

FEBRUARY 2022  
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 = 62



DESIGN DESIGNATION

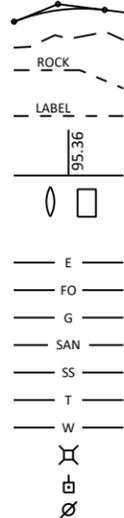
A.A.D.T.	2022	=	865
A.A.D.T.	2042	=	1,285
D.H.V.		=	116
D.D.		=	60/40
T.		=	10% (ASSUMED)
DESIGN SPEED		=	50 M.P.H.
ESALS		=	262,800

CONVENTIONAL SYMBOLS

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

PROFILE

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



# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

## CTH M - STH 81

JORDAN CREEK BRIDGE B-23-179

### CTH Y GREEN COUNTY

STATE PROJECT NUMBER  
**5962-00-70**

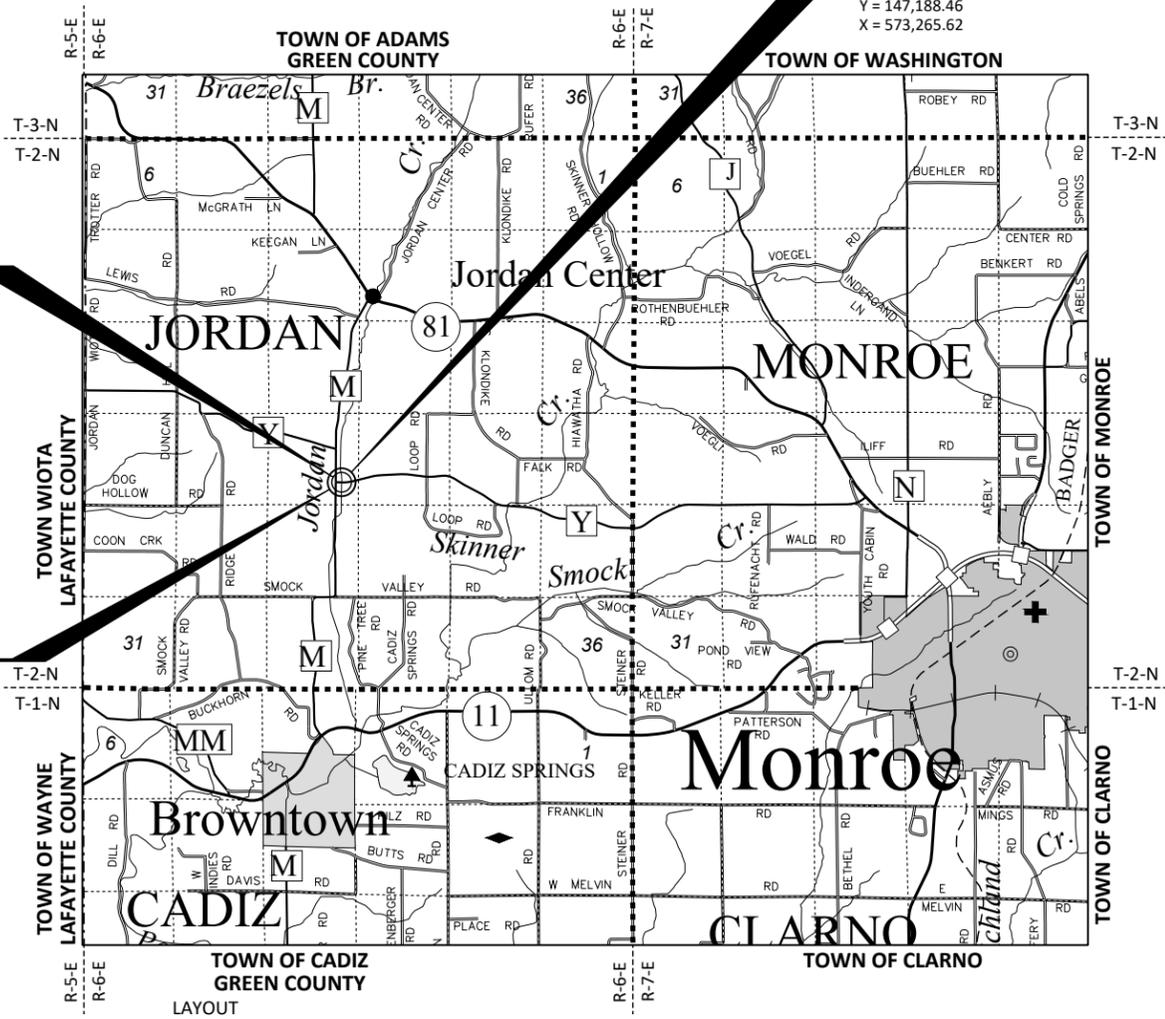
END PROJECT

STA. 12+67  
Y = 147,188.46  
X = 573,265.62

STRUCTURE B-23-179

BEGIN PROJECT

STA. 10+00  
Y = 147,187.91  
X = 572,998.67



SCALE 0 2 MI  
TOTAL NET LENGTH OF CENTERLINE = 0.051 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, GREEN COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCE MAY BE USED AS GROUND DISTANCES.  
ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012).

ACCEPTED FOR

COUNTY of GREEN

10-20-2021 (Date) *Robert B. Hanold* (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

**JEWELL**  
associates engineers, inc  
Engineers - Architects - Surveyors



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY	JEWELL ASSOCIATES ENGINEERS, INC.
Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Project Manager	ZACHARY PEARSON, P.E.
Regional Examiner	SW REGION
Regional Supervisor	JOHN STOLZMAN, P.E.

APPROVED FOR THE DEPARTMENT  
DATE: 10/25/2021 *John Stolzman* (Signature)

E

### GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE, AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

UNLESS SHOWN OTHERWISE, DISTURBED AREAS SHOWN WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE TEMPORARY), AND MULCHED AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60. DO NOT FERTILIZE WETLAND AREAS.

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

SILT FENCE AND TEMPORARY DITCH CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND SHALL BE IN PLACE PRIOR TO STRUCTURE REMOVAL.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE EQUIPMENT OR STOCKPILE MATERIALS BEYOND THE EXISTING STREAMBANK FROM STA. 10+51 RT. - STA. 11+27 RT., STA. 10+68 LT. - STA. 11+28 LT., AND STA. 11+44 LT. - STA. 12+80 LT.

ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER IN THE FIELD.

ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING 115 LB/SY/IN.

CURVE DATA IS BASED ON THE ARC DEFINITIONS.

### CONTACTS

#### GREEN COUNTY HIGHWAY DEPARTMENT:

CHRIS NARVESON, COMMISSIONER  
P.O. BOX 259  
MONROE, WI 53566  
PHONE: (608) 328-9411  
EMAIL: cnarveson@greencountywi.org

#### WISCONSIN DEPT. OF TRANSPORTATION

WISDOT PROJECT MANAGER  
2101 WRIGHT ST.  
MADISON, WI 53704  
ATTN: ZACHARY PEARSON, P.E.  
PHONE: (608) 246-5319  
EMAIL: zachary.pearson@dot.wi.gov

#### DESIGN CONSULTANT:

JEWELL ASSOCIATES ENGINEERS, INC.  
560 SUNRISE DRIVE  
SPRING GREEN, WI 53588  
ATTN: ROBERT HANOLD, P.E.  
PHONE: (608) 588-7484  
CELL: (608) 606-3568  
EMAIL: robert.hanold@jewellassoc.com

#### DNR LIAISON:

DNR SOUTH CENTRAL REGION HEADQUARTERS  
3911 FISH HATCHERY ROAD  
FITCHBURG, WI 53711  
ATTN: SHELLEY NELSON  
PHONE: (608) 444-2835  
EMAIL: shelley.nelson@wisconsin.gov

### UTILITIES

#### ELECTRIC

ALLIANT ENERGY  
ATTN: BETSI BASS  
1915 STATE ROAD 69 S  
MONROE, WI 53566  
PHONE: (608) 333-4343  
EMAIL: BETSIBASS@alliantenergy.com

#### TELEPHONE

TDS TELECOM  
ATTN: JERRY MYERS  
525 JUNCTION ROAD  
MADISON, WI 53717  
PHONE: (608) 664-4404  
EMAIL: jerry.myers@tdstelecom.com

### LIST OF STANDARD ABBREVIATIONS

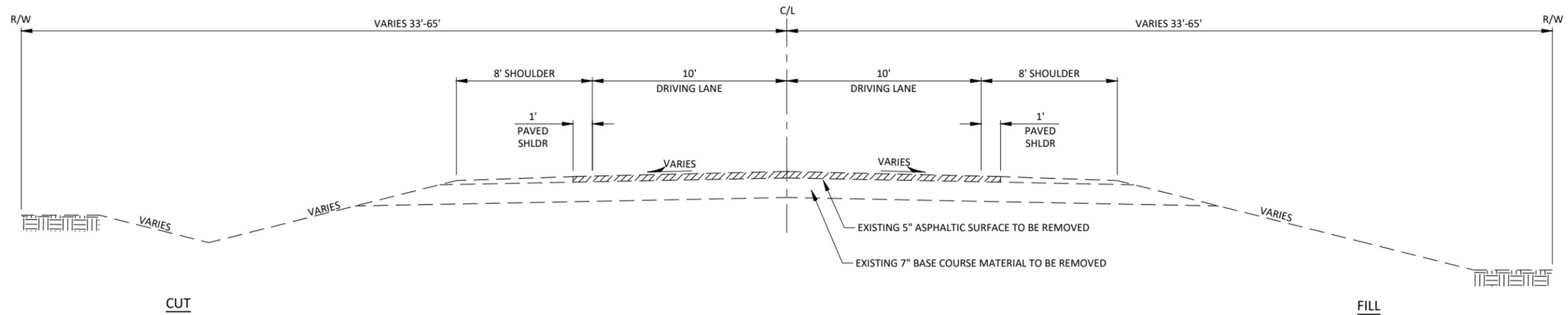
ABUT	Abutment	INV	Invert	RDWY	Roadway
AC	Acre	IP	Iron Pipe or Pin	SALV	Salvaged
AGG	Aggregate	IRS	Iron Rod Set	SAN S	Sanitary Sewer
AH	Ahead	JT	Joint	SEC	Section
<	Angle	JCT	Junction	SHLDR	Shoulder
ASPH	Asphaltic	LHF	Left-Hand Forward	SHR	Shrinkage
AVG	Average	L	Length of Curve	SW	Sidewalk
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	S	South
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SQ	Square
BK	Back	MH	Manhole	SF or SQ FT	Square Feet
BF	Back Face	MB	Mailbox	SY or SQ YD	Square Yard
BM	Bench Mark	ML or M/L	Match Line	STD	Standard
BR	Bridge	N	North	SDD	Standard Detail Drawings
C or C/L	Center Line	Y	North Grid Coordinate	STH	State Trunk Highways
CC	Center to Center	O.A.L.	Overall Length	STA	Station
CTH	County Trunk Highway	OD	Outside Diameter	SS	Storm Sewer
CR	Creek	PLE	Permanent Limited Easement	SG	Subgrade
CR	Crushed	PT	Point	SE	Super-elevation
CY or CU YD	Cubic Yard	PC	Point of Curvature	SL or S/L	Survey Line
CP	Culvert Pipe	PI	Point of Intersection	SV	Septic Vent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	T	Tangent
D	Degree of Curve	PT	Point of Tangency	TEL	Telephone
DHV	Design Hour Volume	POC	Point On Curve	TEMP	Temporary
DIA	Diameter	POT	Point on Tangent	TI	Temporary Interest
E	East	PVC	Polyvinyl Chloride	TLE	Temporary Limited Easement
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Transit Line
EBS	Excavation Below Subgrade	R	Radius	T	Trucks (percent of)
ESTR	Existing Sign to Remain	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP	Reference Point	USH	United States Highway
FG	Finished Grade	RCCP	Reinforced Concrete Culvert	VAR	Variable
FL or F/L	Flow Line		Pipe	V	Velocity or Design Speed
FT	Foot	REQ'D	Required	VERT	Vertical
FTG	Footing	RES	Residence or Residential	VC	Vertical Curve
GN	Grid North	RW	Retaining Wall	VOL	Volume
HT	Height	RT	Right	WM	Water Main
CWT	Hundredweight	RHF	Right-Hand Forward	WV	Water Valve
HYD	Hydrant	R/W	Right-of-Way	W	West
INL	Inlet	R	River	WB	Westbound
ID	Inside Diameter	RD	Road	YD	Yard

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

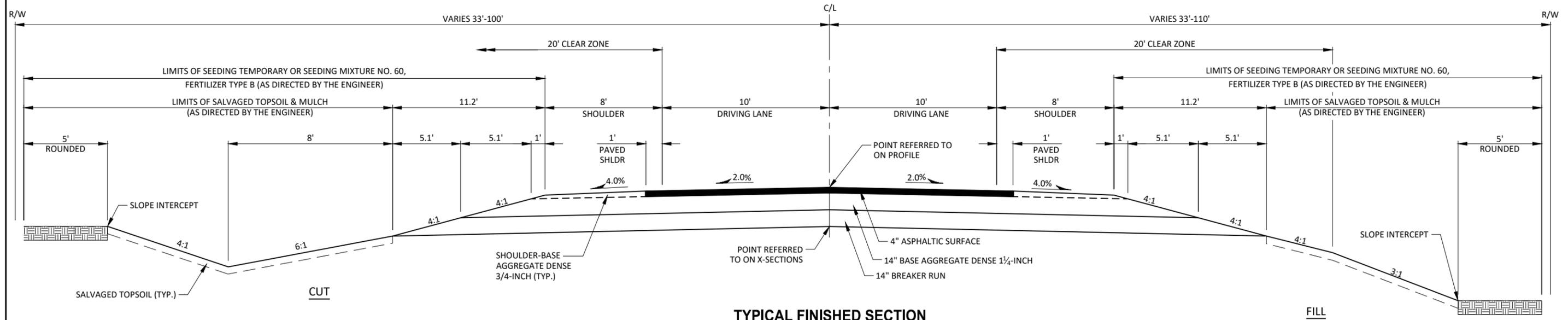
TOTAL PROJECT AREA= 1.13 ACRES  
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.83 ACRES



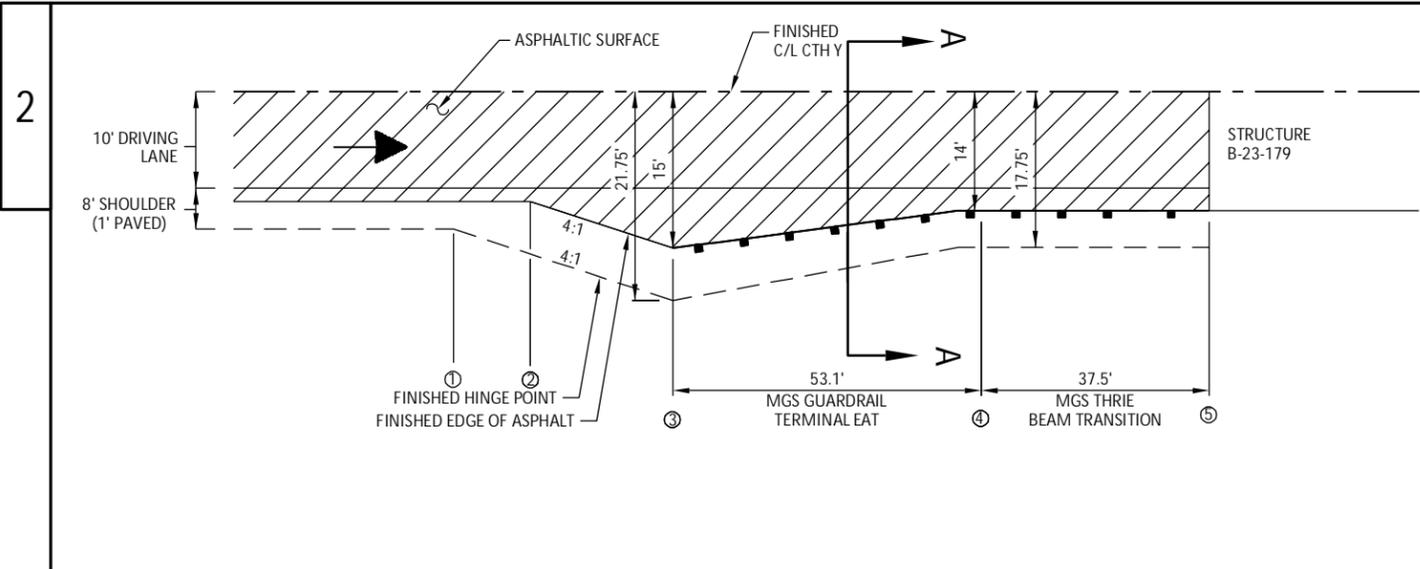
\*UTILITY NOT PART OF DIGGERS HOTLINE



**TYPICAL EXISTING SECTION**  
 CTH Y  
 STA. 10+00 - STA. 12+67



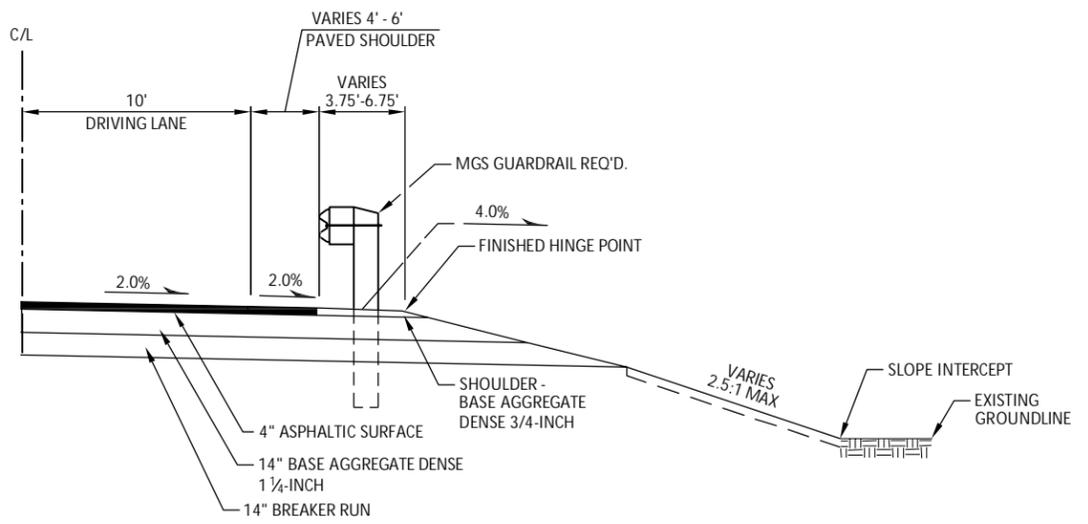
**TYPICAL FINISHED SECTION**  
 CTH Y  
 STA. 10+00 - STA. 11+12.65  
 STA. 11+55.15 - STA. 12+67



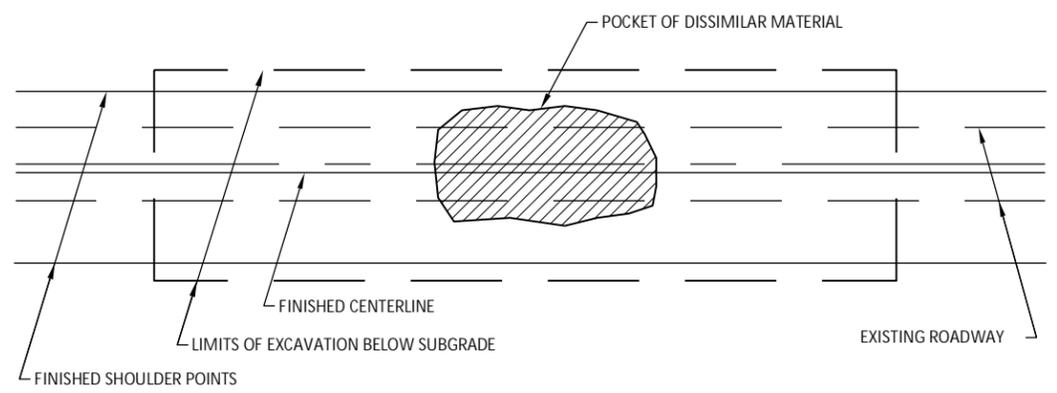
**BEAMGUARD LAYOUT DETAIL**

BEAMGUARD LAYOUT TABLE

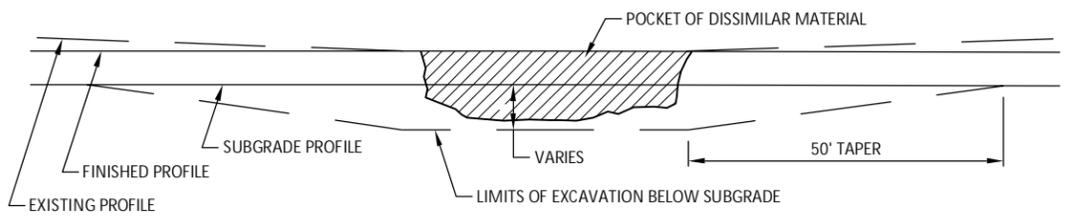
STATION-STATION	LOCATION	STATION				
		①	②	③	④	⑤
9+89 - 11+13	MAINLINE, LT.	9+89	10+03	10+21	10+75	11+13
10+00 - 11+13	MAINLINE, RT.	10+00	10+00	10+23	10+75	11+13
11+55 - 12+88	MAINLINE, LT.	12+88	12+65	12+46	11+93	11+55
11+55 - 12+89	MAINLINE, RT.	12+71	12+67	12+46	11+93	11+55



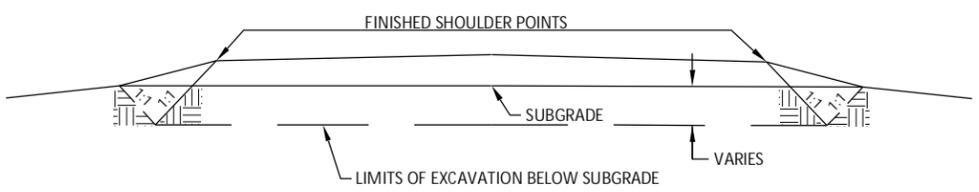
**SECTION A-A**



**PLAN VIEW**



**PROFILE VIEW**



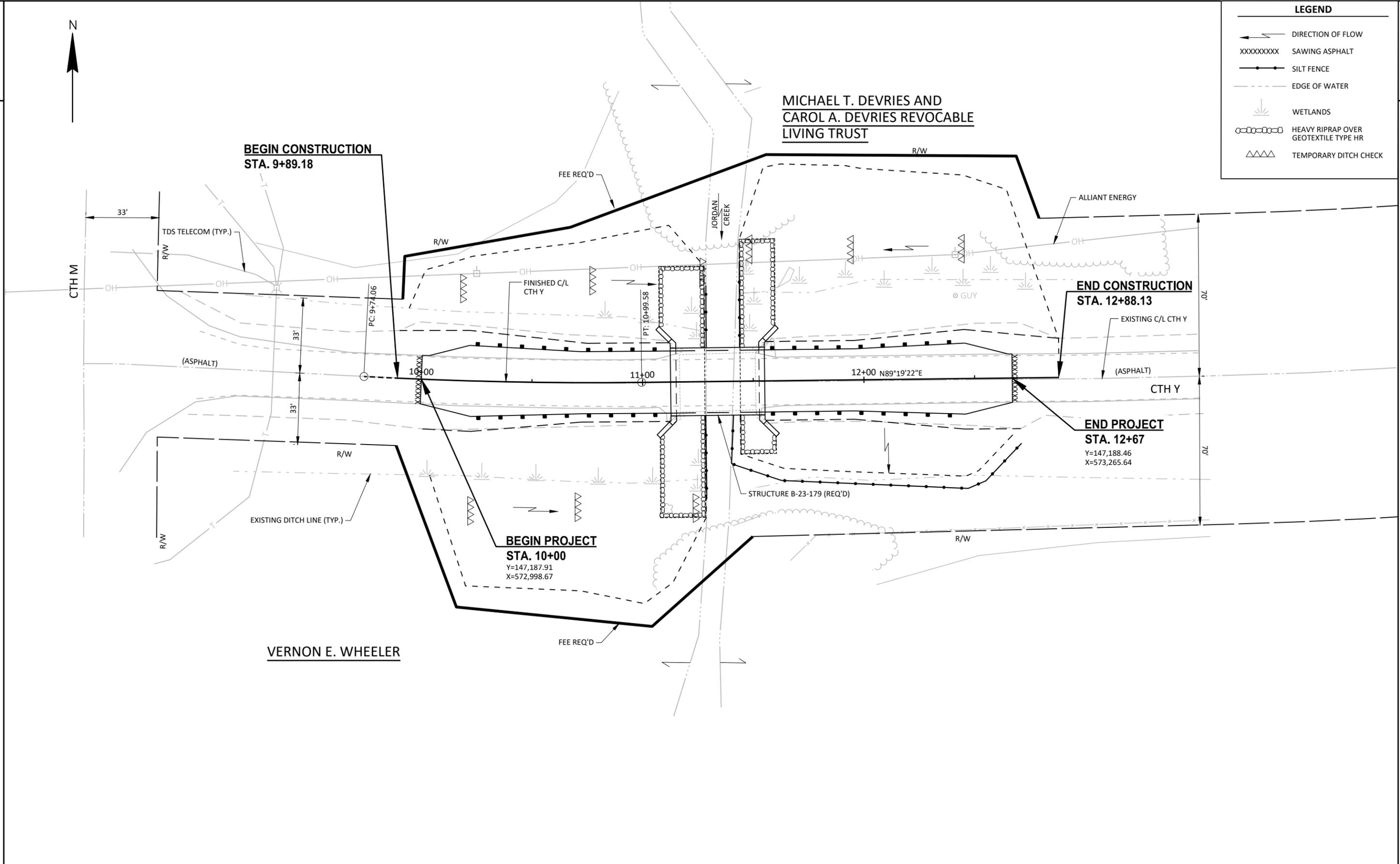
**CROSS SECTION VIEW**

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

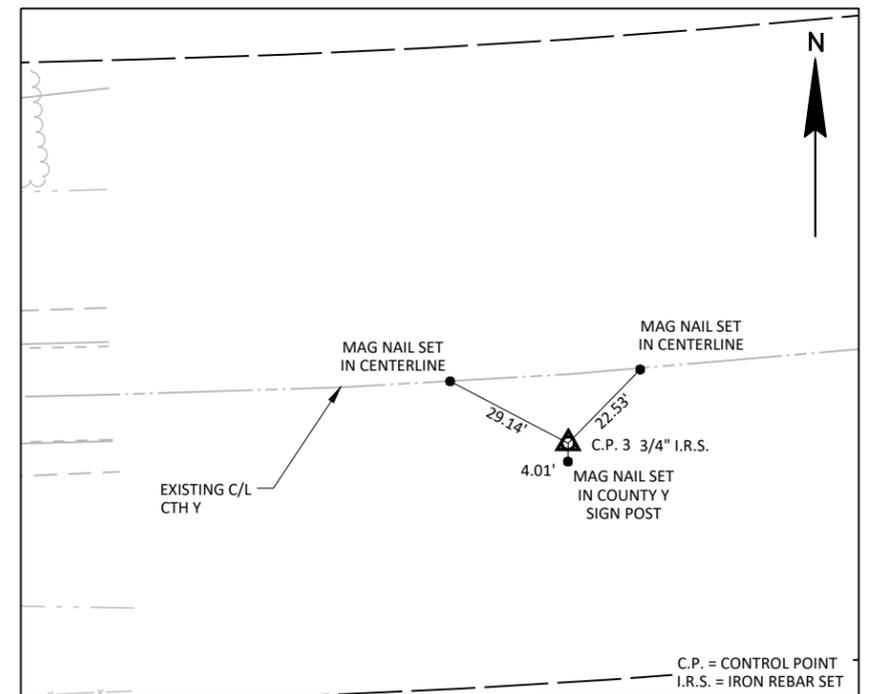
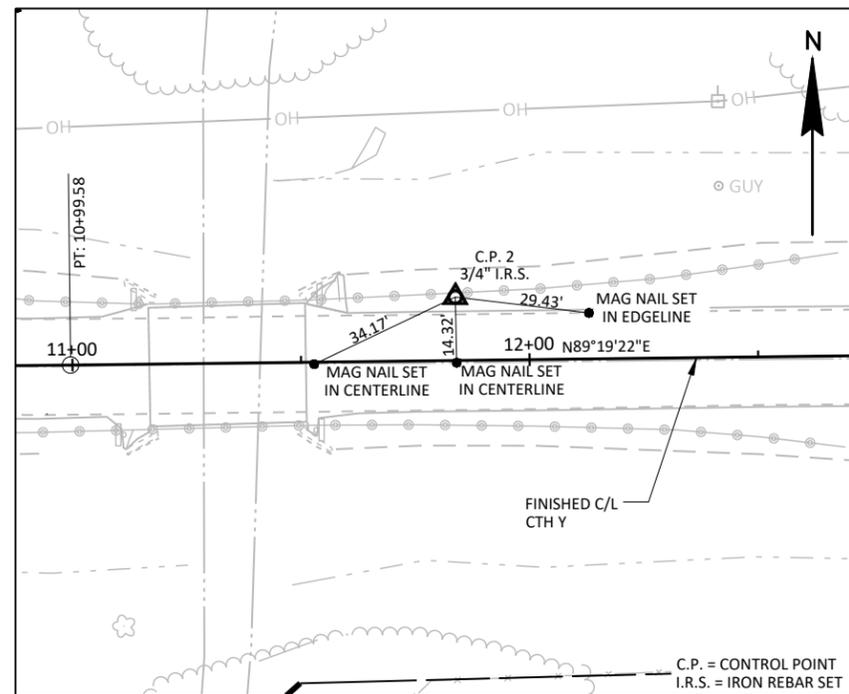
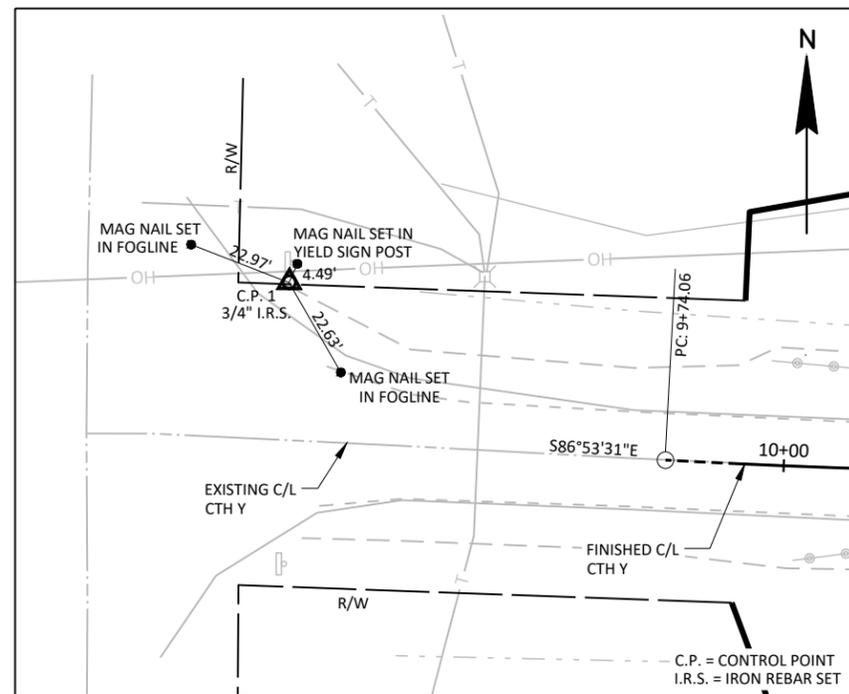
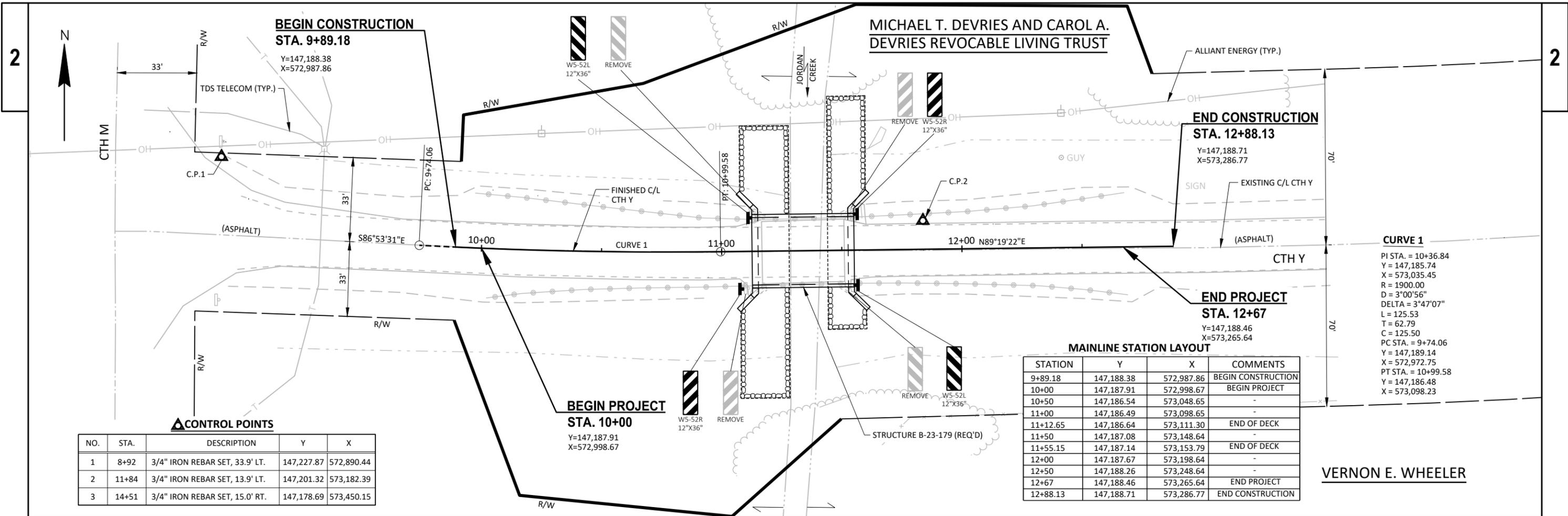
**EXCAVATION BELOW SUBGRADE (E.B.S.) DETAIL**



LEGEND	
	DIRECTION OF FLOW
	SAWING ASPHALT
	SILT FENCE
	EDGE OF WATER
	WETLANDS
	HEAVY RIPRAP OVER GEOTEXTILE TYPE HR
	TEMPORARY DITCH CHECK



PROJECT NO: 5962-00-70	HWY: CTH Y	COUNTY: GREEN	PROJECT OVERVIEW & EROSION CONTROL	SHEET	E
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Estimate Of Quantities

5962-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0205	Grubbing	STA	3.000	3.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-23-0150	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	2,100.000	2,100.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-23-0179	LS	1.000	1.000
0012	210.1500	Backfill Structure Type A	TON	240.000	240.000
0014	213.0100	Finishing Roadway (project) 01. Project 5962-00-70	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	78.000	78.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,010.000	1,010.000
0020	311.0110	Breaker Run	TON	1,120.000	1,120.000
0022	455.0605	Tack Coat	GAL	56.000	56.000
0024	465.0105	Asphaltic Surface	TON	182.000	182.000
0026	502.0100	Concrete Masonry Bridges	CY	149.000	149.000
0028	502.3200	Protective Surface Treatment	SY	200.000	200.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	4,450.000	4,450.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	18,540.000	18,540.000
0034	513.4061	Railing Tubular Type M	LF	90.000	90.000
0036	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0038	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	490.000	490.000
0040	606.0300	Riprap Heavy	CY	305.000	305.000
0042	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0044	614.0920	Salvaged Rail	LF	480.000	480.000
0046	614.2500	MGs Thrie Beam Transition	LF	160.000	160.000
0048	614.2610	MGs Guardrail Terminal EAT	EACH	4.000	4.000
0050	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5962-00-70	EACH	1.000	1.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	624.0100	Water	MGAL	40.000	40.000
0056	625.0500	Salvaged Topsoil	SY	3,190.000	3,190.000
0058	627.0200	Mulching	SY	3,190.000	3,190.000
0060	628.1504	Silt Fence	LF	440.000	440.000
0062	628.1520	Silt Fence Maintenance	LF	880.000	880.000
0064	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0068	628.7504	Temporary Ditch Checks	LF	88.000	88.000
0070	629.0210	Fertilizer Type B	CWT	3.000	3.000
0072	630.0160	Seeding Mixture No. 60	LB	6.000	6.000
0074	630.0170	Seeding Mixture No. 70	LB	15.000	15.000
0076	630.0200	Seeding Temporary	LB	100.000	100.000
0078	630.0500	Seed Water	MGAL	90.000	90.000
0080	633.5100	Markers ROW	EACH	11.000	11.000
0082	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0084	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0086	638.2602	Removing Signs Type II	EACH	4.000	4.000
0088	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0090	642.5001	Field Office Type B	EACH	1.000	1.000
0092	643.0420	Traffic Control Barricades Type III	DAY	1,278.000	1,278.000
0094	643.0705	Traffic Control Warning Lights Type A	DAY	1,988.000	1,988.000
0096	643.0900	Traffic Control Signs	DAY	944.000	944.000
0098	643.5000	Traffic Control	EACH	1.000	1.000

Estimate Of Quantities

5962-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0102	645.0120	Geotextile Type HR	SY	500.000	500.000
0104	646.1020	Marking Line Epoxy 4-Inch	LF	1,080.000	1,080.000
0106	650.4500	Construction Staking Subgrade	LF	224.000	224.000
0108	650.5000	Construction Staking Base	LF	224.000	224.000
0110	650.6500	Construction Staking Structure Layout (structure) 01. B-23-0179	LS	1.000	1.000
0112	650.9910	Construction Staking Supplemental Control (project) 01. Project 5962-00-70	LS	1.000	1.000
0114	650.9920	Construction Staking Slope Stakes	LF	256.000	256.000
0116	690.0150	Sawing Asphalt	LF	44.000	44.000
0118	715.0502	Incentive Strength Concrete Structures	DOL	888.000	888.000
0120	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. STA. 11+39	EACH	1.000	1.000
0122	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0124	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	900.000	900.000
0126	SPV.0090	Special 01. Flashing Stainless Steel	LF	75.000	75.000

CLEARING & GRUBBING

STATION-STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
10+00-12+67	MAINLINE	3	3
TOTALS =		3	3

ASPHALTIC SURFACE

CATEGORY	STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
0010	10+00 - 12+67	MAINLINE	36	120
0030	10+00 - 10+62	MAINLINE	10	31
0030	12+05 - 12+67	MAINLINE	10	31
TOTALS =			56	182

BASE AGGREGATE DENSE / BREAKER RUN

CATEGORY	STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	311.011 BREAKER RUN (TON)
0010	10+00 - 12+67	MAINLINE	78	790	920
0030	10+00 - 10+62	MAINLINE	-	110	100
0030	12+05 - 12+67	MAINLINE	-	110	100
TOTALS =			78	1010	1120

EARTHWORK SUMMARY

CATEGORY	STA. - STA.	LOCATION	205.0100 COMMON EXCAVATION CUT (2) (CY)	AVAILABLE MATERIAL (CY) (1)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (2)	MASS ORDINATE +/- (CY) (3)
0010	10+00 - 12+67	MAINLINE	1873	1873	330	413	1461
0030	10+00 - 10+62	MAINLINE	75	75	0	0.0	75
0030	12+05-12+67	MAINLINE	152	152	0	0.0	152
TOTALS =			2100	2100	330	413	1688

NOTES:  
 1.) AVAILABLE MATERIAL=CUT  
 2.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL)\*1.25  
 3.) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

MARKERS ROW

PT #	STATION	LOCATION	OFFSET FROM FINISHED C/L FT	633.5100 MARKERS ROW (EACH)
1	12+80	RIGHT	68.21	1
2	11+48.99	RIGHT	70.04	1
3	11+03	RIGHT	110.00	1
4	10+19	RIGHT	102.00	1
5	9+90	RIGHT	30.36	1
6	9+90	LEFT	35.64	1
7	9+90	LEFT	55.00	1
8	10+67	LEFT	70.00	1
9	11+57	LEFT	102.00	1
10	12+70	LEFT	100.00	1
11	12+80	LEFT	71.87	1
TOTAL=				11

WATER

CATEGORY	PROJECT	624.0100 (MGAL)
0010	5960-00-70	32
0030	5960-00-70	8
TOTAL =		40

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	*630.0160 SEEDING MIXTURE NO. 60 (LB)	**630.0170 SEEDING MIXTURE NO. 70 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0500 SEED WATER (MGAL)
10+00 - 11+12	MAINLINE	1,385	1,385	1.00	3	-	43	39
11+55 - 12+67	MAINLINE	1,170	1,170	1.00	2	-	38	35
-	DELIVERED	-	-	-	-	15	-	-
-	UNDISTRIBUTED	635	635	1.00	1	-	19	16
TOTALS =		3,190	3,190	3.0	6	15	100	90

\*ADJACENT TO WETLAND AREAS (STA 10+50 - 11+27, RT; STA 10+68 - 11+28, LT; STA 11+44 - 12+80, LT)  
 \*\*DELIVER SEED TO GREEN COUNTY HIGHWAY DEPARTMENT. COUNTY WILL PERFORM SEEDING.

GUARDRAIL

STATION - STATION	LOCATION	614.0920 SALVAGED RAIL (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
10+00 - 12+67	MAINLINE, LT.	240	-	-
10+00 - 12+67	MAINLINE, RT.	240	-	-
10+75 - 11+12	MAINLINE, LT.	-	40	-
10+75 - 11+12	MAINLINE, RT.	-	40	-
11+55 - 11+93	MAINLINE, LT.	-	40	-
11+55 - 11+93	MAINLINE, RT.	-	40	-
10+21-10+75	MAINLINE, LT.	-	-	1
10+21-10+75	MAINLINE, RT.	-	-	1
11+93-12+46	MAINLINE, LT.	-	-	1
11+93-12+46	MAINLINE, RT.	-	-	1
TOTALS =		480	160	4

PERMANENT SIGNING

APPROX. STATION	POSITION	LOCATION	SIGN CODE	SIGN DESCRIPTION	SIGN SIZE	634.0612 POSTS WOOD 4X6- INCH X 12-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
11+12	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	--	--
11+12	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	--	--	1	1
11+12	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	--	--
11+12	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	--	--	1	1
11+55	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	--	--	1	1
11+55	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	--	--
11+55	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	--	--	1	1
11+55	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	--	--
TOTALS =						4	12.00	4	4

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
10+00 - 11+12	MAINLINE, LT.	50	100
10+00 - 11+12	MAINLINE, RT.	60	120
11+55 - 12+67	MAINLINE, LT.	60	120
11+55 - 12+67	MAINLINE, RT.	180	360
-	UNDISTRIBUTED	90	180
TOTALS =		440	880

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.4500 SUBGRADE (L.F.)	650.5000 BASE (L.F.)	*650.6500 STRUCTURE LAYOUT (B-10-0391) (L.S.)	650.9910 SUPPLEMENTAL CONTROL (7834-03-72) (L.S.)	650.9920 SLOPES STAKES (L.F.)
9+89 - 11+12	MAINLINE	-	-	-	-	123
11+55 - 12+88	MAINLINE	-	-	-	-	133
10+00 - 11+12	MAINLINE	112	112	-	-	-
11+55 - 12+67	MAINLINE	112	112	-	-	-
5960-00-70	PROJECT	-	-	1	1	-
TOTAL =		224	224	1	1	256

\*CATEGORY 020

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
10+20	MAINLINE, RT.	8
10+20	MAINLINE, LT.	8
10+65	MAINLINE, RT.	8
10+75	MAINLINE, LT.	8
11+20	MAINLINE, RT.	8
11+30	MAINLINE, RT.	8
11+48	MAINLINE, LT.	8
11+95	MAINLINE, LT.	8
12+48	MAINLINE, LT.	8
-	UNDISTRIBUTED	16
TOTALS =		88

MARKING LINE EPOXY 4-INCH

STATION - STATION	LOCATION	DESCRIPTION	646.1020 (LF)
10+00 - 12+67	MAINLINE	WHITE EDGELINE	540
10+00 - 12+67	MAINLINE	CL DOUBLE YELLOW	540
TOTAL =			1080

TRAFFIC CONTROL

LOCATION	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0900 SIGNS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
PROJECT	1,278	1,988	994	1
TOTALS =		1,278	1,988	994

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
5960-00-70	4	3
TOTALS =		4

SAWING ASPHALT

STATION	LOCATION	690.0150 (LF)
10+00	MAINLINE	22
12+67	MAINLINE	22
TOTAL =		44

R/W PROJECT NUMBER 5962-00-00	SHEET NUMBER 4.01	TOTAL SHEETS 2
FEDERAL PROJECT NUMBER		
PLAT OF RIGHT-OF-WAY REQUIRED FOR <b>CTH M - STH 81</b> (JORDAN CREEK BRIDGE B-23-179)		
CTH Y		GREEN COUNTY
CONSTRUCTION PROJECT NUMBER 5962-00-70		

**CONVENTIONAL ABBREVIATIONS**

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
BARN	B.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
GARAGE	G.	<b>CURVE DATA</b>	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH
HOUSE	H.	LONG CHORD BEARING	LCB
HOUSE TRAILER	H.T.	RADIUS	R
LAND CONTRACT	LC	DEGREE OF CURVE	D
MONUMENT	MON.	CENTRAL ANGLE OR DELTA	DELTA
PAGE	P.	LENGTH OF CURVE	L
PERMANENT LIMITED EASEMENT	PLE	TANGENT	TAN

**CONVENTIONAL SYMBOLS**

FOUND SURVEY MONUMENT (WITH POINT NUMBER)	○ 1040	PROPOSED R/W LINE	———
R/W MONUMENT	○ ● (SET)	EXISTING H.E. LINE	———
R/W STANDARD	△ ▲ (SET)	PROPERTY LINE	———
SIGN	ISIGN	LOT & TIE LINES	———
SECTION CORNER MONUMENT	⊕	SLOPE INTERCEPTS	//////
SECTION CORNER SYMBOL	⊕	CORPORATE LIMITS	———
FEE (HATCH VARIES)	⊕	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	———
TEMPORARY LIMITED EASEMENT	⊕	NO ACCESS (BY ACQUISITION)	———
PERMANENT LIMITED EASEMENT	⊕	NO ACCESS (BY STATUTORY AUTHORITY)	———
R/W BOUNDARY POINT	⊕	SECTION LINE	———
PARCEL NUMBER	⊕	QUARTER LINE	———
UTILITY PARCEL NUMBER	⊕	SIXTEENTH LINE	———
SIGN NUMBER (OFF PREMISE)	⊕	EXISTING CENTERLINE	———
BUILDING	⊕	PROPOSED REFERENCE LINE	———
		PARALLEL OFFSET	———
		ENCROACHMENT	———
		HIGHWAY EASEMENT	———

**CONVENTIONAL UTILITY SYMBOLS**

WATER	—W—	SANITARY SEWER	—SAN—
GAS	—G—	STORM SEWER	—SS—
TELEPHONE	—T—		
OVERHEAD TRANSMISSION LINES	—OH—	NON COMPENSABLE	⊕
ELECTRIC	—E—	COMPENSABLE	⊕
CABLE TELEVISION	—TV—	POWER POLE	⊕
FIBER OPTIC	—FO—	TELEPHONE POLE	⊕
		TELEPHONE PEDESTAL	⊕
		ELECTRIC TOWER	⊕

**NOTES**

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, GREEN COUNTY, NAD 83 (2011) IN US 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 MONUMENTS (TYPICALLY 3/4 X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

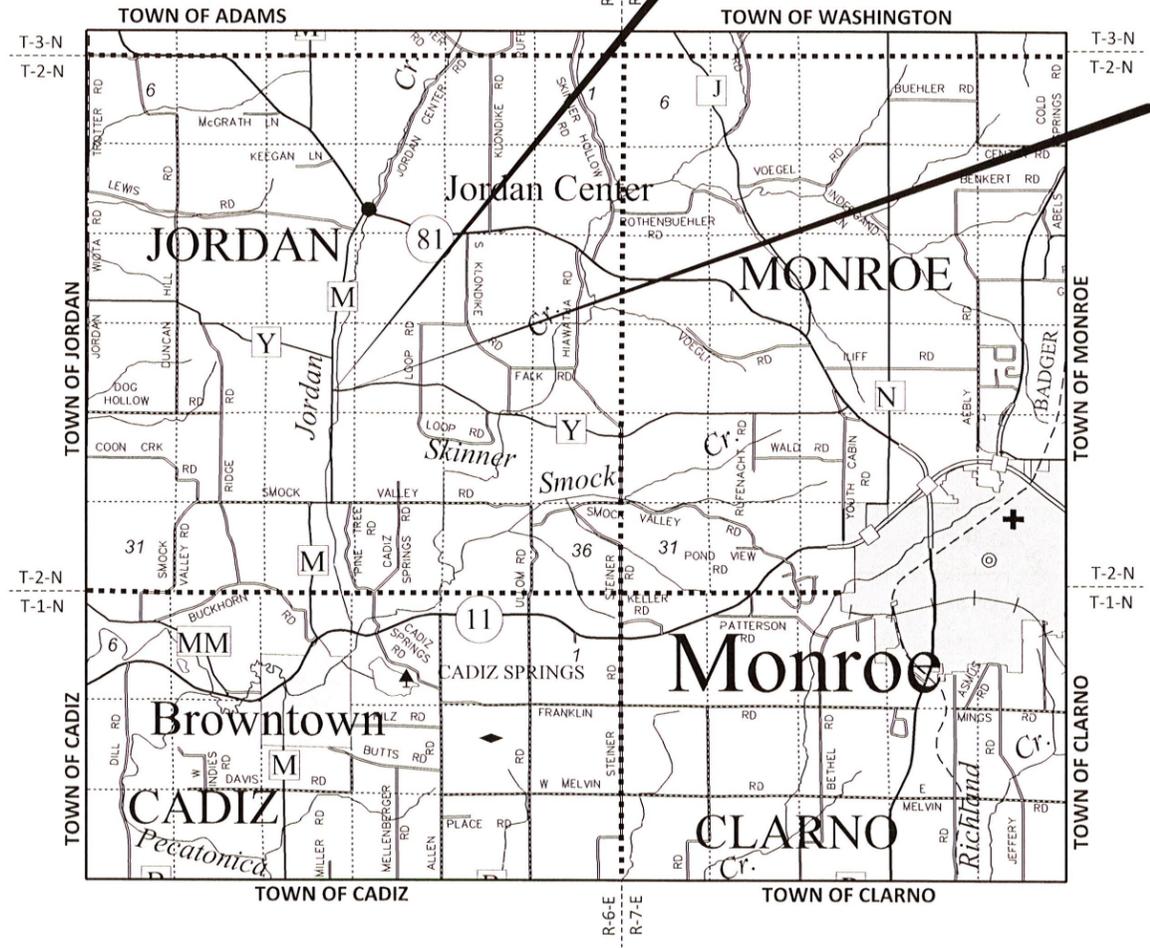
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD."

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE GREEN COUNTY HIGHWAY DEPARTMENT.

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, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSE ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

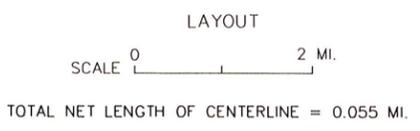


**BEGIN RELOCATION ORDER**

**STA. 9+90.00**  
1292.96' NORTH AND 1154.88' WEST OF THE  
S.E. CORNER OF SECTION 21, T.2N., R.6E.,  
TOWN OF JORDAN, GREEN COUNTY, WI  
Y=147188.35  
X=572988.68

**END RELOCATION ORDER**

**STA. 12+80.00**  
1293.23' NORTH AND 864.93' WEST OF THE  
S.E. CORNER OF SECTION 21 T.2N., R.6E.,  
TOWN OF JORDAN, GREEN COUNTY, WI  
Y=147188.62  
X=573278.64



**JEWELL**  
associates engineers, inc.  
Engineers - Architects - Surveyors

560 SUNRISE DRIVE  
SPRING GREEN, WI 53588  
PHONE : 608.588.7484  
www.jewellssoc.com

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR GREEN COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



APPROVED FOR GREEN COUNTY  
DATE: 8-30-21 *Wesley L. Kraemer*  
(NAME/TITLE)  
Green County Hwy Commission

REVISION DATE
---------------

0= UNLOCK SHEET

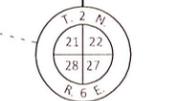
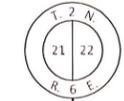
**SCHEDULE OF LANDS & INTERESTS REQUIRED**

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED		
			NEW	EXISTING	TOTAL
1	MICHAEL T. DEVRIES AND CAROL A. DEVRIES REVOCABLE LIVING TRUST	FEE	0.23	0.05	0.28
2	VERNON E. WHEELER	FEE	0.23	0.19	0.42
201	ALLIANT ENERGY	RELEASE OF RIGHTS			
202	TDS TELECOM	RELEASE OF RIGHTS			

EASEMENT NUMBER	OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
1	TDS TELECOM FORMERLY UNITED TELEPHONE COMPANY	DOC.# 189183,V.34,P.111	1	35' WIDE EASEMENT
2	TDS TELECOM FORMERLY UNITED TELEPHONE COMPANY	DOC.# 252187,V.289,P.344	1	BLANKET EASEMENT OF THE NE 1/4 OF THE SE 1/4
3	TDS TELECOM FORMERLY UNITED TELEPHONE COMPANY	DOC.# 251655,V.288,P.82	2	BLANKET EASEMENT OF THE SE 1/4 OF THE SE 1/4



NE 1/4 CORNER SEC. 21  
FD. ALUMINUM MONUMENT  
Y = 148520.79  
X = 574144.96



S.E. CORNER SEC. 21  
FD. ALUMINUM MONUMENT  
Y = 145895.39  
X = 574143.56

**TOWN OF JORDAN**

1  
MICHAEL T. DEVRIES AND CAROL A. DEVRIES REVOCABLE LIVING TRUST  
DOC. 561311

2  
TDS TELECOM (BLANKET EASEMENT)  
NE 1/4-SE 1/4  
SEC. 21, T2N, R6E

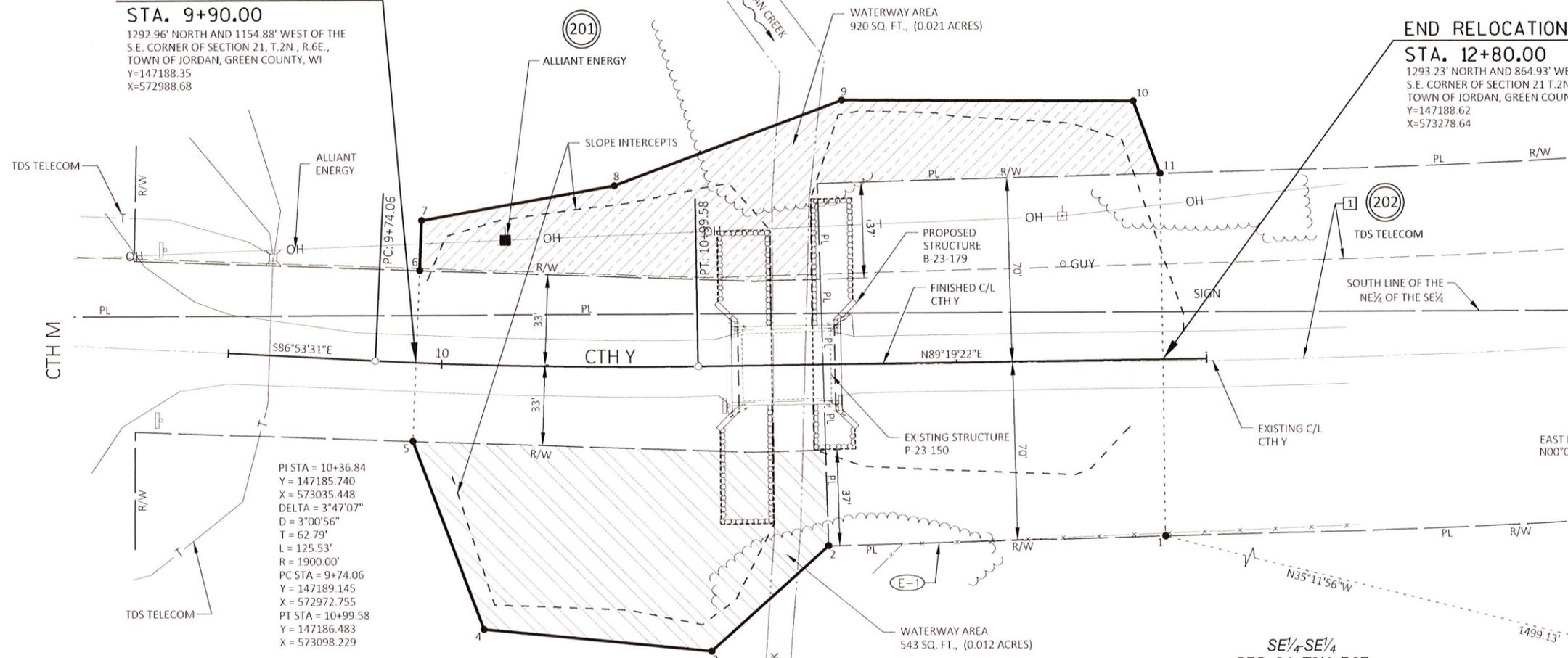
2  
VERNON E. WHEELER  
DOC. 603318

BEGIN RELOCATION ORDER  
STA. 9+90.00

1292.96' NORTH AND 1154.88' WEST OF THE S.E. CORNER OF SECTION 21, T.2N., R.6E., TOWN OF JORDAN, GREEN COUNTY, WI  
Y=147188.35  
X=572988.68

END RELOCATION ORDER  
STA. 12+80.00

1293.23' NORTH AND 864.93' WEST OF THE S.E. CORNER OF SECTION 21 T.2N., R.6E., TOWN OF JORDAN, GREEN COUNTY, WI  
Y=147188.62  
X=573278.64



PI STA = 10+36.84  
Y = 147185.740  
X = 573035.448  
DELTA = 3'47'07"  
D = 3'00'56"  
T = 62.79'  
L = 125.53'  
R = 1900.00'  
PC STA = 9+74.06  
Y = 147189.145  
X = 572972.755  
PT STA = 10+99.58  
Y = 147186.483  
X = 573098.229

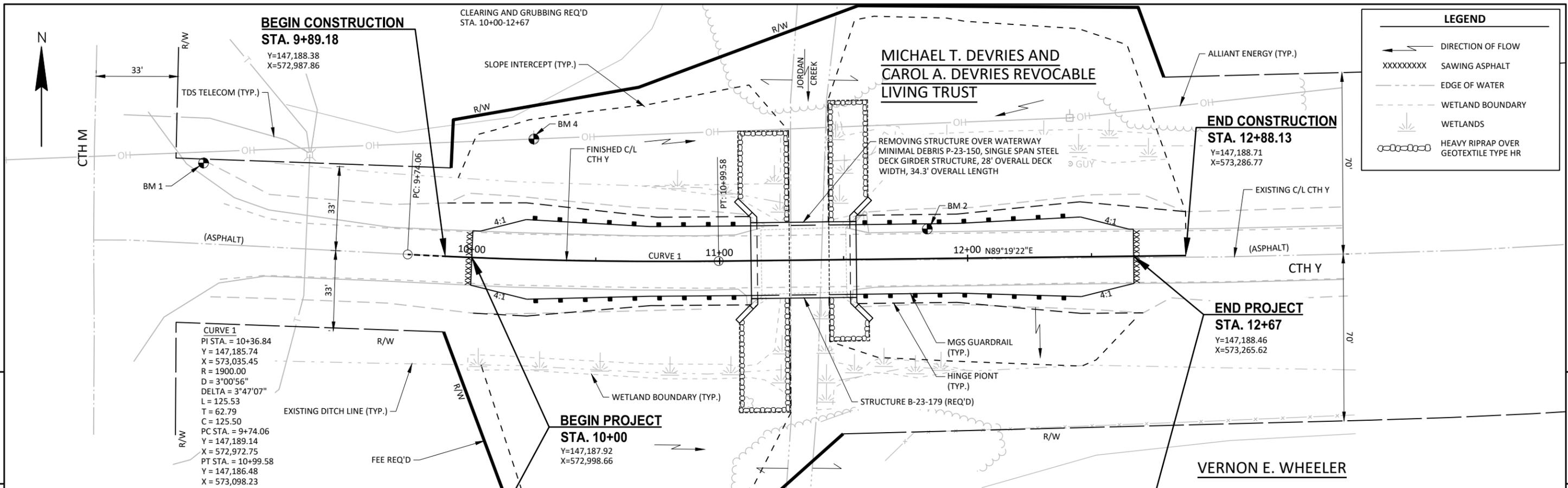
PT#	STATION	OFFSET	Y	X
1	12+80.00	68.21' RT.	147120.41	573279.44
2	11+48.99	70.04' RT.	147117.03	573148.46
3	11+03.00	110.00' RT.	147076.53	573102.95
4	10+19.00	102.00' RT.	147085.29	573014.53
5	9+90.00	30.36' RT.	147158.02	572987.29
6	9+90.00	35.64' LT.	147223.95	572990.31
7	9+90.00	55.00' LT.	147243.29	572991.2
8	10+67.00	70.00' LT.	147256.38	573066.02
9	11+57.00	102.00' LT.	147289.15	573154.44
10	12+70.00	100.00' LT.	147288.49	573267.45
11	12+80.00	71.81' LT.	147260.42	573277.79

POINT TO POINT	BEARING	DISTANCE
1 TO 2	S88°31'18"W	131.02'
2 TO 3	S48°20'02"W	60.93'
3 TO 4	N84°20'38"W	88.85'
4 TO 5	N20°32'09"W	77.67'
5 TO 6	N02°37'38"E	66.00'
6 TO 7	N02°37'38"E	19.36'
7 TO 8	N80°04'45"E	75.96'
8 TO 9	N69°39'33"E	94.30'
9 TO 10	S89°39'48"E	113.02'
10 TO 11	S20°12'27"E	29.91'
11 TO 1	S00°40'38"E	140.01'

ENCROACHMENT	PROPERTY OWNER (S)	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-1	VERNON E. WHEELER	STA. 11+92.12 - STA. 12+80.00, 69.44' RT. - 67.19' RT.	FENCE

NOTE: EXISTING C/L OF CTH Y BASED ON R/W PROJECT 5962-1-72  
EXISTING RIGHT-OF-WAY FOR CTH Y, BASED ON R/W PROJECT 5962-1-72

REVISION DATE	DATE: AUGUST 5, 2021	SCALE, FEET 0 25 50	HWY: CTH Y	R/W PROJECT NUMBER: 5962-00-00	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: GREEN	CONSTRUCTION PROJECT NUMBER: 5962-00-70	PS&E SHEET E



**LEGEND**

- ← DIRECTION OF FLOW
- XXXXXXXX SAWING ASPHALT
- - - - - EDGE OF WATER
- - - - - WETLAND BOUNDARY
- WETLANDS
- ○ ○ ○ ○ HEAVY RIPRAP OVER GEOTEXTILE TYPE HR

**CURVE 1**  
 PI STA. = 10+36.84  
 Y = 147,185.74  
 X = 573,035.45  
 R = 1900.00  
 D = 3°00'56"  
 DELTA = 3°47'07"  
 L = 125.53  
 T = 62.79  
 C = 125.50  
 PC STA. = 9+74.06  
 Y = 147,189.14  
 X = 572,972.75  
 PT STA. = 10+99.58  
 Y = 147,186.48  
 X = 573,098.23

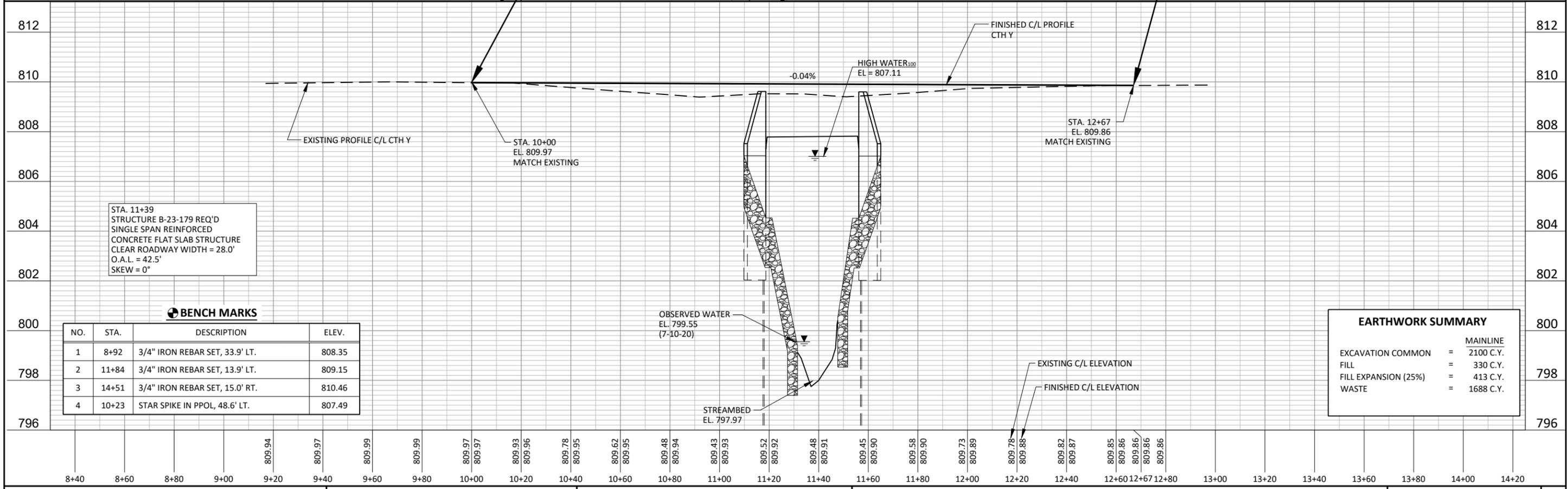
STA. 11+39  
 STRUCTURE B-23-179 REQ'D  
 SINGLE SPAN REINFORCED  
 CONCRETE FLAT SLAB STRUCTURE  
 CLEAR ROADWAY WIDTH = 28.0'  
 O.A.L. = 42.5'  
 SKEW = 0°

**BENCH MARKS**

NO.	STA.	DESCRIPTION	ELEV.
1	8+92	3/4" IRON REBAR SET, 33.9' LT.	808.35
2	11+84	3/4" IRON REBAR SET, 13.9' LT.	809.15
3	14+51	3/4" IRON REBAR SET, 15.0' RT.	810.46
4	10+23	STAR SPIKE IN PPOL, 48.6' LT.	807.49

**EARTHWORK SUMMARY**

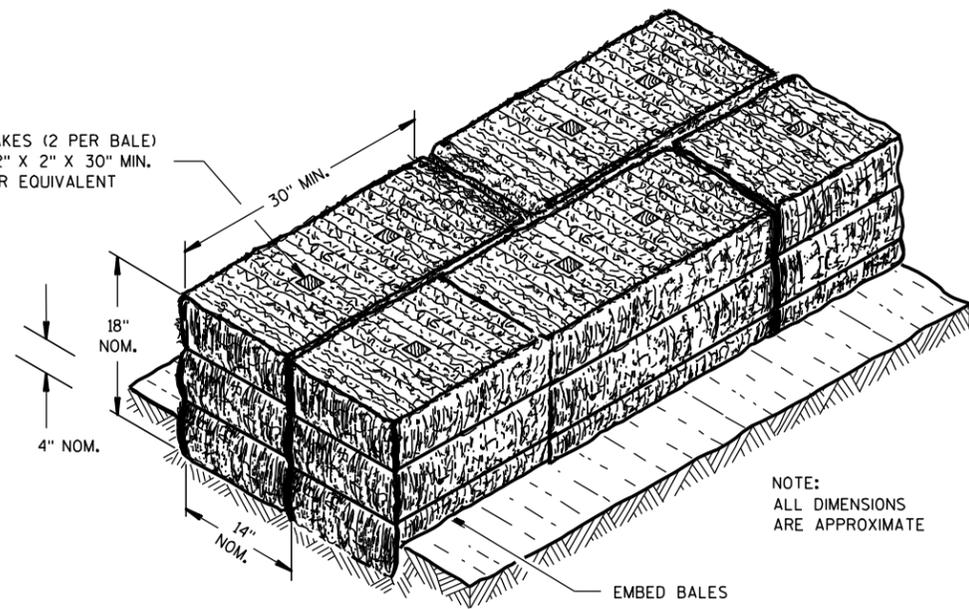
	MAINLINE
EXCAVATION COMMON	= 2100 C.Y.
FILL	= 330 C.Y.
FILL EXPANSION (25%)	= 413 C.Y.
WASTE	= 1688 C.Y.



## Standard Detail Drawing List

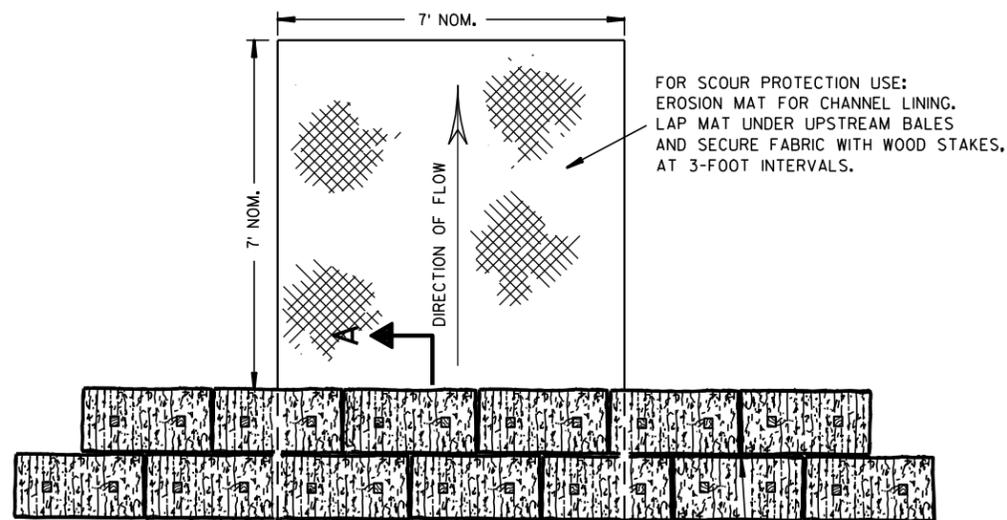
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) 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)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

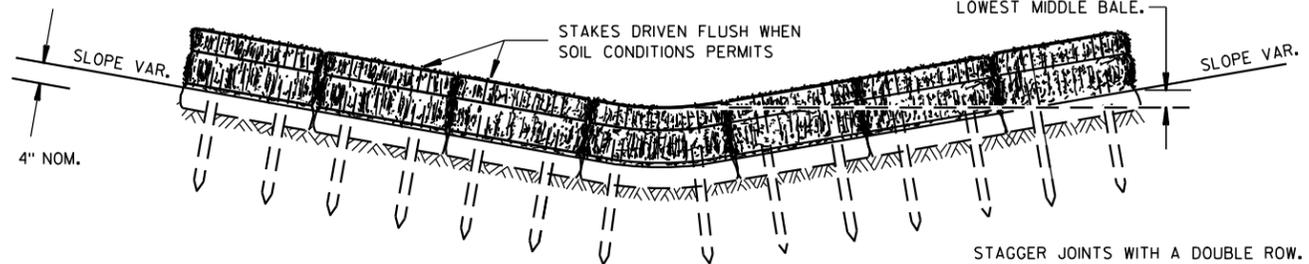
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL  
BE EQUAL TO OR GREATER THAN TOP OF  
LOWEST MIDDLE BALE.



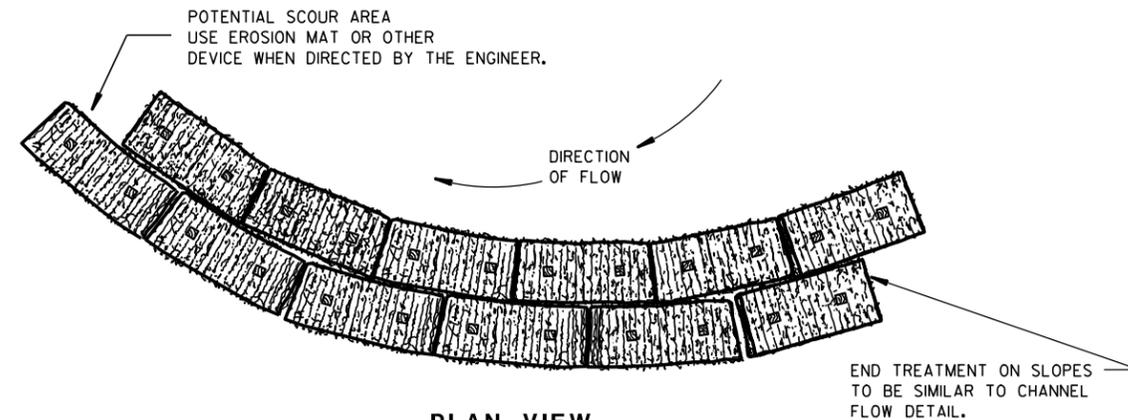
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

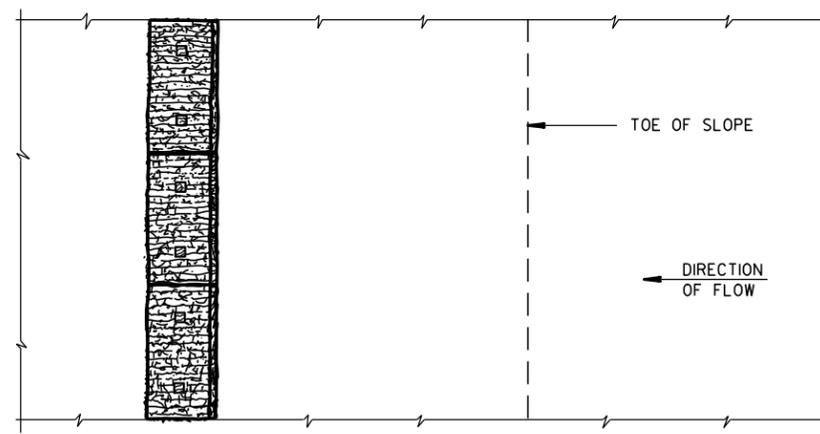
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

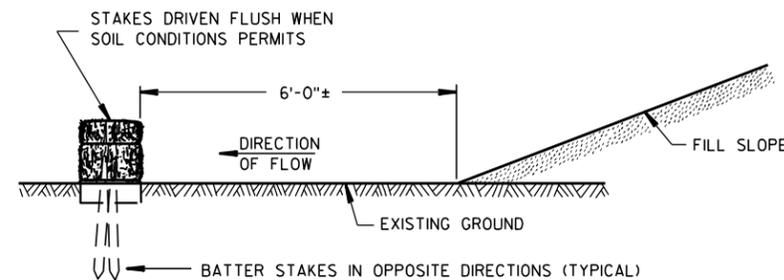


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

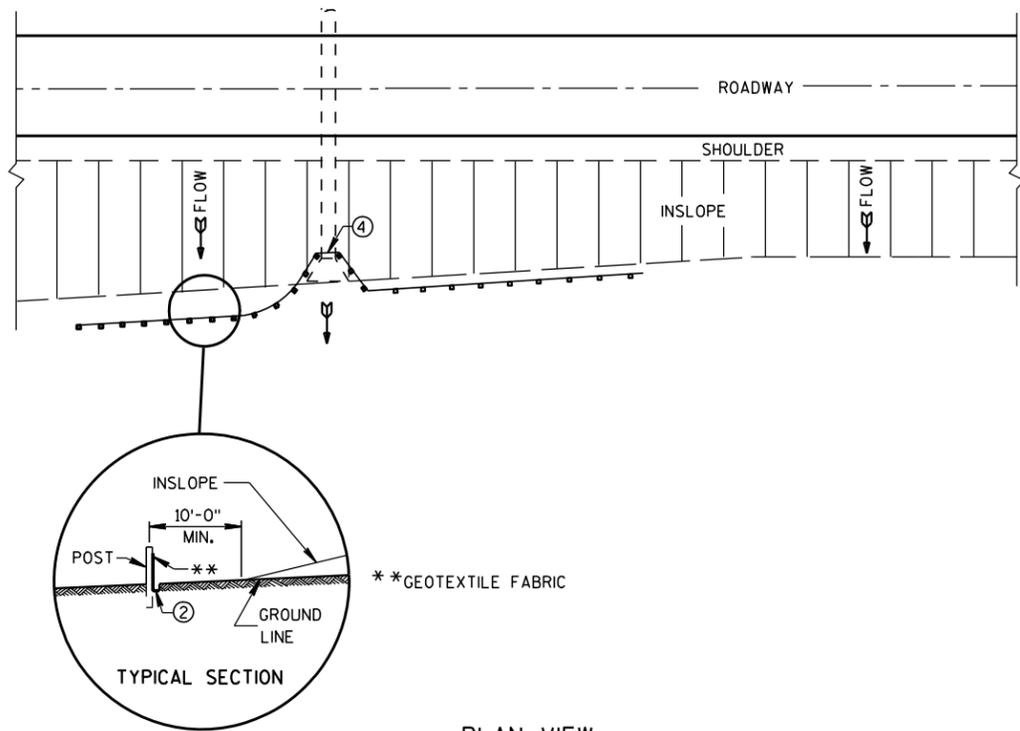
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

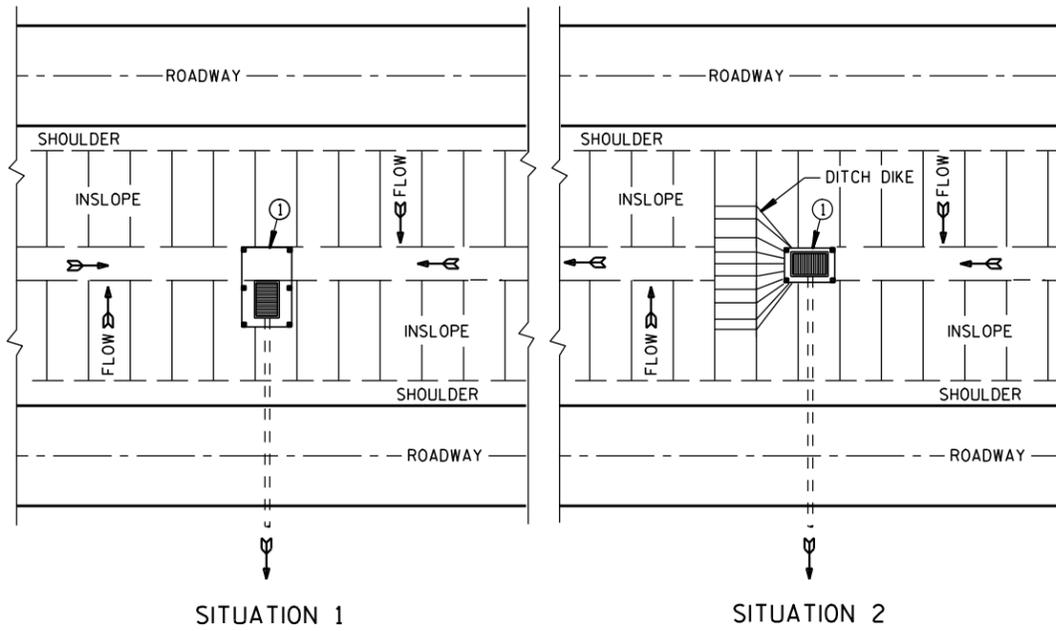
TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 6/04/02 /S/ Beth Canestra  
 DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
 FHWA



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

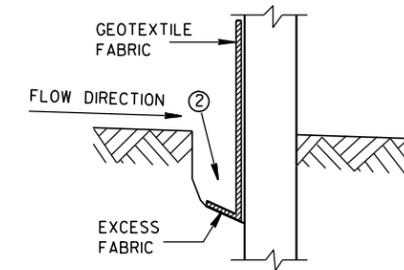


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

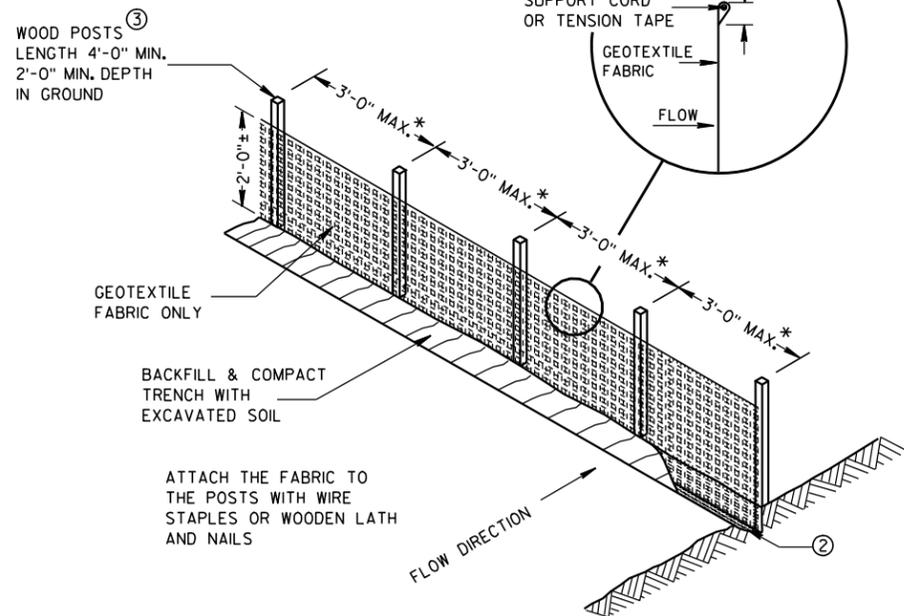
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



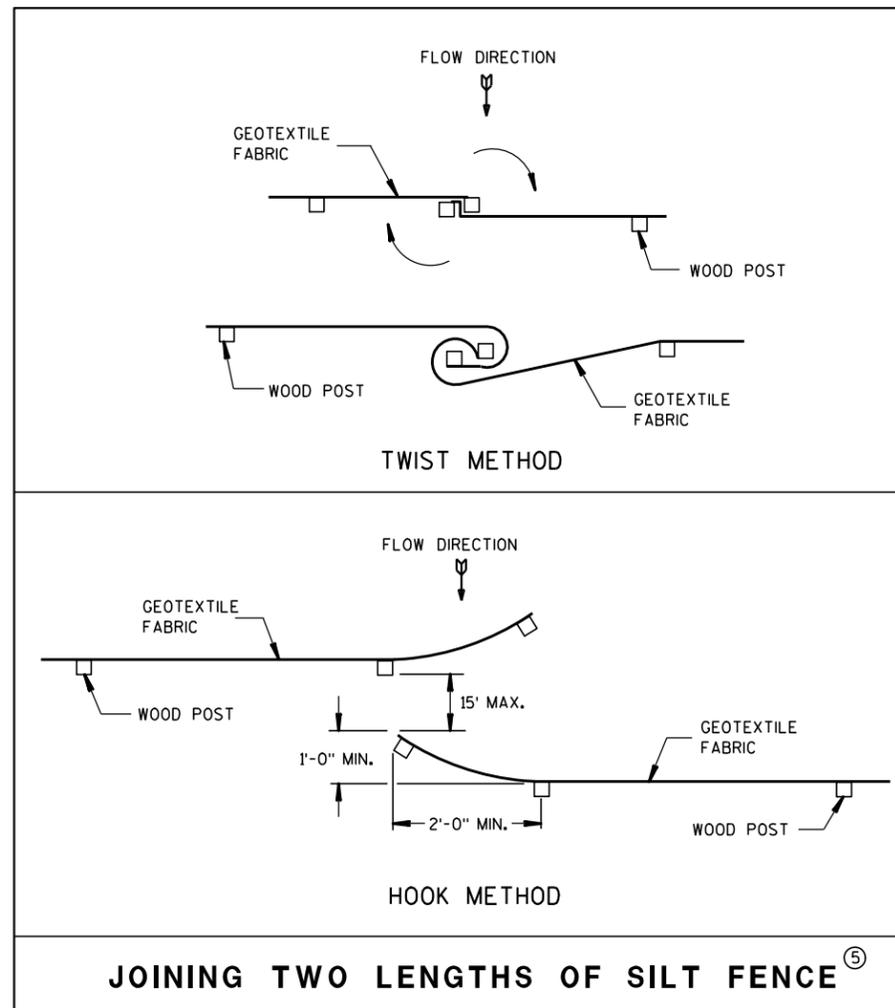
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

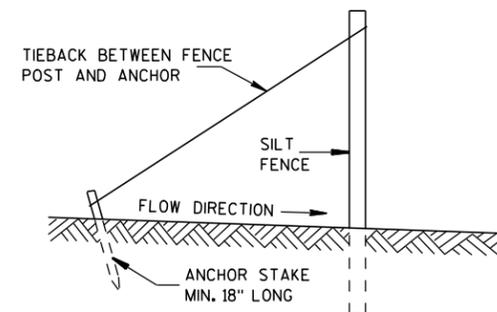


SILT FENCE

\* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

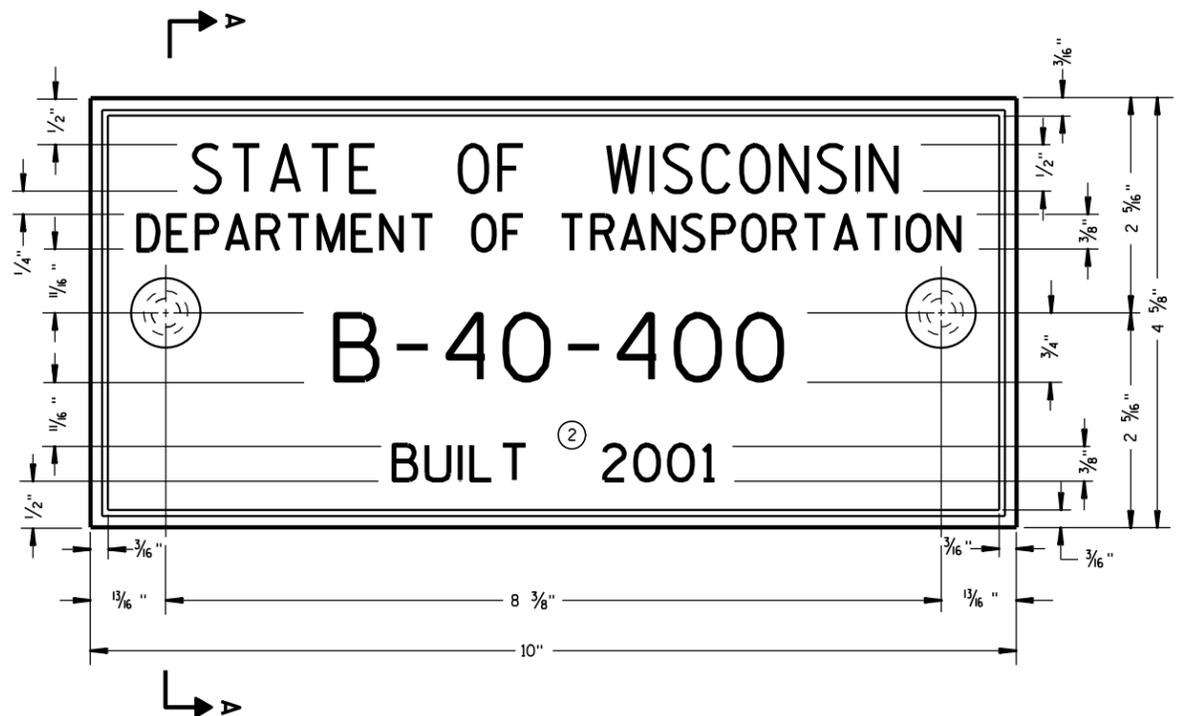
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05  
DATE

FHWA

/S/ Beth Cannestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER



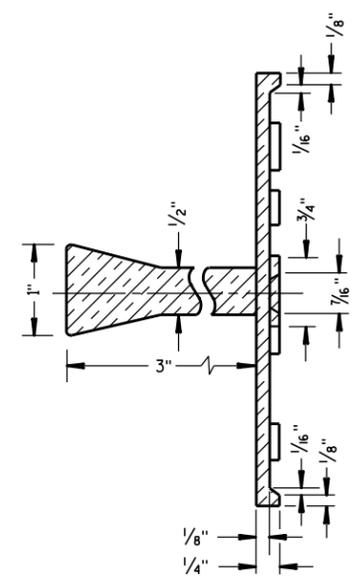
**TYPICAL NAME PLATE**  
(BRIDGES, CULVERTS, AND RETAINING WALLS)

**GENERAL NOTES**

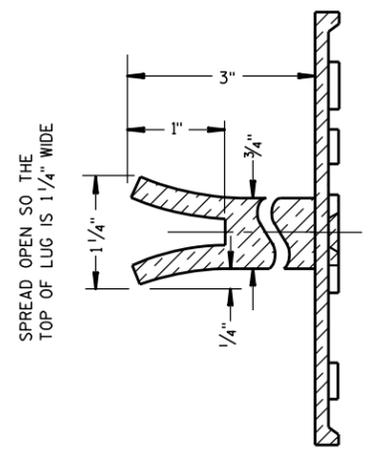
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.



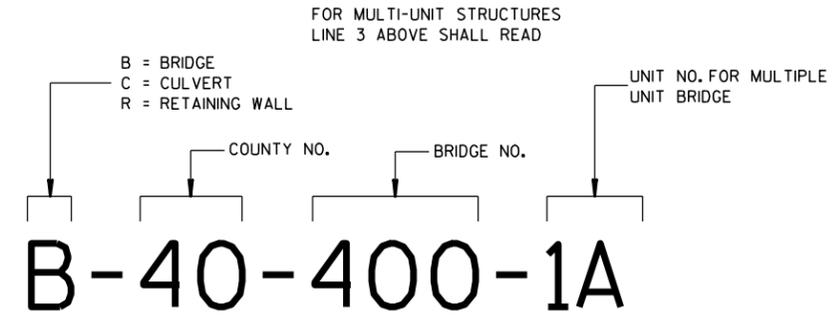
**SECTION A-A**



**ALTERNATE LUG**

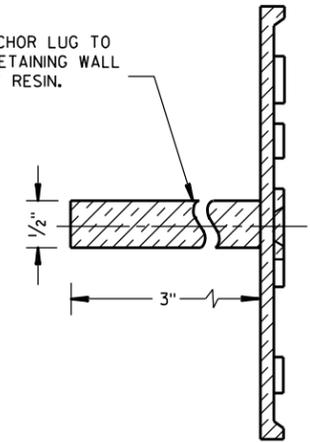
6

6



**NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES**

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

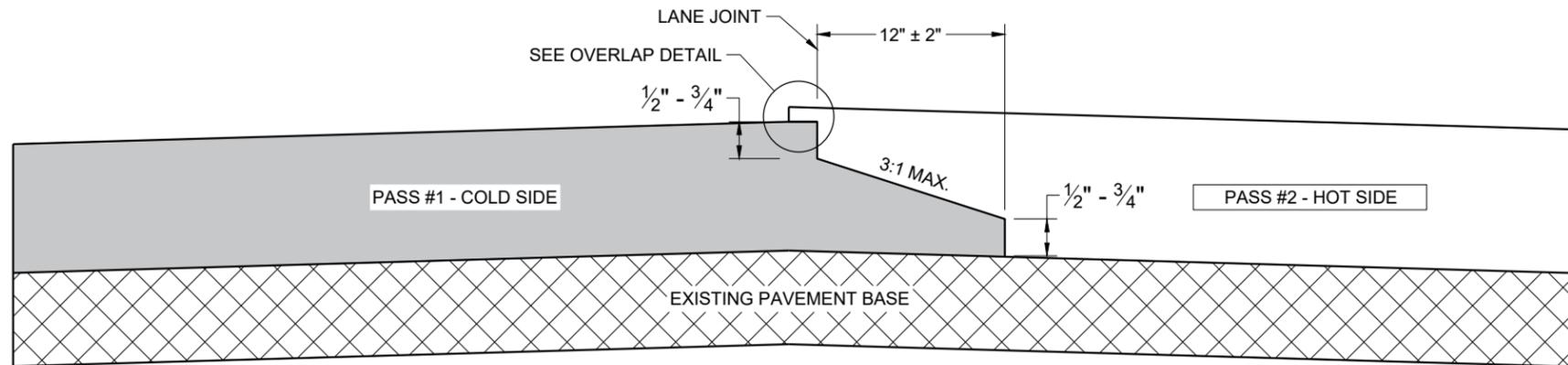


**ALTERNATE LUG**  
(FOR ATTACHMENT TO PRECAST STRUCTURES)

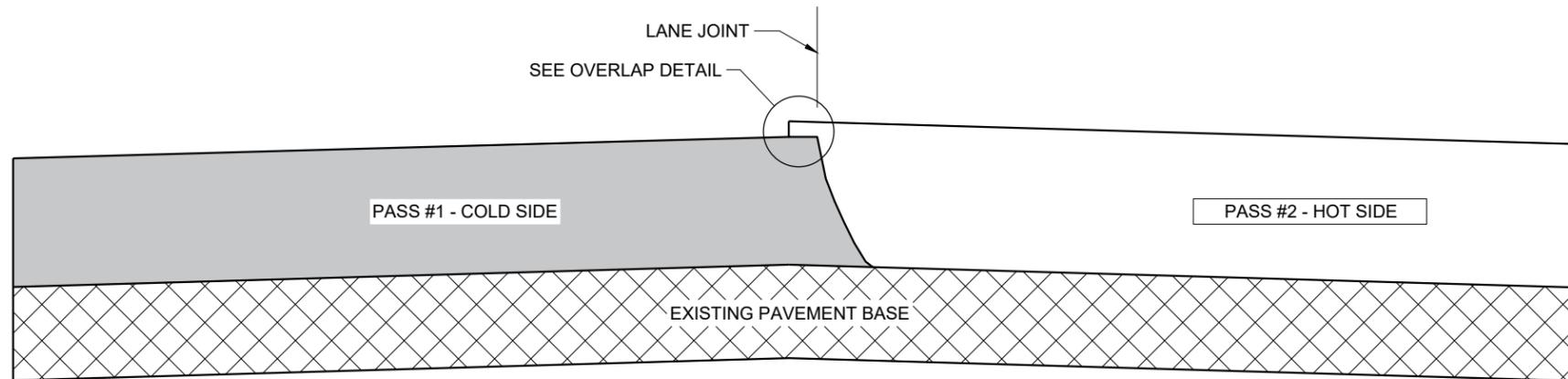
S.D.D. 12 A 3-10

S.D.D. 12 A 3-10

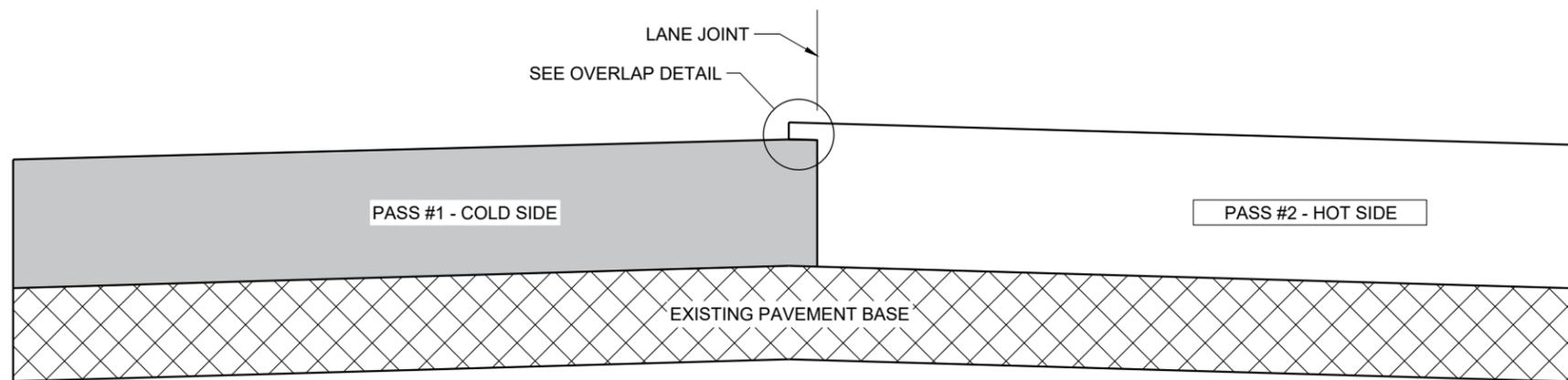
<b>NAME PLATE (STRUCTURES)</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 3/26/10	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



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

**GENERAL NOTES**

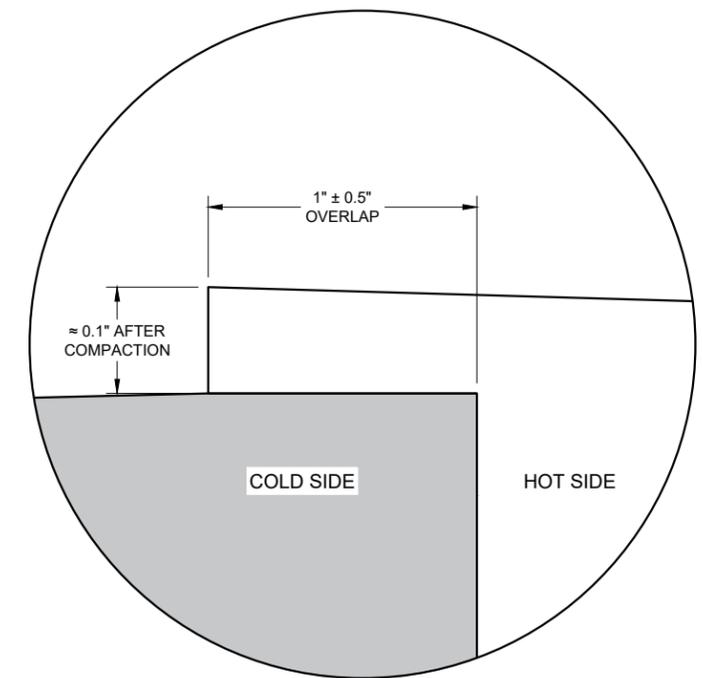
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)**

6

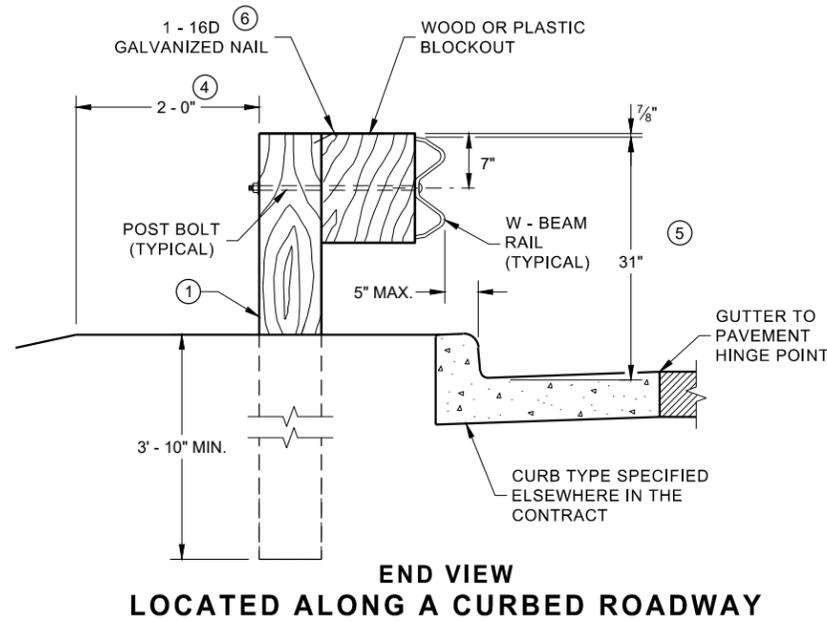
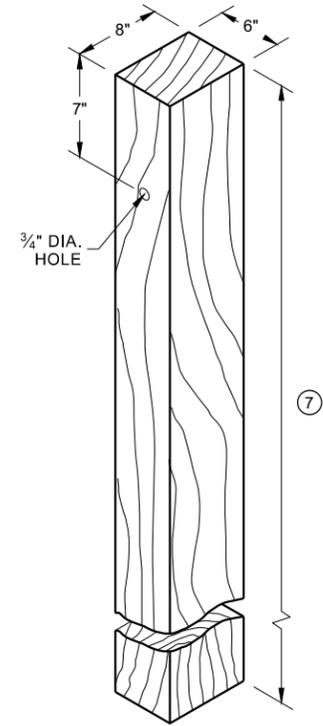
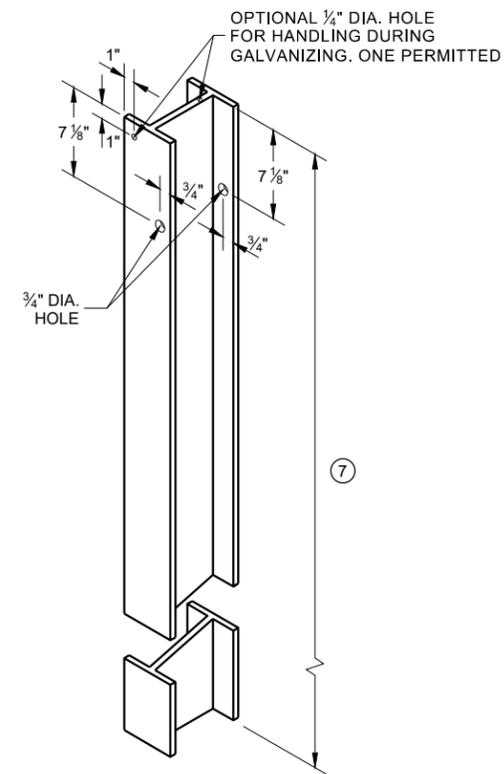
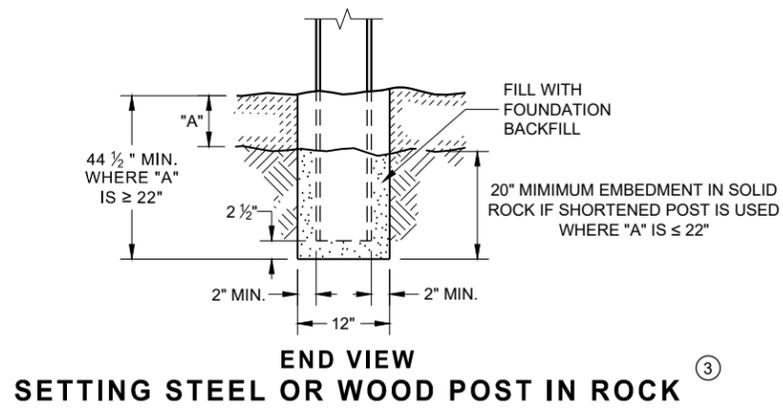
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SDD 13C19 - 03

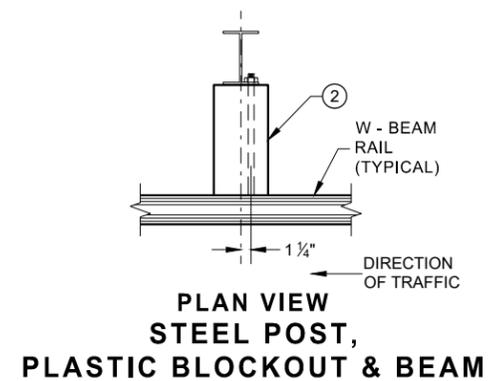
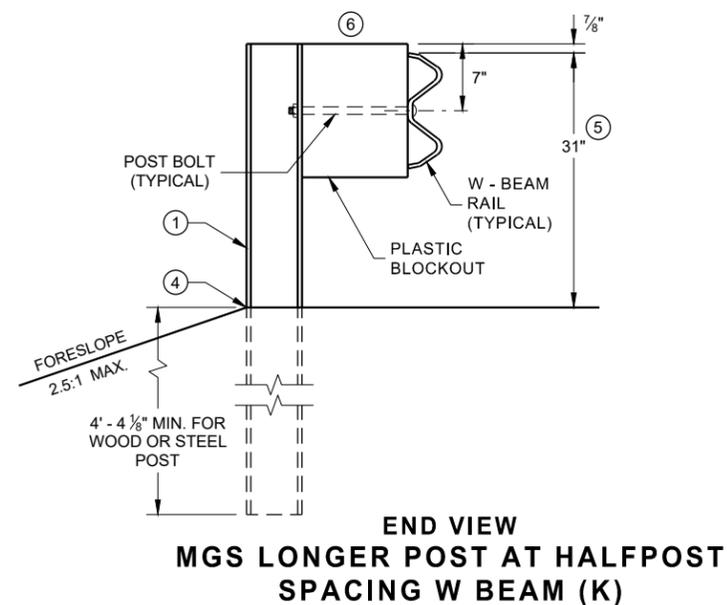
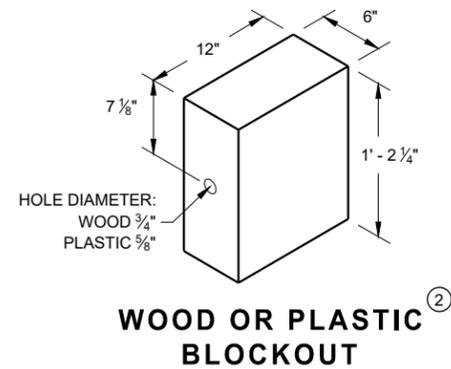
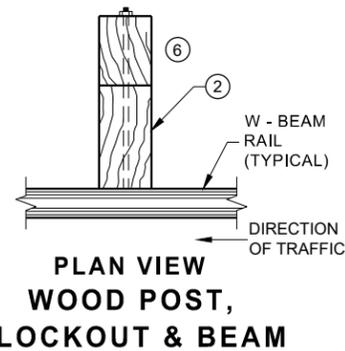
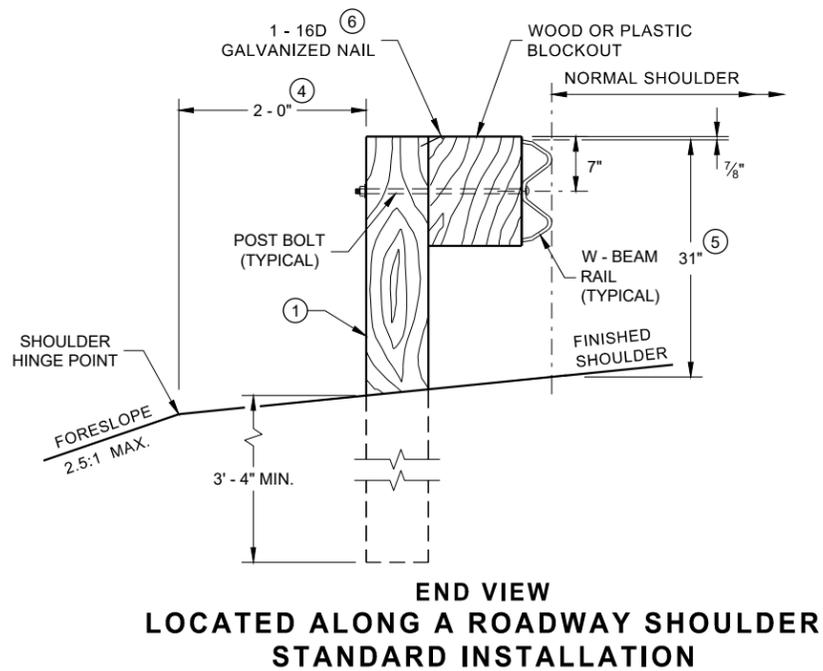
<b>HMA LONGITUDINAL JOINTS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 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".



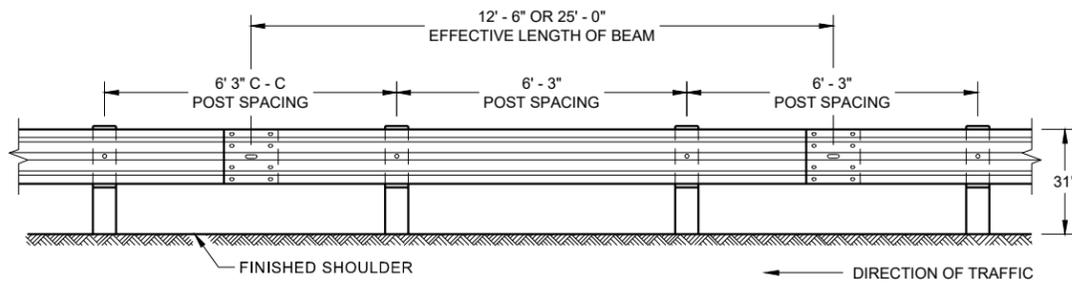
**STEEL POST & HOLE  
PUNCHING DETAIL  
(W 6 X 9)** ①

**WOOD POST  
(6" X 8") NOMINAL** ①

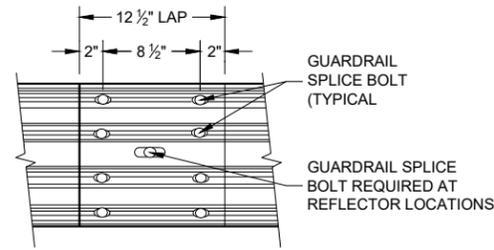


**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



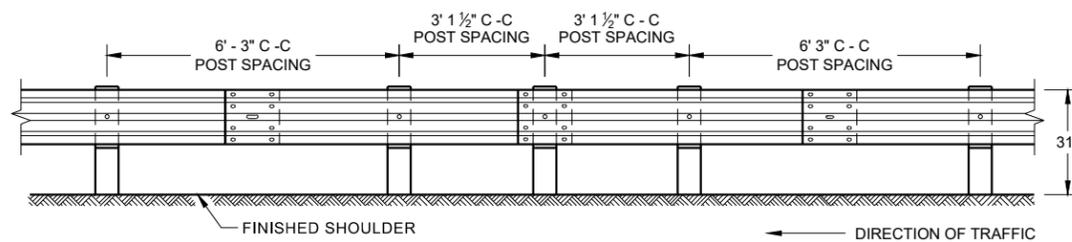
**FRONT VIEW  
POST SPACING STANDARD INSTALLATION**



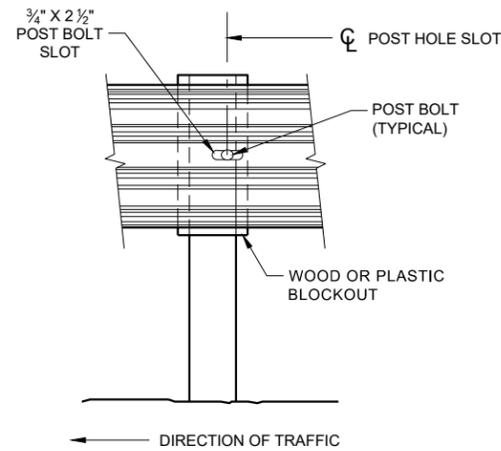
**FRONT VIEW  
MID-SPAN BEAM SPLICE**

**GENERAL NOTES**

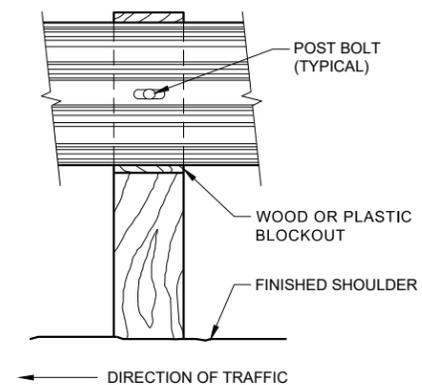
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
  - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER 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.



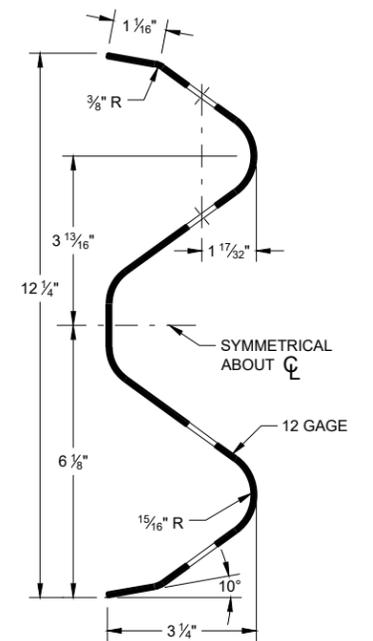
**FRONT VIEW  
HALF POST SPACING (HS) AND  
HALF POST SPACING WITH LONGER POSTS (K)**



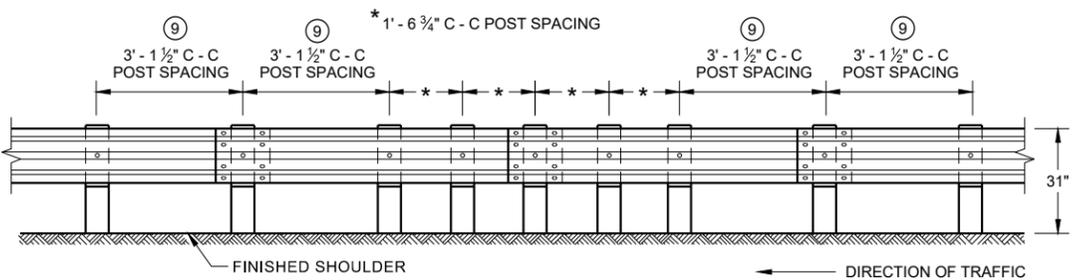
**FRONT VIEW AT STEEL POST**



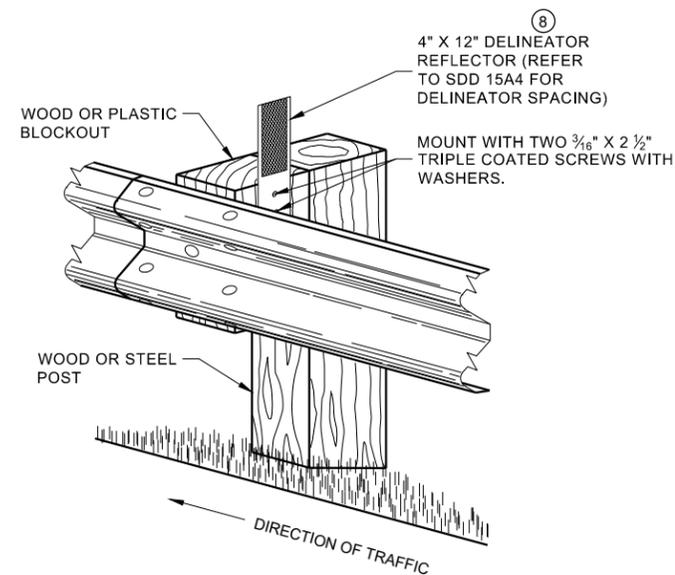
**FRONT VIEW AT WOOD POST**



**SECTION THRU W-BEAM RAIL**



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



**ONE SIDED REFLECTOR DETAIL  
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

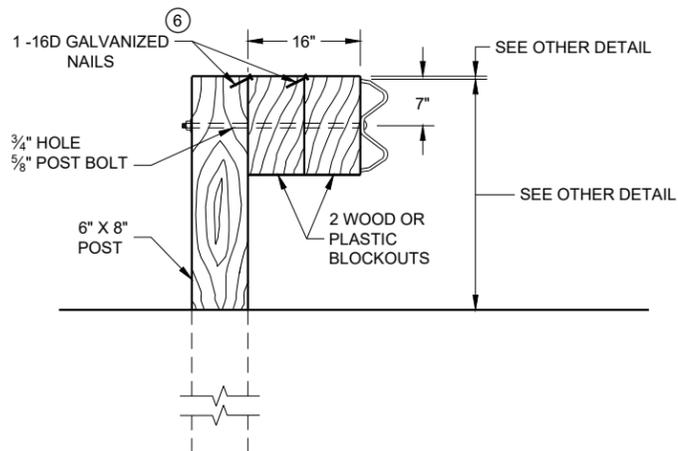
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

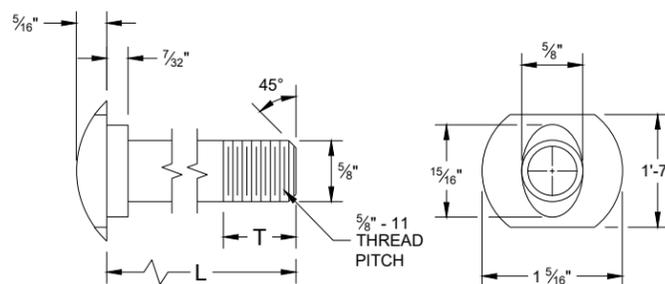


**DETAIL FOR 16" BLOCKOUT DEPTH**

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.

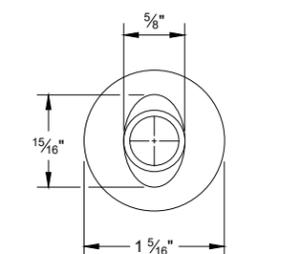
**NOTE:**

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

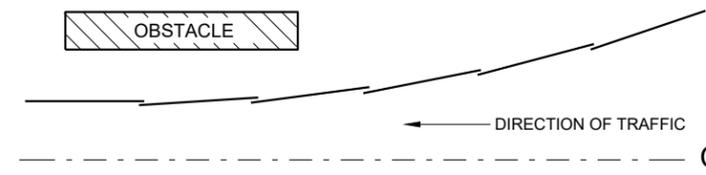


**POST BOLT TABLE**

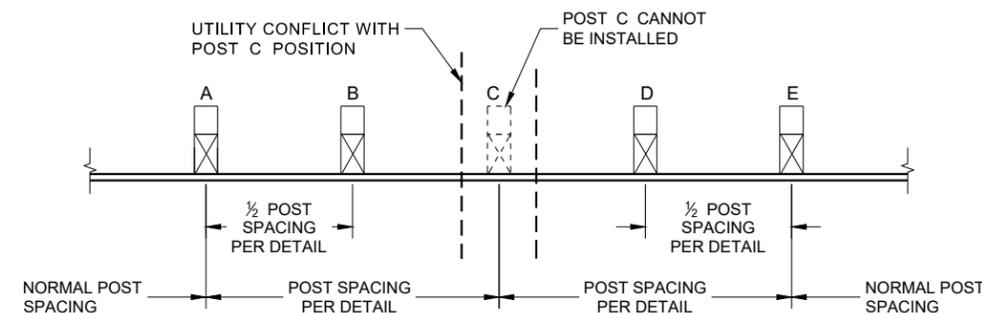
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



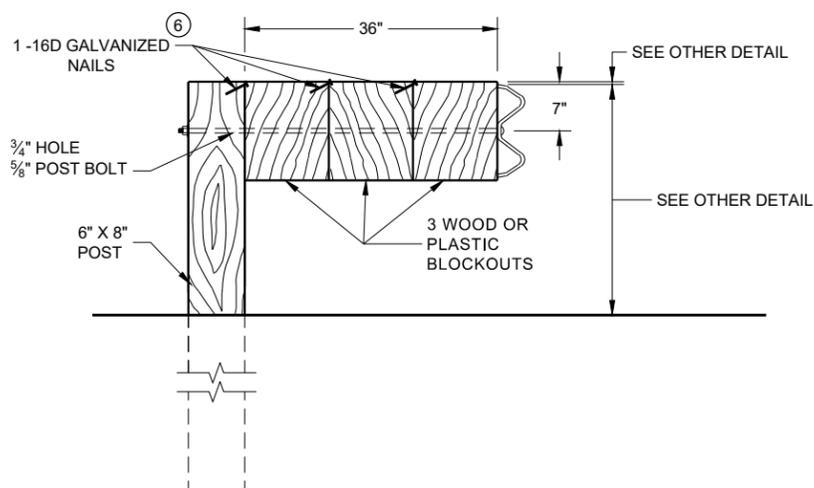
**ALTERNATE BOLT HEAD**



**PLAN VIEW  
BEAM LAPPING DETAIL**

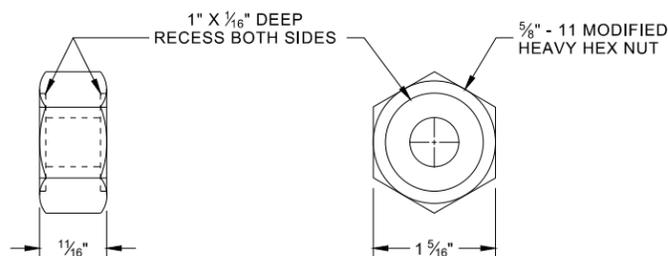


**POST DRIVING FOR CONTINUOUS  
UNDERGROUND OBSTRUCTION**

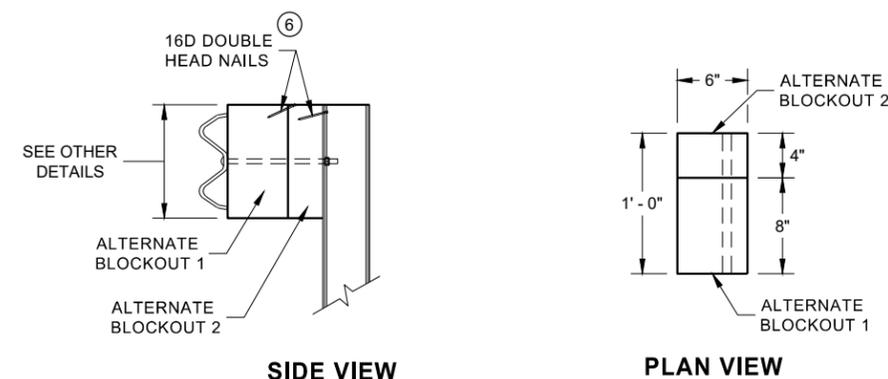


**DETAIL FOR 36" BLOCKOUT DEPTH**

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.



**POST BOLT, SPLICE BOLT  
AND RECESS NUT**

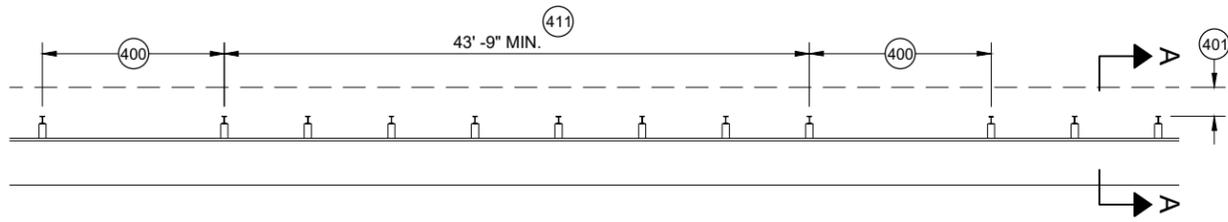


**ALTERNATE WOOD  
BLOCKOUT DETAIL**

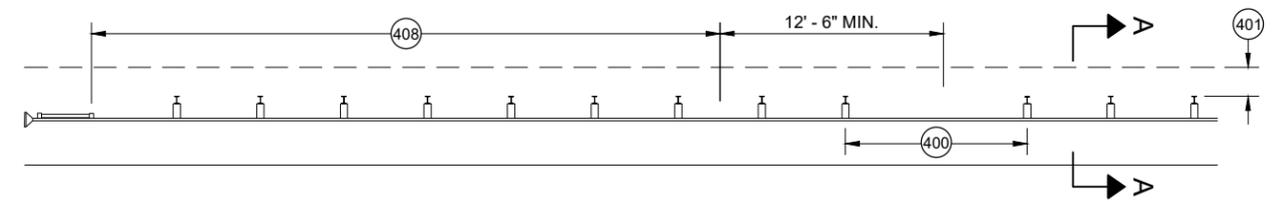
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

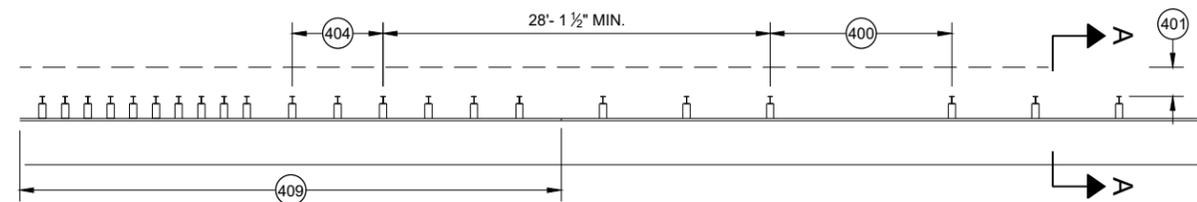
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



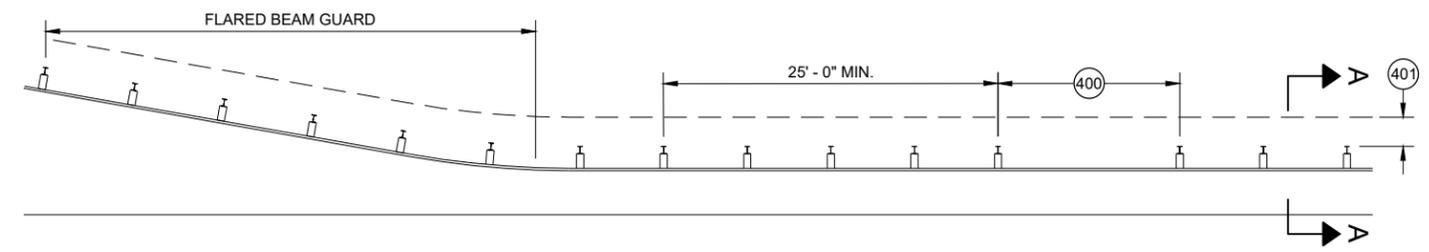
**MISSING POST IN MGS GUARDRAIL**



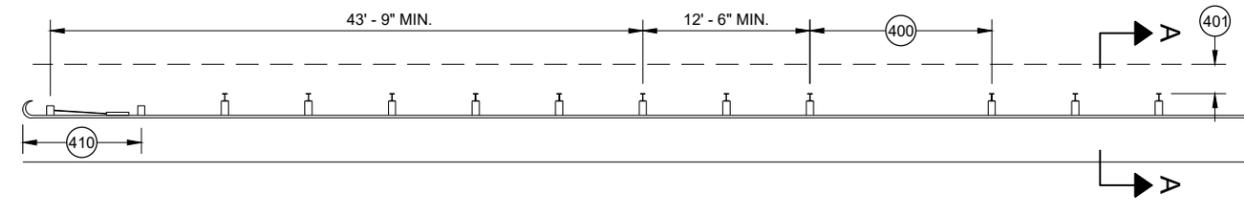
**MISSING POST IN MGS GUARDRAIL NEAR EAT**



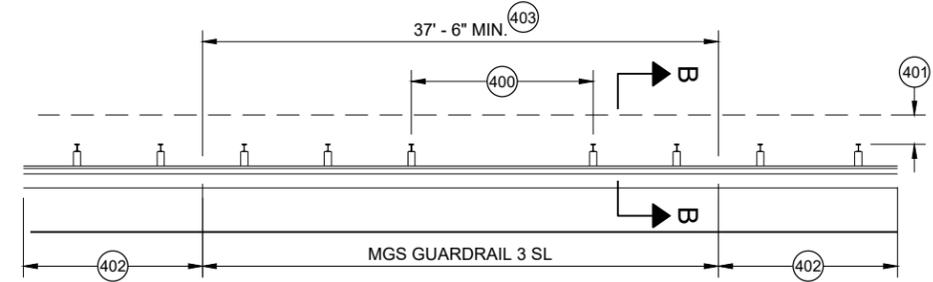
**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**



**MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD**

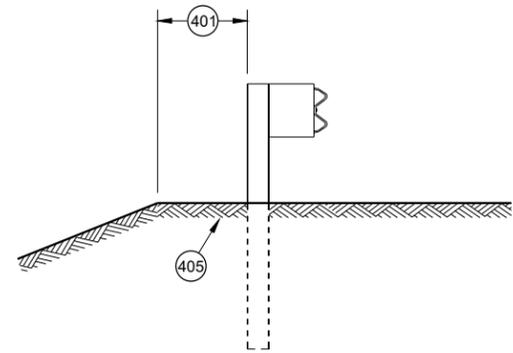


**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

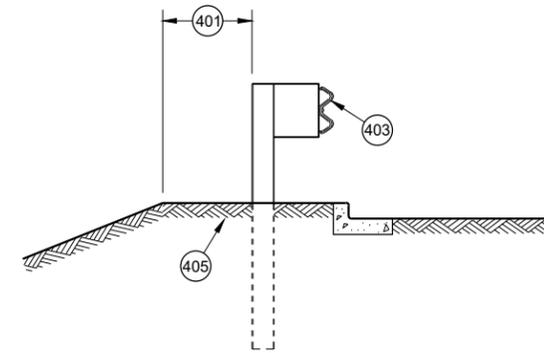


**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)**

- 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**

<b>MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

**GENERAL NOTES**

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE 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.

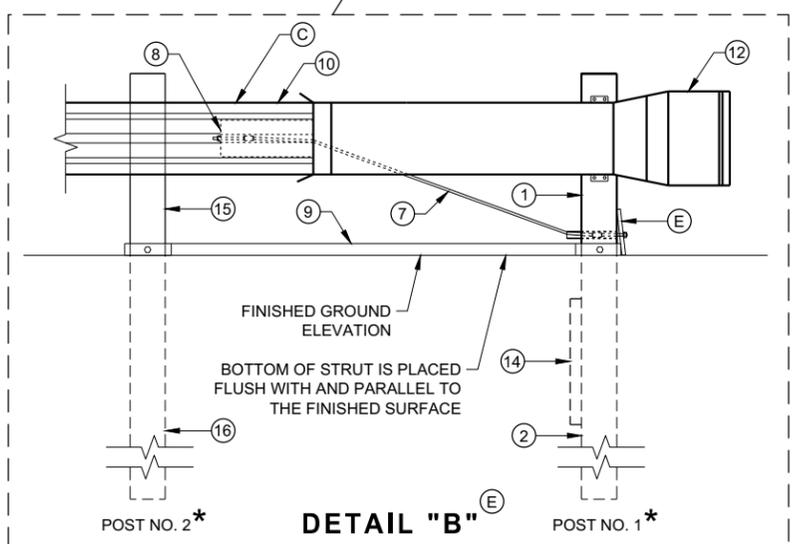
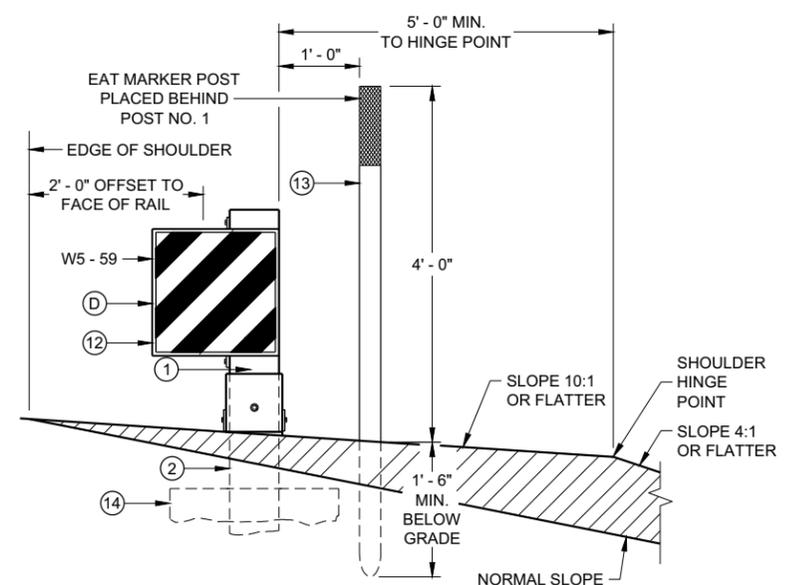
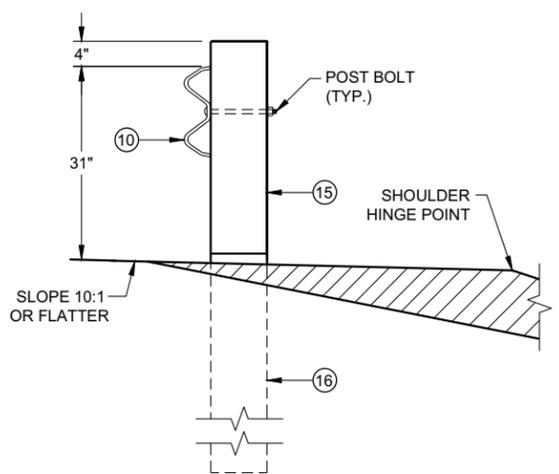
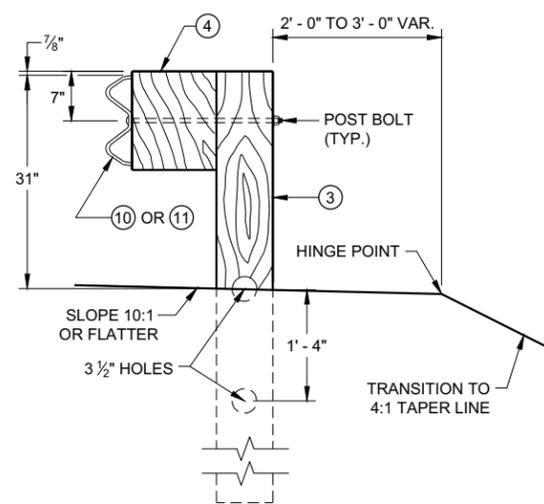
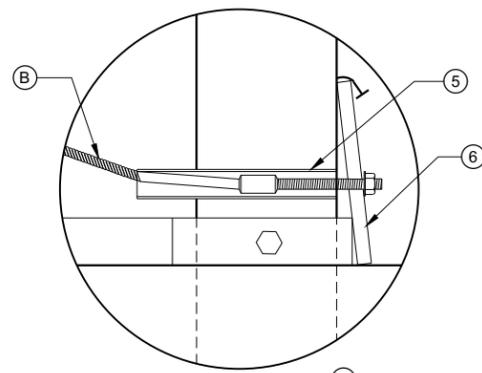
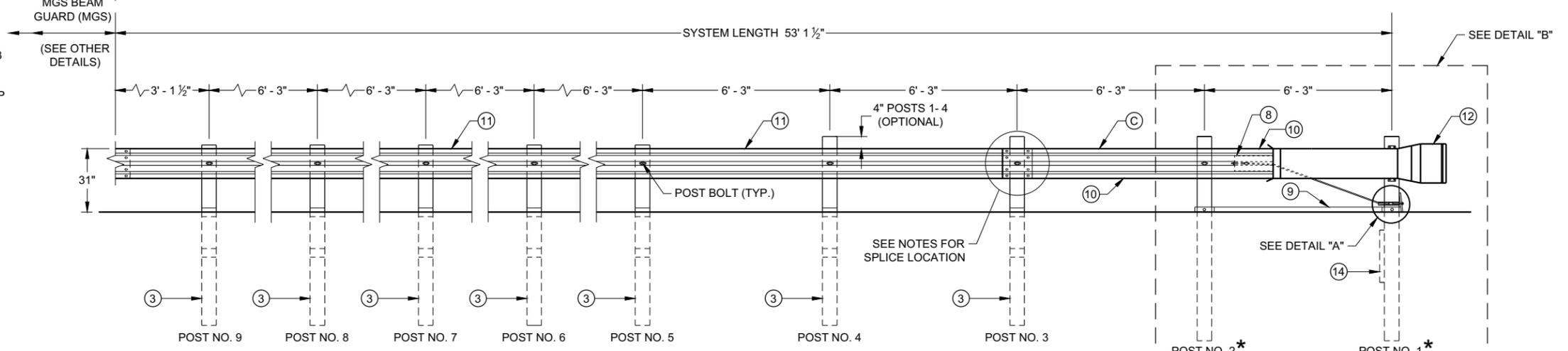
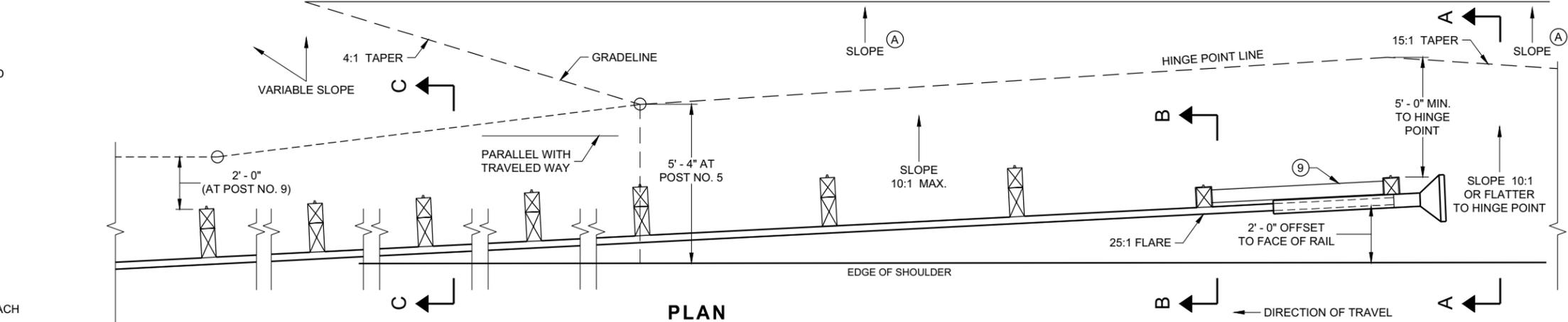
\* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

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.

CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

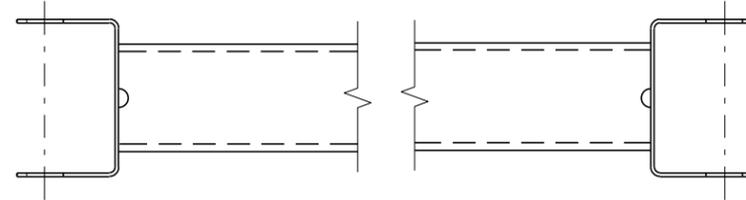
6

SDD 14B44 - 04a

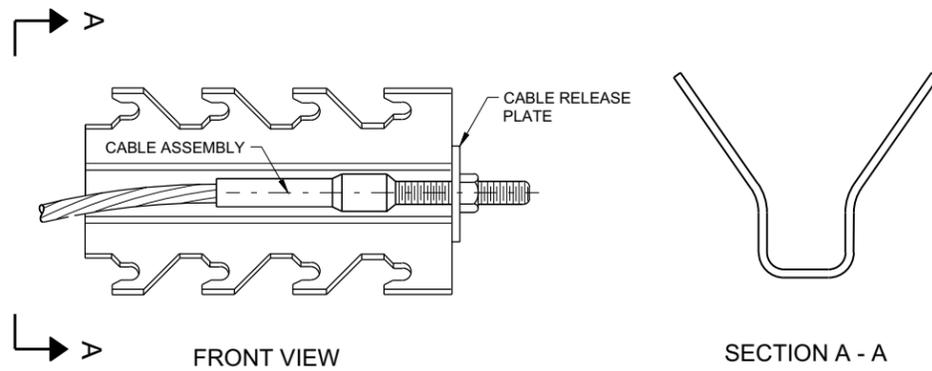
SDD 14B44 - 04a

**BILL OF MATERIALS**

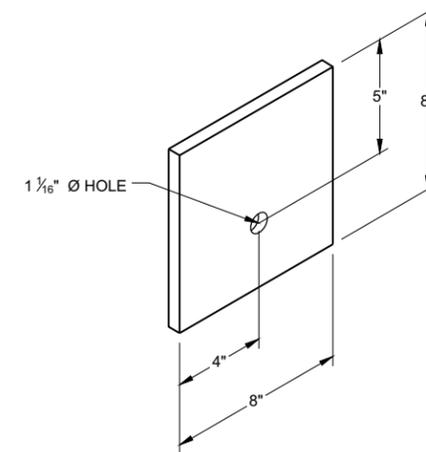
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL 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 GROUND STRUT** ⑨ ⑤



**GENERIC ANCHOR CABLE BOX** ⑨ ⑤



**BEARING PLATE** ⑥ ⑤

6

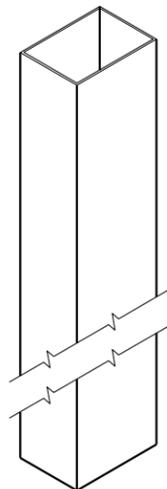
6

SDD 14B44 - 04b

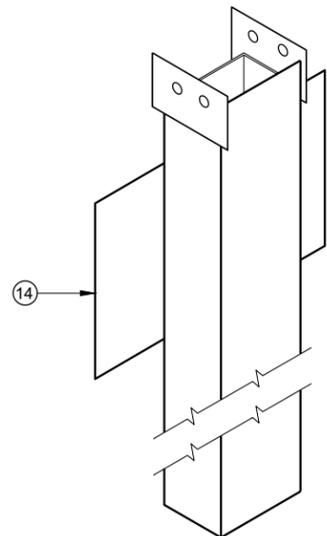
SDD 14B44 - 04b

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

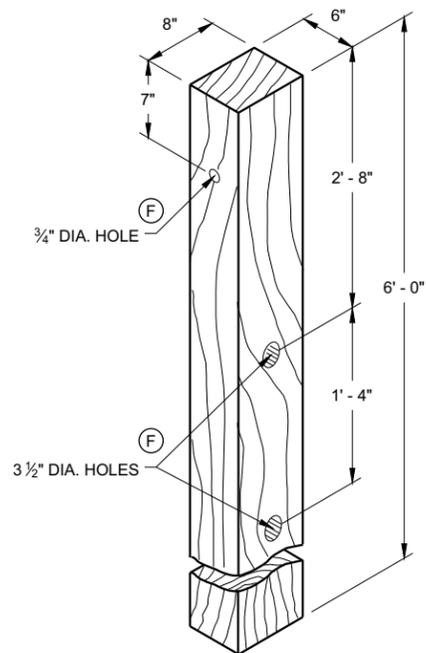
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



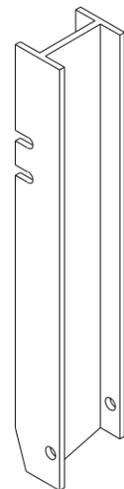
UPPER POST NO. 1 <sup>(1)</sup> (E)



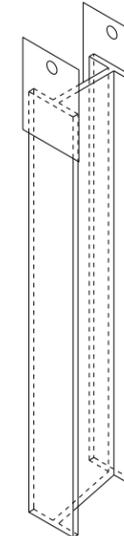
LOWER POST NO. 1 <sup>(2)</sup> (E)



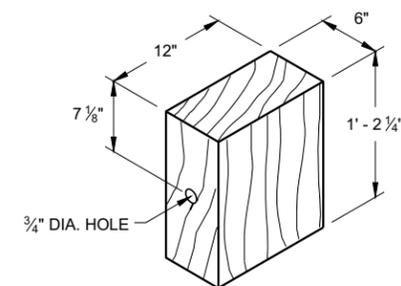
WOOD CRT POST <sup>(3)</sup> (E)  
POSTS NUMBER 3-9



UPPER POST NO. 2 <sup>(15)</sup> (E)

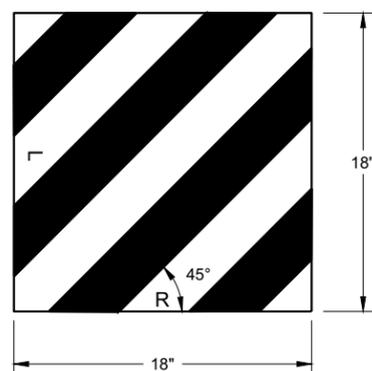


LOWER POST NO. 2 <sup>(16)</sup> (E)

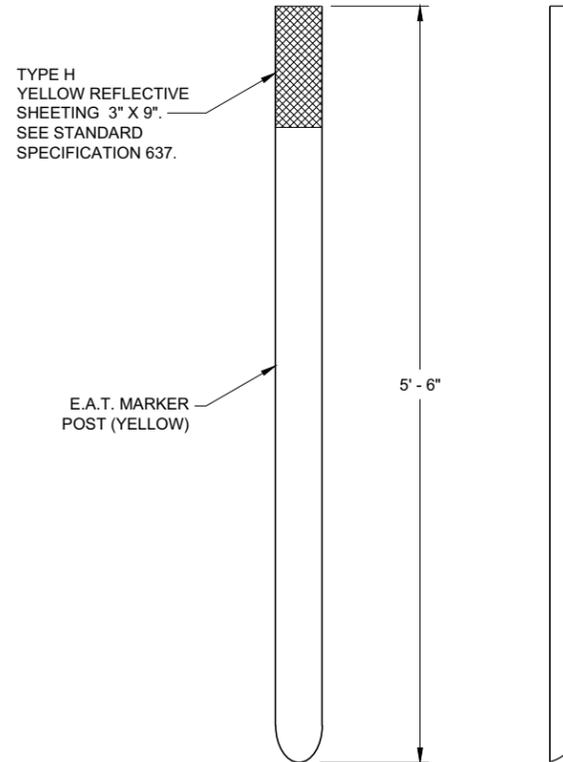


WOOD BLOCKOUT <sup>(4)</sup>  
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

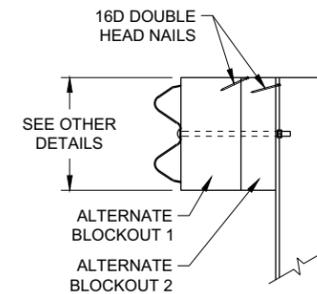
6



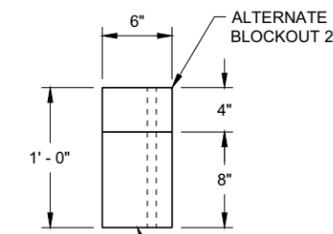
W5 - 59  
REFLECTIVE SHEETING DETAIL <sup>(E)</sup>



FRONT VIEW SIDE VIEW  
E.A.T. MARKER POST <sup>(13)</sup>



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

6

SDD 14B44 - 04c

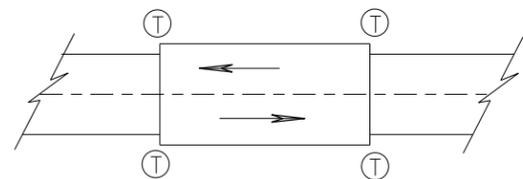
SDD 14B44 - 04c

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

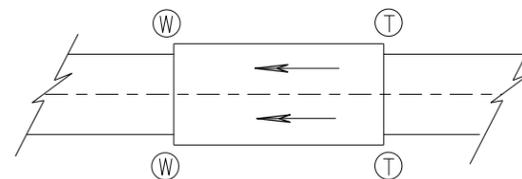
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
7/2018 DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR

FHWA



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

(T) THRIE BEAM CONNECTION

(W) 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 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

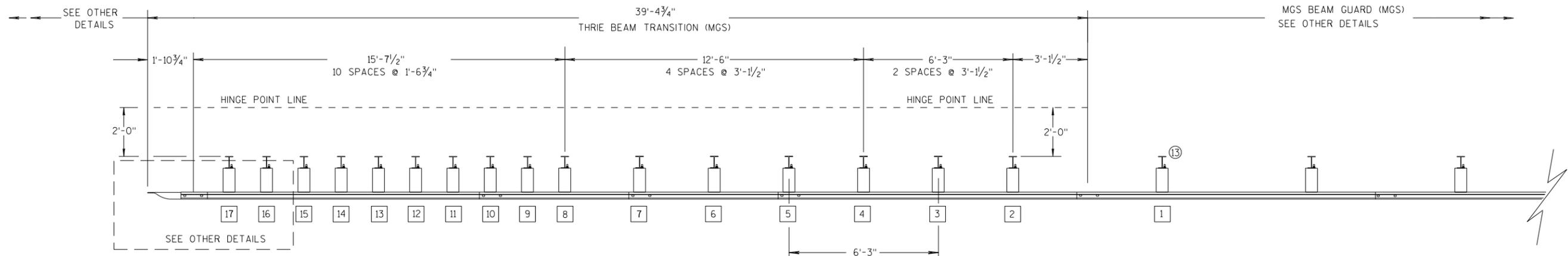
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

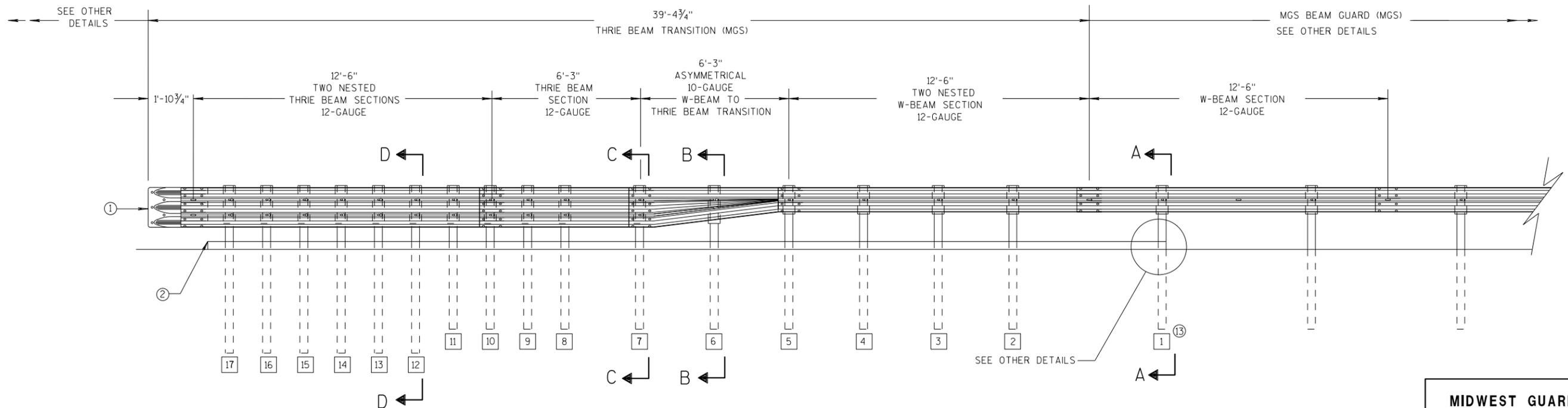
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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**

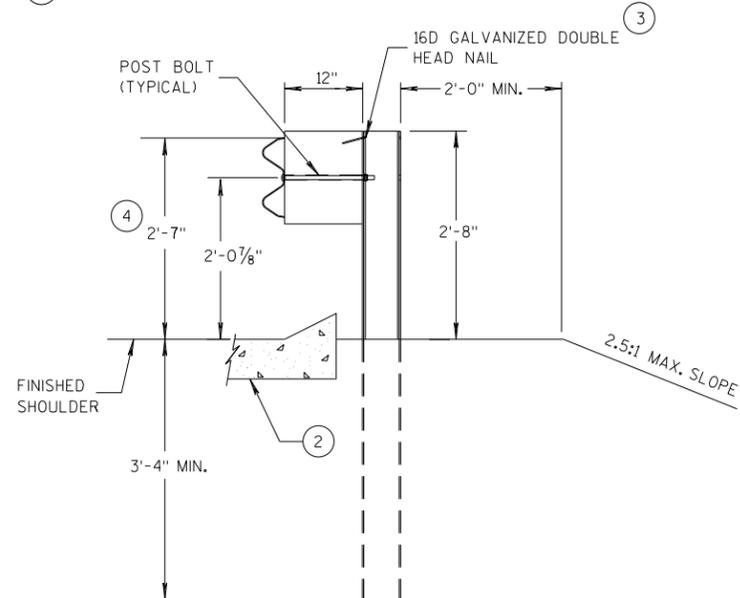
**MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION**

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

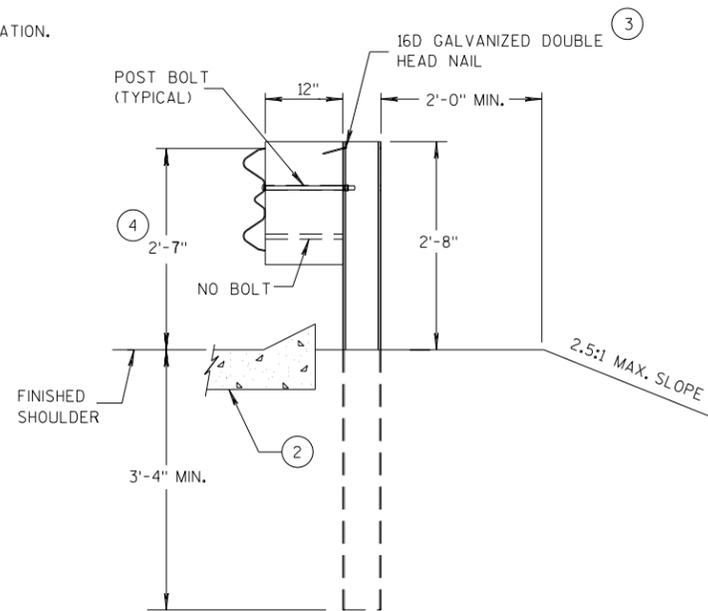
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

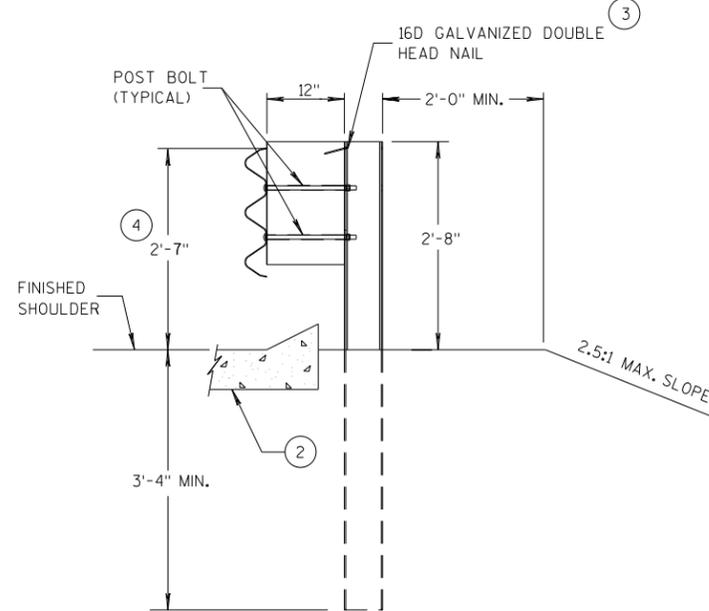
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".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



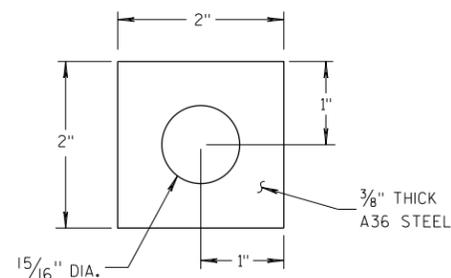
**SECTION A-A  
POSTS 1-5**



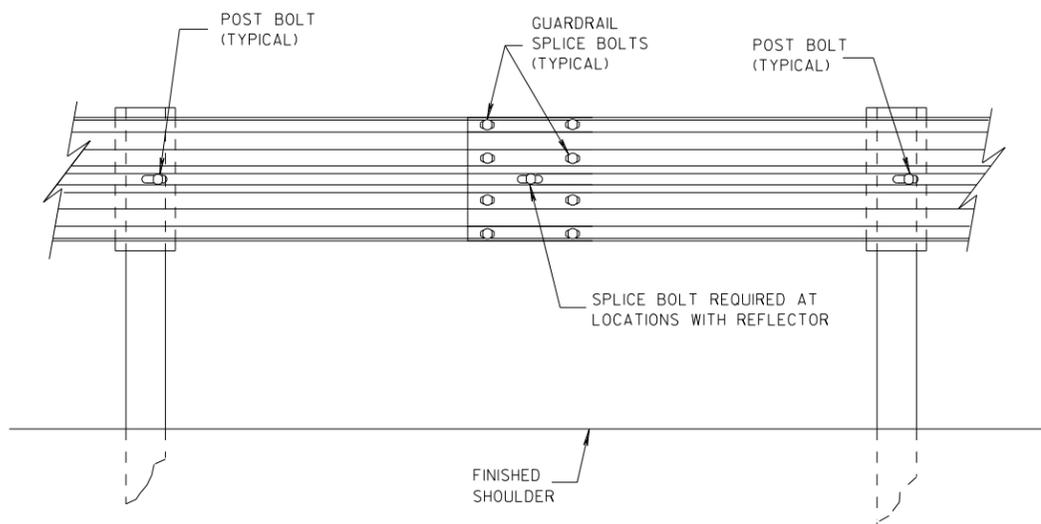
**SECTION B-B  
POST 6**



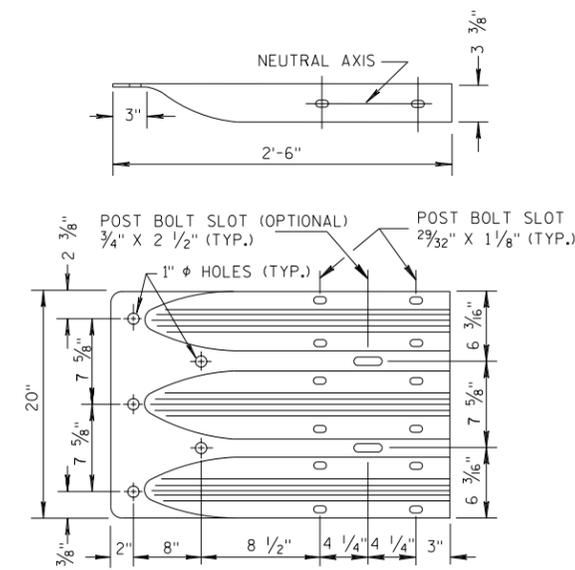
**SECTION C-C  
POSTS 7-11**



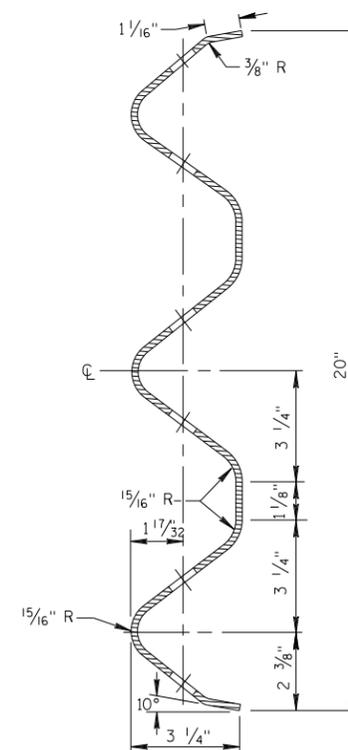
**PLATE WASHER DETAIL**



**SPLICE DETAIL**



**THRIE BEAM  
TERMINAL CONNECTOR**

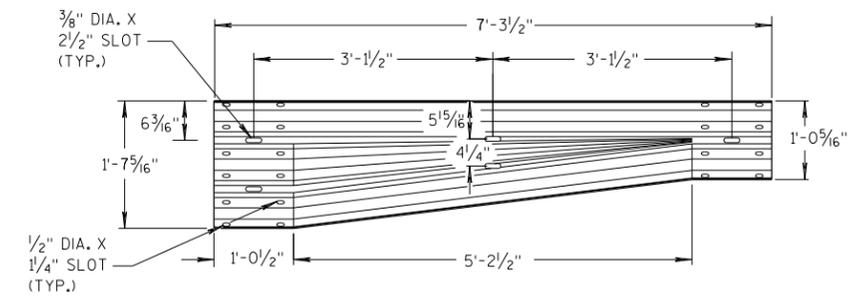


**SECTION THRU THRIE  
BEAM RAIL ELEMENT**

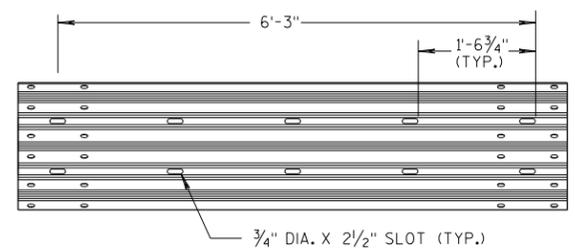
**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

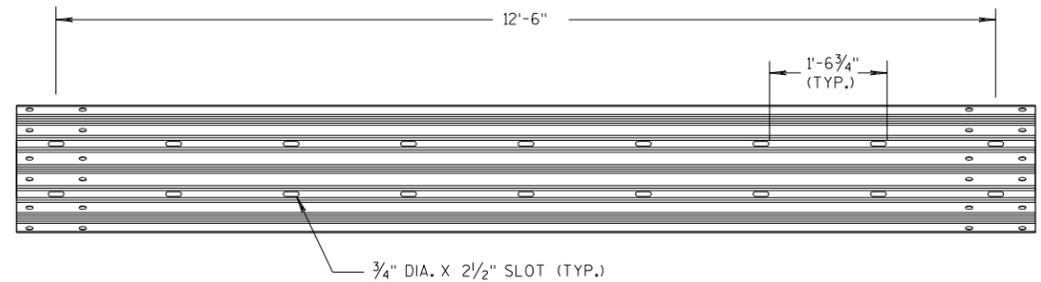
**SECTION D-D  
POSTS 12-17**



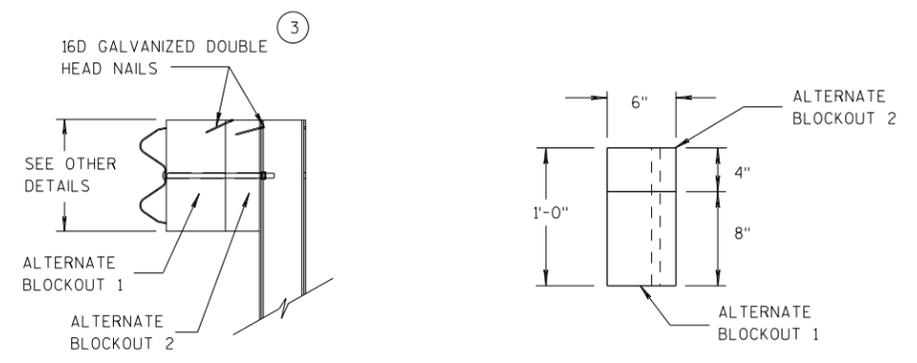
**W-BEAM TO THRIE BEAM TRANSITION SECTION**



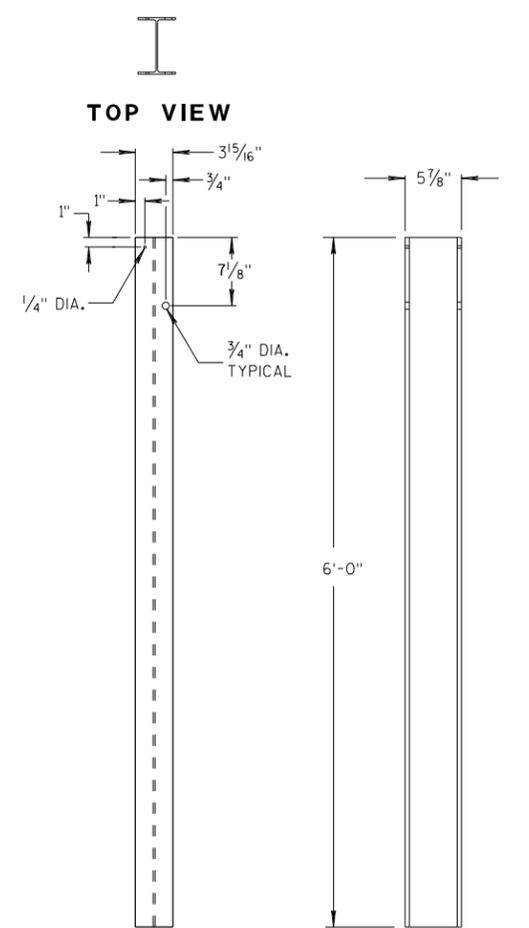
**6'-3\"/>**



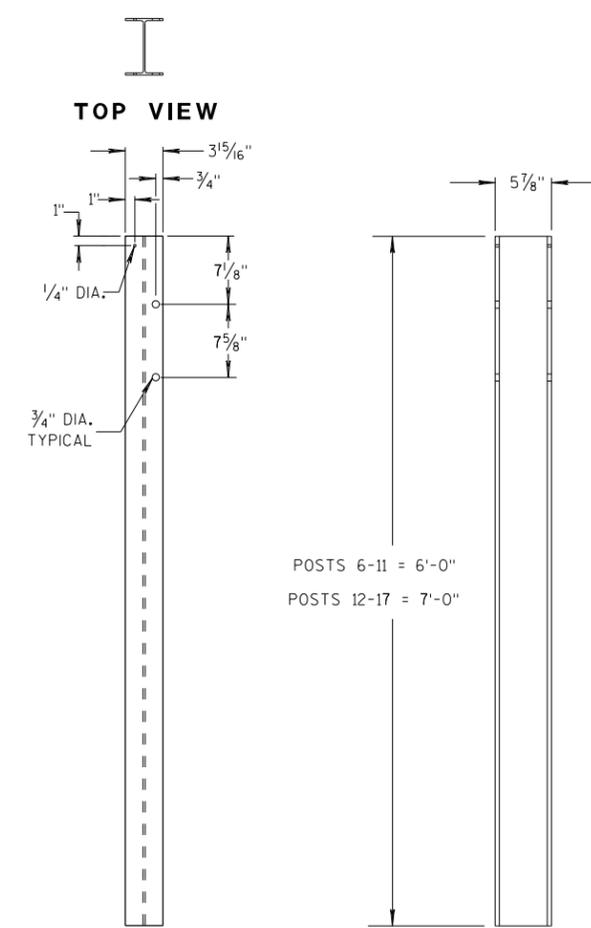
**12'-6\"/>**



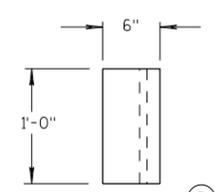
**ALTERNATE WOOD BLOCKOUT DETAIL**



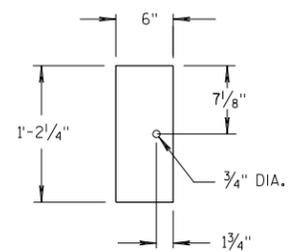
**STEEL POSTS 1-5**



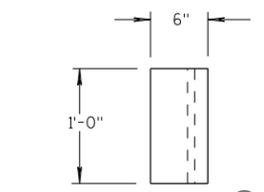
**STEEL POSTS 6-17**



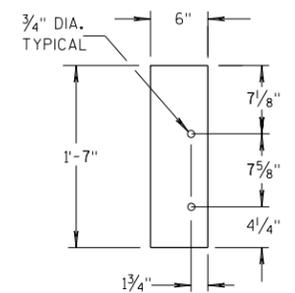
**TOP VIEW**



**FRONT VIEW  
BLOCKOUT  
POSTS 1-5**



**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

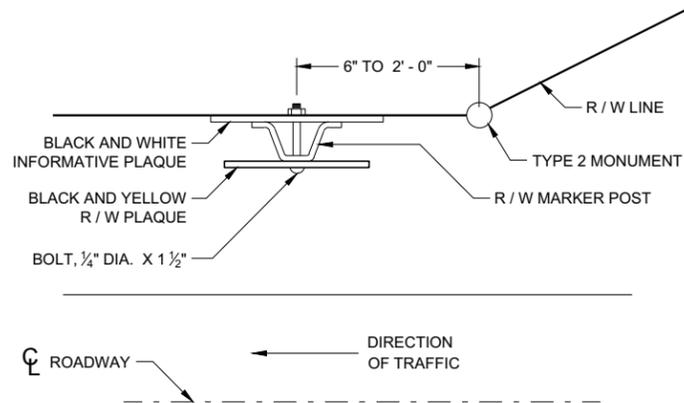
6

6

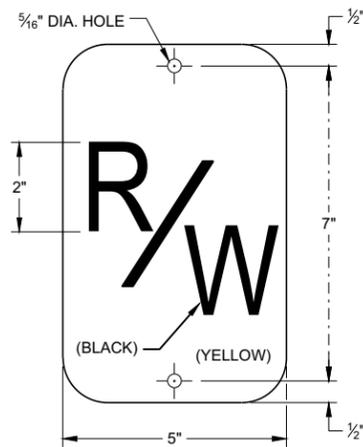
S.D.D. 14 B 45-5c

S.D.D. 14 B 45-5c



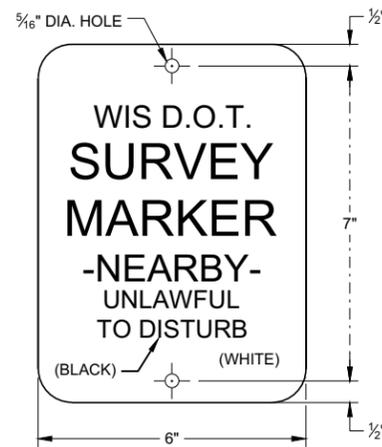


**PLAN VIEW  
STEEL MARKER POST**



**R / W PLAQUE**

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



**INFORMATIVE PLAQUE**

**GENERAL NOTES**

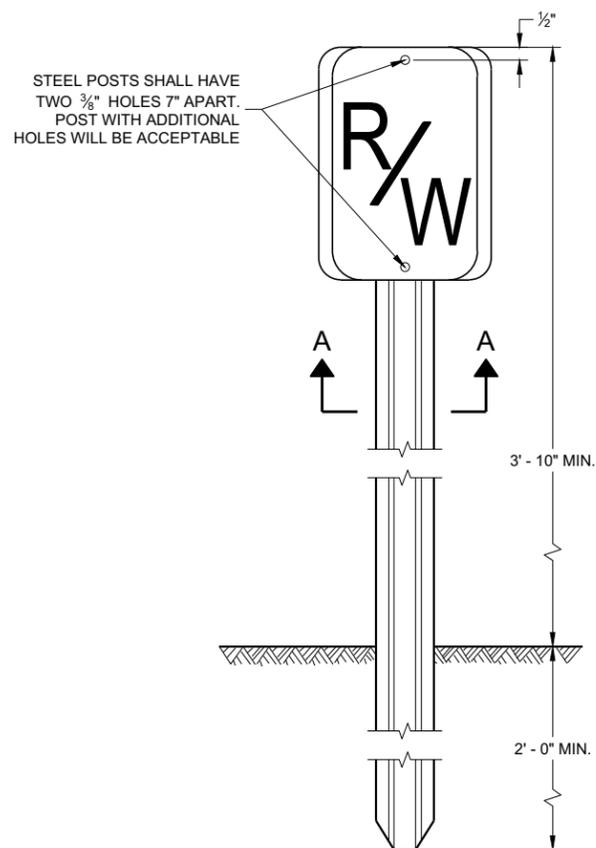
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT -OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

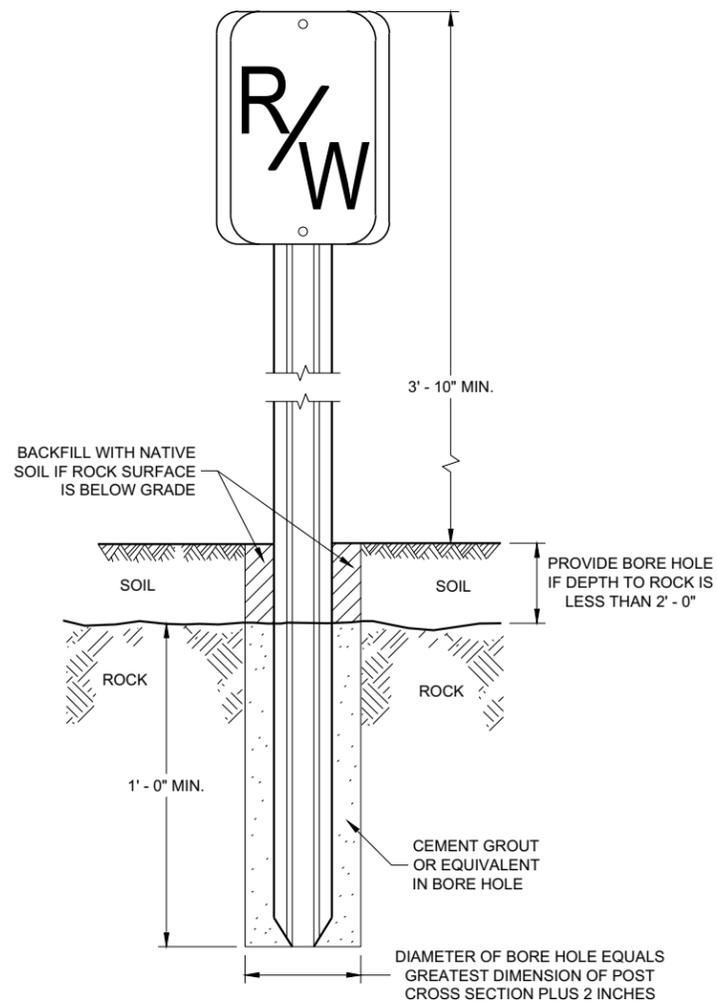
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. "R/W" AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

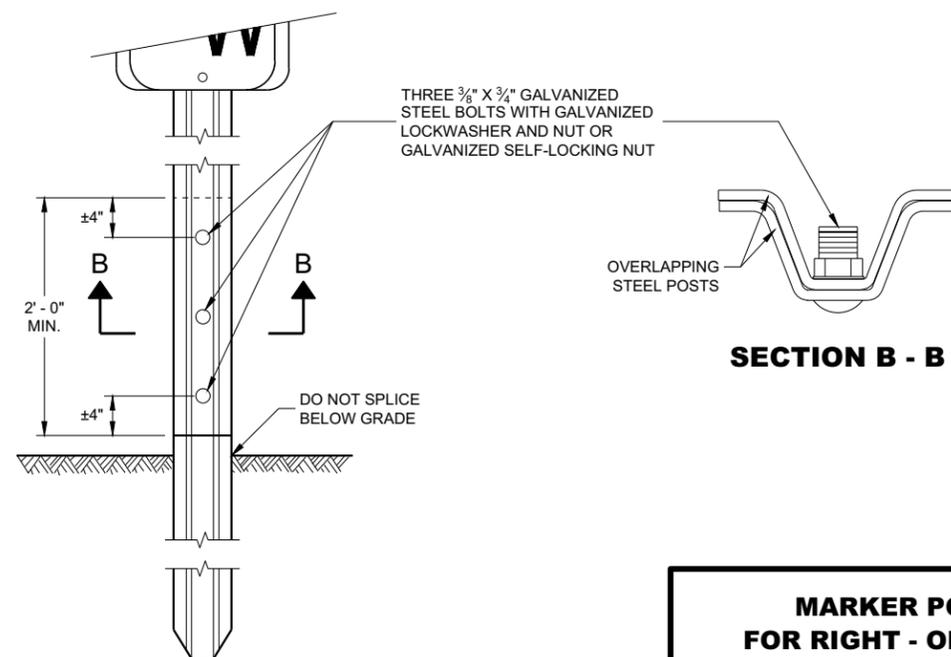
- ① IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' - 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



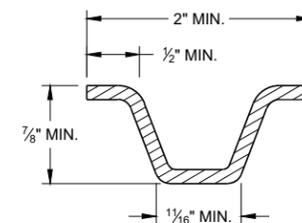
**FRONT VIEW  
STEEL MARKER POST**



**FRONT VIEW  
ROCK INSTALLATION** ①



**FRONT VIEW  
SPLICE DETAIL**



MIN. WEIGHT 1.12 LB./FT.  
**SECTION A - A**



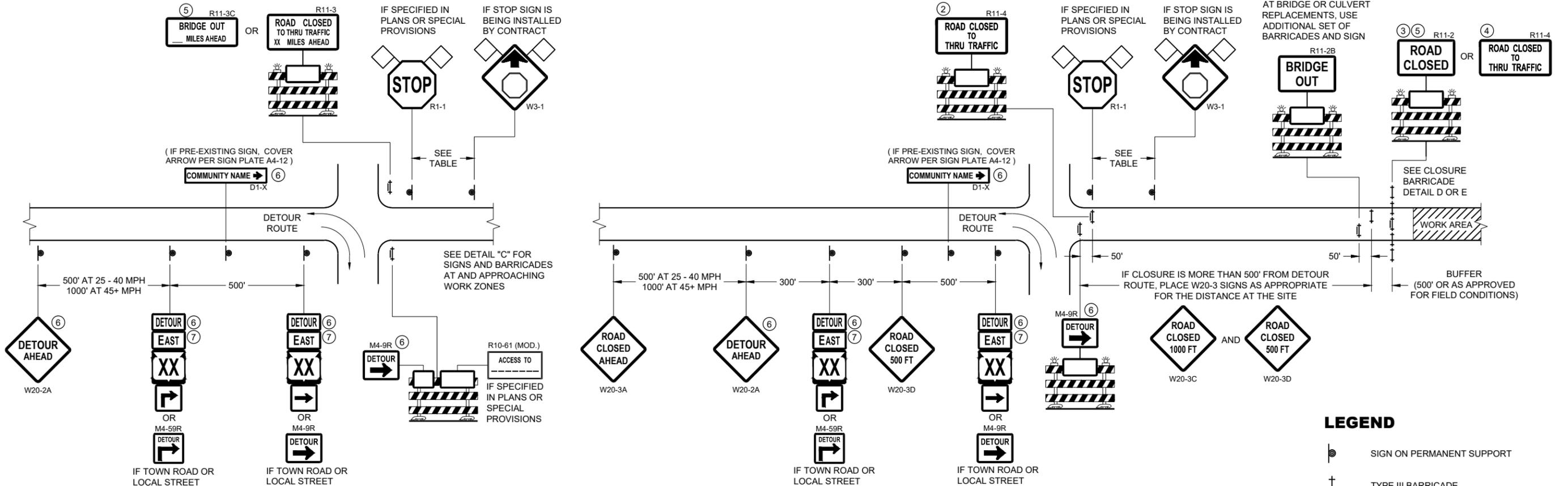
**SECTION B - B**

**MARKER POST  
FOR RIGHT - OF - WAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
2/18/2016 DATE /S/ Ray Kumapayi  
DATE CHIEF SURVEYING AND MAPPING ENGINEER

FHWA



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

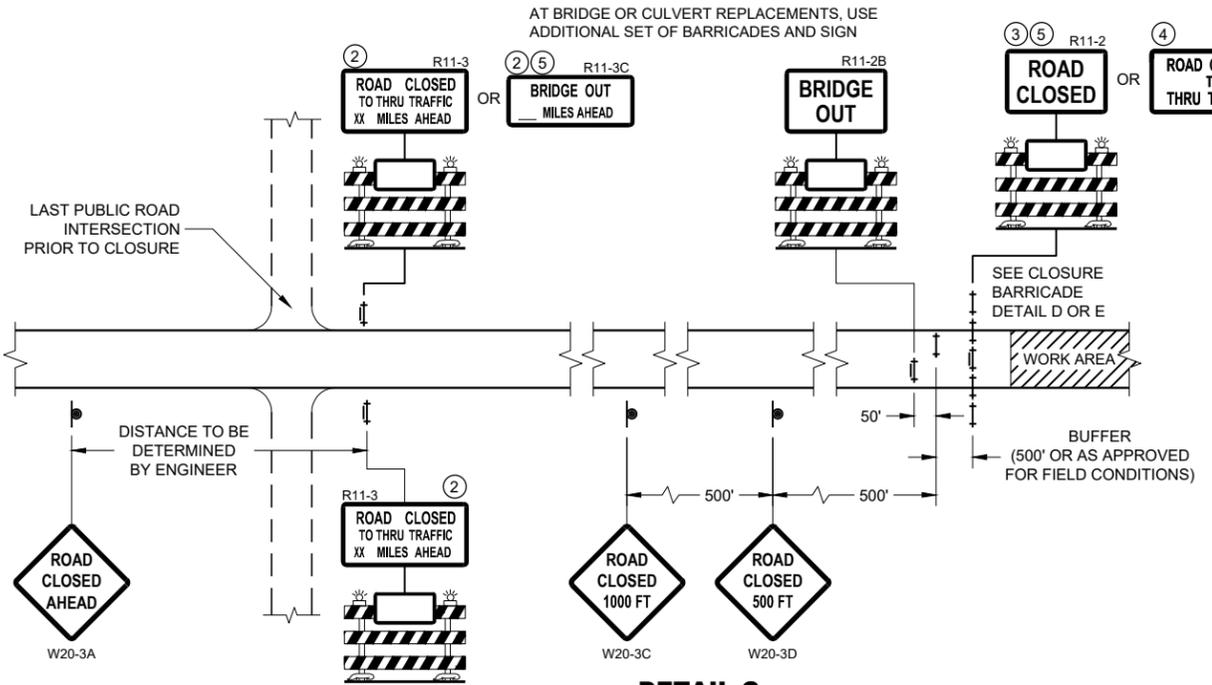
WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**LEGEND**

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

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



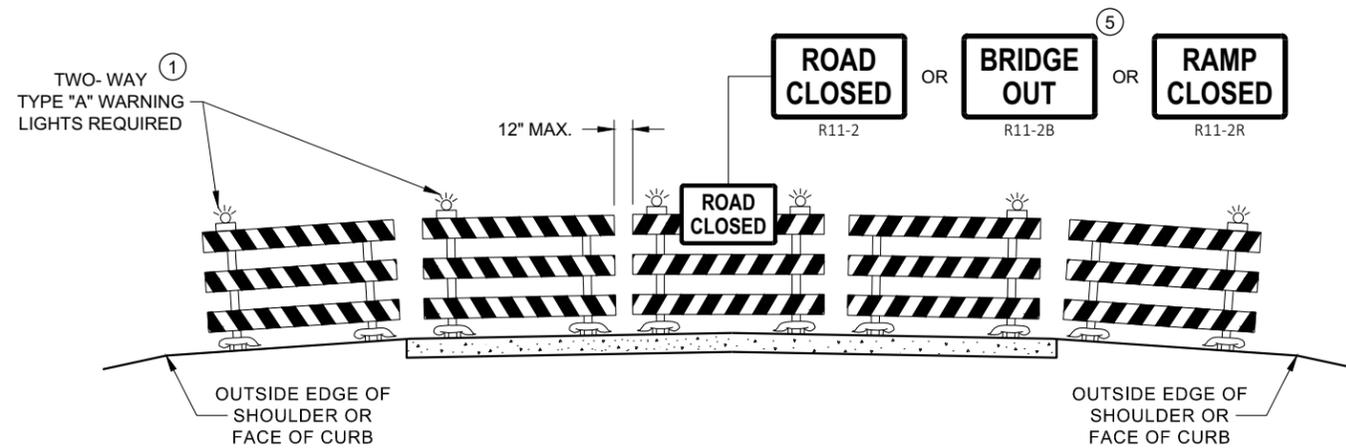
**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

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

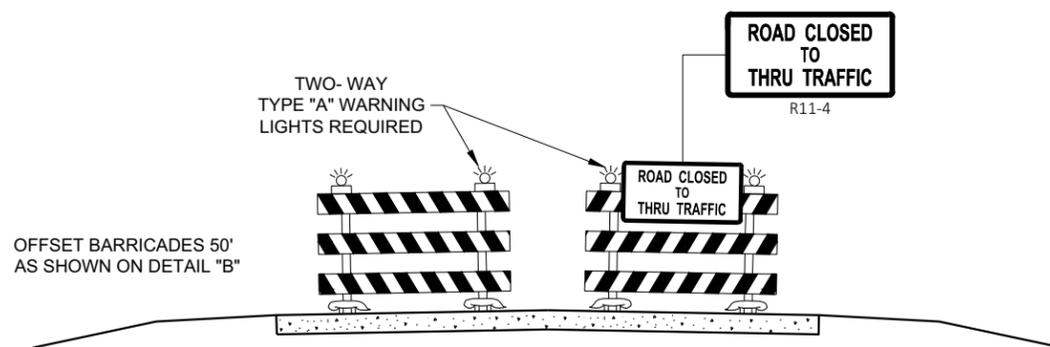
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW**



**DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

**GENERAL NOTES**

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

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

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

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

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

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

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

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

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

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

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

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

**BARRICADES AND SIGNS  
FOR  
VARIOUS CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

**GENERAL NOTES**

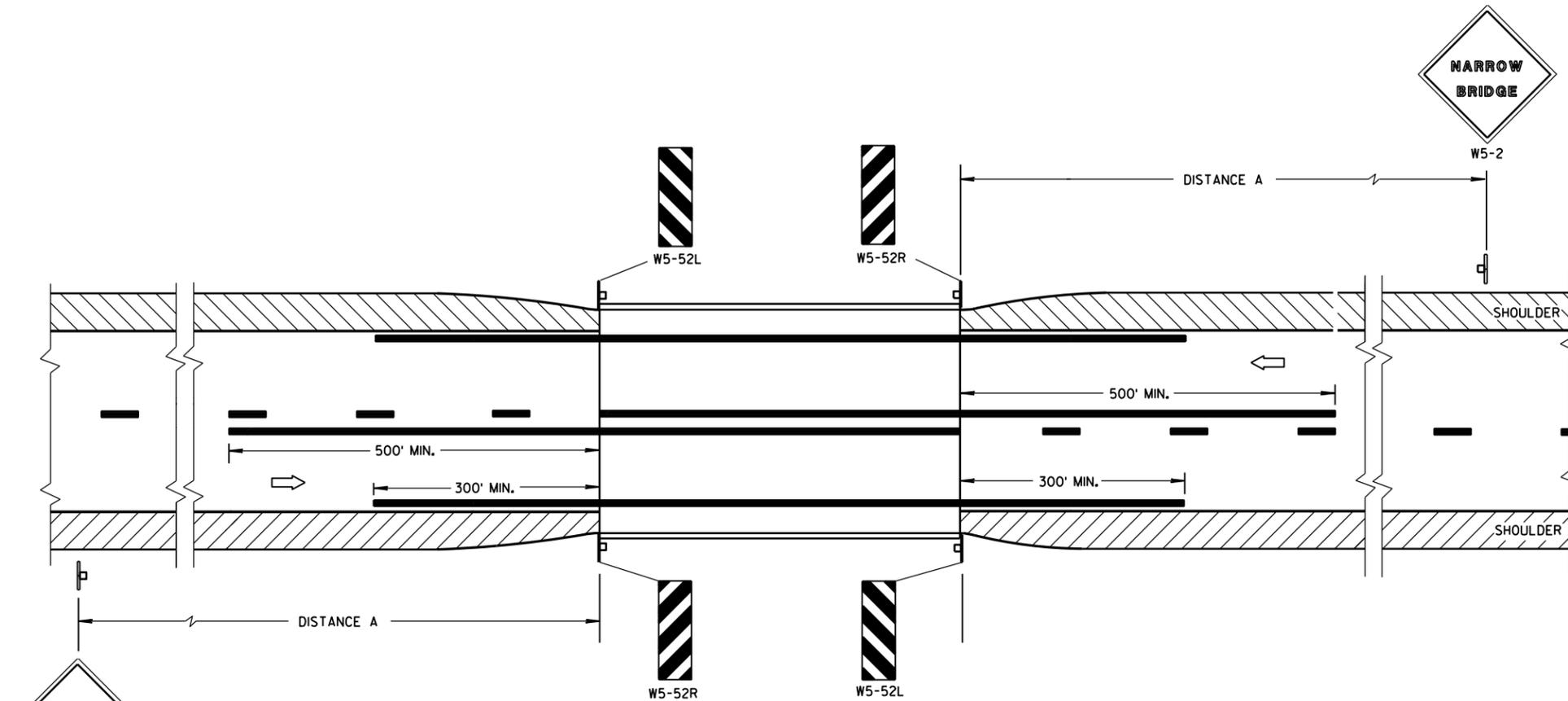
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

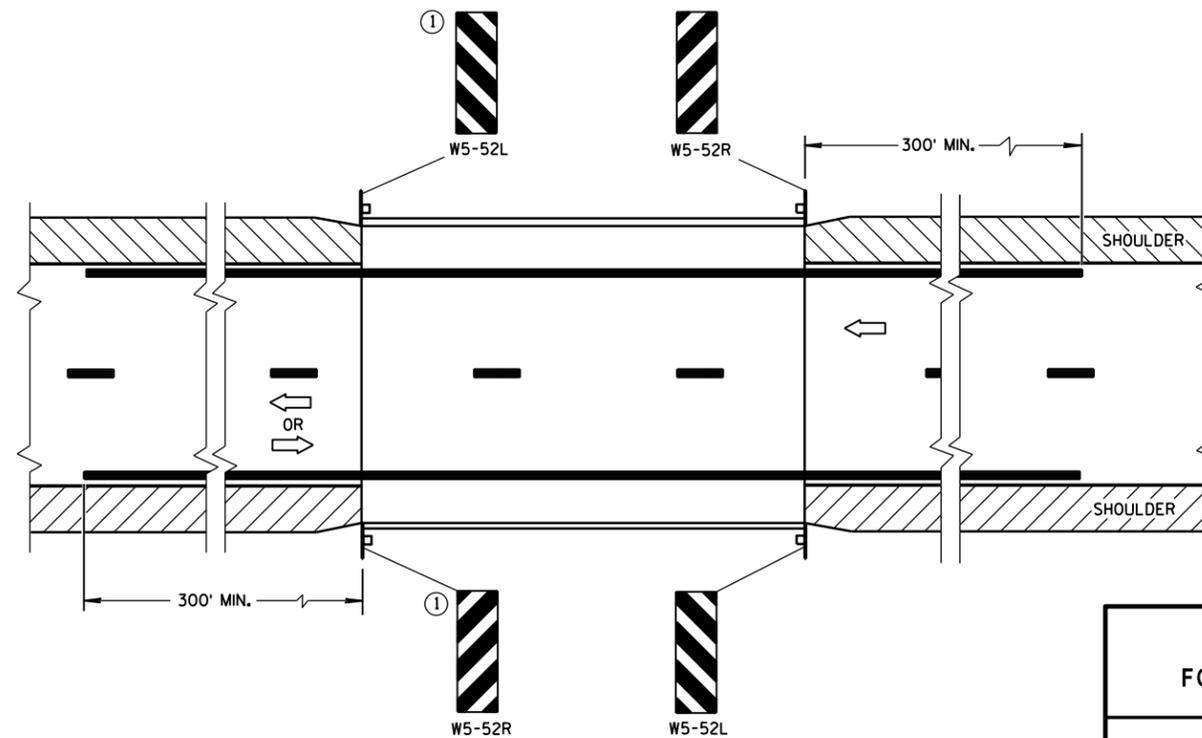
① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



**SITUATION 1**

WARRANTING CRITERIA:  
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



**SITUATION 2**

WARRANTING CRITERIA:  
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND  
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

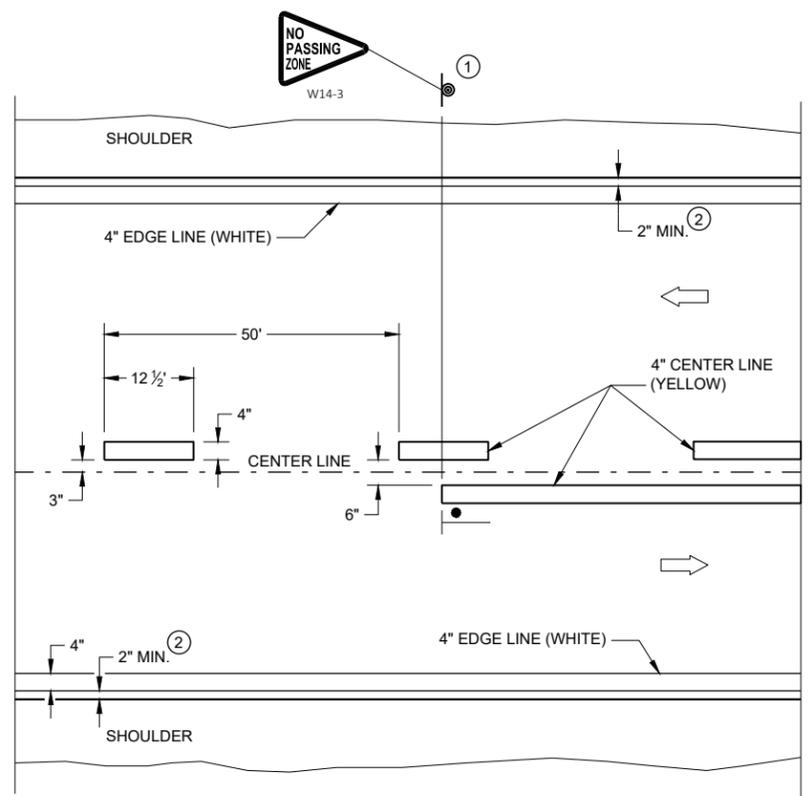
**DISTANCE TABLE**

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

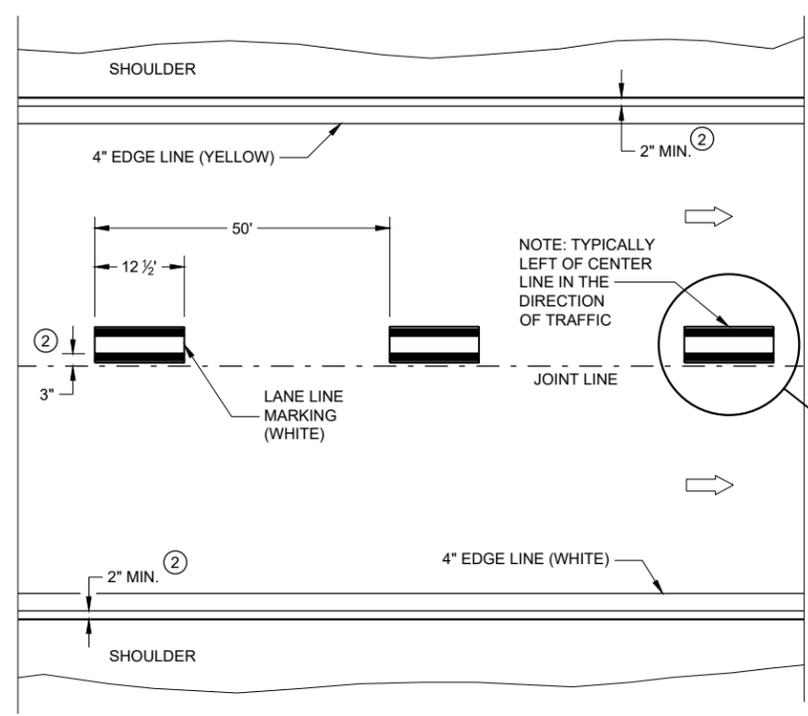
**SIGNING & MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

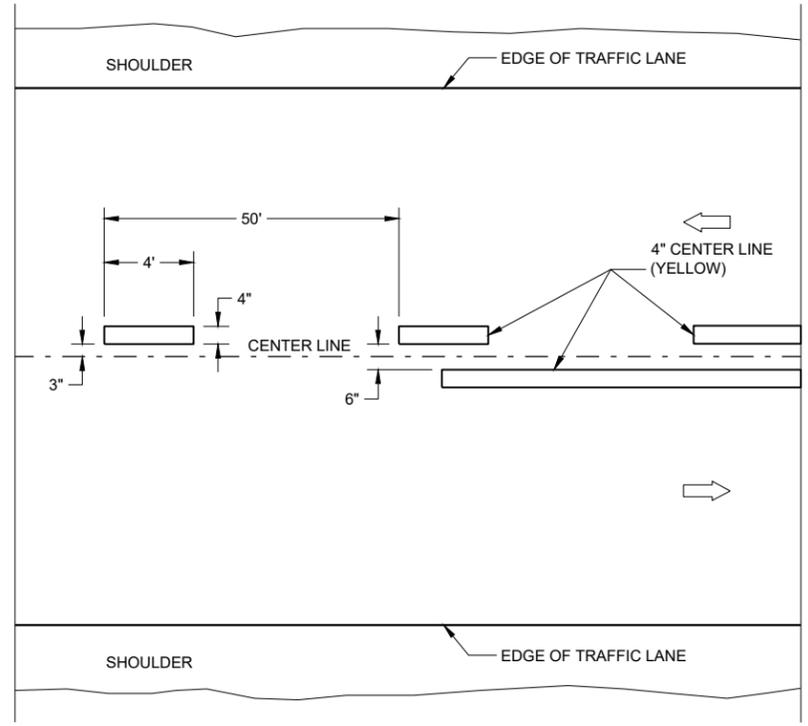


TWO WAY TRAFFIC

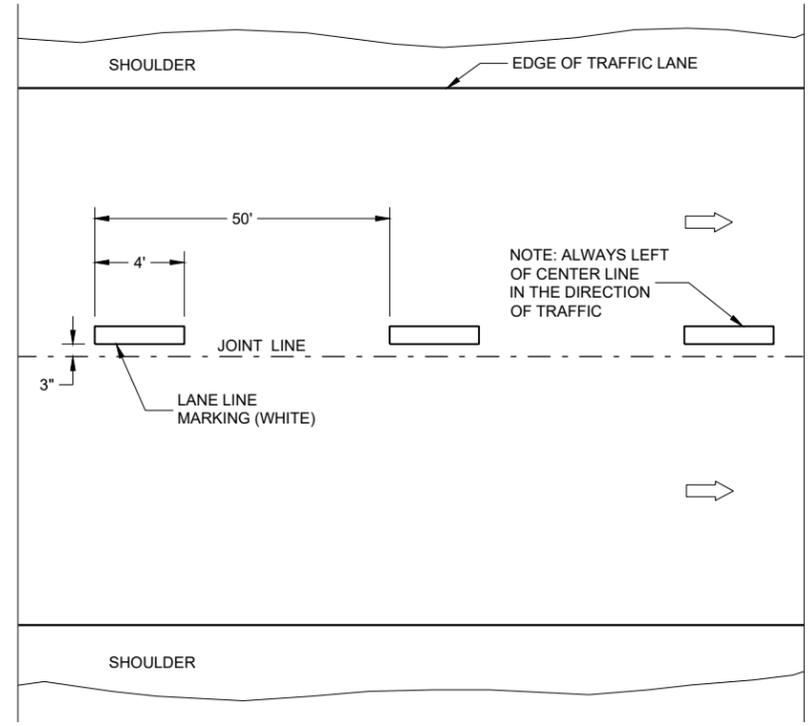


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

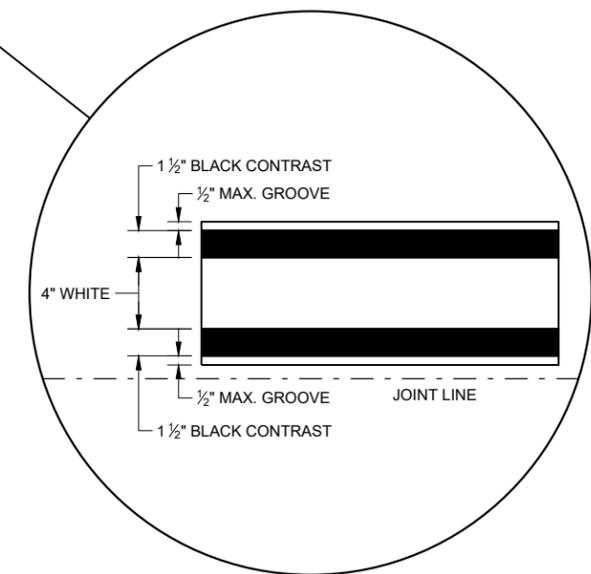
GENERAL NOTES

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

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

LEGEND

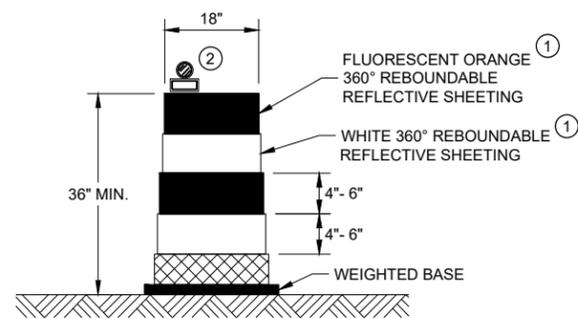
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC



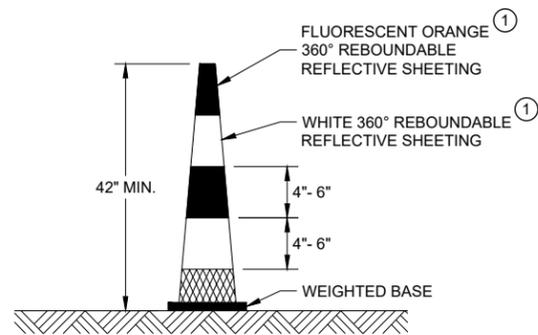
LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED  
 February 2020 /S/ Matthew Rauch  
 DATE STATEWIDE SIGNING AND MARKING ENGINEER  
 FHWA

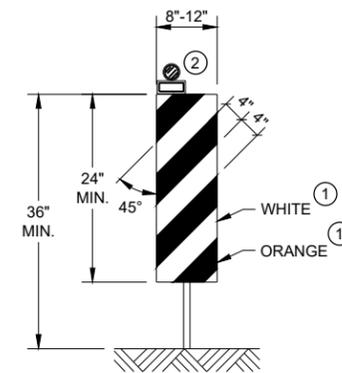


**DRUM**



**42" CONE**

DO NOT USE IN TAPERS  
1/2 SPACING OF DRUMS

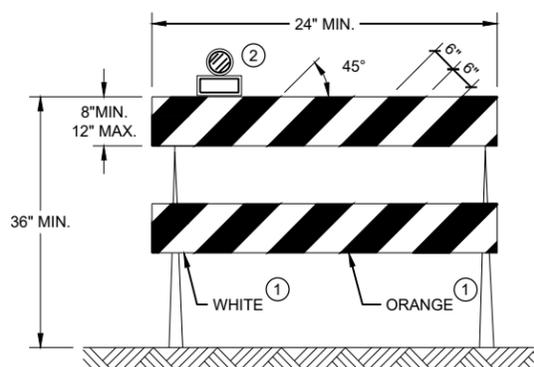


**VERTICAL PANEL**

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

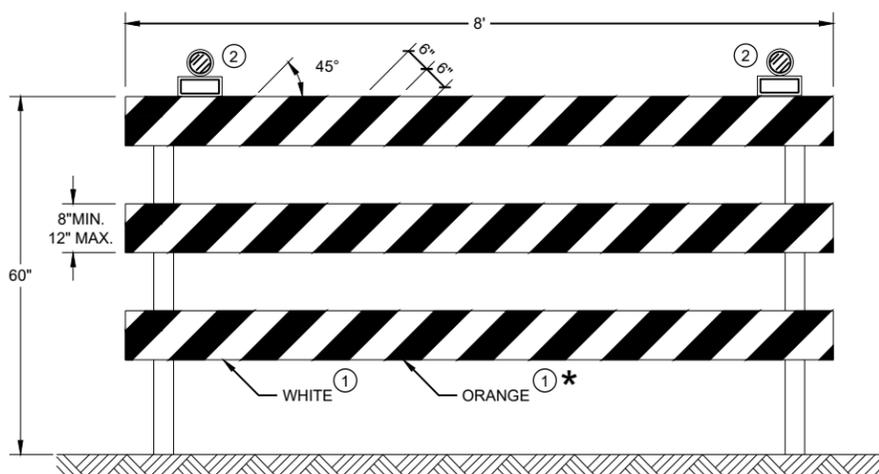
**GENERAL NOTES**

- 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.



**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**

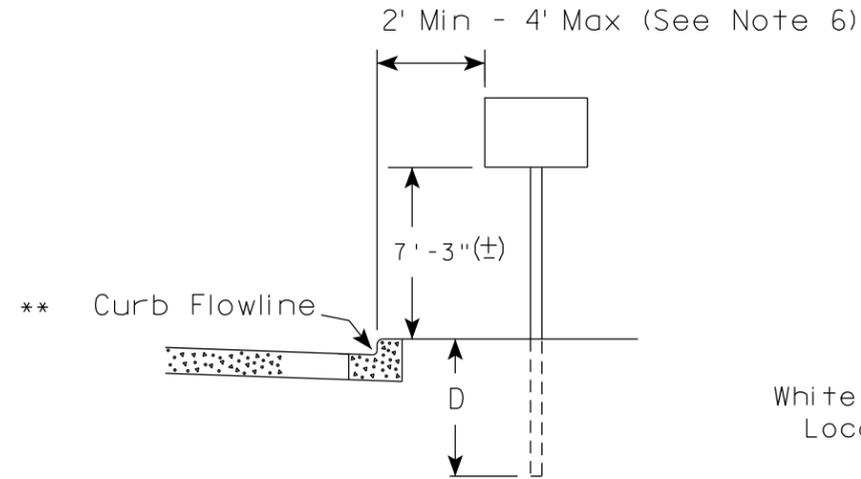
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

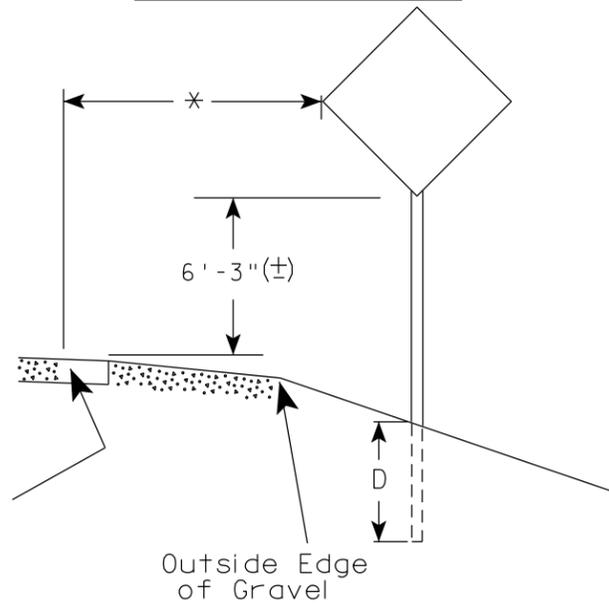
<b>CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA

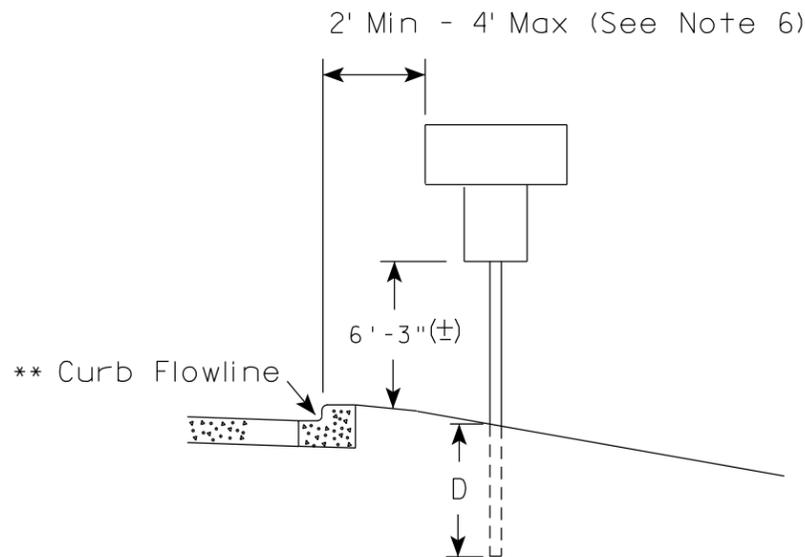
RURAL AREA (See Note 2)



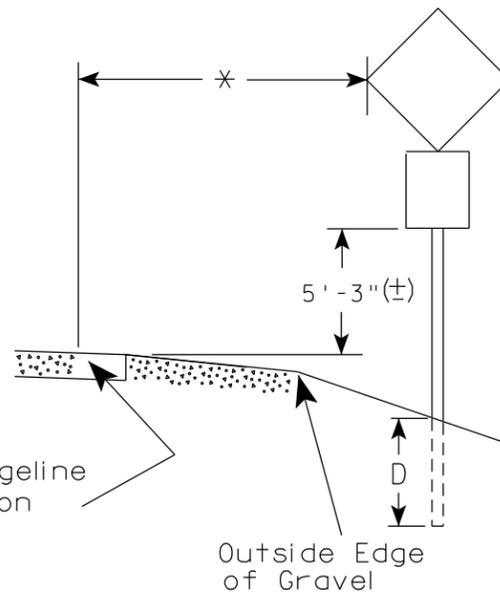
White Edgeline Location



Outside Edge of Gravel



White Edgeline Location



Outside Edge of Gravel

POST EMBEDMENT DEPTH

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

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" (±). 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. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

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

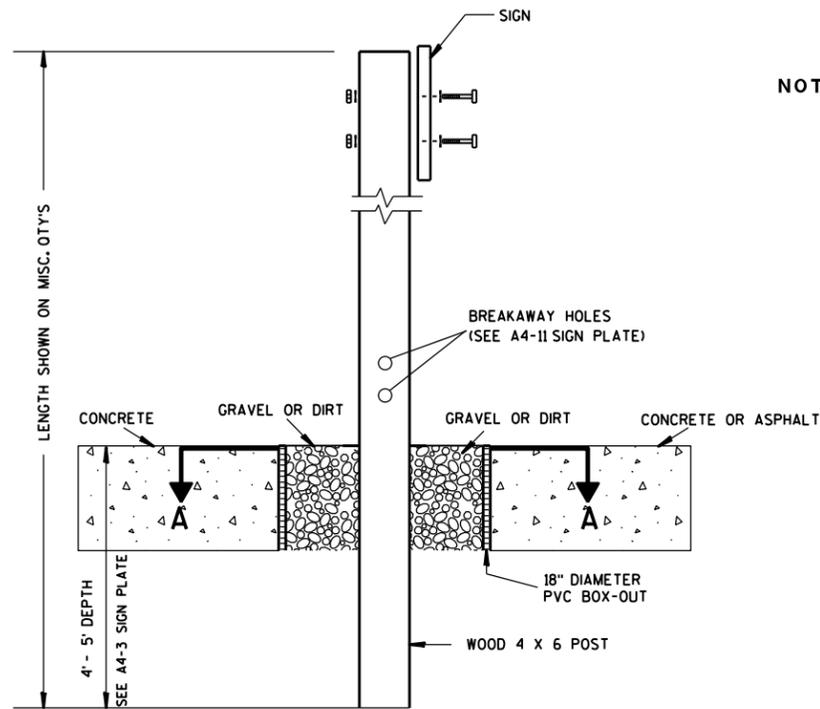
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

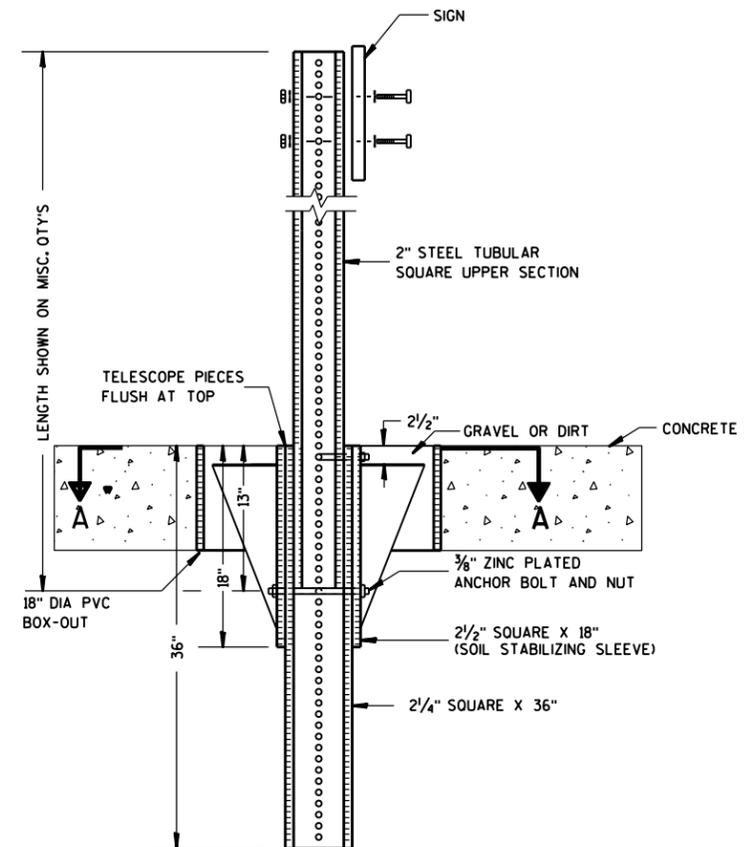
DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

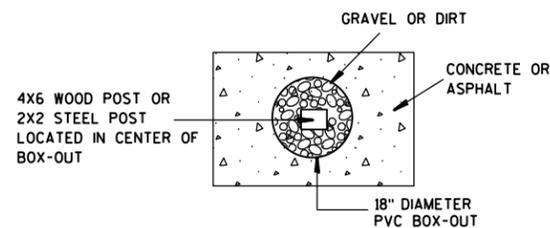
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- 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**

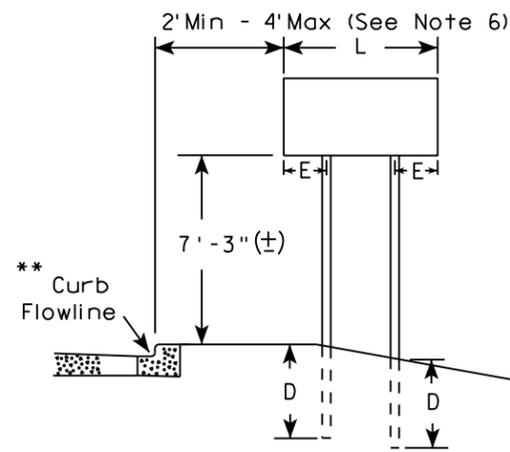
**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

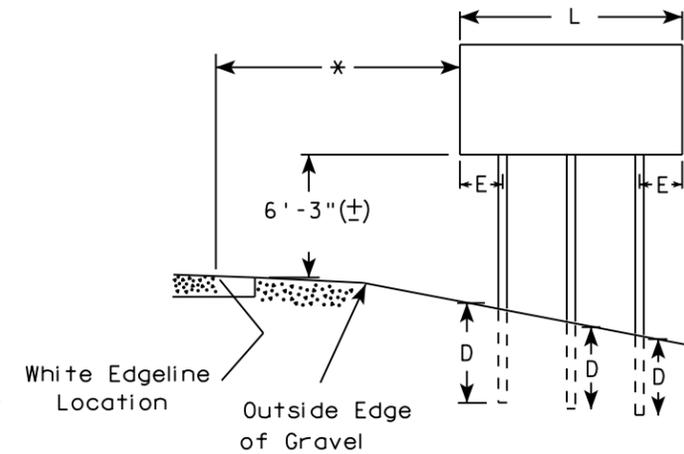
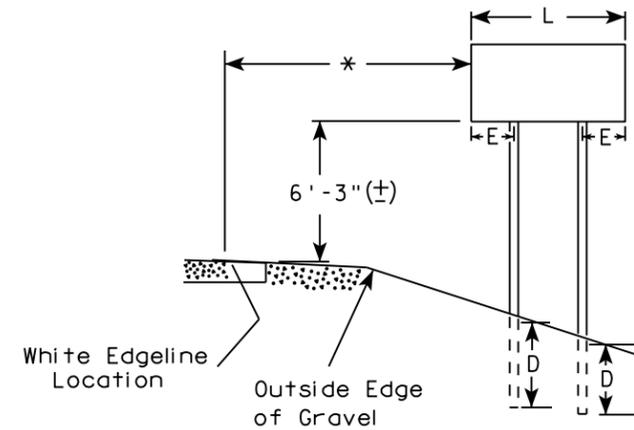
GENERAL NOTES

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

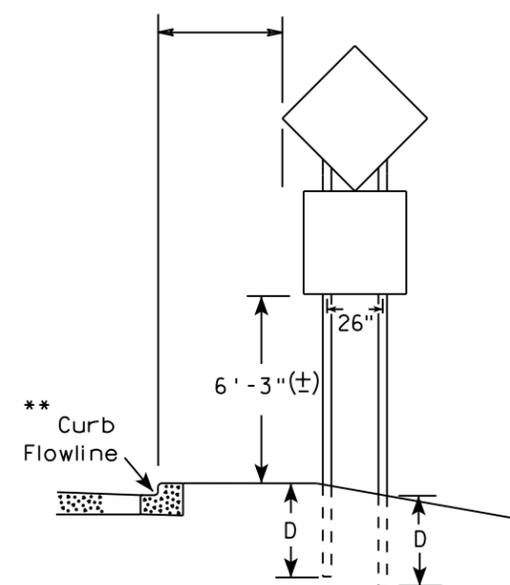
URBAN AREA



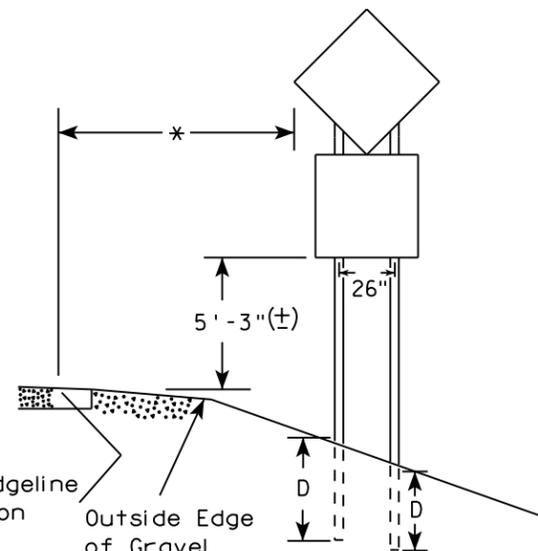
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

\*\*\*

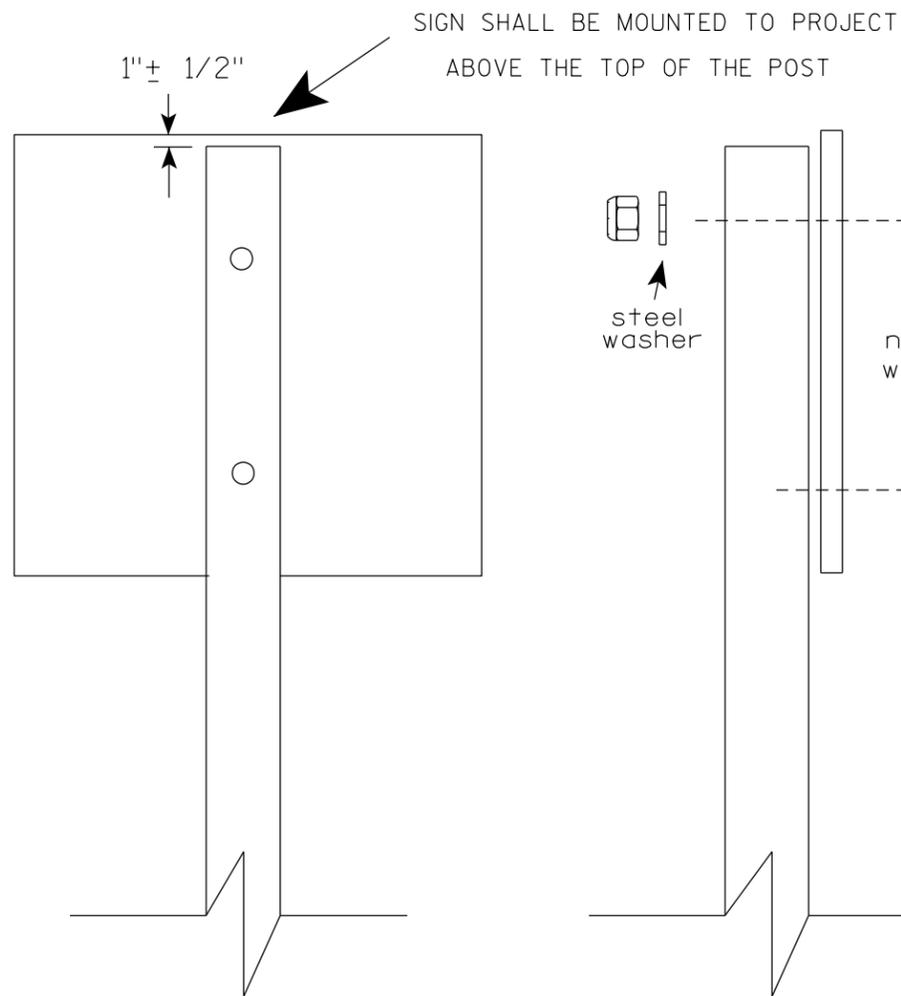
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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 8/21/17 PLATE NO. A4-4.15



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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)  
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS  
TO POSTS

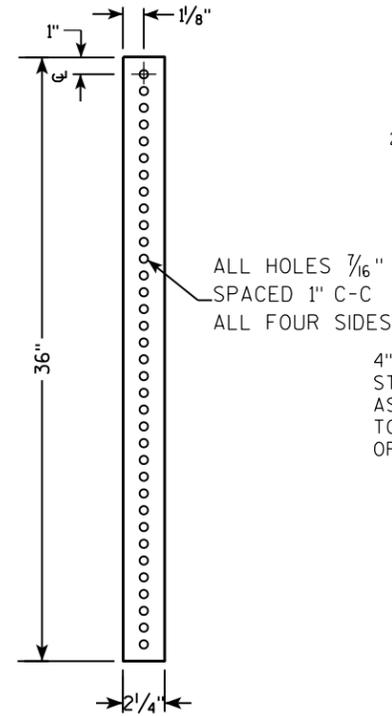
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

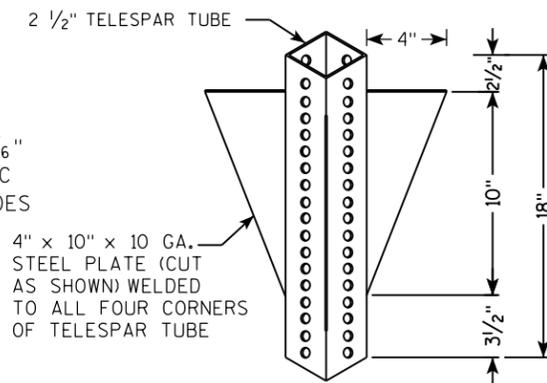
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

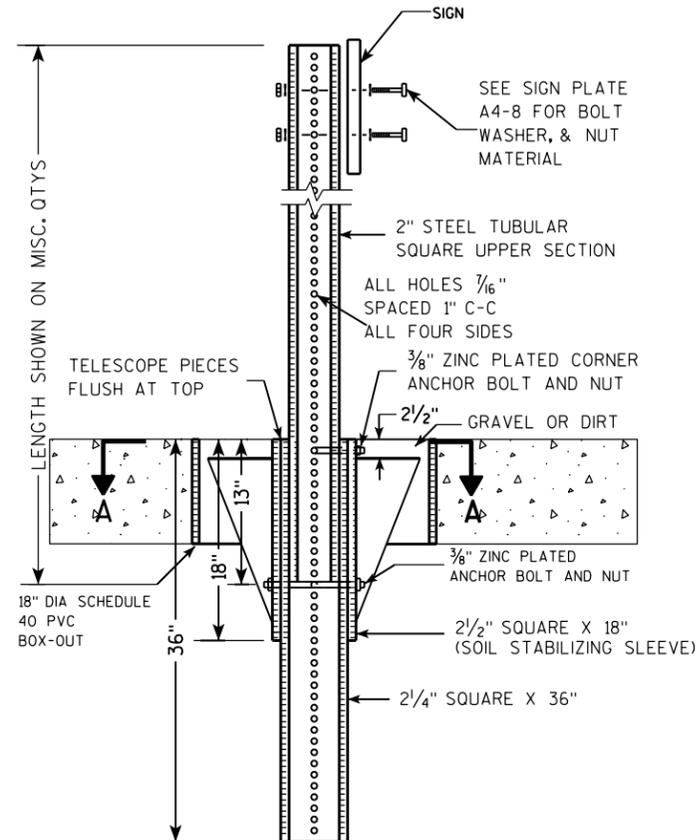
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



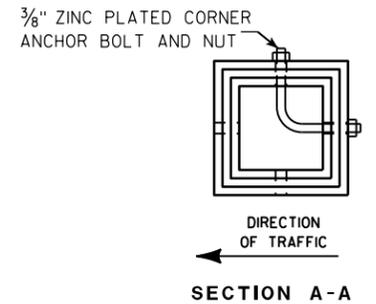
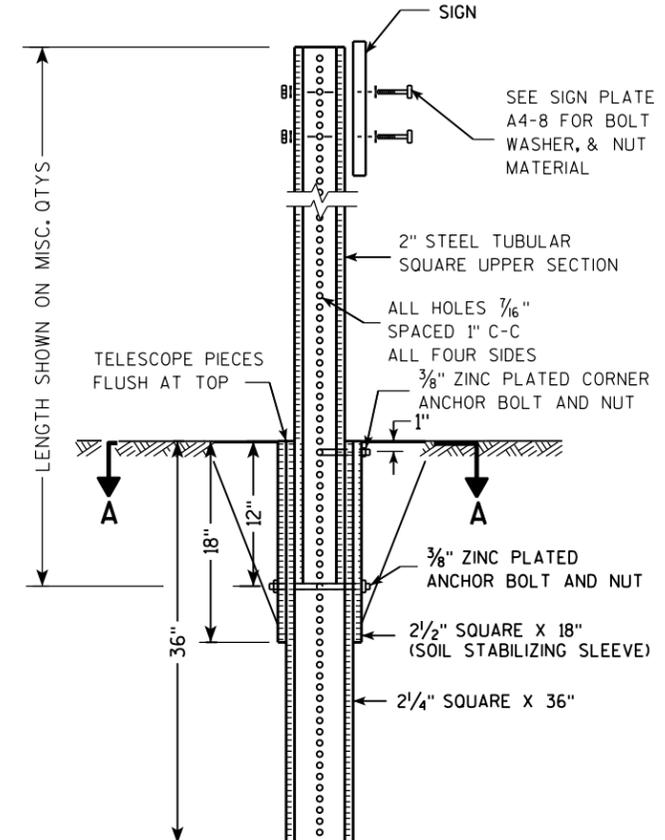
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



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



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



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

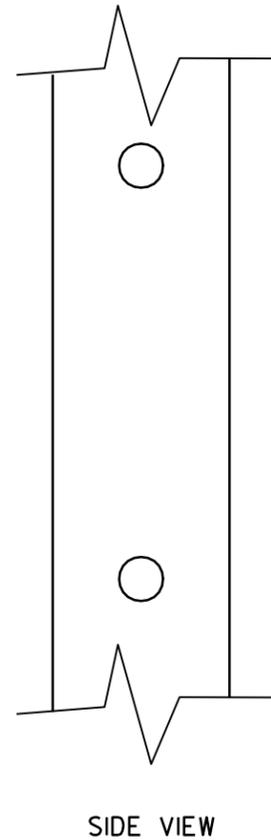
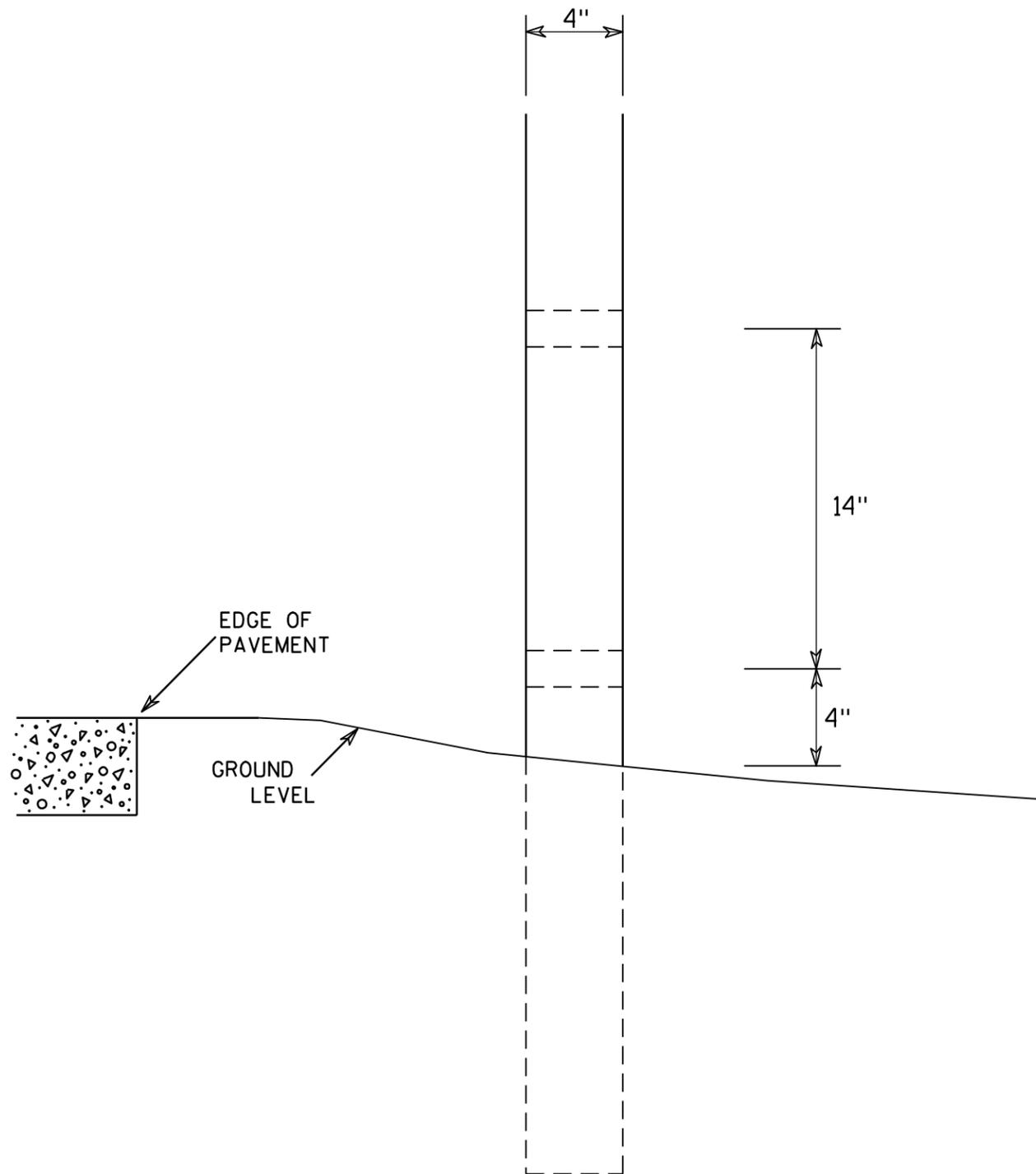
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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



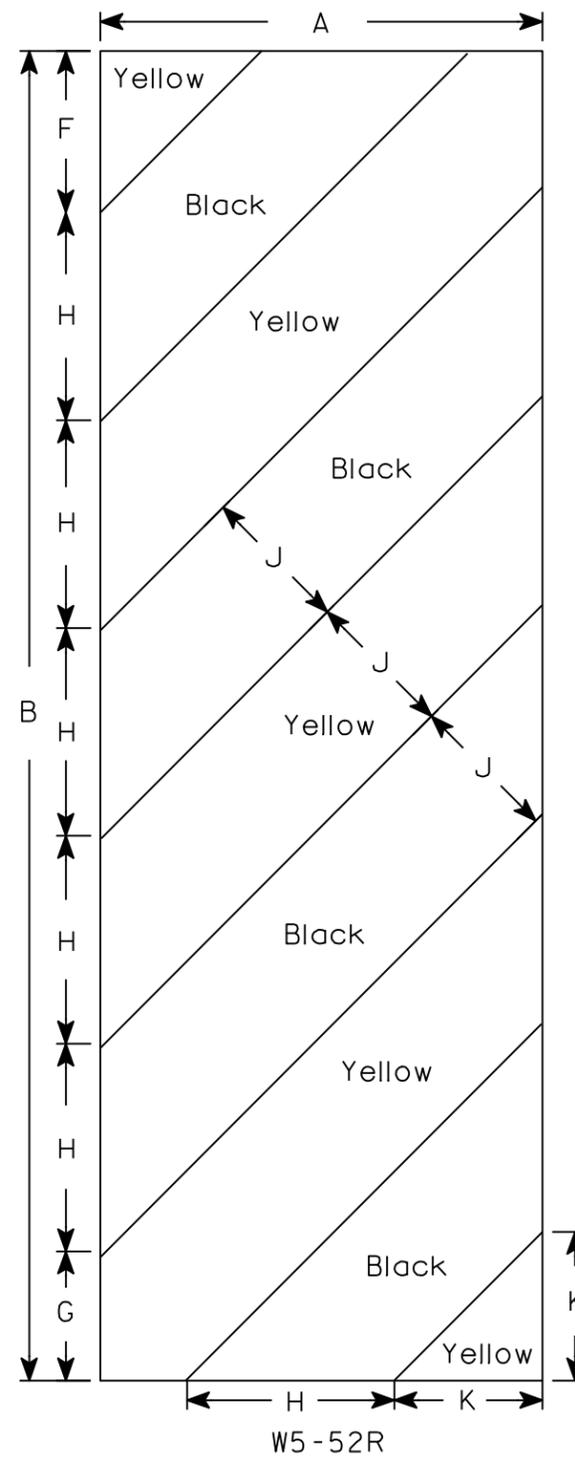
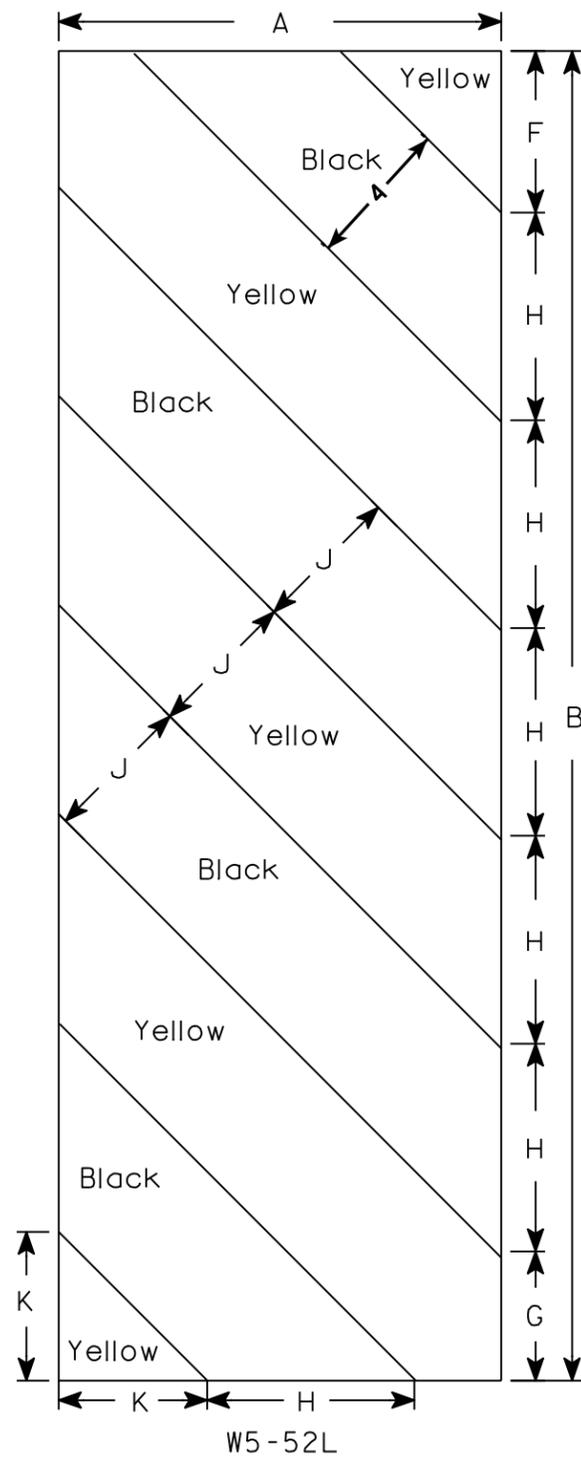
GENERAL NOTES

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

7

7

<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>



NOTES

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

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN  
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

**DESIGN DATA**

**LIVE LOAD:**

DESIGN LOADING \_\_\_\_\_ HL-93  
 INVENTORY RATING FACTOR \_\_\_\_\_ RF=1.13  
 OPERATING RATING FACTOR \_\_\_\_\_ RF=1.47  
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) \_\_\_\_\_ 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

**MATERIAL PROPERTIES:**

CONCRETE MASONRY, SUPERSTRUCTURE \_\_\_\_\_ f'c = 4,000 P.S.I.  
 ALL OTHER \_\_\_\_\_ f'c = 3,500 P.S.I.  
 HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 \_\_\_\_\_ fy = 60,000 P.S.I.

**FOUNDATION DATA**

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS\*\* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 35 FT PILE LENGTHS 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.

**TRAFFIC DATA**

A.D.T. (2022) \_\_\_\_\_ 865  
 A.D.T. (2042) \_\_\_\_\_ 1,285  
 DESIGN SPEED \_\_\_\_\_ 50 M.P.H.

**HYDRAULIC DATA**

100 YEAR FREQUENCY \_\_\_\_\_  
 DRAINAGE AREA \_\_\_\_\_ 12.2 SQ. MI.  
 Q<sub>100</sub> TOTAL \_\_\_\_\_ 990 C.F.S.  
 THROUGH STRUCTURE \_\_\_\_\_ 990 C.F.S.  
 OVERTOPPING ROADWAY \_\_\_\_\_ N/A  
 VELOCITY - THROUGH STRUCTURE \_\_\_\_\_ 4.99 F.P.S.  
 WATERWAY AREA - THROUGH STRUCTURE \_\_\_\_\_ 199.00 SQ. FT.  
 HIGH WATER<sub>100</sub> ELEVATION \_\_\_\_\_ 807.11  
 SCOUR CRITICAL CODE \_\_\_\_\_ 5

**EROSION CONTROL**

Q<sub>2</sub> \_\_\_\_\_ 216 C.F.S.  
 VELOCITY<sub>2</sub> \_\_\_\_\_ 3.19 F.P.S.  
 HIGH WATER<sub>2</sub> ELEVATION \_\_\_\_\_ 802.93

**LIST OF DRAWINGS**

- GENERAL PLAN \_\_\_\_\_ 1.
- CROSS SECTION AND QUANTITIES \_\_\_\_\_ 2.
- SUBSURFACE EXPLORATION \_\_\_\_\_ 3.
- ABUTMENTS \_\_\_\_\_ 4.
- ABUTMENT DETAILS \_\_\_\_\_ 5.
- SUPERSTRUCTURE \_\_\_\_\_ 6.
- SUPERSTRUCTURE DETAILS \_\_\_\_\_ 7.
- TUBULAR STEEL RAILING TYPE M \_\_\_\_\_ 8.

○ INDICATES WING NUMBER  
 \* THRIE BEAM RAIL ATTACHMENT

**RIPRAP HEAVY LAYOUT**

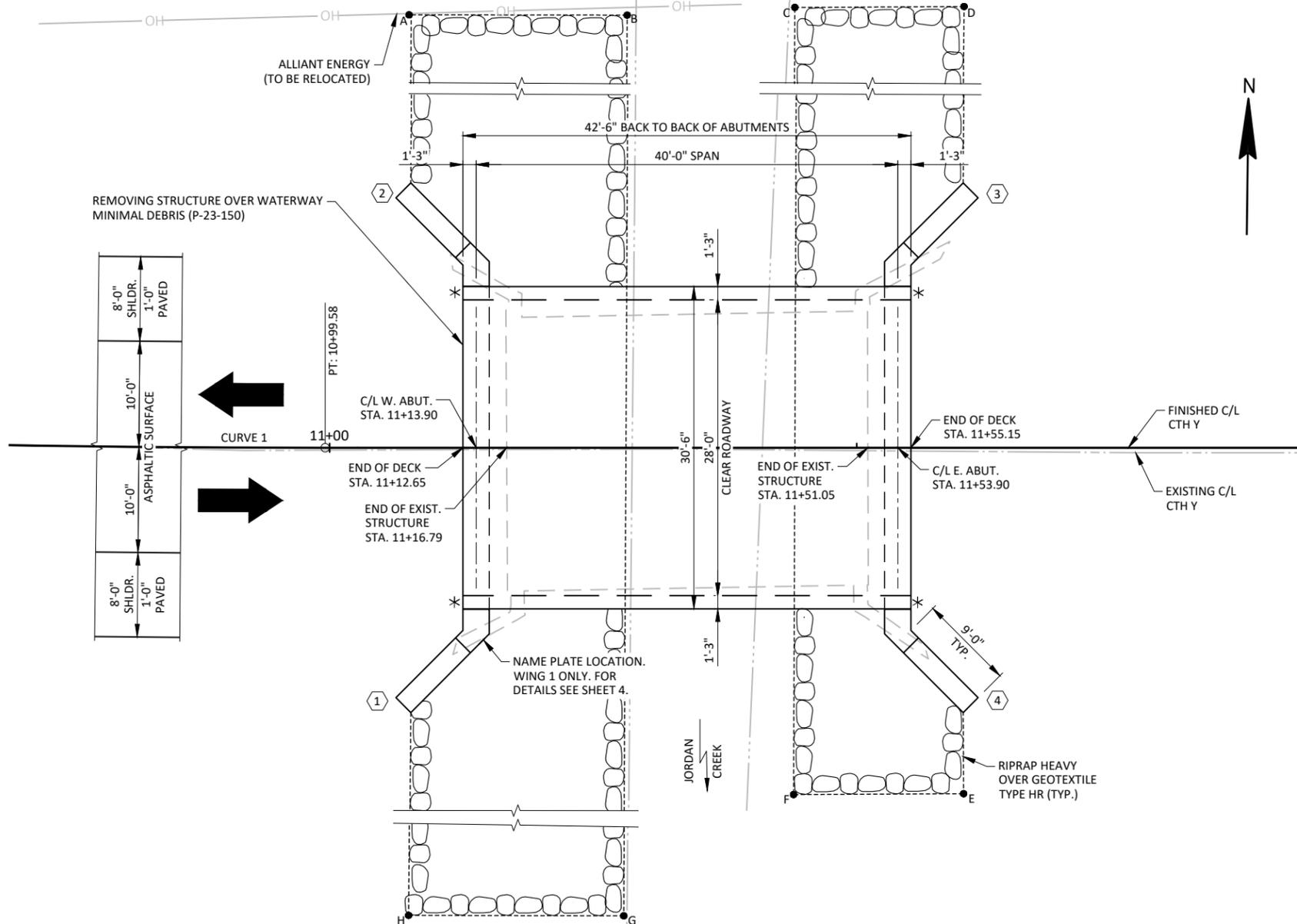
POINT	STATION	OFFSET
A	11+08	52' LT.
B	11+28	52' LT.
C	11+44	64' LT.
D	11+60	64' LT.
E	11+60	33' RT.
F	11+44	33' RT.
G	11+28	61' RT.
H	11+08	61' RT.

**CURVE 1**

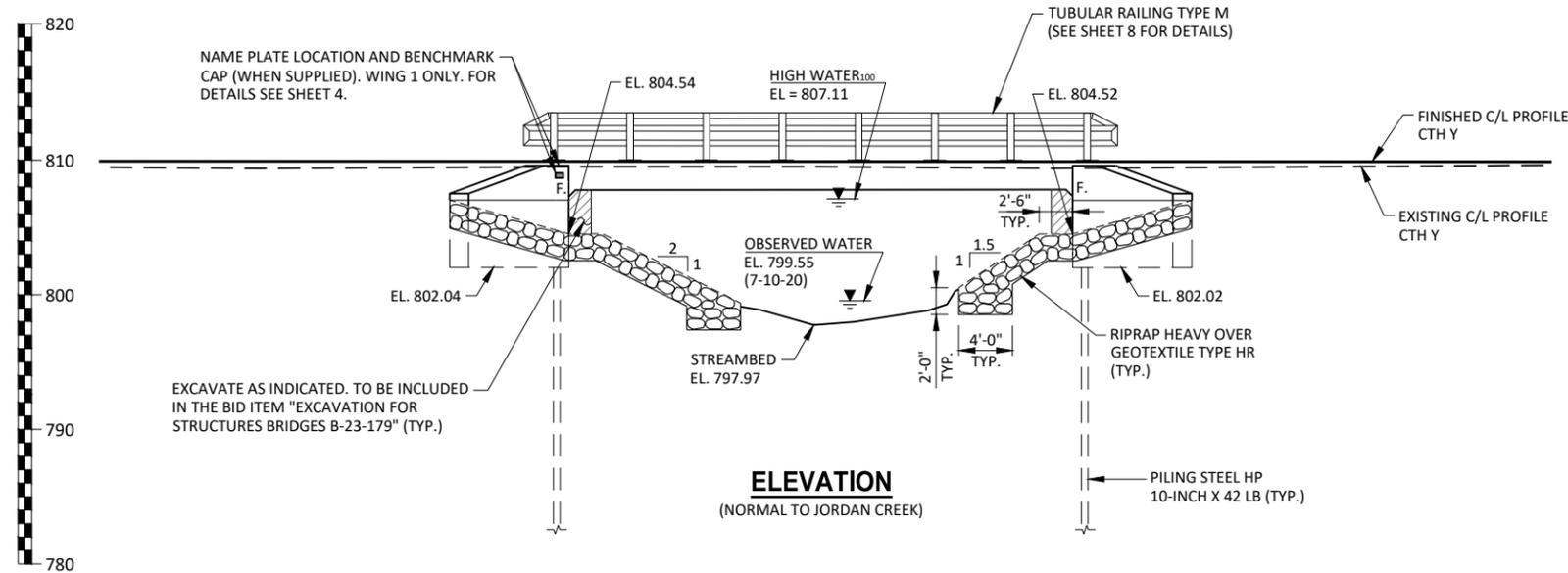
PI STA. = 10+36.84  
 Y = 147,185.74  
 X = 573,035.45  
 R = 1900.00  
 D = 3°00'56"  
 DELTA = 3°47'07"  
 L = 125.53  
 T = 62.79  
 C = 125.50  
 PC STA. = 9+74.06  
 Y = 147,189.14  
 X = 572,972.75  
 PT STA. = 10+99.58  
 Y = 147,186.48  
 X = 573,098.23

**BENCH MARKS**

NO.	STA.	DESCRIPTION	ELEV.
1	8+92	3/4" IRON REBAR SET, 33.9' LT.	808.35
2	11+84	3/4" IRON REBAR SET, 13.9' LT.	809.15
3	14+51	3/4" IRON REBAR SET, 15.0' RT.	810.46
4	10+23	STAR SPIKE IN PPOL, 48.6' LT.	807.49



**PLAN B-23-179**  
 (SINGLE SPAN REINFORCED CONCRETE FLAT SLAB)



**ELEVATION**  
 (NORMAL TO JORDAN CREEK)



**DESIGN CONSULTANT**  
 PAULINA FALTEISEK, PE  
 (608) 588-7484

**BRIDGE OFFICE CONTACT**  
 AARON BONK, PE  
 (608) 261-0261

NO.	DATE	REVISION	BY

**JEWELL** 560 SUNRISE DRIVE  
 SPRING GREEN, WI 53588  
 OFFICE: (608) 588-7484  
 www.jewellassoc.com

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

ACCEPTED *[Signature]* SDR **11/15/21**  
 CHIEF STRUCTURES DESIGN ENGINEER DATE

**STRUCTURE B-23-179**  
 CTH Y OVER JORDAN CREEK

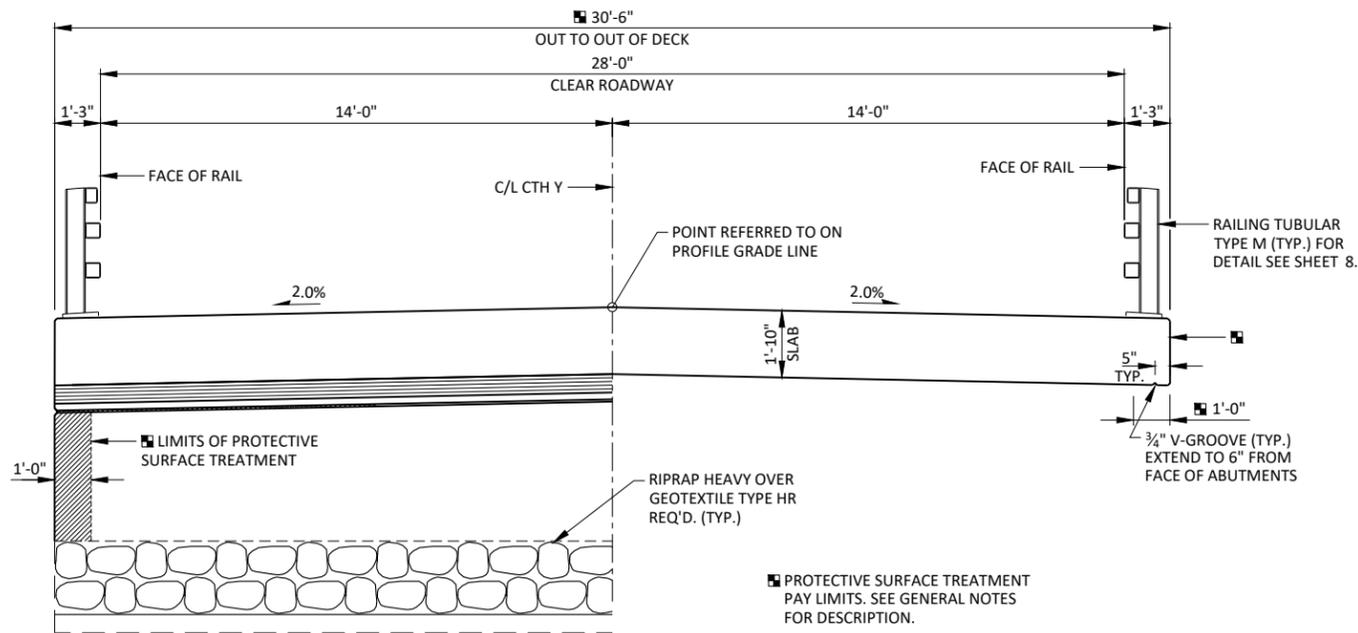
COUNTY GREEN TOWN/VILLAGE JORDAN

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY PMF DESIGN CK'D. PTB DRAWN BY PMF PLANS CK'D. PTB

**GENERAL PLAN**

SHEET 1 OF 8

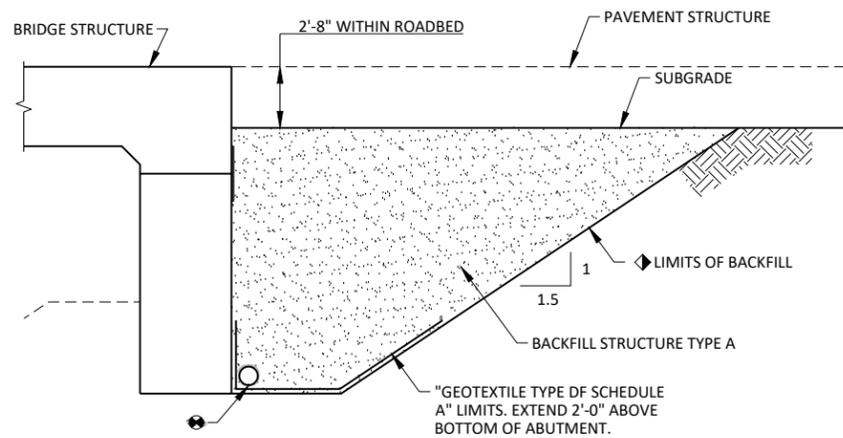


AT ABUTMENT

IN SPAN

**PROPOSED CROSS-SECTION THROUGH ROADWAY**

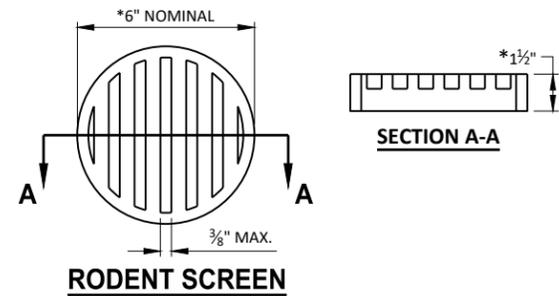
LOOKING EAST



**BACKFILL STRUCTURE DETAIL**

(TYPICAL AT ABUTMENTS. ABUTMENT BODY SHOWN - WING WALLS SIMILAR)

- ◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-23-179". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."



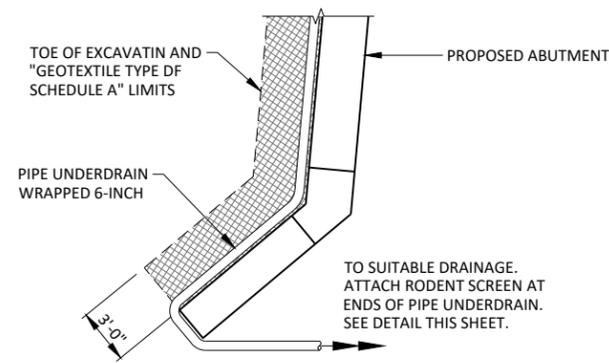
**RODENT SCREEN**

NOTES:  
\* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

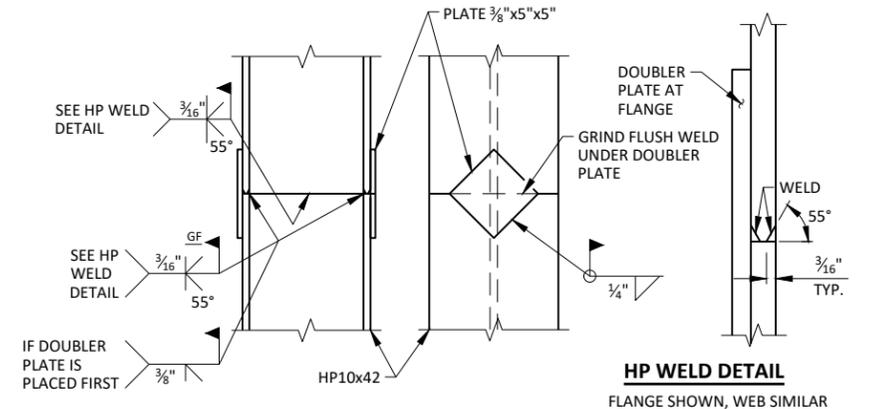
ORIENT SHIELD SO SLOTS ARE VERTICAL.

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

THE RODENT SCREEN 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 SCREEN TO THE EXPOSED ENDS OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



**PIPE UNDERDRAIN DETAIL**



**HP WELD DETAIL**

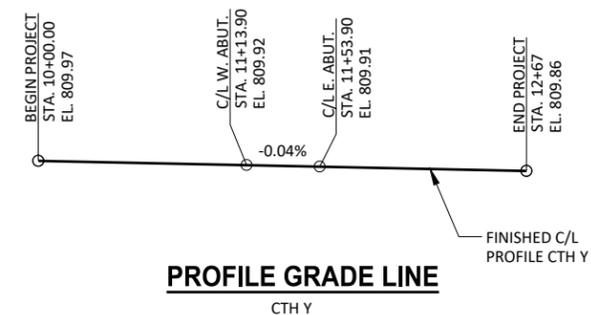
FLANGE SHOWN, WEB SIMILAR

**PILE SPLICE DETAIL**

STEEL "HP" PILE MATERIAL SHALL BE ASTM A 572 GRADE 50.

**TOTAL ESTIMATED QUANTITIES**

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	SUPER	E. ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-23-150	EACH	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-23-179	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	120	--	120	240
502.0100	CONCRETE MASONRY BRIDGES	CY	27.9	93.2	27.9	149
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	200	--	200
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,225	--	2,225	4,450
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,340	15,860	1,340	18,540
513.4061	RAILING TUBULAR TYPE M	LF	--	90	--	90
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	--	6	12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	245	--	245	490
606.0300	RIPRAP HEAVY	CY	180	--	125	305
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	--	75	150
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50	--	50	100
645.0120	GEOTEXTILE TYPE HR	SY	295	--	205	500
SPV.0090.01	FLASHING STAINLESS STEEL	LF	--	75	--	75
NON-BID ITEMS						
	FILLER	SIZE				1/2" & 3/4"
	NAME PLATE					



**PROFILE GRADE LINE**

CTH Y

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-23-179</b>			
DRAWN BY		PMF	PLANS CK'D. PTB
<b>CROSS SECTION AND QUANTITIES</b>		SHEET 2 OF 8	

**SOIL BORINGS**

BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	10/19/20	147,175.5	573,112.8
2	10/19/20	147,191.2	573,152.3

BORINGS & REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC. 5620 WOODLAND DRIVE WAUNAKEE, WI 53597

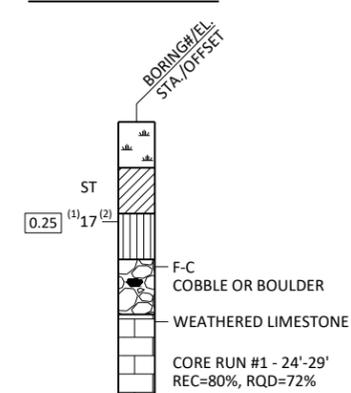
STATE PROJECT NUMBER

**5962-00-70**

**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 (TSP)  
 (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 ELEVATIONS**

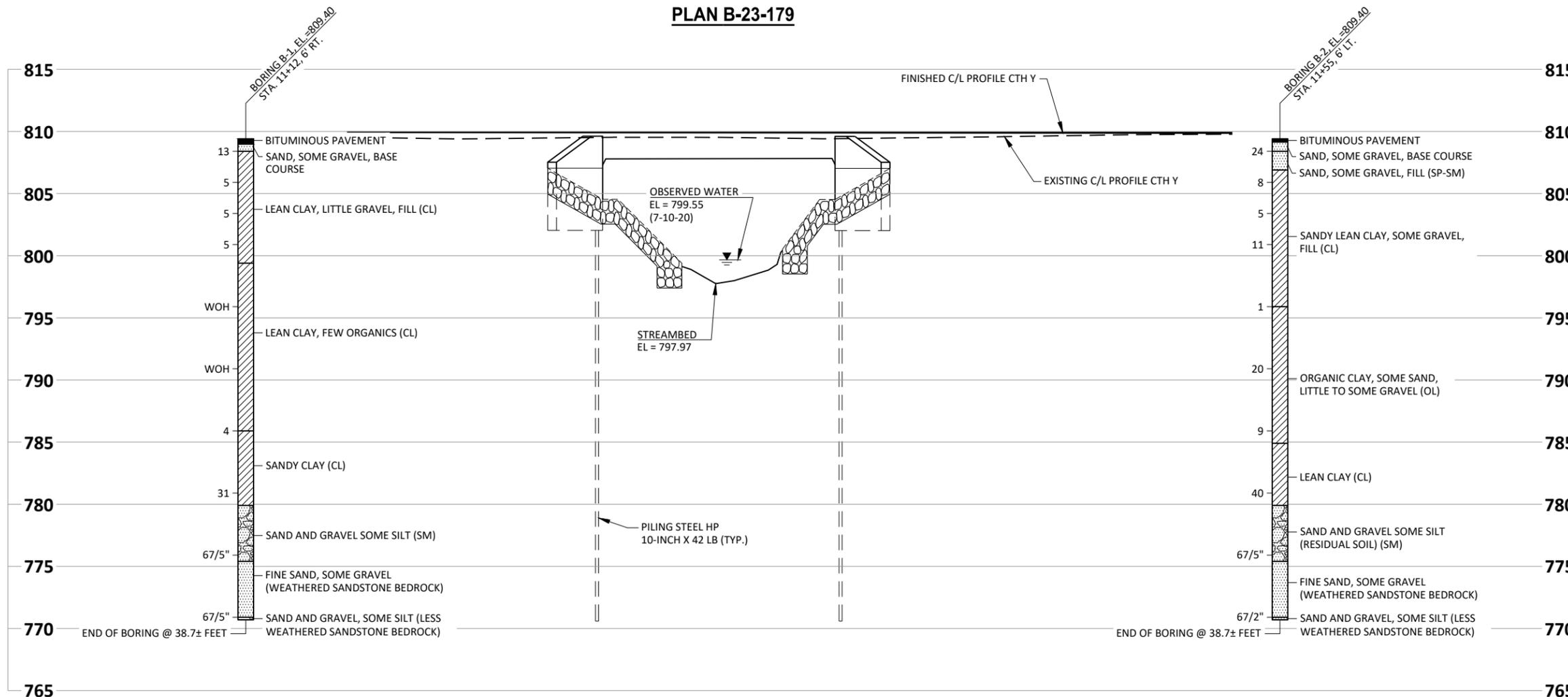
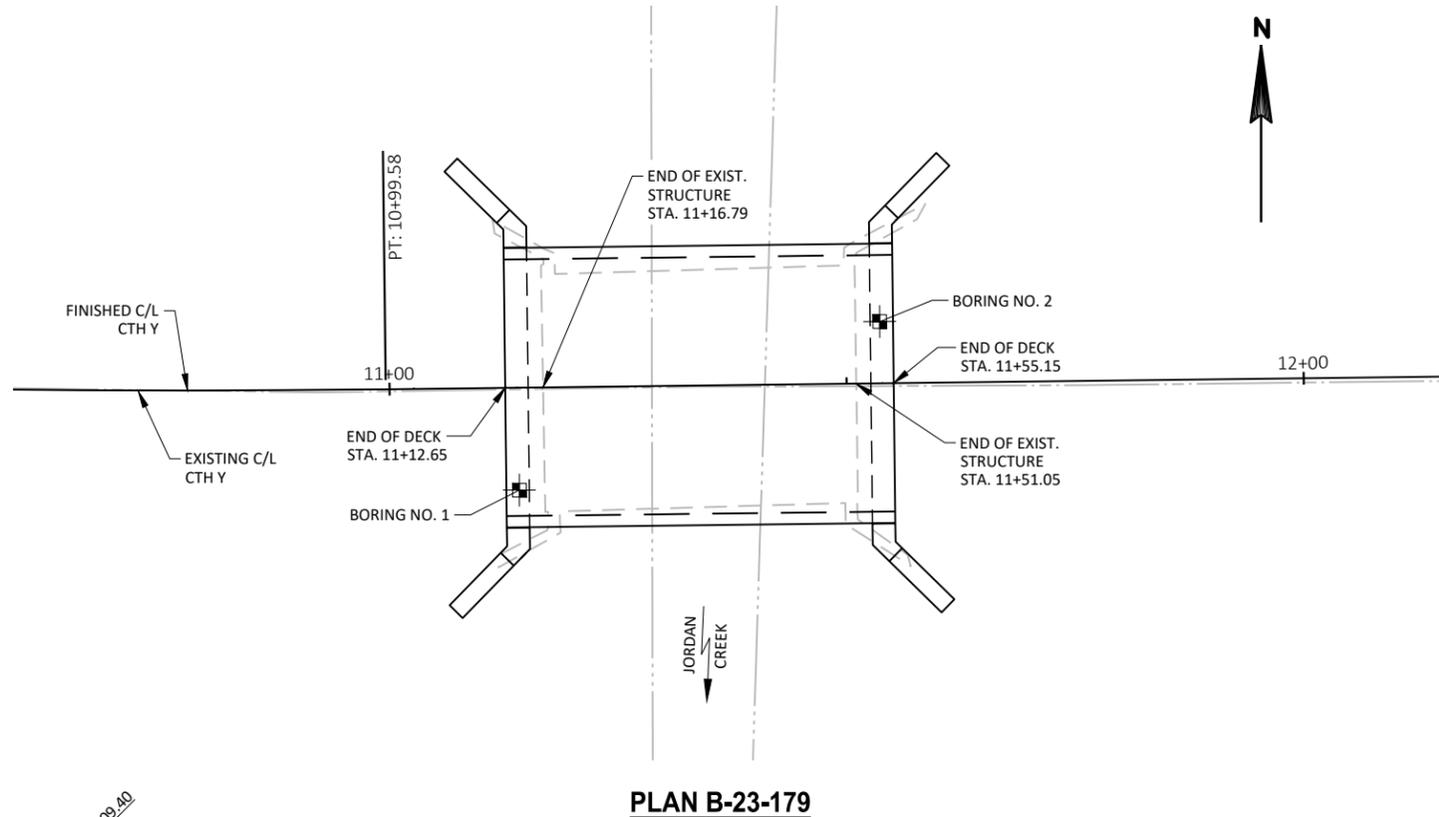


**ABBREVIATIONS**

F-FINE M-MEDIUM C-COURSE 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
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-23-179</b>			
DRAWN BY: PMF		PLANS CK'D: PTB	
<b>SUBSURFACE EXPLORATION</b>		SHEET 3 OF 8	

**NOTES**

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 5 FOR BILL OF BARS.

SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING NEGLLECTING THE KEYED CONSTRUCTION JOINT.

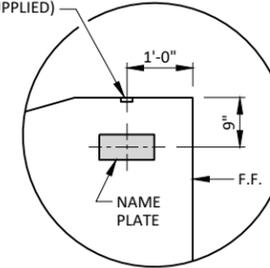
DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SPACE REINFORCEMENT TO MISS PILING

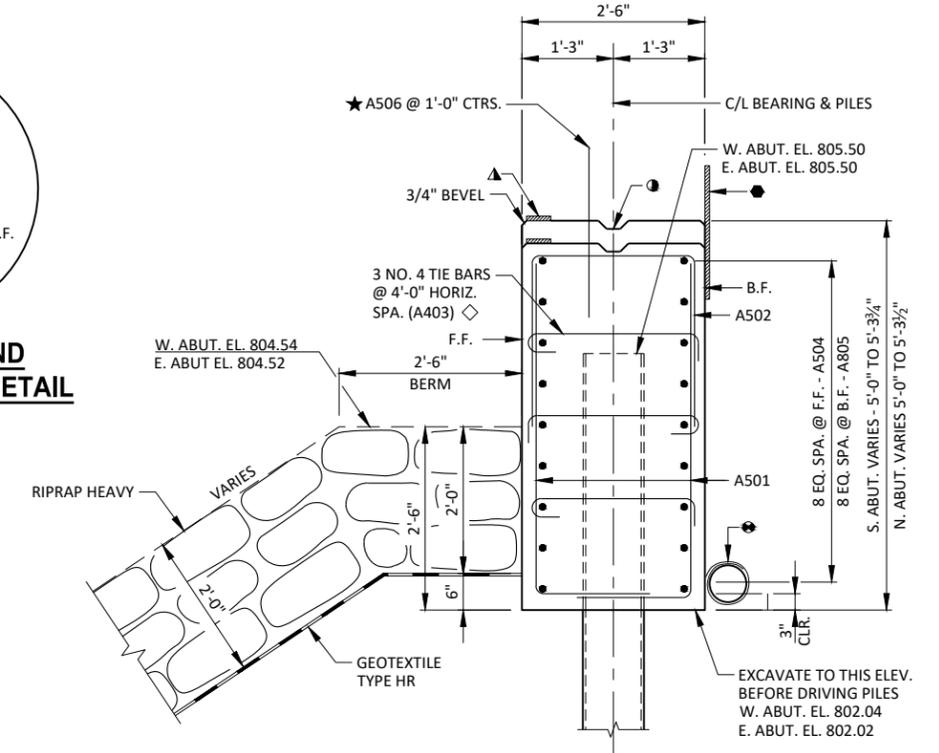
F.F. - FRONT FACE

B.F. - BACK FACE

BENCHMARK CAP  
(WHEN SUPPLIED)

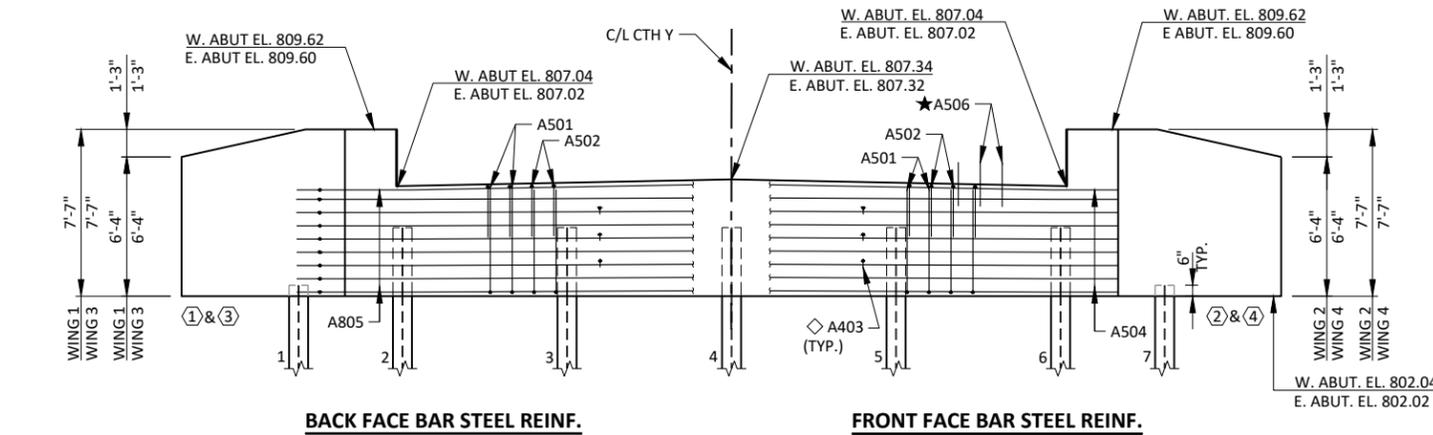


**NAME PLATE AND BENCHMARK CAP DETAIL**  
(WING 1 ONLY)

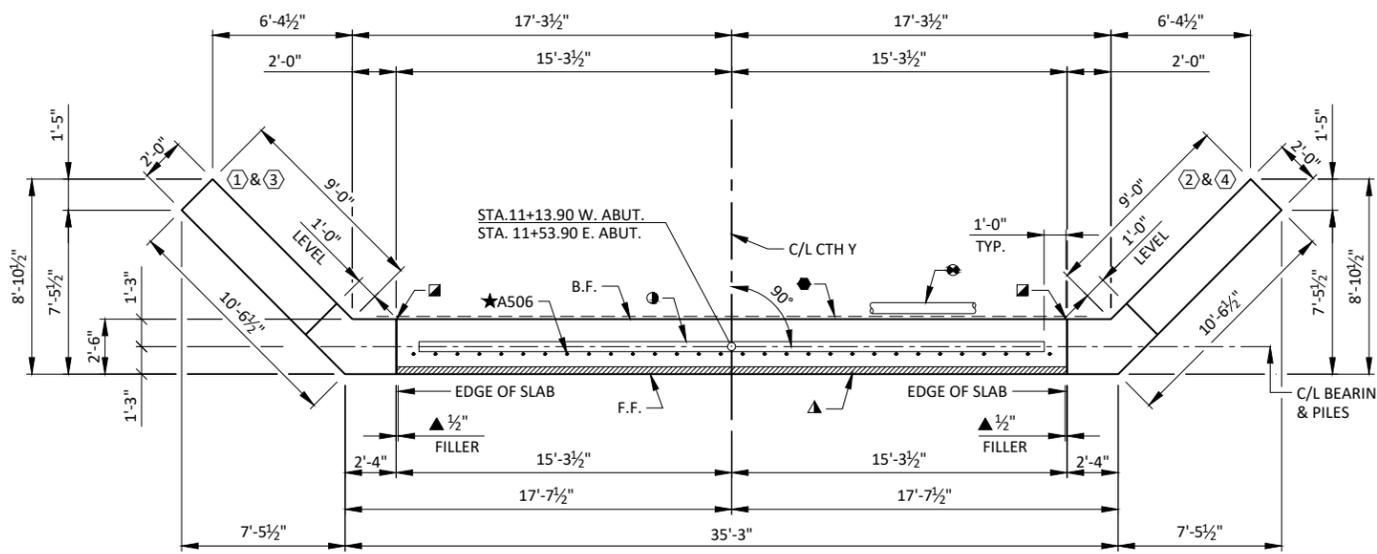


ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH x 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 35 FT PILE LENGTHS AT EACH ABUTMENT.

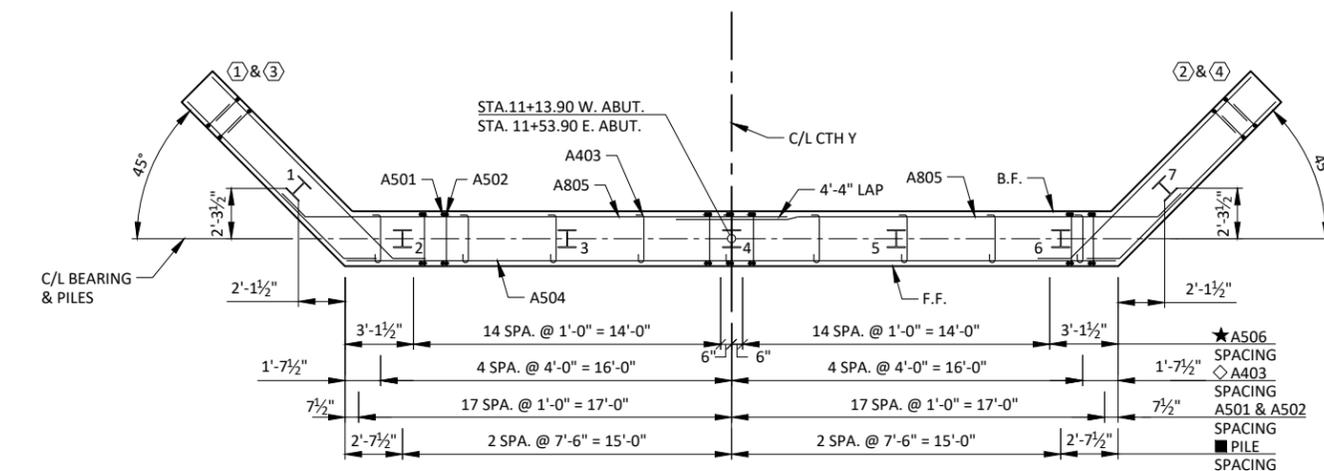
**TYPICAL SECTION THROUGH ABUTMENT BODY**



**ELEVATION**  
(WEST ABUTMENT LOOKING WEST)  
(EAST ABUTMENT LOOKING EAST)



**PLAN**

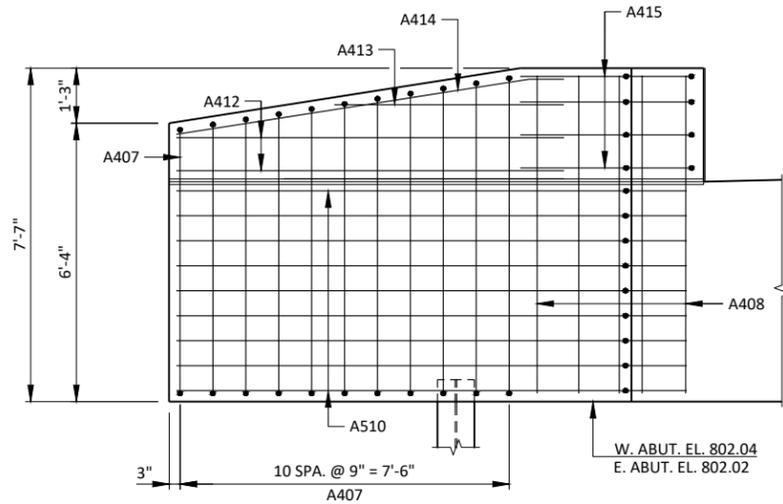


**LAYOUT**

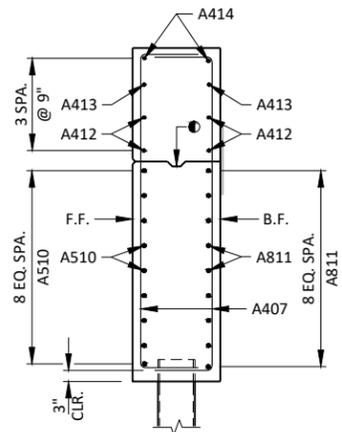
**LEGEND**

- ◆ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE)
- ▲ 3/4" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGN. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."
- ◇ ALTERNATE THE POSITION OF THE 90° AND THE 180° BENDS AT EACH VERTICAL LAYER OF TIES.

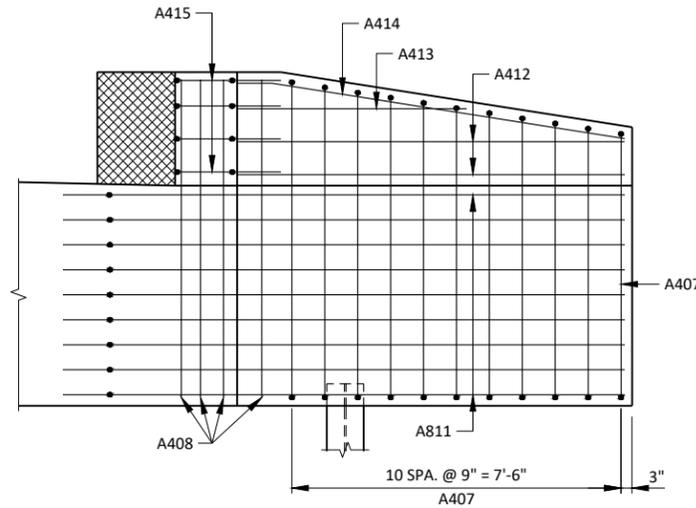
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-23-179</b>			
DRAWN BY: PMF		PLANS CKD: PTB	
<b>ABUTMENTS</b>			SHEET 4 OF 8



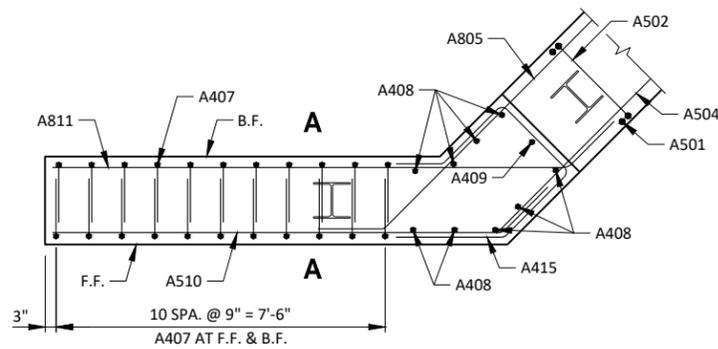
F.F. ELEVATION - WING 1



SECTION A-A



B.F. ELEVATION - WING 1



PLAN VIEW - WING 1

**LEGEND**

OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6, 3/4" V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

**NOTES**

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

**BILL OF BARS**  
**TWO ABUTMENTS SHOWN**

**2,680 LB (COATED)**  
**4,450 LB (UNCOATED)**

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	140	6-1	X			BODY - VERT. - F.F. & B.F.
A502	70	7-3	X			BODY - VERT. - TOP
A403	54	3-0	X			TIE BARS
A504	18	35-1				BODY - HORIZ. - F.F.
A805	36	23-6	X			BODY - HORIZ. - B.F.
A506	60	2-0		X		BODY - VERT. - DOWELS
A407	88	9-0	X	X	*	WINGS - VERT. - F.F. & B.F.
A408	36	7-2		X		WINGS - VERT.
A409	4	2-11		X		WINGS - VERT. - TOP
A510	36	11-9	X	X		WINGS - HORIZ. - F.F.
A811	36	13-5	X	X		WINGS - HORIZ. - B.F.
A412	16	8-10		X		WINGS - HORIZ. - F.F. & B.F.
A413	8	5-3		X		WINGS - HORIZ. - F.F. & B.F.
A414	8	8-11	X	X		WINGS - HORIZ. - F.F. & B.F. - TOP
A415	16	9-4	X	X		WINGS - HORIZ. - TOP

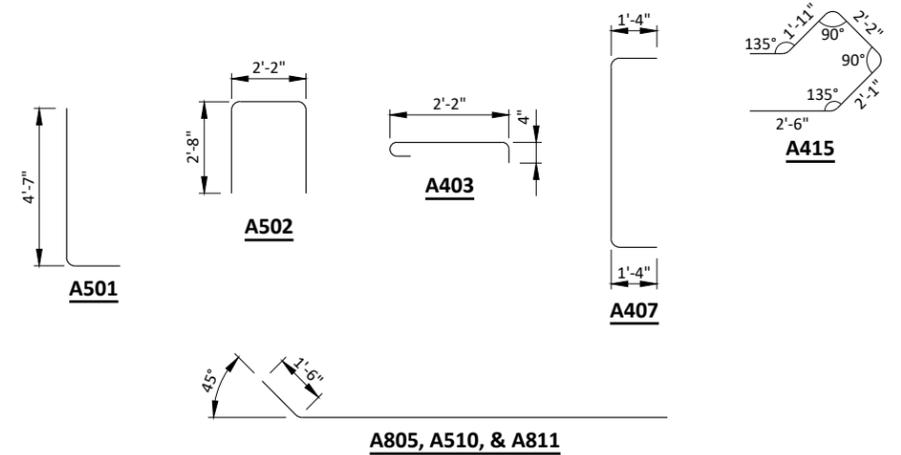
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

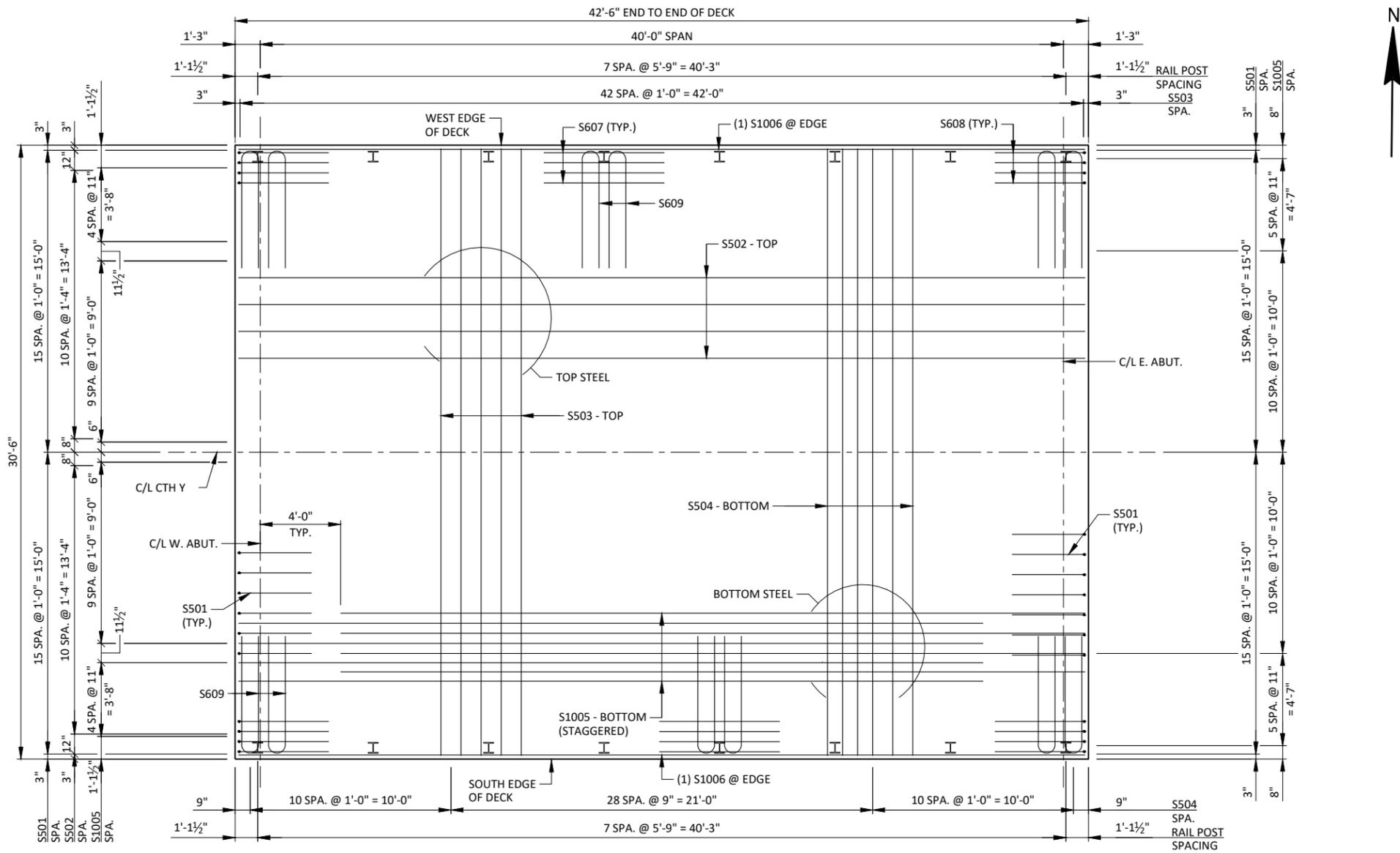
\* LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

**BAR SERIES TABLE**

BAR MARK	NO. REQ'D.	LENGTH
A407	8 SERIES OF 11	9-7 TO 8-5



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-23-179</b>			
DRAWN BY: PMF		PLANS CK'D: PTB	
<b>ABUTMENT DETAILS</b>			SHEET 5 OF 8



**NOTES**

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

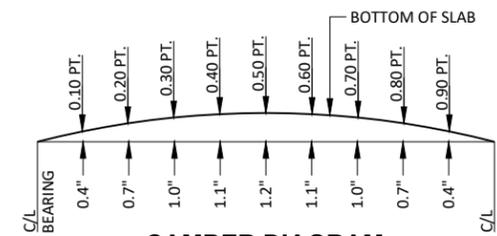
**SURVEY TOP OF DECK ELEVATIONS**

	W. ABUT.	0.50 PT.	E. ABUT.
NORTH EDGE OF DECK			
CENTER LINE			
SOUTH EDGE OF DECK			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG THE EDGE OF DECK AND CENTER LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

**TOP OF DECK ELEVATIONS**

	C/L S. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L N. ABUT.
N. EDGE	809.62	809.62	809.62	809.61	809.61	809.61	809.61	809.61	809.61	809.60	809.60
C/L	809.92	809.92	809.92	809.92	809.92	809.91	809.91	809.91	809.91	809.91	809.91
S. EDGE	809.62	809.62	809.62	809.61	809.61	809.61	809.61	809.61	809.61	809.60	809.60



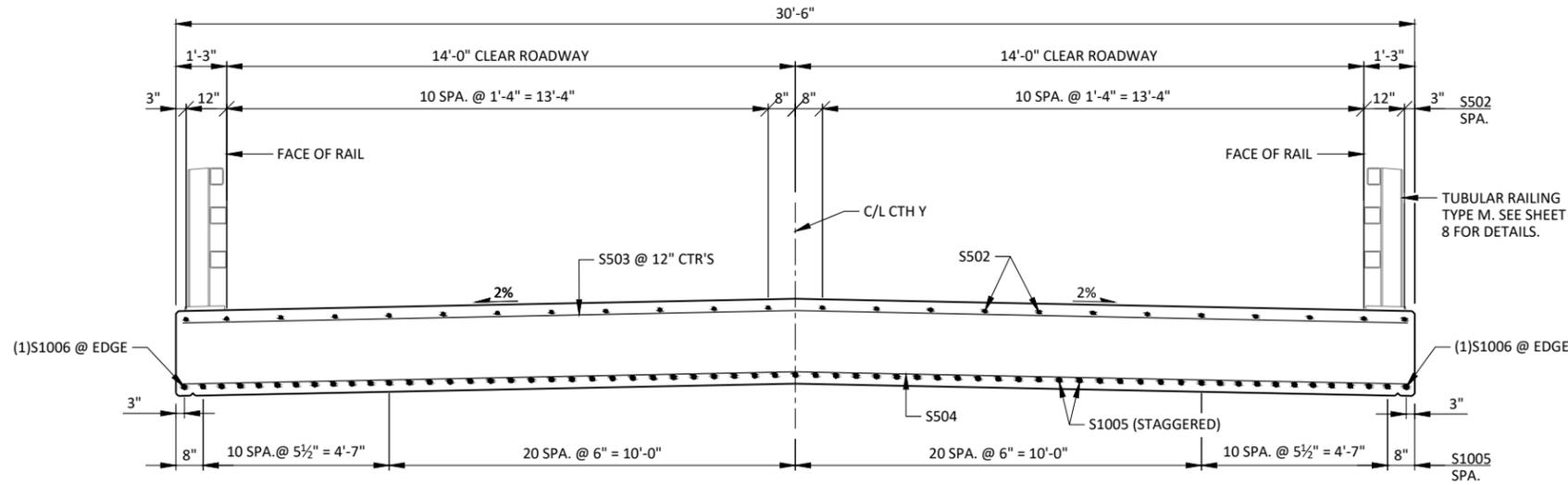
**CAMBER DIAGRAM**

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPAN AS SHOWN TO PROVIDE FOR THEORETICAL DEADLOAD DEFLECTION AND FUTURE PLASTIC FLOW. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:

- TOP OF SLAB ELEVATION AT FINAL GRADE
- SLAB THICKNESS
- +CAMBER
- +FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
- =TOP OF SLAB FALSEWORK ELEVATION.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-23-179</b>			
DRAWN BY: PMF		PLANS CK'D: PTB	
<b>SUPERSTRUCTURE</b>			SHEET 6 OF 8



**CROSS SECTION THROUGH ROADWAY**

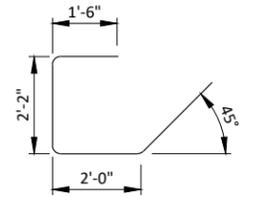
**BILL OF BARS  
SUPERSTRUCTURE 15,860 LB (COATED)**

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	62	7-9	X	X	ENDS OF DECK
S502	24	42-2		X	SLAB - TOP - LONGIT.
S503	49	30-2		X	SLAB - TOP - TRANS. & AT ABUT.
S504	49	30-2		X	SLAB - BOTTOM - TRANS.
S1005	61	37-1		X	SLAB - BOTTOM - LONGIT.
S1006	2	42-2		X	SLAB - BOTTOM - LONGIT. - EDGES
S607	48	6-0		X	RAIL POSTS - INTERIOR
S608	16	4-8	X	X	RAIL POSTS - CORNERS
S609	32	12-0	X	X	RAIL POSTS

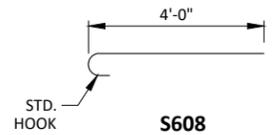
NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

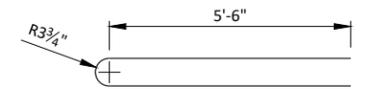
SOME BARS HAVE BEEN OMITTED FOR CLARITY.



**S501**



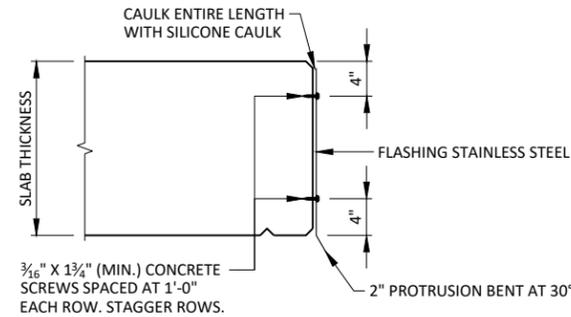
**S608**



**S609**

**LEGEND**

- 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ 3/4" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- \* DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- \*\* SEE SHEET 4 FOR PLACEMENT OF A506 BARS.



**STAINLESS STEEL FLASHING DETAIL**

**NOTES:**

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK, 3/16" CONCRETE SCREWS, AND CLEANING THE EDGE OF DECK PRIOR TO ATTACHMENT OF THE FLASHING.

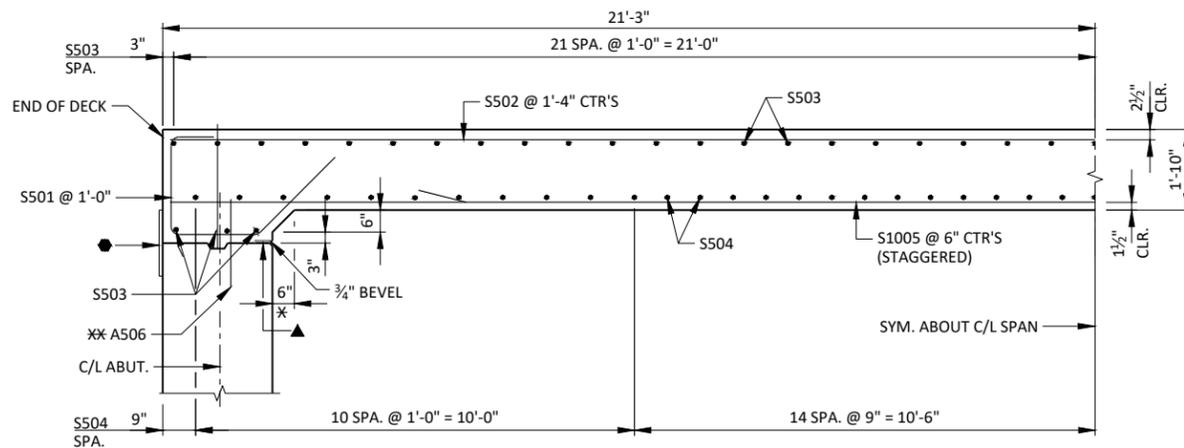
FLASHING TO BE INSTALLED AFTER APPLICATION OF PROTECTIVE SURFACE TREATMENT.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO F.F. OF ABUTMENT.

TOP OF FLASHING TO BEGIN APPROXIMATELY 1" BELOW TOP OF SLAB SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.



**PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY**

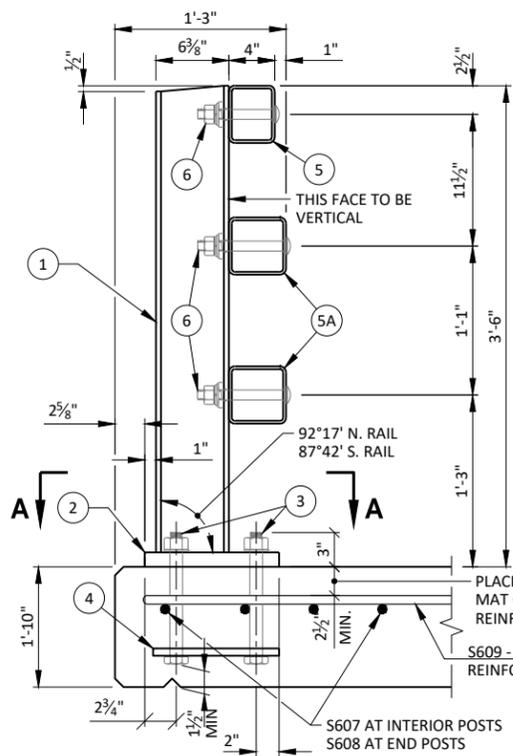
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-23-179</b>			
DRAWN BY		PMF	PLANS CK'D. PTB
<b>SUPERSTRUCTURE DETAILS</b>			SHEET 7 OF 8

**LEGEND**

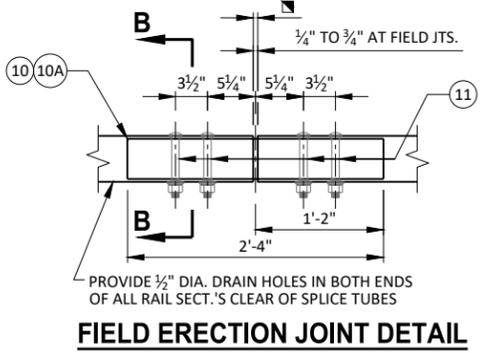
- ① W6x25 WITH 1½" x 1½" HORIZONTAL SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1¼"x11¼"x1'-8" WITH 1¼" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ ASTM A449 - 1½" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS.
- ④ ¾"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1¼" DIA. HOLES FOR ANCHOR BOLTS NO. 3.
- ⑤ TSS 5x4x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑤A TSS 5x5x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑥ 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ¾"x1½"x1½" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
- ⑦ ½" THK. BACK-UP PLATE WITH 2 - 7/8"x1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- ⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
- ⑨ SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
- ⑩ ¾"x3¾"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- ⑩A ¾"x2½"x2'-4" PLATE USED IN NO. 5, ¾"x3¾"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- ⑪ 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1½"x1½" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 1¾"x2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 1¼" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
- ⑫ 7/8" DIA. BY 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
- ⑬ ¾"x8"x1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- ⑭ 7/8" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D).
- ⑮ 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

**GENERAL NOTES**

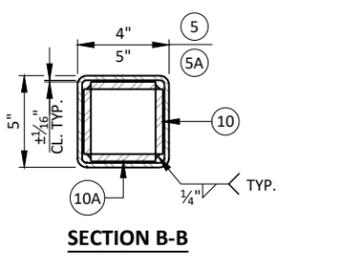
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY=50 KSI. ANCHOR PLATES AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ¼ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).



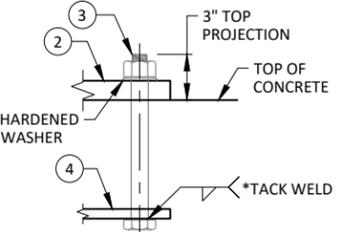
**SECTION THROUGH RAILING ON DECK**



**FIELD ERECTION JOINT DETAIL**

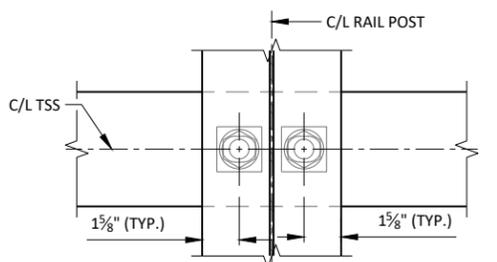


**SECTION B-B**

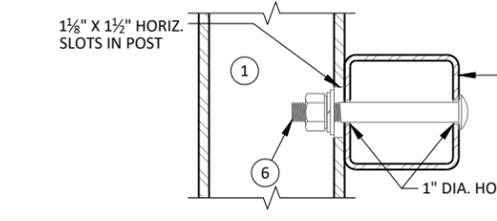


**ANCHOR BOLTS**

\* ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.



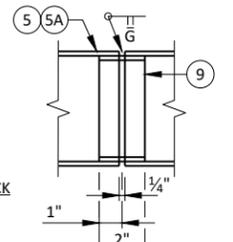
**SECTION THROUGH POST WEB**



**SECTION THROUGH RAIL**

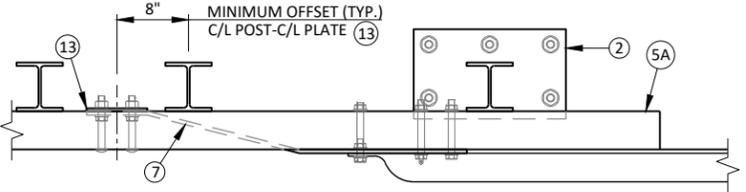
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

**TYPICAL RAIL TO POST CONNECTIONS**



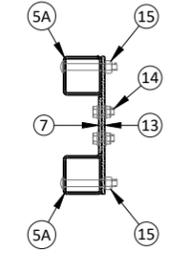
**SHOP RAIL SPLICE DETAIL**

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

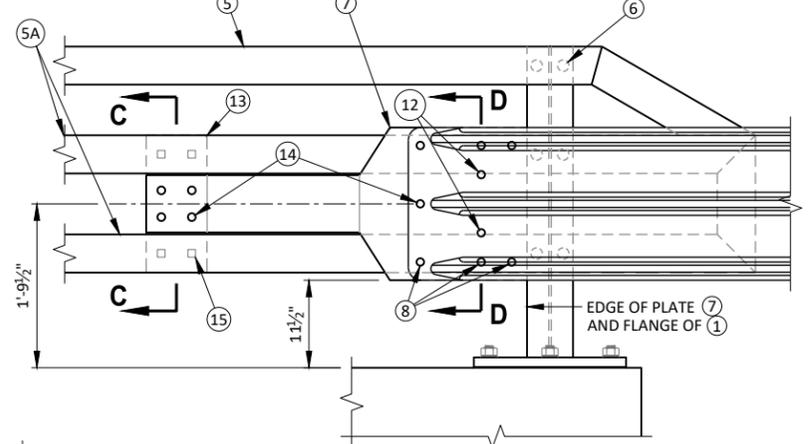


**TOP VIEW AT END POST**

(THRIE BEAM RAIL ATTACHMENT)

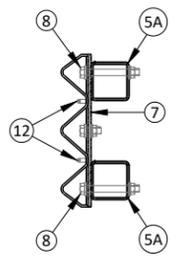


**SECTION C-C**

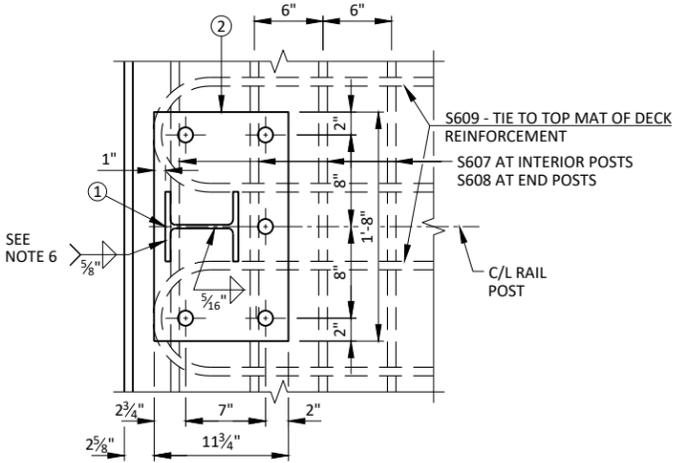


**DETAIL AT END POST**

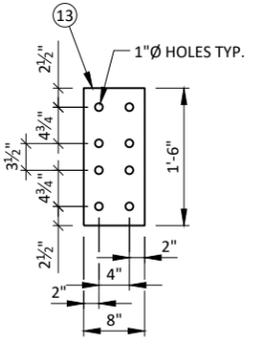
(THRIE BEAM RAIL ATTACHMENT)



**SECTION D-D**

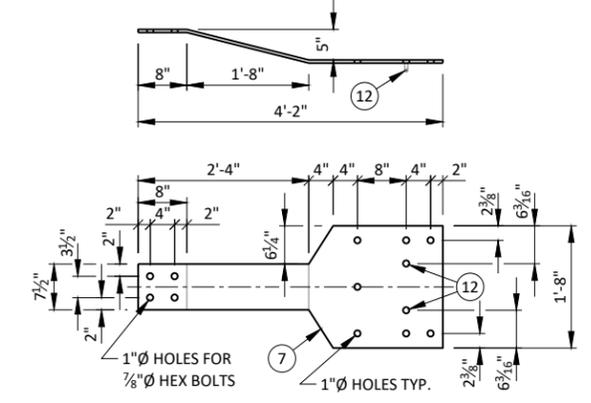


**SECTION A-A**



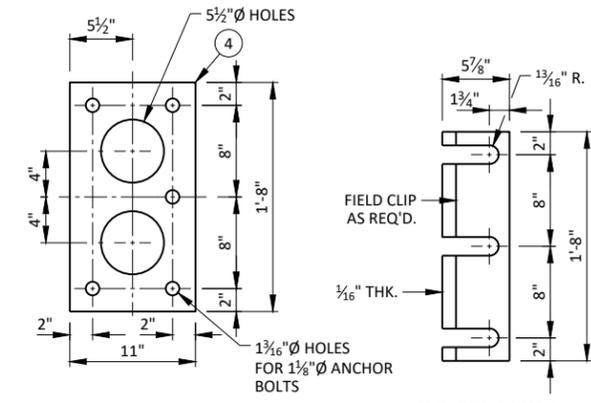
**ANCHOR PLATE**

AT BEAM GUARD ATTACHMENT



**BACK-UP PLATE DETAIL**

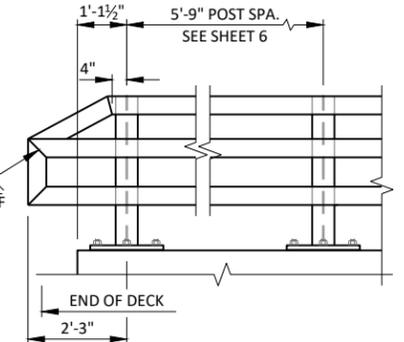
AT BEAM GUARD ATTACHMENT



**ANCHOR PLATE**

AT RAIL TO DECK CONNECTION

**POST SHIM DETAIL**



**PART ELEVATION OF RAILING**

8

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-23-179</b>			
DRAWN BY		PMF	PLANS CK'D. PTB
<b>TUBULAR STEEL RAILING TYPE M</b>			SHEET 8 OF 8

EARTHWORK-CTH Y

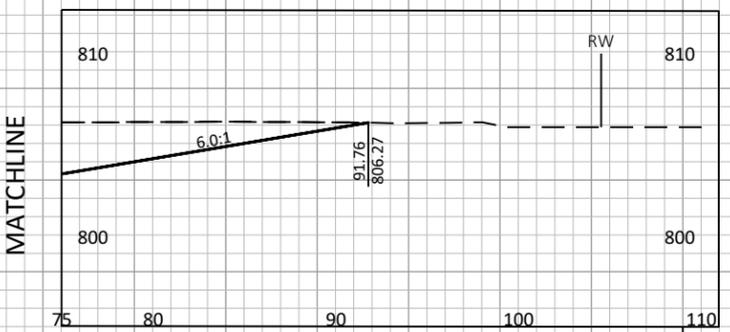
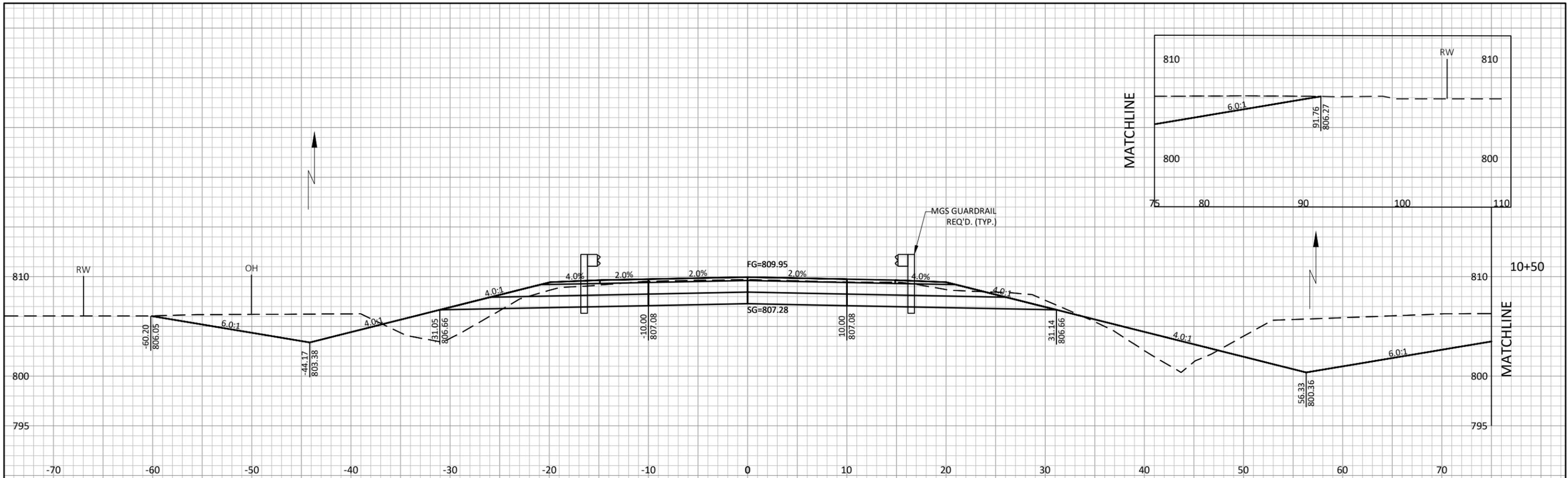
STATION	AREA (SF)		INCREMENTAL VOL (CY)			CUMMULATIVE VOLUME (CY)				
	CUT	FILL	CUT NOTE 1	FILL NOTE 2	FILL (25%) NOTE 3	CUT 1.00		FILL (25%)		MASS ORDINATE NOTE 4
						NOTE 1	FILL	NOTE 3	NOTE 4	
9+89	0	0	7	1	2	7	1	2	5	
10+00	34	7	290	45	56	297	46	58	239	
10+50	278	42	571	81	101	868	127	159	709	
11+00	332	45	160	22	27	1028	149	186	843	
11+13	332	45	0	0	0	1028	149	186	843	
11+55	238	35	410	59	74	1438	208	260	1179	
12+00	238	35	447	82	102	1885	289	361	1524	
12+50	228	53	138	27	34	2023	316	395	1628	
12+67	151	31	77	14	18	2100	330	413	1688	

COLUMN TOTALS = 2100 330 413 1688

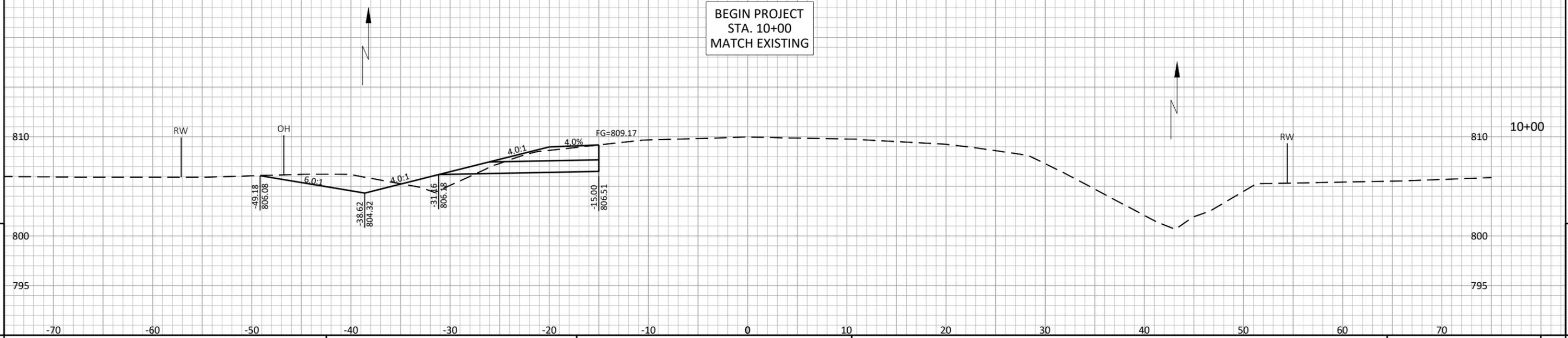
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
3 - FILL 25%	(UNEXPANDED FILL)*1.25
4 - MASS ORDINATE	CUT + ROCK (10%) +REDUCED MARSH (60%) - FILL (25%)

9

9

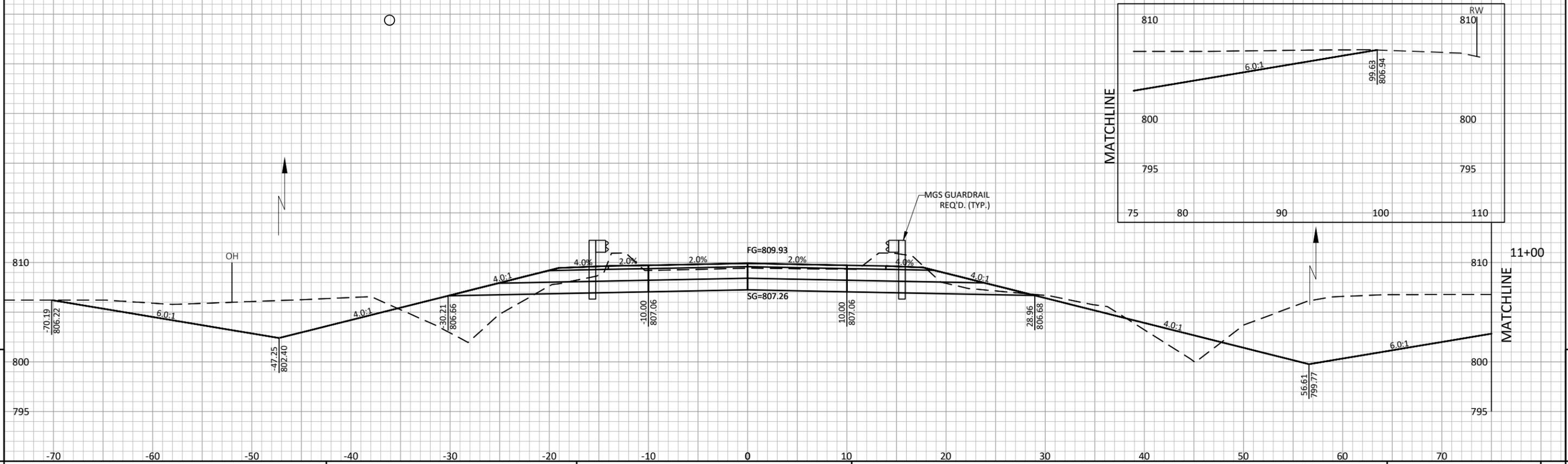
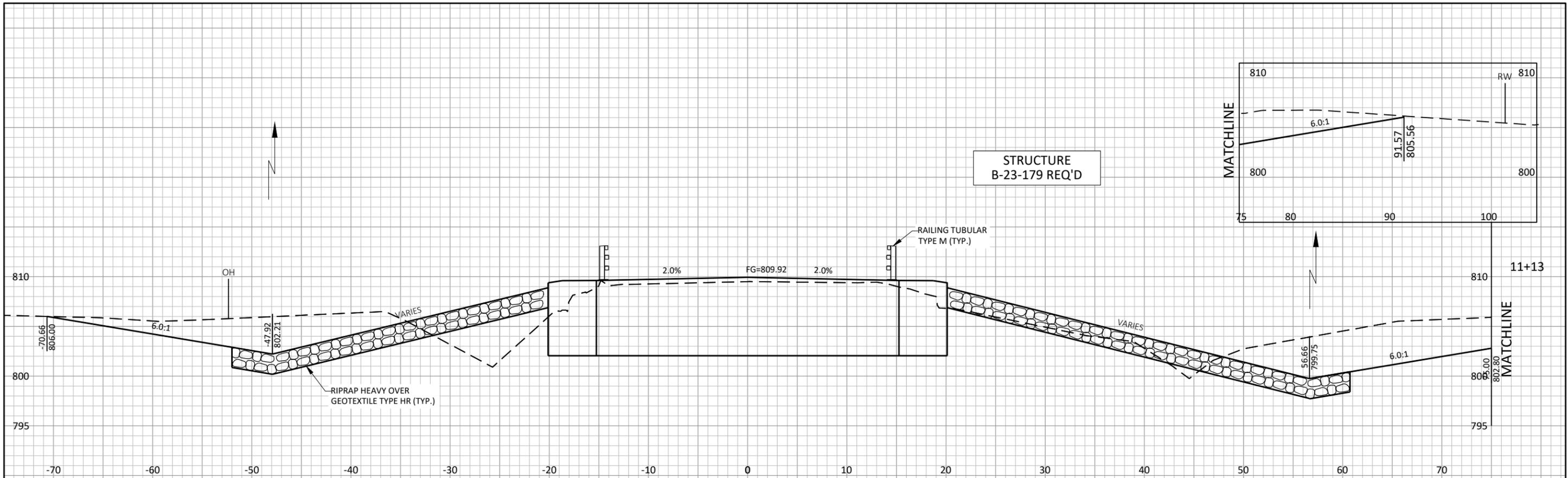


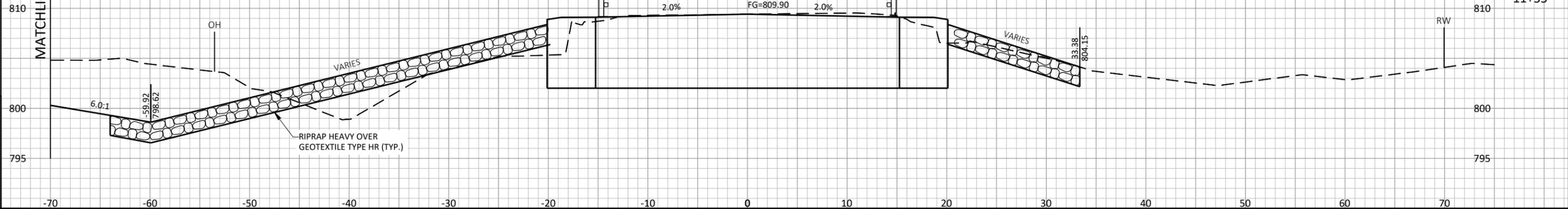
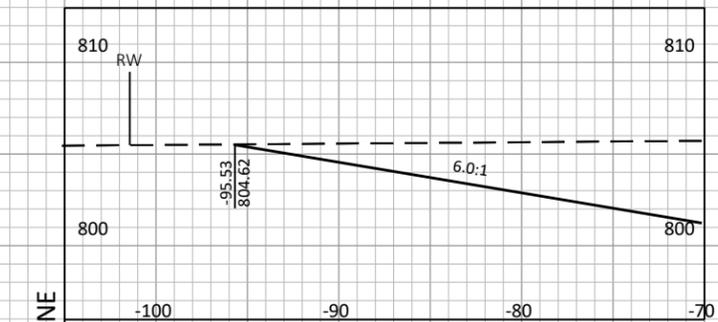
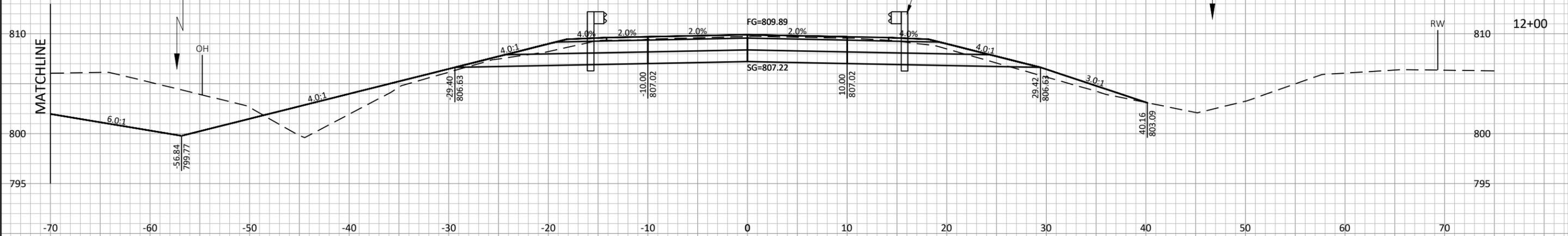
BEGIN PROJECT  
 STA. 10+00  
 MATCH EXISTING



9

9





PROJECT NO: 5962-00-70

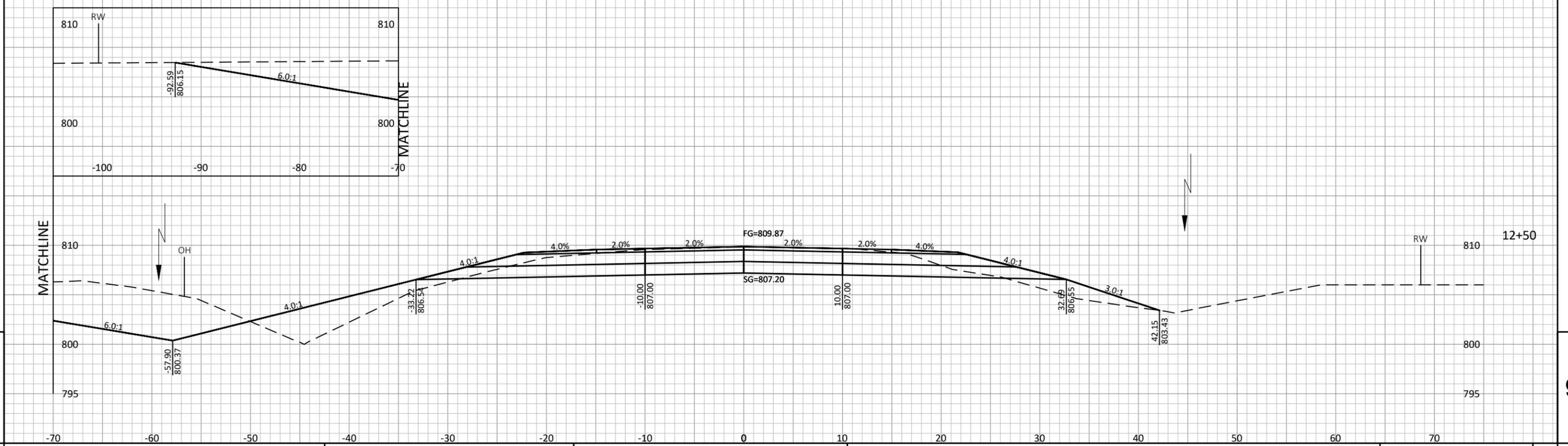
HWY: CTH Y

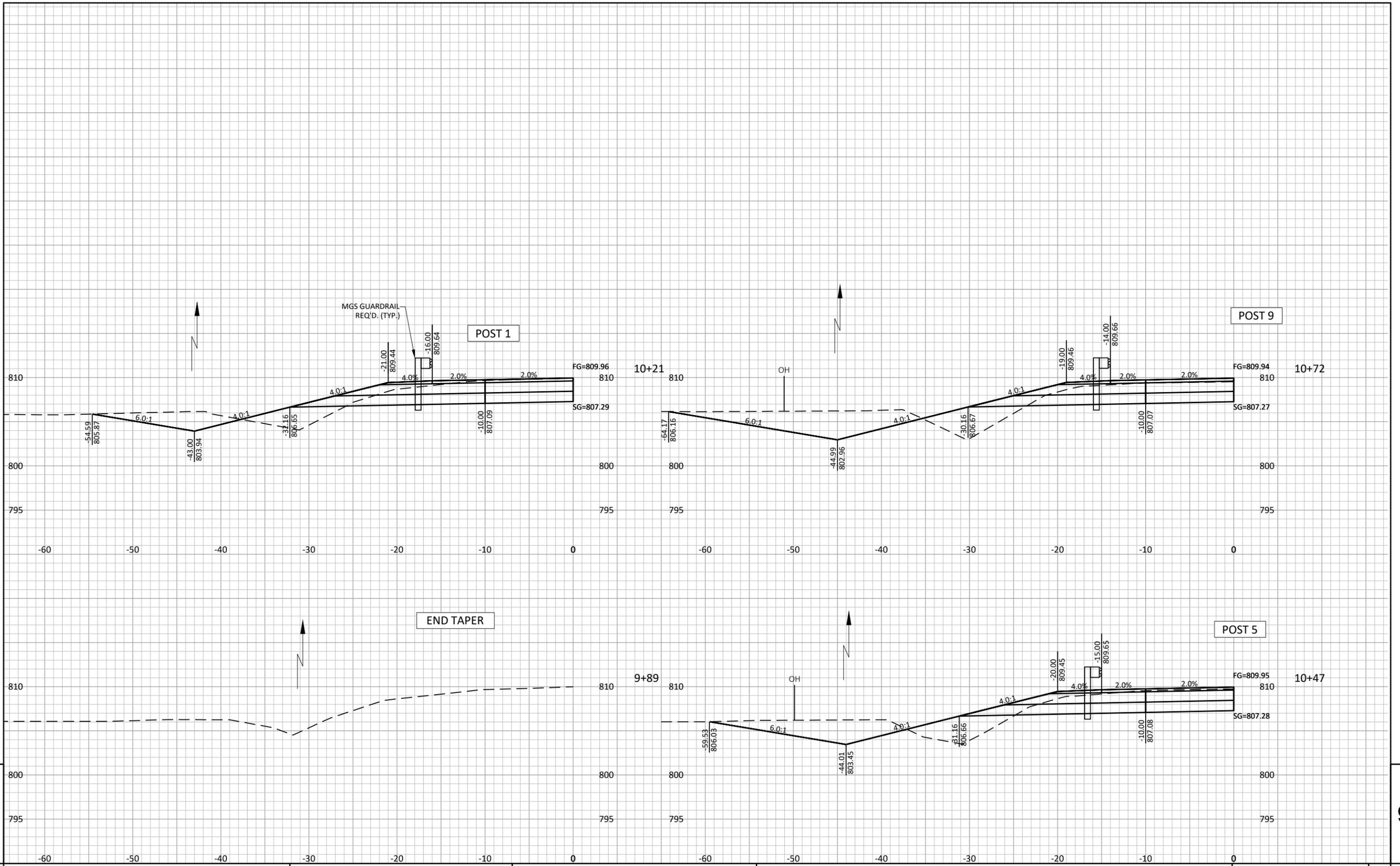
COUNTY: GREEN

CROSS SECTIONS: MAINLINE

SHEET

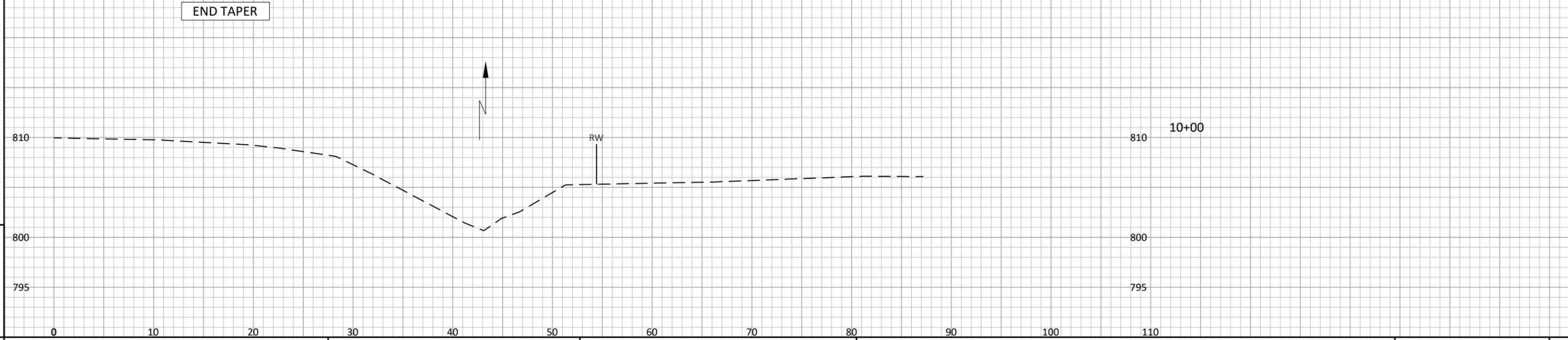
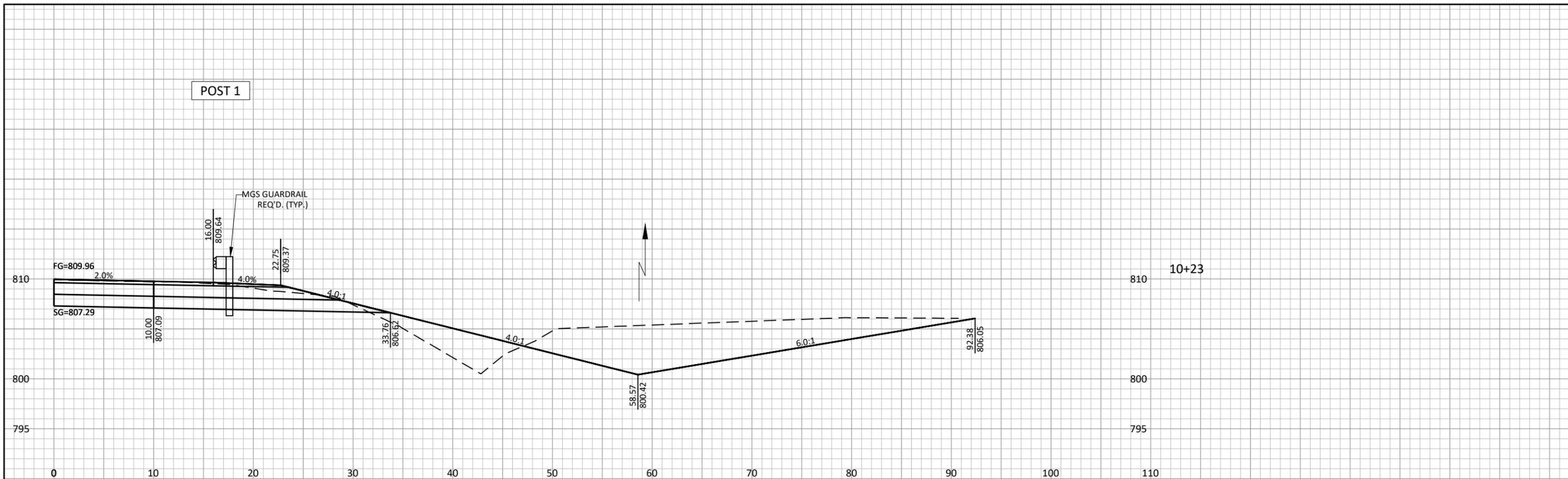
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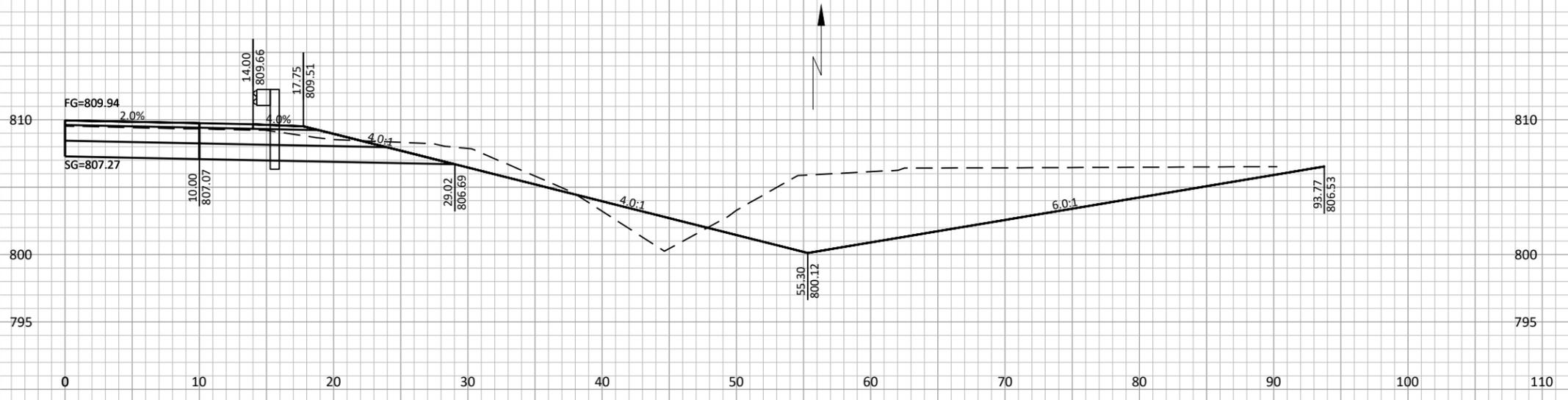
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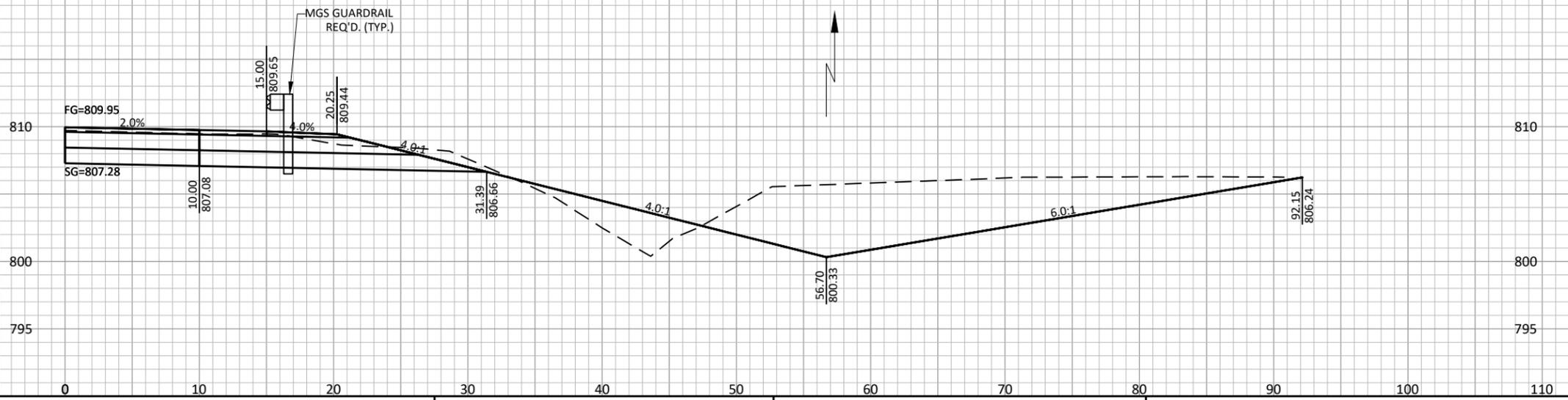
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POST 9



10+72

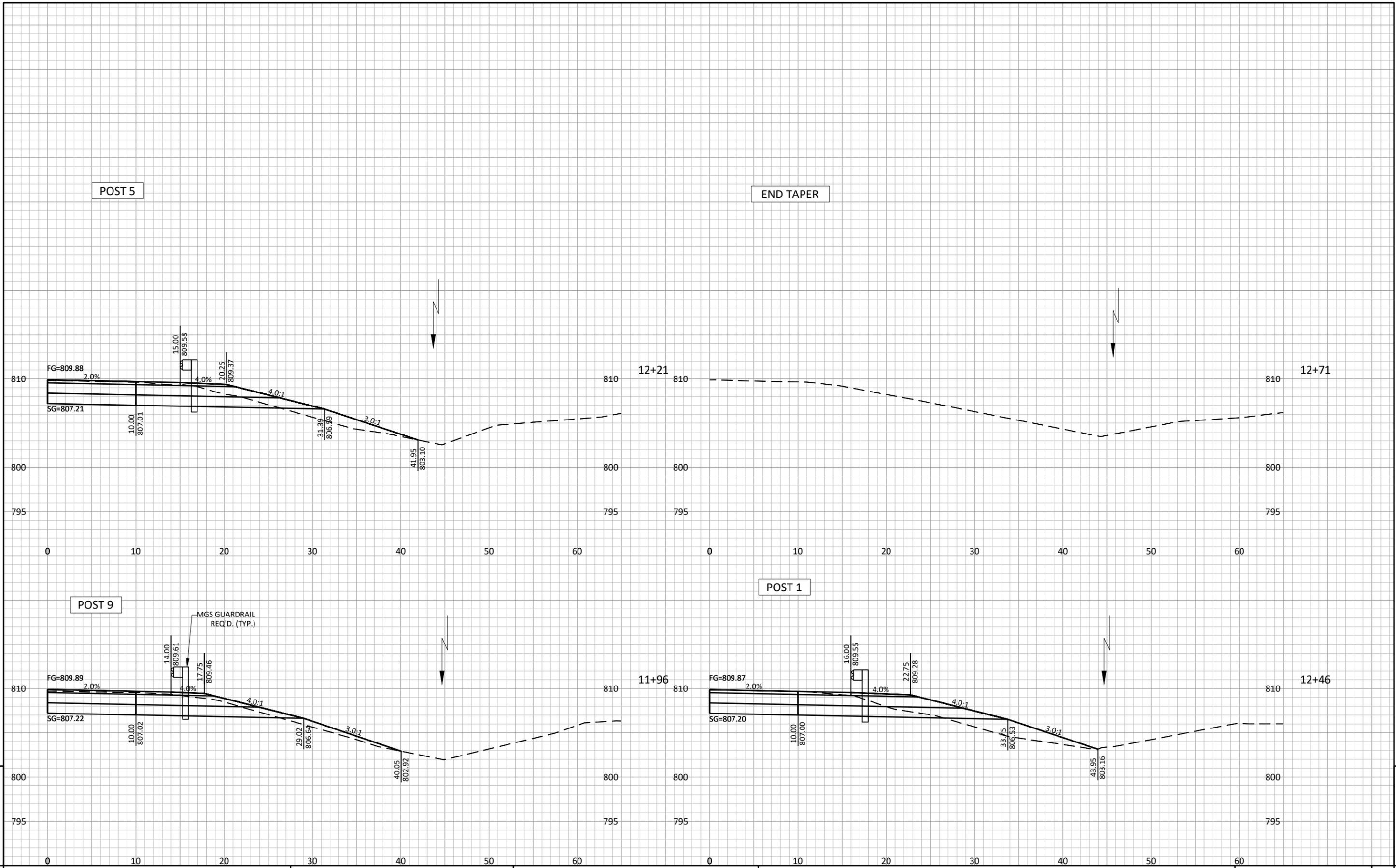
POST 5



10+47

9

9

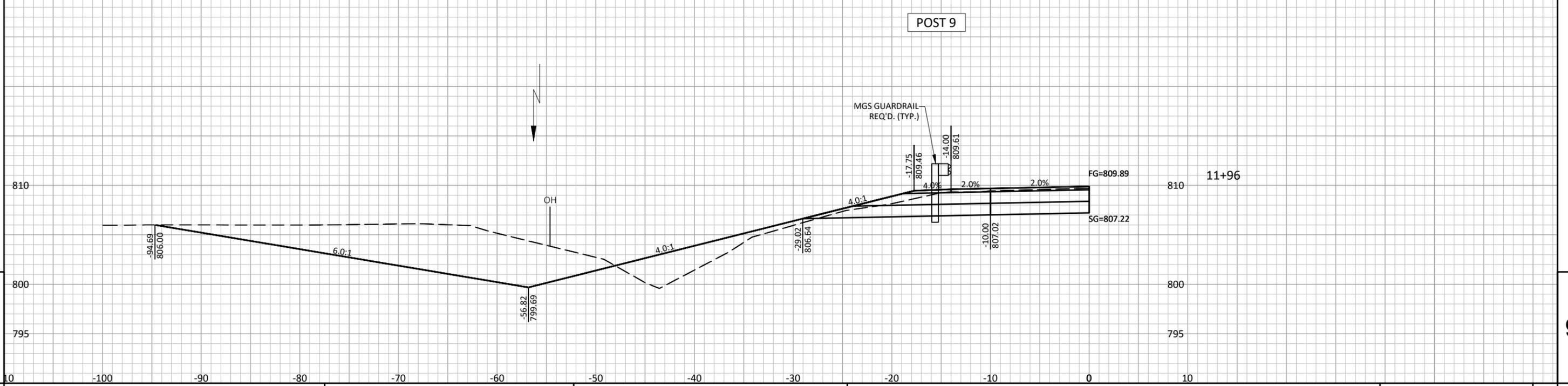
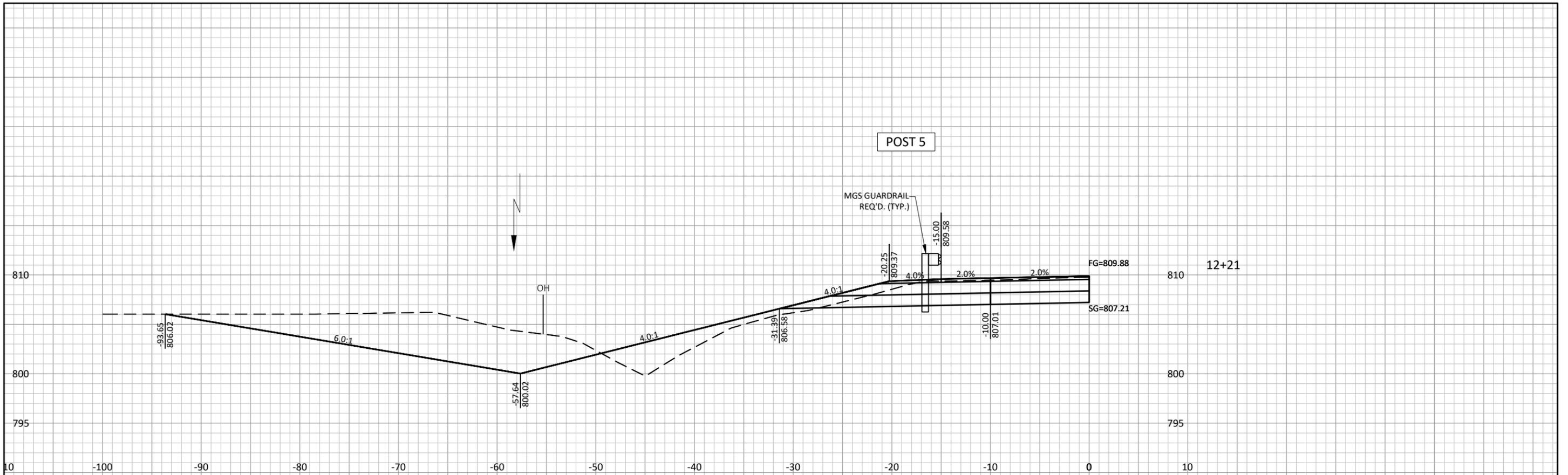


POST 5

END TAPER

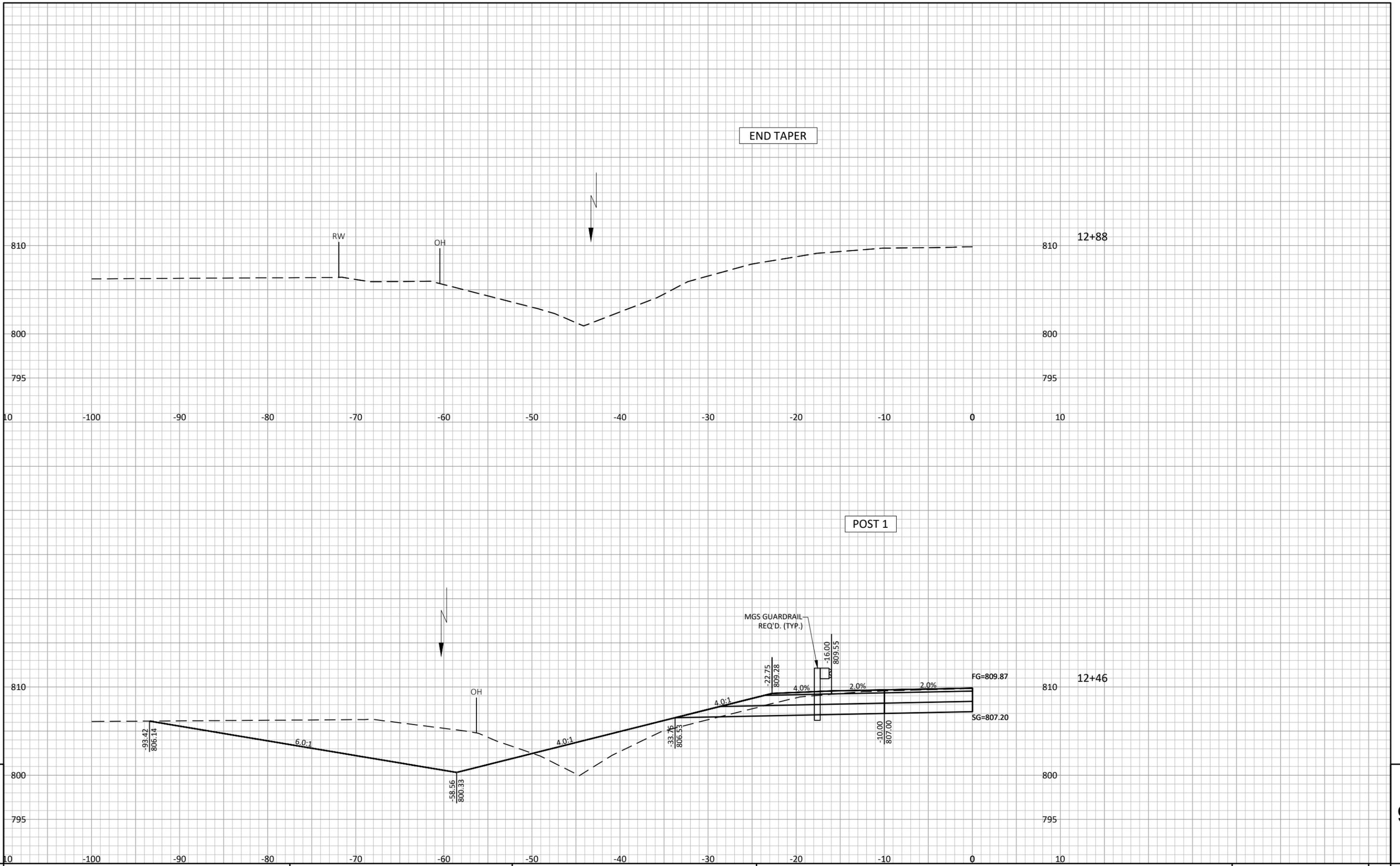
POST 9

POST 1



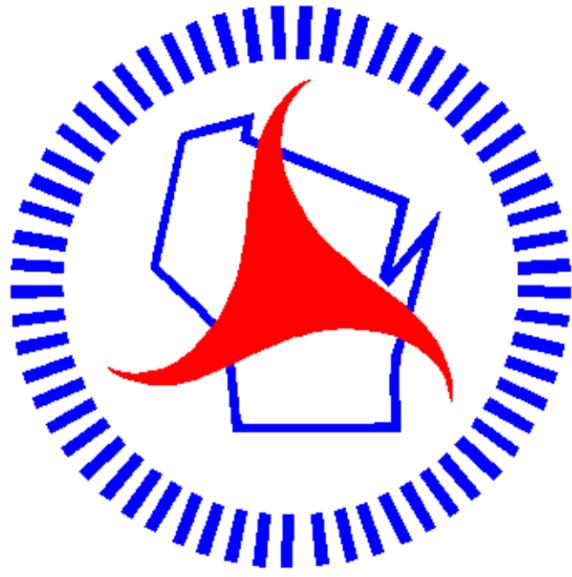
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