FEBRUARY 2025

TOTAL SHEETS = 78

ORDER OF SHEETS STATE OF WISCONSIN **DEPARTMENT OF TRANSPORTATION** Typical Sections and Details Estimate of Quantities

30 Douglas 29

PLAN OF PROPOSED IMPROVEMENT

V HUSTLER - T ORANGE (CTH H)

LITTLE LEMONWEIR BRIDGE B-29-0166

CTH H **JUNEAU COUNTY**

STATE PROJECT NUMBER 5827-00-71

R-2-E

Computer Earthwork Data

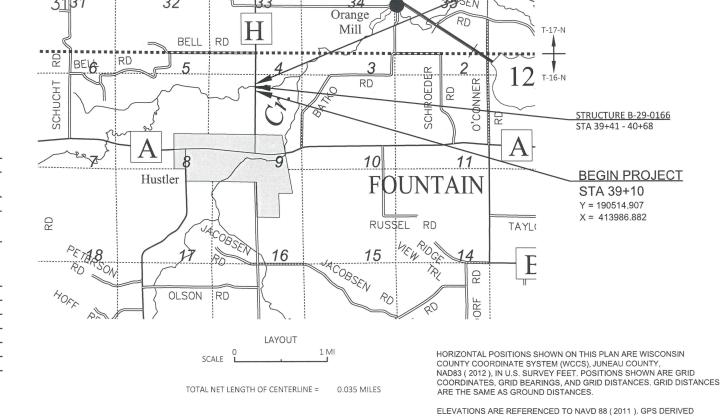
Cross Sections

DESIGN DESIGNATION 5827-00-01

A.A.D.T.	(2025)	=	580
A.A.D.T.	(2045)	=	620
D.H.V.		=	N/A
D.D.		=	50/50
T.		=	12.9%
DESIGN SPEED		=	55 MPH
FCALC		_	120 000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS	1//////	GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND MARSH OR ROCK PROFILE	_ ROCK_
LOT LINE		(To be noted as such)	
LIMITED HIGHWAY EASEMENT	L — — –	SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY PROPOSED OR NEW R/W LINE		GRADE ELEVATION	95.36
SLOPE INTERCEPT		CULVERT (Profile View)	0 🗆
REFERENCE LINE	300'EB'	UTILITIES	
SWIETING CHILLIEST		ELECTRIC	— E —
EXISTING CULVERT		FIBER OPTIC	—— FO ——
PROPOSED CULVERT (Box or Pipe)		GAS	—— G ——
	MA	SANITARY SEWER	SAN
COMBUSTIBLE FLUIDS	-CAUTION-	STORM SEWER	ss
	1/4	TELEPHONE	— т —
MARSH AREA	(1-1-1)	WATER	w
1111 1110011111110011	الطيط	UTILITY PEDESTAL	Ħ
	······	POWER POLE	4
WOODED OR SHRUB AREA	ξ λ	TELEPHONE POLE	ø



ACCEPTED FOR ORIGINAL PLANS PREPARED BY **ENGINEERING** ERIC T. PRICE E-39027 MADISON STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION Designer CORRE, INC. DELLA KOENIG, P.E. REGIONAL EXAMINER KYLE HEMP, P.E. 10/21/2024 Della Koenig, P.E. Е

FEDERAL PROJECT

WISC 2025307

CONTRACT

STATE PROJECT

5827-00-71

ELEVATIONS ARE BASED ON GEOID 18-WI.

END PROJECT STA 40+96

UTILITIES CONTACTS

ALLIANT ENERGY FLECTRICITY & GAS TYLER DONOVAN 338 E STATE STREET MAUSTON, WI 53948

PHONE: (608) 963-9585 EMAIL: TYLERDONOVAN@ALLIANTENERGY.COM MEDIACOM COMMUNICATIONS

CRAIG EGGERT 1501 DIVISION STREET DECORAH, IA 52101 PHONE: (563) 419-5160

EMAIL: CEGGERT@MEDIACOMCC.COM

LEMONWEIR VALLEY TELEPHONE / LYNXX NETWORKS COMMUNICATIONS BEN GRILLEY 127 U.S. HWY 12 / P.O. BOX 267 CAMP DOUGLAS, WI 54618

EMAIL: BEN.GRILLEY@GETLYNXX.COM

PHONE: (608) 427-4036

WISCONSIN DNR LIAISON

KAREN KALVELAGE CENTRAL REGION 3550 MORMON COULEE ROAD LA CROSSE, WI 54601 PHONE: (608) 785-9115 EMAIL: KAREN.KALVELAGE@WISCONSIN.GOV

COUNTY HIGHWAY COMMISSIONER

TRAVIS SCHULTZ JUNEAU COUNTY 930 E. STATE STREET MAUSTON, WI 53948 PHONE: (608) 847-9543 EMAIL: TSCHULTZ@CO.JUNEAU.WI.US WISDOT DESIGN PROJECT MANAGER

DELLA KOENIG, P.E. SOUTHWEST REGION 2101 WRIGHT STREET MADISON, WI 53704 PHONE: (608) 246-7963 EMAIL: DELLA.KOENIG@DOT.WI.GOV

DESIGN CONSULTANT

FRIC PRICE, P.F. CORRE,INC. 6510 GRAND TETON PLAZA, SUITE 314 MADISON, WI 53719 PHONE: 608-826-6146 EMAIL: EPRICE@CORREINC.COM

GENERAL NOTES

THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES BY CALLING DIGGER'S HOTLINE AND CONTACTING UTILITIES DIRECTLY AS NEEDED.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE. SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

PRIOR TO PLACING THE NEW BASE AGGREGATE DENSE COURSE OR PAVED SHOULDERS EXISTING UNCOMPACTED SHOULDER MATERIAL SHALL BE REMOVED OR DEPOSITED ON THE OUTER PORTION OF THE EXISTING SHOULDER OR AS DIRECTED BY THE ENGINEER.

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

PRIOR TO PLACEMENT OF BEAM GUARD THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AND PUBLIC TRAILS AT ALL TIMES.

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

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

TACK COAT CALCULATIONS ARE BASED ON AN APPLICATION RATE OF 0.07 GAL/SY.

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES TYPICAL SECTIONS CONSTRUCTION DETAILS

RUNOFF COEFFICIENT TABLE

					ŀ	HYDROLOGIC	SOIL G	ROUP						
		Α			В			С			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		
DOW CDODS:	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38		
ROW CROPS:	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56		
MEDIAN STRIPTURF:	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30		
WEDIAN STRIPTORF.	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40		
SIDE SLOPETURF:			.25			.27			.28			.30		
SIDE SLOPETORF.			.32			.34			.36			.38		
PAVEMENT:														
ASPHALT:	.7095													
CONCRETE:						.80	95							
BRICK:						.70	80							
DRIVES, WALKS:						.75	85							
ROOFS:	.7595													
GRAVEL ROADS, SHOULDERS:						.40	60							

TOTAL PROJECT AREA = 1.276 ACRES TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.317 ACRES Dial [31] or (800)242-8511 www.DiggersHotline.com

GENERAL NOTES

SHEET

C:\OD\CORRE, INC\PROJECTS - WI-SW REGION\5827-00-01_CTH H_JUNEAU COUNTY\500_CADD\501_C3D_2022\58270001\SHEETS\020101-GN.DWG FILE NAME :

10/24/2024 3:37 PM

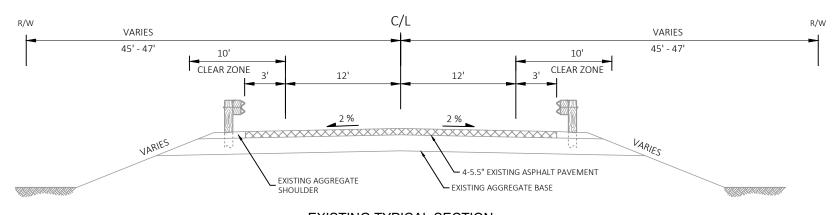
COUNTY: JUNEAU

PLOT BY: MATT KOSKI PLOT NAME :

PROJECT NO:

HWY: CTH H

5827-00-71



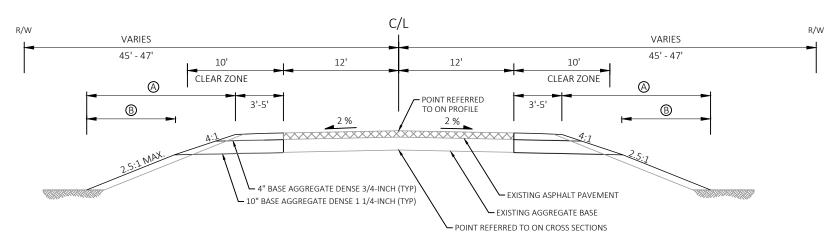
EXISTING TYPICAL SECTION STA 36+71 - 39+41.8

STA 40+68.3 - 42+73

LEGEND

FERTILIZER TYPE A, SEEDING MIXTURE NO. 20 & SEEDING TEMPORARY

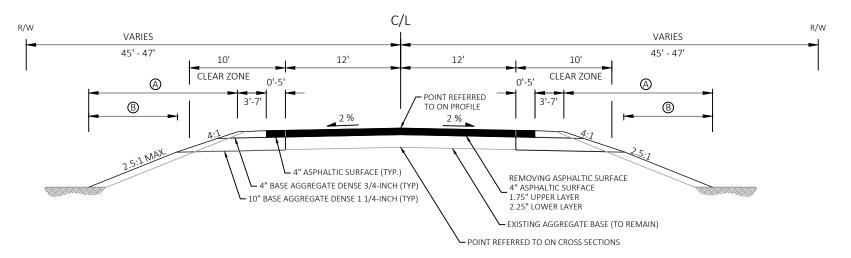
B SALVAGED TOPSOIL & EROSION MAT URBAN CLASS I TYPE B



FINISHED TYPICAL SECTION - SHOULDER WIDENING

STA 36+71 - 37+35 STA 42+62 - 42+73

HWY: CTH H PROJECT NO: 5827-00-71 COUNTY: JUNEAU TYPICAL SECTIONS SHEET 10/24/2024 3:37 PM PLOT BY: MATT KOSKI



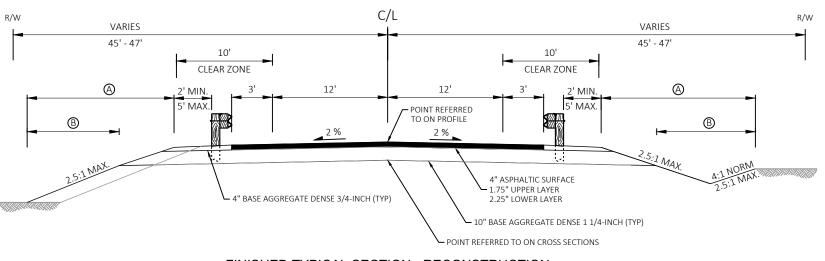
LEGEND

FERTILIZER TYPE A, SEEDING MIXTURE NO. 20 & SEEDING TEMPORARY

B SALVAGED TOPSOIL & EROSION MAT URBAN CLASS I TYPE B

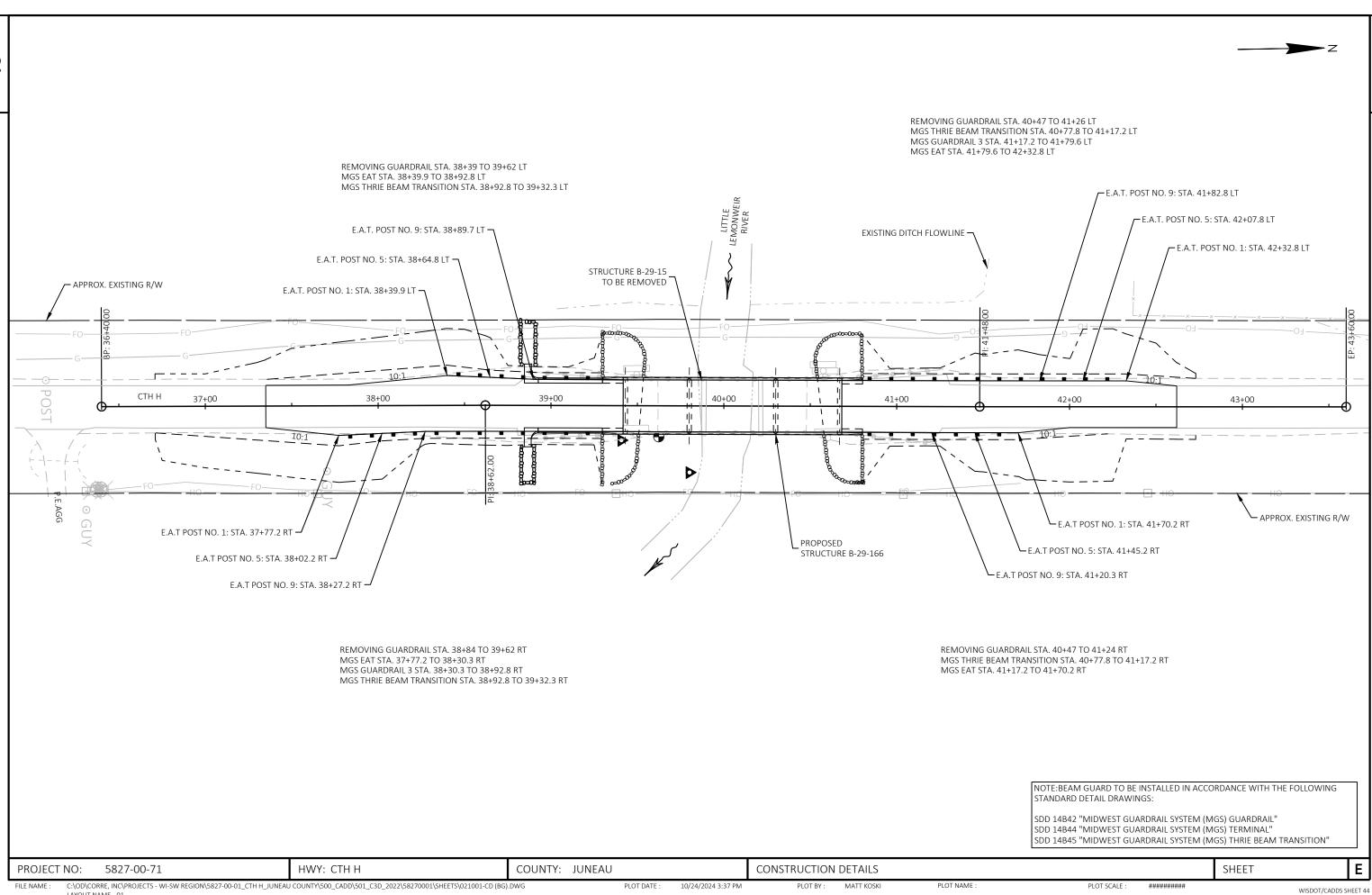
FINISHED TYPICAL SECTION - PAVEMENT REPLACEMENT

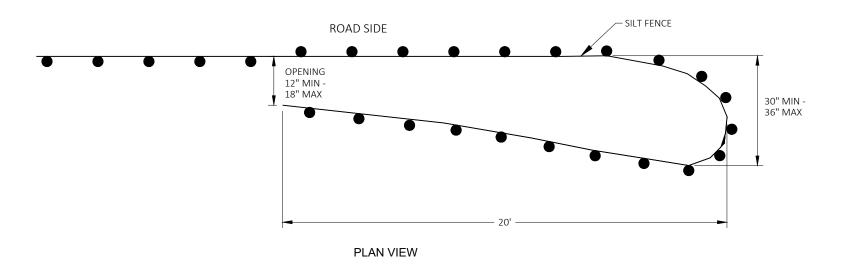
STA 37+35 - 39+10 STA 40+96 - 42+62



FINISHED TYPICAL SECTION - RECONSTRUCTION

STA 39+10 - 39+41.8 STA 40+68.3 - 40+96



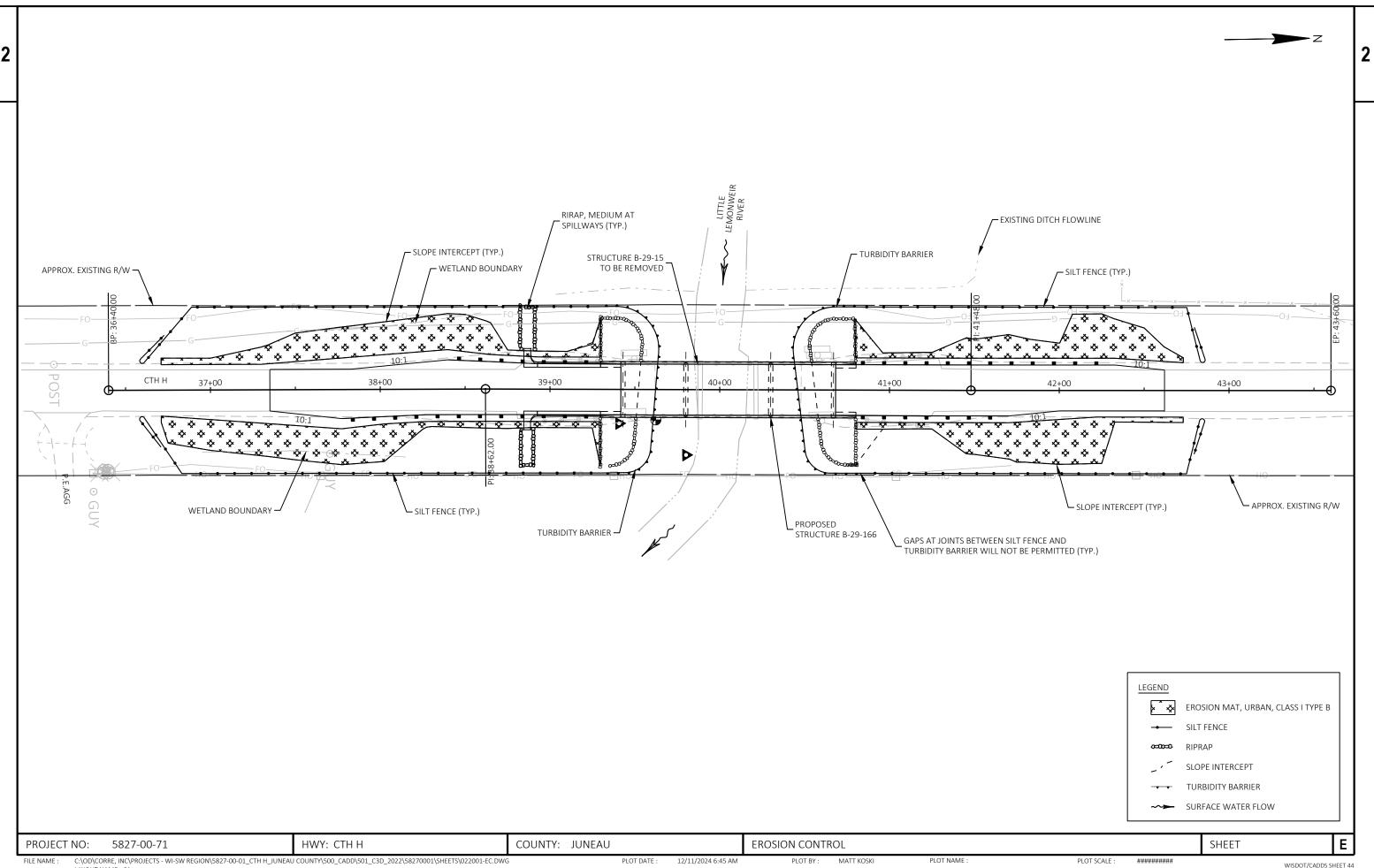


TEMPORARY SMALL ANIMAL TURN-AROUND

GENERAL NOTES:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

CONSTRUCTION DETAILS Ε PROJECT NO: 5827-00-71 HWY: CTH H COUNTY: JUNEAU SHEET

10/24/2024 3:38 PM



WISDOT/CADDS SHEET 44

3

5827-00-71

					5827-00-71	
Line	Item	Item Description	Unit	Total	Qty	
0002	203.0270	Removing Structure Over Waterway Debris Capture (structure) 01. B-29-15	EACH	1.000	1.000	
0004	204.0165	Removing Guardrail	LF	155.000	155.000	
006	205.0100	Excavation Common	CY	375.000	375.000	
800	206.1001	Excavation for Structures Bridges (structure) 01. B-29-166	EACH	1.000	1.000	
010	208.0100	Borrow	CY	280.000	280.000	
012	210.1500	Backfill Structure Type A	TON	230.000	230.000	
014	213.0100	Finishing Roadway (project) 01. 5827-00-71	EACH	1.000	1.000	
016	305.0110	Base Aggregate Dense 3/4-Inch	TON	130.000	130.000	
)18	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	430.000	430.000	
020	415.0060	Concrete Pavement 6-Inch	SY	6.000	6.000	
022	416.0610	Drilled Tie Bars	EACH	20.000	20.000	
)24	455.0605	Tack Coat	GAL	86.000	86.000	
026	465.0105	Asphaltic Surface	TON	275.000	275.000	
028	502.0100	Concrete Masonry Bridges	CY	443.000	443.000	
030	502.3200	Protective Surface Treatment	SY	422.000	422.000	
032	502.3210	Pigmented Surface Sealer	SY	144.000	144.000	
034	505.0400	Bar Steel Reinforcement HS Structures	LB	8,150.000	8,150.000	
036	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	65,560.000	65,560.000	
)38	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000	
040	550.2126	Piling CIP Concrete 12 3/4 X 0.375-Inch	LF	1,145.000	1,145.000	
42	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	76.000	76.000	
)44	602.3010	Concrete Surface Drains	CY	5.000	5.000	
44	606.0200	Riprap Medium		26.000	26.000	
		Riprap Heavy	CY			
)48	606.0300		CY	260.000	260.000	
50	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000	
)52	614.2300	MGS Guardrail 3	LF	125.000	125.000	
54	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600	
56	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000	
58	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5827-00-71	EACH	1.000	1.000	
60	619.1000	Mobilization	EACH	1.000	1.000	
62	624.0100	Water	MGAL	12.000	12.000	
64	625.0500	Salvaged Topsoil	SY	1,010.000	1,010.000	
066	628.1504	Silt Fence	LF	1,500.000	1,500.000	
68	628.1520	Silt Fence Maintenance	LF	1,500.000	1,500.000	
70	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000	
72	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000	
74	628.2008	Erosion Mat Urban Class I Type B	SY	1,270.000	1,270.000	
76	628.6005	Turbidity Barriers	SY	185.000	185.000	
78	629.0205	Fertilizer Type A	CWT	1.300	1.300	
80	630.0120	Seeding Mixture No. 20	LB	84.000	84.000	
82	630.0200	Seeding Temporary	LB	50.000	50.000	
84	630.0500	Seed Water	MGAL	23.000	23.000	
86	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000	
88	637.2230	Signs Type II Reflective F	SF	12.000	12.000	
90	638.2102	Moving Signs Type II	EACH	1.000	1.000	
)92	638.2602	Removing Signs Type II	EACH	4.000	4.000	
094	638.3000	Removing Small Sign Supports	EACH	4.000	4.000	
096	638.4000	Moving Small Sign Supports	EACH	1.000	1.000	
098	642.5001	Field Office Type B	EACH	1.000	1.000	

Page

Estimate Of Quantities

5827-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	643.0420	Traffic Control Barricades Type III	DAY	920.000	920.000
0102	643.0705	Traffic Control Warning Lights Type A	DAY	1,840.000	1,840.000
0104	643.0900	Traffic Control Signs	DAY	460.000	460.000
0106	643.5000	Traffic Control	EACH	1.000	1.000
0108	645.0111	Geotextile Type DF Schedule A	SY	64.000	64.000
0110	645.0120	Geotextile Type HR	SY	510.000	510.000
0112	650.4500	Construction Staking Subgrade	LF	455.000	455.000
0114	650.5000	Construction Staking Base	LF	455.000	455.000
0116	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	90.000	90.000
0118	650.6501	Construction Staking Structure Layout (structure) 01. B-29-166	EACH	1.000	1.000
0120	650.7000	Construction Staking Concrete Pavement	LF	24.000	24.000
0122	650.9911	Construction Staking Supplemental Control (project) 01. 5827-00-71	EACH	1.000	1.000
0124	650.9920	Construction Staking Slope Stakes	LF	455.000	455.000
0126	690.0150	Sawing Asphalt	LF	50.000	50.000
0128	715.0502	Incentive Strength Concrete Structures	DOL	2,658.000	2,658.000
0130	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 40+05	EACH	1.000	1.000
0132	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,000.000	1,000.000
0134	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,260.000	1,260.000

REMOVALS

					204.0165 REMOVING	690.0150
					GUARDRAIL	SAWING ASPHALT
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF
0010	38+84	-	39+62	LT & RT	78	-
0010	40+48	-	41+25	LT & RT	77	-
0010			37+35	CL	-	25
0010			42+62	CL	-	25
				TOTAL 0010	155	50
	0010 0010 0010	0010 38+84 0010 40+48 0010	0010 38+84 - 0010 40+48 - 0010	0010 38+84 - 39+62 0010 40+48 - 41+25 0010 37+35	0010 38+84 - 39+62 LT & RT 0010 40+48 - 41+25 LT & RT 0010 37+35 CL 0010 42+62 CL	REMOVING GUARDRAIL LOCATION LOCATION LF

EARTHWORK

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (CY)	SALVAGED/UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL	UNEXPANDED FILL	EXPANDED FILL FACTOR 1.25	MASS ORDINATE +/-	WASTE	208.0100 BORROW (CY)	COMMENT
CTH H SOUTH APPROACH	36+71/39+42	CTH H	204	103	101	260	325	-224	0	224	
CTH H NORTH APPROACH	40+68 / 42+73	CTH H	171	98	73	103	129	-56	0	56	
	TOTAL CO	MMON EXC	375	201	174	363	454	-280	0	280	

BASE AGGREGATE <u>ASPHALT</u>

		305.0110 BASE AGGREGATE DENSE 3/4-INCH	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	624.0100 WATER
CATEGORY	LOCATION	TON	TON	MGAL
0010	SOUTH APPROACH	80	260	7
0010	NORTH APPROACH	50	170	5
	TOTAL 0010	130	430	12

CURB & GUTTER GUARDRAIL

					415.0060	416.0610	601.0588	602.3010						614.2300	614.2500	614.2610
					CONCRETE PAVEMENT	DRILLED TIE	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH	CONCRETE	_CATEGORY_	STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH
					6-INCH	BARS	TYPE TBT	SURFACE DRAINS								
CATEGORY	STATION	TO	STATION	LOCATION	SY	EACH	LF	CY	0010	37+77	-	39+32	RT	62.5	39.4	1
									0010	38+40	-	39+32	LT	-	39.4	1
0010	38+92	-	39+30	LT & RT	-	-	76	5	0010	40+78	-	41+70	RT	-	39.4	1
0010	39+30	-	39+42	LT & RT	6	20	-	-	0010	40+78	-	42+33	LT	62.5	39.4	1
				TOTAL 0010	6	20	76	5					TOTAL 0010	125	157.6	4

SHEET Ε PROJECT NO: 5827-00-71 HWY: CTH H COUNTY: JUNEAU MISCELLANEOUS QUANTITIES

LANDSCAPING & EROSION CONTROL

0.770000		606.0200 RIPRAP MEDIUM	625.0500 SALVAGED TOPSOIL	628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.1905 MOBILIZATIONS EROSION CONTROL	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	628.2008 EROSION MAT URBAN CLASS I TYPE B	628.6005 TURBIDITY BARRIERS	629.0205 FERTILIZER TYPE A	630.0120 SEEDING MIXTURE NO. 20	630.0200 SEEDING TEMPORARY	630.0500 SEED WATER	645.0120 GEOTEXTILE TYPE HR
CATEGORY	LOCATION	СҮ	SY	LF	LF	EACH	EACH	SY	SY	CWT	LB	LB	MGAL	SY
0010 0010	ENTIRE PROJECT UNDISTRIBUTED	21 5	1,010 -	1,200 300	1,200 300	5 -	3 -	1,010 260	185 -	1.0 0.3	67 17	40 10	23	75 20
	TOTAL 0010	26	1,010	1,500	1,500	5	3	1,270	185	1.3	84	50	23	95

SIGNING

CATEGORY	LOCATION	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	SE QUADRANT	1	3.0		1	1		INSTALL NEW BRIDGE MARKER SIGNS
0010	SW QUADRANT	1	3.0	-	1	1	-	(W5-52L & W5-52R) ACCORDING TO S.D.D.
0010	NE QUADRANT	1	3.0	_	1	1	_	"SIGNING AND MARKING FOR TWO LANE
0010	NW QUADRANT	1	3.0	1	1	1	1	BRIDGES". MOVE EXISTING RIVER NAME SIGN.
	TOTAL 0010	4	12	1	4	4	1	

TRAFFIC CONTROL

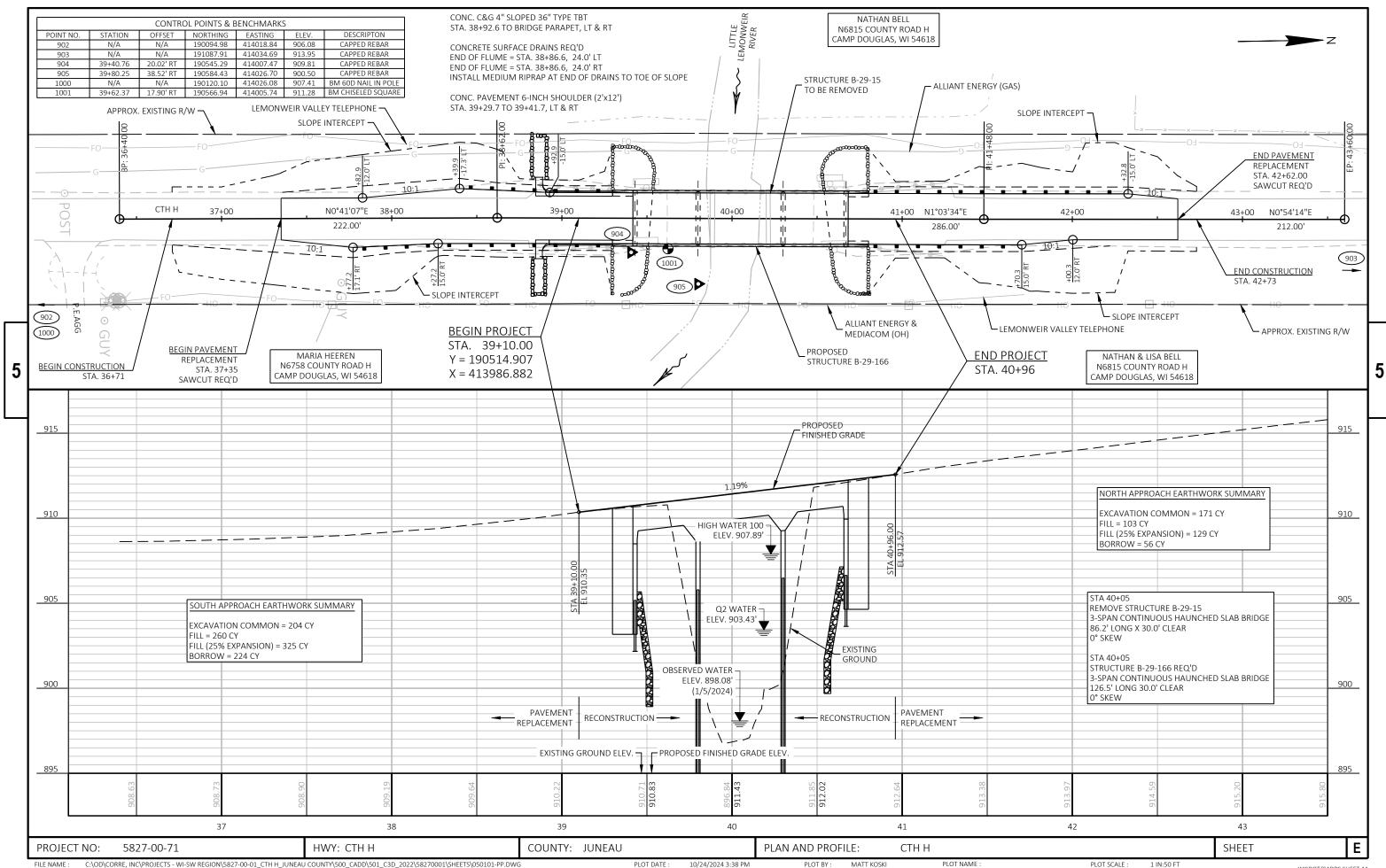
OO10 ENTIRE PROJECT 920 1,840 460 1	CATEGORY	LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC CONTROL EACH
TOTAL 0010 920 1.840 460 1		ENTIRE PROJECT	920	1,840	460	1

CONSTRUCTION STAKING

		650.4500	650.5000	650.5500	650.7000	650.9911.01	650.9920
CATEGORY	LOCATION	CONSTRUCTION STAKING SUBGRADE LE	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	CONSTRUCTION STAKING CONCRETE PAVEMENT LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (5827-00-71) EACH	CONSTRUCTION STAKING SLOPE STAKES LF
CATEGORI	LOCATION	LF	LF	LF	LF	ЕАСП	LF
0010	ENTIRE PROJECT	455	455	90	24	1	455
	TOTAL 0010	455	455	90	24	1	455

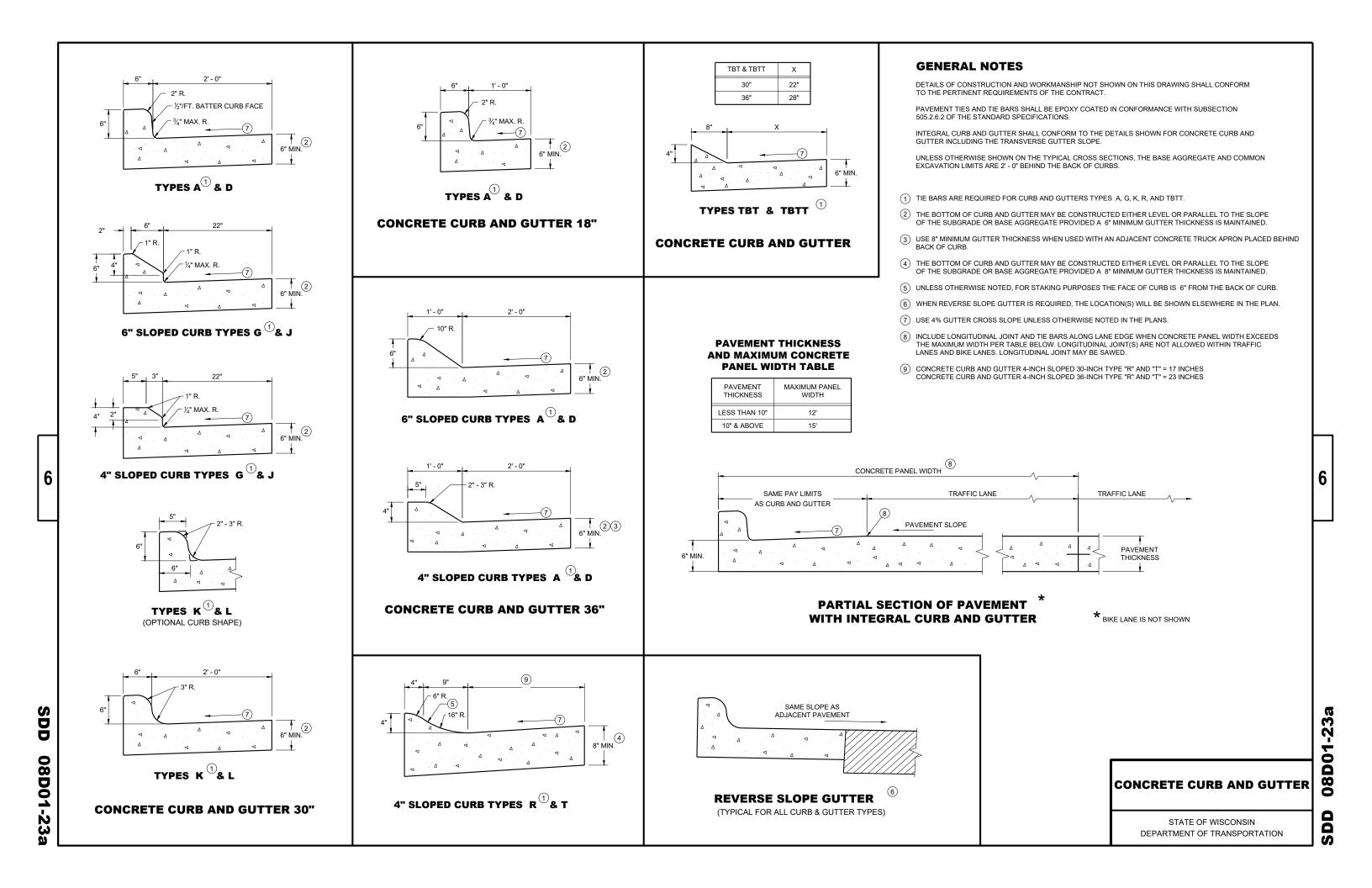
SHEET Ε PROJECT NO: 5827-00-71 HWY: CTH H COUNTY: JUNEAU MISCELLANEOUS QUANTITIES

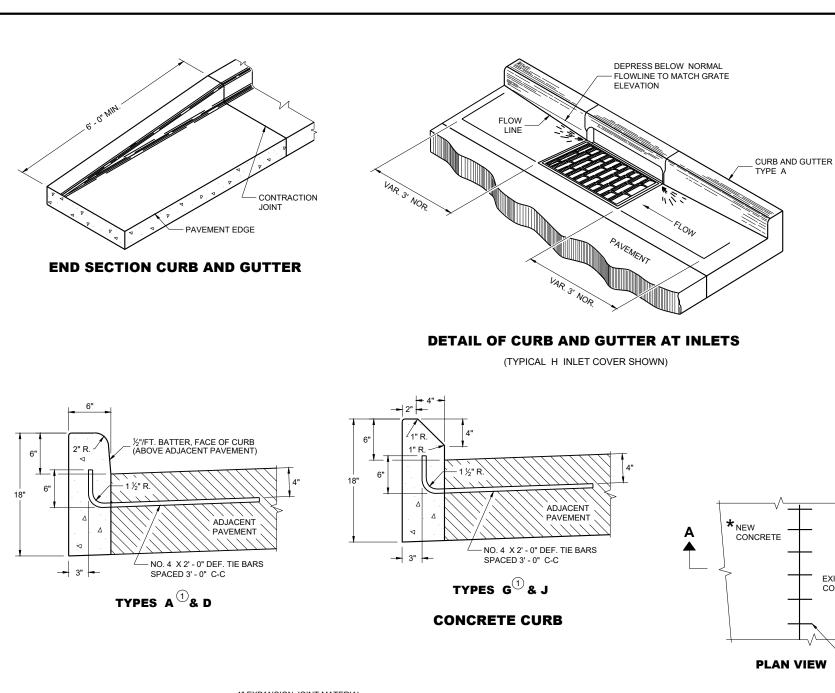
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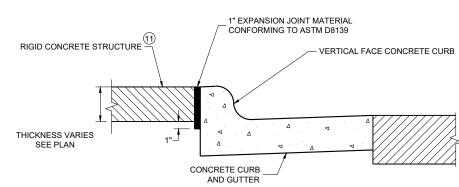


Standard Detail Drawing List

08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES







EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE 119

CONCRETE **EXISTING** CONCRETE * NEW CURB AND GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE. **PLAN VIEW** NO. 6 TIE BARS SPACED 2' - 6" C-C, INSTALLED PERPENDICULAR TO THE CONCRETE MAXIMUM DRILL HOLE SIZE IS 1/8" GREATER THAN TIE BAR DIAMETER 1/2 THICKNESS OF_ NEW CONCRETE **EXISTING**

TIE BARS DRILLED INTO EXISTING PAVEMENT

SECTION A - A

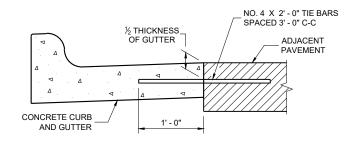
GENERAL NOTES

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

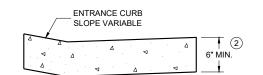
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- 1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- (2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- 10 REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- (1) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION



DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

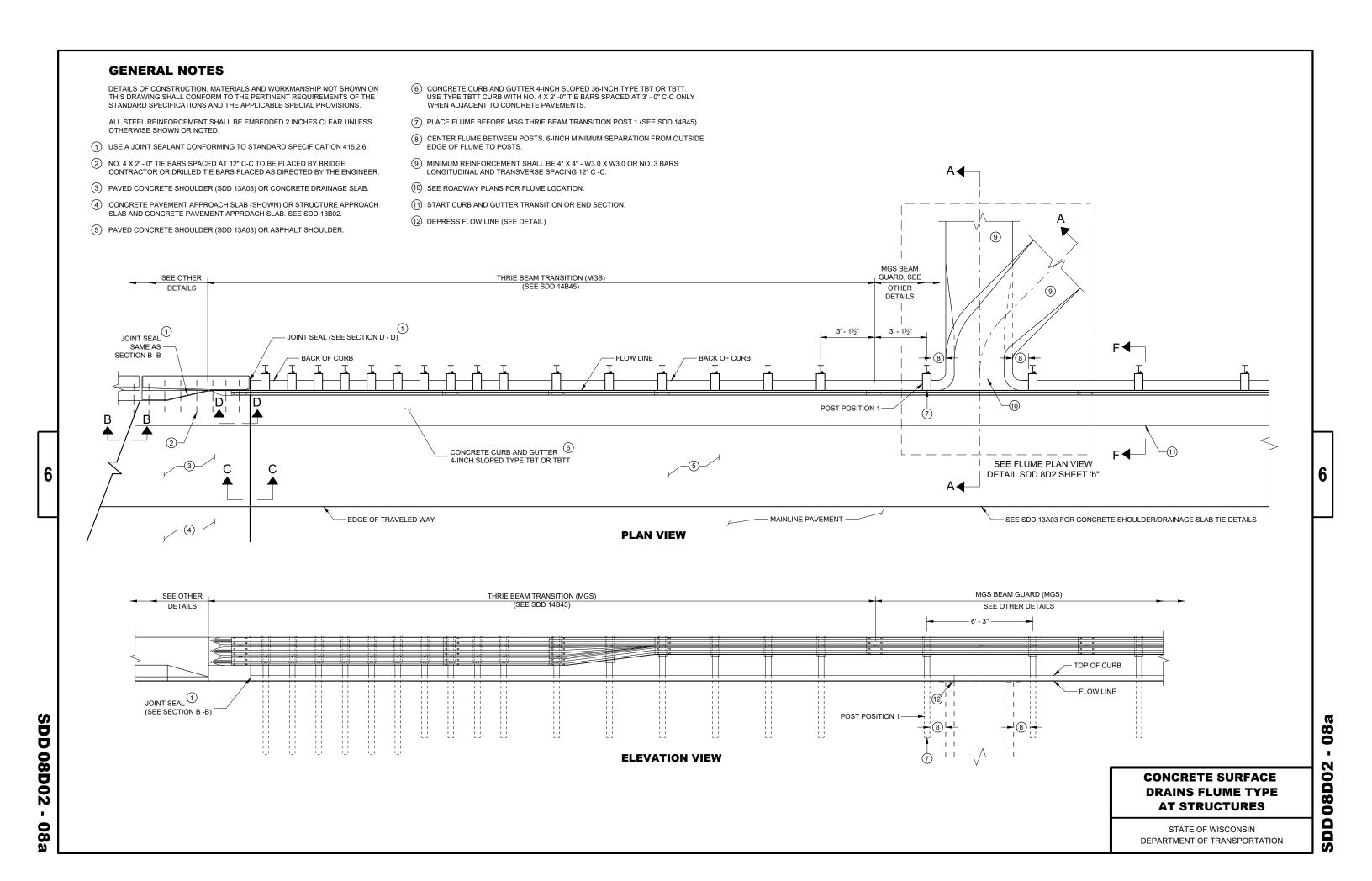
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

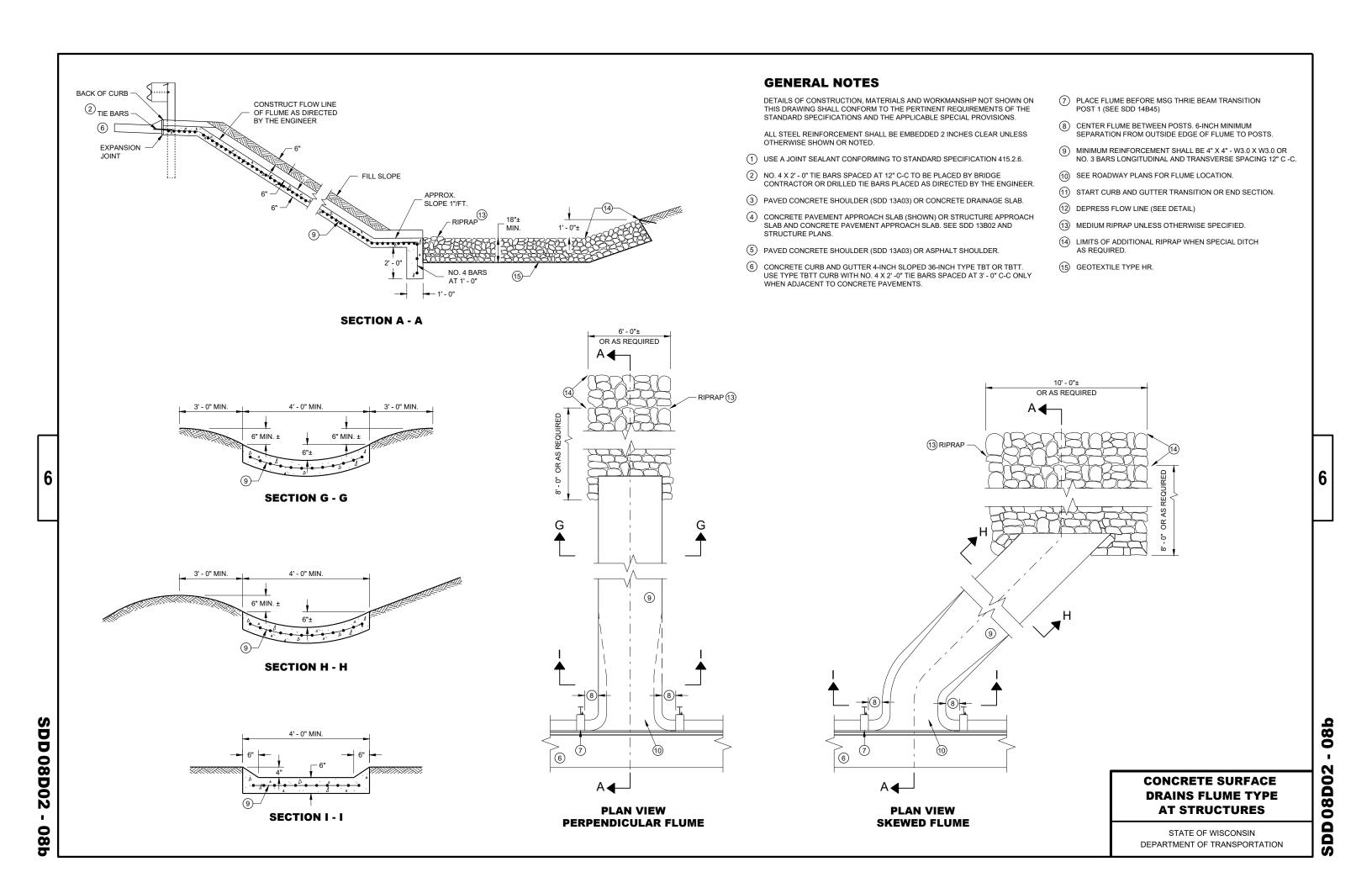
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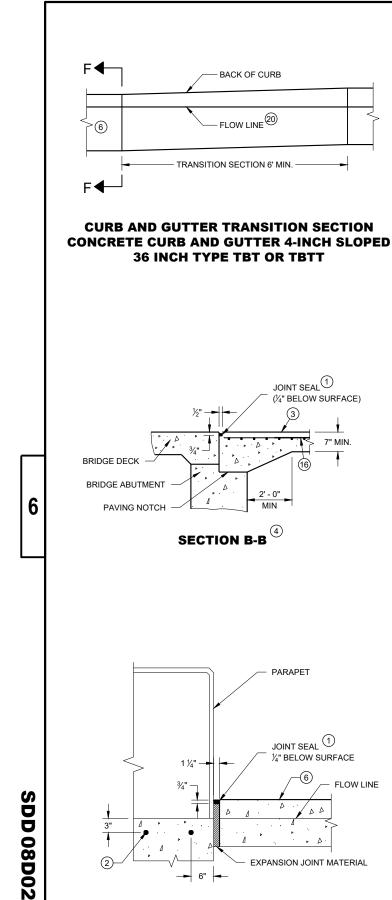
May 2023
DATE
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

SDD 08D01-23b

08D01-2

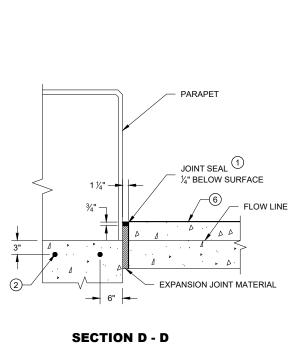






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SECTION B-B

BACK OF CURB

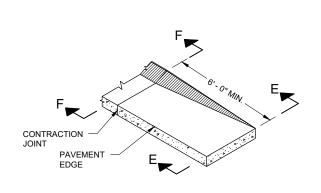
FLOW LINE

JOINT SEAL 1

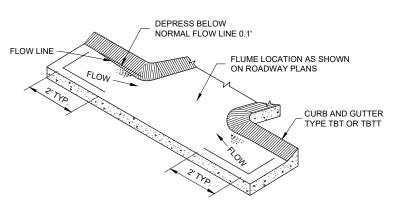
(1/4" BELOW SURFACE)

7" MIN.

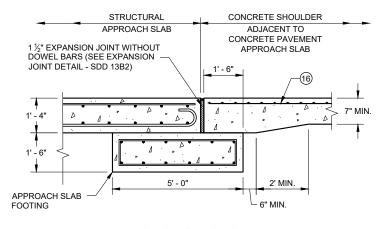
TRANSITION SECTION 6' MIN.



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



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

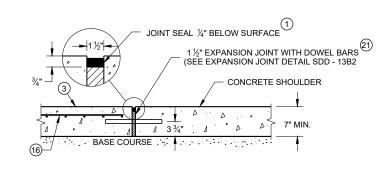


SECTION C - C JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB

FINISHED

SHOULDER

6" MIN



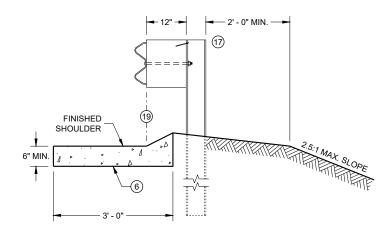
SECTION C - C JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS

GENERAL NOTES

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

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS

- (1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- (2) NO. 4 X 2' 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- (3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- (4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- (5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- (6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- 7 PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- 8 CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- 9 MINIMUM REINFORCEMENT SHALL BE 4" X 4" W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
- (10) SEE ROADWAY PLANS FOR FLUME LOCATION.
- (11) START CURB AND GUTTER TRANSITION OR END SECTION.
- (12) DEPRESS FLOW LINE (SEE DETAIL)
- (13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- (14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- (15) GEOTEXTILE TYPE HR.
- (16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- (7) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- (18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- (19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- 20 MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- (21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED May 2023 DATE /S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER

SECTION E - E

2' - 0" MIN. —

TYPICAL APPLICATION OF SILT FENCE

6

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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.

- \bigcirc 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 11/8" X 11/8" OF OAK OR HICKORY.
- 4) SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- (5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK

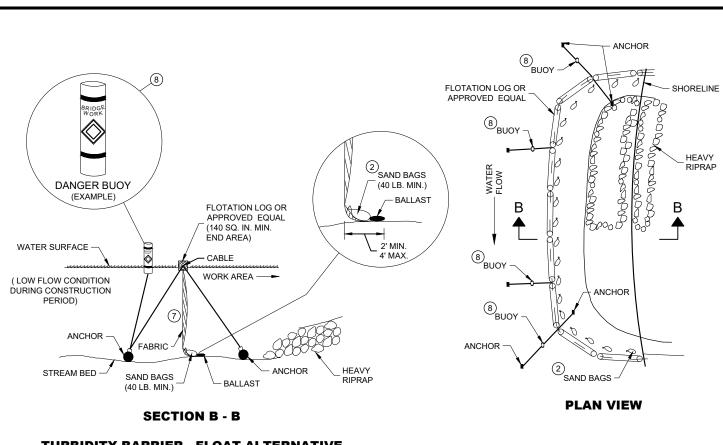
(WHEN REQUIRED BY THE ENGINEER)



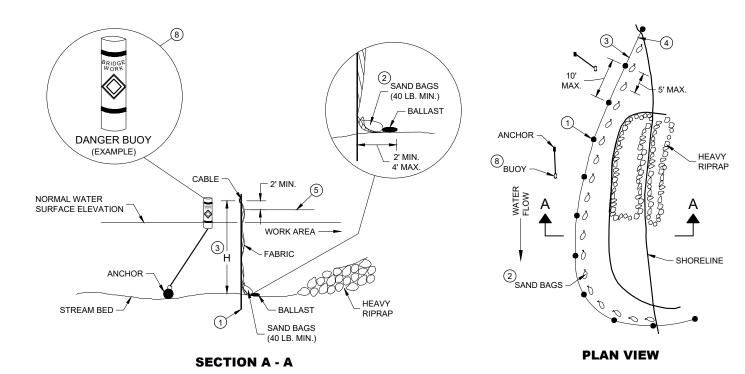
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TURBIDITY BARRIER - FLOAT ALTERNATIVE CAUTION - SEE NOTE 6



TURBIDITY BARRIER - STANDARD POST INSTALLATION

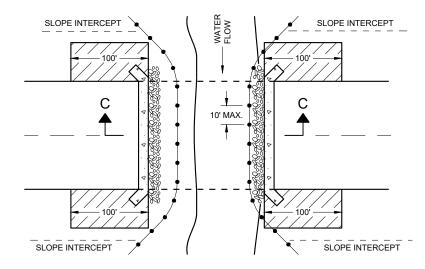
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

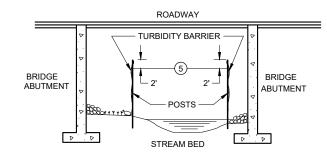
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ∞

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





TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

GENERAL NOTES

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

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

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



SPREAD OPEN SO THE TOP OF LUG IS 11/4" WIDE

SECTION A-A

ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/IO /S/ Scot Becker

DATE CHIEF STRUCTURAL DEVELOPMENT ENGINEER

.D.D. 12 A

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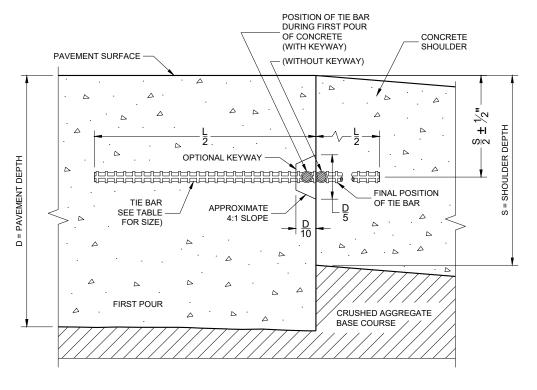
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE

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



SECTION A - A LONGITUDINAL CONSTRUCTION JOINT

1' - 0" DOWEL BARS 12" C -C DOWEL BARS 12" C -C (SEE DOWEL BAR TABLE) SHOULDER WIDTH TIE BAR (SEE TIE BAR TABLE TIE BAR SPACING FOR SIZE) (SEE TABLE) LONGITUDINAL JOINT → 15" MIN. →

- JOINT SPACING (SEE TABLE) -

PLAN VIEW CONCRETE PAVEMENT SHOULDER

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
<10 ½"	NO. 4	30"	36"
>10 ½"	NO. 5	36"	36"
> 10 /2	NO. 4*	30"	_{24"} * *

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

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

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

	PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
ſ	6", 6 ½"	NONE	12"
ſ	7", 7 ½"	1"	14"
ſ	8" & ABOVE	1 1/4"	15"

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

CONCRETE PAVEMENT SHOULDERS

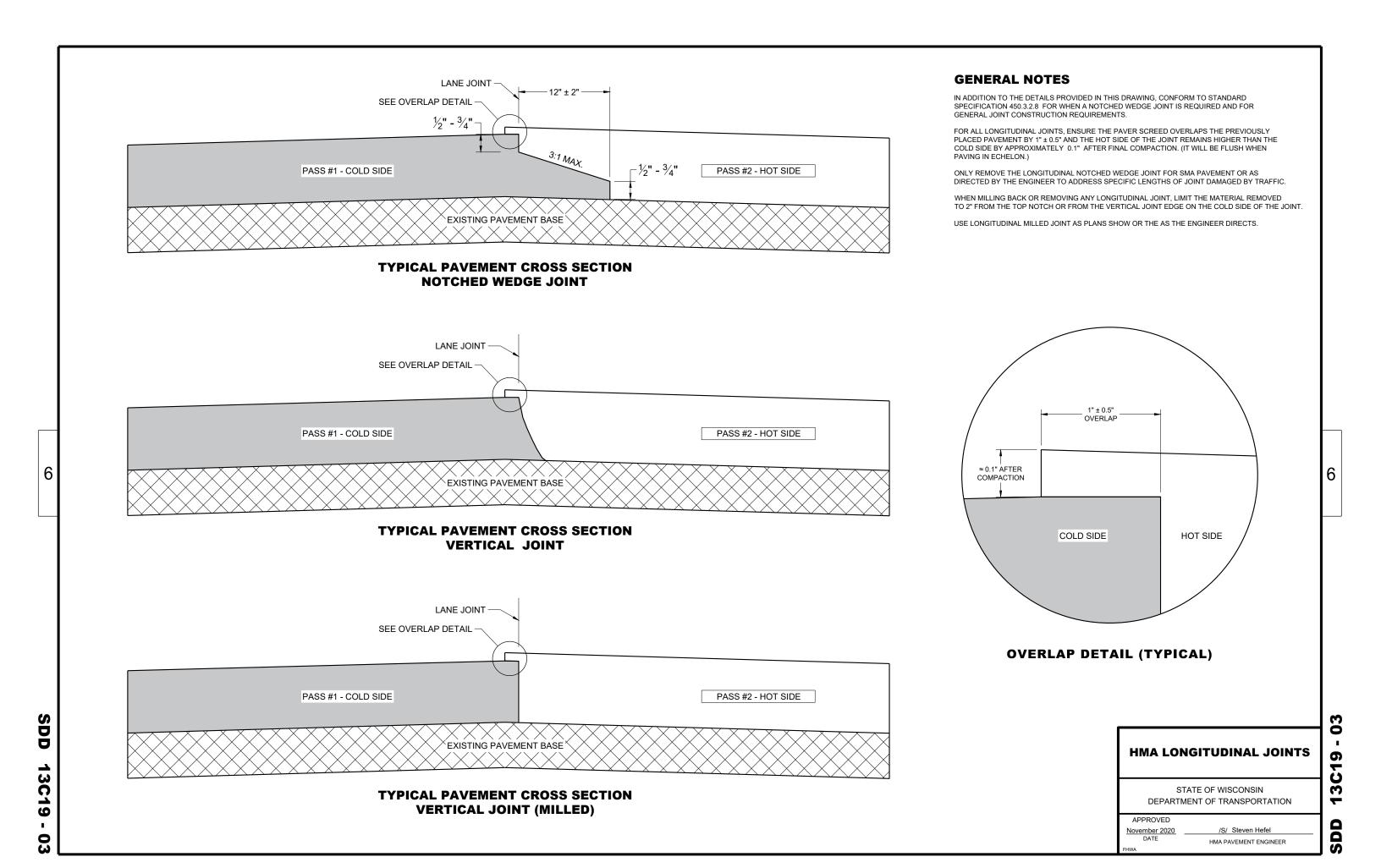
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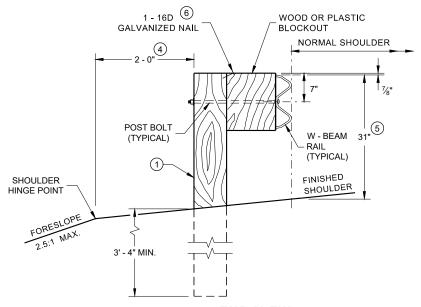
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

November 2022 DATE /S/ Peter Kemp PAVEMENT SUPERVISOR

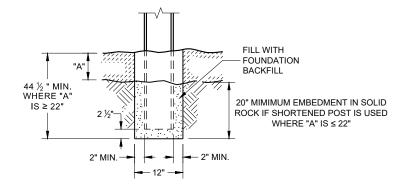
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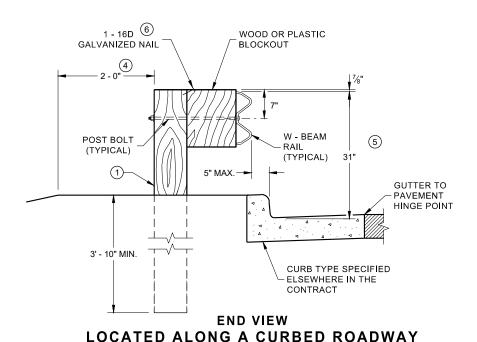
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- (3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES 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).
- $\fill \ensuremath{\texttt{5}}$ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS \$\pm1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 % " 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.
- \bigcirc TOTAL POST LENGTH FOR TYPE K IS 7' 0". TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' 0".

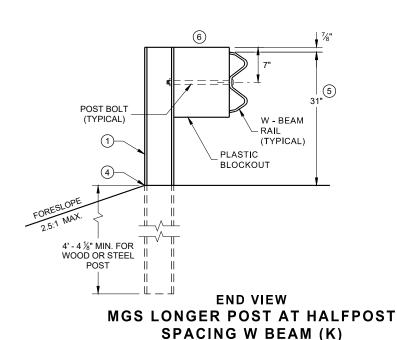


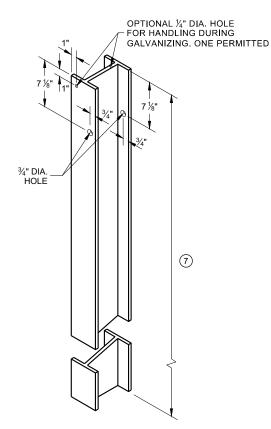
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



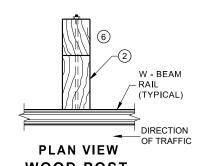
SETTING STEEL OR WOOD POST IN ROCK



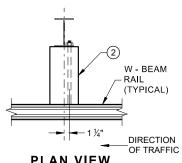




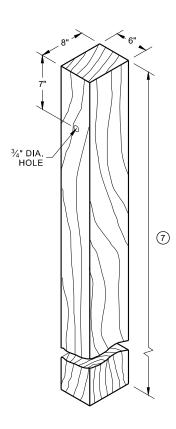
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



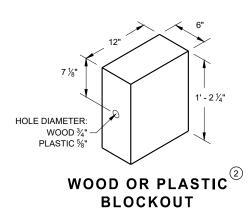
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



WOOD POST (6" X 8") NOMINAL



MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

3' 1½" C -C 3' 1½" C - C POST SPACING POST SPACING

6' 3" C - C

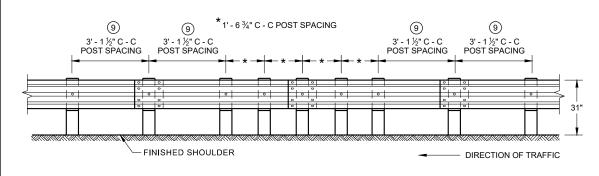
POST SPACING

DIRECTION OF TRAFFIC

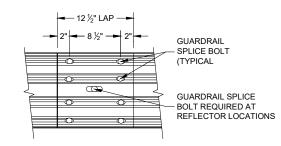
6' - 3" C -C

POST SPACING

FINISHED SHOULDER



FRONT VIEW
QUARTER POST SPACING (QS)



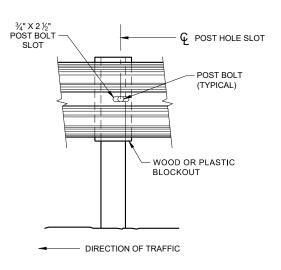
FRONT VIEW
MID-SPAN BEAM SPLICE

GENERAL NOTES

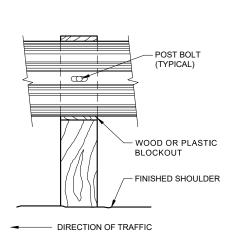
- 8 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- (9) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

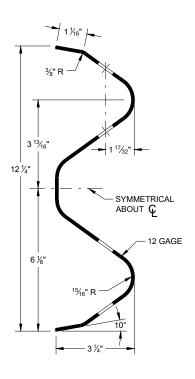
GUARD RAIL SPLICE BOLTS ARE A %" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES %" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



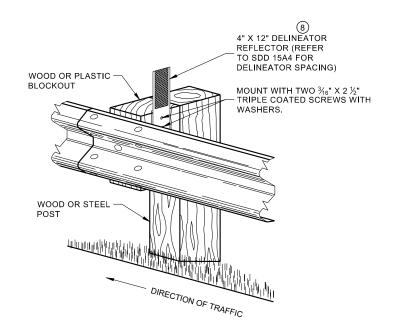
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

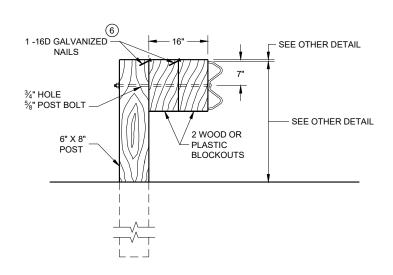
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

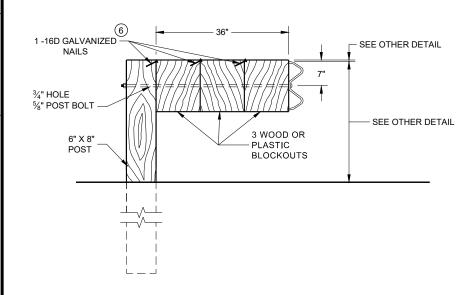
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DETAIL FOR 16" BLOCKOUT DEPTH

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.



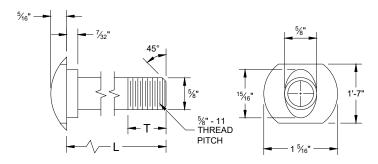
DETAIL FOR 36" BLOCKOUT DEPTH

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

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

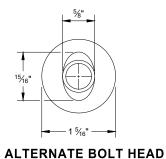
NOTE:

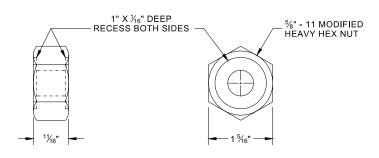
- 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
- 2. IF THE BOLT EXTENDS MORE THAN $\mbox{\ensuremath{\mbox{\sc M}}}\mbox{\sc "}\mbox{\sc FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.}$



POST BOLT TABLE

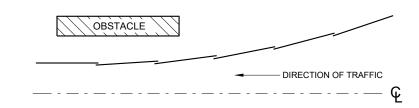
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



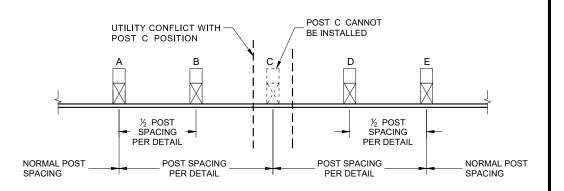


POST BOLT, SPLICE BOLT **AND RECESS NUT**

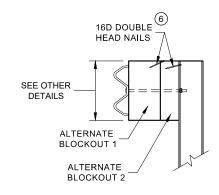
WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D (6) GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

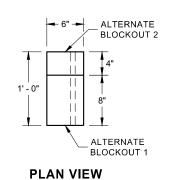


PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION





SIDE VIEW

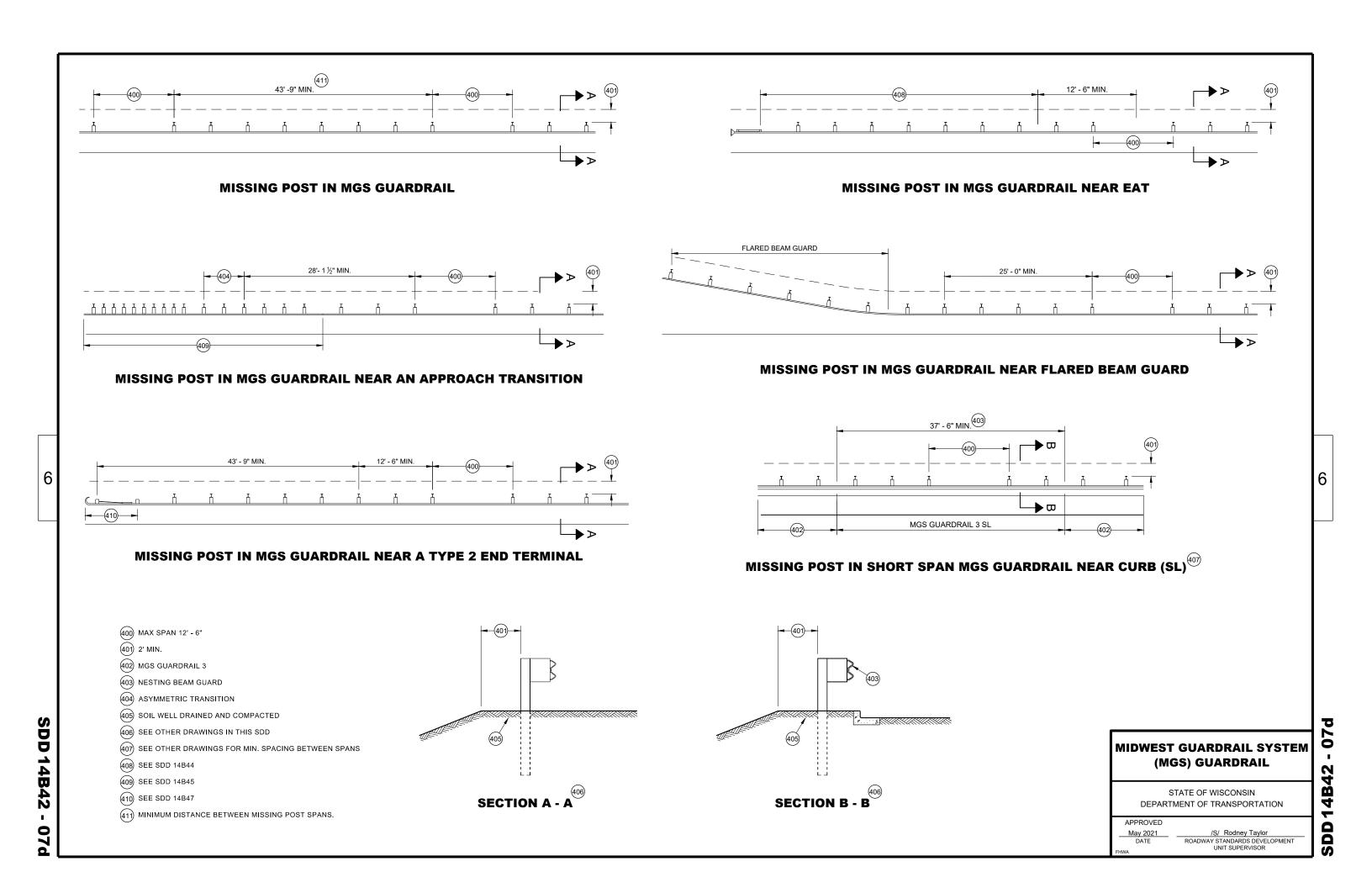
ALTERNATE WOOD BLOCKOUT DETAIL

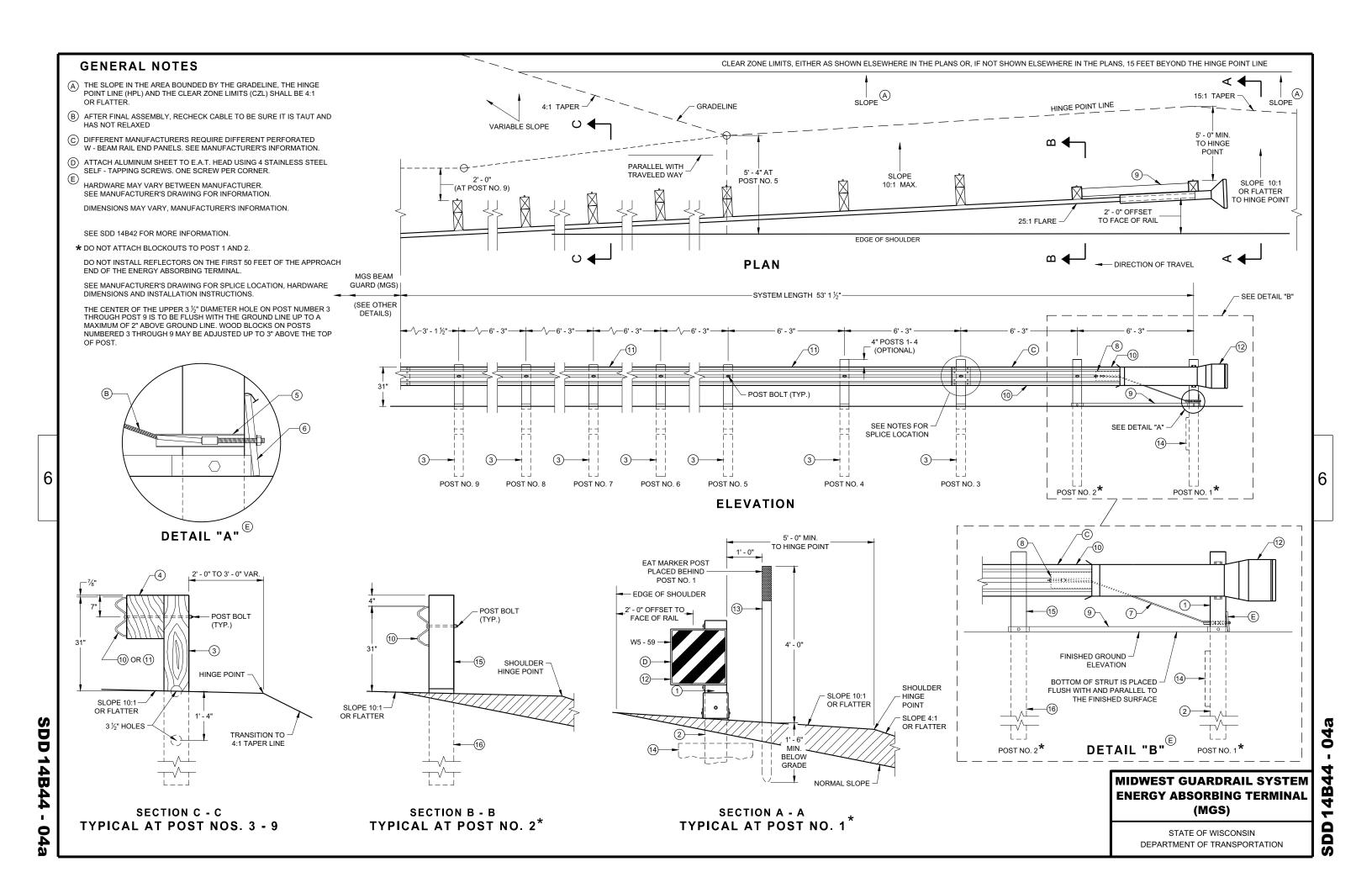
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

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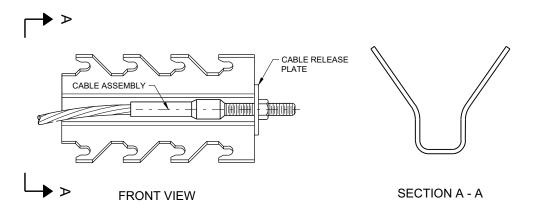
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

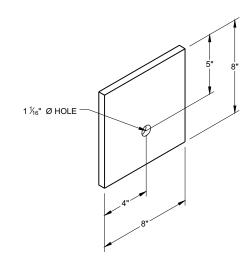




GENERIC GROUND STRUT



GENERIC ANCHOR CABLE BOX ^{(9) (E)}



BEARING PLATE

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

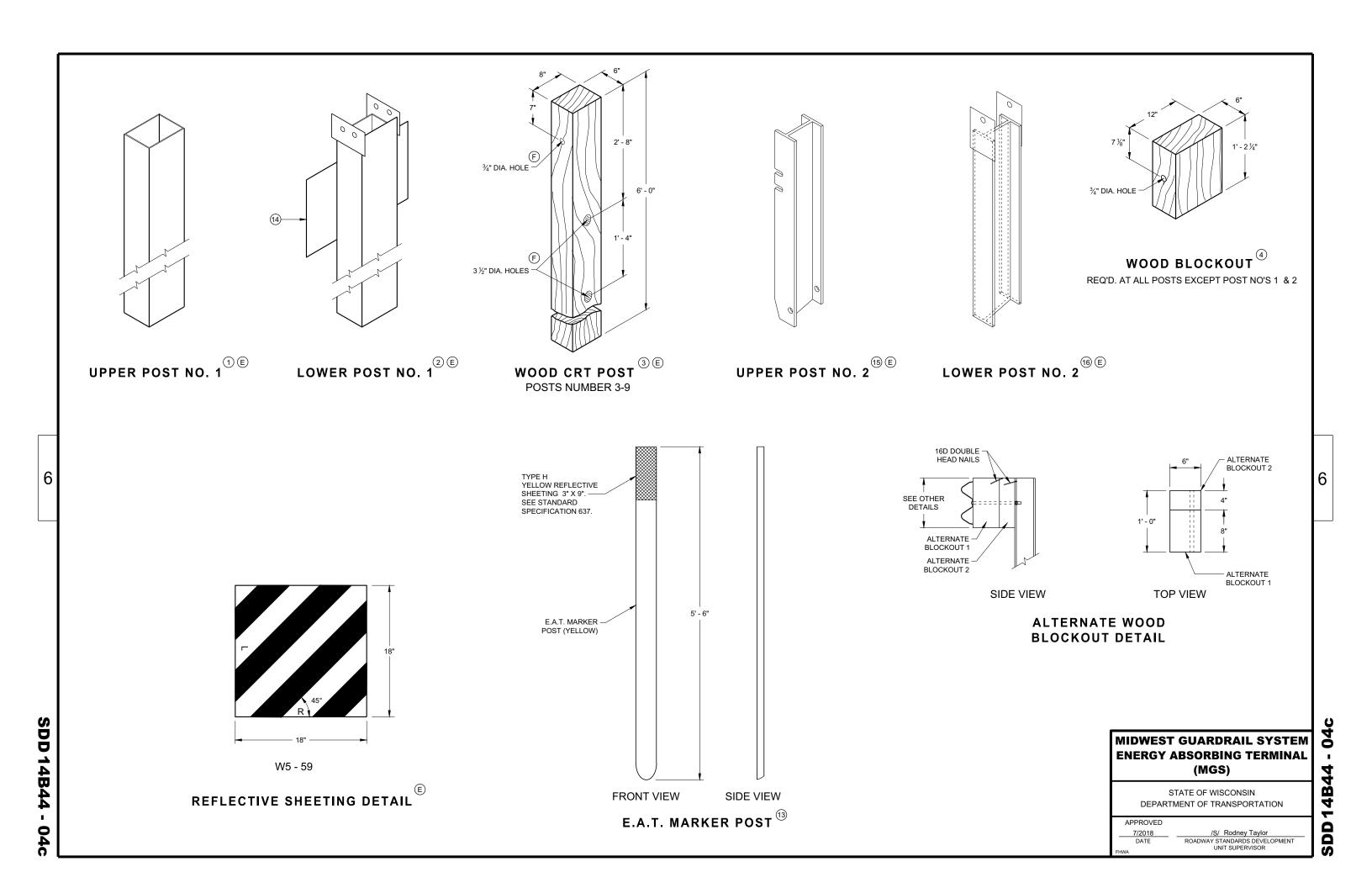
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

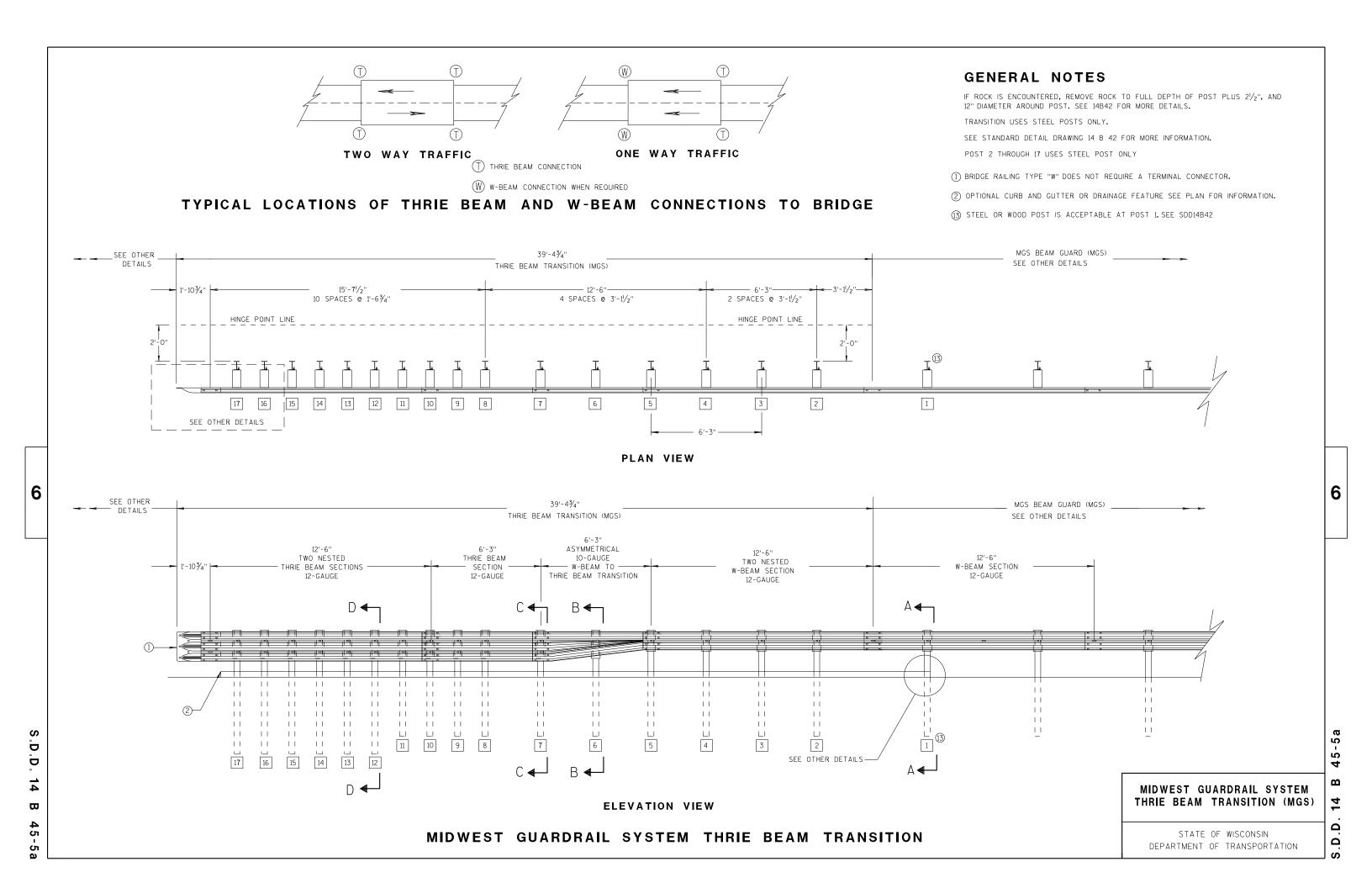
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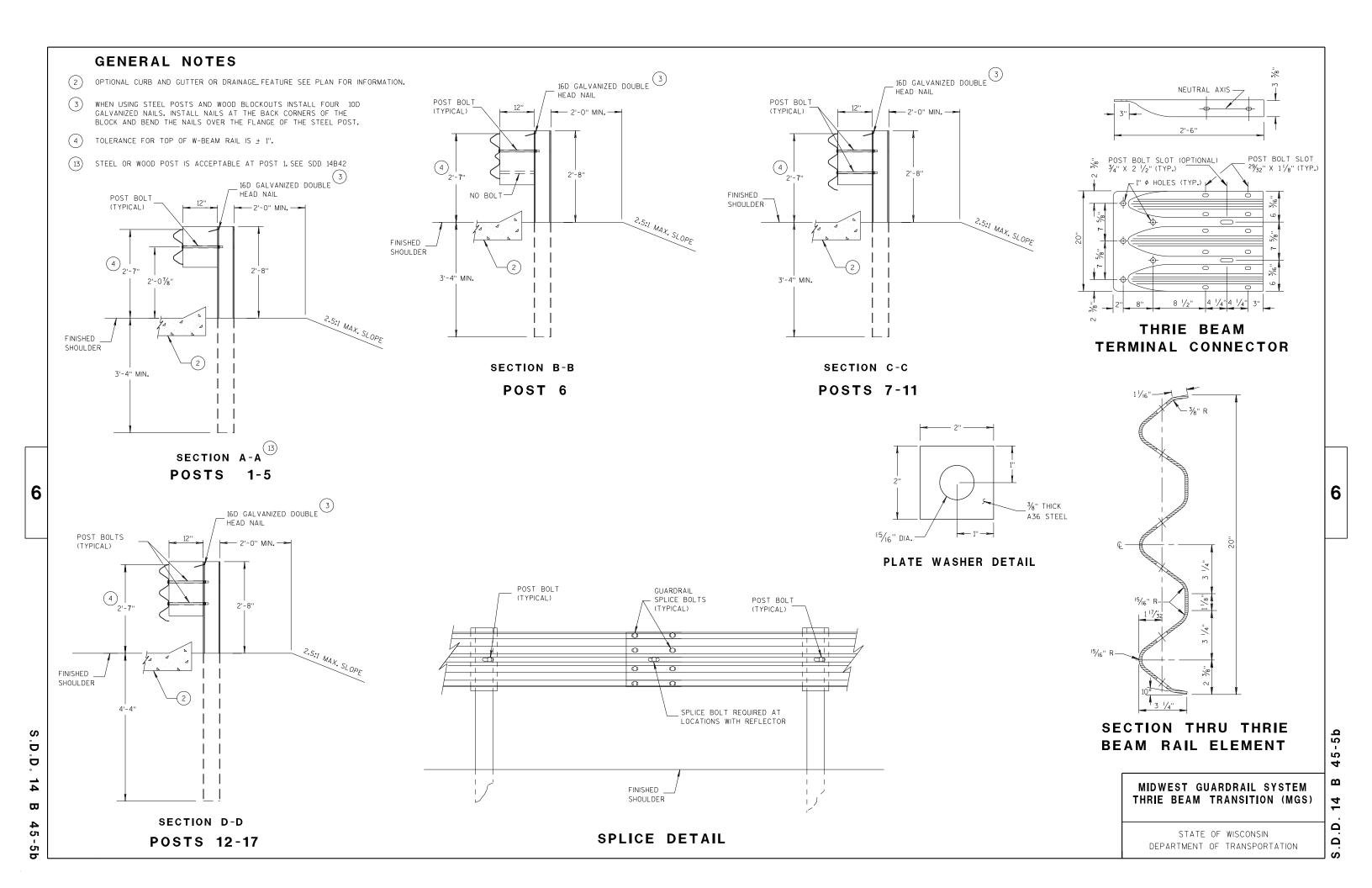
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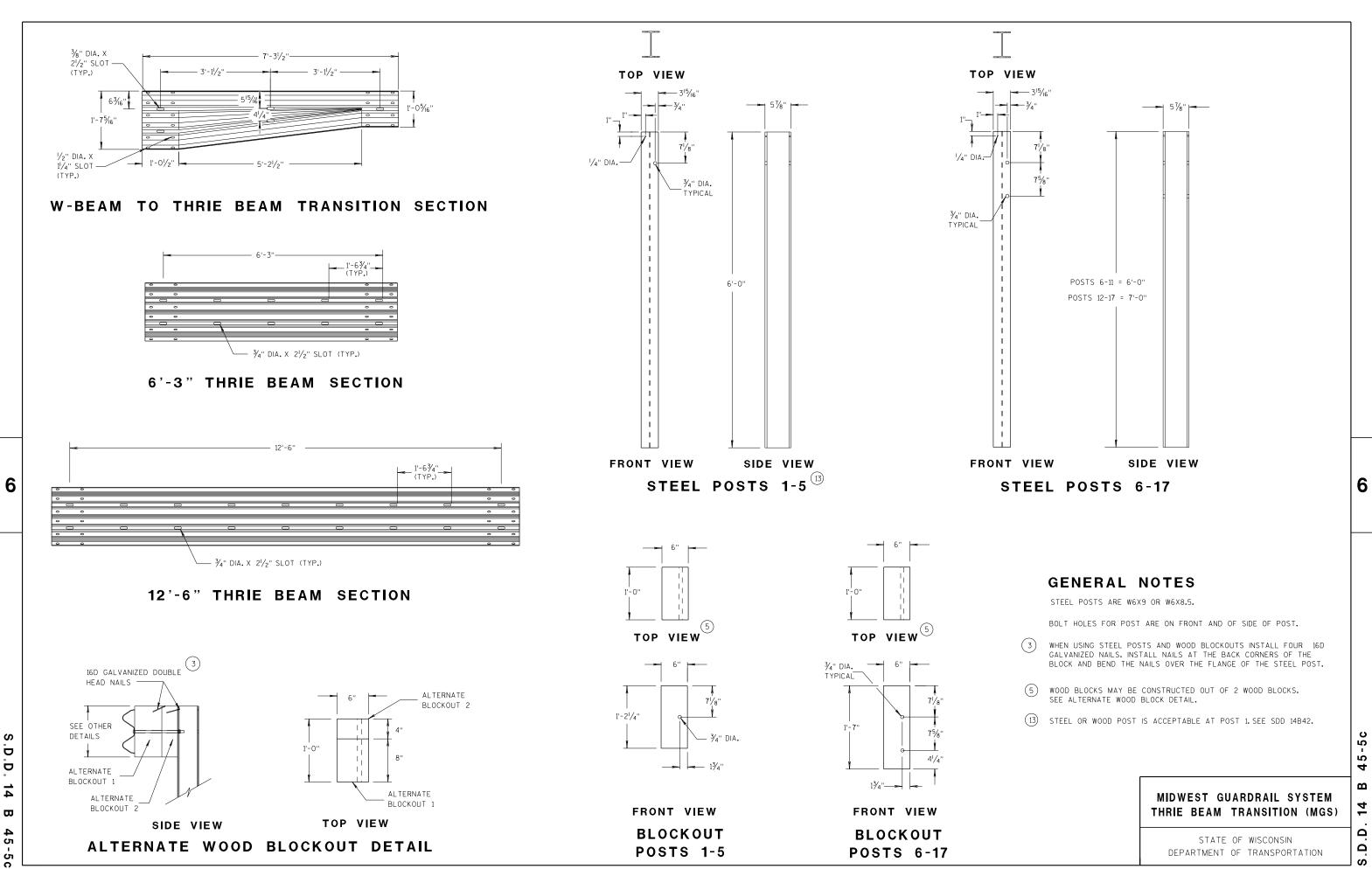
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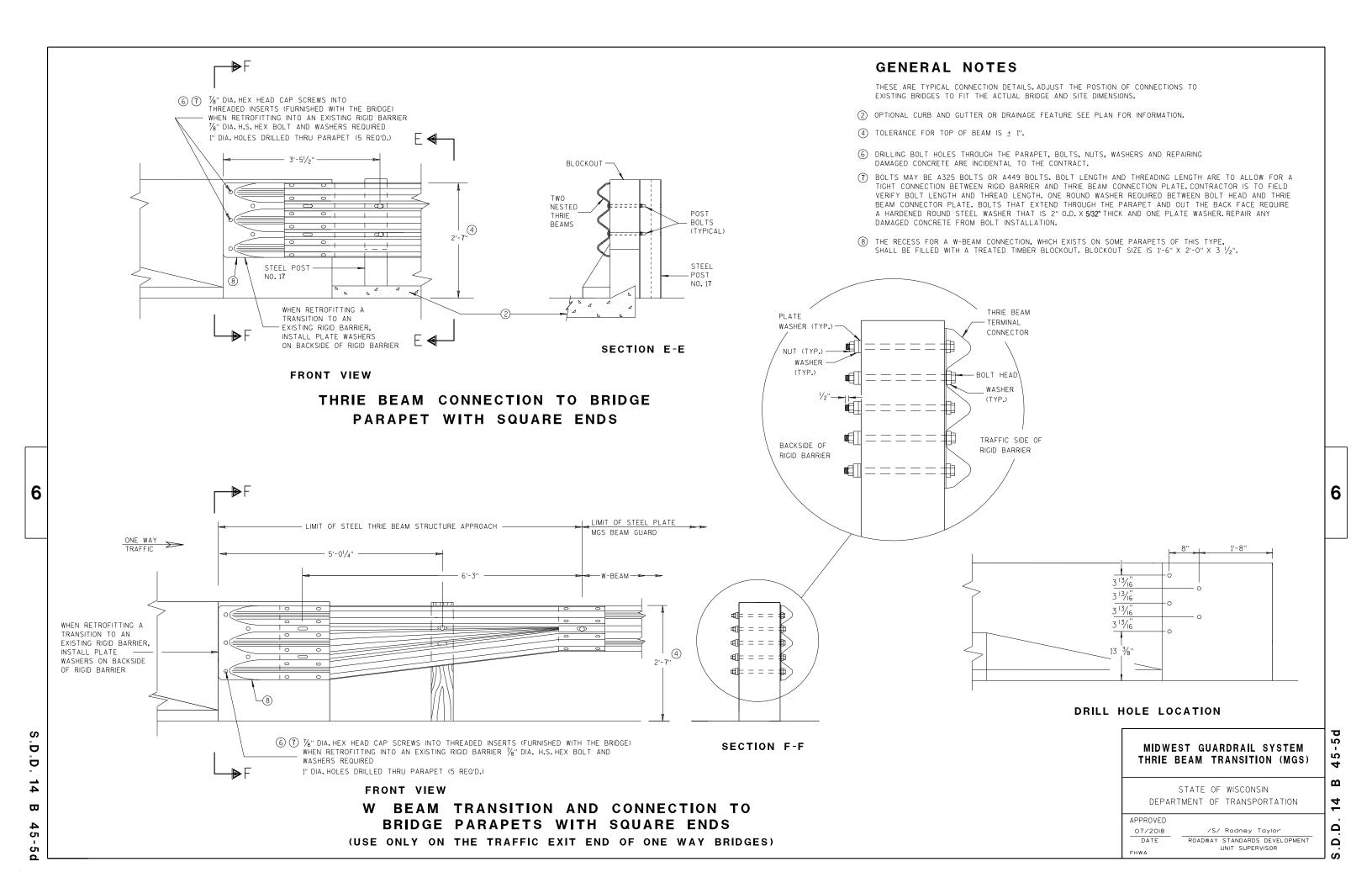
SDD 14B44 - 04











- (2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- (4) TOLERANCE FOR TOP OF BEAM IS ± 1".

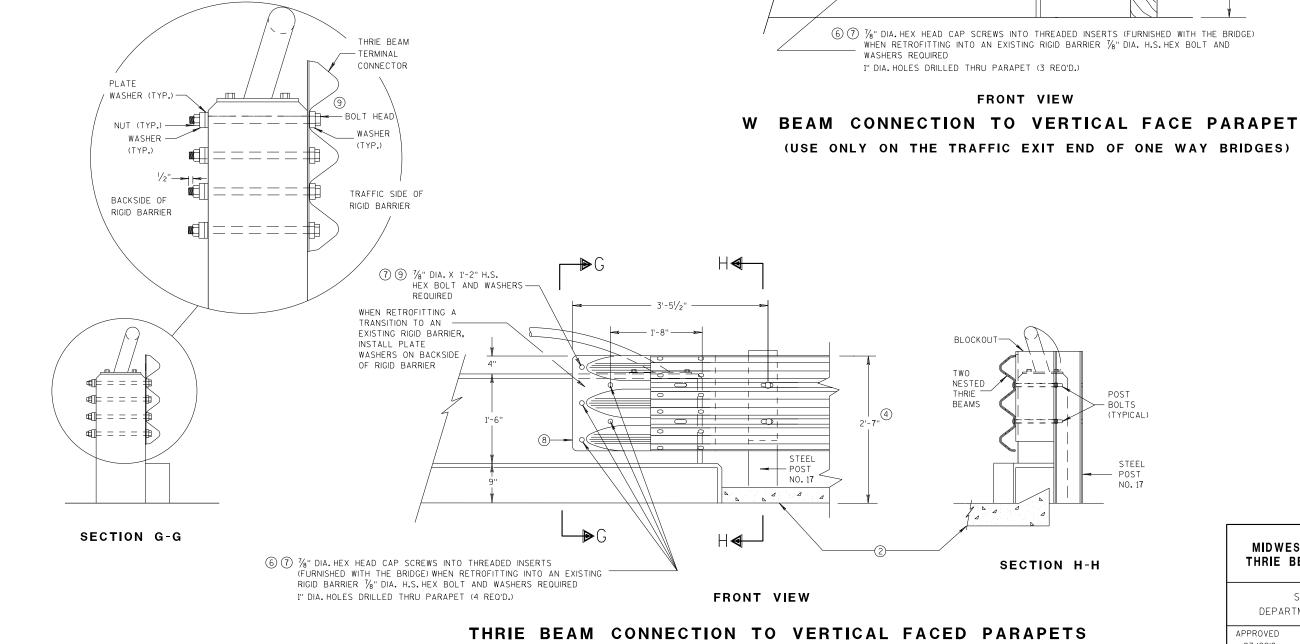
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- 6 DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- 7 BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN 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".
- (9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



7 7/8" DIA. X 1'-2" H.S.

REQUIRED

WHEN RETROFITTING

A TRANSITION TO

AN EXISTING RIGID

BARRIER, INSTALL

PLATE WASHERS

ON BACKSIDE OF

RIGID BARRIER

HEX BOLT AND WASHERS

CONNECTOR

W BEAM TERMINAL 8

9

LIMIT OF STEEL PLATE

MGS BEAM GUARD

ONE WAY
TRAFFIC

(4)

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MIDWEST GUARDRAIL SYSTEM

THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

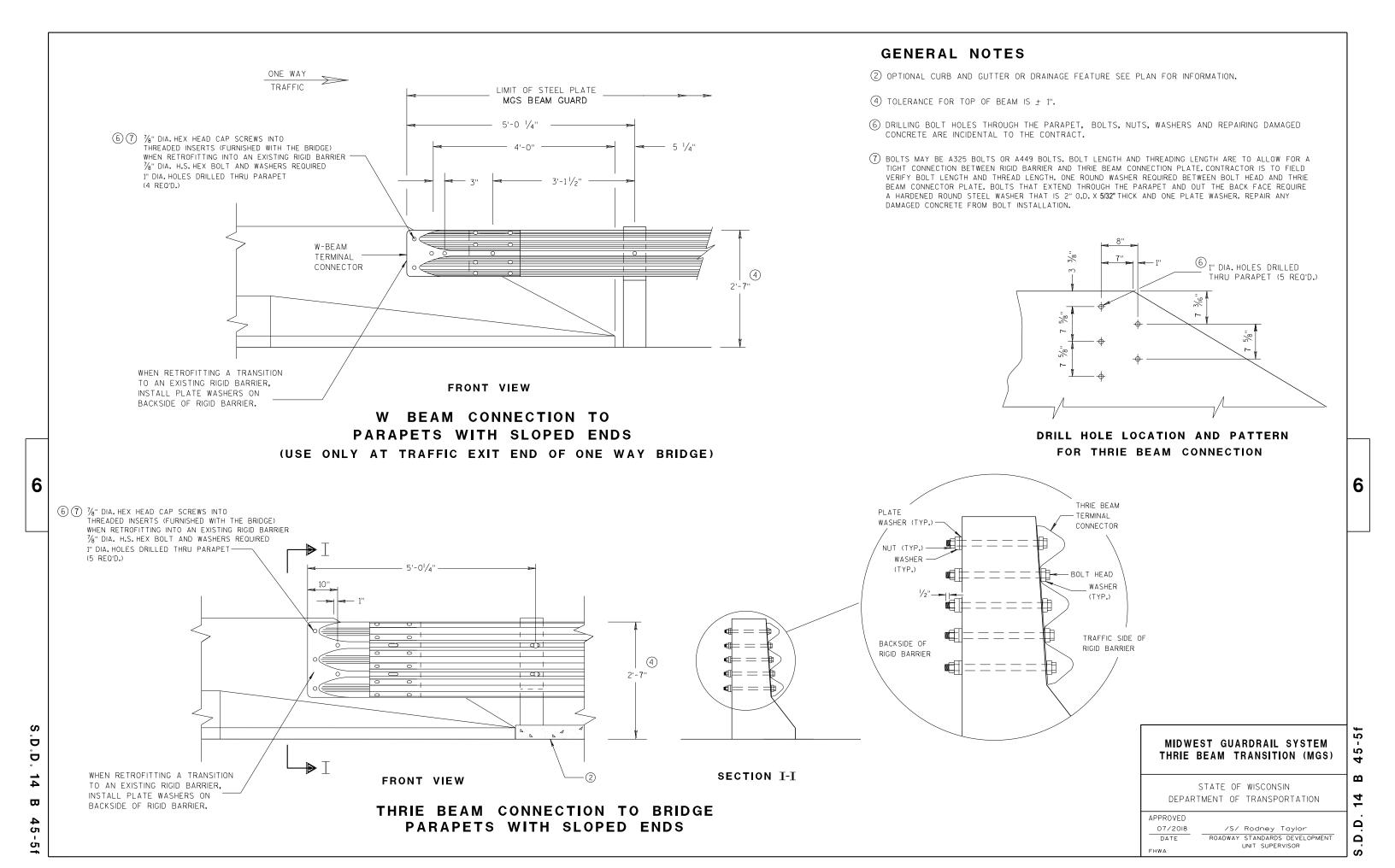
APPROVED

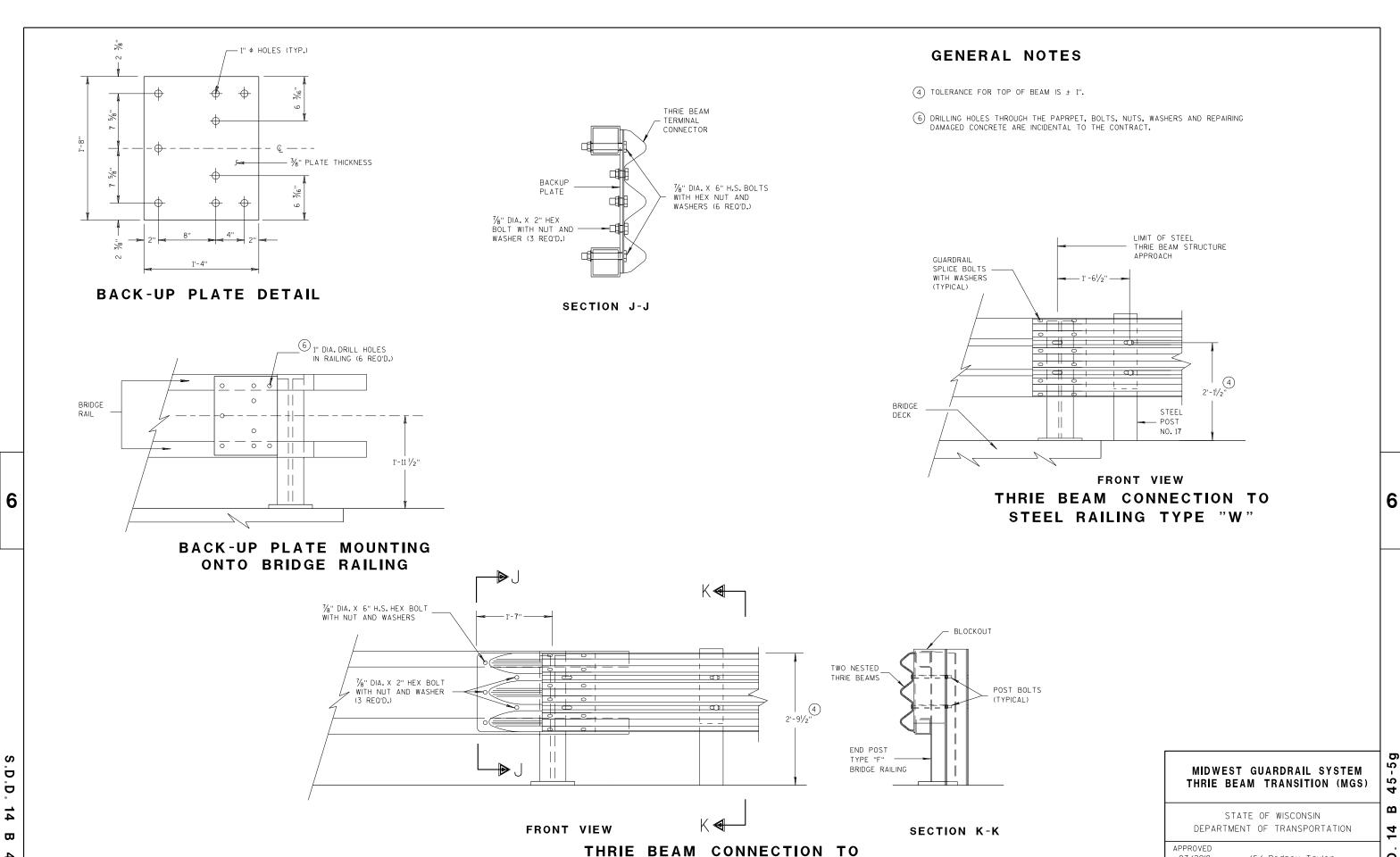
07/2018

DATE

2'-7'

5'-0 1/4"





TUBULAR RAILING TYPE "F"

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S.D.D. 14 B 45-5

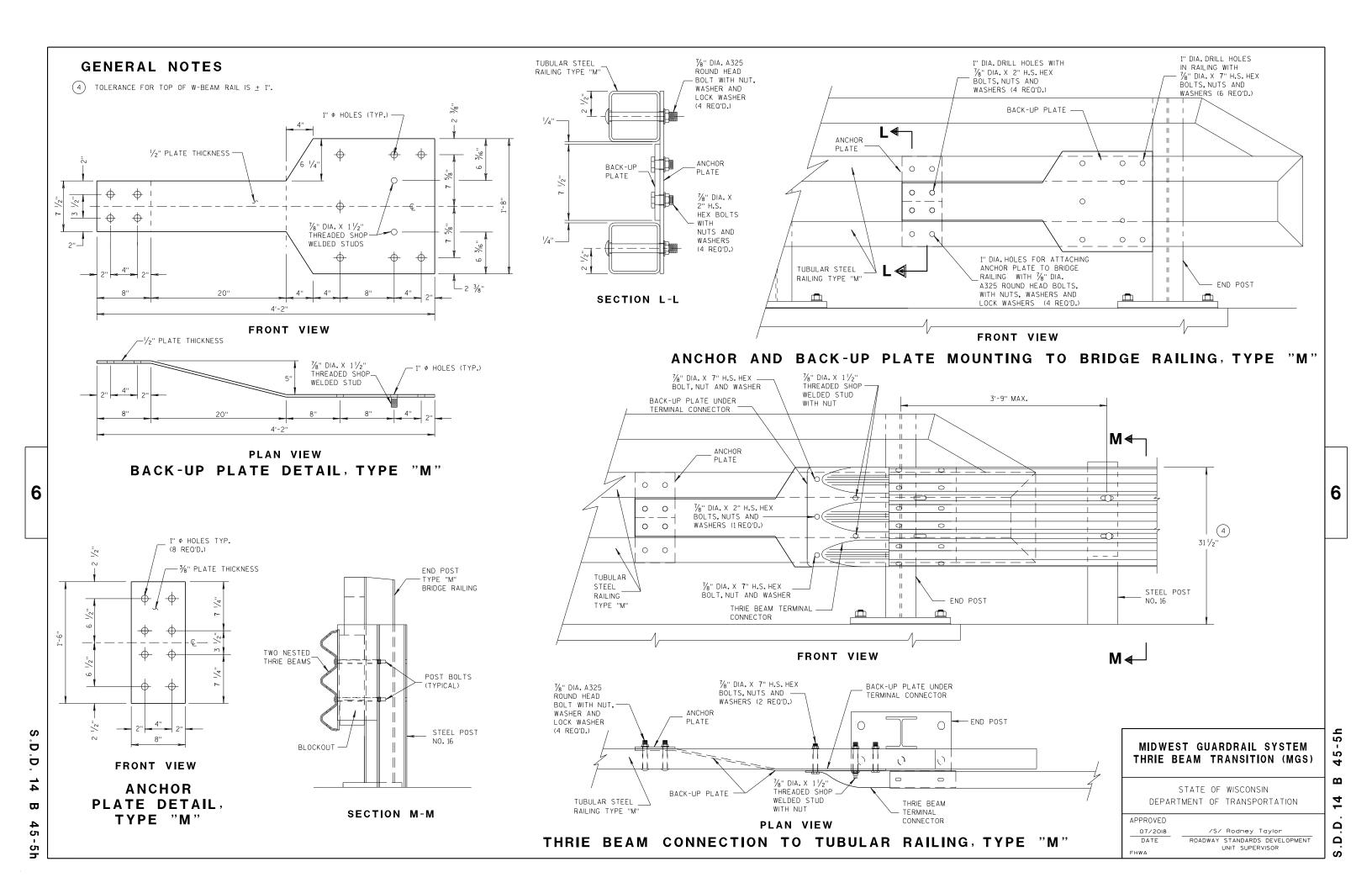
07/2018

DATE

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR



WELDING INSTRUCTION

21/2"

101/2"

(VIEWED FROM BACK SIDE OF PLATE)

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

	CONNE		R PLATE DIMENS R ASSEMBLY)	ION
PLATE	QUANTITY	SHAPE	SIZE (A × B × C × D)	THICKNESS
P1	1	ВЁ	20" × 20"	3/16"
P2	1	B₽€	20" × 20" × 28%6"	3/16"
Р3	1	B A C D	39" × 35/8" × 20" × 195//6"	3/16"
S1	4	B A	187/6" × 35/8" × 183/4"	1/4"
S2	1	B O	$10^{1}/_{4}$ " × $2\frac{7}{16}$ " × $10\frac{3}{8}$ " × $\frac{1}{2}$ "	1/4"
S3	1	B₽D	3" × 1½6" × 3½" × ½"	1/4"
S4	1	В□	61/8" × 27/16"	1/4"
S5	1	в∟	61/8" × 11/16"	1/4"
S6	1	вФ	7¾" × 1¾"	1/4"
S7	1	ABC	2%6" × 6" × 3%" × 5%"	1/4"
S8	1	ABC	1 ⁵ / ₃₂ " × 7 ¹ / ₂ " × 2 ¹ / ₂ " × 7 ³ / ₈ "	1/4"
S9	1	CLA B	$6\frac{1}{16}$ " × $6\frac{3}{16}$ " × $1\frac{3}{32}$ "	1/4"
S10	1	ABC	1%" × 9%" × 3%" × 9"/ ₁₆ "	1/4"
S11	1	C A	8½" × 8¾" × 1 ¹³ / ₁₆ "	1/4"

BACK SIDE OF PLATE

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

GENERAL NOTES

COVER PLATE PANELS ARE 3/6" THICK.

BACK SIDE OF PLATE

7/2018 /S/ Rodney Taylor

DATE ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

S.D.D. 14 B 45-5

6

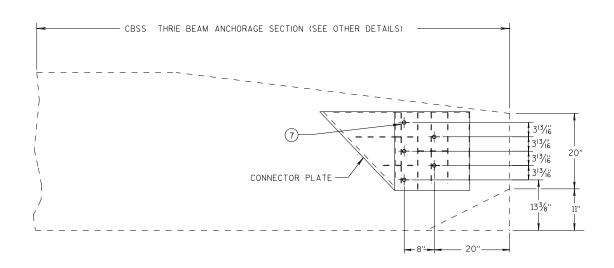
/S/ Rodney Taylo

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THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

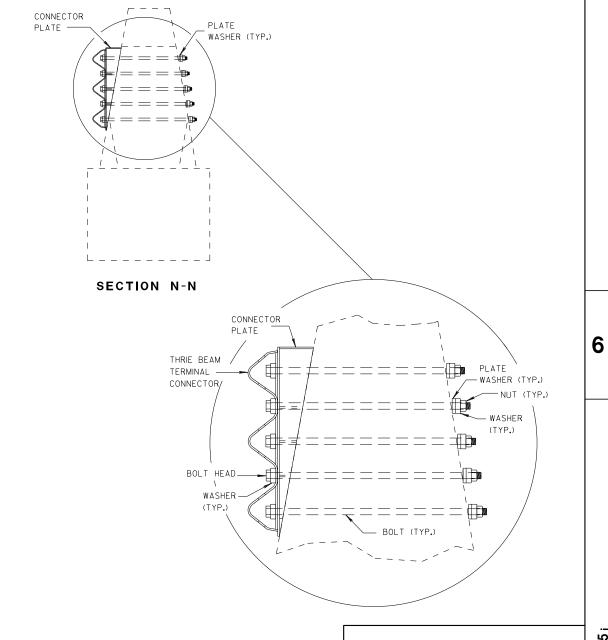


SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

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

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



MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE
ROADWAY

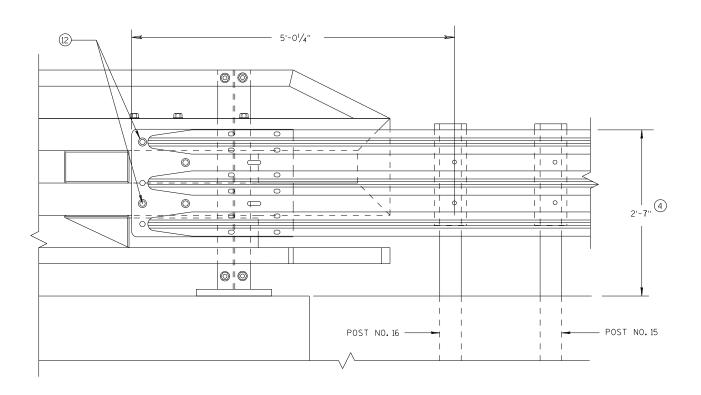
/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

D.D. 14 B

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

- 4) TOLERANCE FOR TOP OF BEAM IS ± 1".
- (2) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 /S/ RODNEY Taylor

DATE ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

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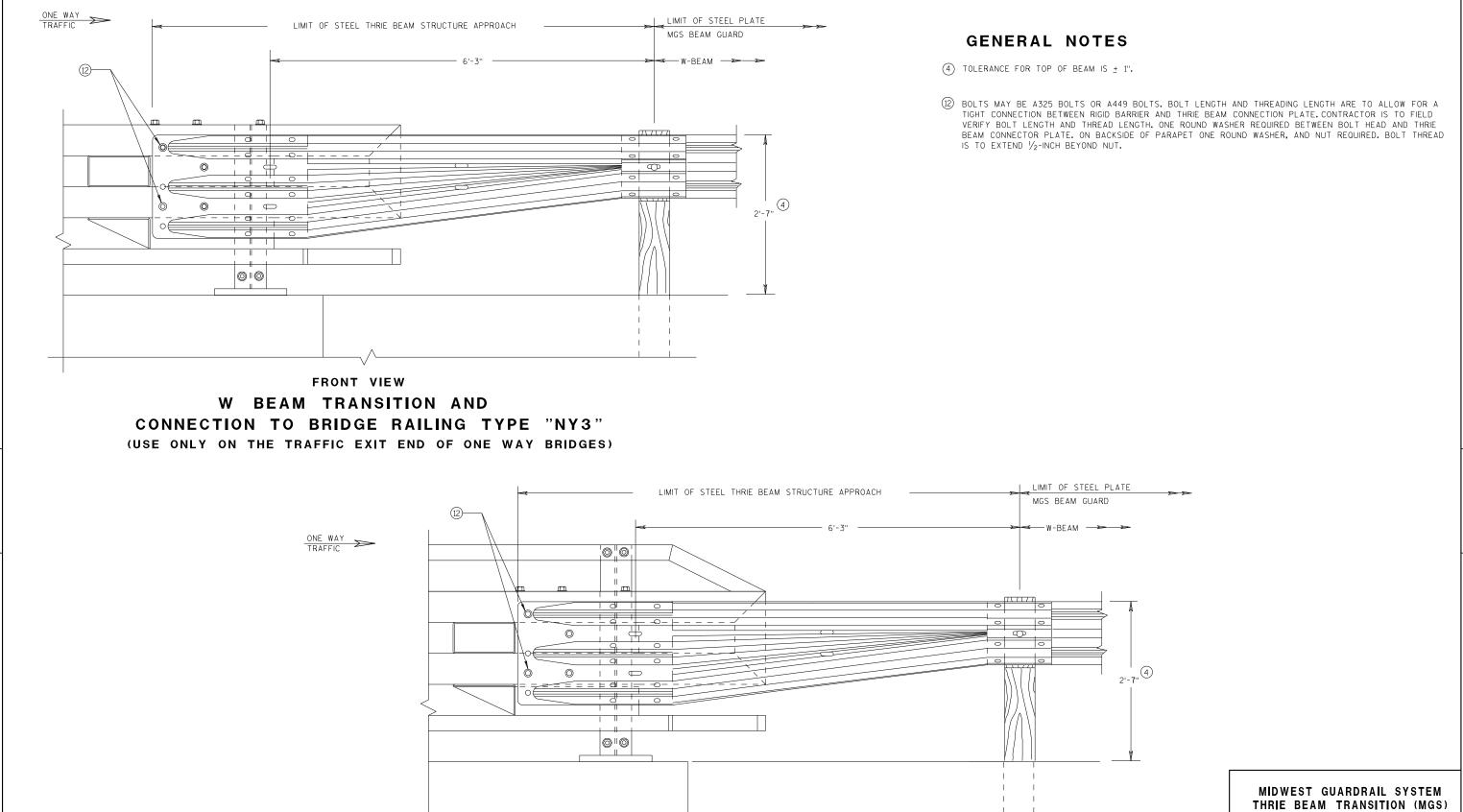
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1 B 45-5k

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FRONT VIEW

W BEAM TRANSITION AND

CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

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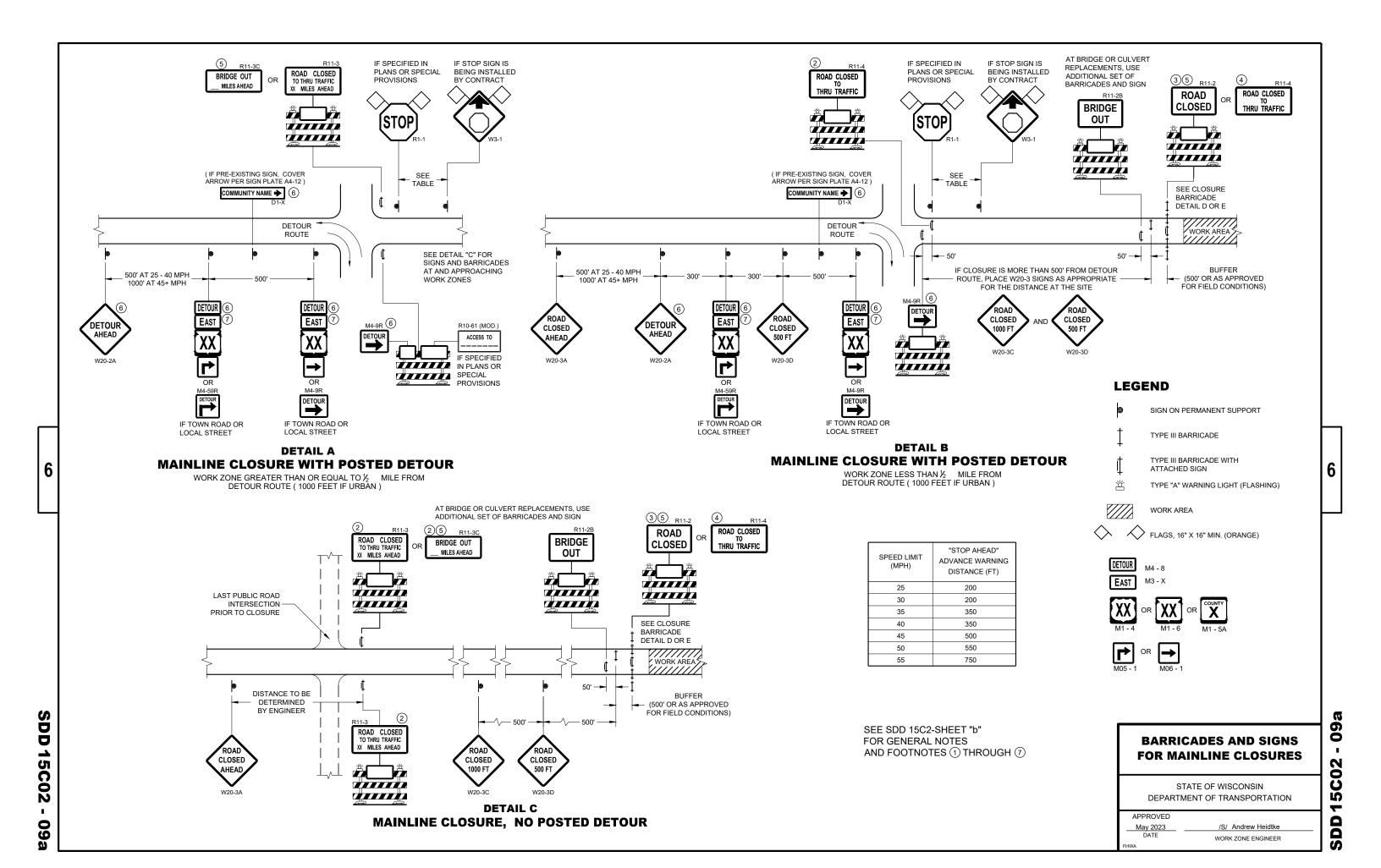
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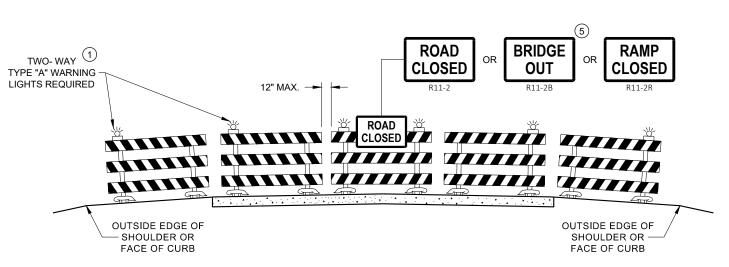
/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

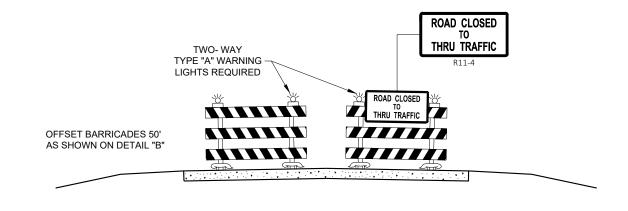
APPROVED

DATE





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

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"

- 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**
- THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- (3) FOR ROAD CLOSURE <u>WITHOUT</u> 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
- "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR **VARIOUS CLOSURES**

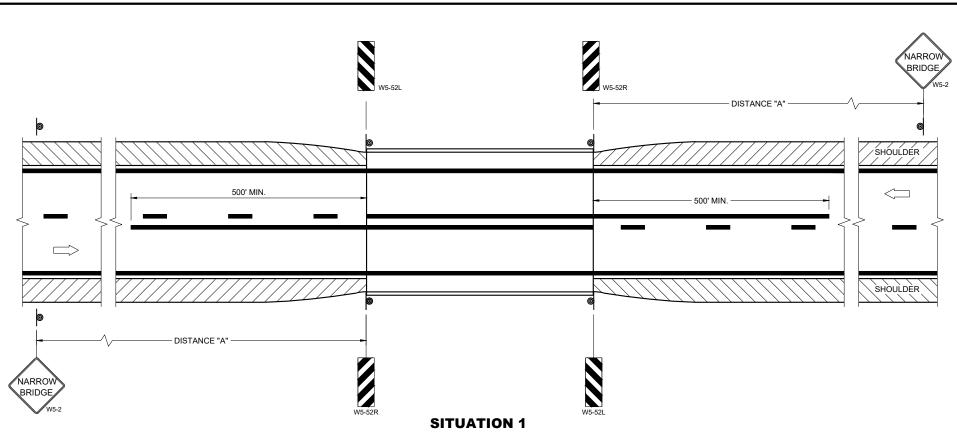
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED May 2023 DATE WORK ZONE ENGINEER

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SDD 15C06-12



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

OR SHOULDER SHOULDER WS-52R WS-52L

SITUATION 2

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

SDD

15C06-12

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THE 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.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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





RURAL AREA (See Note 2)



GENERAL NOTES

- 1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.

The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (\pm) 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" (\pm) 3".

- 3. For expressways and freeways, mounting height is 7'- 3" (\pm) 3" or 6'-3" (\pm) 3" depending upon existence of a sub-sign.
- 4. Minimum mounting height for signs mounted on traffic signal poles is 5' 3'' ($\frac{+}{-}$) 3''.
- 5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 6. Folding signs shall be mounted at a height of 5'-3'' (\pm) 3'' or as directd by the Engineer.

2' Min - 4' Max (See Note 5)



White Edgeline
Location

Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

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

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

PLOT BY : mscj9h

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Rawh

For State Traffic Engineer

DATE 12/6/23 PLATE NO. _A4-3.23

Ε

PROJECT NO: HWY: COUNTY: SHEET NO:



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



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

HWY:



PLAN VIEW

COUNTY:

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

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

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN

PROJECT NO:

PLOT DATE: 27-JAN-2014 09:48

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 13.659812:1.000000

APPROVED

WISDOT/CADDS SHEET 42





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



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

HWY:

SIGN SHAPE OTHER THAN	DIAMOND
(THREE POSTS REQUIR	RED)
L	Е
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" (±) 3" or 6'-3" (±) 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'' (\pm) 3'' or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 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.
- $\times \times \times$ See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch
For State Traffic Engineer

DATE 12/6/23

PLATE NO. <u>A4-4.16</u>

Ε

CUEET NO.

SHEET NO:

FILE NAME : C:\CAEfiles\Project\tr_stdplate\A44.dgn

PROJECT NO:

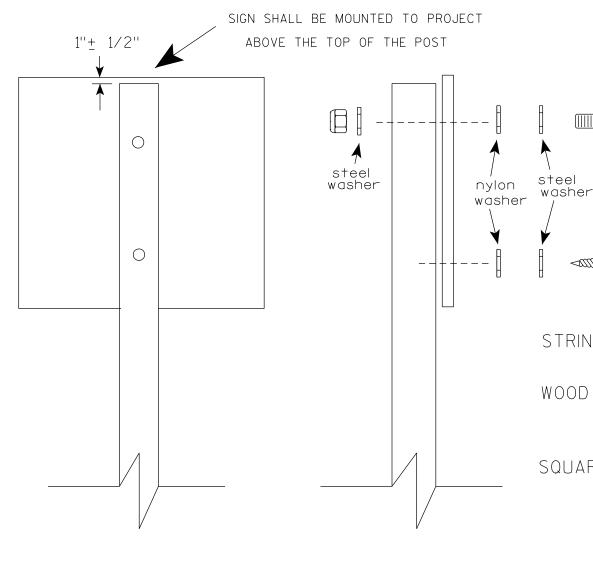
COUNTY:

PLOT DATE: 6-DEC 2023 11:31

PLOT NAME :

PLOT BY : mscj9h

PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42



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

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

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

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

MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts

WOOD POSTS $(4'' \times 6'')$

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 - 1/32 " (6605-9-6) BULB-TITE. TRI-FOLD. ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matther

≠or State Traffic Engineer

SHEET NO:

DATE 4/1/2020

PLATE NO. <u>A4-8.9</u>

PLOT DATE: 01-APRIL-2020

PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

Ε

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN

PROJECT NO:



PROJECT NO: HWY: COUNTY: SHEET NO: FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE: 05-FEB-2015 17:09 PLOT BY: mscsja PLOT NAME : PLOT SCALE: 13.659812:1.000000

DATE 2/05/15

PLATE NO. <u>A4-9.9</u>

For State Traffic Engineer



BANDING



SINGLE SIGN





WASHER PLACEMENT



HWY:

WASHERS (ALL POSTS) -

1-1/4" O.D. X³/₈" I.D. X¹/₁₆" STEEL 1-1/4" O.D. $\times \frac{3}{8}$ " I.D. \times .080 NYLON FOR ALL TYPE H SIGNS

CHANNEL

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 $\frac{3}{4}$ " in width and 0.025" thickness.
- 4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

DATE 6/10/19

PLATE NO. A5-9.4

Ε

State Traffic Engineer

COUNTY:

PLOT NAME :

PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42

PROJECT NO:

VIEW FROM TOP

GENERAL NOTES

- 1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
- 2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
- 3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS.

 SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
- 4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT 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 $1^{1}/_{4}$ " O.D. X $3/_{8}$ " I.D. X $1/_{16}$ "
- 8. NYLON WASHERS SHALL BE $1^{1}/_{4}$ " O.D. X $3/_{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

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

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

Manher R

APPROVED

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

SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A510.dgn

PROJECT NO:

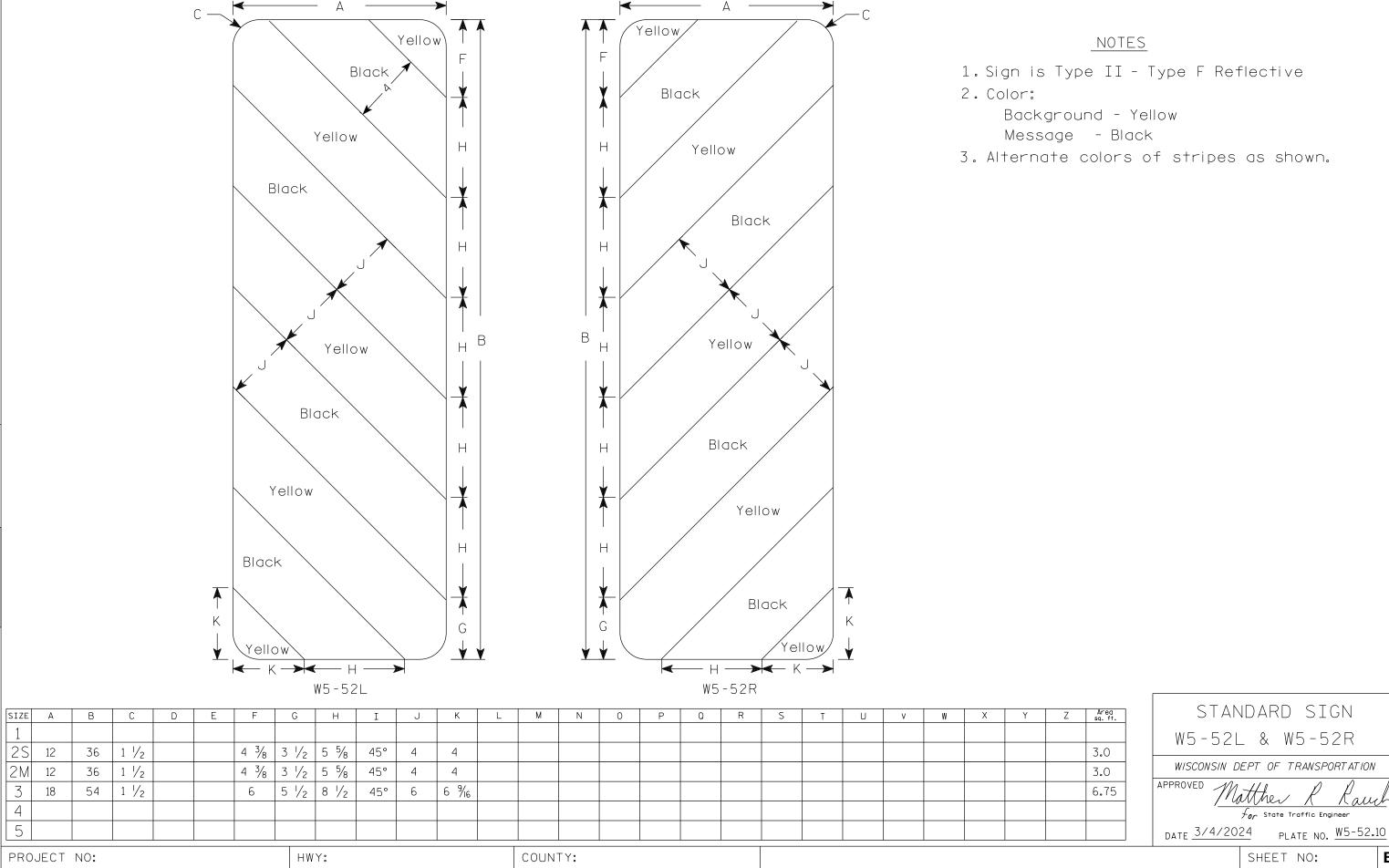
PLOT DATE: 19-APRIL 2022 11:55

SIGN

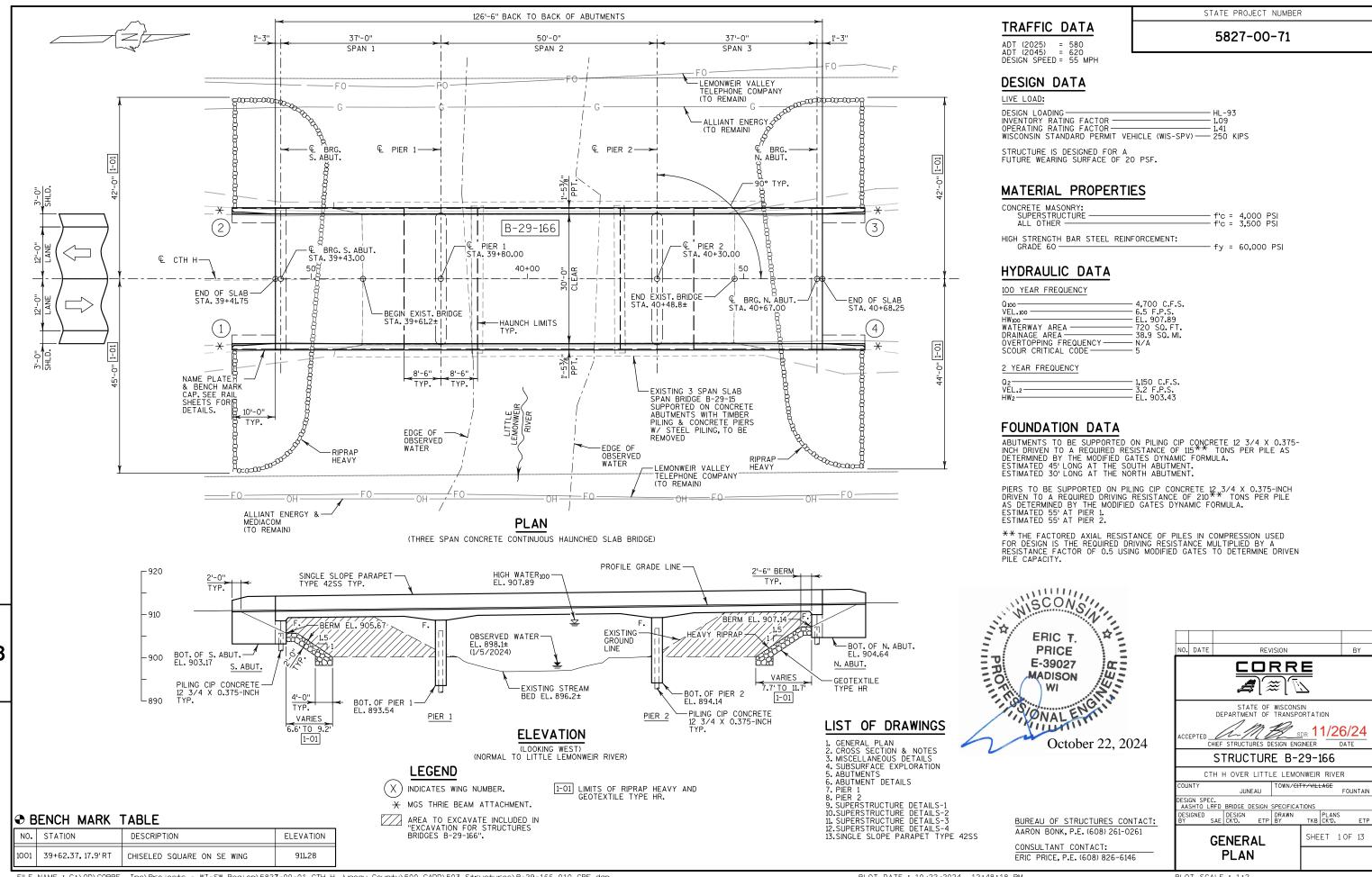
PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

Ε



PLOT DATE: 4-MARCH 2024 11:57 PLOT NAME : PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42 PLOT BY : dotc4c



5827-00-71

GENERAL NOTES:

DRAWINGS SHALL NOT BE SCALED.

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

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-29-166" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

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

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP OF DECK.PIGMENTED SURFACE SEALER TO BE APPLIED TO THE TOP AND ROADWAY FACE OF THE PARAPET.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURES UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE EXISTING STREAM BED SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.

THE EXISTING STRUCTURE, B-29-15 TO BE REMOVED, IS A THREE-SPAN CONCRETE HAUNCHED SLAB BRIDGE, $86.2~\mathrm{FT}$. LONG WITH A 30.0 FT. CLEAR WIDTH.

AT PIERS 1 & 2, CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC 502.3.5.3. CONCRETE POURED UNDERWATER SHALL NOT EXCEED 10.0 FEET IN DEPTH, UNLESS APPROVED OTHERWISE.

32'-103/4" OUT TO OUT 1'-5%' 15'-0" 15'-0" 30'-0" BETWEEN PARAPETS 1'-3" LEVEL LEVEL — GUTTER LINE GUTTER- BRIDGE & CTH H 2-03 SINGLE SLOPE PARAPET POINT REFERRED TO TYPE 42SS ON PROFILE 2-02 2.0% 2.0% 2-01 32'-6"

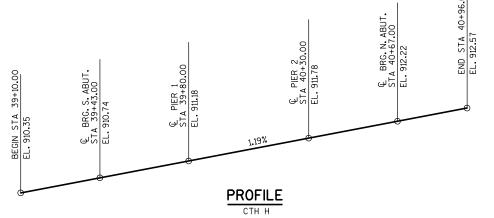
PROPOSED CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUTMENT	PIER 1	PIER 2	NORTH ABUTMENT	SUPER.	TOTALS
203.0270	REMOVING STRUCTURE OVER WATERWAY DEBRIS CAPTURE B-29-15	EACH		_				1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-29-166	EACH	-	_	-			1
210.1500	BACKFILL STRUCTURE TYPE A	TON	115	_	-	115		230
502.0100	CONCRETE MASONRY BRIDGES	CY	32.4	42.7	42.7	32.6	292.5	443
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	-		422	422
502.3210	PIGMENTED SURFACE SEALER	SY	10	_	-	10	124	144
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,035	2,040	2,040	2,035		8,150
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,920	60	60	1,920	61,600	65,560
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	_	-	10		20
550.2126	PILING CIP CONCRETE 12 3/4 X 0.375-INCH	LF	225	385	385	150		1,145
606.0300	RIPRAP HEAVY	CY	125	-	-	135		260
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	95	-	-	95		190
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	_	-	2		4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	32	_		32		64
645.0120	GEOTEXTILE TYPE HR	SY	195	-		220		415
	NON-BID ITEMS							
	FILLER	SIZE	-	_	-		-	1/2" & 3/4"

ALL ITEMS ARE CATEGORY 0020



LEGEND

- 2-01 3/4" V-GROOVE. TERMINATE 6" FROM FRONT FACE OF ABUTMENTS.
- 2-02 COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE WISDOT STANDARD SPECIFICATIONS.
- 2-03 COAT FRONT FACE AND TOP OF PARAPETS WITH "PIGMENTED SURFACE SEALER".

ABBREVIATIONS:

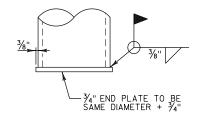
ABUT. ABUTMENT BTWN. B.F. BOT. BRG. BETWEEN BACK FACE BOTTOM BEARING CLEAR CONSTRUCTION CL. -CONST. -DIA. E.F. DIAMETER EACH FACE EXIST. -FXISTING F.F. -HORIZ. -FRONT FACE HORIZONTAL JT. -LONG. -PPT. -PROJ. -JOINT LONGITUDINAL PARAPET PROJECTION S.E. SPA. STD. SYMM. SEMI-EXPANSION SPACED STANDARD SYMMETRICAL TOP AND BOTTOM T&B TRANS. -TRANSVERSE TYP. -VFRT. -VERTICAL UNLESS NOTED OTHERWISE U.N.O.

8

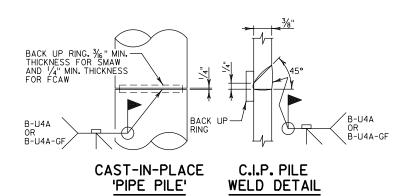
NO. DATE REVISION BY STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-29-166 SHEET 2 OF 13 CROSS SECTION

& NOTES

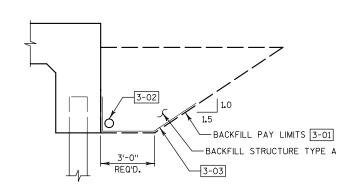
5827-00-71



END PLATE DETAIL FOR CIP PILING

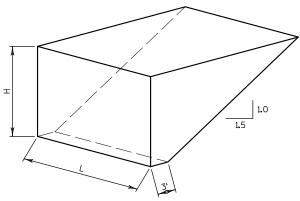


PILE SPLICE DETAILS



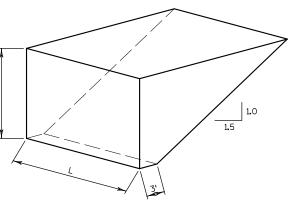
STRUCTURE BACKFILL LIMITS

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.



ABUTMENT BACKFILL PAY LIMIT DIAGRAM

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1,20 FOR CY BID ITEMS AND 1,00 FOR TON BID ITEMS)
V_{CF} = (L)(3,0')(H) + (L)(0,5)(1,5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2,0)



-PARAPET PLACE HEAVY RIPRAP -EVEN WITH THE TOP OF WING, 2 FEET FROM WING TIP -TOP OF APPROACH HEAVY RIPRAP 2.5 MIN. WING WALL -END OF ABUT. GEOTEXTILE TYPE HR (TYP.)

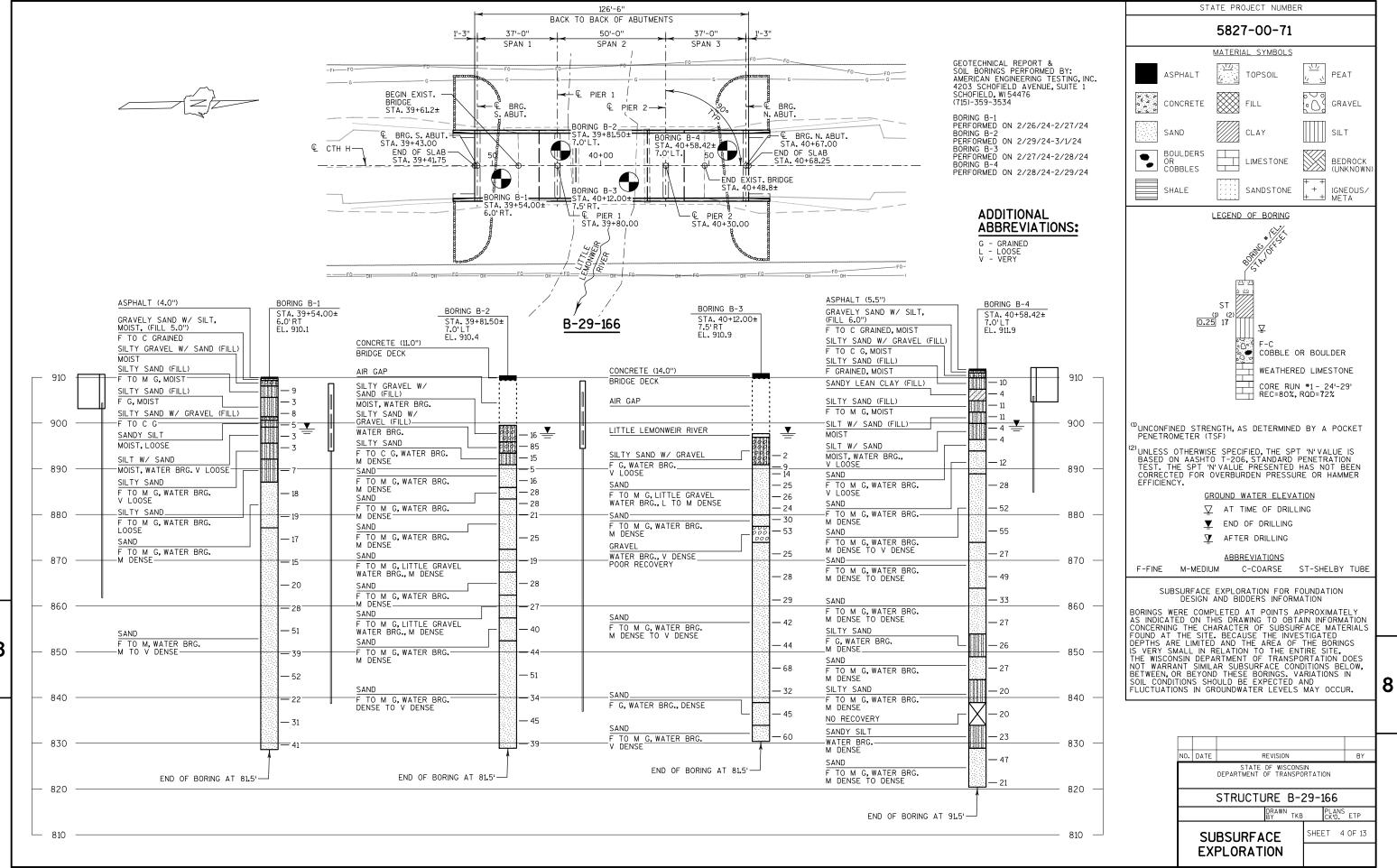
TYPICAL FILL SECTION AT WING TIPS

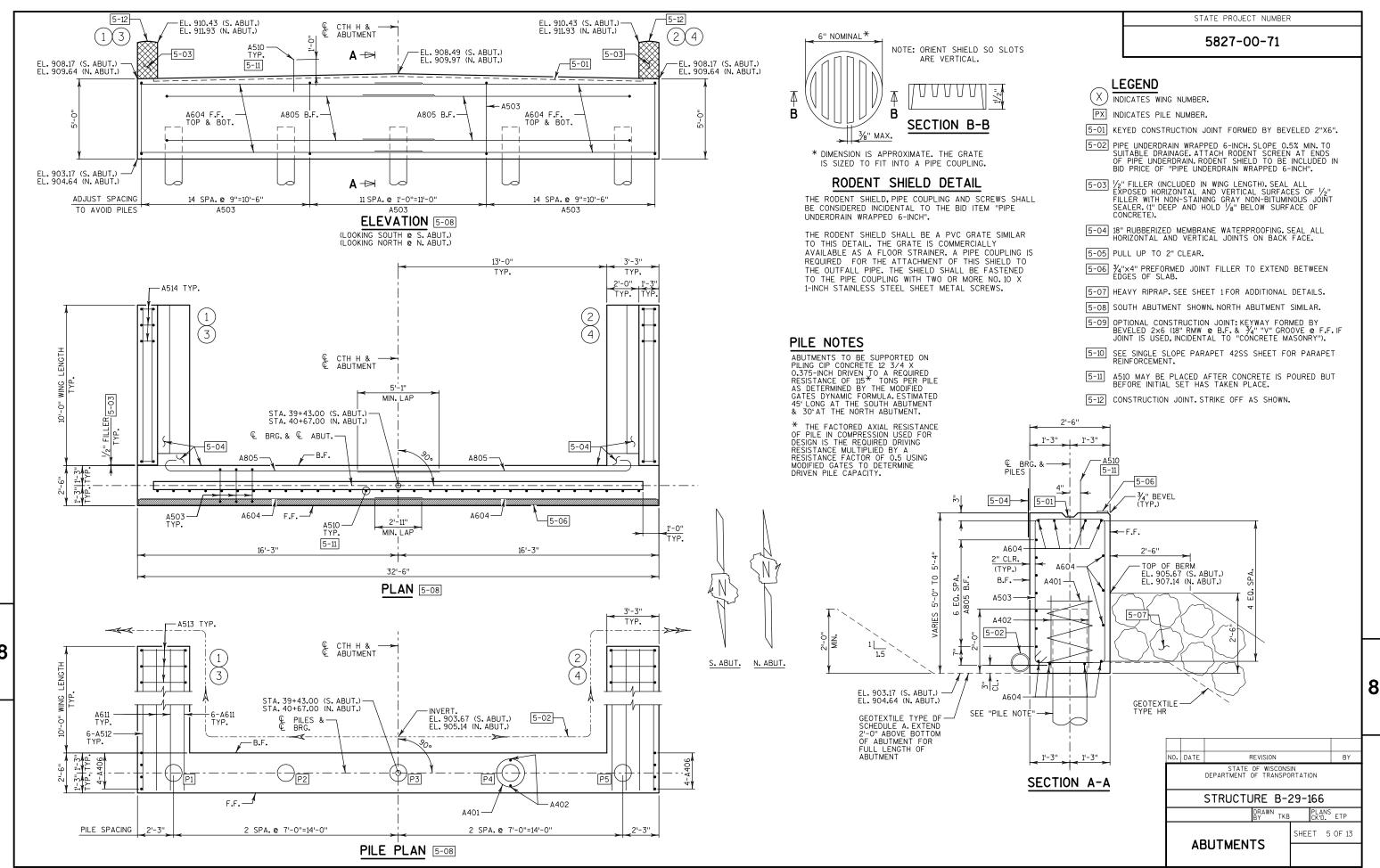
LEGEND

- [3-01] BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION OF STRUCTURES, LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- 3-02 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.
- 3-03 EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. "GEOTEXTILE TYPE OF SCHEDULE A" SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF EXCAVATION LIMITS.
- $\fbox{3-04}$ Cast-in-place pile shell material shall be in accordance with the standard specification.

8

NO. DATE REVISION BY STRUCTURE B-29-166 SHEET 3 OF 13 **MISCELLANEOUS DETAILS**



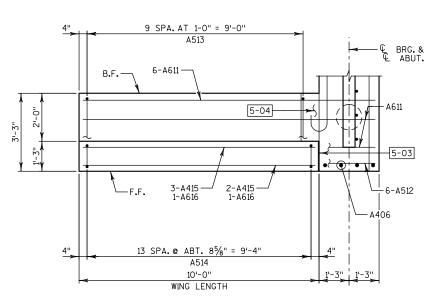


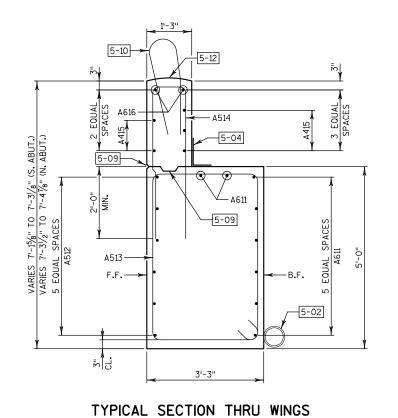
LEGEND

5-XX SEE SHEET 5 FOR CALLOUTS.

STATE PROJECT NUMBER

5827-00-71





BILL OF BARS - ABUTMENTS

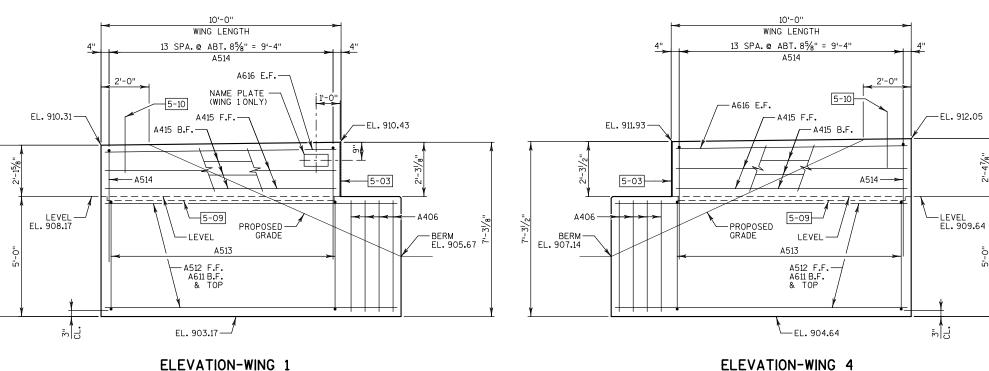
BAR MARK	NO.REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
UNCOATI	ED BARS				TOTAL WEIGHT	= 4,070 LBS
A401	10	28'-0"	Х		BODY - AT PILES - 1 PER PILE	VERT.
A402	20	2'-3"			BODY - AT PILES - 2 PER PILE	VERT.
A503	80	14'-2"	Х		BODY - STIRRUPS	VERT.
A604	44	17'-9"			BODY - TOP, F.F. & B.F.	HORIZ.
A805	28	19'-5"	Х		BODY - B.F.	HORIZ.
A406	16	4'-7"			BODY - ENDS	VERT.
COATED	BARS				TOTAL WEIGHT	= 2,440 LBS
A510	62	2'-0"			ABUTMENTS - TOP	VERT.
A611	32	11'-11"			WINGS - B.F. & TOP	HORIZ.
A512	24	12'-2"			WINGS - F.F.	HORIZ.
A513	40	15'-8"	Х		WINGS - STIRRUPS	VERT.
A514	56	9'-2"	Х		WINGS - TOP	VERT.
A415	20	9'-8"			WINGS - TOP	HORIZ.
A616	8	9'-8"			WINGS - TOP	HORIZ.

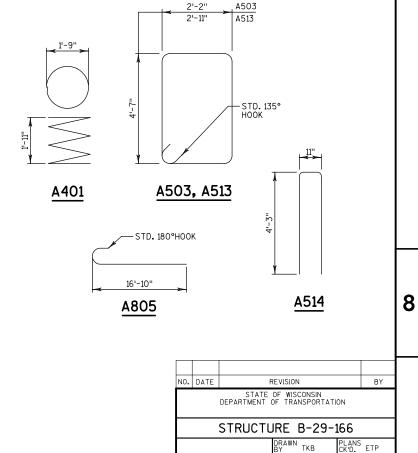
THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

PLAN-WINGS

(WING 1 SHOWN, WINGS 2-4 SIMILAR)

8





ELEVATION-WING 4

(WING 1 SHOWN, WING 2 SIMILAR)

ABUTMENT DETAILS

SHEET 6 OF 13

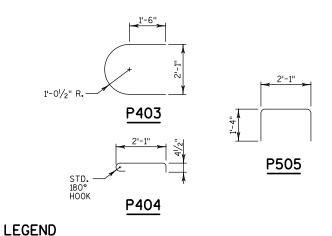
5827-00-71

BILL OF BARS - PIER 1

DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
NON-COA	TED BAF	RS	TOTAL WEIGHT = 2,040 LBS			
P501	66	14'-0"			E.F.	VERT.
P402	68	15'-3"			E.F.	HORIZ.
P403	34	6'-4"	Х		ENDS	HORIZ.
P404	84	2'-11"	Х		TIE BAR	HORIZ.
P505	17	4'-6"	Х		TOP TIE	VERT.
COATED B	ARS					TOTAL WEIGHT = 60 LBS
P506	31	2'-0"			DOWEL BAR	VERT.

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



PIER TO BE SUPPORTED ON PILING CIP CONCRETE 12 3/4 X 0.375-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA, ESTIMATED 55 LONG AT PIER 1.

PX INDICATES PILE NUMBER.

7-01 KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2×6.

[7-02] P404 BARS PLACED ADJACENT TO EACH PILE ONLY. TIE TO THE NEAREST P501 BAR. VERTICAL SPACING TO MATCH TYPICAL P402, P403 SPACING. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

[7-03] P506 BARS @ 1'-0" MAX.CTRS.MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO

7-04 FIELD BEND TO FOLLOW TOP OF PIER SLOPE.

7-05 4"x3/4" PREFORMED JOINT FILLER TYP.

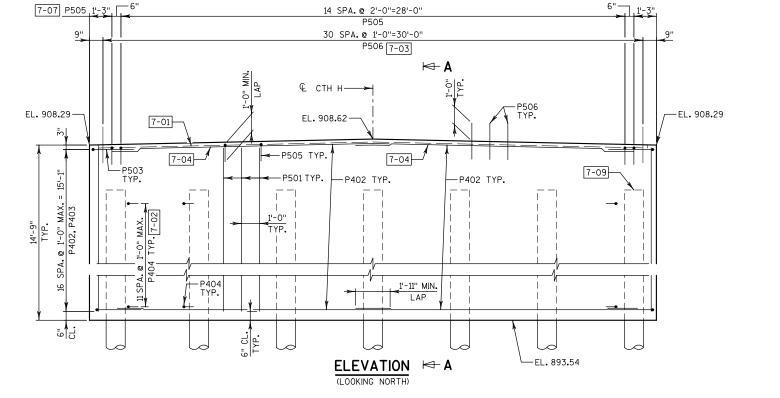
7-06 ELEVATION SHOWN IS TAKEN AT THE € OF PIER.

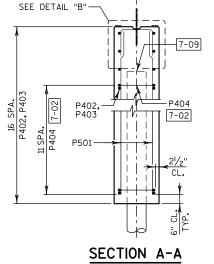
7-07 PULL UP TO 2" CLEAR.

7-08 SLOPE TOP OF PIER AS SHOWN.

7-09 TYPICAL TOP OF PILE EL. 905.79. SEE "PILE NOTES".

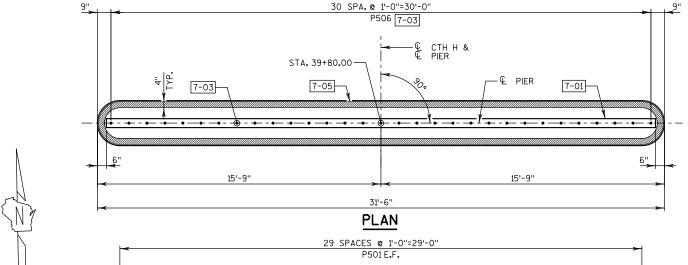


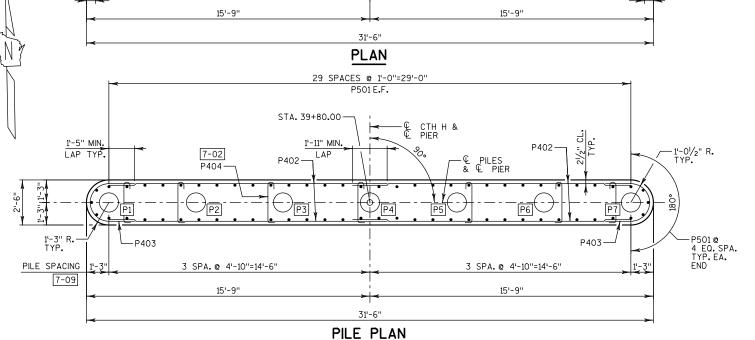


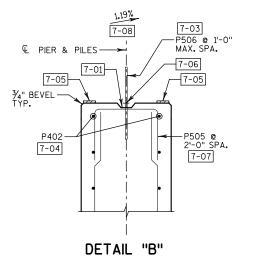


PILE NOTES

© PIER & PILES ->







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

NO. DATE REVISION STRUCTURE B-29-166 SHEET 7 OF 13 PIER 1

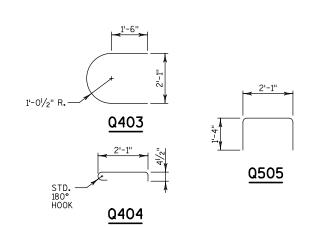
5827-00-71

BILL OF BARS - PIER 2

DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
NON-COA	TED BAF	RS		TOTAL WEIGHT = 2,040 LBS		
Q501	66	14'-0"			E.F.	VERT.
Q402	68	15'-3"			E.F.	HORIZ.
Q403	34	6'-4"	Х		ENDS	HORIZ.
Q404	84	2'-11"	Х		TIE BAR	HORIZ.
Q505	17	4'-6"	Х		TOP TIE	VERT.
COATED B	ARS					TOTAL WEIGHT = 60 LBS
Q506	31	2'-0"			DOWEL BAR	VERT.

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



LEGEND

PX INDICATES PILE NUMBER.

8-01 KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2x6.

8-02 Q404 BARS PLACED ADJACENT TO EACH PILE ONLY. TIE TO THE NEAREST Q501 BAR. VERTICAL SPACING TO MATCH TYPICAL Q402, Q403 SPACING. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

8-03 Q506 BARS @ 1'-0" MAX.CTRS.MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO

8-04 FIELD BEND TO FOLLOW TOP OF PIER SLOPE.

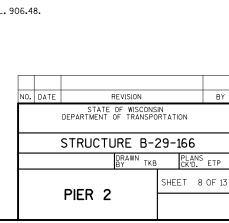
8-05 4"x3/4" PREFORMED JOINT FILLER TYP.

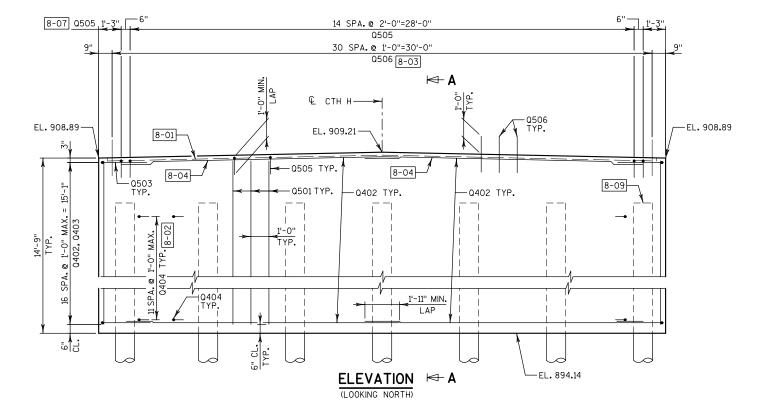
8-06 ELEVATION SHOWN IS TAKEN AT THE € OF PIER.

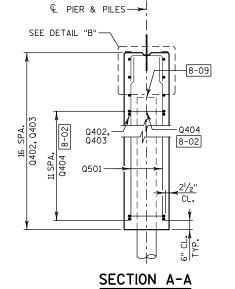
8-07 PULL UP TO 2" CLEAR.

8-08 SLOPE TOP OF PIER AS SHOWN.

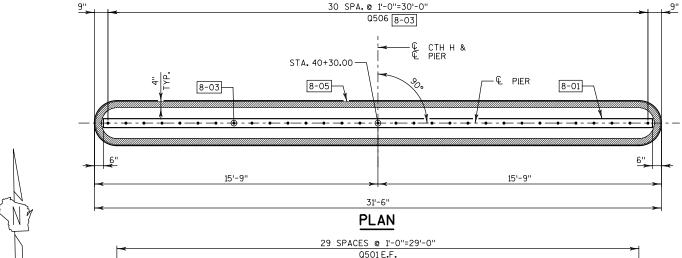
8-09 TYPICAL TOP OF PILE EL. 906.48. SEE "PILE NOTES".

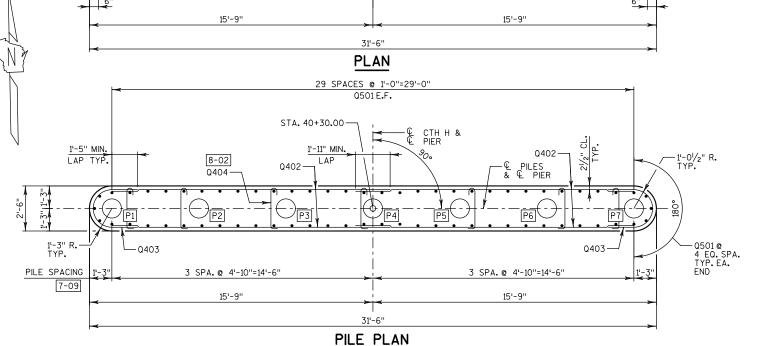


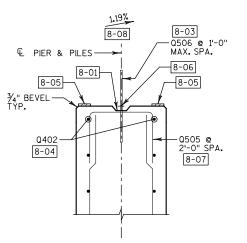




PILE NOTES







PIER TO BE SUPPORTED ON PILING CIP CONCRETE 12 3/4 X 0.375-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA, ESTIMATED 55 LONG AT PIER 2.

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

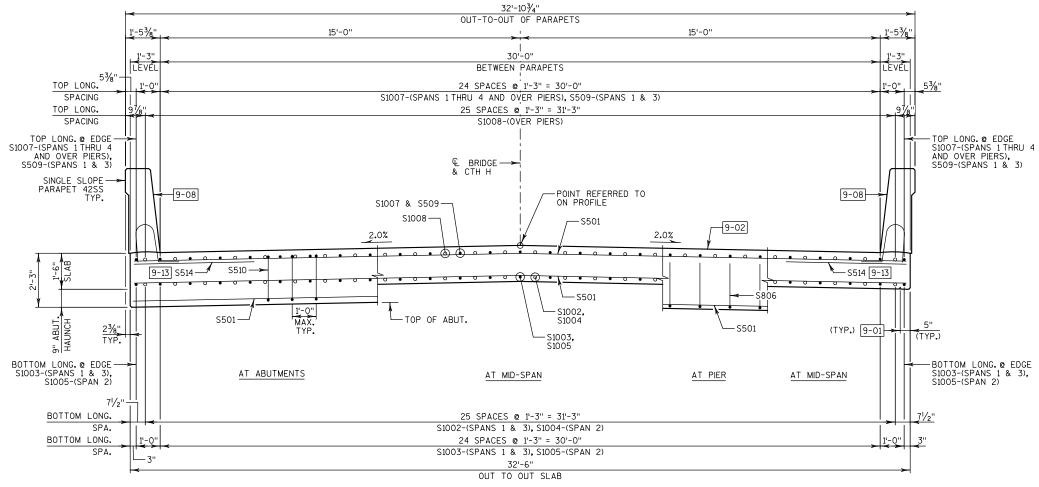
DETAIL "B"

8

BY

STATE PROJECT NUMBER

5827-00-71

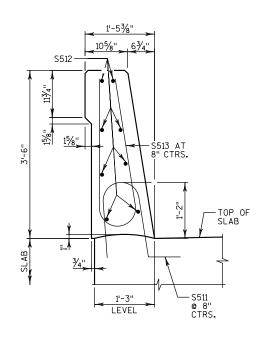


CROSS SECTION THRU SLAB (LOOKING NORTH)

\$501@ 1'-0" SPA. (TOP) 9-07 S501@ 11" SPA. (BOTTOM) 9-07 \$509 S501-S501 S1002 −S510 @ 1'-0" CTRS. 9-04 S1003 -S501 9-03 -¾" BEVEL B.F. ABUT.→ BRG.→ 2'-6"

PARTIAL LONGITUDINAL

SECTION AT ABUTMENTS



SECTION THRU PARAPET ON SLAB

NOTES

THE TOP TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-O" CENTERS EACH WAY.

THE BOTTOM LONGITUDINAL BAR STEEL REINFORCEMENT SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO SUBSTRUCTURE UNITS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM, ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE \$\frac{P}{2}\$ OF ABUTMENTS, THE \$\frac{P}{2}\$. PIERS AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG THE EDGE OF SLAB AND \$\frac{R}{2}\$. CTH H/CROWN POINT, RECORD THE ELEVATIONS IN THE "SURVEY TOP OF SLAB ELEVATIONS" TABLE ON "SUPERSTRUCTURE DETAILS-4" SHEET FOR THE "AS BUILT"

PARAPETS SHALL BE POURED AFTER THE FALSEWORK HAS BEEN

LEGEND

- 9-01 3/4" CONTINUOUS DRIP "V" GROOVE, END 6" FROM FRONT FACE OF ABUTMENTS.
- 9-02 COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATION.
- $\boxed{9\text{-}03}$ $\boxed{3}\!\!/_4"\times 4"$ PREFORMED JOINT FILLER TO EXTEND BETWEEN EDGES OF SLAB OR AROUND ENTIRE OUTSIDE EDGE OF TOP OF PIER.
- 9-04] 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- 9-05 NOT USED.
- 9-06 DIMENSION IS TAKEN PARALLEL TO R CTH H.
- $\fbox{9-07}$ Bars placed parallel to skew and spaced along R CTH H.
- 9-08 PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE ROADWAY FACE AND TOP OF PARAPETS.
- 9-09 NOT USED.
- 9-10 SEE ABUTMENT SHEETS FOR DOWEL INFO.
- 9-11 SEE PIER SHEETS FOR DOWEL INFO.
- 9-12 NOT USED.
- 9-13 S514 TOP TRANSVERSE SLAB BARS SPACED @ EVEN SPACES BETWEEN ALL S501 TOP TRANSVERSE SLAB REINFORCEMENT ALONG EDGE OF SLAB.

NO. DATE REVISION BY STRUCTURE B-29-166 SHEET 9 OF 13 SUPERSTRUCTURE **DETAILS-1**

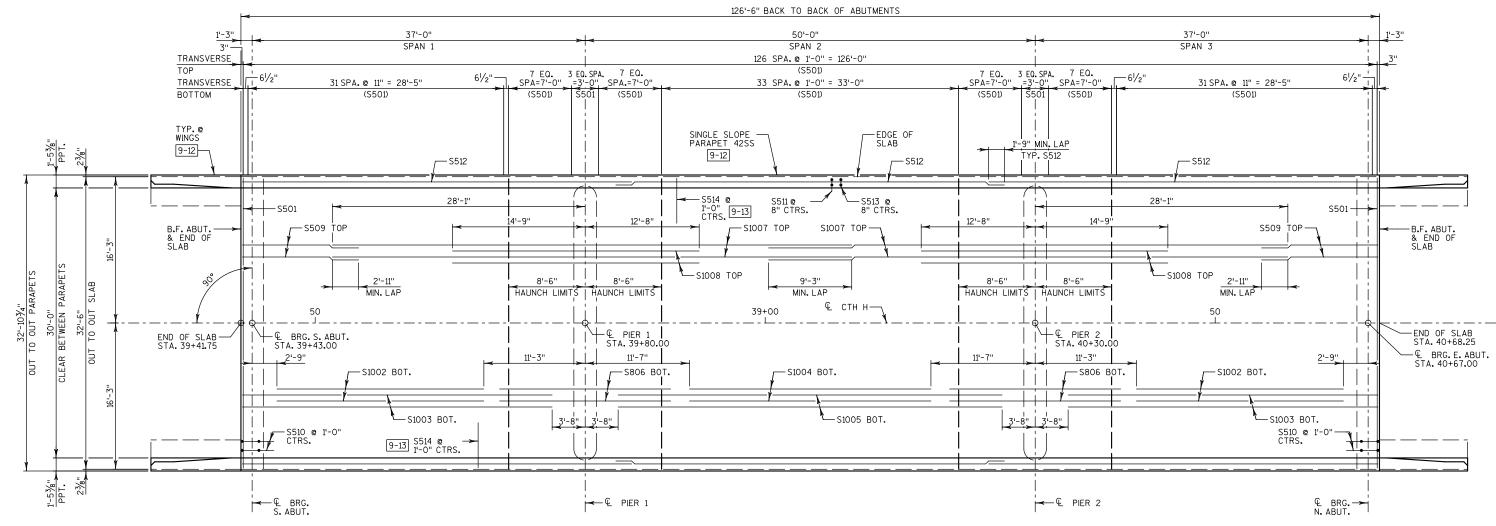
STATE PROJECT NUMBER
5827-00-71

LEGEND

9-XX SEE "SUPERSTRUCTURE DETAILS-1" SHEET FOR CALLOUTS AND NOTES.



8



PLAN

NO. DATE REVISION BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-29-166

DRAWN TKB PLANS ETP

SUPERSTRUCTURE
DETAILS-2

SHEET 10 OF 13

LEGEND

9-XX SEE "SUPERSTRUCTURE DETAILS-1" SHEET FOR CALLOUTS AND NOTES.

STATE PROJECT NUMBER

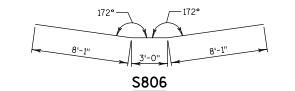
5827-00-71

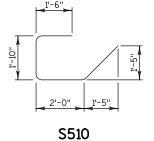
BILL OF BARS - SUPERSTRUCTURE

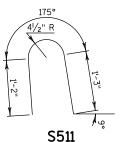
DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

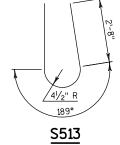
BAR	NO.		۸.	BAR		
MARK	REQ'D	LENGTH	BENT	SERIES	LOCATION	
COATED E	BARS				TOTAL WEIGHT =	= 61,600 LBS
S501	271	32'-2"			SLAB	TRANS.
S1002	52	23'-0"			SLAB - BTM. SPANS 1 & 3	LONG.
S1003	54	34'-5"			SLAB - BTM. SPANS 1 & 3	LONG.
S1004	26	26'-10"			SLAB- BTM. SPAN 2	LONG.
S1005	27	42'-8"			SLAB - BTM. SPAN 2	LONG.
S806	54	19'-2"	Х		SLAB - BTM. HAUNCH	LONG.
S1007	54	57'-9"			SLAB - TOP ALL SPANS & OVER PIERS	LONG.
S1008	52	27'-5"			SLAB - TOP OVER PIERS	LONG.
S509	54	13'-0"			SLAB - TOP SPANS 1 & 3	LONG.
S510	66	7'-1"	Х		SLAB AT ABUTMENTS	VERT.
S511	380	4'-5"	Х		PARAPET	VERT.
S512	48	43'-3"			PARAPET	HORIZ.
S513	380	6'-8"	Х		PARAPET	VERT.
S514	252	5'-0"			SLAB - TOP	TRANS

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





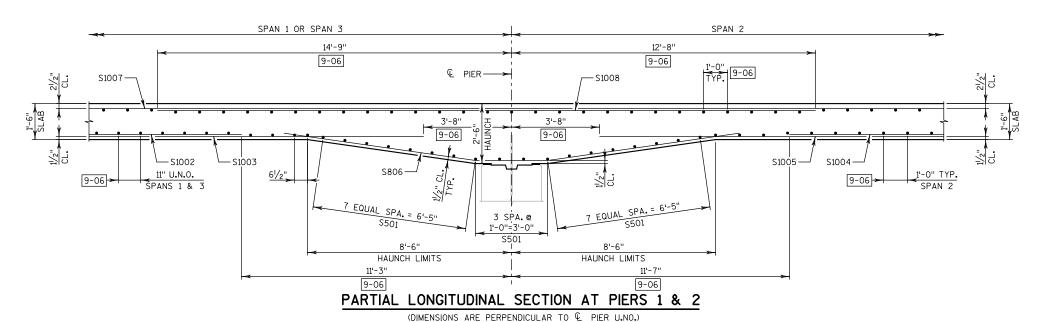


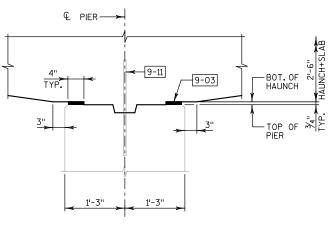


<u>\$511</u>

8

NO. DATE REVISION								
	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION							
	STRUCTURE B-29-166							
			DRAWN BY TKB		PLANS CK'D.	ETP		
S	UPE	RSTRUC	TURE	SHEE	ET 11	OF 13		
	D	ETAILS-	.3					





PIER BEARING SEAT DETAIL

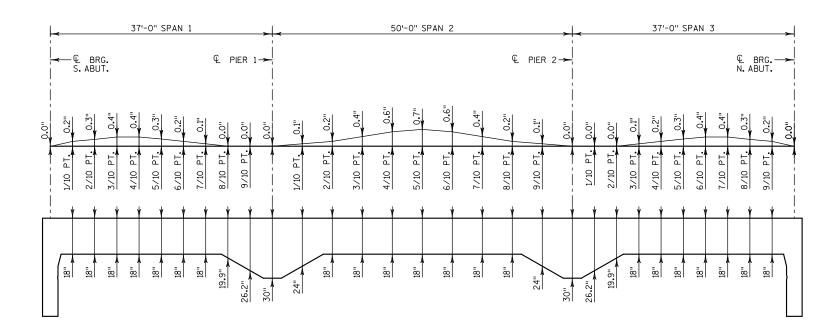
(DIMENSIONS TAKEN PERPENDICULAR TO © PIER)

STATE PROJECT NUMBER

5827-00-71

TOP OF SLAB ELEVATIONS

LOCATION	S. ABUT.	1.1 PT	1.2 PT	1.3 PT	1.4 PT	1.5 PT	1.6 PT	1.7 PT	1.8 PT	1.9 PT	PIER 1	2.1 PT	2.2 PT	2.3 PT	2.4 PT	2.5 PT	2.6 PT	2.7 PT	2.8 PT	2.9 PT	PIER 2	3.1 PT	3.2 PT	3.3 PT	3.4 PT	3.5 PT	3.6 PT	3.7 PT	3.8 PT	3.9 PT	N. ABUT.
WEST GUTTER	910.44	910.49	910.53	910.57	910.62	910.66	910.71	910.75	910.79	910.84	910.88	910.94	911.00	911.06	911.12	911.18	911.24	911.30	911.36	911.42	911.48	911.52	911.57	911.61	911.65	911.70	911.74	911.79	911.83	911.87	911.92
CENTER LINE	910.74	910.79	910.83	910.87	910.92	910.96	911.01	911.05	911.09	911.14	911.18	911.24	911.30	911.36	911.42	911.48	911.54	911.60	911.66	911.72	911.78	911.82	911.87	911.91	911.95	912.00	912.04	912.09	912.13	912.17	912.22
EAST GUTTER	910.44	910.49	910.53	910.57	910.62	910.66	910.71	910.75	910.79	910.84	910.88	910.94	911.00	911.06	911.12	911.18	911.24	911.30	911.36	911.42	911.48	911.52	911.57	911.61	911.65	911.70	911.74	911.79	911.83	911.87	911.92



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR CENTERLINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
MINUS (-) SLAB THICKNESS
PLUS (+) CAMBER
PLUS (+) FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)

EQUALS= TOP OF SLAB FALSEWORK ELEVATION.

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	S. ABUT.	5/10 PT	PIER 1	5/10 PT	PIER 2	5/10 PT	N. ABUT.
WEST GUTTER							
CROWN							
EAST GUTTER							

CAMBER NOTES:

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE & OF ABUTMENTS, THE & OF PIERS AND AT 5/10 POINTS, TO VERIFY CAMBER, TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN POINT. RECORD THE ELEVATIONS IN THE "SURVEY TOP OF SLAB ELEVATIONS" TABLE FOR THE "AS BUILT" PLANS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

NO.	DATE	RE	VISION		BY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION						
		STRUCTU	RE B-2	29-166		
		D E	RAWN Y TKB	PLAN CK'D.	IS ETP	
s	UPE	RSTRUCT	ΓURE	SHEET 1	2 OF 13	
	D	ETAILS-	4			

STATE PROJECT NUMBER

5827-00-71



DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR

	DIMENSION	12 IN REL	NDING DETA	ILS ARE	301-10-0	UT OF BAR.				
	BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION				
	COATED BARS TOTAL WEIGHT = 1,400 LBS									
	R501	8	5'-10"	Х		PARAPET - WINGS	VERT.			
	R502	8	6'-8"	Х		PARAPET - WINGS	VERT.			
	R503	48	3'-0"	Х		PARAPET - WINGS	VERT.			
	R504	68	5'-7"	Х		PARAPET - WINGS	VERT.			
	R505	20	6'-5"	X		PARAPET - WINGS	VERT.			
	R506	24	6'-6"	Х		PARAPET - WINGS	VERT.			
	R507	4	9'-7"	Х		PARAPET - WINGS	HORIZ.			
	R508	20	9'-7"			PARAPET - WINGS	HORIZ.			
13-05	R509	24	5'-5"	Х	Х	PARAPET - WINGS	VERT.			
	R510	8	9'-7"	Х		PARAPET - WINGS	HORIZ.			

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

TABLE INCLUDES BARS FOR BOTH ABUTMENTS.

R501 R502 R503 R504 R505 R507 R506 R509 R510

SEE "SUPERSTRUCTURE" SHEETS FOR REINFORCEMENT

ABUT.

13-06

-EDGE OF

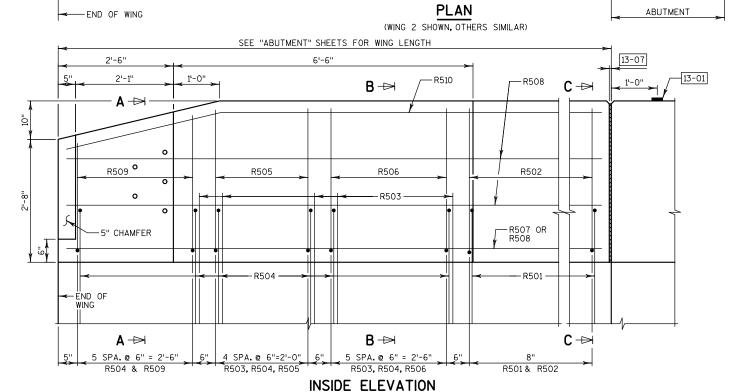
DECK

NOTES

- 13-01 BENCH MARK CAP.
- R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BBEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- 13-03 R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE DECK IS POURED.
- [13-04] CONSTRTUCTION JOINT. STRIKE OFF AS SHOWN.
- LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.
- OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINFORCEMENT THRU THE JOINT. LAP LONGITUDINAL BARS A MINIMUM OF 1'-9". MINIMUM JOINT SPACING OF 80'-0". DEFINE CONSTRUCTION JOINT WITH A 3/4"-'V'GROOVE.
- [13-07] 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE)



BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"



1'-538"

-R507

R501

13-03

R502

R508 OR

R501 13-03

R510

****—R507

13-07

R510

13-04

R506

SECTION C-C

₹ R508

-R503

-R504

13-03

SEE "ABUTMENT" SHEETS FOR WING LENGTH

R503 F.F. 13-02

6'-6"

SECTION B-B

R504 13-03

R505

9'-0"

R510 -

R508

R506

R507

-€ OF ANCHOR ASSEMBLY

-FINISH SURFACE NOT COVERED BY PARAPET SAME AS RDWY.

R504

13-03

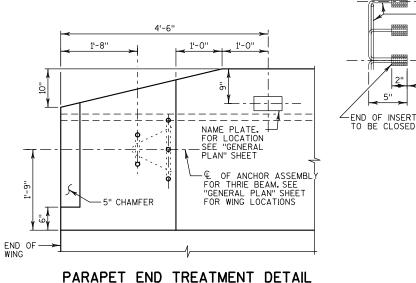
R509

2'-6"

R508

R507

SECTION A-A



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

IN ACCORDANCE WITH ASTM F2329.

THREADED INSERTS FOR $\frac{7}{8}$ " DIA. X 2" LONG GALVANIZED HEX HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF $\frac{17}{8}$ " AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF $\frac{17}{4}$ ".

%" ¢ BARS WELD TO INSERTS.

DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED

SYM. ABOUT &

ASSEMBLY

-‰"¢ BARS WELD TO INSERTS

CONCRETE

STRUCTURE B-29-166

STRUCTURE B-29-166

BRAWN TKB PLANS CKD. EP

SINGLE SLOPE
PARAPET 42SS

BY

STRUCTURE B-29-166

BY

SHEET 13 OF 13

LOOKING AT INSIDE FACE OF PARAPET

(WING 2 SHOWN, OTHERS SIMILAR)

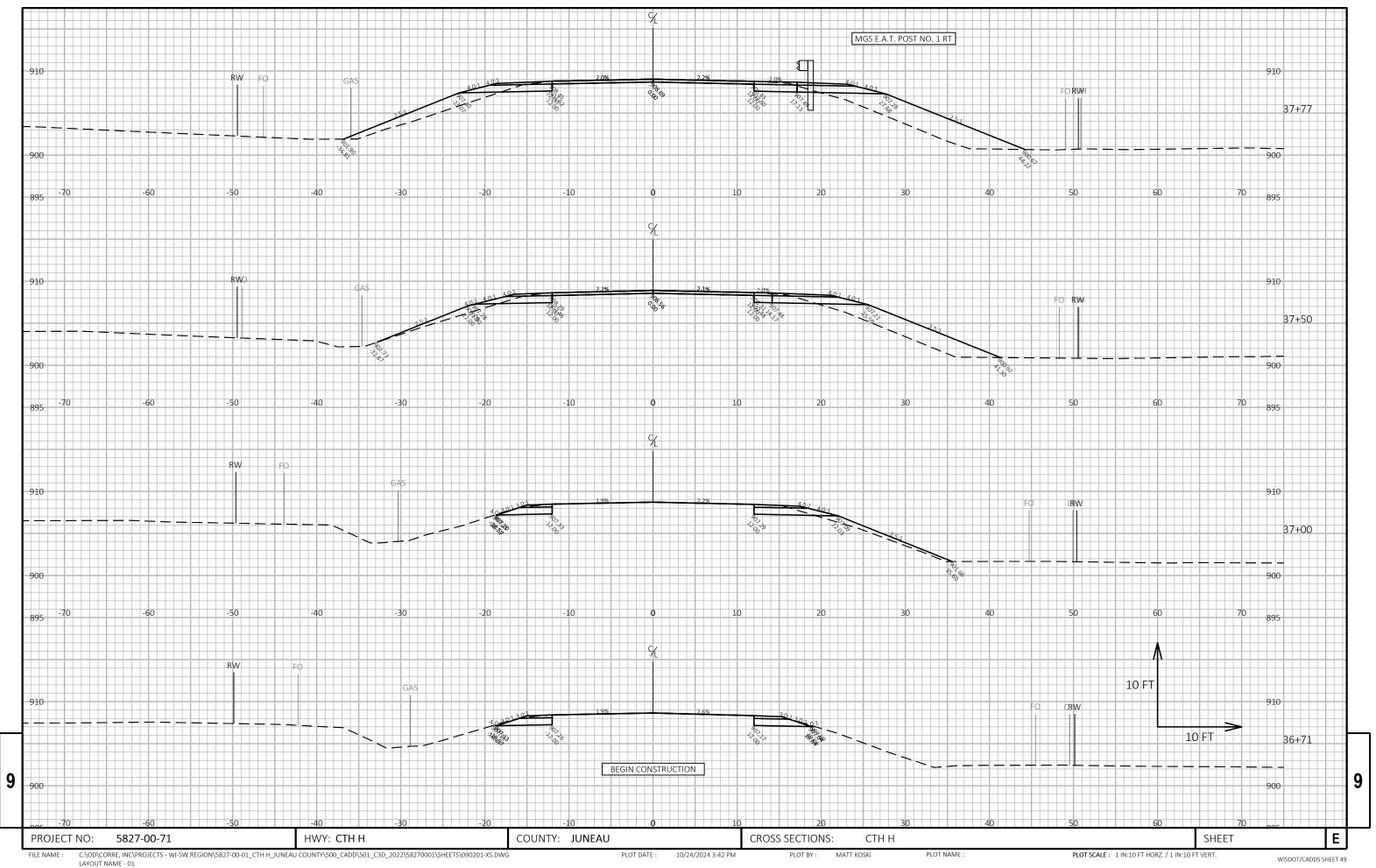
Division 1 - CTH H

			AREA	(SF)	INCREM	MENTAL VOL (CY) (UNAD	JUSTED)		CUMULAT	TIVE VOL (CY)	
STATION	REAL STATION	DISTANCE	CUT	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2		NOTE 4
36+71.00	3671.00	0.00	15.35	0.00	0	0	0	0	0	0	0
37+00.00	3700.00	29.00	15.14	6.81	16	8	4	16	8	5	3
37+50.00	3750.00	50.00	19.04	38.57	32	8	42	48	16	58	-25
37+77.20	3777.20	27.20	19.24	62.08	19	8	51	67	24	121	-78
38+00.00	3800.00	22.80	19.09	53.45	16	8	49	83	32	183	-131
38+02.19	3802.19	2.19	19.10	52.38	2	8	4	85	40	188	-142
38+27.19	3827.19	25.00	22.56	30.98	19	8	39	104	47	236	-180
38+39.88	3839.88	12.69	24.27	34.40	11	8	15	115	55	255	-195
38+50.00	3850.00	10.12	25.36	24.70	9	8	11	124	63	269	-208
38+64.75	3864.75	14.75	26.59	10.64	14	8	10	138	71	281	-214
38+89.73	3889.73	24.98	26.50	0.00	25	8	5	163	79	288	-204
39+00.00	3900.00	10.27	16.46	0.02	8	8	0	171	87	288	-203
39+10.00	3910.00	10.00	16.64	0.02	6	8	0	177	95	288	-205
39+41.75	3941.75	31.75	28.86	51.53	27	8	30	204	103	325	-224
						STRUCTURE B	-29-166				
40+68.25	4068.25	126.50	31.53	19.32	0	0	0	204	103	325	-224
40+96.00	4096.00	27.75	28.38	0.00	31	8	10	235	111	338	-213
41+00.00	4100.00	4.00	28.34	0.00	4	8	0	239	119	338	-218
41+20.27	4120.27	20.27	27.80	0.00	21	8	0	260	127	338	-205
41+45.25	4145.25	24.98	23.45	11.99	24	8	6	284	135	345	-196
41+50.00	4150.00	4.75	22.09	12.66	4	8	2	288	144	348	-203
41+70.19	4170.19	20.19	19.61	21.09	16	8	13	304	152	364	-212
41+82.75	4182.75	12.56	19.29	17.29	9	8	9	313	160	375	-222
42+00.00	4200.00	17.25	19.06	18.32	12	8	11	325	168	389	-232
42+07.75	4207.75	7.75	19.19	32.79	5	8	7	330	176	398	-244
42+32.75	4232.75	25.00	18.89	25.10	18	8	27	348	185	431	-268
42+50.00	4250.00	17.25	18.96	13.18	12	8	12	360	193	446	-279
42+73.00	4273.00	23.00	15.22	0.00	15	8	6	375	201	454	-280

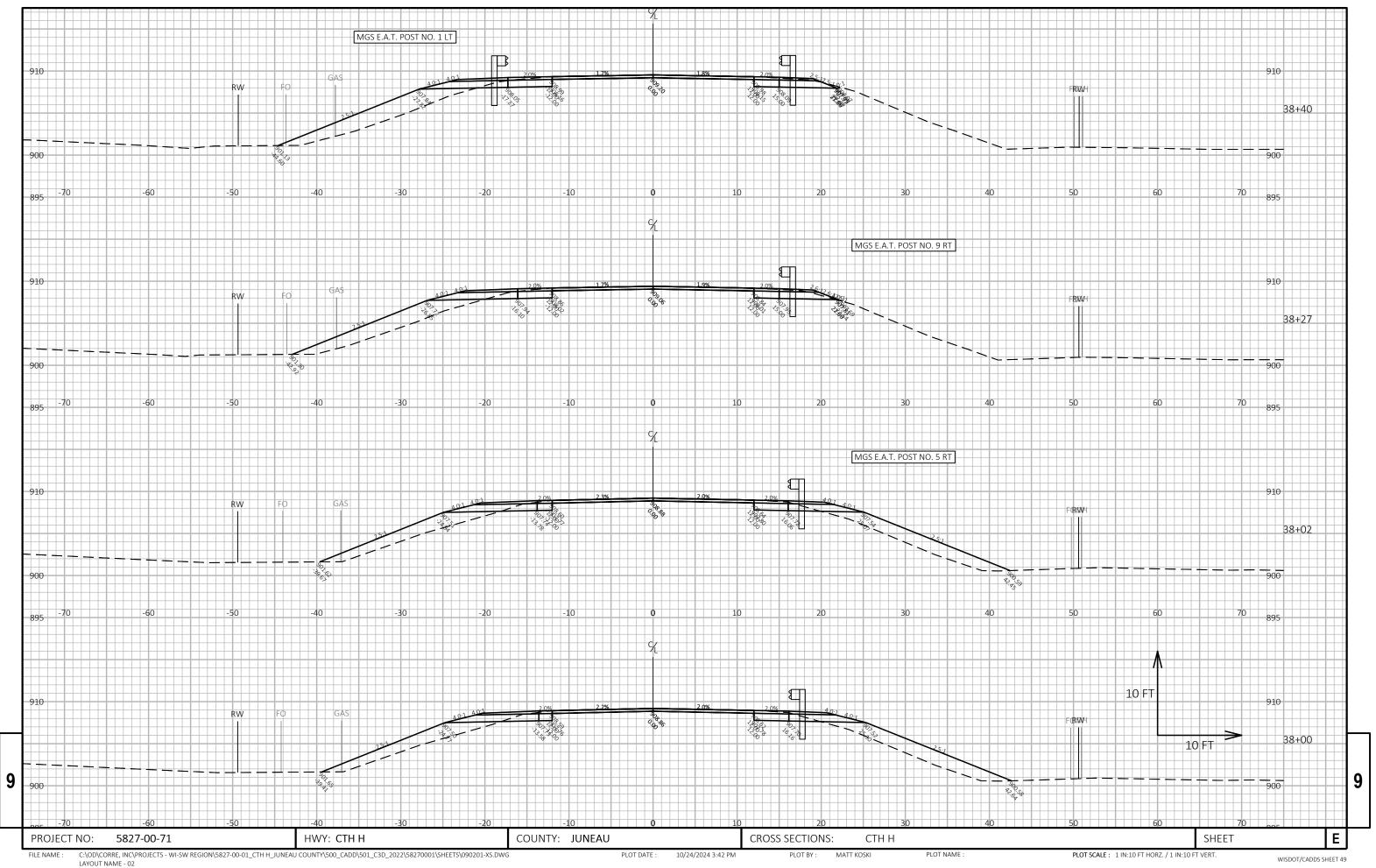
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3-FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT - SALVAGED PAVT) - (FILL * FILL FACTOR)

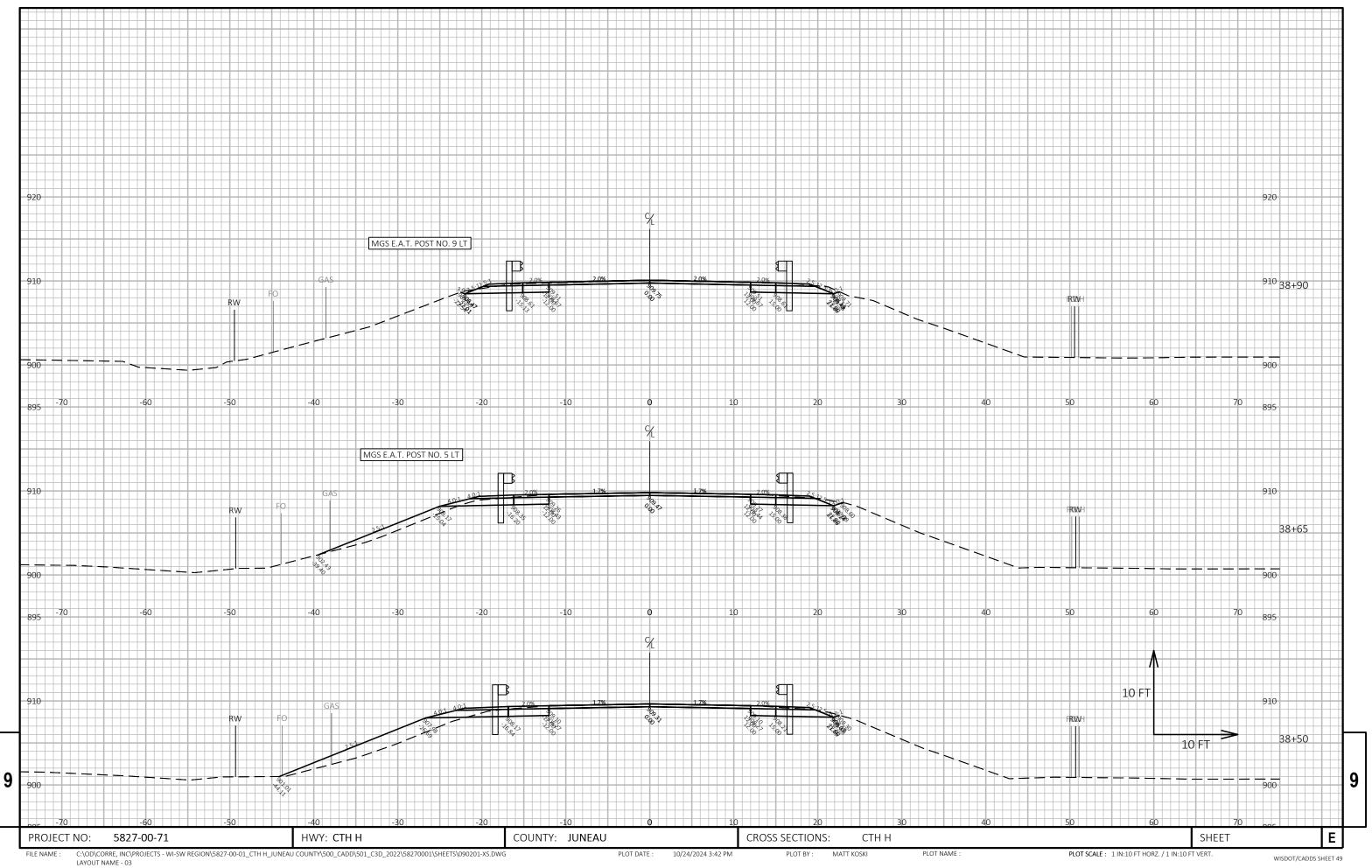
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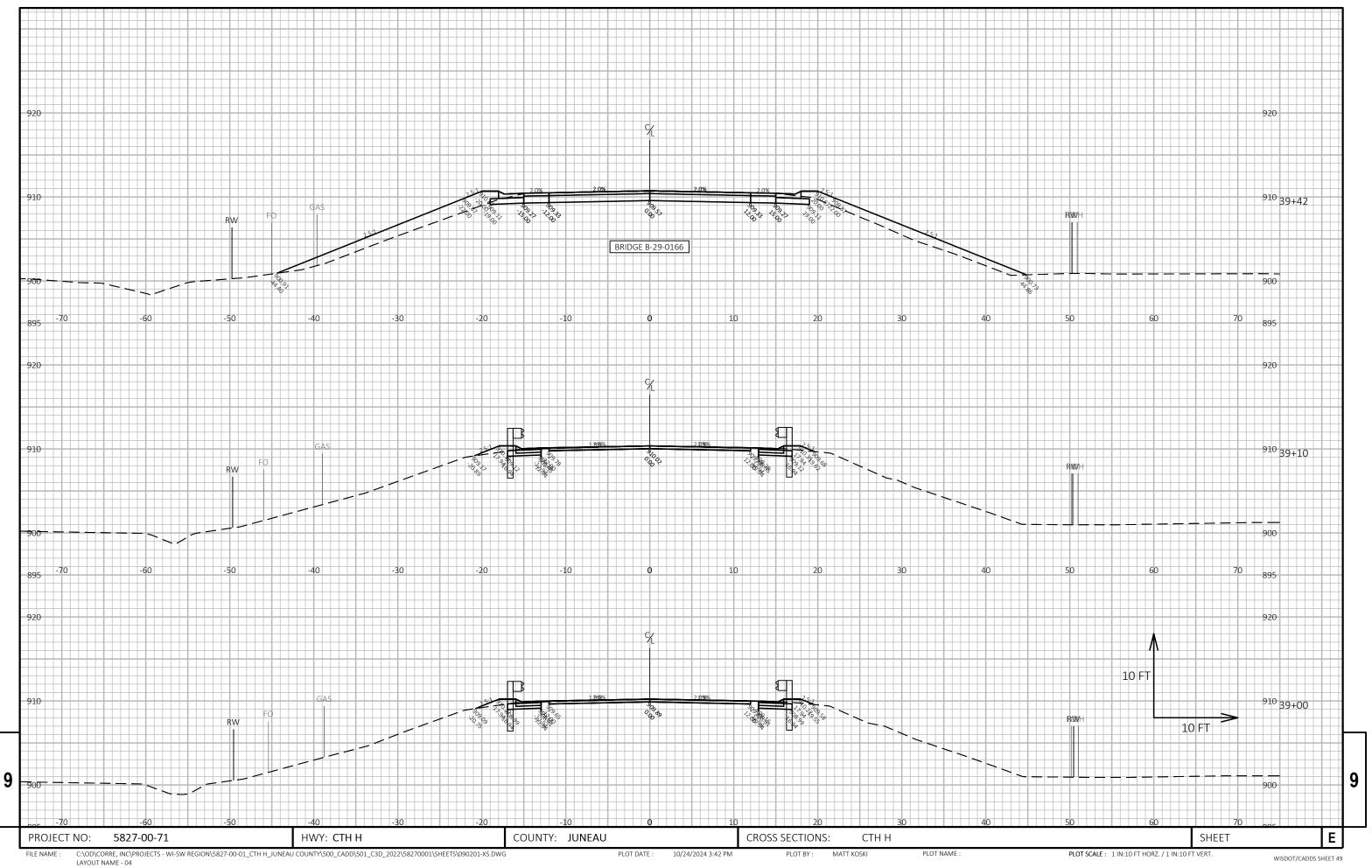
SHEET HWY: CTH H COUNTY: JUNEAU Ε PROJECT NO: 5827-00-71 EARTHWORK DATA

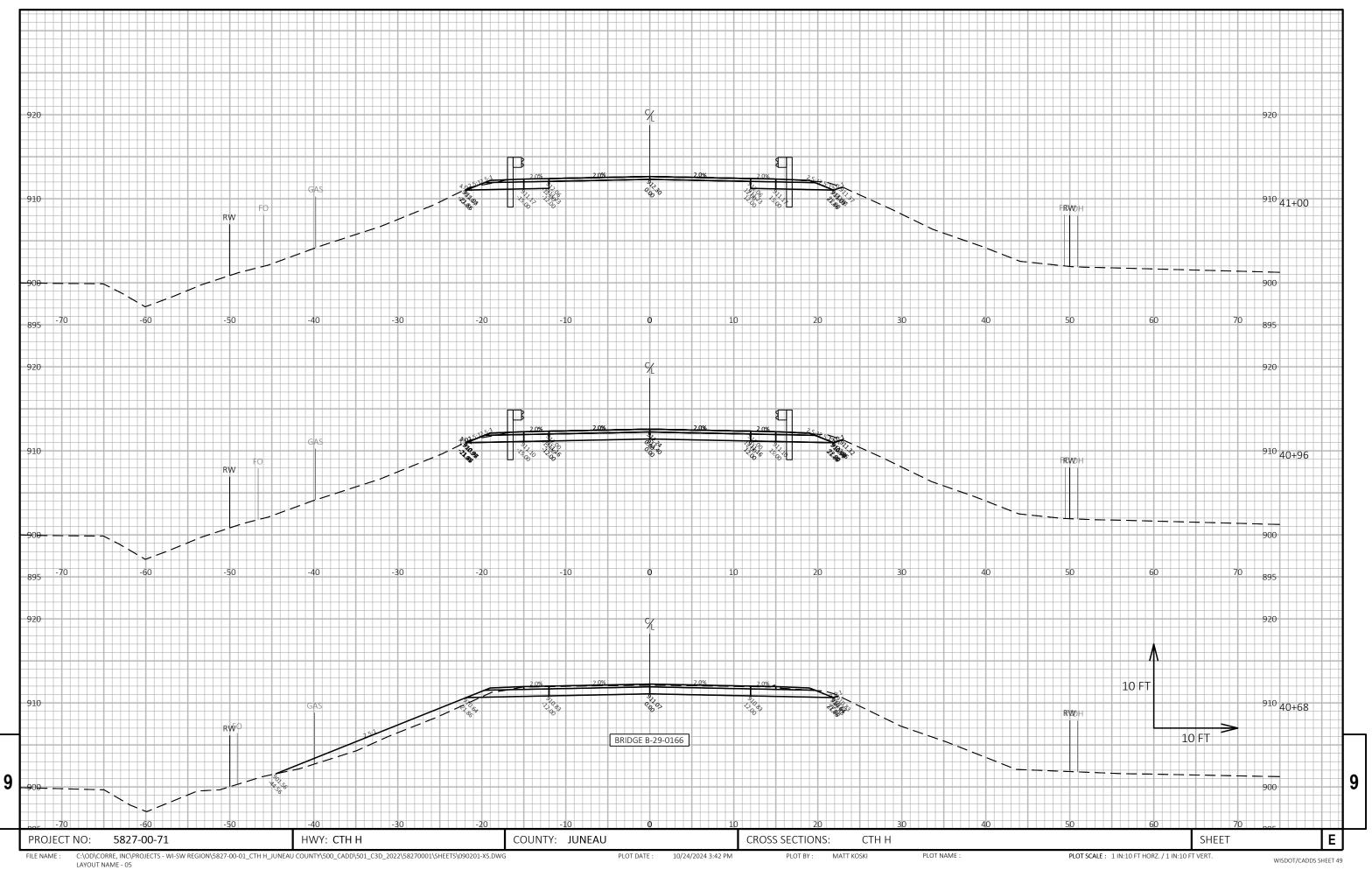


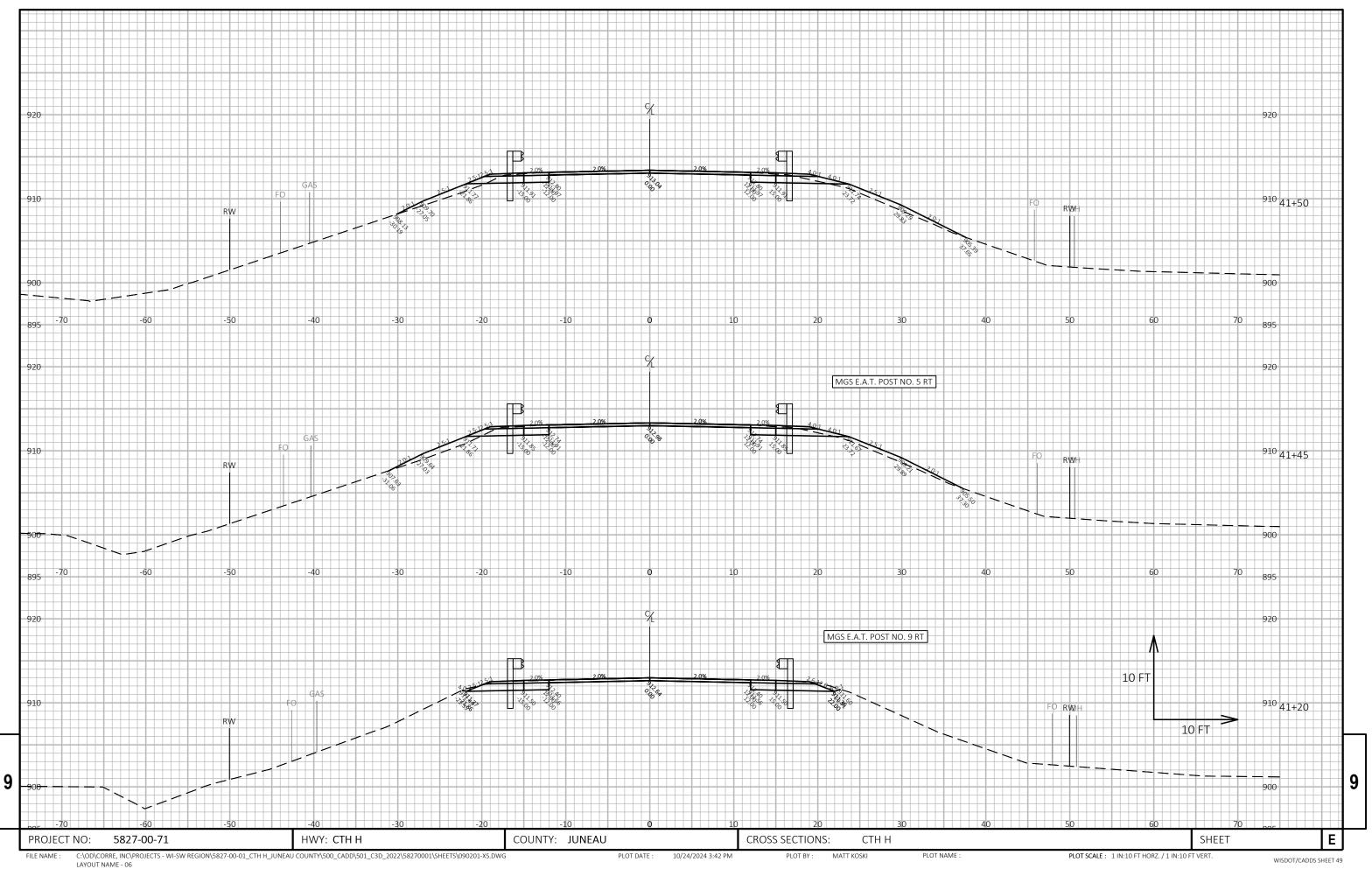
EATOUT NAWE - 01

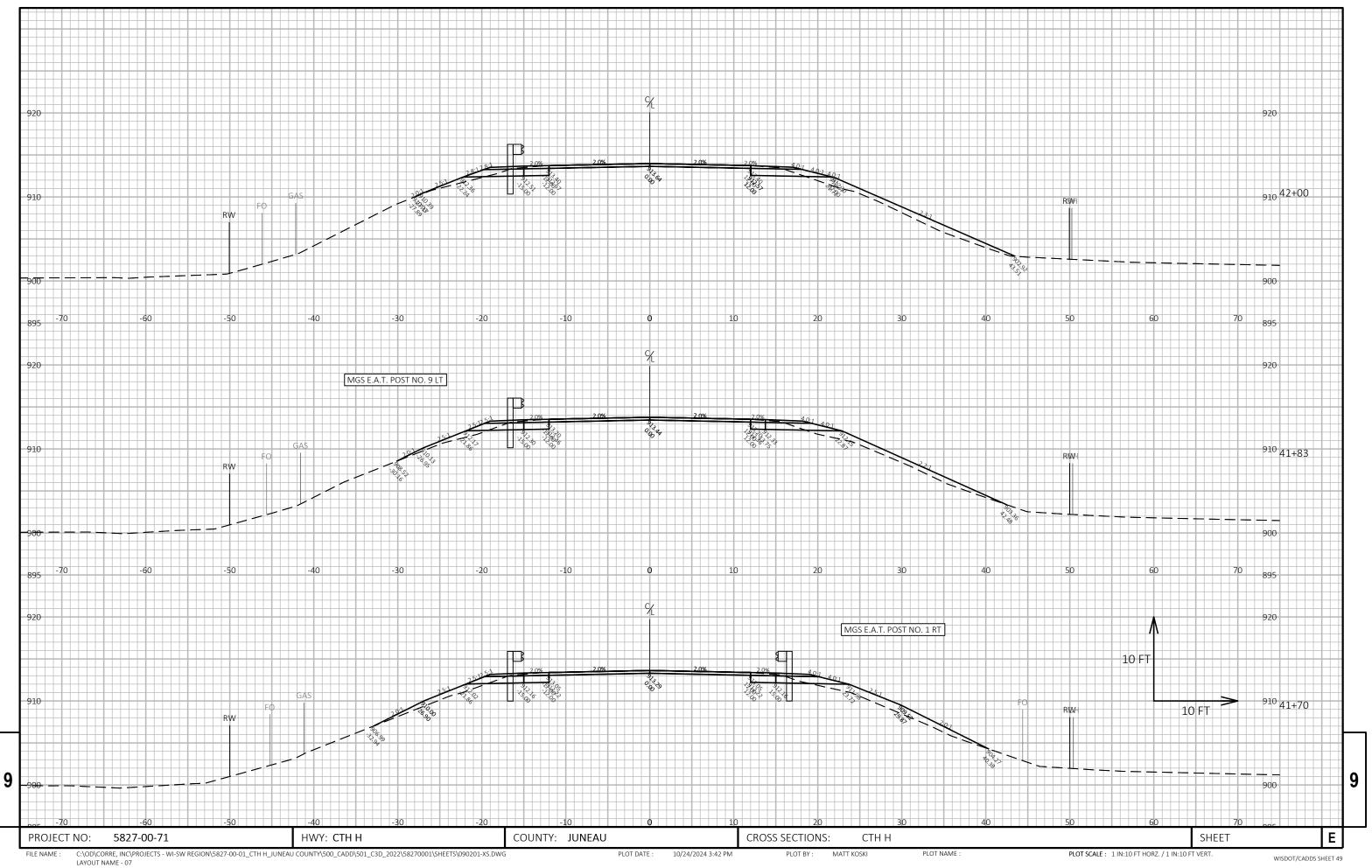


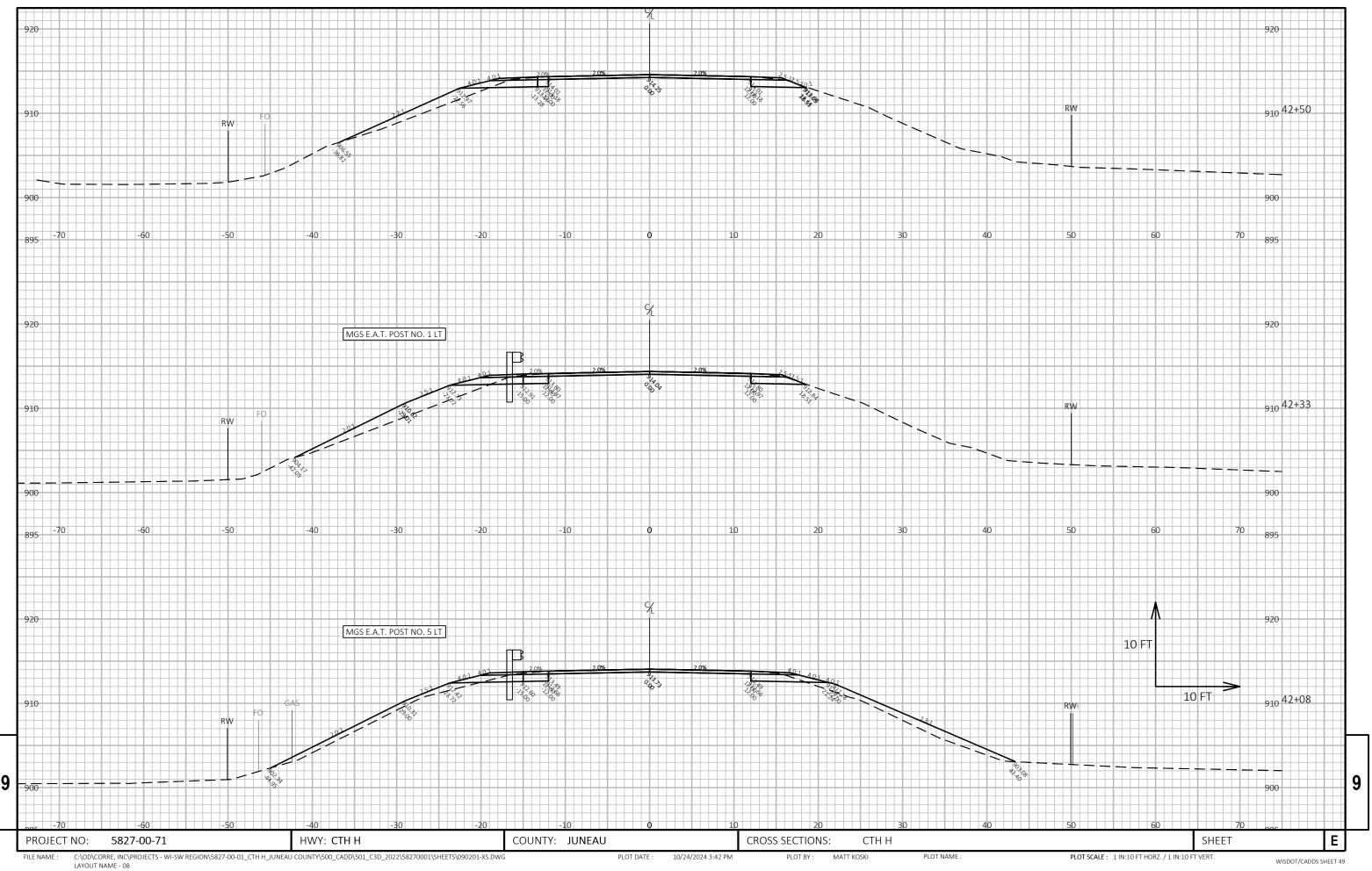


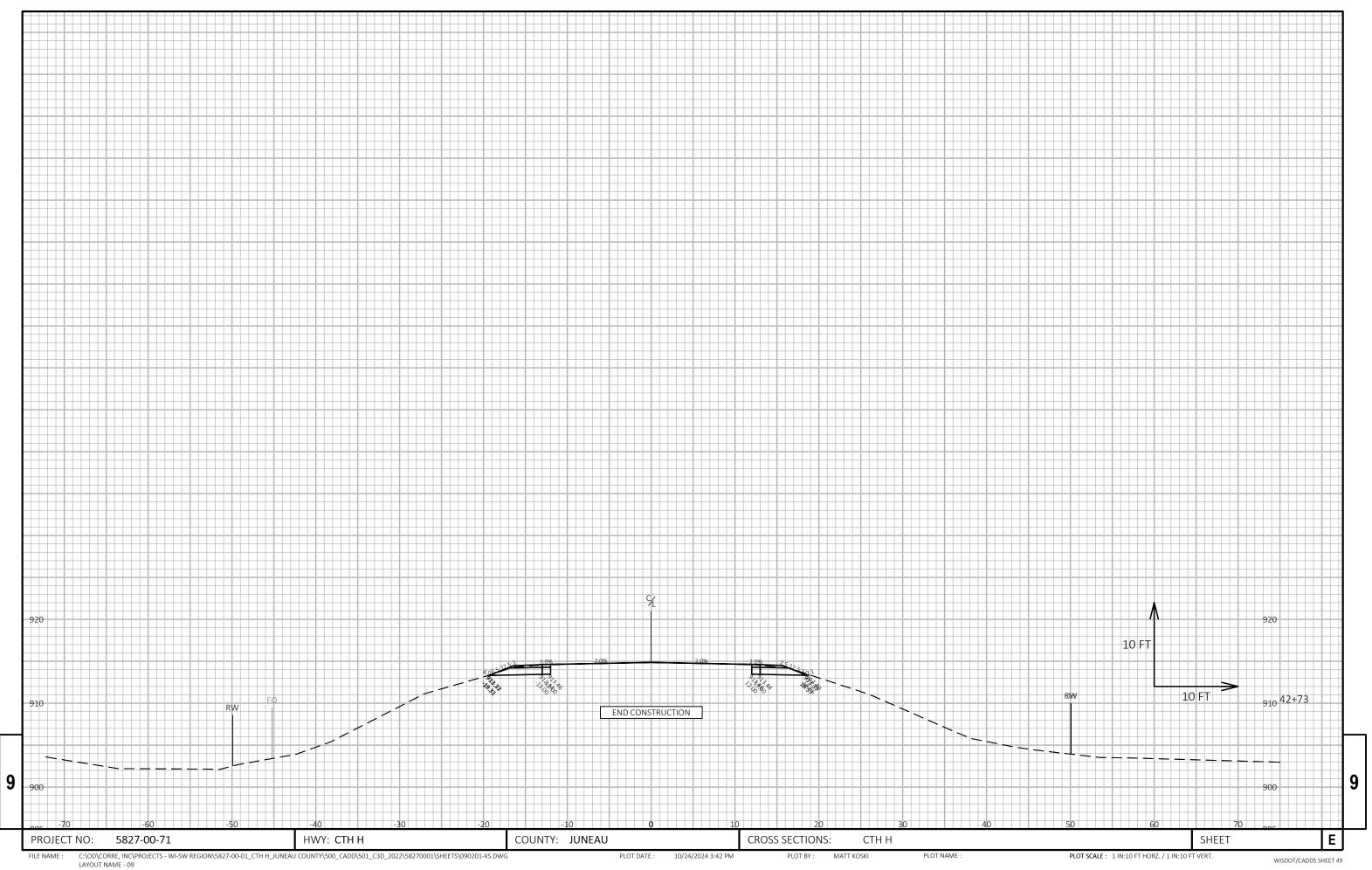












LATOUT NAINE - US



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

http://www.dot.wisconsin.gov