

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 = 80

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

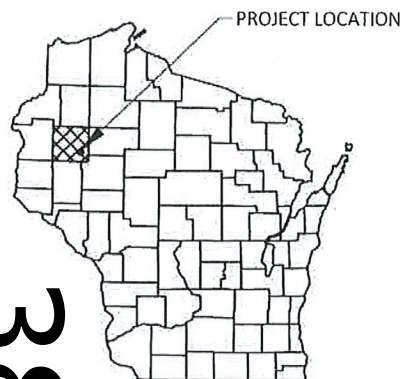
DALLAS - CTH SS

CTH U TO CTH I

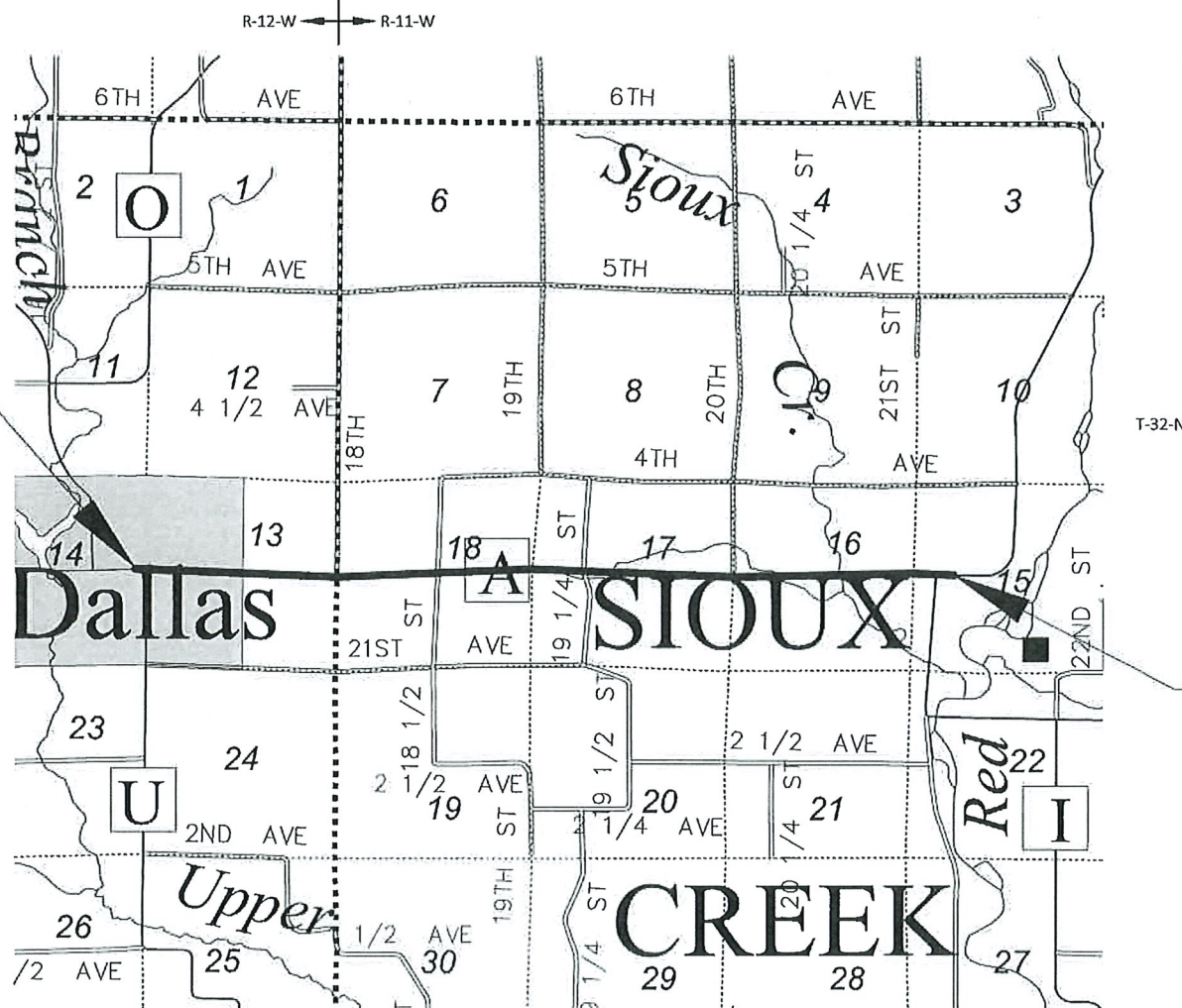
CTH A

BARRON COUNTY

STATE PROJECT		FEDERAL PROJECT	
8833-00-71		PROJECT	CONTRACT
		WISC 2022412	1



STATE PROJECT NUMBER
8833-00-71



BEGIN PROJECT
STA 18+50
Y= 45,911.78
X= 316,042.90

END PROJECT
STA 243+50

LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 4.261 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BARRON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

DESIGN DESIGNATION

A.A.D.T. (2022)	=	1175
A.A.D.T. (2042)	=	1435
D.H.V.	=	N/A
D.D.	=	50/50
T.	=	19.6%
DESIGN SPEED	=	55 MPH
ESALS	=	550,000

CONVENTIONAL SYMBOLS

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

ACCEPTED FOR BARRON COUNTY

Date: 1/13/2022
Kevin L. Meyer
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY



MADISON | EAU CLAIRE | APPLETON | WAUKESHA | TOMAH | WITTENBERG



DATE: 1/13/2022
Kevin L. Meyer
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	CORRE, INC.
Designer	CORRE, INC.
Project Manager	PAULA GROOM, PE
Regional Examiner	TOU YANG, PE
Regional Supervisor	TYLER RONGSTAD, PE

APPROVED FOR THE DEPARTMENT
DATE: 1/19/22
Paula Groom
(Signature)

GENERAL NOTES:

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

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

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

WETLAND LIMITS ARE SHOWN IN AREAS WHERE GRADING WILL OCCUR. OTHER WETLANDS MAY BE PRESENT ALONG THE CORRIDOR.

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

BEARINGS SHOWN ON THE PLAN ARE REFERENCED TO THE EXISTING ROADWAY CENTERLINE AND ARE ASSUMED.

SECTION CORNER MONUMENTS WILL BE IMPACTED BY THE PROJECT AND ARE SHOWN WITHIN THE CONSTRUCTION PLANS. THE BARRON COUNTY SURVEYOR'S OFFICE WILL PERPETUATE AND RE-MONUMENT ANY EFFECTED CORNERS OUTSIDE OF THE PROJECT. CONTACT THE SURVEYOR'S OFFICE PRIOR TO CONSTRUCTION AND AGAIN AT THE COMPLETION OF PAVING OPERATIONS SO THE SURVEYOR'S OFFICE CAN PLAN THEIR RE-MONUMENTATION WORK.



Dial **811** or (800)242-8511

www.DiggersHotline.com

UTILITY CONTACTS

ELECTRICITY

BARRON ELECTRIC COOPERATIVE
JEFF NELSON
1434 N STH 25
BARRON, WI 54812
PHONE: (715) 537-3171
EMAIL: JNELSON@BARRONELECTRIC.COM

XCEL ENERGY
CHADWICK ERICKSON
2911 S PIONEER AVE
RICE LAKE, WI 54868
PHONE: (715) 651-0845
EMAIL: CHADWICK.P.ERICKSON@XCELENERGY.COM

COMMUNICATION

MOSAIC TELECOM
DENNIS RUSSETT
401 S 1ST ST, PO BOX 664
CAMERON, WI 54822
PHONE: (715) 458-5518
EMAIL: CTCDENNIS@MOSAICTELECOM.COM

GAS / PETROLEUM

WE ENERGIES
STEVEN CHAVERS
104 W SOUTH ST.
RICE LAKE, WI 54868
PHONE: (715) 234-9605
EMAIL: STEVEN.CHAVERS@WE-ENERGIES.COM

SEWER

DALLAS WATER AND SEWER UTILITY
MIKE NELSON
12 WEST MARSHALL STREET, SUITE 106
DALLAS, WI 54733
PHONE: (715) 418-0476
EMAIL: VDALLAS@CHIBARDUN.NET

WATER

DALLAS WATER AND SEWER UTILITY
MIKE NELSON
12 WEST MARSHALL STREET, SUITE 106
DALLAS, WI 54733
PHONE: (715) 418-0476
EMAIL: VDALLAS@CHIBARDUN.NET

DNR LIAISON

DNR NORTHERN REGION HEADQUARTERS
810 W MAPLE ST
SPOONER, WI 54801

AMY CRONK
PHONE: (715) 635-4229
AMY.CRONK@WISCONSIN.GOV

DESIGN CONTACT

CORRE, INC.
1802 WARDEN ST
EAU CLAIRE, WI 54703

KEVIN MEYER, P.E.
PHONE: (715) 299-1894
E-MAIL: KMEYER@CORREINC.COM

COUNTY CONTACT

HIGHWAY COMMISSIONER
260 N 7TH ST
BARRON, WI 54812

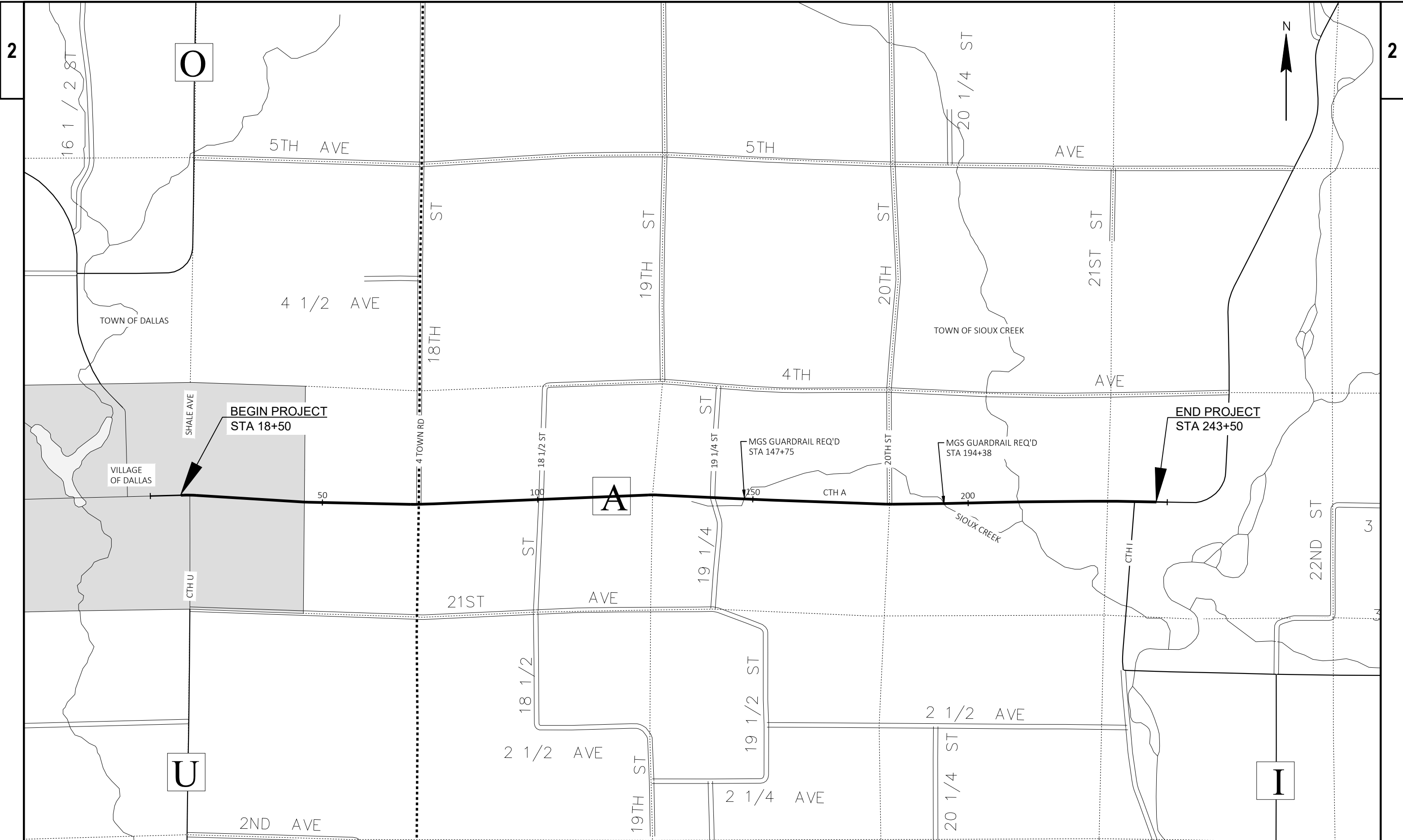
MARK SERVI
PHONE: (715) 637-3755
E-MAIL: MARK.SERVI@CO.BARRON.WI.US

CTH A BORING LOGS				
BORING NO	STATION	LANE	ASPHALTIC PAVEMENT DEPTH (IN)	BASE DEPTH (IN)
B-01	20+10	WB	4.5	2.5
B-02	52+80	EB	4.0	4.5
B-03	63+85	WB	4.0	0.0
B-04	97+73	EB	4.0	7.0
B-05	133+33	WB	4.0	0.0
B-06	146+89	EB	2.0	2.5
B-07	180+39	WB	4.5	5.8
B-08	195+81	WB	4.5	5.5
B-09	219+37	EB	4.0	5.0
B-10	239+35	WB	4.0	5.0

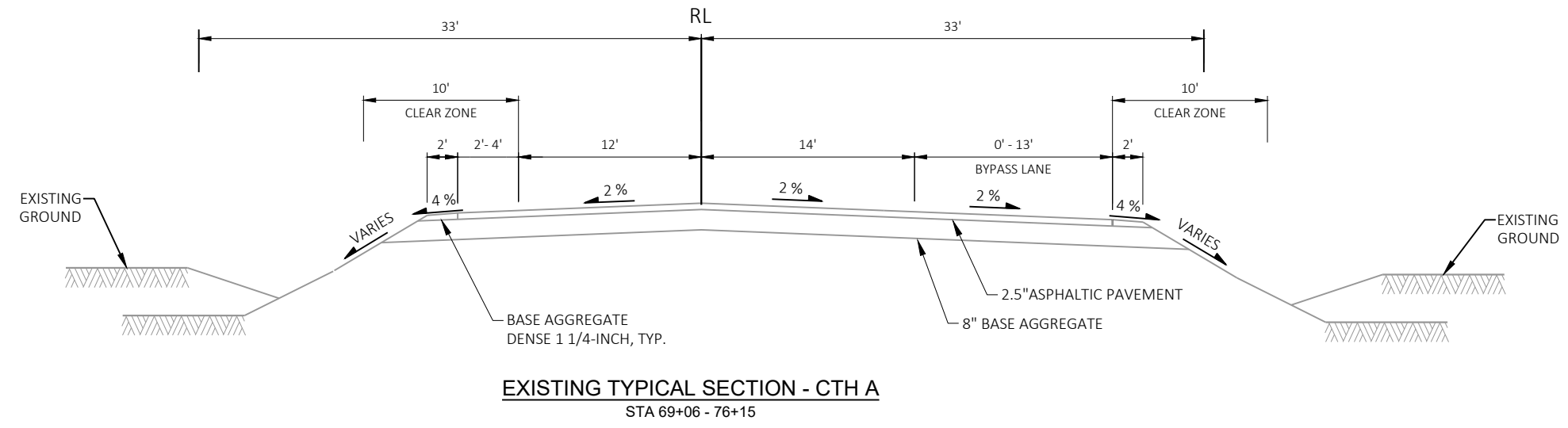
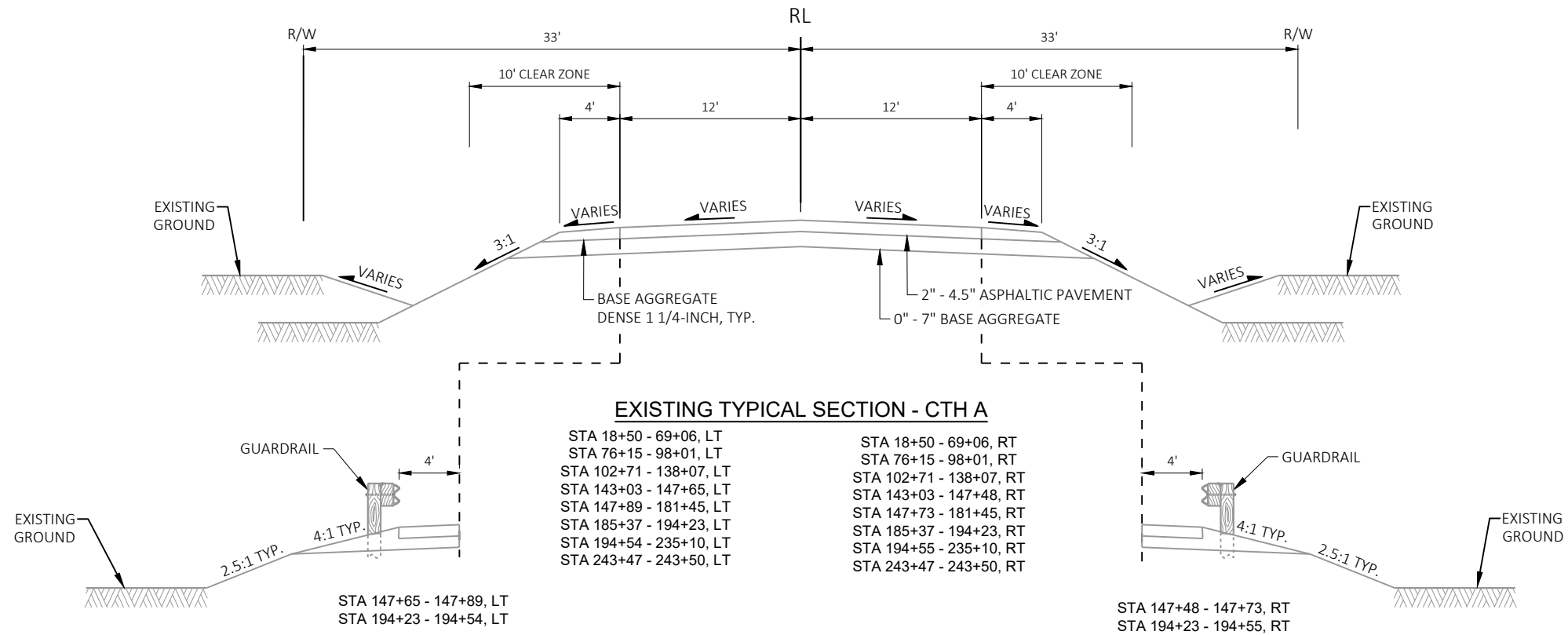
RUNOFF COEFFICIENT TABLE

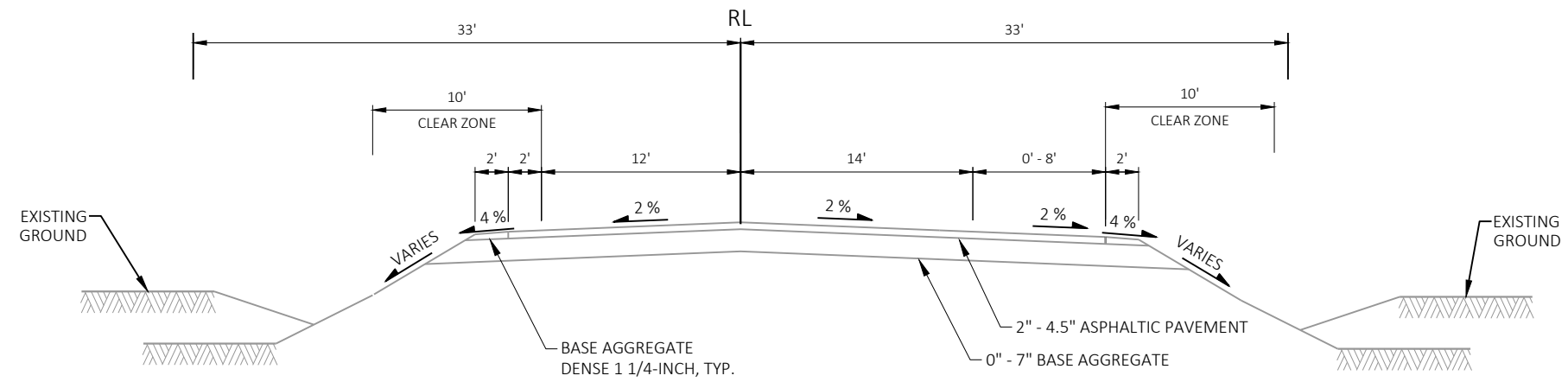
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA = 17.0 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.1 ACRES



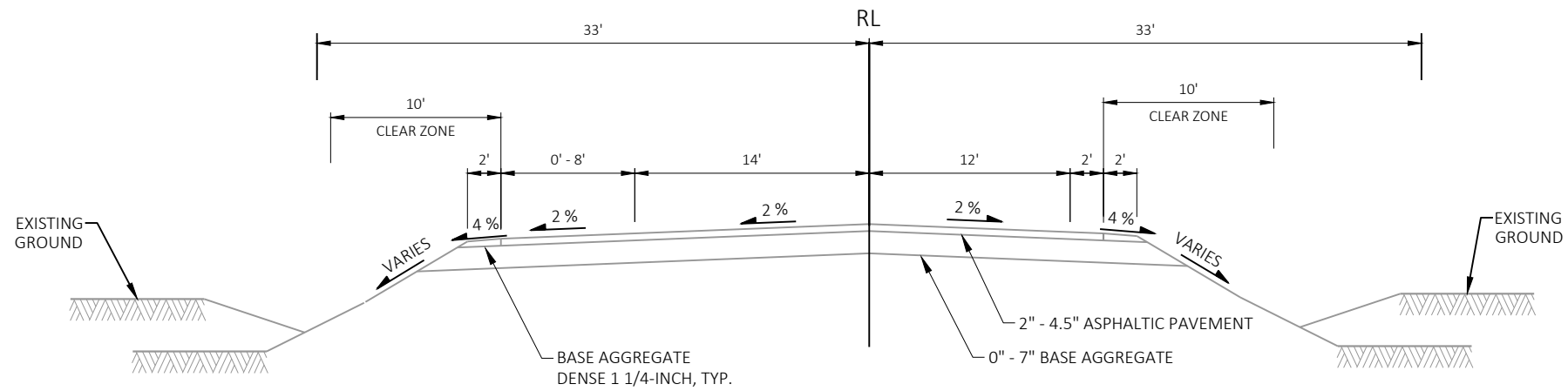
PROJECT NO: 8833-00-71	HWY: CTH A	COUNTY: BARRON	PROJECT OVERVIEW	SHEET	E
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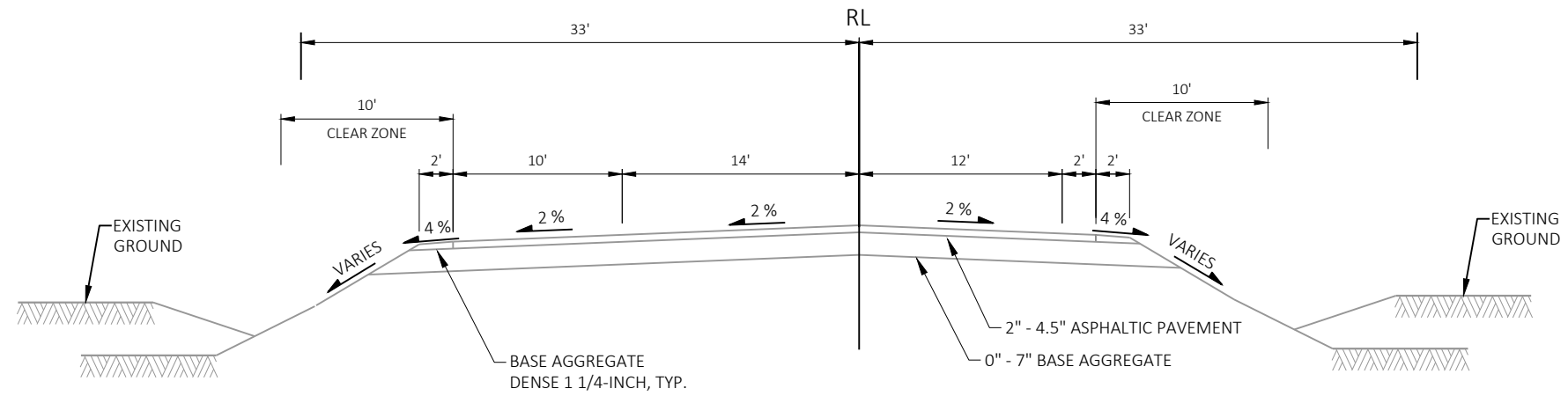
EXISTING TYPICAL SECTION - CTH A

STA 98+01 - 100+51
STA 138+07 - 140+52

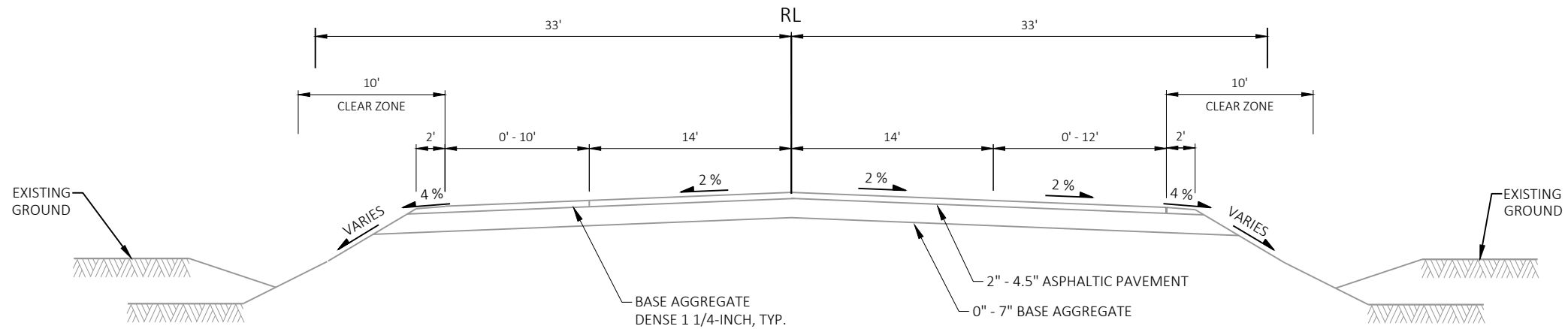


EXISTING TYPICAL SECTION - CTH A

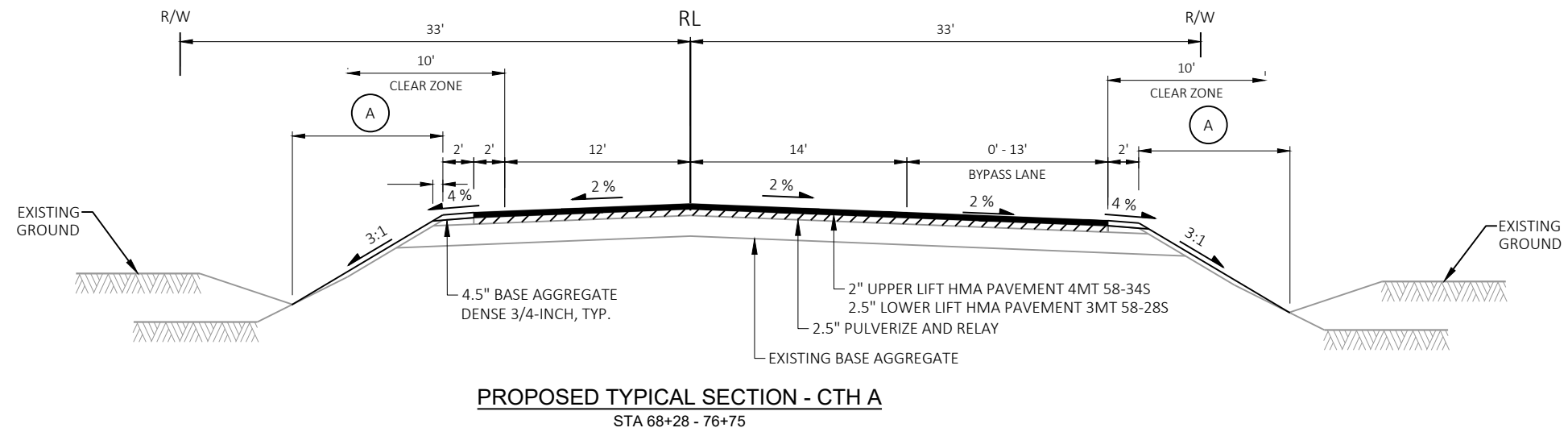
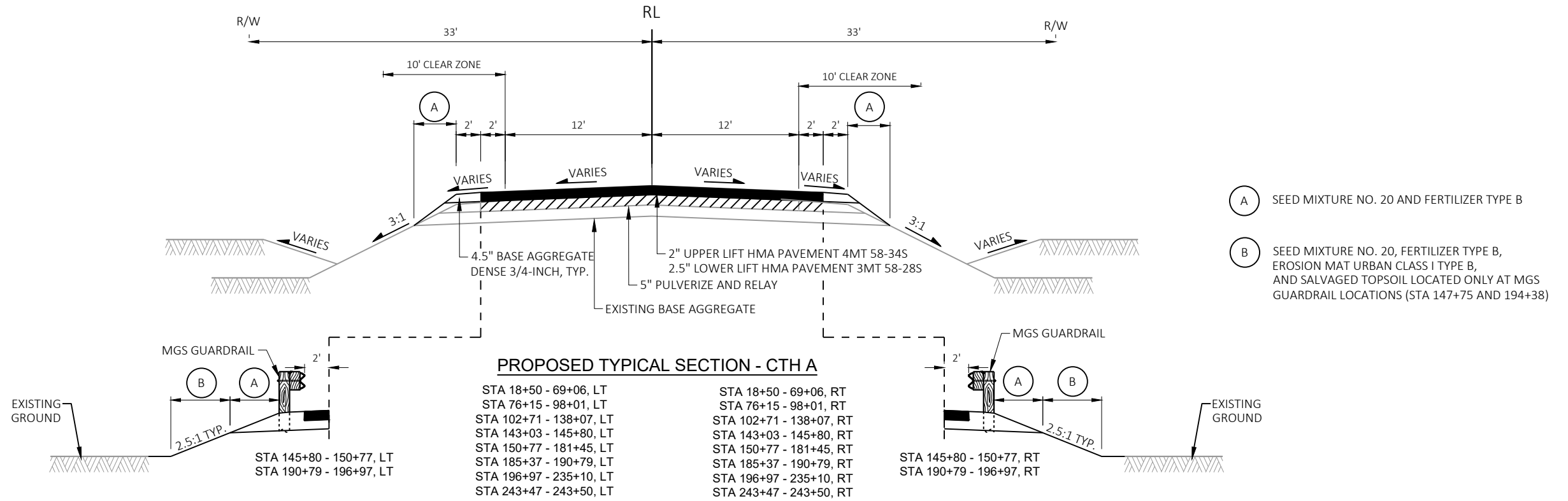
STA 100+51 - 102+71
STA 140+52 - 143+03

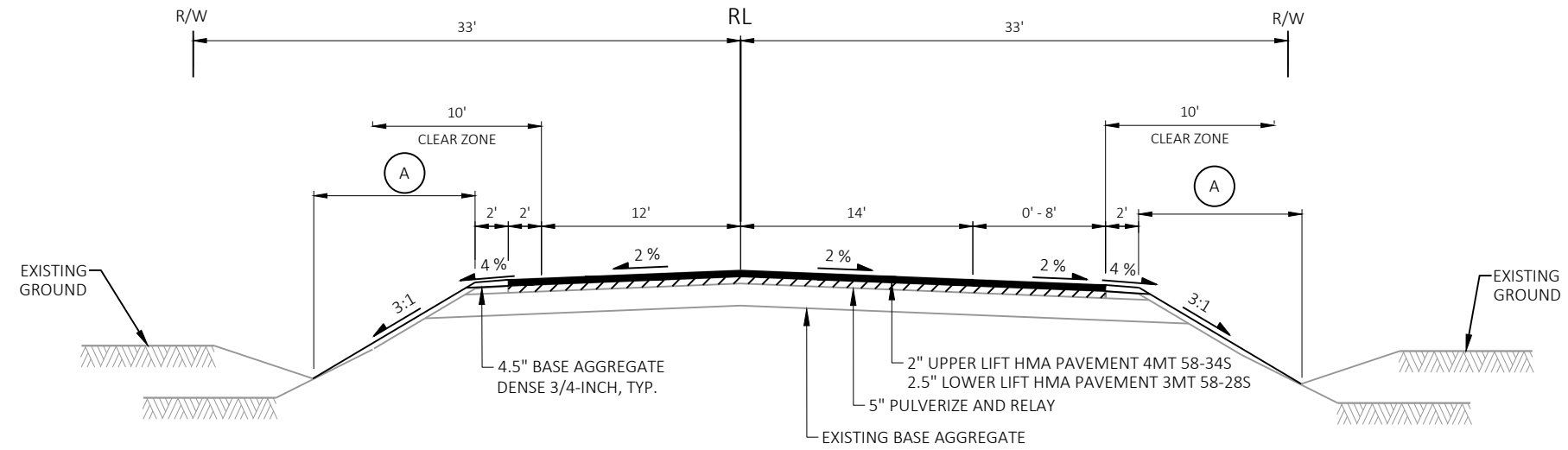


EXISTING TYPICAL SECTION - CTH A
STA 181+45 - 185+37



EXISTING TYPICAL SECTION - CTH A
STA 235+10 - 243+47

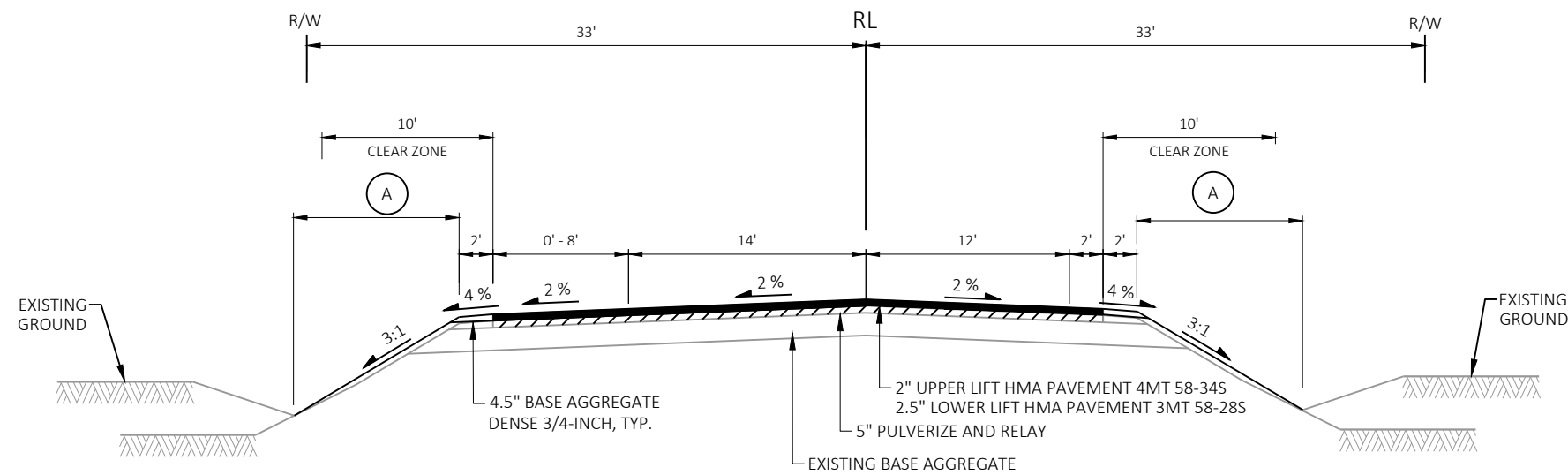




PROPOSED TYPICAL SECTION - CTH A

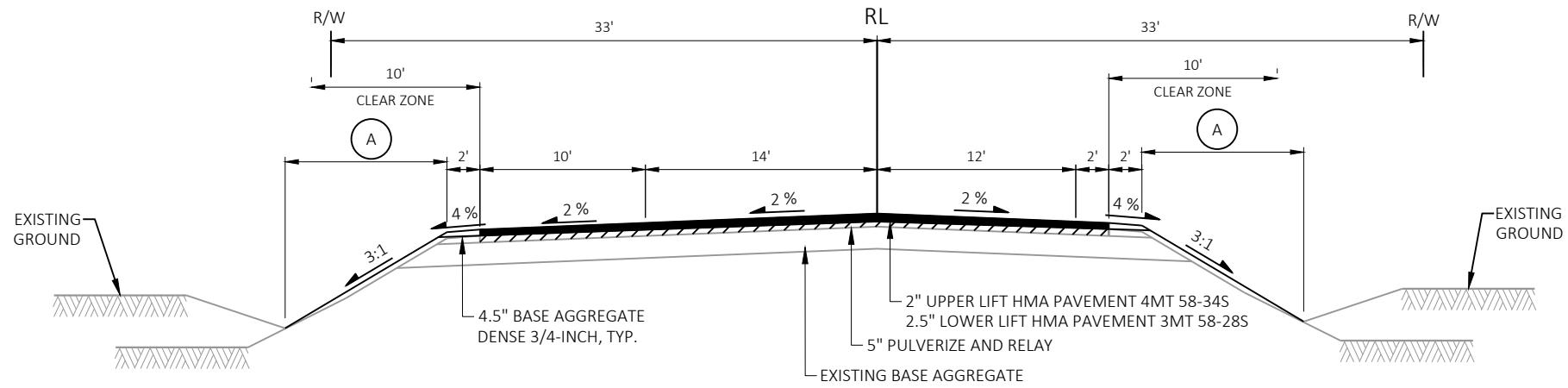
STA 98+01 - 100+51
STA 138+07 - 140+52

(A) SEED MIXTURE NO. 20 AND FERTILIZER TYPE B



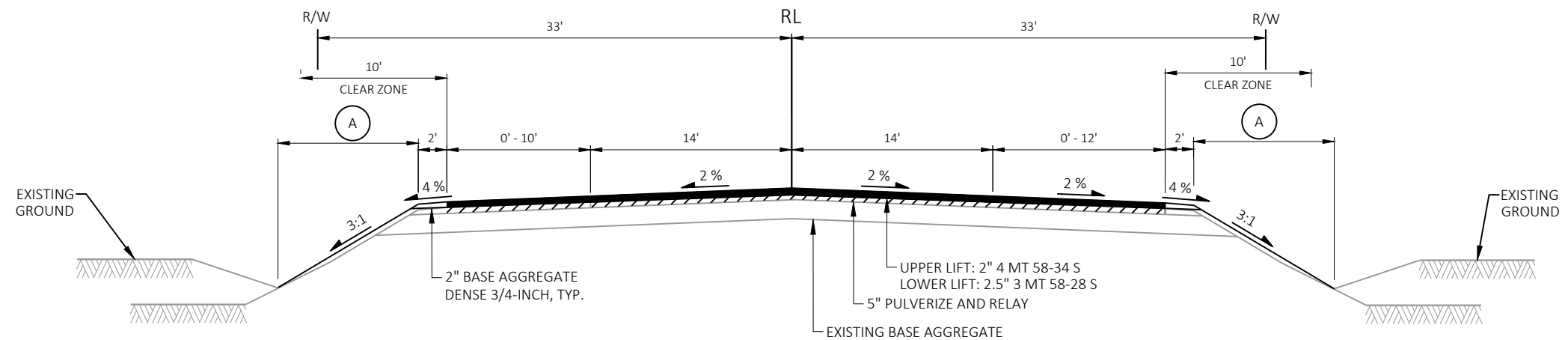
PROPOSED TYPICAL SECTION - CTH A

STA 100+51 - 102+71
STA 140+52 - 143+03

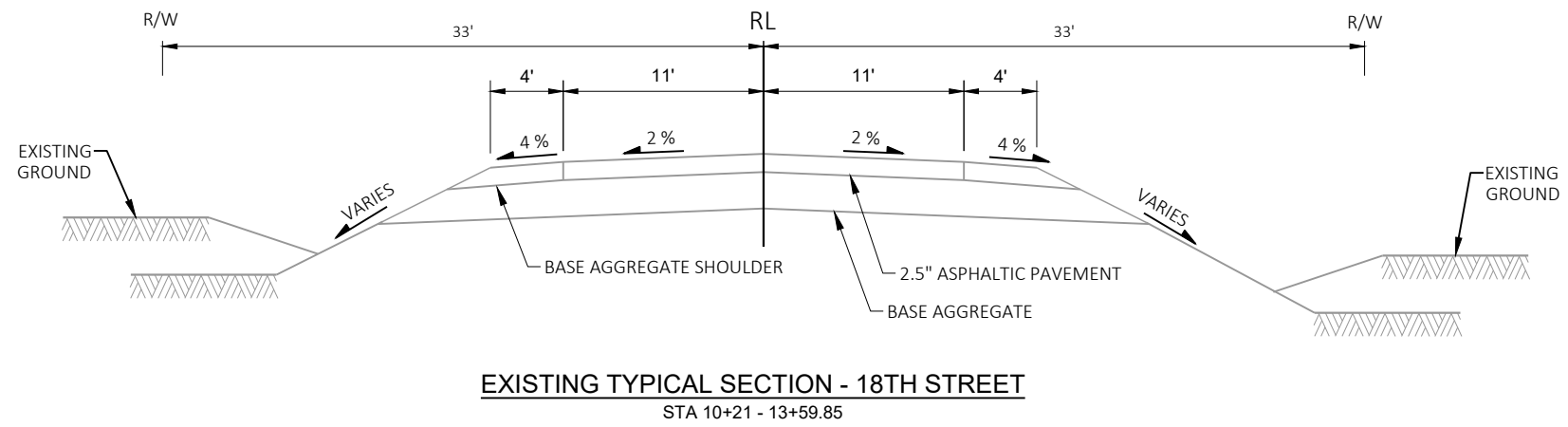


PROPOSED TYPICAL SECTION - CTH A
 STA 181+45 - 185+37

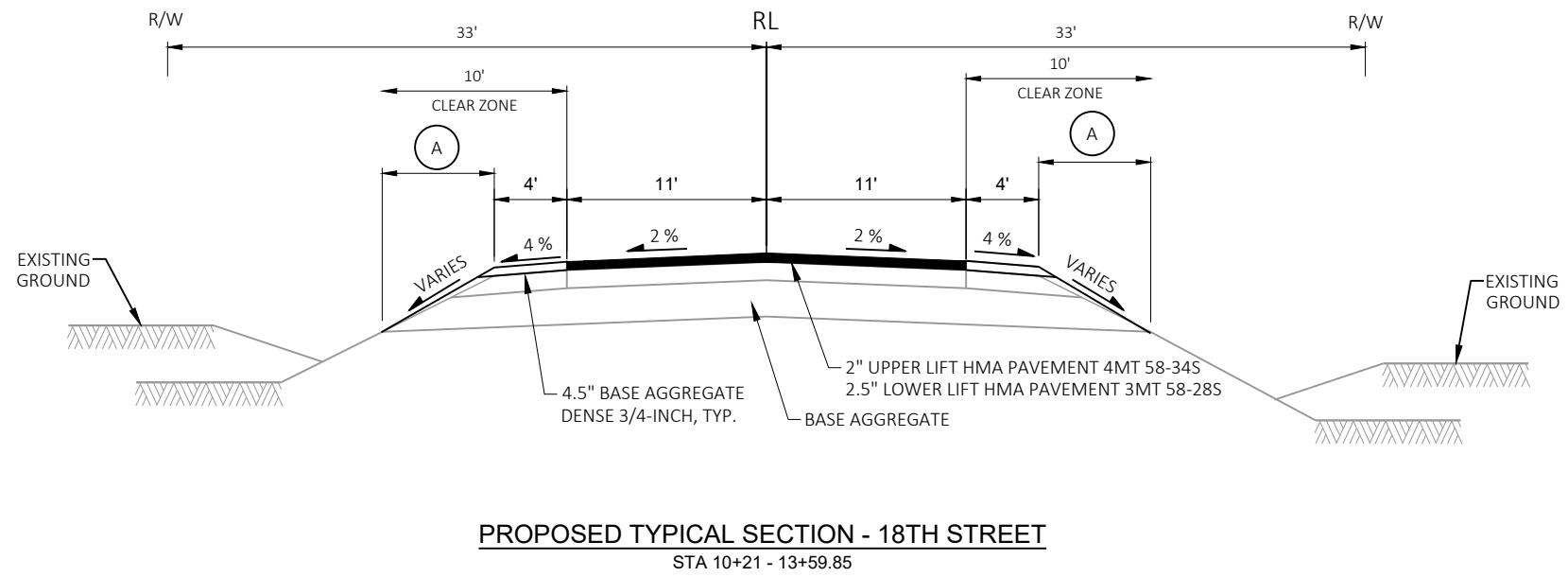
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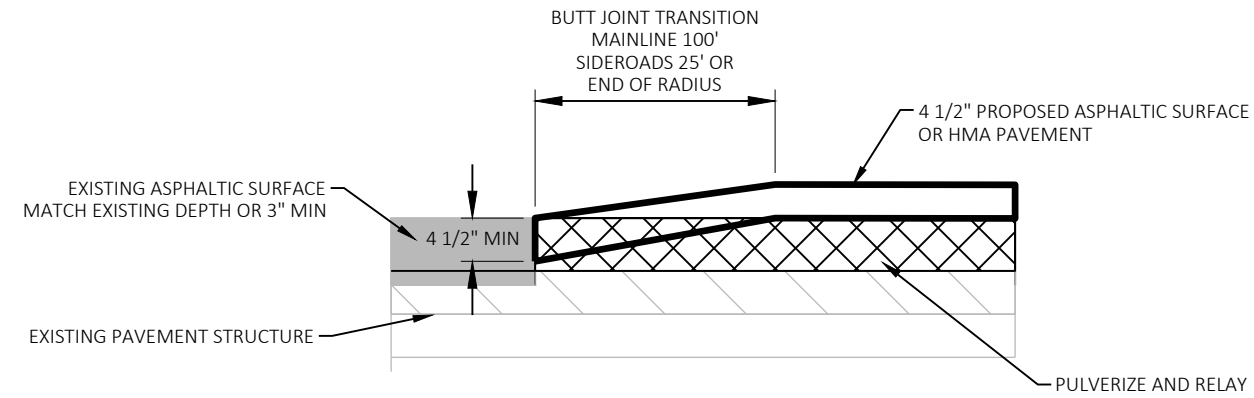


PROPOSED TYPICAL SECTION - CTH A
 STA 235+10 - 243+47

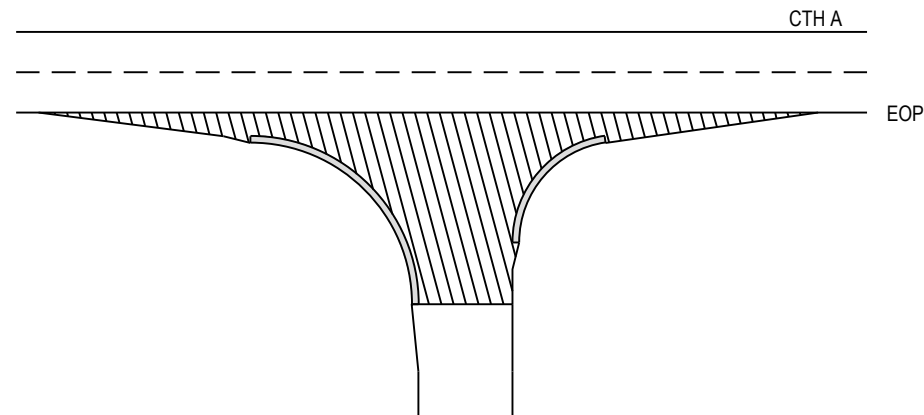


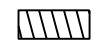
(A) SEED MIXTURE NO. 20 AND FERTILIZER TYPE B





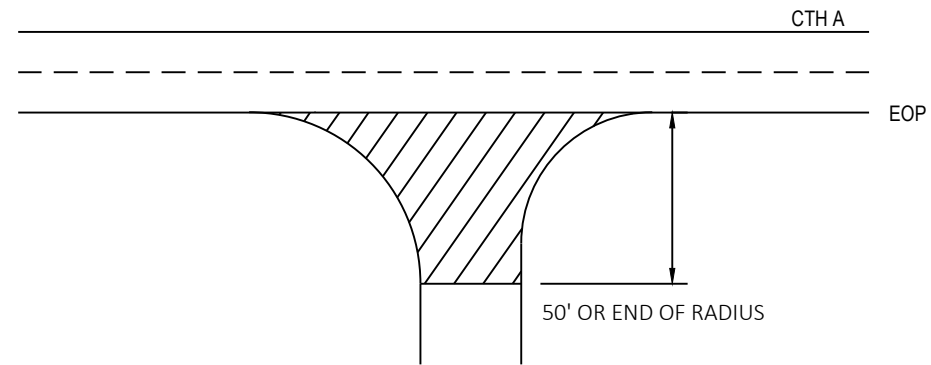
OVERLAP JOINT, BUTTED DETAIL



 REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

SIDE ROADS

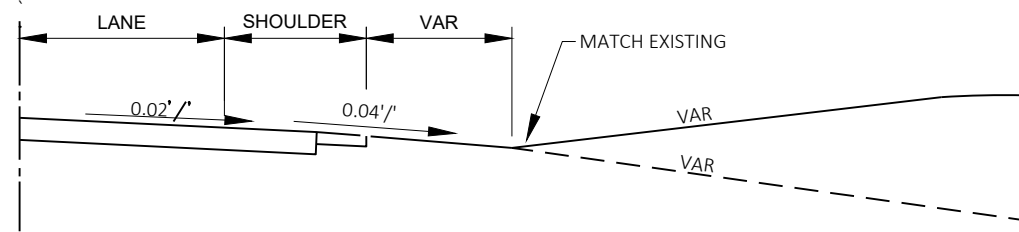
WITH CURB AND GUTTER



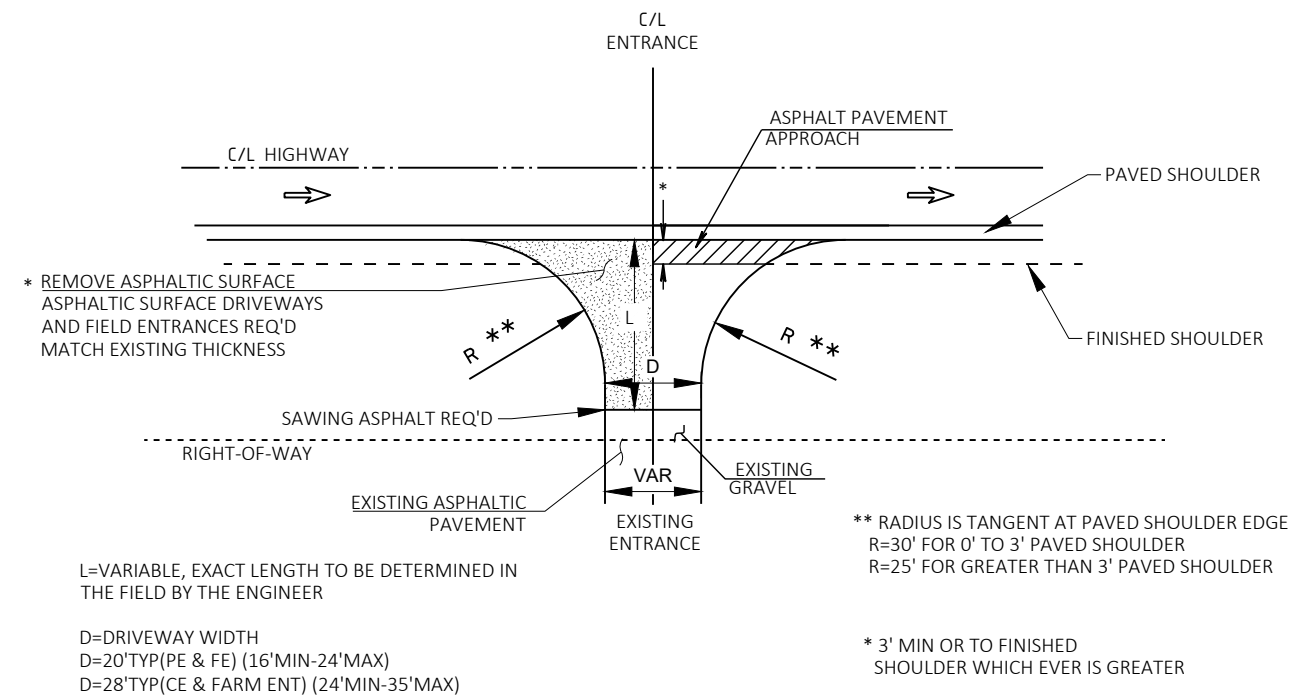
 REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

SIDE ROADS

WITHOUT CURB AND GUTTER

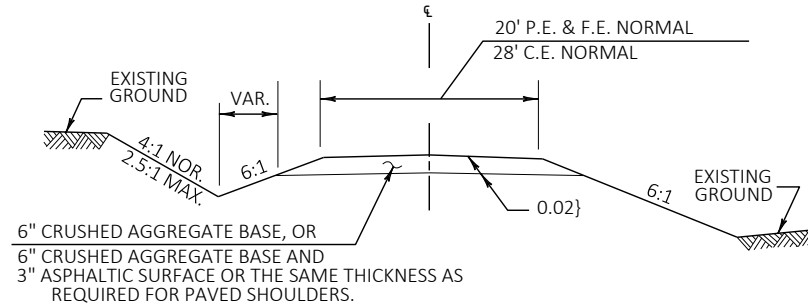


TYPICAL PROFILE VIEW

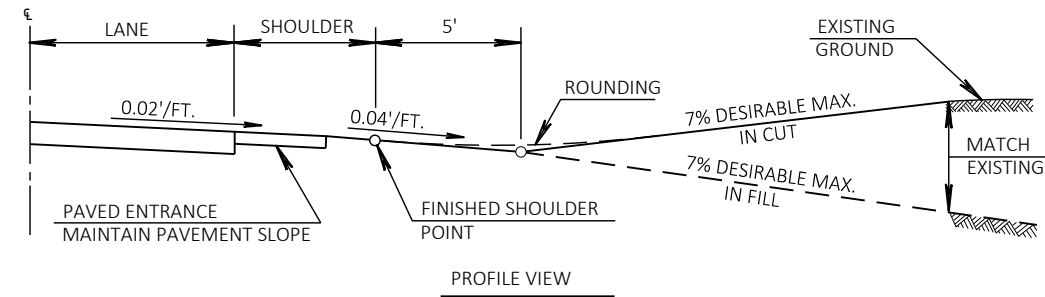


PLAN VIEW

RURAL DRIVEWAY INTERSECTION (PE, FE & CE)

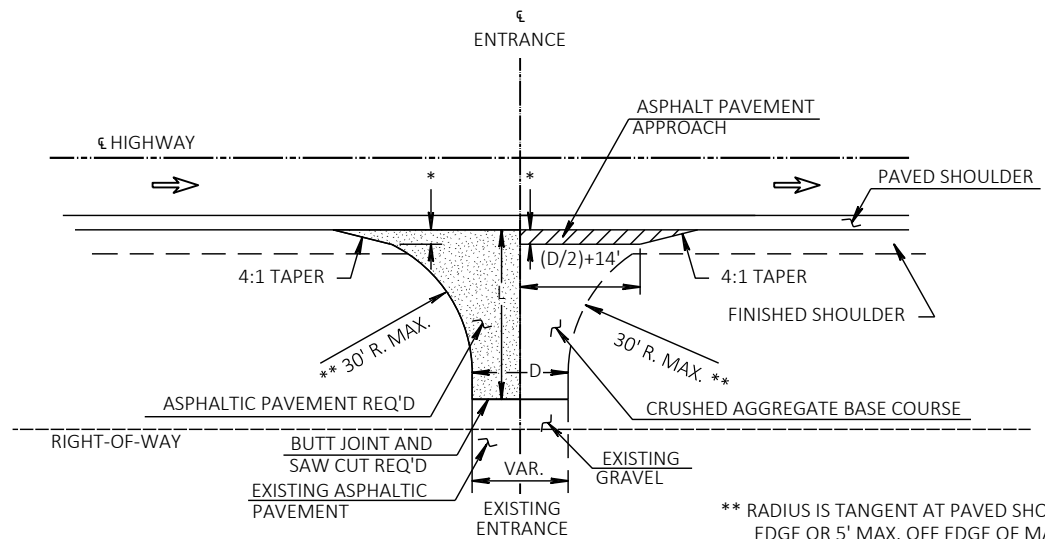


TYPICAL CROSS SECTION



PROFILE VIEW

DESIGN NOTE: (WILL NOT APPEAR IN CONTRACT PLANS)
 IF THE 7% DESIRABLE PROFILE SLOPE CAN NOT BE CONSTRUCTED WITHIN THE NORMAL OR EXISTING R/W, A (TI) TEMPORARY INTEREST (TEMPORARY LIMITED EASEMENT OR CONSTRUCTION EASEMENT) MUST BE ACQUIRED PRIOR TO CONSTRUCTION. IF THE PROPERTY OWNER IS UNWILLING TO GRANT A TI, SLOPES GREATER THAN 7% UP TO A 10% MAXIMUM MAYBE USED. ALL CONSTRUCTION PLANS WITH NEW ENTRANCES SHALL HAVE A CROSS SECTION AT THE CENTER OF EACH ENTRANCE DEPICTING THE PROPOSED PROFILE, % OF GRADE, AND CONSTRUCTION LIMITS.



PLAN VIEW

L=VARIABLE, EXACT LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER. BLEND BACK ON THE ENTRANCE FAR ENOUGH TO GET A SMOOTH PROFILE.
 D=DRIVEWAY WIDTH
 D=20'TYP.(PE's & FE's) (16'MIN.-24'MAX.)
 D=28'TYP.(CE's & FARM ENT.) (24'MIN.-35'MAX.)

** RADIUS IS TANGENT AT PAVED SHOULDER EDGE OR 5' MAX. OFF EDGE OF MAIN LINE PAVEMENT WHICH EVER IS LESS.
 * 3' MAX. OR TO FINISHED SHOULDER WHICH EVER IS LESS.

DESIGN NOTE: (WILL NOT APPEAR IN CONTRACT PLANS)
 THE APPROACHES TO DRIVEWAYS WITH FIRE NUMBERS OR THOSE USED ON A REGULAR BASIS SHOULD BE PAVED. APPROACH PAVEMENT IS GENERALLY NOT WARRANTED ON DRIVEWAYS WITH NO FIRE NUMBER OR ON ENTRANCES HAVING ONLY OCCASIONAL USE.

RURAL DRIVEWAY INTERSECTION DETAIL (PE's, FE's & CE's) (FOR NEW CONSTRUCTION)

Estimate Of Quantities

8833-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	572.000	572.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	2,345.000	2,345.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	81.000	81.000
0008	205.0100	Excavation Common	CY	580.000	580.000
0010	213.0100	Finishing Roadway (project) 01. 8833-00-71	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,414.000	4,414.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,460.000	1,460.000
0016	325.0100	Pulverize and Relay	SY	75,150.000	75,150.000
0018	374.1020.S	QMP Pulverize and Relay Compaction	SY	75,150.000	75,150.000
0020	455.0605	Tack Coat	GAL	3,840.000	3,840.000
0022	460.2000	Incentive Density HMA Pavement	DOL	18,885.000	18,885.000
0024	460.6223	HMA Pavement 3 MT 58-28 S	TON	10,640.000	10,640.000
0026	460.6244	HMA Pavement 4 MT 58-34 S	TON	8,515.000	8,515.000
0028	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	149.000	149.000
0030	614.2330	MGS Guardrail 3 K	LF	1,350.000	1,350.000
0032	614.2340	MGS Guardrail 3 L	LF	226.000	226.000
0034	614.2500	MGS Thrie Beam Transition	LF	158.000	158.000
0036	614.2610	MGS Guardrail Terminal EAT	EACH	8.000	8.000
0038	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8833-00-71	EACH	1.000	1.000
0040	619.1000	Mobilization	EACH	1.000	1.000
0042	624.0100	Water	MGAL	57.000	57.000
0044	625.0500	Salvaged Topsoil	SY	4,196.000	4,196.000
0046	628.1504	Silt Fence	LF	2,712.000	2,712.000
0048	628.1520	Silt Fence Maintenance	LF	2,712.000	2,712.000
0050	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0052	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0054	628.2008	Erosion Mat Urban Class I Type B	SY	4,196.000	4,196.000
0056	629.0210	Fertilizer Type B	CWT	16.000	16.000
0058	630.0120	Seeding Mixture No. 20	LB	645.000	645.000
0060	630.0500	Seed Water	MGAL	537.000	537.000
0062	633.5200	Markers Culvert End	EACH	28.000	28.000
0064	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	8.000	8.000
0066	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	27.000	27.000
0068	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	4.000	4.000
0070	637.2210	Signs Type II Reflective H	SF	158.000	158.000
0072	637.2230	Signs Type II Reflective F	SF	75.000	75.000
0074	638.2102	Moving Signs Type II	EACH	5.000	5.000
0076	638.2602	Removing Signs Type II	EACH	36.000	36.000
0078	638.3000	Removing Small Sign Supports	EACH	32.000	32.000
0080	642.5001	Field Office Type B	EACH	1.000	1.000
0082	643.0300	Traffic Control Drums	DAY	150.000	150.000
0084	643.0900	Traffic Control Signs	DAY	918.000	918.000
0086	643.5000	Traffic Control	EACH	1.000	1.000
0088	646.1020	Marking Line Epoxy 4-Inch	LF	12,479.000	12,479.000
0090	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	44,187.000	44,187.000
0092	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	1,187.000	1,187.000
0094	648.0100	Locating No-Passing Zones	MI	4.270	4.270
0096	649.0105	Temporary Marking Line Paint 4-Inch	LF	12,404.000	12,404.000
0098	650.4500	Construction Staking Subgrade	LF	1,360.000	1,360.000

Estimate Of Quantities

8833-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	650.5000	Construction Staking Base	LF	1,360.000	1,360.000
0102	650.8000	Construction Staking Resurfacing Reference	LF	22,500.000	22,500.000
0104	650.9910	Construction Staking Supplemental Control (project) 01. 8833-00-71	LS	1.000	1.000
0106	650.9920	Construction Staking Slope Stakes	LF	1,360.000	1,360.000
0108	690.0150	Sawing Asphalt	LF	244.000	244.000
0110	740.0440	Incentive IRI Ride	DOL	17,080.000	17,080.000
0112	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0114	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0116	SPV.0090	Special 01. Remove and Replace Steel Thrie Railing on Existing Posts	LF	66.000	66.000

204.0110 REMOVING ASPHALTIC SURFACE			
CATEGORY	STATION	LOCATION	SY
0010	30+96	HMA DRIVEWAY	31
0010	39+65	HMA DRIVEWAY	42
0010	42+71	HMA DRIVEWAY	33
0010	49+80	HMA DRIVEWAY	32
0010	52+07	HMA DRIVEWAY	34
0010	80+00	HMA DRIVEWAY	33
0010	180+59	HMA DRIVEWAY	26
0010	182+17	HMA DRIVEWAY	30
0010	183+20	HMA DRIVEWAY	29
0010	207+85	HMA DRIVEWAY	30
0010	215+09	HMA DRIVEWAY	34
0010	217+57	HMA DRIVEWAY	41
0010	218+91	HMA DRIVEWAY	86
0010	220+92	HMA DRIVEWAY	91
TOTAL 0010			572

204.0120 REMOVING ASPHALTIC SURFACE MILLING				
CATEGORY	STATION	TO	STATION	LOCATION
0010	194+22	-	194+55	CTH A
TOTAL 0010				81

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DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (2)	AVAILABLE MATERIAL (3)	UNEXPANDED FILL	EXPANDED FILL (4)	MASS ORDINATE +/- (5)
		CUT (2)	EBS EXCAVATION (2)				FACTOR 1.25	
DIVISION 1	145+17.4/151+38.4	290	0	0	290	155	194	96
DIVISION 1 SUBTOTAL		290	0	0	0	0	0	0
DIVISION 2	190+00.0/194+22.0	173	0	0	173	101	126	47
DIVISION 2 SUBTOTAL		173	0	0	0	0	0	0
DIVISION 3	194+55.0/197+62.0	117	0	0	117	88	110	7
DIVISION 3 SUBTOTAL		117	0	0	0	0	0	0
GRAND TOTAL		580	0	0	580	344	430	150
TOTAL COMMON EXC		580						

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL

204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS						
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	18+50	-	19+50	BOP	775	100' BUTT JOINTS
0010		-	71+39	18TH ST	120	25' BUTT JOINTS
0010		-	100+73	18 1/2 ST, RT	80	25' BUTT JOINTS
0010		-	100+78	18 1/2 ST, LT	50	25' BUTT JOINTS
0010		-	140+50	19 1/4 ST, RT	95	25' BUTT JOINTS
0010		-	140+74	19 1/4 ST, LT	85	25' BUTT JOINTS
0010		-	181+76	20TH ST	80	25' BUTT JOINTS
0010	193+22	-	194+22	BRIDGE	270	100' BUTT JOINTS
0010	194+55	-	195+55	BRIDGE	270	100' BUTT JOINTS
0010		-	238+54	CTH I	235	25' BUTT JOINTS
0010	242+50	-	243+50	EOP	335	100' BUTT JOINTS
TOTAL 0010					2,345	

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	524.0100
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	WATER MGAL
0010	19+36	-	20+05	CTH I INTERSECTION ML	15	-	0.15
0010	20+05	-	70+76	ML	834	-	7.95
0011	69+06	-	76+15	18TH ST	78	-	1.03
0010	69+06	-	76+15	18TH ST BYPASS	59	-	0.56
0010	70+76	-	98+01	ML	449	-	4.27
0010	98+01	-	102+71	18 1/2 ST INTERSECTION, NORTH	41	-	0.39
0010	98+01	-	102+71	18 1/2 ST INTERSECTION, SOUTH	41	-	0.39
0010	102+71	-	138+07	ML	582	-	5.54
0010	138+07	-	143+03	19 1/4 ST INTERSECTION, NORTH	43	-	0.41
0010	138+07	-	143+03	19 1/4 ST INTERSECTION, SOUTH	43	-	0.41
0010	143+03	-	181+00	ML	625	-	5.95
0010	145+20	-	151+37	CULVERT	-	604	6.04
0010	181+00	-	185+37	20TH ST INTERSECTION	74	-	0.70
0010	185+37	-	234+00	ML	800	-	7.62
0010	190+19	-	197+58	BRIDGE	-	723	7.23
0010	234+00	-	243+50	CTH I to EOP	156	-	1.49
0010	BOP	-	EOP	DRIVEWAYS	177	-	1.47
0010	BOP	-	EOP	UNDISTRIBUTED QUANTITIES	402	133	5.16
TOTAL 0010					4,414	1,460	57

CATEGORY	STATION	TO	STATION	LOCATION	325.0100	374.1020.5
					PULVERIZE AND RELAY SY	QMP PULVERIZE AND RELAY COMPACTION SY
0010	18+50	-	20+05	M/L	605	605
0010	18+77	-	19+60	CTH J INTERSECTION, NORTH	155	155
0010	18+65	-	19+77	CTH J INTERSECTION, SOUTH	190	190
0010	20+05	-	76+16	M/L	17460	17460
0010	70+76	-	74+10	18TH ST	1205	1205
0010	69+06	-	76+15	18TH ST BYPASS	565	565
0010	76+16	-	103+00	M/L	8355	8355
0010	100+36	-	102+71	18 1/2 ST INTERSECTION, NORTH	260	260
0010	98+01	-	101+03	18 1/2 ST INTERSECTION, SOUTH	315	315
0010	103+00	-	144+00	M/L	12760	12760
0010	140+14	-	143+03	19 1/4 ST INTERSECTION, NORTH	315	315
0010	138+07	-	141+05	19 1/4 ST INTERSECTION, SOUTH	320	320
0010	144+00	-	186+00	M/L	13070	13070
0010	181+45	-	185+37	20TH ST INTERSECTION	440	440
0010	186+00	-	243+50	M/L	17890	17890
0010	235+10	-	243+50	CTH I BYPASS, NORTH	620	620
0010	235+69	-	243+50	CTH A, RT	625	625
TOTAL 0010					75,150	75,150

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CATEGORY	STATION	TO	STATION	LOCATION	455.0600	460.5223	450.5244	633.5200 MARKERS CULVERT END
					TACK COAT GAL	HMA PAVEMENT 3 MT 58-28 S TON	HMA PAVEMENT 4 MT 58-34 S TON	
0010	18+50	-	20+05	ML	35	85	70	
0010	18+77	-	19+60	CTH U INTERSECTION, NORTH	10	25	20	
0010	18+65	-	19+77	CTH U INTERSECTION, SOUTH	10	30	25	
0010	20+05	-	76+16	ML	875	2445	1960	
0010	70+76	-	74+10	18TH ST	65	170	135	
0010	69+06	-	76+15	18TH ST BYPASS	30	80	65	
0010	76+16	-	103+00	ML	420	1170	940	
0010	100+36	-	102+71	18 1/2 ST INTERSECTION, NORTH	15	40	30	
0010	98+01	-	101+03	18 1/2 ST INTERSECTION, SOUTH	20	45	35	
0010	103+00	-	144+00	MI	640	1790	1430	
0010	140+14	-	143+03	19 1/4 ST INTERSECTION, NORTH	20	45	35	
0010	138+07	-	141+05	19 1/4 ST INTERSECTION, SOUTH	20	45	40	
0010	144+00	-	186+00	ML	670	1870	1495	
0010	181+45	-	185+37	20TH ST INTERSECTION, NORTH	25	65	50	
0010	186+00	-	243+50	ML	915	2555	2045	
0010	235+10	-	243+50	CTH I BYPASS	35	90	70	
0010	235+69	-	243+50	CTH A, RT	35	90	70	
TOTAL 0010					3,840	10,540	8,515	

CATEGORY	STATION	LOCATION	EACH
0010	21+85	ML	2
0010	23+73	ML	2
0010	56+73	ML	2
0010	100+75	18 1/2 ST RT	2
0010	126+58	ML	4
0010	170+30	ML	2
0010	185+74	ML	4
0010	196+13	ML	2
0010	211+15	ML	6
0010	232+62	ML	2
TOTAL 0010			28

CATEGORY	STATION	TO	STATION	LOCATION	614.2330	614.2340	614.2500	614.2610	SPV.0090.01
					MGS GUARDRAIL 3 K LF	MGS GUARDRAIL 3 L LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH	SPECIAL (01. REMOVE AND REPLACE STEEL THRIE RAILING ON EXISTING POSTS) LF
0010	145+66	-	146+20	CULVERT	-	-	-	2	-
0010	146+20	-	147+20	CULVERT	200	-	-	-	-
0010	147+20	-	148+32	CULVERT	-	226	-	-	-
0010	148+32	-	150+07	CULVERT	350	-	-	-	-
0010	150+07	-	150+60	CULVERT	-	-	-	2	-
0010	190+79	-	191+32	BRIDGE	-	-	-	2	-
0010	191+32	-	193+82	BRIDGE	500	-	-	-	-
0010	193+83	-	194+22	BRIDGE	-	-	79	-	-
0010	194+22	-	194+55	BRIDGE	-	-	-	-	66
0010	194+55	-	194+95	BRIDGE	-	-	79	-	-
0010	194+95	-	196+45	BRIDGE	300	-	-	-	-
0010	196+45	-	196+98	BRIDGE	-	-	-	2	-
TOTAL 0010					1,350	226	158	8	66

CATEGORY	STATION	LOCATION	465.0120
			ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
0010	30+96	DRIVEWAY	9
0010	39+65	DRIVEWAY	9
0010	47+71	DRIVEWAY	9
0010	49+80	DRIVEWAY	9
0010	52+07	DRIVEWAY	9
0010	80+00	DRIVEWAY	9
0010	180+59	DRIVEWAY	7
0010	182+17	DRIVEWAY	8
0010	183+20	DRIVEWAY	7
0010	207+85	DRIVEWAY	7
0010	215+09	DRIVEWAY	9
0010	217+57	DRIVEWAY	11
0010	218+91	DRIVEWAY	23
0010	220+92	DRIVEWAY	23
TOTAL 0010			149

CATEGORY	STATION	TO	STATION	LOCATION	625.0500	628.1504	628.1520	628.2008	629.0210	630.0120	630.0500
					SALVAGED TOPSOIL SY	SILT FENCE LF	SILT FENCE MAINTENANCE LF	EROSION MAT URBAN CLASS I TYPE B SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB	SEED WATER MGAL
0010	19+36	-	20+05	CTH U INTERSECTION	-	-	-	-	0.1	2	2
0010	20+00	-	76+15	ML	-	-	-	-	3.1	135	112
0010	69+09	-	76+15	18TH ST INTERSECTION	-	-	-	-	0.6	24	20
0010	76+15	-	98+01	ML	-	-	-	-	1.2	52	44
0010	98+01	-	102+71	18 1/2 ST INTERSECTION	-	-	-	-	0.3	12	10
0010	102+71	-	138+14	ML	-	-	-	-	2.0	85	71
0010	138+14	-	143+03	19 1/4 ST INTERSECTION	-	-	-	-	0.3	12	10
0010	143+03	-	145+20	ML	-	-	-	-	0.1	5	4
0010	145+20	-	151+37	BRIDGE 1	1938	1234	1234	1939	1.2	52	44
0010	151+37	-	181+00	ML	-	-	-	-	1.7	71	59
0010	181+00	-	186+00	20TH ST INTERSECTION	-	-	-	-	0.3	12	10
0010	186+00	-	190+19	ML	-	-	-	-	0.2	10	8
0010	190+19	-	197+58	BRIDGE 2	2257	1478	1478	2257	1.4	61	51
0010	197+58	-	235+68	ML	-	-	-	-	2.1	91	76
0010	235+68	-	243+50	CTH I to EOP	-	-	-	-	0.4	19	16
TOTAL 0010					4,196	2,712	2,712	4,196	16	645	537

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STATION	LOCATION	SIGN NUMBER	SIGN CODE	SIGN MESSAGE	SIZE (IN)	634.0614	634.0616	634.0618	637.2210	637.2230	638.2102	638.2602	638.3000
						POSTS WOOD 4X6- INCH X 14-FT EACH	POSTS WOOD 4X6- INCH X 16-FT EACH	POSTS WOOD 4X6- INCH X 18-FT EACH	SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	MOVING SIGNS TYPE II EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
18+87	LT	1-2	R1-1	STOP	30X30	-	1.00	-	5.18	-	-	1.00	1.00
19+45	RI	1-4	R1-1	STOP	30X30	-	1.00	-	5.18	-	-	1.00	1.00
19+56	RI	1-6	J13-2	CTH A	24X24	-	1.00	-	15.00	-	-	1.00	1.00
19+56	RT	1-6	J13-2	CTH J	24X24	-	-	-	-	-	-	1.00	-
19+56	RT	1-6	J13-2	DOUBLE ARROW	21X21	-	-	-	-	-	-	1.00	-
19+56	RT	1-6	J13-2	LEFT ARROW	21X21	-	-	-	-	-	-	1.00	-
20+23	RT	1-8	M1-5A	CTH A	24X24	-	1.00	-	4.00	-	-	1.00	1.00
20+23	RT	1-9	D11-10	ATV ROUTE	18X24	-	-	-	-	-	1.00	-	-
20+23	RT	1-9	R3-17B	ENDS	12X8	-	-	-	-	-	1.00	-	-
20+88	RT	1-10	I-55-56P	ADOPT A HIGHWAY SPONSER	30X18	-	1.00	-	-	-	1.00	-	1.00
20+88	RT	1-10	R55-15	NO ATV SYMBOL	12X12	-	-	-	1.00	-	1.00	-	-
21+54	LT	1-12	J13-2	CTH A	48X45	-	1.00	-	15.00	-	-	1.00	1.00
21+54	LT	1-12	J13-2	CTH J	48X45	-	-	-	-	-	-	1.00	-
21+54	LI	1-12	J13-2	AHEAD AND LEFT ARROW	48X45	-	-	-	-	-	-	1.00	-
21+54	LI	1-12	J13-2	UP ARROW	48X45	-	-	-	-	-	-	1.00	-
25+06	LT	1-13	W14-3	NO PASSING ZONE	48X36	-	1.00	-	-	6.00	-	-	-
26+00	LT	1-15	J1-1	JCT	24X39	-	-	1.00	6.50	-	-	1.00	1.00
26+00	LT	1-15	J1-1	CTH J	24X39	-	-	-	-	-	-	-	-
29+61	LT	1-17	W3-5	SPEED LIMIT 25 AHEAD	36X36	-	1.00	-	9.00	-	-	1.00	1.00
33+81	RT	1-18	W14-3	NO PASSING ZONE	48X36	-	1.00	-	-	6.00	-	-	-
37+23	RT	1-20	S3-1	SCHOOL BUS STOP AHEAD	30X30	-	1.00	-	6.25	-	-	1.00	1.00
45+72	LT	2-1	W14-3	NO PASSING ZONE	48X36	-	1.00	-	-	6.00	-	-	-
47+82	LT	2-3	W41-11	CAUTION DRIVEWAY	30X30	-	1.00	-	6.25	-	-	1.00	1.00
61+16	RT	2-4	W14-3	NO PASSING ZONE	48X36	-	1.00	-	-	6.00	-	-	-
82+66	LT	3-1	W14-3	NO PASSING ZONE	48X36	-	1.00	-	-	6.00	-	-	-
100+59	LT	3-3	R1-1	STOP	30X30	-	1.00	-	5.18	-	-	1.00	1.00
100+93	RI	3-5	R1-1	STOP	30X30	-	1.00	-	5.18	-	-	1.00	1.00
139+20	LT	5-1	I-55-56P	ADOPT A HIGHWAY SPONSER	30X18	-	1.00	-	-	-	1.00	-	1.00
140+30	LT	5-3	R1-1	STOP	30X30	-	1.00	-	5.18	-	-	1.00	1.00
140+94	RT	5-5	R1-1	STOP	30X30	-	1.00	-	5.18	-	-	1.00	1.00
145+55	LT	5-6	W5-52L	OBJECT MARKER	12X36	1.00	-	-	-	3.00	-	1.00	1.00
145+55	RT	5-7	W5-52L	OBJECT MARKER	12X36	1.00	-	-	-	3.00	-	1.00	1.00
150+80	LT	5-12	W5-52L	OBJECT MARKER	12X36	1.00	-	-	-	3.00	-	1.00	1.00
150+80	RT	5-13	W5-52L	OBJECT MARKER	12X36	1.00	-	-	-	3.00	-	1.00	1.00
181+55	LT	6-2	R1-1	STOP	30X30	-	1.00	-	5.18	-	-	1.00	1.00
181+96	LT	6-4	W11-14	HORSE DRAWN VEHICLE CROSSING	36X36	-	-	1.00	-	9.00	-	1.00	1.00
194+19	LT	6-5	W5-52L	OBJECT MARKER	12X36	1.00	-	-	-	3.00	-	1.00	1.00
194+19	RT	6-6	W5-52L	OBJECT MARKER	12X36	1.00	-	-	-	3.00	-	1.00	1.00
194+58	LI	7-6	W5-52L	OBJECT MARKER	12X36	1.00	-	-	-	3.00	-	1.00	1.00
194+58	RT	7-8	W5-52L	OBJECT MARKER	12X36	1.00	-	-	-	3.00	-	1.00	1.00
230+85	RT	8-1	W14-3	NO PASSING ZONE	48X36	-	1.00	-	-	6.00	-	-	-
232+10	RT	8-3	J1-1	JCT	24X39	-	-	1.00	6.50	-	-	1.00	1.00
232+10	RT	8-3	J1-1	CTH I	24X39	-	-	-	-	-	-	-	-
234+43	RT	8-5	J13-2	CTH I	48X45	-	-	1.00	15.00	-	-	1.00	1.00
234+43	RT	8-5	J13-2	CTH A	48X45	-	-	-	-	-	-	-	-
234+43	RT	8-5	J13-2	AHEAD AND RIGHT ARROW	48X45	-	-	-	-	-	-	-	-
234+43	RT	8-5	J13-2	RIGHT ARROW	48X45	-	-	-	-	-	-	-	-
236+36	LT	8-7	M1-5A	CTH A	24X24	-	1.00	-	4.00	-	-	1.00	1.00
238+33	LT	8-9	W1-7	DOUBLE ARROW	48X24	-	1.00	-	8.33	-	-	1.00	1.00
238+83	RT	8-11	R1-1	STOP	30X30	-	1.00	-	5.18	-	-	1.00	1.00
240+30	RI	8-13	M1-5A	CTH I	24X24	-	2.00	-	4.00	-	-	1.00	1.00
240+30	LI	8-15	J13-2	CTH I	48X45	-	-	-	15.00	-	-	1.00	1.00
240+30	LT	8-15	J13-2	CTH A	48X45	-	-	-	-	-	-	-	-
240+30	LT	8-15	J13-2	AHEAD AND LEFT ARROW	48X45	-	-	-	-	-	-	-	-
240+30	LT	8-15	J13-2	LEFT ARROW	48X45	-	-	-	-	-	-	-	-
243+50	LT	8-16	W14-3	NO PASSING ZONE	48X36	-	1.00	-	-	6.00	-	-	-
TOTAL QUANTITIES						8	27	4	158	75	5	36	32

PROJECT NO: 8833-00-71

HWY: CTH A

COUNTY: BARRON

MISCELLANEOUS QUANTITIES

SHEET

E

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LOCATION	643.0300	643.0900
	TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL SIGNS DAY
PROJECT	30 DRUMS X 5 DAYS 150	18 SIGNS X 51 DAYS 918
TOTAL 0010	150	918

CATEGORY	STATION	TO	STATION	LOCATION	648.0100 LOCATING NO- PASSING ZONES MI
0010	18+50	-	243+50	ML	4.27
TOTAL 0010					4.27

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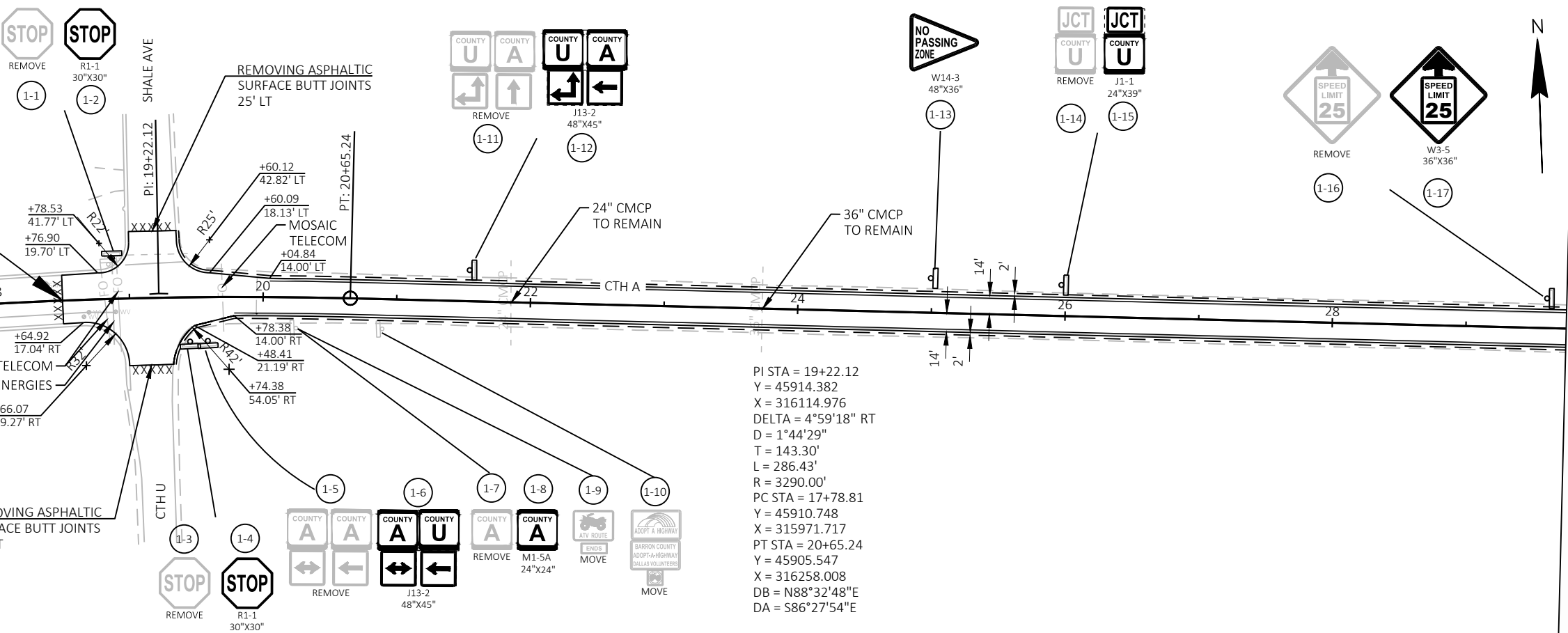
CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH LF	646.3040 MARKING LINE GROOVED WET REF EPOXY 8-INCH LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH LF	REMARKS
0010	18+50	-	243+50	CL	-	-	-	12404	YELLOW CENTERLINE BINDER
0010	18+50	-	243+50	CL	12404	-	-	-	YELLOW CENTERLINE UPPER LAYER
0010	18+50	-	243+50	LT	-	22056	-	-	WHITE EDGELINE
0010	18+50	-	243+50	RT	-	22131	-	-	WHITE EDGELINE
0010	71+00	-	74+00	RT	75	-	-	-	18TH ST BYPASS LANE
0010	73+00	-	75+65	LT	-	-	265	-	TURN LANE 18TH ST
0010	98+75	-	100+65	RT	-	-	190	-	TURN LANE 18 1/2 ST
0010	101+00	-	102+06	LT	-	-	106	-	TURN LANE 18 1/2 ST
0010	139+04	-	140+56	RT	-	-	152	-	TURN LANE 19 1/4 ST
0010	140+70	-	142+28	LT	-	-	158	-	TURN LANE 19 1/4 ST
0010	182+00	-	184+00	LT	-	-	200	-	TURN LANE 20TH ST
0010	236+84	-	238+00	RT	-	-	116	-	TURN LANE CTH I
0010	237+00	-	240+08	LT	75	-	-	-	CTH I BYPASS LANE
TOTAL 0010					12,479	44,187	1,187	12,404	

STATION	LOCATION	690.0150 SAWING ASPHALT LF
30+96	HMA DRIVEWAY	14
39+65	HMA DRIVEWAY	14
42+71	HMA DRIVEWAY	16
49+80	HMA DRIVEWAY	15
52+07	HMA DRIVEWAY	14
80+00	HMA DRIVEWAY	16
180+59	HMA DRIVEWAY	12
182+17	HMA DRIVEWAY	14
183+20	HMA DRIVEWAY	14
207+85	HMA DRIVEWAY	14
215+09	HMA DRIVEWAY	16
217+57	HMA DRIVEWAY	15
218+91	HMA DRIVEWAY	32
220+92	HMA DRIVEWAY	38
TOTAL 0010		244

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (8833-00-71) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	18+50	-	243+50	CTH A	-	-	22,500	1	-
0010	145+70	-	151+37	BRIDGE 1	620	620	-	-	620
0010	190+19	-	197+58	BRIDGE 2	740	740	-	-	740
TOTAL 0010					1,360	1,360	22,500	1	1,360

CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
1	16+20.88	23.83 RT	1059.62	NO. 6 REBAR	45882.92	315814.44

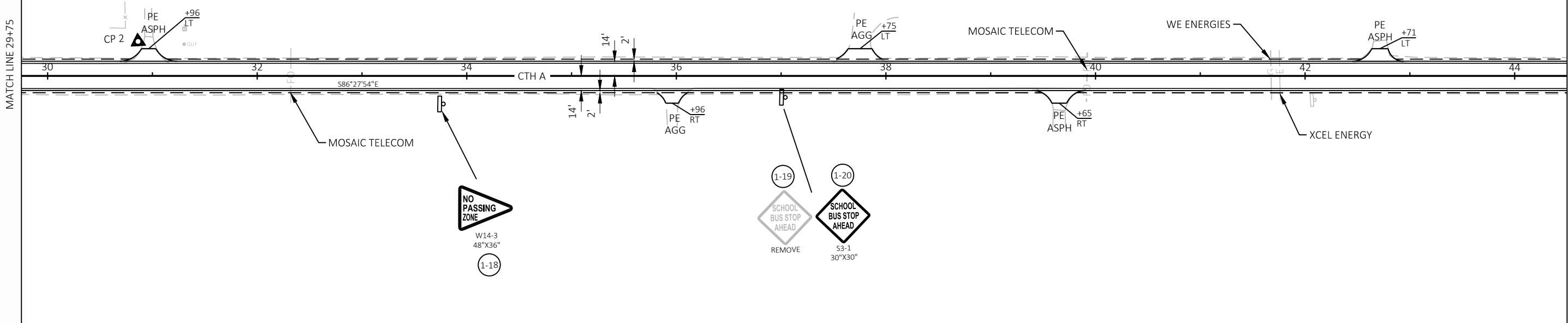
**BEGIN PROJECT
STA 18+50**
Y = 45,911.78
X = 316,042.90



5

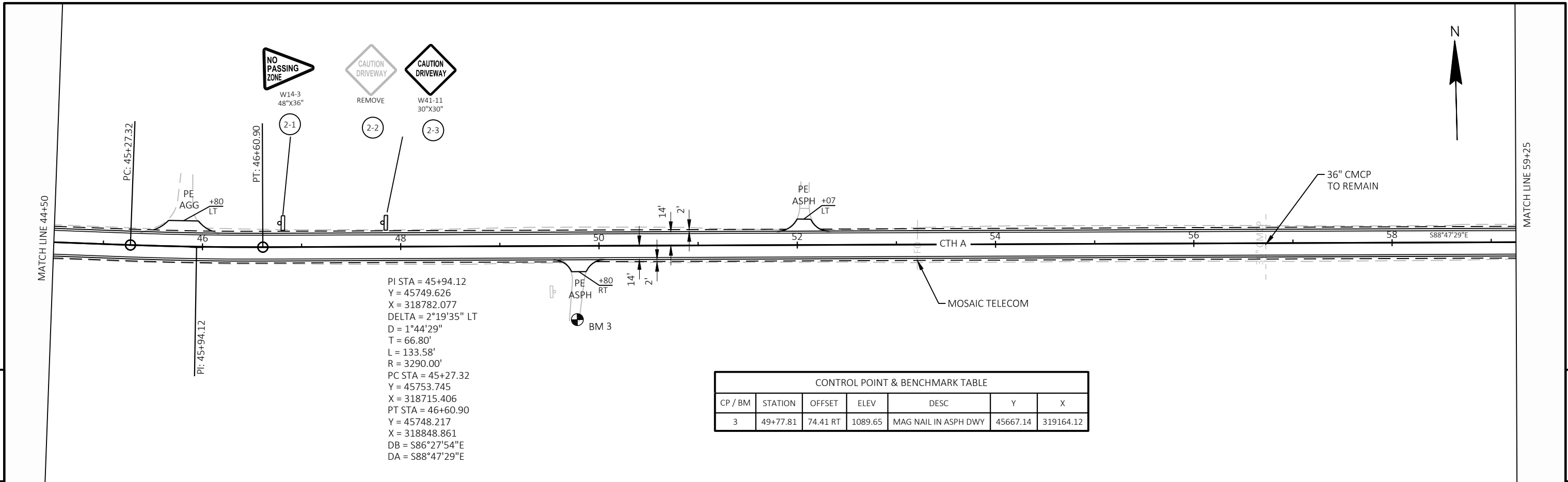
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CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
2	30+86.28	32.85 LT	1071.42	NO. 6 REBAR	45875.38	317279.13



MATCH LINE 29+75

MATCH LINE 44+50

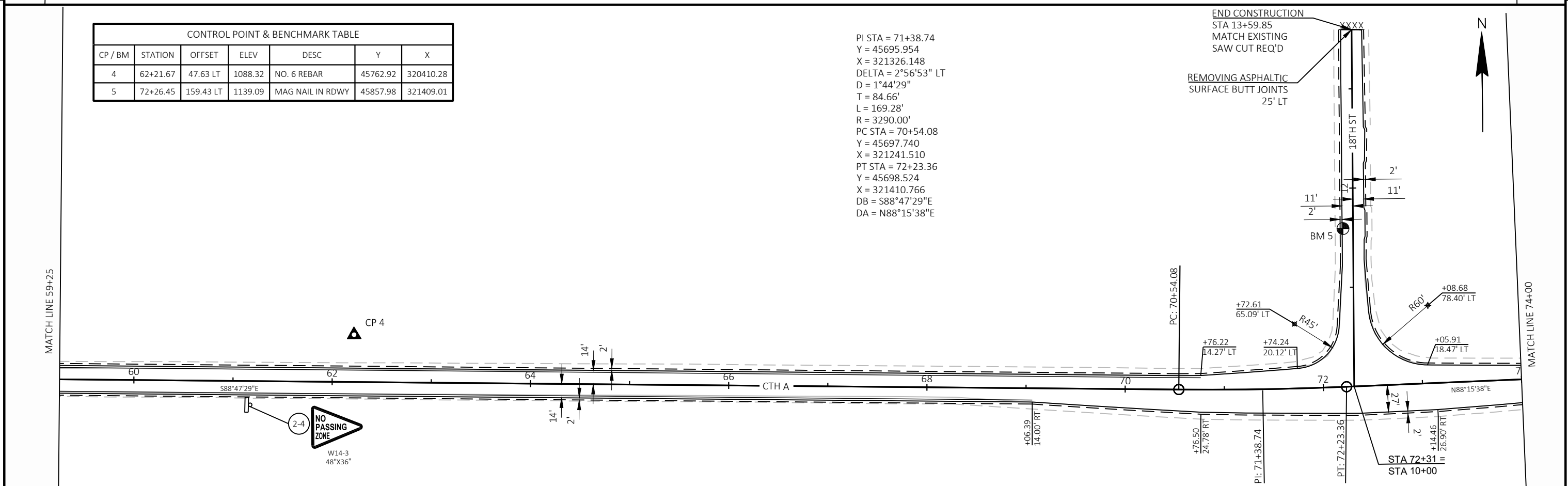


PI STA = 45+94.12
 Y = 45749.626
 X = 318782.077
 DELTA = 2°19'35" LT
 D = 1°44'29"
 T = 66.80'
 L = 133.58'
 R = 3290.00'
 PC STA = 45+27.32
 Y = 45753.745
 X = 318715.406
 PT STA = 46+60.90
 Y = 45748.217
 X = 318848.861
 DB = S86°27'54"E
 DA = S88°47'29"E

CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
3	49+77.81	74.41 RT	1089.65	MAG NAIL IN ASPH DWY	45667.14	319164.12

5

5



CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
4	62+21.67	47.63 LT	1088.32	NO. 6 REBAR	45762.92	320410.28
5	72+26.45	159.43 LT	1139.09	MAG NAIL IN RDWY	45857.98	321409.01

PI STA = 71+38.74
 Y = 45695.954
 X = 321326.148
 DELTA = 2°56'53" LT
 D = 1°44'29"
 T = 84.66'
 L = 169.28'
 R = 3290.00'
 PC STA = 70+54.08
 Y = 45697.740
 X = 321241.510
 PT STA = 72+23.36
 Y = 45698.524
 X = 321410.766
 DB = S88°47'29"E
 DA = N88°15'38"E

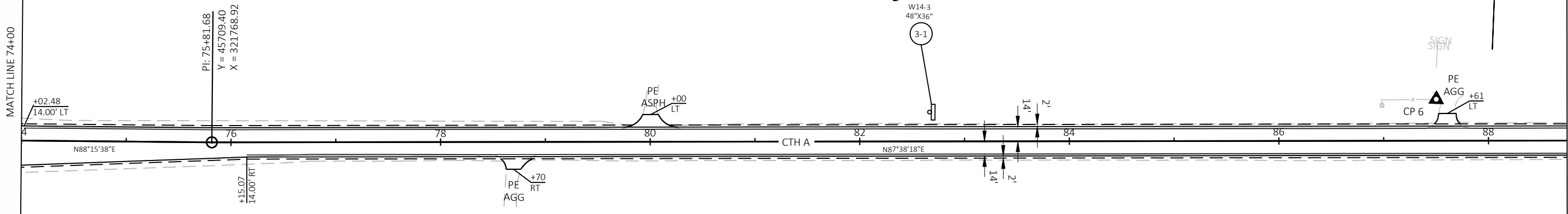
CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
6	87+50.18	39.54 LT	1109.14	NO. 6 REBAR	45797.06	322934.80

MATCH LINE 74+00

MATCH LINE 88+75

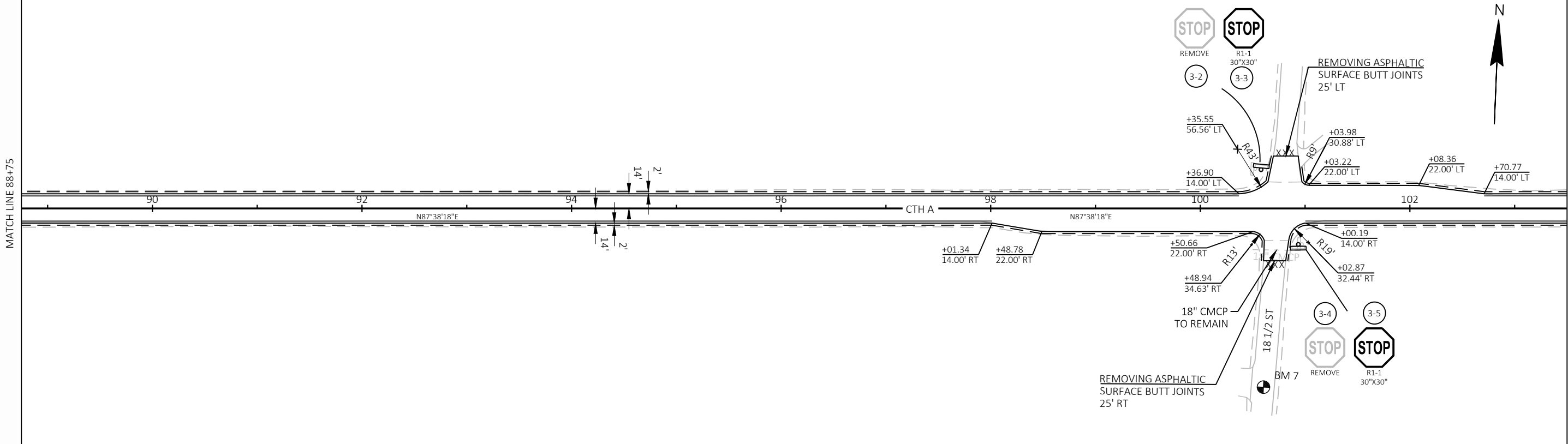
5

5



MATCH LINE 88+75

MATCH LINE 103+50



PROJECT NO: 8833-00-71	HWY: CTH A	COUNTY: BARRON	PLAN SHEETS	SHEET	E
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CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
8	114+20.93	31.71 LT	1081.02	NO. 6 REBAR	45899.29	325603.60

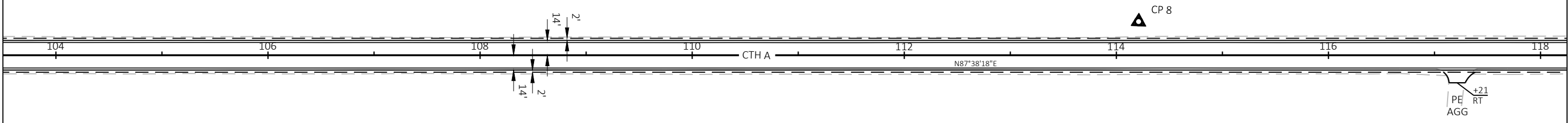


MATCH LINE 103+50

MATCH LINE 118+25

5

5



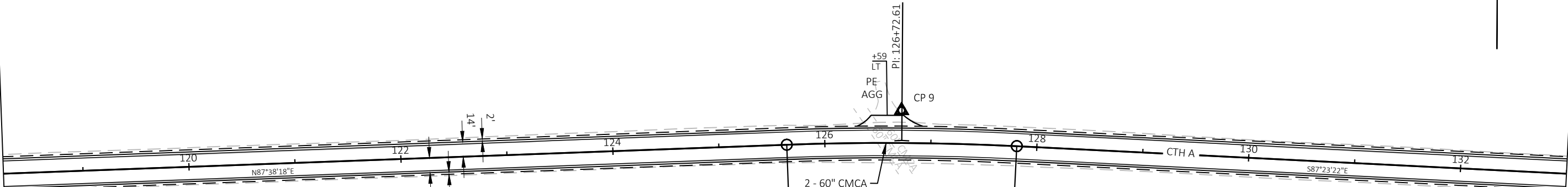
CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
9	126+72.06	30.61 LT	1067.10	NO. 6 REBAR	45947.44	326855.10

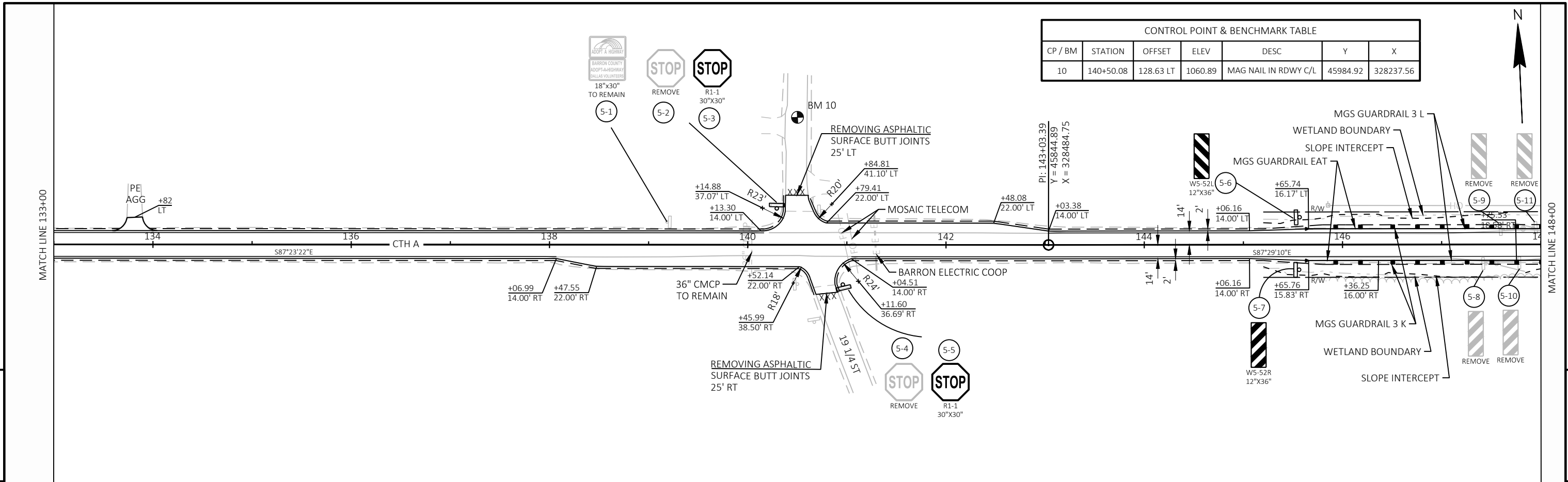


MATCH LINE 118+25

MATCH LINE 133+00

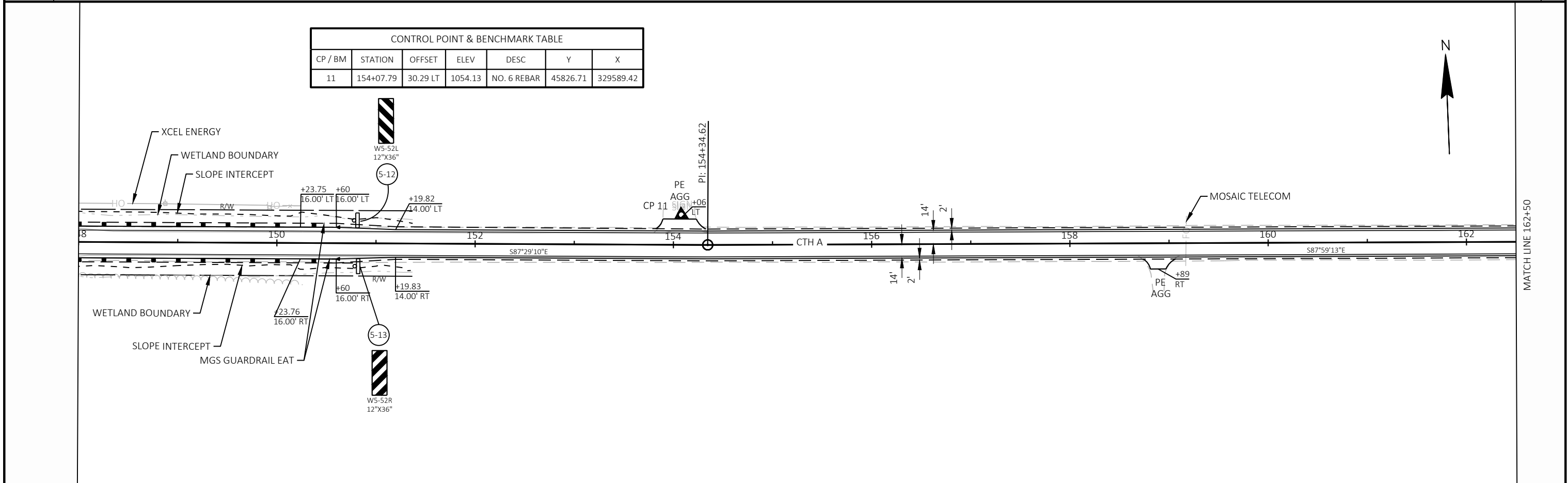
PI STA = 126+72.61
 Y = 45919.177
 X = 326855.523
 DELTA = 4°58'20" RT
 D = 2°17'31"
 T = 108.55'
 L = 216.96'
 R = 2500.00'
 PC STA = 125+64.06
 Y = 45914.705
 X = 326747.069
 PT STA = 127+81.02
 Y = 45914.233
 X = 326963.957
 DB = N87°38'18"E
 DA = S87°23'22"E





CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
10	140+50.08	128.63 LT	1060.89	MAG NAIL IN RDWY C/L	45984.92	328237.56

CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
11	154+07.79	30.29 LT	1054.13	NO. 6 REBAR	45826.71	329589.42

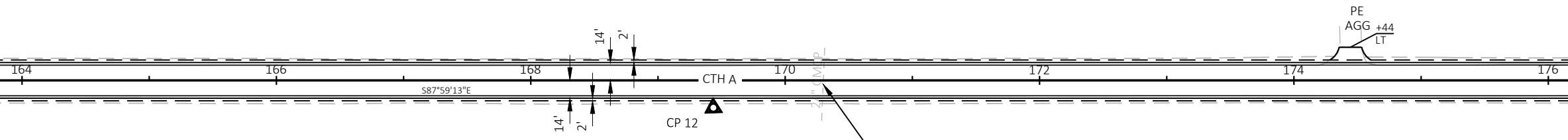


PROJECT NO: 8833-00-71 HWY: CTH A COUNTY: BARRON PLAN SHEETS SHEET E



MATCH LINE 162+50

MATCH LINE 177+50



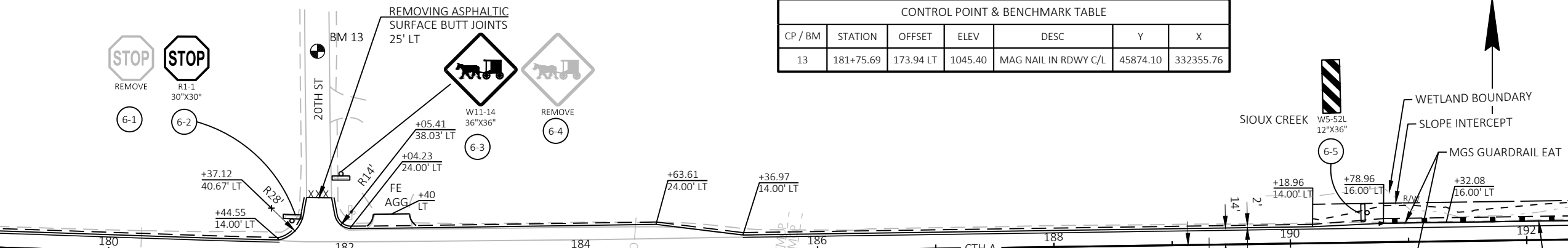
CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
12	169+43.54	21.48 RT	1050.33	NO. 6 REBAR	45720.80	331122.12

5

5

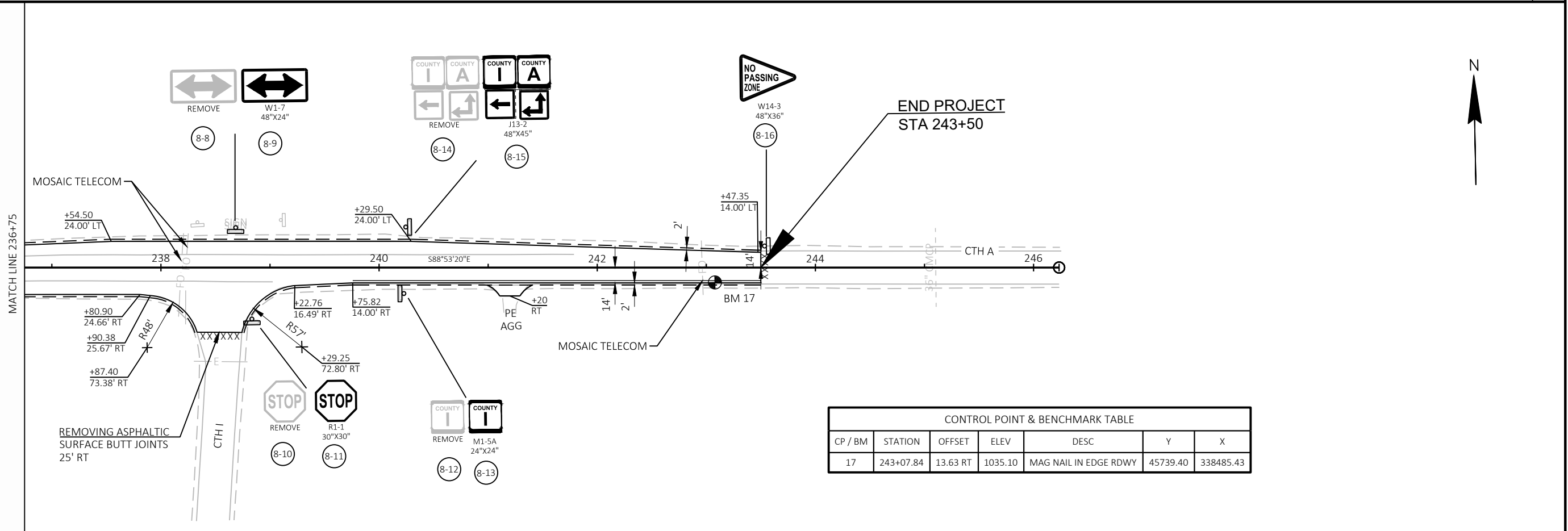
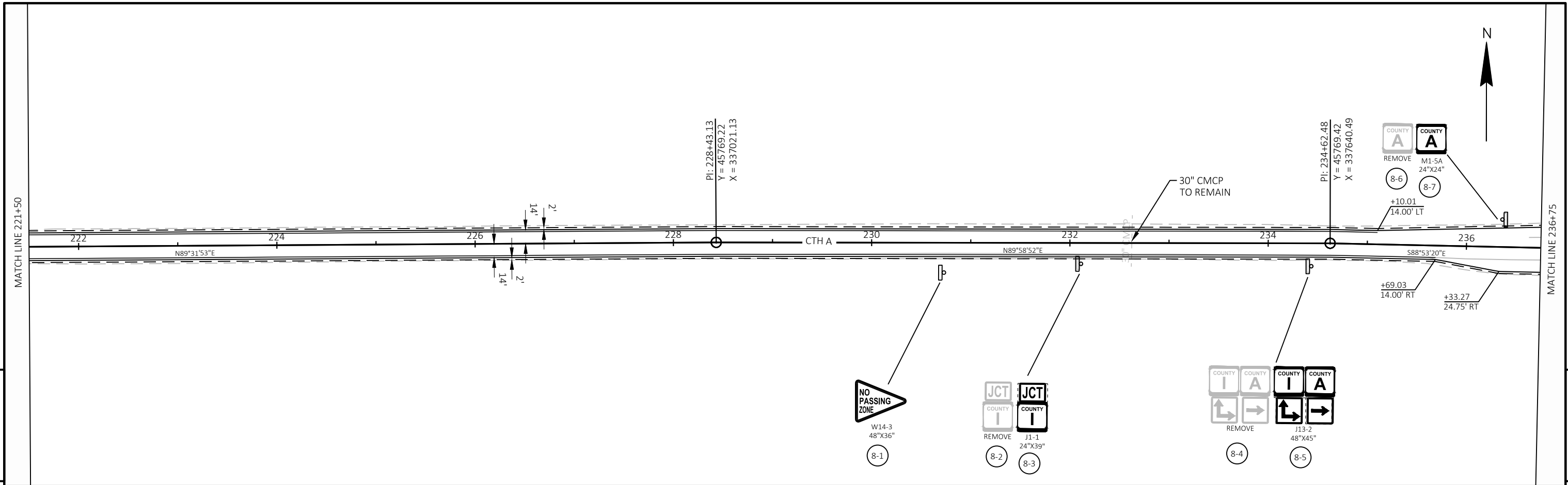
MATCH LINE 177+50

MATCH LINE 192+50



CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
13	181+75.69	173.94 LT	1045.40	MAG NAIL IN RDWY C/L	45874.10	332355.76

PI STA = 181+67.22
 Y = 45699.279
 X = 332345.803
 DELTA = 2°46'19" LT
 D = 1°44'29"
 T = 79.60'
 L = 159.17'
 R = 3290.00'
 PC STA = 180+87.62
 Y = 45702.075
 X = 332266.250
 PT STA = 182+46.79
 Y = 45700.333
 X = 332425.399
 DB = S87°59'13"E
 DA = N89°14'28"E

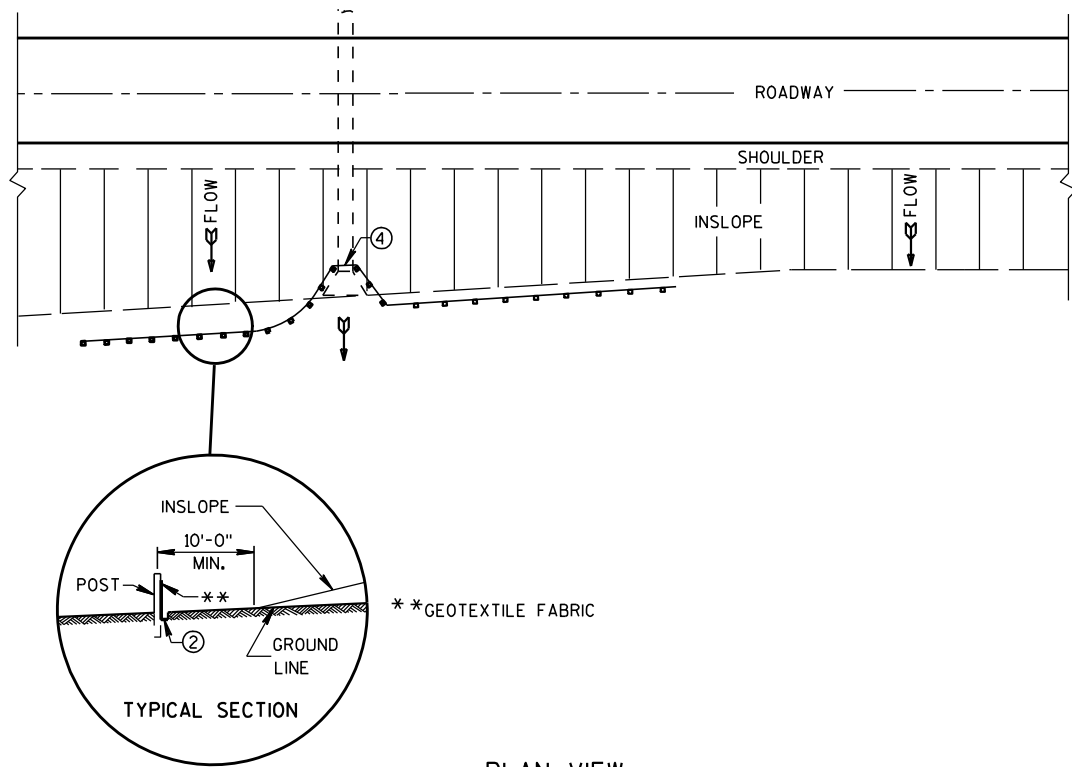


CONTROL POINT & BENCHMARK TABLE						
CP / BM	STATION	OFFSET	ELEV	DESC	Y	X
17	243+07.84	13.63 RT	1035.10	MAG NAIL IN EDGE RDWY	45739.40	338485.43

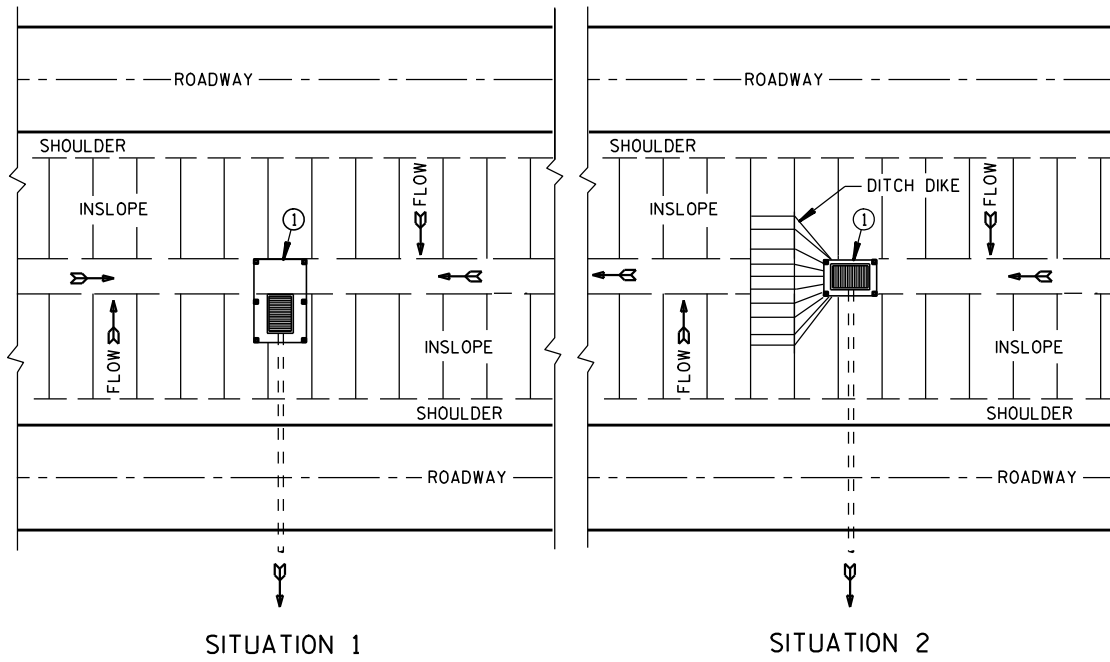
PROJECT NO: 8833-00-71 HWY: CTH A COUNTY: BARRON PLAN SHEETS SHEET **E**

Standard Detail Drawing List

08E09-06	SILT FENCE
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
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
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 THREE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C12-08	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

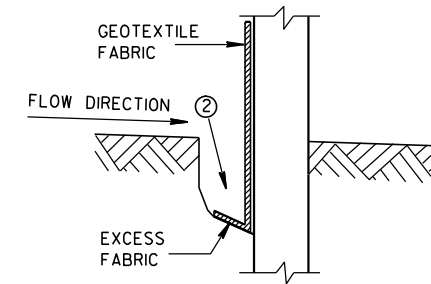


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

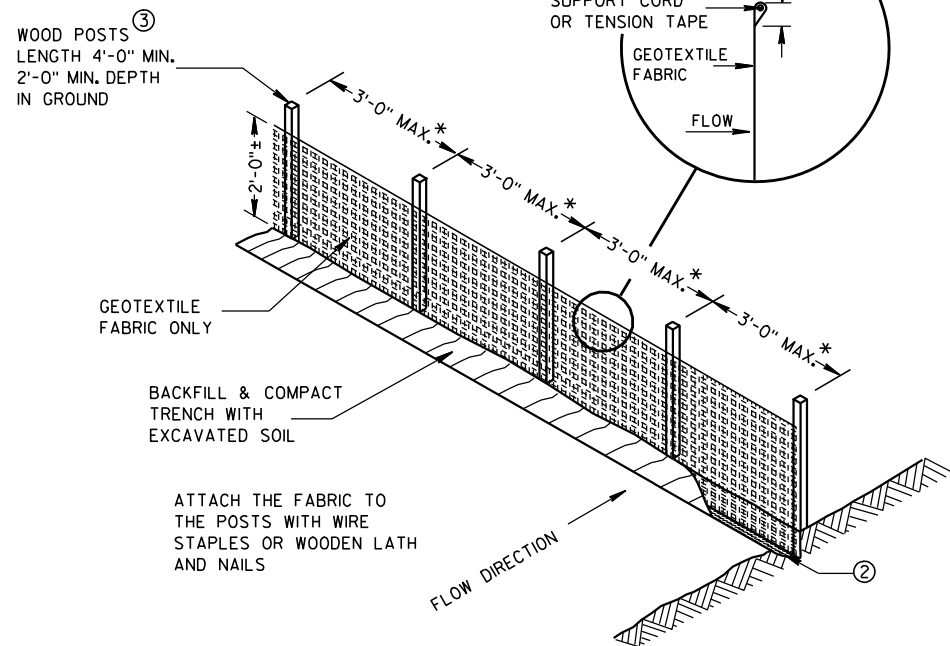
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



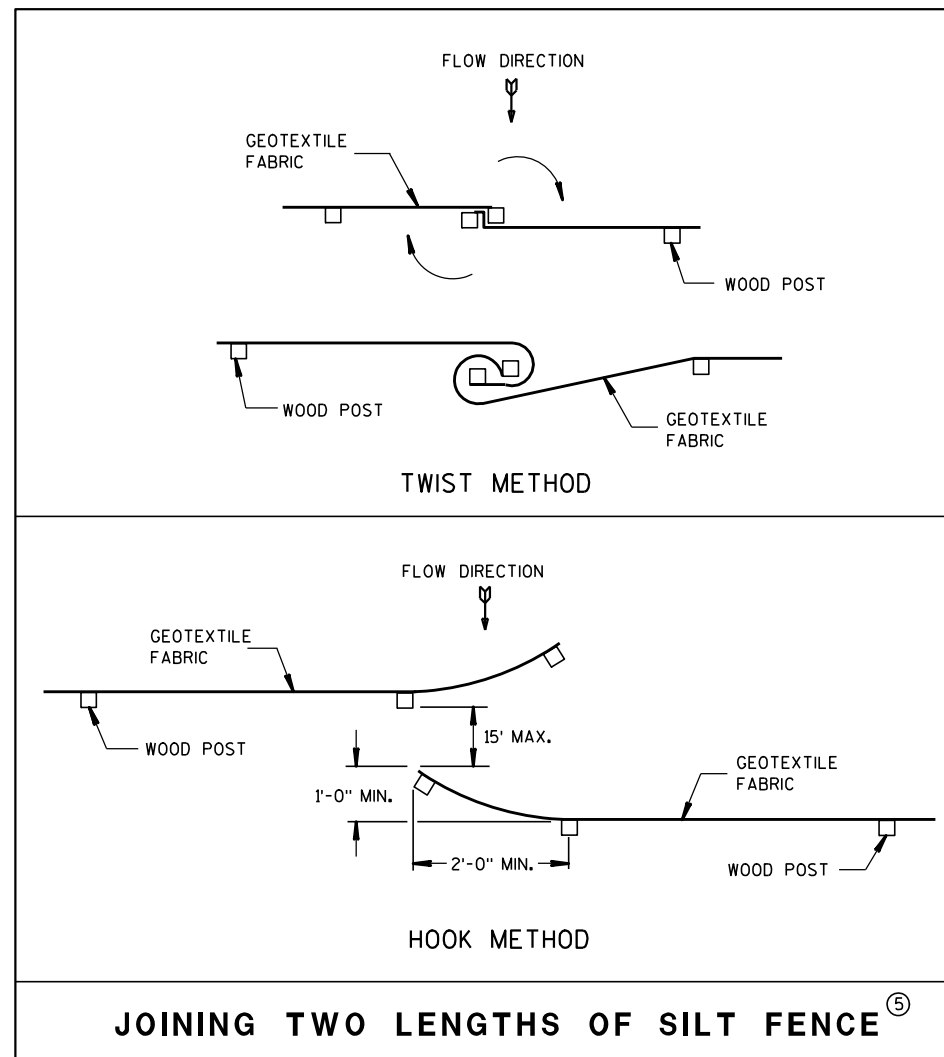
TRENCH DETAIL

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

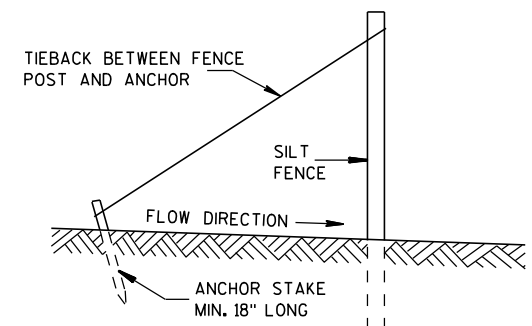


SILT FENCE

* 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

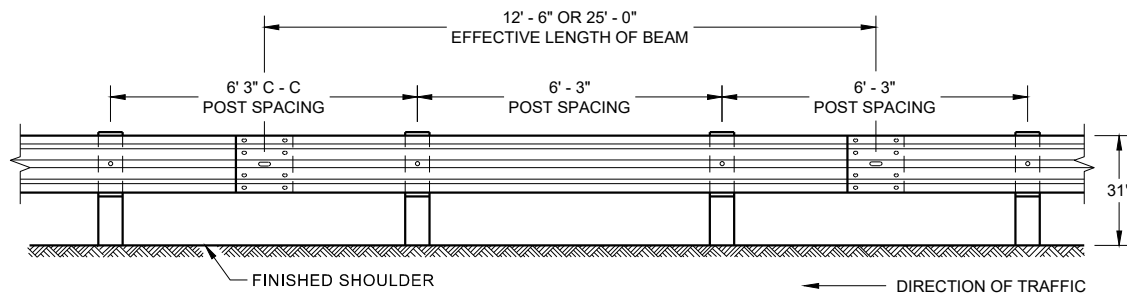
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

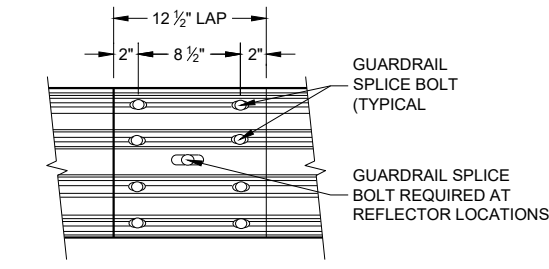
4-29-05
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



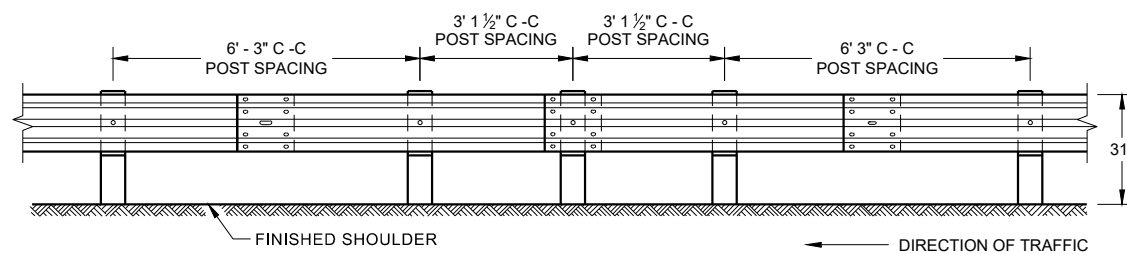
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



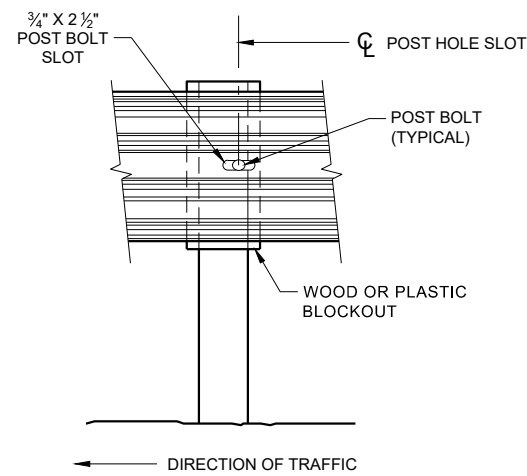
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

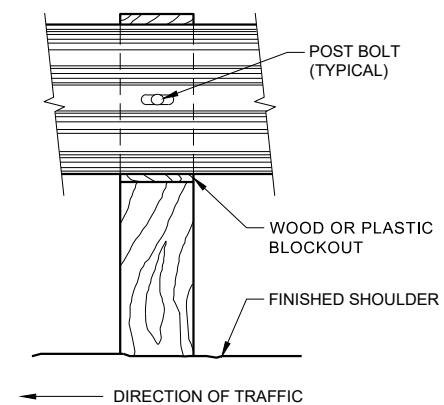
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER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



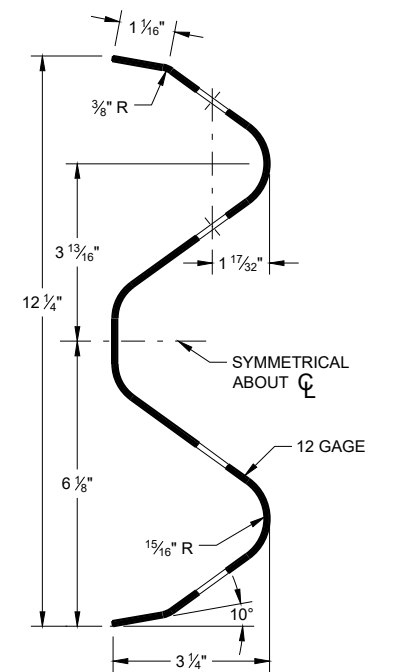
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



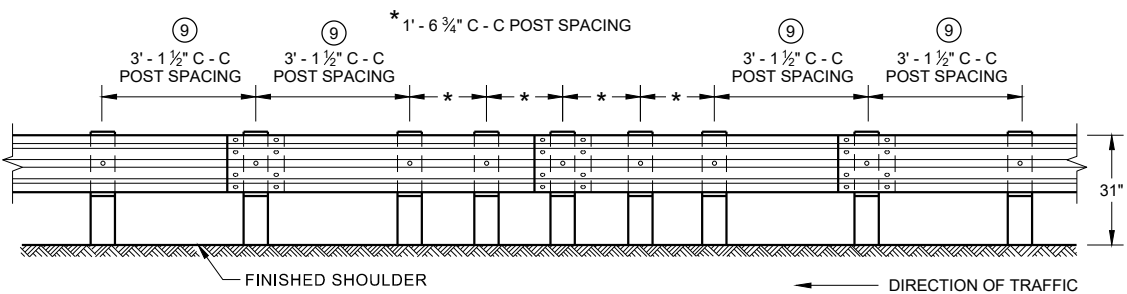
FRONT VIEW AT STEEL POST



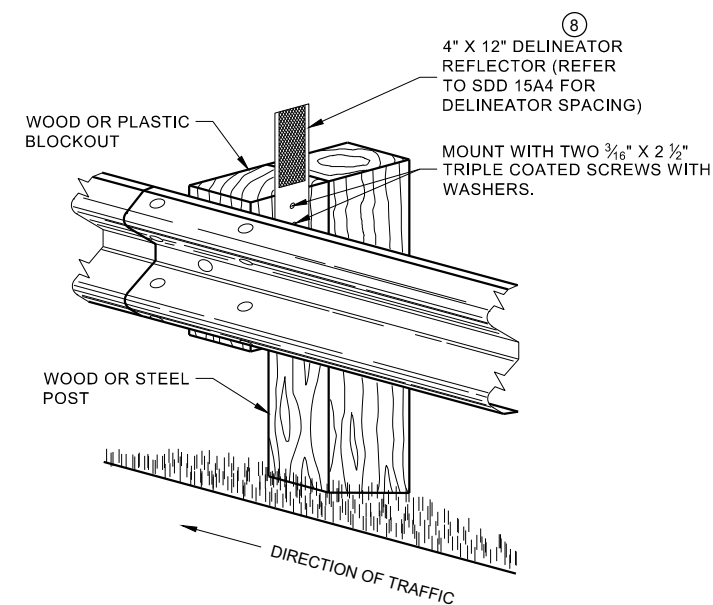
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



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



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

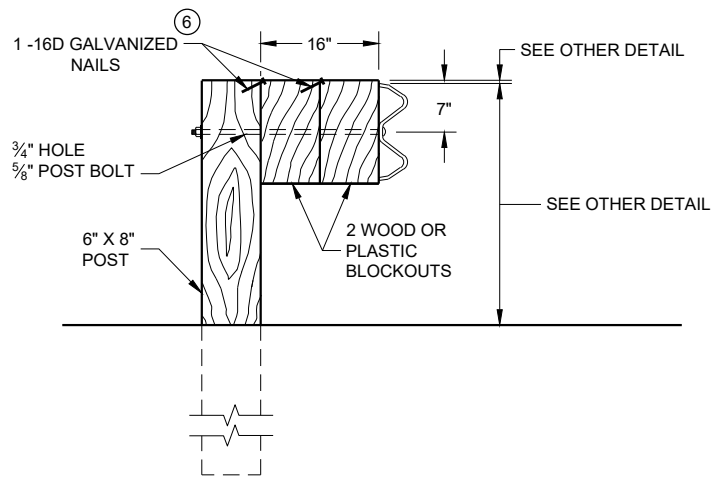
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

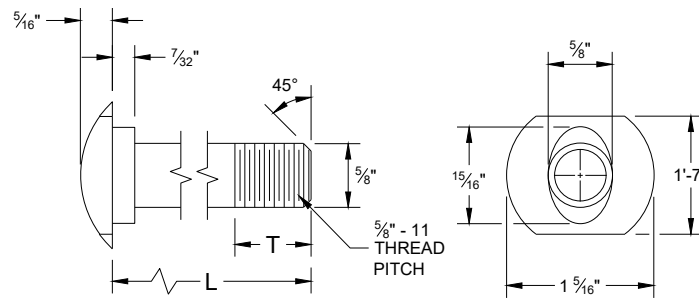


DETAIL FOR 16" BLOCKOUT DEPTH

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.

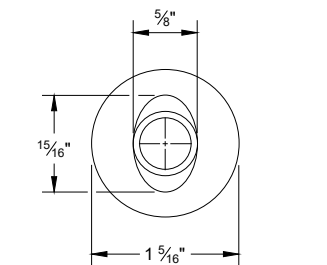
NOTE:

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.

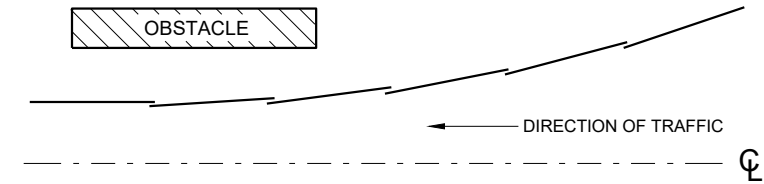


POST BOLT TABLE

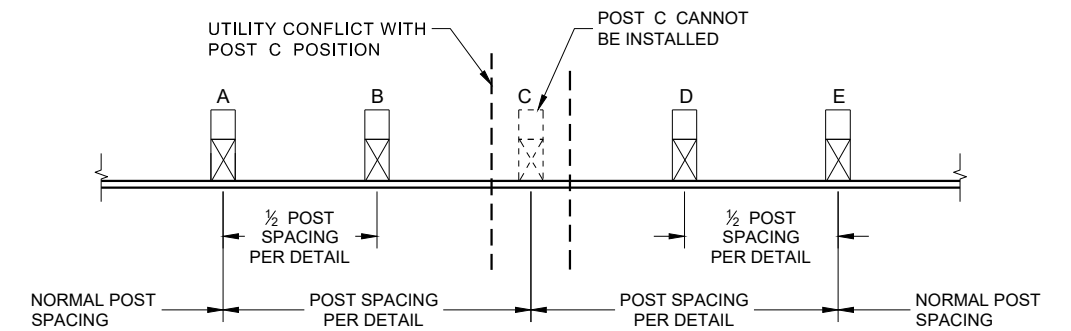
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



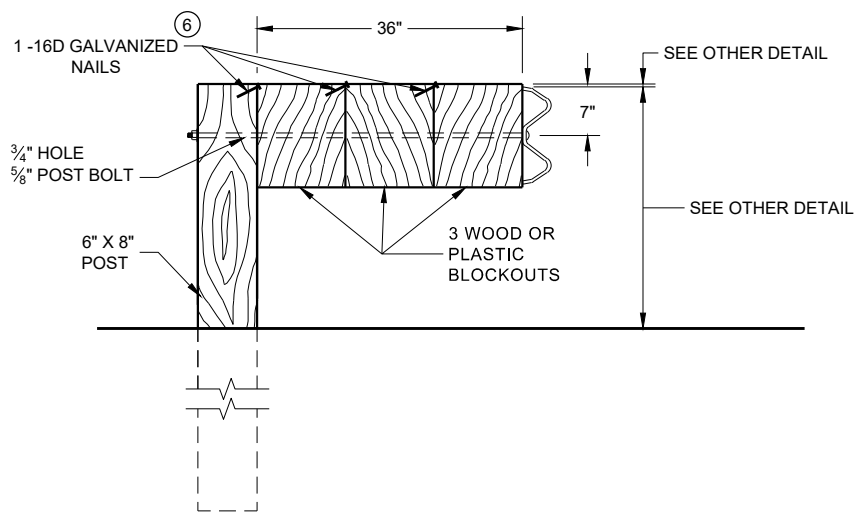
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

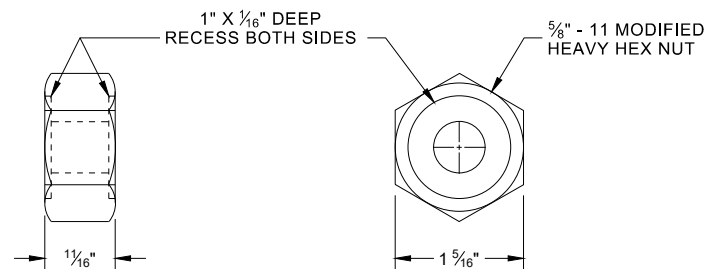


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

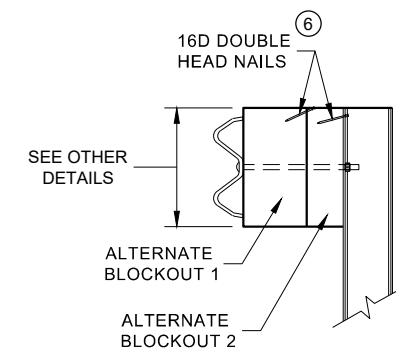


DETAIL FOR 36" BLOCKOUT DEPTH

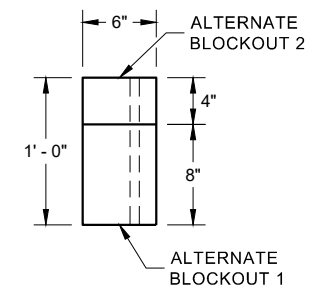
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT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



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



SIDE VIEW



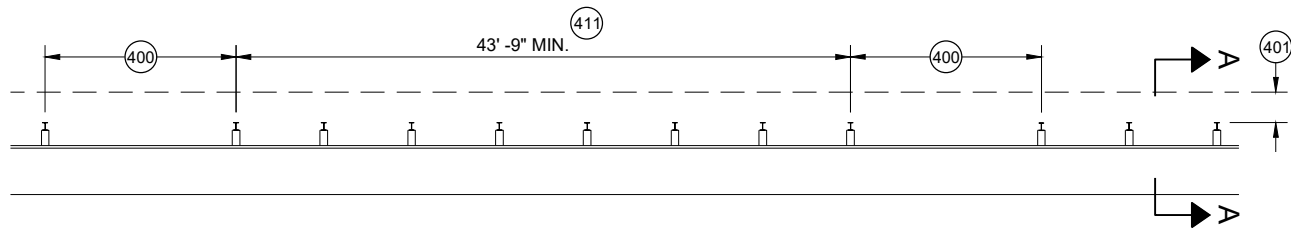
PLAN VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

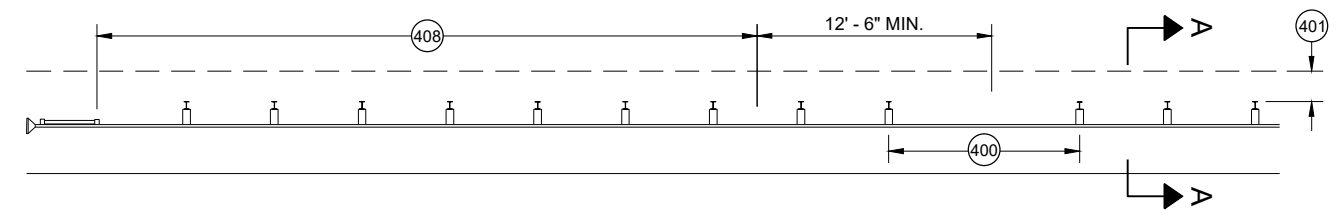
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

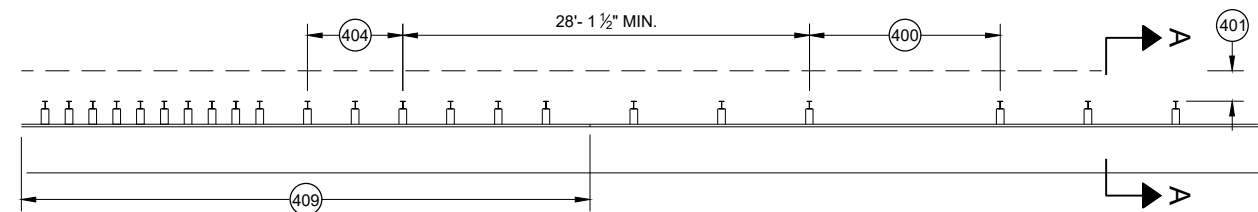
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



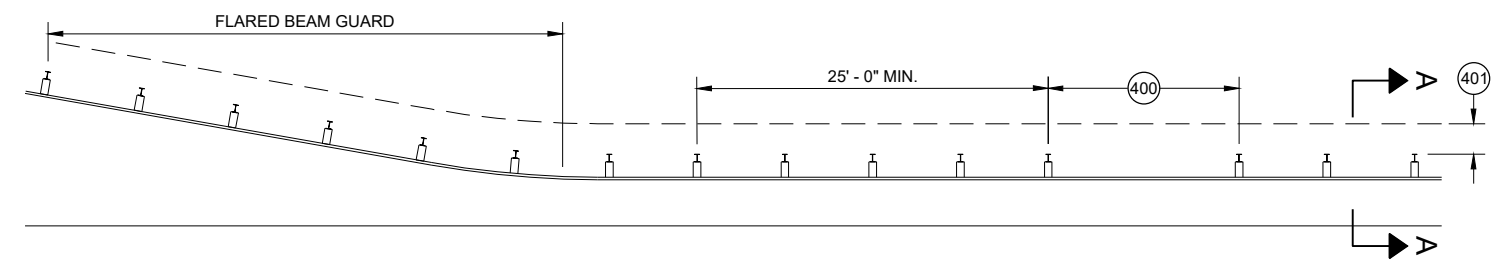
MISSING POST IN MGS GUARDRAIL



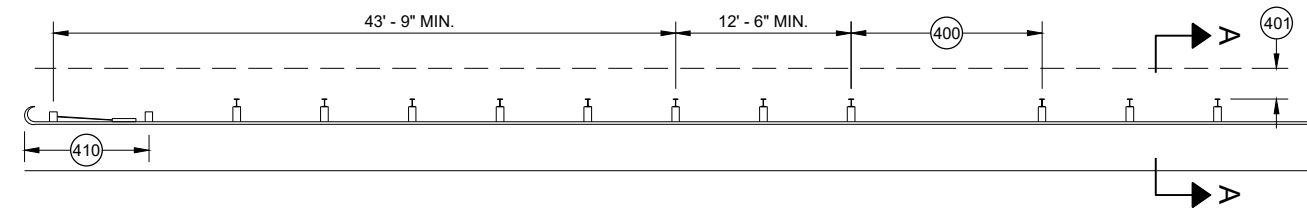
MISSING POST IN MGS GUARDRAIL NEAR EAT



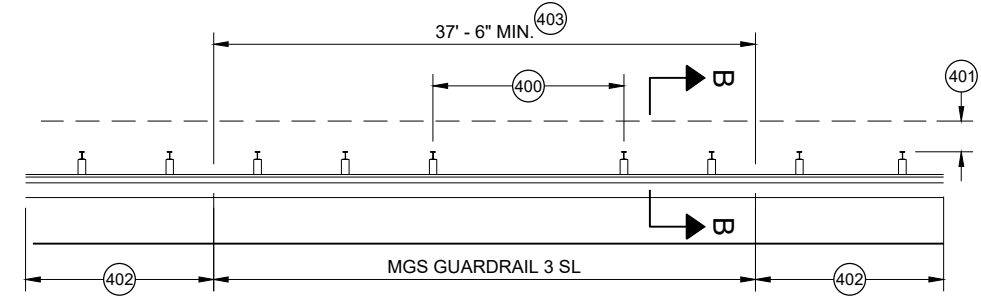
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

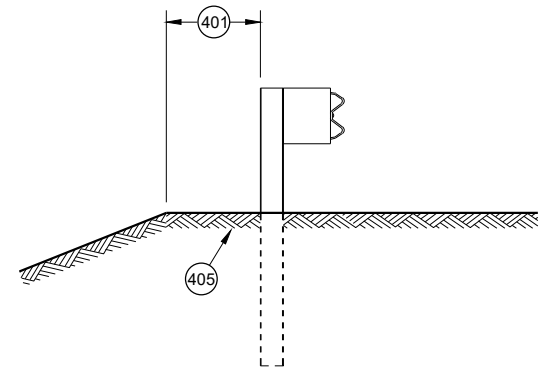


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

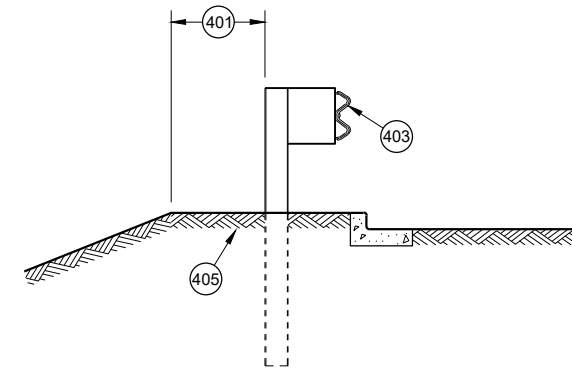


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (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

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

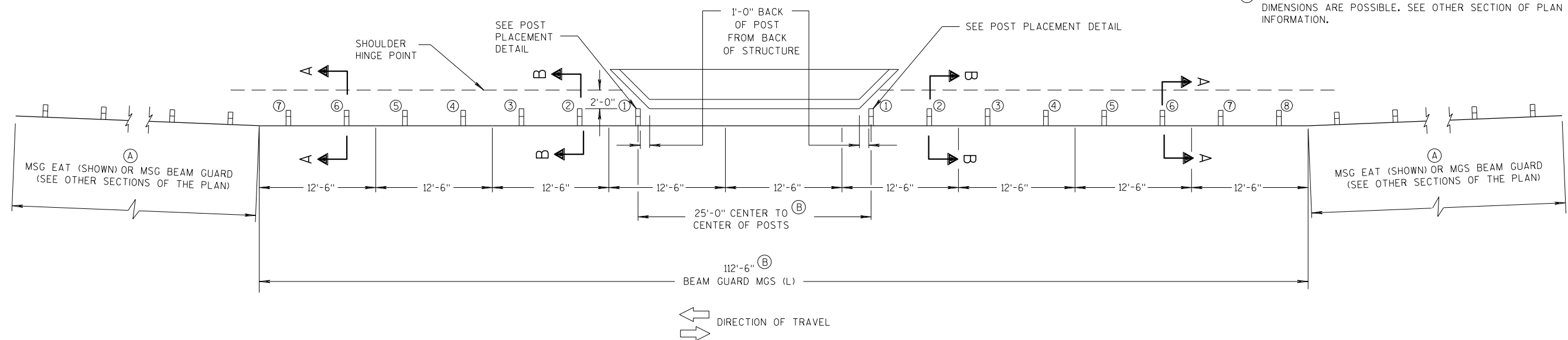
GENERAL NOTES

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

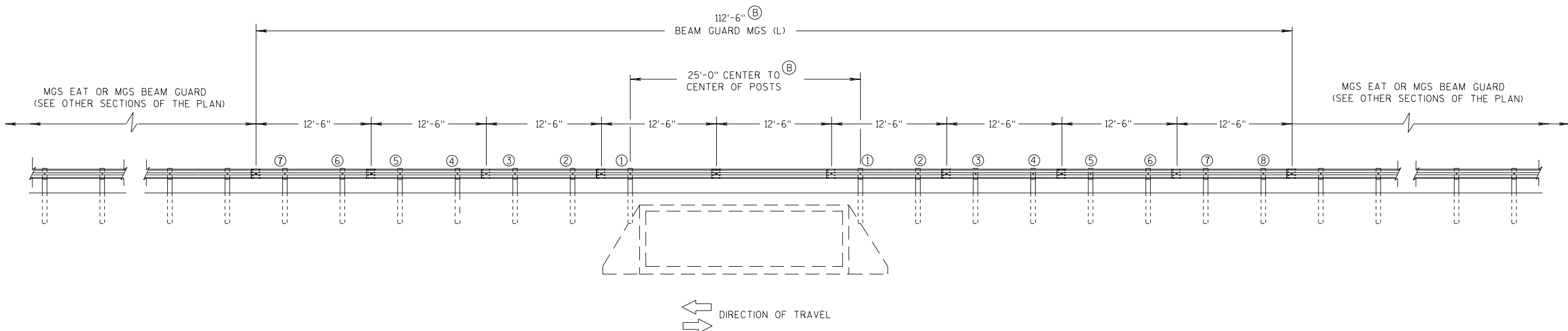
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN, IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

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

<p>MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>

6

6

S.D.D. 14 B 43-4a

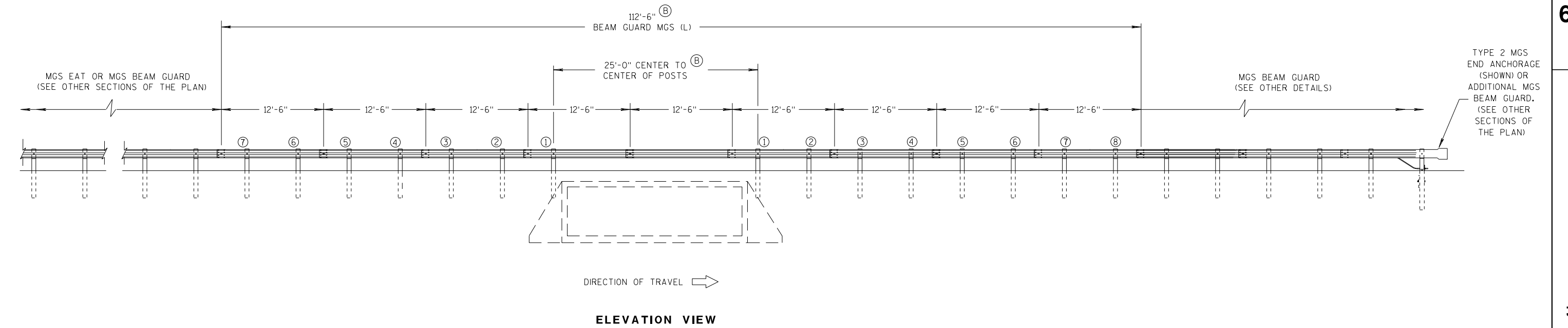
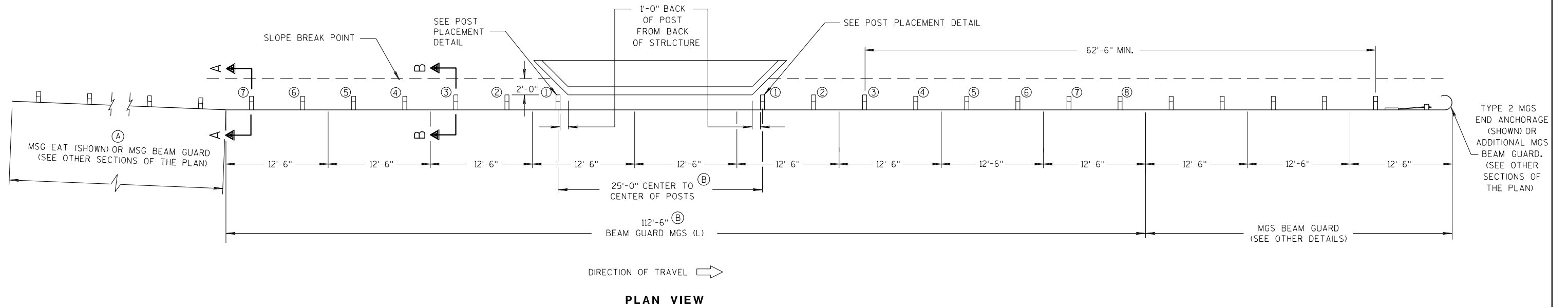
S.D.D. 14 B 43-4a

GENERAL NOTES

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

SEE SDD 14 B 42 FOR MORE DETAILS.

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



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

**MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)**

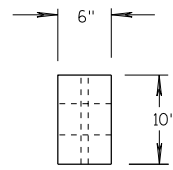
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

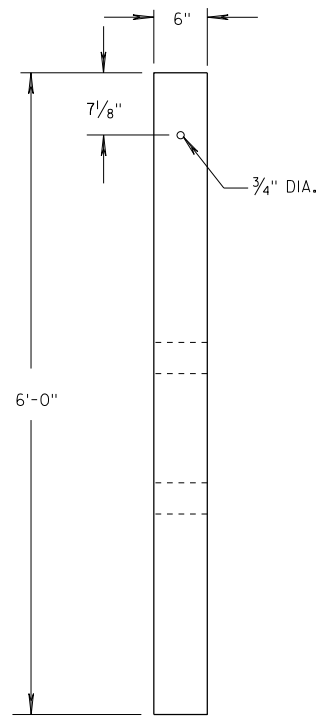
6

S.D.D. 14 B 43-4b

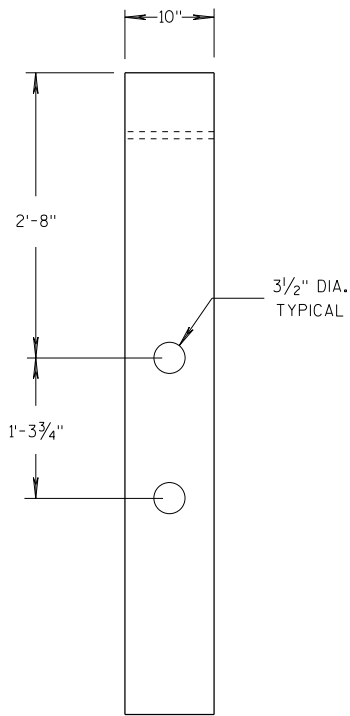
S.D.D. 14 B 43-4b



PLAN VIEW

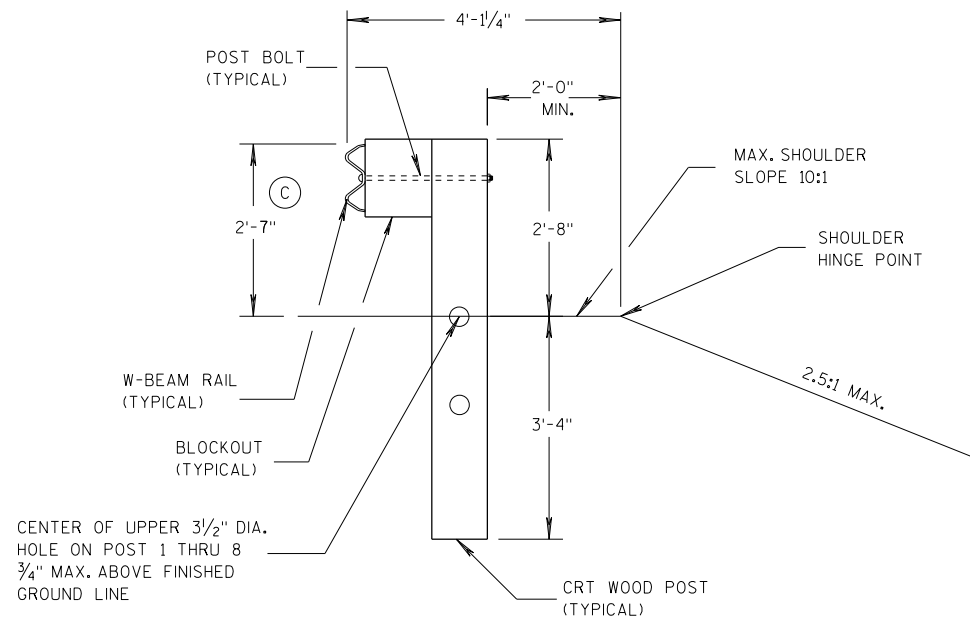


FRONT VIEW

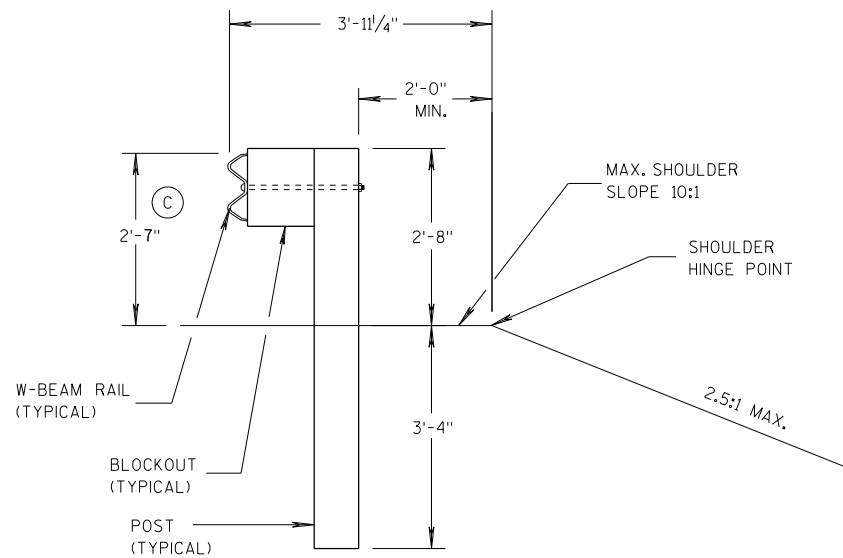


SIDE VIEW

CRT WOOD POST



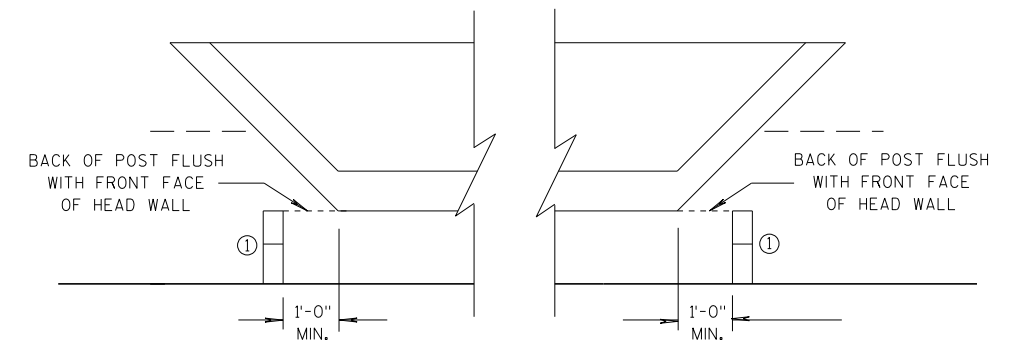
SECTION B-B
POSTS NO. 1-3
SEE OTHER DETAILS



SECTION A-A
POSTS NO. 4-8
SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED	/s/ Rodney Taylor
07/2018	DATE
	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

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.

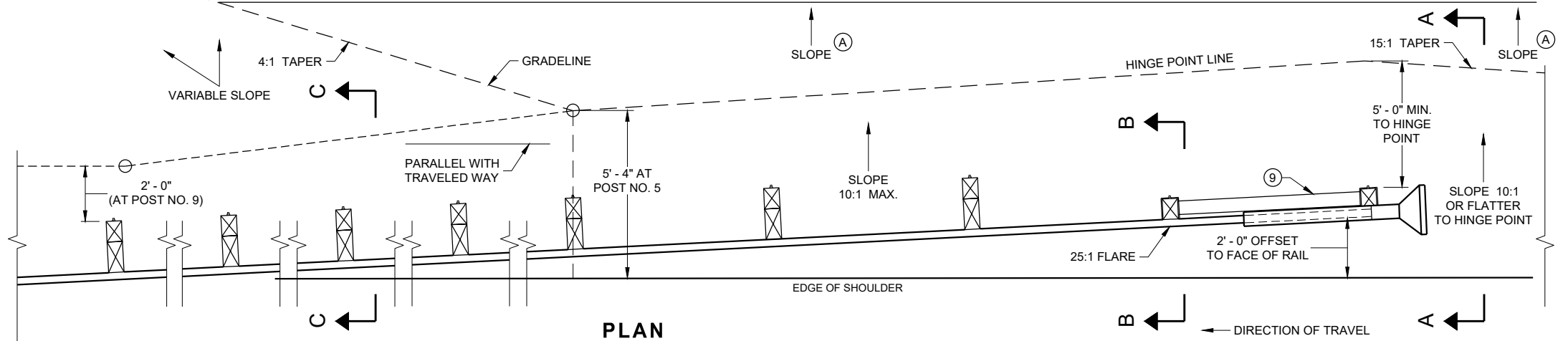
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

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

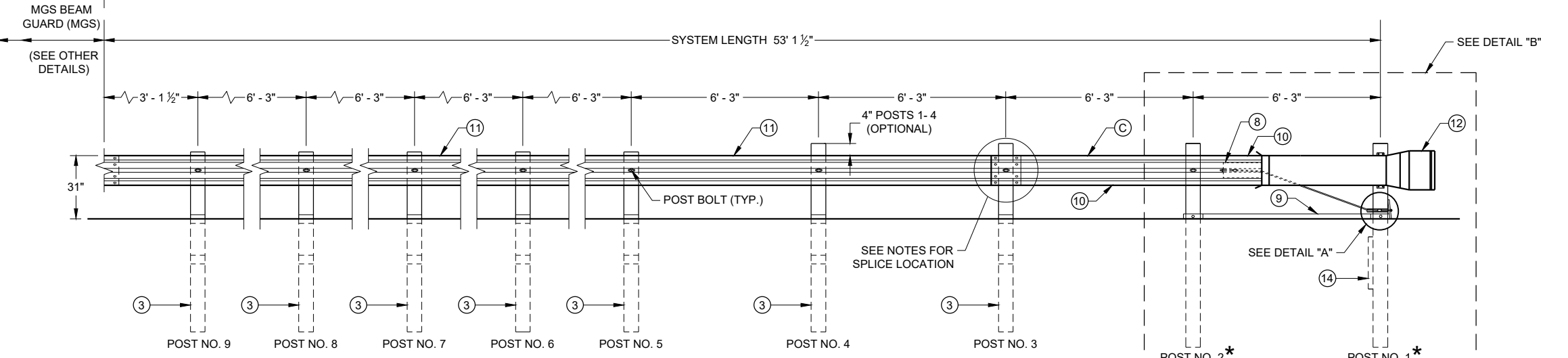
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

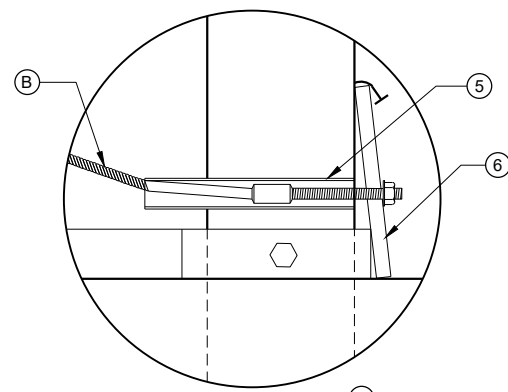
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



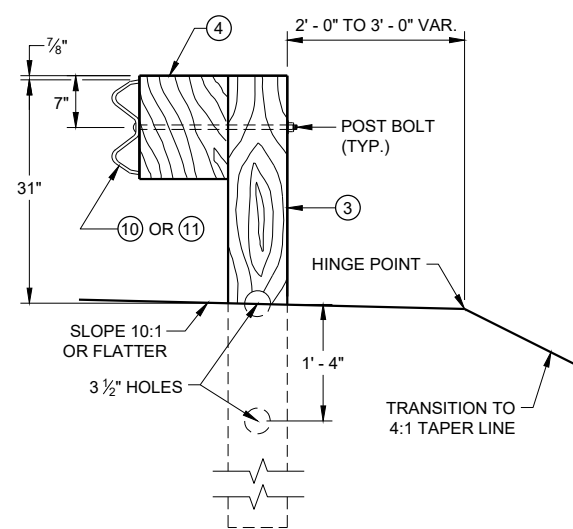
PLAN



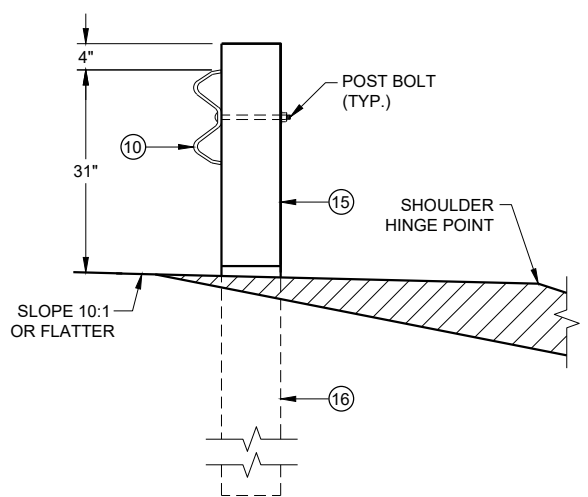
ELEVATION



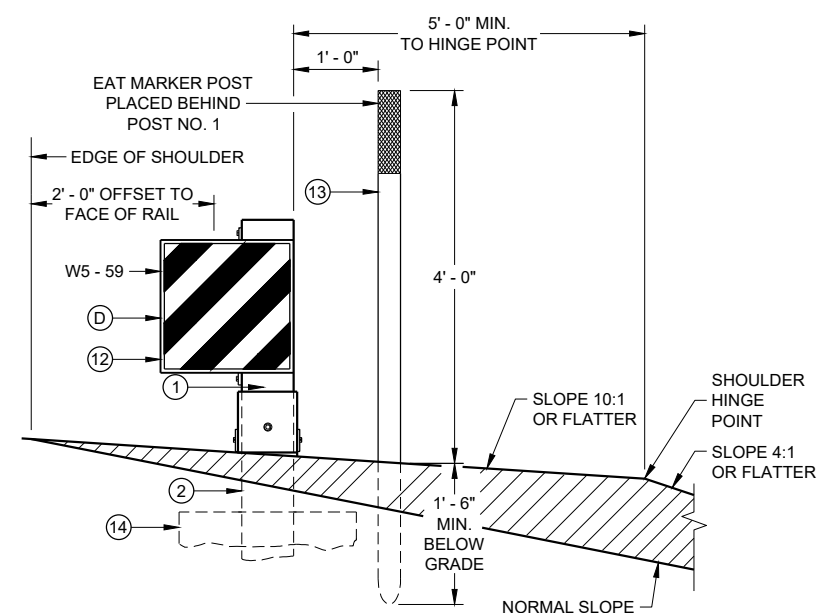
DETAIL "A"



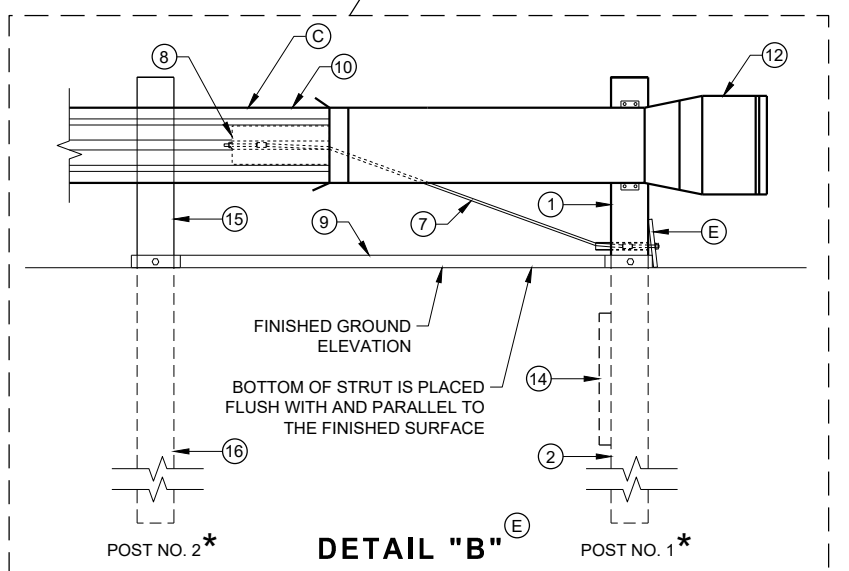
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B
TYPICAL AT POST NO. 2***



**SECTION A - A
TYPICAL AT POST NO. 1***



DETAIL "B"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

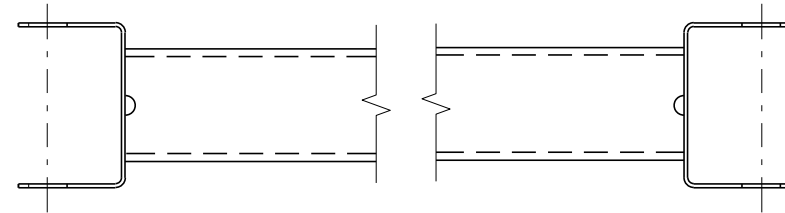
6

SDD 14B44 - 04a

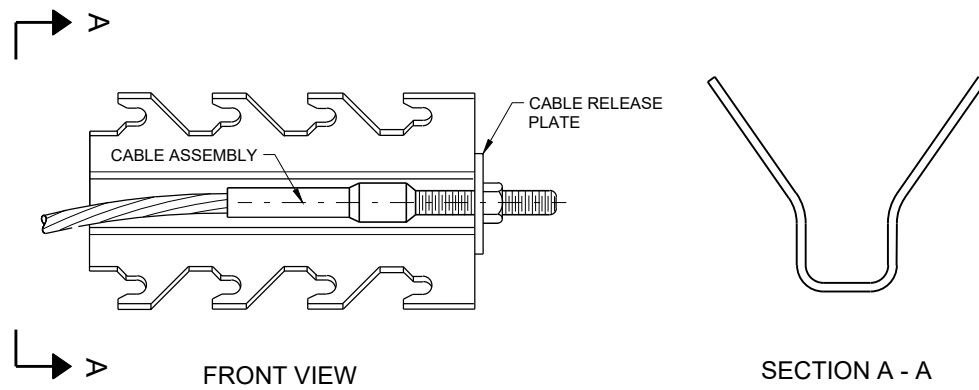
SDD 14B44 - 04a

BILL OF MATERIALS

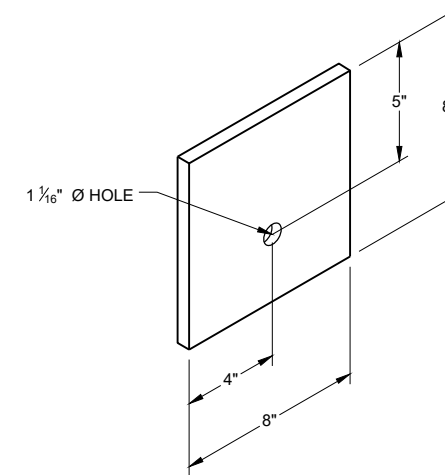
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



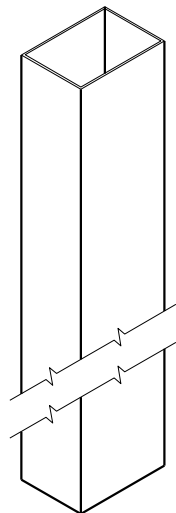
GENERIC GROUND STRUT ⑨ ⑤



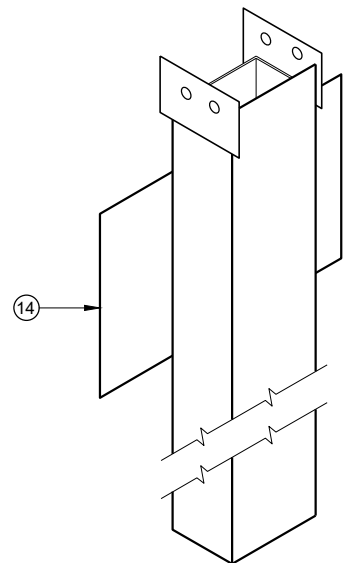
GENERIC ANCHOR CABLE BOX ⑨ ⑤



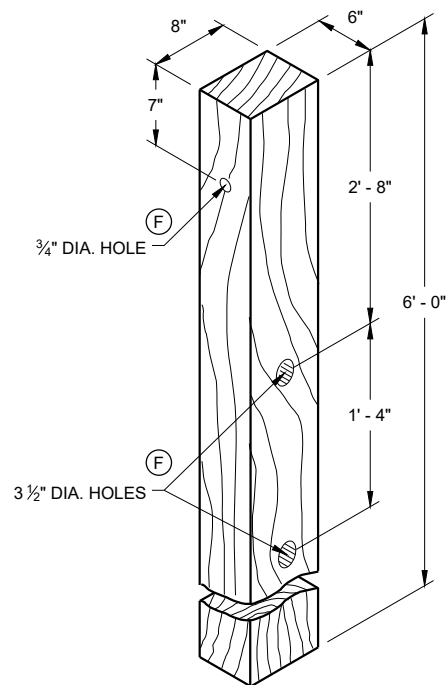
BEARING PLATE ⑥ ⑤



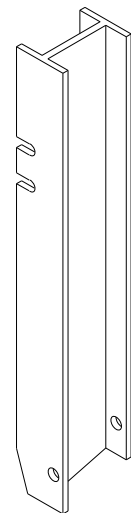
UPPER POST NO. 1 ⁽¹⁾ (E)



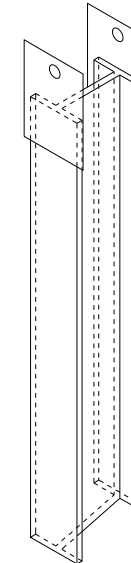
LOWER POST NO. 1 ⁽²⁾ (E)



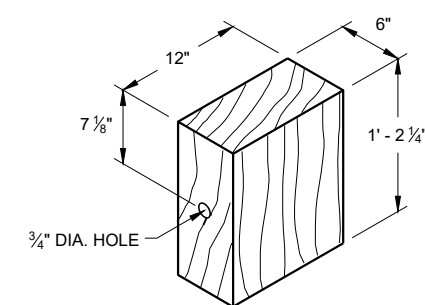
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

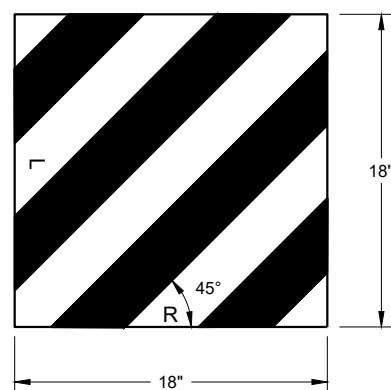


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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

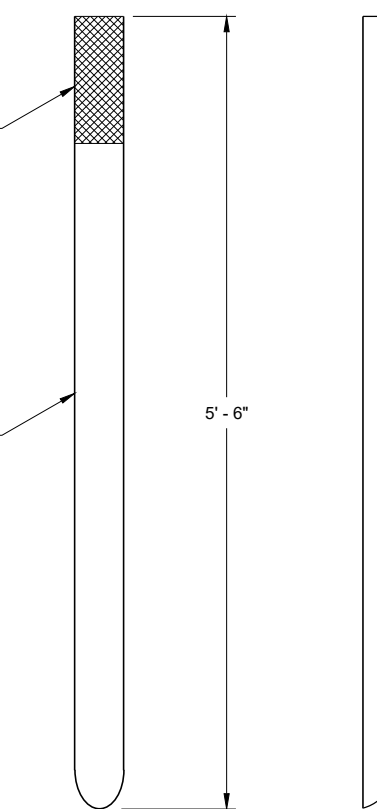
6



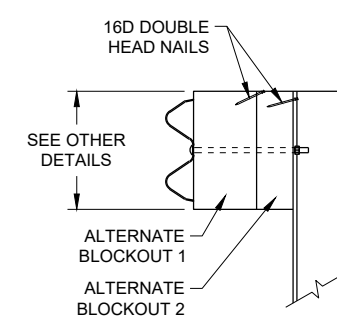
REFLECTIVE SHEETING DETAIL ^(E)

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

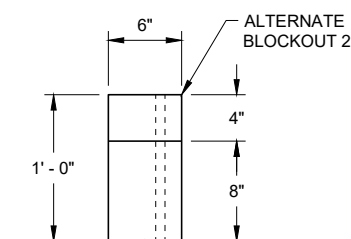
E.A.T. MARKER
POST (YELLOW)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

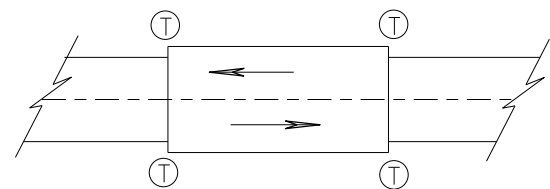
ALTERNATE WOOD
BLOCKOUT DETAIL

6

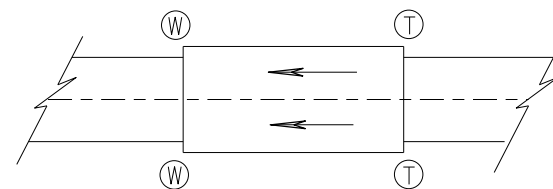
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

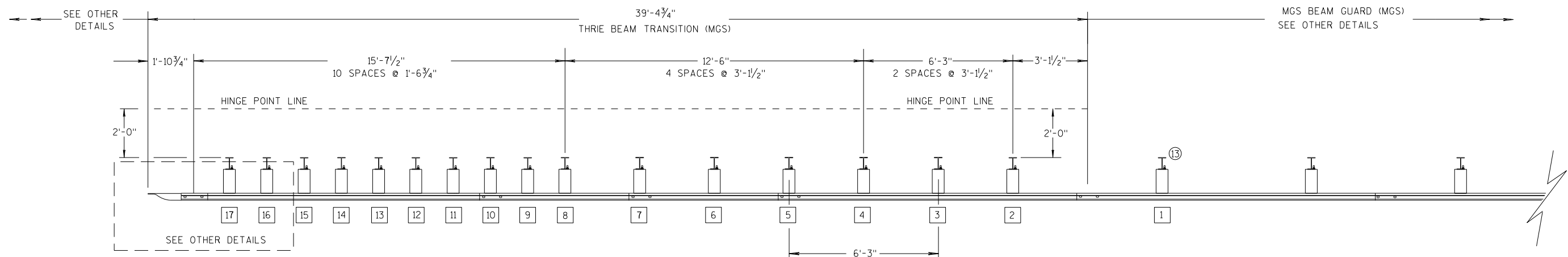
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

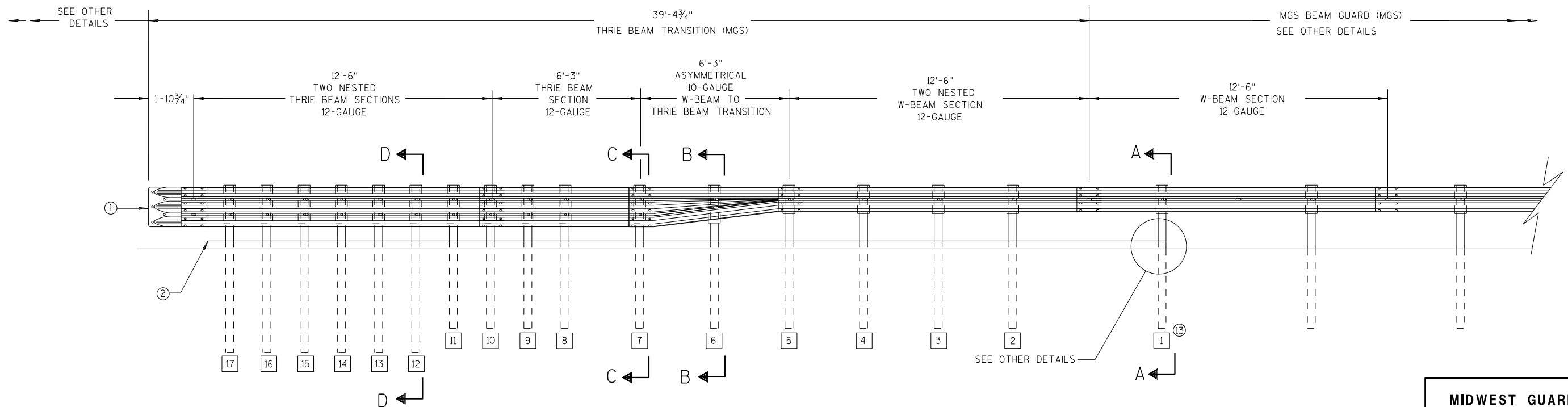
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

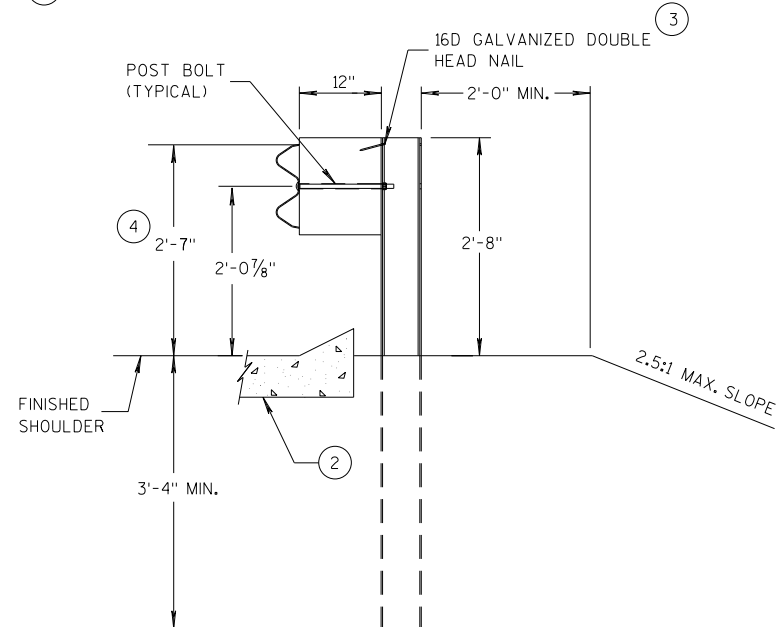
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

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

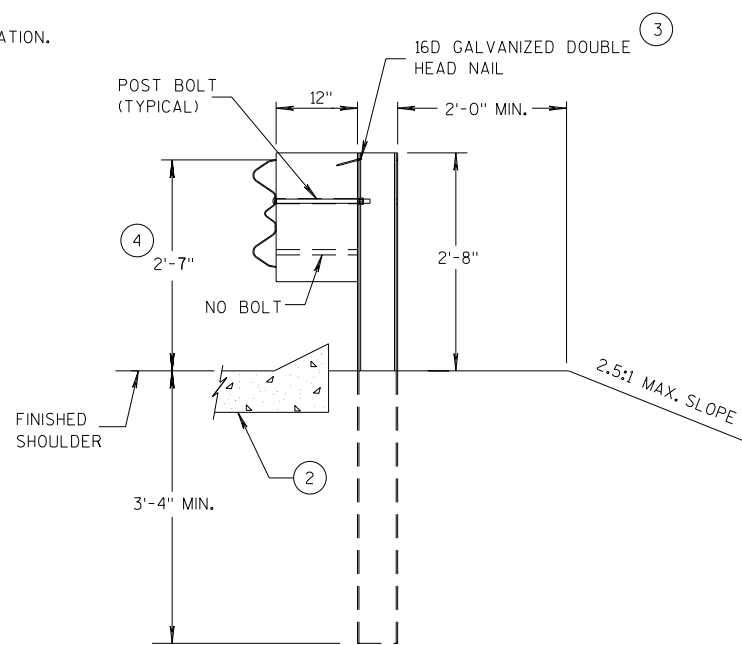
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

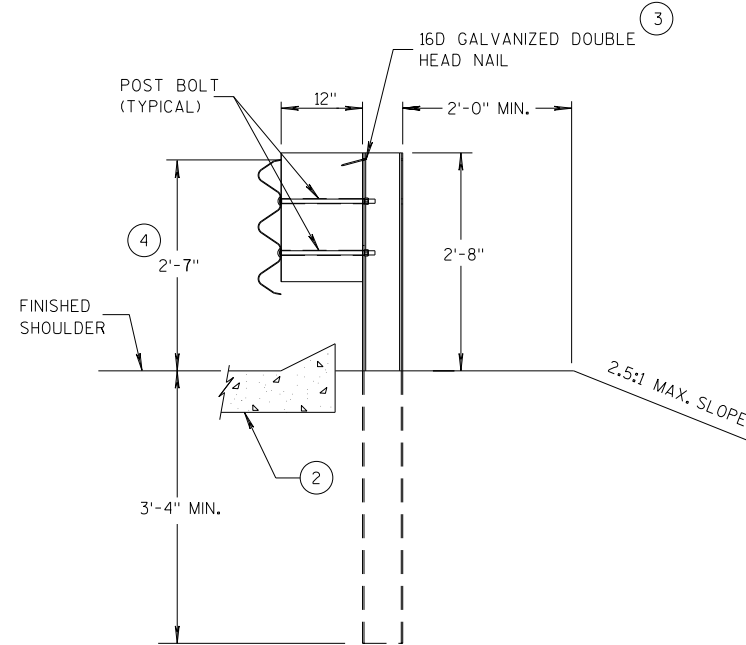
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".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



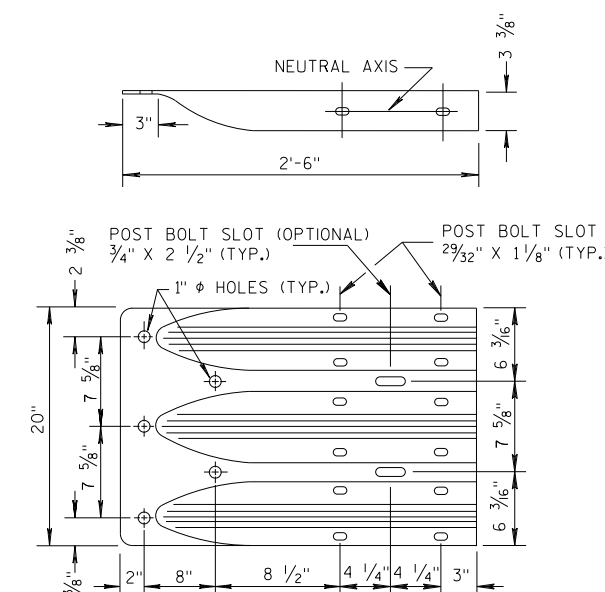
**SECTION A-A
POSTS 1-5**



**SECTION B-B
POST 6**



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



**THRIE BEAM
TERMINAL CONNECTOR**

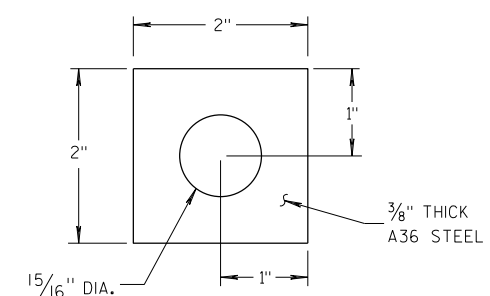
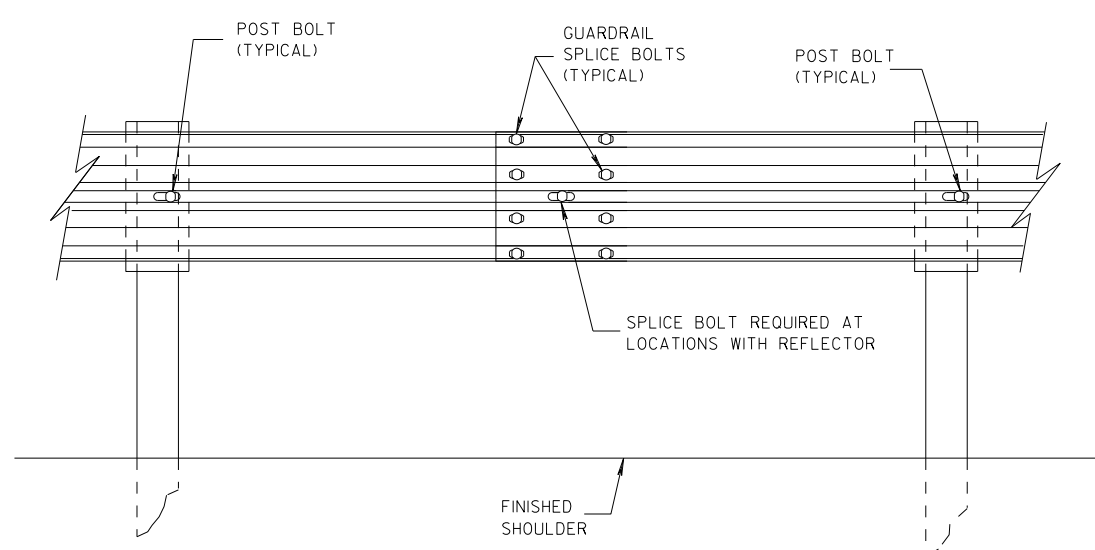
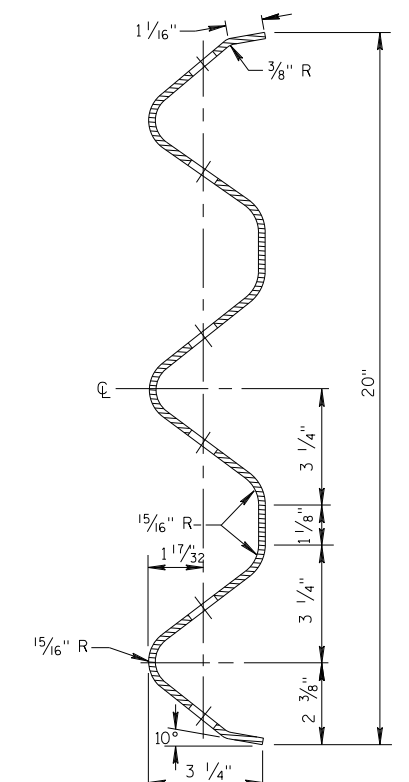


PLATE WASHER DETAIL



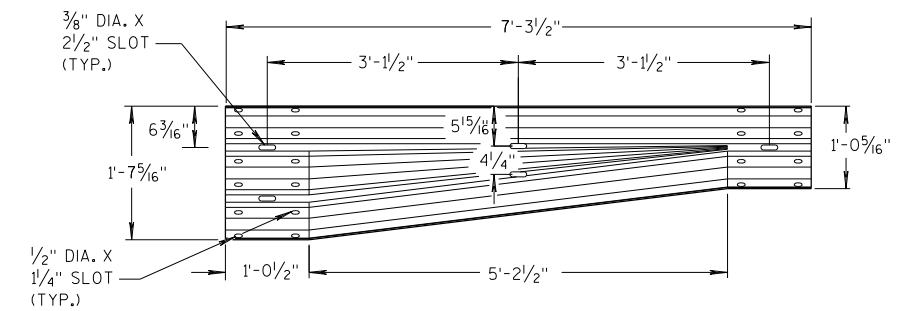
SPLICE DETAIL



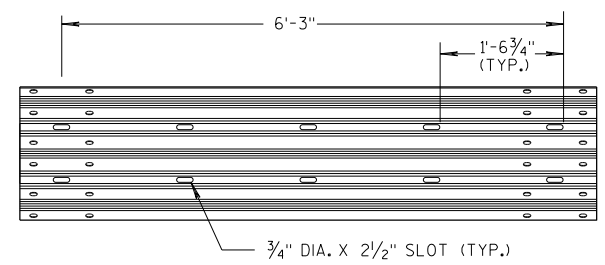
**SECTION THRU THRIE
BEAM RAIL ELEMENT**

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

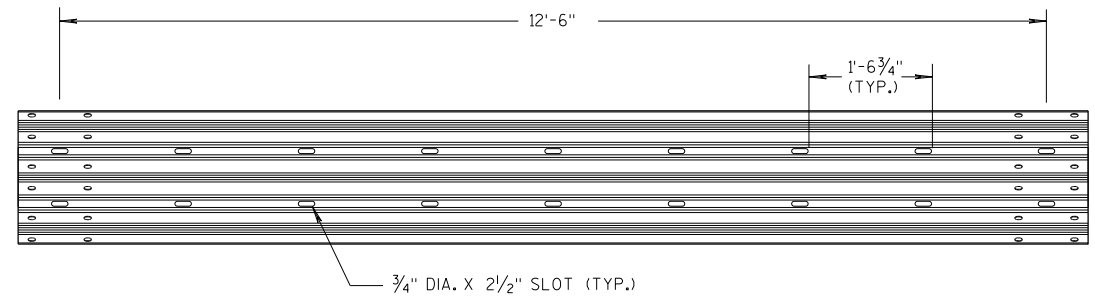
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



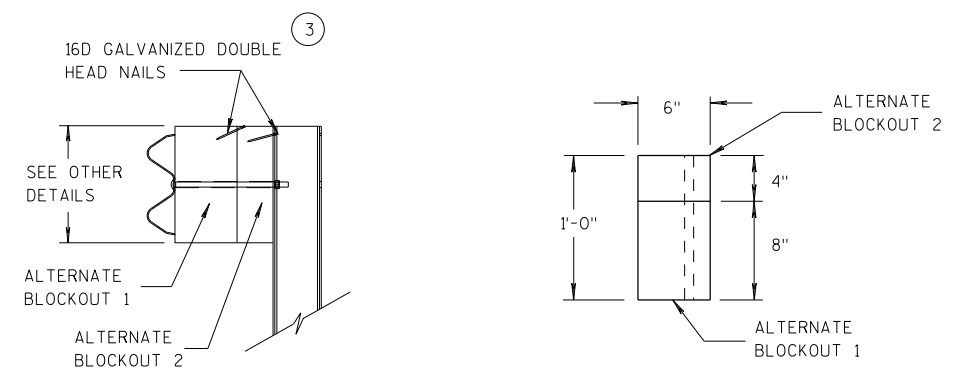
W-BEAM TO THRIE BEAM TRANSITION SECTION



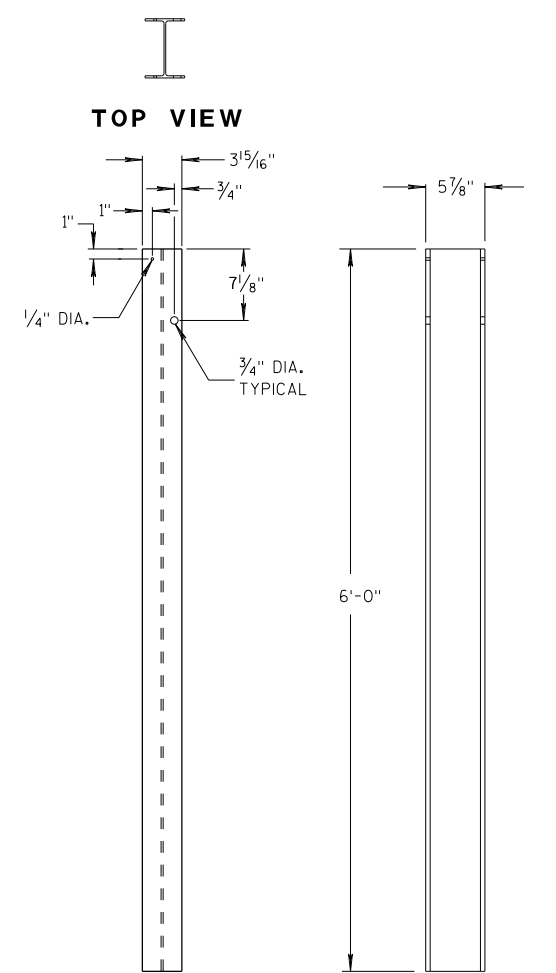
6'-3\"/>



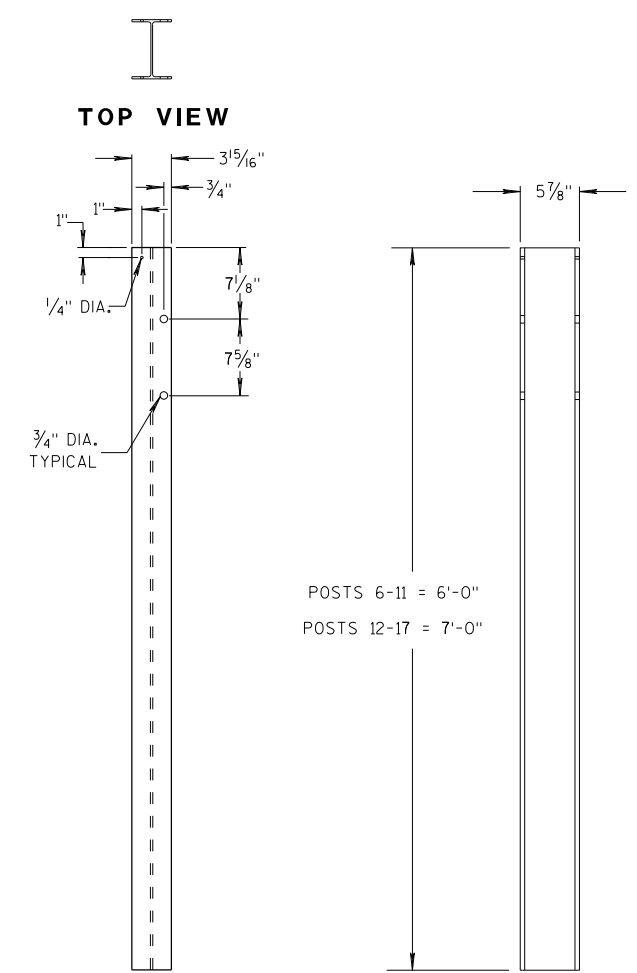
12'-6\"/>



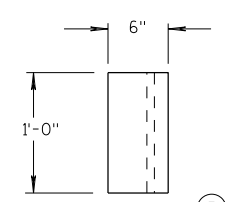
ALTERNATE WOOD BLOCKOUT DETAIL



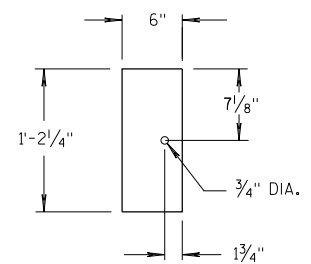
STEEL POSTS 1-5



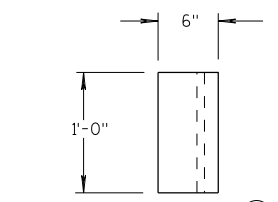
STEEL POSTS 6-17



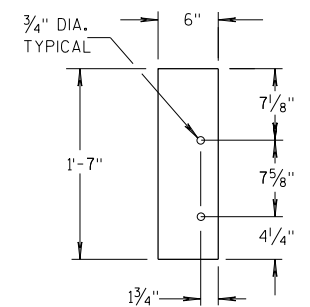
TOP VIEW



**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)**

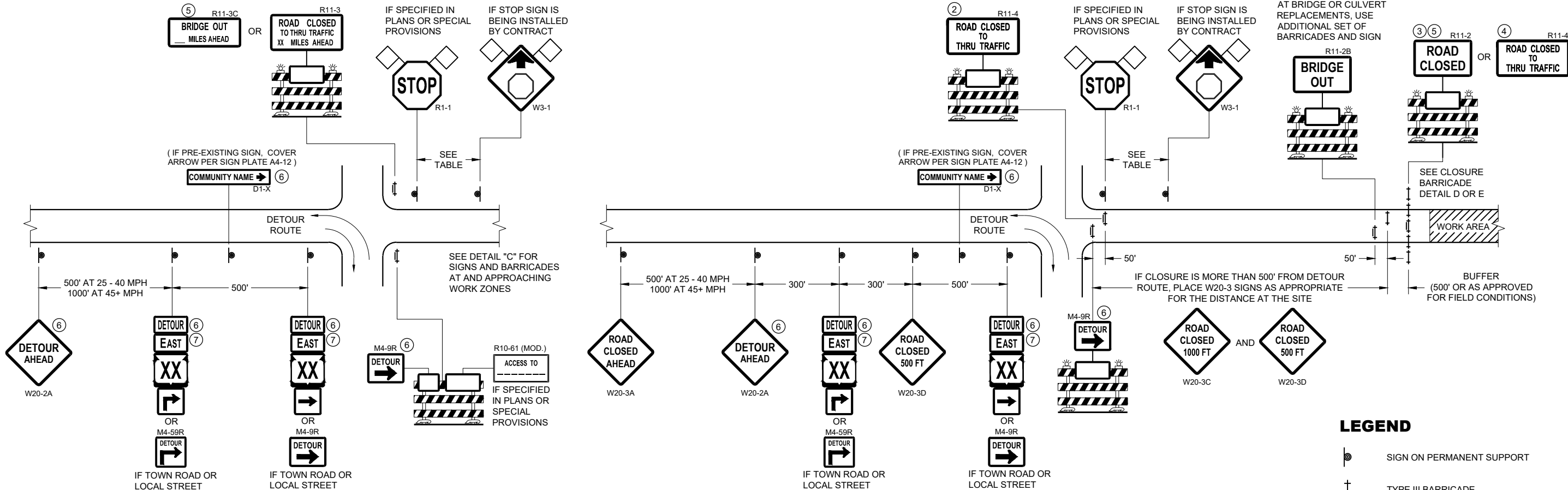
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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



**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**

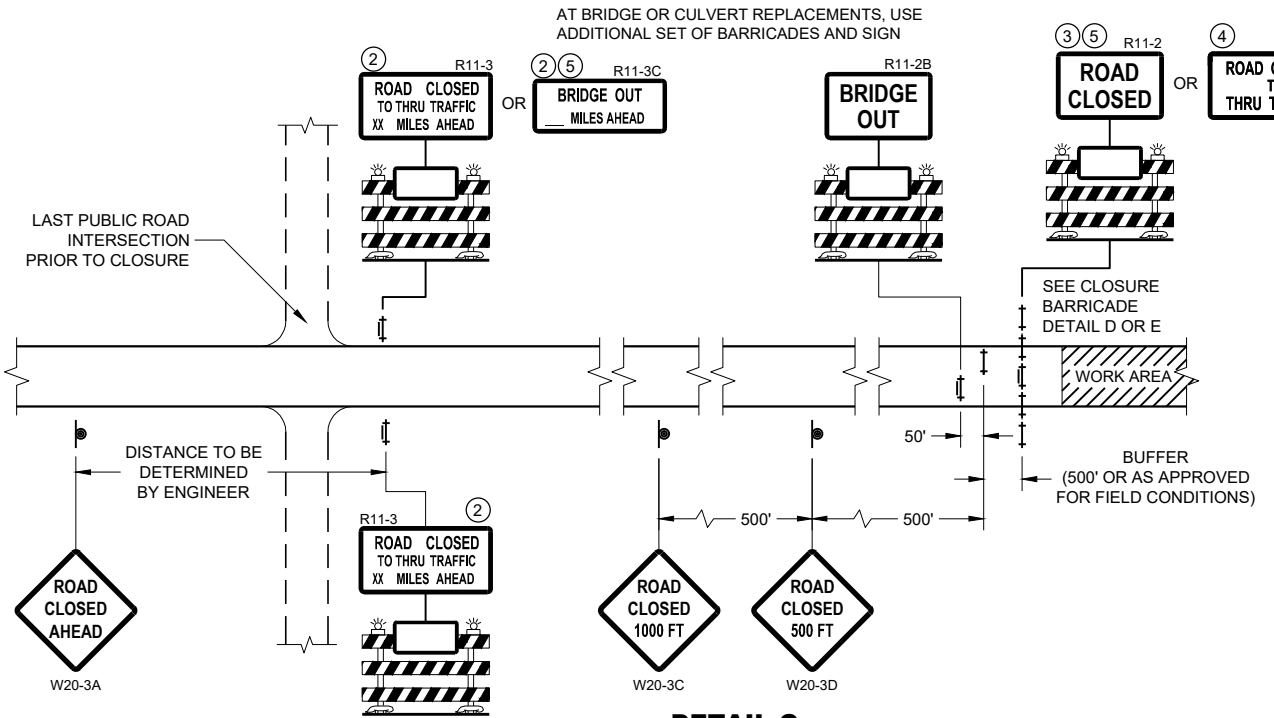
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

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



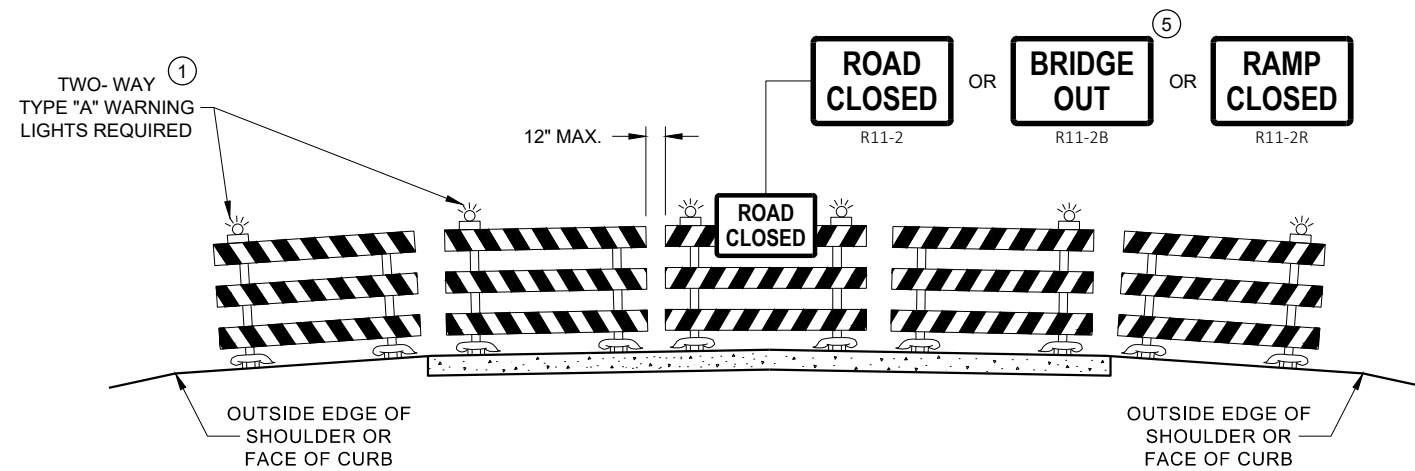
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

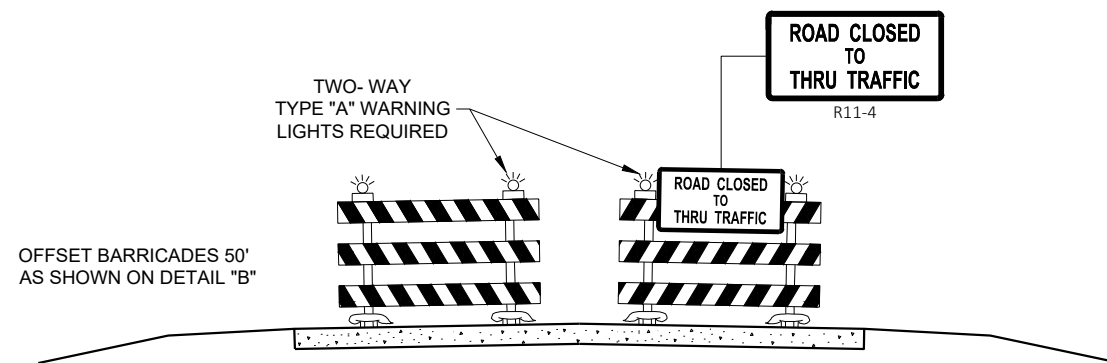
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE 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

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

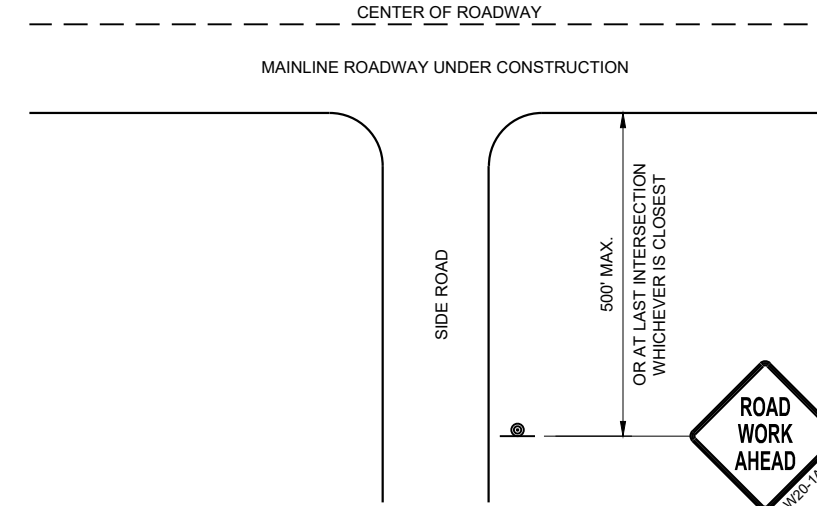
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

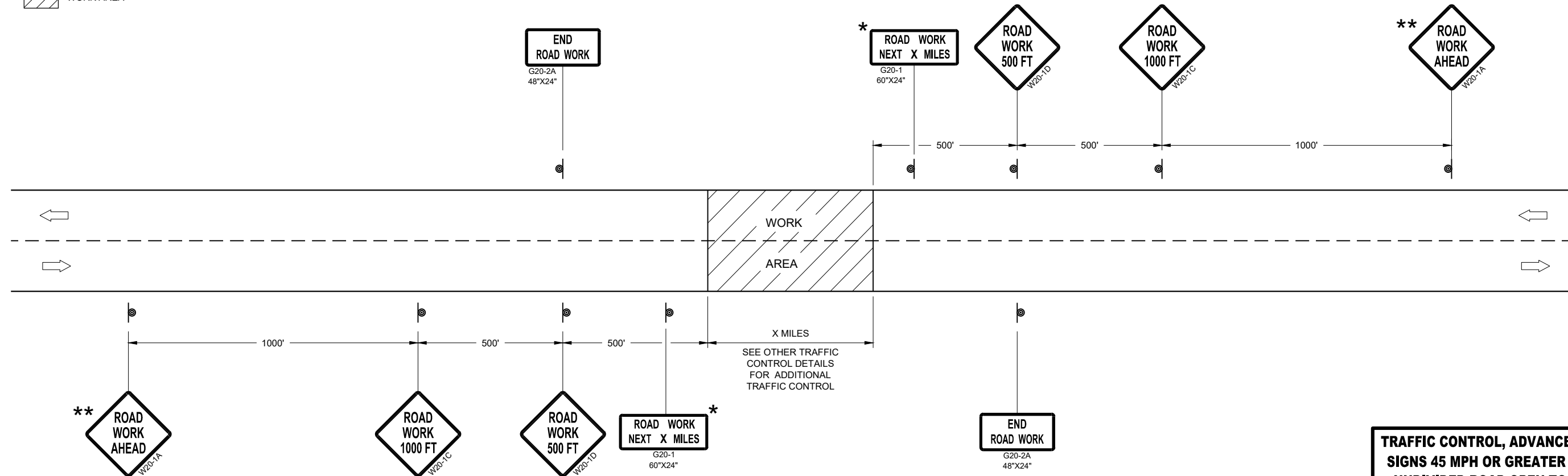
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**

LEGEND

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



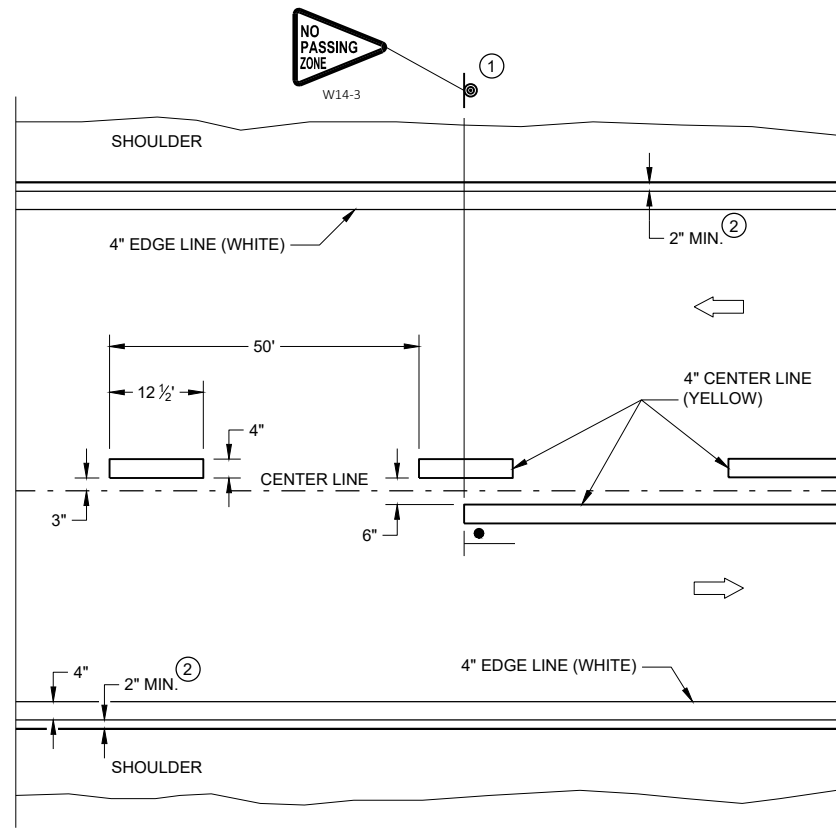
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

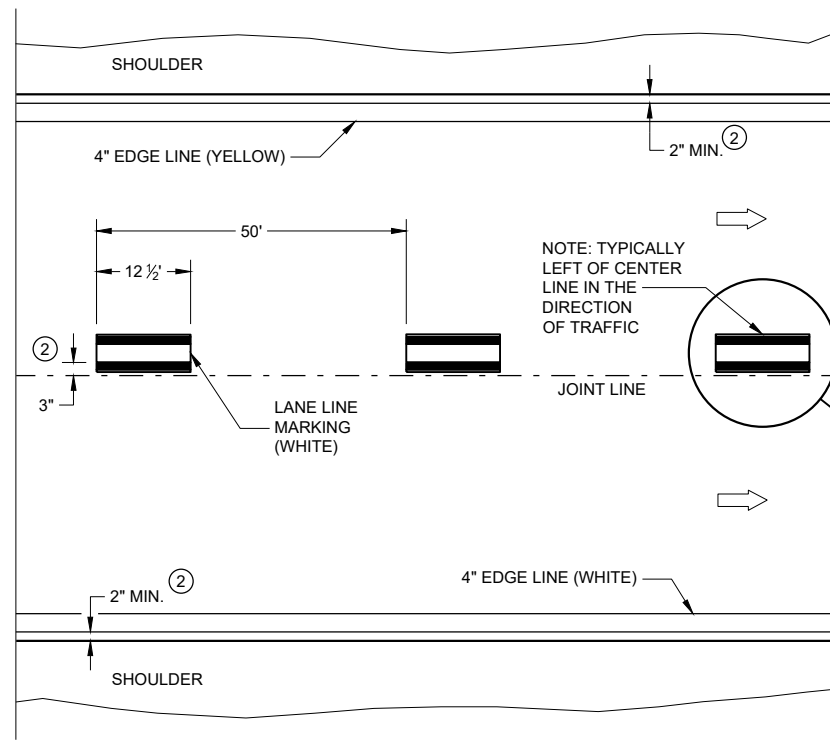
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

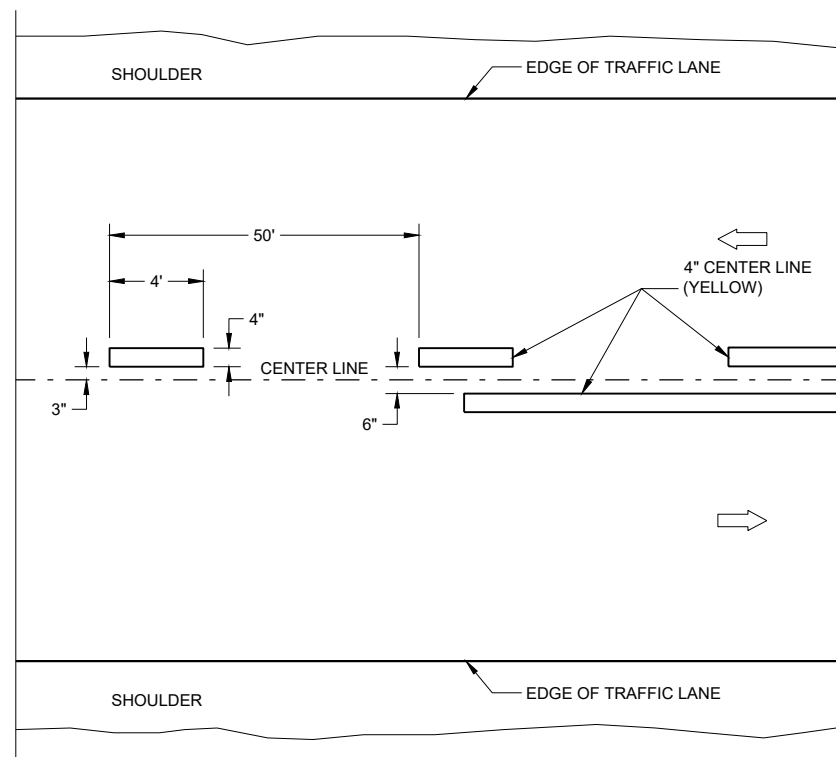


TWO WAY TRAFFIC

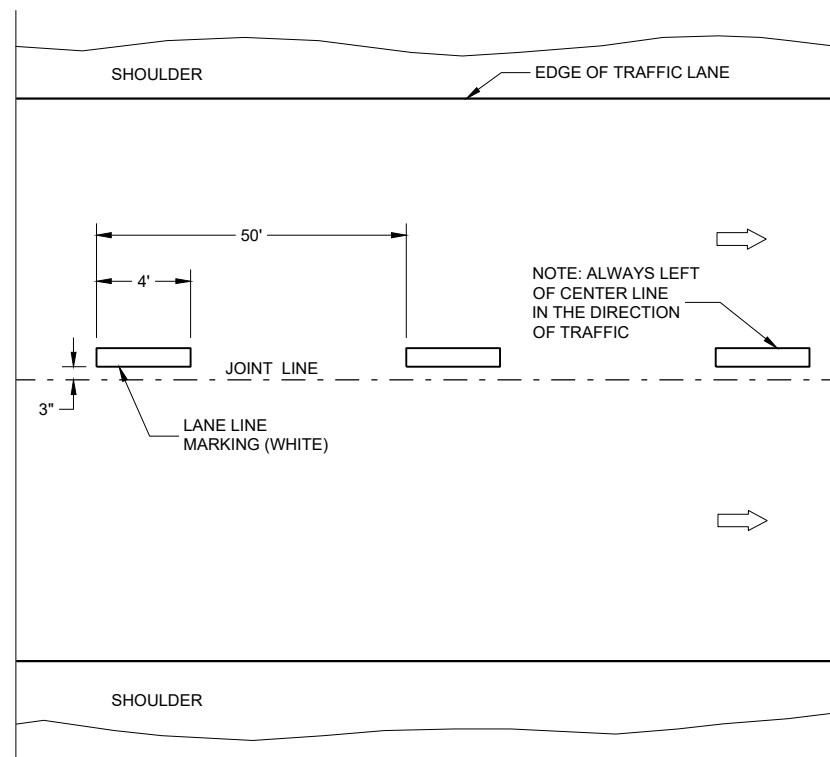


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

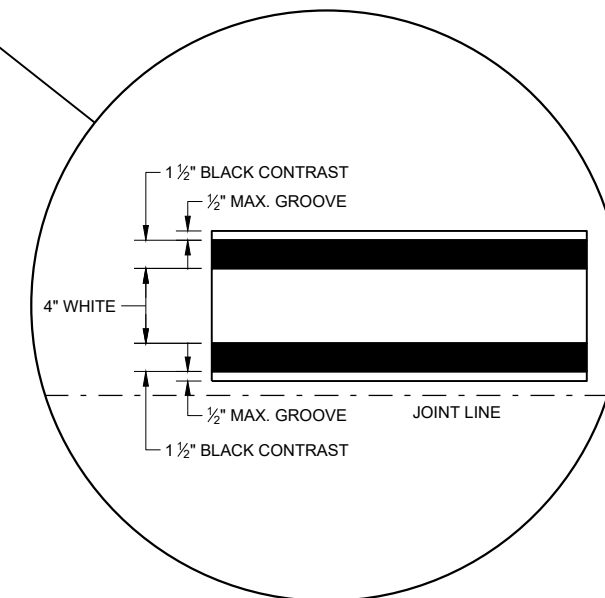
GENERAL NOTES

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

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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

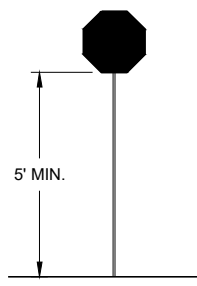
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



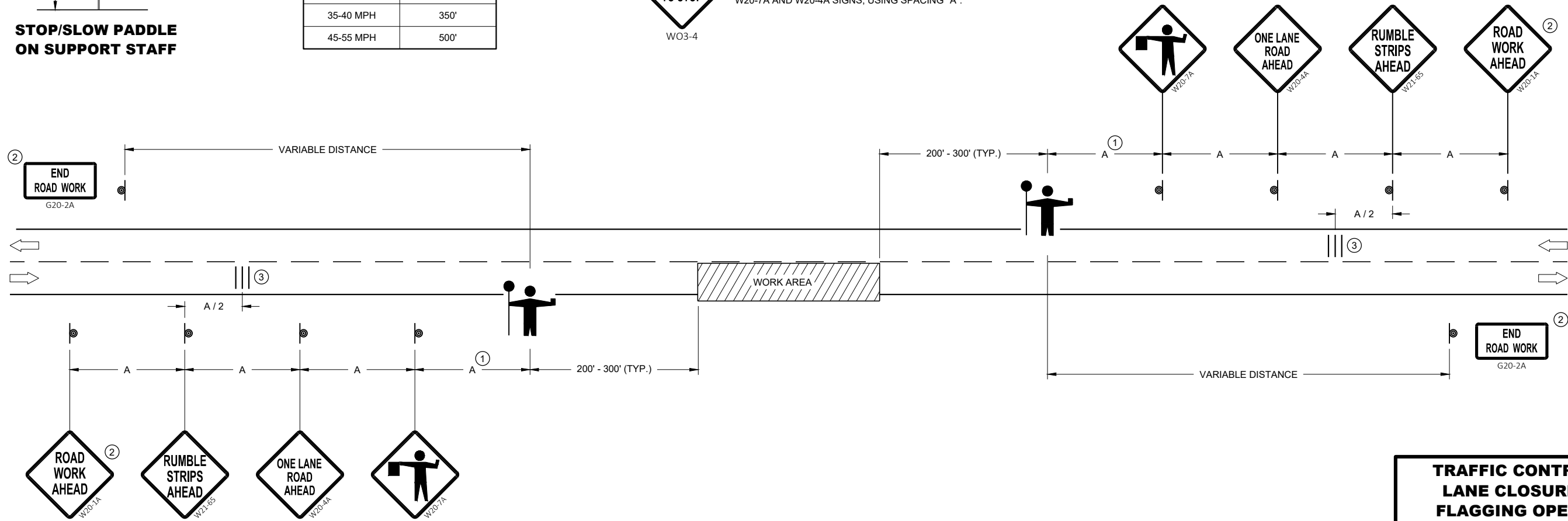
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".







TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

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

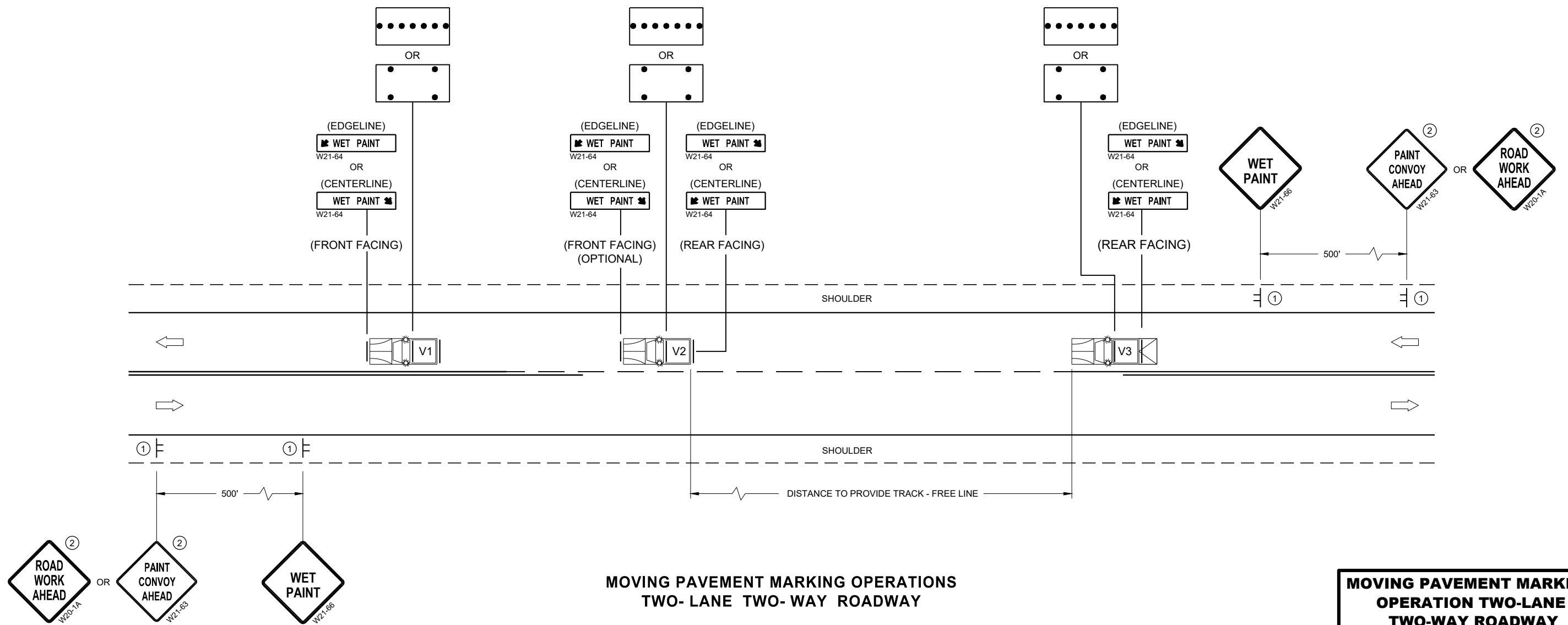
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING.

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

6

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**MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19 - 06a

SDD 15C19 - 06a

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

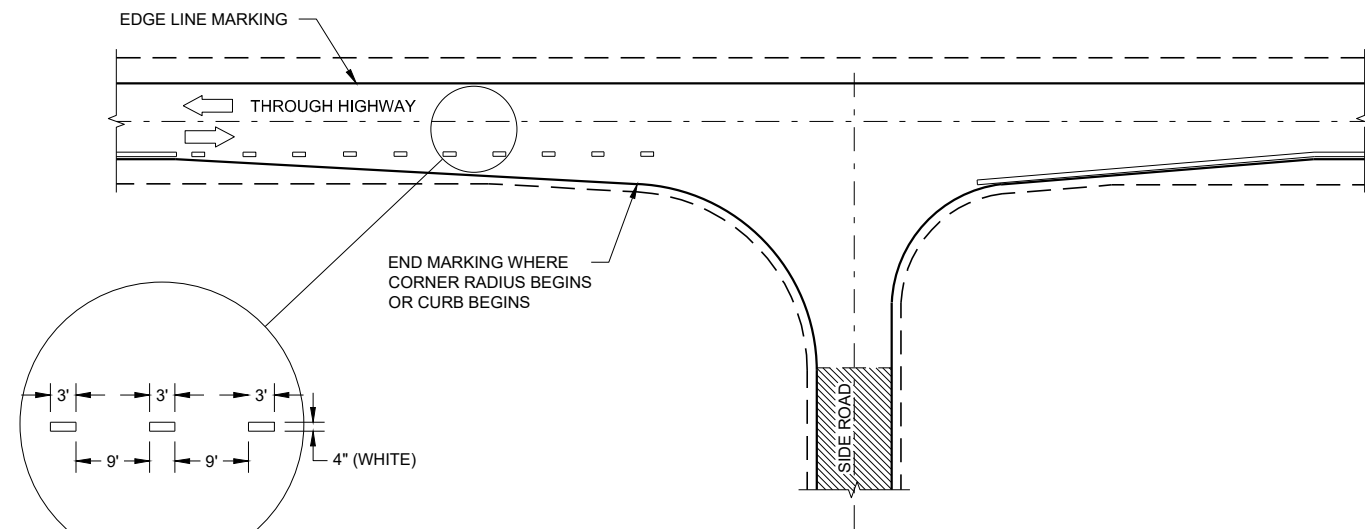
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

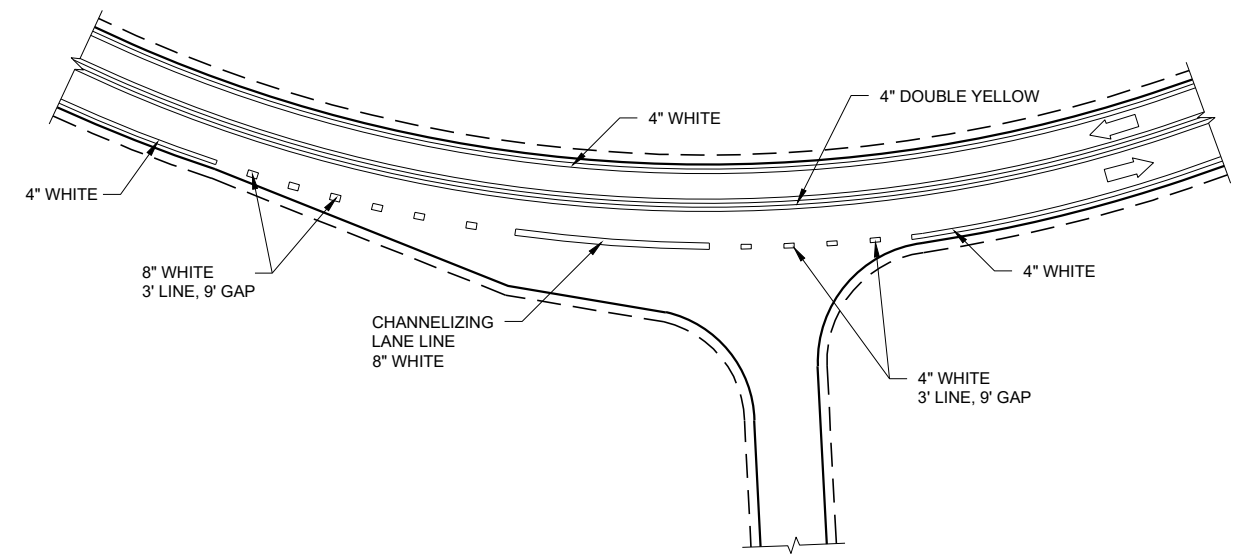
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

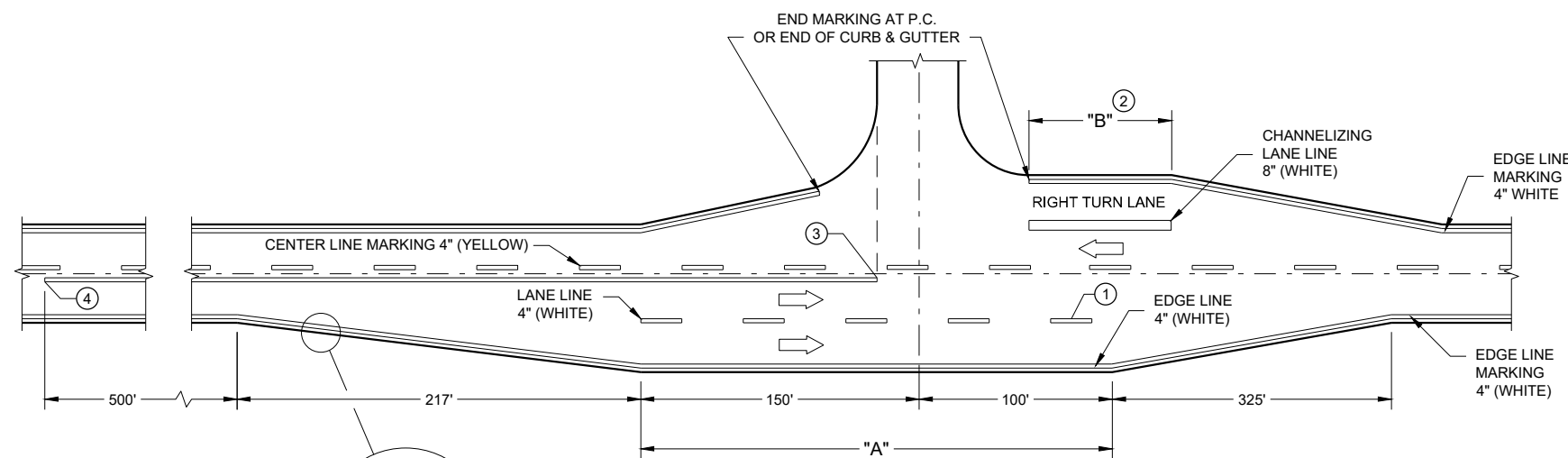
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE







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

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

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

GENERAL NOTES

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

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

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

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

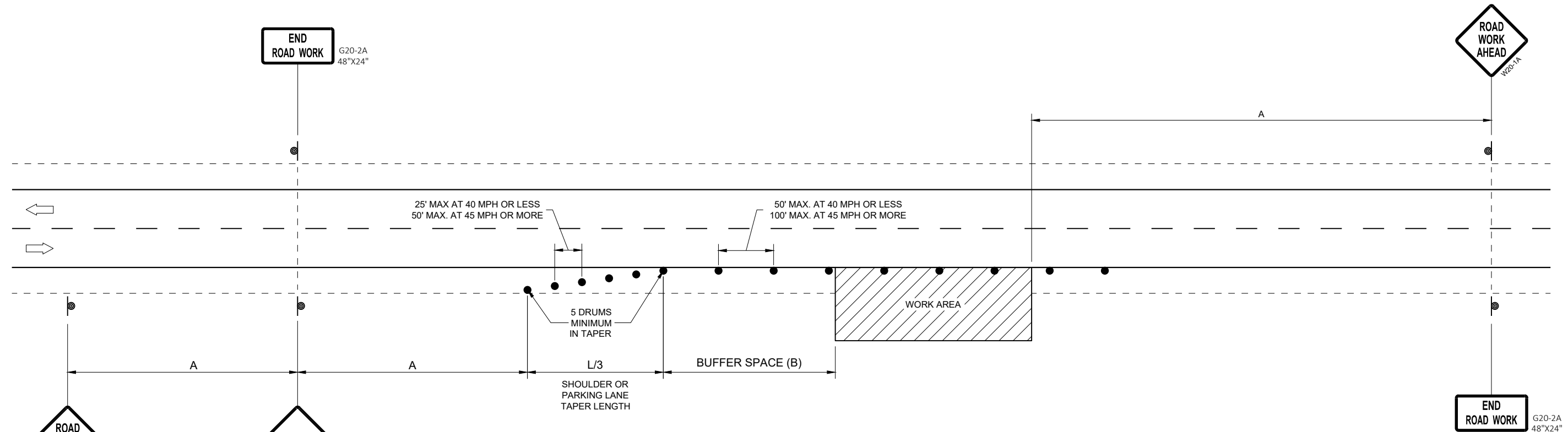
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

6



OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

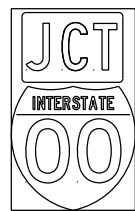
APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

FHWA

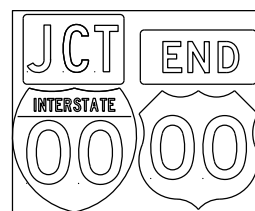
SDD 15D28 - 04

SDD 15D28 - 04

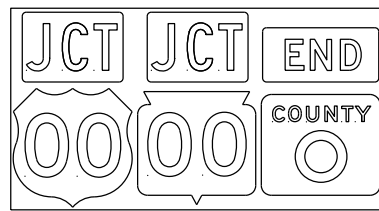
TYPICAL ASSEMBLIES



J1-1



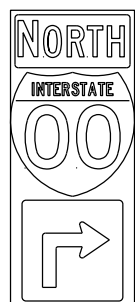
J1-2



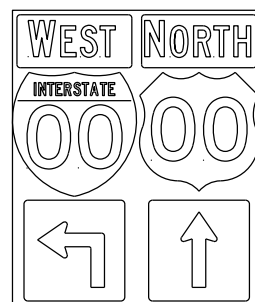
J1-3



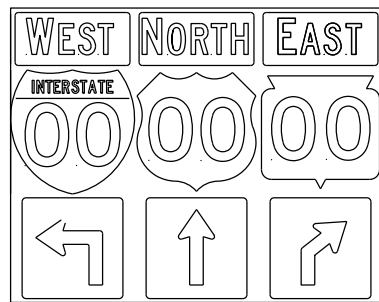
JR1-1



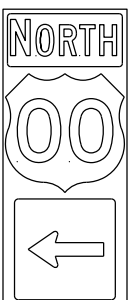
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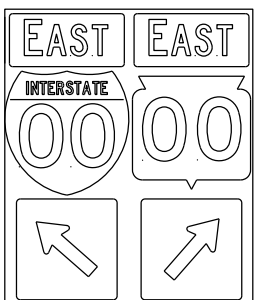
J2-2



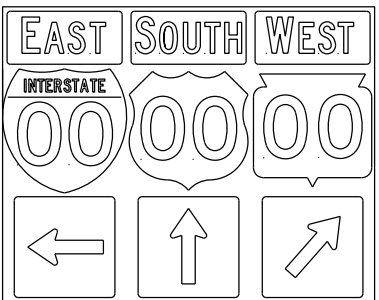
J2-3



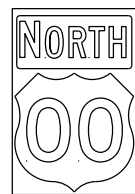
J3-1



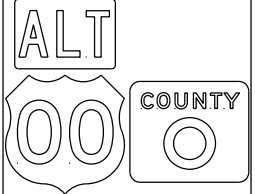
J3-2



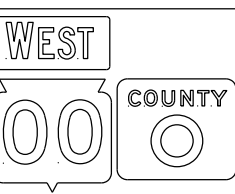
J3-3



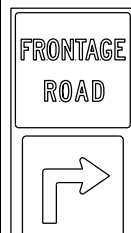
J4-1



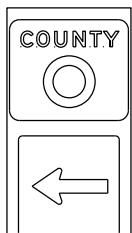
J4-2



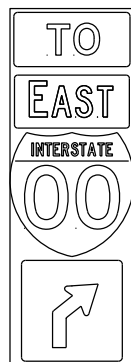
J4-2



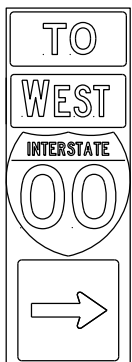
J12-1



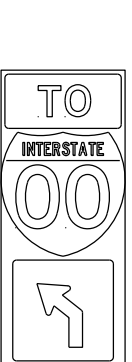
J13-1



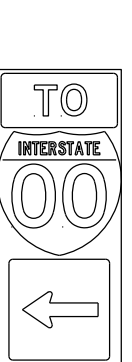
J32-1



J33-1



J22-1



J23-1



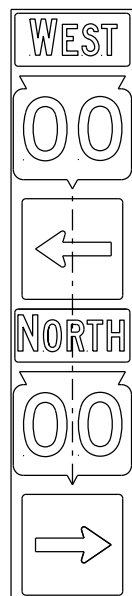
JR13-1



JR23-1

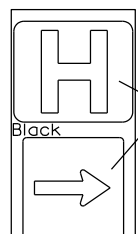


JR99-1



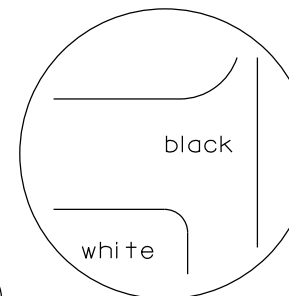
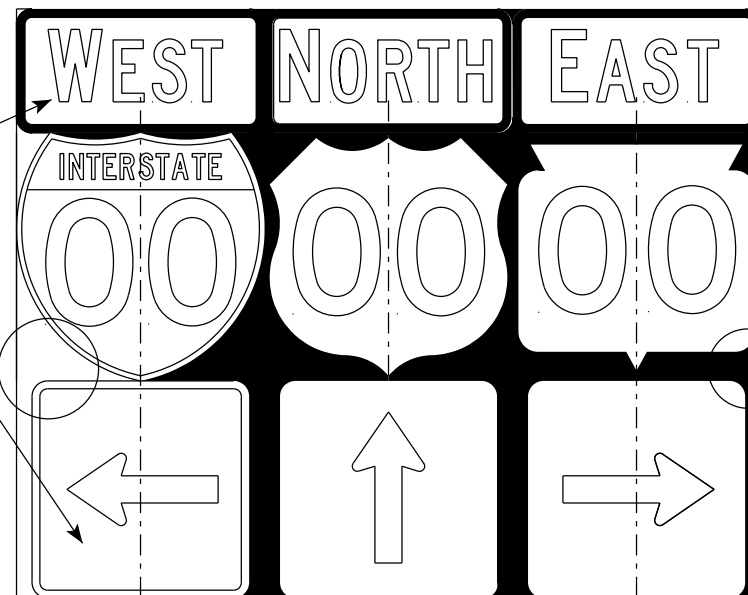
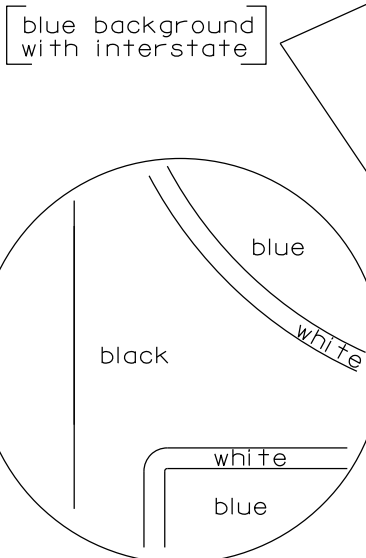
JV

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



JH-1

Blue Background



black background

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 3/18/21

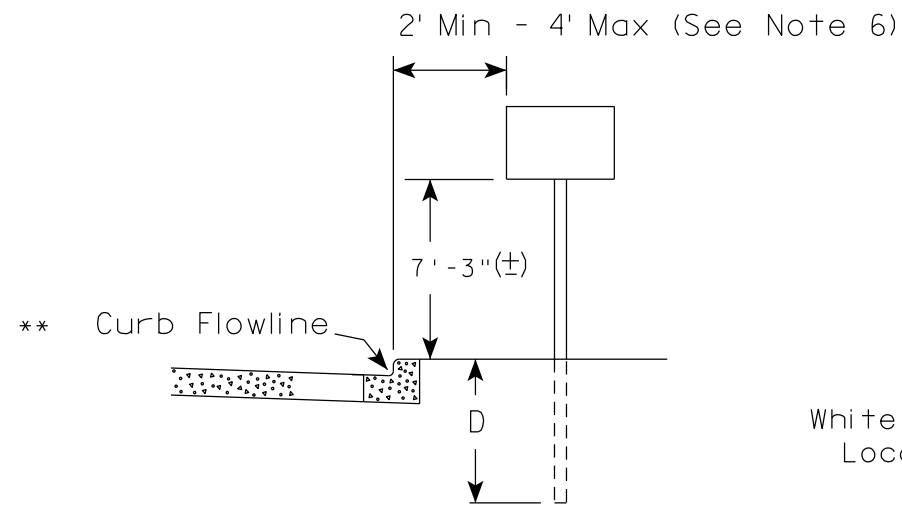
PLATE NO. A2-1S.9

PROJECT NO:

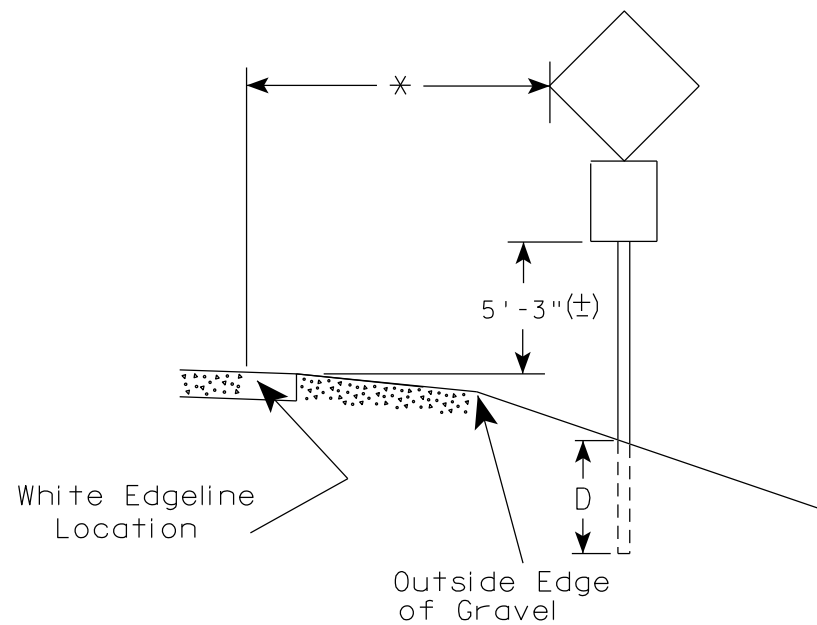
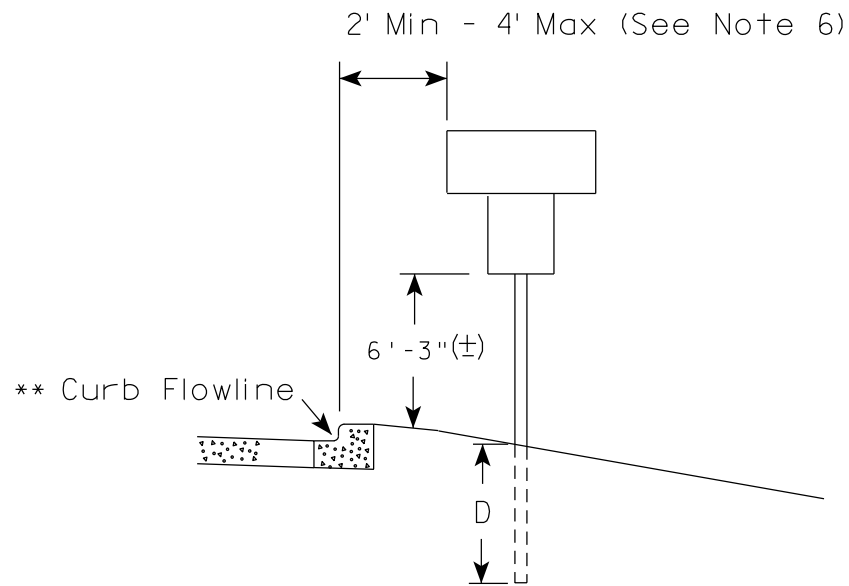
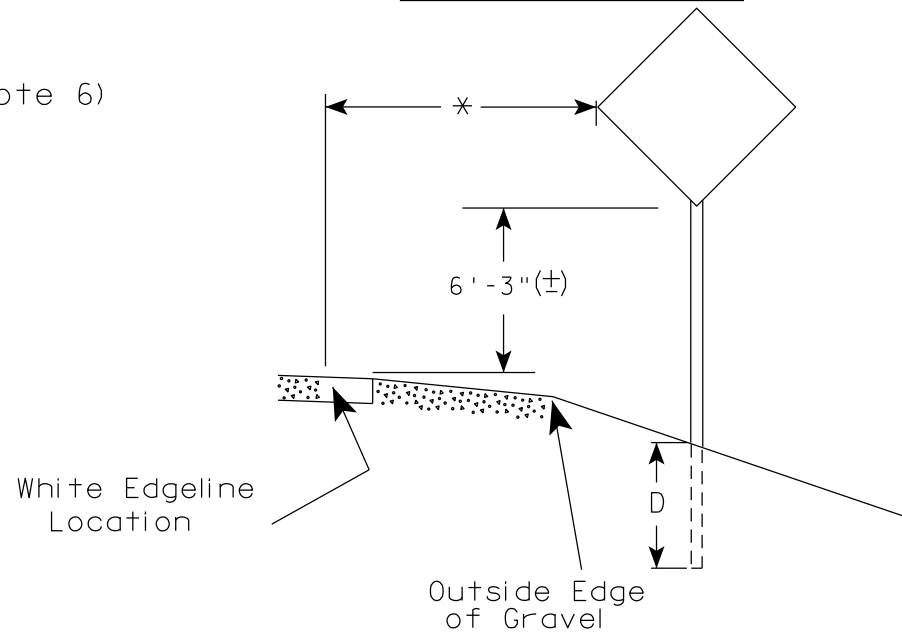
SHEET NO:

E

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on 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.

POST EMBEDMENT DEPTH

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

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

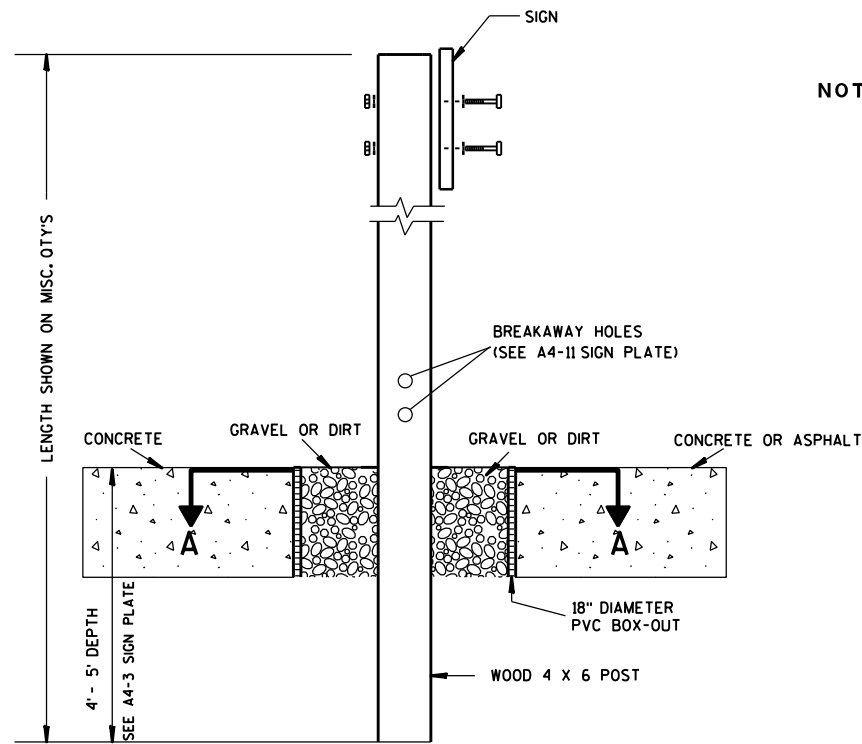
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

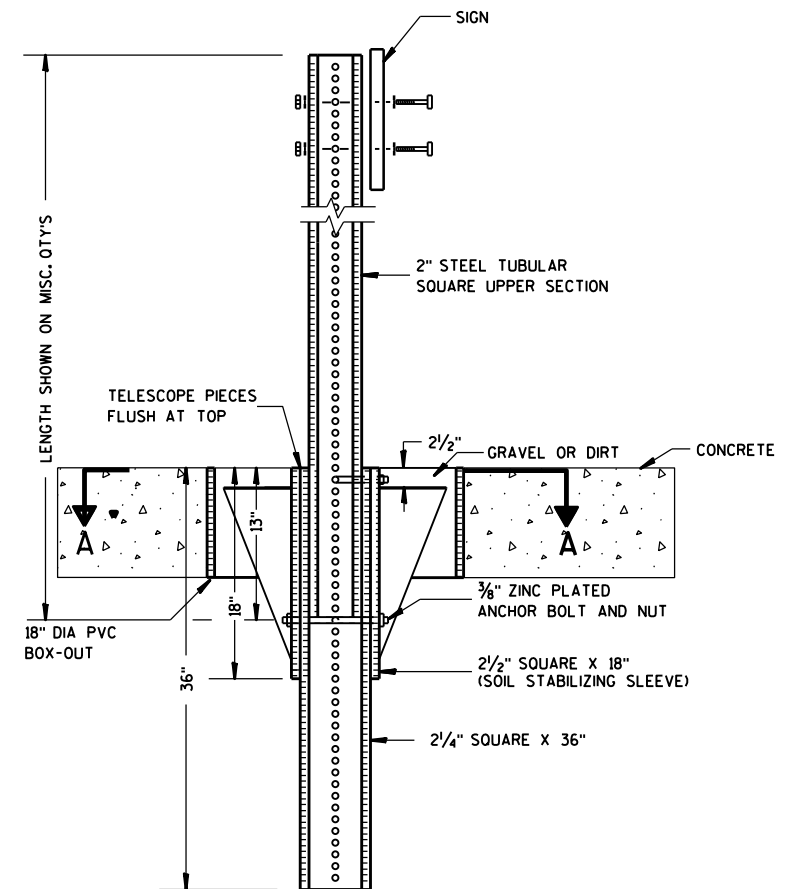
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

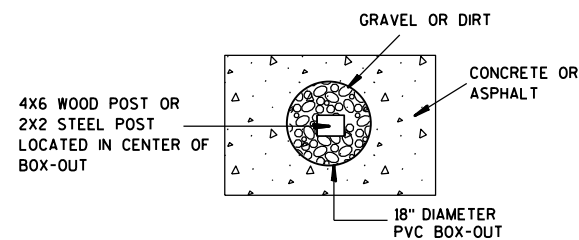
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

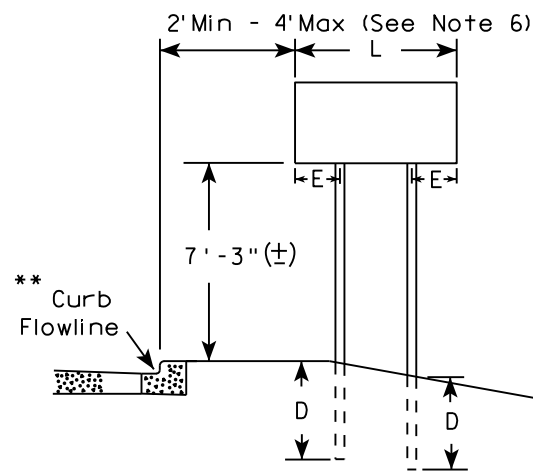
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<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>

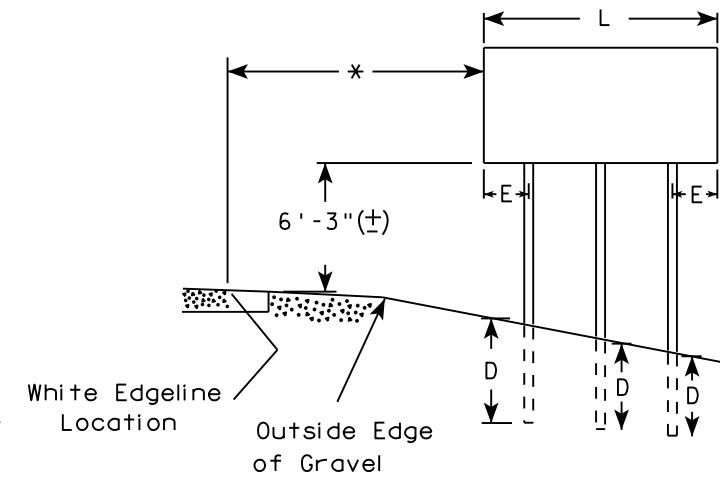
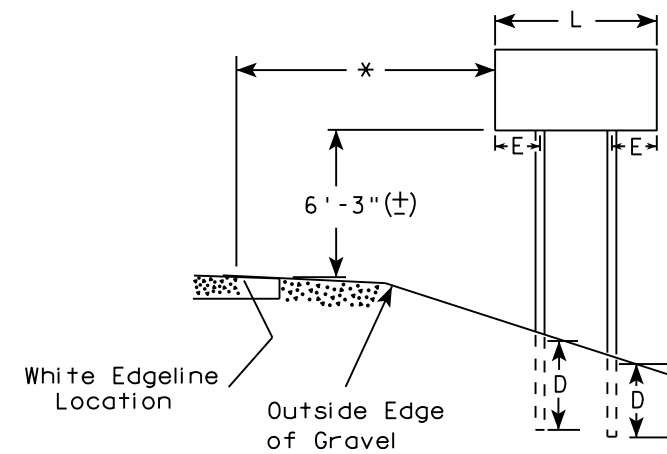
GENERAL NOTES

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" (±).

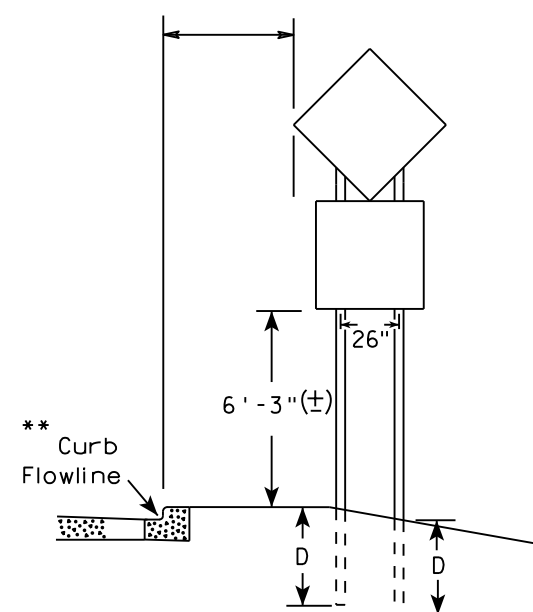
URBAN AREA



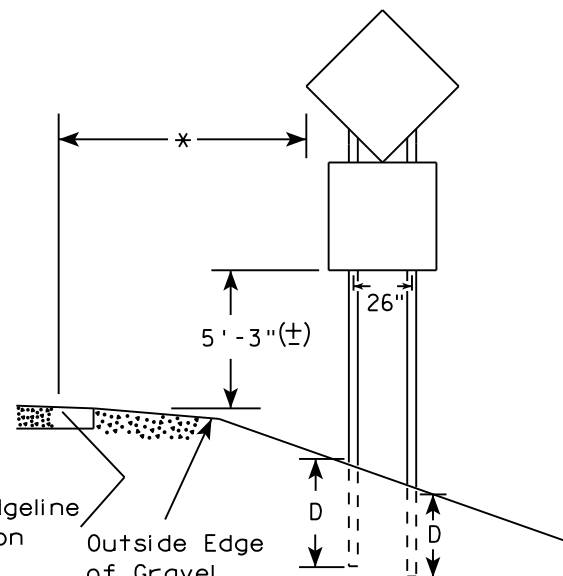
RURAL AREA (See Note 3)



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

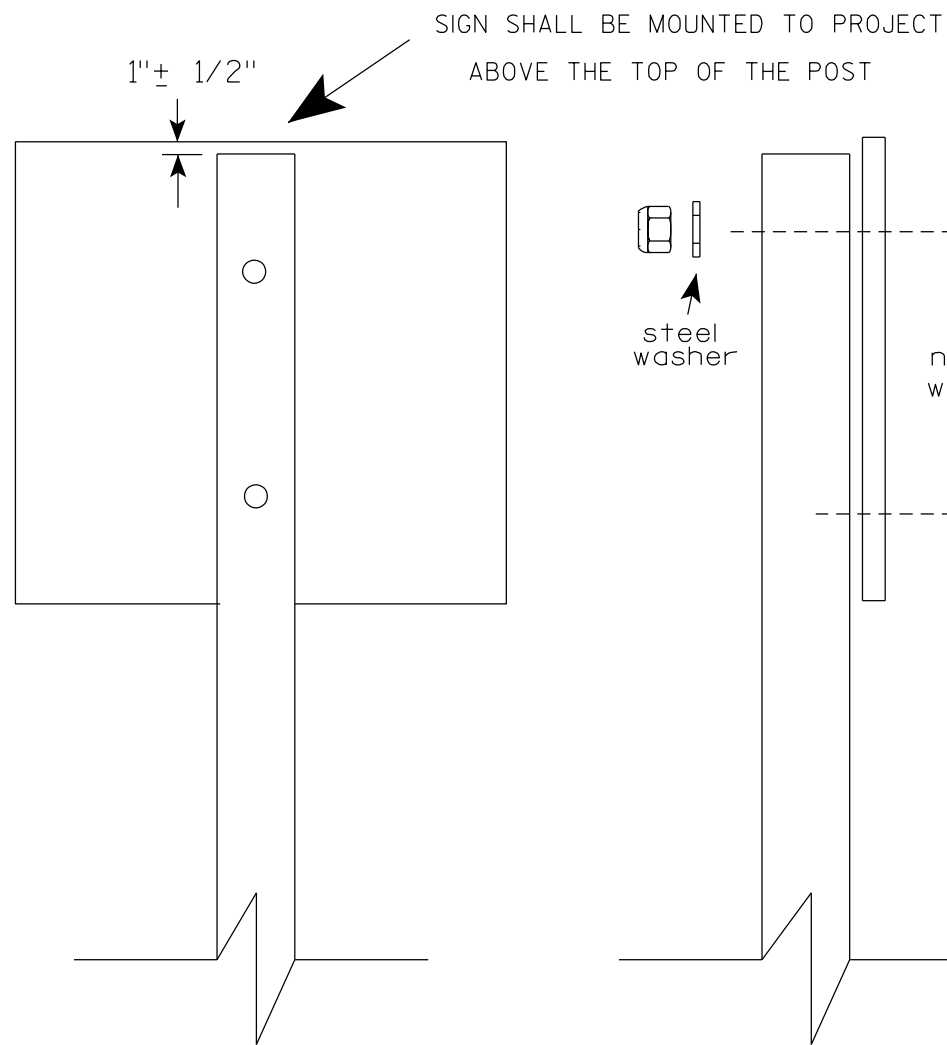
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

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 :

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

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

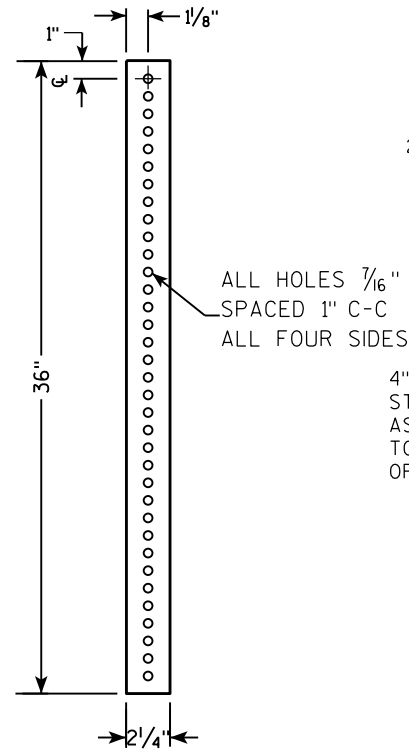
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
 O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

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

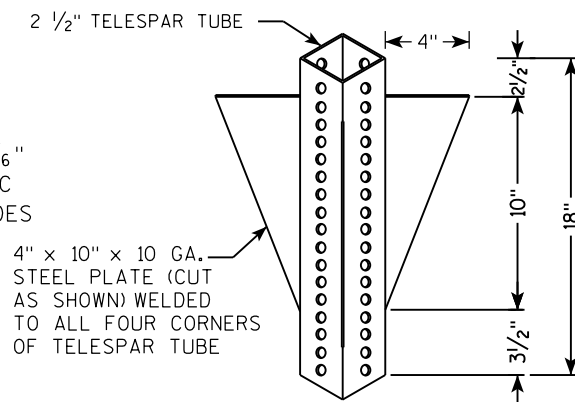
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

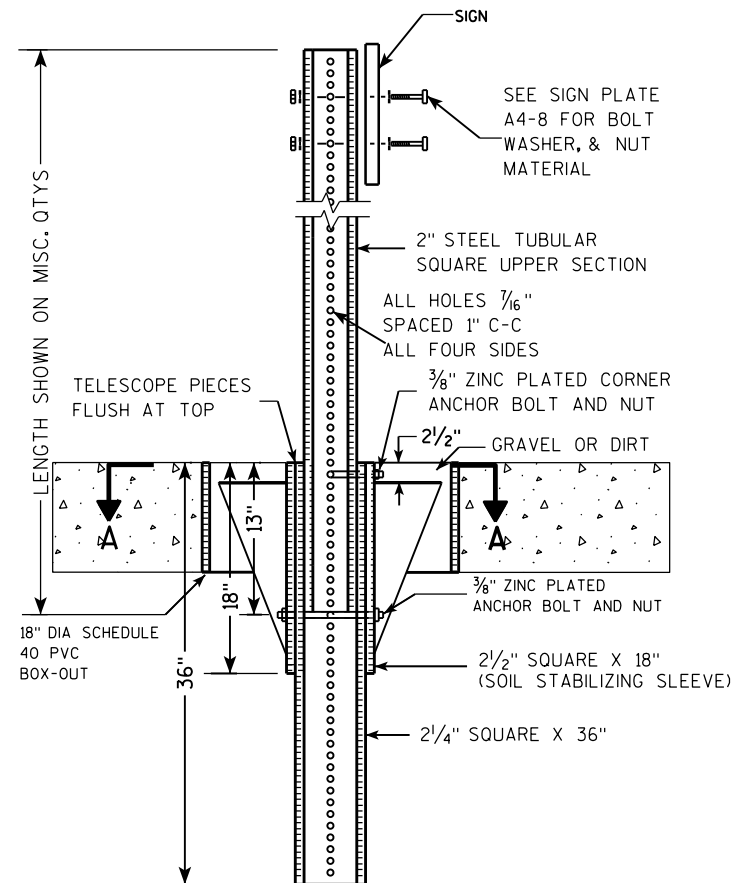
**2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



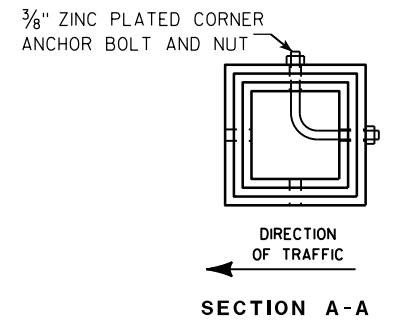
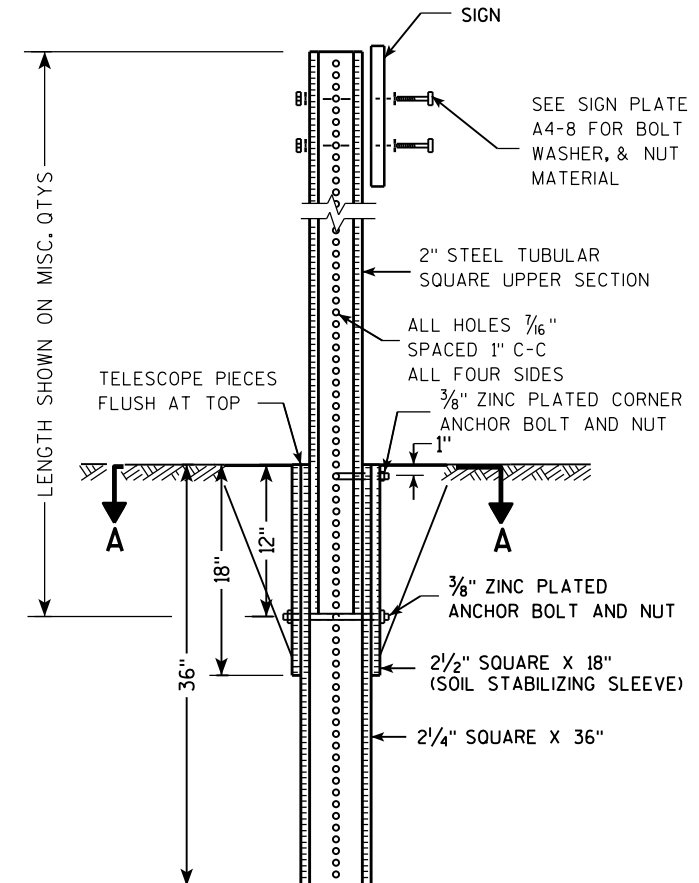
**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



**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

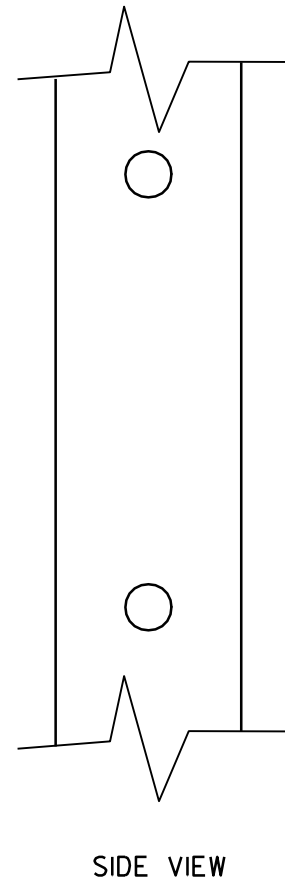
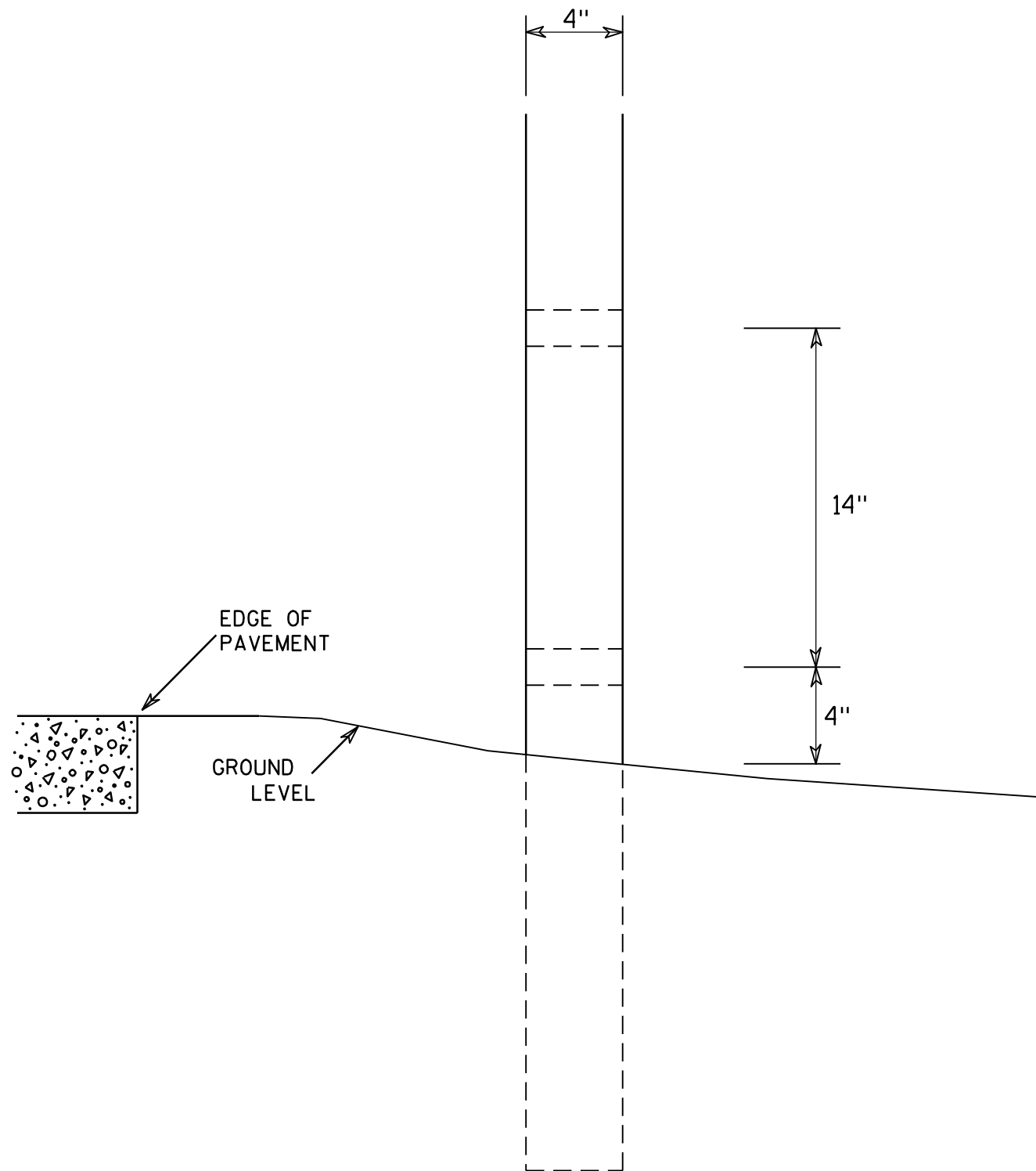
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

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

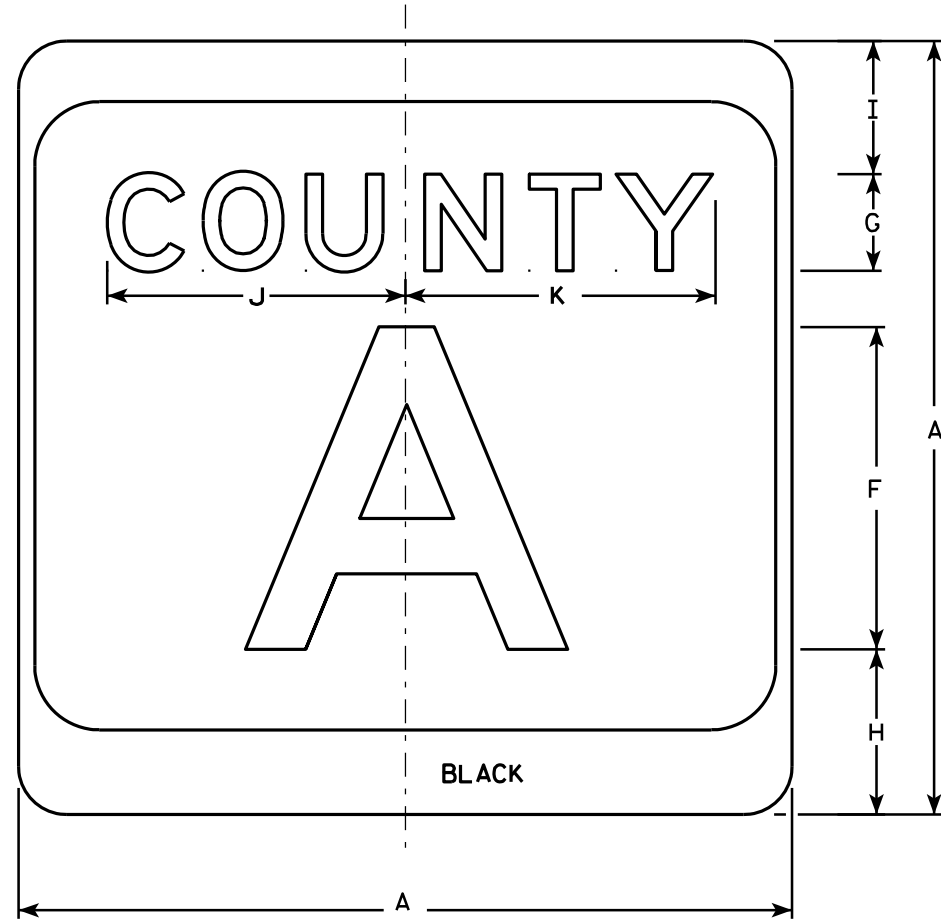
7

7

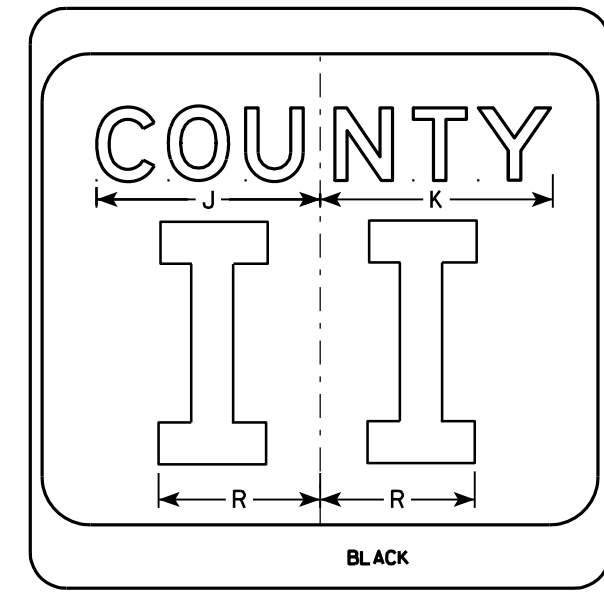
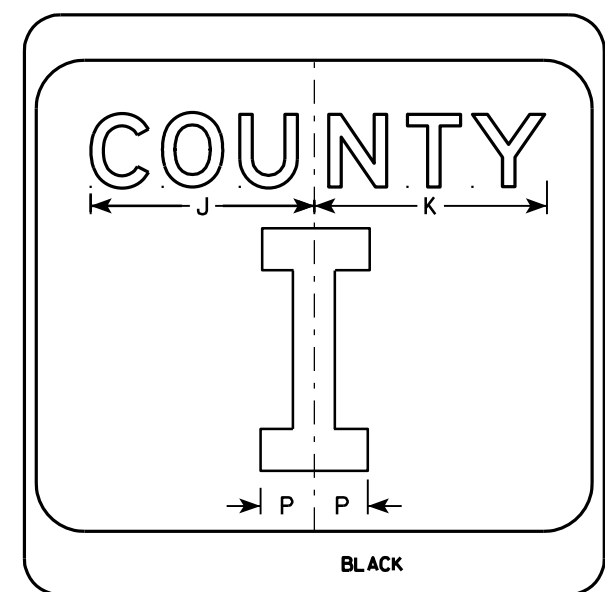
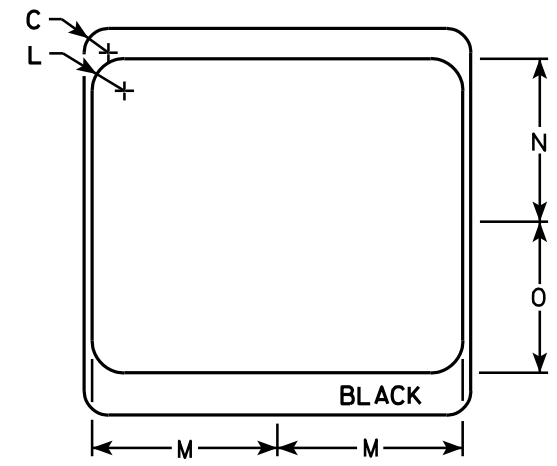
4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE 3/27/97	PLATE NO. A4-11.2

NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



M1-5A



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																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

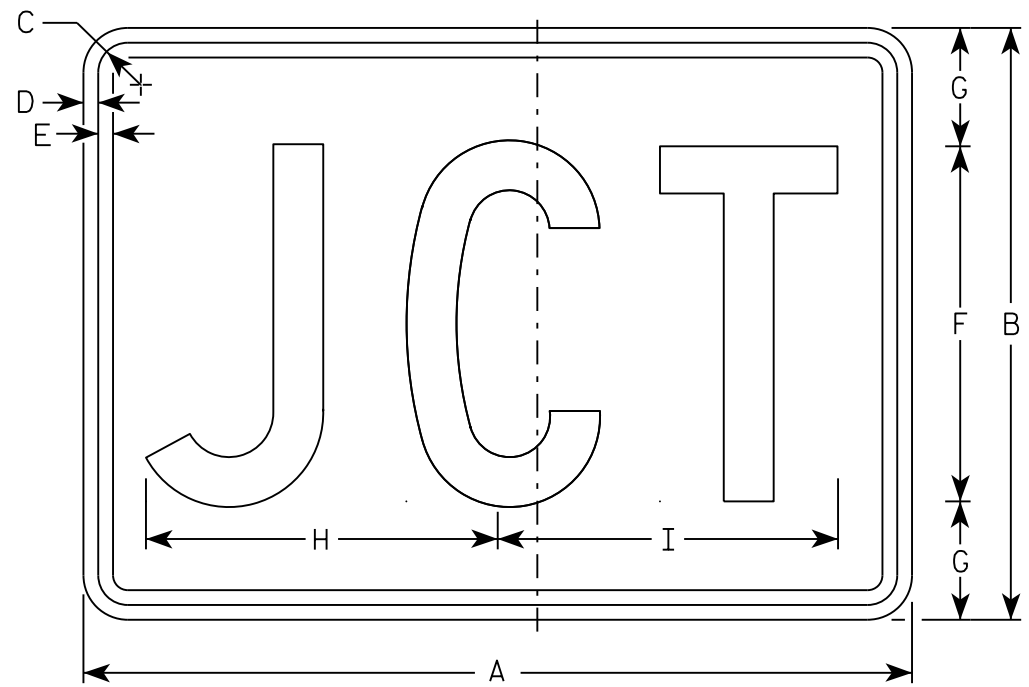
APPROVED *Matthew R. Raub*
For State Traffic Engineer

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

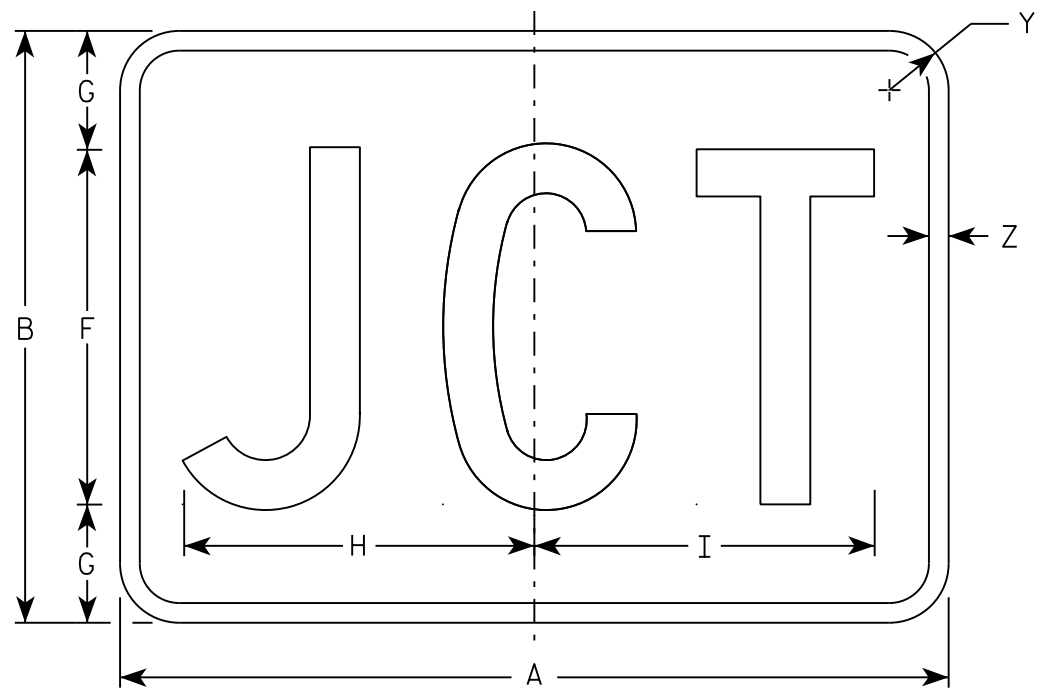
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H
2. Color:
 - Background - See note 5
 - Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
 Message - Black
 MB2-1 Background - Blue
 Message - White
 MK2-1 Background - Green
 Message - White
 MM2-1 Background - White
 Message - Green
 MN2-1 Background - Brown
 Message - White
 MP2-1 Background - White
 Message - Blue
 MR2-1 Background - Brown
 Message - Yellow



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

7

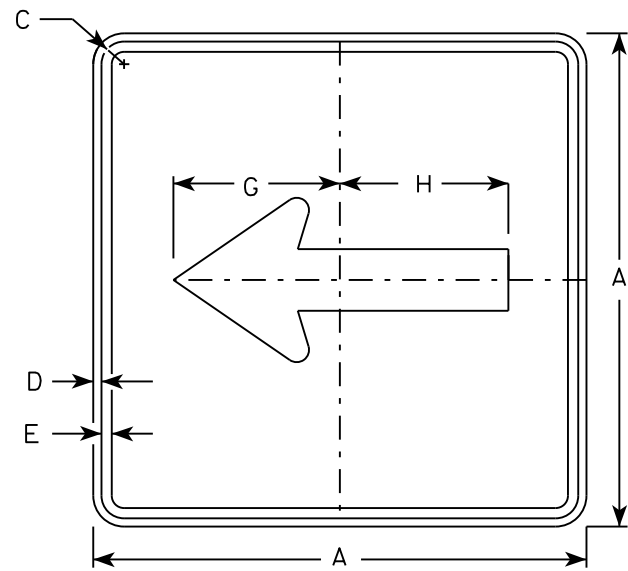
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN
M2-1

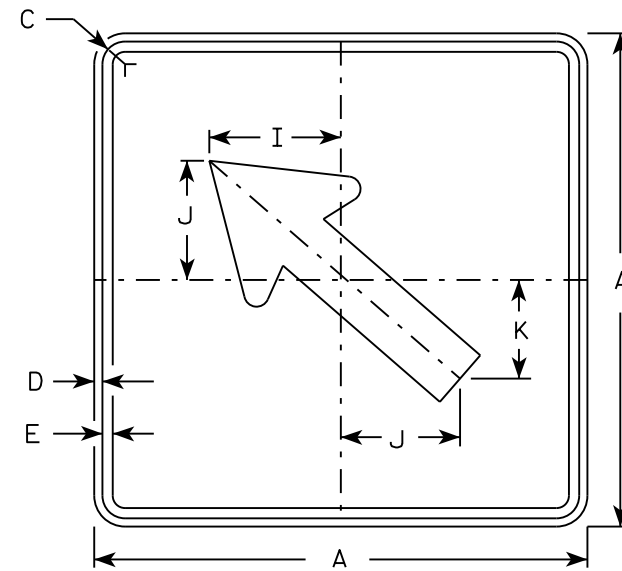
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

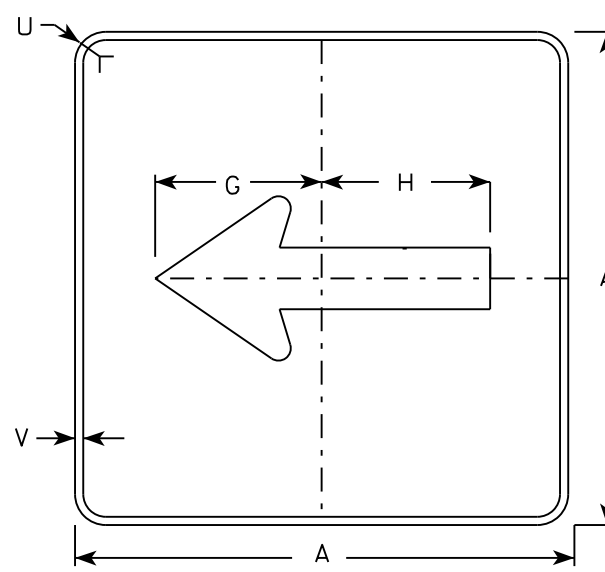
DATE 10/15/15 PLATE NO. M2-1.12



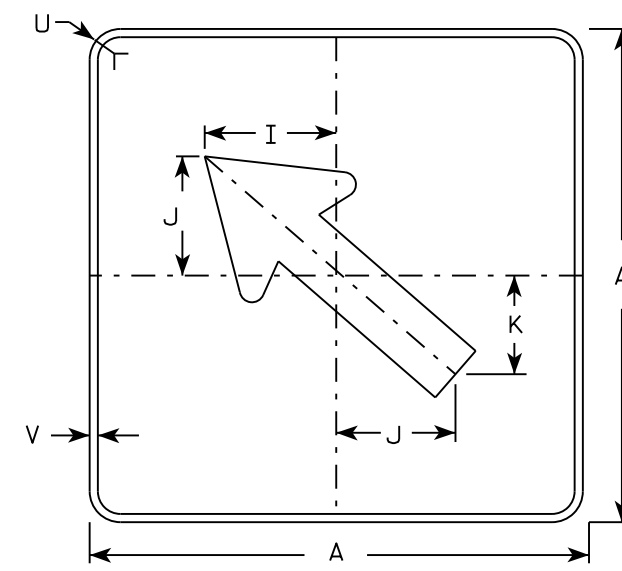
M6-1
MM6-1
M06-1
MP6-1



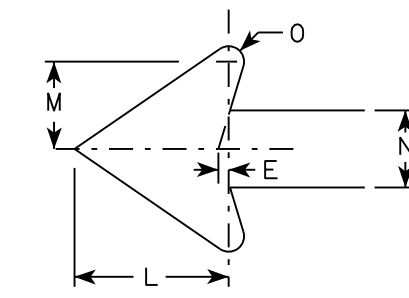
M6-2
MM6-2
M06-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

7

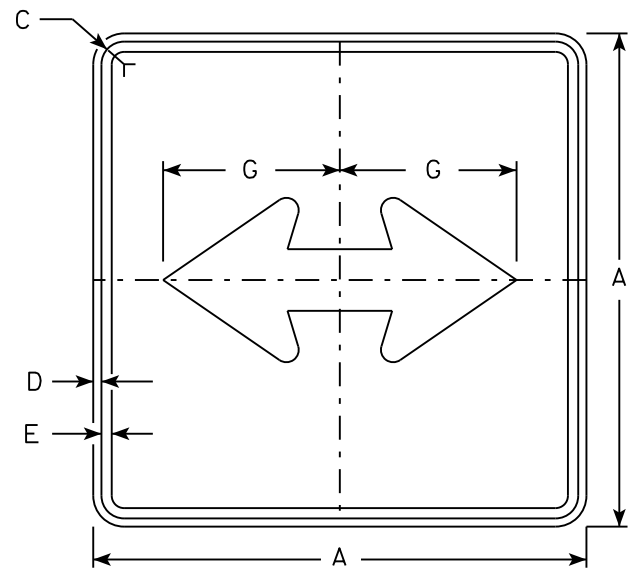
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10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

STANDARD SIGN
M6-1 & M6-2
SERIES

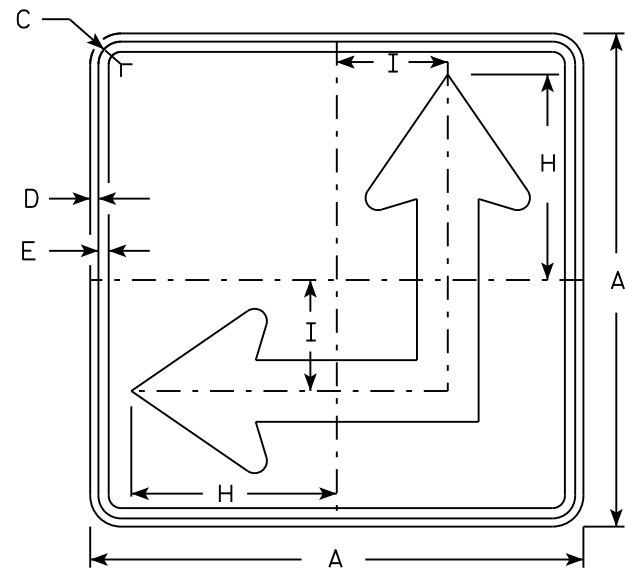
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

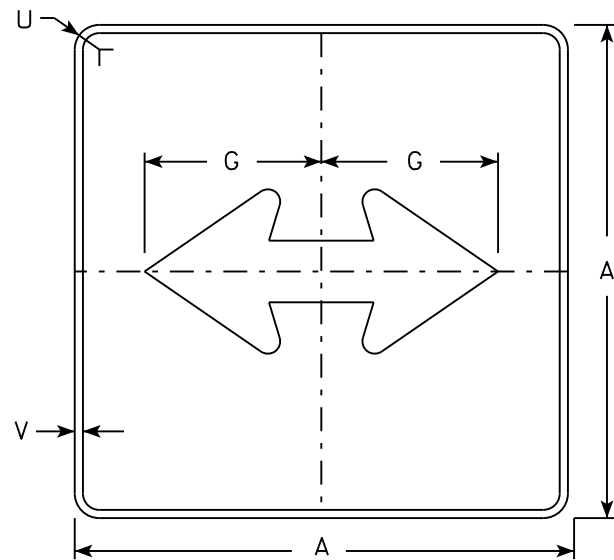
DATE 10/15/15 PLATE NO. M6-1.15



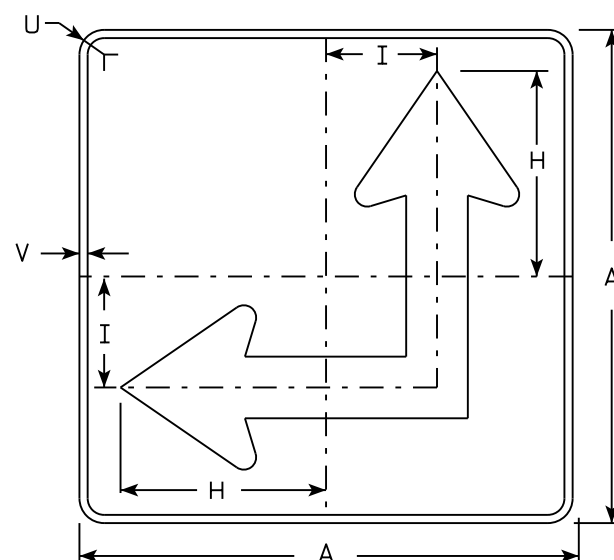
M6-4
MM6-4
M06-4
MP6-4



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



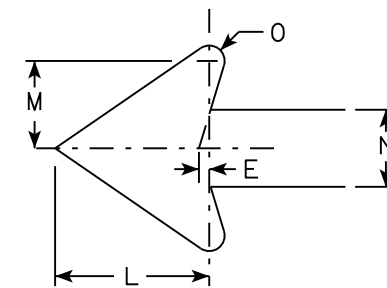
MB6-4
MK6-4
MN6-4
MR6-4



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

NOTES

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



7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

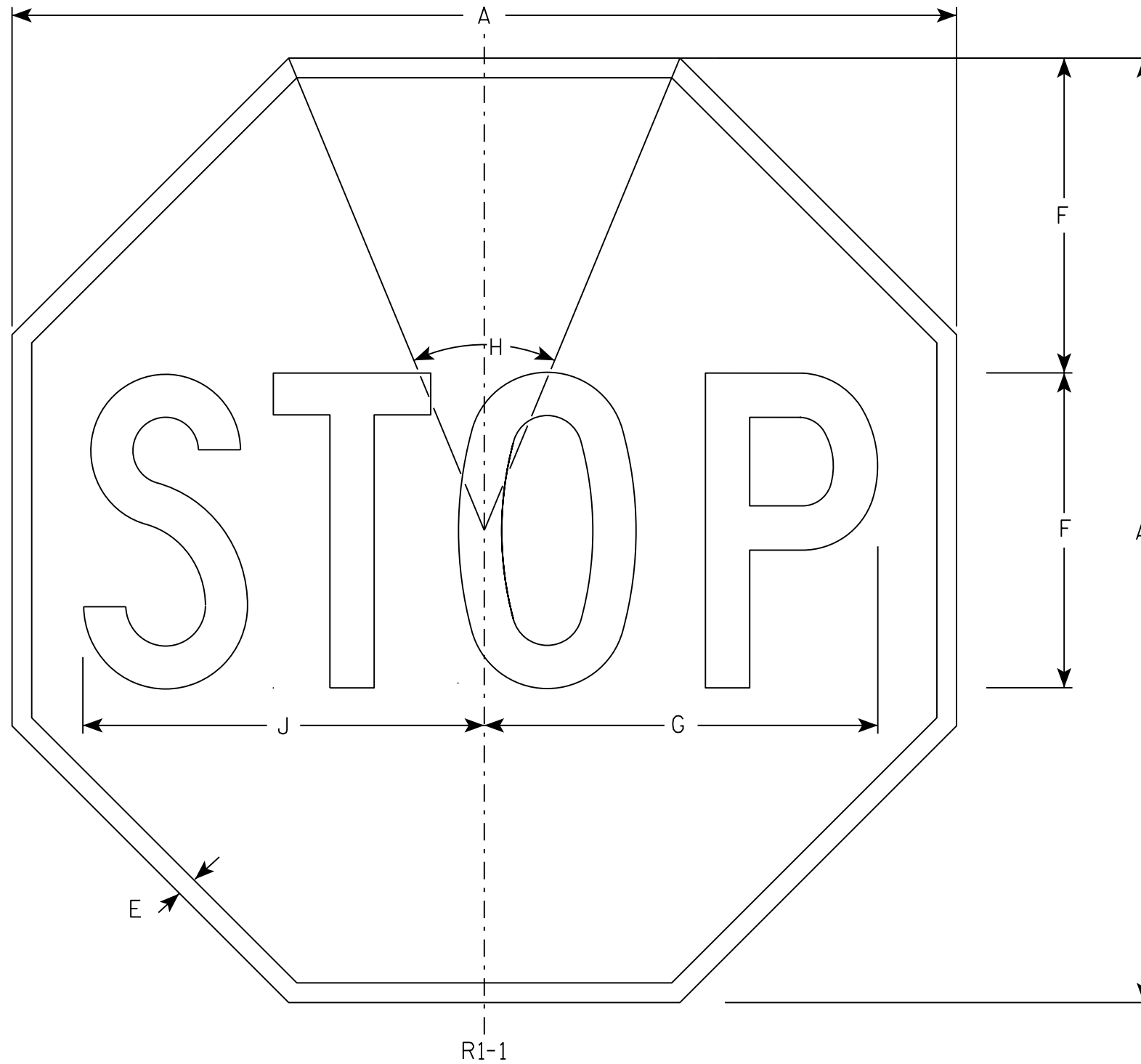
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10

NOTES

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



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

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

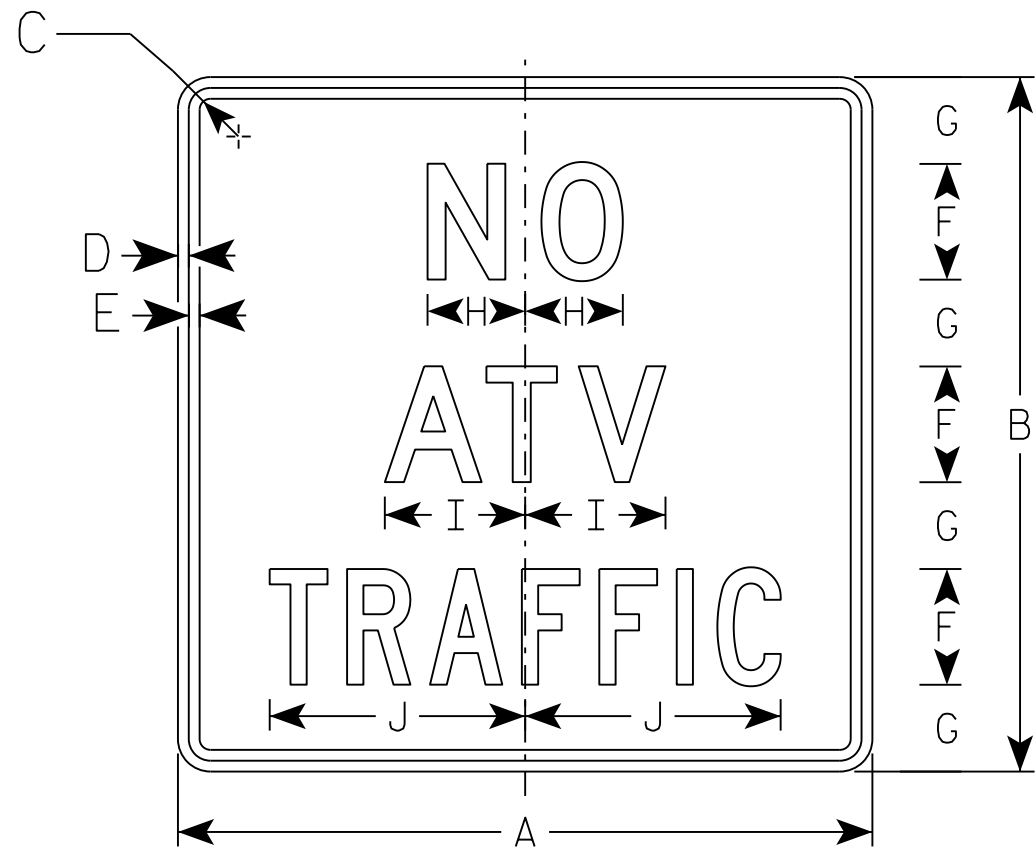
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

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

NOTES

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



R5-51

7

7

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

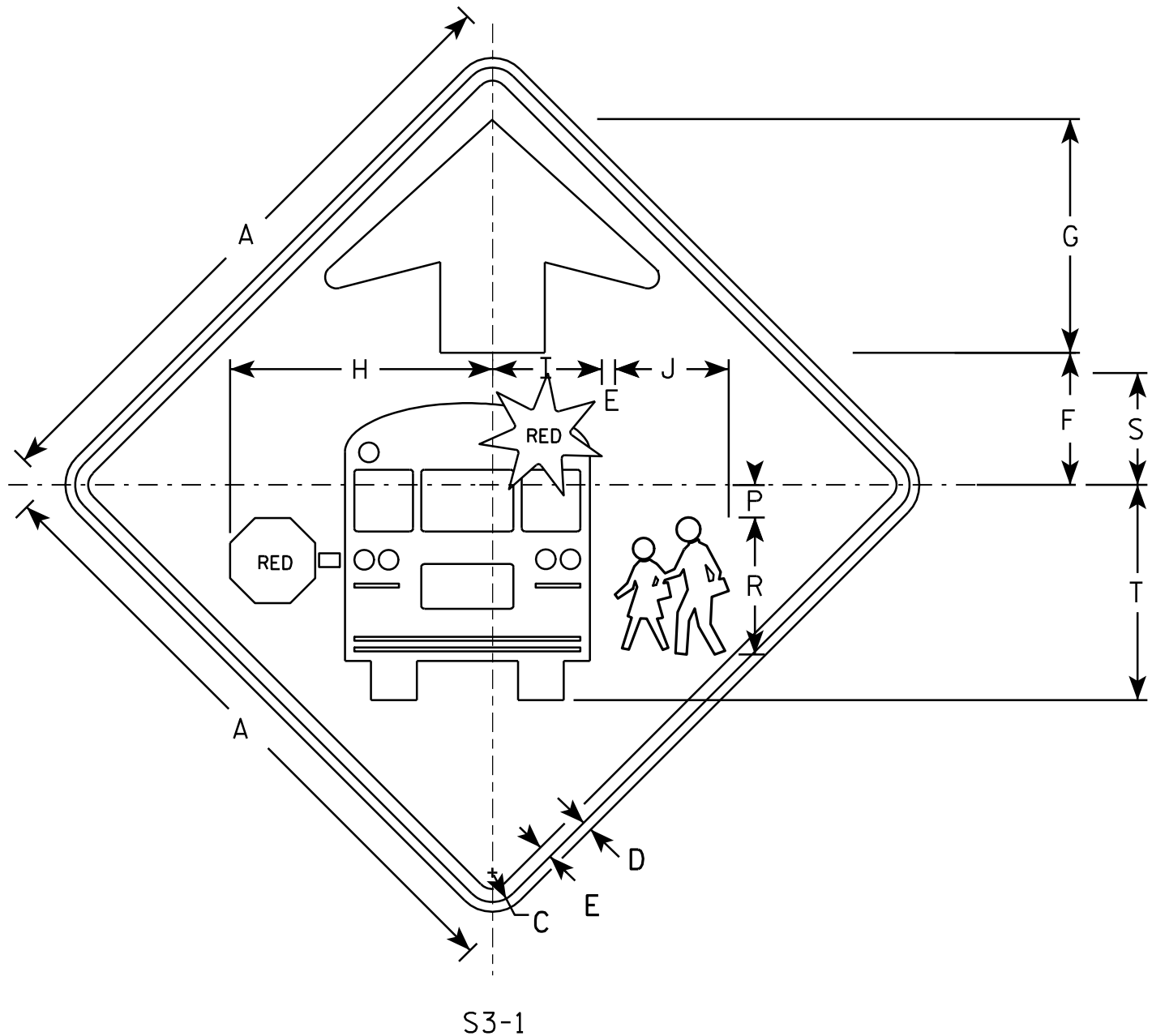
STANDARD SIGN
R5-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 5/16/18 PLATE NO. R5-51.1

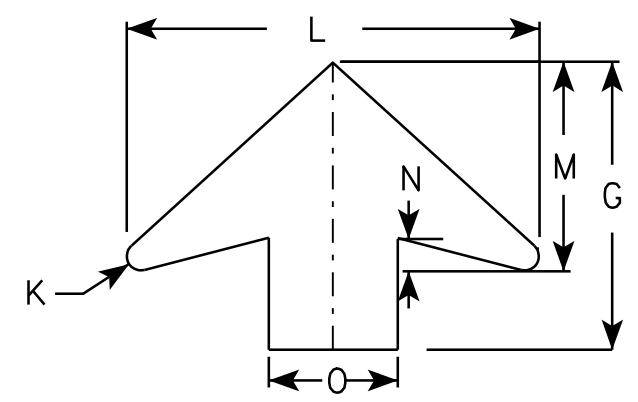
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



S3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 Background - YELLOW-GREEN
 Message - BLACK except as noted
 Circles except PEDS- RED BACKGROUND
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 1/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

STANDARD SIGN
S3-1

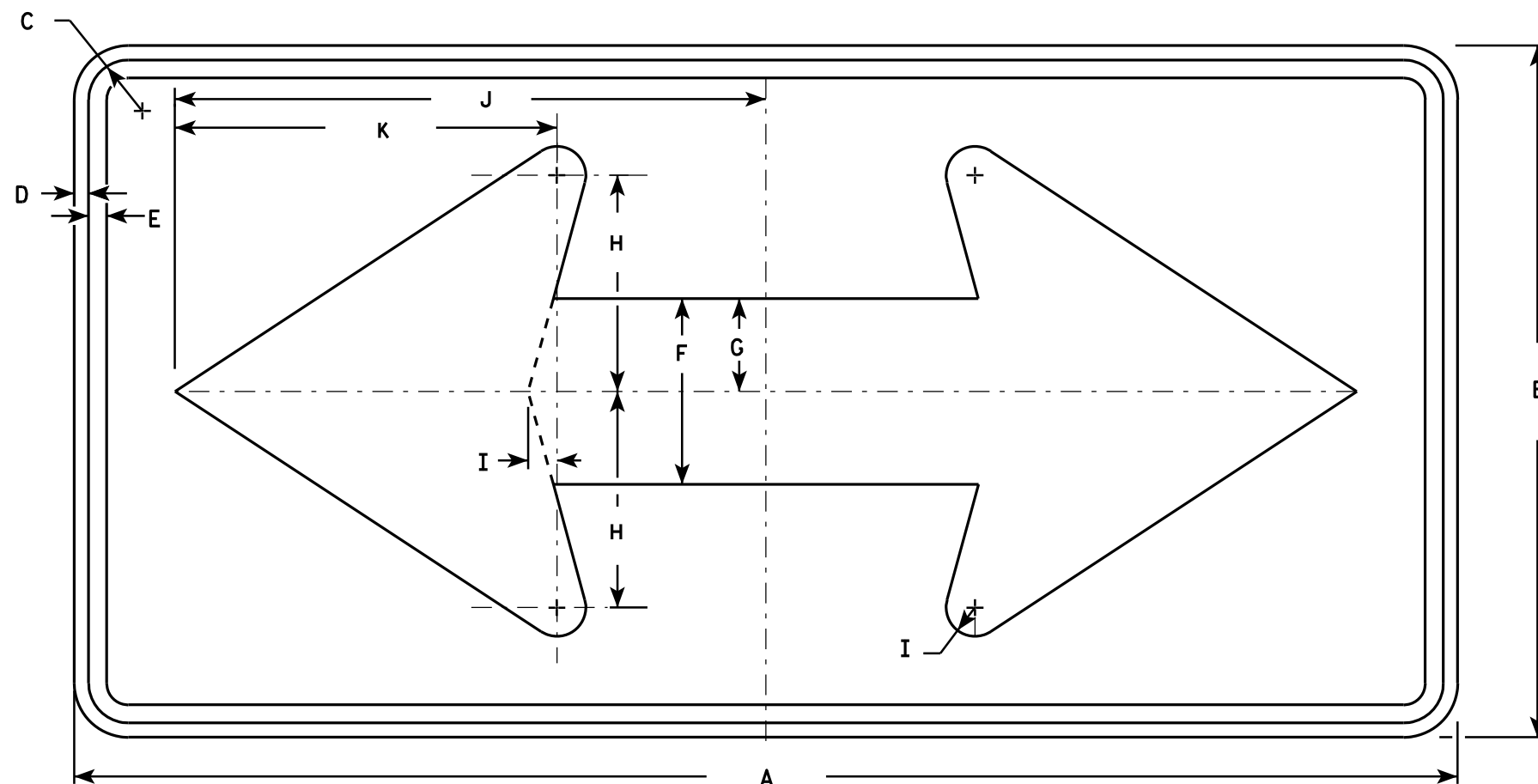
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/8/10 PLATE NO. S3-1.6

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.



W1-7

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	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

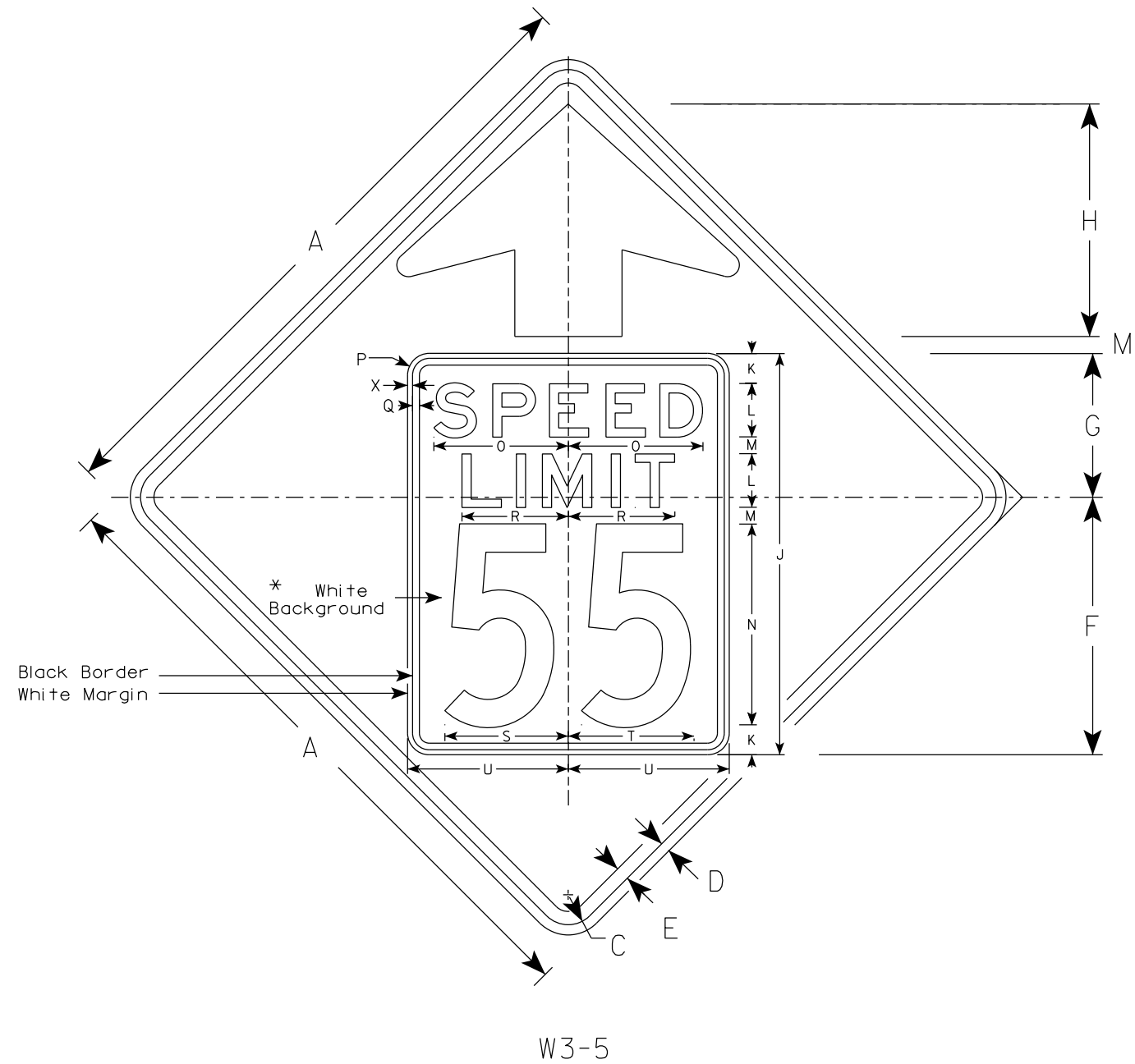
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

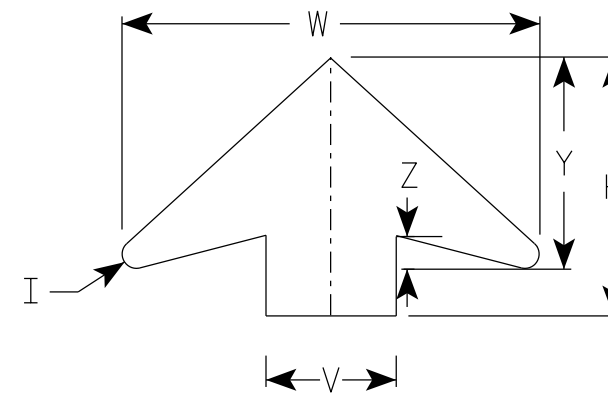
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

1. Sign is Type II - See Note 2 for Sheeting Type
2. Color: *
Background - Yellow* (Type F Reflective)
Message - Black
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background with black message (Type SH Reflective)



ARROW DETAIL

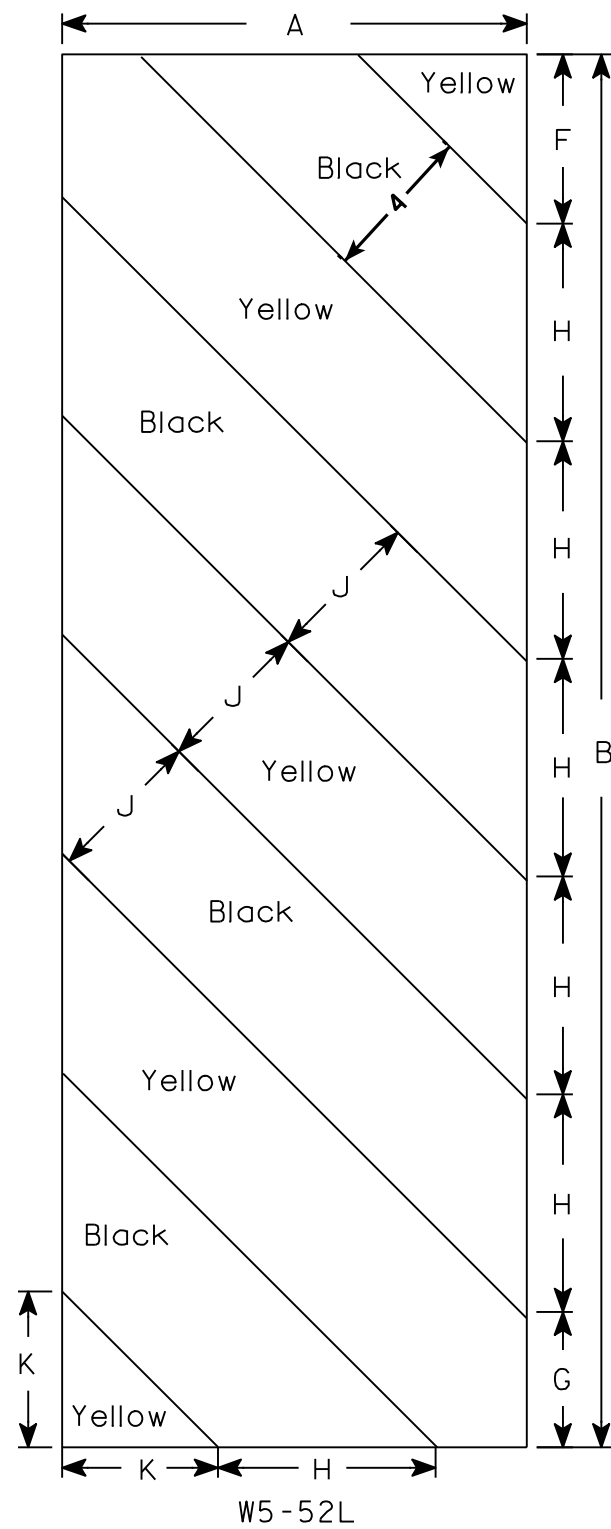
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

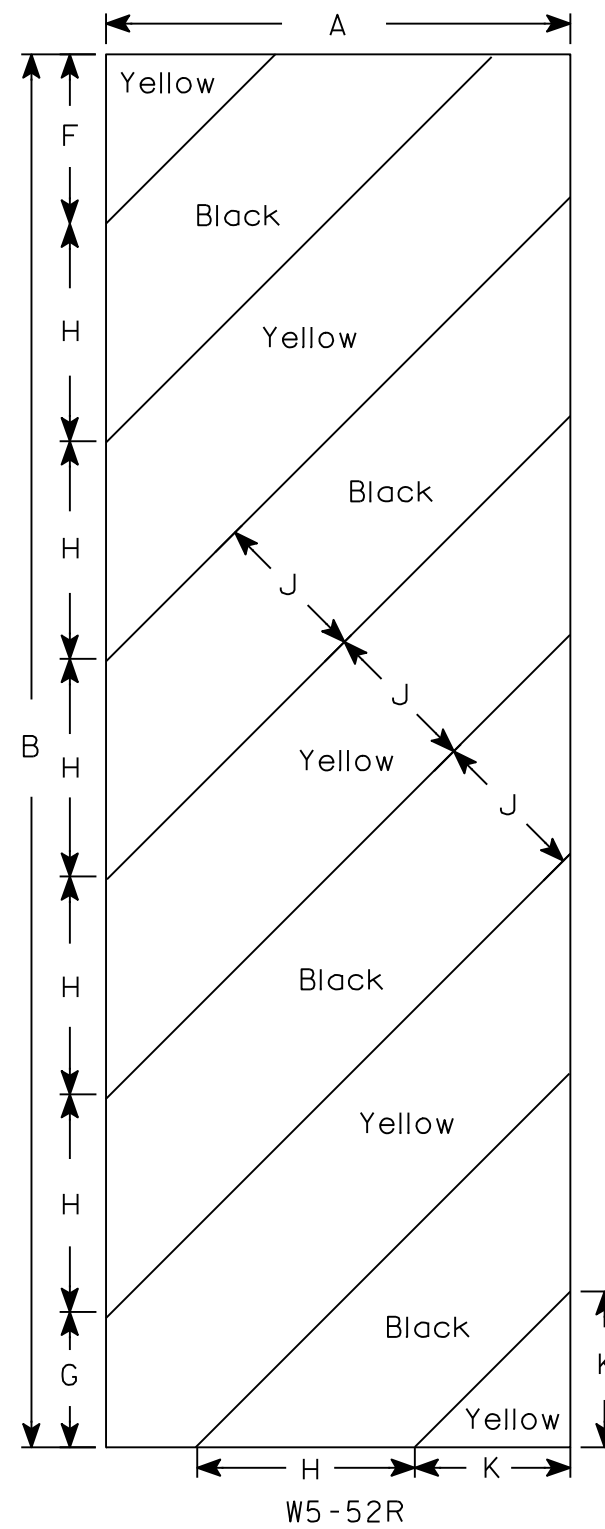
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/27/2020 PLATE NO. W3-5.6



W5-52L



W5-52R

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

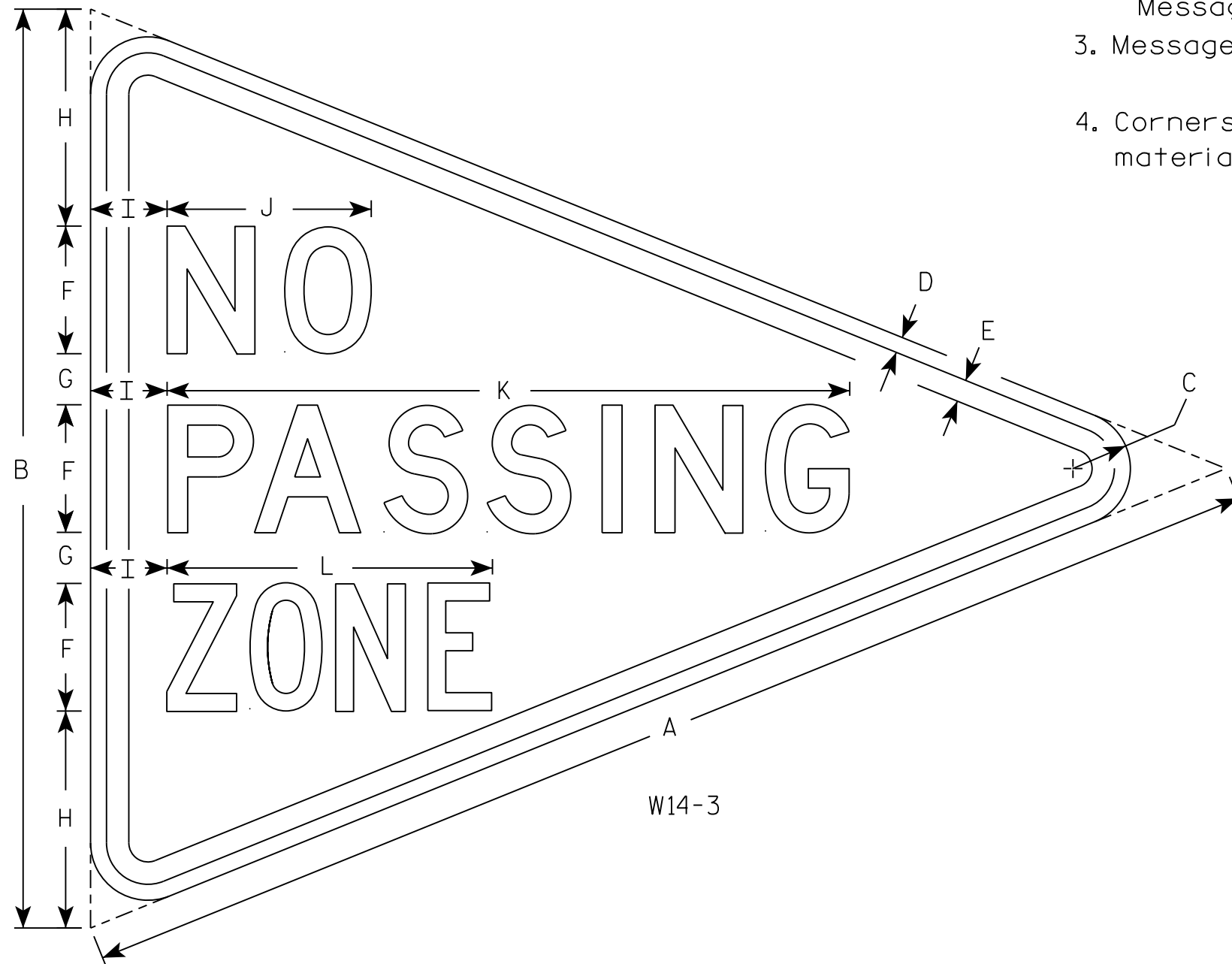
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



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	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

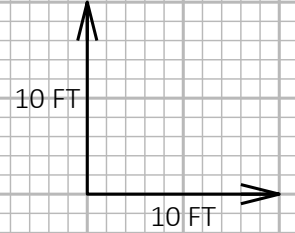
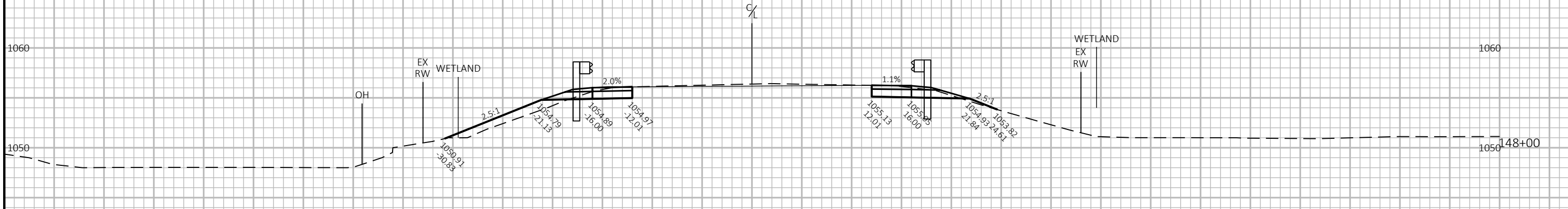
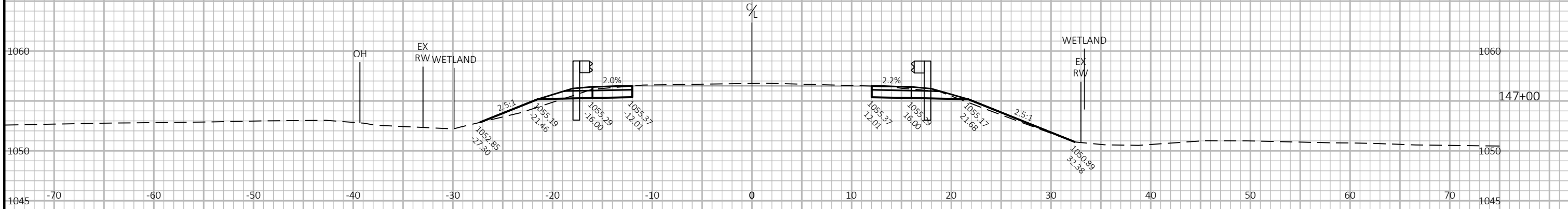
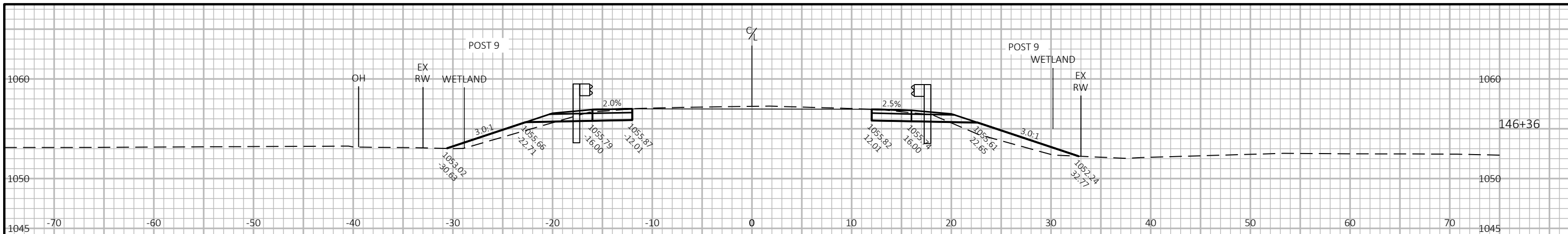
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)			
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL		MASS ORDNATE
								NOTE 1	NOTE 3	
145+17.4	14517.40	0.0	0.0	0.0	0	0	0	0	0	
145+20.0	14520.01	2.6	12.7	0.0	1	0	1	0	1	
145+80.0	14580.00	60.0	12.2	7.5	28	8	29	10	19	
146+00.0	14600.00	20.0	12.1	15.7	9	9	38	21	17	
146+05.0	14605.00	5.0	12.1	15.8	2	3	40	25	15	
146+36.3	14636.25	31.2	12.0	16.0	14	18	54	48	7	
147+00.0	14700.00	63.7	12.3	5.7	29	26	83	80	3	
148+00.0	14800.00	100.0	12.3	9.1	46	27	129	114	15	
149+00.0	14900.00	100.0	12.0	5.8	45	28	174	149	25	
150+00.0	15000.00	100.0	12.8	4.1	46	18	220	171	49	
150+23.8	15023.76	23.8	12.9	9.0	11	6	231	179	52	
150+51.9	15051.88	28.1	13.7	4.8	14	7	245	188	58	
150+76.9	15076.88	25.0	13.8	2.0	13	3	258	191	67	
151+00.0	15100.00	23.1	14.2	1.4	12	1	270	193	78	
151+36.9	15136.88	36.9	14.4	0.0	20	1	290	194	96	
151+38.4	15138.36	1.5	0.0	0.0	0	0	290	194	96	
190+00.0	18999.99	0.0	0.0	0.0	0	0	0	0	0	
190+19.0	19018.96	19.0	13.5	0.0	5	0	5	0	5	
190+79.0	19078.96	60.0	12.6	7.5	29	8	34	10	24	
191+04.0	19103.96	25.0	12.3	10.3	12	8	46	20	26	
191+32.1	19132.08	28.1	12.3	7.5	13	9	59	31	28	
192+00.0	19200.00	67.9	12.0	7.5	30	19	89	55	34	
193+00.0	19300.00	100.0	8.4	18.2	38	48	127	115	12	
194+00.0	19400.00	100.0	10.8	8.0	38	42	165	115	50	
194+22.0	19422.00	22.0	10.8	8.0	8	9	173	126	47	
BRIDGE	--	0.0	0.0	0.0	0	0	0	0	0	
194+55.0	19455.00	0.0	8.4	17.3	0	0	0	0	0	
195+00.0	19500.00	45.0	8.4	17.3	9	19	9	24	-15	
196+00.0	19600.00	100.0	10.2	2.5	33	46	42	81	39	
196+44.6	19644.58	44.6	12.4	8.3	19	9	61	93	32	
196+72.7	19672.70	28.1	12.5	4.0	13	6	74	100	-26	
196+97.7	19697.70	25.0	12.8	3.7	12	4	86	105	-19	
197+50.0	19750.00	52.3	13.9	0.0	26	4	112	110	2	
197+57.7	19757.70	7.7	13.8	0.0	4	0	116	110	6	
197+62.0	19761.88	4.2	0.0	0.0	1	0	117	110	7	

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME

9

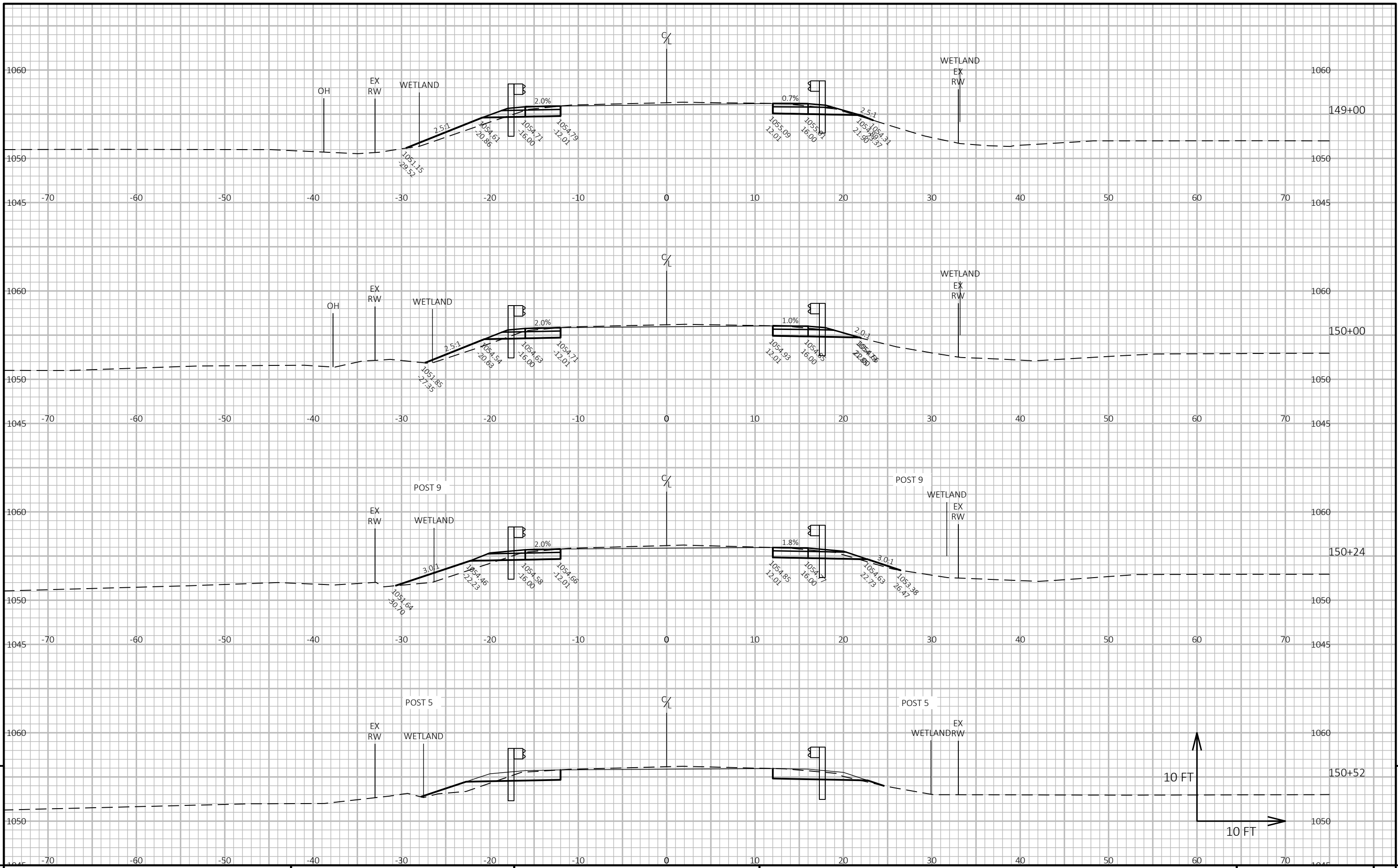
9



9

9

PROJECT NO: 8833-00-71	HWY: CTH A	COUNTY: BARRON	CROSS SECTIONS: BEAM GUARD MGS3	SHEET	E
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PROJECT NO: 8833-00-71

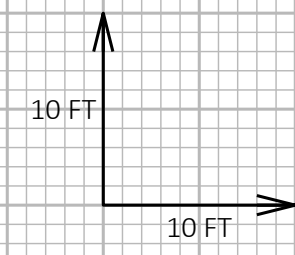
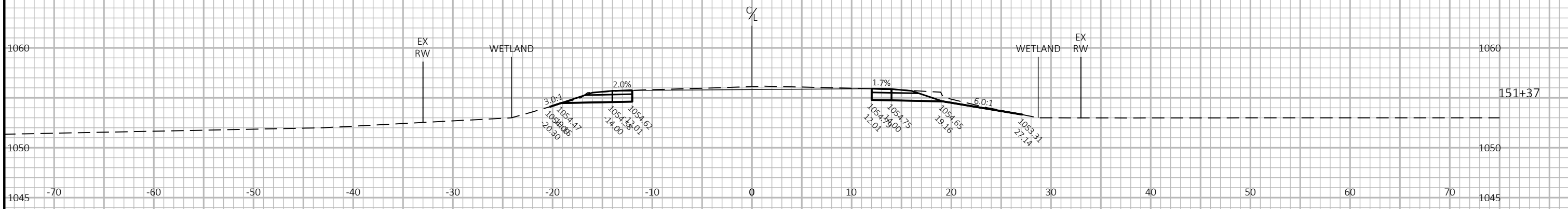
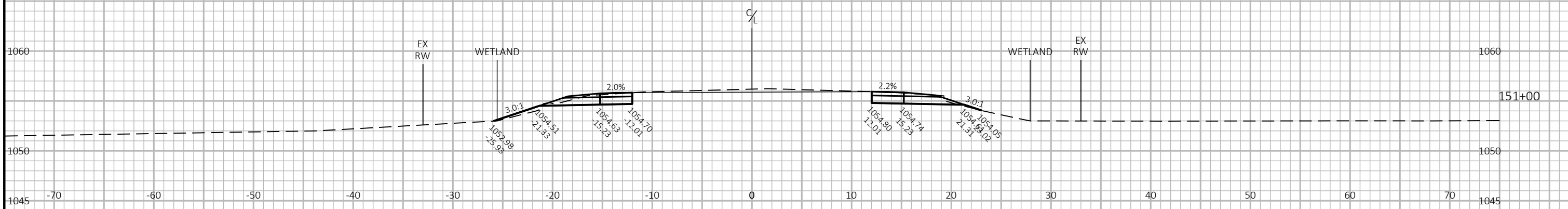
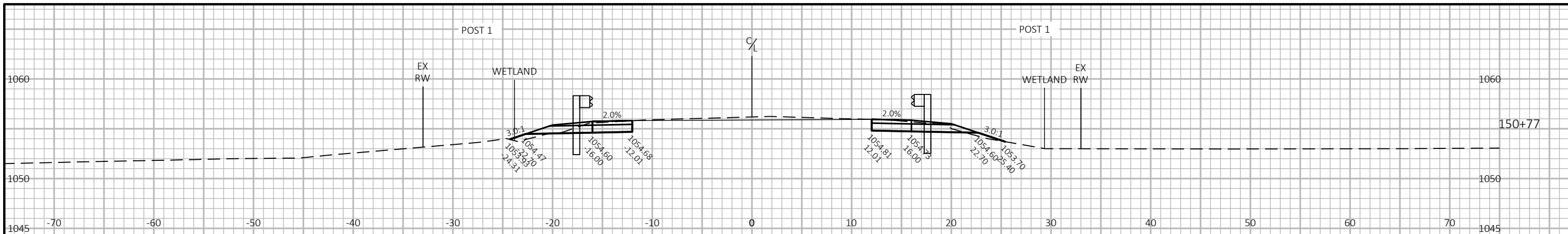
HWY: CTH A

COUNTY: BARRON

CROSS SECTIONS: BEAM GUARD MGS3

SHEET

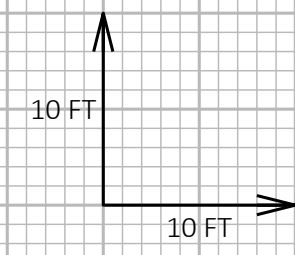
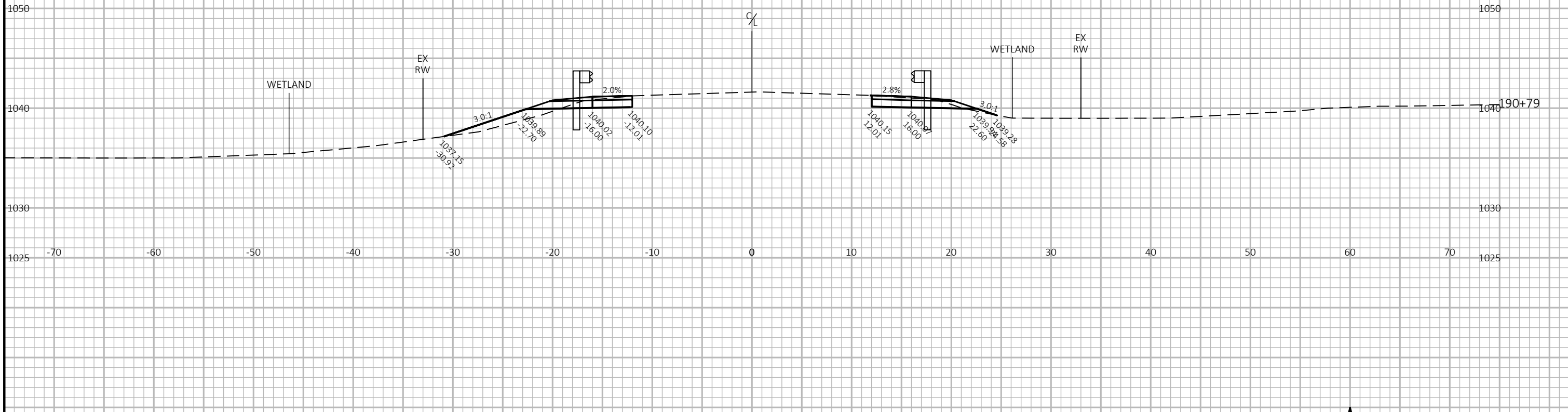
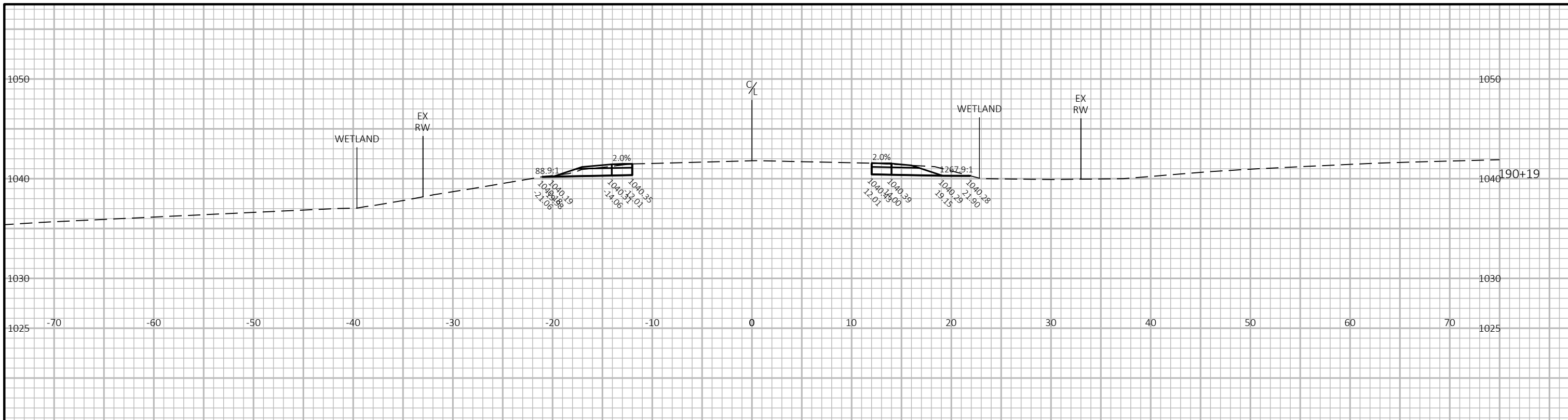
E



9

9

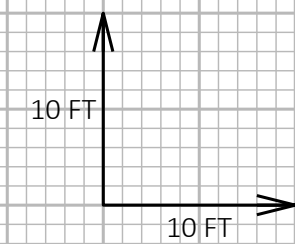
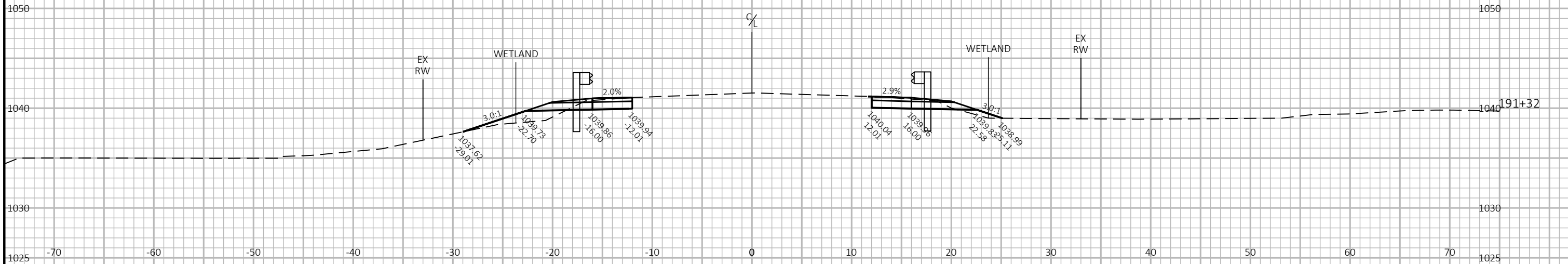
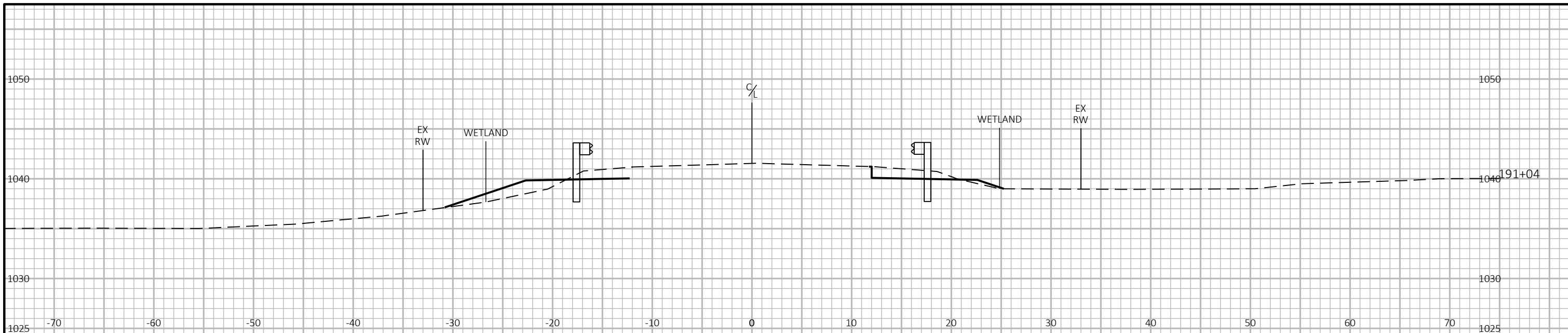
PROJECT NO: 8833-00-71	HWY: CTH A	COUNTY: BARRON	CROSS SECTIONS: BEAM GUARD MGS3	SHEET	E
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9

9

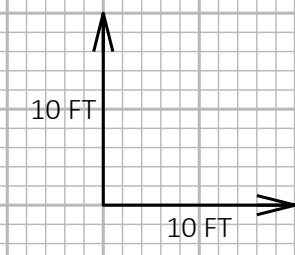
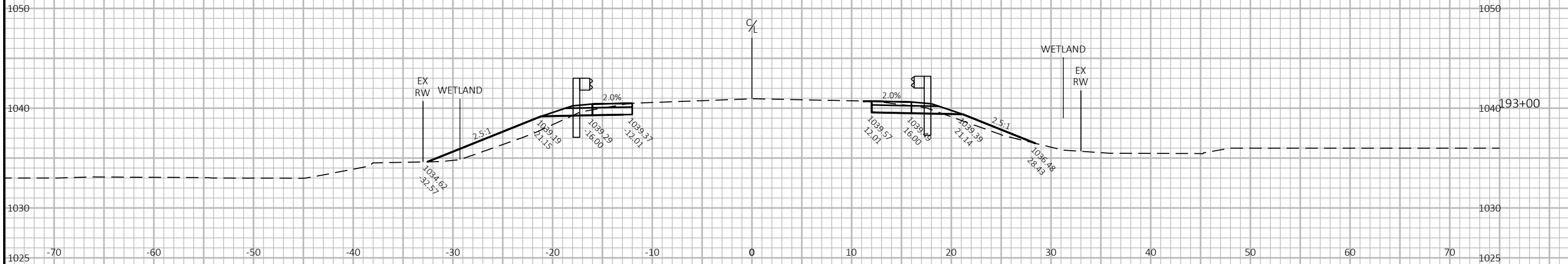
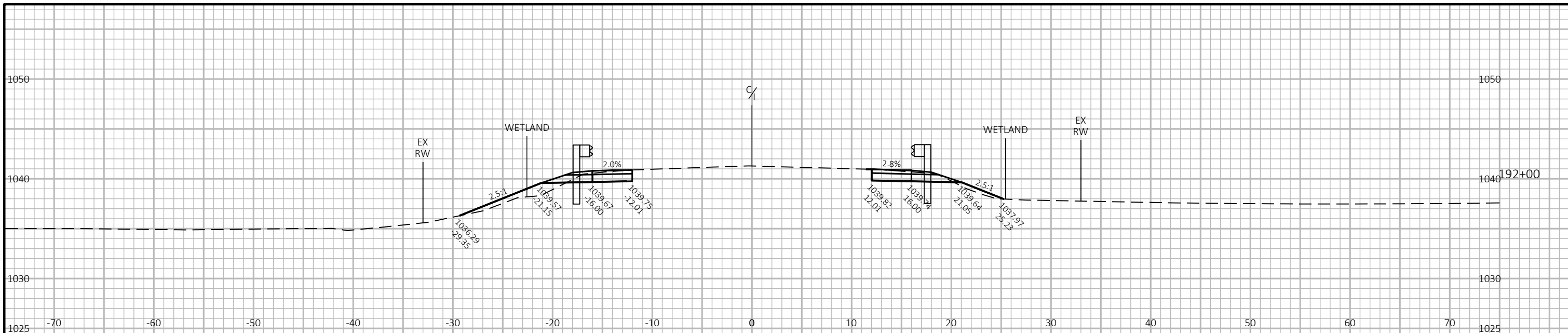
PROJECT NO: 8833-00-71	HWY: CTH A	COUNTY: BARRON	CROSS SECTIONS: BEAM GUARD MGS3	SHEET	E
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9

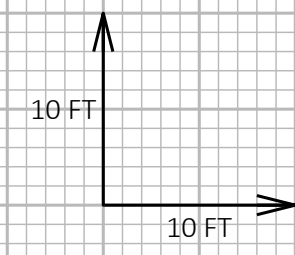
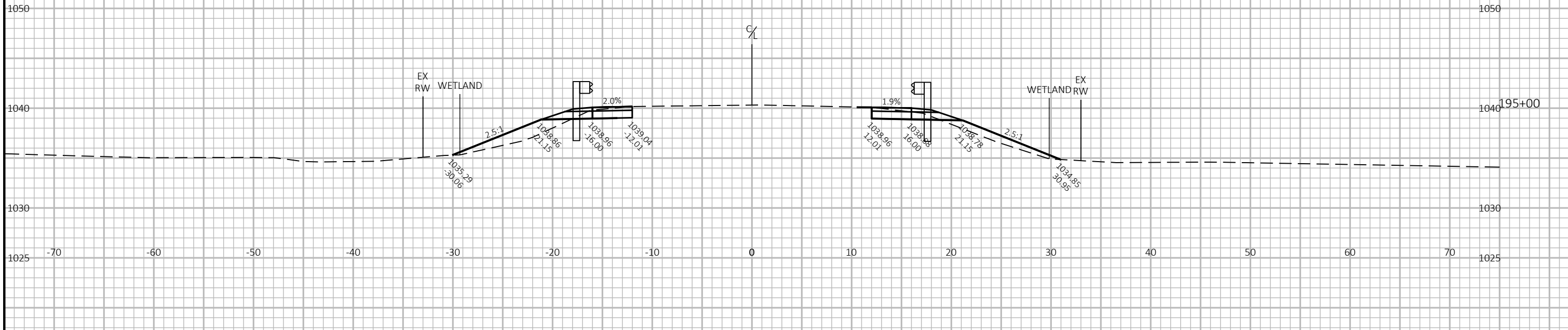
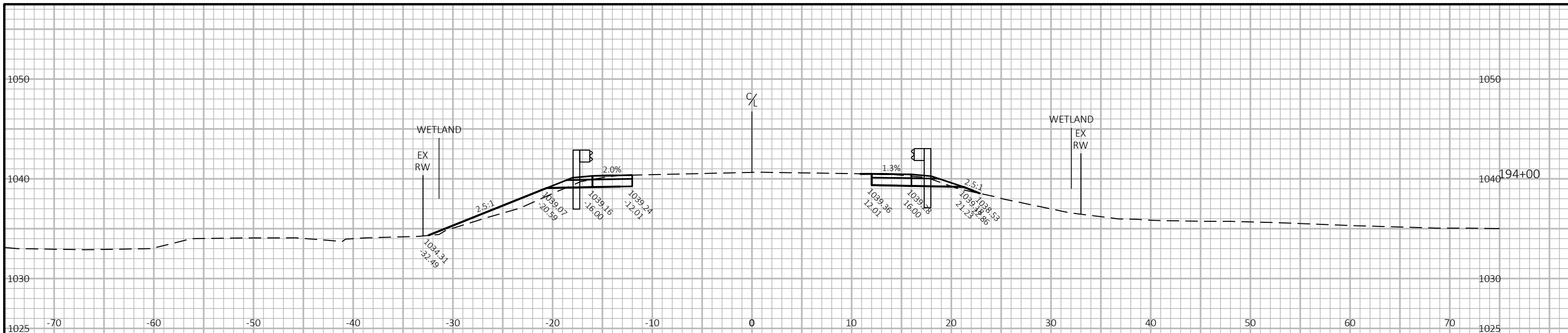
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PROJECT NO: 8833-00-71	HWY: CTH A	COUNTY: BARRON	CROSS SECTIONS: BEAM GUARD MGS3	SHEET	E
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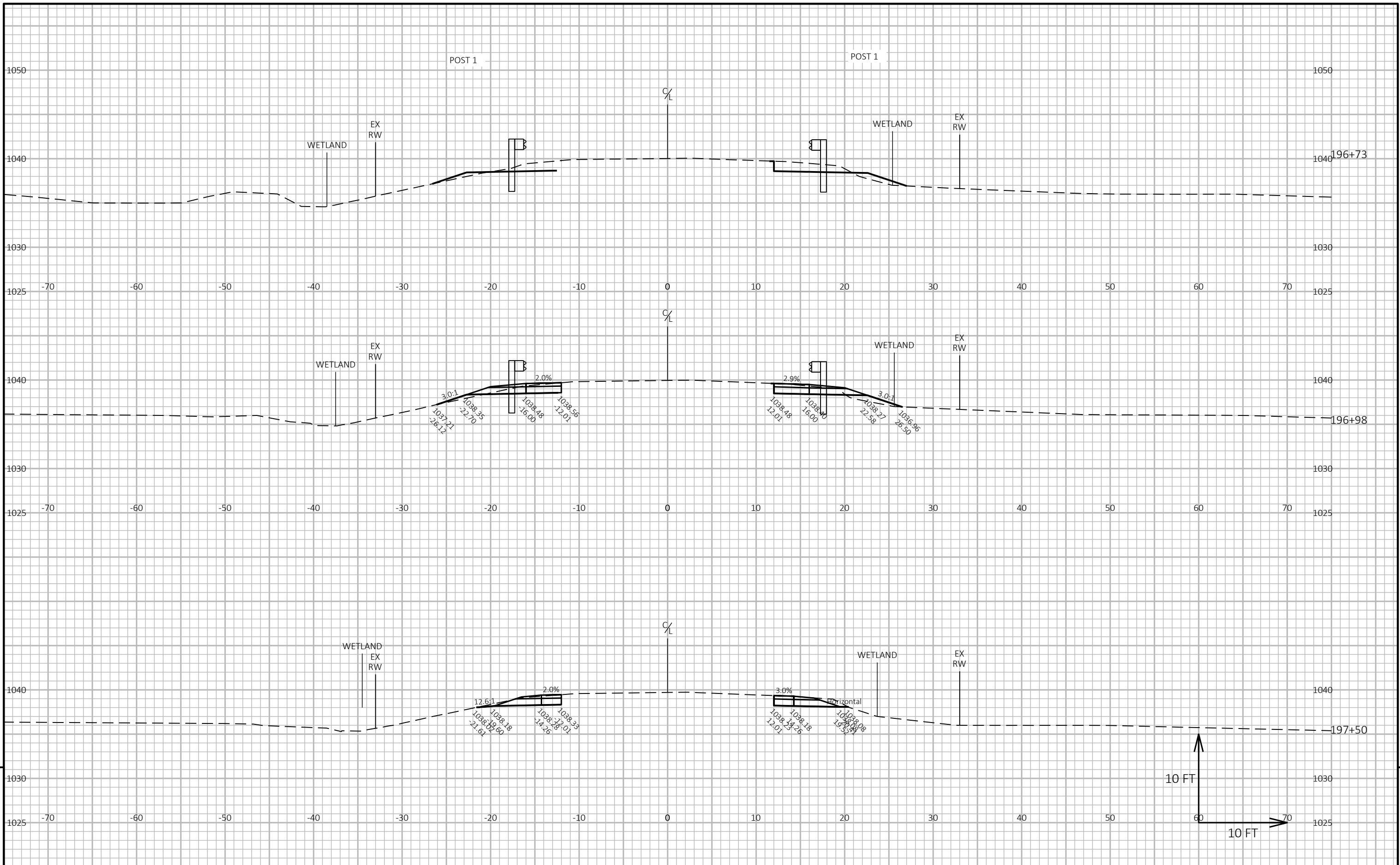
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PROJECT NO: 8833-00-71	HWY: CTH A	COUNTY: BARRON	CROSS SECTIONS: BEAM GUARD MGS3	SHEET E
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PROJECT NO: 8833-00-71

HWY: CTH A

COUNTY: BARRON

CROSS SECTIONS: BEAM GUARD MGS3

SHEET

E



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