EAU

MARCH 2021

PROJECT ID: 7894-03-73

WITH: N/A

COUNTY: PIERCE

26

ORDER OF SHEETS

TOTAL SHEETS = 62

PROJECT LOCATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STH 35 - USH 10

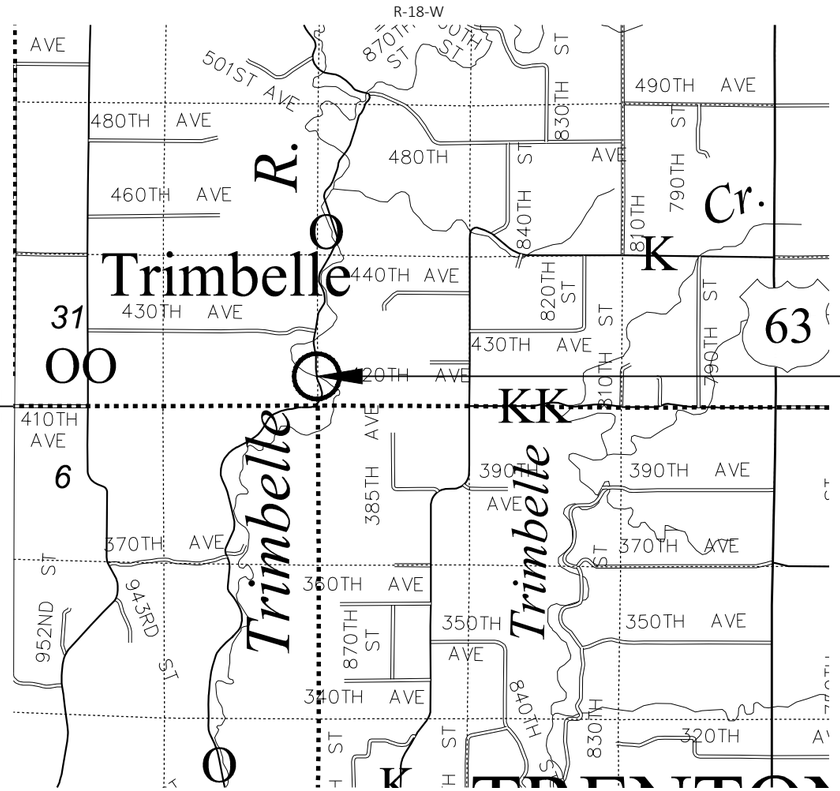
TRIMBELLE RIVER BRIDGE B-47-0048

CTH O

PIERCE COUNTY

STATE PROJECT NUMBER
7894-03-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7894-03-73	—	—



TOTAL NET LENGTH OF CENTERLINE = 0.099 MI

BEGIN PROJECT
STA 12+03.00
Y = 302438.1696
X = 458852.4241

STRUCTURE B-47-48
STA 14+27.83

END PROJECT
STA 17+26.00
Y = 302949.1350
X = 458759.6711

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), PIERCE 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 (2001). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

DESIGN DESIGNATION 7894-03-03

A.A.D.T.	2021	=	251
A.A.D.T.	2041	=	277
D.H.V.		=	35
D.D.		=	50/50
T.		=	7%
DESIGN SPEED		=	55 MPH
ESALS		=	52,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH
- GRADE ELEVATION (LABEL 95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ACCEPTED FOR
COUNTY OF PIERCE

DATE: 10/28/20 (Signature)

Hwy Commissioner (Title)

ORIGINAL PLANS PREPARED BY

Cedar corporation

MENOMONIE - MADISON - GREEN BAY - CEDARBURG
www.cedarcorp.com
800-472-7372

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER

10-28-2020

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CEDAR CORPORATION
Designer	CEDAR CORPORATION
Project Manager	MATTHEW J. THORNSEN, P.E.
Regional Examiner	TOU YANG, P.E.
Regional Supervisor	ANDREW STENSTAND, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 10/29/2020 (Signature)

E

FILE NAME : I:\CLIENTS-MENO\W\W3900 WDOT NW REGION - EAU CLAIRE\024 7894-03-03 STH 35 - USH 10 TRIMBELLE RIVER BRIDGE B-47-0048 CTH O PIERCE COUNTY\78940300\SHEETSPLAN\010101-TI.DWG PLOT DATE : PLOT BY : NICK THOMPSON PLOT NAME :

GENERAL NOTES

THE BENCHMARK IS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), PIERCE COUNTY.

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

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE PLACED PRIOR TO CONSTRUCTION.

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

THE 4.5" OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2.5" LOWER LAYER AND A 2.0" UPPER LAYER.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), PIERCE COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE SALVAGED TOP SOIL, FERTILIZED, SEEDED, TEMPORARY SEEDED, AND COVERED WITH EROSION MAT AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 10.

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE OF THE SLOPE INTERCEPTS. DO NOT STORE OR STOCKPILE MATERIALS IN WETLANDS

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

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	OFF	OFFSET
AGG	AGGREGATE	PC	POINT OF CURVATURE
ET AL	AND OTHERS	PI	POINT OF INTERSECTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PT	POINT OF TANGENCY
BF	BACK FACE	POL	POINT ON LINE
BM	BENCHMARK	PE	PRIVATE ENTRANCE
C/L OR ℄	CENTERLINE	PL	PROPERTY LINE
Δ	CENTRAL ANGLE OR DELTA	PSI	POUNDS/SQUARE INCH
CLR	CLEAR	PROP	PROPOSED
CONC	CONCRETE	R	RADIUS
CONST	CONSTRUCTION	RR	RAILROAD
COR	CORNER	REBAR	REINFORCEMENT BAR
CMP	CORRUGATED METAL PIPE	REQ'D	REQUIRED
CTH	COUNTY TRUNK HIGHWAY	RT	RIGHT
CR	CREEK	RHF	RIGHT-HAND FORWARD
CFS	CUBIC FEET/SECOND	R/W	RIGHT-OF-WAY
CULV	CULVERT	RD	ROAD
D	DEGREE OF CURVE	SEC	SECTION
DHV	DESIGN HOUR VOLUME	S	SOUTH
DIA	DIAMETER	SE	SOUTHEAST
E	EAST	SW	SOUTHWEST
EL	ELEVATION	STH	STATE TRUNK HIGHWAY
EST	ESTIMATED	STA	STATION
FPS	FEET PER SECOND	SE	SUPER ELEVATION
FE	FIELD ENTRANCE	T	TANGENT
FT	FOOT (FEET)	TEL	TELEPHONE
FTG	FOOTING	TEMP	TEMPORARY
FDN	FOUNDATION	TI	TEMPORARY INTEREST
FF	FRONT FACE	TLE	TEMPORARY LIMITED EASEMENT
IP	IRON PIN	TL OR T/L	TRANSIT LINE
LT	LEFT	T	TRUCKS
LHF	LEFT-HAND FORWARD	TYP	TYPICAL
L	LENGTH OF CURVE	U/G	UNDERGROUND
LF	LINEAR FOOT	USH	UNITED STATES HIGHWAY
MAX	MAXIMUM	VAR	VARIABLE
MI	MILE	V	VELOCITY
MIN	MINIMUM	VPC	VERTICAL POINT OF CURVATURE
NC	NORMAL CROWN	VPI	VERTICAL POINT OF INTERSECTION
N	NORTH	VPT	VERTICAL POINT OF TANGENCY
NE	NORTHEAST	W	WEST
NW	NORTHWEST	YB	YARD
NO	NUMBER		

DNR CONTACT

DNR WEST CENTRAL REGION HEADQUARTERS
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701-5108
ATTN: AMY L. LESIK
PH: (715) 836-6571
EMAIL: AmyL.Lesik@wisconsin.gov

DESIGN CONSULTANT CONTACT

CEDAR CORPORATION
604 WILSON AVENUE
MENOMONIE, WI 54751
ATTN: TROY PETERSON, P.E.
PH: (715) 235-9081
EMAIL: troy.peterson@cedarcorp.com

MUNICIPALITY CONTACT

PIERCE COUNTY HIGHWAY DEPARTMENT
621 WEST CAIRNS STREET
ELLSWORTH, WI 54011
ATTN: CHAD JOHNSON, P.E., HIGHWAY COMMISSIONER
PH: (715) 273-5096
EMAIL: chad.johnson@co.pierce.wi.us

UTILITIES CONTACT(S)

COMMUNICATION
BEVCOMM
P.O. BOX 125
HAGER CITY, WI 54014
ATTN: CHAD WHITCOMB
PH: (715) 792-2103
EMAIL: cwhitcomb@bevcomm.com

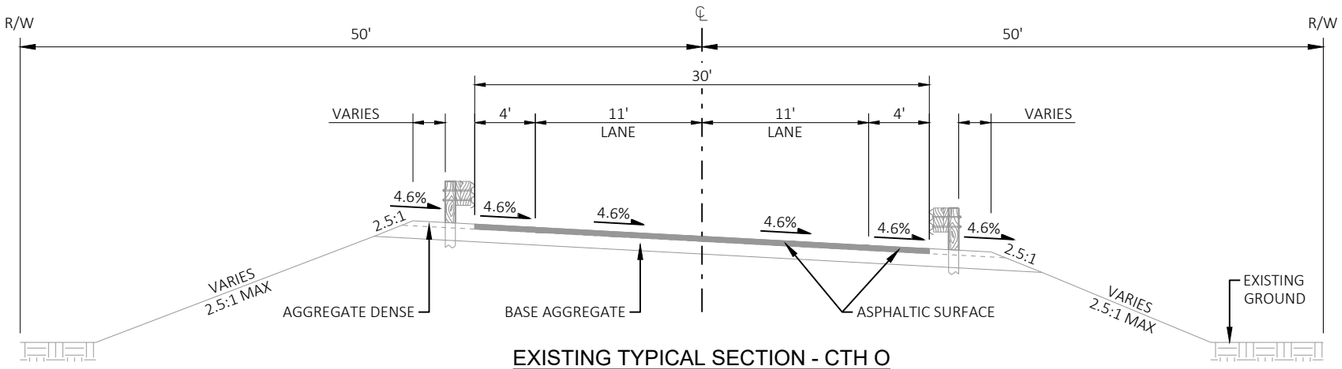
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com
**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS.

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
PAYMENT:												
ASPHALT:	.70 - .95											
CONCRETE:	.80 - .95											
BRICK:	.70 - .80											
DRIVES, WALKS:	.75 - .85											
ROOFS:	.75 - .95											
GRAVEL ROADS, SHOULDERS:	.40 - .60											

TOTAL PROJECT AREA = 0.80 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.31 ACRES

2



EXISTING TYPICAL SECTION - CTH O

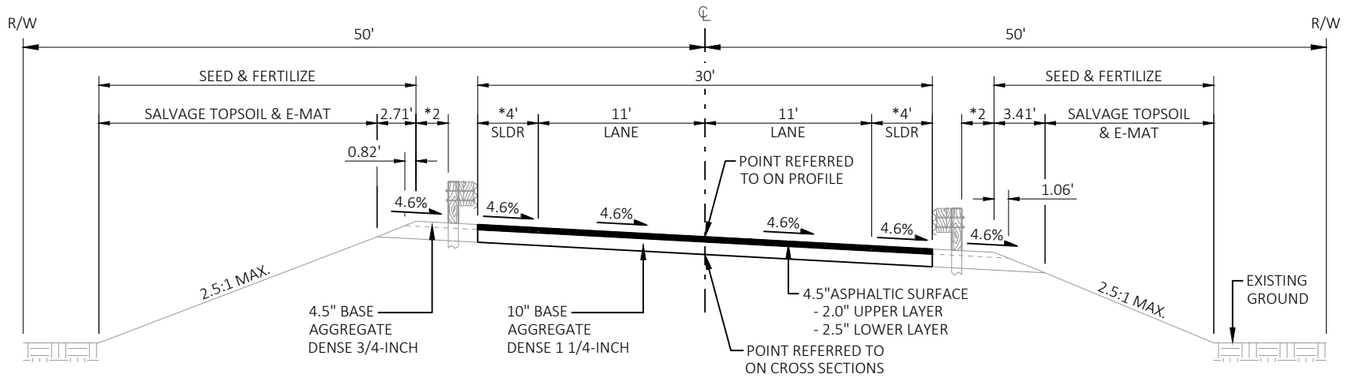
STA 12+03.00 TO STA 13+66.65
STA 14+88.78 TO STA 17+26.00

PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	TYPICAL SECTIONS - EXISTING	SHEET 3	E

FILE NAME : I:\CLIENTS-MENO\W\W3900 WDOT NW REGION - EAU CLAIRE\024 7894-03-03 STH 35 - USH 10 TRIMBELLE RIVER BRIDGE B-47-0048 CTH O PIERCE COUNTY\78940300\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - Existing TS
PLOT DATE : 12/15/2020 10:52 AM PLOT BY : NICK THOMPSON PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

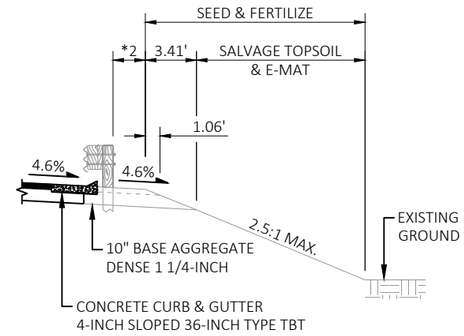
2

* SEE STANDARD DETAIL DRAWINGS (SDDs) 14B42-MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL, 14B45-MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION, AND 14B44-MIDWEST GUARDRAIL SYSTEM (MGS) ENERGY ABSORBING TERMINAL (EAT) DETAILS FOR GUARDRAIL GRADING. PAVE SHOULDER TO FACE OF BEAMGUARD. TAPER PAVED SHOULDERS 10:1 TO LANE EDGE FROM MGS TERMINAL.



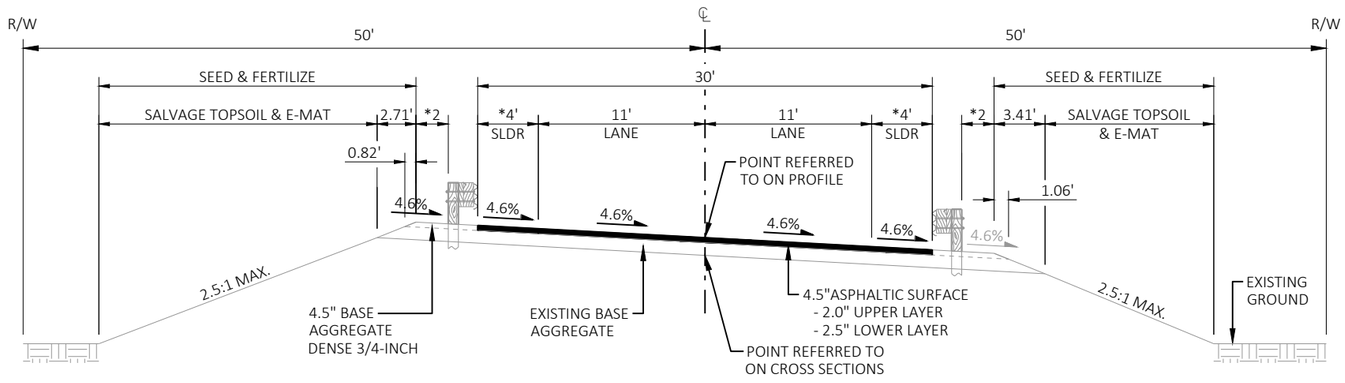
PROPOSED TYPICAL SECTION - CTH O

STA 13+16.00 TO STA 13+66.65



PROPOSED TYPICAL SECTION AT CURB AND GUTTER

STA 13+10.61 TO STA 13+66.65 RT

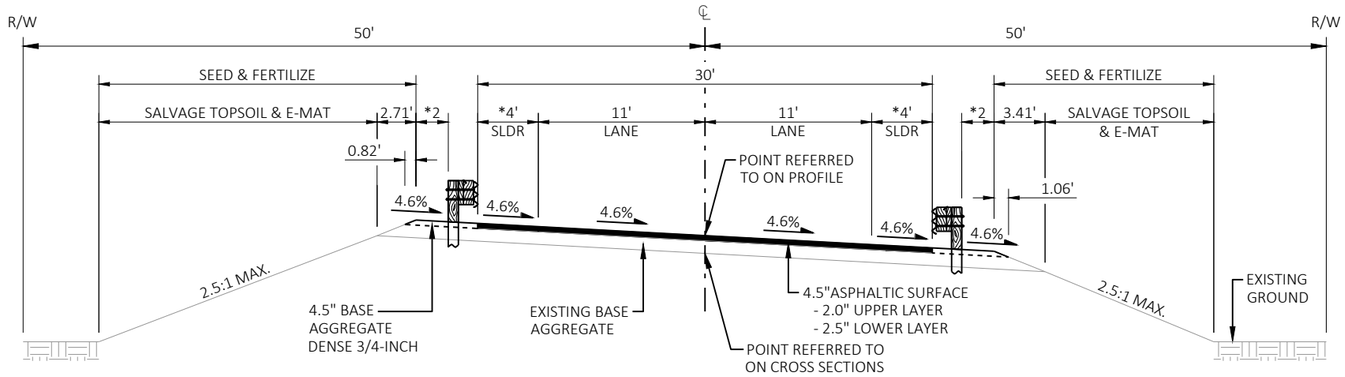


PROPOSED TYPICAL SECTION - CTH O

STA 12+63.44 TO STA 13+16.00 RT
STA 12+89.34 TO STA 13+16.00 LT

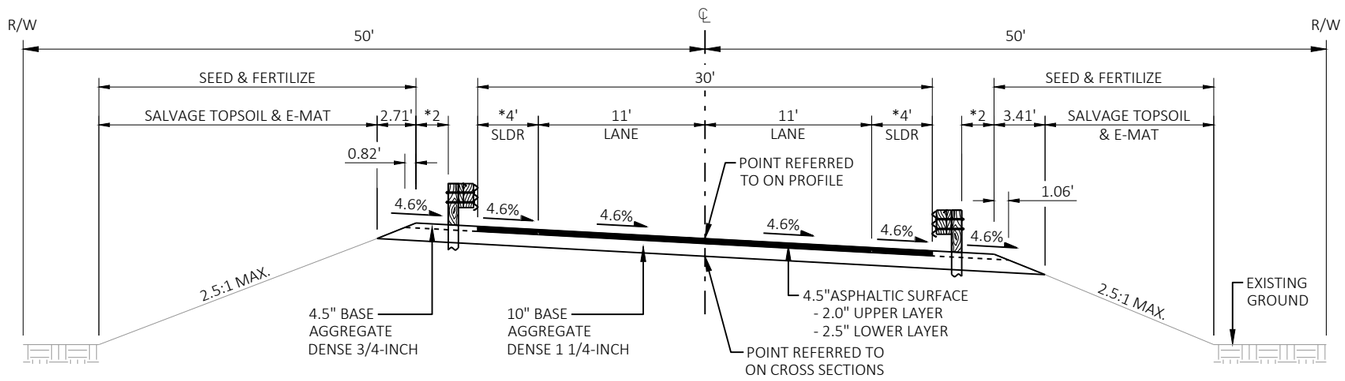
PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	TYPICAL SECTIONS - PROPOSED SOUTH END	SHEET 4	E

FILE NAME : I:\CLIENTS-MENO\W\W3900 WDOT NW REGION - EAU CLAIRE\024 7894-03-03 STH 35 - USH 10 TRIMBELLE RIVER BRIDGE B-47-0048 CTH O PIERCE COUNTY\78940300\SHEETSPLAN\020301-TS.DWG PLOT DATE : 12/15/2020 10:52 AM PLOT BY : NICK THOMPSON PLOT NAME : PLOT SCALE : ##########
LAYOUT NAME - Proposed TS-1
WISDOT/CADDS SHEET 42



PROPOSED TYPICAL SECTION - CTH O

STA 15+39.00 TO STA 15+81.85 RT
STA 15+39.00 TO STA 16+66.62 LT



PROPOSED TYPICAL SECTION - CTH O

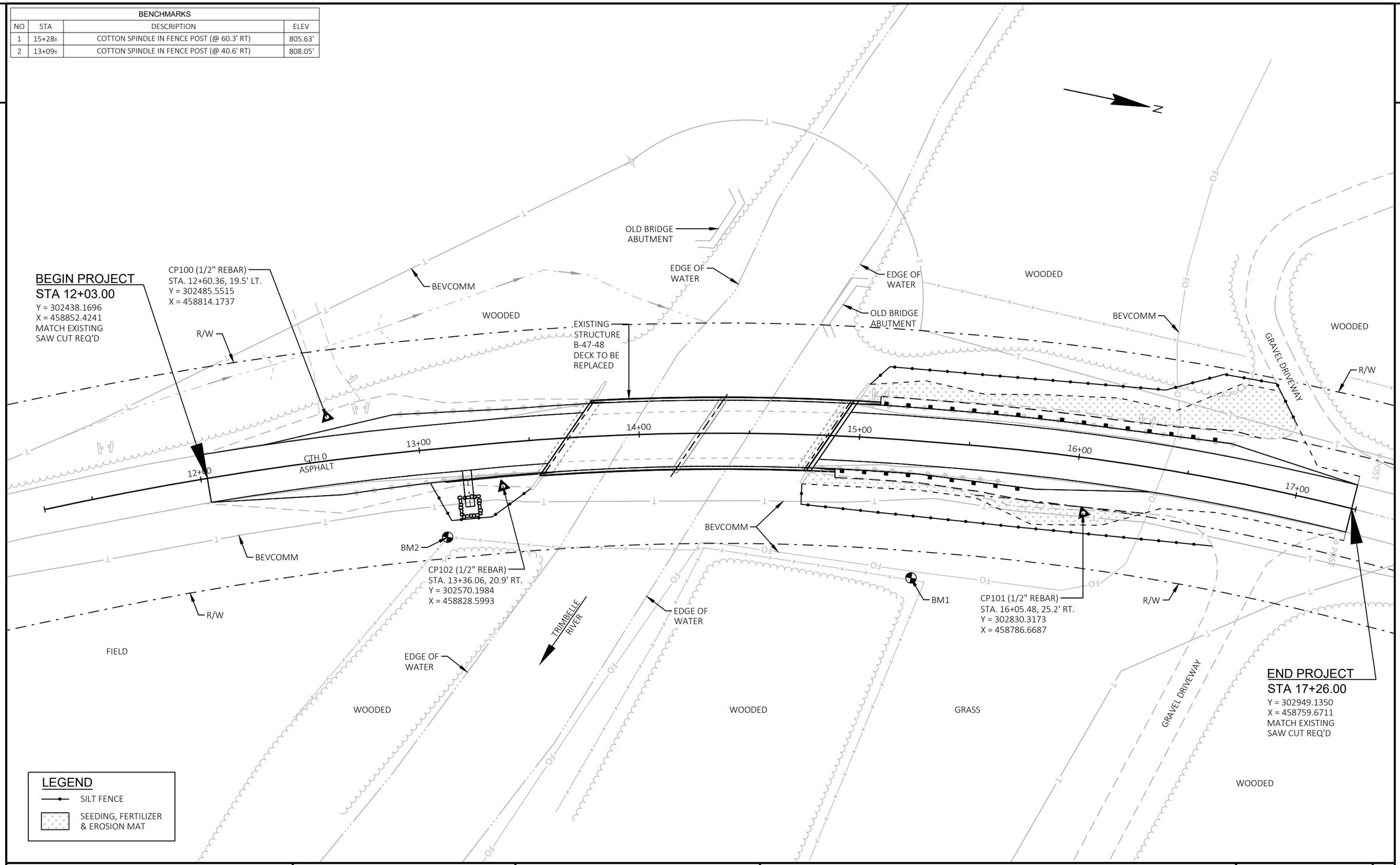
STA 14+88.78 TO STA 15+39.00

* SEE STANDARD DETAIL DRAWINGS (SDDs) 14B42-MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL, 14B45-MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION, AND 14B44-MIDWEST GUARDRAIL SYSTEM (MGS) ENERGY ABSORBING TERMINAL (EAT) DETAILS FOR GUARDRAIL GRADING. PAVE SHOULDER TO FACE OF BEAMGUARD. TAPER PAVED SHOULDERS 10:1 TO LANE EDGE FROM MGS TERMINAL.

PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	TYPICAL SECTIONS - PROPOSED NORTH END	SHEET 5	E

BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
1	15+28±	COTTON SPINDLE IN FENCE POST (@ 60.3' RT)	805.63'
2	13+09±	COTTON SPINDLE IN FENCE POST (@ 40.6' RT)	808.05'

2



PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	EROSION CONTROL	SHEET 6	E

7894-03-73

Line	Item	Item Description	Unit	Total	Qty
0002	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 14+27.83	LS	1.000	1.000
0004	205.0100	Excavation Common	CY	267.000	267.000
0006	206.1000	Excavation for Structures Bridges (structure) 01. B-47-48	LS	1.000	1.000
0008	210.1500	Backfill Structure Type A	TON	210.000	210.000
0010	213.0100	Finishing Roadway (project) 01. 7894-03-73	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	60.000	60.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	154.000	154.000
0016	455.0605	Tack Coat	GAL	65.000	65.000
0018	465.0105	Asphaltic Surface	TON	331.000	331.000
0020	465.0315	Asphaltic Flumes	SY	10.000	10.000
0022	502.0100	Concrete Masonry Bridges	CY	167.000	167.000
0024	502.3101	Expansion Device	LF	37.000	37.000
0026	502.3200	Protective Surface Treatment	SY	400.000	400.000
0028	502.3210	Pigmented Surface Sealer	SY	130.000	130.000
0030	502.4205	Adhesive Anchors No. 5 Bar	EACH	39.000	39.000
0032	502.4206	Adhesive Anchors No. 6 Bar	EACH	24.000	24.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	36,380.000	36,380.000
0036	506.2610	Bearing Pads Elastomeric Laminated	EACH	4.000	4.000
0038	506.4000	Steel Diaphragms (structure) 01. B-47-48	EACH	6.000	6.000
0040	506.7050.S	Removing Bearings (structure) 01. B-47-48	EACH	4.000	4.000
0042	509.1500	Concrete Surface Repair	SF	10.000	10.000
0044	516.0500	Rubberized Membrane Waterproofing	SY	0.500	0.500
0046	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	43.000	43.000
0048	606.0200	Riprap Medium	CY	8.000	8.000
0050	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0052	614.0920	Salvaged Rail	LF	284.000	284.000
0054	614.0952	Replacing Guardrail Reflectors	EACH	13.000	13.000
0056	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7894-03-73	EACH	1.000	1.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	624.0100	Water	MGAL	13.000	13.000
0062	625.0500	Salvaged Topsoil	SY	270.000	270.000
0064	628.1504	Silt Fence	LF	465.000	465.000
0066	628.1520	Silt Fence Maintenance	LF	665.000	665.000
0068	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0072	628.2004	Erosion Mat Class I Type B	SY	198.000	198.000
0074	629.0210	Fertilizer Type B	CWT	0.100	0.100

7894-03-73

Line	Item	Item Description	Unit	Total	Qty
0076	630.0110	Seeding Mixture No. 10	LB	3.000	3.000
0078	630.0200	Seeding Temporary	LB	6.000	6.000
0080	630.0500	Seed Water	MGAL	3.400	3.400
0082	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	10.000	10.000
0084	637.2230	Signs Type II Reflective F	SF	30.000	30.000
0086	638.2602	Removing Signs Type II	EACH	10.000	10.000
0088	638.3000	Removing Small Sign Supports	EACH	10.000	10.000
0090	642.5001	Field Office Type B	EACH	1.000	1.000
0092	643.0420	Traffic Control Barricades Type III	DAY	960.000	960.000
0094	643.0705	Traffic Control Warning Lights Type A	DAY	1,680.000	1,680.000
0096	643.0900	Traffic Control Signs	DAY	840.000	840.000
0098	643.5000	Traffic Control	EACH	1.000	1.000
0100	645.0120	Geotextile Type HR	SY	11.000	11.000
0102	646.1020	Marking Line Epoxy 4-Inch	LF	2,092.000	2,092.000
0104	650.4500	Construction Staking Subgrade	LF	102.000	102.000
0106	650.5000	Construction Staking Base	LF	102.000	102.000
0108	650.6500	Construction Staking Structure Layout (structure) 01. B-47-0048	LS	1.000	1.000
0110	650.9910	Construction Staking Supplemental Control (project) 01. 7894-03-73	LS	1.000	1.000
0112	650.9920	Construction Staking Slope Stakes	LF	402.000	402.000
0114	690.0150	Sawing Asphalt	LF	44.000	44.000
0116	715.0502	Incentive Strength Concrete Structures	DOL	1,002.000	1,002.000

DIVISION	STATIONING	LOCATION	CATEGORY	205.0100 COMMON EXCAVATION (CY)	SALVAGED / UNUSABLE PAVEMENT MATERIAL (1)	AVAILABLE MATERIAL (CY) (2)	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/- (3)
				CUT				FACTOR 1.30	
1	12+03 - 13+67	SOUTH APPROACH	010	82	18	64	0	0	64
			030	32	32	0	0	0	0
DIVISION 1 SUBTOTAL				114	50	64	0	0	64
2	14+88 - 17+26	NORTH APPROACH	010	98	18	80	77	100	-20
			030	55	55	0	0	0	0
DIVISION 2 SUBTOTAL				153	73	80	77	100	-20
CATEGORY 010 SUBTOTAL				180	36	144	77	100	44
CATEGORY 030 SUBTOTAL				87	87	0	0	0	0
GRAND TOTAL(S)				267	123	144	77	100	44
TOTAL COMMON EXCAVATION =				267					

1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
2) AVAILABLE MATERIAL = CUT MINUS THE SALVAGED/UNUSABLE PAVEMENT MATERIAL
3) THE MASS ORDINATE = A + OR - QUANTITY CALCULATED FOR THE DIVISON. A POSITIVE QUANTITY INDICATES AN EXCESS OF MATERIAL.

3

3

BASE AGGREGATE DENSE

STATION	LOCATION	CATEGORY	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
13+16.00 - 13+66.65	RT & LT	010	11	50
14+88.78 - 17+26.00	RT & LT	010	49	104
ITEM TOTAL(S)			60	154

ASPHALTIC SURFACE

STATION	LOCATION	CATEGORY	455.0605* TACK COAT GAL	465.0105 ASPHALTIC TON	465.0315 ASPHALTIC FLUMES SY
12+03 - 13+66	CTH O	010	13	65	-
14+88 - 17+26	CTH O	010	15	76	-
13+20	CTH O	010	-	-	10
	CATEGORY SUBTOTAL		28	141	10
12+03 - 13+16	CTH O	030	14	72	-
15+39 - 17+26	CTH O	030	23	118	-
	CATEGORY SUBTOTAL		37	190	0
	GRAND TOTAL		**65**	**331**	**10**

*APPLICATION RATE = 0.050 GAL/SY

CONCRETE CURB & GUTTER

STATION	LOCATION	CATEGORY	601.0588 4-INCH SLOPED 36-INCH TYPE TBT LF	REMARKS
13+13 - 13+56	RT	010	43	
ITEM TOTAL(S)			43	

RIPRAP

STATION	LOCATION	CATEGORY	606.0200 RIPRAP MEDIUM CY	645.0120 * GEOTEXTILE TYPE HR SY	REMARKS
13+20	RT	010	8	11	FLUME
ITEM TOTAL(S)			8	11	

*QUANTITIES FOUND ELSEWHERE IN PLAN.

GUARD RAIL

STATION	LOCATION	CATEGORY	614.0920 SALVAGED RAIL LF	614.0952 REPLACING GUARDRAIL REFLECTORS EACH
13+63 - 13+78	LT	010	15	-
13+40 - 13+55	RT	010	15	-
15+07 - 16+67	LT	010	162	9
14+90 - 15+82	RT	010	92	4
ITEM TOTAL(S)			284	13

WATER

STATION - STATION	LOCATION	CATEGORY	624.0100 MGAL
12+03 - 13+66.65	CTH O	010	8.5
12+03 - 13+66.65	CTH O	030	4.5
ITEM TOTAL(S)			13

SALVAGED TOPSOIL, MULCH, FERTILIZER, AND SEEDING

STATION	LOCATION	CATEGORY	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
14+88 - 17+26	RT & LT	010	270	0.1	3	6	3.4
ITEM TOTAL(S)			270	0.1	3	6	3.4

EROSION CONTROL ITEMS

STATION	LOCATION	CATEGORY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS 1 TYPE B SY
13+00 - 13+50	RT	010	60	85	--
14+75 - 16+65	RT	010	197	284	--
15+05 - 16+90	LT	010	208	296	--
14+88.78 - 15+39	RT	010	--	--	78
14+88.78 - 15+39	LT	010	--	--	120
ITEM TOTAL(S)			465	665	198

MOBILIZATIONS

PROJECT	CATEGORY	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
7894-03-73	010	0.3	2	2
7894-03-73	020	0.7	-	-
ITEM TOTAL(S)		1	2	2

3

SIGNING QUANTITIES

STATION	LOCATION	SIGN CODE	CATEGORY	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
12+75	LT	W1-8	010	6	2	2	2	CHEVRON
13+52	NW BRIDGE CORNER	W5-52 R	010	3	1	1	1	TIGER BOARD
13+76	SW BRIDGE CORNER	W5-52 L	010	3	1	1	1	TIGER BOARD
14+91	NE BRIDGE CORNER	W5-52 L	010	3	1	1	1	TIGER BOARD
15+05	LT	W1-8	010	6	2	2	2	CHEVRON
15+12	SE BRIDGE CORNER	W5-52 R	010	3	1	1	1	TIGER BOARD
16+25	LT	W1-8	010	6	2	2	2	CHEVRON
ITEM TOTAL(S)				30	10	10	10	

FIELD OFFICE

PROJECT	642.5001 TYPE B EACH
7894-03-73	1
ITEM TOTAL(S)	1

3

TRAFFIC CONTROL

STATION	CATEGORY	DURATION DAYS	643.5000 TRAFFIC CONTROL EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO	643.0420 DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO	643.0705 DAYS	643.0900 TRAFFIC CONTROL SIGNS NO	643.0900 DAYS
12+03 - 17+26	010	60	1.0	16	960	28	1680	14	840
ITEM TOTAL(S)			1.0		960		1680		840

PAVEMENT MARKING

STATION	LOCATION	CATEGORY	646.1020 MARKING LINE EPOXY 4-INCH LF	REMARKS
13+16 - 15+39	CENTER LINE	010	446	DOUBLE YELLOW
13+16 - 15+39	EDGE LINE	010	446	WHITE
	CATEGORY SUBTOTAL		892	
12+03 - 13+16	EDGE LINE	030	226	WHITE
15+39 - 17+26	EDGE LINE	030	374	WHITE
12+03 - 13+16	CENTER LINE	030	226	DOUBLE YELLOW
15+39 - 17+26	CENTER LINE	030	374	DOUBLE YELLOW
	CATEGORY SUBTOTAL		1200	
	GRAND TOTAL		**2092**	

CONSTRUCTION STAKING

STATION - STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500* STRUCTURE LS	650.9910 SUPPLIMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
12+03 - 13+16 (BEAMGUARD GRADING)	-	-	-	-	113
13+16 - 13+67	51	51	-	-	51
13+67 - 14+88	-	-	1.0	-	-
14+88 - 15+39	51	51	-	-	51
15+39 - 17+26 (BEAMGUARD GRADING)	-	-	-	-	187
12+03 - 17+26	-	-	-	1.0	-
ITEM TOTAL(S)	102	102	1.0	1.0	402

*CATEGORY 020

SAWING

STATION	CATEGORY	LOCATION	690.0150 ASPHALT LF
12+03	010	RT/LT	22
17+26	010	RT/LT	22
ITEM TOTAL(S)			44

PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	MISCELLANEOUS QUANTITIES	SHEET 12	E

BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
1	15+28\	COTTON SPINDLE IN FENCE POST (@ 60.3' RT)	805.63'
2	13+09\	COTTON SPINDLE IN FENCE POST (@ 40.6' RT)	808.05'

◥ CENTER ASPHALTIC FLUME BETWEEN FIRST BEAM GUARD SECTION WITH POST SPACING OF 6'-3".

① REMOVE EXISTING CHEVRON BOARDS & RETURN TO COUNTY. INSTALL NEW W1-8 SIGNS.

② REMOVE EXISTING TIGER BOARDS & RETURN TO COUNTY. INSTALL NEW W5-52 SIGNS.

BEGIN PROJECT
STA 12+03.00
Y = 302438.1696
X = 458852.4241
MATCH EXISTING
SAW CUT REQ'D

END PROJECT
STA 17+26.00
Y = 302949.1350
X = 458759.6711
MATCH EXISTING
SAW CUT REQ'D

NOTE:
CONTRACTOR TO CONFIRM BURIED UTILITY LOCATIONS WITH FACILITY OWNERS.

CP100 (1/2" REBAR)
STA. 12+60.36, 19.5' LT.
Y = 302485.5515
X = 458814.1737

CP102 (1/2" REBAR)
STA. 13+36.06, 20.9' RT.
Y = 302570.1984
X = 458828.5993

CP101 (1/2" REBAR)
STA. 16+05.48, 25.2' RT.
Y = 302830.3173
X = 458786.6687

BM1
BM2

DAVID J. AUGUSTINE
MARK A. KEARNS
WOODED
BEVCOMM
EDGE OF WATER
PAVED EDGE OF SHOULDER
GRAVEL DRIVEWAY
TRIMBELLE RIVER
CTH O
ASPHALT
CURB & GUTTER
10:1 TAPER
50'
R/W
PC: 12+26.79
PT: 17+23.79
EXISTING STRUCTURE B-47-48 DECK TO BE REPLACED
OLD BRIDGE ABUTMENTS
SALVAGED RAIL. DISCONNECT FROM TYPE 'F' RAIL AND REATTACH TO NEW PARAPET.
MARKING LINE EPOXY 4-INCH (EDGELINE WHITE)
MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW CENTERLINE)
PROPOSED AGG. REPLACEMENT TO HINGE POINT.
*39.4' TRANSITION
*68.75' MGS
*53.125' EAT
SI
ASPHALTIC FLUME
RIPRAP MEDIUM
8.0'
W1-8 18"X24"
W5-52L 12"X36"
W5-52R 12"X36"
12+00
13+00
14+00
15+00
16+00
17+00

HORIZONTAL CURVE 1 DATA	
PI	= 14+79.17
Y	= 302.599.168
X	= 458798.349
Δ	= 24°51'00"
D	= 5°00'00" RT
T	= 252.48'
L	= 497.00'
R	= 1145.92'
PC	= 12+26.79
Y	= 302546.749
X	= 458815.140
PT	= 17+23.79
Y	= 302652.954
X	= 458786.660
BK	= N17°45'39.4"W
AH	= N12°15'39.5"W

VCL = 160.00
K = 239.15
1.48%
1.40%
1.55%
2.21%
VPI STA. 13+68.11 EL. 815.50
VPI STA. 15+30.00 EL. 817.77
VPC STA 15+40.00 VPC EL 817.92
VPI STA 16+20.00 VPI EL 819.16
VPT STA 17+00.00 VPT EL 820.93
HIGH WATER$_{100}$ EL 808.10 (1977)
PROPOSED NEW DECK
FINISHED ' PROFILE
EXISTING ' PROFILE
* 36"
EXISTING ABUTMENT TO REMAIN
EXISTING PIER TO REMAIN
OBSERVED WATER EL 795.83\ (12-9-19)
* EXISTING 36" GIRDERS TO REMAIN
EXISTING ' ELEVATION
FINISHED ' ELEVATION

812.49	812.62	813.03	813.70	813.76	814.49	814.50	815.10	815.23	794.73	815.95	795.71	816.65	817.18	817.35	817.99	818.08	818.82	818.92	819.86	819.87	820.87	820.93	821.56
11+28	11+50	12+00	12+50		13+00		13+50		14+00		14+50		15+00		15+50		16+00		16+50		17+00		17+28

STATION 14+27.83
REMOVE DECK - STRUCTURE B-47-48
TWO SPAN CONCRETE DECK GIRDER BRIDGE
TUBULAR RAILING, TYPE F
122.1' OVERALL LENGTH
32.0' OVERALL WIDTH
SKEW 35°

STATION 14+27.83
INSTALL DECK - STRUCTURE B-47-48
TWO SPAN CONCRETE DECK GIRDER BRIDGE
SINGLE SLOPE PARAPET 42SS
122.1' OVERALL LENGTH
32.5' OVERALL WIDTH
SKEW 35°

PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	PLAN AND PROFILE	SHEET 13	E

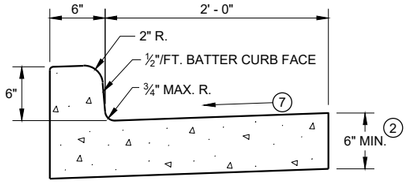
FILE NAME : I:\CLIENTS-MENO\W\W3900 WDOT NW REGION - EAU CLAIRE\024 7894-03-03 STH 35 - USH 10 TRIMBELLE RIVER BRIDGE B-47-0048 CTH O PIERCE COUNTY\78940300\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - Plan & Profile
PLOT DATE : 1/27/2021 10:13 AM PLOT BY : JORDAN DISTERHAFT PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

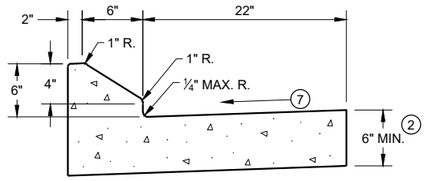
Standard Detail Drawing List

08D01-21A	CONCRETE CURB & GUTTER
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

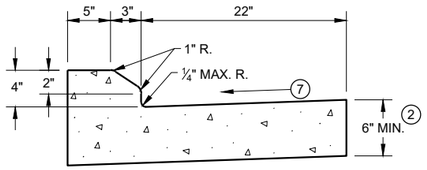
6



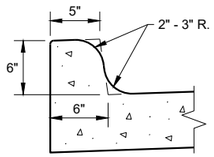
TYPES A[1] & D



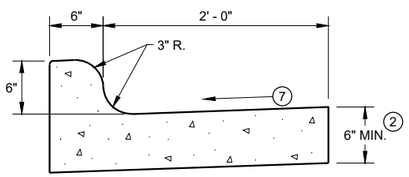
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

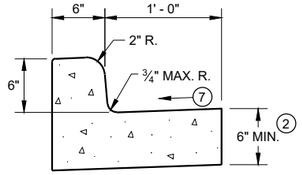


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



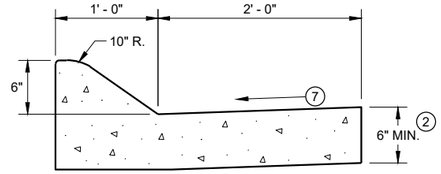
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"

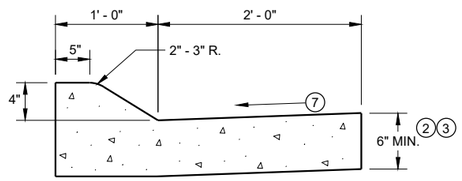


TYPES A[1] & D

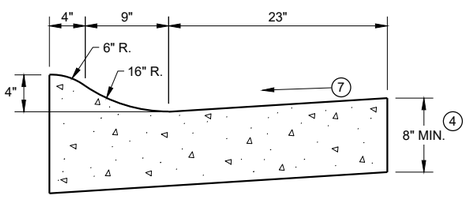
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D



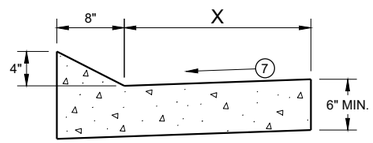
4" SLOPED CURB TYPES A[1] & D



4" SLOPED CURB TYPES R[1] & T[5]

CONCRETE CURB AND GUTTER 36"

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

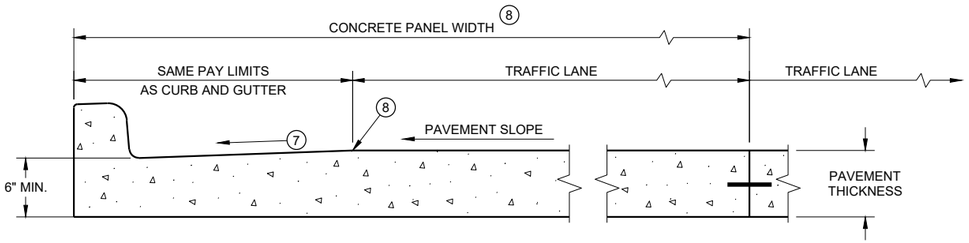


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

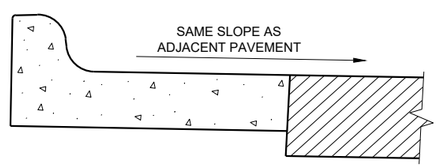
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

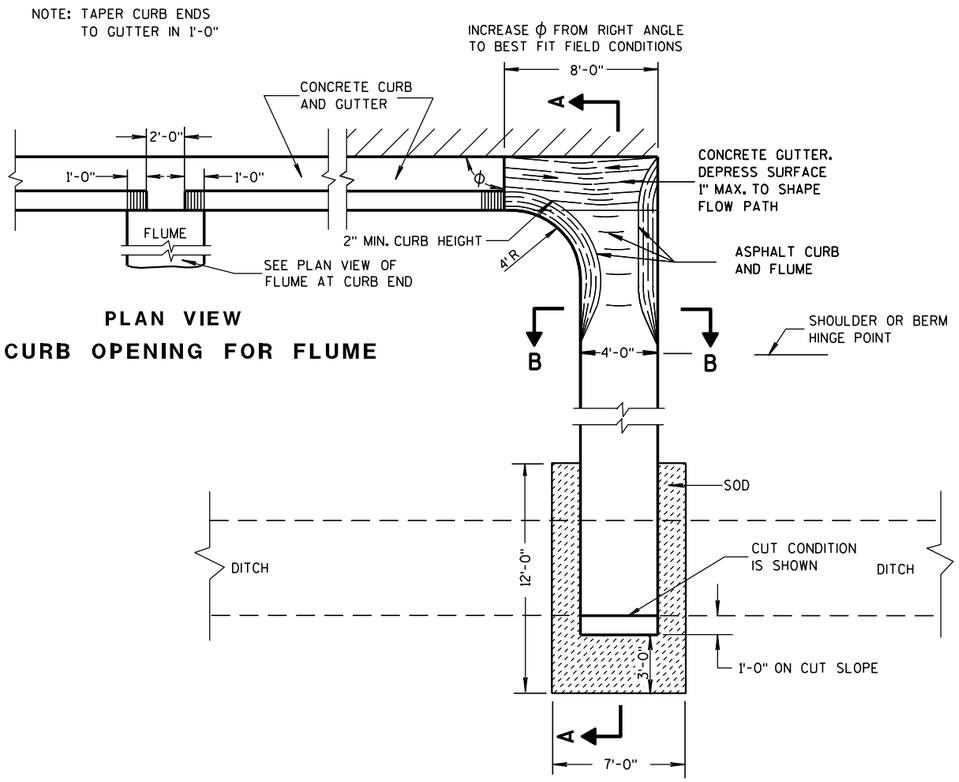
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

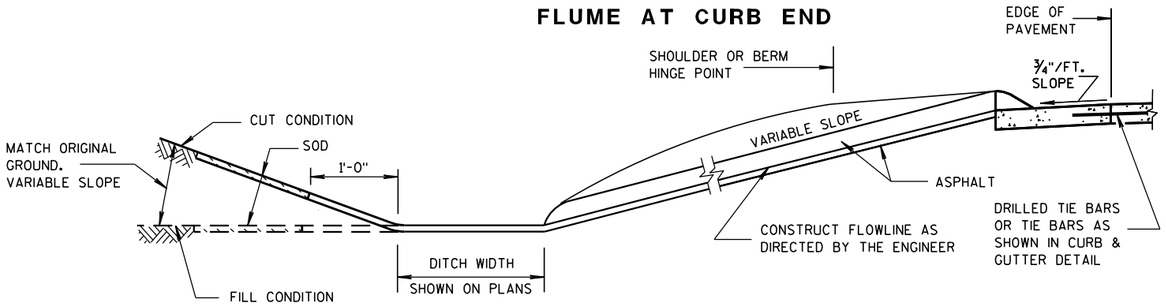
SDD 08D01 - 21a

ASPHALTIC FLUME

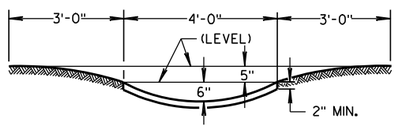


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

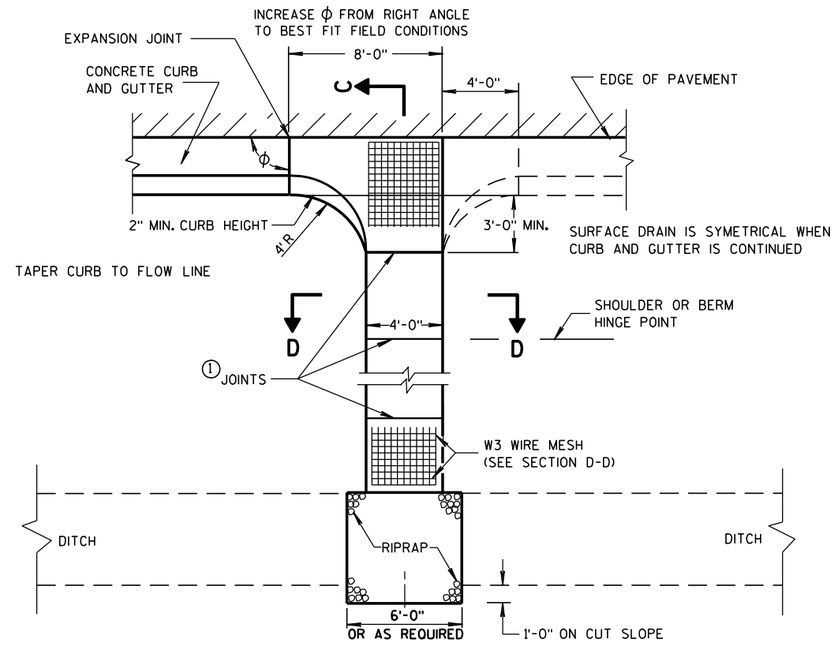
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

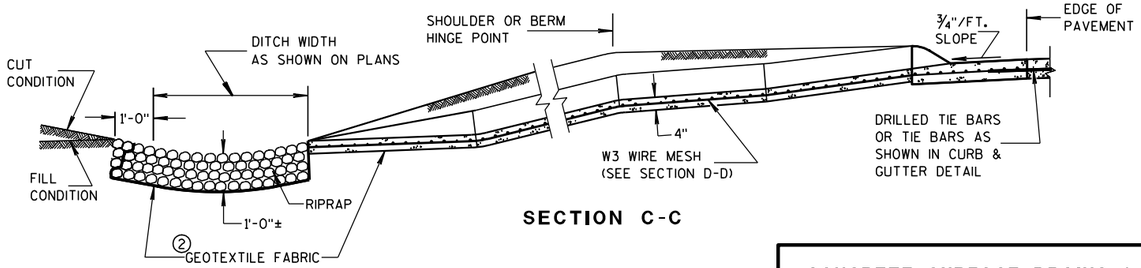
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

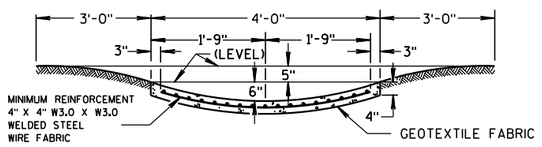
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT

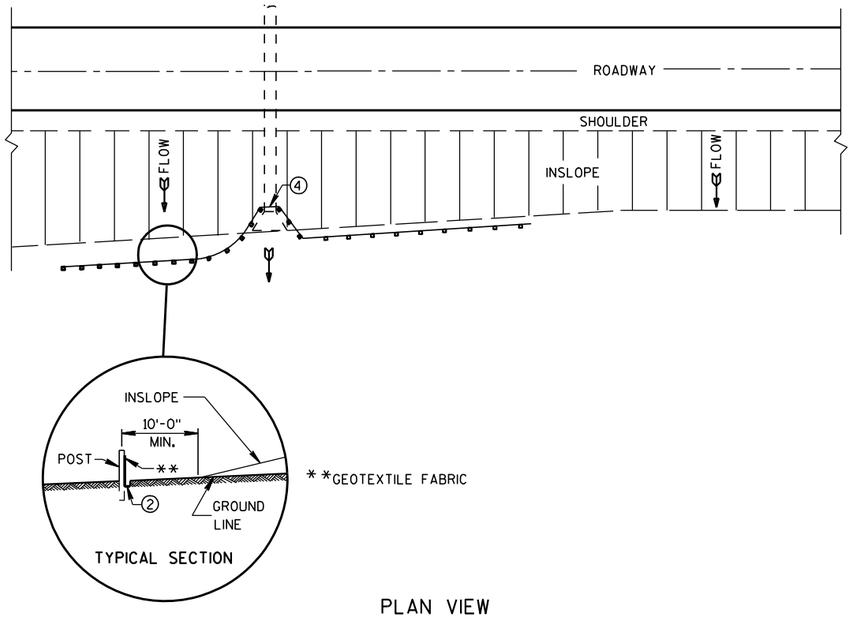
FHWA

6

S.D.D. 8 D 4-5

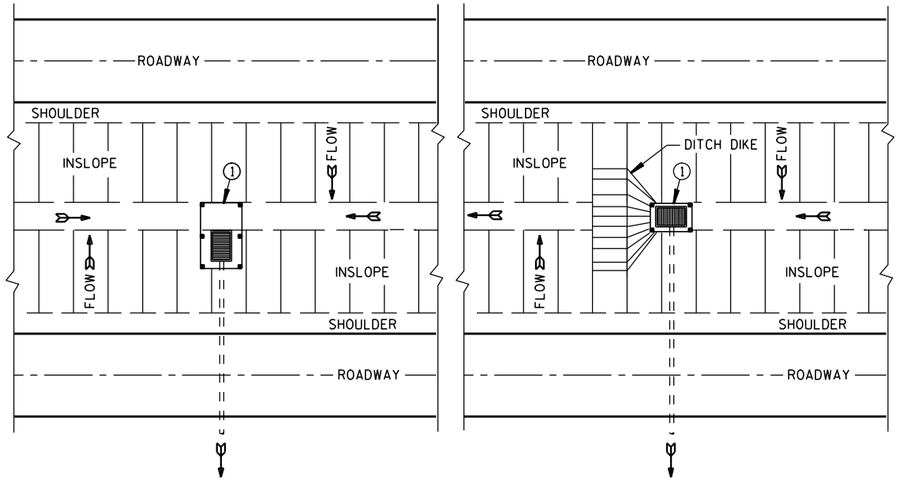
6

S.D.D. 8 D 4-5



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



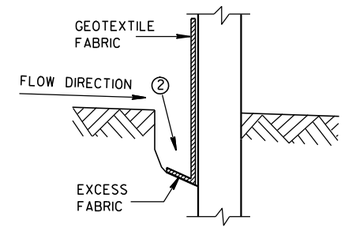
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

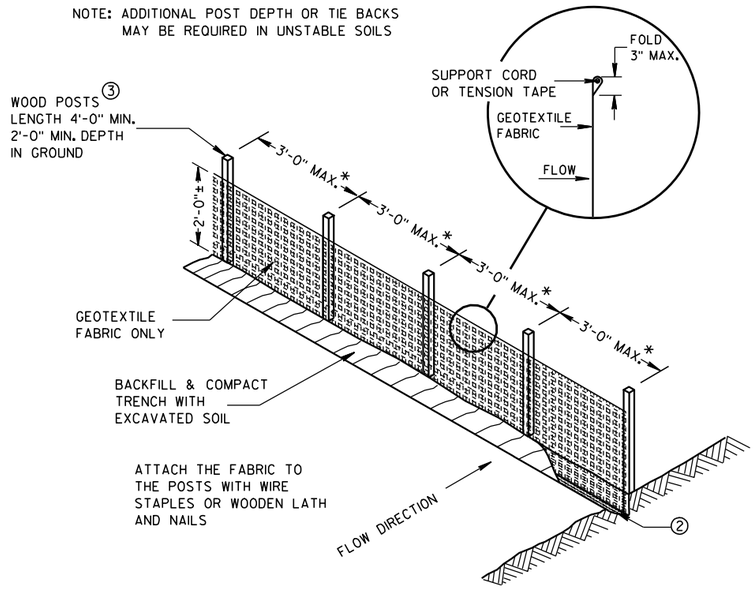
GENERAL NOTES

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

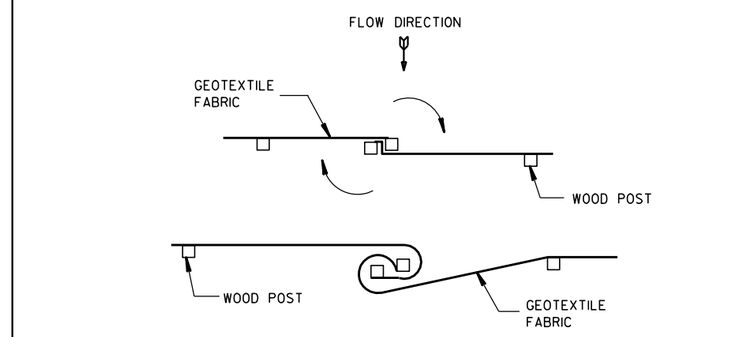
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



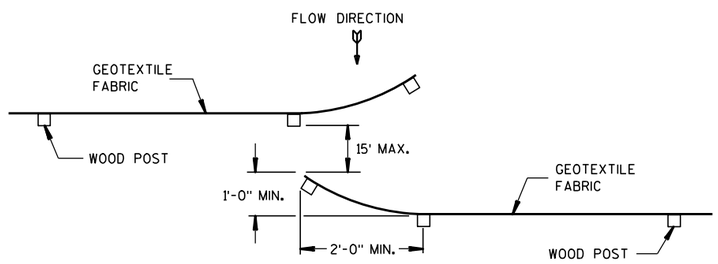
TRENCH DETAIL



SILT FENCE

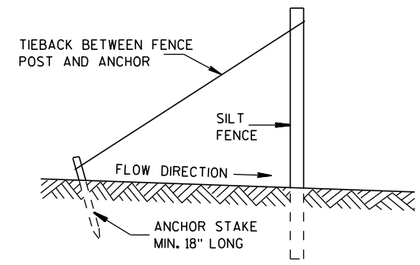


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

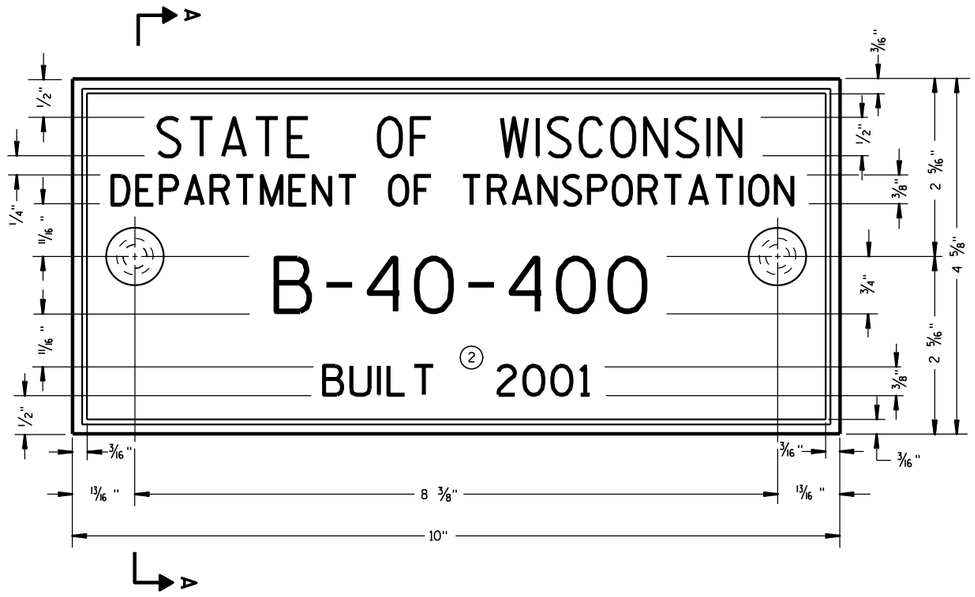
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

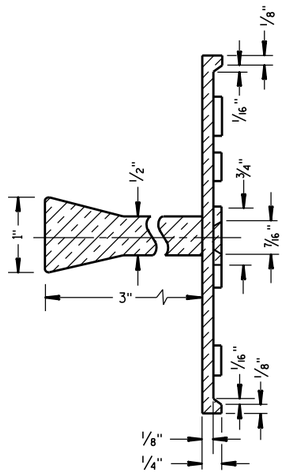
GENERAL NOTES

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

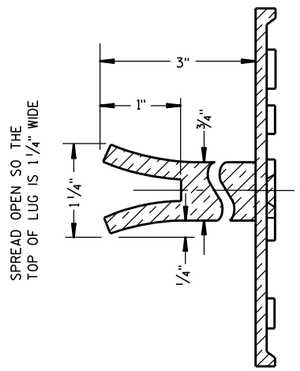
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

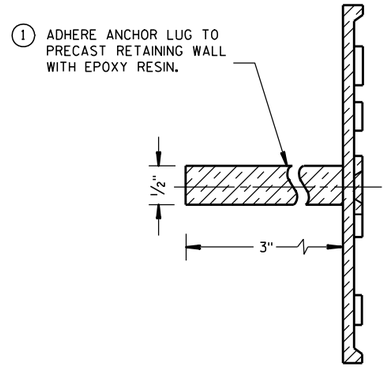
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 12 A 3-10

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

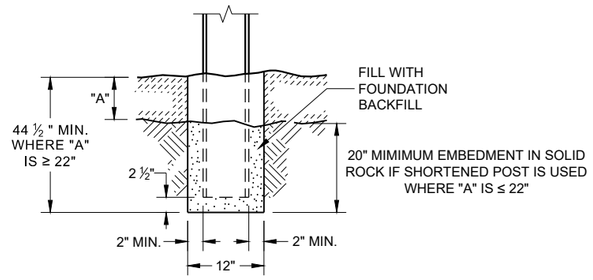
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

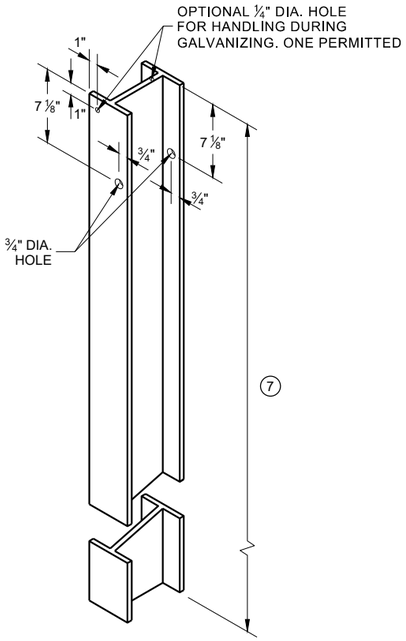
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

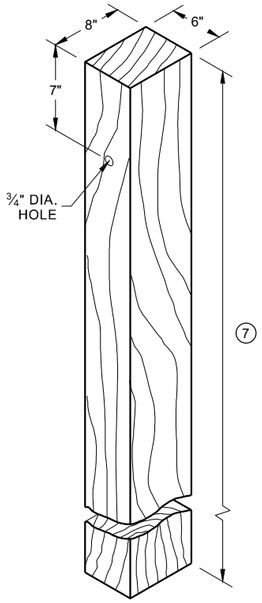
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



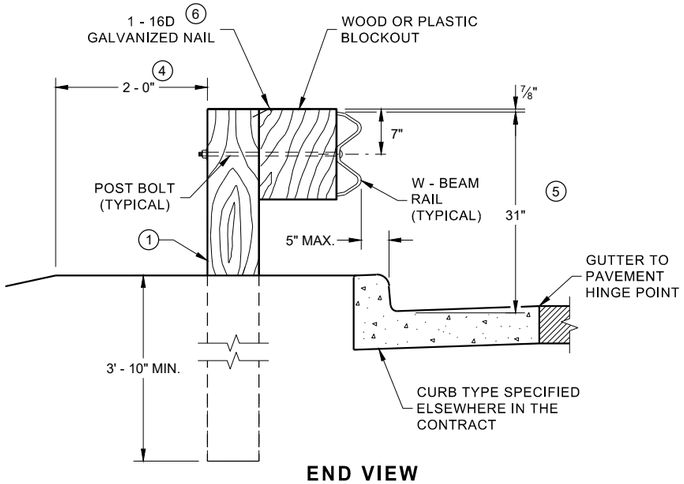
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



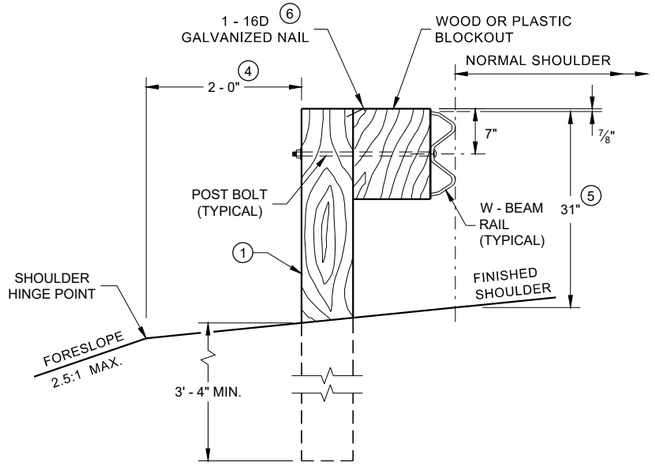
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



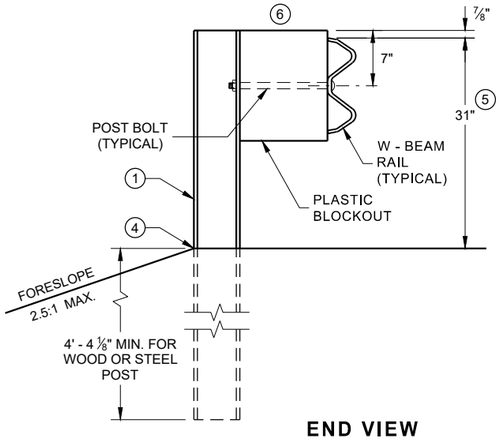
WOOD POST (6" X 8") NOMINAL (1)



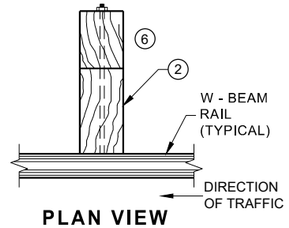
END VIEW
LOCATED ALONG A CURBED ROADWAY



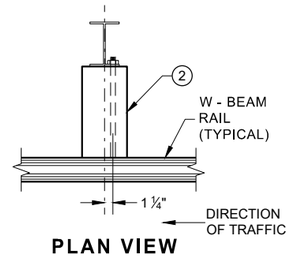
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



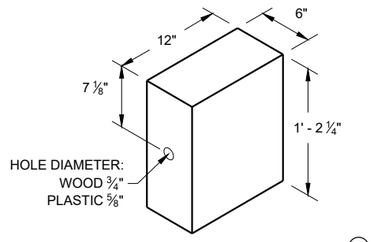
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

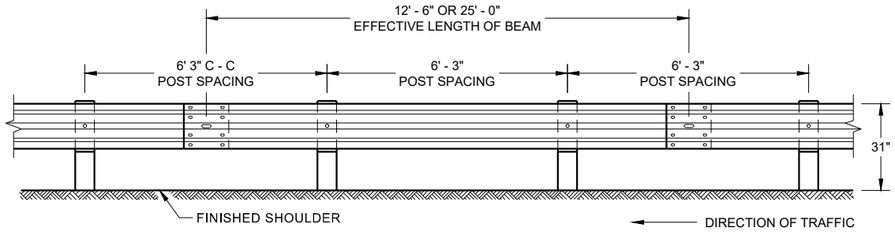
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

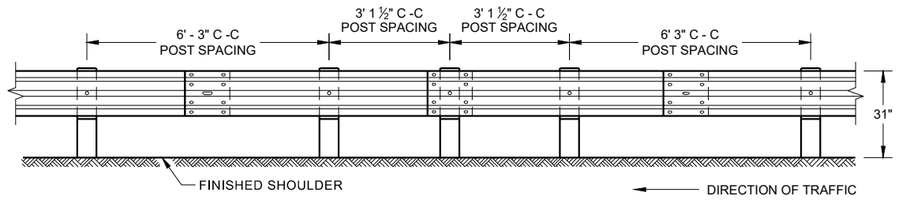
SDD 14B42 - 06a

6

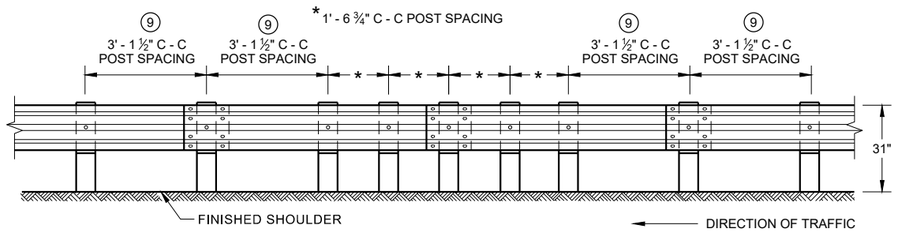
SDD 14B42 - 06a



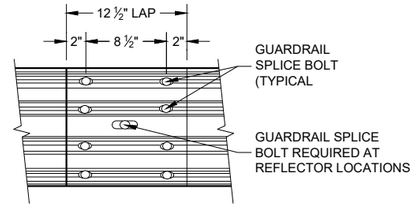
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

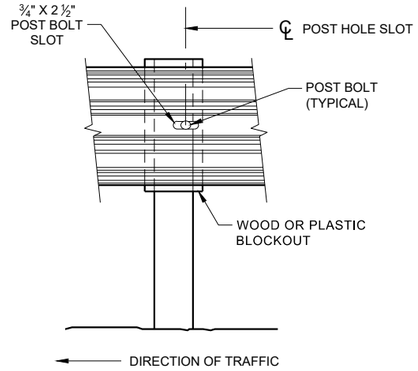
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

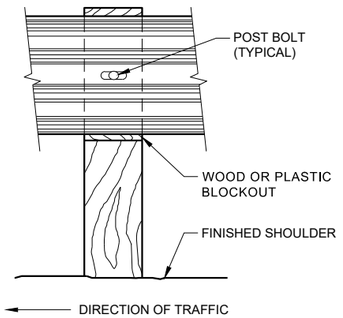
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

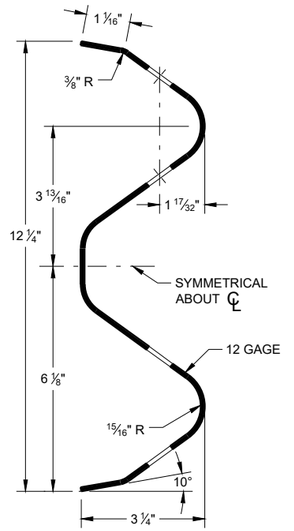
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



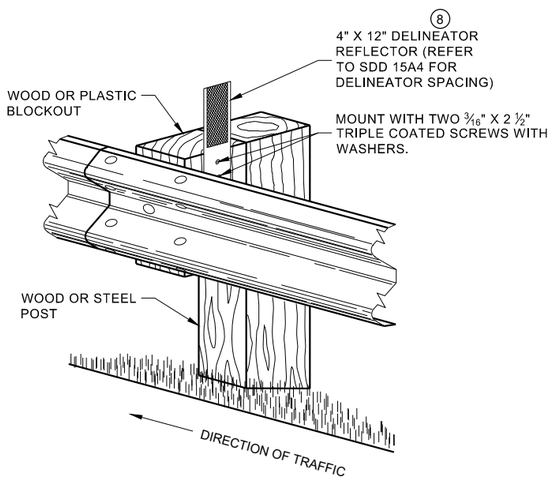
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



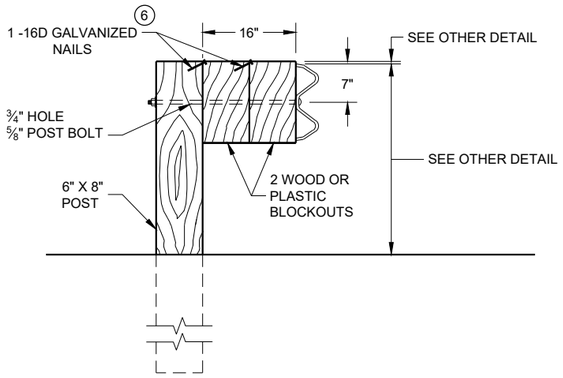
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06b

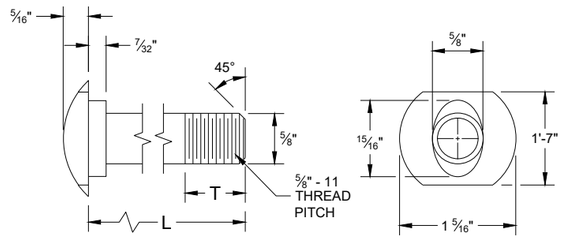


DETAIL FOR 16" BLOCKOUT DEPTH

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.

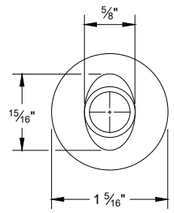
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

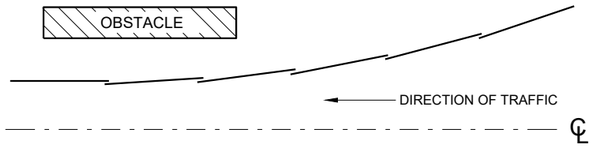


POST BOLT TABLE

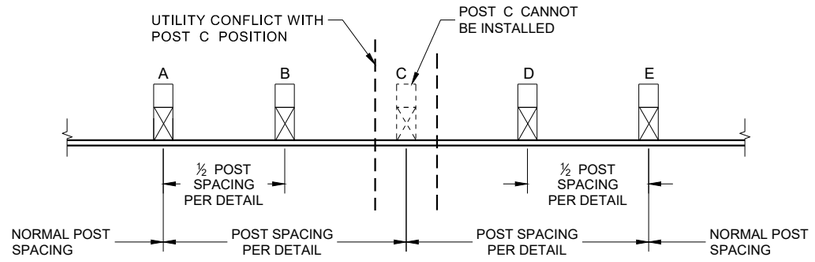
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



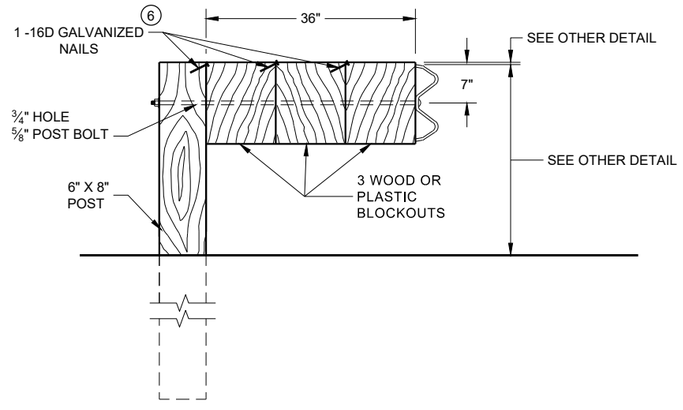
ALTERNATE BOLT HEAD



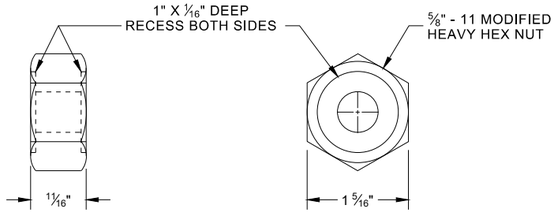
PLAN VIEW
BEAM LAPPING DETAIL



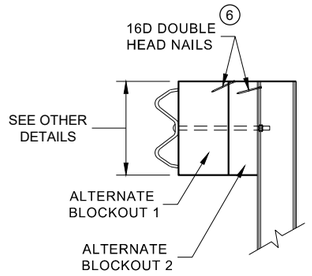
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



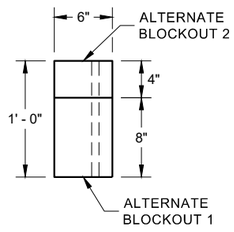
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

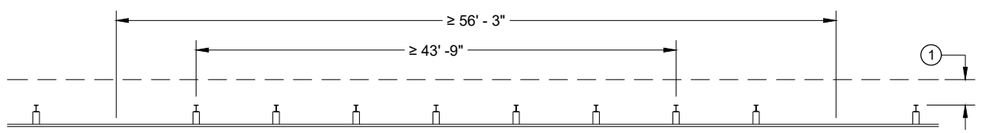
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

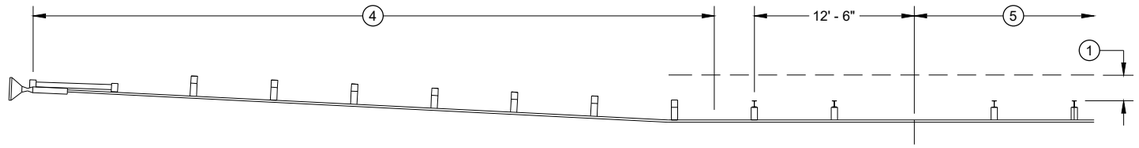
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

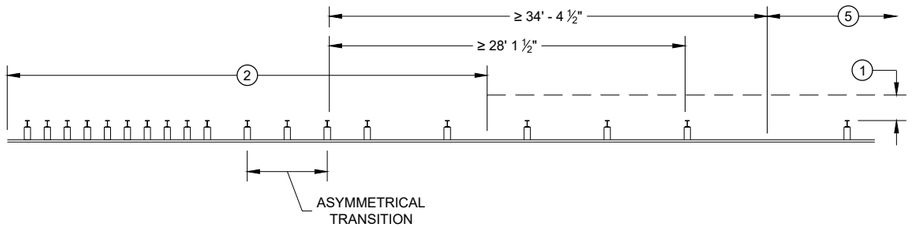
SDD 14B42 - 06c



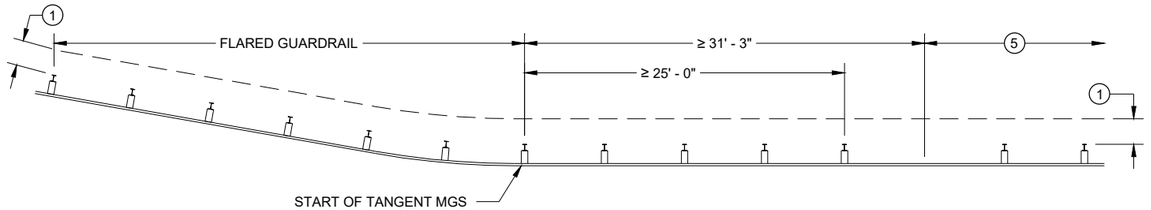
MISSING POST IN NORMAL BEAM GUARD RUN



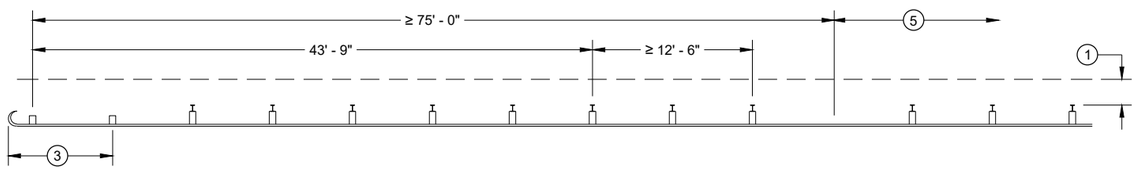
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



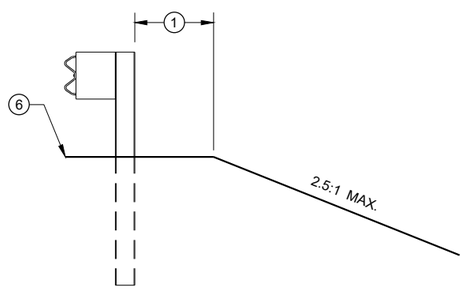
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

SDD 14B42 - 06d

SDD 14B42 - 06d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

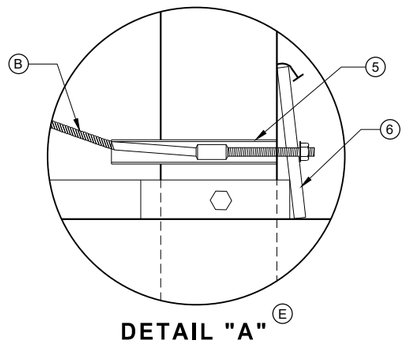
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

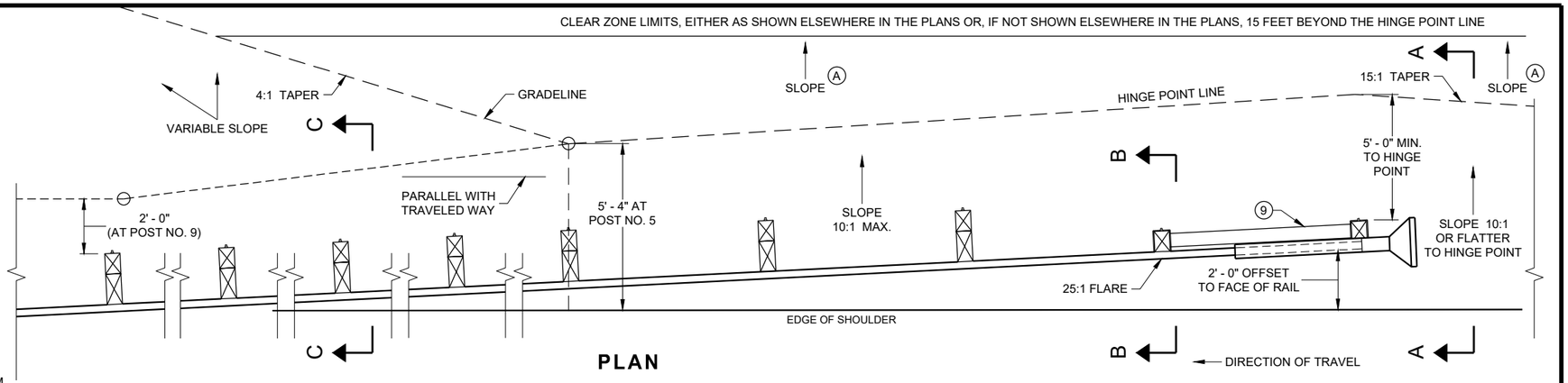
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

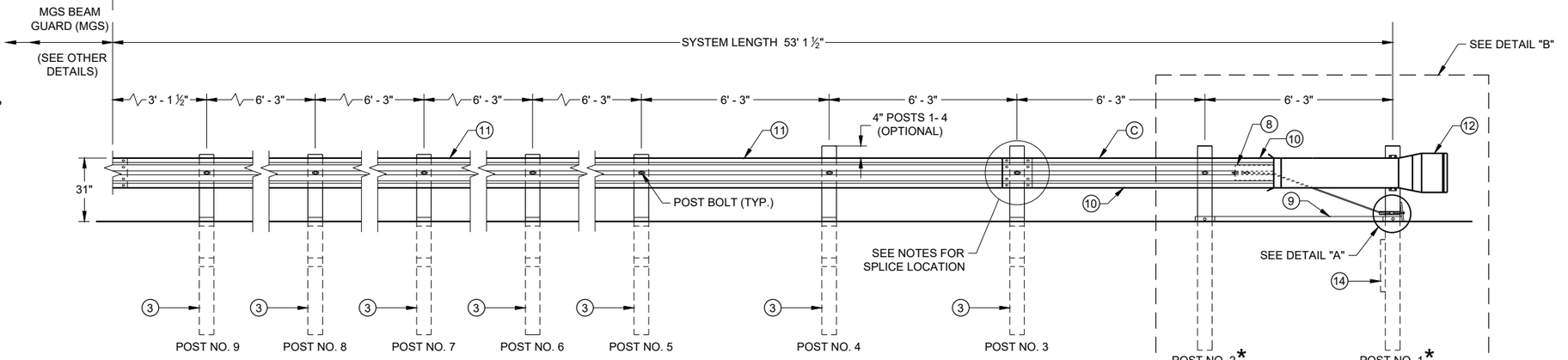
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



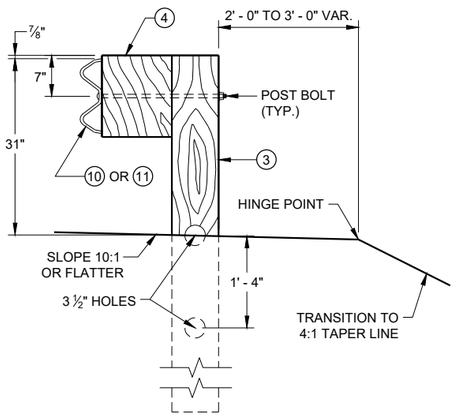
DETAIL "A" (E)



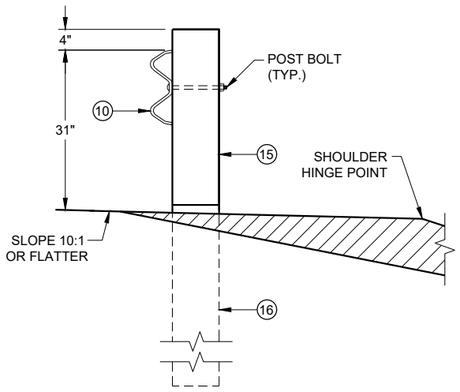
PLAN



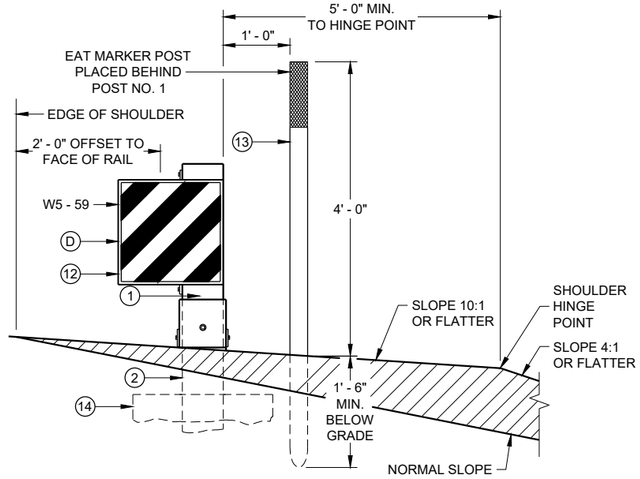
ELEVATION



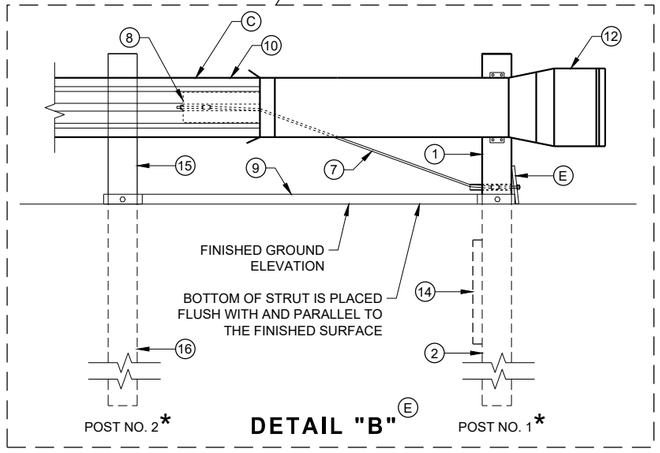
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



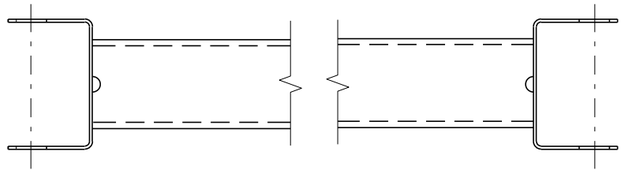
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

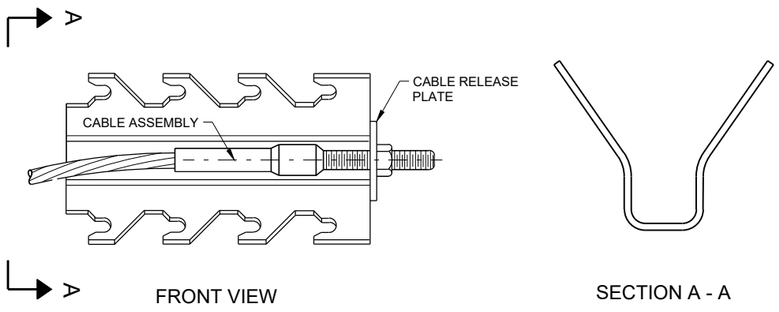
SDD 14B44 - 04a



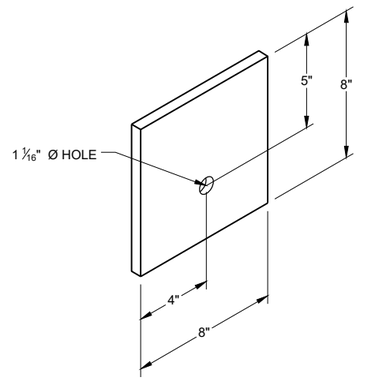
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

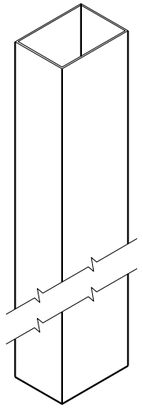
6

SDD 14B44 - 04b

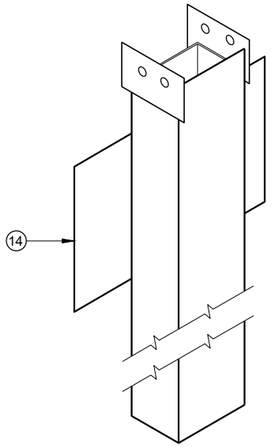
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

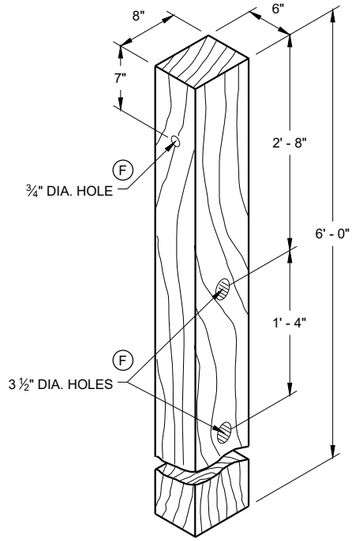
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



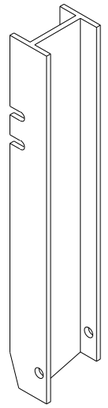
UPPER POST NO. 1 (1) (E)



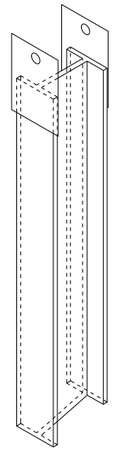
LOWER POST NO. 1 (2) (E)



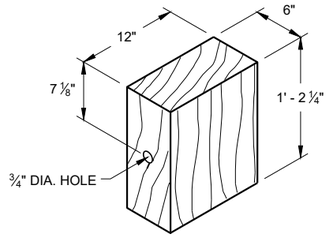
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



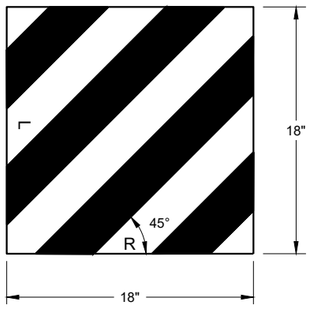
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

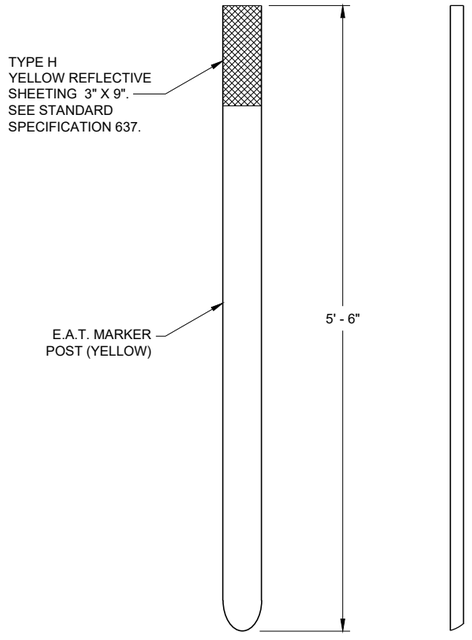


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



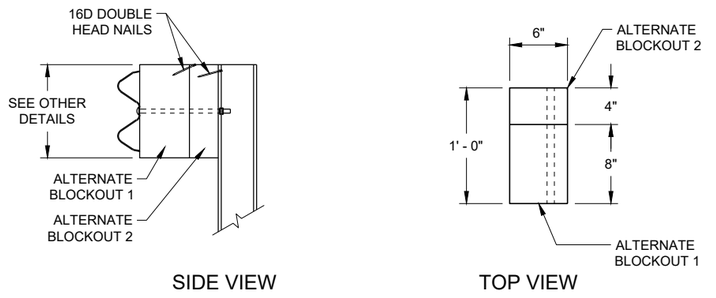
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

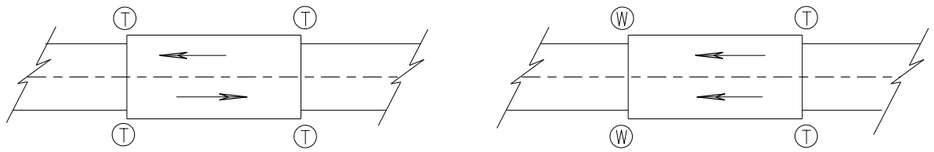
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



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 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

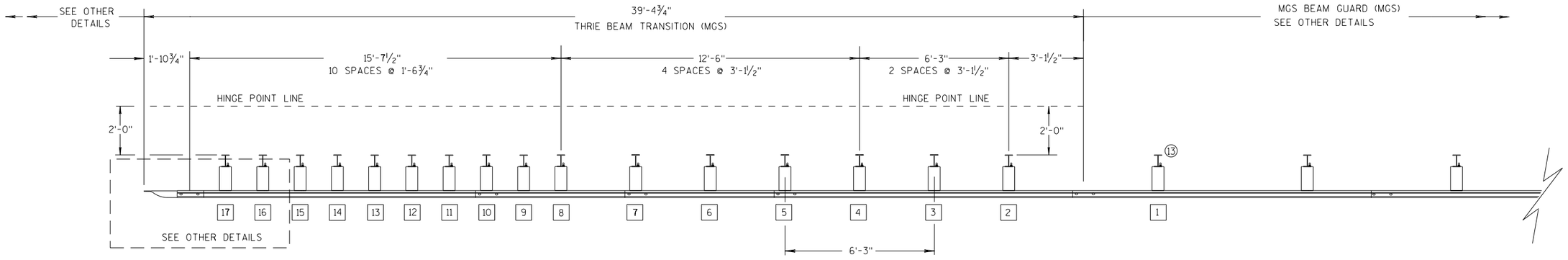
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

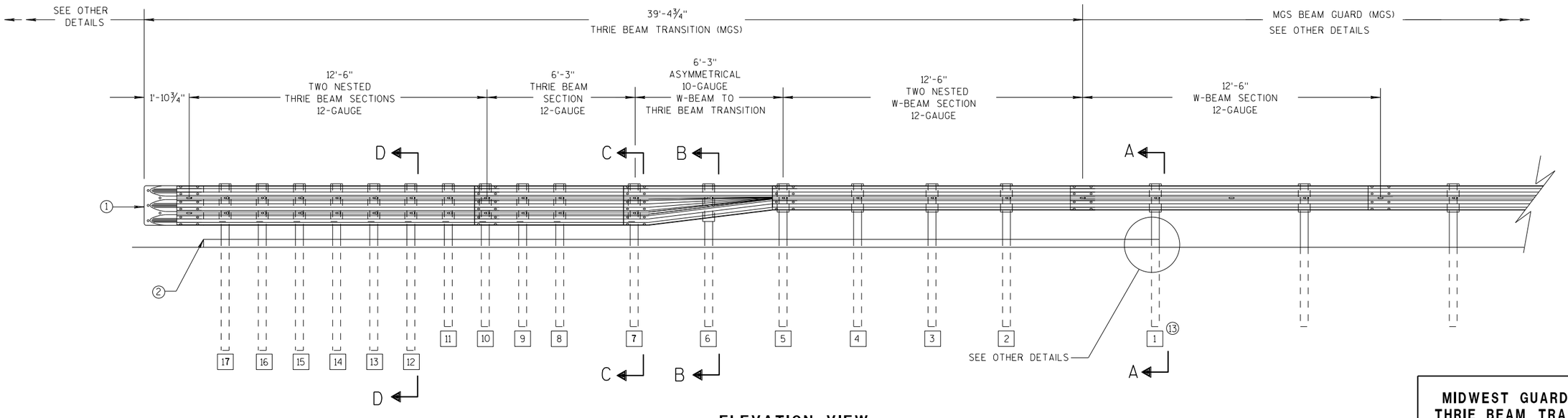
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 45-5a

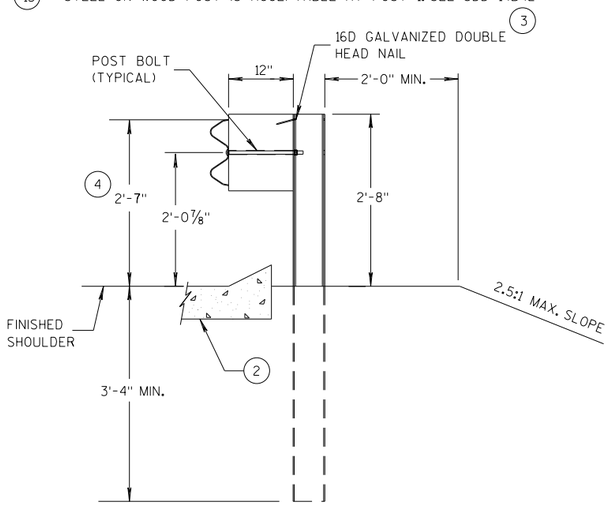
GENERAL NOTES

(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.

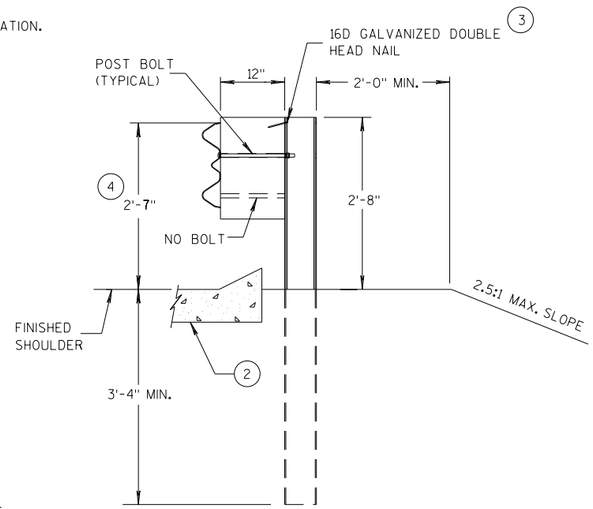
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



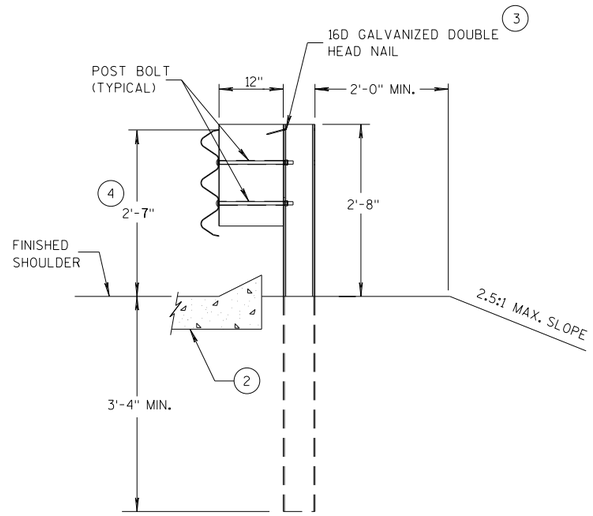
SECTION A-A (13)

POSTS 1-5



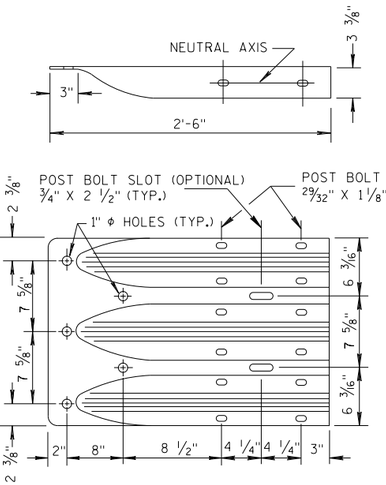
SECTION B-B

POST 6

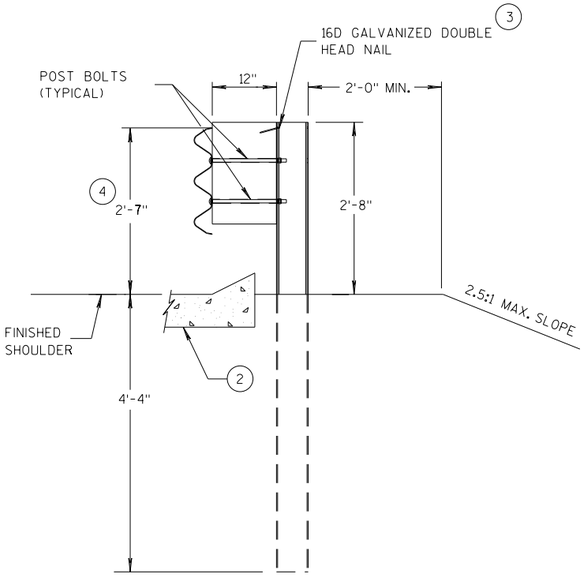


SECTION C-C

POSTS 7-11

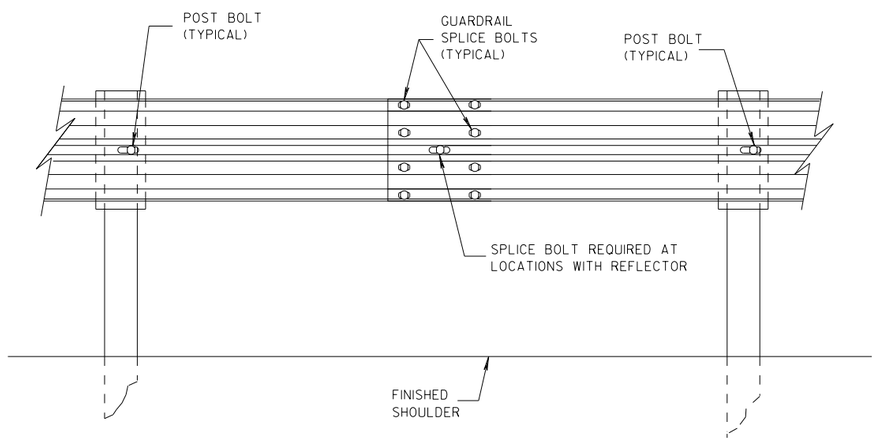


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

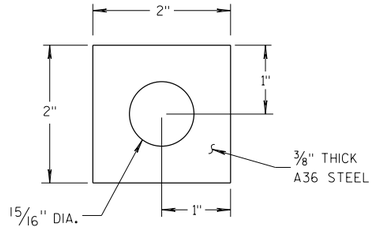
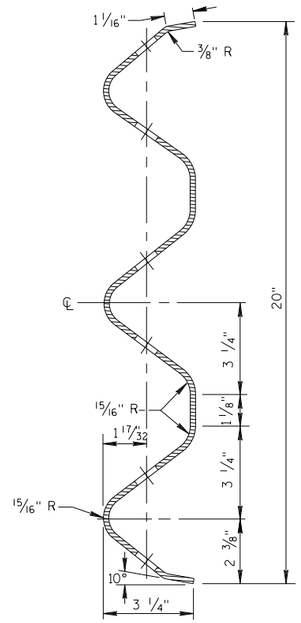


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

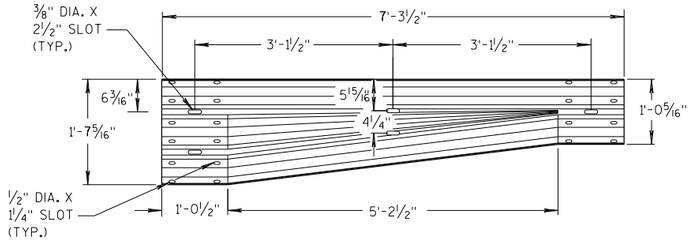
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 27

6

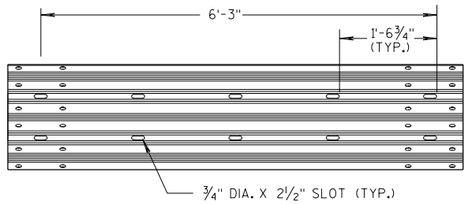
S.D.D. 14 B 45-5b

6

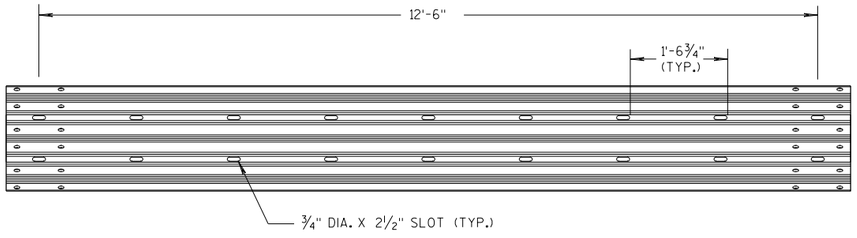
S.D.D. 14 B 45-5b



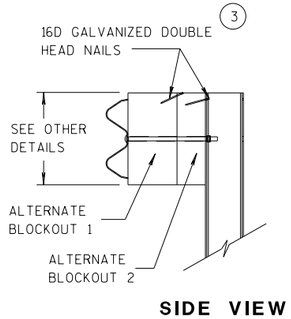
W-BEAM TO THRIE BEAM TRANSITION SECTION



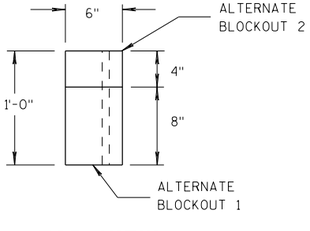
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

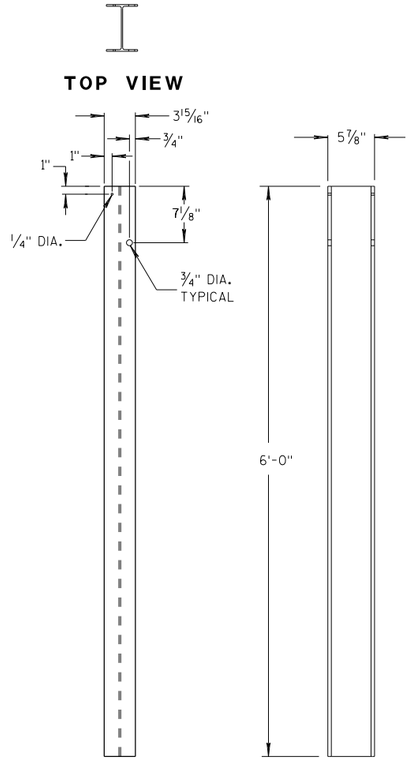


SIDE VIEW



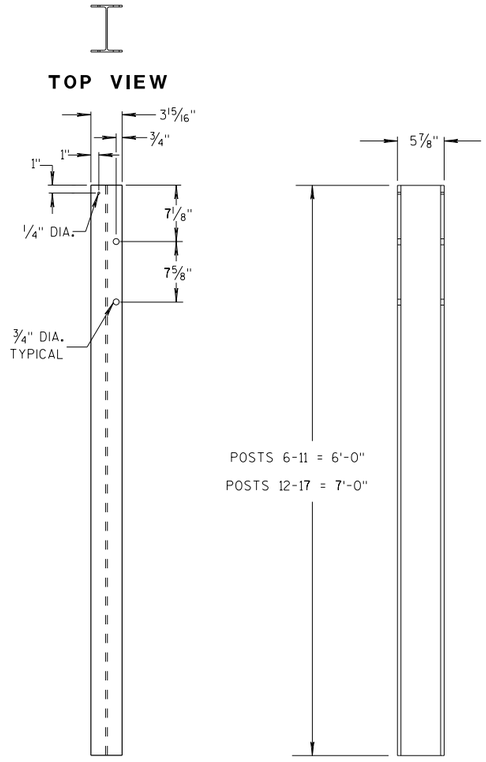
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



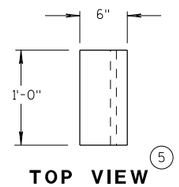
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

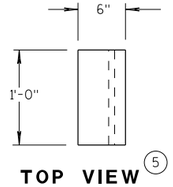


FRONT VIEW SIDE VIEW

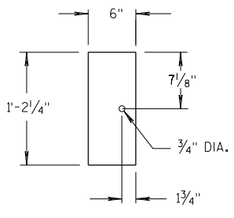
STEEL POSTS 6-17



TOP VIEW (5)

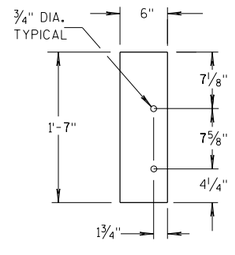


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



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.

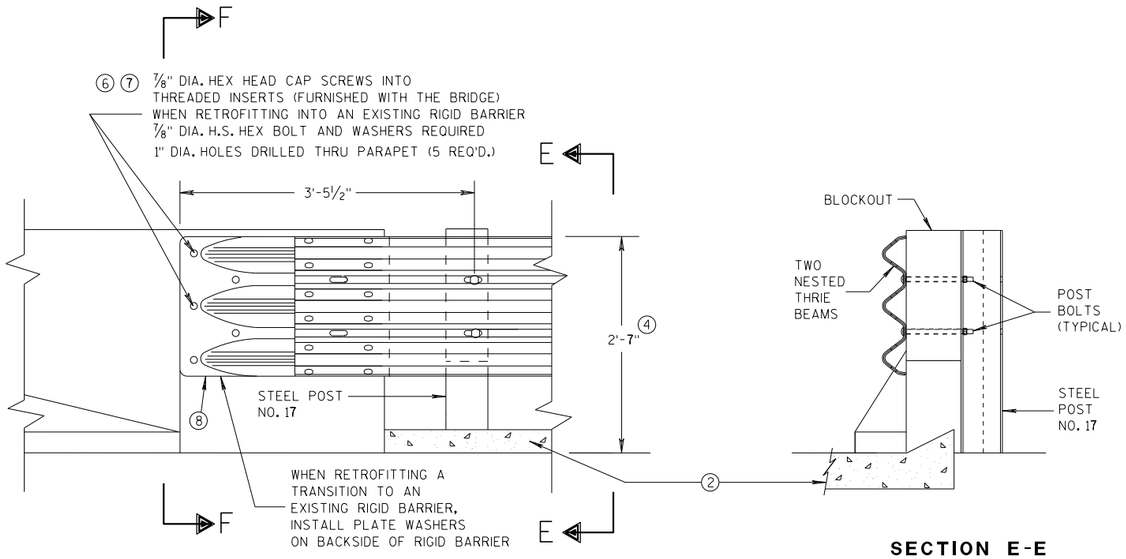
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

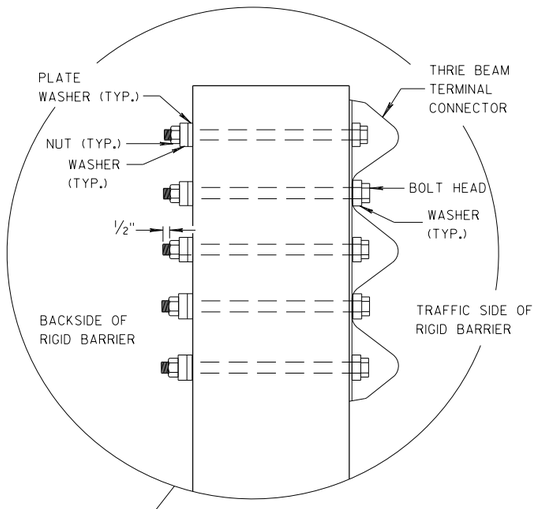
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

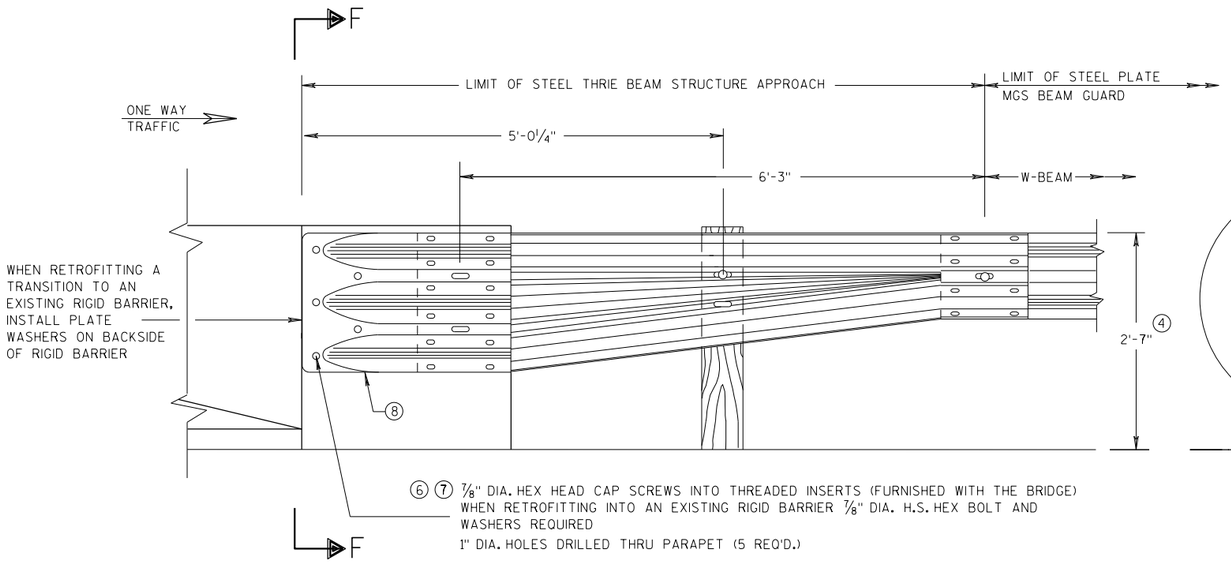
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

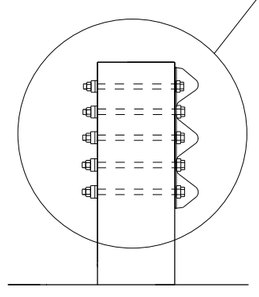
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

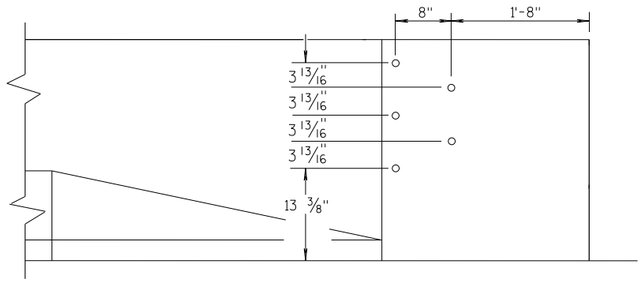




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[UNIT SUPERVIS — NT
FHWA

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

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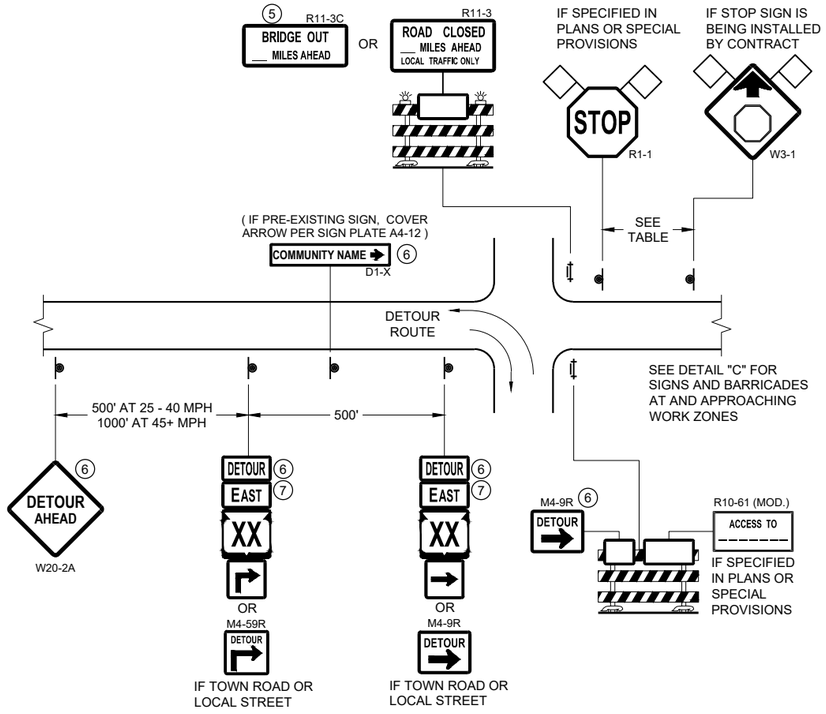
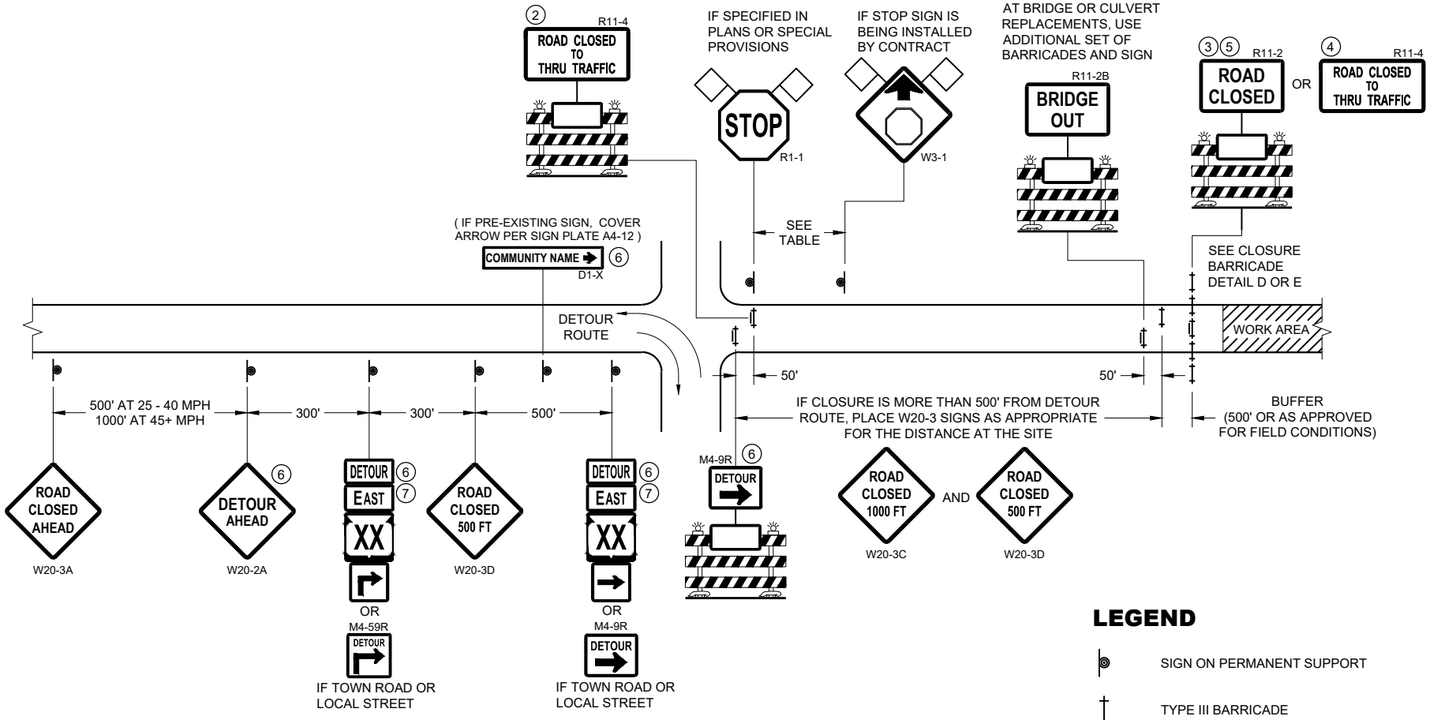
S.D.D. 14 B 45-5d



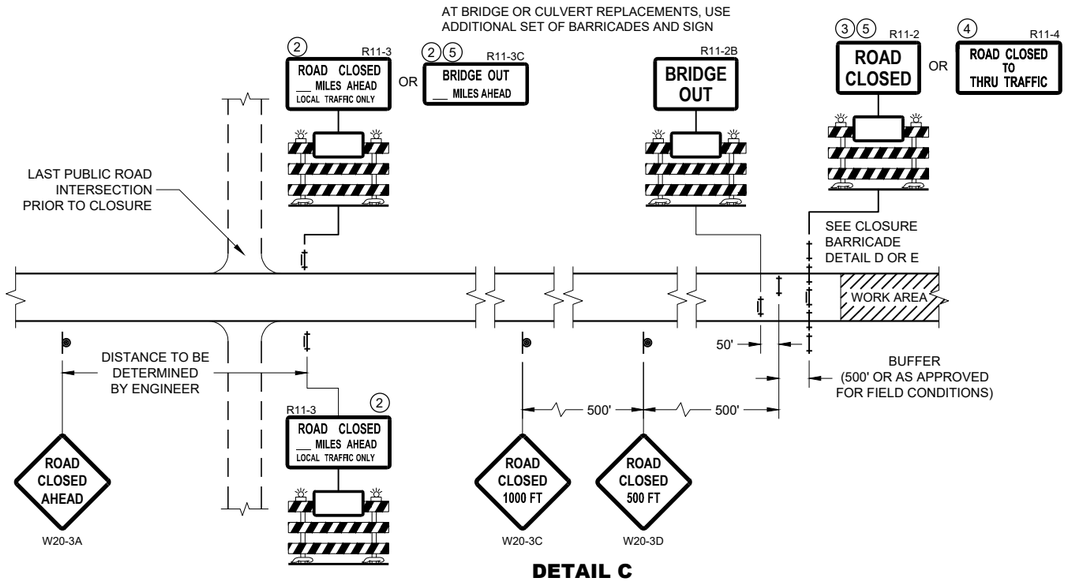
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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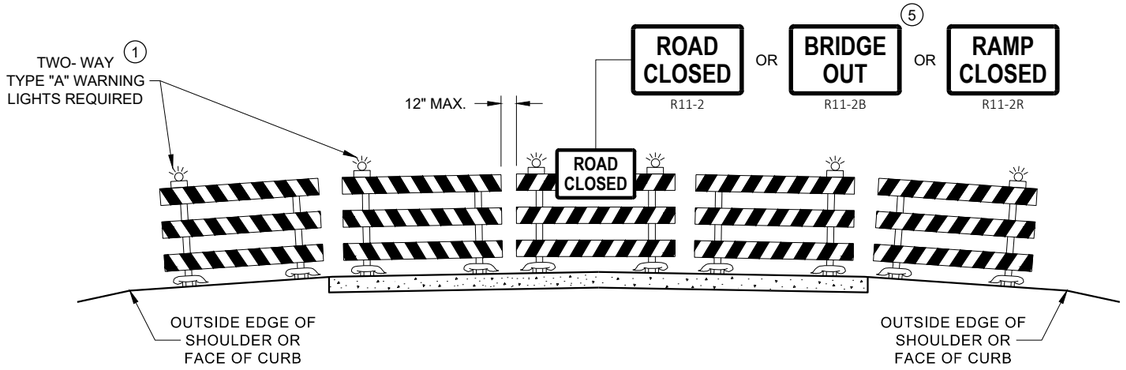
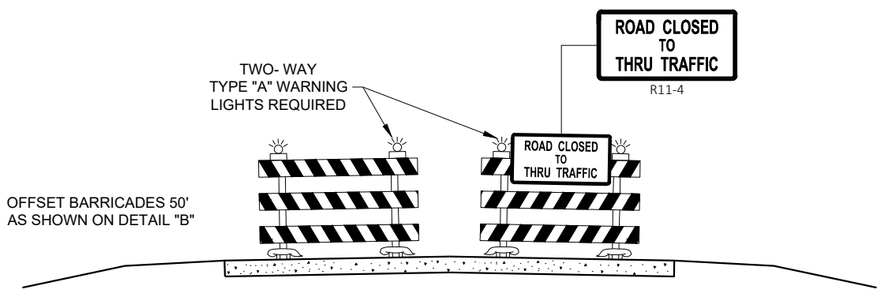
SDD 15C02 - 08a

SDD 15C02 - 08a



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
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 08b

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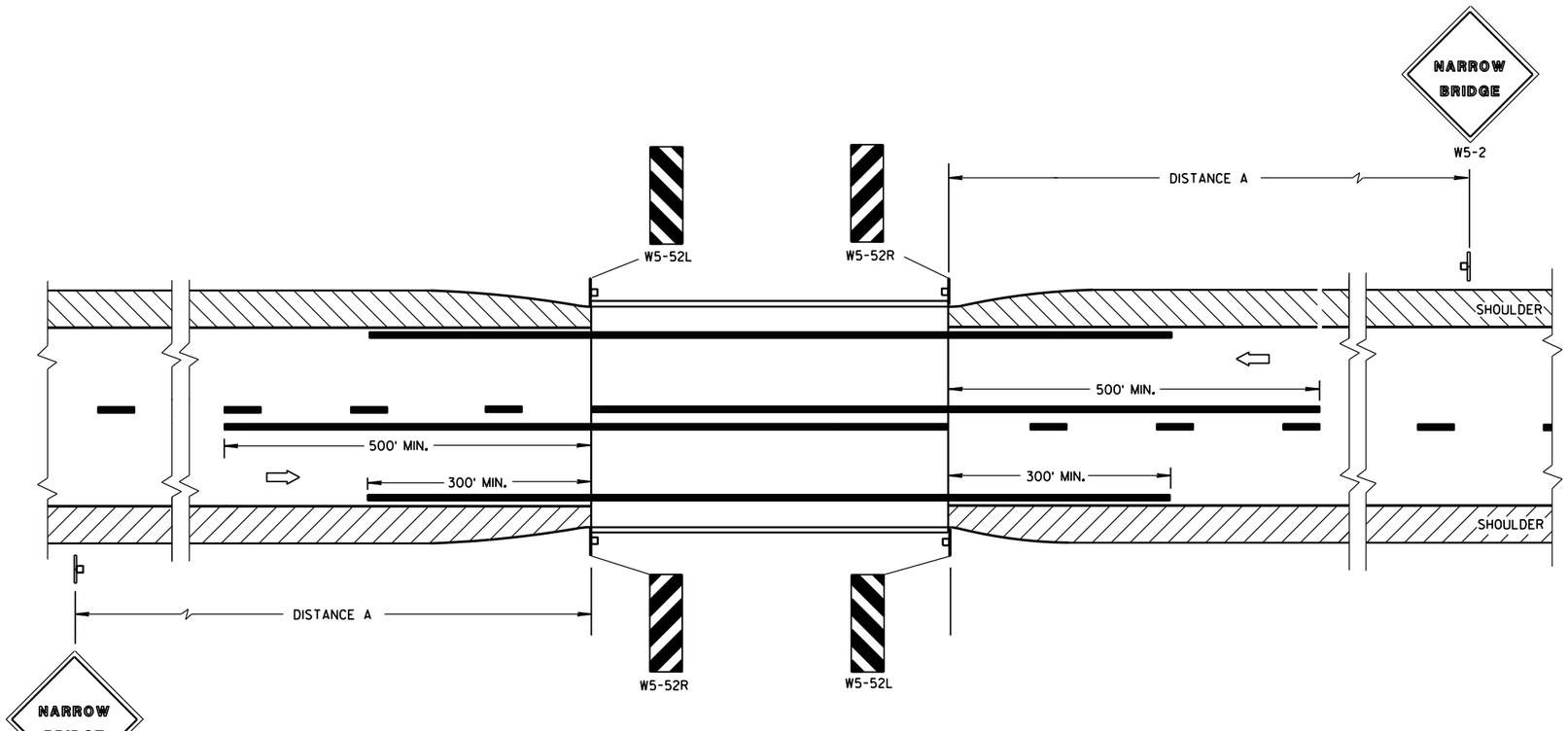
SDD 15C02 - 08b



SITUATION 1

WARRANTING CRITERIA:

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

DISTANCE TABLE

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

GENERAL NOTES

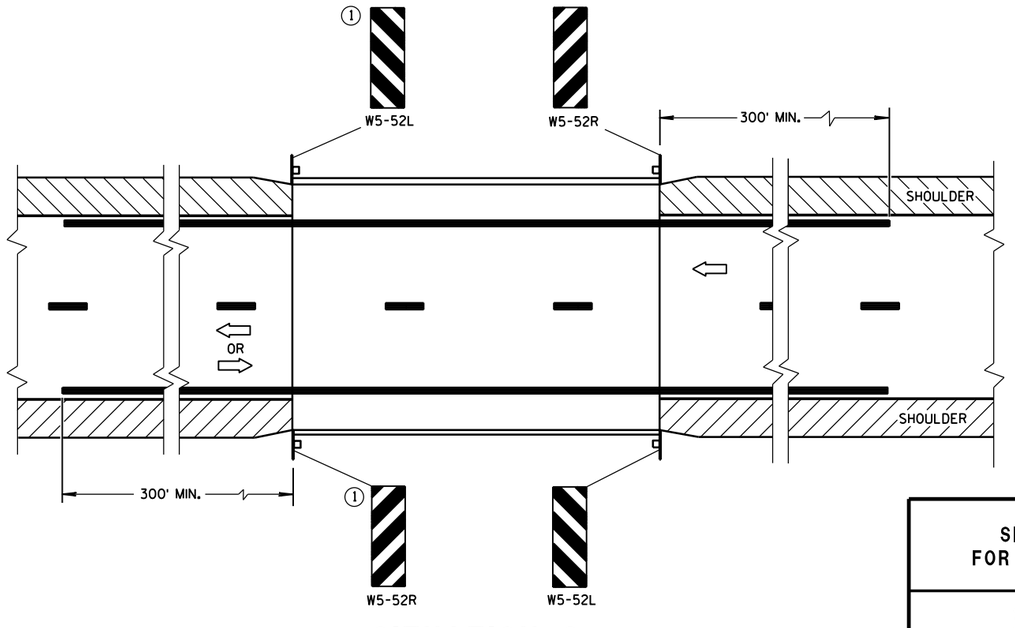
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

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S.D.D. 15 C 6-9

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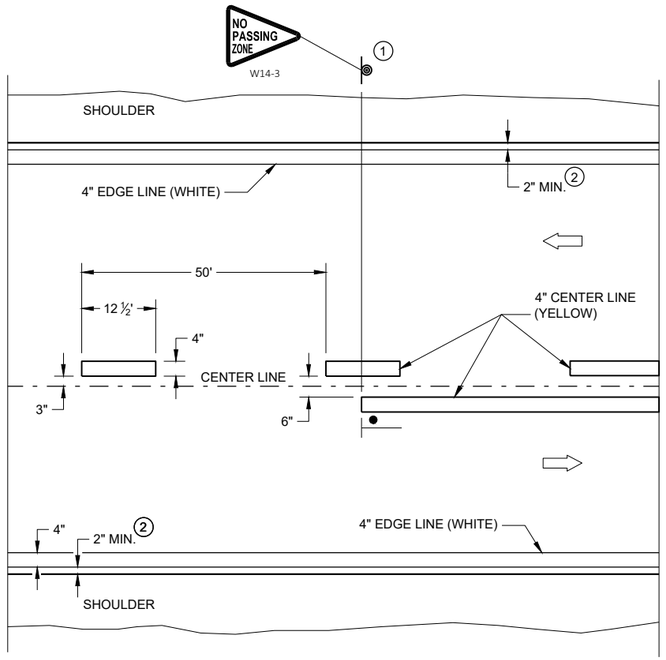
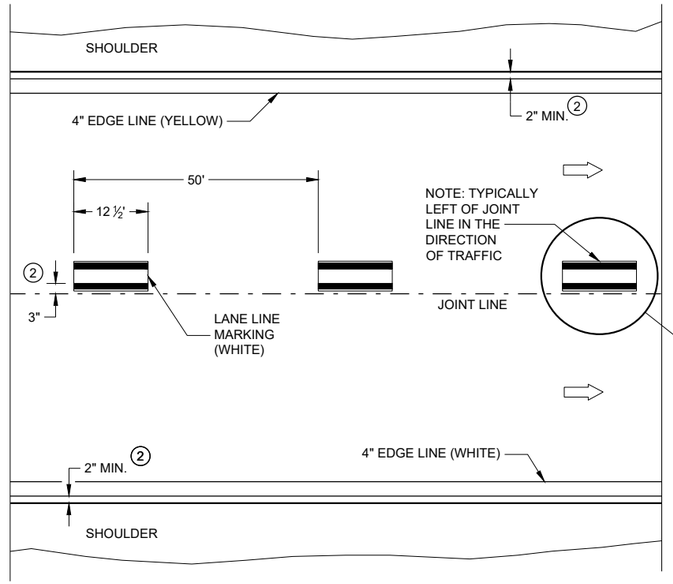
S.D.D. 15 C 6-9

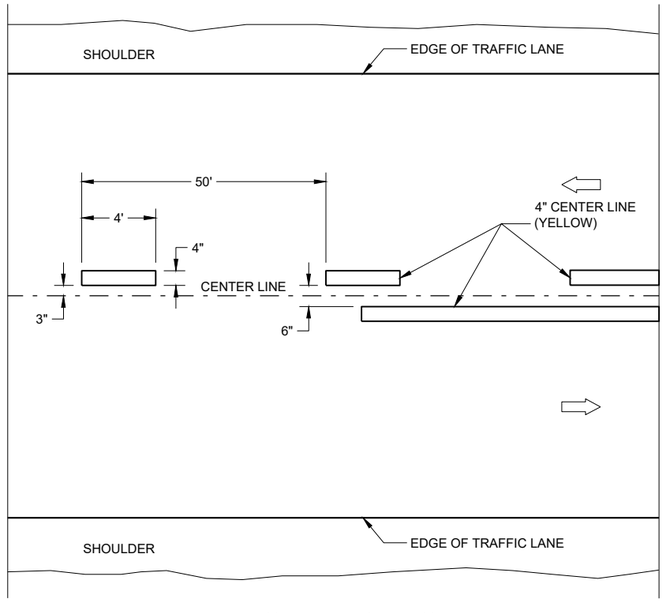


TWO WAY TRAFFIC

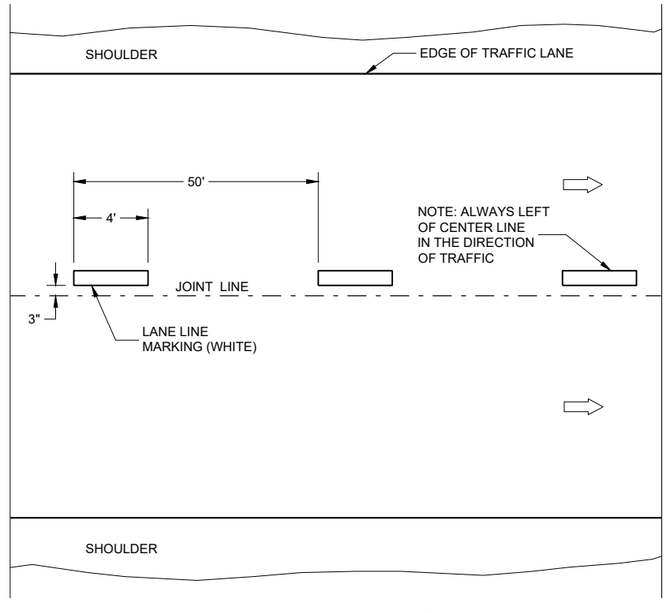


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

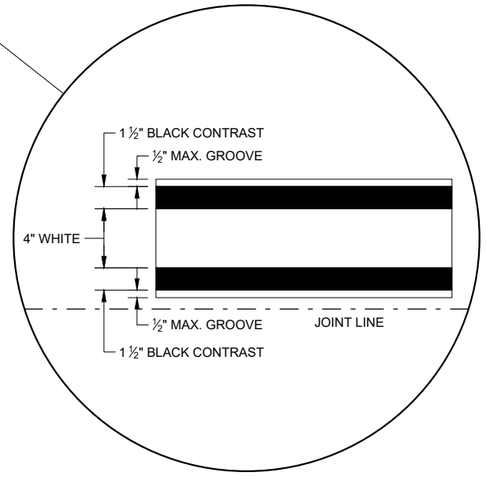
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

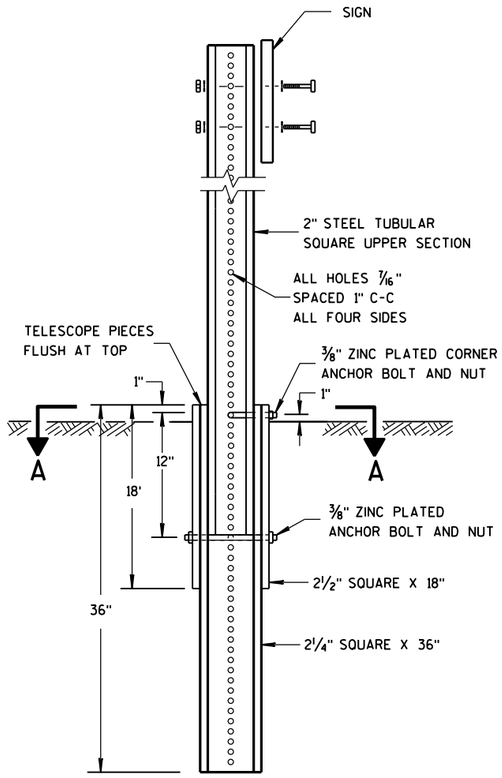
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

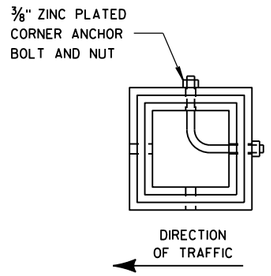
FHWA

SDD 15C08 - 20a

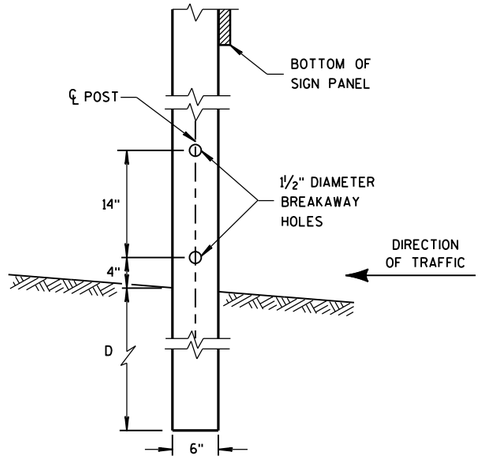
SDD 15C08 - 20a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



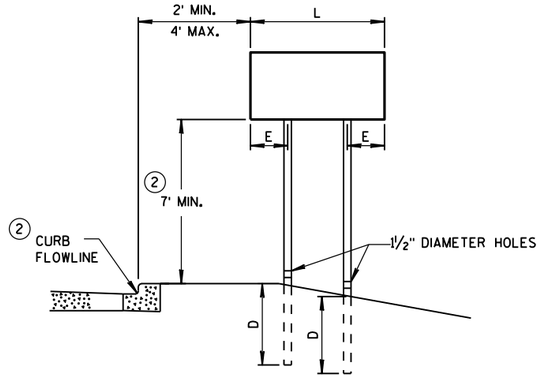
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

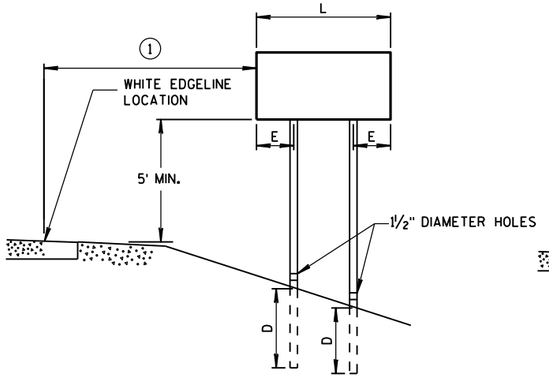
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

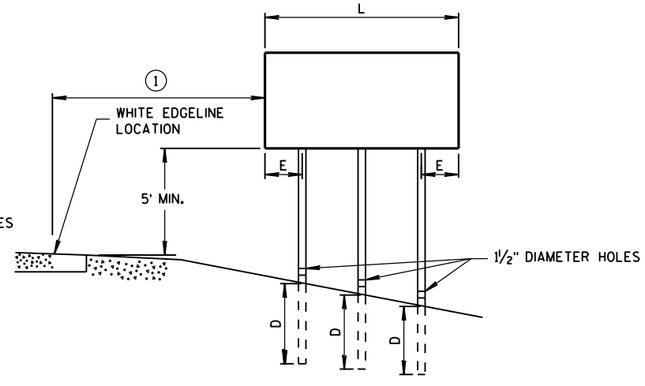
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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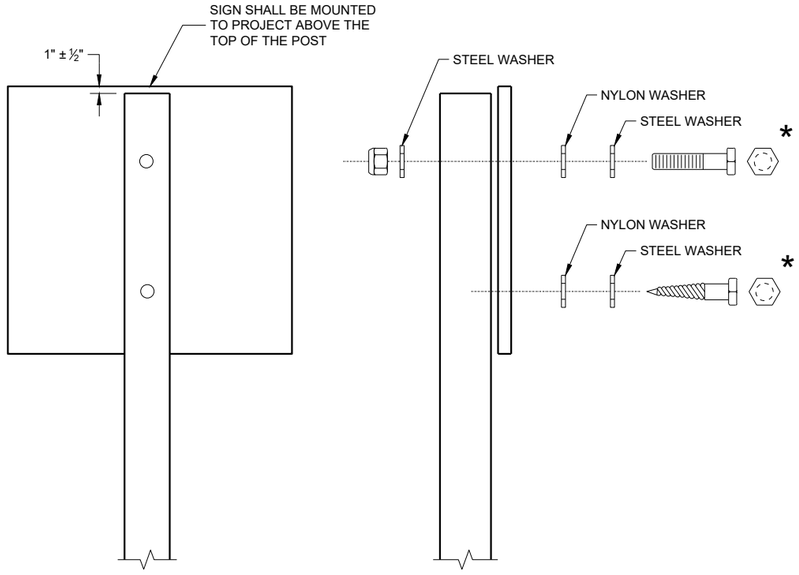
S.D.D. 15 D 38-2a



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

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

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

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

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

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SDD 15D38 - 02b

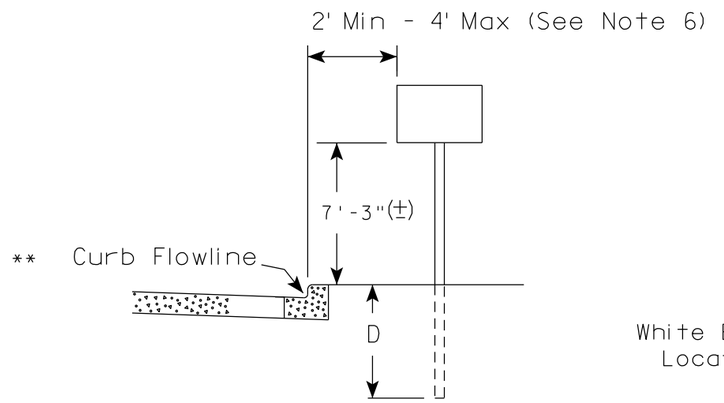
SDD 15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

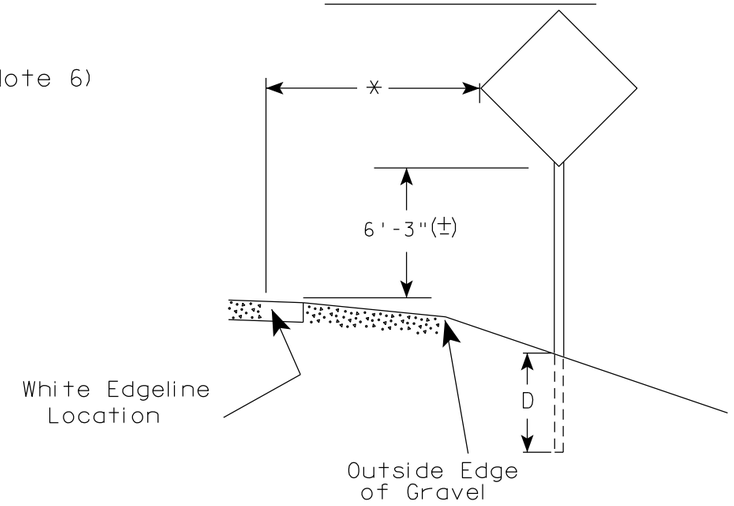
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

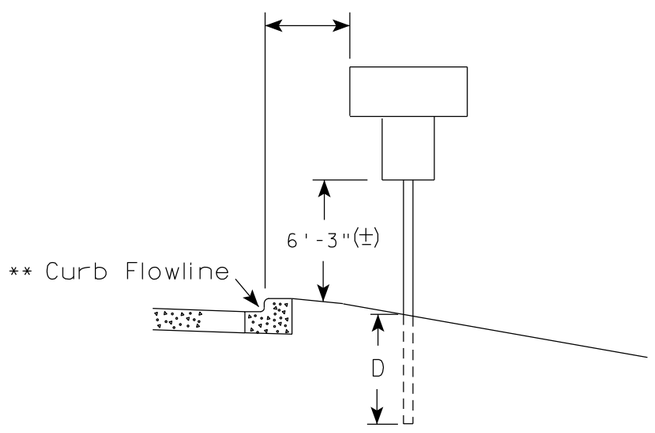
APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

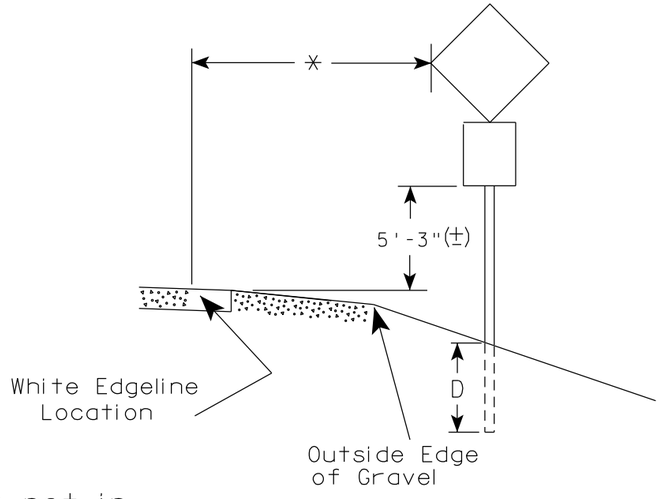
URBAN AREA



RURAL AREA (See Note 2)







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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

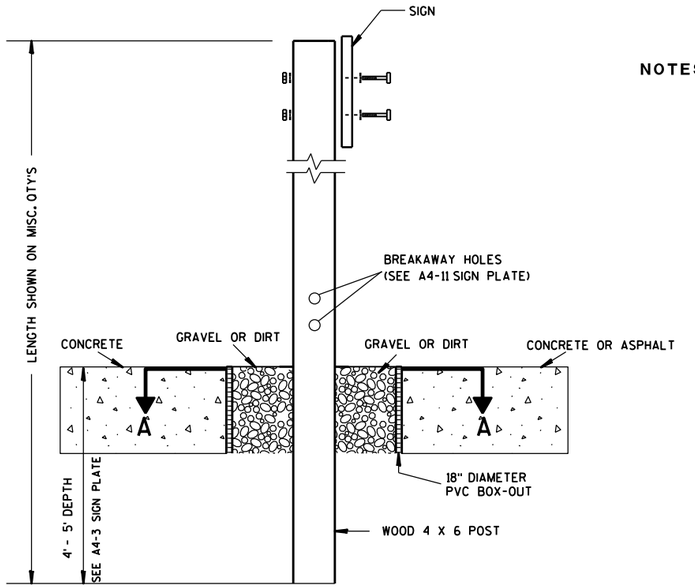
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

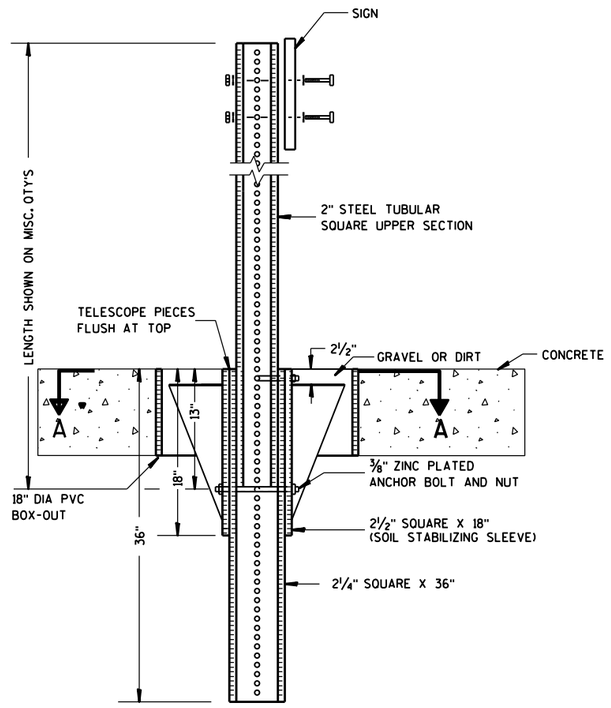
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 36	E



ELEVATION VIEW

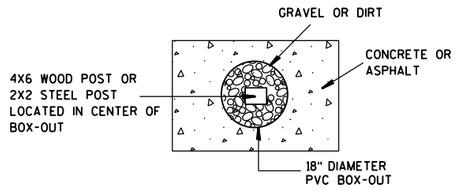
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

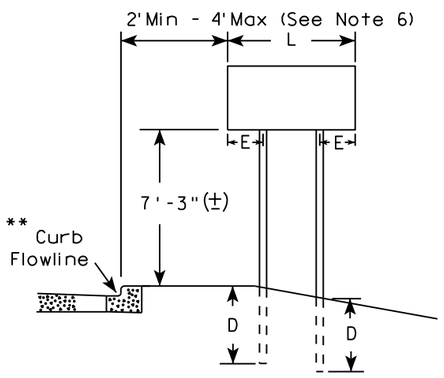
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

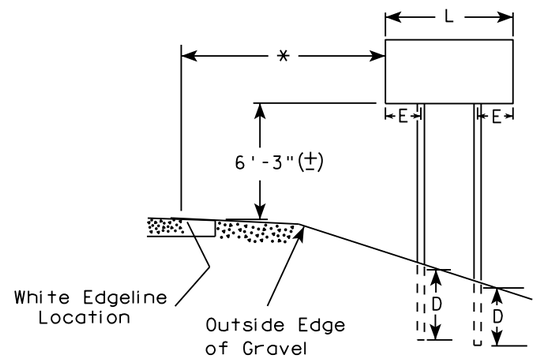
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

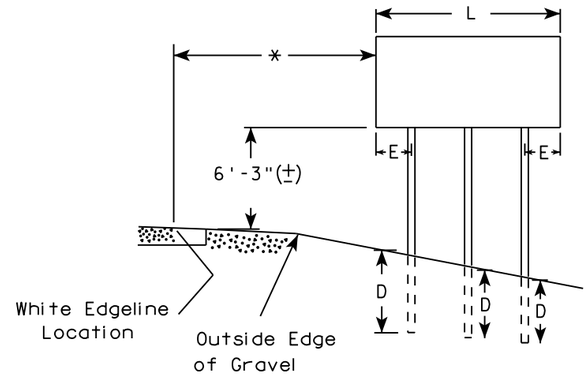
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

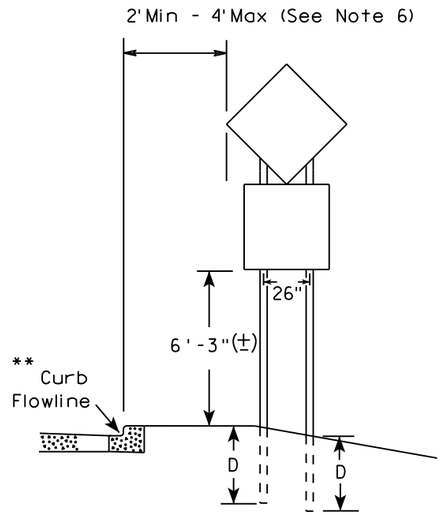
URBAN AREA



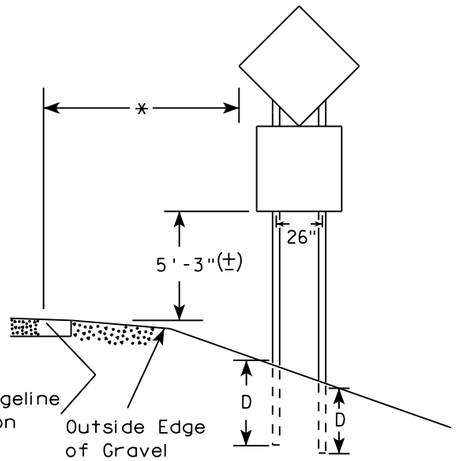
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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" (±).

* 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.

POST EMBEDMENT DEPTH

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

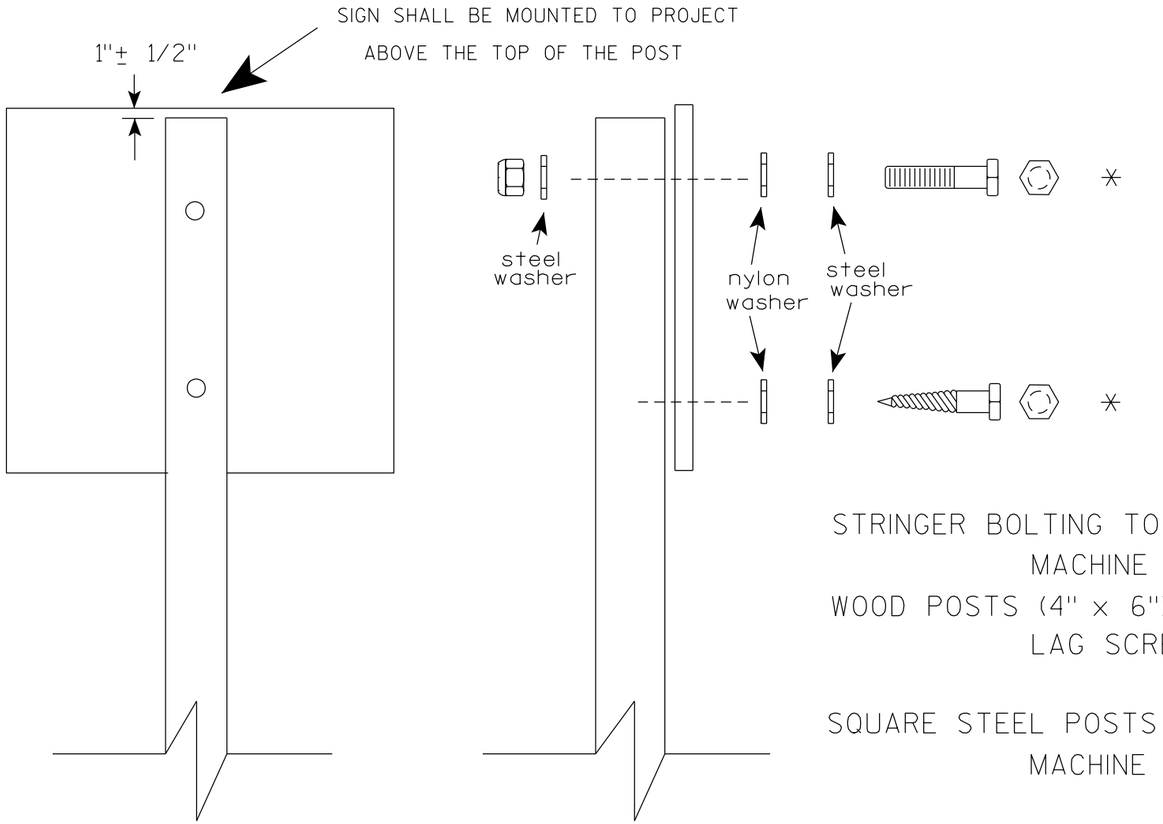
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 38	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

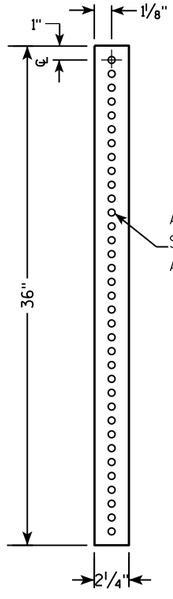
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

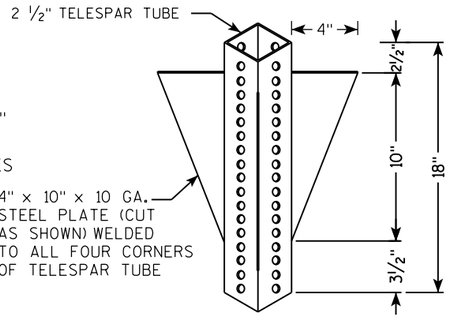
SHEET NO: 39 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

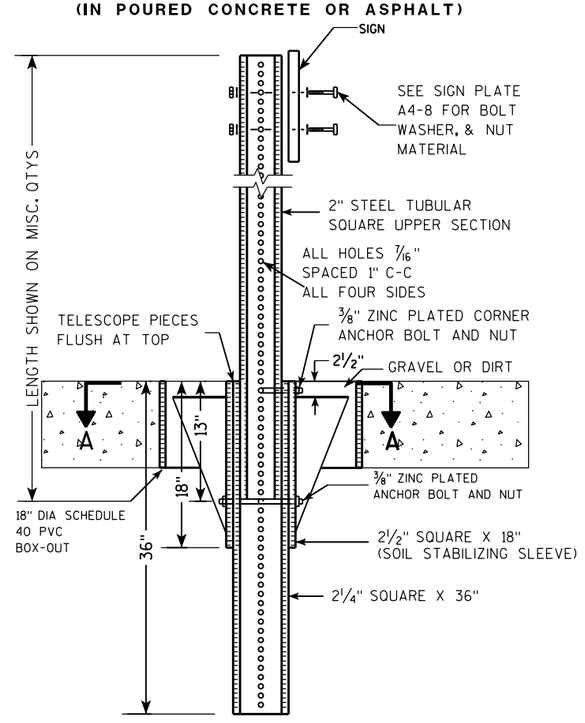
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



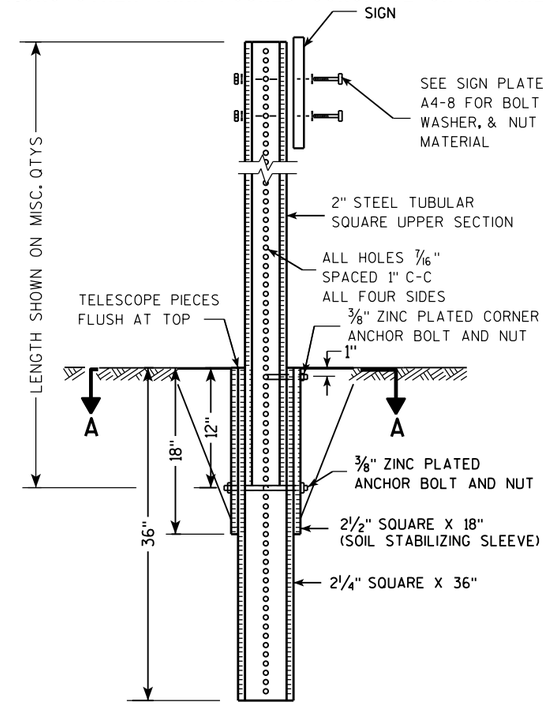
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

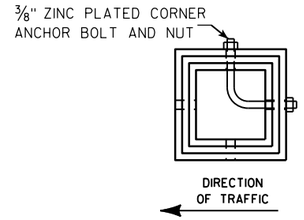


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

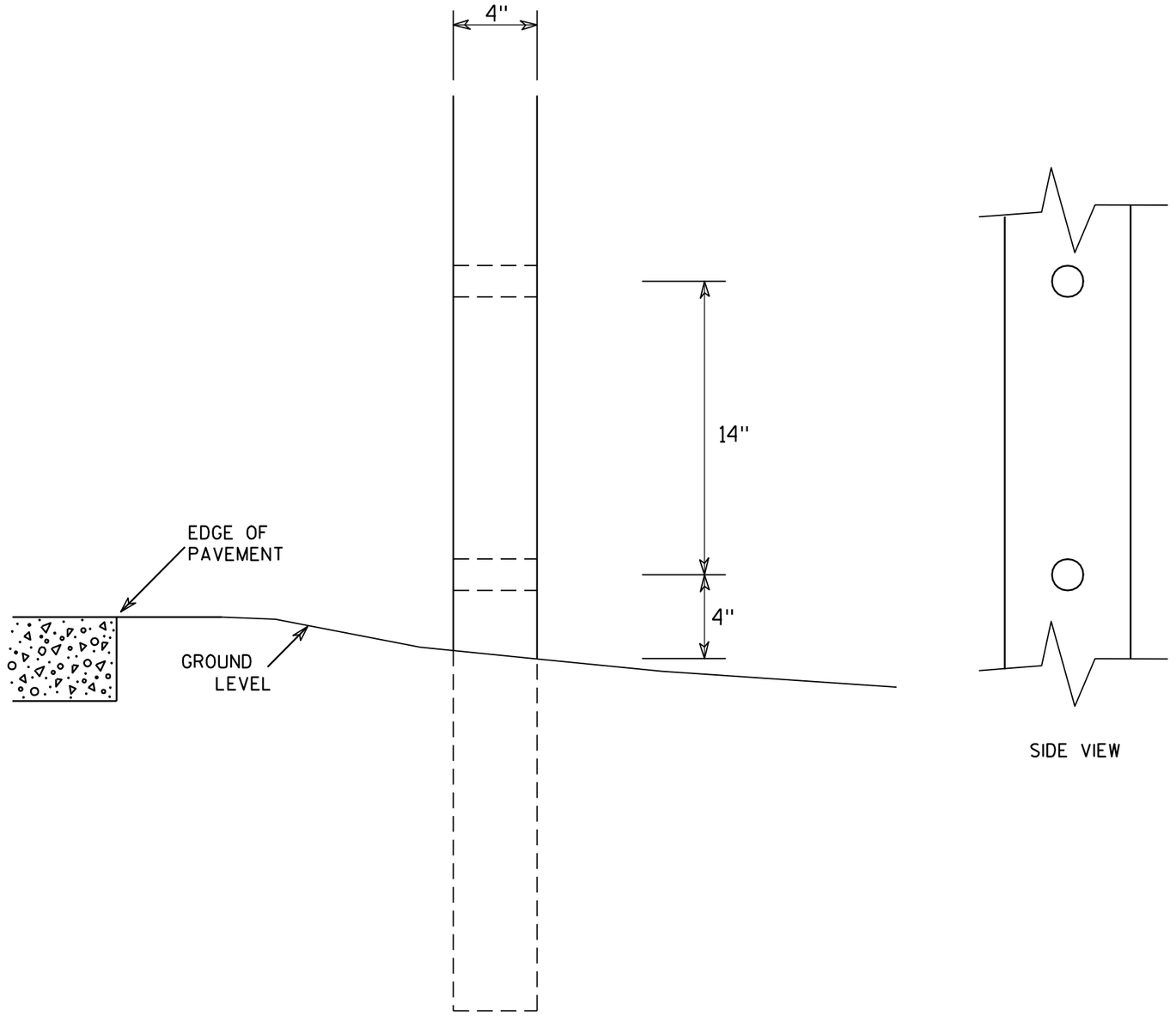
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 40 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

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

WISCONSIN DEPT OF TRANSPORTATION

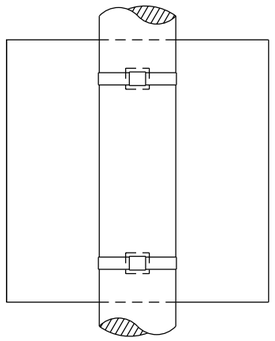
APPROVED Chester J Spang
for State Traffic Engineer

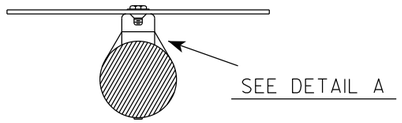
DATE 3/27/97 PLATE NO. A4-11.2

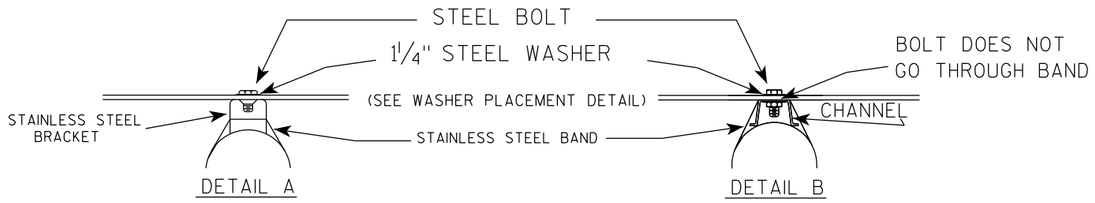
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 41	E

BANDING

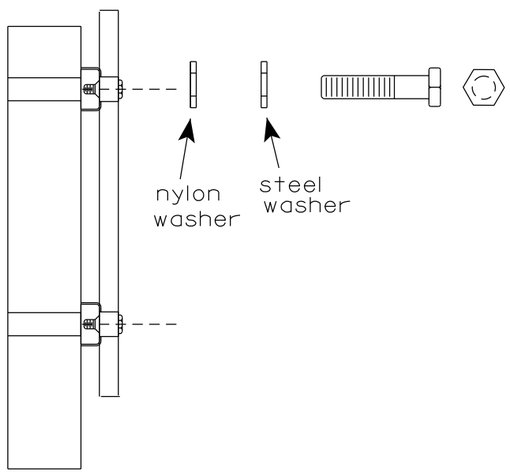
SINGLE SIGN







WASHER PLACEMENT

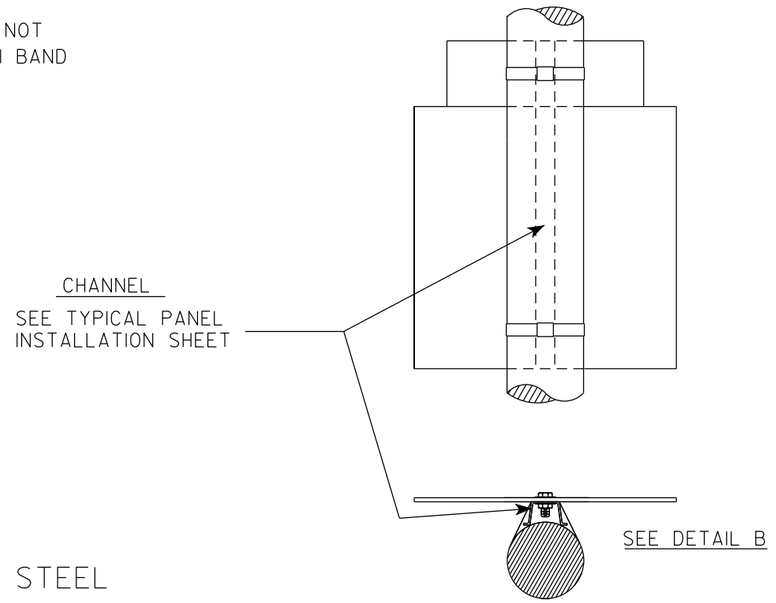


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

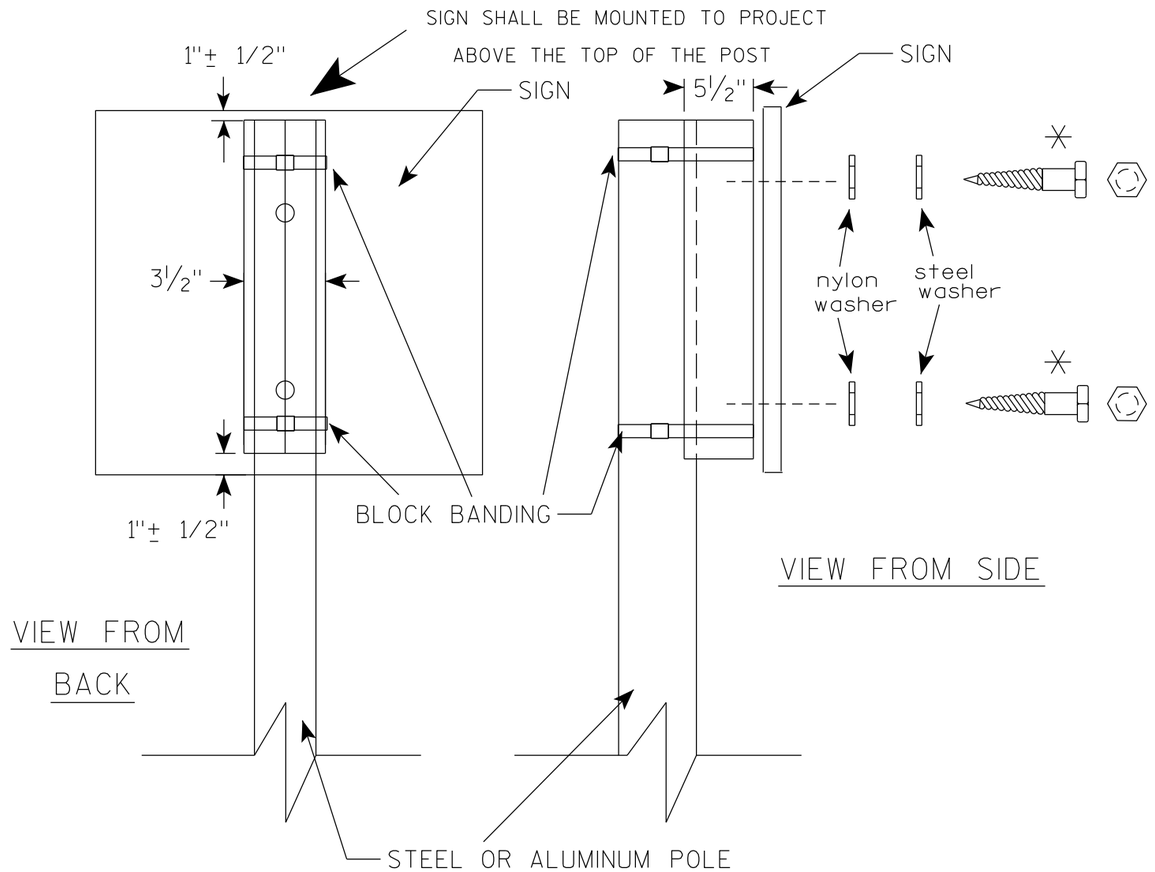
DATE 6/10/19 PLATE NO. A5-9.4

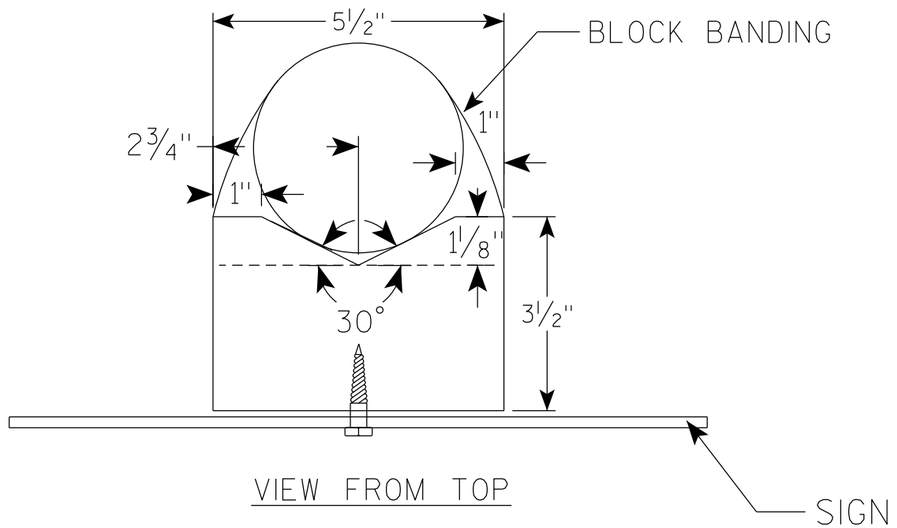
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 42	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

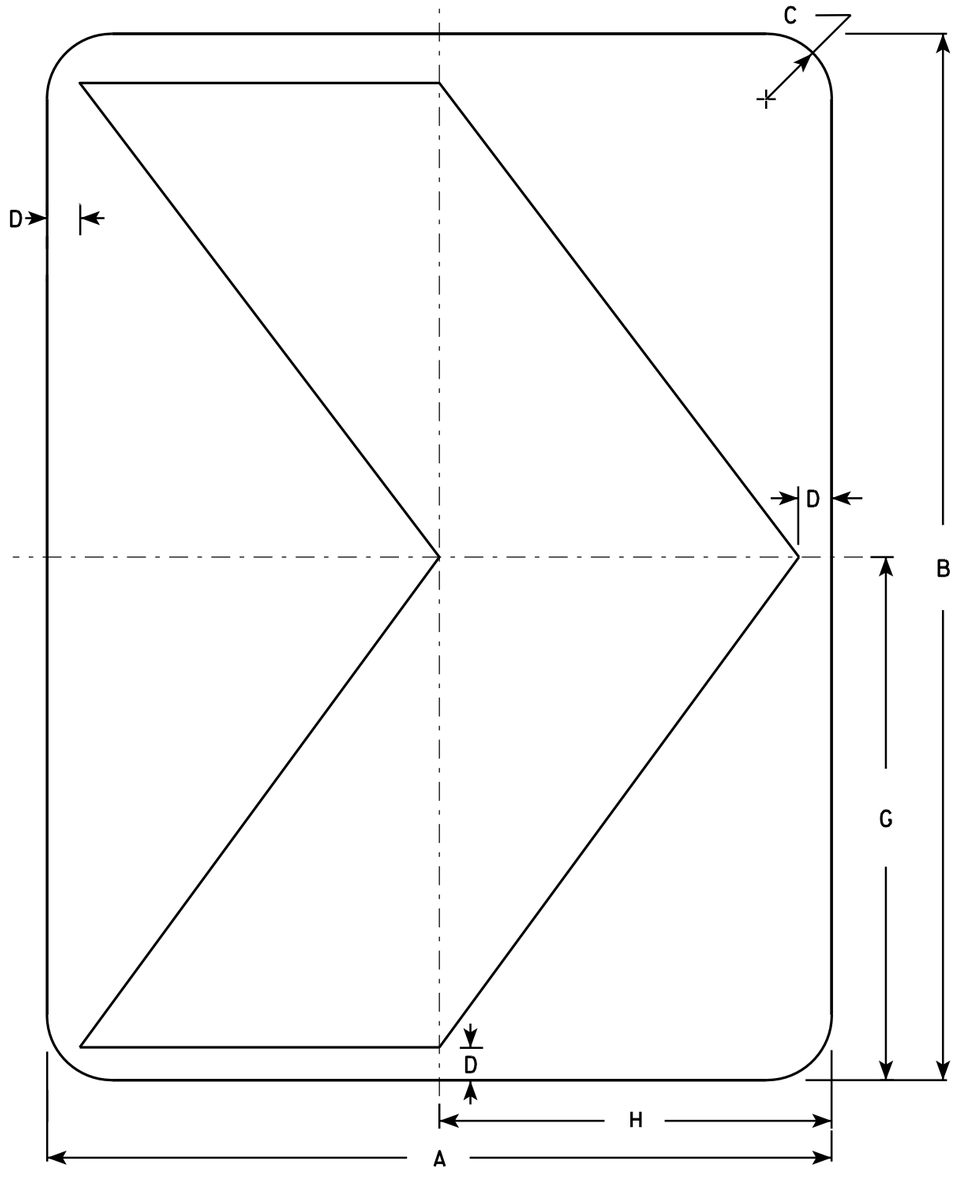
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:

SHEET NO: 43 E



NOTES

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

W1-8

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	12	18	1 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

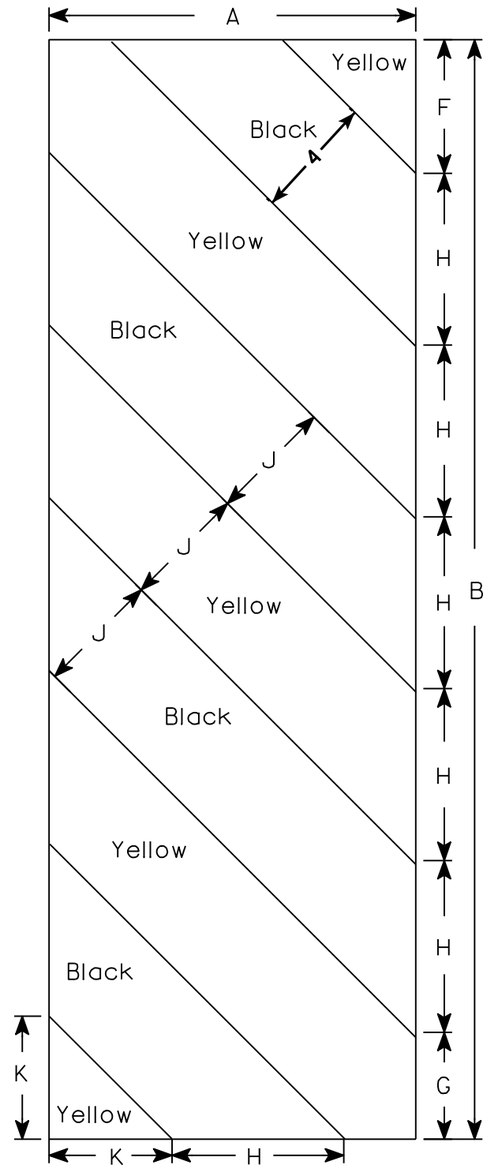
SHEET NO: 44 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W18.DGN PLOT DATE : 07-JUN-2010 12:55 PLOT BY : ditjph

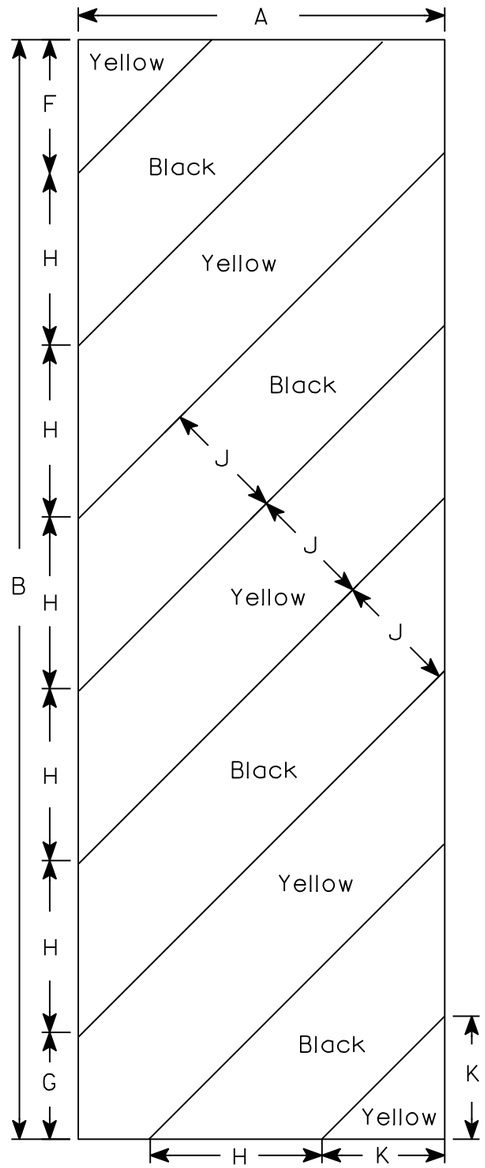
WISDOT/CADDS SHEET 42

7

7



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.

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

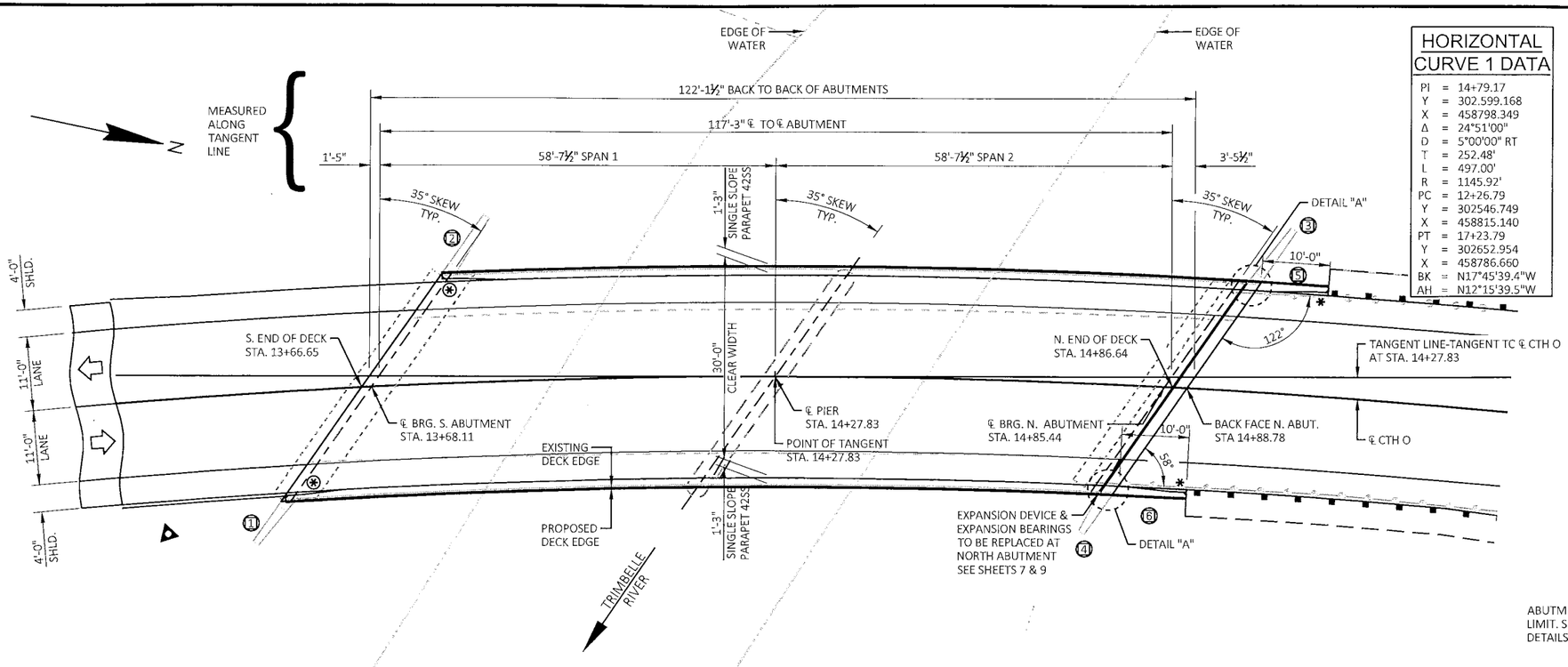
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 45	E

STATE PROJECT NUMBER
7894-03-73



PLAN

REHABILITATION - 2-SPAN - 36 PRESTRESSED GIRDERS

HORIZONTAL CURVE 1 DATA		
PI	=	14+79.17
Y	=	302.599.168
X	=	458798.349
Δ	=	24°51'00"
D	=	5°00'00" RT
T	=	252.48'
L	=	497.00'
R	=	1145.92'
PC	=	12+26.79
Y	=	302546.749
X	=	458815.140
PT	=	17+23.79
Y	=	302652.954
X	=	458786.660
BK	=	N17°45'39.4"W
AH	=	N12°15'39.5"W

DESIGN DATA

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

LIVE LOAD:

DESIGN LOADING	HS20
INVENTORY RATING	HS18
OPERATING RATING	HS30
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	220 KIPS

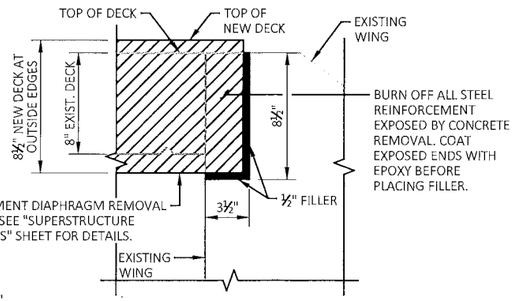
MATERIAL PROPERTIES:

CONCRETE MASONRY

DECK	f'c = 4,000 PSI
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI

TRAFFIC DATA

AADT (2021)	251
AADT (2041)	277
DESIGN SPEED	55 MPH

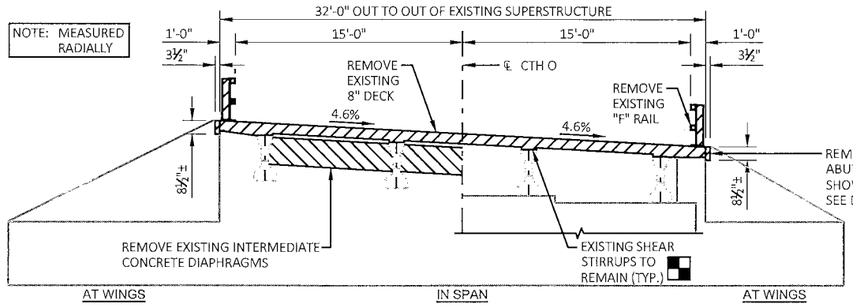


DETAIL A

- ✱ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT.
- ⊛ FIELD VERIFY LOCATION OF ANCHORS IN PROPOSED 42SS PARAPET AND REATTACH EXISTING BEAM GUARD.
- ⓝ INDICATES WING NUMBER

BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
1	15+28±	COTTON SPINDLE IN FENCE POST (@ 60.3' RT)	805.63'
2	13+09±	COTTON SPINDLE IN FENCE POST (@ 40.6' RT)	808.05'

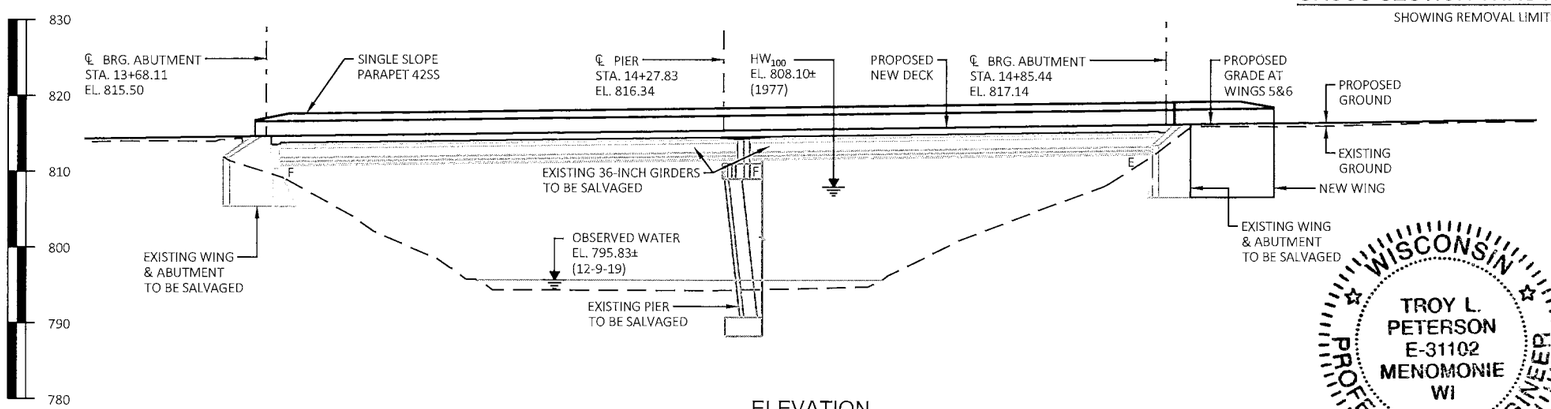
NOTE: MEASURED RADIALLY



CROSS SECTION THRU ROADWAY

SHOWING REMOVAL LIMITS

CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE SHEAR STIRRUPS AND TOP GIRDER FLANGE, THE ENGINEER WILL INSPECT THE GIRDERS PRIOR TO PLACING NEW DECK.



ELEVATION

NORMAL TRIMBELLE RIVER (LOOKING UPSTREAM)

LIST OF DRAWINGS

WISCONSIN PROFESSIONAL ENGINEER
TROY L. PETERSON
E-31102
MENOMONIE
WI

11-20-2020

BRIDGE OFFICE CONTACT
AARON M. BONK
(608) 261-0261

CONSULTANT CONTACT
TROY L. PETERSON
(715) 235-9081

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
Cedar corporation
www.cedarcorp.com 800-472-7372

ACCEPTED _____ SDR 11/23/20
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-47-48

CTH O OVER TRIMBELLE RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
PIERCE	TRIMBELLE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TLP	DWM	NJT	TLP

DECK REPLACEMENT

SHEET 1 OF 10

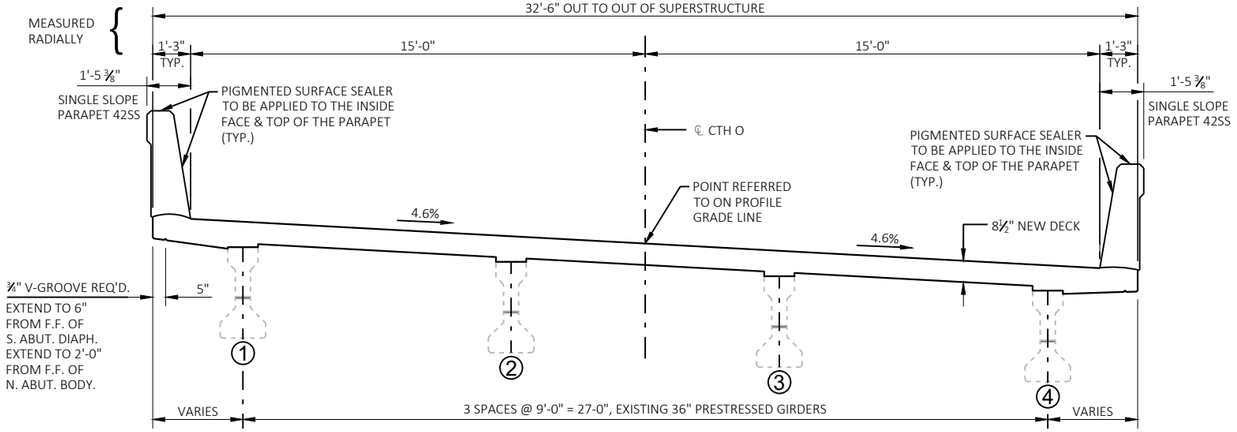
46

I.D. 7894-03-03

DATE: November 2020

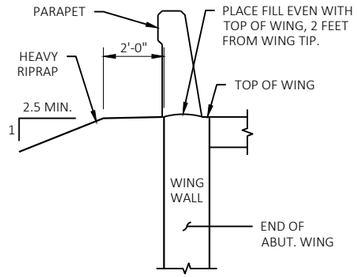
SCALE = 1:1

8

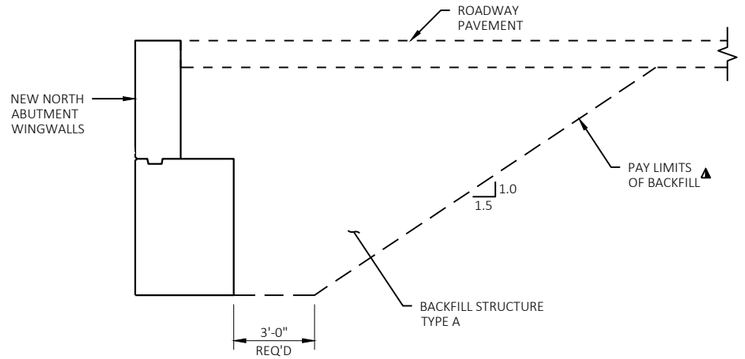


CROSS SECTION THRU ROADWAY

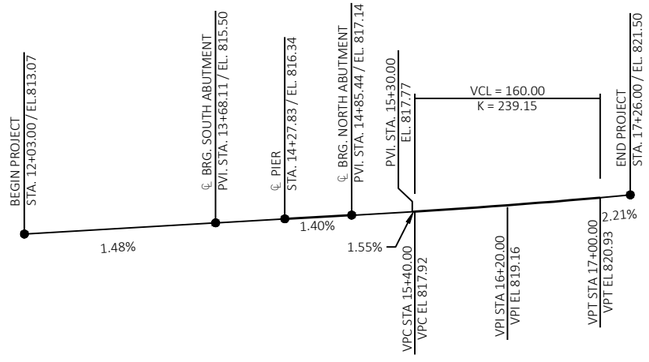
LOOKING UP STATION



TYPICAL FILL SECTION AT WING TIPS



STRUCTURE BACKFILL & LIMITS



PROFILE GRADE LINE - CTH O

NOT TO SCALE

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT.	NORTH ABUT.	PIER	SUPER.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE (STA 14+27.83) OVER WATERWAY WITH MINIMAL DEBRIS	LS	-	-	-	1	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-47-48	LS	-	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	210	-	-	210
502.0100	CONCRETE MASONRY BRIDGES	CY	-	19	-	148	167
502.3101	EXPANSION DEVICE	LF	-	-	-	37	37
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	-	400	400
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	-	130	130
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EA	-	39	-	-	39
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EA	-	24	-	-	24
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	-	1470	-	34910	36380
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EA	-	4	-	-	4
506.4000	STEEL DIAPHRAGMS B-47-48	EA	-	-	-	6	6
506.7050.S	REMOVING BEARINGS	EA	-	4	-	-	4
509.1500	CONCRETE SURFACE REPAIR	SF	-	-	-	10	10
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	1		-	-	1
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	-	4	4
	NON-BID ITEMS						
	FILLER	SIZE	-	-	-	-	½" X ¾"

STATE PROJECT NUMBER

7894-03-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

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

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

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP OF DECK.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

UTILIZE BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE SUPERSTRUCTURE CROSS SECTION.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-47-48" SHALL BE THE EXISTING GROUNDLINE.

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

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

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE INSIDE AND TOP SURFACES OF PARAPETS.

CONCRETE SURFACE REPAIR IS TO PATCH EXISTING SPALLS ON GIRDER #4 WEB AND PILASTER AT PIER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

CROSS SECTION, QUANTITIES, & NOTES

SHEET 2 OF 10

47

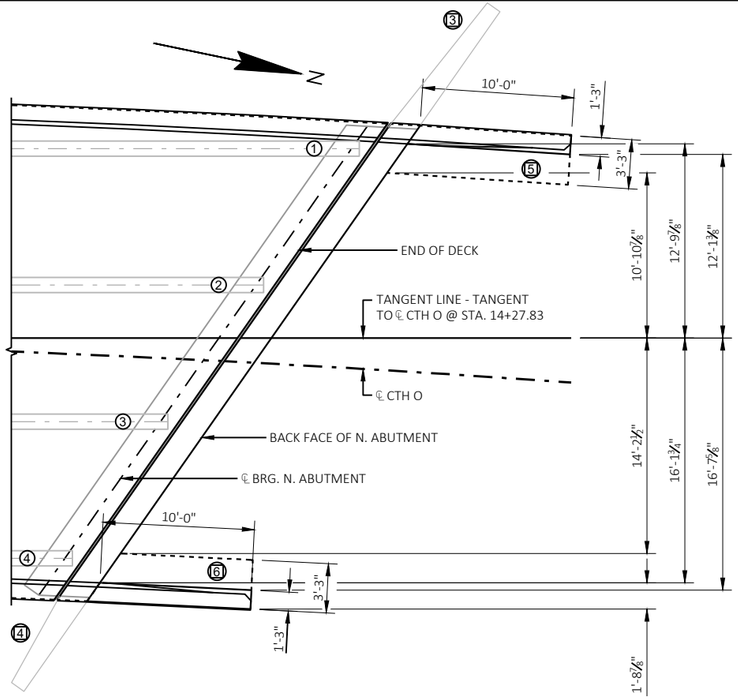
SCALE = 1:1

8

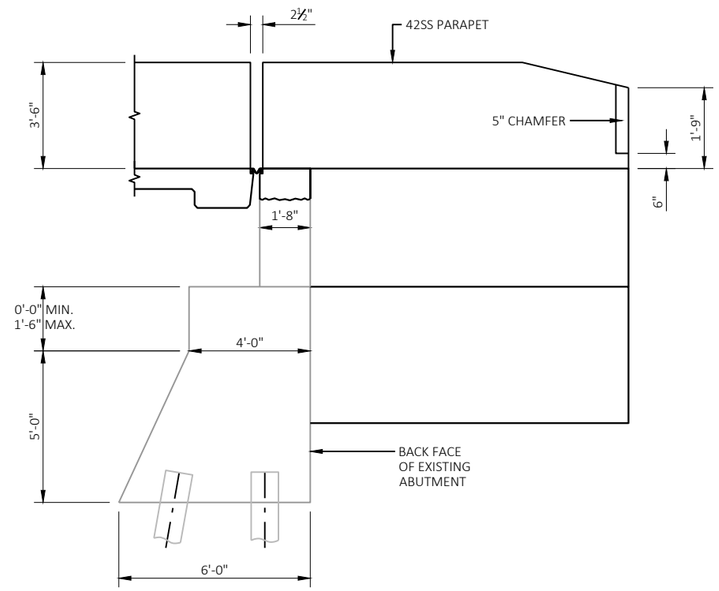
8

STATE PROJECT NUMBER

7894-03-73



PLAN VIEW



NORTH ABUTMENT ELEVATION

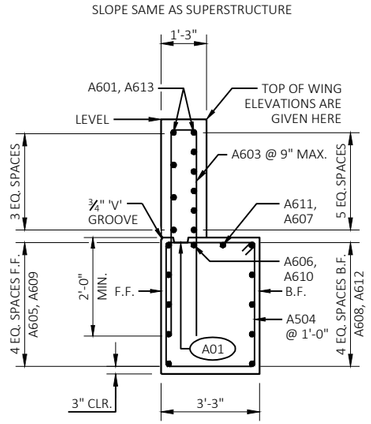
BILL OF BARS

1470# COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A601	X	2	9-7			WING HORIZONTAL TOP
A402	X	8	9-7			WING HORIZONTAL TOP
A603	X	28	12-11	X		WING VERTICAL TOP
A504	X	22	14-8	X		WING STIRRUP BOTTOM
✱ A605	X	5	10-10			WING 5 HORIZONTAL F.F. BOTTOM
✱ A606	X	1	11-6			WING 5 HORIZONTAL BOTTOM
✱ A607	X	1	12-2			WING 5 HORIZONTAL BOTTOM
✱ A608	X	5	12-11			WING 5 HORIZONTAL B.F. BOTTOM
✱ A609	X	5	12-11			WING 6 HORIZONTAL F.F. BOTTOM
✱ A610	X	1	12-2			WING 6 HORIZONTAL BOTTOM
✱ A611	X	1	11-6			WING 6 HORIZONTAL BOTTOM
✱ A612	X	5	10-10			WING 6 HORIZONTAL B.F. BOTTOM
A613	X	2	10-1			WING HORIZONTAL TOP
A414	X	8	10-1			WING HORIZONTAL TOP

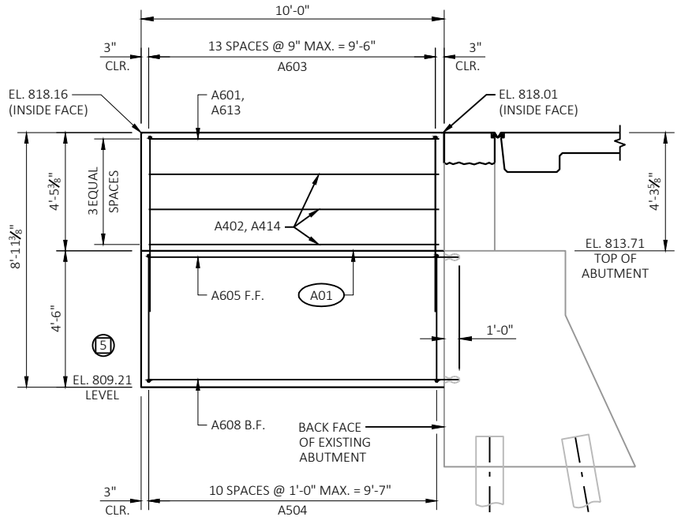
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

✱ ADHESIVE ANCHOR #6 BAR, EMBED 1'-0" IN CONCRETE. ANCHOR SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

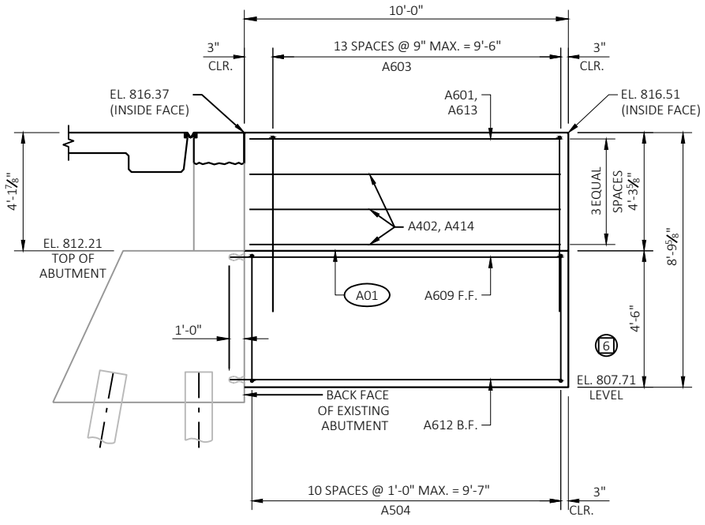


TYPICAL SECTION THRU WINGS

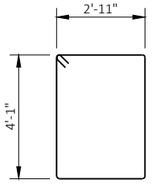
NOTE: B.F. = BACK FACE
F.F. = FRONT FACE



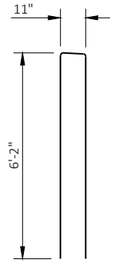
WING 5



WING 6



A504



A603

NORTH ABUTMENT WINGS

LEGEND

⬠	INDICATES WING NUMBER
A01	OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2 X 6. (18" R.M.W. AT B.F. AND 3/4" 'V' GROOVE AT F.F. OF WING WALL IF JOINT IS USED).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

NORTH ABUTMENT WING DETAILS

SHEET 3 OF 10

48

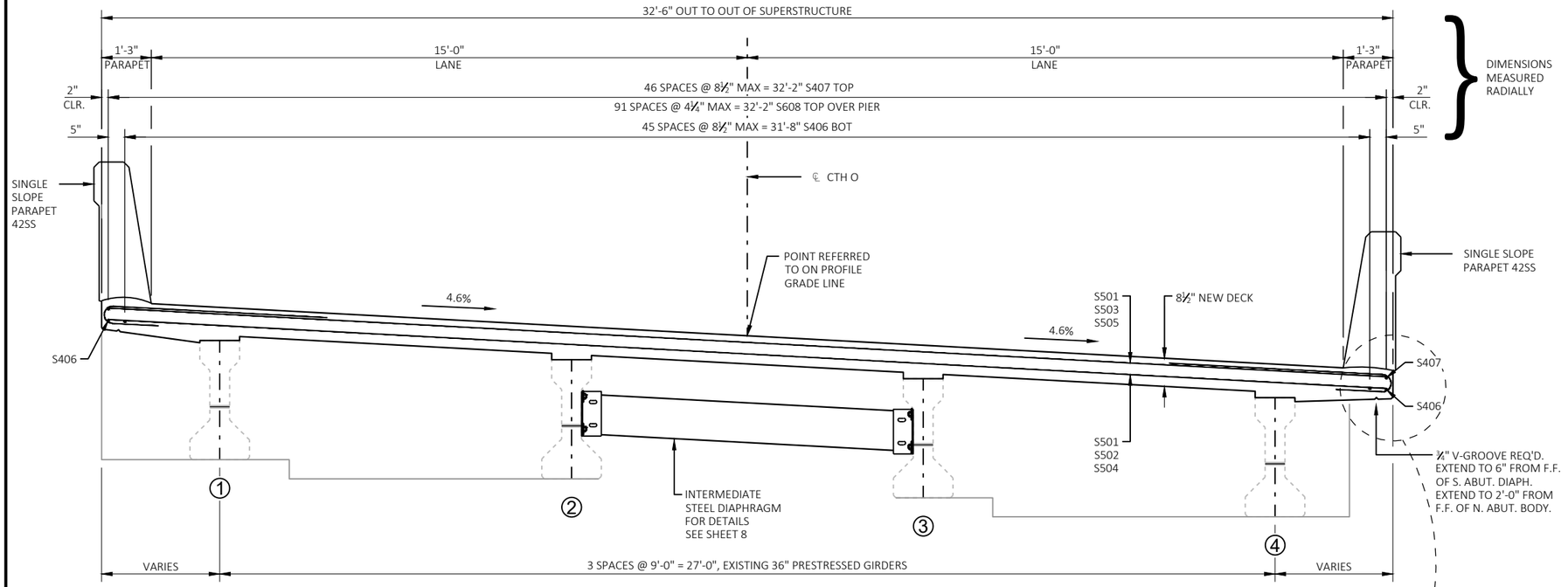
SCALE = 1:1

8

8

STATE PROJECT NUMBER

7894-03-73



AT EXISTING ABUTMENT

IN SPAN

AT EXISTING PIER

BILL OF BARS

34910# COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	334	32-2			SLAB TRANS. TOP & BOTTOM
S502	X	38	16-7		⊠	SLAB TRANS. BOTTOM
S503	X	38	16-2		⊠	SLAB TRANS. TOP
S504	X	36	16-3		⊠	SLAB TRANS. BOTTOM
S505	X	36	16-8		⊠	SLAB TRANS. TOP
S406	X	144	41-3			SLAB LONG. BOTTOM
S407	X	94	40-1			SLAB LONG. TOP
S608	X	92	41-0			SLAB LONG. TOP OVER PIER
S409	X	24	11-3	X		SLAB LONG. BOTTOM OVER PIER
S410	X	18	9-5			SLAB TRANS. BOTTOM OVER PIER
S711	X	18	9-5			NORTH DIAPHRAGM TRANS.
S412	X	30	4-6	X		NORTH DIAPHRAGM STIRRUP
S513	X	15	8-0			TRANS. AT PAVING BLOCK
S514	X	40	4-8	X		STIRRUP AT PAVING BLOCK
S515	X	4	39-4			TRANS. AT PAVING BLOCK
✱ S516	X	39	2-8	X		VERTICAL AT PAVING BLOCK
S417	X	6	9-5			TRANS. AT JOINT BETWEEN GIRDERS
S518	X	334	4-5	X		PARAPET VERTICAL
S519	X	334	6-8	X		PARAPET VERTICAL
S520	X	32	56-9			PARAPET HORIZONTAL

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

✱ ADHESIVE ANCHOR

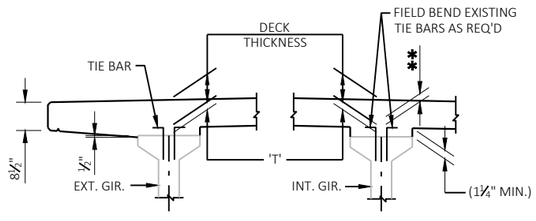
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY

BAR MARK	NO. REQUIRED	LENGTH
S502	1 SERIES OF 38	1'-9" TO 31'-5"
S503	1 SERIES OF 38	1'-4" TO 31'-0"
S504	1 SERIES OF 36	1'-2" TO 31'-4"
S505	1 SERIES OF 36	1'-7" TO 31'-9"

CROSS SECTION THRU ROADWAY

LOOKING UP STATION



DECK HAUNCH DETAIL

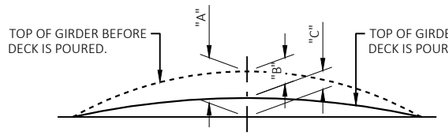
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

✱✱ IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

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

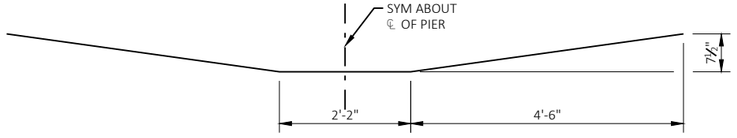
TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

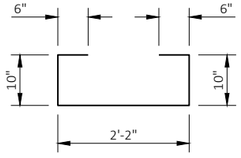


DEAD LOAD DEFLECTION DIAGRAM

GIRDER DEAD LOAD DEFLECTION (IN.)										
SPAN	GIRDER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10
1	1-4	5/16	5/8	13/16	1	1 1/16	1	13/16	5/8	5/16
2	1-4	5/16	5/8	13/16	1	1 1/16	1	13/16	5/8	5/16



S409



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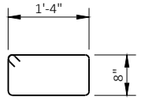

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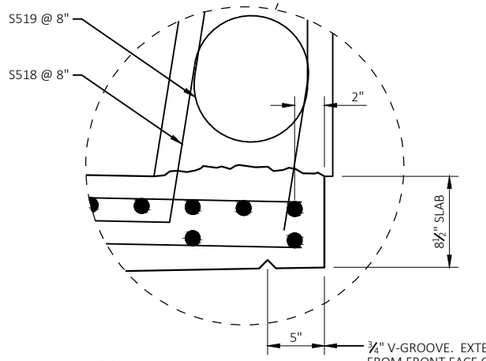

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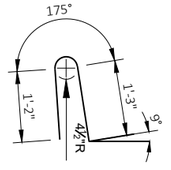

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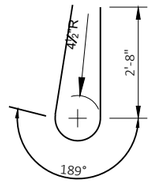


S519

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

SUPERSTRUCTURE CROSS SECTION

SHEET 4 OF 10

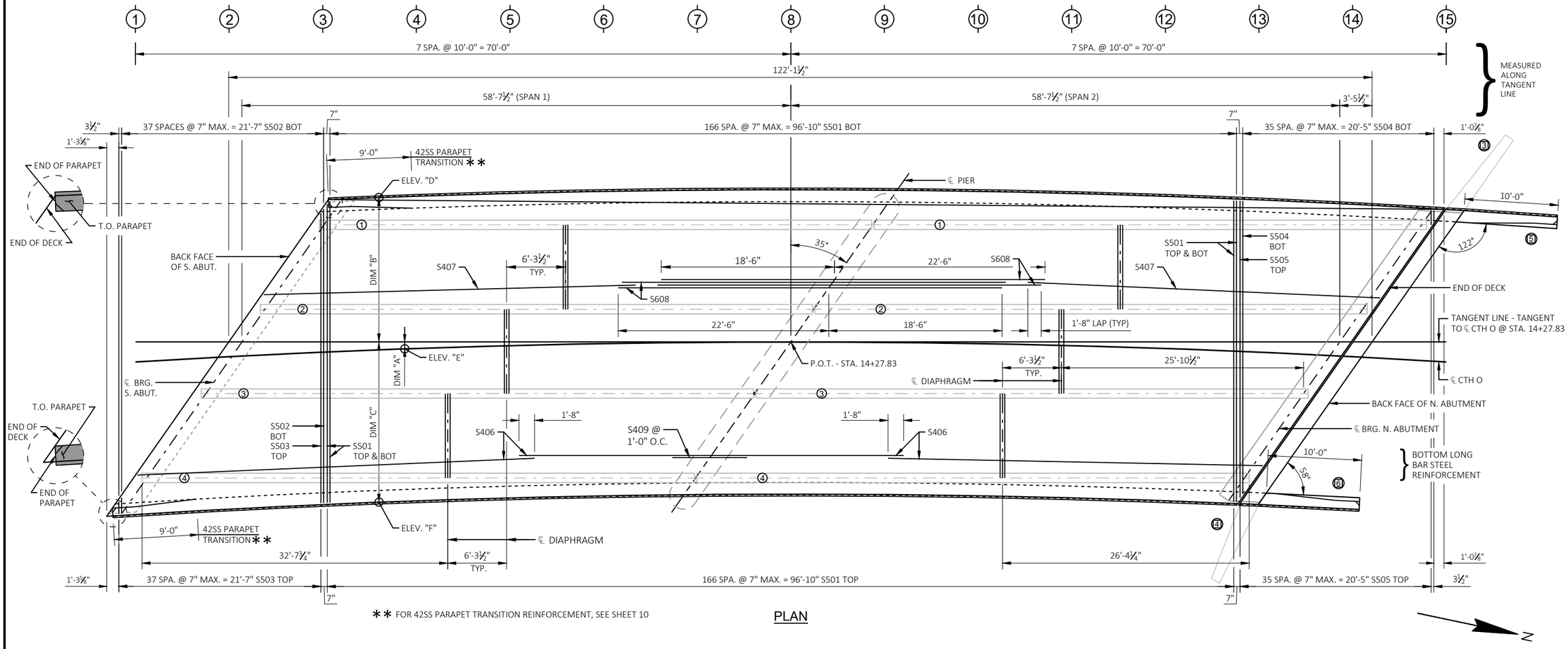
49

SCALE = 1:1

8

8

STATE PROJECT NUMBER
7894-03-73



** FOR 42SS PARAPET TRANSITION REINFORCEMENT, SEE SHEET 10

PLAN

DECK ELEVATIONS OVER GIRDERS

GIRDER 1	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
T.O.D. ELEV.	816.27	816.34	816.41	816.49	816.56	816.64	816.71	816.79	816.87	816.95	817.03	817.12	817.20	817.29	817.38	817.47	817.56	817.65	817.74	817.84	817.93

GIRDER 2	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
T.O.D. ELEV.	815.78	815.85	815.88	815.92	816.06	816.14	816.21	816.29	816.37	816.45	816.53	816.61	816.70	816.78	816.87	816.96	817.05	817.14	817.23	817.33	817.42

GIRDER 3	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
T.O.D. ELEV.	815.29	815.35	815.42	815.49	815.56	815.64	815.71	815.79	815.87	815.95	816.03	816.11	816.19	816.28	816.37	816.45	816.54	816.63	816.73	816.82	816.91

GIRDER 4	S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N. ABUT.
T.O.D. ELEV.	814.80	814.87	814.93	815.00	815.07	815.14	815.21	815.29	815.37	815.45	815.53	815.61	815.69	815.77	815.86	815.95	816.04	816.13	816.22	816.31	816.40

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

TABLE OF OFFSETS & ELEVATIONS

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
DIM. "A"	-	1'-6⅞"	1'-1⅛"	8⅜"	4¾"	2⅛"	½"	0	½"	2⅛"	4¾"	8⅜"	1'-1⅛"	1'-6⅞"	-
DIM. "B"	-	-	-	15'-6¾"	15'-10⅜"	16'-0⅞"	16'-2½"	16'-3"	16'-2½"	16'-0⅞"	15'-10⅜"	15'-6¾"	15'-2⅛"	14'-8⅜"	-
DIM. "C"	18'-5"	17'-10⅛"	17'-4¼"	16'-11½"	16'-7¾"	16'-5⅛"	16'-3½"	16'-3"	16'-3½"	16'-5⅛"	16'-7¾"	16'-11½"	17'-4¼"	-	-
ELEV. "D"	-	-	-	816.53	816.67	816.81	816.95	817.08	817.22	817.36	817.50	817.64	817.77	817.91	818.05
ELEV. "E"	-	815.50	815.64	815.78	815.92	816.06	816.20	816.34	816.48	816.62	816.76	816.90	817.04	817.18	-
ELEV. "F"	814.60	814.75	814.88	815.02	815.16	815.30	815.45	815.59	815.73	815.87	816.01	816.16	816.30	-	-

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

SUPERSTRUCTURE

SHEET 5 OF 10

50

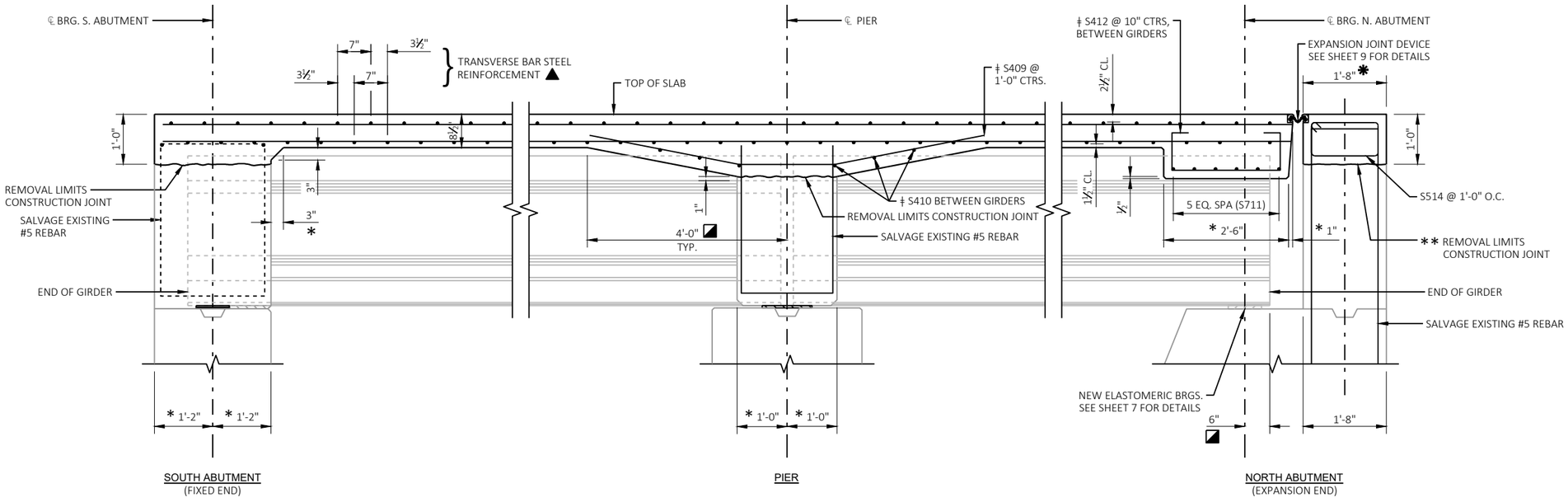
SCALE = 1:1

STATE PROJECT NUMBER

7894-03-73

GENERAL NOTES

- ◪ DIMENSION IS TAKEN PARALLEL TO ℄ GIRDER
- * DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.
- ǂ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO CL GIRDERS.
- ▲ DIMENSIONS MEASURED ALONG TANGENT LINE
- ** POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE.



PART LONGITUDINAL SECTION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

SUPERSTRUCTURE DETAILS

SHEET 6 OF 10

51

SCALE = 1:1

STATE PROJECT NUMBER

7894-03-73

GENERAL NOTES

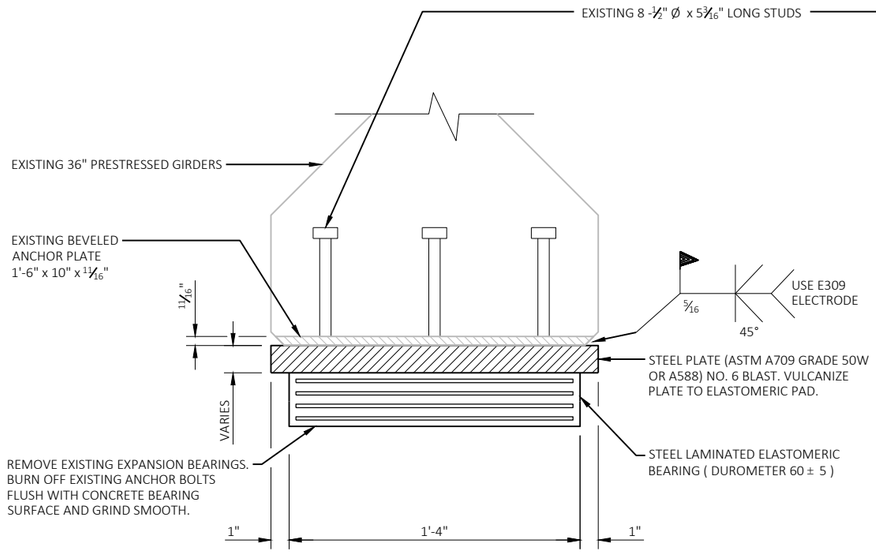
ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATE SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

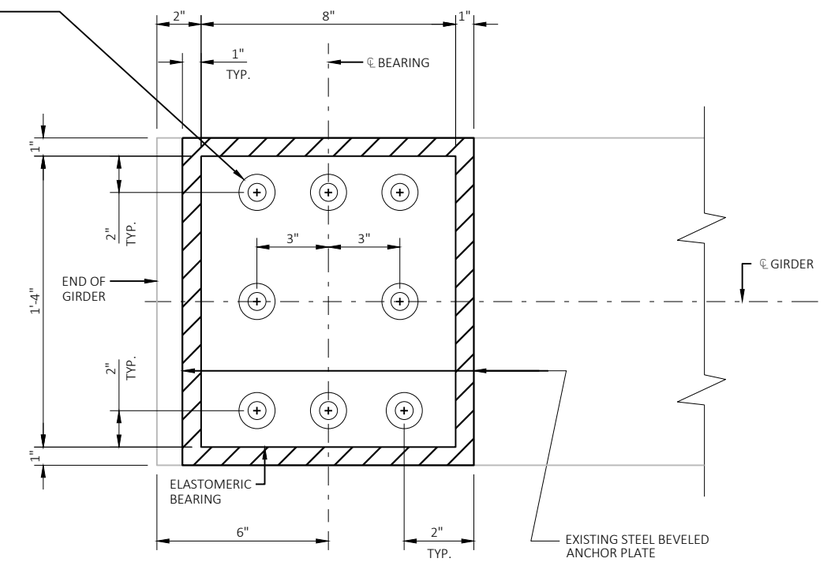
ALL PLACE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85 DEGREES.

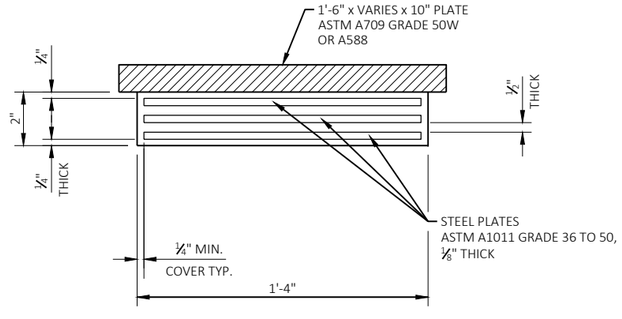
GRIND EXISTING WELD THAT ATTACHED EXISTING TOP PLATE TO EXISTING BOTTOM FLANGE. GRIND AFFECTED AREAS SMOOTH.



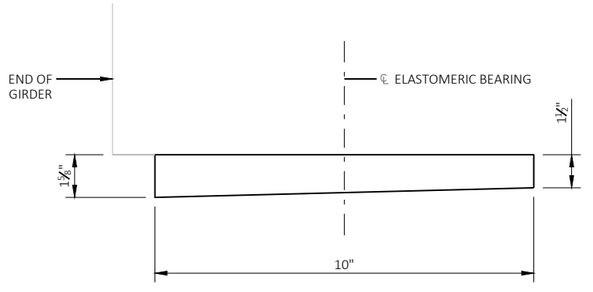
END VIEW



PLAN VIEW



SECTION THRU ELASTOMERIC BEARING



SECTION THRU ELASTOMERIC BEARING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

EXPANSION BEARINGS

SHEET 7 OF 10

52

SCALE = 1:1

8

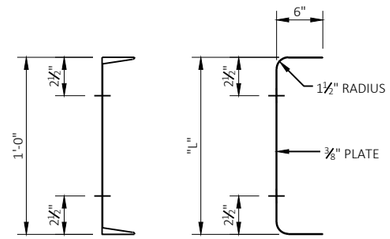
8

STATE PROJECT NUMBER

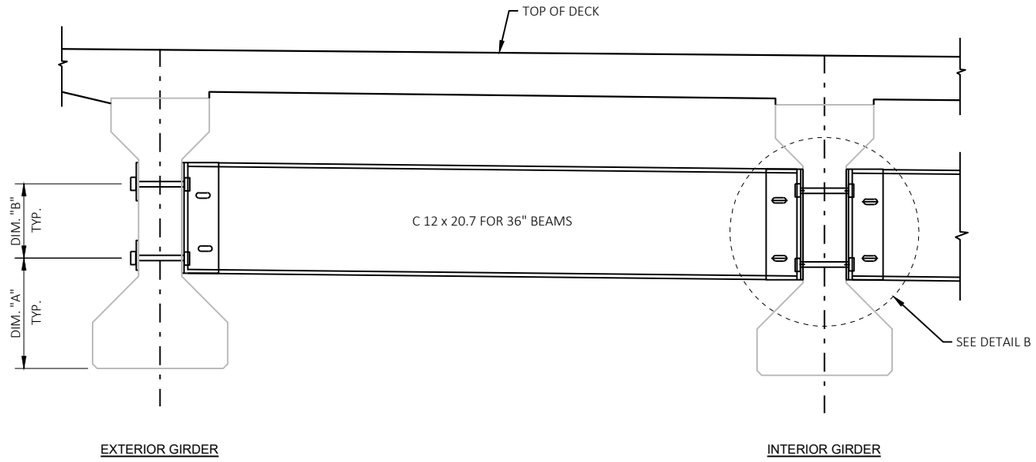
7894-03-73

TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	*DIM. "X"
36"	1'-2⅞"	9⅞"	1'-1½"	3¼"



SECTION THRU DIAPHRAGM



PART TRANSVERSE SECTION AT DIAPHRAGM

GENERAL NOTES

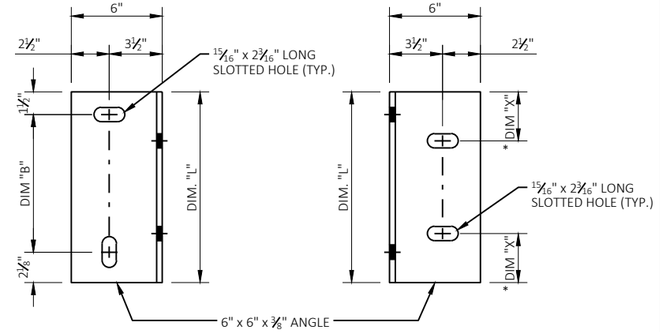
ALL DIAPHRAGM MATERIAL SHOWN AND CORE DRILLLING HOLES IN EXISTING GIRDERS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-47-48", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

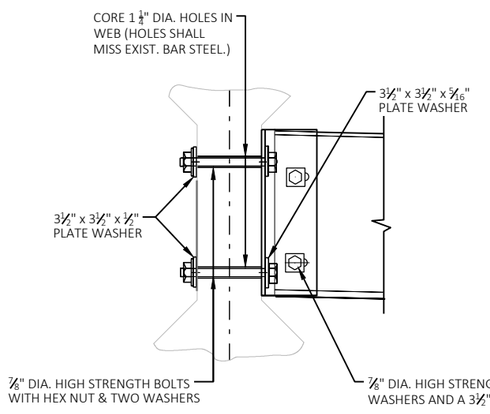
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

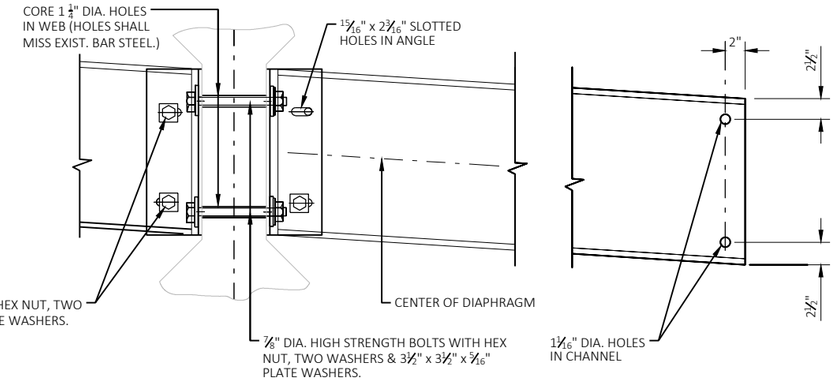


DIAPHRAGM SUPPORT

*DIM "X" = 2½" FOR ALTERNATE PLATE DIAPHRAGM



(FOR EXTERIOR GIRDERS & STAGGERED DIAPHRAGMS)



(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

INTERMEDIATE STEEL DIAPHRAGMS

SHEET 8 OF 10

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SCALE = 1:1

8

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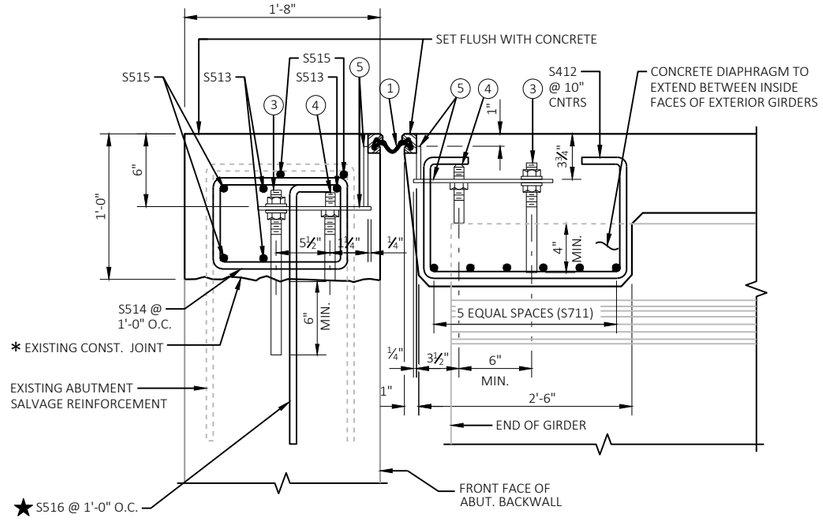
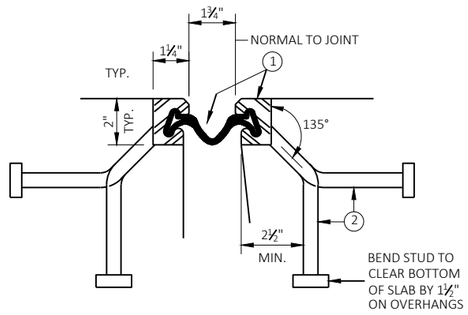


SECTION THRU JOINT AT NORTH ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

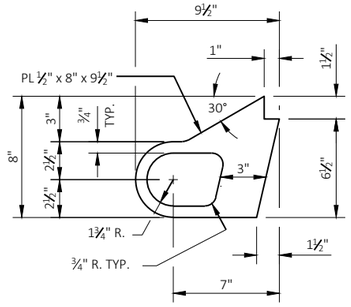
✱ POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE.

★ ADHESIVE ANCHOR EMBED 1'-6" IN CONCRETE. TURN 10" LEG TO FIT.

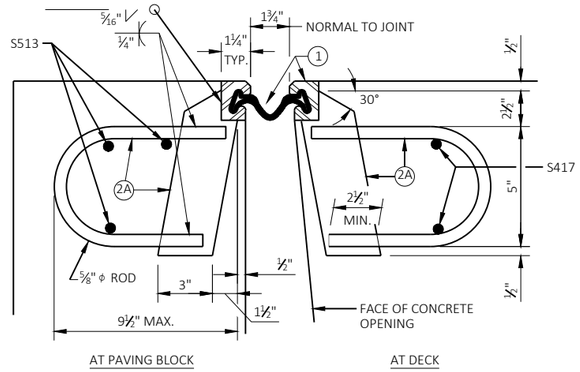


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS

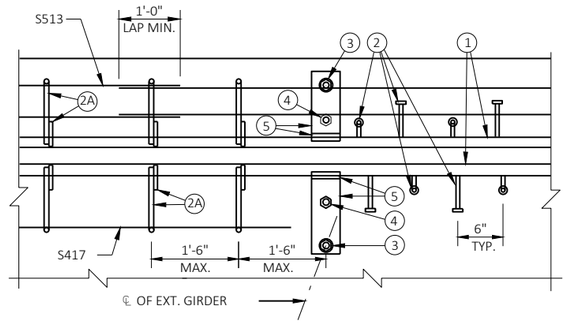


ALTERNATE STRIP SEAL ANCHOR

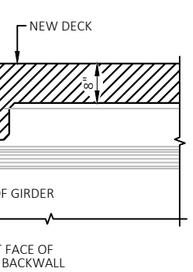


SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



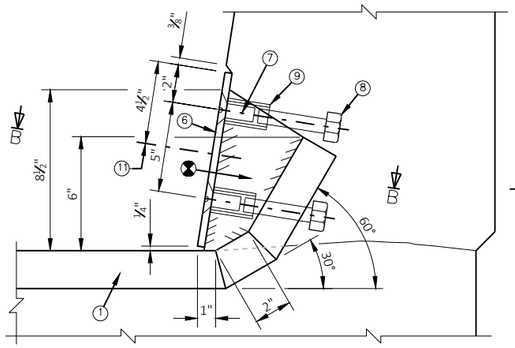
PART PLAN



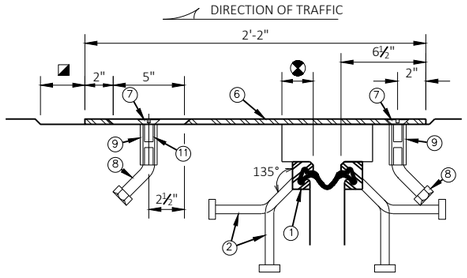
SECTION THRU EXISTING EXPANSION JOINT

NORTH ABUTMENT

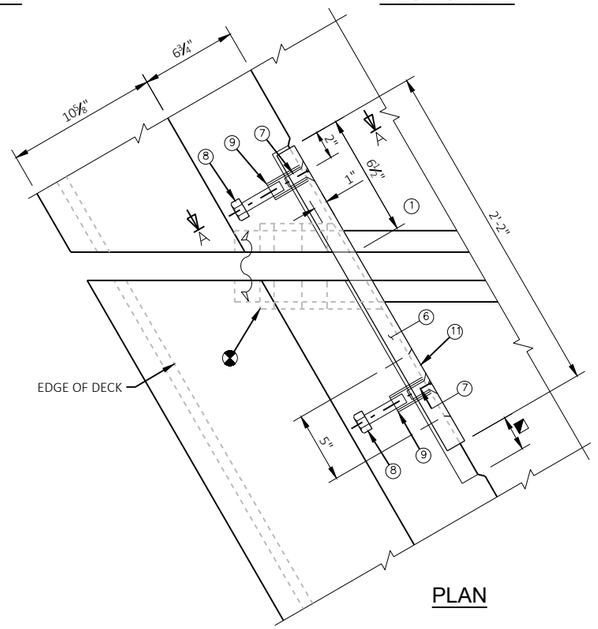
▨ NEW WORK



SECTION A-A



SECTION B-B



PLAN

LEGEND

1. NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝"Ø x 6 ⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝"Ø ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾"Ø THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾"Ø THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½"ϕ HOLE FOR NO. 3 AND 1"ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" x 10" x 2'-2" LONG WITH HOLES FOR NO. 7.
7. ¾" DIA. x 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" DIA. x 2¼" GALVANIZED THREADED COUPLING.
11. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING

◪ JOINT OPENING DIM. ALONG SKEW PLUS ½"

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-47-48".

STATE PROJECT NUMBER

7894-03-73

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

EXPANSION DEVICE

SHEET 9 OF 10

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SCALE = 1:1

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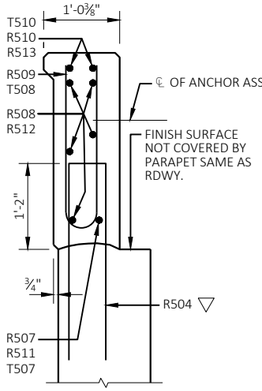
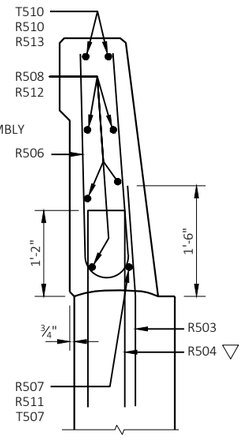
STATE PROJECT NUMBER

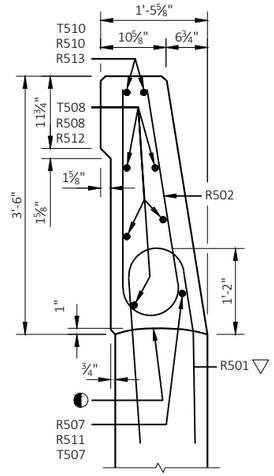
7894-03-73



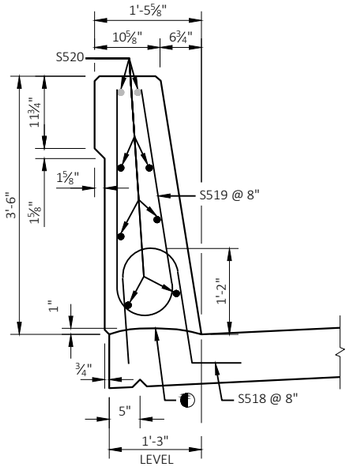
SECTION A-A



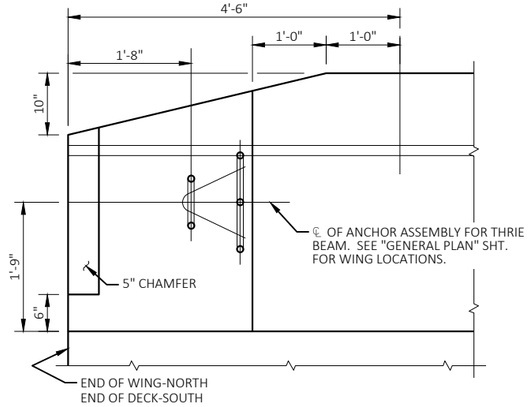
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

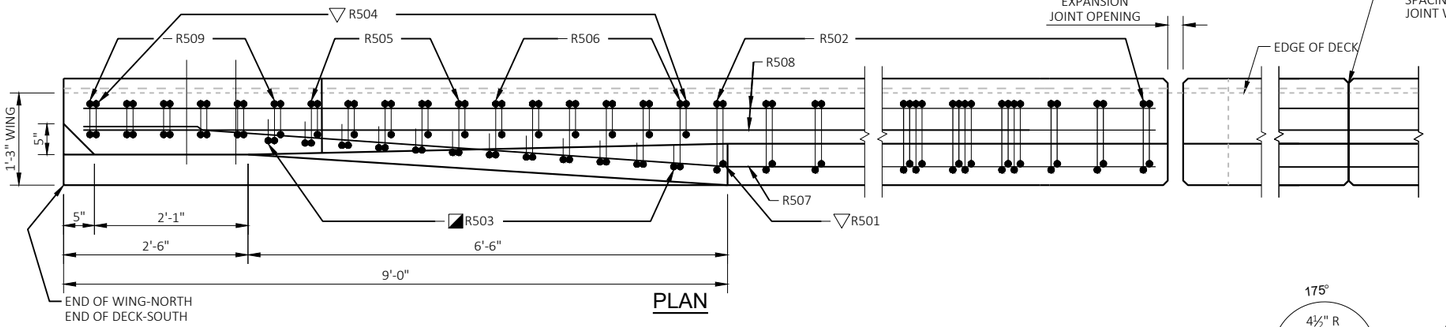
BILL OF BARS

FOR ABUTMENT PAPAPETS , WEIGHT INCLUDED IN SUPERSTRUCTURE TABLE

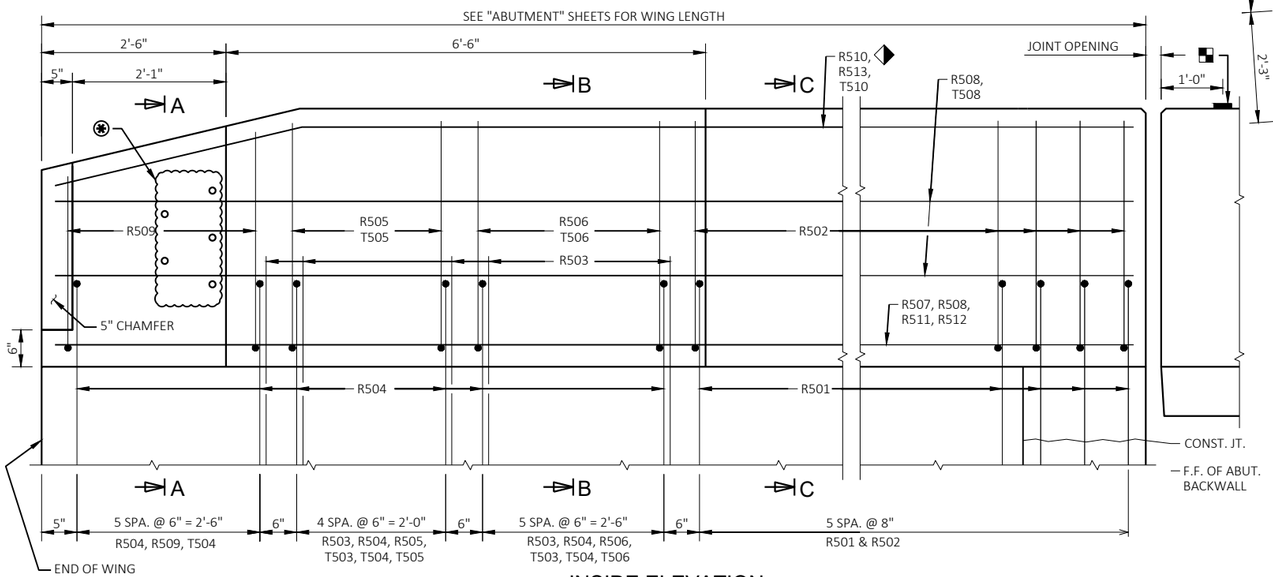
BAR MARK	COAT	S. DECK	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	-	12	5-10	X		PARAPET VERTICAL
R502	X	-	12	6-8	X		PARAPET VERTICAL
R503	X	-	22	3-0	X		PARAPET VERTICAL
R504	X	-	34	5-7	X		PARAPET VERTICAL
R505	X	-	10	6-5	X		PARAPET VERTICAL
R506	X	-	12	6-6	X		PARAPET VERTICAL
R507	X	-	1	12-4	X		PARAPET HORIZONTAL-WING 5
R508	X	-	5	11-7			PARAPET HORIZONTAL
R509	X	-	12	5-5	X	☒	PARAPET VERTICAL
R510	X	-	2	11-7	X		PARAPET HORIZONTAL
R511	X	-	1	11-7	X		PARAPET HORIZONTAL WING 6
R512	X	-	5	12-4			PARAPET HORIZONTAL
R513	X	-	2	12-4	X		PARAPET HORIZONTAL
T503	X	22	-	2-9	X		PARAPET VERTICAL DECK
T504	X	34	-	4-4	X		PARAPET VERTICAL DECK
T505	X	10	-	6-5	X		PARAPET VERTICAL DECK
T506	X	12	-	6-6	X		PARAPET VERTICAL DECK
T507	X	2	-	10-7	X		PARAPET HORIZONTAL DECK
T508	X	10	-	10-7			PARAPET HORIZONTAL DECK
T509	X	12	-	5-5	X	☒	PARAPET VERTICAL DECK
T510	X	4	-	10-7	X		PARAPET HORIZONTAL DECK

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

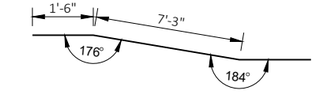


PLAN

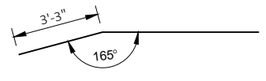


INSIDE ELEVATION

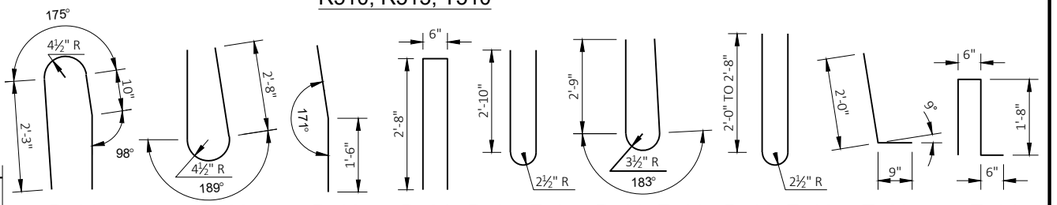
◆ ROADWAY OPENING 2½" MIN. AT EXPANSION JOINT



R507, R511, T507

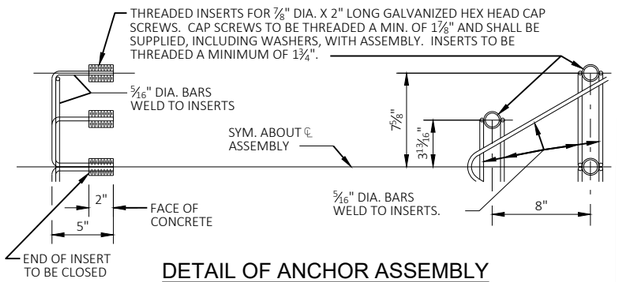


R510, R513, T510



R501 R502 R503 R504 R505, T505 R506, T506 R509, T509 T503 T504

BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

✱ FIELD VERIFY LOCATION OF ANCHORS IN PROPOSED 42SS PARAPET AND REATTACH EXISTING BEAM GUARD. SOUTH END OF STRUCTURE.

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY

BAR MARK	NO. REQUIRED	LENGTH
R509	2 SERIES OF 6	4-9 TO 6-1
T509	2 SERIES OF 6	4-9 TO 6-1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-48

DRAWN BY NJT | PLANS CK'D. TLP

SINGLE SLOPE PARAPET 42SS

SHEET 10 OF 10

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SCALE = 1:1

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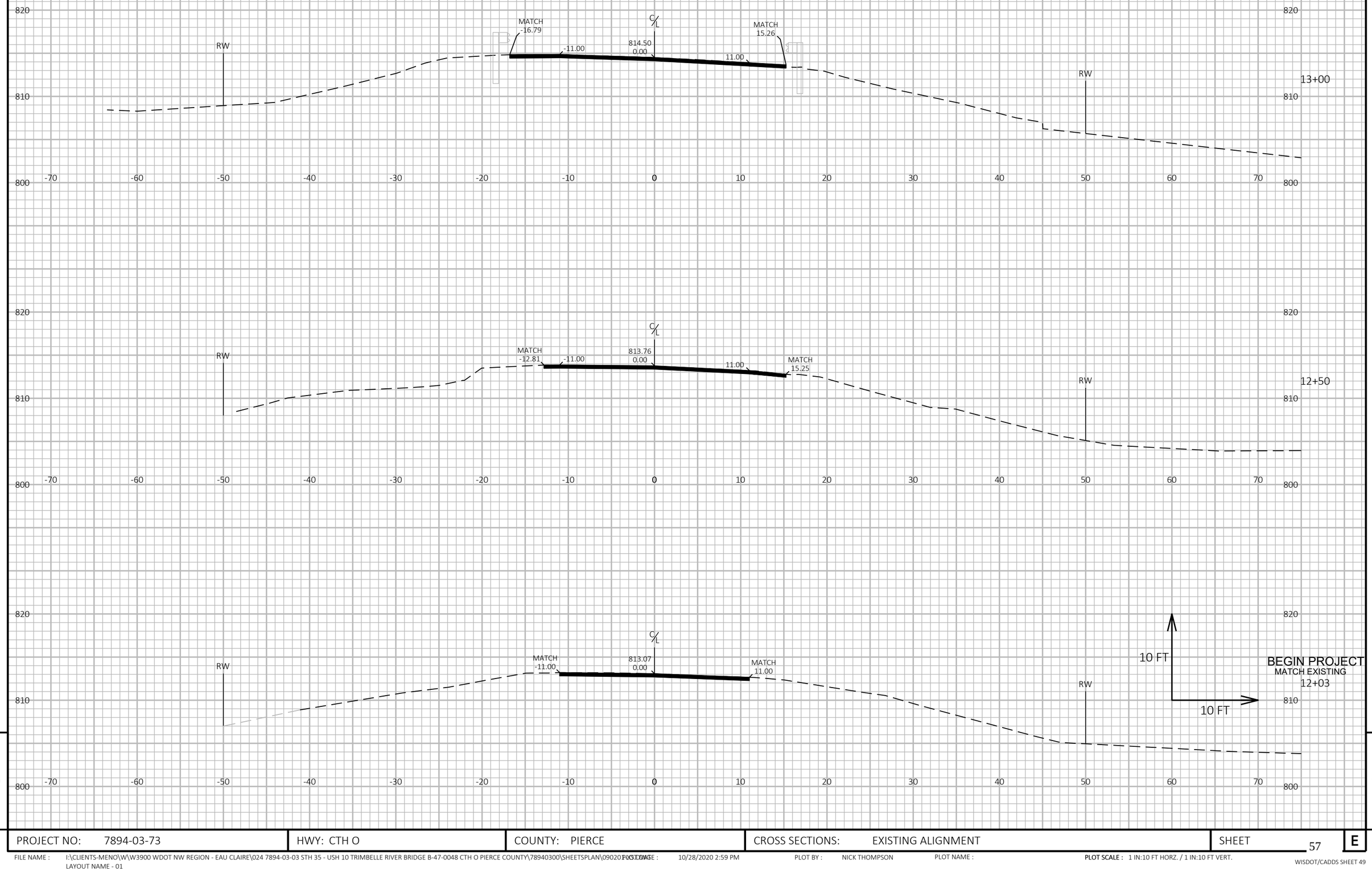
CTH O - INCREMENTAL VOLUME

		END AREA			COMMON				FILL		
STATION	DISTANCE FT	COMMON SF	FILL SF	SALVAGED/UNUSABLE PAVEMENT MATERIAL SF (1)	RAW CY	1.0 ADJ CY	SALVAGED/UNUSABLE PAVEMENT MATERIAL CY	AVAILABLE MATERIAL CY (2)	RAW CY	1.3 ADJ CY	MASS HAUL CY (3)
12+03		8.3	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12+50	47	10.5	0.0	8.3	16.4	16.4	14.4	1.9	0.0	0.0	1.9
13+00	50	12.0	0.0	8.3	20.8	20.8	15.4	5.5	0.0	0.0	5.5
13+16	16	33.6	0.0	8.3	13.5	13.5	4.9	8.6	0.0	0.0	8.6
13+50	34	33.6	0.0	8.3	42.3	42.3	10.4	31.9	0.0	0.0	31.9
13+67	17	33.6	0.0	8.3	14.4	21.2	5.2	16.0	0.0	0.0	16.0
					BRIDGE GAP						
14+88		38.3	5.7	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15+00	12	38.3	5.7	8.3	17.0	17.0	3.7	13.4	2.5	3.3	10.1
15+28	28	38.3	5.7	8.3	39.7	39.7	8.6	31.2	5.9	7.7	23.5
15+39	11	38.3	5.7	8.3	15.6	15.6	3.4	12.2	2.3	3.0	9.2
15+55	16	11.7	4.8	8.3	14.8	14.8	4.9	9.9	3.1	4.0	5.9
15+82	27	12.0	9.7	8.3	11.9	11.9	8.3	3.6	7.3	9.4	-5.9
16+14	32	10.7	14.3	8.3	13.5	13.5	9.8	3.6	14.2	18.5	-14.9
16+40	26	10.0	0.4	8.3	10.0	10.0	8.0	2.0	7.1	9.2	-7.2
16+67	27	10.5	21.4	8.3	10.3	10.3	8.3	2.0	10.9	14.2	-12.2
17+26	59	8.3	0.0	8.3	20.5	20.5	18.1	2.4	23.4	30.4	-28.0
				COLUMN TOTALS		267.4	123.4	144.0	76.7	99.7	44.3

1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN COMMON.
2) AVAILABLE MATERIAL = CUT MINUS THE SALVAGED/UNUSABLE PAVEMENT MATERIAL
3) THE MASS HAUL = A + OR - QUANTITY CALCULATED FOR THE DIVISON. A POSITIVE QUANTITY INDICATES AN EXCESS OF MATERIAL.



9

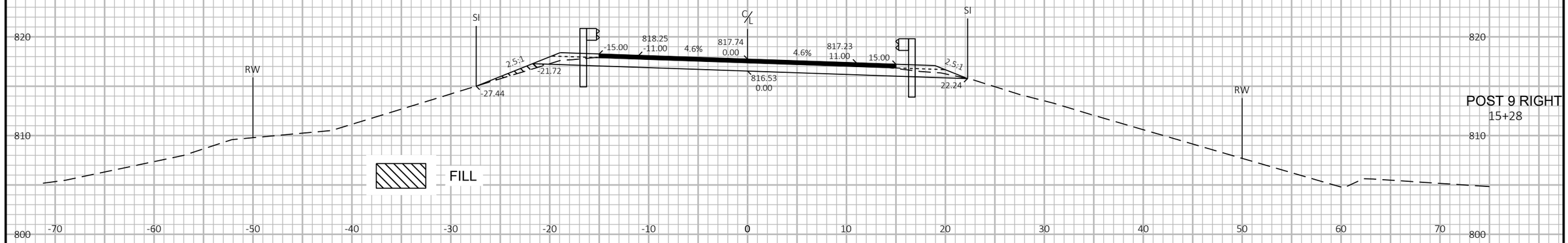
9

PROJECT NO: 7894-03-73 | HWY: CTH O | COUNTY: PIERCE | CROSS SECTIONS: EXISTING ALIGNMENT | SHEET 57 E

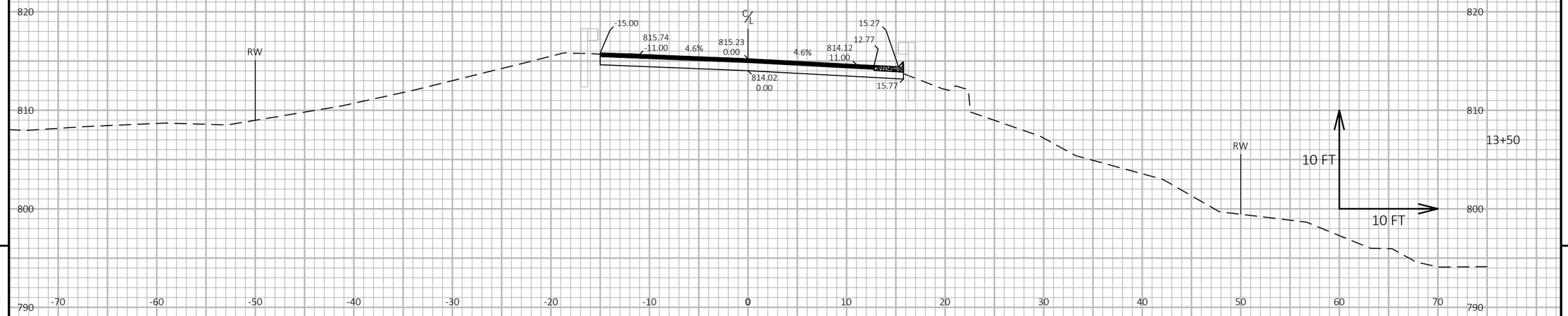
FILE NAME : I:\CLIENTS-MENO\W\W3900 WDOT NW REGION - EAU CLAIRE\024 7894-03-03 STH 35 - USH 10 TRIMBELLE RIVER BRIDGE B-47-0048 CTH O PIERCE COUNTY\78940300\SHEETSPLAN\09020 XS.DWG
LAYOUT NAME - 01

PLOT DATE : 10/28/2020 2:59 PM PLOT BY : NICK THOMPSON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



BRIDGE B-47-48



9

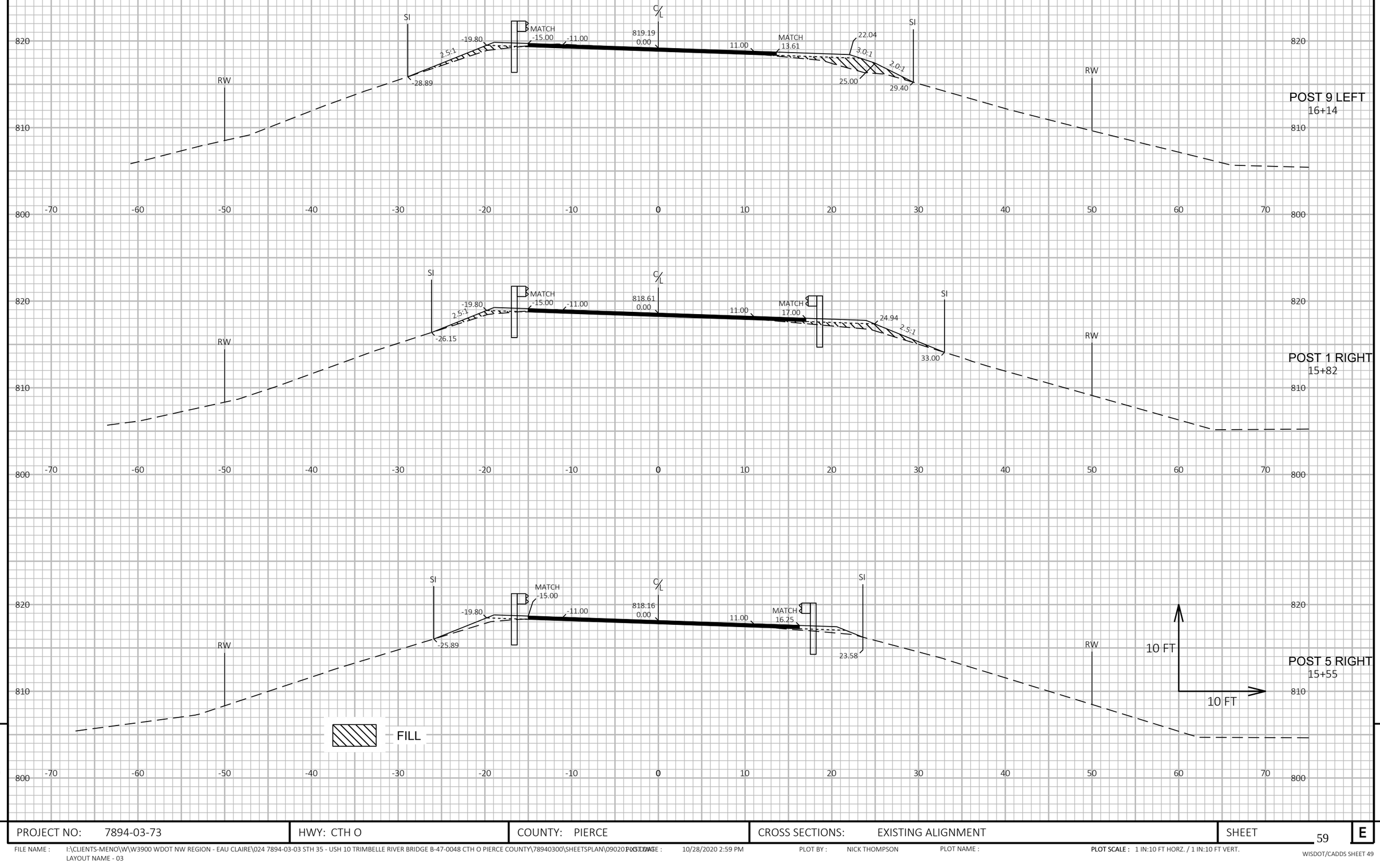
9

PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: EXISTING ALIGNMENT	SHEET 58	E

FILE NAME : I:\CLIENTS-MENO\W\W3900 WDOT NW REGION - EAU CLAIRE\024 7894-03-03 STH 35 - USH 10 TRIMBELLE RIVER BRIDGE B-47-0048 CTH O PIERCE COUNTY\78940300\SHEETSPLAN\090201-XS1.DWG
LAYOUT NAME - 02

PLOT DATE : 10/28/2020 2:59 PM PLOT BY : NICK THOMPSON PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

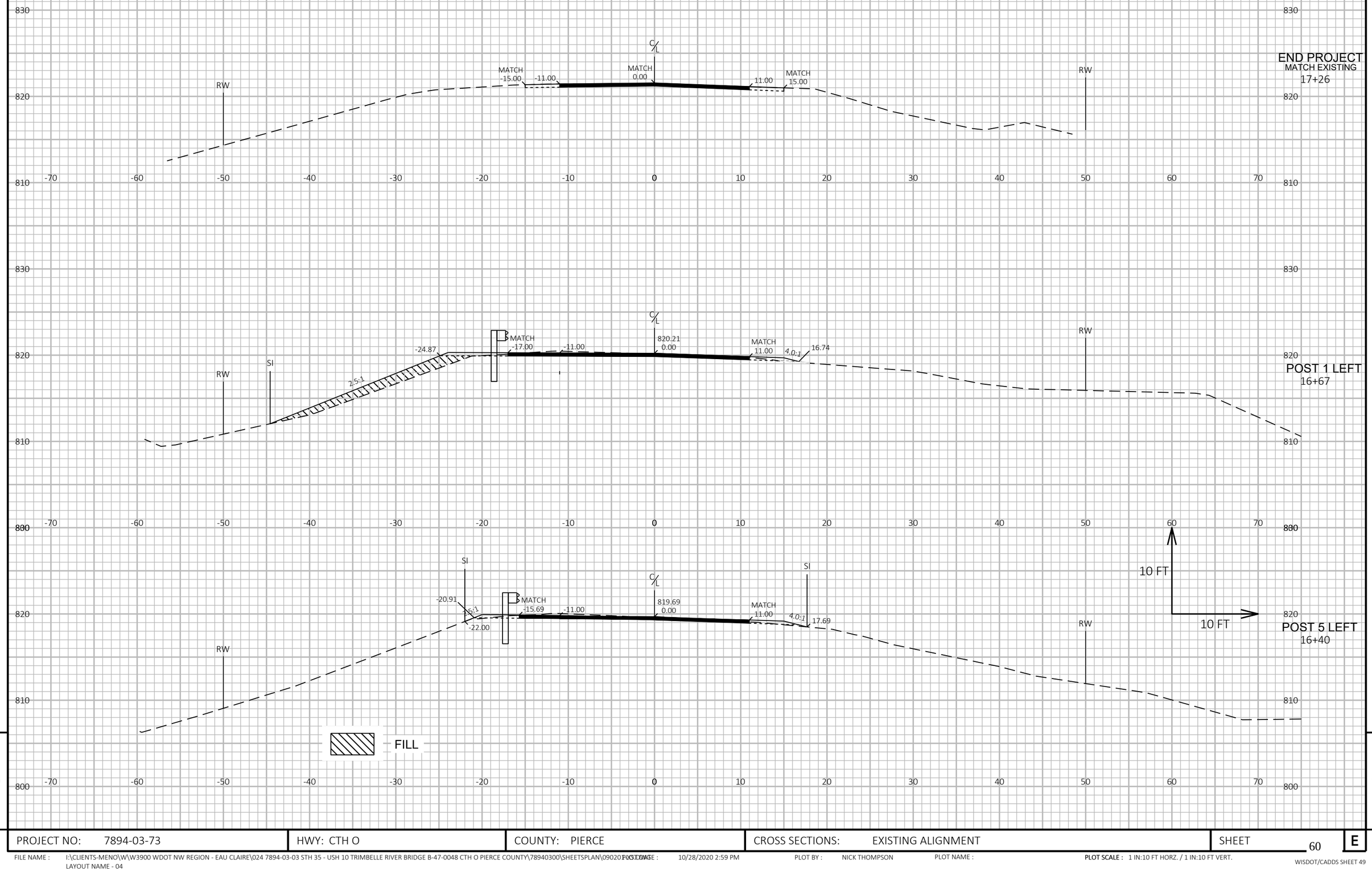
9

PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: EXISTING ALIGNMENT	SHEET 59	E

FILE NAME : I:\CLIENTS-MENO\W\W3900 WDOT NW REGION - EAU CLAIRE\024 7894-03-03 STH 35 - USH 10 TRIMBELLE RIVER BRIDGE B-47-0048 CTH O PIERCE COUNTY\78940300\SHEETSPLAN\09020101.DWG
LAYOUT NAME - 03

PLOT DATE : 10/28/2020 2:59 PM PLOT BY : NICK THOMPSON PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 7894-03-73	HWY: CTH O	COUNTY: PIERCE	CROSS SECTIONS: EXISTING ALIGNMENT	SHEET 60	E

FILE NAME : I:\CLIENTS-MENO\W\W3900 WDOT NW REGION - EAU CLAIRE\024 7894-03-03 STH 35 - USH 10 TRIMBELLE RIVER BRIDGE B-47-0048 CTH O PIERCE COUNTY\78940300\SHEETSPLAN\09020.DGN LAYOUT NAME - 04 | PLOT DATE : 10/28/2020 2:59 PM | PLOT BY : NICK THOMPSON | PLOT NAME : | **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

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through innovation and exceptional service.

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