LAX Dec 08, 2020

PROJECT ID: 5056-00-71

WITH: N.A.

COUNTY: RICHLAND

ORDER OF SHEETS

TOTAL SHEETS = 52

N

DESIGN DESIGNATION

A.A.D.T.	(2021)	=	25
A.A.D.T.	(2041)	=	40
D.H.V.		=	3.6
D.D.		=	60/40
T.		=	10% (ASSUMED)
DESIGN SPEED		=	40 MPH
ESALS		=	11,860

CONVENTIONAL SYMBOLS

PLAN		PROFILE		UTILITIES	
CORPORATE LIMITS		GRADE LINE		ELECTRIC	E
PROPERTY LINE		ORIGINAL GROUND		FIBER OPTIC	FO
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK	GAS	G
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL	SANITARY SEWER	SAN
EXISTING RIGHT OF WAY		GRADE ELEVATION	05.36	STORM SEWER	SS
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)		TELEPHONE	T
SLOPE INTERCEPT				WATER	W
REFERENCE LINE	300'EB'			UTILITY PEDESTAL	
EXISTING CULVERT				POWER POLE	
PROPOSED CULVERT (Box or Pipe)				TELEPHONE POLE	
COMBUSTIBLE FLUIDS	CAUTION				
MARSH AREA					
WOODED OR SHRUB AREA					

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF ITHACA, MCAVOY HILL ROAD

LITTLE WILLOW CREEK BRIDGE, B-52-278

LOC STR
RICHLAND COUNTY

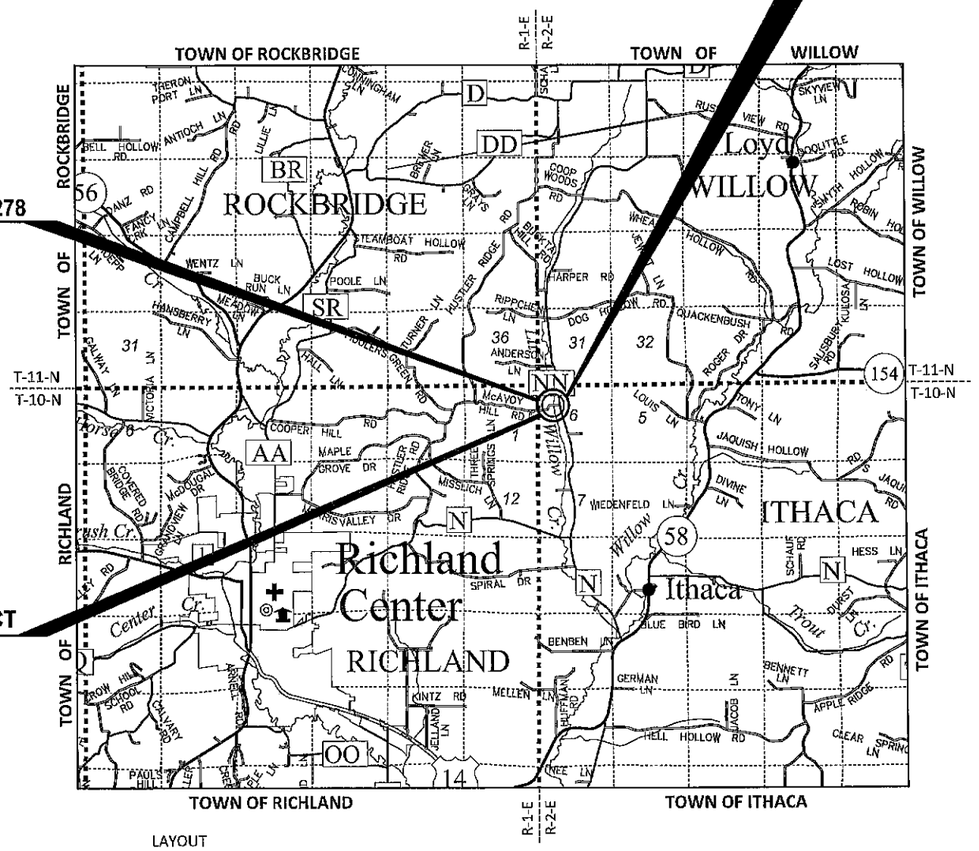
STATE PROJECT NUMBER
5056-00-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5056-00-71	WISC 2021023	1

END PROJECT
STA. 11+60

STRUCTURE B-52-278

BEGIN PROJECT
STA. 9+90
Y = 460,147.78
X = 696,803.78



TOTAL NET LENGTH OF CENTERLINE = 0.032 MILES

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

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

ACCEPTED FOR
COUNTY of RICHLAND
7-22-2020 (Date) (Highway Commissioner)

ACCEPTED FOR
TOWN of ITHACA
7-22-20 (Date) (Town Chairman)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc
Engineers - Architects - Surveyors

WISCONSIN
ROBERT B. HANOLD
E-45655
PRAIRIE DU SAC WI
PROFESSIONAL ENGINEER
7/7/20

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Project Manager	TRAVIS BUROS, P.E.
Regional Examiner	SW REGION
Regional Supervisor	OSCAR WINGER, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 7/27/2020 (Signature)

E

GENERAL NOTES

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

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

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

UNLESS SHOWN OTHERWISE, DISTURBED AREAS SHOWN WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND MULCHED AS DIRECTED BY THE ENGINEER.

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 LAYER SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE, TEMPORARY DITCH CHECKS AND CULVERT PIPE CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE AND SHALL BE PLACED PRIOR TO CONSTRUCTION AND SHALL BE 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%.

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.

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

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

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

INLET AND OUTLET ELEVATIONS FOR CULVERT PIPES AS SHOWN ON THE PLAN MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS.

CURVE DATA IS BASED ON THE ARC DEFINITIONS.

CONTACTS

RICHLAND COUNTY HIGHWAY DEPARTMENT:
ROGER PETRICK, COMMISSIONER
120 BOWEN CIRCLE
RICHLAND CENTER, WI 53581
PH: (608) 647-4707
EMAIL: roger.petrick@co.richland.wi.us

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

TOWN OF ITHACA:
DAVID WANLESS, CHAIRMAN
28749 NEBRASKA ROAD
RICHLAND CENTER, WI 53581
PHONE: (608) 585-3461
EMAIL: wanldav@hotmail.com

DNR LIAISON:
STATE OF WISCONSIN
DNR SOUTH CENTRAL REGION HQ
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
ATTN: ANDY BARTA
PHONE: (608) 275-3308
EMAIL: andrew.barta@wisconsin.gov

UTILITIES

ELECTRIC
RICHLAND ELECTRIC COOPERATIVE
ATTN: LARRY HALLETT
P.O. BOX 439
RICHLAND CENTER, WI 53581
OFFICE: (608) 647-3173
CELL: (608) 553-1418
EMAIL: lhallett@rec.coop

TELEPHONE
FRONTIER COMMUNICATIONS
ATTN:JERRY MOORE
2222 W. WISCONSIN ST.
PORTAGE, WI 53901
PH: (608) 742-9507
EMAIL: Jerald.Moore@ftr.com

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

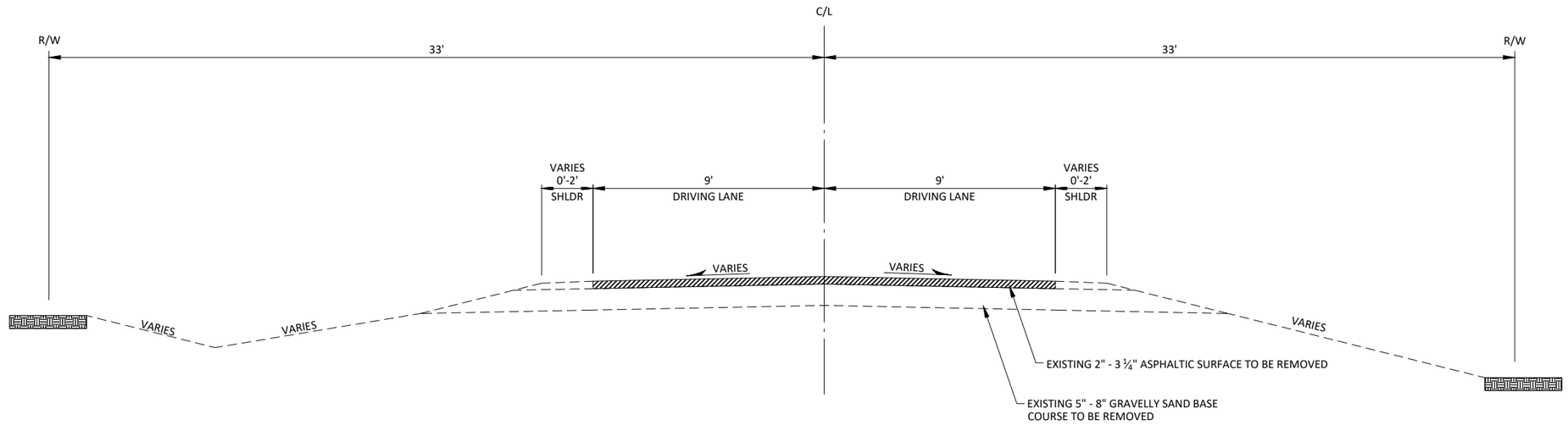
LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	RDWY	Roadway
AC	Acre	IP	Iron Pipe or Pin	SALV	Salvaged
AGG	Aggregate	IRS	Iron Rod Set	SAN S	Sanitary Sewer
AH	Ahead	JT	Joint	SEC	Section
<	Angle	JCT	Junction	SHLDR	Shoulder
ASPH	Asphaltic	LHF	Left-Hand Forward	SHR	Shrinkage
AVG	Average	L	Length of Curve	SW	Sidewalk
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	S	South
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SQ	Square
BK	Back	MH	Manhole	SF or SQ FT	Square Feet
BF	Back Face	MB	Mailbox	SY or SQ YD	Square Yard
BM	Bench Mark	ML or M/L	Match Line	STD	Standard
BR	Bridge	N	North	SDD	Standard Detail Drawings
C or C/L	Center Line	Y	North Grid Coordinate	STH	State Trunk Highways
CC	Center to Center	O.A.L.	Overall Length	STA	Station
CTH	County Trunk Highway	OD	Outside Diameter	SS	Storm Sewer
CR	Creek	PLE	Permanent Limited Easement	SG	Subgrade
CR	Crushed	PT	Point	SE	Superelevation
CY or CU YD	Cubic Yard	PC	Point of Curvature	SL or S/L	Survey Line
CP	Culvert Pipe	PI	Point of Intersection	SV	Septic Vent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	T	Tangent
D	Degree of Curve	PT	Point of Tangency	TEL	Telephone
DHV	Design Hour Volume	POC	Point On Curve	TEMP	Temporary
DIA	Diameter	POT	Point on Tangent	TI	Temporary Interest
E	East	PVC	Polyvinyl Chloride	TLE	Temporary Limited Easement
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
EBS	Excavation Below Subgrade	R	Radius	T	Trucks (percent of)
ESTR	Existing Sign to Remain	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP	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

	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											

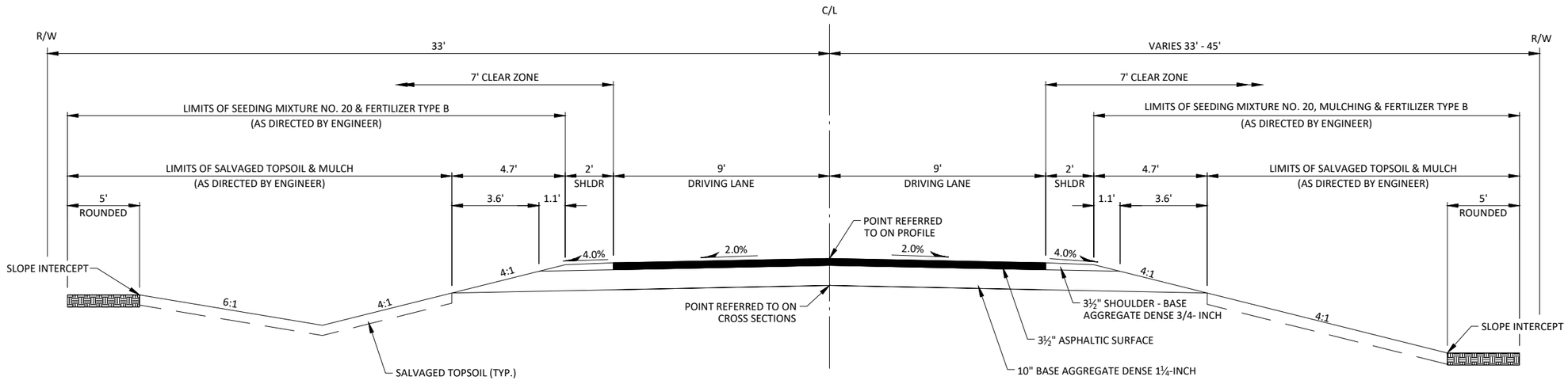
TOTAL PROJECT AREA= 0.30 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.22 ACRES

2



TYPICAL EXISTING SECTION

MCAVOY HILL ROAD

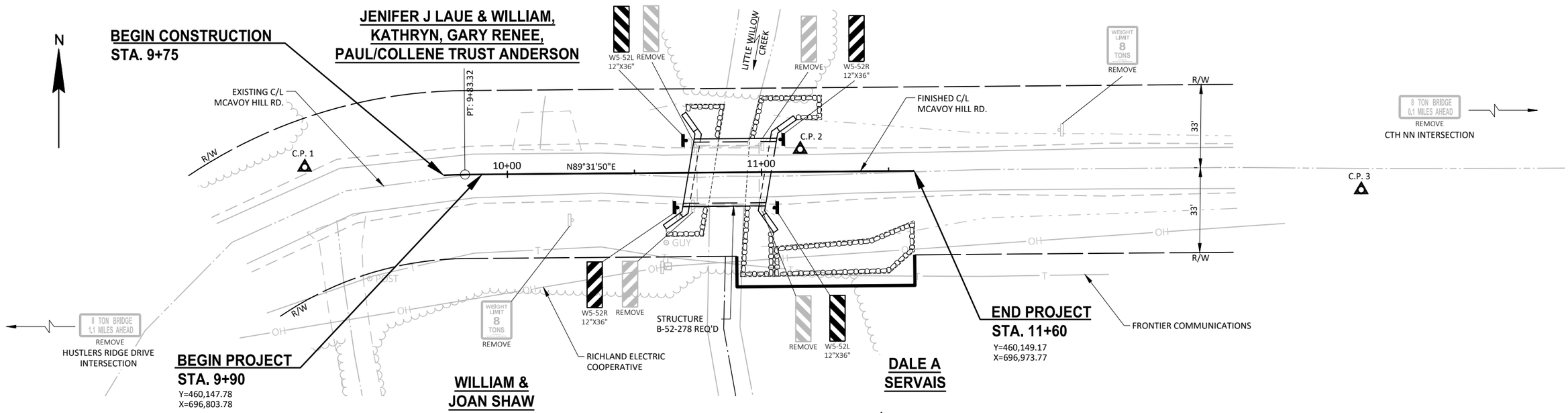


TYPICAL FINISHED SECTION

MCAVOY HILL ROAD

PROJECT NO: 5056-00-71	HWY: MCAVOY HILL ROAD	COUNTY: RICHLAND	TYPICAL EXISTING SECTION & TYPICAL FINISHED SECTION	SHEET 3	E

FILE NAME : S:\PROJECTS\W11601 WISDOT MCAVOY HILL RD BRIDGE RICHLAND COUNTY\SHEETSPLAN\TYPICALS\50560001_TYPICALS.DWG PLOT DATE : 6/3/2020 6:13:38 AM PLOT BY : THEODORE HERBERS PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1

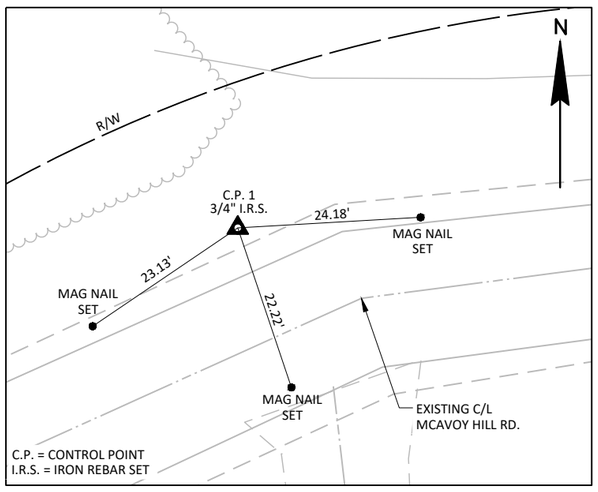


MAINLINE STATION LAYOUT

STATION	Y	X	COMMENTS
9+75	460,147.45	696,788.79	BEGIN CONSTRUCTION
9+90	460,147.78	696,803.78	BEGIN PROJECT
10+00	460,147.86	696,813.78	-
10+50	460,148.27	696,863.78	-
10+71.26	460,148.45	696,885.04	END OF DECK
11+00	460,148.68	696,913.78	-
11+03.80	460,148.71	696,917.58	END OF DECK
11+50	460,149.09	696,963.77	-
11+60	460,149.17	696,973.77	END PROJECT

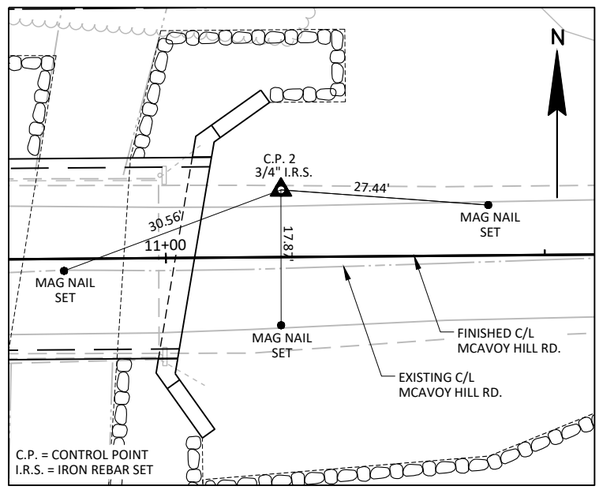
CONTROL POINTS

NO.	STA.	DESCRIPTION	Y	X
1	9+24.22	¾" IRON REBAR SET, 14.84' LT.	460,150.64	696,734.03
2	11+15.27	¾" IRON REBAR SET, 8.88' LT.	460,157.68	696,928.97
3	13+35.98	¾" IRON REBAR SET, 8.32' RT.	460,149.17	696,973.77



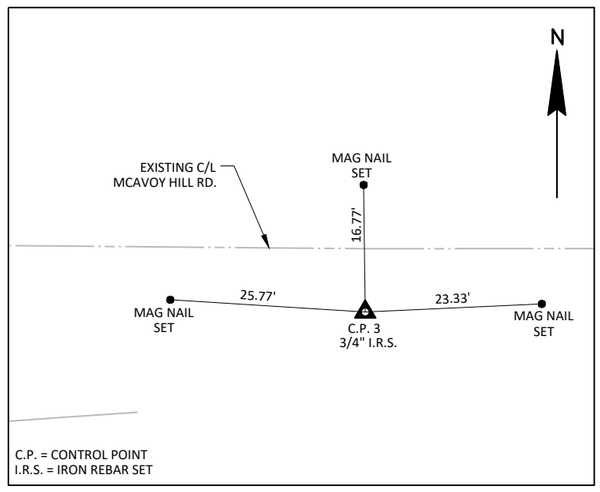
TIES TO C.P.#1

STA. 9+24.22; 14.84' LT.
Y = 460,150.64
X = 696,734.03



TIES TO C.P.#2

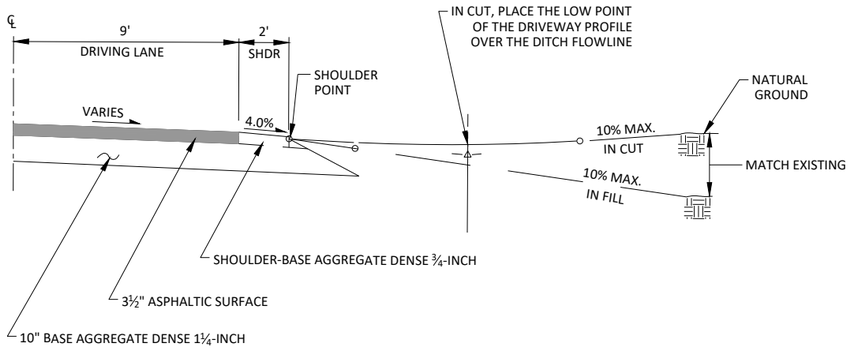
STA. 11+15.27; 8.88' LT.
Y = 460,157.68
X = 696,928.97



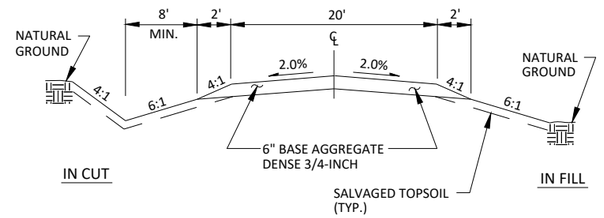
TIES TO C.P.#3

STA. 13+35.98; 8.32' RT.
Y = 460,149.17
X = 696,973.77

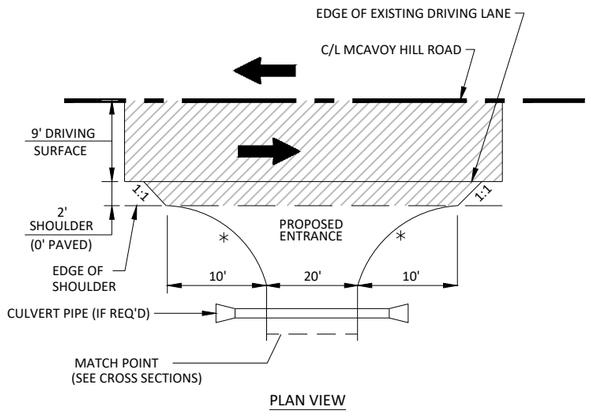
PROJECT NO: 5056-00-71	HWY: MCAVOY HILL ROAD	COUNTY: RICHLAND	ALIGNMENT AND TIES	SHEET 4	E



TYPICAL F.E. PROFILE



TYPICAL CROSS-SECTION FOR F.E.



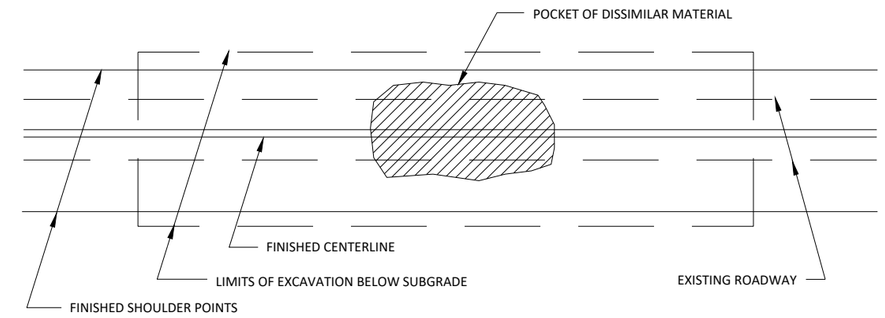
PLAN VIEW

APPROACH AT F.E.

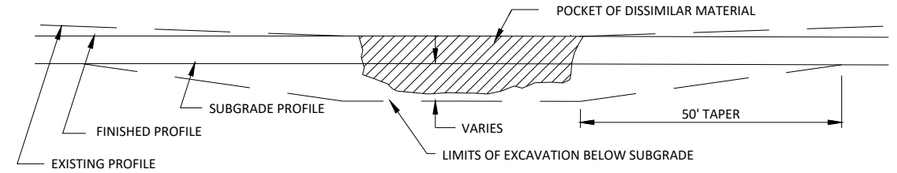
TYPICAL FIELD ENTERANCE (F.E.) DETAILS

LIMITS OF ASPHALTIC SURFACE

∗ RADIUS = 10'

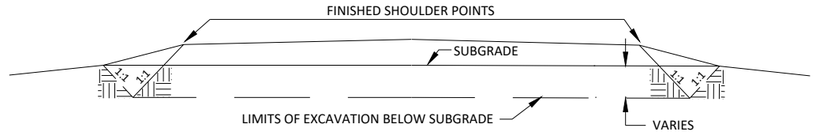


PLAN VIEW



PROFILE VIEW

RURAL EXCAVATION BELOW SUBGRADE (E.B.S.)



CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.

3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

5056-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. Sta. 10+87	LS	1.000	1.000
0008	205.0100	Excavation Common	CY	190.000	190.000
0010	206.1000	Excavation for Structures Bridges (structure) 02. B-52-278	LS	1.000	1.000
0012	210.1500	Backfill Structure Type A	TON	350.000	350.000
0014	213.0100	Finishing Roadway (project) 01. 5056-00-71	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	40.000	40.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	270.000	270.000
0020	455.0605	Tack Coat	GAL	17.000	17.000
0022	465.0105	Asphaltic Surface	TON	64.000	64.000
0024	502.0100	Concrete Masonry Bridges	CY	112.000	112.000
0026	502.3200	Protective Surface Treatment	SY	120.000	120.000
0028	505.0400	Bar Steel Reinforcement HS Structures	LB	4,180.000	4,180.000
0030	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	11,880.000	11,880.000
0032	513.4061	Railing Tubular Type M	LF	69.000	69.000
0034	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0036	520.1015	Apron Endwalls for Culvert Pipe 15-Inch	EACH	2.000	2.000
0038	520.4115	Culvert Pipe Class IV 15-Inch	LF	34.000	34.000
0040	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	240.000	240.000
0042	606.0200	Riprap Medium	CY	53.000	53.000
0044	606.0300	Riprap Heavy	CY	130.000	130.000
0046	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0048	618.0100	Maintenance And Repair of Haul Roads (project) 04. 5056-00-71	EACH	1.000	1.000
0050	619.1000	Mobilization	EACH	1.000	1.000
0052	624.0100	Water	MGAL	5.000	5.000
0054	625.0500	Salvaged Topsoil	SY	550.000	550.000
0056	627.0200	Mulching	SY	550.000	550.000
0058	628.1504	Silt Fence	LF	280.000	280.000
0060	628.1520	Silt Fence Maintenance	LF	560.000	560.000
0062	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0064	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0066	628.7504	Temporary Ditch Checks	LF	24.000	24.000
0068	628.7555	Culvert Pipe Checks	EACH	2.000	2.000
0070	629.0210	Fertilizer Type B	CWT	1.000	1.000
0072	630.0120	Seeding Mixture No. 20	LB	20.000	20.000
0074	630.0200	Seeding Temporary	LB	20.000	20.000

5056-00-71

Line	Item	Item Description	Unit	Total	Qty
0076	630.0500	Seed Water	MGAL	13.000	13.000
0078	633.5100	Markers Row	EACH	6.000	6.000
0080	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0082	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0084	638.2602	Removing Signs Type II	EACH	8.000	8.000
0086	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0088	642.5001	Field Office Type B	EACH	1.000	1.000
0090	643.0420	Traffic Control Barricades Type III	DAY	1,100.000	1,100.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	1,720.000	1,720.000
0094	643.0900	Traffic Control Signs	DAY	860.000	860.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0100	645.0120	Geotextile Type HR	SY	365.000	365.000
0102	650.4500	Construction Staking Subgrade	LF	152.000	152.000
0104	650.5000	Construction Staking Base	LF	152.000	152.000
0106	650.6500	Construction Staking Structure Layout (structure) 03. B-52-278	LS	1.000	1.000
0108	650.9910	Construction Staking Supplemental Control (project) 02. 5056-00-71	LS	1.000	1.000
0110	650.9920	Construction Staking Slope Stakes	LF	152.000	152.000
0112	690.0150	Sawing Asphalt	LF	33.000	33.000
0114	715.0502	Incentive Strength Concrete Structures	DOL	672.000	672.000
0116	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0118	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000

ALL ITEMS 010 UNLESS OTHERWISE NOTED

CLEARING & GRUBBING

STATION - STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
10+50 - 11+50	MAINLINE, RT	1	1
	TOTALS =	1	1

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)
9+90 - 10+71	MAINLINE	8	155
11+04 - 11+60	MAINLINE	7	115
9+95 - 10+35	FIELD ENTRANCE	25	
	TOTALS =	40	270

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
9+90 - 10+71	MAINLINE	10	38
11+04 - 11+60	MAINLINE	7	26
	TOTALS =	17	64

CULVERT PIPE

STATION	LOCATION	520.1015 APRON ENDWALL FOR CULVERT PIPE 15-INCH (EACH)	520.4115 CULVERT PIPE CLASS IV 15-INCH (LF)
10+15, LT	F.E.	2	34
	TOTALS =	2	34

PIPE SIZE	MINIMUM THICKNESS (IN.) STEEL	MINIMUM THICKNESS (IN.) ALUMINUM
15-INCH	0.064	0.060

RIPRAP/ GEOTEXTILE

STATION	LOCATION	606.0200 RIPAP MEDIUM (CY)	645.0120 GEOTEXTILE TYPE HR (SY)
11+05 - 11+60, RT	MAINLINE, DITCH	42	110
	UNDISTRIBUTED	11	30
	TOTALS =	53	140

WATER

PROJECT	624.0100 (MGAL)
5056-00-71	5
TOTAL =	5

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)	630.0200 SEEDING TEMPORARY (LB)	630.0500 SEED WATER (MGAL)
9+75 - 11+60	MAINLINE	440	440	0.50	16	-	13
-	UNDISTRIBUTED	110	110	0.50	4	20	-
	TOTALS =	550	550	1.00	20	20	13

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
9+90 - 10+81	MAINLINE, RT.	124	248
10+81 - 10+86	MAINLINE, LT.	28	56
10+91 - 10+94	MAINLINE, LT.	42	84
10+94 - 11+00	MAINLINE, RT.	31	62
-	UNDISTRIBUTED	55	110
	TOTALS =	280	560

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
5056-00-71	4	2
TOTALS =	4	2

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
10+60	MAINLINE, LT.	8
11+35	MAINLINE, LT.	8
	UNDISTRIBUTED	8
	TOTAL =	24

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 (EACH)
9+95	MAINLINE, LT.	1
	UNDISTRIBUTED	1
	TOTAL =	2

MARKERS ROW

PT. NO.	STATION	LOCATION	OFFSET FROM FINISHED C/L	633.5100 (EACH)
100	9+90	MAINLINE	33.00 LT.	1
101	11+60	MAINLINE	33.00 LT.	1
102	11+60	MAINLINE	33.00 RT.	1
103	11+60	MAINLINE	45.00 RT.	1
104	10+95	MAINLINE	45.00 RT.	1
107	9+90	MAINLINE	33.00' RT	1
			TOTALS =	6

ALL ITEMS 010 UNLESS OTHERWISE NOTED

3

PERMANENT SIGNING

APPROX. STATION	POSITION	SITE ID	SIGN CODE	SIGN DESCRIPTION	SIGN SIZE	634.0612 POSTS WOOD 4X6-INCH X 12-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
AT HUSTLERS RIDGE DRIVE	RIGHT	MAINLINE	R12-55	8 TON BRDGE __ MILES AHEAD	48X18	---	---	1	1
10+25	RIGHT	MAINLINE	R12-1	WEIGHT LIMIT 8 TONS	24X30	---	---	1	1
10+68	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	---	---
10+73	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	---	---
10+74	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	---	---	1	1
10+74	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	---	---	1	1
10+99	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	---	---	1	1
10+99	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	---	---	1	1
11+01	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	---	---
11+07	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	---	---
12+17	LEFT	MAINLINE	W5-52L	WEIGHT LIMIT 8 TONS	24X30	---	---	1	1
AT CTH NN	LEFT	MAINLINE	R12-55	8 TON BRDGE __ MILES AHEAD	48X18	---	---	1	1
					TOTALS =	4	12.00	8	8

TRAFFIC CONTROL

	TRAFFIC CONTROL			
LOCATION	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
5056-00-71	1,100	1,720	860	1
TOTALS =	1,100	1,720	860	1

3

CONSTRUCTION STAKING

		CONSTRUCTION STAKING				
STATION -STATION	LOCATION	650.4500 SUBGRADE (L.F.)	650.5000 BASE (L.F.)	*650.6500 STRUCTURE LAYOUT (L.S.)	650.9910 SUPPLEMENTAL CONTROL (5921-00-74) (L.S.)	650.9920 SLOPES STAKES (L.F.)
9+75 - 10+71	MAINLINE	96	96	-	-	96
11+04 - 11+60	MAINLINE	56	56	-	-	56
-	MAINLINE	-	-	1	1	-
	TOTAL =	152	152	1	1	152

*CATEGORY 020

SAWING ASPHALT

STATION	LOCATION	690.0150 (L.F.)
9+90	MAINLINE	17
11+60	MAINLINE	16
	TOTAL =	33

EARTHWORK SUMMARY

CATEGORY	FROM/TO STA	LOCATION	205.0100 COMMON EXCAVATION CUT (CY)	AVAILABLE MATERIAL (CY) (1)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (2)	MASS ORDINATE +/- (CY) (3)	WASTE (CY)
010	9+75 - 11+60	MAINLINE	190	190	57	71	119	119
		TOTALS =	190	190	57	71	119	119

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.

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

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

CONVENTIONAL UTILITY SYMBOLS

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

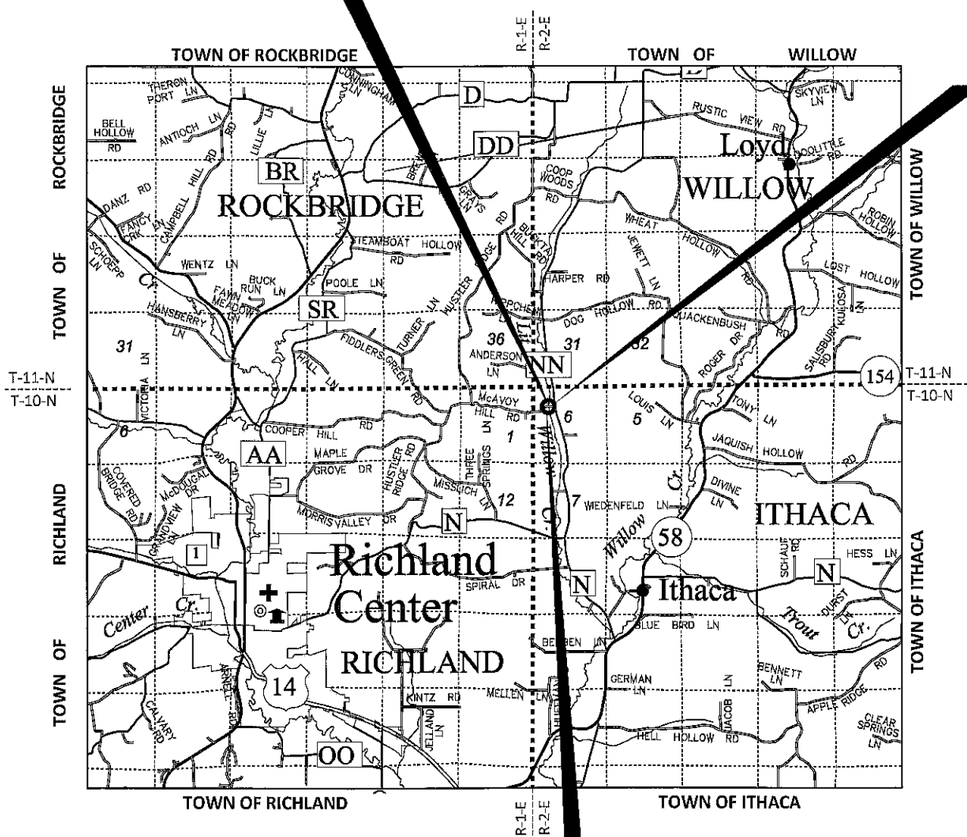
NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), RICHLAND COUNTY, 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."

STRUCTURE B-52-0278



END RELOCATION ORDER
STA. 11+60.00
1374.16' SOUTH AND 1049.51' EAST OF THE N.W. CORNER OF SECTION 6, T.10N., R.2E., TOWN OF ITHACA, RICHLAND COUNTY, WI
Y= 460149.17
X= 696973.77

BEGIN RELOCATION ORDER
STA. 9+90.00
1375.55' SOUTH AND 879.52' EAST OF THE N.W. CORNER OF SECTION 6, T.10N., R.2E., TOWN OF ITHACA, RICHLAND COUNTY, WI
Y= 460147.78
X= 696803.78

N

LAYOUT

SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.032 MI.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5056-00-01	4.01	2
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

TOWN OF ITHACA, MCAVOY HILL ROAD

LITTLE WILLOW CREEK BRIDGE, B-52-0278

LOC STR — RICHLAND COUNTY

CONSTRUCTION PROJECT NUMBER
5056-00-71

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 TOWN OF ITHACA, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
WESLEY L KRAEMER
S-3026
SPRING GREEN WIS.
2-26-20
LAND SURVEYOR

REVISION DATE

APPROVED FOR TOWN OF ITHACA
DATE 3-2-2020 (NAME/TITLE)

10 E

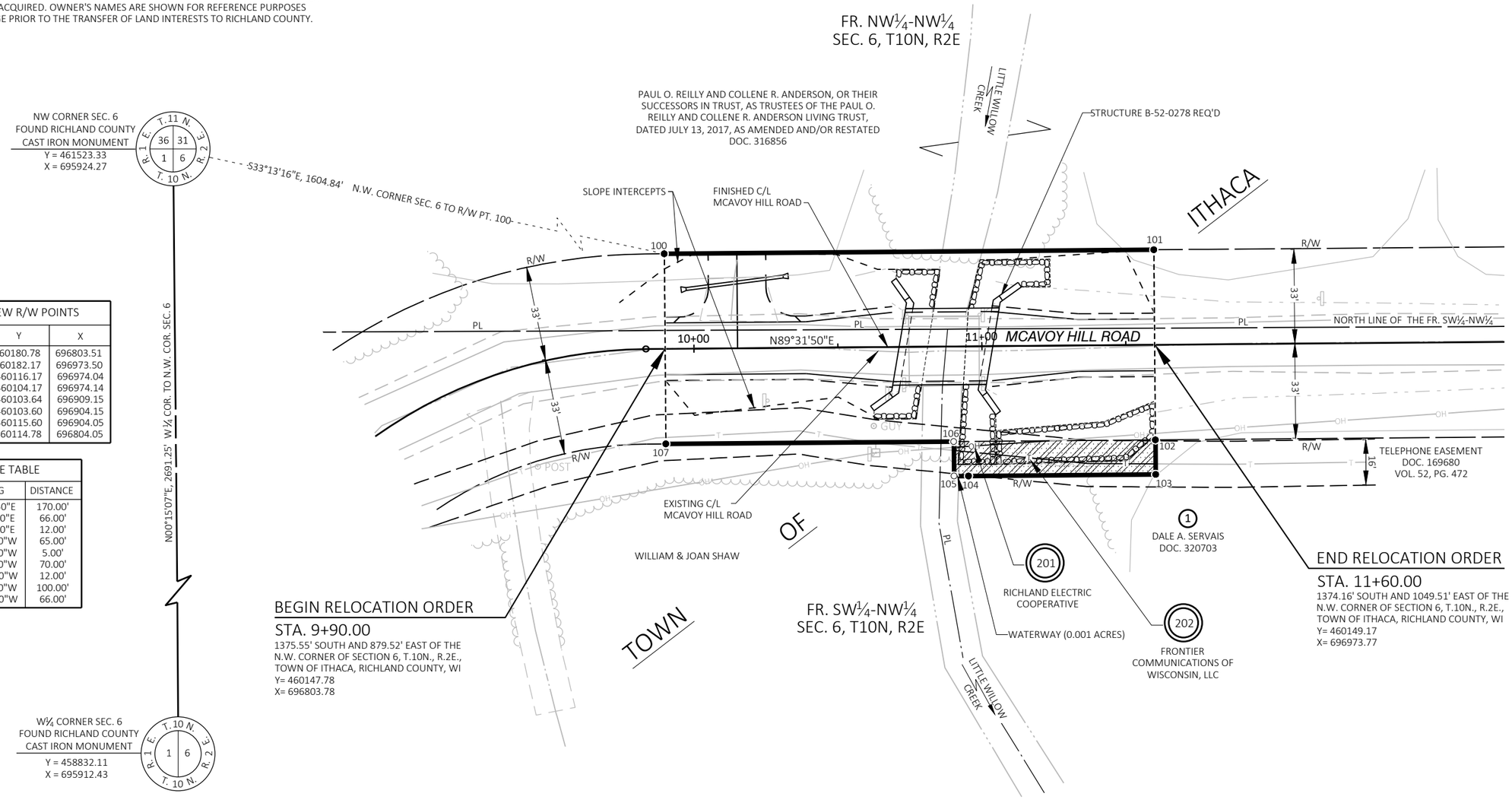
SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	PLE ACRES REQ.
1	DALE A. SERVAIS	PLE	0.019
201	RICHLAND ELECTRIC COOPERATIVE	RELEASE OF RIGHTS	
202	FRONTIER COMMUNICATIONS OF WISCONSIN, LLC	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 RICHLAND COUNTY.

EASEMENT TABLE

OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
RICHLAND COOPERATIVE ELECTRIC ASSOCIATION (RICHLAND ELECTRIC COOPERATIVE)	DOC. #87153	1	RIGHT-OF-WAY EASEMENT (BLANKET)
GENERAL TELEPHONE COMPANY OF WISCONSIN (FRONTIER COMMUNICATIONS OF WISCONSIN, LLC)	DOC. #169680, VOL. 52, PG. 472	1	EASEMENT (16' WIDE)



COORDINATE TABLE - NEW R/W POINTS

PT.#	STATION	OFFSET	Y	X
100	9+90.00	33.00' LT.	460180.78	696803.51
101	11+60.00	33.00' LT.	460182.17	696973.50
102	11+60.00	33.00' RT.	460116.17	696974.04
103	11+60.00	45.00' RT.	460104.17	696974.14
104	10+95.00	45.00' RT.	460103.64	696909.15
105	10+90.00	45.00' RT.	460103.60	696904.15
106	10+90.00	33.00' RT.	460115.60	696904.05
107	9+90.00	33.00' RT.	460114.78	696804.05

RIGHT OF WAY LINE TABLE

POINT TO POINT	BEARING	DISTANCE
100 TO 101	N89°31'50"E	170.00'
101 TO 102	S00°28'10"E	66.00'
102 TO 103	S00°28'10"E	12.00'
103 TO 104	S89°31'50"W	65.00'
104 TO 105	S89°31'50"W	5.00'
103 TO 105	S89°31'50"W	70.00'
105 TO 106	N00°28'10"W	12.00'
106 TO 107	S89°31'50"W	100.00'
107 TO 100	N00°28'10"W	66.00'

NOTE: EXISTING C/L OF MCAVOY HILL ROAD WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR MCAVOY HILL ROAD WAS BASED ON CENTERLINE OF EXISTING PAVEMENT AND WIS. STATUTE 82.31(2)

REVISION DATE	DATE: FEBRUARY 26, 2020	SCALE, FEET 0 20 40	HWY: MCAVOY HILL ROAD	R/W PROJECT NUMBER: 5056-00-01	PLAT SHEET 4.02
	GRID FACTOR		COUNTY: RICHLAND	CONSTRUCTION PROJECT NUMBER: 5056-00-71	PS&E SHEET 11 E

FILE NAME : S:\Projects\W11601 WisDOT McAvoy Hill Rd Bridge Richland County\RW\W11601 RW Plat .dwg PLOT DATE : 2/26/2020 3:43 PM PLOT BY : Kraemer, Wes PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

LEGEND

- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT
- SILT FENCE
- EDGE OF WATER
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 020)
- RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR (CATEGORY 010)

SEE TYPICAL FINISHED SECTION FOR LIMITS OF SEEDING, FERTILIZER, MULCHING AND SALVAGED TOPSOIL

CURVE 1
PI STA. = 8+99.22
Y = 460,146.82
X = 696,686.94
R = 165.00
D = 34°43'29"
DELTA = 67°27'34"
L = 194.27
T = 110.17
C = 183.24
PC STA. = 7+89.05
Y = 460,044.73
X = 696,645.55
PT STA. = 9+83.32
Y = 460,147.73
X = 696,797.10

JENIFER J LAUE & WILLIAM, KATHRYN, GARY RENEE, PAUL/COLLENE TRUST ANDERSON

BEGIN CONSTRUCTION
STA. 9+75

STA. 10+15, LT.
CONSTRUCT F.E. (B.A.D.)

STA. 10+15, LT.
(1) CULVERT PIPE CLASS-IV 15-INCH
(2) APRON ENDWALLS CULVERT PIPE
15-INCH REQ'D.
W. INV. = 791.71
E. INV. = 791.29

SLOPE INTERCEPTS
RT: 9+83.32

LITTLE WILLOW CREEK

REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS
STA. 10+87 (P-52-918)
SINGLE-SPAN STEEL DECK GIRDER STRUCTURE
23.0' OVERALL DECK WIDTH
25.0' OVERALL LENGTH

N

R/W
BM 1
CURVE 1
10+00
11+00
N89°31'50"E
STA 10+43
9.0', LT.
STA 11+36
9.0', LT.
BM 2
10:1
(ASPHALT)
MCAVOY HILL RD.
EXISTING C/L MCAVOY HILL RD.
33'
33'
BM 3
STA 10+39
9.0', RT.
BM 5
STA 11+31
9.0', RT.
STA 11+05
29.2', RT.
STA 11+60
19.5', RT.
STA 11+60
31.5', RT.
STA 11+05
41.0', RT.
STA 11+50
40.1', RT.
PLE REQ'D.
FRONTIER COMMUNICATIONS
STRUCTURE B-52-278 REQ'D
FINISHED C/L MCAVOY HILL RD.
RICHLAND ELECTRIC COOPERATIVE
EXISTING P.E. TO REMAIN

BEGIN PROJECT
STA. 9+90
Y=460,147.78
X=696,803.78

WILLIAM & JOAN SHAW

DALE A SERVAIS

END PROJECT
STA. 11+60
Y=460,149.17
X=696,973.77

STA. 10+87
STRUCTURE B-52-278 REQ'D
SINGLE SPAN REINFORCED CONCRETE FLAT SLAB STRUCTURE
CLEAR ROADWAY WIDTH = 24.0'
O.A.L. = 32.54'
SKEW = 10° L.H.F.

HIGH WATER$_{100}$
EL = 790.54

FINISHED C/L PROFILE MCAVOY HILL RD.

-1.71%

STA. 9+90.00
EL. 794.58
MATCH EXISTING

STA. 11+60.00
EL. 791.68
MATCH EXISTING

EXISTING C/L PROFILE MCAVOY HILL RD.

HIGH WATER$_{2}$
EL = 786.73

OBSERVED WATER
EL. 783.62
(7-26-19)

STREAMBED
EL. 782.60

EXISTING C/L ELEVATION
FINISHED C/L ELEVATION

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	9+24	3/4" IRON REBAR SET, 14.8' LT.	797.04
2	11+15	3/4" IRON REBAR SET, 8.9' LT.	792.14
3	13+36	3/4" IRON REBAR SET, 8.3' RT.	791.37
5	10+63	STAR SPIKE IN PPOL, 36.7' RT.	791.43

EARTHWORK SUMMARY

		MAINLINE
EXCAVATION COMMON	=	190 C.Y.
FILL	=	57 C.Y.
FILL EXPANSION (25%)	=	71 C.Y.
WASTE	=	119 C.Y.

798 796 794 792 790 788 786 784 782

803.93 802.14 800.26 798.81 797.53 796.33 795.61 794.88 794.41 794.41 794.05 794.07 793.71 793.73 793.40 793.39 793.20 793.04 792.95 792.70 792.54 792.36 792.12 792.02 791.68 791.68 791.24 791.07 791.08 791.12 791.33 791.55 791.67 791.75

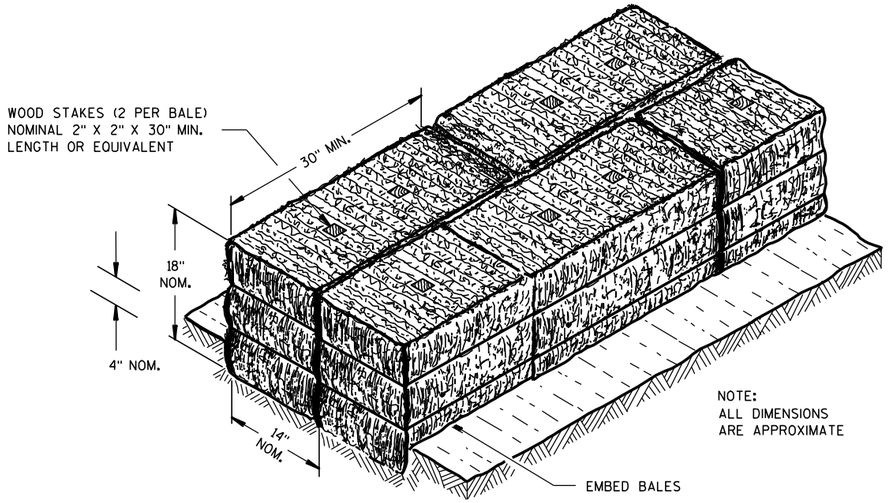
8+00 8+20 8+40 8+60 8+80 9+00 9+20 9+40 9+60 9+80 10+00 10+20 10+40 10+60 10+80 11+00 11+20 11+40 11+60 11+80 12+00 12+20 12+40 12+60 12+80 13+00 13+20 13+40 13+60

PROJECT NO: 5056-00-71	HWY: MCAVOY HILL ROAD	COUNTY: RICHLAND	PLAN AND PROFILE	SHEET 12	E

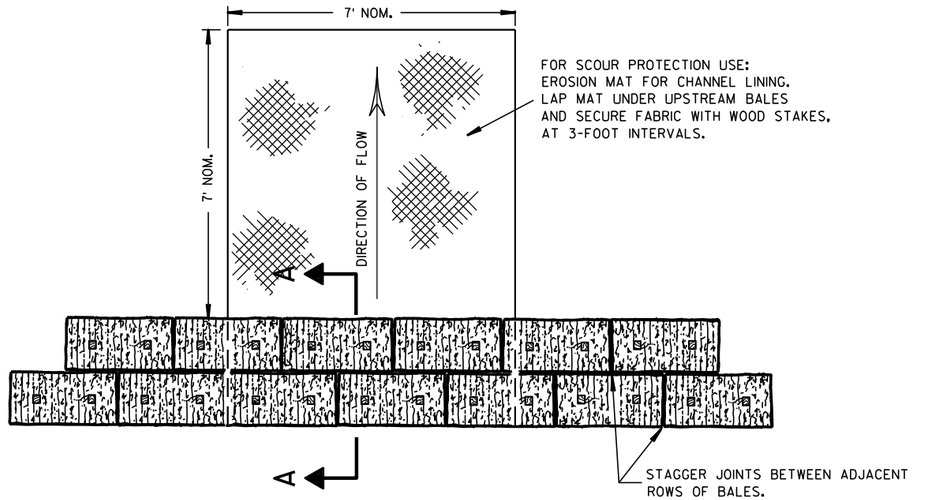
FILE NAME : S:\PROJECTS\W11601 WISDOT MCAVOY HILL RD BRIDGE RICHLAND COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\PLAN & PROFILE.DWG PLOT DATE : 10/15/2020 10:04:03 AM PLOT BY : HANOLD, ROBERT PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1

Standard Detail Drawing List

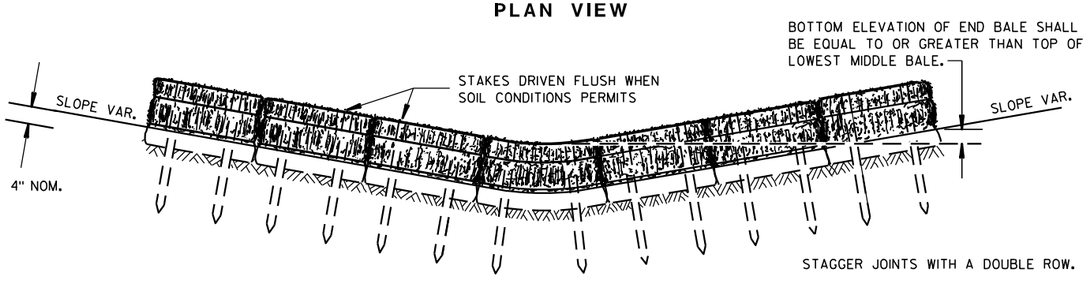
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



SECTION A-A



PLAN VIEW



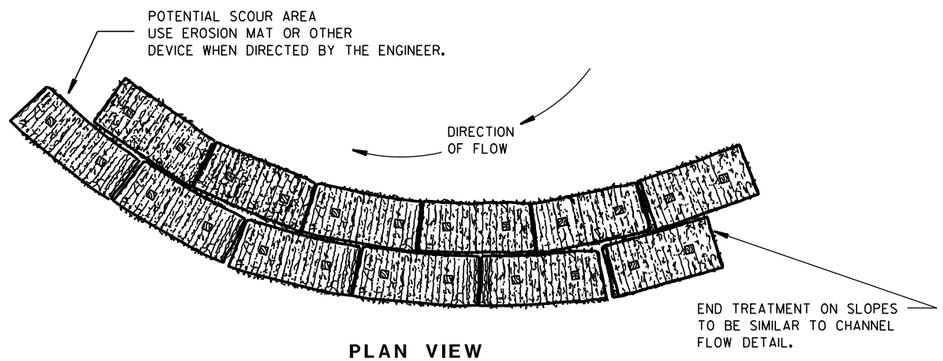
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

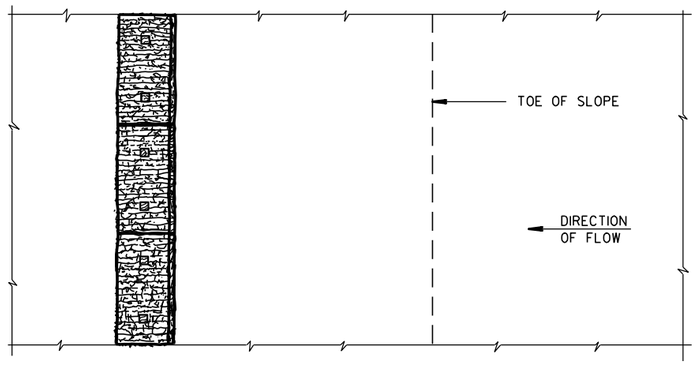
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

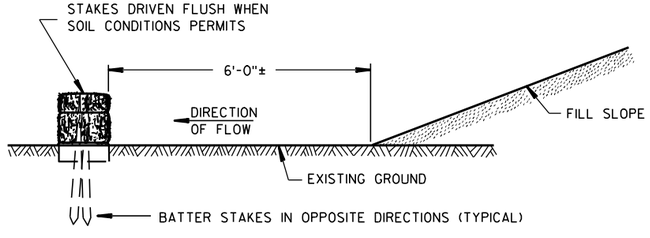


PLAN VIEW

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

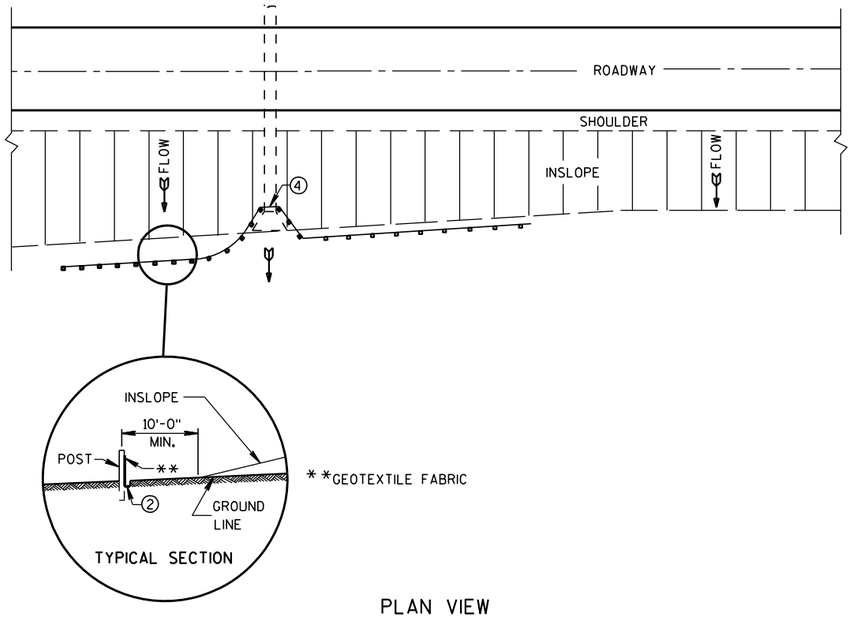
FHWA

6

S.D.D. 8 E 8-3

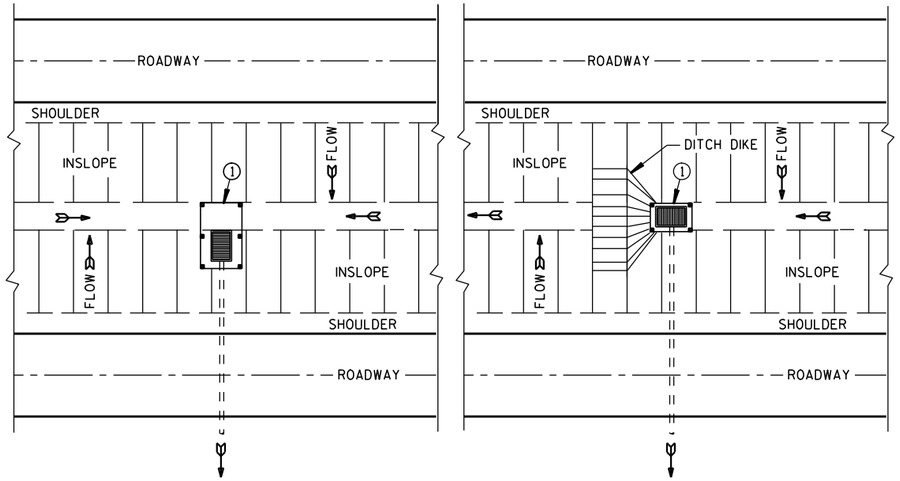
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

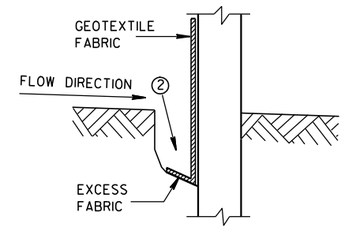
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

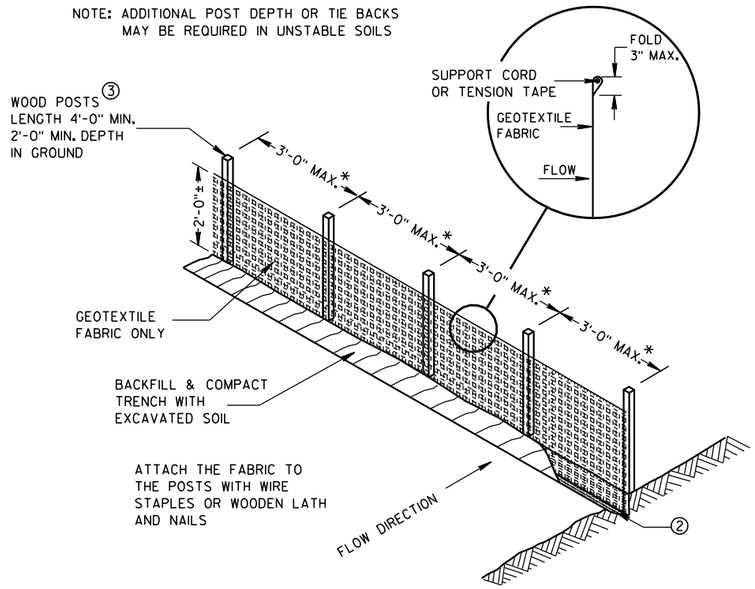
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

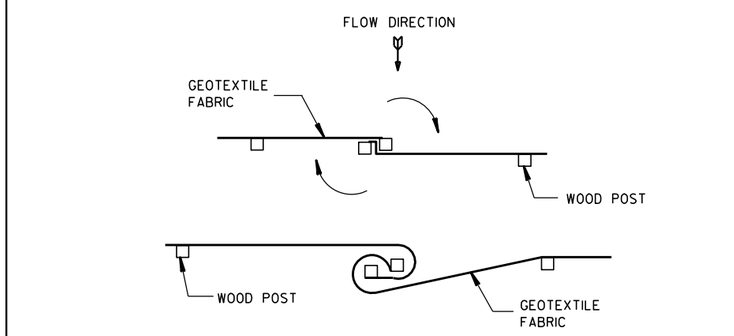
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



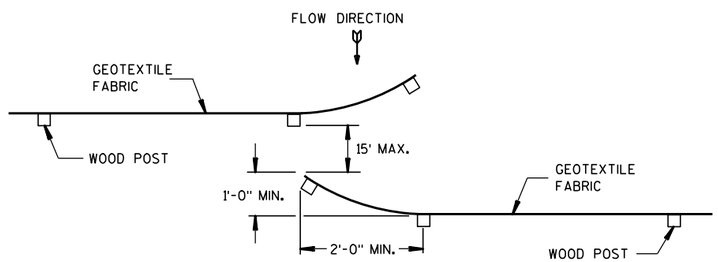
TRENCH DETAIL



SILT FENCE

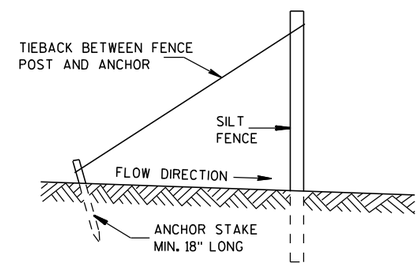


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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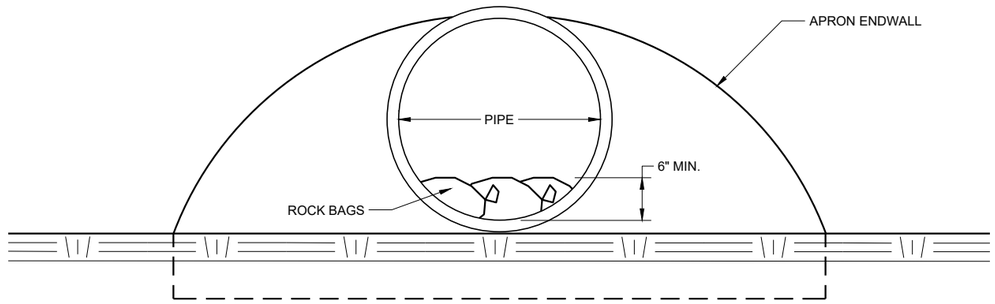
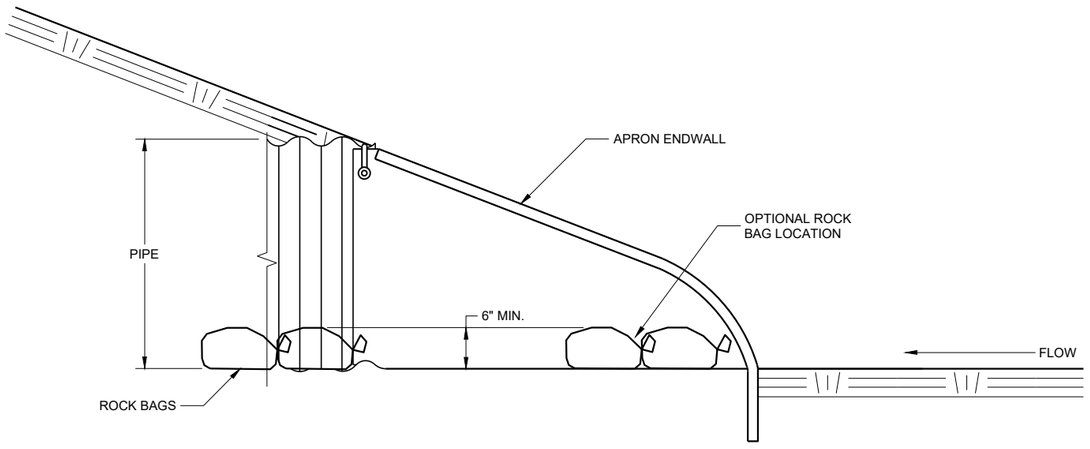
S.D.D. 8 E 9-6



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

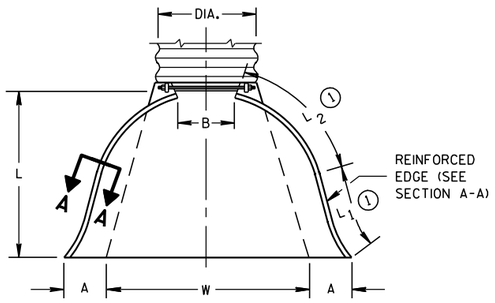
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

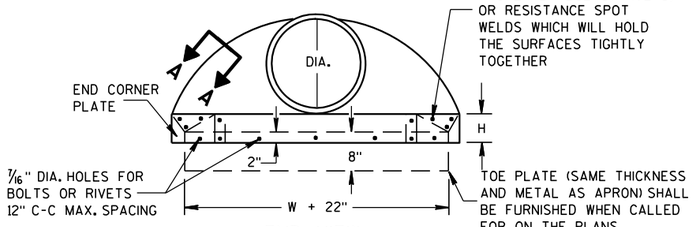
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

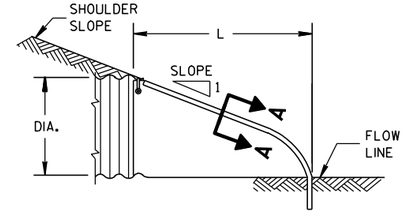
*MINIMUM
**MAXIMUM



PLAN VIEW

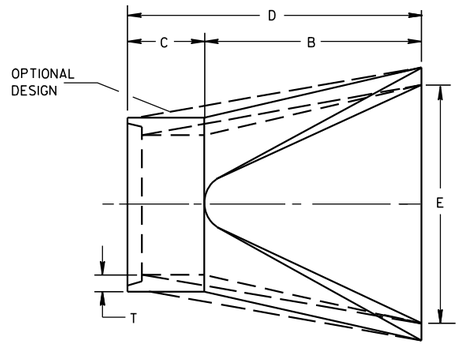


END VIEW

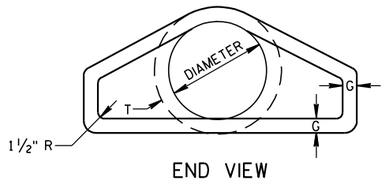


SIDE ELEVATION

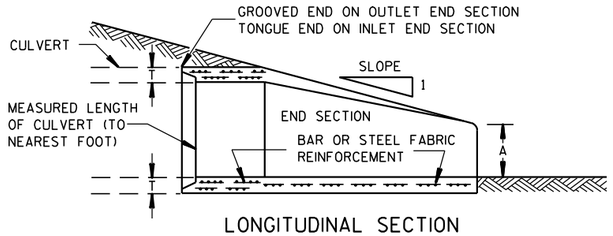
METAL ENDWALLS



PLAN

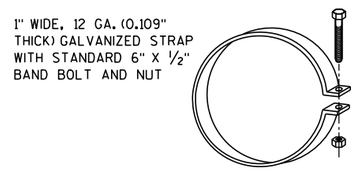


END VIEW



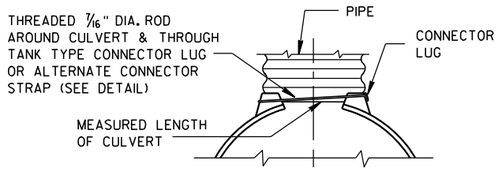
LONGITUDINAL SECTION

CONCRETE ENDWALLS

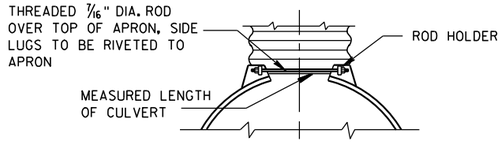


ALTERNATE FOR TYPE 1 CONNECTION

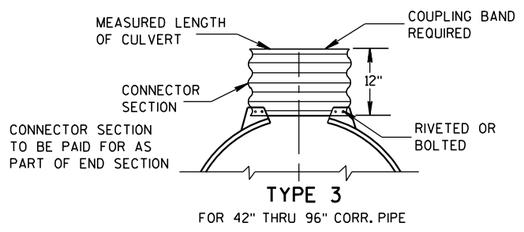
END SECTION CONNECTOR STRAP



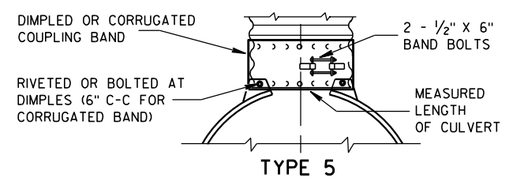
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

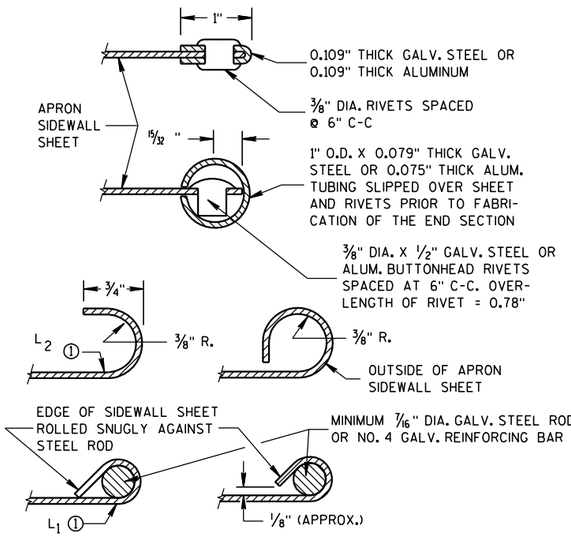
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

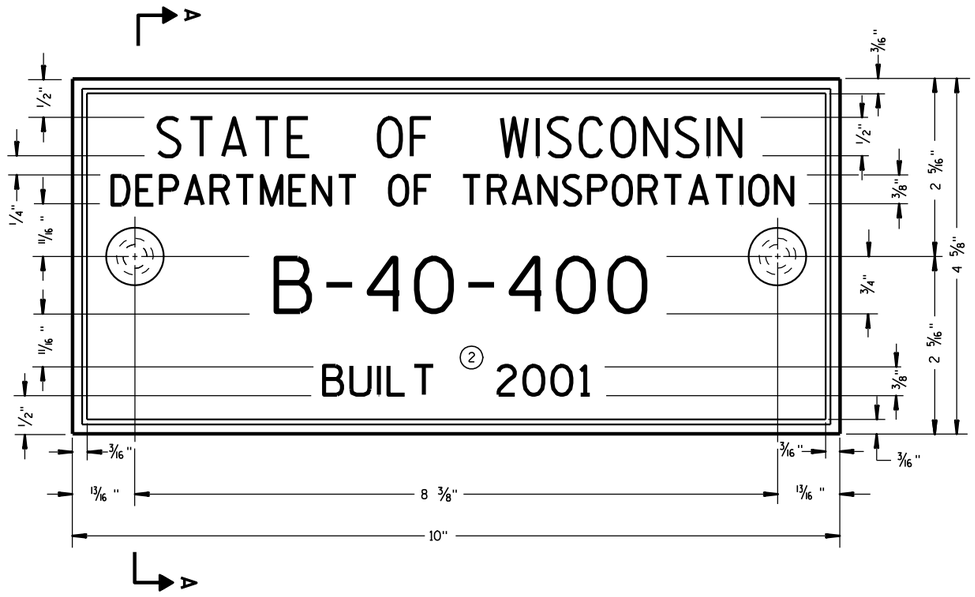
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

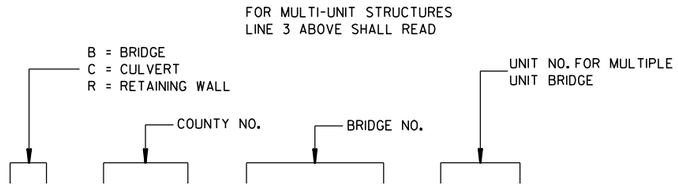
6

S.D.D. 8 F 1-11



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

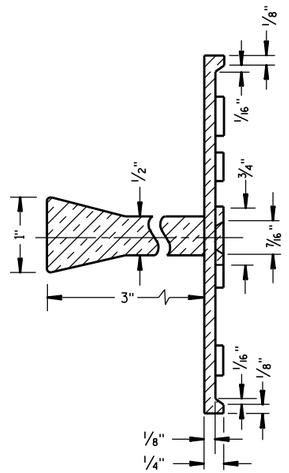
GENERAL NOTES

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.

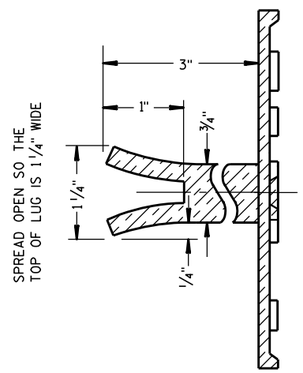
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

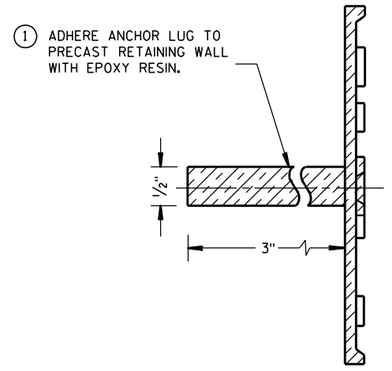
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

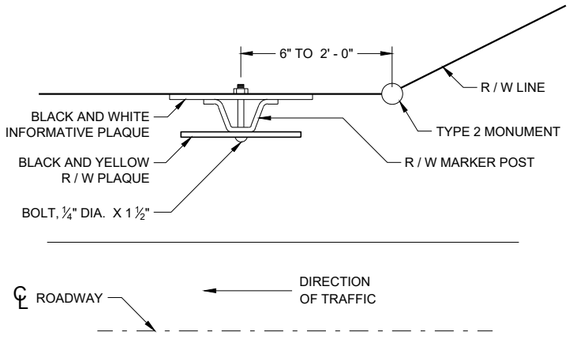
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

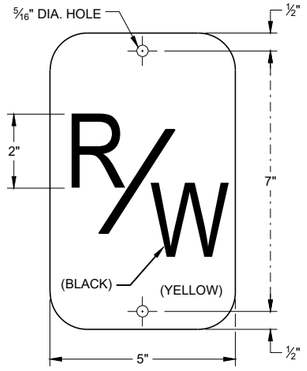
FHWA

6

S.D.D. 12 A 3-10

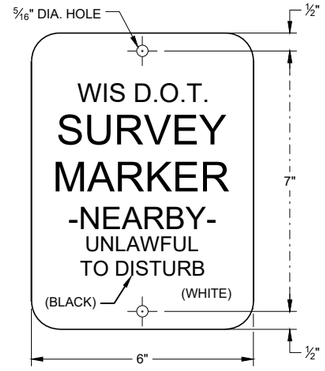


PLAN VIEW
STEEL MARKER POST



R / W PLAQUE

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



INFORMATIVE PLAQUE

GENERAL NOTES

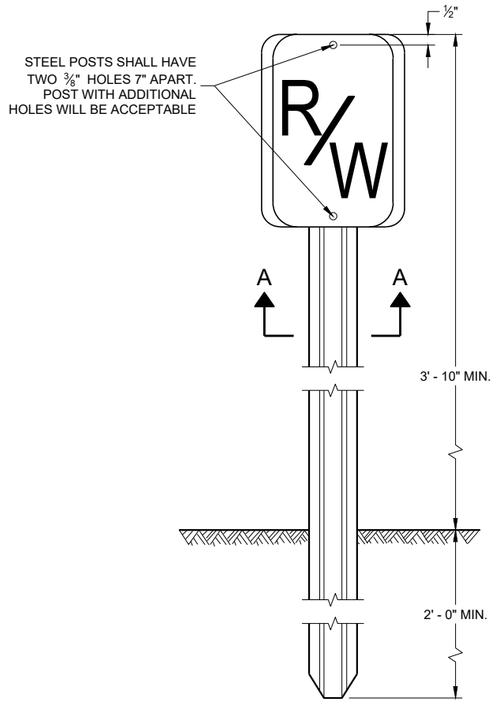
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

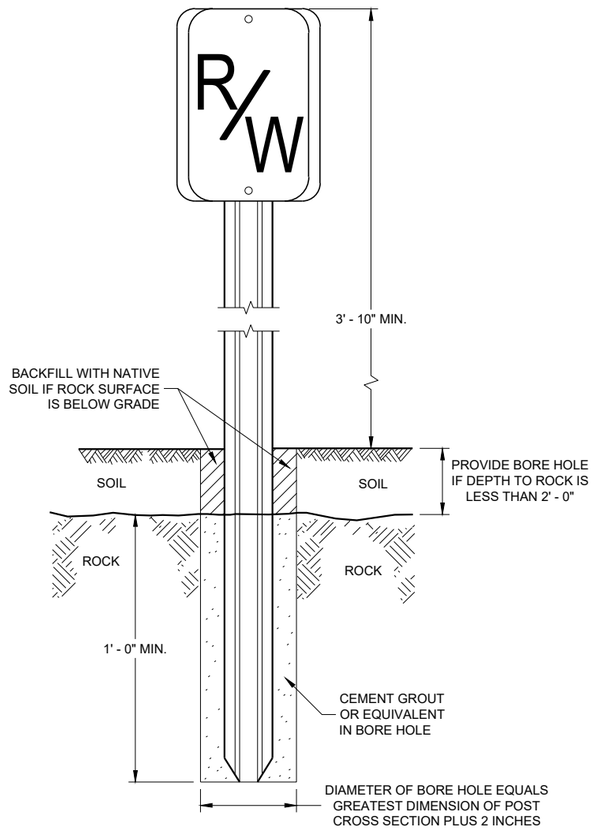
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFROMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. "R/W" AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

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.

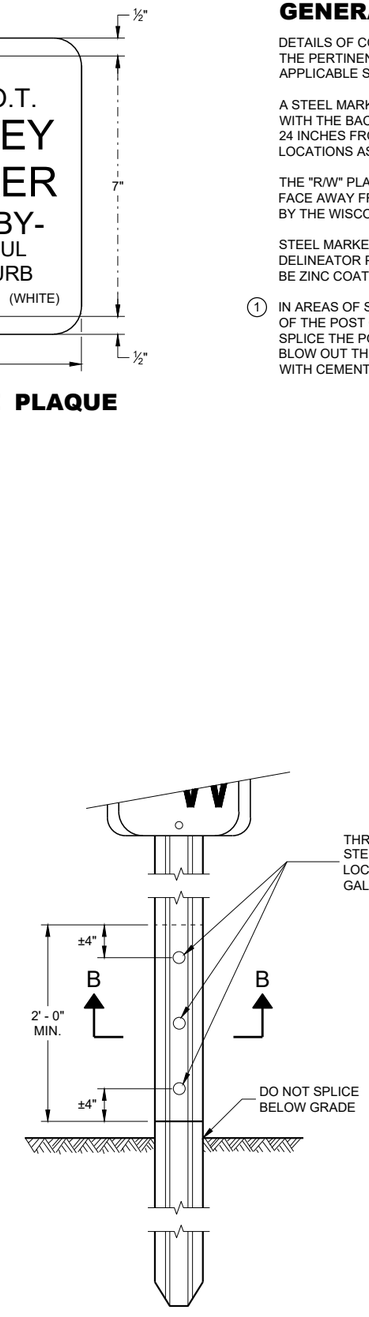
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' - 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL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



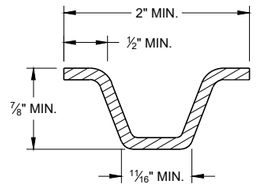
FRONT VIEW
STEEL MARKER POST



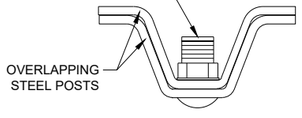
FRONT VIEW
ROCK INSTALLATION (1)



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
ENGINEER

FHWA

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SDD 15A01 - 13a

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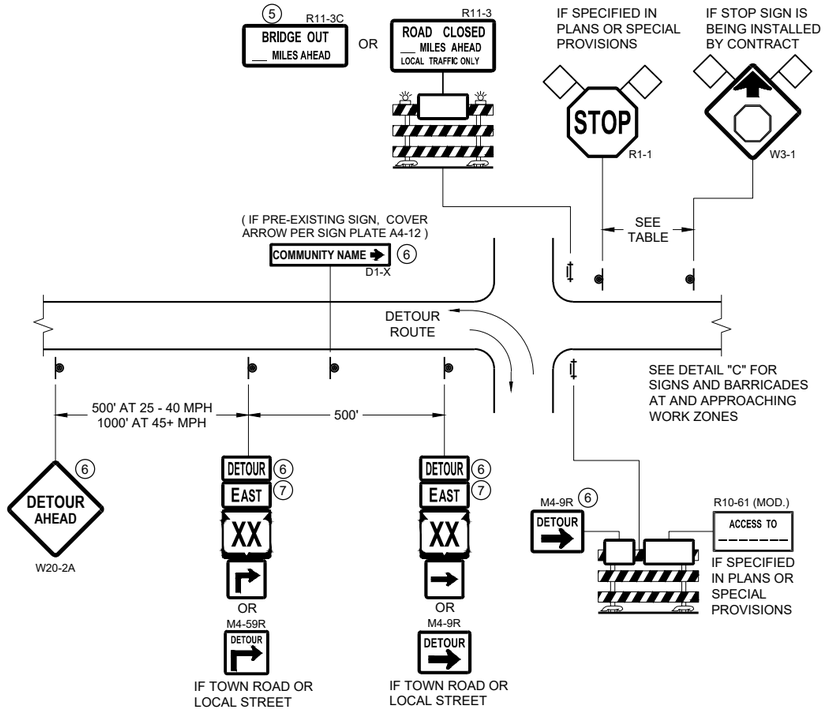
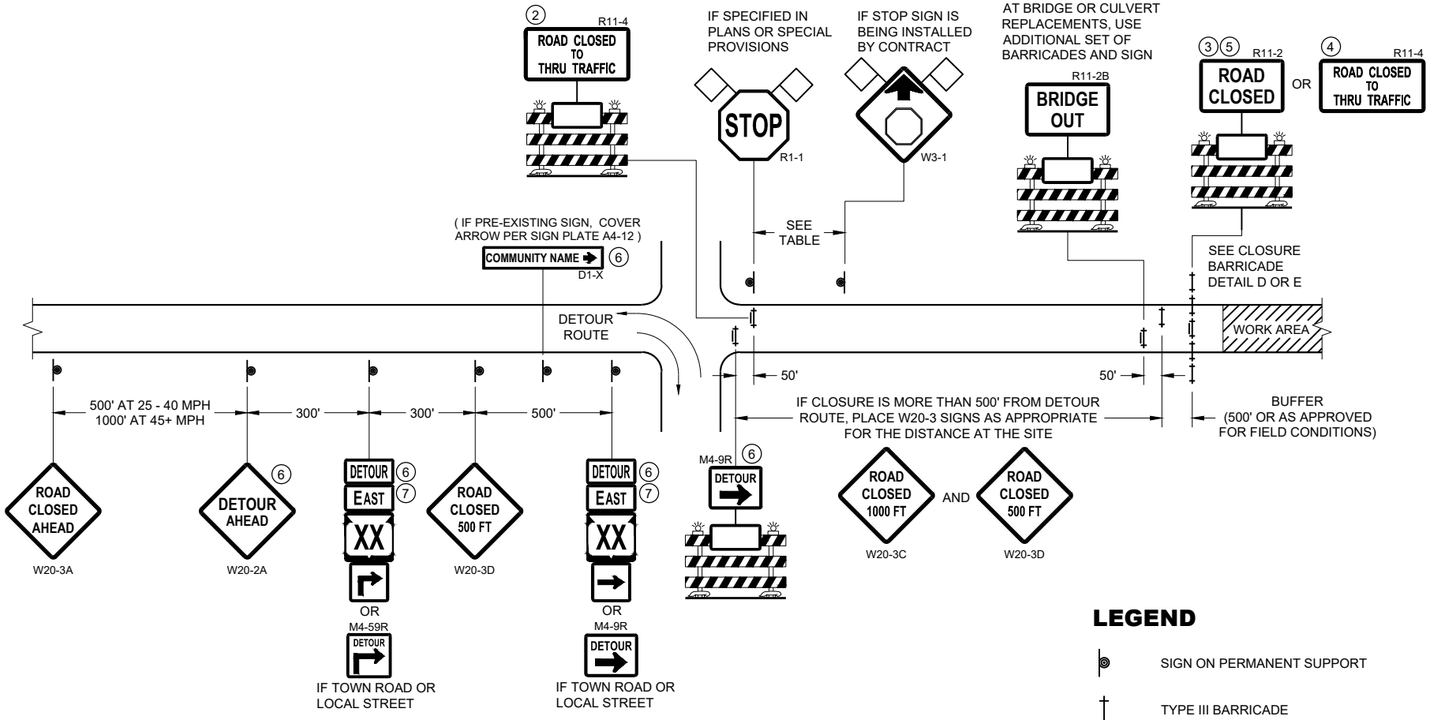
SDD15A01 - 13a



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



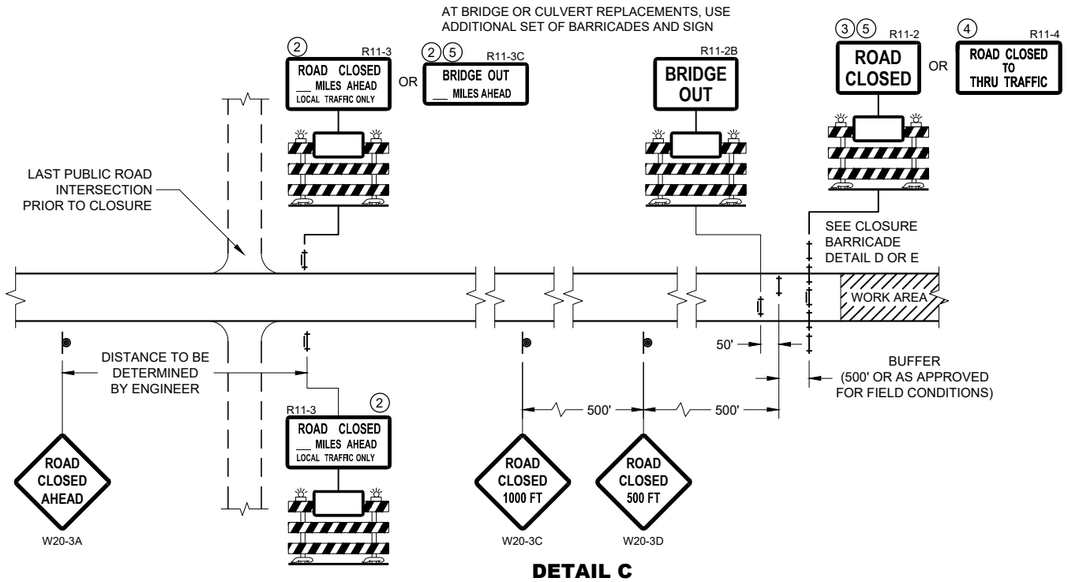
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

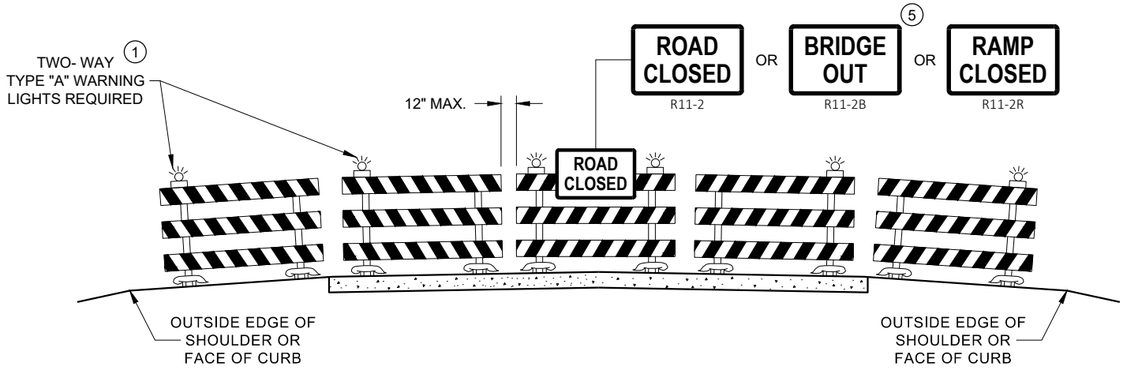
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

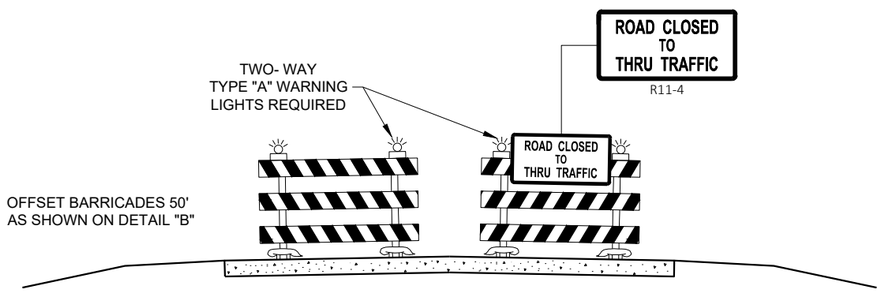
6

SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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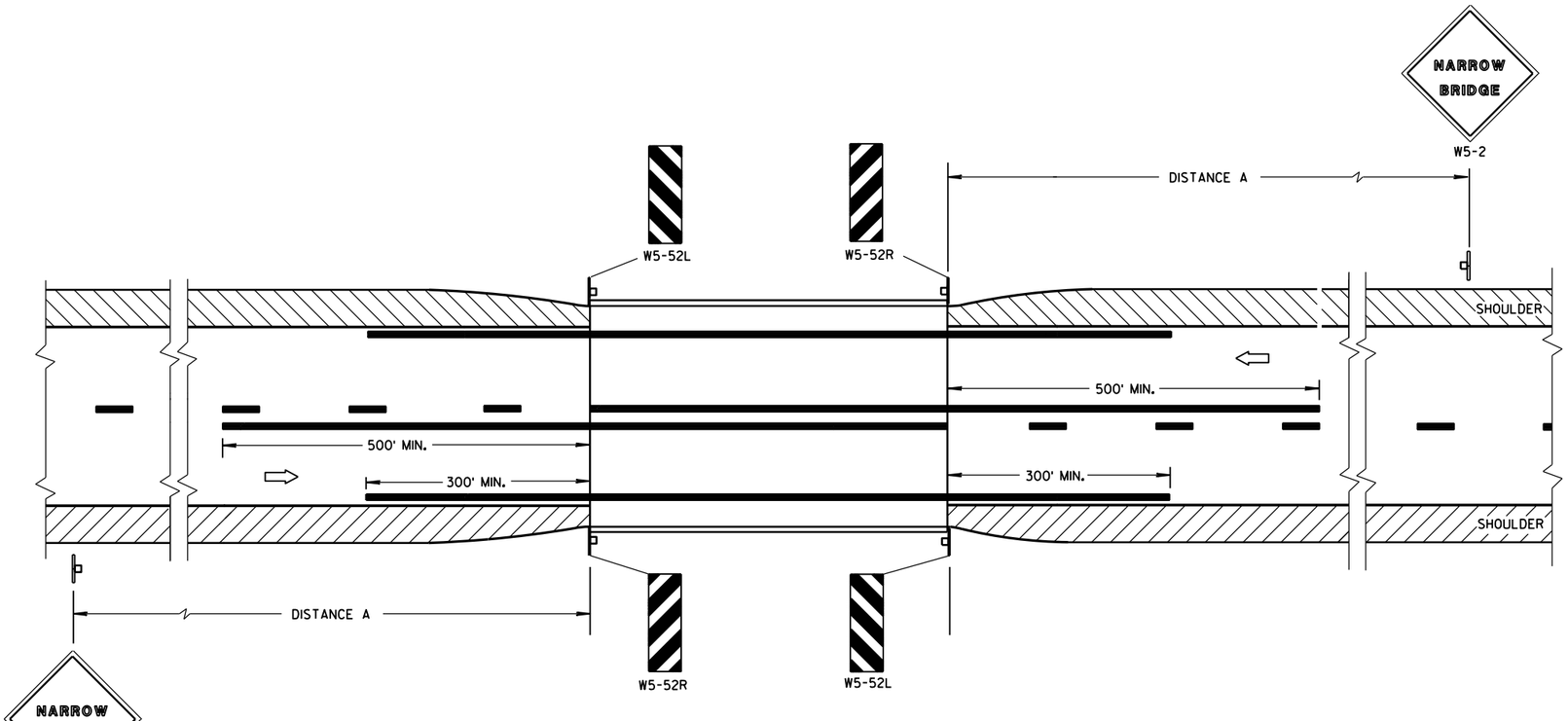
SDD 15C02 - 08b



SITUATION 1

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

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.

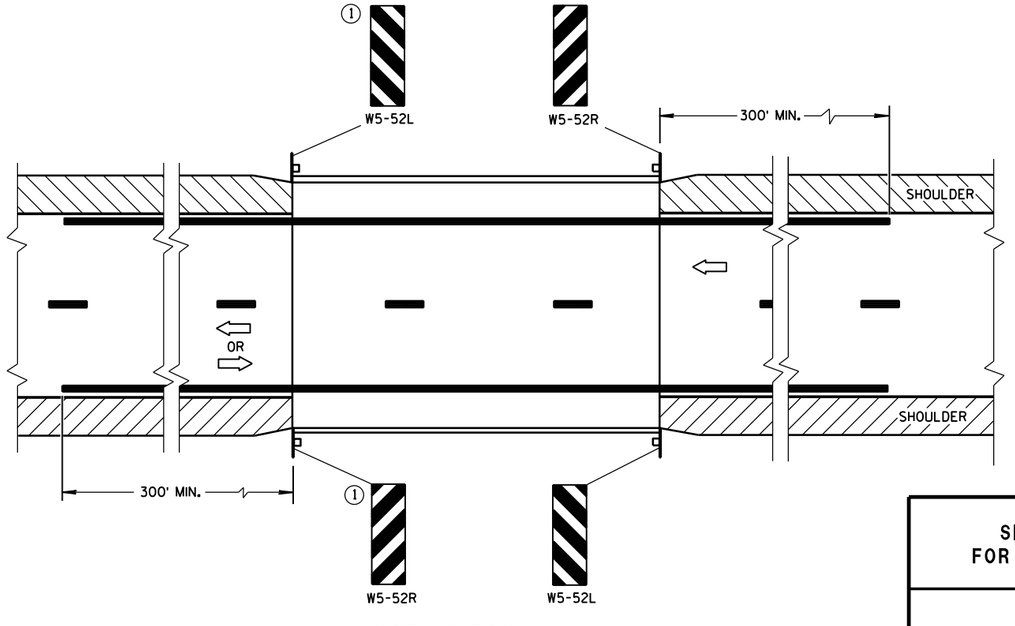
PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC

DISTANCE TABLE

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



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 MARKING ENGINEER
FHWA

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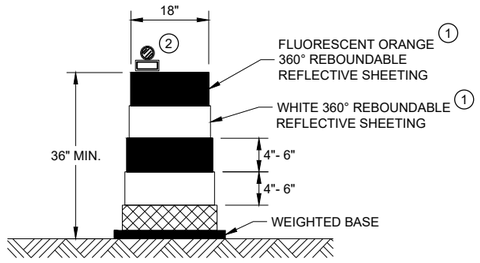
S.D.D. 15 C 6-9

6

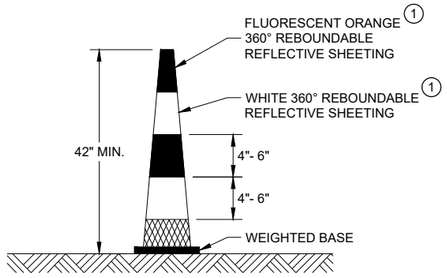
S.D.D. 15 C 6-9

GENERAL NOTES

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

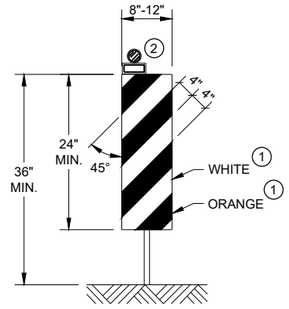


DRUM



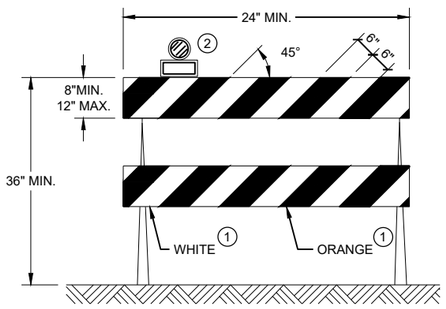
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



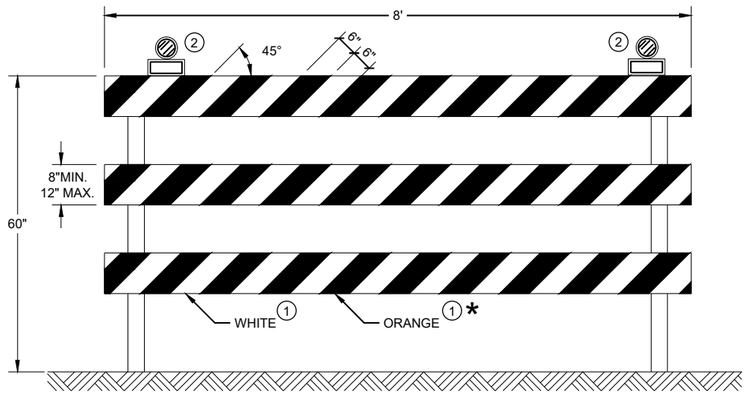
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C11 - 07b

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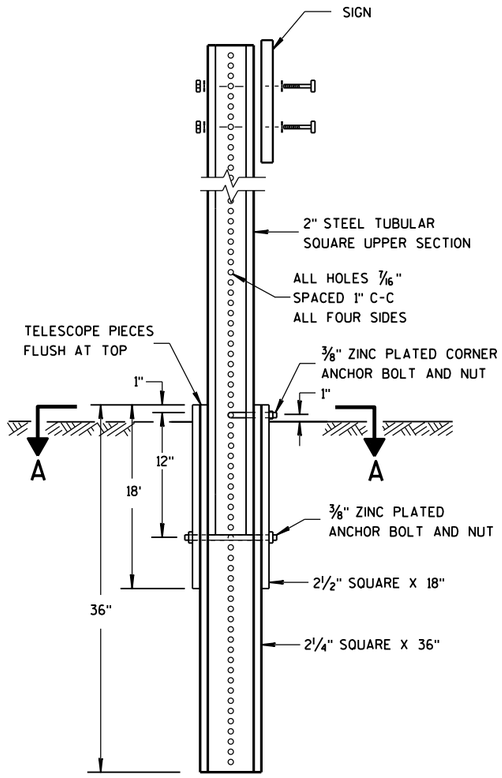
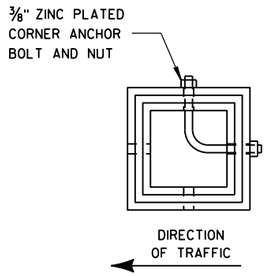
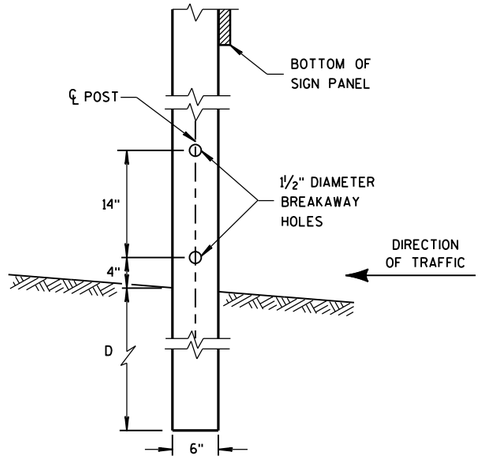
SDD 15C11 - 07b



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



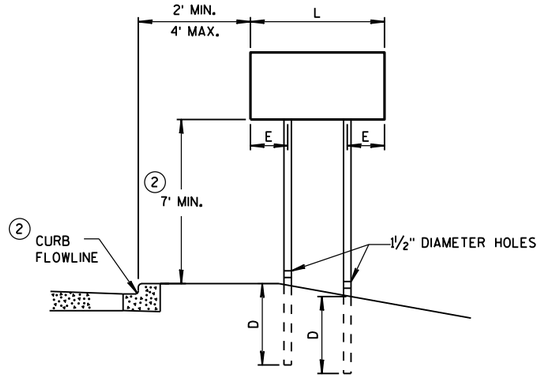
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

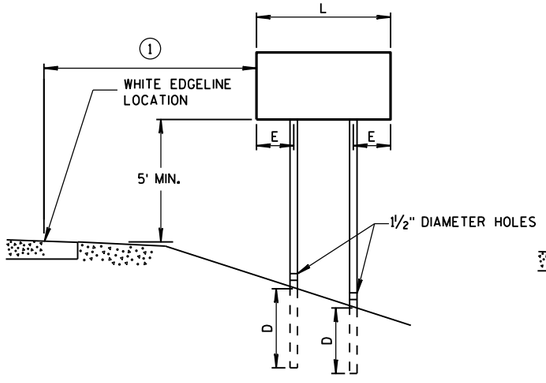
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

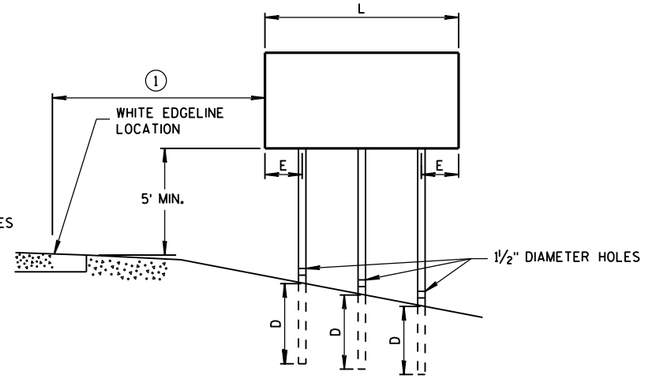
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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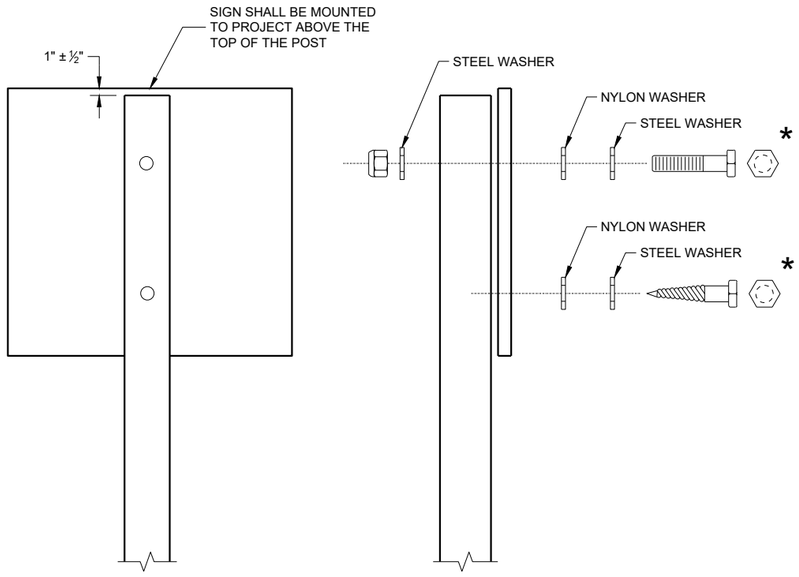
S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



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

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

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

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

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

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

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

6

6

SDD 15D38 - 02b

SDD15D38 - 02b

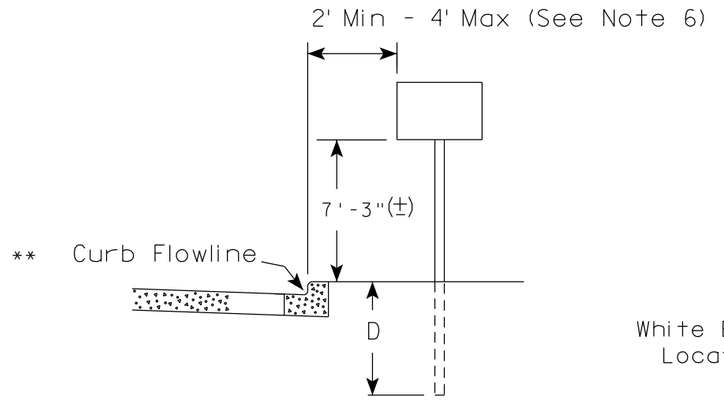
ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

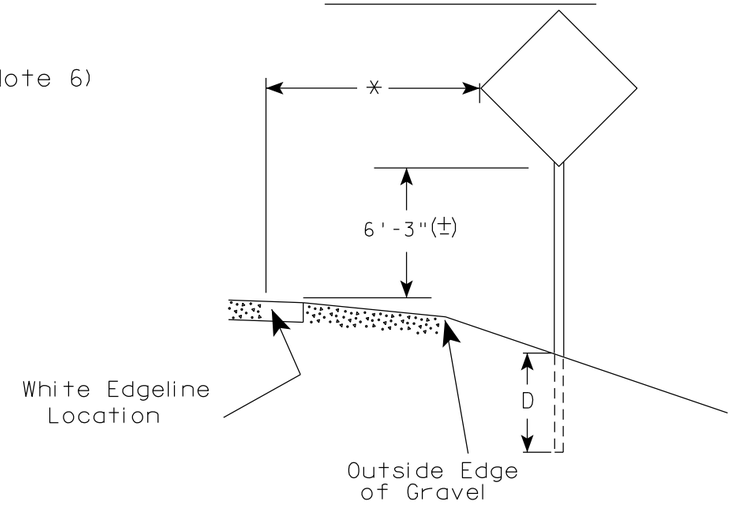
APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

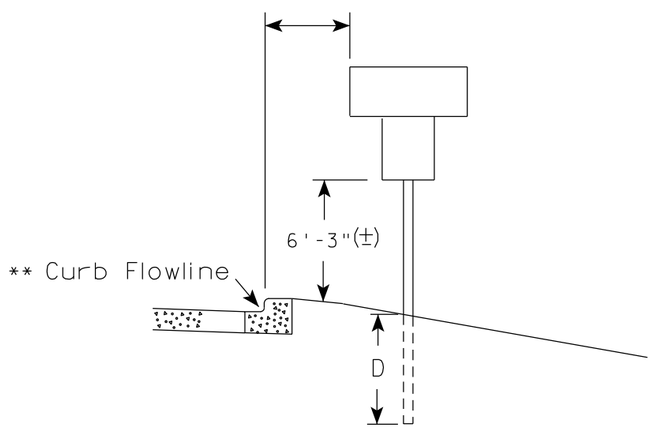
FHWA

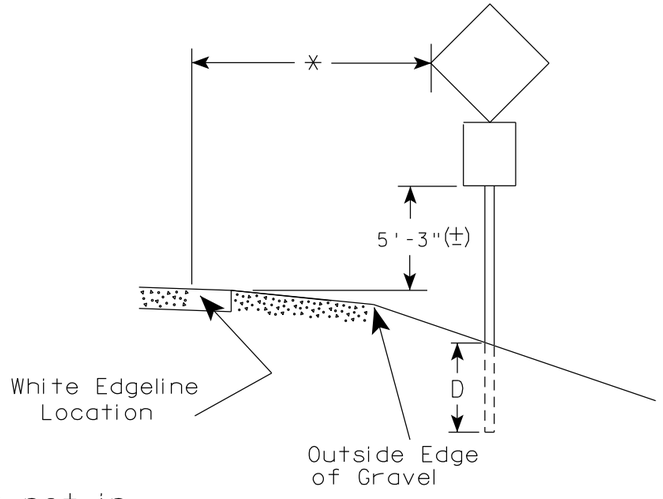
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

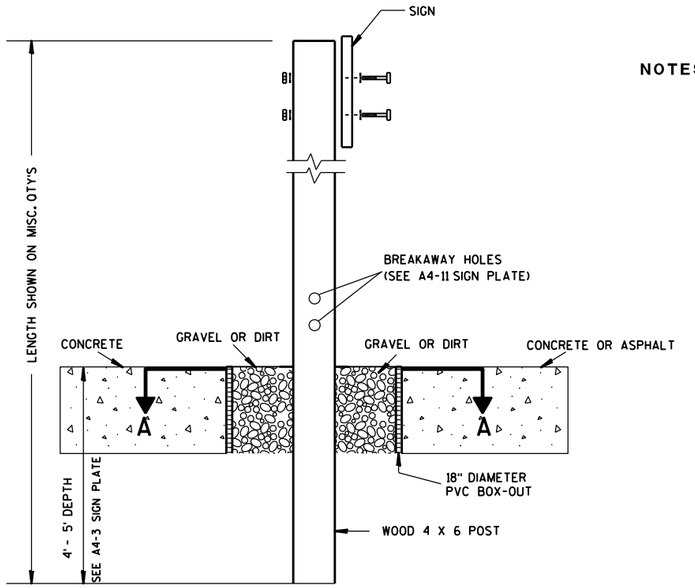
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

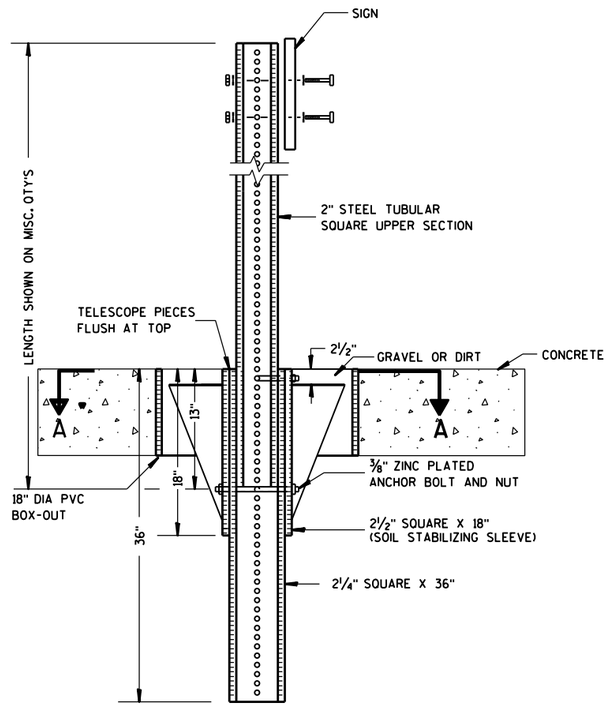
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 26	E



ELEVATION VIEW

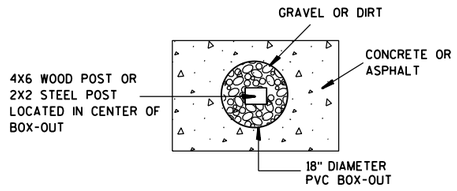
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

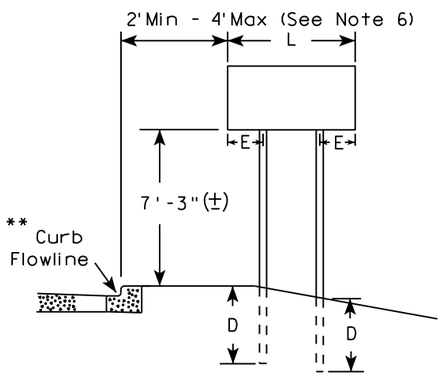
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

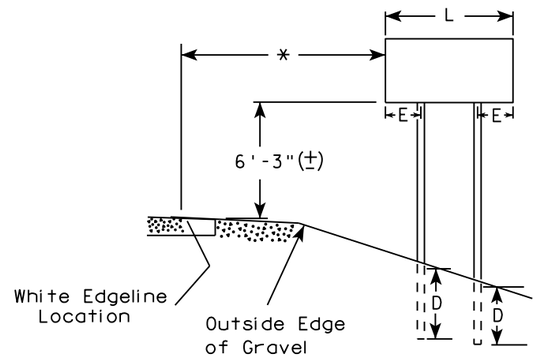
DATE 1/27/14 PLATE NO. A4-3B.1

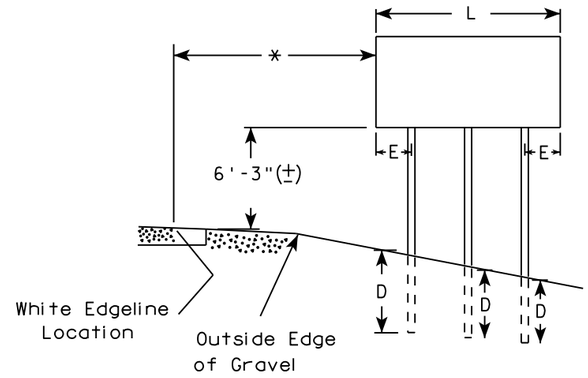
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

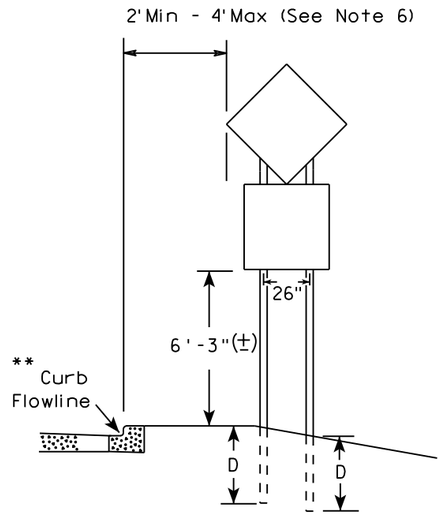
URBAN AREA



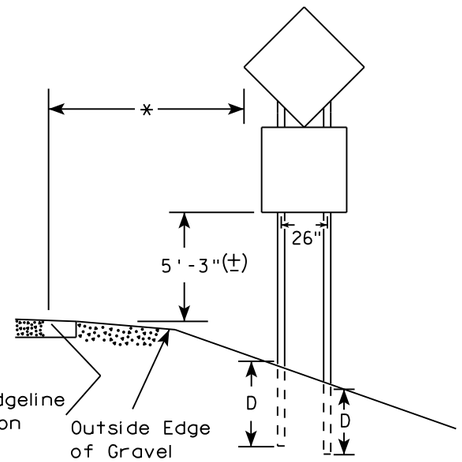
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

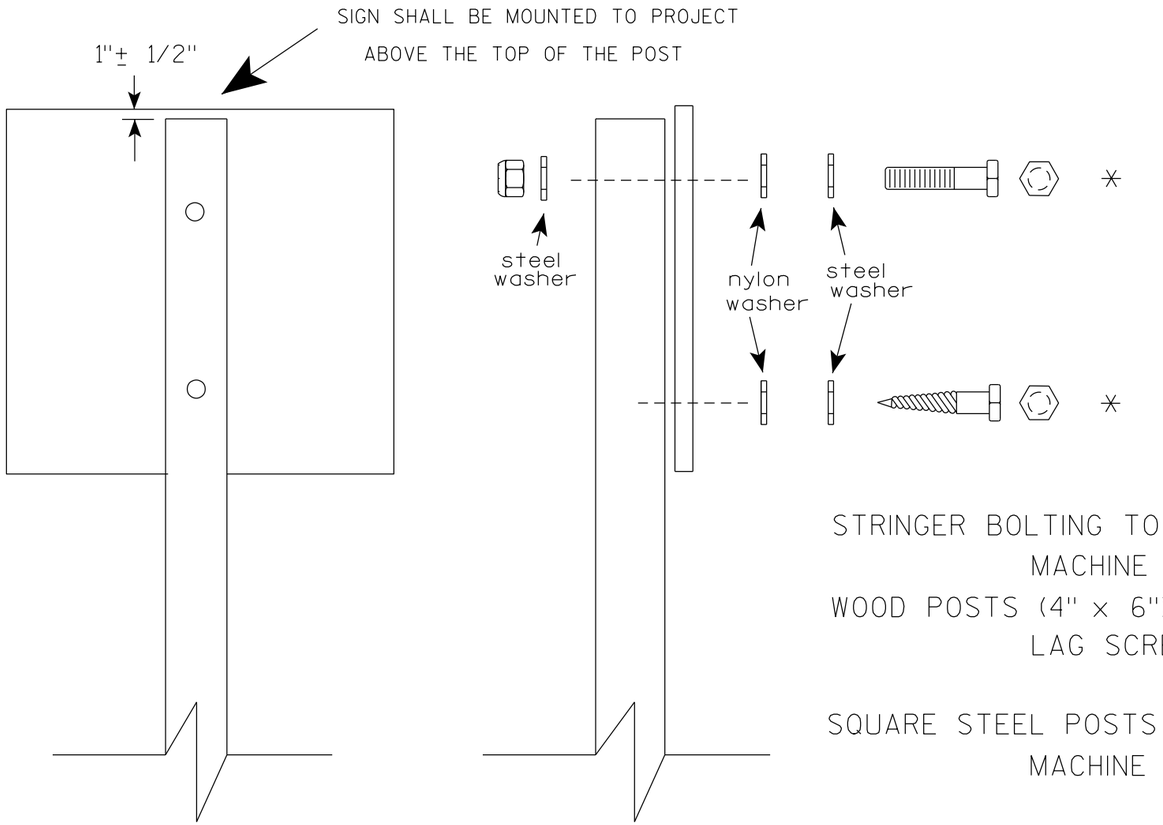
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 28	E



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

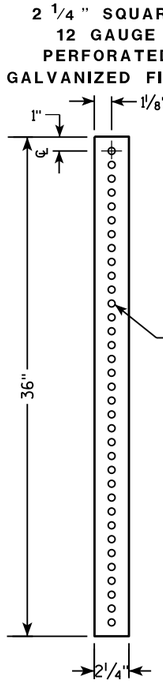
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

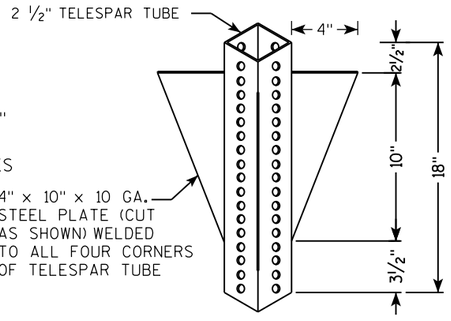
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

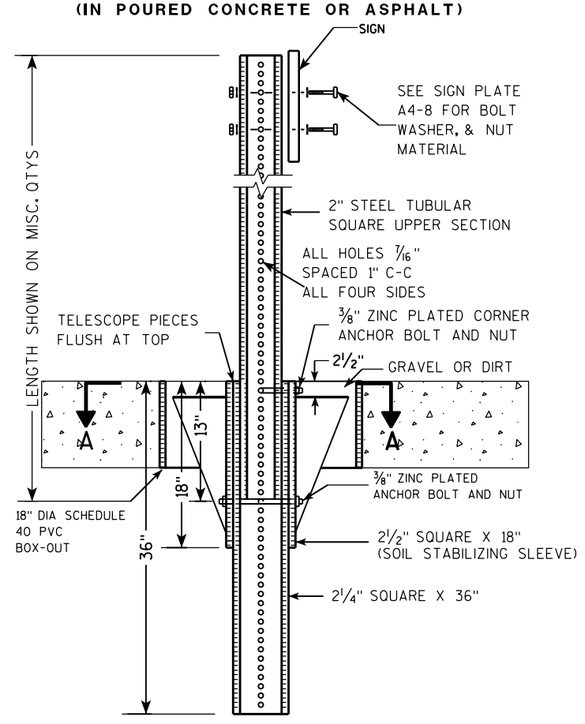
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



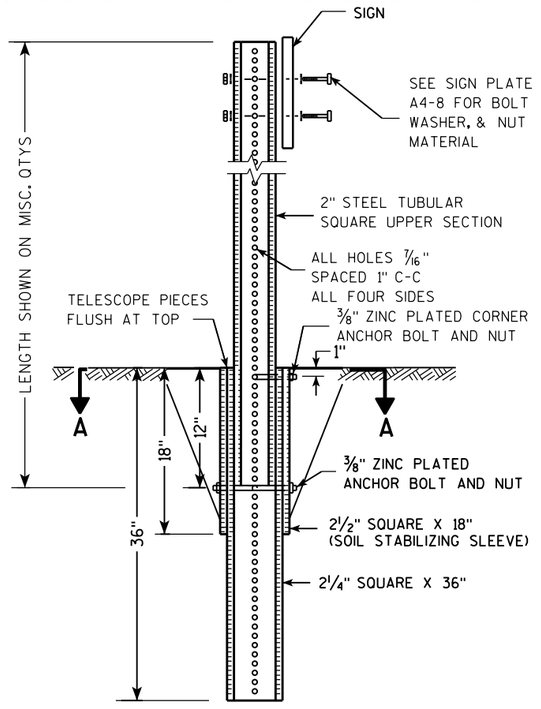
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

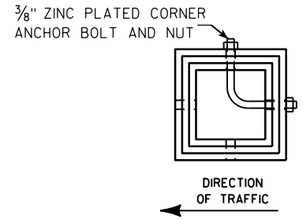


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

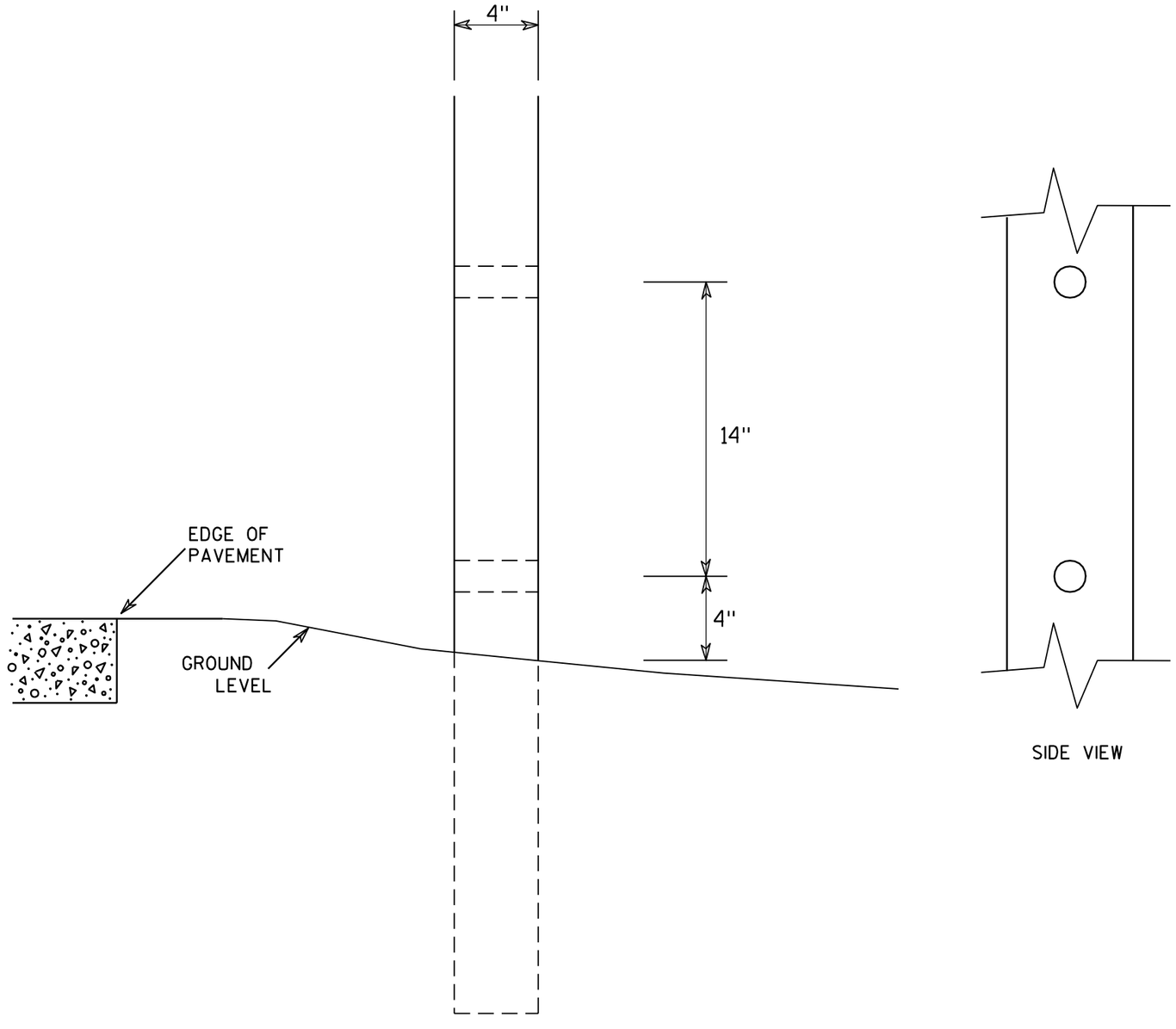
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 30 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

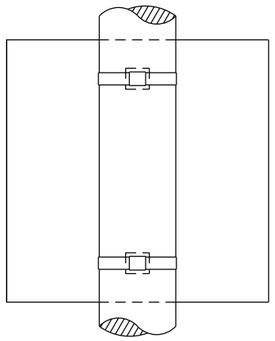
APPROVED Chester J Spang for State Traffic Engineer

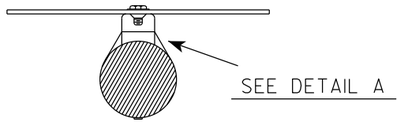
DATE 3/27/97 PLATE NO. A4-11.2

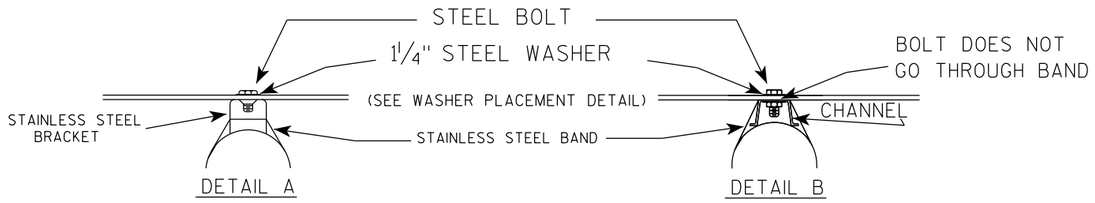
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 31	E

BANDING

SINGLE SIGN



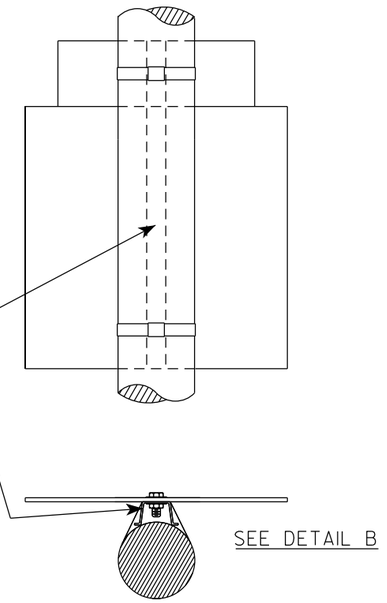




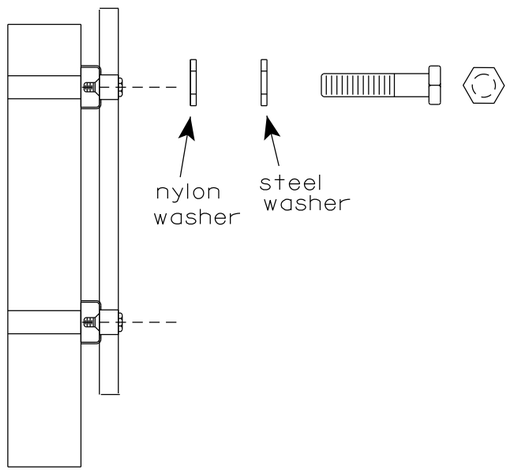
GENERAL NOTES

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

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

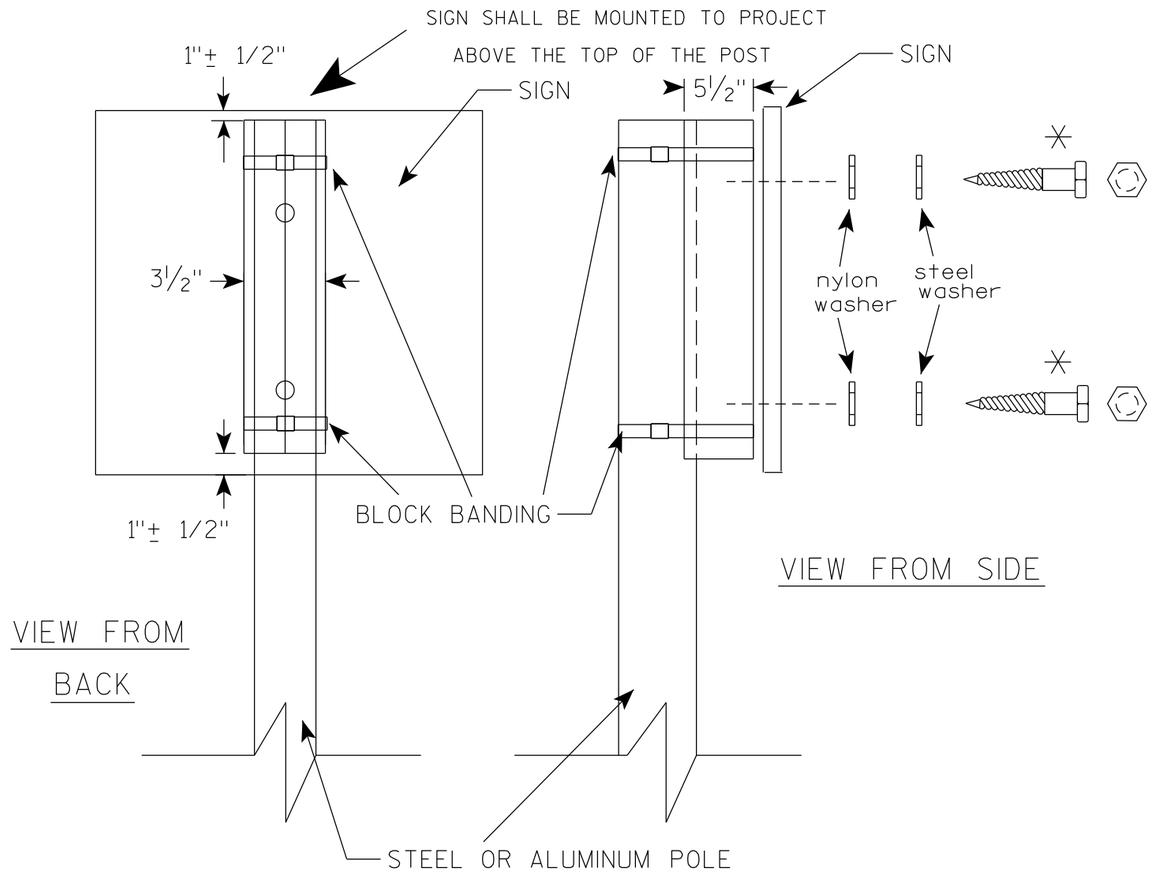
WISCONSIN DEPT OF TRANSPORTATION

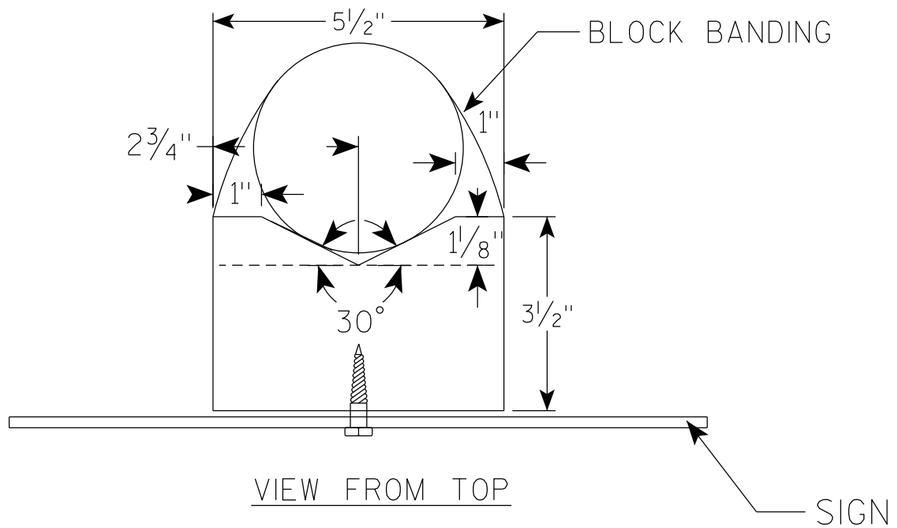
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 32	E

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





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

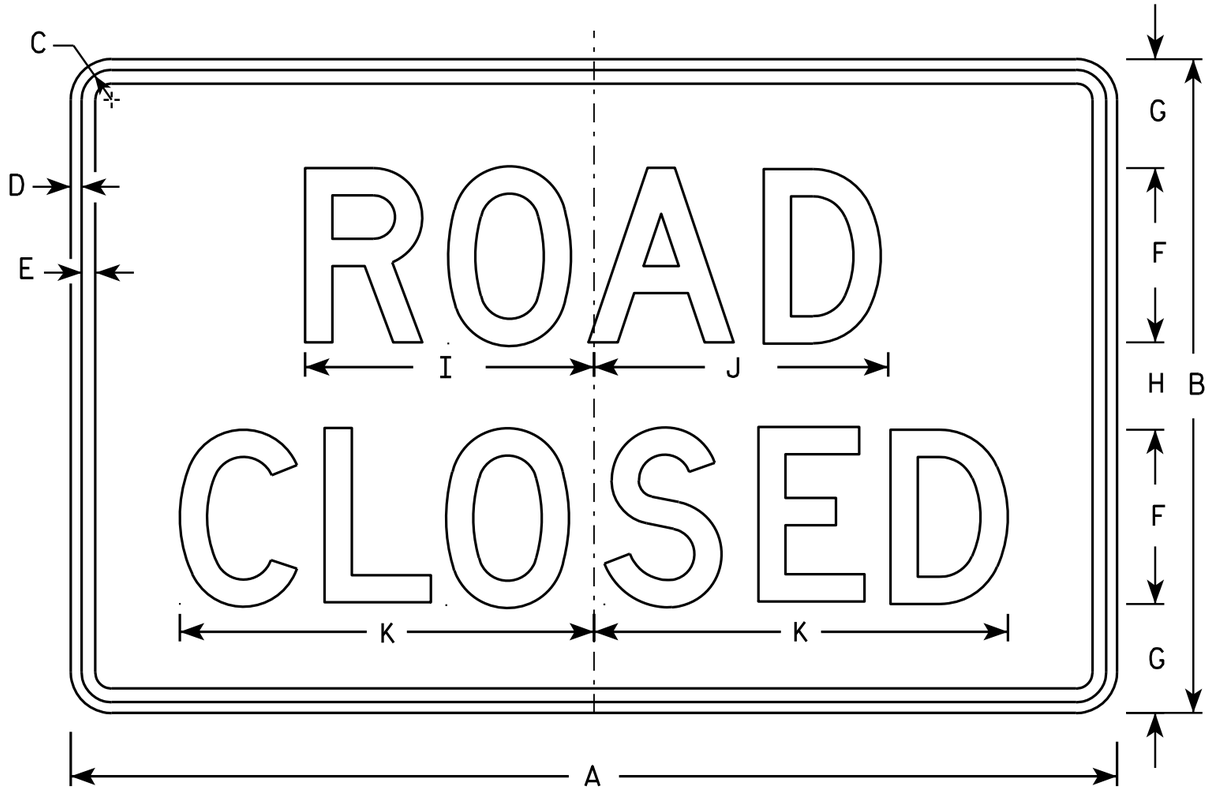
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

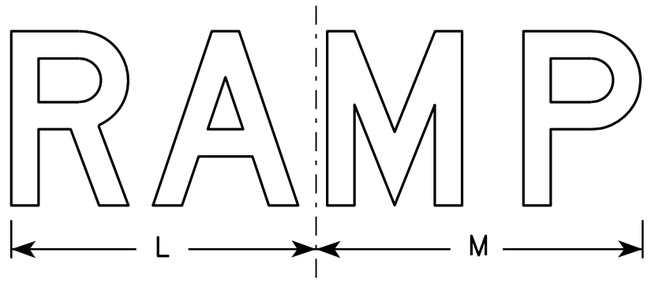
PROJECT NO:				SHEET NO: 33	E



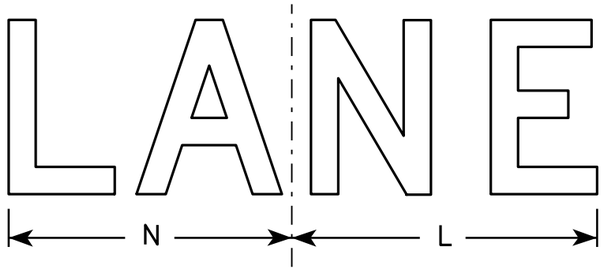
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

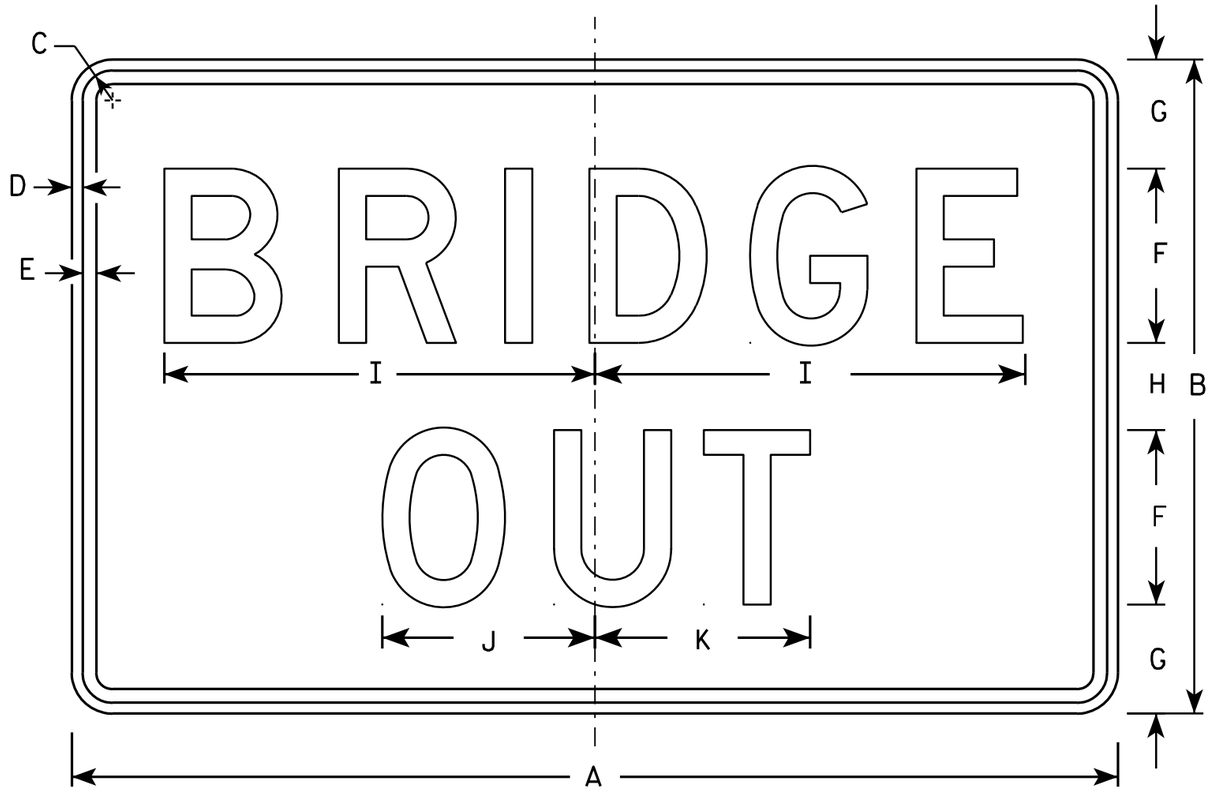
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 34 | E



R11-2B

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

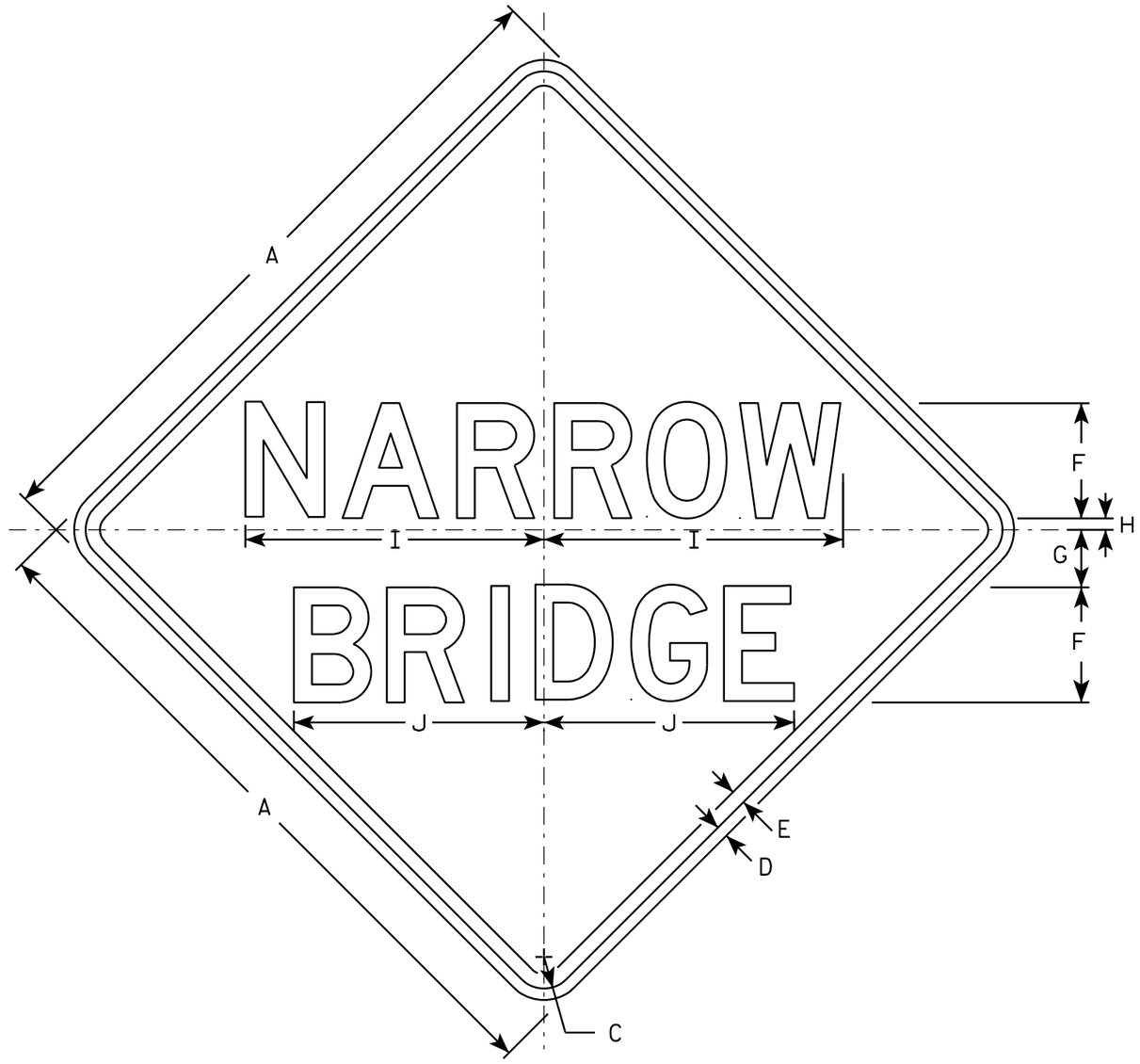
PROJECT NO:

SHEET NO: 35 E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42



W5-2

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. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	2 1/2	1/2	13	10 7/8																	6.25
2S	36		1 5/8	5/8	3/4	6	3	3/4	15 5/8	13 1/8																	9.0
2M	36		1 5/8	5/8	3/4	6	3	3/4	15 5/8	13 1/8																	9.0
3	36		1 5/8	5/8	3/4	6	3	3/4	15 5/8	13 1/8																	9.0
4	48		2 1/4	3/4	1	8	4	3/4	20 3/4	17 3/8																	16.0
5																											

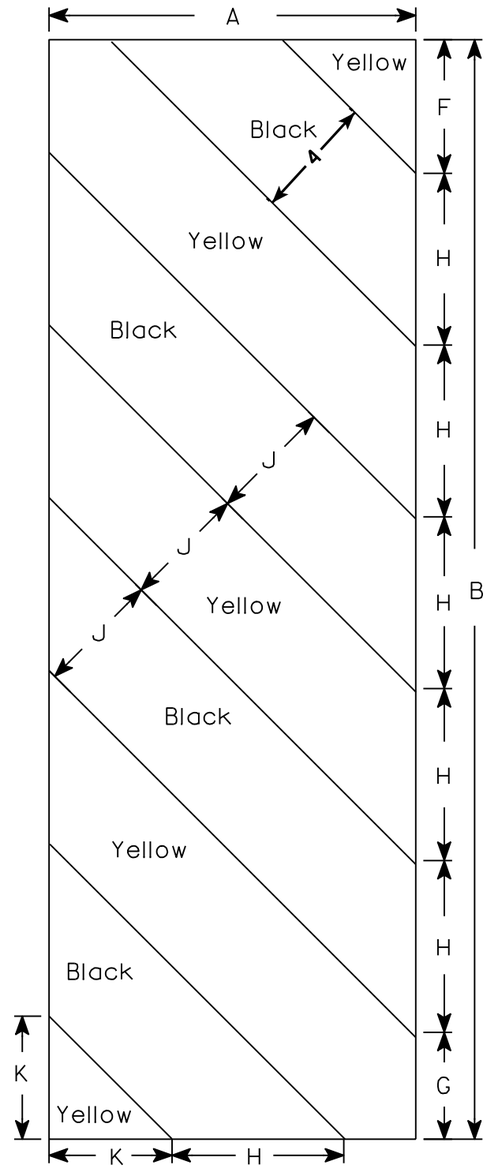
STANDARD SIGN
W5-2

WISCONSIN DEPT OF TRANSPORTATION

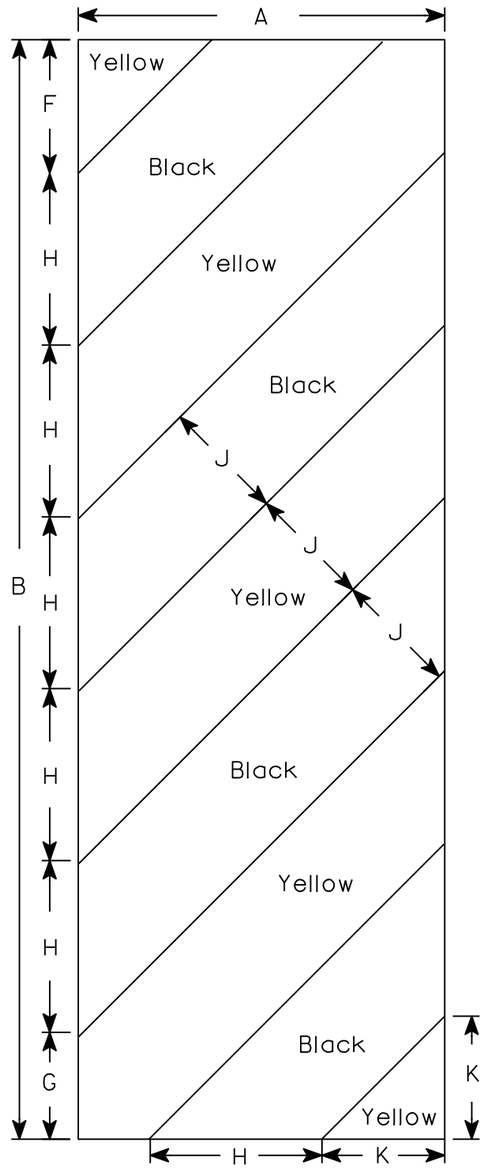
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W5-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 36	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

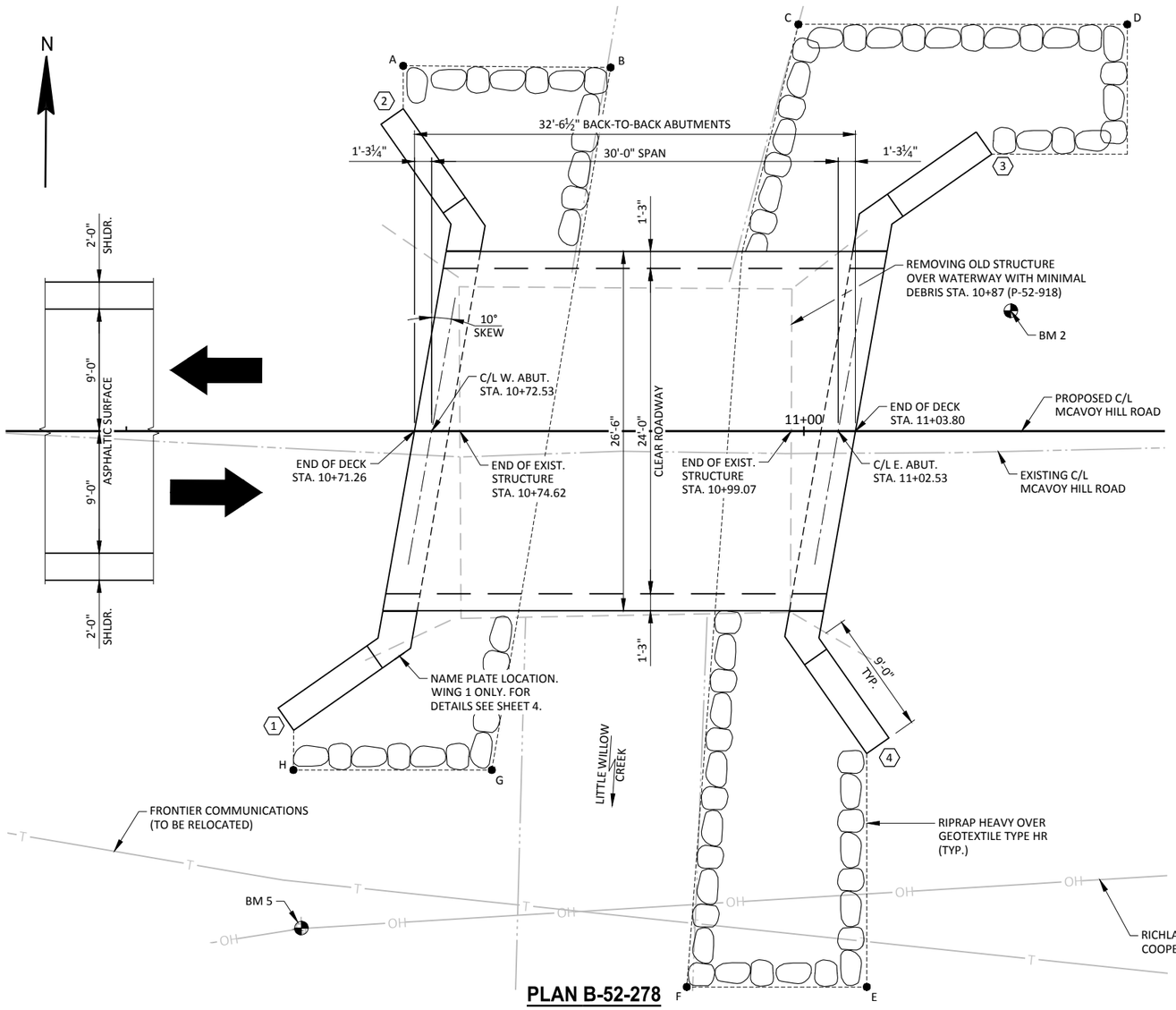
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 37 | E

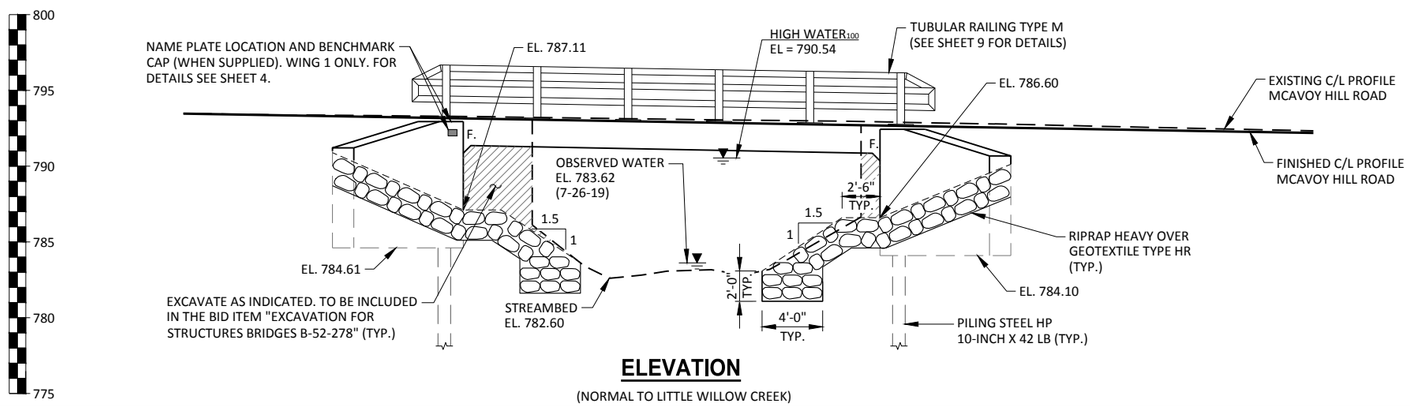
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000



PLAN B-52-278

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)



ELEVATION

(NORMAL TO LITTLE WILLOW CREEK)

⬡ INDICATES WING NUMBER

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	10+70	27' LT.
B	10+86	27' LT.
C	11+00	30' LT.
D	11+13	30' LT.
E	11+05	41' RT.
F	10+91	41' RT.
G	10+77	25' RT.
H	10+62	25' RT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	9+24	3/4" IRON REBAR SET, 14.8' LT.	797.04
2	11+15	3/4" IRON REBAR SET, 8.9' LT.	792.14
3	13+36	3/4" IRON REBAR SET, 8.3' RT.	791.37
5	10+63	STAR SPIKE IN PPOL, 36.7' RT.	791.43

STATE PROJECT NUMBER

5056-00-71

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.11
OPERATING RATING FACTOR — RF=1.44
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.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 20 FT PILE LENGTHS AT BOTH ABUTMENTS.

**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. (2021) — 25
A.D.T. (2041) — 40
DESIGN SPEED — 40 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
DRAINAGE AREA — 6.7 SQ. MI.
Q_{100} TOTAL — 1,360 C.F.S.
THROUGH STRUCTURE — 1,360 C.F.S.
OVERTOPPING ROADWAY — N.A.
VELOCITY - THROUGH STRUCTURE — 11.7 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 116 SQ. FT.
HIGH WATER$_{100}$ ELEVATION — 790.54
SCOUR CRITICAL CODE — 5

EROSION CONTROL
Q_2 — 250 C.F.S.
VELOCITY$_2$ — 6.0 F.P.S.
HIGH WATER$_2$ ELEVATION — 786.73

LIST OF DRAWINGS

WISCONSIN PROFESSIONAL ENGINEER
DANIEL J. TRACY
E-47578
MUSCODA, WI
06/01/20

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 SDR 08/26/20
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-52-278

MCAVOY HILL ROAD OVER LITTLE WILLOW CREEK

COUNTY: RICHLAND — TOWN/~~CITY/VILLAGE~~: ITHACA
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN

SHEET 1 OF 9
38

DESIGN CONSULTANT
DAN TRACY, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

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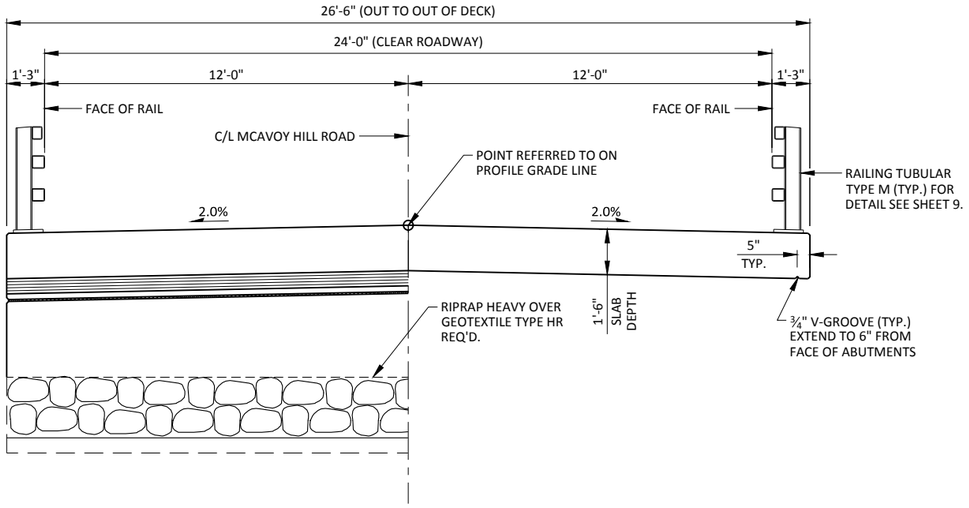
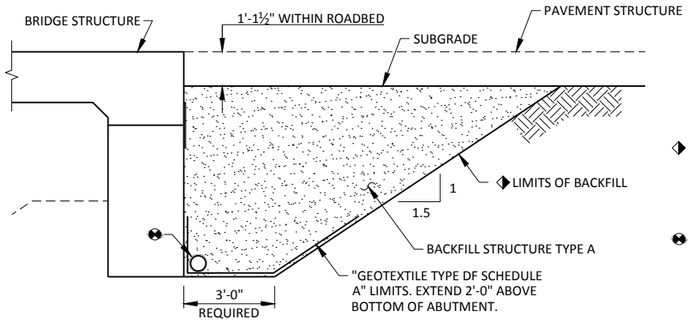


AT ABUTMENT **IN SPAN**

PROPOSED CROSS-SECTION THROUGH ROADWAY

LOOKING EAST



◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-52-278". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

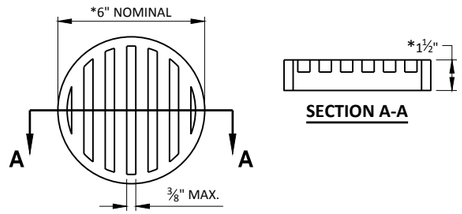
◆ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

BACKFILL STRUCTURE DETAIL

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

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	SUPER	E. ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 10+87	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-52-278	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	175	--	175	350
502.0100	CONCRETE MASONRY BRIDGES	CY	30	52	30	112
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	120	--	120
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,090	--	2,090	4,180
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,390	9,100	1,390	11,880
513.4061	RAILING TUBULAR TYPE M	LF	--	69	--	69
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	--	6	12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	120	--	120	240
606.0300	RIPRAP HEAVY	CY	50	--	80	130
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	--	75	150
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50	--	50	100
645.0120	GEOTEXTILE TYPE HR	SY	85	--	140	225
	NON-BID ITEMS					
	FILLER	SIZE				½" & ¾"
	NAME PLATE					



SECTION A-A

RODENT SCREEN

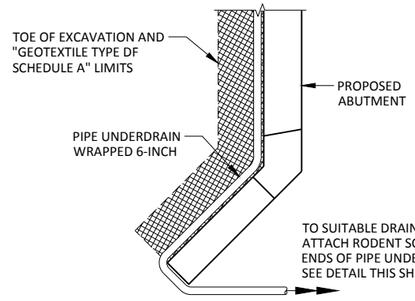
NOTES:

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

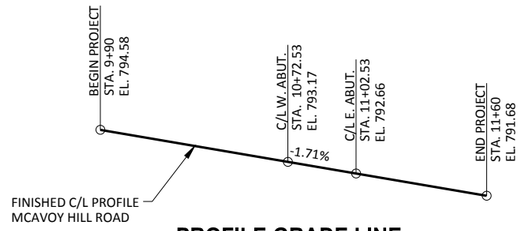
ORIENT SHIELD SO SLOTS ARE VERTICAL.

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.

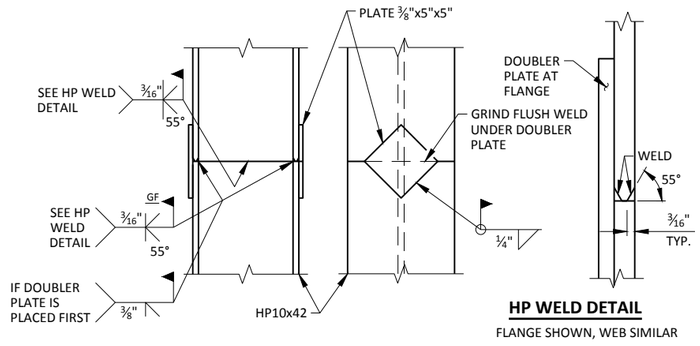


PIPE UNDERDRAIN DETAIL



PROFILE GRADE LINE

MCAVOY HILL ROAD



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

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

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

THE EXISTING STRUCTURE (P-52-918) IS A STEEL DECK GIRDER STRUCTURE WITH A TIMBER DECK SUPPORTED ON TIMBER ABUTMENTS AND PILING. THE STRUCTURE HAS AN OVERALL WIDTH OF 23.0 FEET, AN OVERALL LENGTH OF 25.0 FEET, AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

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

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

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

STATE PROJECT NUMBER

5056-00-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-278

DRAWN BY DJT | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 9

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STATE PROJECT NUMBER

5056-00-71

SOIL BORINGS

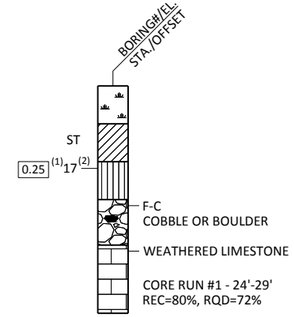
BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	09/25/19	460,152.10	696,924.52
B-2	09/25/19	460,140.28	696,878.98

BORINGS & REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.
1837 COUNTY HIGHWAY OO
CHIPPEWA FALLS, WI 54729

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

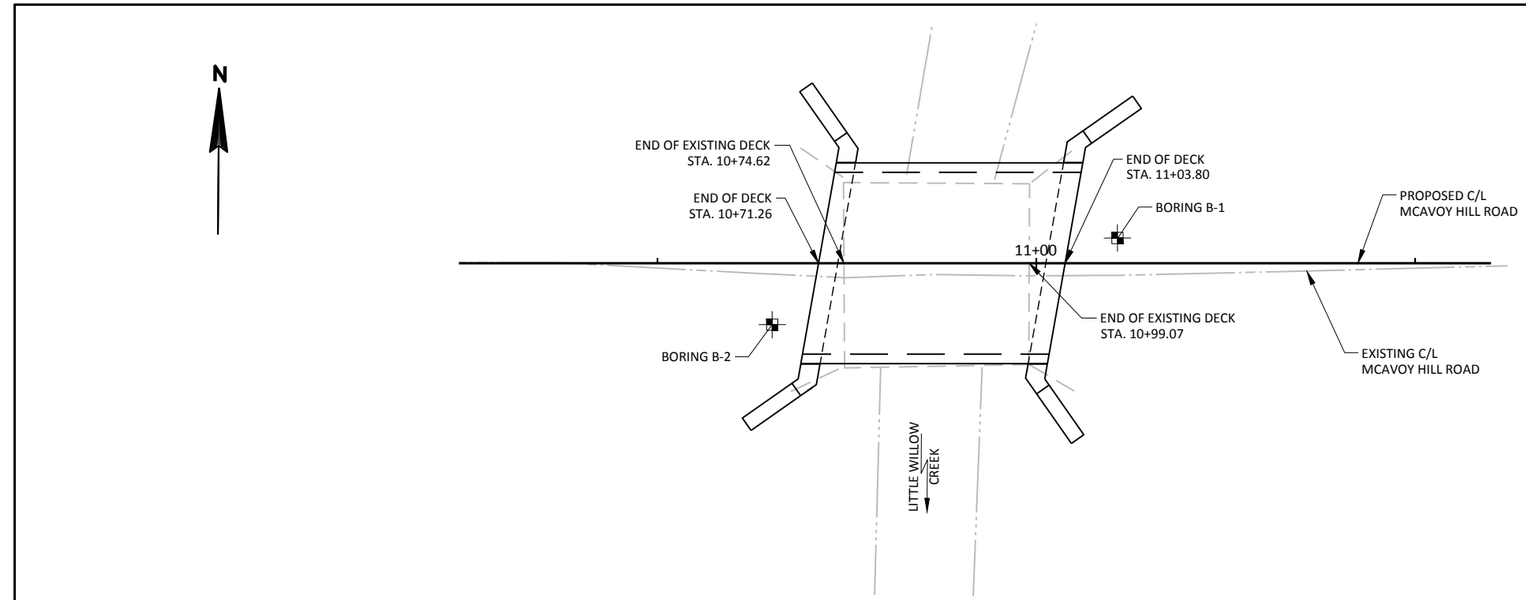
AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

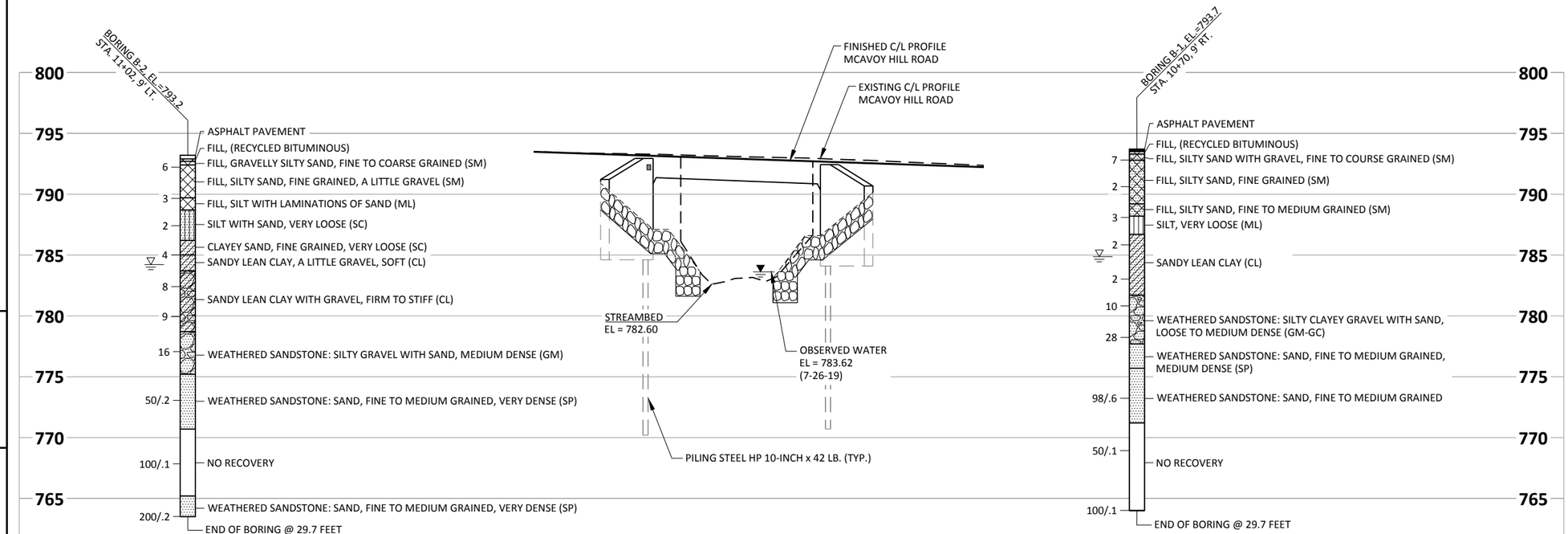
F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

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-52-278



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-278

DRAWN BY DJT | PLANS CK'D. PTB

SUBSURFACE EXPLORATION

SHEET 3 OF 9

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STATE PROJECT NUMBER

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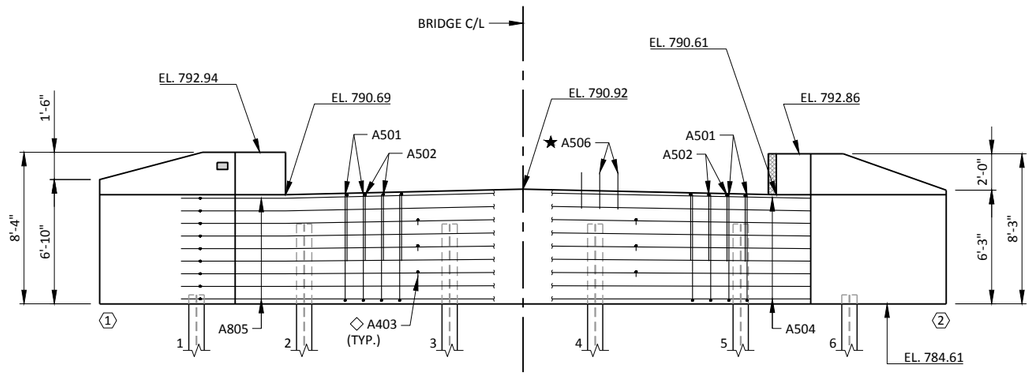
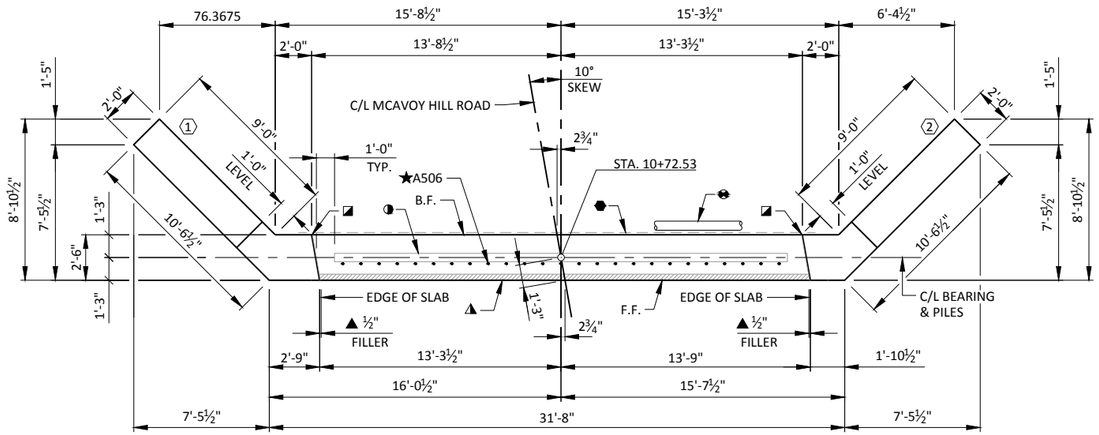


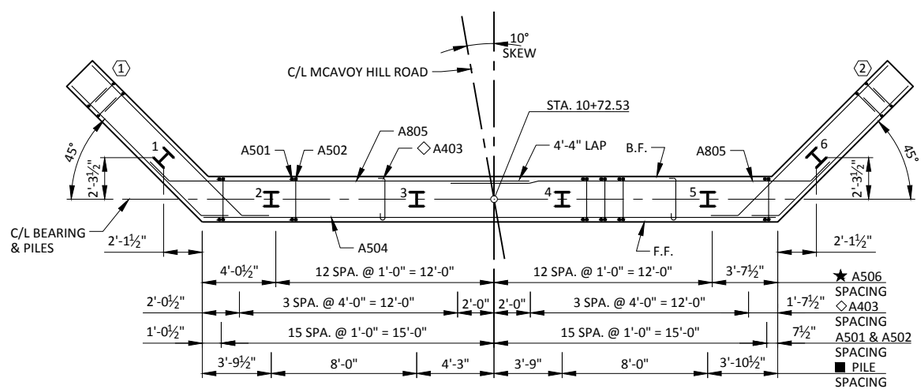
BACK FACE BAR STEEL REINF. **FRONT FACE BAR STEEL REINF.**

ELEVATION

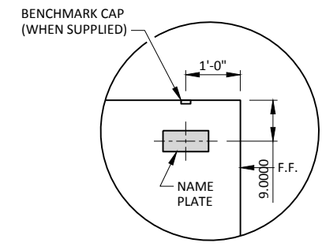
(WEST ABUTMENT LOOKING WEST)



PLAN

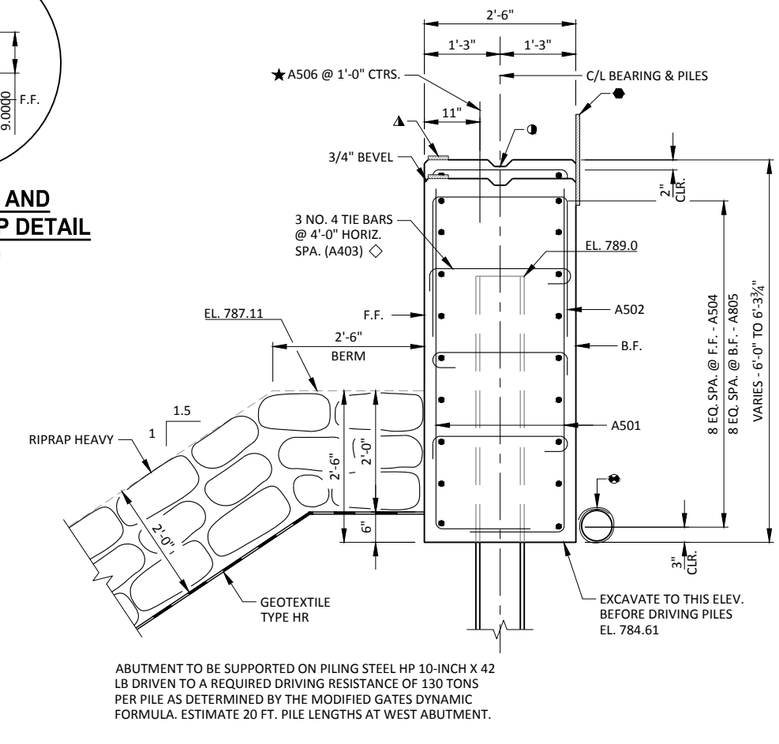


LAYOUT



NAME PLATE AND BENCHMARK CAP DETAIL

(WING 1 ONLY)



ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 20 FT. PILE LENGTHS AT WEST ABUTMENT.

TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◭ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- ⬌ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGN. 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."
- ◇ ALTERNATE THE POSITION OF THE 90° AND THE 180° BENDS AT EACH VERTICAL LAYER OF TIES.

NOTES

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

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

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

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-278

DRAWN BY DJT | PLANS CK'D. PTB

WEST ABUTMENT

SHEET 4 OF 9

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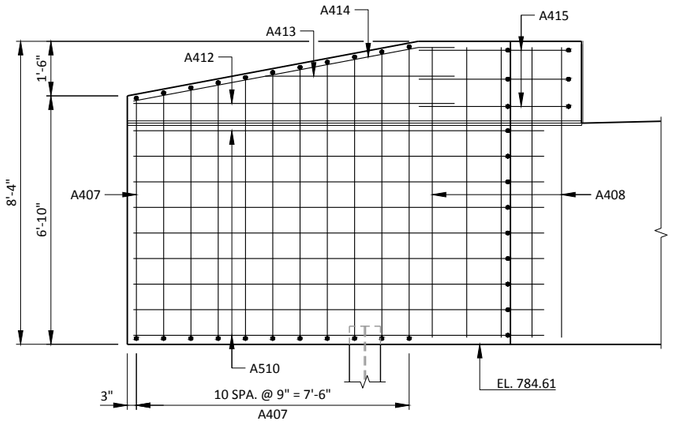
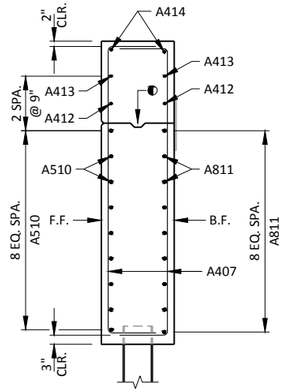
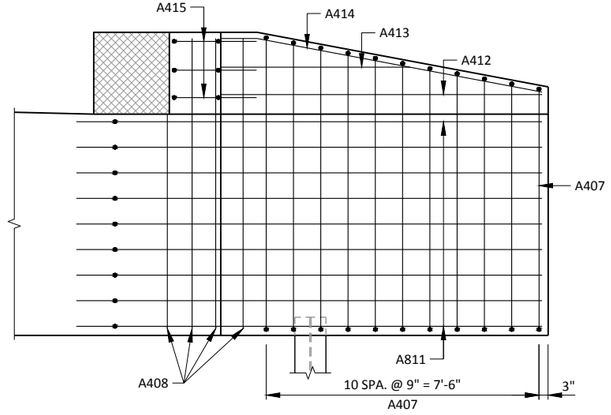


F.F. ELEVATION - WING 1



SECTION A-A



B.F. ELEVATION - WING 1

BILL OF BARS
WEST ABUTMENT

1,390 LB (COATED)
2,090 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	62	7-1	X			BODY - VERT. - F.F & B.F.
A502	31	7-7	X			BODY - VERT. - TOP
A403	24	3-1	X			TIE BARS
A504	9	31-6				BODY - HORIZ. - F.F.
A805	18	21-8	X			BODY - HORIZ. - B.F.
A506	25	2-0		X		BODY - VERT. - DOWELS
A407	22	9-8	X	X	✳	WING 1 - VERT. - F.F. & B.F.
A408	9	7-11		X		WING 1 - VERT.
A409	2	3-1		X		WING 1 & 2 - VERT. - TOP
A510	18	11-9	X	X		WING 1 & 2 - HORIZ. - F.F.
A811	18	13-5	X	X		WING 1 & 2 - HORIZ. - B.F.
A412	2	8-10		X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A413	2	5-3		X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A414	2	8-11	X	X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A415	3	9-10	X	X		WING 1 - HORIZ. - TOP
A416	22	9-4	X	X	✳	WING 2 - VERT. - F.F. & B.F.
A417	9	7-10		X		WING 2 - VERT.
A418	2	7-2		X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A419	2	4-2		X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A420	2	9-1	X	X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A421	3	9-0	X	X		WING 2 - HORIZ.- TOP

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

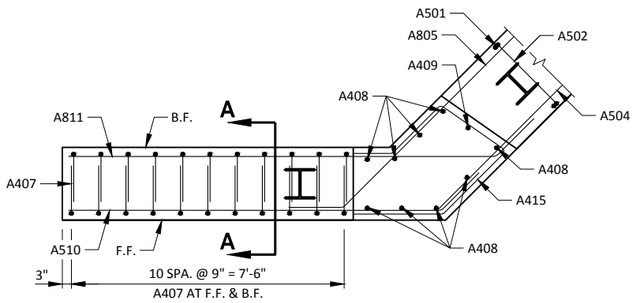
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

✳ LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	2 SERIES OF 11	10-4 TO 9-0
A416	2 SERIES OF 11	10-3 TO 8-5

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN VIEW - WING 1

LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "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".

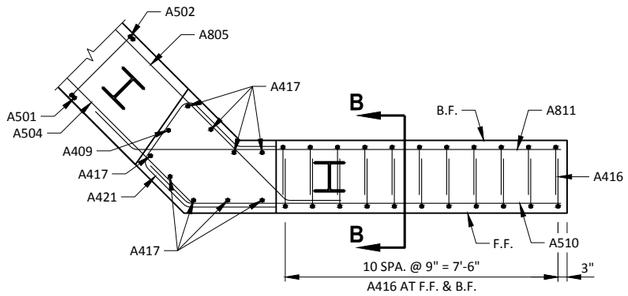
NOTES

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

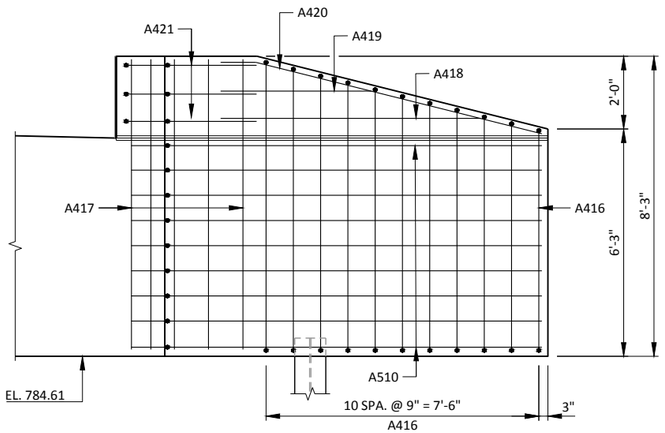
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

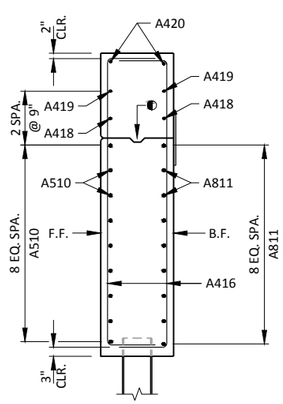
B.F. - BACK FACE



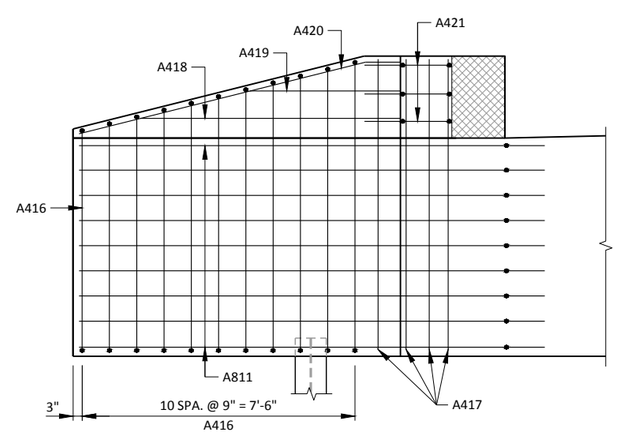
PLAN VIEW - WING 2



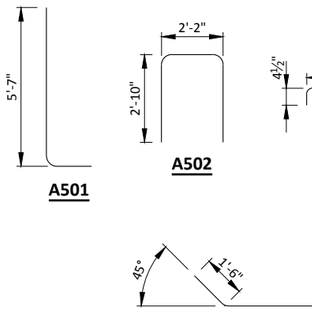
F.F. ELEVATION - WING 2



SECTION B-B



B.F. ELEVATION - WING 2



MARK	'A'
A414	169°23'
A420	165°58'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-278

DRAWN BY DJT | PLANS CK'D. PTB

WEST ABUTMENT DETAILS

SHEET 5 OF 9

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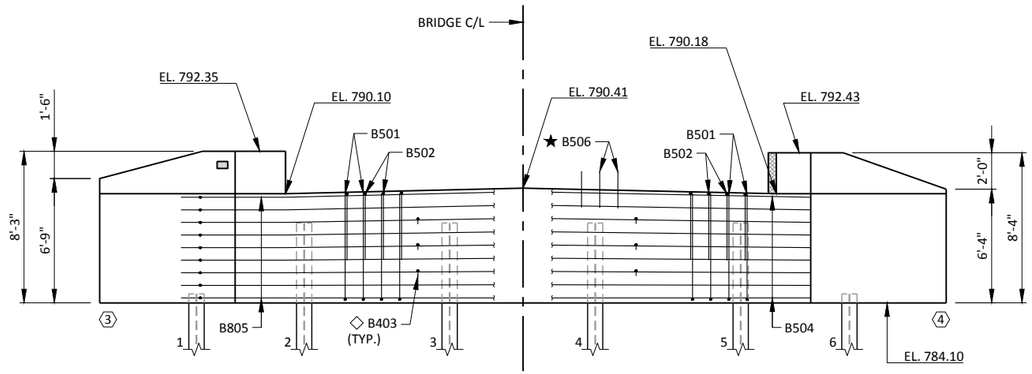
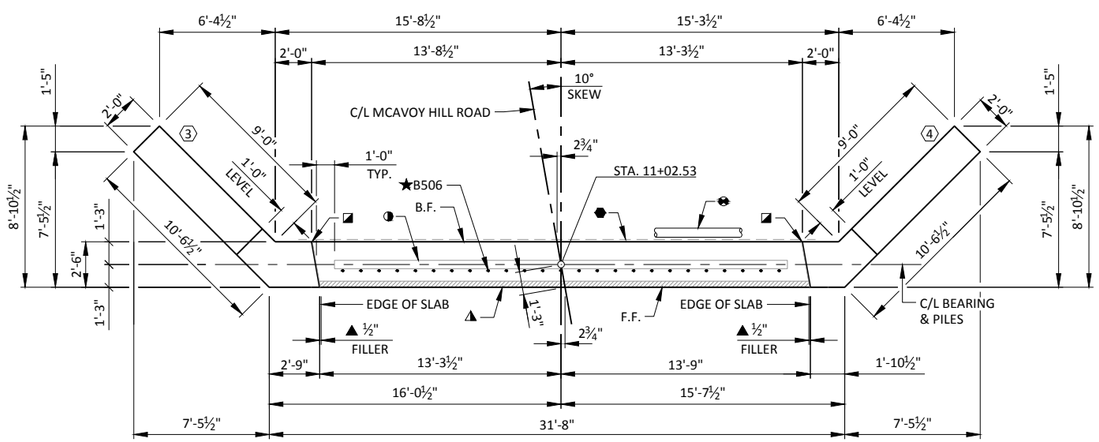
STATE PROJECT NUMBER

5056-00-71

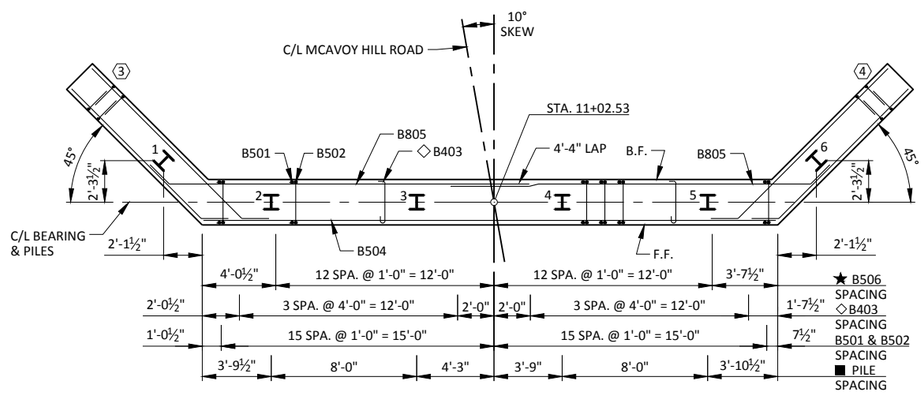


ELEVATION

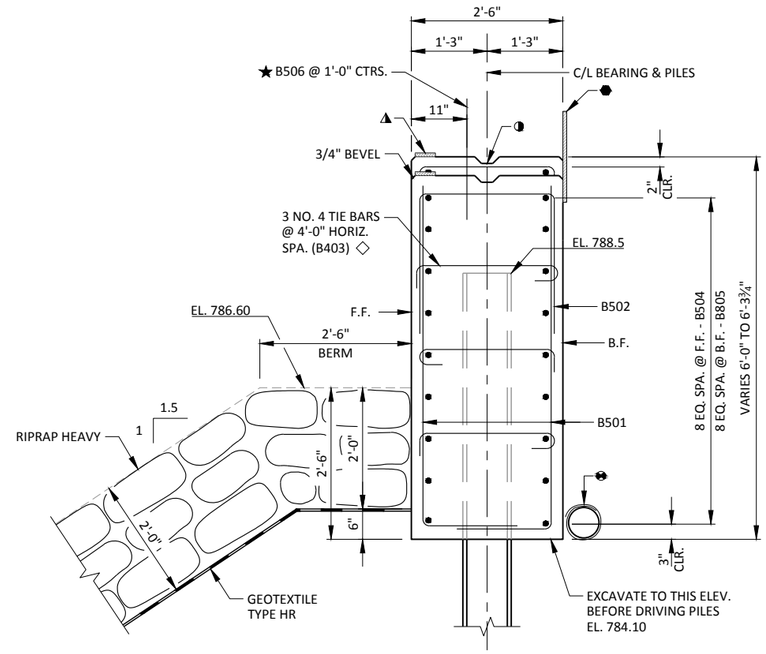
(EAST ABUTMENT LOOKING EAST)



PLAN



LAYOUT



ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 20 FT. PILE LENGTHS AT EAST ABUTMENT.

TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- ◑ KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- ◪ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◮ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- ⬬ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGN. 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."
- ◇ ALTERNATE THE POSITION OF THE 90° AND THE 180° BENDS AT EACH VERTICAL LAYER OF TIES.

NOTES

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

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

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

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-278

DRAWN BY DJT | PLANS CK'D. PTB

EAST ABUTMENT

SHEET 6 OF 9

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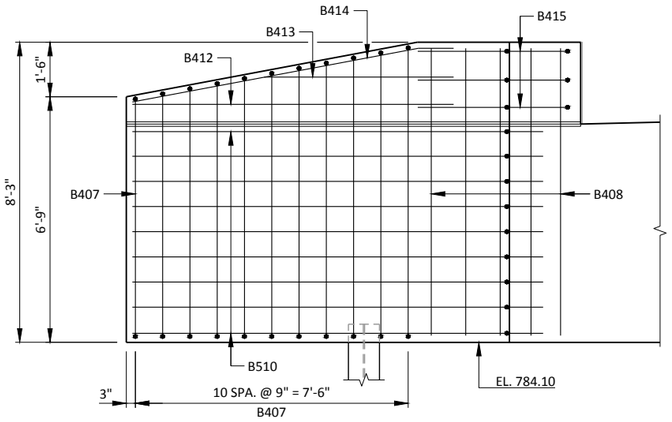
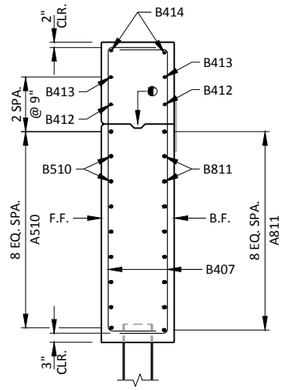
STATE PROJECT NUMBER

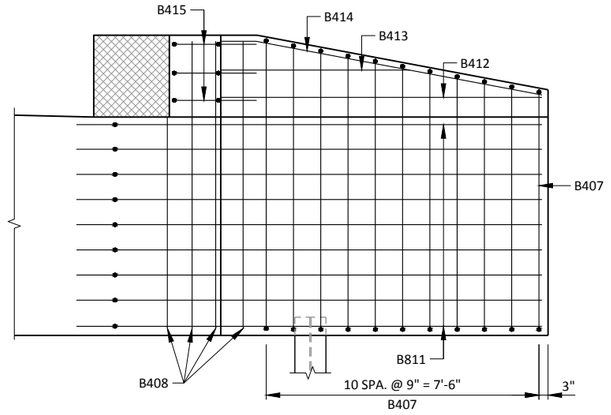
5056-00-71



F.F. ELEVATION - WING 3



SECTION A-A



B.F. ELEVATION - WING 3

BILL OF BARS
EAST ABUTMENT

1,390 LB (COATED)
2,090 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
B501	62	7-1	X			BODY - VERT. - F.F & B.F.
B502	31	7-7	X			BODY - VERT. - TOP
B403	24	3-1	X			TIE BARS
B504	9	31-6				BODY - HORIZ. - F.F.
B805	18	21-8	X			BODY - HORIZ. - B.F.
B506	25	2-0		X		BODY - VERT. - DOWELS
B407	22	9-7	X	X	✳	WING 3 - VERT. - F.F. & B.F.
B408	9	7-10		X		WING 3 - VERT.
B409	2	3-1		X		WING 3 & 4 - VERT. - TOP
B510	18	11-9	X	X		WING 3 & 4 - HORIZ. - F.F.
B811	18	13-5	X	X		WING 3 & 4 - HORIZ. - B.F.
B412	2	8-10		X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B413	2	5-3		X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B414	2	8-11	X	X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B415	3	9-10	X	X		WING 3 - HORIZ. - TOP
B416	22	9-5	X	X	✳	WING 4 - VERT. - F.F. & B.F.
B417	9	7-11		X		WING 4 - VERT.
B418	2	7-2		X		WING 4 - HORIZ. - F.F. & B.F. - TOP
B419	2	4-2		X		WING 4 - HORIZ. - F.F. & B.F. - TOP
B420	2	9-1	X	X		WING 4 - HORIZ. - F.F. & B.F. - TOP
B421	3	9-0	X	X		WING 4 - HORIZ.- TOP

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

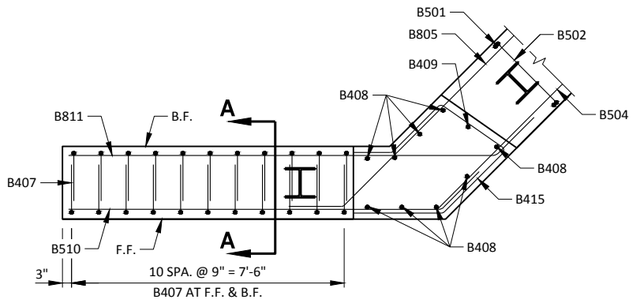
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

✳ LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B407	2 SERIES OF 11	10-3 TO 8-11
B416	2 SERIES OF 11	10-4 TO 8-6

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN VIEW - WING 3

LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "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".

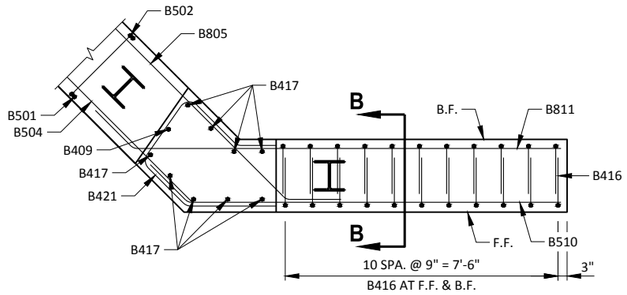
NOTES

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

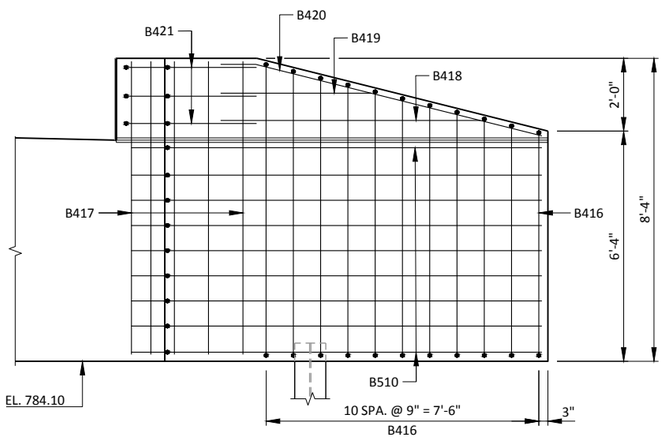
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

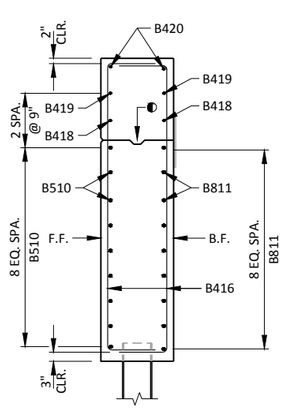
B.F. - BACK FACE



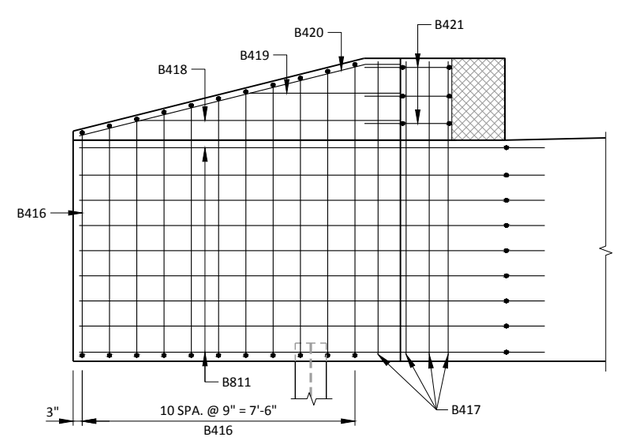
PLAN VIEW - WING 4



F.F. ELEVATION - WING 4

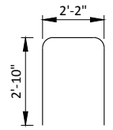


SECTION B-B



B.F. ELEVATION - WING 4

B501



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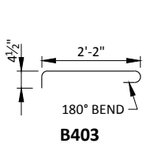
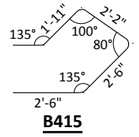
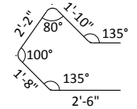


B403

B407 & B416



B415



B421

B805, B510 & B811

B414 & B420

MARK	'A'
B414	169°23'
B420	165°58'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-278

DRAWN BY DJT | PLANS CK'D. PTB

EAST ABUTMENT DETAILS

SHEET 7 OF 9

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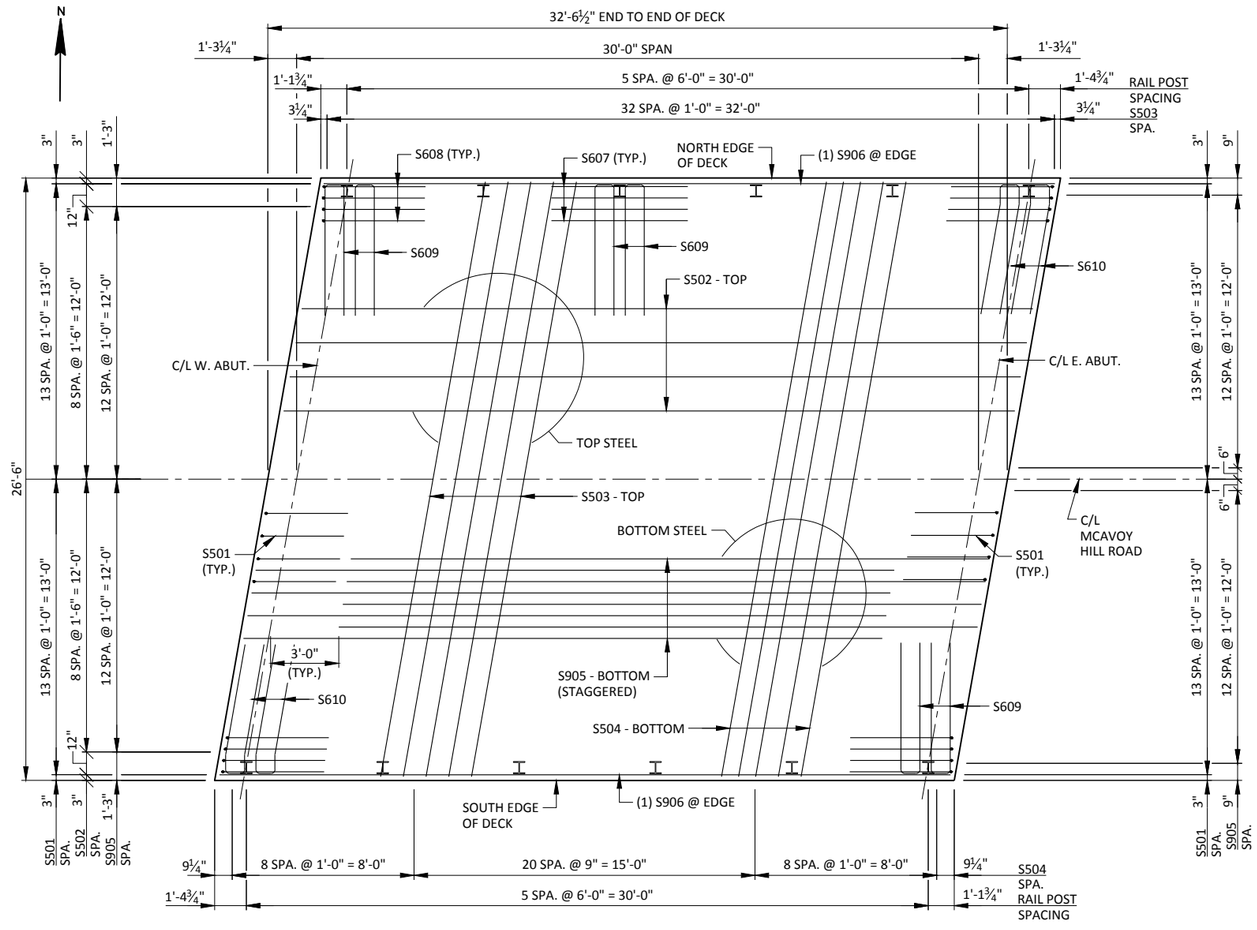
8

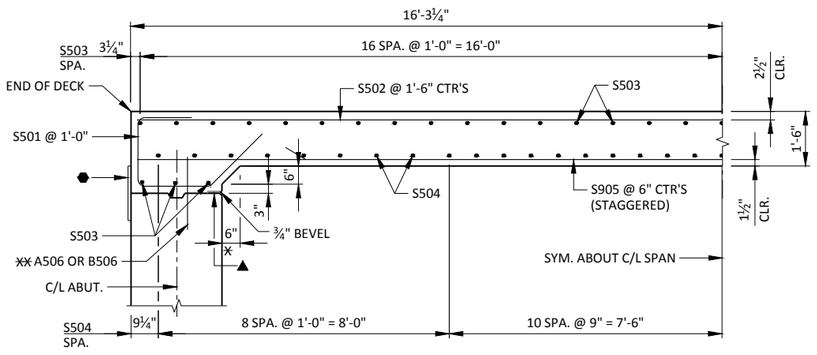
8



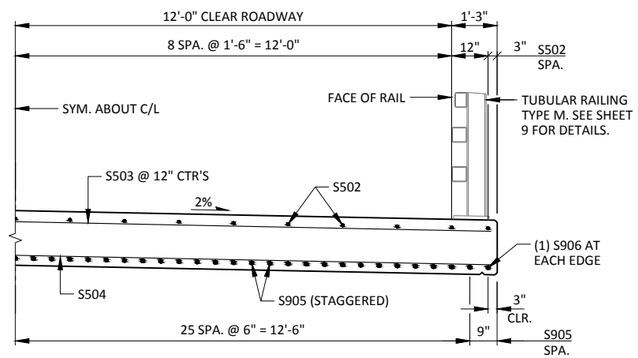
PLAN

TOP OF DECK ELEVATIONS

	C/L W. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L E. ABUT.
N. EDGE	792.86	792.81	792.76	792.71	792.66	792.61	792.56	792.50	792.45	792.40	792.35
C/L	793.17	793.12	793.07	793.02	792.97	792.92	792.87	792.81	792.76	792.71	792.66
S. EDGE	792.94	792.89	792.84	792.79	792.74	792.69	792.63	792.58	792.53	792.48	792.43



PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY



PARTIAL CROSS SECTION THROUGH ROADWAY

NOTES

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

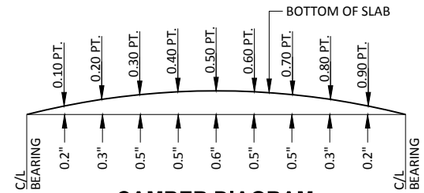
PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

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

SURVEY TOP OF DECK ELEVATIONS

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

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



CAMBER DIAGRAM

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

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

TOP OF SLAB ELEVATION AT FINAL GRADE
-SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.

STATE PROJECT NUMBER

5056-00-71

BILL OF BARS SUPERSTRUCTURE

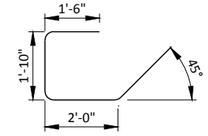
9,100 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	54	7-3	X	X	ENDS OF DECK
S502	19	32-3		X	SLAB - TOP - LONGIT.
S503	39	26-6		X	SLAB - TOP - TRANS.
S504	37	26-6		X	SLAB - BOTTOM - TRANS.
S905	51	28-1		X	SLAB - BOTTOM - LONGIT.
S906	2	32-3		X	SLAB - BOTTOM - LONGIT. - EDGES
S607	32	6-0		X	RAIL POSTS - INTERIOR
S608	16	6-0	X	X	RAIL POSTS - CORNERS
S609	20	12-0	X	X	RAIL POSTS
S610	4	12-0	X	X	RAIL POSTS - CORNERS 1 & 3

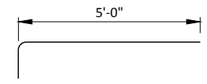
NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

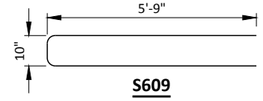
SOME BARS HAVE BEEN OMITTED FOR CLARITY.



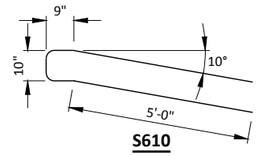
S501



S608



S609



S610

LEGEND

- ⬢ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- X DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- XX SEE SHEET 4 FOR PLACEMENT OF A506 BARS AND SHEET 6 FOR PLACEMENT OF B506 BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-278

DRAWN BY DJT | PLANS CK'D. PTB

SUPERSTRUCTURE

SHEET 8 OF 9

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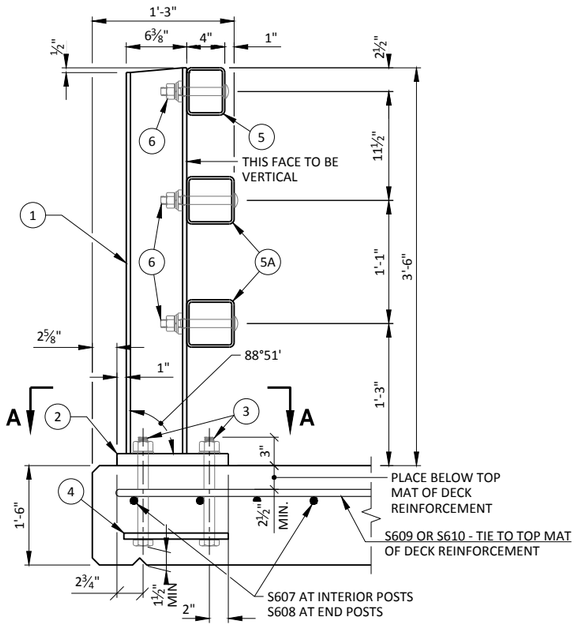
8

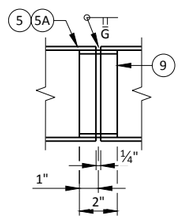
8

STATE PROJECT NUMBER

5056-00-71

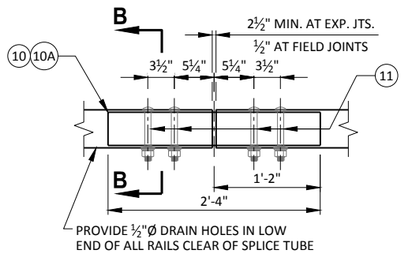


SECTION THROUGH RAILING ON DECK

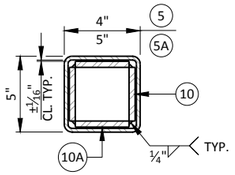


SHOP RAIL SPLICE DETAIL

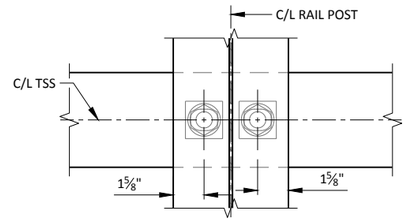
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



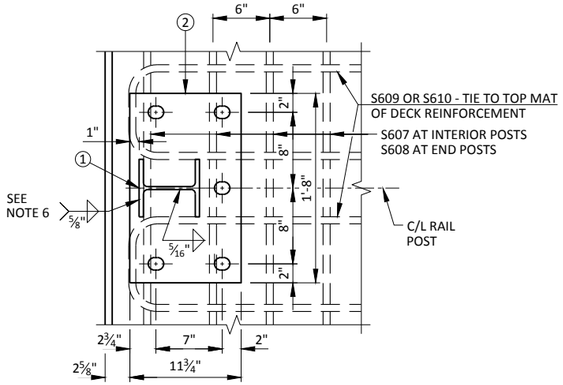
FIELD ERECTION JOINT DETAIL



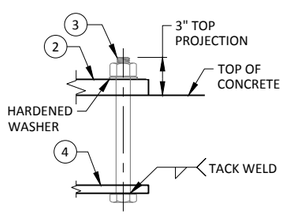
SECTION B-B



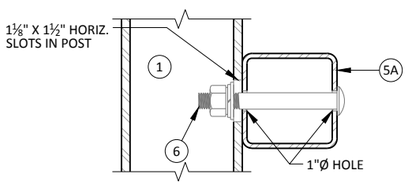
SECTION THROUGH POST WEB



SECTION A-A



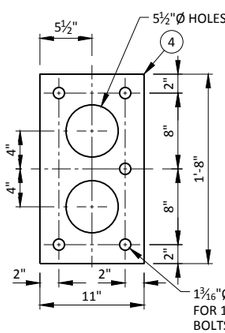
ANCHOR BOLTS



SECTION THROUGH RAIL

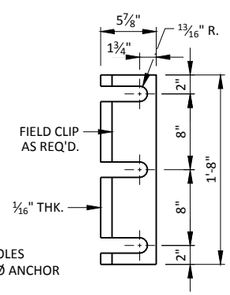
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

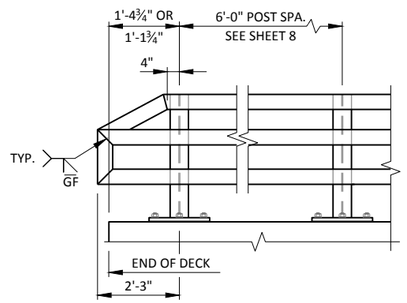


ANCHOR PLATE

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 1¼"x11¾"x1'-8" WITH 1⅝6"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 1¾6" 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, ¾6"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"x2⅝"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 15⅙"x1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15⅙"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).

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-52-278

DRAWN BY	PLANS CK'D.
DJT	PTB

TUBULAR STEEL RAILING TYPE M

SHEET 9 OF 9

46

EARTHWORK-MAINLINE

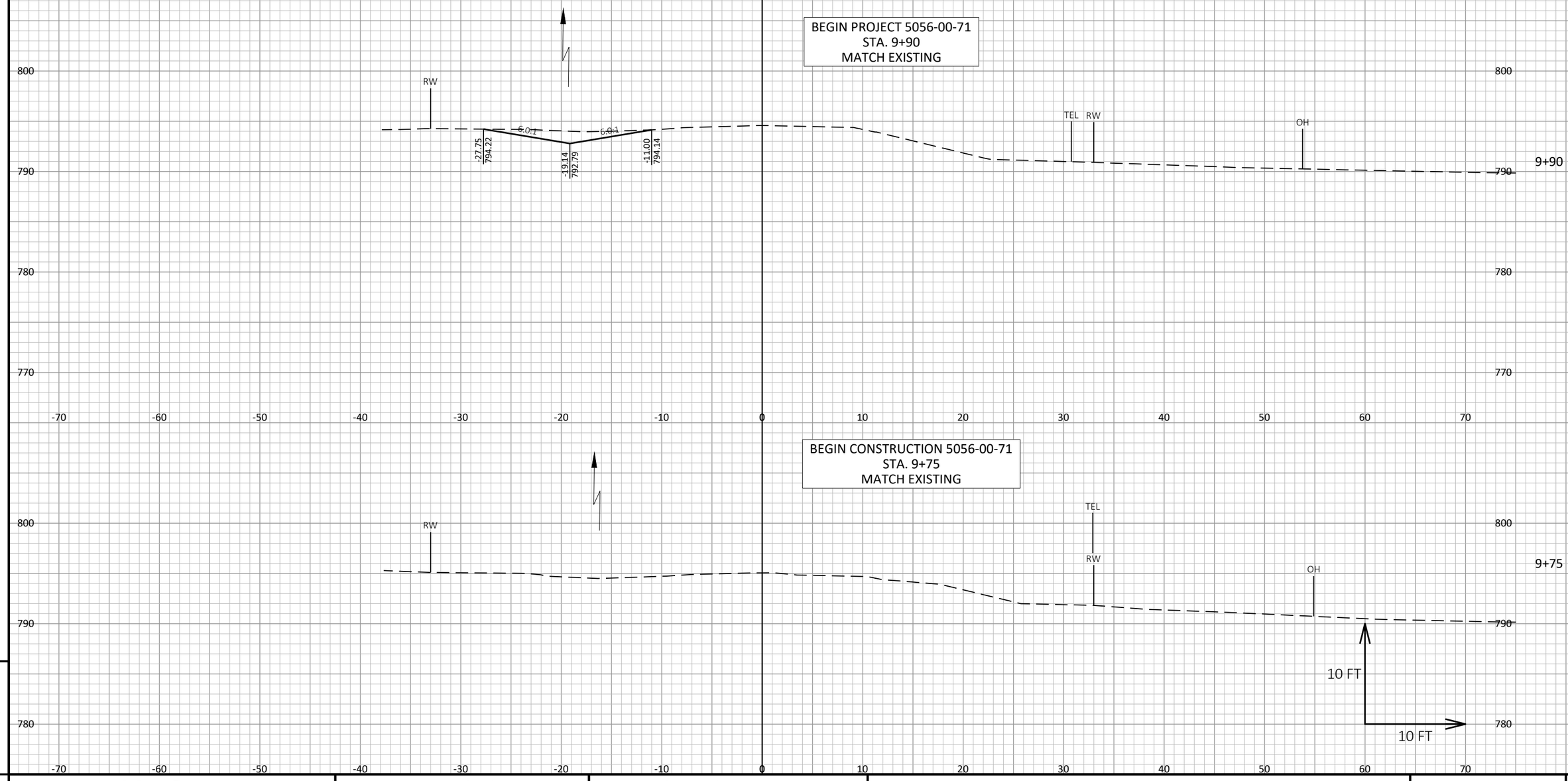
STATION	AREA (SF) CUT	FILL	ROCK EXC	INCREMENTAL VOL (CY) CUT NOTE 1	FILL NOTE 2	FILL (25%) NOTE 3	CUMMULATIVE VOLUME (CY) CUT 1.00 NOTE 1	FILL	FILL (25%) NOTE 3	MASS ORDINATE NOTE 4
09+75	0	0	0	0	0	0	0	0	0	0
09+90	10	0	0	3	0	0	3	0	0	3
10+00	49	1	0	11	0	0	14	0	0	14
10+50	31	1	0	75	2	3	89	2	3	86
10+71	31	1	0	24	1	1	113	3	4	109
10+71	0	0	0	0	0	0	113	3	4	109
11+04	0	0	0	0	0	0	113	3	4	109
11+04	41	29	0	0	0	0	113	3	4	109
11+50	41	29	0	69	49	61	182	52	65	117
11+60	0	0	0	8	5	6	190	57	71	119
COLUMN SUBTOTALS =				190	57	71				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT 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%))

9

9

BEGIN PROJECT 5056-00-71
STA. 9+90
MATCH EXISTING



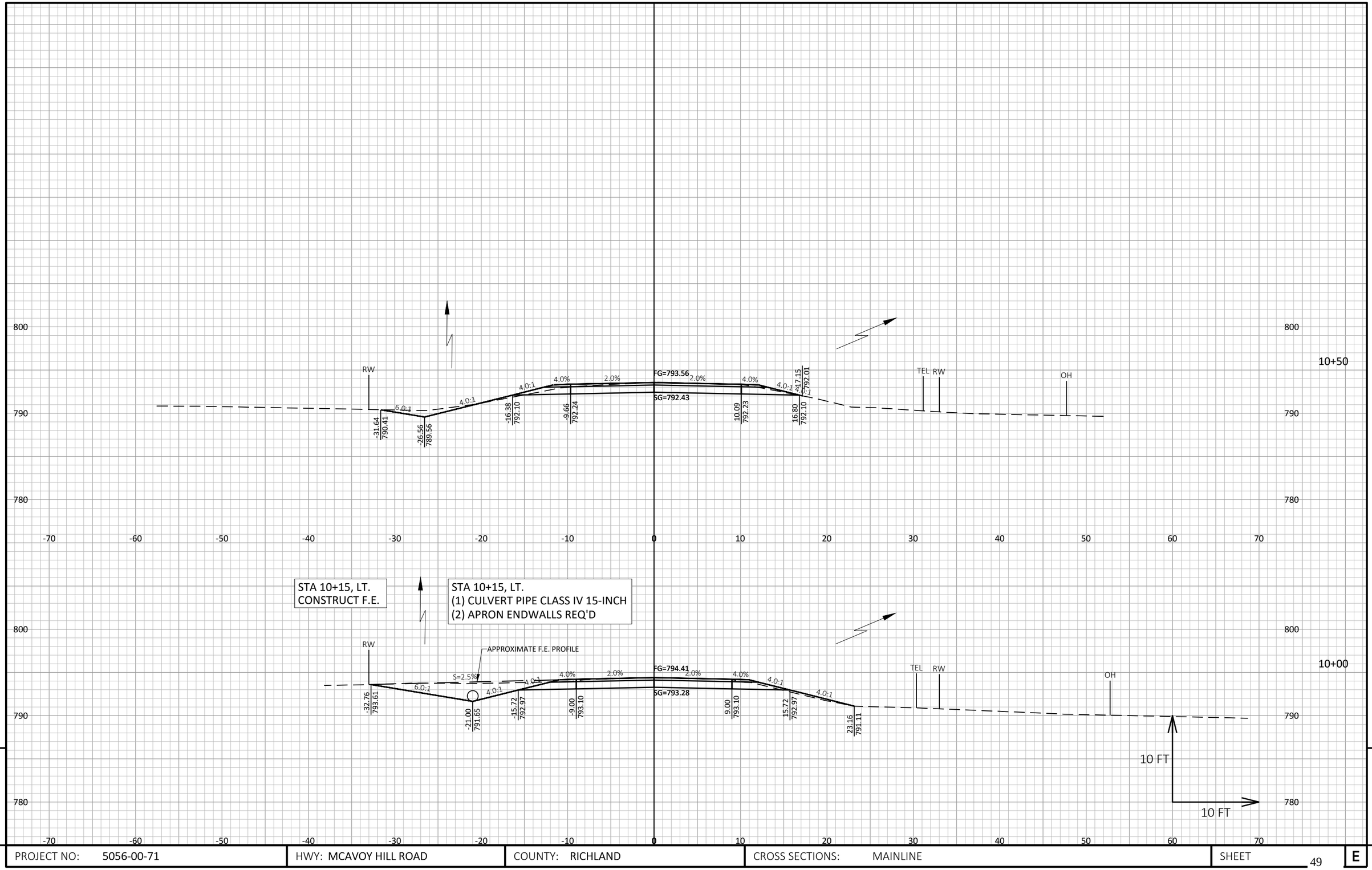
BEGIN CONSTRUCTION 5056-00-71
STA. 9+75
MATCH EXISTING

PROJECT NO: 5056-00-71	HWY: MCAVOY HILL ROAD	COUNTY: RICHLAND	CROSS SECTIONS: MAINLINE	SHEET 48	E

FILE NAME : S:\PROJECTS\W11601 WISDOT MCAVOY HILL RD BRIDGE RICHLAND COUNTY\DESIGN\CORRIDORS\CORRIDOR_MCAVOY HILL RD.DWG
LAYOUT NAME - 1

PLOT DATE : 6/3/2020 6:13 AM PLOT BY : THEODORE HERBERS PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

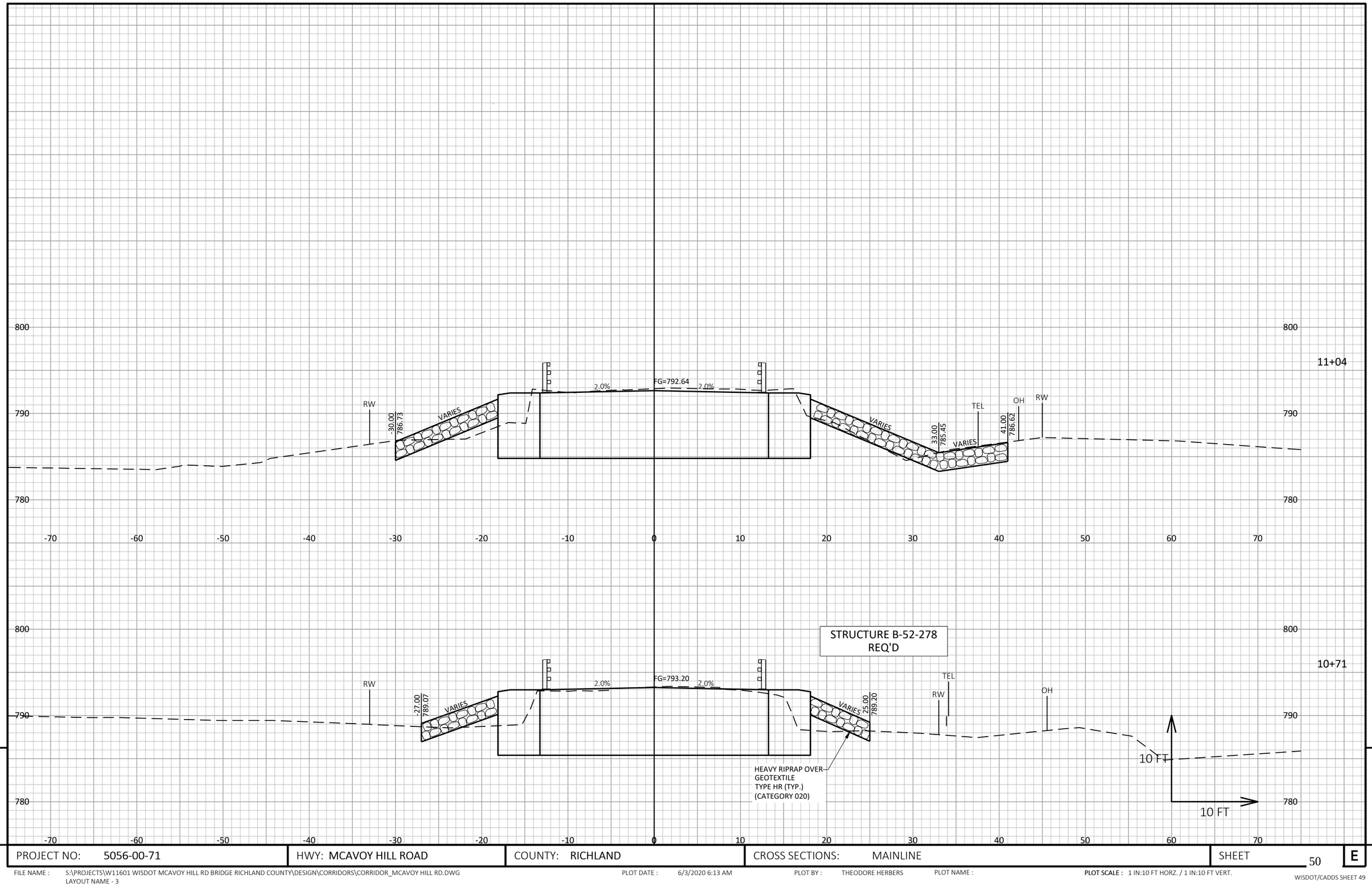
9

PROJECT NO: 5056-00-71	HWY: MCAVOY HILL ROAD	COUNTY: RICHLAND	CROSS SECTIONS: MAINLINE	SHEET 49	E

FILE NAME : S:\PROJECTS\W11601 WISDOT MCAVOY HILL RD BRIDGE RICHLAND COUNTY\DESIGN\CORRIDORS\CORRIDOR_MCAVOY HILL RD.DWG
LAYOUT NAME - 2

PLOT DATE : 7/23/2020 7:47 AM PLOT BY : AUSTIN KASZUBSKI PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5056-00-71	HWY: MCAVOY HILL ROAD	COUNTY: RICHLAND	CROSS SECTIONS: MAINLINE	SHEET 50 E

FILE NAME : S:\PROJECTS\W11601 WISDOT MCAVOY HILL RD BRIDGE RICHLAND COUNTY\DESIGN\CORRIDORS\CORRIDOR_MCAVOY HILL RD.DWG
LAYOUT NAME - 3

PLOT DATE : 6/3/2020 6:13 AM PLOT BY : THEODORE HERBERS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

END PROJECT 5056-00-71
STA. 11+60
MATCH EXISTING

11+60

11+50

RW
OH
TEL
RW

FG=791.85
SG=790.73

4.0%
2.0%
2.0%
4.0%
4.0:1
4.0:1
4.0:1
4.0:1
6.0:1
6.0:1

32.57
789.64
24.32
788.26
15.72
790.41
9.00
790.55
9.00
790.55
15.72
790.41
32.09
786.32
40.00
787.64

MEDIUM RIPRAP
OVER GEOTEXTILE
TYPE R
(CATEGORY 010)

10 FT
10 FT

800
790
780
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

9

PROJECT NO: 5056-00-71	HWY: MCAVOY HILL ROAD	COUNTY: RICHLAND	CROSS SECTIONS: MAINLINE	SHEET 51	E

FILE NAME : S:\PROJECTS\W11601 WISDOT MCAVOY HILL RD BRIDGE RICHLAND COUNTY\DESIGN\CORRIDORS\CORRIDOR_MCAVOY HILL RD.DWG
LAYOUT NAME - 4

PLOT DATE : 6/3/2020 6:14 AM PLOT BY : THEODORE HERBERS PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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