EAU

FEBRUARY 2020

PROJECT ID: 7340-00-70

WITH: N/A

COUNTY: JACKSON

ORDER OF SHEETS

TOTAL SHEETS = 44

33

N

DESIGN DESIGNATION

A.A.D.T.	(2020)	= 265
A.A.D.T.	(2040)	= 340
D.H.V.		= 31
D.D.		= 60/40
T.		= 10% (ASSUMED)
DESIGN SPEED		= 40 MPH
ESALS		= 110,400

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (955.36)
- CULVERT (Profile View)

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CTH H - CTH P

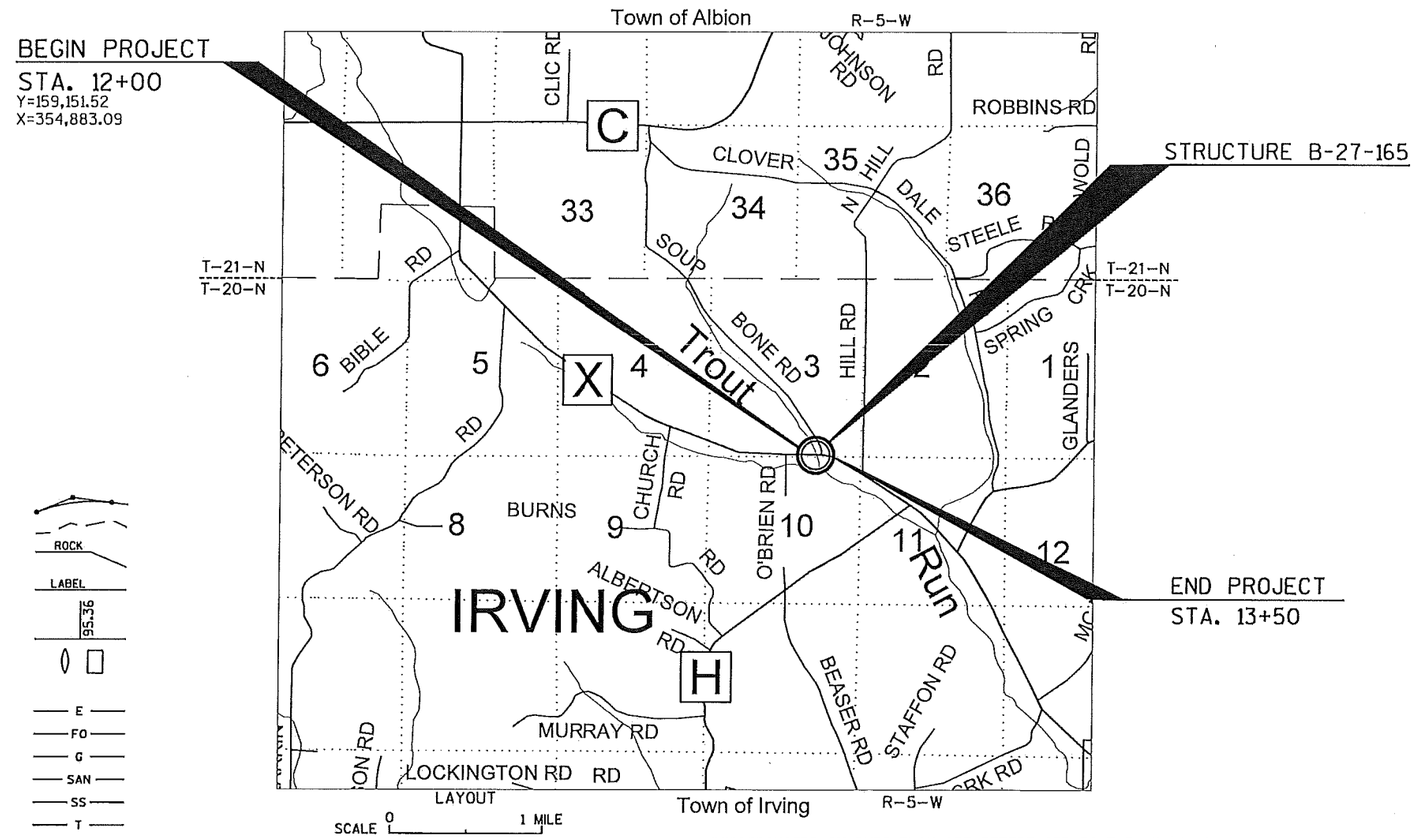
TROUT RUN CREEK BRIDGE B-27-165

CTH X

JACKSON COUNTY

STATE PROJECT NUMBER
7340-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7340-00-70	WISC 2020054	1



TOTAL NET LENGTH OF CENTERLINE = 0.028 MI

"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), JACKSON COUNTY."

"ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)."

ACCEPTED FOR COUNTY of JACKSON

7-30-19 (Date) Jay Bowe (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors

WISCONSIN
ROBERT B. HANOLD
E-45655
PRAIRIE DU SAC
WI
PROFESSIONAL ENGINEER

7/26/19

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Project Manager	MATTHEW THORNSEN, P.E.
Regional Examiner	NW REGION
Regional Supervisor	ANDY STENSLAND, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 7/31/19 (Signature)

E

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left–Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	OD	Outside Diameter	SS	Storm Sewer
CTH	County Trunk Highway	PLE	Permanent Limited Easement	SG	Subgrade
CR	Creek			SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride		
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Transit Line
		R	Radius	T	Trucks (percent of)
EBS	Excavation Below Subgrade	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP	Reference Point	USH	United States Highway
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	VAR	Variable
FL or F/L	Flow Line			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
		RDWY	Roadway		

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.

DISTURBED AREAS SHOWN WITHIN THE RIGHT–OF–WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE TEMPORARY SEEDING AND SEED MIX NO. 20), AND MULCHED AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60.

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 THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

MULCH ALL MAINLINE SLOPES AS DIRECTED BY THE ENGINEER IN THE FIELD.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

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

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 BEYOND THE SLOPE INTERCEPTS FROM STA. 12+08 – STA. 12+59, LT., STA. 12+91 – STA. 13+15, LT., STA. 12+33 – STA. 12+60, RT., AND STA. 12+93 – STA. 13+36, RT.

4–INCHES OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1¾–INCH UPPER LAYER AND A 2¼–INCH LOWER LAYER. THE NOMINAL SIZE AGGREGATE USED FOR THE LOWER LAYER SHALL BE 12.5 MM.

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

CONTACTS

JACKSON COUNTY HIGHWAY DEPARTMENT:

JAY BOREK, COMMISSIONER
119 HARRISON STREET
BLACK RIVER FALLS, WI 54615
PH: (715) 284–0233
EMAIL: jay.borek@co.jackson.wi.us

DESIGN CONSULTANT:

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

DNR LIAISON:

STATE OF WISCONSIN
DNR WEST CENTRAL
REGION HEADQUARTERS
1300 W CLAIREMONT AVE.
EAU CLAIRE, WI 54701
ATTN: LEAH NICOL
PH: (715) 934–9014
EMAIL: Leah.Nicol@wisconsin.gov

UTILITIES

TELEPHONE

CENTURYLINK
ATTN: BRET CLARK
311 SOUTH COURT STREET
SPARTA, WI 54656
PH: (608) 269–0819
EMAIL: bret.clark@centurylink.com

ELECTRIC

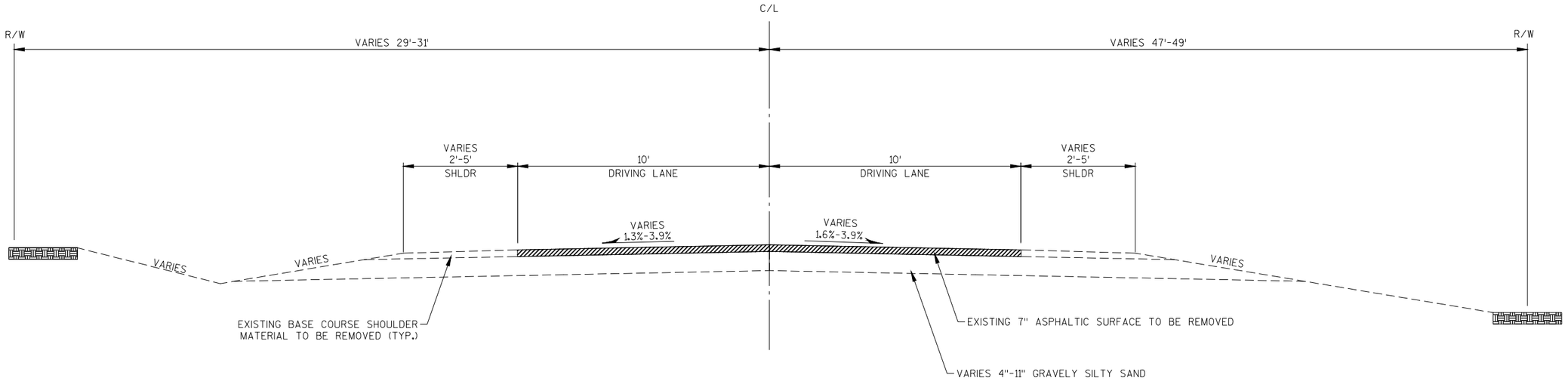
JACKSON ELECTRIC COOPERATIVE
ATTN: ERIC STEIEN
PO BOX 546
BLACK RIVER FALLS, WI 54615
PH: (715) 284–5385
EMAIL: esteien@jackelec.com

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

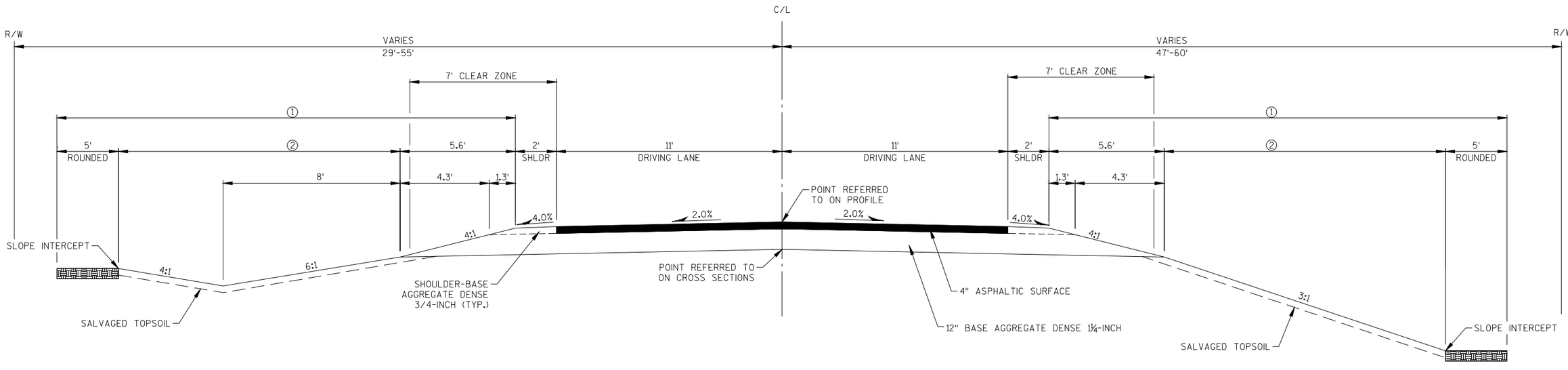
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE	0–2	2–6	6 & OVER	0–2	2–6	6 & OVER	0–2	2–6	6 & OVER	0–2	2–6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA= 0.35 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.22 ACRES



TYPICAL EXISTING SECTION

CTH X
STA. 12+00 - 13+50



CUT

FILL

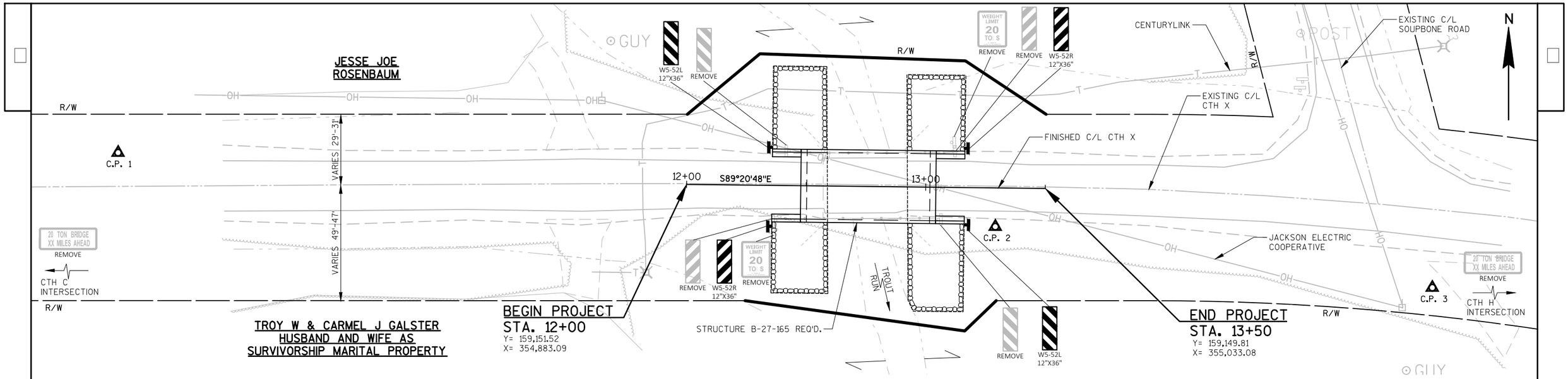
TYPICAL FINISHED SECTION

CTH X
STA. 12+00 - 13+50

① LIMITS OF SEEDING MIXTURE NO. 20 OR SEEDING MIXTURE NO. 60, SEEDING TEMPORARY, MULCHING, & FERTILIZER TYPE B (AS DIRECTED BY ENGINEER)
② LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

PROJECT NO: 7340-00-70	HWY: CTH X	COUNTY: JACKSON	TYPICAL EXISTING SECTION & TYPICAL FINISHED SECTION	SHEET 3	E

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\SHEETSPLAN\TYPICALS\TYPICALS.DWG
LAYOUT : TYPICALS
PLOT DATE : 7/29/2019
PLOT TIME : 1:32:49 PM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'

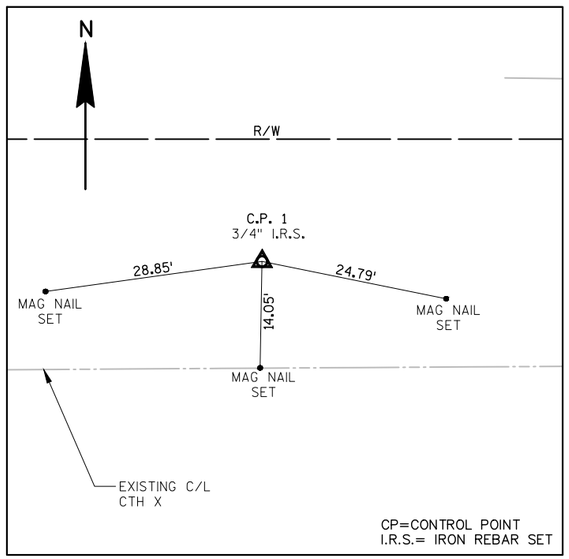


MAINLINE STATION LAYOUT

STATION	Y	X	COMMENTS
12+00	159,151.52	354,883.09	BEGIN PROJECT
12+47.75	159,150.98	354,930.83	END OF DECK
12+50	159,150.95	354,933.08	–
13+00	159,150.38	354,983.08	–
13+04.25	159,150.33	354,987.33	END OF DECK
13+50	159,149.81	355,033.08	END PROJECT

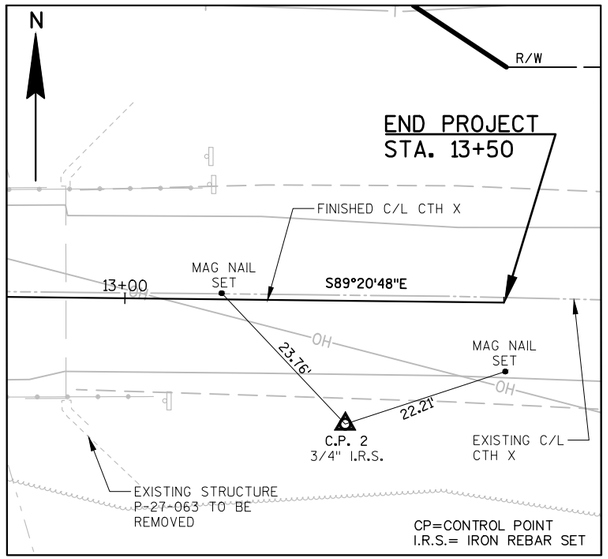
⧋ CONTROL POINTS

NO.	STA.	DESCRIPTION	Y	X
1	9+62.29	¾" IRON REBAR SET, 14.13' LT.	159,164.77	354,645.33
2	13+29.26	¾" IRON REBAR SET, 16.23' RT.	159,133.79	355,012.15
3	15+15.48	¾" IRON REBAR SET, 32.52' RT.	159,108.30	355,194.93



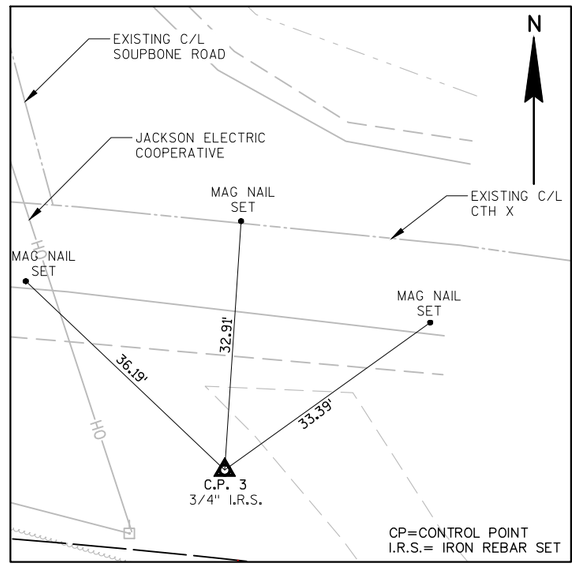
TIES TO C.P.#1

STA. 9+62.29; 14.13' LT.
Y = 159,164.77
X = 354,645.33



TIES TO C.P.#2

STA. 13+29.26; 16.23' RT.
Y = 159,133.79
X = 355,012.15



TIES TO C.P.#3

STA. 15+15.48; 32.52' RT.
Y = 159,108.30
X = 355,194.93

PROJECT NO: 7340-00-70	HWY: CTH X	COUNTY: JACKSON	ALIGNMENT AND TIES & PERMANENT SIGNING	SHEET 4	E

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\SHEETSPLAN\DETAILS\ALIGN & TIES.DWG
LAYOUT : LAYOUT1
PLOT DATE : 7/26/2019
PLOT TIME : 1:41:58 PM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'

7340-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 12+75	LS	1.000	1.000
0006	205.0100	Excavation Common	CY	85.000	85.000
0008	206.1000	Excavation for Structures Bridges (structure) 01. B-27-165	LS	1.000	1.000
0010	208.0100	Borrow	CY	195.000	195.000
0012	210.1500	Backfill Structure Type A	TON	320.000	320.000
0014	213.0100	Finishing Roadway (project) 01. 7340-00-70	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	15.000	15.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	240.000	240.000
0020	455.0605	Tack Coat	GAL	14.000	14.000
0022	465.0105	Asphaltic Surface	TON	63.000	63.000
0024	502.0100	Concrete Masonry Bridges	CY	132.000	132.000
0026	502.3200	Protective Surface Treatment	SY	213.000	213.000
0028	503.0136	Prestressed Girder Type I 36-Inch	LF	220.000	220.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	3,560.000	3,560.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	16,290.000	16,290.000
0034	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0036	506.4000	Steel Diaphragms (structure) 01. B-27-165	EACH	3.000	3.000
0038	513.4061	Railing Tubular Type M	LF	166.000	166.000
0040	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0042	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	500.000	500.000
0044	606.0300	Riprap Heavy	CY	355.000	355.000
0046	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0048	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7340-00-70	EACH	1.000	1.000
0050	619.1000	Mobilization	EACH	1.000	1.000
0052	624.0100	Water	MGAL	4.000	4.000
0054	625.0500	Salvaged Topsoil	SY	375.000	375.000
0056	627.0200	Mulching	SY	790.000	790.000
0058	628.1504	Silt Fence	LF	410.000	410.000
0060	628.1520	Silt Fence Maintenance	LF	820.000	820.000
0062	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0064	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0066	628.7504	Temporary Ditch Checks	LF	24.000	24.000
0068	629.0210	Fertilizer Type B	CWT	0.500	0.500
0070	630.0120	Seeding Mixture No. 20	LB	15.000	15.000
0072	630.0160	Seeding Mixture No. 60	LB	2.000	2.000
0074	630.0200	Seeding Temporary	LB	18.000	18.000

7340-00-70

Line	Item	Item Description	Unit	Total	Qty
0076	630.0300	Seeding Borrow Pit	LB	3.000	3.000
0078	630.0500	Seed Water	MGAL	19.000	19.000
0080	633.5100	Markers Row	EACH	9.000	9.000
0082	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0084	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0086	638.2602	Removing Signs Type II	EACH	8.000	8.000
0088	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0090	642.5001	Field Office Type B	EACH	1.000	1.000
0092	643.0420	Traffic Control Barricades Type III	DAY	1,134.000	1,134.000
0094	643.0705	Traffic Control Warning Lights Type A	DAY	1,764.000	1,764.000
0096	643.0900	Traffic Control Signs	DAY	882.000	882.000
0098	643.5000	Traffic Control	EACH	1.000	1.000
0100	645.0111	Geotextile Type DF Schedule A	SY	90.000	90.000
0102	645.0120	Geotextile Type HR	SY	580.000	580.000
0104	646.1020	Marking Line Epoxy 4-Inch	LF	600.000	600.000
0106	650.4500	Construction Staking Subgrade	LF	93.000	93.000
0108	650.5000	Construction Staking Base	LF	93.000	93.000
0110	650.6500	Construction Staking Structure Layout (structure) 01. B-27-165	LS	1.000	1.000
0112	650.9910	Construction Staking Supplemental Control (project) 01. 7340-00-70	LS	1.000	1.000
0114	650.9920	Construction Staking Slope Stakes	LF	93.000	93.000
0116	690.0150	Sawing Asphalt	LF	40.000	40.000
0118	715.0502	Incentive Strength Concrete Structures	DOL	792.000	792.000
0120	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	200.000	200.000
0122	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	200.000	200.000

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

GRUBBING

STATION	LOCATION	201.0205 (STA)
12+00 - 13+50	MAINLINE	2
	TOTALS =	2

EARTHWORK SUMMARY

FROM/TO STA	LOCATION	205.0100 EXCAVATION COMMON CUT (CY)	AVAILABLE MATERIAL (CY) (1)	UNEXPANDED FILL (CY)	FILL (25%) (2)	MASS ORDINATE +/- (CY) (3)	208.0100 BORROW (CY)
12+00 - 13+50	MAINLINE	85	85	224	280	-195	195
	TOTALS =	85	85	224	280		195

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.

3

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
12+00 - 12+48	MAINLINE	7.5	122
13+04 - 13+50	MAINLINE	7.5	118
	TOTALS =	15	240

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
12+00 - 12+48	MAINLINE	7	32
13+04 - 13+50	MAINLINE	7	31
	TOTALS =	14	63

WATER

STATION-STATION	LOCATION	624.0100 (MGAL)
12+00-13+50	MAINLINE	4
	TOTALS =	4

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0160 SEEDING MIXTURE NO. 60 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0300 SEEDING BORROW PIT (LB)	630.0500 SEED WATER (MGAL)
12+00 - 13+50	MAINLINE	300	510	0.3	12	*1	13	---	12
---	BORROW PIT	---	120	0.1	---	---	---	2	3
--	UNDISTRIBUTED	75	160	0.1	3	1	5	1	4
	TOTALS =	375	790	0.5	15	2	18	3	19

* WETLAND AREAS AS NOTED ON GENERAL NOTES SHEET.

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
11+93 - 12+59	MAINLINE, LT.	120	240
12+58 - 12+59	MAINILINE, RT.	50	100
12+90 - 12+91	MAINLINE, LT.	40	80
12+90 - 13+54	MAINLINE, RT.	120	240
--	UNDISTRIBUTED	80	160
	TOTALS =	410	820

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
7340-00-70	3	2
TOTALS =	3	2

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
12+49	MAINLINE, RT.	8
12+90	MAINLINE, LT.	8
-	UNDISTRIBUTED	8
	TOTALS =	24

MARKERS ROW

POINT #	STATION	LOCATION	633.5100 (EACH)
100	12+00.00	MAINLINE, 29.36' LT.	1
101	12+30.00	MAINLINE, 55.00' LT.	1
102	13+16.00	MAINLINE, 53.00' LT.	1
103	13+50.00	MAINLINE, 31.05' LT.	1
104	13+50.00	MAINLINE, 46.95' RT.	1
105	13+30.00	MAINLINE, 47.18' RT.	1
106	13+17.00	MAINLINE, 60.00' RT.	1
107	12+25.00	MAINLINE, 48.37' RT.	1
108	12+00.00	MAINLINE, 48.65' RT.	1
		TOTALS =	9

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

PERMANENT SIGNING

APPROX. STATION	POSITIION	LOCATION	SIGN CODE	SIGN DESCRIPTION	SIGN SIZE	634.0612 POSTS WOOD 4X6 INCH X 12-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
--	RIGHT	CTH C INT.	R12-55	20 TON BRIDGE __MILES AHEAD	48X18	---	---	1	1
12+35	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	---	---
12+35	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	---	---
12+37	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	---	---	1	1
12+38	RIGHT	MAINLINE	R12-1	WEIGHT LIMIT 20 TONS	24X30	---	---	1	1
12+43	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	---	---	1	1
13+05	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	---	---	1	1
13+11	LEFT	MAINLINE	R12-1	WEIGHT LIMIT 20 TONS	24X30	---	---	1	1
13+11	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	---	---	1	1
13+16	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	---	---
13+16	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	---	---
--	LEFT	CTH H INT.	R12-55	20 TON BRIDGE __MILES AHEAD	48X18	---	---	1	1
				TOTALS =		4	12.00	8	8

TRAFFIC CONTROL

	TRAFFIC CONTROL					
	643.0420 BARRICADES TYPE III (DAY)		643.0705 WARNING LIGHTS TYPE A (DAY)		643.0900 TRAFFIC CONTROL SIGNS (DAY)	
LOCATION	NO. DAYS	NO. DEVICES	NO. DAYS	NO. DEVICES	NO. DAYS	NO. DEVICES
PROJECT	63	18	63	28	63	14
TOTALS =	1134		1764		882	

3

MARKING LINE EPOXY 4-INCH

STATION-STATION	LOCATION	DESCRIPTION	646.1020 (LF)
12+00-13+50	MAINLINE	DOUBLE YELLOW	300
12+00-13+50	MAINLINE, LT.	WHITE EDGELINE	150
12+00-13+50	MAINLINE, RT.	WHITE EDGELINE	150
		TOTALS =	600

CONSTRUCTION STAKING

		CONSTRUCTION STAKING		
STATION -STATION	LOCATION	650.4500 SUBGRADE (L.F.)	650.5000 BASE (L.F.)	650.9920 SLOPES STAKES (L.F.)
12+00 - 13+50	MAINLINE	93	93	93
	TOTAL =	93	93	93

SAWING ASPHALT

STATION	LOCATION	690.0150 (L.F.)
12+00	MAINLINE	20
13+50	MAINLINE	20
	TOTAL =	40

PROJECT NO: 7340-00-70	HWY: CTH X	COUNTY: JACKSON	MISCELLANEOUS QUANTITIES	SHEET 8	E

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\SHEETSPLAN\DETAILS\MISCELLANEOUS QUANTITIES.DWG
LAYOUT : QUANTITIES
PLOT DATE : 7/29/2019
PLOT TIME : 1:41:10 PM
PLOT BY : JONAH DRAKE
PLOT SCALE : 1" = 1'

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
7340-00-00	4.01	2
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

CTH H – CTH P

TROUT RUN CREEK BRIDGE B-27-0165

CTH X JACKSON COUNTY

CONSTRUCTION PROJECT NUMBER
7340-00-70

CONVENTIONAL ABBREVIATIONS

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

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER)	o 1040	PROPOSED R/W LINE	
R/W MONUMENT	o ● (SET)	EXISTING H.E. LINE	
R/W STANDARD	△ ▲ (SET)	PROPERTY LINE	
SIGN	SIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT		SLOPE INTERCEPTS	
SECTION CORNER SYMBOL		CORPORATE LIMITS	
FEE (HATCH VARIES)		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
R/W BOUNDARY POINT	RWB20	NO ACCESS (NEW HIGHWAY)	
PARCEL NUMBER	8	SECTION LINE	
UTILITY PARCEL NUMBER	92	QUARTER LINE	
SIGN NUMBER (OFF PREMISE)	21-9	SIXTEENTH LINE	
BUILDING		EXISTING CENTERLINE	
		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	
		ENCROACHMENT	E-1 TYPE
		HIGHWAY EASEMENT	

CONVENTIONAL UTILITY SYMBOLS

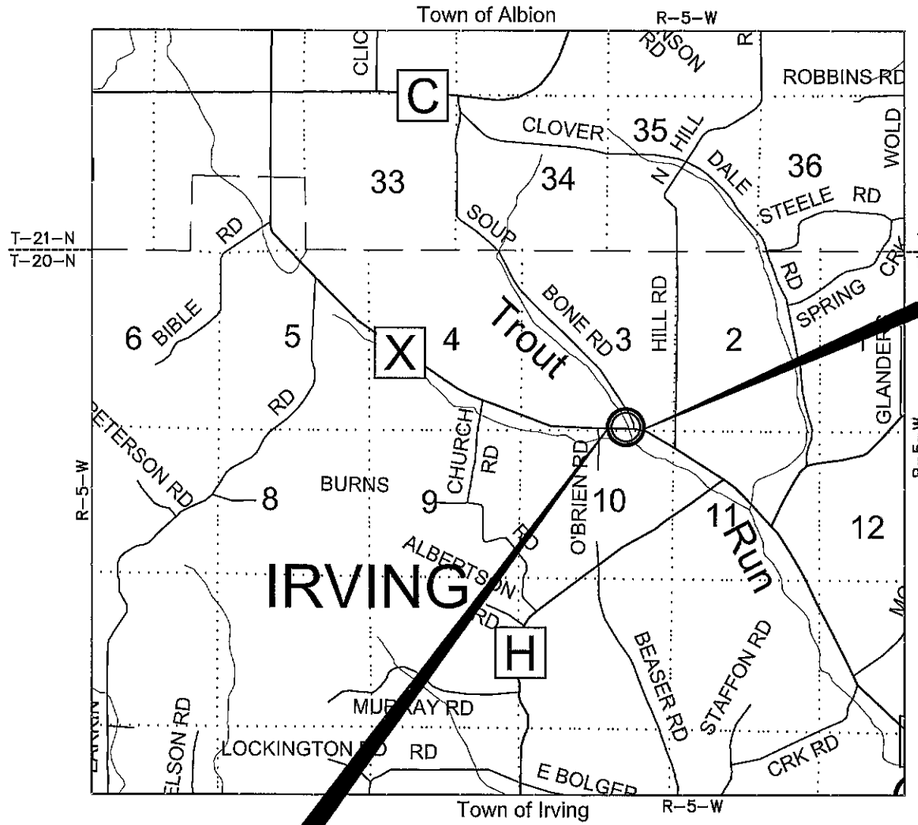
WATER	W	SANITARY SEWER	SAN	
GAS	G	STORM SEWER	SS	
TELEPHONE	T		NON COMPENSABLE	COMPENSABLE
OVERHEAD TRANSMISSION LINES	OH	POWER POLE		
ELECTRIC	E	TELEPHONE POLE		
CABLE TELEVISION	TV	TELEPHONE PEDESTAL		
FIBER OPTIC	FO	ELECTRIC TOWER		

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS) COORDINATES, JACKSON COUNTY ORIGINAL PROJECTION, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" X 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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



END RELOCATION ORDER
STA. 13+50
1.46' SOUTH AND 1163.63' EAST OF THE S1/4 CORNER OF SECTION 3, T.20N., R.5W., TOWN OF IRVING, JACKSON COUNTY, WI
Y= 159,149.81
X= 355,033.08

BEGIN RELOCATION ORDER
STA. 12+00
0.25' NORTH AND 1013.64' EAST OF THE S1/4 CORNER OF SECTION 3, T.20N., R.5W., TOWN OF IRVING, JACKSON COUNTY, WI
Y=159,151.52
X=354,883.09

N

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.028 MI.

JEWELL
associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
www.jewellassoc.com

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

WISCONSIN SCOTT D. WARNER S-2524 RICHLAND CENTER, WI 07-10-2019 LAND SURVEYOR

REVISION DATE

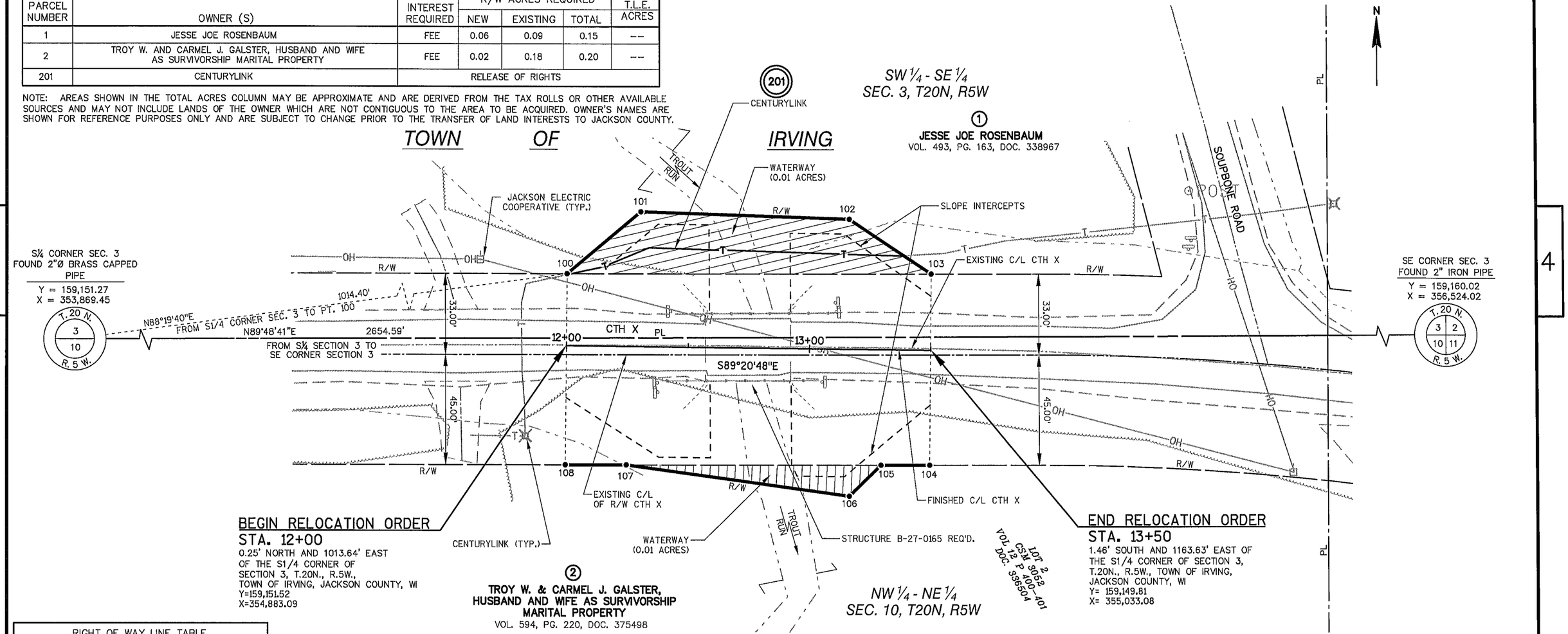
APPROVED FOR JACKSON COUNTY
DATE: 7-24-19 NAME/TITLE Commissioner

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			T.L.E. ACRES
			NEW	EXISTING	TOTAL	
1	JESSE JOE ROSENBAUM	FEE	0.06	0.09	0.15	---
2	TROY W. AND CARMEL J. GALSTER, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE	0.02	0.18	0.20	---
201	CENTURYLINK	RELEASE OF RIGHTS				

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO JACKSON COUNTY.



RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
100 TO 101	N50°07'44"E	39.47'
101 TO 102	S88°00'52"E	86.02'
102 TO 103	S56°30'18"E	40.47'
103 TO 104	S00°39'12"W	78.01'
104 TO 105	N89°59'43"W	20.00'
105 TO 106	S46°02'54"W	18.26'
106 TO 107	N82°08'23"W	92.73'
107 TO 108	N89°59'43"W	25.00'
108 TO 100	N00°39'12"E	78.01'

NOTE: EXISTING C/L OF CTH X WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR CTH X WAS BASED ON VOL. 109, PG. 540, DOC. 145415, A 45' OFFSET SOUTH OF THE DESCRIBED CENTERLINE THEREIN, AND A 33' OFFSET NORTH OF THE DESCRIBED CENTERLINE THEREIN

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET	Y	X
100	12+00.00	29.36 LT.	159180.87	354883.42
101	12.30.00	55.00 LT.	159206.18	354913.71
102	13+16.00	53.00 LT.	159203.19	354999.69
103	13+50.00	31.05 LT.	159180.86	355033.43
104	13+50.00	46.95 RT.	159102.86	355032.54
105	13+30.00	47.18 RT.	159102.86	355012.54
106	13+17.00	60.00 RT.	159090.19	354999.40
107	12+25.00	48.37 RT.	159102.87	354907.54
108	12+00.00	48.65 RT.	159102.87	354882.53

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
GENERAL TELEPHONE COMPANY OF WISCONSIN (n.k.a CENTURYLINK)	DOC. #204932, VOL. 211, PG. 777	1	BLANKET EASEMENT INCLUDING THE SW¼-SE¼ OF SECTION 3
GENERAL TELEPHONE COMPANY OF WISCONSIN (N.K.A CENTURYLINK)	DOC. #204608, VOL. 211, PG. 287	2	BLANKET EASEMENT INCLUDING THE NW¼-NE¼ OF SECTION 10
JACKSON ELECTRIC COOPERATIVE	DOC. #310830, VOL. 413, PG. 491	2	BLANKET EASEMENT FOR THE NW¼-NE¼ OF SECTION 10

REVISION DATE	DATE	SCALE, FEET 0 20 40	HWY: CTH X	R/W PROJECT NUMBER: 7340-00-00	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: JACKSON	CONSTRUCTION PROJECT NUMBER: 7340-00-70	PS&E SHEET E

FILE NAME : R:\Projects\W11591 Jackson Co CTH X Bridge\RW\73400000_Plat Sheet.dwg PLOT DATE : 7/10/2019 3:52 PM PLOT BY : Scott Warner PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

LEGEND

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

JESSE JOE ROSENBAUM

SLOPE INTERCEPTS

TROUT RUN

REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS
STA. 12+75 (P-27-0063)
SINGLE-SPAN STEEL DECK GIRDER STRUCTURE
27.6' CLEAR ROADWAY WIDTH
36.5' OVERALL LENGTH

SOUPBONE RD

EXISTING C/L SOUPBONE ROAD

TIMOTHY F ZILLMER
BRENDA A ZILLMER

CENTURYLINK (TYP.)

EXISTING F.E. TO REMAIN

BM 4

EXISTING C/L CTH X

R/W

VARIES 29'-31'

VARIES 49'-47'

(ASPHALT)

12+00

13+00

S89°20'48"E

BM 2

CTH X

JACKSON ELECTRIC COOPERATIVE (TYP.)

BM 3

TROY W & CARMEL J GALSTER
HUSBAND AND WIFE AS
SURVIVORSHIP MARITAL PROPERTY

EXISTING F.E. TO REMAIN

FINISHED C/L CTH X

STRUCTURE B-27-165 REQ'D.

BEGIN PROJECT
STA. 12+00
Y= 159,151.52
X= 354,883.09

END PROJECT
STA. 13+50
Y= 159,149.81
X= 355,033.08

JESSE JOE ROSENBAUM

FINISHED C/L PROFILE CTH X

L=123.00'
K=76.20

PI STA 12+62.00
EL 847.99

0.89%

0.72%

MATCH EXISTING
STA. 12+00
EL. = 848.54

MATCH EXISTING
STA. 13+50
EL. = 848.62

EXISTING C/L PROFILE CTH X

PC STA 12+00.50
EL 848.53

PT STA 13+23.50
EL 848.43

HIGH WATER100
EL = 839.77

HIGH WATER2
EL = 837.29

OBSERVED WATER
EL. 834.57
(12-12-2018)

EXISTING
STREAMBED
EL. 833.91

FINISHED C/L ELEVATION

EXISTING C/L ELEVATION

STA. 12+76.00
STRUCTURE B-27-165 REQ'D.
SINGLE-SPAN 36-INCH PRESTRESSED CONCRETE GIRDER
CLEAR ROADWAY WIDTH = 28.0'
O.A.L. = 56.50'
SKEW = 0°
STREAMBED EL. = 833.91

EARTHWORK SUMMARY

EXCAVATION COMMON	=	85 C.Y.
FILL	=	224 C.Y.
FILL EXPANSION (25%)	=	280 C.Y.
BORROW	=	195 C.Y.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	9+52	3/4" IRON REBAR SET, 14.1' LT	852.42
2	13+29	3/4" IRON REBAR SET, 16.3' RT	846.57
3	15+15	3/4" IRON REBAR SET, 32.5' RT	851.06
4	11+65	STAR SPIKE SET IN PPOL, 35.0' LT	847.60

10+20	10+40	10+60	10+80	11+00	11+20	11+40	11+60	11+80	12+00	12+20	12+40	12+60	12+80	13+00	13+20	13+40	13+60	13+80	14+00	14+20	14+40	14+60	14+80	15+00	15+20	15+40	15+60	15+80
852.15	851.69	851.24	850.85	850.46	850.03	849.58	849.16	848.85	848.54	848.54	848.38	848.23	848.28	848.00	848.24	847.70	848.24	847.69	848.30	847.96	848.41	848.22	848.55	848.50	848.74	848.98	849.24	849.57	849.89	850.21	850.51	850.79	851.03	851.26

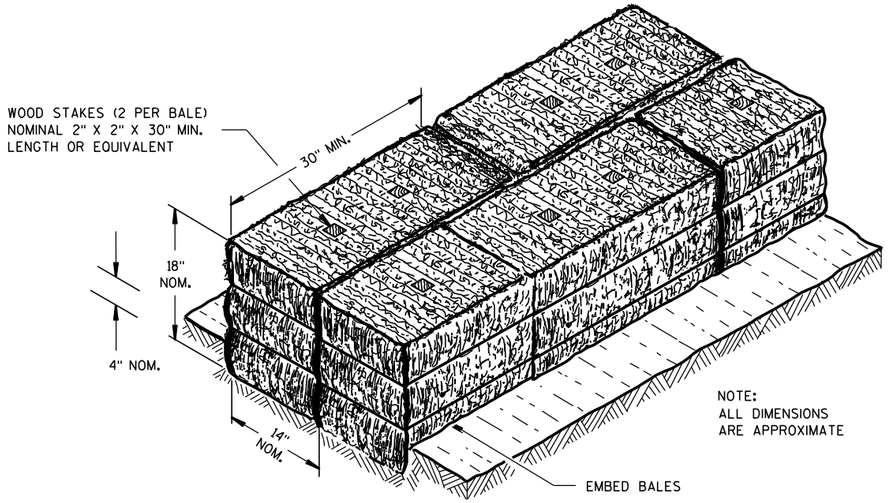
PROJECT NO: 7340-00-70	HWY: CTH X	COUNTY: JACKSON	PLAN AND PROFILE: CTH X	SHEET	E

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\SHEETSPLAN\PLAN & PROFILE SHEETS\P&P.DWG
LAYOUT : LAYOUT NAME - MAINLINE
PLOT DATE : 7/26/2019
PLOT TIME : 1:42:16 PM
PLOT BY : JONAH DRAKE
PLOT SCALE : 0.215269

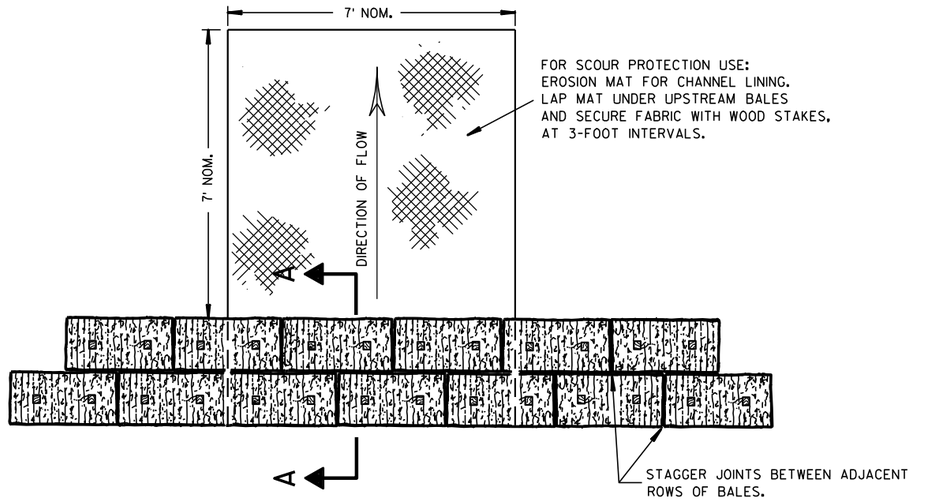
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

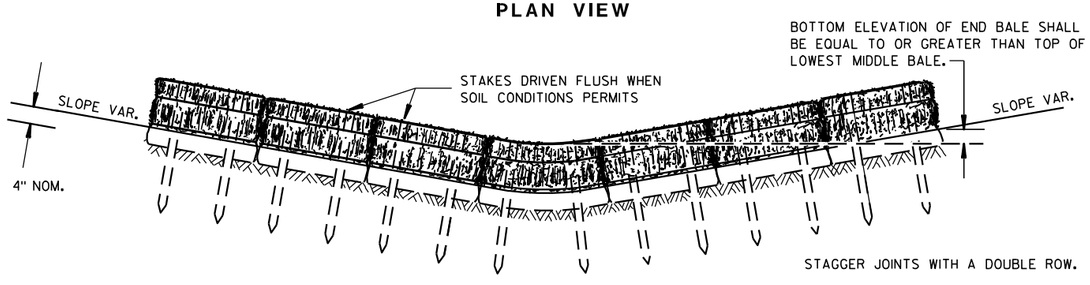
6



SECTION A-A



PLAN VIEW



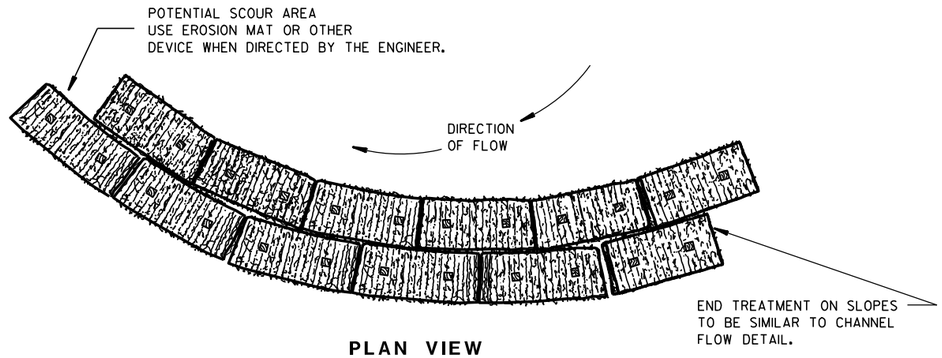
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

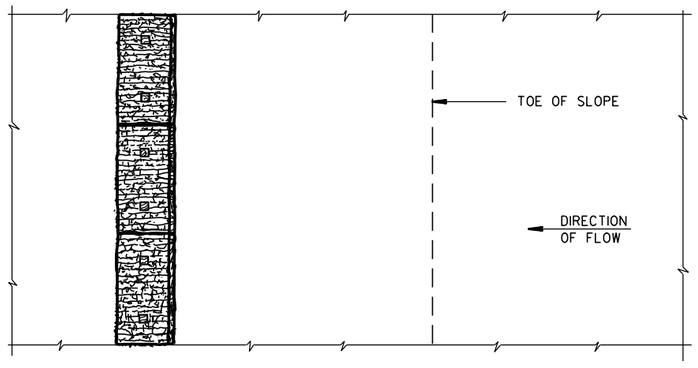
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

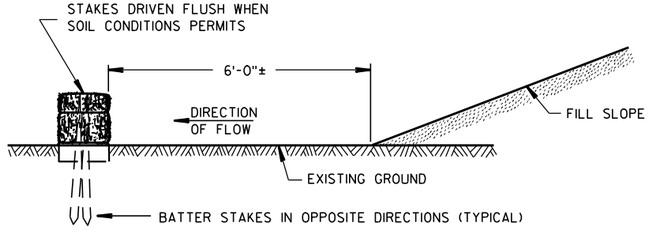


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE — /S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER

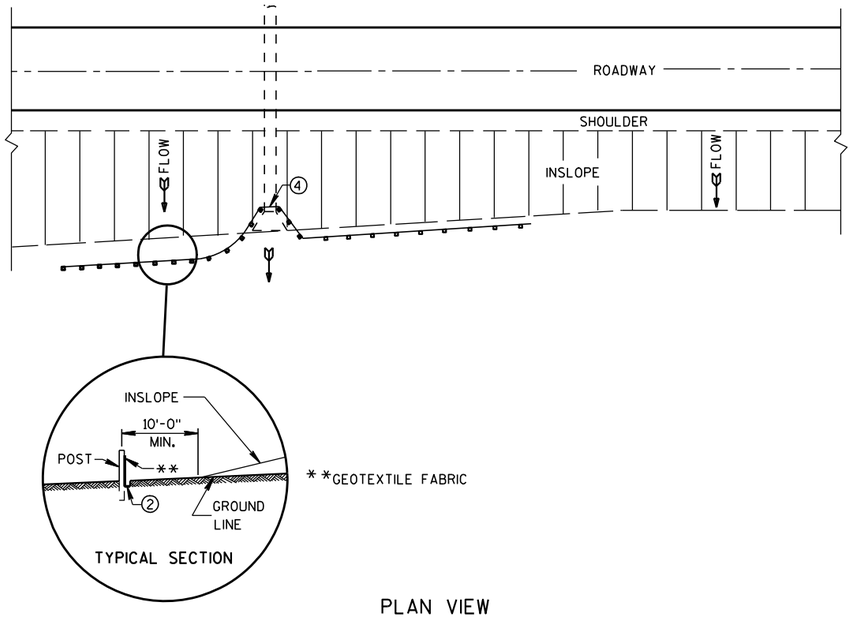
FHWA

6

S.D.D. 8 E 8-3

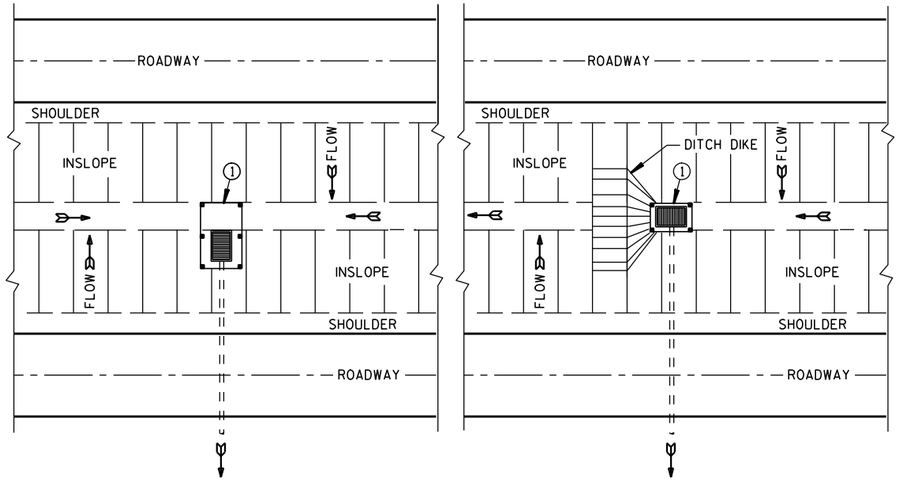
6

S.D.D. 8 E 8-3



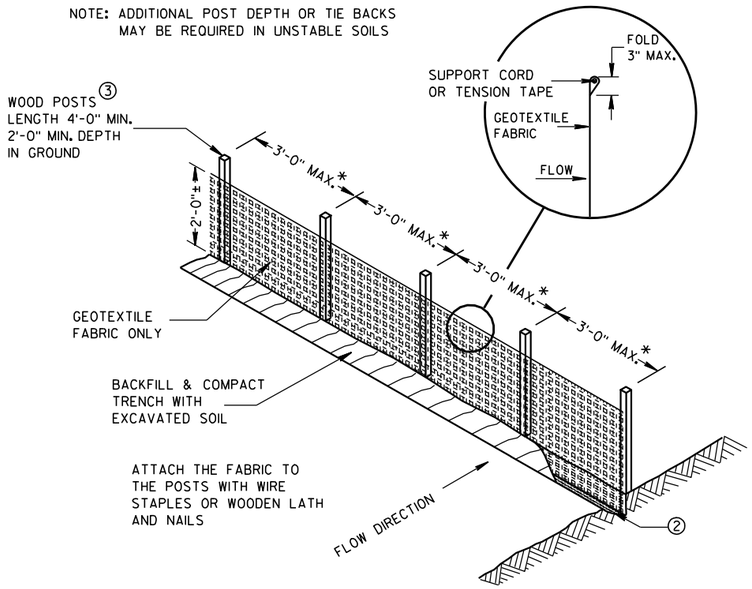
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



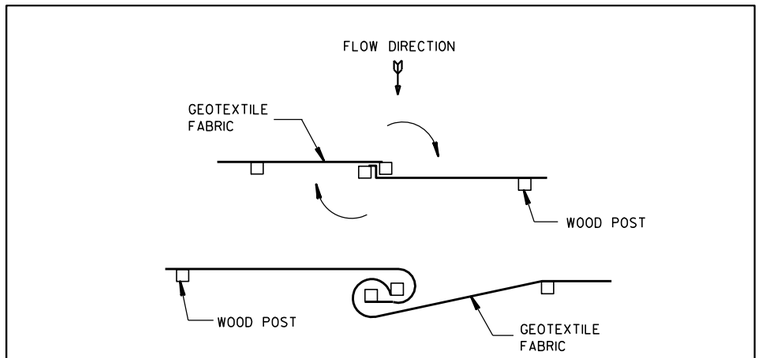
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

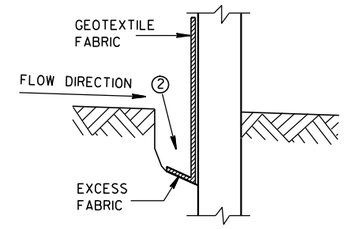


JOINING TWO LENGTHS OF SILT FENCE 5

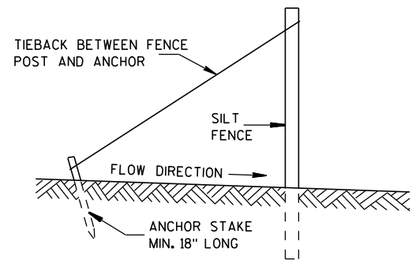
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

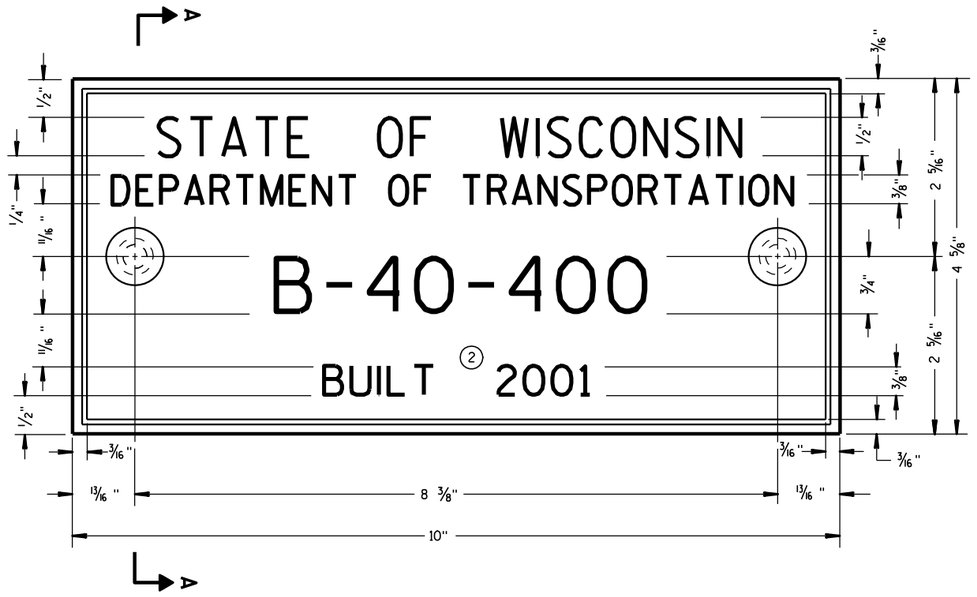
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

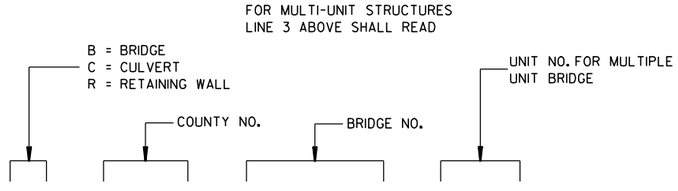
S.D.D. 8 E 9-6

S.D.D. 8 E 9-6



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

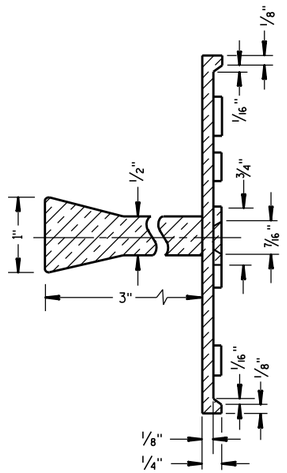
GENERAL NOTES

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.

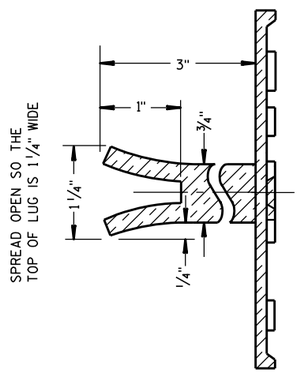
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

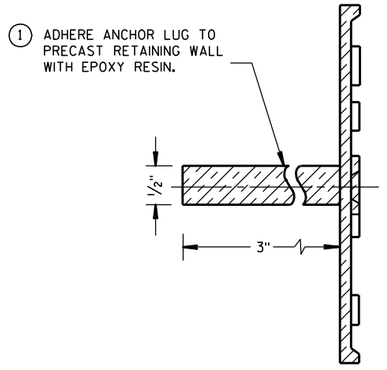
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

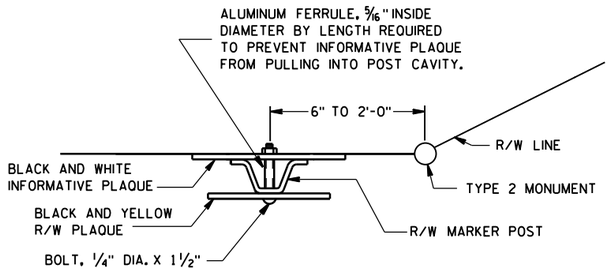
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

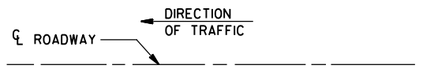
6

S.D.D. 12 A 3-10

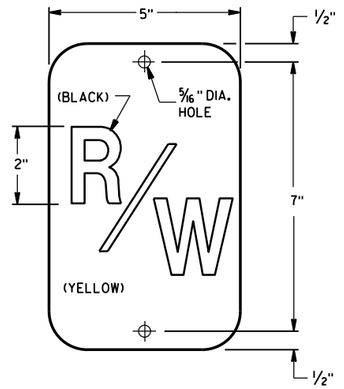
6

S.D.D. 12 A 3-10



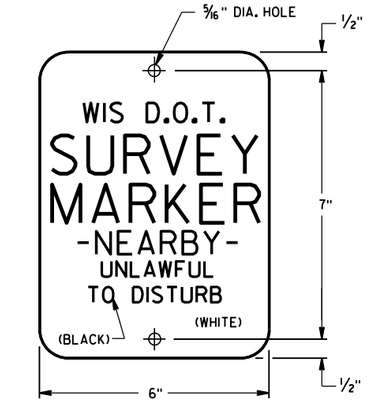


PLAN VIEW



R/W PLAQUE

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



INFORMATIVE PLAQUE

GENERAL NOTES

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

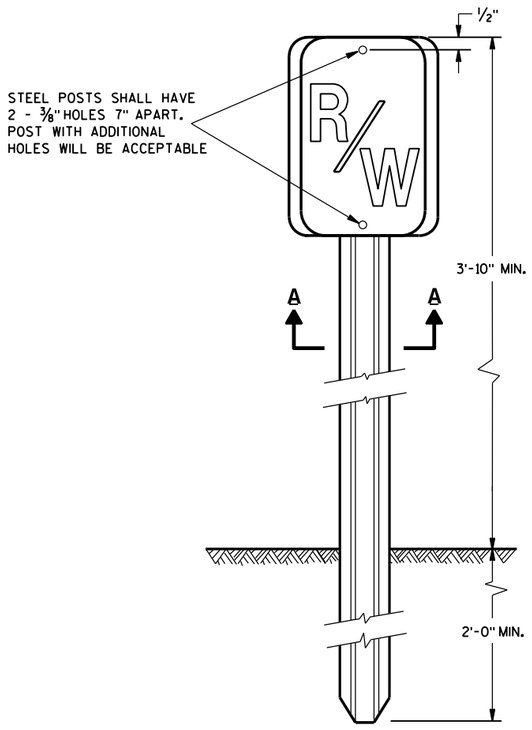
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

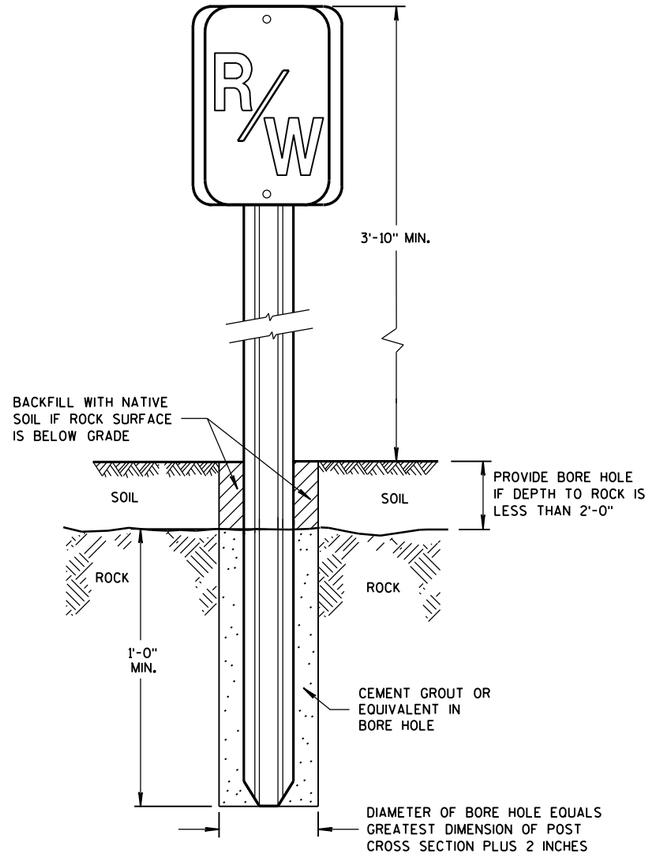
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3'10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

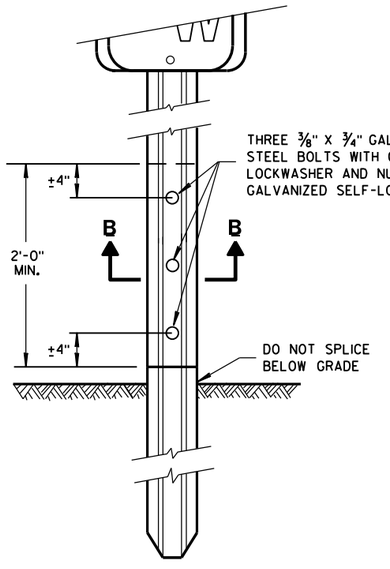
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.



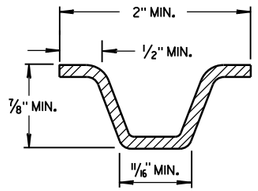
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

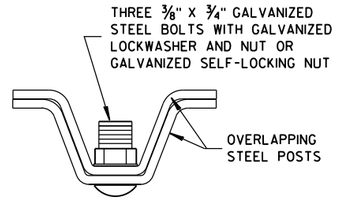


FRONT VIEW
SPLICE DETAIL



MIN. WEIGHT 1.12 LB./FT.

SECTION A-A



SECTION B-B

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible]INEER
FHWA

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S.D.D. 15 A 1-13a

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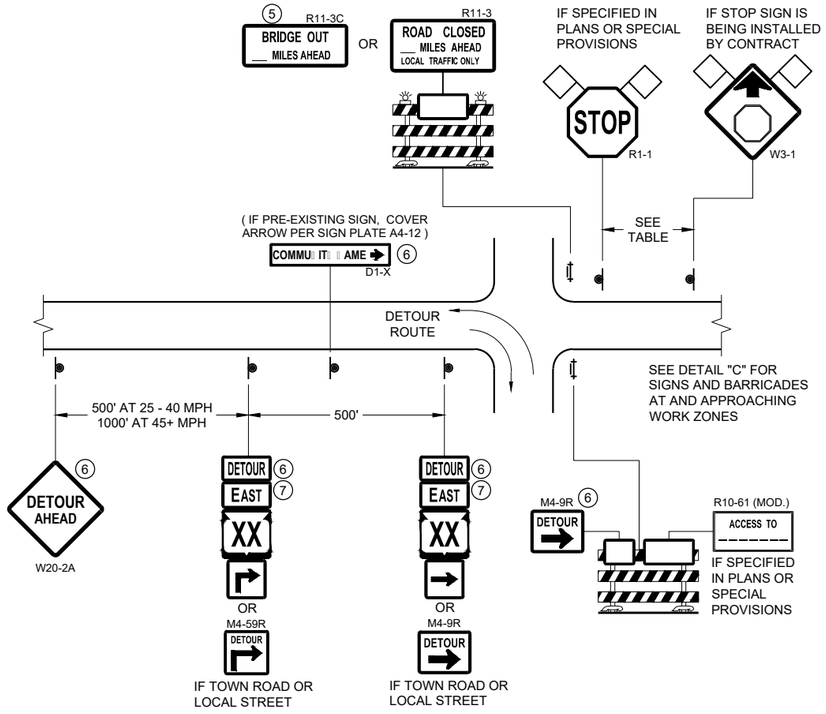
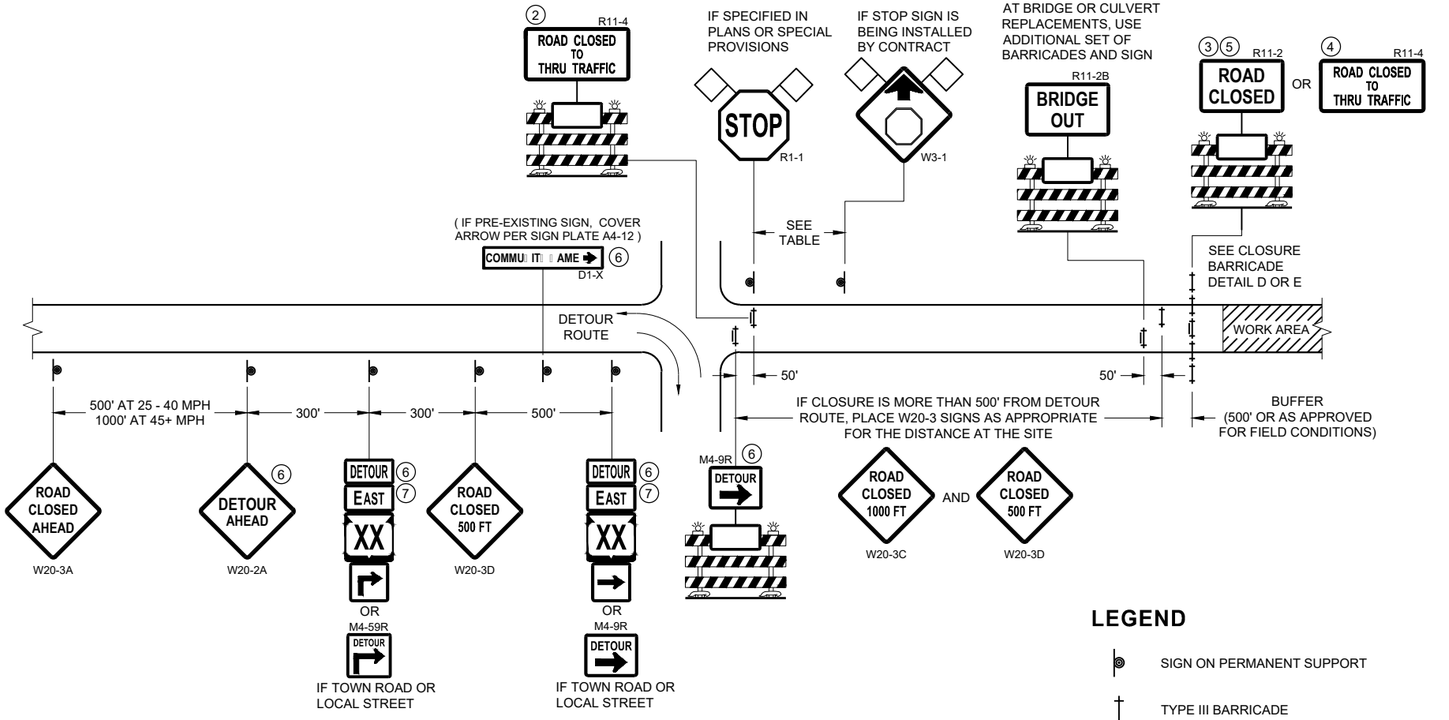
S.D.D. 15 A 1-13a



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

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

LEGEND

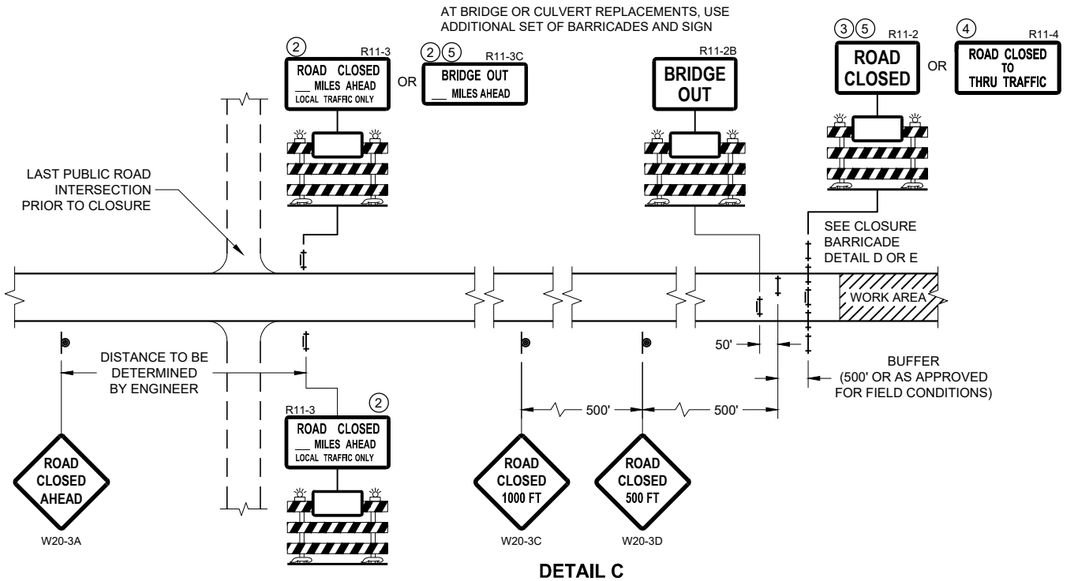
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8

EAST M3 - X

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M06 - 1



DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

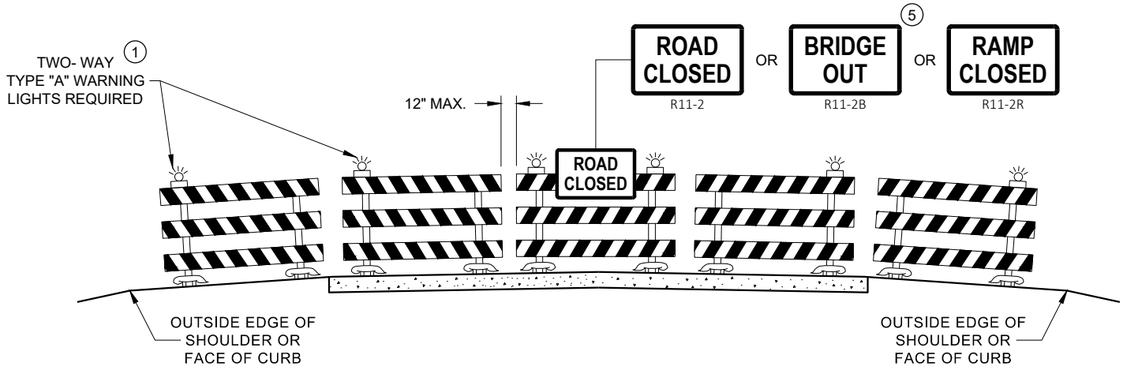
APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

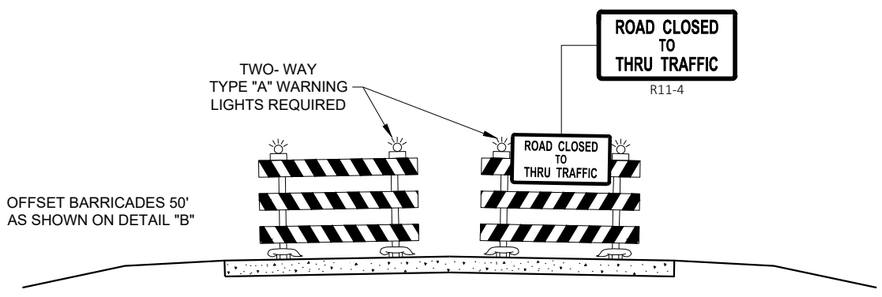
FHWA

6

SDD 15C02 - 07a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

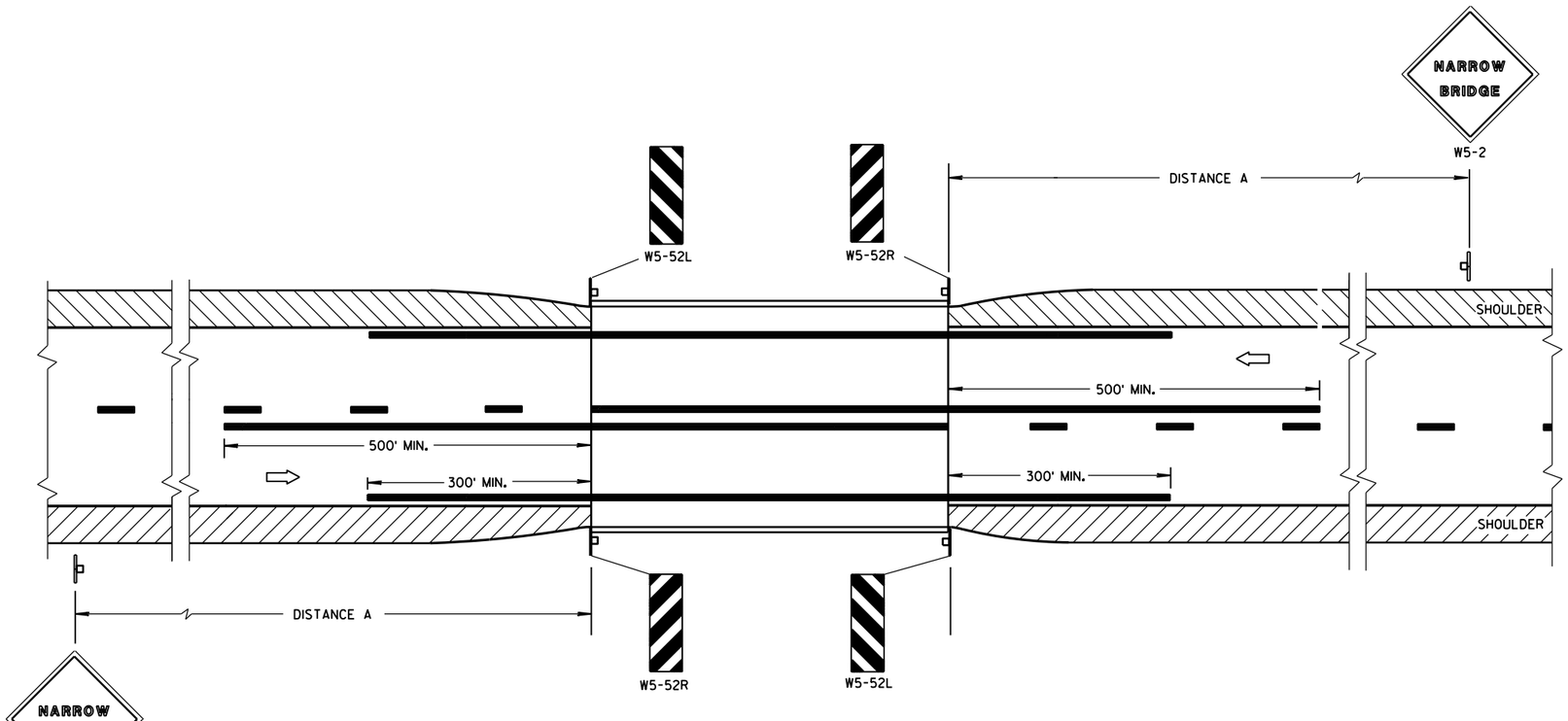
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 07b

6

SDD 15C02 - 07b



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

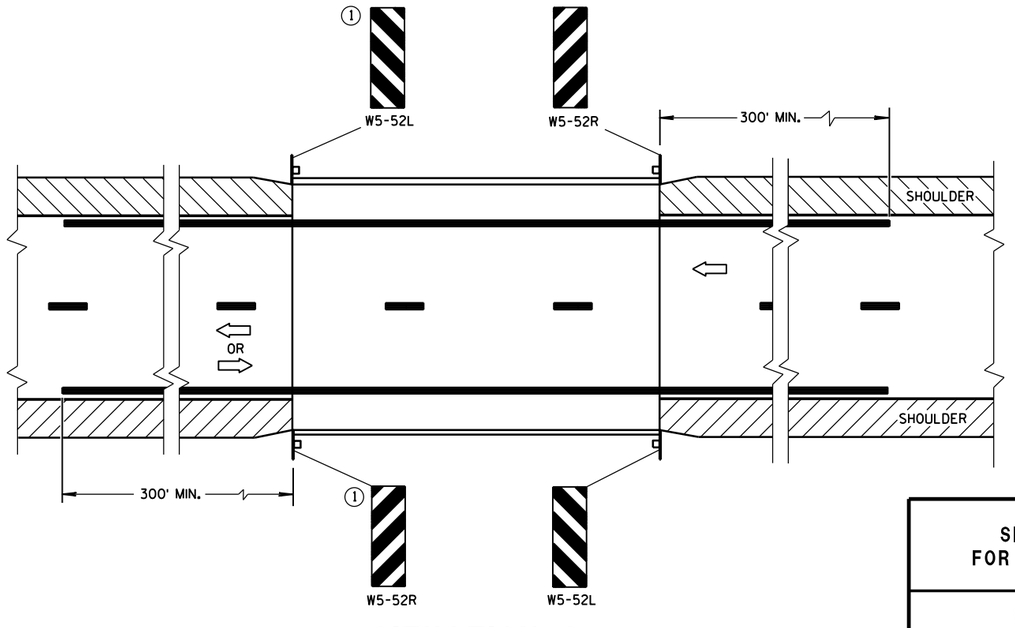
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

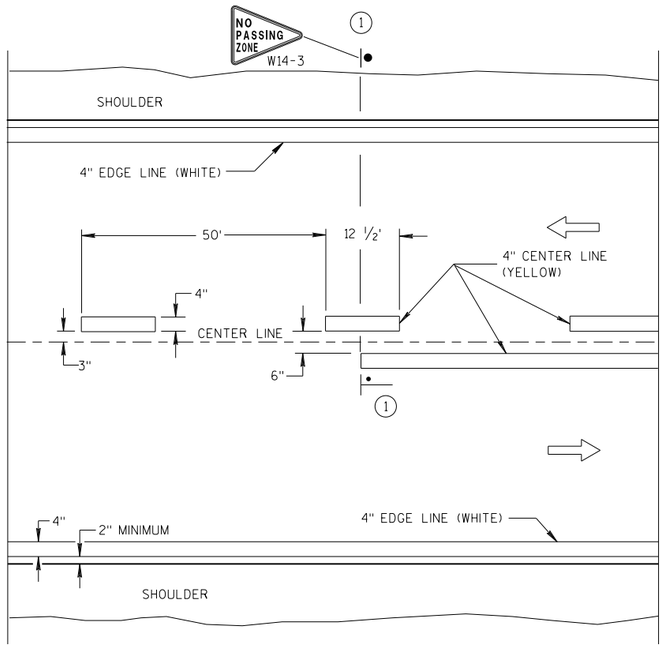
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

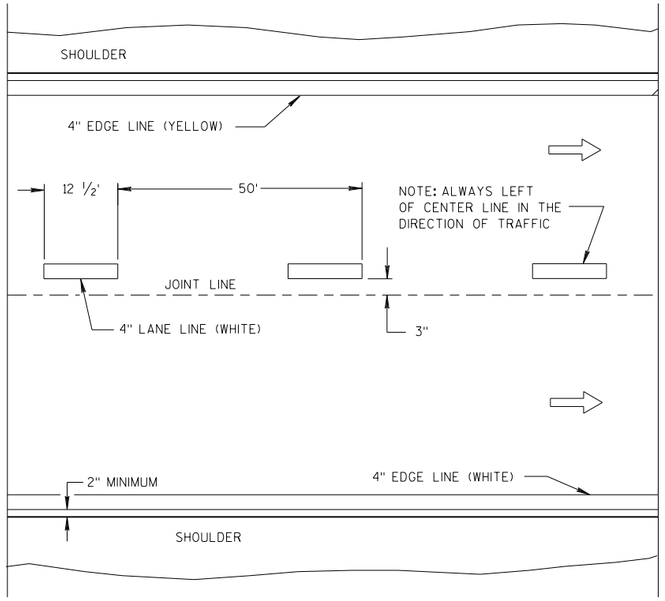
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

6

S.D.D. 15 C 6-9



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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.

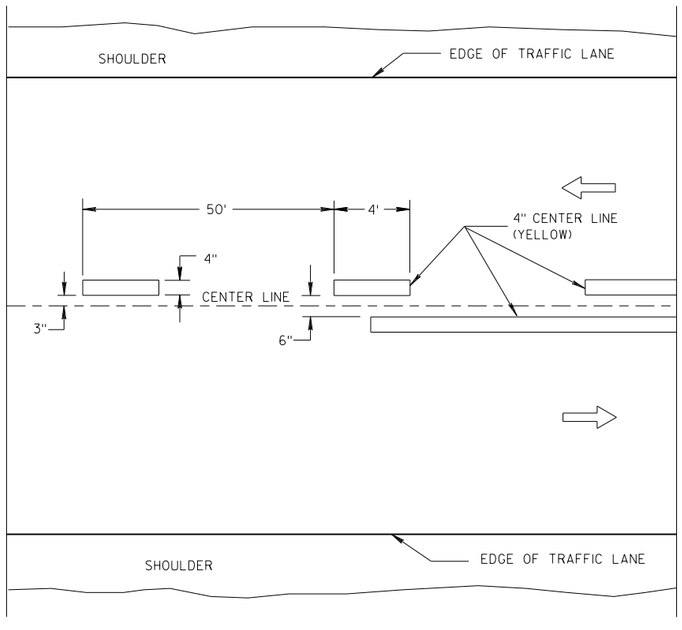
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

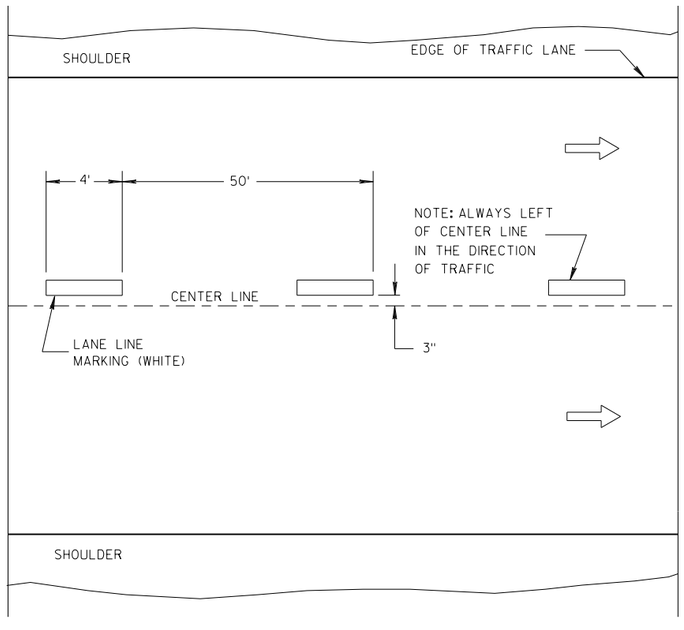
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

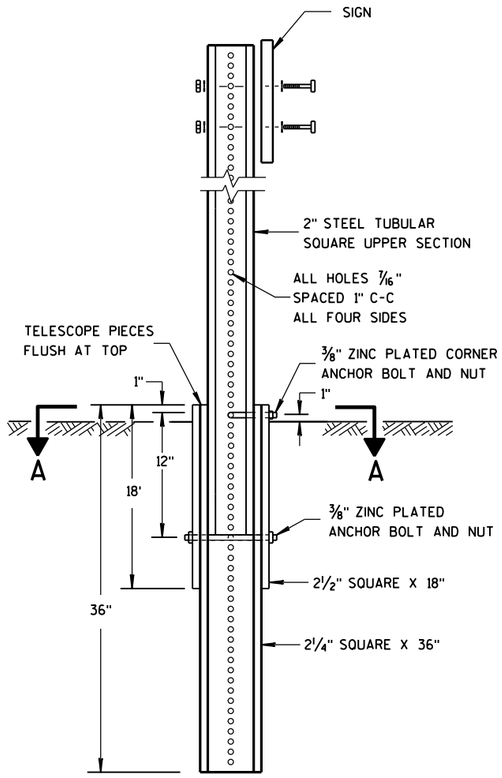
7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

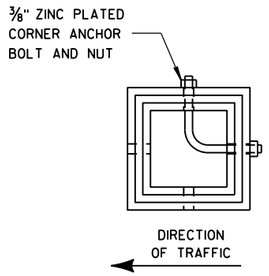
FHWA

6

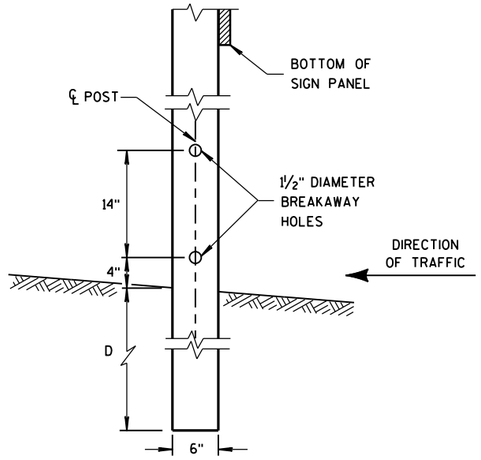
S.D.D. 15 C 8-19a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



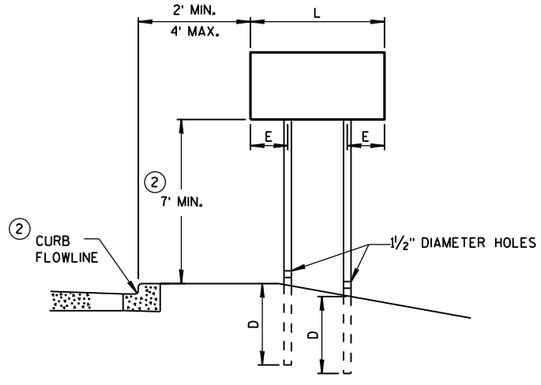
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

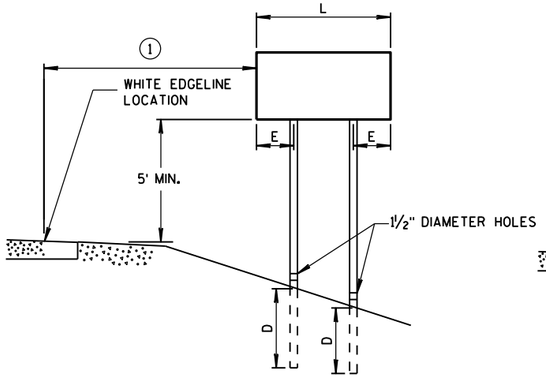
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

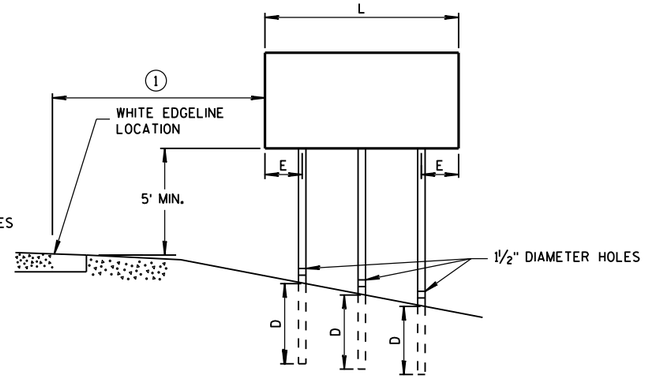
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

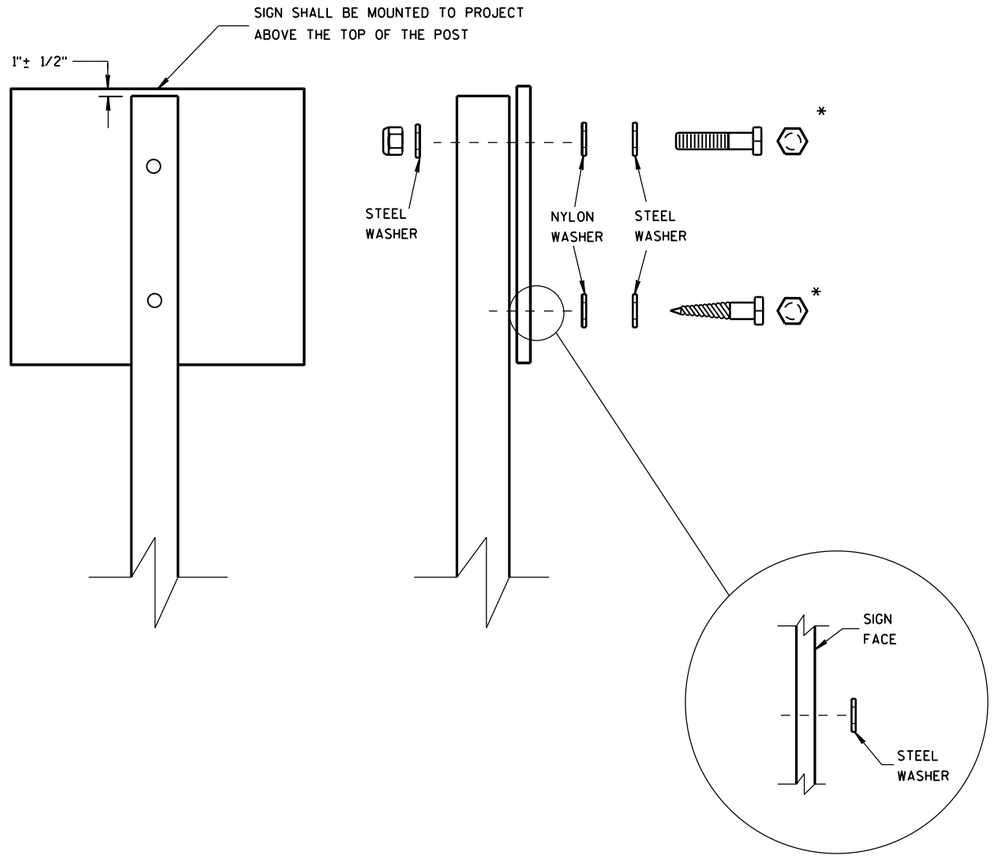
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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

WASHERS (ALL POSTS) -

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

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

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

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

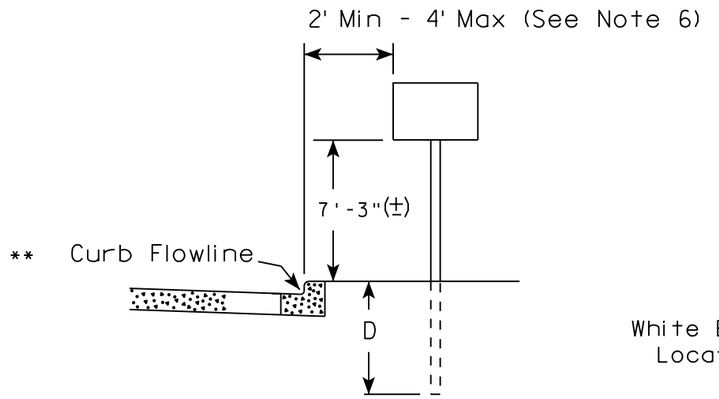
APPROVED

June 2017
DATE

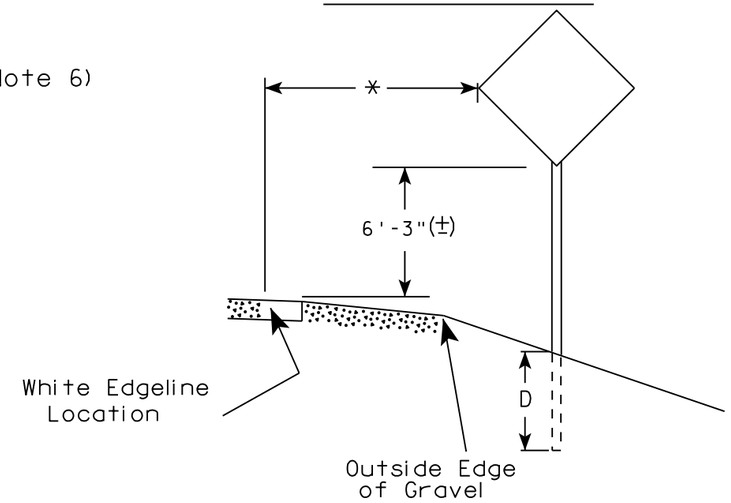
/S/ Andrew Heldtke
WORK ZONE ENG

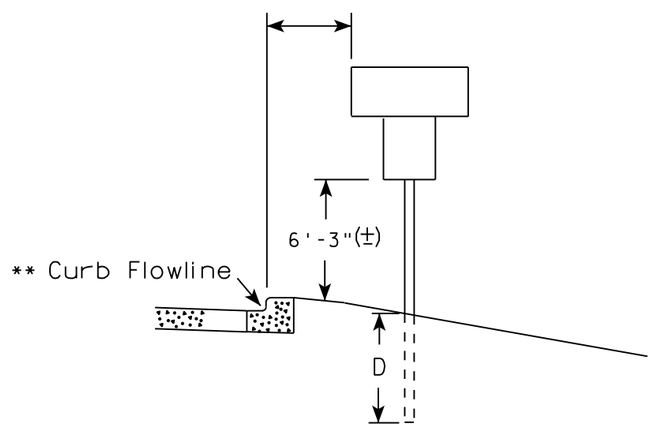
FHWA

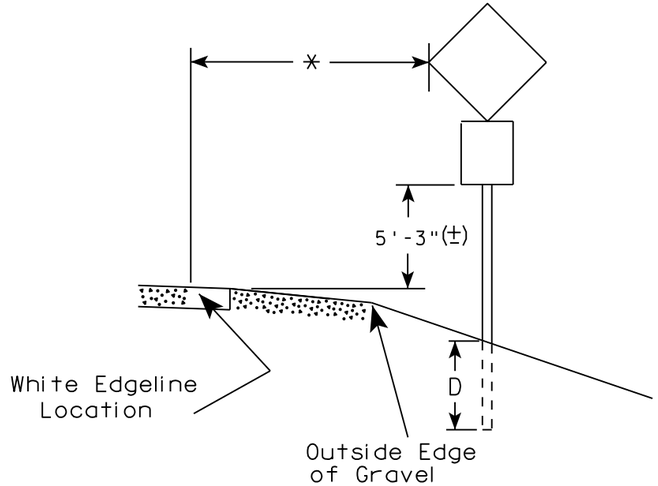
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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" (±).

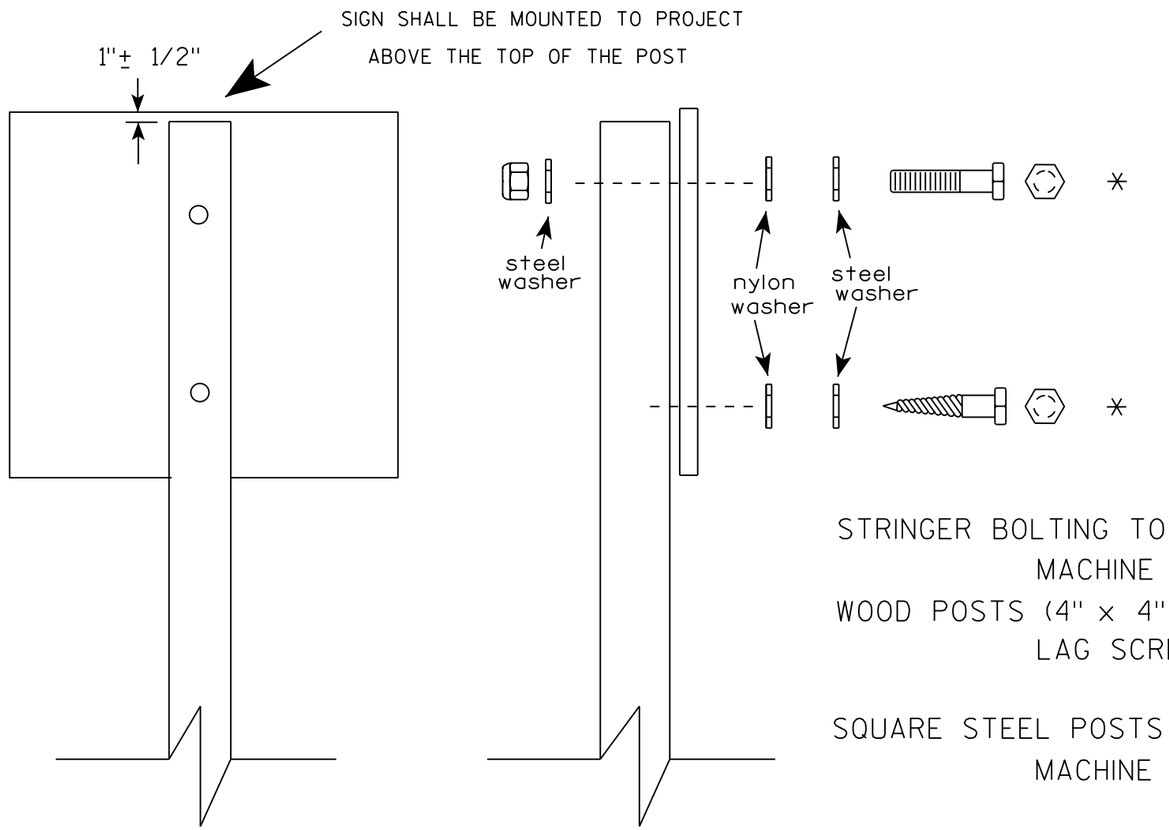
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 23	E



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

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

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

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

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

WOOD POSTS (4" x 4" or 4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

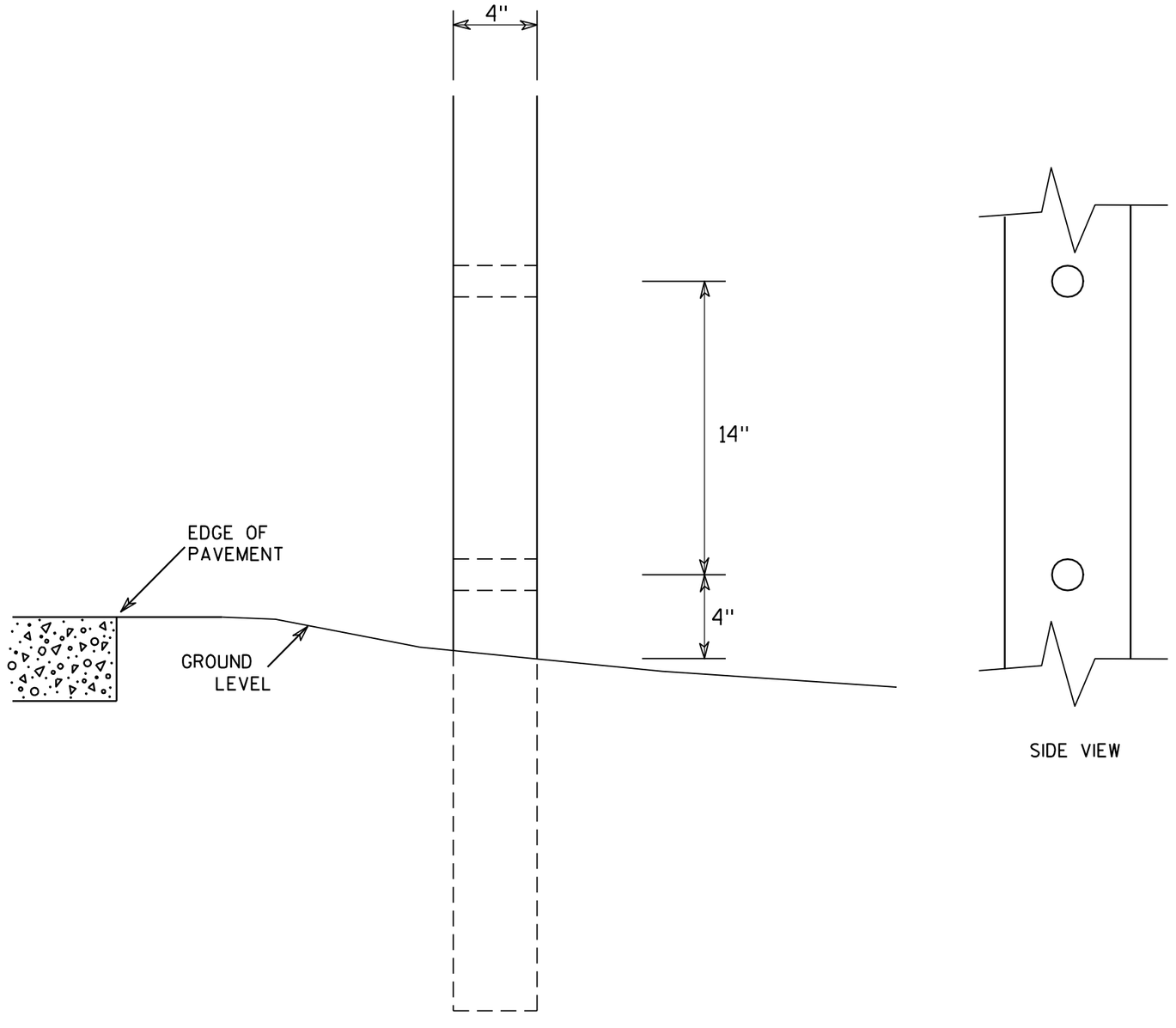
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E



SIDE VIEW

GENERAL NOTES

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

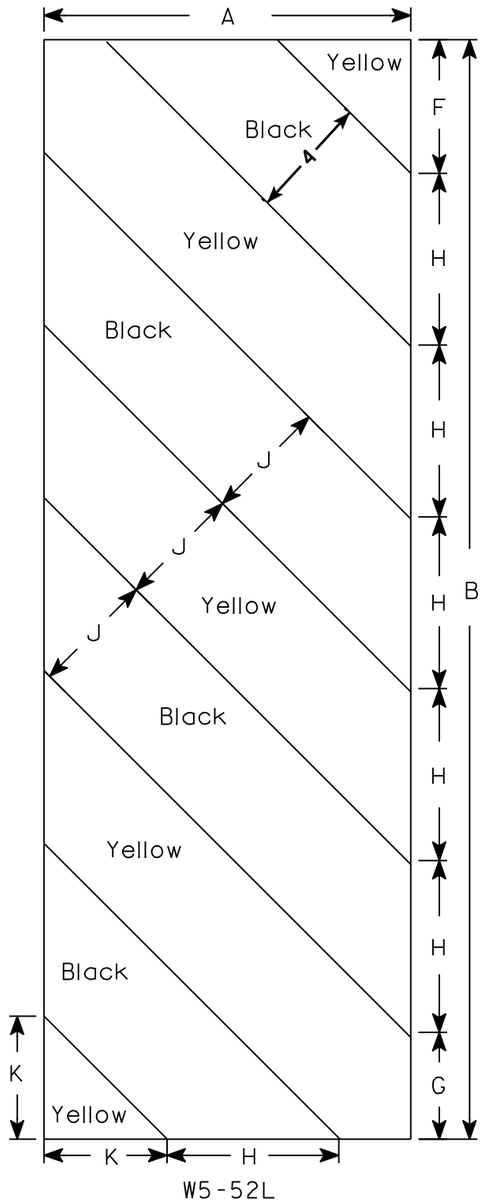
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

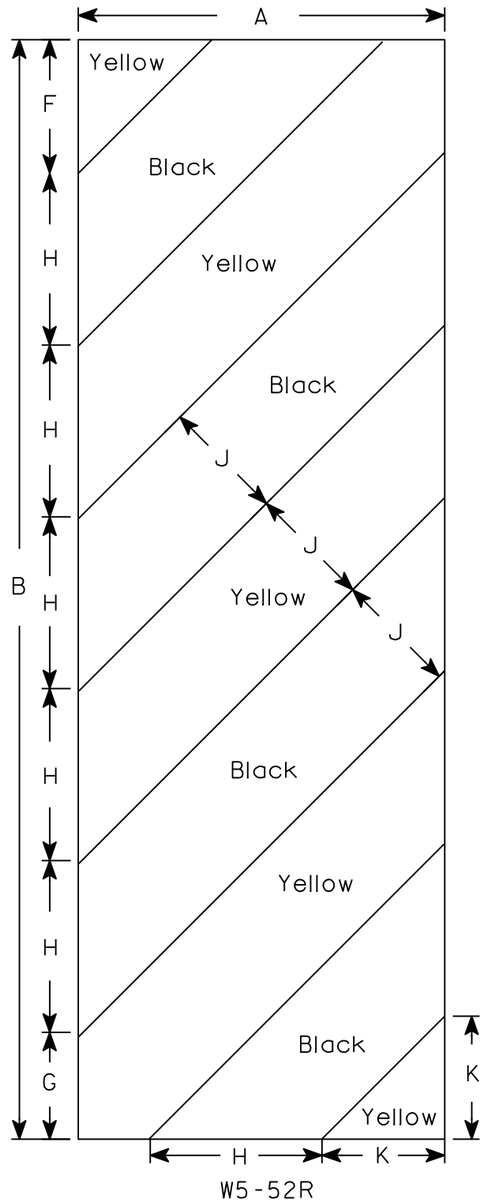
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 25	E



W5-52L



W5-52R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

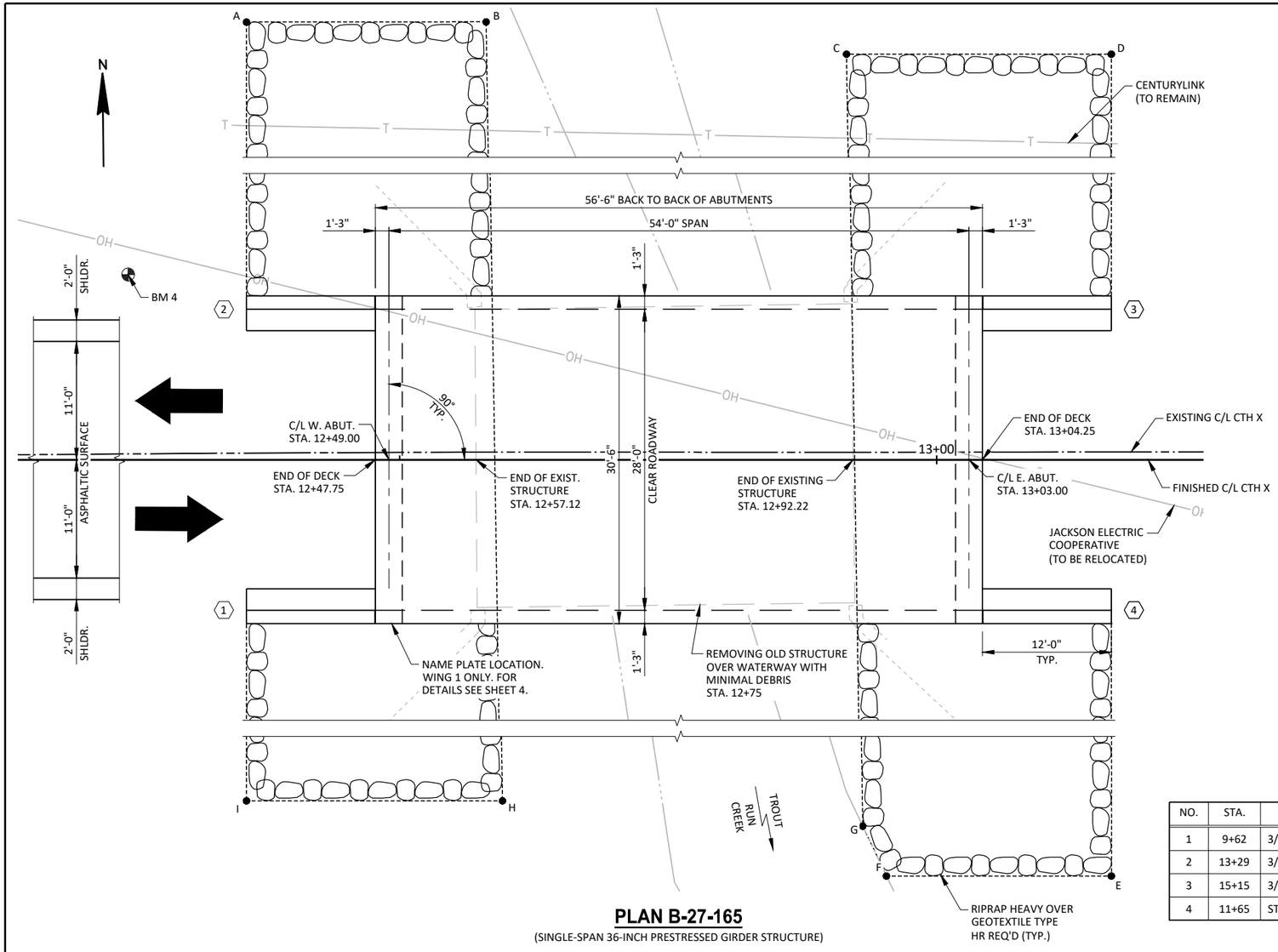
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 26 | E



PLAN B-27-165

(SINGLE-SPAN 36-INCH PRESTRESSED GIRDER STRUCTURE)

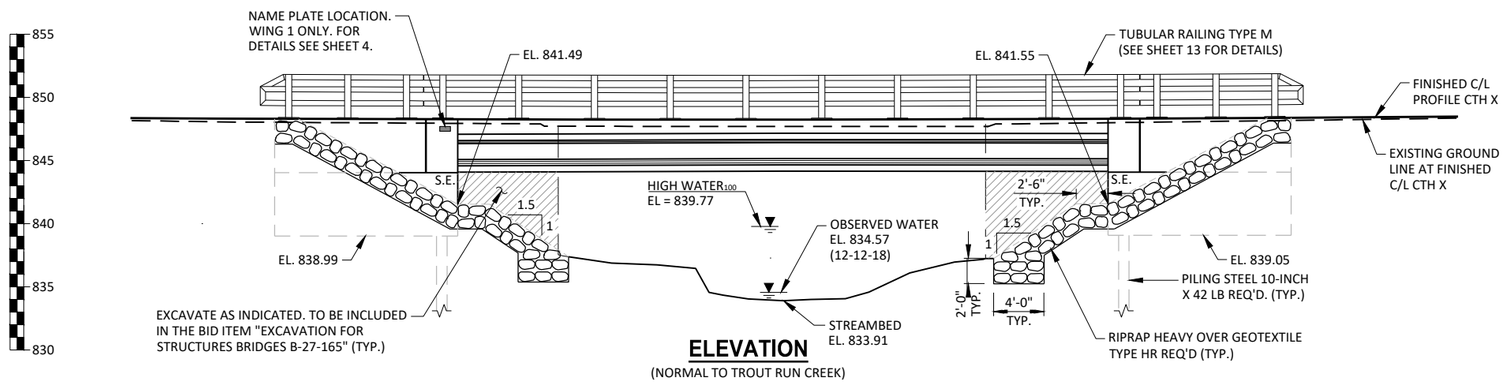
INDICATES WING NUMBER

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	12+36	50' LT.
B	12+58	50' LT.
C	12+92	47' LT.
D	13+16	47' LT.
E	13+16	52' RT.
F	12+95	52' RT.
G	12+93	47' RT.
H	12+60	45' RT.
I	12+36	45' RT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	9+62	3/4" IRON REBAR SET, 14.1' LT	852.42
2	13+29	3/4" IRON REBAR SET, 16.3' RT	846.57
3	15+15	3/4" IRON REBAR SET, 32.5' RT	851.06
4	11+65	STAR SPIKE SET IN PPOL, 35.0' LT	847.60



ELEVATION

(NORMAL TO TROUT RUN CREEK)

STATE PROJECT NUMBER

7340-00-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.28
OPERATING RATING FACTOR — RF=1.80
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) — 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SUPERSTRUCTURE — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL
REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.
36-INCH PRESTRESSED GIRDER
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS 0.6 INCH DIA.
ULTIMATE TENSILE STRENGTH — fy = 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 55 FT PILE LENGTHS AT WEST ABUTMENT AND 70 FT PILE LENGTHS AT EAST ABUTMENT.

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

TRAFFIC DATA

A.D.T. (2020) — 265
A.D.T. (2040) — 340
DESIGN SPEED — 40 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
DRAINAGE AREA — 2.9 SQ. MI.
Q_{100} TOTAL — 670 C.F.S.
THROUGH STRUCTURE — 670 C.F.S.
OVERTOPPING ROADWAY — N/A
VELOCITY - THROUGH STRUCTURE — 6.6 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 101.7 SQ. FT.
HIGH WATER$_{100}$ ELEVATION — 839.77
SCOUR CRITICAL CODE — 5

EROSION CONTROL
Q_2 — 135 C.F.S.
VELOCITY$_2$ — 3.5 F.P.S.
HIGH WATER$_2$ ELEVATION — 837.29

LIST OF DRAWINGS

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

NO.	DATE	REVISION	BY

JEWELL associates engineers, Inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.jewellassoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — 08/29/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-27-165

CTH X OVER TROUT RUN CREEK

COUNTY: JACKSON
TOWN/~~CITY/VILLAGE~~: IRVINE
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

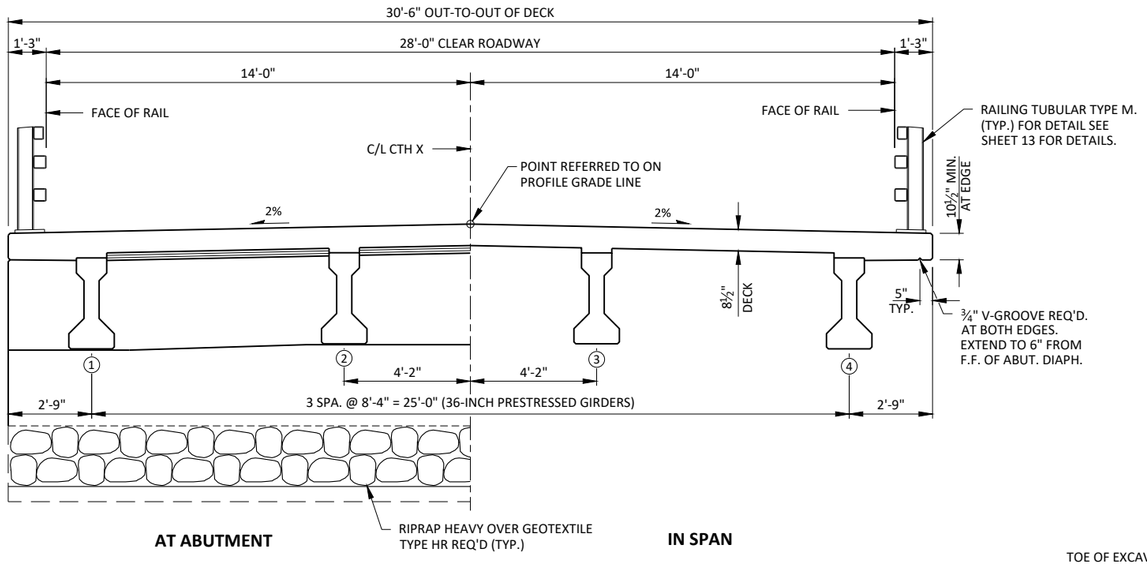
GENERAL PLAN

SHEET 1 OF 13
27

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\STRUCTURE\CAD FILES\FINALS\01 GENERAL PLAN.DWG
PLOT DATE : 7/12/2019 9:45:55 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'
LAYOUT : LAYOUT1

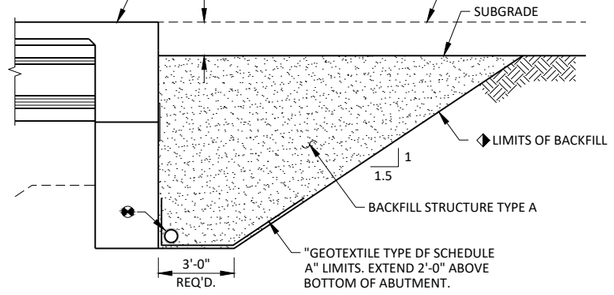
STATE PROJECT NUMBER

7340-00-70



PROPOSED CROSS-SECTION THROUGH ROADWAY

LOOKING EAST



BACKFILL STRUCTURE DETAIL

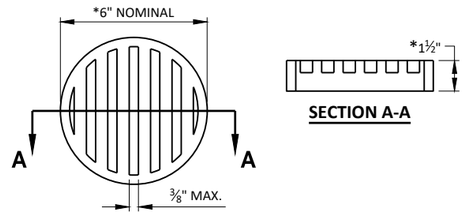
ABUTMENT BODY SHOWN - WING WALLS SIMILAR
(TYPICAL AT BOTH ABUTMENTS)

◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-27-165". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

◆ 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 6-INCH."

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	SUPER.	E. ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MIN. DEBRIS STA. 12+75	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-27-165	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	160	--	160	320
502.0100	CONCRETE MASONRY BRIDGES	CY	33	66	33	132
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	213	--	213
503.0136	PRESTRESSED GIRDER TYPE I 36-INCH	LF	--	220	--	220
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,780	--	1,780	3,560
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,560	13,170	1,560	16,290
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	--	8	--	8
506.4000	STEEL DIAPHRAGMS B-27-165	EACH	--	3	--	3
513.4061	RAILING TUBULAR TYPE M	LF	--	166	--	166
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	--	6	12
550.1100	PILING STEEL 10-INCH X 42 LB	LF	220	--	280	500
606.0300	RIPRAP HEAVY	CY	170	--	185	355
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100	--	100	200
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	45	--	45	90
645.0120	GEOTEXTILE TYPE HR	SY	280	--	300	580
	NON-BID ITEMS					
	FILLER	SIZE	--	--	--	½" & ¾"
	NAME PLATE					



RODENT SCREEN

SECTION A-A

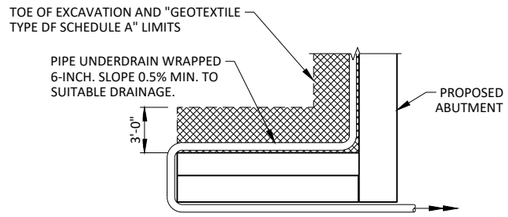
NOTES:

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

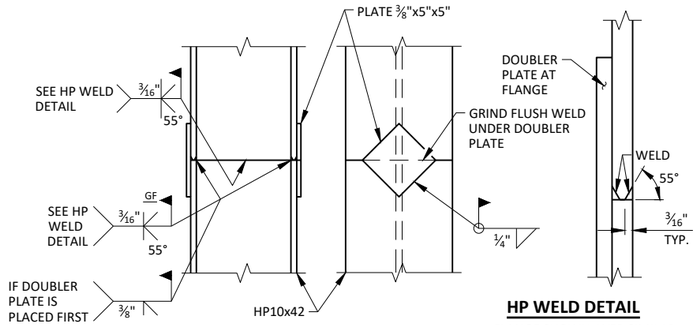
ORIENT SHIELD SO SLOTS ARE VERTICAL.

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

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS 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.



PIPE UNDERDRAIN DETAIL

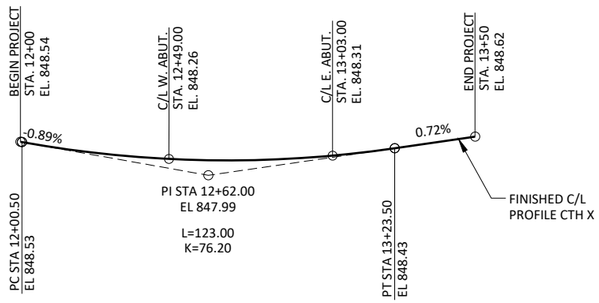


HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

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



PROFILE GRADE LINE

CTH X

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD 88).

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION M153, 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 OVER 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.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK, AND THE EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

THE EXISTING STRUCTURE IS A SINGLE-SPAN STEEL DECK GIRDER STRUCTURE WITH A CONCRETE DECK SUPPORTED ON CONCRETE ABUTMENTS. THE STRUCTURE HAS A 28.0' OVERALL WIDTH AND IS 36.5' LONG AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

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

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

HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

DRAWN BY PTB | PLANS CK'D. RBH

CROSS SECTION AND QUANTITIES

SHEET 2 OF 13

28

8

FILE NAME : R:\PROJECTS\W111591 JACKSON CO CTH X BRIDGE\STRUCTURE\CAD FILES\FINALS\02 CROSS SECTIONS AND QUANTITIES.DWG
PLOT DATE : 7/11/2019 11:08:24 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'
LAYOUT : LAYOUT1

STATE PROJECT NUMBER

7340-00-70

SOIL BORINGS

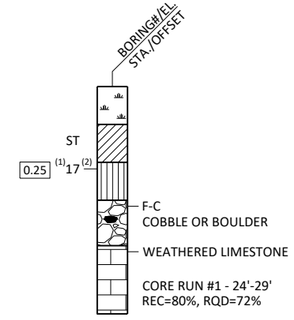
BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	03/20/19	159,159.76	355,014.87
2	03/20/19	159,143.65	354,930.57

BORINGS & REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.
4203 SCHOLFIELD AVENUE, STE 1
SCHOFIELD, WI 54476

MATERIAL SYMBOLS

Asphalt · Topsoil · Peat
Concrete · Fill · Gravel
Sand · Clay · Silt
Boulders or Cobbles · Limestone · Bedrock (unknown)
Shale · Sandstone · Igneous/ meta

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

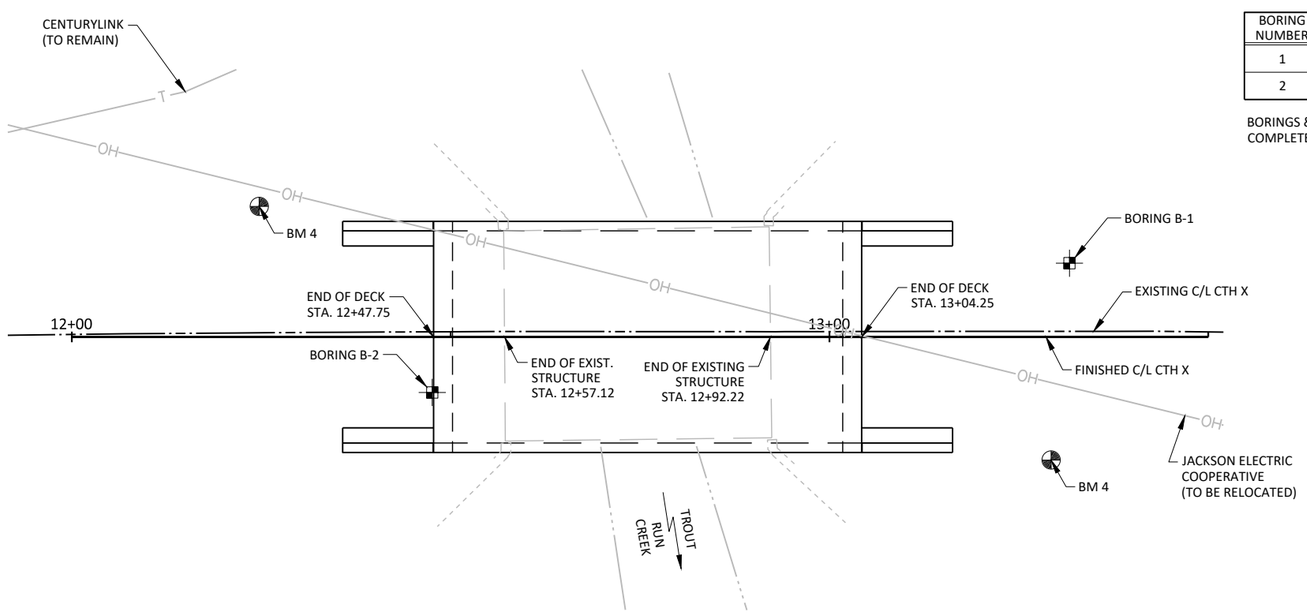
AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

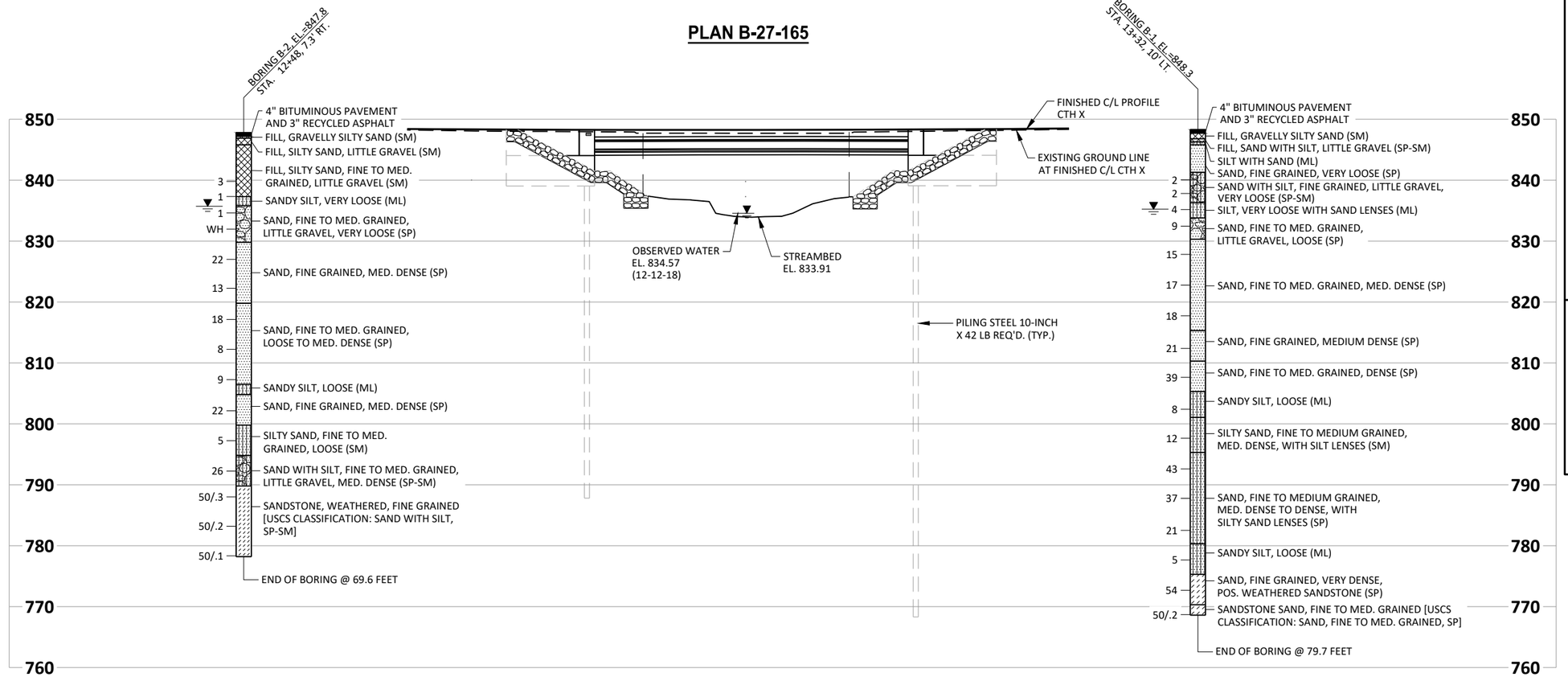
F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.



PLAN B-27-165



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

DRAWN BY TMS | PLANS CK'D. RBH

SUBSURFACE EXPLORATION

SHEET 3 OF 13

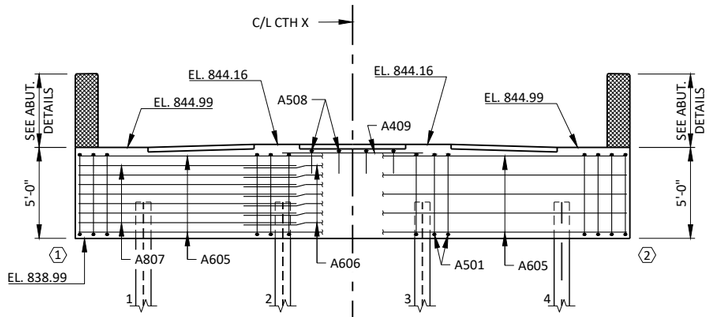
29

8

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\STRUCTURE\CAD FILES\FINALS\03 SUBSURFACE EXPLORATION.DWG
PLOT DATE : 7/11/2019 11:08:25 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'
LAYOUT : LAYOUT1

STATE PROJECT NUMBER

7340-00-70

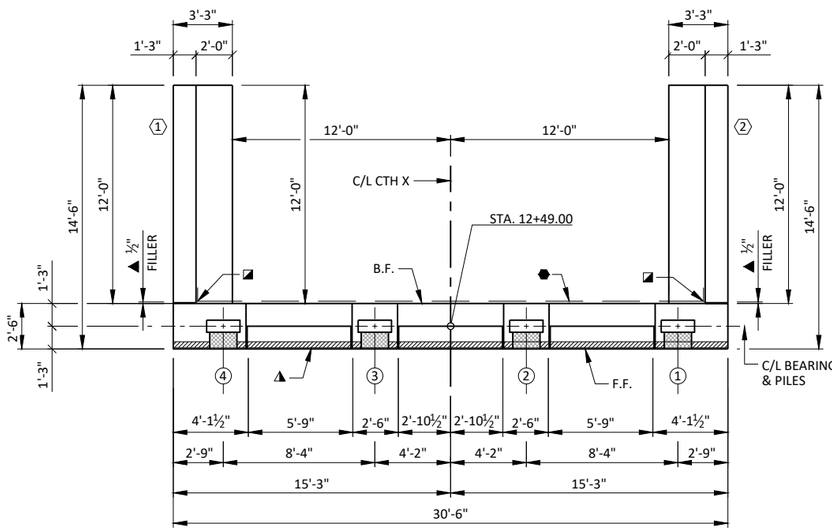


BACK FACE BAR STEEL REINF.

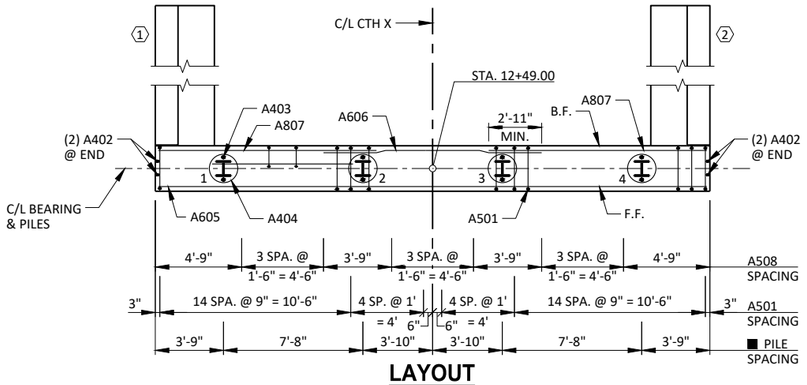
FRONT FACE BAR STEEL REINF.

ELEVATION

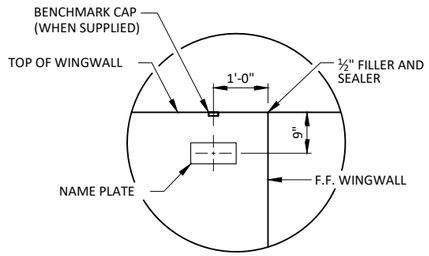
(WEST ABUTMENT LOOKING WEST)



PLAN

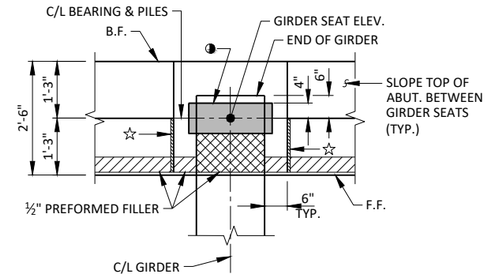


LAYOUT



NAME PLATE DETAIL

WING 1 ONLY



GIRDER SEAT DETAIL

BEAM SEATS TO BE CONSTRUCTED LEVEL.
INTERIOR SEAT SHOWN, EXTERIOR SEAT SIMILAR.

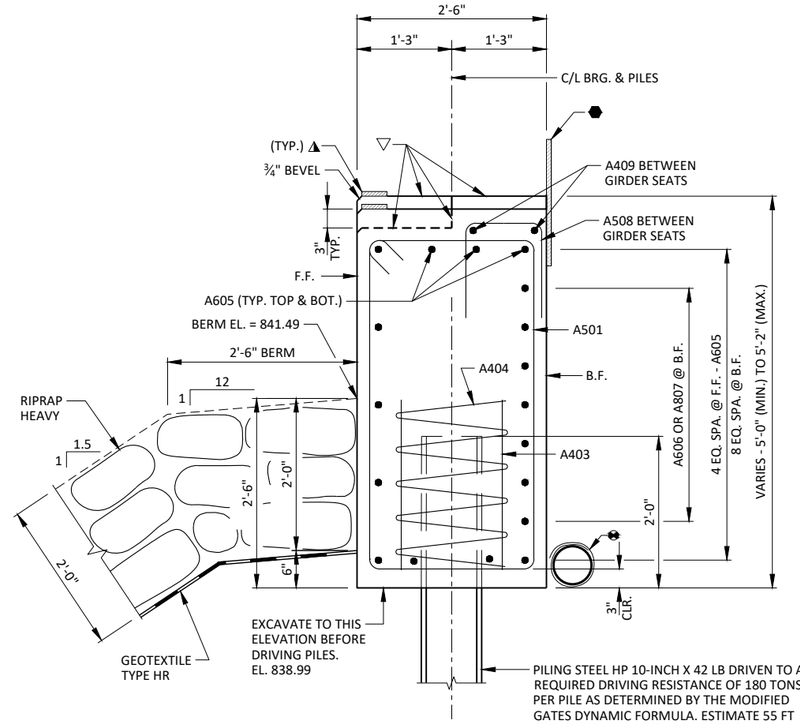
NOTES

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

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- ⬣ 18" RUBBERIZED MEMBRANE WATERPROFING (HORIZONTAL)
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ▲ 1/2" 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)
- ◮ 4"x½" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF DECK.
- ☆ ¾" CORK FILLER ON VERTICAL GIRDER SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- ◑ ½"x8"x1'-10" ELASTOMERIC BEARING PAD.
- ■ 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."
- ▽ STEEL TROWEL ENTIRE TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".
- ⬡ INDICATES WING NUMBER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

DRAWN BY PTB | PLANS CK'D. RBH

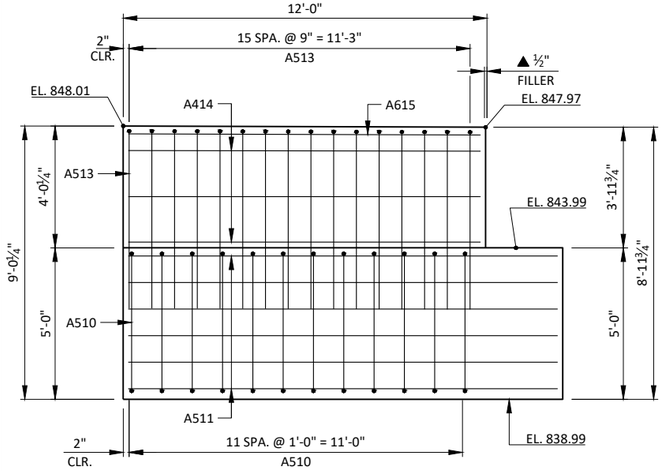
WEST ABUTMENT

SHEET 4 OF 13

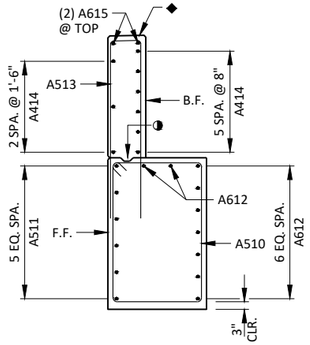
30

8

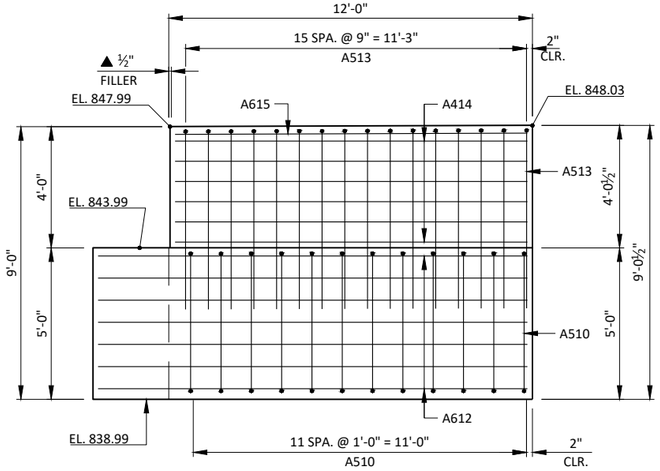
8



F.F. ELEVATION - WING 1



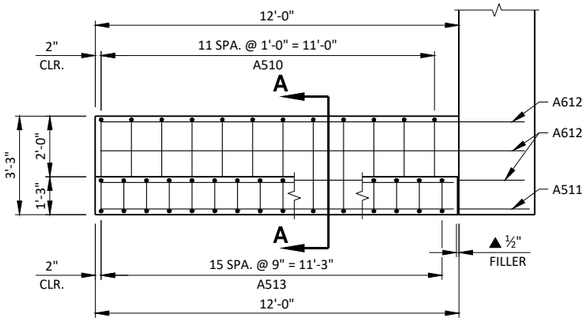
SECTION A-A



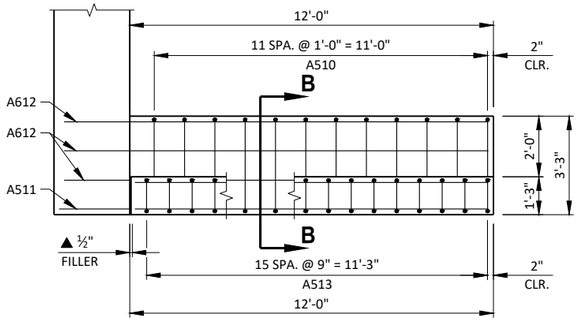
B.F. ELEVATION - WING 1

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 BRIDGES".
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◆ SLOPE SAME AS SUPERSTRUCTURE.



PLAN VIEW - WING 1



PLAN VIEW - WING 2

NOTES

SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

STATE PROJECT NUMBER

7340-00-70

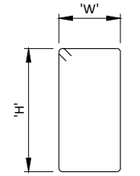
BILL OF BARS
WEST ABUTMENT

1,560 LB (COATED)
1,780 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
A501	38	13-6	X		BODY -VERT. - STIRRUP
A402	4	4-7			BODY - VERT. - AT ENDS
A403	8	2-3			BODY - VERT. - 2 PER PILE
A404	4	28-0	X		BODY - SPIRAL - 1 PER PILE
A605	11	30-2			BODY - HORIZ. - F.F. - TOP & BOT.
A606	7	12-0			BODY - HORIZ. - B.F. - CENTER
A807	14	12-0			BODY - HORIZ. - B.F. - ENDS
A508	12	3-4	X		BODY - VERT. - TOP
A409	6	7-9			BODY - HORIZ. - TOP
A510	24	15-6	X	X	WING 1 & 2 - VERT. - STIRRUP
A511	12	14-2		X	WING 1 & 2 - HORIZ. - F.F.
A612	18	14-0		X	WING 1 & 2 - HORIZ. - B.F.
A513	32	12-4	X	X	WING 1 & 2 - VERT. - STIRRUP - TOP
A414	18	11-7		X	WING 1 & 2 - HORIZ. - TOP
A615	4	11-7		X	WING 1 & 2 - HORIZ. - TOP

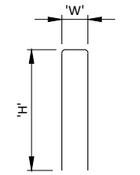
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



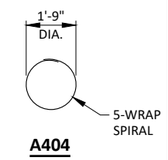
A501, A510

BAR MARK	'W'	'H'
A501	2-2	4-4
A510	2-11	4-7

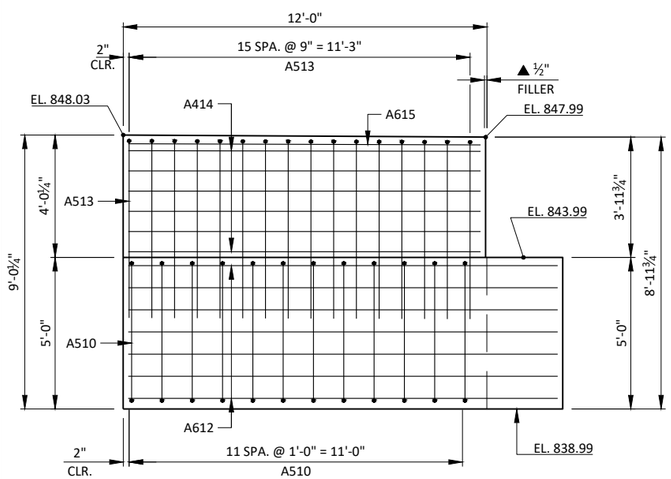


A508, A513

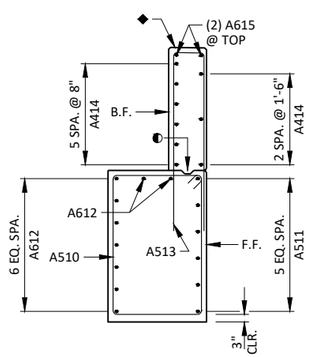
BAR MARK	'W'	'H'
A508	0-11	1-4
A513	0-11	5-10



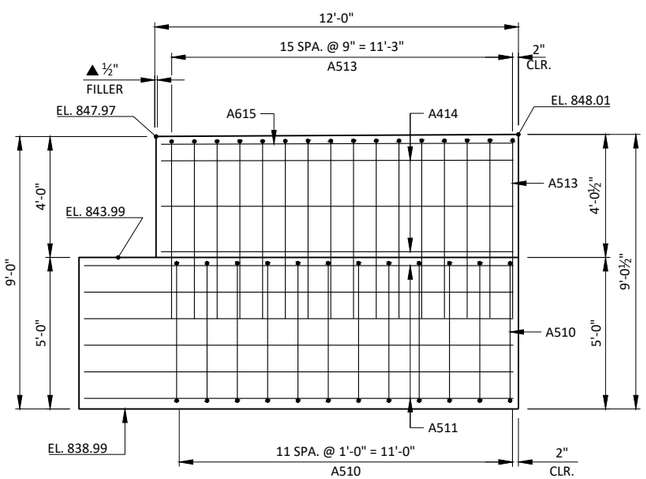
A404



B.F. ELEVATION - WING 2



SECTION B-B



F.F. ELEVATION - WING 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

DRAWN BY: PTB | PLANS CK'D.: RBH

WEST ABUTMENT DETAILS

SHEET 5 OF 13

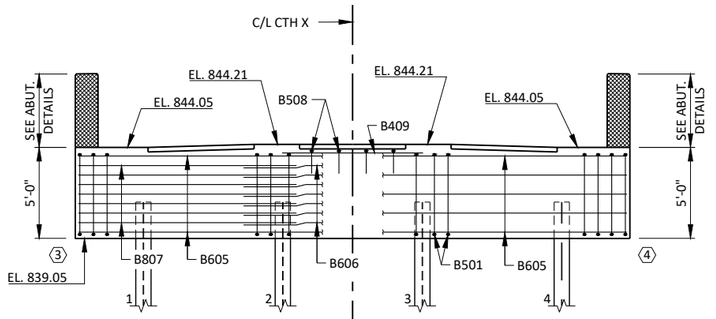
31

8

8

STATE PROJECT NUMBER

7340-00-70

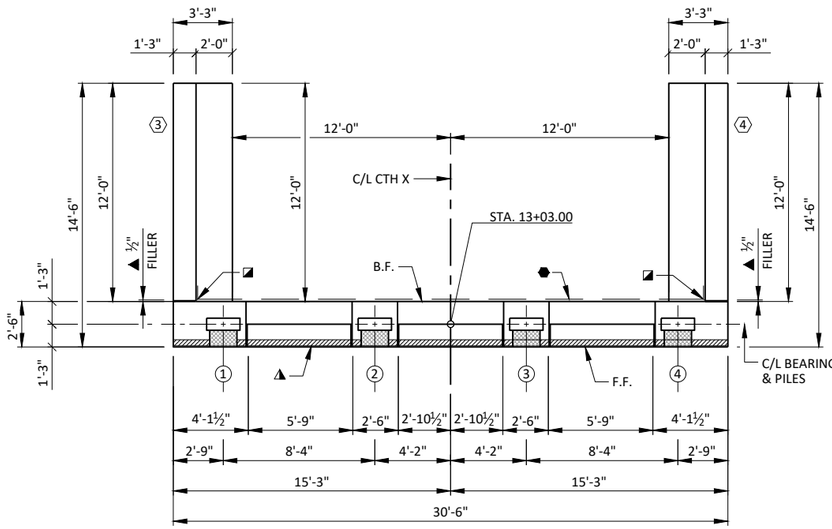


BACK FACE BAR STEEL REINF.

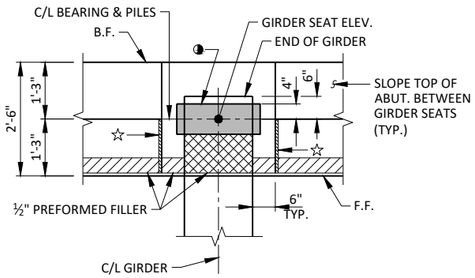
FRONT FACE BAR STEEL REINF.

ELEVATION

(EAST ABUTMENT LOOKING EAST)



PLAN



GIRDER SEAT DETAIL

BEAM SEATS TO BE CONSTRUCTED LEVEL.
INTERIOR SEAT SHOWN, EXTERIOR SEAT SIMILAR.

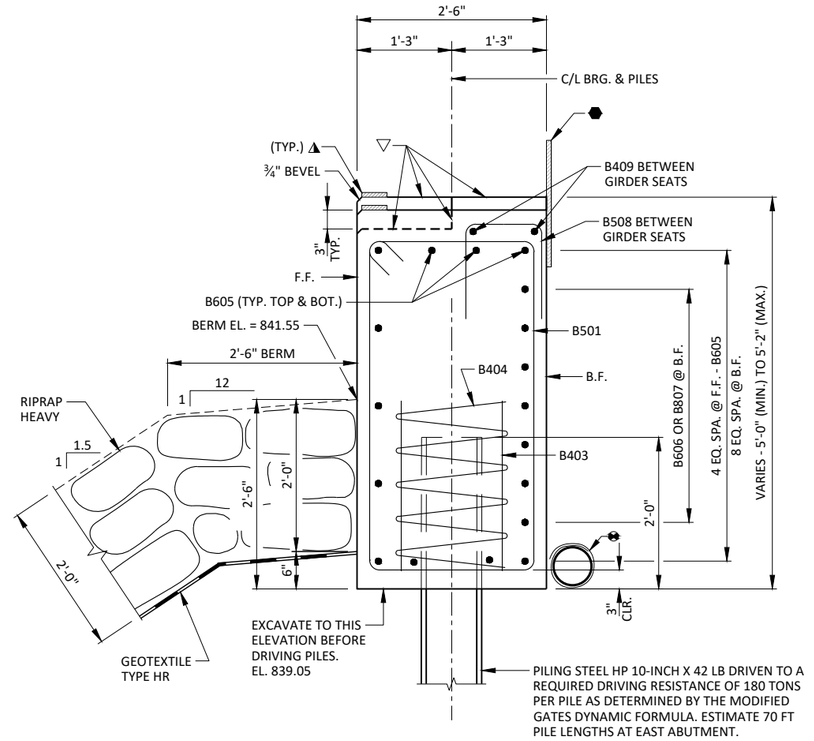
NOTES

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

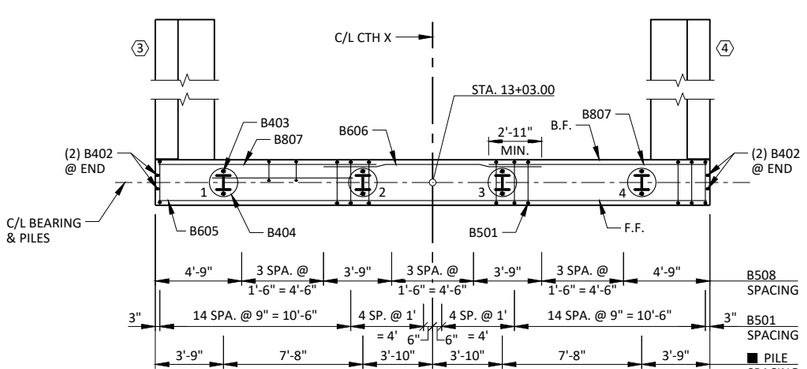
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE



TYPICAL SECTION THROUGH ABUTMENT BODY



LAYOUT

LEGEND

- ⬣ 18" RUBBERIZED MEMBRANE WATERPROFING (HORIZONTAL)
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ▲ 1/2" 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)
- ◮ 4"x½" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF DECK.
- ☆ ¾" CORK FILLER ON VERTICAL GIRDER SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- ◑ ½"x8"x1'-10" ELASTOMERIC BEARING PAD.
- ■ 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."
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- ⬡ INDICATES WING NUMBER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

DRAWN BY PTB | PLANS CK'D. RBH

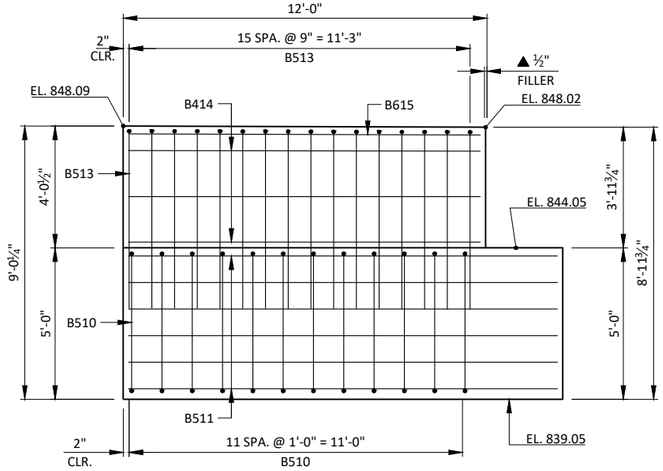
EAST ABUTMENT

SHEET 6 OF 13

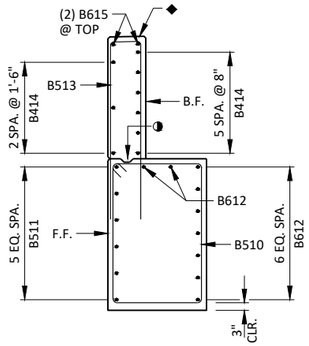
32

8

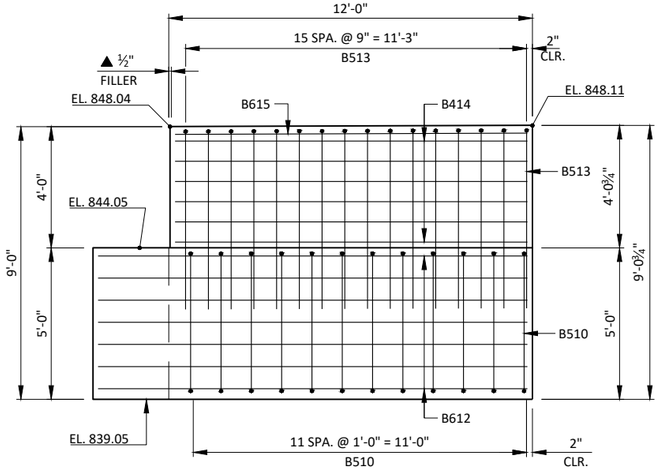
8



F.F. ELEVATION - WING 3



SECTION A-A



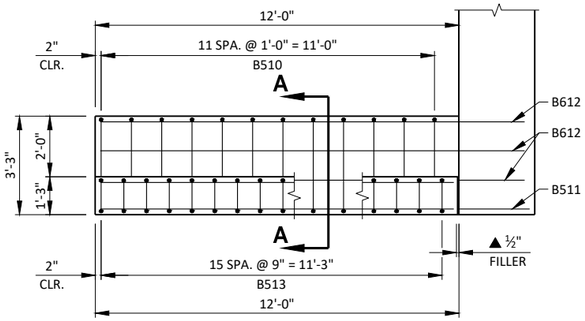
B.F. ELEVATION - WING 3

LEGEND

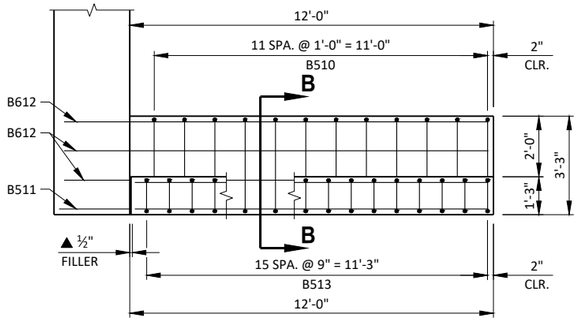
◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾-INCH "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)

◆ SLOPE SAME AS SUPERSTRUCTURE.



PLAN VIEW - WING 3



PLAN VIEW - WING 4

NOTES

SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

STATE PROJECT NUMBER

7340-00-70

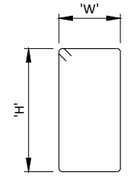
BILL OF BARS
EAST ABUTMENT

1,560 LB (COATED)
1,780 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
B501	38	13-6	X		BODY -VERT. - STIRRUP
B402	4	4-7			BODY - VERT. - AT ENDS
B403	8	2-3			BODY - VERT. - 2 PER PILE
B404	4	28-0	X		BODY - SPIRAL - 1 PER PILE
B605	11	30-2			BODY - HORIZ. - F.F. - TOP & BOT.
B606	7	12-0			BODY - HORIZ. - B.F. - CENTER
B807	14	12-0			BODY - HORIZ. - B.F. - ENDS
B508	12	3-4	X		BODY - VERT. - TOP
B409	6	7-9			BODY - HORIZ. - TOP
B510	24	15-6	X	X	WING 3 & 4 - VERT. - STIRRUP
B511	12	14-2		X	WING 3 & 4 - HORIZ. - F.F.
B612	18	14-0		X	WING 3 & 4 - HORIZ. - B.F.
B513	32	12-4	X	X	WING 3 & 4 - VERT. - STIRRUP - TOP
B414	18	11-7		X	WING 3 & 4 - HORIZ. - TOP
B615	4	11-7		X	WING 3 & 4 - HORIZ. - TOP

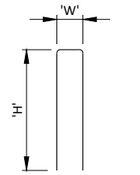
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



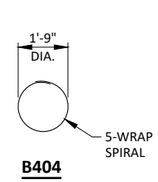
B501, B510

BAR MARK	'W'	'H'
B501	2-2	4-4
B510	2-11	4-7

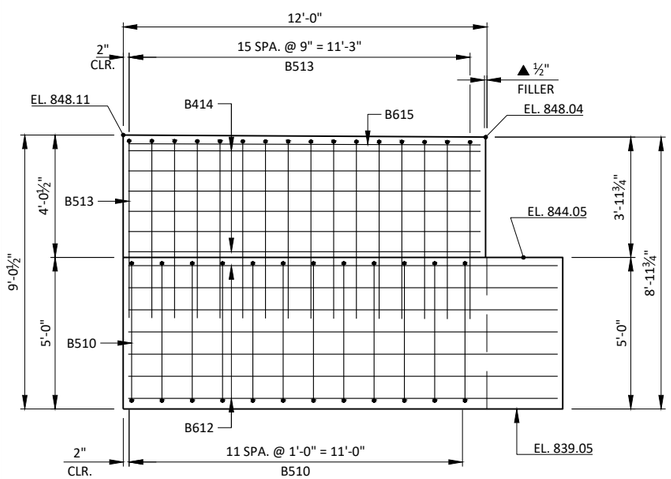


B508, B513

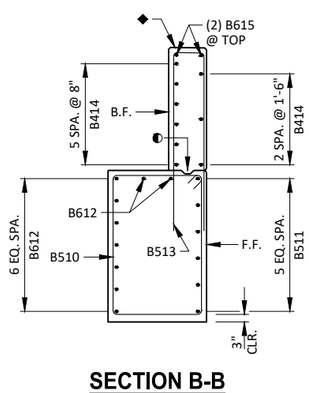
BAR MARK	'W'	'H'
B508	0-11	1-4
B513	0-11	5-10



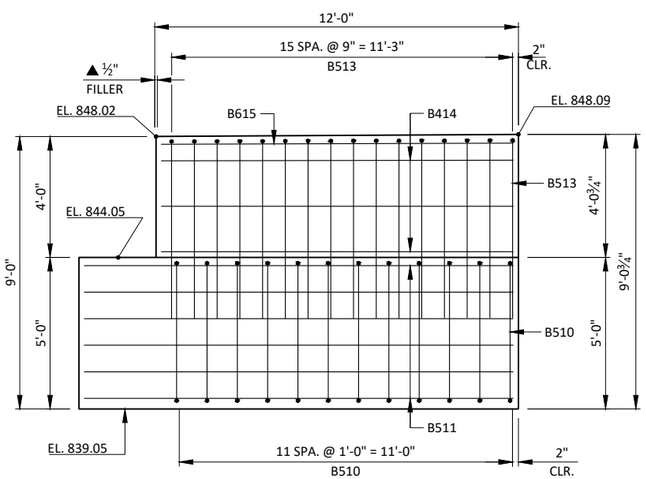
B404



B.F. ELEVATION - WING 4



SECTION B-B



F.F. ELEVATION - WING 4

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STATE OF WISCONSIN
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STRUCTURE B-27-165

DRAWN BY: PTB | PLANS CK'D.: RBH

EAST ABUTMENT DETAILS

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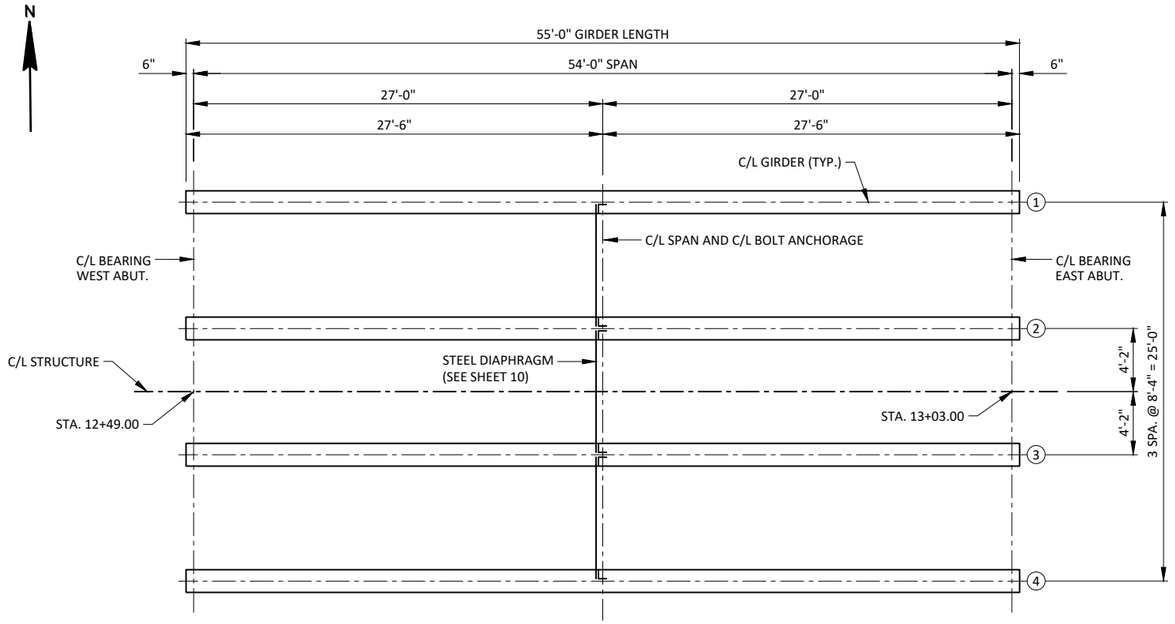


GIRDER LAYOUT

BILL OF BARS
SUPERSTRUCTURE

13,170 LB (COATED)

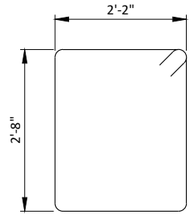
BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	72	10-3	X	X	ABUT. DIAPHRAGM - VERT. STIRRUP
S502	72	5-11	X	X	ABUT. DIAPHRAGM - VERT. - TOP
S603	4	1-8		X	ABUT. DIAPHRAGM - HORIZ. - FRONT - ENDS
S604	12	1-11		X	ABUT. DIAPHRAGM - HORIZ. - FRONT - ENDS
S605	6	6-6		X	ABUT. DIAPHRAGM - HORIZ. - FRONT
S606	18	7-0		X	ABUT. DIAPHRAGM - HORIZ. - FRONT
S607	12	30-2		X	ABUT. DIAPHRAGM - HORIZ. - BACK
S408	12	5-6		X	ABUT. DIAPHRAGM - HORIZ. - BOT.
S409	42	3-3	X	X	ABUT. DIAPHRAGM - VERT. - BOT.
S510	16	6-0		X	ABUT. DIAPHRAGM - GIRDER WEB
S511	193	30-2		X	DECK - TOP & BOT. - TRANSVERSE
S412	174	29-0		X	DECK - TOP & BOT. - LONGITUDINAL
S613	40	12-0	X	X	DECK - RAIL POSTS
S614	64	6-0		X	DECK - RAIL POSTS - INTERIOR
S615	16	6-0	X	X	DECK - RAIL POSTS - CORNERS

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

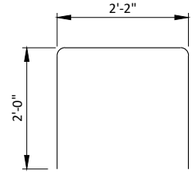
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

LEGEND

(1) INDICATES GIRDER LINE.



S501



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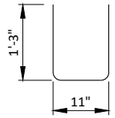
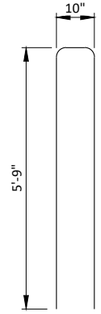
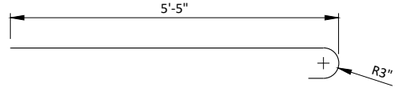


S409



S613



S615

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

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GIRDER LAYOUT

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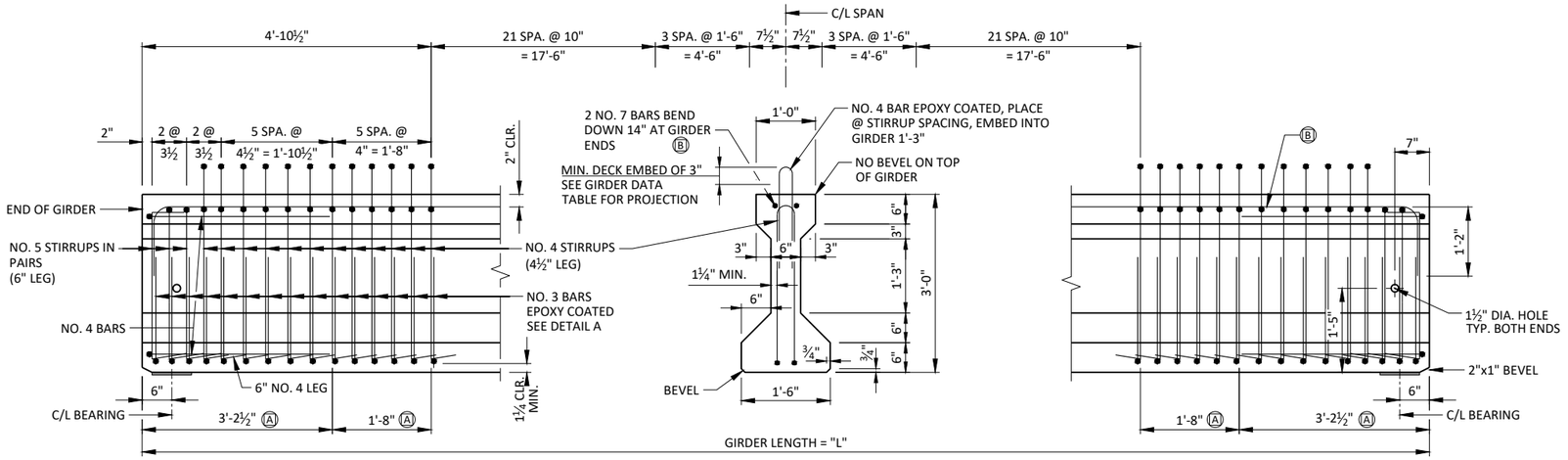


36-INCH GIRDER - SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECTION 503.3.3 OF STANDARD SPECIFICATION FOR GUIDANCE.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

PRESTRESSING STRANDS SHALL BE 0.6-INCH DIAMETER 7-WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270 KSI.

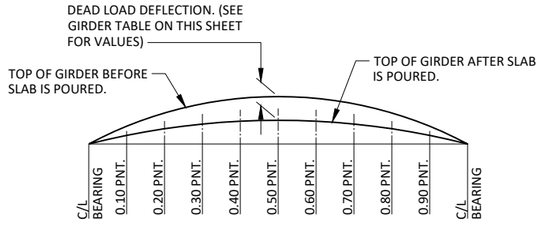
STRANDS SHALL BE FLUSH WITH THE ENDS OF THE GIRDER. END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

SPACING SHOWN FOR NO. 4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

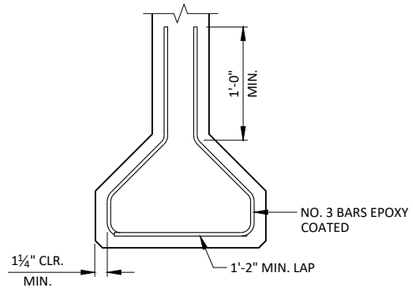
AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE SHEET 10.

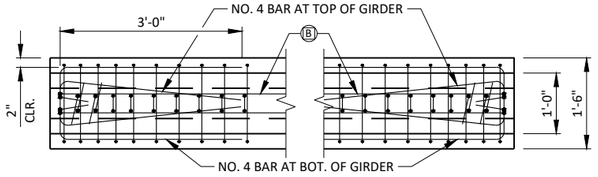
DATA SHOWN IN DEFLECTION DATA IS THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESS CONDITIONS AND PRESTRESS LOSES.



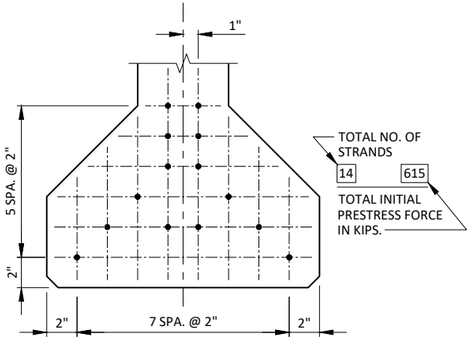
DEAD LOAD DEFLECTION DIAGRAM



DETAIL A



TOP VIEW OF GIRDER ENDS



TYP. STRAND PATTERN

GIRDER DATA															Ⓑ NO. 7 "B" BARS MAY BE SPLICED, USE 54" MIN. LAP.								
GIRDER LENGTH "L"	QUANT.	DEAD LOAD DEFLECTION									CONC. STRENGTH	STIRRUP PROJECTION "P"			DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN		GIRDER NO.
		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	f'c Ksi	1ST ⅓	MID. ⅓	END ⅓		TOTAL NO. OF STRANDS	f'ci Ksi *	(INCHES) "A"	(INCHES) "B" MIN.	(INCHES) "B" MAX.	(INCHES) "C"	TOTAL NO. OF STRANDS	f'ci Ksi *	
55'-0"	4	0.2"	0.3"	0.5"	0.5"	0.6"	0.5"	0.5"	0.3"	0.2"	8	8"	6"	8"	0.6	--	--	--	--	--	--	14	6.8	1-4

* MIN. CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

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36-INCH PRESTRESSED GIRDER DETAILS

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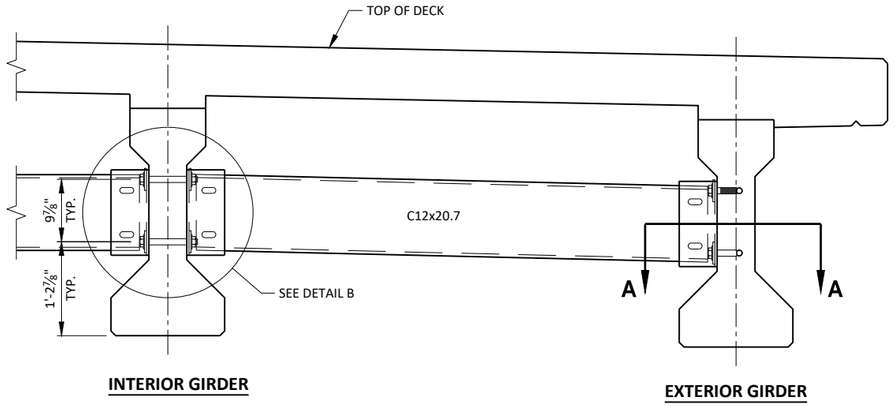
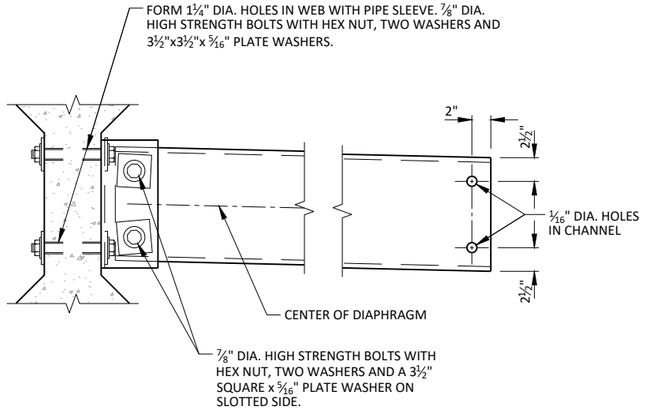


INTERIOR GIRDER **EXTERIOR GIRDER**

PART TRANSVERSE SECTION AT DIAPHRAGM



DETAIL B

(FOR STAGGERED DIAPHRAGMS)

GIRDER NOTES

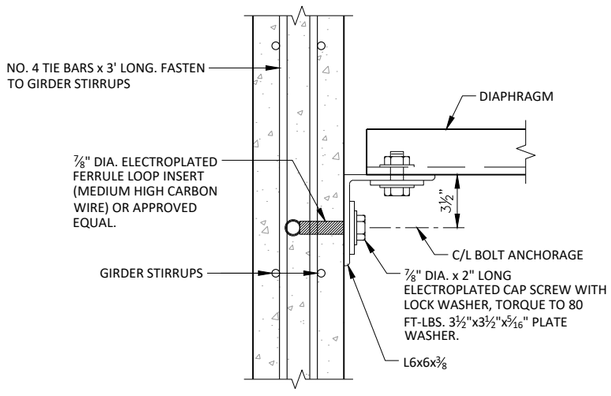
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-27-165", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

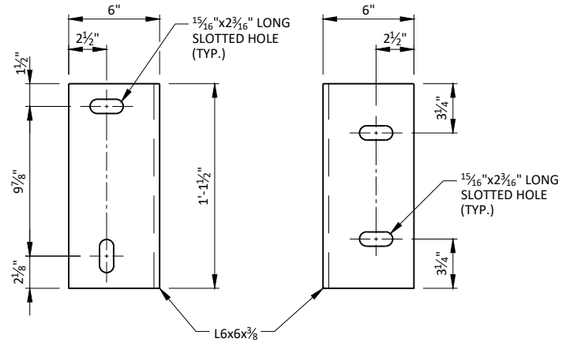
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS, AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

PLACE ONE DIAPHRAGM AT MID-LENGTH OF GIRDER AS INDICATED ON SHEET 8.



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



GIRDER FACE **DIAPHRAGM FACE**

DIAPHRAGM SUPPORT

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STATE OF WISCONSIN
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STRUCTURE B-27-165

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STEEL DIAPHRAGM

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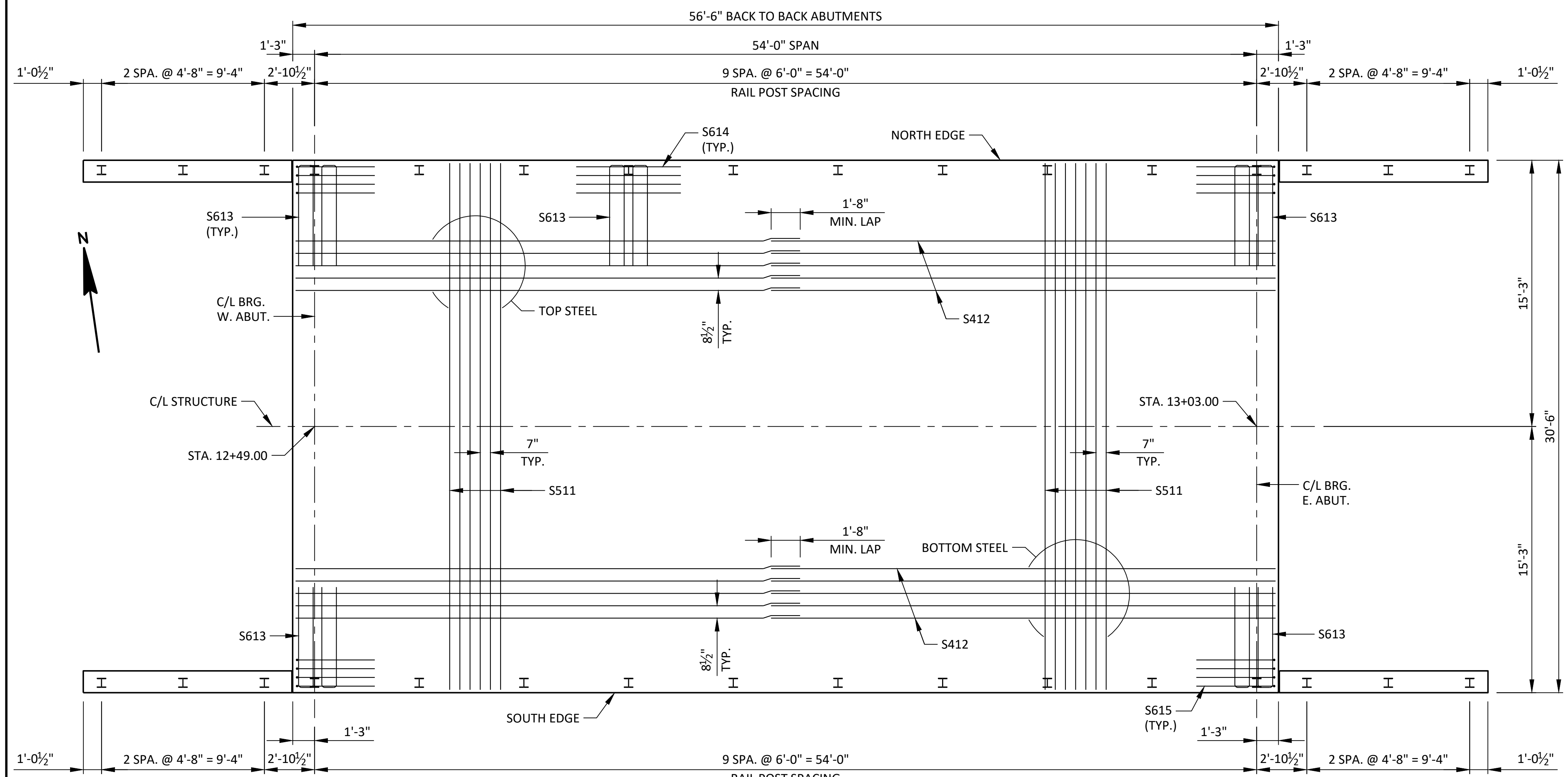
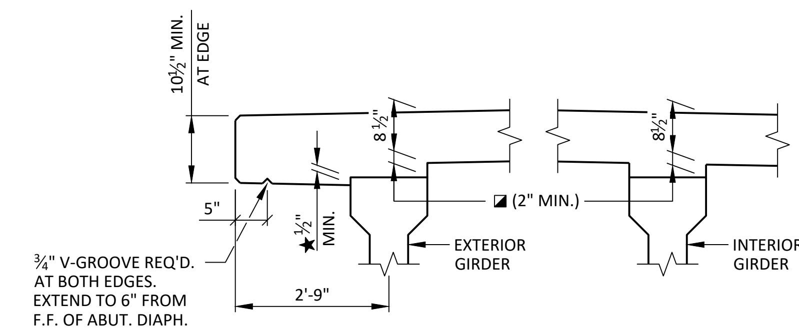


PLAN

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 8 FOR BILL OF BARS.

T.D. - TOP OF DECK



IF 2" MINIMUM HAUNCH HEIGHT "◪" CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3".

TO DETERMINE "◪" (AFTER GIRDERS ARE IN PLACE):
OBTAIN THE ELEVATIONS OF THE TOP OF GIRDER AT THE C/L OF SUBSTRUCTURE UNITS AND AT EACH 1/10 POINT FOR EVERY GIRDER AND ALL SPANS, THEN PROCEED WITH THE PROCESS SHOWN BELOW.

TOP OF DECK ELEVATION AT THE FINAL GRADE
-TOP OF GIRDER ELEVATION
+DEAD LOAD DEFLECTION
-SLAB THICKNESS
=HAUNCH HEIGHT "◪"

NOTE: AN AVERAGE HAUNCH "◪" OF 2.6" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

★ SLAB THICKNESS SHALL BE INCREASED AS NECESSARY TO CONCEAL INTERSECTION OF SLAB AND TOP OF GIRDER AT ALL FACIA GIRDERS.

SLAB HAUNCH DETAIL

ELEVATIONS AT TOP OF DECK

GIRDER LINE		C/L BRG. W. ABUT.	0.10 PT.	0.20 PT.	0.30 PT.	0.40 PT.	0.50 PT.	0.60 PT.	0.70 PT.	0.80 PT.	0.90 PT.	C/L BRG. E. ABUT.
N. EDGE	T.D.	847.98	847.97	847.96	847.96	847.96	847.96	847.97	847.98	847.99	848.01	848.03
①	T.D.	848.01	848.00	847.99	847.99	847.99	847.99	848.00	848.01	848.02	848.04	848.06
②	T.D.	848.18	848.16	848.16	848.15	848.15	848.16	848.16	848.17	848.19	848.21	848.23
C/L	T.D.	848.26	848.25	848.24	848.24	848.24	848.24	848.25	848.26	848.27	848.29	848.31
③	T.D.	848.18	848.16	848.16	848.15	848.15	848.16	848.16	848.17	848.19	848.21	848.23
④	T.D.	848.01	848.00	847.99	847.99	847.99	847.99	848.00	848.01	848.02	848.04	848.06
S. EDGE	T.D.	847.98	847.97	847.96	847.96	847.96	847.96	847.97	847.98	847.99	848.01	848.03

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

DRAWN BY PTB PLANS CK'D. RBH

SUPERSTRUCTURE

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\STRUCTURE\CAD FILES\FINALS\11 SUPERSTRUCTURE.DWG PLOT DATE : 7/11/2019 11:08:45 AM PLOT BY : BOLAND, PATRICK PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1

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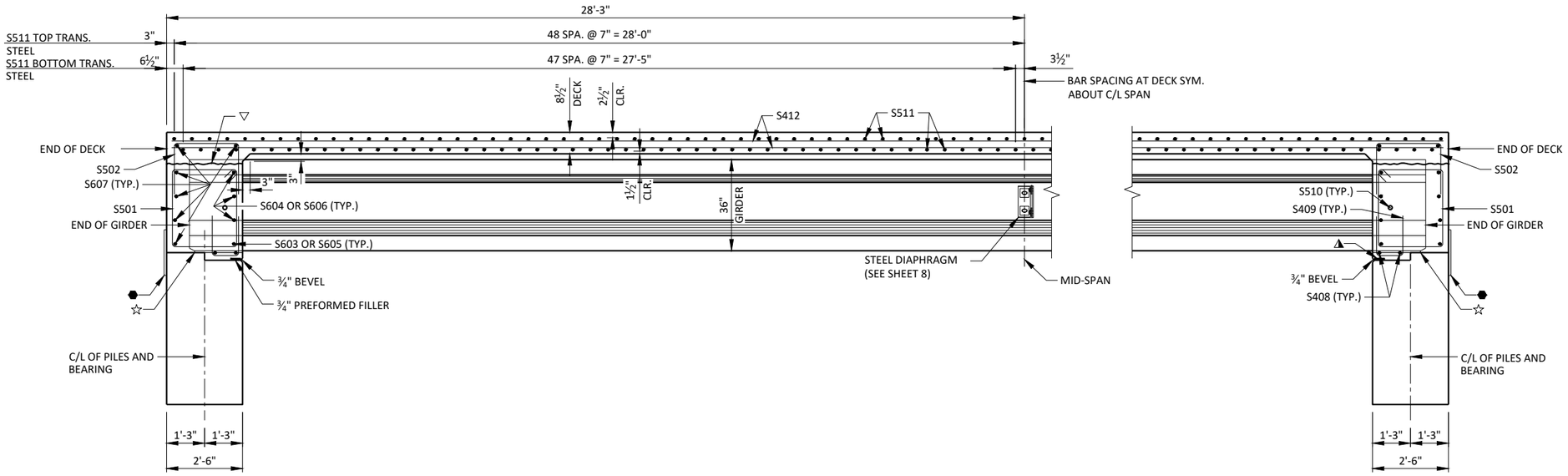
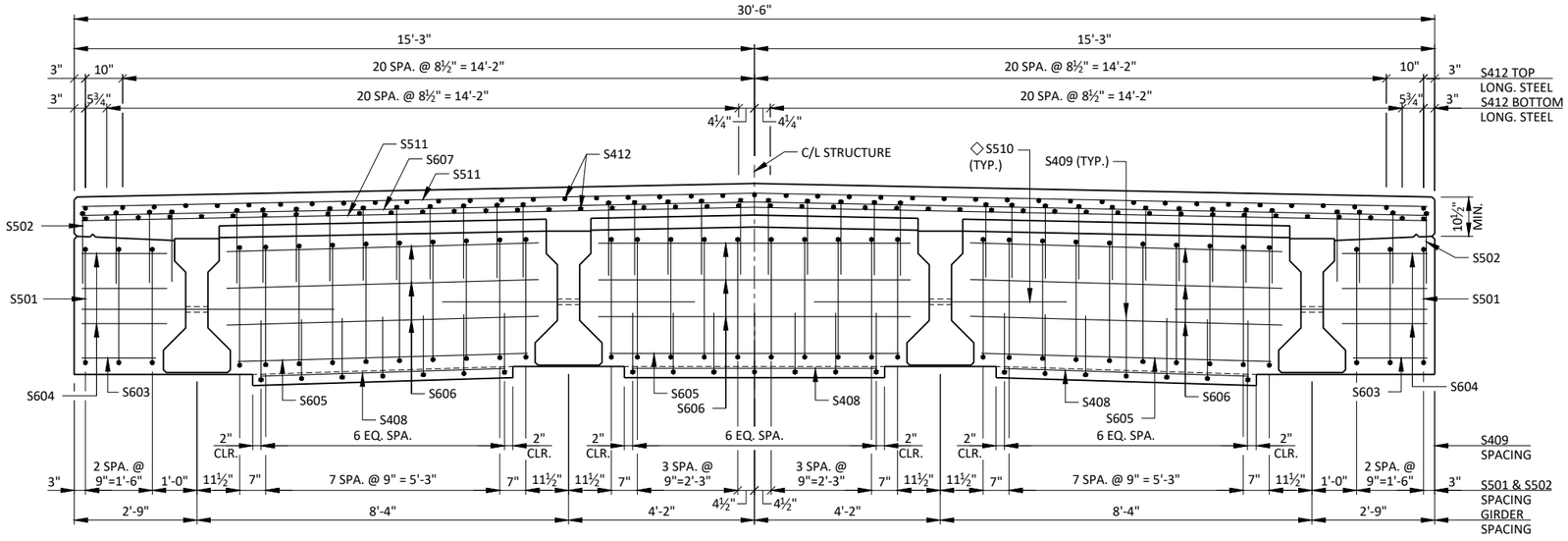


PARTIAL LONGITUDINAL SECTION



CROSS SECTION THROUGH ROADWAY

BAR SPACING IN DIAPHRAGM SYM. ABOUT C/L STRUCTURE

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 8 FOR BILL OF BARS.

LEGEND

- ⬢ 18" RUBBERIZED MEMBRANE WATERPROOFING (HORIZONTAL)
- ☆ ½" NON-LAMINATED ELASTOMERIC BEARING PAD AND ½" PREFORMED FILLER.
- ◭ 4"x½" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ◇ (1) 1½" DIAMETER HOLE IN WEB FOR (2) S510 HORIZONTAL BARS. BARS TO BE PLACED SYMMETRICAL ABOUT C/L OF GIRDERS.
- ▽ OPTIONAL CONSTRUCTION JOINT. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR

8

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NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-27-165

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SUPERSTRUCTURE DETAILS

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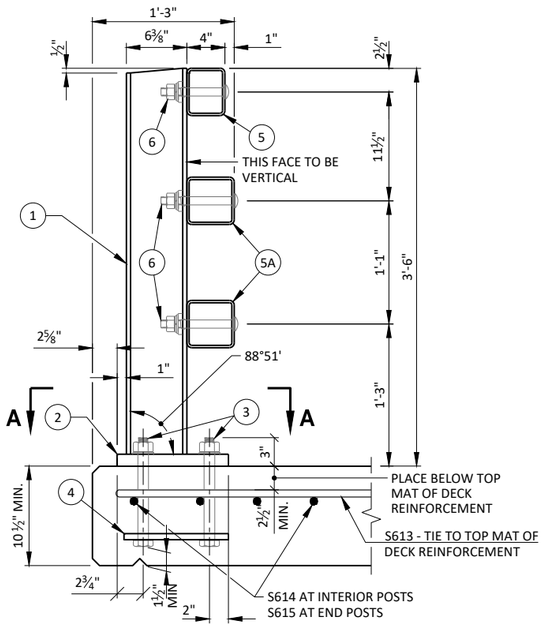
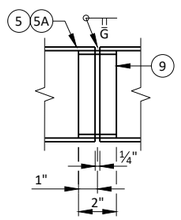
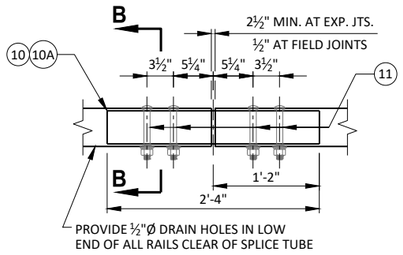


SECTION THROUGH RAILING ON DECK

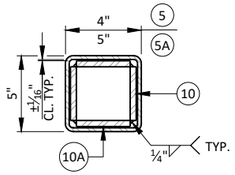


SHOP RAIL SPLICE DETAIL

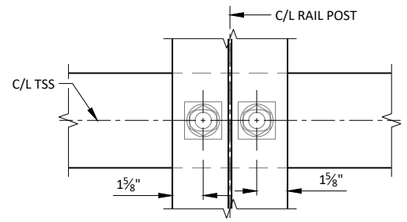
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL



SECTION B-B



SECTION THROUGH POST WEB

SECTION A-A

ANCHOR BOLTS

SECTION THROUGH RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

ANCHOR PLATE

AT RAIL TO DECK CONNECTION

POST SHIM DETAIL

PART ELEVATION OF RAILING

LEGEND

1. W6x25 WITH 1⅛" x 1½" HORIZONTAL SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1½"x11¾"x1'-8" WITH 1⁵⁄₁₆"x1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG.
4. ⅝"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3.
5. TSS 5x4x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TSS 5x5x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ³⁄₁₆"x1⅝"x1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜"x3⅜"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜"x2⅜"x2'-4" PLATE USED IN NO. 5, ⅜"x3⅜"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE ¹⁵⁄₁₆"x1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND ¹⁵⁄₁₆"x2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY=50 KSI. ANCHOR PLATES AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

NO.	DATE	REVISION	BY

STRUCTURE B-27-165

DRAWN BY: PTB | PLANS CK'D.: RBH

TUBULAR RAILING TYPE M

SHEET 13 OF 13

39

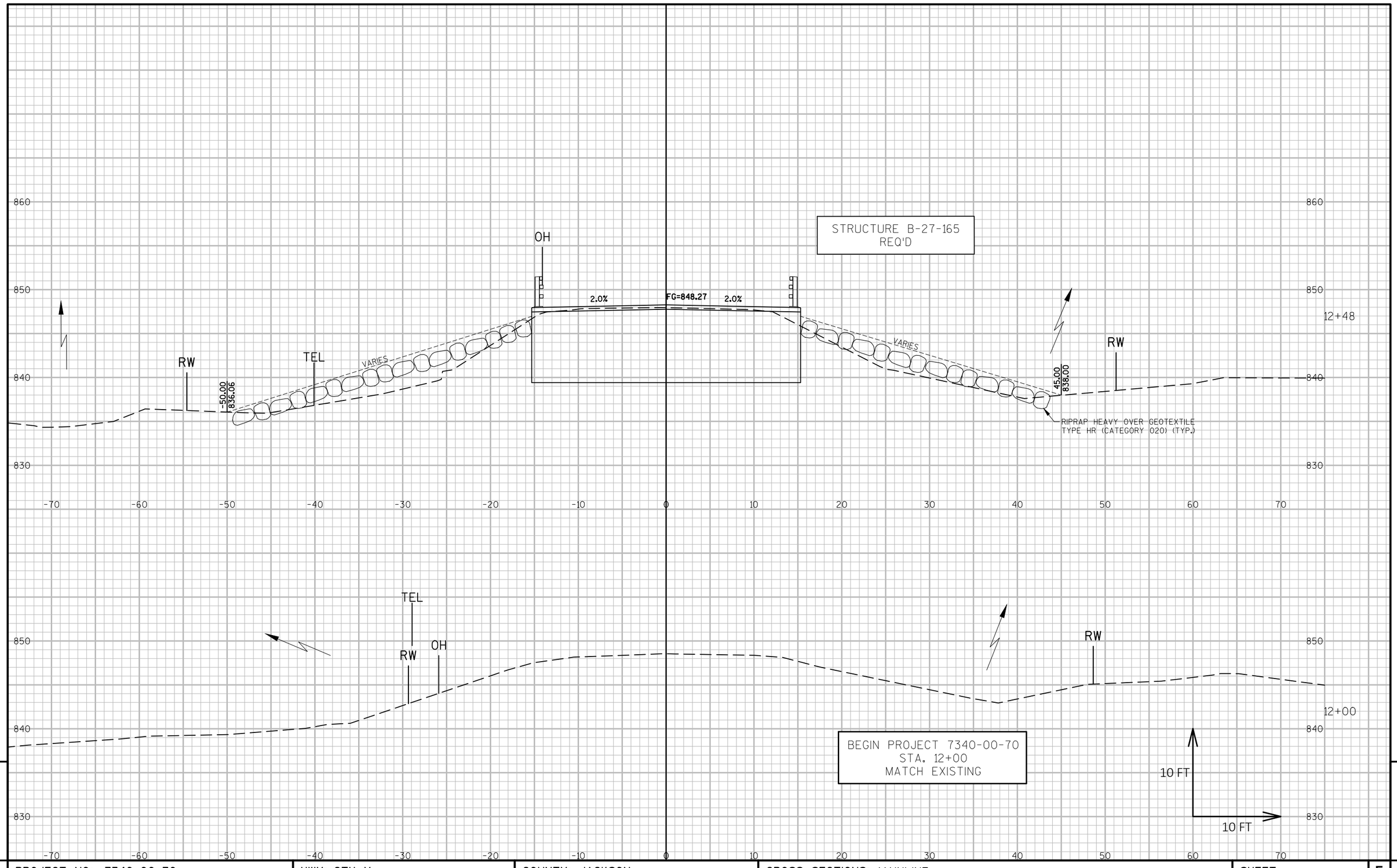
8

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\STRUCTURE\CAD FILES\FINALS\13 TUBULAR RAILING TYPE M.DWG
PLOT DATE : 7/11/2019 11:08:55 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'
LAYOUT : LAYOUT (WITHOUT BEAM GUARD)

EARTHWORK-MAINLINE

STATION	AREA (SF) CUT	AREA (SF) FILL	INCREMENTAL VOL (CY) CUT NOTE 1	INCREMENTAL VOL (CY) FILL NOTE 2	INCREMENTAL VOL (CY) FILL (25%)	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	CUMMULATIVE VOLUME (CY) FILL	CUMMULATIVE VOLUME (CY) FILL (25%) NOTE 3	CUMMULATIVE VOLUME (CY) MASS ORDINATE NOTE 4
12+00	0	0	0	0	0	0	0	0	0
12+48	48	172	43	153	191	43	153	191	-148
12+48	0	0	0	0	0	43	153	191	-148
13+04	0	0	0	0	0	43	153	191	-148
13+04	49	83	0	0	0	43	153	191	-148
13+50	0	0	42	71	89	85	224	280	-195
		COLUMN TOTALS =	85	224	280	85	224	280	-195

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



PROJECT NO: 7340-00-70	HWY: CTH X	COUNTY: JACKSON	CROSS SECTIONS: MAINLINE	SHEET 41	E

END PROJECT 7340-00-70
STA. 13+50
MATCH EXISTING

OH
RW
TEL
RW
850
840
13+50
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

OH
2.0%
FG=848.32
2.0%
RW
TEL
VARIES
VARIES
-47.00
837.49
52.00
835.77
RW
13+04
10 FT
10 FT
RIPRAP HEAVY OVER GEOTEXTILE
TYPE HR (CATEGORY 020) (TYP.)
850
840
830

PROJECT NO: 7340-00-70	HWY: CTH X	COUNTY: JACKSON	CROSS SECTIONS: MAINLINE	SHEET 42	E

FILE NAME : R:\PROJECTS\W11591 JACKSON CO CTH X BRIDGE\DESIGN\CORRIDORS\CTH X - CRDR.DWG
LAYOUT NAME - Mainline - (2)
PLOT DATE : 7/26/2019 1:42 PM
PLOT BY : JONAH DRAKE
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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