rhi FEB 13, 2024

PROJECT ID: 9815-00-70
WITH: N/A

COUNTY: FOREST

33

ORDER OF SHEETS

TOTAL SHEETS = 46

PROJECT LOCATION

N

DESIGN DESIGNATION

A.A.D.T.	(2024)	=	60
A.A.D.T.	(2044)	=	70
D.H.V.		=	-
D.D.		=	50/50
T.		=	3.5%
DESIGN SPEED		=	30 MPH
ESALS		=	0

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE			
SLOPE INTERCEPT		CULVERT (Profile View)	
REFERENCE LINE	300'EB'	UTILITIES	
EXISTING CULVERT		ELECTRIC	E
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

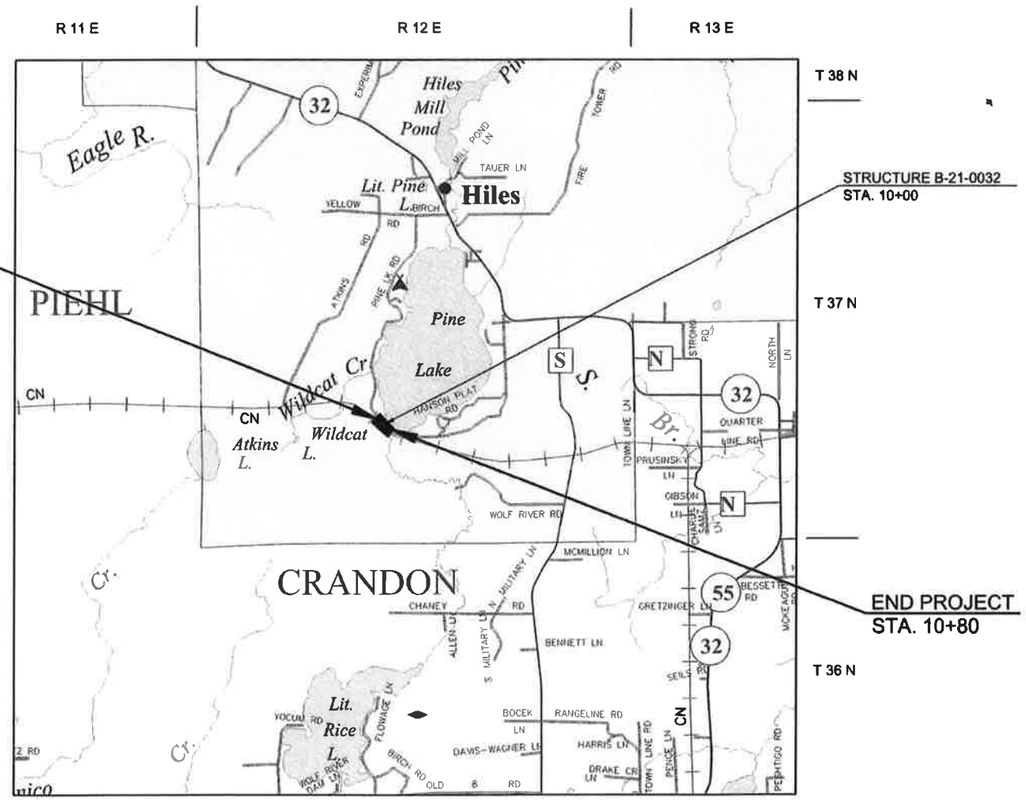
T HILES, WEST PINE LAKE ROAD

WOLF RIVER BRIDGE B-21-0032

LOC STR
FOREST COUNTY

STATE PROJECT NUMBER
9815-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9815-00-70	WISC 2024258	1



BEGIN PROJECT
STA. 9+50
Y =603777.881
X =812523.150

STRUCTURE B-21-0032
STA. 10+00

END PROJECT
STA. 10+80

LAYOUT
SCALE 0 2 MI

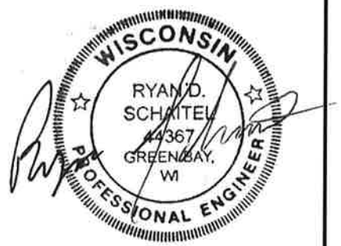
TOTAL NET LENGTH OF CENTERLINE = 0.025 Mi

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), FOREST 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 12B.

ACCEPTED FOR
FOREST COUNTY

10-31-2023 (DATE) _____ HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY
AYRES



10/30/2023 (Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES
Designer	AYRES
Project Manager	DAN ERVA
Regional Supervisor	DAN ERVA

APPROVED FOR THE DEPARTMENT
DATE: 10/31/23 _____ (Signature)

E

FILE NAME : I:\45\450505 W. PINE LAKE ROAD\C3D\SHEETSPLAN\010101_TI.DWG PLOT DATE : 10/30/2023 2:08 PM PLOT BY : GARNICA, BRANDON PLOT NAME :

2

GENERAL NOTES

THE LOCATION OF EXISTING UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

PROPERTY LINES AS SHOWN ARE APPROXIMATE.

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

BEARINGS SHOWN ON THIS PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

EROSION CONTROL LOCATIONS AS SHOWN ON THE EROSION CONTROL PLAN ARE APPROXIMATE. THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SUBGRADE SHOULDER POINTS ARE TO BE SEEDED AND EROSION MAT AS DIRECTED BY THE ENGINEER.

ALL ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (2012).

WISDOT WILL FURNISH A BENCHMARK MONUMENT TO BE SET BY THE CONTRACTOR.

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA= 0.20 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.17 ACRES
SOIL GROUP A/D

UTILITIES

* FRONTIER COMMUNICATIONS — TELEPHONE 608-637-0373
114 E COURT STREET
VIROQUA, WI 54665
ATTENTION: GLENN LEFEBVRE
E-MAIL: glen.lefebvre@FTR.com

* WISCONSIN PUBLIC SERVICES - ELECTRIC — TELEPHONE 715-848-7353
PO BOX 1166
WAUSAU, WI 54401-1166
ATTENTION: KEVIN TERMAAT
E-MAIL: kevin.termaat@wisconsinpublicservice.com

* WISCONSIN PUBLIC SERVICES - GAS — TELEPHONE 715-369-7133
2027 NAVAJO STREET
RHINELANDER, WI 54501
ATTENTION: SHANE SARKKINEN
E-MAIL: shane.sarkkinen@wisconsinpublicservice.com

*-MEMBER OF DIGGERS HOTLINE

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

DESIGN CONTACT

AYRES — TELEPHONE 920-327-7840
3376 PACKERLAND DRIVE
DE PERE, WI 54115
ATTENTION: RYAN SCHAITEL
E-MAIL: SchaitelR@AyresAssociates.com

DEPARTMENT OF NATURAL RESOURCES

WDNR-NORTHERN REGION — TELEPHONE 715-367-1936
107 SUTLIFF
RHINELANDER, WI 54501
ATTENTION: JON SIMONSEN
E-MAIL: jonathan.simonsen@wisconsin.com

FOREST COUNTY

HIGHWAY COMMISSIONER — TELEPHONE 715-478-3516
5350 COUNTY HWY W
CRANDON, WI 54520
ATTENTION: MARK CHRISMAN
E-MAIL: mchrisman@co.forest.wi.us

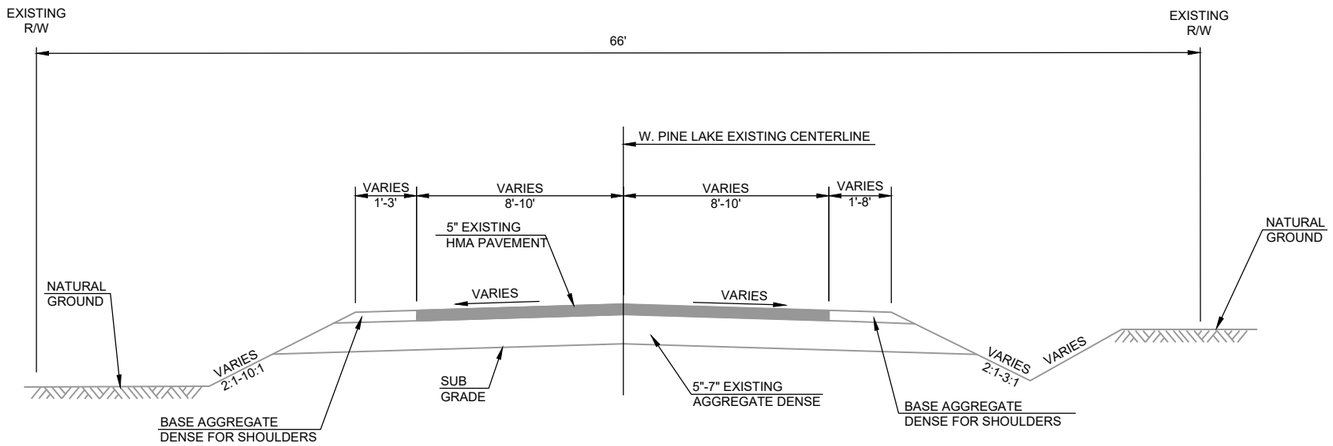
TOWN OF HILES

TOWN CHAIRMAN — TELEPHONE 715-784-1323
9193 NORTH MAIN STREET
HILES, WI 54511
ATTENTION: BRIAN BUKOVIC
E-MAIL: townofhiles@outlook.com

STANDARD ABBREVIATIONS

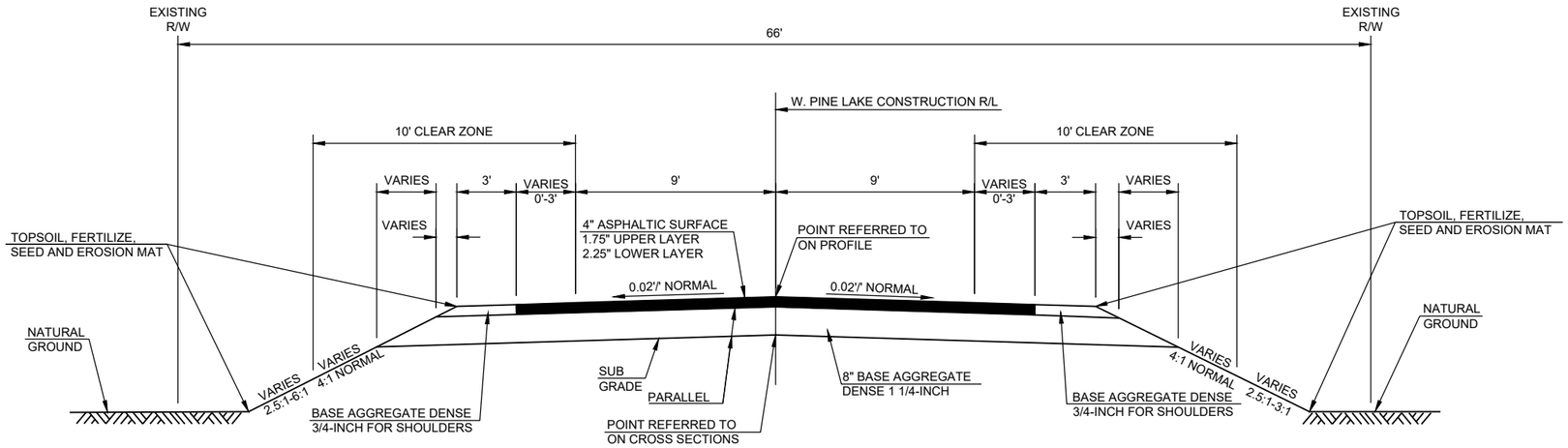
ADT	AVERAGE DAILY TRAFFIC
AC	ASPHALT CEMENT
AGG	AGGREGATE
ASPH	ASPHALT
BM	BENCH MARK
C/L	CENTERLINE
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CR.	CREEK
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
ESALS	EQUIVALENT SINGLE AXIS LOADS
EXIST	EXISTING
FE	FIELD ENTRANCE
HYD	HYDRANT
IP	IRON PIPE OR PIN
L	LENGTH OF CURVE
LC	LONG CHORD OF CURVE
LR	LENGTH OF RUNOFF
MH	MANHOLE
NC	NORMAL CROWN
PT	POINT OF TANGENCY
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PE	PRIVATE ENTRANCE
R	RADIUS
REM	REMOVE
R/L OR RL	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
R.O.	RUNOUT
R/W	RIGHT-OF-WAY
STA	STATION
SE	SUPER ELEVATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
T	TRUCKS
VC	VERTICAL CURVE
W	WELL

2



EXISTING TYPICAL SECTION FOR W. PINE LAKE

STA. 9+50 - STA. 10+80

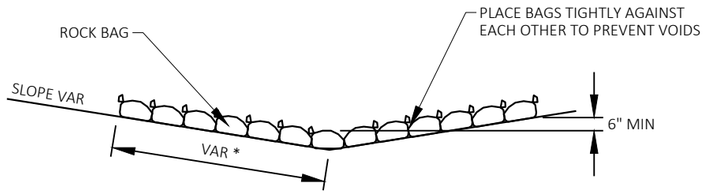


TYPICAL FINISHED SECTION FOR W. PINE LAKE

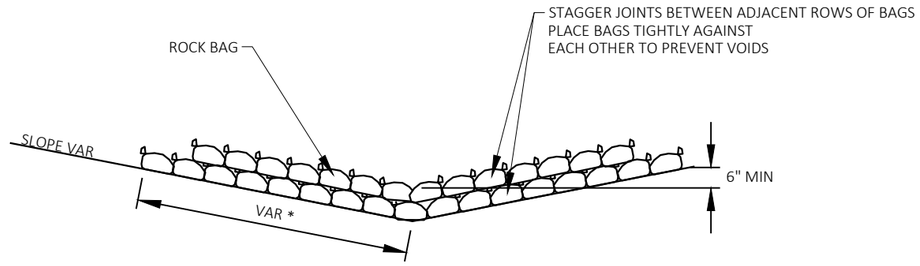
STA. 9+50 - STA. 10+80

PROJECT NO: 9815-00-70	HWY: WEST PINE LAKE ROAD	COUNTY: FOREST	TYPICAL SECTIONS	SHEET 3	E

2

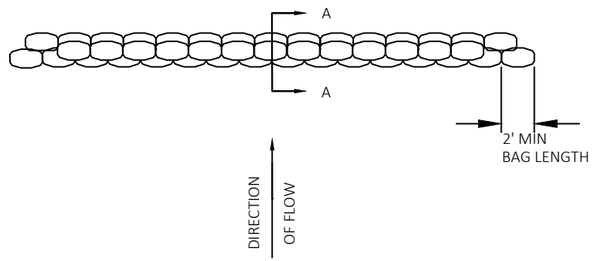


SIDE VIEW (SINGLE LAYER)

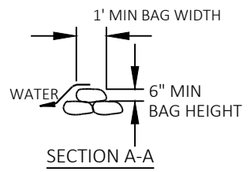


* LENGTH AND NUMBER OF BAGS MAY VARY
DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)



TOP VIEW (MULTIPLE LAYER)



SECTION A-A

ROCK BAGS USED FOR DITCH CHECKS

PINE LAKE

REMOVING SHEET PILING

PROPOSED DAM

REMOVING SHEET PILING

N

EXISTING R/W

RAILROAD R/W

IP

EXISTING R/W

RAILROAD R/W

1633 1634 1635 1636 1637 1638 1639 1640

WEST PINE LAKE RD

9+25 9+50 9+75 10+00 10+25 10+50 10+75

SILT FENCE

MEDIUM RIPRAP

SILT FENCE

WOLF RIVER

EXISTING R/W

LIMITS OF WETLANDS

EXISTING R/W

LIMITS OF WETLANDS

FOR INFORMATIONAL PURPOSES ONLY

(PLANNED PROPOSED DAM CONSTRUCTION TO BE CONSTRUCTED BY OTHERS PRIOR BRIDGE CONTRACT)

PROJECT NO: 9815-00-70	HWY: WEST PINE LAKE ROAD	COUNTY: FOREST	CONSTRUCTION DETAILS	SHEET 5	E

FILE NAME : I:\45\450505 W. PINE LAKE ROAD\C3D\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021002_cd

PLOT DATE : 10/30/2023 2:09 PM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- TURBIDITY BARRIER
- SLOPE INTERCEPT
- SURFACE WATER FLOW
- R — ROCK BAGS
- RIPRAP
- ASPH — ASPHALTIC FLUME

N

PINE LAKE

IP

CABC PE

WOODS

BLDG

BLDG

BLDG

CABC PE

EXISTING R/W

7 WEST PINE LAKE RD.

RAILROAD R/W

8

9

10

11

12

EXISTING R/W

RAILROAD R/W

EXISTING R/W

OH

G

R

ASPH

LIMITS OF WETLANDS

WOODS

GUY

WOODS

GUY

EXISTING R/W

LIMITS OF WETLANDS

LIMITS OF WETLANDS

WOLF RIVER

60" RCCP

60" RCCP

48" RCCP

42" RCCP

NOTE: Q2 ELEVATION = 1634.08

RAILROAD R/W

RAILROAD R/W

PROJECT NO: 9815-00-70	HWY: WEST PINE LAKE ROAD	COUNTY: FOREST	EROSION CONTROL	SHEET 6	E

FILE NAME : I:\45\450505 W. PINE LAKE ROAD\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_ec

PLOT DATE : 10/30/2023 2:09 PM PLOT BY : GARNICA, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

Estimate Of Quantities

9815-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	204.9060.S	Removing (item description) 01. Sheet Piling	EACH	2.000	2.000
0006	205.0100	Excavation Common	CY	106.000	106.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-21-32	EACH	1.000	1.000
0010	213.0100	Finishing Roadway (project) 01. 9815-00-70	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	16.000	16.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	141.000	141.000
0016	450.4000	HMA Cold Weather Paving	TON	14.000	14.000
0018	455.0605	Tack Coat	GAL	15.000	15.000
0020	465.0105	Asphaltic Surface	TON	54.000	54.000
0022	465.0315	Asphaltic Flumes	SY	9.000	9.000
0024	502.0100	Concrete Masonry Bridges	CY	120.000	120.000
0026	502.3200	Protective Surface Treatment	SY	105.000	105.000
0028	502.3210	Pigmented Surface Sealer	SY	55.000	55.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	3,080.000	3,080.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,040.000	15,040.000
0034	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0036	550.0020	Pre-Boring Rock or Consolidated Materials	LF	140.000	140.000
0038	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	140.000	140.000
0040	606.0300	Riprap Heavy	CY	135.000	135.000
0042	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	90.000	90.000
0044	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0046	618.0100	Maintenance and Repair of Haul Roads (project) 01. 9815-00-70	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	624.0100	Water	MGAL	2.000	2.000
0052	625.0100	Topsoil	SY	142.000	142.000
0054	628.1504	Silt Fence	LF	191.000	191.000
0056	628.1520	Silt Fence Maintenance	LF	382.000	382.000
0058	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0060	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0062	628.2008	Erosion Mat Urban Class I Type B	SY	70.000	70.000
0064	628.6005	Turbidity Barriers	SY	137.000	137.000
0066	628.7570	Rock Bags	EACH	40.000	40.000
0068	629.0210	Fertilizer Type B	CWT	0.100	0.100
0070	630.0140	Seeding Mixture No. 40	LB	2.000	2.000
0072	630.0200	Seeding Temporary	LB	3.000	3.000
0074	630.0500	Seed Water	MGAL	4.000	4.000
0076	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0078	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0080	638.2602	Removing Signs Type II	EACH	10.000	10.000
0082	638.3000	Removing Small Sign Supports	EACH	12.000	12.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0420	Traffic Control Barricades Type III	DAY	1,152.000	1,152.000
0088	643.0705	Traffic Control Warning Lights Type A	DAY	1,792.000	1,792.000
0090	643.0900	Traffic Control Signs	DAY	896.000	896.000
0092	643.5000	Traffic Control	EACH	1.000	1.000
0094	645.0111	Geotextile Type DF Schedule A	SY	80.000	80.000
0096	645.0120	Geotextile Type HR	SY	255.000	255.000
0098	650.4500	Construction Staking Subgrade	LF	98.000	98.000
0100	650.5000	Construction Staking Base	LF	98.000	98.000

Estimate Of Quantities

9815-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	204.9060.S	Removing (item description) 01. Sheet Piling	EACH	2.000	2.000
0006	205.0100	Excavation Common	CY	106.000	106.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-21-32	EACH	1.000	1.000
0010	213.0100	Finishing Roadway (project) 01. 9815-00-70	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	16.000	16.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	141.000	141.000
0016	450.4000	HMA Cold Weather Paving	TON	14.000	14.000
0018	455.0605	Tack Coat	GAL	15.000	15.000
0020	465.0105	Asphaltic Surface	TON	54.000	54.000
0022	465.0315	Asphaltic Flumes	SY	9.000	9.000
0024	502.0100	Concrete Masonry Bridges	CY	120.000	120.000
0026	502.3200	Protective Surface Treatment	SY	105.000	105.000
0028	502.3210	Pigmented Surface Sealer	SY	55.000	55.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	3,080.000	3,080.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,040.000	15,040.000
0034	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0036	550.0020	Pre-Boring Rock or Consolidated Materials	LF	140.000	140.000
0038	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	140.000	140.000
0040	606.0300	Riprap Heavy	CY	135.000	135.000
0042	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	90.000	90.000
0044	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0046	618.0100	Maintenance and Repair of Haul Roads (project) 01. 9815-00-70	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	624.0100	Water	MGAL	2.000	2.000
0052	625.0100	Topsoil	SY	142.000	142.000
0054	628.1504	Silt Fence	LF	191.000	191.000
0056	628.1520	Silt Fence Maintenance	LF	382.000	382.000
0058	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0060	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0062	628.2008	Erosion Mat Urban Class I Type B	SY	70.000	70.000
0064	628.6005	Turbidity Barriers	SY	137.000	137.000
0066	628.7570	Rock Bags	EACH	40.000	40.000
0068	629.0210	Fertilizer Type B	CWT	0.100	0.100
0070	630.0140	Seeding Mixture No. 40	LB	2.000	2.000
0072	630.0200	Seeding Temporary	LB	3.000	3.000
0074	630.0500	Seed Water	MGAL	4.000	4.000
0076	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0078	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0080	638.2602	Removing Signs Type II	EACH	10.000	10.000
0082	638.3000	Removing Small Sign Supports	EACH	12.000	12.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0420	Traffic Control Barricades Type III	DAY	1,152.000	1,152.000
0088	643.0705	Traffic Control Warning Lights Type A	DAY	1,792.000	1,792.000
0090	643.0900	Traffic Control Signs	DAY	896.000	896.000
0092	643.5000	Traffic Control	EACH	1.000	1.000
0094	645.0111	Geotextile Type DF Schedule A	SY	80.000	80.000
0096	645.0120	Geotextile Type HR	SY	255.000	255.000
0098	650.4500	Construction Staking Subgrade	LF	98.000	98.000
0100	650.5000	Construction Staking Base	LF	98.000	98.000

Estimate Of Quantities

9815-00-70

Line	Item	Item Description	Unit	Total	Qty
0102	650.6501	Construction Staking Structure Layout (structure) 01. B-21-32	EACH	1.000	1.000
0104	650.9911	Construction Staking Supplemental Control (project) 01. 9815-00-70	EACH	1.000	1.000
0106	650.9920	Construction Staking Slope Stakes	LF	98.000	98.000
0108	690.0150	Sawing Asphalt	LF	37.000	37.000
0110	715.0502	Incentive Strength Concrete Structures	DOL	720.000	720.000
0112	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0114	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0116	SPV.0060	Special 01. Retrofit PVC Waterstop	EACH	2.000	2.000
0118	SPV.0060	Special 02. Railroad Settlement Monitoring	EACH	1.000	1.000
0120	SPV.0195	Special 01. Backfill Structure Special	TON	240.000	240.000

LANDSCAPING

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
9+50	-	9+75	WEST PINE LAKE RD, LT & RT	33	0.02	0.6	0.9	0.7
10+15	-	10+80	WEST PINE LAKE RD, LT & RT	23	0.01	0.5	0.6	0.5
			WASTE SITE	72	0.02	0.5	0.6	2.0
			UNDISTRIBUTED	14	0.05	0.4	0.9	0.8
			TOTALS	142	0.10	2.0	3.0	4.0

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
WEST PINE LAKE RD, LT & RT	5	3
TOTALS	5	3

SILT FENCE

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
9+50	-	9+63	WEST PINE LAKE RD, LT	21	42
9+50	-	9+73	WEST PINE LAKE RD, RT	41	82
10+19	-	10+90	WEST PINE LAKE RD, RT	72	144
10+74	-	10+90	WEST PINE LAKE RD, LT	19	38
			UNDISTRIBUTED	38	76
			TOTALS	191	382

EROSION MAT

STATION	TO	STATION	LOCATION	628.2008 EROSION MAT URBAN CLASS I TYPE B SY
9+50	-	9+75	WEST PINE LAKE RD	33
10+15	-	10+80	WEST PINE LAKE RD	23
			UNDISTRIBUTED	14
			TOTALS	70

TURBIDITY BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	628.6005 TURBIDITY BARRIERS SY
0010	9+63	-	9+94	WEST PINE LAKE RD	58
0010	10+06	-	10+74	WEST PINE LAKE RD	79
				TOTAL	137

ROCK BAGS

STATION	LOCATION	628.7570 ROCK BAGS EACH
9+65	WEST PINE LAKE RD, LT	8
9+75	WEST PINE LAKE RD, RT	8
10+30	WEST PINE LAKE RD, RT	8
10+40	WEST PINE LAKE RD, LT	8
	UNDISTRIBUTED	8
	TOTAL 0010	40

GORY 0010 UNLESS STATED OTHERWISE

3

3

REMOVING SIGNS

STATION	LOCATION	DESCRIPTION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
	WEST PINE LAKE RD, RT	"10 TON BRIDGE 2.8 MILES AHEAD"	1	2	SALVAGE "SNOWMOBILE" & "ATV 25MPH" SIGNS
	WEST PINE LAKE RD, RT	ONE LANE BRIDGE	1	1	SALVAGE WOOD SIGN
9+75	WEST PINE LAKE RD, RT	"WEIGHT POSTED 10 TONS"	1	1	
9+80	WEST PINE LAKE RD, LT	OBJECT MARKER	1	1	
9+80	WEST PINE LAKE RD, RT	OBJECT MARKER	1	1	
10+20	WEST PINE LAKE RD, LT	OBJECT MARKER	1	1	
10+20	WEST PINE LAKE RD, RT	OBJECT MARKER	1	1	
	WEST PINE LAKE RD, RT	"WEIGHT POSTED 10 TONS"	1	1	
	WEST PINE LAKE RD, RT	ONE LANE BRIDGE	1	1	SALVAGE "SLOW" SIGN
	WEST PINE LAKE RD, RT	"10 TON BRIDGE 3.1 MILES AHEAD"	1	2	SALVAGE "ATV 25MPH" SIGN
	TOTALS		10	12	

SIGNS TYPE II AND POSTS

QUADRANT	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F W5-52L SF	637.2230 SIGNS TYPE II REFLECTIVE F W5-52R SF
SW	WEST PINE LAKE RD	1	-	3
NW	WEST PINE LAKE RD	1	3	-
SE	WEST PINE LAKE RD	1	3	-
NE	WEST PINE LAKE RD	1	-	3
	TOTALS	4	12	

SAWING ASPHALT

STATION	LOCATION	690.0150 SAWING ASPHALT LF
9+50	WEST PINE LAKE RD	18
10+80	WEST PINE LAKE RD	19
	TOTAL	37

GORY 0010 UNLESS STATED OTHERWISE

TRAFFIC CONTROL

LOCATION	APPROX. SERVICE PERIOD	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. IN SERVICE	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. IN SERVICE	643.0705 DAY	643.0900 TRAFFIC CONTROL SIGNS NO. IN SERVICE	643.0900 DAY	REMARKS
WEST PINE LAKE RD& YELLOW BIRCH RD	64	2	128	4	256	3	192	REFER TO SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C"
WEST PINE LAKE RD (WEST PROJECT LIMITS)	64	7	448	10	640	4	256	REFER TO SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C & D"
WEST PINE LAKE RD (EAST PROJECT LIMITS)	64	7	448	10	640	4	256	REFER TO SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C & D"
WEST PINE LAKE RD & MITCHELL PLOT RD	64	2	128	4	256	3	192	REFER TO SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C"
TOTALS			1,152		1,792		896	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-21-32) EACH	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (9815-00-70) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	9+50	-	9+84	WEST PINE LAKE RD, LT & RT	34	34	-	-	34
0010	10+16	-	10+80	WEST PINE LAKE RD, LT & RT	64	64	-	-	64
0010	PROJECT			WEST PINE LAKE RD, LT & RT	-	-	-	1	-
				0010 TOTALS	98	98	0	1	98
0020	STRUCTURE			B-21-32	-	-	1	-	-
				0020 TOTALS	0	0	1	0	0
				TOTALS	98	98	1	1	98

GORY 0010 UNLESS STATED OTHERWISE

Estimate Of Quantities

9815-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	204.9060.S	Removing (item description) 01. Sheet Piling	EACH	2.000	2.000
0006	205.0100	Excavation Common	CY	106.000	106.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-21-32	EACH	1.000	1.000
0010	213.0100	Finishing Roadway (project) 01. 9815-00-70	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	16.000	16.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	141.000	141.000
0016	450.4000	HMA Cold Weather Paving	TON	14.000	14.000
0018	455.0605	Tack Coat	GAL	15.000	15.000
0020	465.0105	Asphaltic Surface	TON	54.000	54.000
0022	465.0315	Asphaltic Flumes	SY	9.000	9.000
0024	502.0100	Concrete Masonry Bridges	CY	120.000	120.000
0026	502.3200	Protective Surface Treatment	SY	105.000	105.000
0028	502.3210	Pigmented Surface Sealer	SY	55.000	55.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	3,080.000	3,080.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,040.000	15,040.000
0034	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0036	550.0020	Pre-Boring Rock or Consolidated Materials	LF	140.000	140.000
0038	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	140.000	140.000
0040	606.0300	Riprap Heavy	CY	135.000	135.000
0042	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	90.000	90.000
0044	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0046	618.0100	Maintenance and Repair of Haul Roads (project) 01. 9815-00-70	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	624.0100	Water	MGAL	2.000	2.000
0052	625.0100	Topsoil	SY	142.000	142.000
0054	628.1504	Silt Fence	LF	191.000	191.000
0056	628.1520	Silt Fence Maintenance	LF	382.000	382.000
0058	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0060	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0062	628.2008	Erosion Mat Urban Class I Type B	SY	70.000	70.000
0064	628.6005	Turbidity Barriers	SY	137.000	137.000
0066	628.7570	Rock Bags	EACH	40.000	40.000
0068	629.0210	Fertilizer Type B	CWT	0.100	0.100
0070	630.0140	Seeding Mixture No. 40	LB	2.000	2.000
0072	630.0200	Seeding Temporary	LB	3.000	3.000
0074	630.0500	Seed Water	MGAL	4.000	4.000
0076	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0078	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0080	638.2602	Removing Signs Type II	EACH	10.000	10.000
0082	638.3000	Removing Small Sign Supports	EACH	12.000	12.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0420	Traffic Control Barricades Type III	DAY	1,152.000	1,152.000
0088	643.0705	Traffic Control Warning Lights Type A	DAY	1,792.000	1,792.000
0090	643.0900	Traffic Control Signs	DAY	896.000	896.000
0092	643.5000	Traffic Control	EACH	1.000	1.000
0094	645.0111	Geotextile Type DF Schedule A	SY	80.000	80.000
0096	645.0120	Geotextile Type HR	SY	255.000	255.000
0098	650.4500	Construction Staking Subgrade	LF	98.000	98.000
0100	650.5000	Construction Staking Base	LF	98.000	98.000

Estimate Of Quantities

9815-00-70

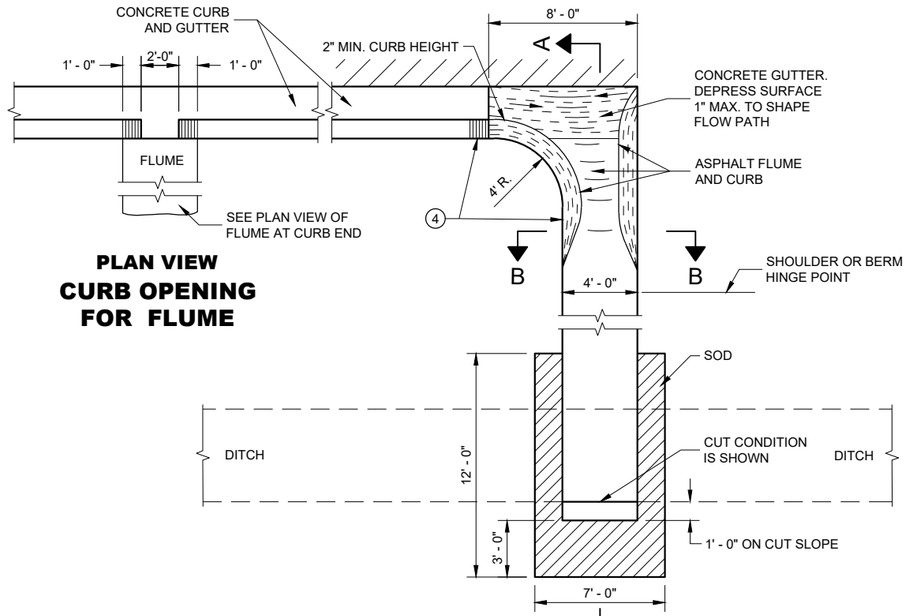
Line	Item	Item Description	Unit	Total	Qty
0102	650.6501	Construction Staking Structure Layout (structure) 01. B-21-32	EACH	1.000	1.000
0104	650.9911	Construction Staking Supplemental Control (project) 01. 9815-00-70	EACH	1.000	1.000
0106	650.9920	Construction Staking Slope Stakes	LF	98.000	98.000
0108	690.0150	Sawing Asphalt	LF	37.000	37.000
0110	715.0502	Incentive Strength Concrete Structures	DOL	720.000	720.000
0112	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0114	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0116	SPV.0060	Special 01. Retrofit PVC Waterstop	EACH	2.000	2.000
0118	SPV.0060	Special 02. Railroad Settlement Monitoring	EACH	1.000	1.000
0120	SPV.0195	Special 01. Backfill Structure Special	TON	240.000	240.000

Standard Detail Drawing List

08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
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
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

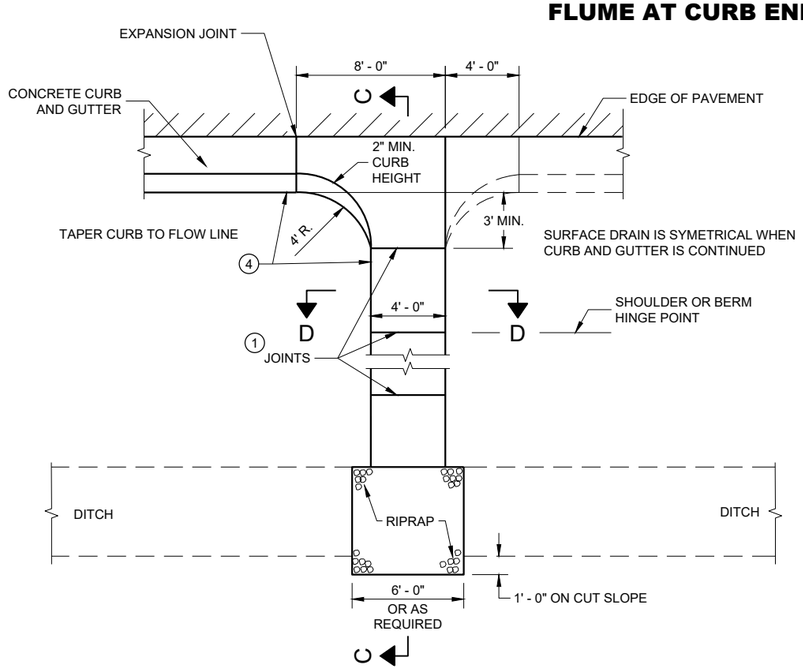
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



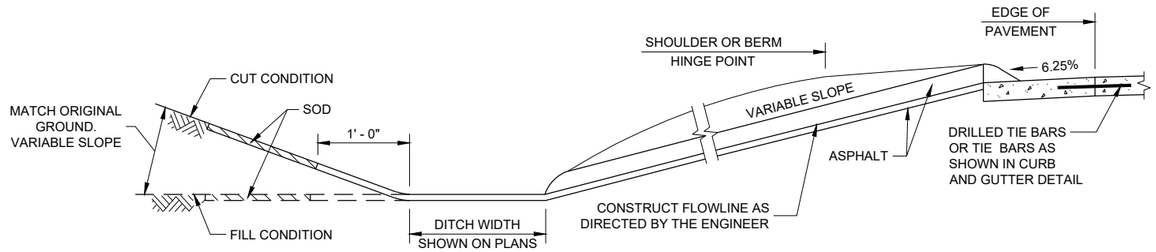
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

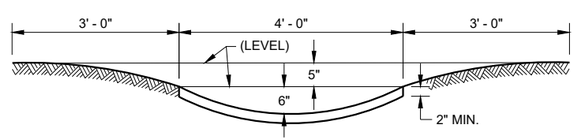
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

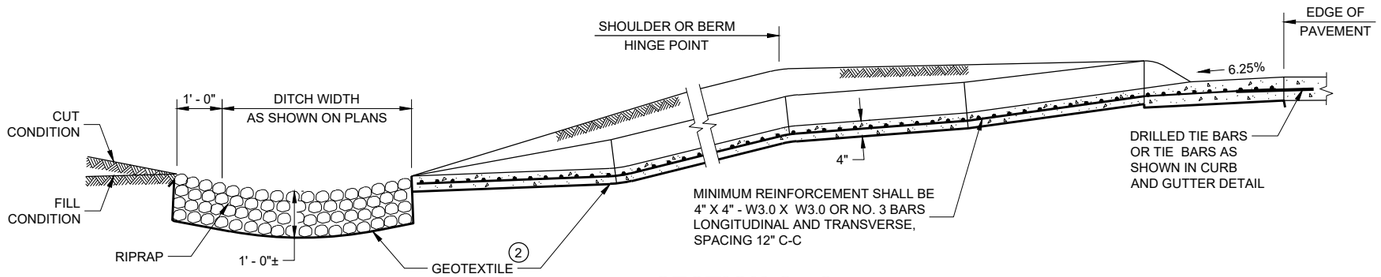
1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



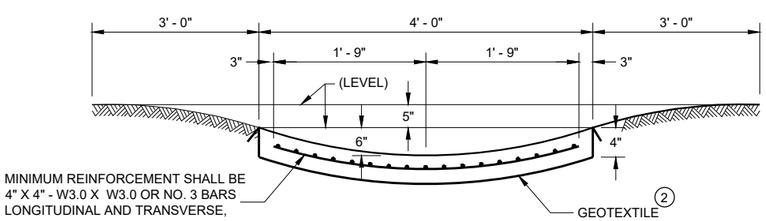
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

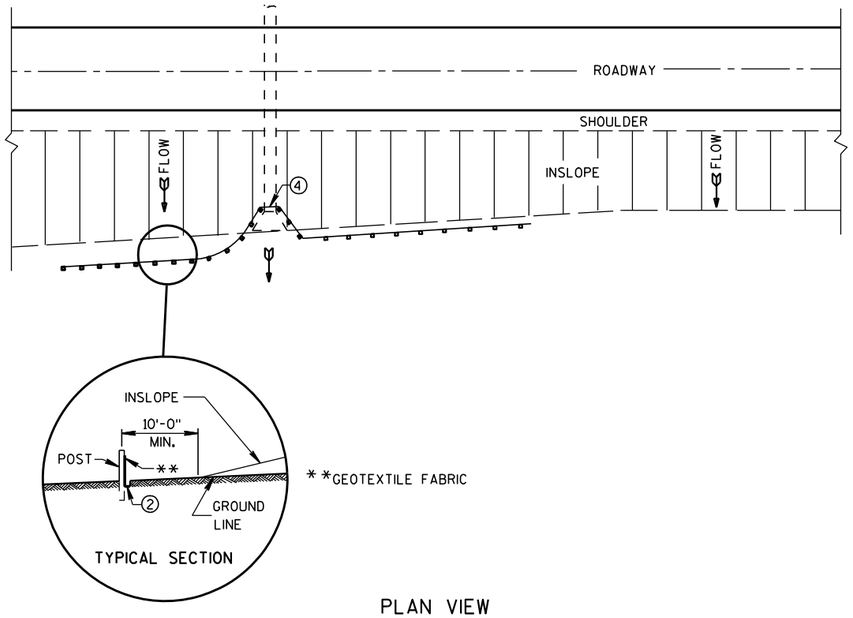
APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

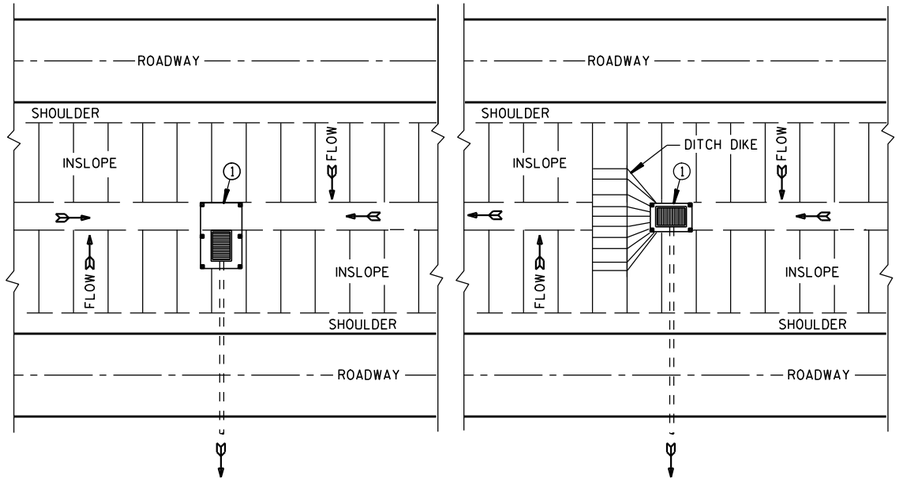
6

SDD 08D04 - 07



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

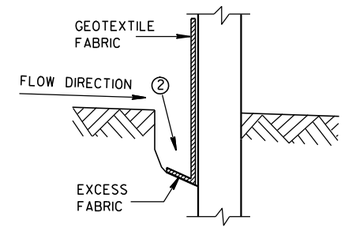
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

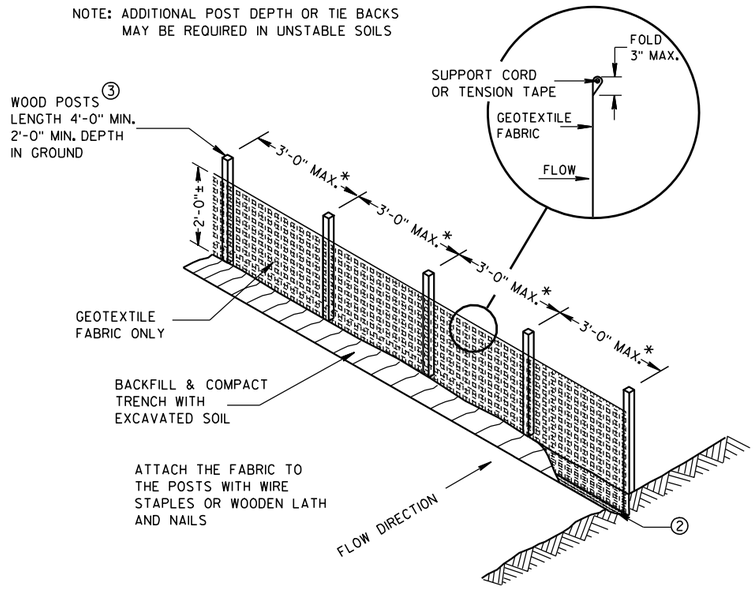
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

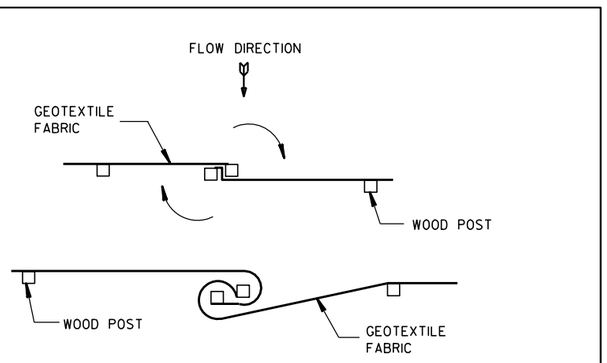
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



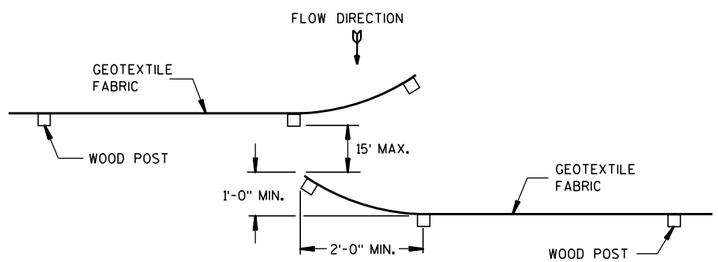
TRENCH DETAIL



SILT FENCE

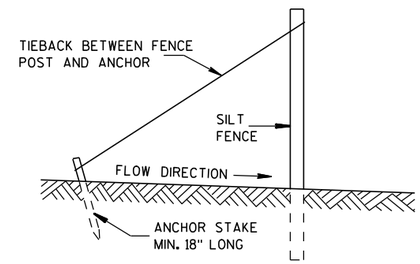


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

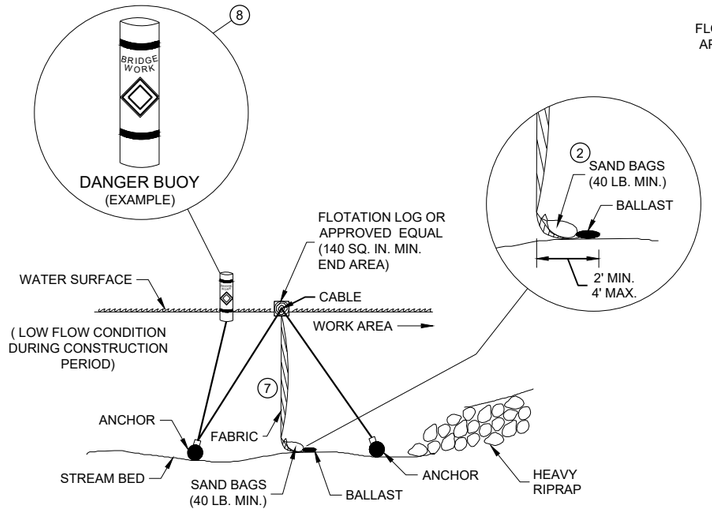
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

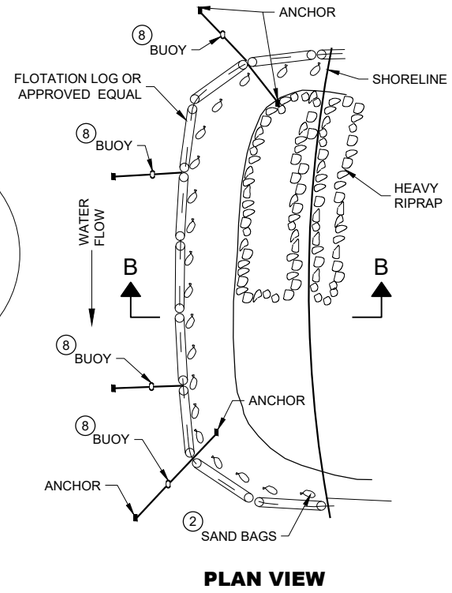
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

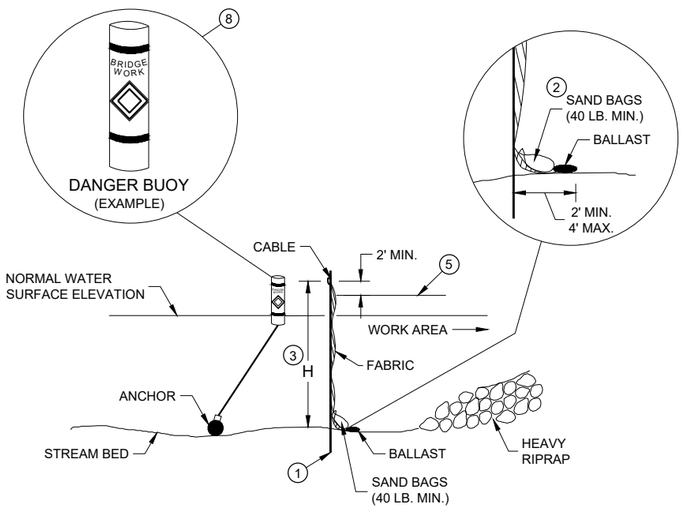


SECTION B - B

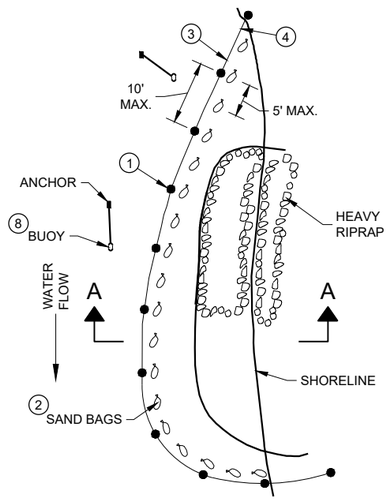


PLAN VIEW

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.

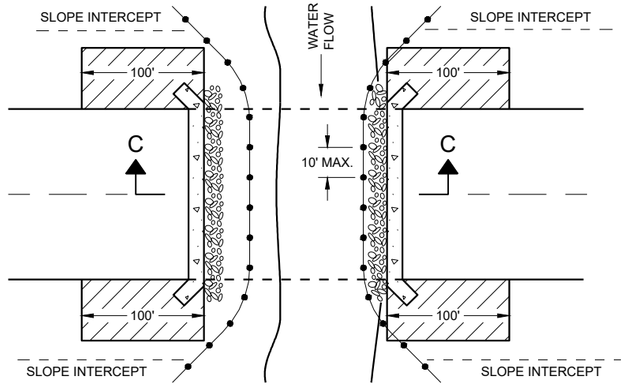
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(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.

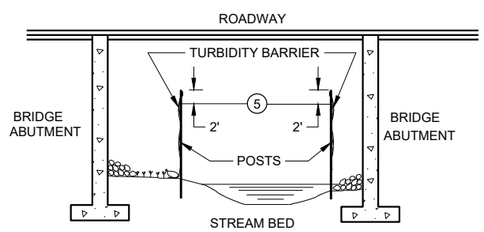
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(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 DEVELOI
ENGINEER

FHWA

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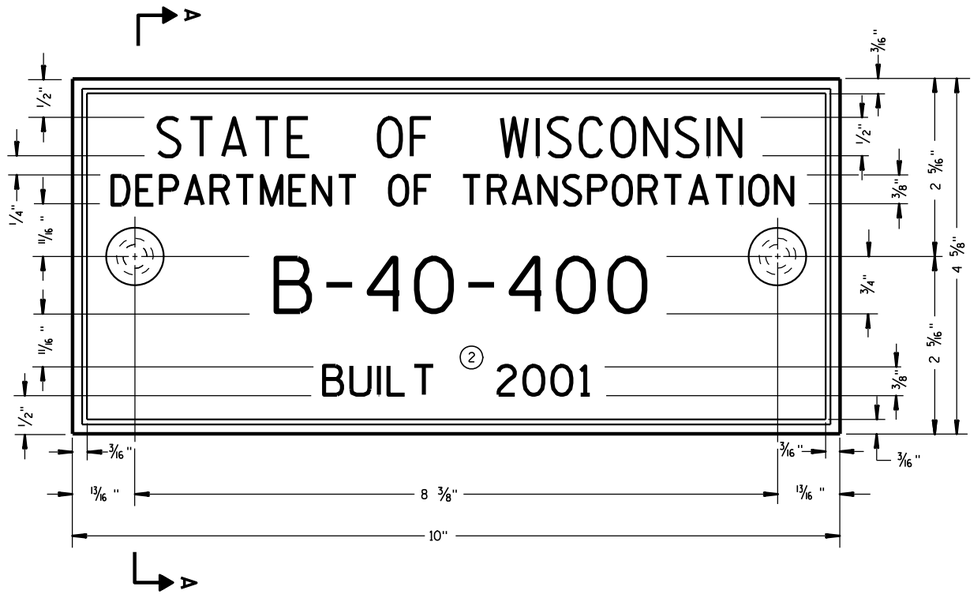
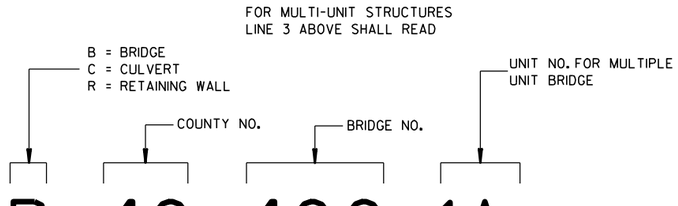
SDD 08E11 - 02



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

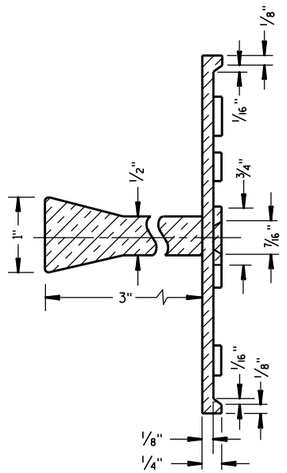
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

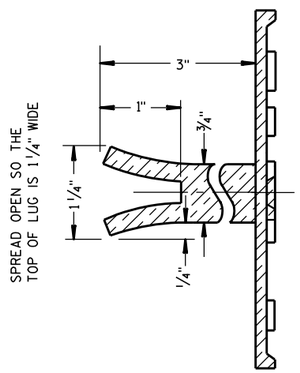
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

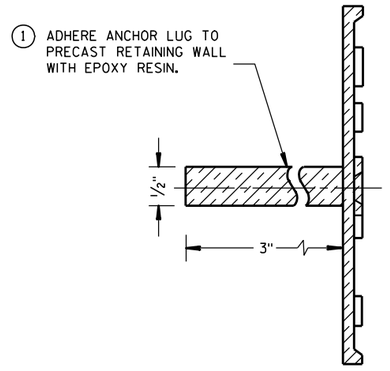
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

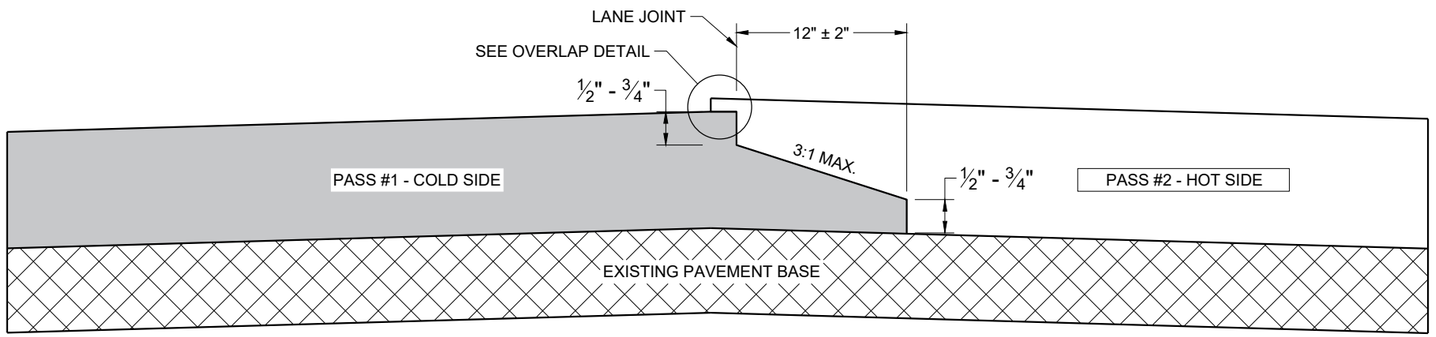
APPROVED

3/26/10 DATE — /S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

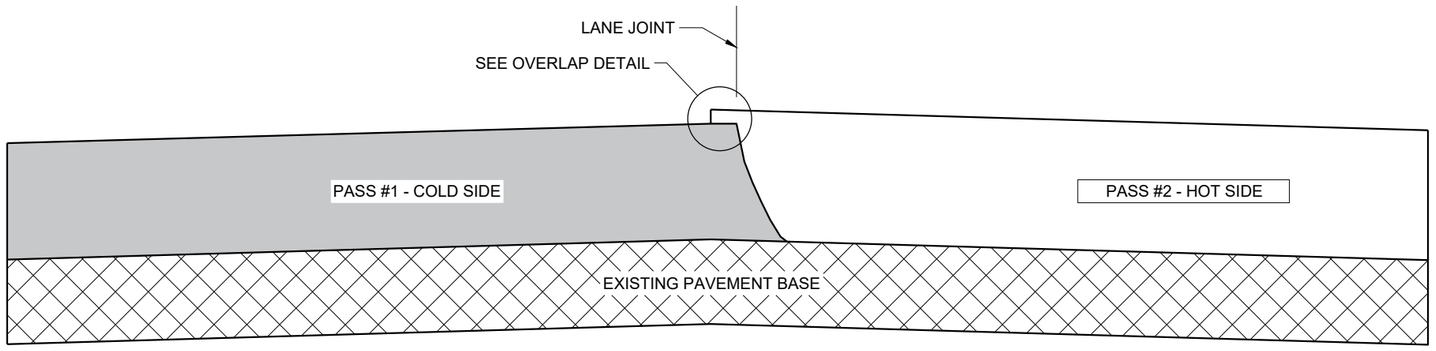
FHWA

6

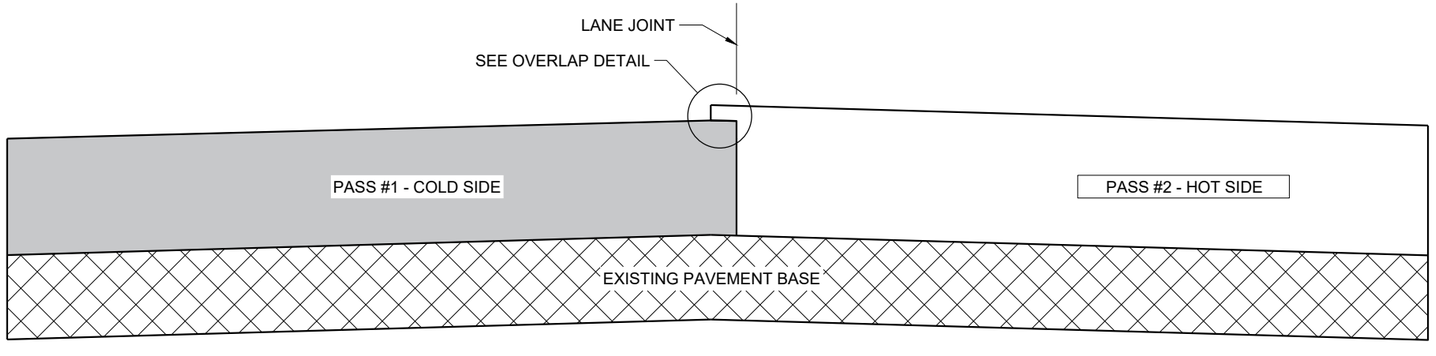
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

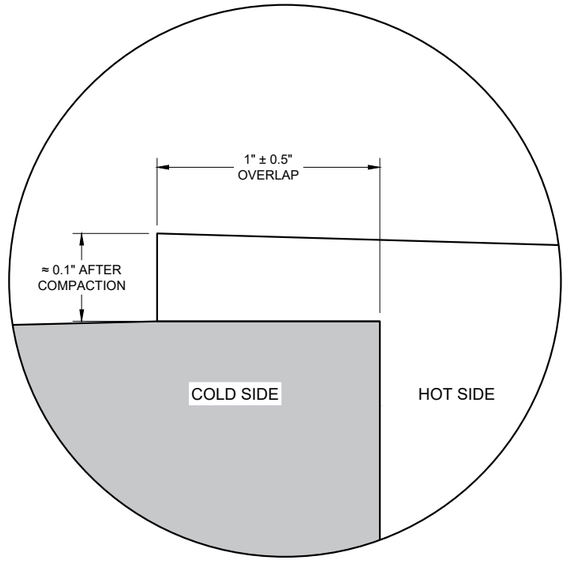
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

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SDD 13C19 - 03

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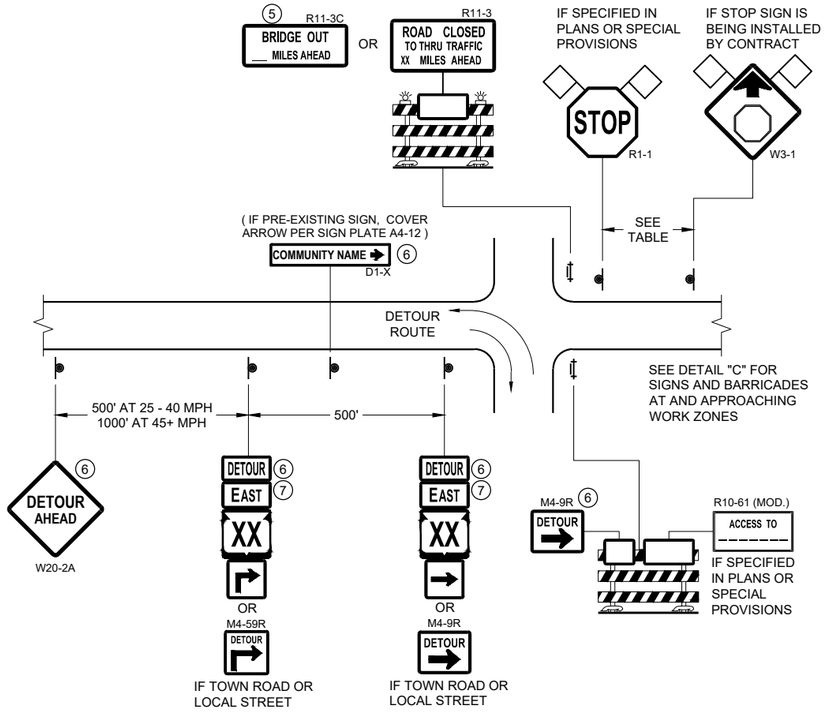
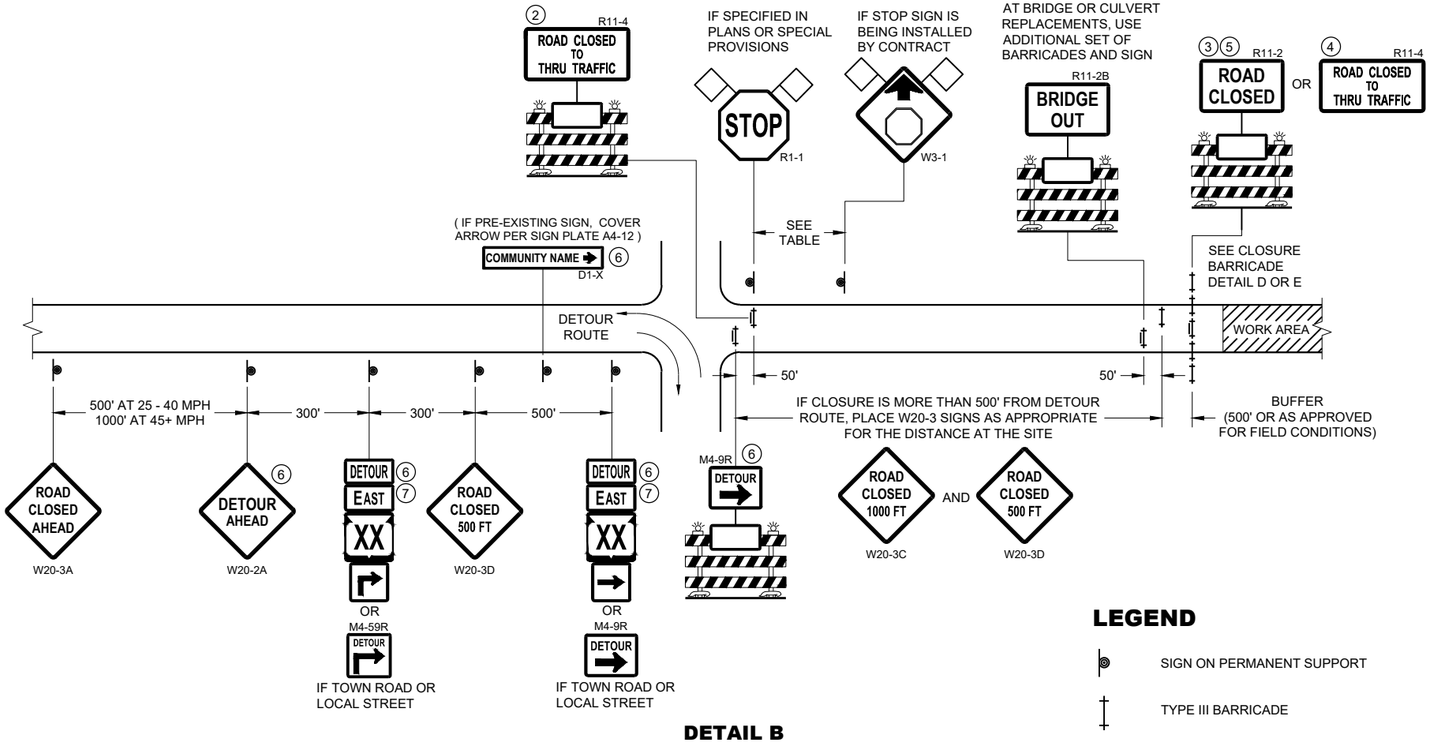
SDD 13C19 - 03



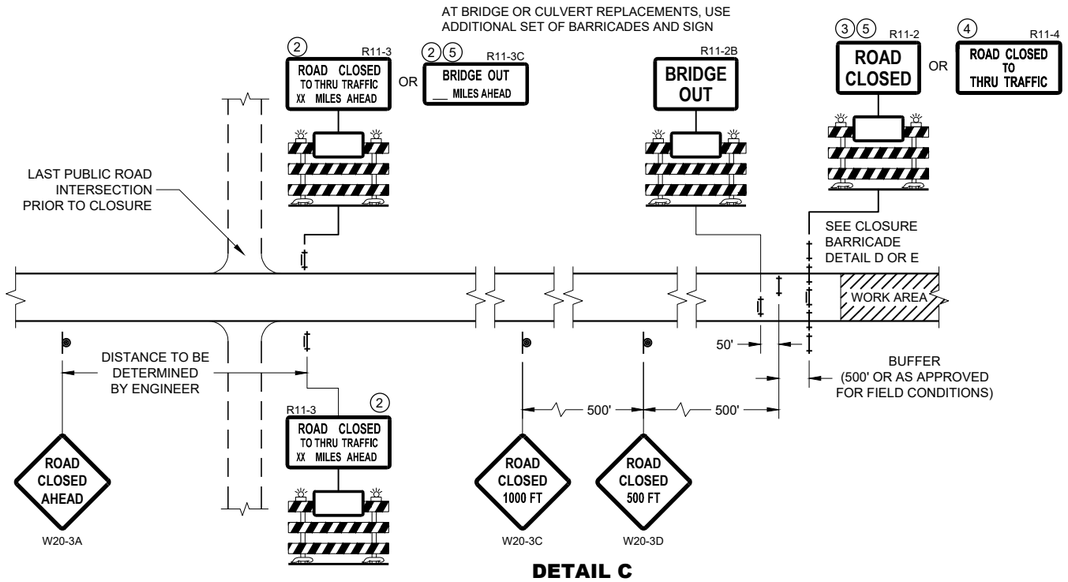
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

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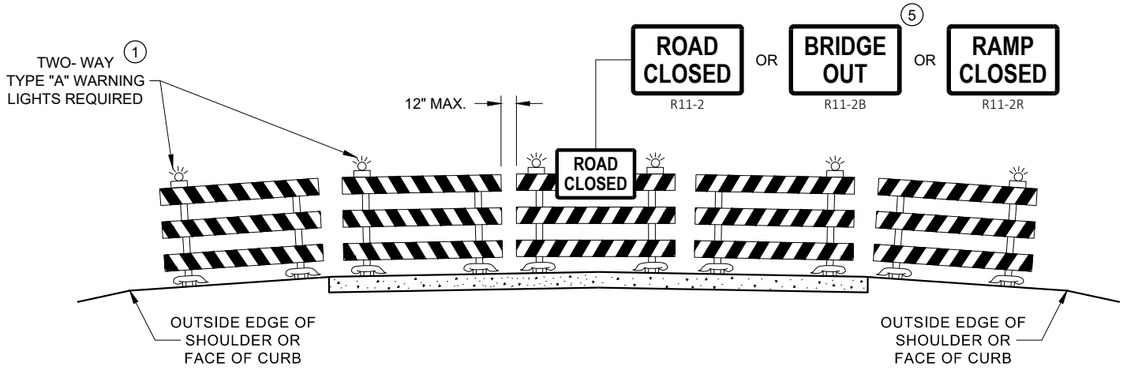
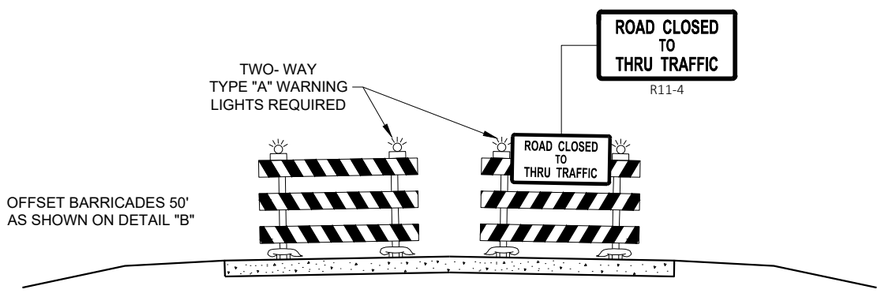
SDD 15C02 - 09a

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 ENGINEER
FHWA

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SDD 15C02 - 09b

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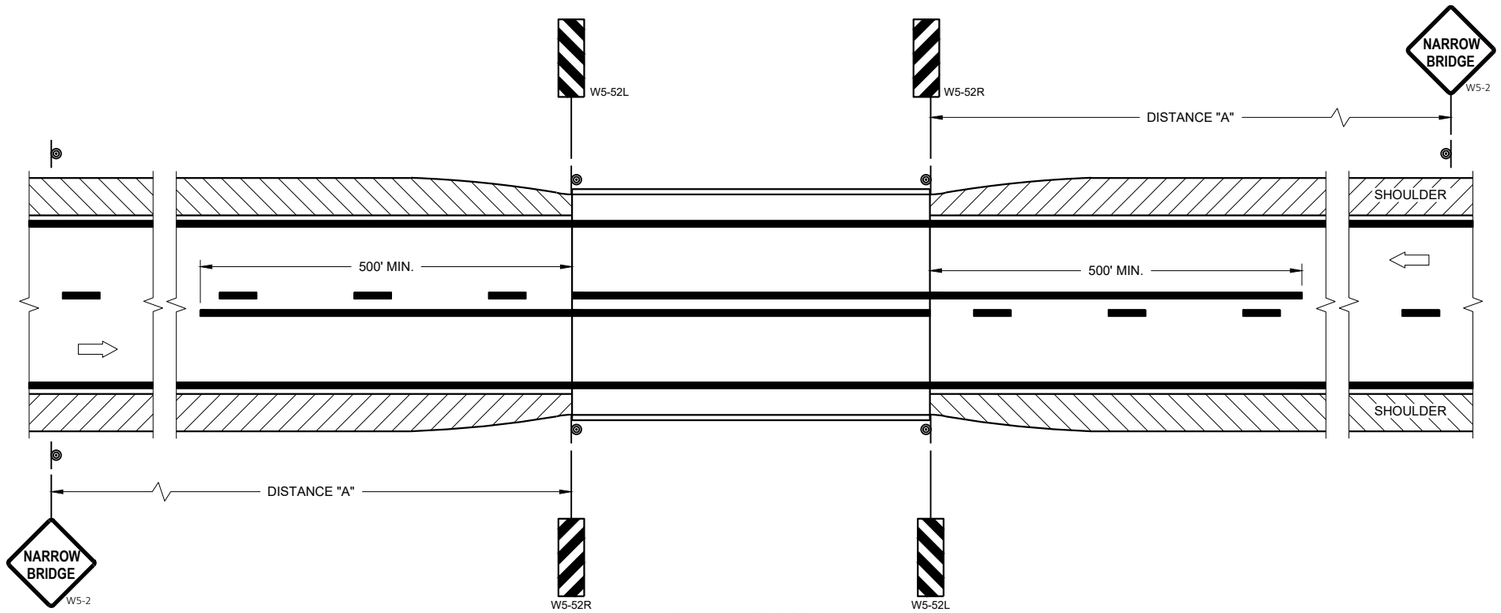
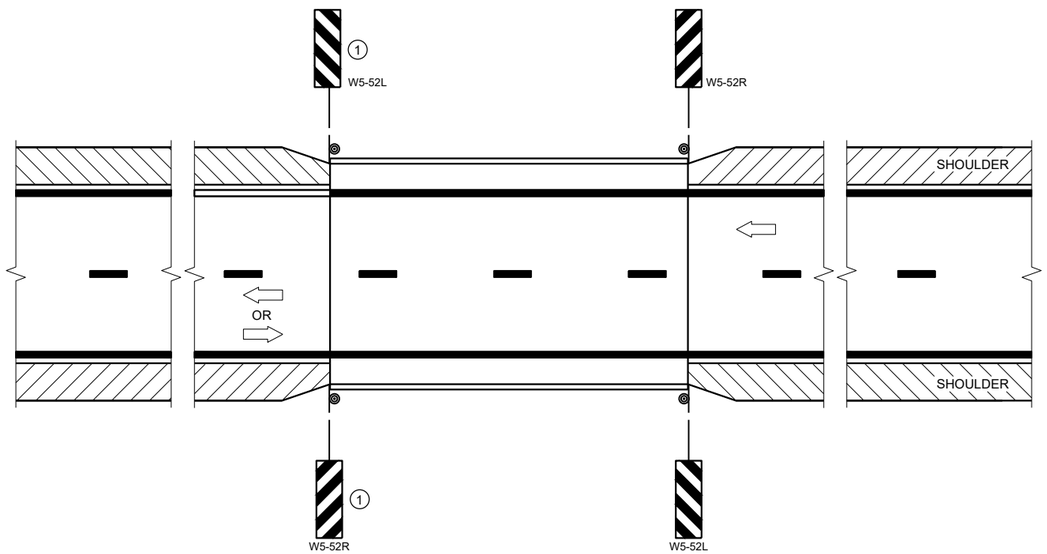
SDD 15C02 - 09b



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

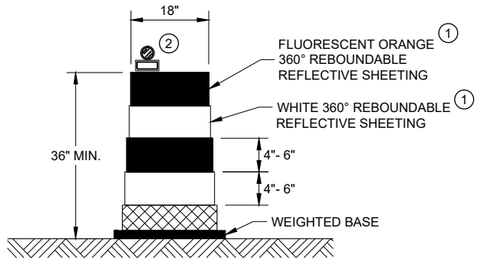
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER
FHWA

6
SDD 15C06-12

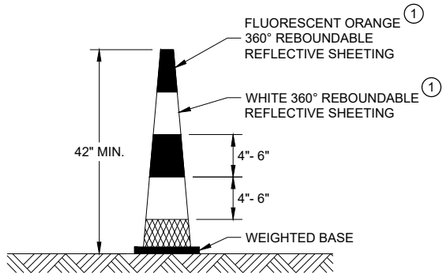
GENERAL NOTES

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



DRUM

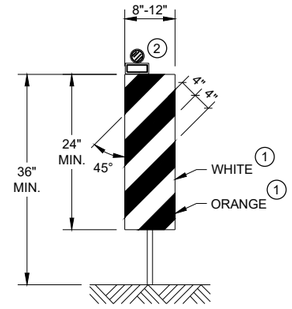
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

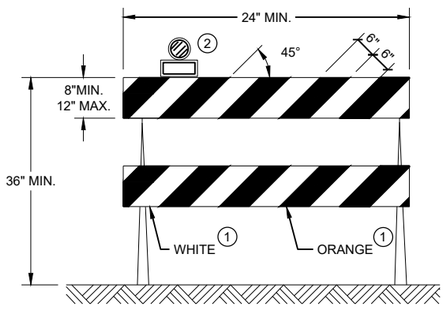
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



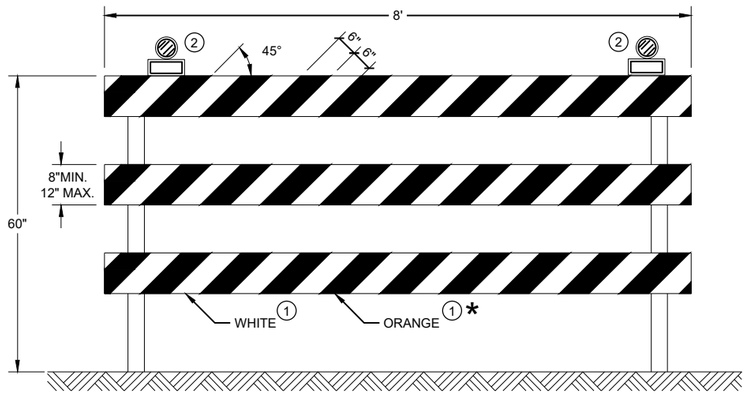
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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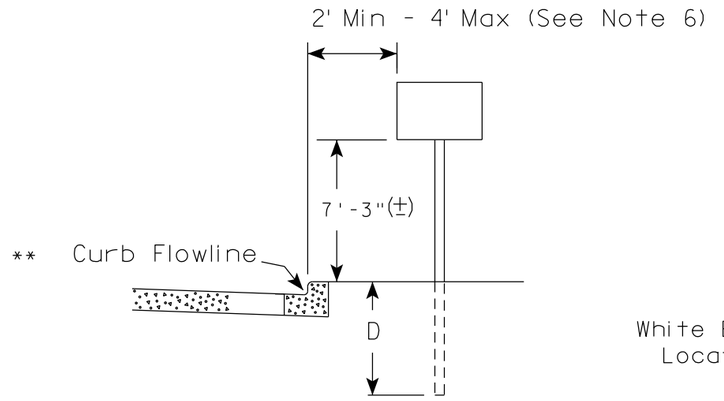
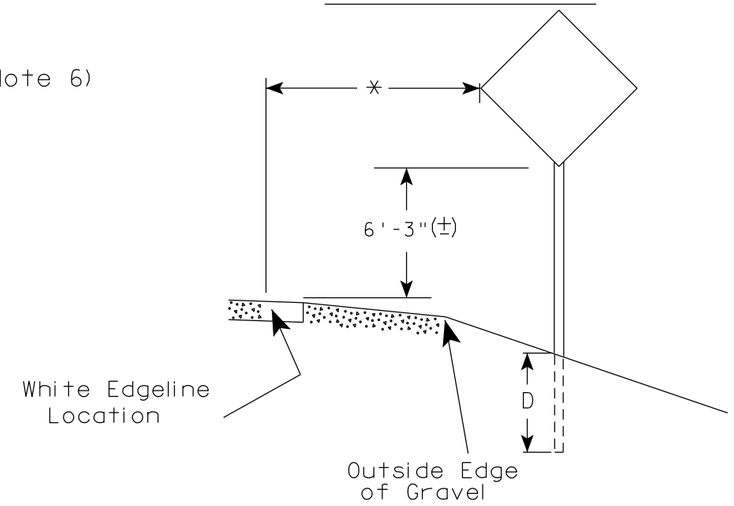
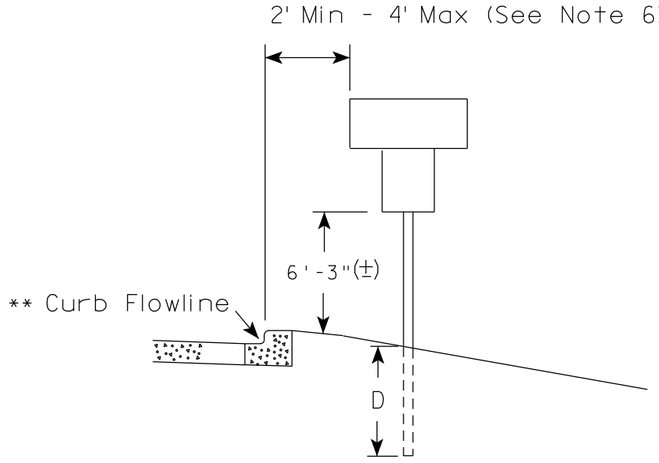
SDD 15C11 - 10b
SDD 15C11 - 10b

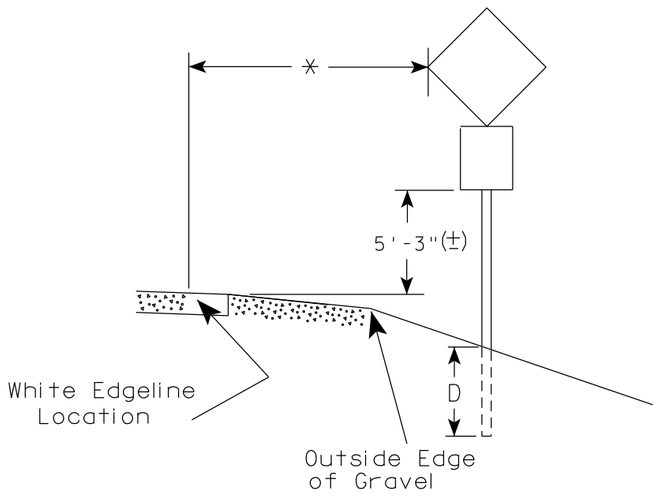
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

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

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

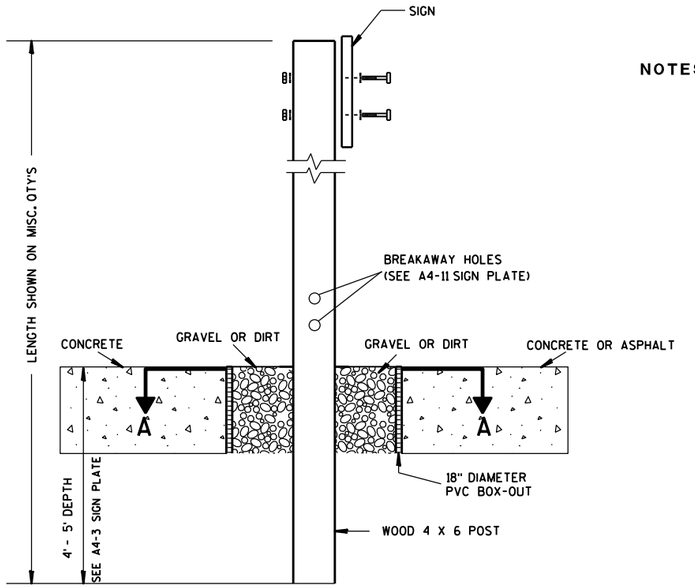
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

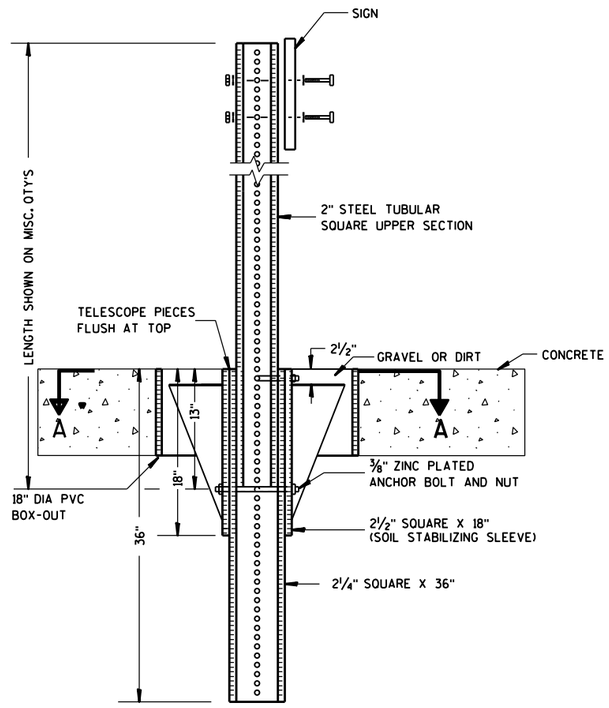
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 24	E



ELEVATION VIEW

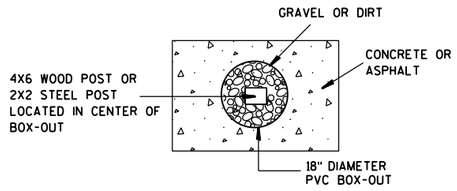
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

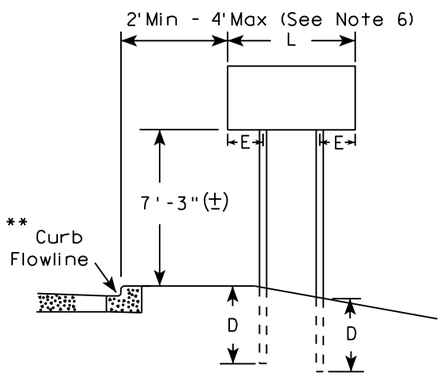
APPROVED Matthew R Rauch
for State Traffic Engineer

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

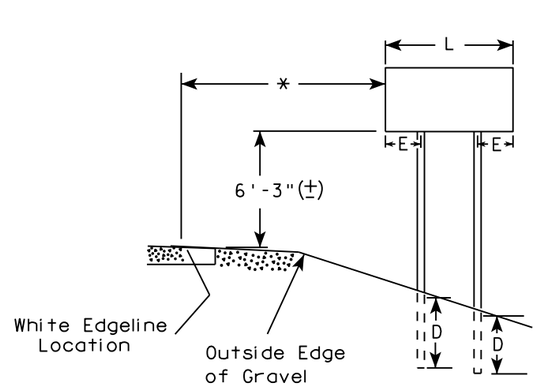
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

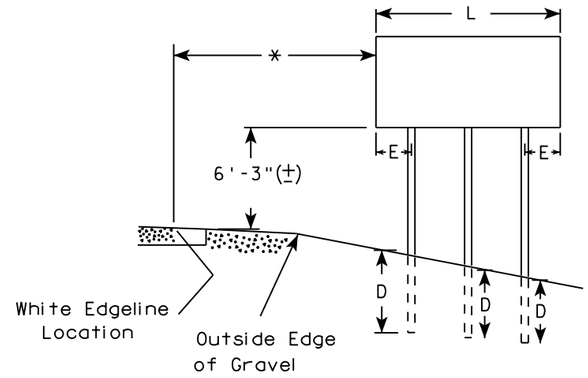
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

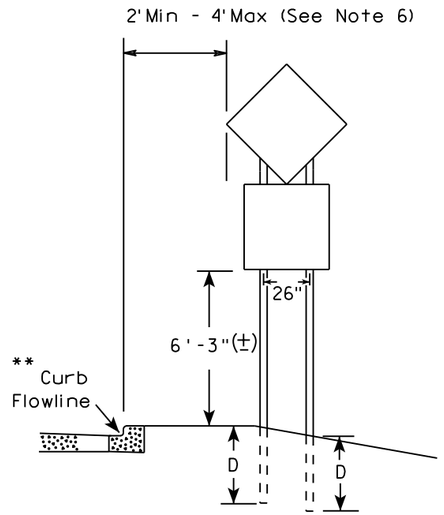
URBAN AREA



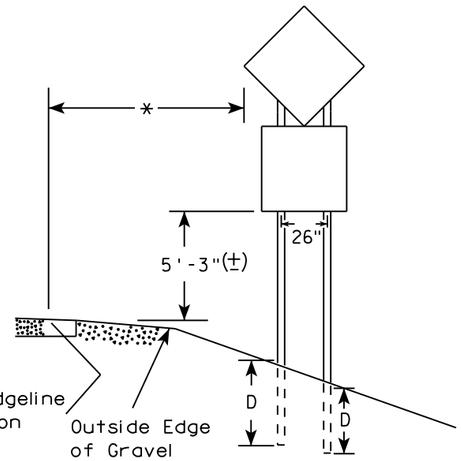
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

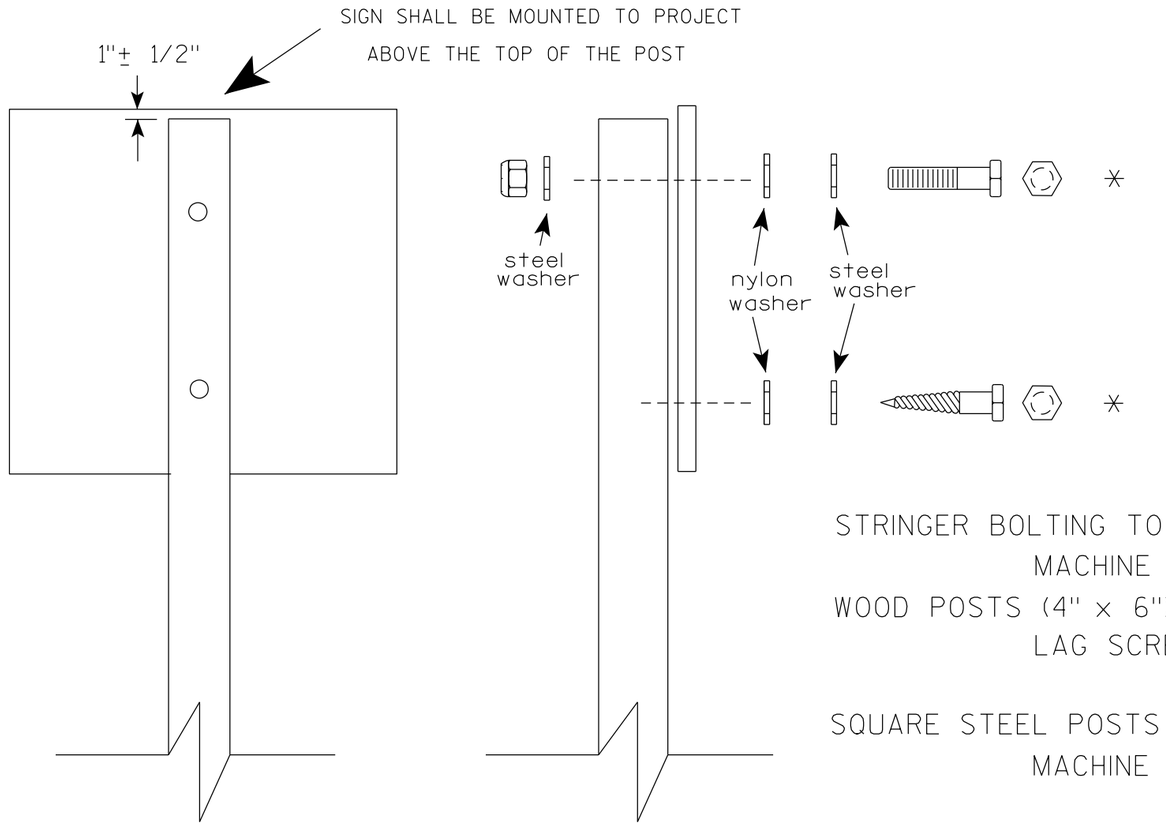
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 26	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

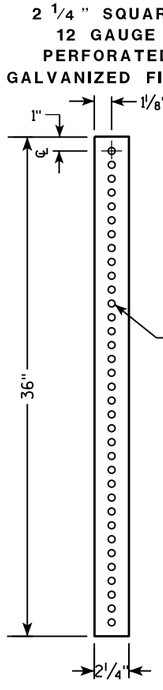
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

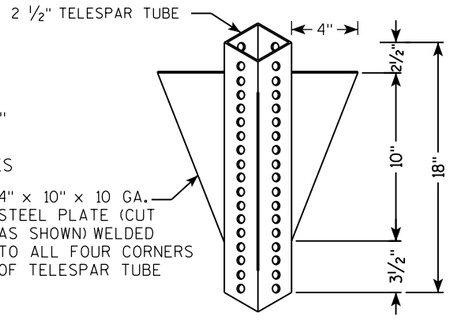
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

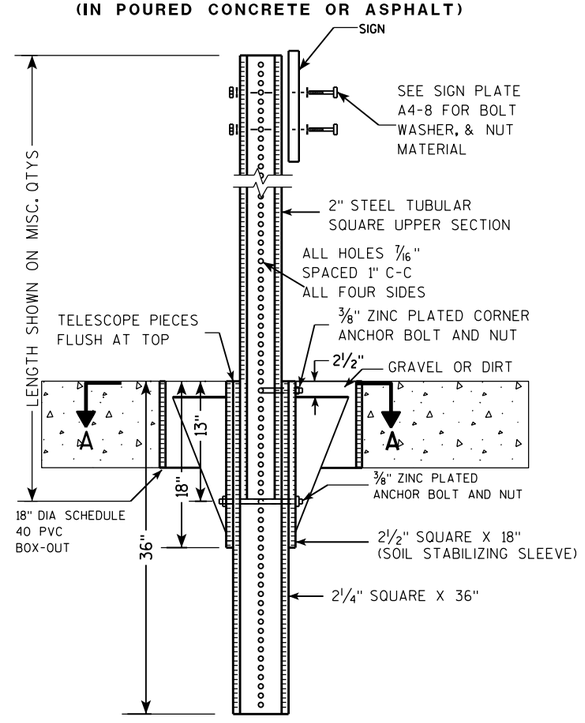
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



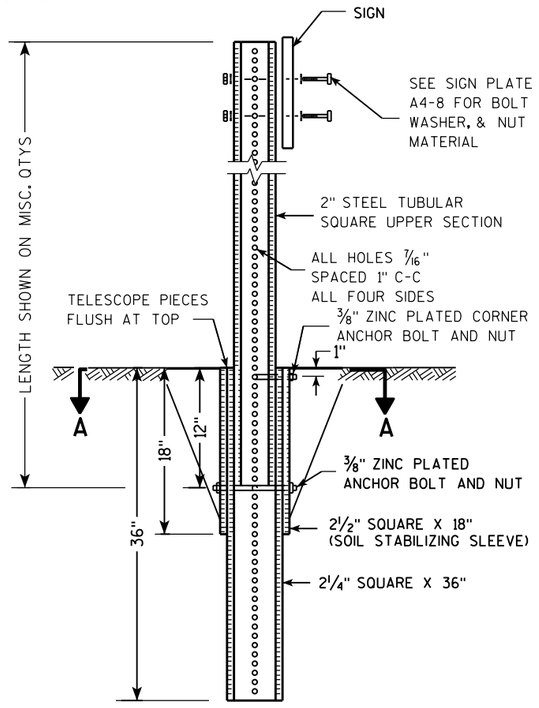
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

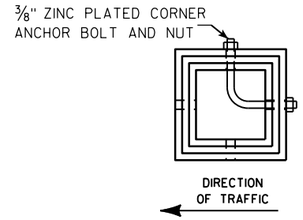


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

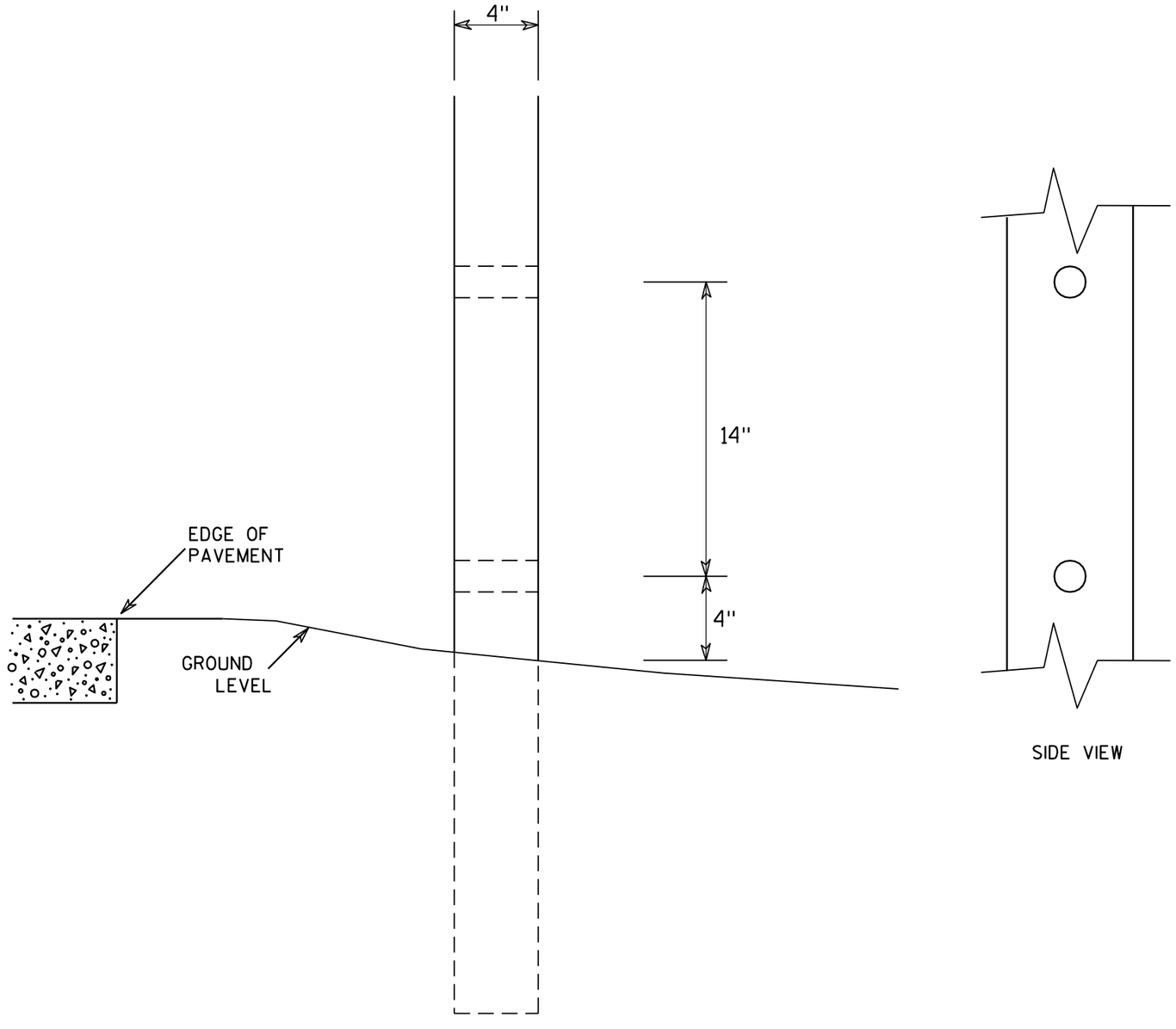
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

7

7

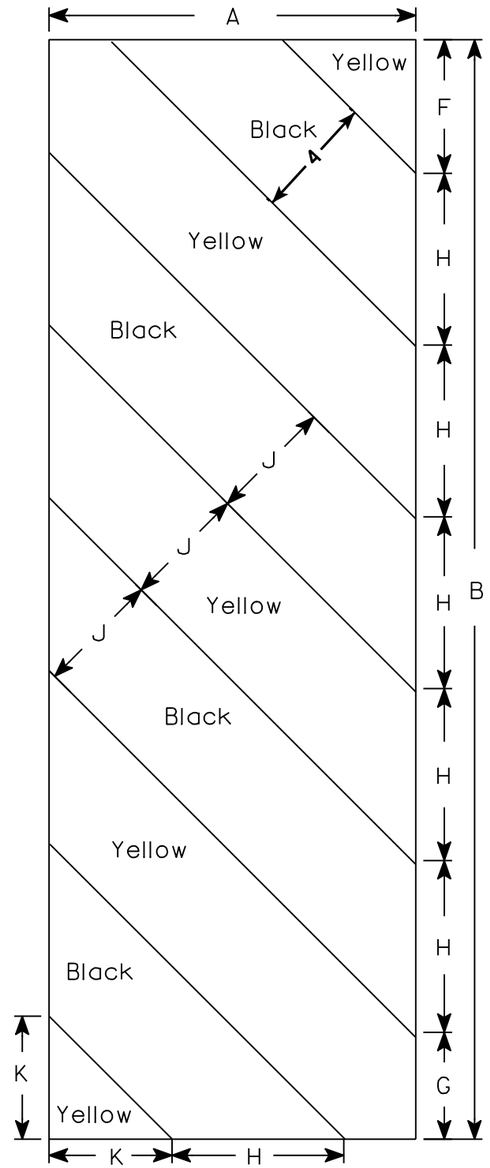
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

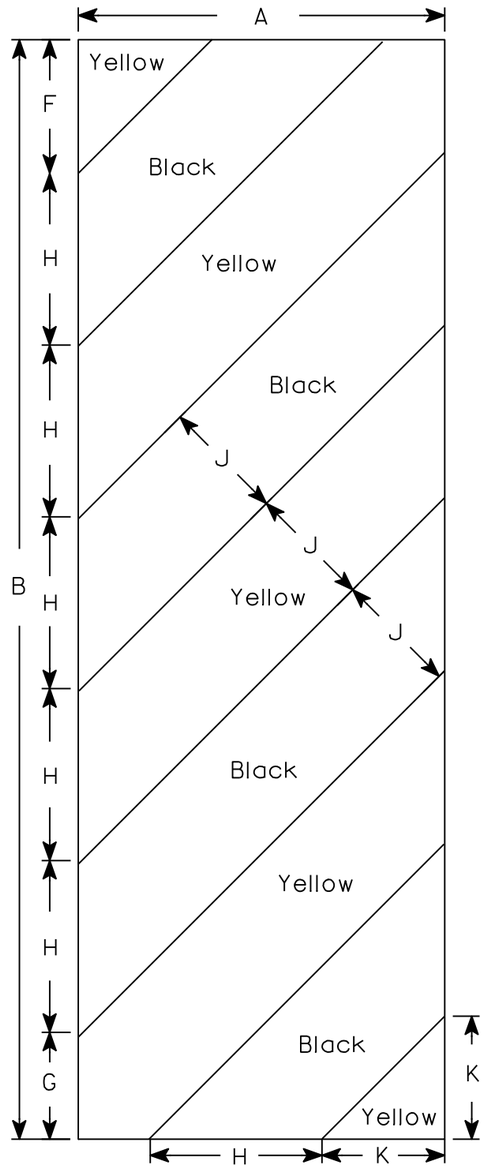
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 29	E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

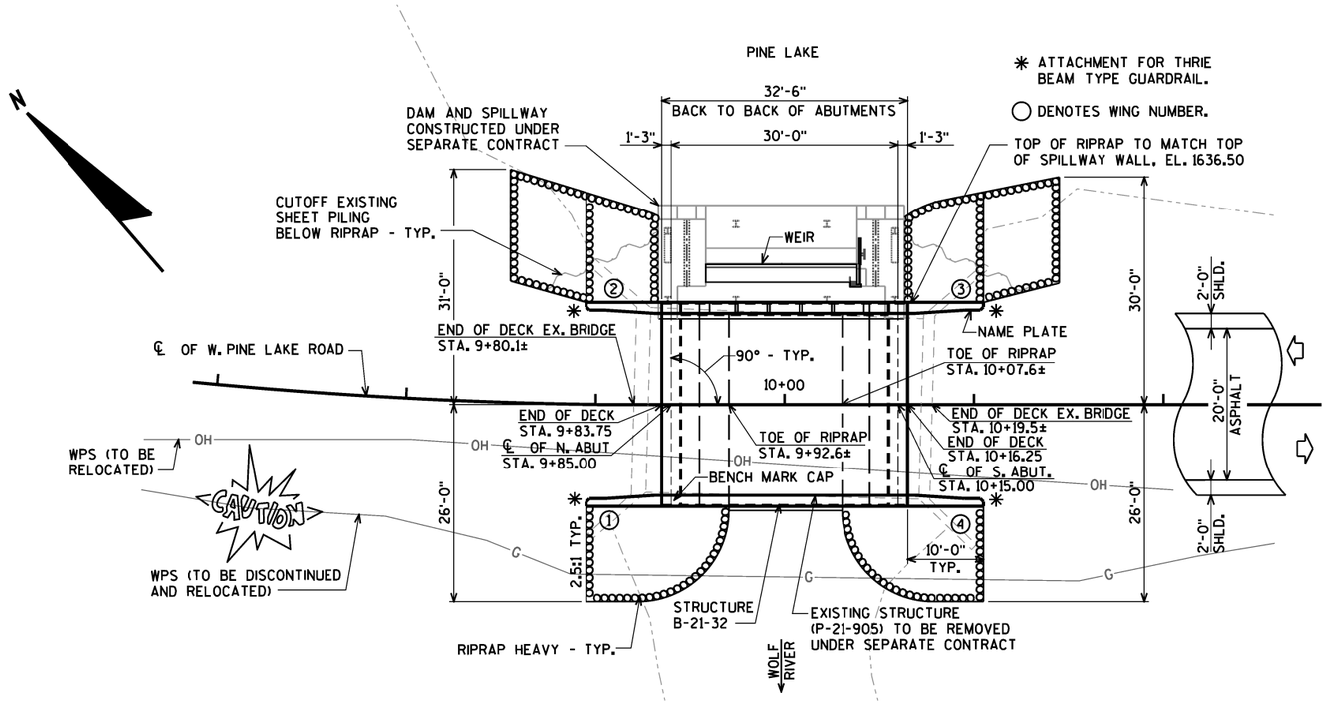
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

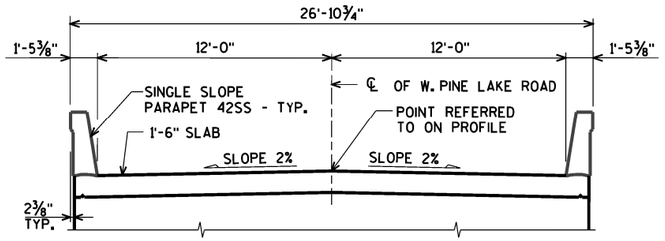
STATE PROJECT NUMBER

9815-00-70



PLAN

SINGLE-SPAN CONCRETE FLAT SLAB BRIDGE



TYPICAL SECTION THRU BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.10
OPERATING RATING FACTOR: 1.42
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY { SUPERSTRUCTURE ____ f'_c = 4,000 p.s.i.
ALL OTHER ____ f'_c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) ____ f_y = 60,000 p.s.i.

HYDRAULIC DATA:

100 YEAR FREQUENCY	2 YEAR FREQUENCY
Q_{100} = 142 c.f.s.	Q_2 = 39 c.f.s.
VEL. = 1.4 f.p.s.	VEL. = 0.6 f.p.s.
HW_{100} = EL. 1635.92	HW_2 = EL. 1634.46

WATERWAY AREA = 100 sq. ft.
DRAINAGE AREA = 22 sq. mi.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5
DATUM = NAVD88 (2012)

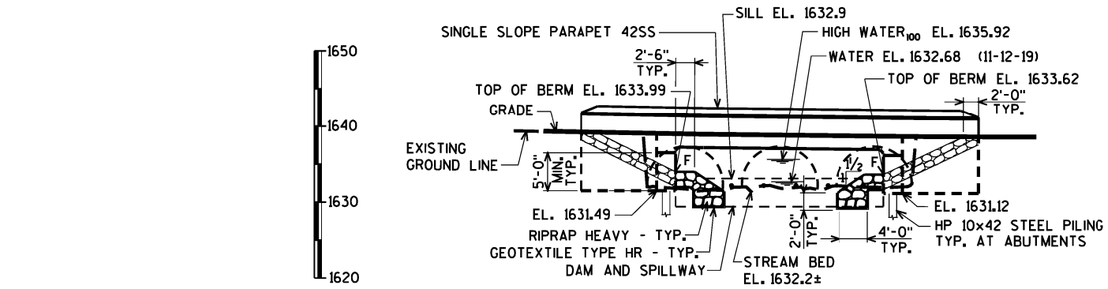
FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING SEATED IN PREBORED HOLES CORED IN CONSOLIDATED MATERIAL AND DO NOT REQUIRE DRIVING. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 130 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ALL PILES REQUIRE A MINIMUM DEPTH OF 10'-0" BELOW BOTTOM OF ABUTMENT OR 3'-0" INTO CONSOLIDATED MATERIAL, WHICHEVER DEPTH IS GREATER. CASING IS REQUIRED DURING PREBORING.

ESTIMATED 20'-0" LONG AT NORTH ABUTMENT
ESTIMATED 15'-0" LONG AT SOUTH ABUTMENT

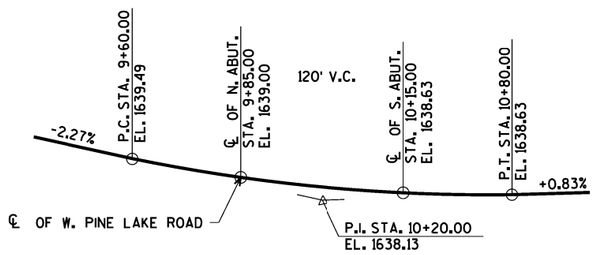
TRAFFIC DATA:

A.A.D.T. = 60 (2022)
A.A.D.T. = 70 (2042)
R.D.S. = 30 M.P.H.



ELEVATION

(NORMAL TO ℄ OF RIVER)



PROFILE GRADE LINE

(W. PINE LAKE ROAD)

BENCH MARK:
DISK ON DAM
STA. 9+81, 12' LT.
EL. 1639.90

LIST OF DRAWINGS

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON
PROFESSIONAL ENGINEER
11/9/2023

BRIDGE OFFICE CONTACT:
AARON BONK
(608)-261-0261

CONSULTANT CONTACT:
KRISTOFER OLSON
(920)-498-1200

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 11/13/23
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-21-32

W. PINE LAKE ROAD OVER WOLF RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
FOREST	HILES

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JMC	ZSS	CLP	KRO

GENERAL PLAN

SHEET 1 OF 12
31

I.D. DATE:

DATE: DATE: DATE:
CHECKED BY: BACK CHECKED BY: CORRECTED BY:

11/9/2023
PENTABLE:BReau_shd_util.tbl

8

8

I:±45±450505 W. Pine Lake Road±Structures±CADD±Final±450505 gp.dgn

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	N. ABUT.	S. ABUT.	SUPER.	TOTAL
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-21-32	EACH	-----	-----	-----	1
502.0100	CONCRETE MASONRY BRIDGES	CY	29.6	29.5	60.8	120
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	105	105
502.3210	PIGMENTED SURFACE SEALER	SY	-----	-----	55	55
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,540	1,540	-----	3,080
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,230	1,210	12,600	15,040
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-----	18
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	80	60	-----	140
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	80	60	-----	140
606.0300	RIPRAP HEAVY	CY	70	65	-----	135
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	45	45	-----	90
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	2	-----	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	40	40	-----	80
645.0120	GEOTEXTILE TYPE HR	SY	130	125	-----	255
SPV.0060	RETROFIT PVC WATERSTOP	EACH	1	1	-----	2
SPV.0195	BACKFILL STRUCTURE SPECIAL	TON	120	120	-----	240
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

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 FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-21-32" SHALL BE THE EXISTING GROUNDLINE.

THE EXISTING STRUCTURE, P-21-905, TO BE REMOVED IN A SEPARATE CONTRACT, IS THREE STEEL PIPE ARCHES, WITH 10-FT. WIDE DIA. AND A CLEAR WIDTH OF 18.3-FT.

A DAM AND SPILLWAY WILL BE CONSTRUCTED UPSTREAM OF THE PROPOSED BRIDGE PRIOR TO CONSTRUCTION OF THE BRIDGE. THE RIPRAP PLACED TO PROTECT THE CHANNEL DURING DAM CONSTRUCTION SHALL BE REMOVED UNDER THIS CONTRACT, INCLUDED IN "EXCAVATION FOR STRUCTURES BRIDGES B-21-32". SEE ROADWAY PLANS FOR ADDITIONAL DETAILS.

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

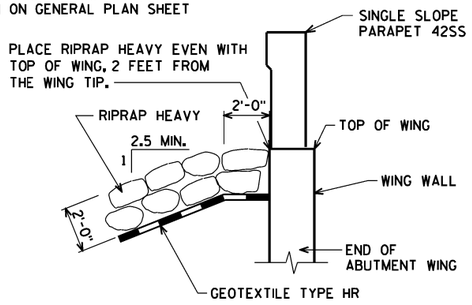
PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.

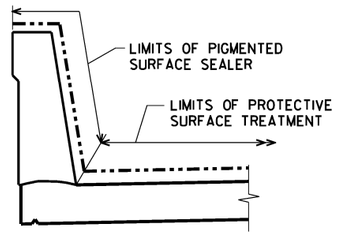
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

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

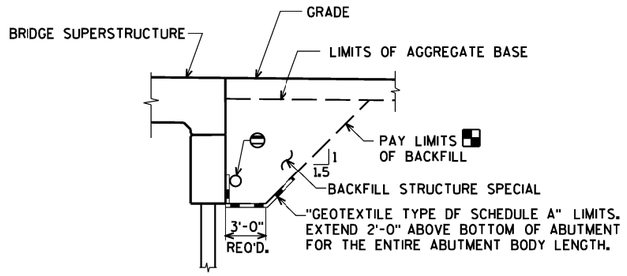
NOTE: PLACE RIPRAP HEAVY AS SHOWN ON GENERAL PLAN SHEET



TYPICAL FILL SECTION AT WING TIPS



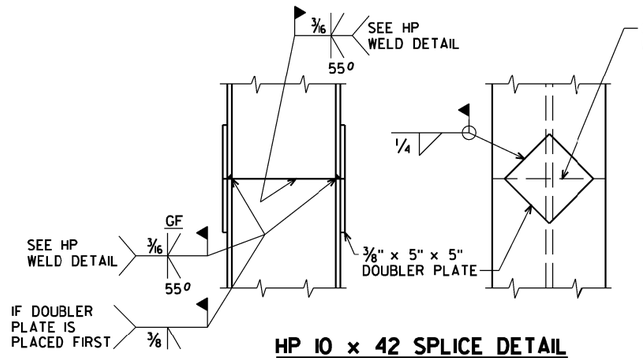
PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER DETAILS



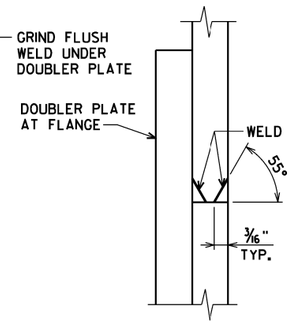
BACKFILL STRUCTURE LIMITS THRU ABUTMENT

BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL 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 AS DETAILED ON SHEET 6.



HP 10 x 42 SPLICE DETAIL



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

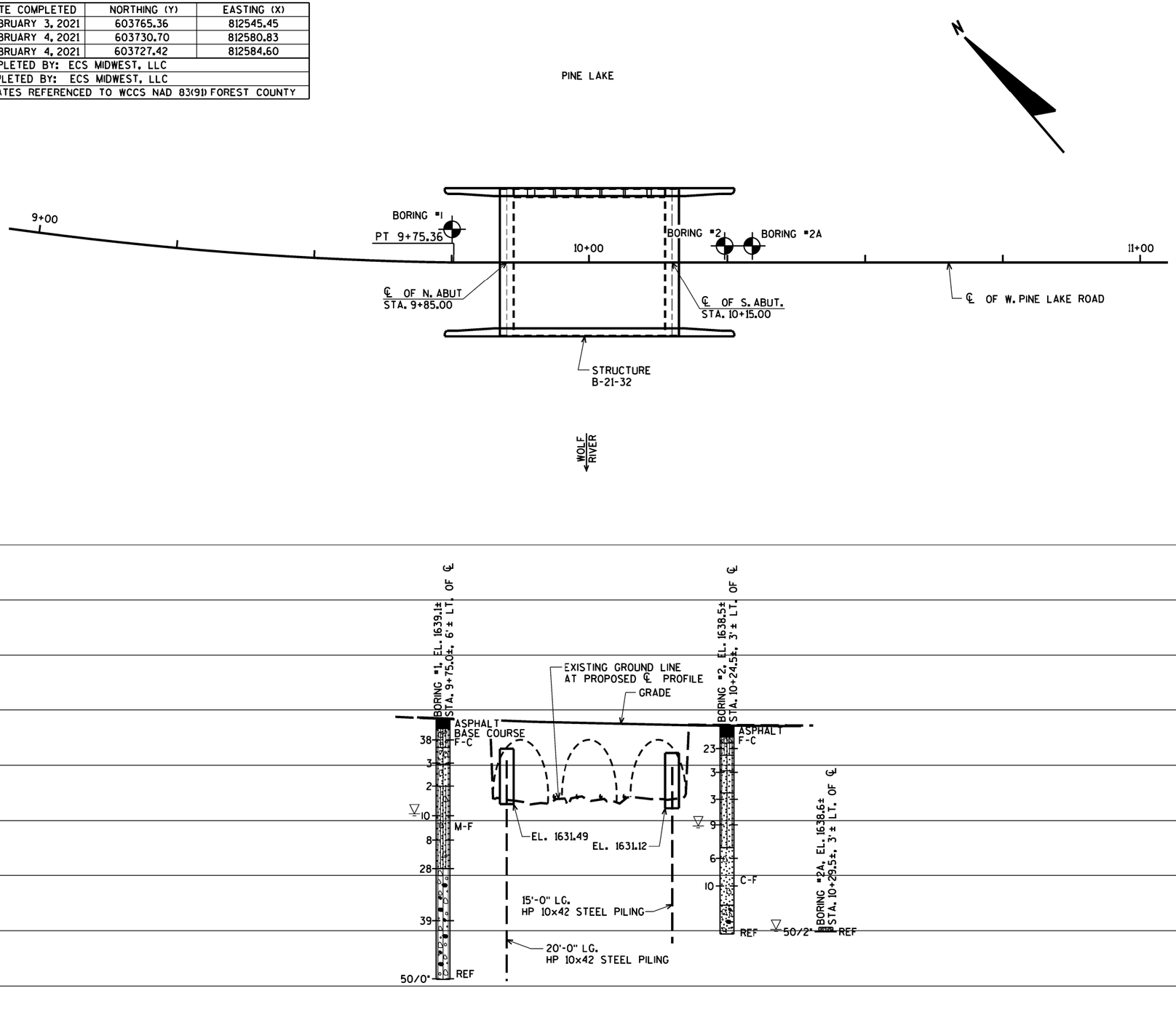
DRAWN BY CLP | PLANS CK'D. JMC

QUANTITIES AND NOTES

SHEET 2 OF 12
32

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	FEBRUARY 3, 2021	603765.36	812545.45
2	FEBRUARY 4, 2021	603730.70	812580.83
2A	FEBRUARY 4, 2021	603727.42	812584.60
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) FOREST COUNTY			



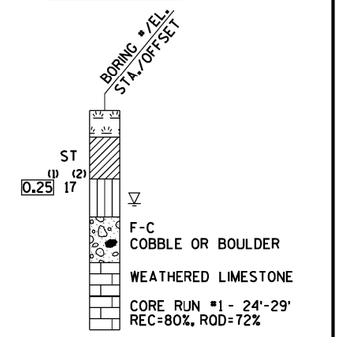
STATE PROJECT NUMBER

9815-00-70

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-21-32

DRAWN BY CLP | PLANS CK'D. JMC

SUBSURFACE EXPLORATION

SHEET 3 OF 12
33

8

8

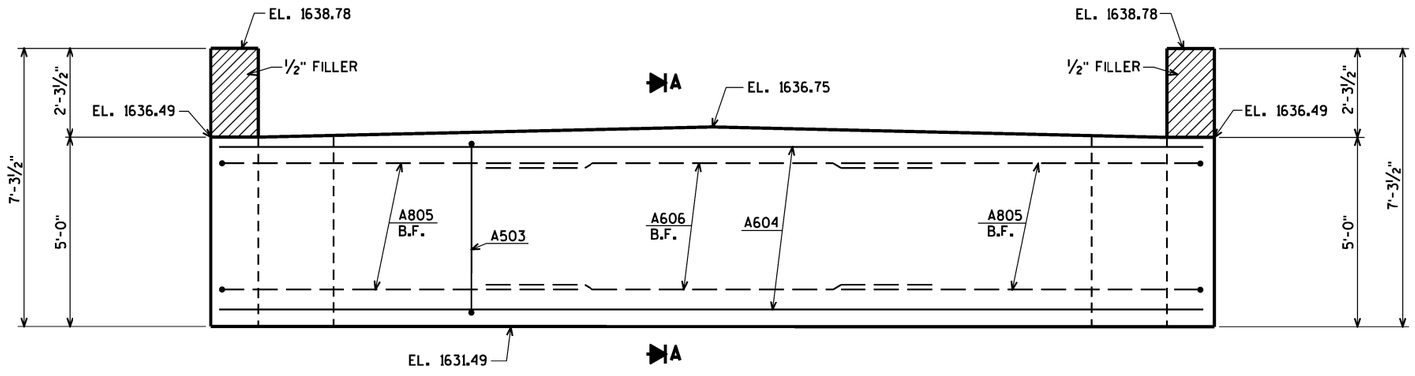
11/9/2023
PENTABLE:BReau_shd_util.tbl

I:±45±450505 W. Pine Lake Road±Structures±CADD±Final±450505 soils.dgn

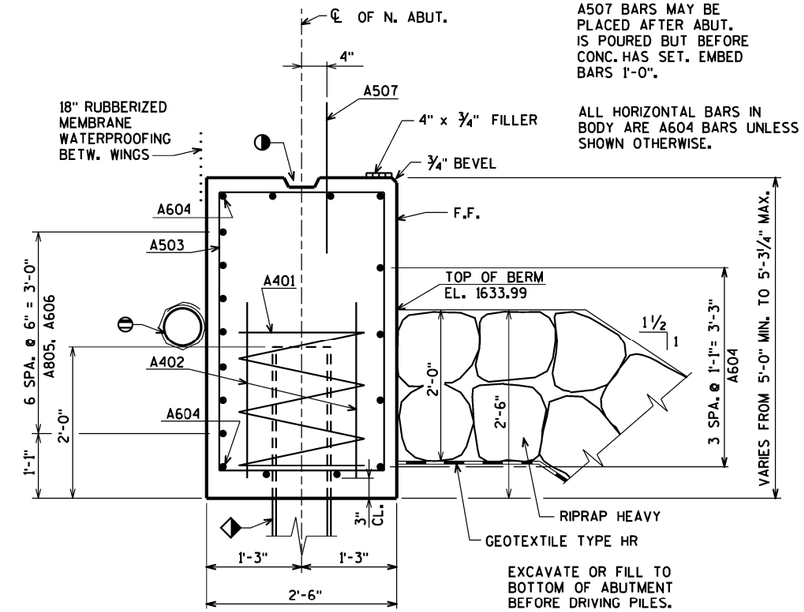
STATE PROJECT NUMBER

9815-00-70

NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



ELEVATION
(LOOKING NORTH)



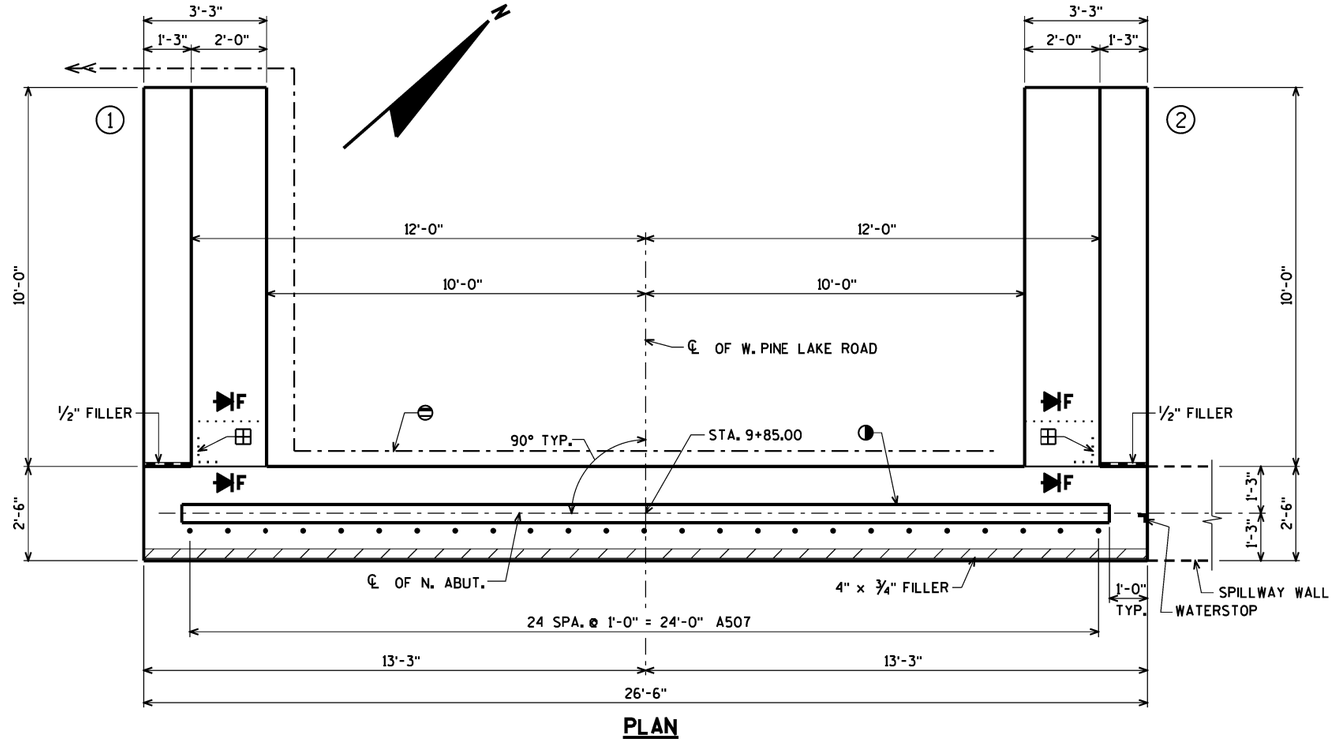
A507 BARS MAY BE PLACED AFTER ABUT. IS POURED BUT BEFORE CONC. HAS SET. EMBED BARS 1'-0".

ALL HORIZONTAL BARS IN BODY ARE A604 BARS UNLESS SHOWN OTHERWISE.

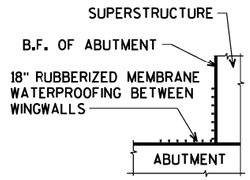
EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

SECTION A

◆ ABUTMENT TO BE SUPPORTED ON PRE-BORED HP 10 x 42 STEEL PILING WITH FACTORED AXIAL RESISTANCE OF 130 TONS PER PILE.
ESTIMATED LENGTH 20'-0".
SEE GENERAL PLAN SHEET FOR PRE-BORING REQUIREMENTS.



PLAN



SECTION F

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 6. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

⊞ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WINGWALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY CLP | PLANS CK'D. JMC

NORTH ABUTMENT

SHEET 4 OF 12
34

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

10/27/2023
PENTABLE:BReau_shd_utl1.tbl

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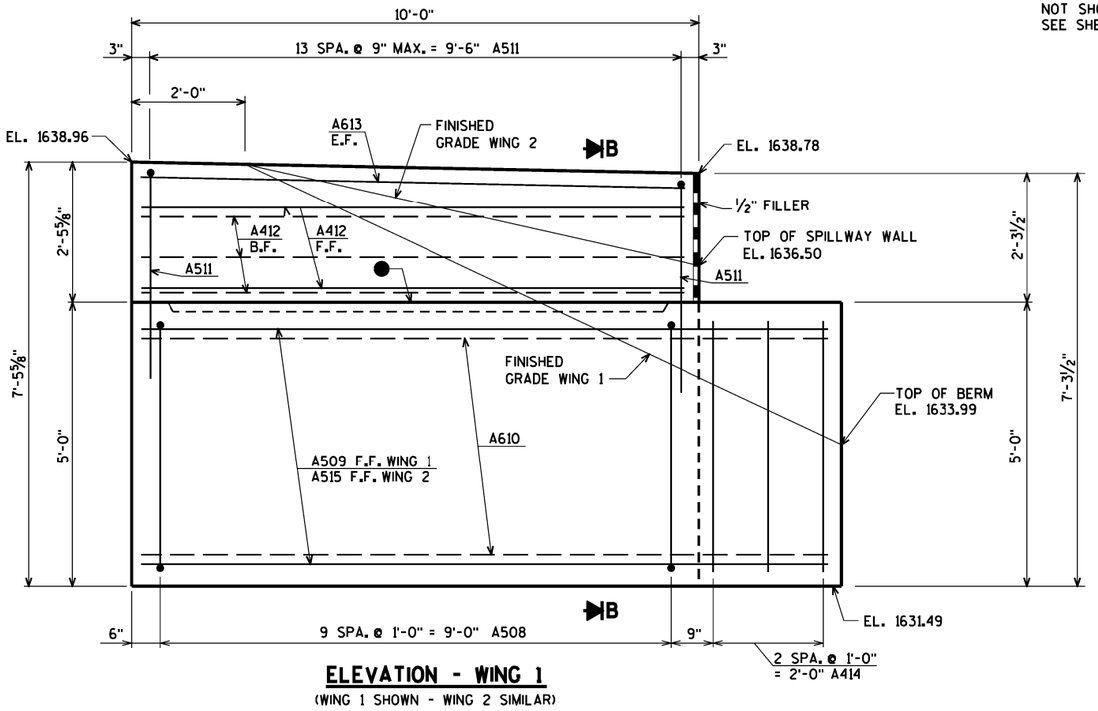
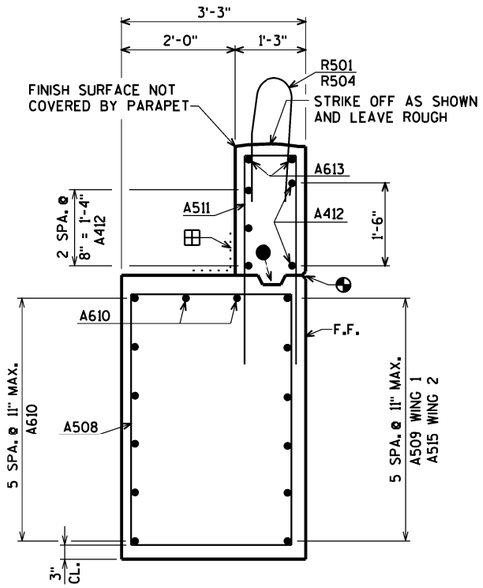
I:±45±450505 W. Pine Lake Road±Structures±CADD±Final±450505 na.dgn

STATE PROJECT NUMBER
9815-00-70



ELEVATION - WING 1
(WING 1 SHOWN - WING 2 SIMILAR)

SINGLE SLOPE 42SS PARAPET
NOT SHOWN. FOR DETAILS
SEE SHEET 12



SECTION B

◔ ¾" "V" GROOVE ON FRONT FACE OF WINGWALL. ONLY REQUIRED IF OPTIONAL CONSTRUCTION JOINT IS USED.

● OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HOIRZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY CLP | PLANS CK'D. JMC

NORTH ABUTMENT WING DETAILS

SHEET 5 OF 12
35

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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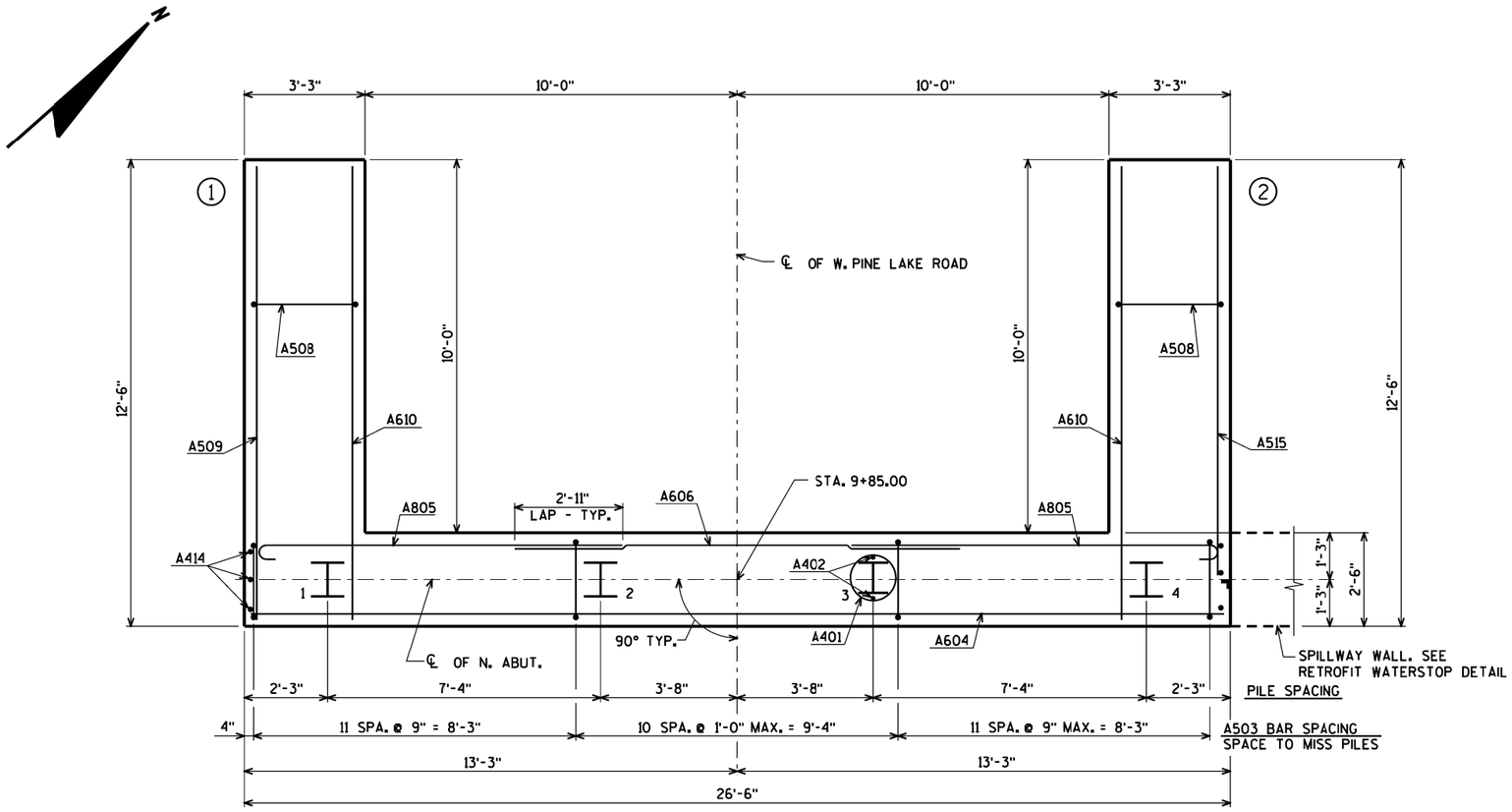
STATE PROJECT NUMBER
9815-00-70

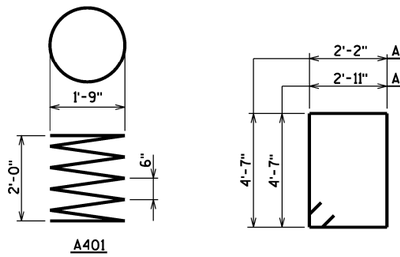
BILL OF BARS

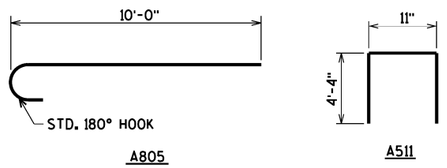
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	LOCATION
A401		4	28-0	X		BODY @ PILES
A402		8	2-3			BODY @ PILES
A503		33	14-2	X		BODY VERT.
A604		11	26-2			BODY HORIZ.
A805		14	10-11	X		BODY HORIZ. @ WING B.F.
A606		7	12-0			BODY HORIZ. BETW. WINGS B.F.
A507	X	25	2-0			BODY DOWELS
A508	X	20	15-8	X		WINGS 1 & 2 VERT.
A509	X	6	12-2			WING 1 HORIZ. F.F.
A610	X	16	12-2			WINGS 1 & 2 HORIZ. B.F. & TOP
A511	X	28	9-4	X		WINGS 1 & 2 VERT.
A412	X	10	9-7			WINGS 1 & 2 HORIZ. E.F.
A613	X	4	9-7			WINGS 1 & 2 HORIZ. E.F.
A414	X	6	4-7			BODY VERT. END @ WINGS 1 & 2
A515	X	6	10-10			WING 2 HORIZ. F.F.

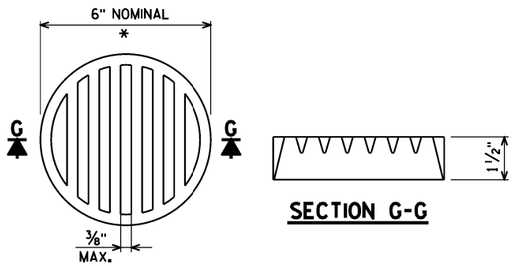
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PILE LAYOUT







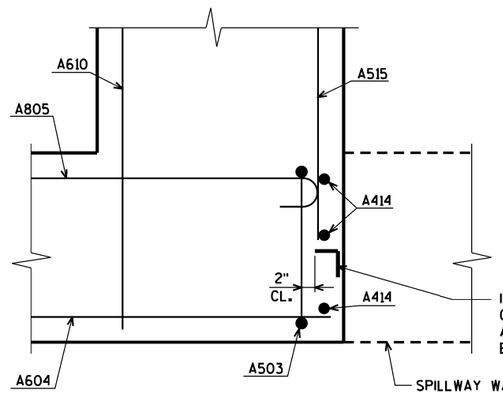
SECTION G-G

* 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 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 SHEET METAL SCREWS.

RODENT SHIELD DETAIL



RETROFIT PVC WATERSTOP DETAIL

FOR PILE SPLICE DETAIL SEE SHEET 2.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY CLP | PLANS CK'D. JMC

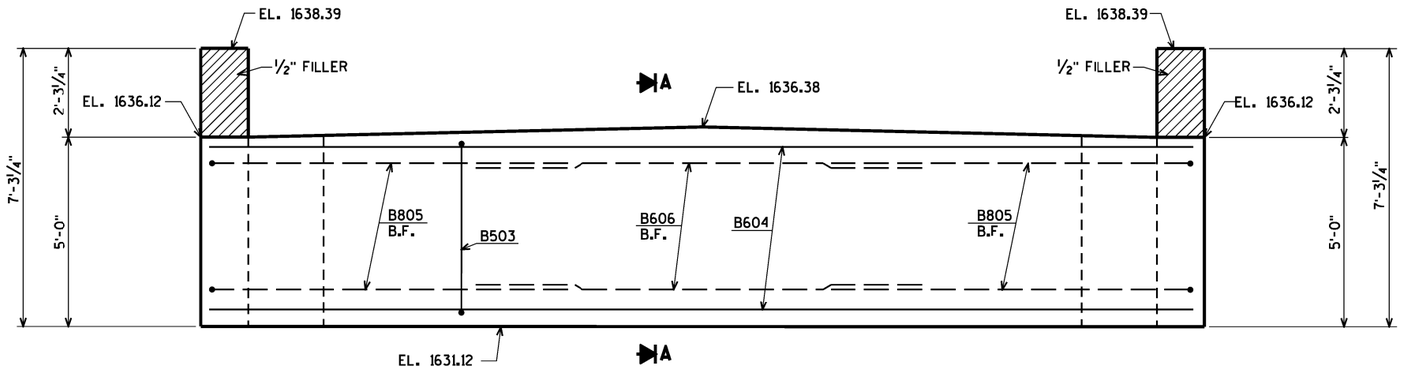
NORTH ABUTMENT PILE LAYOUT & BILL OF BARS

SHEET 6 OF 12
36

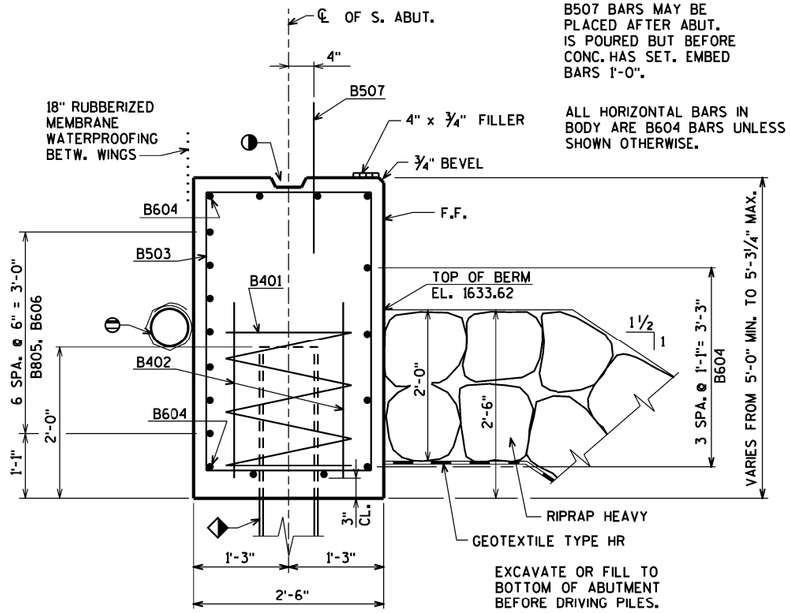
ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER
9815-00-70

NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



ELEVATION
(LOOKING SOUTH)

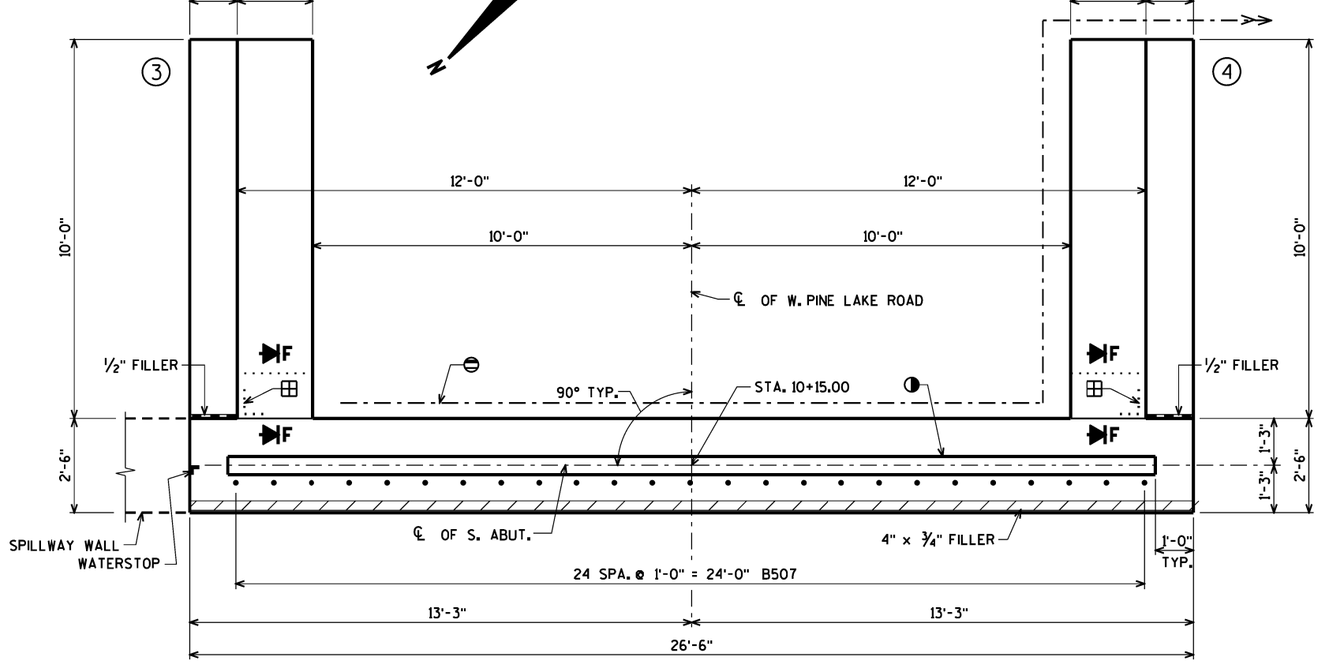


SECTION A

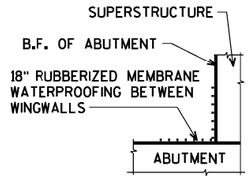
B507 BARS MAY BE PLACED AFTER ABUT. IS POURED BUT BEFORE CONC. HAS SET. EMBED BARS 1'-0".

ALL HORIZONTAL BARS IN BODY ARE B604 BARS UNLESS SHOWN OTHERWISE.

◆ ABUTMENT TO BE SUPPORTED ON PRE-BORED HP 10 x 42 STEEL PILING WITH FACTORED AXIAL RESISTANCE OF 130 TONS PER PILE.
ESTIMATED LENGTH 15'-0".
SEE GENERAL PLAN SHEET FOR PRE-BORING REQUIREMENTS.



PLAN



SECTION F

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 6. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

⊞ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WINGWALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY	CLP	PLANS CK'D.	JMC

SOUTH ABUTMENT

SHEET 7 OF 12
37

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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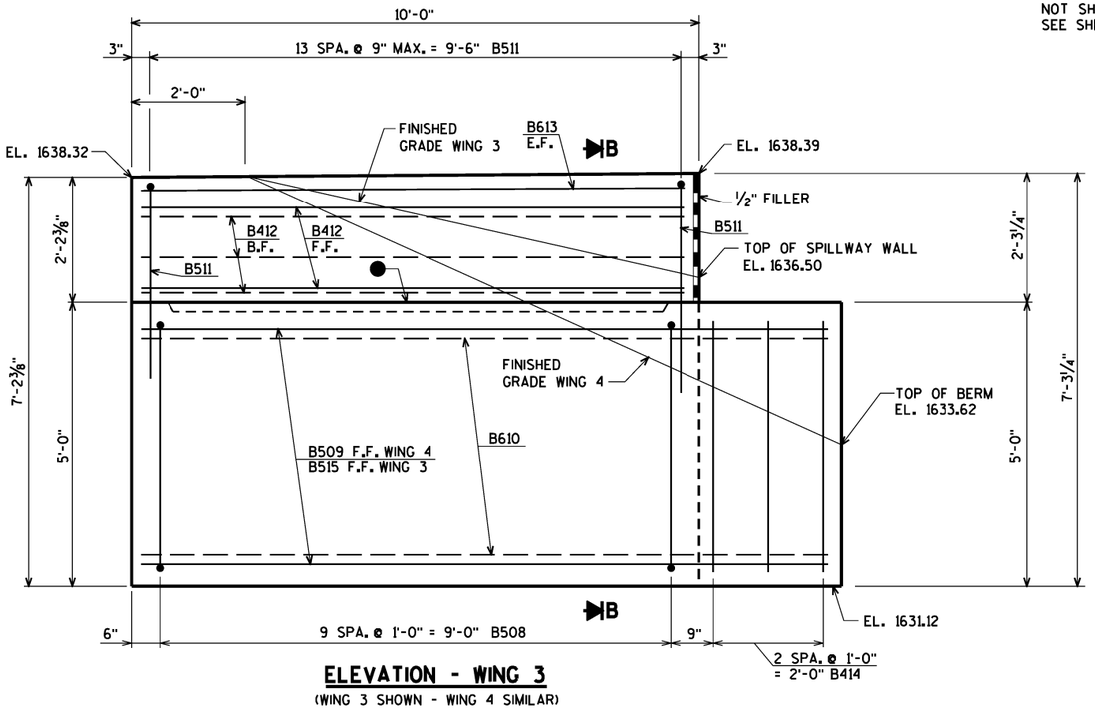
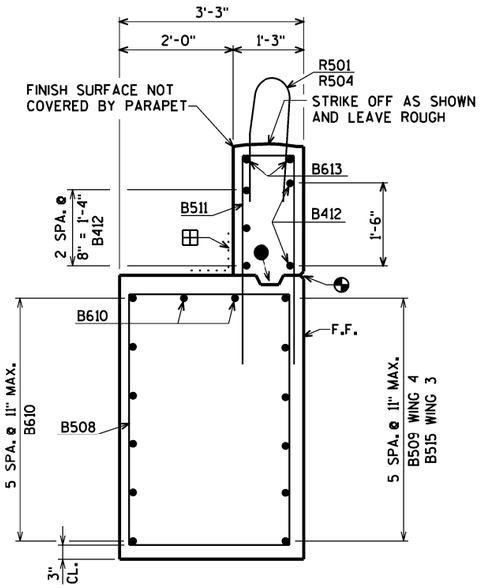
STATE PROJECT NUMBER
9815-00-70



ELEVATION - WING 3
(WING 3 SHOWN - WING 4 SIMILAR)

SINGLE SLOPE 42SS PARAPET NOT SHOWN. FOR DETAILS SEE SHEET 12



SECTION B

◔ 3/4" "V" GROOVE ON FRONT FACE OF WINGWALL. ONLY REQUIRED IF OPTIONAL CONSTRUCTION JOINT IS USED.

● OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HOIRZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY CLP | PLANS CK'D. JMC

SOUTH ABUTMENT WING DETAILS

SHEET 8 OF 12
38

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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10/27/2023
PENTABLE:BRequ_shd_util.tbl

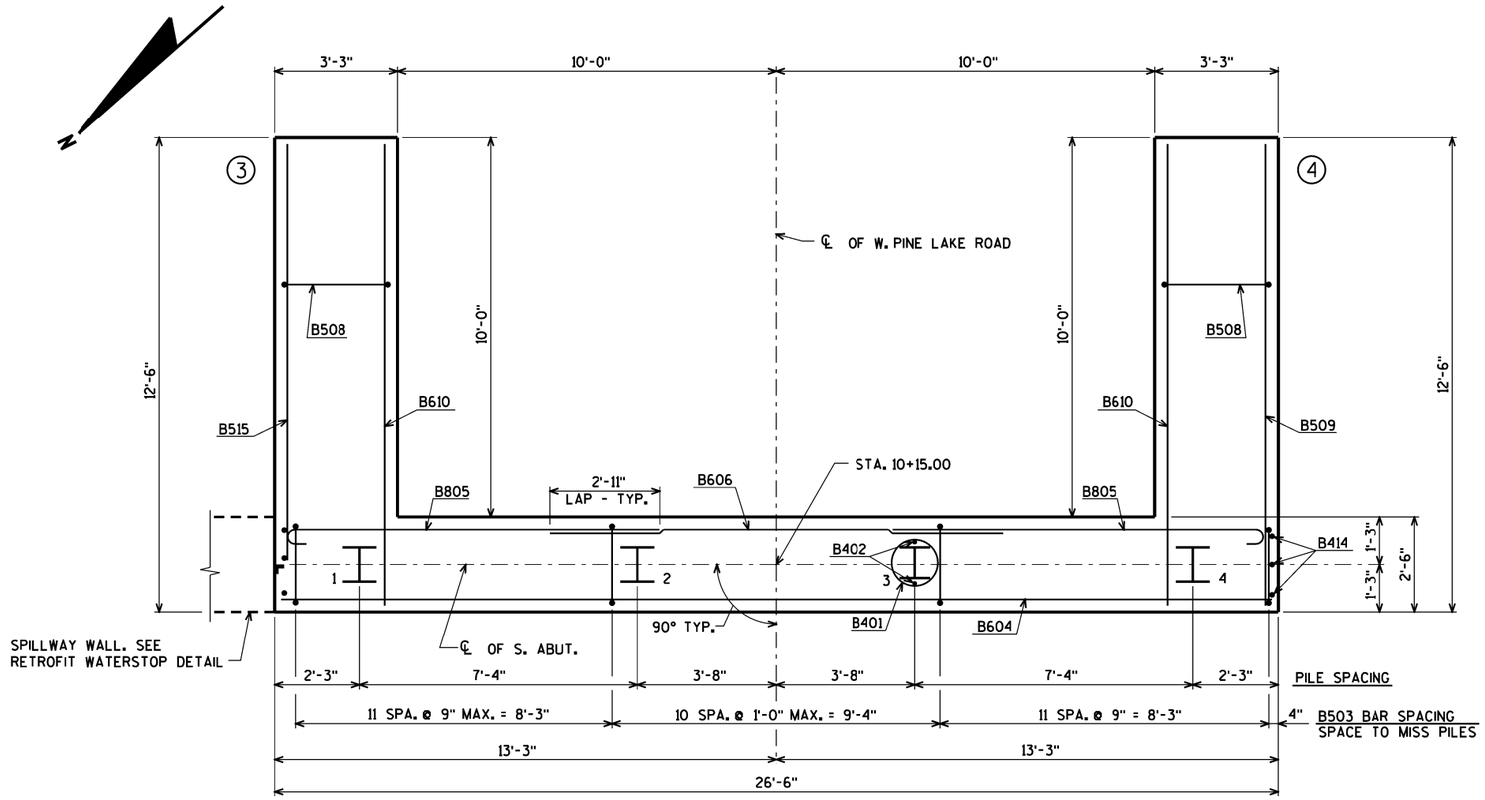
I:±45±450505 W. Pine Lake Road±Structures±CADD±Final±450505 sa.dgn

STATE PROJECT NUMBER
9815-00-70

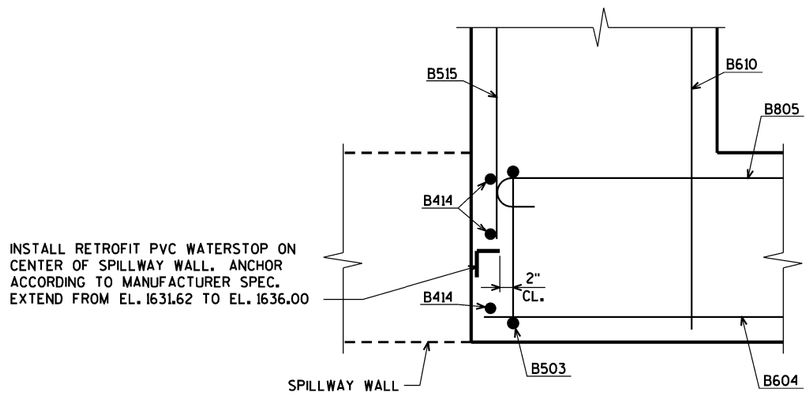
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	LOCATION
B401		4	28-0	X		BODY @ PILES
B402		8	2-3			BODY @ PILES
B503		33	14-2	X		BODY VERT.
B604		11	26-2			BODY HORIZ.
B805		14	10-11	X		BODY HORIZ. @ WING B.F.
B606		7	12-0			BODY HORIZ. BETW. WINGS B.F.
B507	X	25	2-0			BODY DOWELS
B508	X	20	15-8	X		WINGS 3 & 4 VERT.
B509	X	6	12-2			WINGS 4 HORIZ. F.F.
B610	X	16	12-2			WINGS 3 & 4 HORIZ. B.F. & TOP
B511	X	28	8-10	X		WINGS 3 & 4 VERT.
B412	X	10	9-7			WINGS 3 & 4 HORIZ. E.F.
B613	X	4	9-7			WINGS 3 & 4 HORIZ. E.F.
B414	X	6	4-7			BODY VERT. END @ WINGS 3 & 4
B515	X	6	10-10			WING 3 HORIZ. F.F.

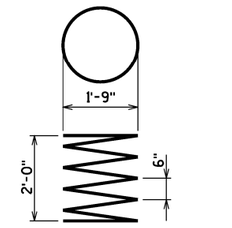
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PILE LAYOUT



RETROFIT PVC WATERSTOP DETAIL



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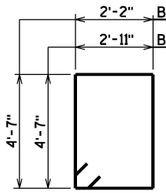
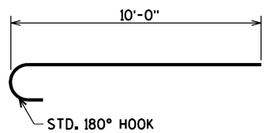
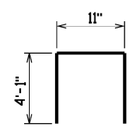




B805



B511

FOR PILE SPLICE DETAIL SEE SHEET 2.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY CLP | PLANS CK'D. JMC

SOUTH ABUTMENT
PILE LAYOUT &
BILL OF BARS

SHEET 9 OF 12
39

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

10/27/2023
PENTABLE:BReau_shd_util.tbl

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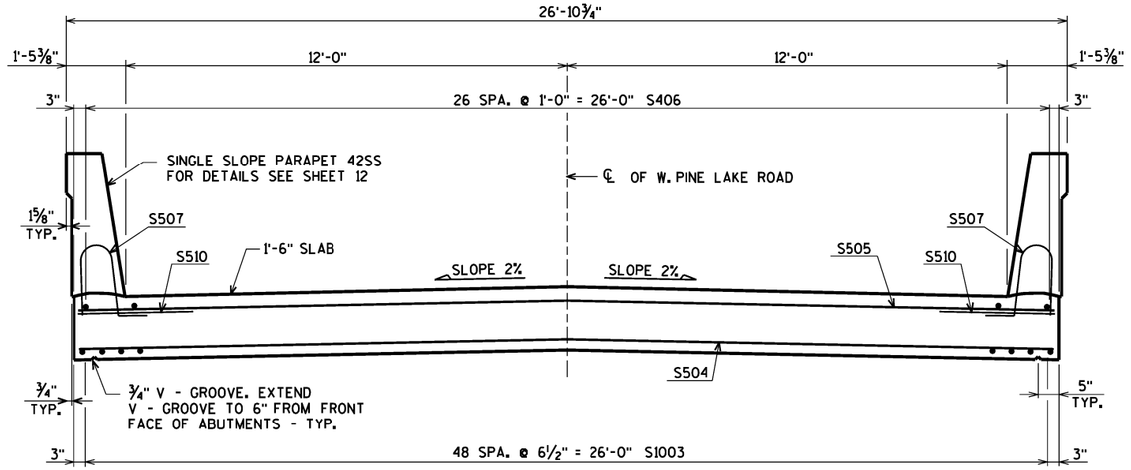
I:\45\450505 W. Pine Lake Road\Structures\CADD\Final\450505 sa.dgn

STATE PROJECT NUMBER

9815-00-70



TYPICAL SECTION THRU BRIDGE

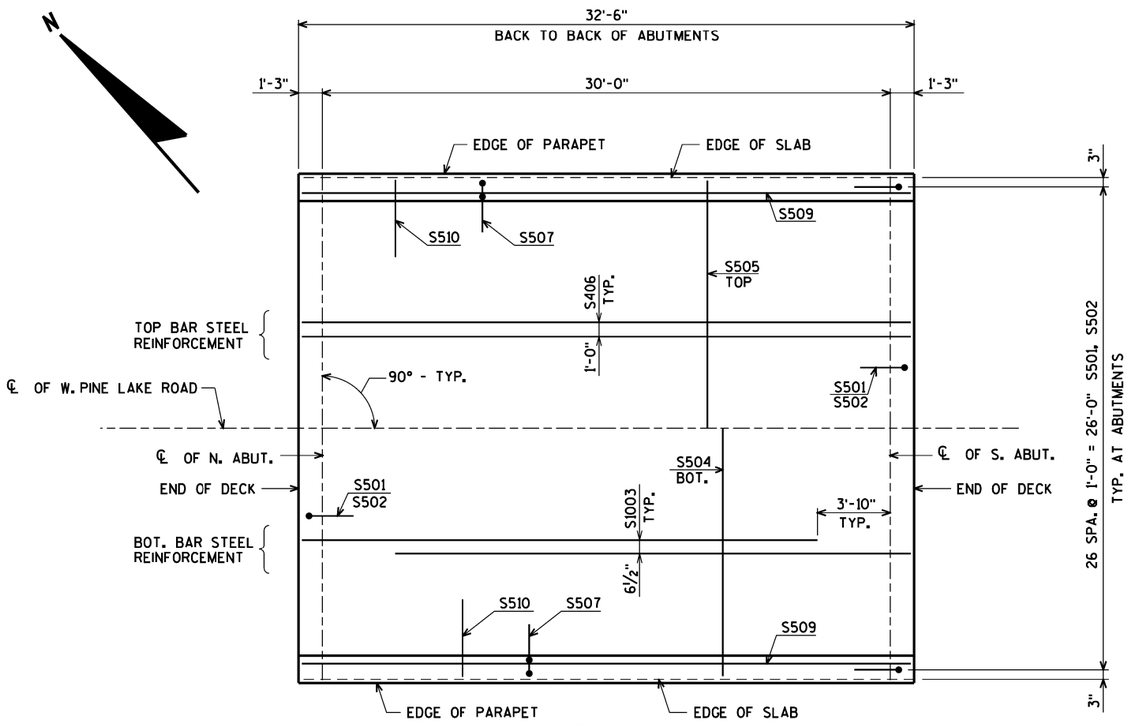
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

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

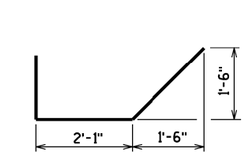
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	LOCATION
S501	X	54	5-10	X			SLAB @ ABUT.
S502	X	54	3-3	X			SLAB @ ABUT.
S1003	X	49	27-3				SLAB LONG. BOT.
S504	X	52	26-2				SLAB TRANS. BOT.
S505	X	33	26-2				SLAB TRANS. TOP
S406	X	27	32-2				SLAB LONG. TOP
S507	X	98	4-5	X			SLAB @ PARAPET VERT.
S508	X	98	6-8	X			PARAPET VERT.
S509	X	16	32-2				PARAPET HORIZ.
S510	X	60	5-0				SLAB TRANS. TOP @ EDGES

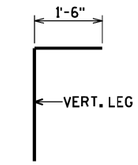
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PLAN



S501



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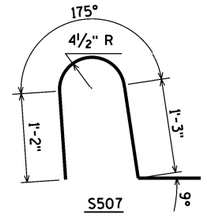

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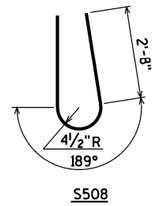

S508

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY CLP | PLANS CK'D. JMC

SUPERSTRUCTURE

SHEET 10 OF 12
40

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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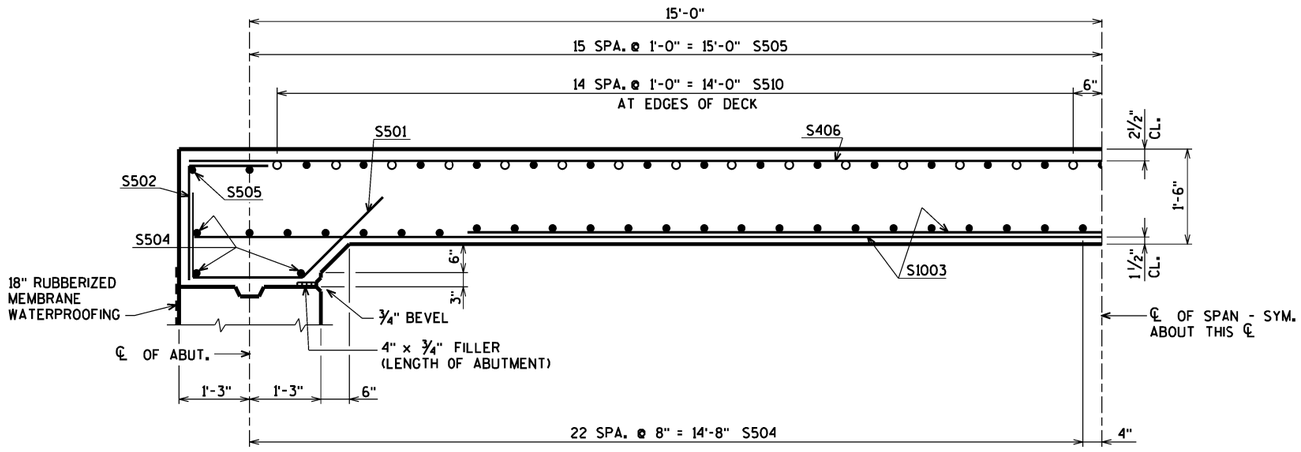
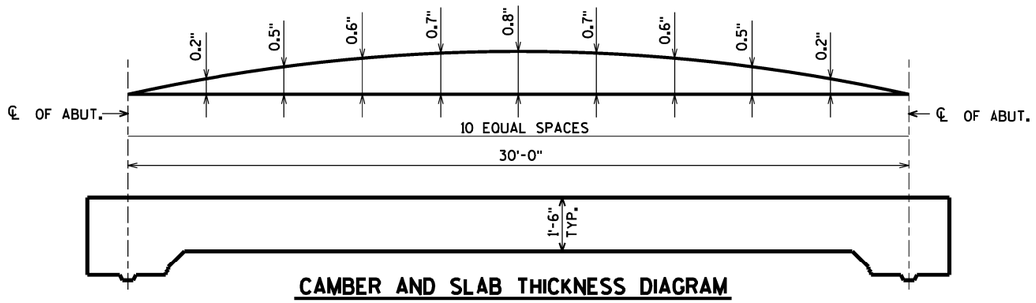
11/9/2023
PENTABLE:BRequ_shd_util.tbl

I:±45±450505 W. Pine Lake Road±Structures±CADD±Final±450505 sup.dgn

STATE PROJECT NUMBER
9815-00-70



PART LONGITUDINAL SECTION



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTION.

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TOP OF DECK ELEVATIONS

LOCATION	℄ OF N. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ OF S. ABUT.
E. EDGE OF SLAB	1638.76	1638.72	1638.67	1638.63	1638.59	1638.55	1638.51	1638.48	1638.45	1638.42	1638.39
℄ OF STRUCTURE	1639.00	1638.96	1638.91	1638.87	1638.83	1638.79	1638.75	1638.72	1638.69	1638.66	1638.63
W. EDGE OF SLAB	1638.76	1638.72	1638.67	1638.63	1638.59	1638.55	1638.51	1638.48	1638.45	1638.42	1638.39

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

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

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

EQUALS = TOP OF SLAB FLASEWORK ELEVATION

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	℄ OF N. ABUT.	5/10 PTS.	℄ OF S. ABUT.
E. EDGE OF SLAB			
℄ OF STRUCTURE			
W. EDGE OF SLAB			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY CLP | PLANS CK'D. JMC

SUPERSTRUCTURE DETAILS

SHEET 11 OF 12
41

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

6/5/2023
PENTABLE:BReau_shd_util.tbl

I:±45±450505 W. Pine Lake Road±Structures±CADD±Final±450505 sup.dgn

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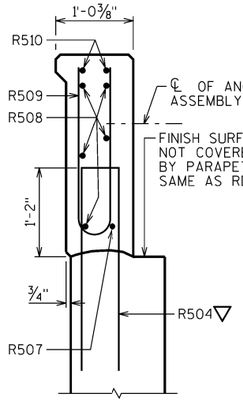
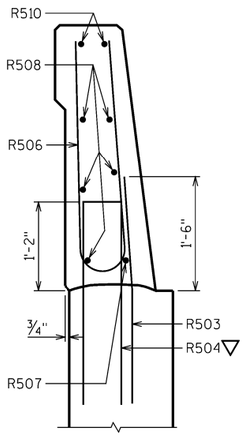
STATE PROJECT NUMBER

9815-00-70



SECTION A-A



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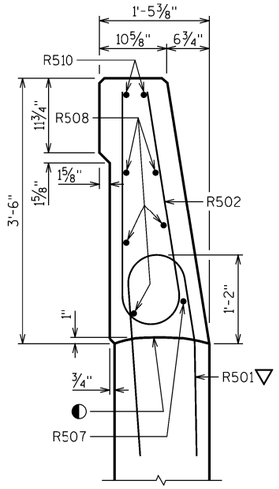
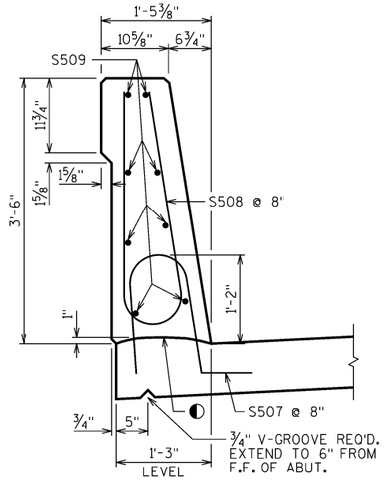
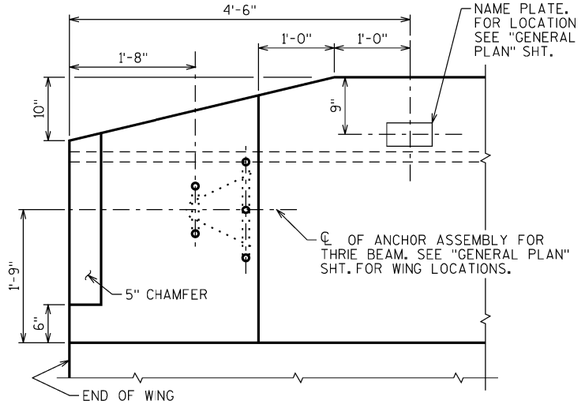


SECTION C-C



SECTION THRU PARAPET ON BRIDGE



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

FOR ABUTMENT PARAPETS

NOTE: REINFORCEMENT WEIGHT INCLUDED IN ABUTMENT QUANTITIES.

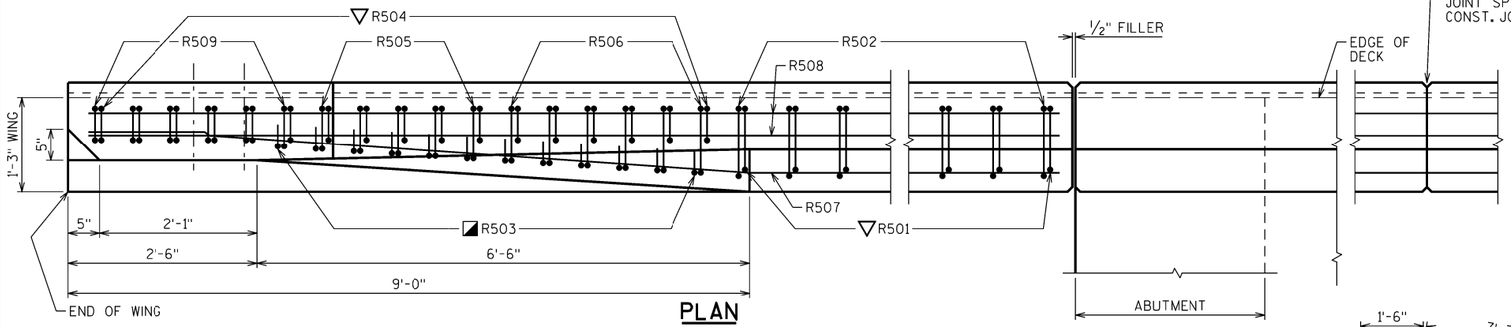
BAR MARK	COAT	NORTH ABUT.	SOUTH ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	6	6	5'-10"	X		PARAPET VERT.
R502	X	6	6	6'-8"	X		PARAPET VERT.
R503	X	24	24	3'-0"	X		PARAPET VERT.
R504	X	34	34	5'-7"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	9'-6"	X		PARAPET HORIZ.
R508	X	10	10	9'-7"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	9'-7"	X		PARAPET HORIZ.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

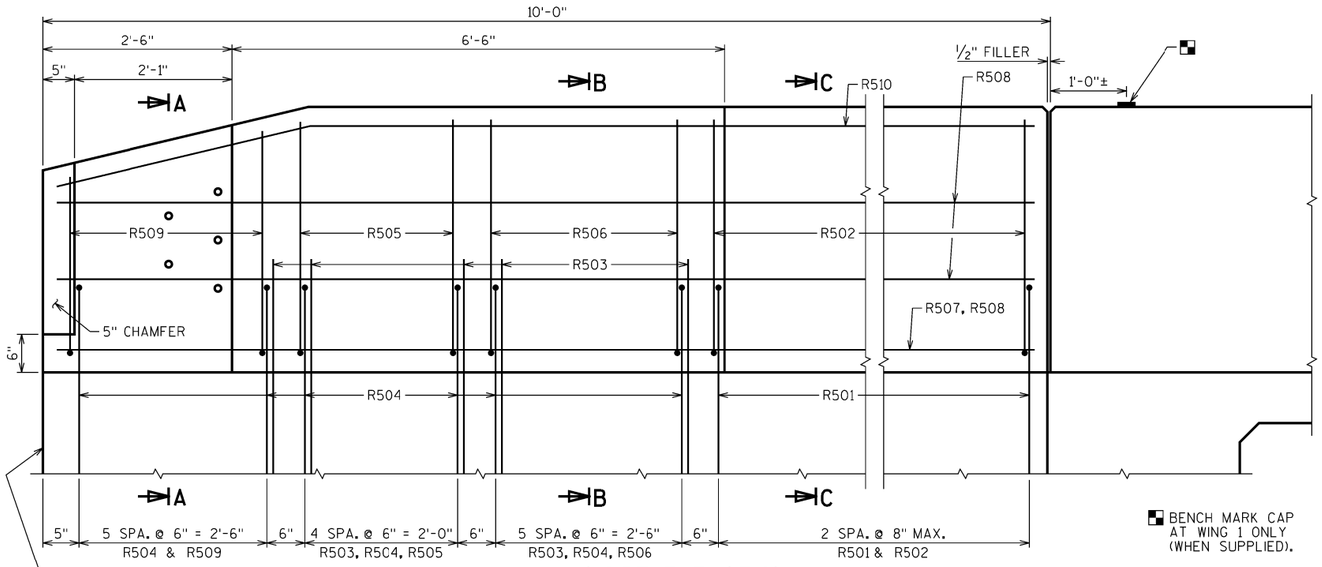
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN

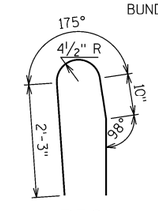
WING 2 SHOWN, OTHERS SIMILAR



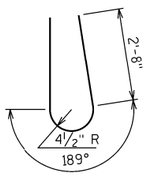
INSIDE ELEVATION

WING 2 SHOWN, OTHERS SIMILAR

BENCH MARK CAP AT WING 1 ONLY (WHEN SUPPLIED).



R501



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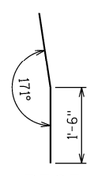
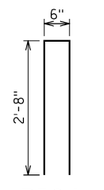


R503



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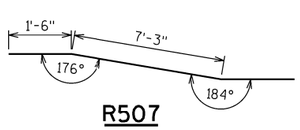

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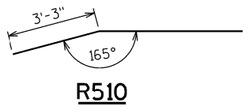

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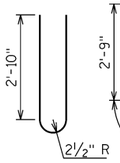

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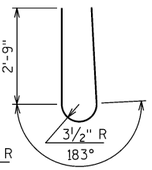

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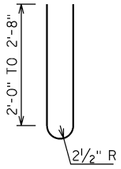
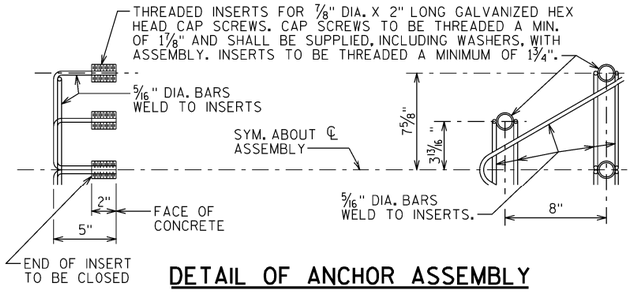


R509



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-21-32

DRAWN BY CLP | PLANS CK'D. JMC

SINGLE SLOPE PARAPET 42SS

SHEET 12 OF 12
42

ORIGINAL PLANS PREPARED BY

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

SCALE = 1.00

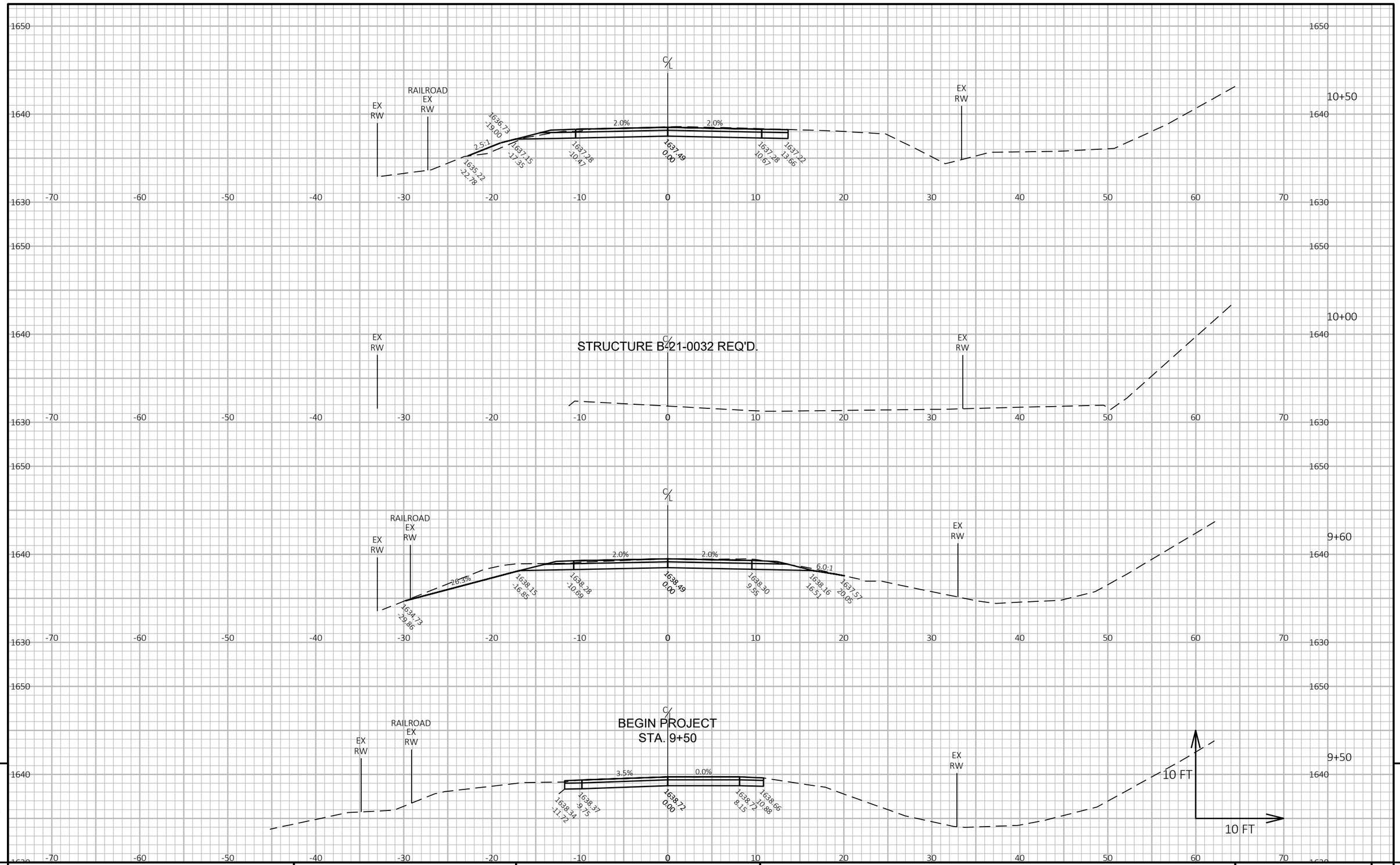
8

8

EARTHWORK - WEST PINE LAKE RD

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORDINATE
	CUT	UNUSABLE PAVEMENT MATERIAL	FILL	CUT	UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.30	
				NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
9+50	22.31	7.92	0.00	0	0	0	0	0	0
9+60	36.04	7.92	0.33	11	3	0	11	0	8
9+83.75	36.04	7.92	0.33	32	7	0	43	0	33
B-21-32	0.00	0.00	0.00	0	0	0	43	0	33
10+16.25	28.48	7.96	2.41	0	0	0	43	0	33
10+50	28.48	7.92	2.41	36	10	3	79	4	55
10+80	20.34	7.92	0.00	27	9	1	106	5	72
				106	29	4			

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

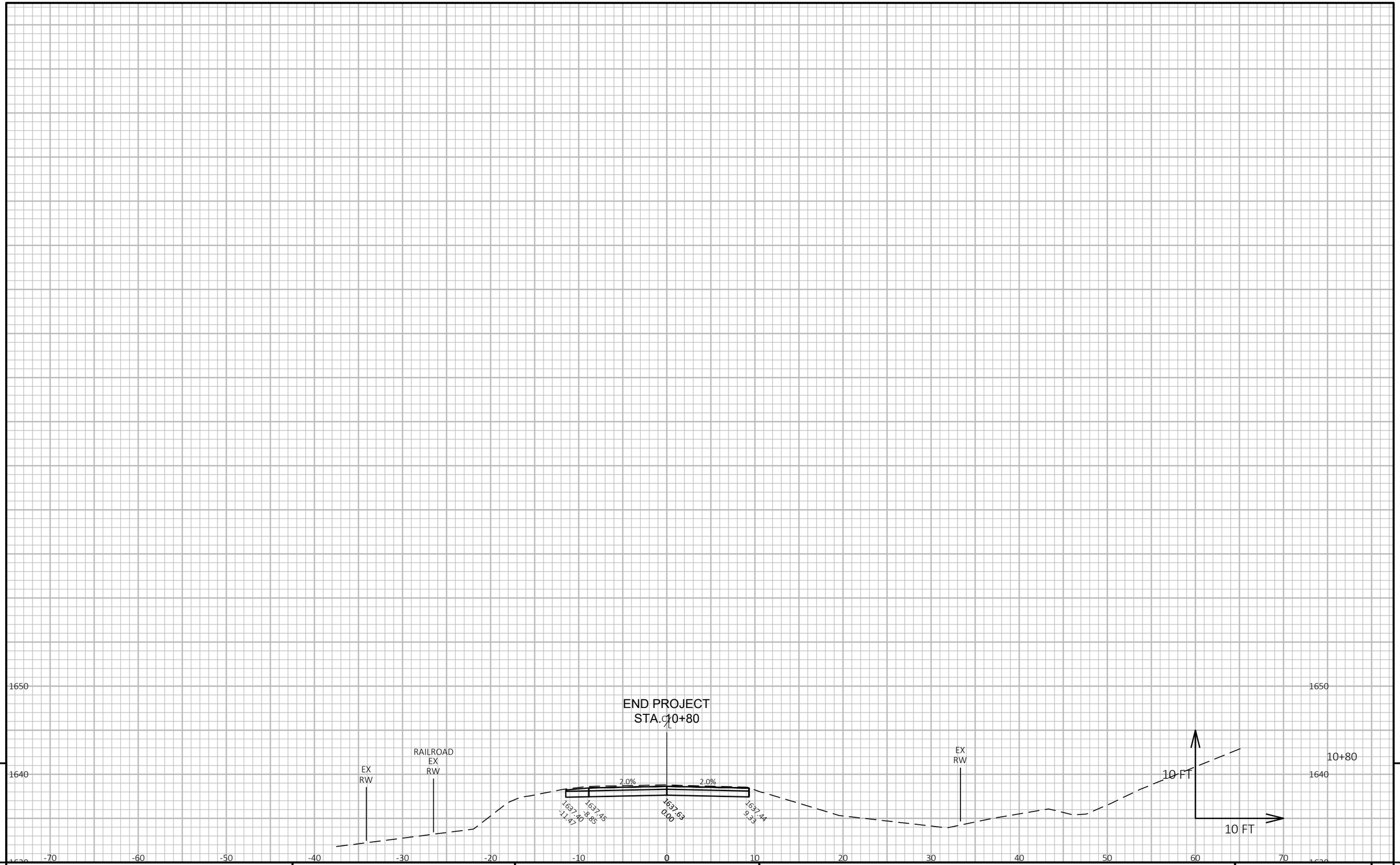


9 9

PROJECT NO: 9815-00-70	HWY: WEST PINE LAKE ROAD	COUNTY: FOREST	CROSS SECTIONS: WEST PINE LAKE ROAD	SHEET 44	E

FILE NAME : I:\45\450505 W. PINE LAKE ROAD\C3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_xs

PLOT DATE : 10/30/2023 2:09 PM PLOT BY : GARNICA, BRANDON PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 9815-00-70	HWY: WEST PINE LAKE ROAD	COUNTY: FOREST	CROSS SECTIONS: WEST PINE LAKE ROAD	SHEET 45	E

FILE NAME : I:\45\450505 W. PINE LAKE ROAD\C3D\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090202_xs

PLOT DATE : 10/30/2023 2:09 PM PLOT BY : GARNICA, BRANDON PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Wisconsin Department of Transportation

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