JANUARY 2025

Section No.

Section No.

Section No.

Section No.

Section No. Section No.

Section No.

Section No.

TOTAL SHEETS = 46

DESIGN DESIGNATION 5165-00-02

CONVENTIONAL SYMBOLS

2025 = 270

= 325

= 30

= 60/40 = 10%

= 40 M.P.H

AADT

A.A.D.T.

DESIGN SPEED

D.H.V.

PLAN

LOTTINE

CORPORATE LIMITS

LIMITED HIGHWAY EASEMENT

PROPOSED OR NEW R/W LINE

EXISTING RIGHT OF WAY

SLOPE INTERCEPT

REFERENCE LINE

EXISTING CULVERT

PROPOSED CULVERT (Box or Pipe)

COMBUSTIBLE FLUIDS

WOODED OR SHRUB AREA

MARSH AREA

PROPERTY LINE

D.D.

ORDER OF SHEETS

Typical Sections and Details

Estimate of Quantities

Miscellaneous Quantities

Standard Detail Drawings

Computer Earthwork Data

Cross Sections

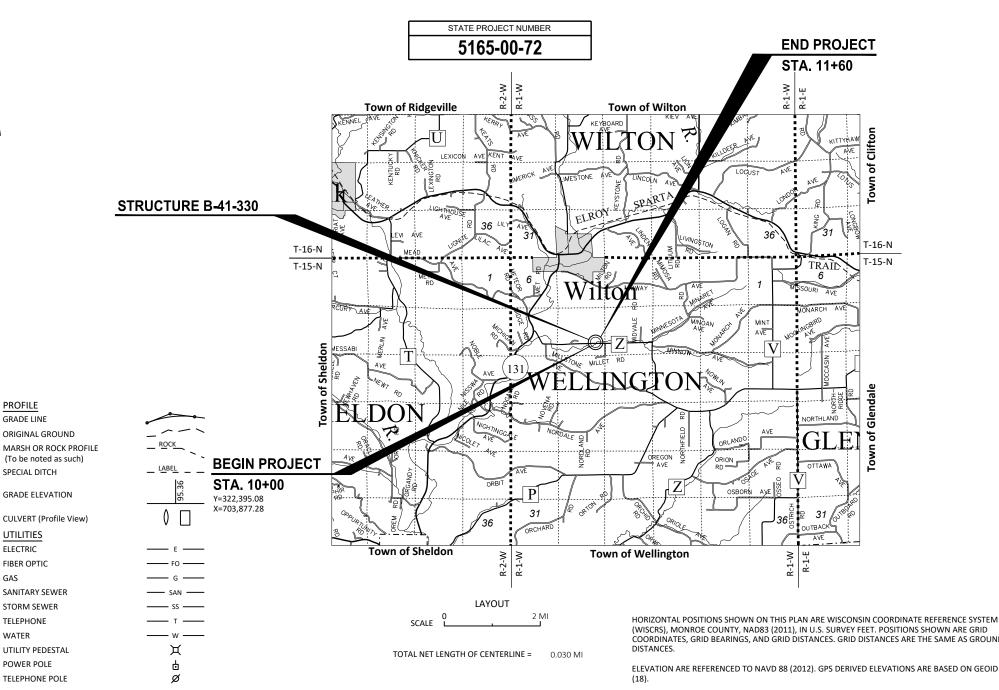
STATE OF WISCONSIN **DEPARTMENT OF TRANSPORTATION**

PLAN OF PROPOSED IMPROVEMENT

CTH P - STH 131 (CTH Z)

POE CREEK BRIDGE B-41-0330

CTH Z **MONROE COUNTY**



FEDERAL PROJECT STATE PROJECT CONTRACT 5165-00-72

COUNTY ORIGINAL PLANS PREPARED BY Engineers - Architects - Surveyors HANOLD PRAIRIE DU SAC

STATE OF WISCONSIN **DEPARTMENT OF TRANSPORTATION**

E-45655

SONAL EN

7/18/2024

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ACCEPTED FOR

MONROE

PREPARED BY JEWELL ASSOCIATES ENGINEERS, INC. Surveyor Designer KYLE HEMP, P.E

PPROVED FOR THE DEPARTMENT DATE:_7/30/24

<u>//////</u>

PROFILE

GRADE LINE

SPECIAL DITCH

UTILITIES

FIBER OPTIC

SANITARY SEWER

STORM SEWER

UTILITY PEDESTAL

TELEPHONE POLE

POWER POLE

TELEPHONE

FLECTRIC

GRADE ELEVATION

ORIGINAL GROUND

GENERAL NOTES

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

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

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

UNLESS SHOWN OTHERWISE, DISTURBED AREAS SHOWN WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND MULCHED AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60. DO NOT FERTILIZE WETLAND AREAS.

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

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

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

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

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE EQUIPMENT OR STOCKPILE MATERIALS BEYOND THE EXISTING SLOPE INTERCEPT FROM STA. 10+28 - STA. 10+73 RT., STA. 10+36 - STA. 10+68 LT., AND STA. 10+80 - STA. 11+20 LT.

ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING 112 LB/SY/IN.

CURVE DATA IS BASED ON THE ARC DEFINITIONS.

ADD TACK COAT AT A RATE OF 0.05 GAL/SY.

CONTACTS

MONOROE COUNTY HIGHWAY DEPARTMENT:

DAVID OHNSTAD, COMMISSIONER 803 WASHINGTON STREET SPARTA, WI 54656 PHONE: (608) 269-8740 EMAIL: david.ohnstad@monoroe.wi.gov

WISCONSIN DEPT. OF TRANSPORTATION

WISDOT PROJECT MANAGER 2101 WRIGHT STREET MADISON, WI 53704 ATTN: RANDY BYOM, P.E. PHONE: (608) 785-9966 EMAIL: randy.byom@dot.wi.gov

DESIGN CONSULTANT:

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

DNR LIAISON:

DNR NORTHWEST REGION HEADQUARTERS
3550 MORMON COULEE RD
LA CROSSE, WI 54601
ATTN: KAREN KALVELAGE
PHONE: (608) 406-7880
EMAIL: Karen.kalvelage@wisconsin.gov

UTILITIES

ELECTRIC

ALLIANT ENERGY ATTN: PETER FRITZ 528 INDUSTRIAL AVE TOMAH, WI 54660 PHONE: (608) 963-5676 EMAIL: PETERFRITZ@ALLIANTENERGY.COM

COMMUNICATION LINE

BRIGHTSPEED
ATTN: THOMAS MURRAY
333 NORTH FRONT STREET
LA CROSSE, WI 54601
PHONE: (980) 376-1555
EMAIL: TOM.L.MURRAY@BRIGHTSPEED.COM



LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	RDWY	Roadway
AC	Acre	IP	Iron Pipe or Pin	SALV	Salvaged
AGG	Aggregate	IRS	Iron Rod Set	SAN S	Sanitary Sewer
AH	Ahead	JT	Joint	SEC	Section
<	Angle	JCT	Junction	SHLDR	Shoulder
ASPH	Asphaltic	LHF	Left-Hand Forward	SHR	Shrinkage
AVG	Average	L	Length of Curve	SW	Sidewalk
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	S	South
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SQ	Square
BK	Back	MH	Manhole	SF or SQ FT	Square Feet
BF	Back Face	MB	Mailbox	SY or SQ YD	Square Yard
BM	Bench Mark	ML or M/L	Match Line	STD	Standard
BR	Bridge	N	North	SDD	Standard Detail Drawings
C or C/L	Center Line	Υ	North Grid Coordinate	STH	State Trunk Highways
cc	Center to Center	O.A.L.	Overall Length	STA	Station
CTH	County Trunk Highway	OD	Outside Diameter	SS	Storm Sewer
CR	Creek	PLE	Permanent Limited Easement	SG	Subgrade
CR	Crushed	PT	Point	SE	Superelevation
CY or CU YD	Cubic Yard	PC	Point of Curvature	SL or S/L	Survey Line
CP	Culvert Pipe	PI	Point of Intersection	SV	Septic Vent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	Ť	Tangent
D	Degree of Curve	PT	Point of Tangency	TEL	Telephone
DHV	Design Hour Volume	POC	Point On Curve	TEMP	Temporary
DIA	Diameter	POT	Point on Tangent	TI	Temporary Interest
E	East	PVC	Polyvinyl Chloride	TLE	Temporary Limited Easement
Χ	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Transit Line
EBS	Excavation Below Subgrade	R	Radius	Τ	Trucks (percent of)
ESTR	Existing Sign to Remain	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP RP	Reference Point	USH	United States Highway
FG	Finished Grade	RCCP	Reinforced Concrete Culvert	VAR	Variable
FL or F/L	Flow Line	11001	Pipe	V	Velocity or Design Speed
FT	Foot	REQ'D	Required	VERT	Vertical
FTG	Footing	RES	Residence or Residential	VC	Vertical Curve
GN	Grid North	RW	Retaining Wall	VOL	Volume
HT	Height	RT	Right	WM	Water Main
CWT	Hundredweight	RHF	Right-Hand Forward	WV	Water Valve
HYD	Hydrant	R/W	Right-of-Way	W	West
INL	Inlet	R	River	WB	Westbound
ID	Inside Diameter	RD	Road	YD	Yard

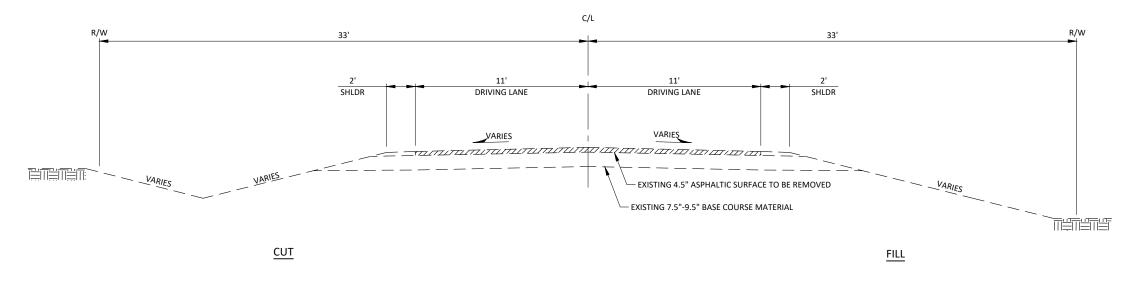
	HYDROLOGIC SOIL GROUP												
		A	A		В			С			D		
	,		RANGE CENT)	;	SLOPE RANGE (PERCENT)		SLOPE RANGE (PERCENT)		SLOPE RANGE (PERCENT)		-		
LAND USE	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56	
MEDIAN STRIP TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40	
SIDE SLOPE TURF			.25 .32			.27 .34			.28 .36			.30 .38	
PAVEMENT													
ASPHALT						.709	95						
CONCRETE						.809	95						
BRICK						.708	30						
DRIVES, WALKS	DRIVES, WALKS .7585												
ROOFS	ROOFS .7595												
GRAVEL ROADS, S	HOULE	DERS				.406	50						

TOTAL PROJECT AREA= 0.24 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.21 ACRES

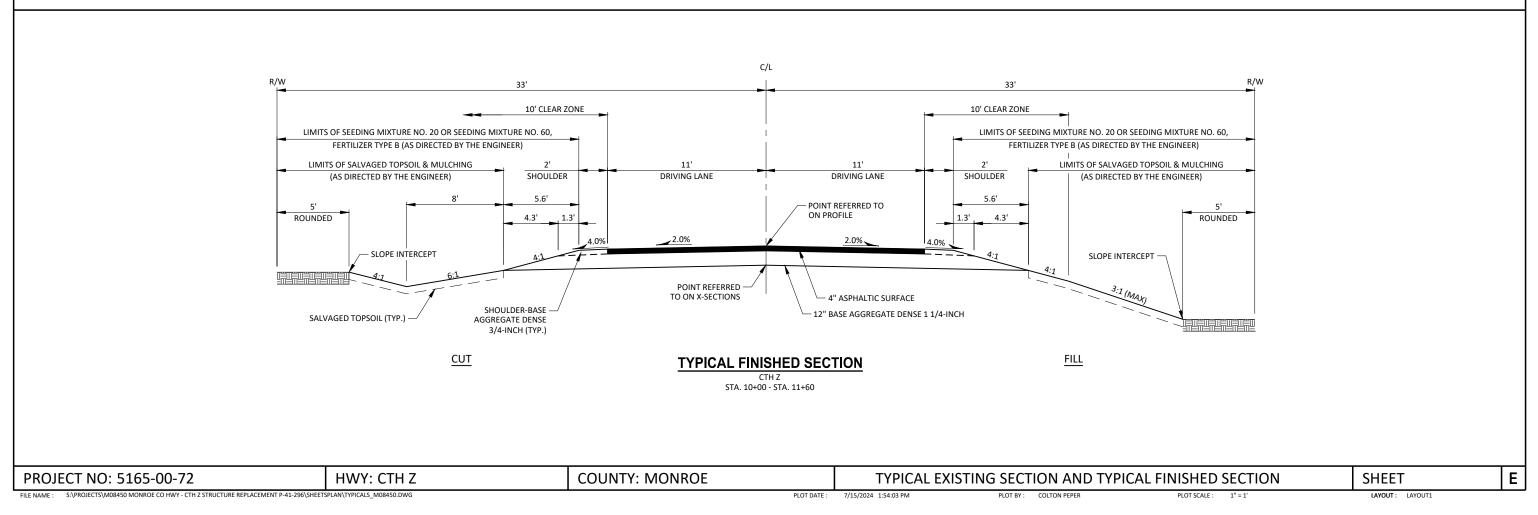
PROJECT NO: 5165-00-72 HWY: CTH Z COUNTY: MONROE GENERAL NOTES, UTILITIES, CONTACTS, & ABBREVIATIONS SHEET **E**

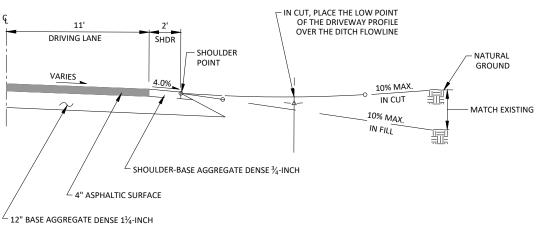




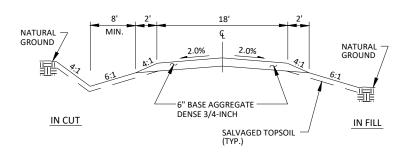
TYPICAL EXISTING SECTION

CTH Z STA. 10+00 - STA. 11+60

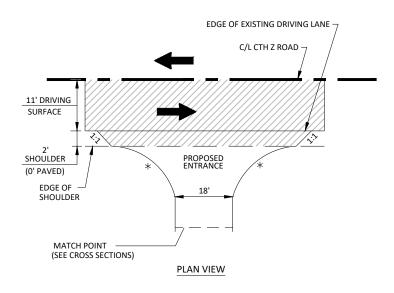




TYPICAL F.E. PROFILE



TYPICAL CROSS-SECTION FOR F.E.

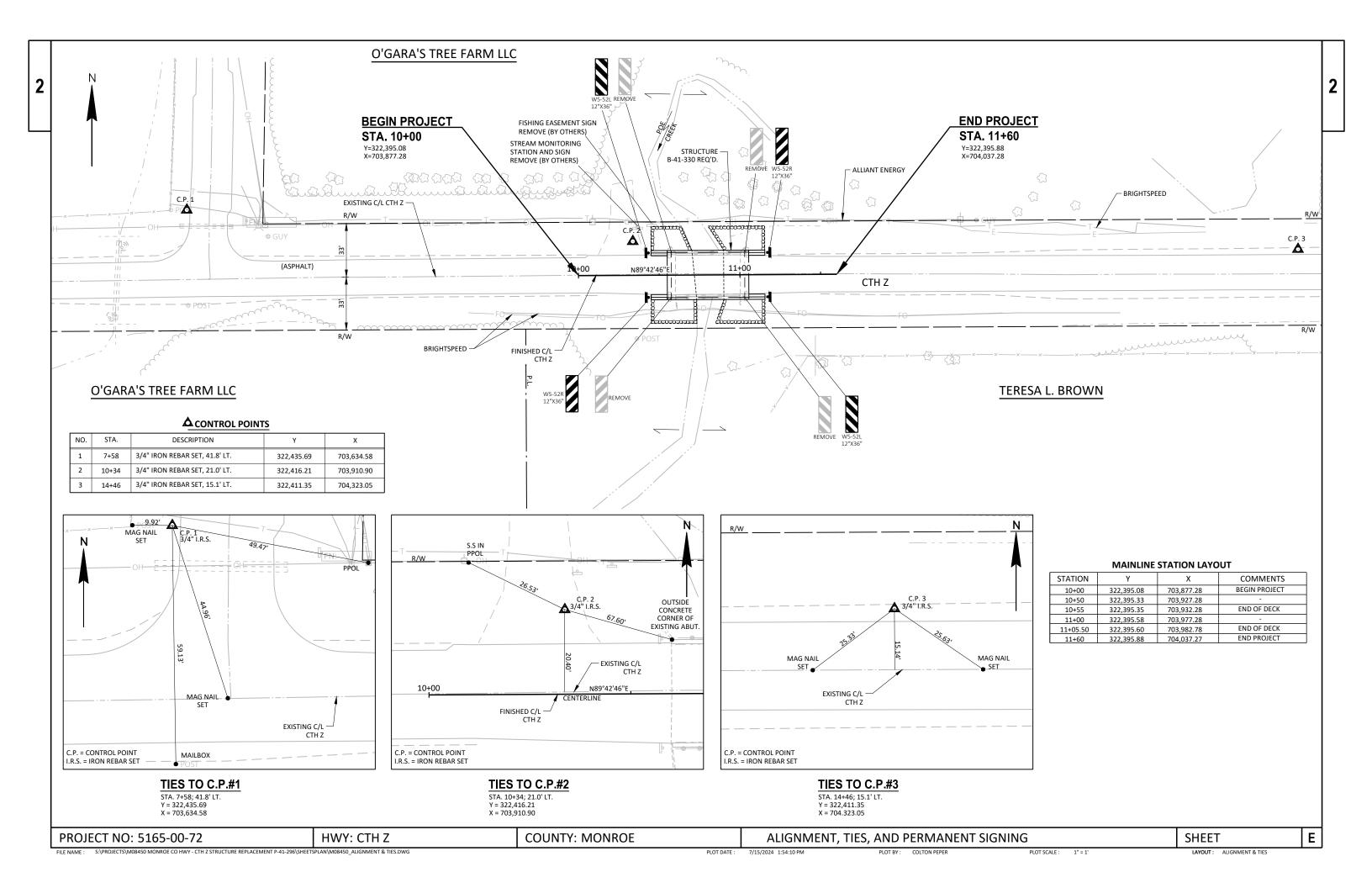


APPROACH AT F.E.

TYPICAL FIELD ENTERANCE (F.E.) DETAILS

LIMITS OF ASPHALTIC SURFACE * RADIUS = 20'

COUNTY: MONROE PROJECT NO: 5165-00-72 **CONSTRUCTION DETAILS** E HWY: CTH Z **SHEET** LAYOUT: LAYOUT1



E 4	CE	$\Delta \Delta$	70
O I	65-	・いい・	-//

					5165-00-72	
Line	Item	Item Description	Unit	Total	Qty	
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-41-0296	EACH	1.000	1.000	
0004	205.0100	Excavation Common	CY	160.000	160.000	
0006	205.0508.S	Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil 01. 5165-00-72	TON	350.000	350.000	
8000	206.1001	Excavation for Structures Bridges (structure) 01. B-41-0330	EACH	1.000	1.000	
0010	210.1500	Backfill Structure Type A	TON	260.000	260.000	
0012	213.0100	Finishing Roadway (project) 01. 5165-00-72	EACH	1.000	1.000	
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	25.000	25.000	
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	300.000	300.000	
0018	455.0605	Tack Coat	GAL	15.000	15.000	
0020	465.0105	Asphaltic Surface	TON	78.000	78.000	
0022	502.0100	Concrete Masonry Bridges	CY	178.000	178.000	
0024	502.3200	Protective Surface Treatment	SY	220.000	220.000	
0026	505.0400	Bar Steel Reinforcement HS Structures	LB	3,700.000	3,700.000	
0028	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	25,410.000	25,410.000	
0030	513.4061	Railing Tubular Type M	LF	146.000	146.000	
0032	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000	
0034	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	250.000	250.000	
0036	606.0300	Riprap Heavy	CY	235.000	235.000	
0038	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	140.000	140.000	
0040	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5165-00-72	EACH	1.000	1.000	
0042	619.1000	Mobilization	EACH	1.000	1.000	
0044	624.0100	Water	MGAL	5.000	5.000	
0046	625.0500	Salvaged Topsoil	SY	300.000	300.000	
0048	627.0200	Mulching	SY	300.000	300.000	
0050	628.1504	Silt Fence	LF	365.000	365.000	
0052	628.1520	Silt Fence Maintenance	LF	730.000	730.000	
0054	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000	
0056	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000	
0058	628.6005	Turbidity Barriers	SY	220.000	220.000	
0060	629.0210	Fertilizer Type B	CWT	1.000	1.000	
0062	630.0120	Seeding Mixture No. 20	LB	9.000	9.000	
0064	630.0160	Seeding Mixture No. 60	LB	2.000	2.000	
0066	630.0200	Seeding Temporary Seed Water	LB	9.000	9.000	
0068	630.0500		MGAL	9.000	9.000	
0070	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH SF	4.000	4.000	
0072		Signs Type II Reflective F	•	12.000	12.000	
0074	638.2602	Removing Signs Type II	EACH EACH	4.000	4.000 4.000	
0076	638.3000	Removing Small Sign Supports	EACH	4.000 1.000	1.000	
0078	642.5001	Field Office Type B				
0800	643.0420	Traffic Control Marriage Lights Type III	DAY DAY	1,135.000	1,135.000	
0082	643.0705 643.0900	Traffic Central Signs		1,765.000 885.000	1,765.000	
0084		Traffic Control	DAY		885.000	
0086	643.5000	Traffic Control	EACH	1.000	1.000	
8800	645.0111	Geotextile Type UR	SY	50.000	50.000	
0090	645.0120	Geotextile Type HR	SY LF	395.000	395.000	
0092	646.1020	Marking Line Epoxy 4-Inch Construction Staking Subgrade	LF	40.000 110.000	40.000 110.000	
0094	650.4500	Construction Staking Subgrade Construction Staking Base	LF	110.000	110.000	
0096	650.5000	Construction Staking Dase	LF	1 10.000	110.000	

11/19/2024 11:33:28

Page 2 **Estimate Of Quantities**

Line	Item	Item Description	Unit	Total	Qty
0098	650.6501	Construction Staking Structure Layout (structure) 01. B-41-0330	EACH	1.000	1.000
0100	650.9911	Construction Staking Supplemental Control (project) 01. 5165-00-72	EACH	1.000	1.000
0102	650.9920	Construction Staking Slope Stakes	LF	110.000	110.000
0104	690.0150	Sawing Asphalt	LF	44.000	44.000
0106	715.0502	Incentive Strength Concrete Structures	DOL	1,068.000	1,068.000
0108	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+75	EACH	1.000	1.000

EARTHWORK SUMMARY

EXCAVATION, HAULING, AND DISPOSAL OF POTENTIAL CREOSOTE CONTAMINATED SOIL

STATION-STATION 10+55 - 10+60 11+00 - 11+05	LOCATION MAINLINE MAINLINE	205.0508.8 (TON) 180 170
	TOTALS =	350

					EXPANDED		
		205.0100			FILL	MASS	
		EXCAVATION COMMON (1)	AVAILABLE	UNEXPANDED	(CY)	ORDINATE	
		CUT	MATERIAL	FILL	FACTOR	+/-	WASTE
FROMTO STA	LOCATION	(CY)	(CY)	(CY)	1.25 (2)	(CY)(3)	(CY)
STA. 10+00 - STA. 11+60	MAINLINE	160	160	4	5	155	155
	TOTALS =	160	160	4	5	155	155

NOTES:

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

BASE AGGREGATE DENSE

		305.0110	305.0120
		BASE AGGREGATE	BASE AGGREGATE
		DENSE 3/4-INCH	DENSE 1 1/4-INCH
STATION - STATION	LOCATION	(TON)	(TON)
10+00 - 11+60	MAINLINE	14	300
10+27	FIELD ENTRANCE	11	
	TOTALS =	25	300

ASPHALTIC SURFACE

		455.0605	465.0105
		TACK COAT	ASPHALTIC SURFACE
STATION - STATION	LOCATION	(GAL)	(TON)
10+00 - 11+60	MAINLINE	15	78
	TOTALS =	15	78

WATER

		624.0100
STATION-STATION	LOCATION	(MGAL)
10+00 - 11+60	MAINLINE	5
	TOTALS =	5

SILT FENCE

_;	STATION - STATION 10+00 - 10+62 10+00 - 10+73 10+80-11+60 10+80-11+60 UNDISTRIBUTED	LOCATION MAINLINE, LT MAINLINE, RT MAINLINE, LT MAINLINE, RT -	628.1504 SILT FENCE (LF) 48 78 85 80 74	628.1520 SILT FENCE MAINTENANCE (LF) 96 156 170 160 148
	TOTALS =		365	730

MOBILIZATION EROSION CONTROL

	628.1905	628.1910
	MOBILIZATIONS	MOBILIZATIONS EMERGENCY
	EROSION CONTROL	EROSION CONTROL
PROJECT	(EACH)	(EACH)
5165-00-72	4	2
TOTAL	S = 4	2

PLOT DATE: 7/31/2024 9:18:09 AM

TURBIDITY BARRIERS

TURBIDITY BARRIERS LOCATION (SY) EAST RIVER BANK WEST RIVER BANK 92 UNDISTRIBUTED 44

220

628.6005

PROJECT NO: 5165-00-72

HWY: CTH Z

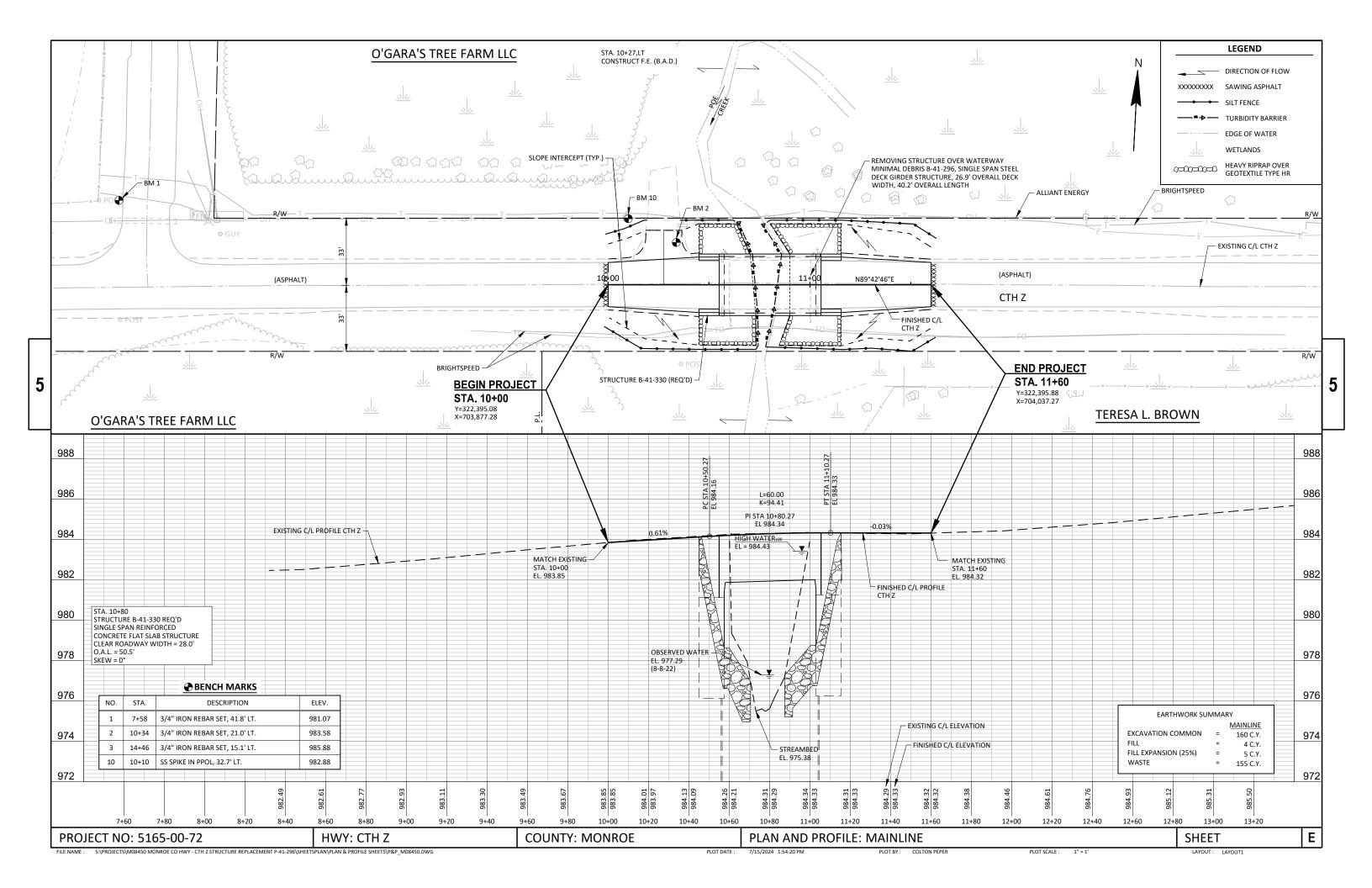
COUNTY: MONROE

MISCELLANEOUS QUANTITIES

SHEET

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						ALL ITEMS 010 UNLESS OTHERWISE NOTED
STATION - STATION 10+00 - 11+60 UNDISTRIBUTED	LOCATION MAINLINE	625.0500 627.0200	629.0210 630.0120 FERTILIZER SEEDING MIXTURE SEE TYPE B NO. 20 (CWT) (LB) 0.4 7 0.6 2	630.0160 630.0200 DING MIXTURE SEEDING NO. 60 TEMPORARY (LB) (LB) 7 0.2 2	630.0500 SEED WATER (MGAL) 7 2	TRAFFIC CONTROL 643.0420
	TOTALS =	300 300	1.0 9	2 9	9	TOTALS = 1135 1765 885 1
APPROX. STATION LOCATION 10+43 MAINLINE, RT 10+43 MAINLINE, LT	T. W5-52R T. W5-52L	SIGN DESCRIPTION BRIDGE HASH MARKS BRIDGE HASH MARKS	POSTS WOOD 4X6- SIGN SIGN INCH X 12-FT RE SIZE (EACH) 12X36 1 12X36 1	REMOVING REI GNS TYPE II SIGNS SMA FLECTIVE F TYPE II SUF (SF) (EACH) (E 3.00 3.00	38.3000 MOVING ALL SIGN PPORTS EACH) —	MARKING LINE EPOXY 4 - INCH 646.1020 TATION-STATION LOCATION DESCRIPTION (LF)
10+58 MAINLINE, R' 10+58 MAINLINE, L' 11+02 MAINLINE, L' 11+02 MAINLINE, L' 11+17 MAINLINE, R' 11+17 MAINLINE, L'	T. W5-52L T. W5-52L T. W5-52R T. W5-52L	BRIDGE HASH MARKS BRIDGE HASH MARKS BRIDGE HASH MARKS BRIDGE HASH MARKS BRIDGE HASH MARKS BRIDGE HASH MARKS	12X36 12X36 12X36 12X36 1	1 1 1 3.00 3.00 12.00 4	1 1 1 1 4	10+00 - 11+60 MAINLINE CL DASHED 40 TOTAL = 40
		CONSTRUCTION ST	TAKING			
STATION -STATION 10+00 - 11+60	LOCATION MAINLINE TOTAL =	650.4500 650.5000 SUBGRADE BASE (LF) (LF) 110 110	*650.6500 650.9911 STRUCTURE SUPPLEMENTAL LAYOUT CONTROL	650.9920 SLOPES STAKES (LF) 110		SAWING ASPHALT STATION
 ROJECT NO: 5165-00-7	*CATEGORY 020	: CTH Z	COUNTY: MONROE	MISCELLANEOUS	S OUANTITIES	SHEET E



Standard Detail Drawing List

8D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
8E09-06	SILT FENCE
8E11-02	TURBIDITY BARRIER
.2A03-10	NAME PLATE (STRUCTURES)
.3C19-03	HMA LONGITUDINAL JOINTS
.5A01-13A	MARKER POST FOR RIGHT-OF-WAY
.5C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
.5С02-09В	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
.5C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
.5C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
.5C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

DRIVEWAY LOCATION AND SPACING DETAILS SIDEWALK SHOWN

GENERAL NOTES

A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

W: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)

DRIVEWAYS WITH CURB AND GUTTER RETURNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 00-00-00 DATE

ROADWAY STANDARDS DEVELOPMENT ENGINEER

SDD 08D20 0

0 **08D20**

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

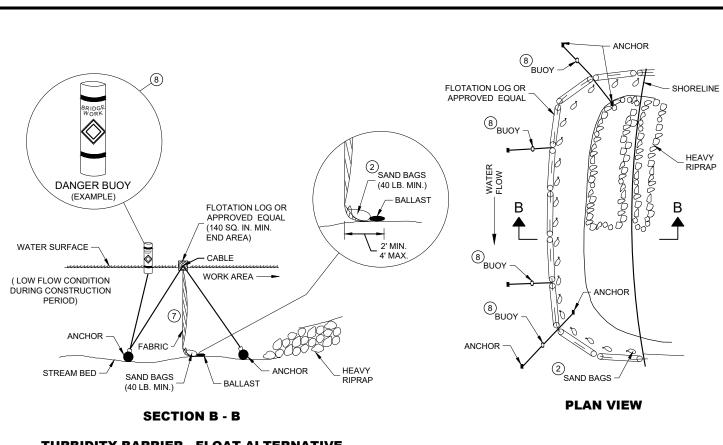
(WHEN REQUIRED BY THE ENGINEER)



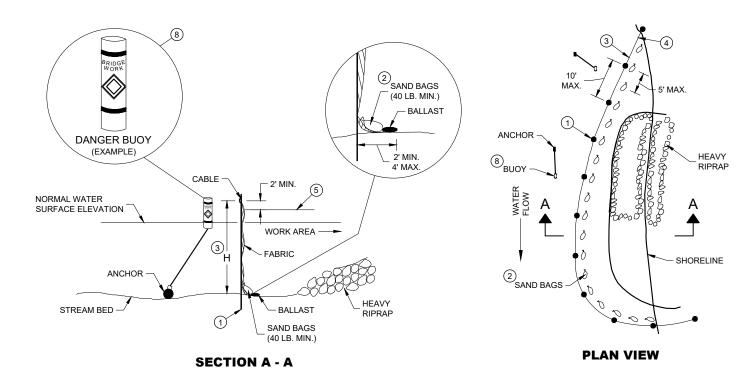
6

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D.D. 8 E 9-6



TURBIDITY BARRIER - FLOAT ALTERNATIVE CAUTION - SEE NOTE 6



TURBIDITY BARRIER - STANDARD POST INSTALLATION

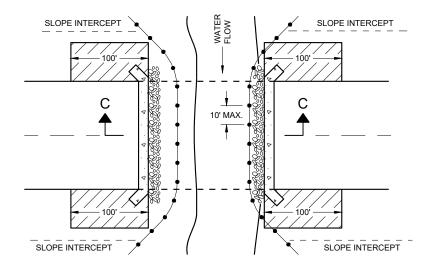
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

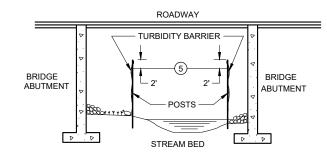
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

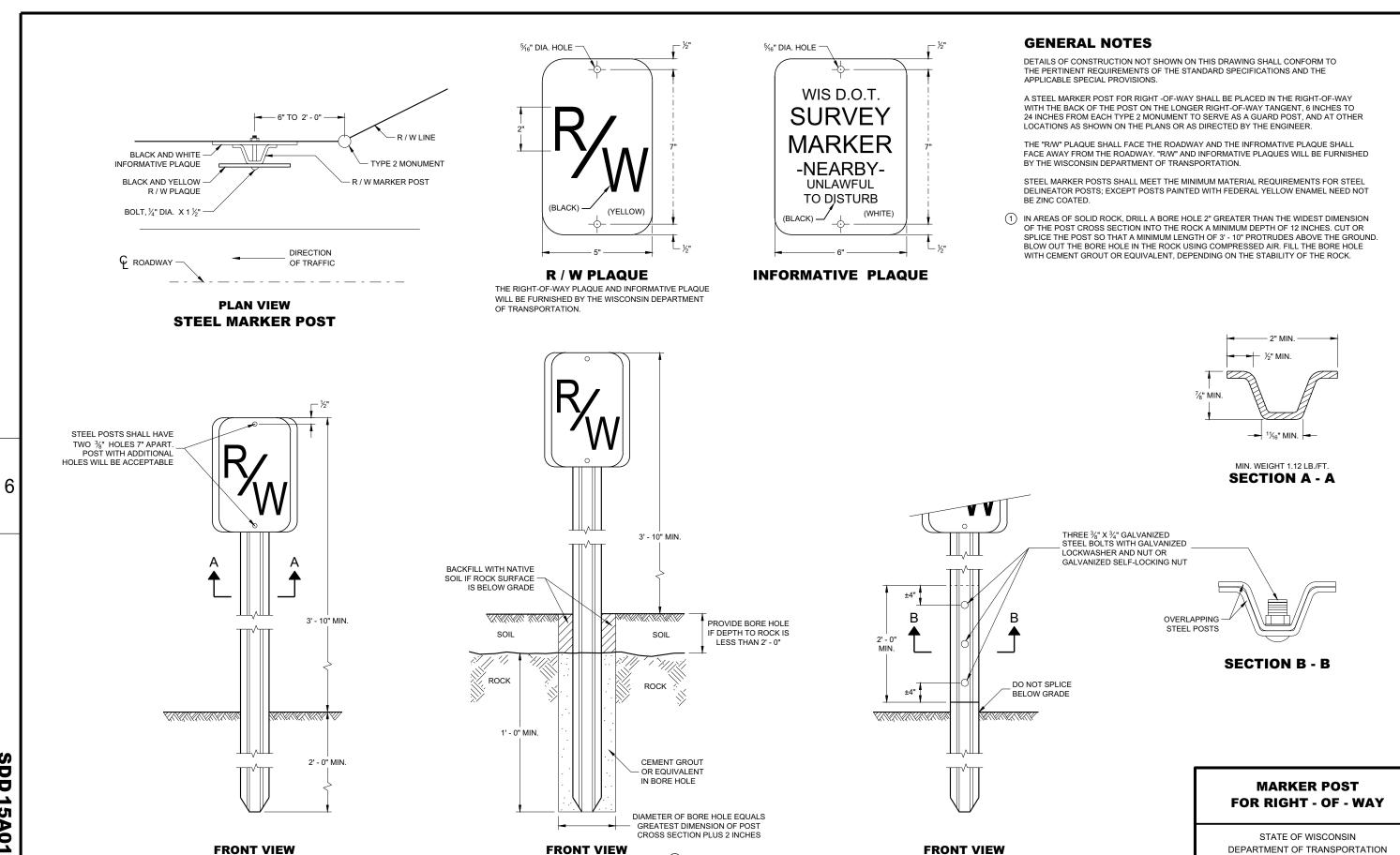
3/26/IO /S/ Scot Becker

DATE CHIEF STRUCTURAL DEVELOPMENT ENGINEER

.D.D. 12 A

3-10





SPLICE DETAIL

ROCK INSTALLATION 1

SDD 15A01 -

STEEL MARKER POST

DD 15A01 - 13

/S/ Ray Kumapayi
CHIEF SURVEYING AND MAPPING
ENGINEER

APPROVED 2/18/2016 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**

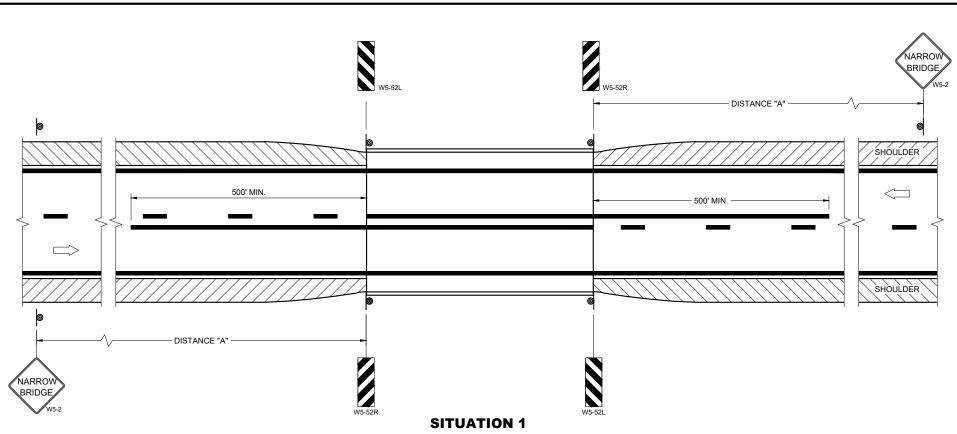
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED May 2023 DATE WORK ZONE ENGINEER

Ò 0 Ŋ



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

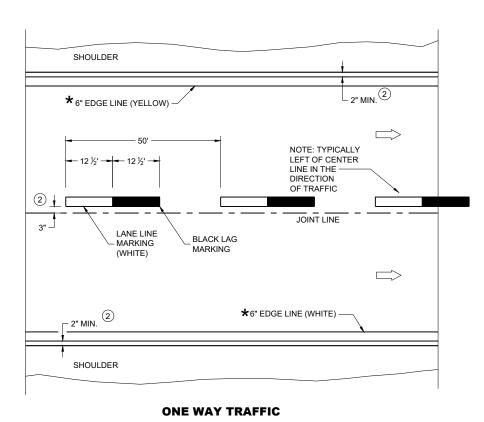
DISTANCE TABLE

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	



PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL **PAVEMENT MARKINGS**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

May 2023 DATE

/S/ Jeannie Silver Statewide Pavement Marking Engineer

6

SDD

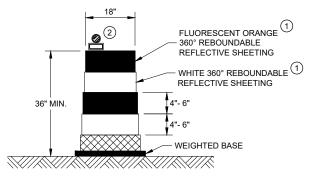
C08-23 Ŋ SD

15C08-23a

SDD 15C11

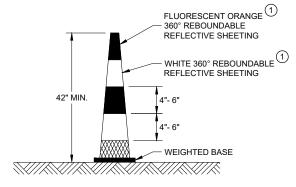
GENERAL NOTES

- (1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- (2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



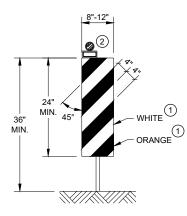
DRUM

BALLAST WIDTHS RANGE FROM 24"-36"



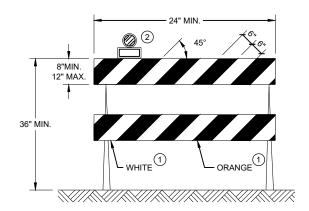
42" CONE

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



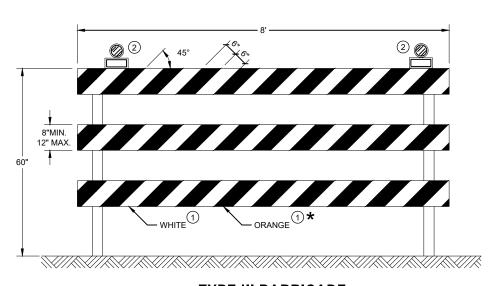
VERTICAL PANEL

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



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 15C

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





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 REQUIRED)						
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:

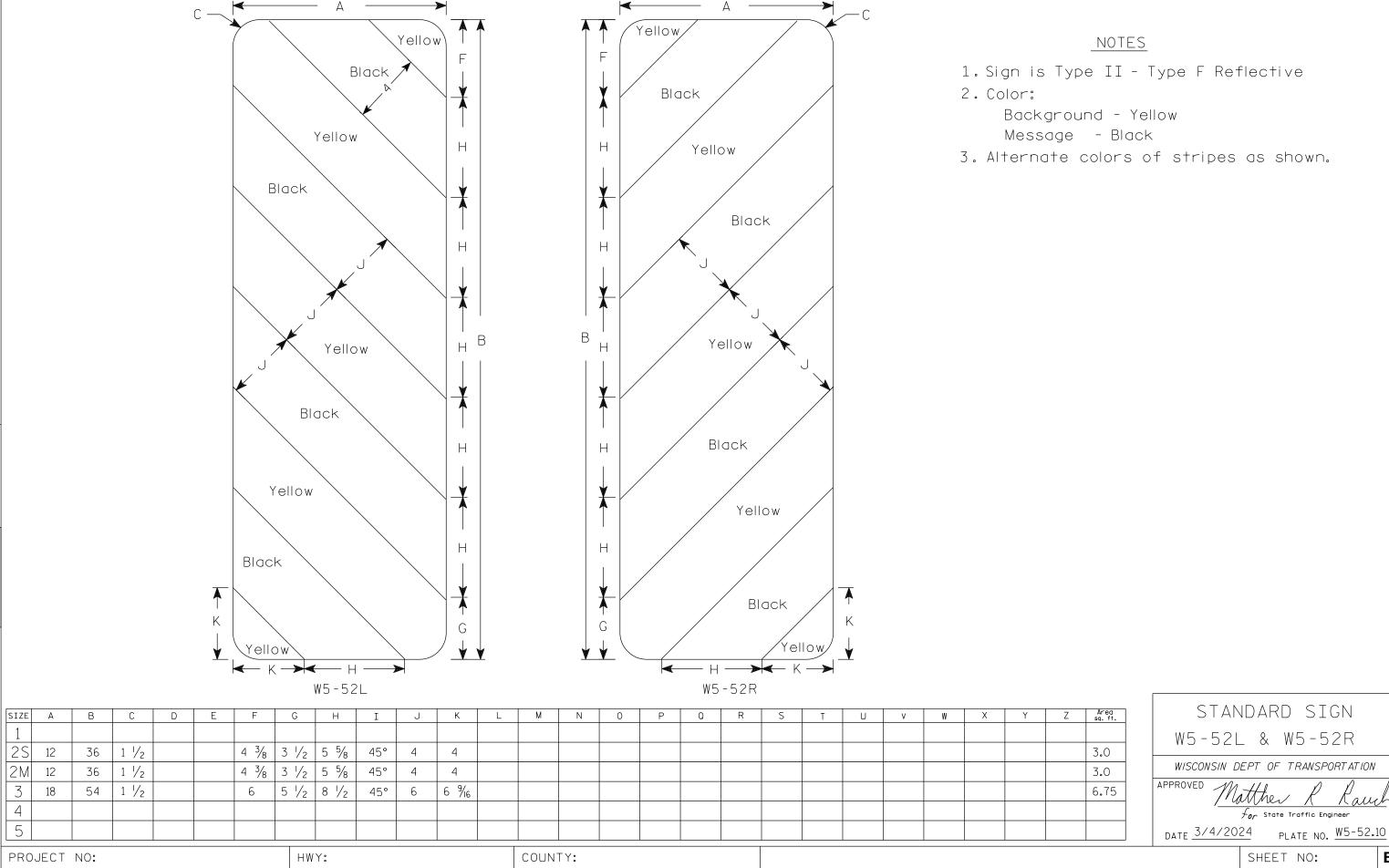
PLOT DATE: 19-APRIL 2022 11:55

SIGN

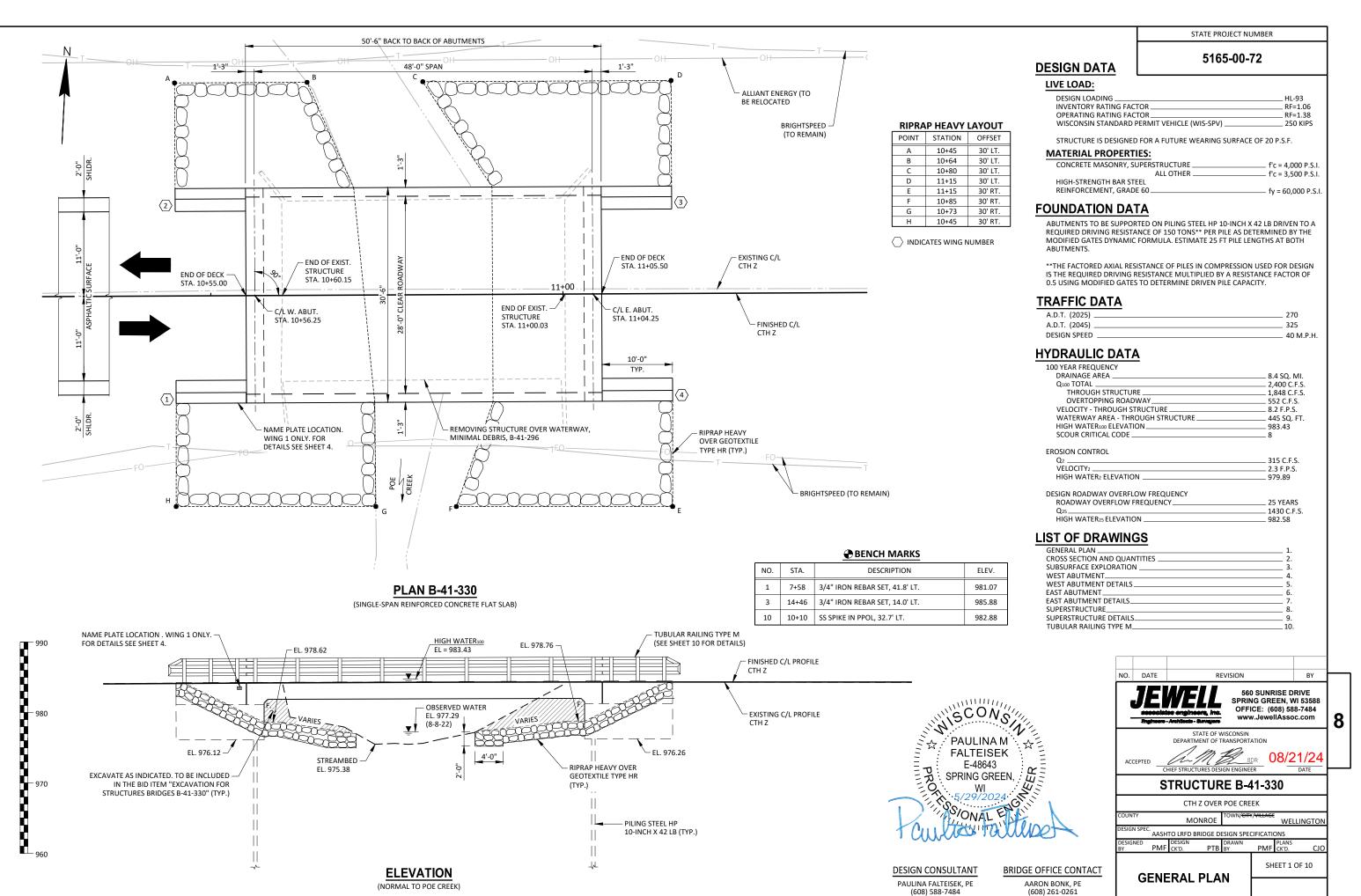
PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

Ε



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



5165-00-72

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NAVD 88 (2012)

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

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION MI53, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS OR AS DIRECTED BY THE ENGINEER IN THE FIELD AT THE BACK FACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE

ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A. SEE THIS SHEET FOR DETAIL.

ANY EXCAVATION BELOW THE ABUTMENT AND ASSOCIATED ABUTMENT BEDDING MATERIALS REQUIRE THE APPROVAL OF THE ENGINEER IN THE FIELD.

AT THE DECK, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK (CONCRETE MATERIAL ONLY), THE SIDES OF THE DECK, AND THE EXTERIOR 12" OF THE UNDERSIDE OF THE DECK. AT THE ABUTMENTS, APPLY TO THE TOP AND EXTERIOR EXPOSED FACES OF WINGS AND THE FRONT FACE OF ABUTMENTS TO 12" PAST THE EDGE OF SLAB. SEE THIS SHEET FOR DETAIL.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER IN THE FIELD.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR

THE EXISTING STRUCTURE (B-41-296) IS A SINGLE-SPAN, CONCRETE DECK, STEEL GIRDER STRUCTURE SUPPORTED ON TIMBER ABUTMENTS. THE STRUCTURE HAS A CLEAR WIDTH OF 26.9' AND AN OVERALL LENGTH OF 40.2', AND SHALL BE REMOVED.

*6" NOMINAL SECTION A-A 3⁄8" MAX.

RODENT SCREEN

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A

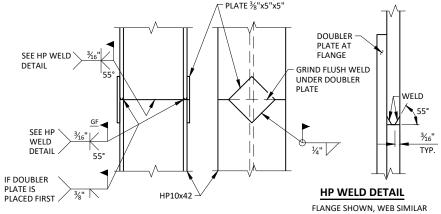
ORIENT SHIELD SO SLOTS ARE VERTICAL.

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

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

PROPOSED ABUTMENT TOE OF EXCAVATION AND "GEOTEXTILE TYPE DF SCHEDULE A" LIMITS TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN. PIPE UNDERDRAIN SEE DETAIL THIS SHEET. WRAPPED 6-INCH

PIPE UNDERDRAIN DETAIL



PILE SPLICE DETAIL

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

■ PROTECTIVE SURFACE TREATMENT

PAY LIMITS. SEE GENERAL NOTES

FACE OF RAIL

- RAILING TUBULAR TYPE M (TYP.) FOR

- ¾" V-GROOVE (TYP.) EXTEND TO 6" FROM

FACE OF ABUTMENTS

DETAIL SEE SHEET 10.

SUBGRADE BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-41-330". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. LIMITS OF BACKFILL

BACKFILL STRUCTURE TYPE A

- PAVEMENT STRUCTURE

PROPOSED CROSS-SECTION THROUGH ROADWAY

30'-6" 🖫

14'-0"

IN SPAN

POINT REFERRED TO ON PROFILE GRADE LINE

RIPRAP HEAVY OVER

GEOTEXTILE TYPE HR

REO'D. (TYP.)

OUT TO OUT OF DECK

28'-0" CLEAR ROADWAY

C/L CTH Z -

14'-0"

2.0%

AT ABUTMENT

1'-4" WITHIN ROADBED

3'-0"

REQ'D.

- FACE OF RAIL

LIMITS OF PROTECTIVE

SURFACE TREATMENT

1'-0"

BRIDGE STRUCTURE -

8

PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED

BACKFILL STRUCTURE DETAIL

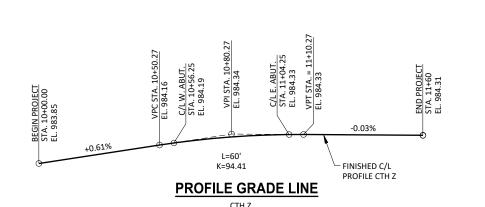
GEOTEXTILE TYPE DE SCHEDULE A" LIMITS. EXTEND 2'-0" ABOVE

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

BOTTOM OF ABUTMENT.

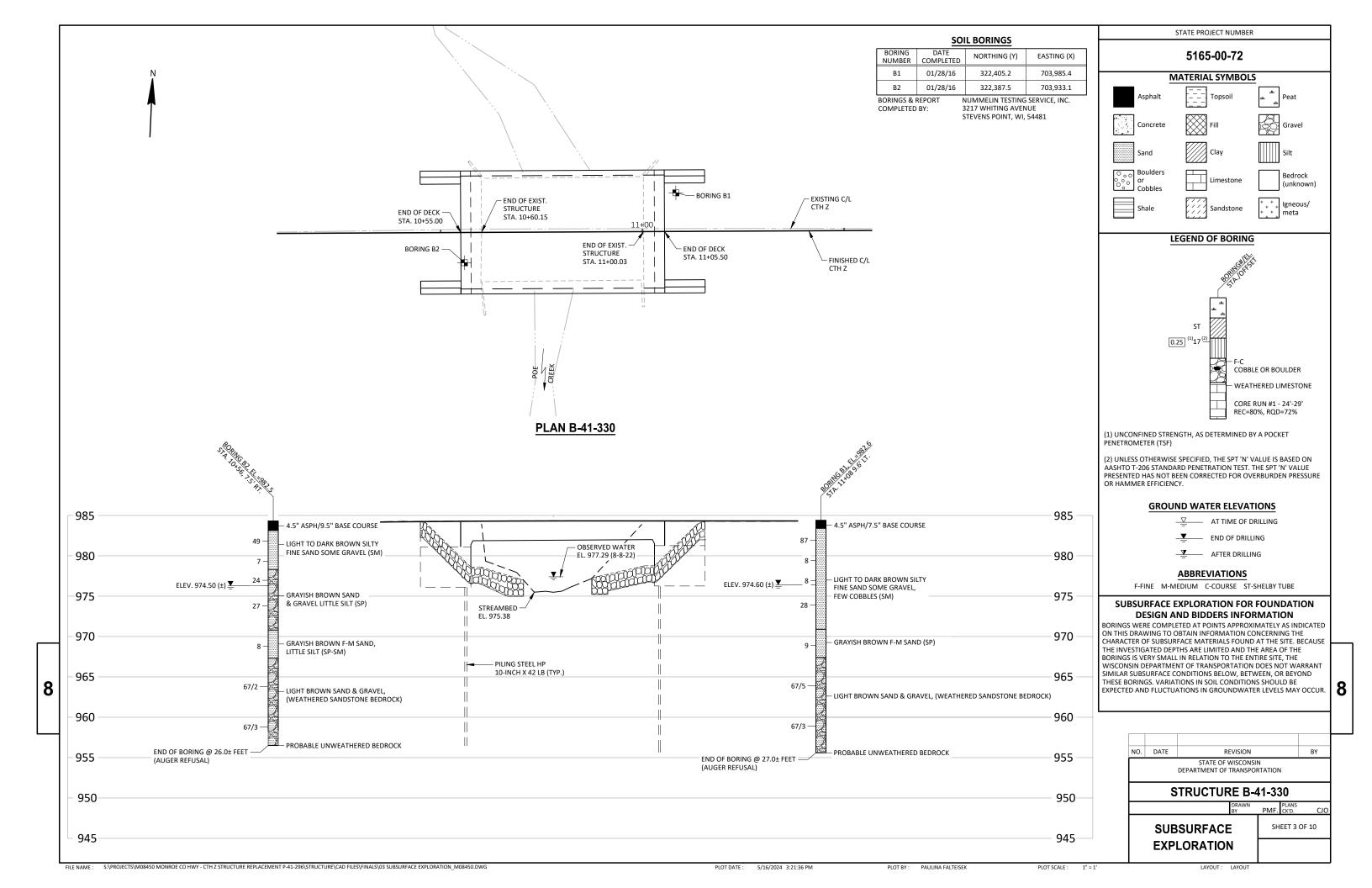
TOTAL ESTIMATED QUANTITIES

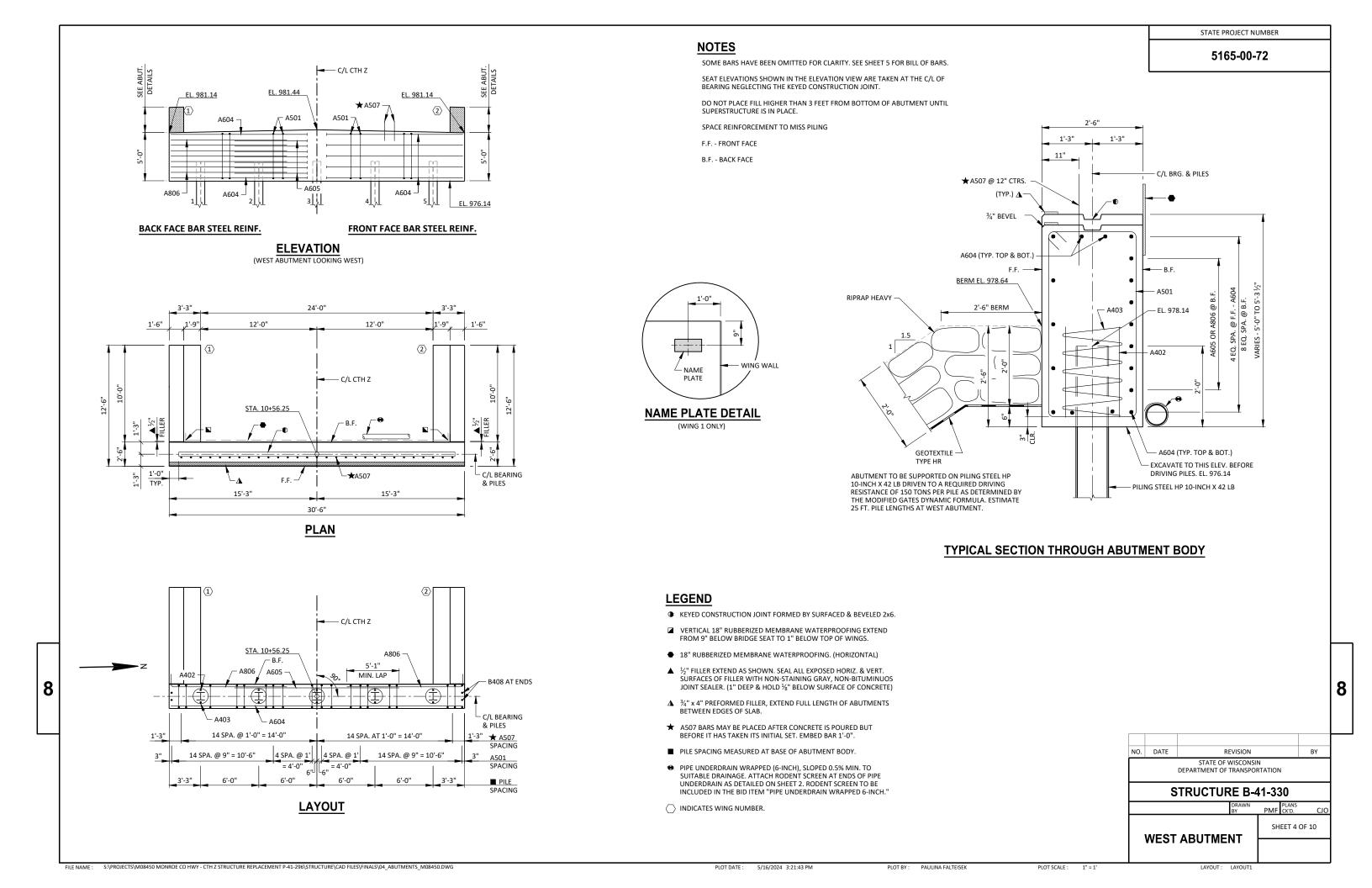
ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	E. ABUT.	SUPER	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-41-296	EACH				1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-41-330	EACH				1
210.1500	BACKFILL STRUCTURE TYPE A	TON	130	130		260
502.0100	CONCRETE MASONRY BRIDGES	CY	29.6	29.7	18.7	178
502.3200	PROTECTIVE SURFACE TREATMENT	SY			220	220
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,850	1,850		3,700
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,330	1,330	22,750	25,410
513.4061	RAILING TUBULAR TYPE M	LF			146	146
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6		12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	125	125		250
606.0300	RIPRAP HEAVY	CY	115	120		235
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70		140
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	25	25		50
645.0120	GEOTEXTILE TYPE HR	SY	190	205		395
	NON-BID ITEMS					
	FILLER	SIZE	l			1/5" & 3/4"
	NAME PLATE	SIZE				72 & 74



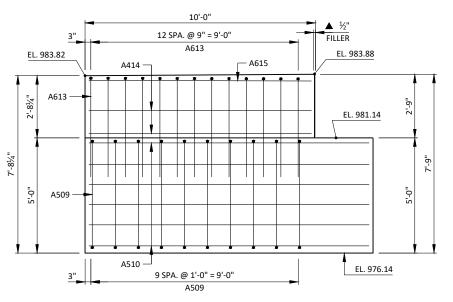
NO. DATE REVISION BY STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-41-330** PMF CK'D. SHEET 2 OF 10 **CROSS SECTION AND** QUANTITIES

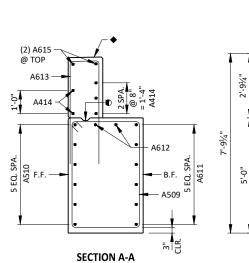
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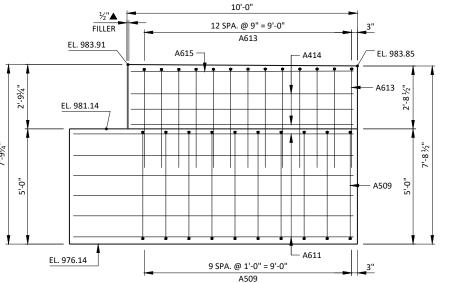




5165-00-72







BILL OF BARS WEST ABUTMENT

1,330 LB (COATED) 1,850 LB (UNCOATED)

		-			
BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
A501	38	14-0	Х		BODY -VERT STIRRUP
A402	10	2-3			BODY - VERT 2 PER PILE
A403	5	28-0	Х		BODY - SPIRAL - 1 PER PILE
A604	11	30-2			BODY - HORIZ F.F., TOP, & BOT.
A605	7	17-0			BODY - HORIZ B.F CENTER
A806	14	13-2	Х		BODY - HORIZ B.F ENDS
A507	29	2-0		Х	BODY - VERT DOWELS
A408	4	4-6			BODY - VERT ENDS
A509	20	15-6	Х	Х	WING 1 & 2 - VERT STIRRUP
A510	12	11-7		Х	WING 1 & 2 - HORIZ F.F.
A611	12	11-11		Х	WING 1 & 2 - HORIZ B.F.
A612	4	11-11		Х	WING 1 & 2 - HORIZ TOP
A613	26	10-0	Х	Х	WING 1 & 2 - VERT TOP
A414	10	9-7		Х	WING 1 & 2 - HORIZ F.F. & B.F TOP
A615	4	9-7		Х	WING 1 & 2 - HORIZ TOP

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

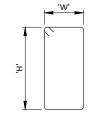
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

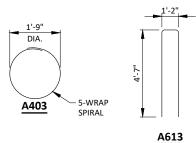
F.F. ELEVATION - WING 1

WING 1 SHOWN - WING 2 SIMILAR

B.F. ELEVATION - WING 1

WING 1 SHOWN - WING 2 SIMILAR





A501, A509	
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BAR MARK	'W'	'H'
A501	2-2	4-7
A509	2-11	4-7



<u>A806</u>

NOTES

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

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

NO.	DATE	R	EVISION			ВҮ			
		STATE OF DEPARTMENT OF			١				
	STRUCTURE B-41-330								
			DRAWN BY	PMF	PLANS CK'D.	CJC			
	WEST	ABUTME	NT	SH	IEET 5	OF 10			
	D	ETAILS							

10'-0" 9 SPA. @ 1'-0" = 9'-0" A509 - A611 — A612 12 SPA. @ 9" = 9'-0" A613

PLAN VIEW - WING 1

8

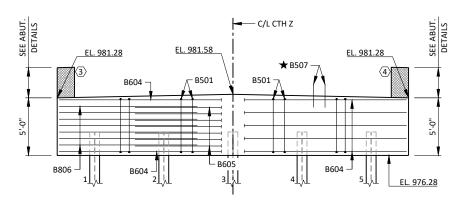
WING 1 SHOWN - WING 2 SIMILAR

10'-0"

LEGEND

- OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾-INCH "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER.
 (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE)
- ◆ SLOPE SAME AS SUPERSTRUCTURE.

B.F. - BACK FACE

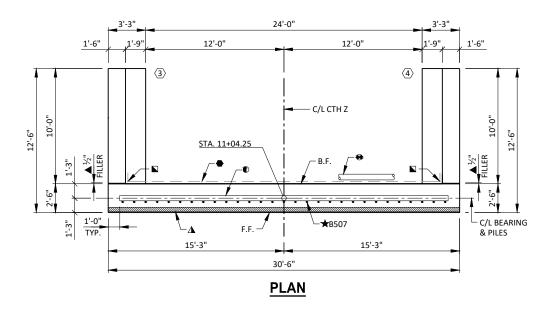


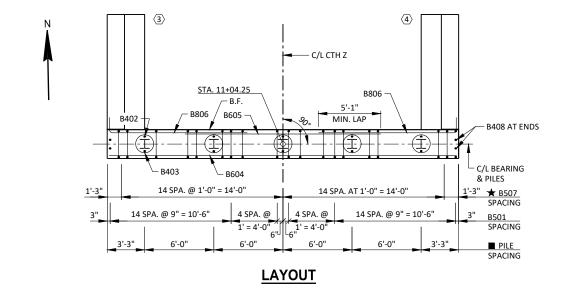
BACK FACE BAR STEEL REINF.

FRONT FACE BAR STEEL REINF.

ELEVATION

(EAST ABUTMENT LOOKING EAST)





NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 7 FOR BILL OF BARS.

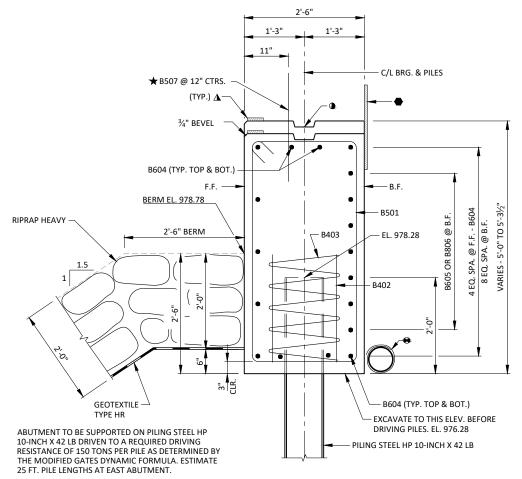
SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING NEGLECTING THE KEYED CONSTRUCTION JOINT.

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

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

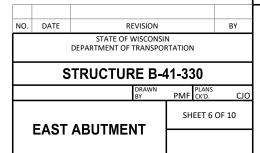
B.F. - BACK FACE



TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

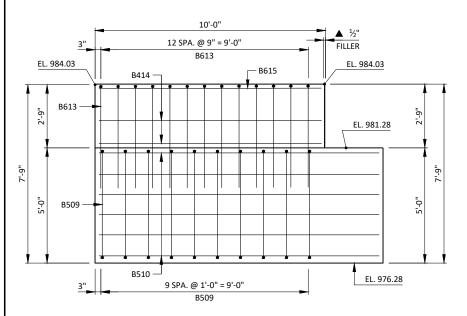
- ♠ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ☑ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ◆ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD \(^1\)_8" BELOW SURFACE OF CONCRETE)
- ★ B507 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

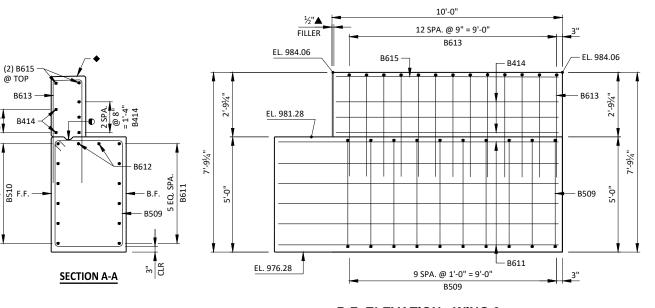


STATE PROJECT NUMBER

5165-00-72

5165-00-72





BILL OF BARS EAST ABUTMENT

1,330 LB (COATED) 1,850 LB (UNCOATED)

					
BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
B501	38	14-0	Х		BODY -VERT STIRRUP
B402	10	2-3			BODY - VERT 2 PER PILE
B403	5	28-0	Х		BODY - SPIRAL - 1 PER PILE
B604	11	30-2			BODY - HORIZ F.F., TOP, & BOT.
B605	7	17-0			BODY - HORIZ B.F CENTER
B806	14	13-2	Х		BODY - HORIZ B.F ENDS
B507	29	2-0		Х	BODY - VERT DOWELS
B408	4	4-6			BODY - VERT ENDS
B509	20	15-6	Х	Х	WING 3 & 4 - VERT STIRRUP
B510	12	11-7		Х	WING 3 & 4 - HORIZ F.F.
B611	12	11-11		Х	WING 3 & 4 - HORIZ B.F.
B612	4	11-11	Х	Х	WING 3 & 4 - HORIZ TOP
B613	26	10-0		Х	WING 3 & 4 - VERT TOP
B414	10	9-7		Х	WING 3 & 4 - HORIZ F.F. & B.F TOP
B615	4	9-7		Х	WING 3 & 4 - HORIZ TOP

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

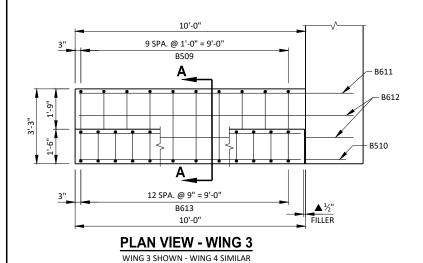
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

F.F. ELEVATION - WING 3

WING 3 SHOWN - WING 4 SIMILAR

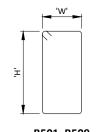
B.F. ELEVATION - WING 3

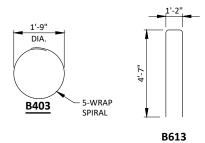
WING 3 SHOWN - WING 4 SIMILAR



LEGEND

- OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾-INCH "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE)
- ◆ SLOPE SAME AS SUPERSTRUCTURE.





B501, B509

BAR MARK	'W'	'H'
B501	2-2	4-7
B509	2-11	4-7



B806

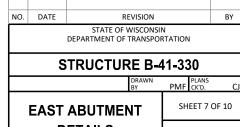
NOTES

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

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



DETAILS

5165-00-72

NOTES

2 SPA. @ 3'-9"

C/L E. ABUT.

- S501 (TYP.)

2 SPA. @ 3'-9"

= 7'-6"

1'-0½"

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 9 FOR BILL OF BARS.

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

CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

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

SURVEY TOP OF DECK ELEVATIONS

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

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

50'-6" END TO END OF DECK 48'-0" SPAN 8 SPA. @ 6'-0" = 48'-0"

50 SPA. @ 1'-0" = 50'-0"

S610 -

— S503 - TOP

S1106 - BOTTOM -

(STAGGERED)

TOP STEEL

- S608 (TYP.)

S502 - TOP

S504 - BOTTOM -

BOTTOM STEEL

└─ (1) S1107 @ BOT. EDGES

50 SPA. @ 6" = 25'-0"

8 SPA. @ 6'-0" = 48'-0"

<u>PLAN</u>

- NORTH EDGE

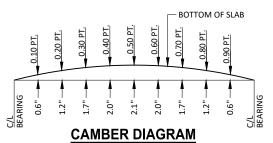
S609 (TYP.) -

∕− C/L CTH Z

OF DECK

TOP OF DECK ELEVATIONS

		C/L W. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L E. ABUT.
-	N. EDGE	983.89	983.91	983.93	983.95	983.97	983.99	984.00	984.01	984.02	984.02	984.03
	C/L	984.19	984.22	984.24	984.26	984.28	984.30	984.31	984.32	984.32	984.33	984.33
	S. EDGE	983.89	984.91	983.93	983.95	983.97	983.99	984.00	984.01	984.02	984.02	984.03



 SOUTH EDGE OF DECK

16 SPA. @ 9" = 12'-0"

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

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

TOP OF SLAB ELEVATION AT FINAL GRADE

+CAMBER

+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)

=TOP OF SLAB FALSEWORK ELEVATION.

NO. DATE BY STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION STRUCTURE B-41-330 SHEET 8 OF 10 **SUPERSTRUCTURE**

S:\PROJECTS\M08450 MONROE CO HWY - CTH Z STRUCTURE REPLACEMENT P-41-296\STRUCTURE\CAD FILES\FINALS\SUPERSTRUCTURE.DWG

RAIL POST 1'-01/2"

@ 1'-0"

15 SPA.

= 15'-0"

@ 1'-0"

15 SPA. (

8

RAIL POST 1'-0½"

12 SPA. @ 1'-3"

2 SPA. @ 3'-9"

S503 SPA.

C/L W. ABUT. -

2 SPA. @ 3'-9"

= 7'-6"

4'-3"

TYP.

- S501 (TYP.)

16 SPA. @ 9" = 12'-0"

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PLOT SCALE :

STATE PROJECT NUMBER

5165-00-72

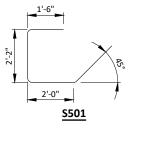
BILL OF BARS

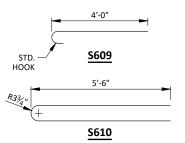
SUPERSTRUCTURE 22,750 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	58	7-10	Х	Х	ENDS OF DECK
S502	25	50-2		Х	SLAB - TOP - LONGIT.
S503	51	30-2		Х	SLAB - TOP - TRANS.
S504	83	30-2		Х	SLAB - BOTTOM - TRANS.
S505	6	30-2		Х	SLAB - TRANS. AT ABUT.
S1106	62	44-10		Х	SLAB - BOTTOM - LONGIT.
S1107	2	50-2		Х	SLAB - BOTTOM - LONGIT EDGES
S608	56	6-0		Х	RAIL POSTS - INTERIOR
S609	16	4-7	Х	Х	RAIL POSTS - CORNERS
S610	36	12-0	Х	Х	RAIL POSTS

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

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.





30 SPA. @ 6" = 15'-0" 15 SPA. @ 5½" = 7'-1"

PARTIAL CROSS SECTION THROUGH ROADWAY

- S504

__ S503 @ 12" CTR'S

- S1106 (STAGGERED)

30'-6"

14'-0" CLEAR ROADWAY

12 SPA. @ 1'-3" = 15'-0"

FACE OF RAIL -

- S502

3" S502

TUBULAR RAILING

TYPE M. SEE SHEET 10 FOR DETAILS.

(1) S1107 AT

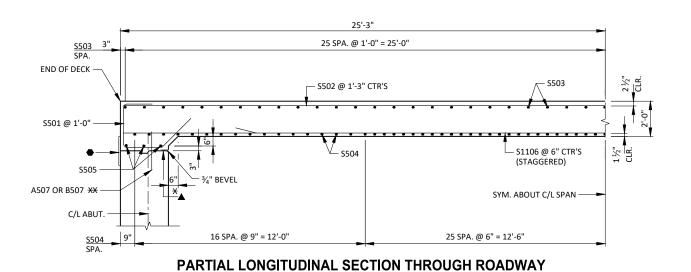
14'-0" CLEAR ROADWAY

12 SPA. @ 1'-3" = 15'-0"

FACE OF RAIL

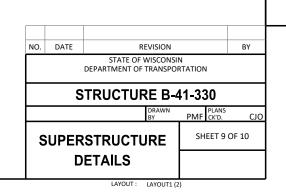
15 SPA. @ 5½" = 7'-1"

(1) S1107 AT EACH EDGE



LEGEND

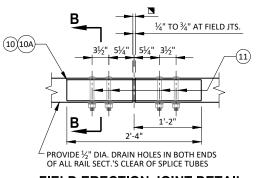
- 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- XX SEE SHEET 4 OR SHEET 6 FOR PLACEMENT OF ABUTMENT BARS.



8

5165-00-72

- ① W6x25 WITH $1\frac{1}{8}$ " x $1\frac{1}{8}$ " HORIZONTAL SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- $\begin{tabular}{ll} \hline \end{tabular} \begin{tabular}{ll} \hline \end{$
- (3) ASTM A449 1½" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG AT ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE $10\frac{3}{4}$ " LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
- $\begin{picture}(4)\end{picture} \begin{picture}(4)\end{picture} \begin{picture}(4)\end{pictu$
- (5) TSS 5x4x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- $\widehat{\rm (5A)}~$ TSS 5x5x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- (6) 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" x15/8" x15/8" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
- 1 SPLICE SLEEVE FABRICATED FROM 1 4" PLATE. PROVIDE "SLIDING FIT"
- 10 3%"x3%"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- $(10A) \ 3\%"x25\%"x2'-4" \ PLATE \ USED \ IN \ NO. \ 5, \ 3\%"x35\%"x2'-4" \ PLATE \ USED \ IN \ \ NO. \ 5A. \ 2 \ PER \ RAIL.$
- $\frac{7}{8}$ " DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE $\frac{15}{16}$ " x1 $\frac{11}{4}$ " LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND $\frac{15}{16}$ " x2 $\frac{11}{4}$ " MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.



FIELD ERECTION JOINT DETAIL

RDWY. OPENING OR $2\frac{1}{2}$ " MIN. FOR STRIP SEAL EXP. JOINT & $(\frac{1}{4}$ " TO $\frac{3}{4}$ ") OPENING FOR A1 ABUTMENT.

SECTION THROUGH RAILING ON DECK

1'-3"

(1)

25/8"

(4)

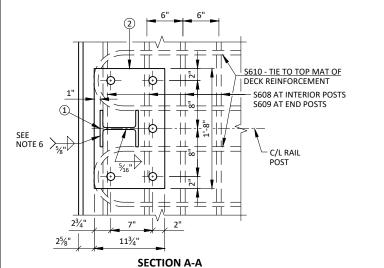
THIS FACE TO BE VERTICAL

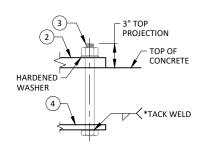
PLACE BELOW TOP

S609 - TIE TO TOP MAT OF DECK REINFORCEMENT

MAT OF DECK REINFORCEMENT

S607 AT INTERIOR POSTS



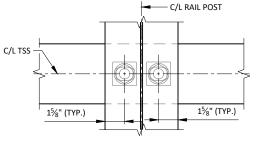


SHOP RAIL

SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

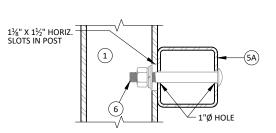
ANCHOR BOLTS * ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED



(10A)

SECTION B-B

SECTION THROUGH POST WEB



SECTION THROUGH RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

GENERAL NOTES

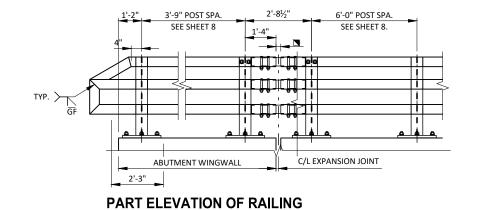
LEGEND

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

FIELD CLIP AS REQ'D. 13/16"Ø HOLES FOR 11/8"Ø ANCHOR **POST SHIM ANCHOR PLATE DETAIL**

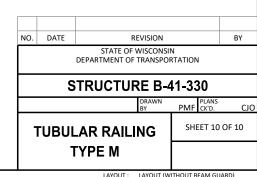
· 51/5"Ø HOLES

8



LEGEND

■ ROADWAY OPENING 1/4" TO 3/4" OPENING FOR A1 ABUTMENT



S:\PROJECTS\M08450 MONROE CO HWY - CTH Z STRUCTURE REPLACEMENT P-41-296\STRUCTURE\CAD FILES\FINALS\10 TUBULAR RAILING TYPE M.DWG

EARTHWORK - CTH Z

	AREA (SF) INCREMENTAL VOL (CY)			CUMMULATIVE VOLUME (CY)					
					FILL	CUT		FILL	MASS
			CUT		(25%)	1.00		(25%)	ORDINATE
STATION	CUT	FILL	NOTE 1	FILL	NOTE 2	NOTE 1	FILL	NOTE 2	NOTE 3
10+00	0	0	22	1	1.25	22	1	1.25	20.75
10+27	43	0.2	37	1	1.25	59	2	2.5	56.5
10+50	43	0.2	8	0	0	67	2	2.5	64.5
10+55	43	0.2	0	0	0	67	2	2.5	64.5
11+05	50	0.5	37	0	0	104	2	2.5	101.5
11+25	50	0.5	46	1	1.25	150	3	3.75	146.25
11+50	48.3	0	10	1	1.25	160	4	5	155
11+60	0	0	0	0	0	160	4	5	155

160

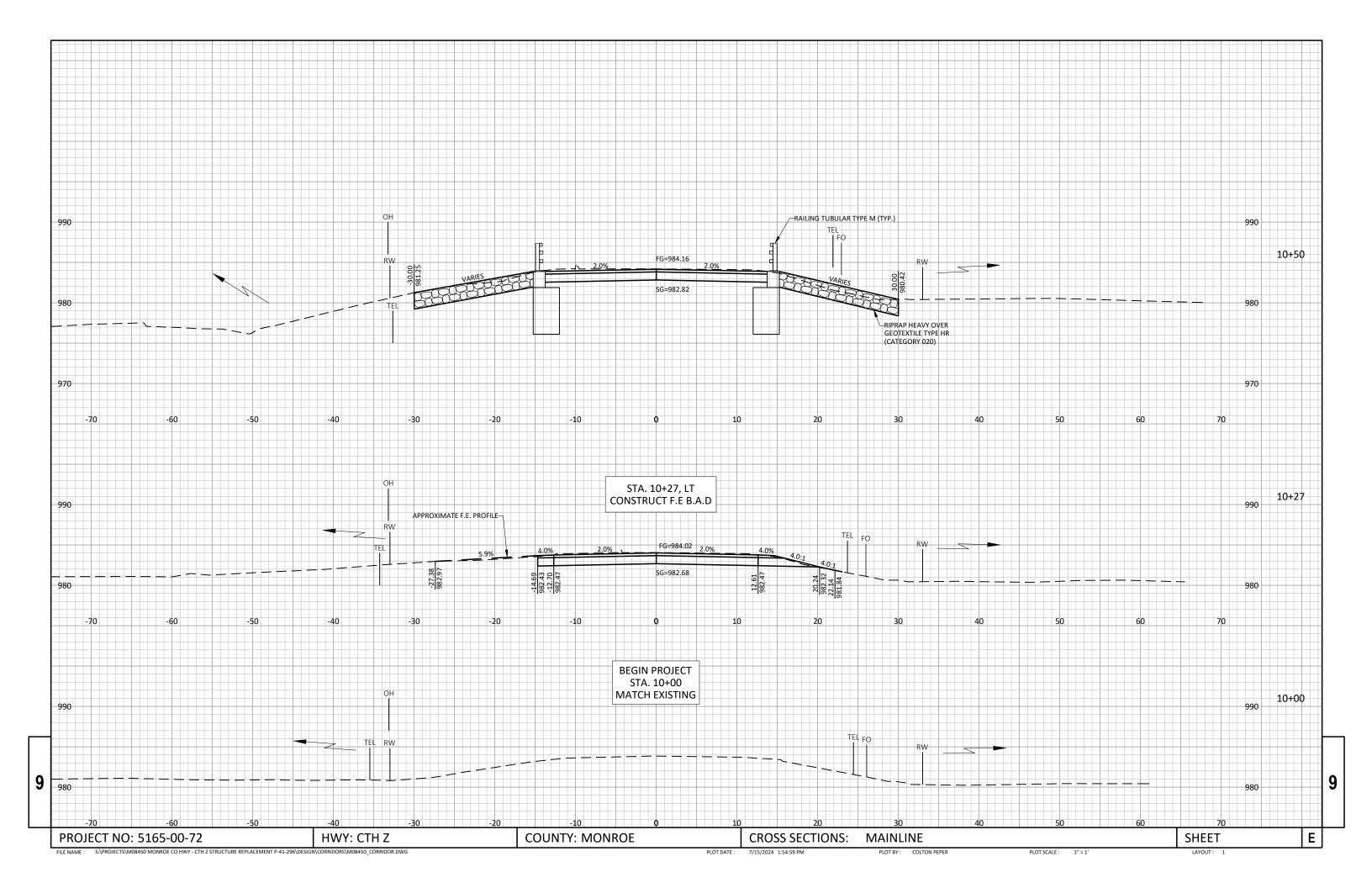
COLUMN TOTALS

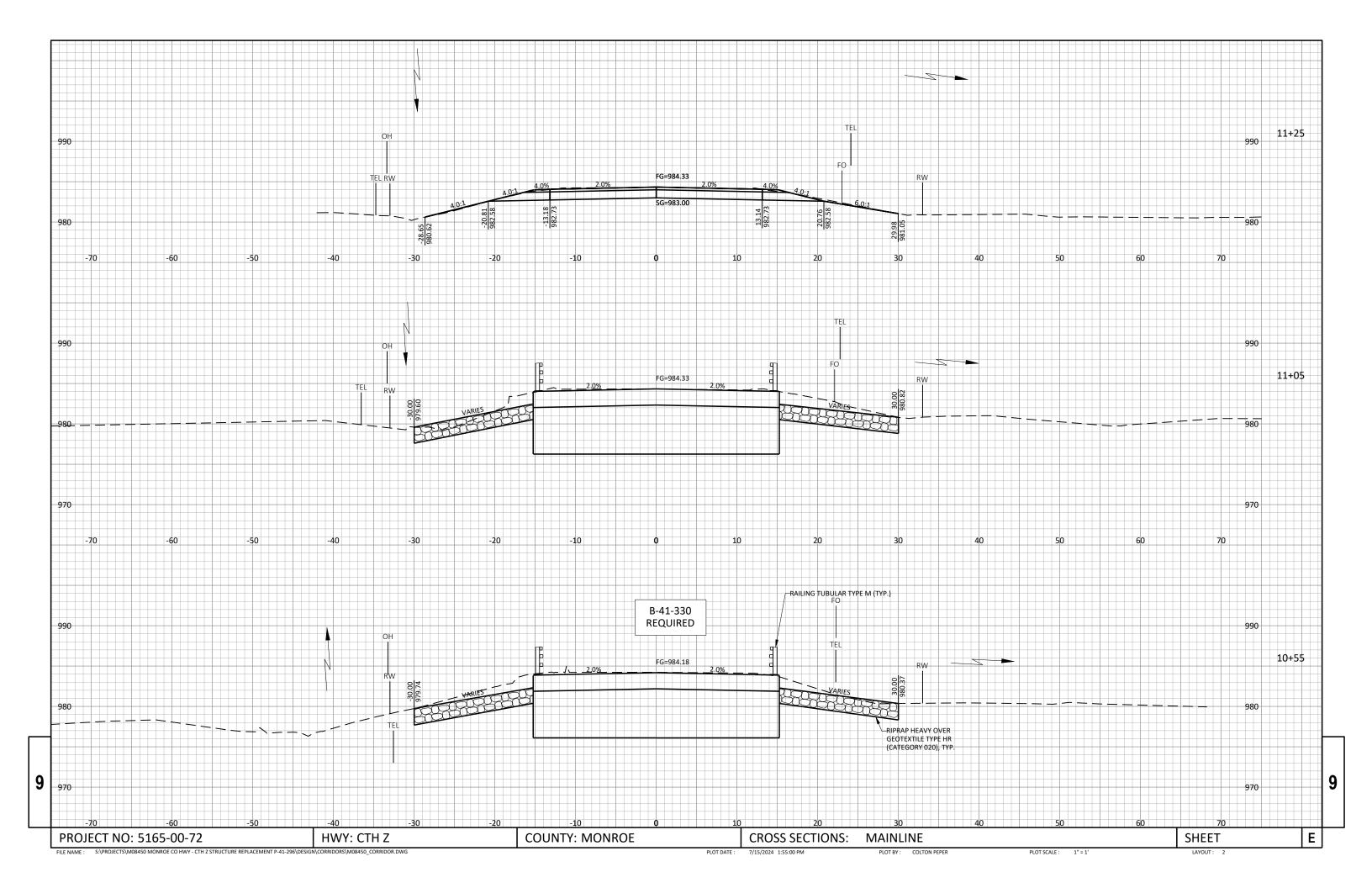
NOTES: 1 - CUT 2 - FILL 25% 3 - MASS ORDINATE CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL (UNEXPANDED FILL)*1.25 CUT - FILL (25%)

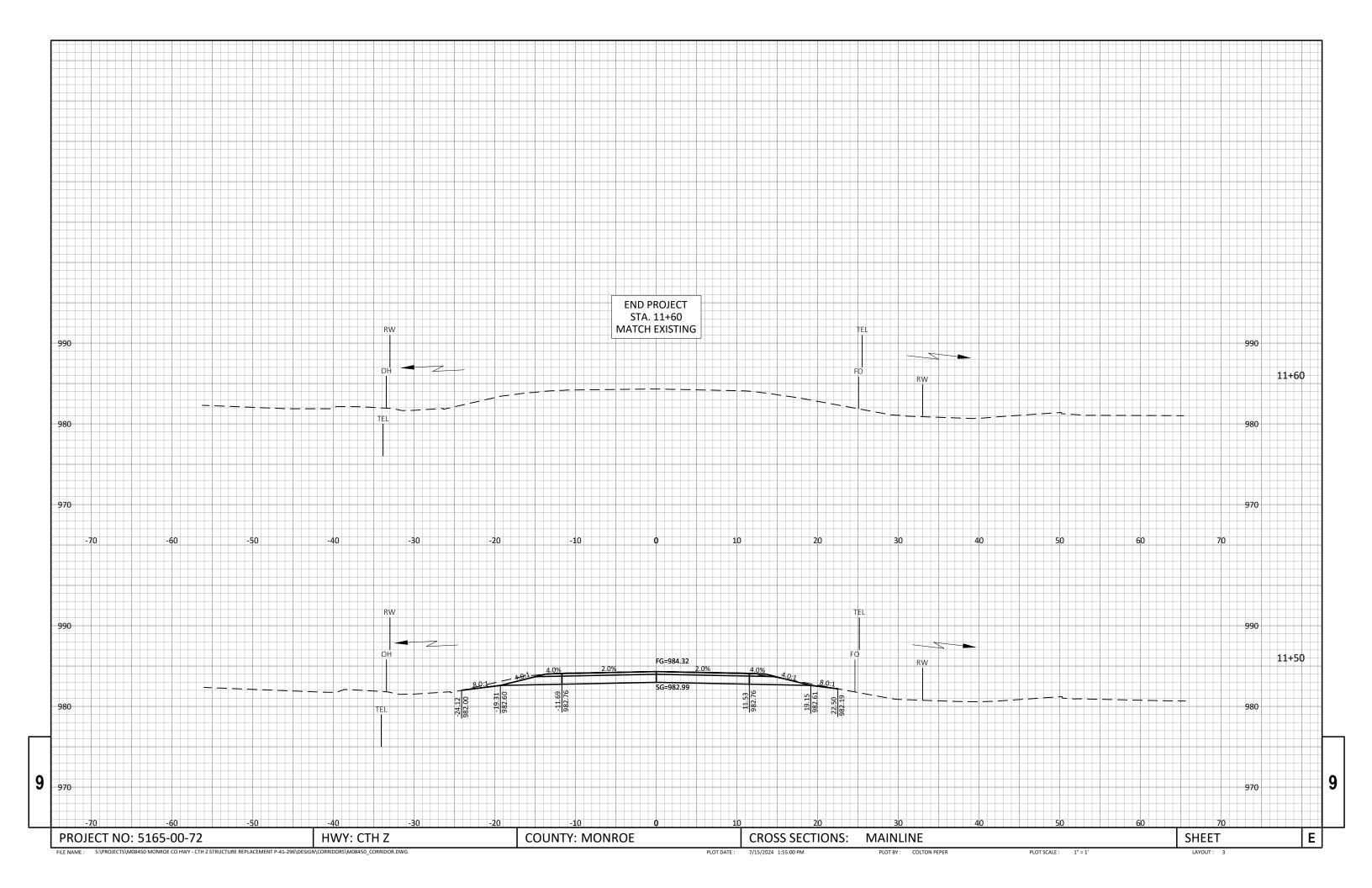
EARTHWORK PROJECT NO: 5165-00-72 HWY: CTH Z COUNTY: MONROE SHEET E

155

PLOT BY: COLTON PEPER









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