

ORDER OF SHEETS

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

TOTAL SHEETS = 38

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

## PLAN OF PROPOSED IMPROVEMENT

### T SAXEVILLE, 29TH DRIVE

AUSTIN CREEK BRIDGE B-69-0052

LOC STR

WAUSHARA COUNTY

STATE PROJECT NUMBER  
**6871-00-70**

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6871-00-70	WISC 2024298	1

ACCEPTED FOR  
COUNTY of WAUSHARA

10/30/23 (date) *[Signature]*  
HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

**MSA**  
1230 South Boulevard, Baraboo WI 53913  
(608) 356-2771

WISCONSIN PROFESSIONAL ENGINEER  
JULIA I. ZEHNER  
E-50015  
PRAIRIE DU SAC WI  
*[Signature]*  
DATE: 10/30/2023  
(Professional Engineer Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY  
Surveyor MSA PROFESSIONAL SERVICES, INC.  
Designer MSA PROFESSIONAL SERVICES, INC.  
Project Manager JASON SCHAEFFER  
Regional Examiner REGIONAL EXAMINER  
Regional Supervisor DAN ERVA, P.E.

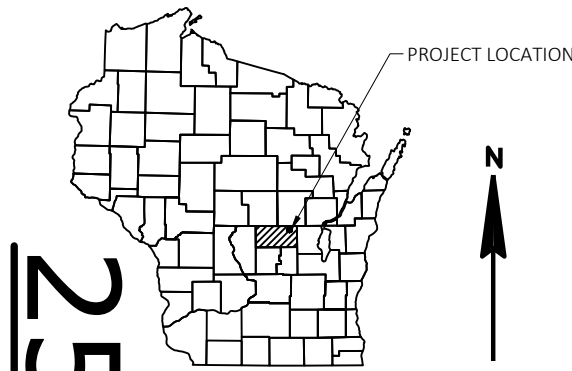
APPROVED FOR THE DEPARTMENT  
DATE: 10/30/2023 *[Signature]*  
(Signature)

E

PROJECT ID: 6871-00-70

WITH: N/A

COUNTY: WAUSHARA



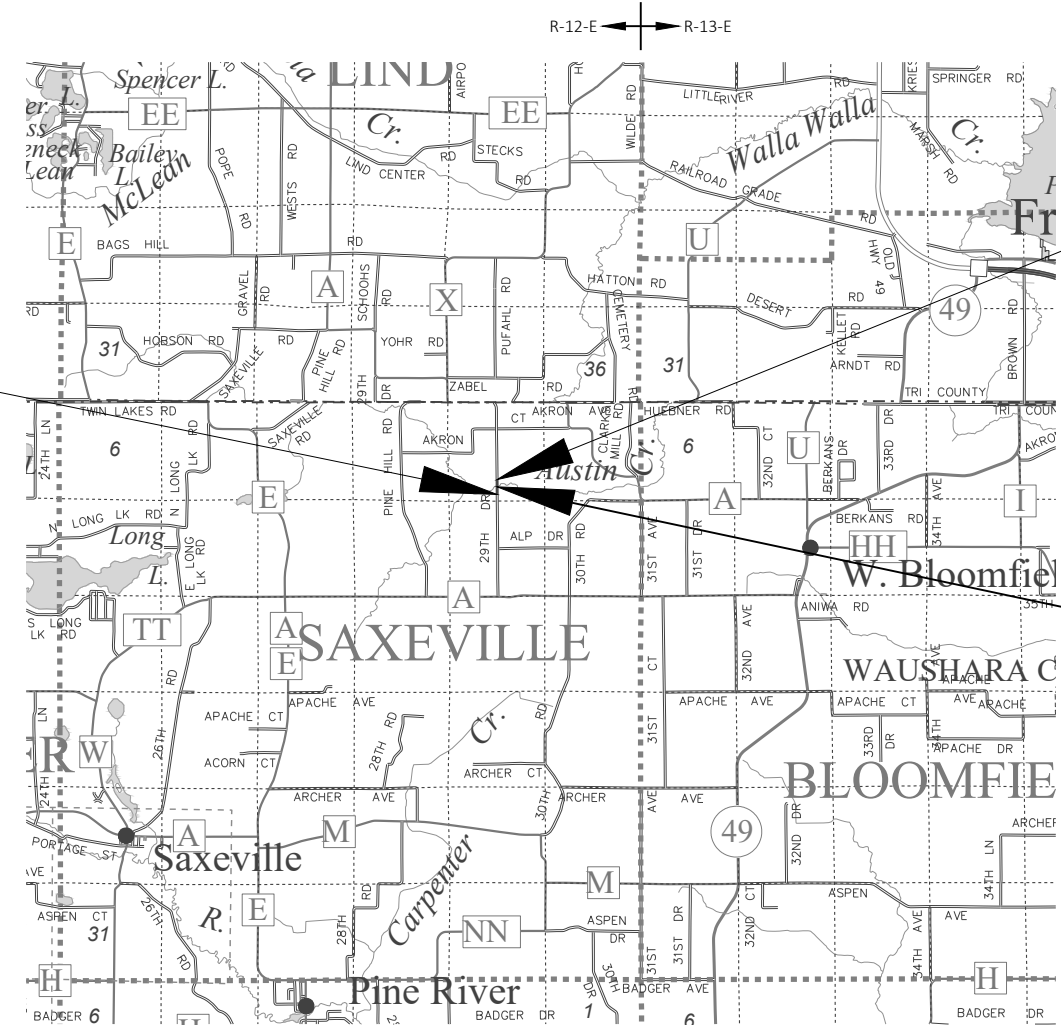
DESIGN DESIGNATION

A.A.D.T. (2024)	=	220
A.A.D.T. (2044)	=	260
D.H.V.	=	9.8%
D.D.	=	62/38
T.	=	12.2%
DESIGN SPEED	=	50 MPH
ESALS	=	52,000

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

BEGIN PROJECT  
STA 9+30  
Y = 190,306.10  
X = 447,720.23



END PROJECT  
STA 10+80

STRUCTURE B-69-0052

LAYOUT  
SCALE 0 2 MI  
TOTAL NET LENGTH OF CENTERLINE = 0.028 MI

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

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

STANDARD ABBREVIATIONS

AC	ACRE	F/L	FLOW LINE	SALV	SALVAGED
AGG	AGGREGATE	FT	FOOT	SAN	SANITARY SEWER
<	ANGLE	GN	GRID NORTH	SECT	SECTION
ASPH	ASPHALTIC	HR	HANDICAP RAMP	SHLDR	SHOULDER
AC	ASPHALT CEMENT	HT	HEIGHT	SW	SIDEWALK
ADT	AVERAGE DAILY TRAFFIC	CWT	HUNDREDWEIGHT	S	SOUTH
B & B	BALLED AND BURLAPPED	HYD	HYDRANT	SB	SOUTHBOUND
BM	BENCH MARK	IN DIA	INCH DIAMETER	SPECS	SPECIFICATIONS
CB	CATCH BASIN	INL	INLET	SQ	SQUARE
OR C/L	CENTER LINE	ID	INSIDE DIAMETER	SF OR SQ FT	SQUARE FEET
C-C	CENTER TO CENTER	I	INTERSECTION ANGLE	SY	SQUARE YARD
CONC	CONCRETE	IE	INVERT ELEVATION	SSPRC	STORM SEWER
CO	COUNTY	IP	IRON PIPE OR PIN		PIPE REINFORCED CONCRETE
CTH	COUNTY TRUNK HIGHWAY	JCT	JUNCTION	STD	STANDARD
CY	CUBIC YARD	L	LENGTH OF CURVE	SDD	STANDARD DETAIL DRAWINGS
CULV	CULVERT	LF	LINEAR FOOT	STH	STATE TRUNK HIGHWAYS
CP	CULVERT PIPE	LC	LONG CHORD OF CURVE	STA	STATION
CPRC	CULVERT PIPE	LCB	LONG CHORD BEARING	SS	STORM SEWER
	REINFORCED CONCRETE	LS	LUMP SUM	T	TANGENT
C & G	CURB AND GUTTER	MH	MANHOLE	TEL	TELEPHONE
D	DEGREE OF CURVE	N	NORTH	TEMP	TEMPORARY
DHV	DESIGN HOUR VOLUME	Y	NORTH GRID COORDINATE	TLE	TEMPORARY LIMITED EASEMENT
DIA OR	DIAMETER	OE	OUTLET ELEVATION	T	TON
DIST	DISTRICT	OL	OUT LOT	TC	TOP OF CURB
DWY	DRIVEWAY	OD	OUTSIDE DIAMETER	TN	TOWN
E	EAST	OH	OVERHEAD LINES	TRANS	TRANSITION
X	EAST GRID COORDINATE	PAVT	PAVEMENT	T	TRUCKS (percent of)
EB	EASTBOUND	PLE	PERMANENT LIMITED EASEMENT	TYP	TYPICAL
ELEC	ELECTRIC	PC	POINT OF CURVATURE	UNCL	UNCLASSIFIED
EL OR ELEV	ELEVATION	PI	POINT OF INTERSECTION	USH	UNITED STATES HIGHWAY
EMB	EMBANKMENT	PT	POINT OF TANGENCY	VAR	VARIABLE
EW	ENDWALL	PCC	PORTLAND CEMENT CONCRETE	VERT	VERTICAL
ESALS	EQUIVALENT SINGLE	LB	POUND	VC	VERTICAL CURVE
	AXLE LOADS	PE	PRIVATE ENTRANCE	VOL	VOLUME
EXC	EXCAVATION	R OR RAD	RADIUS	WM	WATER MAIN
EBS	EXCAVATION BELOW	RR	RAILROAD	WV	WATER VALVE
	SUBGRADE	R	RANGE	W	WEST
EXIST	EXISTING	~ OR R/L	REFERENCE LINE	WB	WESTBOUND
EXP	EXPANSION	REQD	REQUIRED	YD	YARD
F-F	FACE TO FACE	RT	RIGHT		
FERT	FERTILIZER	R/W	RIGHT-OF-WAY		
FE	FIELD ENTRANCE	RD	ROAD		

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.  
 1230 SOUTH BOULEVARD  
 BARABOO, WI 53913  
 ATTN: QUIRIN KLINK, PE  
 PHONE: (608) 355-8890  
 EMAIL: QKLINK@MSA-PS.COM

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
 CASEY JONES  
 DNR WISCONSIN RAPIDS SERVICE CENTER  
 473 GRIFFITH DRIVE  
 WISCONSIN RAPIDS, WI 54494  
 PHONE: (715) 213-6571  
 EMAIL: CASEY.JONES@WISCONSIN.GOV

RUNOFF COEFFICIENT TABLE

LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	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	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.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 = 0.23 ACRES  
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.16 ACRES

GENERAL NOTES

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS SHALL BE FERTILIZED, SEEDED, AND COVERED WITH EROSION CONTROL MAT AS DIRECTED BY THE ENGINEER.

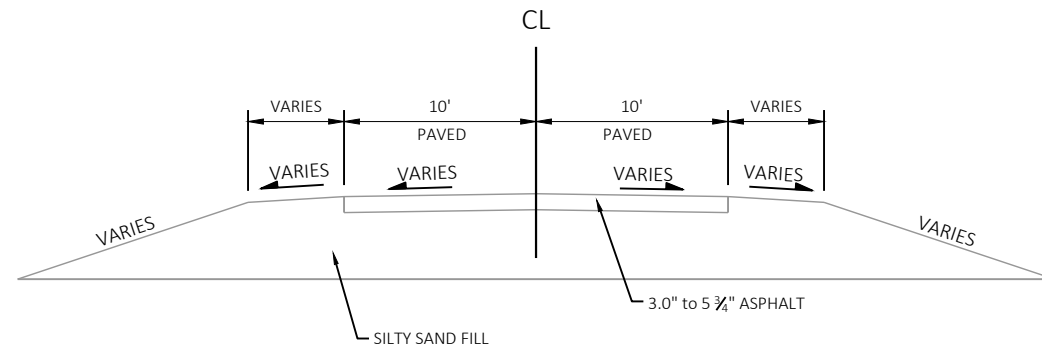
SILT FENCE AND TURBIDITY BARRIER TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO BRIDGE REMOVAL.

WETLANDS ARE PRESENT OUTSIDE THE EXISTING TOE OF SLOPE. AREAS OUTSIDE THE SLOPE INTERCEPTS SHALL NOT BE DISTURBED.

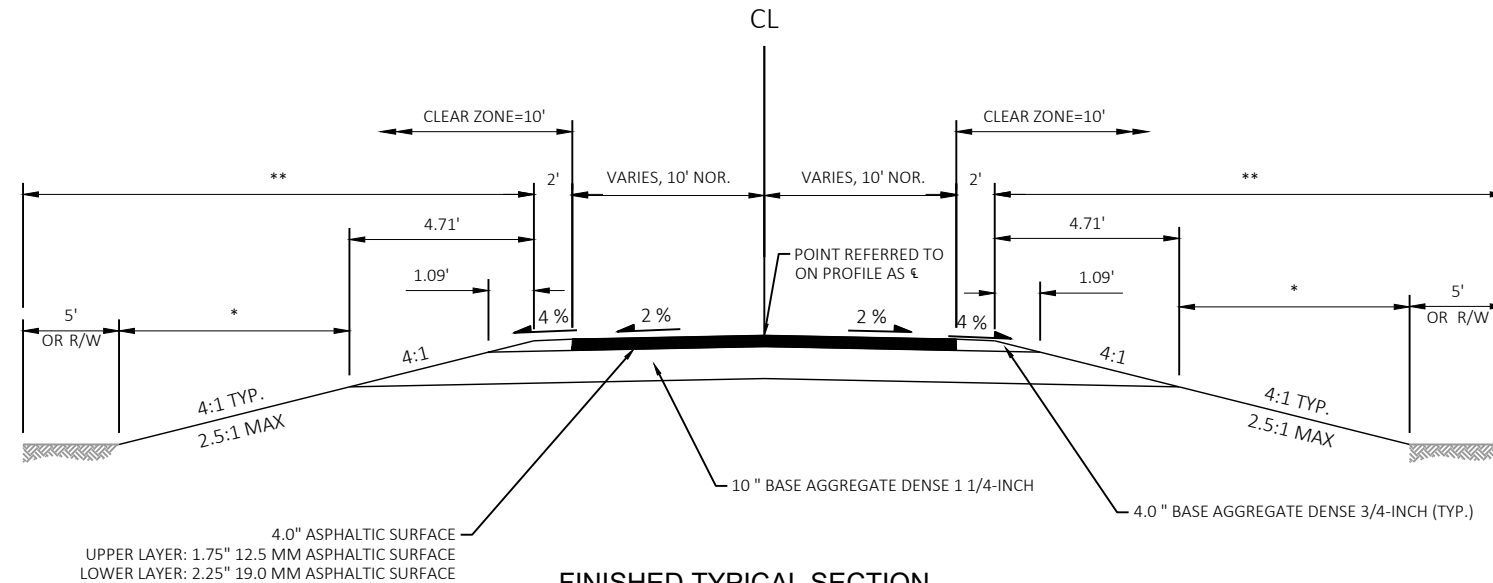


Dial 811 or (800)242-8511

www.DiggersHotline.com

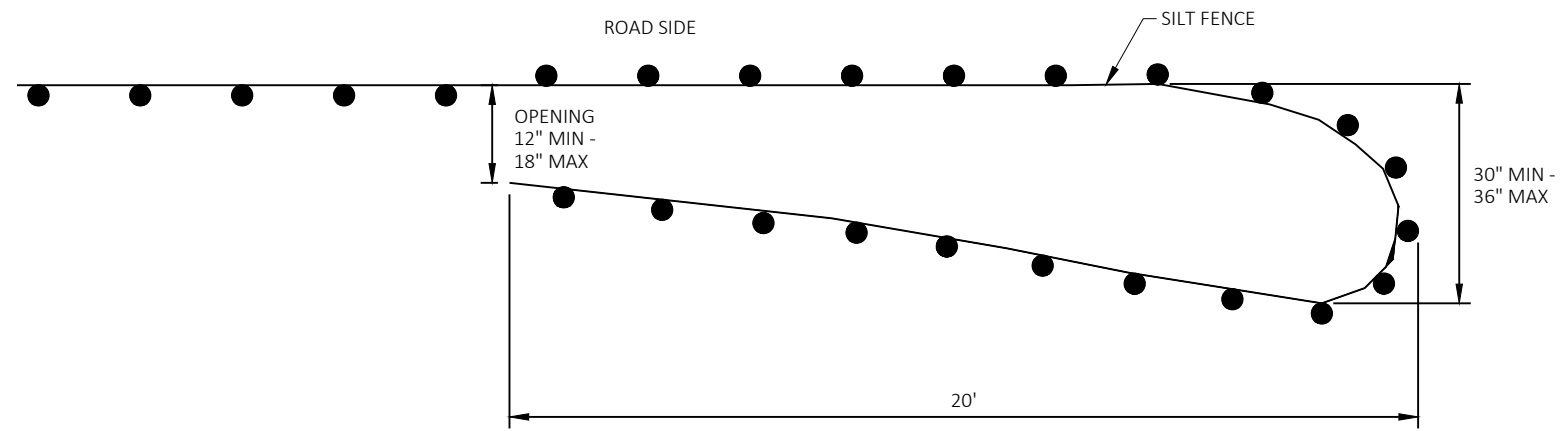


**EXISTING TYPICAL SECTION**  
 29th DRIVE  
 STA. 9+30 - STA. 10+80



**FINISHED TYPICAL SECTION**  
 29th DRIVE  
 STA. 9+30 - STA. 10+80

- \* LIMITS OF SALVAGED TOPSOIL AND EROSION MAT URBAN CLASS I, TYPE B
- \*\* LIMITS OF SEEDING MIXTURE #20, SEEDING TEMPORARY & FERTILIZER TYPE B



PLAN VIEW

GENERAL NOTES:

SILT FENCE POSTS FOR THE TURN-AROUND SHALL BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

TEMPORARY SMALL ANIMAL TURN-AROUND

Estimate Of Quantities

6871-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	203.0270	Removing Structure Over Waterway Debris Capture (structure) 01. P-69-0012	EACH	1.000	1.000
0006	205.0100	Excavation Common	CY	100.000	100.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-69-0052	EACH	1.000	1.000
0010	208.0100	Borrow	CY	14.000	14.000
0012	210.1500	Backfill Structure Type A	TON	293.000	293.000
0014	213.0100	Finishing Roadway (project) 01. 6871-00-70	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	14.000	14.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	225.000	225.000
0020	455.0605	Tack Coat	GAL	15.000	15.000
0022	465.0105	Asphaltic Surface	TON	68.000	68.000
0024	502.0100	Concrete Masonry Bridges	CY	148.000	148.000
0026	502.3200	Protective Surface Treatment	SY	169.000	169.000
0028	505.0400	Bar Steel Reinforcement HS Structures	LB	3,770.000	3,770.000
0030	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,815.000	15,815.000
0032	513.4061	Railing Tubular Type M	LF	130.000	130.000
0034	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0036	550.0600	Pile Redriving	EACH	12.000	12.000
0038	550.2104	Piling CIP Concrete 10 3/4 X 0.25-Inch	LF	930.000	930.000
0040	606.0300	Riprap Heavy	CY	110.000	110.000
0042	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0044	618.0100	Maintenance and Repair of Haul Roads (project) 01. 6871-00-70	EACH	1.000	1.000
0046	619.1000	Mobilization	EACH	1.000	1.000
0048	624.0100	Water	MGAL	3.700	3.700
0050	625.0500	Salvaged Topsoil	SY	183.000	183.000
0052	628.1504	Silt Fence	LF	363.000	363.000
0054	628.1520	Silt Fence Maintenance	LF	363.000	363.000
0056	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0058	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0060	628.2008	Erosion Mat Urban Class I Type B	SY	183.000	183.000
0062	628.6005	Turbidity Barriers	SY	174.000	174.000
0064	629.0210	Fertilizer Type B	CWT	0.500	0.500
0066	630.0120	Seeding Mixture No. 20	LB	14.000	14.000
0068	630.0200	Seeding Temporary	LB	9.000	9.000
0070	630.0500	Seed Water	MGAL	9.500	9.500
0072	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0074	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0076	642.5001	Field Office Type B	EACH	1.000	1.000
0078	643.0420	Traffic Control Barricades Type III	DAY	1,485.000	1,485.000
0080	643.0705	Traffic Control Warning Lights Type A	DAY	1,650.000	1,650.000
0082	643.0900	Traffic Control Signs	DAY	1,155.000	1,155.000
0084	643.5000	Traffic Control	EACH	1.000	1.000
0086	645.0111	Geotextile Type DF Schedule A	SY	56.000	56.000
0088	645.0120	Geotextile Type HR	SY	240.000	240.000
0090	650.4500	Construction Staking Subgrade	LF	112.000	112.000
0092	650.5000	Construction Staking Base	LF	112.000	112.000
0094	650.6501	Construction Staking Structure Layout (structure) 01. B-69-0052	EACH	1.000	1.000
0096	650.9911	Construction Staking Supplemental Control (project) 01. 6871-00-70	EACH	1.000	1.000
0098	650.9920	Construction Staking Slope Stakes	LF	112.000	112.000
0100	690.0150	Sawing Asphalt	LF	41.000	41.000

Estimate Of Quantities

6871-00-70

Line	Item	Item Description	Unit	Total	Qty
0102	715.0502	Incentive Strength Concrete Structures	DOL	888.000	888.000
0104	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	150.000	150.000
0106	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0108	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	52.000	52.000

3

3

EXCAVATION COMMON AND BORROW

GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0205 GRUBBING STA
0010	9+30	-	9+86	LT & RT	1
0010	10+18	-	10+80	LT & RT	1
TOTAL 0010					2

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY	FILL CY (1)	EXPANDED FILL CY (2)	WASTE CY	208.0100 BORROW CY
0010	9+30	-	9+70	MAINLINE	47	19	25	22	-22
0010	10+32	-	10+80	MAINLINE	53	50	25	-12	12
0010	---	-	---	UNUSABLE PAVEMENT	---	---	---	---	24
TOTAL 0010					100				14

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.  
 (2) - FILL EXPANSION 30%  
 (3) - EXISTING PAVEMENT IS INCLUDED IN EXCAVATION COMMON TOTALS. SEE EARTHWORK TABLE.

BASE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4- INCH TON	624.0100 WATER MGAL
0010	9+30	-	9+82	MAINLINE & SHOULDERS	6	103	1.7
0010	10+20	-	10+80	MAINLINE & SHOULDERS	8	122	2.0
TOTAL 0010					14	225	3.7

ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	THICKNESS (INCHES)	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
0010	9+30	-	9+82	LOWER LAYER	2.25	---	18
0010	9+30	-	9+82	UPPER LAYER	1.75	7	14
0010	10+20	-	10+80	LOWER LAYER	2.25	---	20
0010	10+20	-	10+80	UPPER LAYER	1.75	8	16
TOTAL 0010						15	68

RESTORATION ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
0010	9+30	-	9+70	LT	29	29	0.1	2	1	1.5
0010	9+30	-	9+70	RT	29	29	0.1	3	2	1.7
0010	10+32	-	10+80	LT	42	42	0.1	3	2	2.1
0010	10+32	-	10+80	RT	46	46	0.1	3	2	2.3
0010	UNDISTRIBUTED				37	37	0.1	3	2	1.9
TOTAL 0010					183	183	0.5	14	9	9.5

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT 6871-00-70	3	2
TOTAL 0010		3	2

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520
					SILT FENCE LF	SILT FENCE MAINTENANCE LF
0010	9+30	-	9+80	LT	66	66
0010	9+30	-	9+80	RT	72	72
0010	10+20	-	10+80	LT	75	75
0010	10+20	-	10+80	RT	77	77
0010	UNDISTRIBUTED				73	73
TOTAL 0010					363	363

TURBIDITY BARRIERS

CATEGORY	LOCATION	628.6005
		TURBIDITY BARRIERS SY
0010	SOUTH ABUTMENT	92
0010	NORTH ABUTMENT	82
TOTAL 0010		174

SIGNING ITEMS

CATEGORY	STATION	LOCATION	634.0612	637.2230	REMARKS
			POSTS WOOD 4X6-INCH X 12-FT EACH	SIGNS TYPE II REFLECTIVE F SF	
0010	9+68	LT	1	3	W5-52L
0010	9+68	RT	1	3	W5-52R
0010	10+32	LT	1	3	W5-52L
0010	10+32	RT	1	3	W5-52R
TOTAL 0010			4	12	

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	DAYS	643.0420	643.0420	643.0705	643.0705	643.0900	643.0900
			TRAFFIC CONTROL BARRICADES TYPE III EACH	TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL SIGNS EACH	TRAFFIC CONTROL SIGNS DAY
0010	ALP DRIVE	75	2	150	4	300	3	225
0010	SOUTH PROJECT LIMITS	75	7	525	6	450	4	300
0010	NORTH PROJECT LIMITS	75	7	525	6	450	4	300
0010	AKRON CT	75	2	150	4	300	3	225
0010	UNDISTRIBUTED	--	--	135	--	150	--	105
TOTAL 0010				1,485		1,650		1,155

CONSTRUCTION STAKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	650.4500	650.5000	650.9920
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING SLOPE STAKES LF
0010	9+30	-	9+82	MAINLINE	52	52	52
0010	10+20	-	10+80	MAINLINE	60	60	60
TOTAL 0010					112	112	112

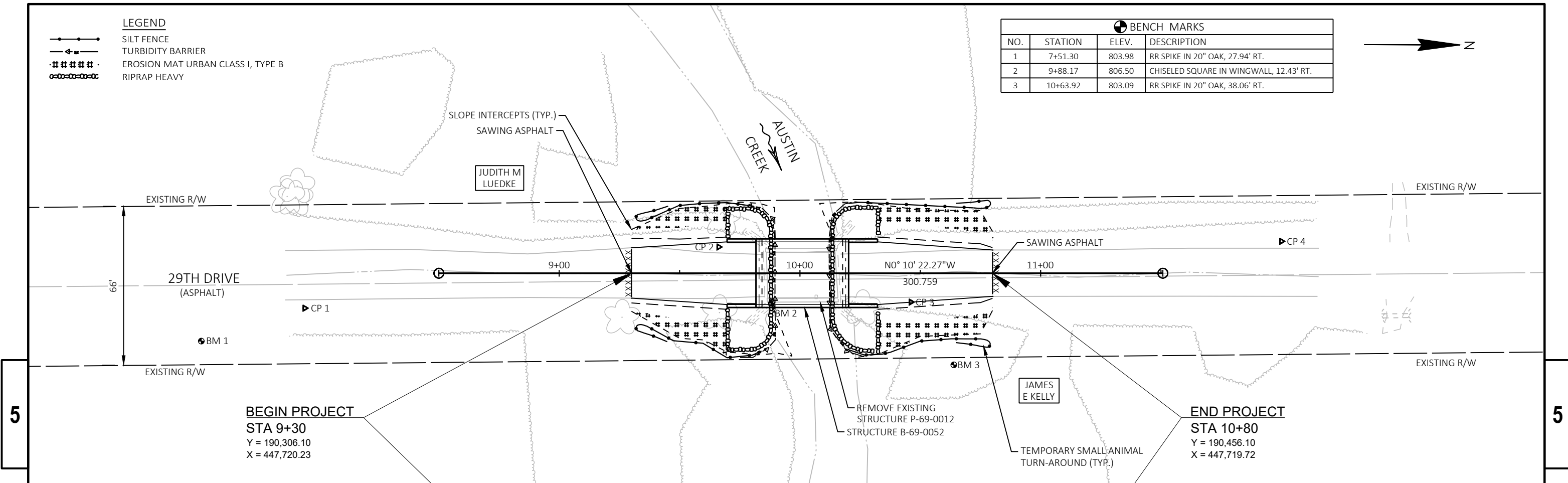
SAWING

CATEGORY	STATION	LOCATION	690.0150
			SAWING ASPHALT LF
0010	9+30	MAINLINE	21
0010	10+80	MAINLINE	20
TOTAL 0010			41



- LEGEND**
- SILT FENCE
  - ◄— TURBIDITY BARRIER
  - #### EROSION MAT URBAN CLASS I, TYPE B
  - RIPRAP HEAVY

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
1	7+51.30	803.98	RR SPIKE IN 20" OAK, 27.94' RT.
2	9+88.17	806.50	CHISELED SQUARE IN WINGWALL, 12.43' RT.
3	10+63.92	803.09	RR SPIKE IN 20" OAK, 38.06' RT.

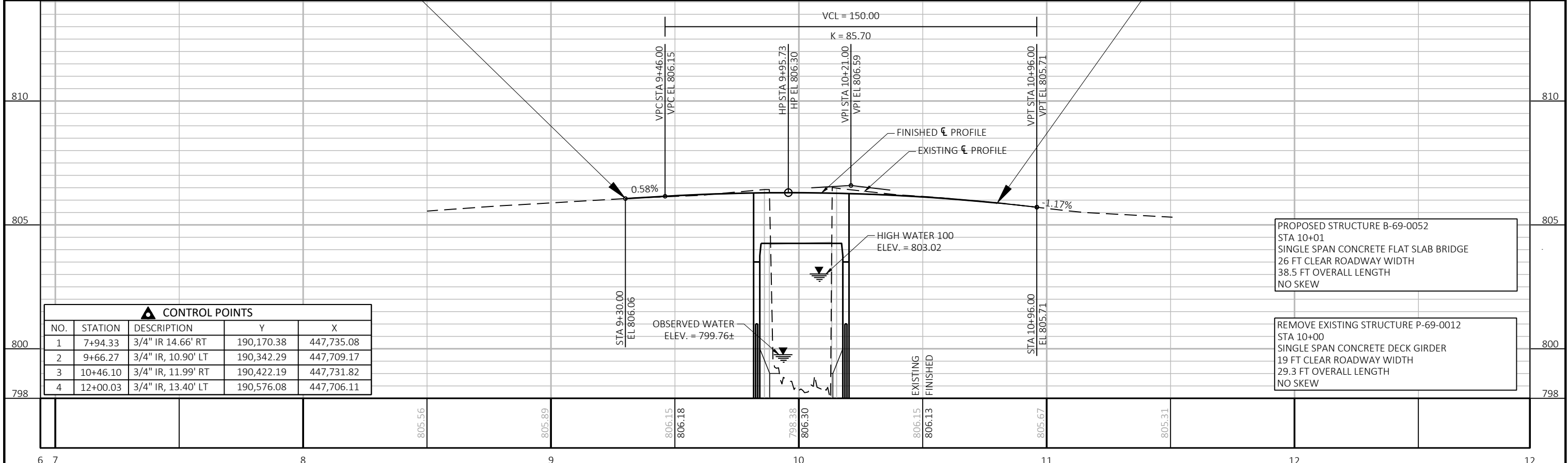


5

5

**BEGIN PROJECT**  
 STA 9+30  
 Y = 190,306.10  
 X = 447,720.23

**END PROJECT**  
 STA 10+80  
 Y = 190,456.10  
 X = 447,719.72

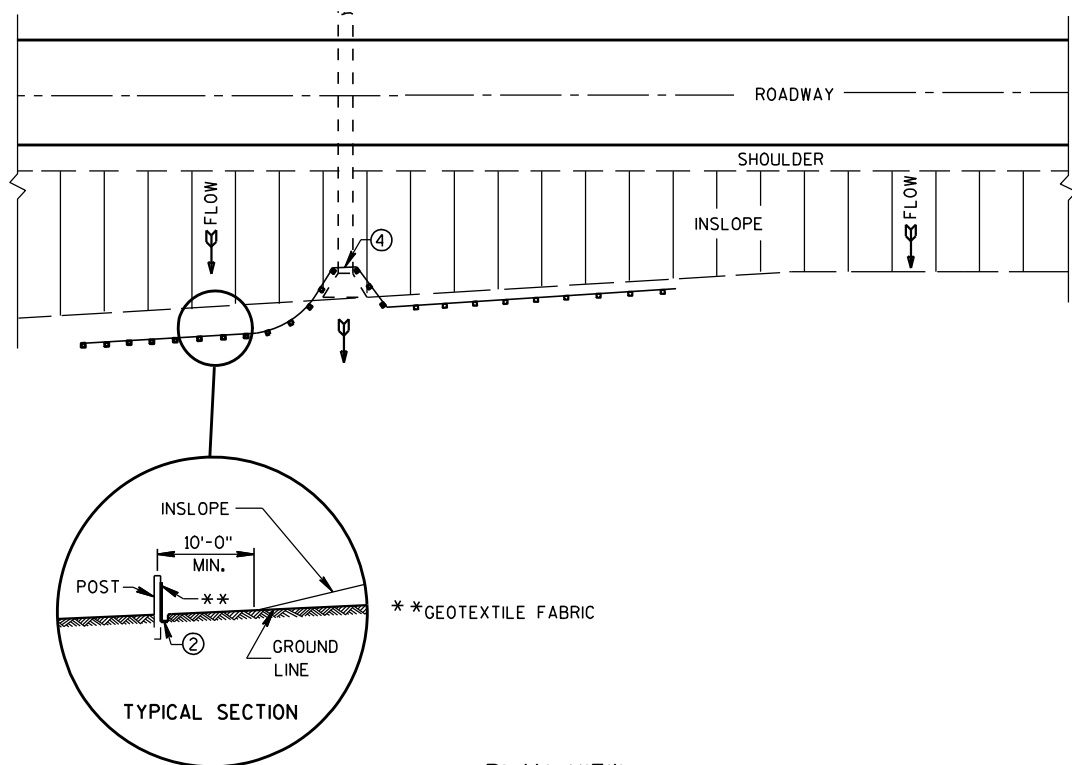


CONTROL POINTS				
NO.	STATION	DESCRIPTION	Y	X
1	7+94.33	3/4" IR 14.66' RT	190,170.38	447,735.08
2	9+66.27	3/4" IR, 10.90' LT	190,342.29	447,709.17
3	10+46.10	3/4" IR, 11.99' RT	190,422.19	447,731.82
4	12+00.03	3/4" IR, 13.40' LT	190,576.08	447,706.11

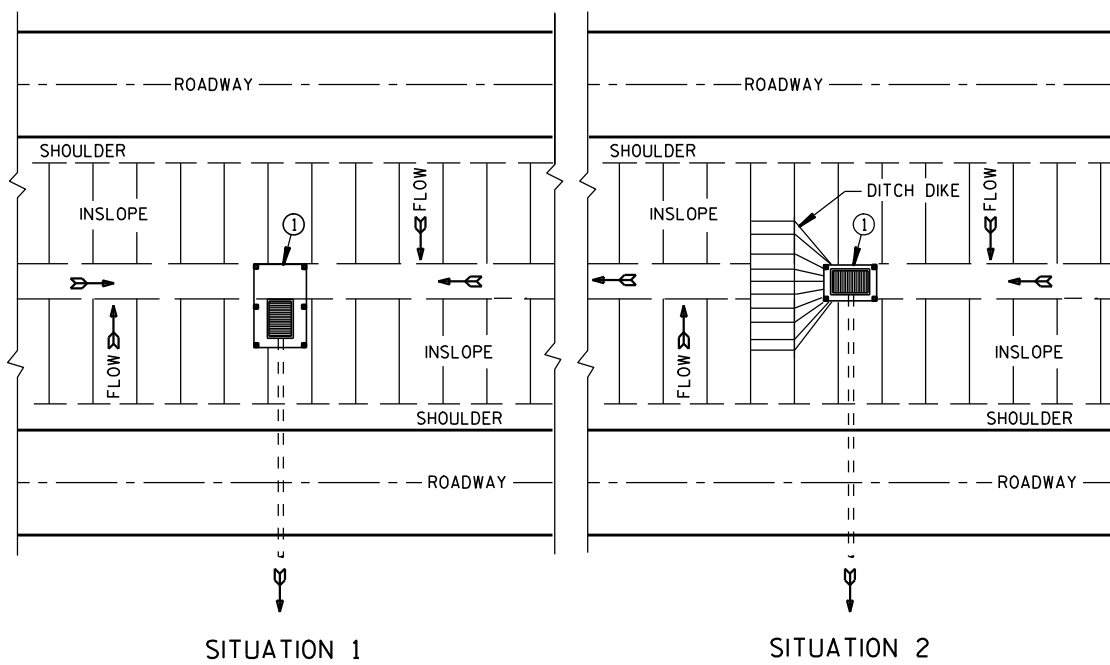
PROJECT NO: 6871-00-70      HWY: LOC STR      COUNTY: WAUSHARA      PLAN AND PROFILE: 29TH DRIVE      SHEET: E

## Standard Detail Drawing List

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



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

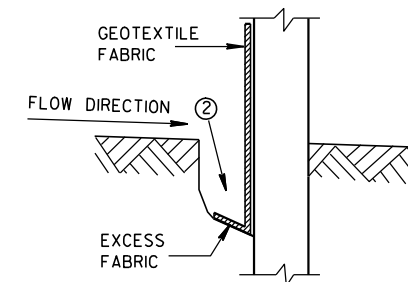


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

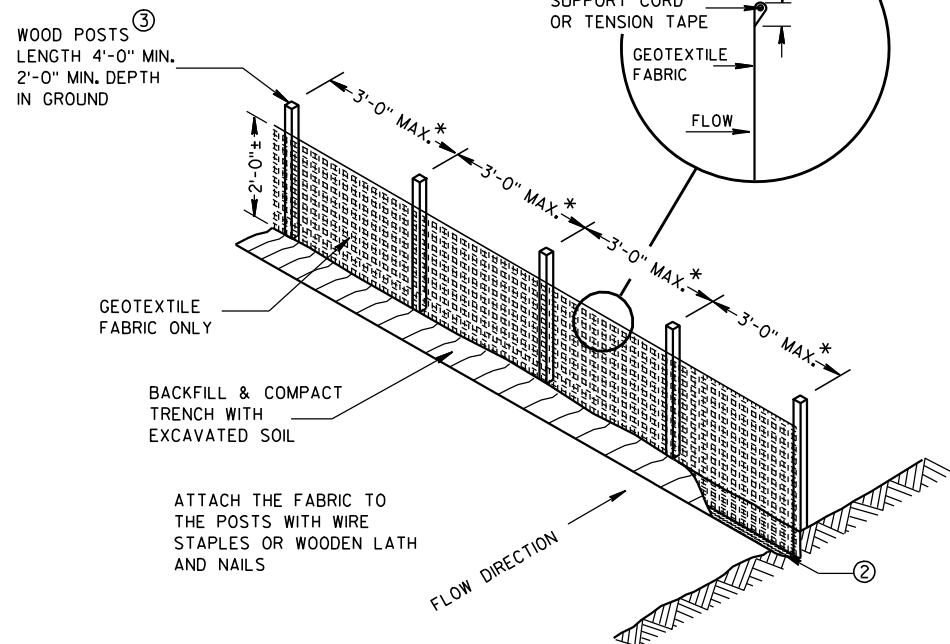
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



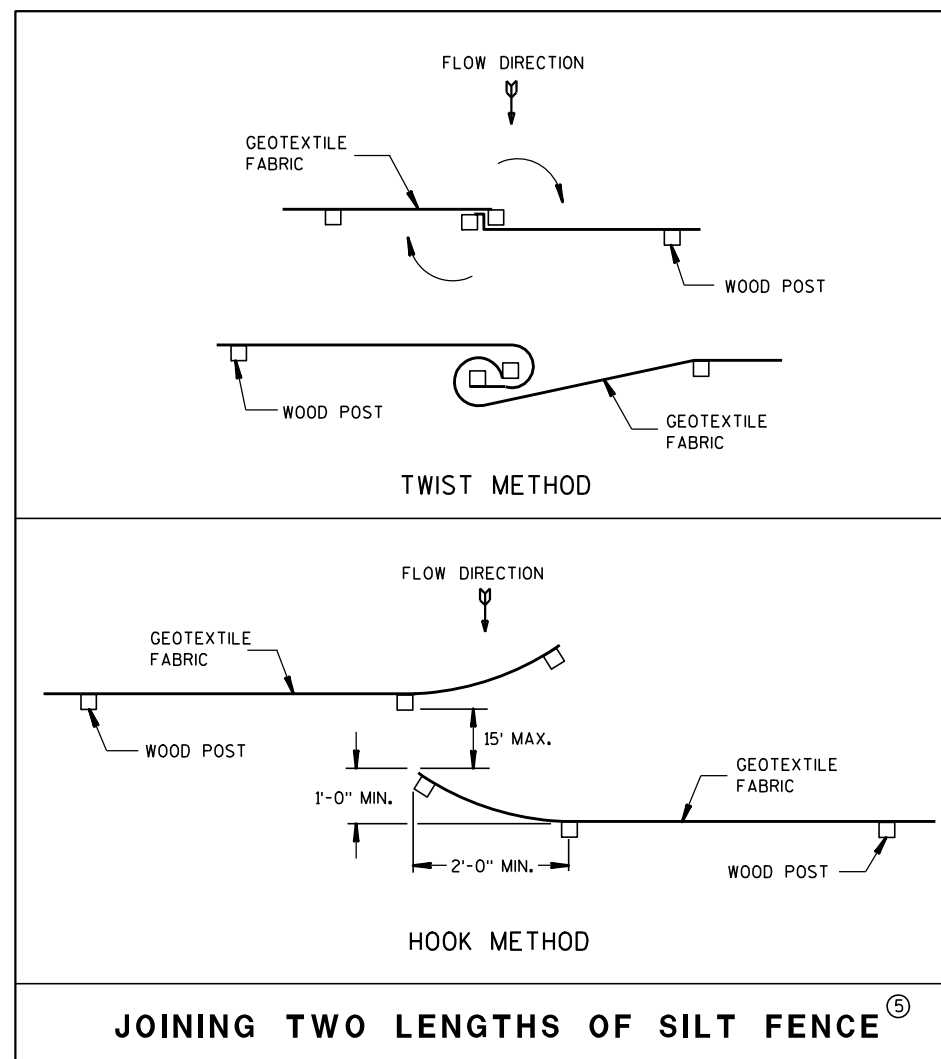
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

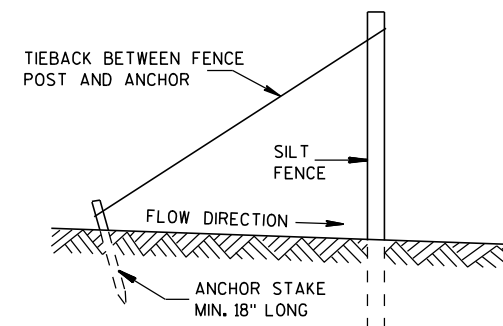


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE

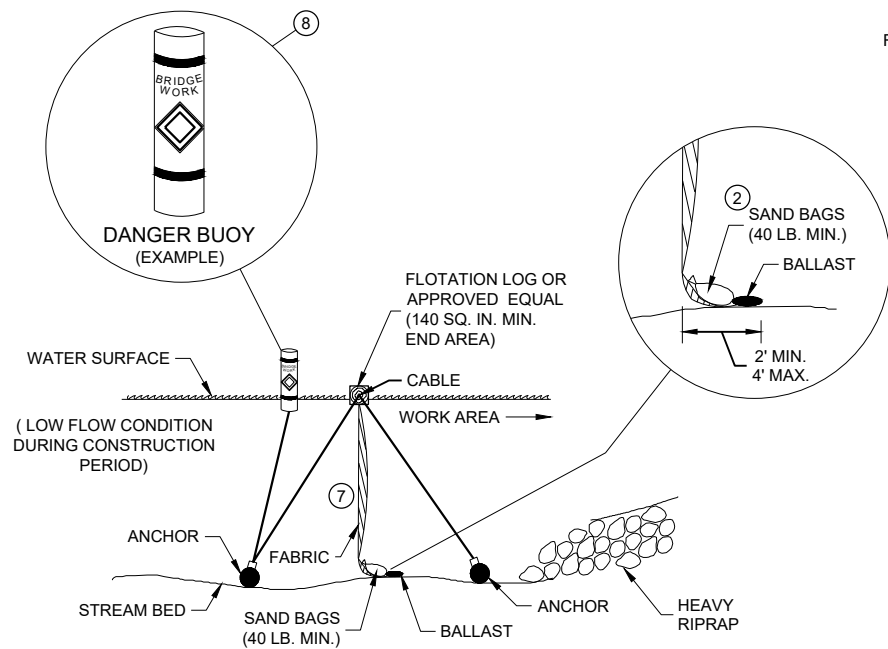


SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

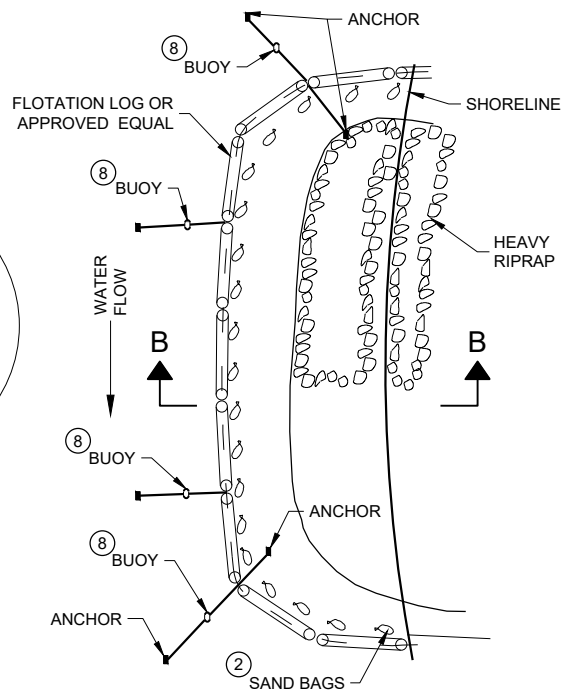
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

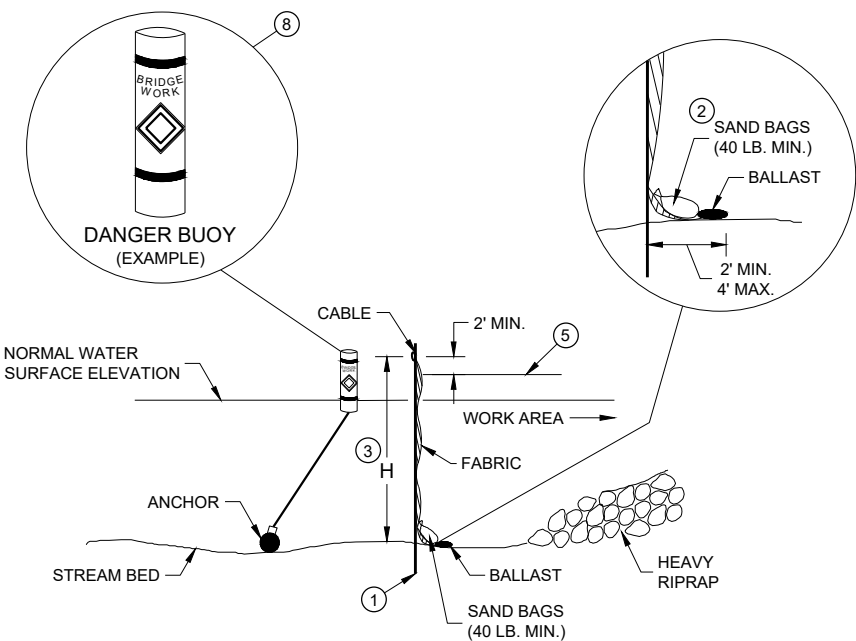


**SECTION B - B**

**TURBIDITY BARRIER - FLOAT ALTERNATIVE  
CAUTION - SEE NOTE 6**

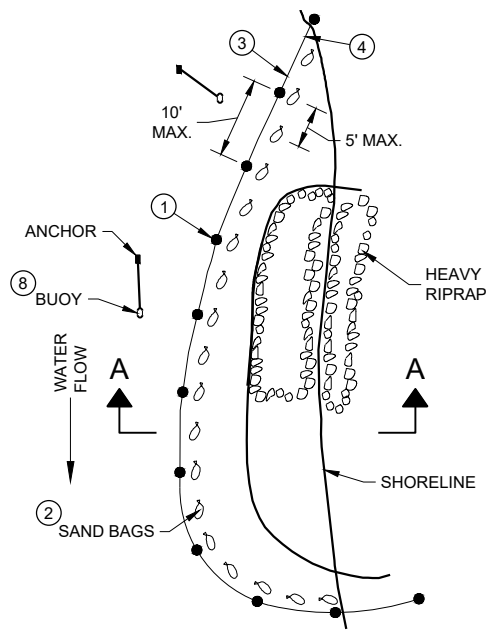


**PLAN VIEW**



**SECTION A - A**

**TURBIDITY BARRIER - STANDARD POST INSTALLATION**



**PLAN VIEW**

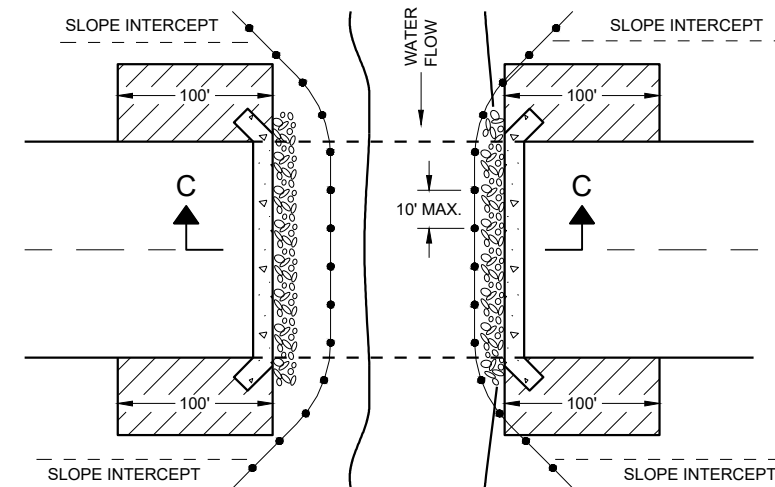
**TURBIDITY BARRIER PLACEMENT DETAILS**

**GENERAL NOTES**

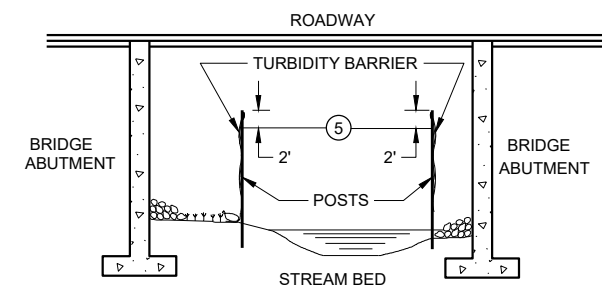
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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**

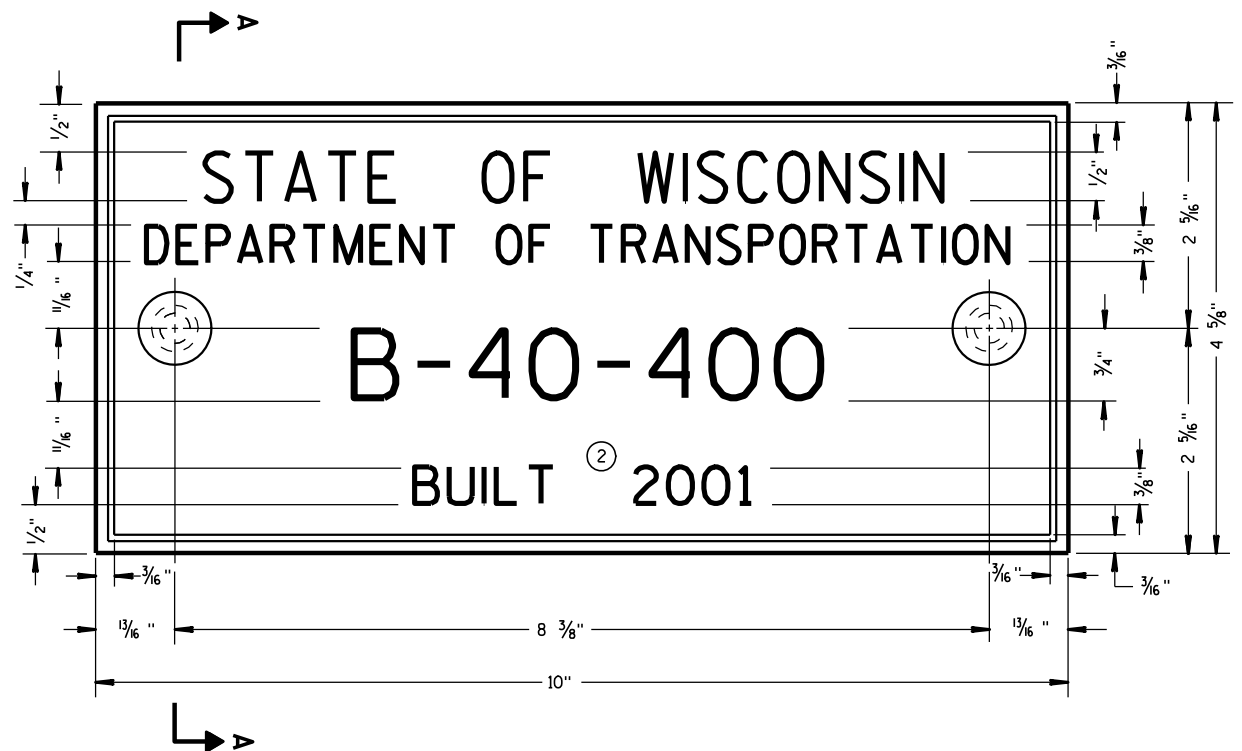
**TURBIDITY BARRIER DETAIL SHOWING  
TYPICAL PLACEMENT AT STRUCTURES**

**TURBIDITY BARRIER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



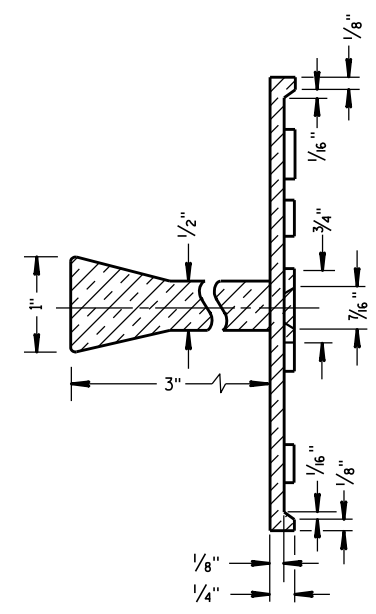
**TYPICAL NAME PLATE**  
(BRIDGES, CULVERTS, AND RETAINING WALLS)

**GENERAL NOTES**

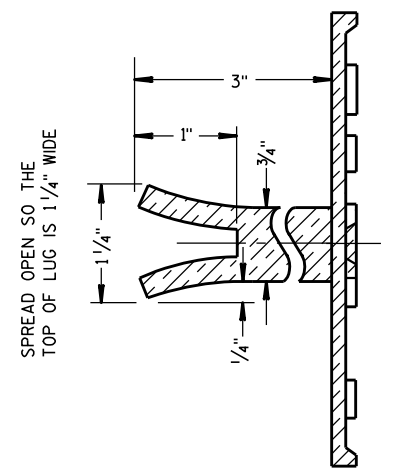
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



**SECTION A-A**

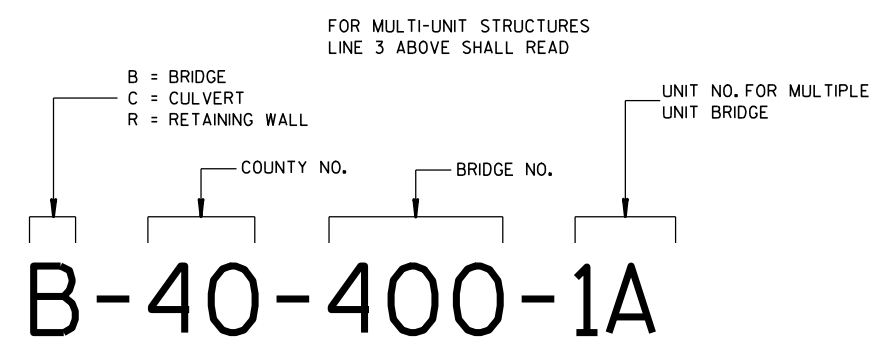


SPREAD OPEN SO THE TOP OF LUG IS 1 1/4" WIDE

**ALTERNATE LUG**

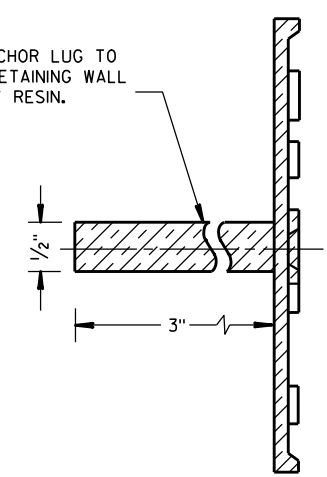
6

6



**NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES**

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.

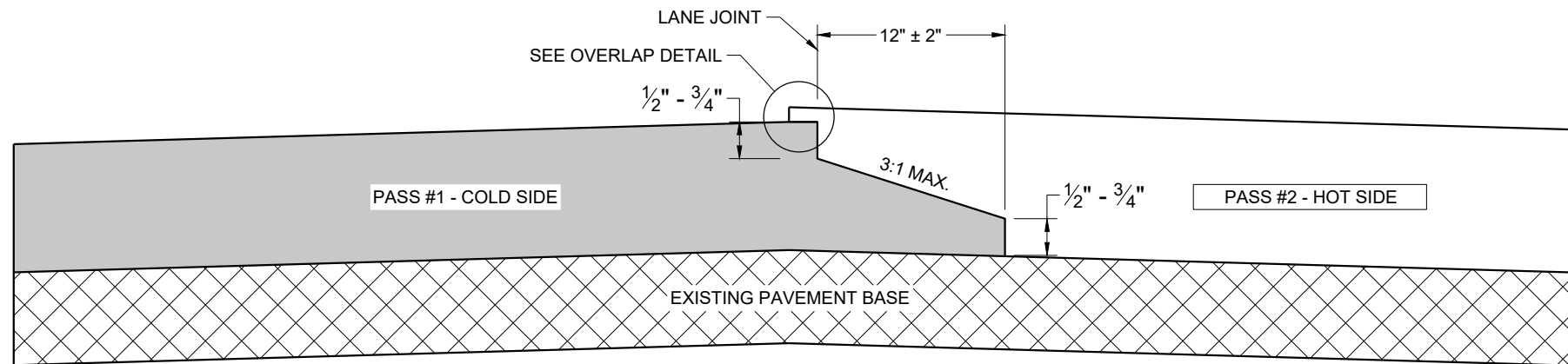


**ALTERNATE LUG**  
(FOR ATTACHMENT TO PRECAST STRUCTURES)

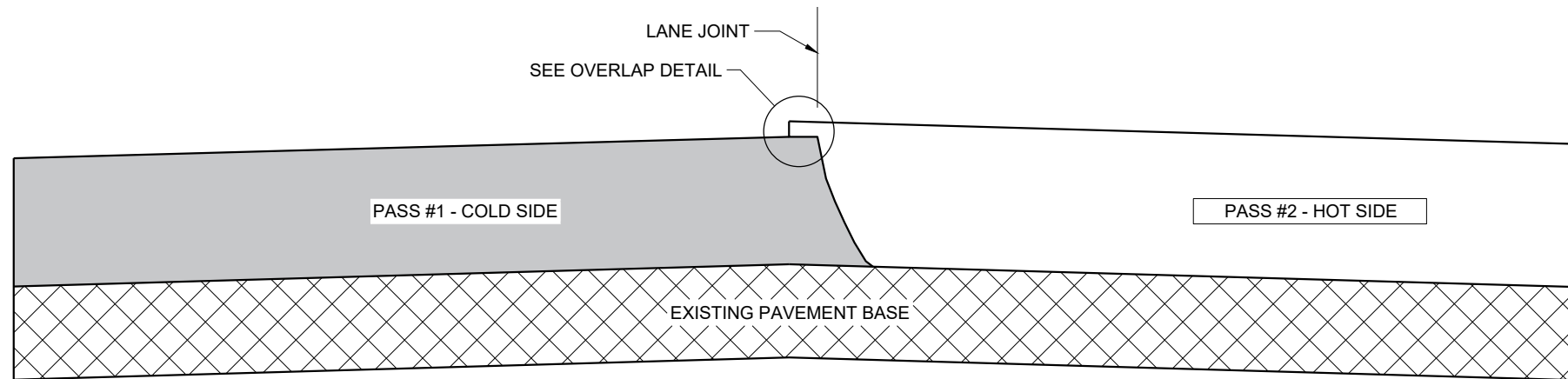
S.D.D. 12 A 3-10

S.D.D. 12 A 3-10

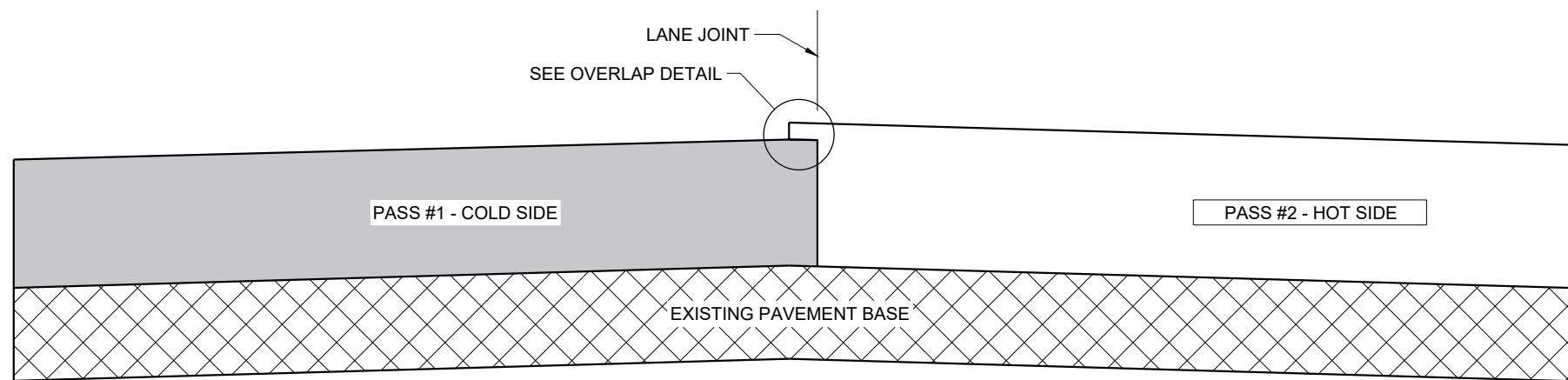
<b>NAME PLATE (STRUCTURES)</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 3/26/10	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

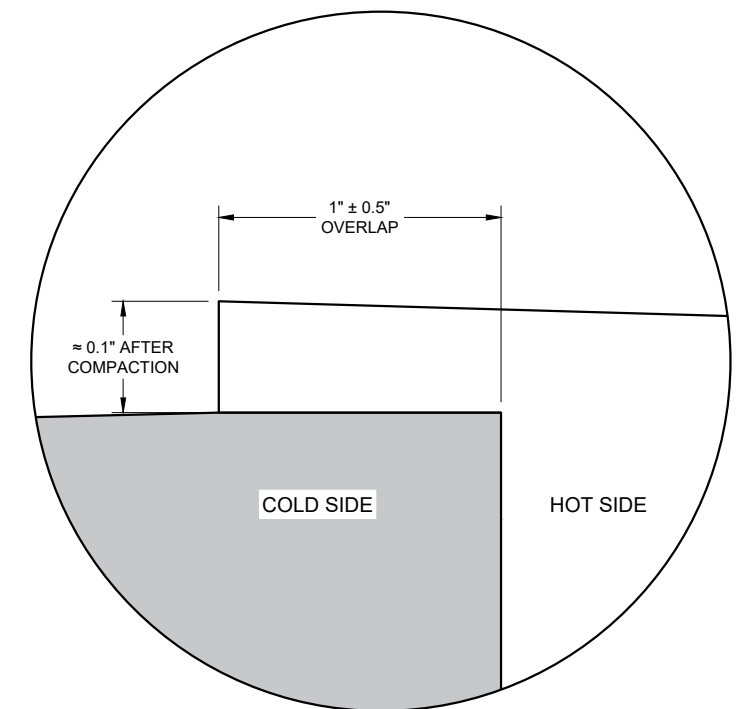
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  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)**

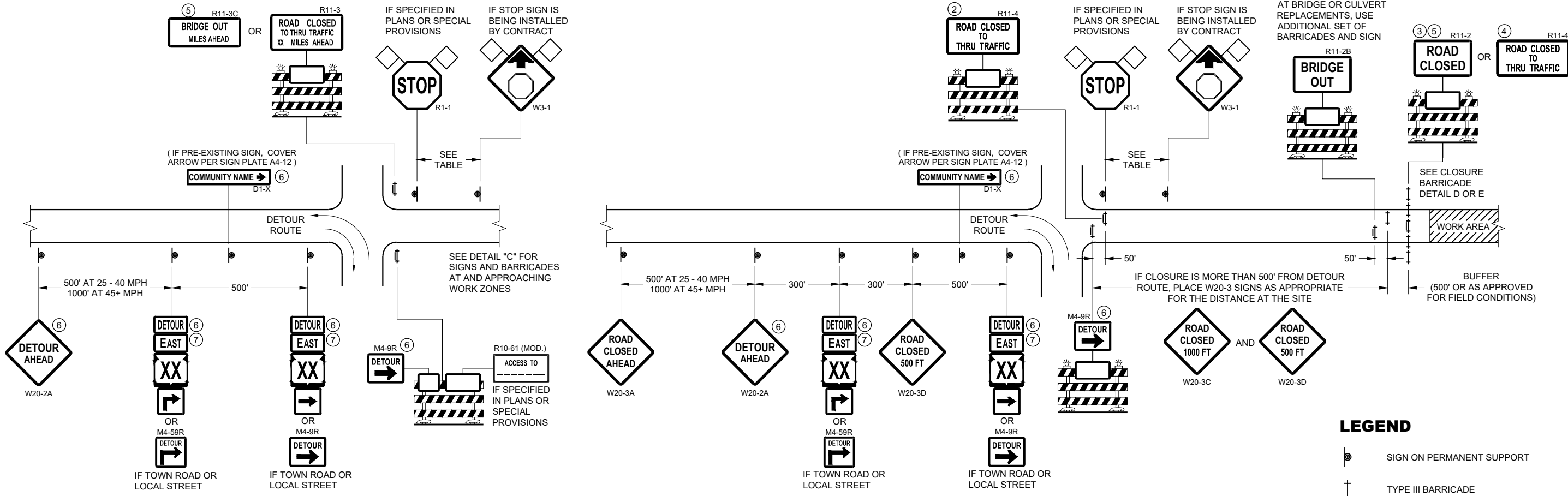
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SDD 13C19 - 03

SDD 13C19 - 03

<b>HMA LONGITUDINAL JOINTS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

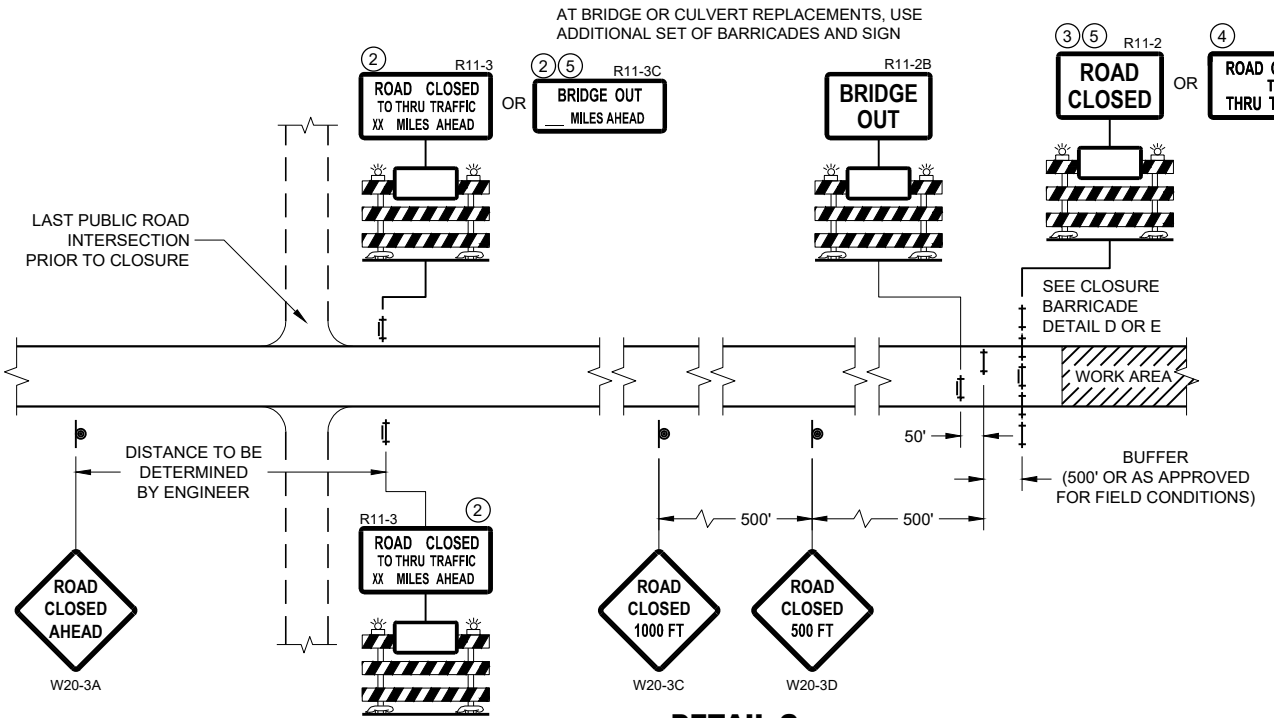
**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

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

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



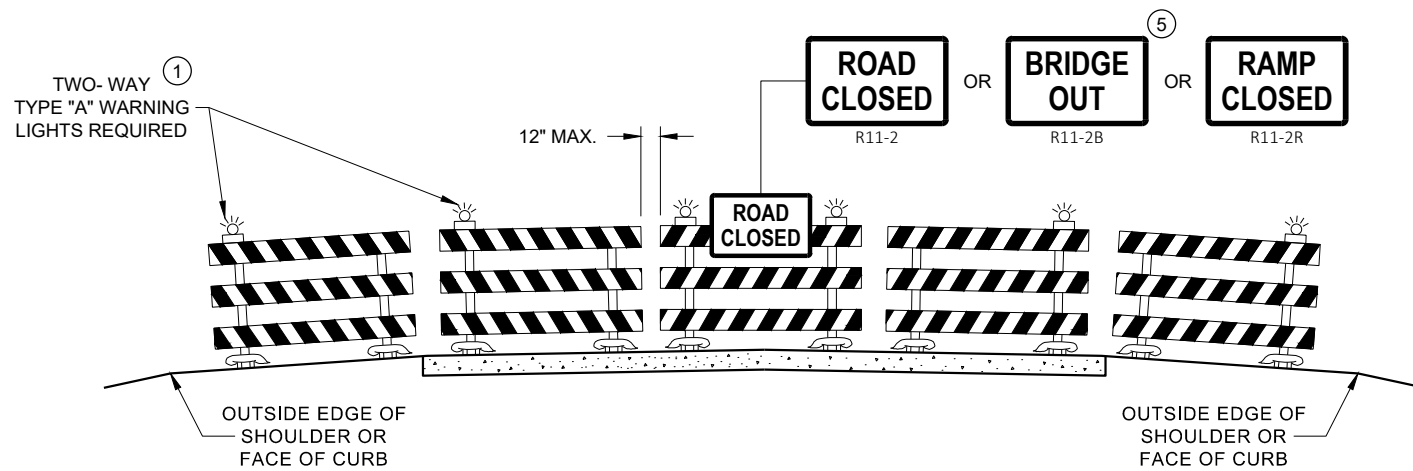
**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

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

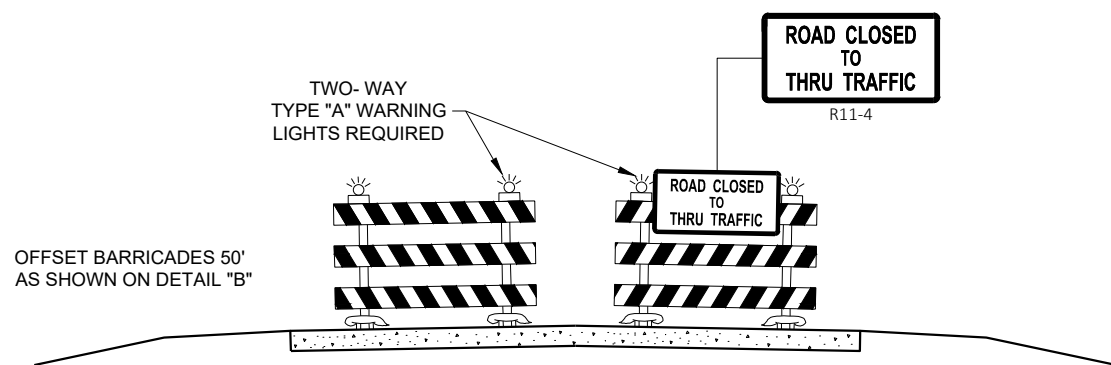
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**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"

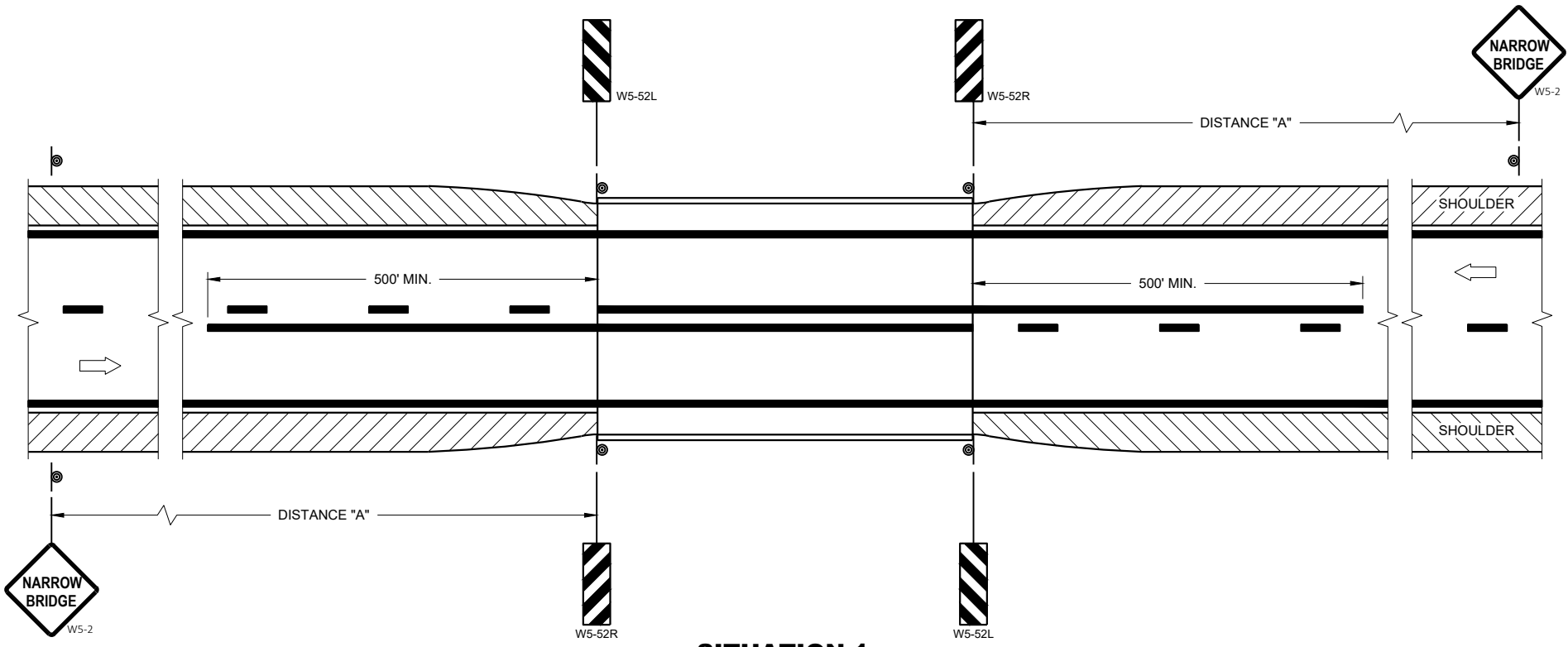
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS 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**

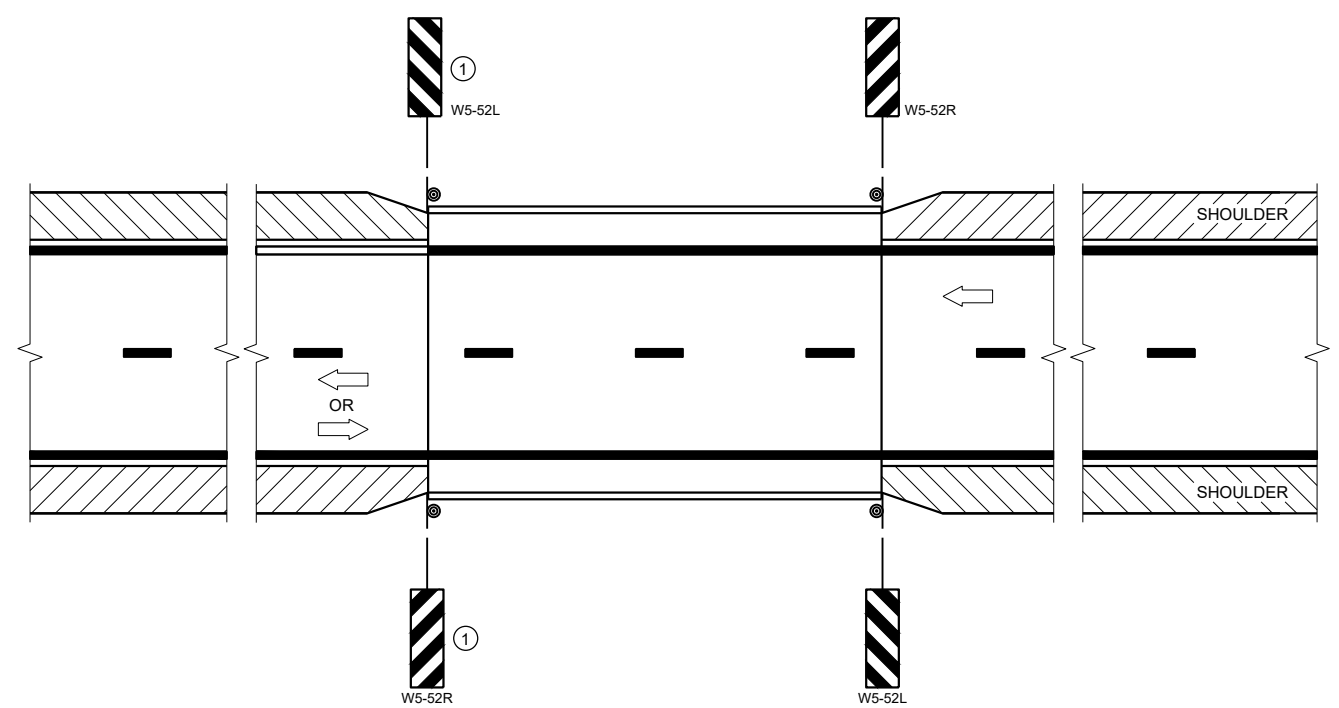
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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





**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'

6

6

SDD 15C06-12

SDD 15C06-12

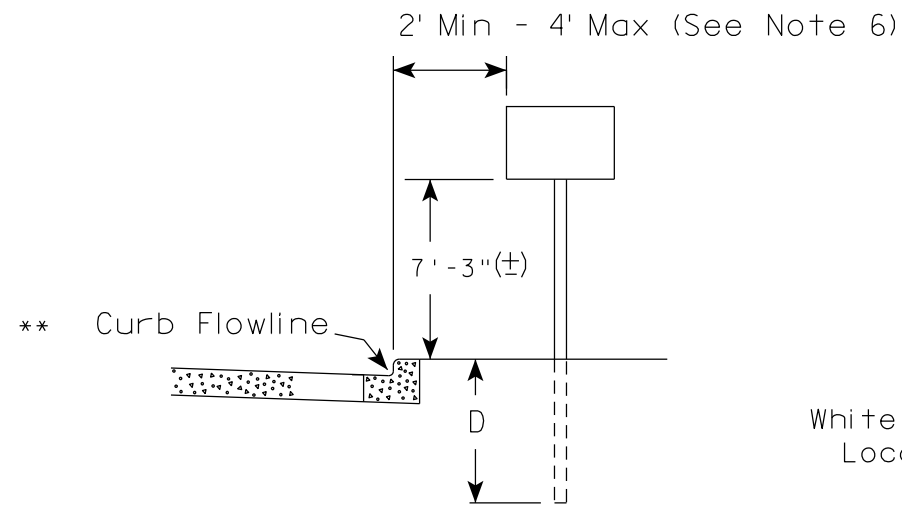
**SIGNING AND MARKING FOR TWO LANE BRIDGES**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

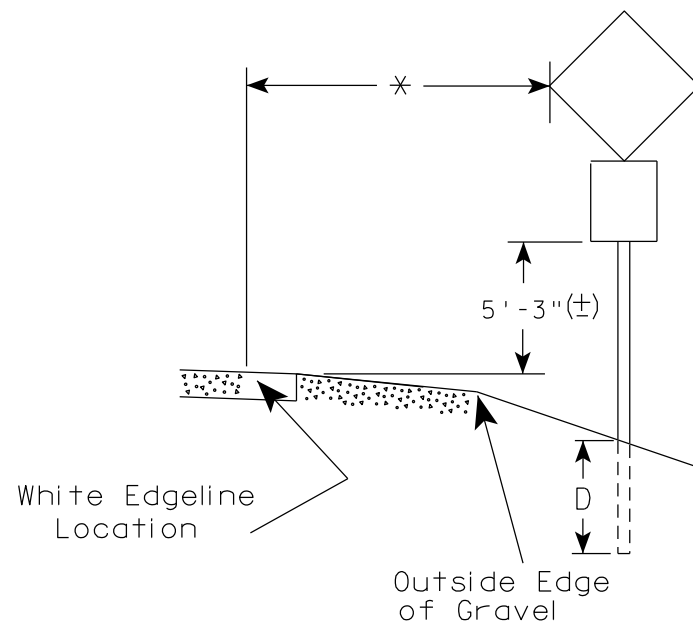
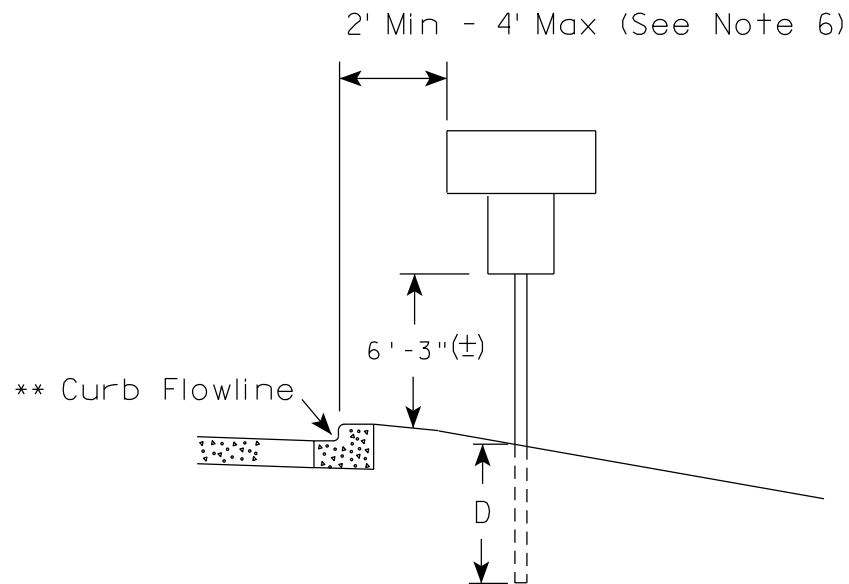
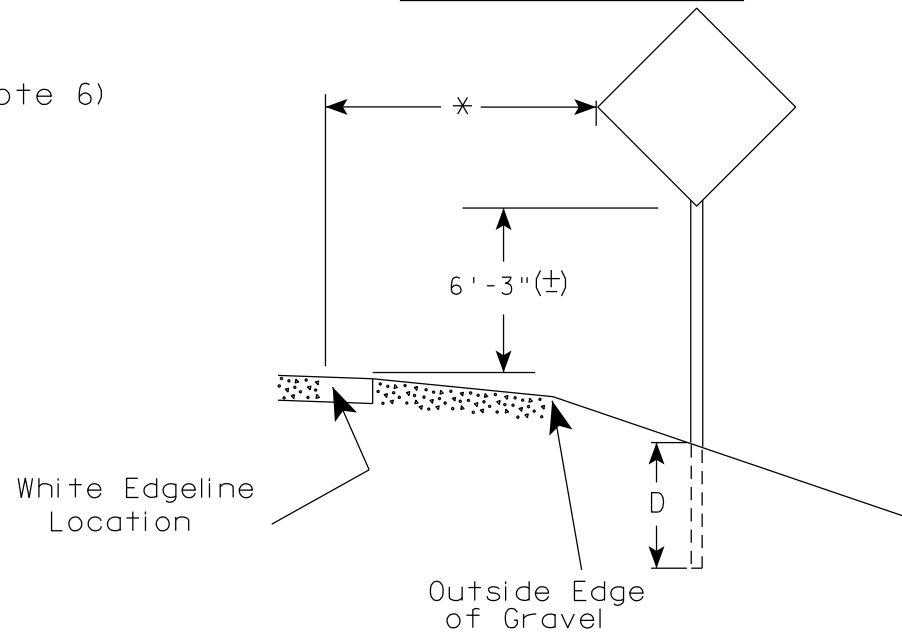
APPROVED  
 May 2023 /S/ Jeannie Silver  
 DATE STATE SIGNING AND MARKING ENGINEER

FHWA

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 directed 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.

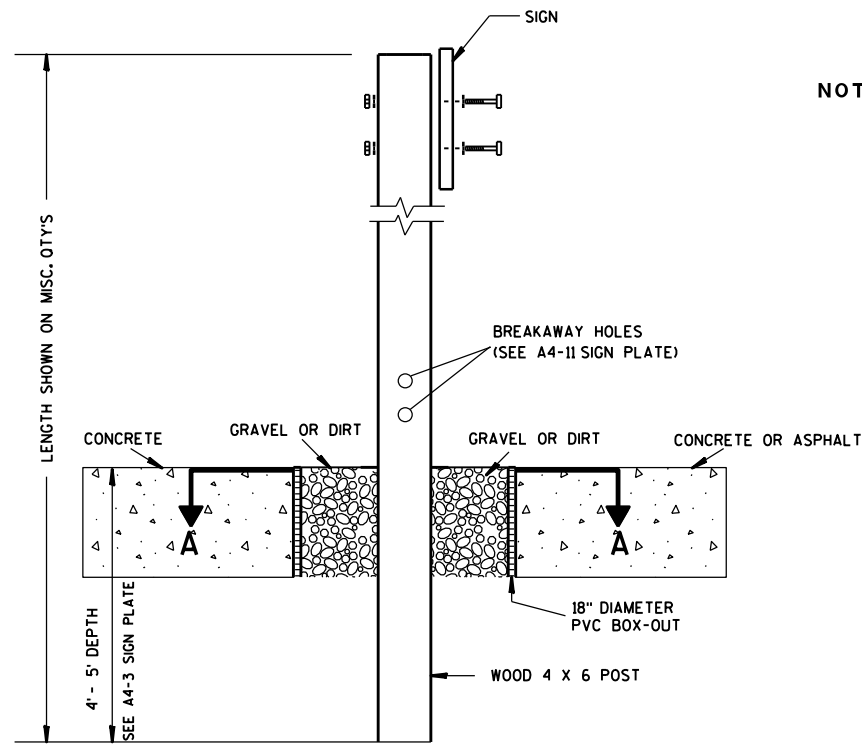
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

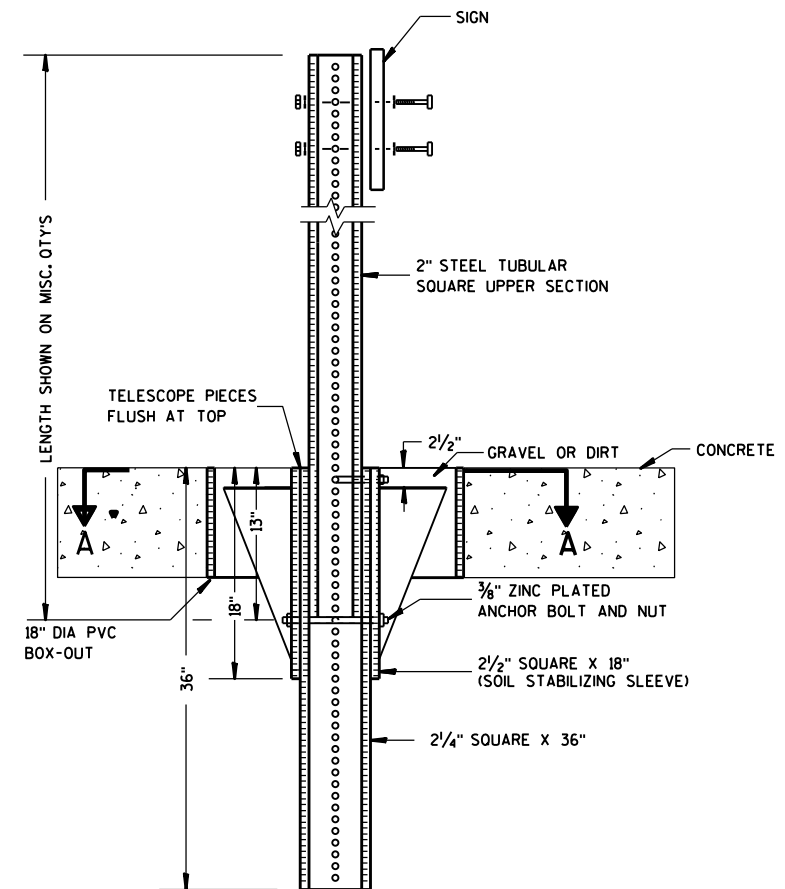
DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

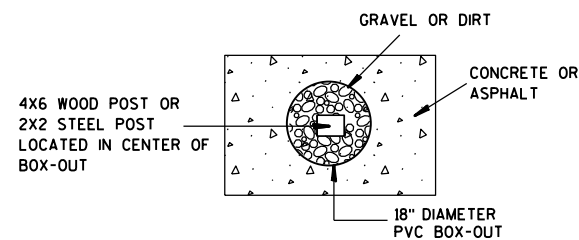
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- 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**

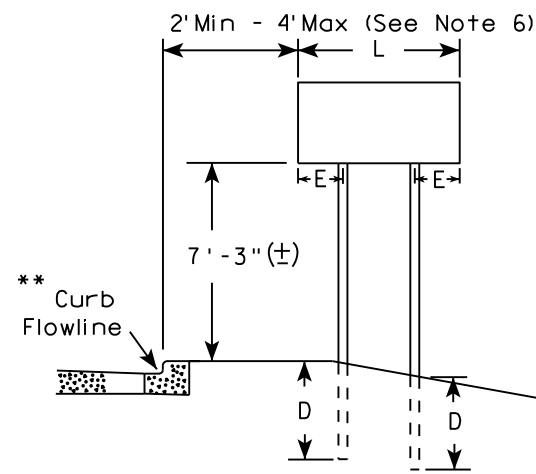
**FOR NEW CONCRETE/ ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

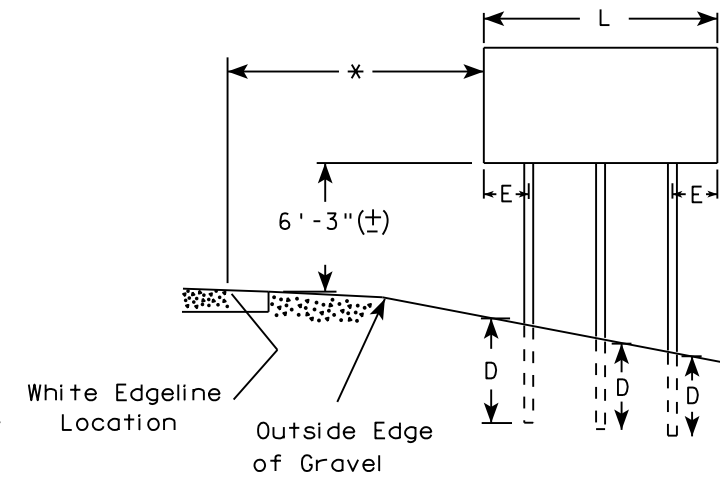
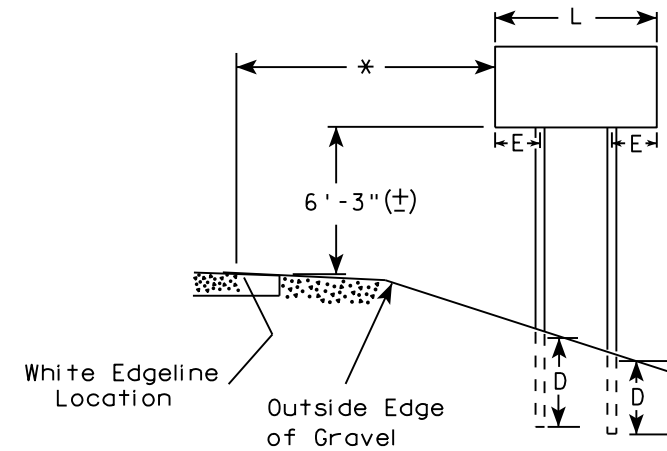
GENERAL NOTES

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" (±).

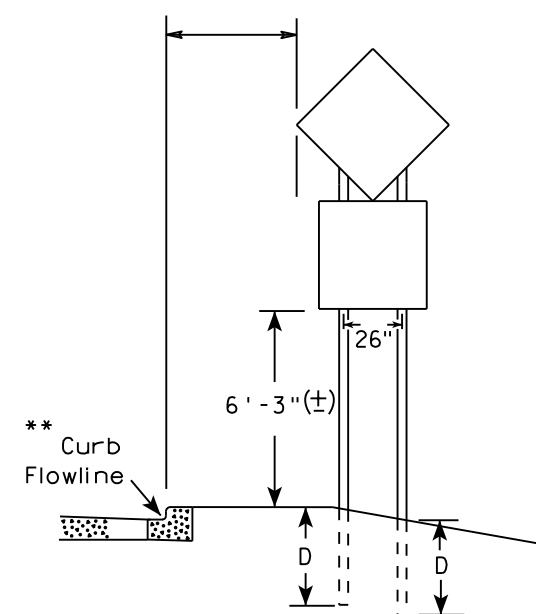
URBAN AREA



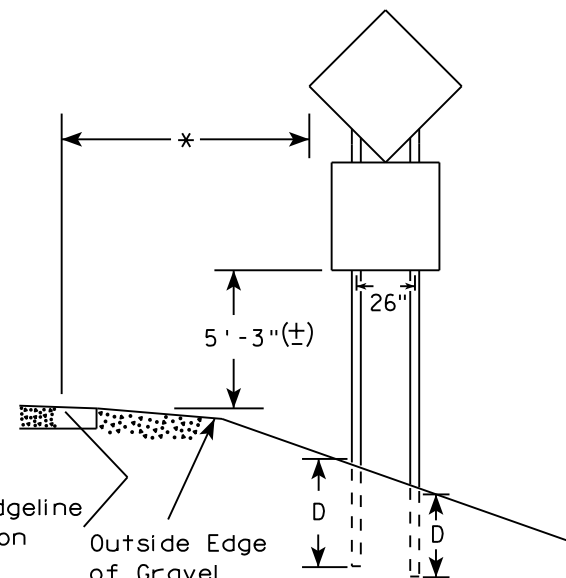
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\* 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.

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

\*\*\*

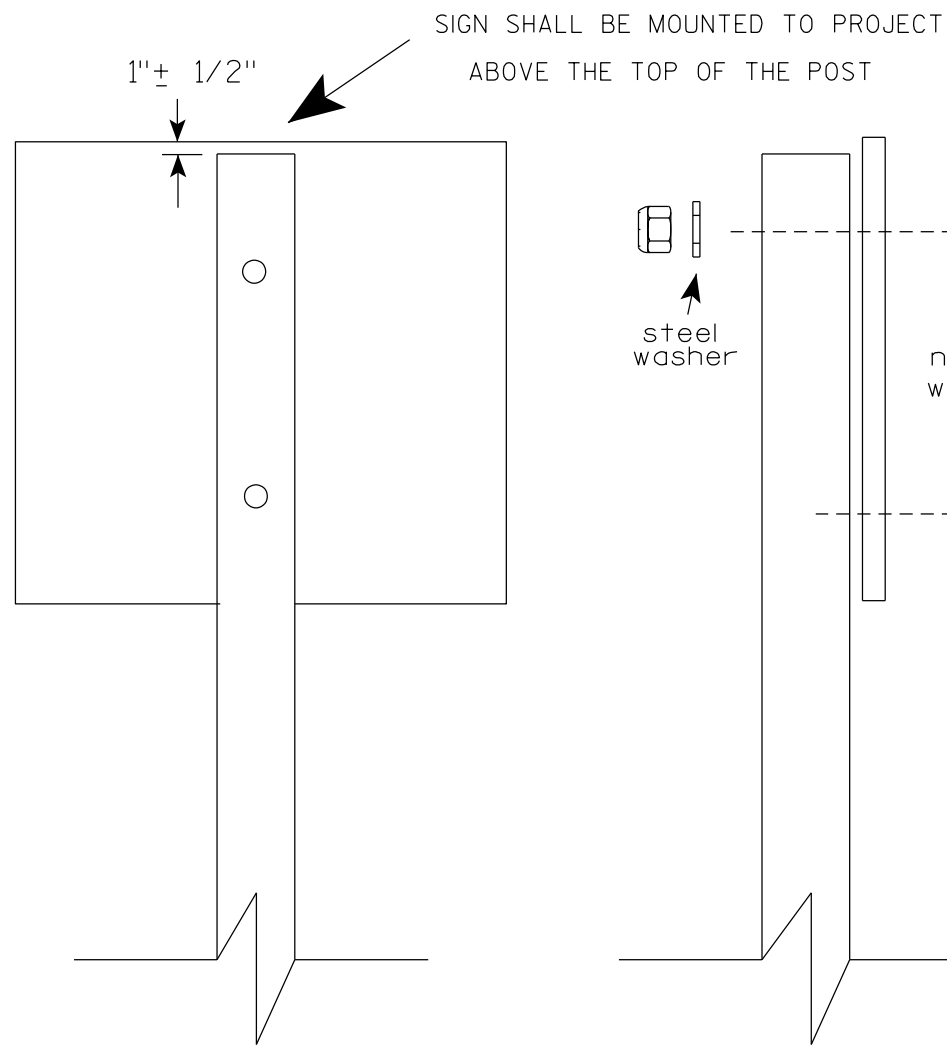
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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



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

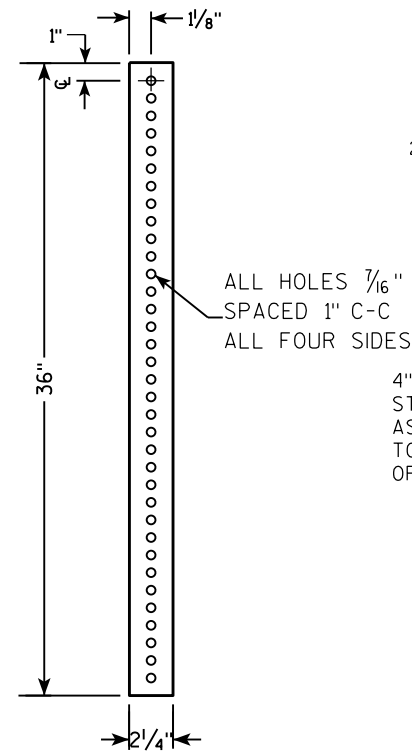
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

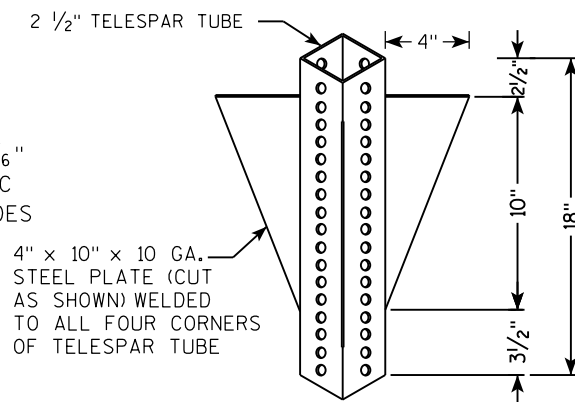
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

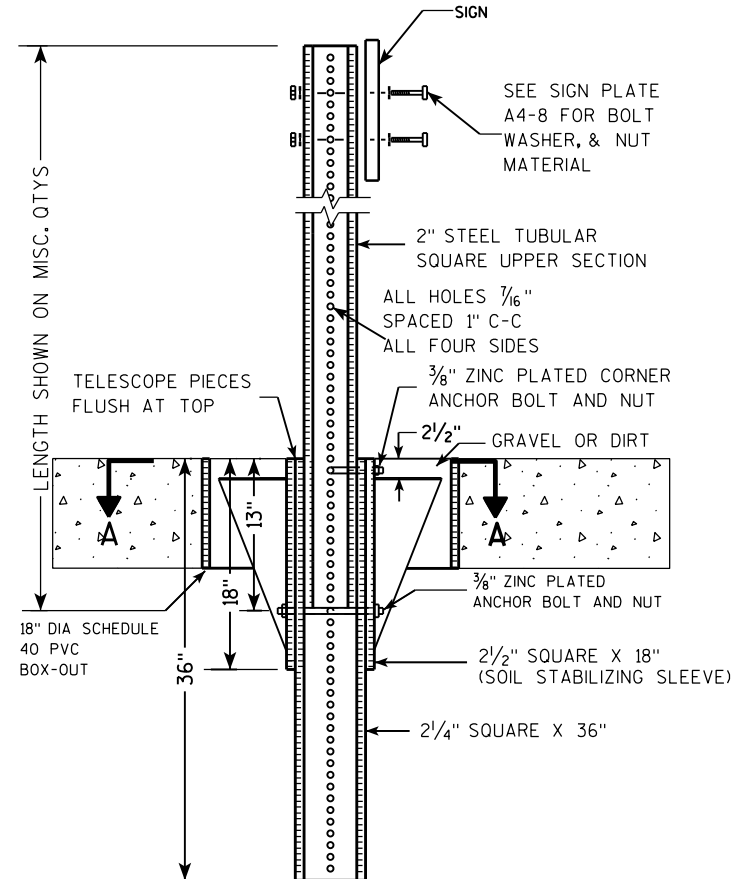
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



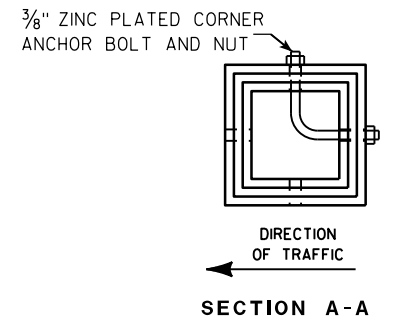
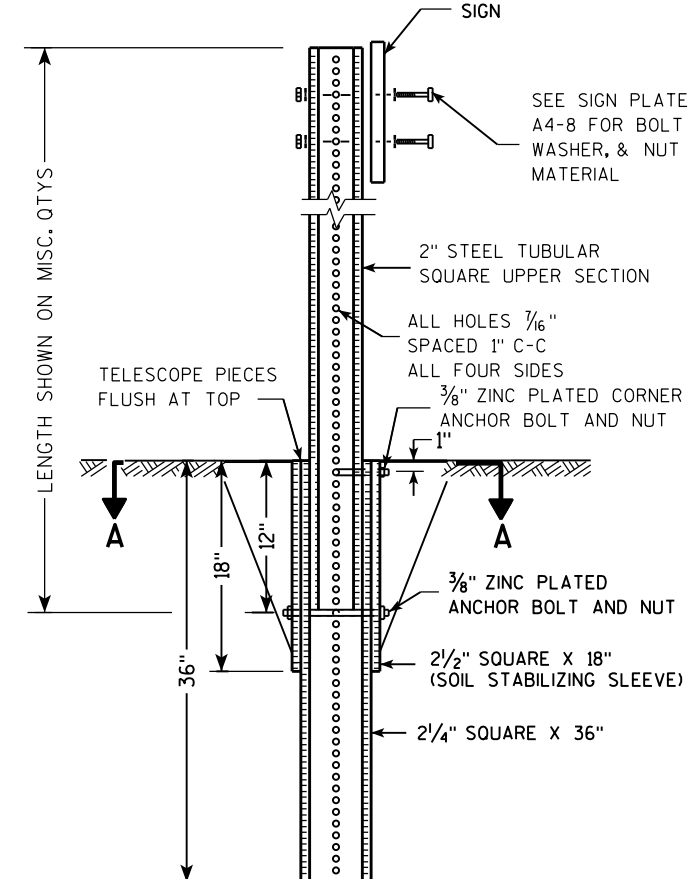
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**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)**



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

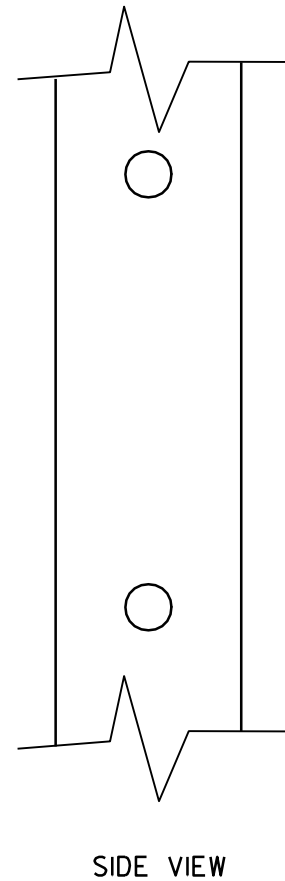
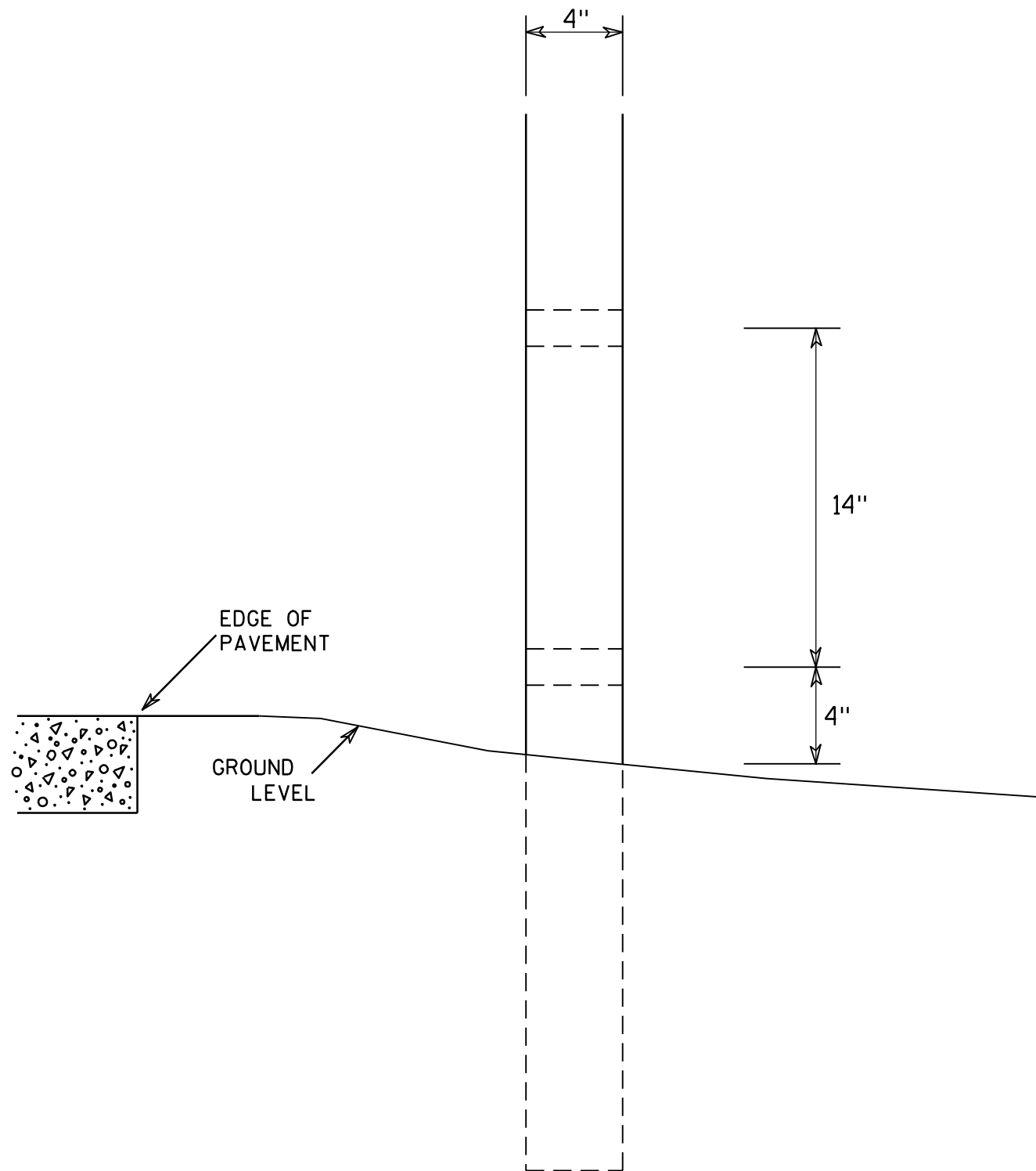
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



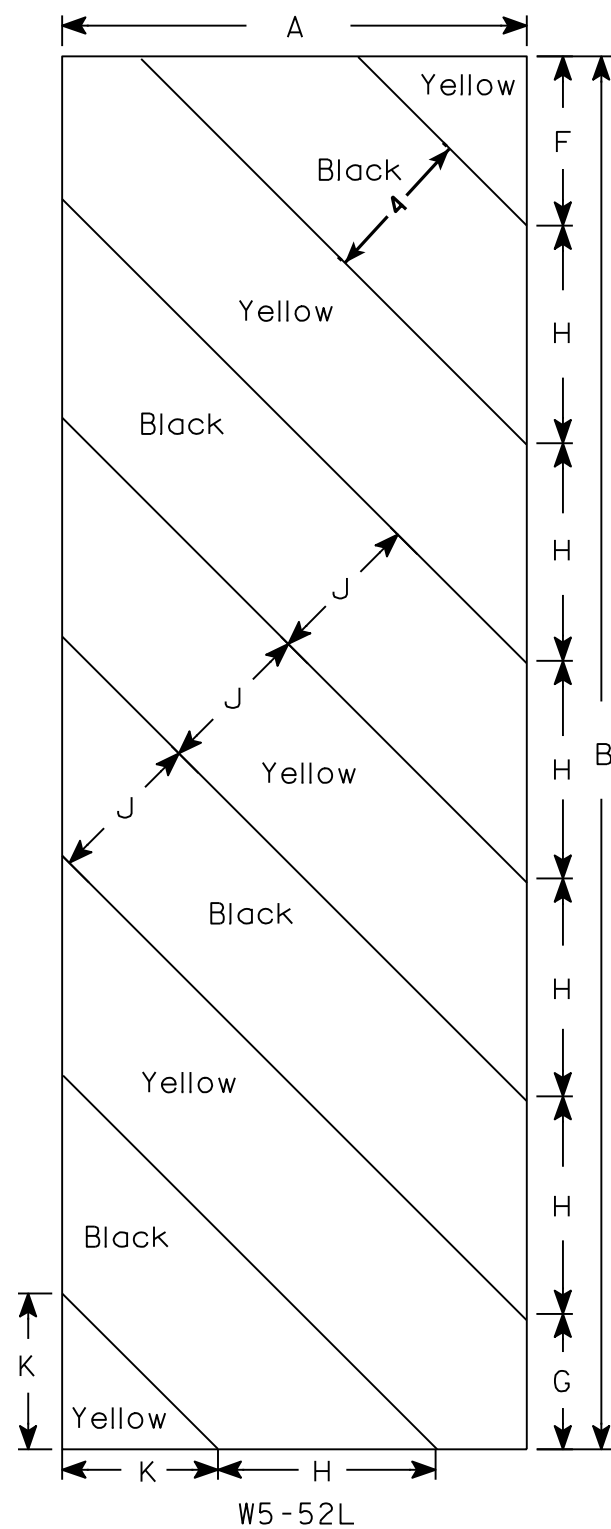
GENERAL NOTES

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

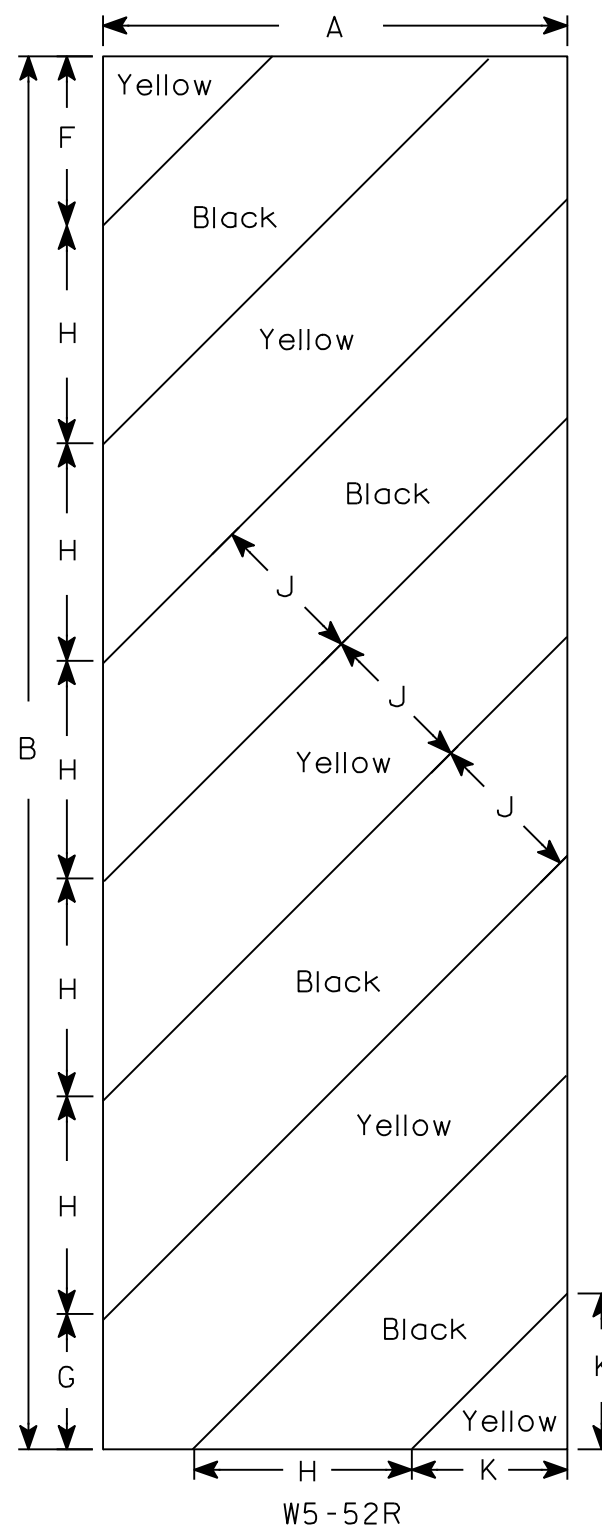
7

7

<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>



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.

7

7

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: \_\_\_\_\_ E



### DESIGN DATA

#### LIVE LOAD:

DESIGN LOADING: HL - 93  
INVENTORY RATING FACTOR: 1.14  
OPERATIONAL RATING FACTOR: 1.47  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)  
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

#### MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB  $f'_c = 4,000$  PSI  
ALL OTHER  $f'_c = 3,500$  PSI

HIGH - STRENGTH BAR STEEL REINFORCEMENT, GRADE 60  $f_y = 60,000$  PSI

#### FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10 3/4 X 0.25-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 115 TONS \* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 80'-0" AT THE SOUTH ABUTMENT AND 75'-0" AT THE NORTH ABUTMENT.

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

### HYDRAULIC DATA

#### 100-YEAR FREQUENCY:

$Q_{100} = 375$  C.F.S.  
 $V_{100} = 2.82$  F.P.S.  
 $HW_{100} = EL. 802.88$   
WATERWAY AREA = 133 SQ. FT.  
DRAINAGE AREA = 14.7 SQ. MI.  
SCOUR CRITICAL CODE = 5

#### 2-YEAR FREQUENCY:

$Q_2 = 130$  C.F.S.  
 $V_2 = 1.47$  F.P.S.  
 $HW_2 = EL. 801.66$

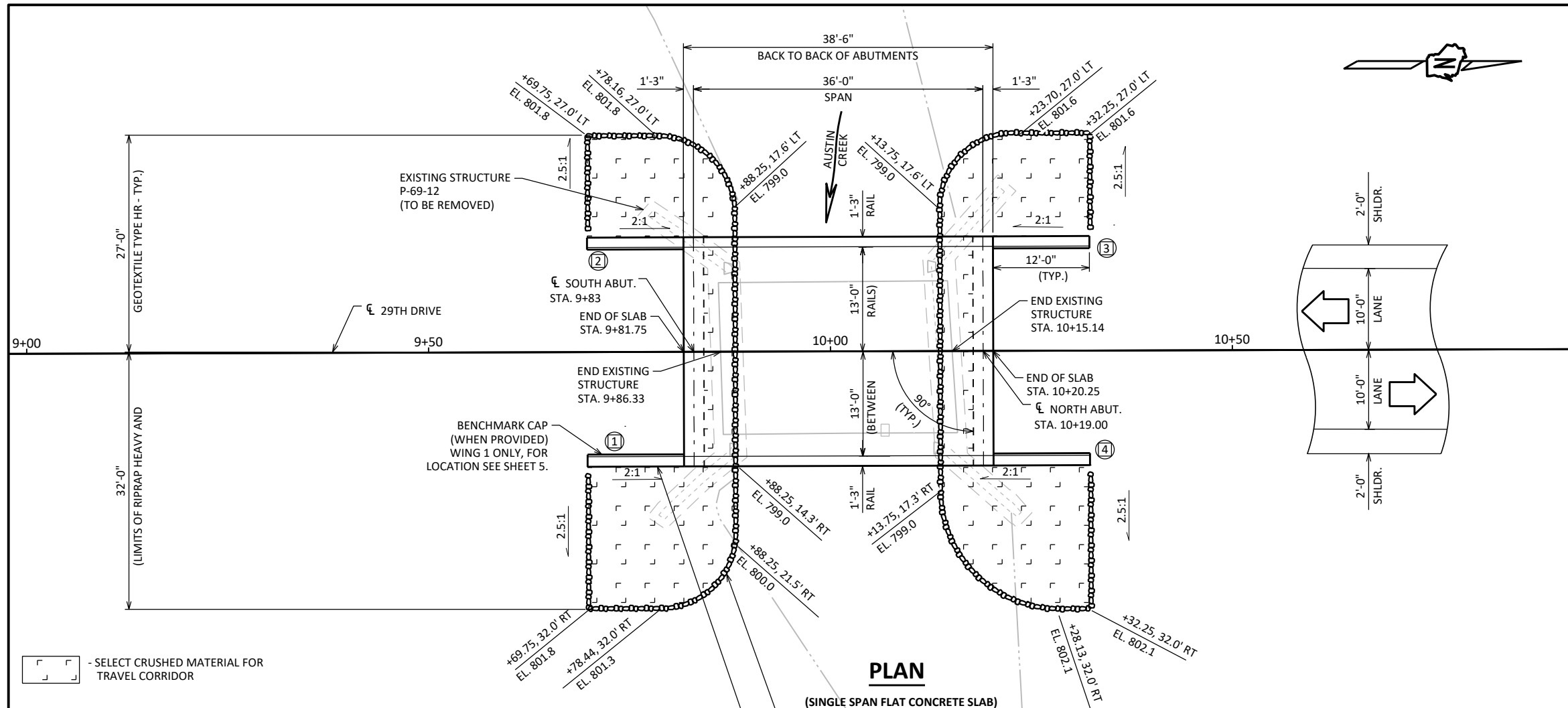
#### ROADWAY OVERTOPPING

FREQUENCY = >100 YEARS

### TRAFFIC DATA

#### FEATURE ON: 29TH DRIVE

AADT = 220 (2024)  
AADT = 260 (2044)  
R.D.S. = 50 MPH



### PLAN

(SINGLE SPAN FLAT CONCRETE SLAB)

- SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR

① INDICATES WING NUMBER

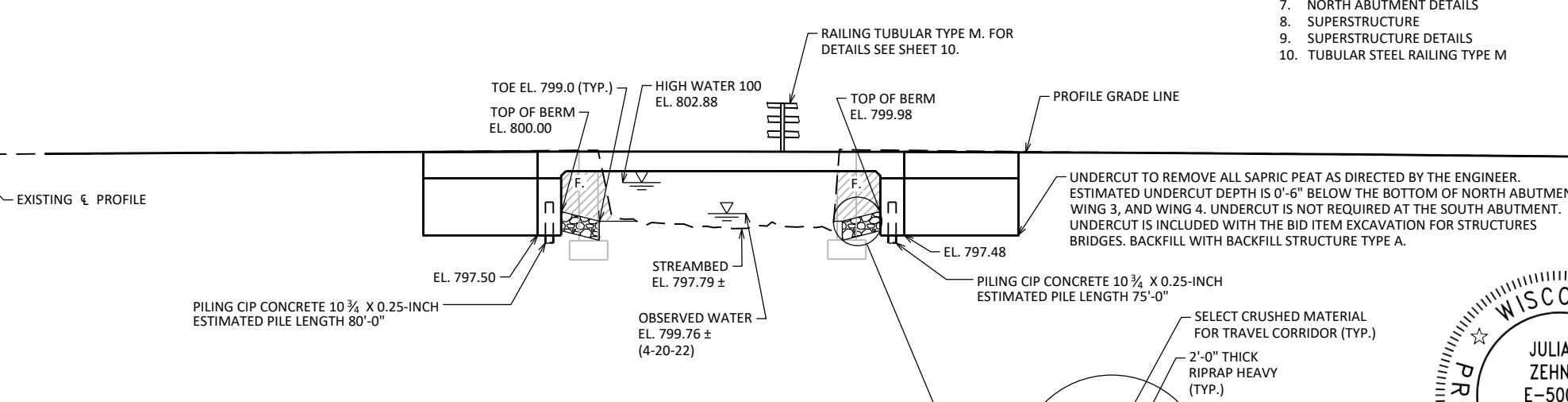
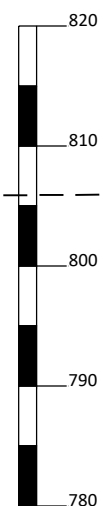
- REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-69-52"

### LIST OF DRAWINGS:

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES & NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. TUBULAR STEEL RAILING TYPE M

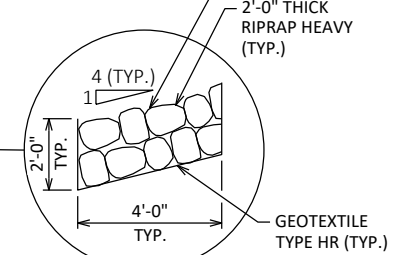
#### STRUCTURES DESIGN CONTACTS

CONSULTANT DESIGN CONTACT: BRIDGE OFFICE CONTACT:  
JULIA ZEHNER AARON BONK  
(608) 355-8878 (608) 261-0261



### ELEVATION

(LOOKING WEST)



NO.	DATE	REVISION	BY

**MSA** ENGINEERING | ARCHITECTURE | SURVEYING  
FUNDING | PLANNING | ENVIRONMENTAL  
1702 Pankratz St Madison, WI 53704  
(608) 242-7779 www.msa-ps.com  
© MSA Professional Services, Inc.

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

ACCEPTED *[Signature]* SDR 11/21/23  
CHIEF STRUCTURES DESIGN ENGINEER DATE

**STRUCTURE B-69-52**

29TH DRIVE OVER AUSTIN CREEK

COUNTY WAUSHARA TOWN SAXEVILLE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED DS CK'D JZ BY EEK PLANS CK'D JZ

**GENERAL PLAN** SHEET 1 OF 10

**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.

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

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

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

THIS STRUCTURE WILL REPLACE EXISTING STRUCTURE P-69-12, A 29.0 FT. LONG CONCRETE DECK GIRDER BRIDGE SUPPORTED ON FULL RETAINING CONCRETE ABUTMENTS WITH A 19.0 FT. CLEAR ROADWAY WIDTH.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-69-52" SHALL BE THE EXISTING GROUNDLINE.

CONFLICTS WITH EXISTING FOUNDATIONS ARE ANTICIPATED. FOUNDATION REMOVAL LIMITS TO BE DETERMINED BY THE ENGINEER IN THE FIELD AND INCLUDED UNDER BID ITEM "REMOVING STRUCTURE OVER WATER DEBRIS CAPTURE P-69-12". ORIGINAL 1921 ABUTMENT DRAWINGS ARE AVAILABLE THROUGH THE WISCONSIN DEPARTMENT OF TRANSPORTATION HSI DATABASE.

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

EXCAVATION BELOW THE SOUTH ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 3'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF SLAB, TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF SLAB, TO THE TOPS OF WINGS, TO THE EXPOSED FRONT FACES OF WINGS, AND ABUTMENTS TO 1'-0" IN FROM THE EDGE OF SLAB..

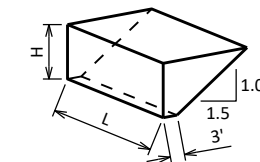
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS AND WINGS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS. AFTER PLACEMENT OF RIPRAP HEAVY, PLACE SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR TO FILL VOIDS ON ALL SURFACES.

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

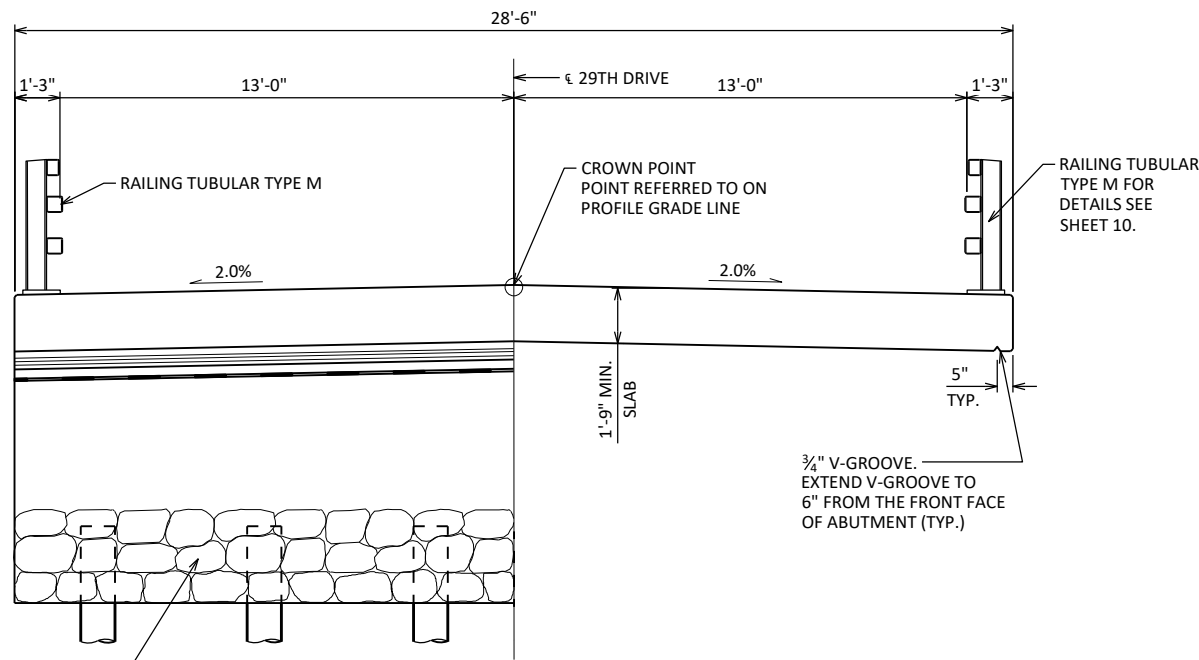
CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

BECAUSE MOST OF THE GEOTECHNICAL RESISTANCE WILL BE DERIVED FROM SIDE RESISTANCE IN COHESIVE SOILS, THERE IS HIGH POTENTIAL FOR PILE SETUP TO OCCUR. IF DRIVING RESISTANCE IS NOT OBTAINED WITH PILES DRIVEN TO THE PLAN LENGTH, PILE REDRIVING IS INCLUDED FOR EACH PILE TO OBTAIN THE REQUIRED DRIVING RESISTANCE.



**ABUTMENT BACKFILL DIAGRAM**

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

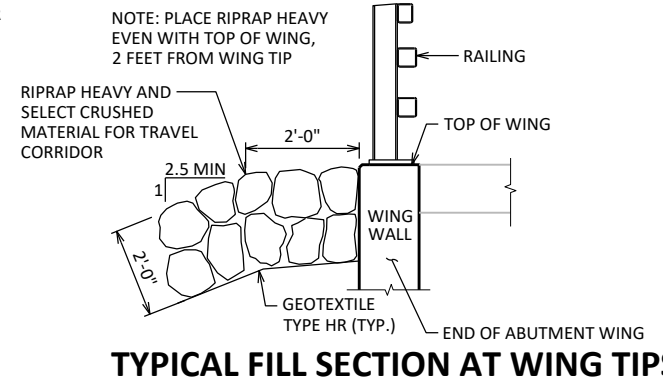


**AT ABUTMENTS**

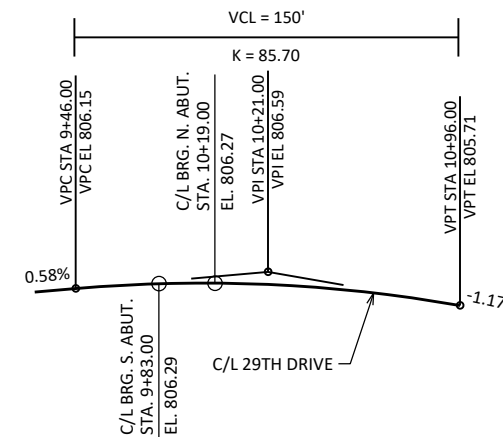
**IN SPAN**

**CROSS SECTION THRU BRIDGE**

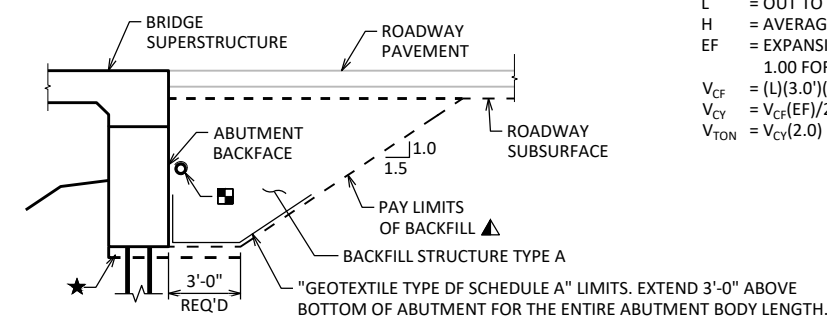
(LOOKING NORTH)



**TYPICAL FILL SECTION AT WING TIPS**



**PROFILE GRADE LINE**



**TYPICAL SECTION THRU ABUTMENT**

- ▲ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.
- ★ UNDERCUT TO REMOVE ALL SAPRIC PEAT AS DIRECTED BY THE ENGINEER. ESTIMATED UNDERCUT DEPTH IS 0'-6" BELOW THE BOTTOM OF NORTH ABUTMENT, WING 3, AND WING 4. UNDERCUT IS NOT REQUIRED AT THE SOUTH ABUTMENT. UNDERCUT IS INCLUDED WITH THE BID ITEM EXCAVATION FOR STRUCTURES BRIDGES. BACKFILL WITH BACKFILL STRUCTURE TYPE A.

**TOTAL ESTIMATED QUANTITIES**

ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
203.0270.01	REMOVING STRUCTURE OVER WATERWAY DEBRIS CAPTURE P-69-12	EACH	-	-	-	1
206.1001.01	EXCAVATION FOR STRUCTURES BRIDGES B-69-52	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	141	152	-	293
502.0100	CONCRETE MASONRY BRIDGES	CY	36.4	36.4	75.3	148
502.3200	PROTECTIVE SURFACE TREATMENT	SY	12	12	145	169
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1885	1885	-	3,770
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1710	1710	12395	15,815
513.4061	RAILING TUBULAR TYPE M	LF	-	-	130	130
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-	18
550.0600	PILE REDRIVING	EACH	6	6	-	12
550.2104	PILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	480	450	-	930
606.0300	RIPRAP HEAVY	CY	55	55	-	110
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	90	-	180
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	28	28	-	56
645.0120	GEOTEXTILE TYPE HR	SY	120	120	-	240
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	26	26	-	52
<b>NON-BID ITEMS</b>						
	PREFORMED FILLER	SIZE				1/2" & 3/4"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-69-52</b>			
DRAWN BY		EK	PLANS CK'D JZ
<b>CROSS SECTION, QUANTITIES &amp; NOTES</b>			SHEET 2 OF 10

SCALE = 5

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	06/16/2022	190,358.07	447,725.02
2	06/17/2022	190,396.04	447,714.90

BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.  
 REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.  
 ALL COORDINATES REFERENCED TO WCCS NAD 83 (2011) WAUSHARA COUNTY

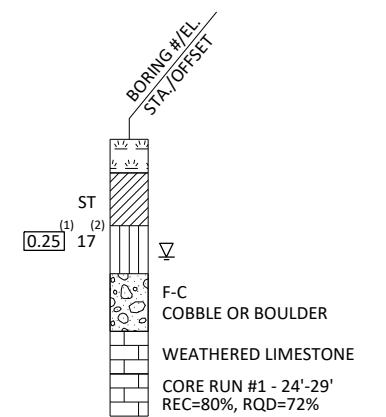
STATE PROJECT NUMBER

**6871-00-70**

**MATERIAL SYMBOLS**

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

**LEGEND OF BORING**



<sup>(1)</sup> UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

<sup>(2)</sup> 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

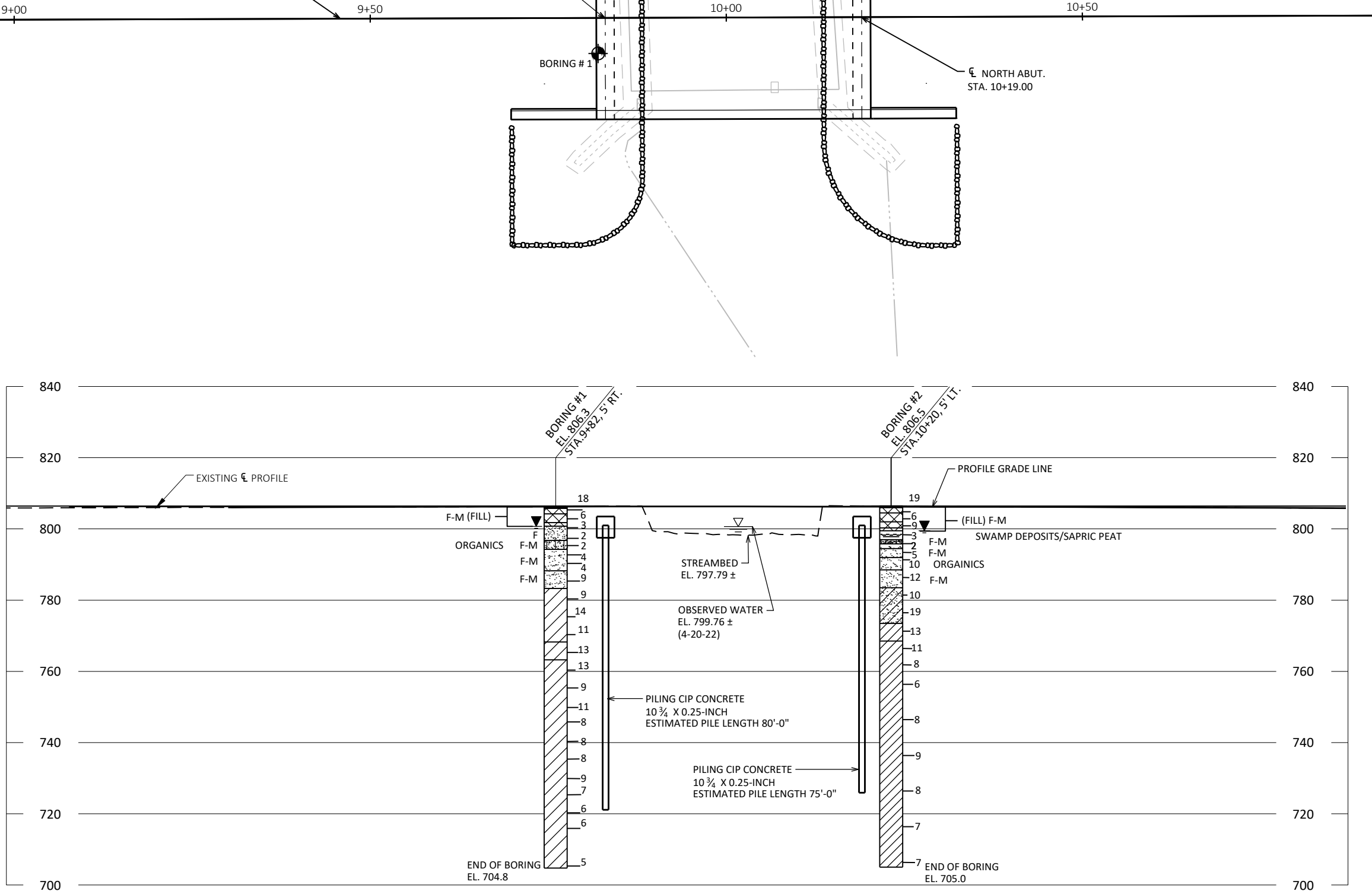
**STRUCTURE B-69-52**

DRAWN BY: EEK PLANS CK'D: JZ

**SUBSURFACE EXPLORATION**

SHEET 3 OF 10

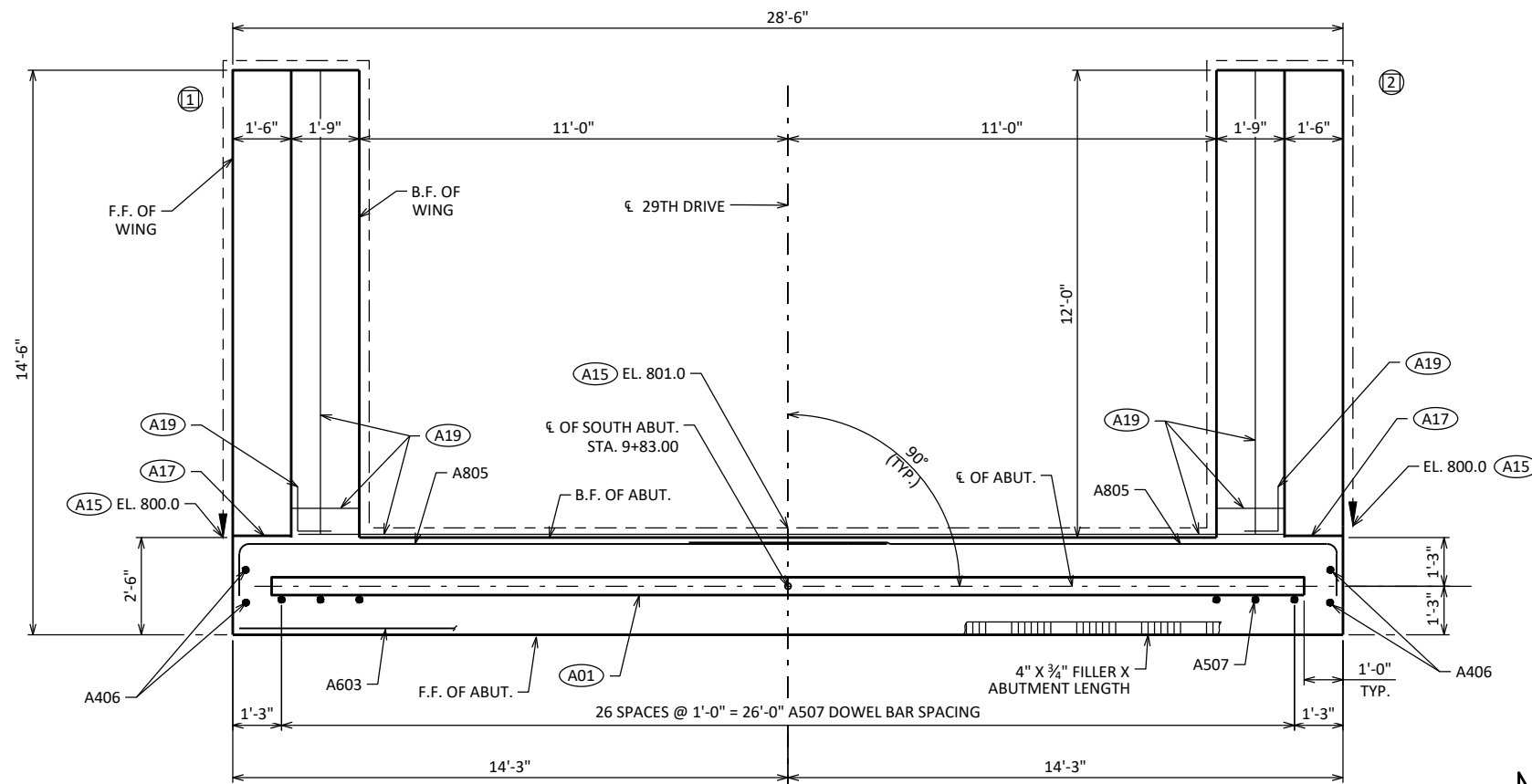
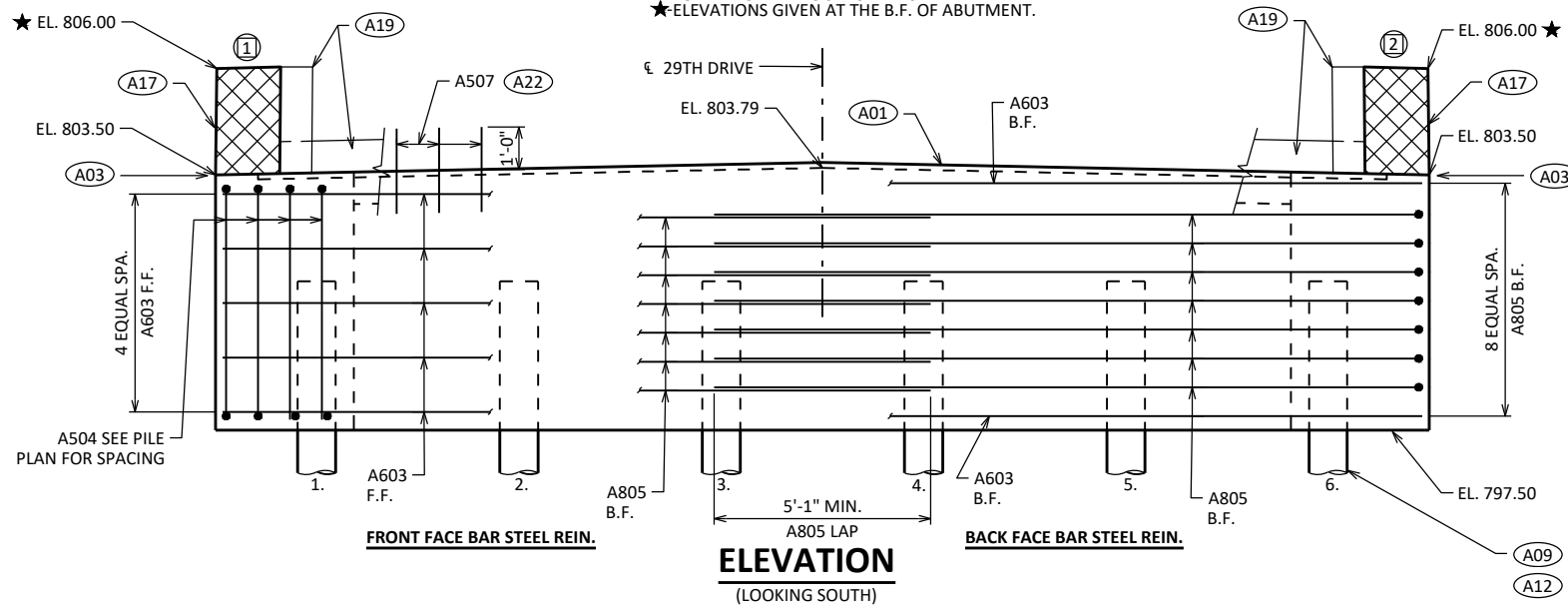
SCALE = 1/8" = 1'-0"



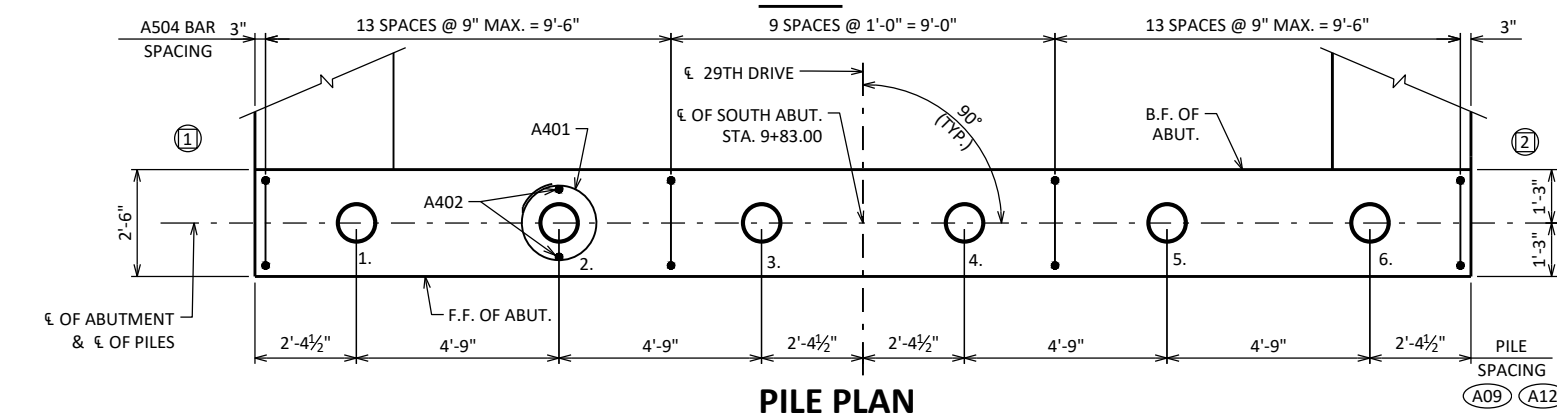
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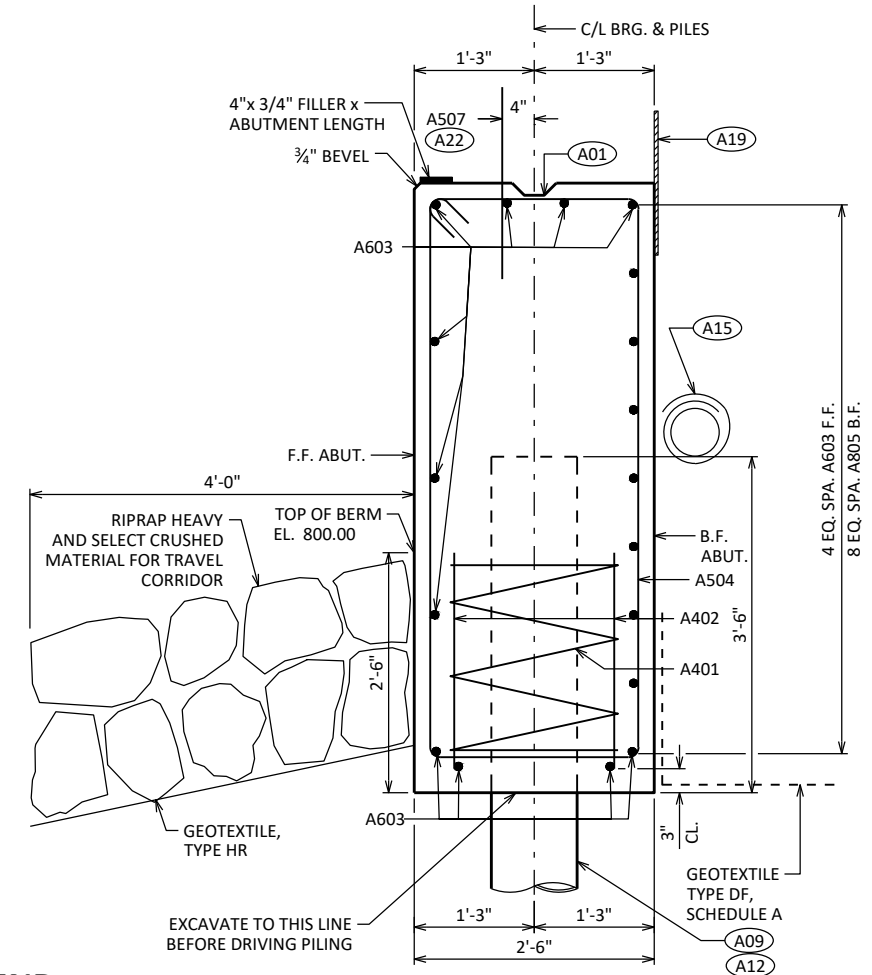
NOTE:  
FOR WING DETAILS SEE SHEET 5.  
★ ELEVATIONS GIVEN AT THE B.F. OF ABUTMENT.



**PLAN**



**PILE PLAN**



**LEGEND**

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" V" GROOVE @ F.F. IF JOINT IS USED).
- (A09) SUPPORT SOUTH ABUTMENT ON 10 3/4" DIA. 0.25" CIP CONCRETE PILING, ESTIMATED 80'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 115 TONS PER PILE.
- (A12) 12 3/4" DIA. CIP PILES MAY BE USED IN LIEU OF 10 3/4" DIA. CIP PILES, BUT PAYMENT SHALL BE BASED ON THE BID PRICE FOR "PILING CIP CONCRETE 10 3/4" X 0.25" -INCH".
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/2" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A22) BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (A27) LINE OF BACKWALL REMOVAL.
- ☐ - INDICATES WING NUMBER
- F.F. - FRONT FACE
- B.F. - BACK FACE
- CL. - CLEAR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-69-52</b>			
DRAWN BY		EKK	PLANS CK'D JZ
<b>SOUTH ABUTMENT</b>		SHEET 4 OF 10	

SCALE =

(COATED) 1,710 LBS.

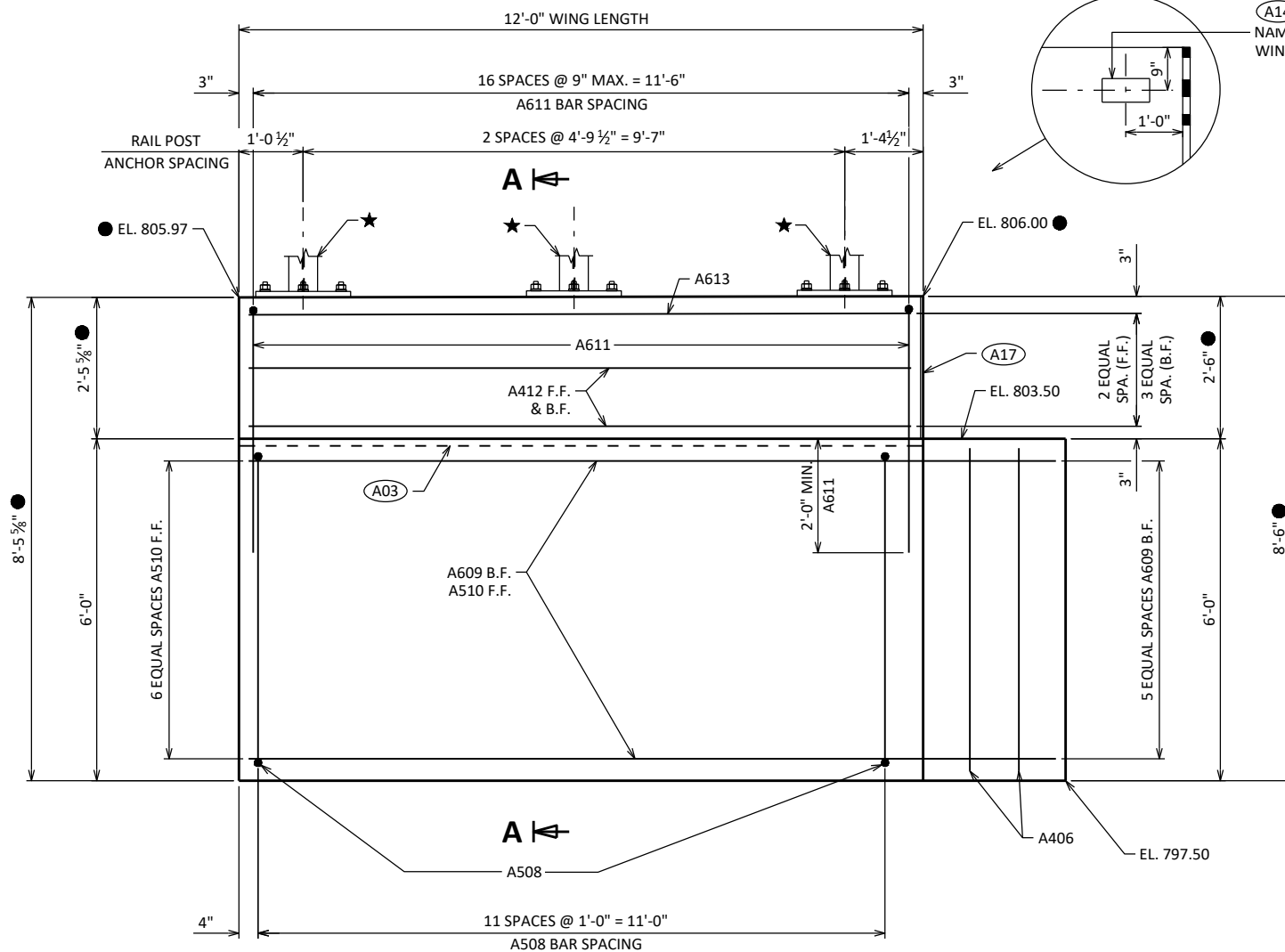
(UNCOATED) 1,885 LBS.

**BILL OF BARS (SOUTH ABUT.)**

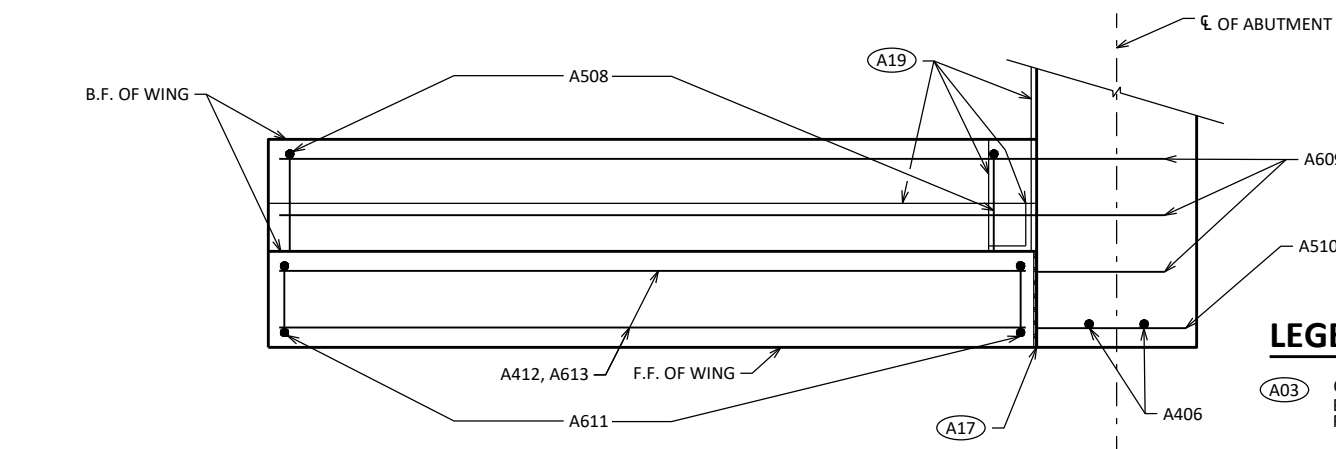
NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		6	28'-0"	X	ABUTMENT BODY - 1 SPIRAL WRAP @ EACH PILE
A402		12	2'-3"		ABUTMENT BODY - 2 @ EACH PILE - VERT.
A603		11	28'-2"		ABUTMENT BODY - F.F., TOP & BOTTOM - HORIZ.
A504		36	16'-2"	X	ABUTMENT BODY - STIRRUP - VERT.
A805		14	17'-10"	X	ABUTMENT BODY - B.F. - HORIZ.
A406		4	5'-7"		ABUTMENT BODY - ENDS - VERT.
A507	X	27	2'-0"		ABUTMENT BODY - TOP - DOWELS - VERT.
A508	X	24	17'-8"	X	WINGS 1 & 2 - BASE - STIRRUP - VERT.
A609	X	16	13'-11"		WINGS 1 & 2 - BASE - B.F. & TOP - HORIZ.
A510	X	14	14'-2"		WINGS 1 & 2 - BASE - F.F. - HORIZ.
A611	X	34	9'-6"	X	WINGS 1 & 2 - TOP - STIRRUP - VERT.
A412	X	10	11'-8"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.
A613	X	6	11'-8"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR



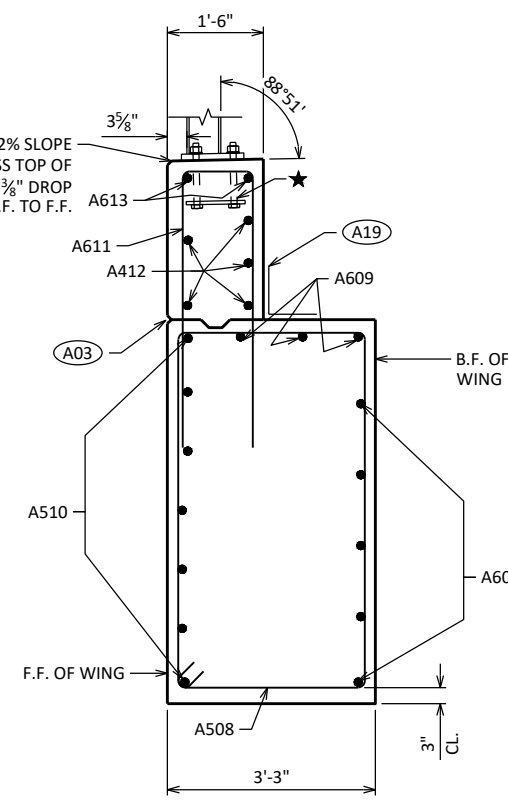
**WING - ELEVATION**



**PLAN - WING**

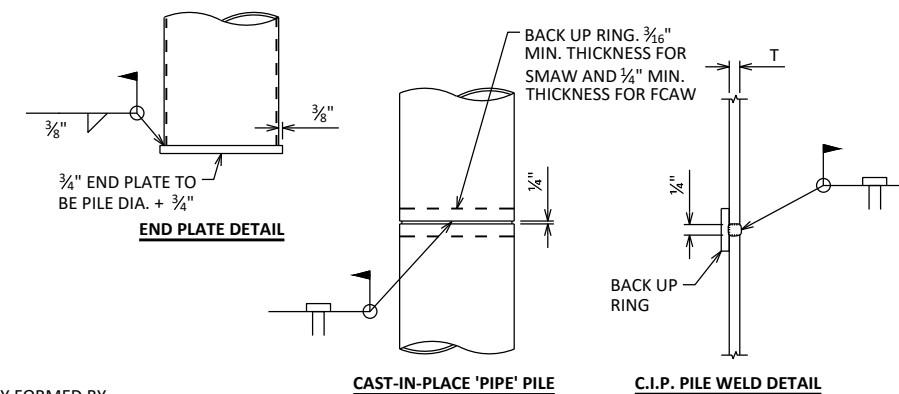
**LEGEND**

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" RMW @ B.F. & B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A14) CONTRACTOR SHALL SUPPLY A NEW NAME PLATE PER 502.3.11 OF STD.SPEC.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACE OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW TOP OF WING AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE

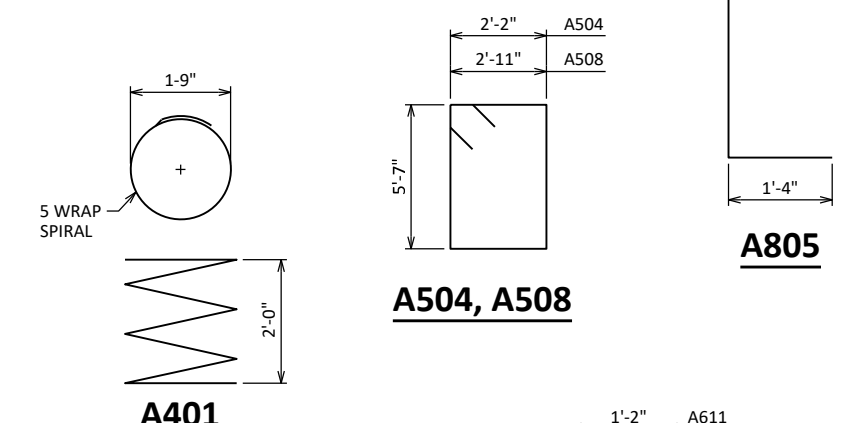


**SECTION A-A THRU WING**

**WING 1 SHOWN,  
WING 2 SIMILAR**



**CIP PILE DETAILS**



**A401**

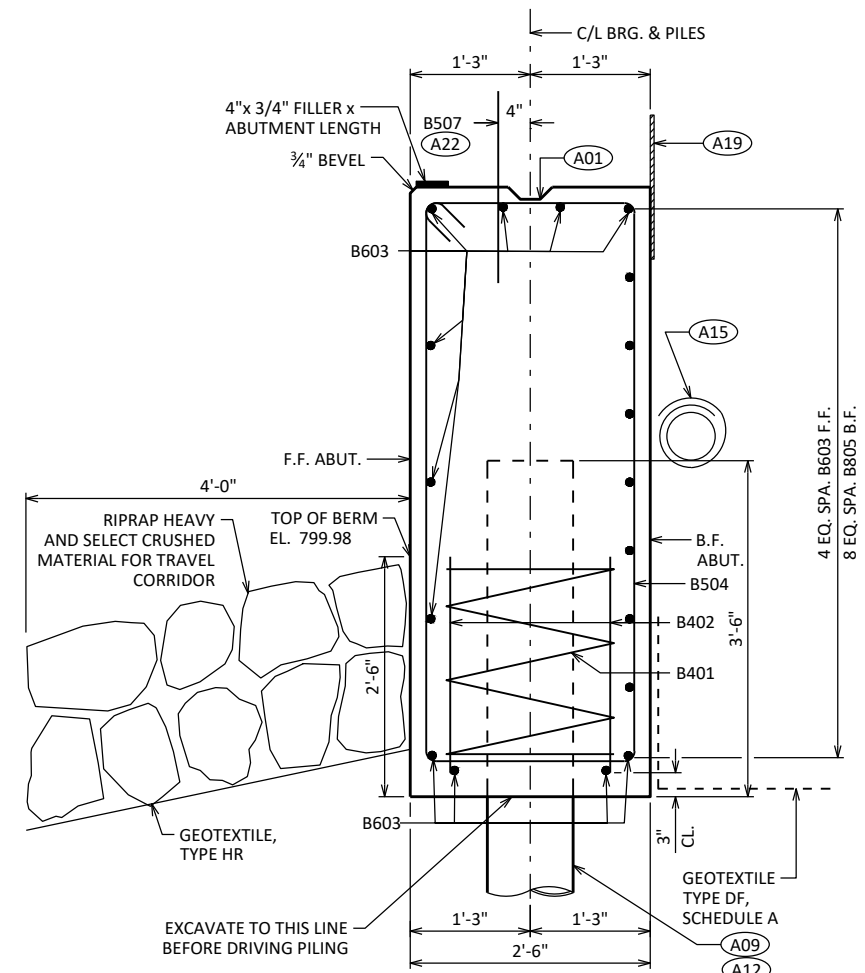
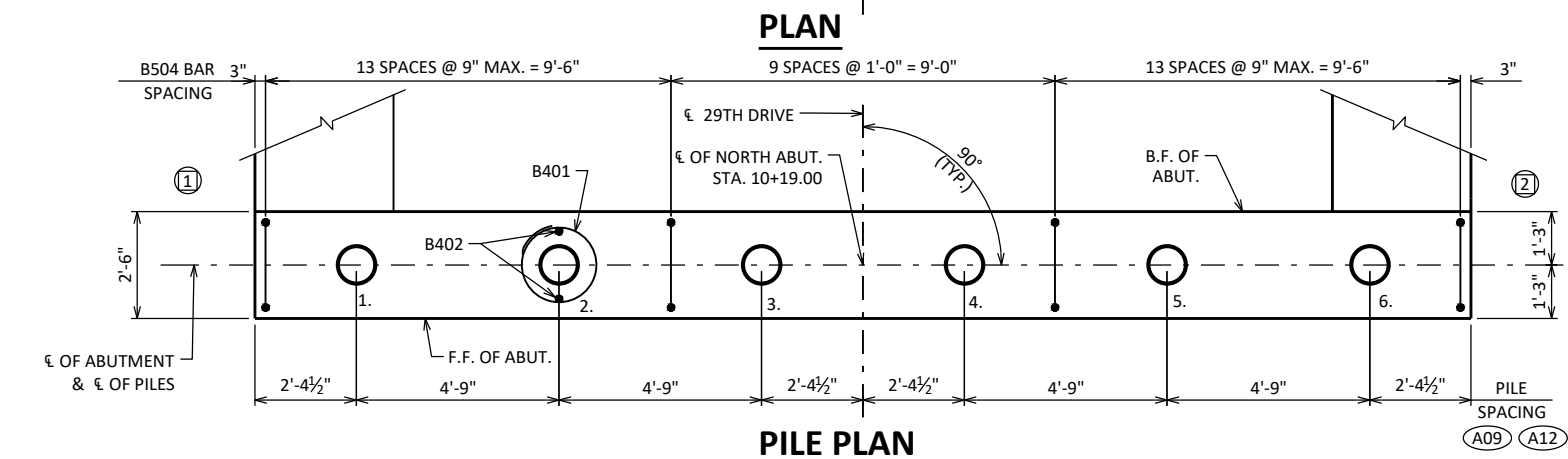
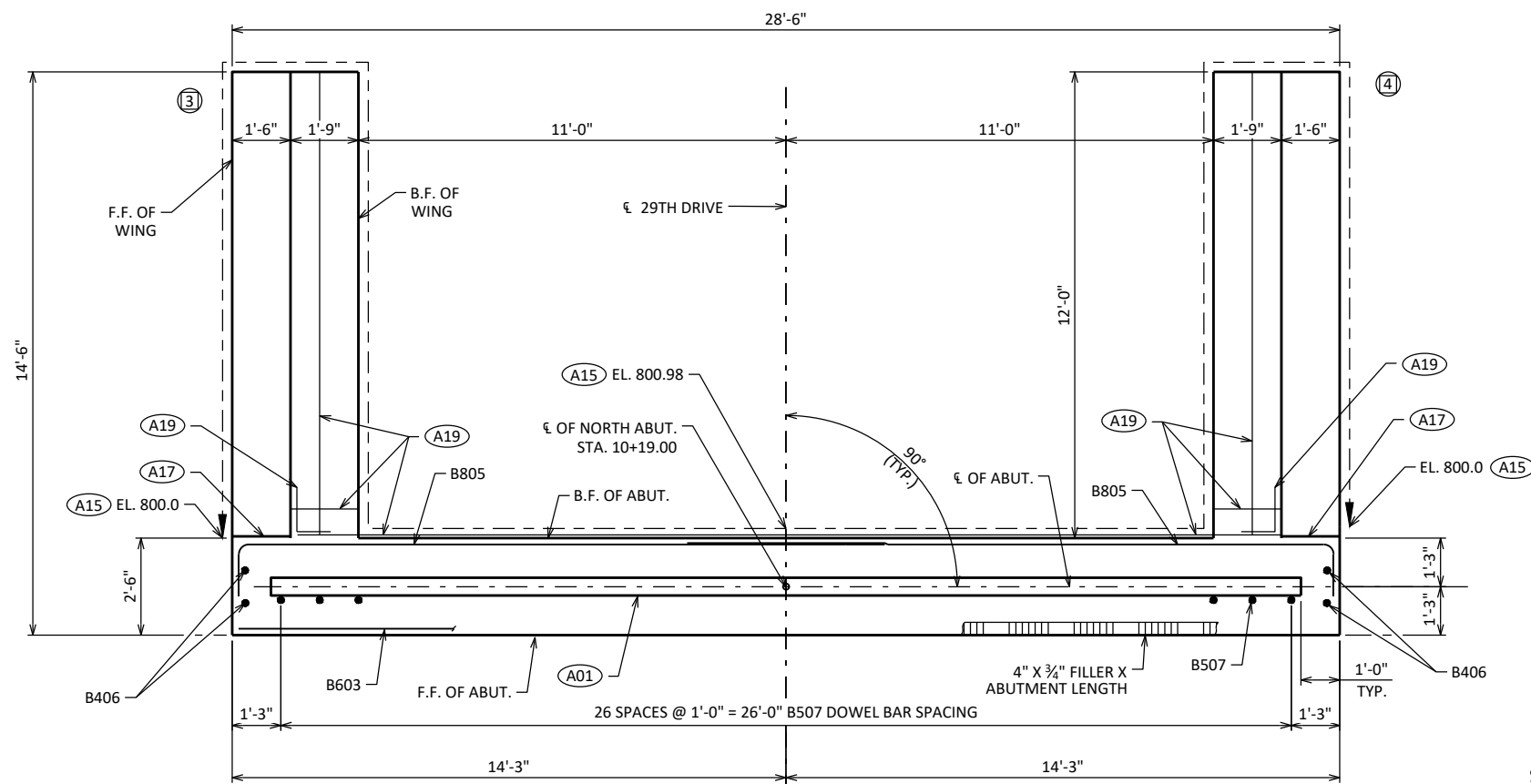
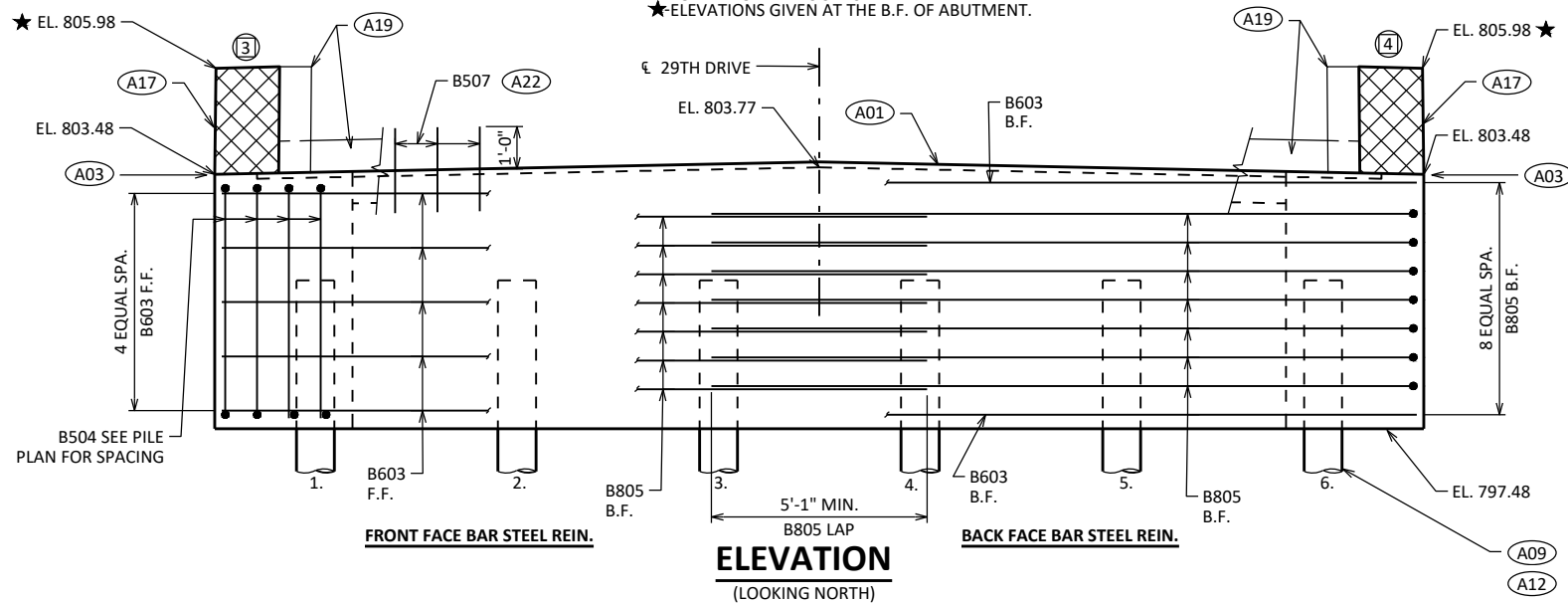
**A504, A508**

**A805**

**A611**

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-69-52</b>			
DRAWN BY		PLANS CK'D	
BY EKK		JZ	
<b>SOUTH ABUTMENT DETAILS</b>		SHEET 5 OF 10	

NOTE:  
FOR WING DETAILS SEE SHEET 7.  
★ ELEVATIONS GIVEN AT THE B.F. OF ABUTMENT.



**LEGEND**

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" V" GROOVE @ F.F. IF JOINT IS USED).
- (A09) SUPPORT NORTH ABUTMENT ON 10 3/4" DIA. 0.25" CIP CONCRETE PILING, ESTIMATED 75'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 115 TONS PER PILE.
- (A12) 12 3/4" DIA. CIP PILES MAY BE USED IN LIEU OF 10 3/4" DIA. CIP PILES, BUT PAYMENT SHALL BE BASED ON THE BID PRICE FOR "PILING CIP CONCRETE 10 3/4" X 0.25-INCH".
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/2" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A22) BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (A27) LINE OF BACKWALL REMOVAL.
- ⊙ - INDICATES WING NUMBER
- F.F. - FRONT FACE
- B.F. - BACK FACE
- CL. - CLEAR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-69-52</b>			
DRAWN BY		PLANS CK'D	
EKK		JZ	
<b>NORTH ABUTMENT</b>		SHEET 6 OF 10	

8

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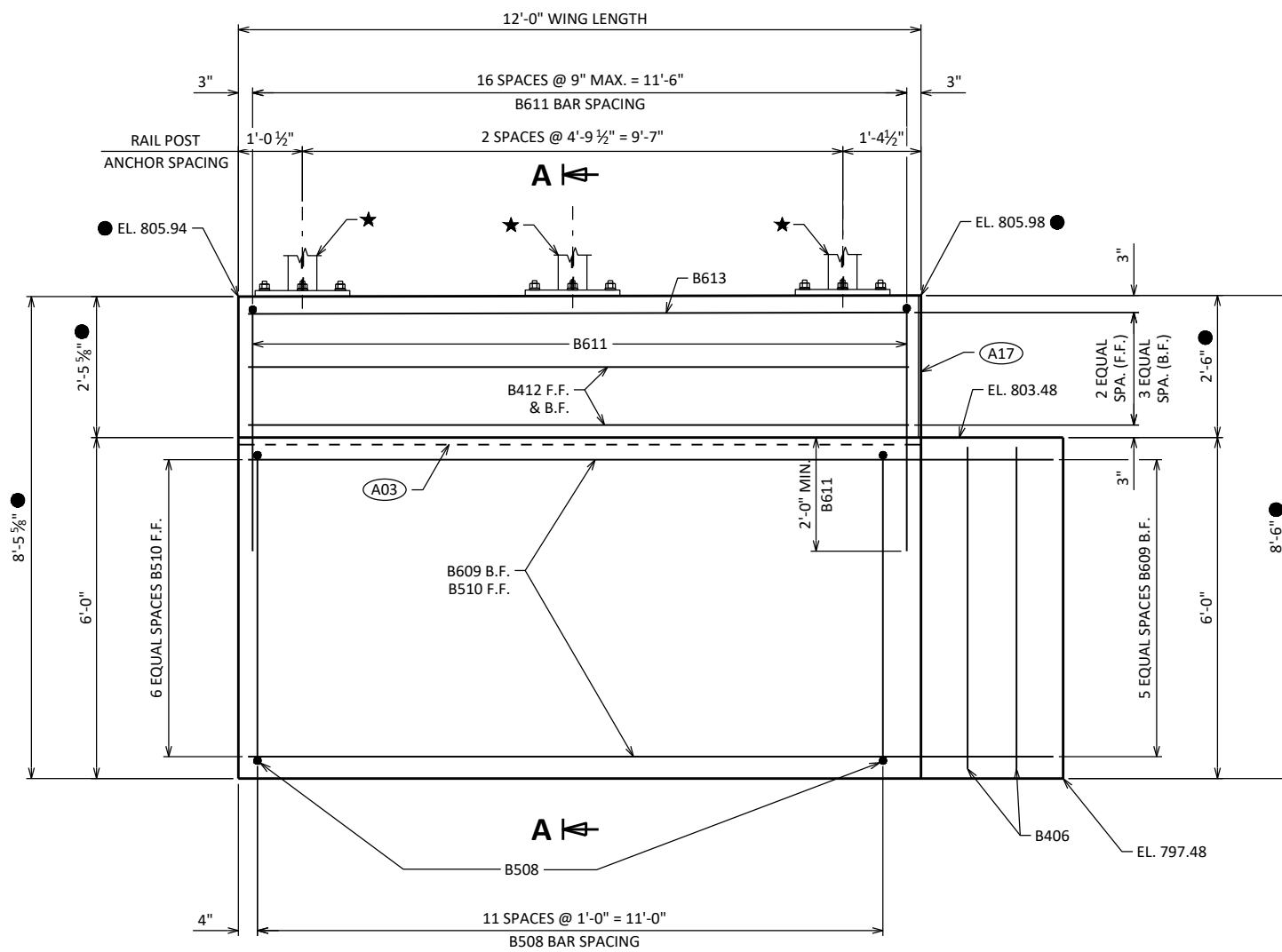
(COATED) 1,710 LBS.

BILL OF BARS (NORTH ABUT.) (UNCOATED) 1,885 LBS.

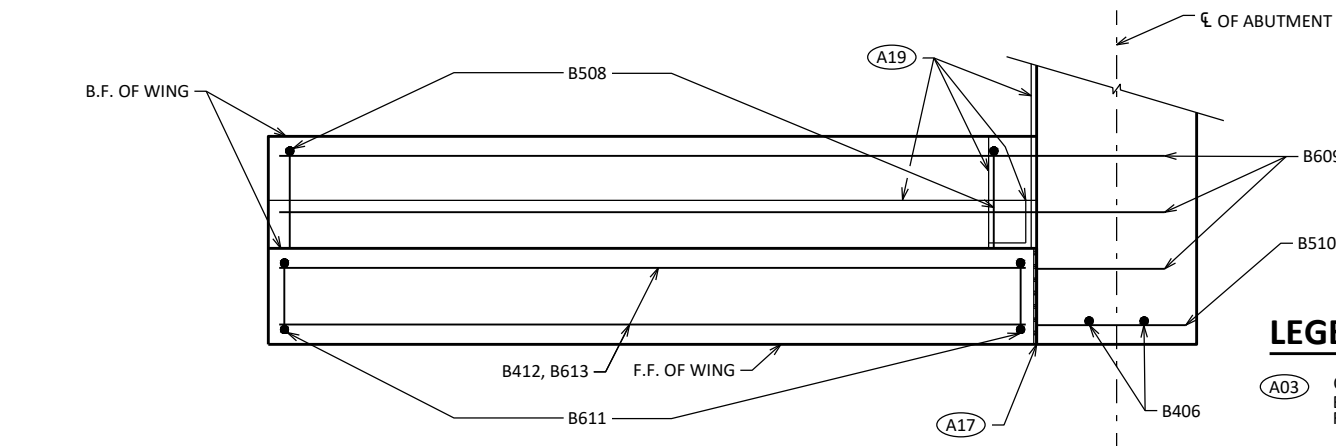
NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		6	28'-0"	X	ABUTMENT BODY - 1 SPIRAL WRAP @ EACH PILE
B402		12	2'-3"		ABUTMENT BODY - 2 @ EACH PILE - VERT.
B603		11	28'-2"		ABUTMENT BODY - F.F., TOP & BOTTOM - HORIZ.
B504		36	16'-2"	X	ABUTMENT BODY - STIRRUP - VERT.
B805		14	17'-10"	X	ABUTMENT BODY - B.F. - HORIZ.
B406		4	5'-7"		ABUTMENT BODY - ENDS - VERT.
B507	X	27	2'-0"		ABUTMENT BODY - TOP - DOWELS - VERT.
B508	X	24	17'-8"	X	WINGS 3 & 4 - BASE - STIRRUP - VERT.
B609	X	16	13'-11"		WINGS 3 & 4 - BASE - B.F. & TOP - HORIZ.
B510	X	14	14'-2"		WINGS 3 & 4 - BASE - F.F. - HORIZ.
B611	X	34	9'-6"	X	WINGS 3 & 4 - TOP - STIRRUP - VERT.
B412	X	10	11'-8"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B613	X	6	11'-8"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR



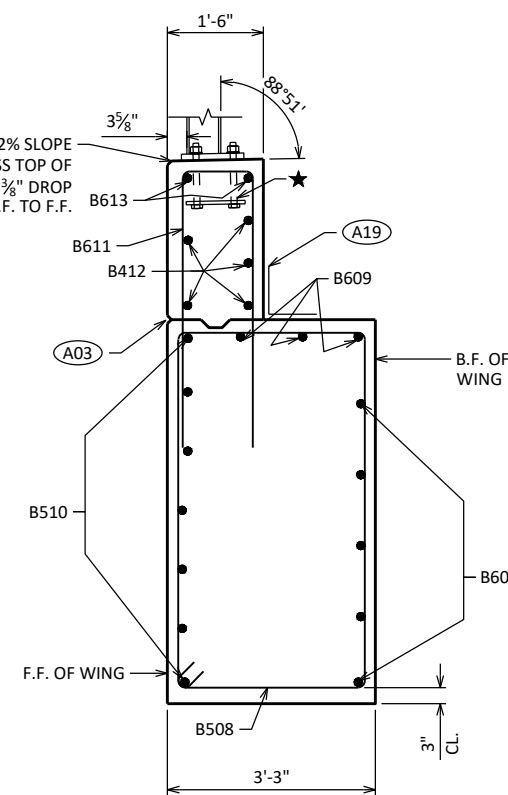
WING - ELEVATION



PLAN - WING

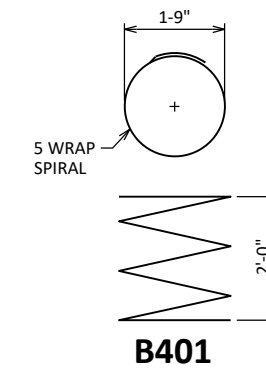
LEGEND

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" RMW @ B.F. & B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACE OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW TOP OF WING AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE

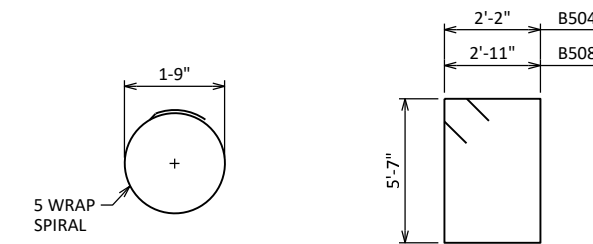


SECTION A-A THRU WING

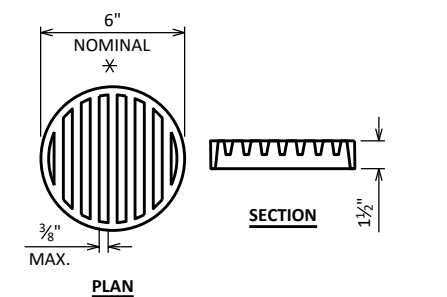
WING 3 SHOWN, WING 4 SIMILAR



B401



B504, B508



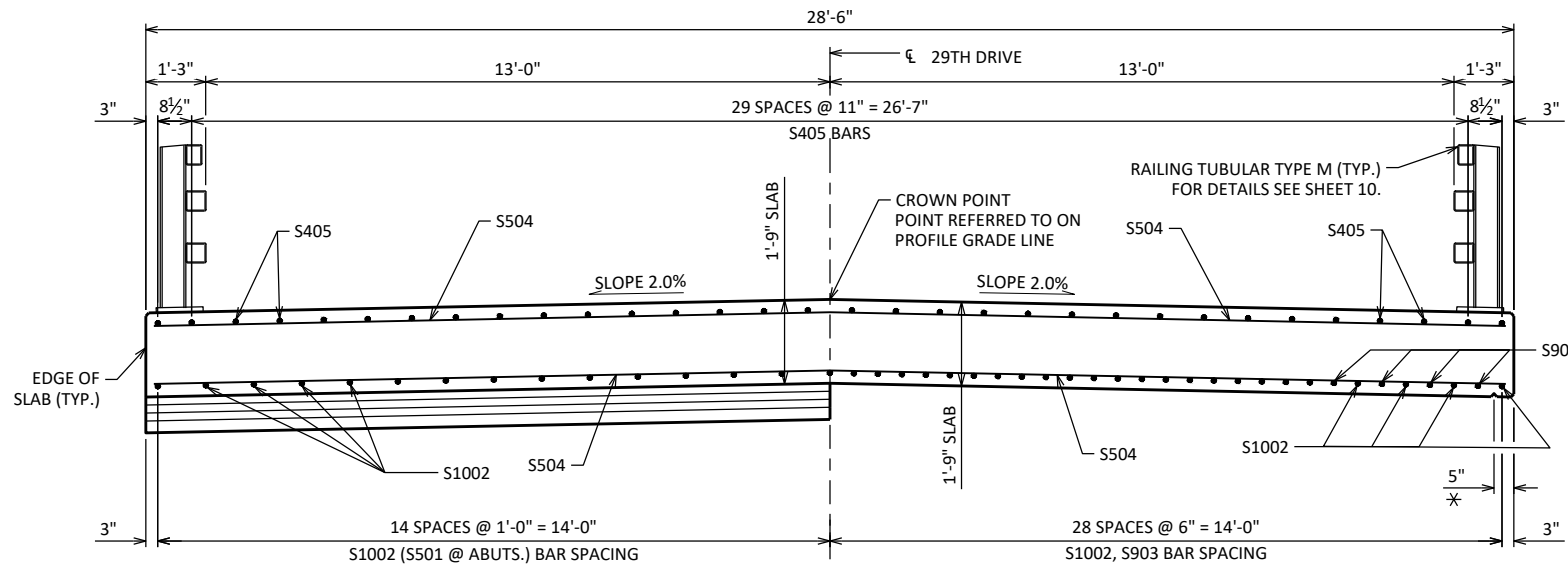
RODENT SHIELD DETAIL

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

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

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

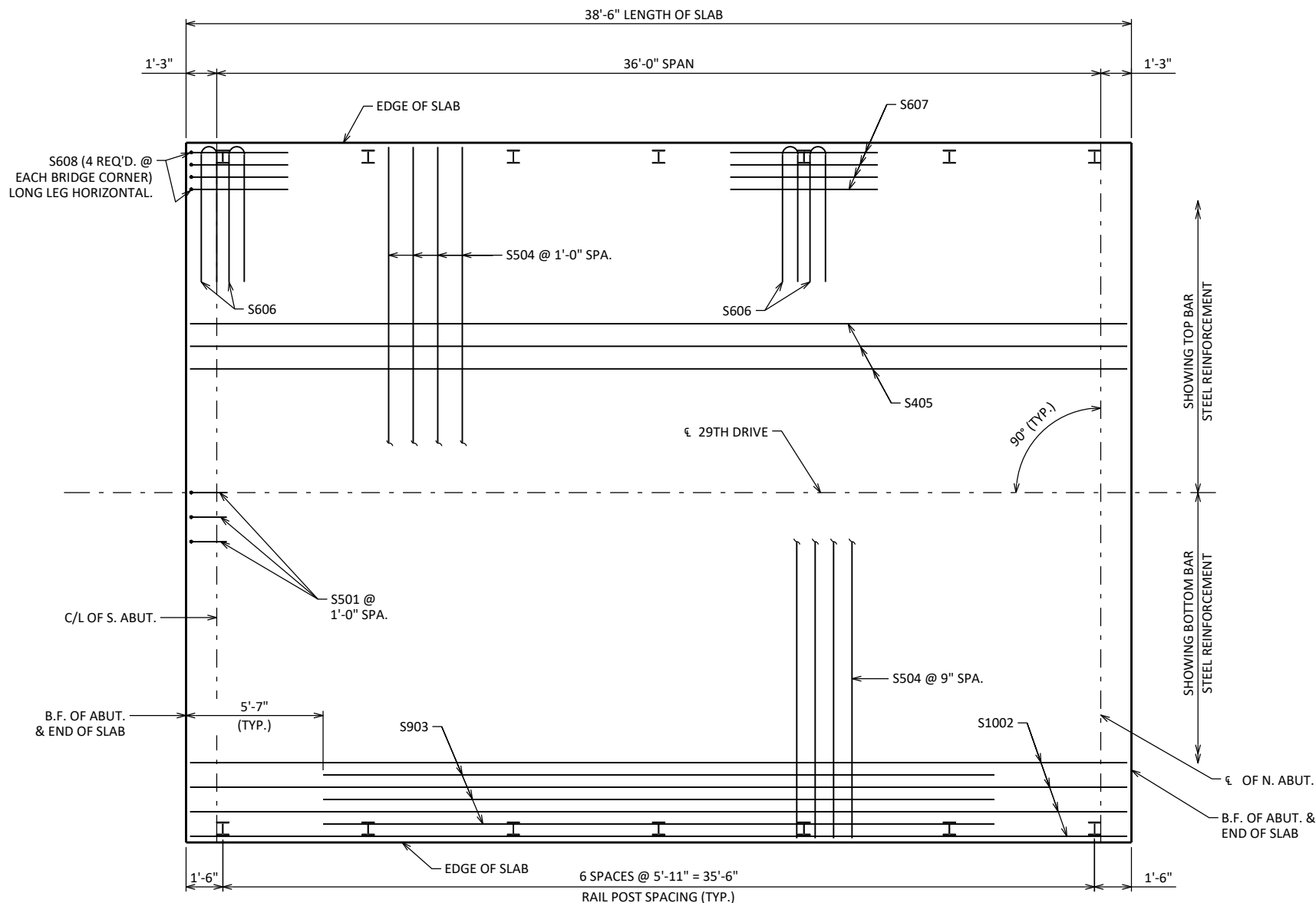
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-69-52</b>			
DRAWN BY		PLANS CK'D	
EKK		JZ	
<b>NORTH ABUTMENT DETAILS</b>		SHEET 7 OF 10	



**AT ABUTMENTS**

**IN SPAN**

**CROSS SECTION THRU BRIDGE**



**PLAN**

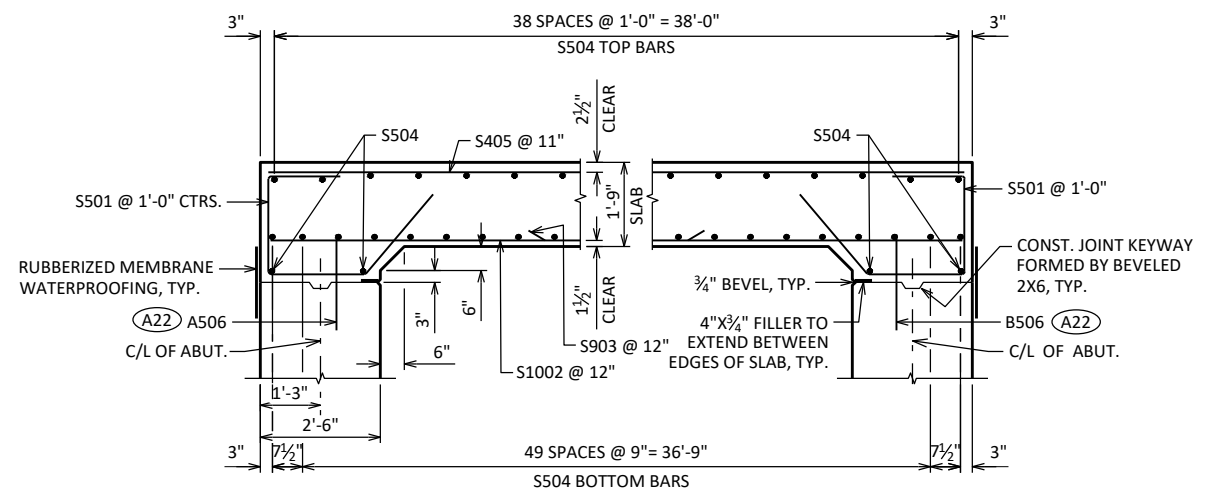
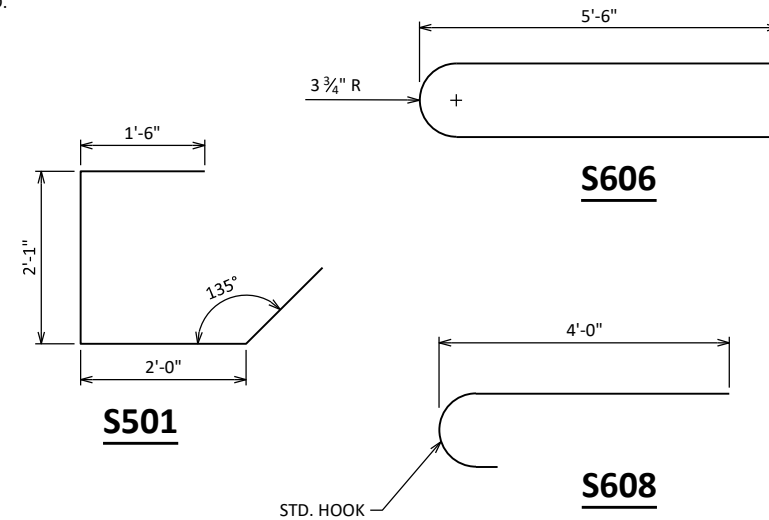
**BILL OF BARS (COATED) 12,395 LBS.**

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	X	58	7'-10"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S1002	X	29	38'-2"		SLAB BOTTOM - LONGIT.
S903	X	28	27'-4"		SLAB BOTTOM - LONGIT.
S504	X	95	28'-2"		SLAB TOP & BOTTOM - TRANS.
S405	X	32	38'-2"		SLAB TOP - LONGIT.
S606	X	28	11'-4"	X	SLAB TOP @ RAIL POST, 2 PER POST
S607	X	40	6'-0"		SLAB TOP @ RAIL POST, 4 PER POST
S608	X	16	4'-8"	X	SLAB TOP @ RAIL END POST AS NOTED

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

\* 3/4" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT.  
V-GROOVES ARE REQUIRED.



**LONGITUDINAL SECTION**

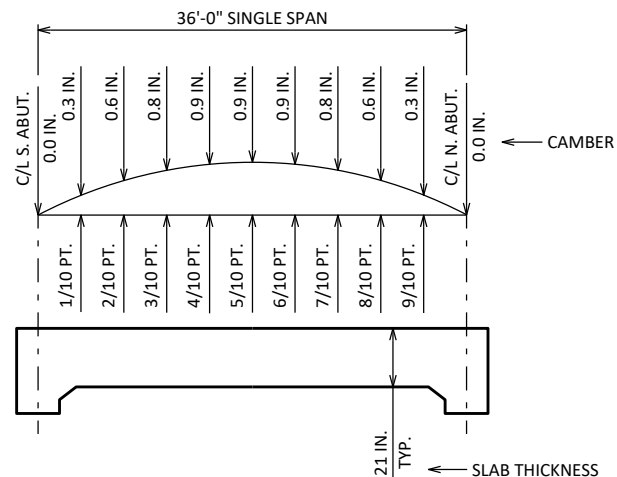
DIMENSIONS ARE GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED.

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-69-52</b>			
DRAWN BY		EKK	PLANS CK'D JZ
<b>SUPERSTRUCTURE</b>		SHEET 8 OF 10	

SCALE = 6





**CAMBER AND SLAB THICKNESS DIAGRAM**

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

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

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

**TOP OF SLAB ELEVATIONS**

SPAN	LOCATION	C/L BRG. S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. N. ABUT.
1	E. EDGE OF SLAB	806.00	806.01	806.01	806.01	806.01	806.01	806.01	806.00	806.00	805.99	805.98
	CROWN OR C/L	806.29	806.29	806.30	806.30	806.30	806.30	806.29	806.29	806.28	806.28	806.27
	W. EDGE OF SLAB	806.00	806.01	806.01	806.01	806.01	806.01	806.01	806.00	806.00	805.99	805.98

**SURVEY TOP OF SLAB ELEVATIONS**

LOCATION	S. ABUTMENT	5/10 PT.	N. ABUTMENT
W. EDGE OF SLAB			
CROWN OR C/L			
E. EDGE OF SLAB			

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

**NOTES**

FILL IN THE TABLE OF "SURVEY TOP OF SLAB ELEVATIONS" FOR EACH SPAN ON AS BUILT PLANS.

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 (+).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-69-52</b>			
DRAWN BY		EKK	PLANS CK'D JZ
<b>SUPERSTRUCTURE DETAILS</b>			SHEET 9 OF 10

SCALE = 2.25

8

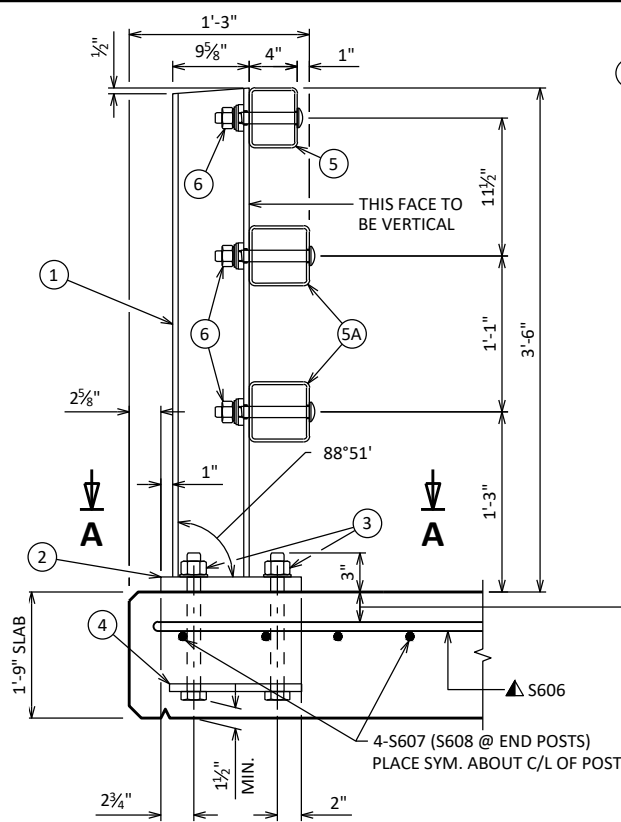
8

**LEGEND**

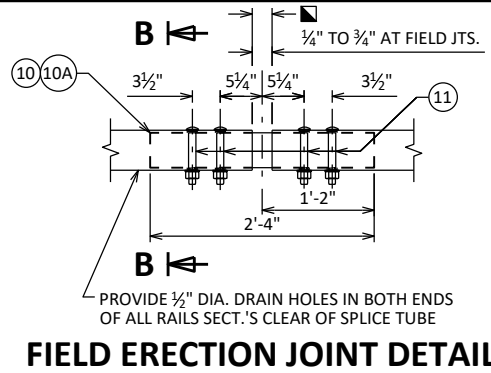
- 1 W6 X 25 WITH 1 1/8" X 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- 2 PLATE 1 1/4" X 11 3/8" X 1'-8" WITH 1 1/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- 3 ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
- 4 5/8" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- 5 TS 5 X 4 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- 5A TS 5 X 5 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- 6 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- 7 7/8" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" THREADED SHOP WELDED STUDS (NO. 12) BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THREE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- 8 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
- 9 SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- 10 3/8" X 3 3/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- 10A 3/8" X 2 5/8" X 2'-4" PLATE USED IN NO. 5, 3/8" X 3 3/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- 11 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/16" X 1 1/2" LONG IT. SLOTTED HOLES AT FIELD JOINTS AND 1 3/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
- 12 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
- 13 3/8" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THREE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- 14 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
- 15 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

**GENERAL NOTES**

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



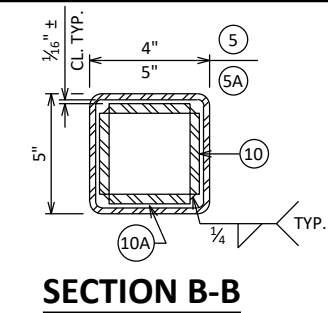
**SECTION THRU RAILING ON SLAB**



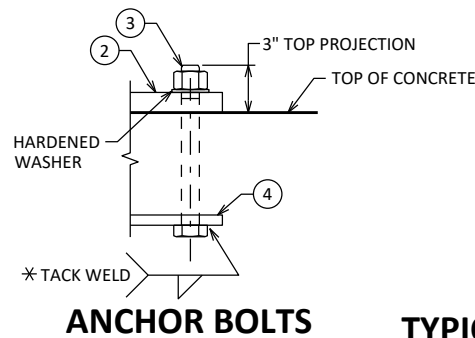
**FIELD ERECTION JOINT DETAIL**



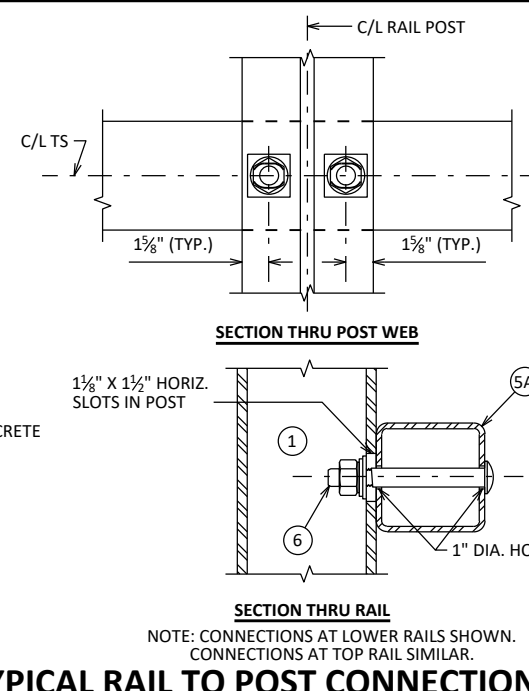
**SHOP RAIL SPLICE DETAIL**



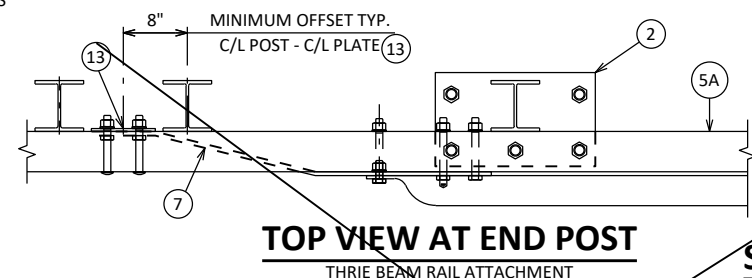
**SECTION B-B**



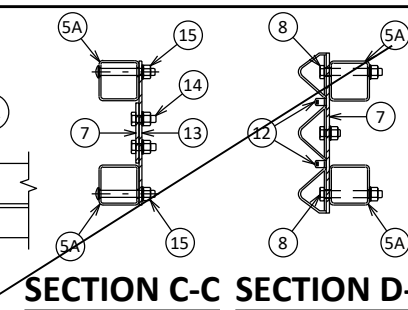
**ANCHOR BOLTS**



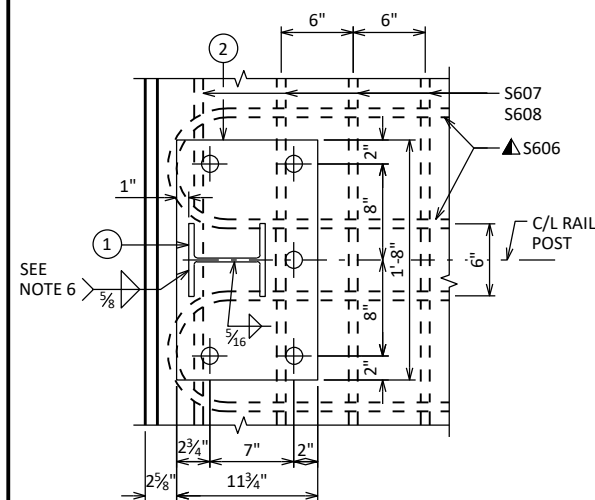
**TYPICAL RAIL TO POST CONNECTIONS**



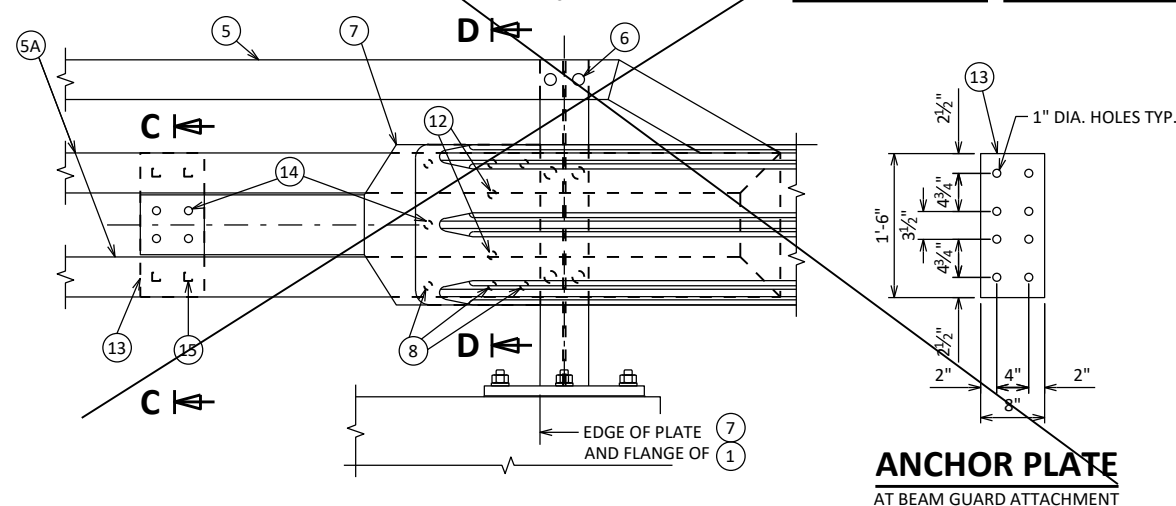
**TOP VIEW AT END POST**



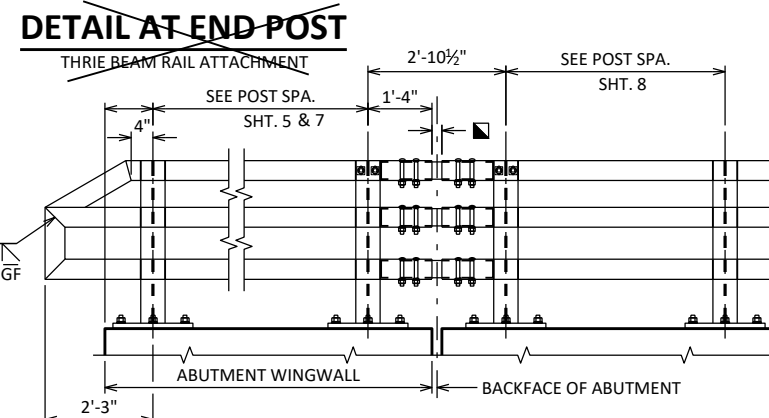
**SECTION C-C SECTION D-D**



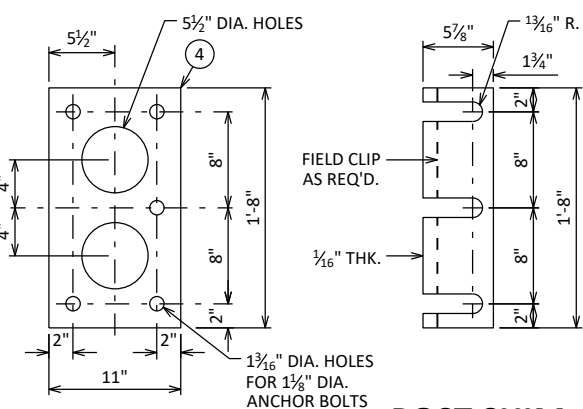
**SECTION A-A**



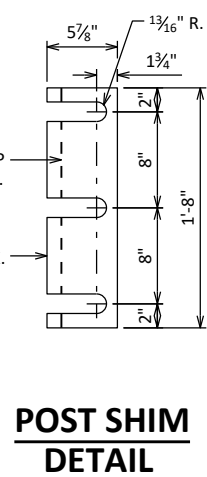
**ANCHOR PLATE AT BEAM GUARD ATTACHMENT**



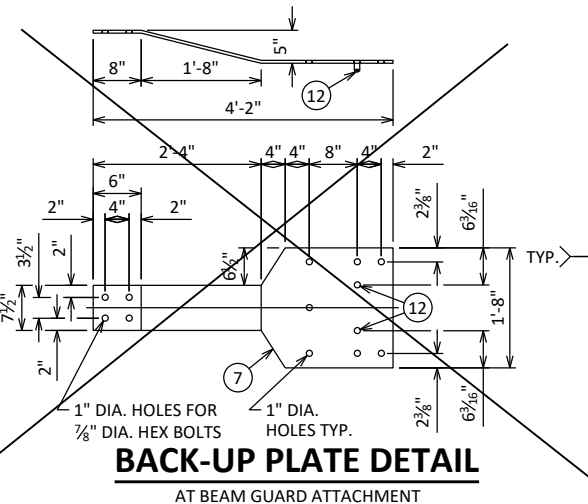
**PART ELEVATION OF RAILING**



**ANCHOR PLATE AT RAIL TO SLAB CONNECTION**



**POST SHIM DETAIL**

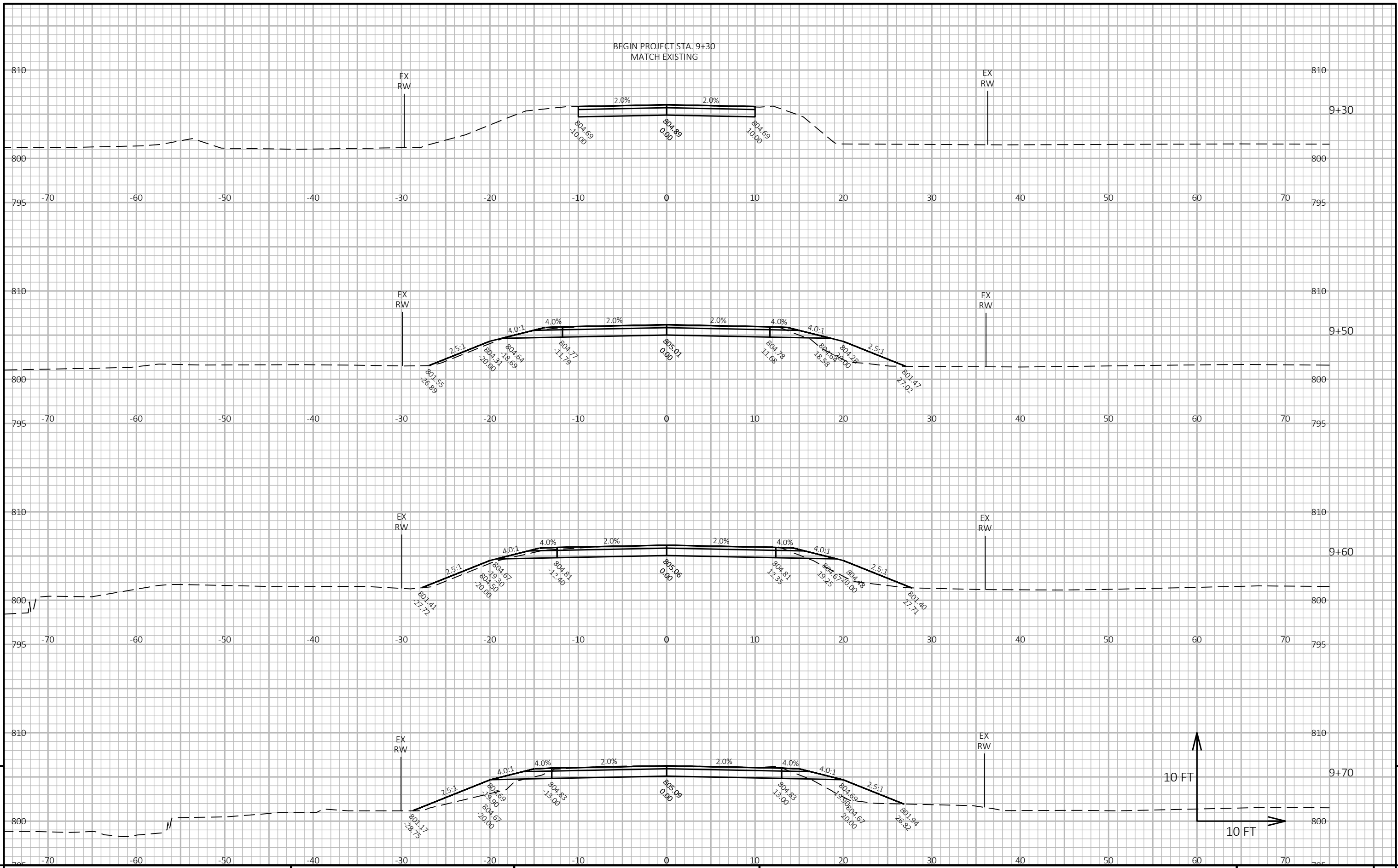


**BACK-UP PLATE DETAIL AT BEAM GUARD ATTACHMENT**

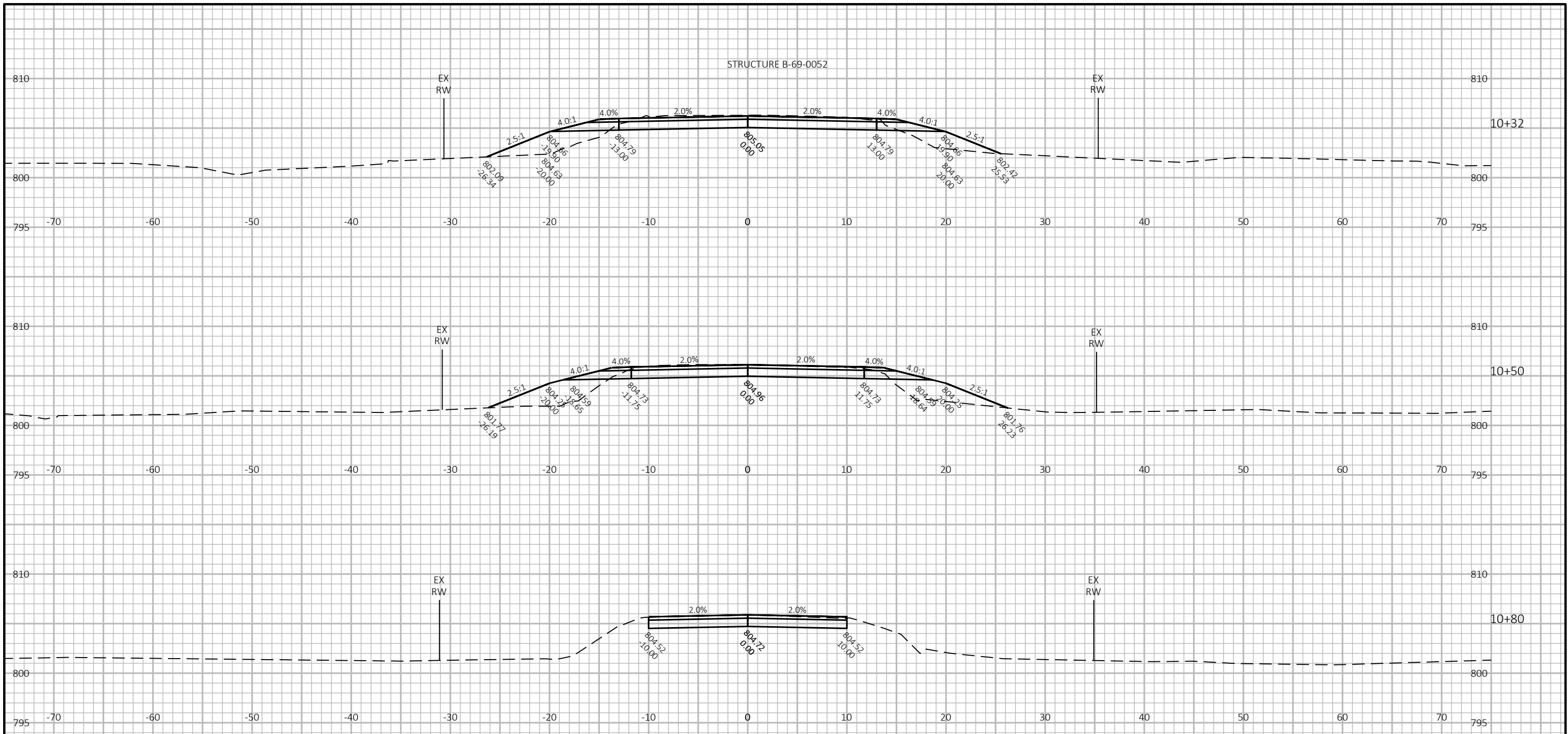
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
<b>STRUCTURE B-69-52</b>			
DRAWN BY		EKK	PLANS CK'D JZ
<b>TUBULAR STEEL RAILING TYPE M</b>			SHEET 10 OF 10

EARTHWORK SUMMARY

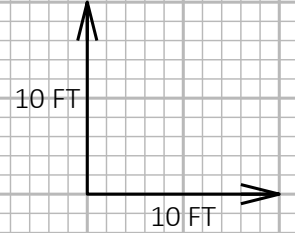
STA	EXCAVATION COMMON CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY	BORROW CY
9+30.00	-	-	-	-	-
	21.00	6.00	8.00	13.00	13.00
9+50.00	-	-	-	-	-
	13.00	6.00	8.00	5.00	5.00
9+60.00	-	-	-	-	-
	13.00	7.00	9.00	.00	.00
9+70.00	-	-	-	-	-
STRUCTURE 690052					
10+32.25	-	-	-	-	-
	21.00	18.00	23.00	2.00	2.00
10+50.00	-	-	-	-	-
	27.00	29.00	38.00	11.00	11.00
10+75.00	-	-	-	-	-
	5.00	3.00	.00	1.00	1.00
10+80.00	-	-	-	-	-
SUTOTAS	-	-	-	-	-
S. AROAH	7.00	19.00	25.00	22.00	22.00
. AROAH	53.00	50.00	65.00	12.00	12.00
UUSAE AEMET 3					2.00
TOTAS	100.00	69.00	90.00	10.00	1.00
1 OT A TEM OR ORMATOA UROSES OY. 2 EASO 30 3 EST AEMET ASE O AE THK O .5					



PROJECT NO: 6871-00-70      HWY: LOC STR      COUNTY: WAUSHARA      CROSS SECTIONS: 29TH DRIVE      SHEET      E



END PROJECT STA. 10+80  
MATCH EXISTING



9

9

PROJECT NO: 6871-00-70	HWY: LOC STR	COUNTY: WAUSHARA	CROSS SECTIONS: 29TH DRIVE	SHEET	E
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## ***Wisconsin Department of Transportation***

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