SUP

PROJECT ID: 8396-00-74

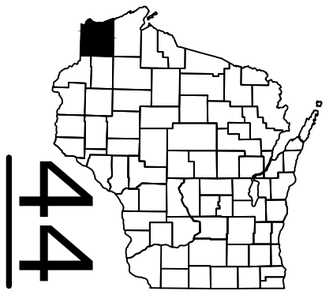
WITH: N/A

COUNTY: DOUGLAS

MARCH 2025

ORDER OF SHEETS

TOTAL SHEETS = 56



N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T WASCOTT, LIDBERG BRIDGE ROAD

EAU CLAIRE RIVER BRIDGE B-16-0149

LOC STR

DOUGLAS COUNTY

STATE PROJECT NUMBER
8396-00-74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8396-00-74	WISC 2025395	1

DESIGN DESIGNATION

A.A.D.T.	(2025)	=	<100
A.A.D.T.	(2045)	=	<100
D.H.V.		=	10
D.D.		=	50/50
T.		=	5%
DESIGN SPEED		=	25 MPH
ESALS		=	36,500

CONVENTIONAL SYMBOLS

PLAN

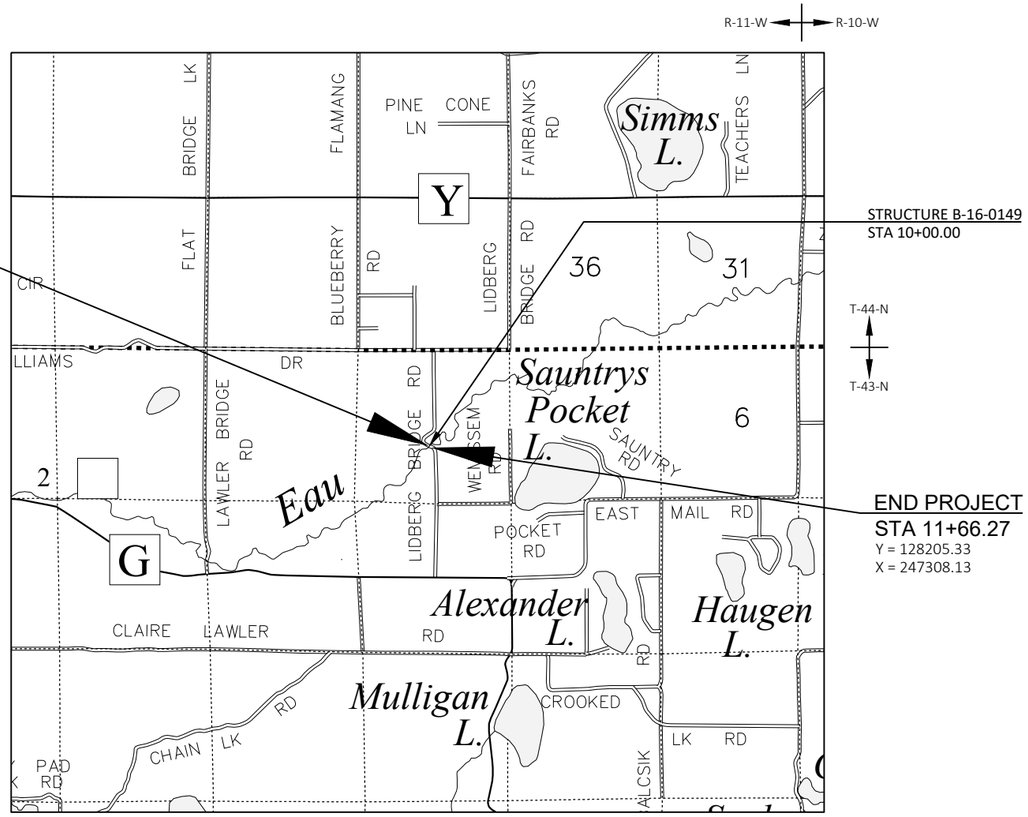
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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



STRUCTURE B-16-0149
STA 10+00.00

BEGIN PROJECT
STA 8+08.73
Y = 128363.48
X = 246991.59

END PROJECT
STA 11+66.27
Y = 128205.33
X = 247308.13

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.068 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DOUGLAS COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

ACCEPTED FOR

TOWN of WASCOTT

10/15/24 (Date) (Town Chairman)

ORIGINAL PLANS PREPARED BY

AYRES

WISCONSIN DANIEL N. SYDOW E-38363 WI PROFESSIONAL ENGINEER

10/16/2024

(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES ASSOCIATES INC
Designer	AYRES ASSOCIATES INC
Project Manager	TOU YANG, PE
Regional Examiner	NW REGION
Regional Supervisor	TOU YANG, PE

APPROVED FOR THE DEPARTMENT

DATE: 10/28/2024 (Signature)

E

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\SHEETS\010101-TI.DWG

PLOT DATE : 10/14/2024 11:49 AM

PLOT BY : WALDERA, KAREN

PLOT NAME :

UTILITIES CONTACTS

BRIGHTSPEED
MICHAEL COUGHLIN
1409 JOHN AVE
SUPERIOR, WI 54880
PHONE: 980-376-1865
EMAIL: michael.coughlin@brightspeed.com

EAST CENTRAL ENERGY
JAKE KLOCKE
2200 FINLAND AVENUE
FINLAYSON, MN 55735
PHONE: 763-691-2041
EMAIL: jake.klocke@ecemn.com

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

WISCONSIN DNR LIAISON

AMY CRONK
WDNR
810 W. MAPLE STREET
SPOONER, WI 54801
PHONE: 715-520-3976
EMAIL: amy.cronk@wisconsin.gov

DESIGN PROJECT MANAGER

TOU YANG, PE
WISDOT NW REGION
718 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715-833-5570
EMAIL: tou.yang@dot.wi.gov

TOWN CONTACT

CHUCK YOUNGQUIST, CHAIR
TOWN OF WASCOTT
16362S TOWN HALL ROAD
P.O. BOX 159
WASCOTT, WI 54890
PHONE: 651-248-2484
EMAIL: townofwascott@gmail.com

DESIGN PROJECT LEADER

DANIEL SYDOW, PE
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
PHONE: 715-834-3161
EMAIL: sydowd@AyresAssociates.com

GENERAL NOTES

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

FILL EXPANSION FACTOR IS 30%

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

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

SEED MIXTURE NO. 20 AND SEEDING TEMPORARY SHALL BE USED IN THE PROJECT AND SHALL BE PLACED AS SHOWN IN THE PLANS AND/OR DIRECTED BY THE ENGINEER.

ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2" UPPER LAYER AND A 2" LOWER LAYER. ASPHALTIC SURFACE SHALL USE 12.5 mm NOMINAL AGGREGATE SIZE.

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

SAWCUTS, AS SHOWN ON THE PLANS, ARE SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

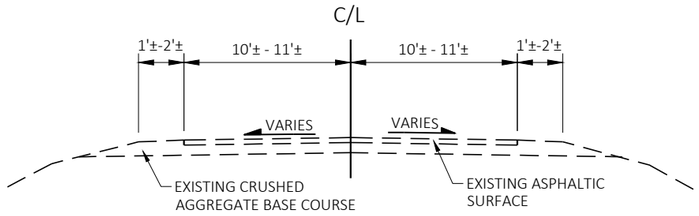
DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

2

RUNOFF COEFFICIENT TABLE

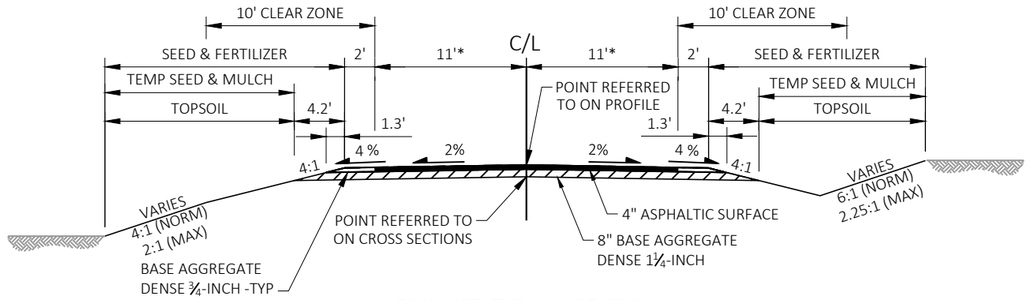
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA = 0.542 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.322 ACRES



EXISTING TYPICAL SECTION

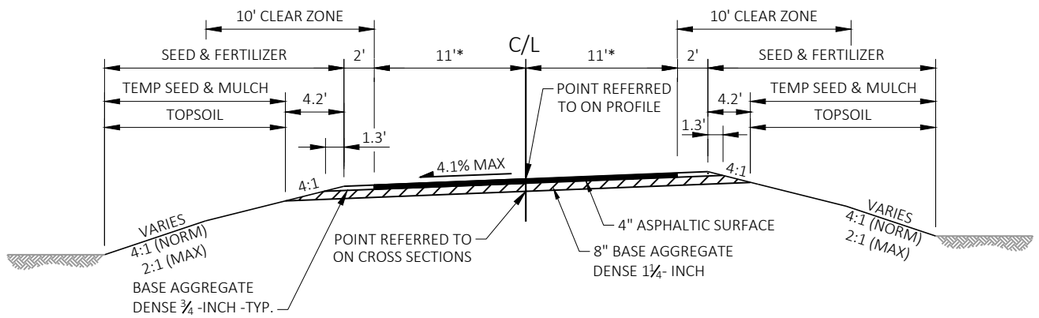
LIDBERG BRIDGE ROAD



FINISHED TYPICAL SECTION

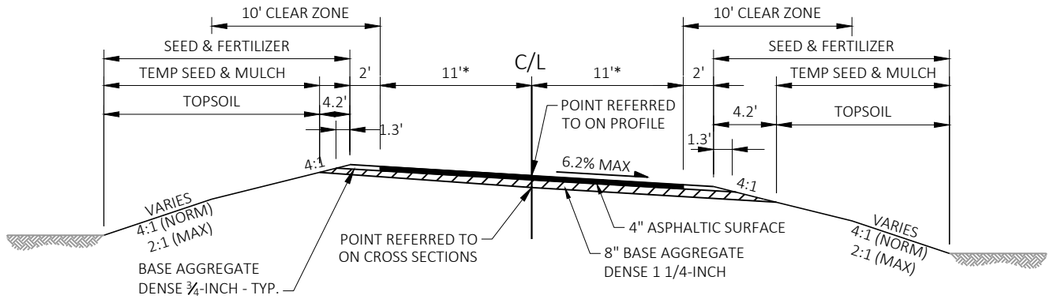
LIDBERG BRIDGE ROAD
STA. 8+50.00 TO STA. 9+58.73
STA. 10+41.27 TO STA. 10+91.27

*THE ASPHALT SURFACE LANE SHALL TAPER FROM 13.25' WIDE AT THE ENDS OF THE WINGS TO 11' WIDE AT 50' FROM THE END OF THE BRIDGE AND MATCH EXISTING AT THE ENDS OF THE PROJECT.



FINISHED TYPICAL SUPERELEVATED SECTION

LIDBERG BRIDGE ROAD
STA. 8+08.73 TO STA. 8+50.00



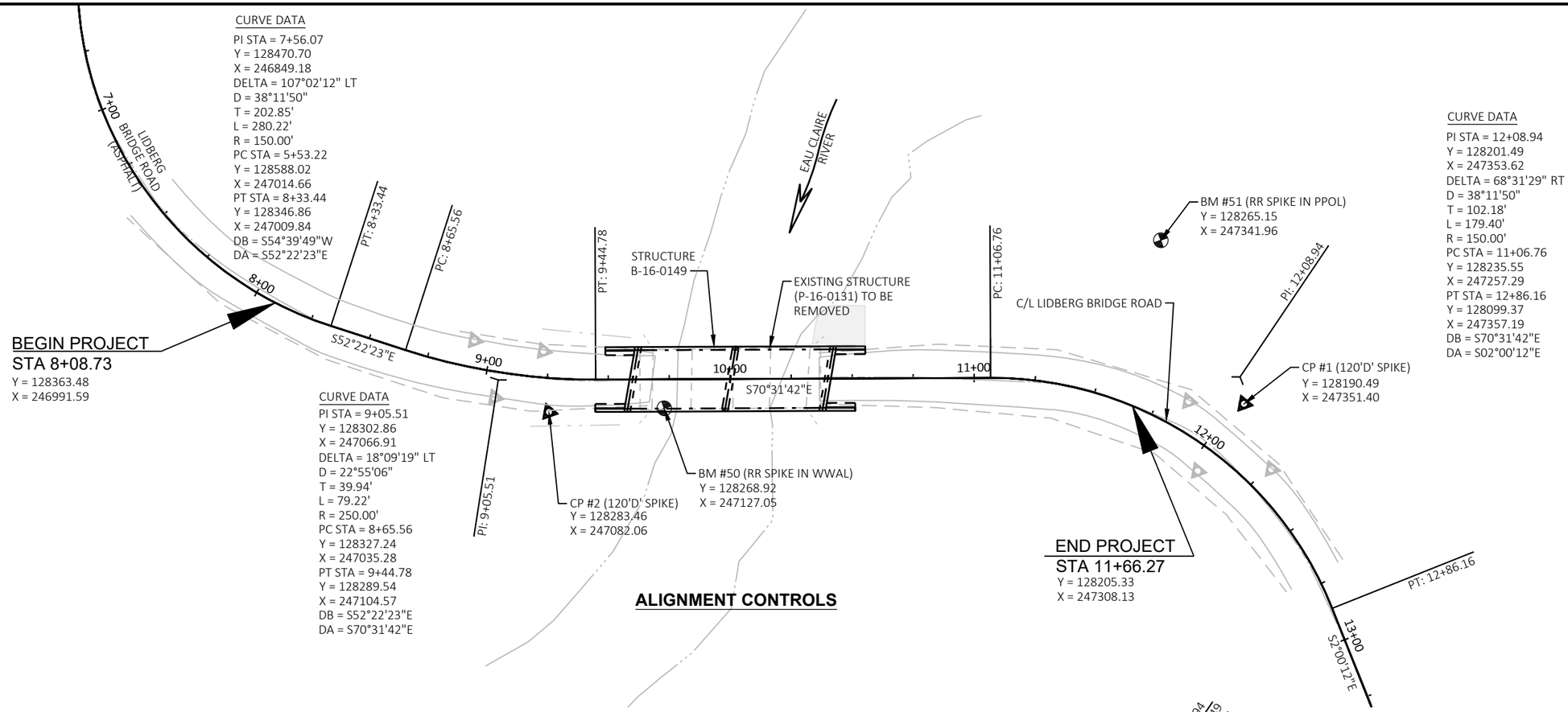
FINISHED TYPICAL SUPERELEVATED SECTION

LIDBERG BRIDGE ROAD
STA. 10+91.27 TO STA. 11+66.27

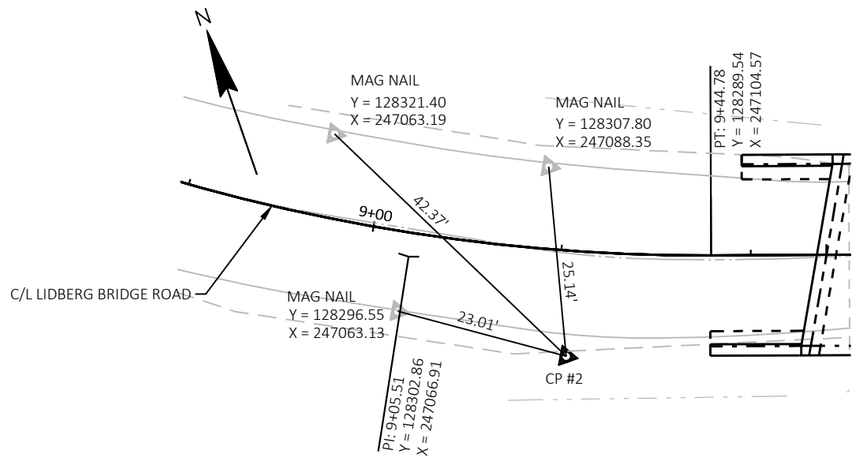
PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	TYPICAL SECTIONS	SHEET 3	E

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\SHEETS\020301-TS.DWG
LAYOUT NAME - 01-10ft
PLOT DATE : 10/24/2024 1:52 PM
PLOT BY : WALDERA, KAREN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

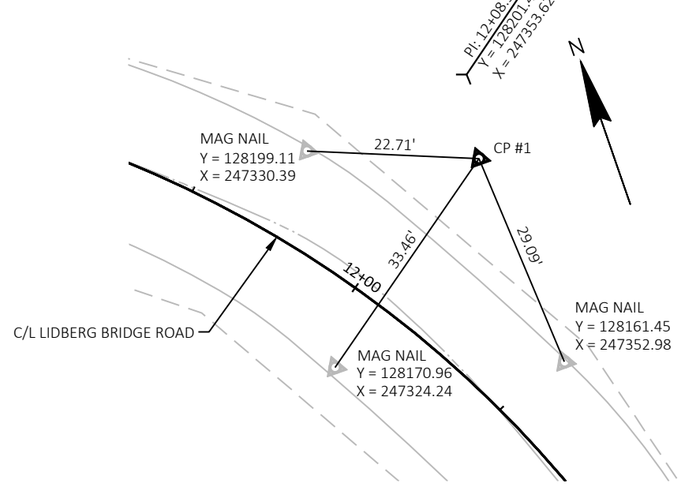
2



ALIGNMENT CONTROLS



CP #2 (120'D' SPIKE)
Y = 128283.46
X = 247082.06

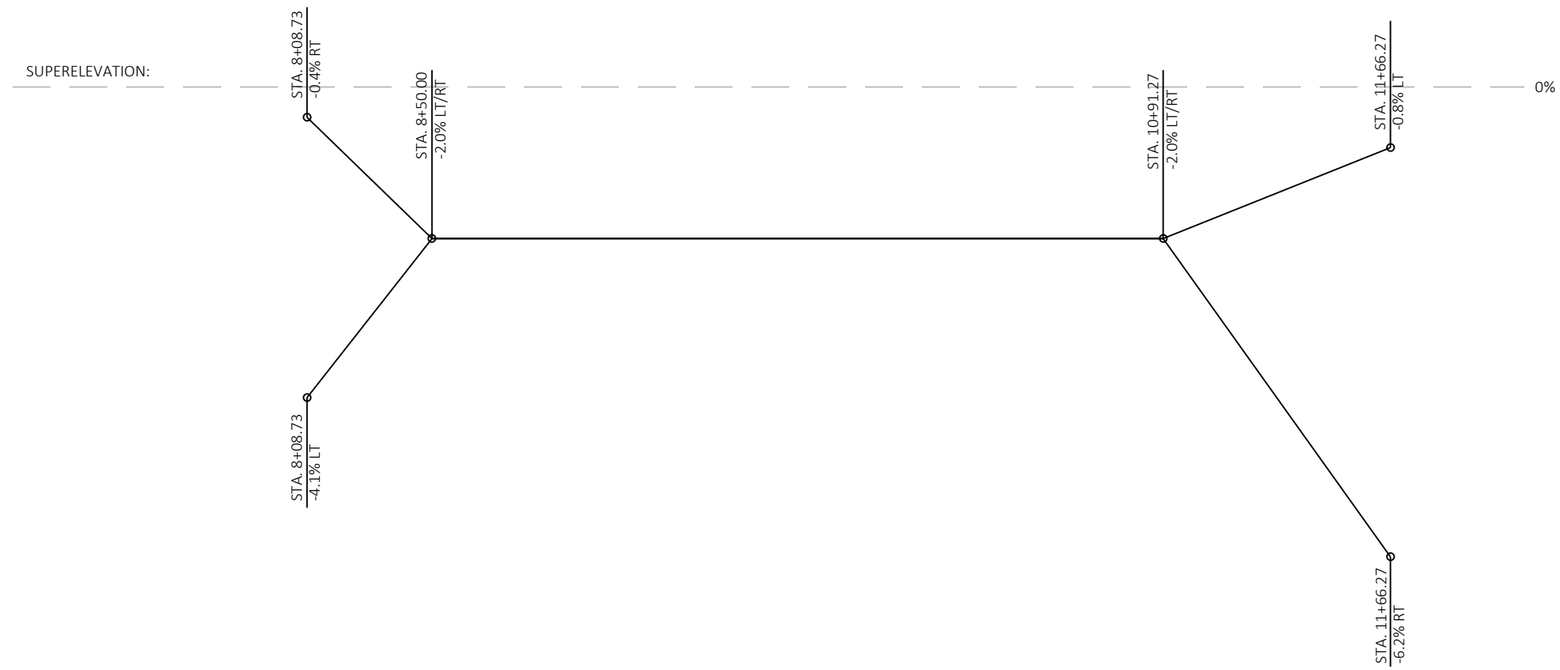


CP #1 (120'D' SPIKE)
Y = 128190.49
X = 247351.40

ALIGNMENT TIES

PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	ALIGNMENT CONTROLS	SHEET 4	E

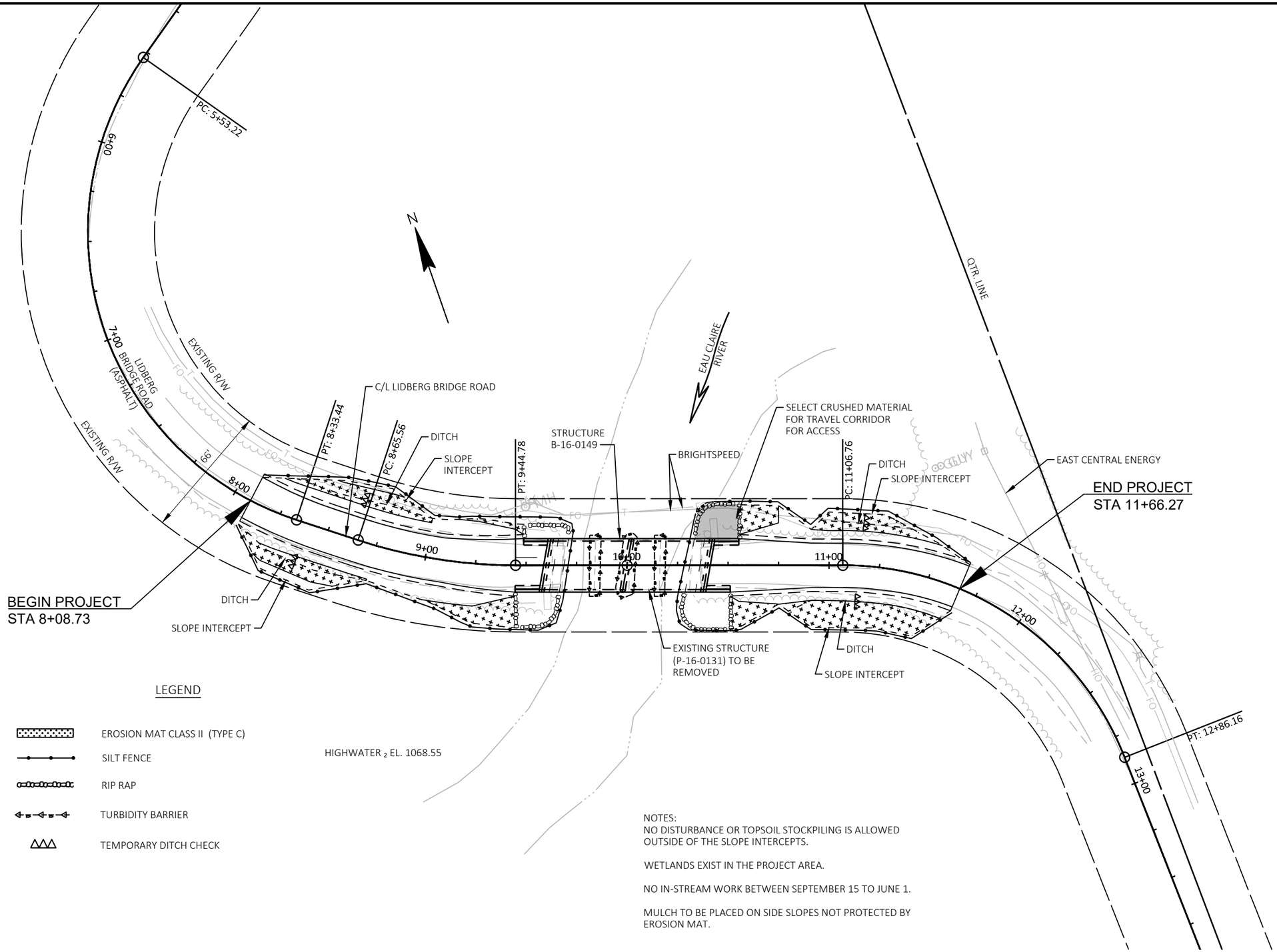
2



SUPERELEVATION DIAGRAM

PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	CONSTRUCTION DETAILS	SHEET 5	E

2



NOTES:
NO DISTURBANCE OR TOPSOIL STOCKPILING IS ALLOWED OUTSIDE OF THE SLOPE INTERCEPTS.

WETLANDS EXIST IN THE PROJECT AREA.

NO IN-STREAM WORK BETWEEN SEPTEMBER 15 TO JUNE 1.

MULCH TO BE PLACED ON SIDE SLOPES NOT PROTECTED BY EROSION MAT.

PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	EROSION CONTROL	SHEET 6	E

Estimate Of Quantities

8396-00-74

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	4.000	4.000
0004	201.0205	Grubbing	STA	4.000	4.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-16-0131	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	215.000	215.000
0010	205.0508.S	Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil	TON	138.000	138.000
0012	206.1001	Excavation for Structures Bridges (structure) 01. B-16-0149	EACH	1.000	1.000
0014	208.0100	Borrow	CY	125.000	125.000
0016	210.1500	Backfill Structure Type A	TON	220.000	220.000
0018	213.0100	Finishing Roadway (project) 01. 8396-00-74	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	40.000	40.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	415.000	415.000
0024	455.0605	Tack Coat	GAL	50.000	50.000
0026	465.0105	Asphaltic Surface	TON	160.000	160.000
0028	502.0100	Concrete Masonry Bridges	CY	224.000	224.000
0030	502.3200	Protective Surface Treatment	SY	310.000	310.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	4,420.000	4,420.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	32,710.000	32,710.000
0036	513.4061	Railing Tubular Type M	LF	218.000	218.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0040	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	280.000	280.000
0042	606.0300	Riprap Heavy	CY	145.000	145.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0046	618.0100	Maintenance and Repair of Haul Roads (project) 01. 8396-00-74	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	624.0100	Water	MGAL	15.000	15.000
0052	625.0100	Topsoil	SY	525.000	525.000
0054	627.0200	Mulching	SY	475.000	475.000
0056	628.1504	Silt Fence	LF	920.000	920.000
0058	628.1520	Silt Fence Maintenance	LF	1,840.000	1,840.000
0060	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0062	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0064	628.2027	Erosion Mat Class II Type C	SY	425.000	425.000
0066	628.6005	Turbidity Barriers	SY	240.000	240.000
0068	628.7504	Temporary Ditch Checks	LF	70.000	70.000
0070	629.0210	Fertilizer Type B	CWT	0.800	0.800
0072	630.0120	Seeding Mixture No. 20	LB	53.000	53.000
0074	630.0200	Seeding Temporary	LB	13.000	13.000
0076	630.0500	Seed Water	MGAL	28.000	28.000
0078	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0080	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0082	637.2230	Signs Type II Reflective F	SF	24.000	24.000
0084	638.2602	Removing Signs Type II	EACH	7.000	7.000
0086	638.3000	Removing Small Sign Supports	EACH	7.000	7.000
0088	642.5001	Field Office Type B	EACH	1.000	1.000
0090	643.0420	Traffic Control Barricades Type III	DAY	2,120.000	2,120.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	2,830.000	2,830.000
0094	643.0900	Traffic Control Signs	DAY	1,420.000	1,420.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0111	Geotextile Type DF Schedule A	SY	40.000	40.000

8396-00-74

Line	Item	Item Description	Unit	Total	Qty
0100	645.0120	Geotextile Type HR	SY	290.000	290.000
0102	650.4500	Construction Staking Subgrade	LF	275.000	275.000
0104	650.5000	Construction Staking Base	LF	275.000	275.000
0106	650.6501	Construction Staking Structure Layout (structure) 01. B-16-0149	EACH	1.000	1.000
0108	650.9911	Construction Staking Supplemental Control (project) 01. 8396-00-74	EACH	1.000	1.000
0110	650.9920	Construction Staking Slope Stakes	LF	275.000	275.000
0112	690.0150	Sawing Asphalt	LF	44.000	44.000
0114	715.0502	Incentive Strength Concrete Structures	DOL	1,344.000	1,344.000
0116	999.2005.S	Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0118	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0120	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0122	SPV.0090	Special 01. Removing Existing Timber Piling	LF	100.000	100.000
0124	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	16.000	16.000

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
8+00	-	12+00	MAINLINE	4	4
			TOTAL 0010	**4**	**4**

NOTE: TREES HAVE BEEN CUT BY OTHERS.

EXCAVATION, HAULING, AND DISPOSAL OF POTENTIAL CREOSOTE CONTAMINATED SOIL

STATION	TO	STATION	LOCATION	205.0508.S EXCAVATION, HAULING, AND DISPOSAL OF POTENTIAL CREOSOTE CONTAMINATED SOIL TON
9+63	-	10+39	MAINLINE	138
			TOTAL 0010	**138**

FINISHING ROADWAY

PROJECT	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 8396-00-74) EACH
8396-00-74	1
TOTAL 0010	**1**

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 AGGREGATE DENSE 3/4-INCH TON	305.0120 AGGREGATE DENSE 1 1/4-TON
8+08	-	9+58	MAINLINE	20	225
10+41	-	11+66	MAINLINE	20	190
			TOTAL 0010	**40**	**415**

ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
8+08	-	9+58	MAINLINE	27	85
10+41	-	11+66	MAINLINE	23	75
			TOTAL 0010	**50**	**160**

LIDBERG BRIDGE ROAD EARTHWORK SUMMARY

From/To Station	Location	Excavation Common (1) 205.0100 Cut	Salvaged / Unuseable Pavement Material (5)	Unexpanded Fill	Expanded Fill (2) Factor 1.30	Mass Ordinate +/- (3)	Waste	Borrow 208.0100
8+08.73 - 9+58.73	LIDBERG BRIDGE RD	78	38	127	165	-125	0	125
10+41.27 - 11+66.27	LIDBERG BRIDGE RD	137	32	60	78	27	27	0
	TOTAL	**215**		**187**	**243**			**125**

1) Excavation Common is the Cut. Item number 205.0100.
2) Expanded Fill. Factor = 1.30; Expanded Fill = Unexpanded Fill * Fill Factor
3) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material on the project.
4) All quantities shown in CY.
5) Salvaged/unuseable pavement material

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (01. 8396-00-74) EACH
0030	PROJECT LIMITS	1
	TOTAL 0030	**1**

MOBILIZATION

LOCATION	619.1000 MOBILIZATION EACH
PROJECT LIMITS	1
TOTAL 0010	**1**

WATER

LOCATION	624.0100 WATER MGAL
COMPACTION	7
DUST CONTROL	8
TOTAL 0010	**15**

EROSION CONTROL ITEMS

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF
8+08	-	9+58	MAINLINE	390	780	150	--	28
10+41	-	11+66	MAINLINE	345	690	190	--	28
		10+00		--	--	--	190	--
			UNDISTRIBUTED	185	370	85	50	14
			TOTAL 0010	**920**	**1,840**	**425**	**240**	**70**

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT LIMITS	4	4
TOTAL 0010	**4**	**4**

RESTORATION ITEMS

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
8+08	-	9+58	MAINLINE	210	220	0.3	22	5	11
10+41	-	11+66	MAINLINE	210	160	0.3	20	5	11
			UNDISTRIBUTED	105	95	0.2	11	3	6
			TOTAL 0010	**525**	**475**	**0.8**	**53**	**13**	**28**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

SIGNS

STATION	LOCATION	SIGN CODE	SIGN SIZE (INCHES)	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	MESSAGE
4+50	RT	W1-3L	36x36	--	1	9	1	1	
		W13-1	18x18	--	--	3	--	--	"25", SHARES POST
9+64	RT			--	--	--	1	1	
9+66	LT	W5-52L	12x36	1	--	3	1	1	
9+66	RT	W5-52R	12x36	1	--	3	1	1	
10+37	LT	W5-52L	12x36	1	--	3	1	1	
10+37	RT	W5-52R	12x36	1	--	3	1	1	
10+40	LT			--	--	--	1	1	
13+85	LT	W1-3L	36x36	--	1	9	1	1	
		W13-1	18x18	--	--	3	--	--	"25", SHARES POST
TOTAL 0010				4	1	24	7	7	

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 8396-00-74) EACH
8396-00-74	1
TOTAL 0010	1

SAWING ASPHALT

STATION	LOCATION	690.0150 SAWING ASPHALT LF
8+08	MAINLINE	22
11+66	MAINLINE	22
TOTAL 0010		44

FIELD OFFICE TYPE B

LOCATION	642.5001 FIELD OFFICE TYPE B EACH
PROJECT LIMITS	1
TOTAL 0010	1

TRAFFIC CONTROL

LOCATION	DURATION DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC CONTROL EACH
SDD 15C02	100	18	1,800	24	2,400	12	1,200	1
UNDISTRIBUTED			320		430		220	--
TOTAL 0010			2,120		2,830		1,420	1

MAINTAINING BIRD DETERRENT SYSTEM

STATION	LOCATION	999.2005.S.01 MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. STA 10+00) EACH
10+00	MAINLINE	1
TOTAL 0010		1

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
8+08	-	9+58	MAINLINE	150	150	150
10+41	-	11+66	MAINLINE	125	125	125
			TOTAL 0010	275	275	275

CONSTRUCTION STAKING STRUCTURE LAYOUT

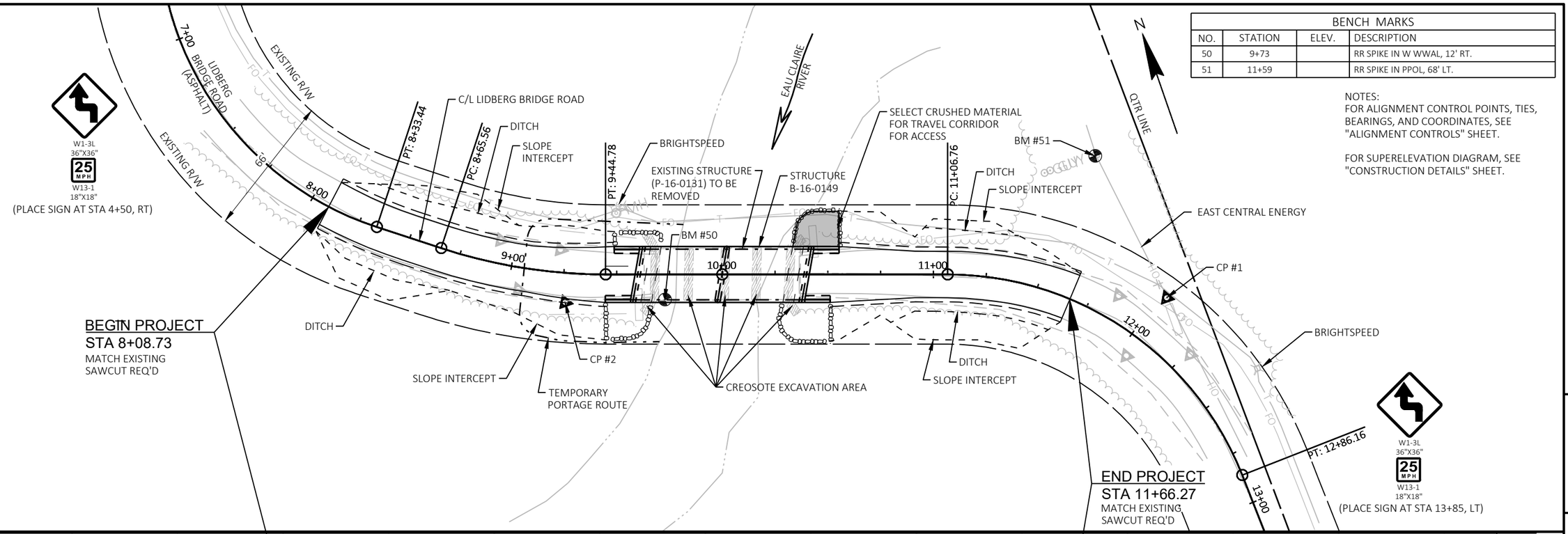
CATEGORY	STATION	LOCATION	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-16-0149) EACH
0020	10+00	MAINLINE	1
		TOTAL 0020	1

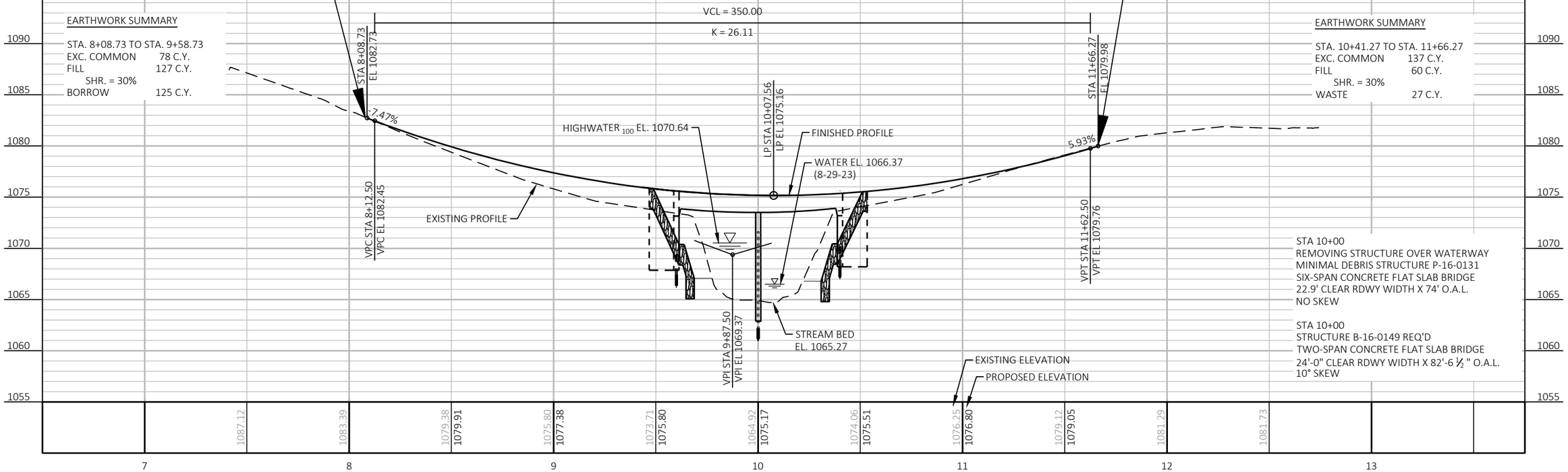
ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	9+73		RR SPIKE IN W WWAL, 12' RT.
51	11+59		RR SPIKE IN PPOL, 68' LT.

NOTES:
FOR ALIGNMENT CONTROL POINTS, TIES, BEARINGS, AND COORDINATES, SEE "ALIGNMENT CONTROLS" SHEET.

FOR SUPERELEVATION DIAGRAM, SEE "CONSTRUCTION DETAILS" SHEET.

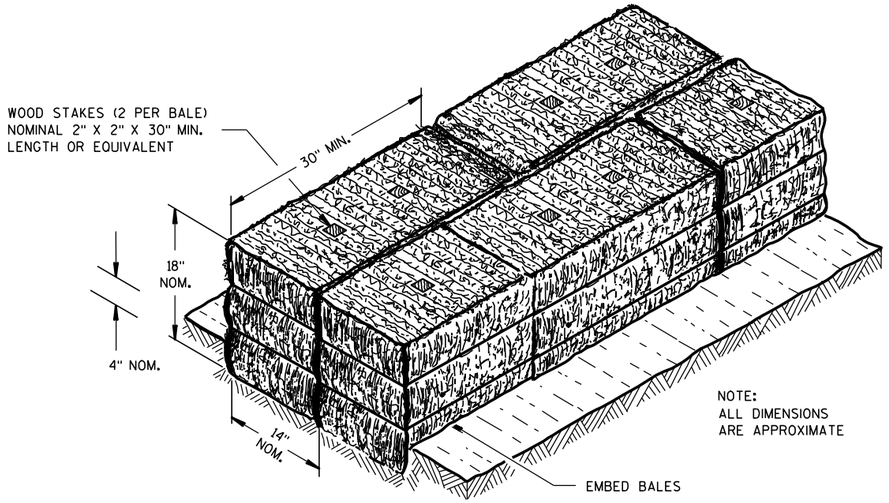




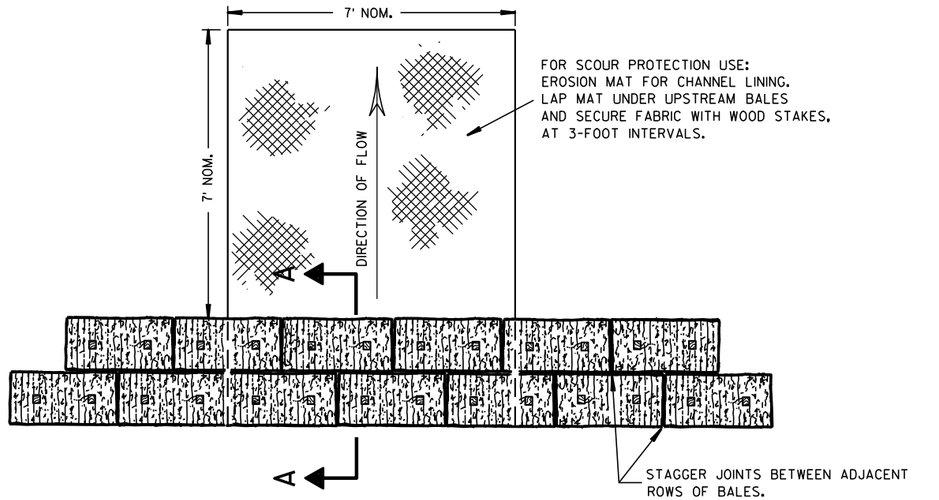
PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	PLAN AND PROFILE:	SHEET 11	E

Standard Detail Drawing List

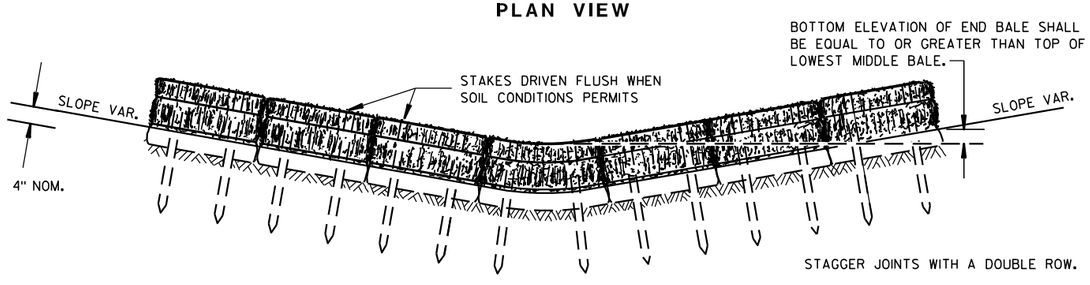
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES



SECTION A-A



PLAN VIEW



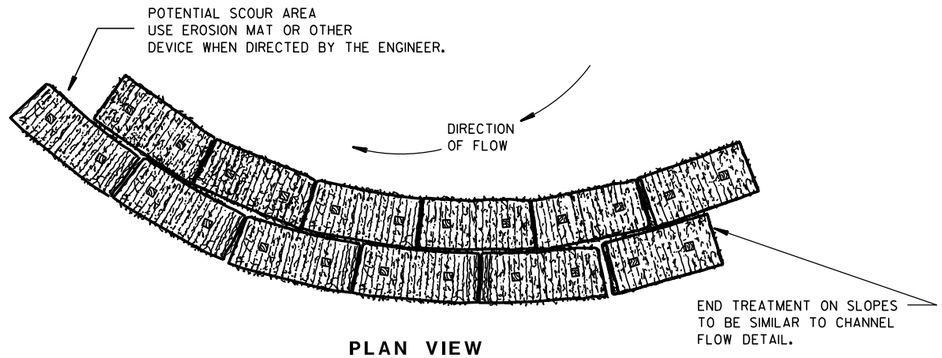
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

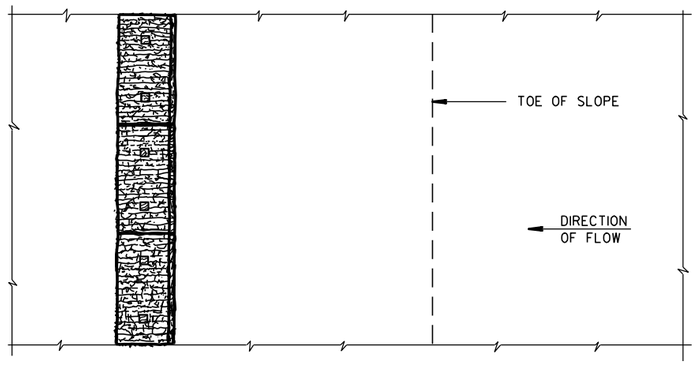
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

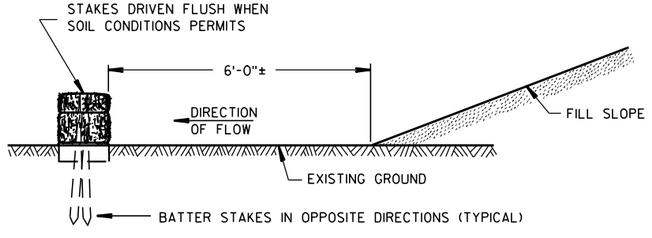


PLAN VIEW

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

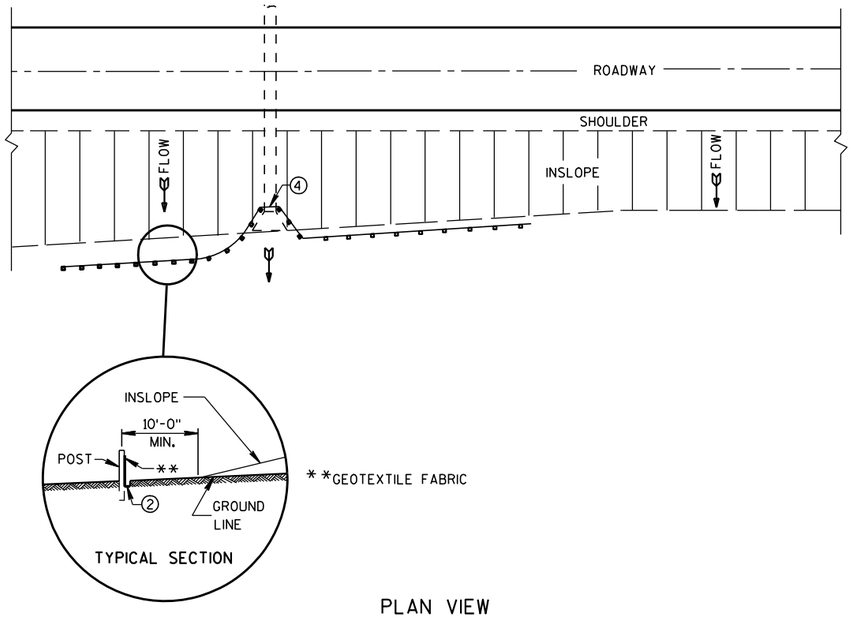
FHWA

6

S.D.D. 8 E 8-3

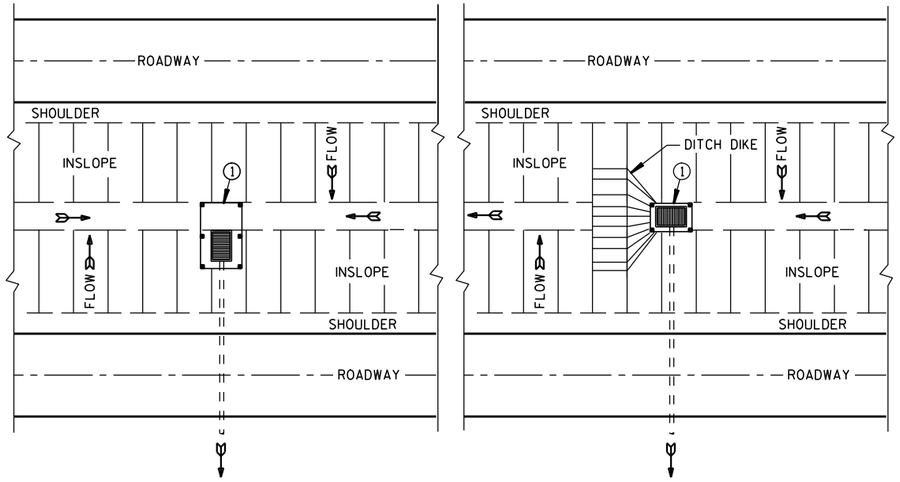
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



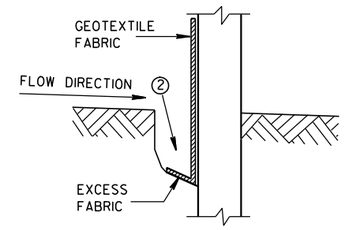
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

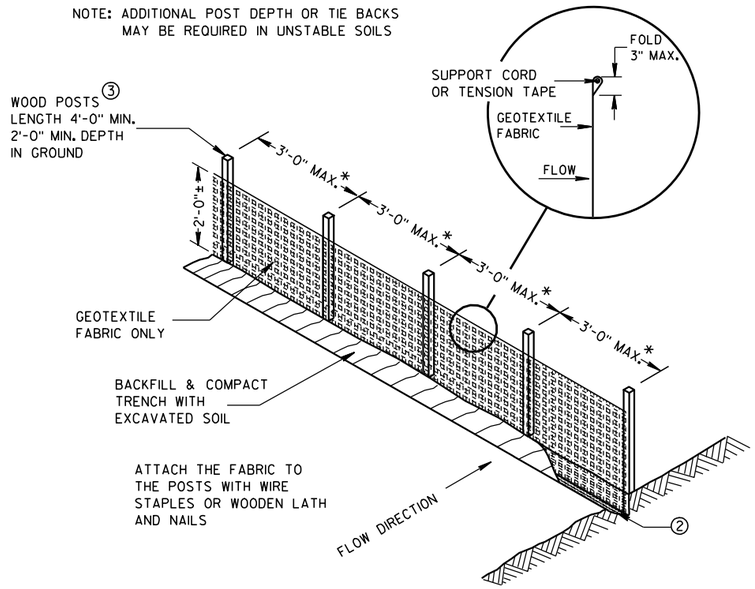
GENERAL NOTES

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.

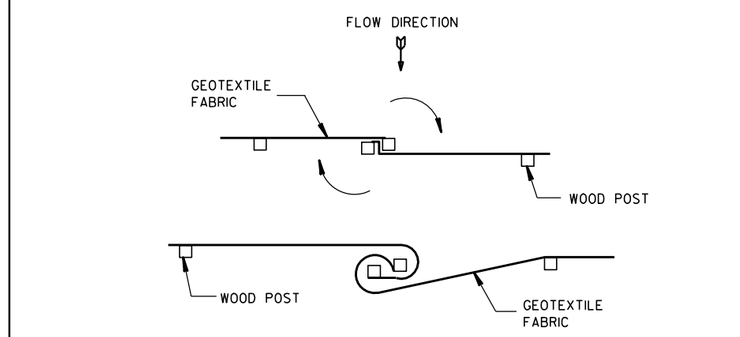


TRENCH DETAIL

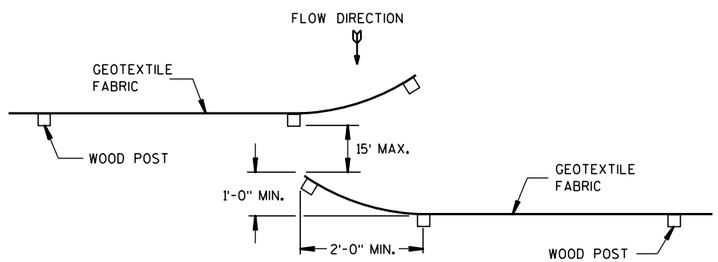


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

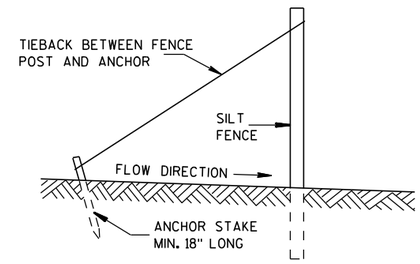


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

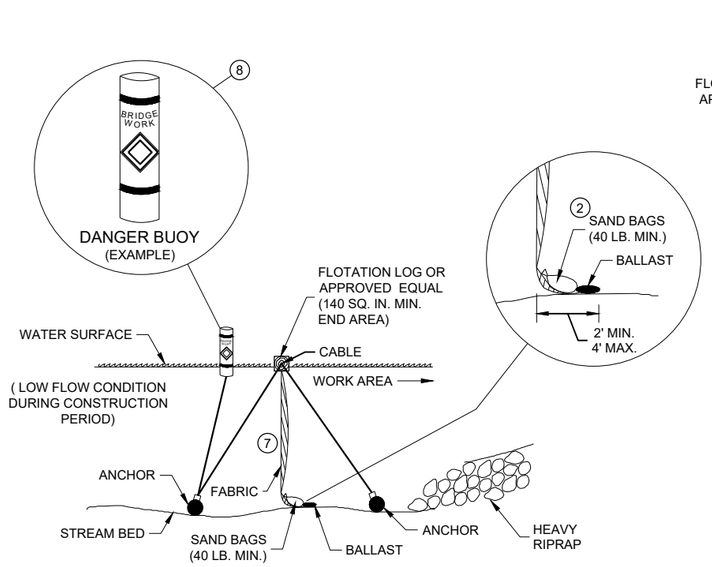
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

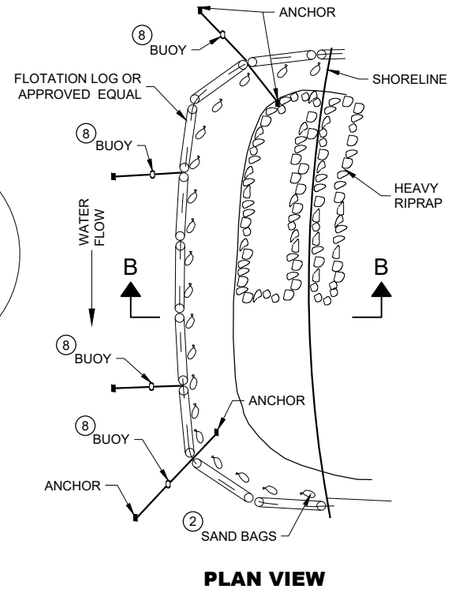
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

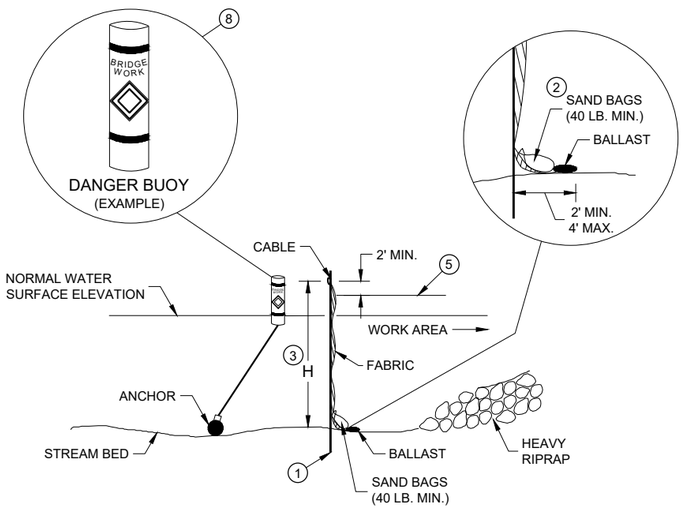


SECTION B - B

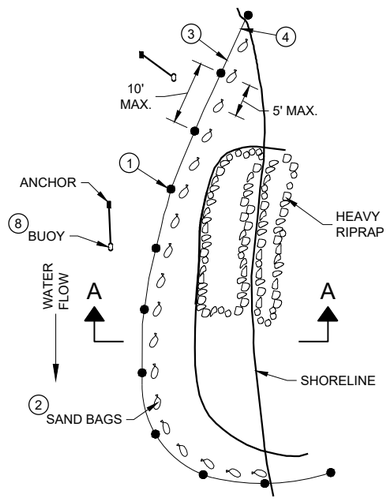


PLAN VIEW

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

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

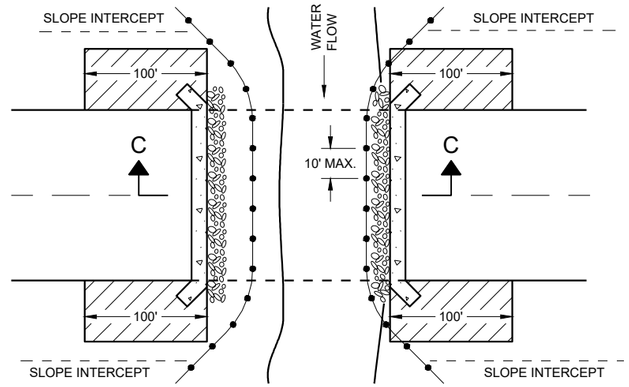
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

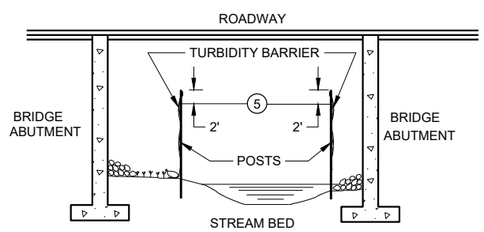
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

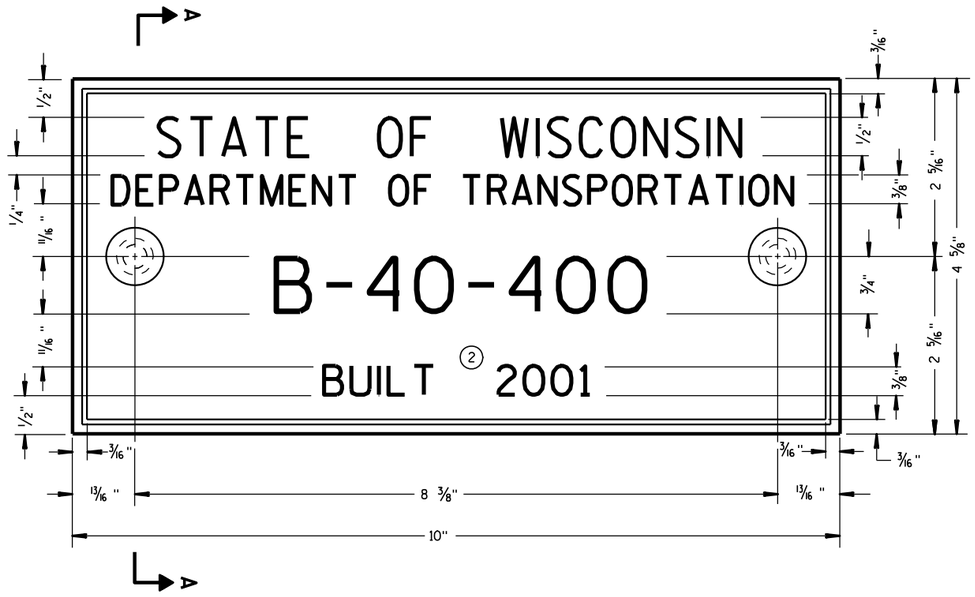
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6
SDD 08E11 - 02



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

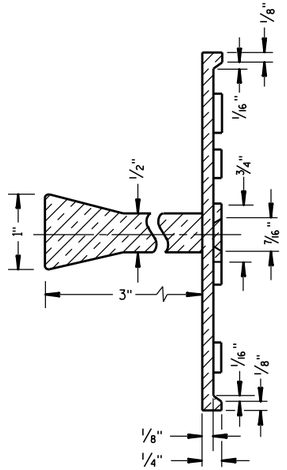
GENERAL NOTES

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.

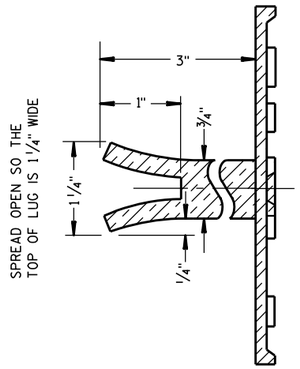
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

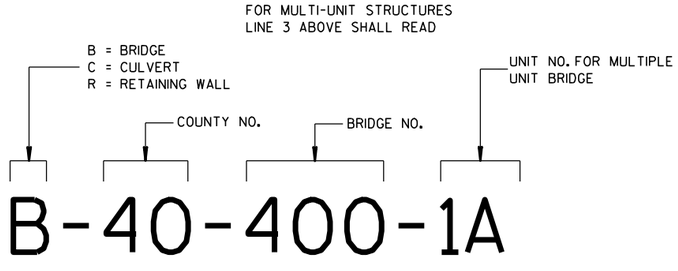
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



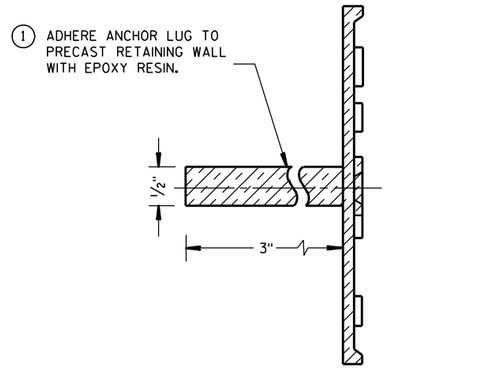
SECTION A-A



ALTERNATE LUG



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

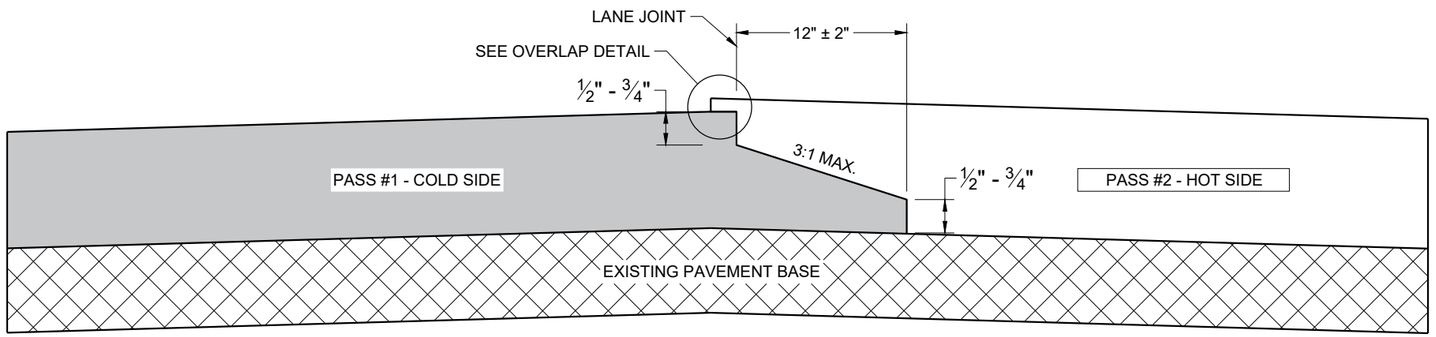
3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

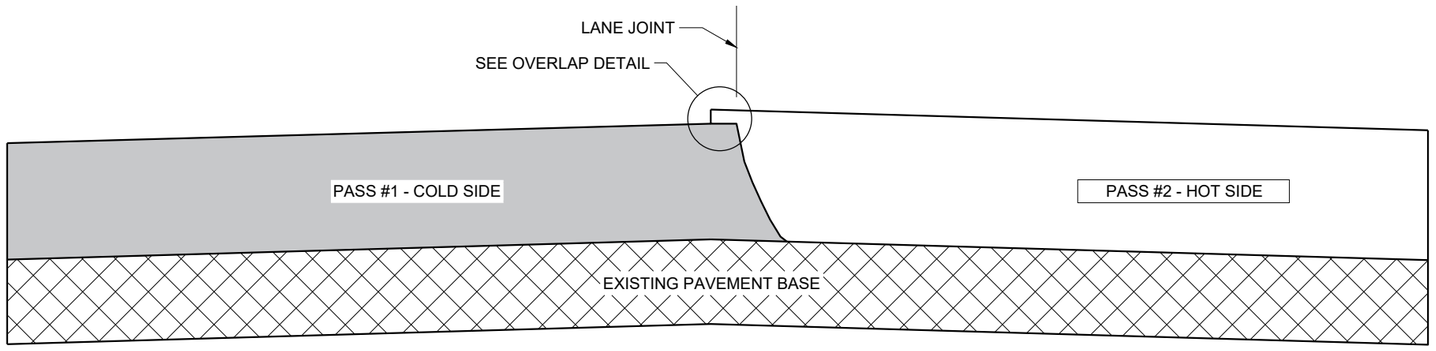
FHWA

6

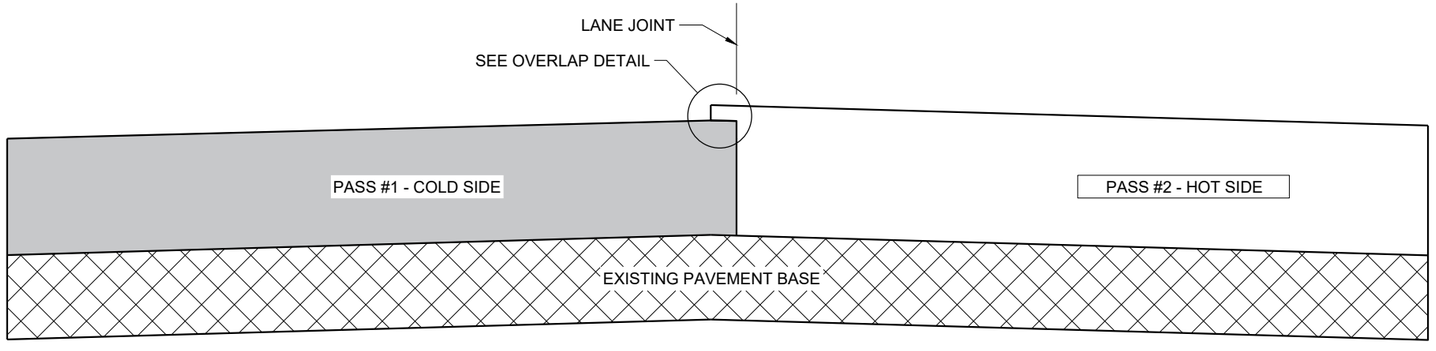
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

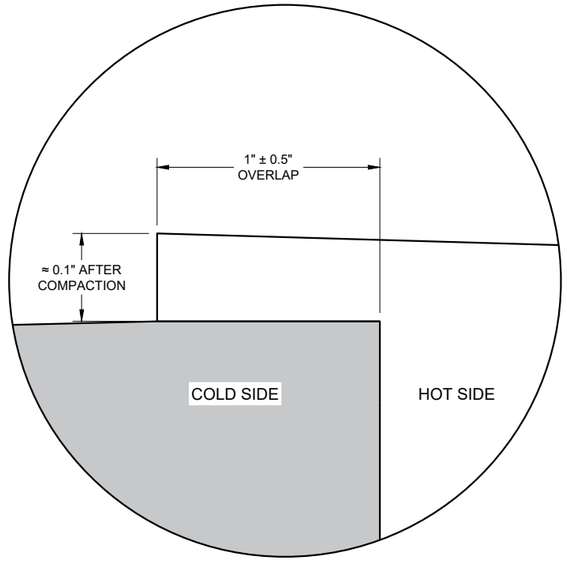
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

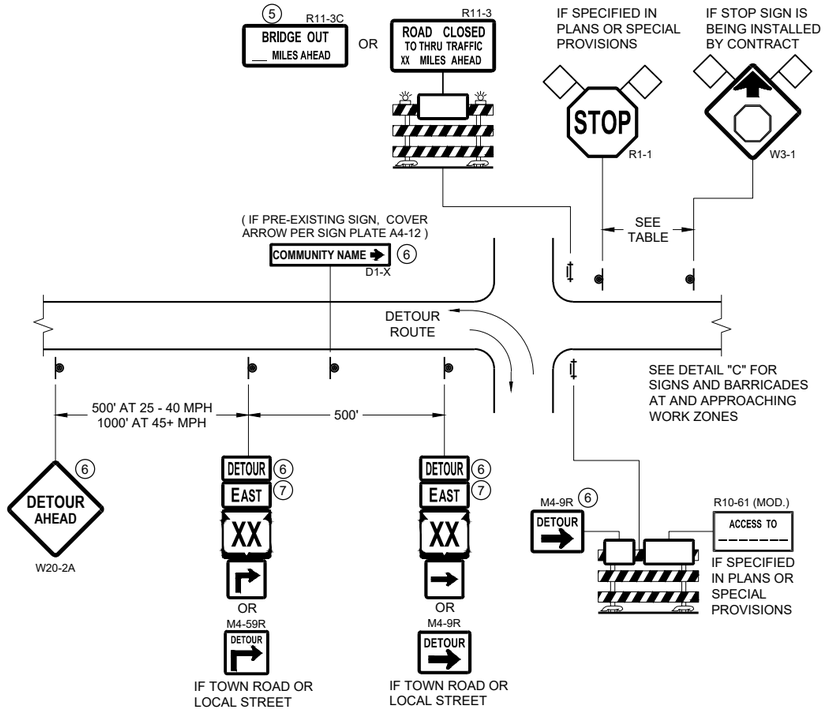
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

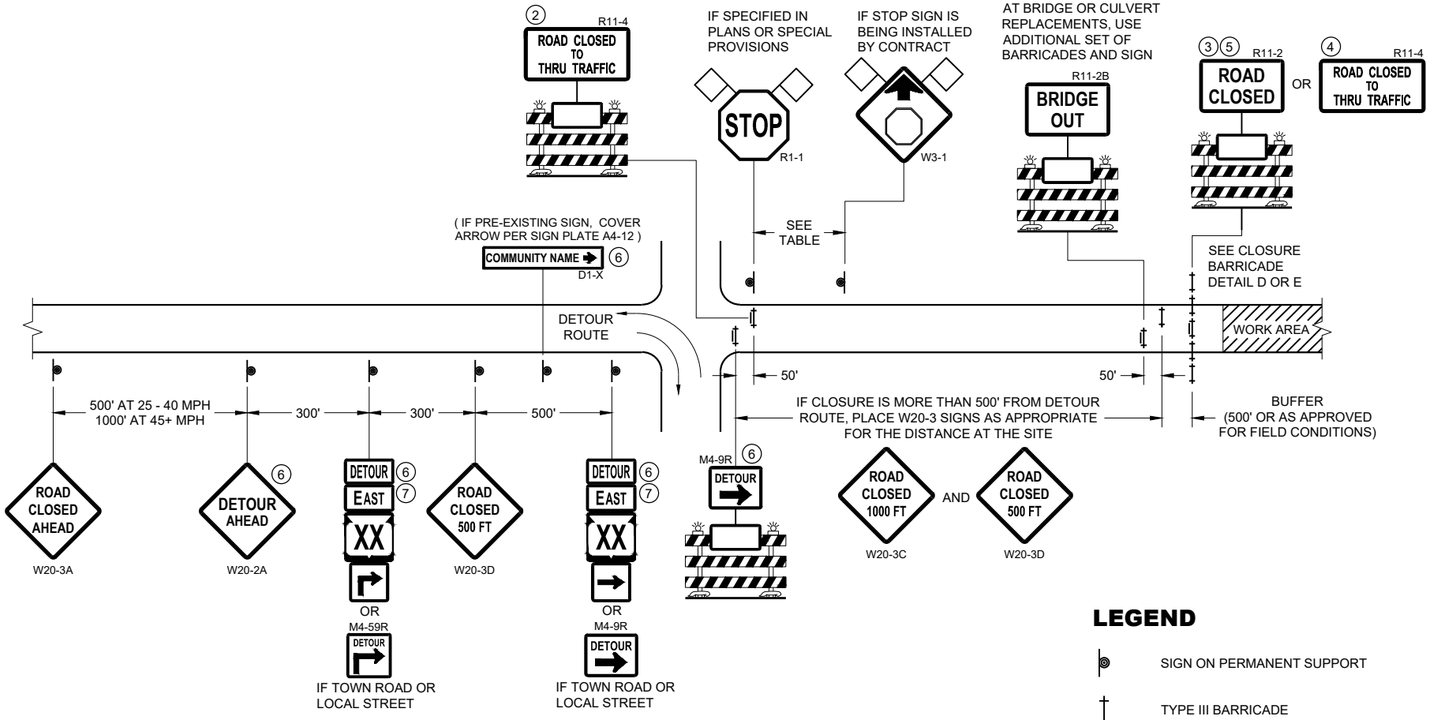
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



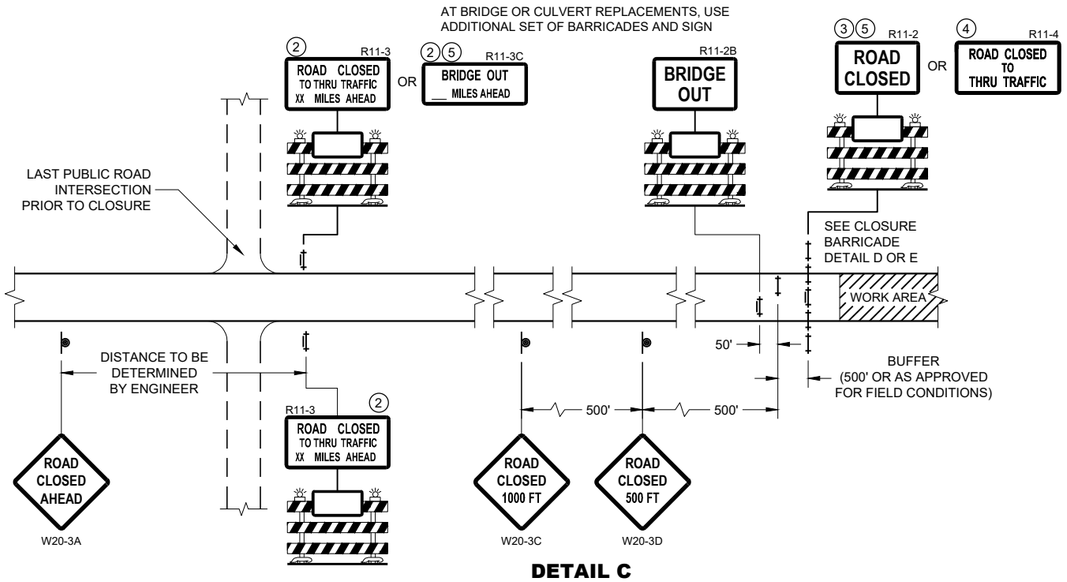
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



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
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

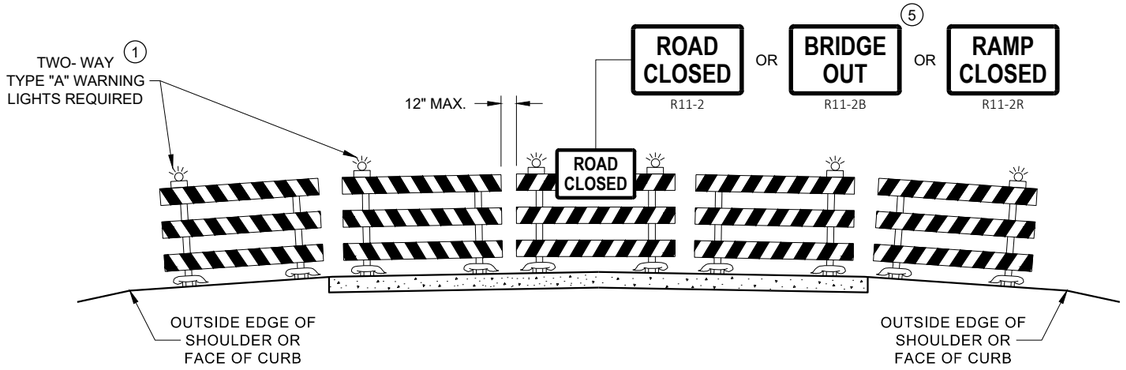
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

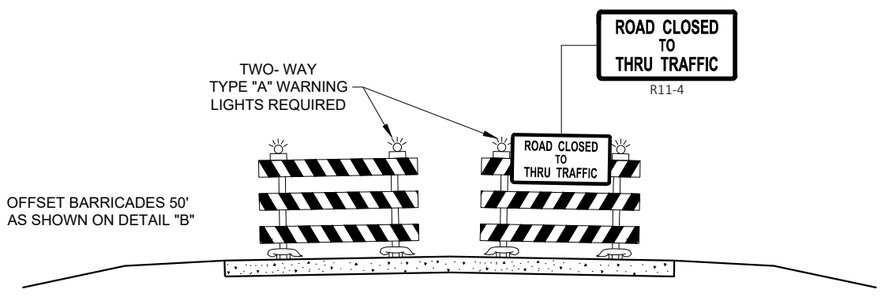
6

SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

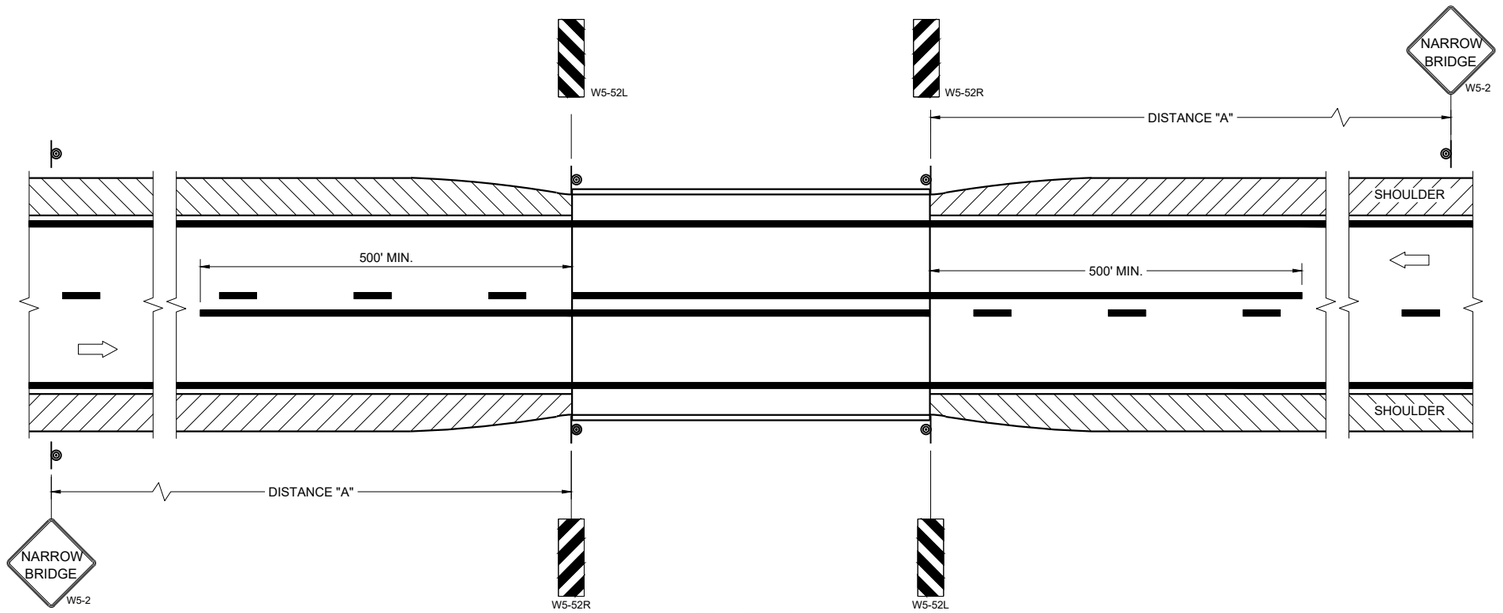
BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

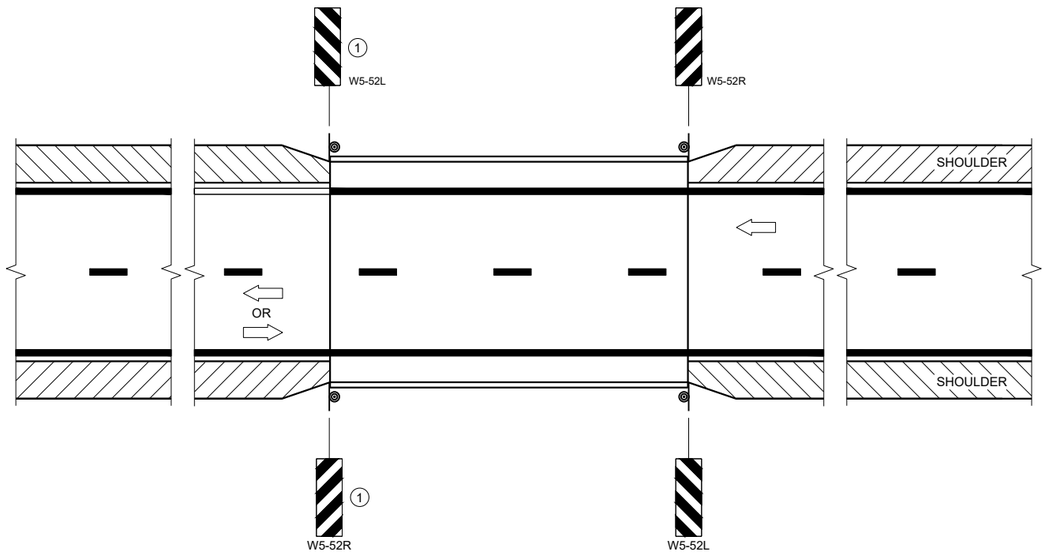
6

SDD 15C02 - 09b



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

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

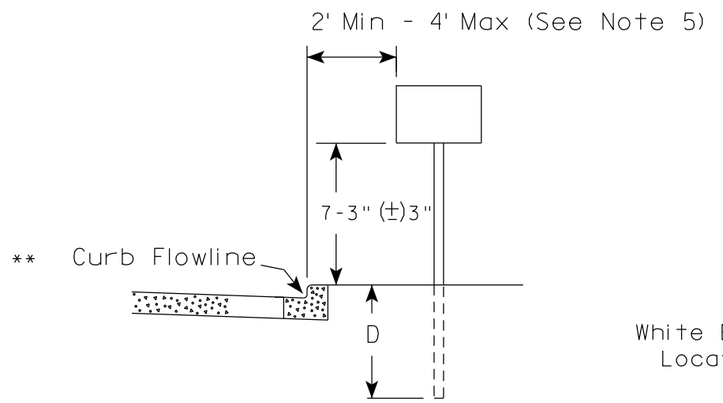
SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

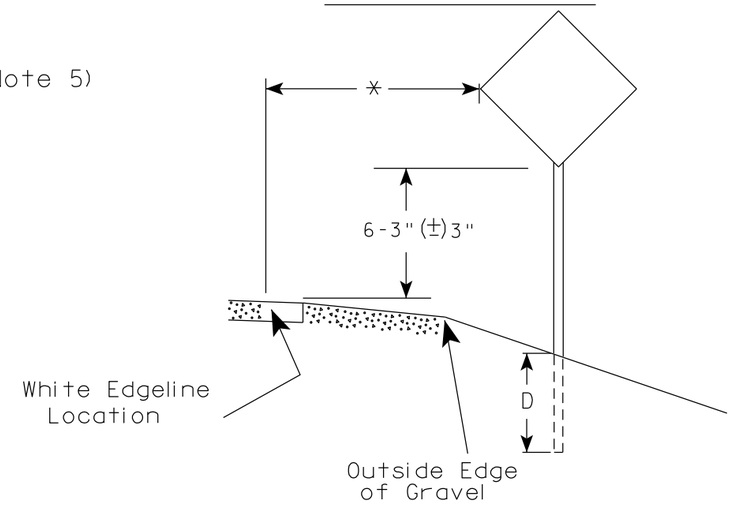
APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

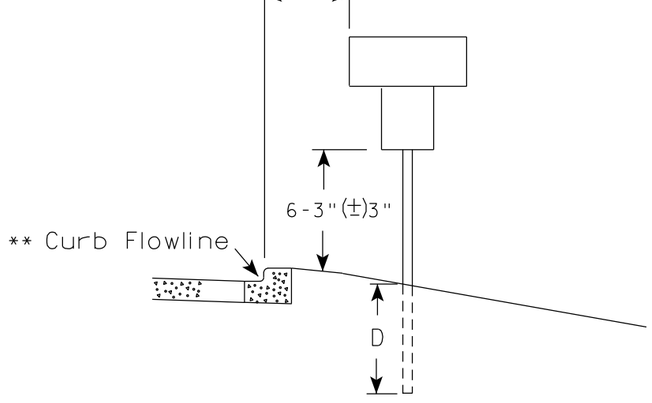
6
SDD 15C06-12

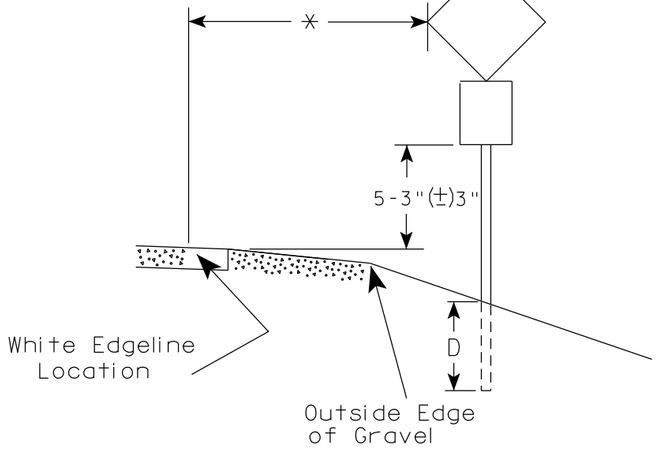
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

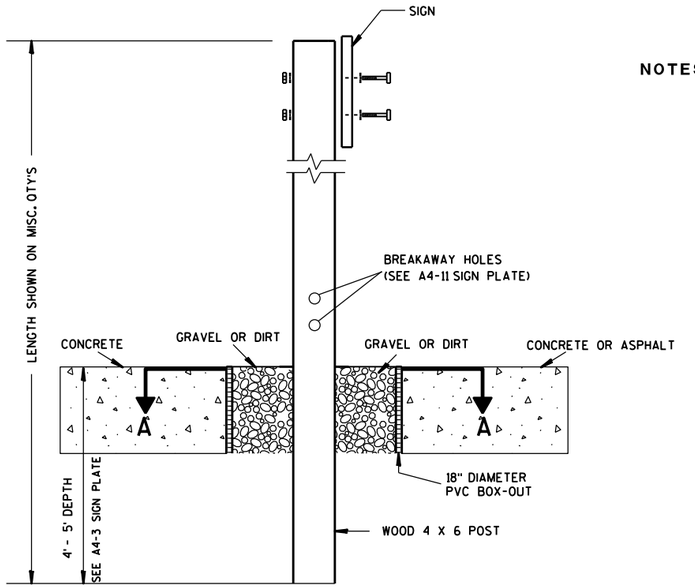
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

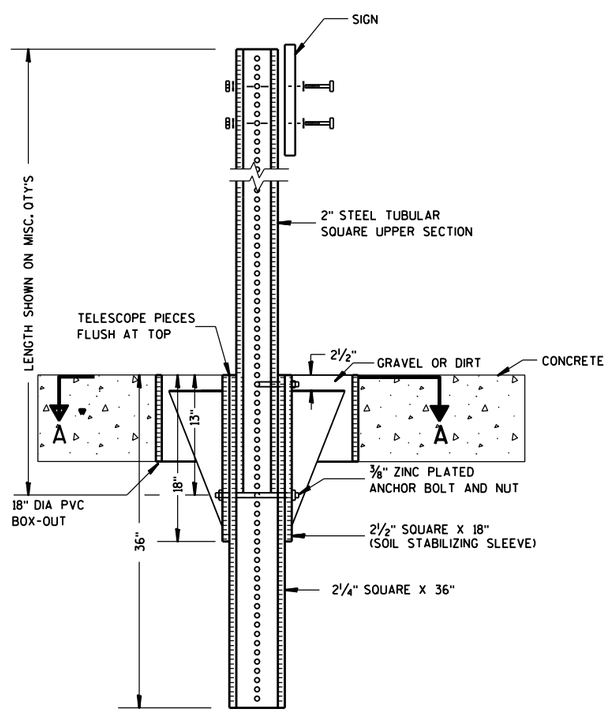
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 21	E



ELEVATION VIEW

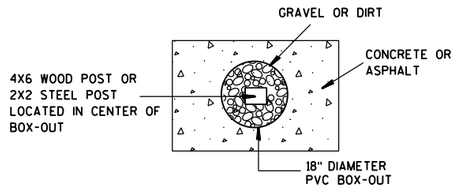
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

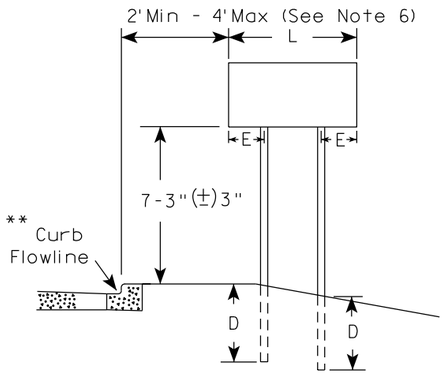
APPROVED Matthew R Rauch
for State Traffic Engineer

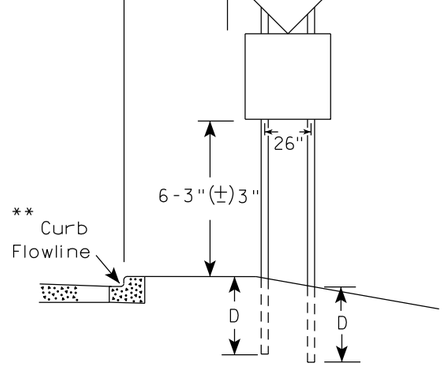
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

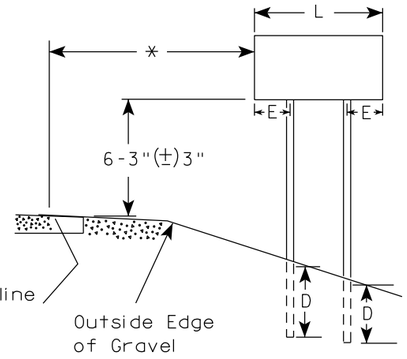
URBAN AREA

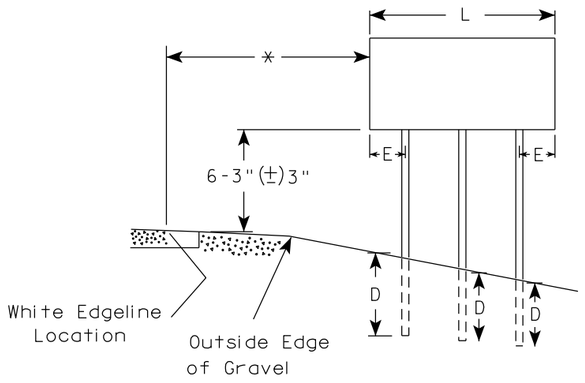


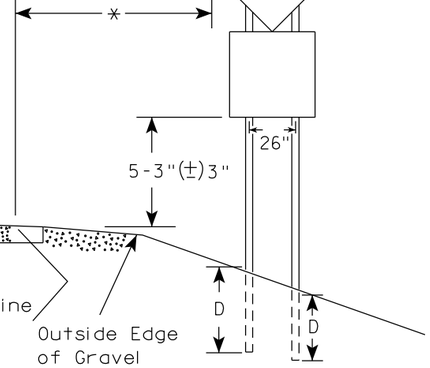


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

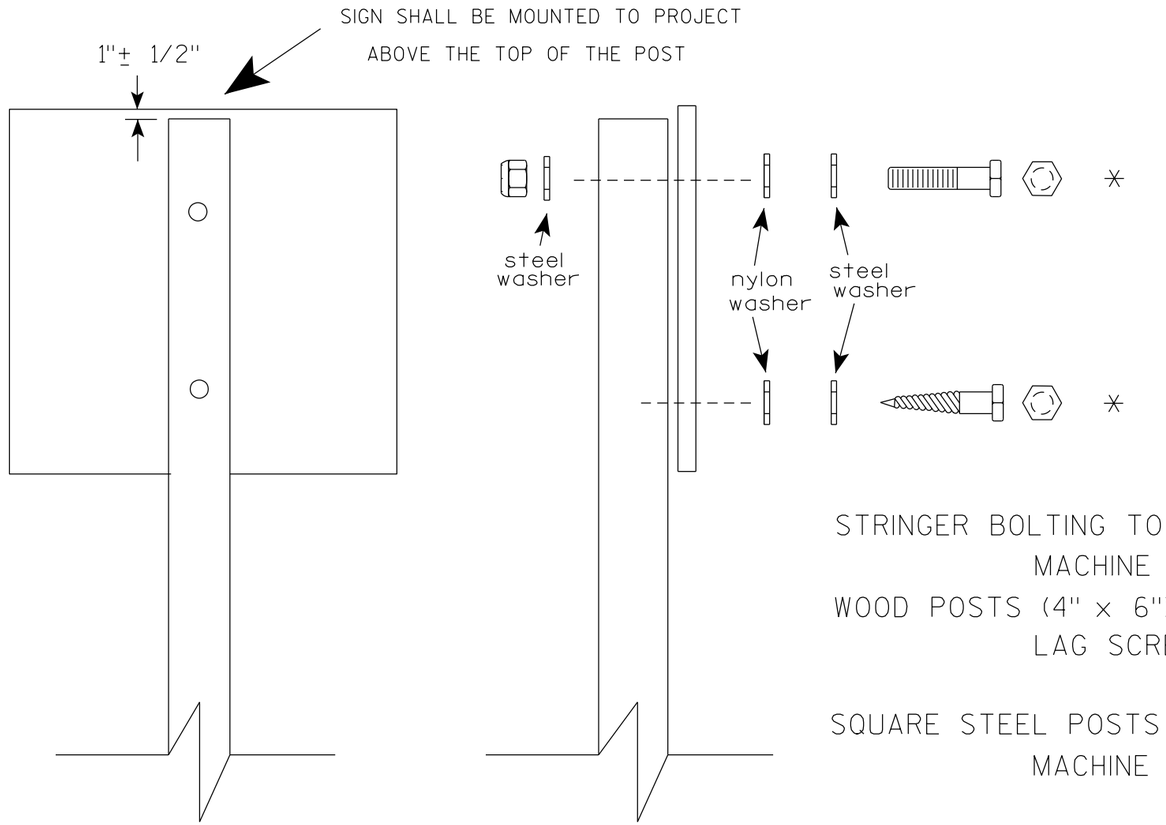
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

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



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

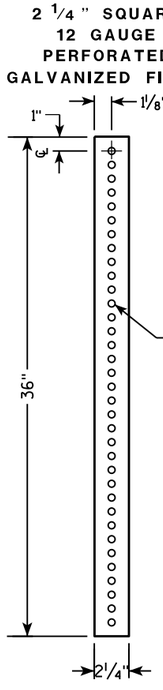
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

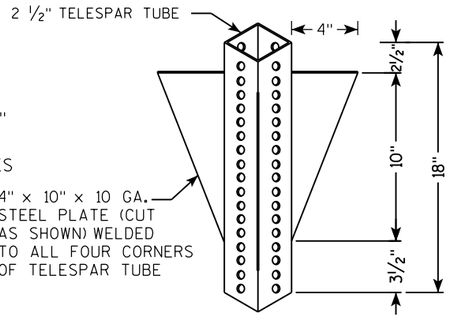
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

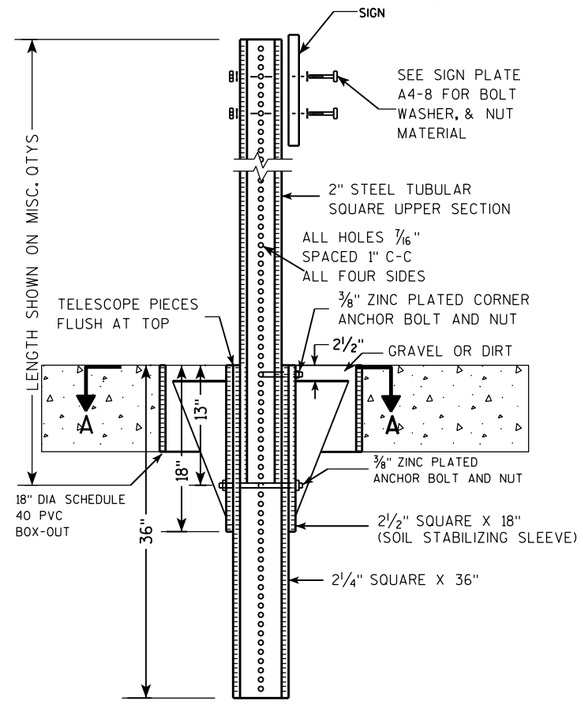
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



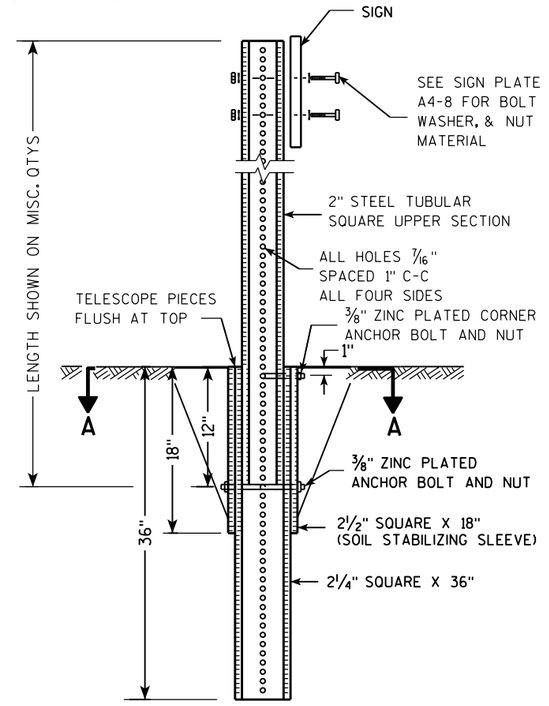
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

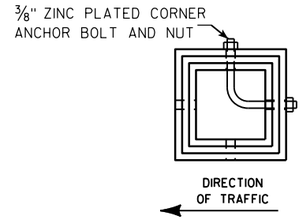


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

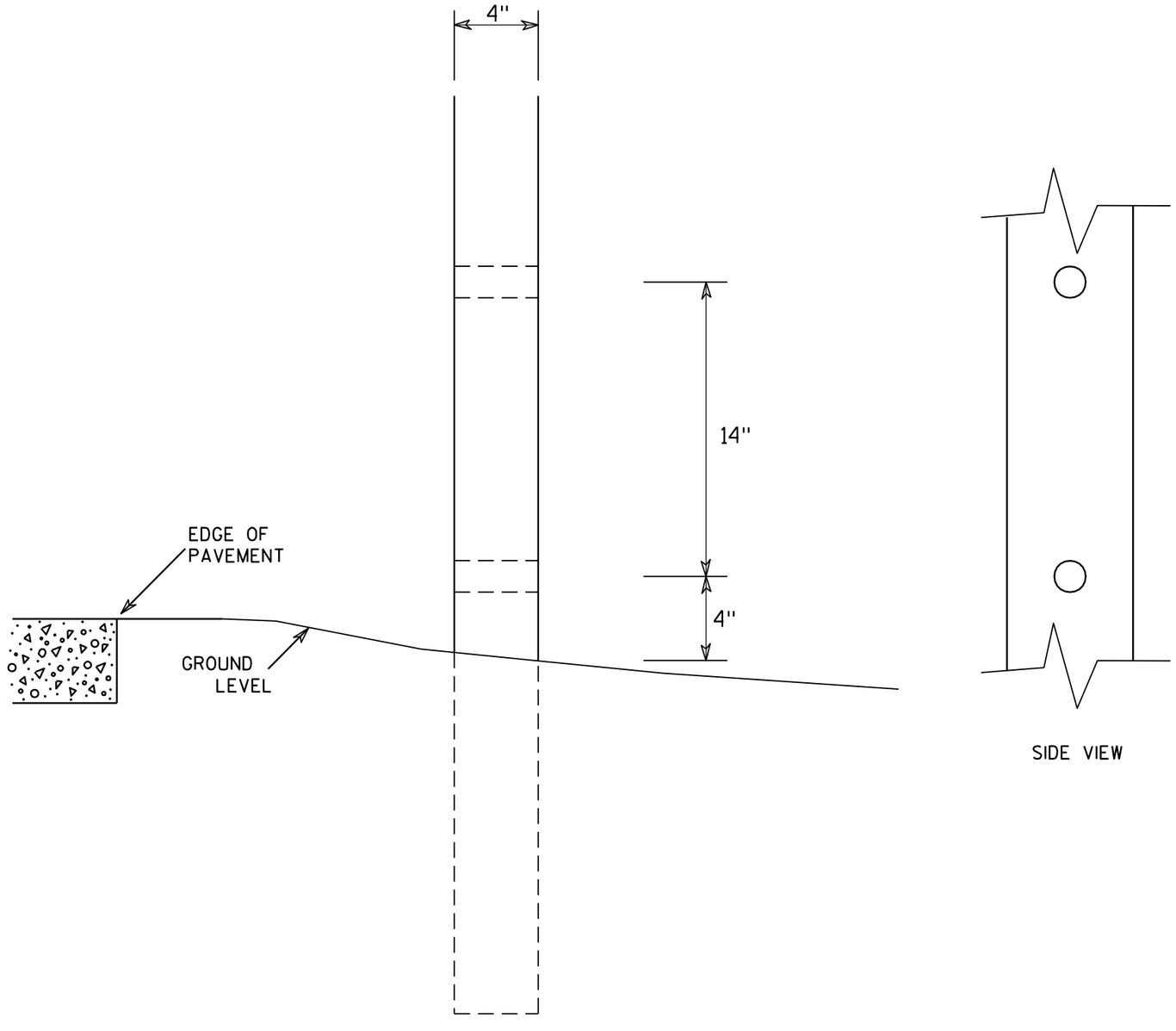
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 25 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

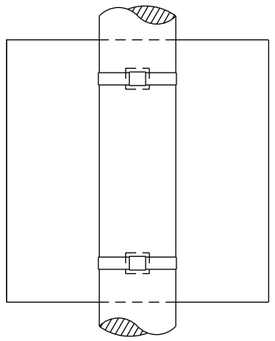
APPROVED Chester J Spang
for State Traffic Engineer

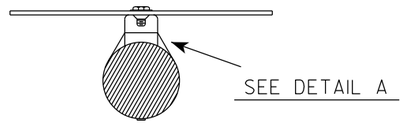
DATE 3/27/97 PLATE NO. A4-11.2

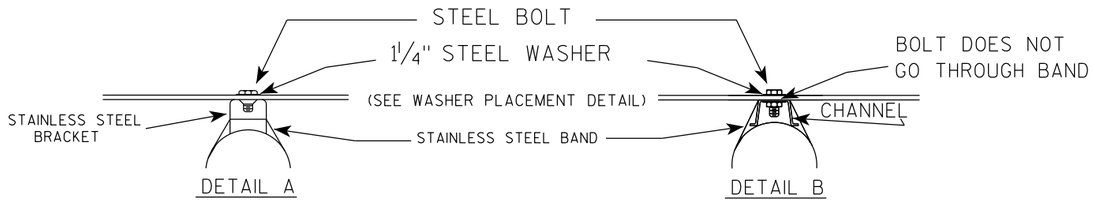
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 26	E

BANDING

SINGLE SIGN



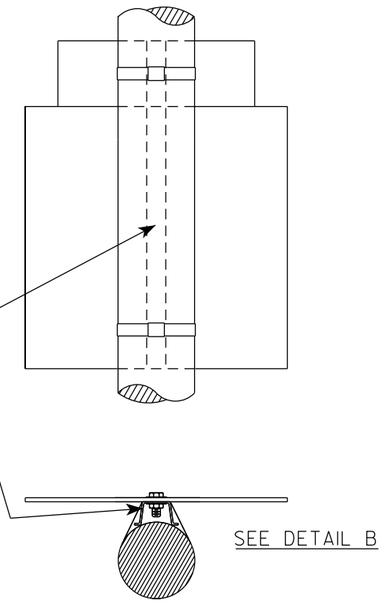




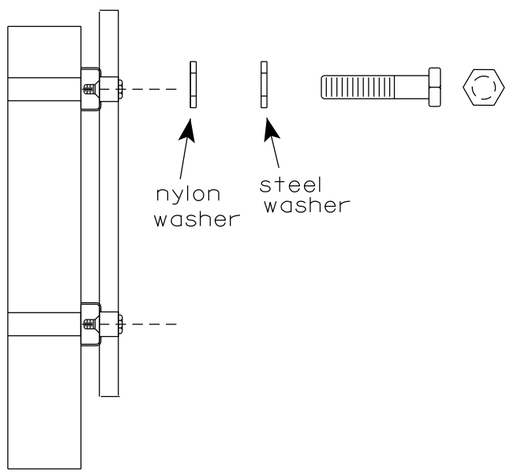
GENERAL NOTES

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

"J" ASSEMBLY



WASHER PLACEMENT



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

STANDARD SIGN
SIGN BANDING DETAILS

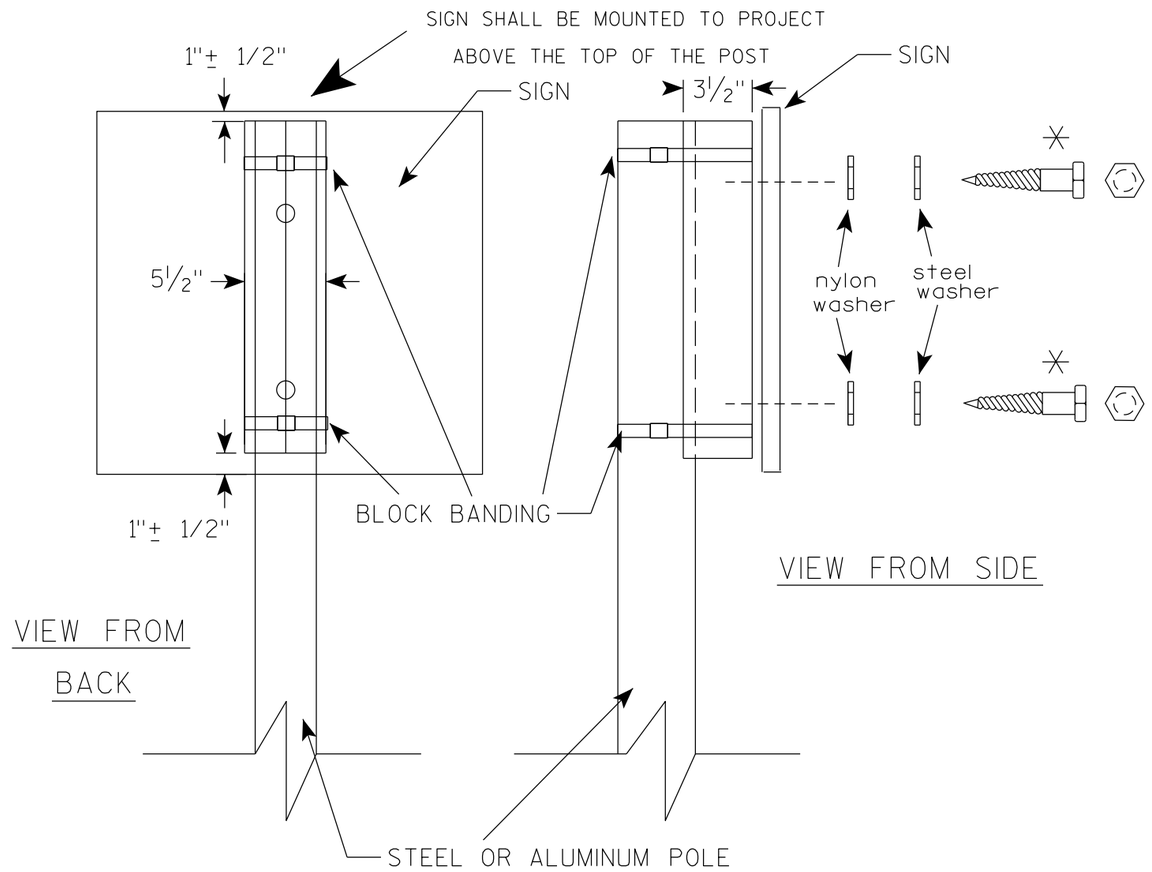
WISCONSIN DEPT OF TRANSPORTATION

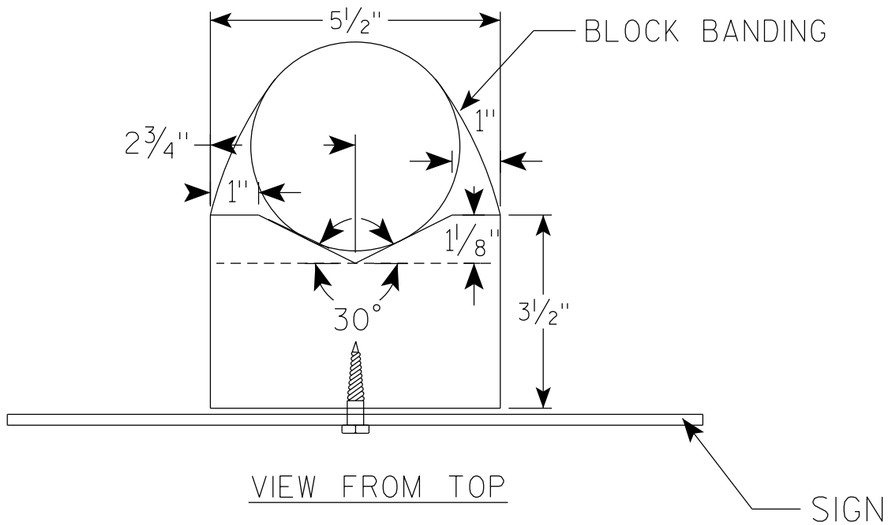
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 27	E

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





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

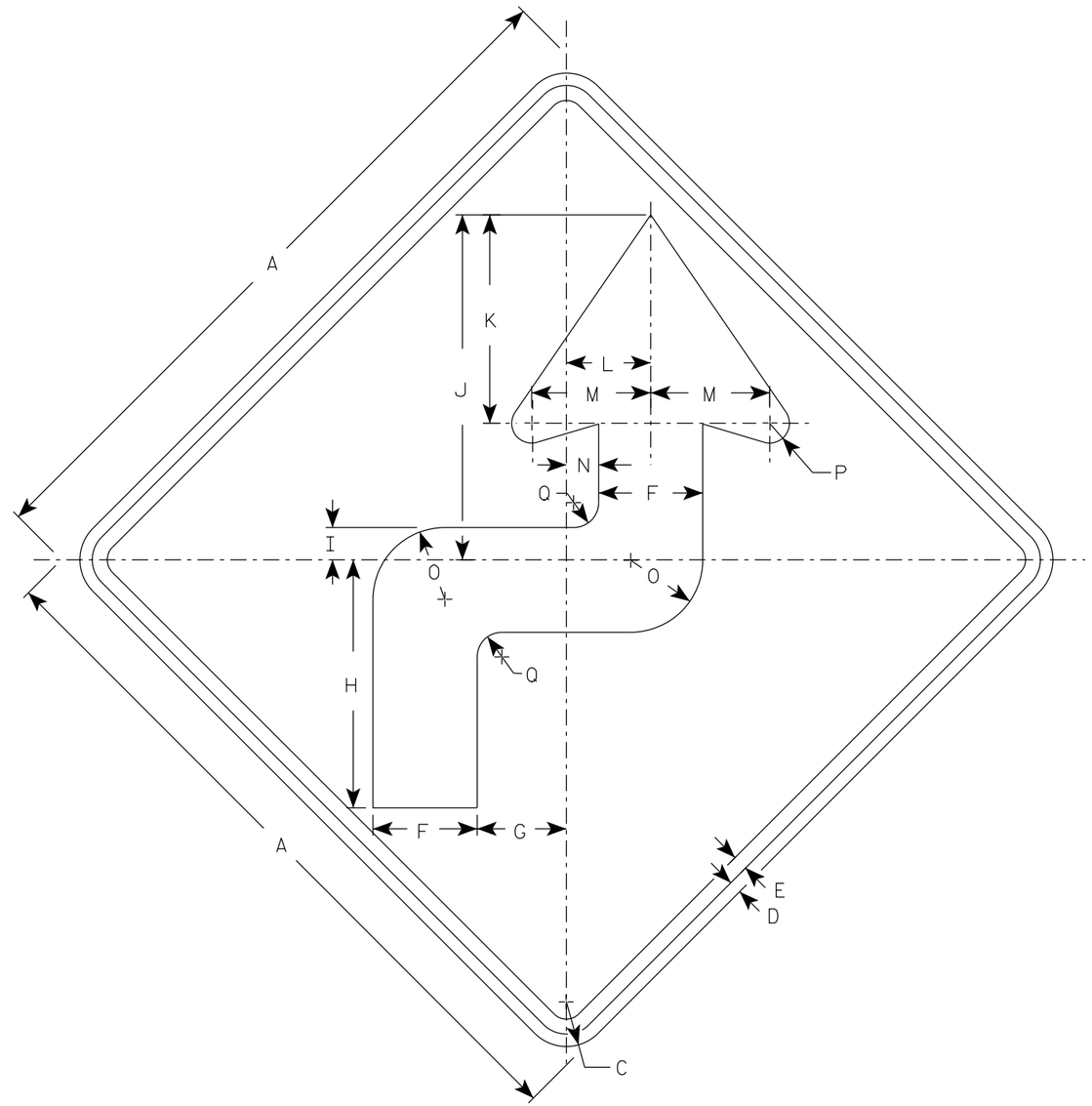
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 28 E



W1-3R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. 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 1/2	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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		3	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

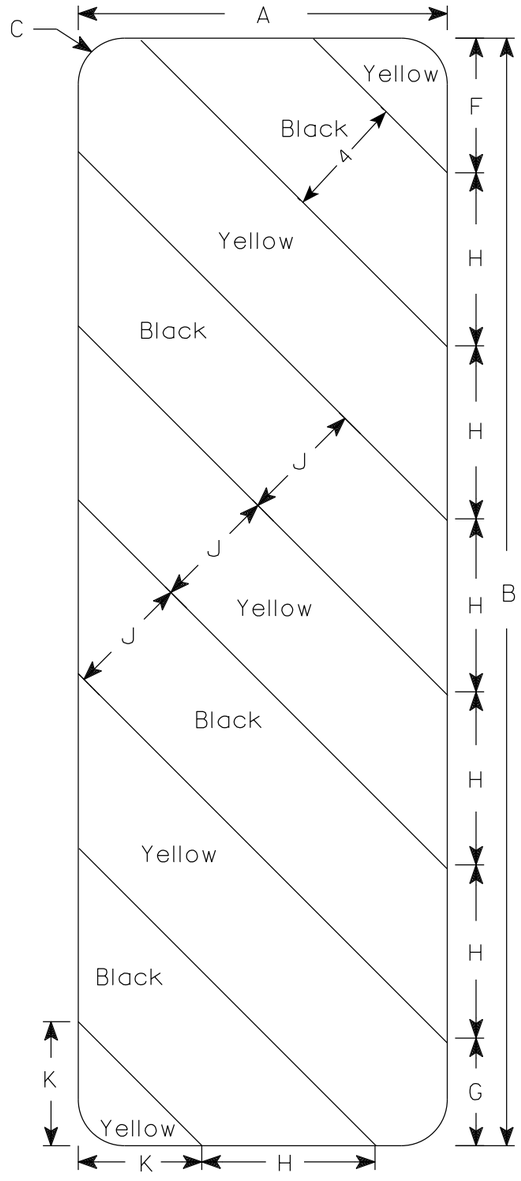
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

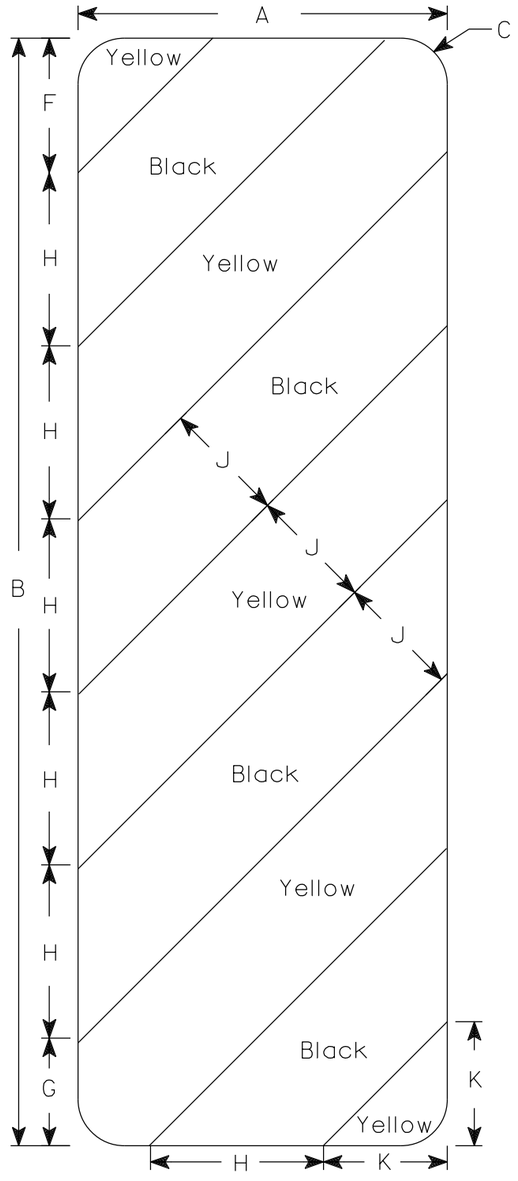
DATE 3/23/2023 PLATE NO. W1-3.9

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

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W13.dgn PLOT DATE : 30-OCT 2023 9:16 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. 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	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

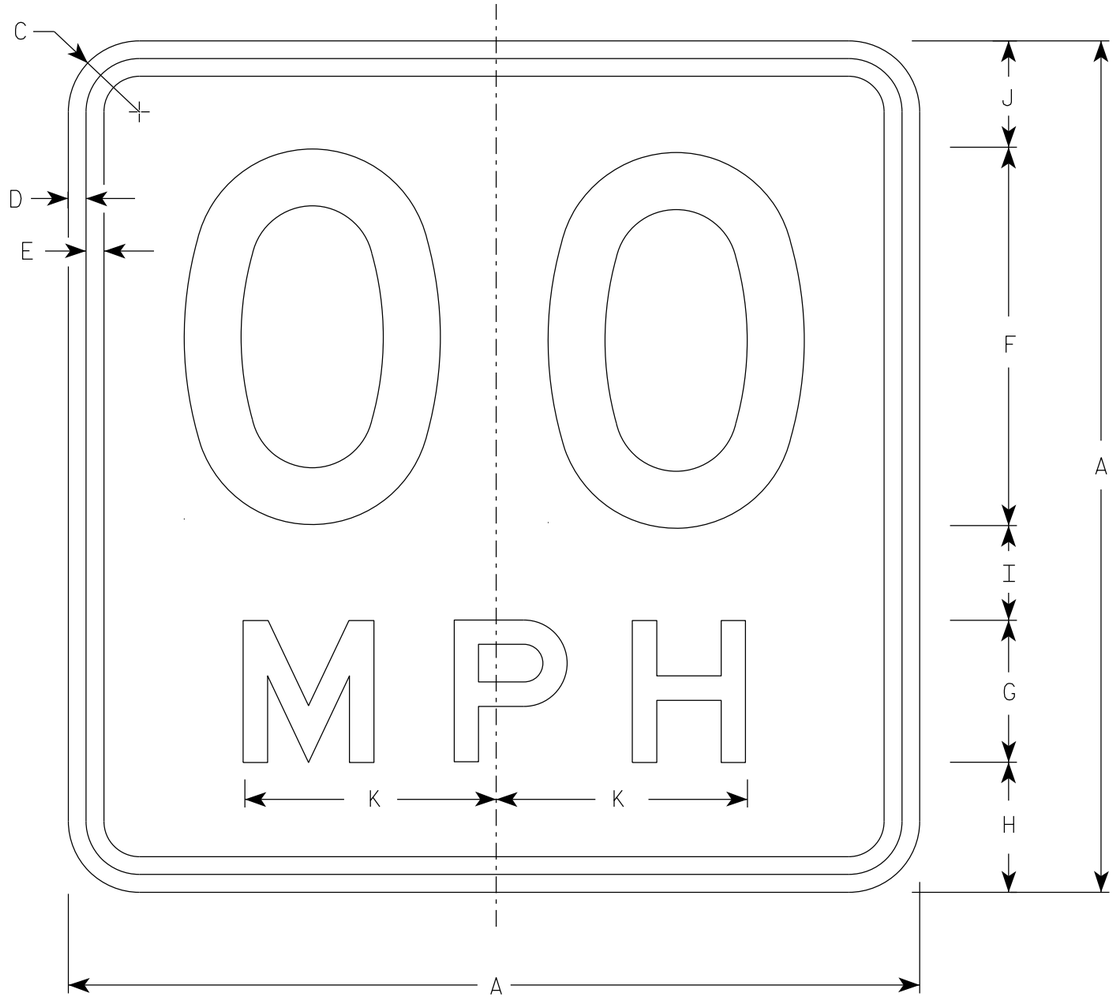
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/4/2024 PLATE NO. W5-52.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 30 E



W13-1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
   Line 2 is Series E

* 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.

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

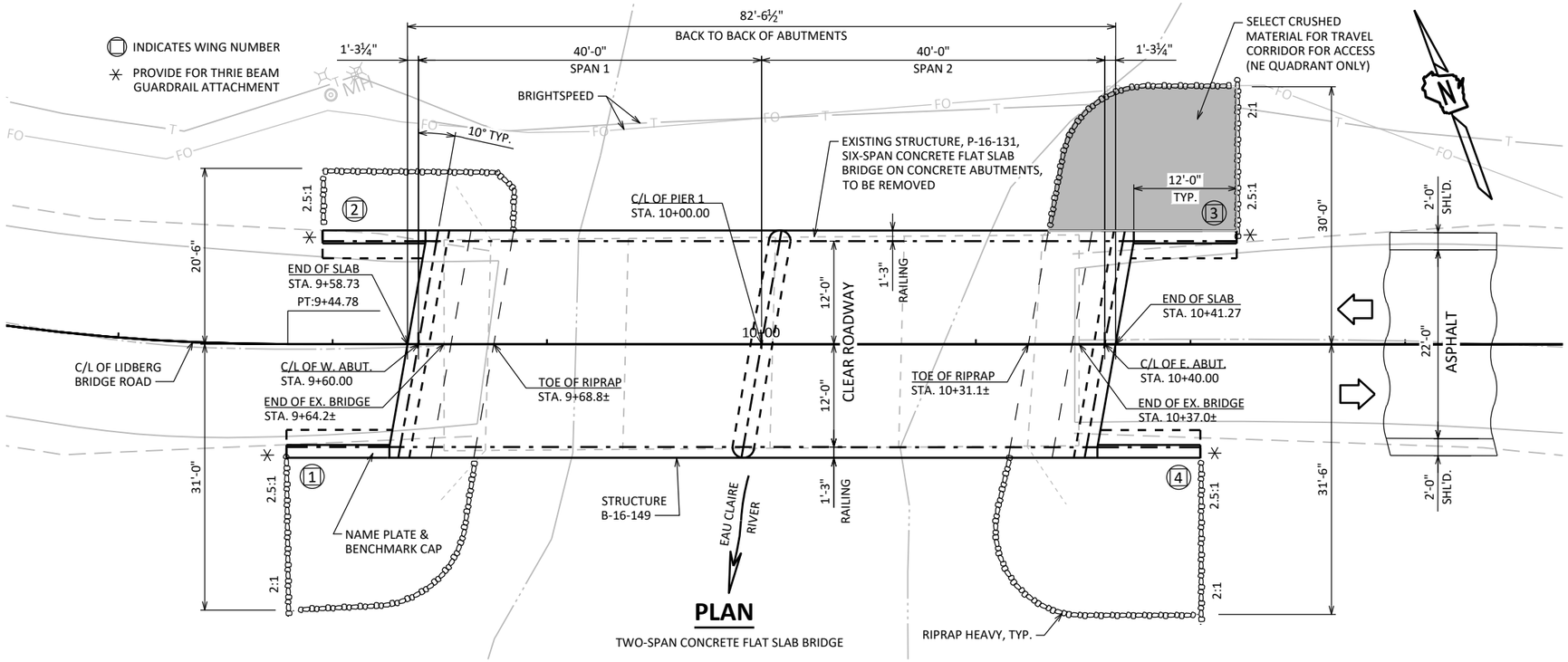
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W13-1.17

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

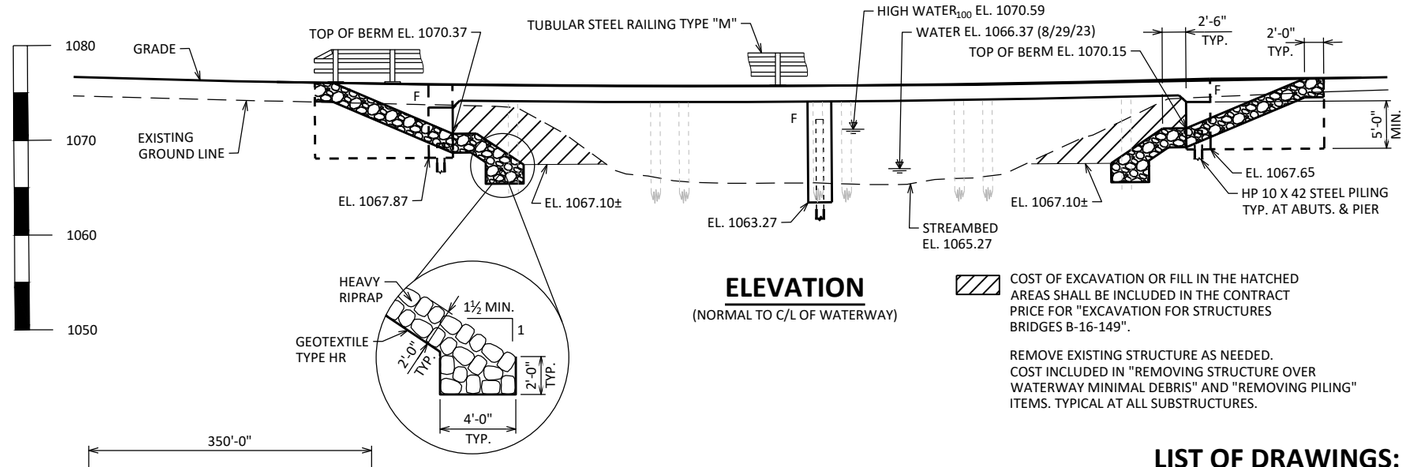
STATE PROJECT NUMBER

8396-00-74



PLAN

TWO-SPAN CONCRETE FLAT SLAB BRIDGE

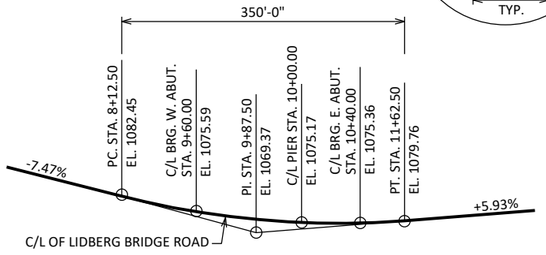


ELEVATION

(NORMAL TO C/L OF WATERWAY)

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-16-149".

REMOVE EXISTING STRUCTURE AS NEEDED. COST INCLUDED IN "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS" AND "REMOVING PILING" ITEMS. TYPICAL AT ALL SUBSTRUCTURES.



PROFILE GRADE LINE

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
50	9+73	RR SPIKE IN W WWAL, 12' RT	1072.62
51	11+59	RR SPIKE IN PPOL, 68' LT	1081.35

LIST OF DRAWINGS:

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.20
OPERATING RATING: RF = 1.55
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 20-'0" LONG AT WEST ABUTMENT.
ESTIMATED 20-'0" LONG AT EAST ABUTMENT.

PIER TO BE SUPPORTED ON ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 20-'0" LONG.

**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 PILE CAPACITY.

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 1,150 C.F.S.
V_{100}= 4.69 F.P.S.
HW_{100}= EL. 1070.59
WATERWAY AREA = 245 SQ. FT.
DRAINAGE AREA = 60.1 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

Q_2= 350 C.F.S.
V_2= 2.87 F.P.S.
HW_2= EL. 1068.55

TRAFFIC DATA

FEATURE ON:

ADT = <100 (2025)
ADT = <100 (2045)
R.D.S. = 25 MPH

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/19/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN DANIEL N. SYDOW E-38363 WI PROFESSIONAL ENGINEER
10/28/2024

STRUCTURE DESIGN CONTACTS:
AARON BONK 608-261-0261
DAN SYDOW 715-834-3161

STRUCTURE B-16-149

LIDBERG BRIDGE ROAD OVER EAU CLAIRE RIVER

COUNTY	TOWN
DOUGLAS	WASCOTT

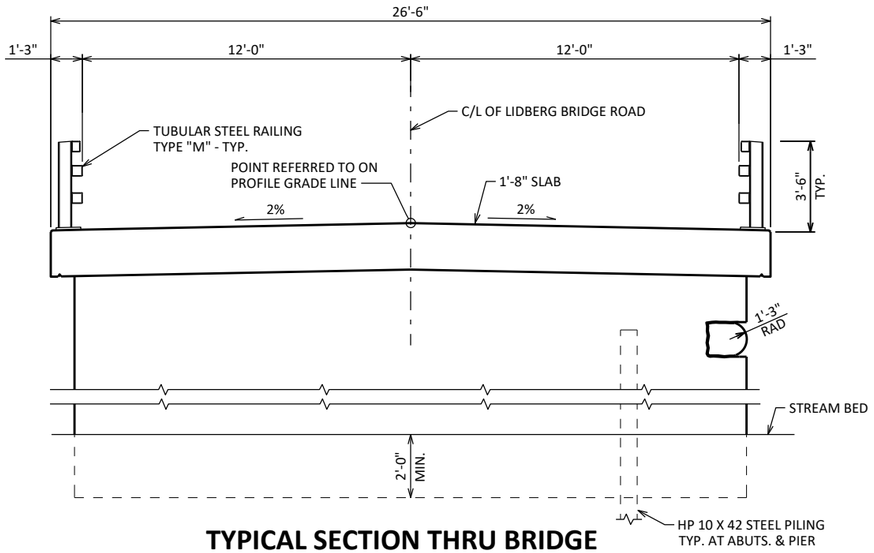
DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
NBE	DRS	CLP	DNS

GENERAL PLAN

SHEET 1 OF 16
32

I.D.
DATE:



TYPICAL SECTION THRU BRIDGE

STATE PROJECT NUMBER

8396-00-74

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

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

SLAB FALSE WORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-16-149" SHALL BE THE EXISTING GROUNDLINE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET AND APPLY TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENTS.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENTS.

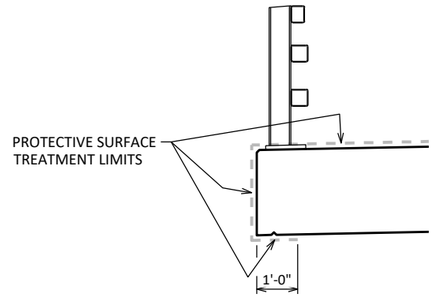
THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLAN AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" AND "REMOVING PILING" ITEMS.

CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. ABUT.	PIER	E. ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS (P-16-131)	EACH	---	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-16-149	EACH	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	110	---	110	220
502.0100	CONCRETE MASONRY BRIDGES	CY	139.2	30.9	23.3	30.9	224
502.3200	PROTECTIVE SURFACE TREATMENT	SY	290	10	---	10	310
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	1,650	1,120	1,650	4,420
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	29,380	1,640	50	1,640	32,710
513.4061	RAILING TUBULAR TYPE M	LF	218	---	---	---	218
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	9	---	9	18
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	80	120	80	280
606.0300	RIPRAP HEAVY	CY	---	65	---	80	145
612.0406	PIPE UNDERDRAIN WRAPPED 6 - INCH	LF	---	90	---	90	180
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	20	---	20	40
645.0120	GEOTEXTILE TYPE HR	SY	---	130	---	160	290
SPV.0090.01	REMOVING EXISTING TIMBER PILING	LF	---	---	100	---	100
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	---	---	---	16	16
	NON-BID ITEMS						
	FILLER	SIZE	---	---		---	½", ¾"



PROTECTIVE SURFACE TREATMENT DETAIL

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

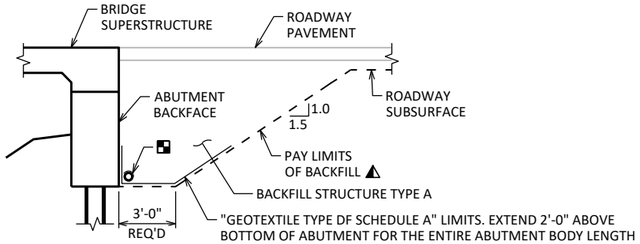
DRAWN BY CLP | PLANS CK'D DNS

TYPICAL SECTION, QUANTITIES AND NOTES

SHEET 2 OF 16

STATE PROJECT NUMBER

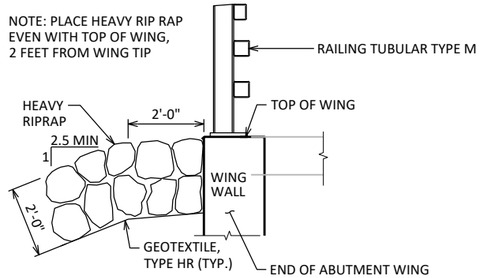
8396-00-74



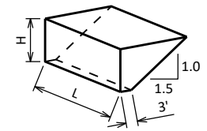
TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

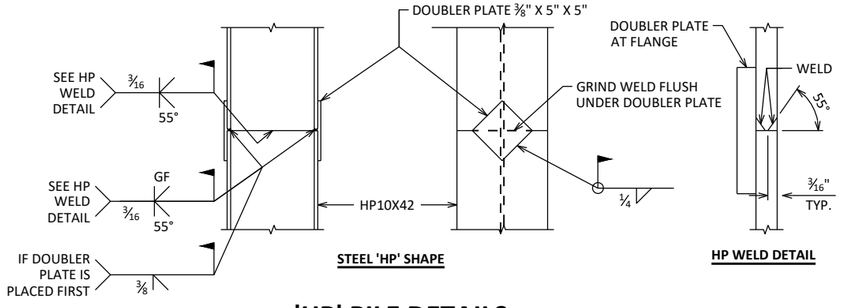


TYPICAL FILL SECTION AT WING TIPS

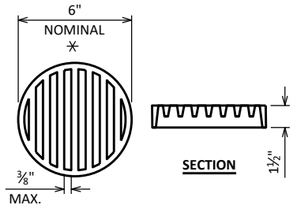


ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)



'HP' PILE DETAILS



RODENT SHIELD DETAIL

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

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 ATTACHMENT 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D DNS

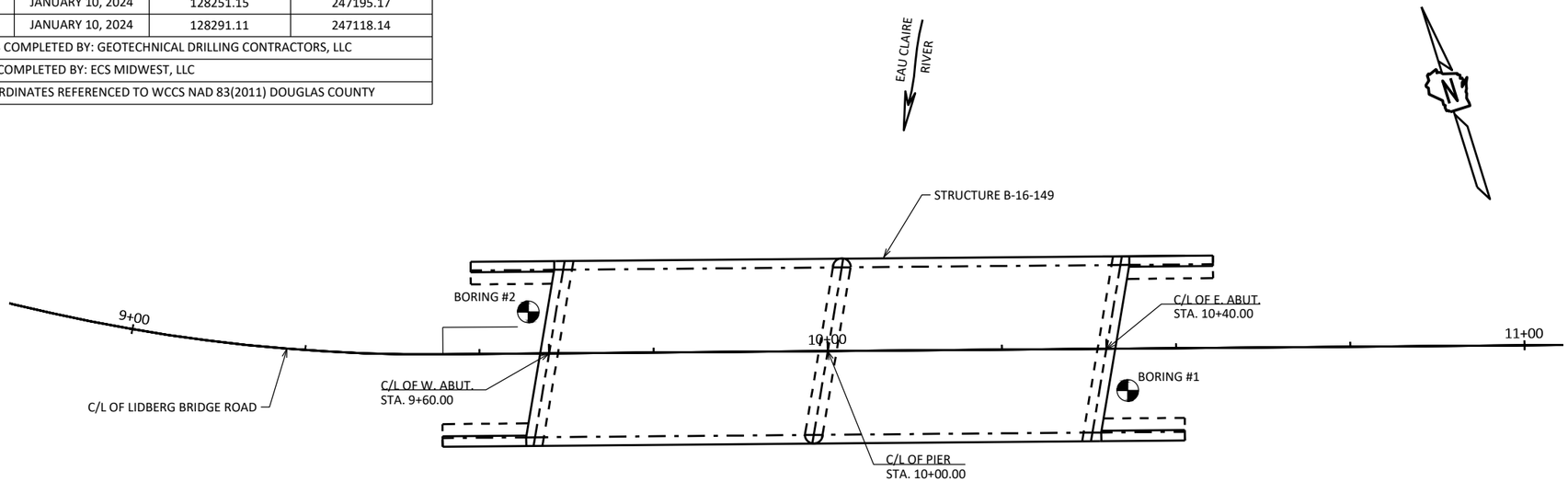
STRUCTURE DETAILS

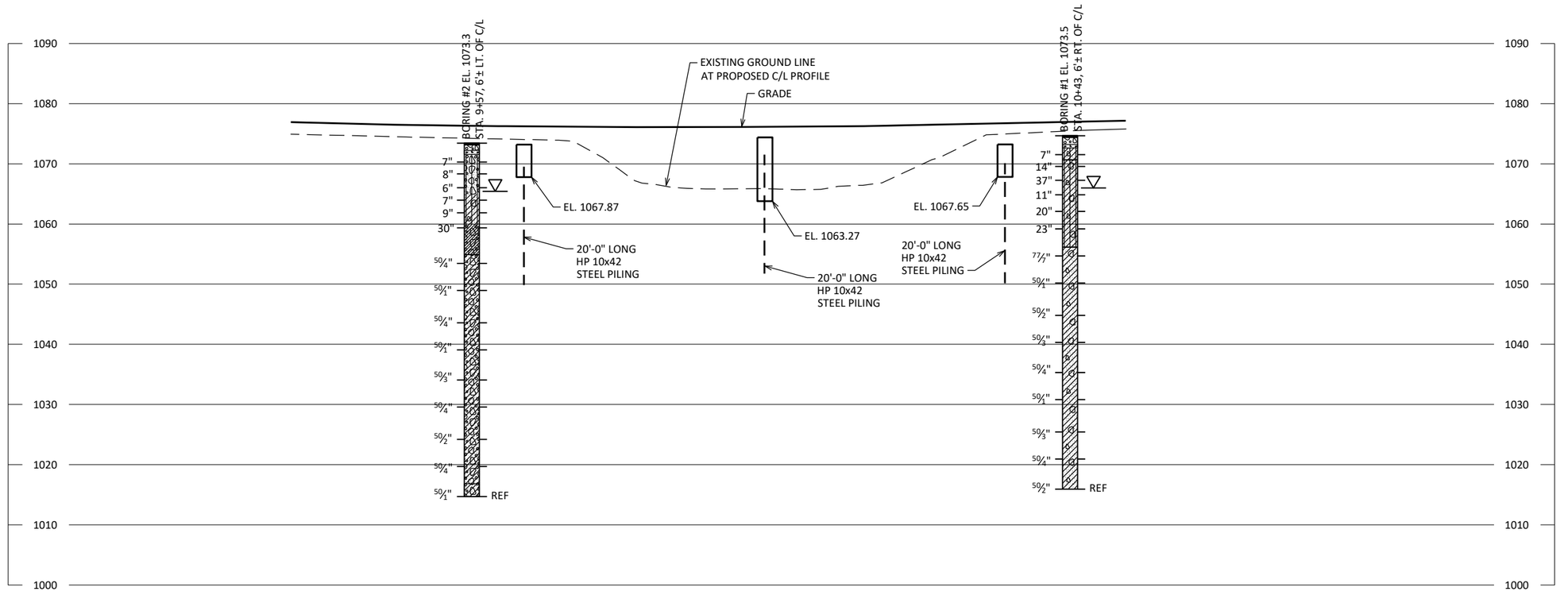
SHEET 3 OF 16

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	JANUARY 10, 2024	128251.15	247195.17
2	JANUARY 10, 2024	128291.11	247118.14
BORINGS COMPLETED BY: GEOTECHNICAL DRILLING CONTRACTORS, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WCCS NAD 83(2011) DOUGLAS COUNTY			





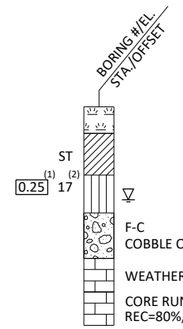
STATE PROJECT NUMBER

8396-00-74

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D DNS

SUBSURFACE EXPLORATION

SHEET 4 OF 16

8

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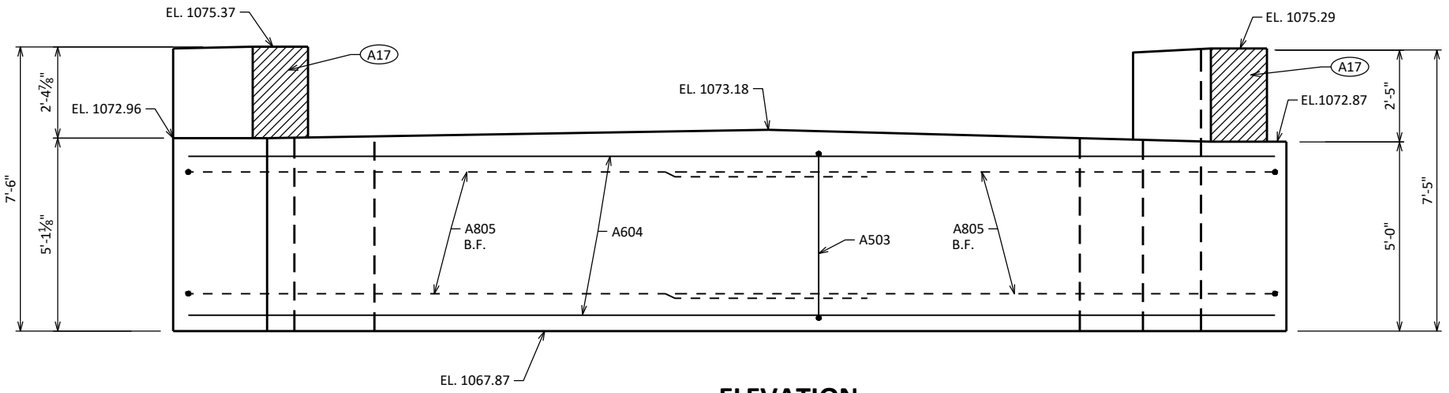
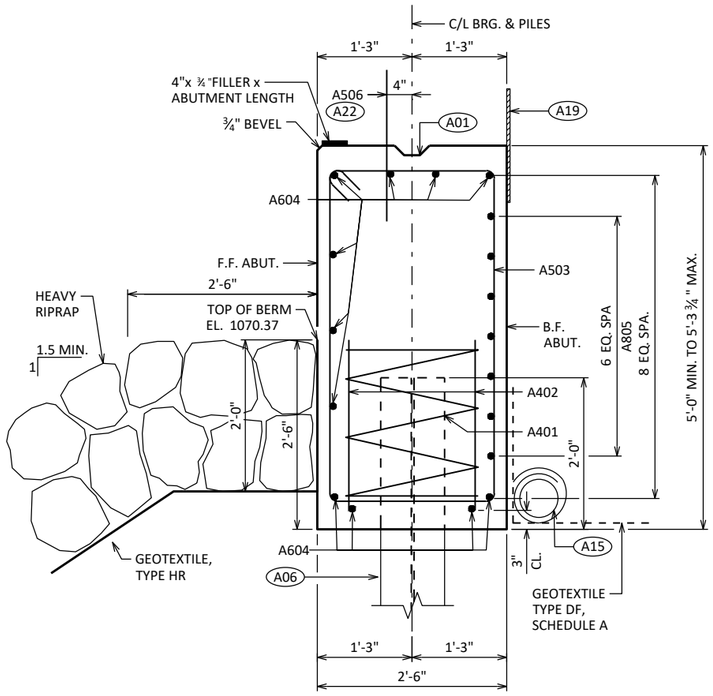
STATE PROJECT NUMBER
8396-00-74

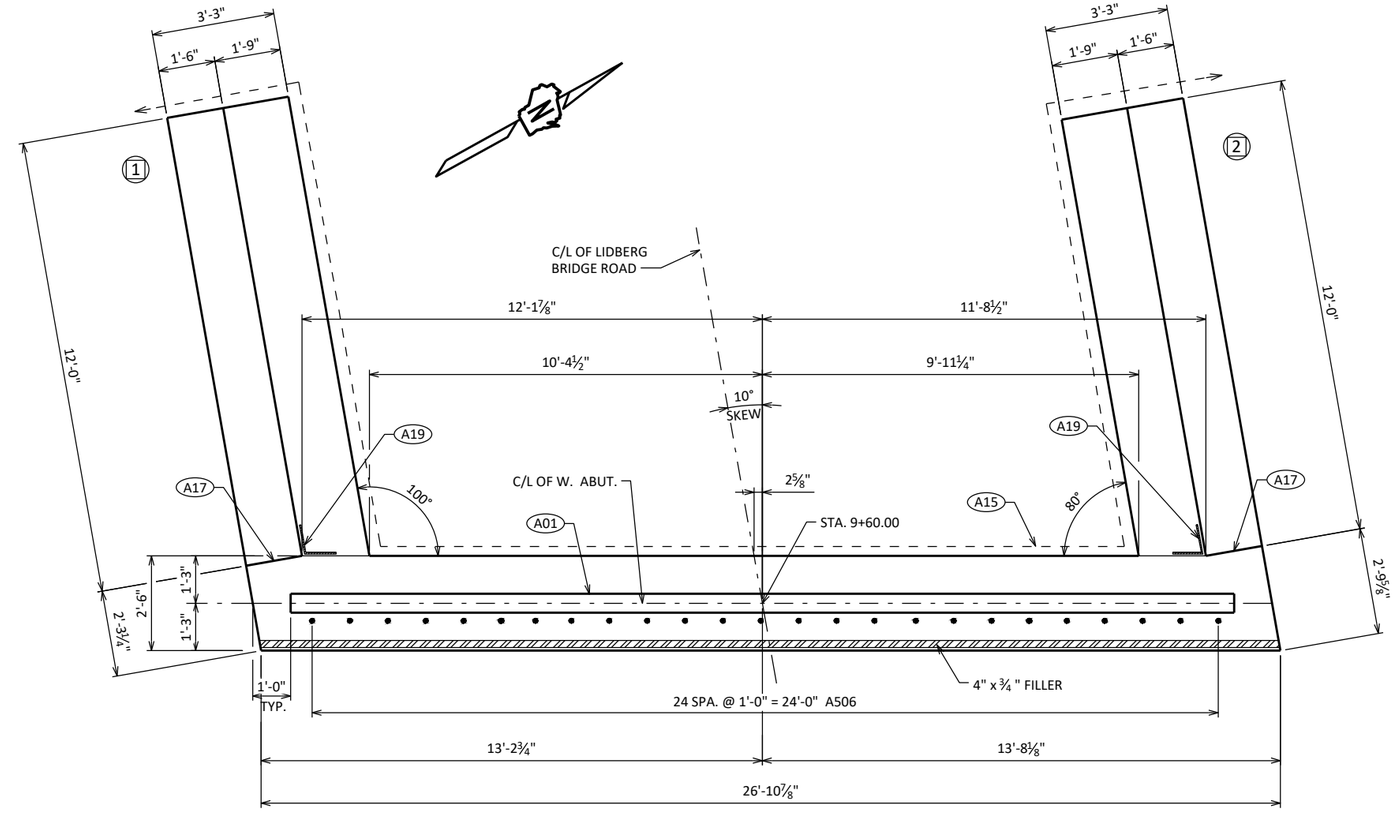


ELEVATION

(LOOKING WEST)



SECTION THRU BODY



PLAN

A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

A06 SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A22 BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY	CLP	PLANS CK'D	NBE

WEST ABUTMENT

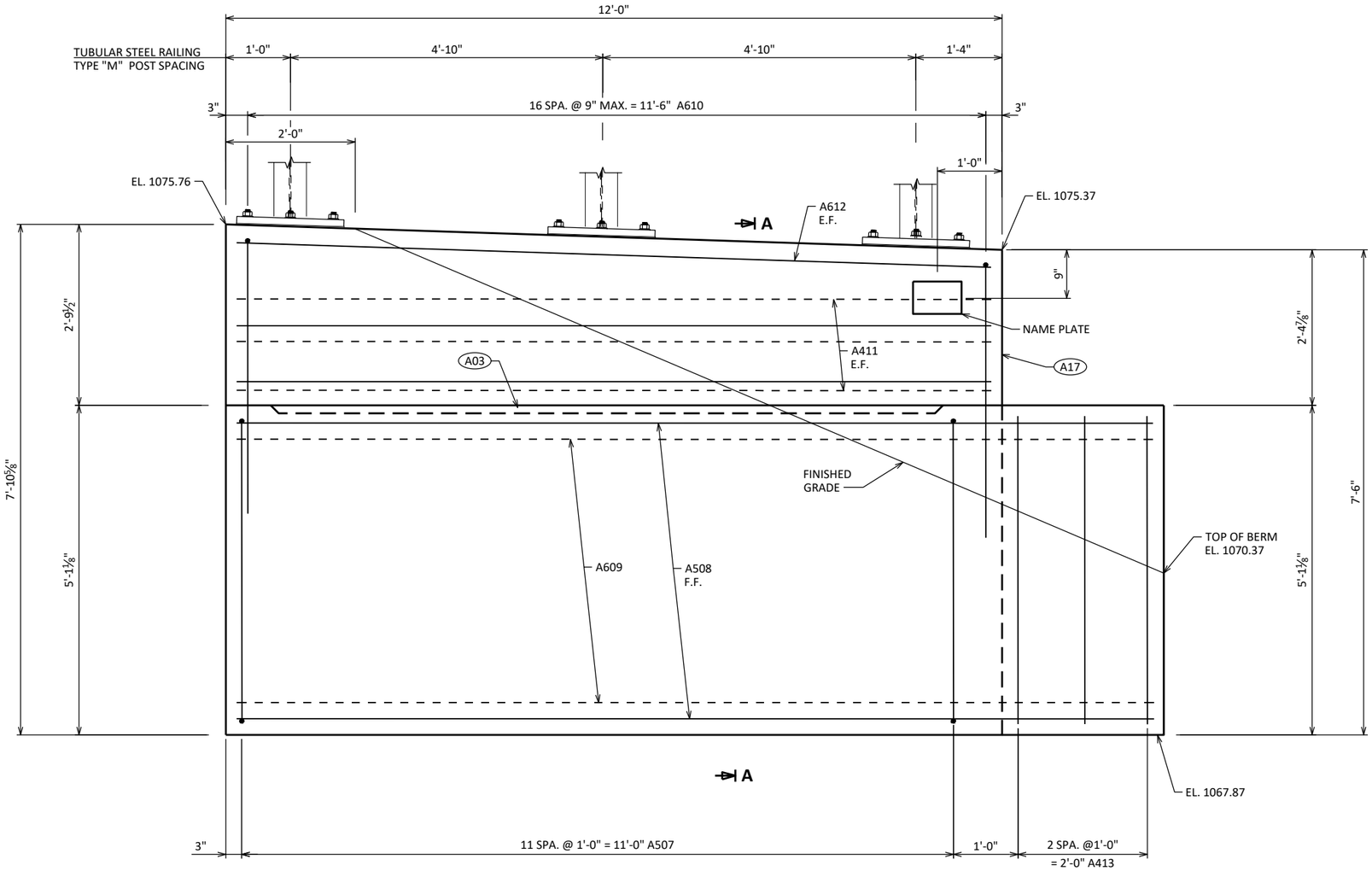
SHEET 5 OF 16

8

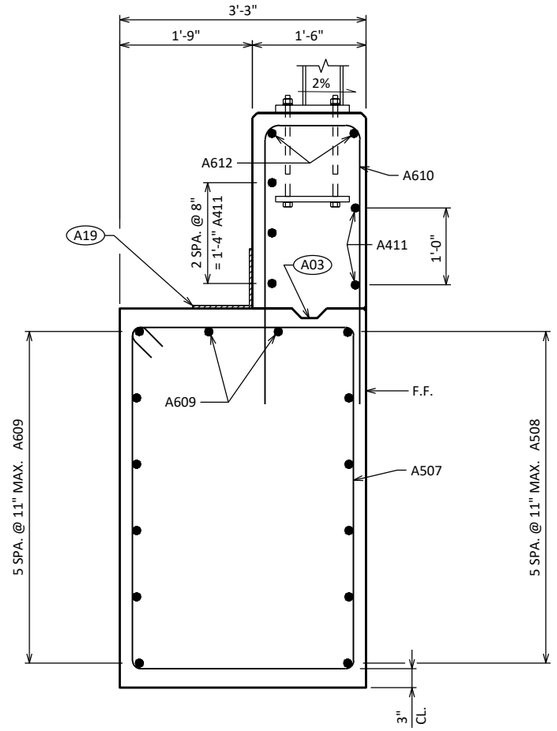
8

STATE PROJECT NUMBER

8396-00-74



ELEVATION - WING 1



SECTION A

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

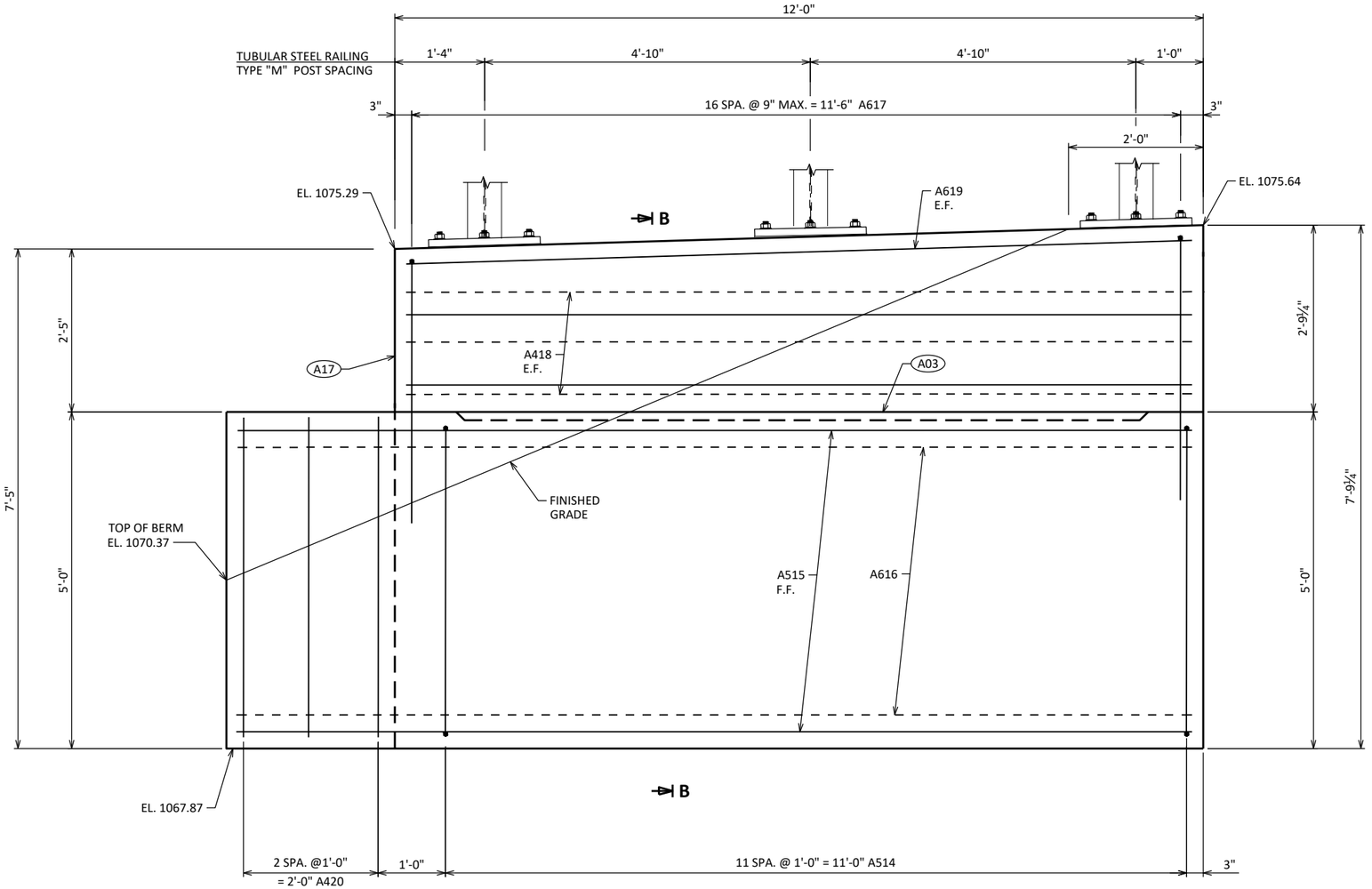
WEST ABUTMENT WING 1 DETAILS

SHEET 6 OF 16

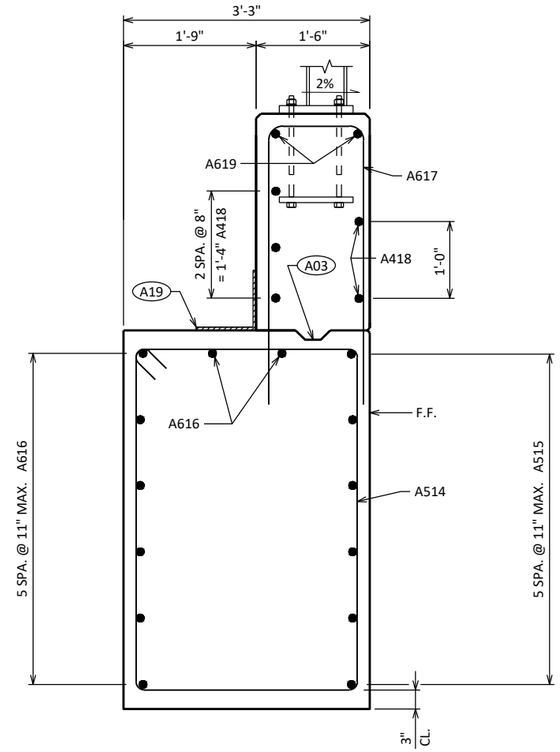
8

8

STATE PROJECT NUMBER
8396-00-74



ELEVATION - WING 2



SECTION B

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

WEST ABUTMENT WING 2 DETAILS

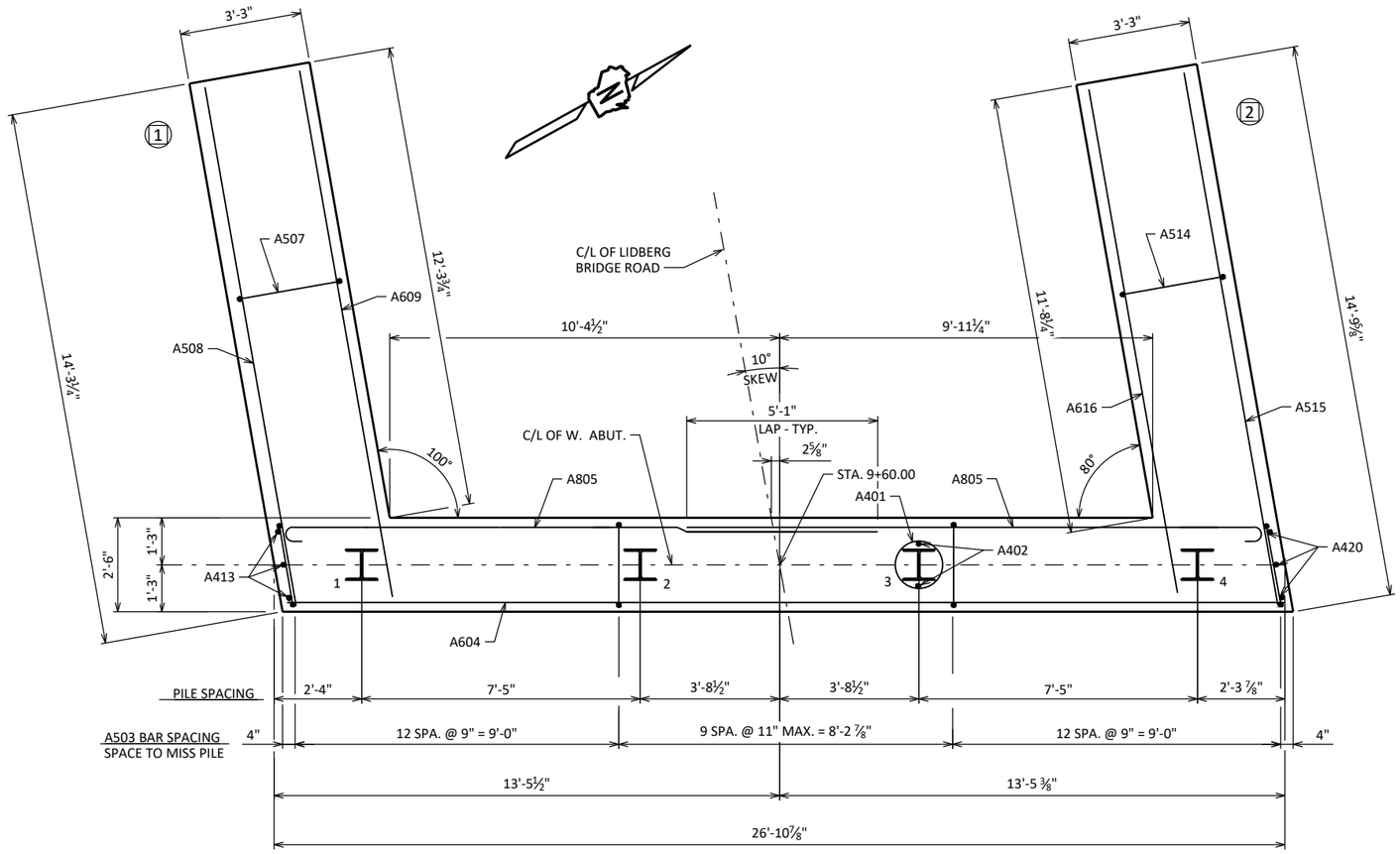
SHEET 7 OF 16

8

8

STATE PROJECT NUMBER

8396-00-74



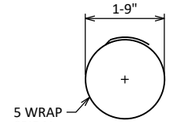
PILE LAYOUT

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		4	28'-0"	X		BODY @ PILES
A402		8	2'-3"			BODY @ PILES
A503		34	14'-0"	X		BODY VERT.
A604		11	26'-6"			BODY HORIZ.
A805		14	16'-11"	X		BODY HORIZ. @ WINGS 1 & 2 B.F.
A506	X	25	2'-0"			BODY DOWELS
A507	X	12	15'-10"	X		WING 1 VERT.
A508	X	6	13'-11"			WING 1 HORIZ. F.F.
A609	X	8	14'-2"			WING 1 HORIZ. B.F. & TOP
A610	X	17	10'-2"	X		WING 1 VERT.
A411	X	5	11'-8"			WING 1 HORIZ. E.F.
A612	X	2	11'-8"			WING 1 HORIZ. E.F. TOP
A413	X	3	4'-8"			BODY VERT. END @ WING 1
A514	X	12	15'-8"	X		WING 2 VERT.
A515	X	6	14'-5"			WING 2 HORIZ. F.F.
A616	X	8	13'-7"			WING 2 HORIZ. B.F. & TOP
A617	X	17	10'-2"	X		WING 2 VERT.
A418	X	5	11'-8"			WING 2 HORIZ. E.F.
A619	X	2	11'-8"			WING 2 HORIZ. E.F. TOP
A420	X	3	4'-7"			BODY VERT. END @ WING 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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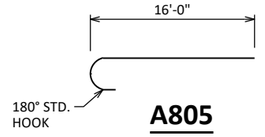

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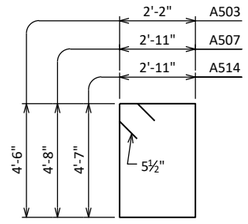
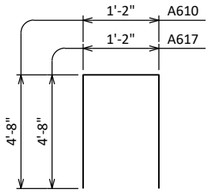


A503, A507, A514



A610, A617

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

WEST ABUTMENT PILE LAYOUT AND BILL OF BARS

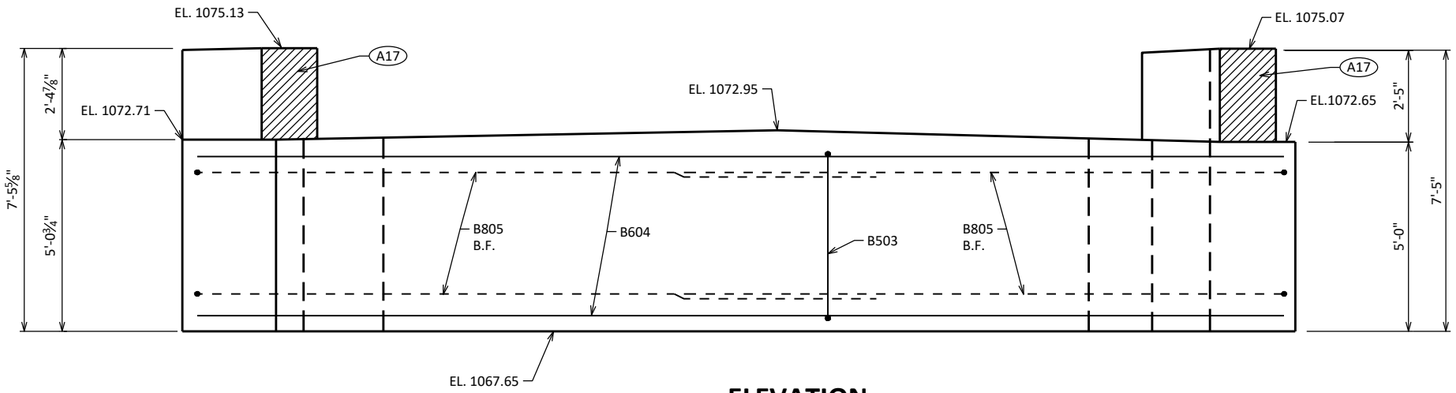
SHEET 8 OF 16

8

8

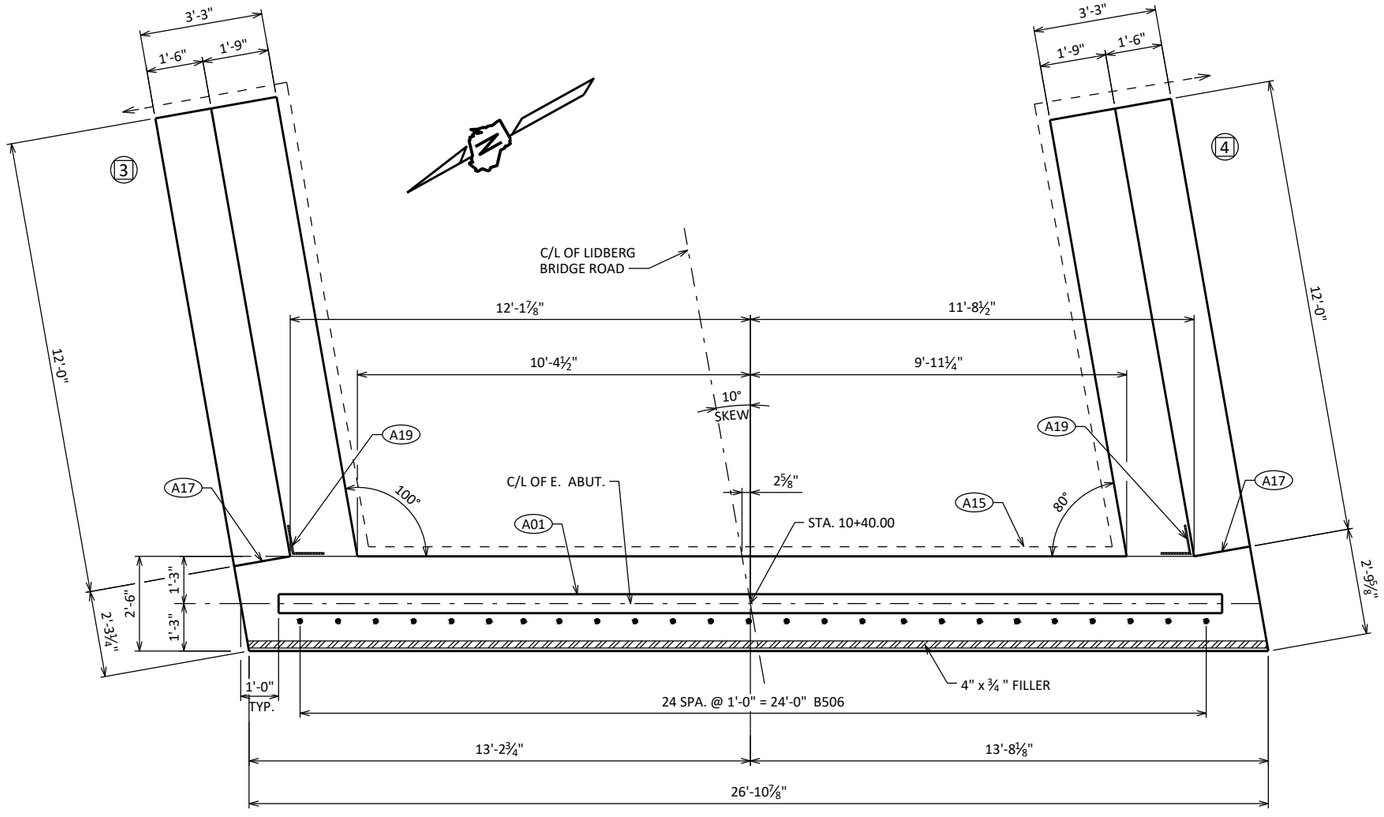
STATE PROJECT NUMBER

8396-00-74

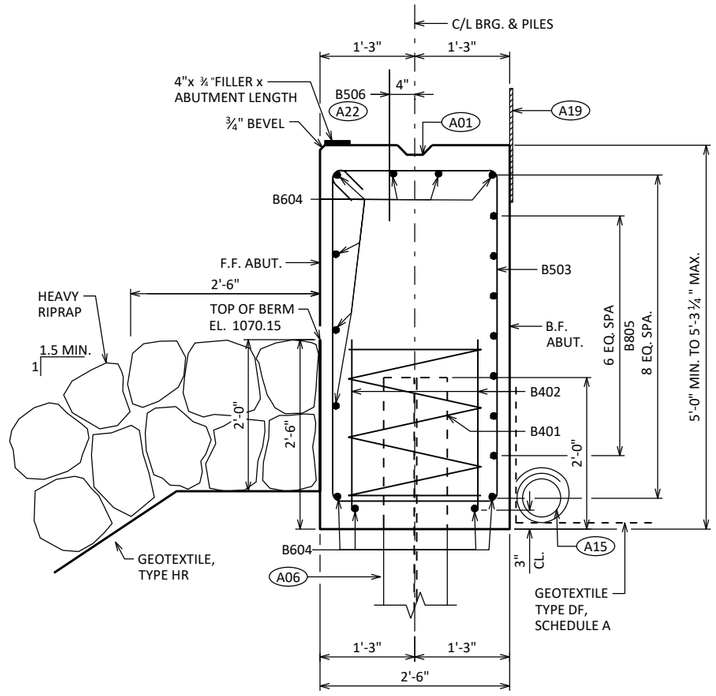


ELEVATION

(LOOKING EAST)



PLAN



SECTION THRU BODY

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

EAST ABUTMENT

SHEET 9 OF 16

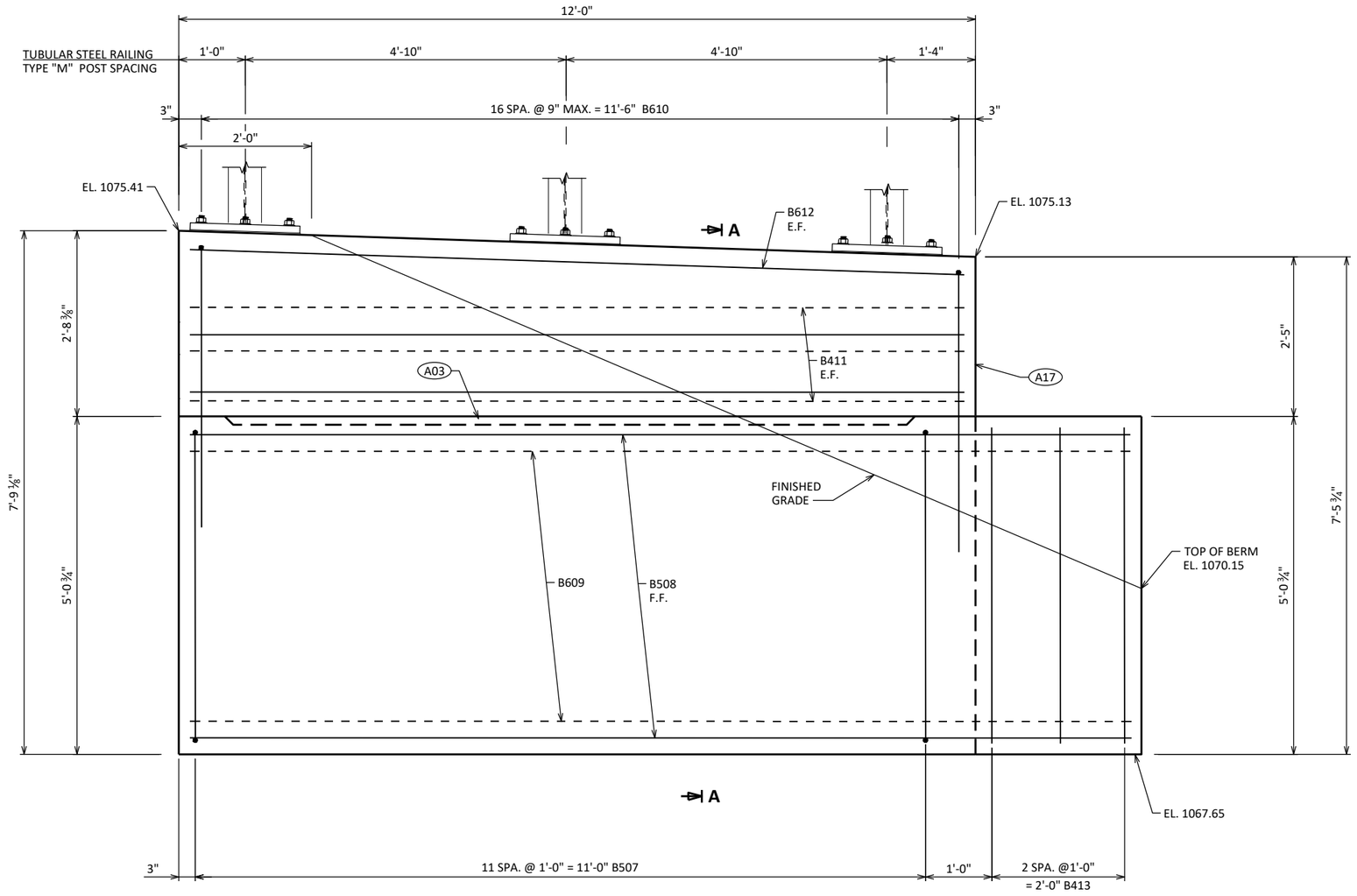
40

8

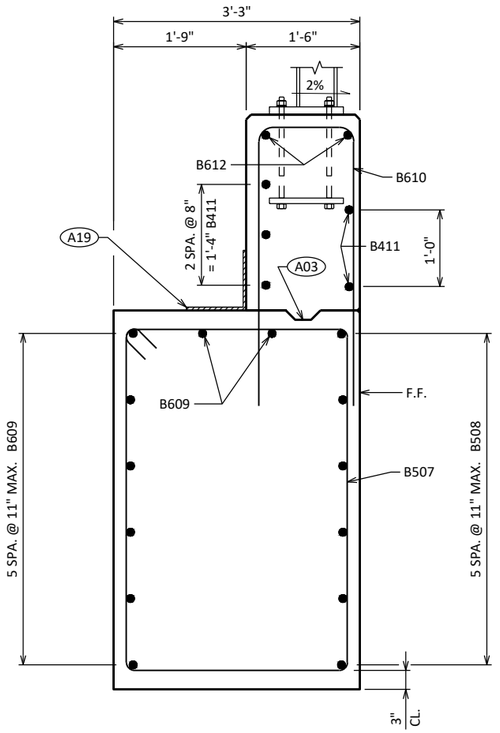
8

STATE PROJECT NUMBER

8396-00-74



ELEVATION - WING 3



SECTION A

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

EAST ABUTMENT WING 3 DETAILS

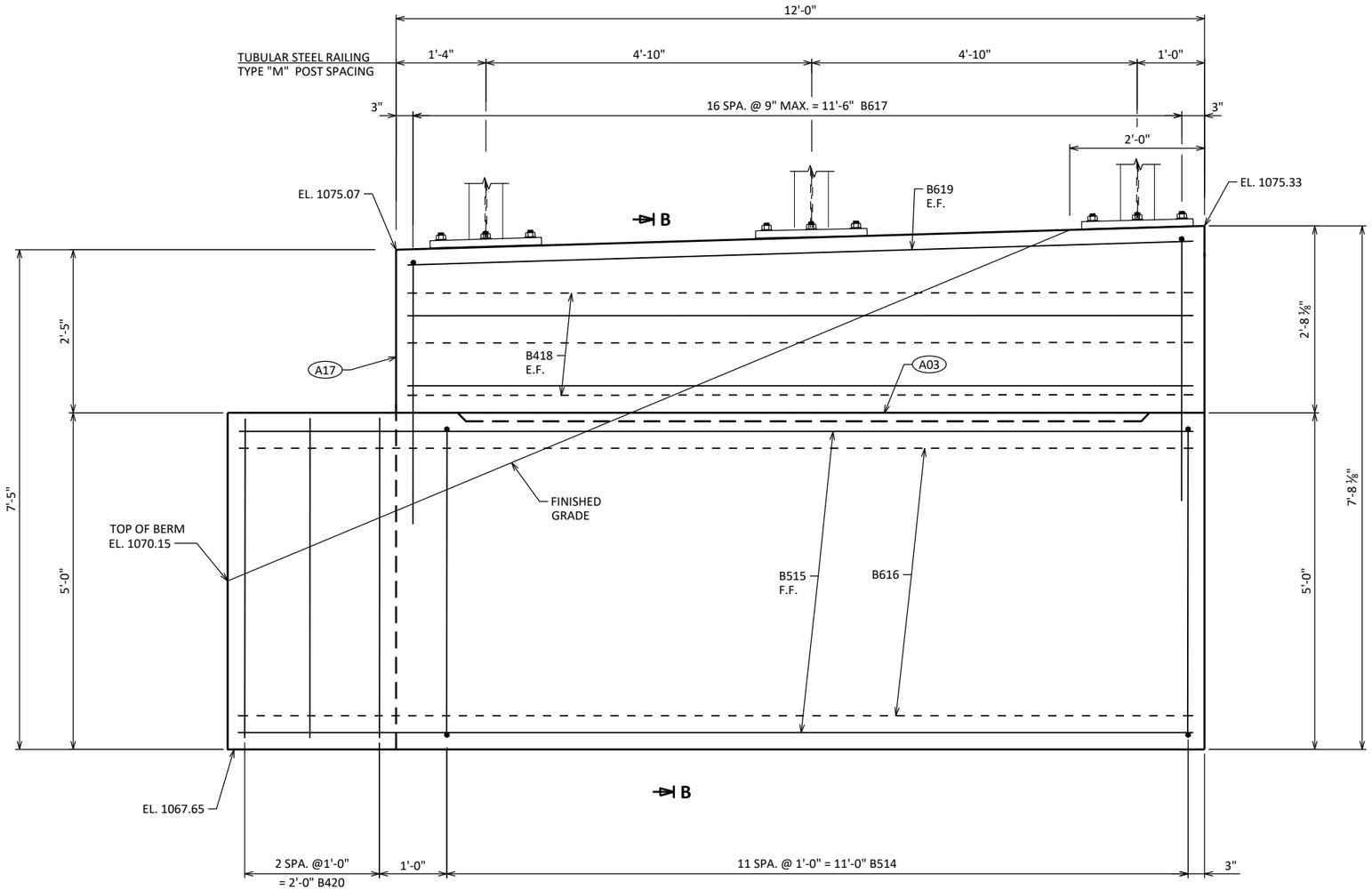
SHEET 10 OF 16

8

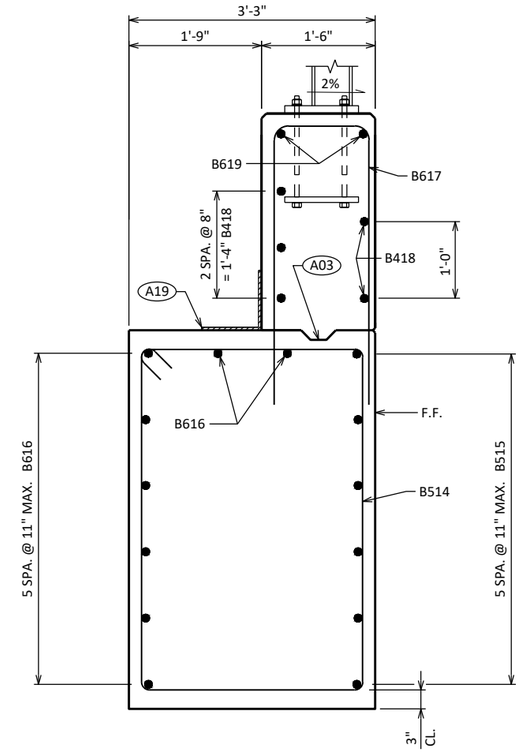
8

STATE PROJECT NUMBER

8396-00-74



ELEVATION - WING 4



SECTION B

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

EAST ABUTMENT WING 4 DETAILS

SHEET 11 OF 16

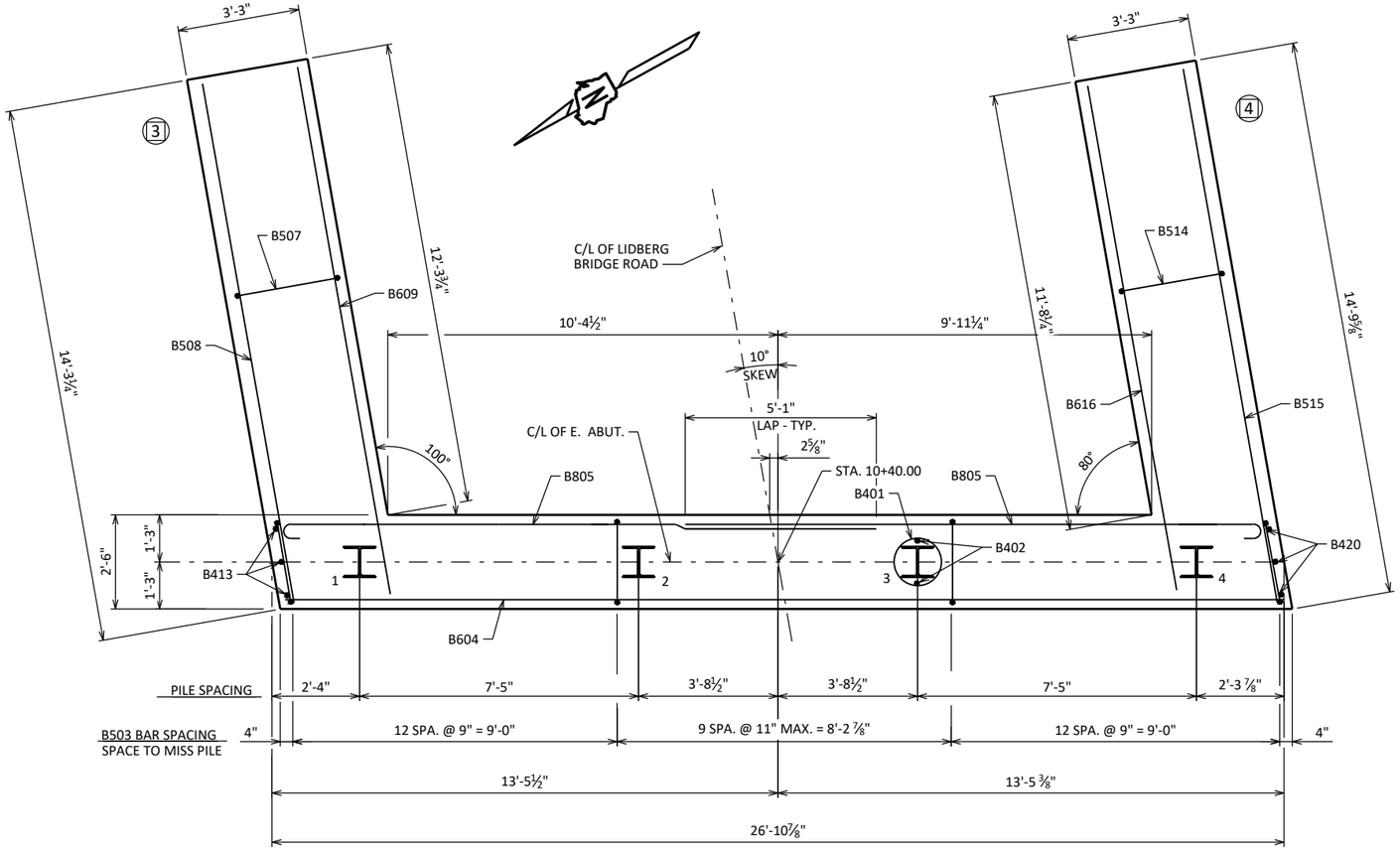
42

8

8

STATE PROJECT NUMBER

8396-00-74



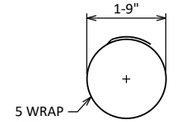
PILE LAYOUT

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		4	28'-0"	X		BODY @ PILES
B402		8	2'-3"			BODY @ PILES
B503		34	14'-0"	X		BODY VERT.
B604		11	26'-6"			BODY HORIZ.
B805		14	16'-11"	X		BODY HORIZ. @ WINGS 3 & 4 B.F.
B506	X	25	2'-0"			BODY DOWELS
B507	X	12	15'-8"	X		WING 3 VERT.
B508	X	6	13'-11"			WING 3 HORIZ. F.F.
B609	X	8	14'-2"			WING 3 HORIZ. B.F. & TOP
B610	X	17	10'-2"	X		WING 3 VERT.
B411	X	5	11'-8"			WING 3 HORIZ. E.F.
B612	X	2	11'-8"			WING 3 HORIZ. E.F. TOP
B413	X	3	4'-7"			BODY VERT. END @ WING 3
B514	X	12	15'-8"	X		WING 4 VERT.
B515	X	6	14'-5"			WING 4 HORIZ. F.F.
B616	X	8	13'-7"			WING 4 HORIZ. B.F. & TOP
B617	X	17	10'-2"	X		WING 4 VERT.
B418	X	5	11'-8"			WING 4 HORIZ. E.F.
B619	X	2	11'-8"			WING 4 HORIZ. E.F. TOP
B420	X	3	4'-7"			BODY VERT. END @ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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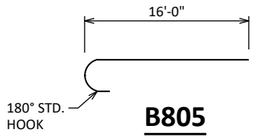

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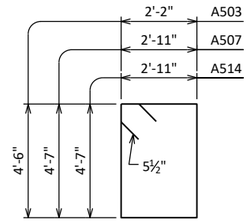
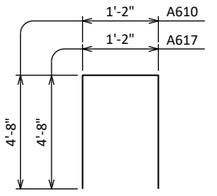


B503, B507, B514



B610, B617

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

EAST ABUTMENT PILE LAYOUT AND BILL OF BARS

SHEET 12 OF 16

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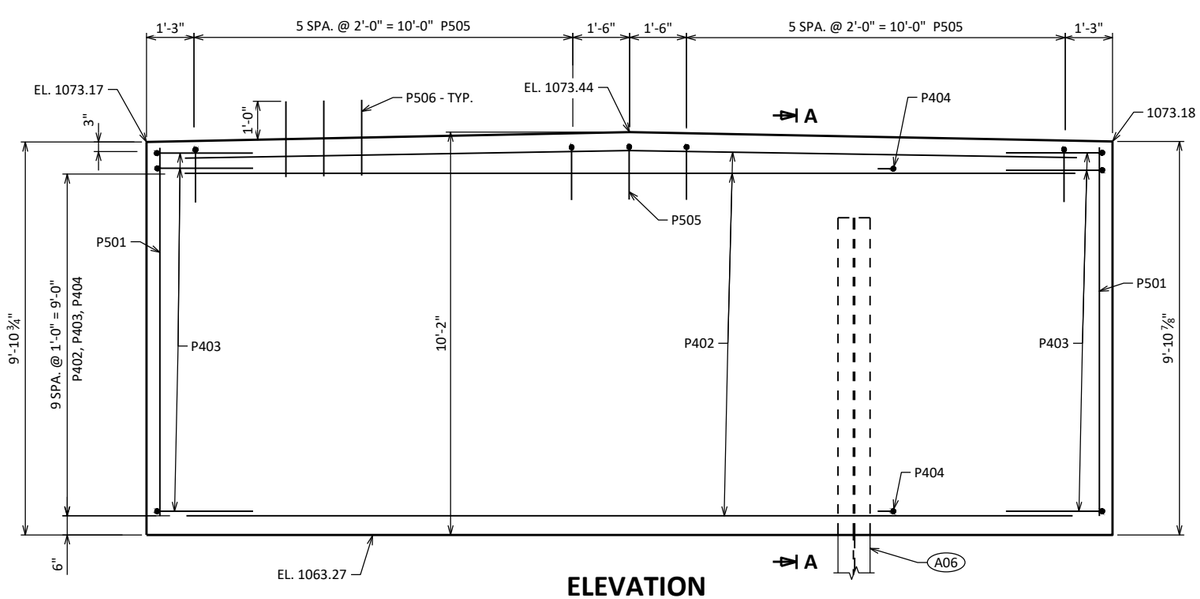
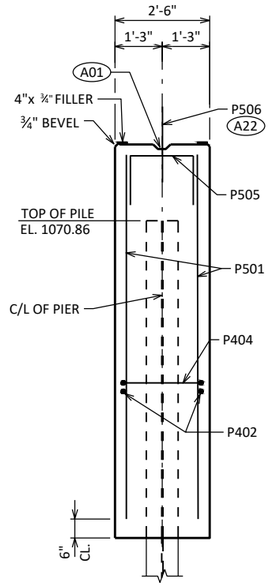
STATE PROJECT NUMBER

8396-00-74



ELEVATION

(LOOKING EAST)



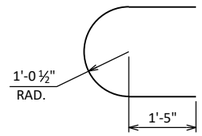
SECTION A

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P501		54	9'-2"			COLUMN VERT.
P402		22	23'-0"			COLUMN HORIZ.
P403		22	6'-1"	X		COLUMN HORIZ.
P404		60	2'-10"	X		COLUMN TIES
P505		13	4'-7"	X		COLUMN TOP
P506	x	24	2'-0"			COLUMN DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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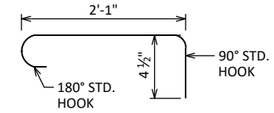

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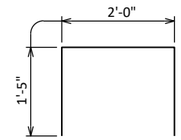

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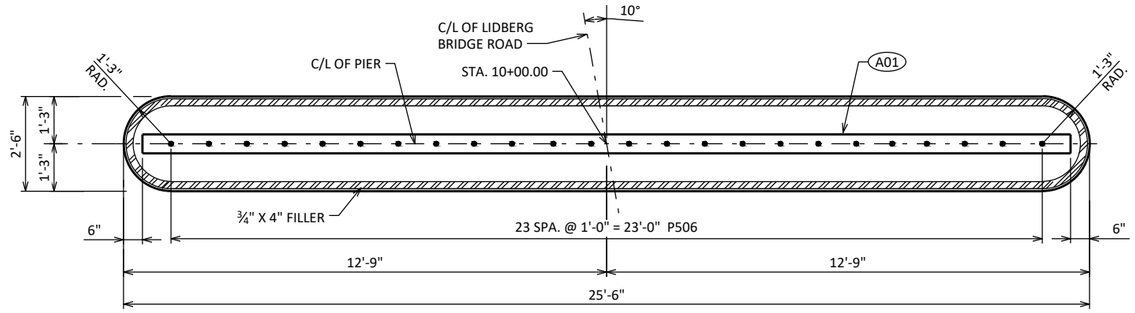
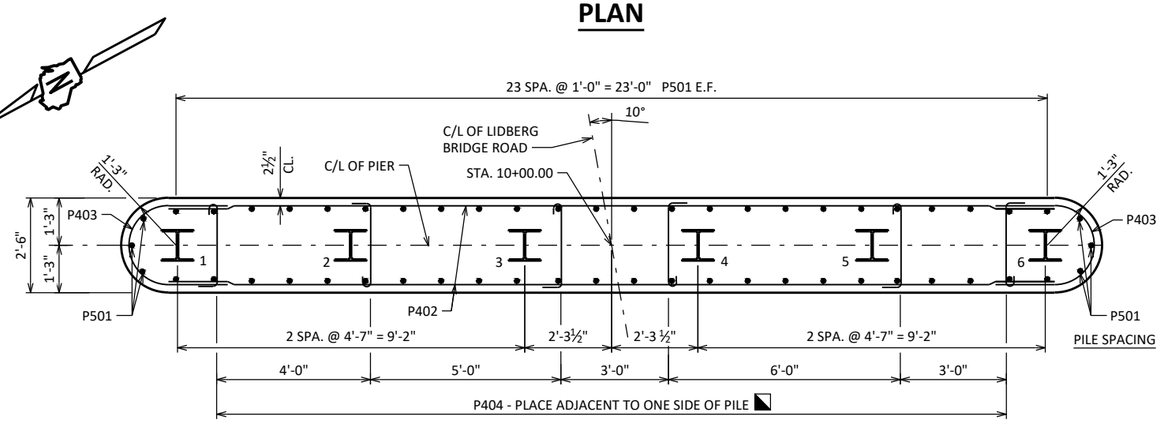


PLAN



PILE LAYOUT

A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

A06 SUPPORT PIER ON HP 10 X 42 STEEL PILING, ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

A22 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

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STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

PIER

SHEET 13 OF 16

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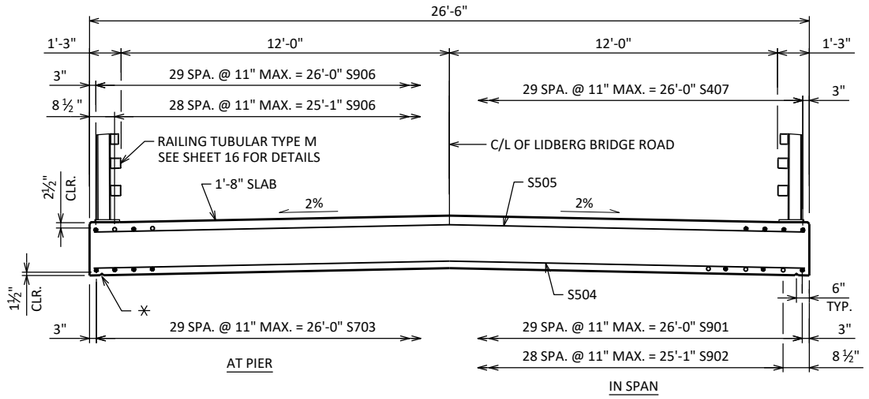
STATE PROJECT NUMBER

8396-00-74



TYPICAL SECTION THRU BRIDGE

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

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

✳ ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT.

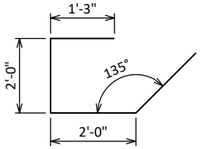
V-GROOVES ARE REQUIRED.

BILL OF BARS

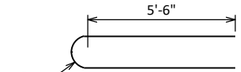
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S901	X	60	38'-3"			SLAB LONG. BOT.
S902	X	58	25'-4"			SLAB LONG. BOT.
S703	X	30	13'-3"			SLAB LONG. BOT. @ PIER
S504	X	100	26'-7"			SLAB TRANS. BOT.
S505	X	100	26'-7"			SLAB TRANS. TOP
S906	X	59	34'-9"			SLAB LONG. TOP @ PIER
S407	X	60	18'-6"			SLAB LONG. TOP
S508	X	54	7'-5"	X		SLAB @ ABUT. DIAPHRAGM STIRRUPS
S509	X	4	26'-7"			SLAB @ ABUT. DIAPHRAGM TRANS.
S610	X	56	12'-0"	X		SLAB @ RAIL POSTS
S611	X	96	6'-0"			SLAB @ INT. RAIL POSTS
S612	X	16	4'-8"	X		SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



S508



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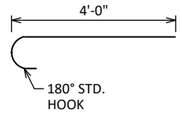

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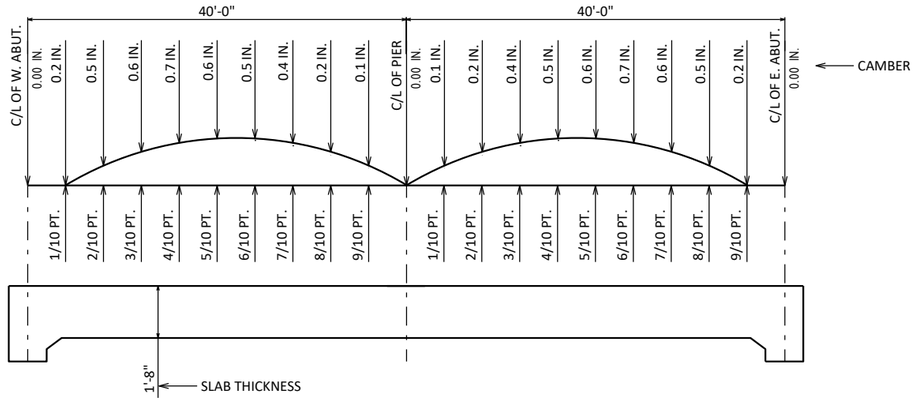

CAMBER AND SLAB THICKNESS DIAGRAM

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

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

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

SURVEY TOP OF SLAB ELEVATIONS

	ABUTMENT	5/10 PT.	PIER	5/10 PT.	ABUTMENT
N. EDGE OF SLAB					
C/L LIDBERG BRIDGE RD					
S. EDGE OF SLAB					

PRIOR TO RELEASING SLAB FORMWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF SUBSTRUCTURES, AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND C/L. . RECORD ELEVATIONS IN THE TABLE ABOVE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS

LOCATION	C/L W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L PIER	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L E. ABUT.
N. EDGE OF SLAB	1075.29	1075.22	1075.16	1075.11	1075.06	1075.02	1074.98	1074.95	1074.93	1074.91	1074.90	1074.90	1074.90	1074.90	1074.92	1074.94	1074.96	1074.99	1075.03	1075.08	1075.13
C/L LIDBERG BRIDGE RD	1075.59	1075.52	1075.46	1075.40	1075.35	1075.31	1075.27	1075.23	1075.21	1075.19	1075.17	1075.16	1075.16	1075.16	1075.17	1075.19	1075.21	1075.24	1075.27	1075.32	1075.36
S. EDGE OF SLAB	1075.37	1075.30	1075.23	1075.17	1075.12	1075.07	1075.02	1074.99	1074.96	1074.93	1074.91	1074.90	1074.90	1074.90	1074.90	1074.91	1074.93	1074.96	1074.99	1075.03	1075.07

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

SUPERSTRUCTURE

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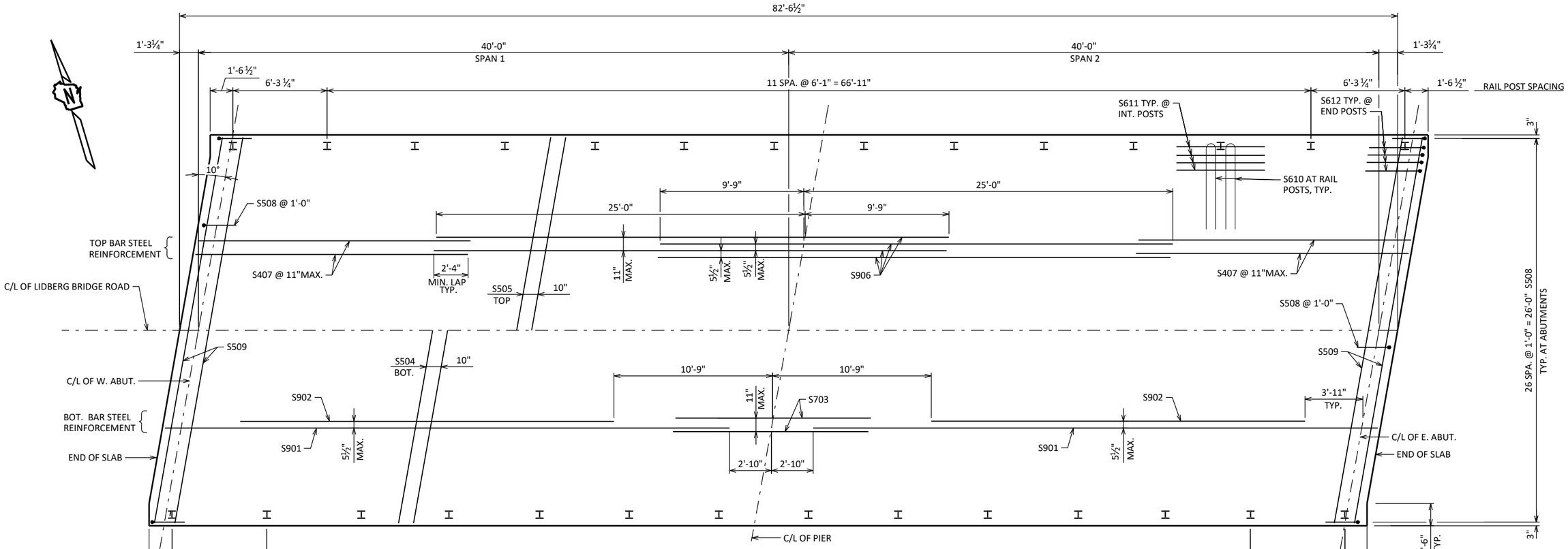
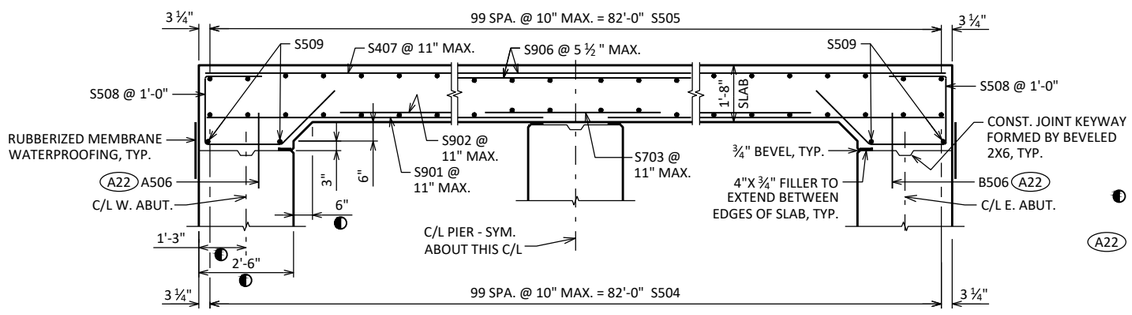
STATE PROJECT NUMBER

8396-00-74



PLAN



LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED.

◐ MEASURED NORMAL TO THE C/L OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

(A22) A506, B506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

SUPERSTRUCTURE PLAN

SHEET 15 OF 16

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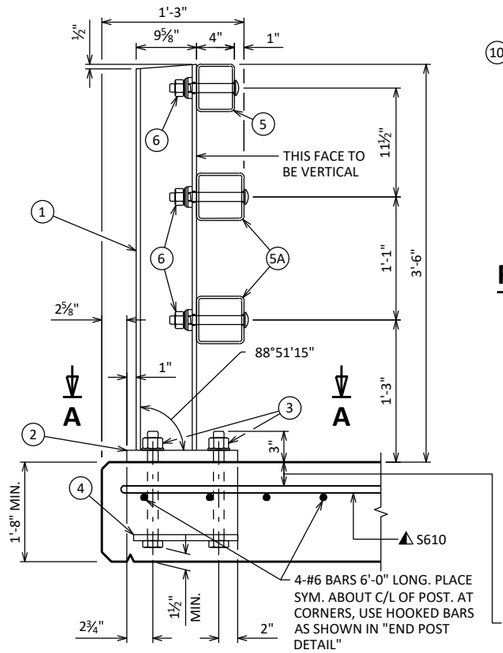
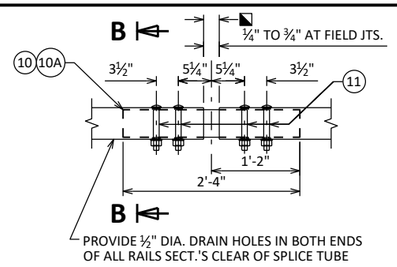
STATE PROJECT NUMBER

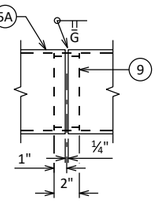
8396-00-74



SECTION THRU RAILING ON DECK

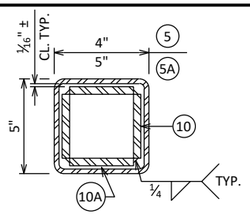


FIELD ERECTION JOINT DETAIL

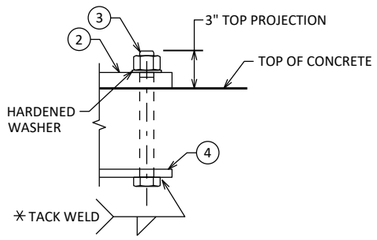


SHOP RAIL SPLICE DETAIL

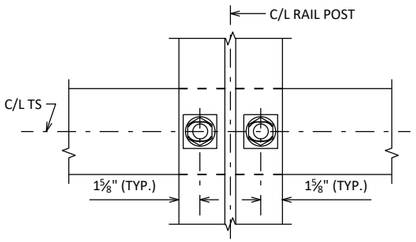
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



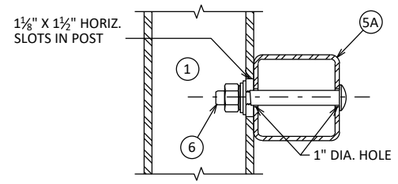
SECTION B-B



ANCHOR BOLTS



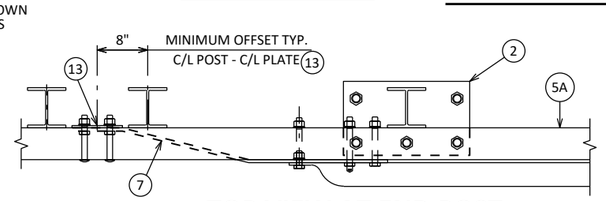
SECTION THRU POST WEB



SECTION THRU RAIL

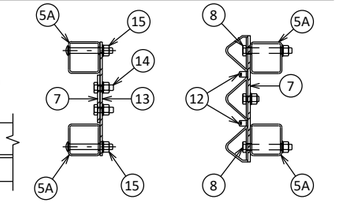
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION C-C

SECTION D-D

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 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
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 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
4. ⅝" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" 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" MIN. 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" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. 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 REQ'D.).
15. 1" DIA. 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.

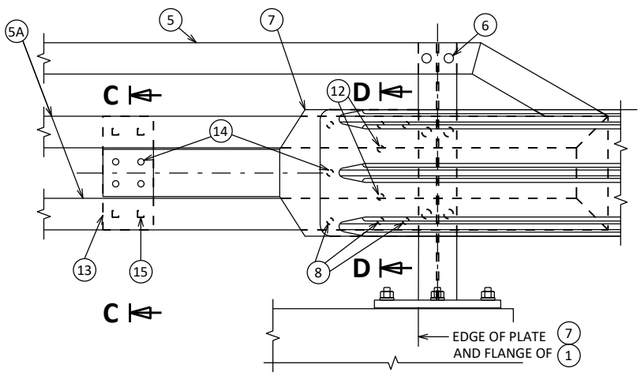
GENERAL NOTES

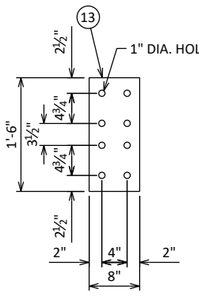
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, 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. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
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 SSPC SPECIFICATIONS.

SECTION A-A

END POST DETAIL

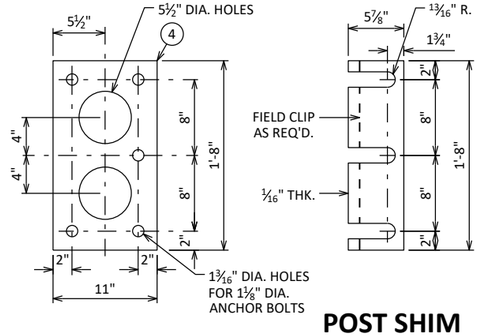
REINFORCEMENT AT CORNERS





ANCHOR PLATE

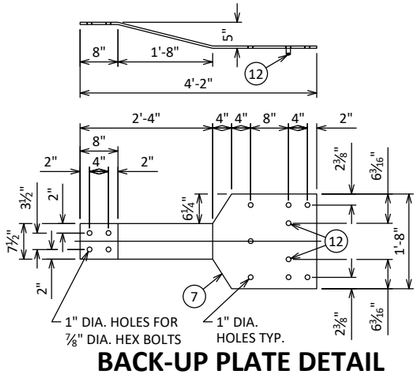
AT BEAM GUARD ATTACHMENT



ANCHOR PLATE

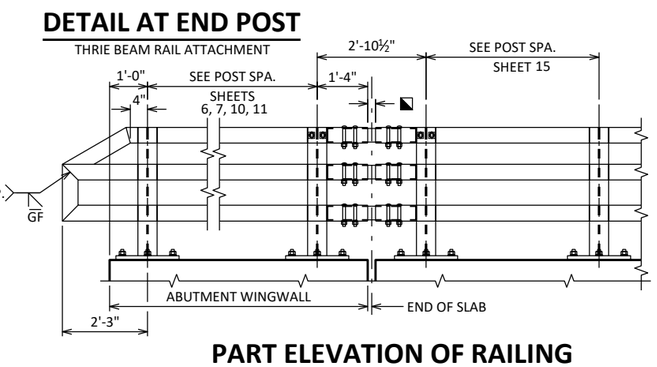
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT

PART ELEVATION OF RAILING

▲ TIE TO TOP MAT OF STEEL.

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

◥ ¼" TO ¾" OPENING FOR A1 ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-16-149

DRAWN BY CLP | PLANS CK'D NBE

TUBULAR STEEL RAILING TYPE "M"

SHEET 16 OF 16

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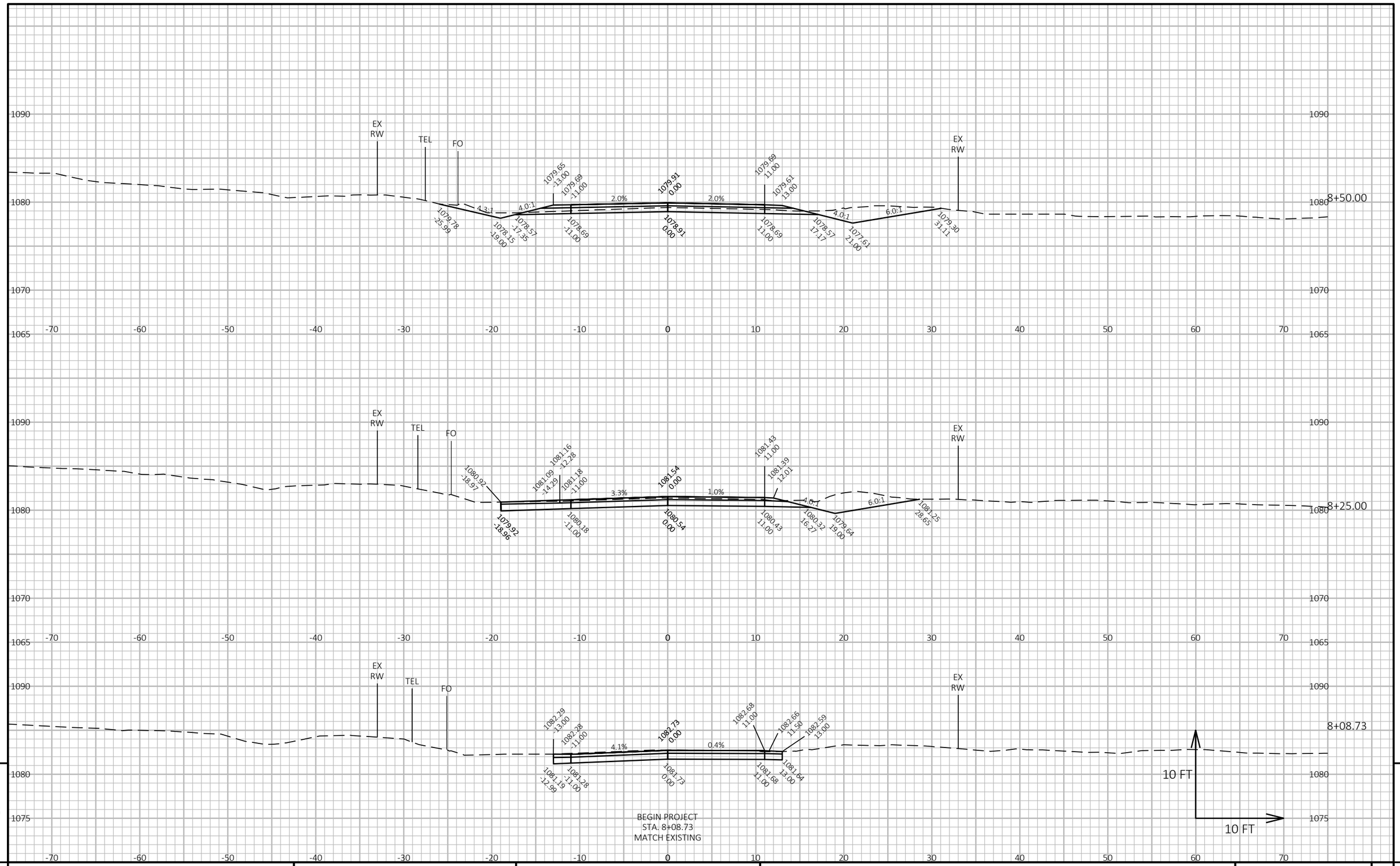
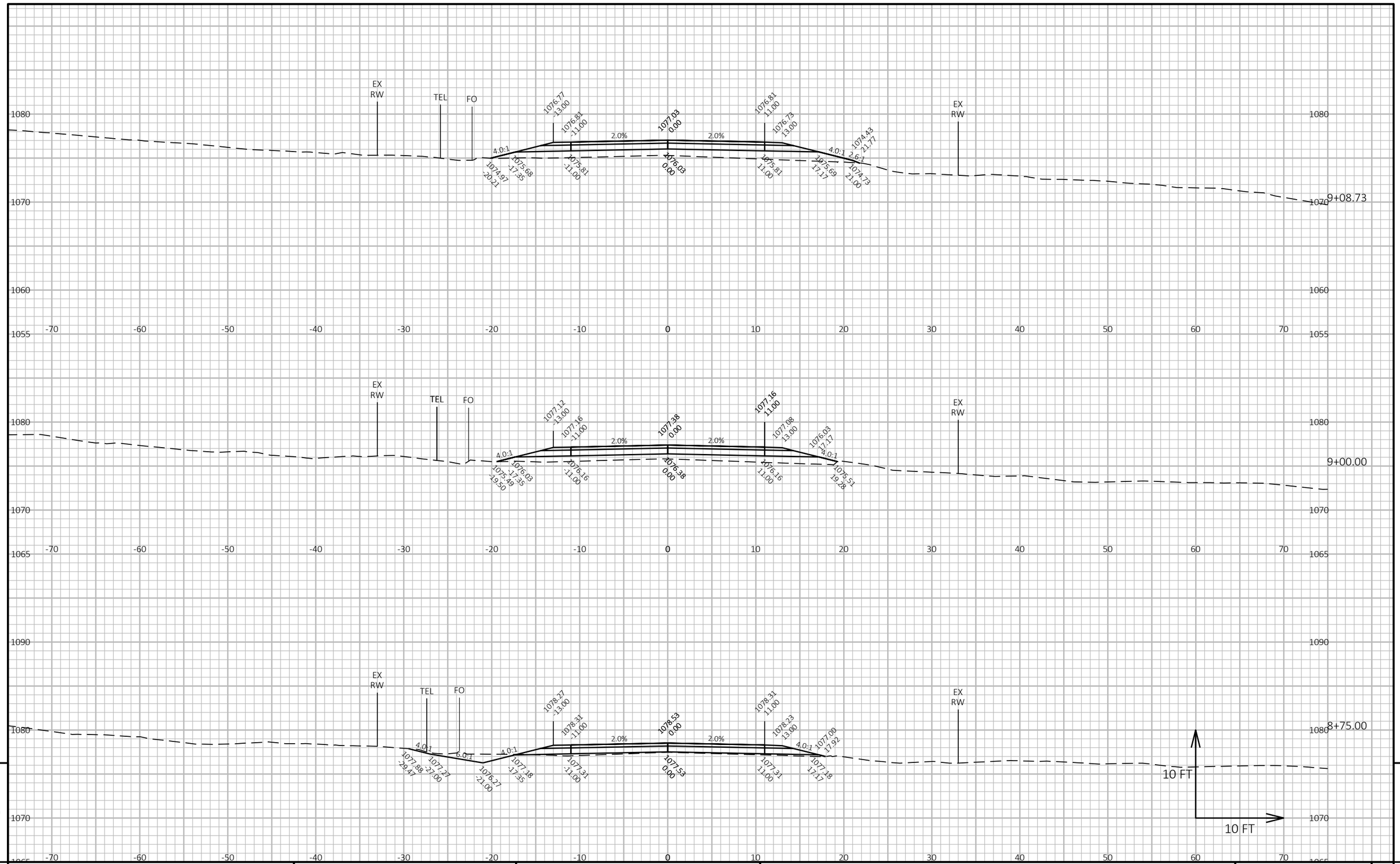
LIDBERG BRIDGE ROAD COMPUTER EARTHWORK

Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Unuseable Pavement Material	Fill	Cut	Salvaged / Unuseable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.30	
					Note 1	Note 4	Note 2	Note 5		Note 3
8+08.73	--	27.4	6.9	0.0						
8+25	16.27	46.0	6.9	0.0	22	4	0	18	0	18
8+50	25.00	31.4	6.9	0.0	36	6	0	47	0	47
8+75	25.00	6.3	6.9	4.2	17	6	2	58	3	56
9+00	25.00	0.0	6.9	24.0	3	6	13	55	20	35
9+08.73	8.73	0.0	6.9	31.8	0	2	9	53	31	22
9+25	16.27	0.0	6.9	53.9	0	4	26	49	65	-16
9+40.82	15.82	0.0	6.9	64.0	0	4	35	45	110	-65
9+44.85	4.03	0.0	6.9	64.7	0	1	10	44	122	-79
9+58.73	13.88	0.0	6.9	64.7	0	4	33	40	165	-125
BRIDGE	--	--	--	--	--	--	--	--	--	--
10+41.27	--	0.0	6.9	53.2	--	--	--	--	--	--
10+55.15	13.88	0.0	6.9	53.2	0	4	27	36	201	-164
10+59.39	4.24	0.0	6.9	51.0	0	1	8	35	212	-176
10+75	15.61	0.0	6.9	16.5	0	4	20	31	237	-206
10+91.27	16.27	33.3	6.9	0.1	10	4	5	37	243	-206
11+00	8.73	41.0	6.9	0.0	12	2	0	47	243	-196
11+25	25.00	53.4	6.9	0.0	44	6	0	84	243	-159
11+50	25.00	50.7	6.9	0.0	48	6	0	126	243	-117
11+66.27	16.27	24.8	6.9	0.0	23	4	0	145	243	-99
					215	70	187			



PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	CROSS SECTIONS: LIDBERG BRIDGE ROAD	SHEET 49

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\DSGN\CRDR\CRDR_LIDBERG ROAD.DWG
LAYOUT NAME - XS-1
PLOT DATE : 10/24/2024 9:16 AM
PLOT BY : PEPIN, STEFFANIE
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

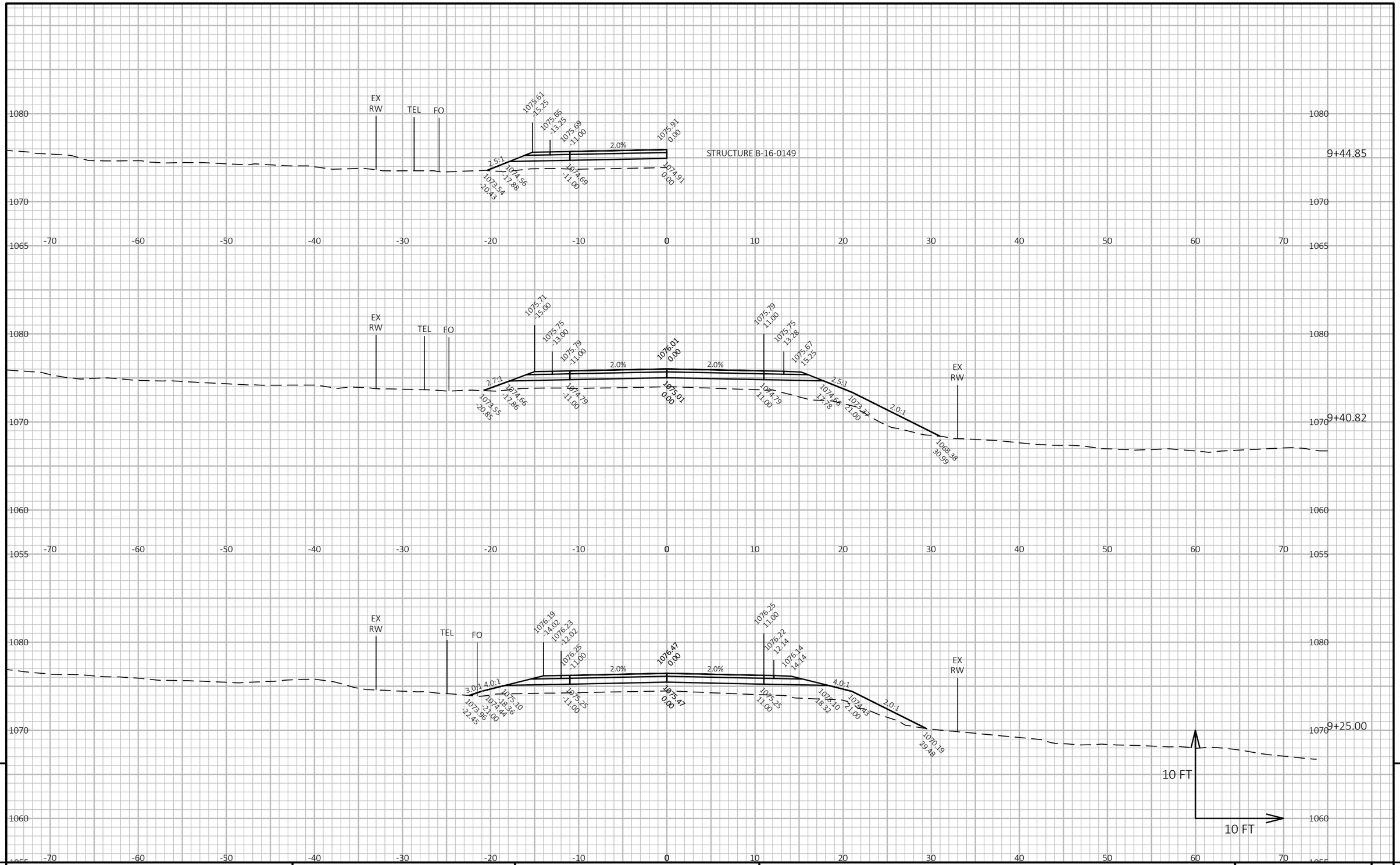


PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	CROSS SECTIONS: LIDBERG BRIDGE ROAD	SHEET 50	E

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\DSGN\CRDR\CRDR_LIDBERG ROAD.DWG
LAYOUT NAME - XS-2

PLOT DATE : 10/24/2024 9:16 AM PLOT BY : PEPIN, STEFFANIE PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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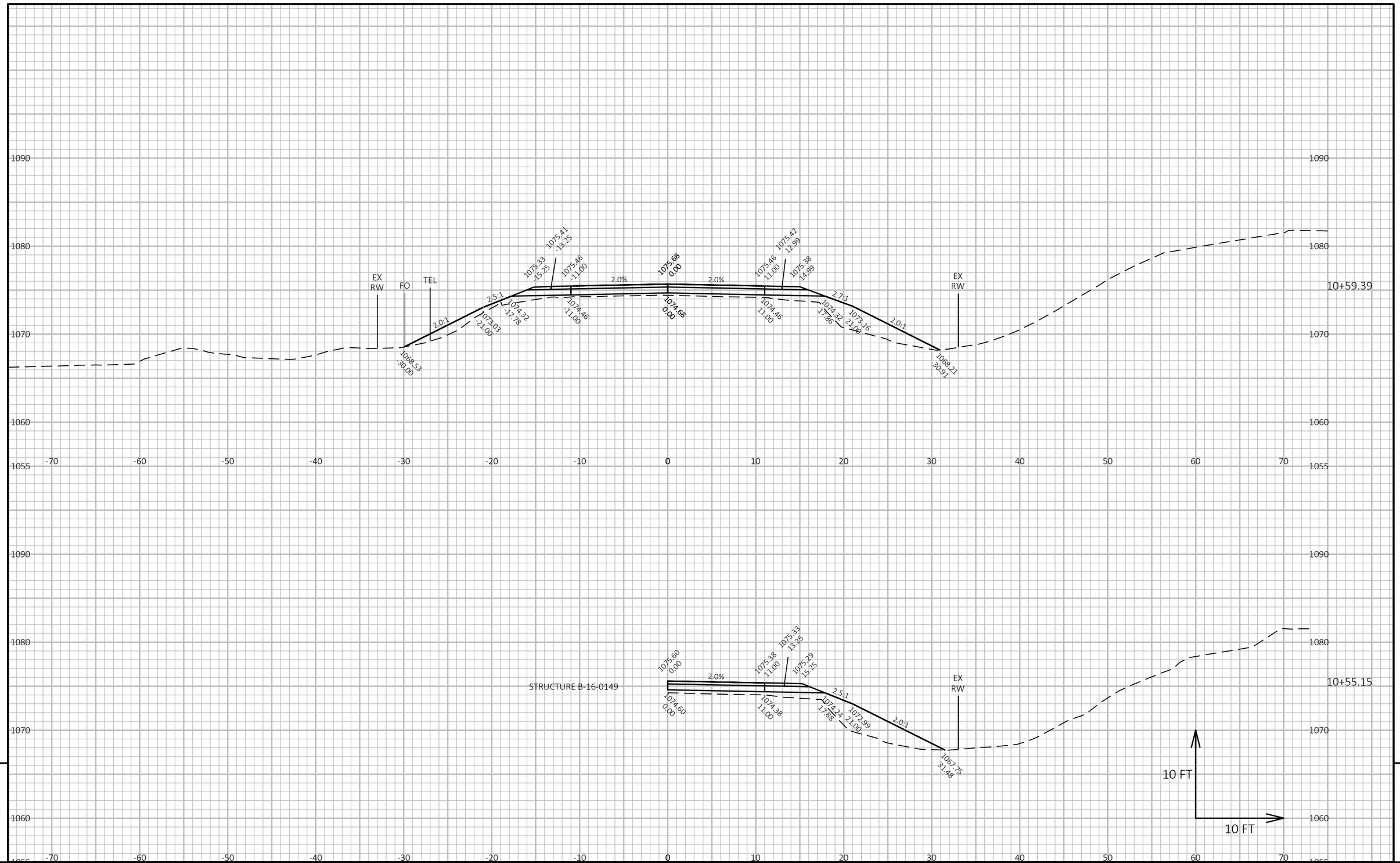
PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	CROSS SECTIONS: LIDBERG BRIDGE ROAD	SHEET 51	E

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\DSGN\CRDR\CRDR_LIDBERG ROAD.DWG
LAYOUT NAME - XS-3

PLOT DATE : 10/24/2024 9:16 AM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



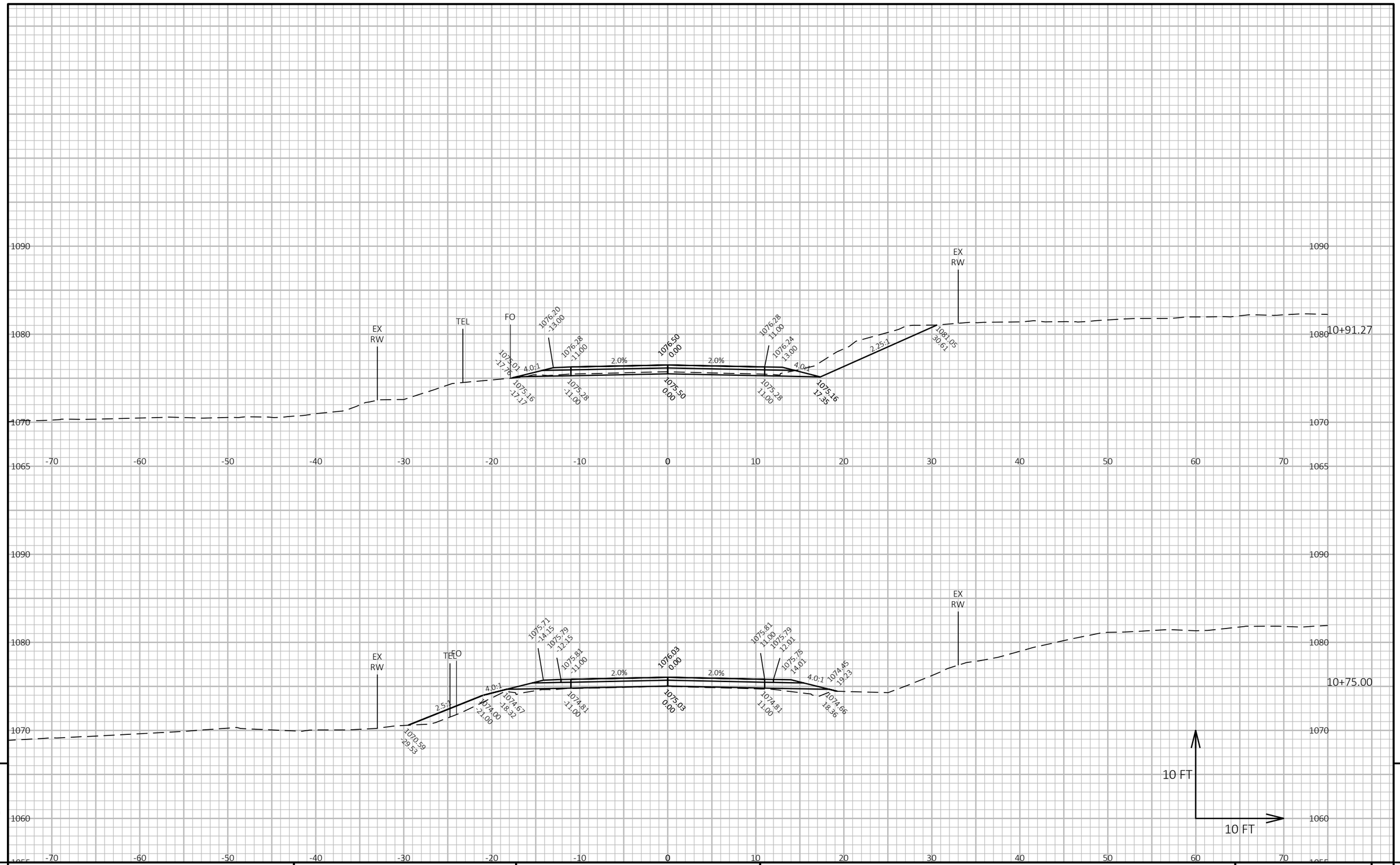
9

9

PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	CROSS SECTIONS: LIDBERG BRIDGE ROAD	SHEET 52	E

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\DSGN\CRDR\CRDR_LIDBERG ROAD.DWG
LAYOUT NAME - XS-4

PLOT DATE : 10/24/2024 9:17 AM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

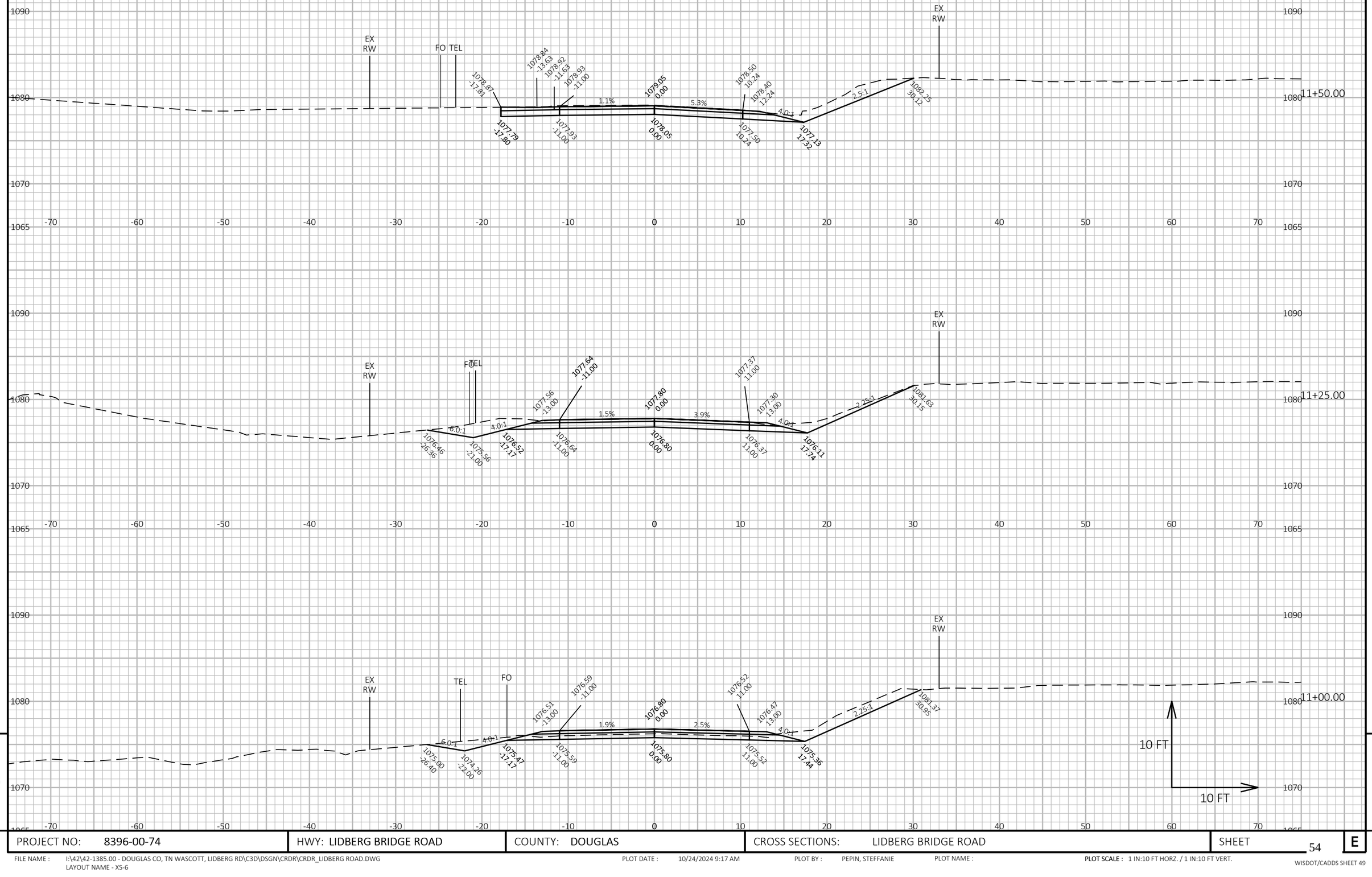


PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	CROSS SECTIONS: LIDBERG BRIDGE ROAD	SHEET 53	E

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\DSGN\CRDR\CRDR_LIDBERG ROAD.DWG
LAYOUT NAME - XS-5

PLOT DATE : 10/24/2024 9:17 AM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



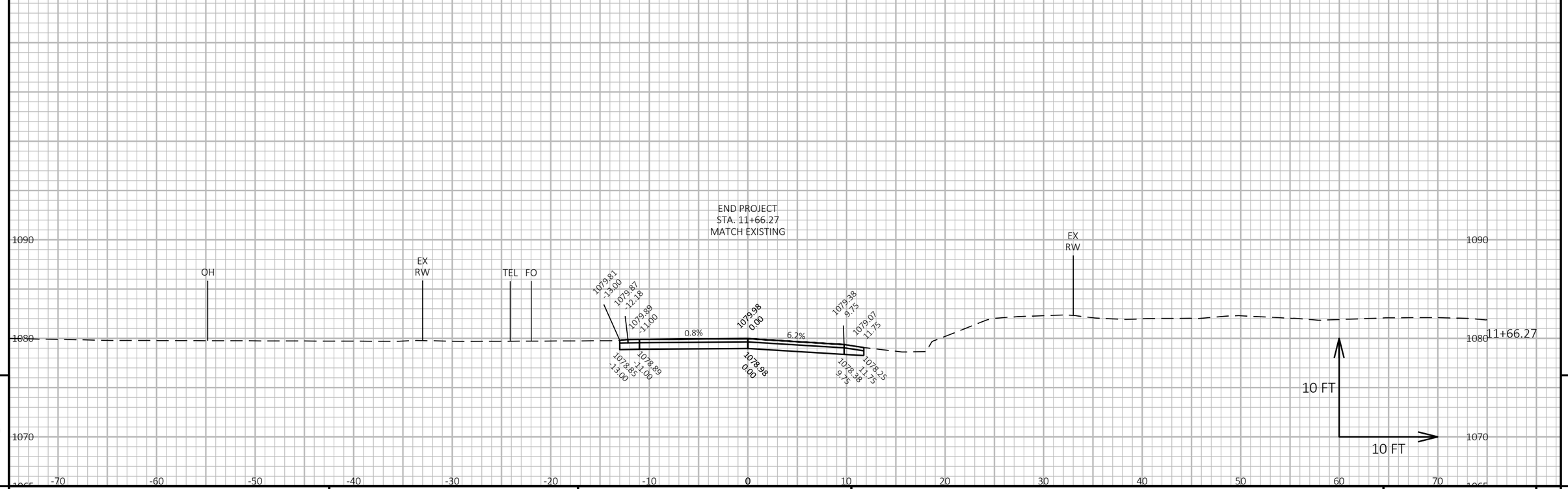
9

9

PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	CROSS SECTIONS: LIDBERG BRIDGE ROAD	SHEET 54	E

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\DSGN\CRDR\CRDR_LIDBERG ROAD.DWG
LAYOUT NAME - XS-6

PLOT DATE : 10/24/2024 9:17 AM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 8396-00-74	HWY: LIDBERG BRIDGE ROAD	COUNTY: DOUGLAS	CROSS SECTIONS: LIDBERG BRIDGE ROAD	SHEET 55	E

FILE NAME : I:\42\42-1385.00 - DOUGLAS CO, TN WASCOTT, LIDBERG RD\C3D\DSGN\CRDR\CRDR_LIDBERG ROAD.DWG
LAYOUT NAME - XS-7

PLOT DATE : 10/24/2024 9:17 AM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Wisconsin Department of Transportation

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