

LAX

AUGUST 2024

PROJECT ID:
WITH: N/A

7269-00-71

COUNTY:

LA CROSSE

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
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 = 48



DESIGN DESIGNATION 7269-00-01

A.A.D.T.	2024	=	282
A.A.D.T.	2044	=	418
D.H.V.		=	42
D.D.		=	50/50
T.		=	10.0%
DESIGN SPEED		=	30 MPH
ESALS		=	120,000

CONVENTIONAL SYMBOLS

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

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T HOLLAND, CASBERG COULEE ROAD

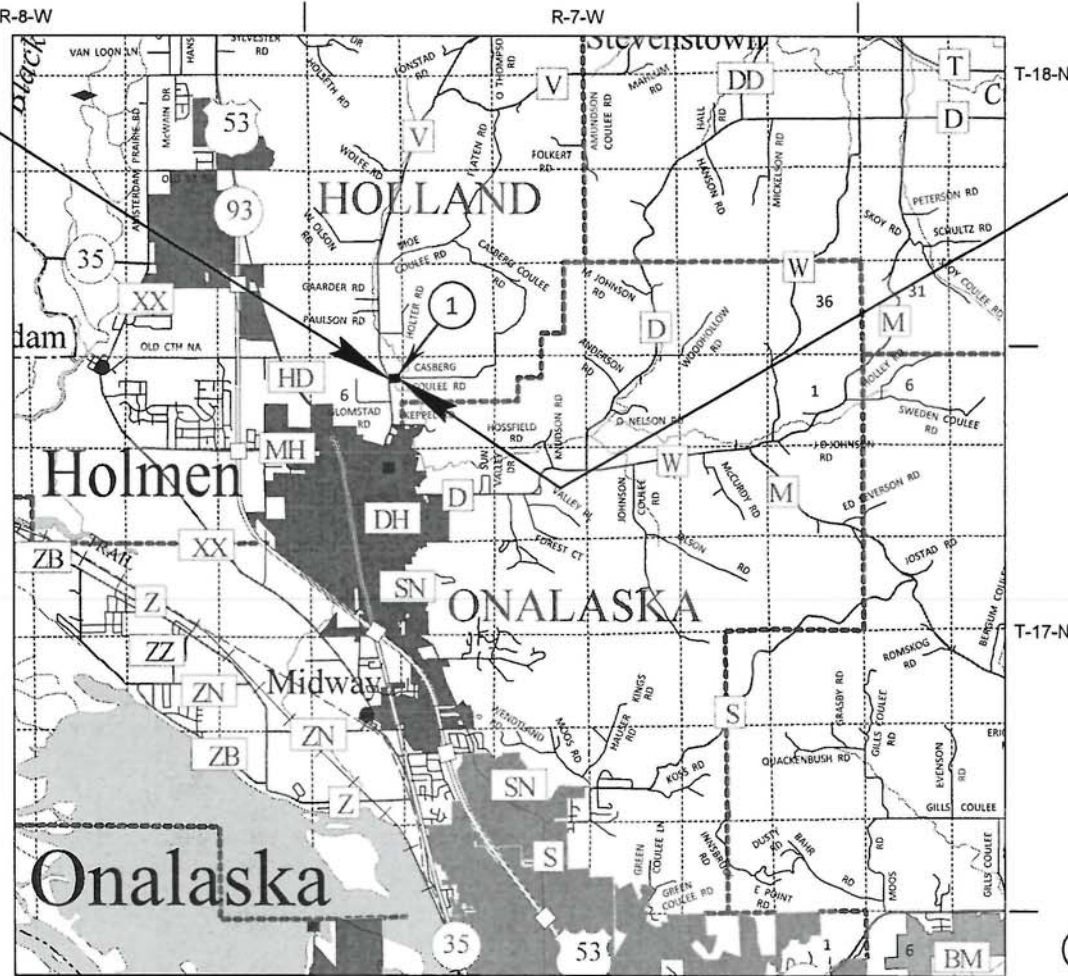
LONG COULEE CREEK BRIDGE B-32-0251

LOCAL STREET
LA CROSSE COUNTY

STATE PROJECT NUMBER
7269-00-71

BEGIN PROJECT
STA 6+25.00
Y=193,286.45
X=444,628.63

END PROJECT
STA 12+50.00



LAYOUT
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.118 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), LA CROSSE 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 12A.

STATE PROJECT

7269-00-71

FEDERAL PROJECT

PROJECT

WISC 2024406

CONTRACT

1

ACCEPTED FOR

LA CROSSE COUNTY

Date 4-18-24

(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

SEH Short Elliott Hendrickson Inc.
6808 Odana Road, Suite 200
Madison, WI 53719-1137
Building a Better World
for All of Us™ 800.732.4362 toll free | www.sehinc.com



4/18/2024

(Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SEH
Designer	SEH
Project Manager	RANDY BYOM, PE
Regional Examiner	RANDY BYOM, PE
Regional Supervisor	KYLE HEMP, PE

APPROVED FOR THE DEPARTMENT

DATE: 06/12/2024

(Signature)

E

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	HYD	HYDRANT
AC	ACRE	ID	INSIDE DIAMETER
AGG	AGGREGATE	INV	INVERT
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE	IP	IRON PIPE ON PIN
AECPCS	APRON ENDWALL FOR CULVERT PIPE CORRUGATED STEEL	LHF	LEFT-HAND FORWARD
ASPH	ASPHALTIC	L	LENGTH OF CURVE
AVG	AVERAGE	LF	LINEAR FOOT
ADT	AVERAGE DAILY TRAFFIC	LC	LONG CHORD OF CURVE
BF	BACK FACE	LS	LUMP SUM
BM	BENCH MARK	MH	MANHOLE
BR	BRIDGE	MOR	MID POINT OF RADIUS
CE	COMMERCIAL ENTRANCE	NC	NORMAL CROWN
C/L	CENTER LINE	NO	NUMBER
Δ	CENTRAL ANGLE OR DELTA	OBLIT	OBLITERATE
COB	CENTER OF BARRIER	PAVT	PAVEMENT
CONC	CONCRETE	PE	PRIVATE ENTRANCE
CPRC	CULVERT PIPE REINFORCED CONCRETE	PVRC	POINT OF VERTICAL REVERSE CURVE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	QOR	QUARTER POINT OF RADIUS
CR	CREEK	R	RADIUS
CY	CUBIC YARD	REQ'D	REQUIRED
C&G	CURB AND GUTTER	RES	RESIDENCE OR RESIDENTIAL
D	DEGREE OF CURVE	RHF	RIGHT-HAND FORWARD
DHV	DESIGN HOUR VOLUME	R/W	RIGHT-OF-WAY
DISCH	DISCHARGE	R	RIVER
DG	DITCH GRADE	RDWY	ROADWAY
DWY	DRIVEWAY	R/L	REFERENCE LINE
X	EAST GRID COORDINATE	SALV	SALVAGED
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	SAN	SANITARY SEWER
EOR	END POINT OF RADIUS	SF	SQUARE FEET
EL	ELEVATION	SY	SQUARE YARD
ENT	ENTRANCE	SDD	STANDARD DETAIL DRAWINGS
ESALS	EQUIVALENT SINGLE AXLE LOADS	STA	STATION
EXC	EXCAVATION	SS	STORM SEWER
EBS	EXCAVATION BELOW SUBGRADE	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EXIST	EXISTING	SE	SUPERELEVATION RATE
FC	FACE OF CURB	TC	TOP OF CURB
FF	FACE TO FACE	T OR TN	TOWN
FERT	FERTILIZE	T	TRUCKS (PERCENT OF)
FE	FIELD ENTRANCE	TYP	TYPICAL
FL	FLOW LINE	VAR	VARIABLE
FO	FIBER OPTIC	VC	VERTICAL CURVE
CWT	HUNDREDWEIGHT	Y	NORTH GRID COORDINATE
		YD	YARD

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.5 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.9 ACRES

DNR AREA LIAISON:

WI DEPT OF NATURAL RESOURCES
DNR SERVICE CENTER
3550 MORMON COULEE RD
LA CROSSE, WI 54601
TELEPHONE: 608.785.9115
ATTENTION: KAREN KALVELAGE
EMAIL: KAREN.KALVELAGE@WISCONSIN.GOV

LA CROSSE COUNTY:

LA CROSSE COUNTY HIGHWAY DEPARTMENT
301 CARLSON ROAD,
WEST SALEM, WI 54669
TELEPHONE: 608.786.3810
ATTENTION: JOE LANGEBERG
EMAIL: JLANGEBERG@LACROSSECOUNTY.ORG

UTILITY CONTACT LIST:

MIDWEST NATURAL GAS INC.
PO BOX 429
LA CROSSE, WI 54602-0429
TELEPHONE: 608.781.1011
ATTENTION: NICK MAIER
EMAIL: NICKM@MIDWESTNATURALGAS.COM

BRIGHTSPEED COMMUNICATIONS
1905 WARD AVENUE
LA CROSSE, WI 54601
TELEPHONE: 608.780.1238
ATTENTION: BRIAN STELPLUGH
EMAIL: BRIAN.STELPLUGH@BRIGHTSPEED.COM

WISDOT CONTACT:

WI DEPT OF TRANSPORTATION
3550 MORMON
COULEE ROAD, LA CROSSE, WI 54601
TELEPHONE: 608.785.9966
ATTENTION: RANDY BYOM
EMAIL: RANDY.BYOM@DOT.WI.GOV

DESIGN CONTACT:

SHORT ELLIOTT HENDRICKSON INC
6808 ODANA ROAD, SUITE 200
MADISON, WI 53719-1137
TELEPHONE: 608.620.6192
ATTENTION: CHRISTOPHER BLUM
EMAIL: CBLUM@SEHINC.COM

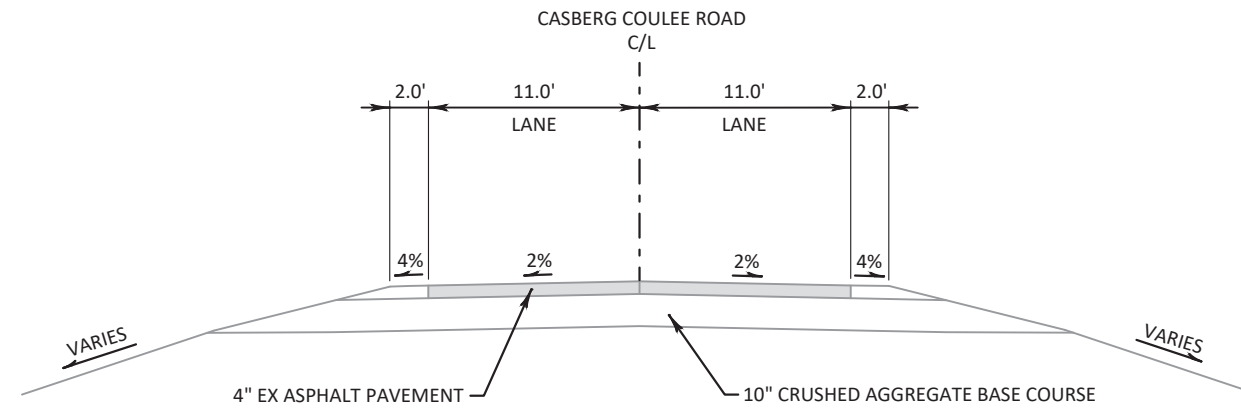
GENERAL NOTES:

- NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
- WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.
- BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP.
- CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. SALVAGED TOPSOIL SHALL BE REPLACED WITH 4-INCH TYPICAL DEPTH.
- TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ASPHALTIC AND CONCRETE SURFACES SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, FERTILIZED AND SEEDED.
- FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.
- A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE.

DIGGERSHOTLINE

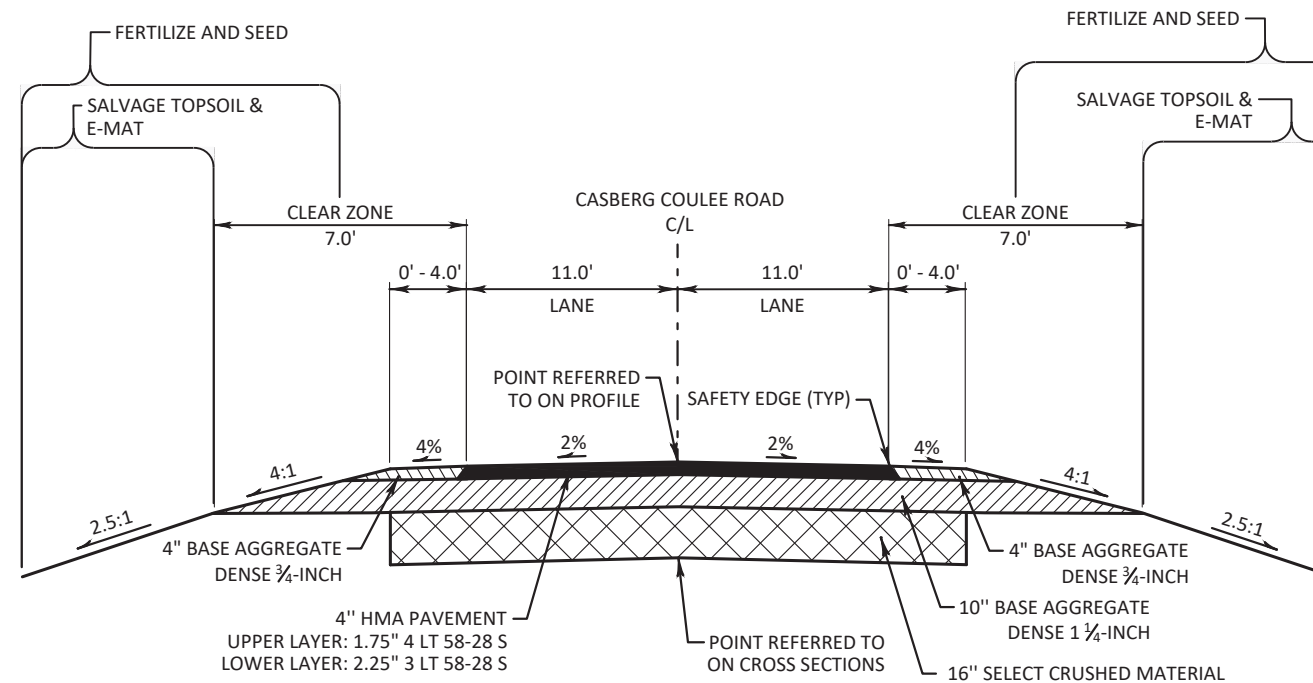
Dial 811 or (800)242-8511

www.DiggersHotline.com



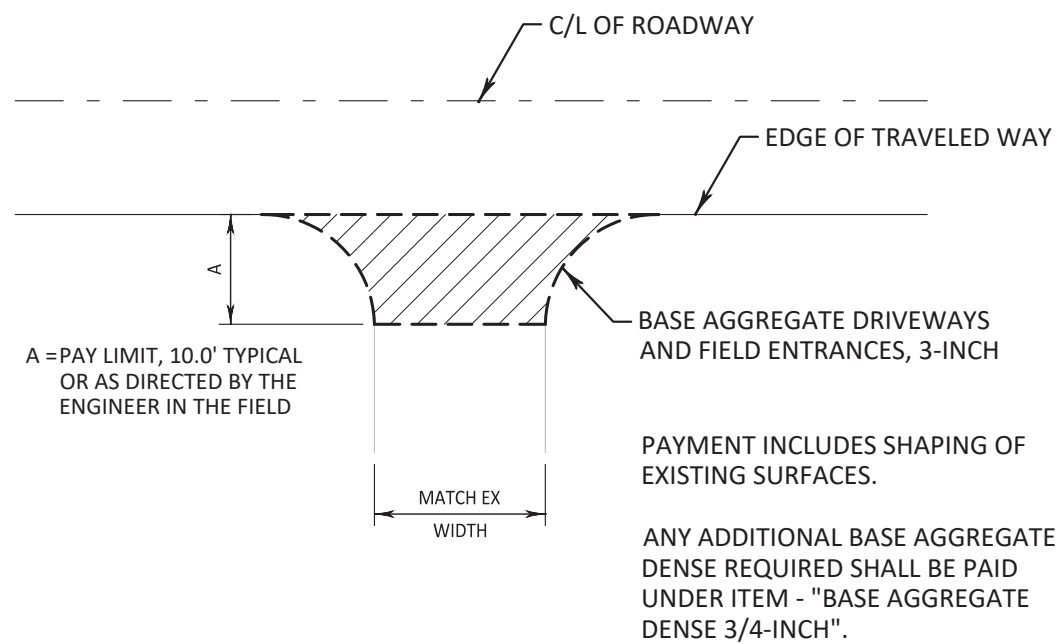
TYPICAL EXISTING SECTION

CASBERG COULEE ROAD
STA 6+25.00 TO STA 12+50.00

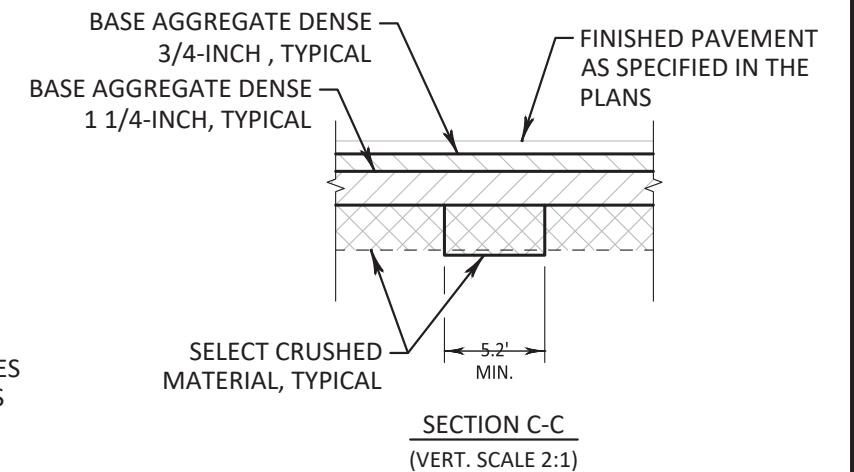
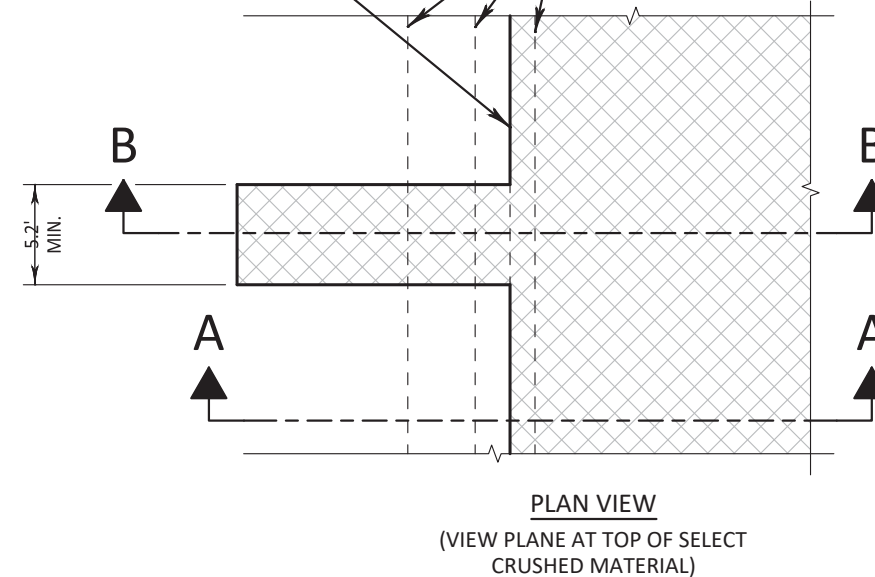
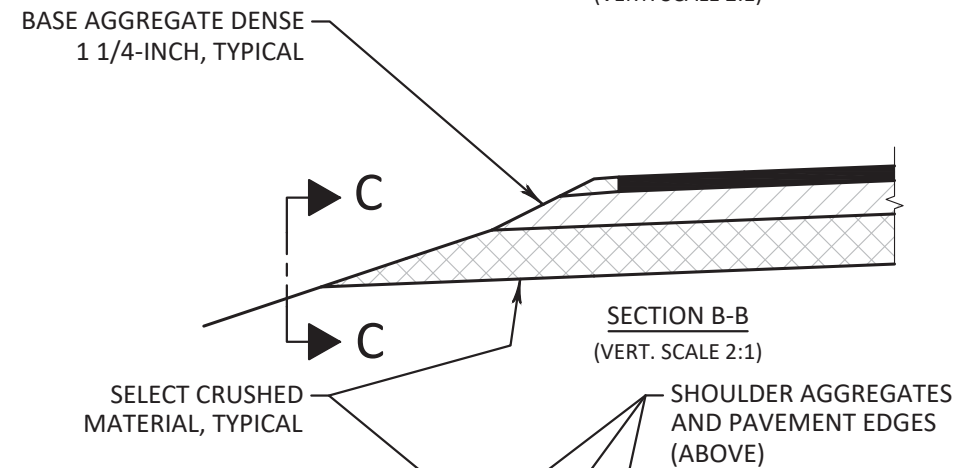
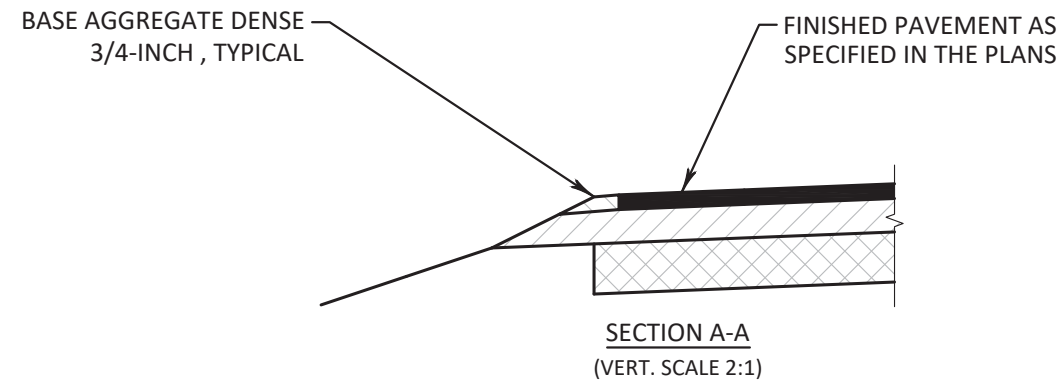


TYPICAL FINISHED SECTION

CASBERG COULEE ROAD
STA 6+25.00 TO STA 12+50.00



BASE AGGREGATE DRIVEWAYS AND FIELD ENTERANCES
(PE, CE, OR FE)



NOTE:

CONSTRUCT RELIEF TRENCHES AT 200'-300' INTERVALS AND AT PROFILE SAG POINTS (LEFT AND RIGHT).

FINAL LOCATIONS TO BE APPROVED OR DETERMINED BY THE ENGINEER IN THE FIELD.

MATERIALS AND LABOR FOR RELIEF TRENCH ARE INCLUDED IN THE SELECT CRUSHED MATERIAL BID ITEM.

Estimate Of Quantities

7269-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	4.000	4.000
0004	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-32-0095	EACH	1.000	1.000
0006	204.0110	Removing Asphaltic Surface	SY	160.000	160.000
0008	205.0100	Excavation Common	CY	2,060.000	2,060.000
0010	206.1001	Excavation for Structures Bridges (structure) 01. B-32-0251	EACH	1.000	1.000
0012	210.1500	Backfill Structure Type A	TON	930.000	930.000
0014	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 7269-00-71	EACH	1.000	1.000
0016	213.0100	Finishing Roadway (project) 01. 7269-00-71	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	170.000	170.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,310.000	1,310.000
0022	312.0110	Select Crushed Material	TON	1,640.000	1,640.000
0024	455.0605	Tack Coat	GAL	90.000	90.000
0026	460.2000	Incentive Density HMA Pavement	DOL	230.000	230.000
0028	460.5223	HMA Pavement 3 LT 58-28 S	TON	200.000	200.000
0030	460.5224	HMA Pavement 4 LT 58-28 S	TON	150.000	150.000
0032	465.0125	Asphaltic Surface Temporary	TON	40.000	40.000
0034	502.0100	Concrete Masonry Bridges	CY	244.000	244.000
0036	502.3200	Protective Surface Treatment	SY	275.000	275.000
0038	505.0400	Bar Steel Reinforcement HS Structures	LB	5,500.000	5,500.000
0040	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	31,390.000	31,390.000
0042	513.4061	Railing Tubular Type M	LF	106.000	106.000
0044	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0046	550.2104	Piling CIP Concrete 10 3/4 X 0.25-Inch	LF	1,530.000	1,530.000
0048	606.0300	Riprap Heavy	CY	210.000	210.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	162.000	162.000
0052	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7269-00-71	EACH	1.000	1.000
0054	619.1000	Mobilization	EACH	1.000	1.000
0056	624.0100	Water	MGAL	30.000	30.000
0058	625.0500	Salvaged Topsoil	SY	2,030.000	2,030.000
0060	628.1504	Silt Fence	LF	1,250.000	1,250.000
0062	628.1520	Silt Fence Maintenance	LF	1,250.000	1,250.000
0064	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0068	628.2027	Erosion Mat Class II Type C	SY	1,670.000	1,670.000
0070	628.6005	Turbidity Barriers	SY	230.000	230.000
0072	629.0210	Fertilizer Type B	CWT	2.000	2.000
0074	630.0120	Seeding Mixture No. 20	LB	57.000	57.000
0076	630.0200	Seeding Temporary	LB	57.000	57.000
0078	630.0500	Seed Water	MGAL	24.000	24.000
0080	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0082	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0084	638.2602	Removing Signs Type II	EACH	4.000	4.000
0086	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0088	642.5001	Field Office Type B	EACH	1.000	1.000
0090	643.0420	Traffic Control Barricades Type III	DAY	606.000	606.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	762.000	762.000
0094	643.0900	Traffic Control Signs	DAY	420.000	420.000
0096	643.1050	Traffic Control Signs PCMS	DAY	56.000	56.000
0098	643.5000	Traffic Control	EACH	1.000	1.000

Estimate Of Quantities

7269-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	645.0111	Geotextile Type DF Schedule A	SY	114.000	114.000
0102	645.0120	Geotextile Type HR	SY	370.000	370.000
0104	646.1020	Marking Line Epoxy 4-Inch	LF	625.000	625.000
0106	650.4500	Construction Staking Subgrade	LF	575.000	575.000
0108	650.5000	Construction Staking Base	LF	575.000	575.000
0110	650.6501	Construction Staking Structure Layout (structure) 01. B-32-0251	EACH	1.000	1.000
0112	650.9911	Construction Staking Supplemental Control (project) 01. 7269-00-71	EACH	1.000	1.000
0114	650.9920	Construction Staking Slope Stakes	LF	575.000	575.000
0116	690.0150	Sawing Asphalt	LF	52.000	52.000
0118	715.0502	Incentive Strength Concrete Structures	DOL	1,464.000	1,464.000
0120	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0122	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0124	SPV.0090	Special 01. Flashing Stainless Steel	LF	102.000	102.000

EARTHWORK SUMMARY (7269-00-71)								
CATEGORY 0010								
SUBSTAGE	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)		SALVAGED / UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6)	MASS ORDINATE +/- (7)
		CUT (2)	EBS EXCAVATION				FACTOR 1.30	
STAGE 1	8+20 - 9+31	300	0	0	300	43	56	244
	FIELD ENTRANCE	180	0	0	180	20	26	154
	9+31 - 12+50	1,030						
CATEGORY 0010 SUBTOTALS		1,510	0	0	480	63	82	398
CATEGORY 0030								
SUBSTAGE	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)		SALVAGED / UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6)	MASS ORDINATE +/- (7)
		CUT (2)	EBS EXCAVATION				FACTOR 1.30	
STAGE 1	6+25 - 8+20	550	0	0	550	88	114	550
CATEGORY 0030 SUBTOTALS		550	0	0	550	88	114	550
PROJECT TOTALS		2,060	0	0	1,030	151	196	948
TOTAL COMMON EXC		2,060						

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(6) EXPANDED FILL FACTOR = 1.30

DEPENDING ON SELECTIONS:

(7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

3

<div><div>GRUBBING</div><div>201.0205</div><table><tr><th>CATEGORY</th><th>STATION</th><th>STA</th></tr><tr><td rowspan="4">0010</td><td>8+00</td><td>1</td></tr><tr><td>9+00</td><td>1</td></tr><tr><td>10+00</td><td>1</td></tr><tr><td>11+00</td><td>1</td></tr><tr><td colspan="2">PROJECT TOTAL</td><td>4</td></tr></table></div>			CATEGORY	STATION	STA	0010	8+00	1	9+00	1	10+00	1	11+00	1	PROJECT TOTAL		4	<div><div>PREPARE FOUNDATION FOR ASPHALTIC PAVEMENT (7269-00-71)</div><div>211.0101</div><table><tr><th>CATEGORY</th><th>EACH</th></tr><tr><td>0010</td><td>1</td></tr><tr><td colspan="2">PROJECT TOTAL</td><td>1</td></tr></table></div>			CATEGORY	EACH	0010	1	PROJECT TOTAL		1	<div><div>BASE AGGREGATE ITEMS</div><table><tr><th colspan="2"></th><th>305.0110</th><th>305.0120</th><th>312.0110</th><th>624.0100</th></tr><tr><th colspan="2"></th><th>BASE AGGREGATE</th><th>BASE AGGREGATE</th><th>SELECT CRUSHED</th><th>WATER</th></tr><tr><th colspan="2"></th><th>DENSE 3/4-INCH</th><th>DENSE 1 1/4-INCH</th><th>MATERIAL</th><th>MGAL</th></tr><tr><th>CATEGORY</th><th>STATION TO STATION</th><th>LOCATION</th><th>TON</th><th>TON</th><th>TON</th><th>MGAL</th></tr><tr><td rowspan="3">0010</td><td>8+20 - 9+75</td><td>CL</td><td>40</td><td>350</td><td>440</td><td>10</td></tr><tr><td>10+25 - 12+50</td><td>CL</td><td>60</td><td>510</td><td>640</td><td>10</td></tr><tr><td>8+95 - 9+60</td><td>FIELD ENTRANCE</td><td>20</td><td>-</td><td>-</td><td>-</td></tr><tr><td colspan="3">CATEGORY 0010 SUBTOTALS</td><td>120</td><td>860</td><td>1,080</td><td>20</td></tr><tr><td rowspan="2">0030</td><td>6+25 - 8+20</td><td>CL</td><td>50</td><td>450</td><td>560</td><td>10</td></tr><tr><td colspan="2">CATEGORY 0030 SUBTOTALS</td><td>50</td><td>450</td><td>560</td><td>10</td></tr><tr><td colspan="3">PROJECT TOTAL</td><td>170</td><td>1,310</td><td>1,640</td><td>30</td></tr></table></div>											305.0110	305.0120	312.0110	624.0100			BASE AGGREGATE	BASE AGGREGATE	SELECT CRUSHED	WATER			DENSE 3/4-INCH	DENSE 1 1/4-INCH	MATERIAL	MGAL	CATEGORY	STATION TO STATION	LOCATION	TON	TON	TON	MGAL	0010	8+20 - 9+75	CL	40	350	440	10	10+25 - 12+50	CL	60	510	640	10	8+95 - 9+60	FIELD ENTRANCE	20	-	-	-	CATEGORY 0010 SUBTOTALS			120	860	1,080	20	0030	6+25 - 8+20	CL	50	450	560	10	CATEGORY 0030 SUBTOTALS		50	450	560	10	PROJECT TOTAL			170	1,310	1,640	30
CATEGORY	STATION	STA																																																																																																									
0010	8+00	1																																																																																																									
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		305.0110	305.0120	312.0110	624.0100																																																																																																						
		BASE AGGREGATE	BASE AGGREGATE	SELECT CRUSHED	WATER																																																																																																						
		DENSE 3/4-INCH	DENSE 1 1/4-INCH	MATERIAL	MGAL																																																																																																						
CATEGORY	STATION TO STATION	LOCATION	TON	TON	TON	MGAL																																																																																																					
0010	8+20 - 9+75	CL	40	350	440	10																																																																																																					
	10+25 - 12+50	CL	60	510	640	10																																																																																																					
	8+95 - 9+60	FIELD ENTRANCE	20	-	-	-																																																																																																					
CATEGORY 0010 SUBTOTALS			120	860	1,080	20																																																																																																					
0030	6+25 - 8+20	CL	50	450	560	10																																																																																																					
	CATEGORY 0030 SUBTOTALS		50	450	560	10																																																																																																					
PROJECT TOTAL			170	1,310	1,640	30																																																																																																					
<div><div>REMOVING ASPHALTIC SURFACE</div><div>204.0110</div><table><tr><th>CATEGORY</th><th>STAGE</th><th>STATION</th><th>SY</th></tr><tr><td rowspan="3">0010</td><td rowspan="3">2</td><td>9+50 - 9+75</td><td>80</td></tr><tr><td>10+25 - 10+50</td><td>80</td></tr><tr><td colspan="2">PROJECT TOTAL</td><td>160</td></tr></table></div>			CATEGORY	STAGE	STATION	SY	0010	2	9+50 - 9+75	80	10+25 - 10+50	80	PROJECT TOTAL		160	<div><div>FINISHING ROADWAY</div><div>213.0100</div><table><tr><th>CATEGORY</th><th>EACH</th></tr><tr><td>0010</td><td>1</td></tr><tr><td colspan="2">PROJECT TOTAL</td><td>1</td></tr></table></div>			CATEGORY	EACH	0010	1	PROJECT TOTAL		1																																																																																		
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<div><div>ASPHALTIC PAVEMENT</div><table><tr><th colspan="2"></th><th>*</th><th>*</th><th>*</th><th></th></tr><tr><th colspan="2"></th><th>460.5223</th><th>460.5224</th><th>465.0125</th><th></th></tr><tr><th colspan="2"></th><th>HMA</th><th>HMA</th><th>ASPHALTIC</th><th></th></tr><tr><th colspan="2"></th><th>PAVEMENT</th><th>PAVEMENT</th><th>SURFACE</th><th></th></tr><tr><th colspan="2"></th><th>3 LT 58-28 S</th><th>4 LT 58-28 S</th><th>TEMPORARY</th><th></th></tr><tr><th>CATEGORY</th><th>STATION - STATION</th><th>LOCATION</th><th>TACK COAT GAL</th><th>TON</th><th>TON</th><th>TON</th><th>REMARKS</th></tr><tr><td rowspan="2">0010</td><td>8+20 - 9+75</td><td>CL</td><td>20</td><td>50</td><td>40</td><td>20</td><td>3" TEMP SURFACE DURING WINTER</td></tr><tr><td>10+25 - 12+50</td><td>CL</td><td>30</td><td>80</td><td>60</td><td>20</td><td>3" TEMP SURFACE DURING WINTER</td></tr><tr><td colspan="3">CATEGORY 0010 SUBTOTALS</td><td>50</td><td>130</td><td>100</td><td>40</td><td></td></tr><tr><td>0030</td><td>6+25 - 8+20</td><td>CL</td><td>40</td><td>70</td><td>50</td><td>-</td><td></td></tr><tr><td colspan="3">CATEGORY 0030 SUBTOTALS</td><td>40</td><td>70</td><td>50</td><td>0</td><td></td></tr><tr><td colspan="3">PROJECT TOTAL</td><td>90</td><td>200</td><td>150</td><td>40</td><td></td></tr></table><div>NOTES: TACK COAT REQUIRED PRIOR TO PAVING UPPER SURFACE. CALCULATIONS BASED ON APPLICATION RATE OF 0.05 GAL/SY. HMA PAVEMENT WEIGHT CALCULATIONS BASED ON UNIT WEIGHT OF 112 LB/SY/INCH. * TAPER TEMP ASPHALT AND HMA PAVEMENT TO BRIDGE DECK CLEAR WIDTH. BEGIN TAPER 25 FT BEFORE BRIDGE DECK AND END TAPER 25 FEET AFTER BRIDGE DECK.</div></div>										*	*	*				460.5223	460.5224	465.0125				HMA	HMA	ASPHALTIC				PAVEMENT	PAVEMENT	SURFACE				3 LT 58-28 S	4 LT 58-28 S	TEMPORARY		CATEGORY	STATION - STATION	LOCATION	TACK COAT GAL	TON	TON	TON	REMARKS	0010	8+20 - 9+75	CL	20	50	40	20	3" TEMP SURFACE DURING WINTER	10+25 - 12+50	CL	30	80	60	20	3" TEMP SURFACE DURING WINTER	CATEGORY 0010 SUBTOTALS			50	130	100	40		0030	6+25 - 8+20	CL	40	70	50	-		CATEGORY 0030 SUBTOTALS			40	70	50	0		PROJECT TOTAL			90	200	150	40		<div><div>MAINTENANCE AND REPAIR OF HAUL ROADS (7269-00-71)</div><div>618.0100</div><table><tr><th>CATEGORY</th><th>EACH</th></tr><tr><td>0030</td><td>1</td></tr><tr><td colspan="2">PROJECT TOTAL</td><td>1</td></tr></table></div>		CATEGORY	EACH	0030	1	PROJECT TOTAL		1
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								<div><div>MOBILIZATION</div><div>619.1000</div><table><tr><th>CATEGORY</th><th>LOCATION</th><th>EACH</th></tr><tr><td>0010</td><td>CASBERG COULEE RD</td><td>0.9</td></tr><tr><td>0030</td><td>CASBERG COULEE RD</td><td>0.1</td></tr><tr><td colspan="2">PROJECT TOTAL</td><td>1</td></tr></table></div>		CATEGORY	LOCATION	EACH	0010	CASBERG COULEE RD	0.9	0030	CASBERG COULEE RD	0.1	PROJECT TOTAL		1																																																																																
CATEGORY	LOCATION	EACH																																																																																																			
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0030	CASBERG COULEE RD	0.1																																																																																																			
PROJECT TOTAL		1																																																																																																			

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TOPSOIL, MULCHING AND SEEDING							
CATEGORY	STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 TEMPORARY SEEDING LB	630.0500 SEED WATER MGAL
0010	8+20 - 9+75	LT/RT	380	0.3	11	11	5
	10+25-12+50	LT/RT	600	0.4	17	17	7
	UNDISTRIBUTED		101	0.4	3	3	1
CATEGORY 0010 SUBTOTAL			1081	1.1	31	31	13
0030	6+25 - 8+20	LT/RT	860	0.5	24	24	10
	UNDISTRIBUTED		89	0.4	2	2	1
CATEGORY 0030 SUBTOTAL			949	0.9	26	26	11
PROJECT TOTAL			2,030	2	57	57	24

MOBILIZATIONS EROSION CONTROL		
CATEGORY	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	4	3
PROJECT TOTALS	4	3

FIELD OFFICE TYPE B	
CATEGORY	642.5001 EACH
0010	1
PROJECT TOTAL	1

3

EROSION CONTROL ITEMS					
CATEGORY	STATION - STATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	628.6005 TURBIDITY BARRIERS SY
0010	8+20 - 9+75	278	278	294	90
	10+25 - 12+50	435	435	472	110
	UNDISTRIBUTED	82	82	84	30
CATEGORY 0010 SUBTOTALS		795	795	850	230
0030	6+25 - 8+20	401	401	735	-
	UNDISTRIBUTED	54	54	85	-
CATEGORY 0030 SUBTOTALS		455	455	820	0
PROJECT TOTALS		1,250	1,250	1,670	230

PERMANENT SIGNING								
CATEGORY	STATION	LOCATION	SIGN CODE	SIZE (INCH)	(INCH)	MESSAGE	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF
0010	9+72	RT	W5-52-R	12	36	CLEARANCE STRIPER	1	3
	9+78	LT	W5-52-L	12	36	CLEARANCE STRIPER	1	3
	10+22	RT	W5-52-L	12	36	CLEARANCE STRIPER	1	3
	10+28	LT	W5-52-R	12	36	CLEARANCE STRIPER	1	3
PROJECT TOTAL 0010							4	12

REMOVING SIGNS					
CATEGORY	STATION	LOCATION	MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
0010	9+72	RT	CLEARANCE STRIPER	1	1
	9+78	LT	CLEARANCE STRIPER	1	1
	10+22	RT	CLEARANCE STRIPER	1	1
	10+28	LT	CLEARANCE STRIPER	1	1
PROJECT TOTAL 0010				4	4

PROJECT NO: 7269-00-71	HWY: CASBERG COULEE RD	COUNTY: LA CROSSE	MISCELLANEOUS QUANTITIES	SHEET	E
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TRAFFIC CONTROL ITEMS										
				643.0420	643.0705			643.0900	643.1050	
				TRAFFIC	TRAFFIC CONTROL			TRAFFIC	TRAFFIC	
				CONTROL	WARNING LIGHTS			CONTROL	CONTROL	
				BARRICADES TYPE	TYPE A			SIGNS	SIGNS PCMS	
				III						
CATEGORY	STAGE	APPROX. SERVICE PERIOD DAYS	QTY.	DAY	QTY.	DAY	QTY.	DAY	QTY.	DAY
0010	1	30	16	480	20	600	11	330	2	28
0010	2	9	14	126	18	162	10	90	2	28
PROJECT TOTAL 0010				606		762		420		56

PAVEMENT MARKING		
		646.1020
		MARKING
		LINE EPOXY
		4-INCH
		(DOUBLE YELLOW)
CATEGORY	STATION	LF
0010	8+20 - 12+50	430
CATEGORY 0010 SUBTOTAL		430
0030	6+25 - 8+20	195
CATEGORY 0030 SUBTOTAL		195
PROJECT TOTAL		625

3

CONSTRUCTION STAKING						
		650.4500	650.5000	650.6501	650.9911	650.9920
		SUBGRADE	BASE	STRUCTURE LAYOUT	SUPPLEMENTAL	SLOPE STAKES
		LF	LF	(B-32-0251)	CONTROL	
				EACH	(7269-00-71)	
CATEGORY	STATION				EACH	LF
0010	8+20 - 9+75	155	155	1	1	155
	10+25 - 12+50	225	225	-	-	225
CATEGORY 0010 SUBTOTAL		380	380	1	1	380
0030	6+25 - 8+20	195	195	-	-	195
CATEGORY 0030 SUBTOTAL		195	195	0	0	195
PROJECT TOTAL		575	575	1	1	575

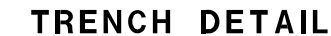
SAWING		
		690.0150
		ASPHALT
CATEGORY	STATION	LF
0010	12+50	22
CATEGORY 0010 SUBTOTAL		22
0030	6+25	30
CATEGORY 0030 SUBTOTAL		30
PROJECT TOTAL		52

Standard Detail Drawing List

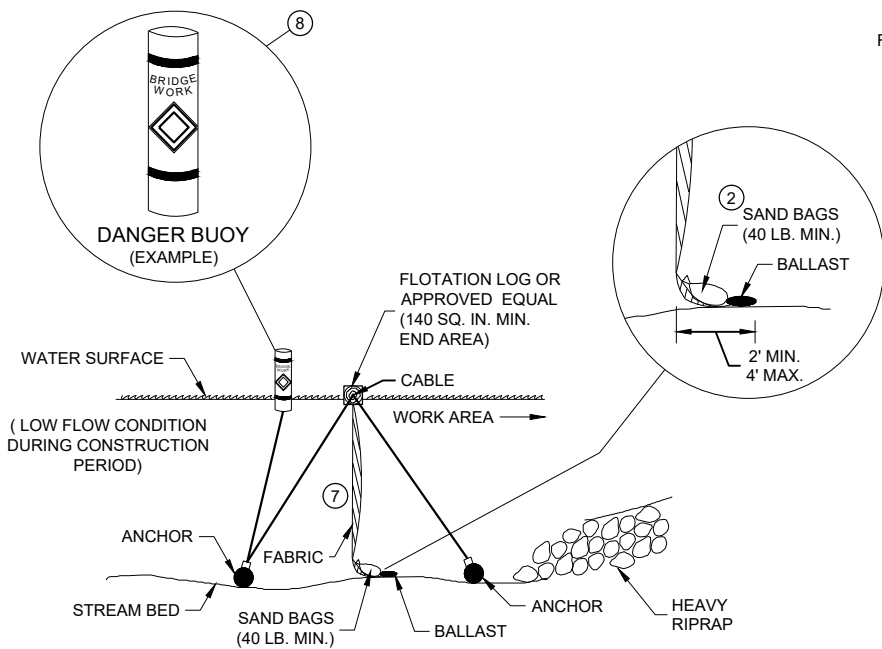
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



- 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 1½" X 1½" 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.

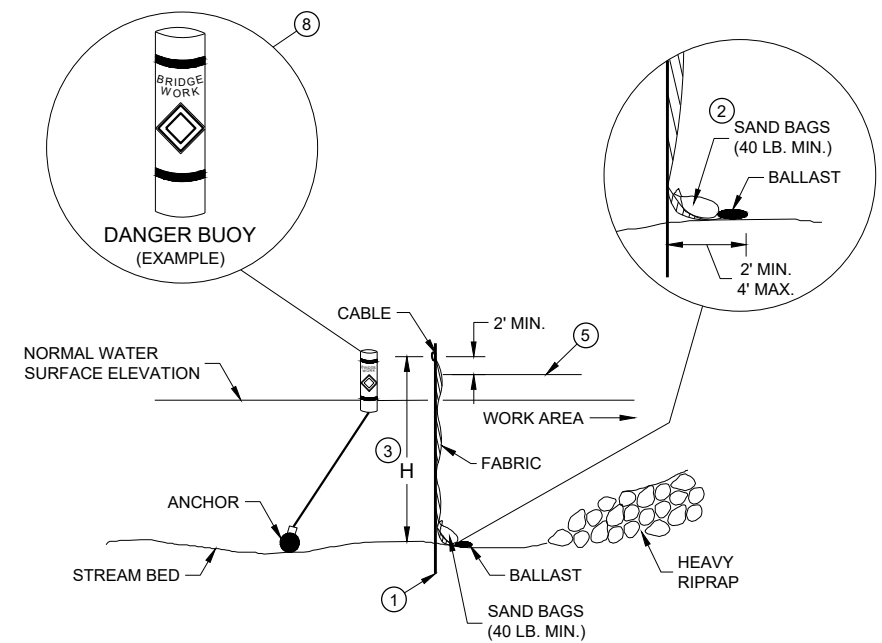


<p style="text-align: center;">SILT FENCE</p>	
<p style="text-align: center;">STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>	
<p>APPROVED</p> <p><u>4-29-05</u></p> <p><u>DATE</u></p>	<p><u>/S/ Beth Canestra</u></p> <p>CHIEF ROADWAY DEVELOPMENT ENGINEER</p>



SECTION B - B

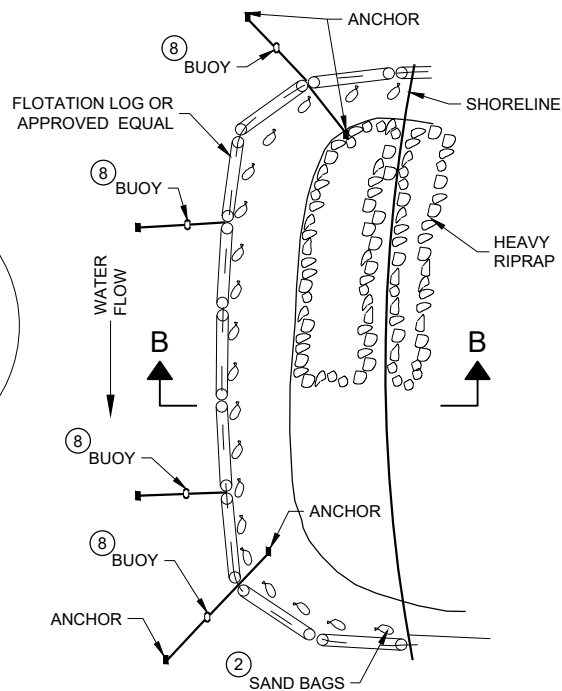
TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



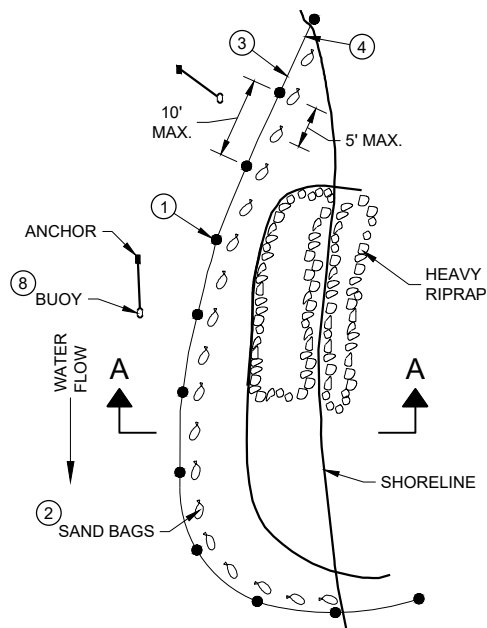
SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS



PLAN VIEW



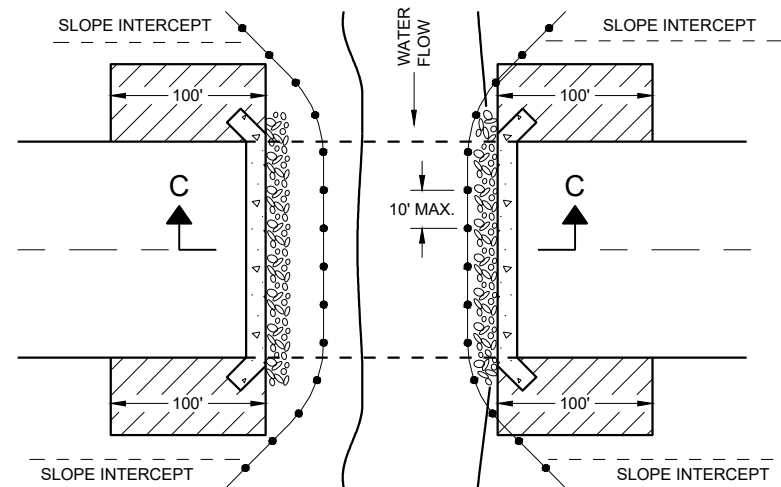
PLAN VIEW

GENERAL NOTES

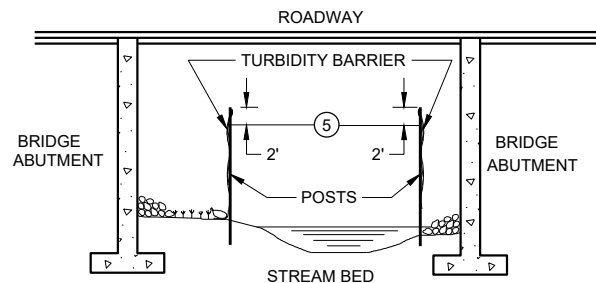
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- 1 DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- 2 SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- 3 WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.
- 4 IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- 5 ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- 6 FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.
- 7 ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- 8 USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

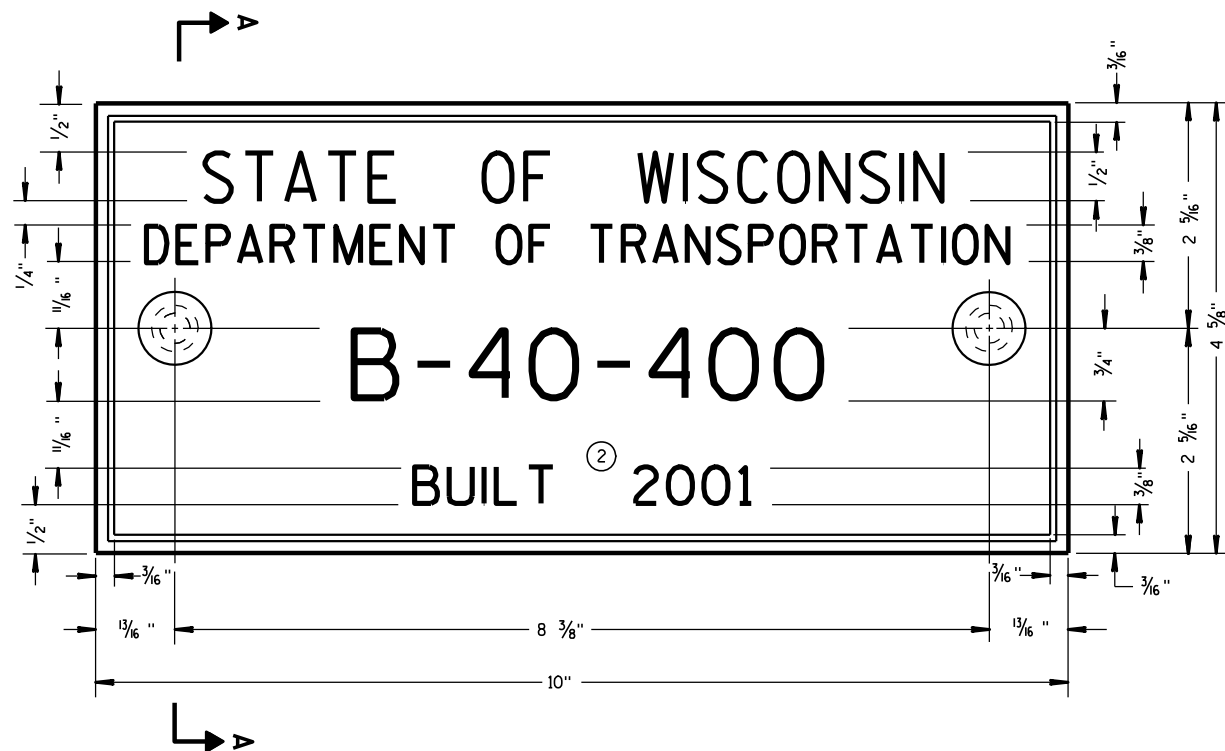
TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

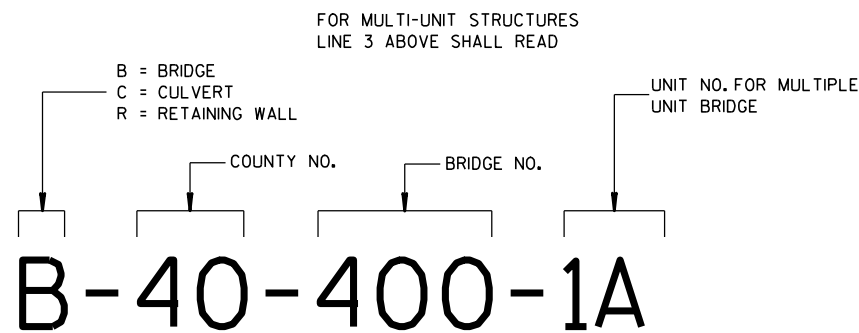
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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



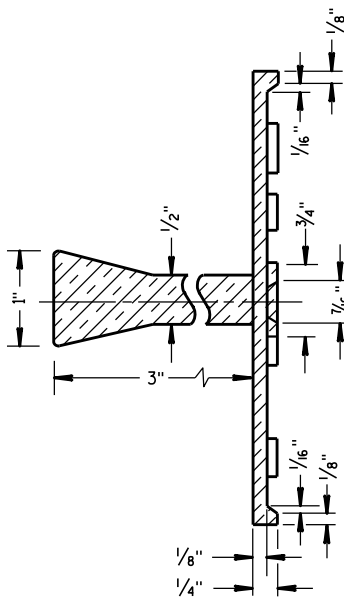
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

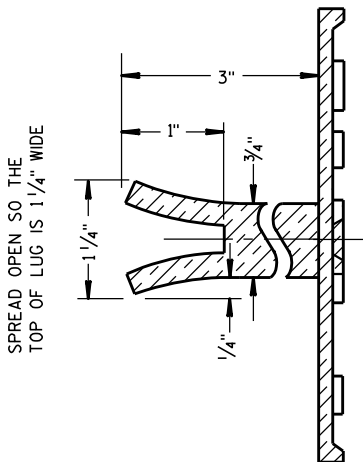
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

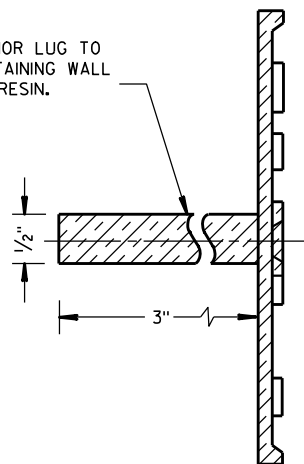


SECTION A-A



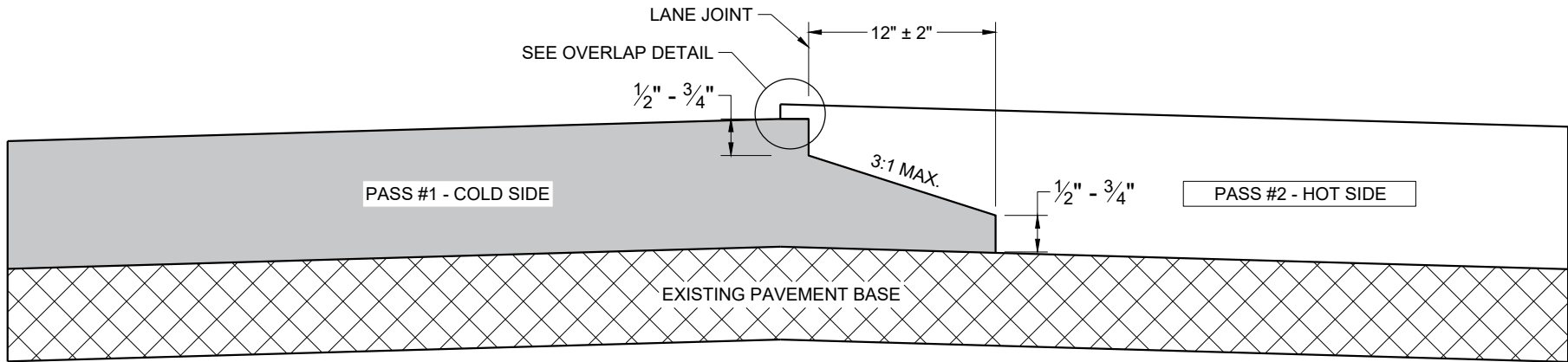
ALTERNATE LUG

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

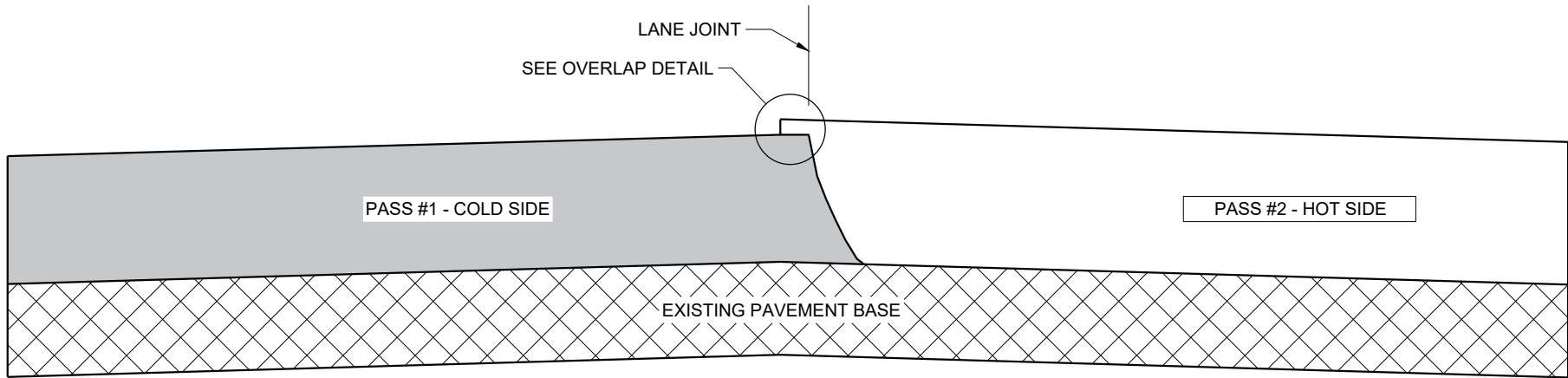


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

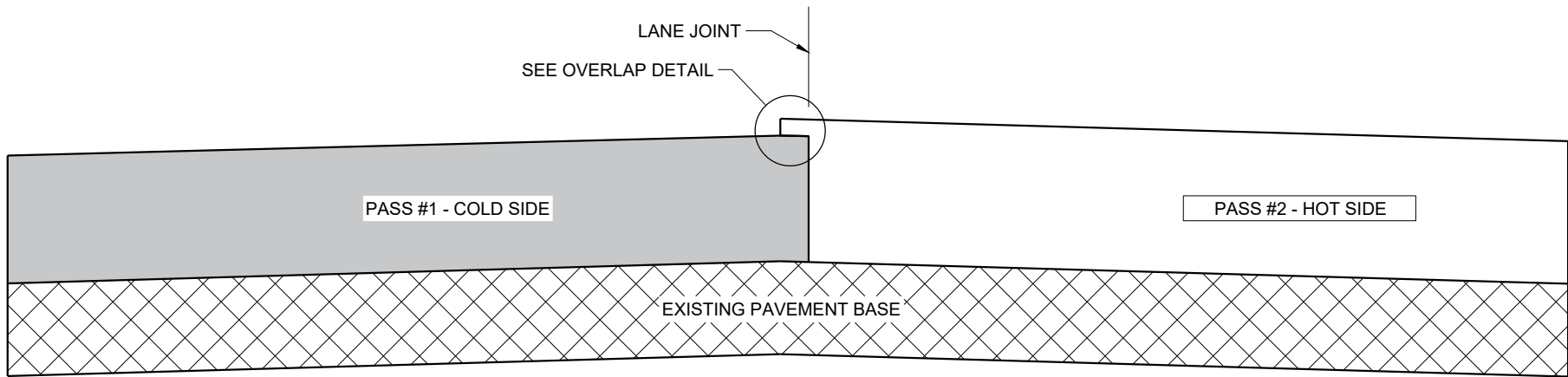
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/26/10 DATE	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

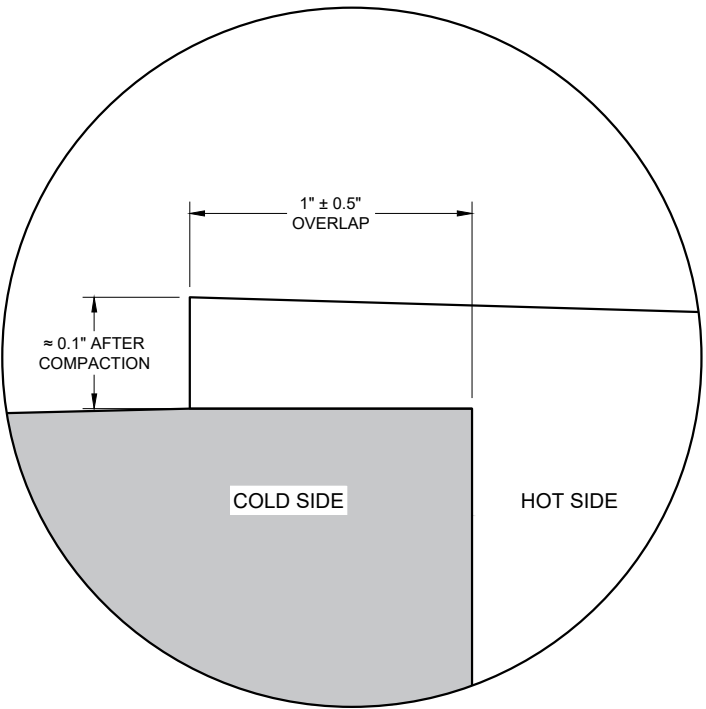
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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.

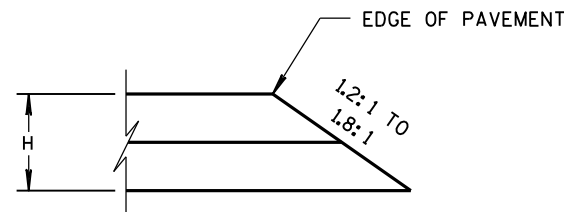


OVERLAP DETAIL (TYPICAL)

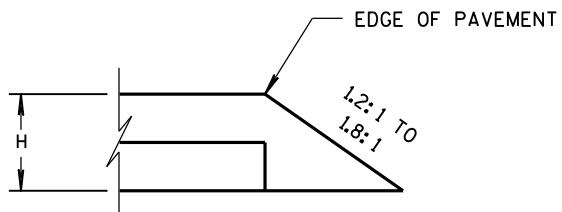
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

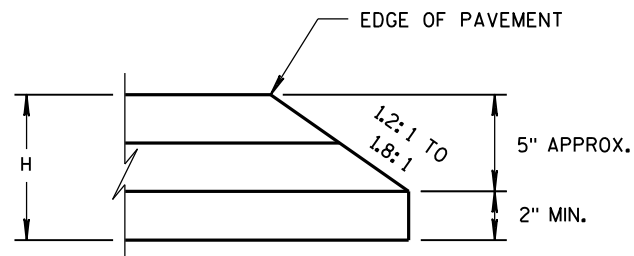
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



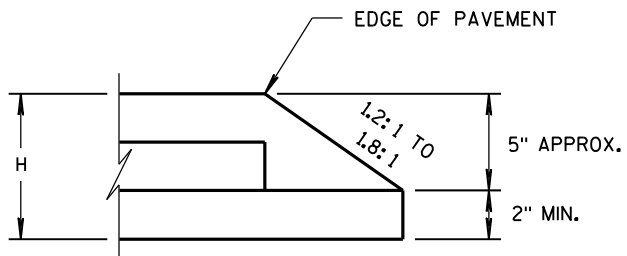
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

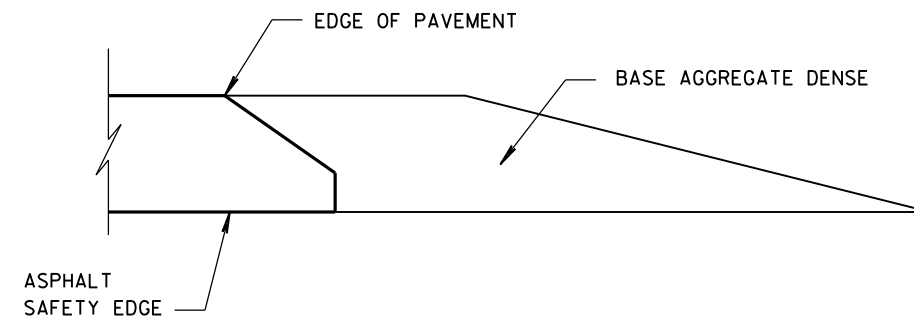


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



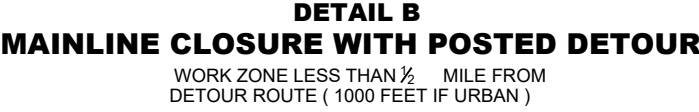
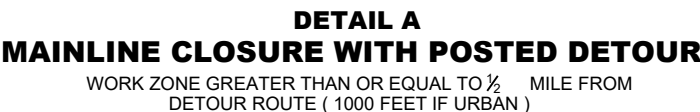
FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE
FHWA

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

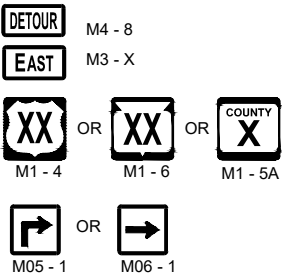


SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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



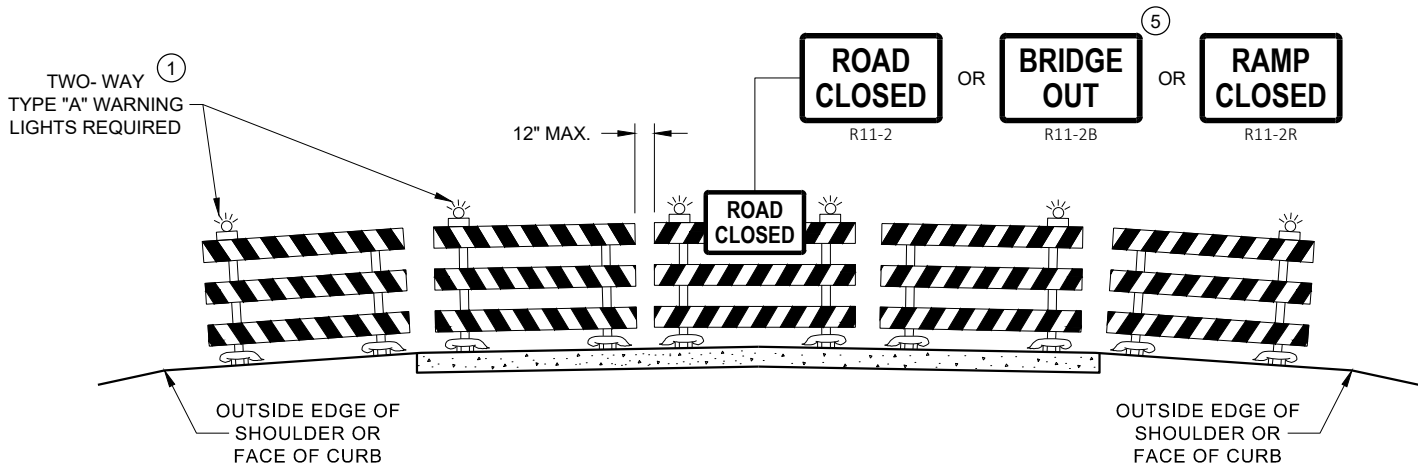
	SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TYPE "A" WARNING LIGHT (FLASHING)
	WORK AREA
	FLAGS, 16" X 16" MIN. (ORANGE)



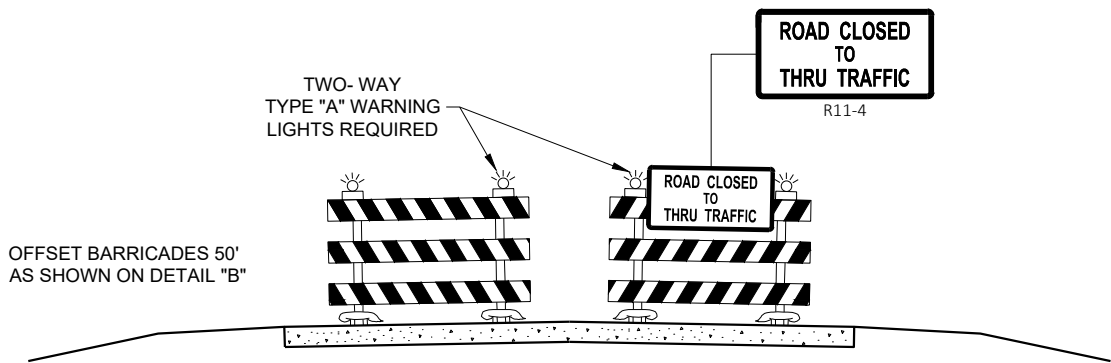
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
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"

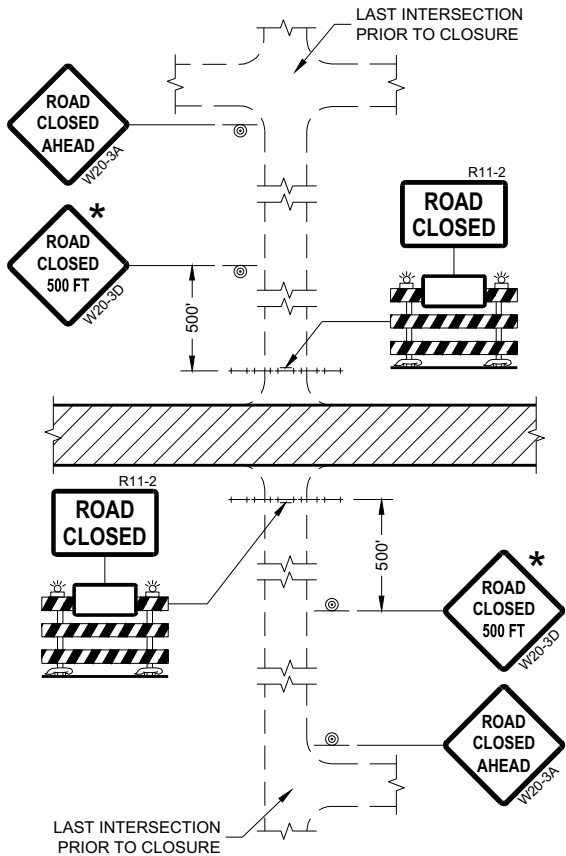
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS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

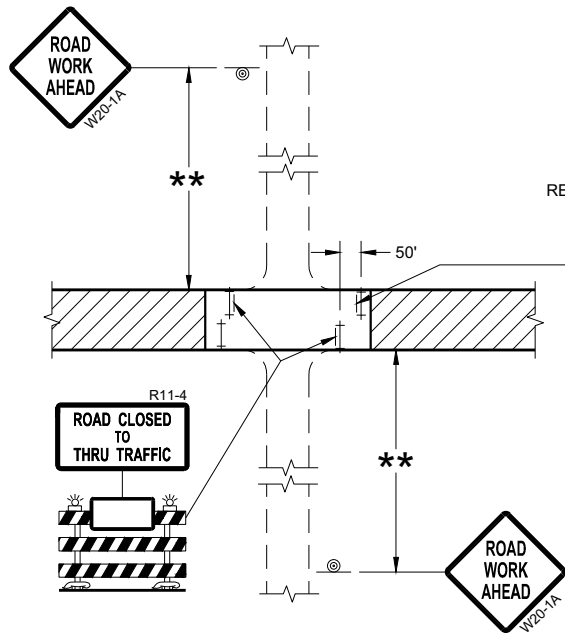
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

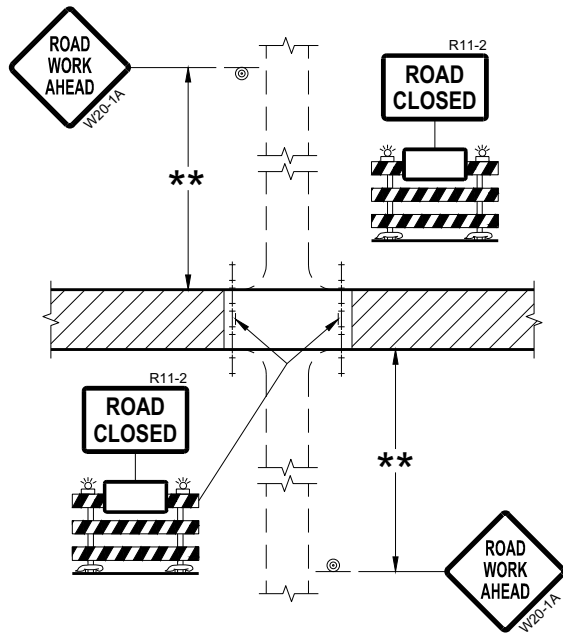
FHWA



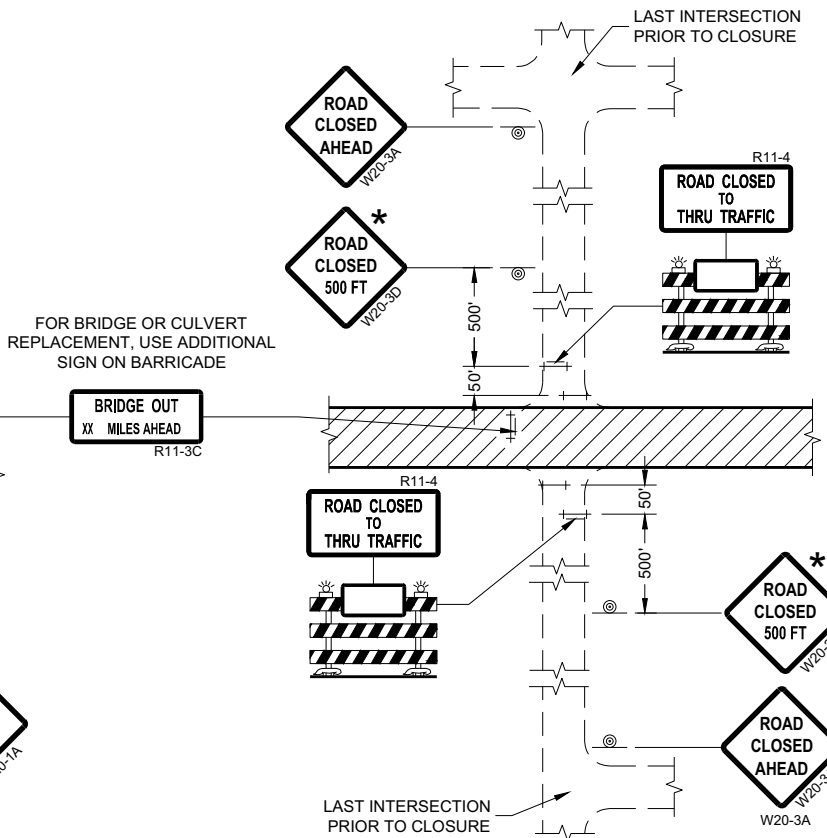
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

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 (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

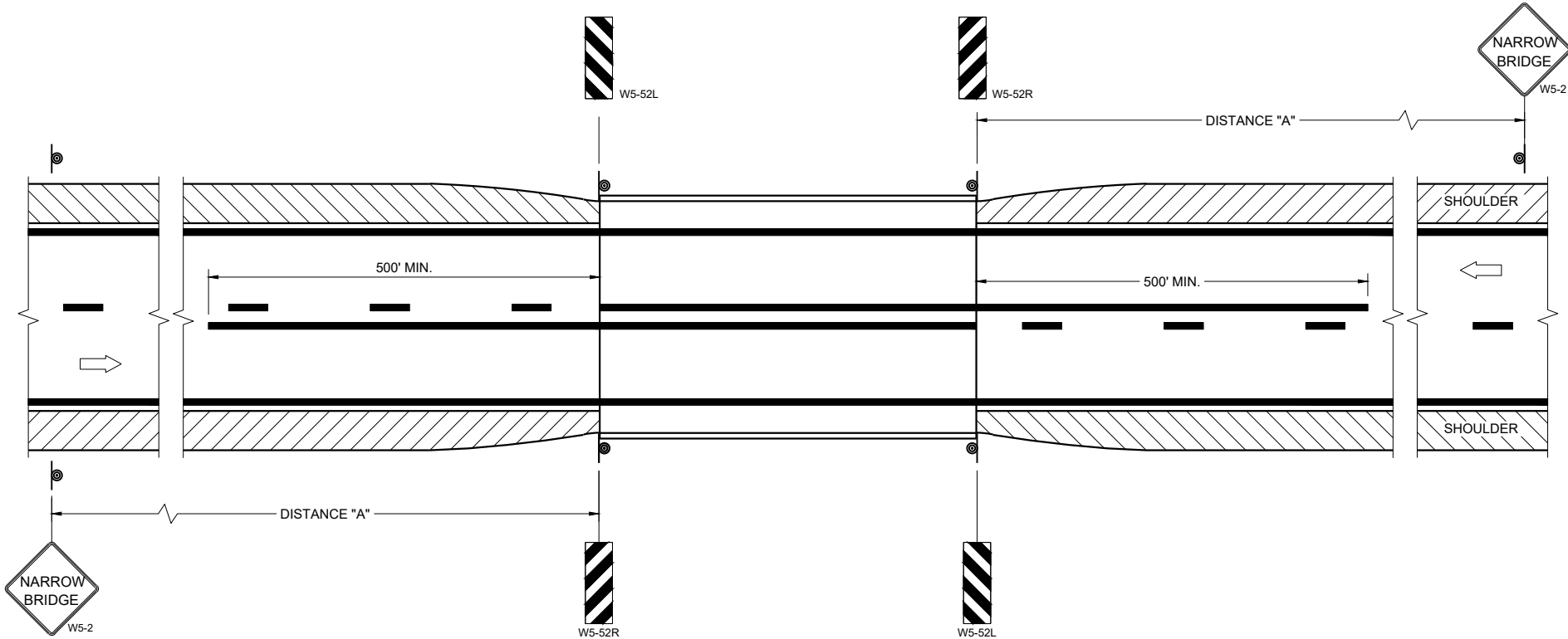
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

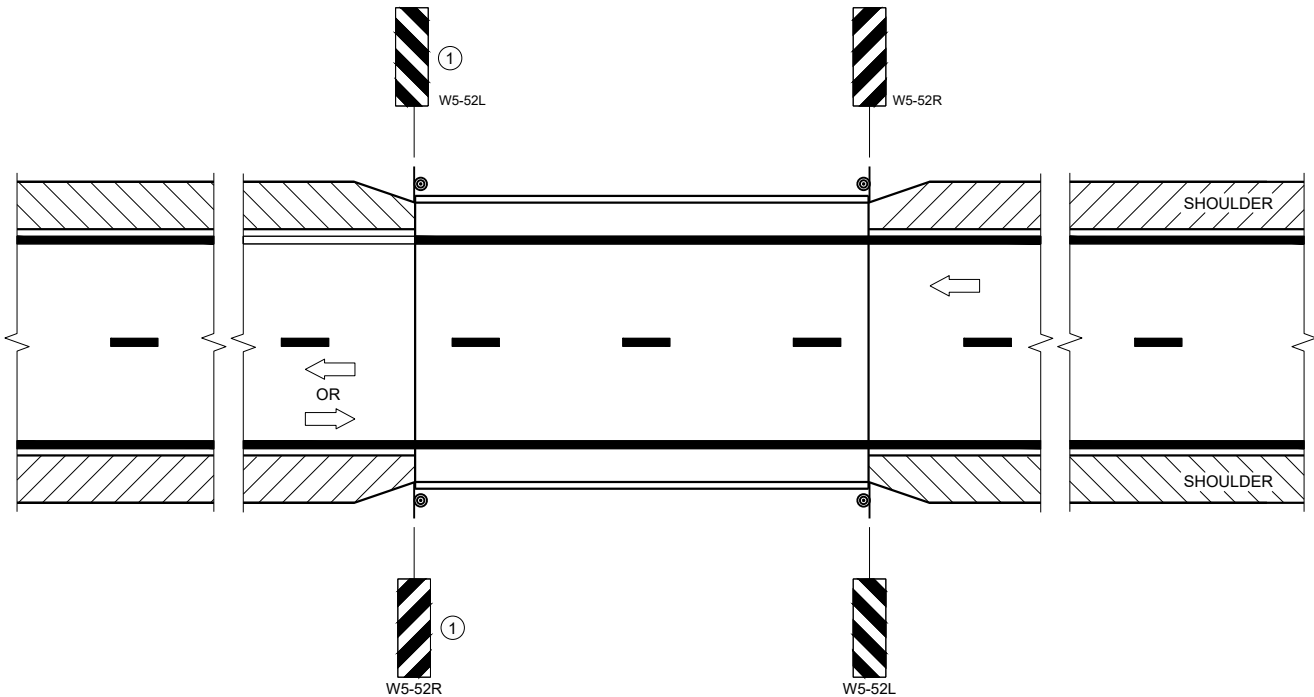
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /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

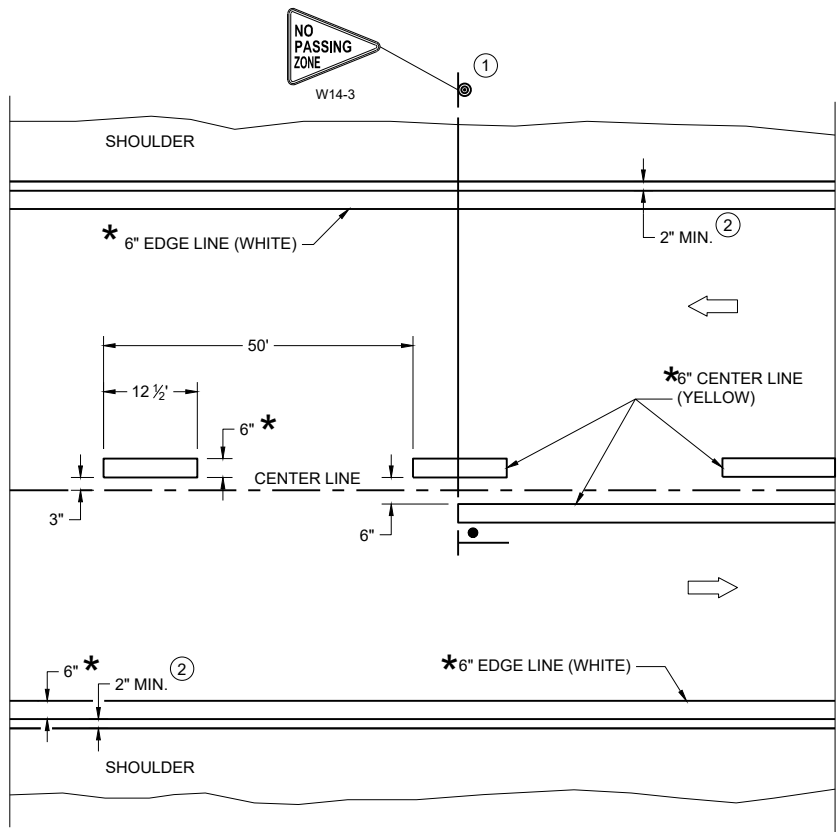
DISTANCE TABLE

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

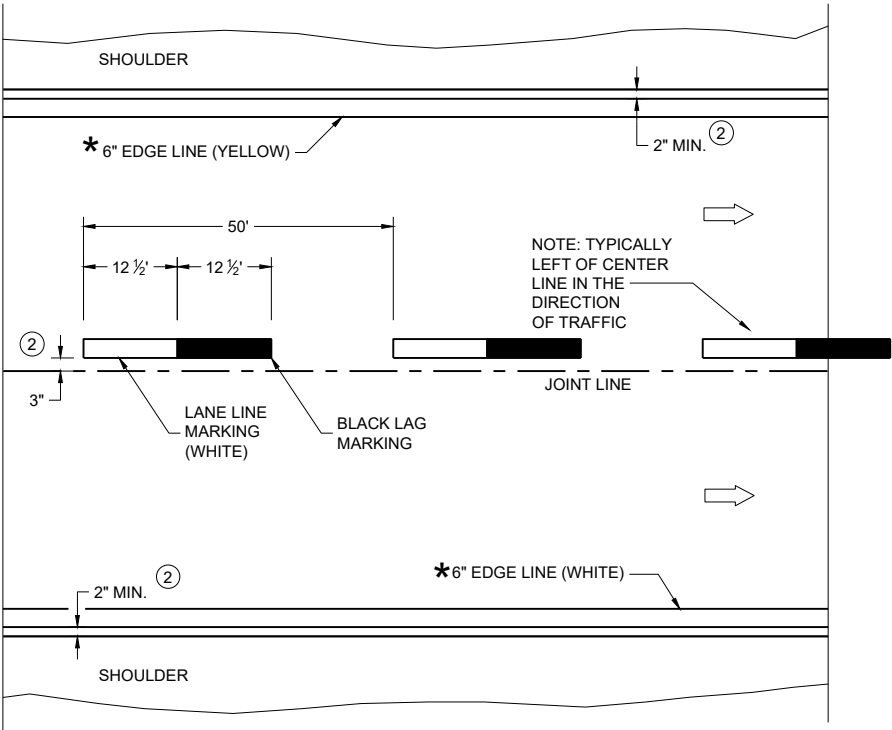
**SIGNING AND MARKING
FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

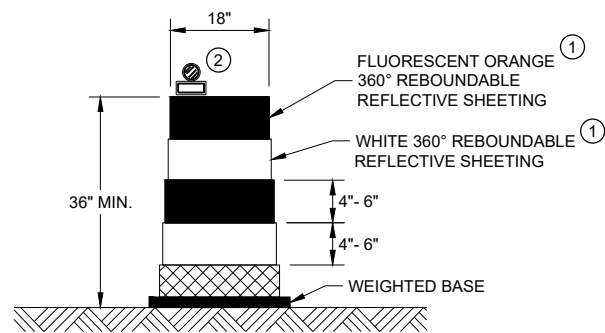
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

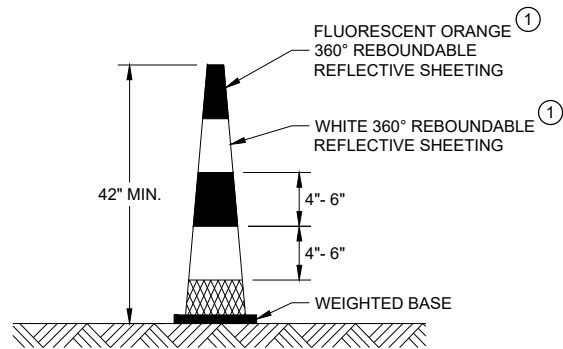
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer



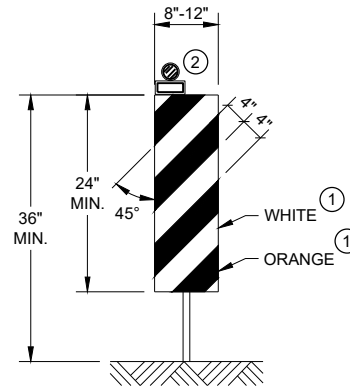
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



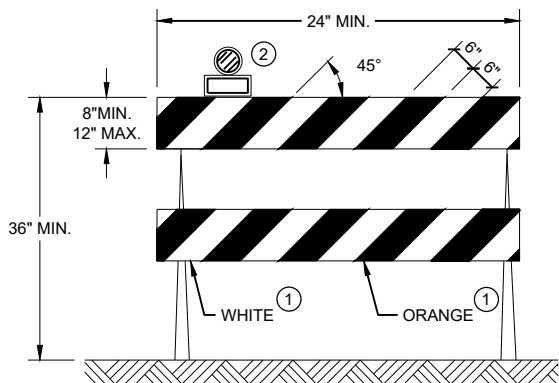
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



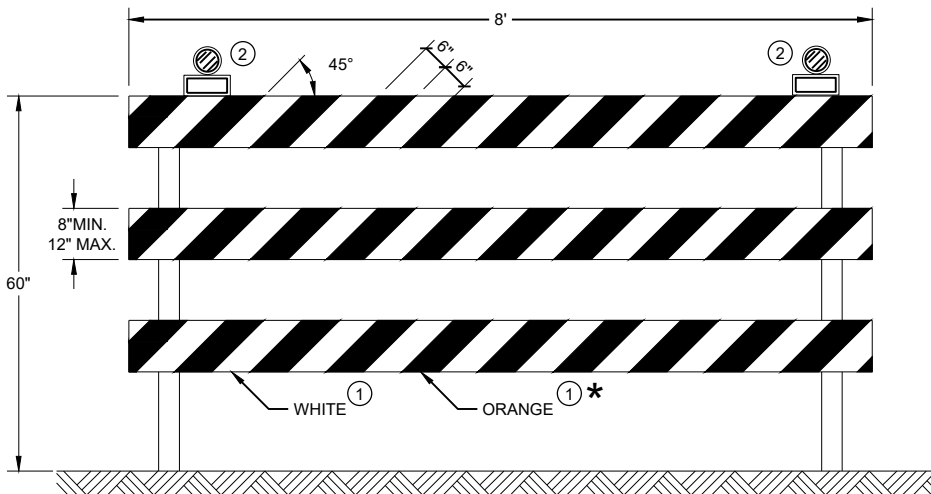
VERTICAL PANEL

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.

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.

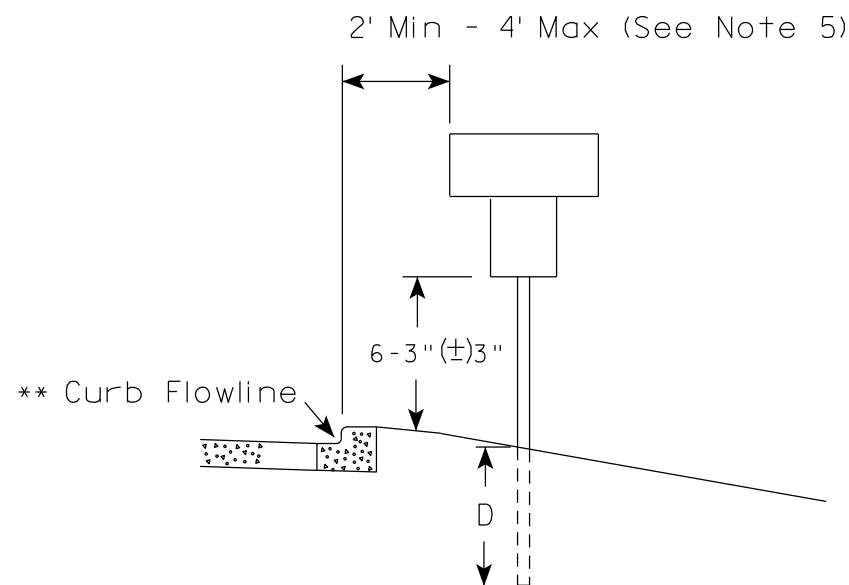
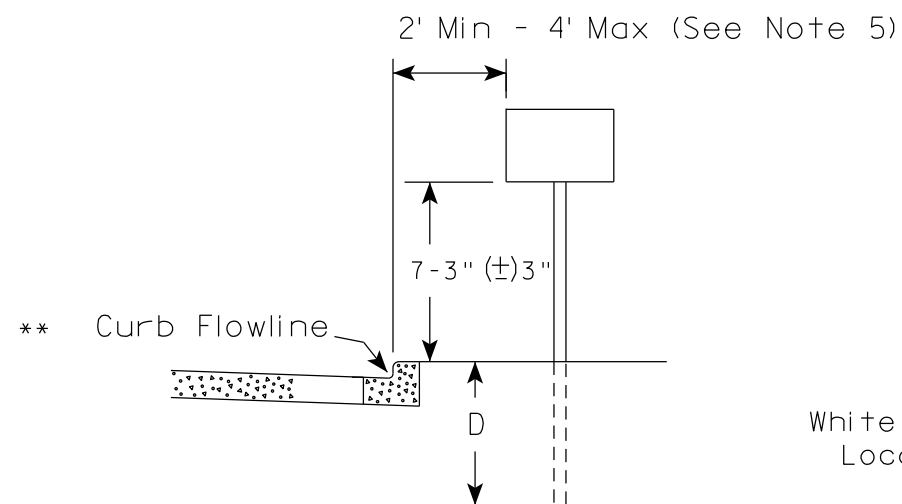
**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

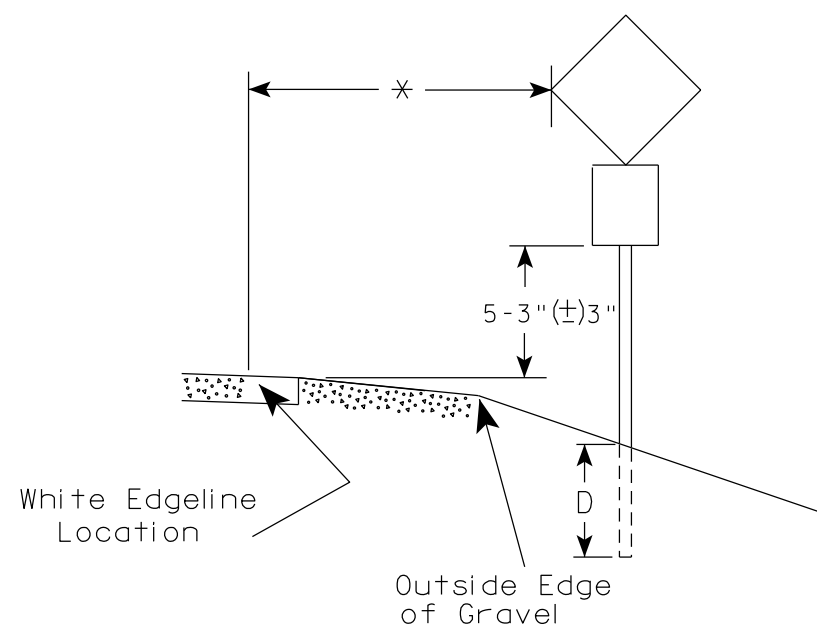
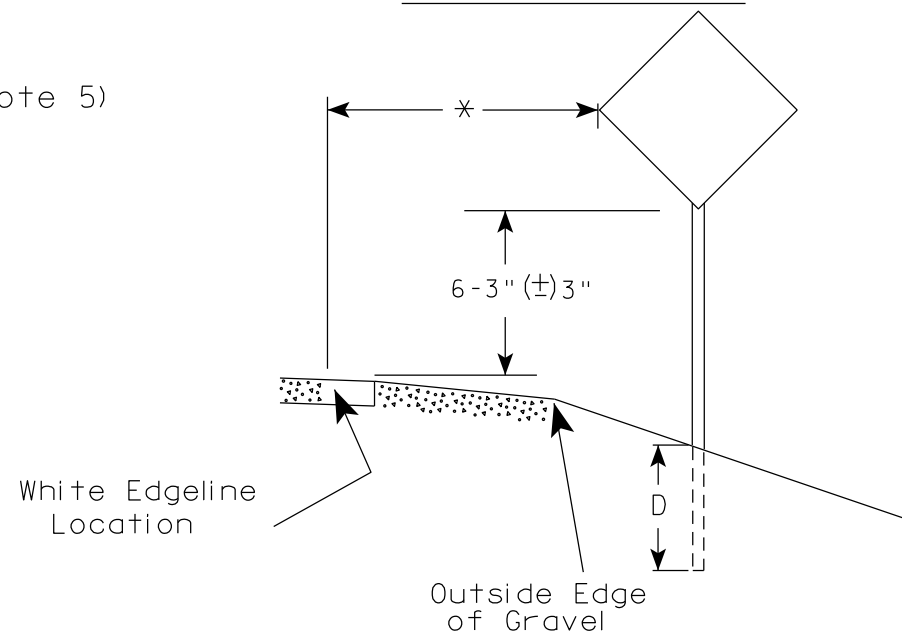
FHWA

URBAN AREA



* * 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.

RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

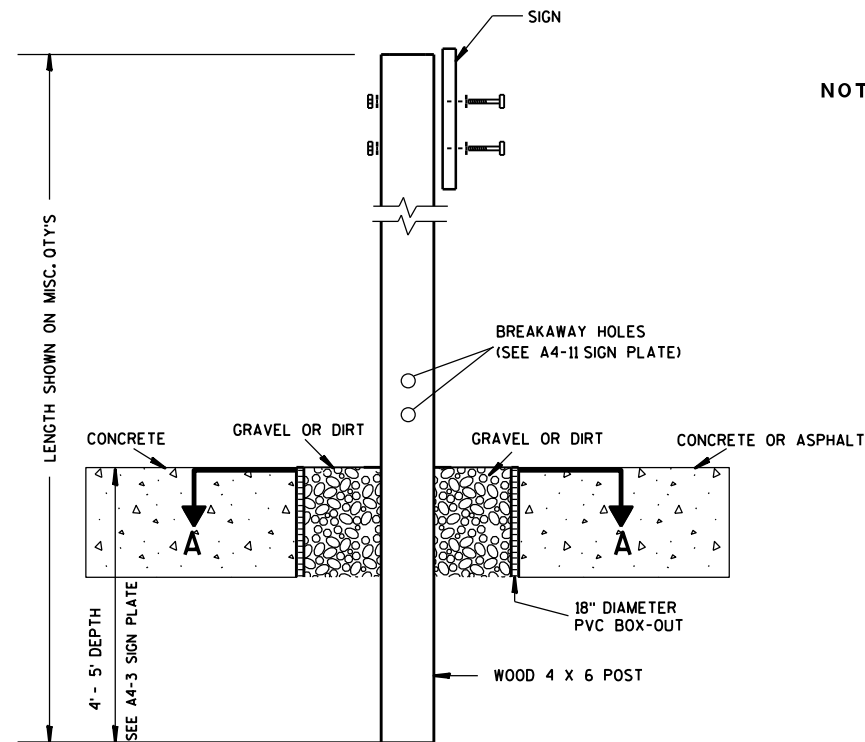
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

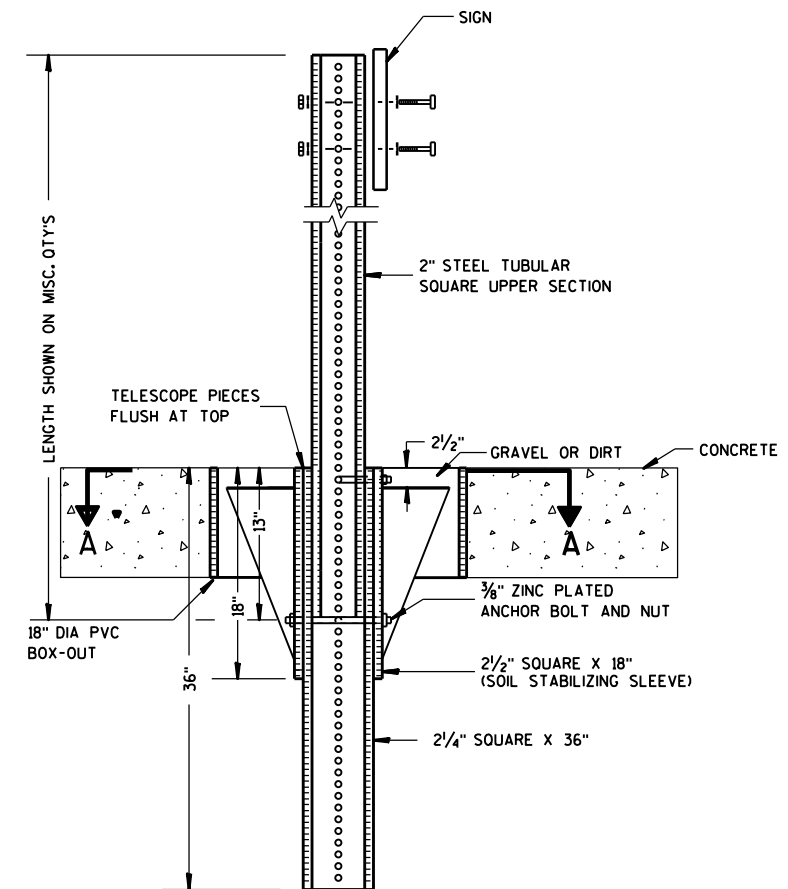
E



ELEVATION VIEW

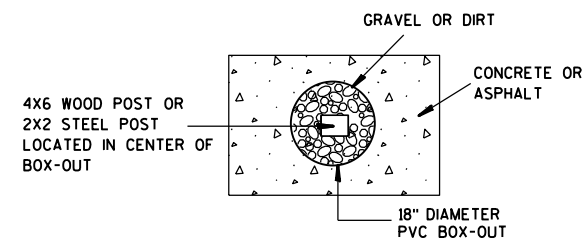
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

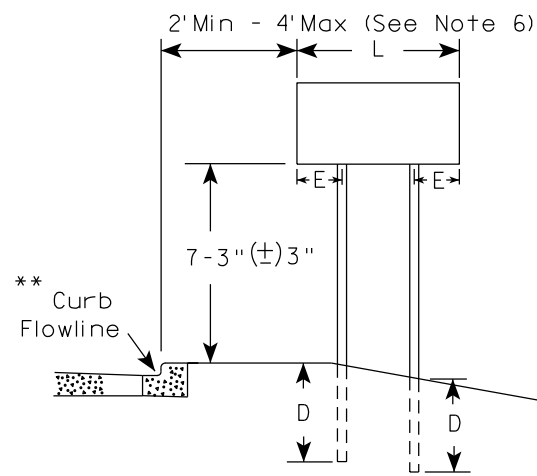
HWY:

COUNTY:

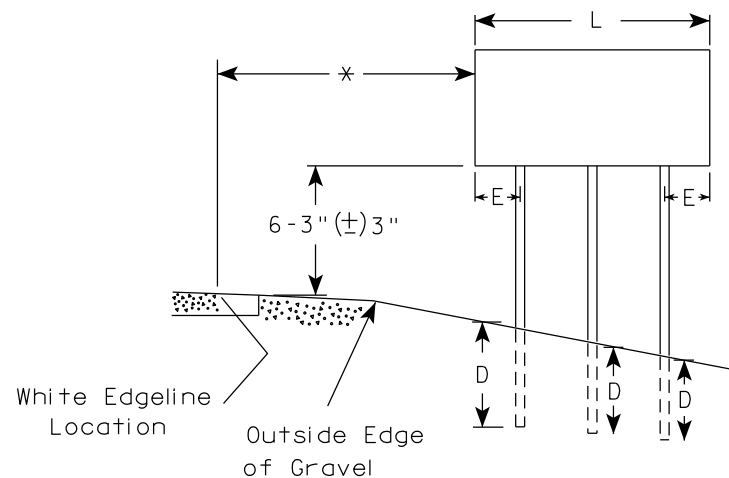
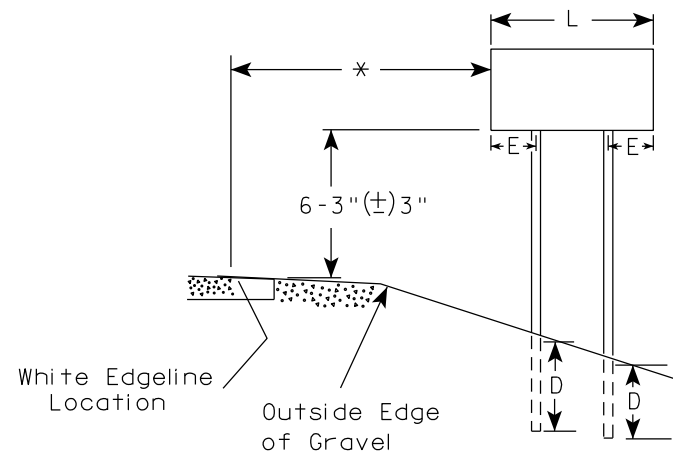
SHEET NO:

E

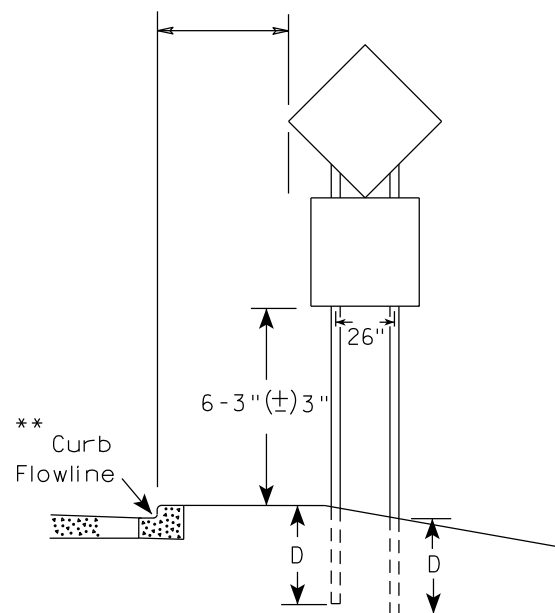
URBAN AREA



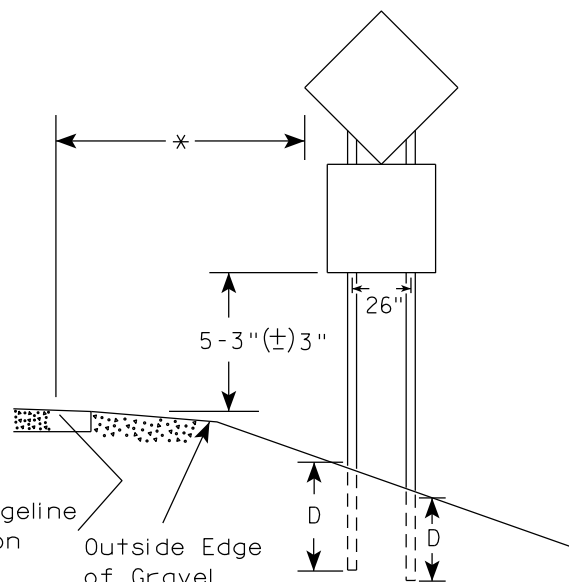
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

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

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

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

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

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

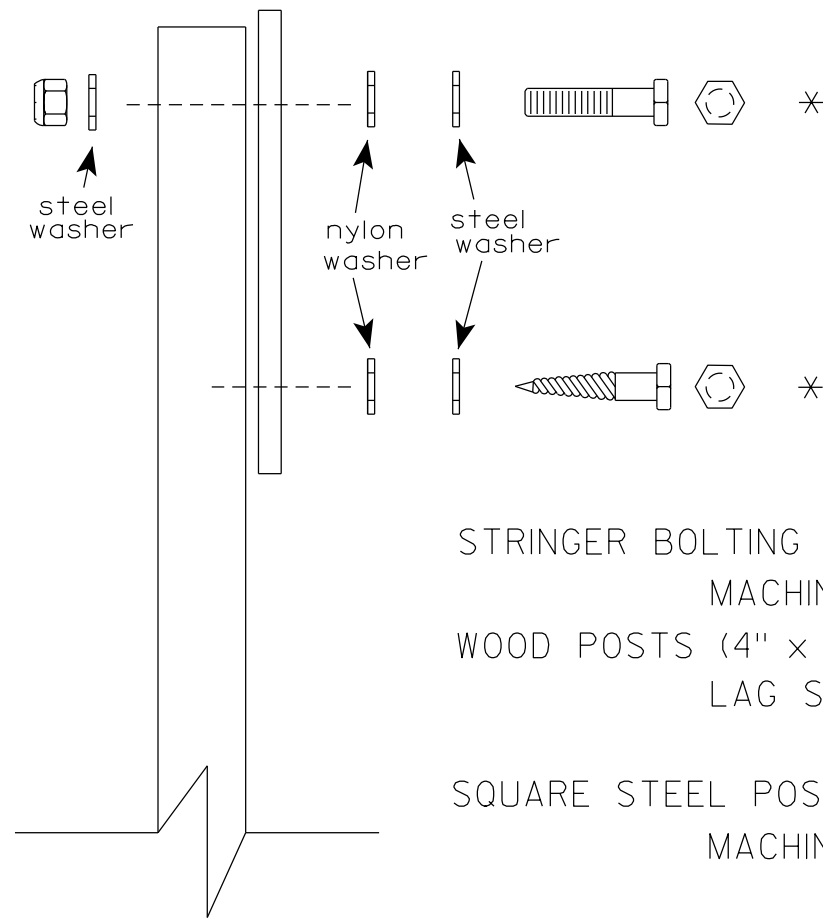
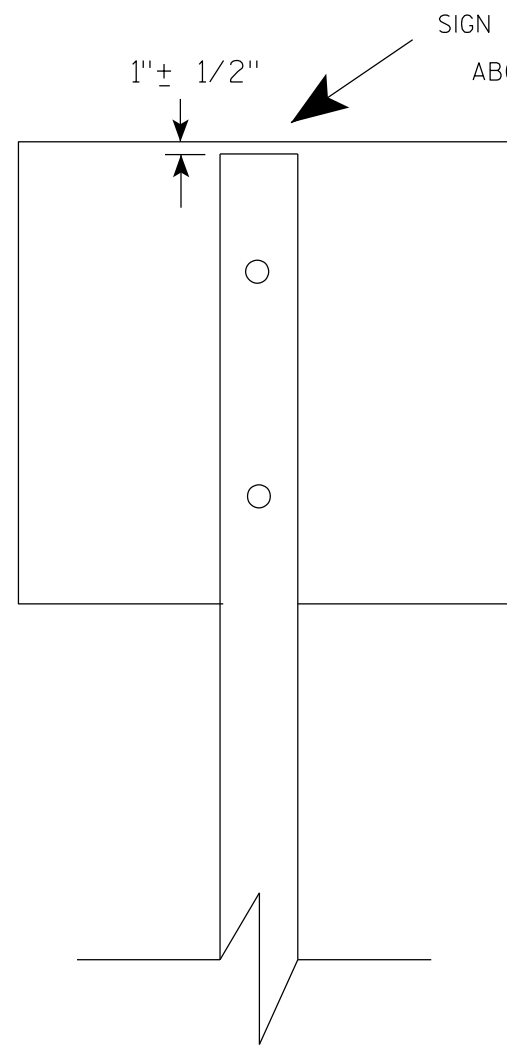
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



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.

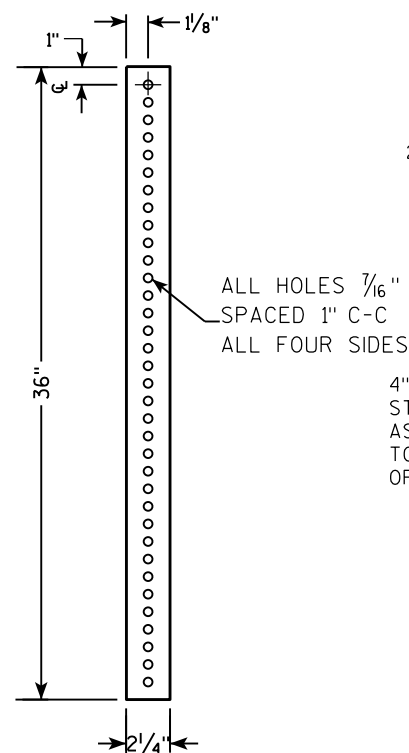
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

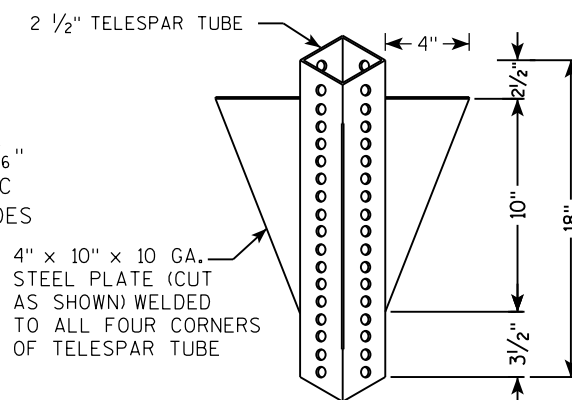
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



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



TELESCOPE PIECES
FLUSH AT TOP

18" DIA SCHEDULE
40 PVC
BOX-OUT

36"

13"

18"

2 1/2" GRAVEL OR DIRT

3/8" ZINC PLATED
ANCHOR BOLT AND NUT

2 1/2" SQUARE X 18"
(SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

2" STEEL TUBULAR
SQUARE UPPER SECTION

ALL HOLES 7/16"
SPACED 1" C-C
ALL FOUR SIDES

SEE SIGN PLATE
A4-8 FOR BOLT
WASHER, & NUT
MATERIAL

SIGN

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

Side View Dimensions:

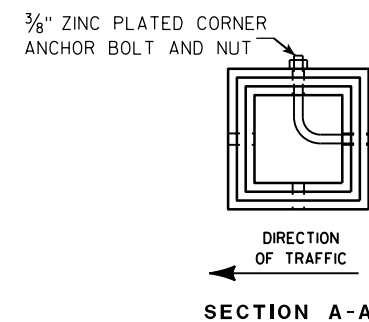
- Overall height: LENGTH SHOWN ON MISC. Q'TYS
- Section 1: 2" STEEL TUBULAR SQUARE UPPER SECTION
- Section 2: 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- Section 3: 2 1/4" SQUARE X 36"
- Section 4: 36" (Total length of the lower square section)
- Section 5: 18"
- Section 6: 12"

Top View Details:

- TELESCOPE PIECES FLUSH AT TOP
- ALL HOLES 7/16" SPACED 1" C-C
- ALL FOUR SIDES
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
- 1" (Distance from corner to bolt)
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT

Sign Assembly Details:

- SIGN
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL



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

PROJECT NO:

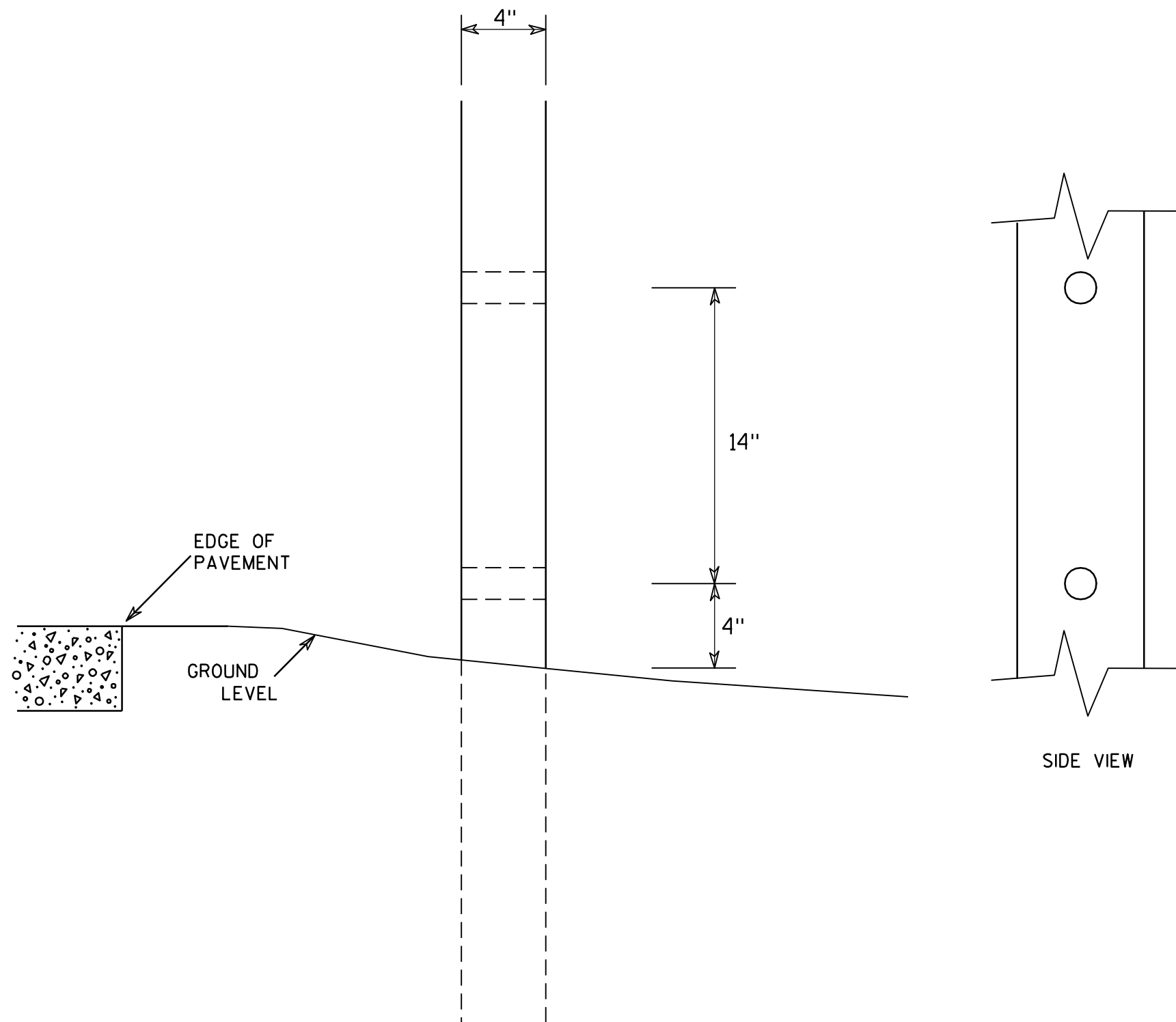
HWY:

COUNTY:

SHEET NO:

E

7



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

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:

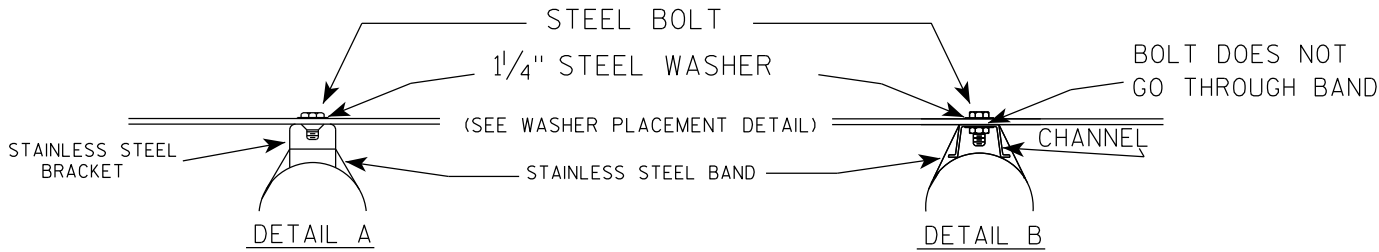
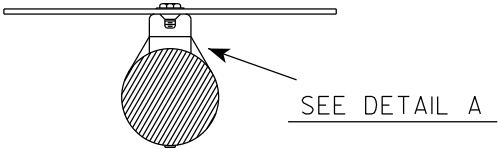
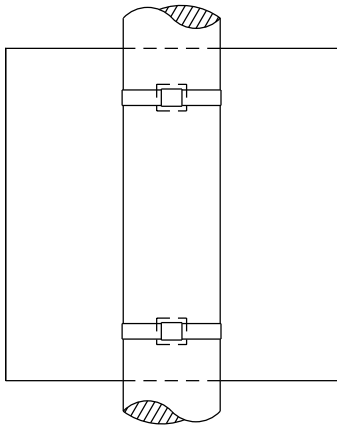
COUNTY:

SHEET NO:

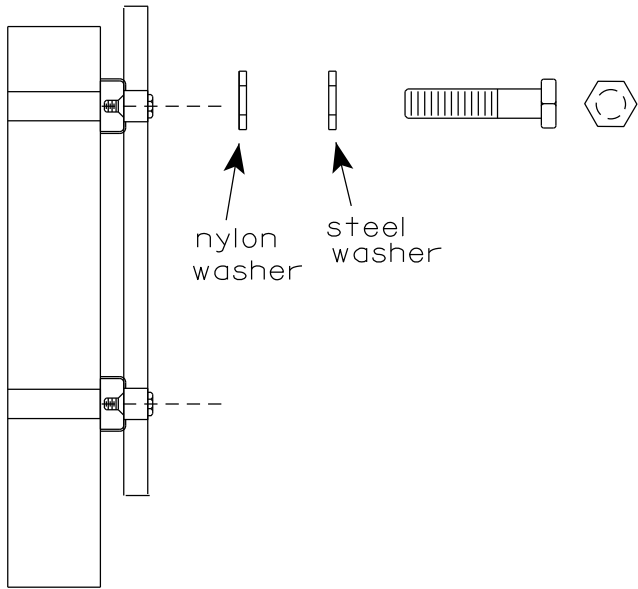
E

BANDING

SINGLE SIGN



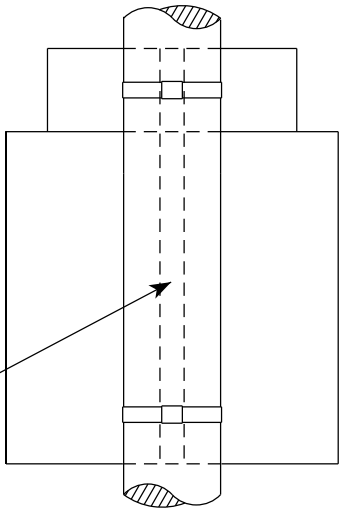
WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

"J" ASSEMBLY



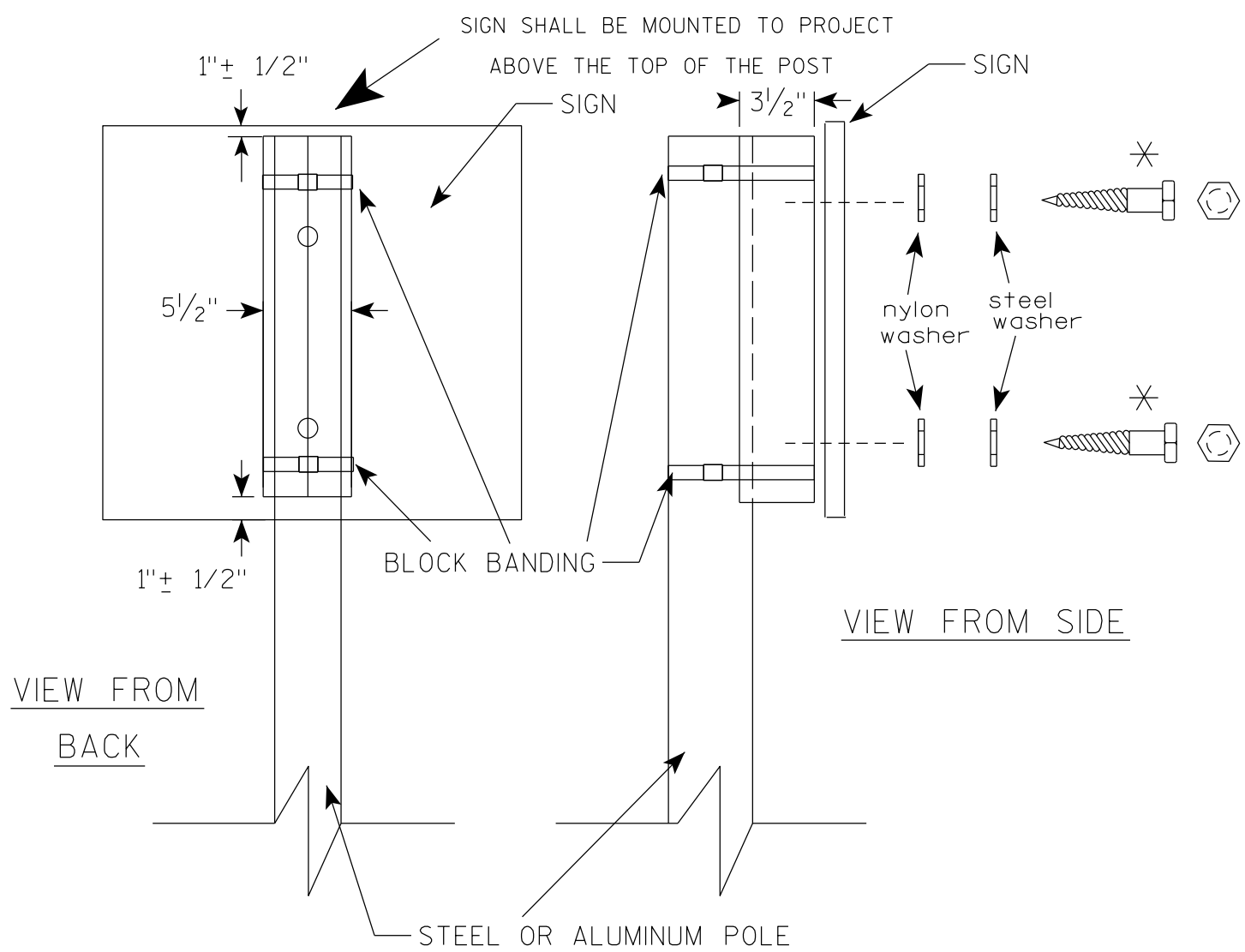
SEE DETAIL B

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

STANDARD SIGN
SIGN BANDING DETAILS

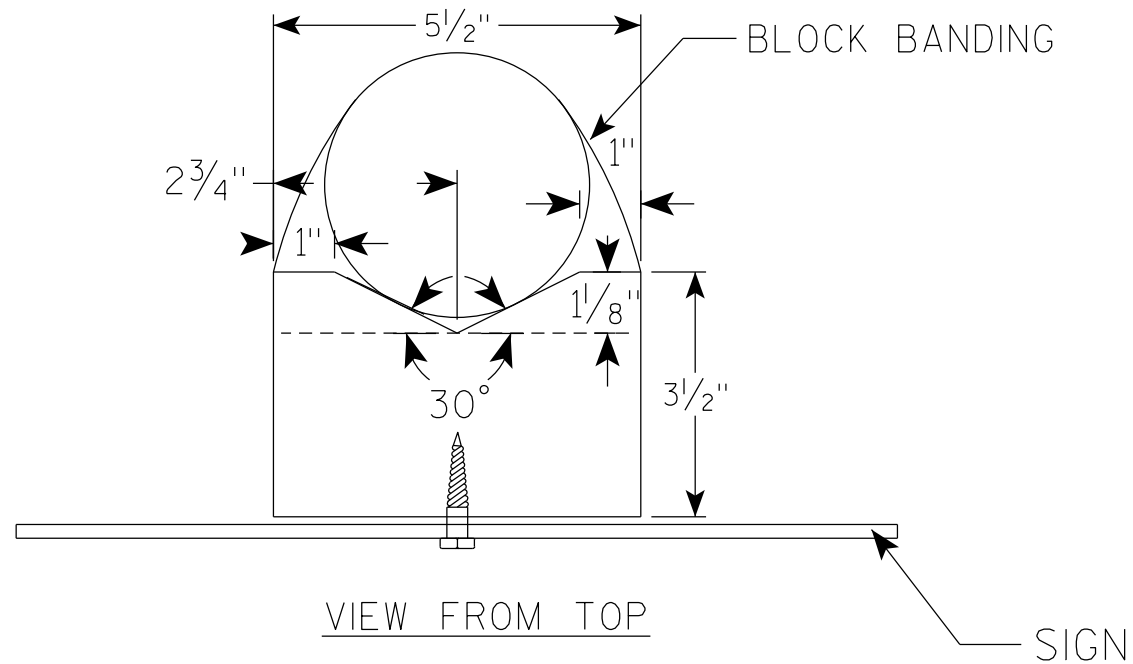
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

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

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

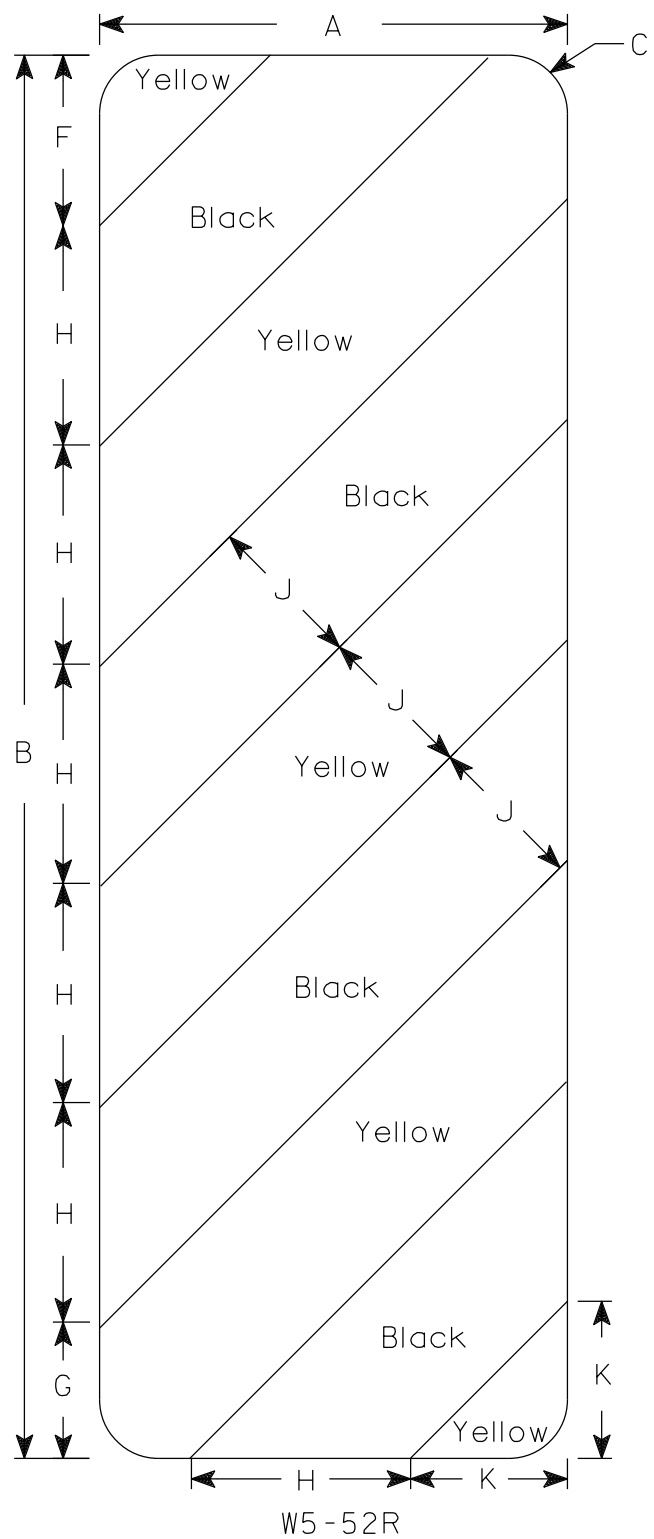
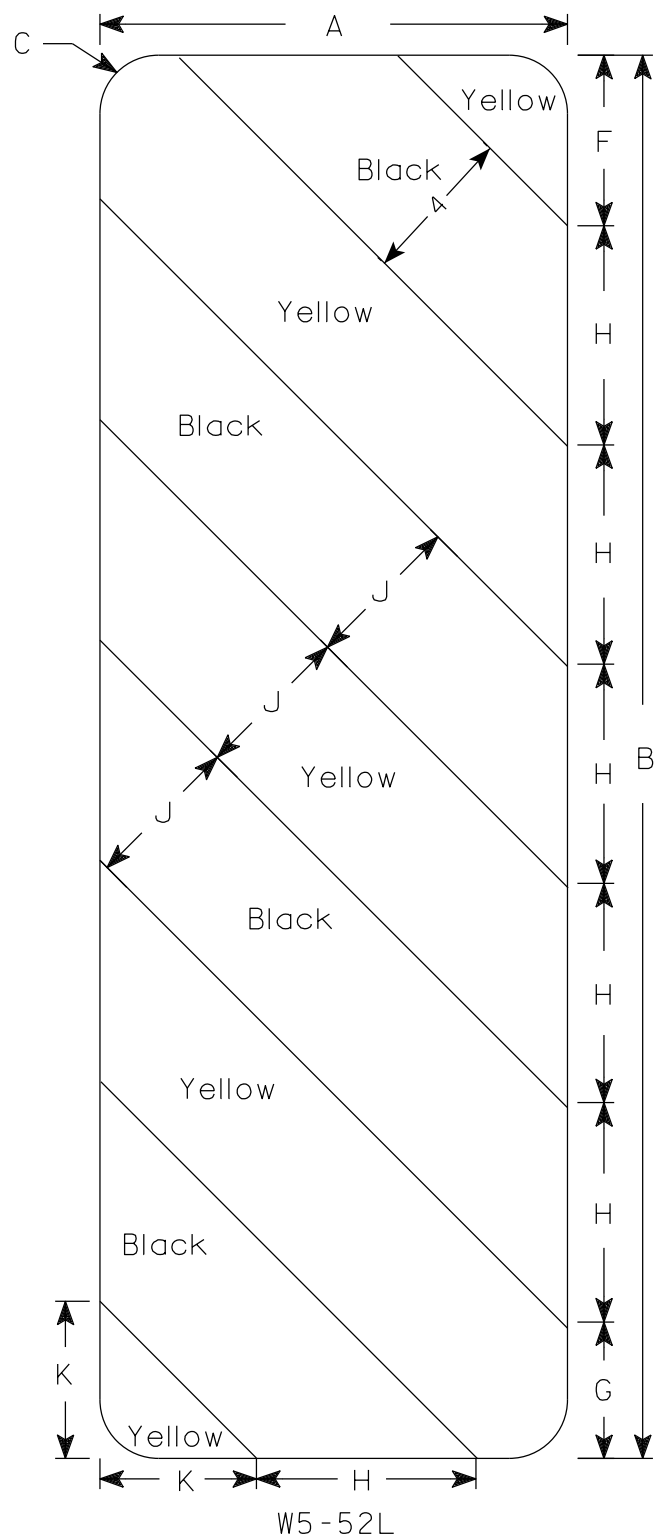
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

SHEET NO:

E



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Message - Black
- 3. Alternate colors of stripes as shown.

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

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.08
OPERATING RATING FACTOR: RF = 1.40
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: _____ f'c = 4,000 P.S.I.
SUPERSTRUCTURE _____ f'c = 3,500 P.S.I.
ALL OTHER _____

BAR STEEL REINFORCEMENT: _____ fy = 60,000 P.S.I.
GRADE 60 _____

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON CIP 10% X 0.25 PILING DRIVEN TO A REQUIRED
DRIVING RESISTANCE OF 130 TONS †† PER PILE AS DETERMINED BY THE MODIFIED
GATES DYNAMIC FORMULA.
ESTIMATED 90 FEET LONG AT WEST ABUTMENT.
ESTIMATED 80 FEET LONG AT EAST 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.

TRAFFIC VOLUME

CASBERG COULEE ROAD
ADT = 418 (2024)
R.D.S. = 30 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q₁₀₀ = 1400 C.F.S.
VEL. = 8.24 F.P.S.
HW₁₀₀ = EL. 729.05
WATERWAY AREA = 170.0 SQ. FT.
DRAINAGE AREA = 6.58 SQ. MI.
ROADWAY OVERTOPPING = NA
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q₂ = 220 C.F.S.
VEL. = 3.39 F.P.S.
HW₂ = EL. 723.21

LIST OF DRAWINGS



1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. TUBULAR STEEL RAILING TYPE 'M'

STRUCTURE DESIGN CONTACTS:

CHRIS BLUM 608-620-6192
AARON BONK 608-261-0261

THESE PLANS ARE BASED UPON STANDARD
BRIDGE PLANS DEVELOPED AND MAINTAINED BY
THE WISCONSIN DEPARTMENT OF
TRANSPORTATION THROUGH THE USE OF THE
WISDOT STANDARD BRIDGE DESIGN TOOL. THE
UNDERSIGNED DESIGNER CERTIFIES THE
ACCURACY OF THE BRIDGE TYPE, SIZE AND
LOCATION, HYDRAULICS AND FOUNDATION
SUPPORT, AND INFORMATION IN THE PLANS
THAT IS NOT PART OF THE STANDARD PLANS
SUPPLIED BY THE DEPARTMENT. THE DESIGNER
FURTHER CERTIFIES THAT USE OF THE STANDARD
BRIDGE DESIGN TOOL FOR DEVELOPMENT OF
THIS PLAN IS CONSISTENT WITH THE GUIDANCE
PROVIDED IN THE WISDOT BRIDGE MANUAL.



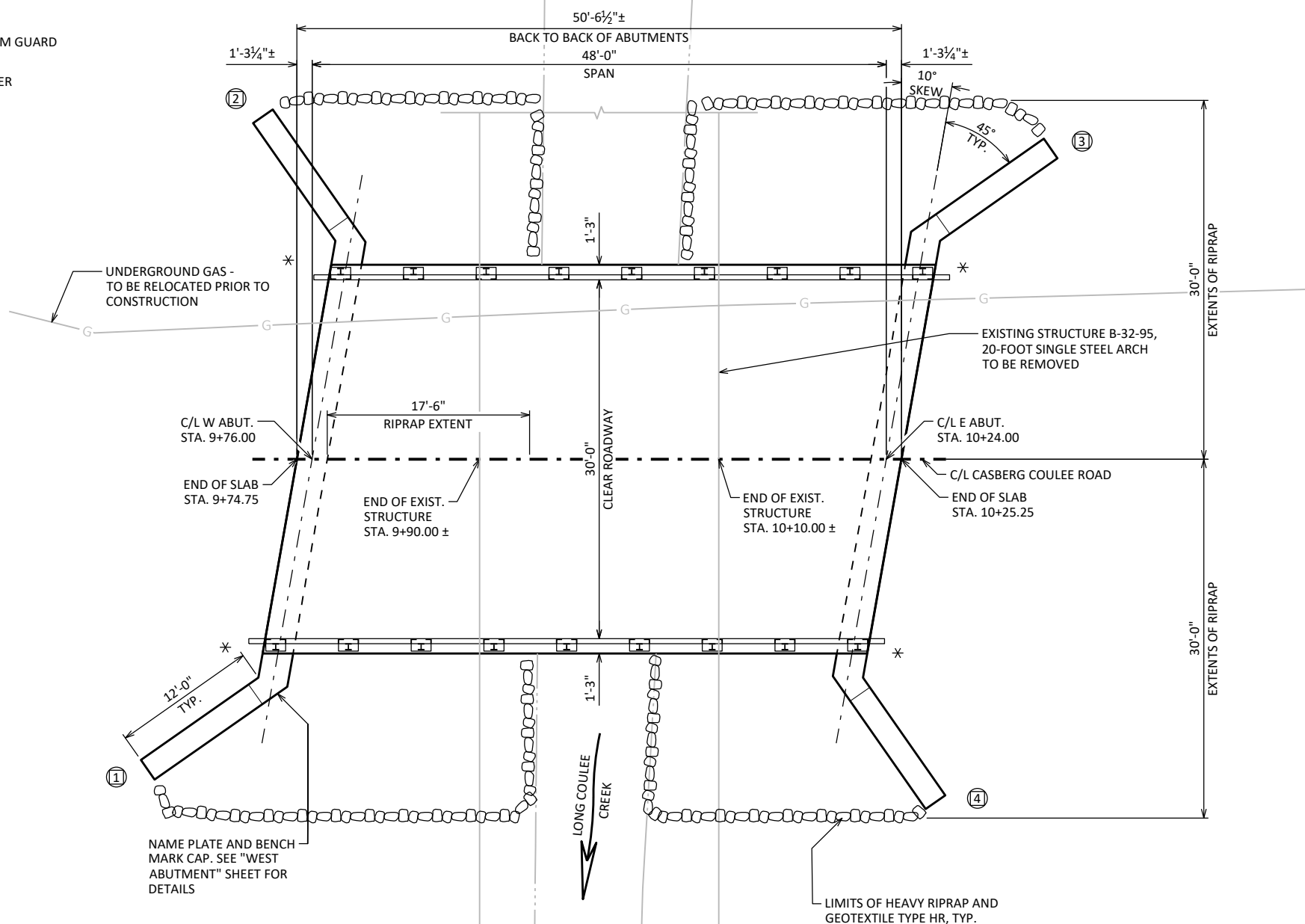
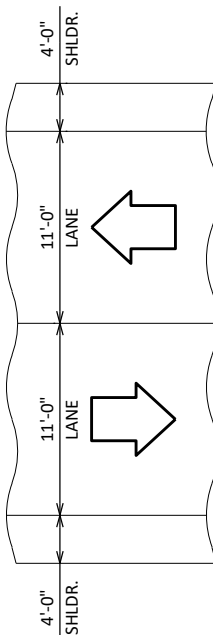
NO.	DATE	REVISION	BY
 SHORT ELLIOTT HENDRICKSON INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		SDR	05/02/24 DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-32-251			
CASBERG COULEE ROAD OVER LONG COULEE CREEK			
COUNTY	LA CROSSE	TOWN	HOLLAND
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION			
DESIGNED BY	CJB	DESIGNED CK'D	JGM
DRAWN BY	ALC	PLANS CK'D	JGM
GENERAL PLAN			SHEET 1 OF 10

I.D.

DATE:

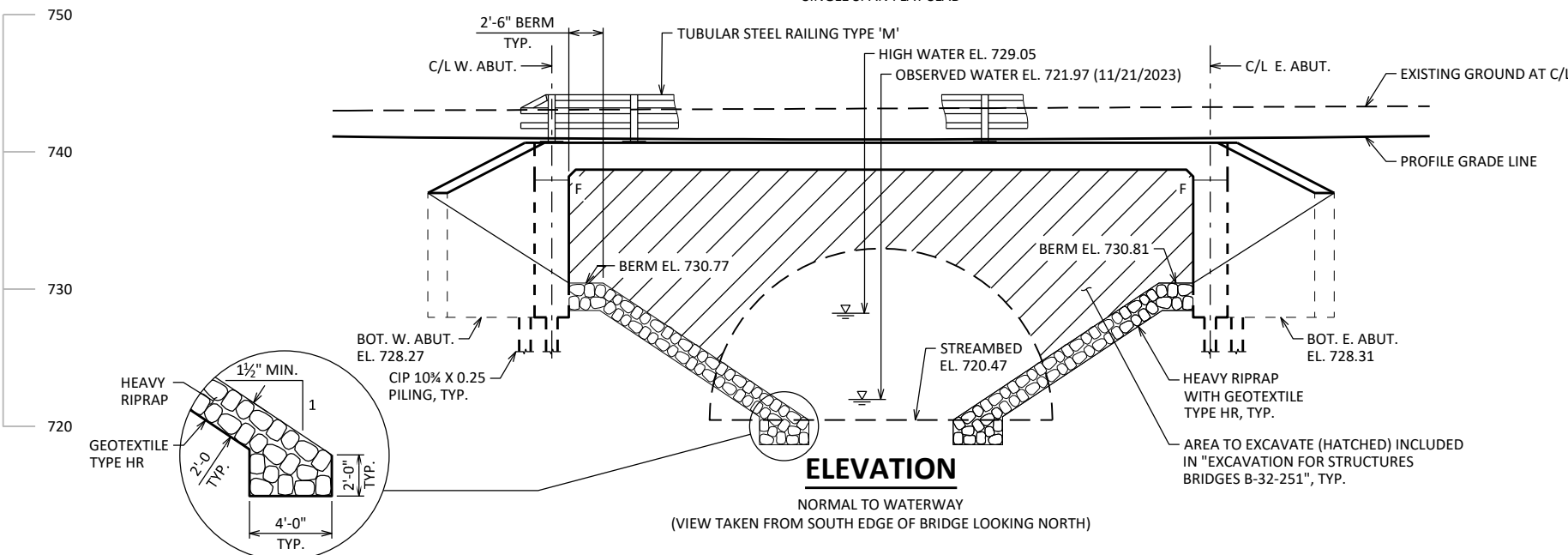
* PROVIDE FOR THREE BEAM GUARD
RAIL ATTACHMENT.

○ INDICATES WING NUMBER



PLAN

SINGLE SPAN FLAT SLAB



ELEVATION

NORMAL TO WATERWAY
(VIEW TAKEN FROM SOUTH EDGE OF BRIDGE LOOKING NORTH)

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 $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-32-251 " SHALL BE THE EXISTING GROUNDLINE.

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 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.

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

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.

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE EXPOSED TOP OF SLAB, INCLUDING THE SLAB EDGE AND 1'-0" UNDER THE SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS AND FRONT FACE OF ABUTMENT TO 1'-0" PAST THE EDGE OF SLAB.

NO.	STATION / OFFSET	DESCRIPTION	ELEV.
BM1	9+17.21 / 45.43' LT	SPK IN 16" BOX ELDER	738.00'
BM2	12+40.00/ 33.02' RT	SPK IN 14" ELM	747.42'

* 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

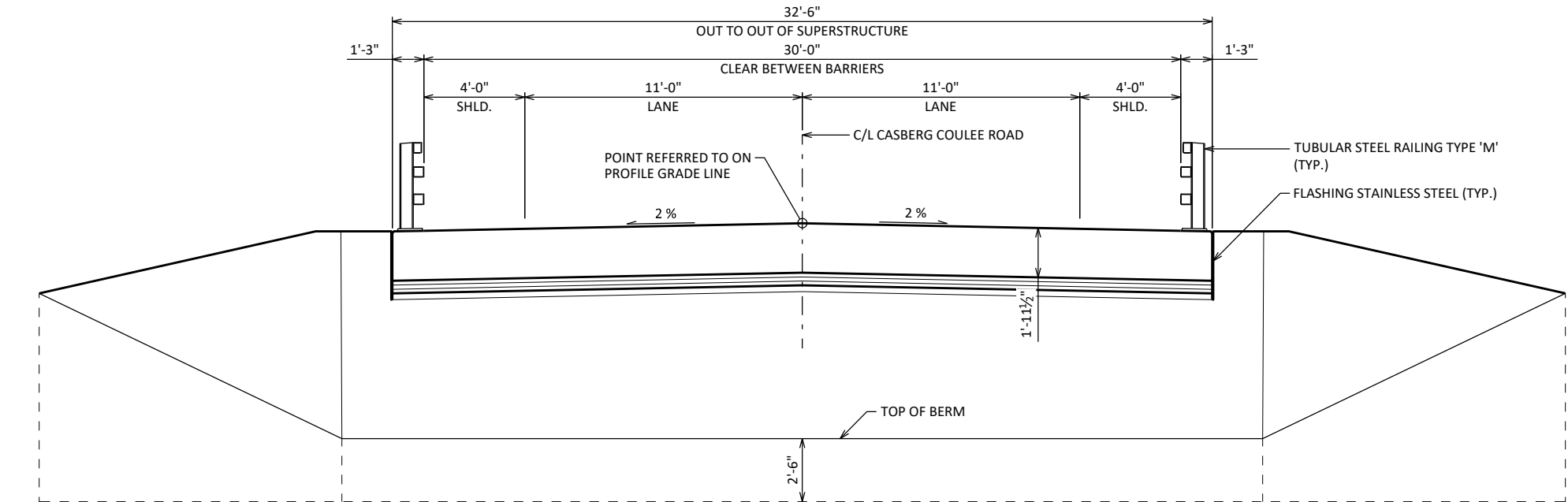
STRUCTURE B-32-251

DRAWN BY	ALC	PLANS CK'D	JGM
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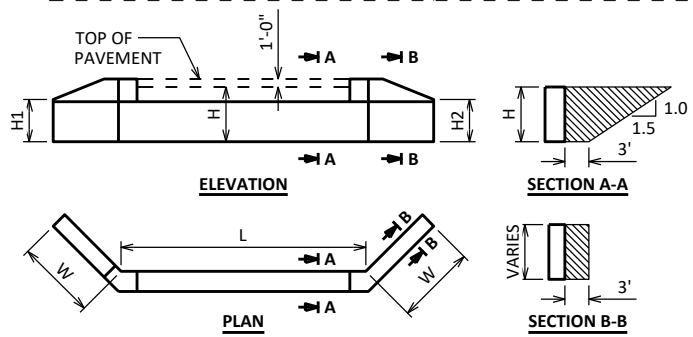
CROSS SECTION & QUANTITIES

SHEET 2 OF 10

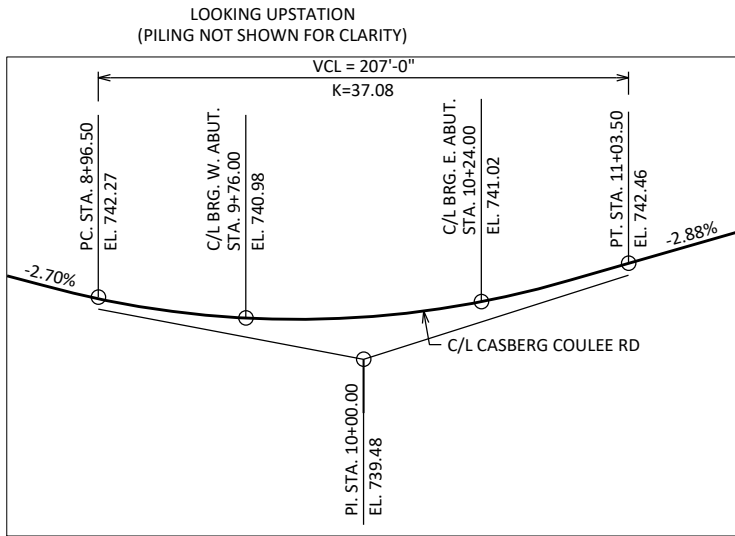
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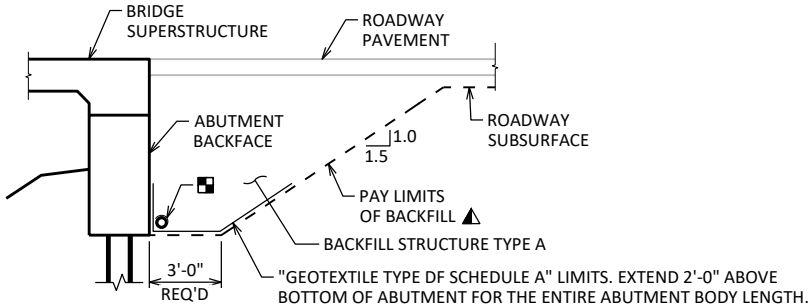
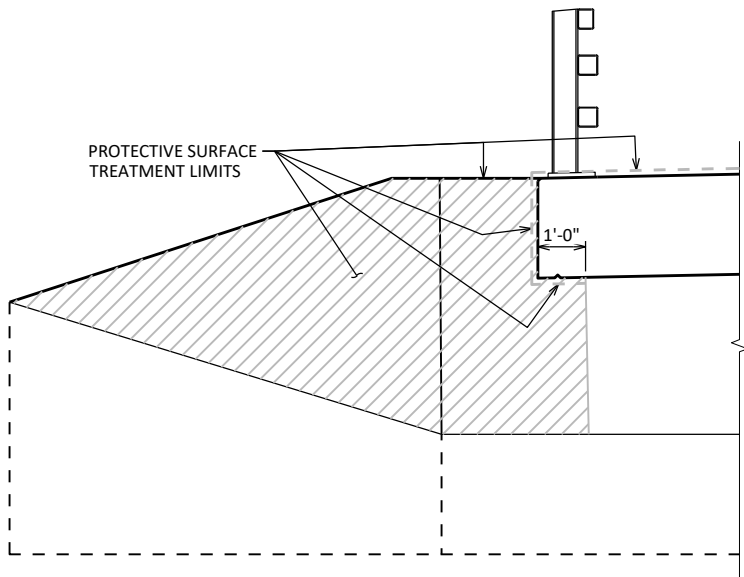
- BOTTOM OF ABUTMENT



L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)$
 $V_{CY} = V_{CF}(EF)/27$
 $V_{TON} = V_{CY}(2.0)$



PROFILE GRADE LINE



▲ 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.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	WEST ABUT.	EAST ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS B-32-95	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-32-251	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	465	465	930
502.0100	CONCRETE MASONRY BRIDGES	CY	124	60	60	244
502.3200	PROTECTIVE SURFACE TREATMENT	SY	215	30	30	275
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	2,750	2,750	5,500
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	27,350	2,020	2,020	31,390
513.4061	RAILING TUBULAR TYPE M	LF	106	---	---	106
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	6	6	12
550.2104	PIILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	---	810	720	1,530
606.0300	RIPRAP HEAVY	CY	---	105	105	210
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	81	81	162
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	57	57	114
645.0120	GEOTEXTILE TYPE HR	SY	---	185	185	370
SPV.0090.01	FLASHING STAINLESS STEEL	LF	102	---	---	102
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	½", ¾"
	NAMEPLATE	EACH	1	---	---	1
	BENCHMARK	EACH	1	---	---	1

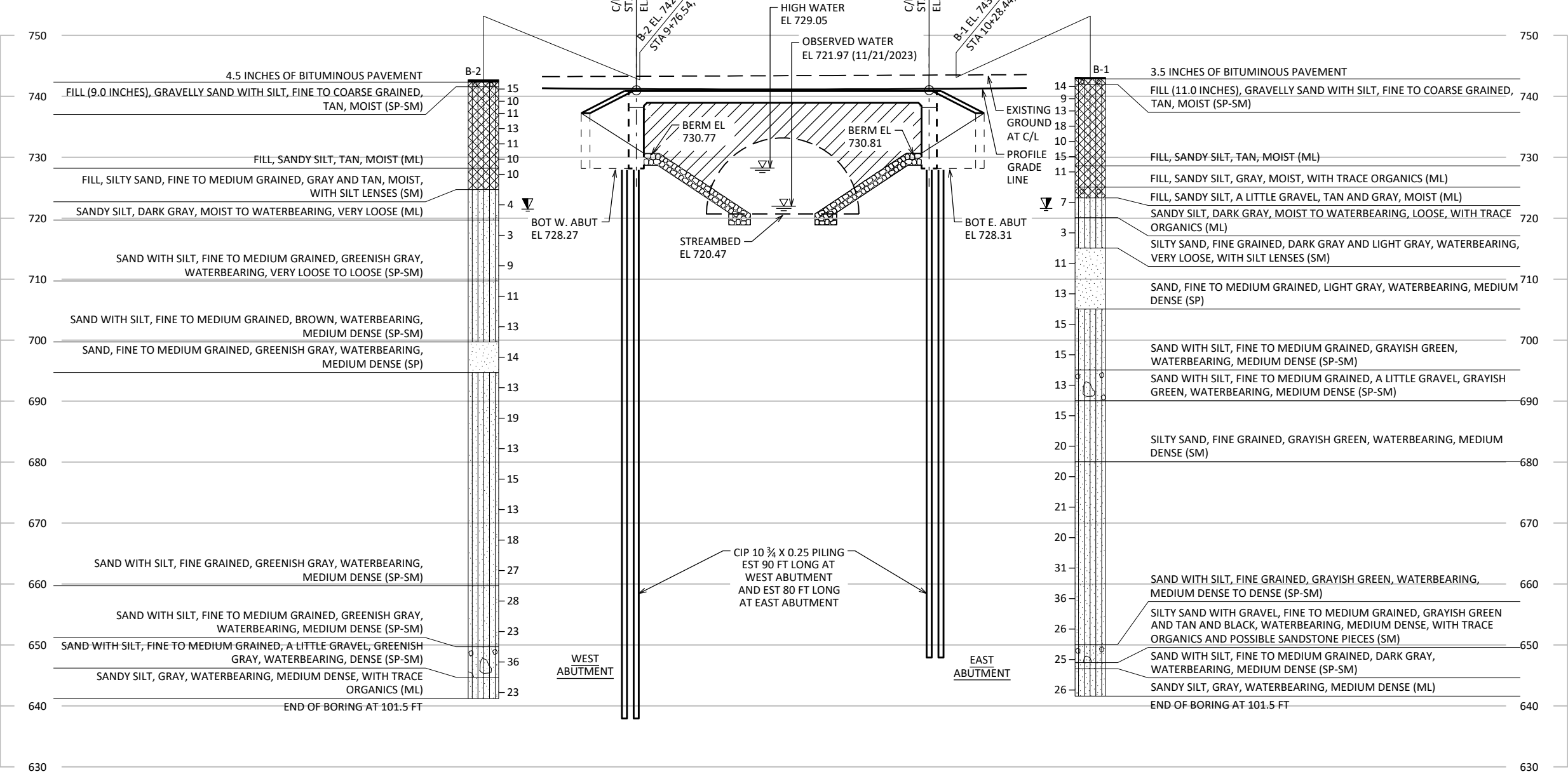
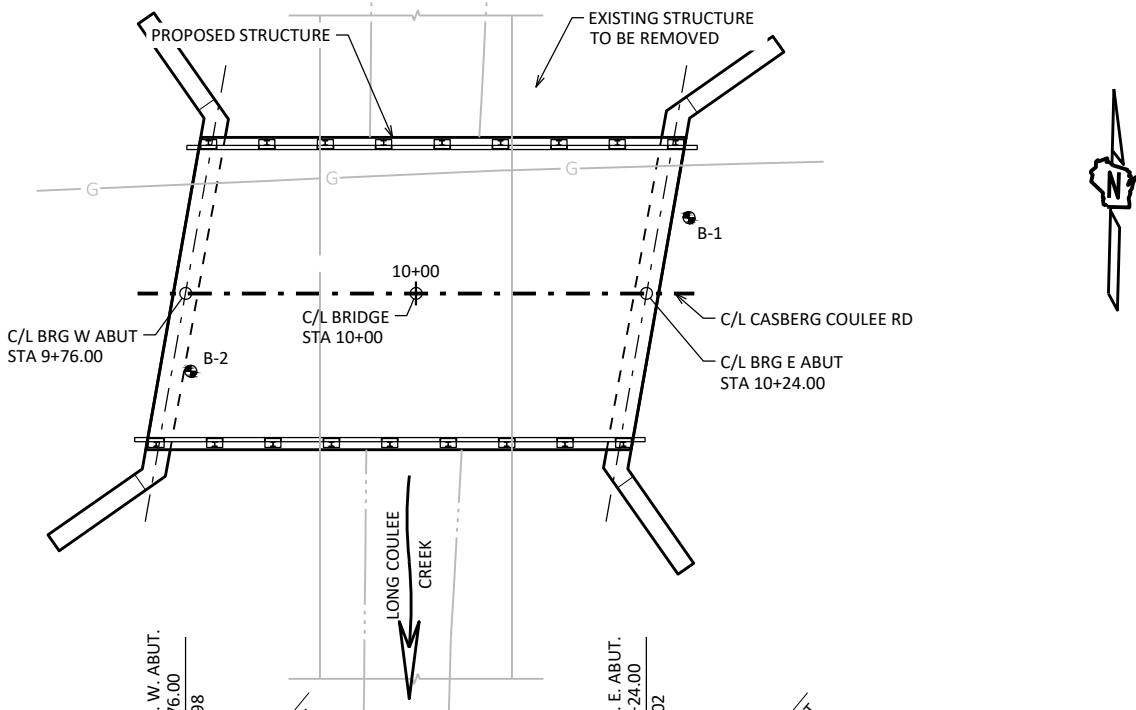
THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.0.0.0

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	11/16/2023	193306.23	445031.69
B-2	11/14/2023	193288.82	444980.22

BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC
4203 SCHOFIELD AVENUE, SUITE 1
SCHOFIELD, WI 54476
PH: (715) 359-3534

REPORT COMPLETED BY: MATTHEW B. WILLIAMS, P.E.

ALL COORDINATES REFERENCED TO WCCS NAD 83(91) LA CROSSE COUNTY



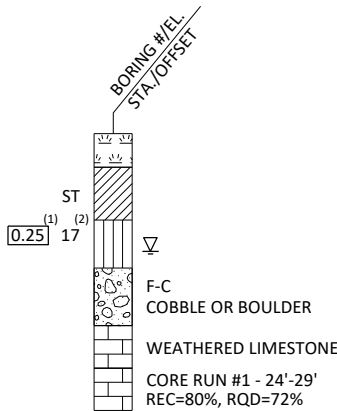
STATE PROJECT NUMBER

7269-00-71

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-32-251			
DRAWN BY		ALC	PLANS CK'D JGM
SUBSURFACE EXPLORATION		SHEET 3 OF 10	

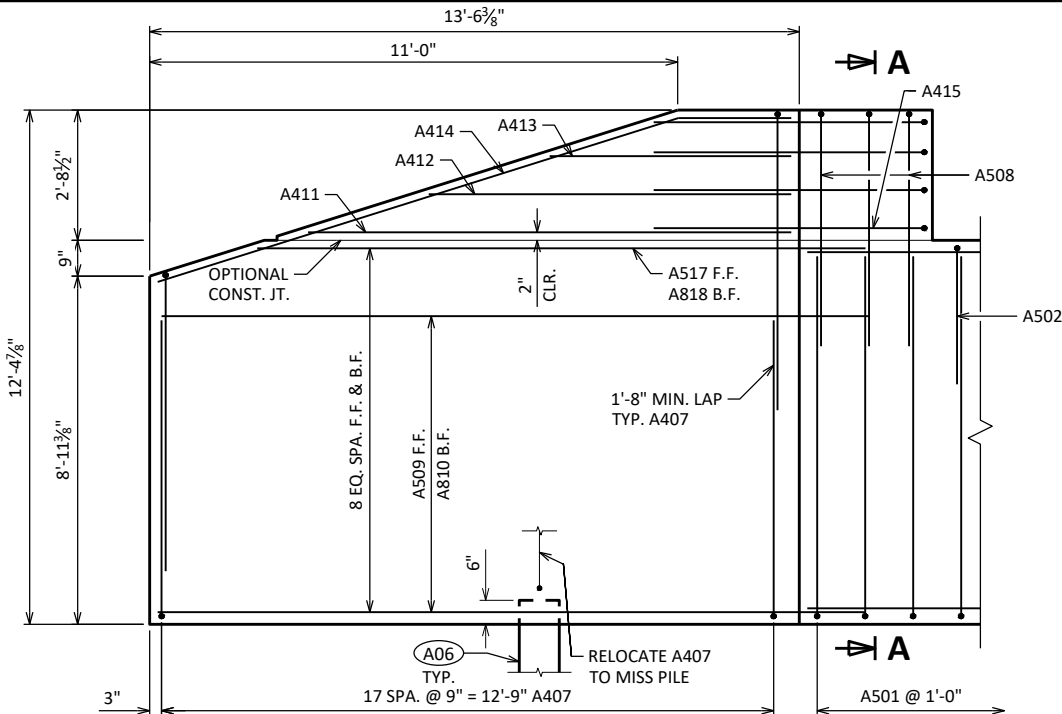


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| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE B-32-251 | | | |
| | | DRAWN
BY | PLANS
CK'D |
| | | JGM | CJG |
| WEST
ABUTMENT | | SHEET 4 OF 10 | |
| | | | |

BILL OF BARS

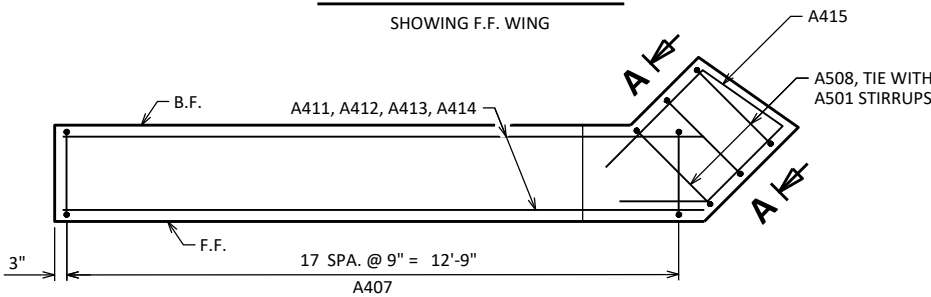
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		76	11'-0"	X		ABUT BODY STIRRUPS
A502		34	7'-7"	X		ABUT BODY STIRRUPS - TOP U-BAR
A503		9	37'-9"			ABUT BODY HORIZ. - F.F.
A804		18	24'-10"	X		ABUT BODY HORIZ. - B.F.
A405		30	3'-0"	X		ABUT BODY TIE BARS
A506	X	32	2'-0"			ABUT BODY DOWEL BARS
A407	X	72	15'-10"	X		WING STIRRUPS
A508	X	5	11'-7"	X		WING CORNER STIRRUPS
A509	X	16	14'-9"	X		WING LOWER HORIZ. - F.F.
A810	X	16	16'-3"	X		WING LOWER HORIZ. - B.F.
A411	X	4	9'-10"			WING UPPER HORIZ.
A412	X	4	7'-4"			WING UPPER HORIZ.
A413	X	4	4'-10"			WING UPPER HORIZ.
A414	X	4	12'-10"	X		WING TOP HORIZ.
A415	X	4	8'-10"	X		WING 1 UPPER HORIZ. CORNER
A416	X	4	7'-11"	X		WING 2 UPPER HORIZ. CORNER
A517	X	2	12'-6"	X		WING LOWER HORIZ. - F.F.
A818	X	2	14'-0"	X		WING LOWER HORIZ. - B.F.



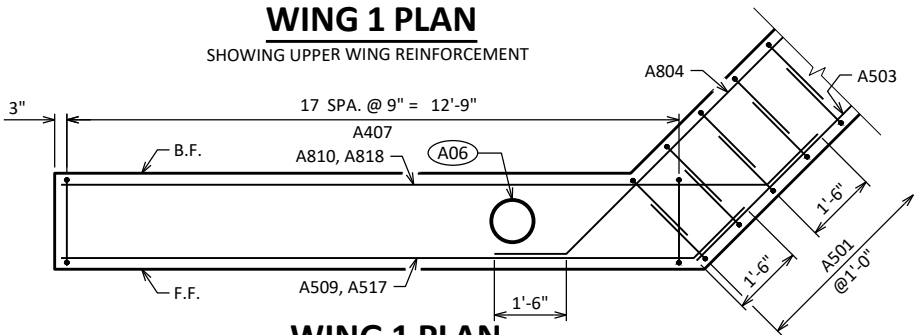
WING 1 ELEVATION

SHOWING F.F. WING



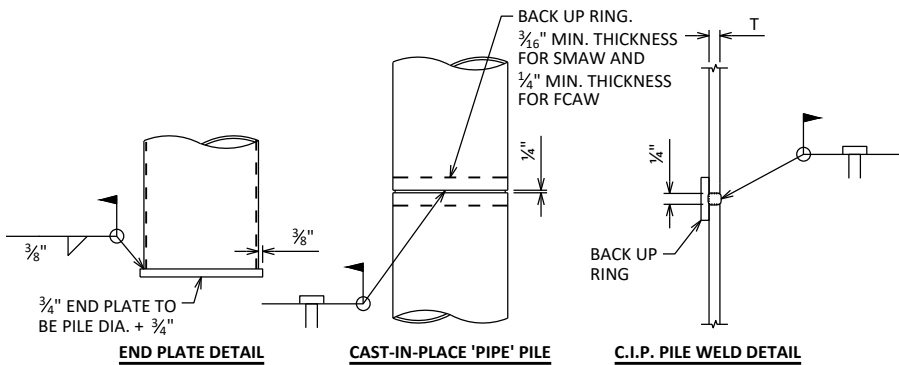
WING 1 PLAN

SHOWING UPPER WING REINFORCEMENT

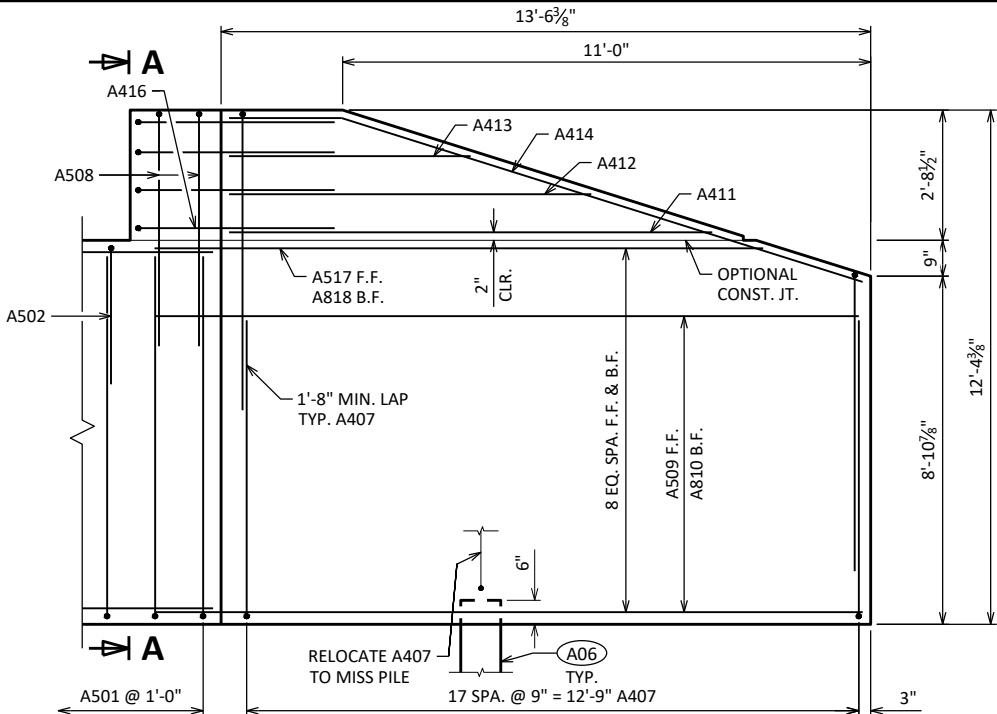


WING 1 PLAN

SHOWING LOWER WING REINFORCEMENT WING 2 SIMILAR

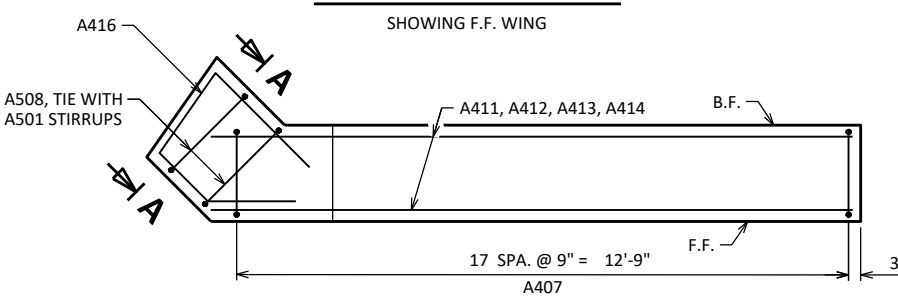


CIP PILE DETAILS



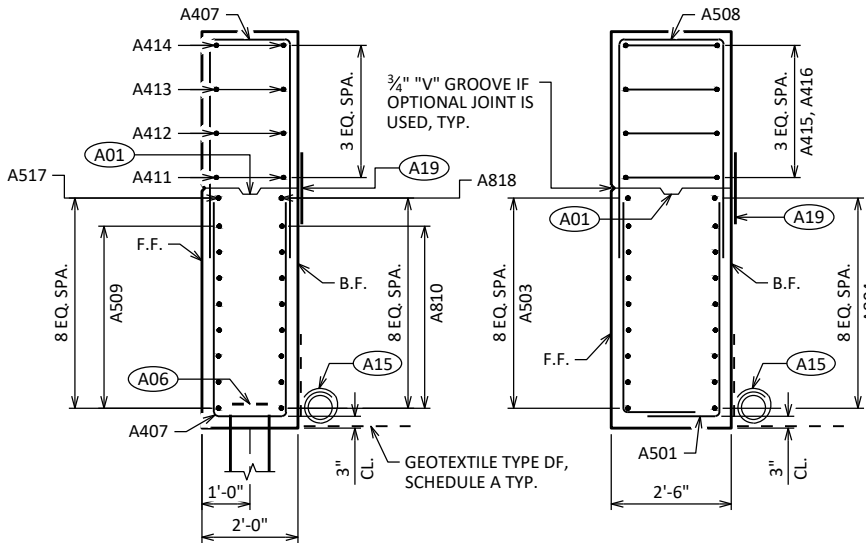
WING 2 ELEVATION

SHOWING F.F. WING



WING 2 PLAN

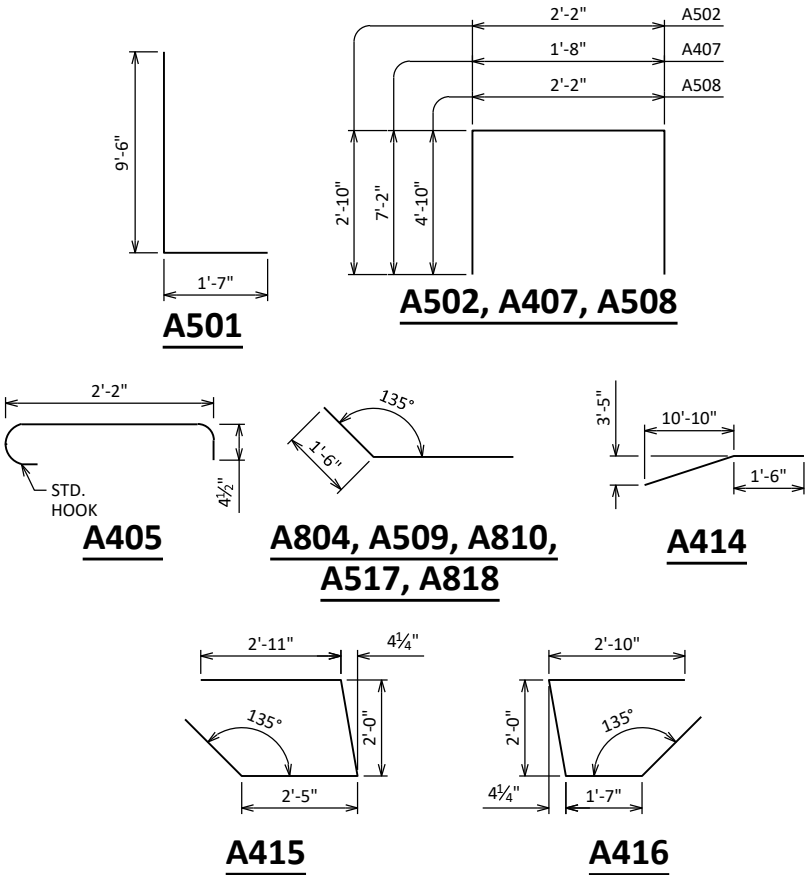
SHOWING UPPER WING REINFORCEMENT



SECTION THRU WING 1

TYPICAL BOTH WINGS

SECTION A-A



- A01 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE 3/4" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.
- A06 SUPPORT ABUTMENT ON CIP 10% X 0.25 PILING, ESTIMATED 90FT LONG WITH A REQUIRED DRIVING RESISTANCE OF 130TONS PER PILE.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A19 18" RUBBERIZED MEMBRANE WATERPROOFING, ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY STRUCTURES".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-251			
DRAWN BY JGM		PLANS CK'D CJB	
WEST ABUTMENT DETAILS		SHEET 5 OF 10	

SCALE =



- A01** CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.
 - A06** SUPPORT ABUTMENT ON CIP 10 1/2" X 0.25 PILING, ESTIMATED 80FT LONG WITH A REQUIRED DRIVING RESISTANCE OF 130TONS PER PILE.
 - A15** PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
 - A17** 1/2" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES 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 GUTTER LINE AT INSIDE FACE.
 - A19** 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
 - A22** 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.)
- ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
- ONLY USE NOTCH IF OPTIONAL CONST. JOINT IS USED.

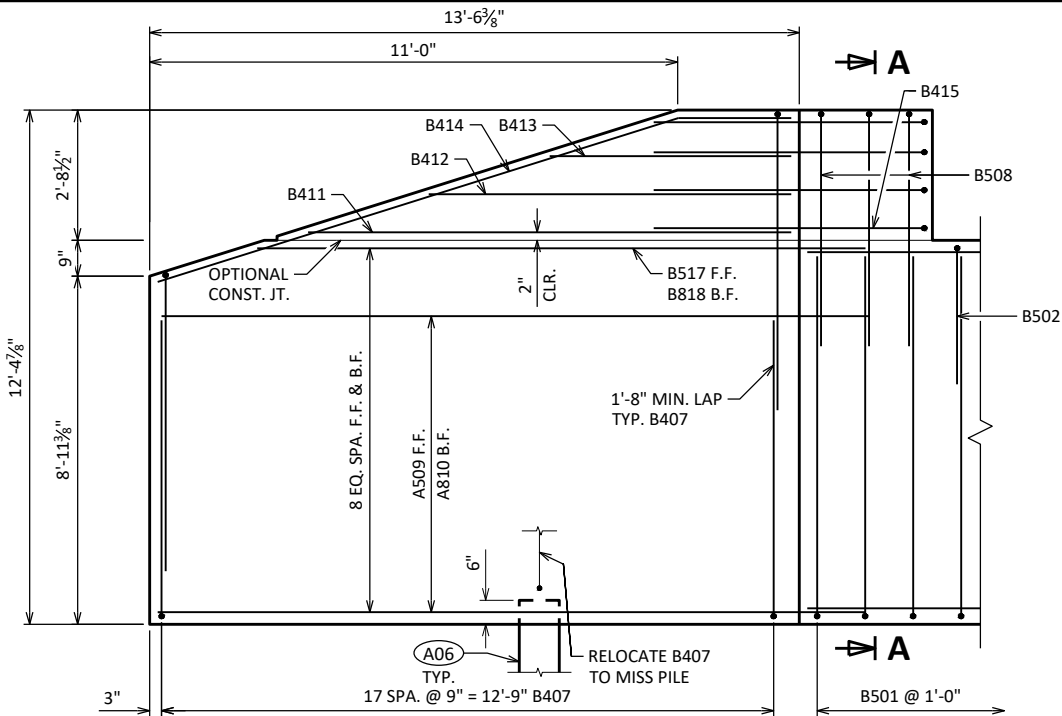
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-32-251	
		DRAWN BY	PLANS CK'D
		JGM	CJB
EAST ABUTMENT		SHEET 6 OF 10	

SCALE -

BILL OF BARS

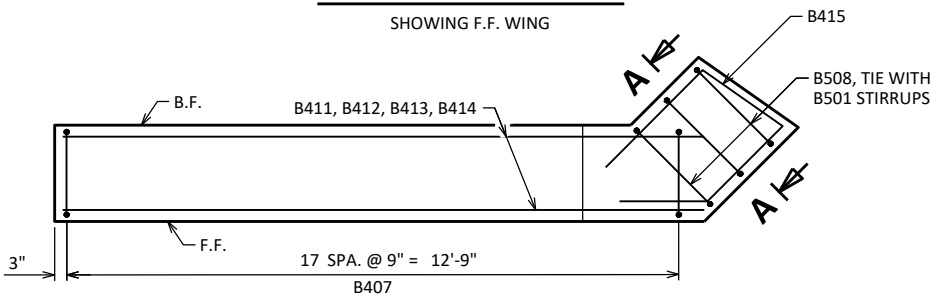
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		76	11'-0"	X		ABUT BODY STIRRUPS
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B405		30	3'-0"	X		ABUT BODY TIE BARS
B506	X	32	2'-0"			ABUT BODY DOWEL BARS
B407	X	72	15'-10"	X		WING STIRRUPS
B508	X	5	11'-7"	X		WING CORNER STIRRUPS
B509	X	16	14'-9"	X		WING LOWER HORIZ. - F.F.
B810	X	16	16'-3"	X		WING LOWER HORIZ. - B.F.
B411	X	4	9'-10"			WING UPPER HORIZ.
B412	X	4	7'-4"			WING UPPER HORIZ.
B413	X	4	4'-10"			WING UPPER HORIZ.
B414	X	4	12'-10"	X		WING TOP HORIZ.
B415	X	4	8'-10"	X		WING 3 UPPER HORIZ. CORNER
B416	X	4	7'-11"	X		WING 4 UPPER HORIZ. CORNER
B517	X	2	12'-6"	X		WING LOWER HORIZ. - F.F.
B818	X	2	14'-0"	X		WING LOWER HORIZ. - B.F.



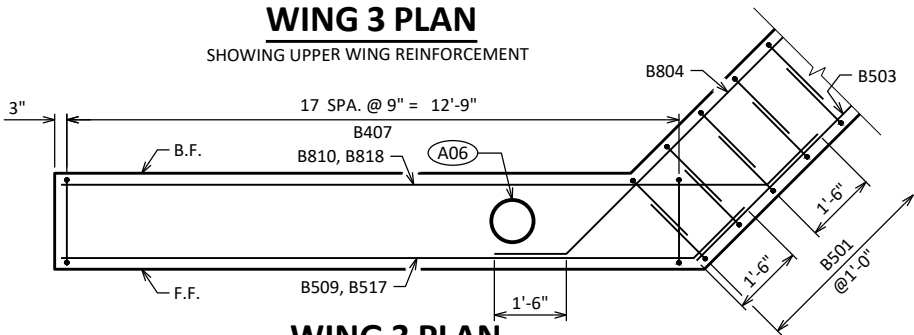
WING 3 ELEVATION

SHOWING F.F. WING



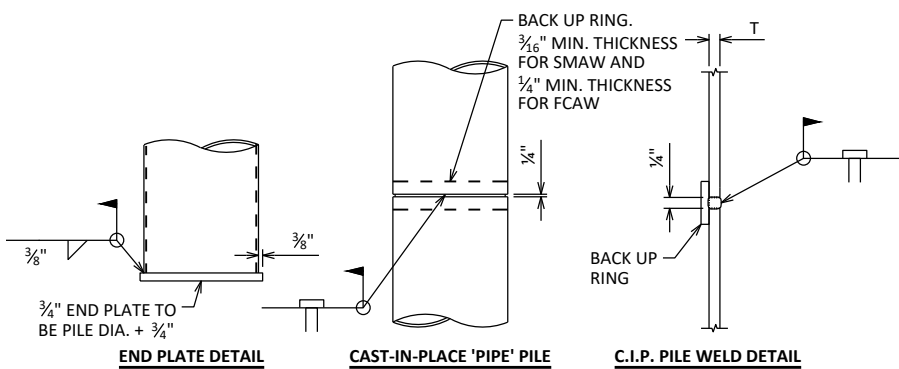
WING 3 PLAN

SHOWING UPPER WING REINFORCEMENT

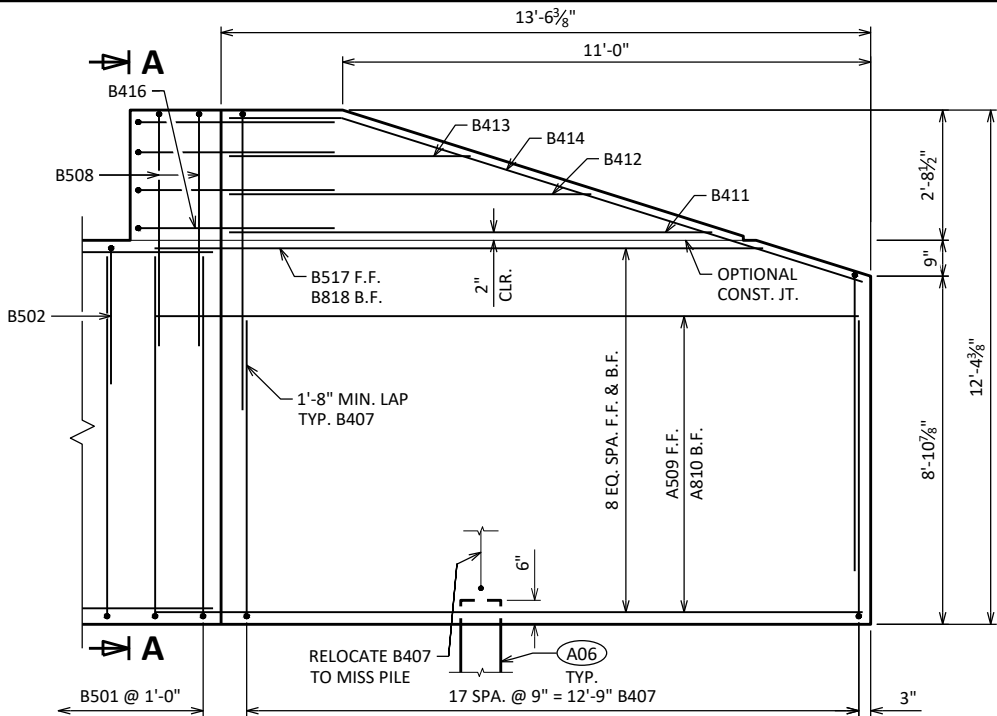


WING 3 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 4 SIMILAR

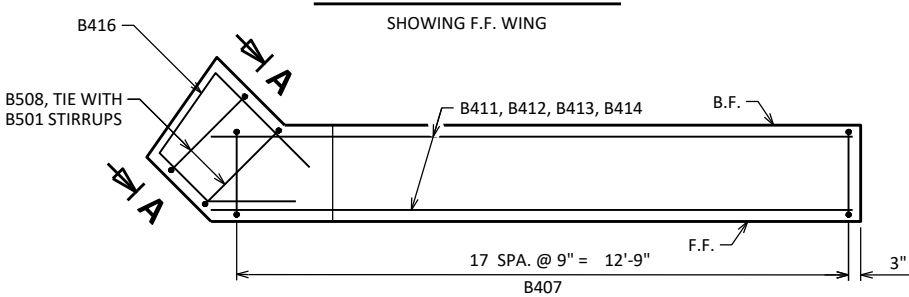


CIP PILE DETAILS



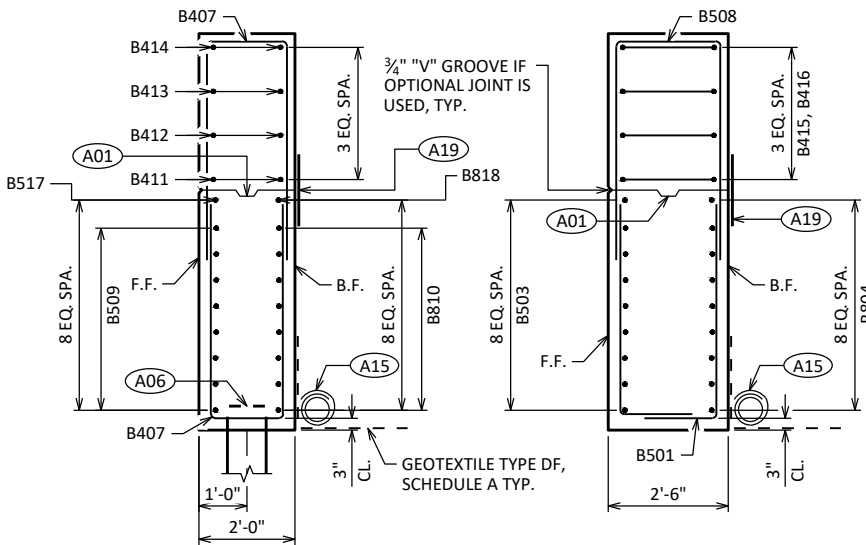
WING 4 ELEVATION

SHOWING F.F. WING



WING 4 PLAN

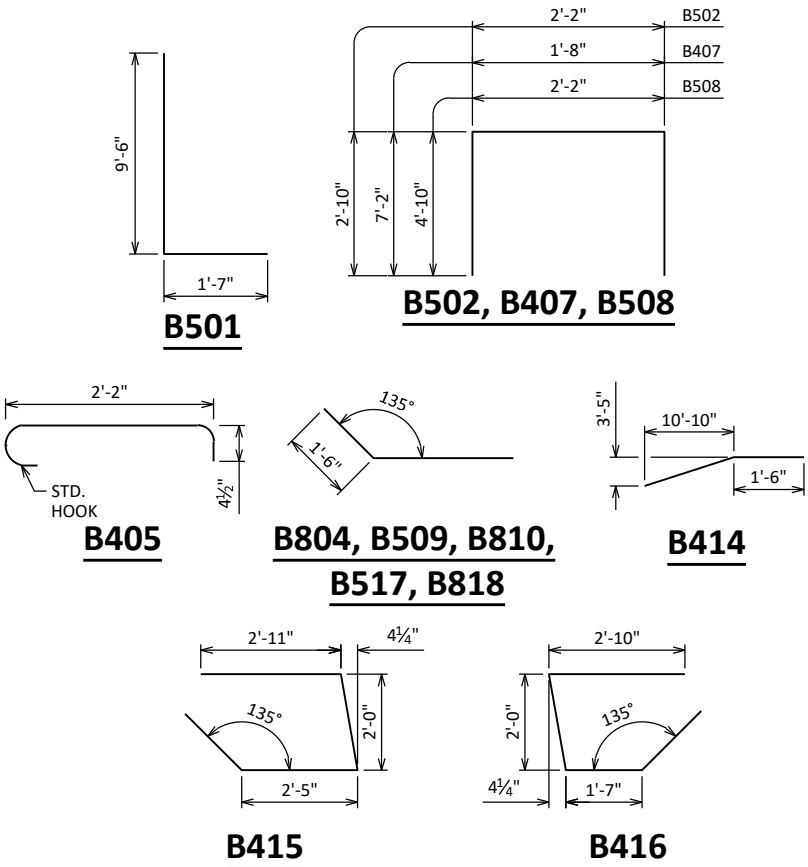
SHOWING UPPER WING REINFORCEMENT



SECTION THRU WING 3

TYPICAL BOTH WINGS

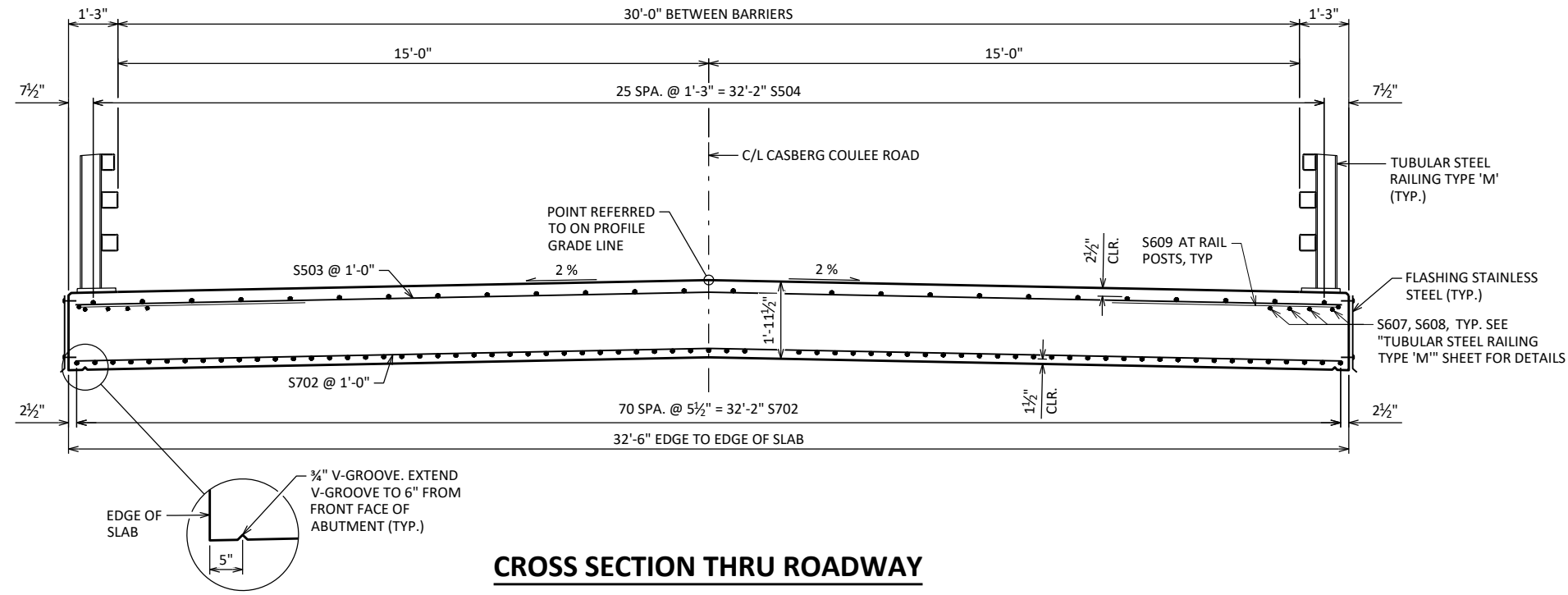
SECTION A-A



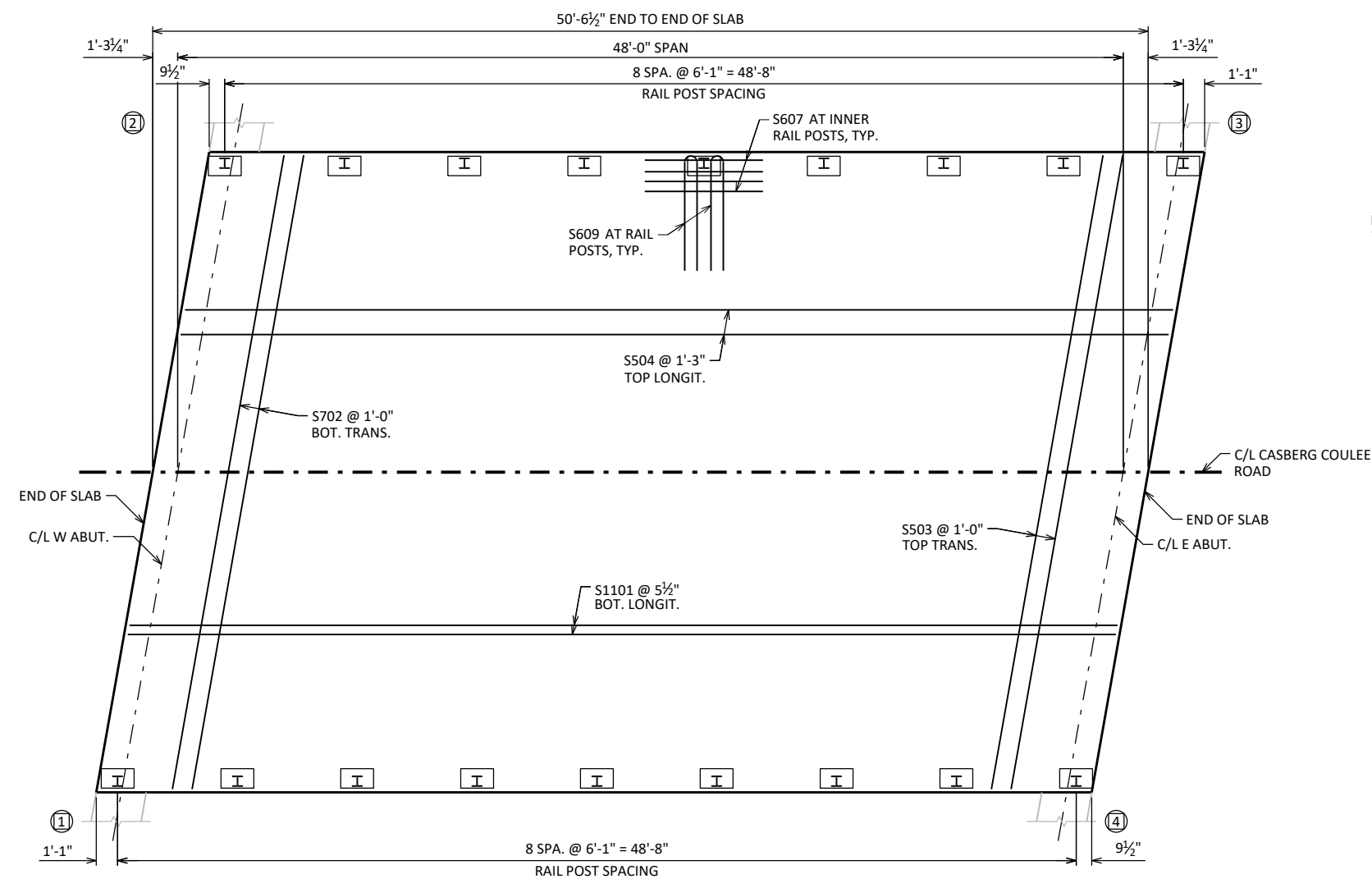
- A01 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE 3/4" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.
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- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-251			
DRAWN BY JGM		PLANS CK'D CJB	
EAST ABUTMENT DETAILS		SHEET 7 OF 10	

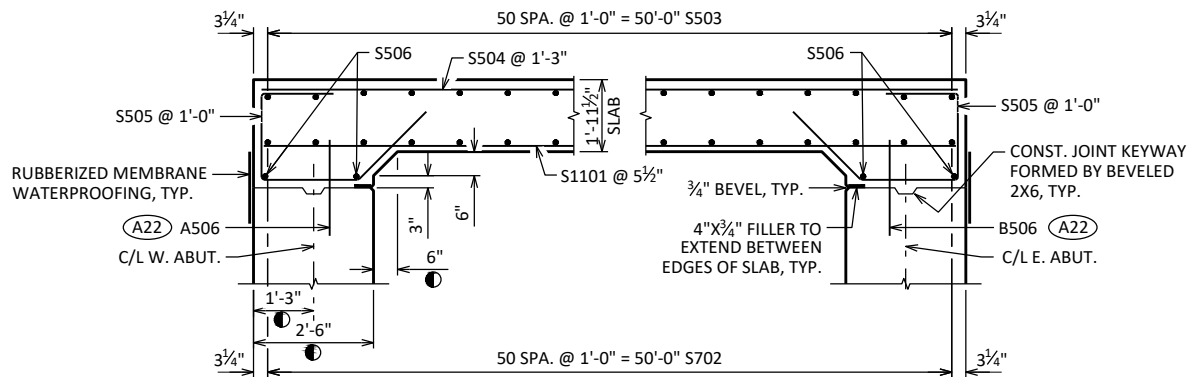
SCALE =



CROSS SECTION THRU ROADWAY



PLAN

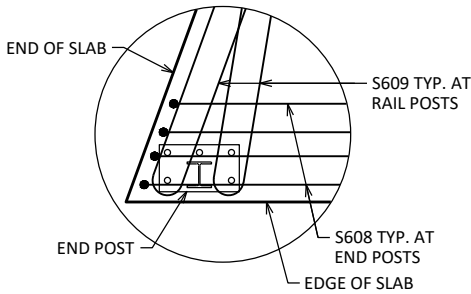


LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO THE ROADWAY UNLESS OTHERWISE NOTED.

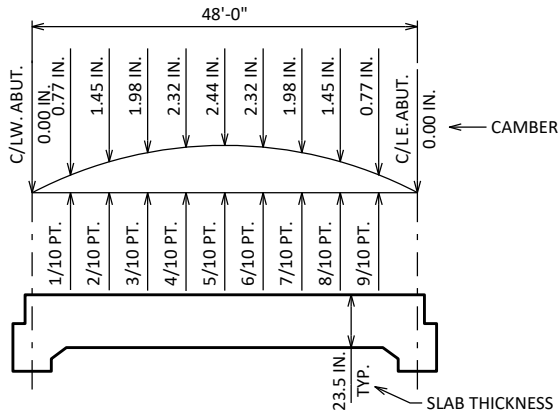
MEASURED NORMAL TO THE FACE OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

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



END POST DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-251			
DRAWN BY JGM		PLANS CK'D CJB	
SUPERSTRUCTURE		SHEET 8 OF 10	



CAMBER AND SLAB THICKNESS DIAGRAM

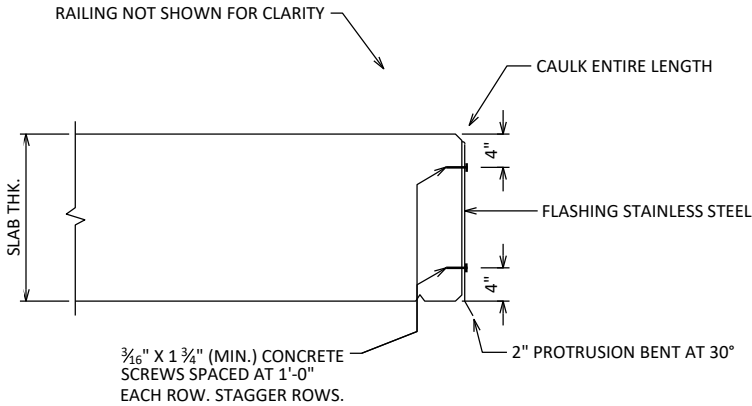
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

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

LESS	TOP OF SLAB ELEVATION AT FINAL GRADE
PLUS	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

LOCATION	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
N. EDGE OF DECK	740.64	740.62	740.61	740.60	740.60	740.61	740.62	740.63	740.66	740.69	740.72
CROWN OR R/L	740.98	740.95	740.94	740.93	740.92	740.92	740.93	740.94	740.96	740.99	741.02
S. EDGE OF DECK	740.68	740.65	740.63	740.61	740.60	740.60	740.60	740.61	740.63	740.65	740.68



FLASHING DETAIL FOR NEW BRIDGES WITH OPEN RAILING

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, CAULK, 3/16" CONCRETE SCREWS AND CLEANING THE EDGE OF THE DECK PRIOR TO THE ATTACHMENT OF THE FLASHING.

FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

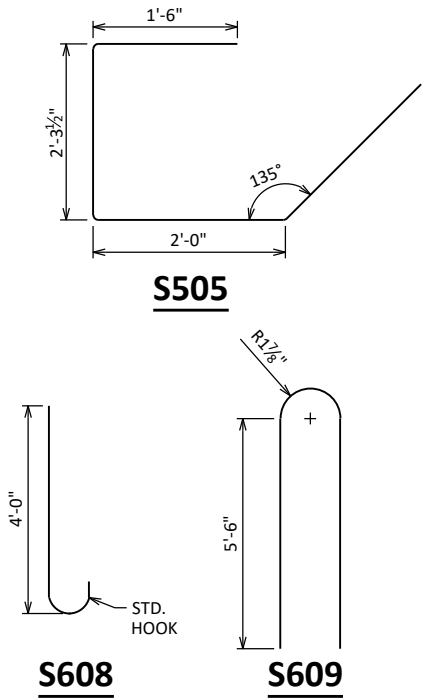
EXTEND FLASHING TO B.F. OF ABUTMENT DIAPHRAGM.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF DECK/SLAB SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.

PROVIDE 2" MINIMUM FLASHING OVERLAP, FASTEN WITH 3/16" X 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.



BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S1101	X	71	50'-2"			SLAB BOTTOM LONGITUDINAL
S702	X	51	32'-8"			SLAB BOTTOM TRANSVERSE
S503	X	51	32'-8"			SLAB TOP TRANSVERSE
S504	X	26	50'-2"			SLAB TOP LONGITUDINAL
S505	X	66	7'-7"	X		ABUTMENT DIAPHRAGM STIRRUPS
S506	X	4	32'-8"			ABUTMENT DIAPHRAGM LONGITUDINAL
S607	X	56	6'-0"			SLAB TOP LONGIT. UNDER RAIL POSTS
S608	X	16	4'-8"	X		SLAB TOP LONGIT. UNDER RAIL END POSTS
S609	X	36	12'-0"	X		SLAB TOP HOOKS UNDER RAIL POSTS

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	ABUTMENT	5/10 PT.	ABUTMENT
N. GUTTER			
CROWN OR R/L			
S. GUTTER			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF ABUTMENTS, THE C/L OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR R/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 (+).

STATE PROJECT NUMBER
7269-00-71

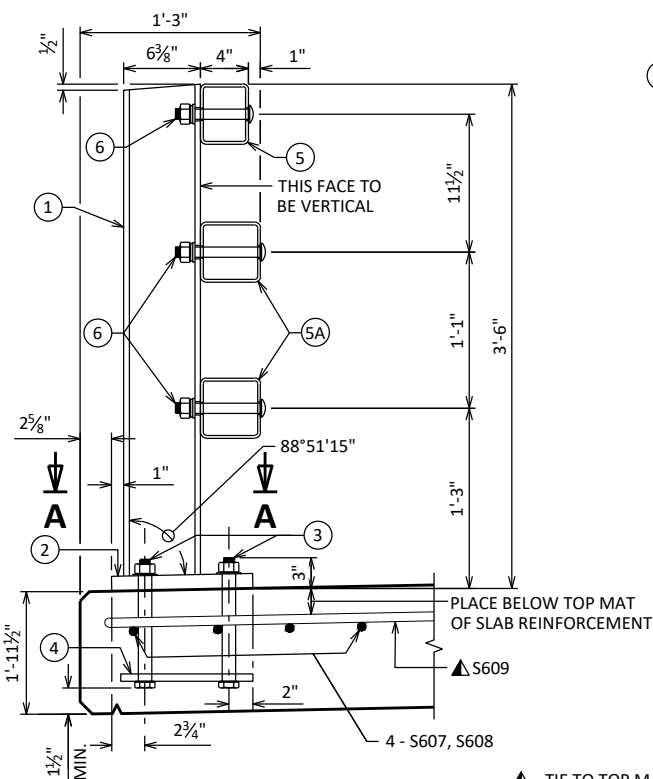
NO.	DATE	REVISION	BY
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STRUCTURE B-32-251			
DRAWN BY JGM		PLANS CK'D CJB	
SUPERSTRUCTURE DETAILS		SHEET 9 OF 10	

LEGEND

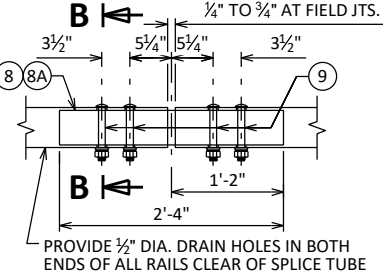
- 1 W6 x 25 WITH 1 1/2" x 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- 2 PLATE 1 1/4" x 11 3/4" x 1'-8" WITH 1 1/16" OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- 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. USE 10 3/4" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
- 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 SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- 8 3/8" x 3 5/8" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- 8A 3/8" x 2 5/8" x 2'-4" PLATE USED IN NO. 5, 3/8" x 3 5/8" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- 9 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/16" x 1 1/4" LONGIT. SLOTTED HOLES IN PLATE NO. 10A AT FIELD JOINTS AND 1 5/16" x 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 8A. PROVIDE 1 5/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
- 10 1/2" 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 THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- 11 1" DIA. HOLES IN PLATE NO. 10 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 10.
- 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 THRIE 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

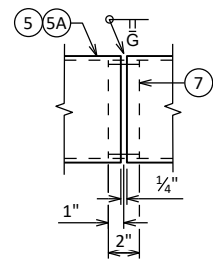
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES,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



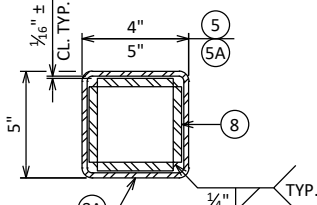
SECTION THRU RAILING ON DECK



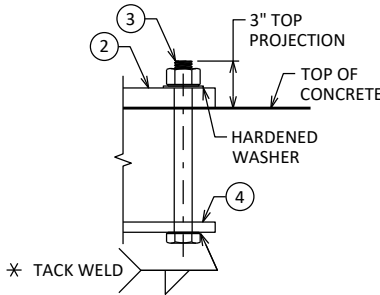
FIELD ERECTION JOINT DETAIL



SHOP RAIL SPLICE DETAIL
LOCATION MUST BE SHOWN ON SHOP DRAWINGS

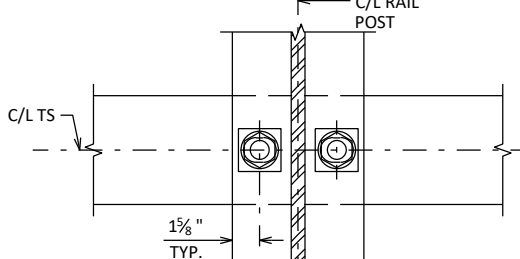


SECTION B-B

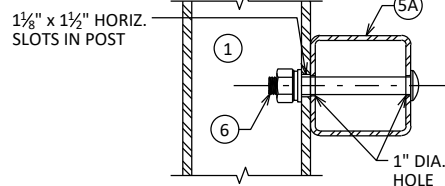


ANCHOR BOLTS

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



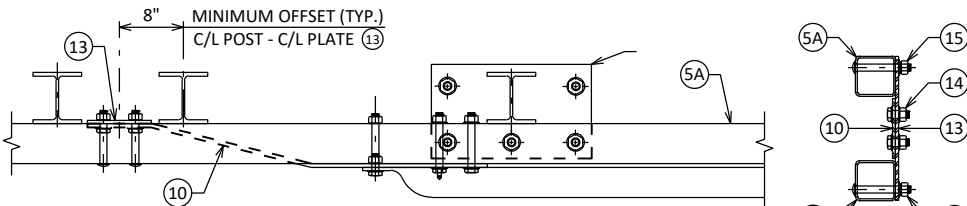
SECTION THRU POST WEB



SECTION THRU RAIL

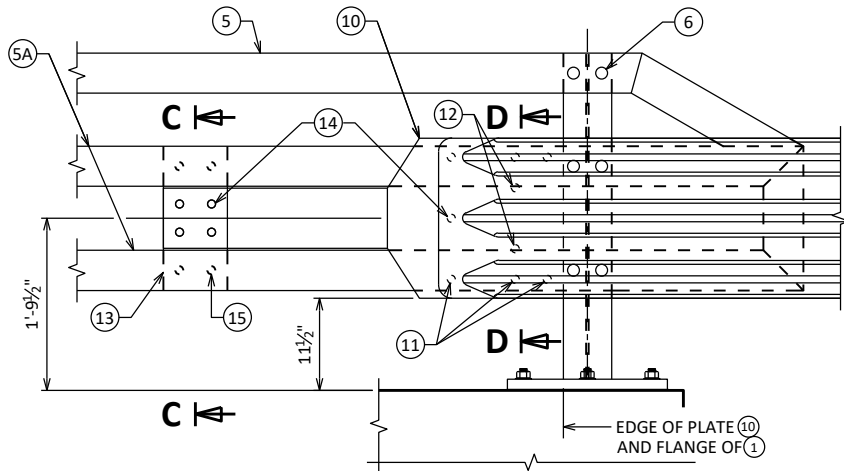
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

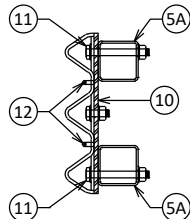


TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT

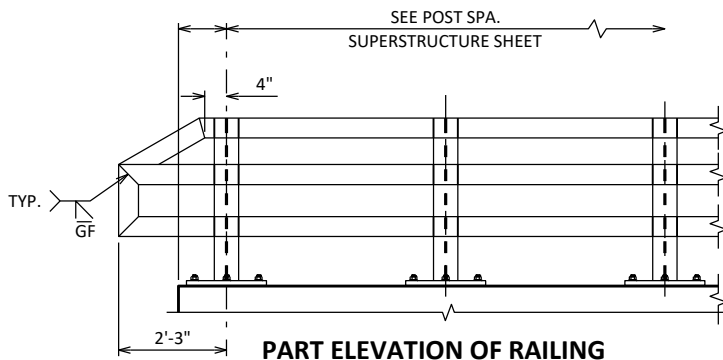


SECTION C-C

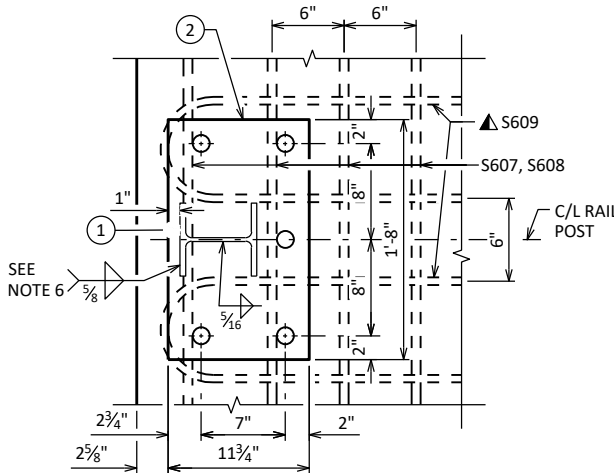


SECTION D-D

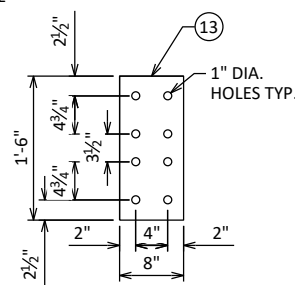
DETAIL AT END POST
THRIE BEAM RAIL ATTACHMENT



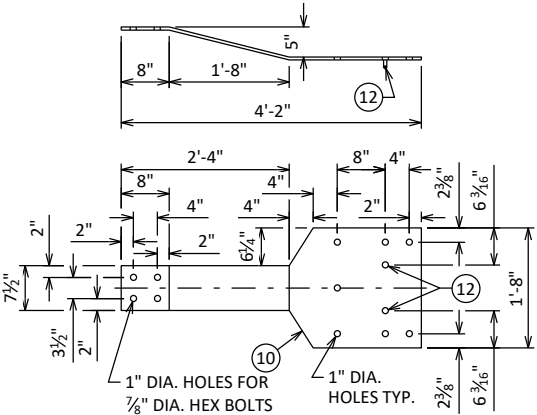
PART ELEVATION OF RAILING



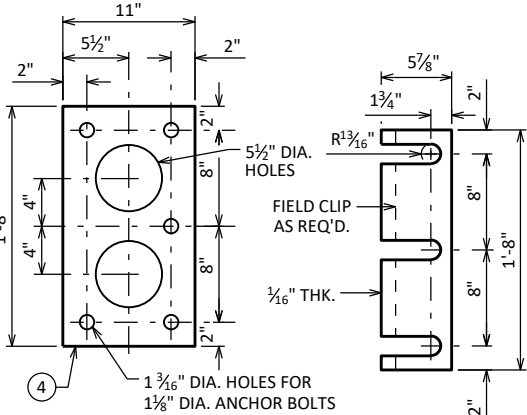
SECTION A-A



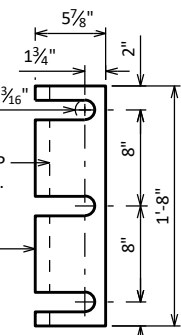
ANCHOR PLATE
AT BEAM GUARD ATTACHMENT



BACK-UP PLATE DETAIL
AT BEAM GUARD ATTACHMENT



ANCHOR PLATE
AT RAIL TO DECK CONNECTION



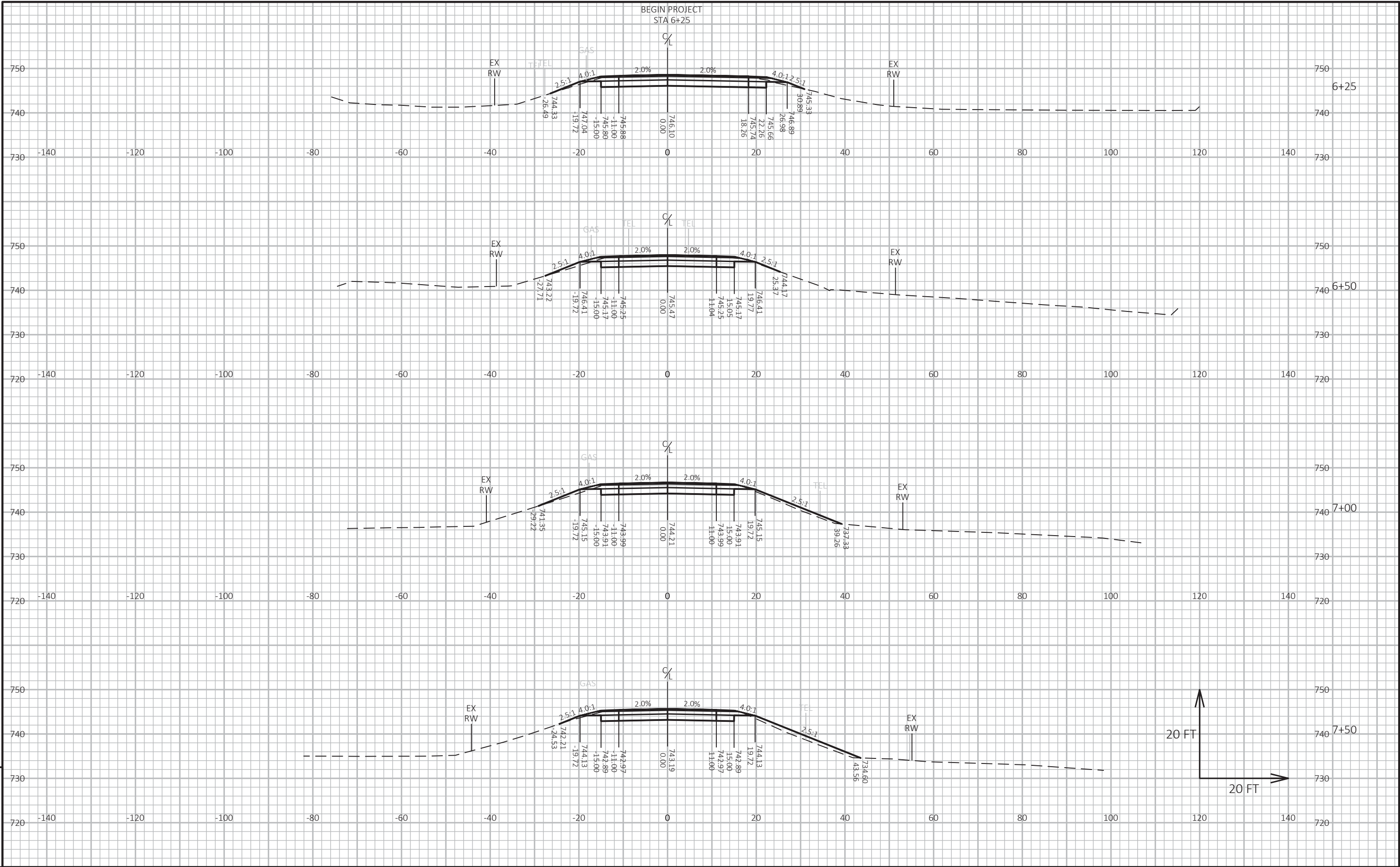
POST SHIM
DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-251			
DRAWN BY JGM		PLANS CK'D CJB	
TUBULAR STEEL RAILING TYPE 'M'		SHEET 10 OF 10	

BRIDGE B-32-251
EARTHWORK SUMMARY

CATEGORY	STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
				CUT	FILL	CUT (3)	FILL (1)	CUT 1.00	FILL 1.3 (2)	
0030	6+25 AH	625.00	0.00	91.09	5.15	0.00	0.00	0.00	0.00	0.00
	6+50	650.00	25.00	75.13	5.00	76.95	4.70	76.95	6.11	70.84
	7+00	700.00	50.00	74.41	15.37	138.46	18.86	215.42	30.63	184.79
	7+50	750.00	50.00	74.47	20.10	137.85	32.84	353.27	73.32	279.94
	8+00	800.00	50.00	75.98	9.44	139.31	27.35	492.57	108.88	383.69
	8+20	820.00	20.00	76.94	2.18	56.64	4.30	549.21	114.48	434.74
0010	8+50	850.00	30.00	91.88	0.00	93.79	1.21	643.00	116.05	526.95
	9+00	900.00	50.00	128.92	0.00	204.44	0.00	847.44	116.05	731.39
	9+31	931.00	31.00	181.96	0.00	178.47	0.00	1025.91	116.05	909.86
	9+50 BK	950.00	19.00	165.18	0.00	122.14	0.00	1148.05	116.05	1032.00
	STRUCTURE B-32-251									
0010	10+50 AH	1050.00	0.00	157.85	0.00	0.00	0.00	1148.05	116.05	1032.00
	11+00	1100.00	50.00	146.98	0.00	282.25	0.00	1430.30	116.05	1314.25
	11+50	1150.00	50.00	120.24	0.00	247.43	0.00	1677.73	116.05	1561.68
	12+00	1200.00	50.00	100.90	0.00	204.76	0.00	1882.49	116.05	1766.44
	12+50 BK	1250.00	50.00	80.64	0.05	168.09	0.05	2050.58	116.11	1934.47
TOTALS						2060	90			

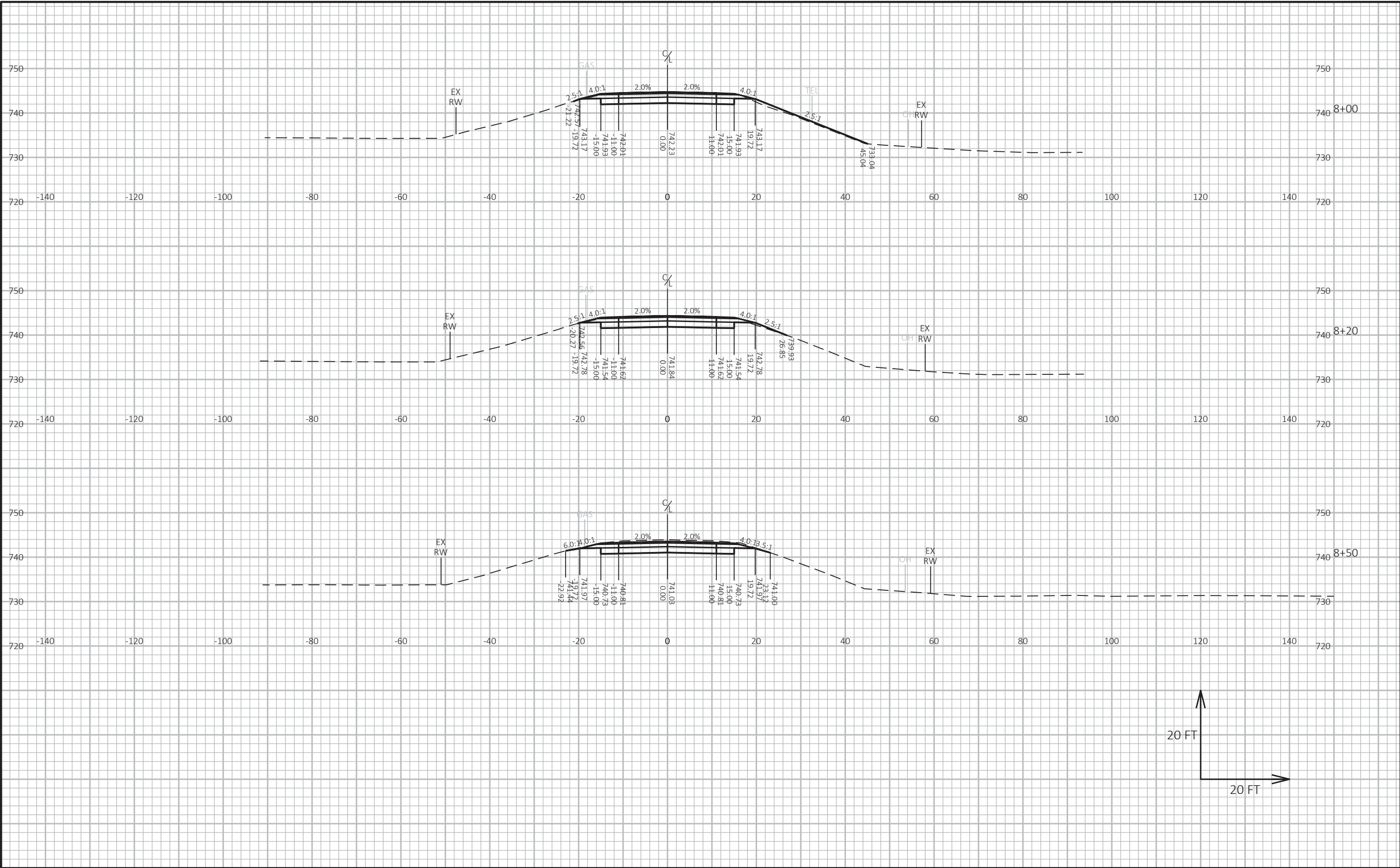
- (1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY
(2) - FILL EXPANSION 30%
(3) - EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS

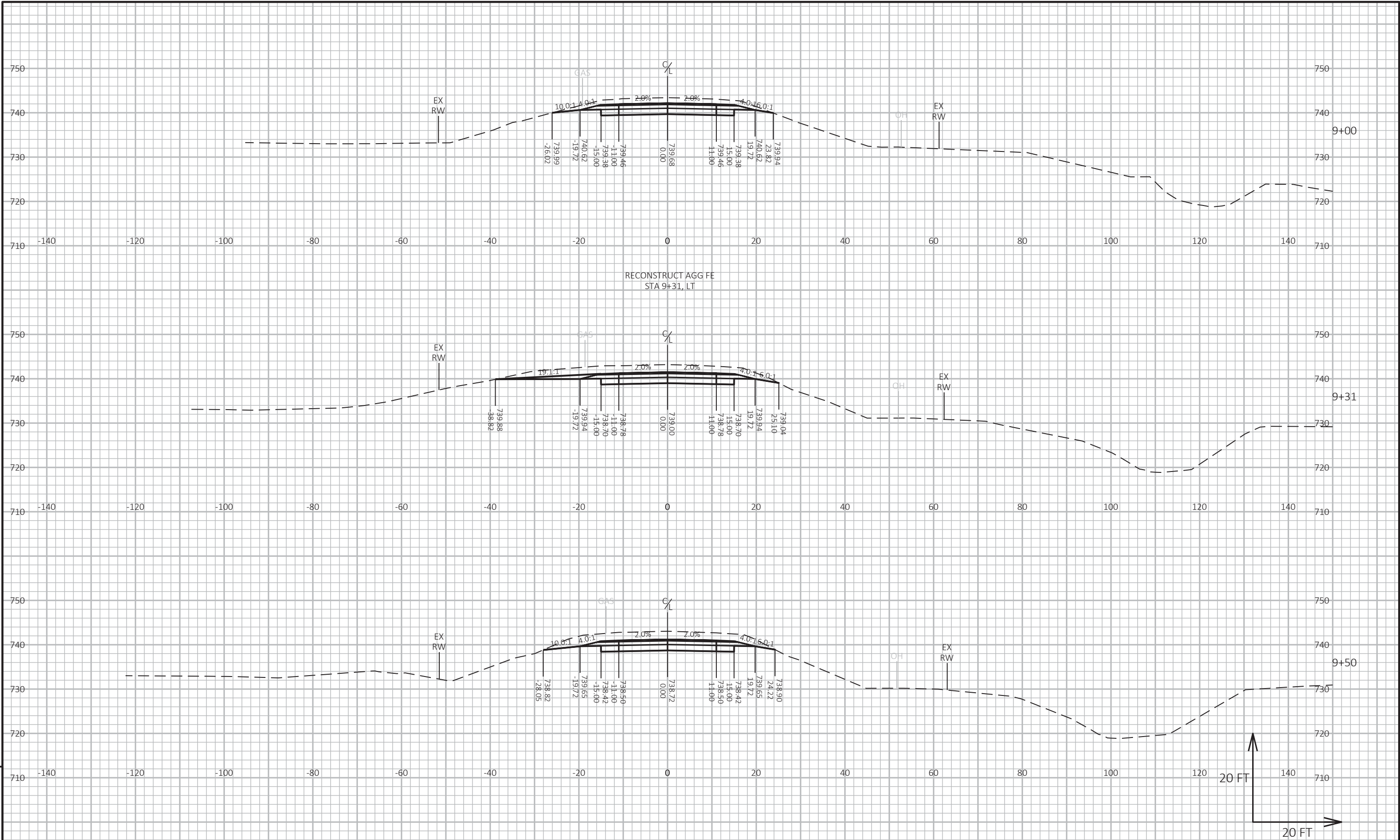


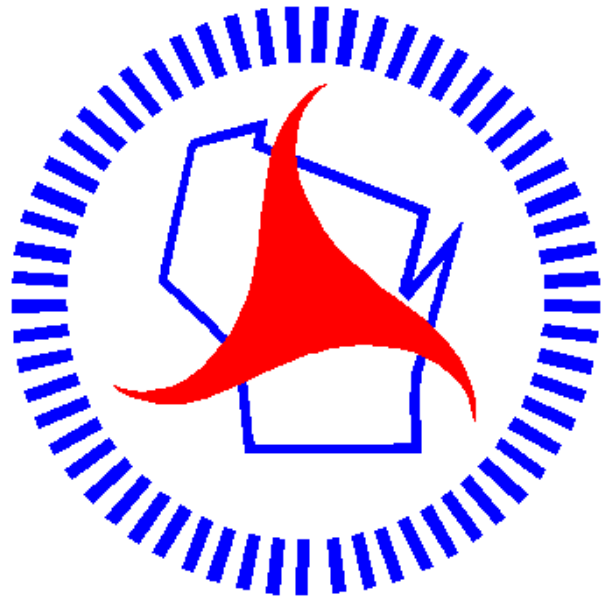
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PROJECT NO: 7269-00-71	HWY: CASBERG COULEE RD	COUNTY: LA CROSSE	CROSS SECTIONS: CASBERG COULEE RD	SHEET E
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Wisconsin Department of Transportation

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