SWL NOV 2015

PROJECT ID: 5648-00-74 WITH:

COUNTY: LAFAYETTE

90

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF FAYETTE, GANT ROAD

(YELLOWSTONE RIVER BRIDGE B-33-0126)

TOWN ROAD

LAFAYETTE COUNTY

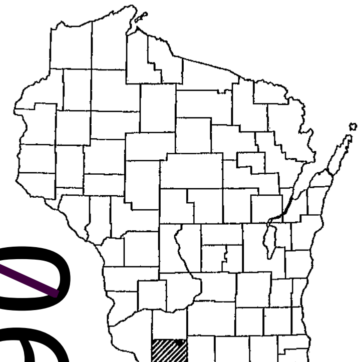
STATE PROJECT	FEDERAL PROJECT PROJECT	CONTRACT
5648-00-74	WISC 2015591	1

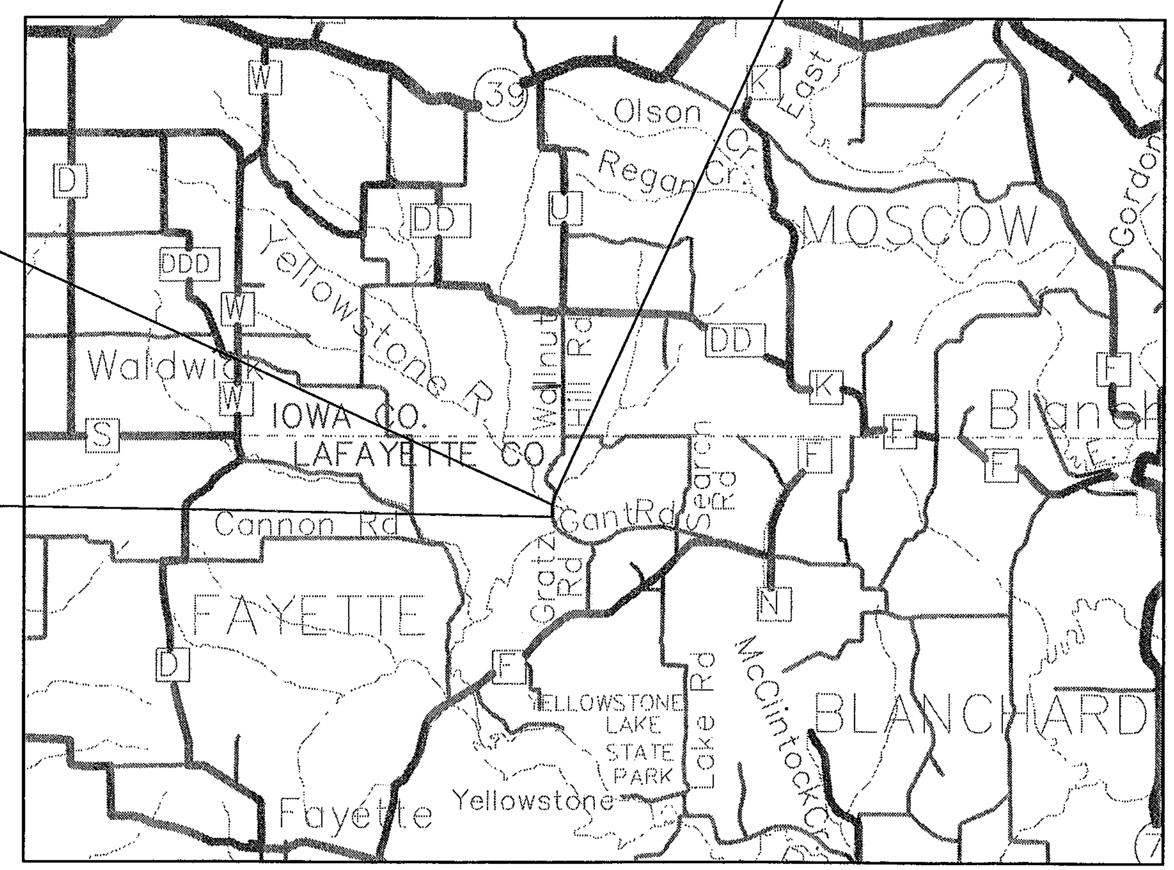
ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile (Includes Erosion Control)
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 56

STATE PROJECT NUMBER 5648-00-74





LAYOUT

SCALE 0 2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.104 MI

DESIGN DESIGNATION

A.A.D.T. 2016	=	100
A.A.D.T. 2036	=	130
D.H.V.	=	4.3
D.D.	=	50/50
T.	=	6.0%
DESIGN SPEED	=	30 MPH
ESALS	=	14,600

CONVENTIONAL SYMBOLS

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

PROFILE: GRADE LINE; ORIGINAL GROUND; MARSH OR ROCK PROFILE (To be noted as such) (ROCK); SPECIAL DITCH (T- -N, LABEL); GRADE ELEVATION (R- -E, 95.36); CULVERT (Profile View)

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

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, LAFAYETTE COUNTY, NAD88 (2013), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ACCEPTED FOR TOWN of FAYETTE

4-8-15 (Date) [signature] (TOWN CHAIRMAN)

ACCEPTED FOR COUNTY of LAFAYETTE

4-8-15 (Date) Thomas R. [signature] (HIGHWAY COMMISSIONER)

ORIGINAL PLANS PREPARED BY

MICHAEL J. STATZ E-31249 MADISON WI PROFESSIONAL ENGINEER

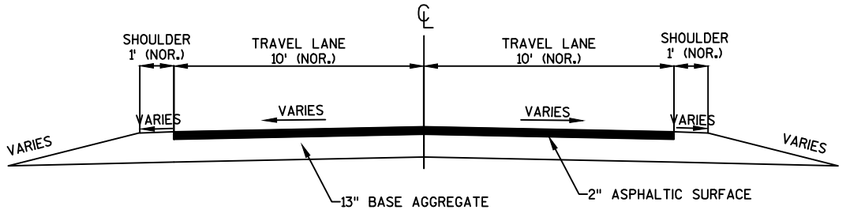
3-31-15 (Date) [signature] (Professional Engineer)

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor MSA PROFESSIONAL SERVICES, INC.
Designer MSA PROFESSIONAL SERVICES, INC.
Management Consultant KJOHNSON ENGINEERS

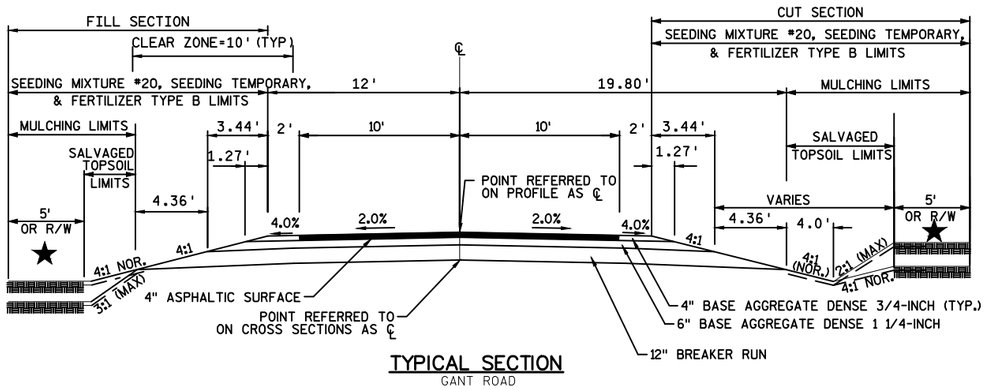
APPROVED FOR THE DEPARTMENT
DATE: 4/30/15 [signature] (Management Consultant Signature)

E



EXISTING TYPICAL SECTION

GANT ROAD



TYPICAL SECTION

GANT ROAD

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

THERE ARE NO KNOWN UTILITY FACILITIES WITHIN THE PROJECT AREA. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THIS.

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO FAYETTE N GPS BENCHMARK WITH ELEVATION OF 1046.51 LOCATED 0.70 MILES NORTHEAST OF THE EXISTING BRIDGE, THE STATION IS A BRONZE WISDOT GEODETIC SURVEY CONTROL STATION .

THE 4" ASPHALTIC SURFACE SHALL BE CONSTRUCTED USING A 2.25" LOWER LAYER AND A 1.75" UPPER LAYER.

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO BRIDGE REMOVAL.

TEMPORARY DITCH CHECKS, IF NEEDED, SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

THE ASPHALTIC SURFACE SHALL TAPER FROM 26.5 FEET AT THE END OF THE BRIDGE TO 20.0 FEET AT ± 30 FEET FROM THE BRIDGE ENDS.

★ WETLAND EXIST AT STA. 9+62 TO 9+75, LT/RT AND STA. 9+93 TO 10+02 LT/RT. THE CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE THE SLOPE INTERCEPT IN THESE AREAS.

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
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 = 1.33 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.16 ACRES

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: MICHAEL J. STATZ, P.E.
2901 INTERNATIONAL LANE, SUITE 300
MADISON, WI 53704-3133
PHONE: (608) 242-7779
EMAIL: MSTATZ@MSA-PS.COM

LAFAYETTE COUNTY
ATTN: TOM JEAN, COMMISSIONER
12016 HILL STREET, PO BOX 100
DARLINGTON, WI 53530
PHONE: (608) 776-4919
EMAIL: TOM.JEAN@LAFAYETTECOUNTYWI.ORG

TOWN OF FAYETTE
ATTN: JOHN RUF
11516 COUNTY RD. G
DARLINGTON, WI 53530
PHONE: (608) 776-4048

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
ATTN.: LAURA BUB
ENVIRONMENTAL REVIEW AND ANALYSIS SPECIALIST
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711-5397
PHONE: (608) 275-3485
EMAIL: LAURA.BUB@WISCONSIN.GOV

UTILITIES

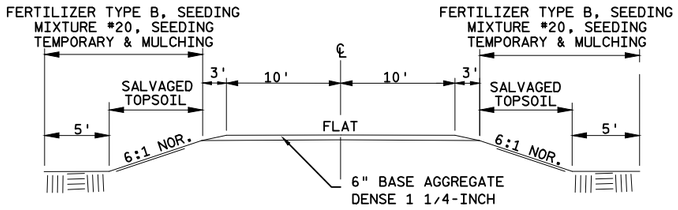
NONE

**-DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

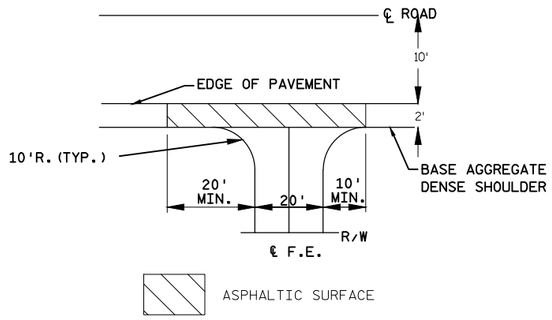
PROJECT NO:5648-00-74	HWY: GANT ROAD	COUNTY: LAFAYETTE	TYPICAL SECTION & GENERAL NOTES	SHEET 2	E

2

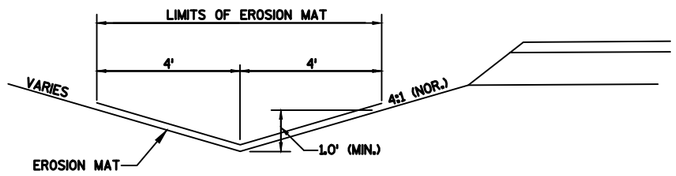
FIELD ENTRANCE DETAILS



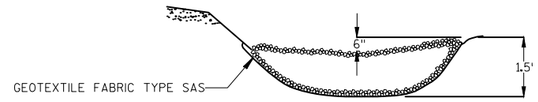
FIELD ENTRANCE - TYPICAL SECTION



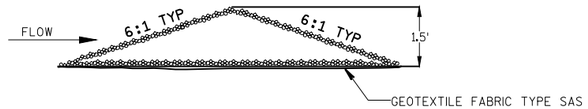
FIELD ENTRANCE PLAN



EROSION MAT DITCH DETAIL



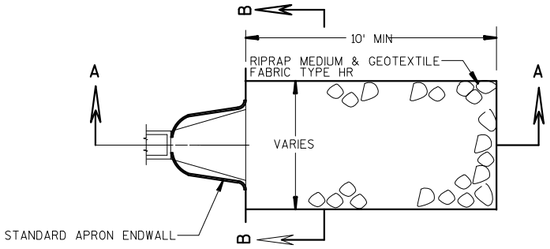
CROSS SECTIONAL VIEW



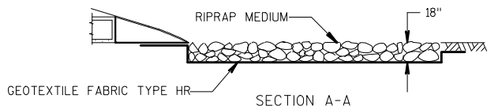
ELEVATION VIEW

PERMANENT STONE OR ROCK DITCH CHECK DETAIL

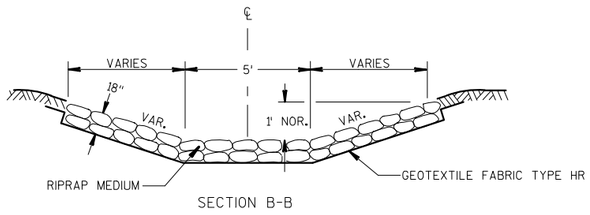
ESTIMATED BAG SIZE = 24" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	1
18"	2
24"	3
30"	5
48"	10
54"	10
60"	13
72"	16



PLAN VIEW

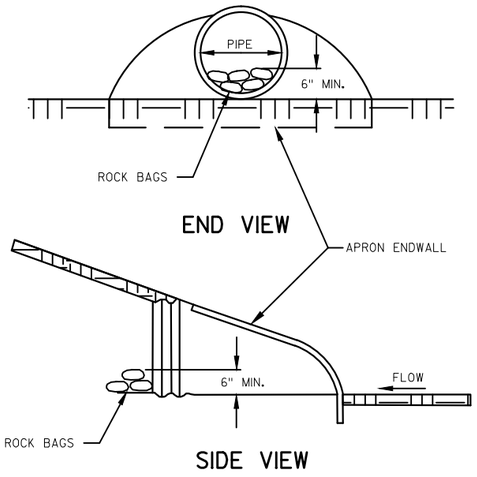


SECTION A-A



SECTION B-B

RIPRAP MEDIUM AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS



CULVERT PIPE CHECKS
INSTALL ON INLET PIPE

DATE 06AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5648-00-74 QUANTITY
0010	201.0105	Clearing	STA	2.000	2.000
0020	201.0205	Grubbing	STA	2.000	2.000
0030	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0040	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 9+94	LS	1.000	1.000
0050	205.0100	Excavation Common	CY	724.000	724.000
0060	205.0200	Excavation Rock	CY	74.000	74.000
0070	206.1000	Excavation for Structures Bridges (structure) 01. B-33-0126	LS	1.000	1.000
0080	208.0100	Borrow	CY	2,717.000	2,717.000
0090	210.0100	Backfill Structure	CY	160.000	160.000
0100	213.0100	Finishing Roadway (project) 01. 5648-00-74	EACH	1.000	1.000
0110	305.0110	Base Aggregate Dense 3/4-Inch	TON	55.000	55.000
0120	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	570.000	570.000
0130	311.0110	Breaker Run	TON	1,340.000	1,340.000
0140	455.0605	Tack Coat	GAL	60.000	60.000
0150	465.0105	Asphaltic Surface	TON	250.000	250.000
0160	502.0100	Concrete Masonry Bridges	CY	136.000	136.000
0170	502.3200	Protective Surface Treatment	SY	280.000	280.000
0180	503.0137	Prestressed Girder Type I 36W-Inch	LF	284.000	284.000
0190	505.0405	Bar Steel Reinforcement HS Bridges	LB	3,090.000	3,090.000
0200	505.0605	Bar Steel Reinforcement HS Coated Bridges	LB	15,660.000	15,660.000
0210	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0220	506.4000	Steel Diaphragms (structure) 01. B-33-0126	EACH	3.000	3.000
0230	511.1200	Temporary Shoring (structure) 01. B-33-0126	SF	195.000	195.000
0240	513.4060	Railing Tubular Type M (structure) 01. B-33-0126	LS	1.000	1.000
0250	516.0500	Rubberized Membrane Waterproofing	SY	19.000	19.000
0260	520.0118	Culvert Pipe Class III 18-Inch	LF	68.000	68.000
0270	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000	4.000
0280	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	350.000	350.000
0290	603.8000	Concrete Barrier Temporary Precast Delivered	LF	50.000	50.000
0300	603.8125	Concrete Barrier Temporary Precast Installed	LF	50.000	50.000
0310	606.0200	Riprap Medium	CY	32.000	32.000
0320	606.0300	Riprap Heavy	CY	530.000	530.000
0330	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	185.000	185.000
0340	614.0920	Salvaged Rail	LF	65.000	65.000
0350	619.1000	Mobilization	EACH	1.000	1.000
0360	624.0100	Water	MGAL	12.000	12.000
0370	625.0500	Salvaged Topsoil	SY	2,520.000	2,520.000
0380	627.0200	Mulching	SY	2,200.000	2,200.000
0390	628.1104	Erosion Bales	EACH	50.000	50.000
0400	628.1504	Silt Fence	LF	900.000	900.000
0410	628.1520	Silt Fence Maintenance	LF	1,800.000	1,800.000
0420	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0430	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0440	628.2004	Erosion Mat Class I Type B	SY	350.000	350.000
0450	628.2006	Erosion Mat Urban Class I Type A	SY	50.000	50.000
0460	628.2023	Erosion Mat Class II Type B	SY	550.000	550.000

3

DATE 06AUG15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5648-00-74 QUANTITY
0470	628.6005	Turbidity Barriers	SY	330.000	330.000
0480	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0490	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0500	628.7560	Tracking Pads	EACH	2.000	2.000
0510	628.7560.S	Stone or Rock Ditch Checks	CY	10.000	10.000
0520	629.0210	Fertilizer Type B	CWT	2.500	2.500
0530	630.0120	Seeding Mixture No. 20	LB	110.000	110.000
0540	630.0200	Seeding Temporary	LB	55.000	55.000
0550	631.1100	Sod Erosion Control	SY	50.000	50.000
0560	633.5100	Markers Row	EACH	18.000	18.000
0570	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0580	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0590	637.2210	Signs Type II Reflective H	SF	12.000	12.000
0600	637.2230	Signs Type II Reflective F	SF	13.000	13.000
0610	642.5001	Field Office Type B	EACH	1.000	1.000
0620	643.0100	Traffic Control (project) 01. 5648-00-74	EACH	1.000	1.000
0630	645.0120	Geotextile Fabric Type HR	SY	937.000	937.000
0640	645.0140	Geotextile Fabric Type SAS	SY	40.000	40.000
0650	650.4500	Construction Staking Subgrade	LF	478.000	478.000
0660	650.5000	Construction Staking Base	LF	478.000	478.000
0670	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0680	650.6500	Construction Staking Structure Layout (structure) 01. B-33-0126	LS	1.000	1.000
0690	650.9910	Construction Staking Supplemental Control (project) 01. 5648-00-74	LS	1.000	1.000
0700	650.9920	Construction Staking Slope Stakes	LF	478.000	478.000
0710	690.0150	Sawing Asphalt	LF	40.000	40.000
0720	715.0502	Incentive Strength Concrete Structures	DOL	816.000	816.000

CLEARING & GRUBBING

CATEGORY	STATION	TO STATION	LOCATION	(201.0105) CLEARING STA	(201.0205) GRUBBING STA
0010	7+00	9+00	LT/RT	2	2
PROJECT TOTAL				**2**	**2**

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	TYPE	DIAMETER	LENGTH	(203.0100) EACH
0010	11+55	LT	CMP	18"	25	1
PROJECT TOTAL						**1**

GUARDRAIL

CATEGORY	STATION	TO STATION	LOCATION	(614.0920) SALVAGING LF
0010	9+39	9+73	LT	38
	9+42	9+69	LT	27
PROJECT TOTAL				**65**

MOBILIZATION EROSION CONTROL

CATEGORY	STATION	TO STATION	(628.1905) EACH	(628.1910) EMERGENCY EACH
0010	7+00	12+50	2	1
PROJECT TOTAL			**2**	**1**

BASE AGGREGATE DENSE

CATEGORY	STATION	TO STATION	LOCATION	(305.0110) 3/4-INCH TON	(305.0120) 1 1/4-INCH TON	(311.0110) BREAKER TON
0010	7+00	9+45	LT & RT	30	270	580
	10+17	12+50	LT & RT	25	250	550
		FIELD ENTRANCES		-	50	-
		UNDISTRIBUTED		-	-	210
PROJECT TOTAL				**55**	**570**	**1,340**

ASPHALTIC SURFACE

CATEGORY	STATION	TO STATION	(455.0605) TACK COAT GAL	(465.0105) TON
0010	7+00	9+45	30	125
	10+17	12+50	30	125
PROJECT TOTAL			**60**	**250**

CULVERT PIPE

CATEGORY	STATION	LOCATION	(520.0118) CLASS III 18-INCH LF	THICKNESS STEEL IN	THICKNESS ALUM IN	(520.1018) APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	(650.6000) CONSTRUCTION STAKING PIPE CULVERTS EACH
0010	11+55	RT	34	0.064	0.060	2	1
	11+55	LT	34	0.064	0.060	2	1
PROJECT TOTAL			**68**			**4**	**2**

TRACKING PAD

CATEGORY	STATION	(628.7560) EACH
0010	7+00	1
	12+50	1
PROJECT TOTAL		**2**

SAWING ASPHALT

CATEGORY	STATION	LOCATION	(690.0150) LF
0010	7+00	LT & RT	20
	12+50	LT & RT	20
PROJECT TOTAL			**40**

TURBIDITY BARRIERS

CATEGORY	STATION	LOCATION	(628.6005) SY
0010	9+68	LT & RT	165
	9+95	LT & RT	165
PROJECT TOTAL			**330**

EARTHWORK PROJECT I.D. 5648-00-74

Division	From/To Station	Location	Common Excavation (1) (item # 205.0100) Cut (2)	Common Excavation (1) (item # 205.0100) EBS Excavation (3)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Rock Excavation (7) (item #205.0200)	Expanded Rock (12) Factor 1.10	Unexpanded Fill	Expanded Fill (13) Factor 1.25	Mass Ordinate +/- (14)	Waste	Borrow (item #208.0100)	Comment:
1	7+00 - 9+44.73	South Gant Road	318	0	0	318	74	81	2043	2452	-2134	-2134	2134	
2	10+17.27- 12+50	North Gant Road	285	0	0	285	0	0	694	868	-583	-583	583	
	STRUCTURE B-33-0126		0	0	0	0	0	0	0	0	0	0	0	
	UNDISTRIBUTED EBS		0	121	0	0			0	0	0	0	0	
Grand Total			603	121	0	603	74	81	2738	3320	-2717	-2717	2717	
			724											

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Breaker Run material.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
7) Rock Excavation item number 205.0200
12) Expanded Rock - Factor = 1.1.
13) Expanded Fill. Factor = 1.25
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

FINISHING ITEMS

CATEGORY	STATION	TO 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	(631.1100) SOD EROSION CONTROL SY	(628.1104) EROSION BALES EACH
0010	7+00	9+31	LT	830	460	0.8	34	17	-	-
	7+00	9+27	RT	930	1060	0.8	36	18	-	-
	10+30	12+50	LT	390	350	0.5	20	10	-	-
	10+26	12+50	RT	370	330	0.4	20	10	-	-
	UNDISTRIBUTED			-	-	-	-	-	50	50
PROJECT TOTAL				**2,520**	**2,200**	**2.5**	**110**	**55**	**50**	**50**

** PAY PLAN QUANTITY WITHOUT MEASURE

RIPRAP AND GEOTEXTILE FABRIC

CATEGORY	STATION	TO STATION	LOCATION	(606.0200) RIPRAP MEDIUM CY	* (645.0120) GEOTEXTILE FABRIC TYPE HR SY
0010	11+31	11+43	RT	8	18
	11+62	11+79	RT	8	18
	11+30	11+41	LT	8	18
	11+67	11+79	LT	8	18
PROJECT TOTAL				**32**	**72**

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

DITCH CHECKS

CATEGORY	STATION	LOCATION	(628.7555) CULVERT PIPE EACH	(628.7504) TEMPORARY LF	(628.7560.S) STONE OR ROCK CY	(645.0140) GEOTEXTILE FABRIC TYPE SAS SY
0010	8+25	LT	-	-	5	20
	8+75	LT	-	-	5	20
	11+70	RT	2	-	-	-
	11+70	LT	2	-	-	-
UNDISTRIBUTED			-	50	-	-
PROJECT TOTAL			**4**	**50**	**10**	**40**

WATER

CATEGORY	DESCRIPTION	(624.0100) MGAL
0010	COMPACTION	6
	DUST CONTROL	3
	UNDISTRIBUTED	3
	PROJECT TOTAL	**12**

PERMANENT SIGNING

CATEGORY	CODE	STATION	LOCATION	(637.2210) SIGNS REFLECTIVE TYPE H SF	(637.2230) SIGNS REFLECTIVE TYPE F SF	(634.0612) POSTS WOOD 4 X 6-INCH 12-FT EACH	(634.0616) POSTS WOOD 4 X 6-INCH 16-FT EACH	NOTES
0010	W5-52R	9+30.66	RT	3.0	-	1	-	-
	W5-52L	9+34.80	LT	3.0	-	1	-	-
	W5-52R	10+25.20	RT	3.0	-	1	-	-
	W5-52L	10+29.34	LT	3.0	-	1	-	-
	W1-3L	12+00	RT	-	9.00	-	1	-
	W13-1P	12+00	RT	-	4.00	-	-	20 MPH
PROJECT TOTAL				**12.00**	**13.00**	**4**	**1**	

MARKERS ROW

CATEGORY	R/W PT	STATION	LOCATION	(633.5100) EACH
0010	1	7+00	33' LT	1
	2	8+00	70' LT	1
	3	8+30	49.93' LT	1
	4	8+46.36	54.51' LT	1
	5	8+86.44	66.45' LT	1
	7	10+06.25	61.60' LT	1
	8	10+25	55.99' LT	1
	9	10+50	62' LT	1
	10	11+92	34.41' LT	1
	11	12+50	33' LT	1
	12	12+50	33' RT	1
	13	12+00	33' RT	1
	14	11+00	48' RT	1
	15	9+50	51' RT	1
	16	9+00	65' RT	1
	17	8+00	77' RT	1
	18	7+40	33' RT	1
	19	7+00	33' RT	1
PROJECT TOTAL				**18**

CONCRETE BARRIER TEMPORARY PRECAST

CATEGORY	STATION	TO STATION	LOCATION	(603.8000) DELIVERED LF	(603.8125) INSTALLED LF
0010	10+05	10+30	LT	50	50
PROJECT TOTAL				**50**	**50**

SILT FENCE

CATEGORY	STATION	TO STATION	LOCATION	(628.1504) LF	(628.1520) MAINTENANCE LF
0010	7+00	9+70	RT	290	580
	9+97	11+47	RT	150	300
	10+02	11+47	LT	150	300
	11+63	12+50	RT	90	180
	11+63	12+50	LT	90	180
UNDISTRIBUTED				130	260
PROJECT TOTAL				**900**	**1,800**

CONSTRUCTION STAKING

CATEGORY	STATION	TO STATION	LOCATION	(650.4500) SUBGRADE LF	(650.5000) BASE LF	(650.9910) SUPPLEMENTAL CONTROL LS	(650.9920) SLOPE STAKING LF
010	7+00	9+45	LT & RT	245	245	-	245
	10+17	12+50	LT & RT	233	233	-	233
UNDISTRIBUTED			LT & RT	-	-	1	-
PROJECT TOTAL				**478**	**478**	**1**	**478**

EROSION MAT

CATEGORY	STATION	TO STATION	LOCATION	(628.2006) EROSION MAT URBAN CLASS I TYPE A SY	(628.2004) EROSION MAT CLASS I TYPE B SY	(628.2023) EROSION MAT CLASS II TYPE B SY
0010	7+00	9+34	LT	-	-	500
	10+26	11+29	RT	-	90	-
	10+30	11+28	LT	-	90	-
	11+80	12+50	RT	-	60	-
	11+80	12+50	LT	-	60	-
UNDISTRIBUTED				50	50	50
PROJECT TOTAL				**50**	**350**	**550**

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5648-00-04	4.01	2
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

TOWN OF FAYETTE, GANT ROAD

(YELLOWSTONE RIVER BRIDGE B-33-0126)

TOWN ROAD — LAFAYETTE CO.

CONSTRUCTION PROJECT NUMBER
5648-00-74

ACCEPTED FOR

TOWN of FAYETTE

2-10-15 (Date) — (SIGNATURE/TITLE) Town Chairman

ORIGINAL PLAT PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL • REMEDIATION DEVELOPMENT • ENVIRONMENTAL
2901 International Lane, Suite 300 Madison, WI 53704-3133
608-242-7779 1-800-446-0679 Fax: 608-242-5664

Linda L. Lauden
Lafayette Co. Clerk
2/11/2015

WISCONSIN
BRADLEY L. TISDALE
S-2324
WAUNAKEE
WI
LAND SURVEYOR

2-12-2015 (Date) — Brad L Tisdale (Professional Land Surveyor)

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.	**CURVE DATA**	
EASEMENT	EASE.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
LAND CONTRACT	LC	RADIUS	R
MONUMENT	MON.	DEGREE OF CURVE	D
PAGE	P.	CENTRAL ANGLE OR DELTA	DELTA
PERMANENT LIMITED EASEMENT	PLE	LENGTH OF CURVE	L
PROPERTY LINE	PL	TANGENT	TAN
RECORDED AS	(100')		
REFERENCE LINE	R/L		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	I.P. (IF UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	● (SET)	PROPERTY LINE	
R/W STANDARD	▲ (SET)	LOT & TIE LINES	
SIGN	(SIGN)	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	●	CORPORATE LIMITS	
SECTION CORNER SYMBOL	⊕	ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		ACCESS RESTRICTED (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	(RWB20)	QUARTER LINE	
PARCEL NUMBER	(10)	SIXTEENTH LINE	
UTILITY INTEREST	(40)	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	(21-)	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

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

NOTES:

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, LAFAYETTE COUNTY ZONE, NAD 83 (2011) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

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.

EXISTING RIGHT-OF-WAY IS BASED ON THE EXISTING CENTERLINE OF GANT ROAD AND STATE STATUTE 82.31.

ALL STATION/OFFSET DATA IS REFERENCED TO THE MAINLINE ALIGNMENT (GANT ROAD).

END RELOCATION

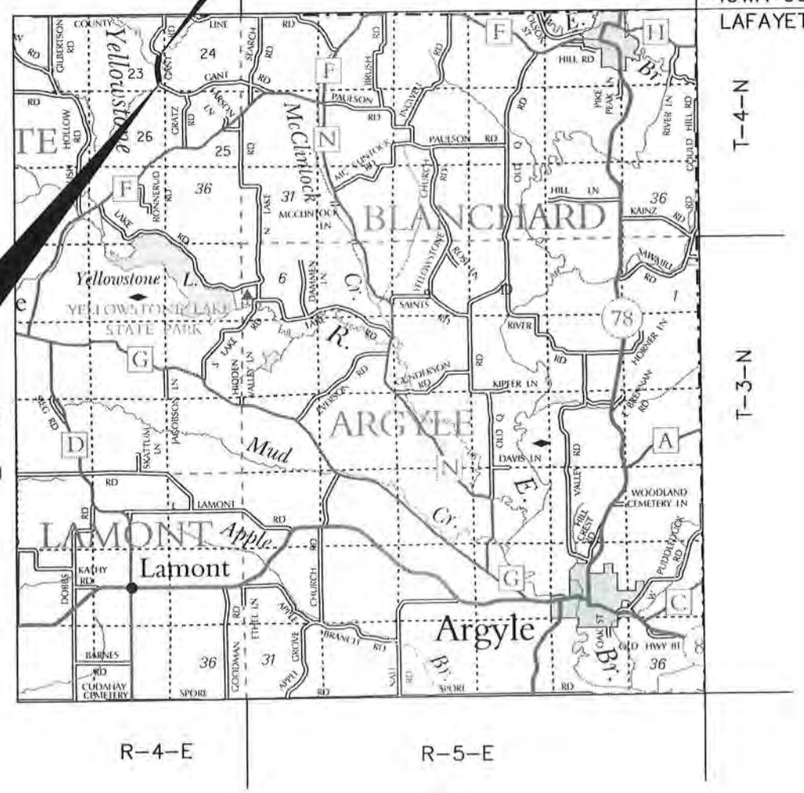
ORDER STA.12+50.00
Y = 211,251.700
X = 520,730.149

APPROXIMATELY 664 FEET SOUTH OF AND 487 FEET WEST OF THE EAST QUARTER CORNER OF SECTION 23, T-4-N, R-4-E, TOWN OF FAYETTE, LAFAYETTE COUNTY, WI

BEGIN RELOCATION

ORDER STA.7+00.00
Y = 210,705.925
X = 520,662.108

APPROXIMATELY 1,209 FEET SOUTH OF AND 556 FEET WEST OF THE EAST QUARTER CORNER OF SECTION 23, T-4-N, R-4-E, TOWN OF FAYETTE, LAFAYETTE COUNTY, WI



N

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.104 MI.

REVISION DATE			

DATE 9/25/2014

GRID FACTOR NA

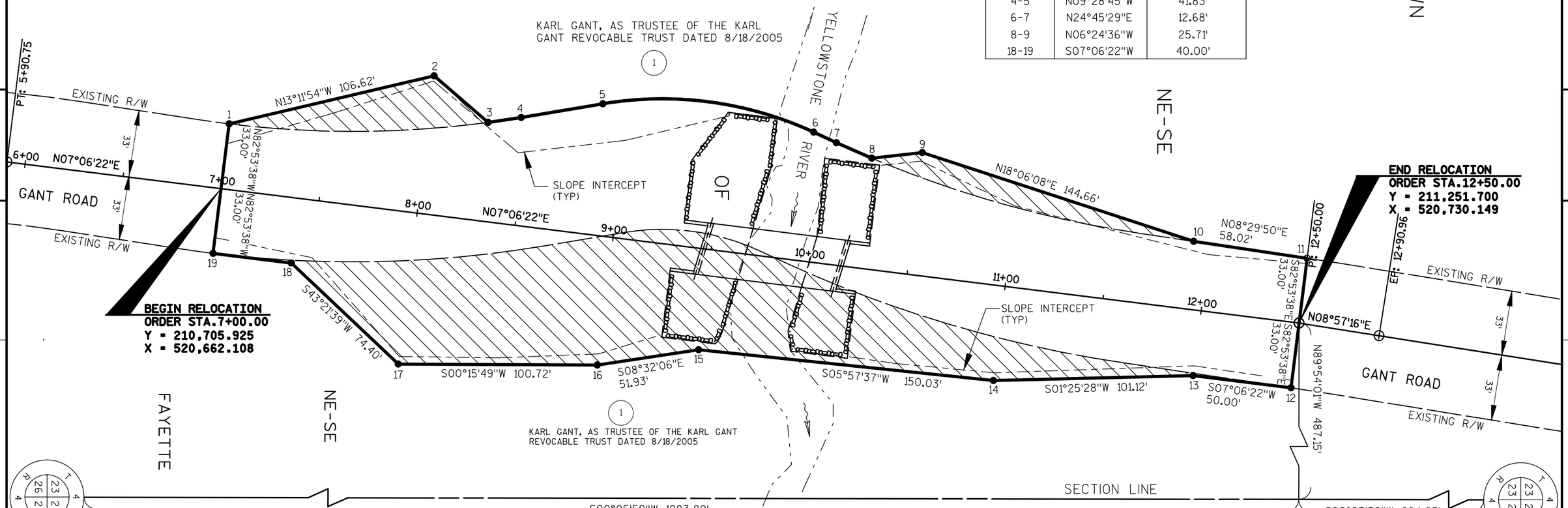
SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN OF FAYETTE.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	NEW	EXISTING	TOTAL	TLE ACRES
1	KARL GANT, AS TRUSTEE OF THE KARL GANT REVOCABLE TRUST DATED 8/18/2005	FEE	0.48	0.85	1.33	--

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD DISTANCE
3-4	517.00'	16.99'	N08°32'17"W	16.98'
5-6	183.00'	109.35'	N07°38'22"E	107.73'
7-8	567.00'	19.57'	N23°46'10"E	19.57'

LINE	BEARING	DISTANCE
2-3	N40°53'12"E	36.10'
4-5	N09°28'45"W	41.83'
6-7	N24°45'29"E	12.68'
8-9	N06°24'36"W	25.71'
18-19	S07°06'22"W	40.00'

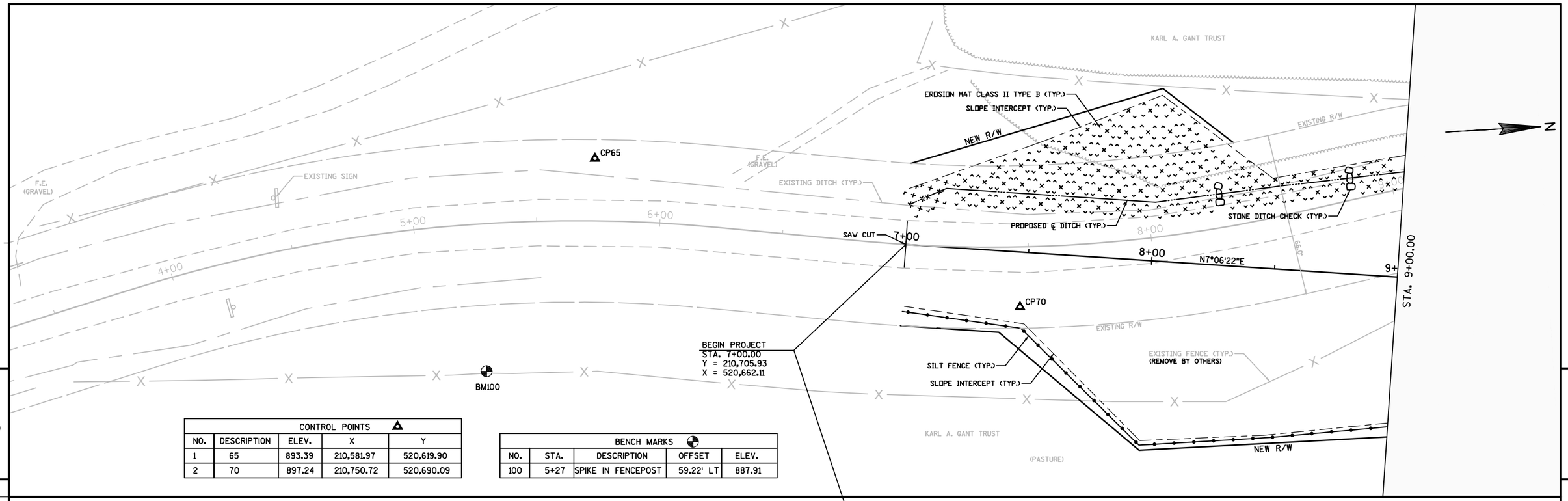


R/W POINT	STATION	OFFSET	Y	X	R/W POINT	STATION	OFFSET	Y	X
1	7+00.00	33.00 L	210,710.007	520,629.361	11	12+50.00	33.00 L	211,255.782	520,697.403
2	8+00.00	70.00 L	210,813.813	520,605.017	12	12+50.00	33.00 R	211,247.616	520,762.904
3	8+30.00	49.93 L	210,841.103	520,628.645	13	12+00.00	33.00 R	211,198.002	520,756.710
4	8+46.36	54.51 L	210,857.899	520,626.124	14	11+00.00	48.00 R	211,096.914	520,759.224
5	8+86.44	66.45 L	210,899.156	520,619.235	15	9+50.00	51.00 R	210,947.698	520,743.646
6	9+94.17	65.45 L	211,005.932	520,633.557	16	9+00.00	65.00 R	210,896.348	520,751.352
7	10+06.25	61.60 L	211,017.446	520,638.867	17	8+00.00	77.00 R	210,795.629	520,750.889
8	10+25.00	55.99 L	211,035.355	520,646.754	18	7+40.00	33.00 R	210,741.534	520,699.804
9	10+50.00	62.00 L	211,060.906	520,643.884	19	7+00.00	33.00 R	210,701.842	520,694.856
10	11+92.00	34.41 L	211,198.402	520,688.830					

REVISION DATE	DATE 9/25/2014	SCALE, FEET 0 25 50	HWY: GANT ROAD	STATE R/W PROJECT NUMBER 5648-00-04	PLAT SHEET 4.02
	GRID FACTOR NA		COUNTY: LAFAYETTE	CONSTRUCTION PROJECT NUMBER 5648-00-74	PS&E SHEET --9 E

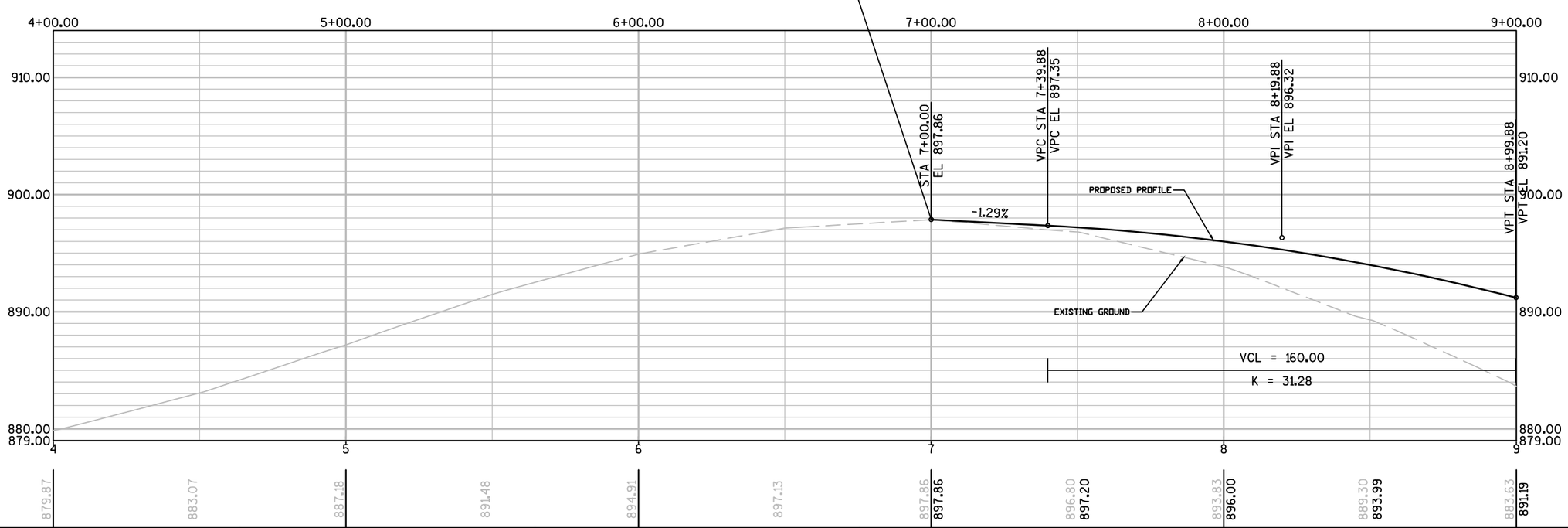
FILE NAME : P:\2300S\2390S\2398\02398009\CADD\RW\2398009 PLINE.DWG PLOT DATE : 11/19/2014 12:02 PM PLOT BY : SARAH GENGLER PLOT NAME :

WISDOT/CADDS SHEET 75

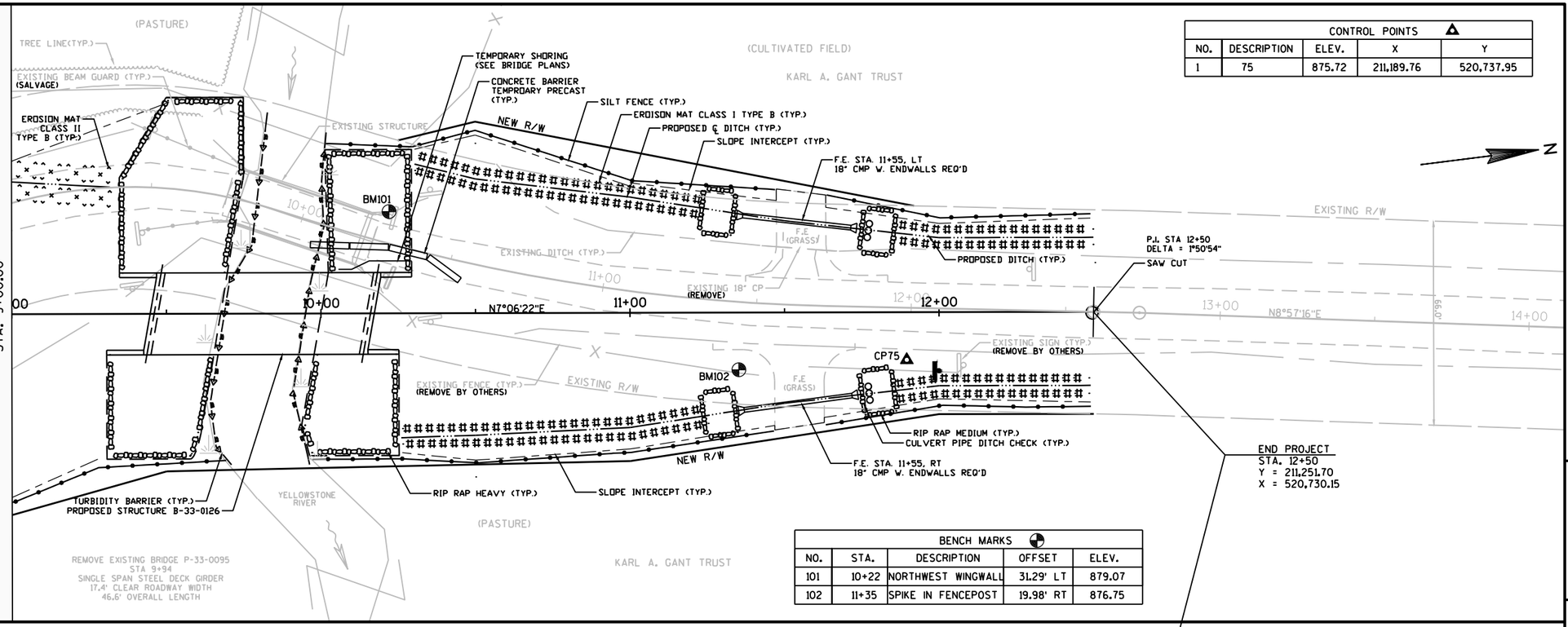


CONTROL POINTS				
NO.	DESCRIPTION	ELEV.	X	Y
1	65	893.39	210,581.97	520,619.90
2	70	897.24	210,750.72	520,690.09

BENCH MARKS				
NO.	STA.	DESCRIPTION	OFFSET	ELEV.
100	5+27	SPIKE IN FENCEPOST	59.22' LT	887.91

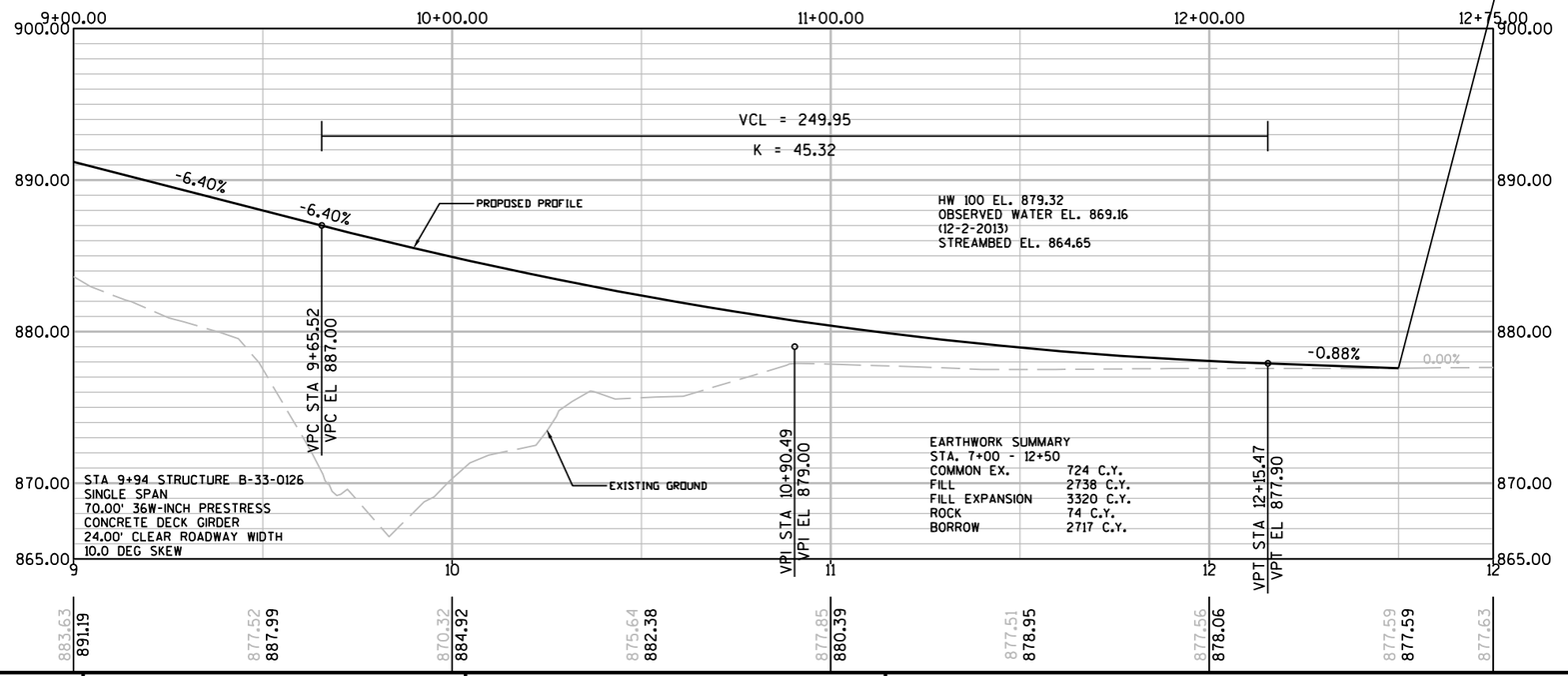


PROJECT NO: 5648-00-74	HWY: GANT ROAD	COUNTY: LAFAYETTE	PLAN AND PROFILE:	SHEET 10	E



CONTROL POINTS				
NO.	DESCRIPTION	ELEV.	X	Y
1	75	875.72	211,189.76	520,737.95

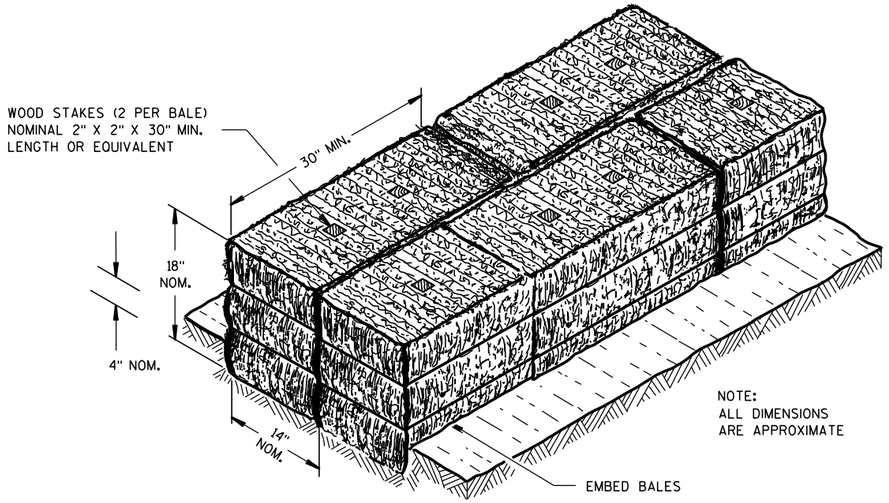
BENCH MARKS				
NO.	STA.	DESCRIPTION	OFFSET	ELEV.
101	10+22	NORTHWEST WINGWALL	31.29' LT	879.07
102	11+35	SPIKE IN FENCEPOST	19.98' RT	876.75



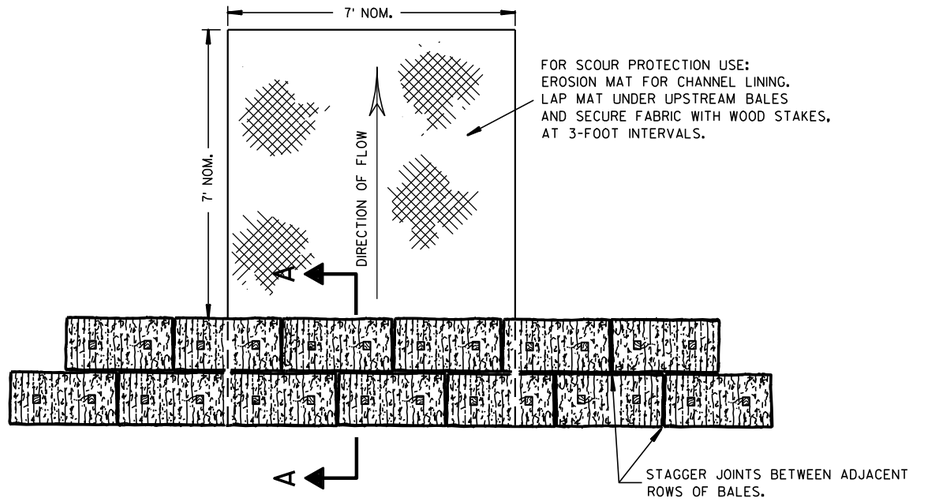
PROJECT NO:5648-00-74	HWY: GANT ROAD	COUNTY: LAFAYETTE	PLAN AND PROFILE:	SHEET 11	E

Standard Detail Drawing List

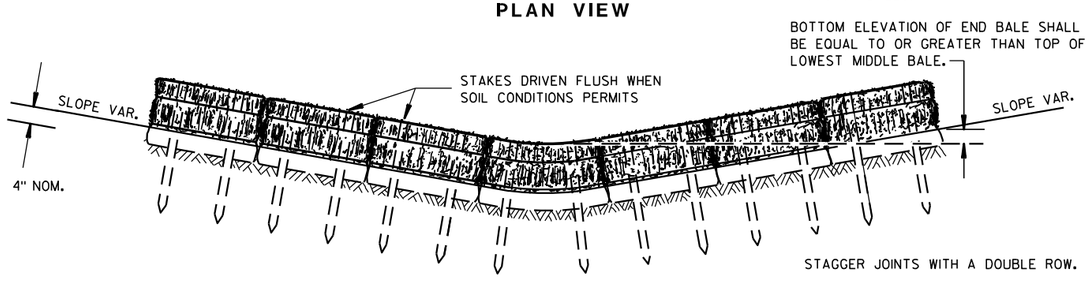
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
15A01-11	MARKER POST FOR RIGHT-OF-WAY
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES



SECTION A-A



PLAN VIEW



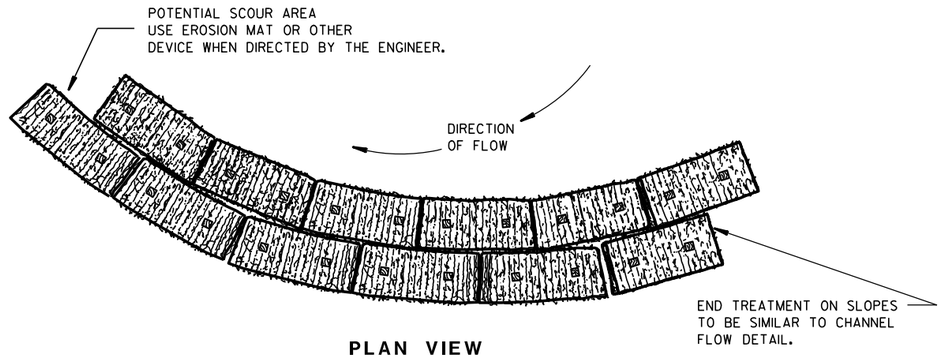
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

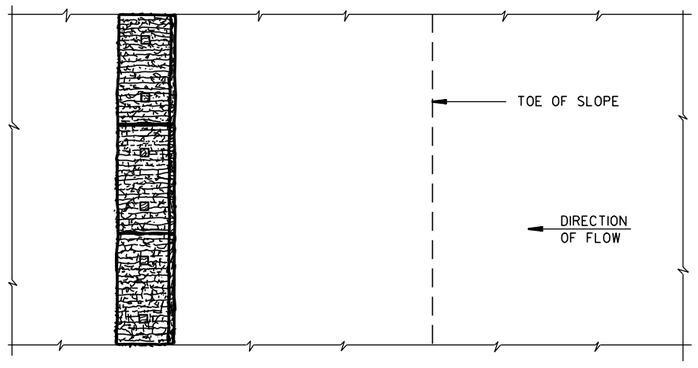
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

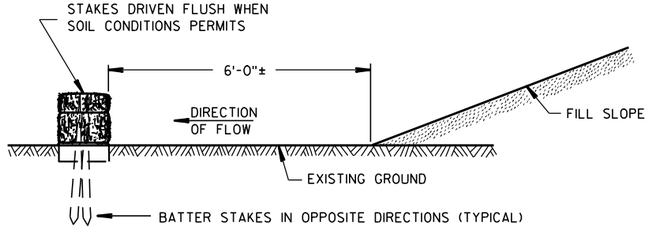


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

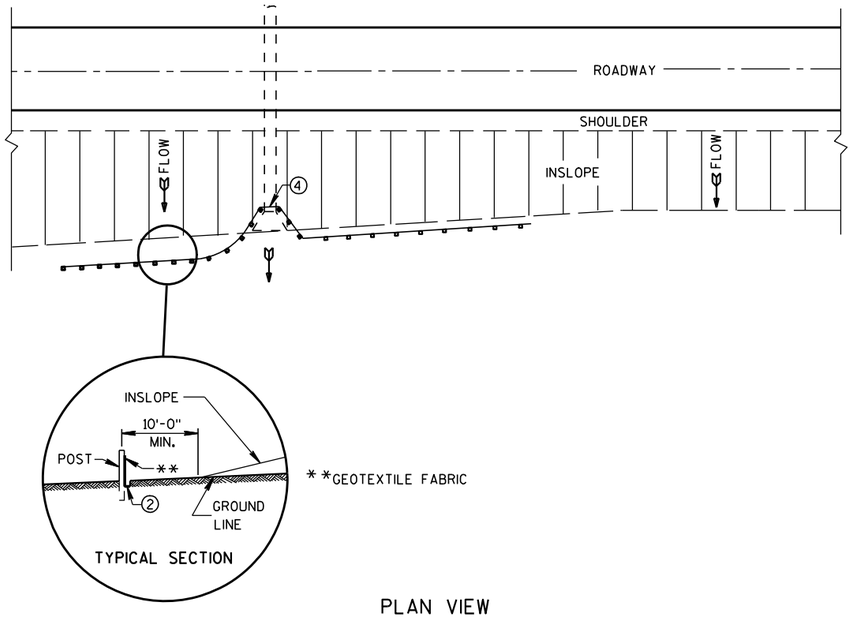
FHWA

6

S.D.D. 8 E 8-3

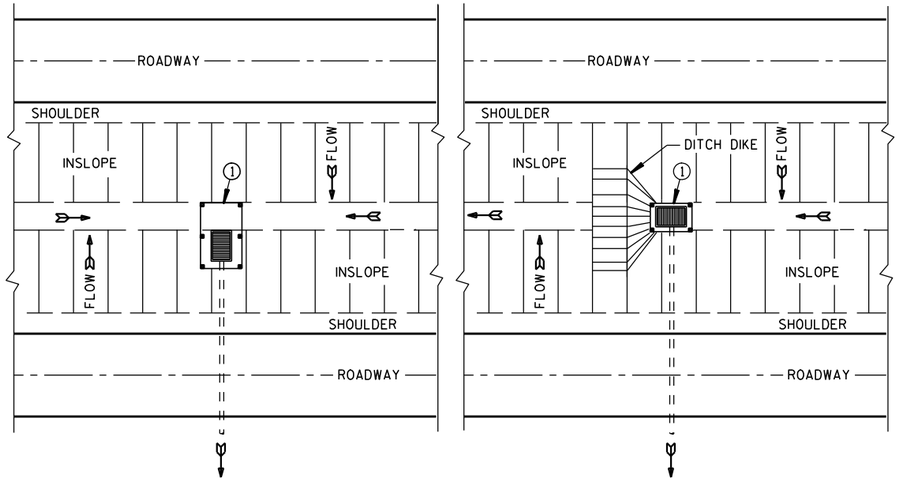
6

S.D.D. 8 E 8-3



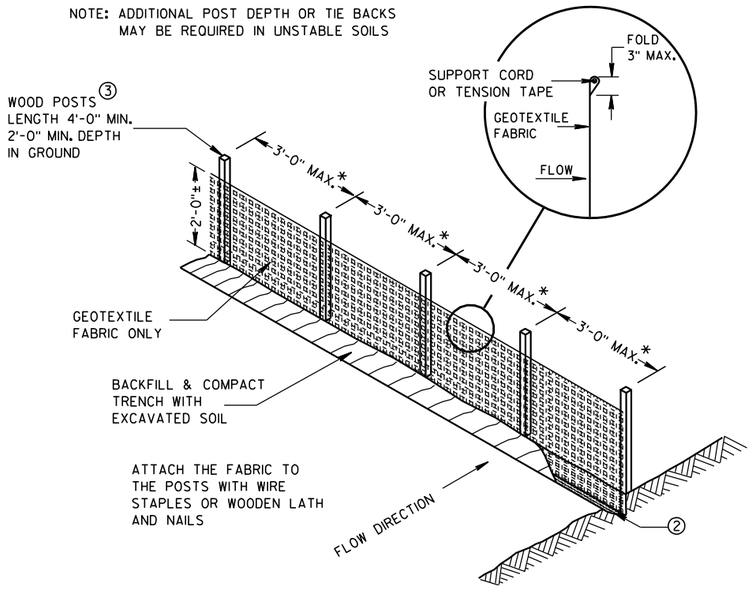
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



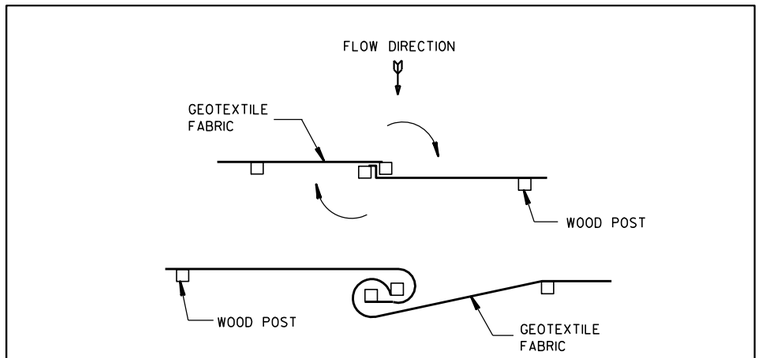
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

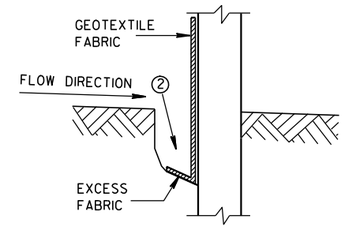


JOINING TWO LENGTHS OF SILT FENCE 5

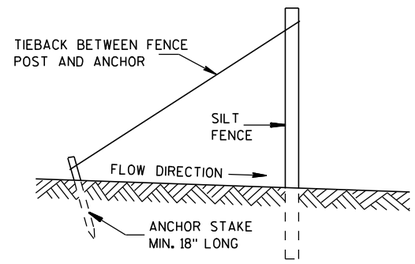
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

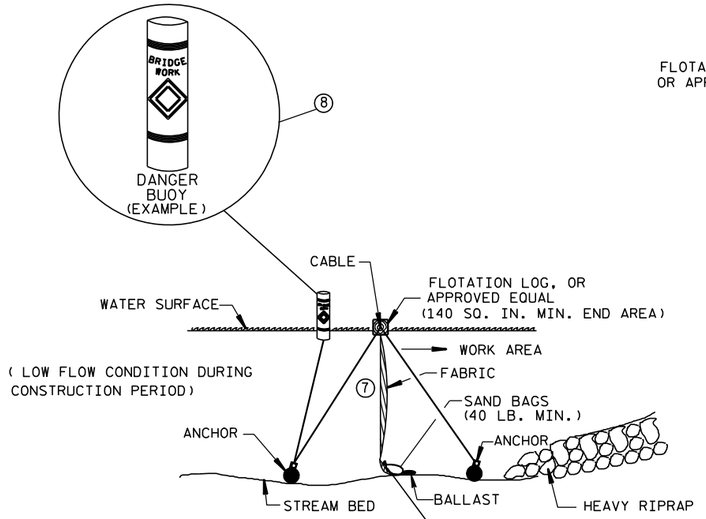
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

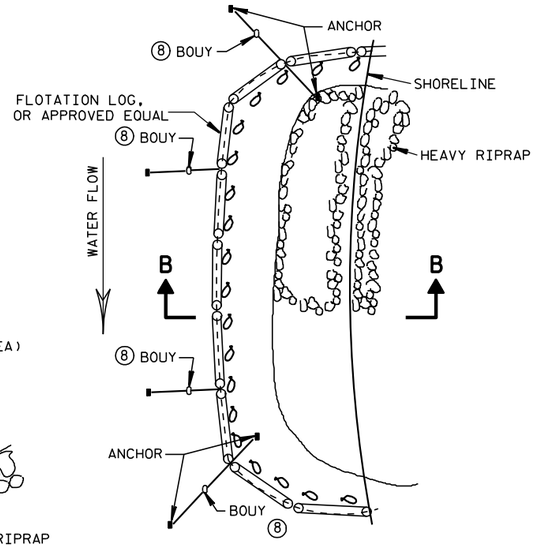
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

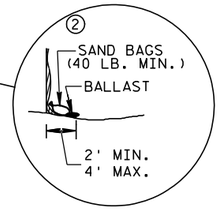
S.D.D. 8 E 9-6

S.D.D. 8 E 9-6

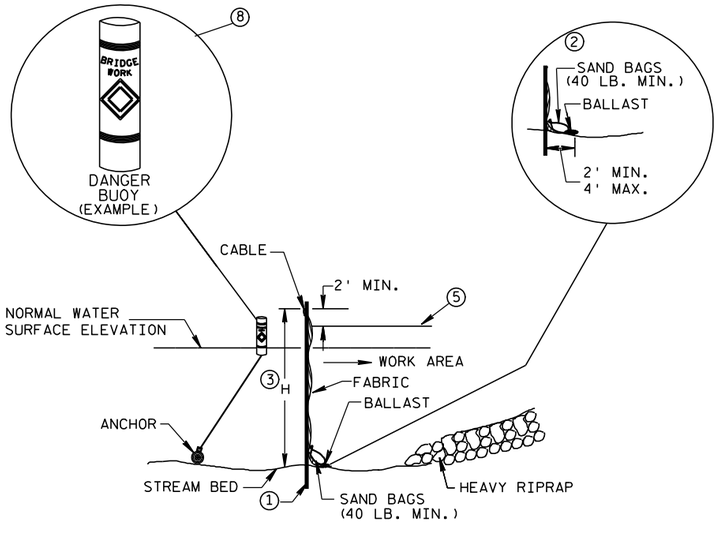


SECTION B-B

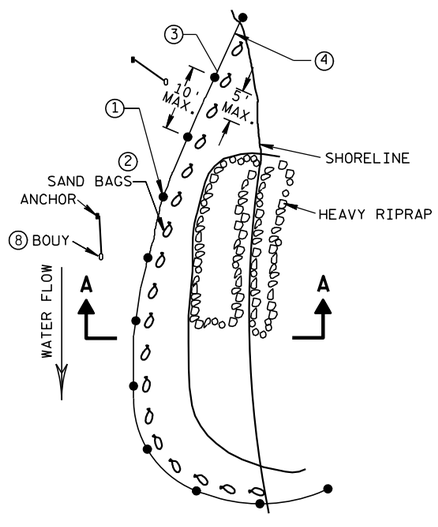




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

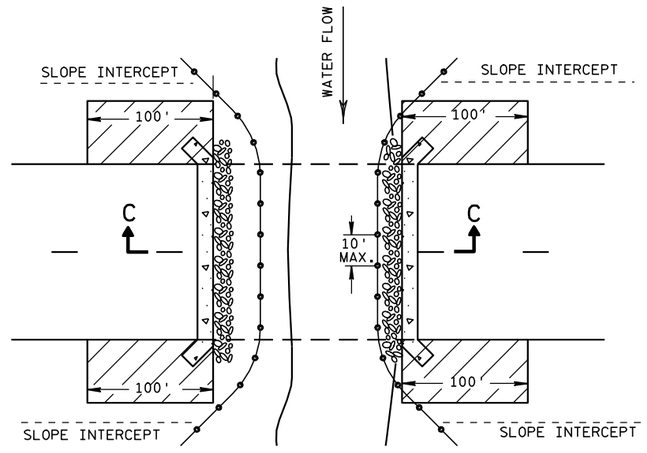
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

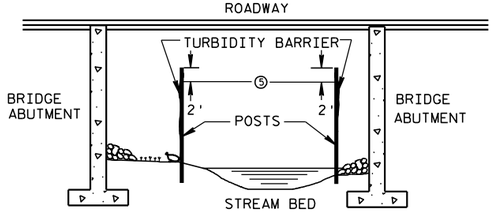
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



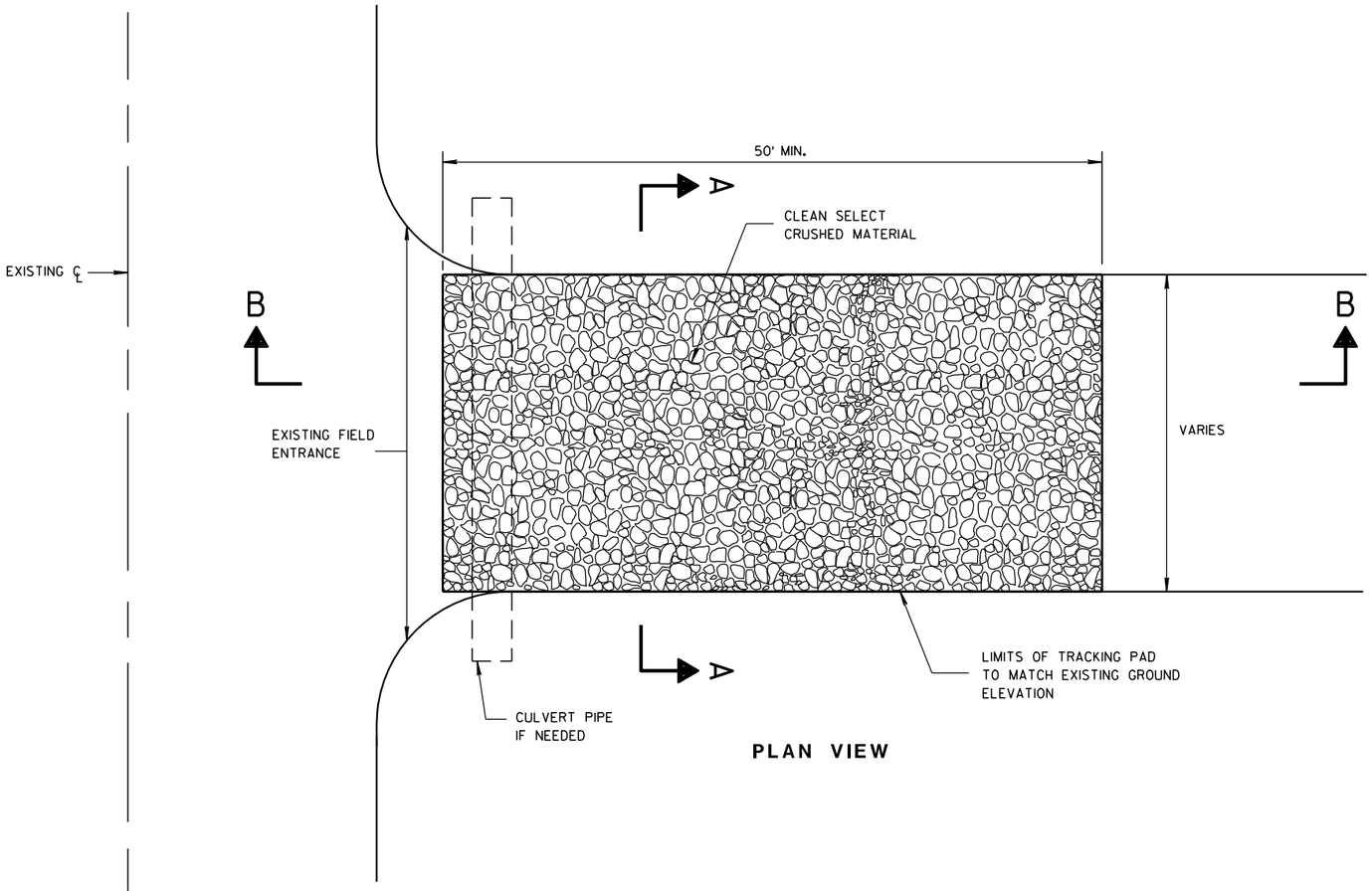
SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

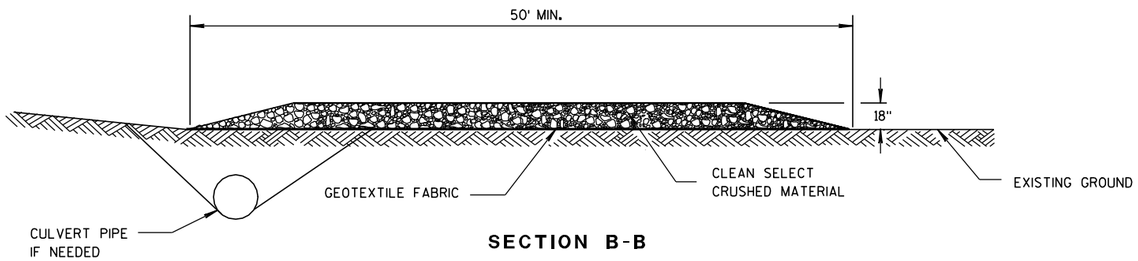
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW



SECTION B-B

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

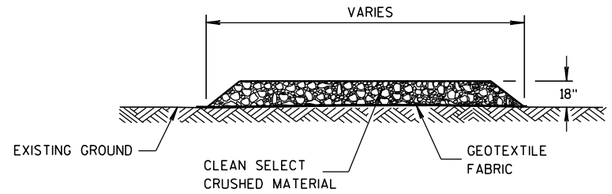
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

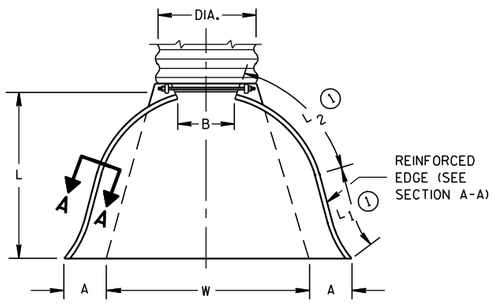
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

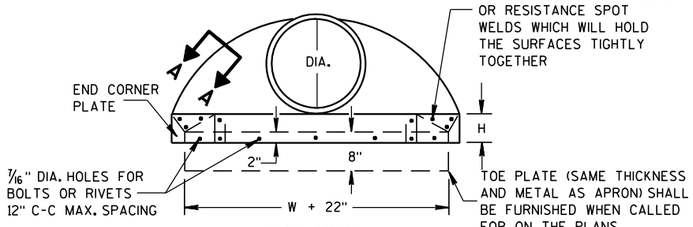
REINFORCED CONCRETE APRON ENDWALLS

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

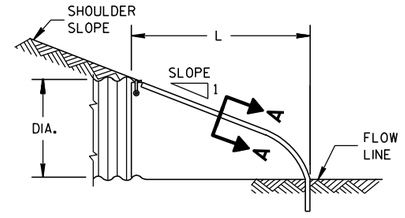
*MINIMUM
**MAXIMUM



PLAN VIEW

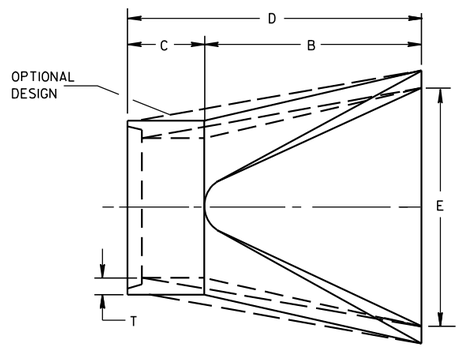


END VIEW

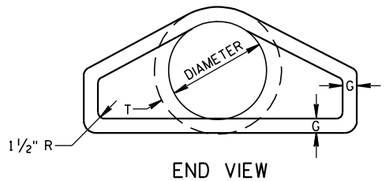


SIDE ELEVATION

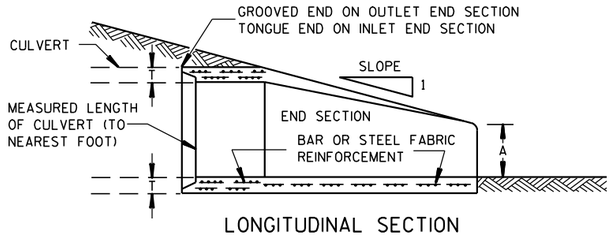
METAL ENDWALLS



PLAN

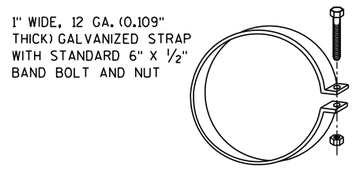


END VIEW



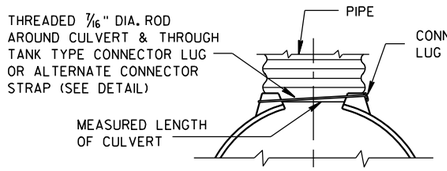
LONGITUDINAL SECTION

CONCRETE ENDWALLS

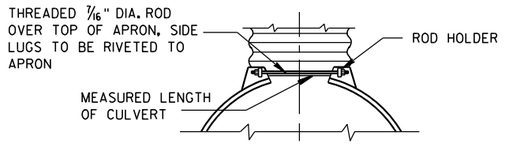


ALTERNATE FOR TYPE 1 CONNECTION

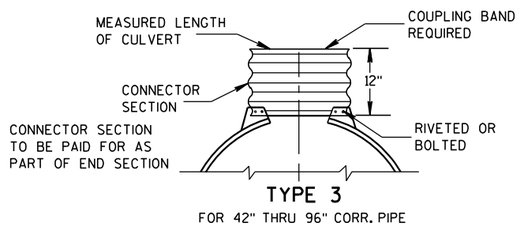
END SECTION CONNECTOR STRAP



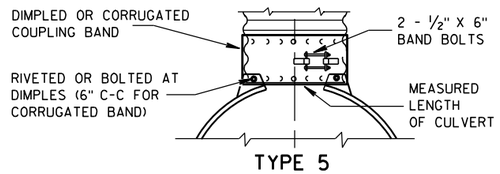
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

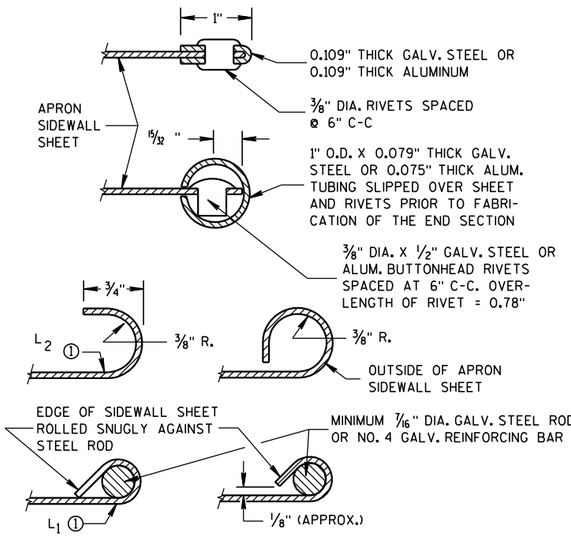
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

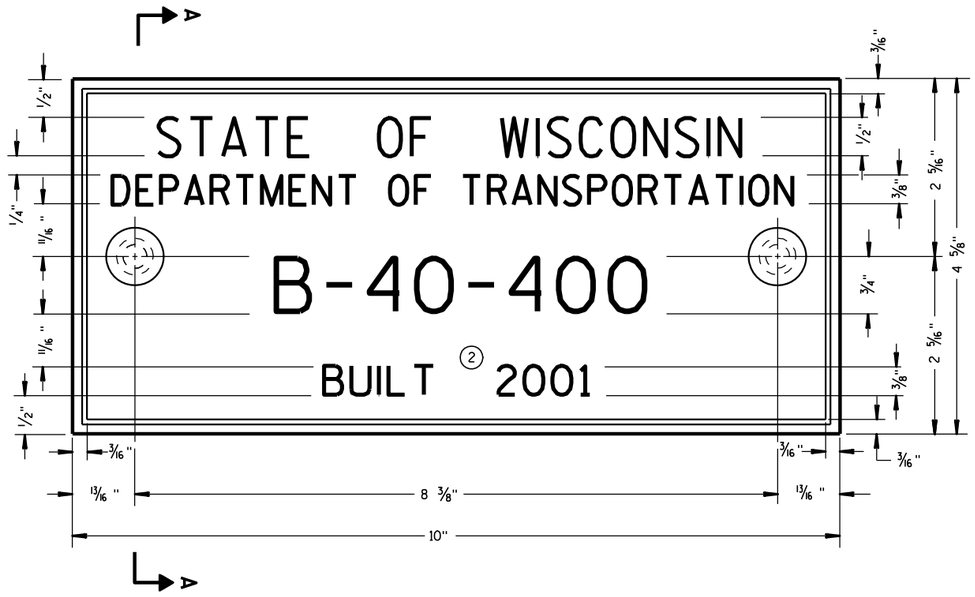
APRON ENDWALLS FOR CULVERT PIPE

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)

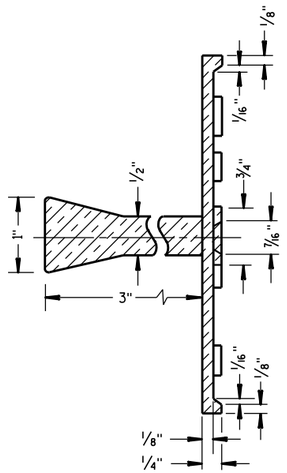
GENERAL NOTES

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.

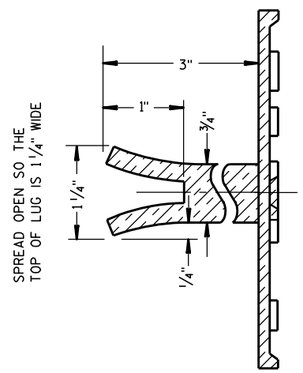
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

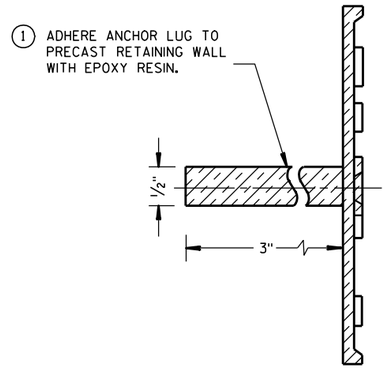
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

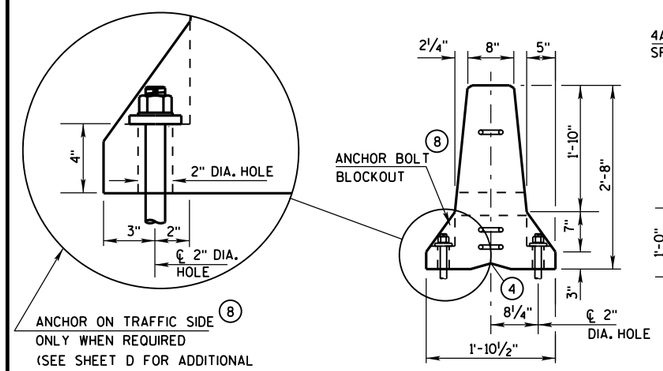
FHWA

6

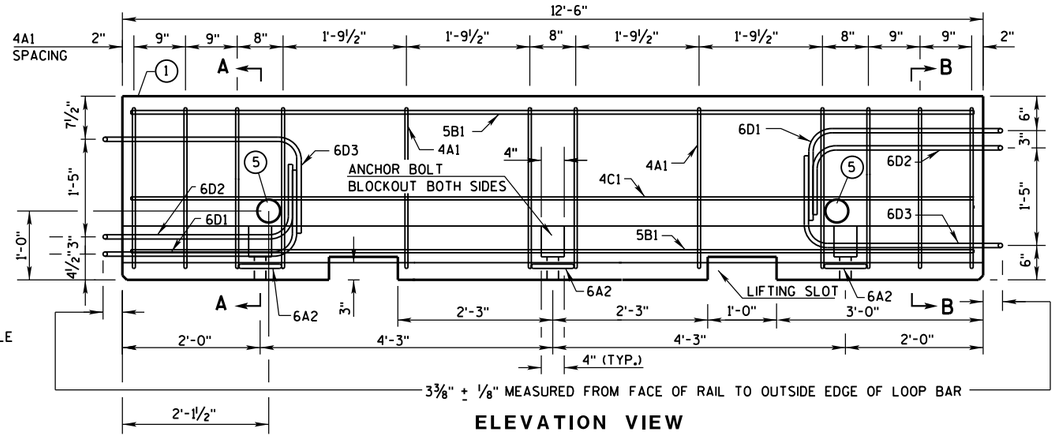
S.D.D. 12 A 3-10

6

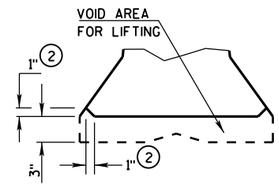
S.D.D. 12 A 3-10



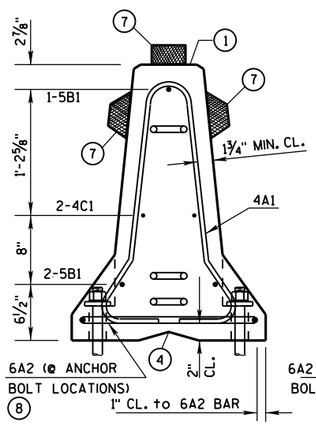
END VIEW



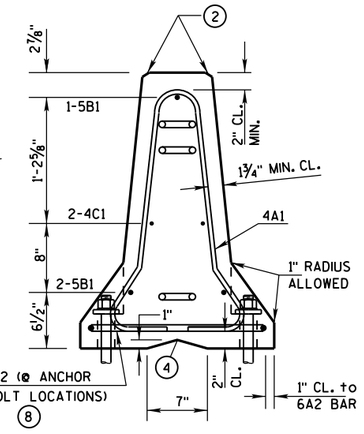
ELEVATION VIEW



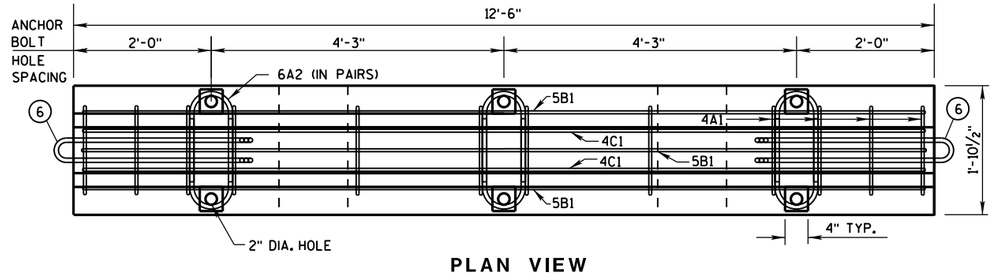
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)



PLAN VIEW

DETAILS OF BARRIER SECTION

GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(a) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

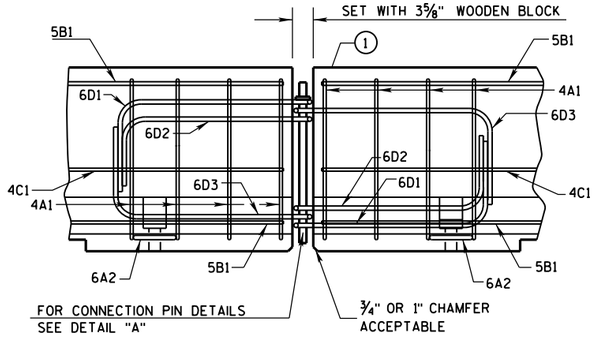
(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

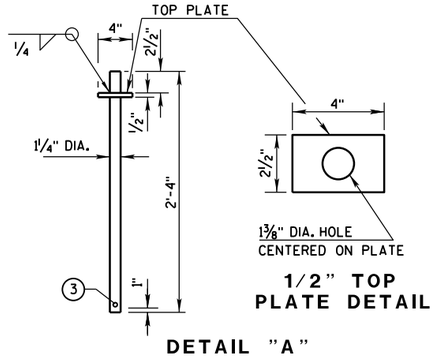
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

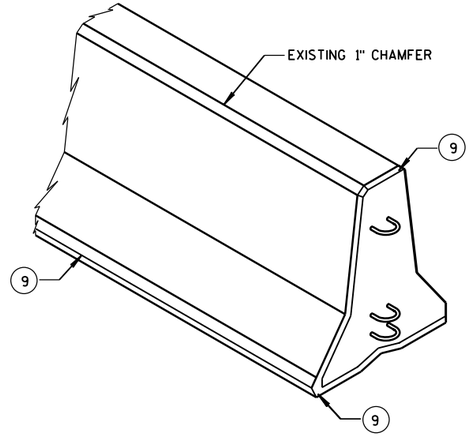


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

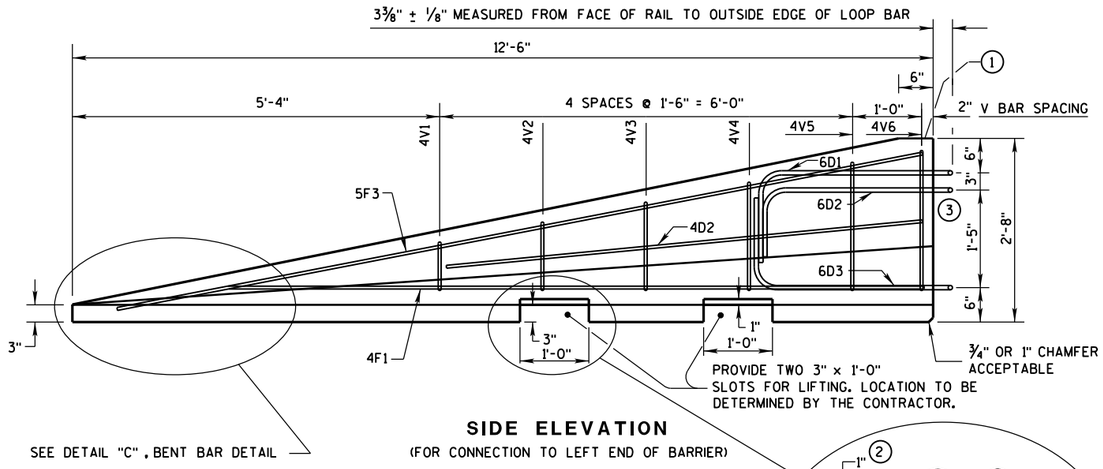
DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



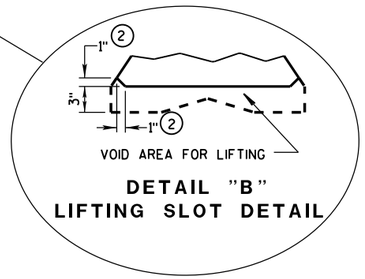
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

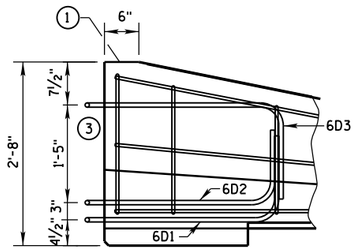
6
S.D.D. 14 B 7-14a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



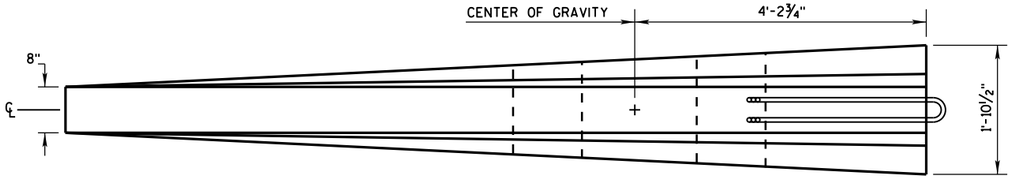
DETAIL "B"
LIFTING SLOT DETAIL



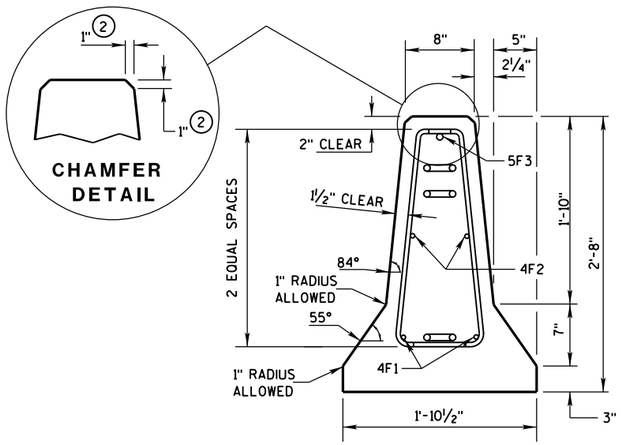
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

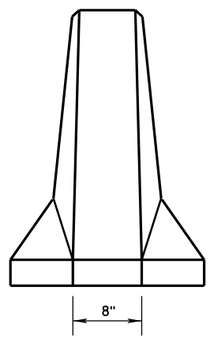
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



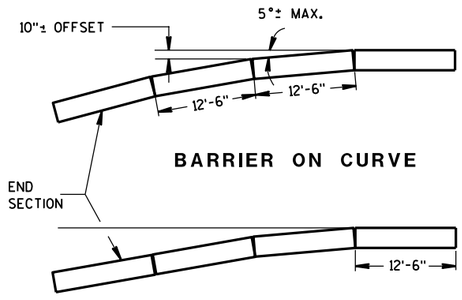
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

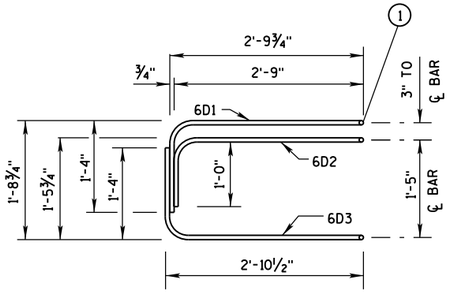
6

S.D.D. 14 B 7-14b

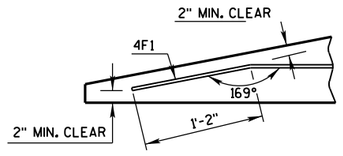
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

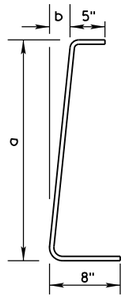
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

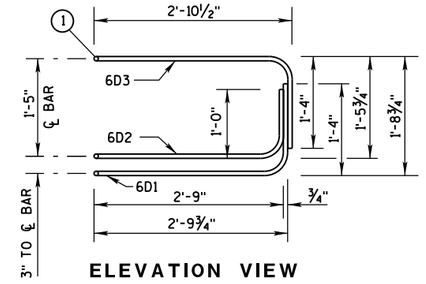
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

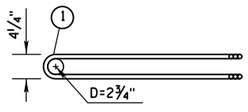
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

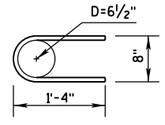
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



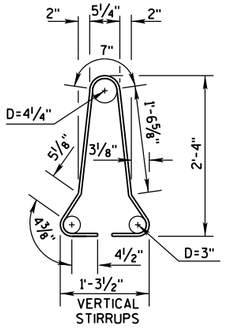
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

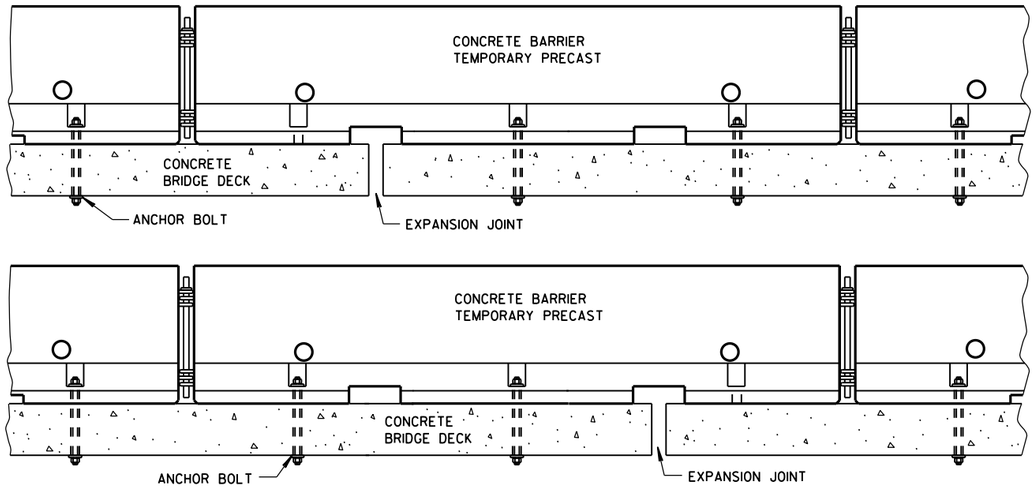
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

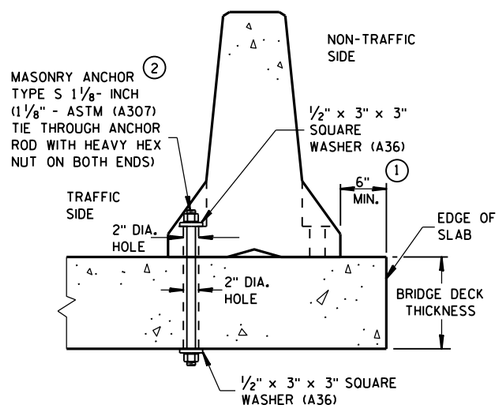
6

S.D.D. 14 B 7-14c



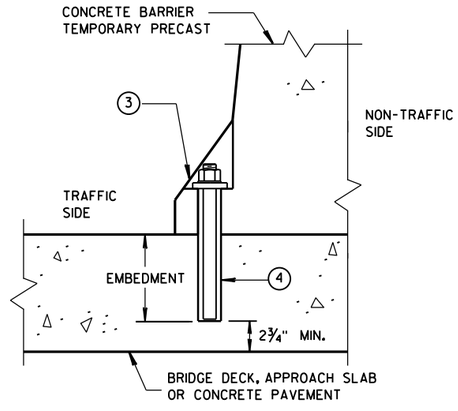
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR ② INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

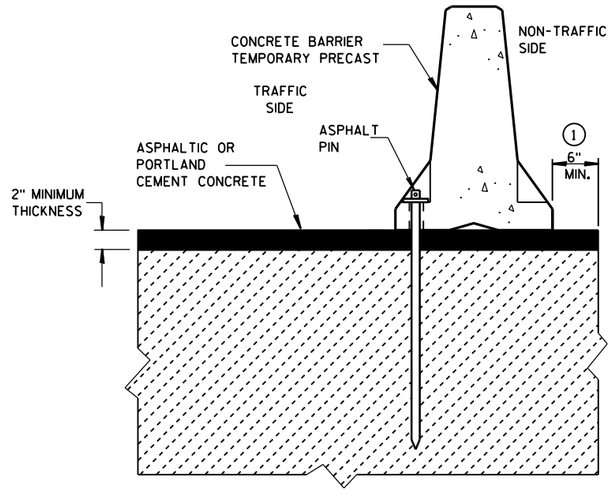
② ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

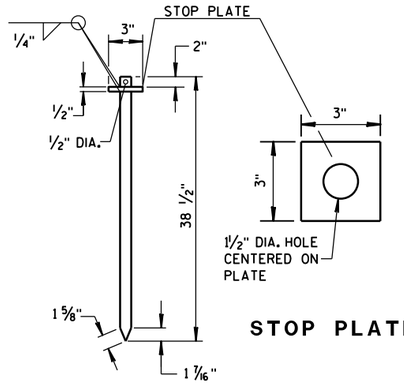
③ 1⅛" DIAMENTER A307 THREADED ROD, ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.

④ ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.



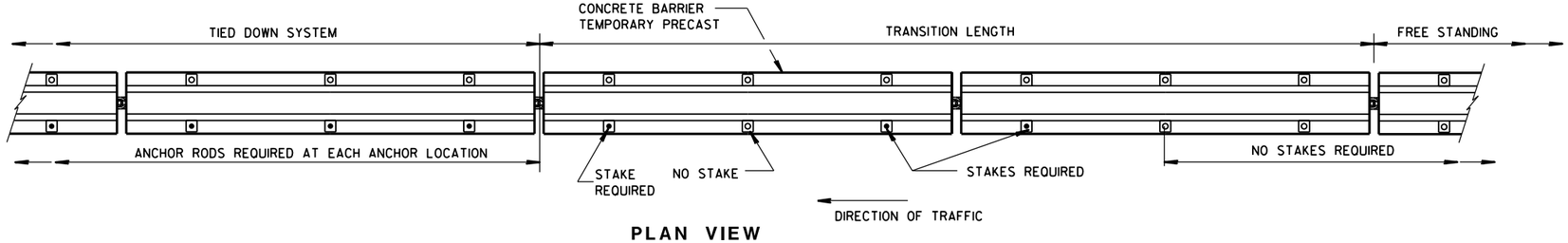
STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

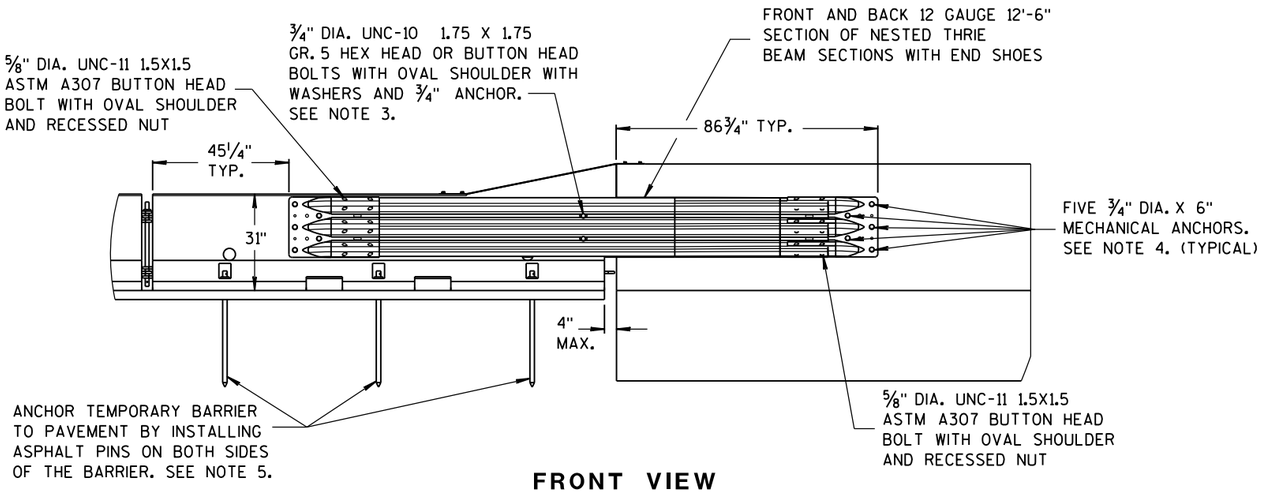
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

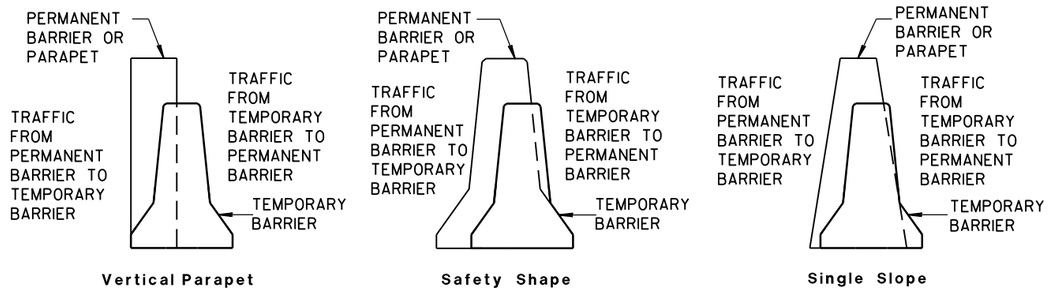
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14d



FRONT VIEW



TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

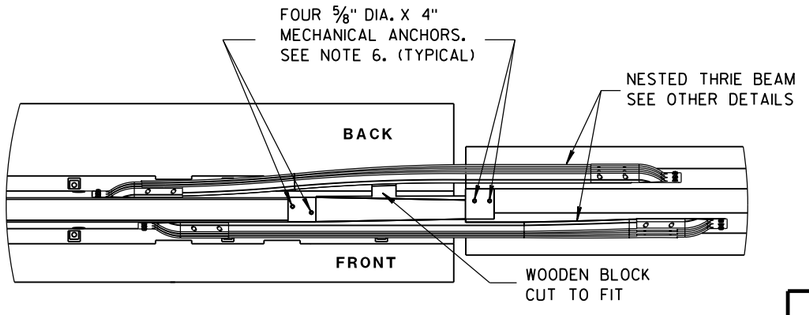
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

BACK VIEW

FRONT VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

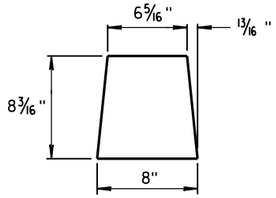
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

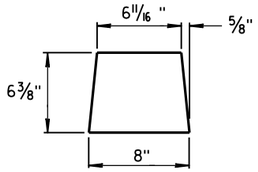
S.D.D. 14 B 7-14e

6

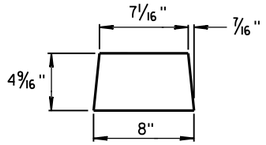
S.D.D. 14 B 7-14e



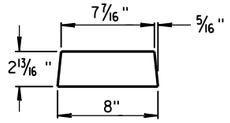
GUSSET 1



GUSSET 2

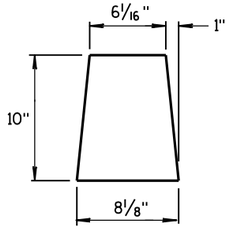


GUSSET 3

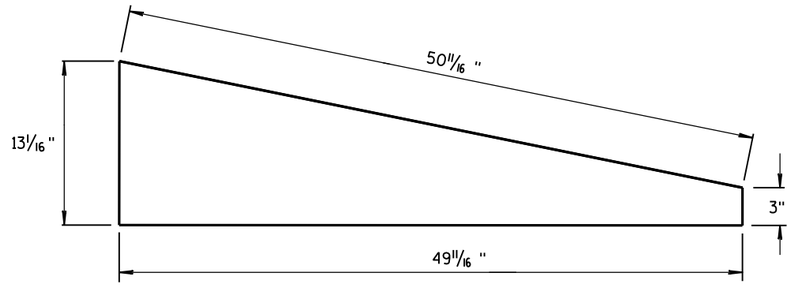


GUSSET 4

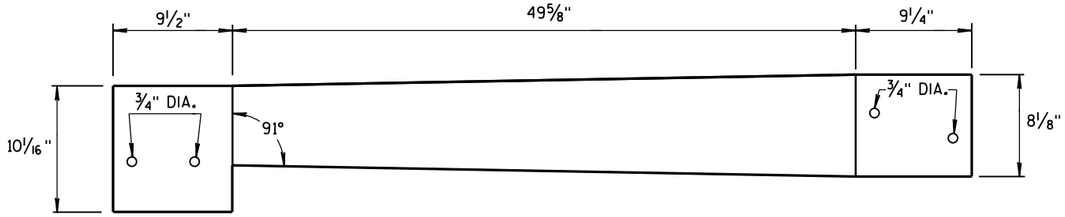
GUSSETS

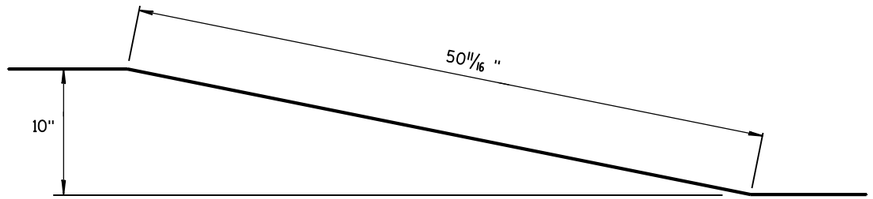


END PLATE



SIDE PLATE

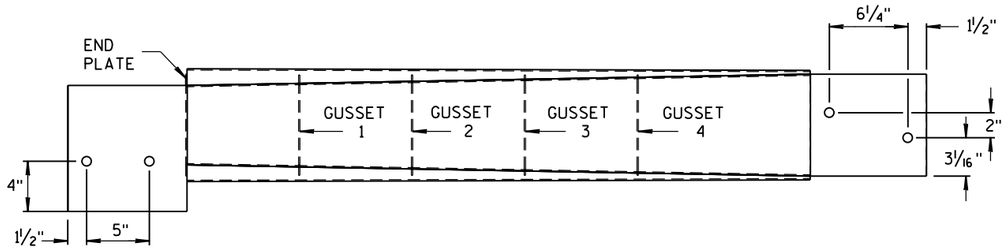


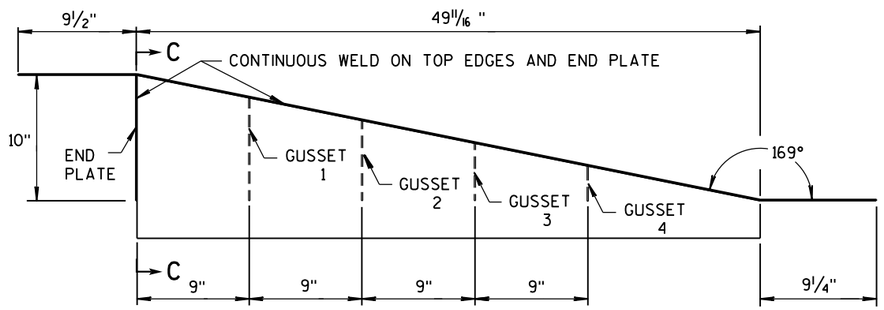


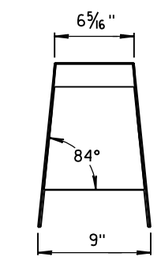
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

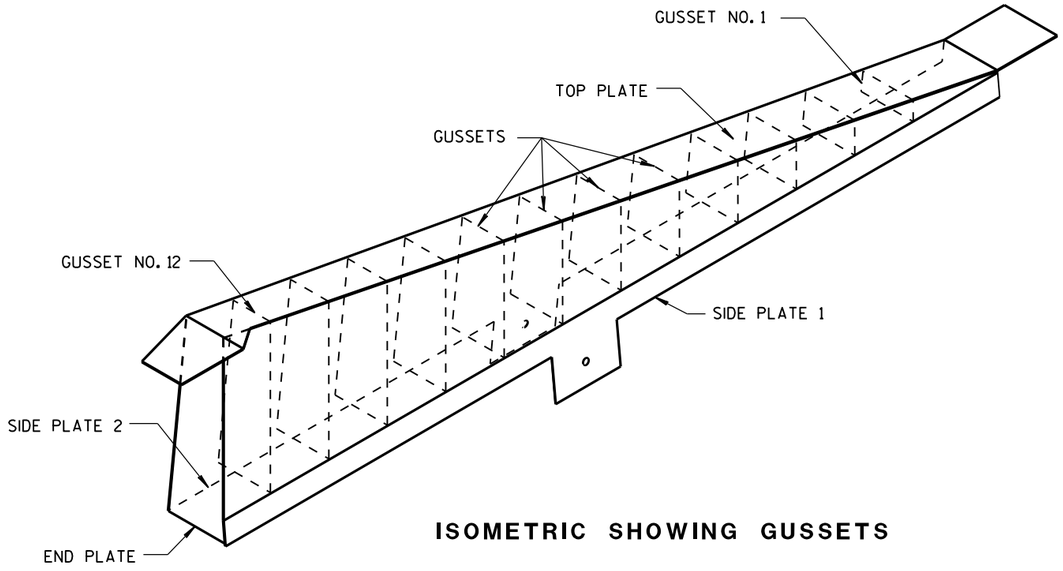
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

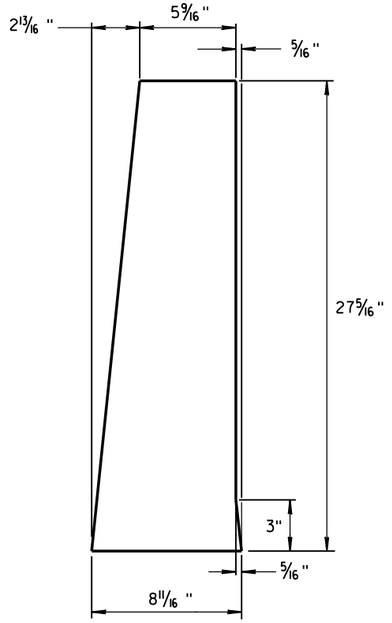
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-14f

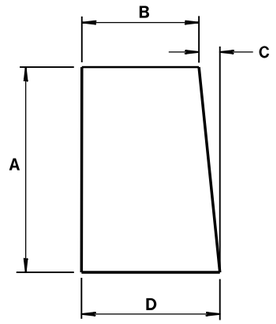


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



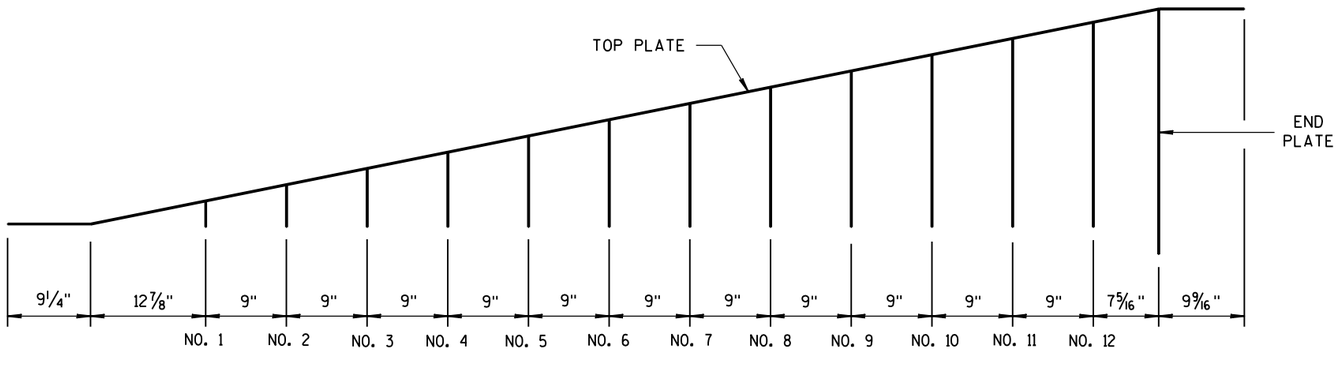
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

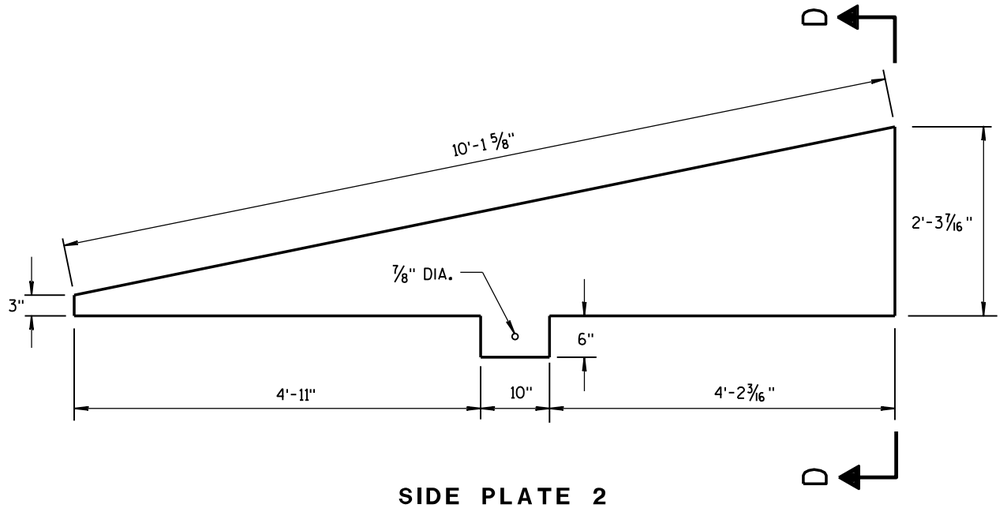
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

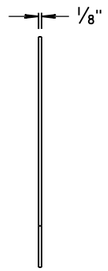
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

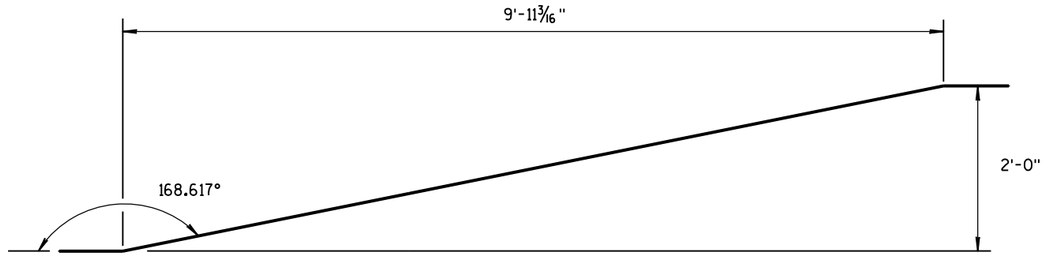
S.D.D. 14 B 7-14g



SIDE PLATE 2

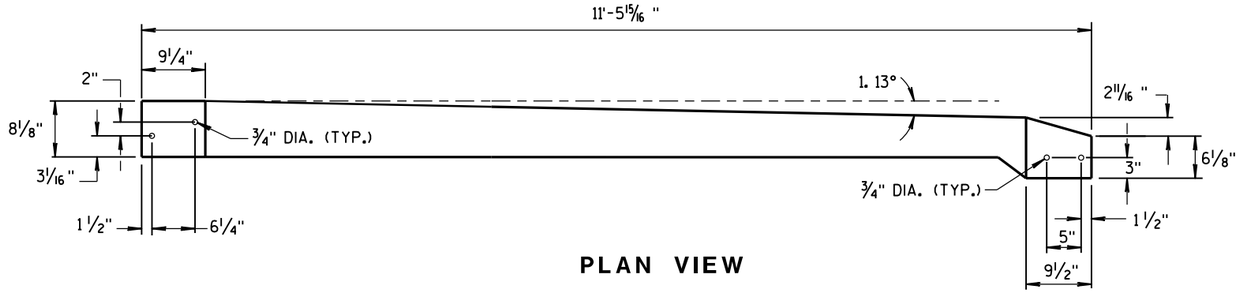


END VIEW



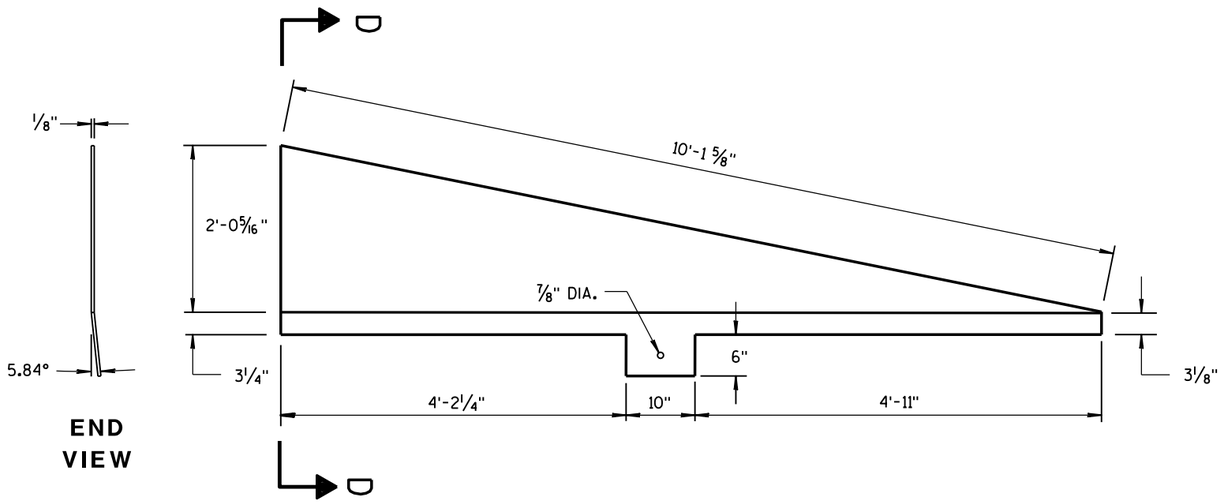
SIDE VIEW

TOP PLATE



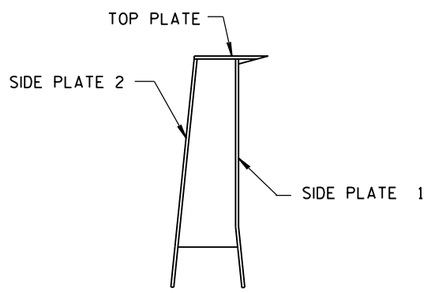
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

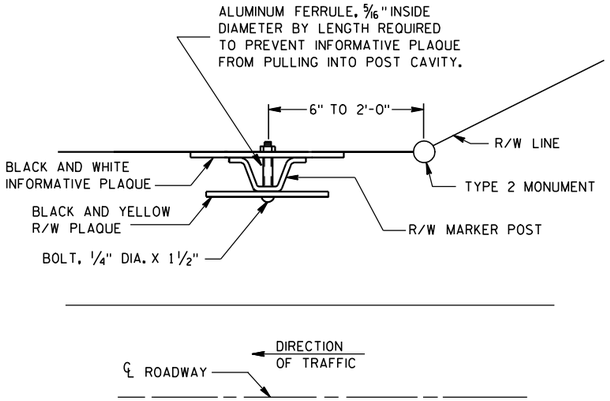
APPROVED
June 2014 — DATE
/S/ Jerry H. Zoaa — ROADWAY STANDARD DEVELOPMENT ENGINEER
FHWA

6

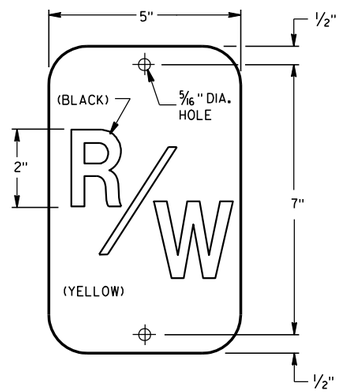
S.D.D. 14 B 7-14h

6

S.D.D. 14 B 7-14h

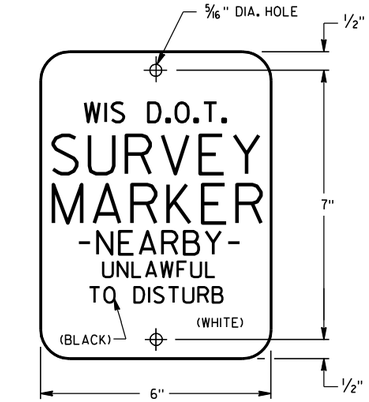


PLAN VIEW



R/W PLAQUE

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



INFORMATIVE PLAQUE

GENERAL NOTES

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

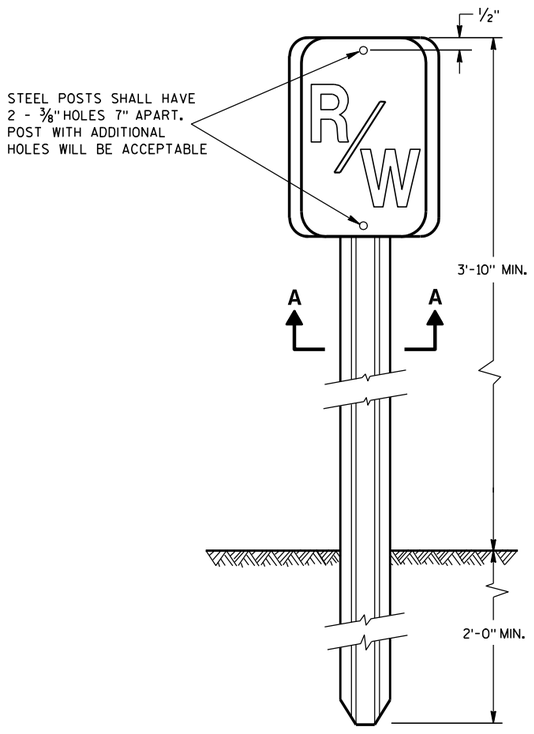
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

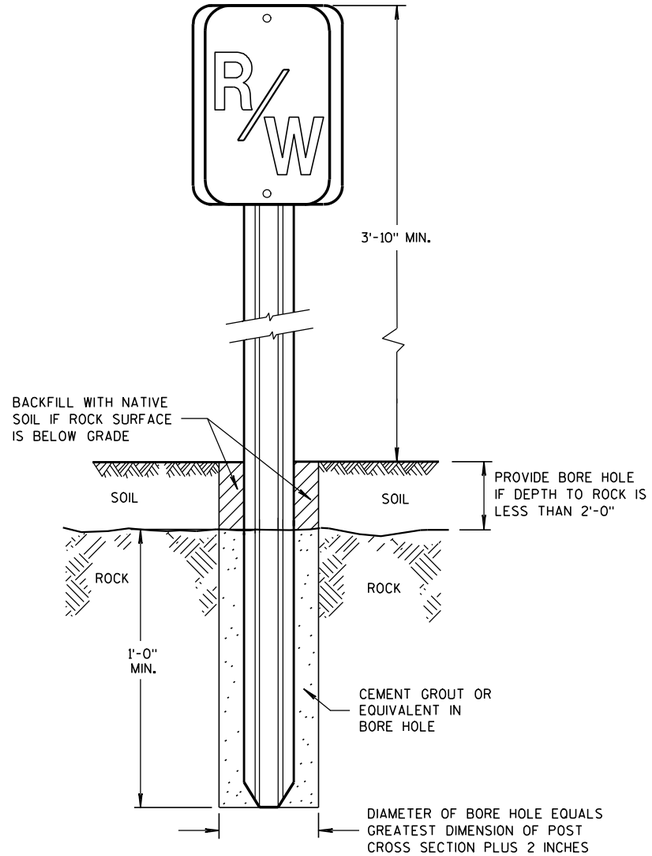
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

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

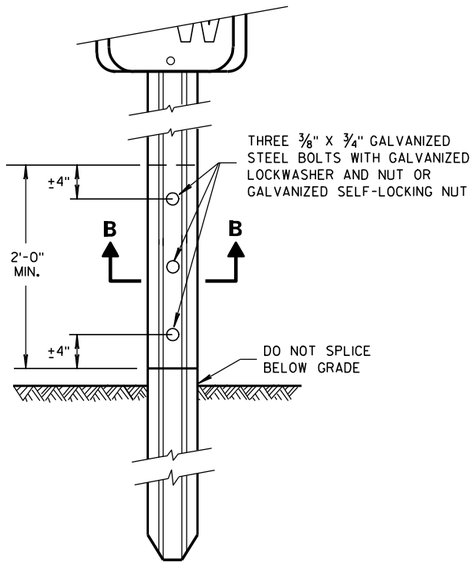
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



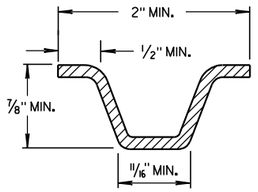
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

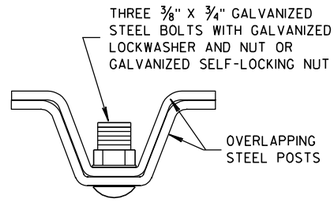


FRONT VIEW
SPLICE DETAIL



MIN. WEIGHT 1.12 LB./FT.

SECTION A-A



SECTION B-B

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/27/09 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MAPPING ENGINEER

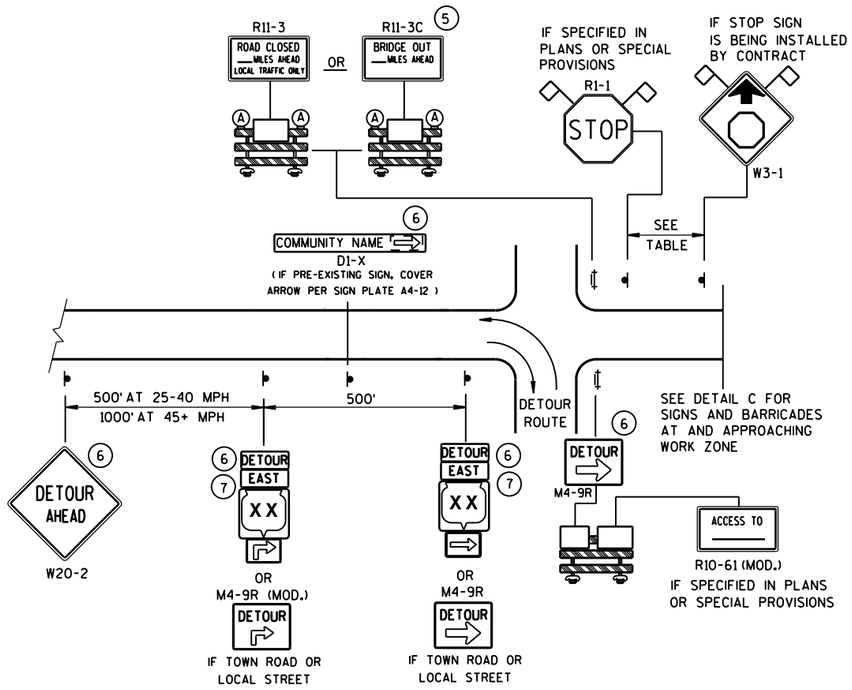
FHWA

6

S.D.D. 15 A 1-11

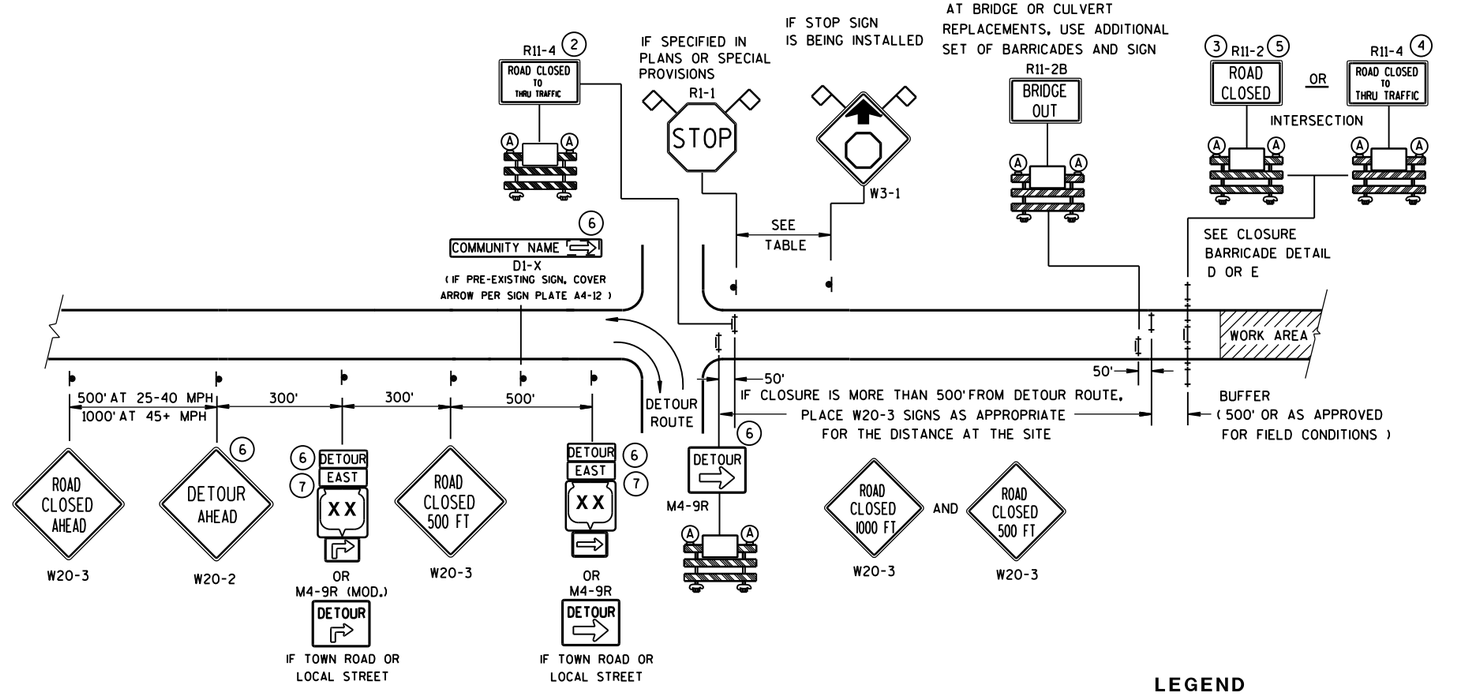
6

S.D.D. 15 A 1-11



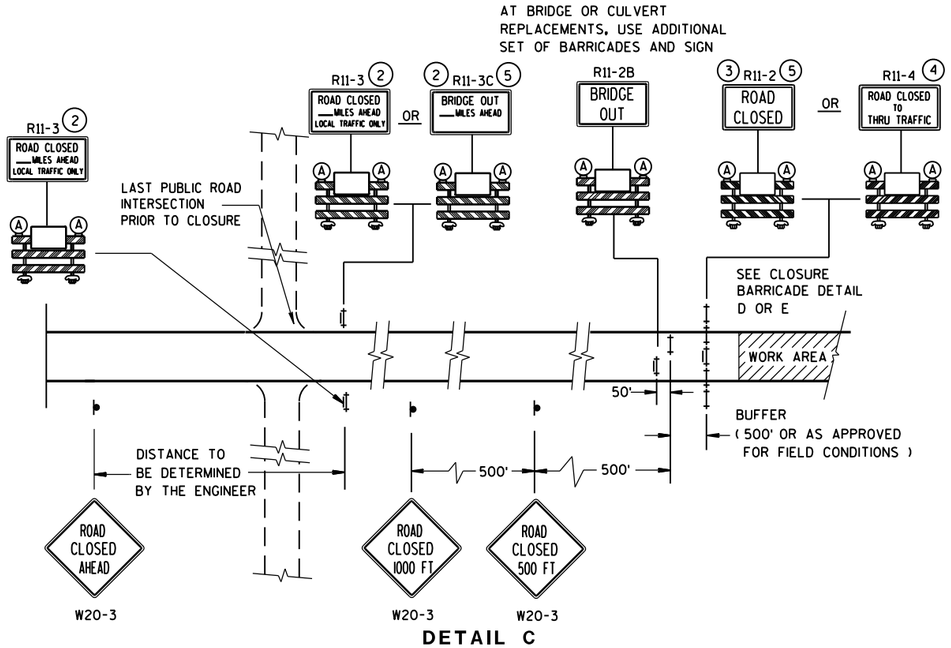
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

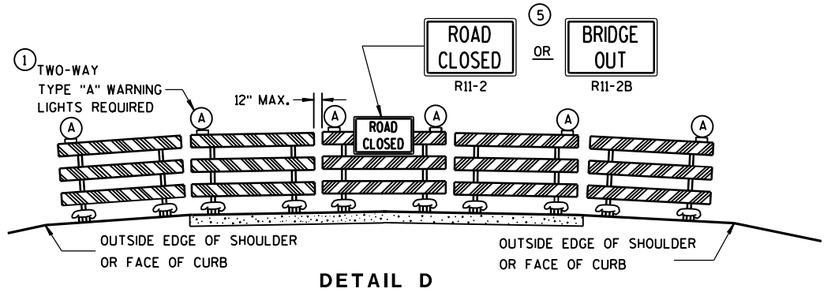
8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

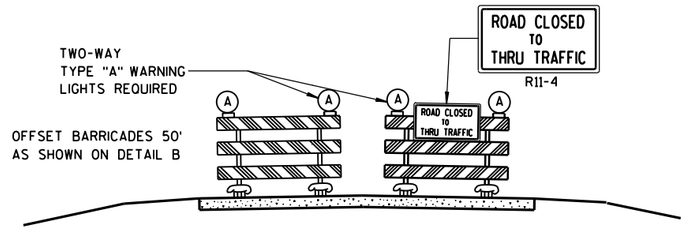
S.D.D. 15 C 2-5a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)
- M05-1 AND M06-1 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 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 LANE 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 MAINLINE CLOSURES

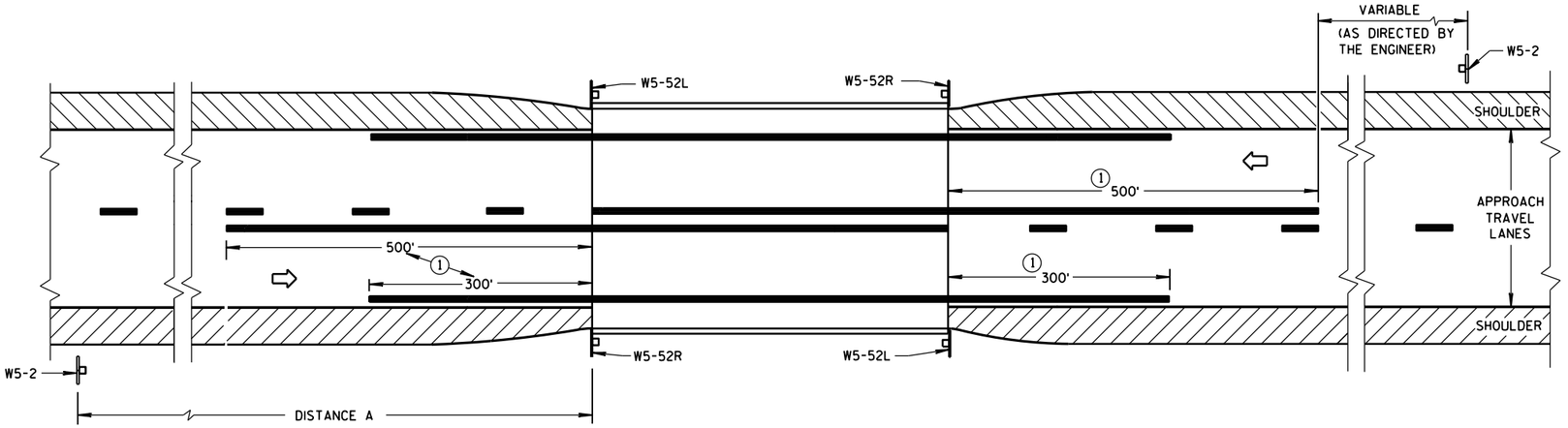
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN

FHWA

6

S.D.D. 15 C 2-5b



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.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

(1) MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

(2) FACE OF OBJECT MARKERS W5-52R, AND W5-52L SHALL BE COVERED WITH TYPE F REFLECTIVE SHEETING.

(3) LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.

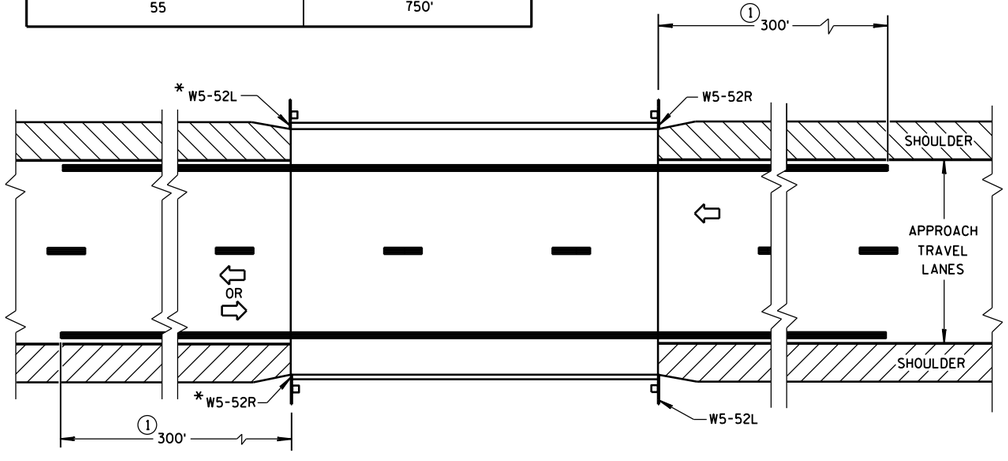
DISTANCE TABLE

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

SITUATION 1

WARRANTING CRITERIA:

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

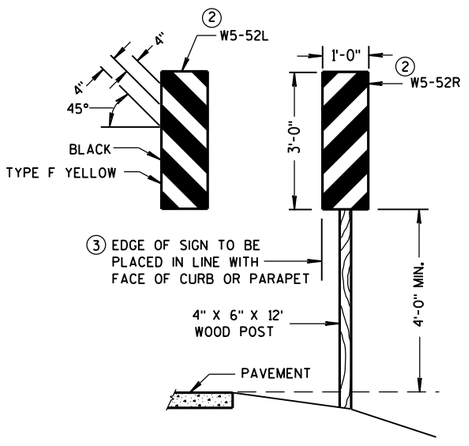


*OMIT ON ONE-WAY TRAVELLED WAYS

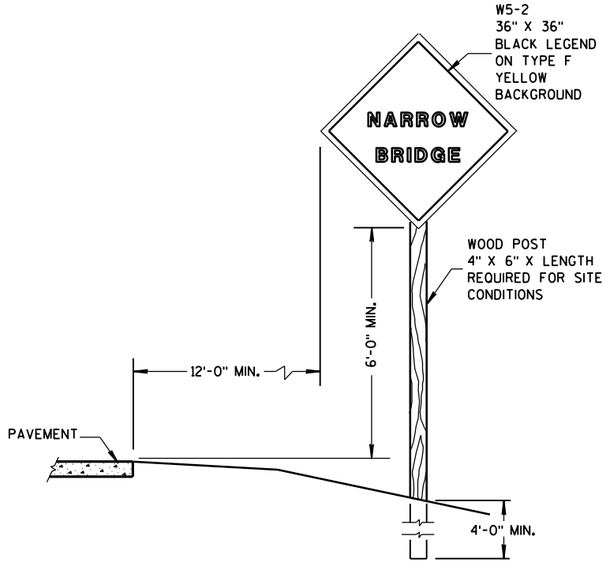
SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING
FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3-2014 DATE

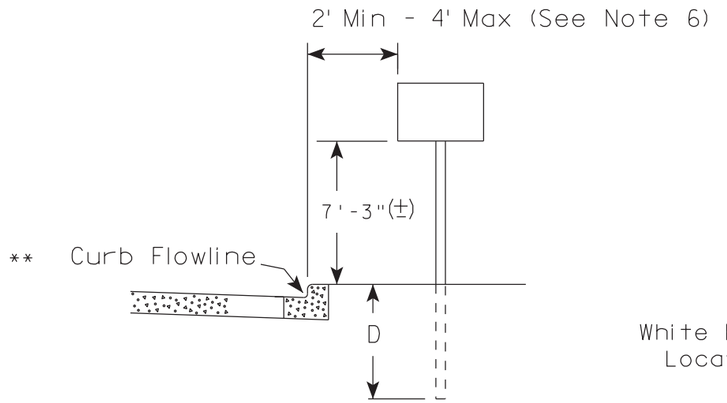
/S/ Travis Feltes STATE TRAFFIC ENGINEER

FHWA

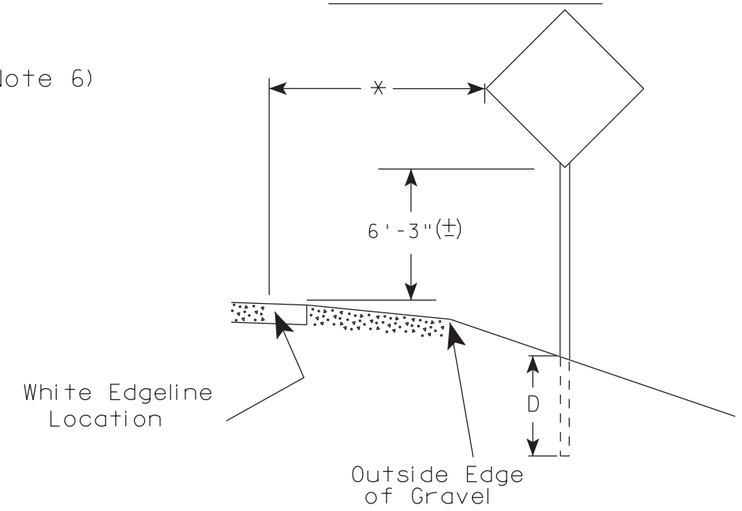
6

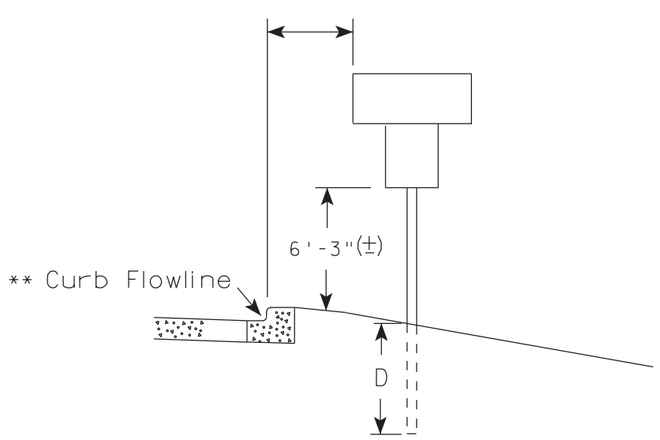
S.D.D. 15 C 6-7

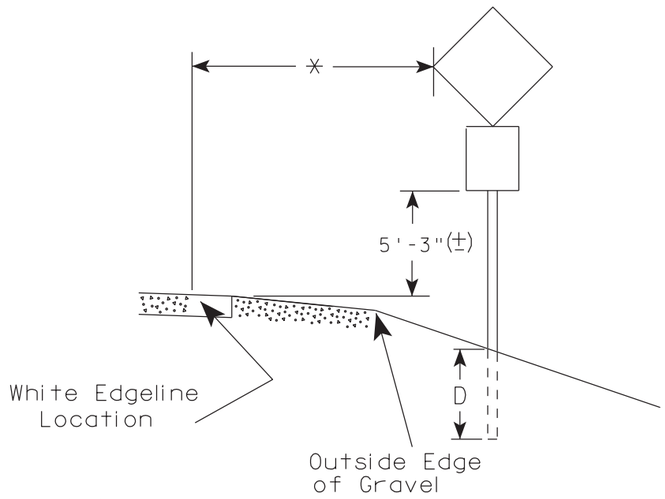
URBAN AREA



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.

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

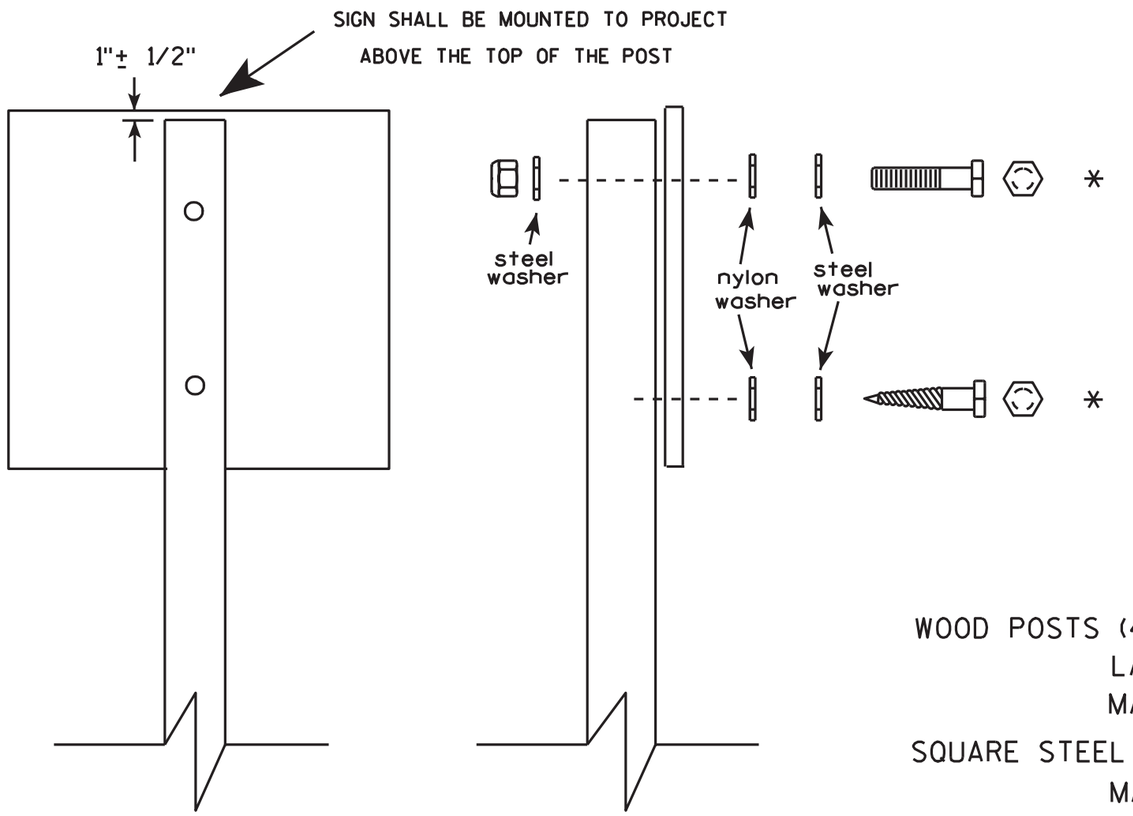
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 30-SEP-2013 13:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



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

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

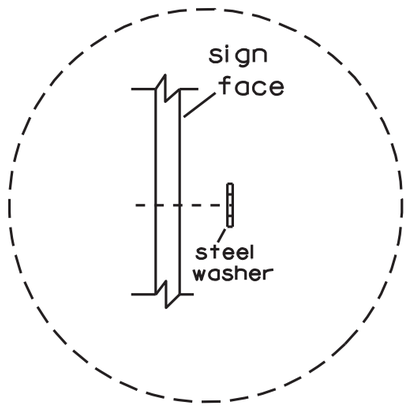
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* 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

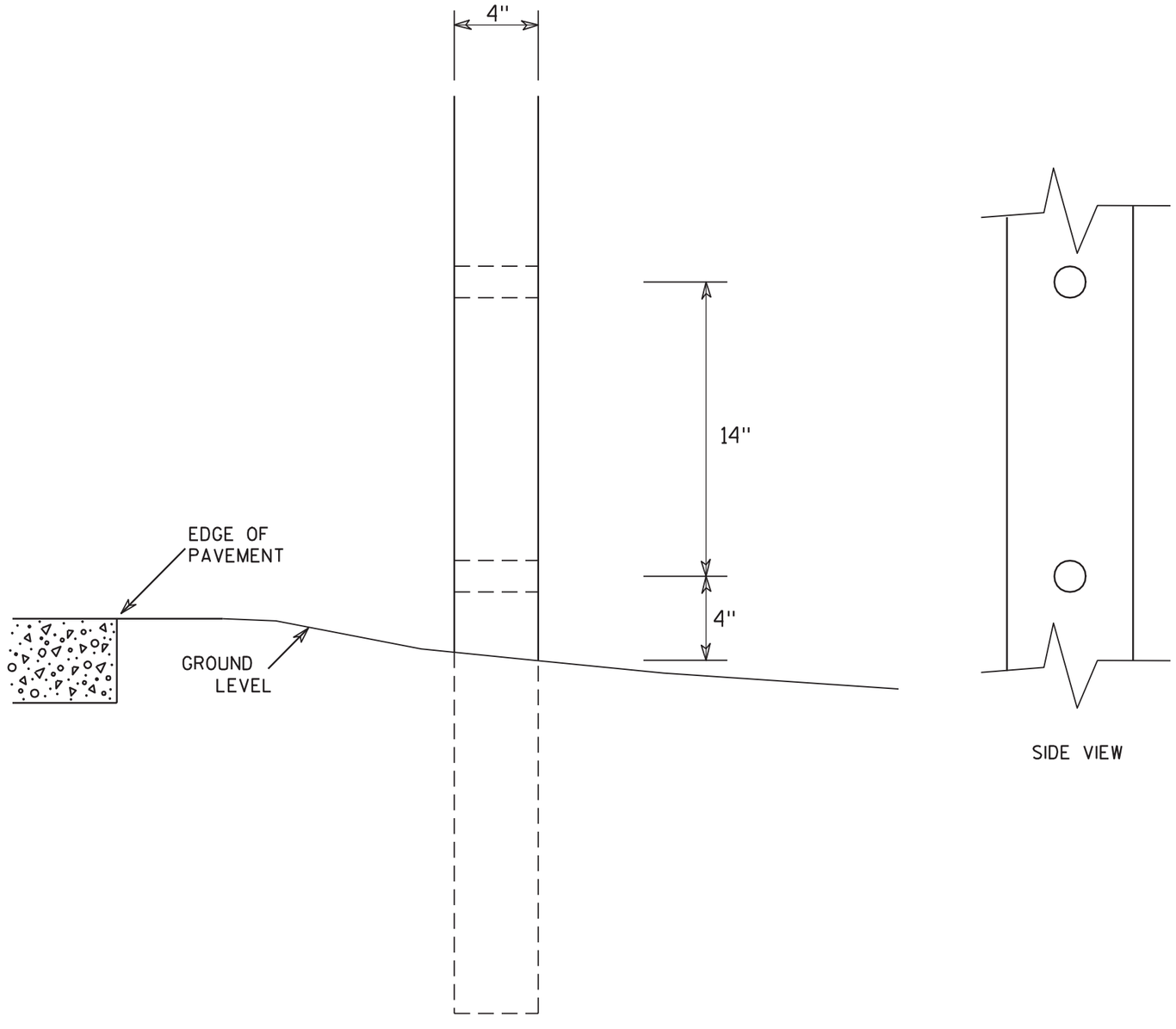
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 32 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

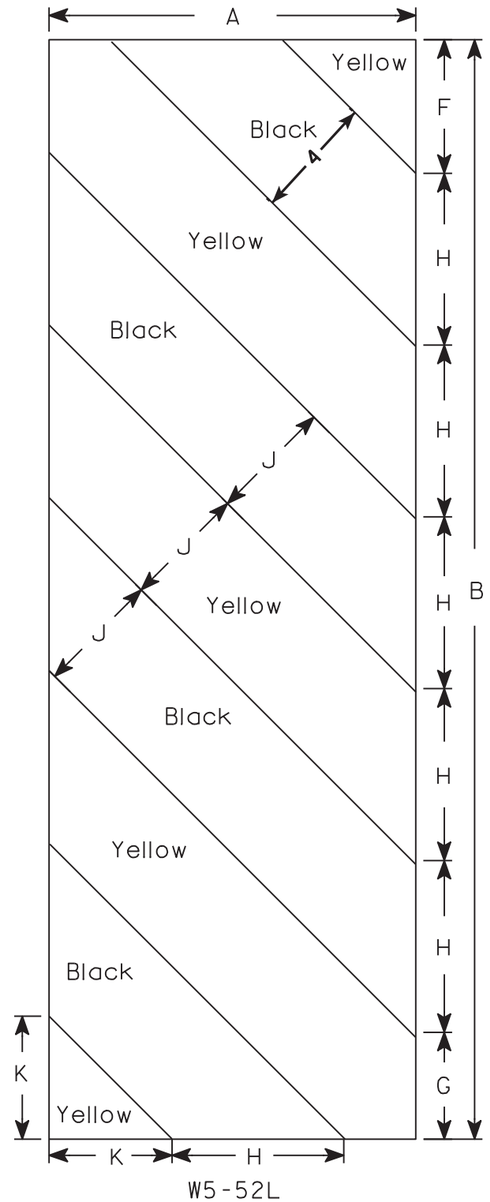
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

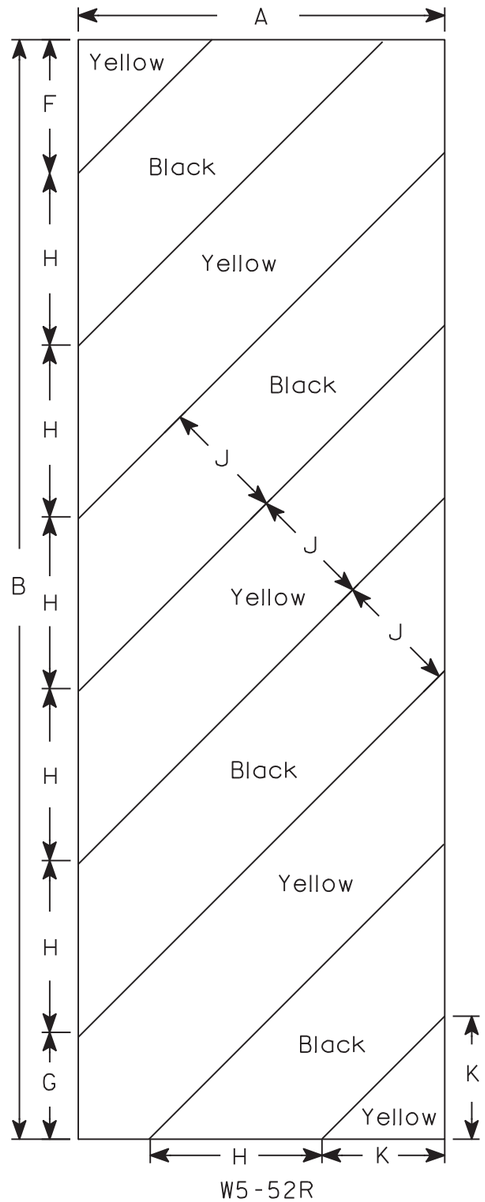
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 33	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

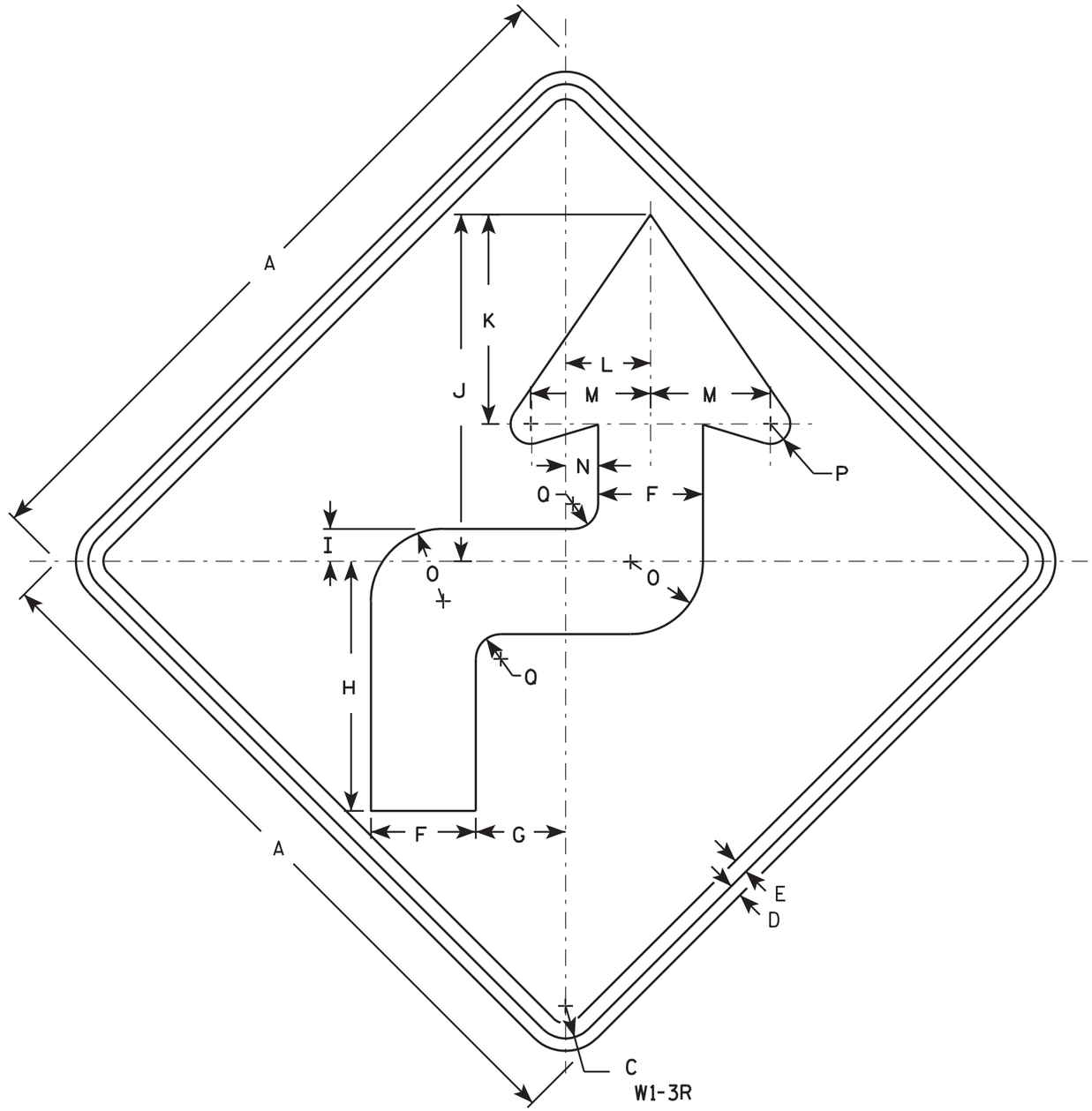
W5-52L & W5-52R

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: 34 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-3L is the same as W1-3R except the arrow is reversed along the vertical centerline.

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	24		1 1/8	3/8	1/2	3 1/2	3	8 3/8	1 1/8	11 5/8	7	2 3/4	4	1 1/8	2 1/2	5/8	7/8										4.0
2S	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2M	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
3	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
4	36		1 5/8	5/8	3/4	5 1/4	6	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

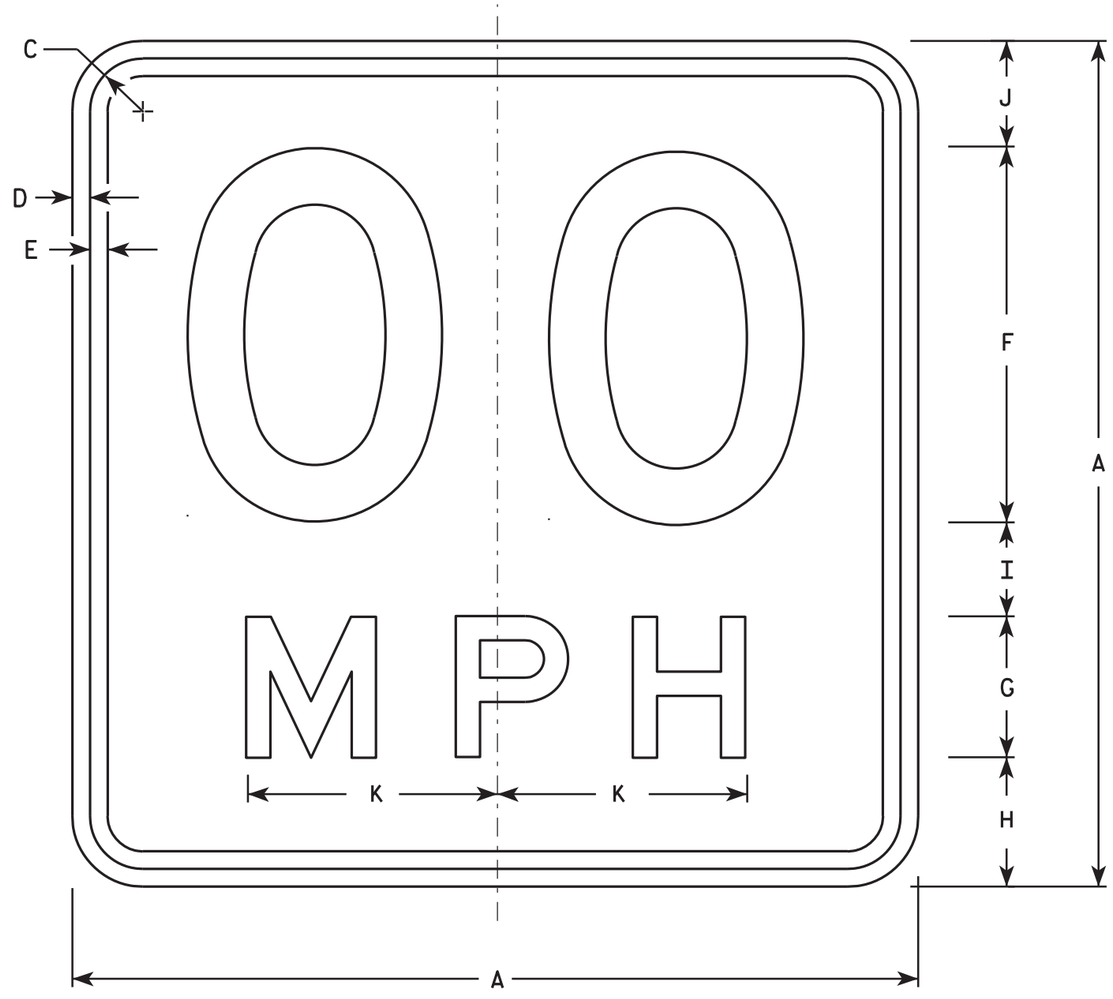
STANDARD SIGN
W1-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-3.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 35 | E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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 - See Note 6
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. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	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	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

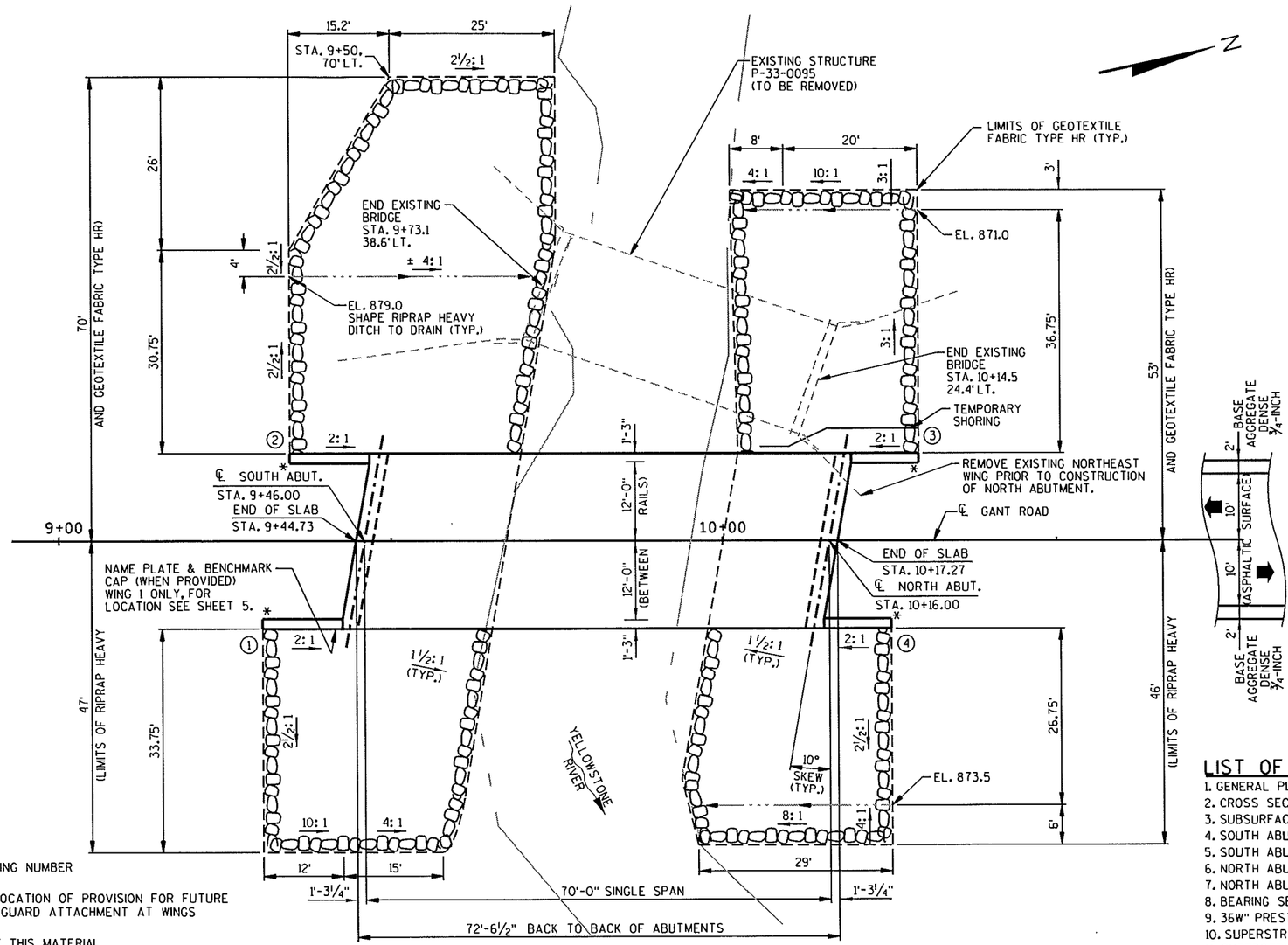
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

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



○ - INDICATES WING NUMBER

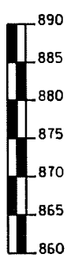
* - INDICATES LOCATION OF PROVISION FOR FUTURE THRIE BEAM GUARD ATTACHMENT AT WINGS

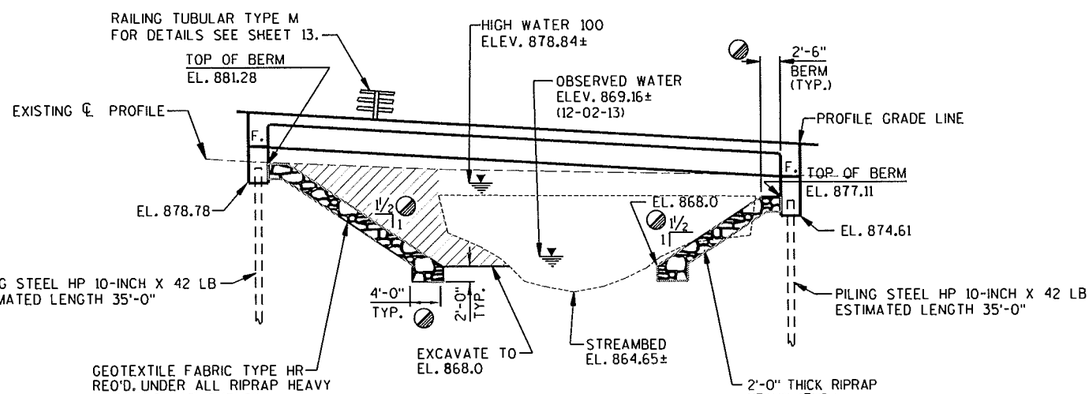
▨ - REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-33-0126".

▨ - DIMENSION GIVEN NORMAL TO THE ℄ OF ABUTMENTS.

PLAN

(SINGLE SPAN 36W" PRESTRESSED CONCRETE GIRDER)





ELEVATION

NORMAL TO ℄ GANT ROAD

STATE PROJECT NUMBER
5648-00-74

BENCHMARKS

NO.	STA./OFFSET	DESCRIPTION	ELEV.
101	10+22, 31.29' LT.	"X" ON NORTHWEST WINGWALL	879.07
100	5+27.0, 59.22' LT.	SPIKE IN FENCE POST	887.91
102	11+35, 19.98' RT.	SPIKE IN FENCE POST	876.75

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.11
OPERATIONAL RATING FACTOR: 1.52

TRAFFIC DATA:

A.A.D.T. (2016) = 100
A.A.D.T. (2036) = 130
R.D.S. = 30 MPH

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.

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

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB — f'_c = 4,000 P.S.I.
ALL OTHER — f'_c = 3,500 P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — f_y = 60,000 P.S.I.

36W-INCH PRESTRESSED GIRDERS
CONCRETE MASONRY — f'_c = 8,000 P.S.I.
STRANDS - 0.60" ϕ WITH AN ULTIMATE TENSILE STRENGTH OF — f_y = 270,000 P.S.I.

PILING STEEL HP — f_y = 50,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH × 42 LB. DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 35'-0" 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.

HYDRAULIC DATA:

100 YEAR FREQUENCY

DRAINAGE AREA — 15.3 SQ. MI.
Q_{100} - TOTAL — 4,340 C.F.S.
- THRU BRIDGE — 3,589 C.F.S.
- OVERTOPPING ROADWAY — 751 C.F.S.
VELOCITY - THRU BRIDGE — 9.30 FT./SEC.
WATERWAY AREA - THRU BRIDGE — 386 SQ. FT.
SCOUR CRITICAL CODE — 8
HIGH WATER$_{100}$ ELEVATION — 878.84 ±
Q_2 ELEVATION (710 CFS) — 872.83 ±

ROADWAY OVERFLOW DESIGN

OVERTOPPING FREQUENCY — 33 YEARS
Q_{32} — 3,140 C.F.S.
HIGH WATER$_{32}$ ELEVATION — 877.58 ±

LIST OF DRAWINGS

WISCONSIN
LEAH J. RHODES
E-41726
BARABOO
WI
PROFESSIONAL ENGINEER

2/20/2015

CONSULTANT DESIGN CONTACT:
LEAH RHODES
(608) 355-8945

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

NO.	DATE	REVISION	BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2770

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher NK 06/24/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-33-0126

GANT ROAD OVER YELLOWSTONE RIVER

COUNTY: LAFAYETTE
TOWN/~~CITY/VILLAGE~~: FAYETTE
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JRS	LJR	RLR	JRS

GENERAL PLAN

SHEET 1 OF 13
37

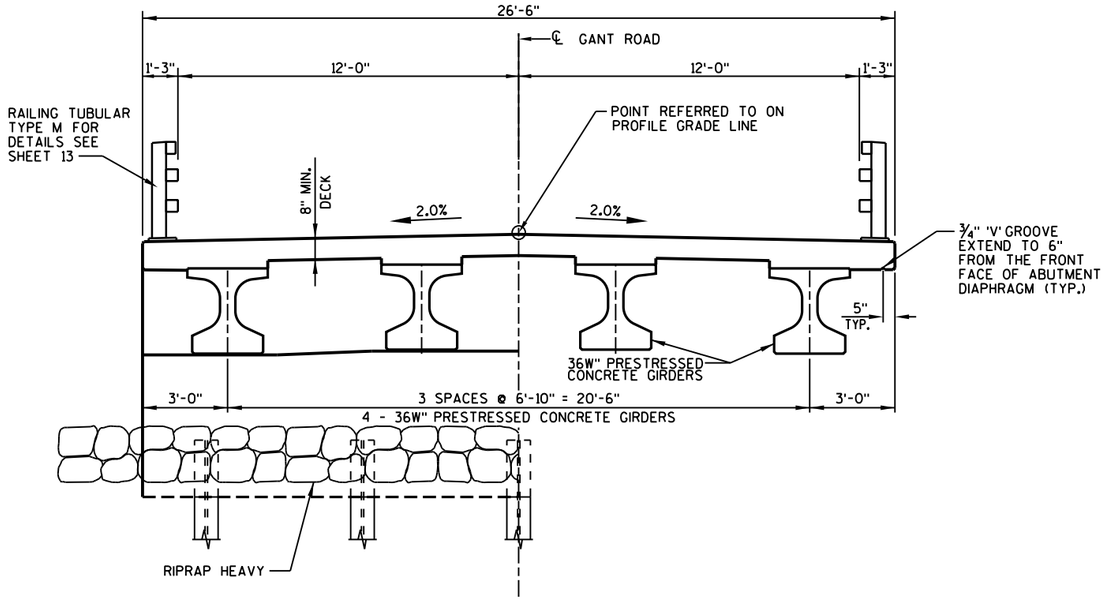
FILE= 2398009_01.DGN
DATE= 2/20/2015

8

8

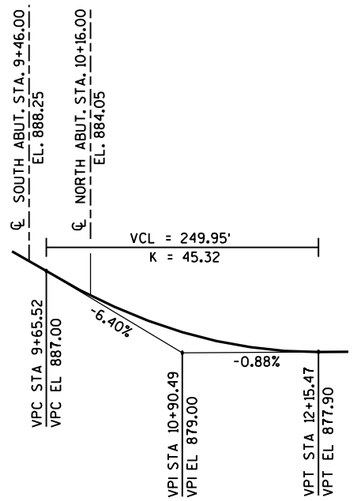
2398009_01.dgn 2/20/2015 11:25:40 AM rrabska

STATE PROJECT NUMBER
5648-00-74



AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE
(LOOKING NORTH)



PROFILE GRADE LINE - GANT ROAD

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER.	TOTAL
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 9+94	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURE BRIDGES B-33-0126	LS	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	80	80	-	160
502.0100	CONCRETE MASONRY BRIDGES	CY	35	30	71	136
502.3200	PROTECTIVE SURFACE TREATMENT	SY	19	16	245	280
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	-	-	284	284
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1545	1545	-	3090
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1870	1490	12300	15660
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	-	8	8
506.4000.01	STEEL DIAPHRAGMS B-33-0126	EACH	-	-	3	3
511.1200	TEMPORARY SHORING B-33-0126	SF	-	195	-	195
513.4060.01	RAILING TUBULAR TYPE M B-33-0126	LS	-	-	-	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	9	-	19
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	175	175	-	350
606.0300	RIPRAP HEAVY	CY	315	215	-	530
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	95	90	-	185
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	510	355	-	865
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				½", ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

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

THE MINIMUM CONCRETE HAUNCH AT THE EDGE OF THE GIRDER FLANGES SHALL BE 1¼". THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH OF 3" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

THIS STRUCTURE WILL REPLACE EXISTING BRIDGE, P-33-0095, A 46.6 FOOT LONG, SINGLE SPAN STEEL DECK GIRDER BRIDGE SET ON STONE MASONRY ABUTMENTS.

AT THE ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE. THE BACKFILL STRUCTURE ESTIMATED QUANTITIES ASSUMED A 1½:1 EXCAVATION SLOPE AT THE ABUTMENTS.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO FAYETTE N GPS BENCHMARK WITH ELEVATION OF 1046.51 LOCATED 0.7 MILES NORTHEAST OF THE EXISTING BRIDGE. THE STATION IS A BRONZE WISDOT GEODETIC SURVEY CONTROL STATION.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP AND SIDES OF THE DECK, TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF DECK, TO THE TOPS OF WINGS, AND TO THE EXPOSED FRONT FACES OF WINGS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

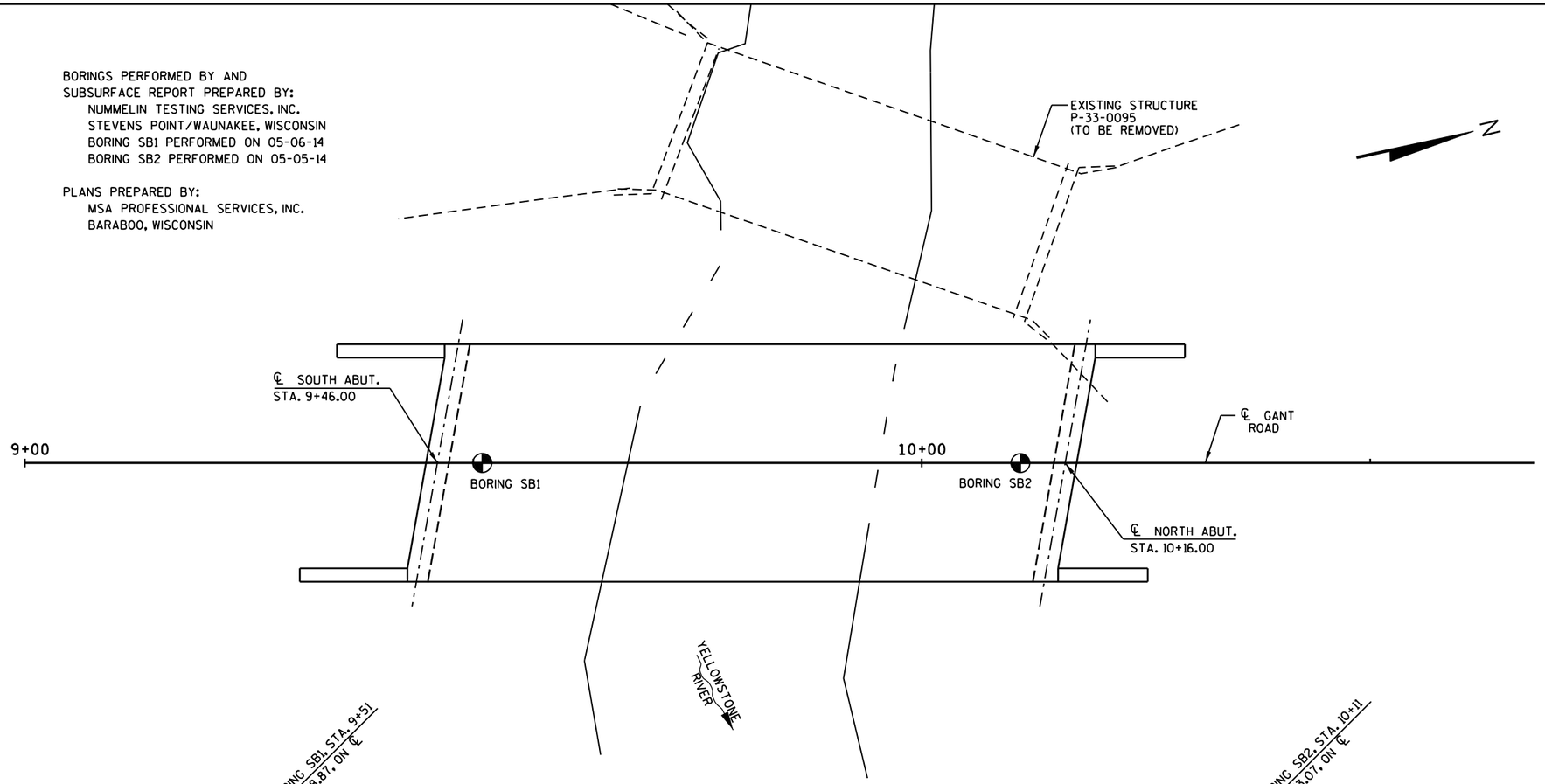
CROSS SECTION, QUANTITIES & NOTES

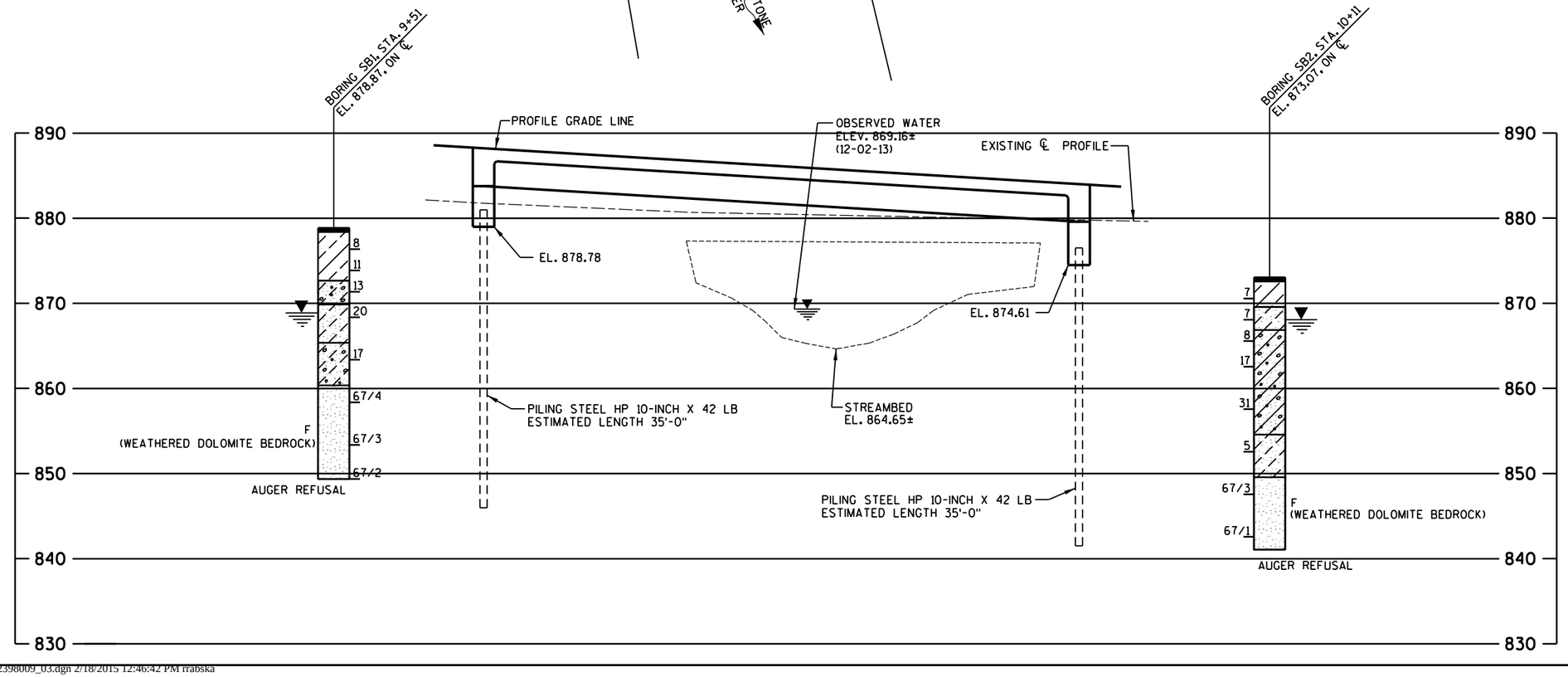
SHEET 7 OF 13
38

FILE= 2398009_02.DGN
DATE= 2/18/2015

BORINGS PERFORMED BY AND
SUBSURFACE REPORT PREPARED BY:
NUMMELIN TESTING SERVICES, INC.
STEVENS POINT/WAUNAKEE, WISCONSIN
BORING SB1 PERFORMED ON 05-06-14
BORING SB2 PERFORMED ON 05-05-14

PLANS PREPARED BY:
MSA PROFESSIONAL SERVICES, INC.
BARABOO, WISCONSIN





STATE PROJECT NUMBER

5648-00-74

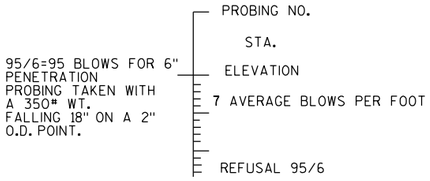
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

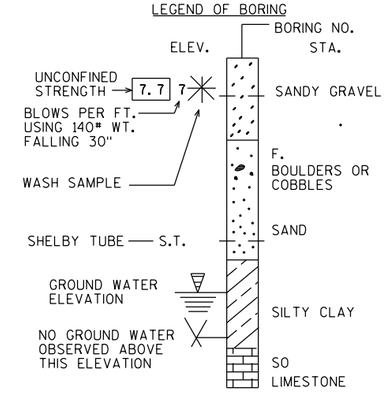
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

SUBSURFACE EXPLORATION

SHEET 3 OF 13
39

8

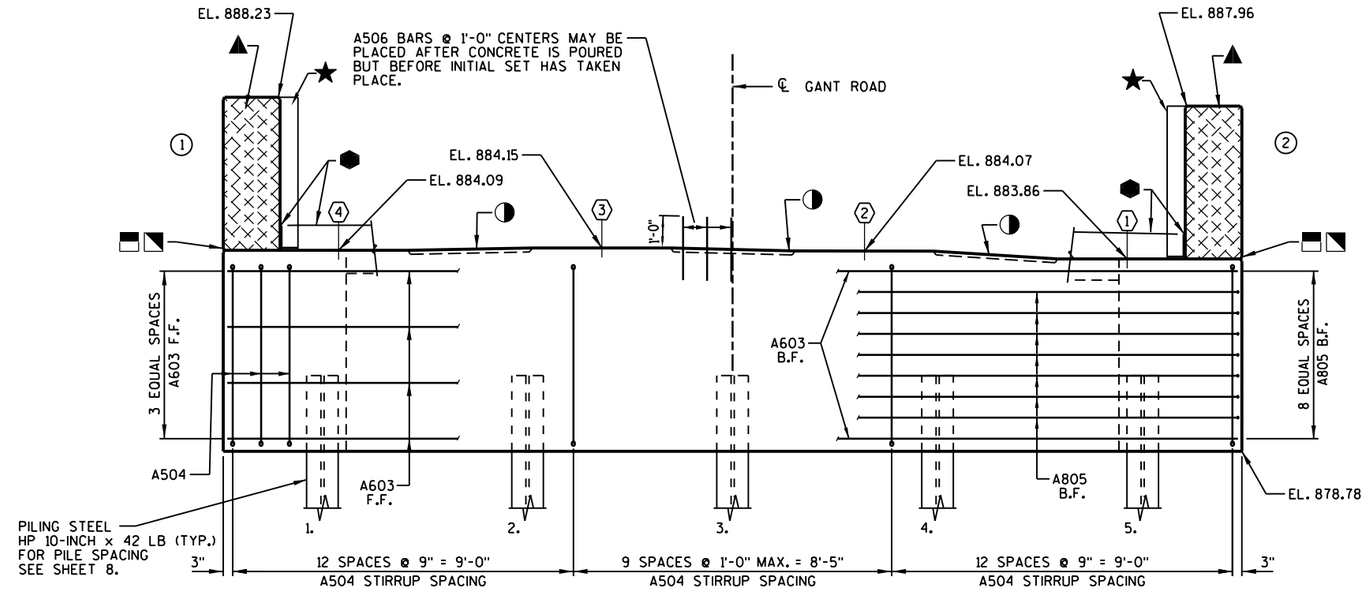
8

2398009_03.dgn 2/18/2015 12:46:42 PM rrabska

FILE=2398009_03.dgn
DATE=2/18/2015

STATE PROJECT NUMBER

5648-00-74

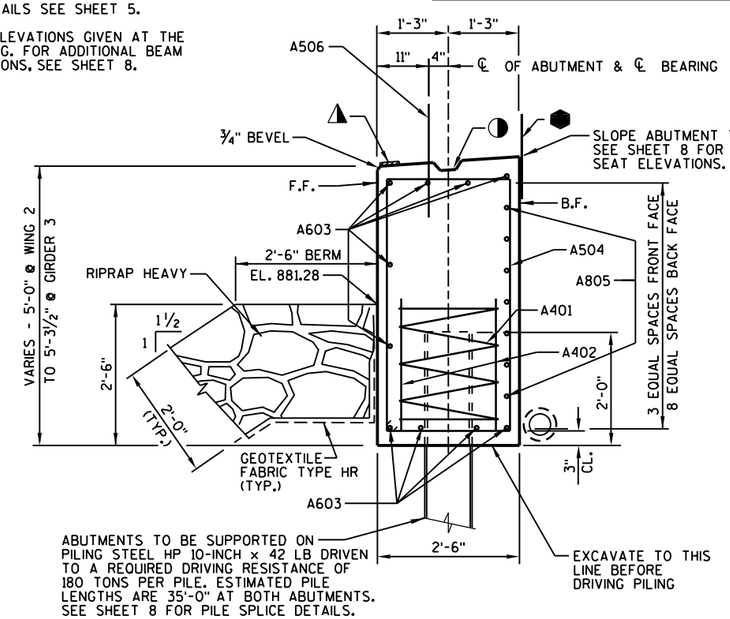


ELEVATION

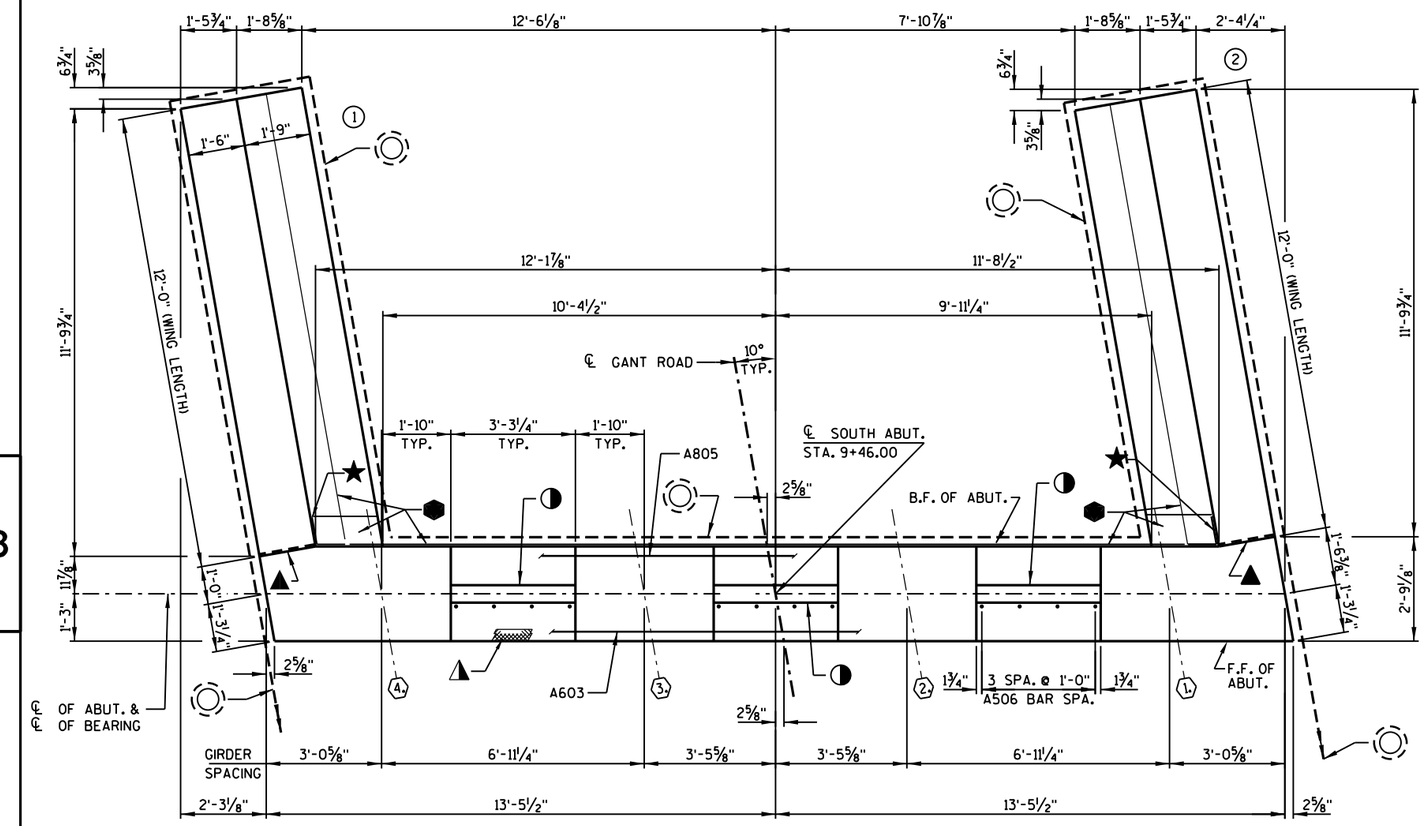
(LOOKING SOUTH)

FOR WING DETAILS SEE SHEET 5.

BEAM SEAT ELEVATIONS GIVEN AT THE ℄ OF BEARING. FOR ADDITIONAL BEAM SEAT ELEVATIONS, SEE SHEET 8.



TYPICAL SECTION THRU ABUTMENT

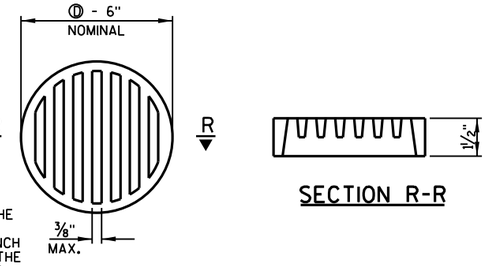


PLAN

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD 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 ATTACHEMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



SECTION R-R

RODENT SHIELD

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

LEGEND

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

◯ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE RODENT SHIELD DETAIL, ABOVE.

⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS IF OPTIONAL CONSTRUCTION JOINT IS USED.

★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.

◑ – KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.

◹ – ¾" "V" GROOVE ON FRONT FACE OF WING WALL. REQ'D. ONLY WHERE CONST. JOINT IS USED.

◧ – OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.

◭ – 4"x ¾" PREFORMED JOINT FILLER, EXTEND FULL LENGTH ALONG F.F. OF ABUTMENT BETWEEN OUTSIDE EDGES OF DECK.

◯ – INDICATES WING NUMBER ⬡ – INDICATES GIRDER NUMBER

F.F. – FRONT FACE B.F. - BACK FACE CL. - CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

SOUTH ABUTMENT

SHEET 4 OF 13
40

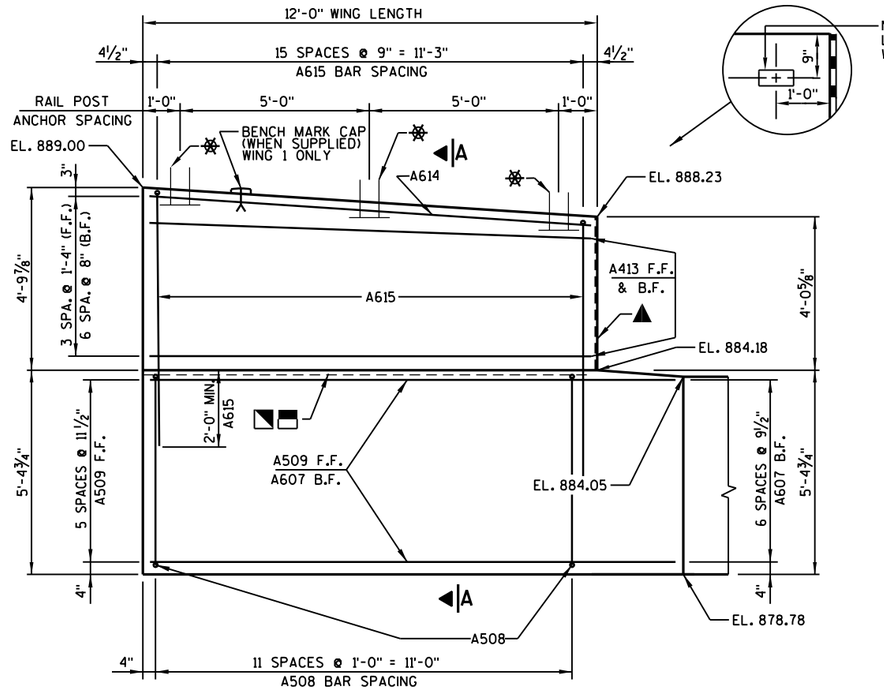
FILE= 2398009_04.DGN
DATE= 2/9/2015

8

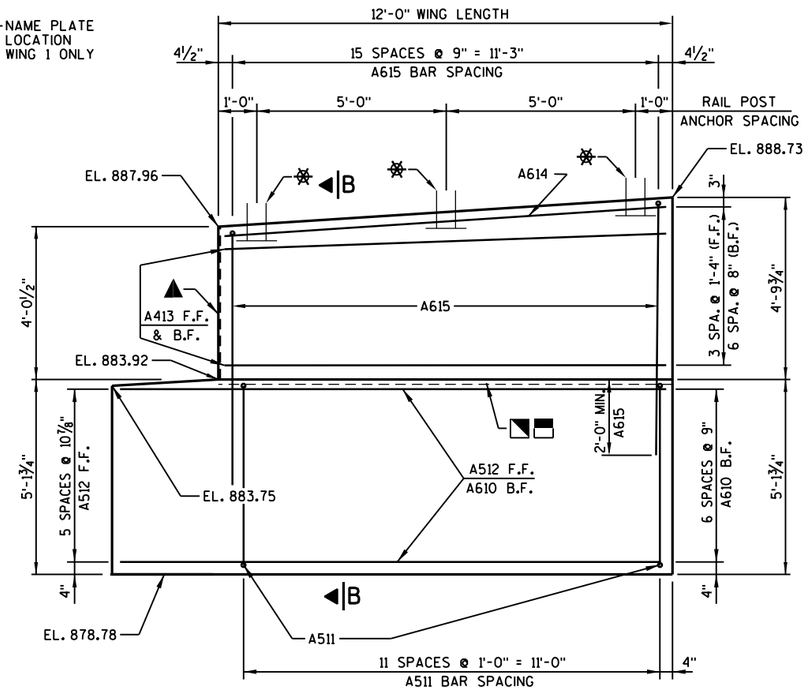
8

STATE PROJECT NUMBER

5648-00-74

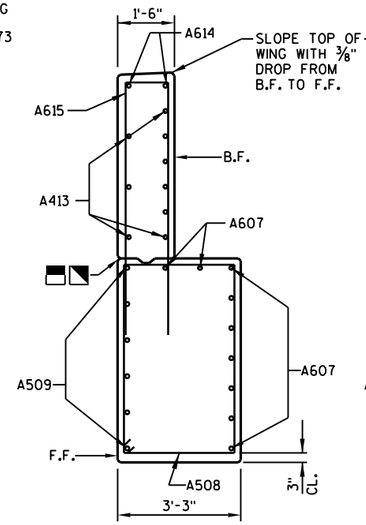


ELEVATION WING 1

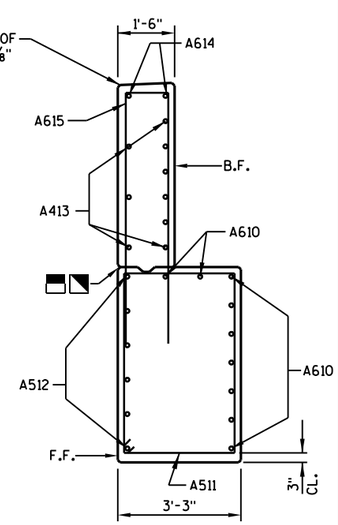


ELEVATION WING 2

✱ - FOR RAIL POST ANCHOR DETAILS SEE SHEET 13.



SECTION A-A THRU WING 1



SECTION B-B THRU WING 2

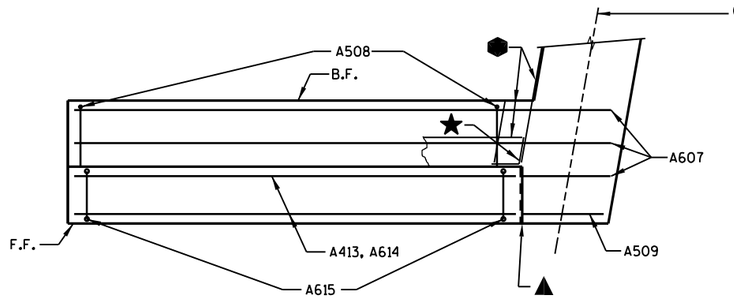
NOTE:
WING DIMENSIONS AND ELEVATIONS ARE GIVEN AT THE BACK FACE OF WING.

BILL OF BARS

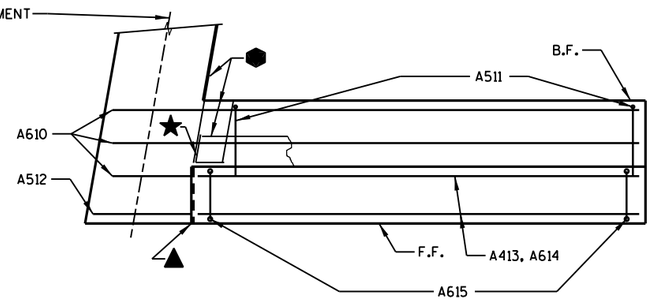
COATED 1870 LBS.
UNCOATED 1545 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A401	-	5	28'-0"	X	ABUT. BODY - 1 SPIRAL WRAP @ EACH PILE
A402	-	10	2'-3"		ABUT. BODY - 2 @ EACH PILE - VERT.
A603	-	10	26'-6"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
A504	-	34	14'-2"	X	ABUT. BODY - STIRRUPS - VERT.
A805	-	7	28'-9"	X	ABUT. BODY - B.F. - HORIZ.
A506	12	-	2'-0"		ABUT. BODY - TOP - DOWEL - VERT.
A607	9	-	14'-2"		WING 1 - BASE - B.F. - HORIZ.
A508	12	-	16'-4"	X	WING 1 - BASE - STIRRUP - VERT.
A509	6	-	14'-0"		WING 1 - BASE - F.F. - HORIZ.
A610	9	-	13'-11"		WING 2 - BASE - B.F. - HORIZ.
A511	12	-	16'-0"	X	WING 2 - BASE - STIRRUP - VERT.
A512	6	-	14'-5"		WING 2 - BASE - F.F. - HORIZ.
A413	18	-	11'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
A614	4	-	11'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
A615	32	-	14'-0"	X	WINGS - TOP - STIRRUP - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

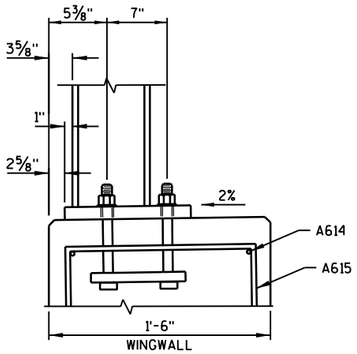


PLAN WING 1

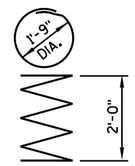


PLAN WING 2

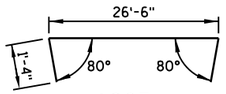
SEE SHEET 4 LEGEND FOR DESCRIPTION OF



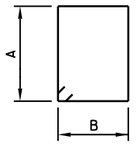
SECTION AT TOP OF WING



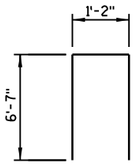
A401
(5 SPIRAL WRAPS)



A805



MARK	A	B
A504	4'-7"	2'-2"
A508	4'-11"	2'-11"
A511	4'-9"	2'-11"



A615

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

SOUTH ABUTMENT DETAILS

SHEET 5 OF 13
41

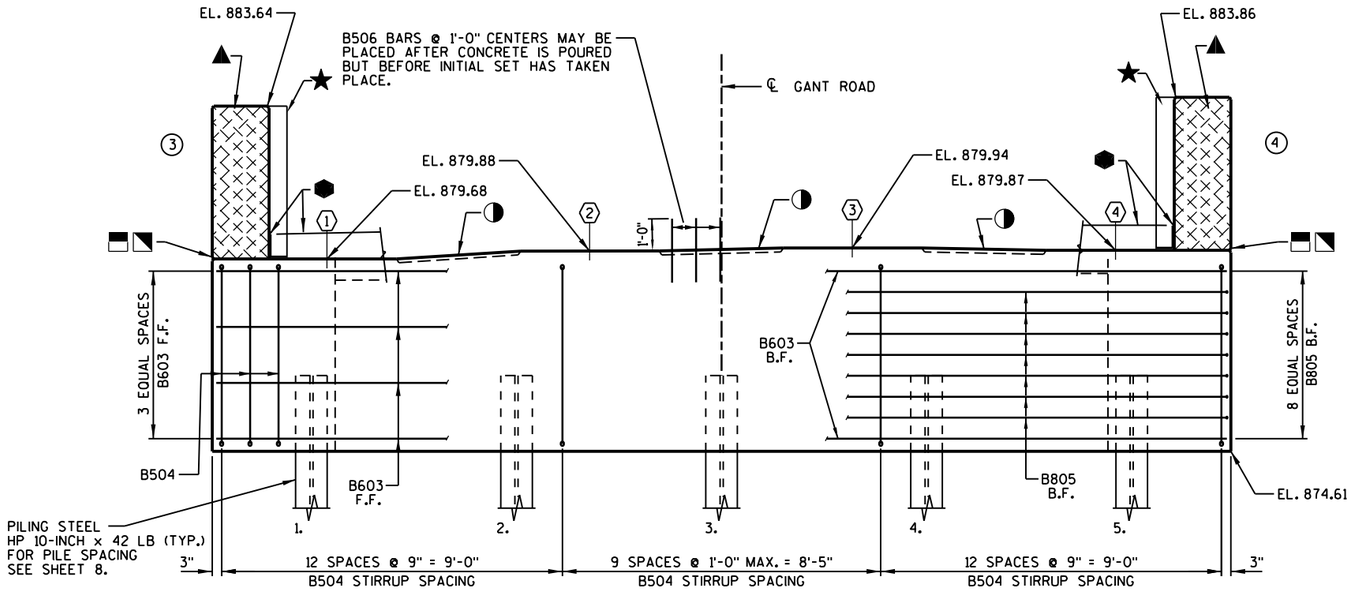
8

8

FILE= 2398009_05.DGN
DATE= 2/18/2015

STATE PROJECT NUMBER

5648-00-74

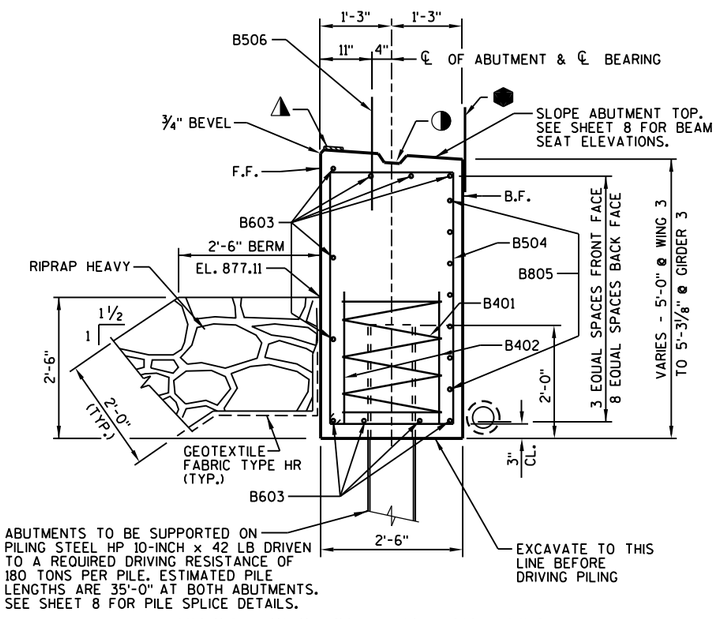


ELEVATION

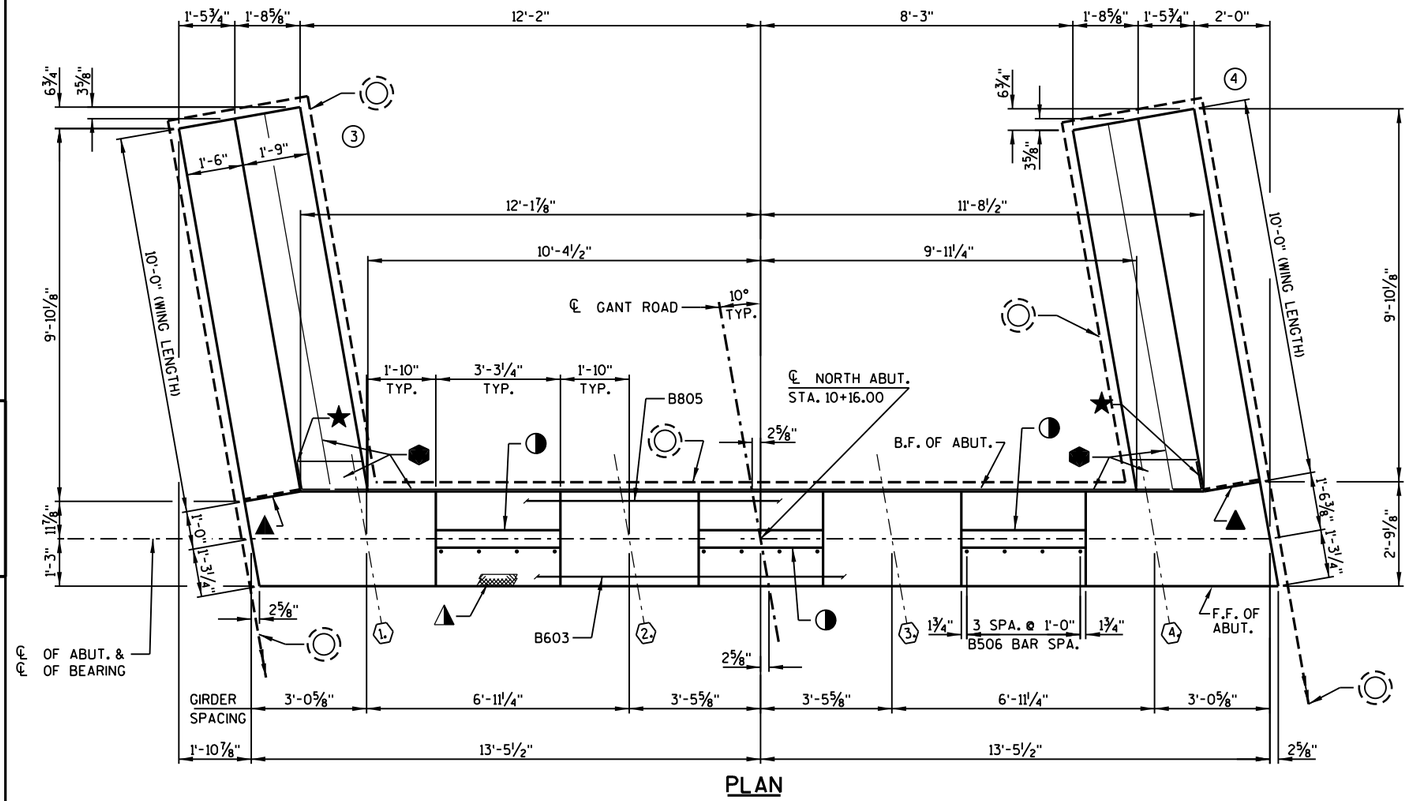
(LOOKING NORTH)

FOR WING DETAILS SEE SHEET 7.

BEAM SEAT ELEVATIONS GIVEN AT THE ℄ OF BEARING. FOR ADDITIONAL BEAM SEAT ELEVATIONS, SEE SHEET 8.



TYPICAL SECTION THRU ABUTMENT



PLAN

LEGEND

- ▲ – ½" PREFORMED JOINT FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◎ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. SEE SHEET 4 FOR RODENT SHIELD DETAIL.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS IF OPTIONAL CONSTRUCTION JOINT IS USED.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- ◑ – KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ◥ – ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- ▬ – OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- ◭ – 4"x ¾" PREFORMED JOINT FILLER, EXTEND FULL LENGTH ALONG F.F. OF ABUTMENT BETWEEN OUTSIDE EDGES OF DECK.
- ◯ – INDICATES WING NUMBER ⬡ – INDICATES GIRDER NUMBER

F.F. – FRONT FACE B.F. - BACK FACE CL. - CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

NORTH ABUTMENT

SHEET 6 OF 13
42

8

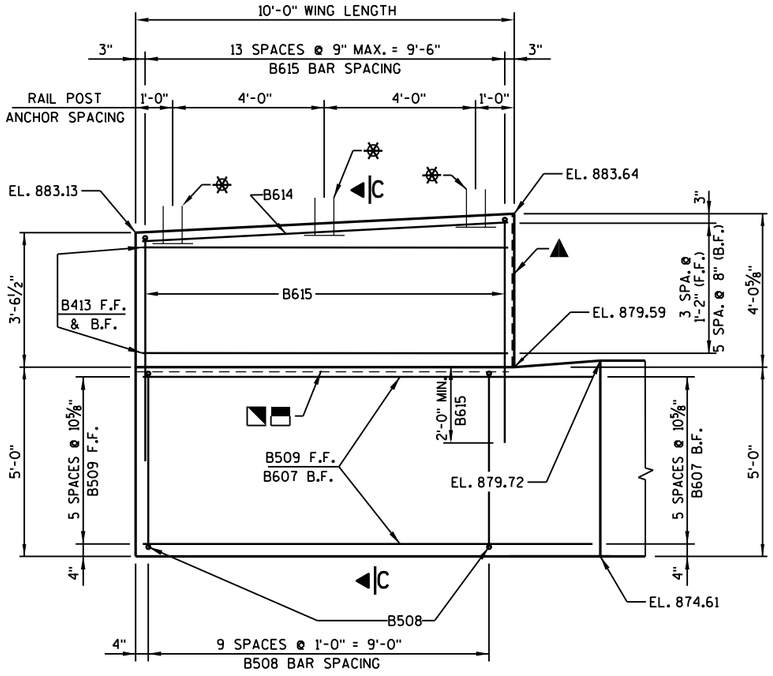
8

FILE= 2398009_06.DGN
DATE= 2/18/2015

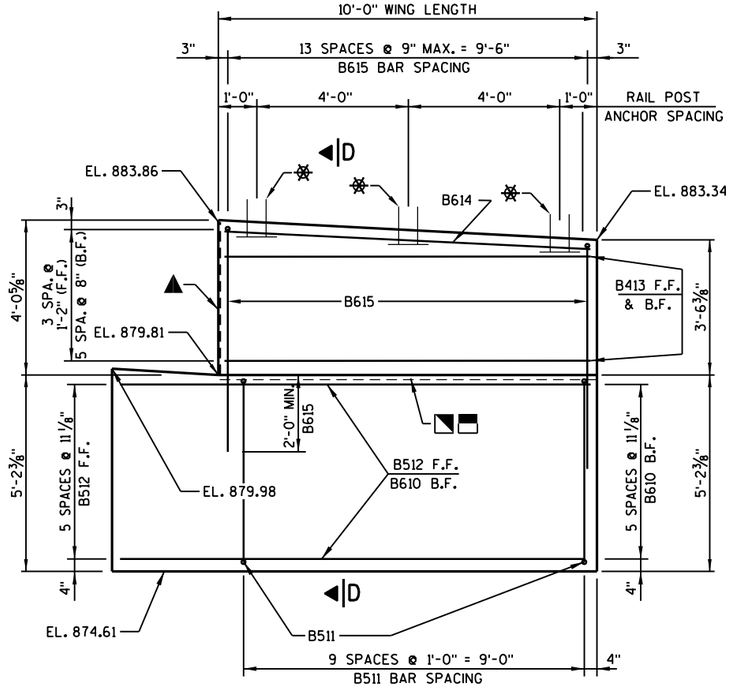
2398009_06.dgn 2/18/2015 12:26:37 PM rrabska

STATE PROJECT NUMBER

5648-00-74

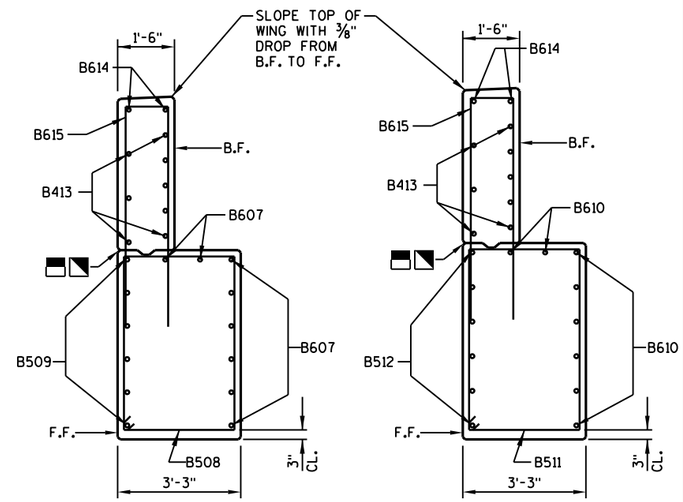


ELEVATION WING 3



ELEVATION WING 4

NOTE:
WING DIMENSIONS AND ELEVATIONS ARE GIVEN AT THE BACK FACE OF WING.



SECTION C-C THRU WING 3

SECTION D-D THRU WING 4

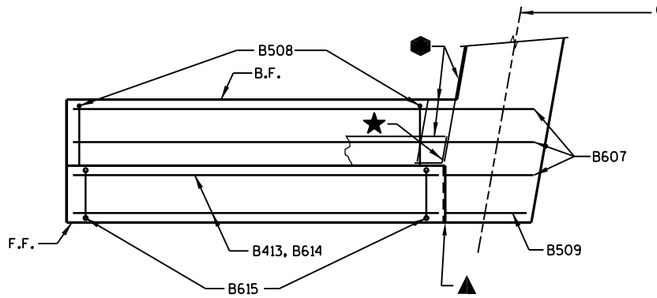
✱ - FOR RAIL POST ANCHOR DETAILS SEE SHEET 13.

COATED 1490 LBS.
UNCOATED 1545 LBS.

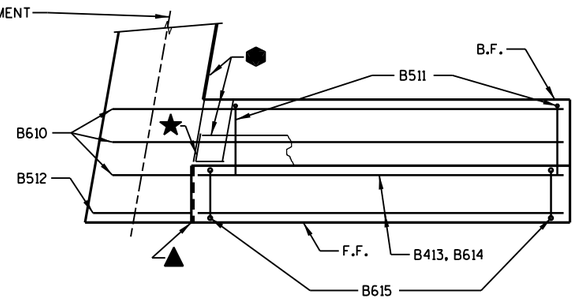
BILL OF BARS

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B401	-	5	28'-0"	X	ABUT. BODY - 1 SPIRAL WRAP @ EACH PILE
B402	-	10	2'-3"		ABUT. BODY - 2 @ EACH PILE - VERT.
B603	-	10	26'-6"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	34	14'-2"	X	ABUT. BODY - STIRRUPS - VERT.
B805	-	7	28'-9"	X	ABUT. BODY - B.F. - HORIZ.
B506	12	-	2'-0"		ABUT. BODY - TOP - DOWEL - VERT.
B607	8	-	12'-2"		WING 3 - BASE - B.F. - HORIZ.
B508	10	-	15'-8"	X	WING 3 - BASE - STIRRUP - VERT.
B509	6	-	12'-0"		WING 3 - BASE - F.F. - HORIZ.
B610	8	-	11'-11"		WING 4 - BASE - B.F. - HORIZ.
B511	10	-	16'-0"	X	WING 4 - BASE - STIRRUP - VERT.
B512	6	-	12'-5"		WING 4 - BASE - F.F. - HORIZ.
B413	16	-	9'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
B614	4	-	9'-7"		WINGS - TOP - F.F. & B.F. - HORIZ.
B615	28	-	12'-8"	X	WINGS - TOP - STIRRUP - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

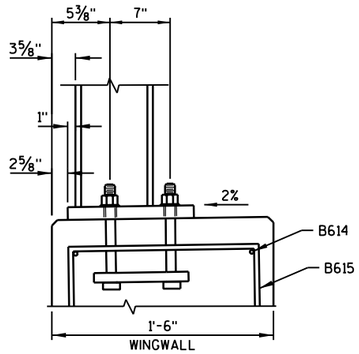


PLAN WING 3

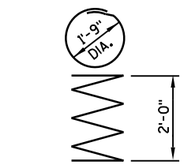


PLAN WING 4

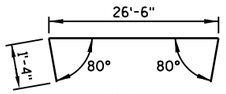
SEE SHEET 6 LEGEND FOR DESCRIPTION OF



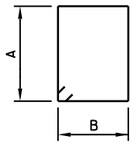
SECTION AT TOP OF WING



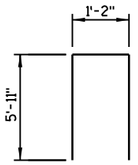
B401
(5 SPIRAL WRAPS)



B805



MARK	A	B
B504	4'-7"	2'-2"
B508	4'-7"	2'-11"
B511	4'-9"	2'-11"



B615

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

NORTH ABUTMENT DETAILS

SHEET 7 OF 13
43

FILE= 2398009_07.DGN
DATE= 2/2/2015

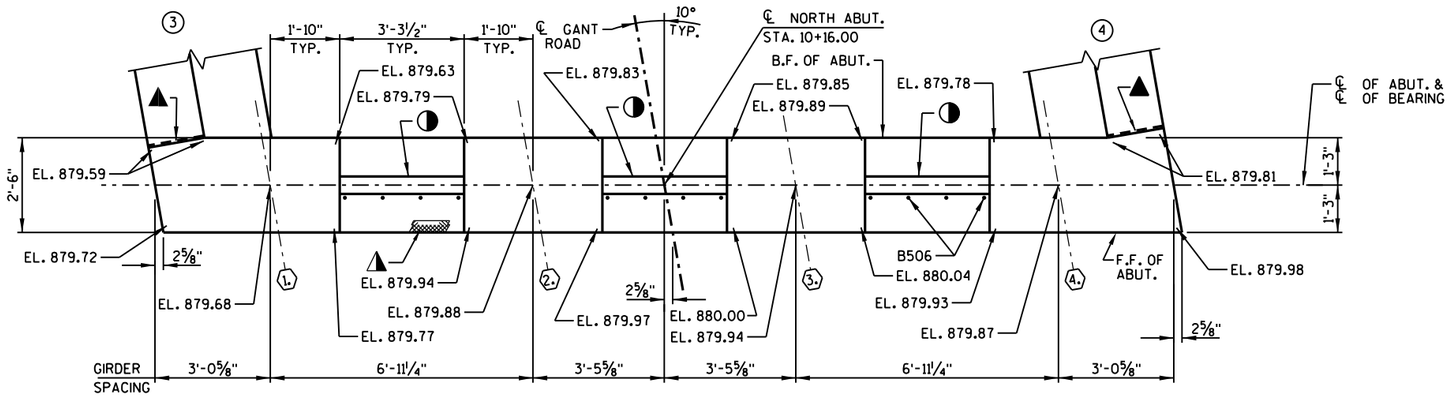
8

8

2398009_07.dgn 2/2/2015 8:06:09 AM rrabska

STATE PROJECT NUMBER

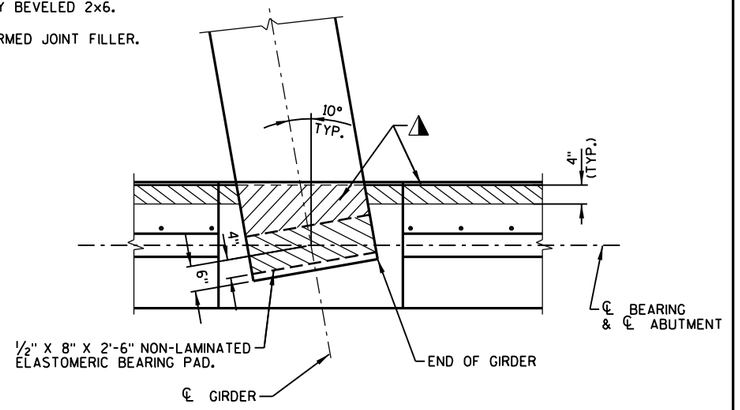
5648-00-74



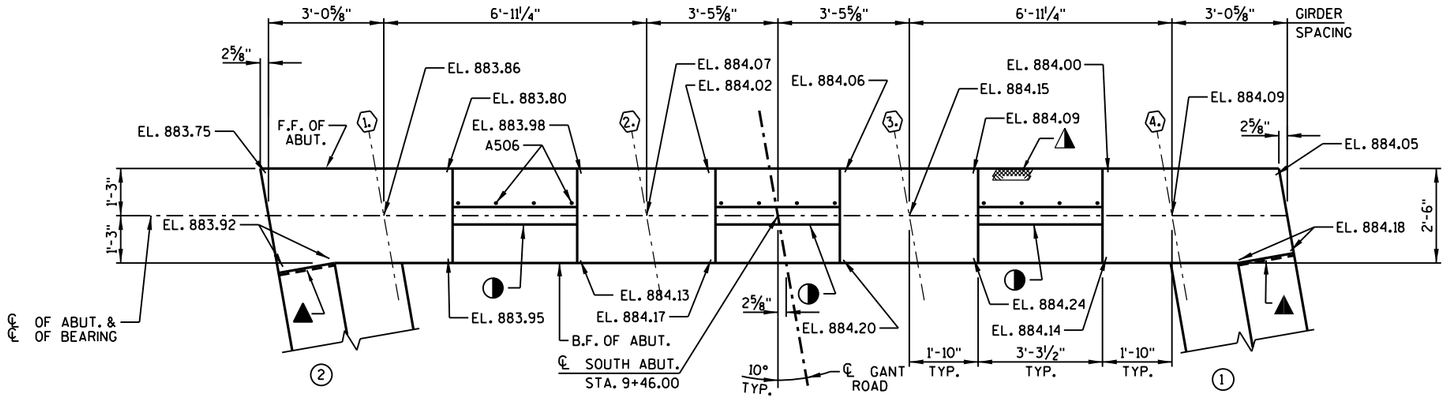
NORTH ABUTMENT BEARING SEAT LAYOUT

LEGEND

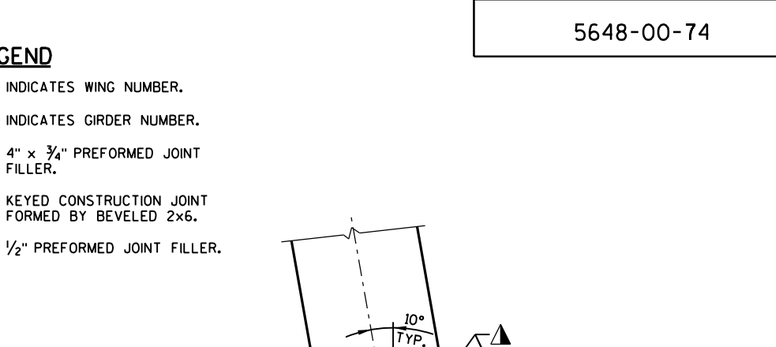
- ◯ - INDICATES WING NUMBER.
- ⬡ - INDICATES GIRDER NUMBER.
- ◭ - 4" x ¾" PREFORMED JOINT FILLER.
- ◑ - KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2×6.
- ▲ - ½" PREFORMED JOINT FILLER.



ABUTMENT BEARING PAD DETAIL

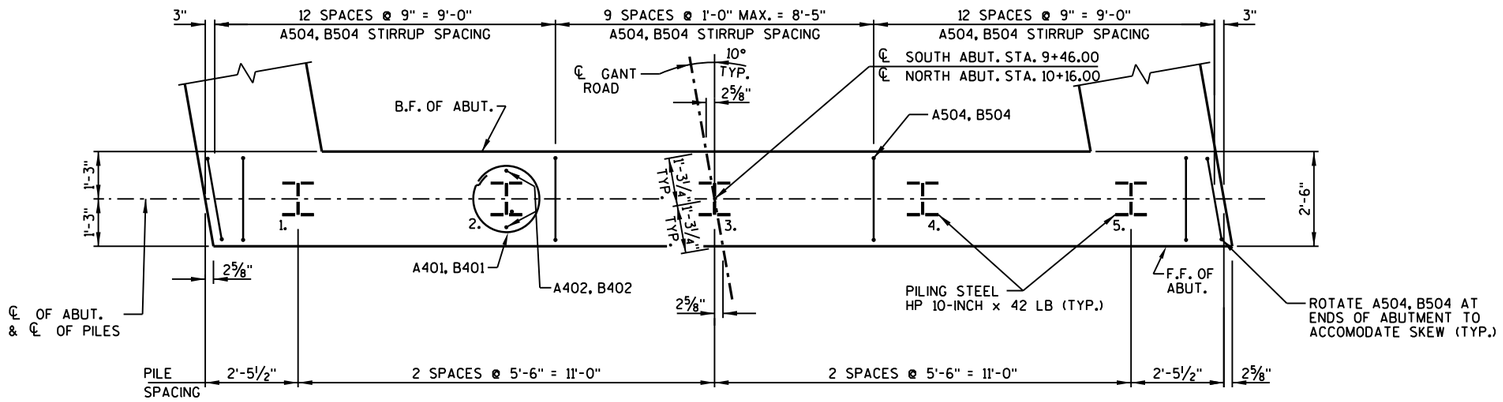


SOUTH ABUTMENT BEARING SEAT LAYOUT



WELD DETAIL
FLANGE SHOWN
WEB SIMILAR

PILE SPLICE DETAILS



ABUTMENT PILE PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY	PLANS CK'D.
RLR	JRS

BEARING SEAT LAYOUT & PILE PLAN

SHEET 8 OF 13
44

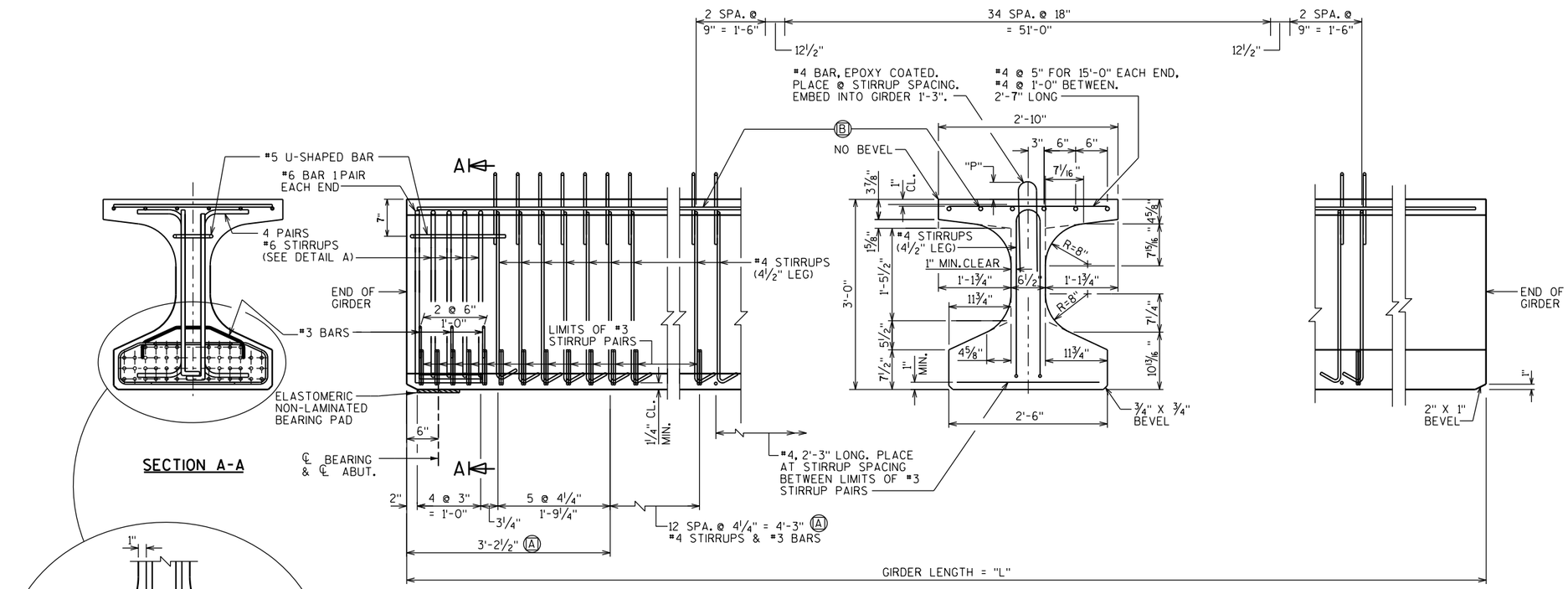
8

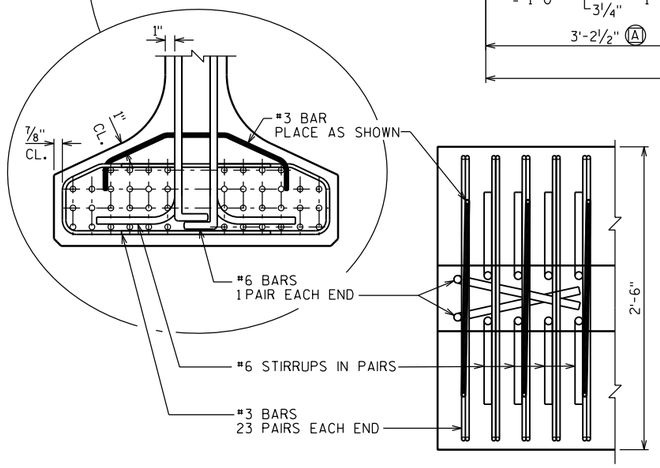
8

FILE= 2398009_08.DGN
DATE=2/9/2015

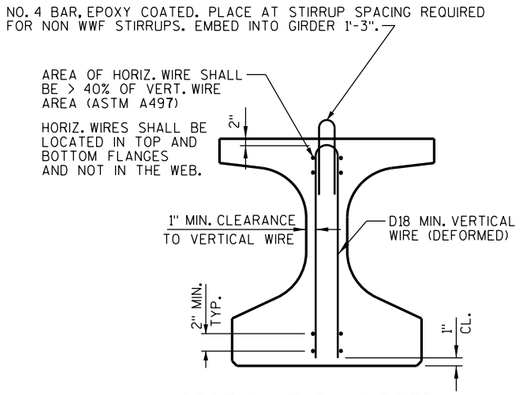
STATE PROJECT NUMBER

5648-00-74

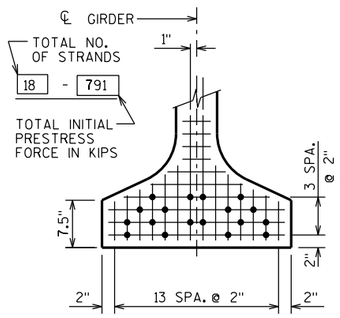




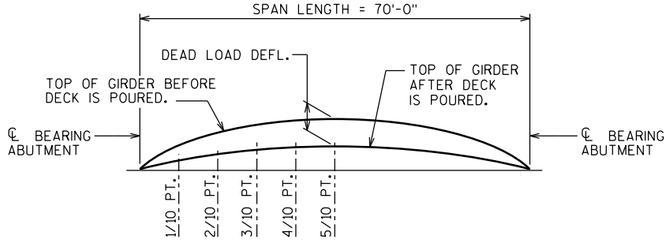
DETAIL A
BOTTOM FLANGE



SECTION THRU GIRDER
SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS ASTM A497 (Fy = 70 Ksi)



TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE 0.6" ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE SHEET 12.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

SIDE VIEW & TYP. SECTION

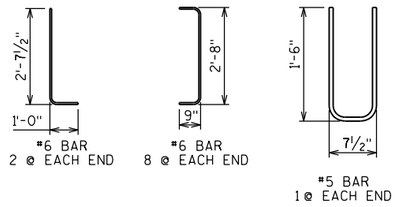
Ⓐ DETAIL TYP. AT EACH END

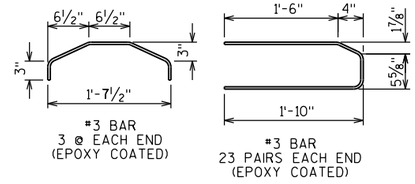
Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN. VALUES INCLUDE A MAGNIFICATION FACTOR OF 1.4 TO ACCOUNT FOR CREEP BETWEEN RELEASE AND INSTALLATION.

SPAN	CAMBER (IN.)
1	1 ¼

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS. THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.





✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1-4	71'-0"	0.2	0.4	0.6	0.6	0.7	0.6	0.6	0.4	0.2	8000	7.5"	7"	7.5"	0.6	-	-	-	-	-	-	18	6800

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

36W" PRESTRESSED GIRDER DETAILS

SHEET 9 OF 13
45

8

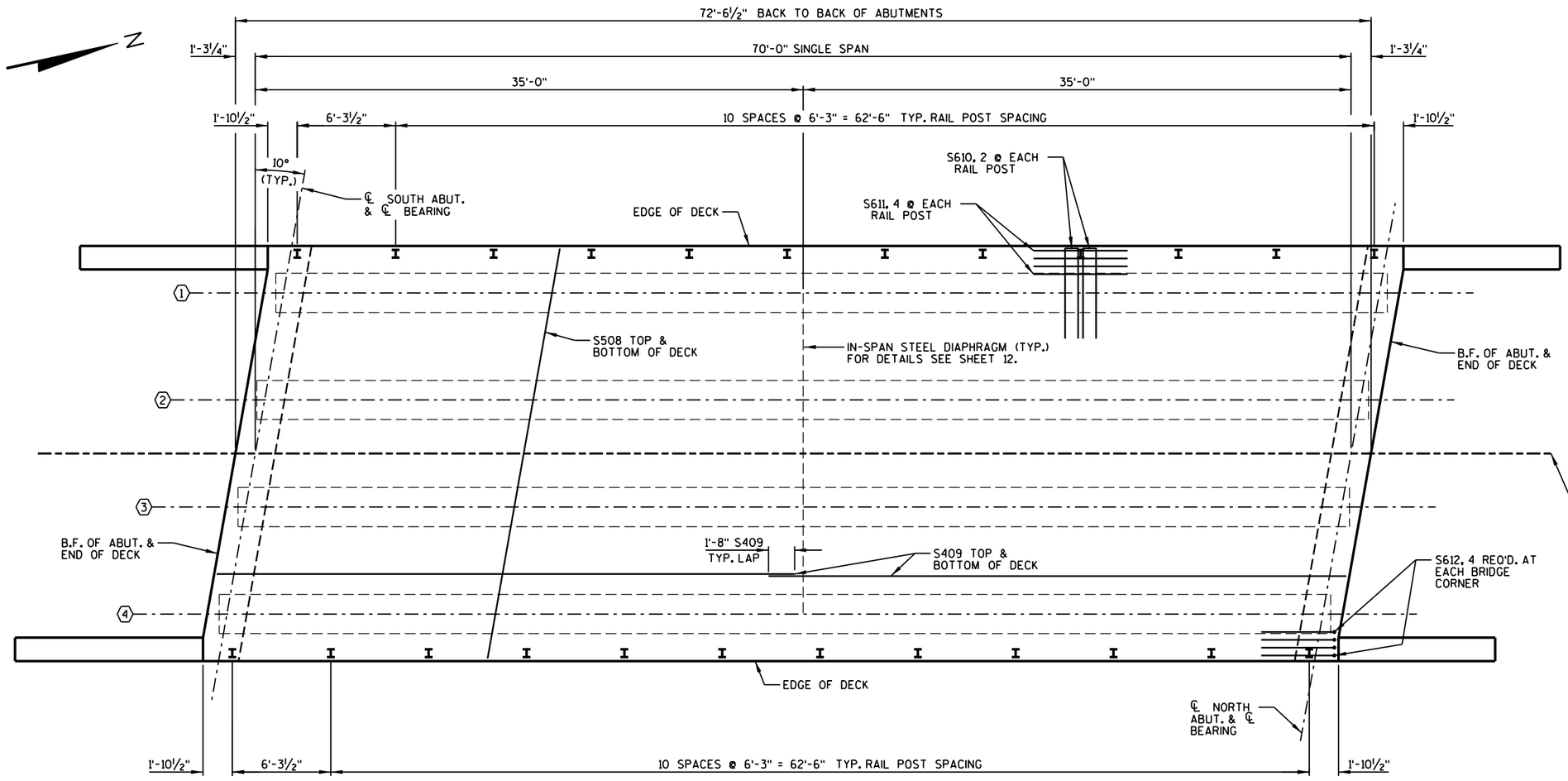
8

FILE= 2398009_09.DGN
DATE= 2/9/2015

2398009_09.dgn 2/9/2015 2:10:15 PM rrabska

STATE PROJECT NUMBER

5648-00-74



PLAN

GENERAL NOTES

⬡ - INDICATES GIRDER NUMBER

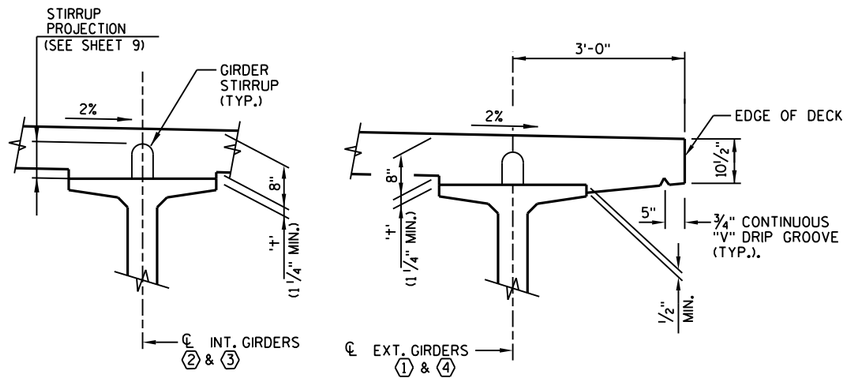
SEE SHEET 11 FOR TRANSVERSE AND LONGITUDINAL BAR SPACING.

PLACE TRANSVERSE BARSTEEL ON THE SKEW.

SEE SHEET 12 FOR LOCATION OF DIAPHRAGM INSERTS ON GIRDERS.

TOP OF DECK ELEVATIONS

LOCATION	SPAN POINT	EAST DECK EDGE	C/L GIRDER 4	C/L GIRDER 3	C/L GANT ROAD	C/L GIRDER 2	C/L GIRDER 1	WEST DECK EDGE
S. ABUT.	1	888.13	888.16	888.22	888.25	888.14	887.93	887.83
	1.1	887.68	887.71	887.77	887.80	887.69	887.48	887.38
	1.2	887.24	887.26	887.32	887.35	887.24	887.03	886.94
	1.3	886.79	886.81	886.87	886.90	886.80	886.58	886.49
	1.4	886.34	886.37	886.43	886.46	886.36	886.15	886.05
	1.5	885.91	885.94	886.00	886.03	885.93	885.72	885.63
	1.6	885.49	885.52	885.58	885.62	885.51	885.30	885.21
	1.7	885.08	885.11	885.17	885.21	885.10	884.90	884.81
	1.8	884.68	884.71	884.78	884.81	884.71	884.50	884.42
	1.9	884.29	884.32	884.39	884.42	884.32	884.12	884.03
N. ABUT	2	883.91	883.94	884.01	884.05	883.95	883.75	883.66



DECK HAUNCH DETAIL

TO DETERMINE 't', ELEV. OF TOP OF GIRDERS AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. TO DETERMINE THE TOP OF DECK ELEVATION FOR POINT REFERRED USE TABLE ON THIS SHEET AND ADJUST FOR CROSS SLOPE OVER GIRDER. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION (SEE SHEET 9)
- DECK THICKNESS

= HAUNCH HEIGHT 't'

IF 1¼" MINIMUM HAUNCH HEIGHT 't' CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. MAX. HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

SUPERSTRUCTURE

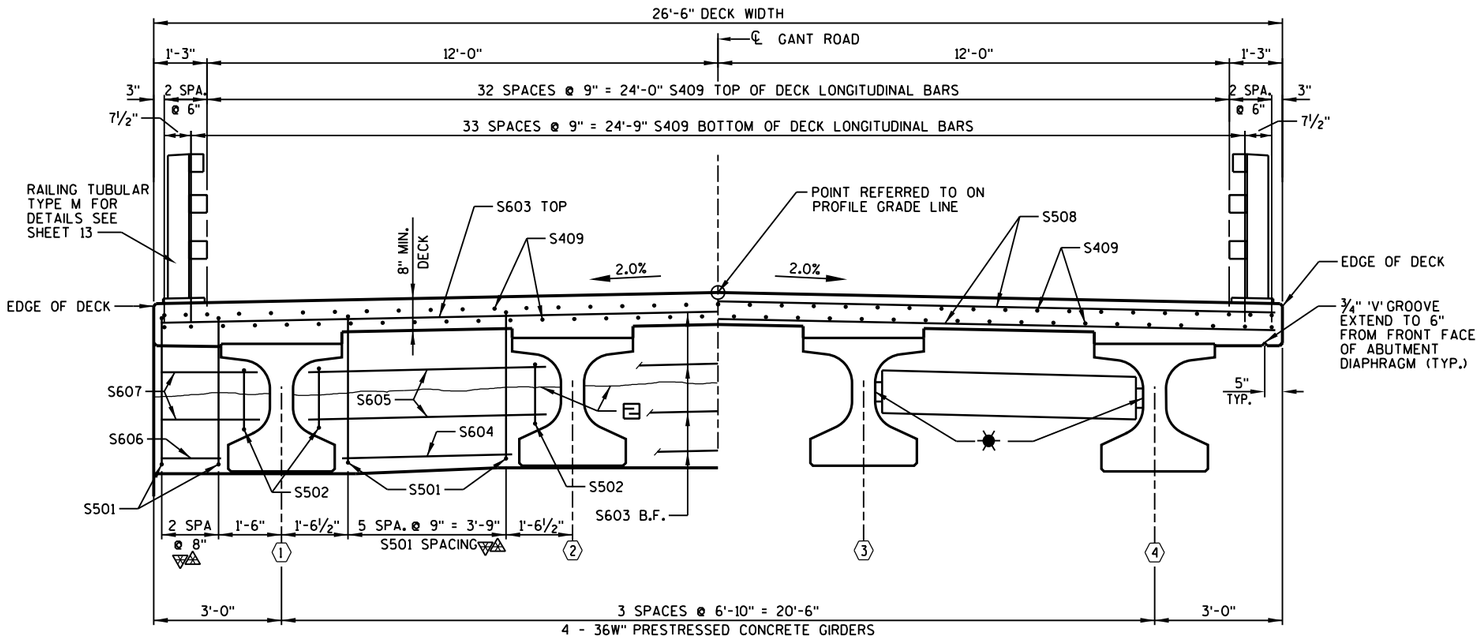
SHEET 10 OF 13
46

8

8

FILE= 2398009_10.DGN
DATE= 2/9/2015

STATE PROJECT NUMBER
5648-00-74



AT ABUTMENTS IN SPAN

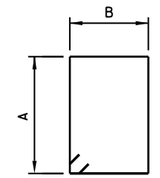
CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

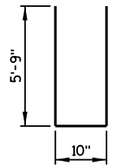
BILL OF BARS (COATED) 12,300 LBS.

MARK	NUMBER REQ'D.	LENGTH	BENT	DESCRIPTION
S501	48	12'-0"	X	DIAPH. @ ABUT. - STIRRUP - VERT.
S502	16	7'-8"	X	DIAPH. @ ABUT. - STIRRUP - VERT.
S603	10	26'-6"		DIAPH. @ ABUT. - B.F. & TOP - HORIZ.
S604	6	4'-0"		DIAPH. @ ABUT. - F.F. - INTERIOR BAYS - HORIZ.
S605	12	5'-8"		DIAPH. @ ABUT. - F.F. - INTERIOR BAYS - HORIZ.
S606	4	1'-5"		DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S607	8	2'-4"		DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S508	205	26'-6"		DECK - TOP & BOTTOM - TRANS.
S409	146	36'-11"		DECK - TOP & BOTTOM - LONGIT.
S610	48	12'-0"	X	DECK - 2 PER RAIL POST - TRANS.
S611	80	6'-0"		DECK - 4 PER RAIL POST - LONGIT.
S612	16	6'-0"	X	DECK - 4 PER END RAIL POST AS NOTED

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR REINFORCEMENT.

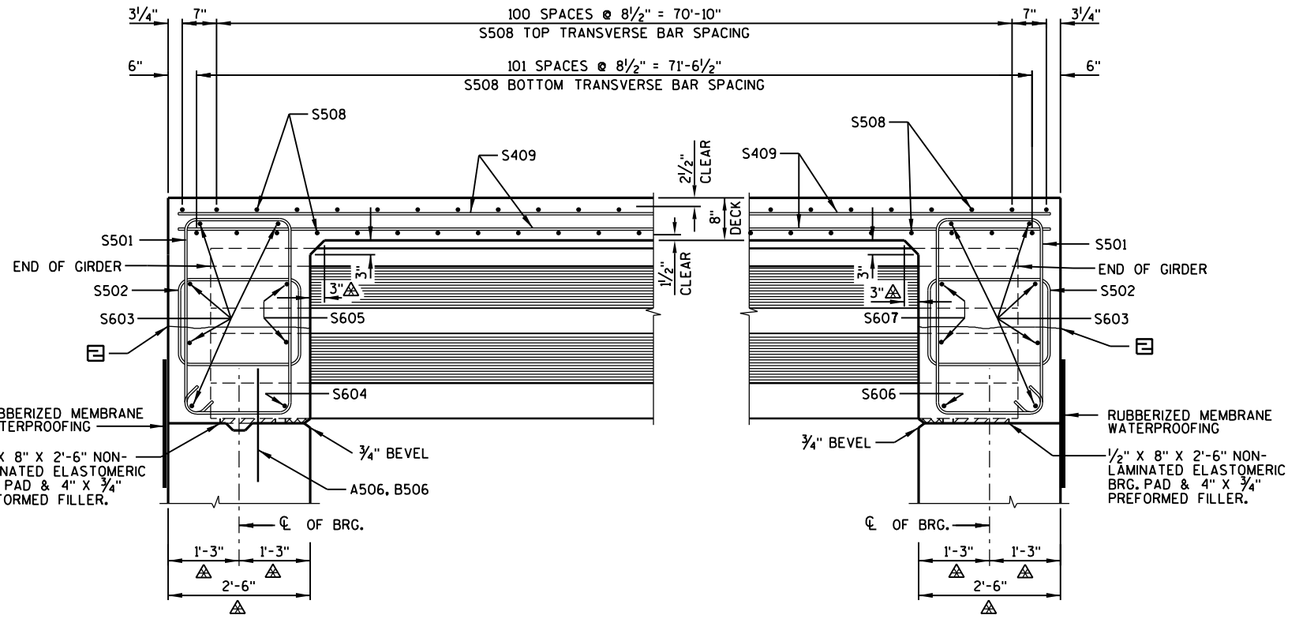


MARK	A	B
S501	3'-6"	2'-2"
S502	1'-4"	2'-2"



S610

S612



PART LONGITUDINAL SECTION

LEGEND

- ⬡ - INDICATES GIRDER NUMBER
- ⊟ - OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDERS. IF USED DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
- ✷ - FOR DETAILS OF STEEL DIAPHRAGMS AND DIAPHRAGM INSERTS, SEE SHEET 12. FOR LAYOUT OF STEEL DIAPHRAGMS, SEE PLAN SHEET 10.
- ⧋ - DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.
- ⧋⧋ - DIMENSION IS TAKEN NORMAL TO ℄ GIRDER.
- F.F. - FRONT FACE
- B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

SUPERSTRUCTURE SECTIONS & DETAILS

SHEET 11 OF 13
47

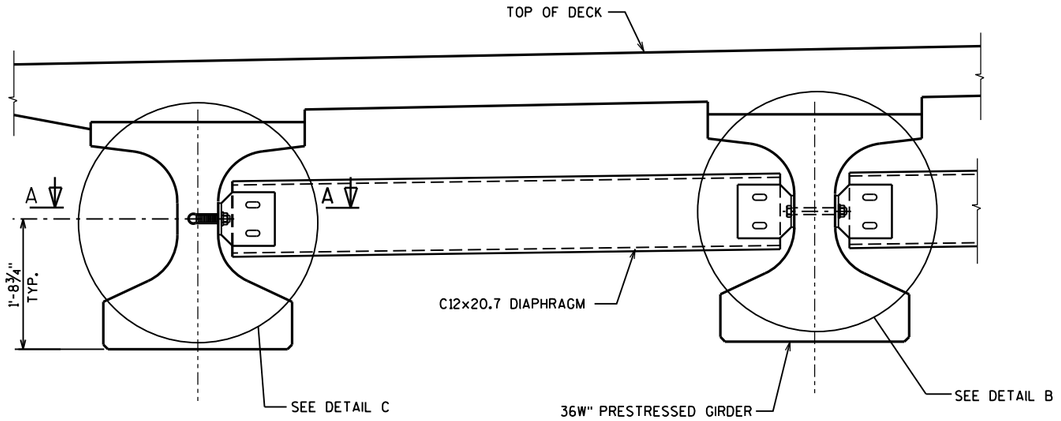
FILE= 2398009_11.DGN
DATE= 2/18/2015

8

8

STATE PROJECT NUMBER

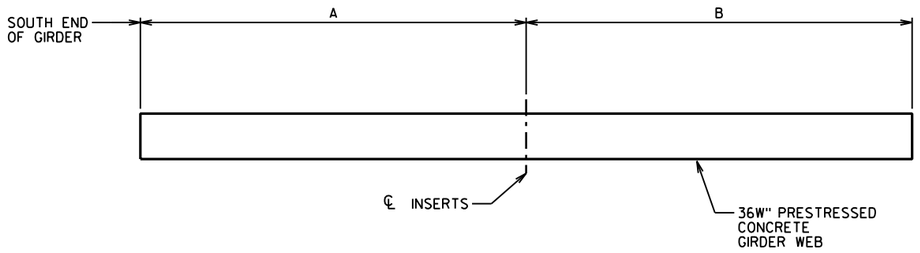
5648-00-74



EXTERIOR GIRDER

INTERIOR GIRDER

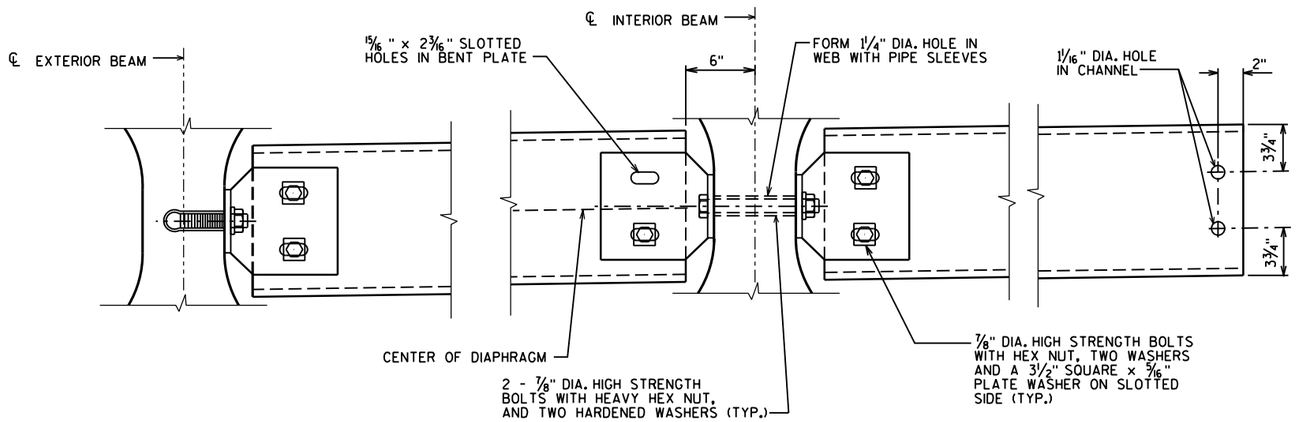
PART TRANSVERSE SECTION AT DIAPHRAGM



DIAPHRAGM INSERT LOCATION PLAN

DIAPHRAGM INSERT LOCATION TABLE

GIRDER NUMBER	A	B	INSERT TYPE
1	33'-8¼"	37'-3¾"	FERRULE LOOPS
2	34'-10¾"	36'-1¼"	PIPE SLEEVES
3	36'-1¼"	34'-10¾"	PIPE SLEEVES
4	37'-3¾"	33'-8¼"	FERRULE LOOPS



DETAIL C

DETAIL B

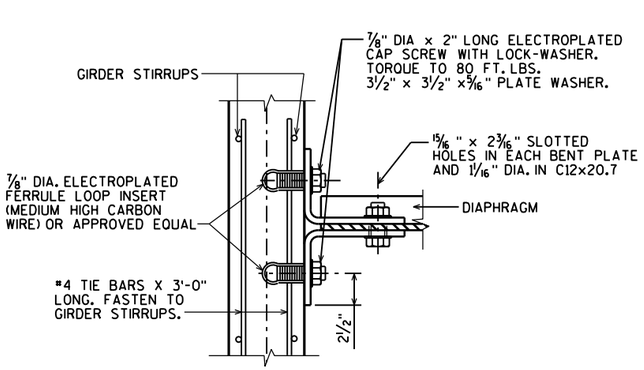
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-33-0126", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

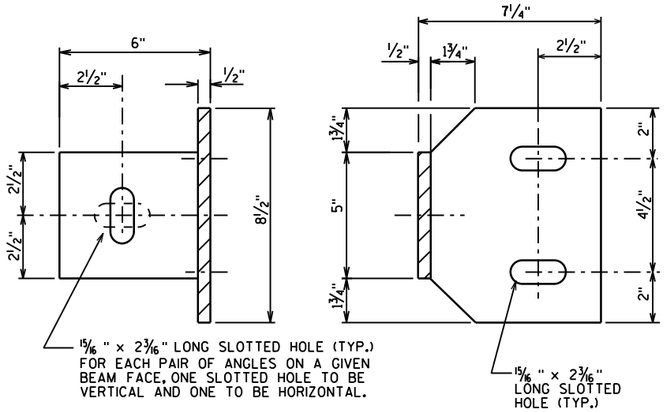
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

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



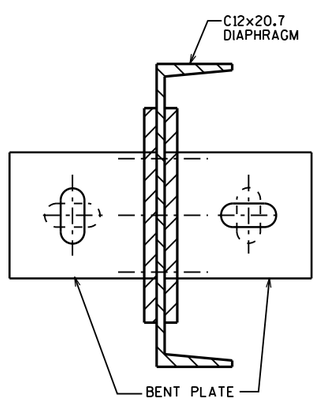
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

STEEL DIAPHRAGM

SHEET 12 OF 13

48

8

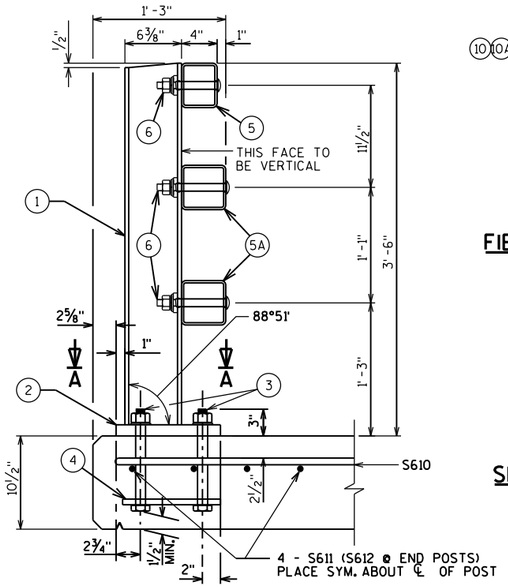
8

FILE= 2398009_12.DGN
DATE= 2/18/2015

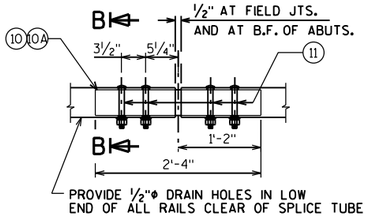
2398009_12.dgn 2/18/2015 12:32:24 PM rrabska

STATE PROJECT NUMBER

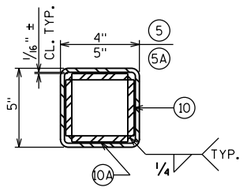
5648-00-74



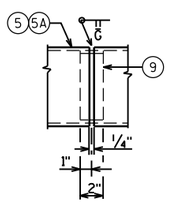
SECTION THRU RAILING ON DECK



FIELD ERECTION JOINT DETAIL

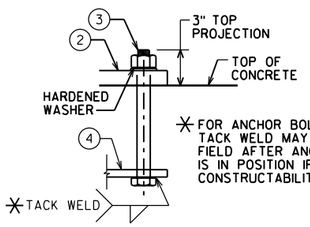


SECTION B-B

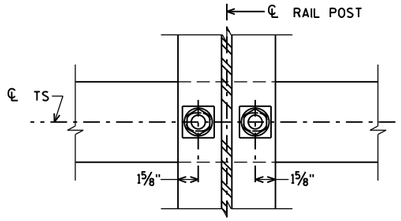


SHOP RAIL SPLICE DETAIL

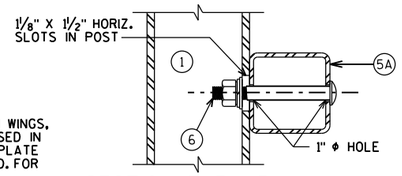
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



ANCHOR BOLTS



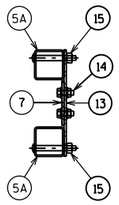
SECTION THRU POST WEB



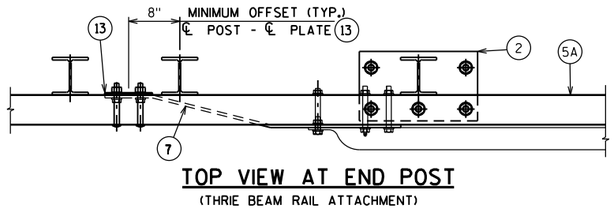
SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS



SECTION C-C



TOP VIEW AT END POST

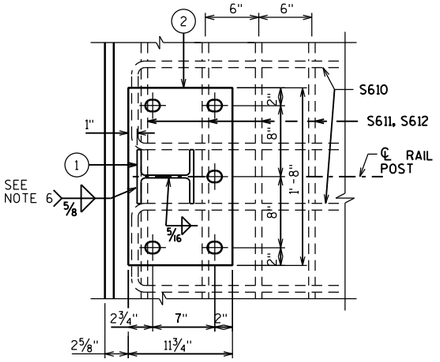
(THRIE BEAM RAIL ATTACHMENT)

LEGEND

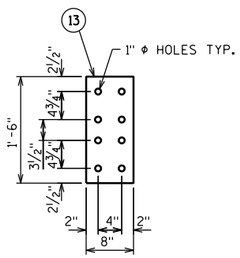
1. W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" x 11¾" x 1'-8" WITH 1⅝" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL 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. USE 10¾" LONG IN CONCRETE DECK. USE 1'-9" LONG IN ABUTMENT WINGS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1¾6" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3⁄16" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" ø A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1⅝ " X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQUIRED).
15. 1" ø HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

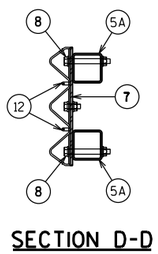
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-33-0126" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR 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. PAINTING IS NOT REQUIRED.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
12. PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.



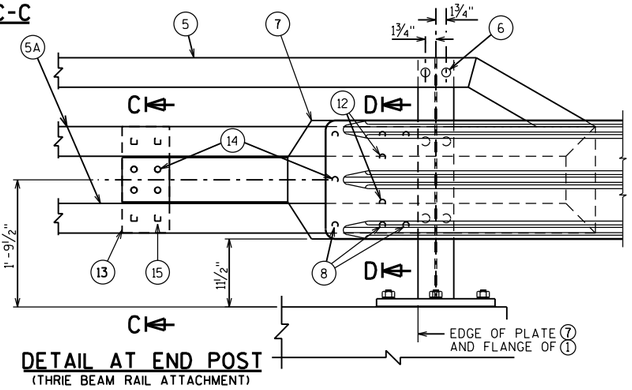
SECTION A-A



ANCHOR PLATE AT BEAM GUARD ATTACHMENT

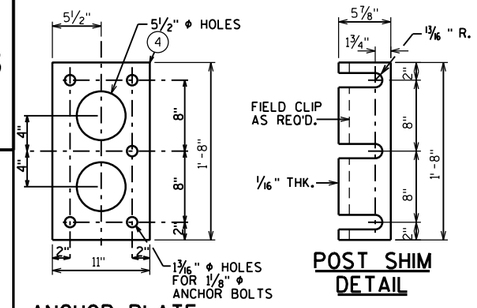


SECTION D-D



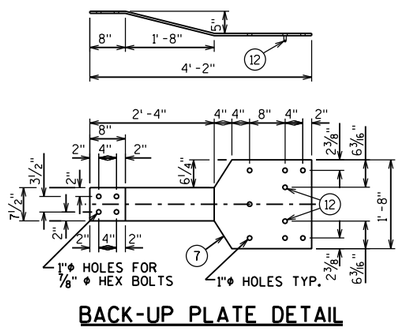
DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)



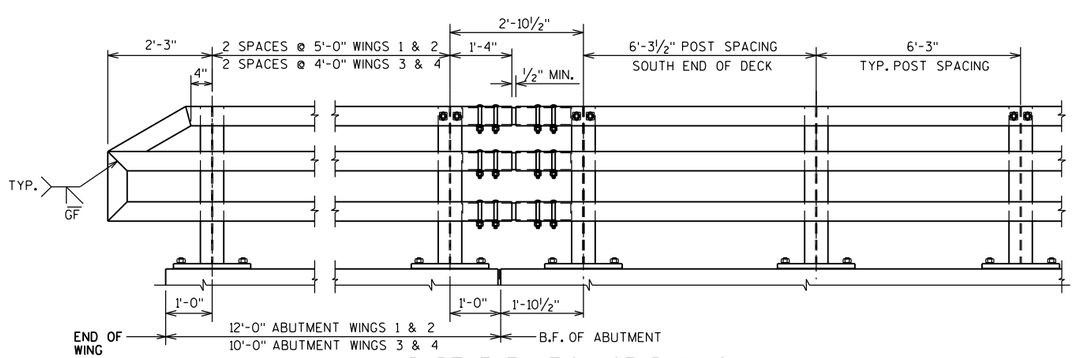
ANCHOR PLATE

POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-33-0126

DRAWN BY RLR | PLANS CK'D. JRS

RAILING TUBULAR TYPE M

SHEET 13 OF 13
49

FILE= 2398009_13.DGN
DATE= 1/29/2015

2398009_13.dgn 1/29/2015 9:41:31 AM rrabska

EARTHWORK PROJECT I.D. 5648-00-74

STATION	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Rock Exc	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Rock Exc	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Rock 1.10	Mass Ordinate Note 8
7+00		43	0	0	0	0	0	0	0	0	0	0	0
7+50	50	108	0	0	40	140	0	0	37	140	-51	41	190
8+00	50	31	0	155	0	129	0	144	37	268	78	81	190
8+50	50	0	0	306	0	29	0	427	0	297	612	81	-315
9+00	50	8	0	460	0	8	0	710	0	305	1499	81	-1195
9+44.73	44.73	8	0	460	0	13	0	762	0	318	2452	81	-2134
B-33-0126													
						318	0	2043	74				

1) CUT - CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL - THIS DOES NOT SHOW UP IN CROSS SECTIONS
3) FILL - DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8) MASS ORDINATE - IF MARSH OR EBS TO BE BACKFILLEDWITH GRANULAR: (CUT + EBS + MARSH EXC) - (FILL - (REDUCED MARSH IN FILL) - (REDUCED EBS IN FILL) - (EXPANDED ROCK)) * FILL FACTOR

EARTHWORK PROJECT I.D. 5648-00-74

STATION	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Rock Exc	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	Rock Exc	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Rock 1.10	Mass Ordinate Note 8
B-33-0126													
10+17.27		41	0	229	0	0	0	0	0	0	0	0	0
10+50	32.73	41	0	229	0	49	0	277	0	49	347	0	-297
11+00	50	16	0	92	0	52	0	297	0	102	718	0	-616
11+50	50	31	0	15	0	43	0	99	0	145	842	0	-697
12+00	50	39	0	4	0	65	0	17	0	210	864	0	-653
12+50	50	42	0	0	0	75	0	3	0	285	868	0	-583
						285	0	694	0				

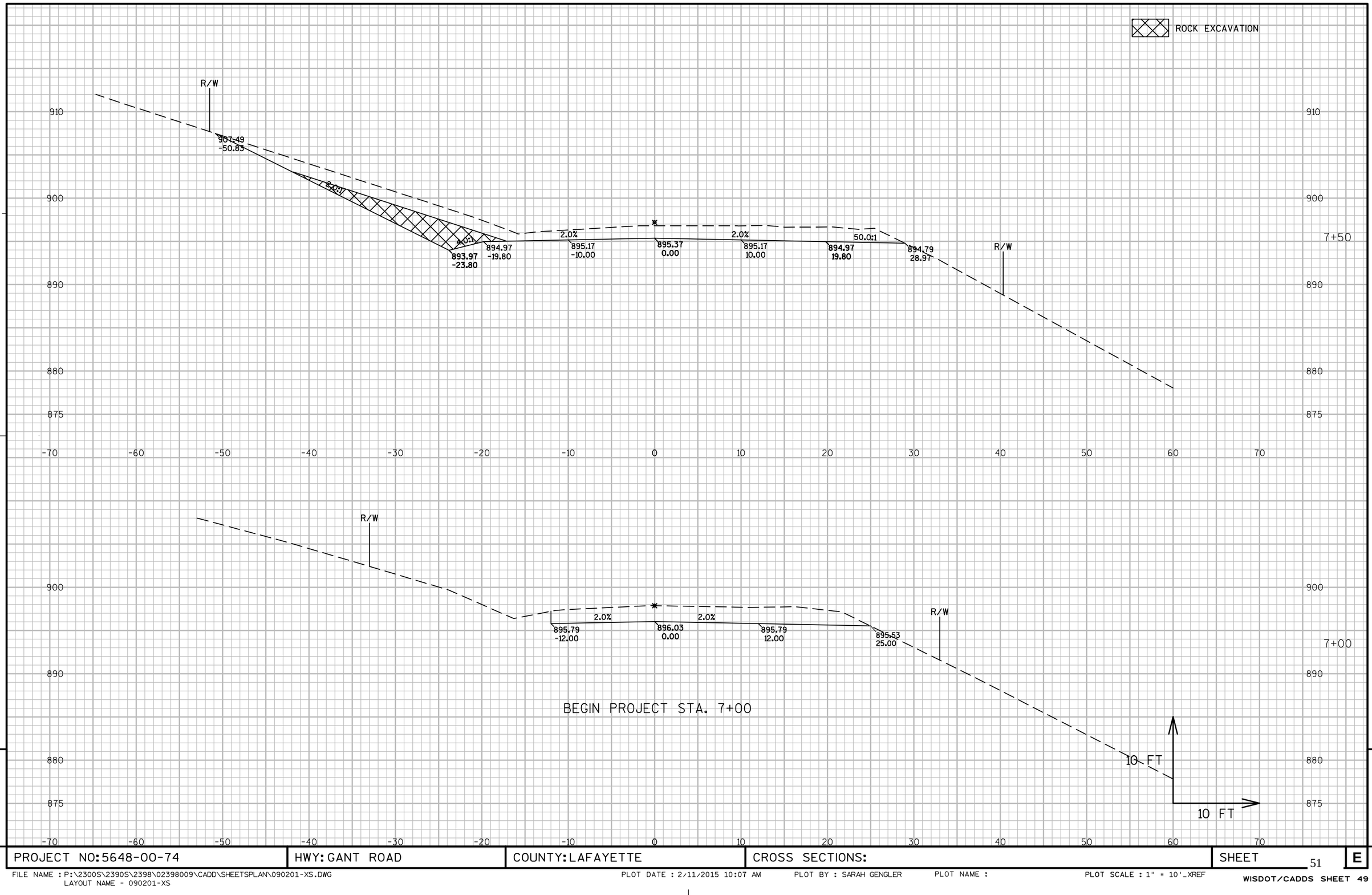
1) CUT - CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2) SALVAGED/UNUSABLE PAVEMENT MATERIAL - THIS DOES NOT SHOW UP IN CROSS SECTIONS
3) FILL - DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8) MASS ORDINATE - IF MARSH OR EBS TO BE BACKFILLEDWITH GRANULAR: (CUT + EBS + MARSH EXC) - (FILL - (REDUCED MARSH IN FILL) - (REDUCED EBS IN FILL) - (EXPANDED ROCK)) * FILL FACTOR

9

9

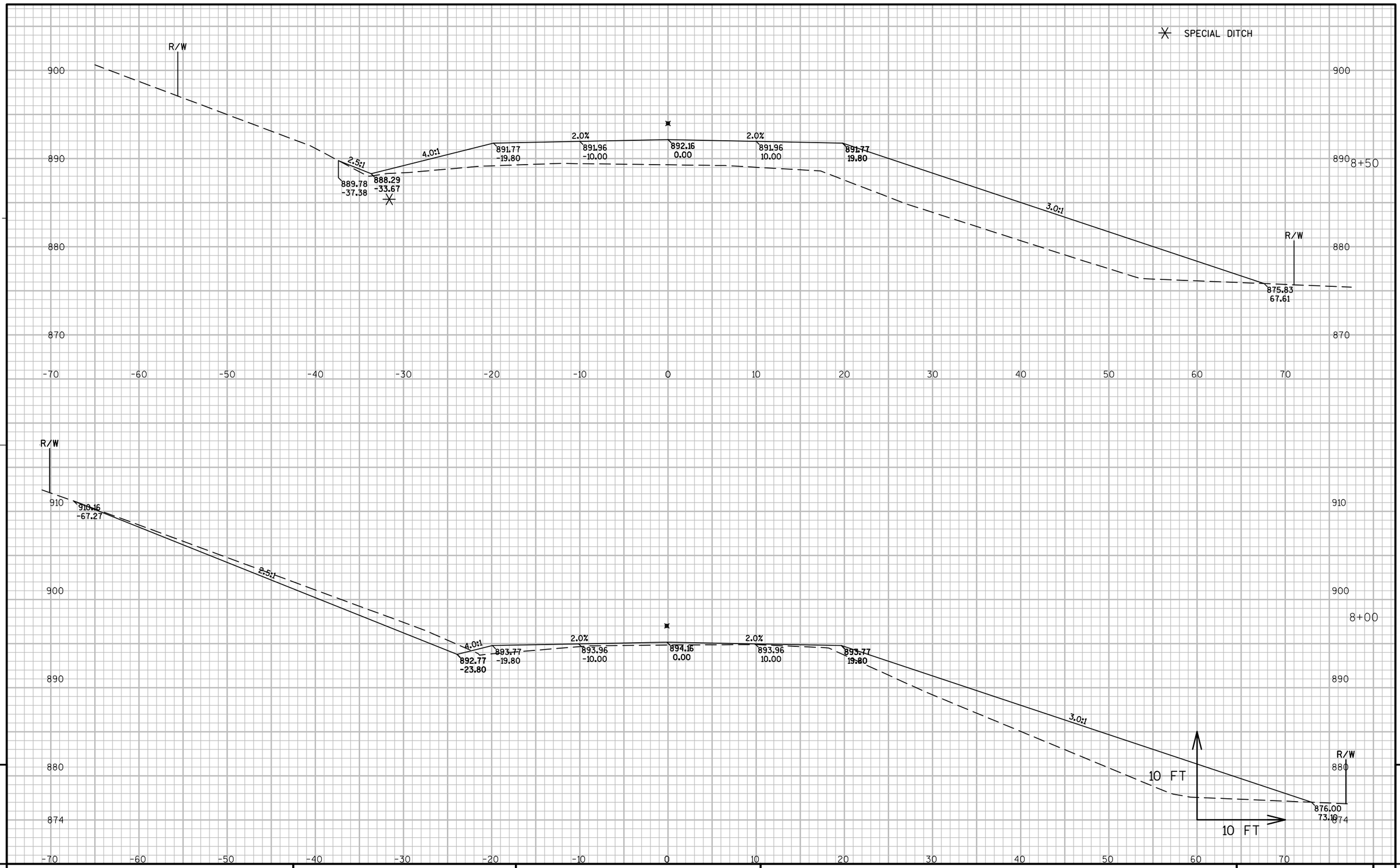
FILE NAME : P:\2300S\2390S\2398\02398009\CADD\SHEETSPLAN\2398009_EW.DWG
LAYOUT NAME - (01)
PLOT DATE : 2/11/2019 2:01 PM PLOT BY : SARAH GENGLER PLOT NAME : PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49

ROCK EXCAVATION



PROJECT NO: 5648-00-74	HWY: GANT ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS:	SHEET	E

FILE NAME : P:\2300S\2390S\2398\02398009\CADD\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS
PLOT DATE : 2/11/2015 10:07 AM PLOT BY : SARAH GENGLER PLOT NAME : PLOT SCALE : 1" = 10'_XREF
WISDOT/CADDS SHEET 49



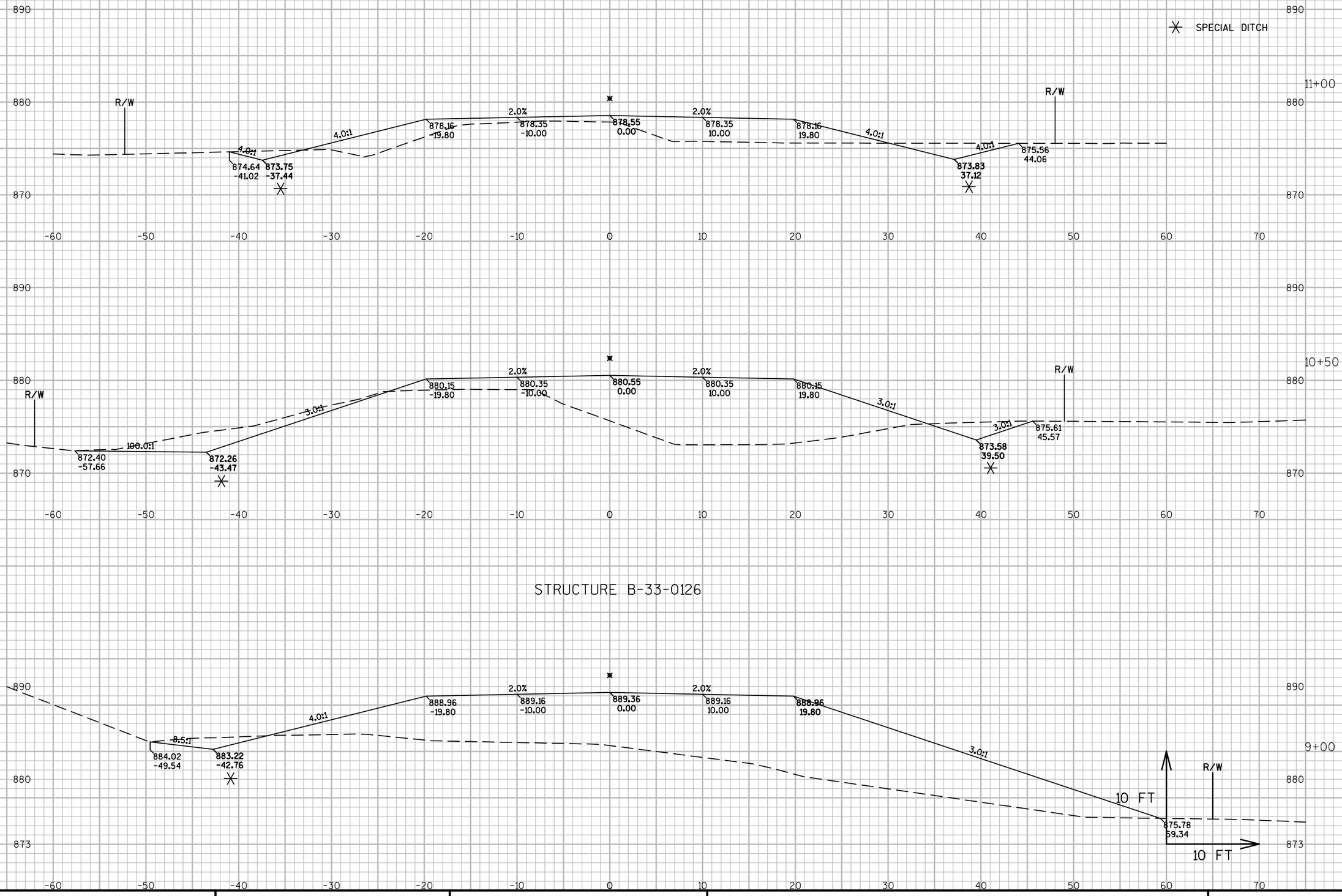
9

9

PROJECT NO: 5648-00-74	HWY: GANT ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS:	SHEET 52	E

FILE NAME : P:\2300S\2390S\2398\02398009\CADD\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090202-XS

PLOT DATE : 2/11/2015 10:07 AM PLOT BY : SARAH GENGLER PLOT NAME : PLOT SCALE : 1" = 10'_XREF



PROJECT NO:5648-00-74	HWY: GANT ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS:	SHEET 53	E

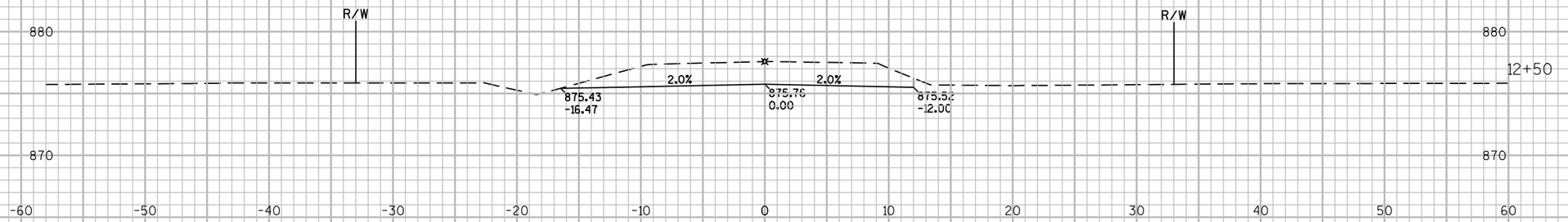
FILE NAME : P:\2300S\2390S\2398\02398009\CADD\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090203-XS

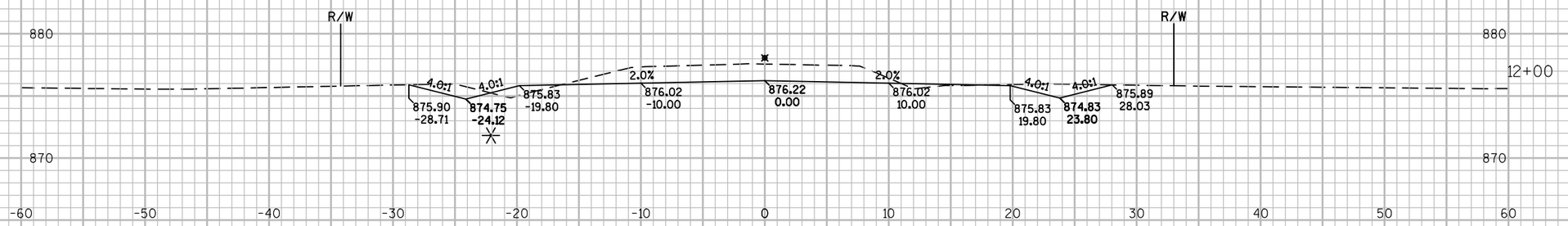
PLOT DATE : 2/20/2015 4:15 PM PLOT BY : SARAH GENGLER PLOT NAME : PLOT SCALE : 1" = 10'_XREF

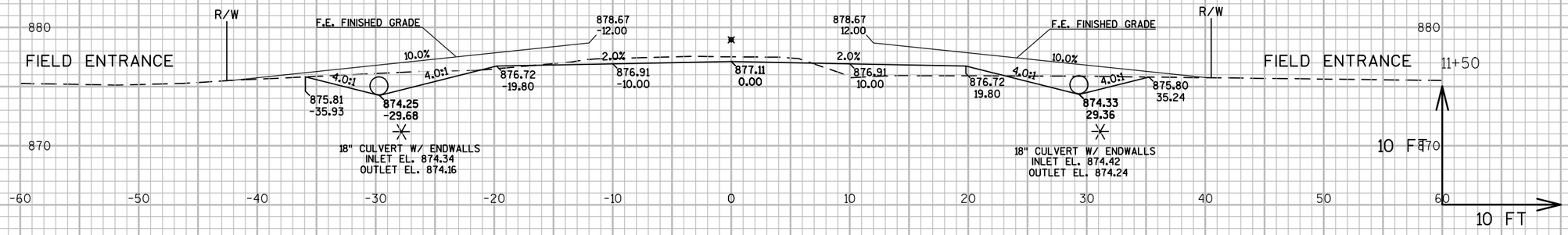
WISDOT/CADDS SHEET 49

SPECIAL DITCH

END PROJECT STA. 12+50







9

9

PROJECT NO:5648-00-74	HWY: GANT ROAD	COUNTY: LAFAYETTE	CROSS SECTIONS:	SHEET 54	E

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov