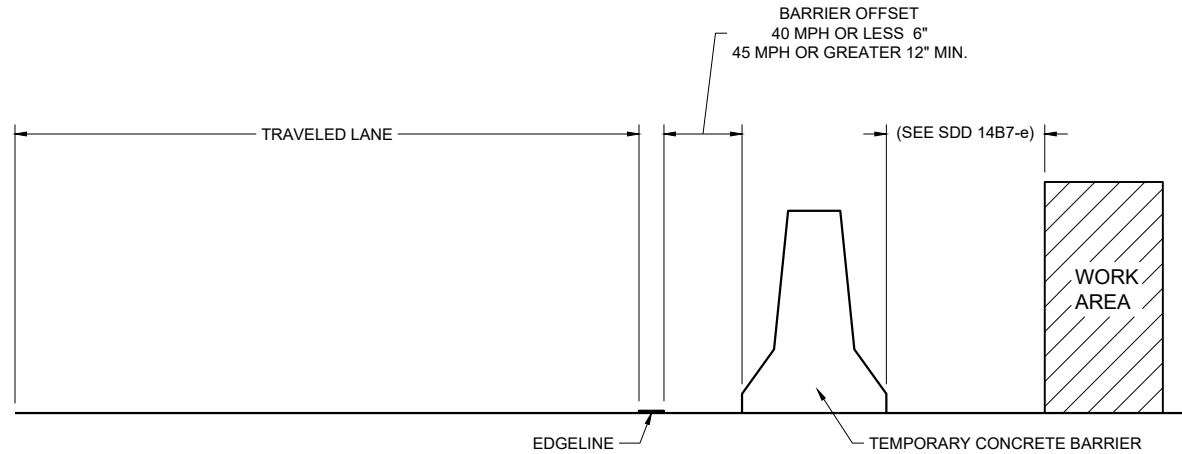
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA 149	



TEMPORARY BARRIER OFFSET FROM EDGE LINE

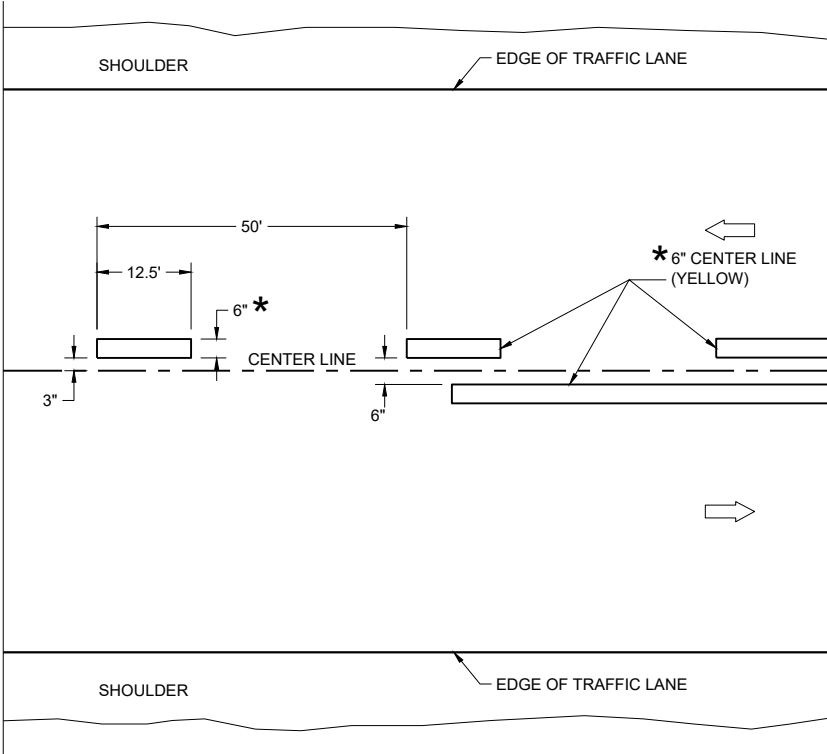
GENERAL NOTES

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

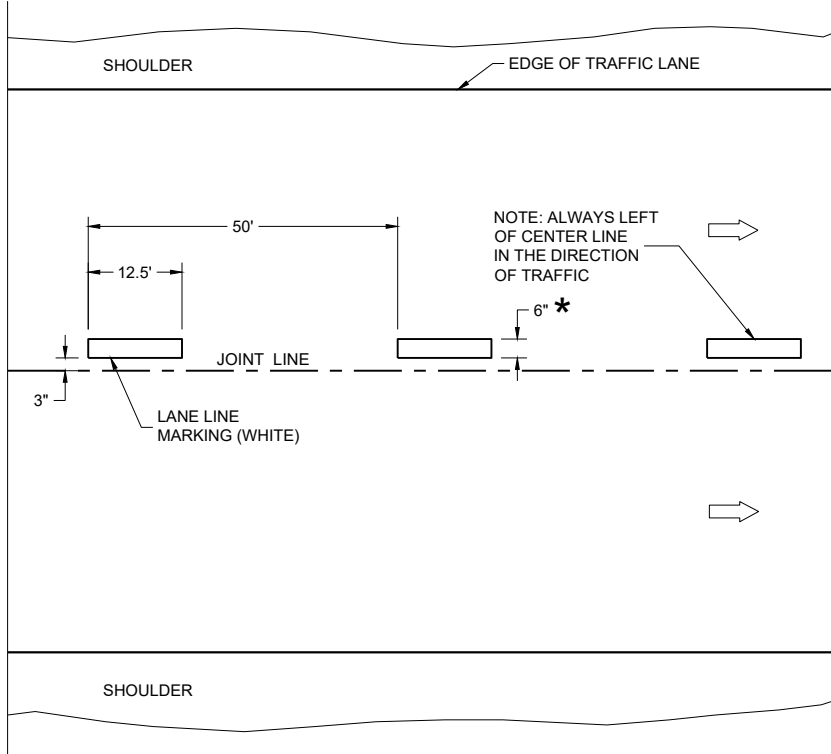
LEGEND

DIRECTION OF TRAFFIC

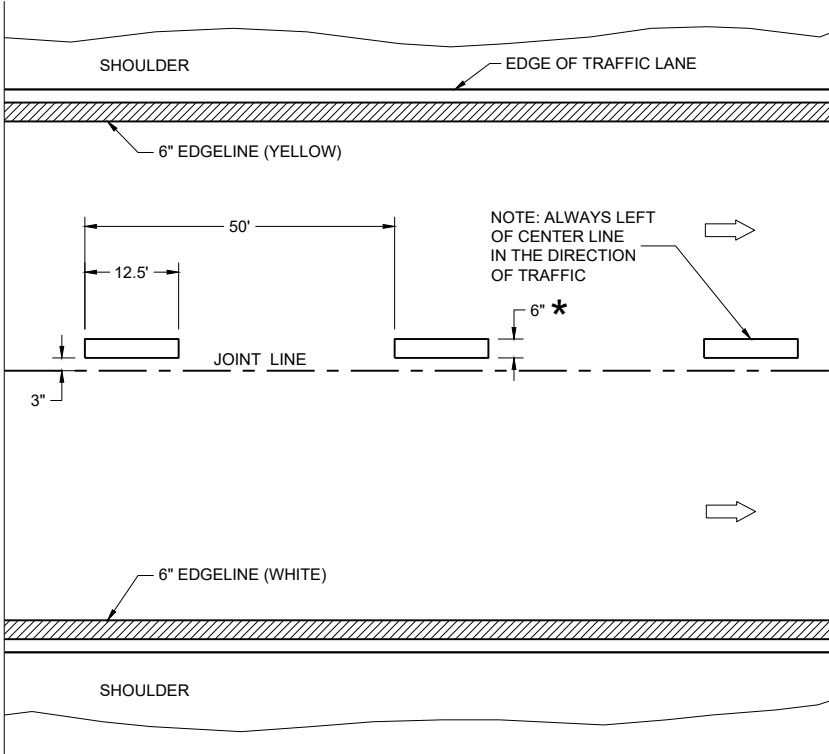
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

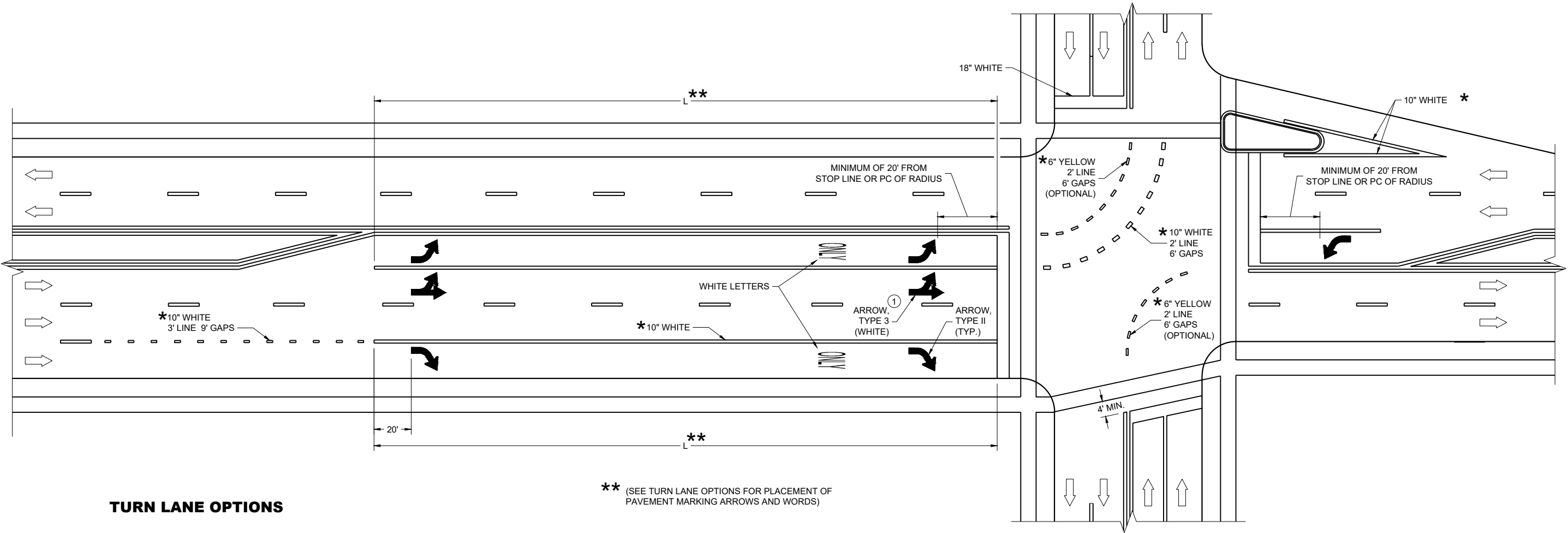
TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

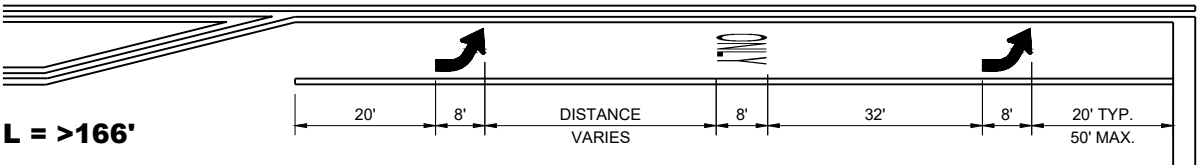
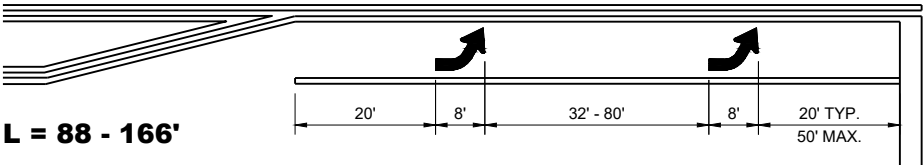
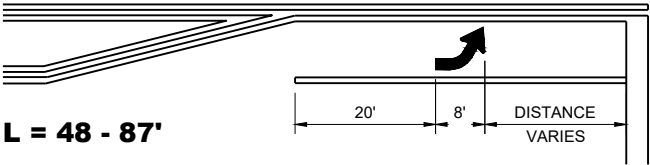
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES





TURN LANE OPTIONS

LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



GENERAL NOTES

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

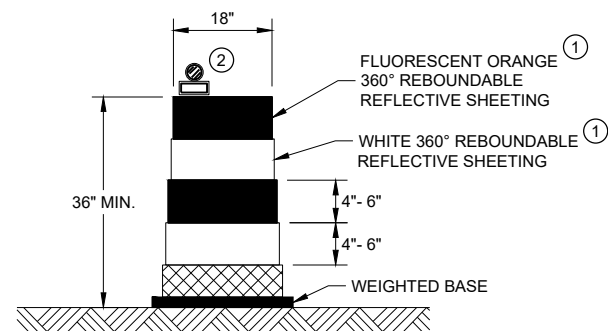
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

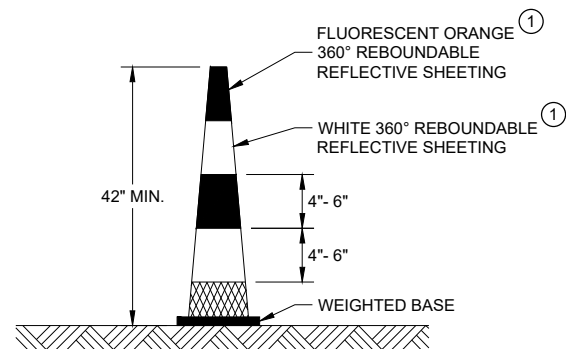
PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



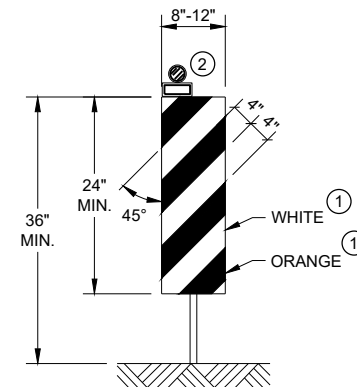
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



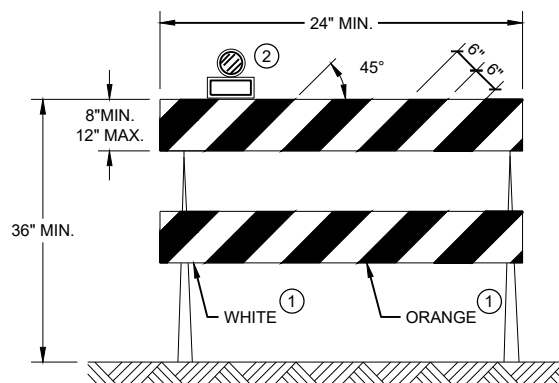
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



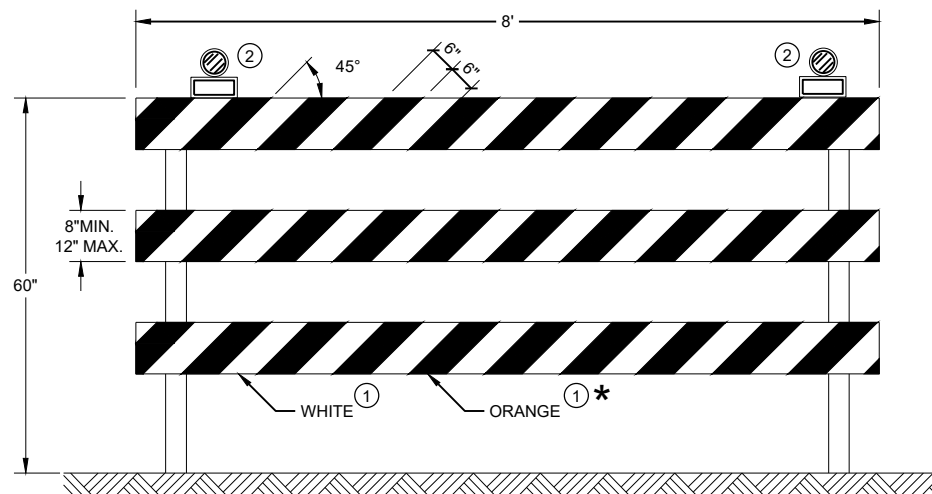
VERTICAL PANEL

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 November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER 153
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

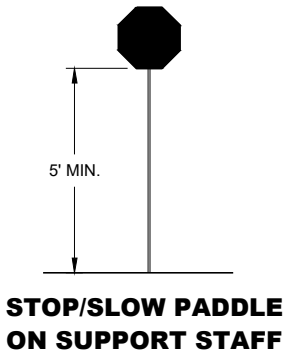
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

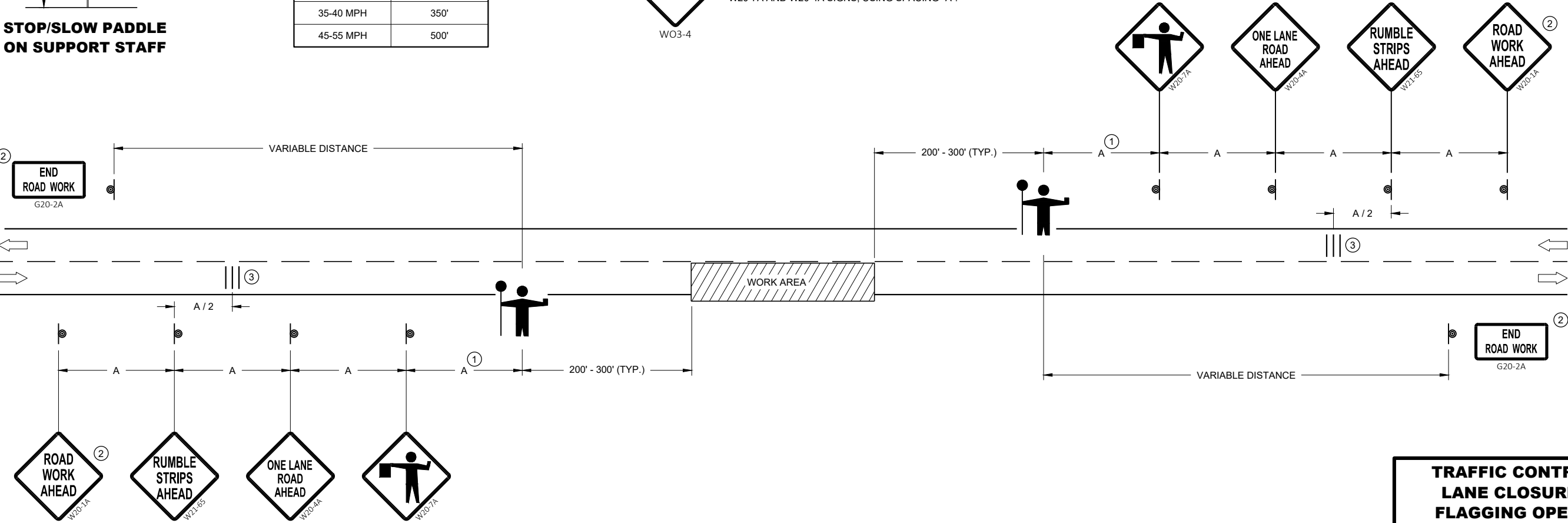


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

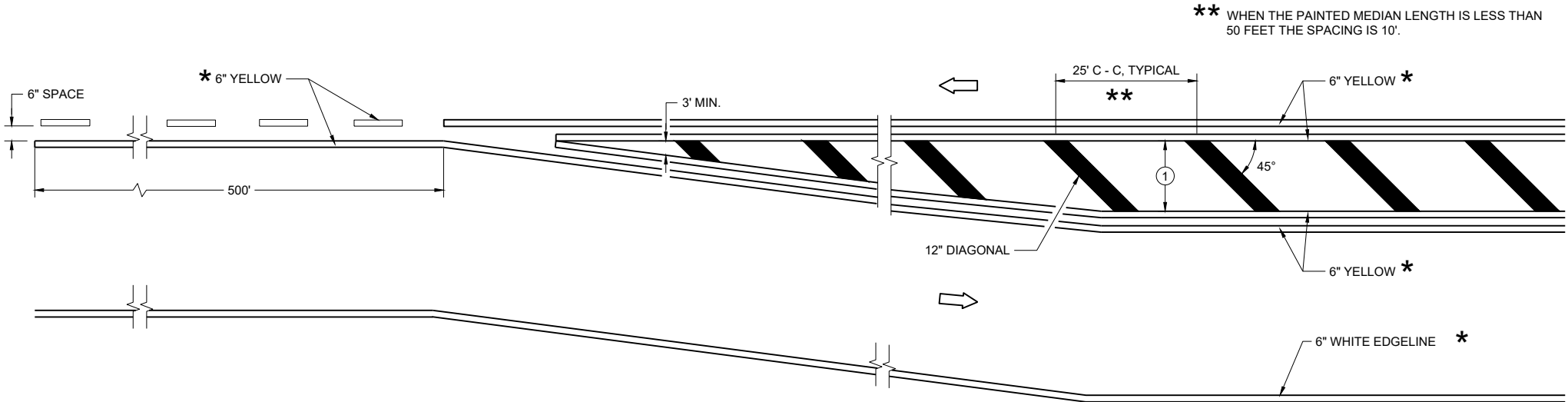
SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



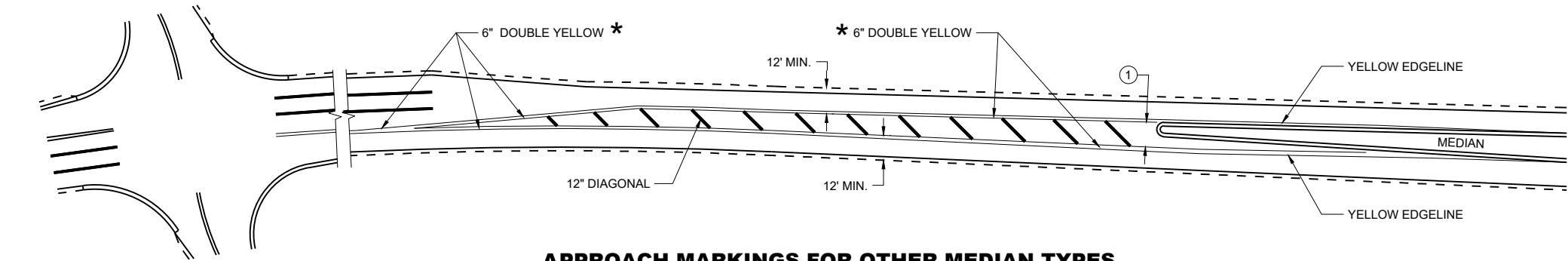
USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



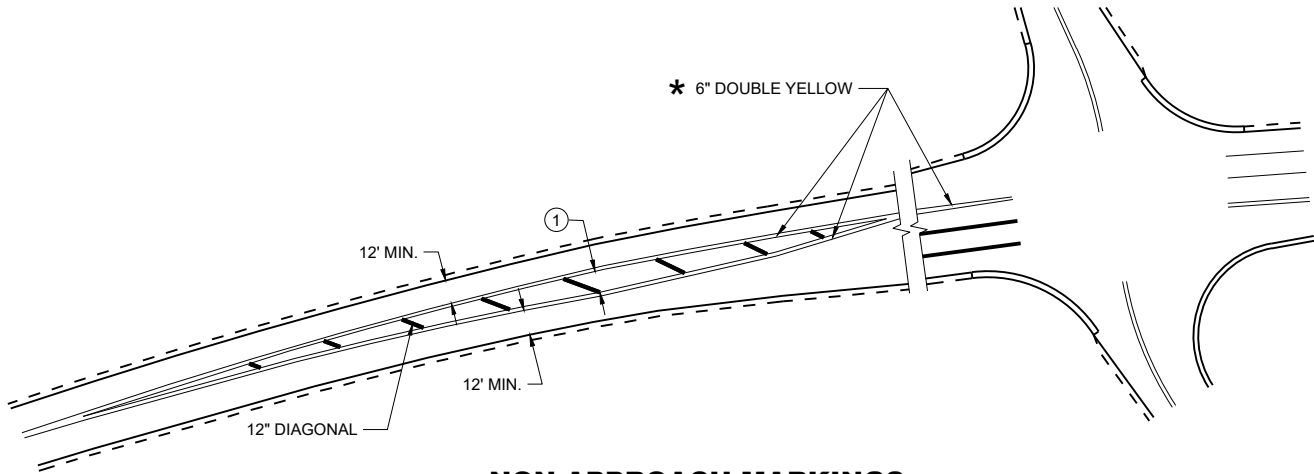
TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER 154
FHWA	



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

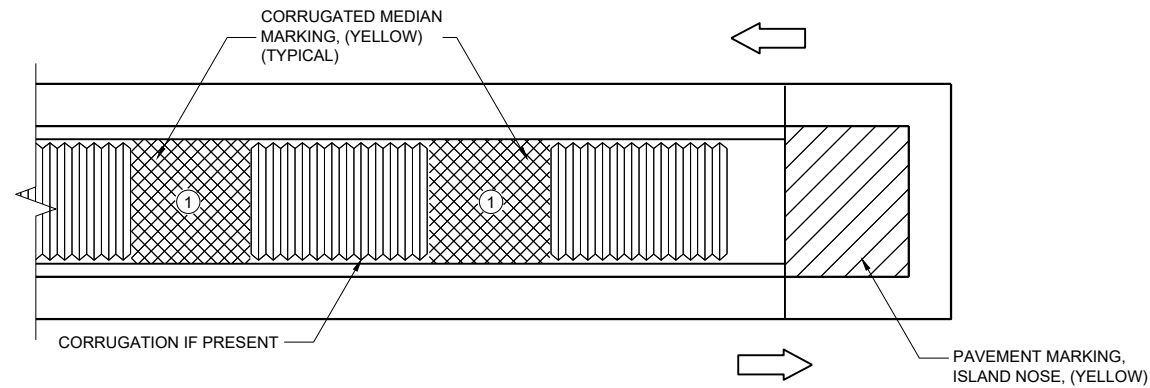
GENERAL NOTES

- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

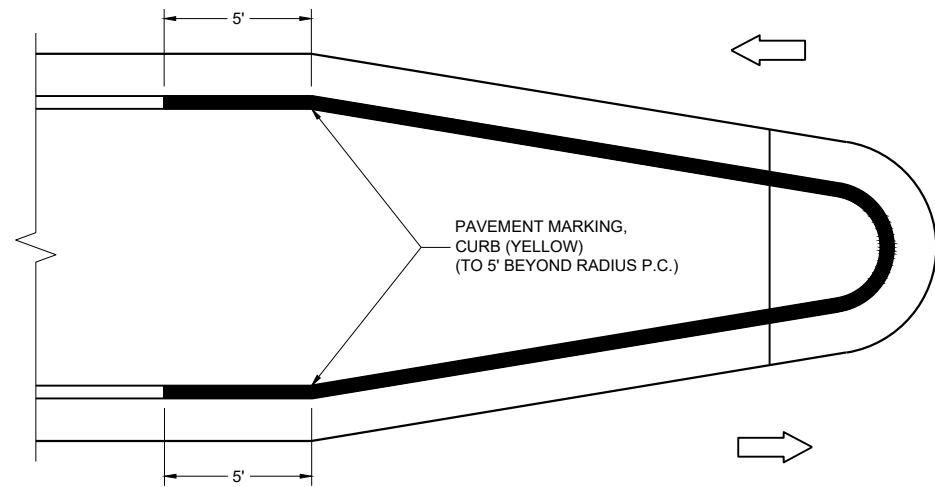
➡ DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

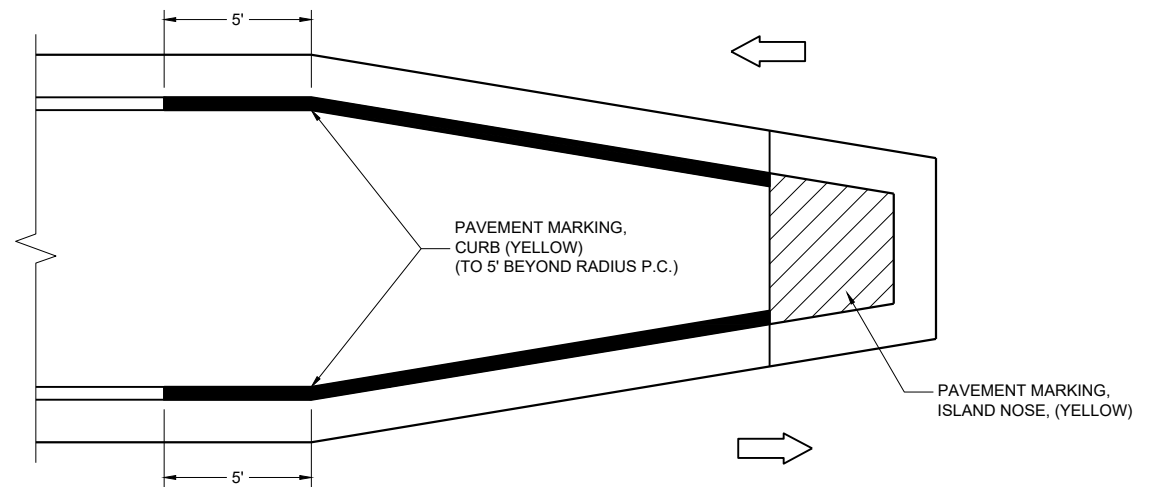
MEDIAN ISLAND PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	155



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

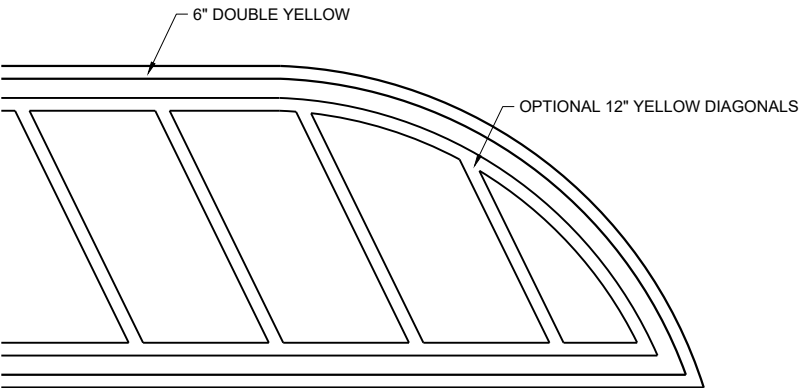
TYPICAL PLACEMENT OF
PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL



FLUSH MEDIAN ISLAND NOSE

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	156

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED

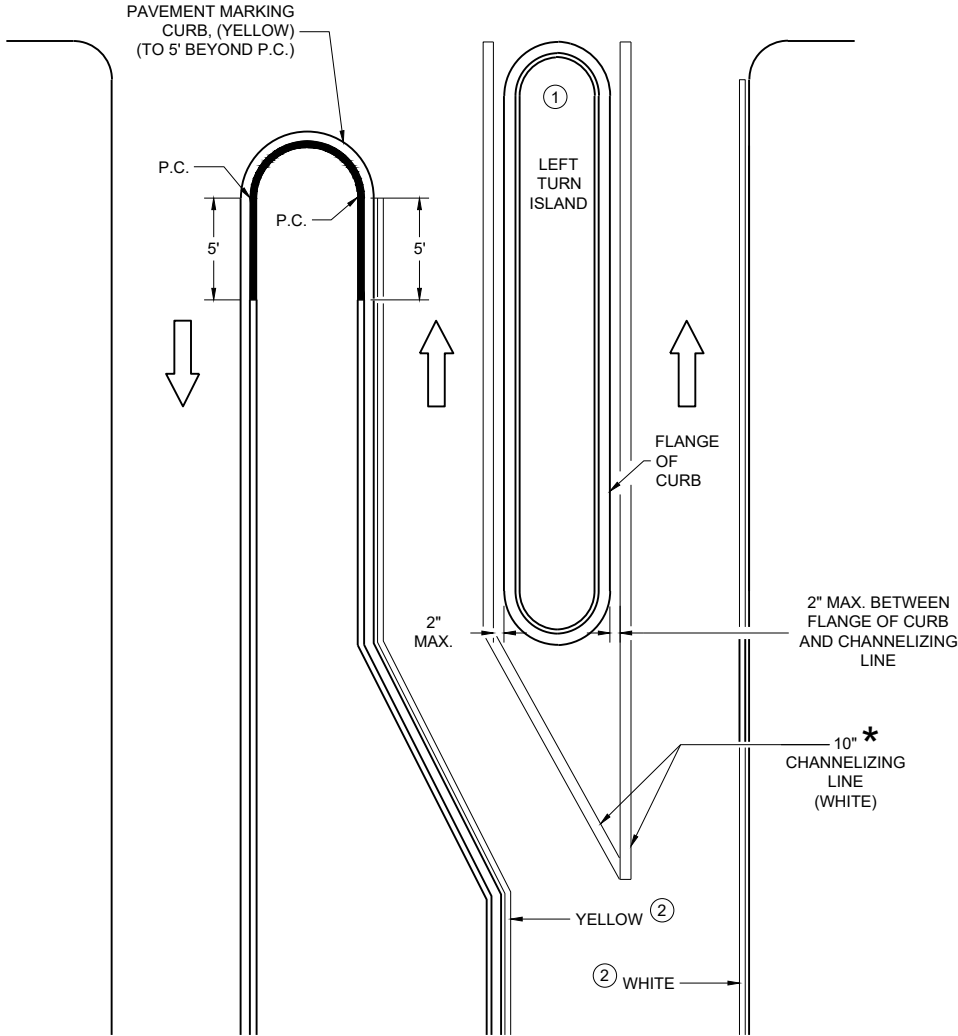
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

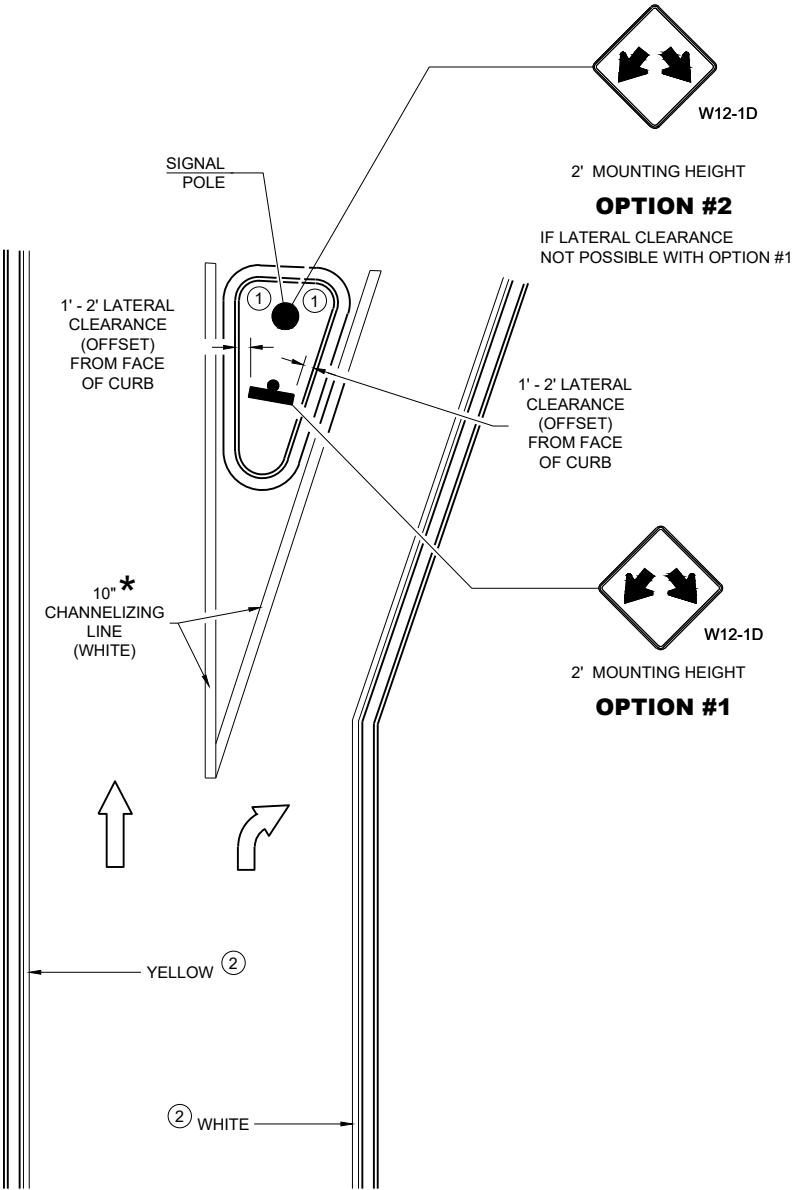
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.
- ③ CHEVRON MAY BE OMITTED IF LESS THAN 4" WIDE

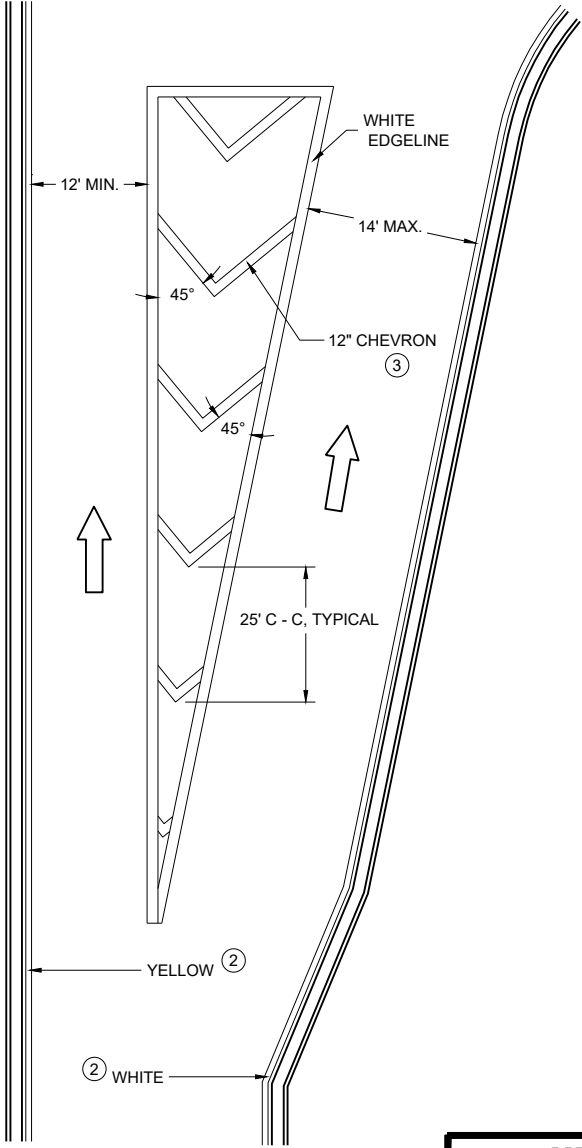
DIRECTION OF TRAVEL



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND



TURN LANE DETAIL

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer

FHWA 157

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

SIGN ON TEMPORARY SUPPORT
- 

DIRECTION OF TRAFFIC

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

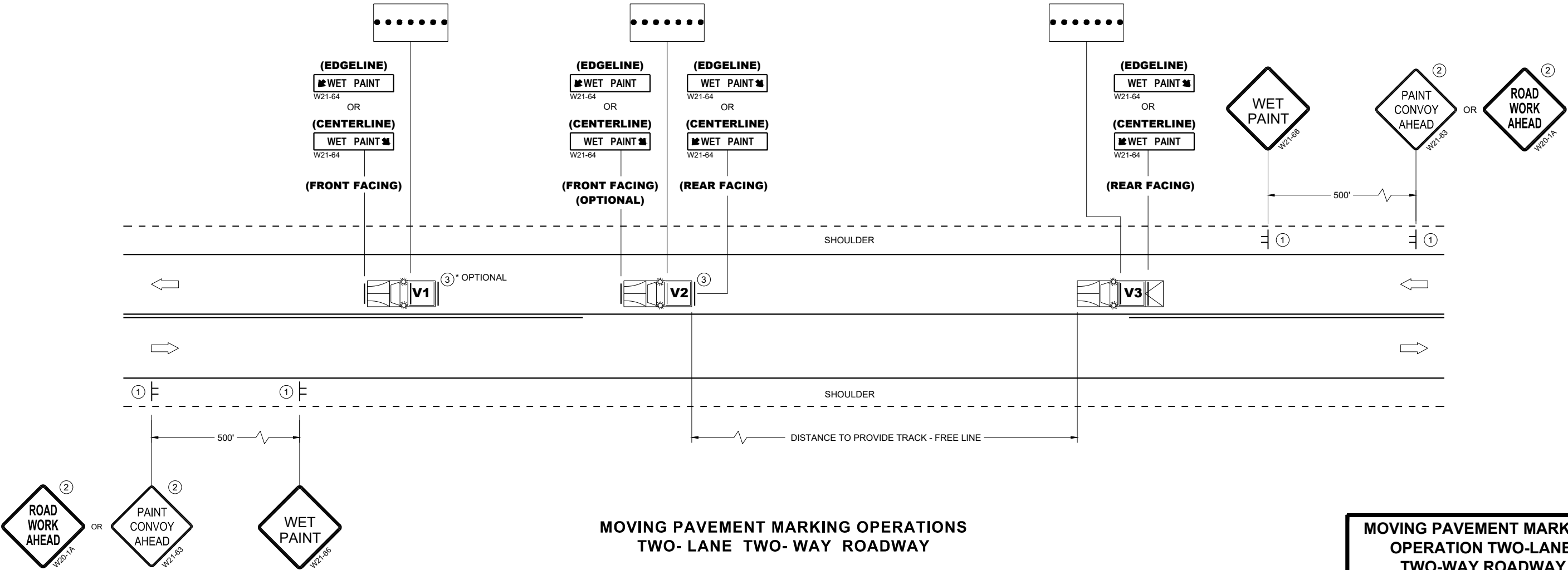
WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

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 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



MOVING PAVEMENT MARKING
OPERATION TWO-LANE
TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Andrew Heidtke
DATE STATE ELECTRICAL ENGINEER

FHWA

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- 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. 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.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

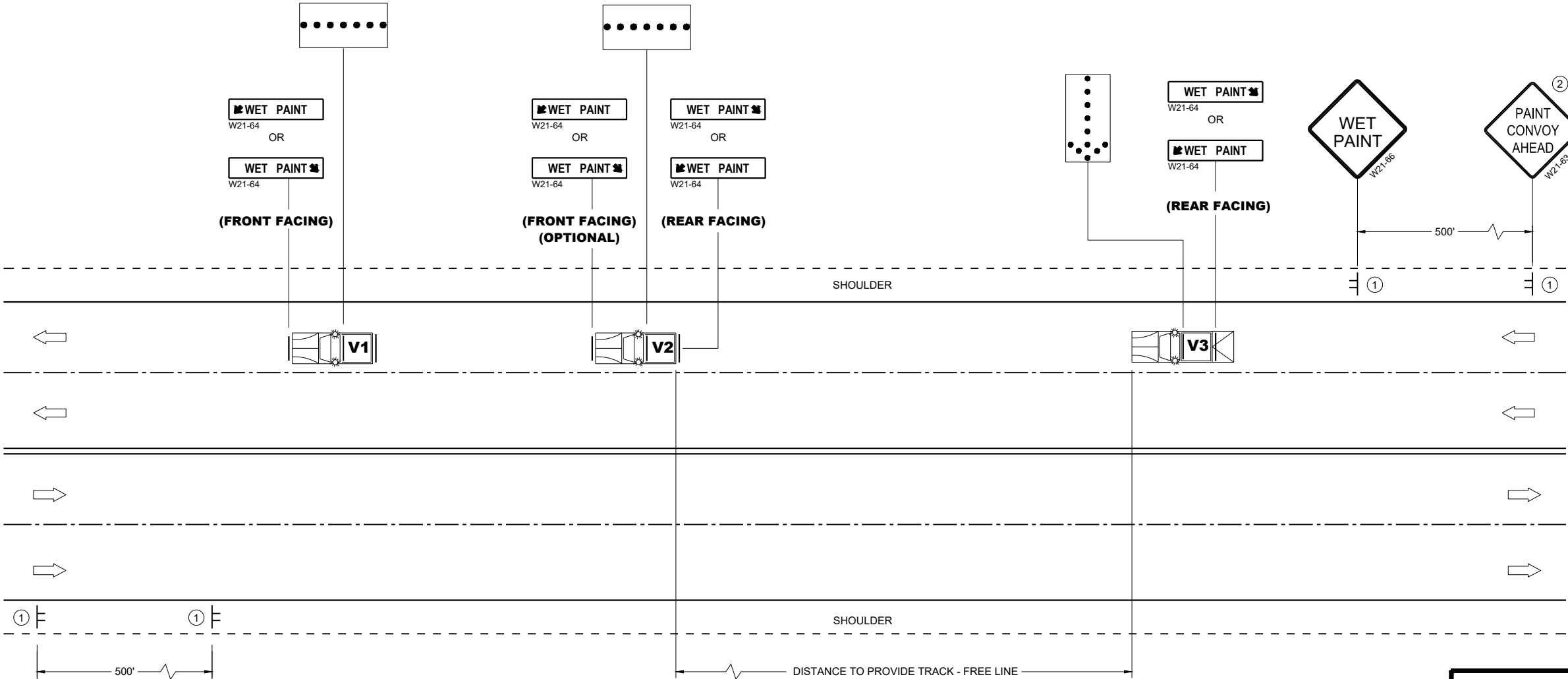
WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

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 VEHICLES 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 HAVE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS.

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



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE UNDIVIDED ROADWAY

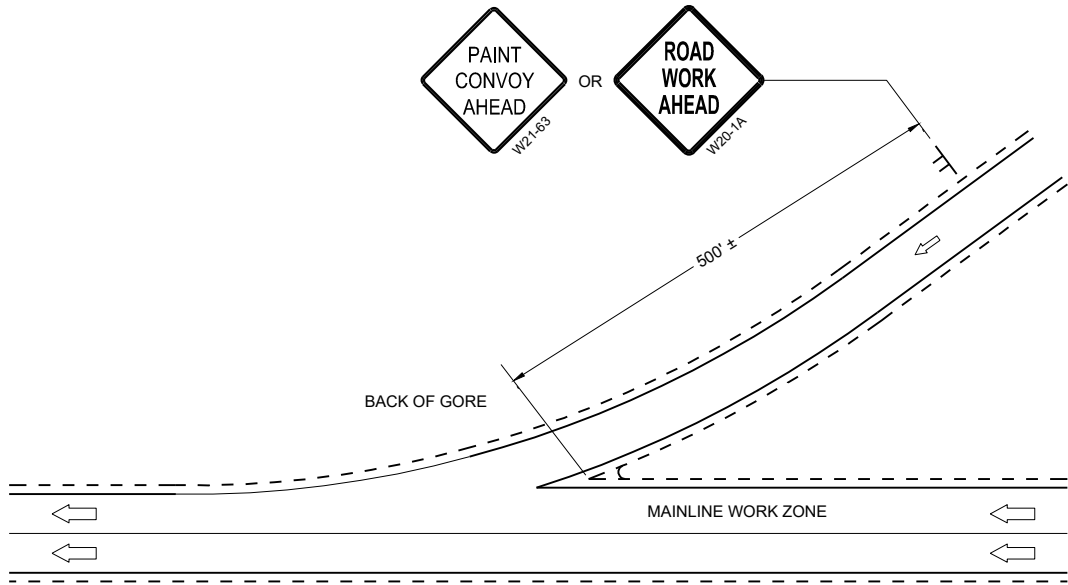
MOVING PAVEMENT MARKING
OPERATION MULTI-LANE
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Andrew Heidtke
DATE STATE ELECTRICAL ENGINEER
FHWA

LEGEND

- V1 MARKING VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- 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. 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.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

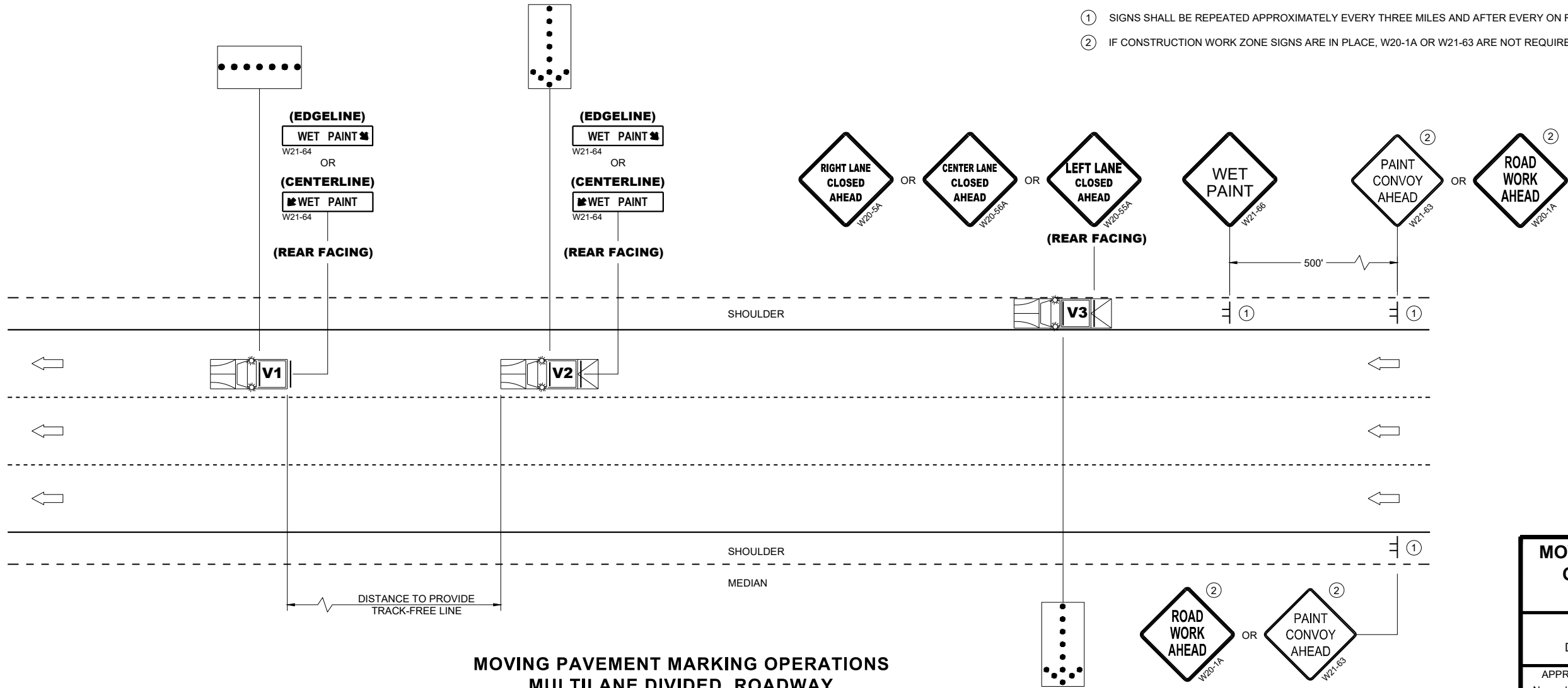
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

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 HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

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



**MOVING PAVEMENT MARKING
OPERATION MULTI-LANE
DIVIDED ROADWAY**

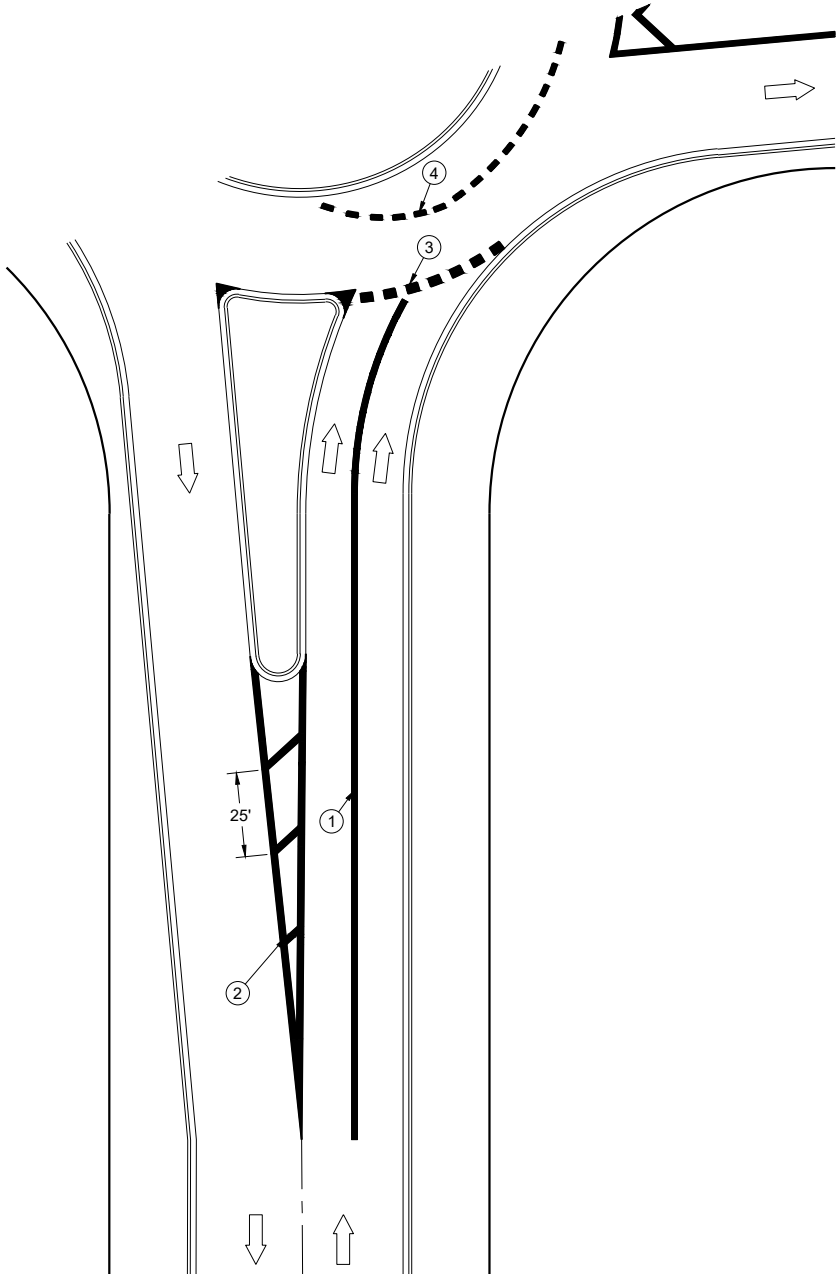
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Andrew Heidtke
DATE STATE ELECTRICAL ENGINEER

FHWA

LEGEND

- ① 10" WHITE
- ② 12" DIAGONALS AT 25' SPACING.
(CAN BE OMITTED IF LESS THAN 6')
- ③ 18" WHITE, 2' LINE, 2" GAP
- ④ 6" LINE (6 FT LINE, 3'GAP)
- DIRECTION OF TRAFFIC
- CURB AND GUTTER
- RIGHT OF WAY

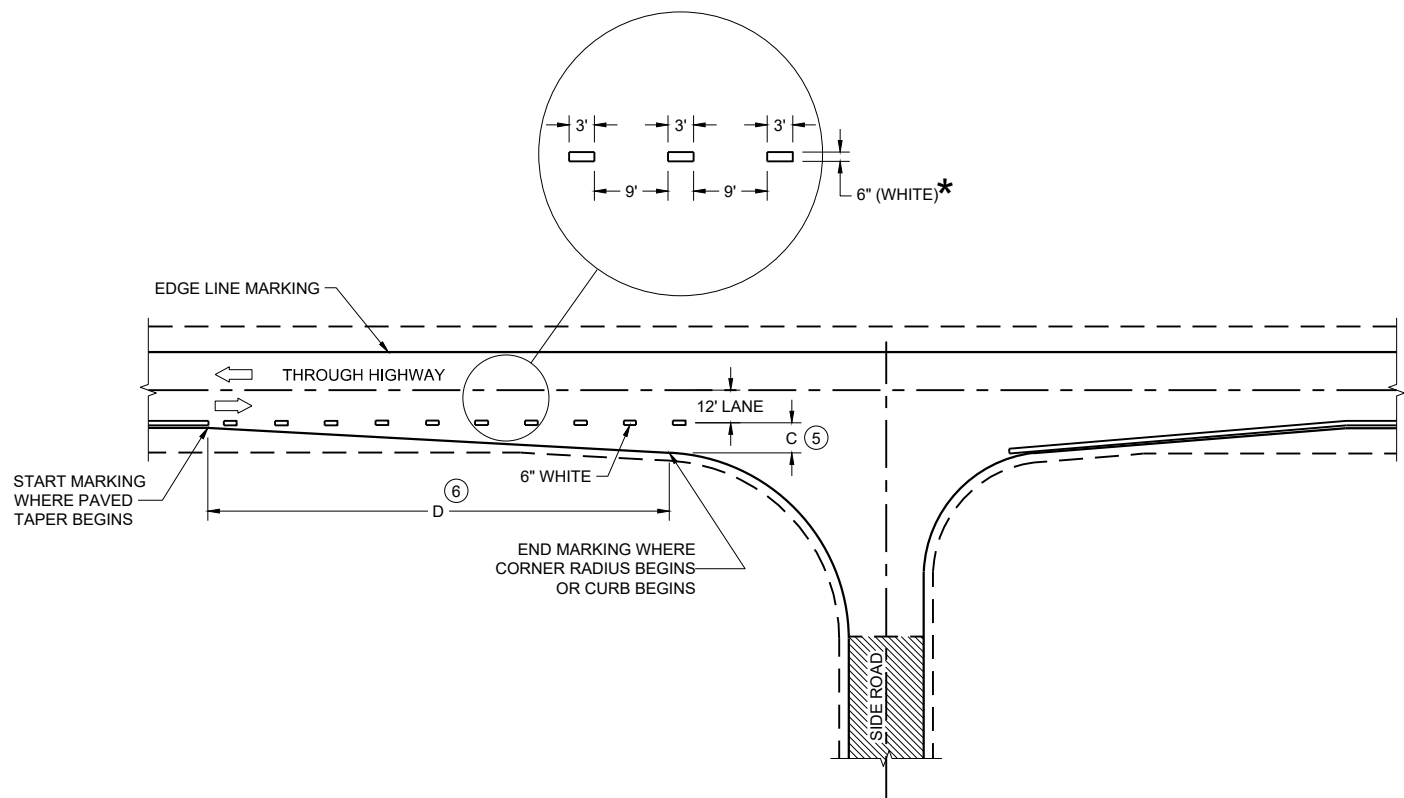


DOTTED EXTENSION FOR
ROUNDAABOUT

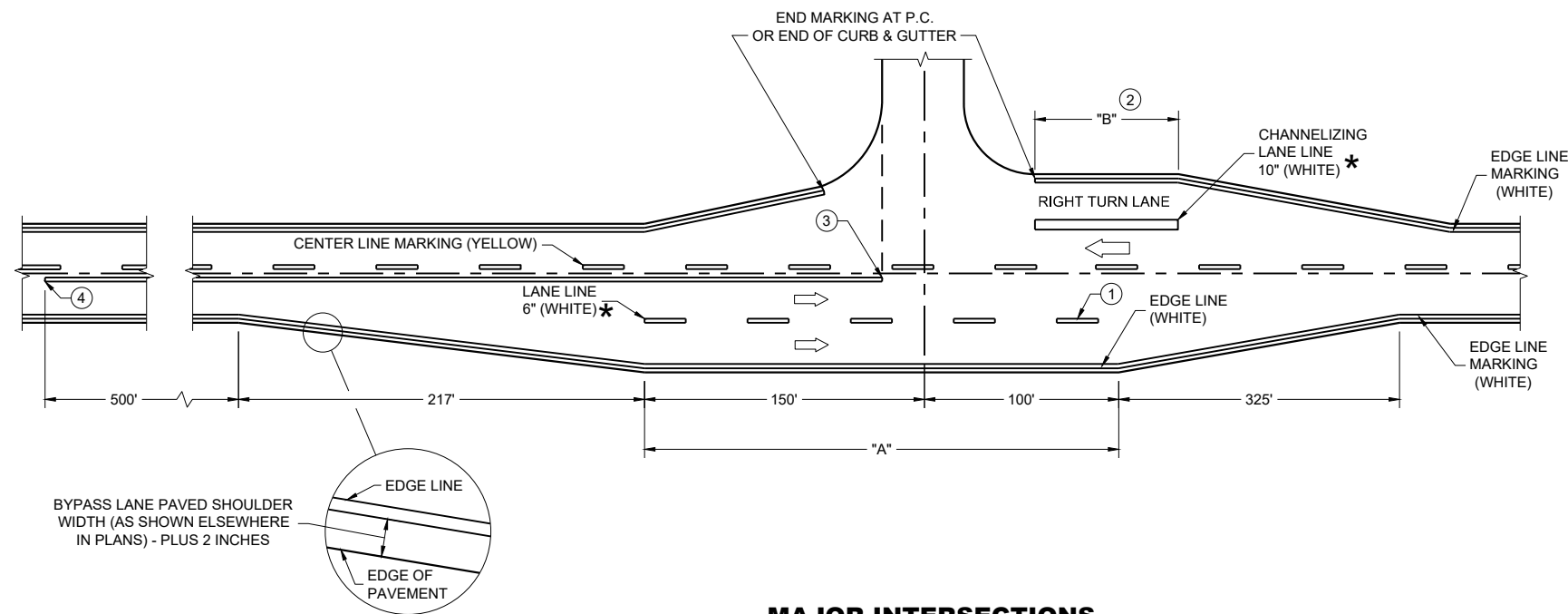
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024 /S/ Matthew Rauch
DATE ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA



MINOR INTERSECTION



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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

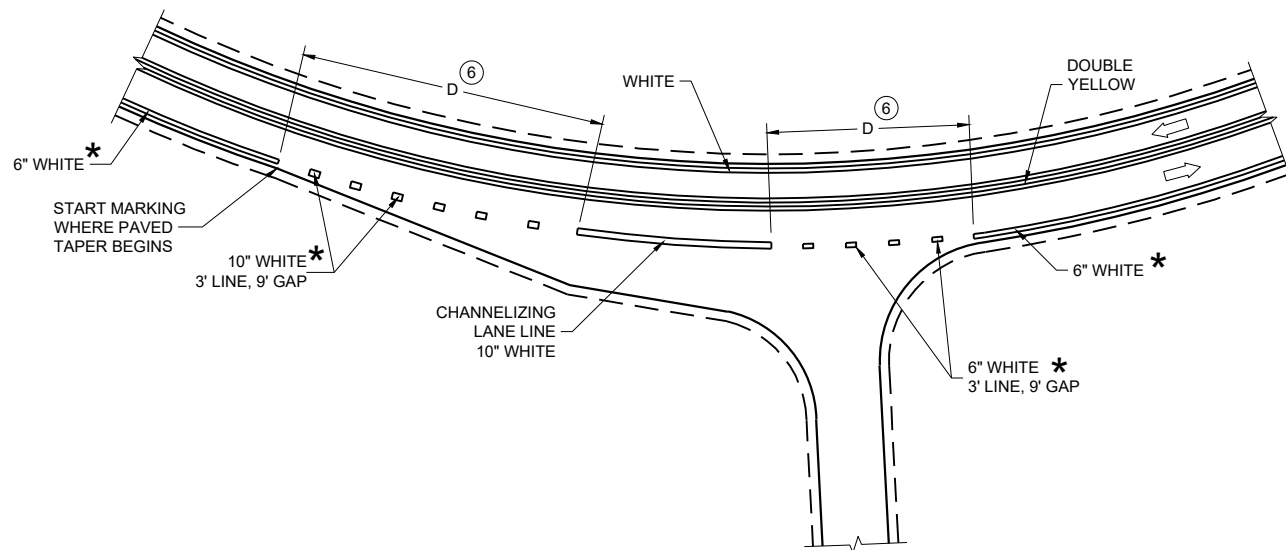
GENERAL NOTES

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.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

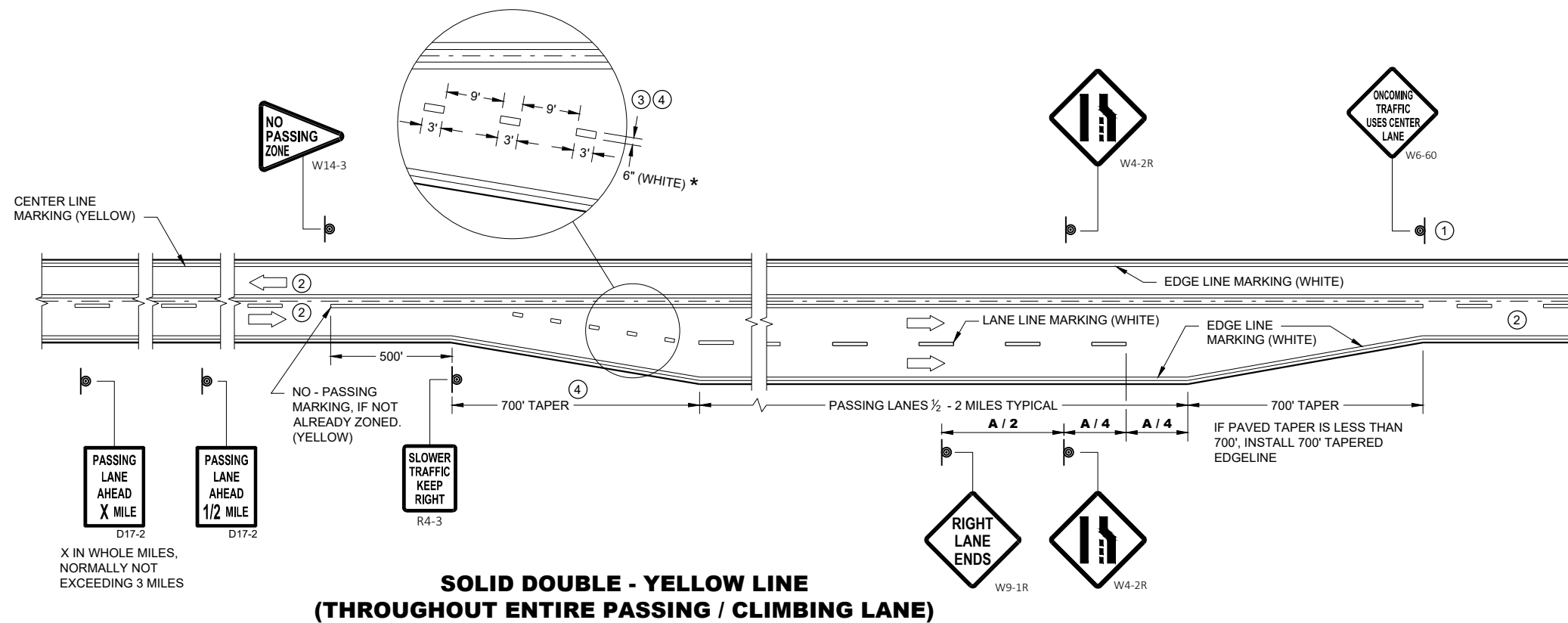
➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

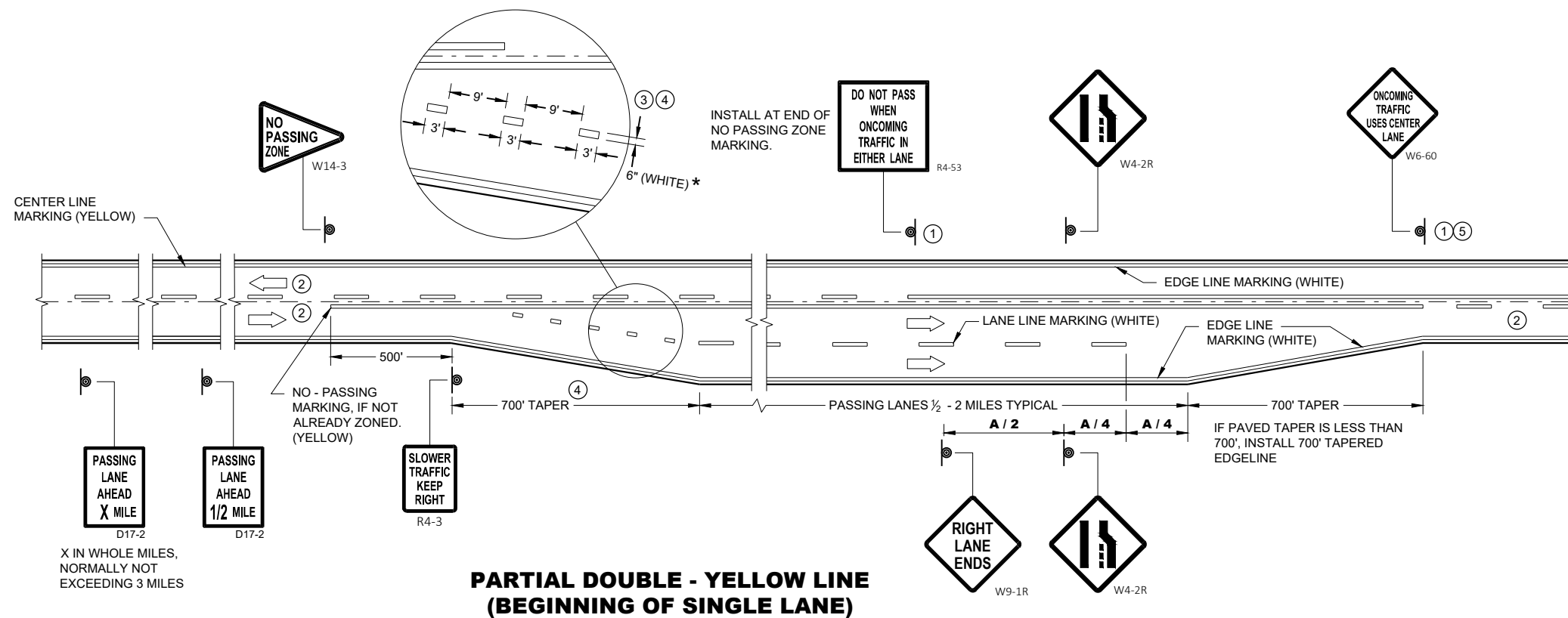


GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

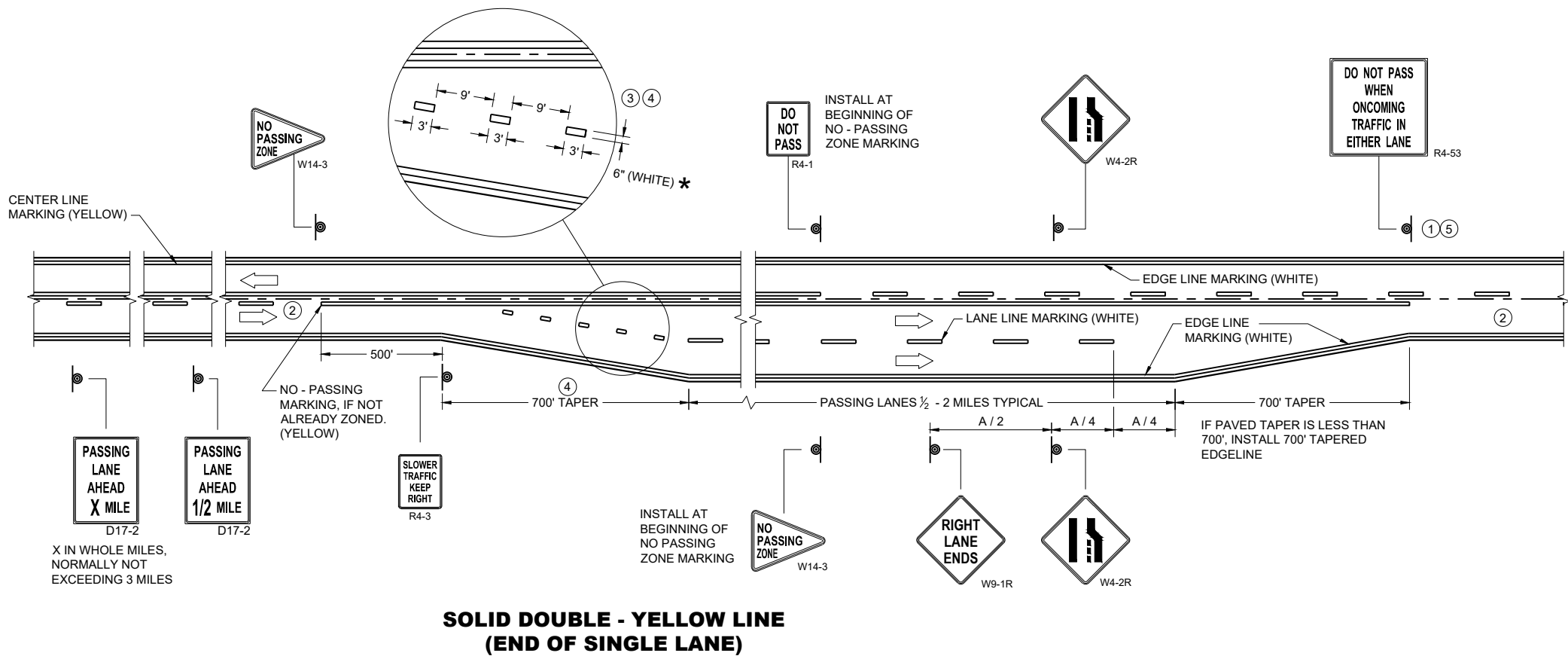
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990



* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 163



GENERAL NOTES

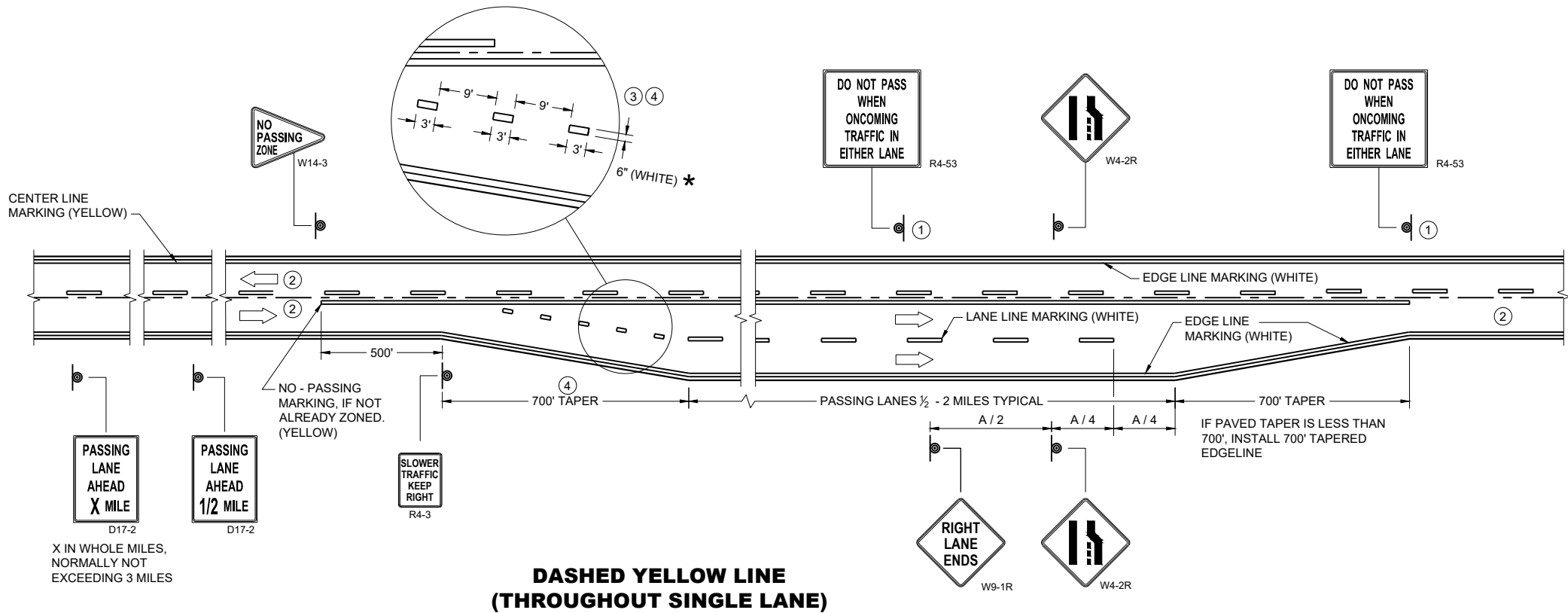
- 1 SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- 2 THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- 3 THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4 WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- 5 REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PAVEMENT MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE
Statewide Pavement Marking Engineer

LEGEND

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

GENERAL NOTES

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

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

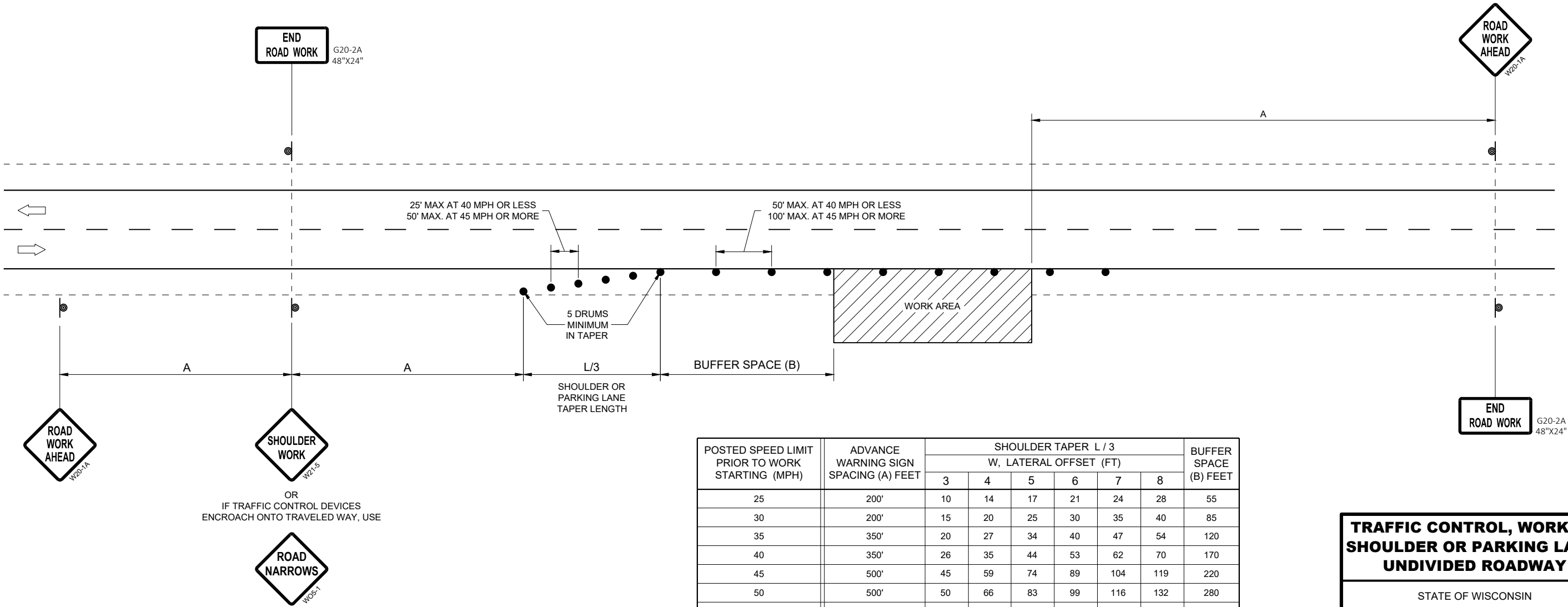
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE T SAFETY ENGINEER 165
FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

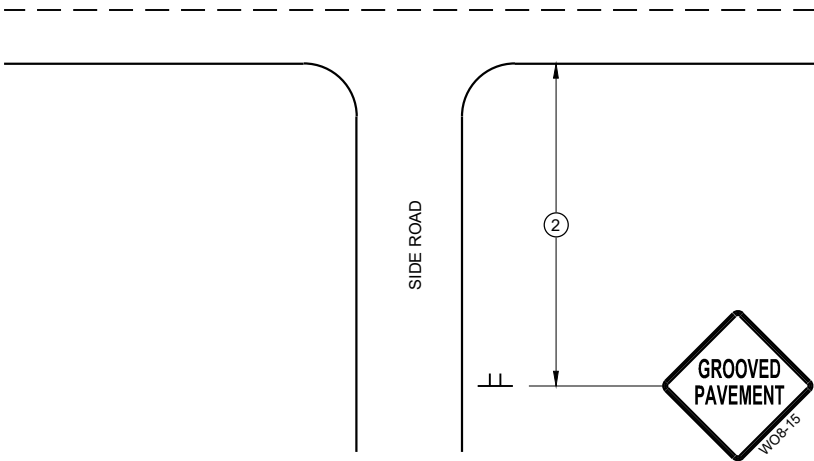
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

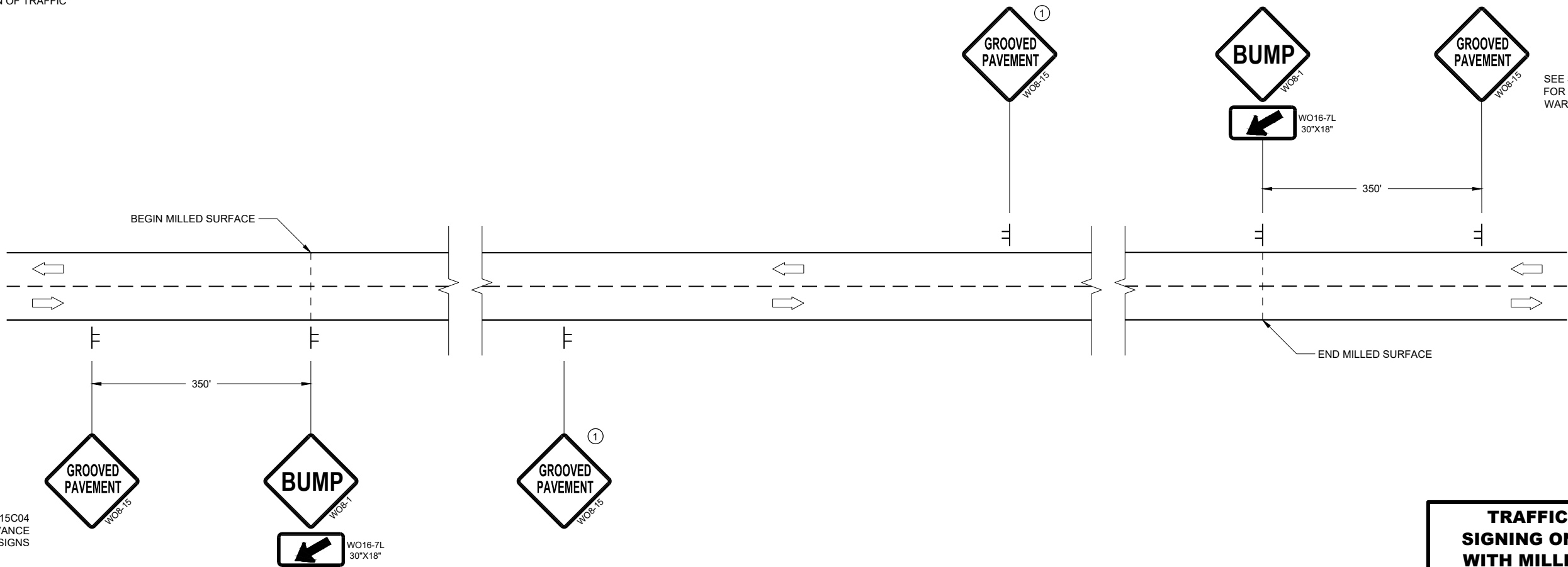
- ①
- PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ②
- PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

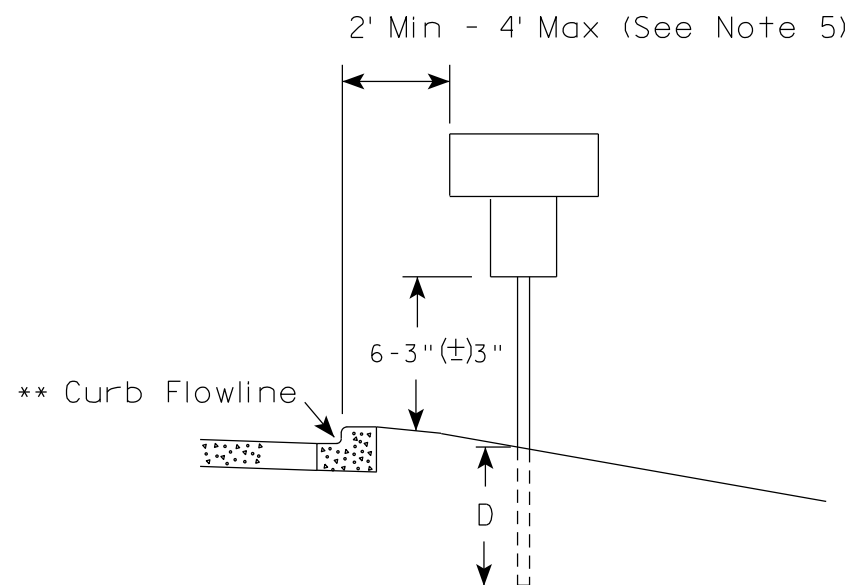
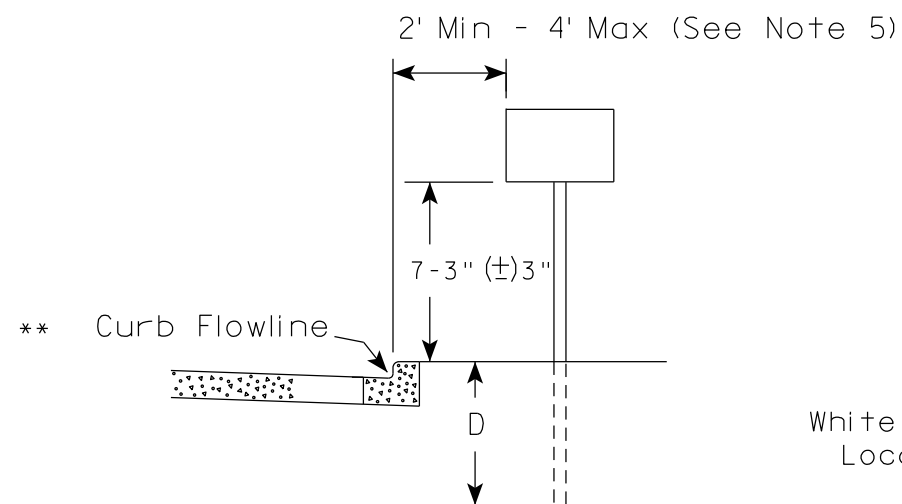
TRAFFIC CONTROL,
SIGNING ON ROADWAYS
WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 166

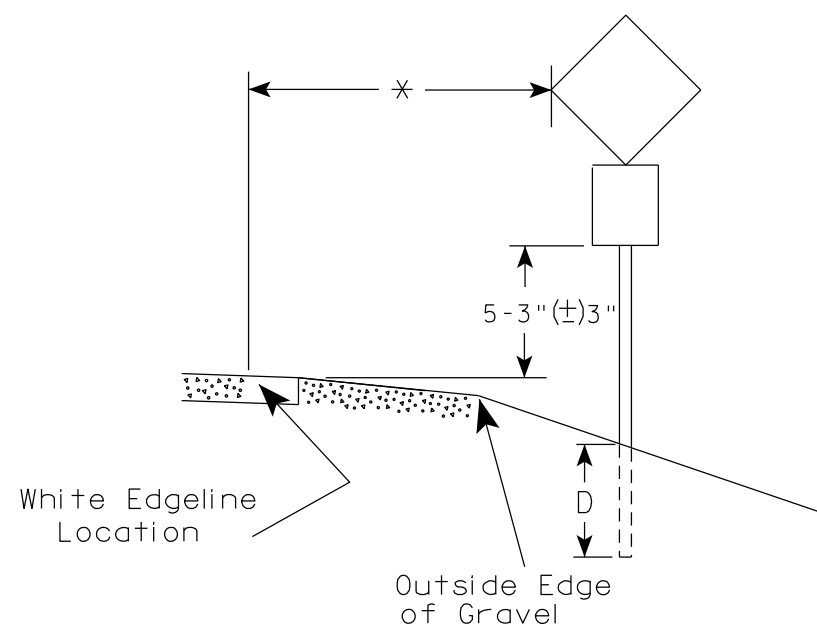
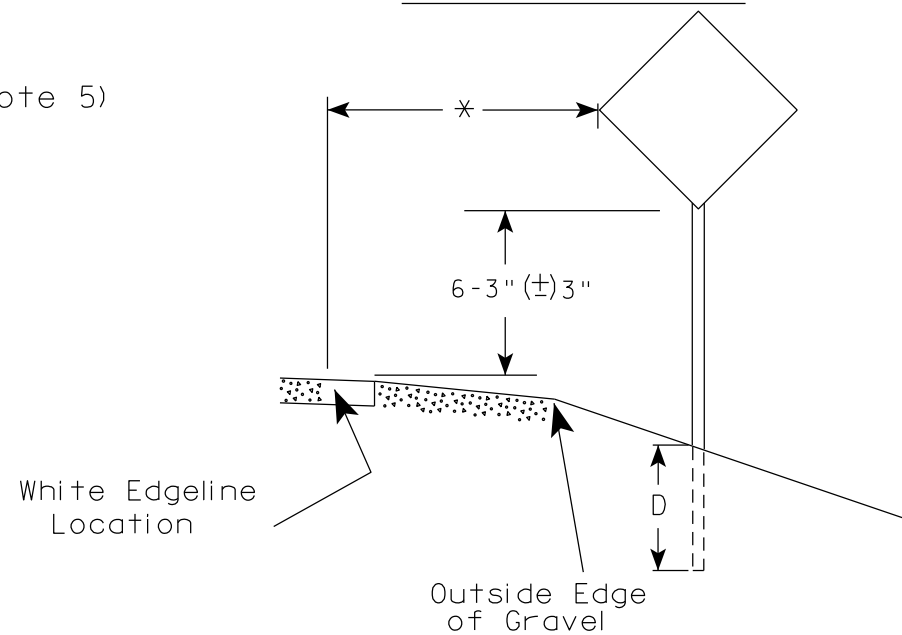
FHWA

URBAN AREA



* * 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.

RURAL AREA (See Note 2)



* 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.

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

PROJECT NO:

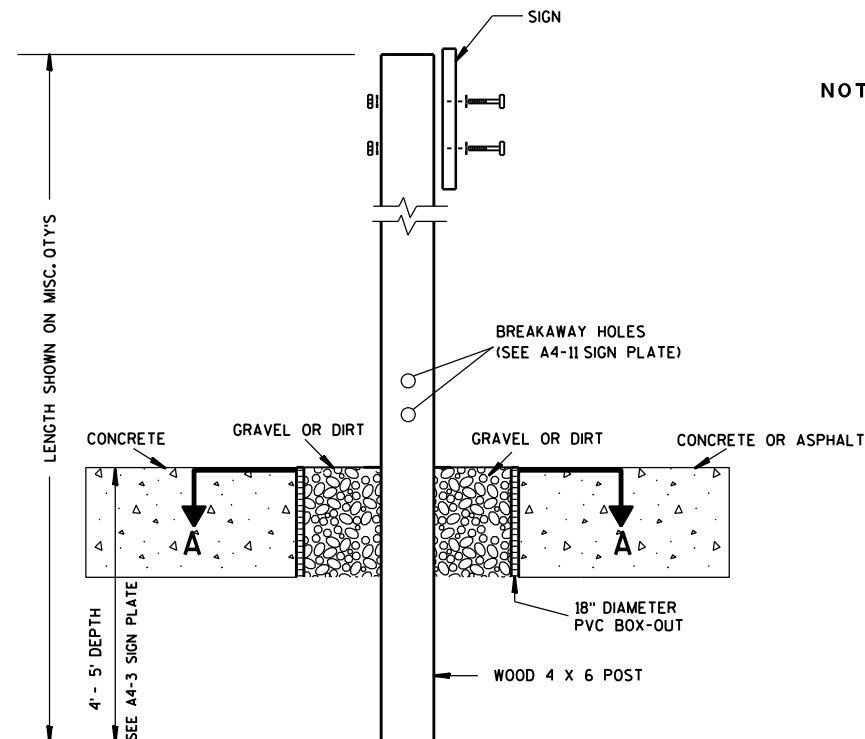
HWY:

COUNTY:

SHEET NO:

167

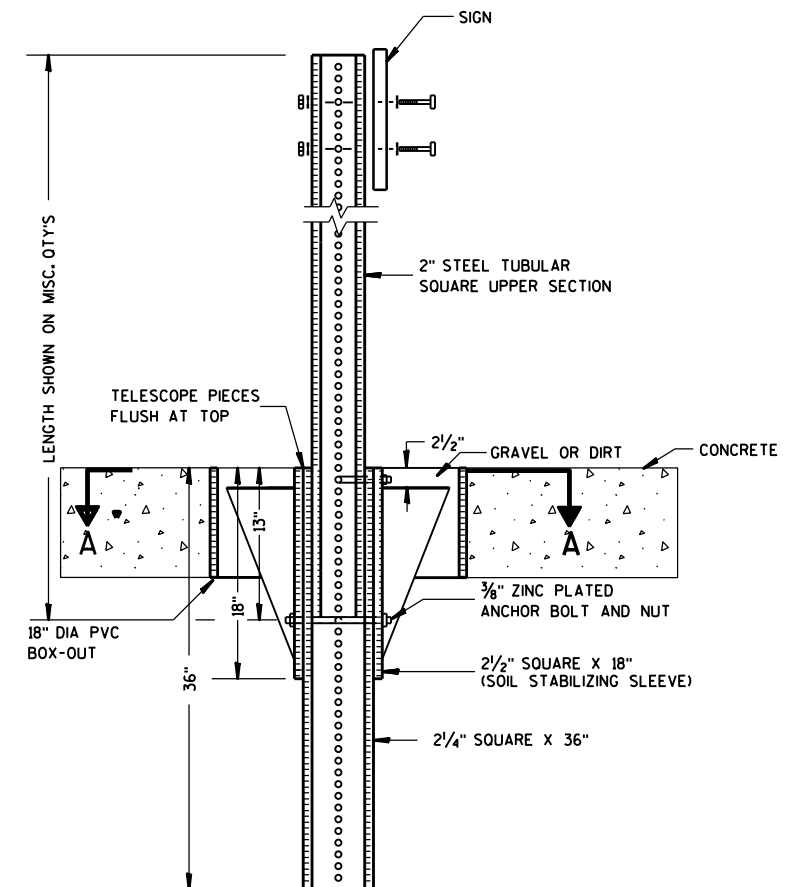
E



ELEVATION VIEW

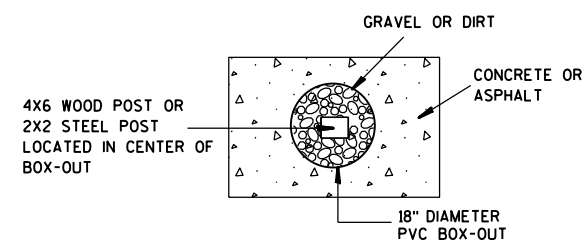
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 168 A4-3B.1

PROJECT NO:

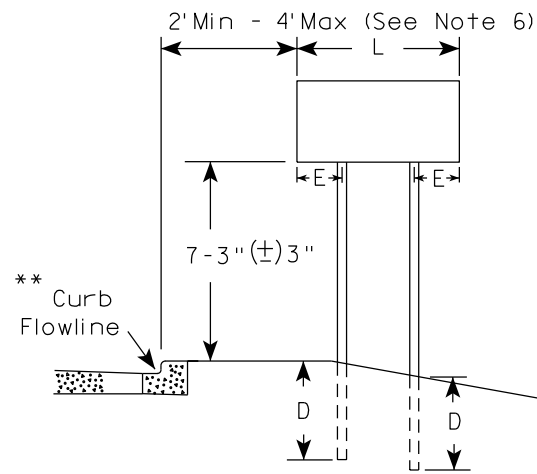
HWY:

COUNTY:

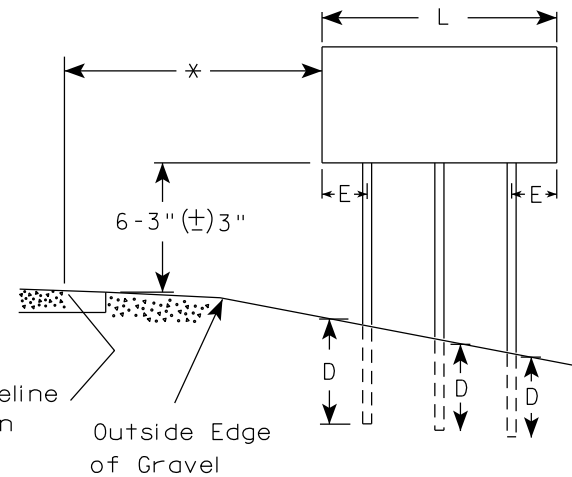
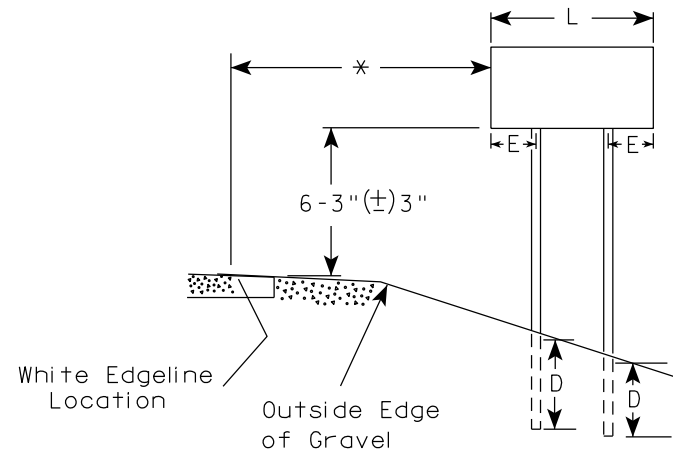
SHEET NO:

E

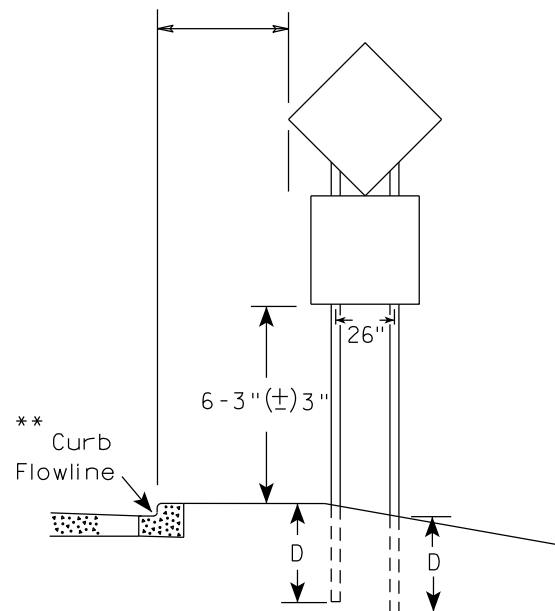
URBAN AREA



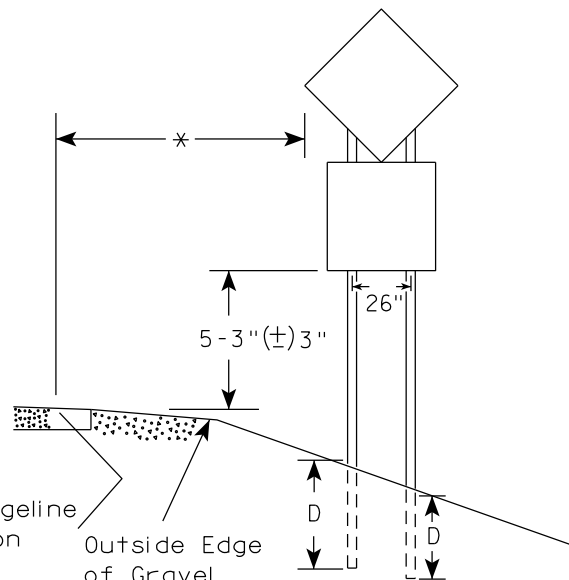
RURAL AREA (See Note 3)



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 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	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 12/6/23 PLATE NO. A4-4.16

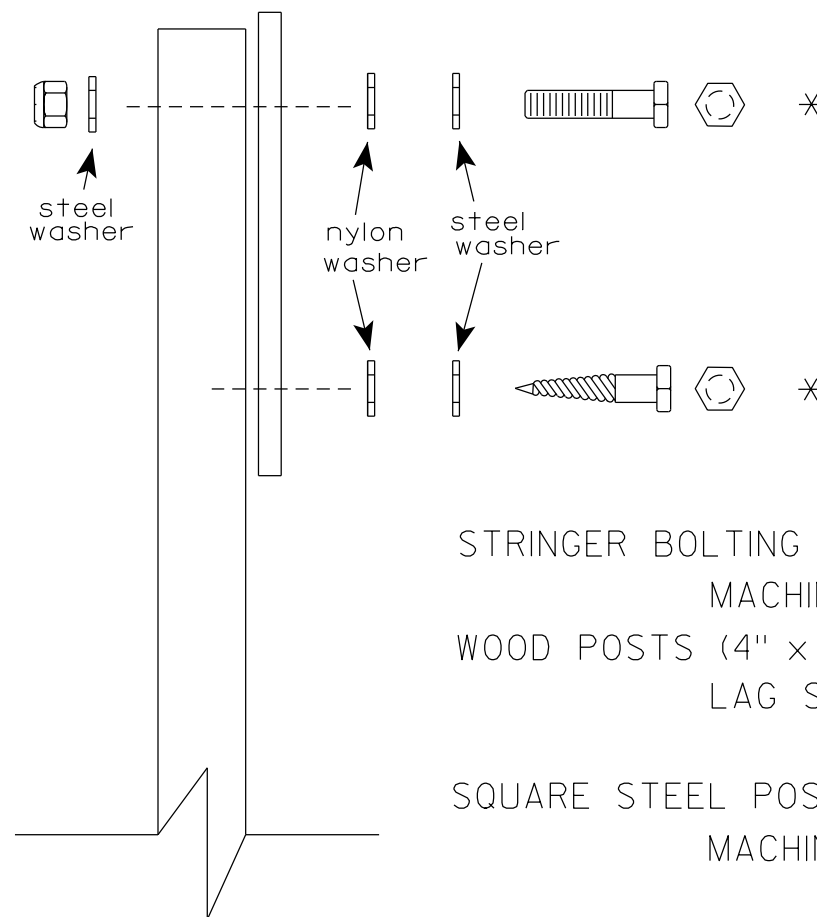
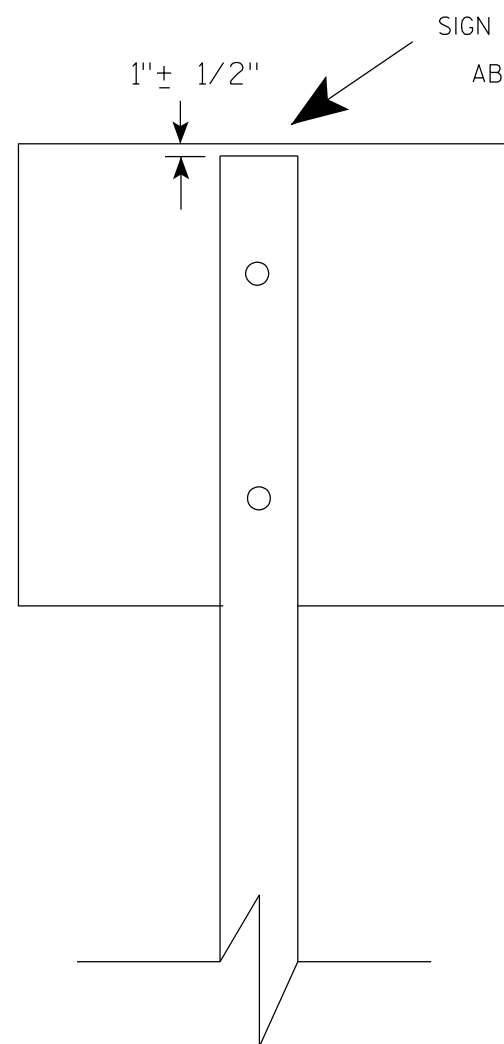
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 169

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.

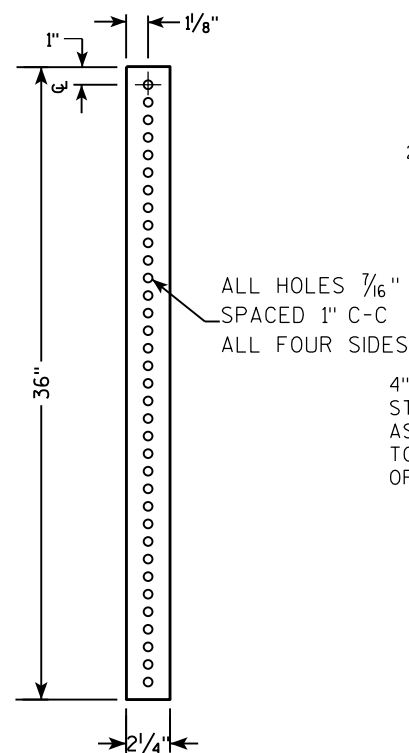
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

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



2 1/2" TELES-
PAR TUBE

4" x 10" x 10 GA.
STEEL PLATE (CUT
AS SHOWN) WELDED
TO ALL FOUR CORNERS
OF TELES-
PAR TUBE

4"

2 1/2"

10"

3 1/2"

18"

[illegible]

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- Dimensions:**
 - Overall height: 36"
 - Section A-A height: 18"
 - Section B-B height: 12"
- Components and Labels:**
 - SIGN
 - SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 - 2" STEEL TUBULAR SQUARE UPPER SECTION
 - ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C
 - ALL FOUR SIDES
 - $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
 - TELESCOPE PIECES FLUSH AT TOP
 - $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
 - 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 - 2 1/4" SQUARE X 36"
- Notes:**
 - LENGTH SHOWN ON MISC. QTYS

A schematic diagram of a square microfluidic chip. It features a central square channel with rounded corners. This central channel is surrounded by a larger square frame, also with rounded corners. Four ports are located at the midpoints of the outer frame's sides, serving as inlets or outlets. A small rectangular component is attached to the top center of the chip, with a line extending from it into the central channel.

DIRECTION
OF TRAFFIC

SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLAT 171 14-9.9

SHEET NO:	E
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PROJECT NO:

HWY:

COUNTY:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN

PLOT DATE : 05-FEB-2015 17:09

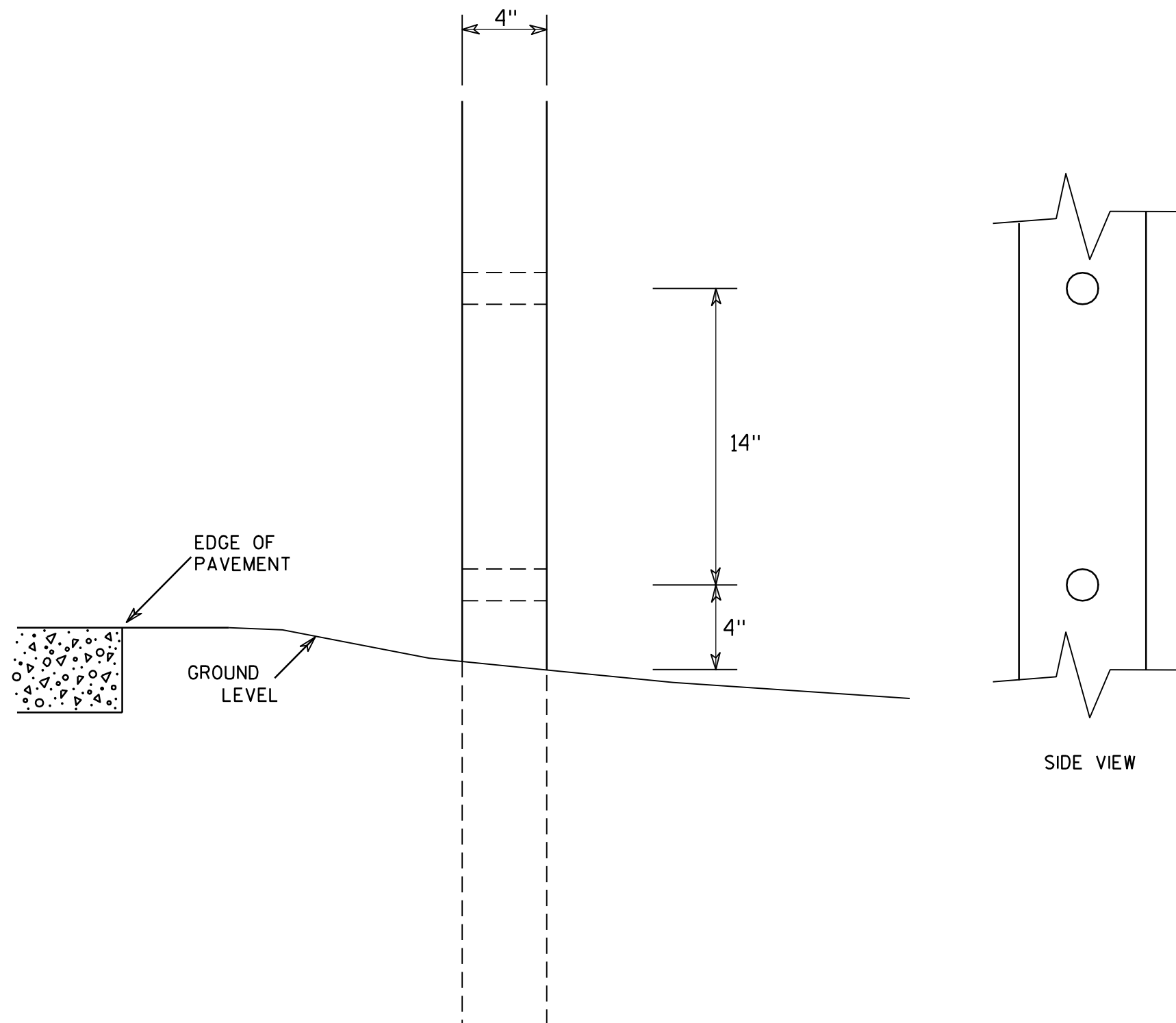
PLOT BY : mscs_ja

PLOT NAME :

PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42

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:

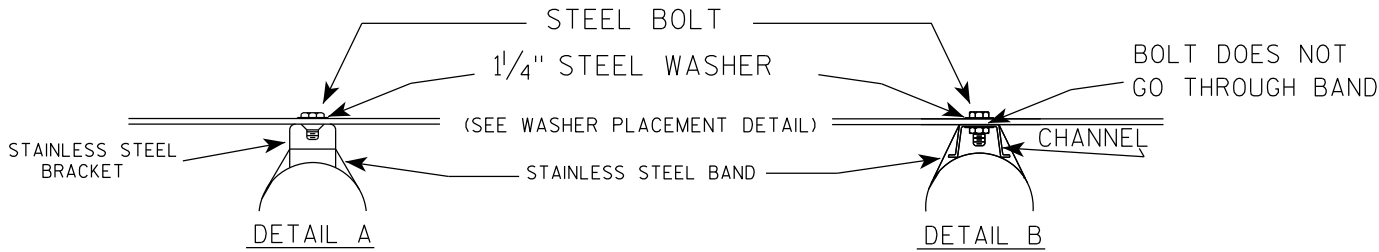
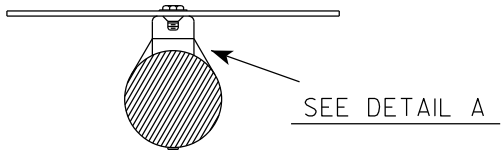
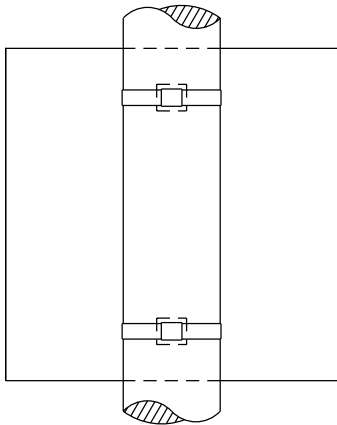
COUNTY:

SHEET NO: 172

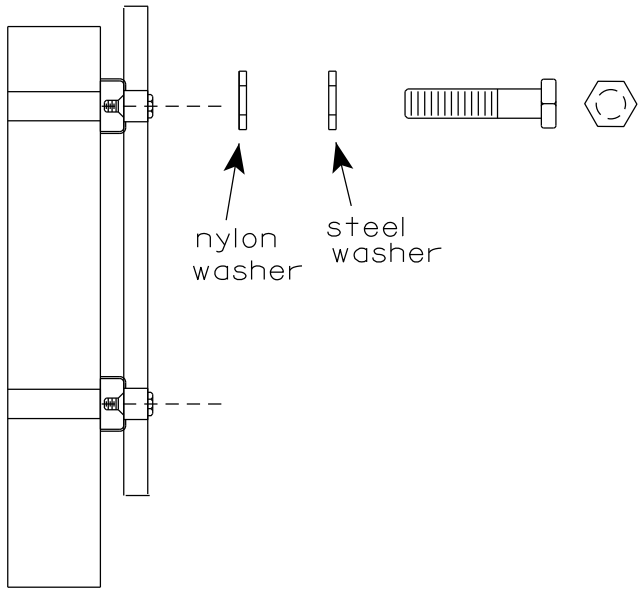
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

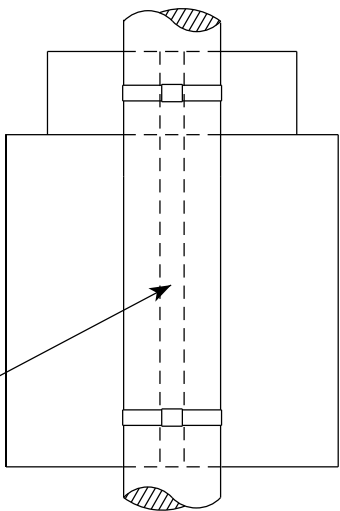


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

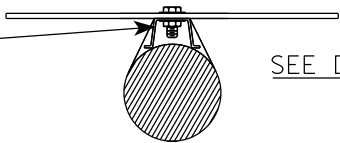
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



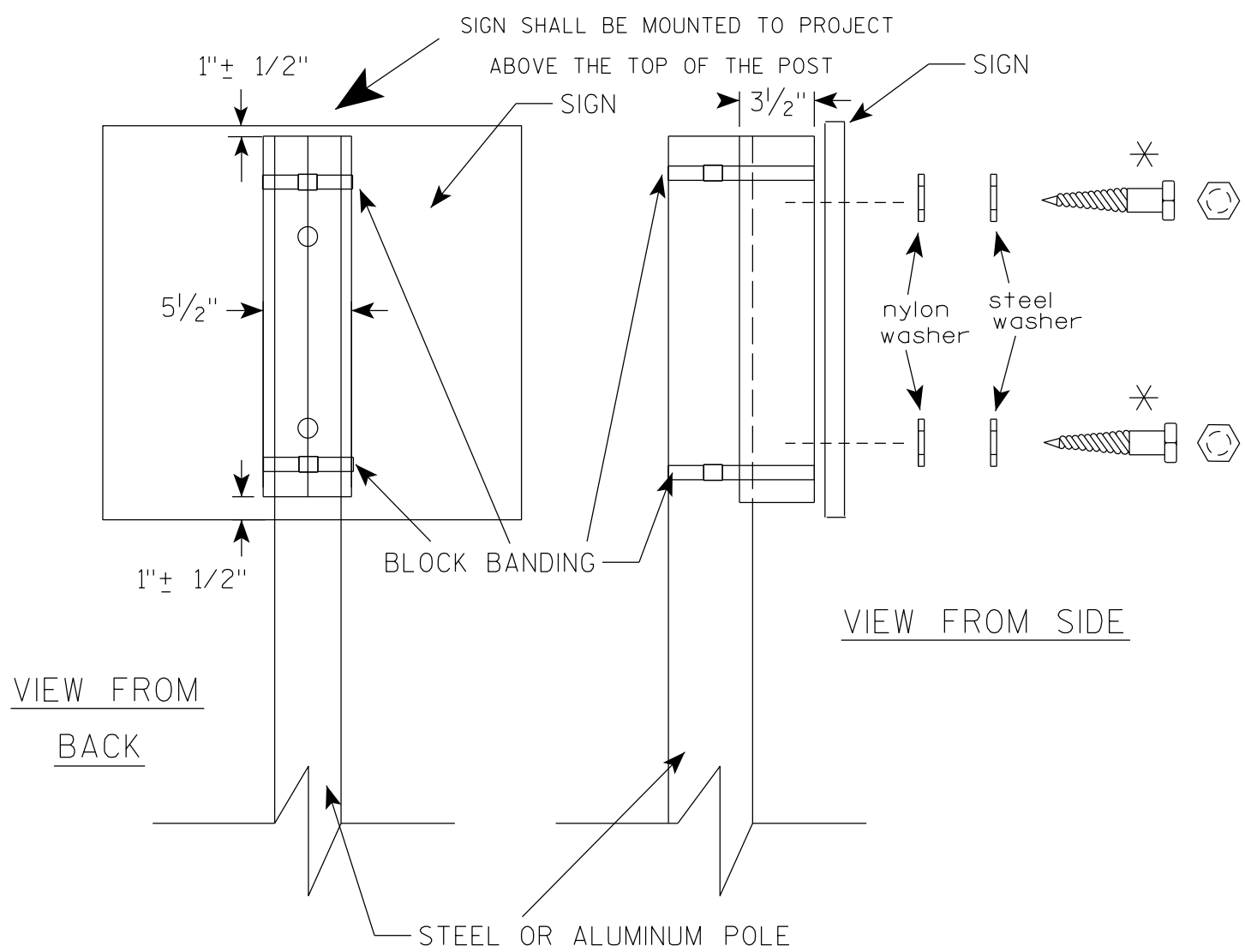
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

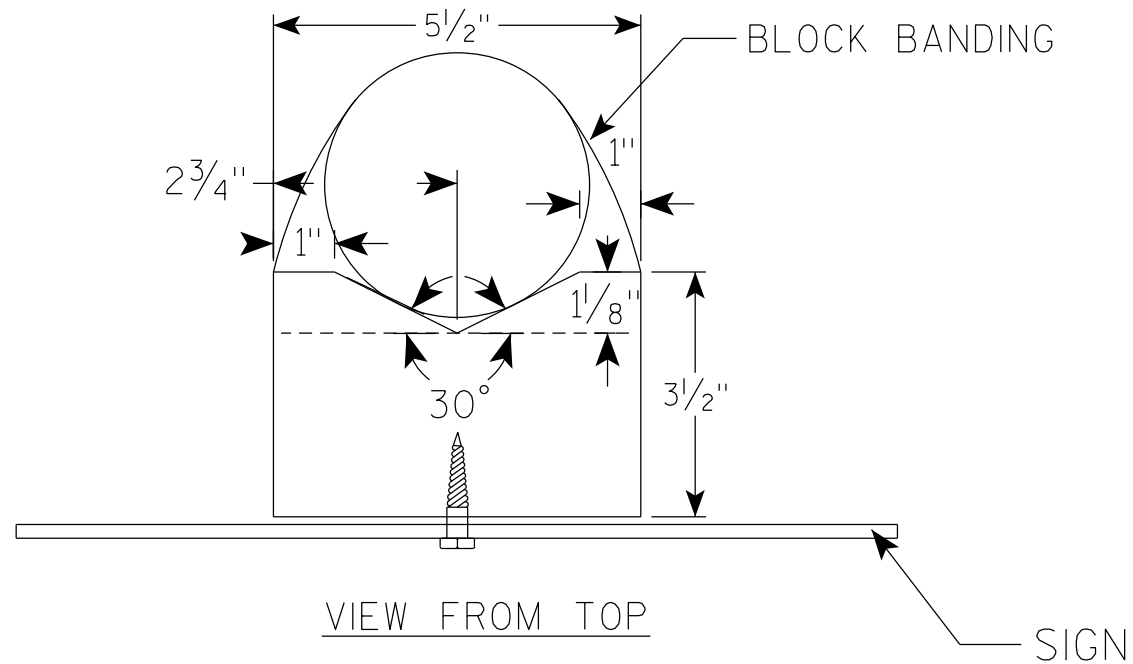
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

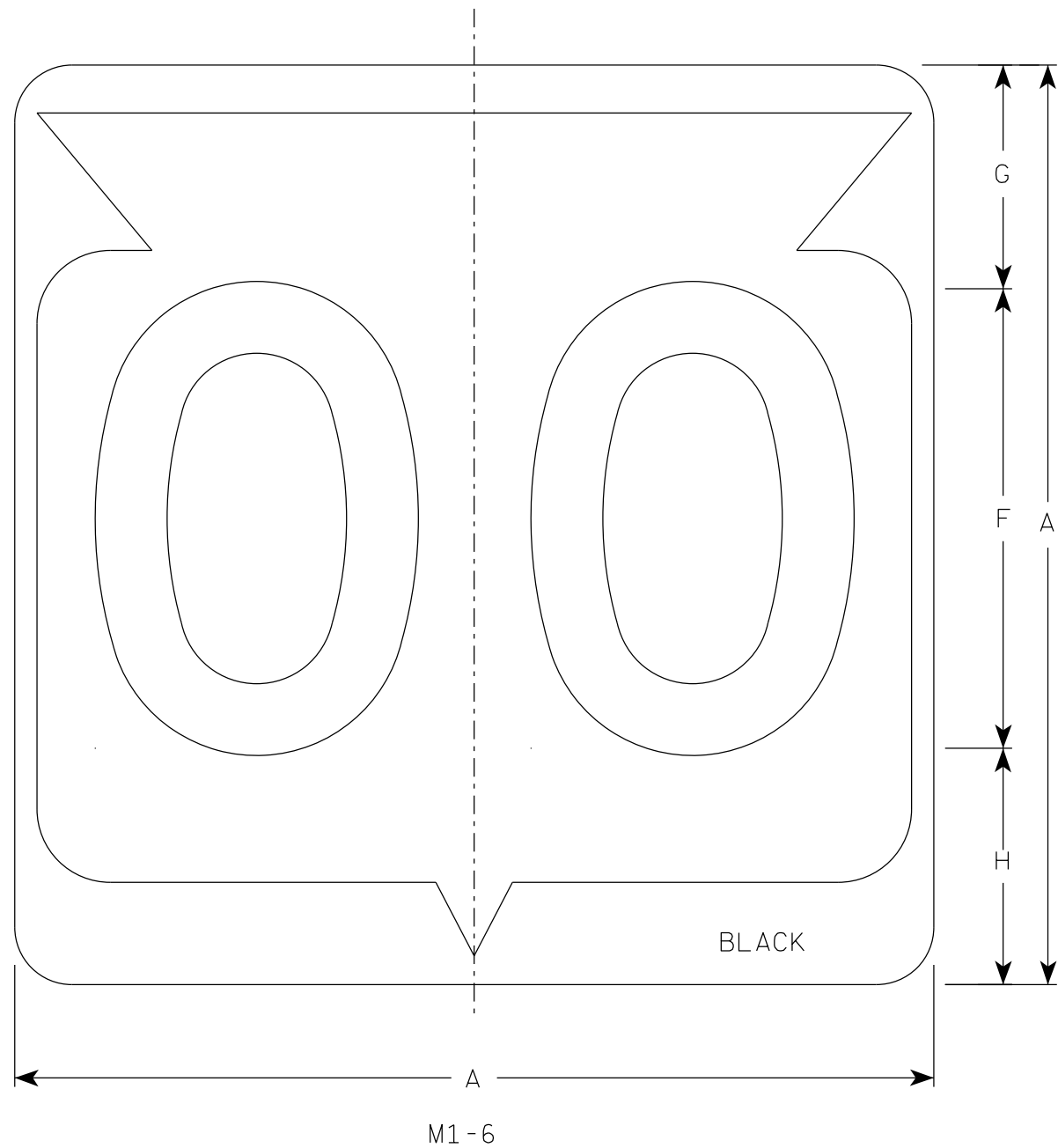
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 174

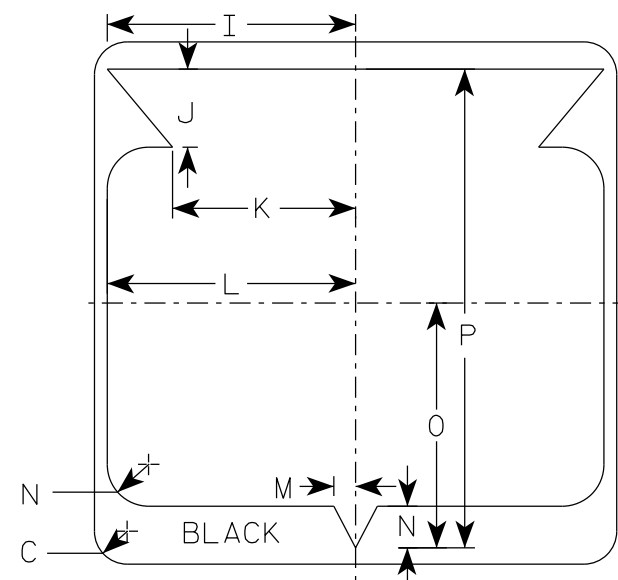
E

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C

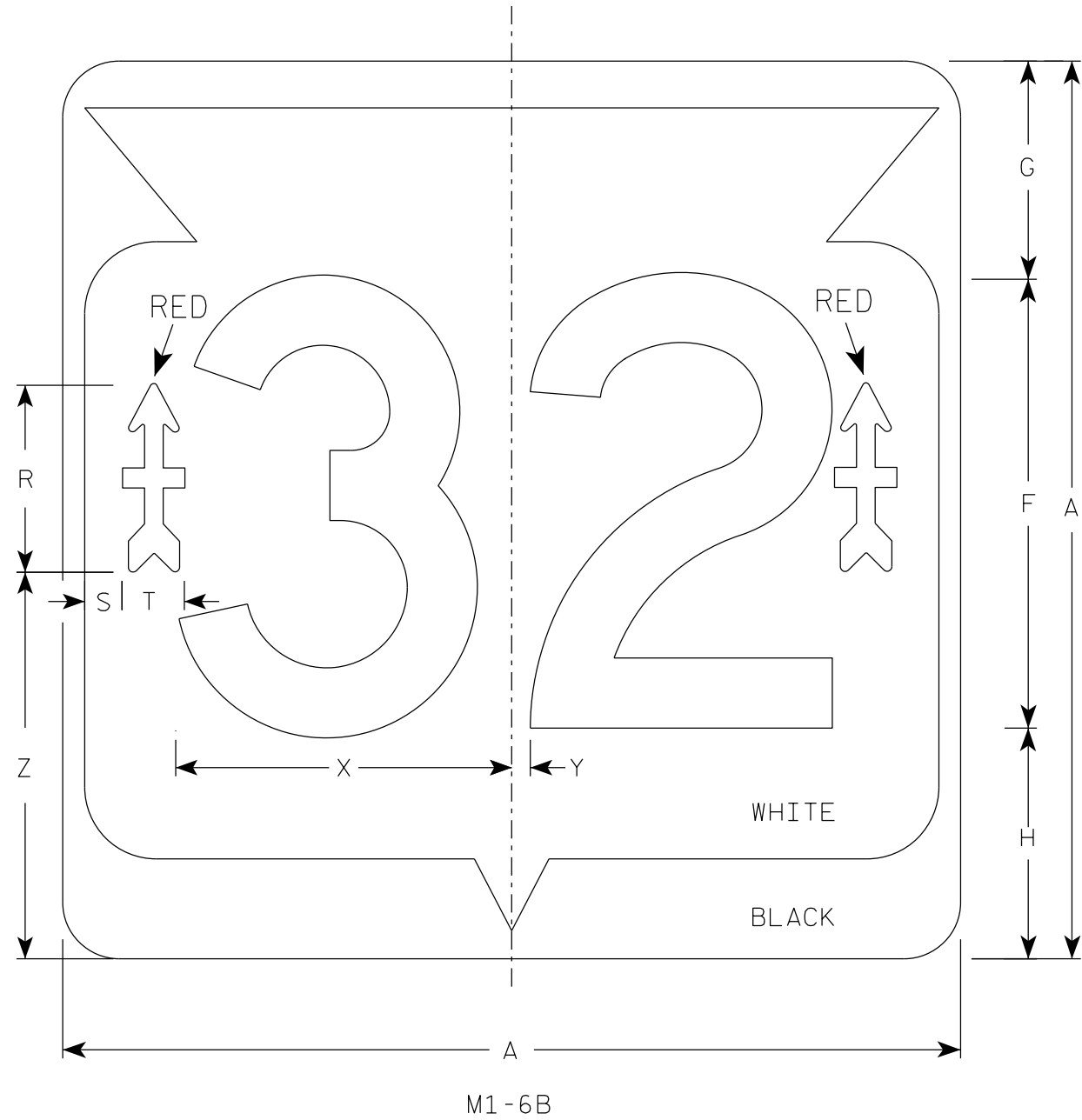


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 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
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
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

STATE ROUTE MARKER M1-6 FOR ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 11/8/2022	PLATE NO. M1-6.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 175	E
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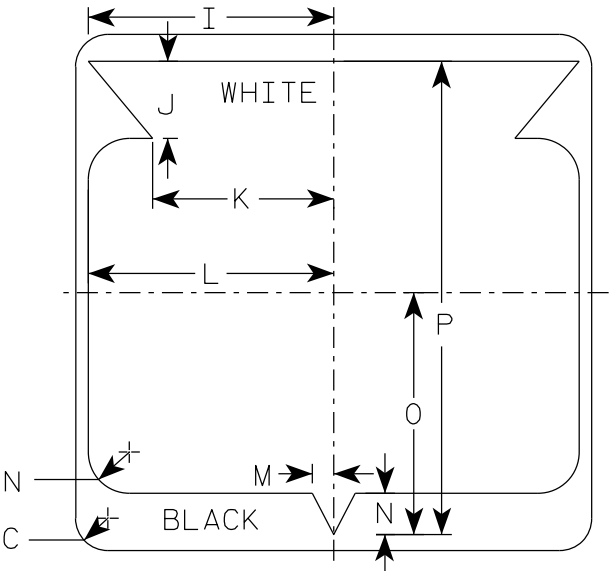
7



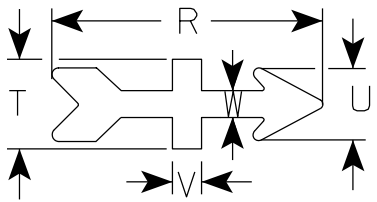
M1-6B

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White & Black
Message - Black
Arrow - Red
- 3. Message Series - D



32nd DIVISION ARROW
DETAIL



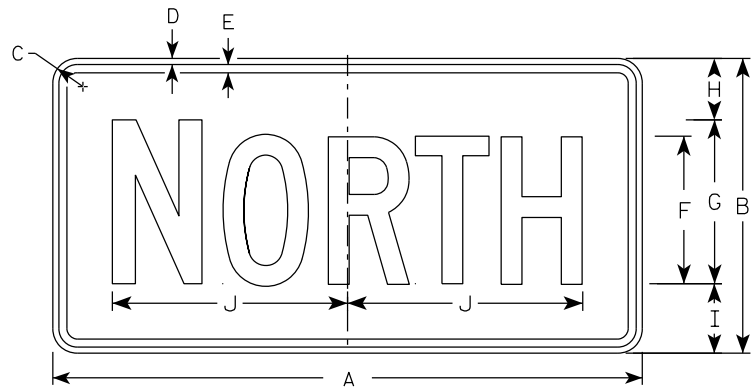
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8		5 1/8	3/4	1 7/8	1 1/2	5/8	5/8	9	1/2	10 1/2	4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8		5 1/8	3/4	1 7/8	1 1/2	5/8	5/8	9	1/2	10 1/2	4.0
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		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0
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		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0
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		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0

STATE ROUTE MARKER"32"
M1-6B FOR ASSEMBLIES

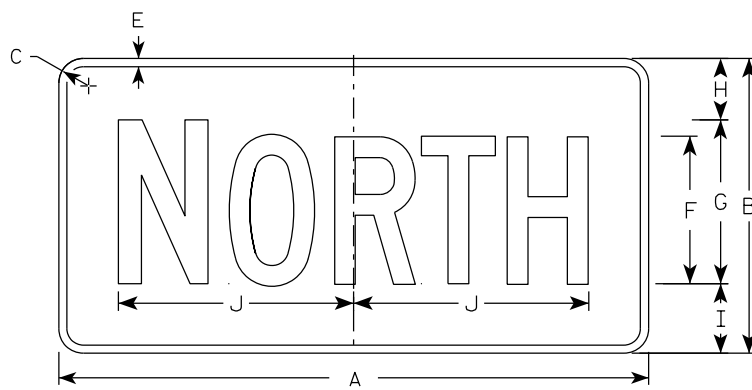
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

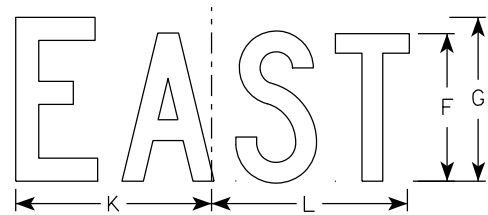
DATE 11/8/2022 PLATE NO. M1-6B.3



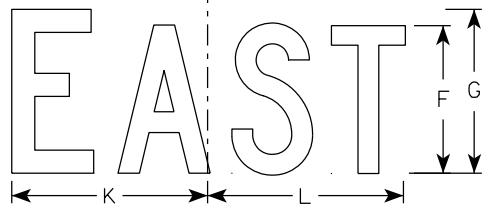
M3-1
MM3-1
MP3-1



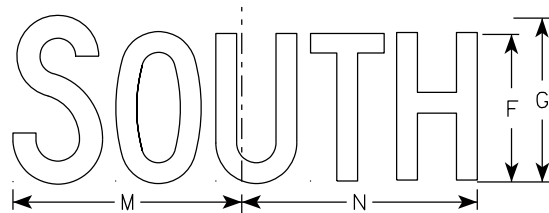
MB3-1
MK3-1
MN3-1



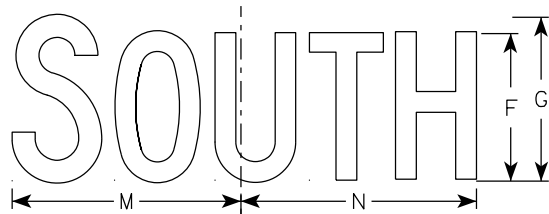
M3-2
MM3-2
MP3-2



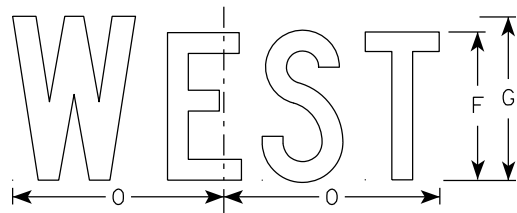
MB3-2
MK3-2
MN3-2



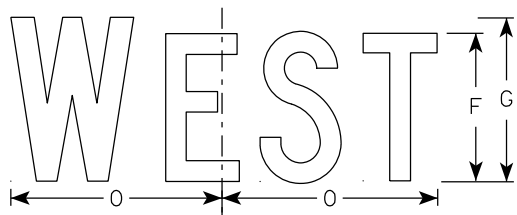
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

- All Signs Type II - Type H Reflective
- 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
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
2M	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

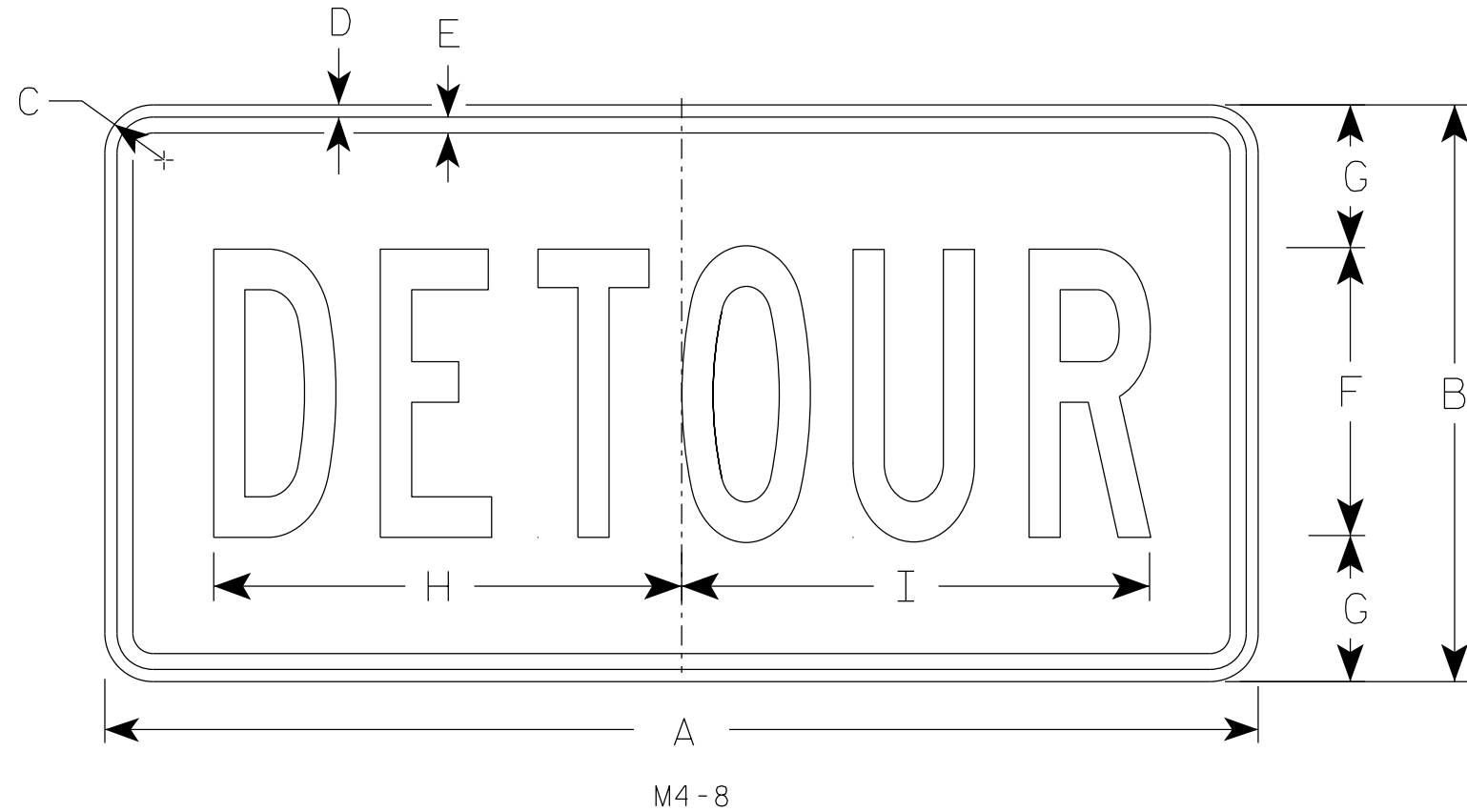
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 177	E
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7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

STANDARD SIGN

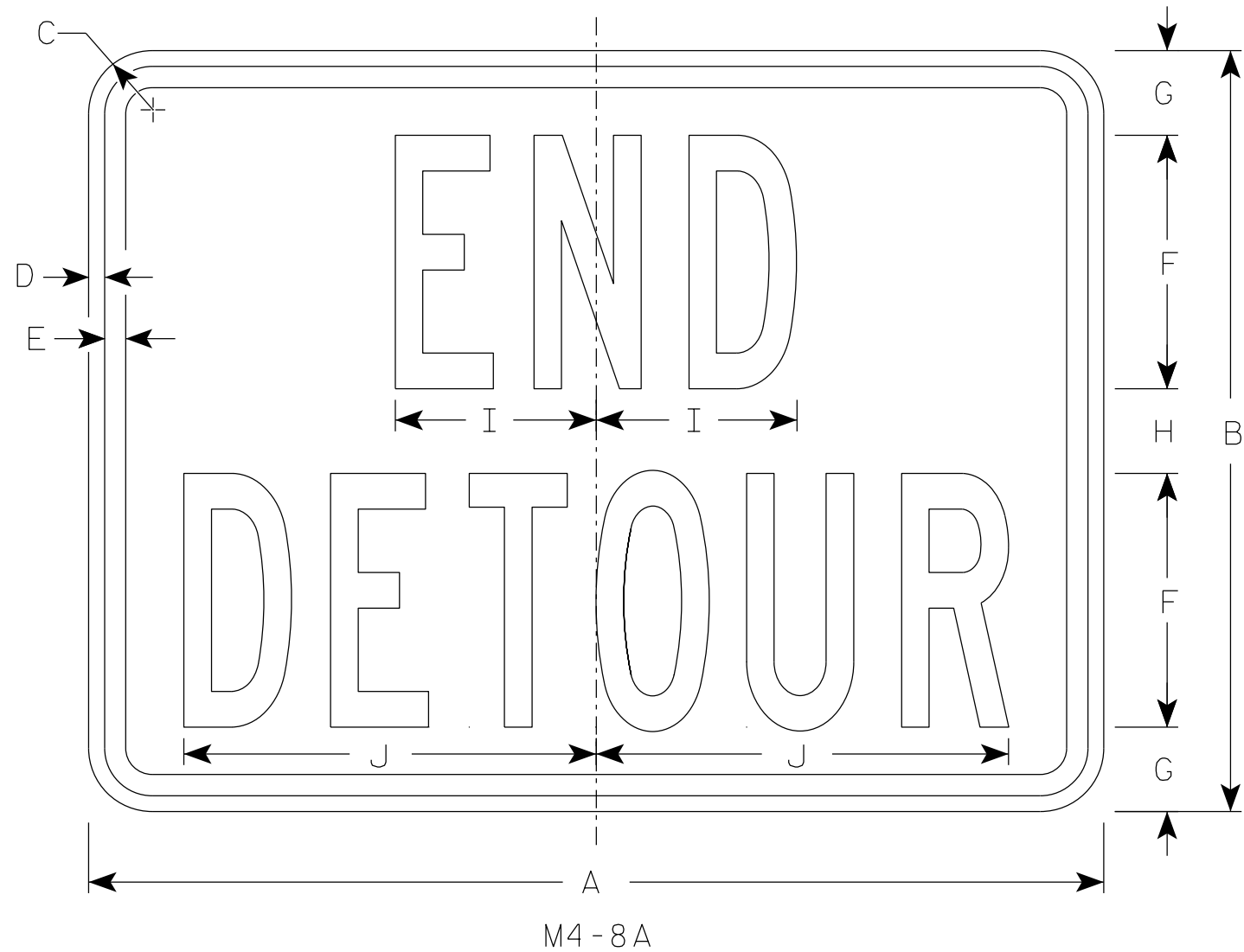
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
2M	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
5	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0

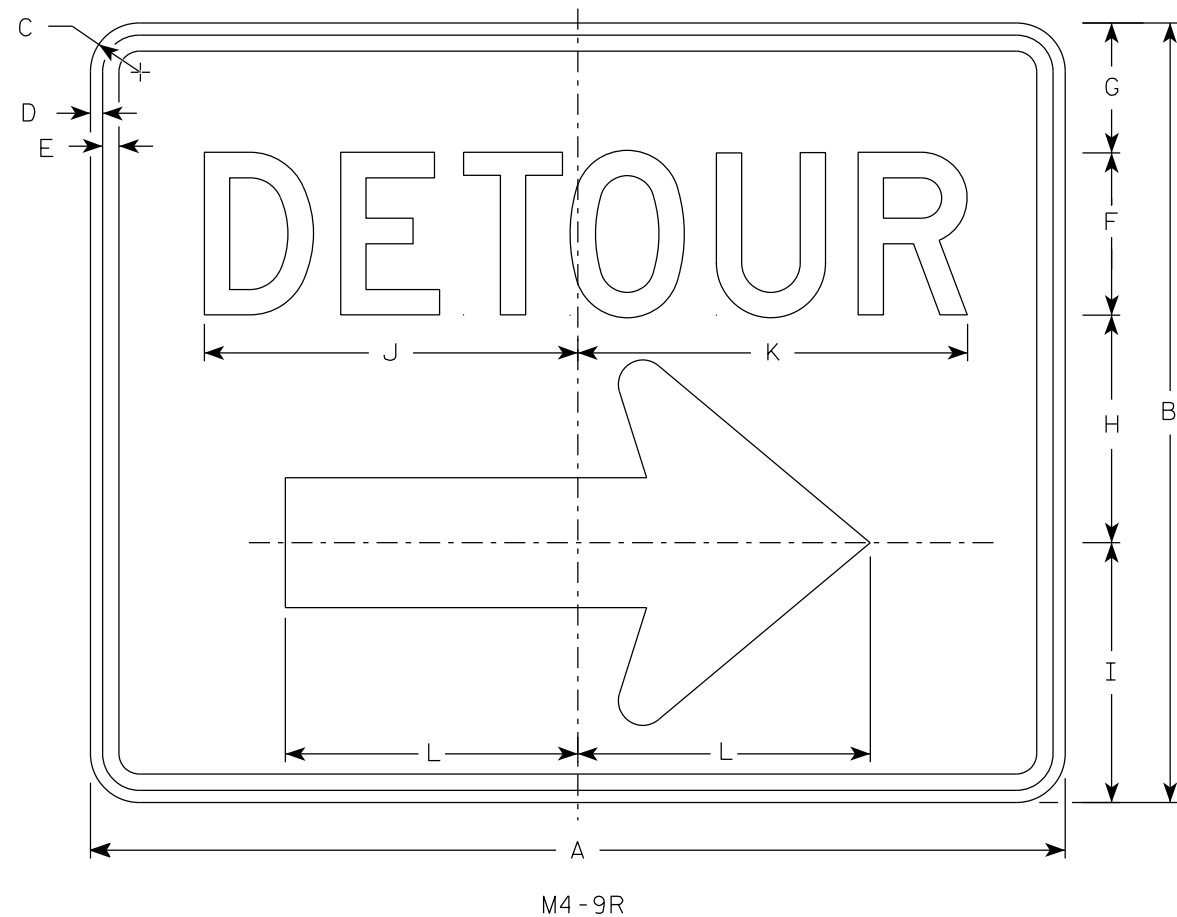
STANDARD SIGN

M4-8A

WISCONSIN DEPT OF TRANSPORTATION

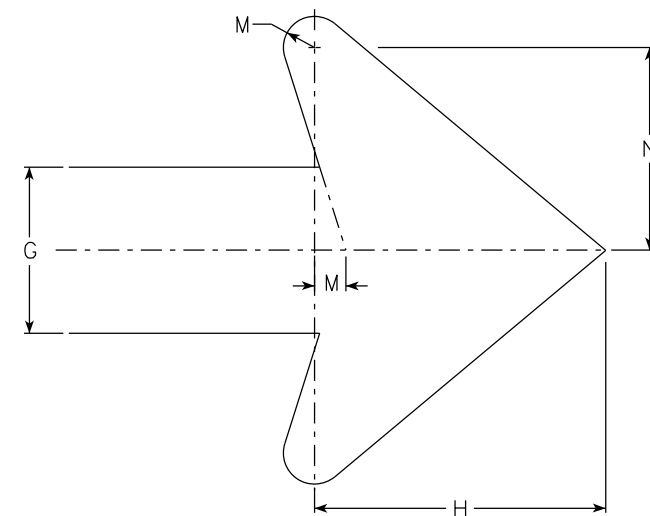
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8A.4



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

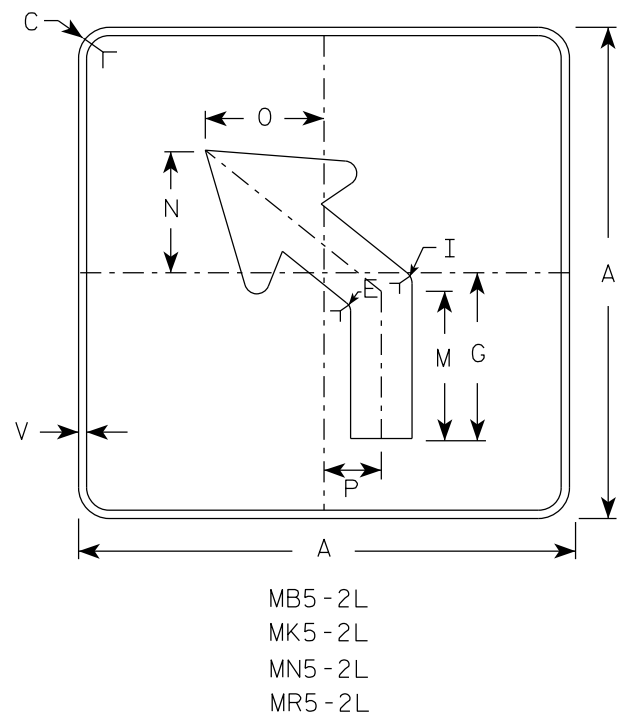
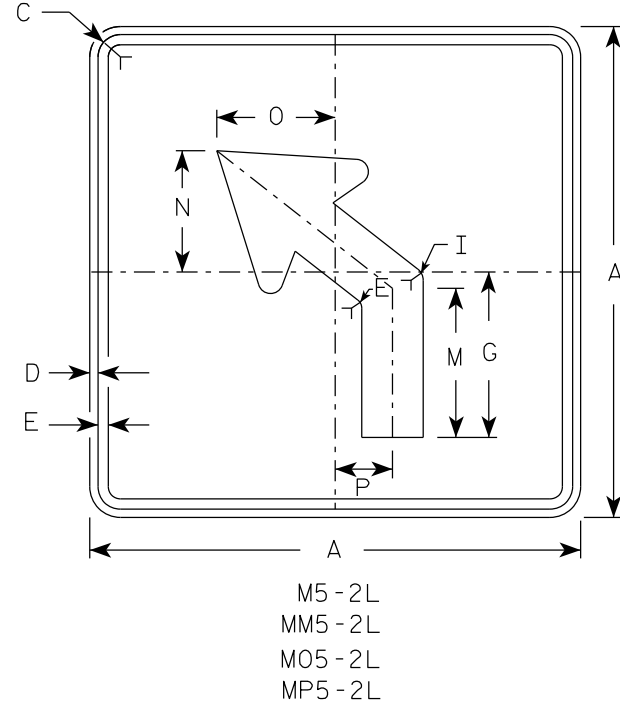
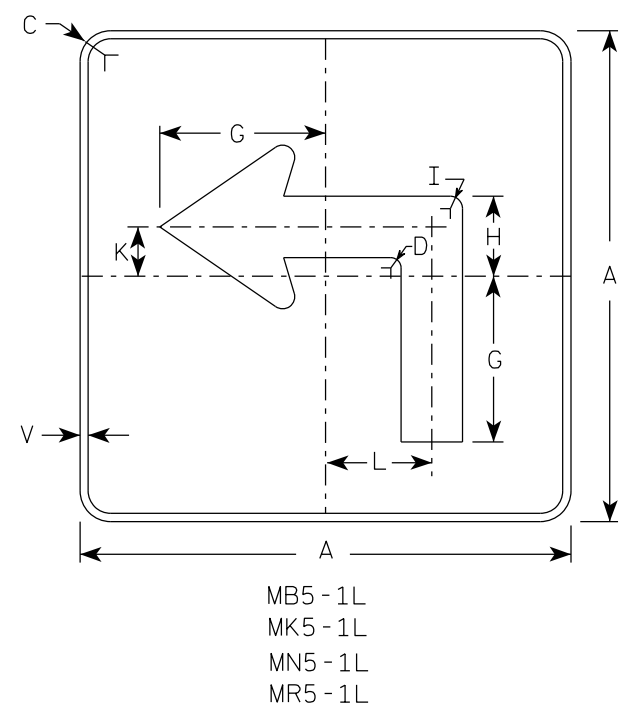
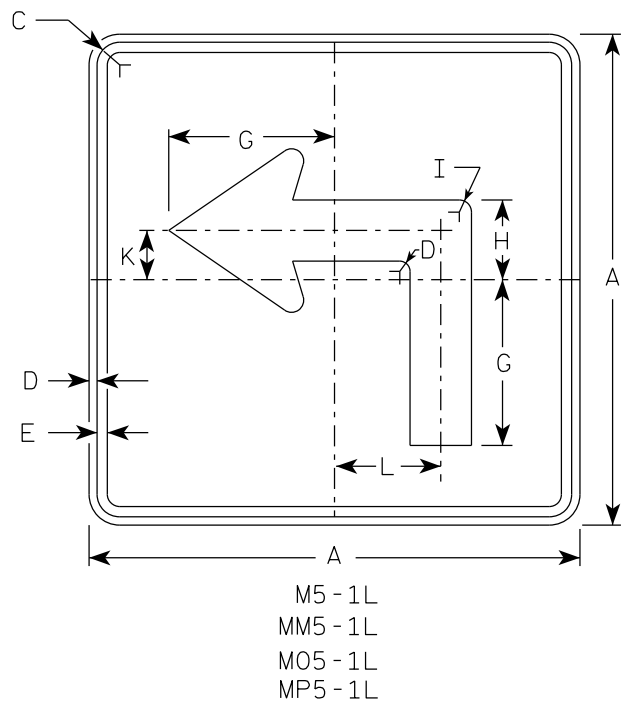
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
2M	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

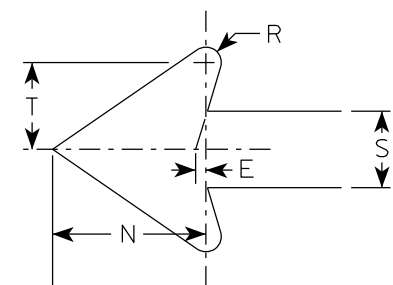
DATE 2/9/2023 PLATE NO. M4-9R.6



NOTES

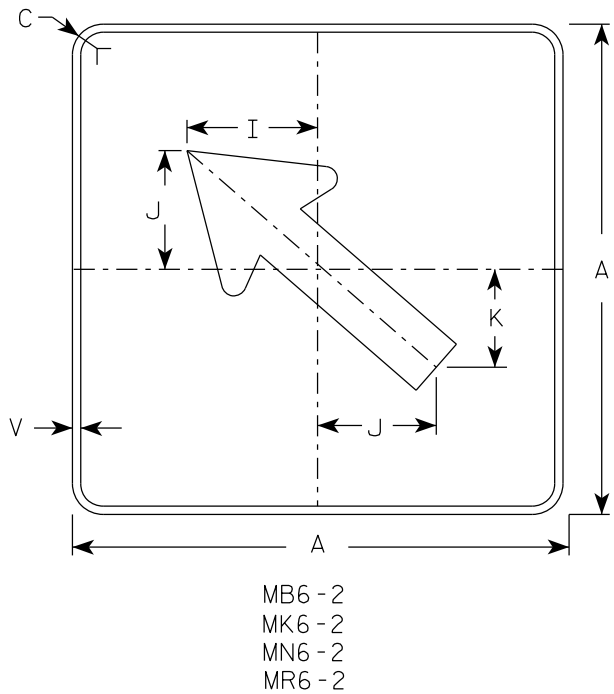
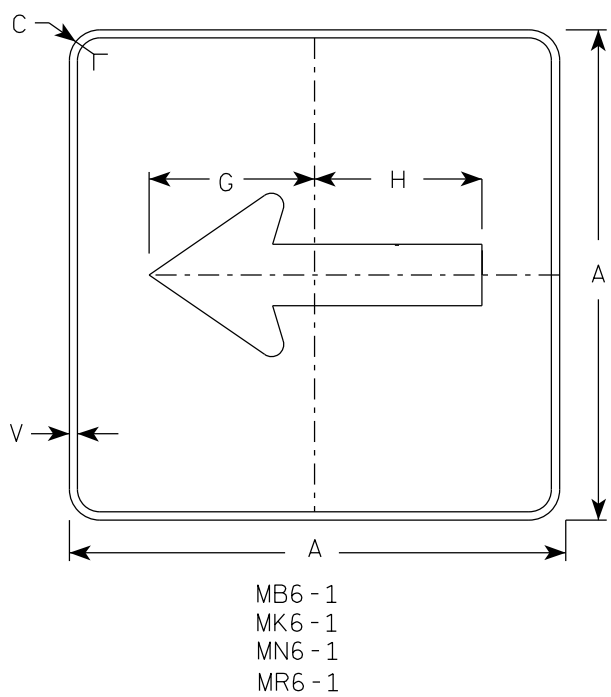
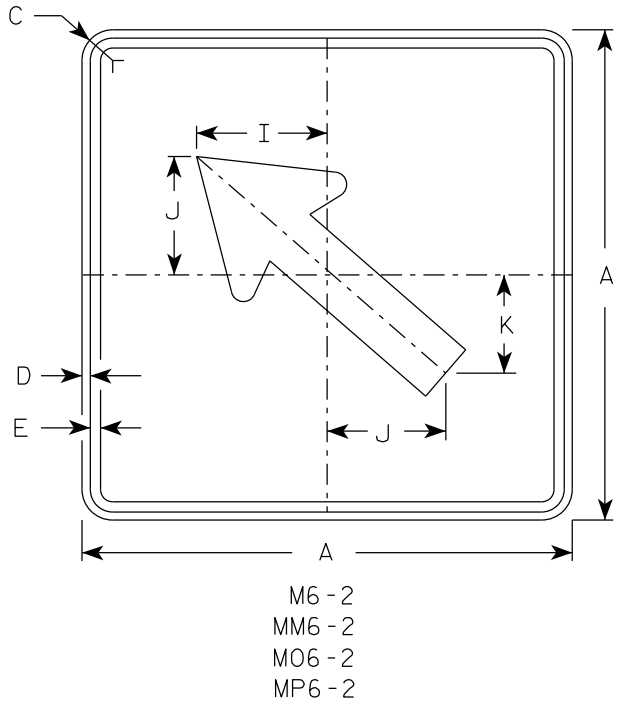
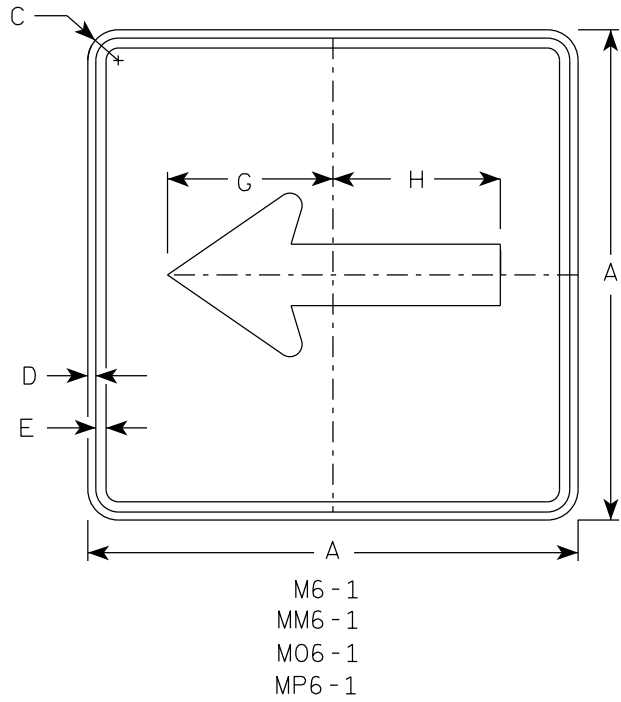
- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | | |
|-----------|-------|---|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

ARROW DETAIL

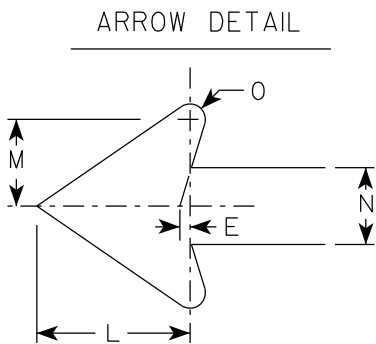


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2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

PROJECT NO:		HWY:		COUNTY:		SHEET NO: 181		E
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- NOTES**
- Signs are Type II - Type H Reflective except as Shown
 - Color:
Background - See note 4
Message - See note 4
 - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow



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

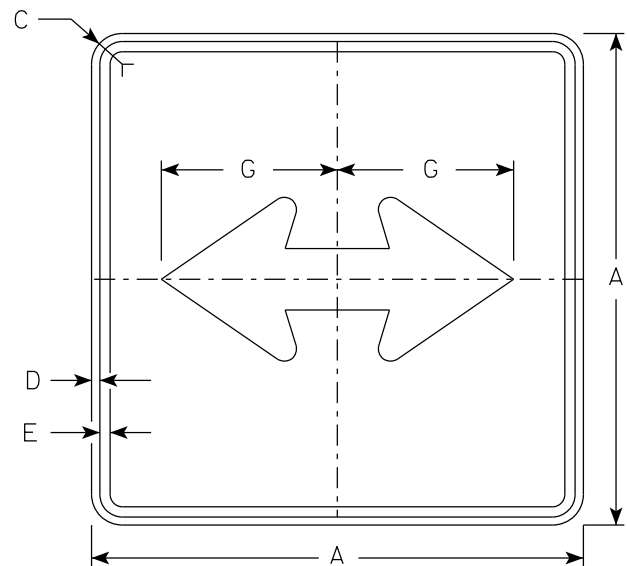
PROJECT NO:

HWY:

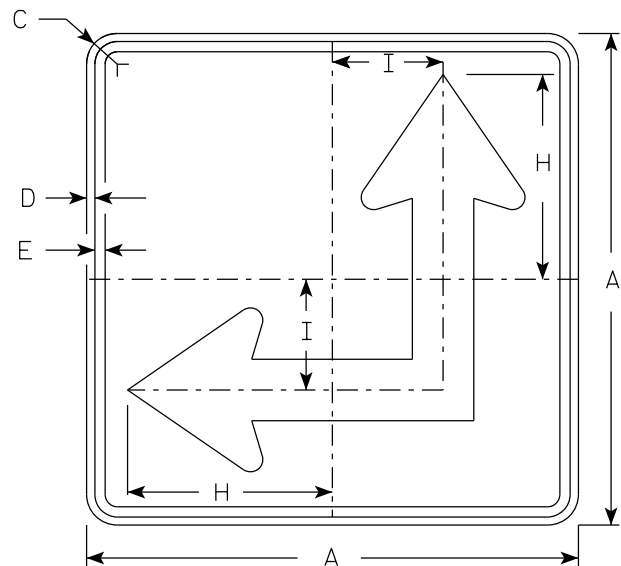
COUNTY:

SHEET NO: 182

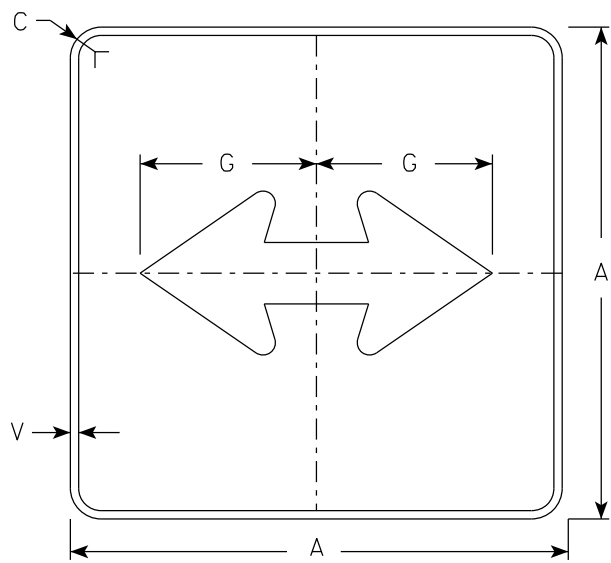
E



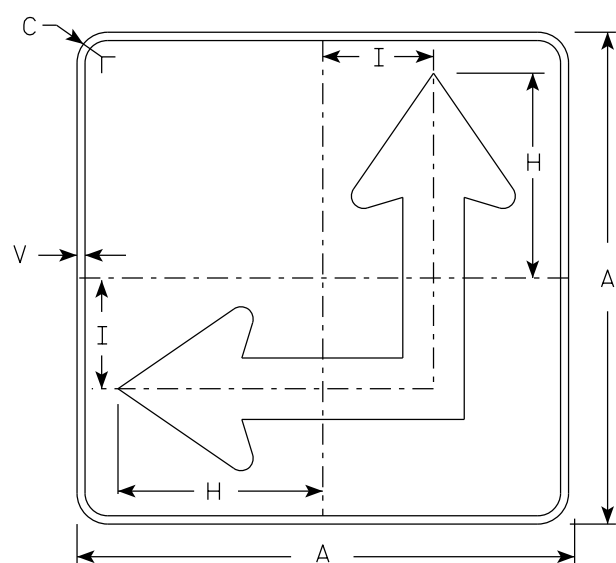
M6 - 4
MM6 - 4
M06 - 4
MP6 - 4



M6 - 6
MM6 - 6
M06 - 6
MP6 - 6



MB6 - 4
MK6 - 4
MN6 - 4
MR6 - 4

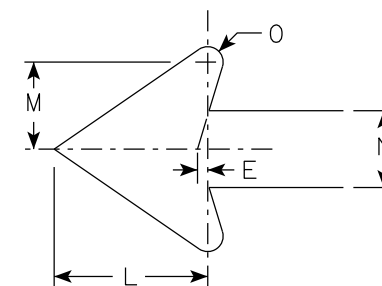


MB6 - 6
MK6 - 6
MN6 - 6
MR6 - 6

NOTES

- Signs are Type II - Type H Reflective except as Shown
- Color:
Background - See Note 4
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
- M6-6R same as M6-6L except arrow points ahead and right.

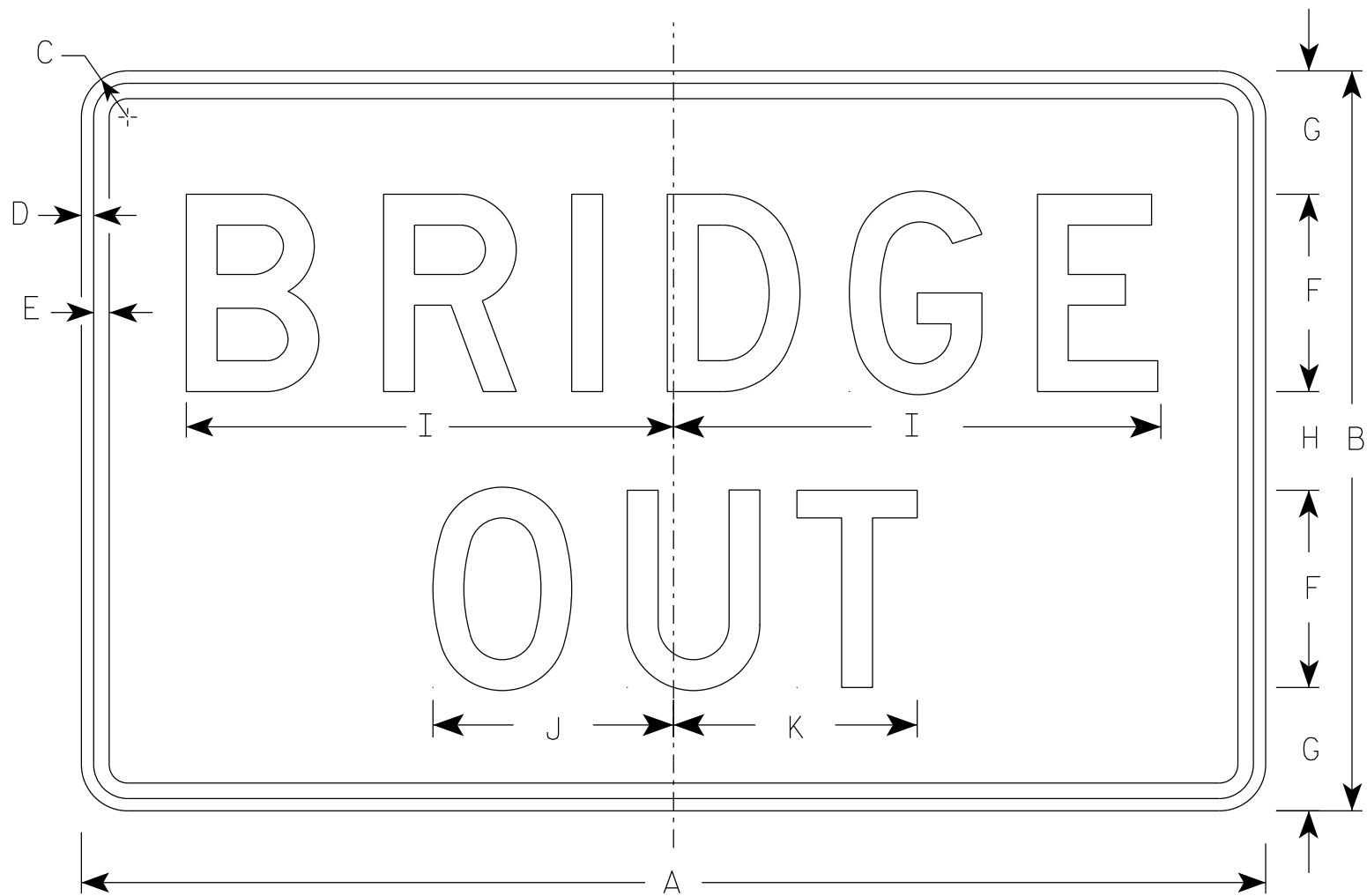
ARROW DETAIL



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	21		1 1/2	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 183												E
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7



R11-2B

NOTES

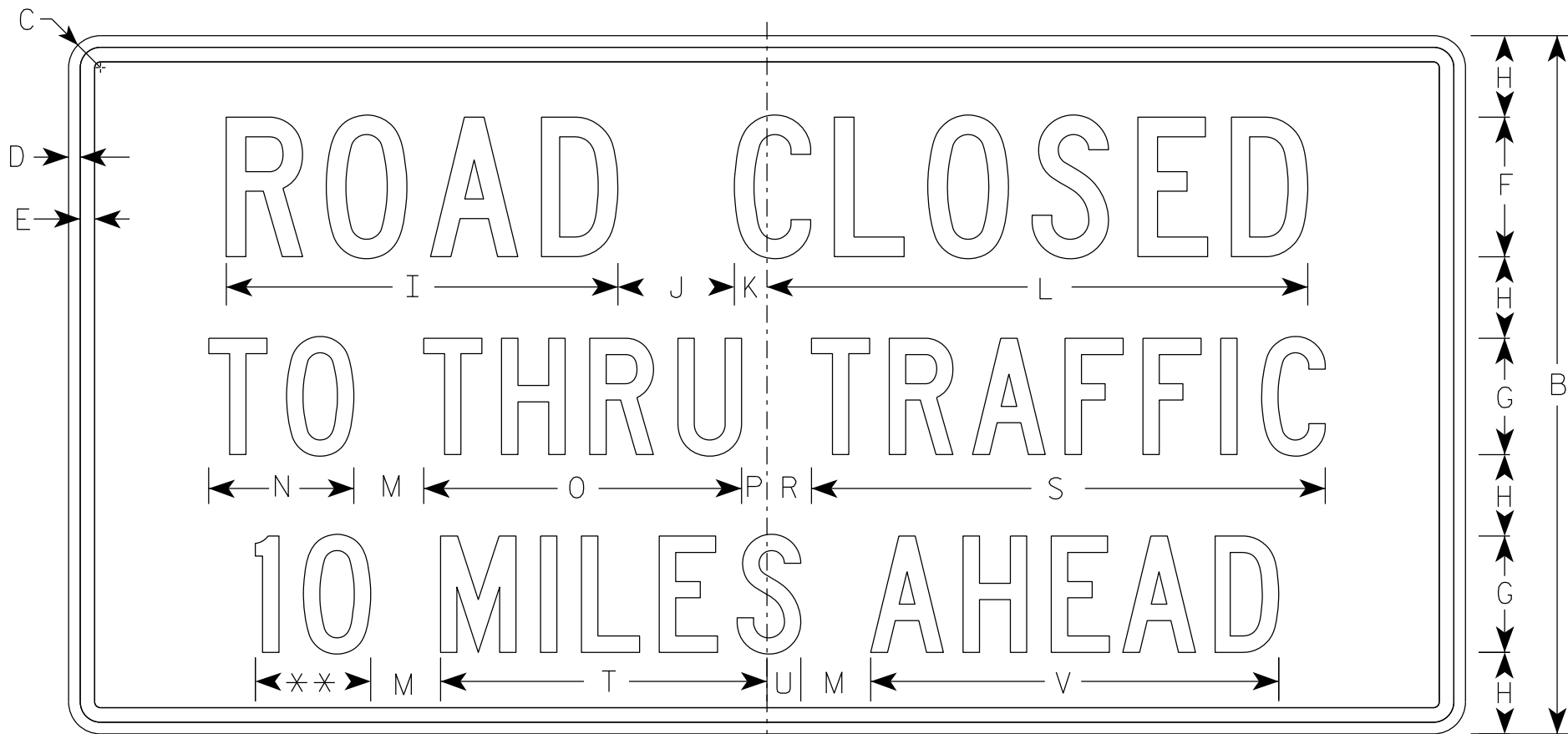
- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

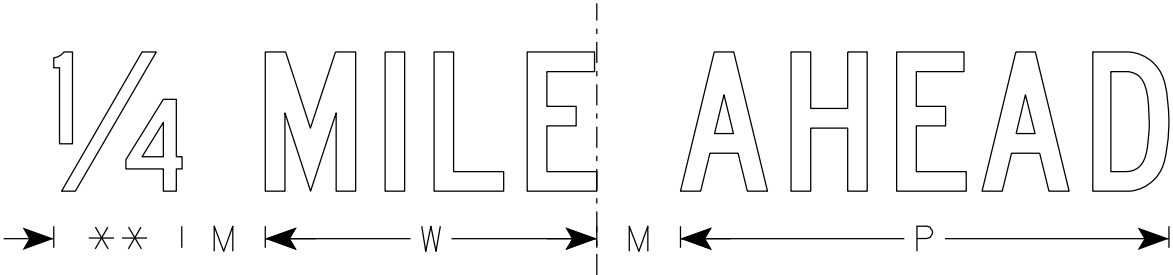
NOTES

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



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3.10

PROJECT NO:

HWY:

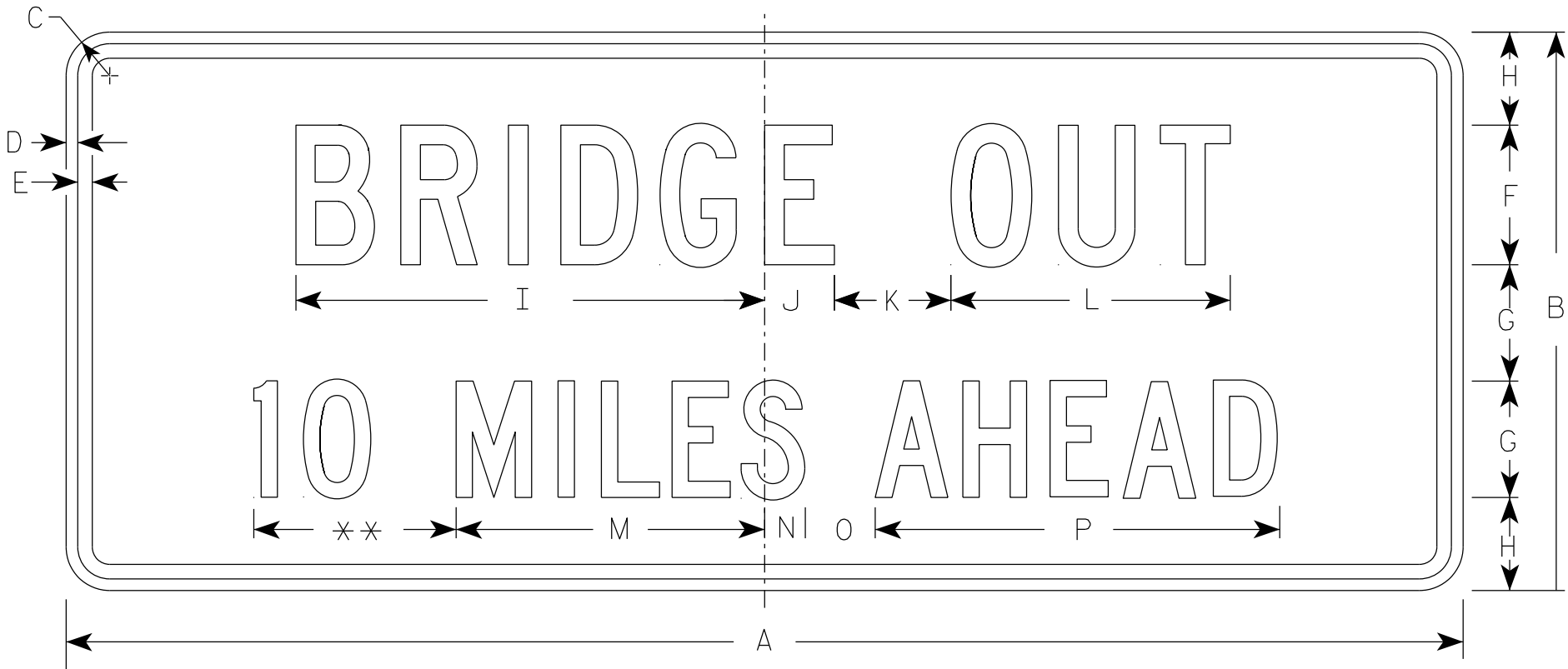
COUNTY:

SHEET NO: 185

E

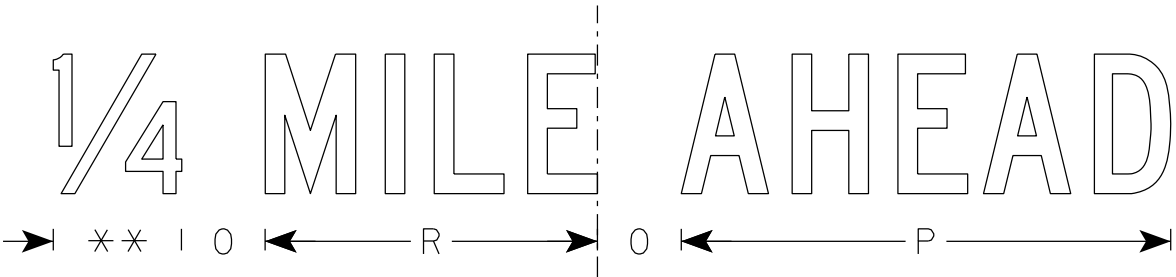
NOTES

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



R11-3C

** See Note 5



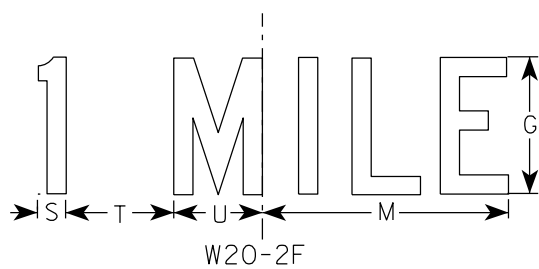
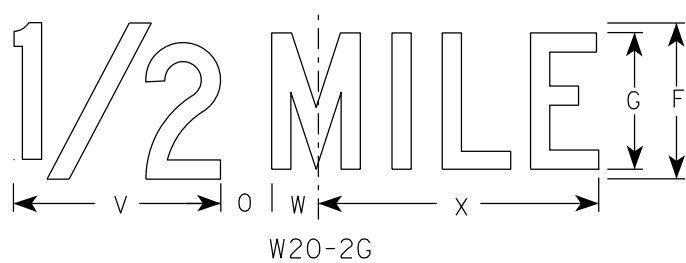
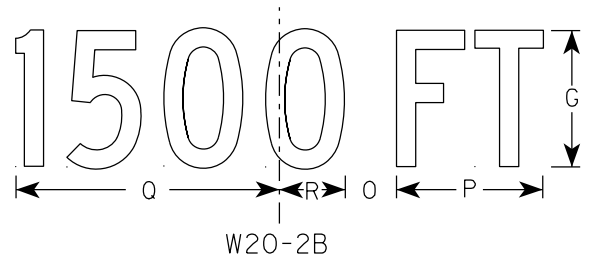
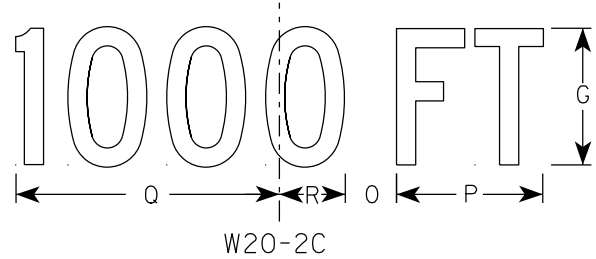
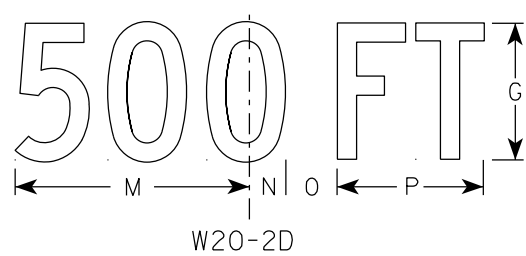
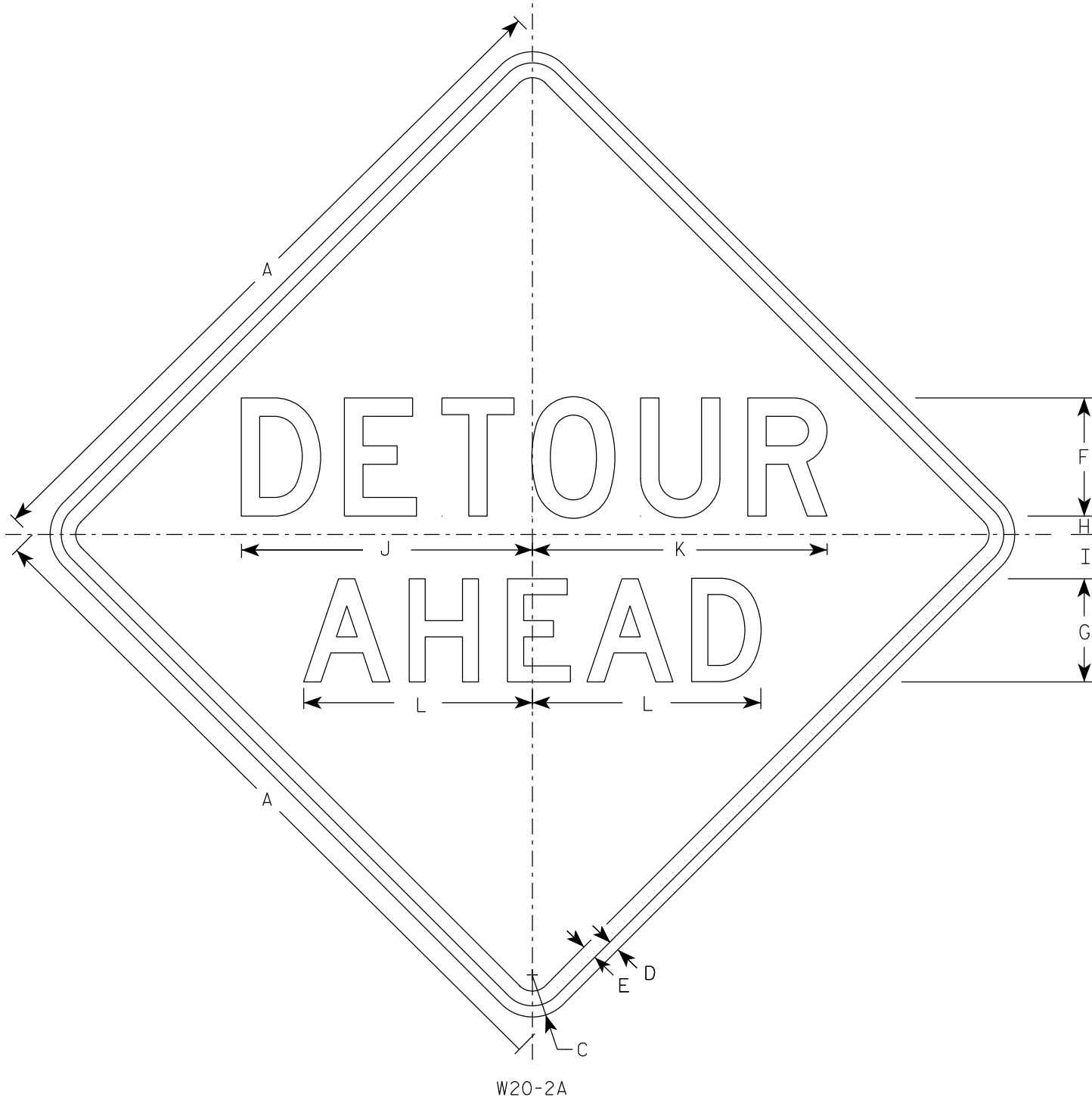
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 1/2	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 7/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 7/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3C.4



NOTES

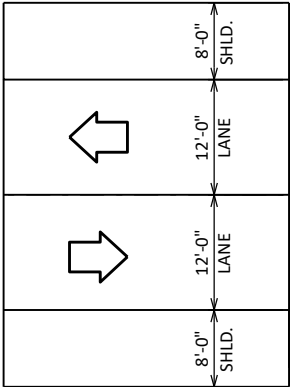
- Sign is Type II - Type F Reflective
- Color:
Background - Orange
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Line 1 is Series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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	w	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN W20-2A,B,C,D,F & G	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 1/10/2024	PLATE NO. W20-2.7

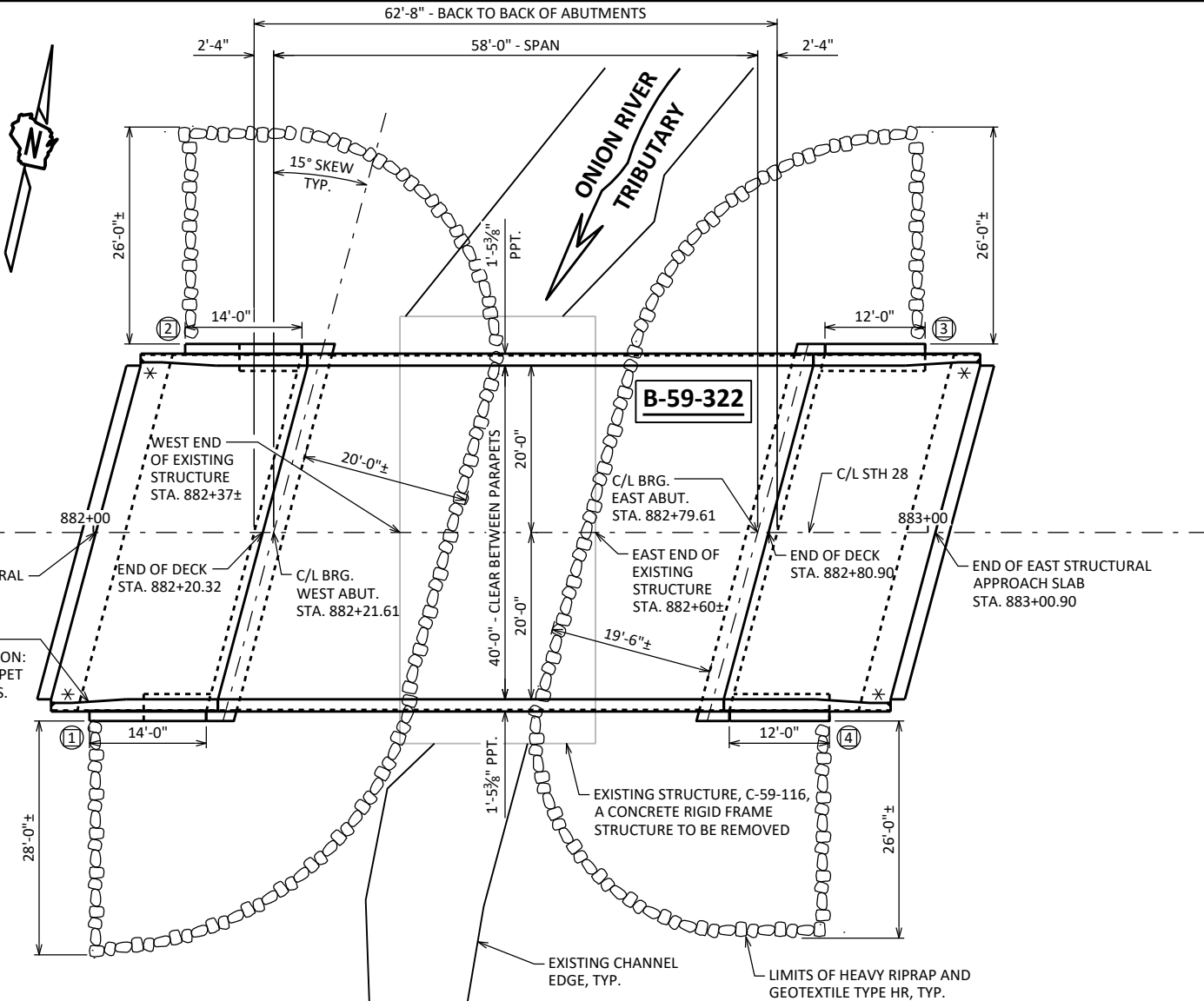
✱ PROVIDE FOR THRIE BEAM
GUARD RAIL ATTACHMENT.
AT UNUSED ANCHOR ASSEMBLIES
CAULK HOLES SHUT WITH
"100% SILICONE CAULK".

Ⓢ INDICATES WING NUMBER



END OF WEST STRUCTURAL
APPROACH SLAB
STA. 882+00.32

NAME PLATE &
BENCHMARK CAP LOCATION:
SEE "SINGLE SLOPE PARAPET
42SS" SHEET FOR DETAILS.



PLAN

SINGLE SPAN - 36W" PRESTRESSED CONCRETE GIRDER BRIDGE

STATE PROJECT NUMBER

4010-28-71

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.04
OPERATING RATING FACTOR: RF = 1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB $f'_c = 4,000$ P.S.I.
ALL OTHER $f'_c = 3,500$ P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 $f_y = 60,000$ P.S.I.
STAINLESS, GRADE 60 $f_y = 60,000$ P.S.I.

36W" PRESTRESSED GIRDERS:
CONCRETE MASONRY $f'_c = 8,000$ P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING
DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ✱ ✱ PER
PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 18 FEET LONG AT BOTH ABUTMENTS.

✱ ✱ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE
REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING
MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

$Q_{100} = 450$ C.F.S.
 $VEL_{100} = 5.64$ F.P.S.
 $HW_{100} = EL. 798.62$
WATERWAY AREA = 80 SQ. FT.
DRAINAGE AREA = 2.7 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2 YEAR FREQUENCY

$Q_2 = 110$ C.F.S.
 $VEL_2 = 2.46$ F.P.S.
 $HW_2 = EL. 796.54$

TRAFFIC VOLUME

STH 28

A.D.T. = 10,110 (2046)
R.D.S. = 55 M.P.H.

STRUCTURE DESIGN CONTACTS:

VISTA SHAHRIARI (608) 266-7086
DOMINIQUE BECHLE (608) 261-8205

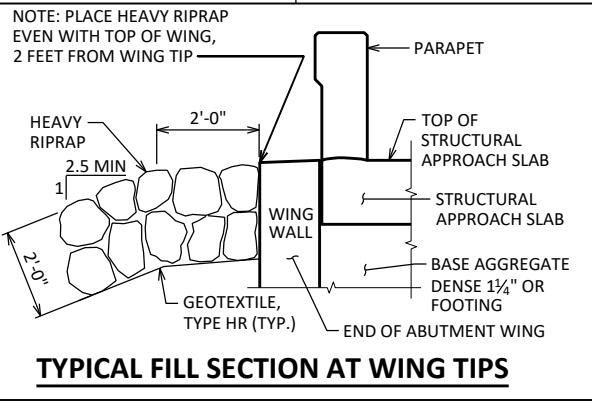
NO.	DATE	REVISION	BY
BUREAU OF STRUCTURES			
ACCEPTED <i>[Signature]</i> CHIEF STRUCTURES DESIGN ENGINEER 11/01/25 DATE			
STRUCTURE B-59-322			
STH 28 OVER UNION RIVER TRIBUTARY			
COUNTY	SHEBOYGAN	TOWN	LIMA
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION			
DESIGNED BY	VS	DESIGNED CK'D	RAC
DRAWN BY	JPH	PLANS CK'D	VS
GENERAL PLAN			SHEET 1 OF 19 188

I.D. 4010-28-00A

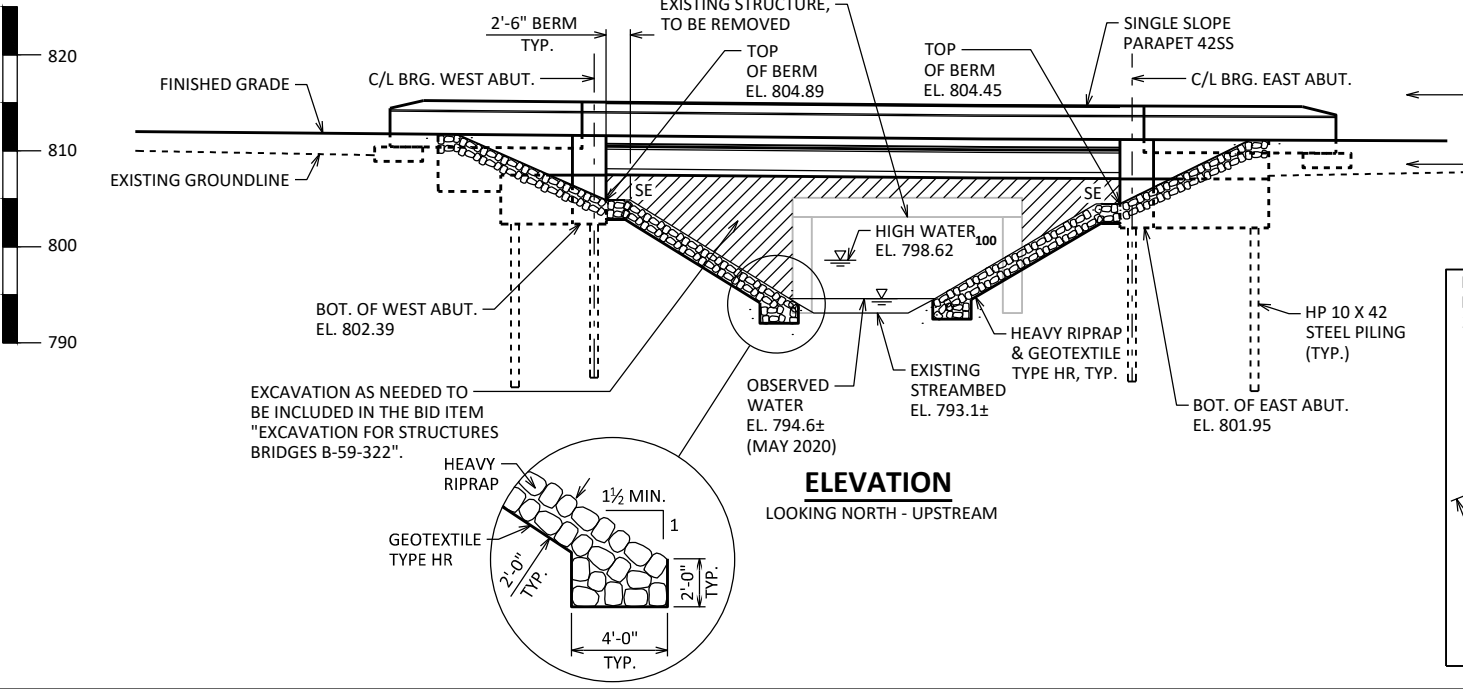
DATE: OCT. 2025

LIST OF DRAWINGS

- GENERAL PLAN
- CROSS SECTION & QUANTITIES
- SUBSURFACE EXPLORATION
- WEST ABUTMENT
- WEST ABUTMENT DETAILS
- EAST ABUTMENT
- EAST ABUTMENT DETAILS
- 36W" PRESTRESSED GIRDER DETAILS 1
- 36W" PRESTRESSED GIRDER DETAILS 2
- STEEL DIAPHRAGM
- SUPERSTRUCTURE CROSS SECTIONS
- ABUTMENT DIAPHRAGM DETAILS
- ABUTMENT DIAPHRAGM CORNER DETAILS
- SUPERSTRUCTURE PLAN
- SUPERSTRUCTURE BAR DETAILS
- STRUCTURAL APPROACH SLAB
- STRUCTURAL APPROACH SLAB CROSS SECTIONS
- SINGLE SLOPE PARAPET 42SS
- STRUCTURAL APPROACH SLAB BAR DETAILS



TYPICAL FILL SECTION AT WING TIPS



ELEVATION

LOOKING NORTH - UPSTREAM

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-59-322" SHALL BE THE EXISTING GROUNDLINE AND STREAMBED ELEVATION.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

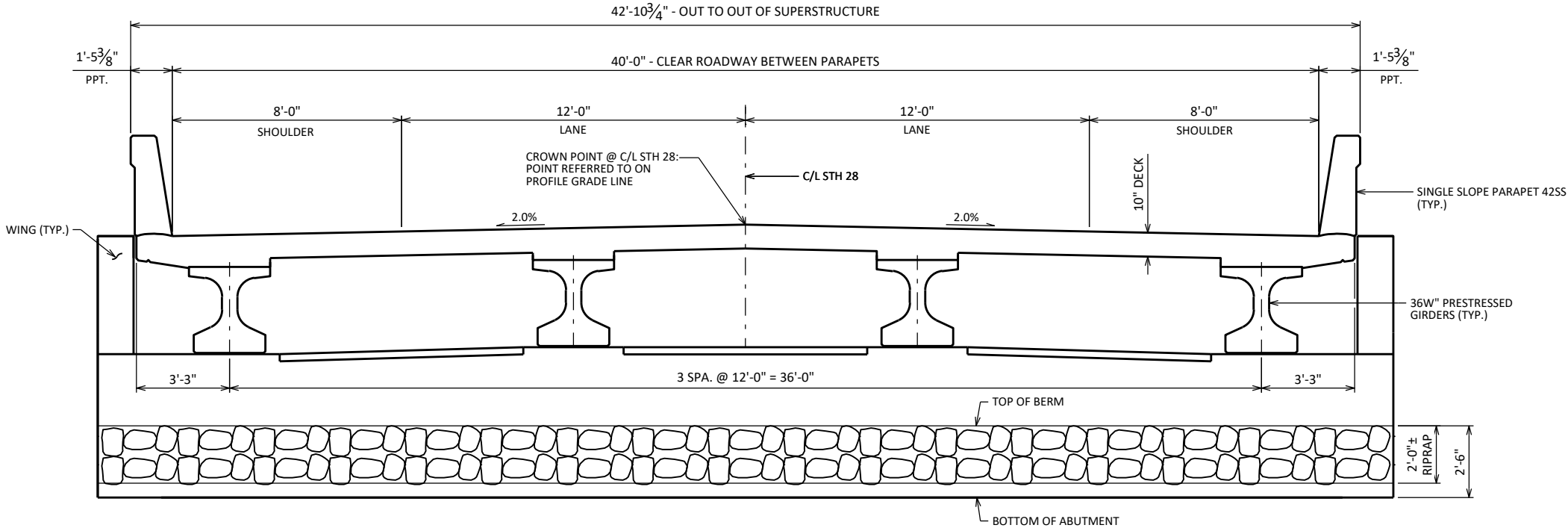
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

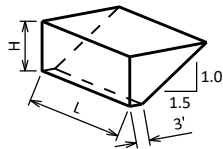
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE 36W" PRESTRESSED GIRDER DETAILS 2" SHEET.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO "EXCAVATION FOR STRUCTURES BRIDGES B-59-322".

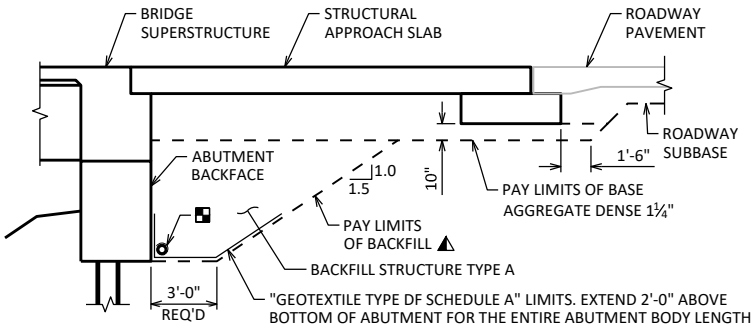


CROSS SECTION THRU ROADWAY LOOKING EAST



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)$
 $V_{CY} = V_{CF}(EF)/27$
 $V_{TON} = V_{CY}(2.0)$



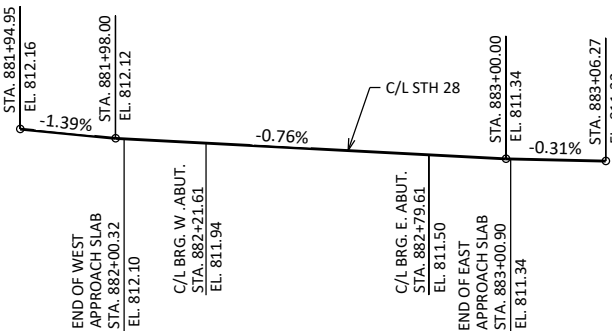
TYPICAL SECTION THRU ABUTMENT

▲ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

■ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APP. SLAB	WEST ABUT.	EAST ABUT.	EAST APP. SLAB	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS (C-59-116)	EACH	—	—	—	—	—	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-59-322	EACH	—	—	—	—	—	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	—	—	142	142	—	284
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	—	135	—	—	135	270
502.0100	CONCRETE MASONRY BRIDGES	CY	140.0	60.0	46.5	50.5	60.0	357
502.3200	PROTECTIVE SURFACE TREATMENT	SY	293	90	—	—	90	473
502.3210	PIGMENTED SURFACE SEALER	SY	60	20	—	—	20	100
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	236	—	—	—	—	236
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	—	—	2,640	2,490	—	5,130
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	22,210	10,430	1,500	1,540	10,430	46,110
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	1,430	—	—	—	—	1,430
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	8	—	—	—	—	8
506.4000	STEEL DIAPHRAGMS (B-59-322)	EACH	3	—	—	—	—	3
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	—	12	13	—	25
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	—	—	162	162	—	324
606.0300	RIPRAP HEAVY	CY	—	—	221	212	—	433
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	—	100	110	—	210
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	—	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	—	—	39	39	—	78
645.0120	GEOTEXTILE TYPE HR	SY	—	—	365	350	—	715
	NON-BID ITEMS							
	FILLER	SIZE	—	—	—	—	—	3/2", 3/4", 1 1/2"

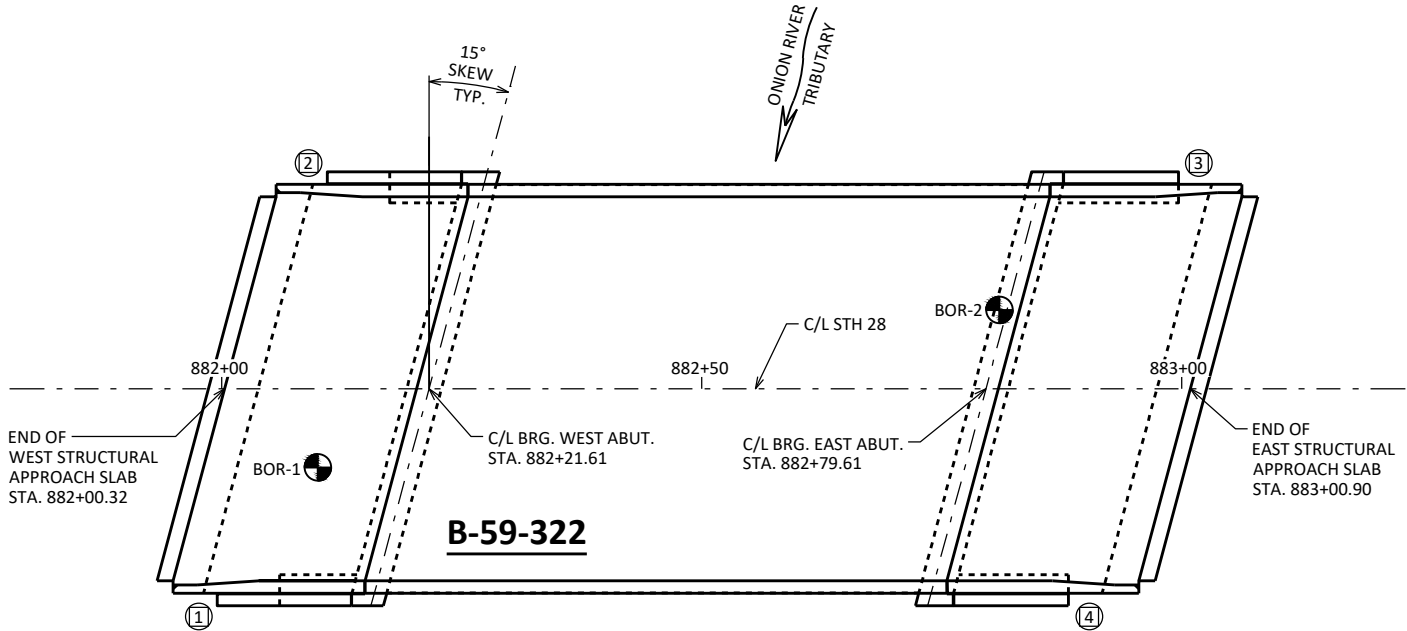


PROFILE GRADE LINE - STH 28

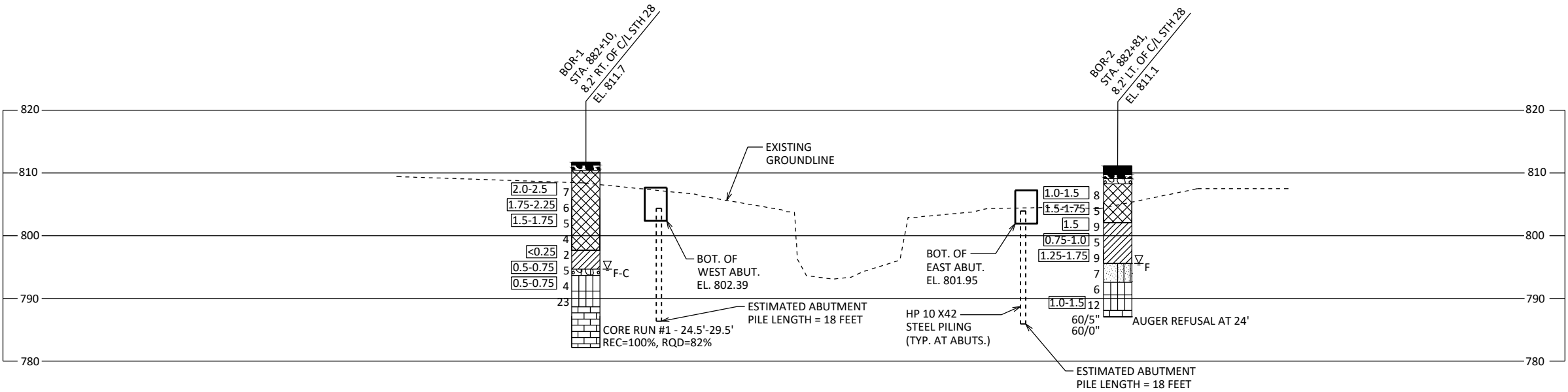
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322		DRAWN BY JPH	PLANS CK'D VS
CROSS SECTION & QUANTITIES		SHEET 2 189	

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	04/21/2022	153826.9	164846.4
2	04/21/2022	153858.6	164911.7
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83 (91) SHEBOYGAN COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			

Ⓢ INDICATES WING NUMBER



PLAN



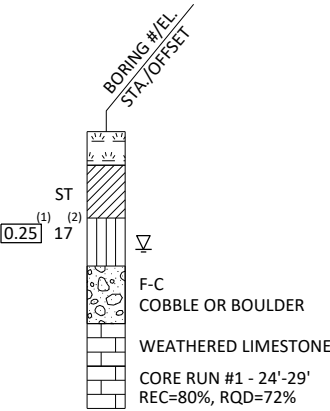
STATE PROJECT NUMBER

4010-28-71

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▼ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

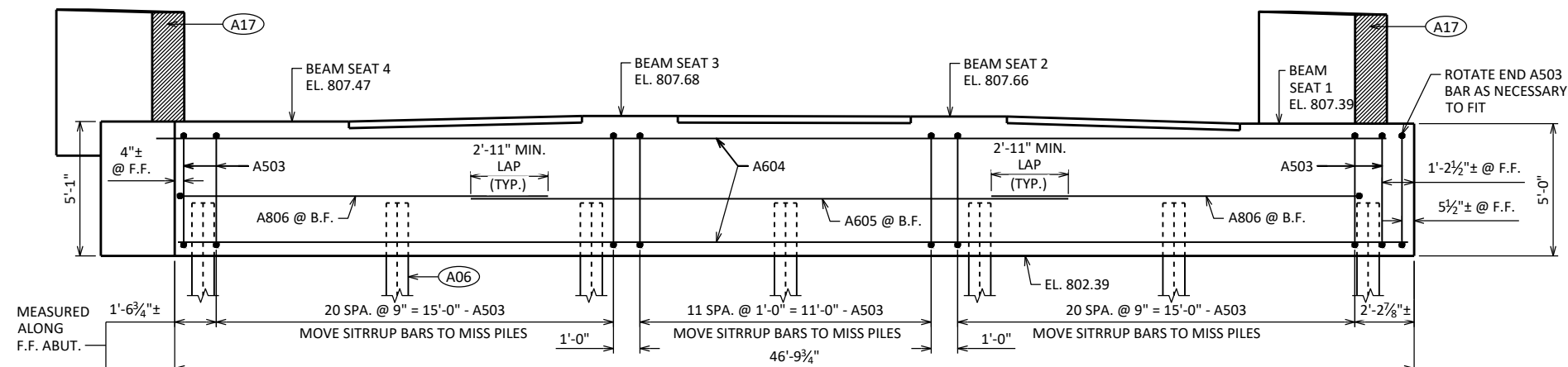
STRUCTURE B-59-322

DRAWN BY	JPH	PLANS CK'D	VS
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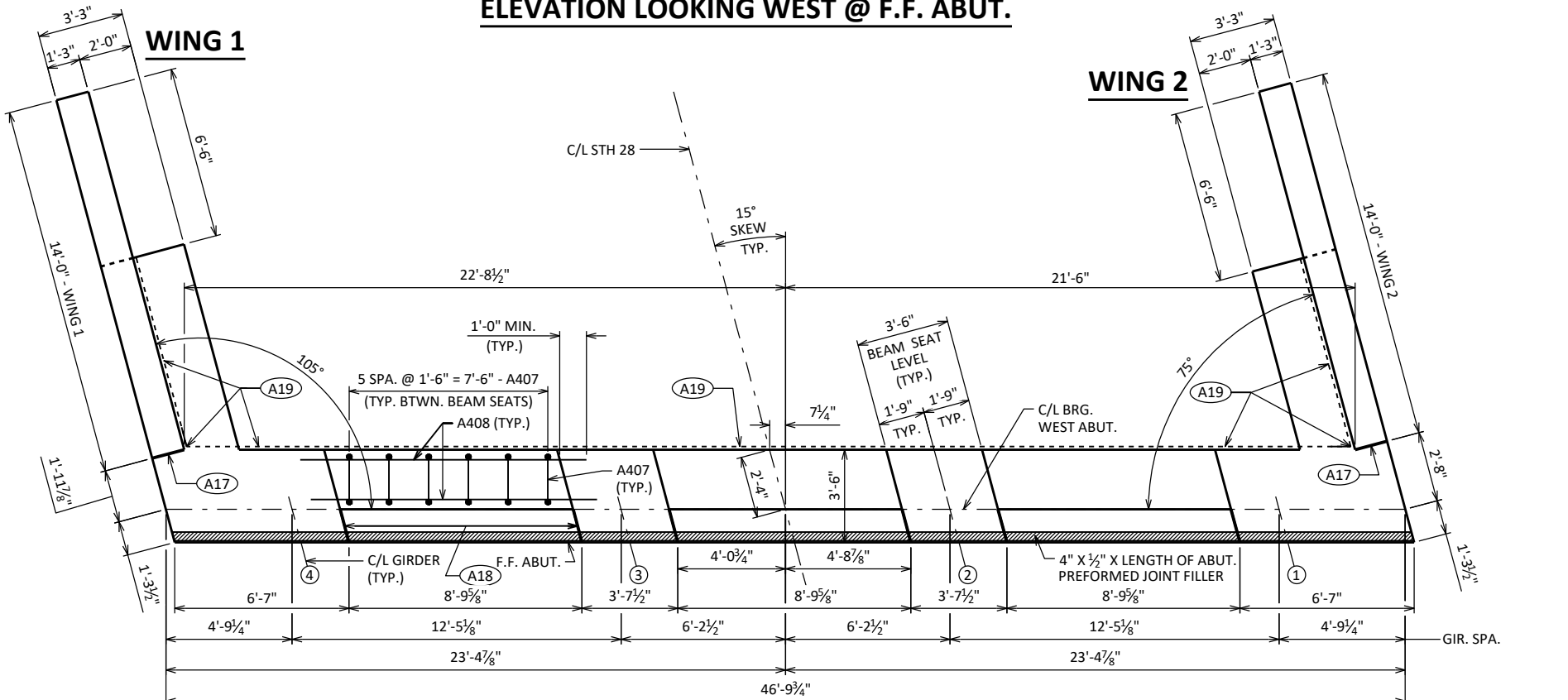
SUBSURFACE
EXPLORATION

SHEET 3
190

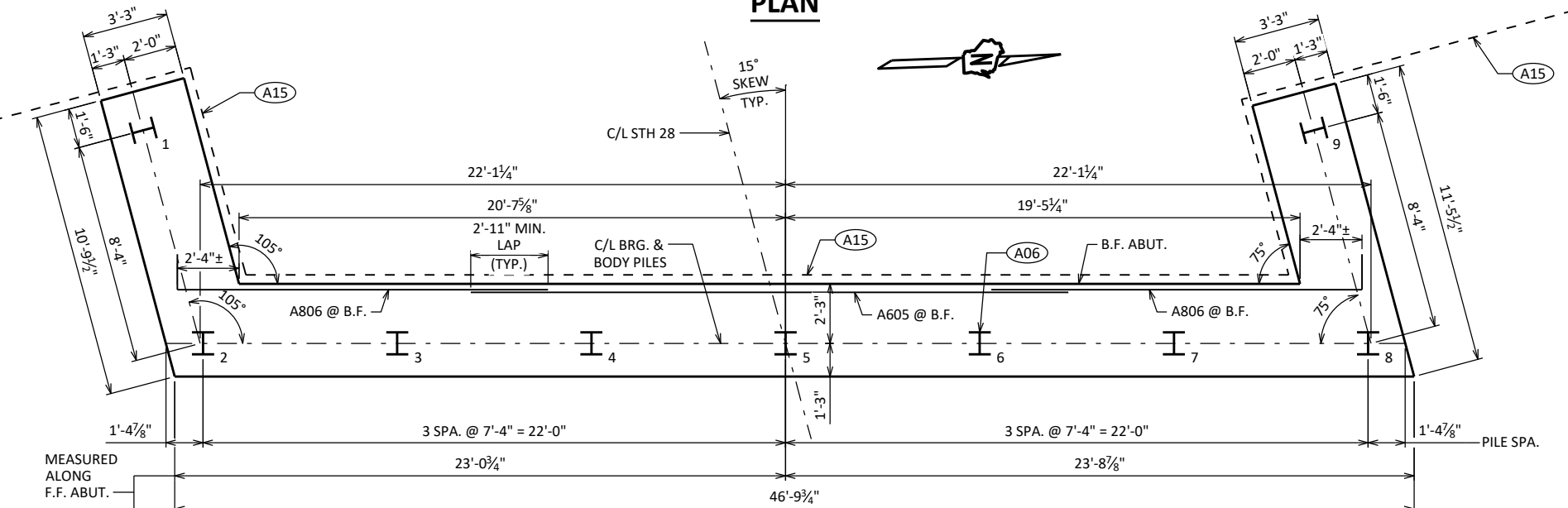
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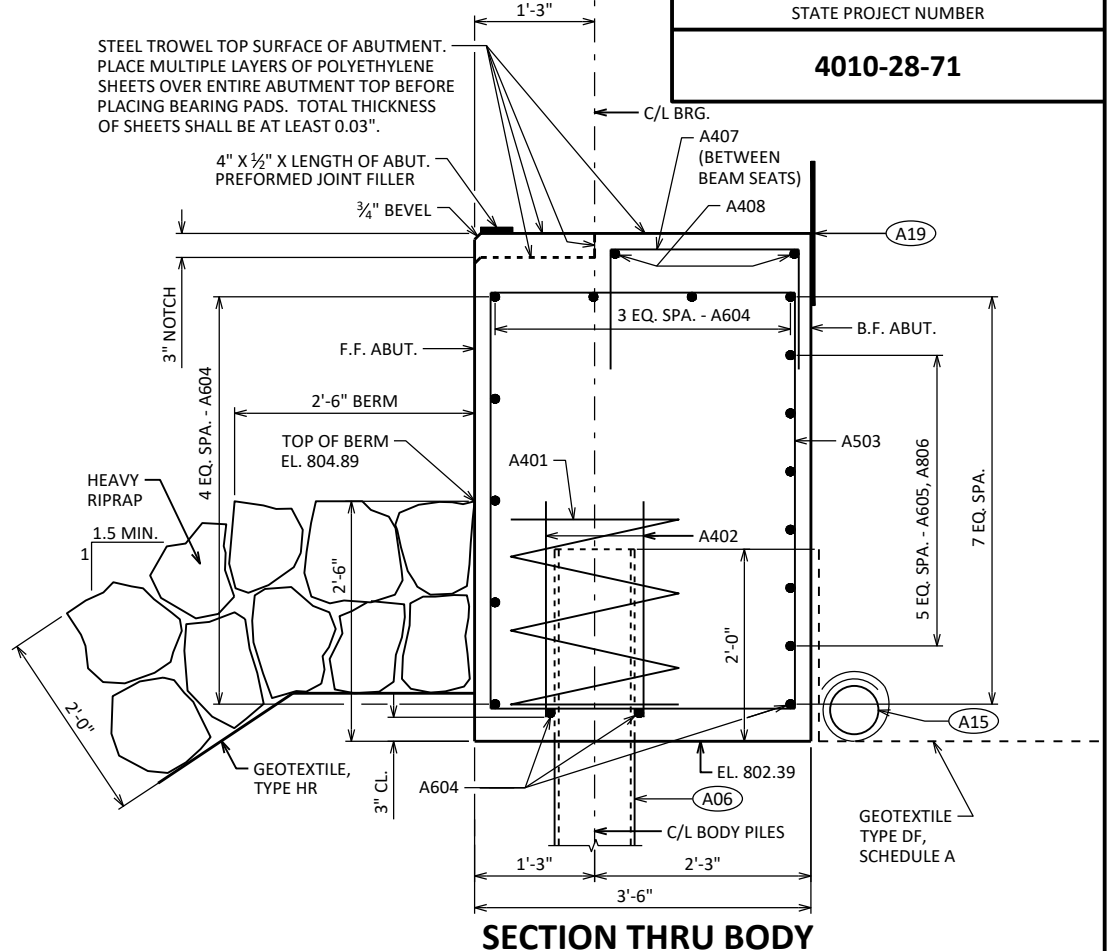
ELEVATION LOOKING WEST @ F.F. ABUT.



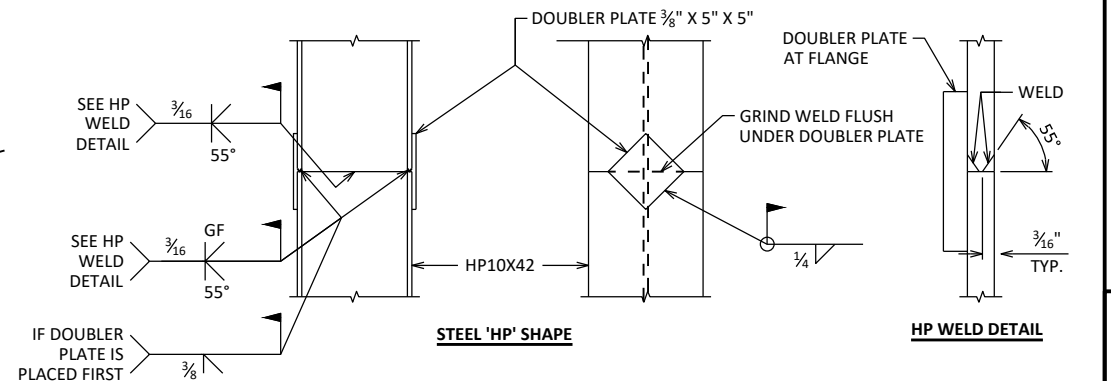
PLAN



PILE PLAN



SECTION THRU BODY



'HP' PILE DETAILS

- A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 18'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A18 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

STATE PROJECT NUMBER 4010-28-71			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322		DRAWN BY JPH	PLANS CK'D VS
WEST ABUTMENT		SHEET 4 191	

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

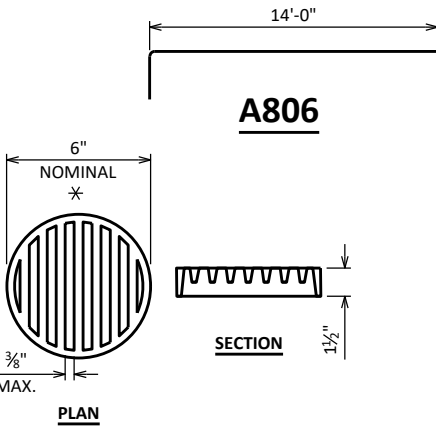
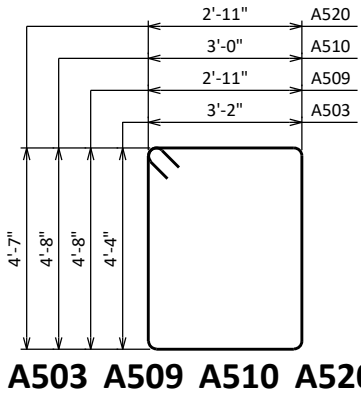
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401		7	28'-0"	X		BODY-BOT.-SPIRAL-1 PER BODY PILE-VERT.
A402		14	2'-3"			BODY-BOT.-2 PER PILE-VERT.
A503		57	15'-8"	X		BODY-STIRRUPS-VERT.
A604		11	46'-5"			BODY-HORIZ.
A605		6	22'-8"			BODY-HORIZ.-B.F.-AT CENTER
A806		12	15'-4"	X		BODY-HORIZ.-B.F.-AT BOTH ENDS ONLY
A407		18	4'-3"	X		BODY-TOP-VERT.-BETWEEN BEAM SEATS
A408		6	10'-10'			BODY-TOP-HORIZ.-BETWEEN BEAM SEATS
A509	X	8	15'-10"	X		WING 1-BOT.-STIRRUP-VERT.
A510	X	1	16'-0"	X		WING 1-BOT.-STIRRUP-VERT.-B.F. ABUT.
A411	X	4	4'-8"			WING 1 F.F./BODY END-BOT. VERT.
A512	X	6	10'-6"			WING 1-BOT.-HORIZ.-F.F.
A613	X	8	10'-0"			WING 1-BOT.-HORIZ.-B.F.
A614	X	2	9'-8"			WING 1-BOT.-HORIZ.-CENTER
A515	X	22	12'-9"	X		WINGS 1&2-TOP-VERT.
A516	X	9	10'-10"	X		WING 1-TOP-VERT.-AT END
A417	X	6	7'-9"			WINGS 1&2-BOT.-HORIZ.-B.F. & F.F.
A418	X	18	13'-8"			WINGS 1&2-TOP-HORIZ.-B.F. & F.F.
A619	X	4	13'-8"			WINGS 1&2-TOP-HORIZ.-B.F. & F.F.
A520	X	8	15'-8"	X		WING 2-BOT.-STIRRUP-VERT.
A421	X	4	4'-7"			WING 2 F.F./BODY END-BOT. VERT.
A522	X	6	11'-0"			WING 2-BOT.-HORIZ.-F.F.
A623	X	8	9'-0"			WING 2-BOT.-HORIZ.-B.F.
A624	X	2	9'-6"			WING 2-BOT.-HORIZ.-CENTER
A525	X	9	10'-8"	X		WING 2-TOP-VERT.-AT END

WING 1 ELEVATION LOOKING AT F.F. WING

WING 1 SECTION

WING 2 ELEVATION LOOKING AT F.F. WING

WING 2 SECTION



RODENT SHIELD DETAIL

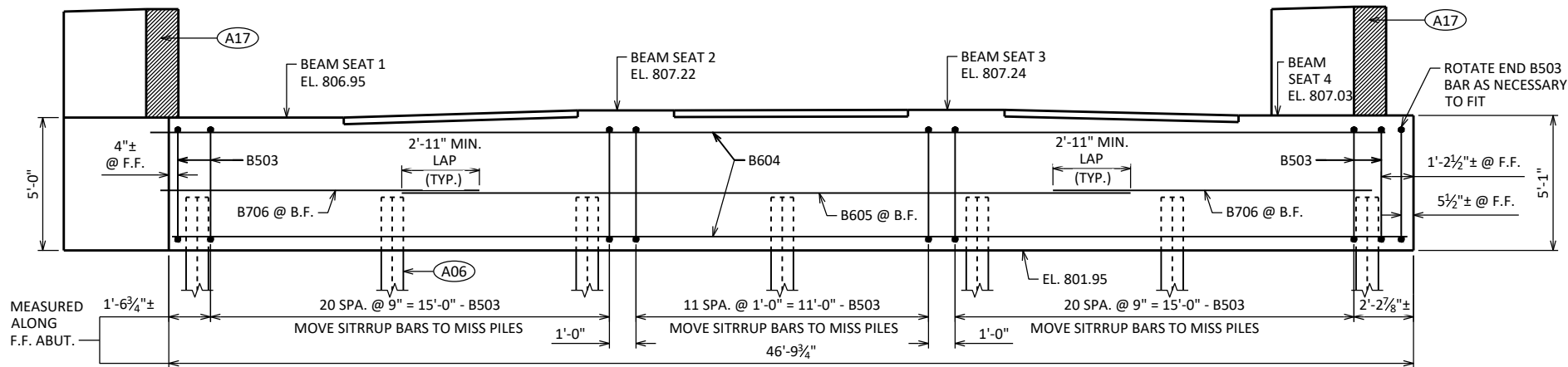
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAINING WRAPPED 6-INCH".

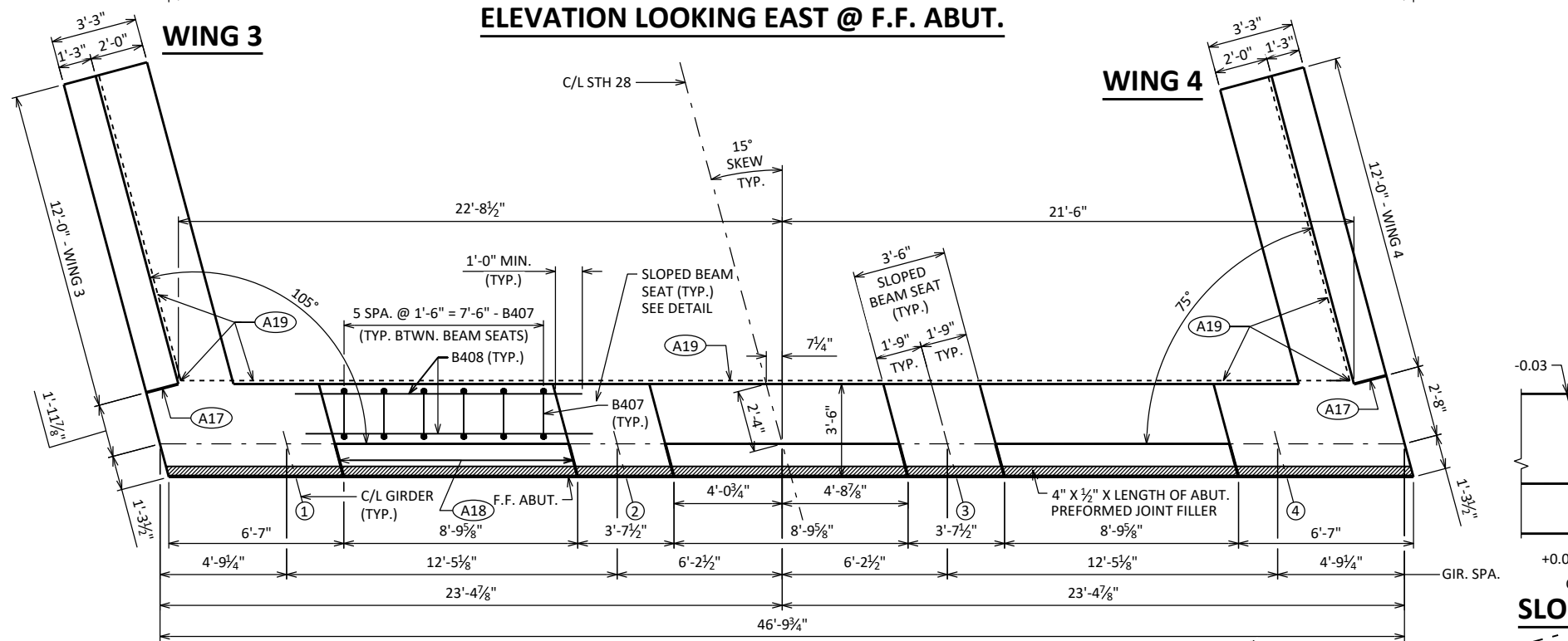
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 18'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 3/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

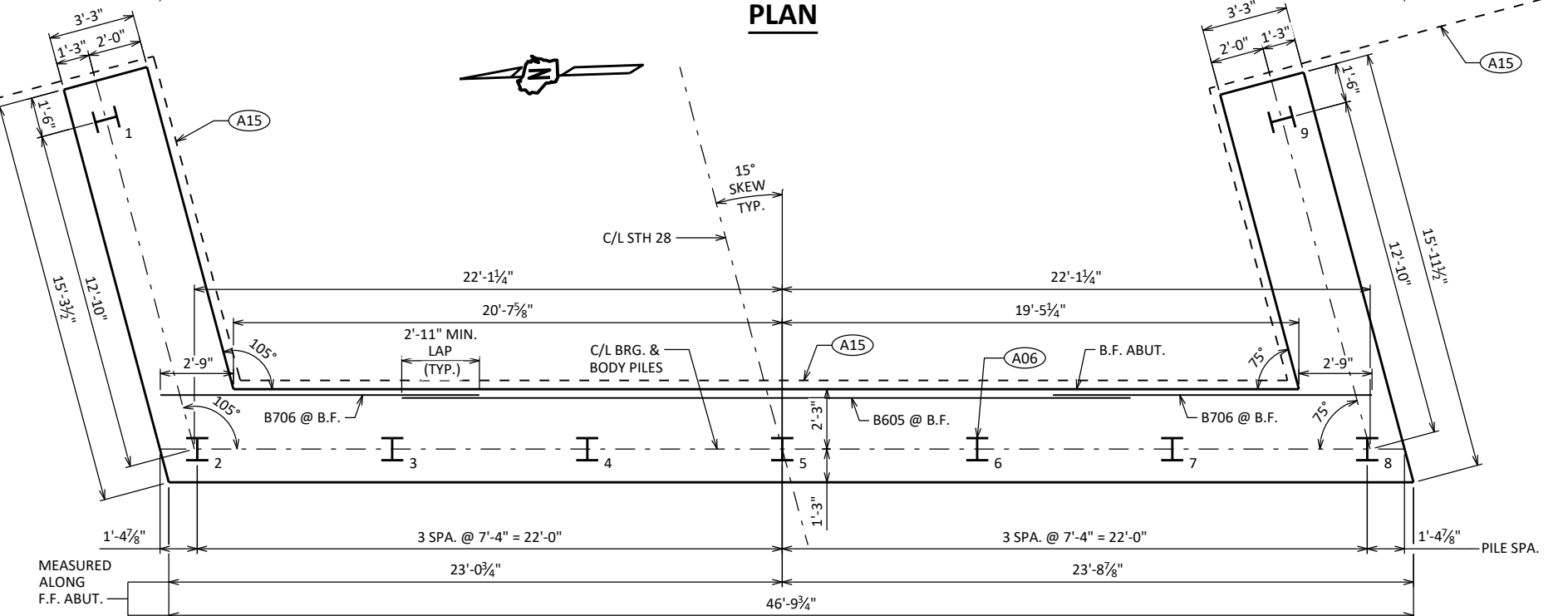
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
WEST ABUTMENT DETAILS		SHEET 5	192



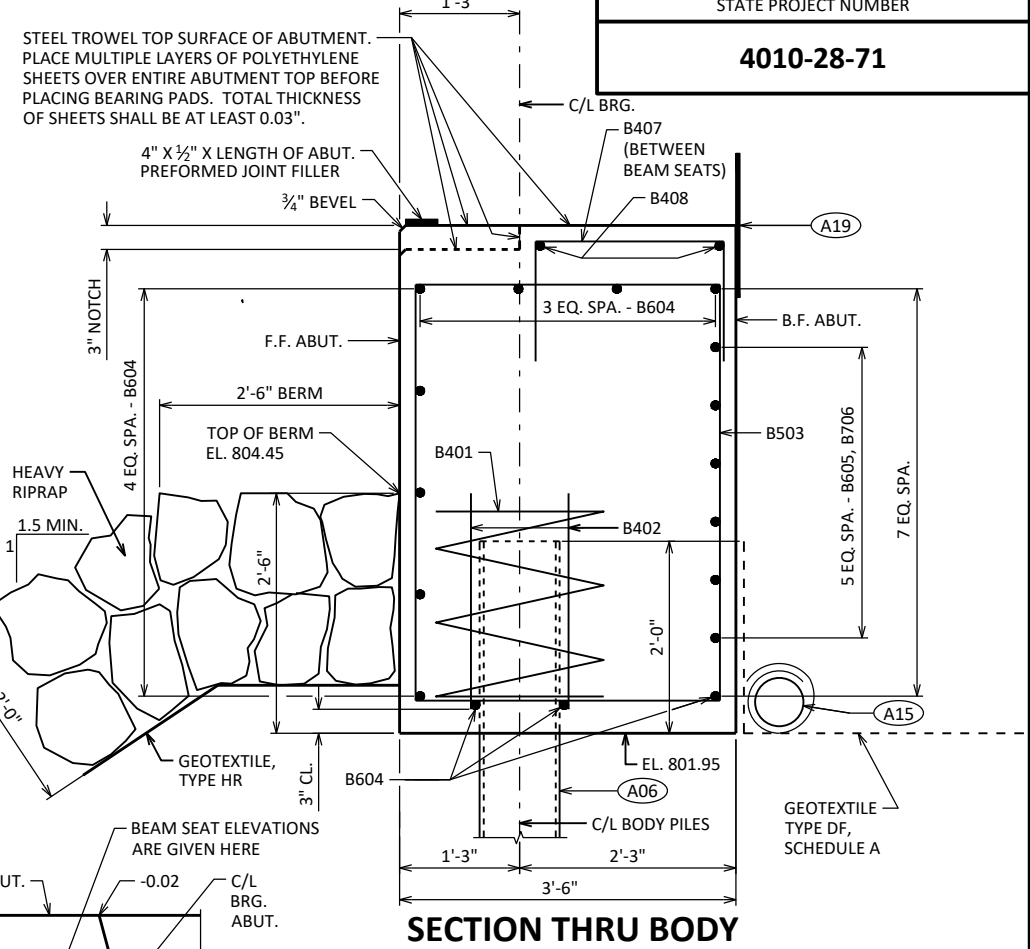
ELEVATION LOOKING EAST @ F.F. ABUT.



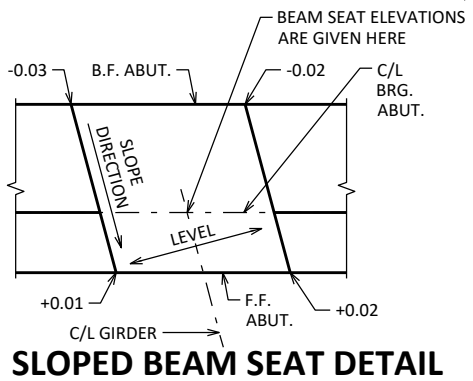
PLAN



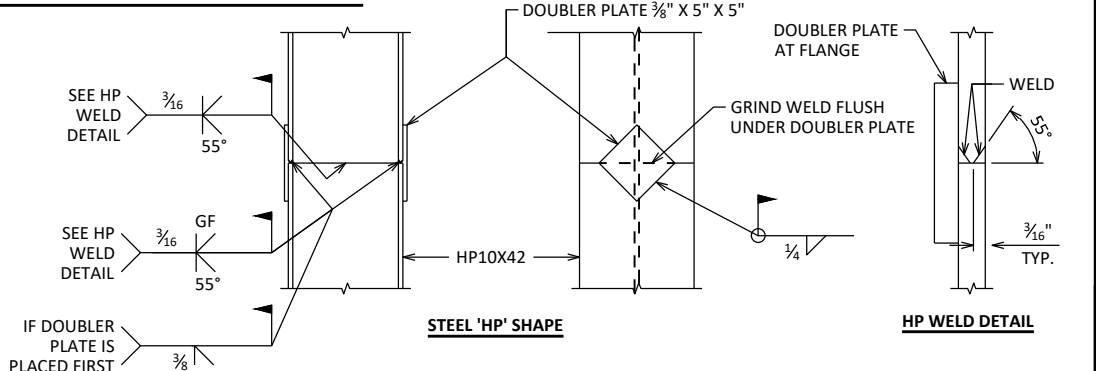
PILE PLAN



SECTION THRU BODY



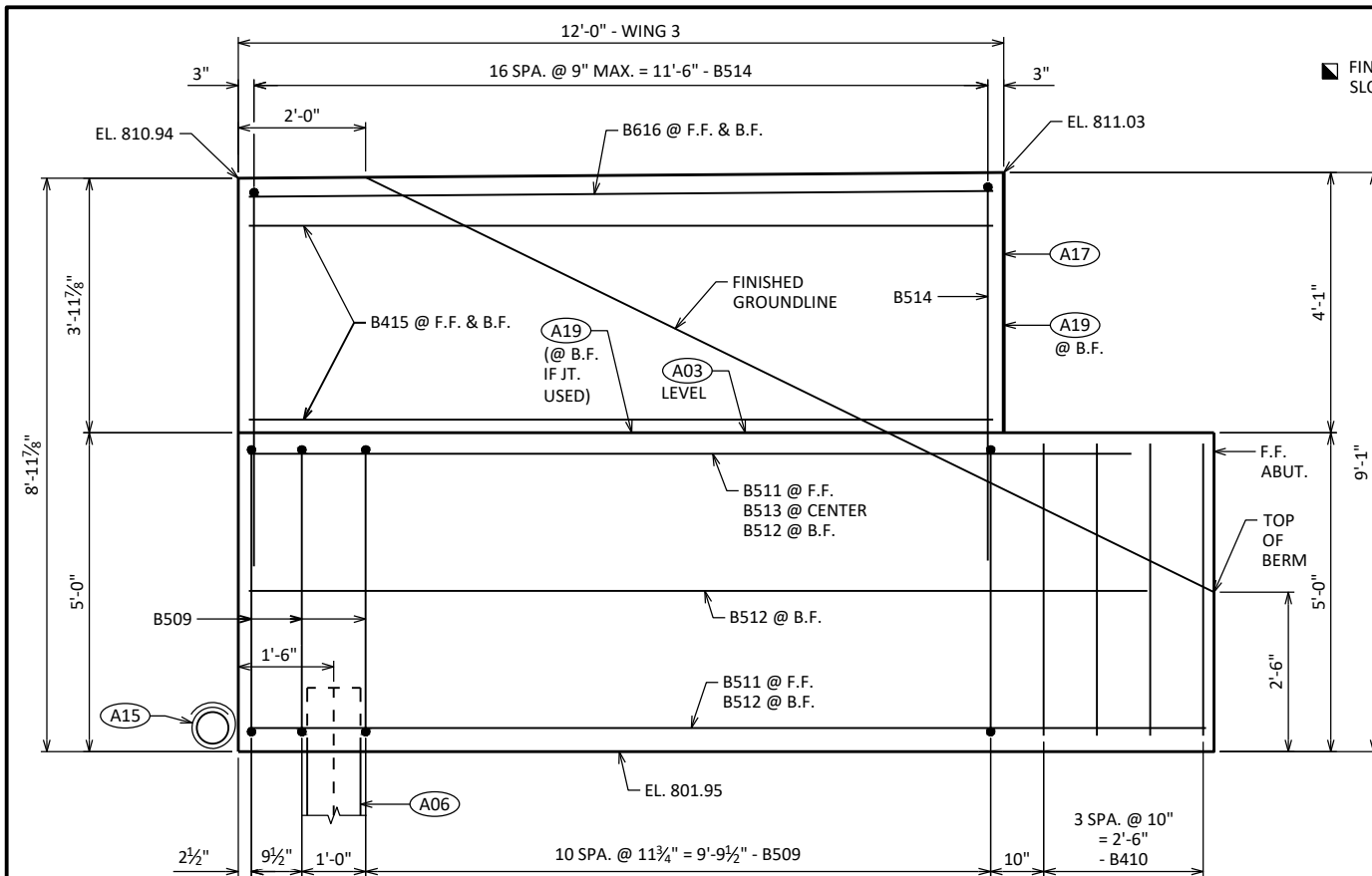
SLOPED BEAM SEAT DETAIL



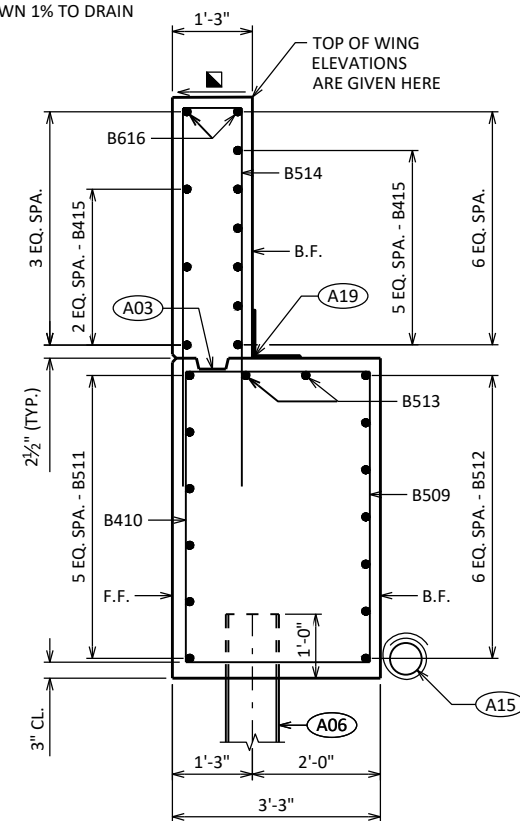
'HP' PILE DETAILS

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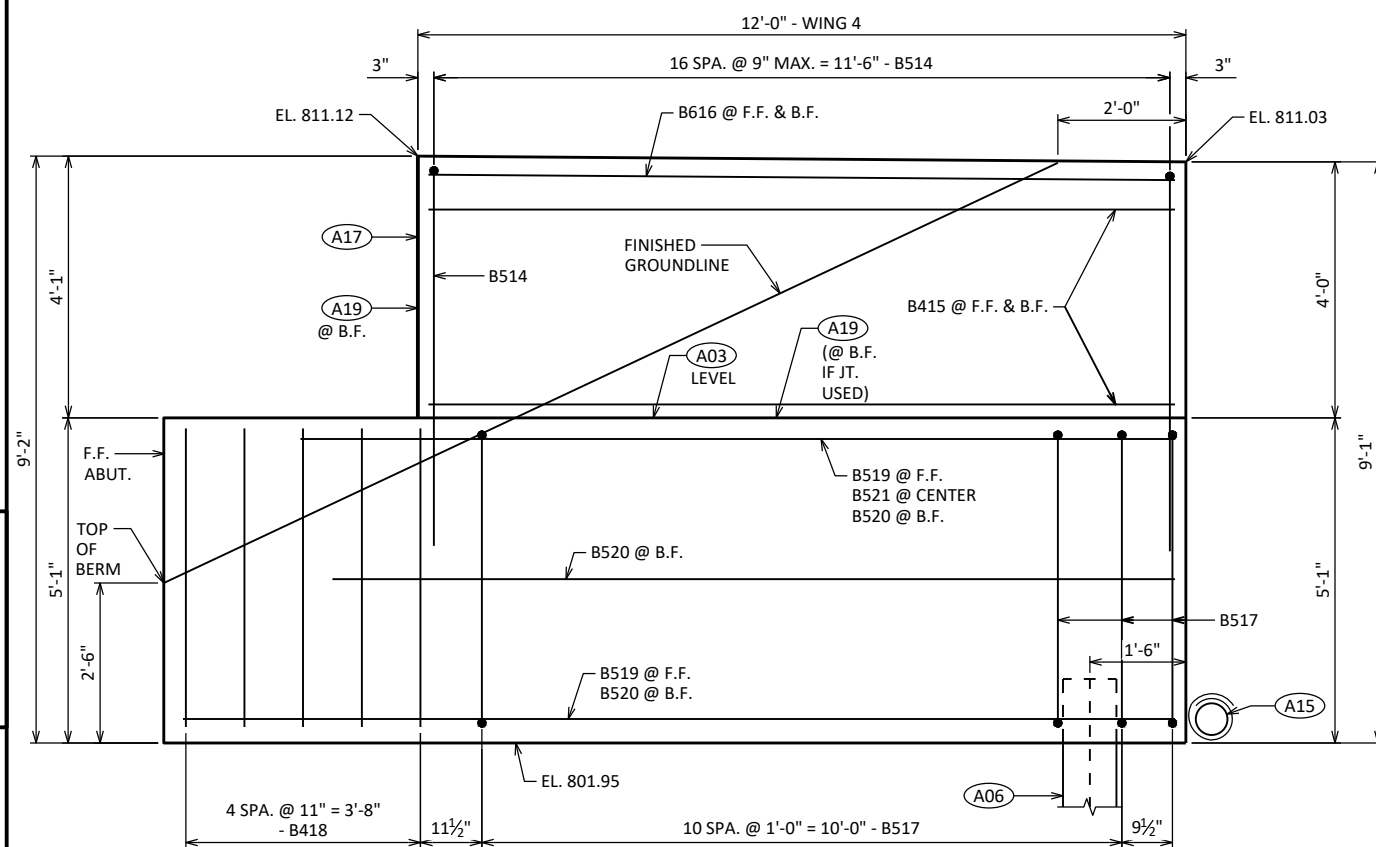
STATE PROJECT NUMBER			
4010-28-71			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322		DRAWN BY JPH	PLANS CK'D VS
EAST ABUTMENT		SHEET 6 193	



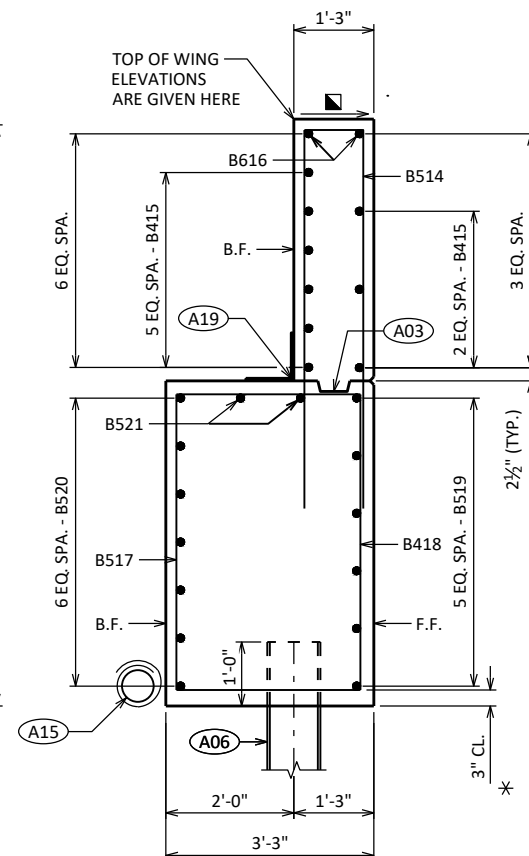
WING 3 ELEVATION LOOKING AT F.F. WING



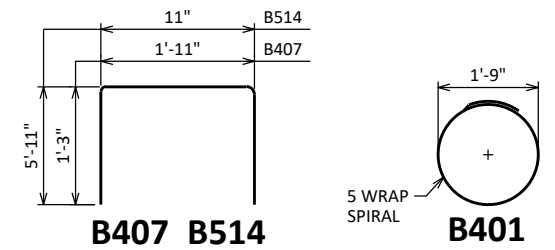
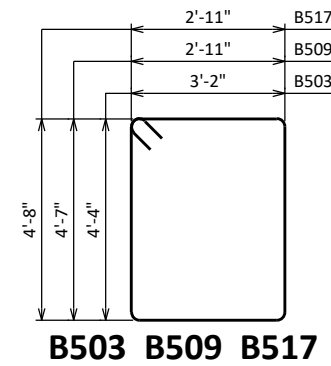
WING 3 SECTION



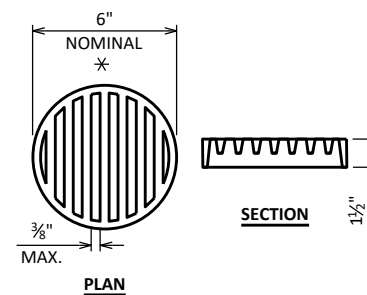
WING 4 ELEVATION LOOKING AT F.F. WING



WING 4 SECTION



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RODENT SHIELD DETAIL

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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
		DRAWN BY JPH	PLANS CK'D VS
EAST ABUTMENT DETAILS		SHEET 7 194	

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

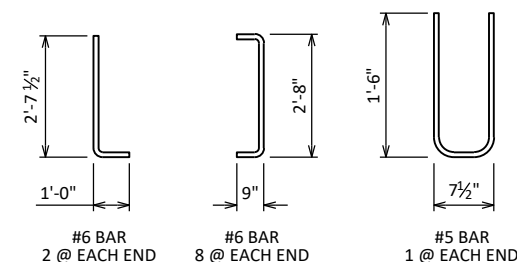
STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

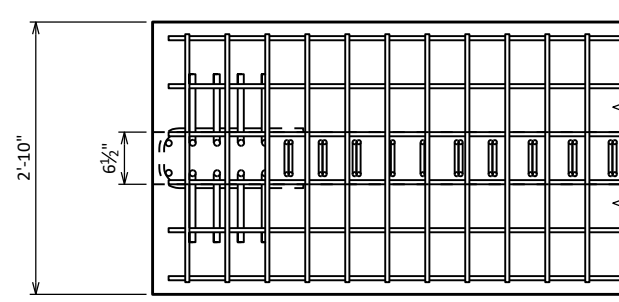
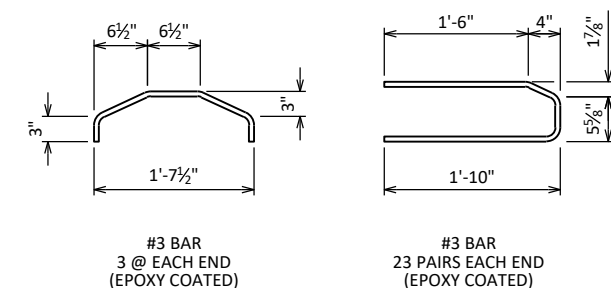
AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

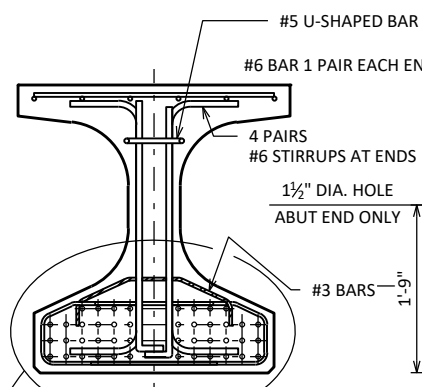
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



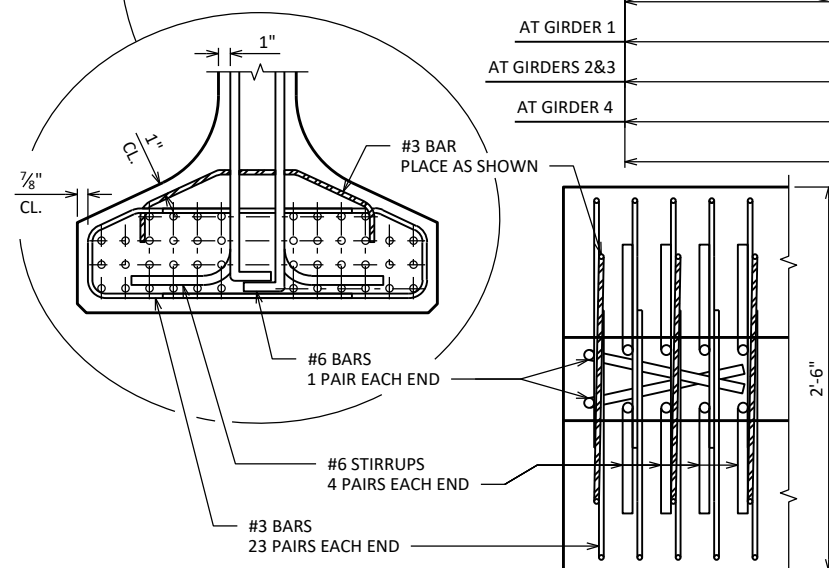
HOLE SPACING DIMENSIONS FOR
THE STEEL DIAPHRAGMS TO
GIRDER WEB CONNECTIONS.
ALSO SEE "SUPERSTRUCTURE PLAN"
SHEET FOR MORE DETAILS



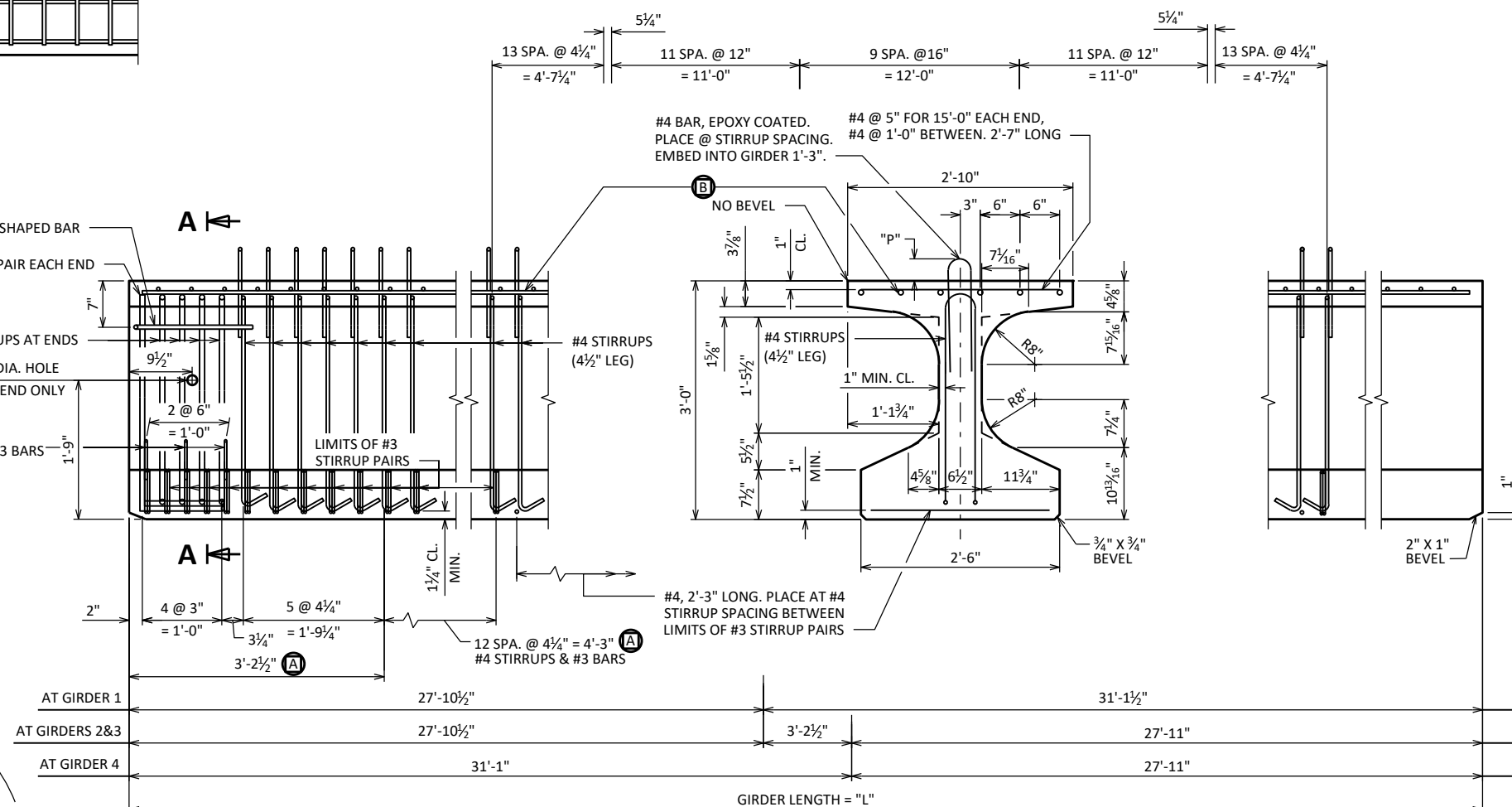
TOP FLANGE



SECTION A-A



BOTTOM FLANGE



SIDE VIEW & TYPICAL SECTION IN SPAN

- (A)** DETAIL TYP. AT EACH END
(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

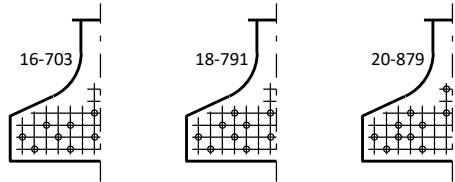
* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

[illegible]

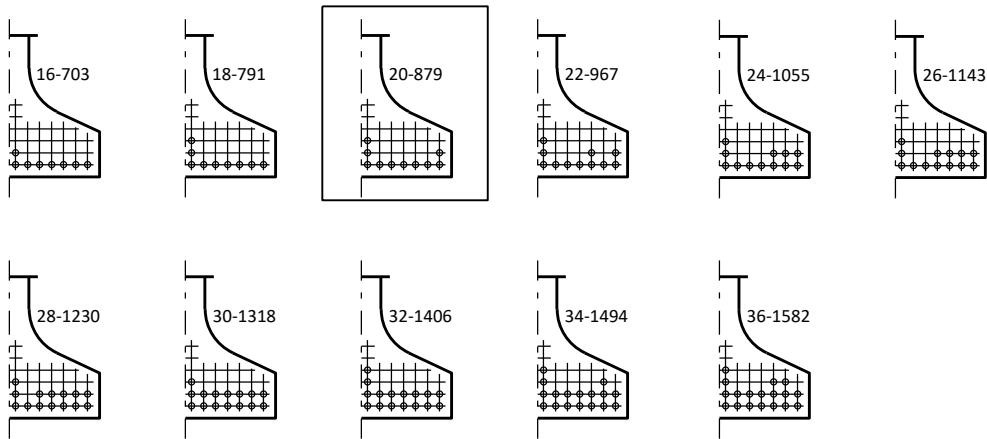
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-59-322	
	DRAWN BY	JPH	PLANS CK'D VS
36W" PRESTRESSED GIRDER DETAILS 1		SHEET 8	
		195	

SCALE = 300



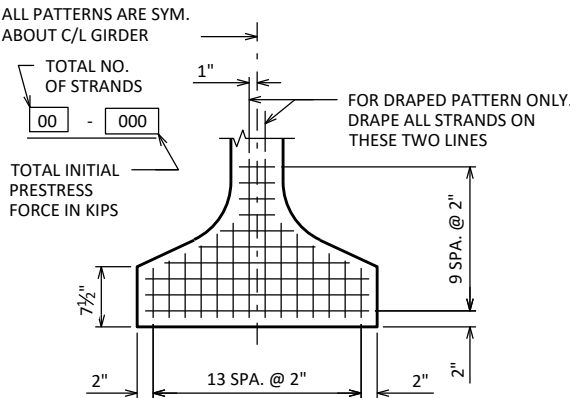
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY
TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

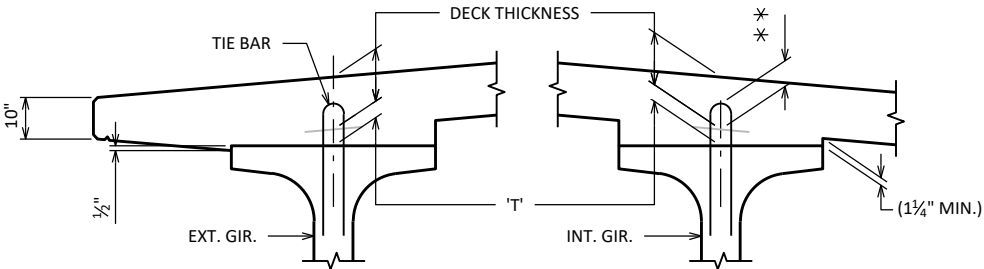


ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



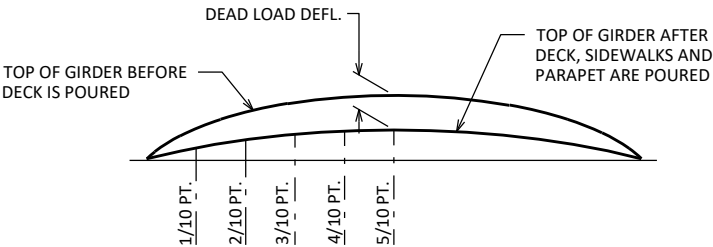
DECK HAUNCH DETAIL

IF 1 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

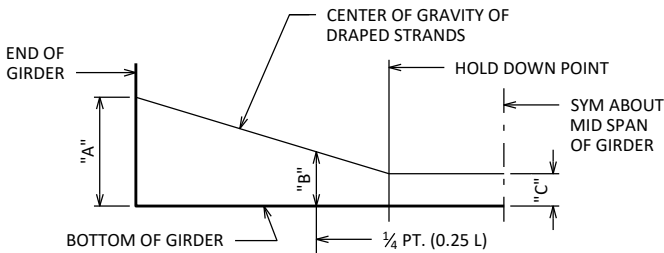
- TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
- + DEAD LOAD DEFLECTION
- DECK THICKNESS
- = HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3.0" WAS USED FOR COMPUTING THE QUANTITY "CONCRETE MASONRY BRIDGES" FOR THE SUPERSTRUCTURE.



DEAD LOAD DEFLECTION DIAGRAM

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.



DRAPED STRAND PROFILE

SPAN	CAMBER (IN.) *
1	1.34

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
36W" PRESTRESSED GIRDER DETAILS 2		SHEET 9	196

SCALE = 2.00

NOTES

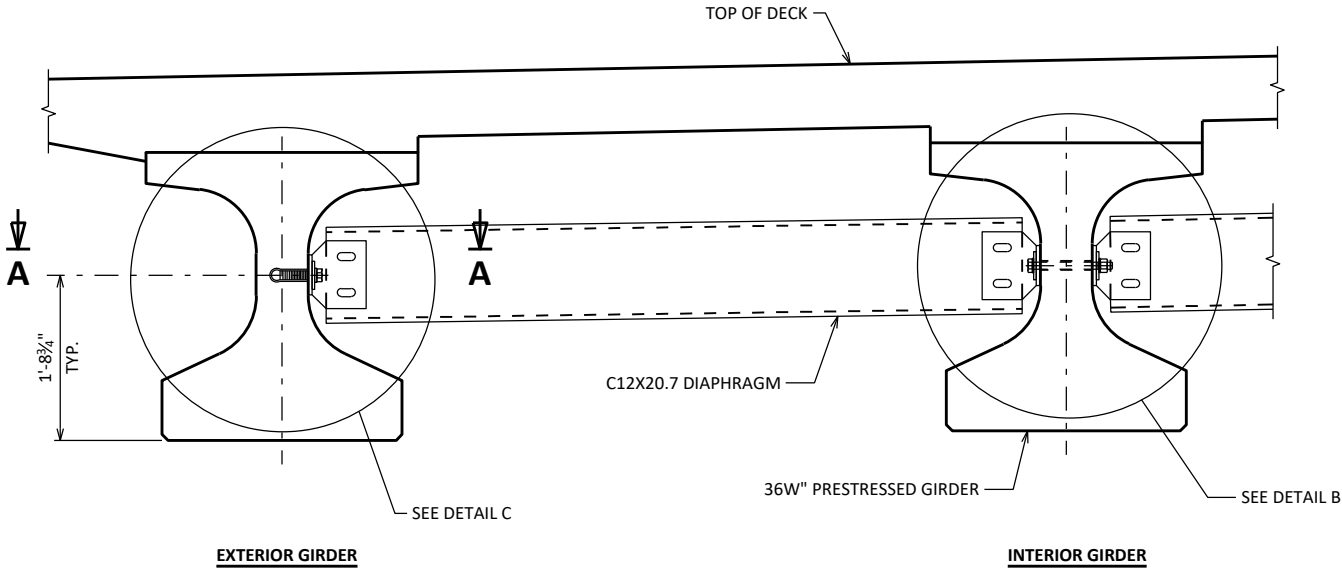
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-59-322", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

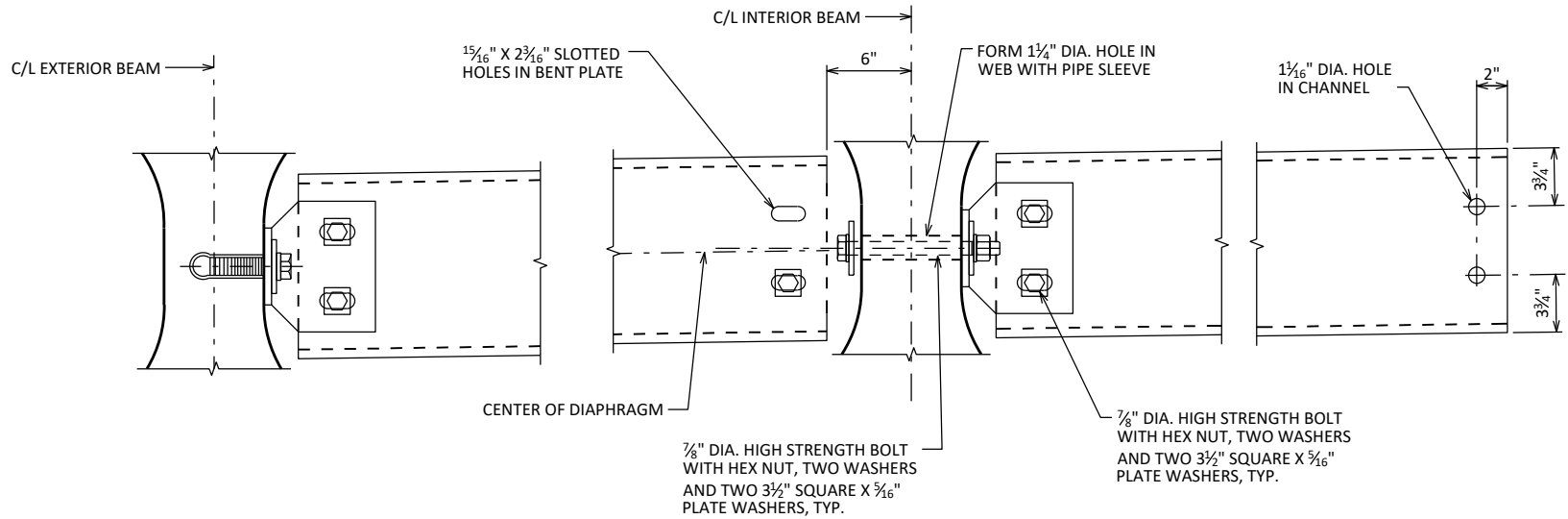
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



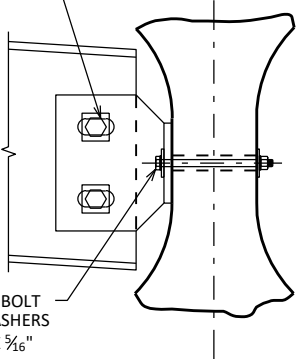
PART TRANSVERSE SECTION AT DIAPHRAGM



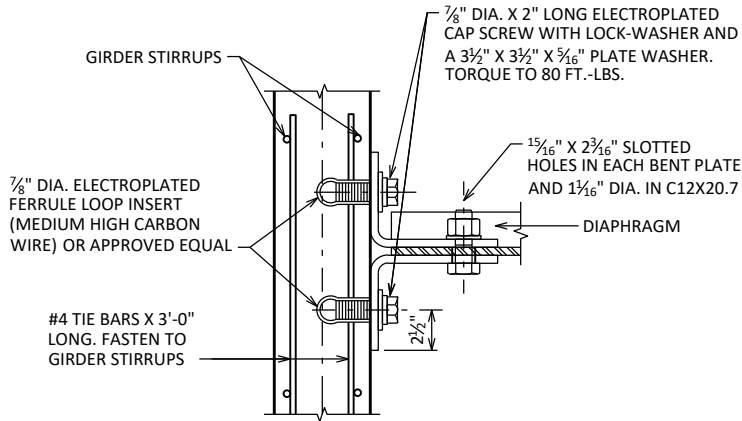
DETAIL C

DETAIL B

7/8" DIA. HIGH STRENGTH BOLT WITH HEX NUT, TWO WASHERS AND TWO 3 1/2" SQUARE X 5/16" PLATE WASHERS, TYP.

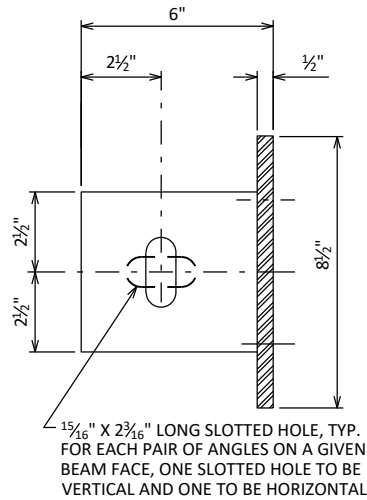


SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM

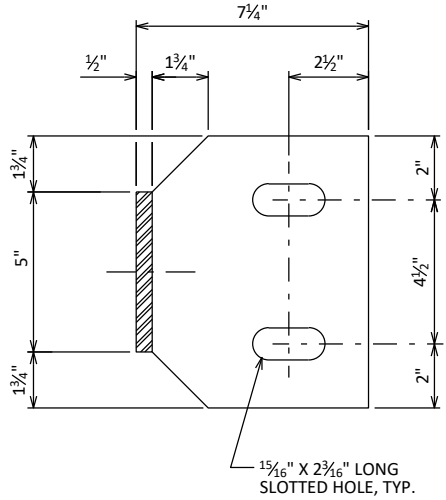


SECTION A-A

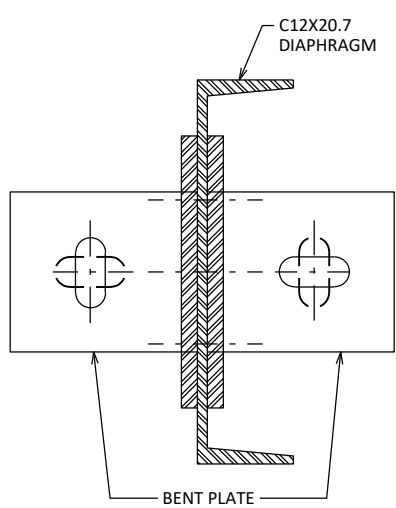
(FOR EXTERIOR ATTACHMENT)



BEAM FACE



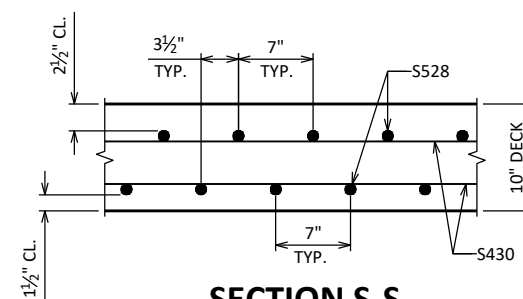
DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

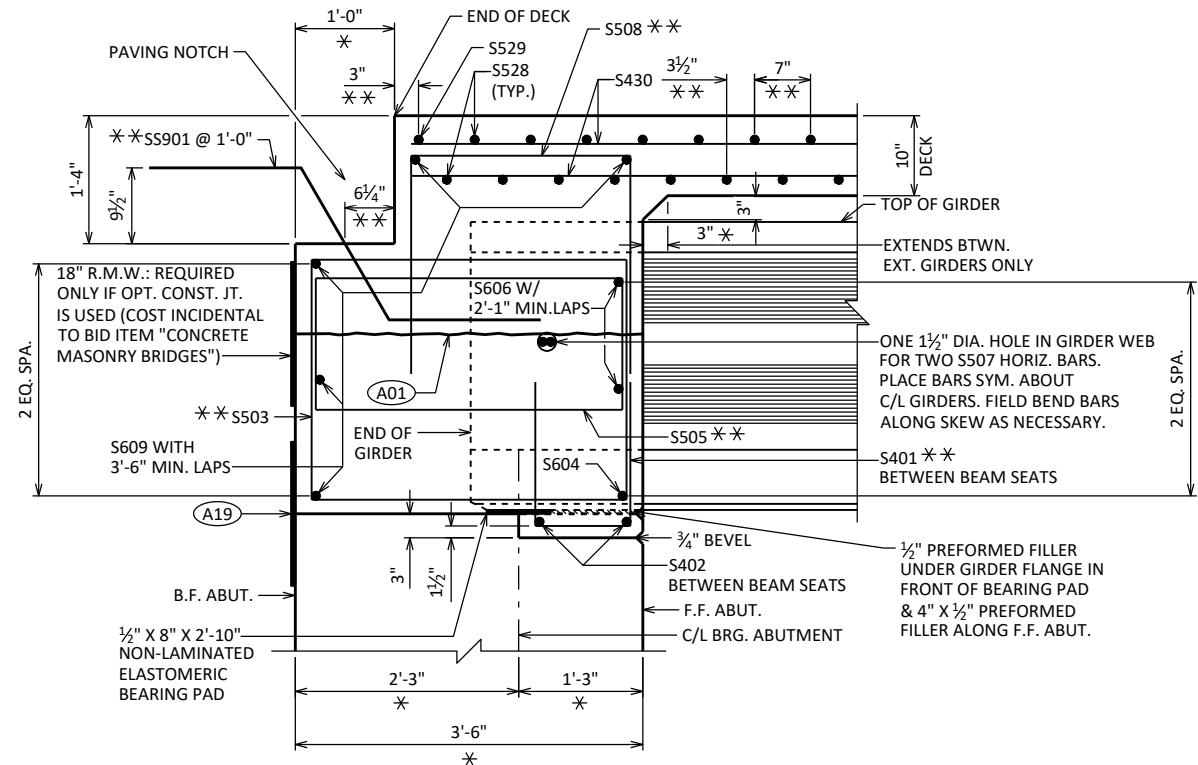
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
STEEL DIAPHRAGM		SHEET 10	197

SCALE = 2.00

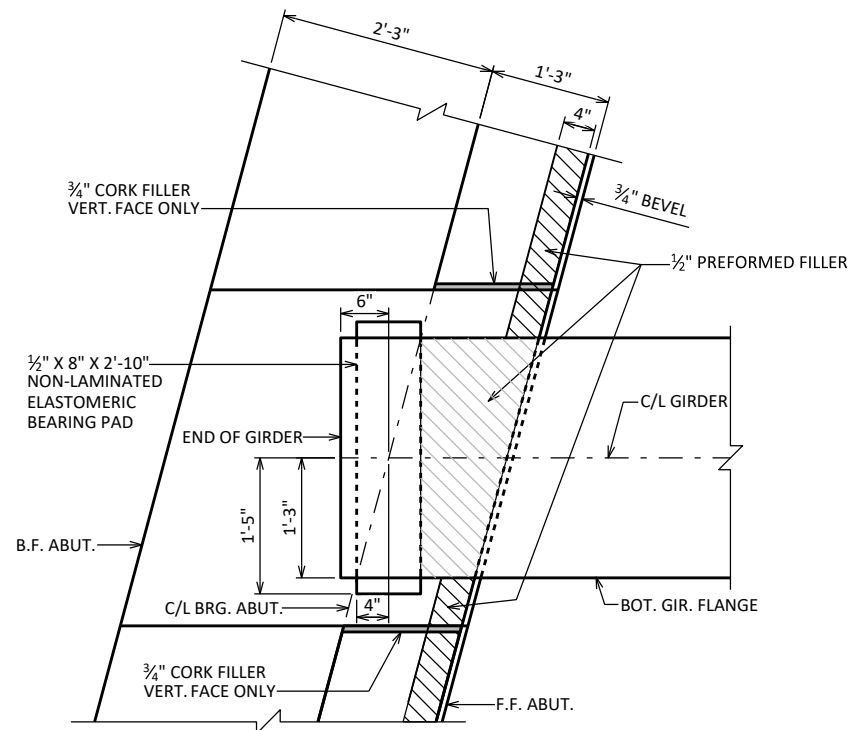


NOTE:
FOR THE SECTIONS THRU ABUTMENT
DIAPHRAGMS AND CORNER DETAILS
SEE THE 'ABUTMENT DIAPHRAGM' SHEETS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-59-322	
		DRAWN BY	PLANS CK'D
		JPH	VS
SUPERSTRUCTURE CROSS SECTIONS		SHEET 11	
		198	



**CROSS SECTION THRU ABUTMENT
DIAPHRAGMS BETWEEN EXTERIOR GIRDERS**



PLAN VIEW AT ABUTMENTS

* DIMENSION IS
TAKEN PERPENDICULAR
TO C/L BRG ABUTMENTS.

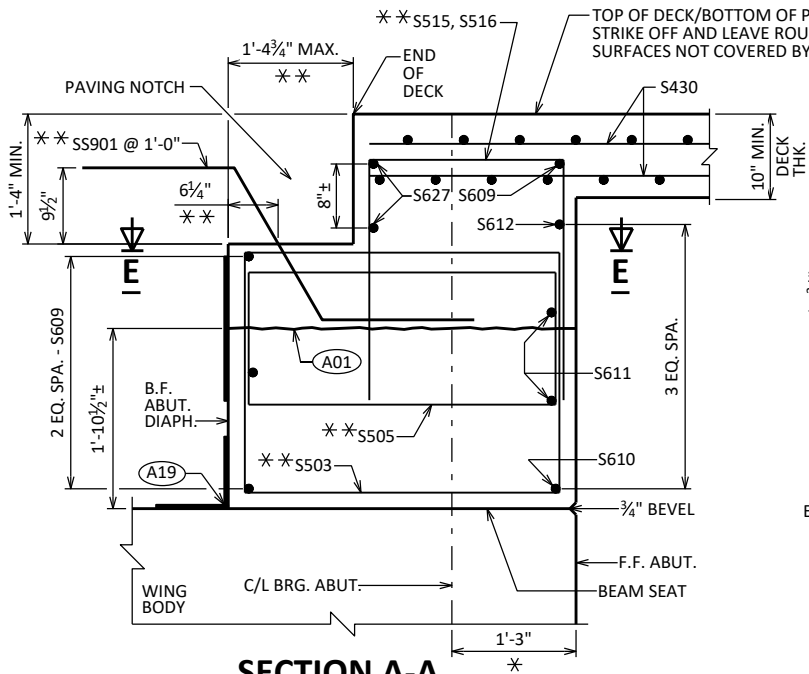
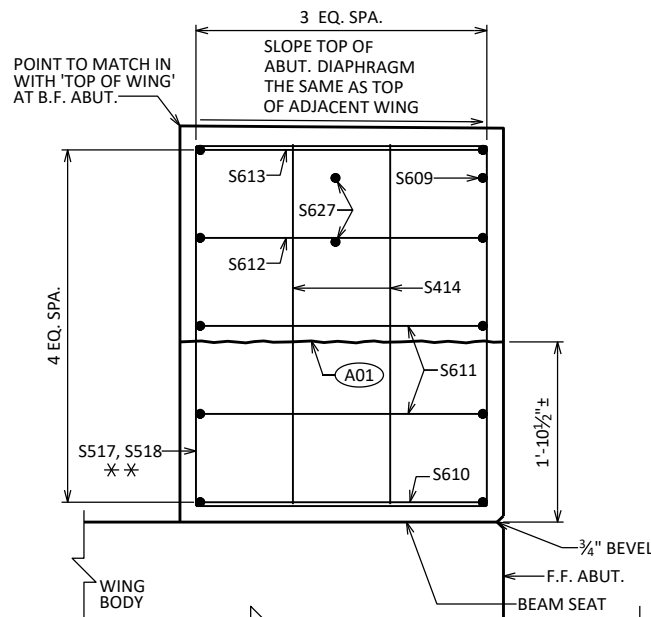
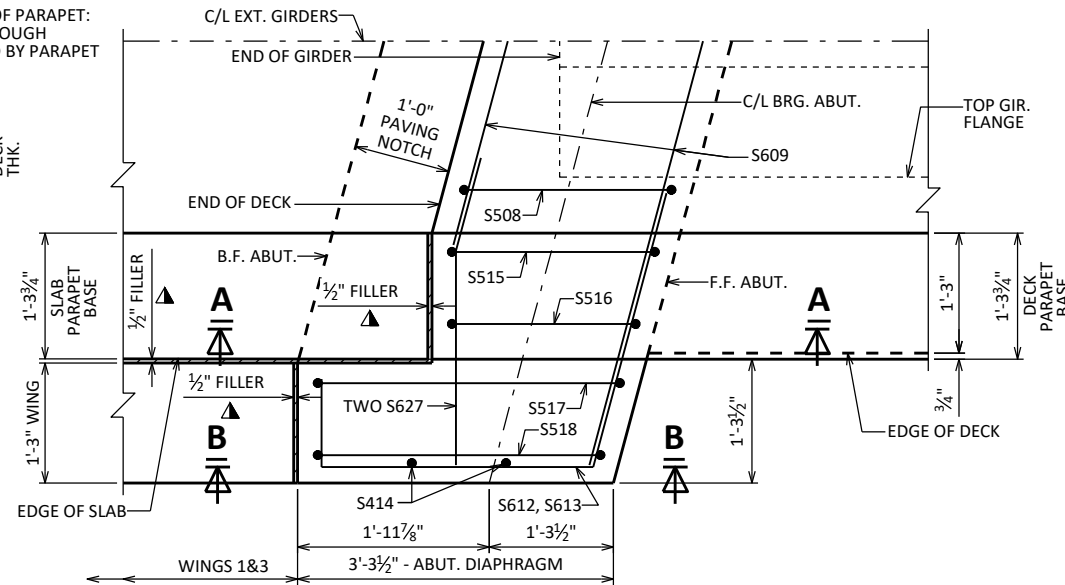
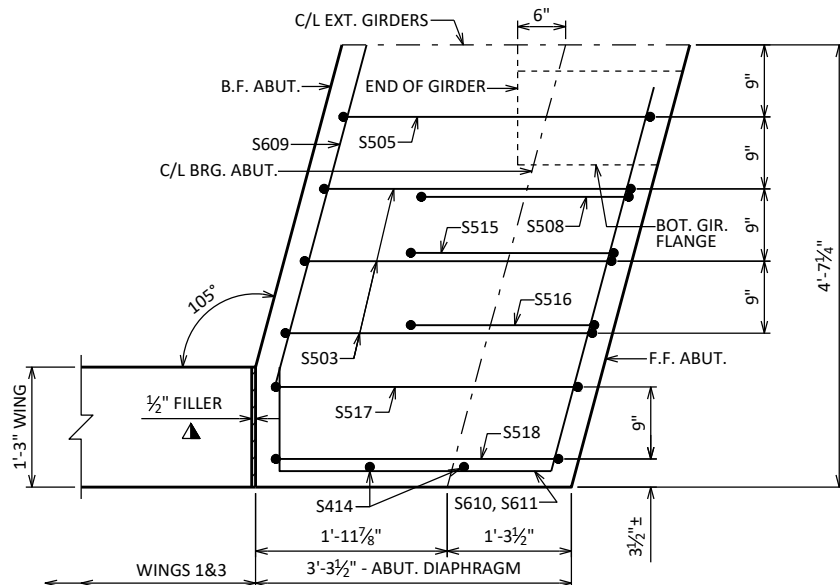
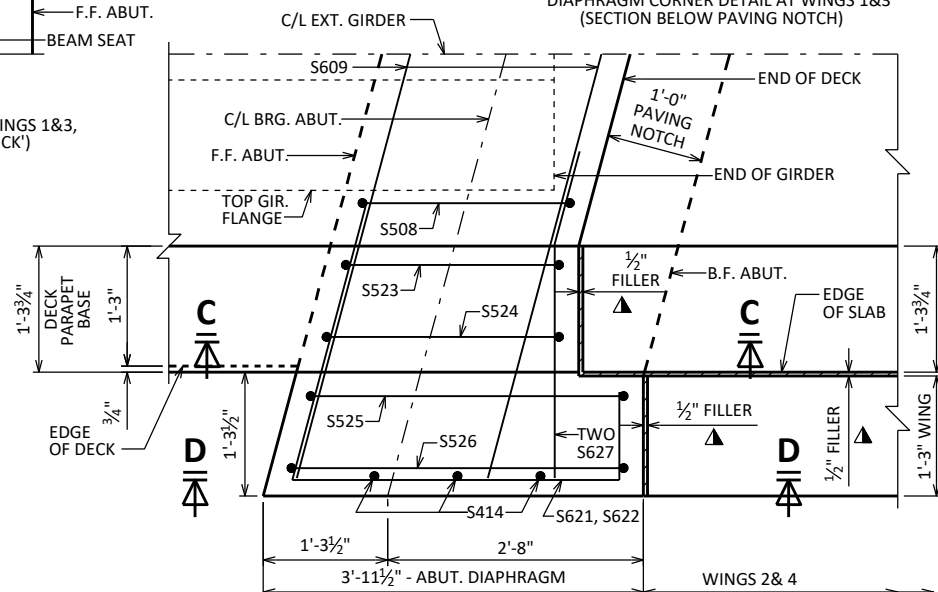
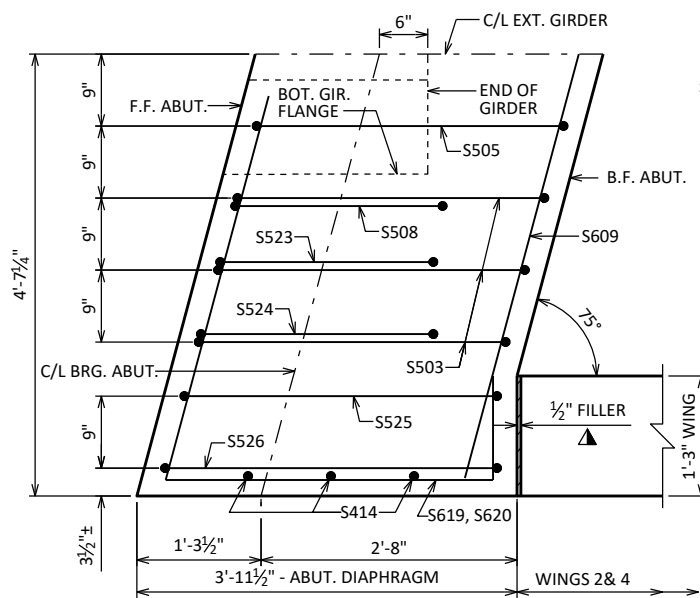
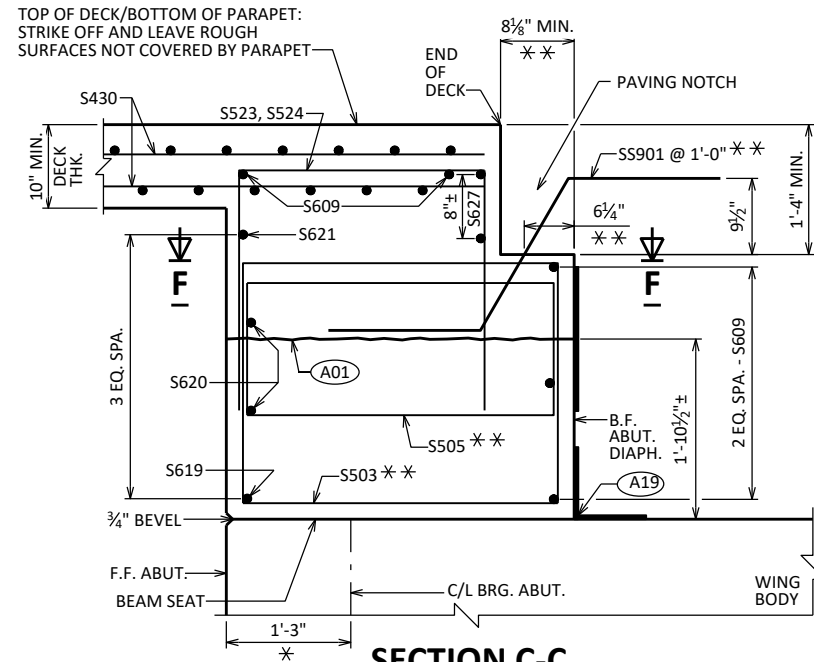
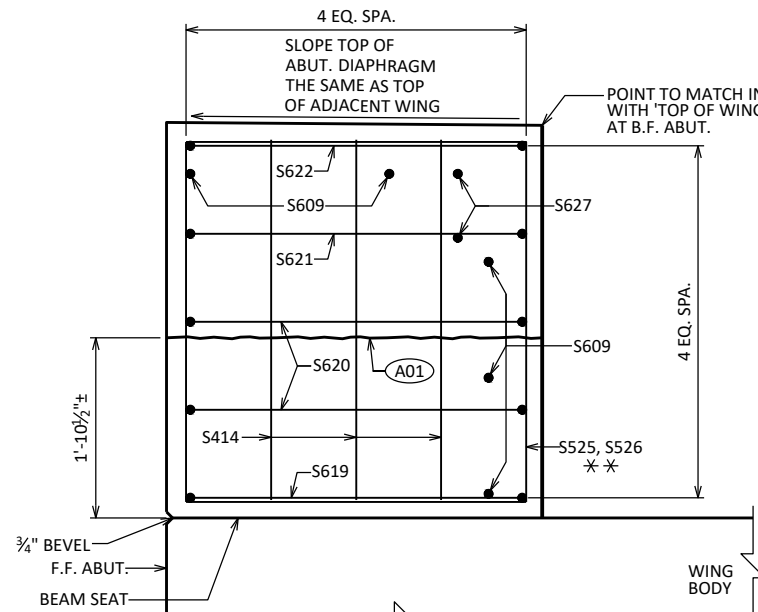
* * DIMENSION IS TAKEN PARALLEL TO C/L GIRDERS.
BARS PLACED PARALLEL TO C/L GIRDERS AND
SPACED PERPENDICULAR TO C/L GIRDERS

(A01) OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW
TOP OF GIRDER. IF USED, DECK POUR
MUST BE WITHIN 2 WEEKS FROM THE TIME
OF THE DIAPHRAGM POUR.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NOTE:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET
FOR THE 'BILL OF BARS' AND BAR DETAILS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
ABUTMENT DIAPHRAGM DETAILS		SHEET 12 199	

**SECTION A-A**SECTION THRU ABUTMENT DIAPHRAGM AT WINGS 1&3,
AT GIRDER EXTERIORS (UNDER DECK)**SECTION B-B**SECTION THRU ABUTMENT DIAPHRAGM AT WINGS 1&3,
AT GIRDER EXTERIORS (OUTSIDE 'EDGE OF DECK')**ABUTMENT DIAPHRAGM CORNER DETAIL -
PLAN VIEW AT WINGS 1&3 GIRDER EXTERIOR CORNERS****SECTION E-E**DIAPHRAGM CORNER DETAIL AT WINGS 1&3
(SECTION BELOW PAVING NOTCH)**ABUTMENT DIAPHRAGM CORNER DETAIL -
PLAN VIEW AT WINGS 2&4 GIRDER EXTERIOR CORNERS****SECTION F-F**DIAPHRAGM CORNER DETAIL AT WINGS 2&4
(SECTION BELOW PAVING NOTCH)**SECTION C-C**SECTION THRU ABUTMENT DIAPHRAGM AT WINGS 2&4,
AT GIRDER EXTERIORS (UNDER DECK)**SECTION D-D**SECTION THRU ABUTMENT DIAPHRAGM AT WINGS 2&4,
AT GIRDER EXTERIORS (OUTSIDE 'EDGE OF DECK')* DIMENSION IS
TAKEN PERPENDICULAR
TO C/L BRG. ABUTMENTS.* * DIMENSION IS TAKEN PARALLEL TO C/L GIRDERS.
BARS PLACED PARALLEL TO C/L GIRDERS AND
SPACED PERPENDICULAR TO C/L GIRDERS(A01) OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW
TOP OF GIRDER. IF USED, DECK POUR
MUST BE WITHIN 2 WEEKS FROM THE TIME
OF THE DIAPHRAGM POUR.(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING
SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.NOTE:
SEE "SUPERSTRUCTURE BAR DETAILS" SHEET
FOR THE 'BILL OF BARS' AND BAR DETAILS.▲ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER
WITH NON-STAINING, GRAY AND NON-BITUMINOUS JOINT SEALER.
(1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
ABUTMENT DIAPHRAGM CORNER DETAILS		SHEET 13 — 200 —	

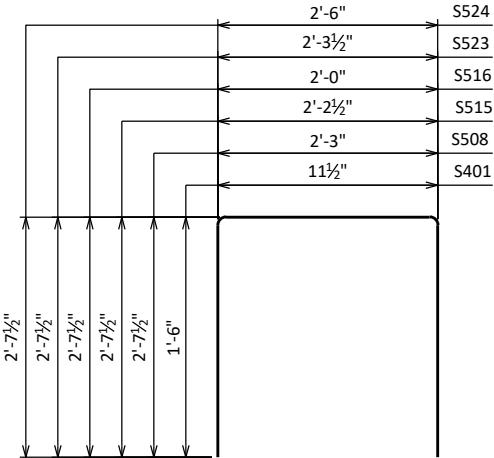
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

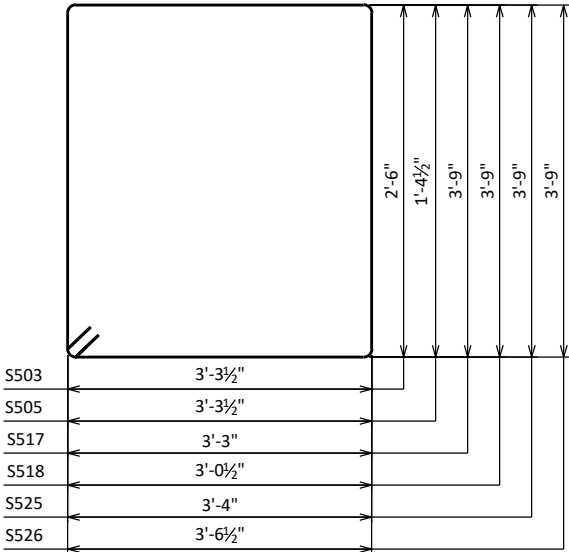
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	LOCATION
S401	X	54	3'-9"	X	ABUT. DIAPH.-F.F.-BOT.-VERT.-BTWN. BEAM SEATS
S402	X	12	8'-5"		ABUT. DIAPH.-F.F.-BOT.-HORIZ.-BTWN. BEAM SEATS
S503	X	90	12'-3"	X	ABUT. DIAPH.-VERT.-UNDER PAVING NOTCHES ONLY
S604	X	6	9'-6"		ABUT DIAPH.-F.F.-BOT.-HORIZ.-BTWN. GIRS. ONLY
S505	X	16	10'-0"	X	ABUT. DIAPH.-VERT.-UNDER GIR. TOP FLANGES
S606	X	24	6'-10"		ABUT DIAPH.-F.F.-HORIZ.-BTWN. GIRS. ONLY
S507	X	16	6'-0"		ABUT DIAPH.-HORIZ.-THRU. GIRDERS
S508	X	82	7'-3"	X	ABUT. DIAPH/DECK-VERT.-BTWN. PARAPETS ONLY
S609	X	20	25'-0"		ABUT. DIAPH. B.F. & DECK-HORIZ.
S610	X	2	6'-9"	X	ABUT. DIAPH.-BOT.-HORIZ.-AT WINGS 1&3 GIR. EXT. ONLY
S611	X	4	7'-9"	X	ABUT. DIAPH.-HORIZ.-AT WINGS 1&3 GIR. EXT. ONLY
S612	X	2	6'-5"	X	ABUT. DIAPH.-HORIZ.-AT WINGS 1&3 GIR. EXT. ONLY
S613	X	2	4'-10"	X	ABUT. DIAPH.-TOP-HORIZ.-AT WINGS 1&3 GIR. EXT. ONLY
S414	X	10	3'-9"		ABUT. DIAPH.-VERT.-AT ALL FOUR GIR. EXT. CRNRS.
S515	X	2	7'-2"	X	ABUT. DIAPH/DECK-VERT.-AT WINGS 1&3 GIR. EXT. ONLY
S516	X	2	7'-0"	X	ABUT. DIAPH/DECK-VERT.-AT WINGS 1&3 GIR. EXT. ONLY
S517	X	2	14'-8"	X	ABUT. DIAPH.-VERT.-AT WINGS 1&3 GIR. EXT. ONLY
S518	X	2	14'-3"	X	ABUT. DIAPH.-VERT.-AT WINGS 1&3 GIR. EXT. ONLY
S619	X	2	7'-4"	X	ABUT. DIAPH.-BOT.-HORIZ.-AT WINGS 2&4 GIR. EXT. ONLY
S620	X	4	8'-4"	X	ABUT. DIAPH.-HORIZ.-AT WINGS 2&4 GIR. EXT. ONLY
S621	X	2	7'-0"	X	ABUT. DIAPH.-HORIZ.-AT WINGS 2&4 GIR. EXT. ONLY
S622	X	2	5'-5"	X	ABUT. DIAPH.-TOP-HORIZ.-AT WINGS 2&4 GIR. EXT. ONLY
S523	X	2	7'-3"	X	ABUT. DIAPH/DECK-VERT.-AT WINGS 2&4 GIR. EXT. ONLY
S524	X	2	7'-6"	X	ABUT. DIAPH/DECK-VERT.-AT WINGS 2&4 GIR. EXT. ONLY
S525	X	2	14'-10"	X	ABUT. DIAPH.-VERT.-AT WINGS 2&4 GIR. EXT. ONLY
S526	X	2	15'-3"	X	ABUT. DIAPH.-VERT.-AT WINGS 2&4 GIR. EXT. ONLY
S627	X	8	3'-5"	X	ABUT. DIAPH/DECK-TOP-HORIZ.-AT ALL 4 GIR. EXT. CRNRS.
S528	X	205	43'-8"		DECK-TOP & BOTTOM-HORIZ.-TRANS.
S529	X	2	42'-9"		DECK-TOP-HORIZ.-TRANS.-AT ENDS OF DECK ONLY
S430	X	254	31'-0"		DECK-TOP & BOTTOM-HORIZ.-LONGIT.
S431	X	190	4'-9"	X	DECK-TOP-VERT.-TRANS.-AT EDGES OF DECK-BTWN. ABUT
S532	X	182	4'-5"	X	PARAPETS/DECK-VERT.-TRANS.
S533	X	182	6'-8"	X	PARAPETS-VERT.-TRANS.
S534	X	32	31'-1"		PARAPETS-BOTH FACES-HORIZ.-LONGIT.

SS901		84	5'-0"	X	APPROACH SLAB/ABUT. DIAPH.-VERT.-AT PAVING NOTCHES
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STAINLESS STEEL REINFORCEMENT



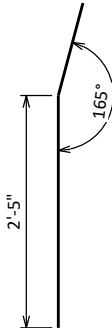
S401 S508 S515
S516 S523 S524



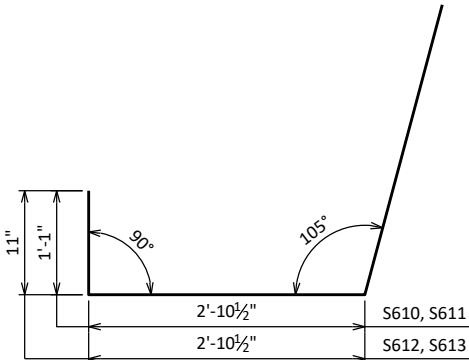
S503 S505 S517 S518 S525 S526
(STIRRUP BARS)

STATE PROJECT NUMBER

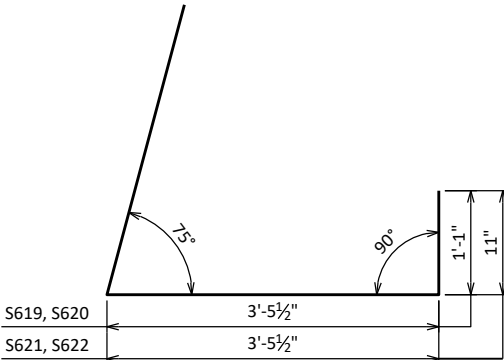
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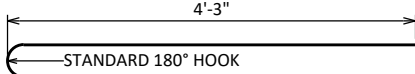
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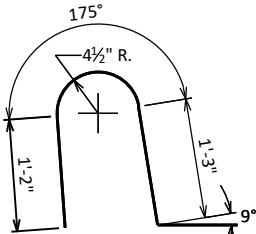
S610 S611 S612 S613



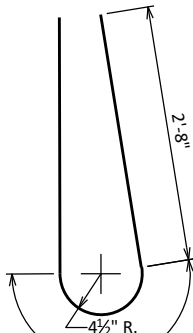
S619 S620 S621 S622



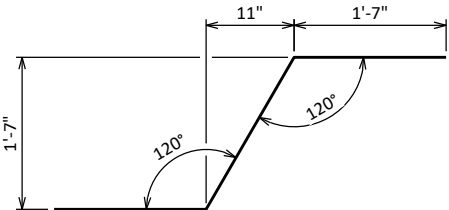
S431



S532



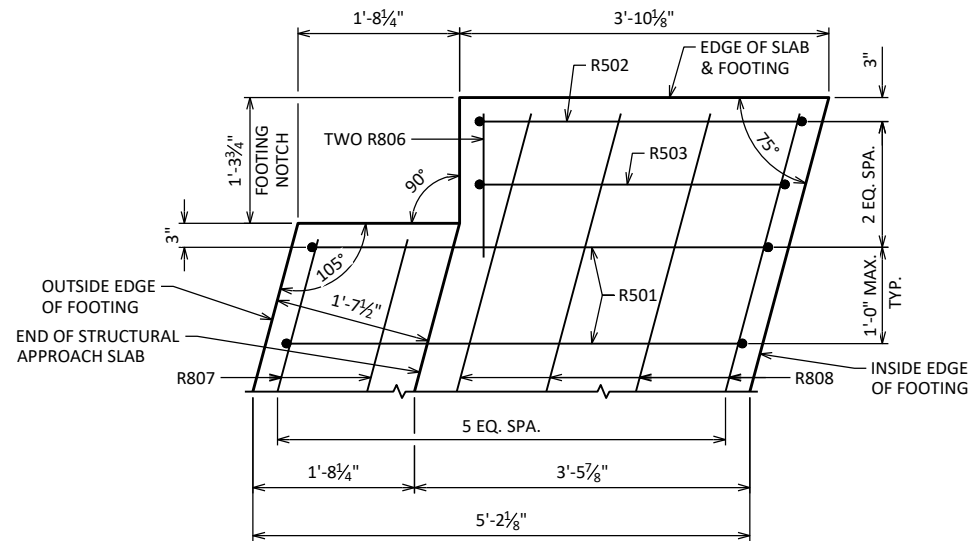
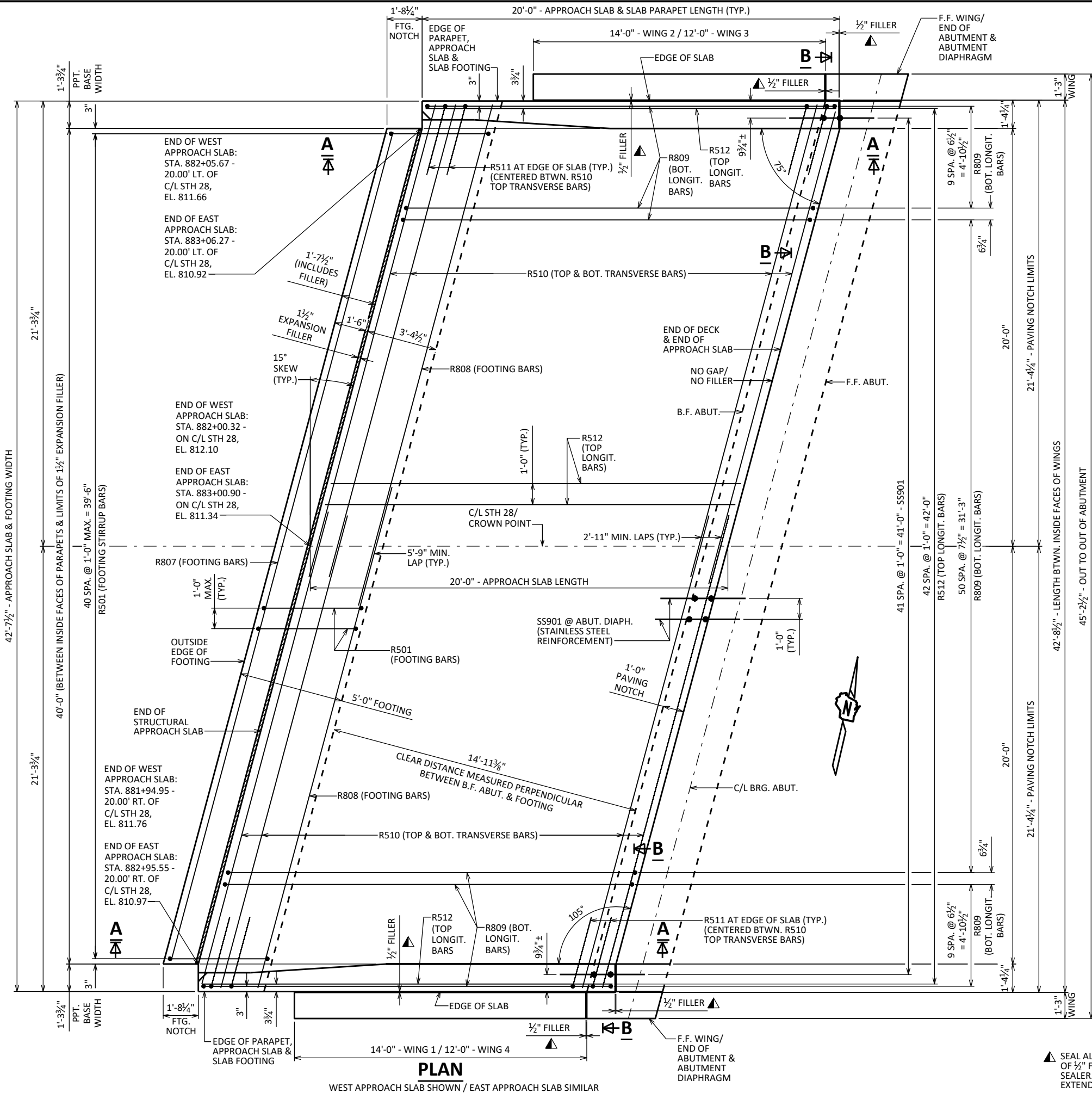
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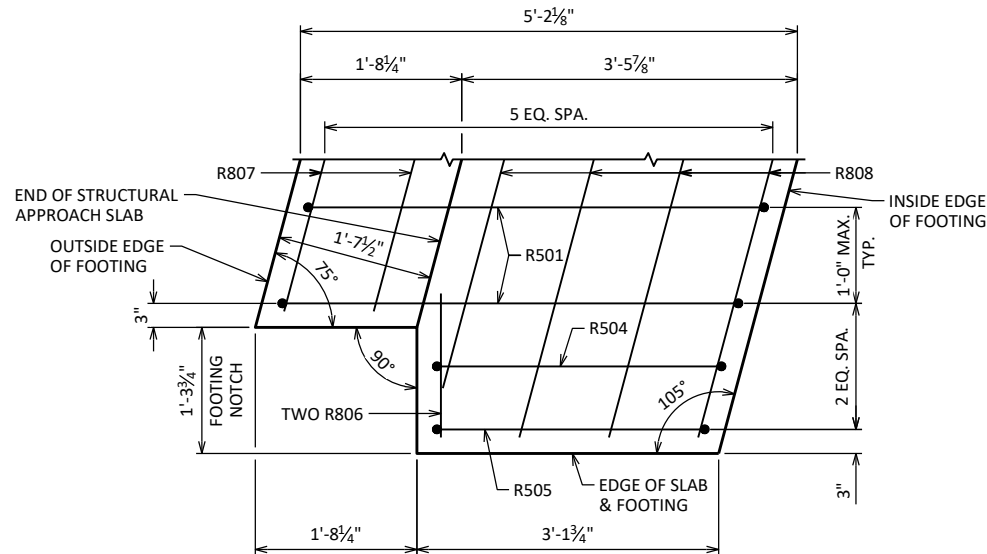
SS901

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
SUPERSTRUCTURE BAR DETAILS		SHEET 15 202	

SCALE = 2



SLAB FOOTING PLAN DETAIL @ NW & SE CORNERS

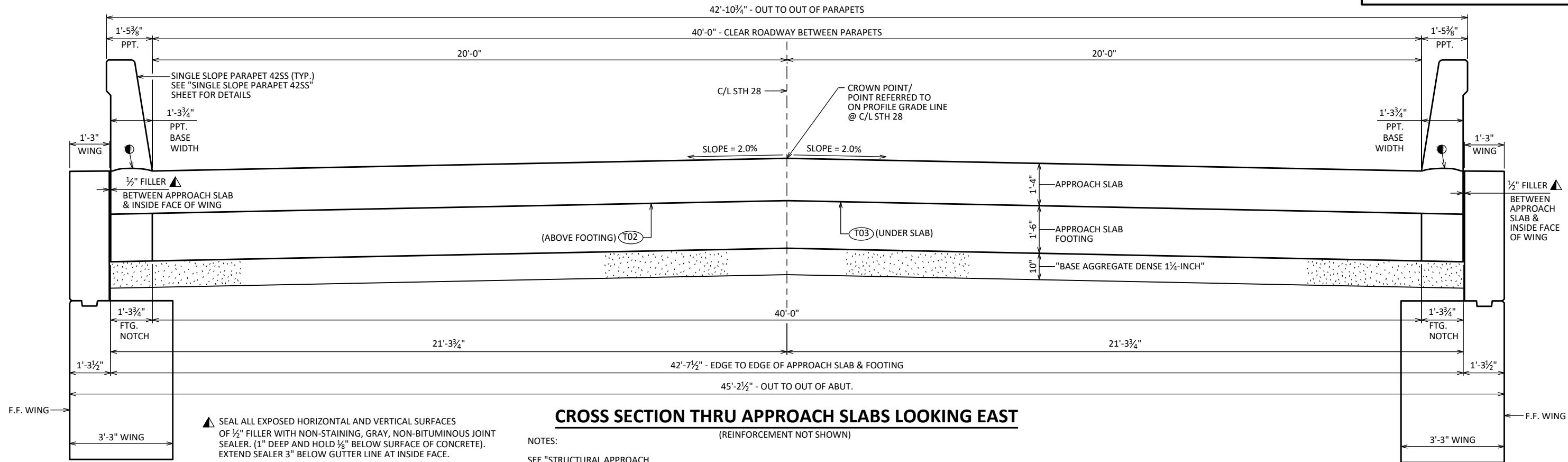


SLAB FOOTING PLAN DETAIL @ SW & NE CORNERS

NOTE:
SEE NEXT SHEET FOR SECTION A-A AND
SECTION B-B CROSS SECTION DETAILS
AT STRUCTURAL APPROACH SLAB

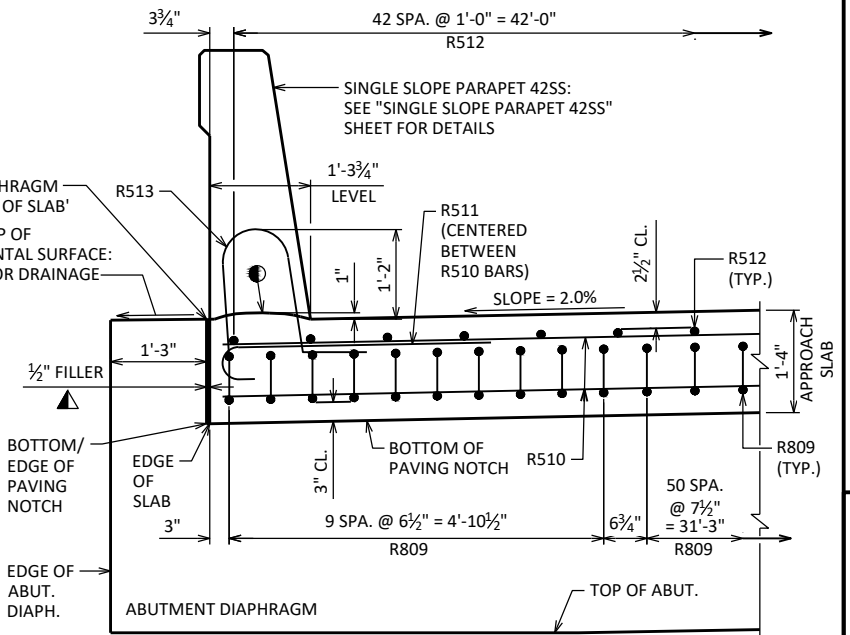
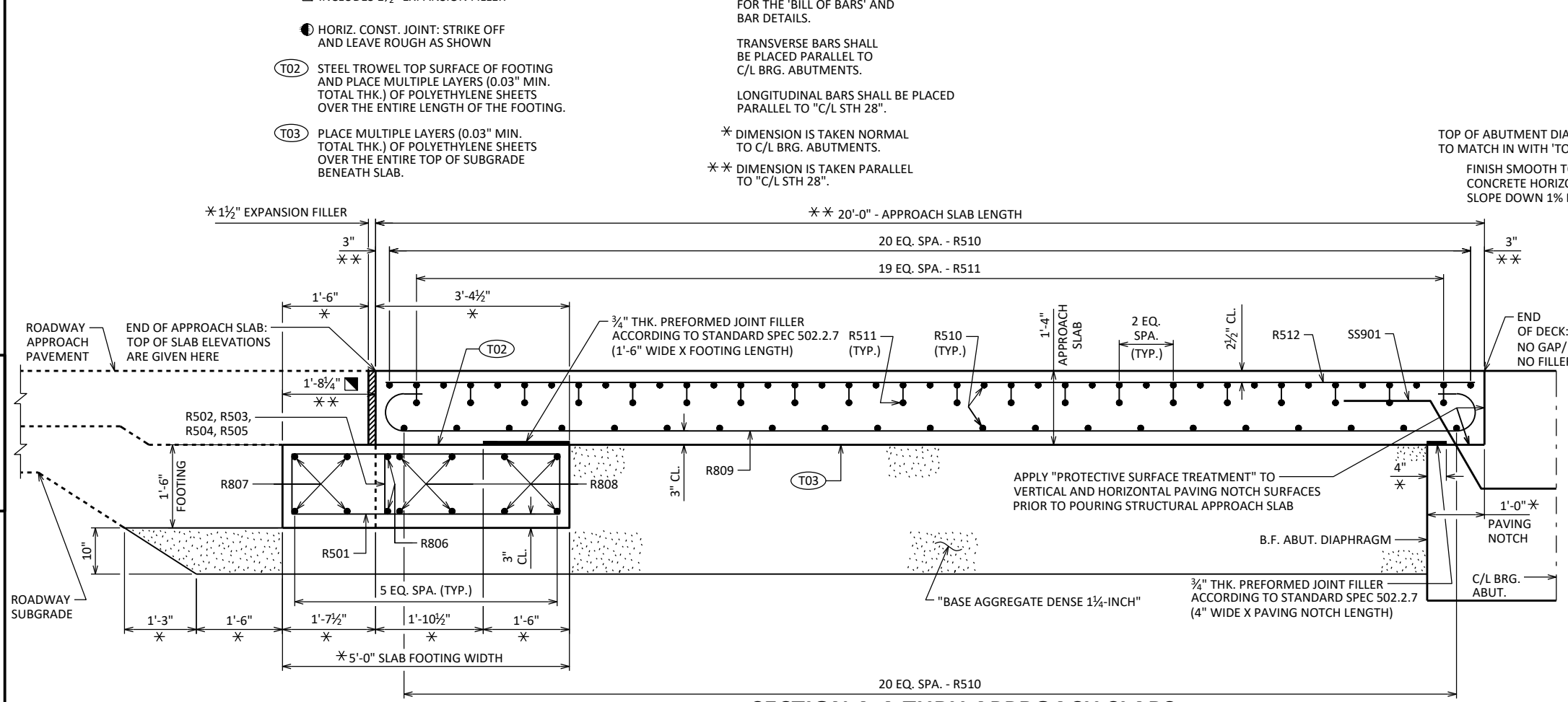
▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES
OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT
SEALER. (1" DEEP AND HOLD 3/8" BELOW SURFACE OF CONCRETE).
EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
STRUCTURAL APPROACH SLAB		SHEET 16 203	

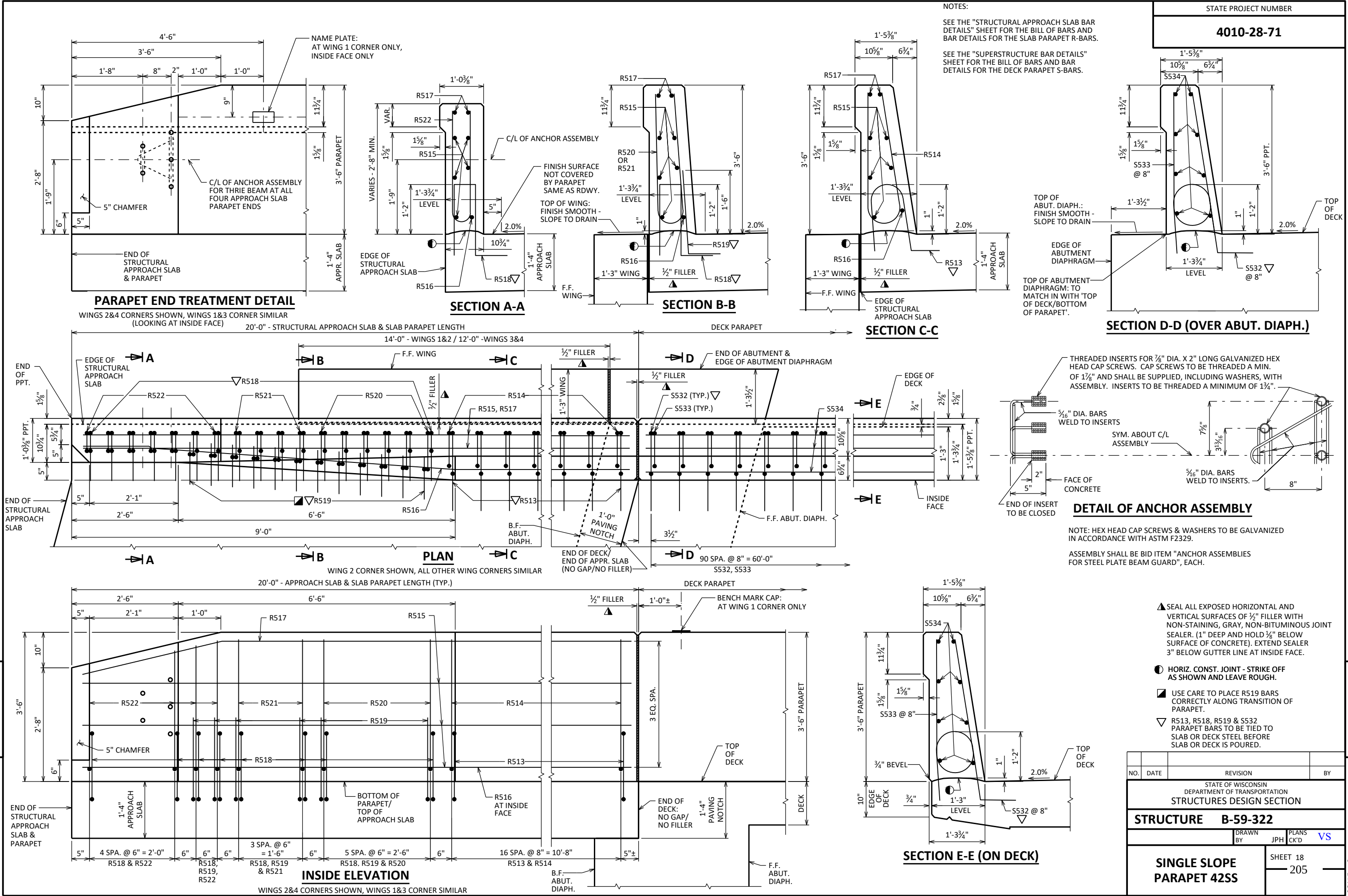


- ▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- INCLUDES 1 1/2" EXPANSION FILLER
- HORIZ. CONST. JOINT: STRIKE OFF AND LEAVE ROUGH AS SHOWN
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

- NOTES:
- SEE "STRUCTURAL APPROACH SLAB BAR DETAILS" SHEET FOR THE 'BILL OF BARS' AND BAR DETAILS.
- TRANSVERSE BARS SHALL BE PLACED PARALLEL TO C/L BRG. ABUTMENTS.
- LONGITUDINAL BARS SHALL BE PLACED PARALLEL TO "C/L STH 28".
- * DIMENSION IS TAKEN NORMAL TO C/L BRG. ABUTMENTS.
- * * DIMENSION IS TAKEN PARALLEL TO "C/L STH 28".



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
STRUCTURAL APPROACH SLAB CROSS SECTIONS		SHEET 17	204



BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

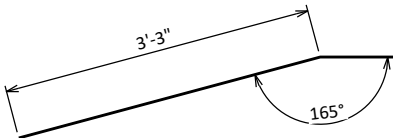
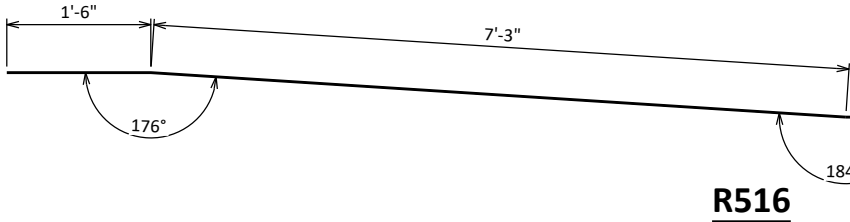
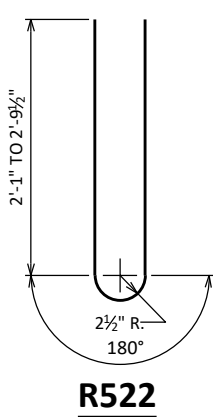
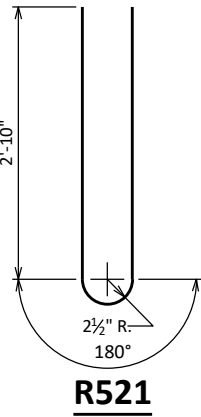
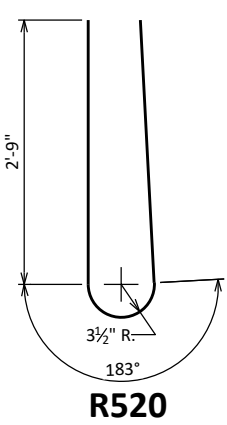
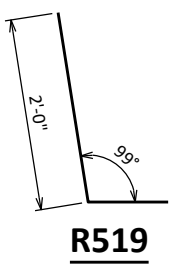
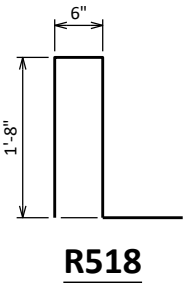
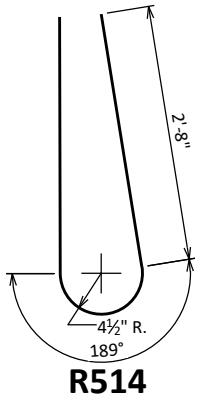
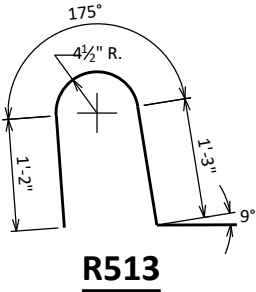
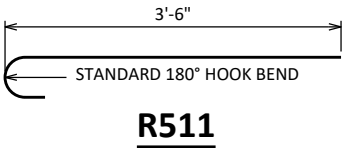
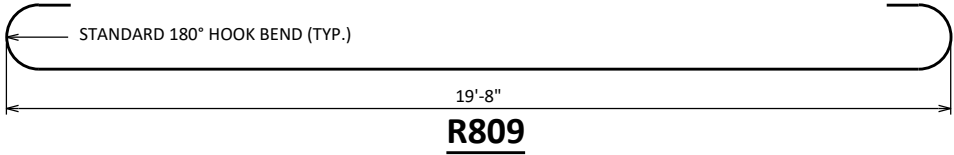
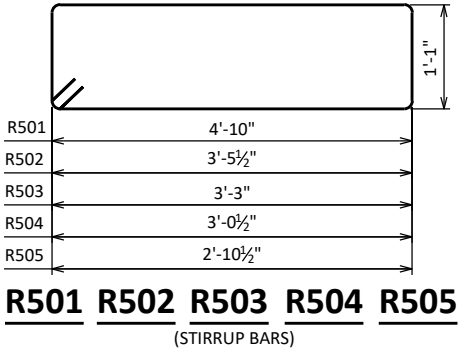
BAR MARK	COAT	NO. REQUIRED		LENGTH	BENT	BAR SERIES	LOCATION
		WEST SLAB	EAST SLAB				
R501	X	41	41	12'-6"	X		FOOTING-VERTICAL-LONGITUDINAL-BETWEEN PARAPETS
R502	X	1	1	9'-9"	X		FOOTING-VERTICAL-LONGITUDINAL-AT WINGS 2&4 ENDS ONLY
R503	X	1	1	9'-4"	X		FOOTING-VERTICAL-LONGITUDINAL-AT WINGS 2&4 ENDS ONLY
R504	X	1	1	8'-11"	X		FOOTING-VERTICAL-LONGITUDINAL-AT WINGS 1&3 ENDS ONLY
R505	X	1	1	8'-7"	X		FOOTING-VERTICAL-LONGITUDINAL-AT WINGS 1&3 ENDS ONLY
R806	X	4	4	1'-6"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT ENDS ONLY
R807	X	4	4	41'-1"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT OUTSIDE EDGE
R808	X	16	16	24'-10"			FOOTING-TOP & BOTTOM-HORIZONTAL-TRANSVERSE-AT INSIDE EDGE
R809	X	71	71	21'-6"	X		SLAB-BOTTOM-VERTICAL-LONGITUDINAL
R510	X	84	84	23'-5"			SLAB-TOP & BOTTOM-HORIZONTAL-TRANSVERSE
R511	X	40	40	4'-1"	X		SLAB-TOP-VERTICAL-TRANSVERSE-AT BOTH EDGES
R512	X	43	43	19'-8"			SLAB-TOP-HORIZONTAL-LONGITUDINAL
R513	X	34	34	4'-5"	X		PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R514	X	34	34	6'-8"	X		PARAPETS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R515	X	10	10	19'-6"			PARAPETS-BOTH FACES-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R516	X	2	2	19'-6"	X		PARAPETS-BOT.-INSIDE FACE-HORIZONTAL-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R517	X	4	4	19'-6"	X		PARAPETS-TOP-BOTH FACES-LONGITUDINAL-AT ALL FOUR PPT. ENDS
R518	X	34	34	4'-4"	X		PARAPETS/SLAB-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R519	X	24	24	2'-9"	X		PARAPETS/SLAB-INSIDE FACE-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R520	X	12	12	6'-6"	X		PARAPETS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R521	X	8	8	6'-5"	X		PARAPETS-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS
R522	X	14	14	5'-8"	X	▲	PARAPETS-END TAPER-VERTICAL-TRANSVERSE-AT ALL FOUR PPT. ENDS

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

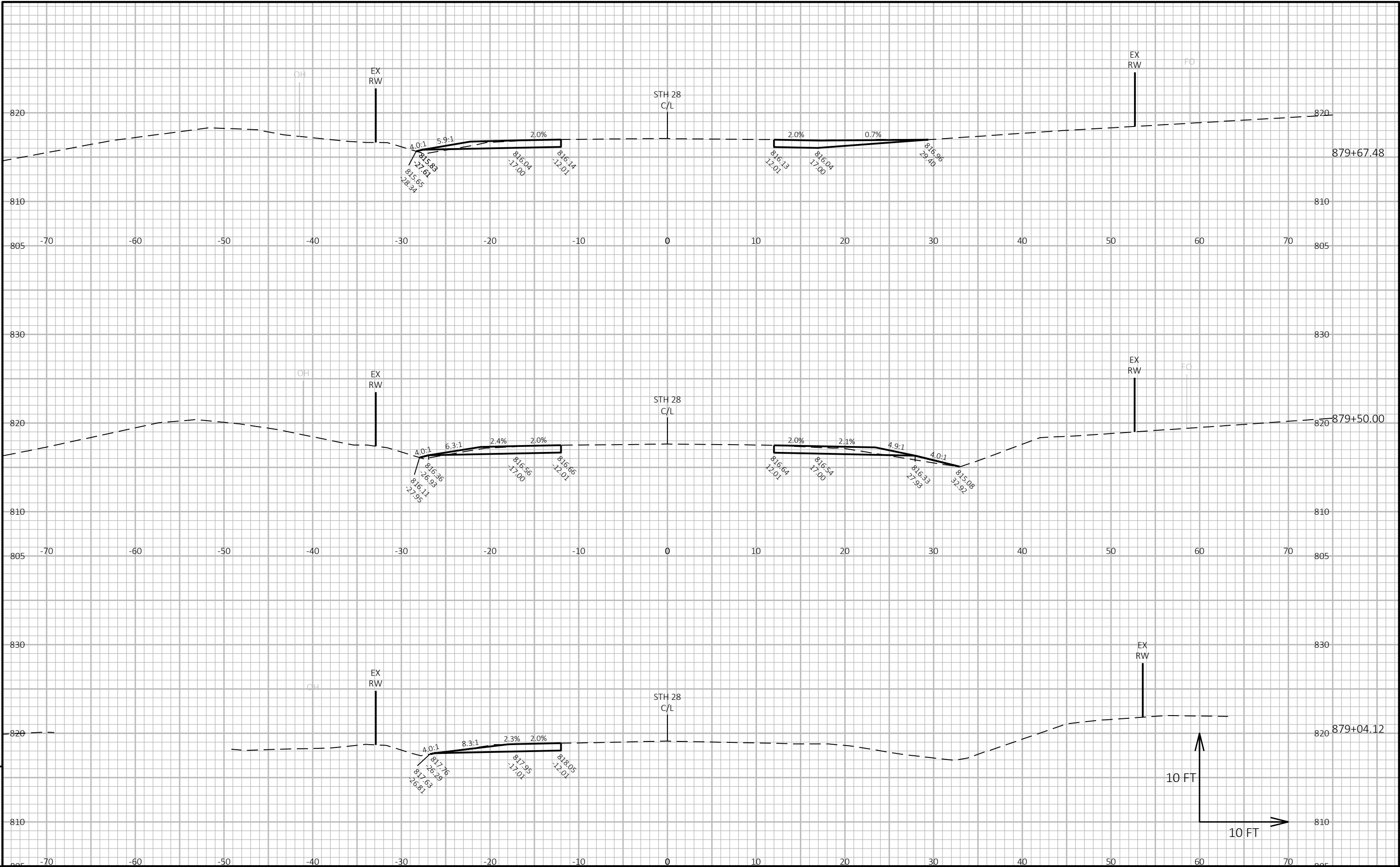
BAR MARK	NUMBER REQUIRED	TOTAL BAR LENGTH
R522	4 SERIES OF 7 BARS	4'-11" TO 6'-4"

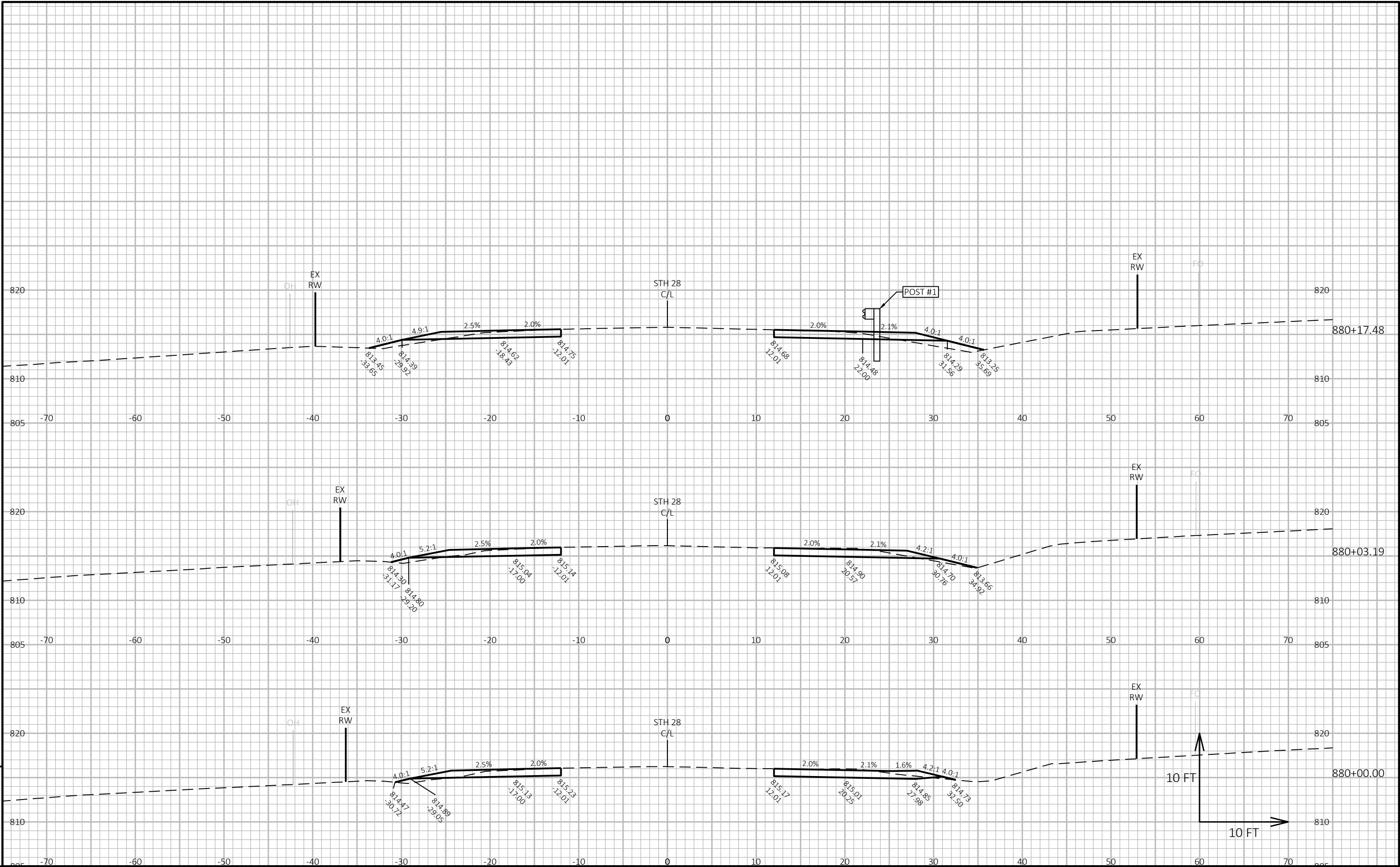
BUNDLE AND TAG EACH SERIES SEPARATELY.

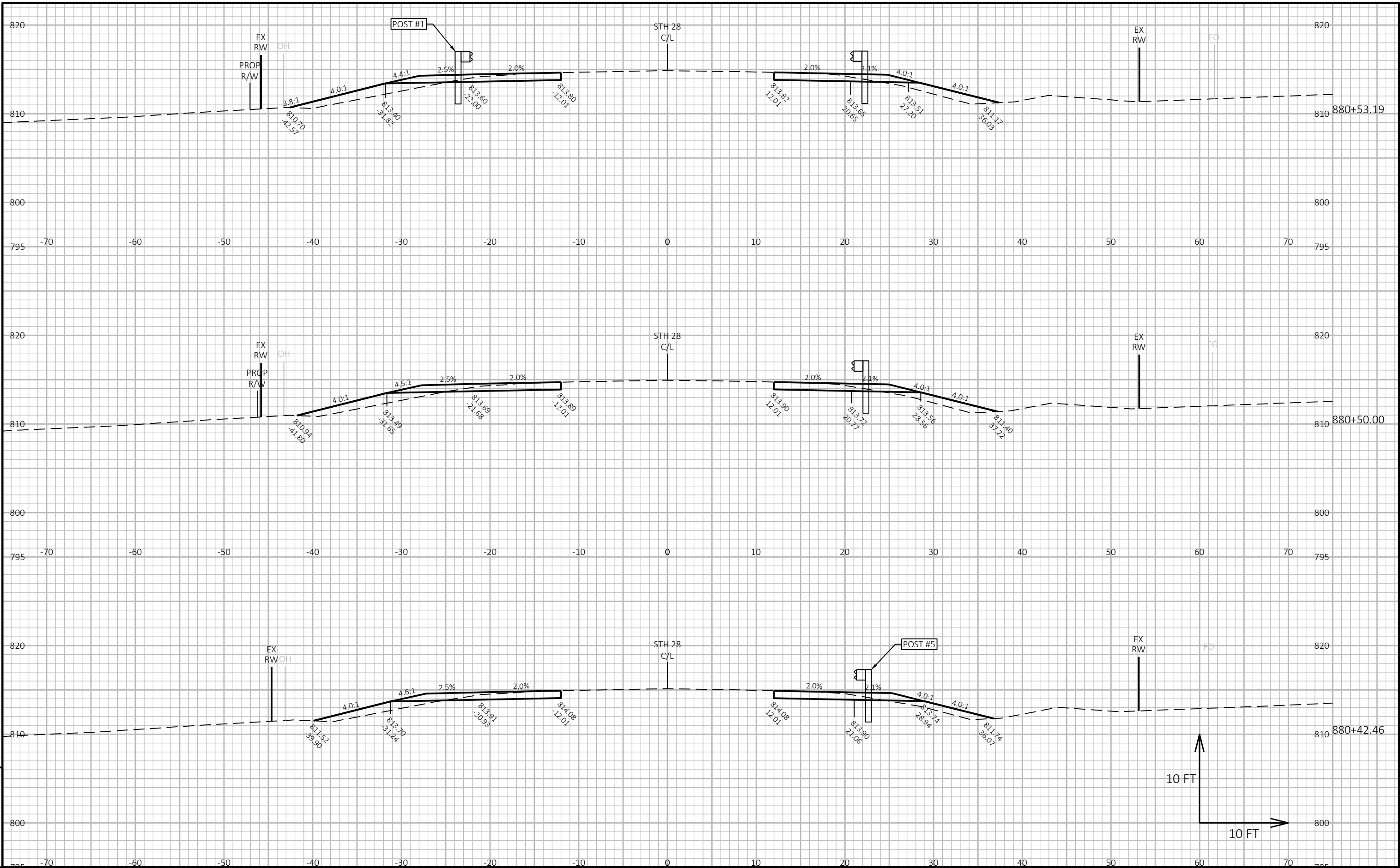


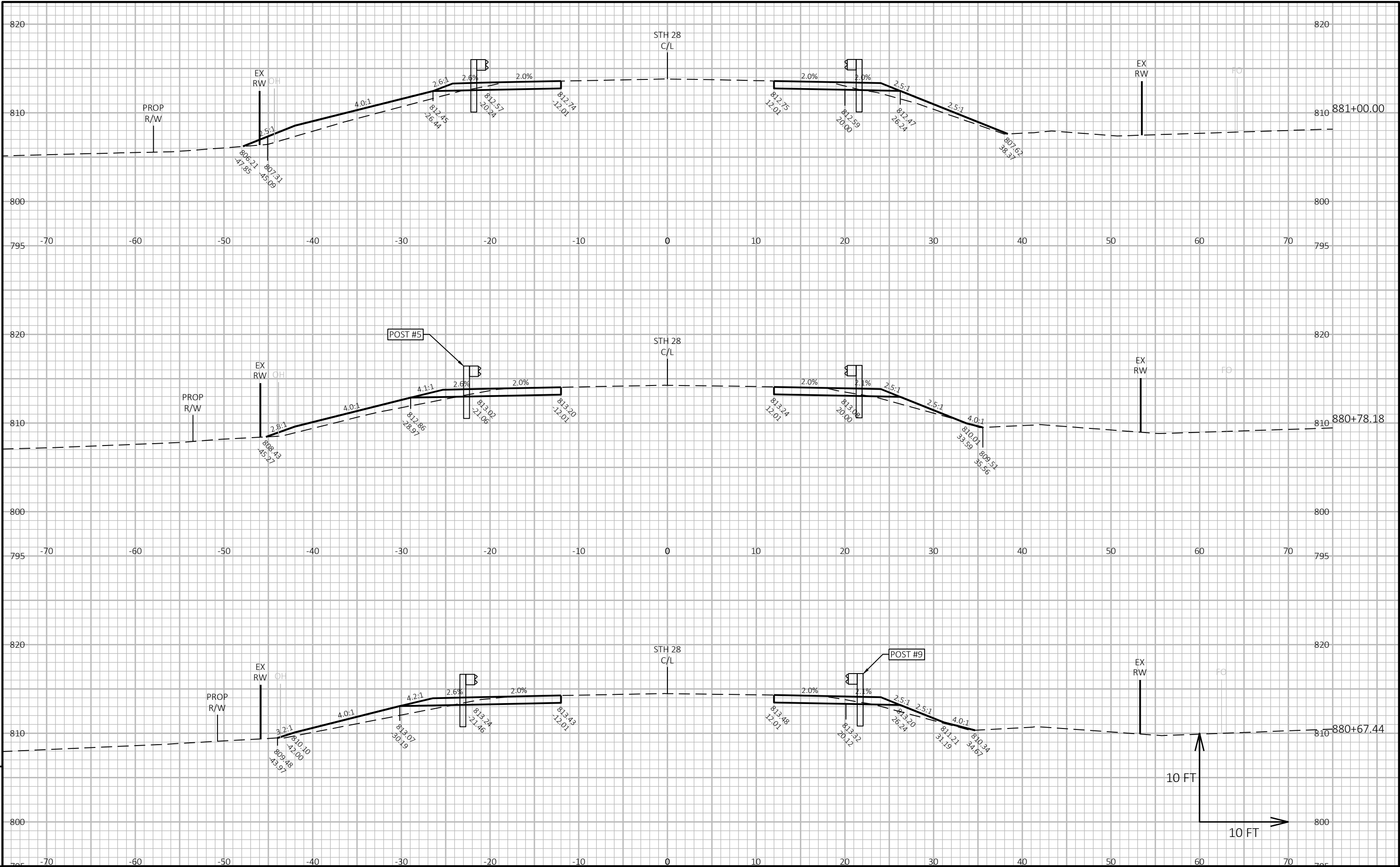
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-322			
DRAWN BY JPH		PLANS CK'D VS	
STRUCTURAL APPROACH SLAB BAR DETAILS		SHEET 19	206

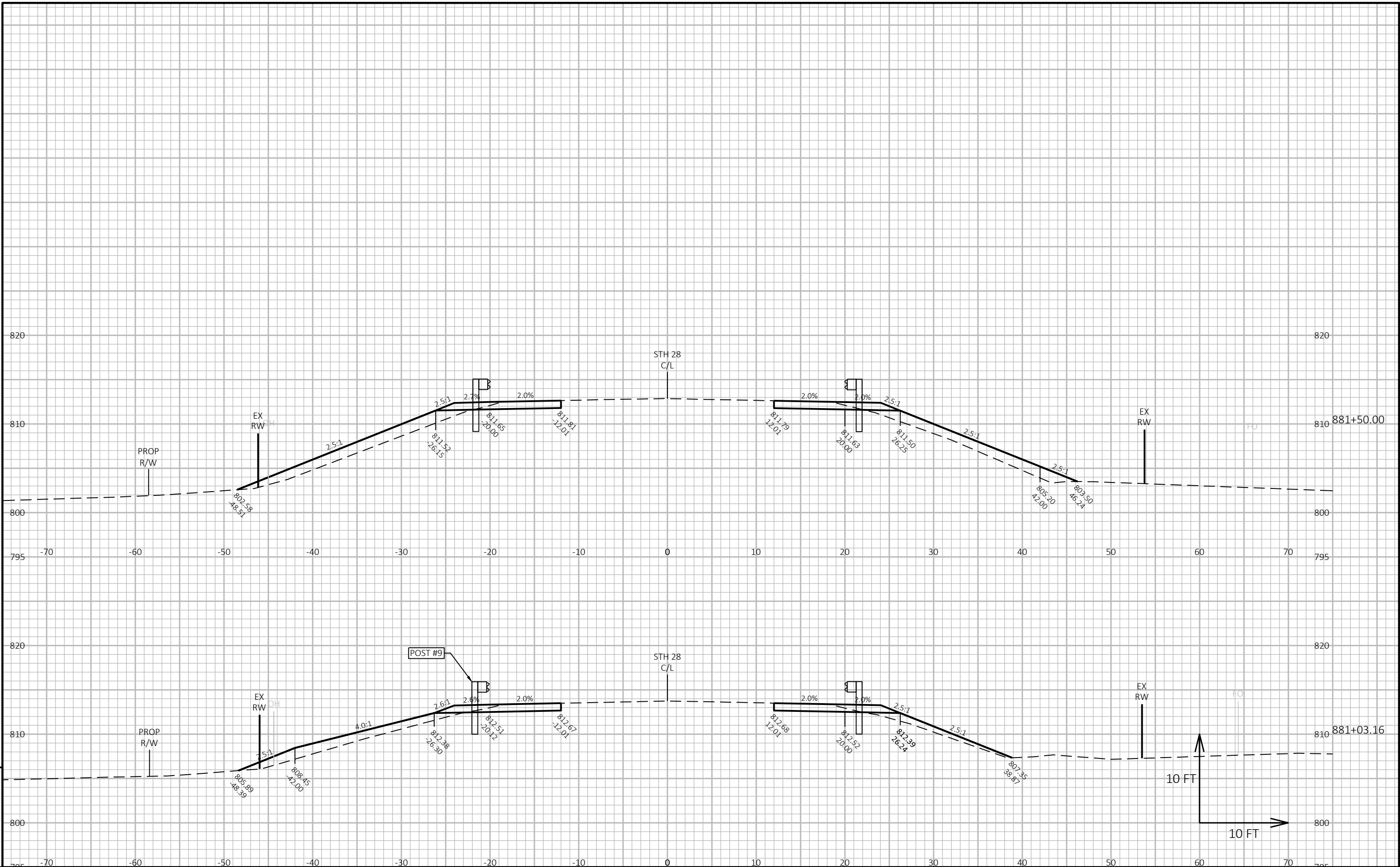
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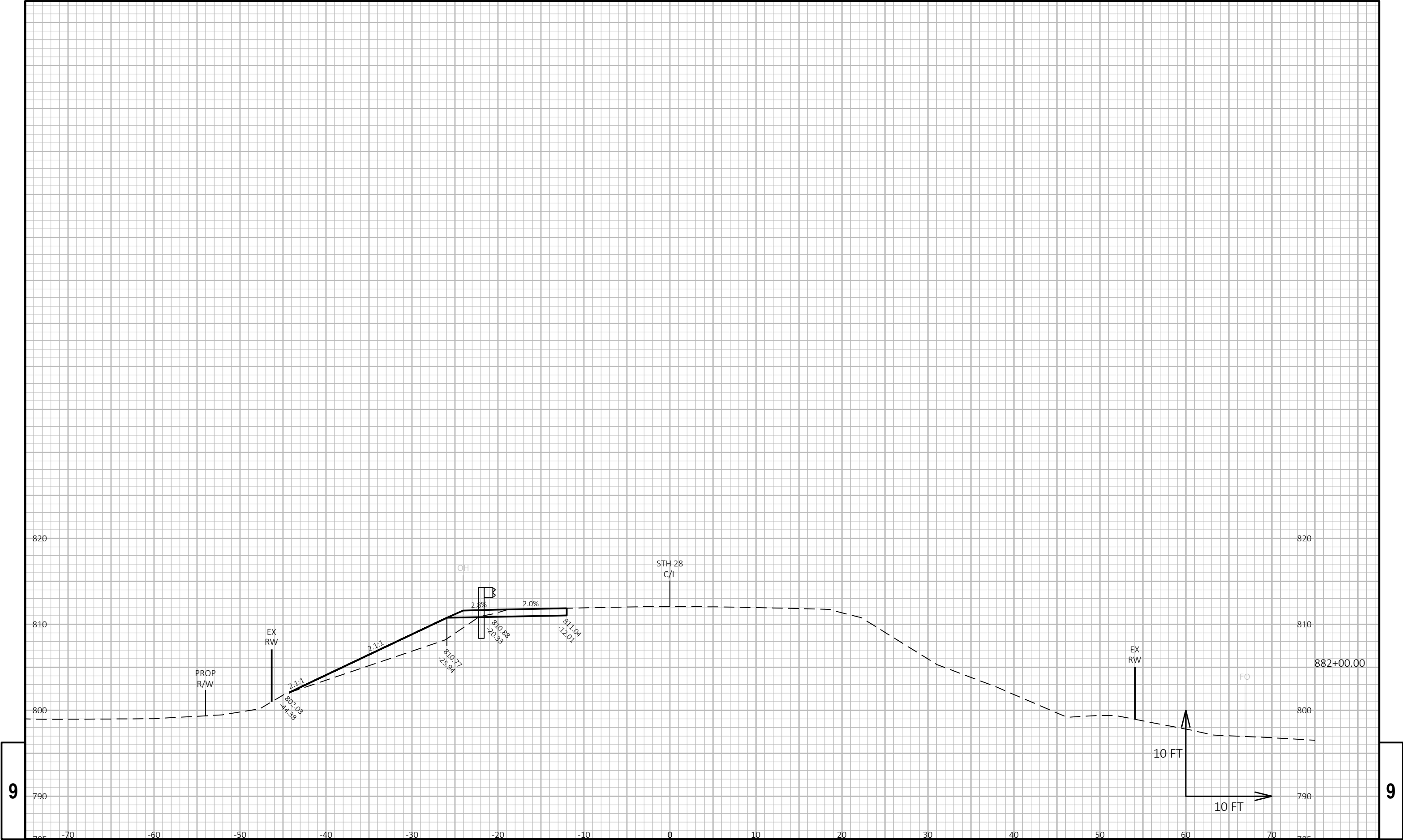








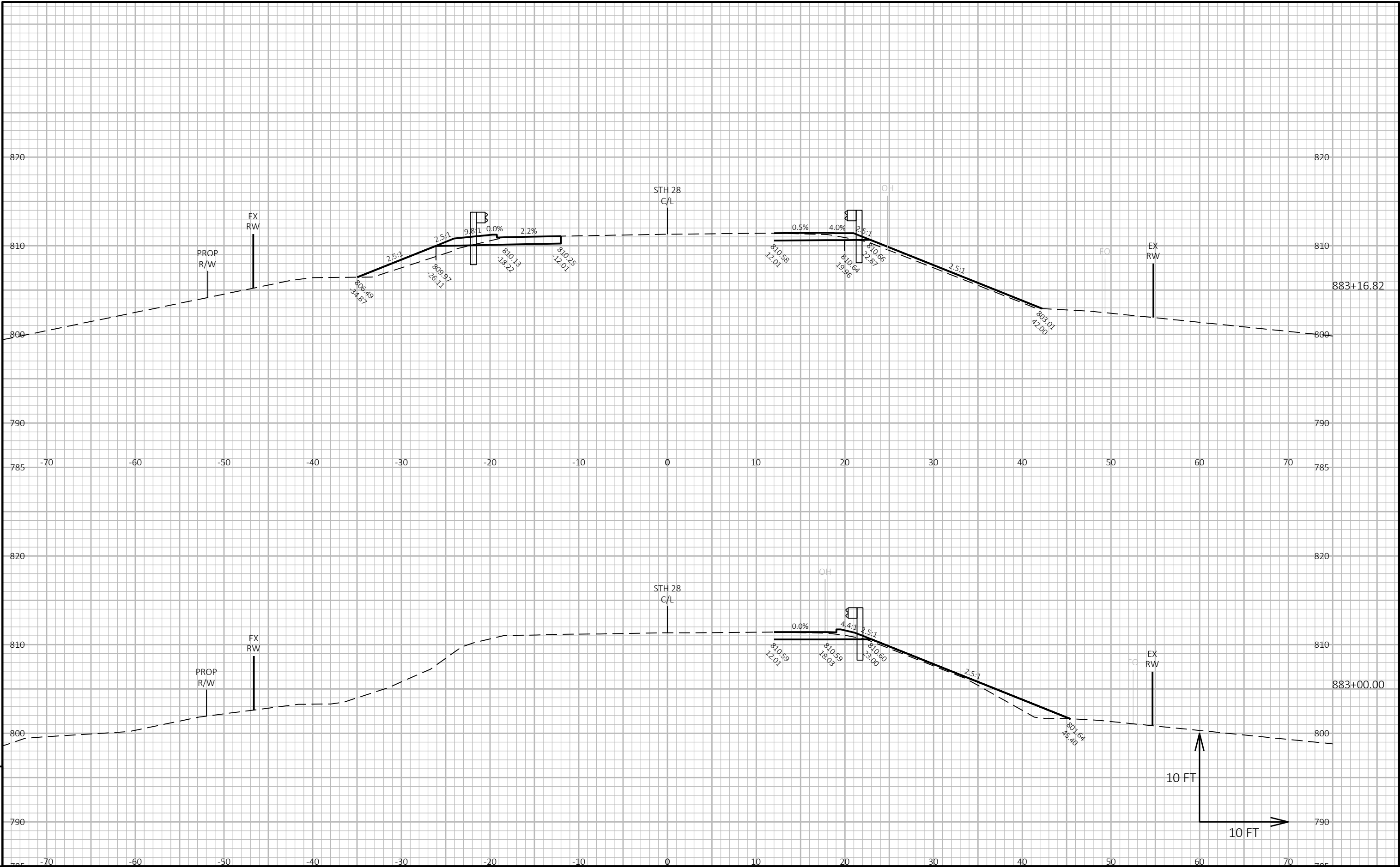


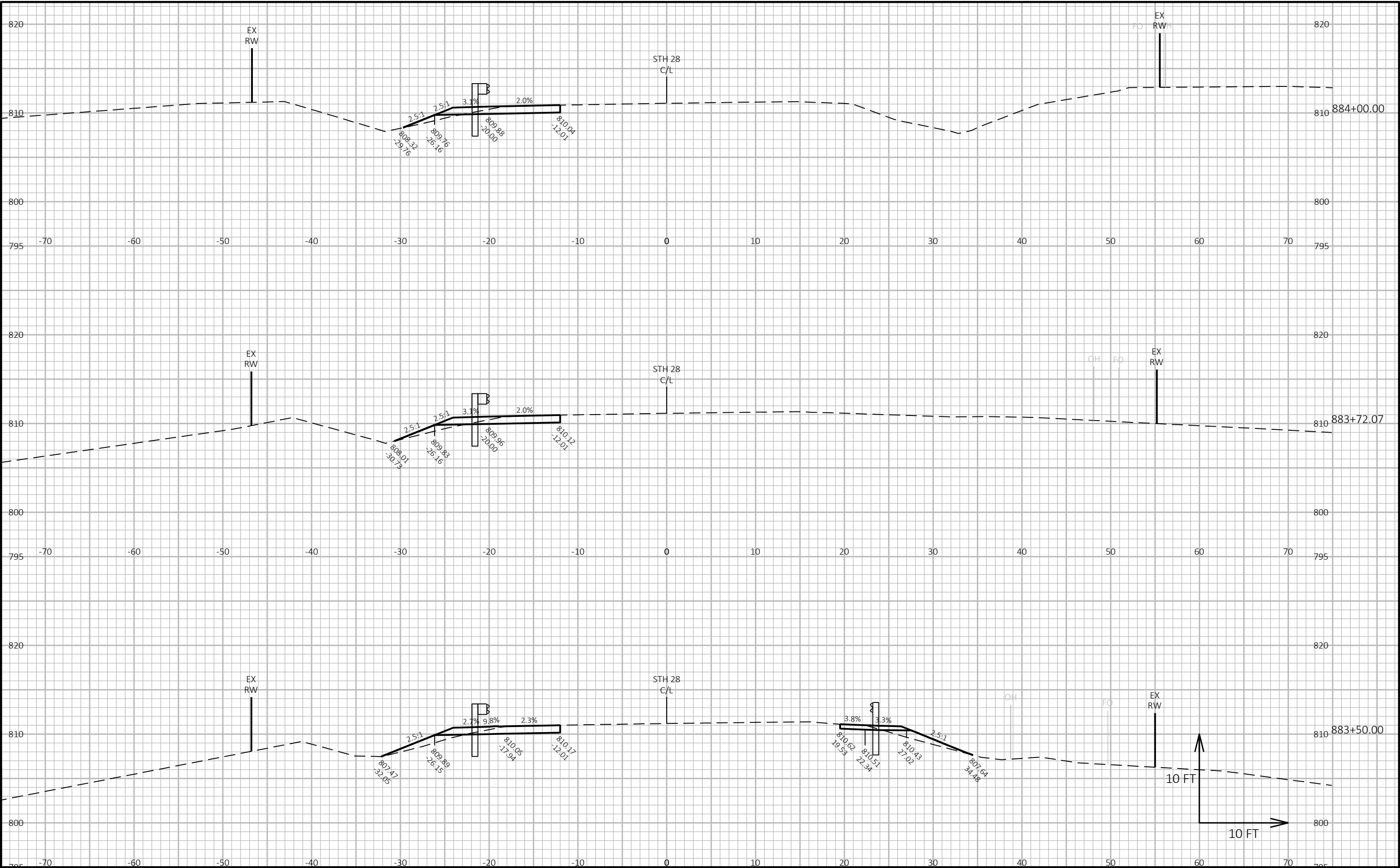


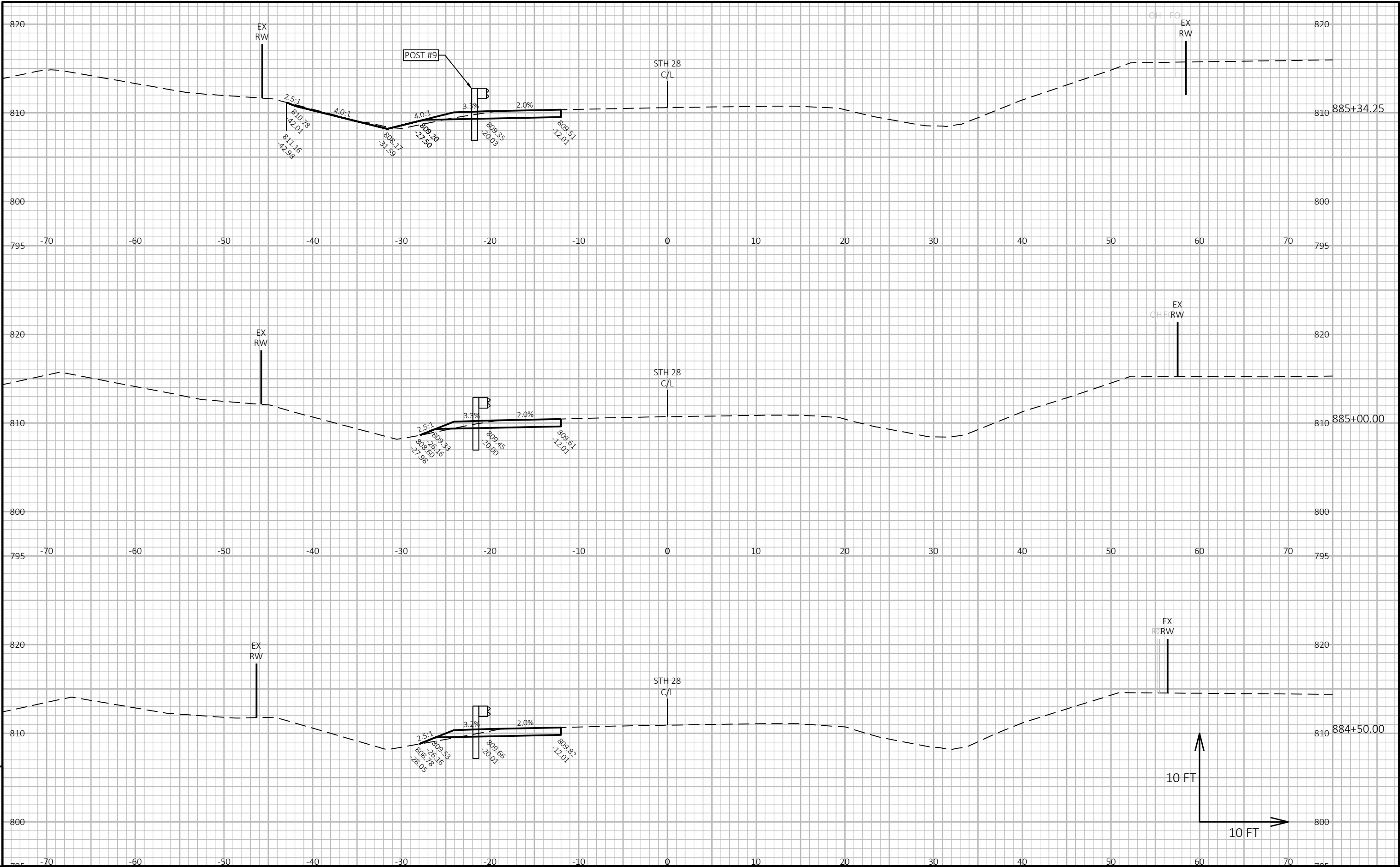
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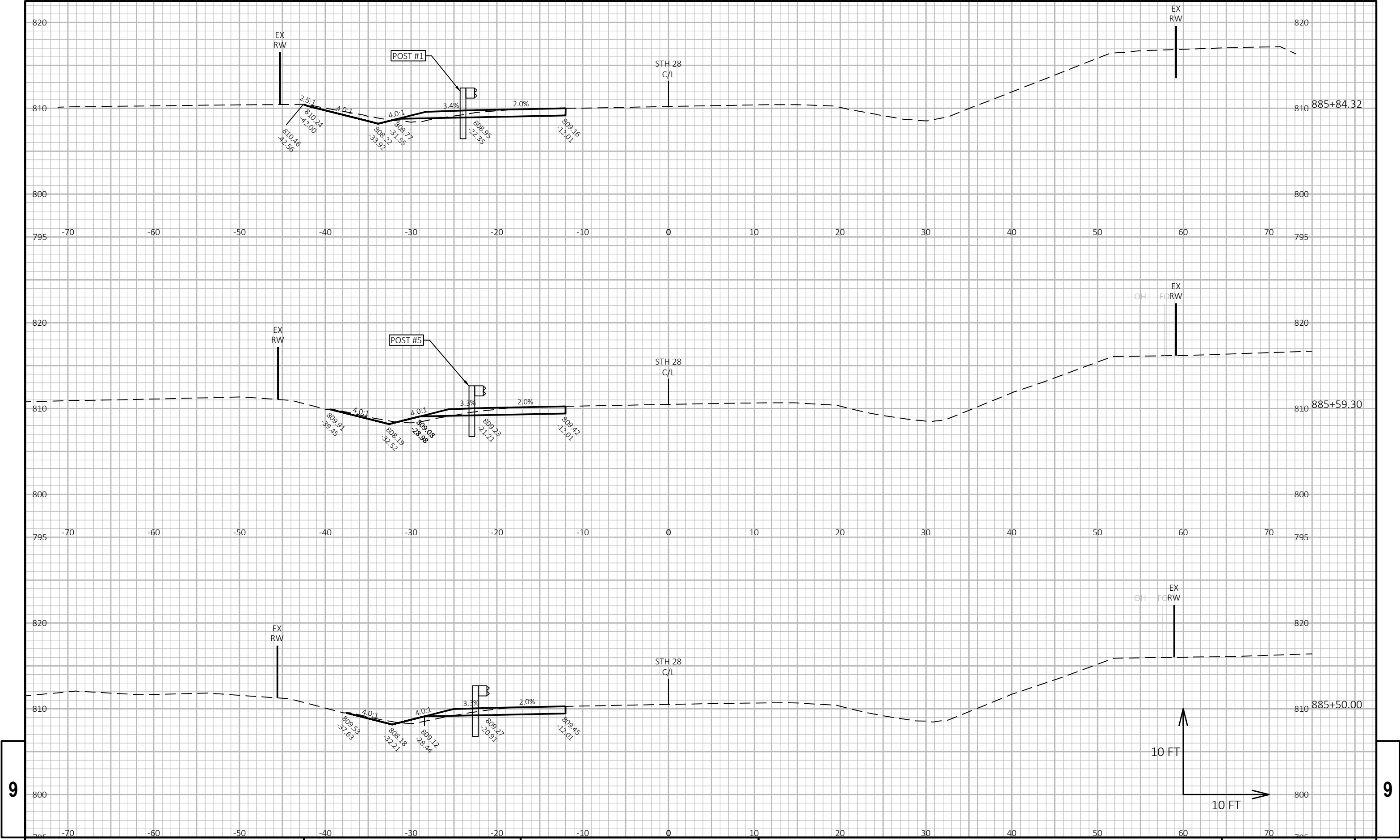
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PROJECT NO:	4010-29-71	HWY:	STH 28	COUNTY:	SHEBOYGAN	CROSS SECTIONS:	STH 28	SHEET	212	E
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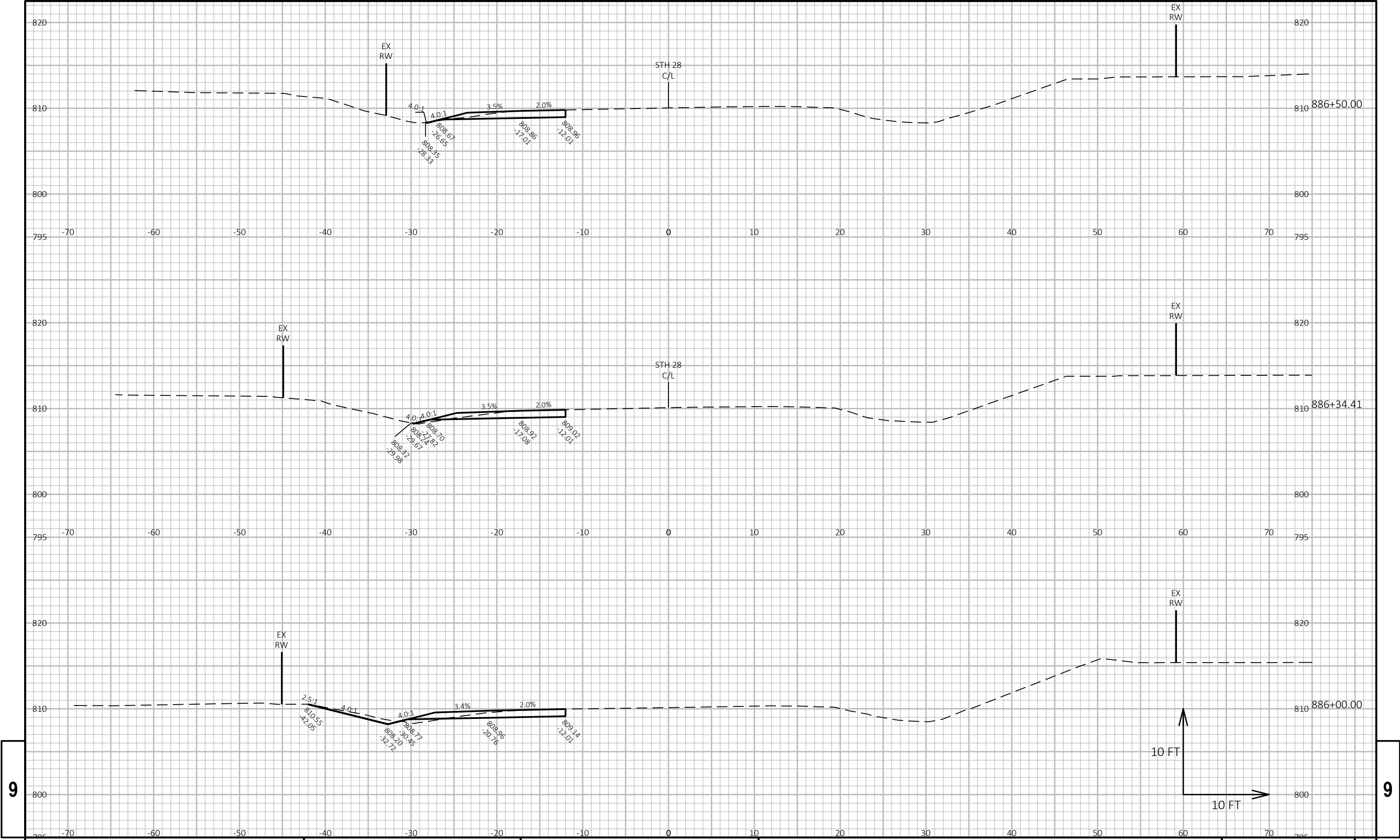






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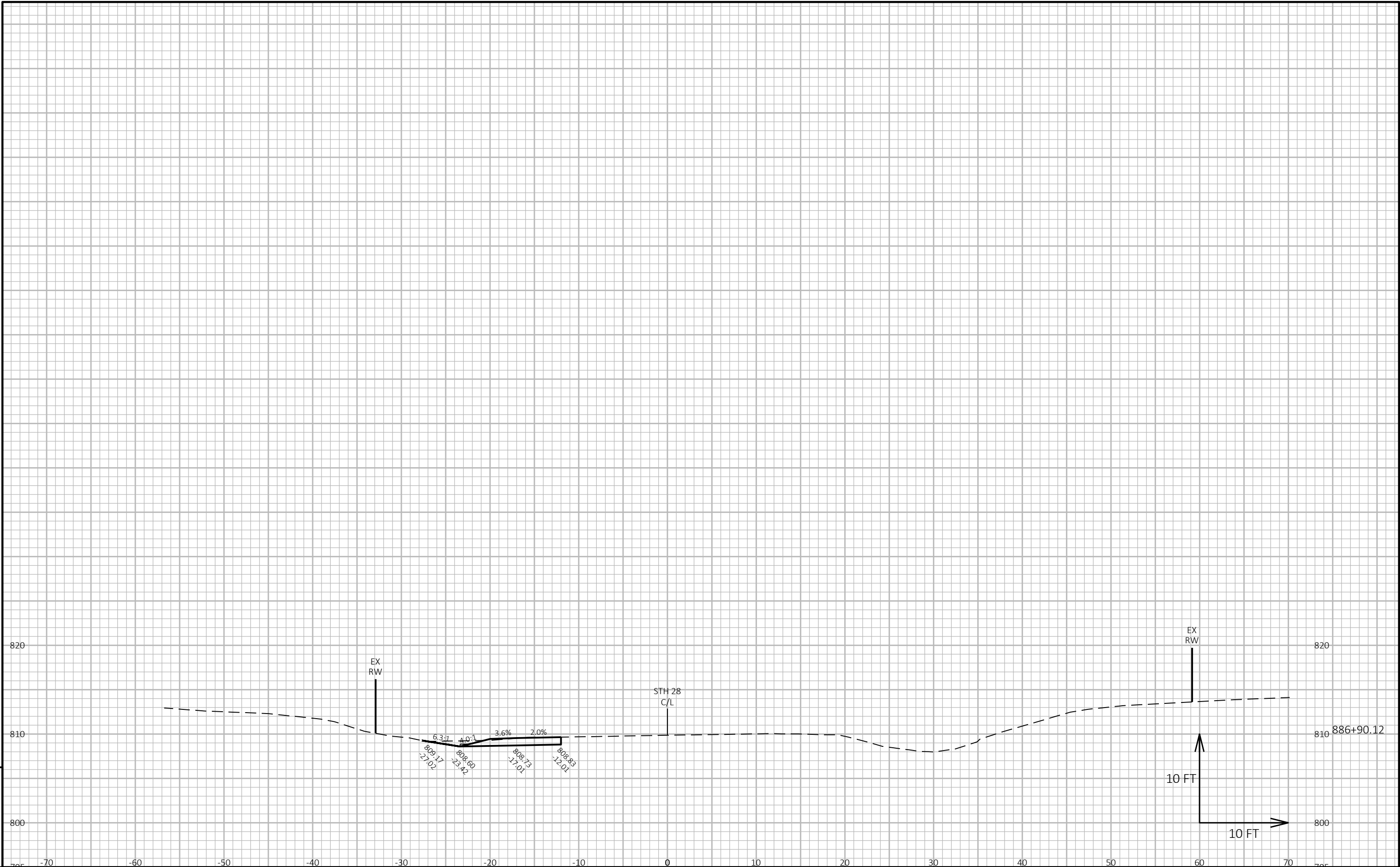
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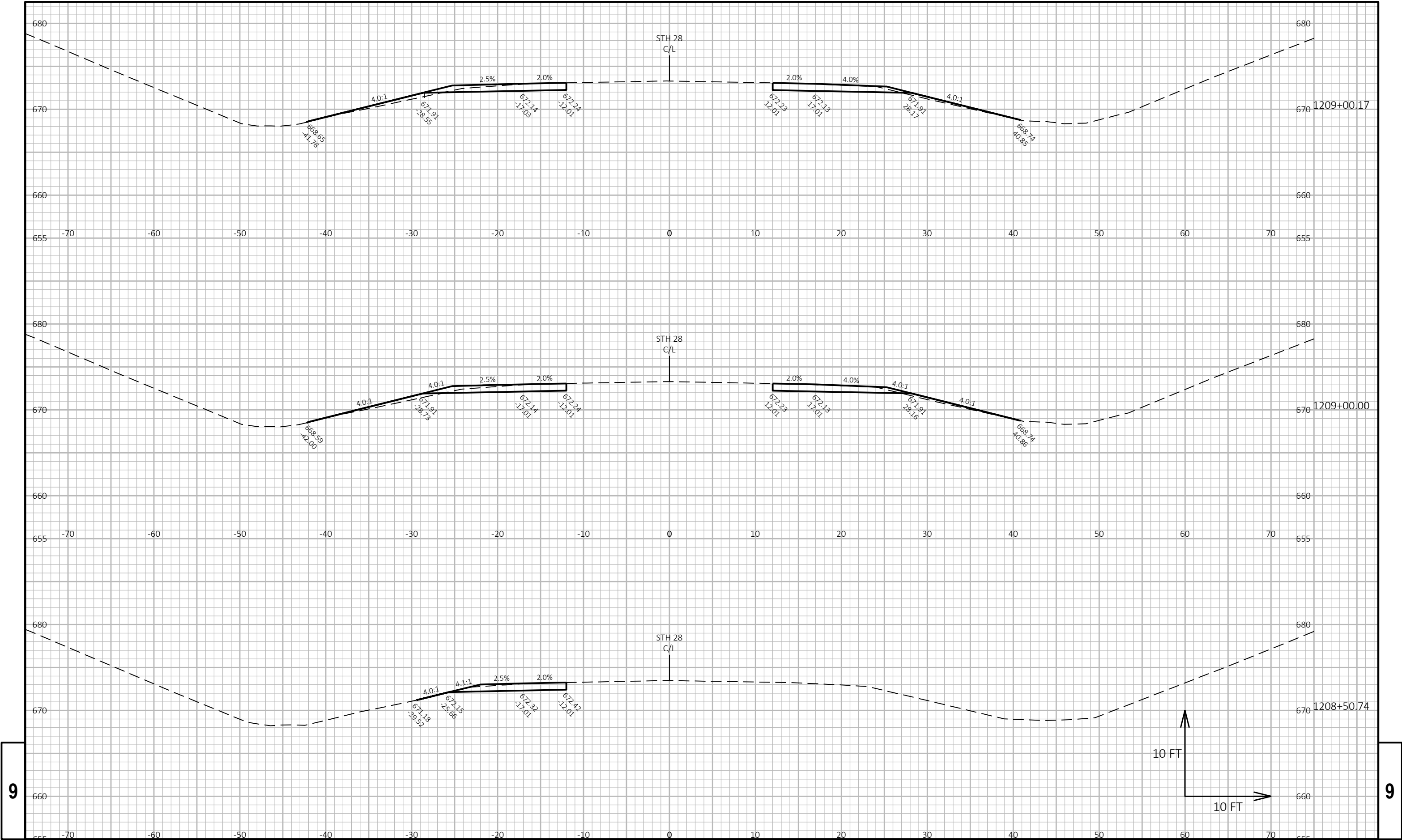
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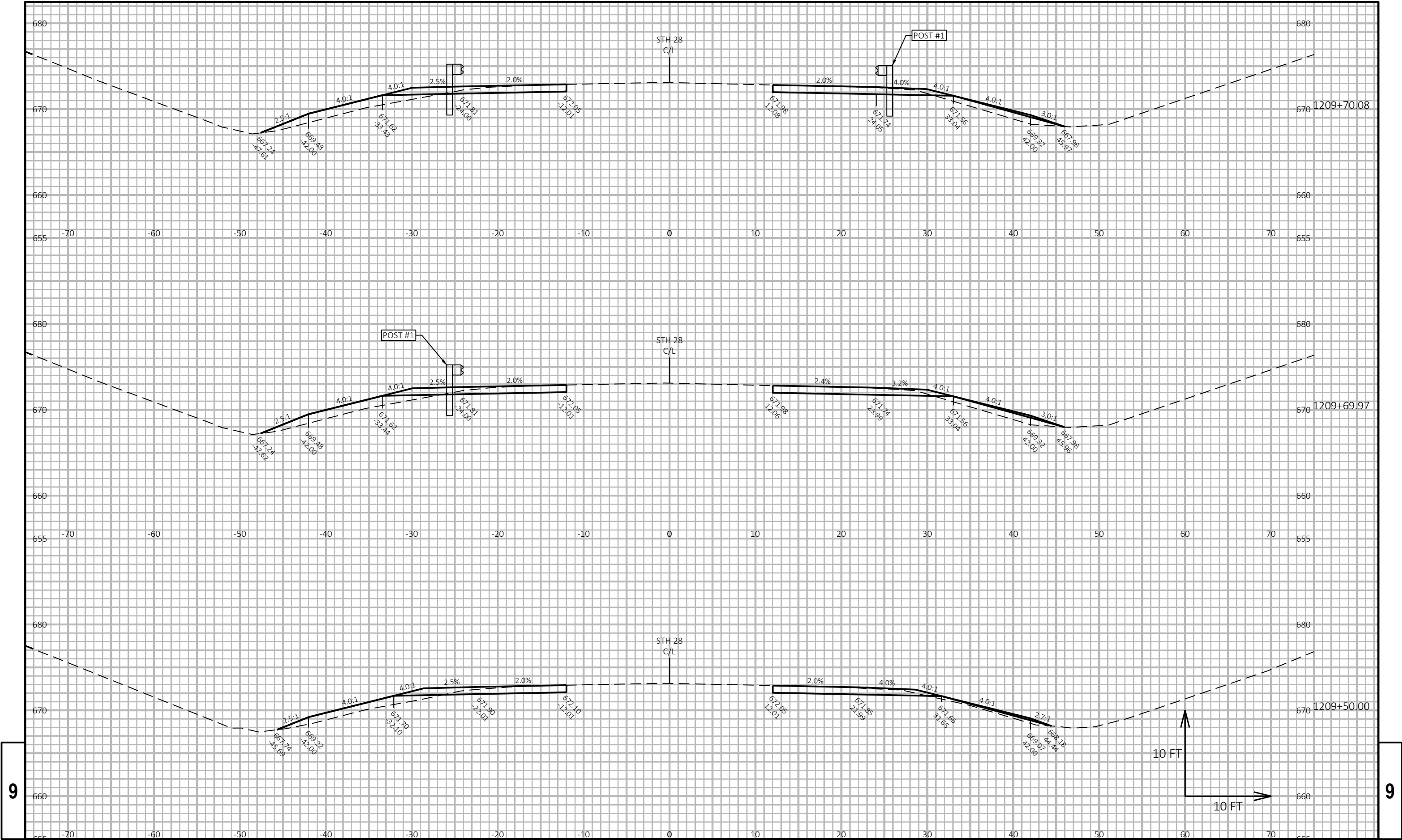


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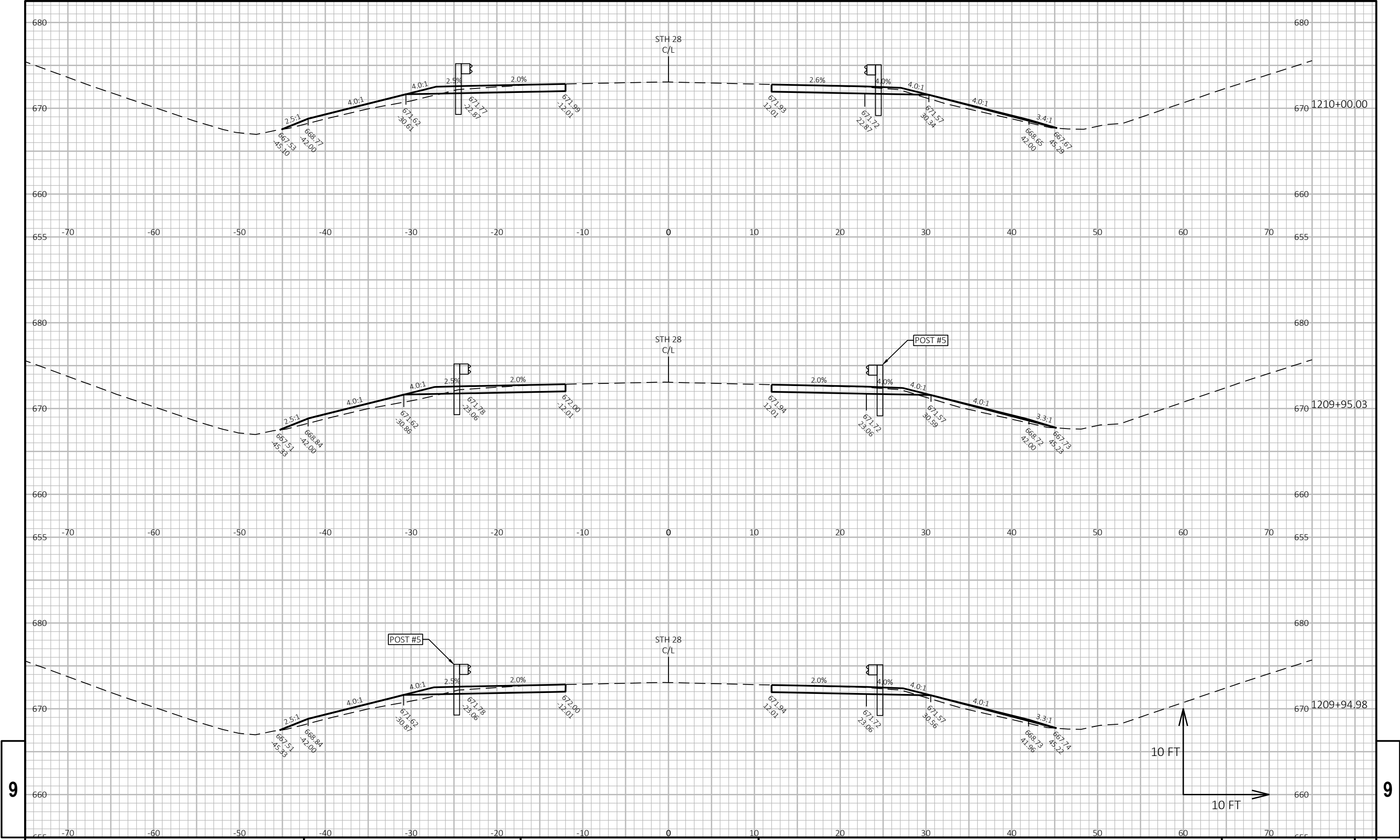
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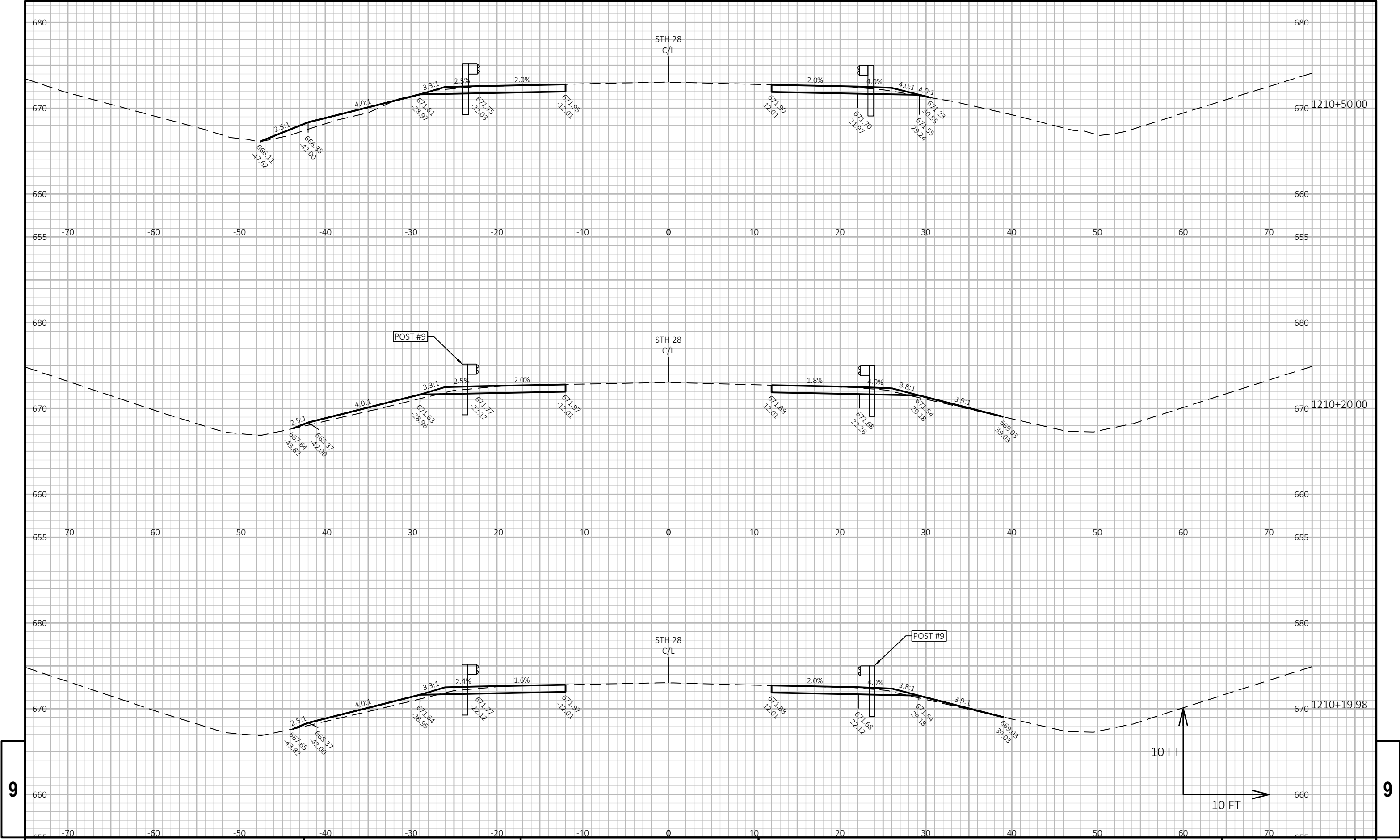
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PROJECT NO:	4010-29-71	HWY:	STH 28	COUNTY:	SHEBOYGAN	CROSS SECTIONS:	STH 28	SHEET	220	E
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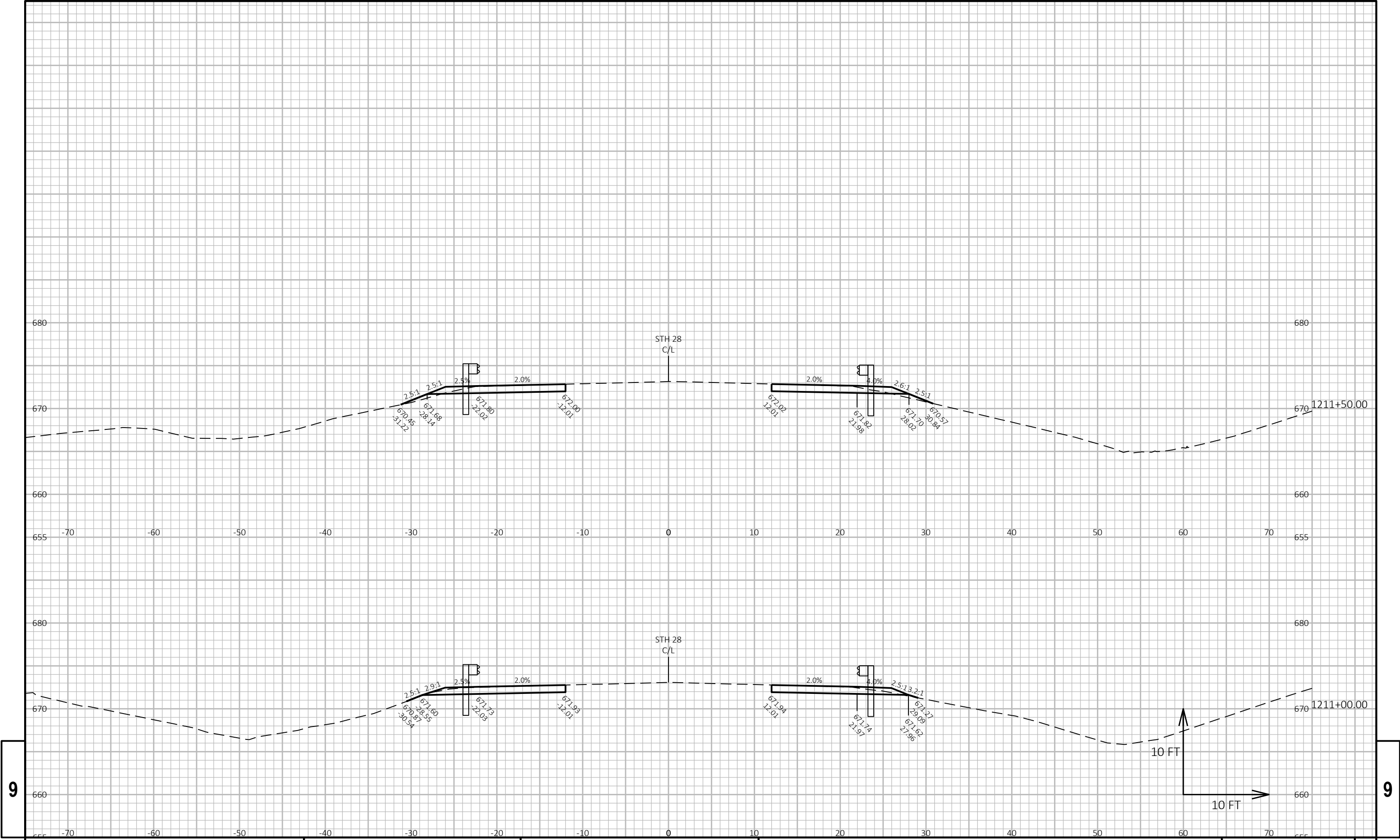
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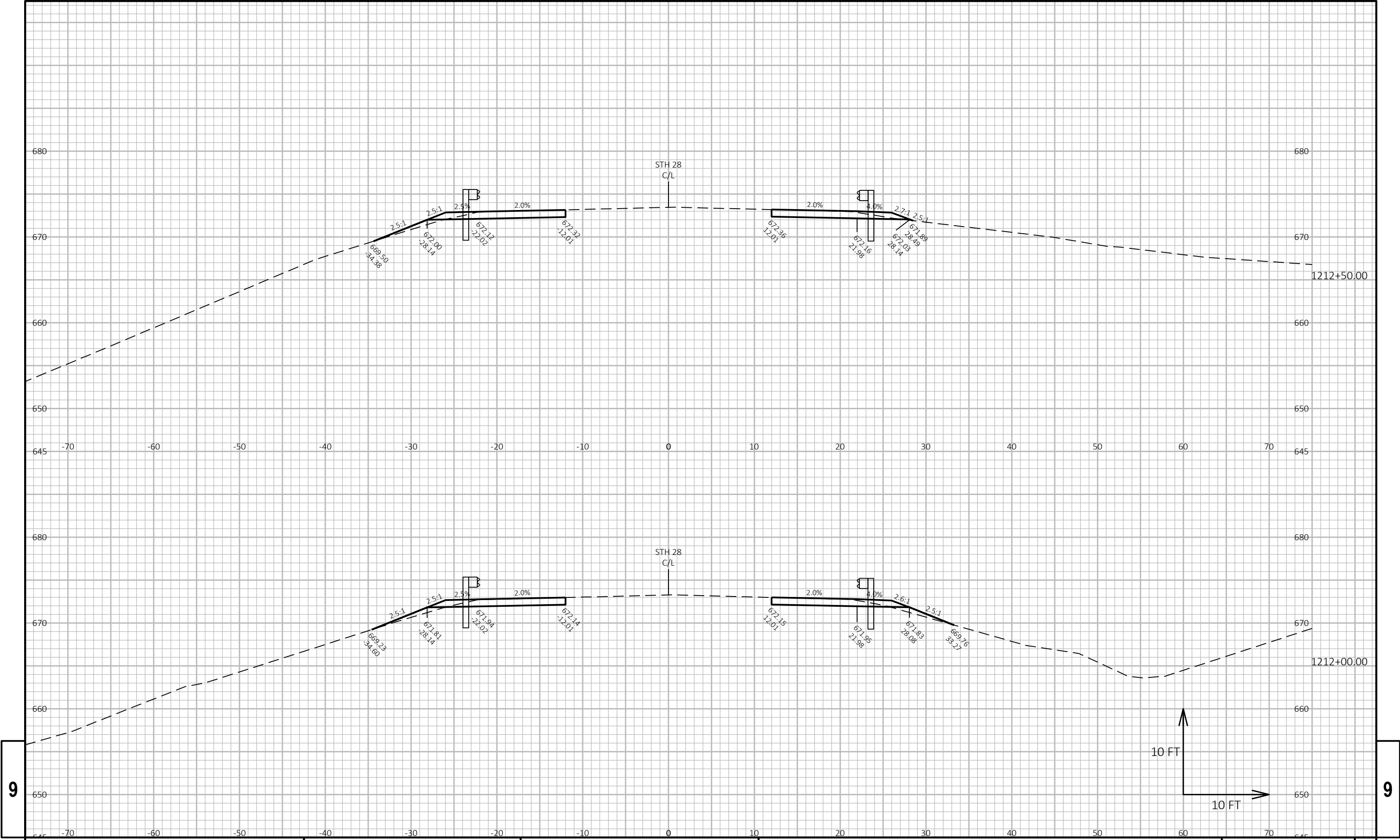
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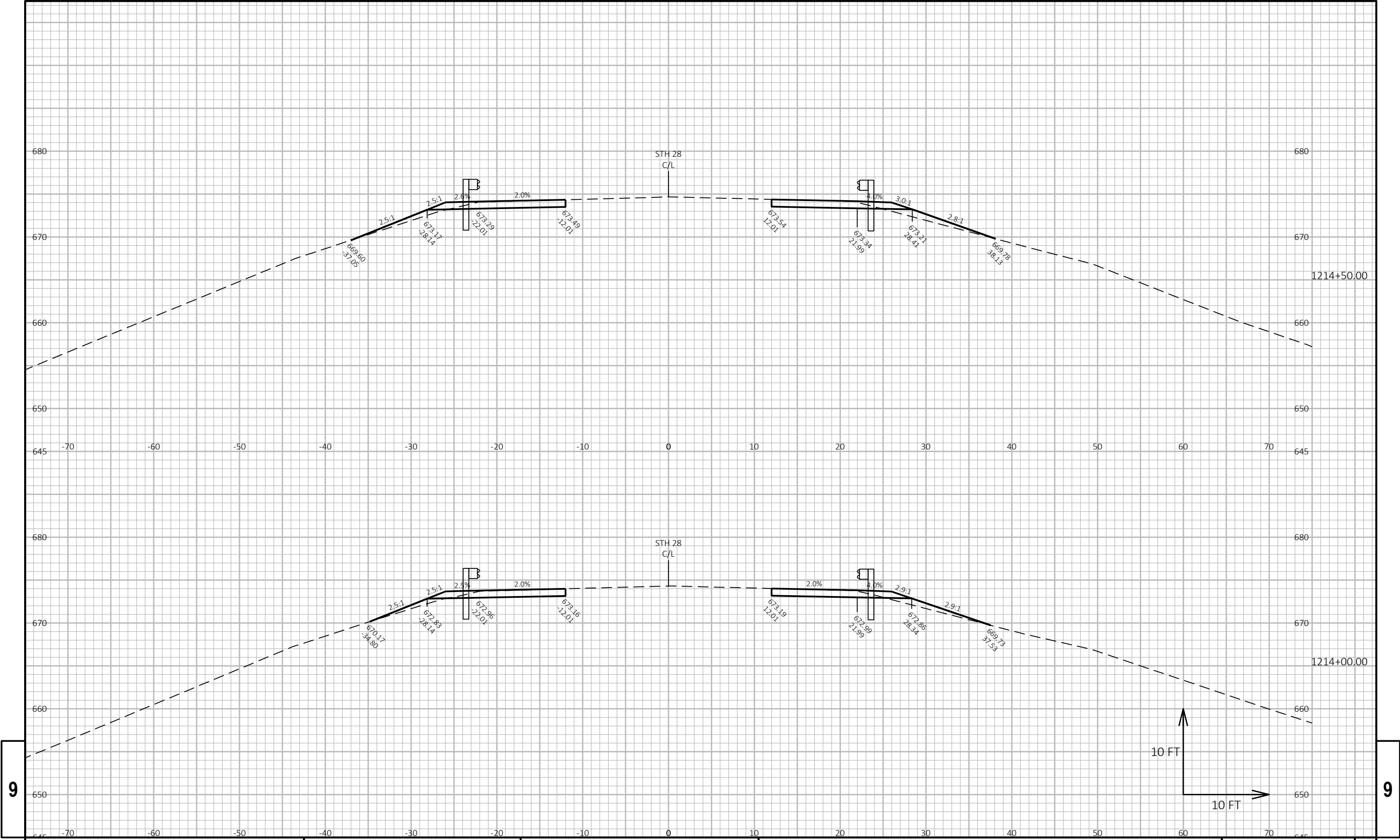


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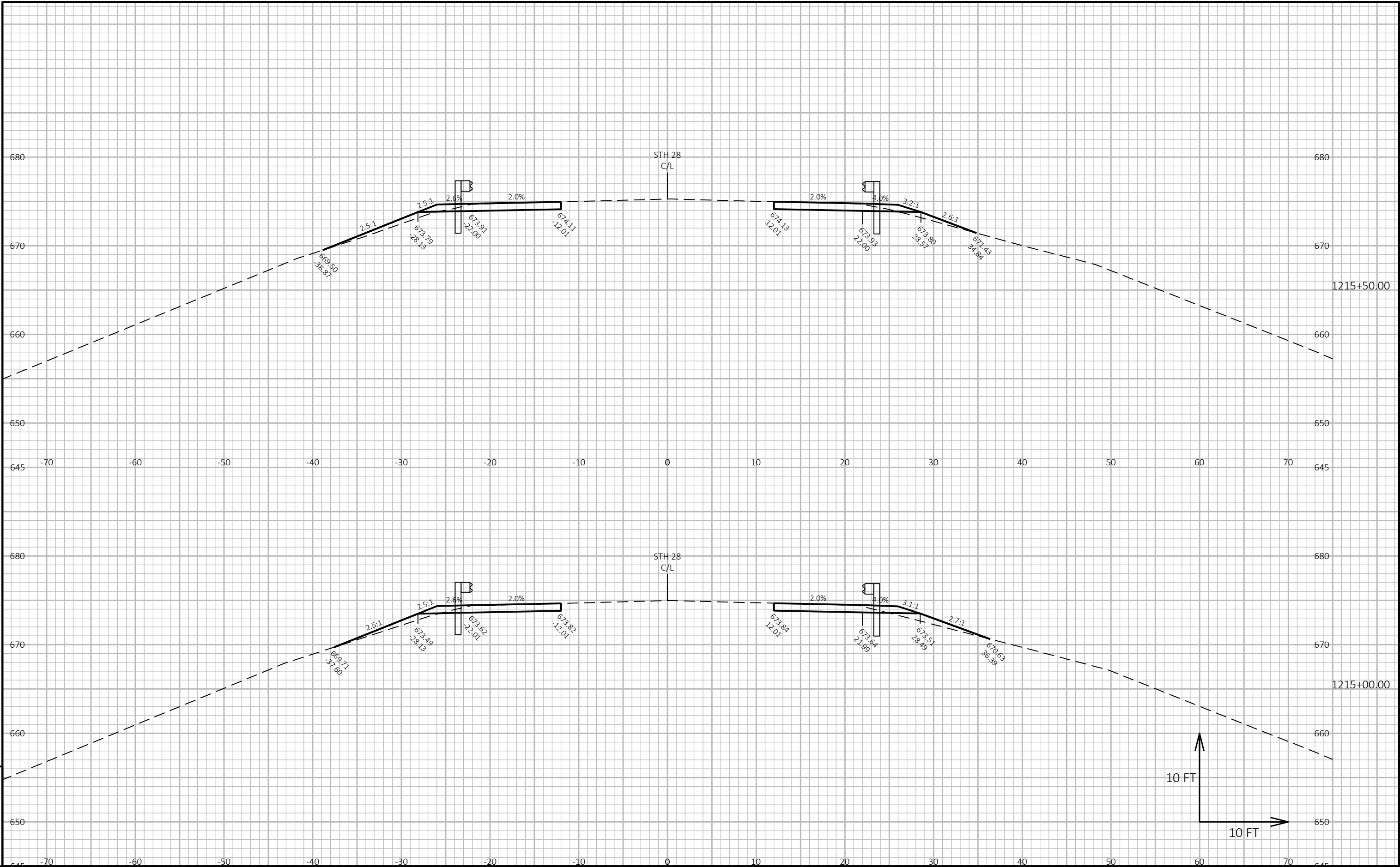


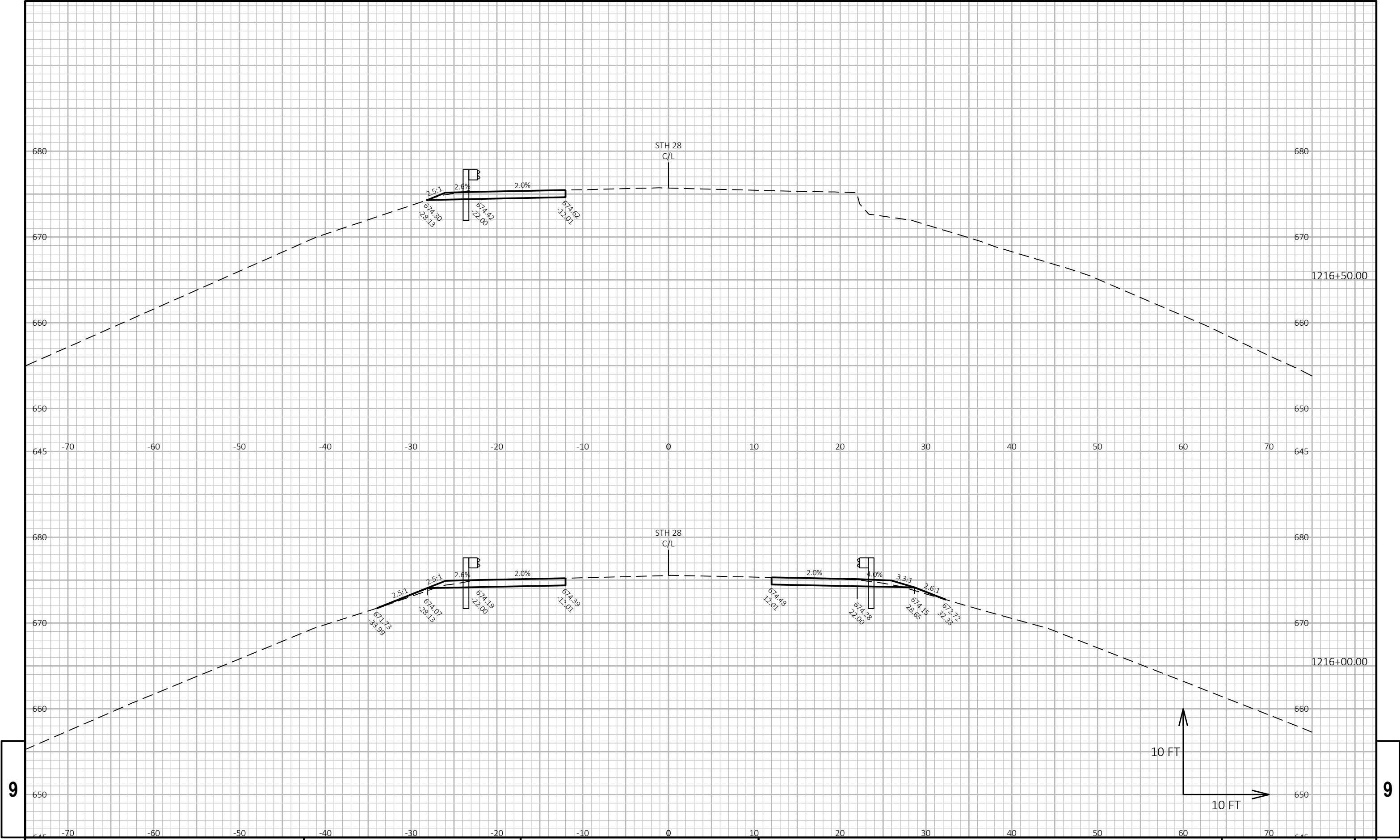


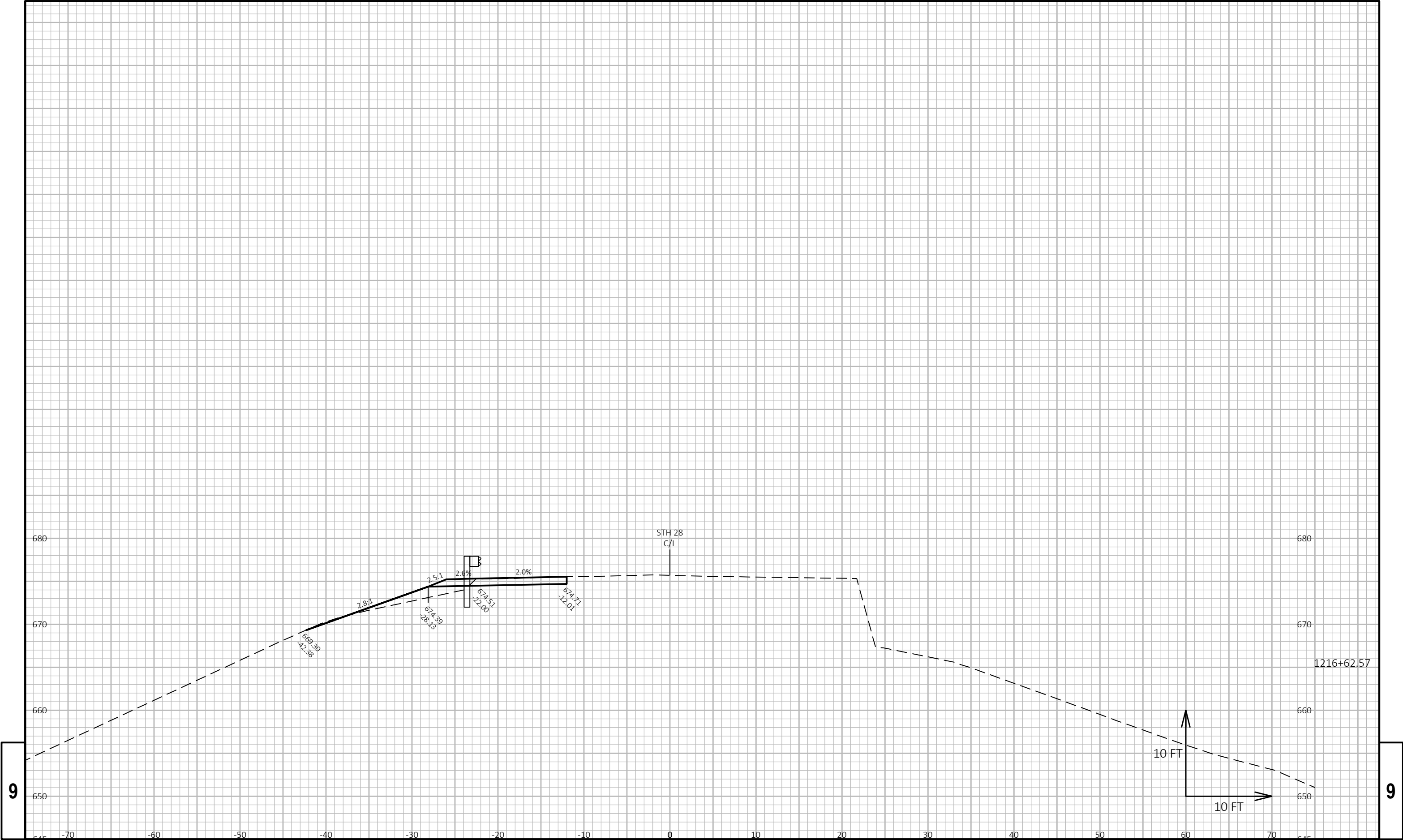


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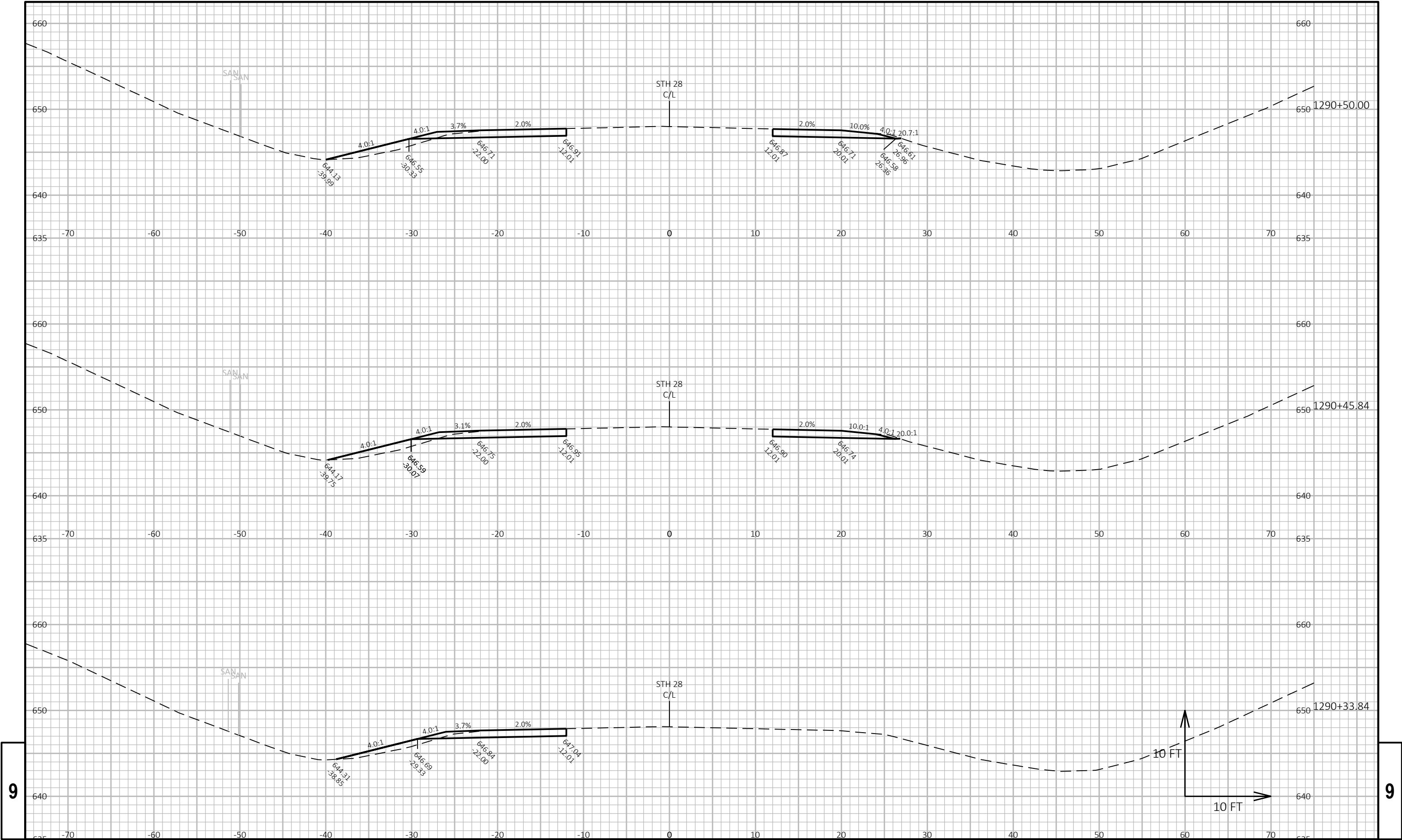






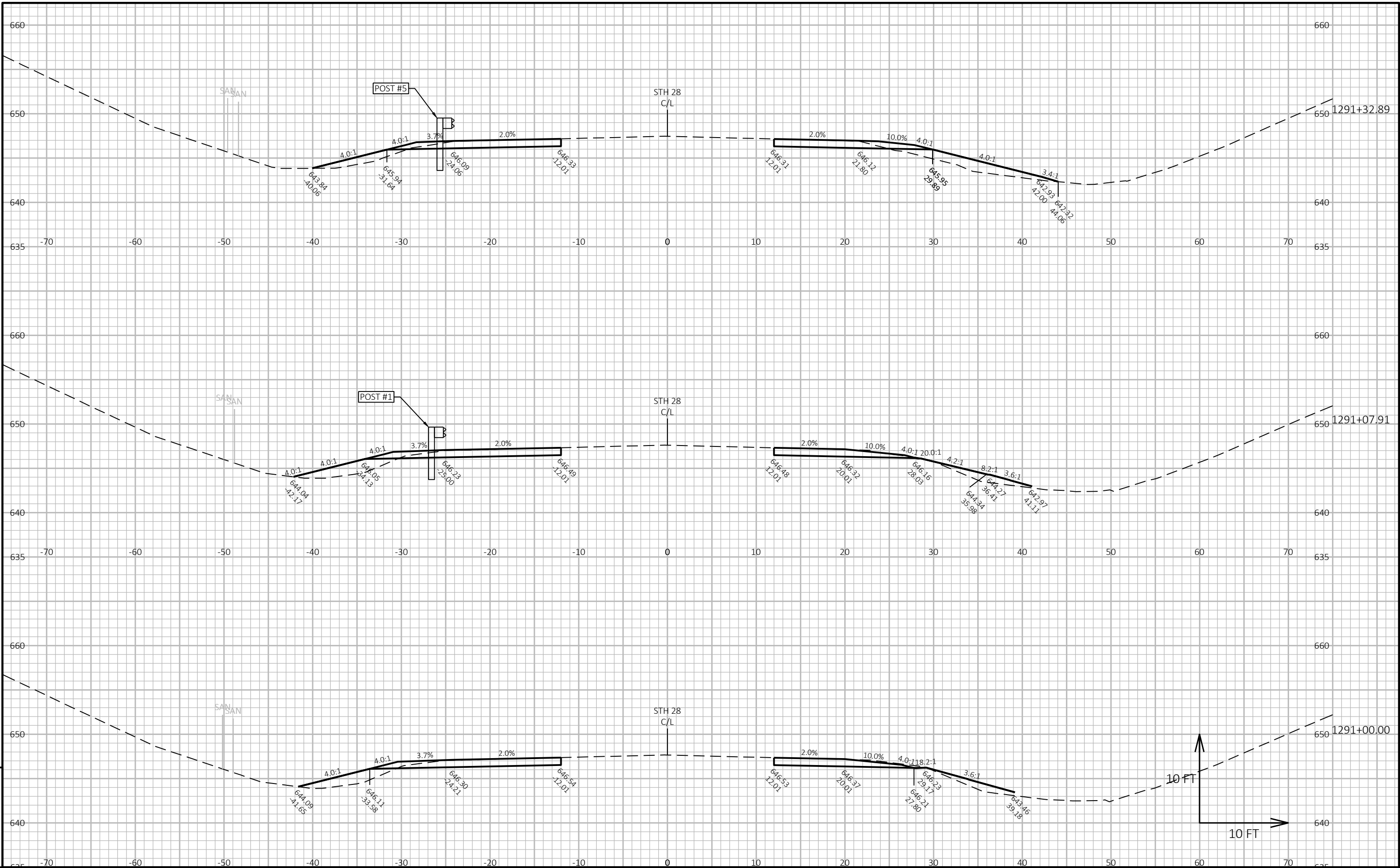
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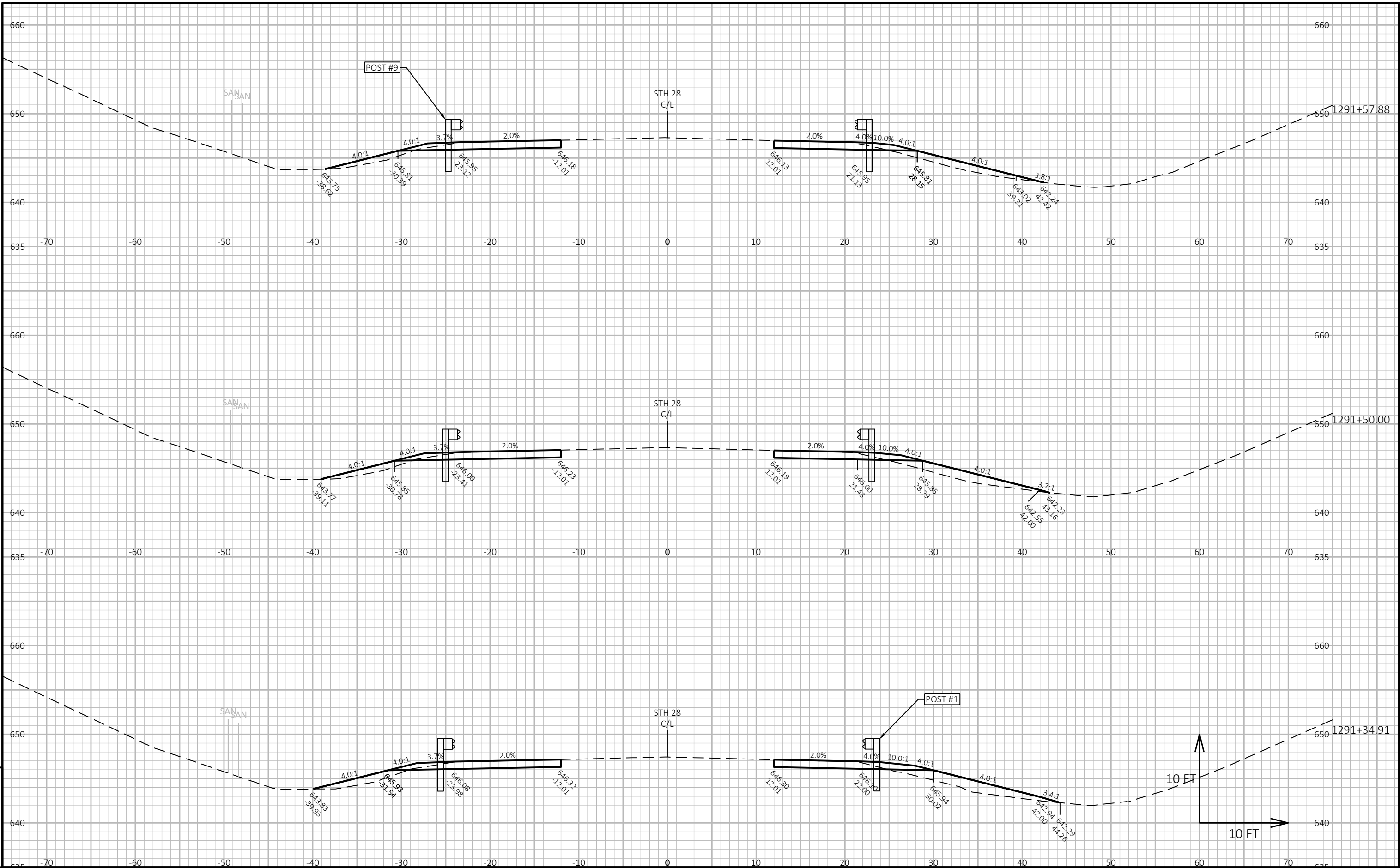
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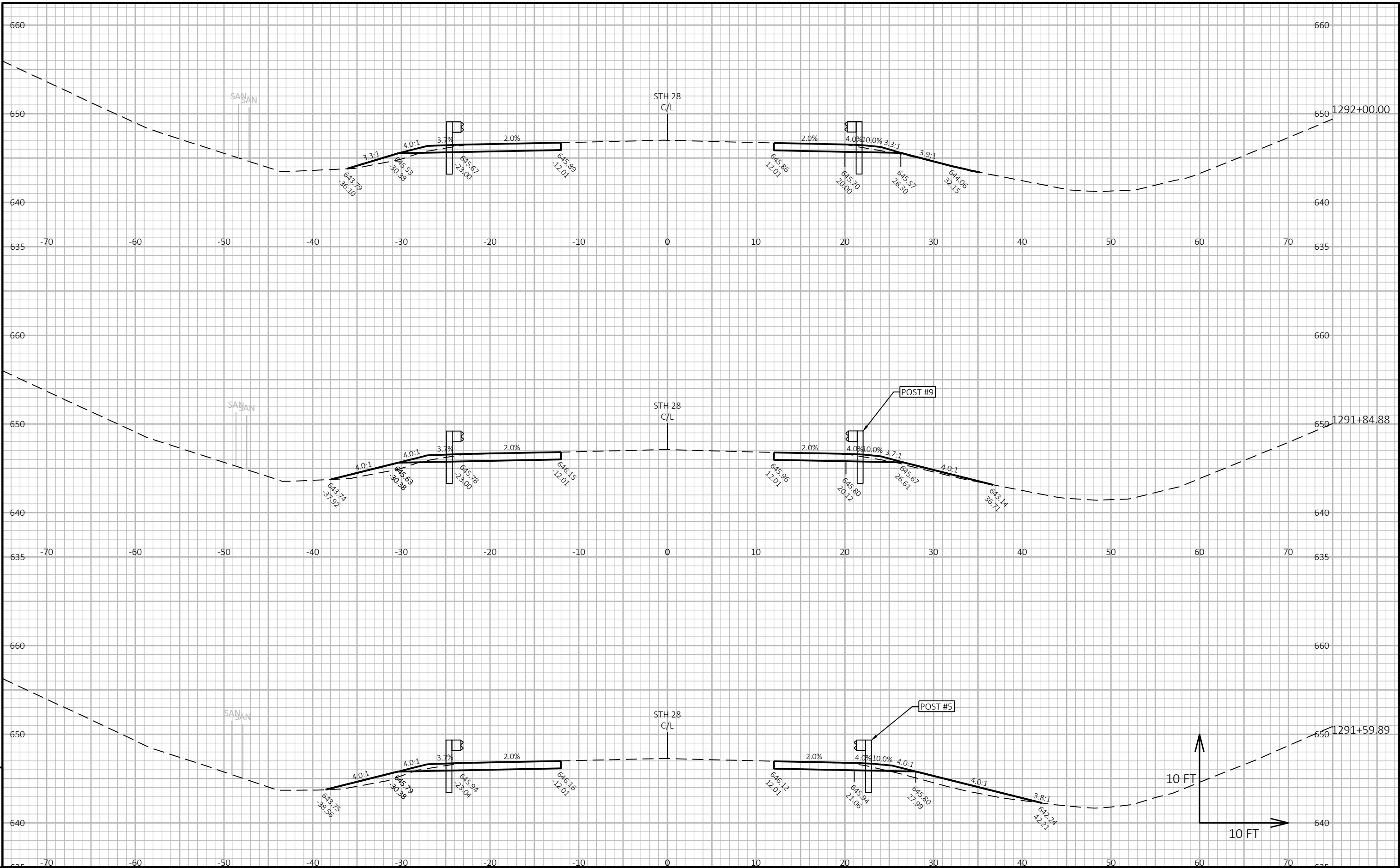


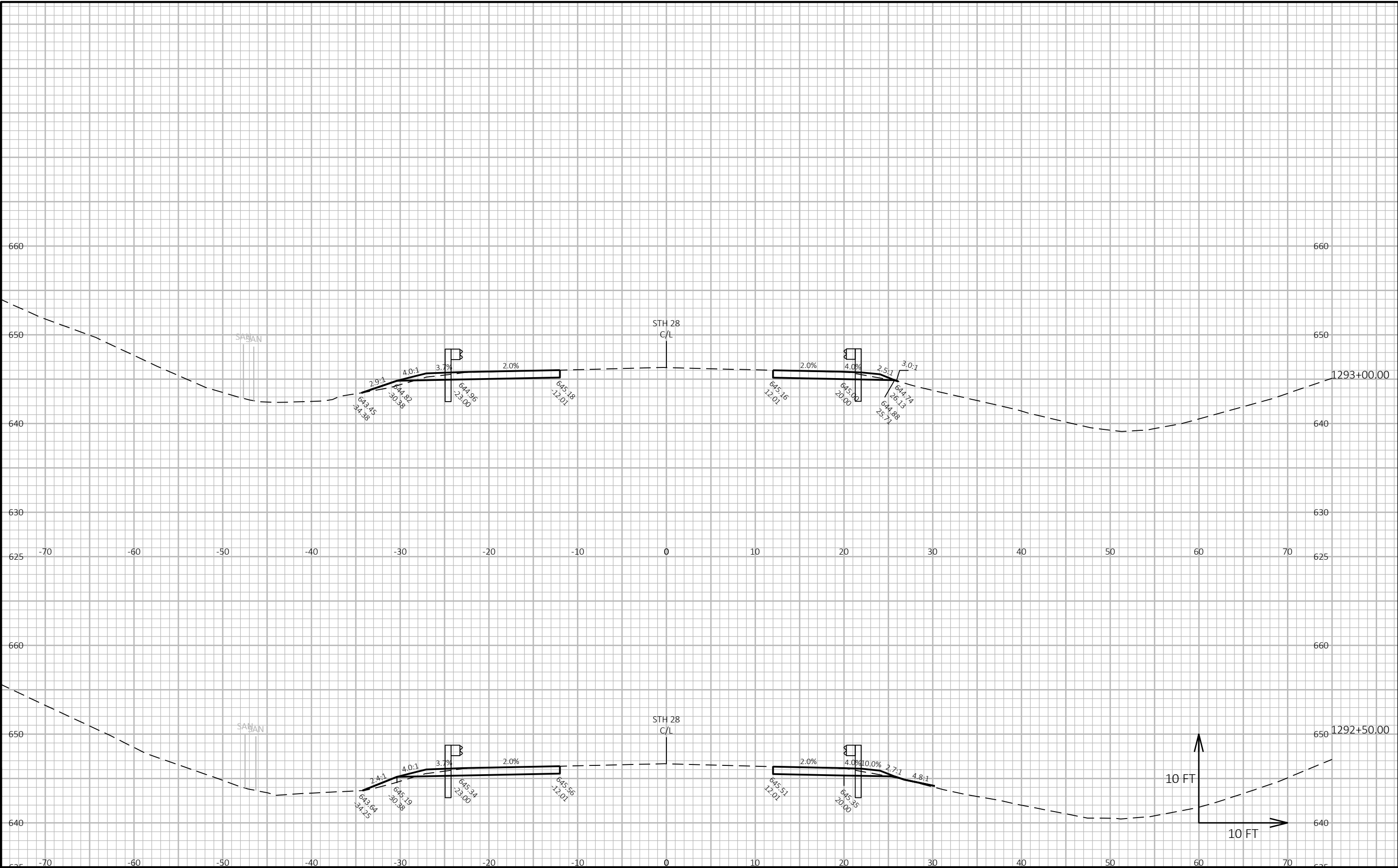
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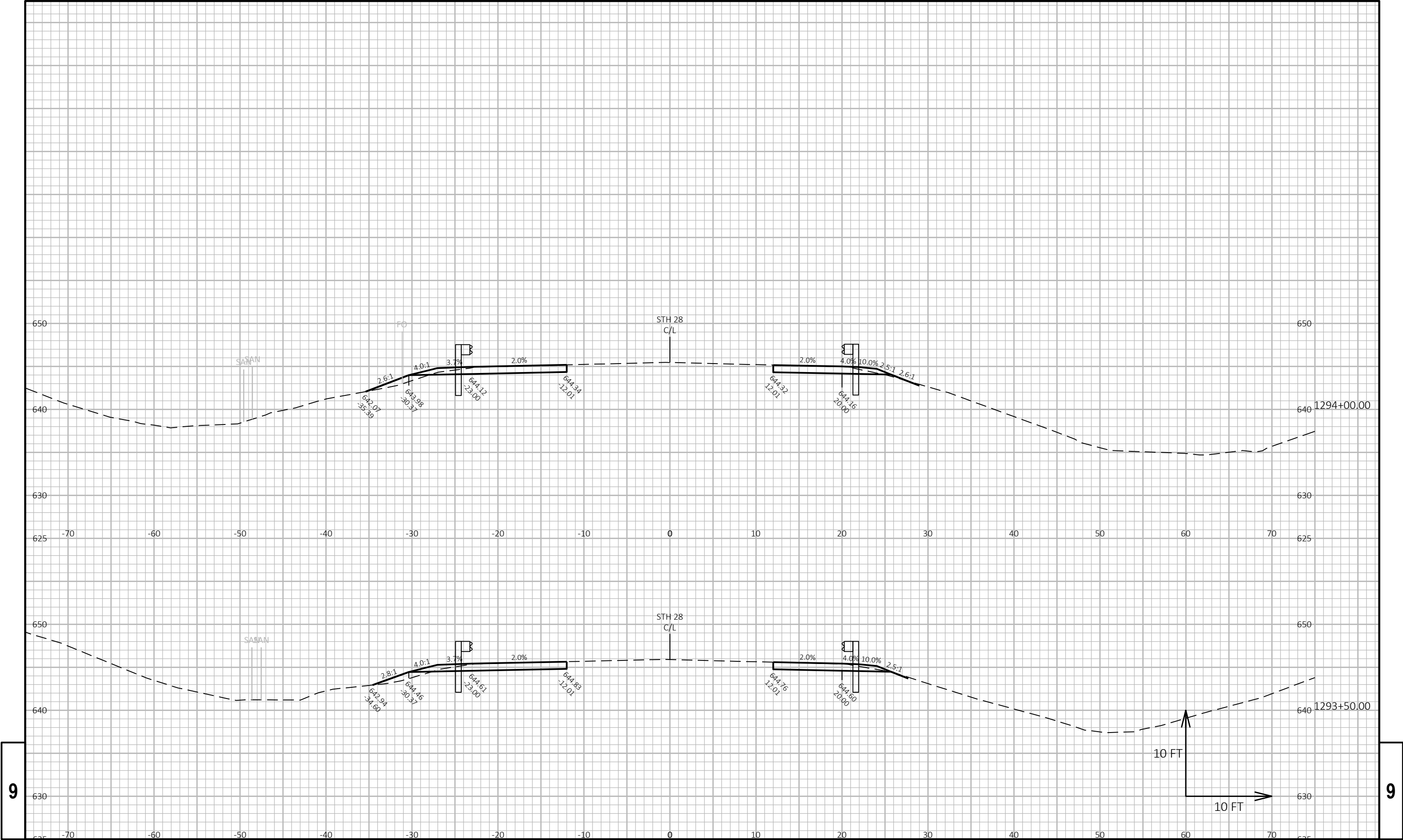
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PROJECT NO: 4010-29-71

HWY: STH 28

COUNTY: SHEBOYGAN

CROSS SECTIONS: STH 28

SHEET 235

E

FILE NAME : N:\PDS\C3D\40102900\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090245-xs

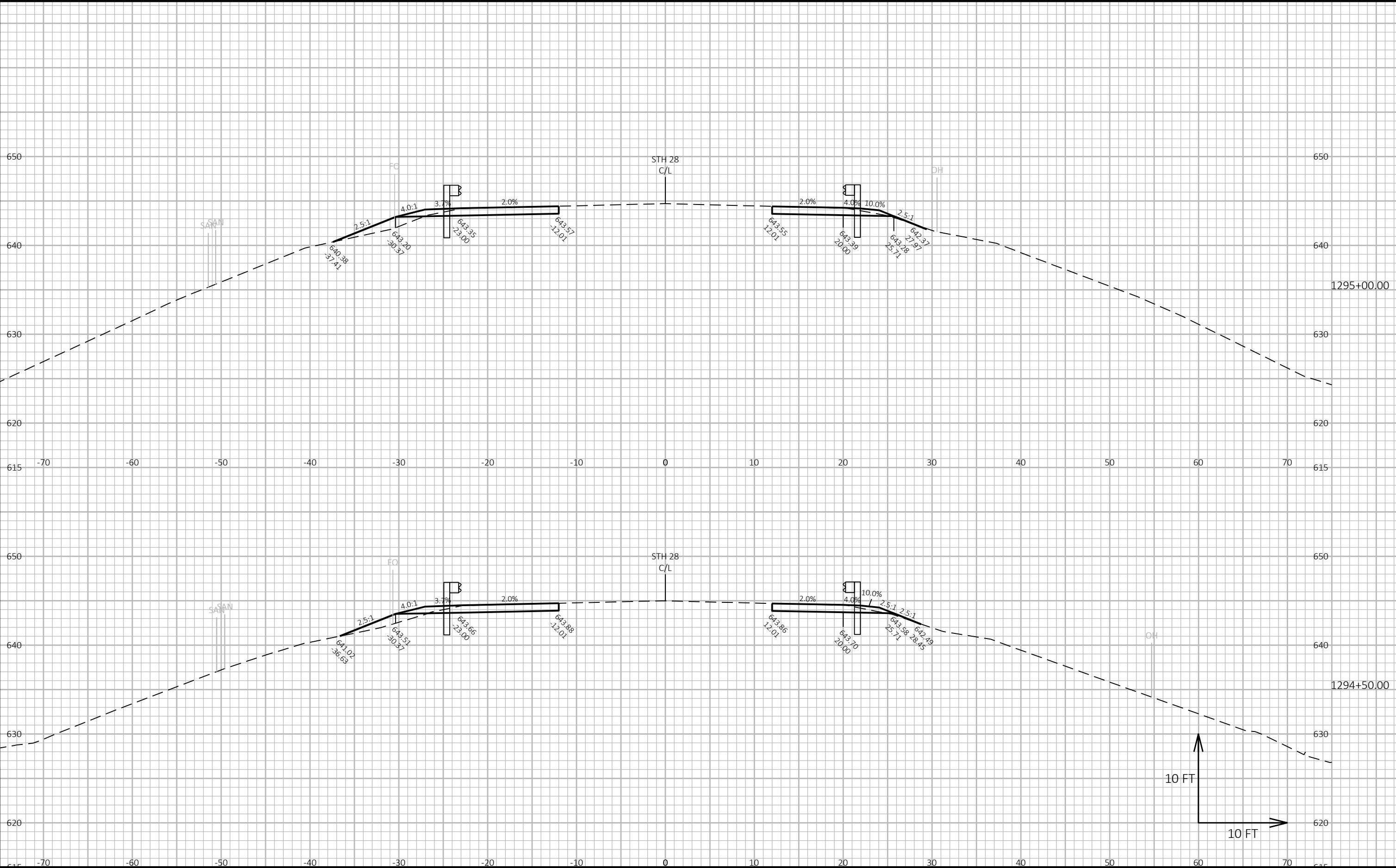
PLOT DATE : 10/27/2025 10:24 AM

PLOT BY : DANA, SHARON T

PLOT NAME :

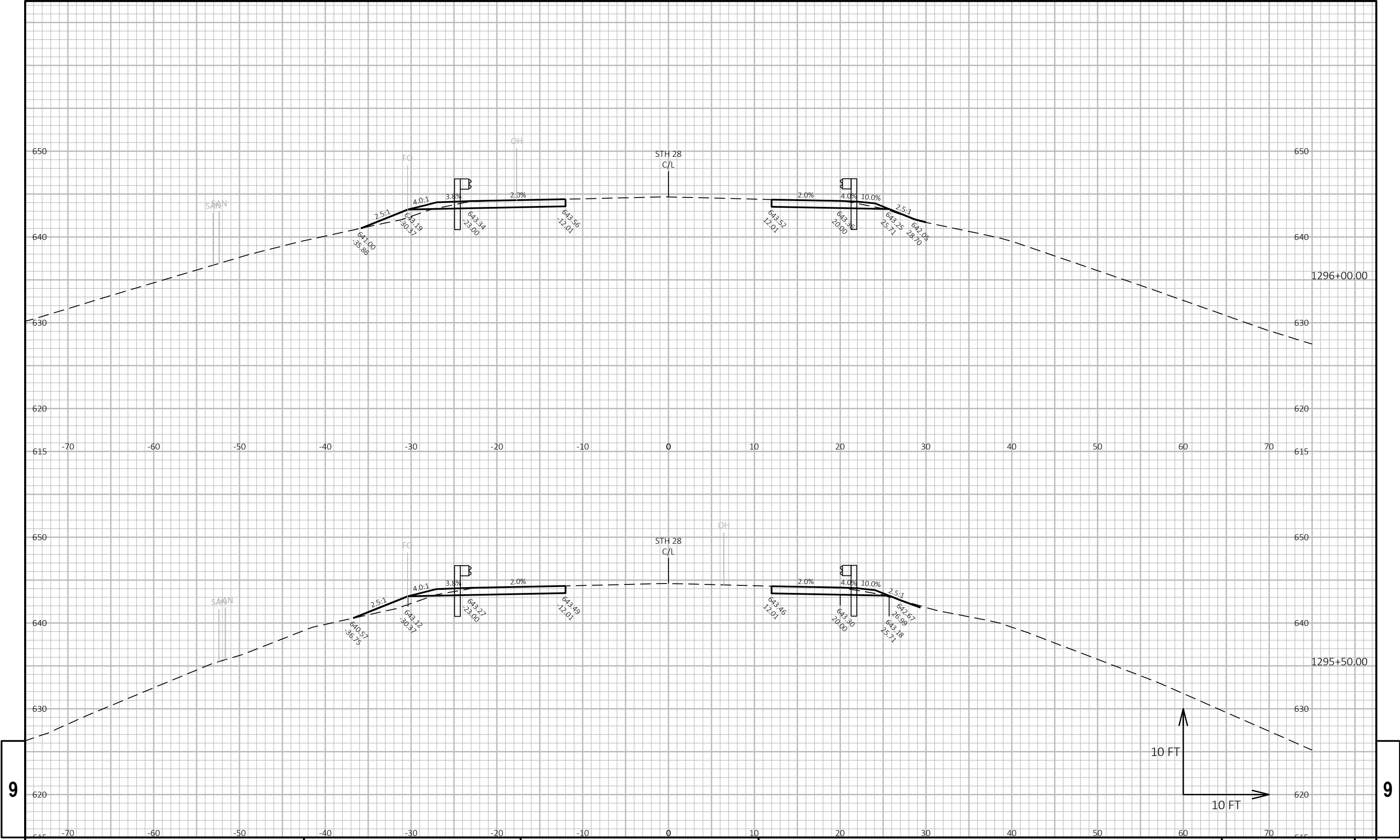
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WISDOT/CADDs SHEET 49



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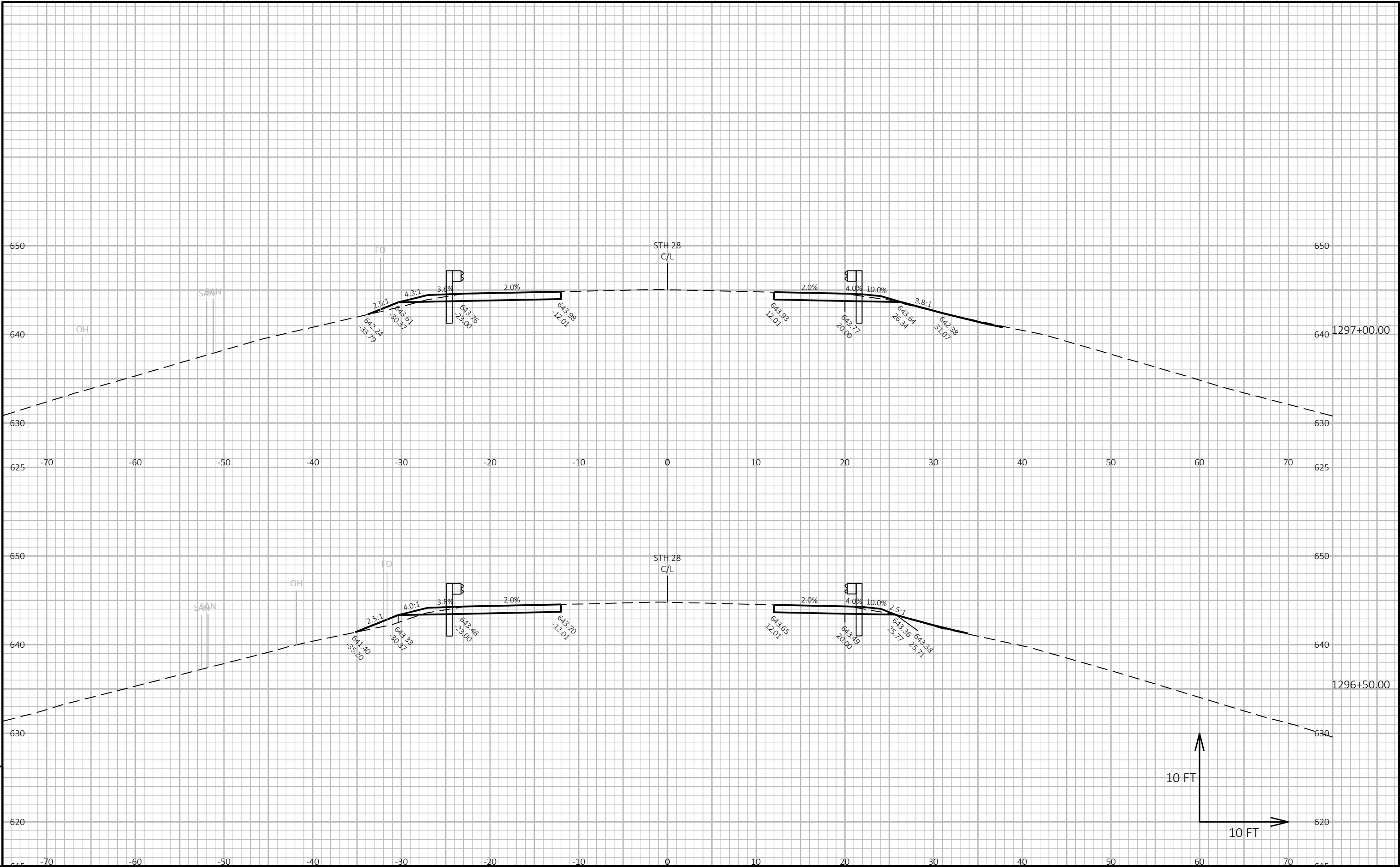
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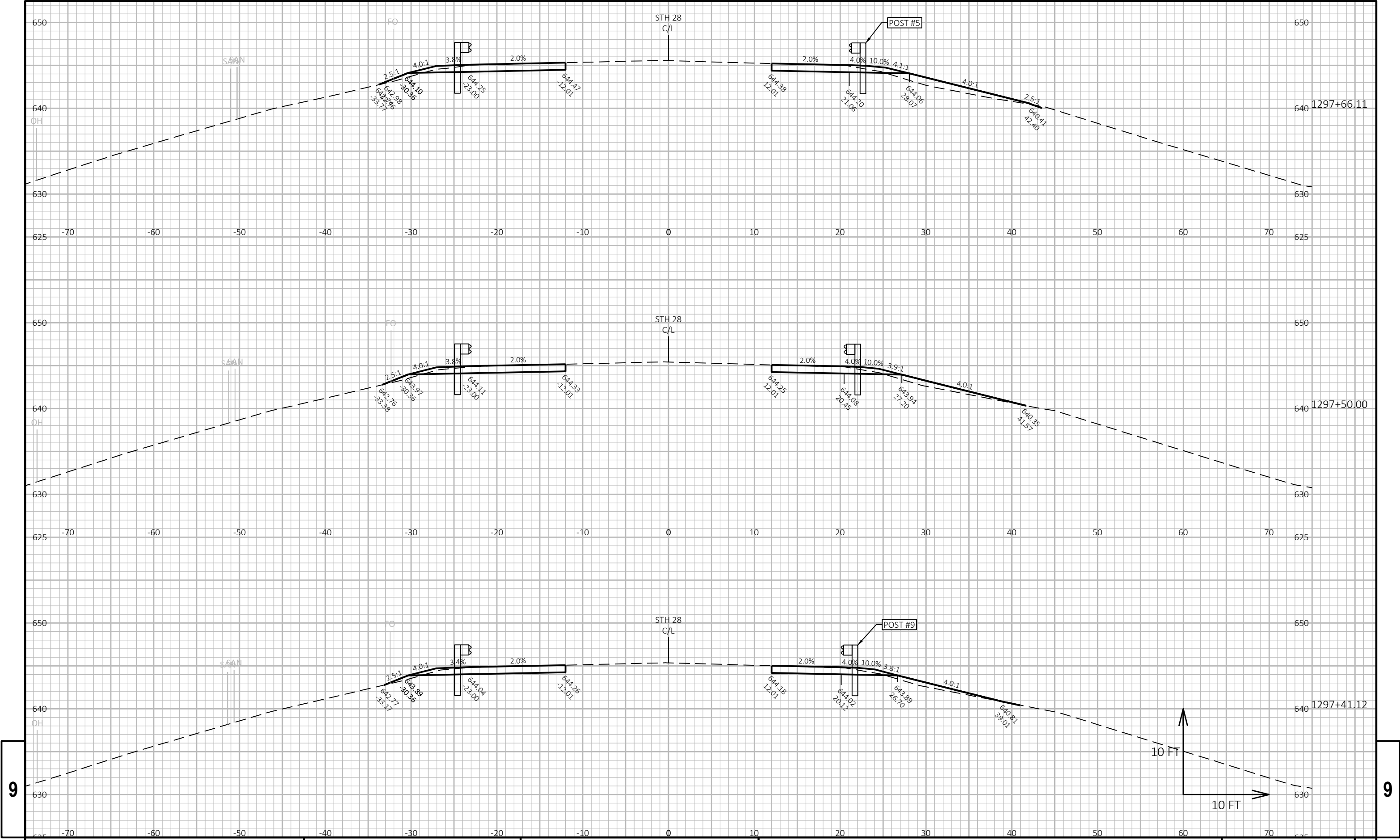


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PROJECT NO: 4010-29-71	HWY: STH 28	COUNTY: SHEBOYGAN	CROSS SECTIONS: STH 28	SHEET 237	E
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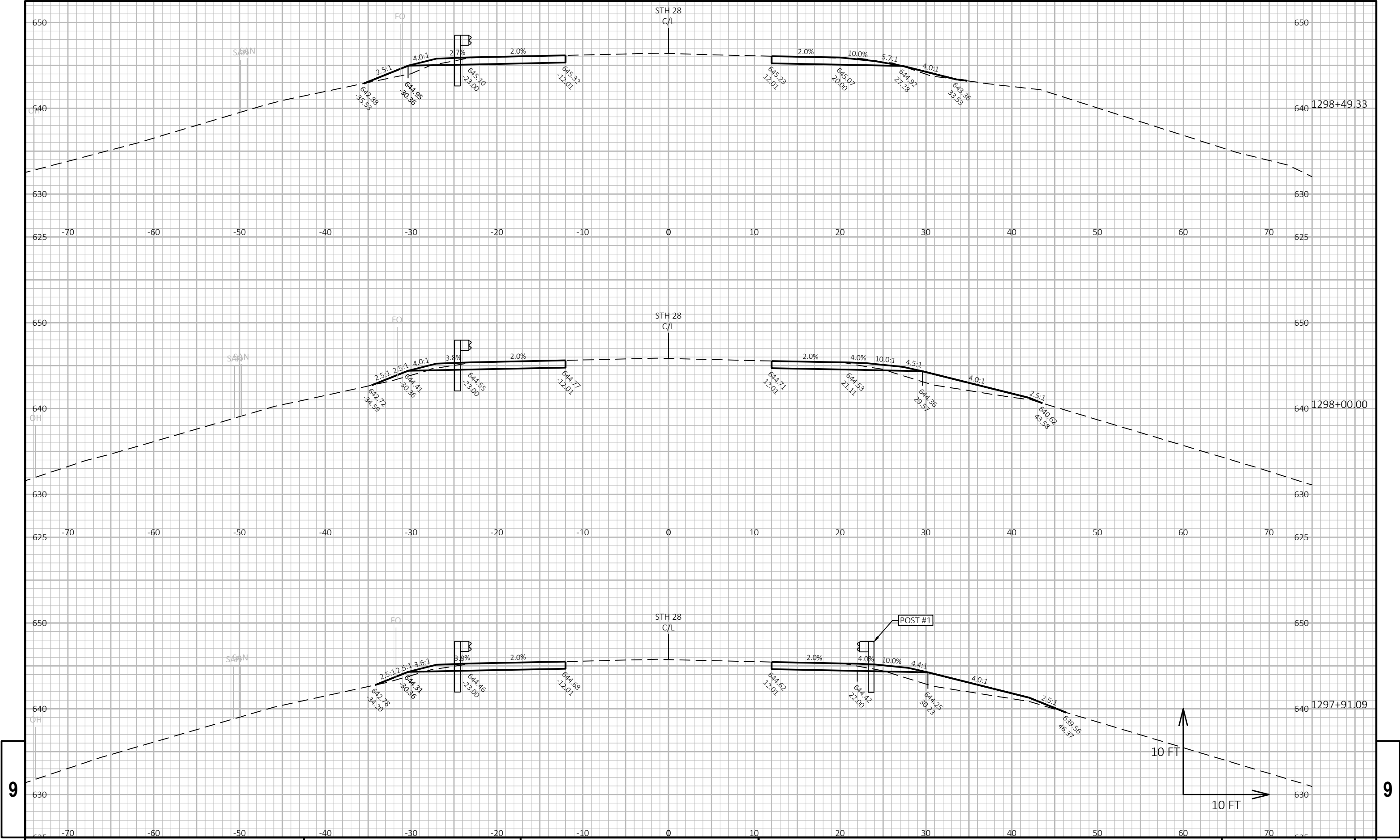




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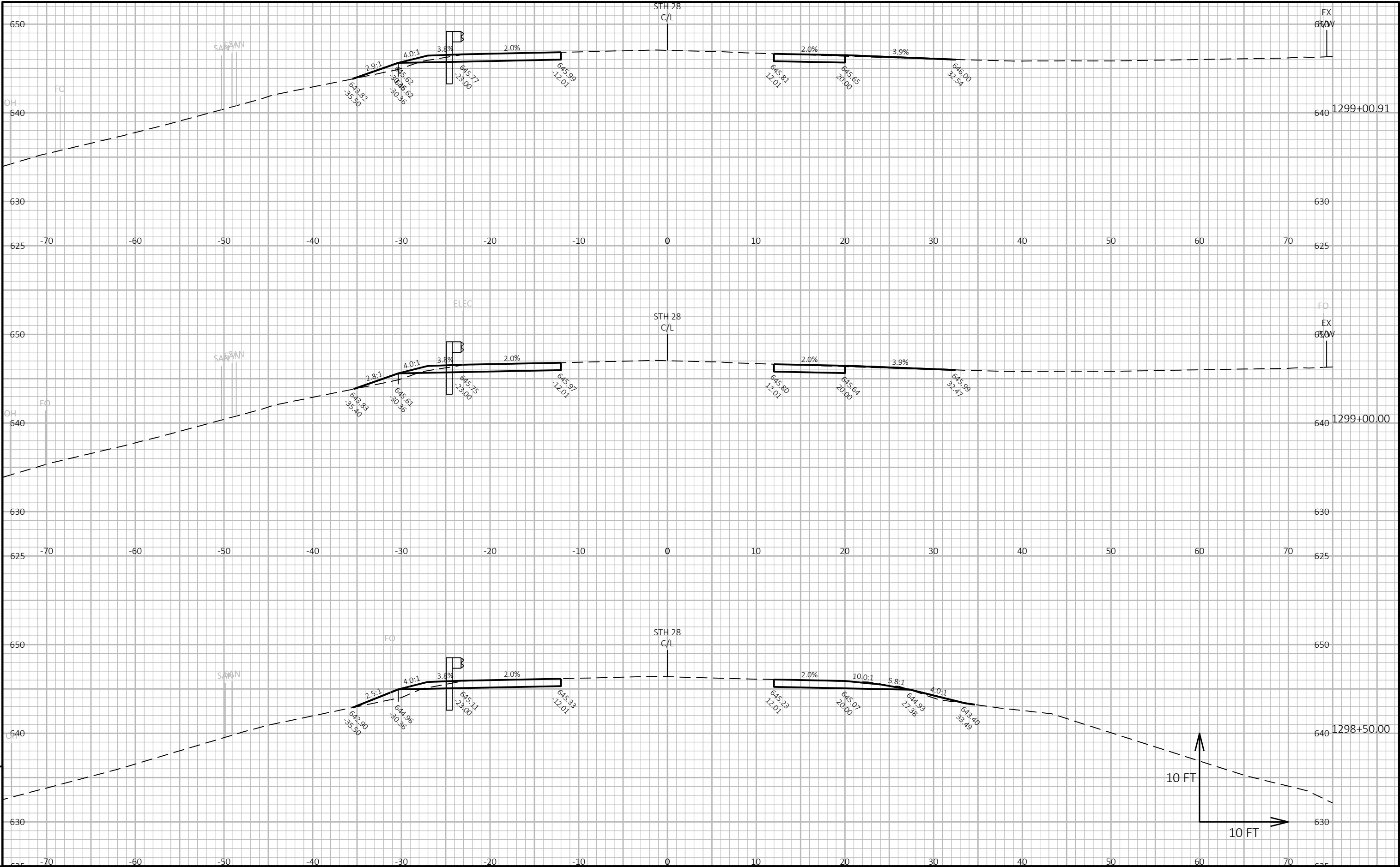
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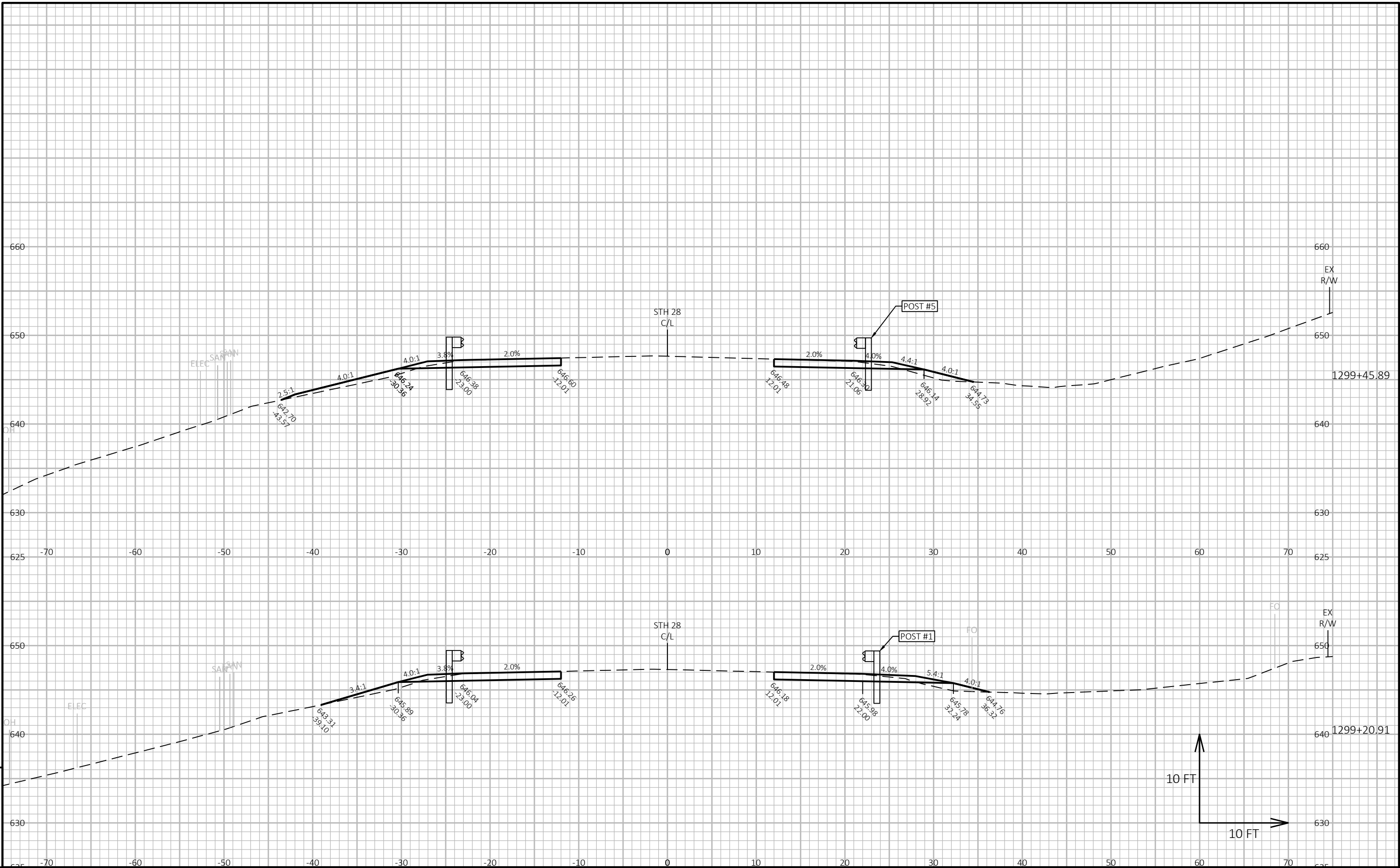
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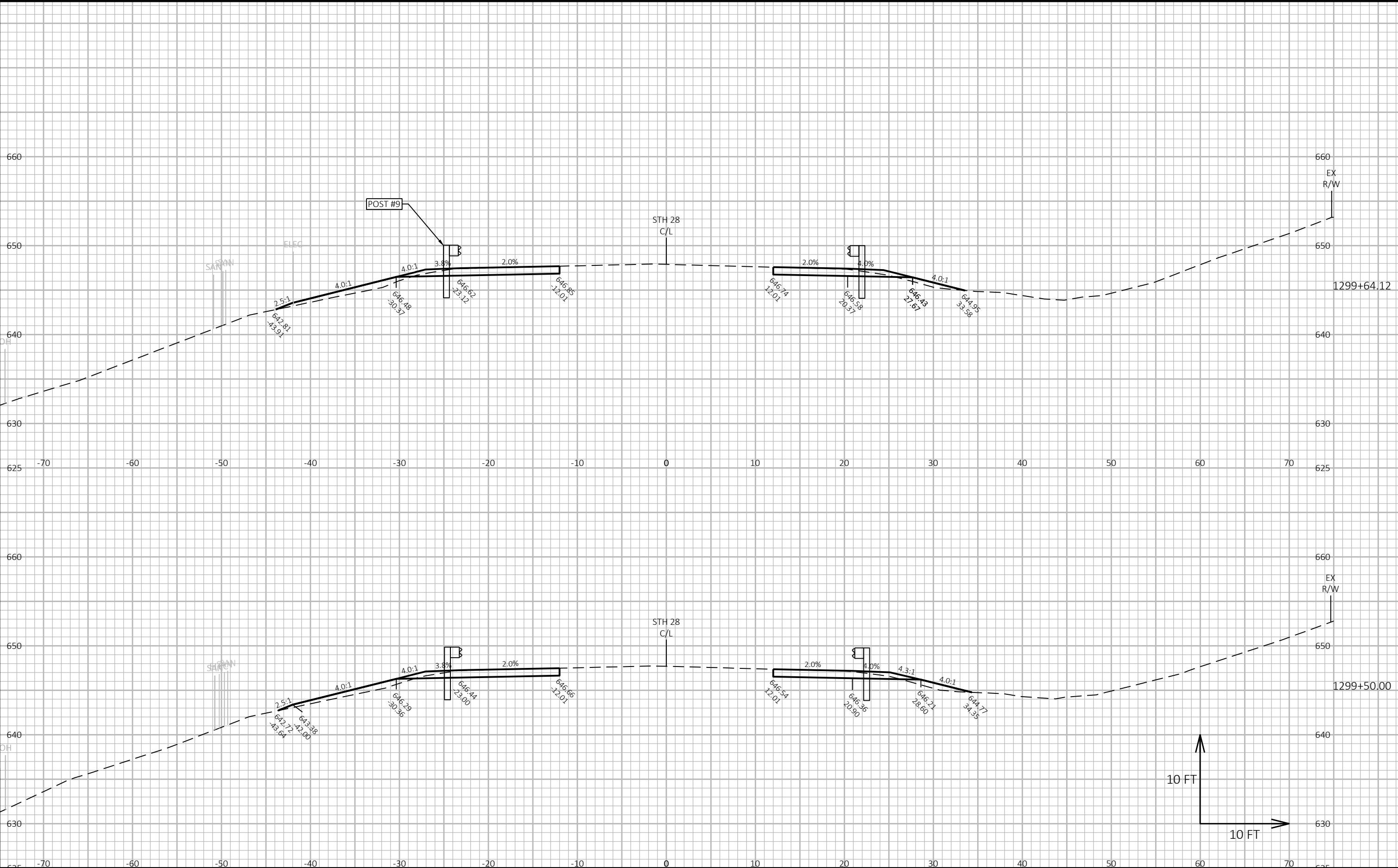


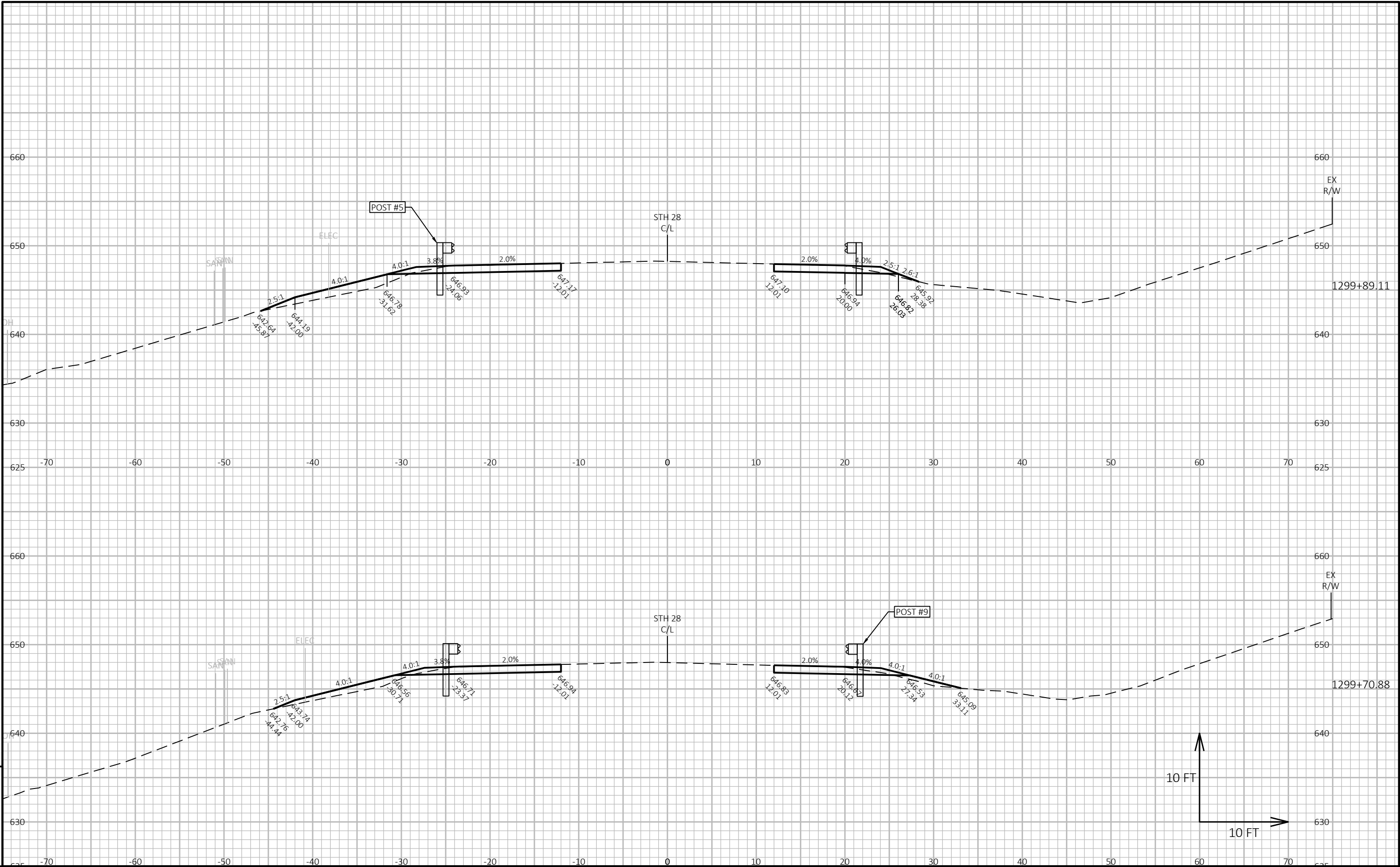
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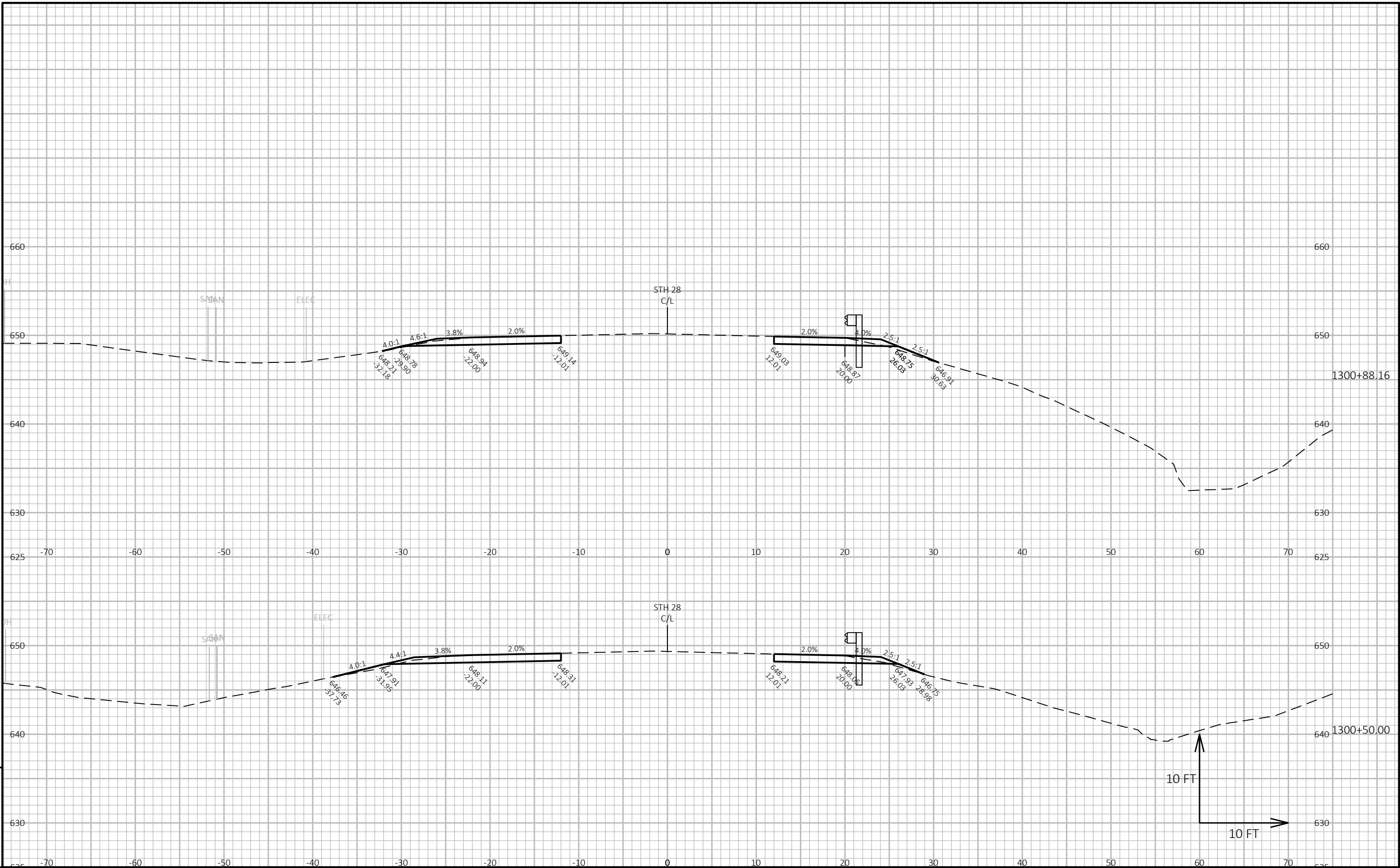
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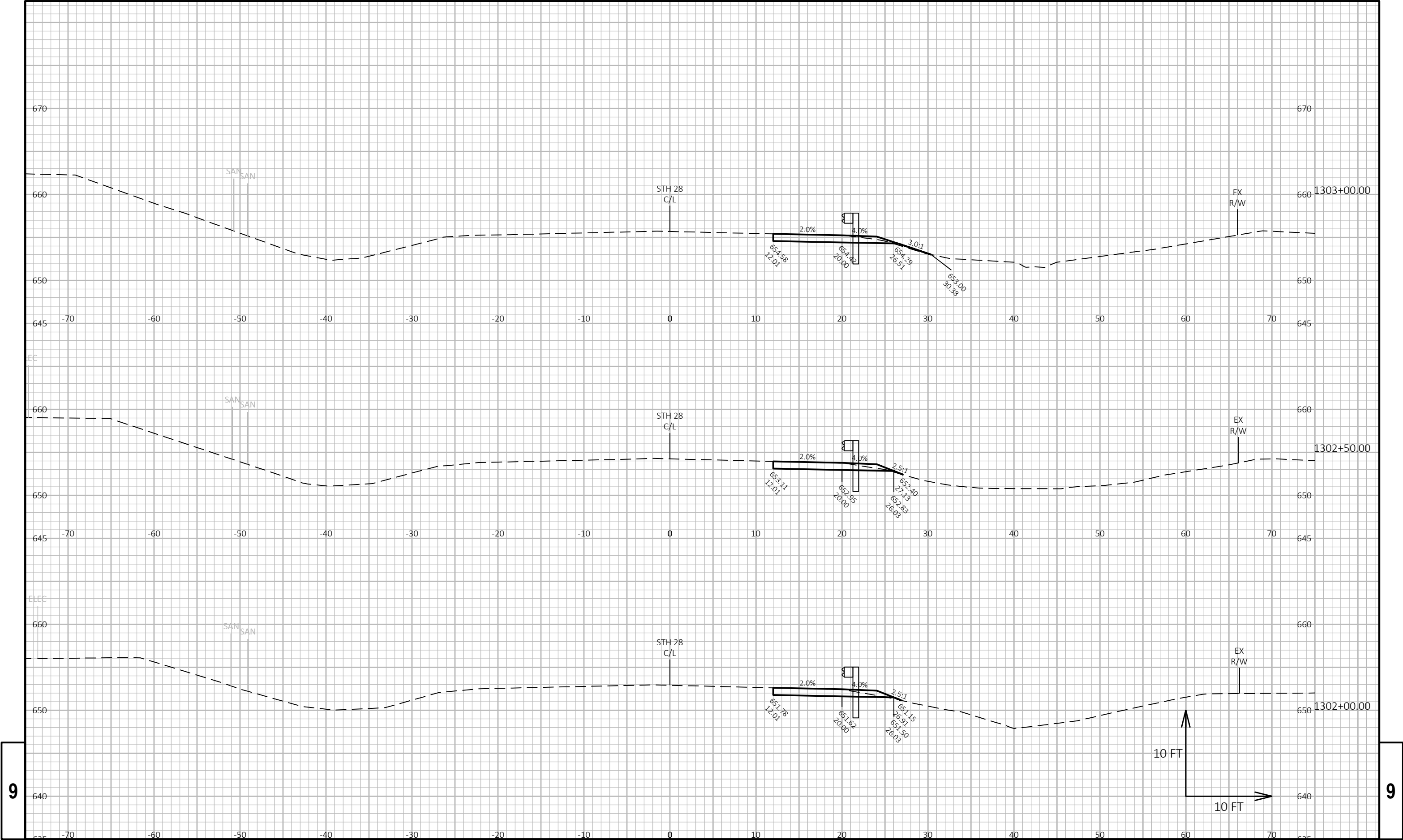






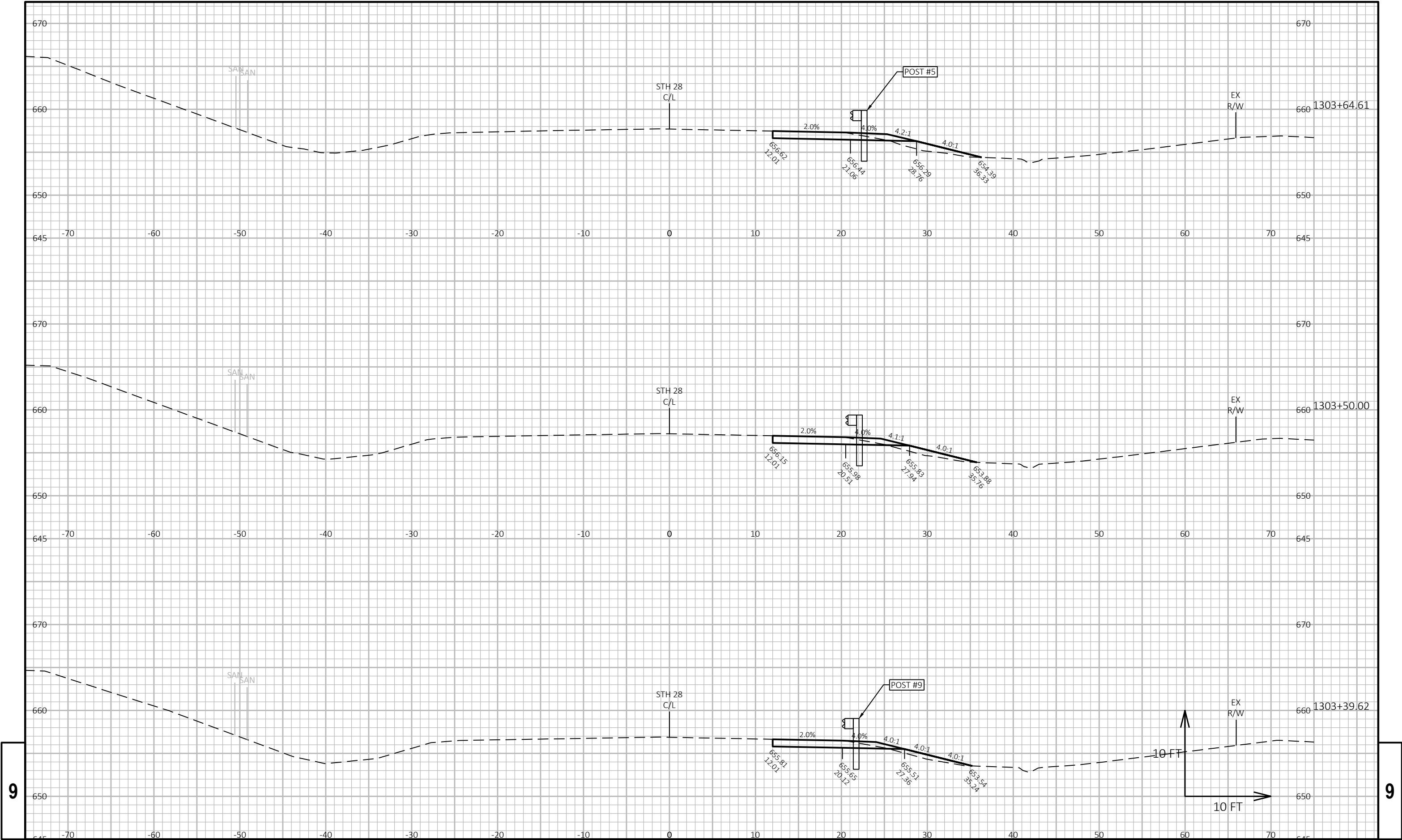






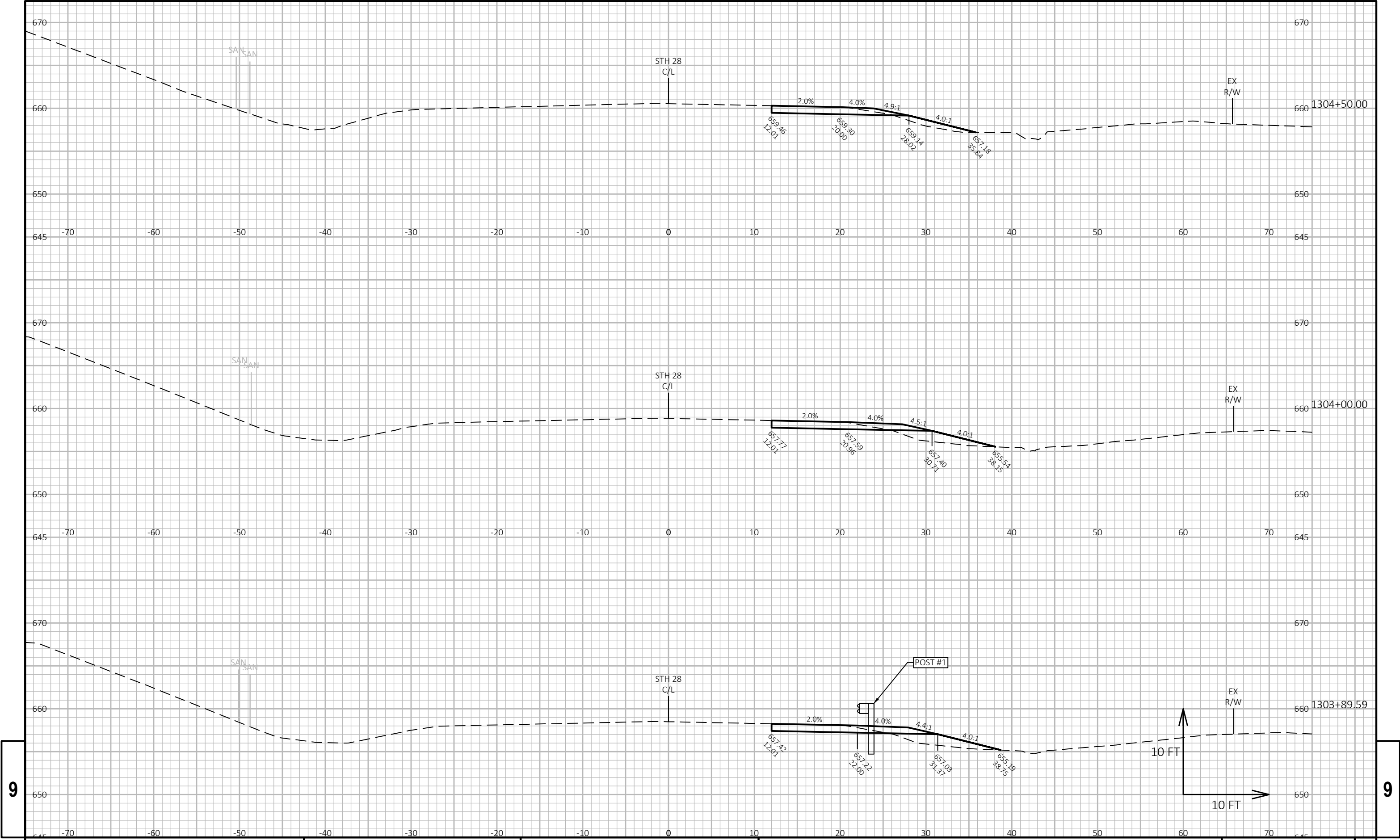
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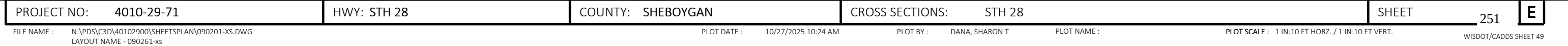
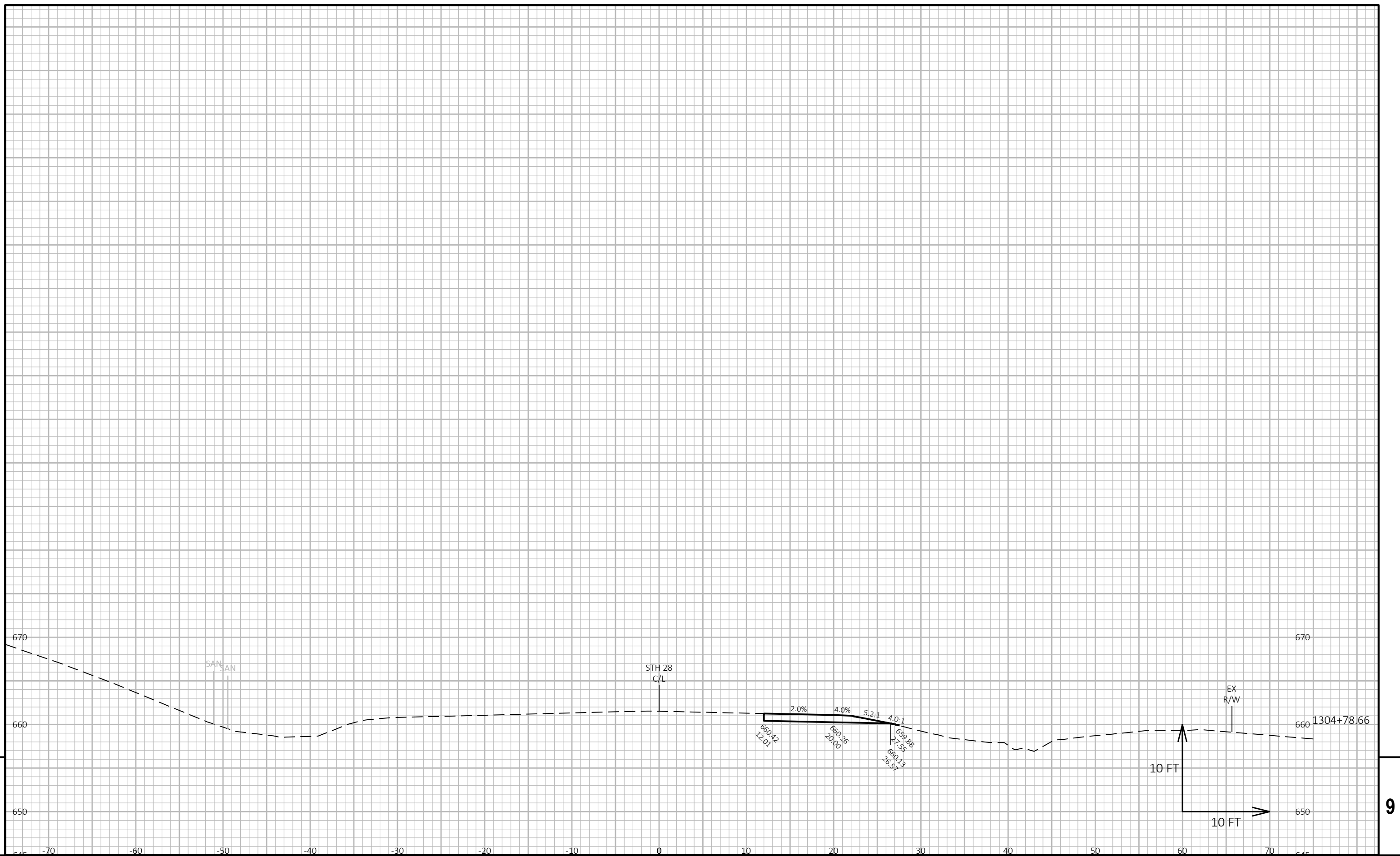
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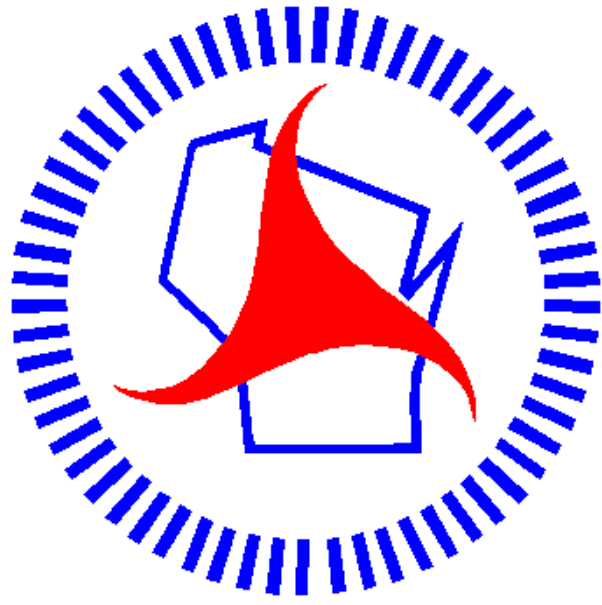
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Wisconsin Department of Transportation

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