

GRE

PROJECT ID:
WITH: NA

4816-00-73

COUNTY:

FOND DU LAC

DECEMBER 2025
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 = 74



DESIGN DESIGNATION

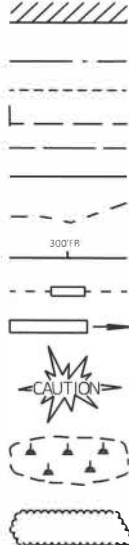
A.A.D.T.	(2026)	=	49
A.A.D.T.	(2046)	=	54
D.H.V.		=	10
D.D.		=	60/40
T.		=	5.4%
DESIGN SPEED		=	35 MPH
ESALS		=	6,000

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

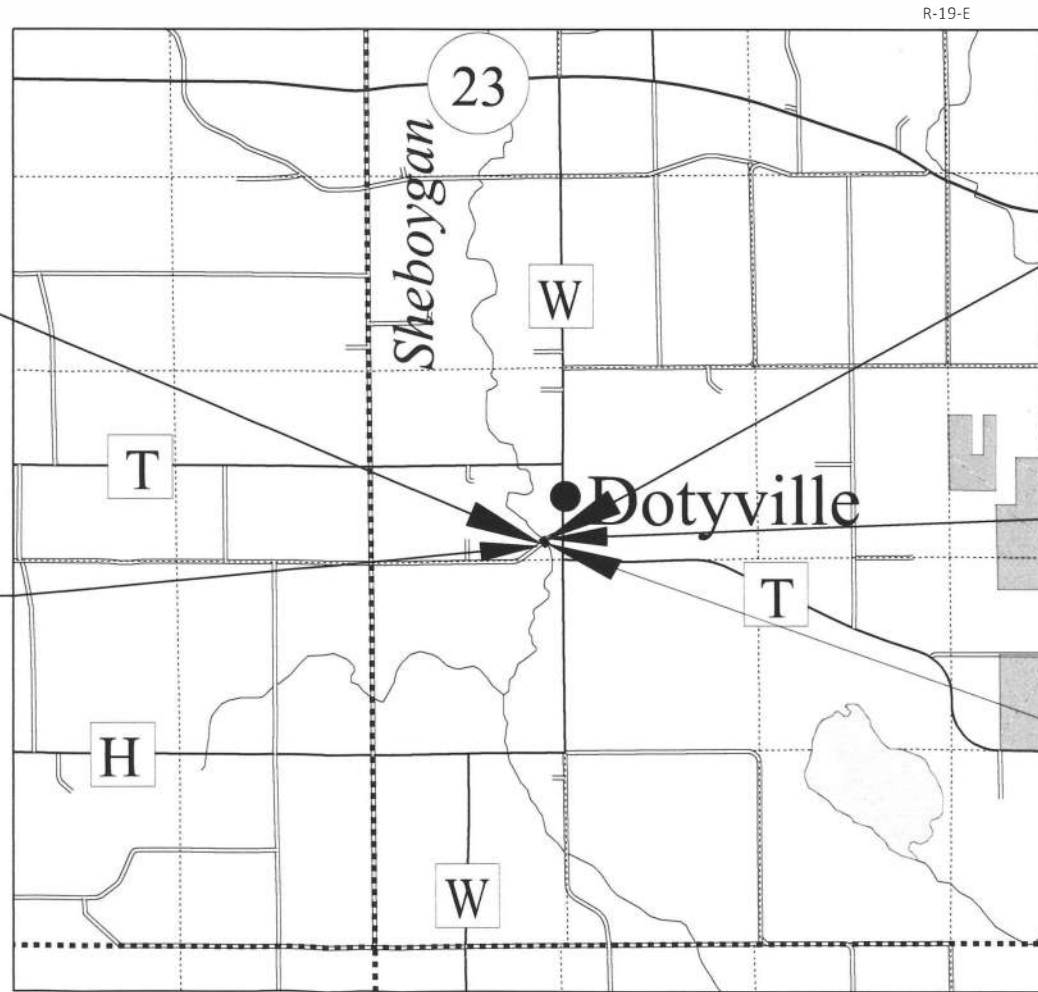
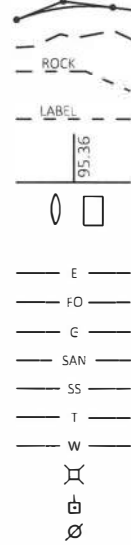


PROFILE

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	

BEGIN PROJECT
STA 10+80.00
Y = 374,985.905
X = 865,534.708

BEGIN CONSTRUCTION
STA 9+50.00



LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.042 MILES

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

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T FOREST, WALNUT ROAD SHEBOYGAN RIVER BRIDGE LOCAL STREET FOND DU LAC COUNTY

STATE PROJECT NUMBER
4816-00-73

STATE PROJECT

4816-00-73

FEDERAL PROJECT

PROJECT

WISC2026082

CONTRACT

1

ACCEPTED FOR
TOWN OF FOREST

DATE: 7-22-25
(Signature and Title of Official)
TOWN CHAIRMAN

ORIGINAL PLANS PREPARED BY

jt ENGINEERING



DATE: 7/10/25
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	<u>JT ENGINEERING, INC.</u>
Designer	<u>JT ENGINEERING, INC.</u>
Project Manager	<u>KATIE SCHWARTZ</u>
Regional Examiner	<u>REGIONAL EXAMINER</u>
Regional Supervisor	<u>KIMBERLY SLEZAK</u>

APPROVED FOR THE DEPARTMENT
DATE: 7/23/2025
(Signature)

E

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION OF 0.05 GAL/SY AND SHALL BE PLACED BETWEEN THE LAYERS OF ASPHALTIC PAVEMENT.

THE CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

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

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

THE LOCATION OF EROSION CONTROL ITEMS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DO NOT PLACE FERTILIZER WITHIN 20 FEET OF A WETLAND OR WATER BODY.

TRAFFIC CONTROL SHALL FOLLOW SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", DETAIL C.

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

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC
AC	ASPHALT CEMENT
AGG	AGGREGATE
ASPH	ASPHALT
BM	BENCHMARK
C/L	CENTERLINE
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CR	CREEK
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
ESALS	EQUIVALENT SINGLE AXIS LOADS
EXIST	EXISTING
FE	FIELD ENTRANCE
HYD	HYDRANT
IP	IRON PIPE
L	LENGTH OF CURVE
LC	LONG CHORD OF CURVE
LR	LENGTH OF RUN OFF
MH	MANHOLE

NC	NORMAL CROWN
PT	POINT OF TANGENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PE	PRIVATE ENTRANCE
R	RADIUS
REM	REMOVE
R/L OR RL	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RCPSS	REINFORCED CONCRETE STORM SEWER
RO	RUNOUT
R/W	RIGHT OF WAY
STA	STATION
SE	SUPER ELEVATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
T	TRUCKS
VC	VERTICAL CURVE
W	WELL

UTILITIES CONTACTS

ALLIANT ENERGY - ELECTRICITY
HUNTER DESTREE
883 W SCOTT STREET
FOND DU LAC, WI 54937
PHONE: (920) 322-6772
EMAIL: HUNTERDESTREE@GMAIL.COM

AT&T COMMUNICATIONS - COMMUNICATION LINE
CHARLES BARTLET
70 E DIVISION STREET
FOND DU LAC, WI 54935
PHONE: (920) 410-5104
EMAIL: CB1461@ATT.COM

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.620 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.567 ACRES

AGENCY/PROJECT CONTACTS

WISCONSIN DNR - NE REGION
MARTY DILLENBURG
625 E COUNTY ROAD Y STE 700
OSHKOSH, WI 54901
(920) 410-7428
MARTY.DILLENBURG@WISCONSIN.GOV

WISDOT - NE REGION
KATIE SCHWARTZ
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920) 492-5652
KATIEA.SCHWARTZ@DOT.WI.GOV

DESIGN CONTACT

JT ENGINEERING, INC.
JOE MALENOSKI
1077 CENTENNIAL CENTRE BLVD
HOBART, WI 54155
(920)770-3110
JOEM@JT-ENGINEERING.COM

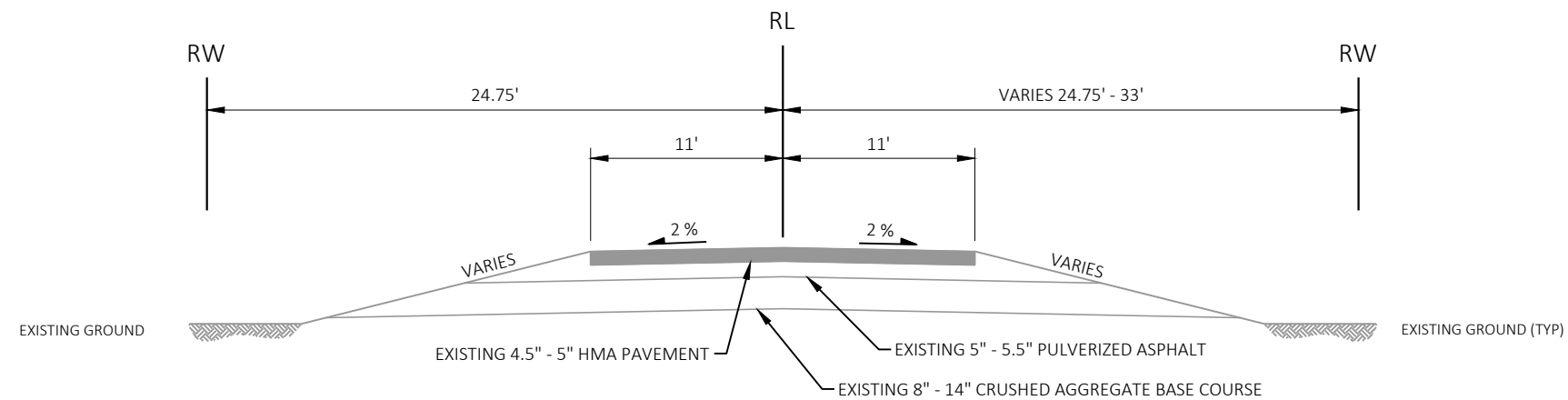
ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL

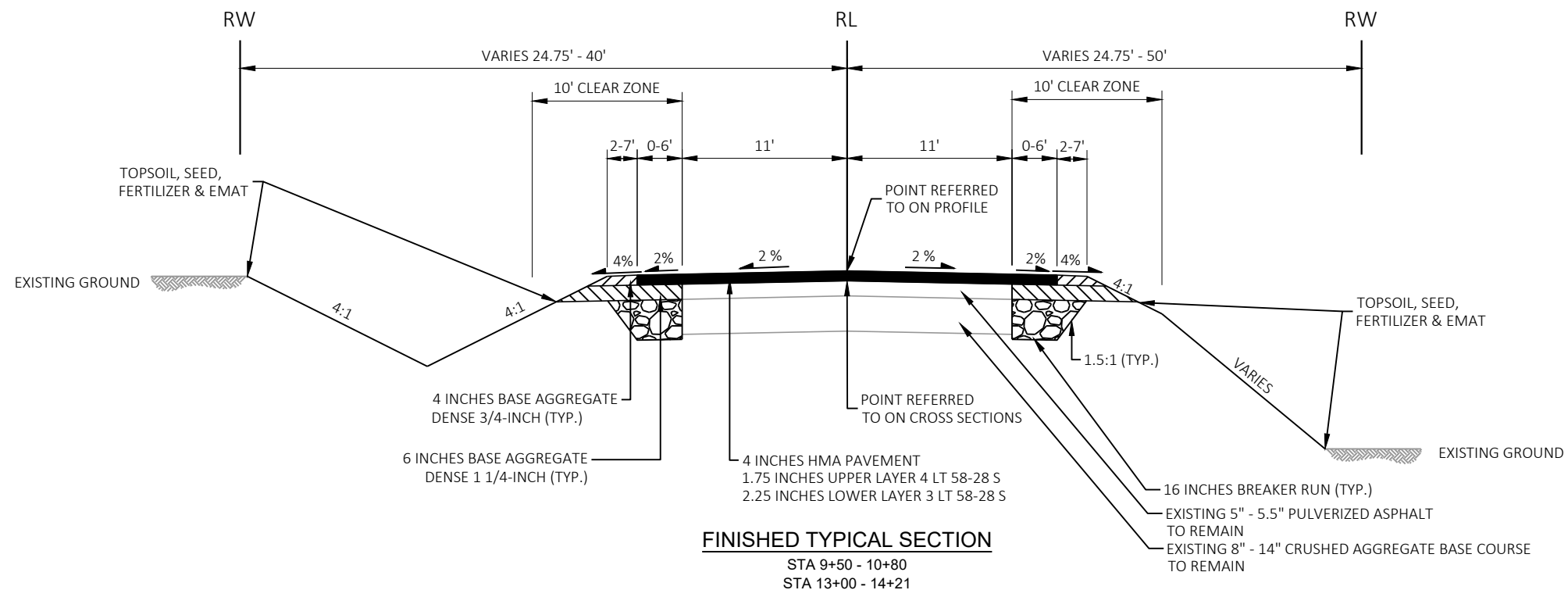


Dial  or (800)242-8511

www.DiggersHotline.com

**EXISTING TYPICAL SECTION**

STA 9+50 - 11+84.48
STA 12+13.48 - 14+21

**SUPERELEVATION DATA**

STA	LOCATION	LT UNPAVED SHLDR	LT LANE	RT LANE	RT UNPAVED SHLDR
13+75	END NORMAL CROWN	-10.00%	-2.00%	-2.00%	-10.00%
13+98.01	LEVEL CROWN	-10.00%	0.00%	-3.50%	-10.00%
14+21	MATCH EXISTING	-10.00%	2.00%	-5.00%	-10.00%

PROJECT NO: 4816-00-73

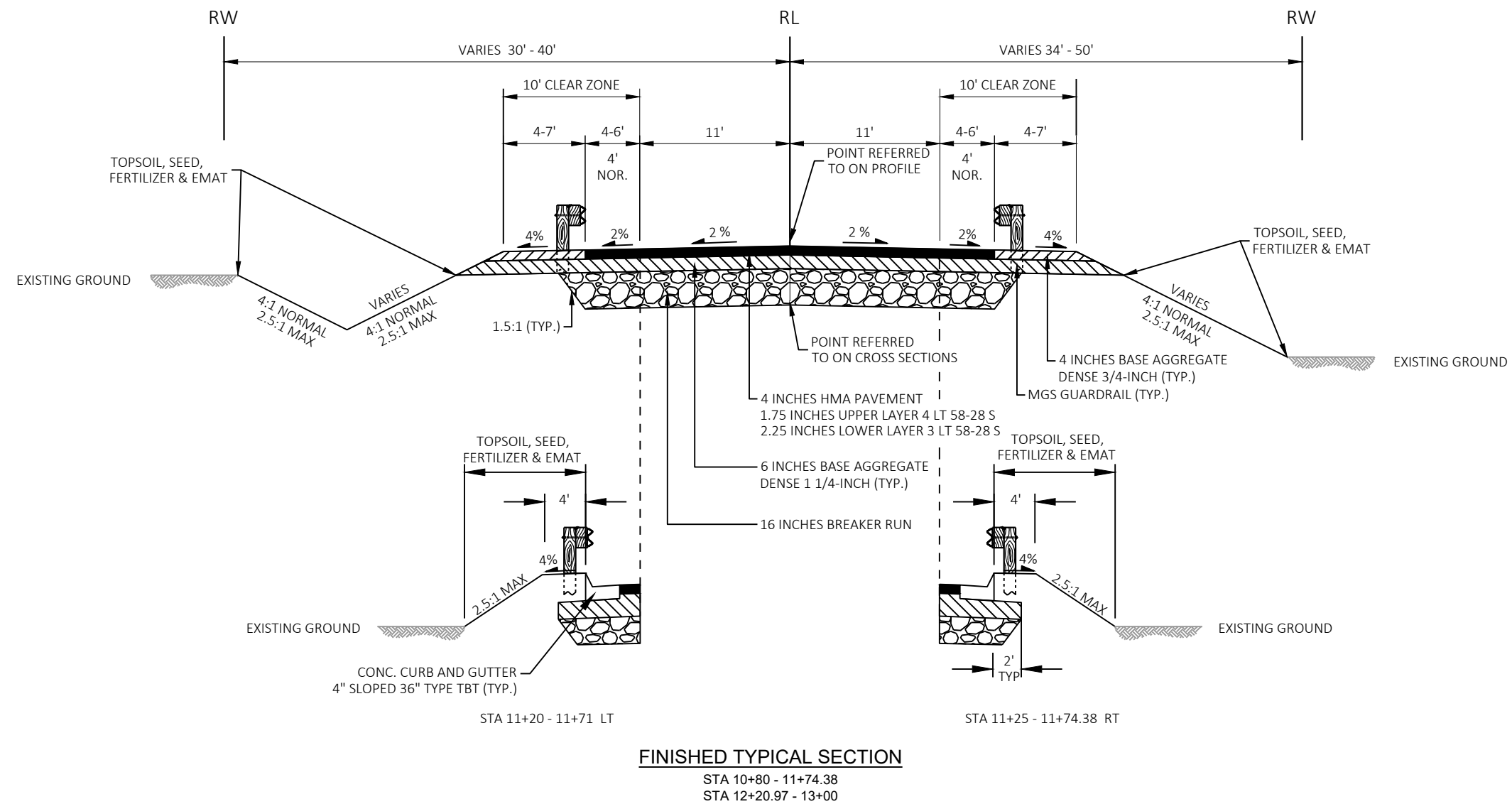
HWY: WALNUT ROAD

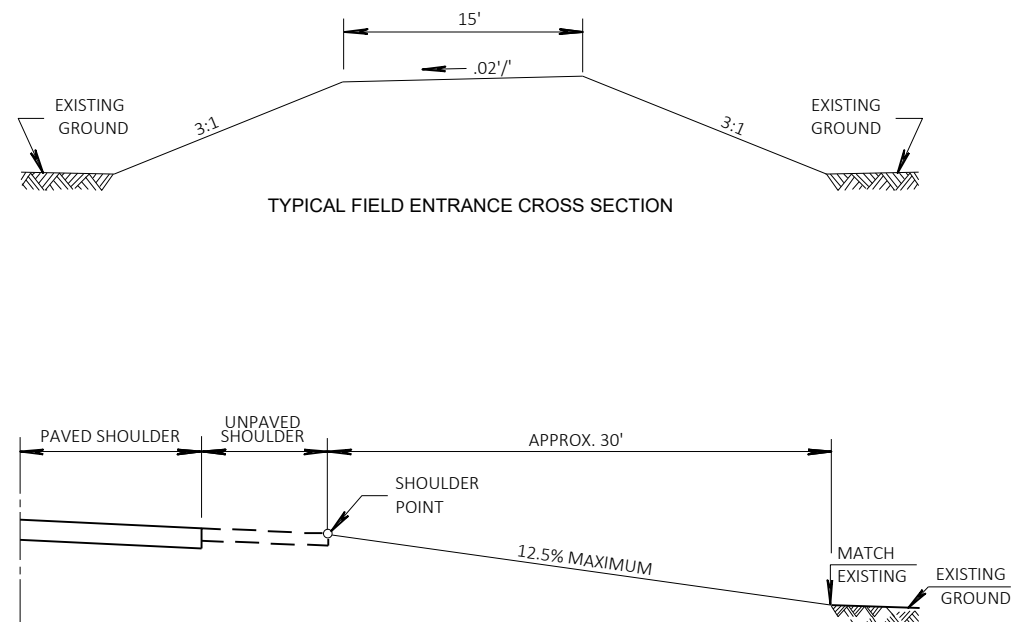
COUNTY: FOND DU LAC

TYPICAL SECTIONS

SHEET

E



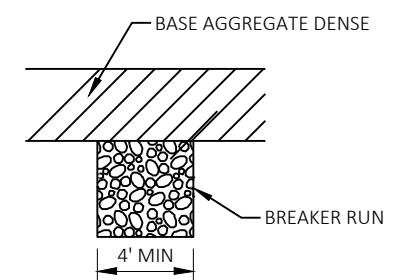
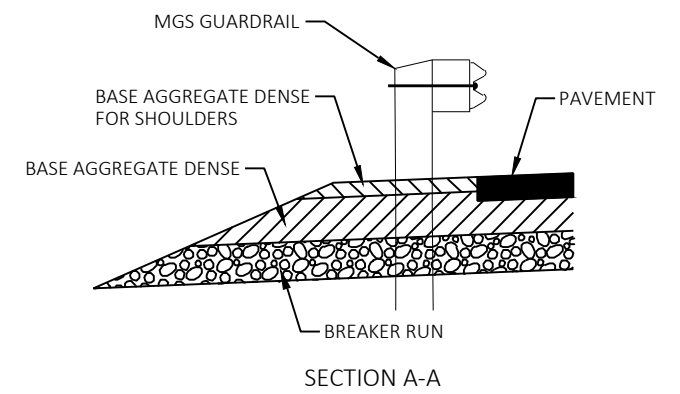
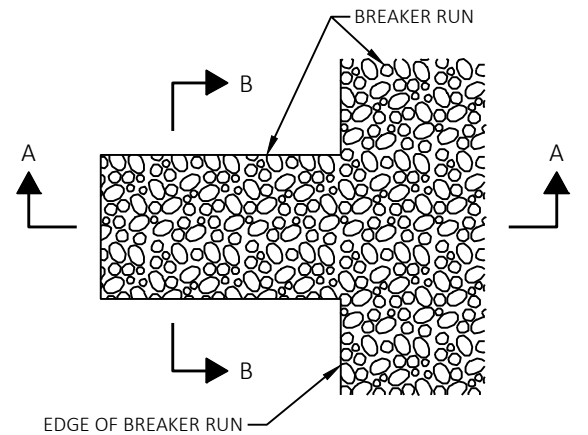


FIELD ENTRANCE

STA 13+75 LT

FINAL LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

FIELD ENTRANCE TO BE CONSTRUCTED OF EMBANKMENT MATERIAL. FINISHED SURFACE SHALL BE RESTORED WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT.



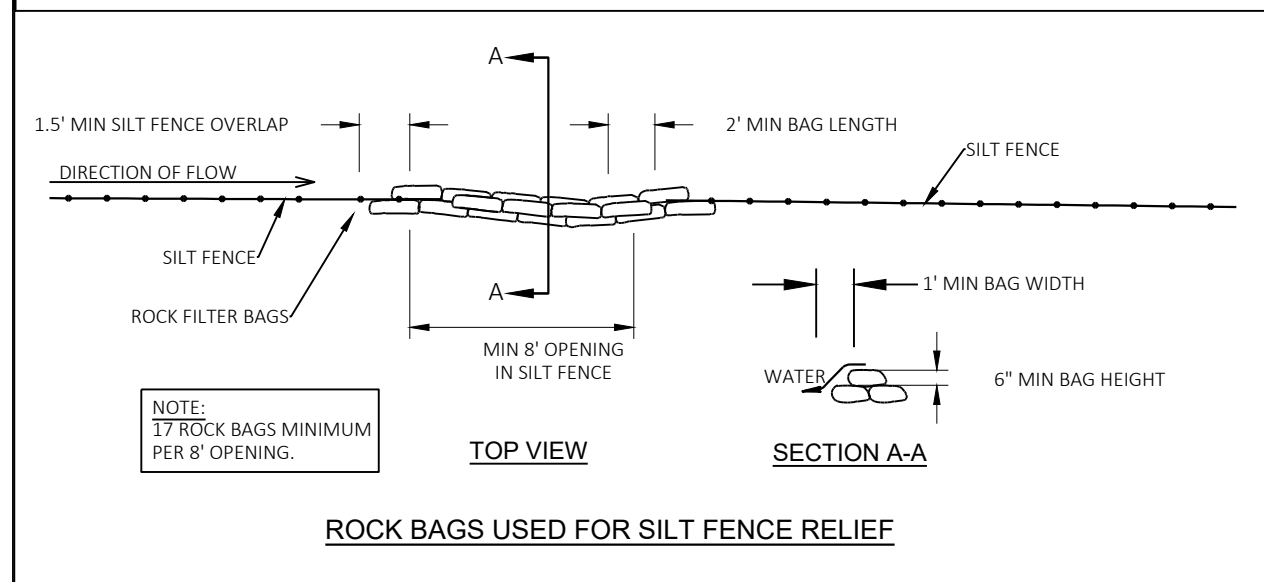
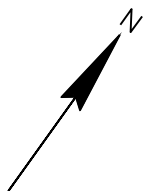
DETAIL FOR FRENCH DRAINS

STA 11+45 LT/RT
STA 12+40 LT/RT

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

MGS GUARDRAIL POST(S) MAY BE LOCATED WITHIN FRENCH DRAINS. CONTRACTOR SHALL TAKE CARE TO ENSURE POST(S) ARE NOT DAMAGED DURING INSTALLATION.

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM BREAKER RUN.



Estimate Of Quantities

4816-00-73

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	6.000	6.000
0004	201.0205	Grubbing	STA	6.000	6.000
0006	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. P-20-084	EACH	1.000	1.000
0008	204.0165	Removing Guardrail	LF	81.000	81.000
0010	205.0100	Excavation Common	CY	807.000	807.000
0012	206.1001	Excavation for Structures Bridges (structure) 01. B-20-264	EACH	1.000	1.000
0014	208.0100	Borrow	CY	393.000	393.000
0016	210.1500	Backfill Structure Type A	TON	438.000	438.000
0018	213.0100	Finishing Roadway (project) 01. 4816-00-73	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	110.000	110.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	650.000	650.000
0024	311.0110	Breaker Run	TON	1,081.000	1,081.000
0026	450.4000	HMA Cold Weather Paving	TON	297.000	297.000
0028	455.0605	Tack Coat	GAL	66.000	66.000
0030	460.2000	Incentive Density HMA Pavement	DOL	190.000	190.000
0032	460.5223	HMA Pavement 3 LT 58-28 S	TON	168.000	168.000
0034	460.5224	HMA Pavement 4 LT 58-28 S	TON	129.000	129.000
0036	502.0100	Concrete Masonry Bridges	CY	188.000	188.000
0038	502.3200	Protective Surface Treatment	SY	189.000	189.000
0040	502.3210	Pigmented Surface Sealer	SY	46.000	46.000
0042	505.0400	Bar Steel Reinforcement HS Structures	LB	4,940.000	4,940.000
0044	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	32,220.000	32,220.000
0046	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0048	550.0020	Pre-Boring Rock or Consolidated Materials	LF	80.000	80.000
0050	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	520.000	520.000
0052	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	107.000	107.000
0054	602.3010	Concrete Surface Drains	CY	2.000	2.000
0056	606.0200	Riprap Medium	CY	6.000	6.000
0058	606.0300	Riprap Heavy	CY	195.000	195.000
0060	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0062	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0064	614.2300	MGS Guardrail 3	LF	100.000	100.000
0066	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0068	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0070	619.1000	Mobilization	EACH	1.000	1.000
0072	624.0100	Water	MGAL	11.400	11.400
0074	625.0100	Topsoil	SY	1,580.000	1,580.000
0076	628.1504	Silt Fence	LF	885.000	885.000
0078	628.1520	Silt Fence Maintenance	LF	884.000	884.000
0080	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0082	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0084	628.2008	Erosion Mat Urban Class I Type B	SY	1,580.000	1,580.000
0086	628.6005	Turbidity Barriers	SY	180.000	180.000
0088	628.7504	Temporary Ditch Checks	LF	25.000	25.000
0090	628.7570	Rock Bags	EACH	70.000	70.000
0092	629.0210	Fertilizer Type B	CWT	1.000	1.000
0094	630.0130	Seeding Mixture No. 30	LB	71.000	71.000
0096	630.0200	Seeding Temporary	LB	44.000	44.000
0098	630.0500	Seed Water	MGAL	35.000	35.000

Estimate Of Quantities

4816-00-73

Line	Item	Item Description	Unit	Total	Qty
0100	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	5.000	5.000
0102	637.2210	Signs Type II Reflective H	SF	3.000	3.000
0104	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0106	638.2602	Removing Signs Type II	EACH	4.000	4.000
0108	638.3000	Removing Small Sign Supports	EACH	3.000	3.000
0110	642.5001	Field Office Type B	EACH	1.000	1.000
0112	643.0420	Traffic Control Barricades Type III	DAY	1,026.000	1,026.000
0114	643.0705	Traffic Control Warning Lights Type A	DAY	1,368.000	1,368.000
0116	643.0900	Traffic Control Signs	DAY	798.000	798.000
0118	643.5000	Traffic Control	EACH	1.000	1.000
0120	645.0111	Geotextile Type DF Schedule A	SY	98.000	98.000
0122	645.0120	Geotextile Type HR	SY	415.000	415.000
0124	650.4500	Construction Staking Subgrade	LF	457.000	457.000
0126	650.5000	Construction Staking Base	LF	457.000	457.000
0128	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	107.000	107.000
0130	650.6501	Construction Staking Structure Layout (structure) 01. B-20-264	EACH	1.000	1.000
0132	650.9911	Construction Staking Supplemental Control (project) 01. 4816-00-73	EACH	1.000	1.000
0134	650.9920	Construction Staking Slope Stakes	LF	457.000	457.000
0136	690.0150	Sawing Asphalt	LF	40.000	40.000
0138	715.0502	Incentive Strength Concrete Structures	DOL	1,128.000	1,128.000
0140	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. Sta 11+98	EACH	1.000	1.000
0142	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0144	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0146	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	21.000	21.000

3

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SHOWN.					
CLEARING & GRUBBING					
				201.0105 CLEARING STA	201.0205 GRUBBING STA
STATION	TO	STATION	LOCATION		
9+64	-	14+21	WALNUT ROAD	6	6
TOTAL 0010				6	6

BASE AGGREGATE							
						*	
		305.0110	305.0120	311.0110	624.0100		
		BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4- INCH TON	BREAKER RUN TON	WATER MGAL		
STATION	TO	STATION	LOCATION				
9+64	-	11+74.38	WALNUT ROAD	52	320	420	5.6
12+20.97	-	14+21	WALNUT ROAD	58	330	380	5.8
TOTAL 0010				110	650	800	11.4

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ASPHALTIC ITEMS							
				450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON
STATION	TO	STATION	LOCATION				
9+64	-	11+74.38	WALNUT ROAD	149	33	84	65
12+20.97	-	14+21	WALNUT ROAD	148	33	84	64
TOTAL 0010				297	66	168	129

CONCRETE ITEMS					
		601.0588 CONCRETE CURB & GUTTER 4- INCH SLOPED 36- INCH TYPE TBT LF	602.3010 CONCRETE SURFACE DRAINS CY		
STATION	TO	STATION	LOCATION		
11+17	-	11+71	WALNUT ROAD LT	54	1
11+26	-	11+78	WALNUT ROAD RT	53	1
TOTAL 0010				107	2

RIPRAP MEDIUM			
		606.0200 RIPRAP MEDIUM CY	* 645.0120 GEOTEXTILE TYPE HR SY
STATION	LOCATION		
11+26	WALNUT ROAD LT	3	10
11+35	WALNUT ROAD RT	3	10
TOTAL 0010		6	20

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	REDUCED EBS IN FILL (6)	EXPANDED EBS BACKFILL (7)	UNEXPANDED FILL	EXPANDED FILL (8)	MASS ORDINATE +/- (7)	WASTE	208.0100 BORROW	* 311.0110 BREAKER RUN	COMMENT
			CUT (2)	EBS EXCAVATION (3)			FACTOR 1.00	FACTOR 1.25		FACTOR 1.25					
DIVISION 1															
9+50 TO 11+85	09+50/11+85	WALNUT	289	0	67	222	0	0	485	606	-384	0	384	0	
12+14 TO 14+21	12+14/14+21	WALNUT	393	0	63	330	0	0	271	-156	-9	0	9	0	
UNDISTRIBUTED	09+64/14+21	WALNUT	0	125	125	-125	125	156	0	0	31	31	0	281	
DIVISION 1 SUBTOTAL			682	125	255	427	125	156	756	450	-362	31	393	281	
GRAND TOTAL			682	125	255	427	125	156	756	450	-362	31	393	281	
TOTAL COMMON EXC			807												

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) EBS EXCAVATION IS ANTICIPATED IN THE EXISTING DITCHLINE, TO BE BACKFILLED WITH BREAKER RUN.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL.

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE MATERIAL

(6) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 1.00

(7) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH BREAKER RUN. EBS BACKFILL FACTOR = 1.25. ITEM NUMBER 208.1100

(8) EXPANDED FILL FACTOR = 1.25

(9) 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.

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 4816-00-73	HWY: WALNUT ROAD	COUNTY: FOND DU LAC	MISCELLANEOUS QUANTITIES	SHEET:	E
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ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SHOWN.							
GUARDRAIL							
		204.0165	614.2300	614.2500	614.2610		
		REMOVING	MGS GUARDRAIL	MGS THRIE	MGS GUARDRAIL		
		GUARDRAIL	3	BEAM	TERMINAL EAT		
		LF	LF	LF	EACH		
STATION	TO	STATION	LOCATION	LF	LF	LF	EACH
10+39	-	11+78	WALNUT ROAD RT	-	50	40	1
10+80	-	11+71	WALNUT ROAD LT	-	-	40	1
11+77	-	12+17	WALNUT ROAD LT	40	-	-	-
11+85	-	12+26	WALNUT ROAD RT	41	-	-	-
12+14	-	13+57	WALNUT ROAD LT	-	50	40	1
12+22	-	12+15	WALNUT ROAD RT	-	-	40	1
TOTAL 0010				81	100	160	4

EROSION CONTROL										
		628.1504	628.1520	628.1905	628.1910	628.6005	628.7504	628.7570		
		SILT FENCE	SILT FENCE	MOBILIZATIONS	MOBILIZATIONS	TURBIDITY	TEMPORARY	ROCK BAGS		
		LF	MAINTENANCE	EROSION	EROSION	BARRIERS	DITCH CHECKS	EACH		
		LF	LF	CONTROL	CONTROL	SY	LF	EACH		
STATION	TO	STATION	LOCATION	LF	LF	SY	LF	EACH		
9+64	-	11+74.38	WALNUT ROAD	470	470	-	-	70	-	-
12+20.97	-	14+21	WALNUT ROAD	235	235	-	-	70	20	-
9+64	-	14+21	UNDISTRIBUTED	180	180	5	3	40	5	70
TOTAL 0010				885	885	5	3	180	25	70

LANDSCAPING									
		625.0100	628.2008	629.0210	630.0130	630.0200	630.0500		
		TOPSOIL	EROSION MAT	FERTILIZER TYPE	SEEDING	SEEDING	SEED WATER		
		SY	URBAN CLASS I	B	MIXTURE NO. 30	TEMPORARY	MGAL		
		SY	TYPE B	CWT	LB	LB			
STATION	TO	STATION	LOCATION	SY	SY	CWT	LB	LB	MGAL
9+64	-	11+74.38	WALNUT ROAD	500	500	0.3	23	14	11
12+20.97	-	14+21	WALNUT ROAD	760	760	0.5	34	21	17
9+64	-	14+21	UNDISTRIBUTED	320	320	0.2	14	9	7
TOTAL 0010				1,580	1,580	1.0	71	44	35

SIGNING										
		634.0614	637.2210	637.2230	638.2602	638.3000				
		POSTS WOOD	SIGNS TYPE II	SIGNS TYPE II	REMOVING	REMOVING				
		4X6-INCH X 14-	REFLECTIVE H	REFLECTIVE F	SIGNS TYPE II	SMALL SIGN				
		FT	SF	SF	EACH	SUPPORTS				
STATION	LOCATION	SIGN CODE	SIZE	EACH	SF	SF	EACH	EACH	REMARKS	
11+73	WALNUT ROAD LT	W5-52L	12X36	1	-	3	-	-	BRIDGE HAZARD MARKER	
11+80	WALNUT ROAD RT	W5-52R	12X36	1	-	3	1	1	BRIDGE HAZARD MARKER	
12+17	WALNUT ROAD LT	W5-52L	12X36	1	-	3	1	1	BRIDGE HAZARD MARKER	
12+24	WALNUT ROAD RT	W5-52R	12X36	1	-	3	-	-	BRIDGE HAZARD MARKER	
13+00	WALNUT ROAD LT	D11-6	24X18	1	3	-	2	1	SNOWMOBILE	
TOTAL 0010				5	3	12	4	3		

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SHOWN.

TRAFFIC CONTROL

					643.0420 TRAFFIC CONTROL		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0900 TRAFFIC CONTROL SIGNS		REMARKS
STATION	TO	STATION	LOCATION	DURATION** DAYS	BARRICADES DAY	EACH	DAY	EACH	DAY	EACH	
8+50	-	9+64	WALNUT ROAD	57	228	4	342	6	342	6	ADVANCED WARNING
9+64	-	14+21	WALNUT ROAD	57	570	10	684	12	114	2	BRIDGE CLOSURE
14+21	-	14+66.82	WALNUT ROAD	57	228	4	342	6	342	6	ADVANCED WARNING
TOTAL 0010					1,026		1,368		798		

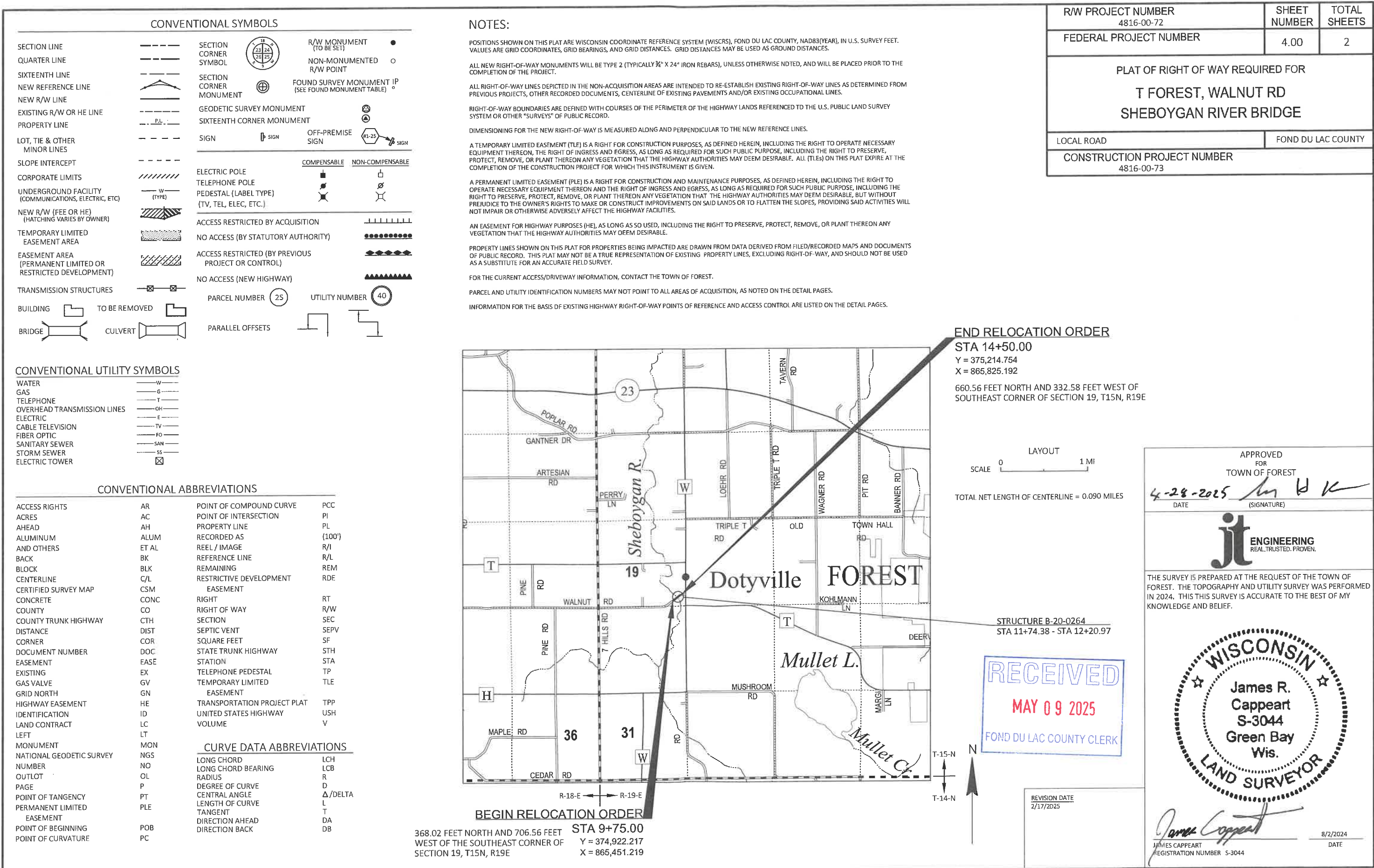
** FOR INFORMATION ONLY

CONSTRUCTION STAKING

					650.4500	650.5000	650.5500	650.9920
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	CONSTRUCTION STAKING SLOPE STAKES LF
0010	9+64	-	14+21	WALNUT ROAD	457	457	107	457
TOTAL 0010					457	457	107	457
0020	9+64	-	14+21	WALNUT ROAD	-	-	-	-
TOTAL 0020					0	0	0	0
PROJECT TOTAL					457	457	107	457

SAWING

		690.0150 SAWING ASPHALT LF
STATION	LOCATION	
9+64	WALNUT ROAD	20
14+21	WALNUT ROAD	20
TOTAL 0010		40



POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), FOND DU LAC COUNTY, NAD83 (2D11) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT OF WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOUND MONUMENT INFORMATION SHOWN REPRESENTS TYPE AND LOCATION OF EXISTING MONUMENTS WITHOUT OPINION AS TO THEIR VALIDITY AND USE AS A PROPERTY CORNER.

FOUND IRON PINS ARE 3/4" REBAR, UNLESS OTHERWISE NOTED IN THE FOUND MONUMENTATION TABLE.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE TOWN OF FOREST.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

EXISTING HIGHWAY RIGHT OF WAY HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE.

EXISTING RIGHT OF WAY FOR WALNUT RD ESTABLISHED FROM CSM 5659, CSM 8605, PLAT OF SURVEY DATED 8/18/2015 BY ERIC OTTE S-2440, PLAT OF SURVEY DATED 4/22/2015 BY ERIC OTTE S-2440, PLAT OF SURVEY DATED 8/13/1962 ROBERT RADTKE S-222, AND DOCUMENT NO. 178687.

COURSE TABLE		
COURSE	BEARING	DISTANCE
1D0-1D1	N36° 40' D7°W	33.98'
1D1-1D2	N45° 19' 21"E	5D.26'
1D2-1D4	N52° 11' 05"E	198.63'
1D4-1D5	S38° 50' 28"E	9.04'
1D5-1D8	N51° D9' 32"E	175.DD'
1D8-1D9	N51° 09' 32"E	27.09'
109-110	SEE CURVE TABLE	
110-111	S34° 33' 42"E	32.11'
111-112	S34° 33' 42"E	25.64'
112-113	S26° 52' 05"W	51.D9'
113-114	S50° 35' 28"W	146.D4'
114-115	N61° 55' 26"W	5.44'
115-116	S51° 10' 16"W	76.53'
116-117	S59° 26' 10"W	76.95'
117-118	S53° 04' 37"W	75.DD'
118-119	S57° 56' 10"W	25.2D'
119-120	S53° 16' 18"W	24.98'
120-1D0	N36° 40' 07"W	32.D2'

R/W STATION & OFFSET TABLE		
POINT	STATION	OFFSET
1D0	9+75.06	D.DD' RT
1D1	9+75.00	33.98' LT
1D2	1D+25.D1	40.91' LT
1D4	12+25.00	40.DD' LT
1D5	12+25.D1	3D.96' LT
1D8	13+99.85	29.52' LT
1D9	14+24.92	3D.58' LT
1D0	14+46.55	32.D5' LT
111	14+48.34	D.00' RT
112	14+5D.D0	25.59' RT
113	14+D0.D1	5D.D0' RT
114	12+53.67	5D.D0' RT
115	12+51.54	4S.D0' RT
116	11+75.D1	45.DD' RT
117	1D+99.44	34.48' RT
118	1D+25.D0	34.D9' RT
119	1D+D0.D0	31.95' RT
12D	9+75.11	32.02' RT

UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	UTILITY OWNER(S)	INTERESTS REQUIRED
200	ALLIANT ENERGY - ELECTRIC	RELEASE OF RIGHTS

200 ALLIANT ENERGY - ELECTRIC
NO RECORDED EASEMENT - PARCEL 1

BEGIN RELOCATON ORDER
STA 9+75.00
Y=374,922.217
X=865,451.219

OWNER: DOTYVILLE HUNTING AND FISHING CLUB, INC.
TAX ID: T10-15-19-19-16-009-00

ALLIANT ENERGY OH LINES
PI: 10+00.00
Y = 374937.116
X = 865471.299
Δ=0°21'07"LT

OWNER: DOTYVILLE HUNTING AND FISHING CLUB, INC.
TAX ID: T10-15-19-19-16-009-00

EAST LINE OF LANDS OWNED BY BAASLER WHEN DOC 178687 WAS EXECUTED

OWNER: DOTYVILLE HUNTING AND FISHING CLUB, INC.
TAX ID: T10-15-19-19-16-D13-00

PLAT OF SURVEY DATED 4/22/2015 BY ERIC OTTE S-2440

STRUCTURE B-20-0264 REQUIRED

WALNUT RD
EXISTING RIGHT OF WAY
11+00
N52°08'21"E

TOWN

OF

FOREST

OWNER: DOTYVILLE HUNTING & FISHING CLUB INC
TAX ID: T10-15-19-19-13-D13-00

OWNER: BENJAMIN IMMEL AND SAMANTHA IMMEL
TAX ID: T10-15-19-19-16-D16-00

LOT 2
CSM 8605
DOC 1142554

END RELOCATON ORDER
STA 14+50.00
Y=375,214.754
X=865,825.192

R/L CURVE
PI STA = 14+75.97
Y = 375234.801
X = 865842.605
DELTA = 25°00'35" RT
D = 15°16'44"
T = 83.17'
L = 163.69'
R = 375.00'
PC STA = 13+92.80
PT STA = 15+56.49
DA = N75°25'22"E

OWNER: SCOTT JAMES BURICH
TAX ID: T10-15-19-19-16-D12-00

PLAT OF SURVEY DATED 8/13/1962 BY ROBERT RADTKE S-222

TLE STATION & OFFSET TABLE		
POINT	STATION	OFFSET
T13D	10+25.D1	45.91' LT
T132	12+50.00	45.00' LT
T133	12+50.00	35.DD' LT
T135	13+50.D1	35.DD' LT
T136	13+50.D1	60.DD' LT
T137	14+00.D1	60.D8' LT
T138	14+00.D1	35.00' LT
T139	14+25.D1	35.DD' LT
T140	13+50.D1	49.91' RT
T141	13+50.D1	55.DD' RT
T142	12+75.D1	55.DD' RT
T143	12+75.D1	49.78' RT
T144	11+24.19	5D.13' RT
T145	11+24.39	37.68' RT

FOUND MONUMENT TABLE			
IP POINT	Y COORDS	X COORDS	IP TYPE
1	375066.368	86568D.D31	1/2" IR
2	375025.279	865629.D94	1/2" IR

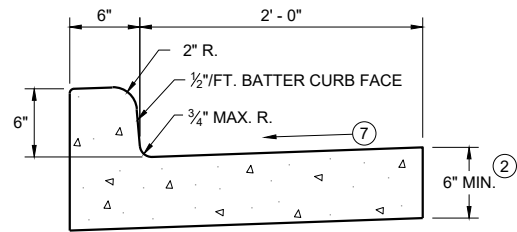
CURVE TABLE				
COURSE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS
109-110	N53° 22' 56"E	23.49'	23.49'	302.69'

SCHEDULE OF LANDS & INTERESTS REQUIRED				OWNER'S NAMES ARE SHOWN FOR REERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN.			
PARCEL NUMBER	OWNER (S)	INTEREST(S) REQUIRED	R/W S.F. REQUIRED			TLE S.F.	
			NEW	EXISTING	TOTAL		
1	DOTYVILLE HUNTING AND FISHING CLUB, INC.	FEE, TLE	4574	1295D	17524	35D4	
2	BENJAMIN IMMEL AND SAMANTHA IMMEL	FEE, TLE	3104	499	36D3	838	
3	SCOTT JAMES BURICH	FEE, TLE	3919	5166	9085	39D	

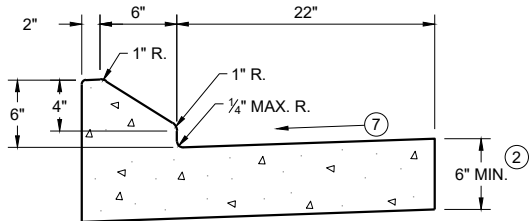
REVISION DATE 2/17/2025	DATE 8/20/2024	SCALE, FEET D 25 50	HWY: LOCAL ROAD	STATE R/W PROJECT NUMBER 4816-00-72	PLAT SHEET 4.01
	GRID FACTOR N/A		COUNTY: FOND DU LAC	CONSTRUCTION PROJECT NUMBER 4816-00-73	PS&E SHEET E
FILE NAME: D40101-RP.DWG LAYOUT NAME: - 4.D1	PLOT DATE: 2/17/2025 11:17 AM	PLOT BY: RYAN MALUEG	PLOT NAME:	PLOT SCALE: 1 IN=50 FT	WISDOT/CADDs SHEET 75

Standard Detail Drawing List

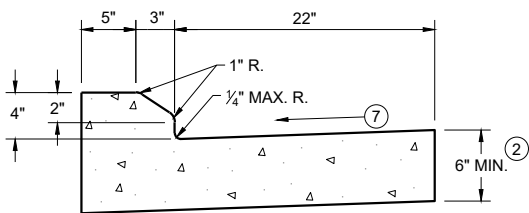
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



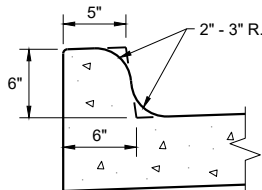
TYPES A^① & D



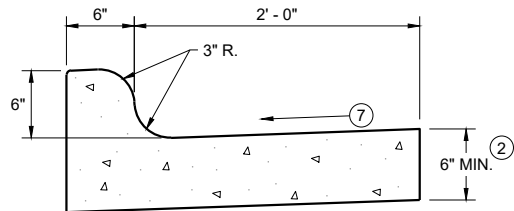
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

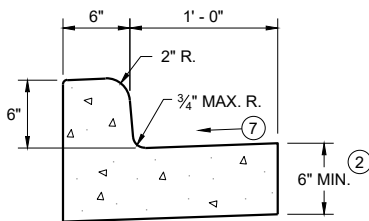


TYPES K^① & L
(OPTIONAL CURB SHAPE)



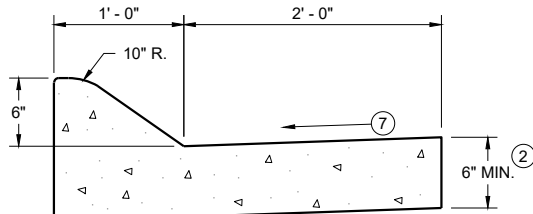
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

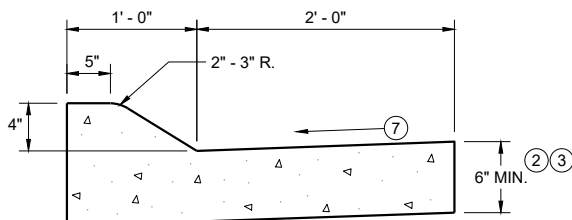


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

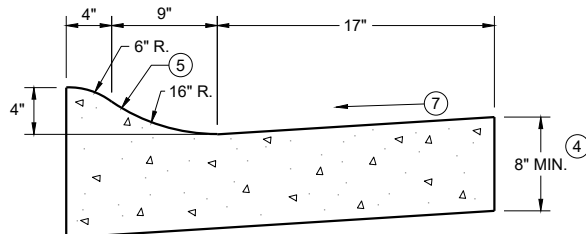


6" SLOPED CURB TYPES A^① & D



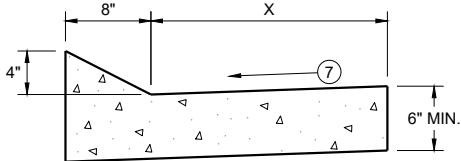
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T
CONCRETE CURB AND GUTTER 30"

TBT & TBTT	X
30"	22"
36"	28"

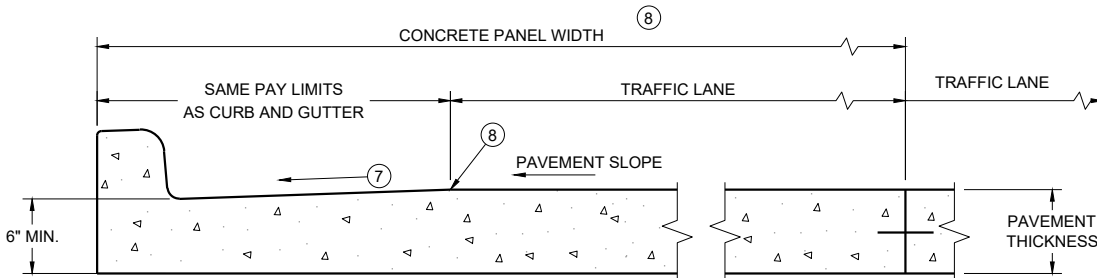


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

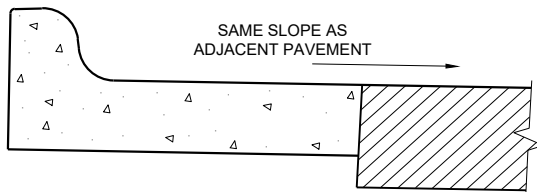
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

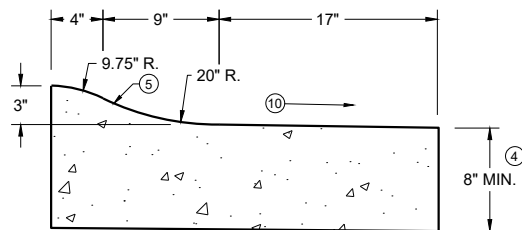


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)



3" SLOPED CURB TYPES R^① & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

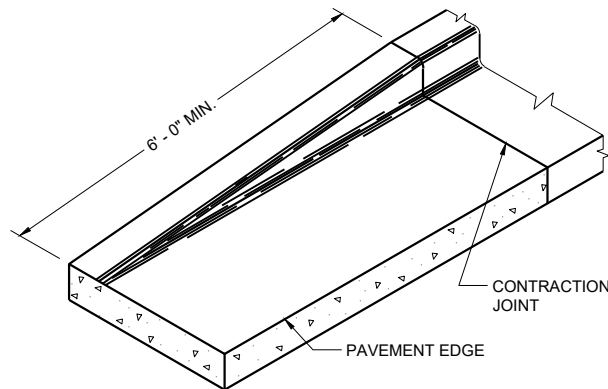
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

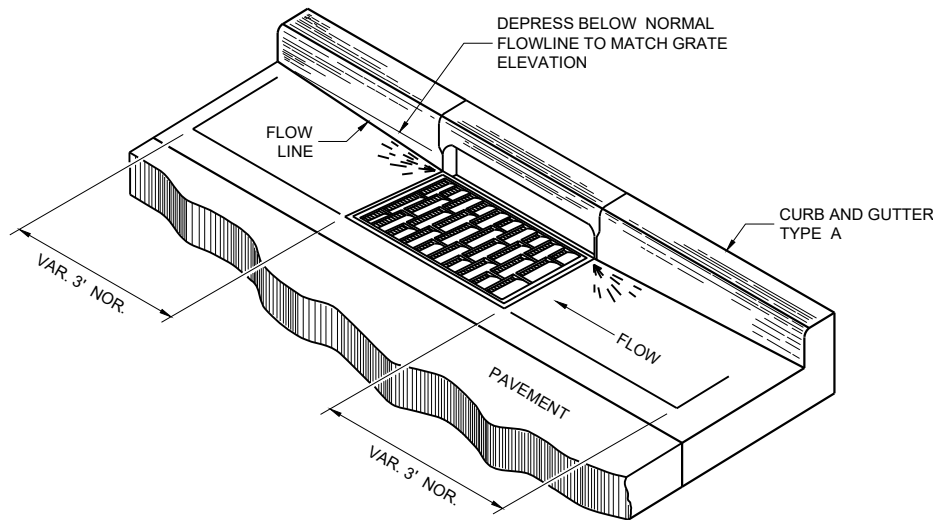
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY

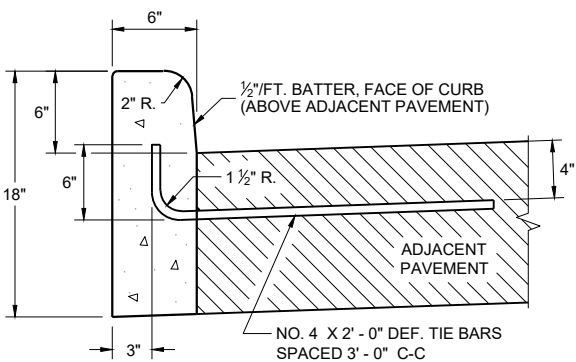


END SECTION CURB AND GUTTER

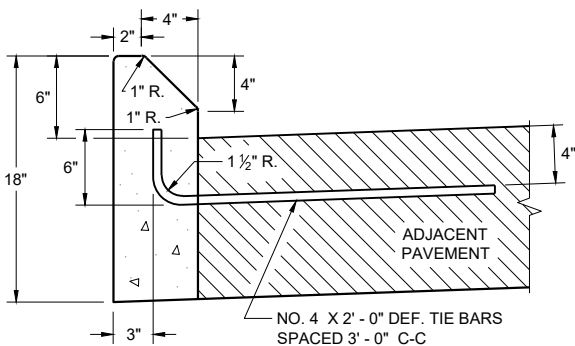


DETAIL OF CURB AND GUTTER AT INLETS

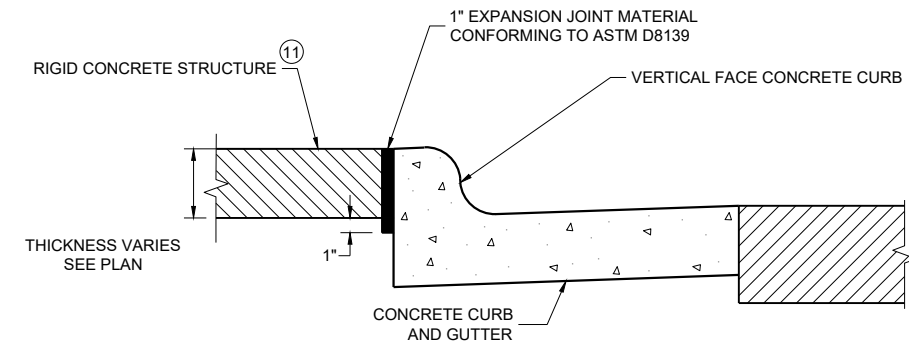
(TYPICAL H INLET COVER SHOWN)



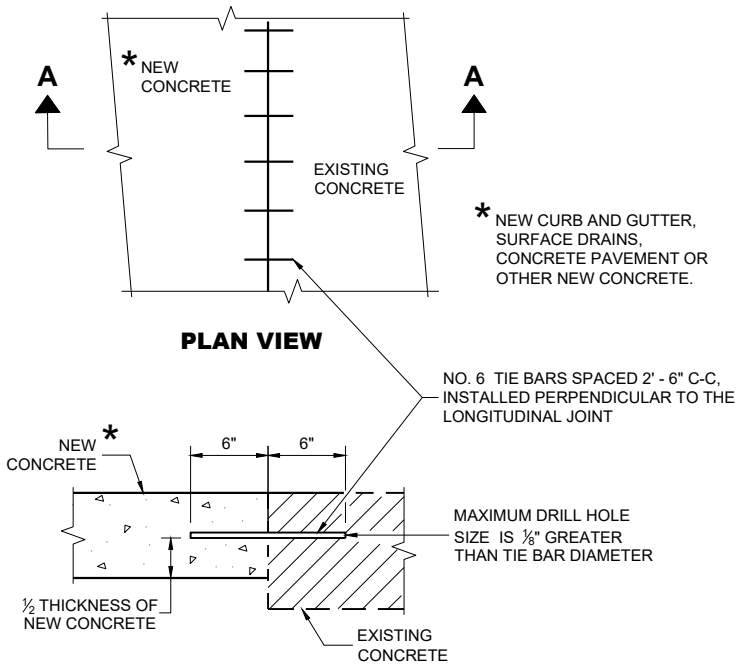
TYPES A^① & D



TYPES G^① & J
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

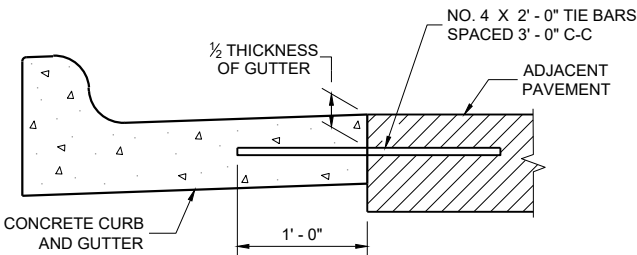
GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

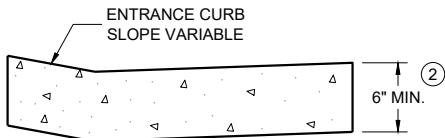
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

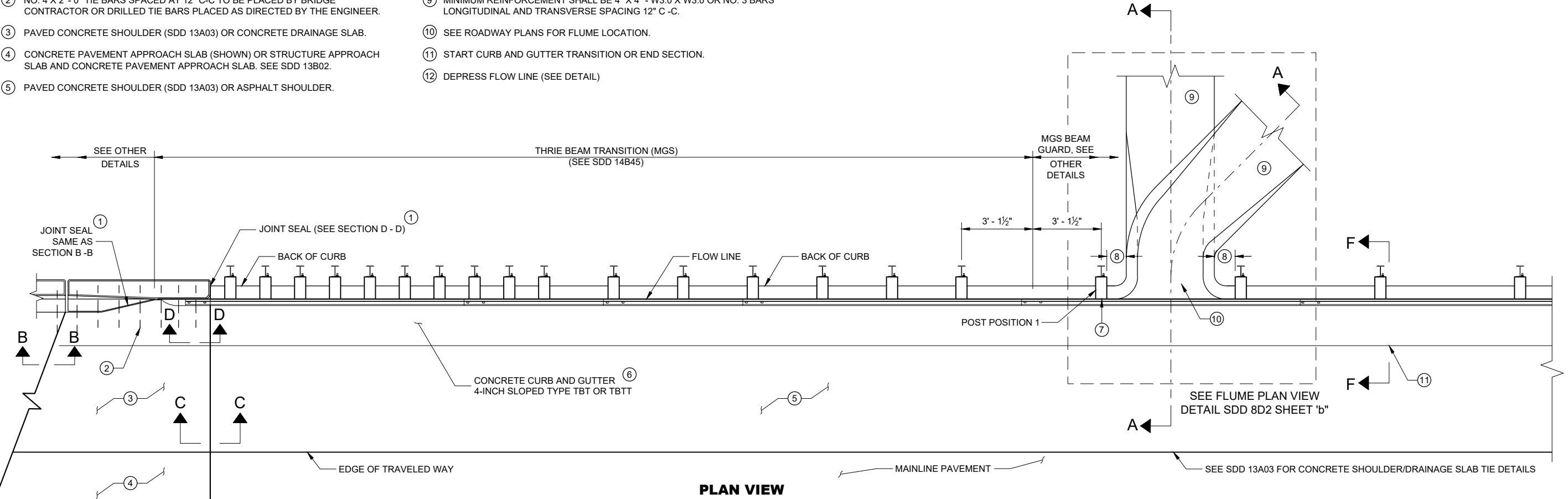
GENERAL NOTES

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.

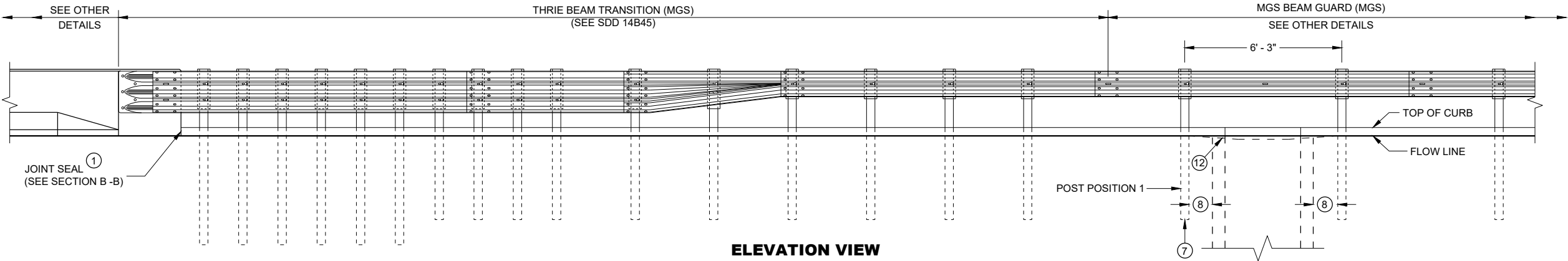
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- 1 USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- 2 NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- 3 PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- 4 CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- 5 PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

- 6 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- 7 PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- 8 CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- 9 MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- 10 SEE ROADWAY PLANS FOR FLUME LOCATION.
- 11 START CURB AND GUTTER TRANSITION OR END SECTION.
- 12 DEPRESS FLOW LINE (SEE DETAIL)



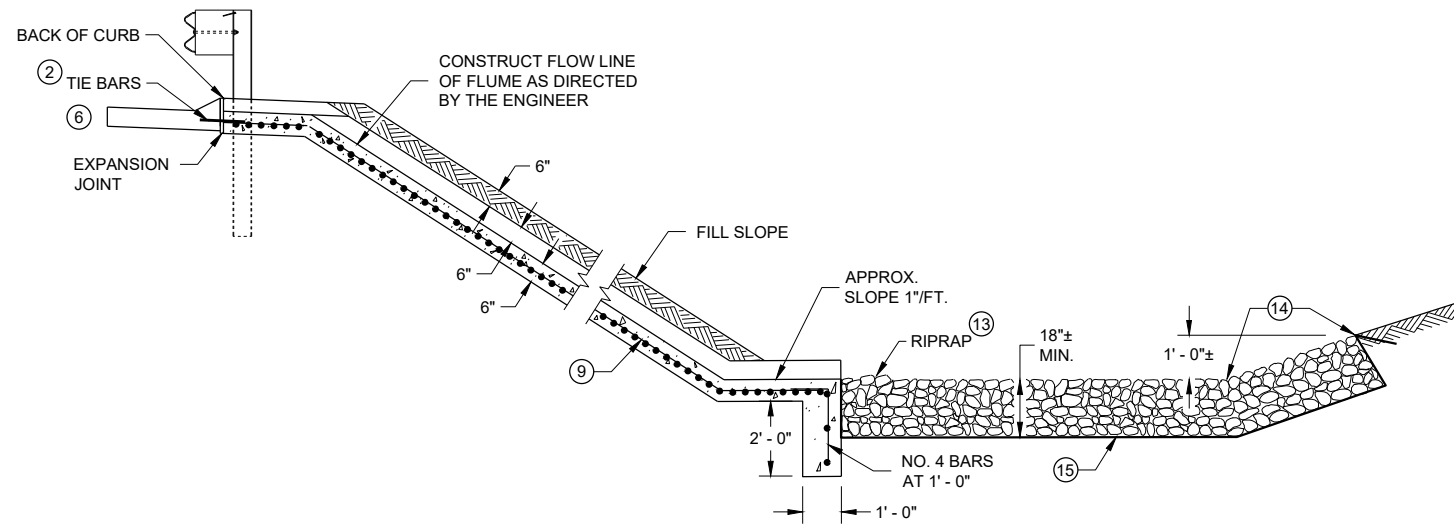
PLAN VIEW



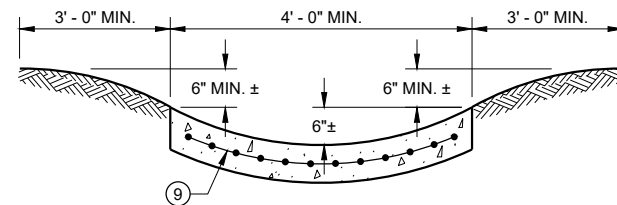
ELEVATION VIEW

CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES

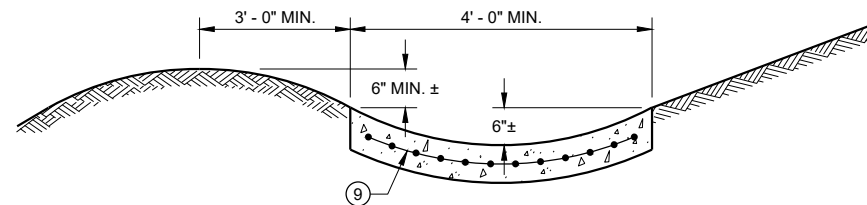
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



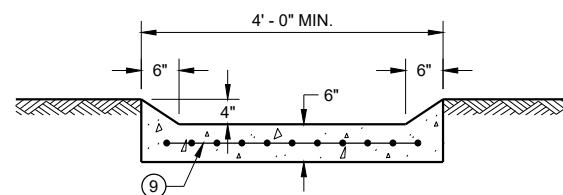
SECTION A - A



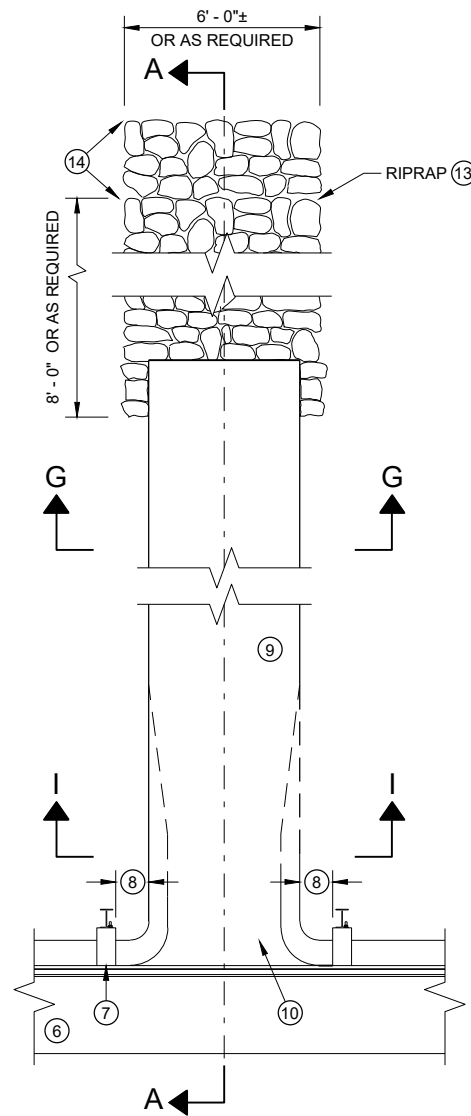
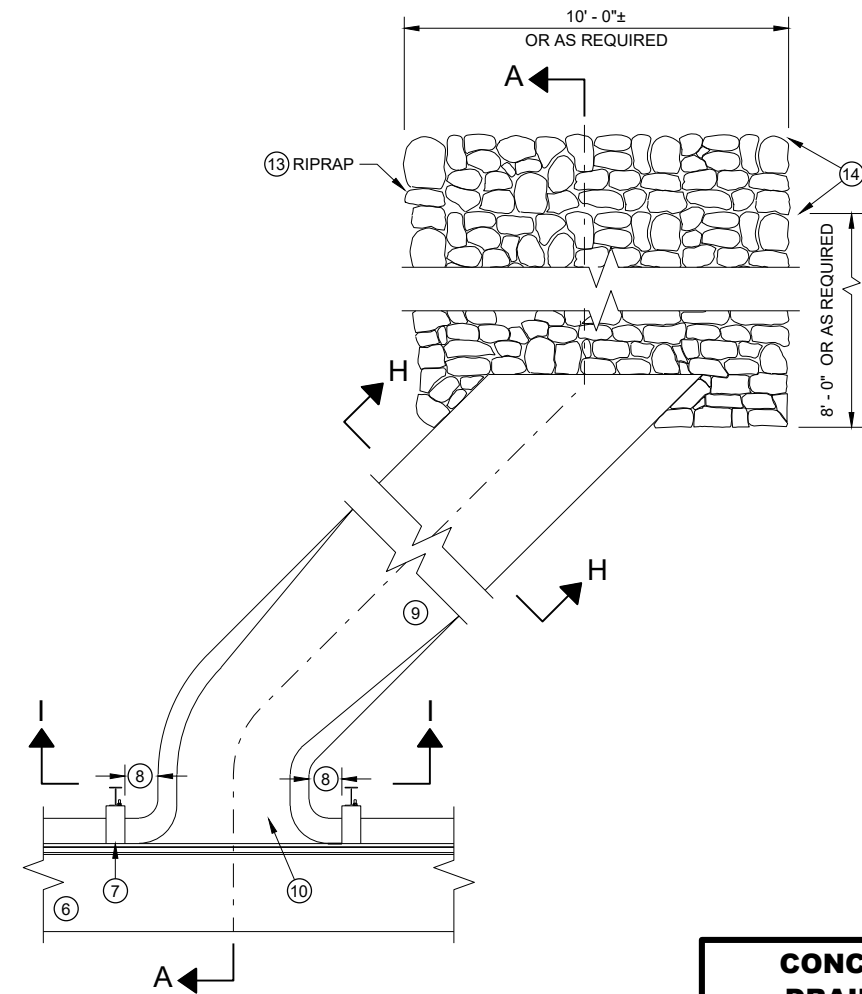
SECTION G - G



SECTION H - H



SECTION I - I

PLAN VIEW
PERPENDICULAR FLUMEPLAN VIEW
SKEWED FLUME

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.

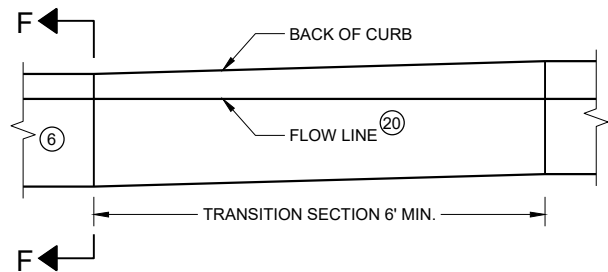
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- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBT. USE TYPE TBT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

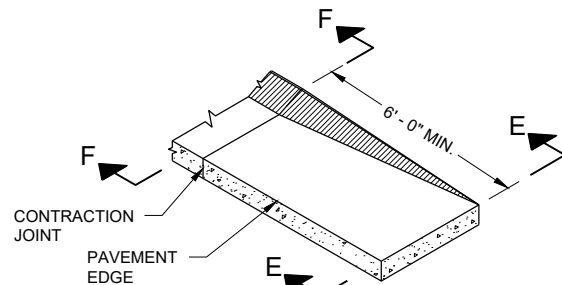
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

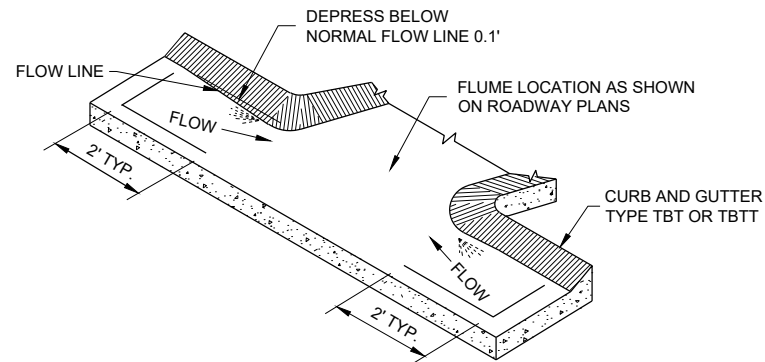
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



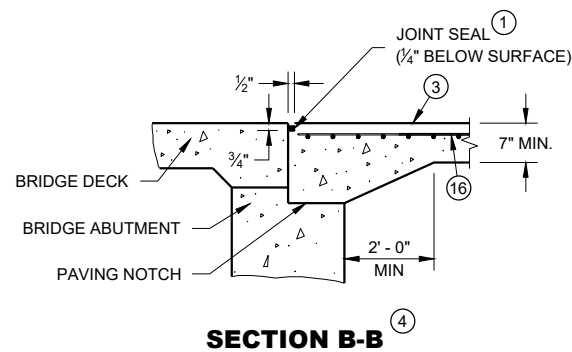
**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



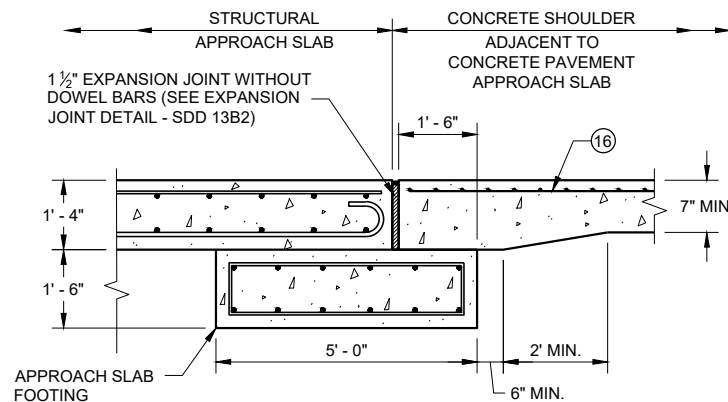
**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



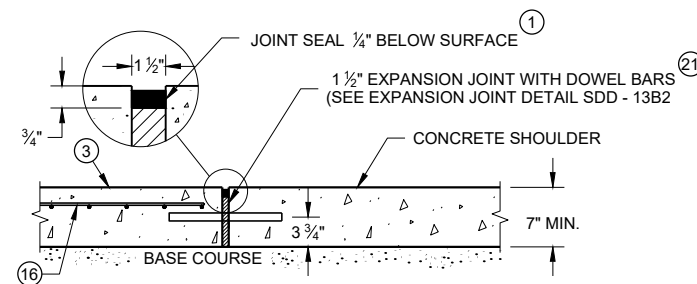
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**



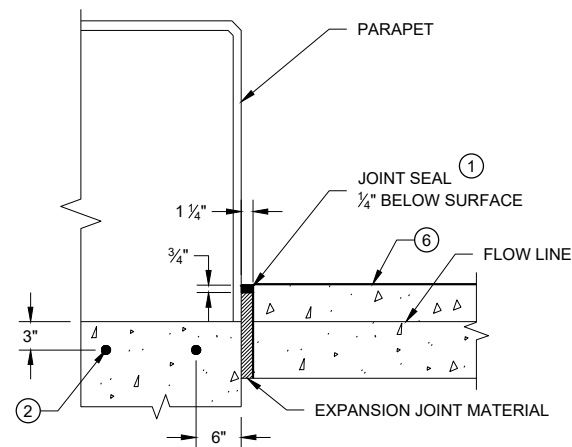
SECTION B-B



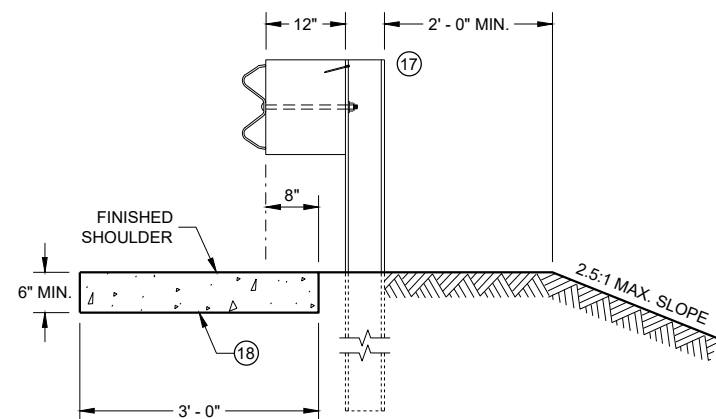
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



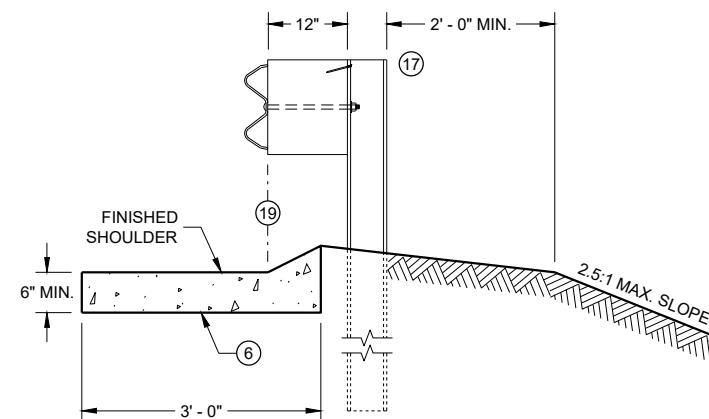
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

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.

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- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
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- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023

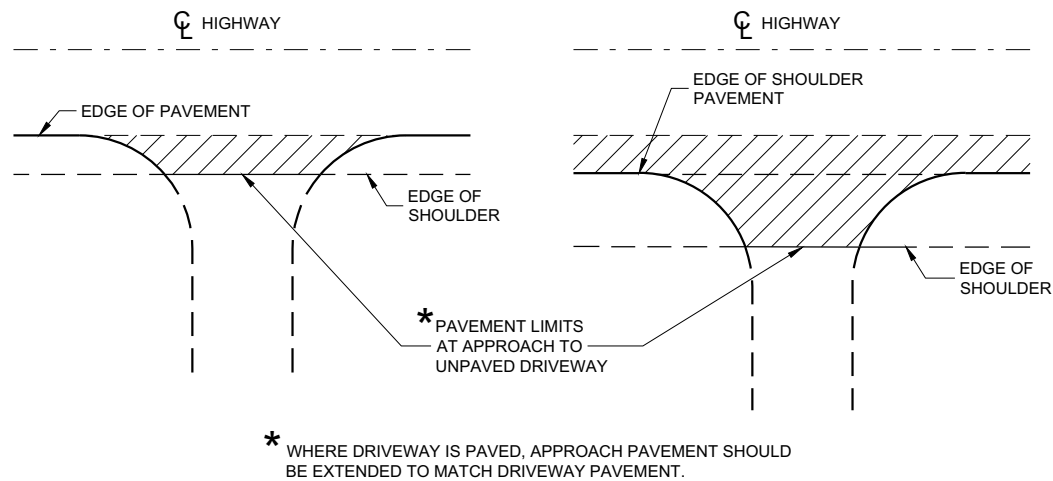
DATE

FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

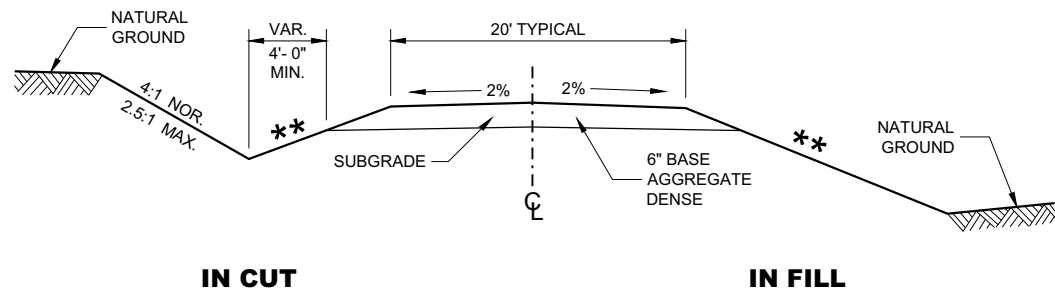
ENGINEER



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

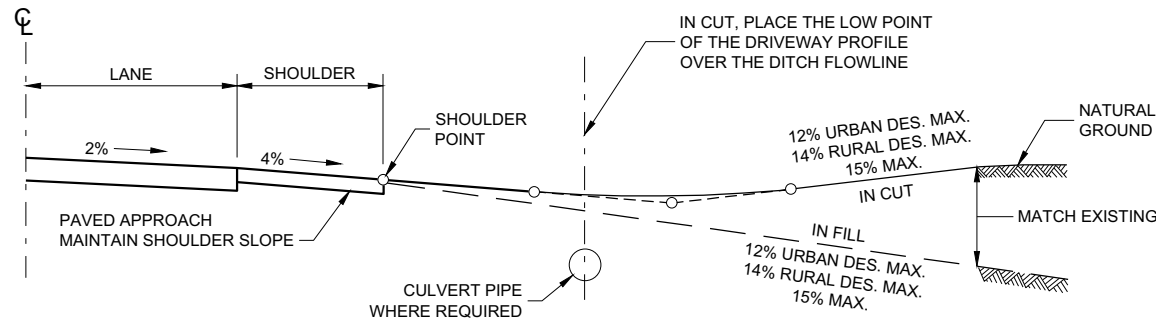
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



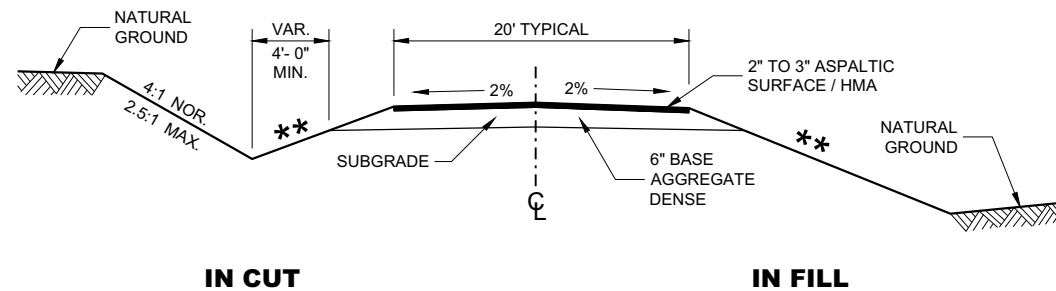
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

****** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



TYPICAL DRIVEWAY PROFILES

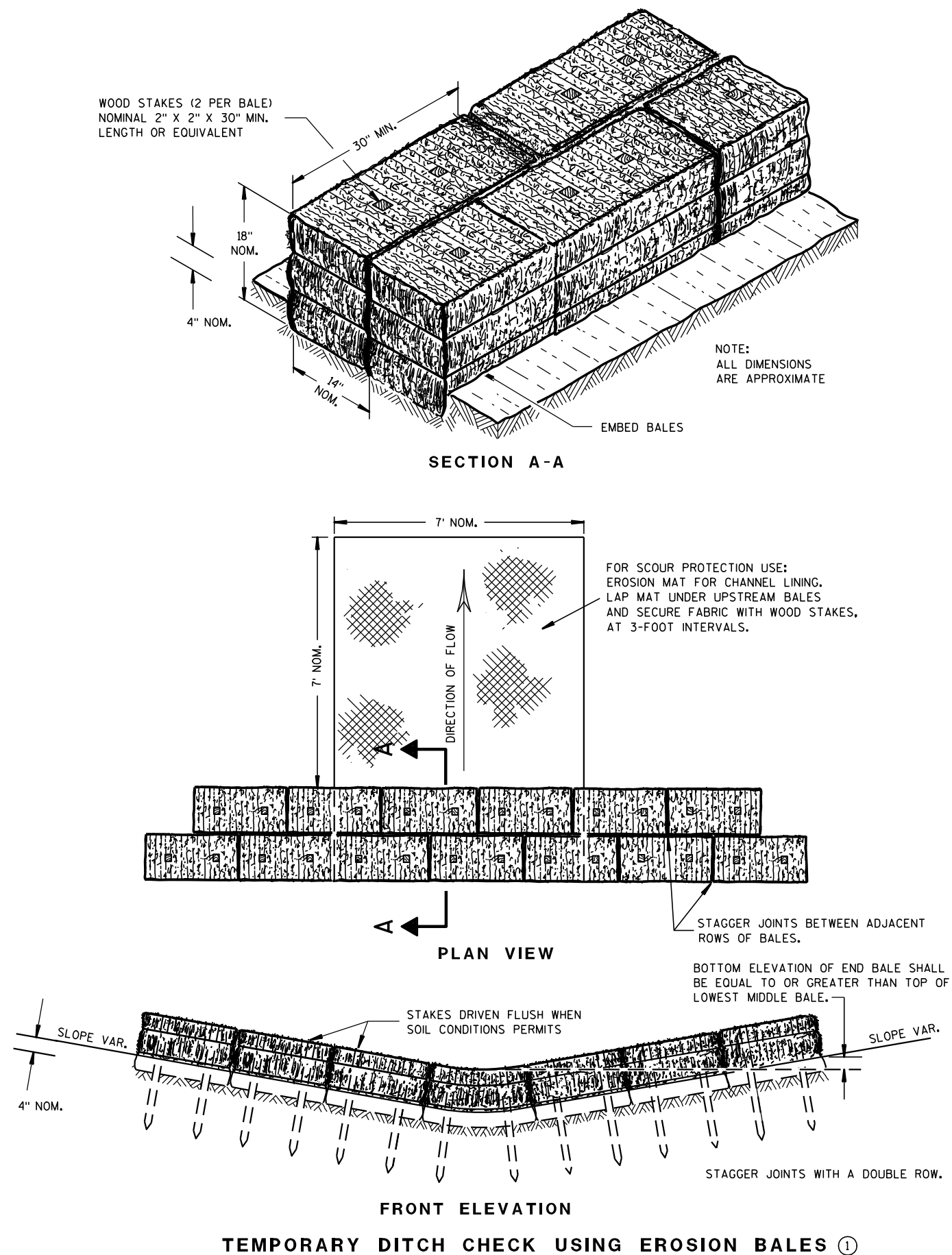


**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

**DRIVEWAYS WITHOUT
CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

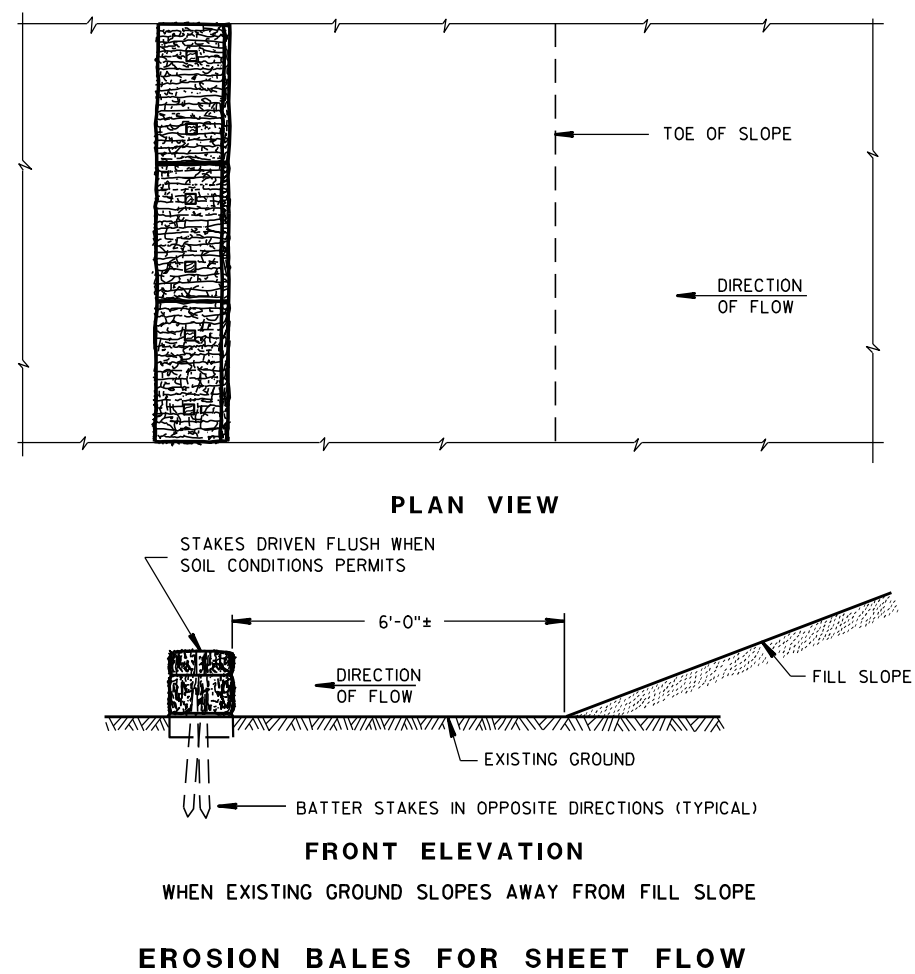
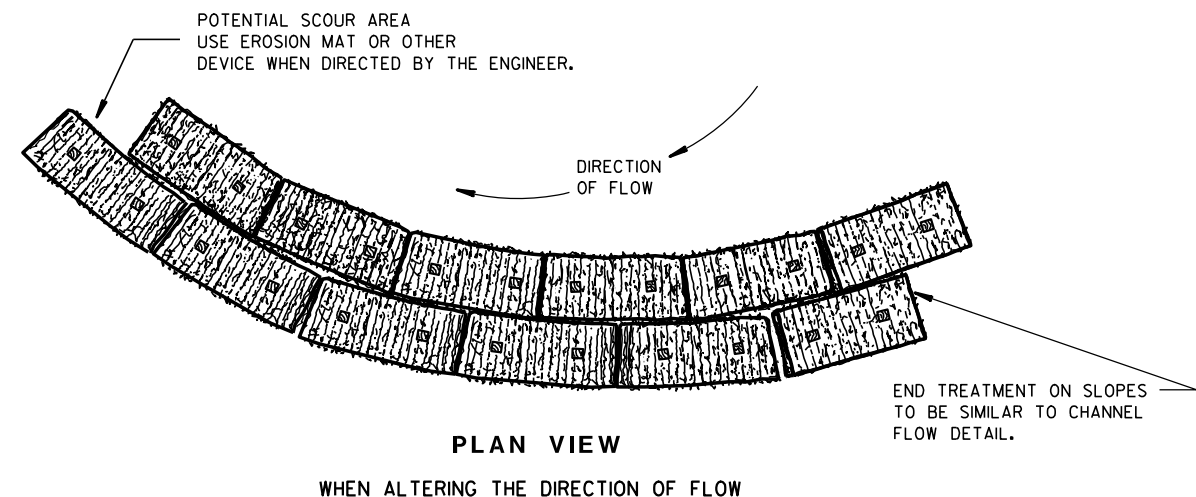
APPROVED
December 2017
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



GENERAL NOTES

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

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

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

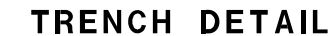
6/04/02
DATE

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

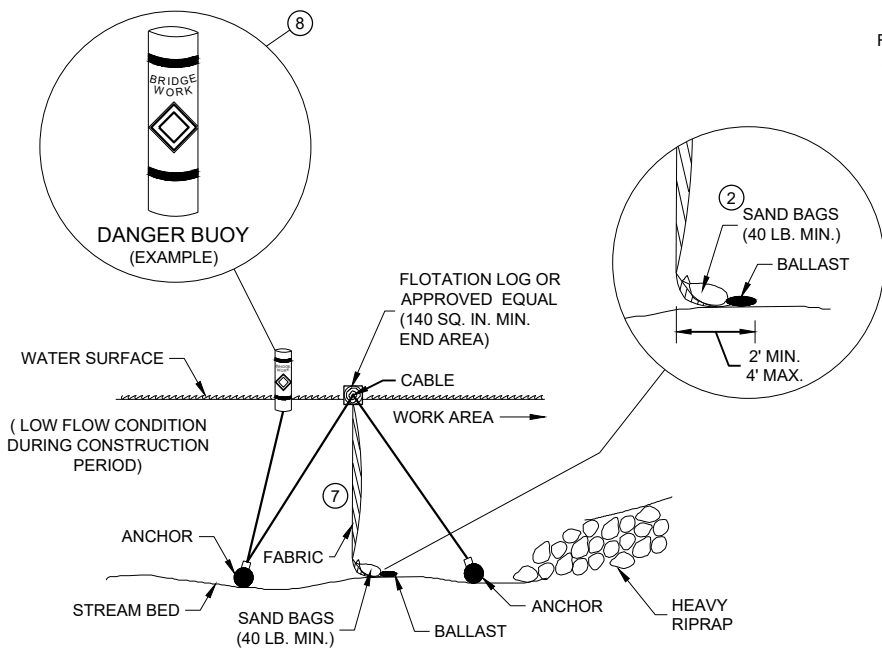
FHWA



- 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.

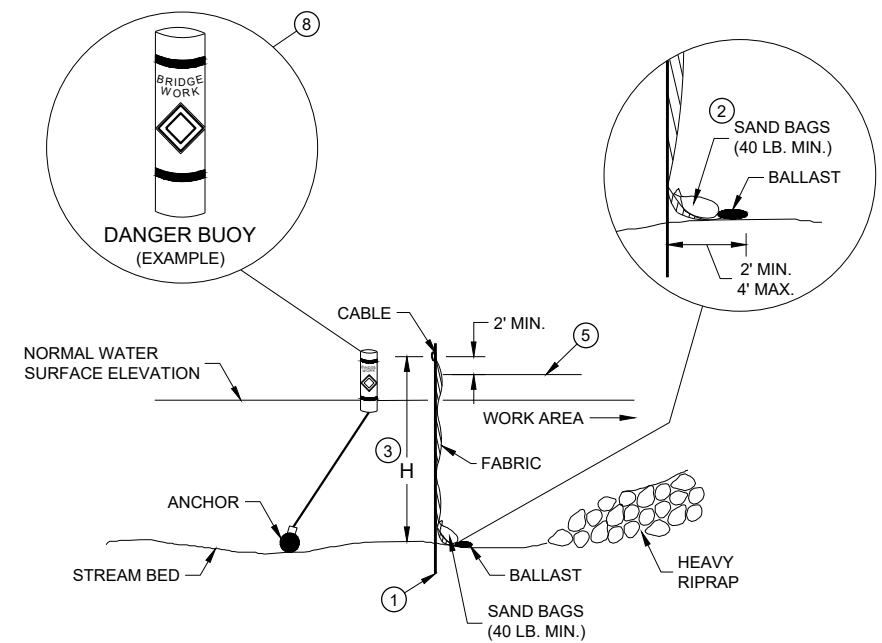


SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>4-29-05</u> DATE	<u>/S/ Beth Cannestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER



SECTION B - B

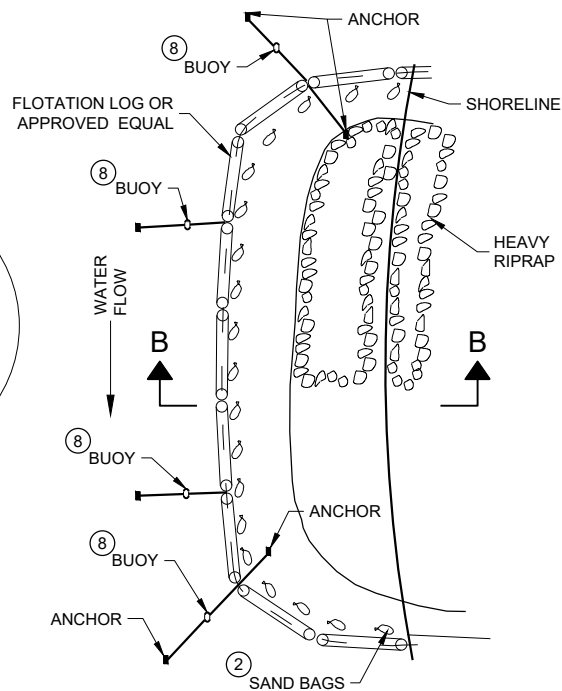
TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



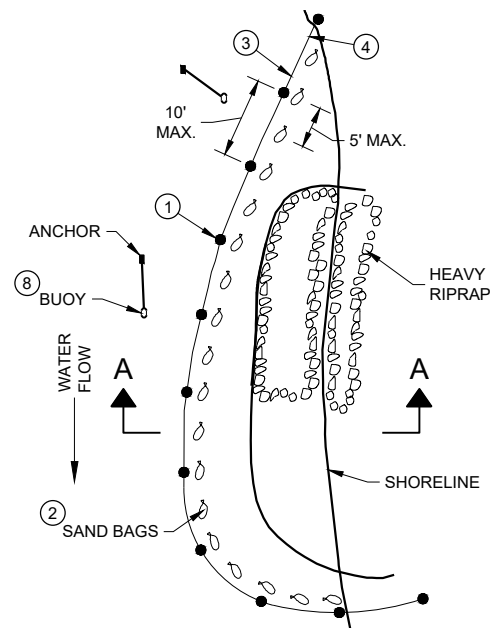
SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS



PLAN VIEW



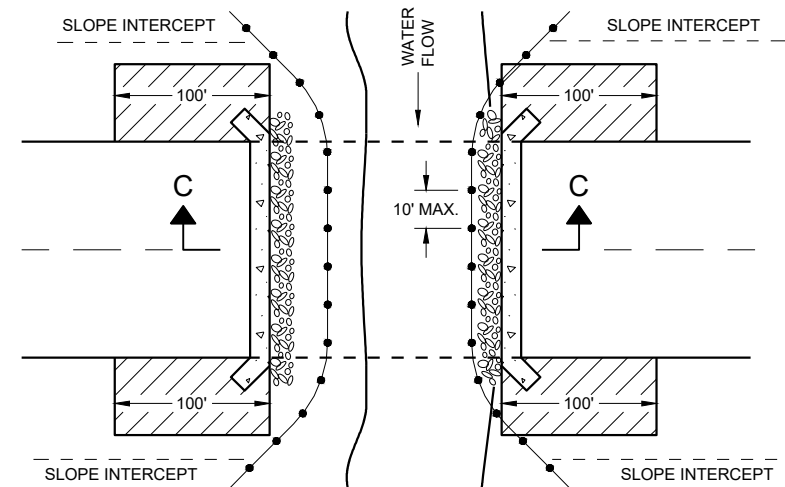
PLAN VIEW

GENERAL NOTES

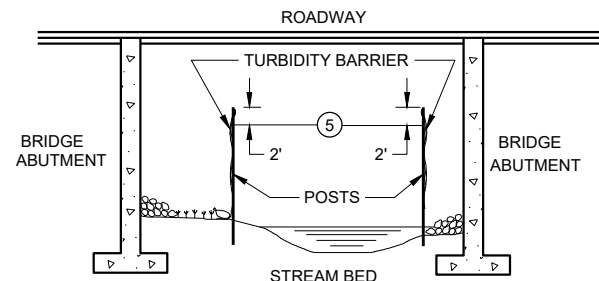
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TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

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



PLAN VIEW



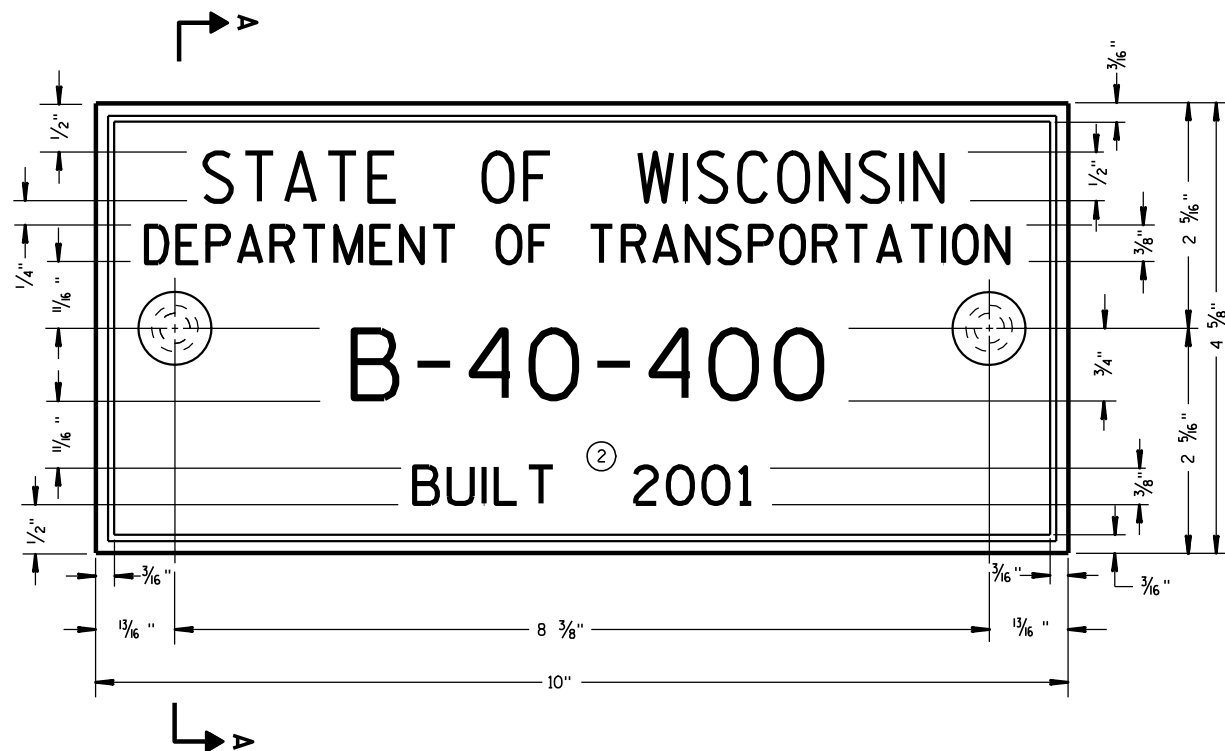
SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES

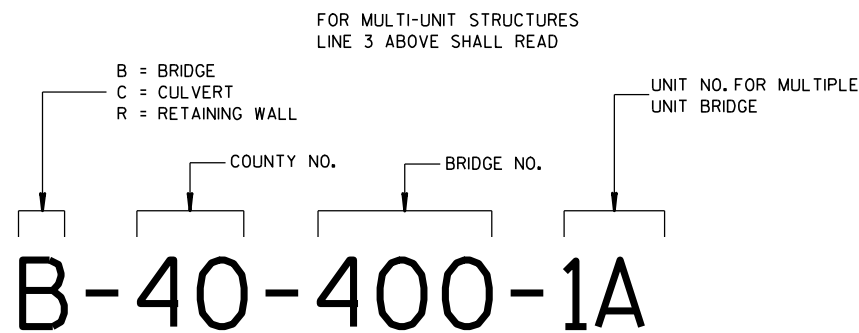
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



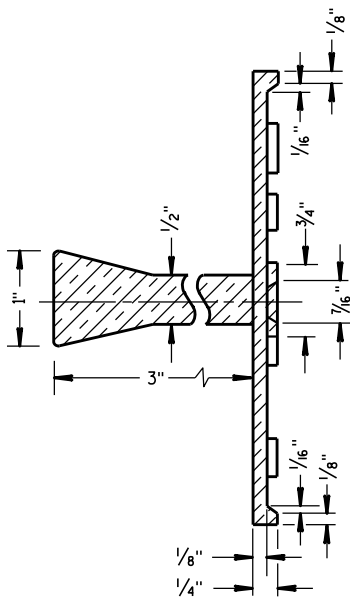
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

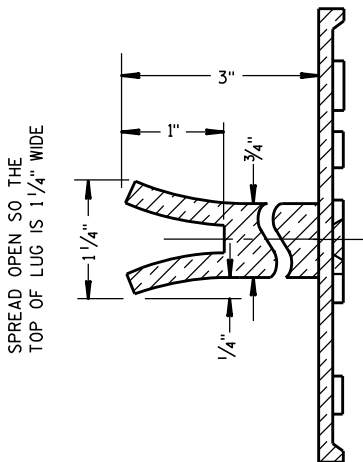
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

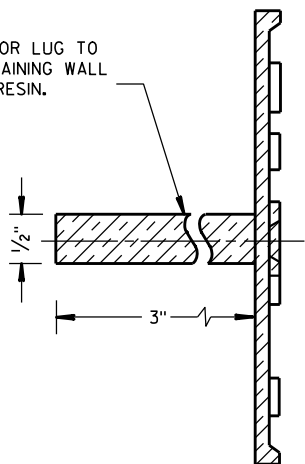


SECTION A-A



ALTERNATE LUG

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

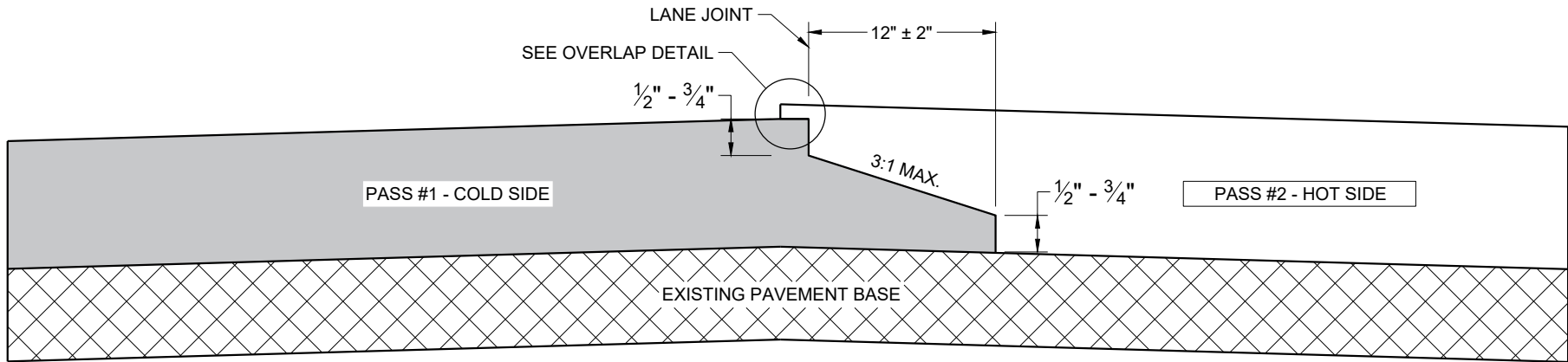


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

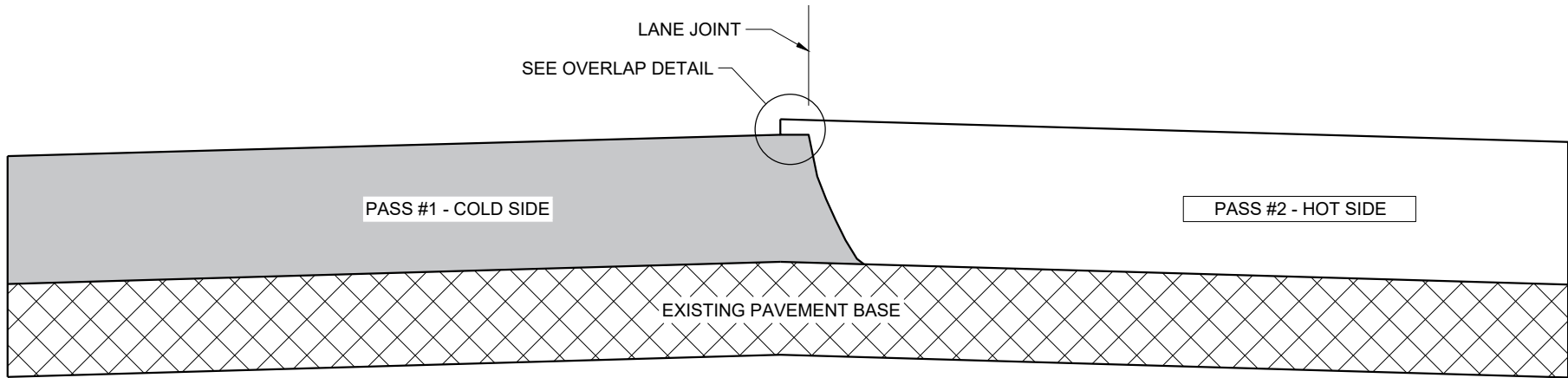
**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

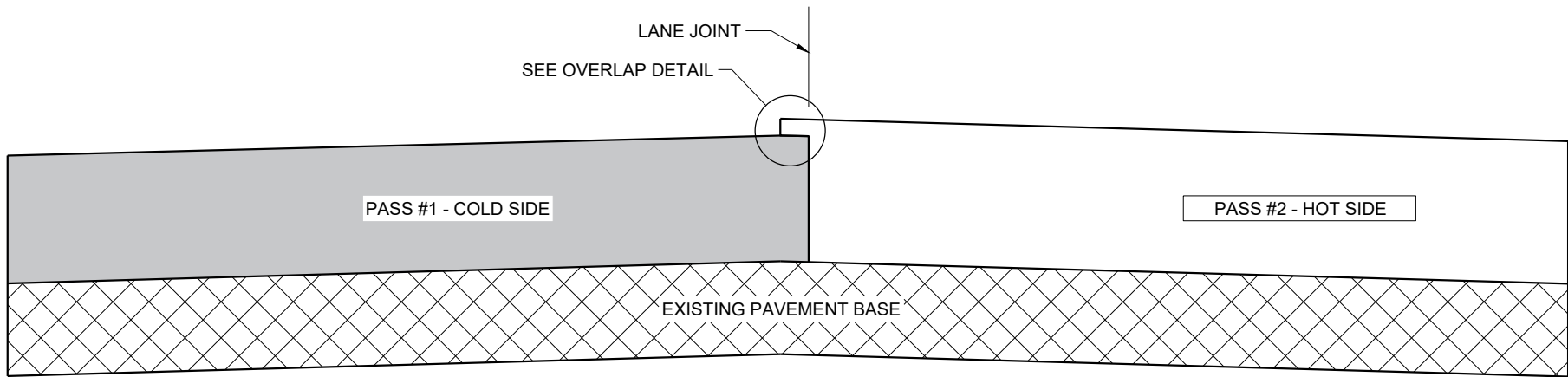
APPROVED
3/26/10
DATE
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



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

GENERAL NOTES

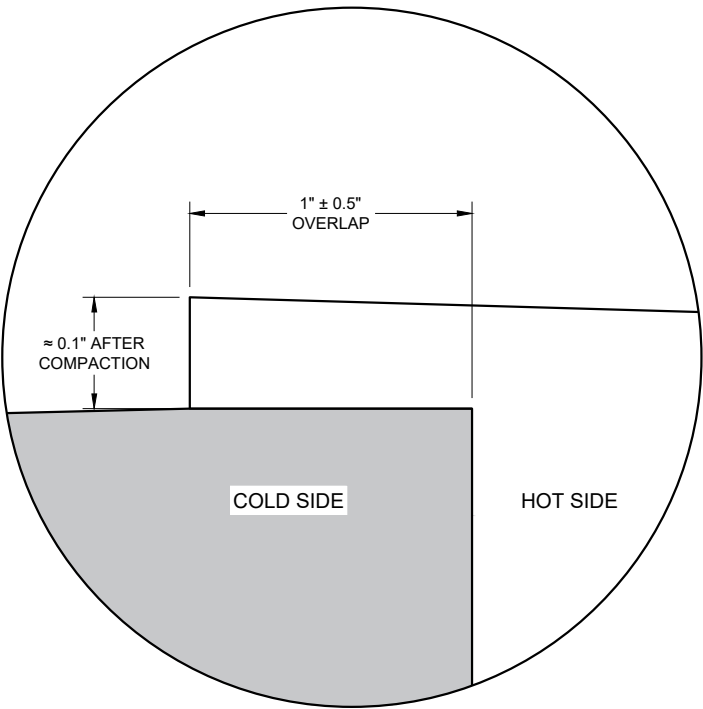
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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.



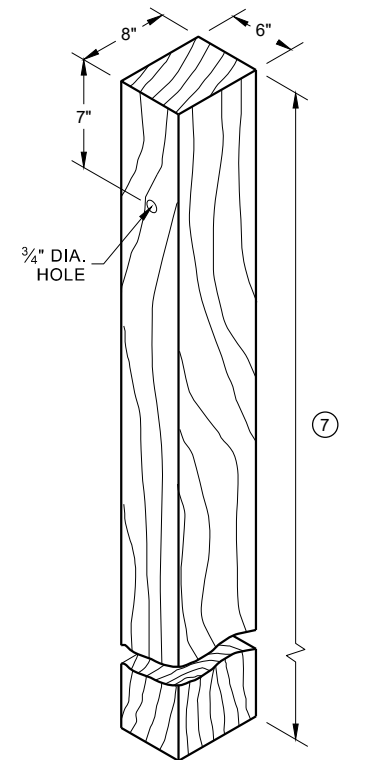
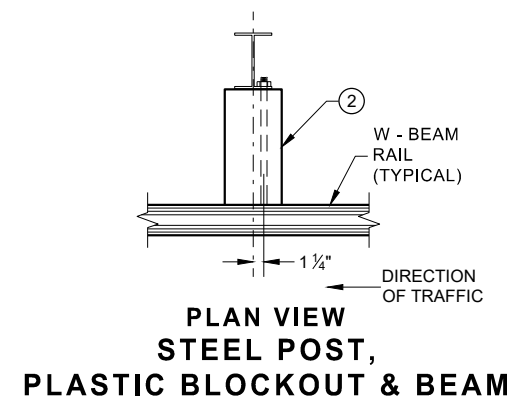
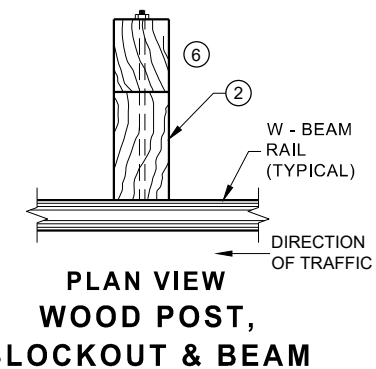
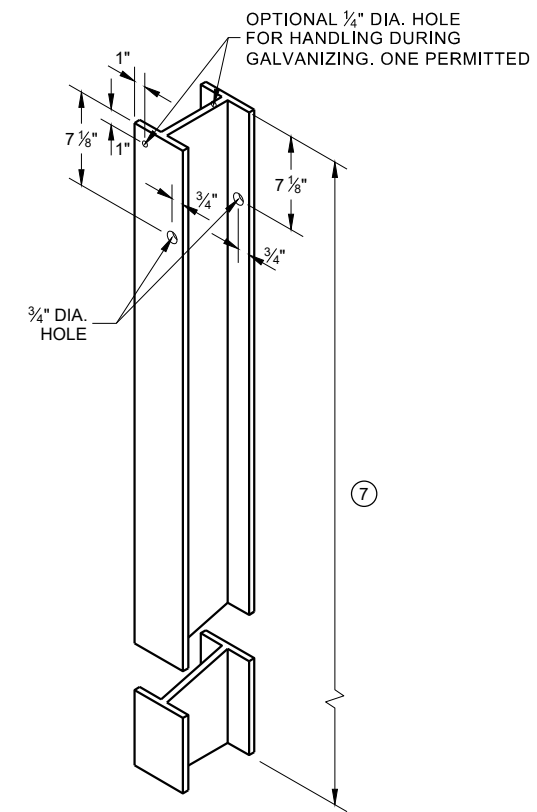
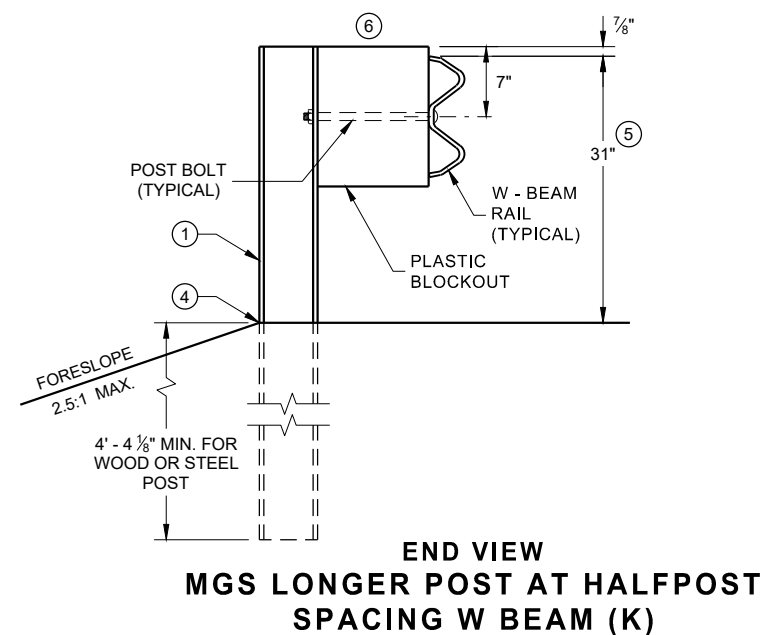
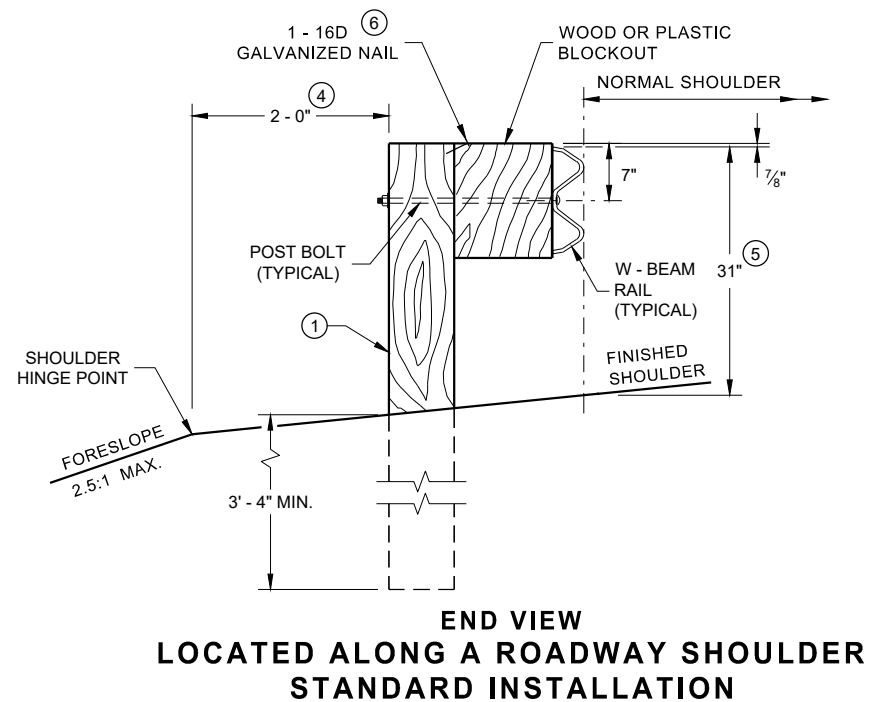
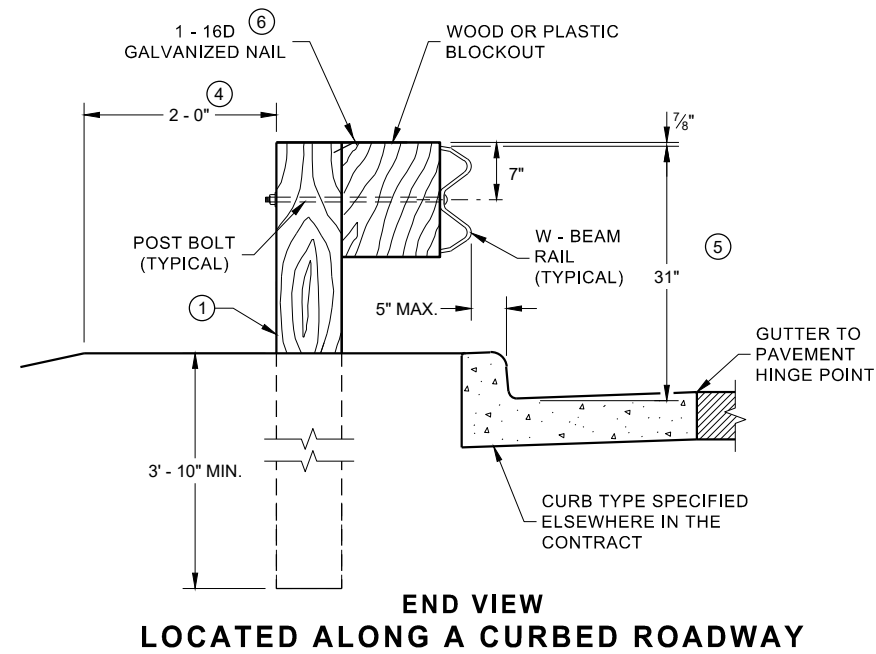
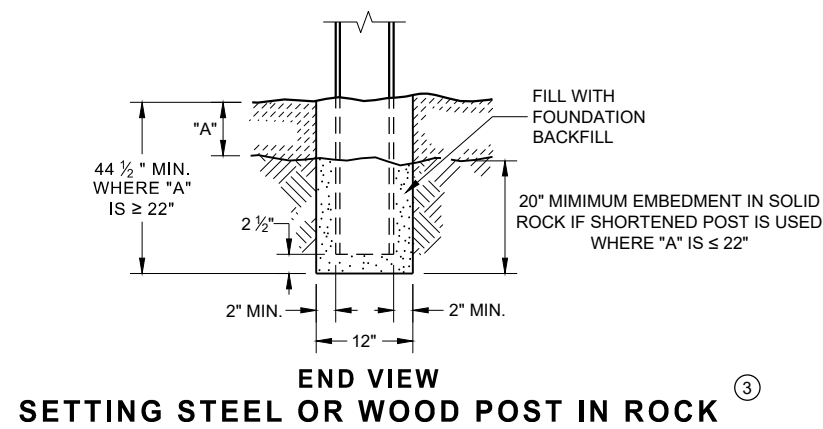
OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

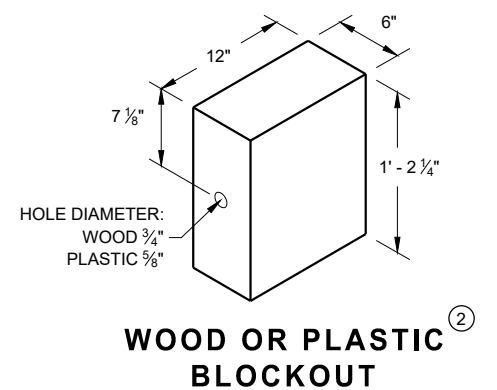
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

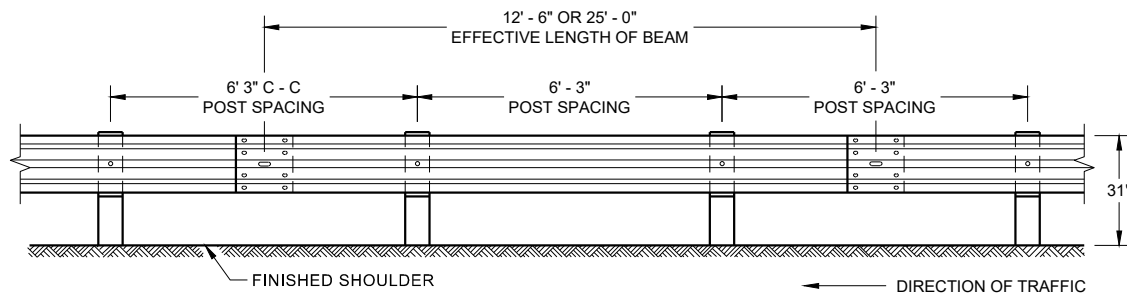
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



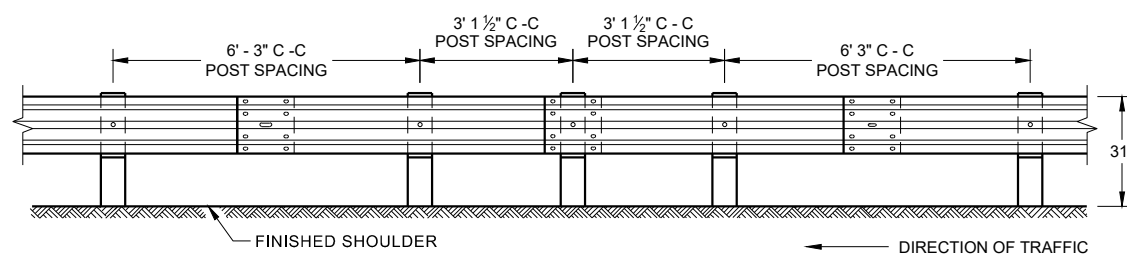
WOOD POST (6" X 8") NOMINAL ⁽¹⁾



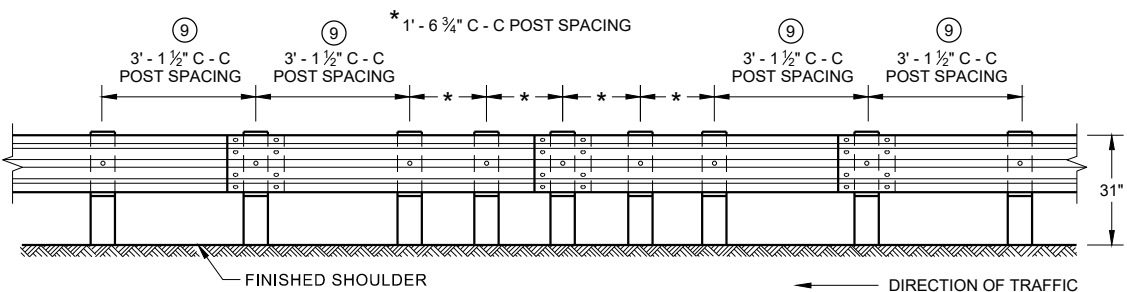
**WOOD OR PLASTIC
BLOCKOUT**



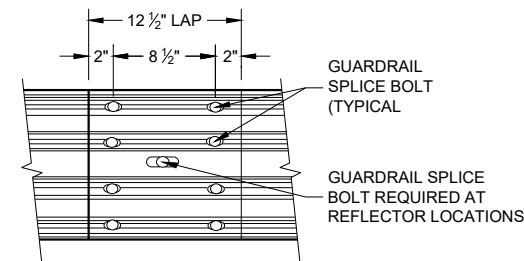
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



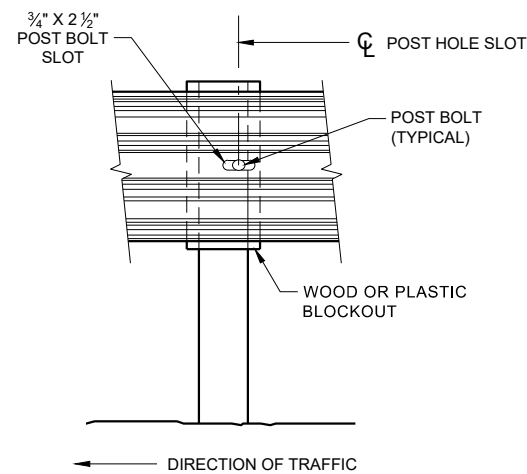
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



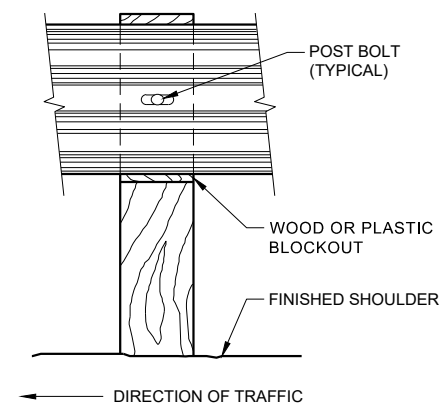
**FRONT VIEW
QUARTER POST SPACING (QS)**



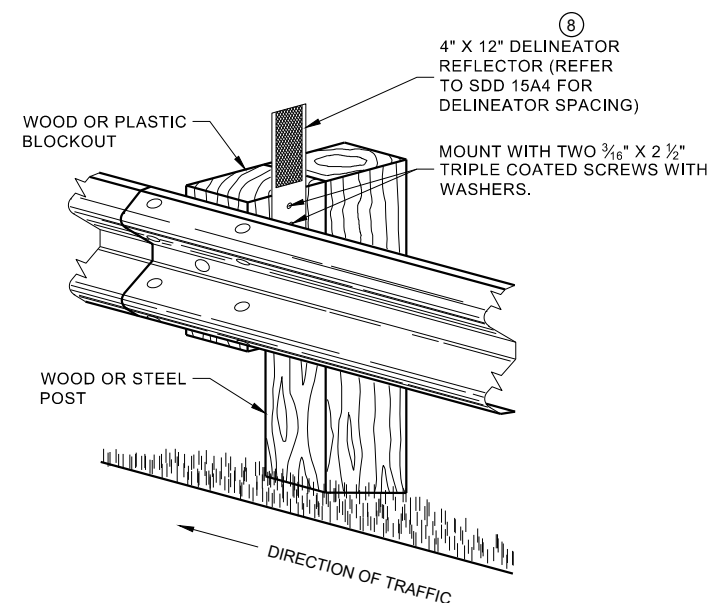
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



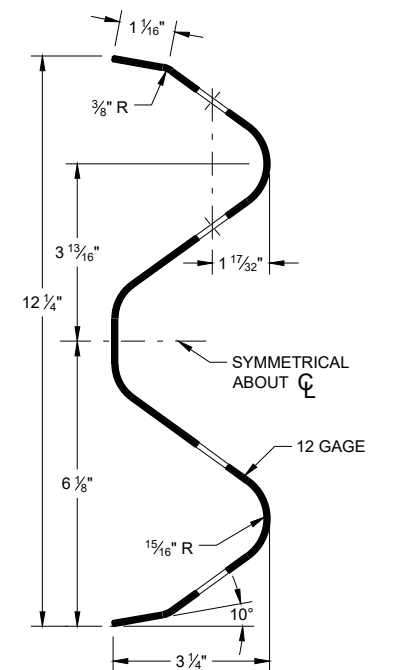
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

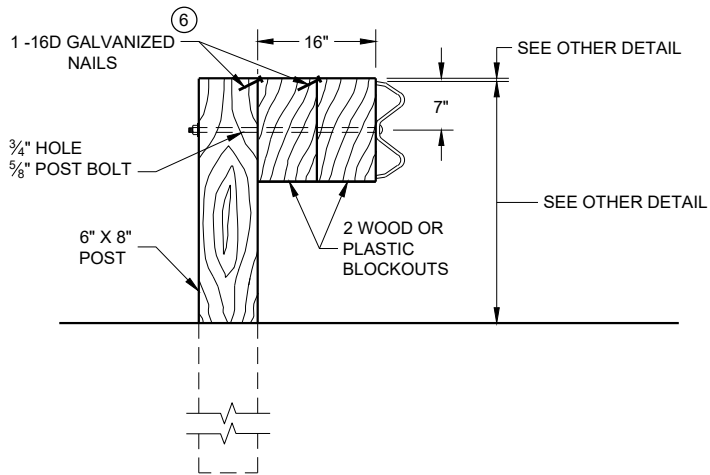
GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

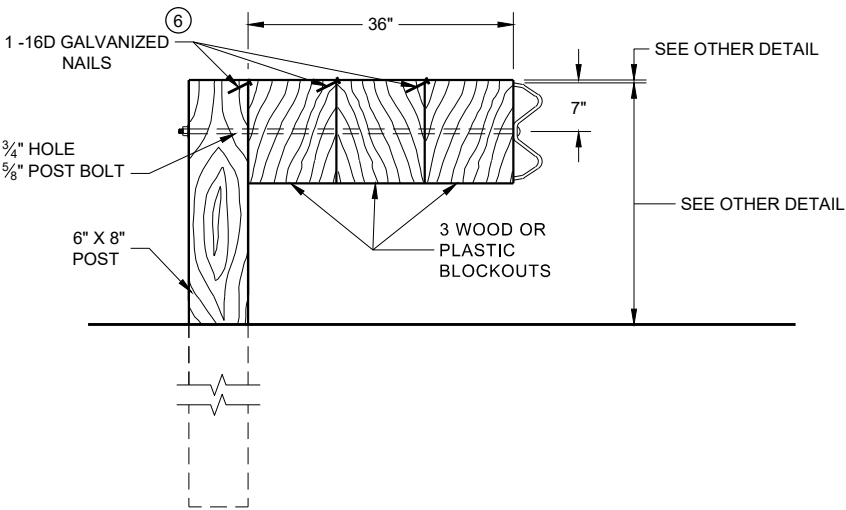
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

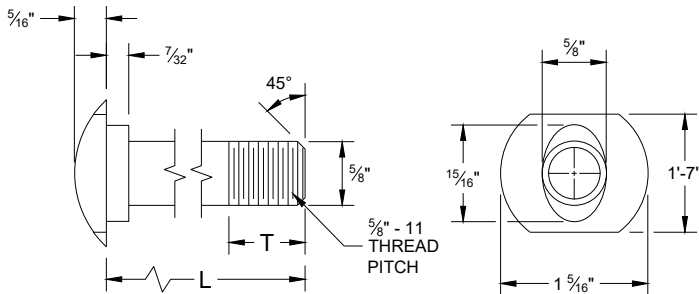
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

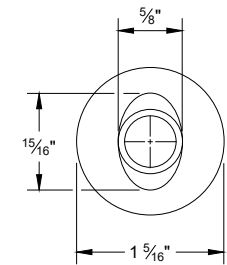
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

- NOTE:
- 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
 - 2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

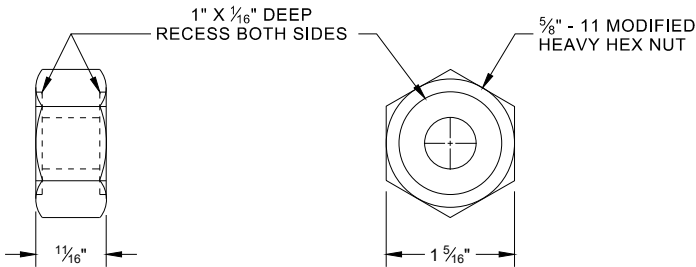


POST BOLT TABLE

L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

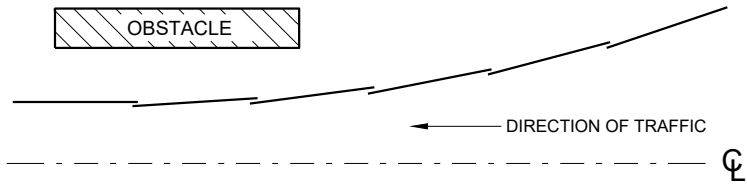


ALTERNATE BOLT HEAD

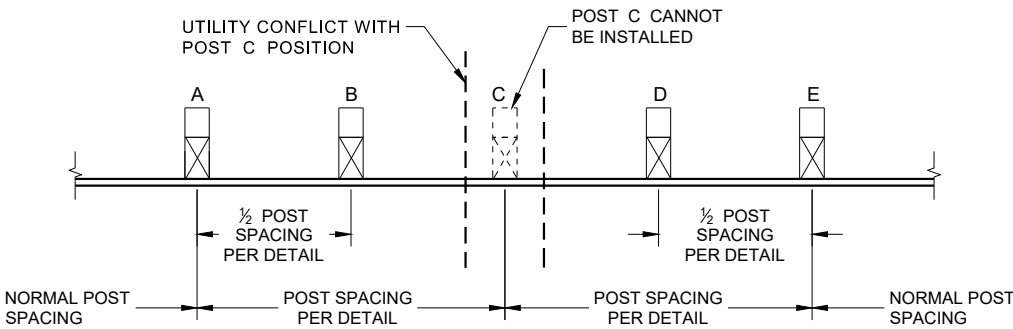


POST BOLT, SPLICE BOLT
AND RECESS NUT

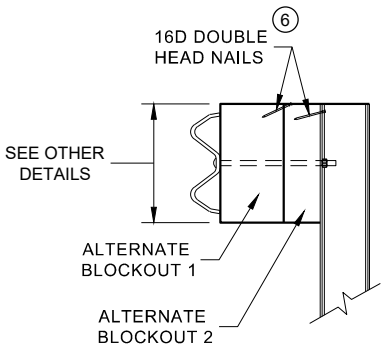
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



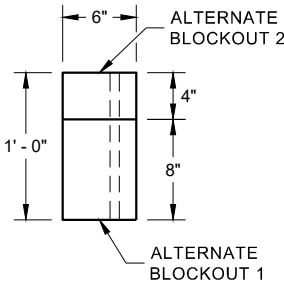
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

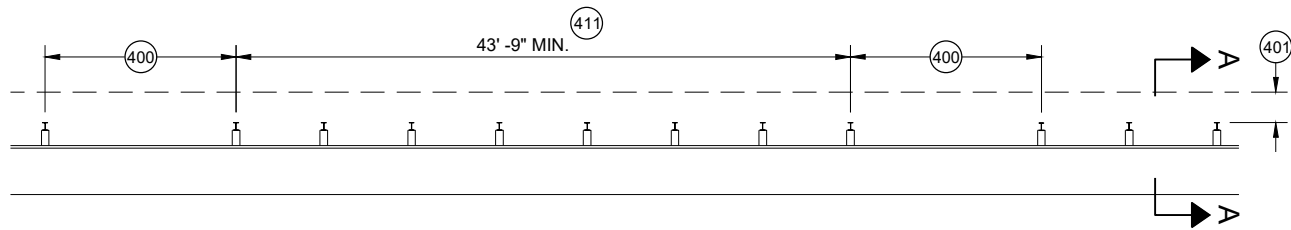


PLAN VIEW

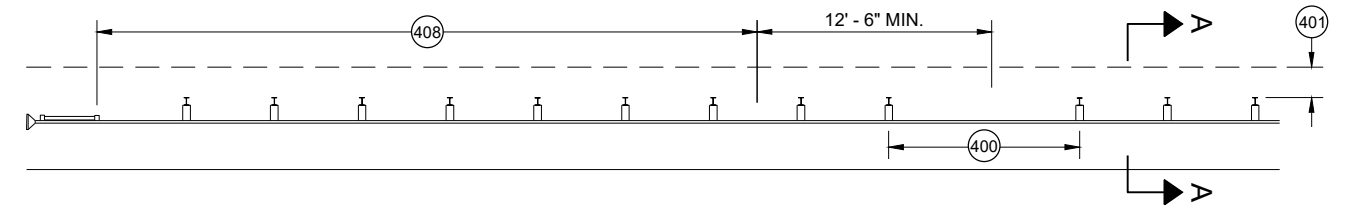
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

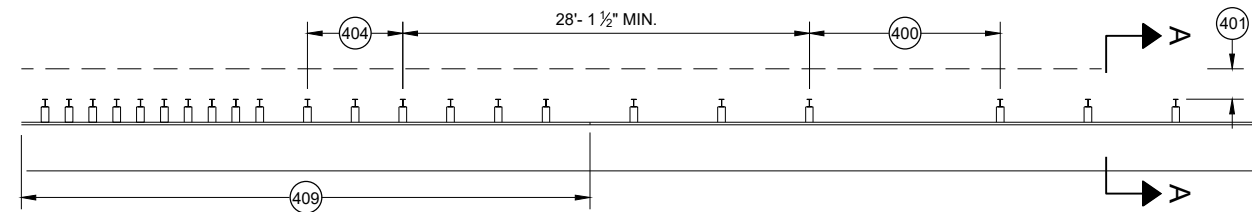
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



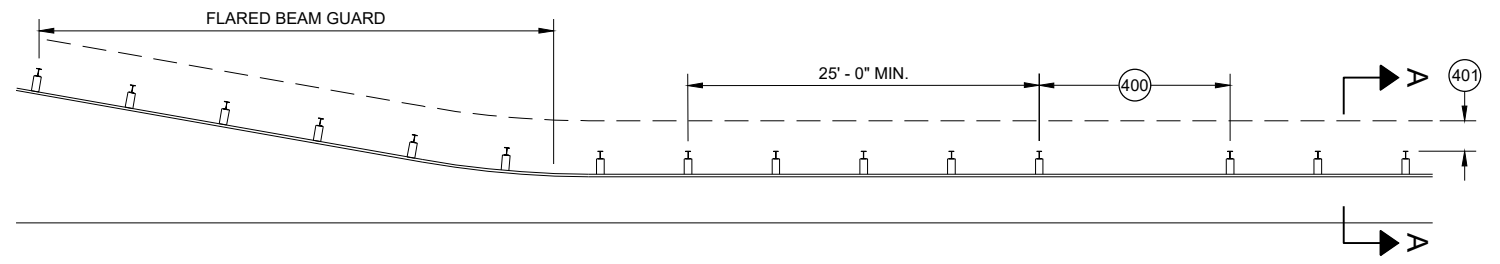
MISSING POST IN MGS GUARDRAIL



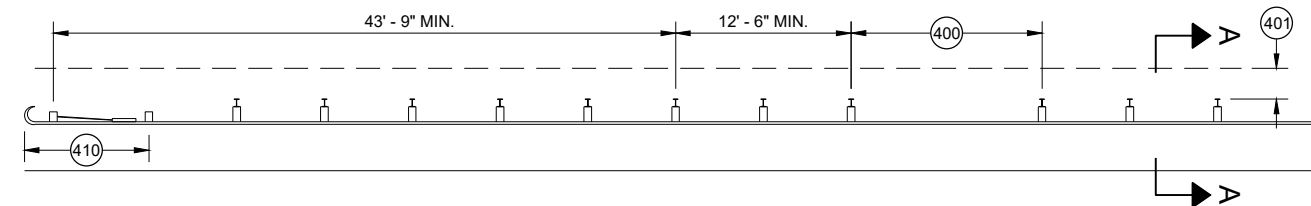
MISSING POST IN MGS GUARDRAIL NEAR EAT



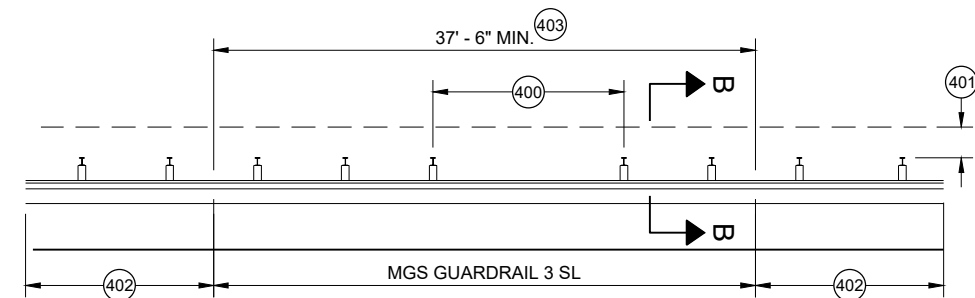
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

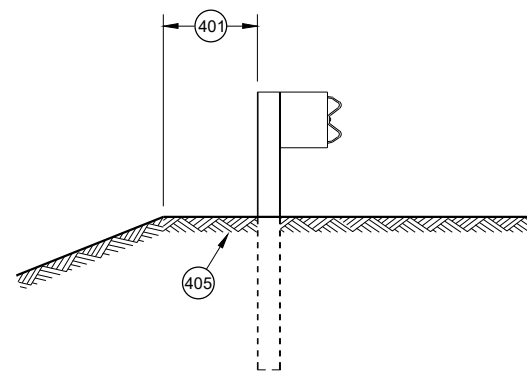


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

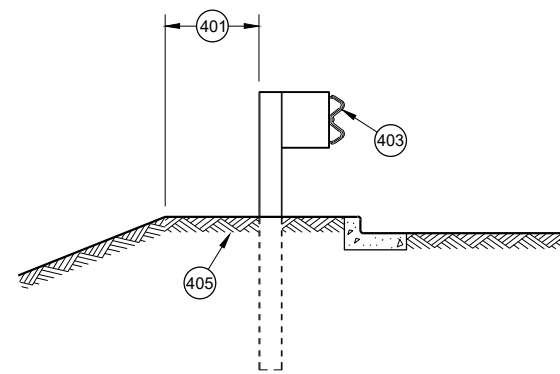


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

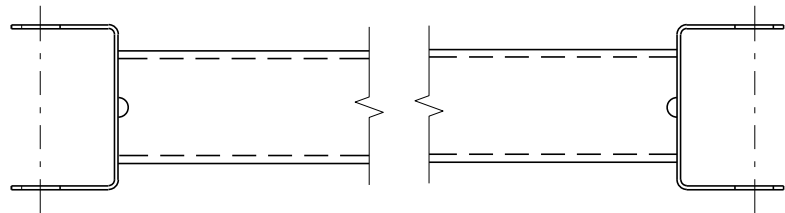
- A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
- E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

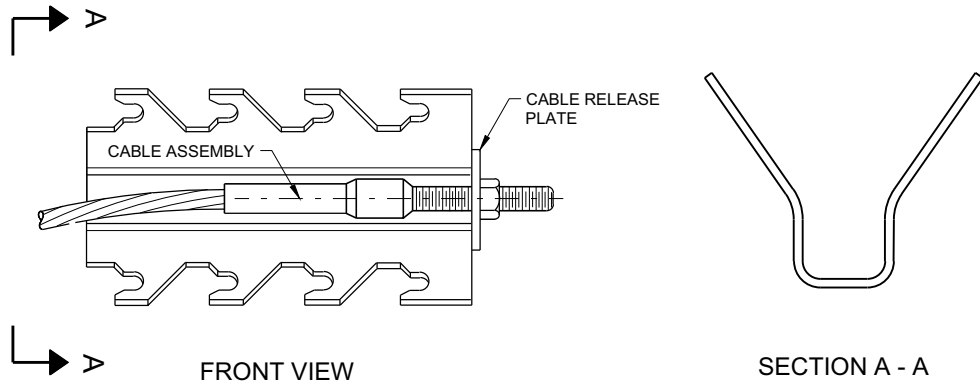


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

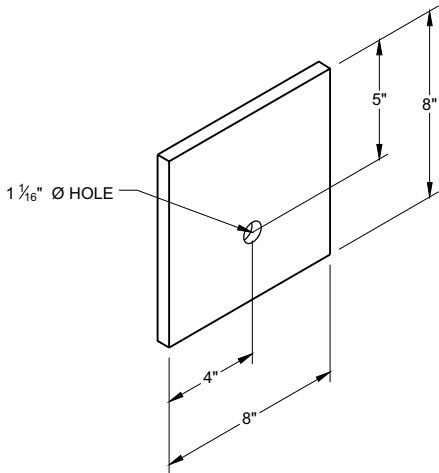


GENERIC GROUND STRUT^⑨ [Ⓔ]

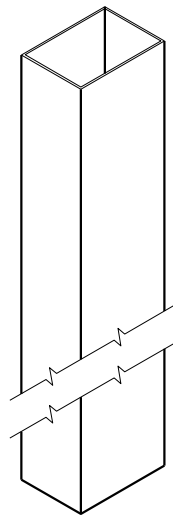
BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



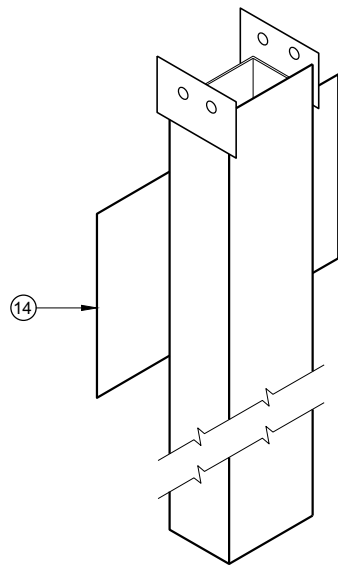
GENERIC ANCHOR CABLE BOX^⑨ [Ⓔ]



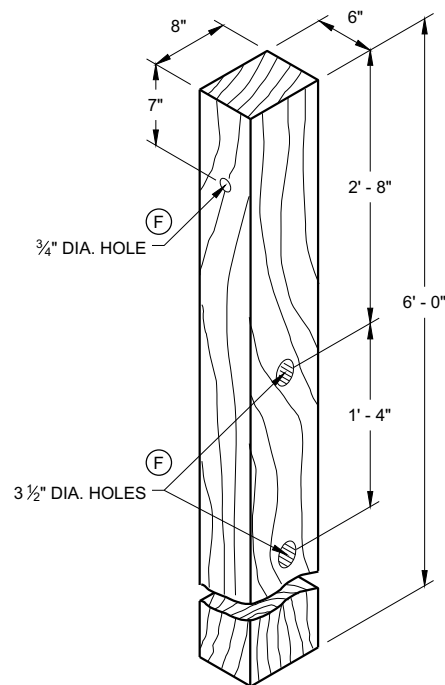
BEARING PLATE^⑥ [Ⓔ]



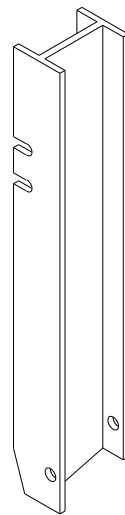
UPPER POST NO. 1 ⁽¹⁾ (E)



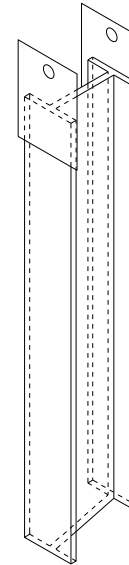
LOWER POST NO. 1 ⁽²⁾ (E)



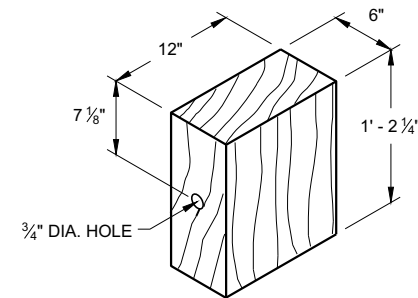
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



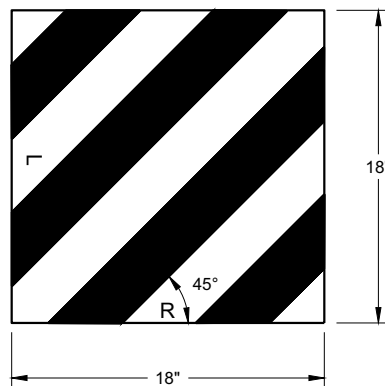
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



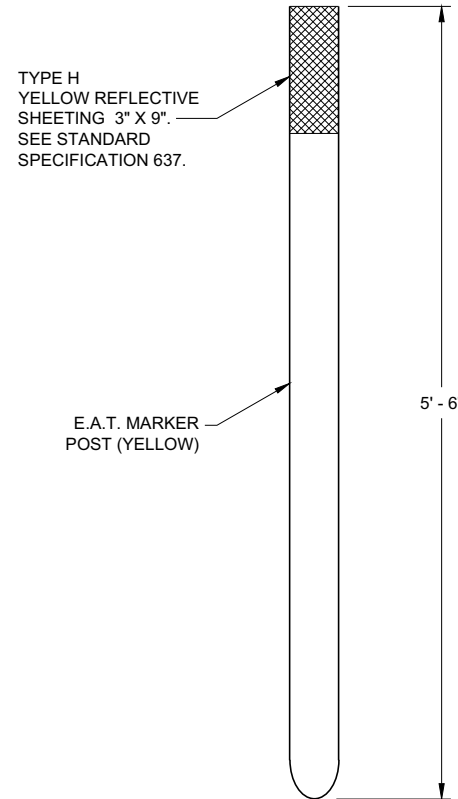
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



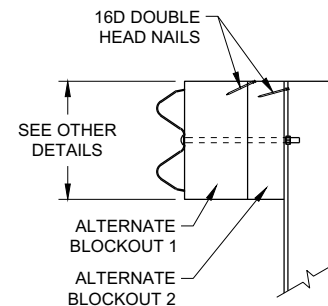
WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



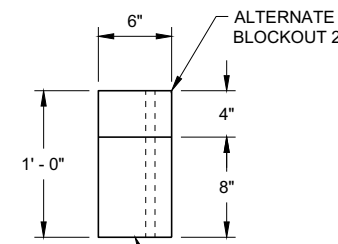
REFLECTIVE SHEETING DETAIL ^(E)



E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

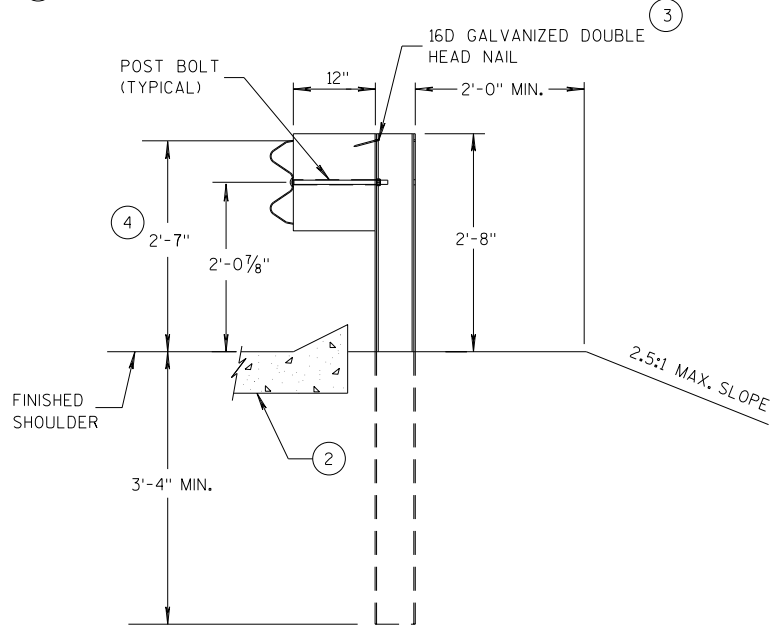
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

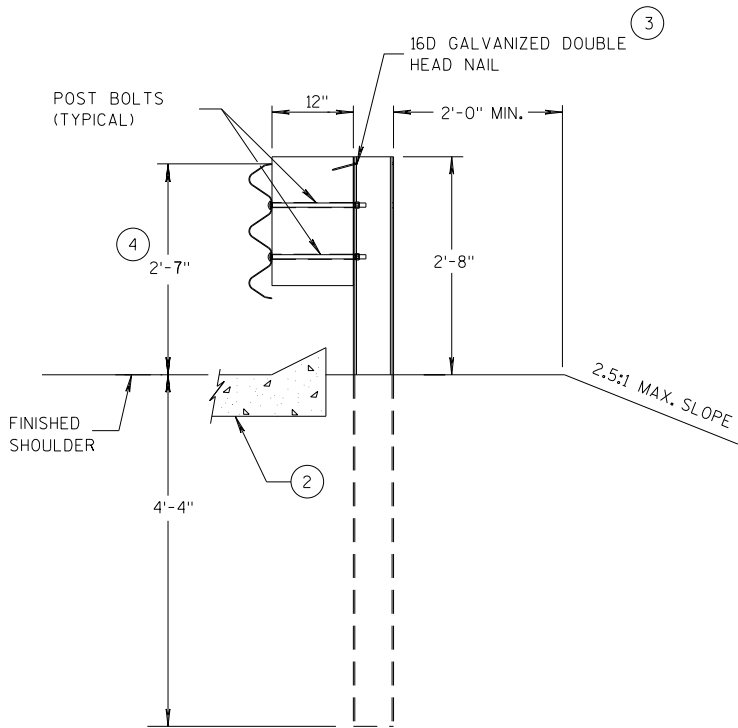
APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

GENERAL NOTES

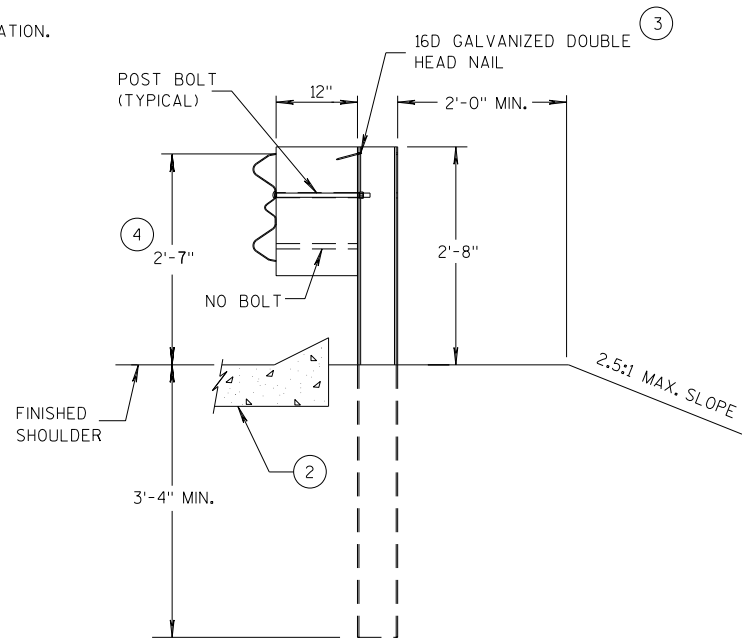
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.
- 13 STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



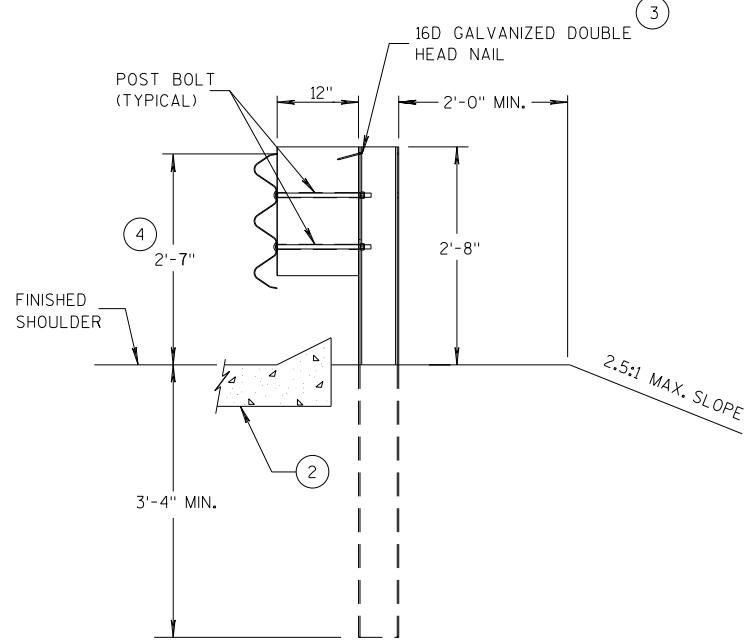
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

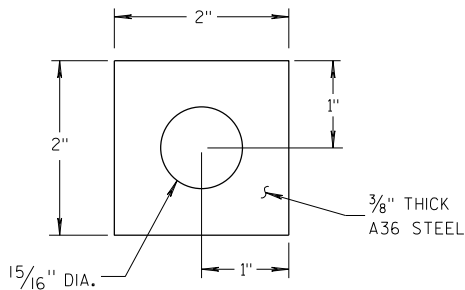
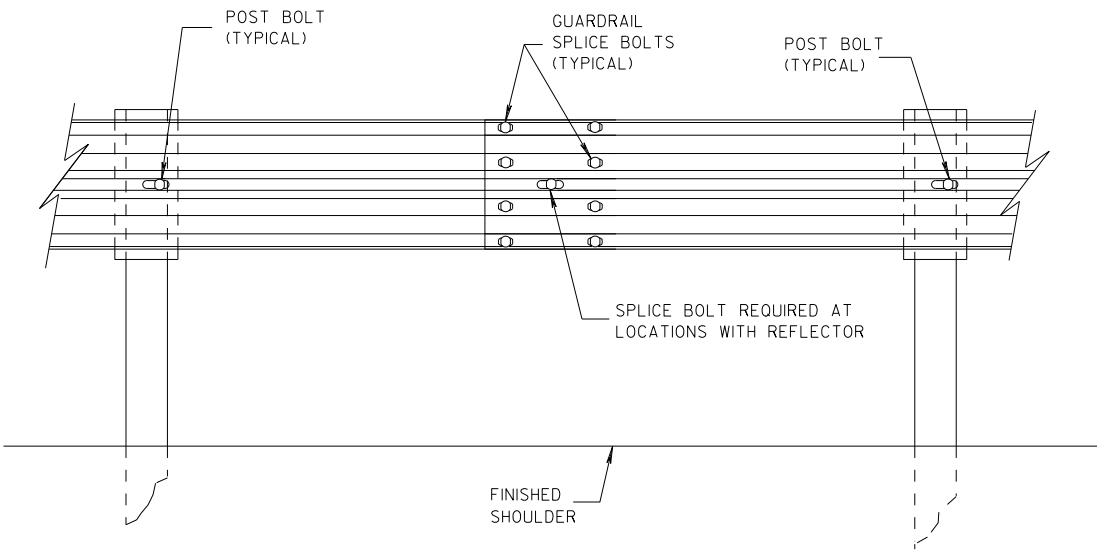
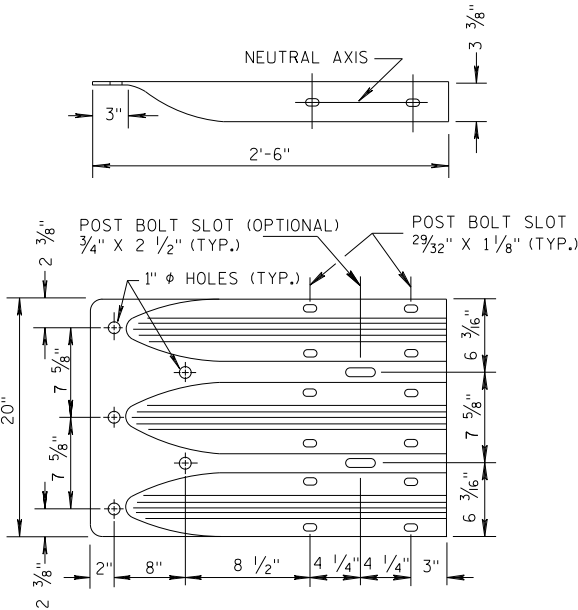


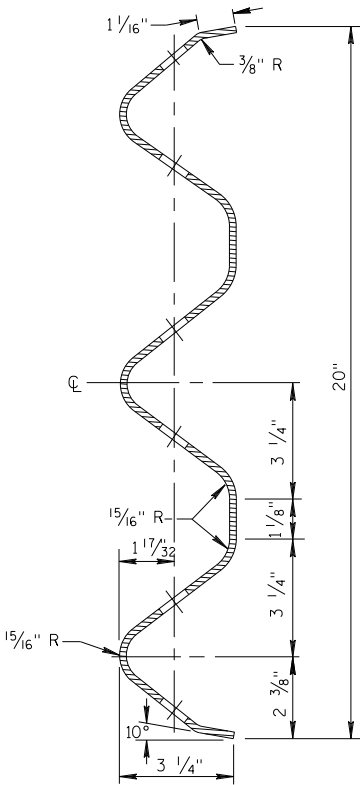
PLATE WASHER DETAIL



SPLICE DETAIL



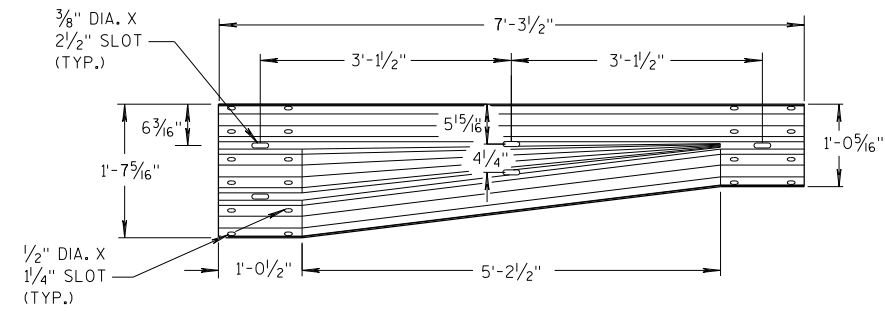
THRIE BEAM
TERMINAL CONNECTOR



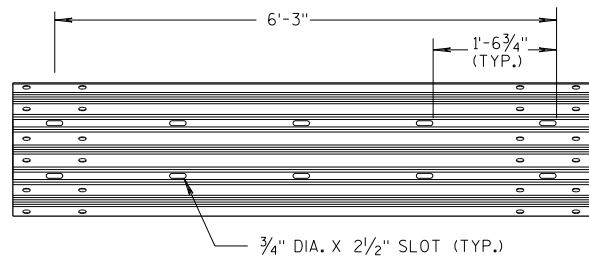
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

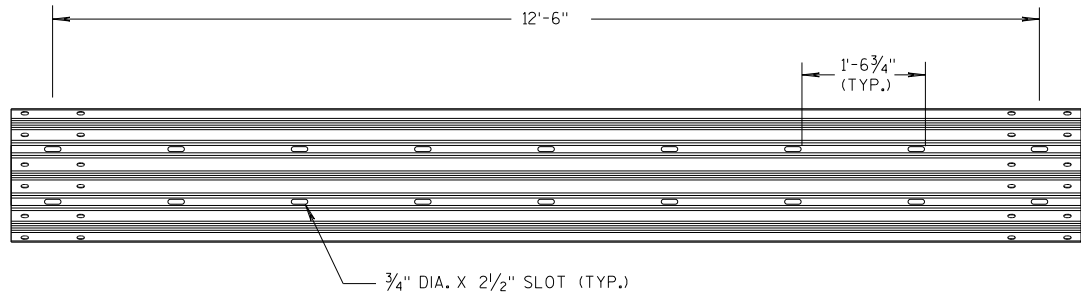
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



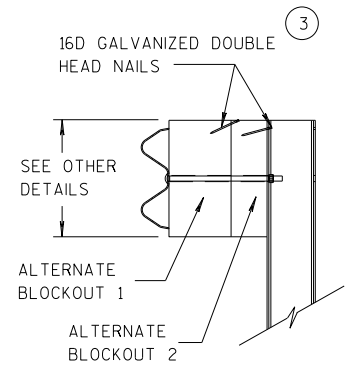
W-BEAM TO THRIE BEAM TRANSITION SECTION



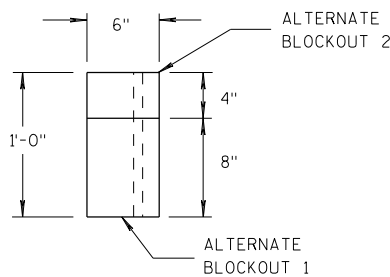
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

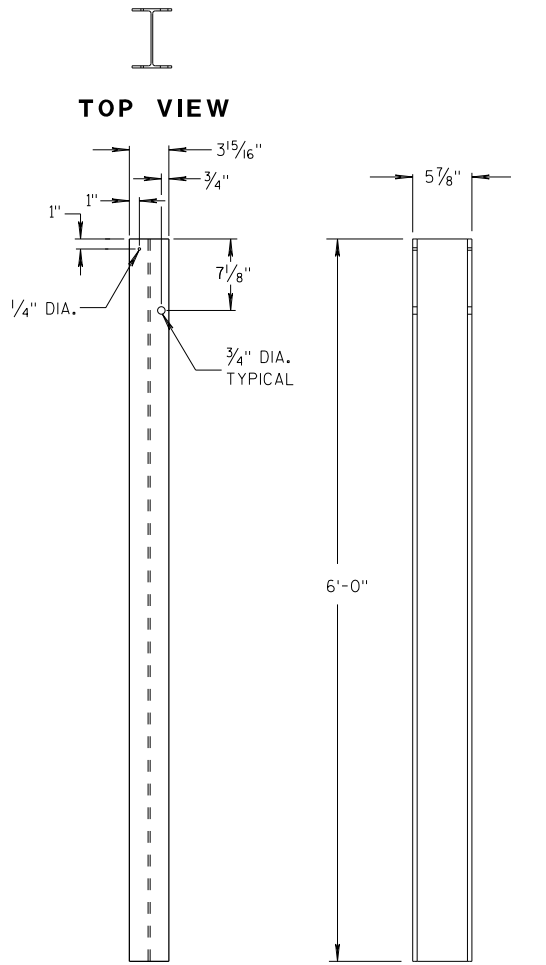


SIDE VIEW



TOP VIEW

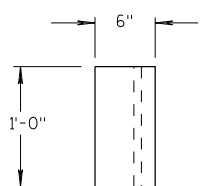
ALTERNATE WOOD BLOCKOUT DETAIL



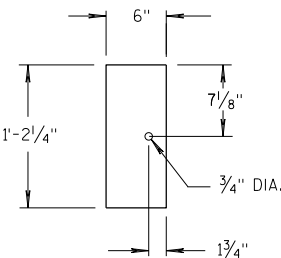
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

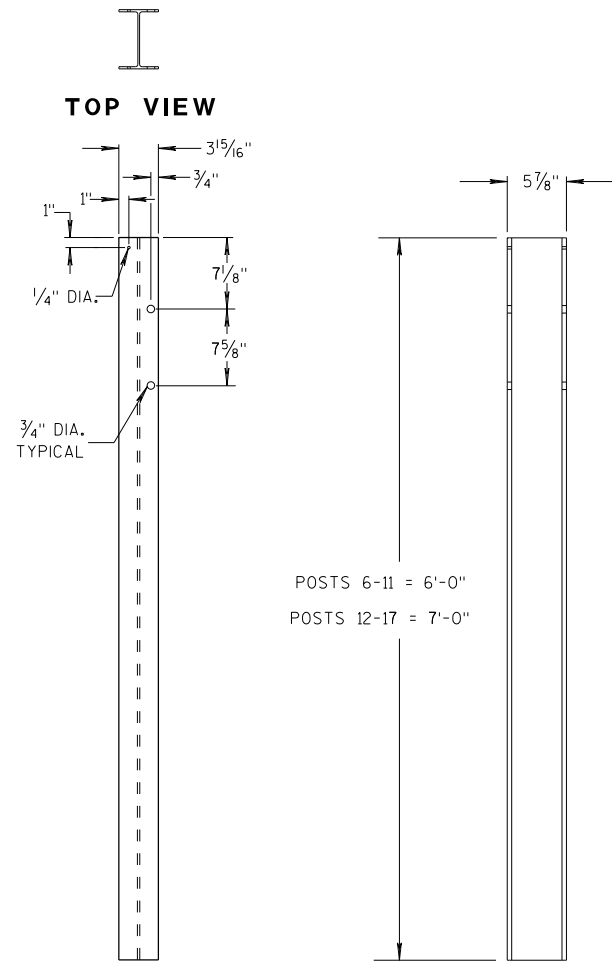


TOP VIEW



FRONT VIEW

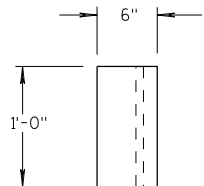
BLOCKOUT POSTS 1-5



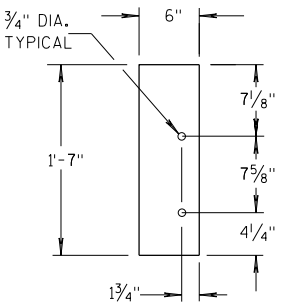
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-17



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

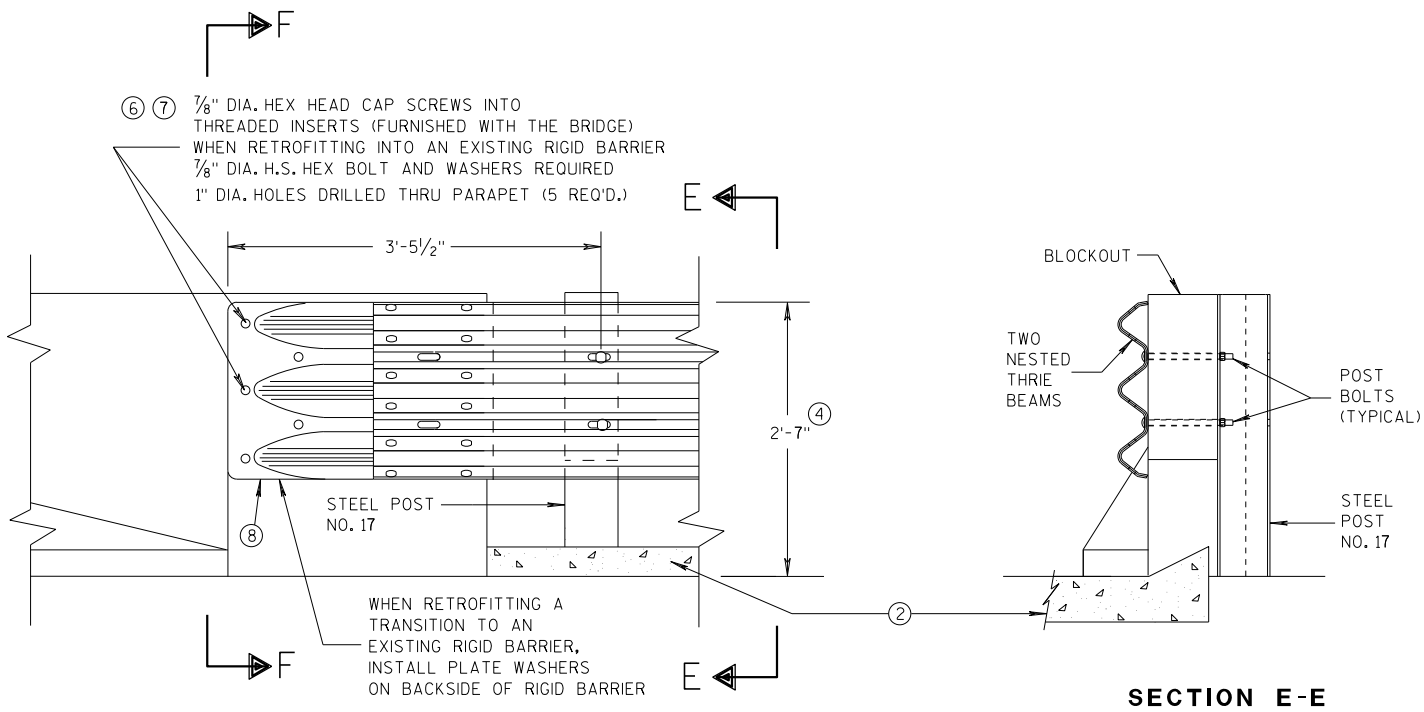
③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

⑤ WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

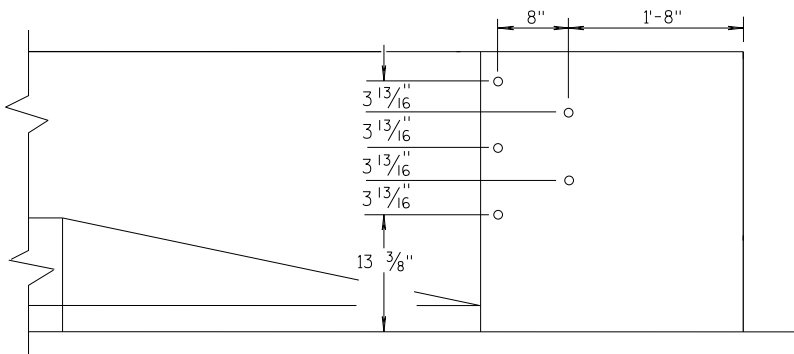
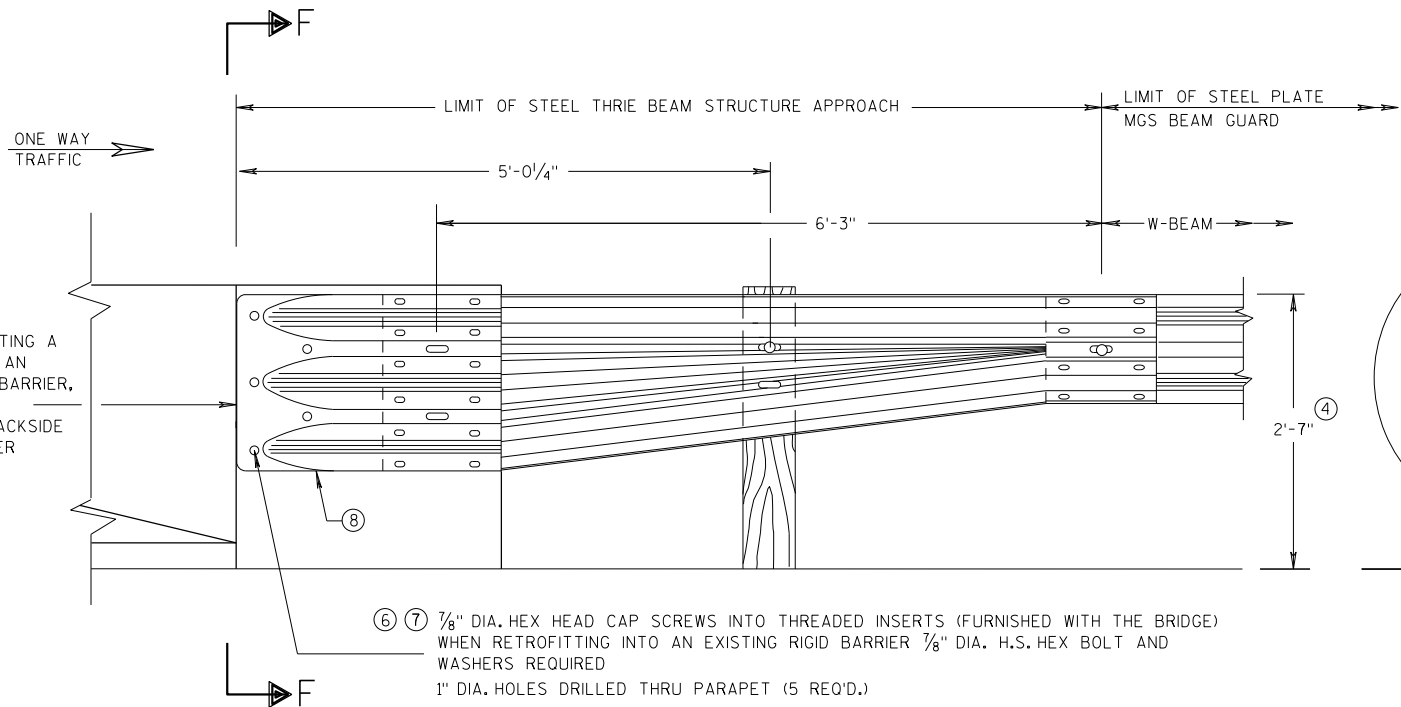
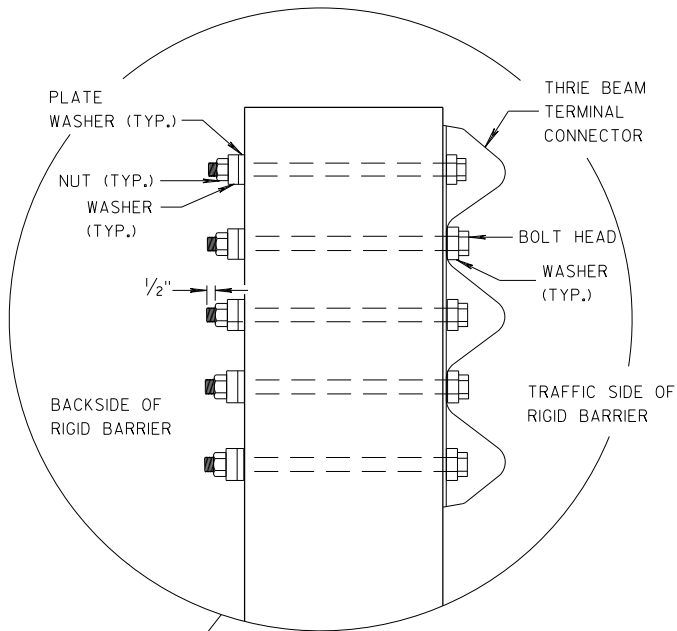
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

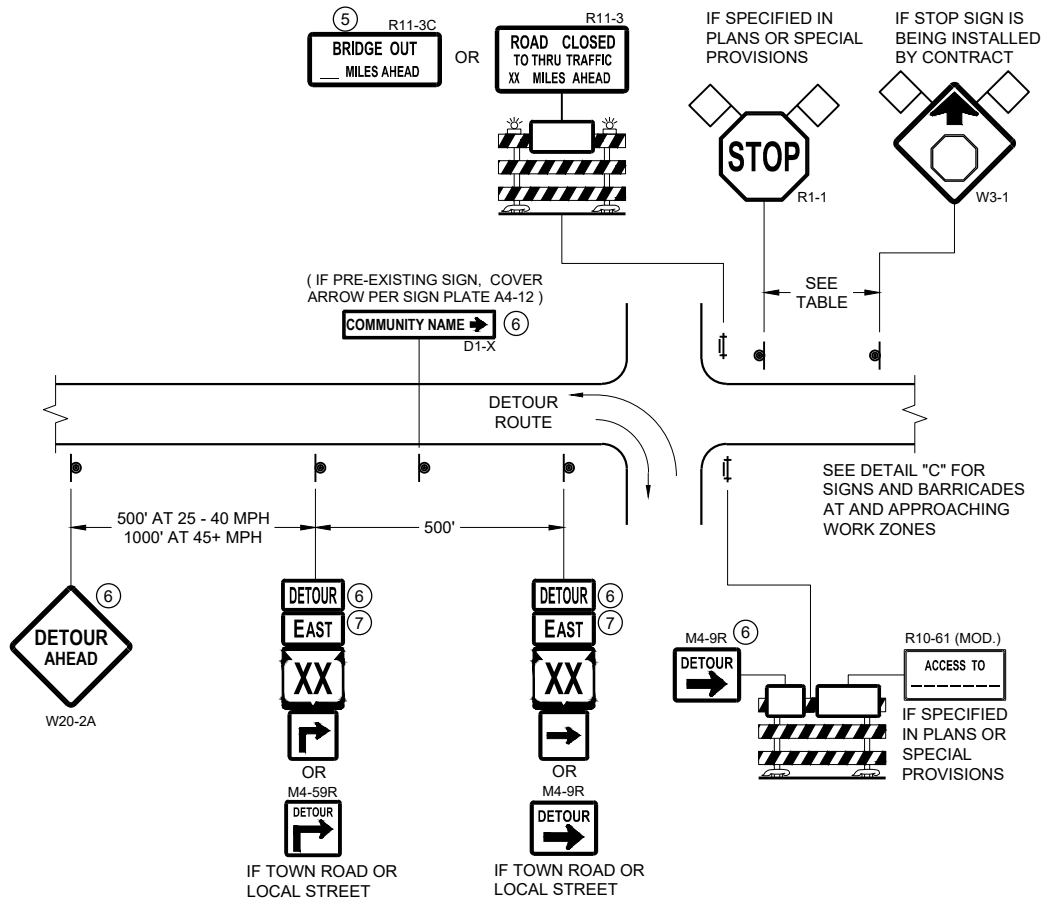


**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

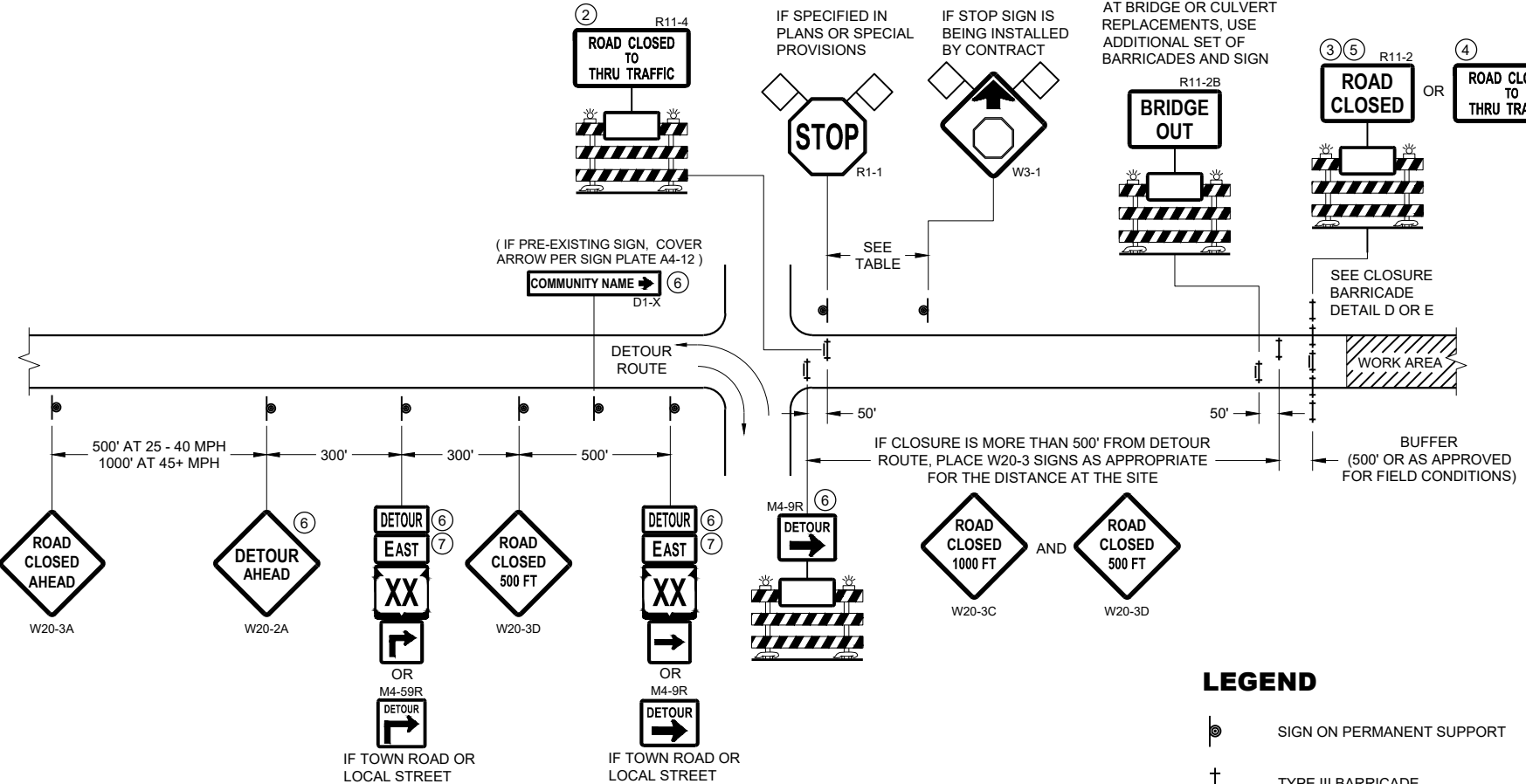
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



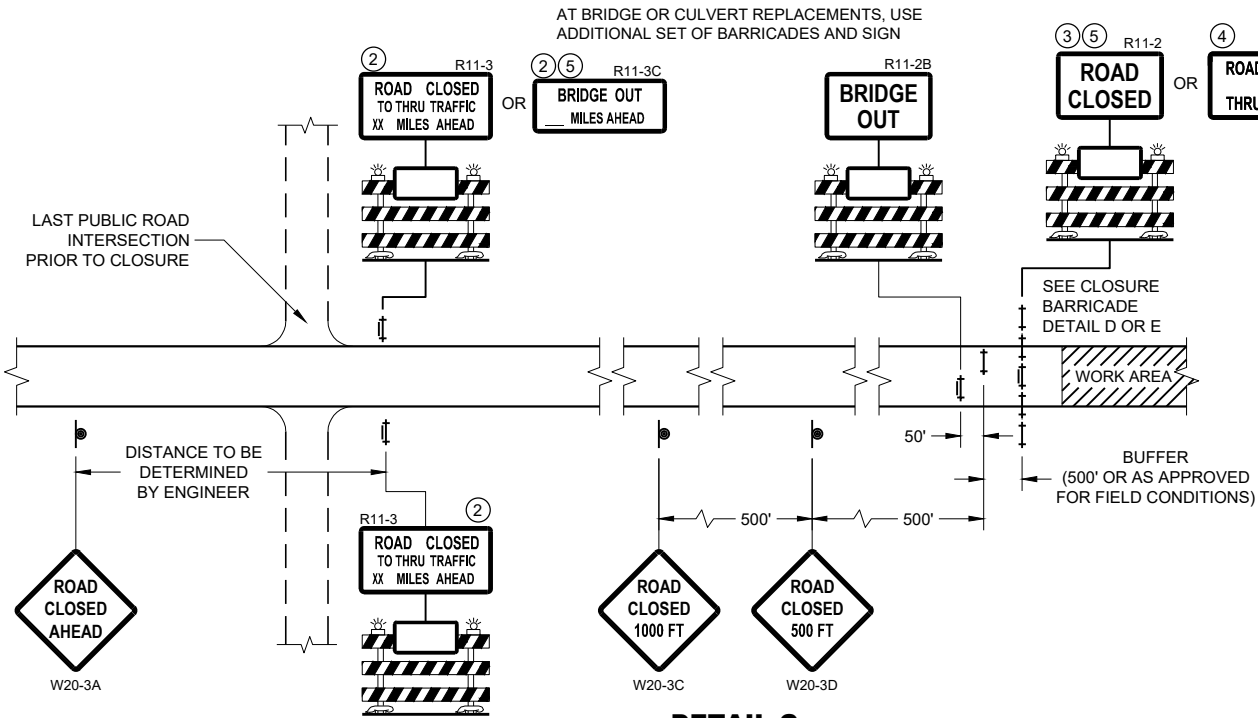
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

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

- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- OR M05 - 1 OR M06 - 1

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



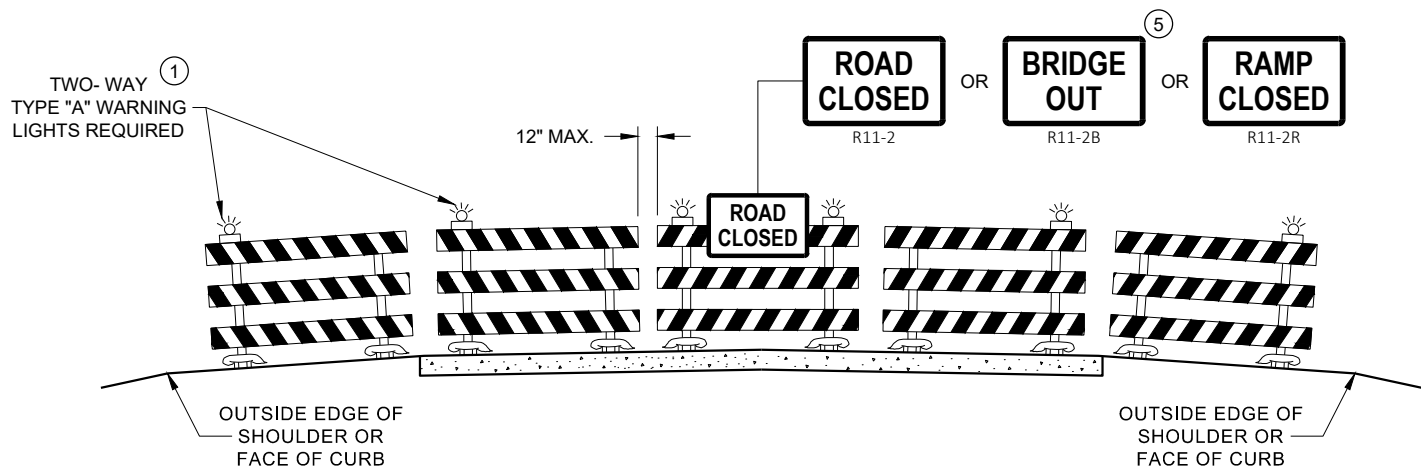
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

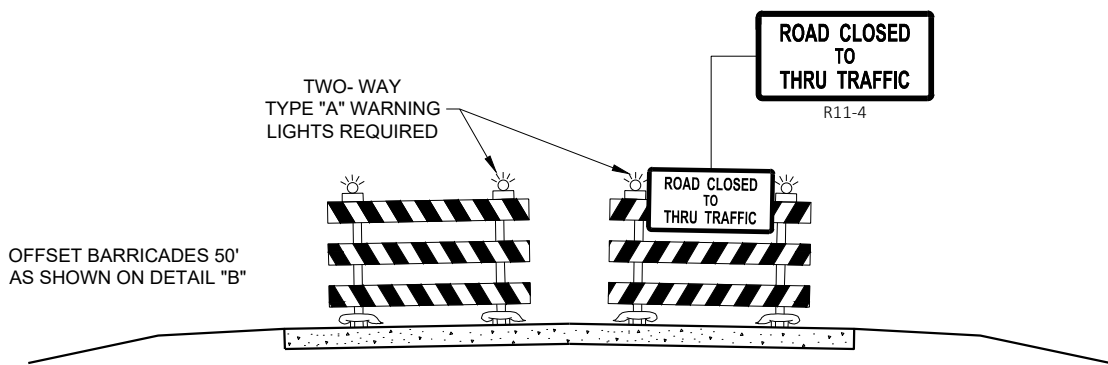
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

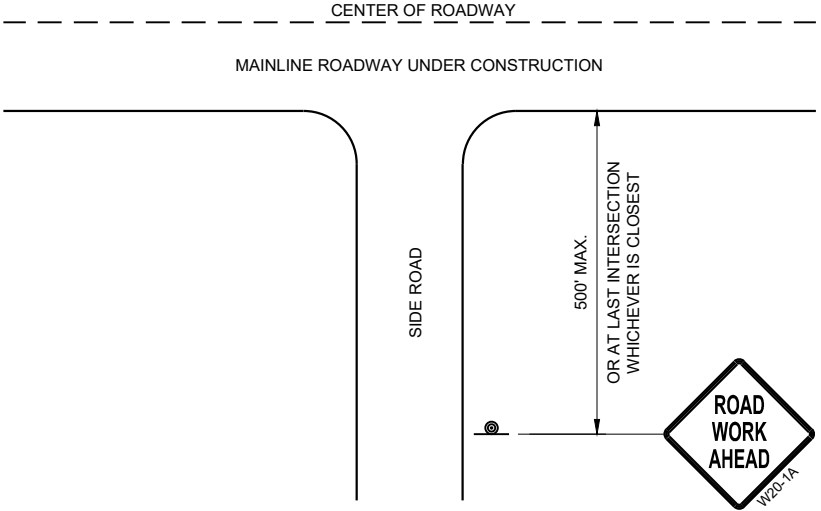
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

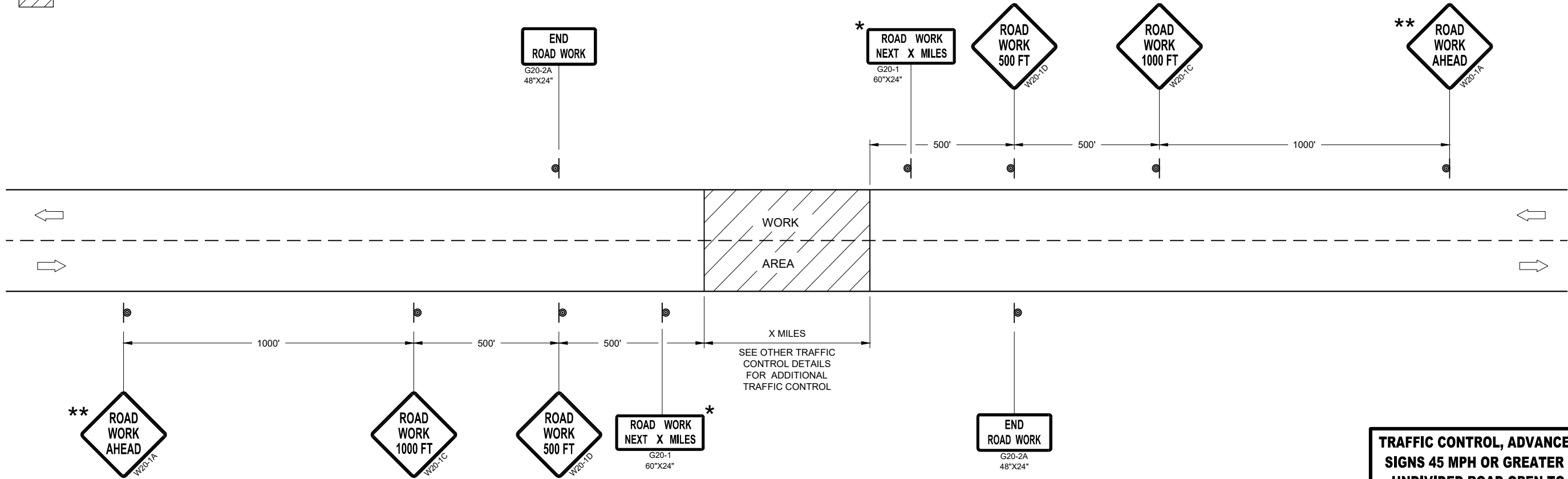
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

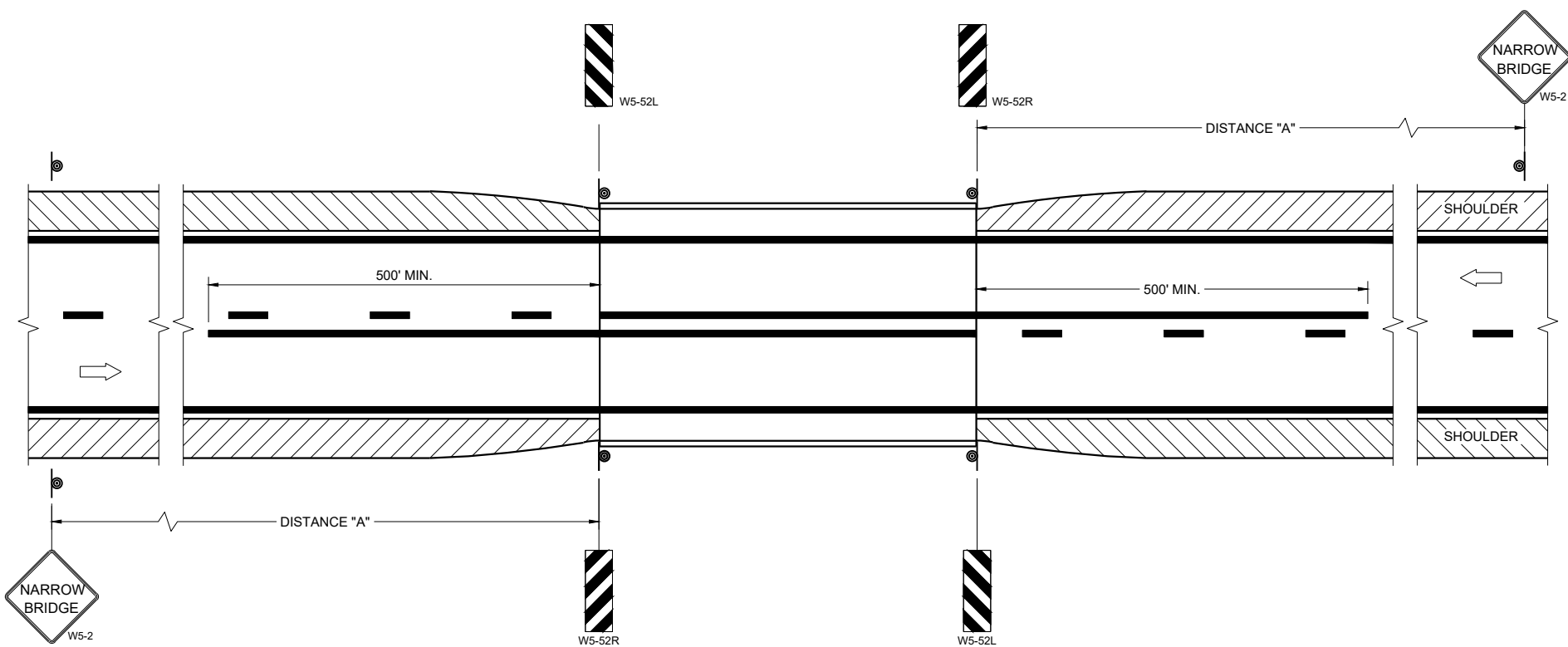


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

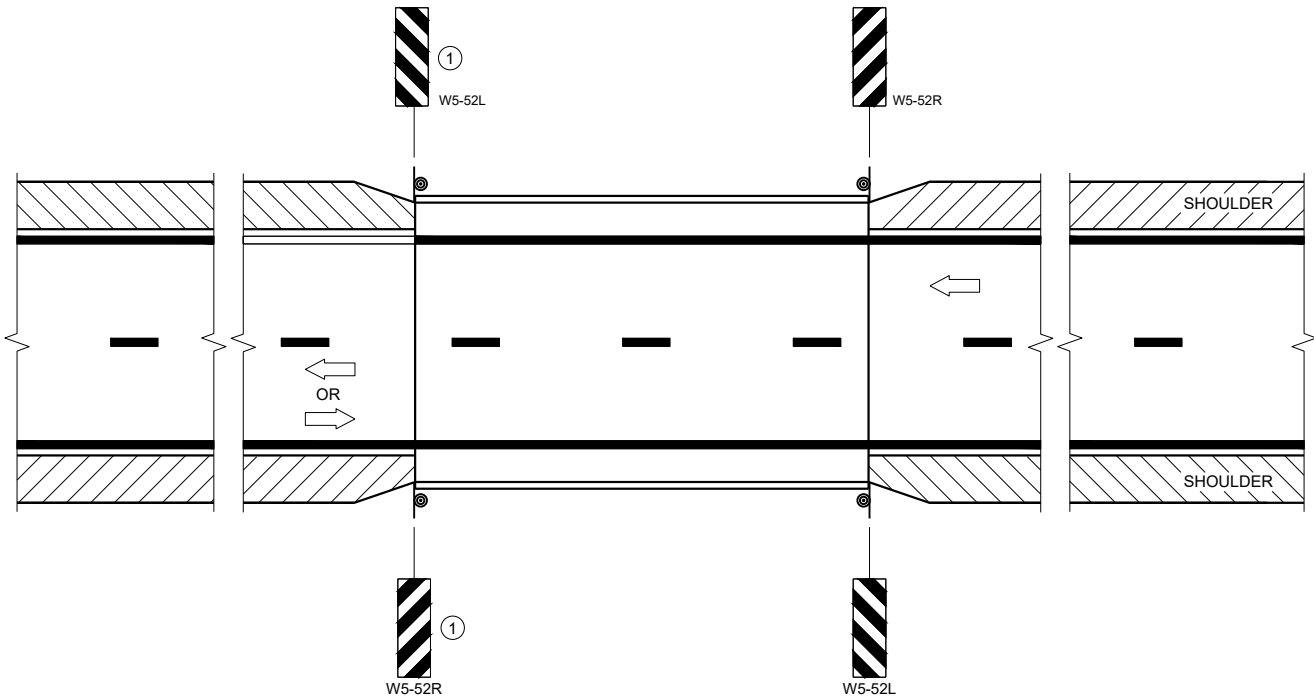
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE /S/ Andrew Heidtke
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

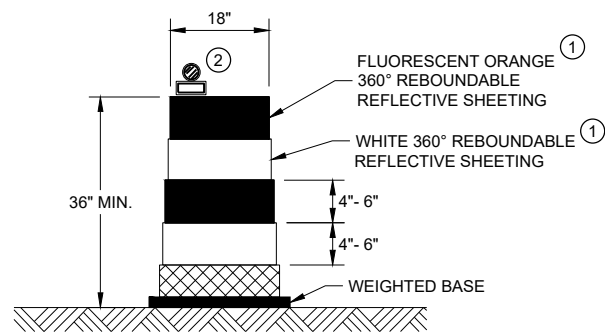
DISTANCE TABLE

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**

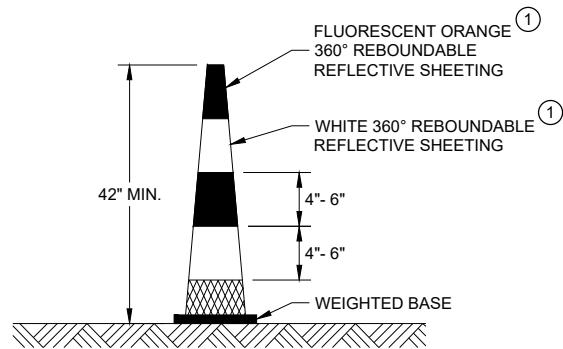
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



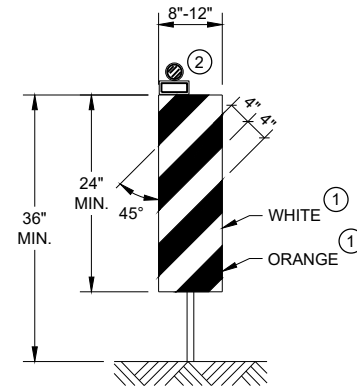
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



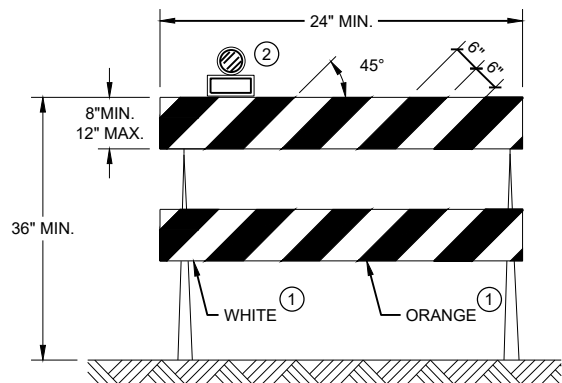
42" CONE

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



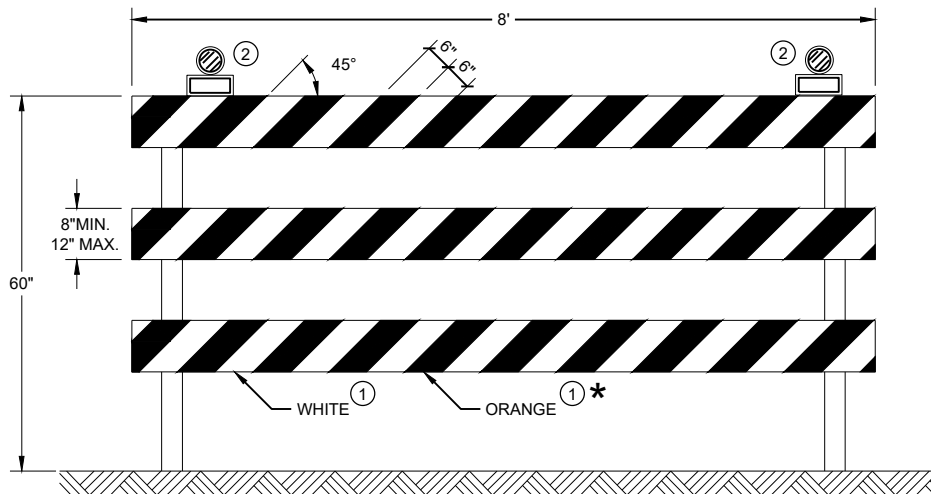
VERTICAL PANEL

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.

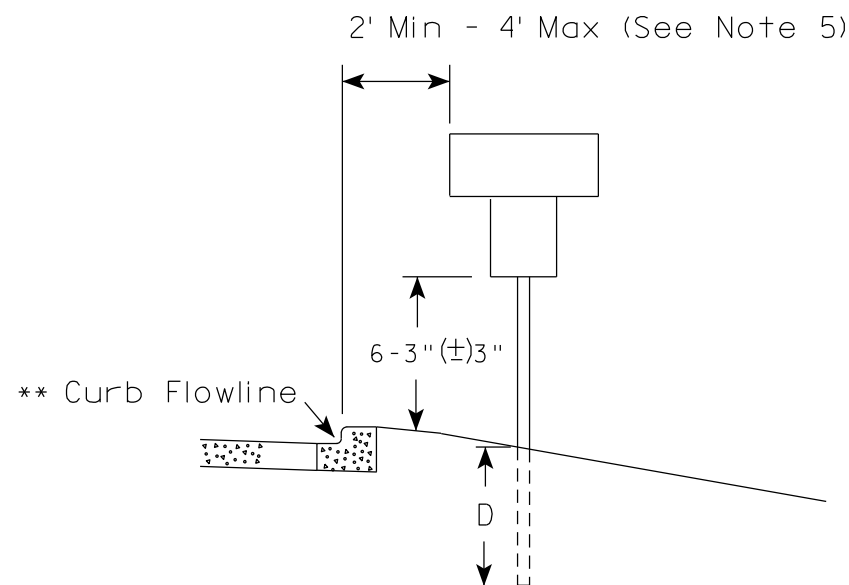
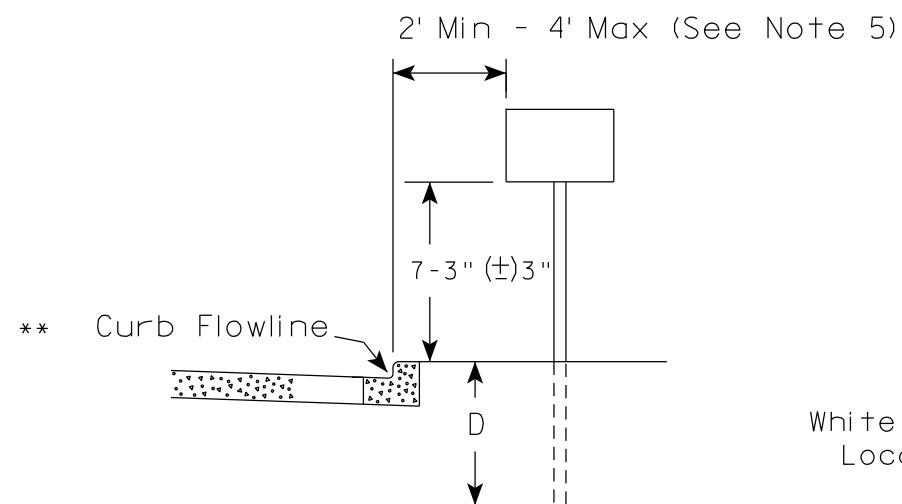
**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

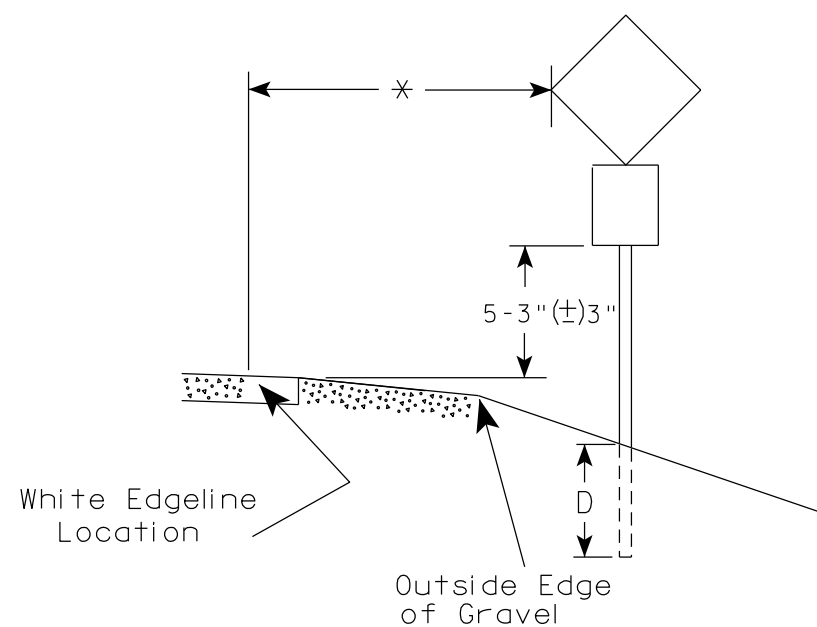
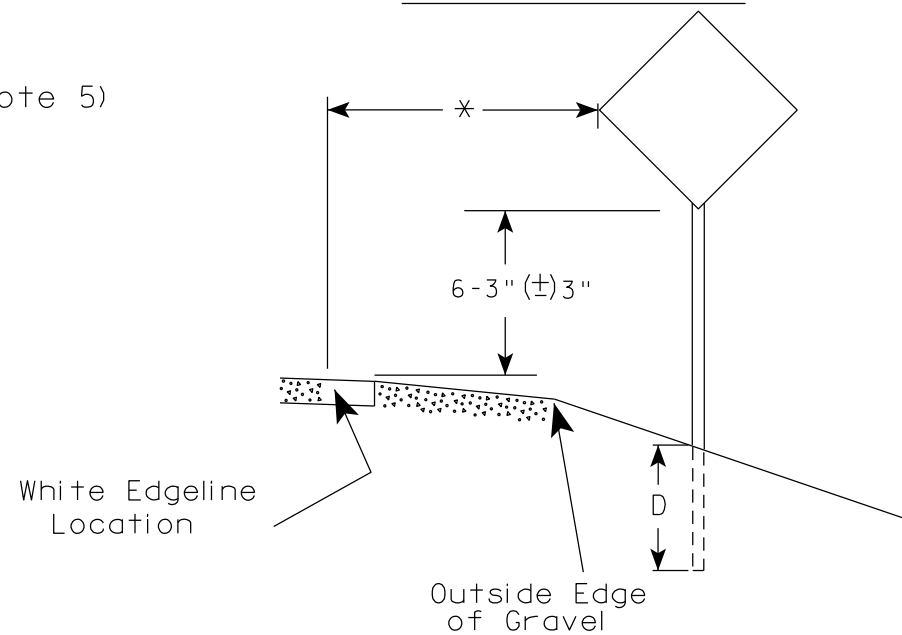
FHWA

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

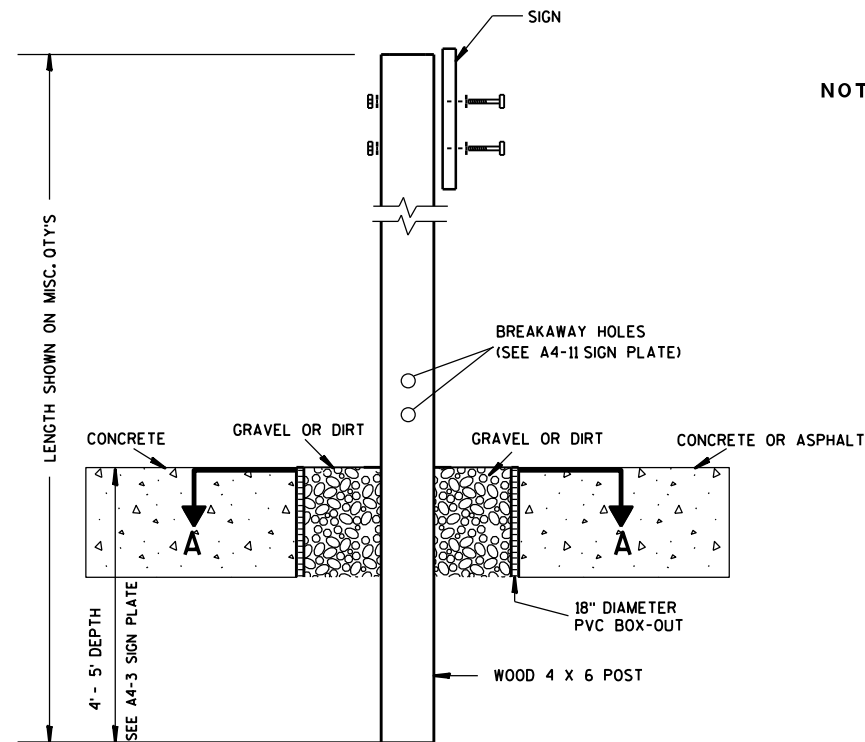
- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (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

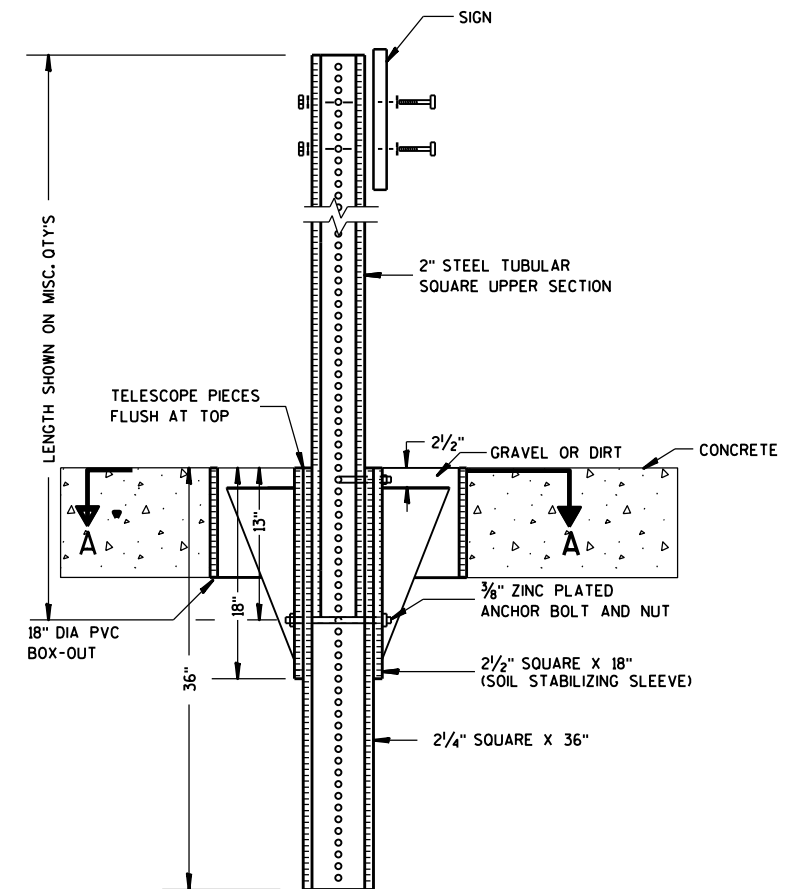
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

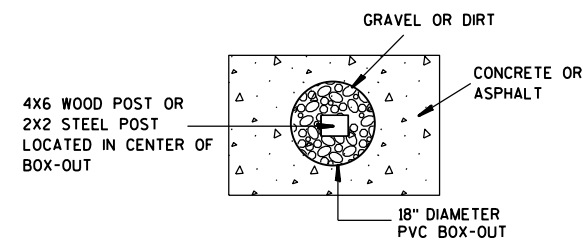
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

GENERAL NOTES

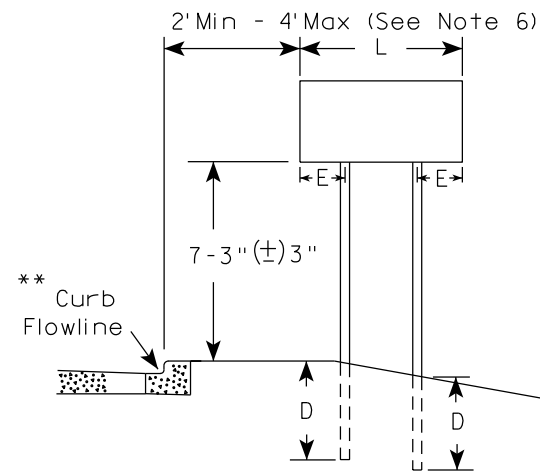
- 1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- 2. See tables below for required number of posts.
- 3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- 4. The (±) tolerance for mounting height 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.

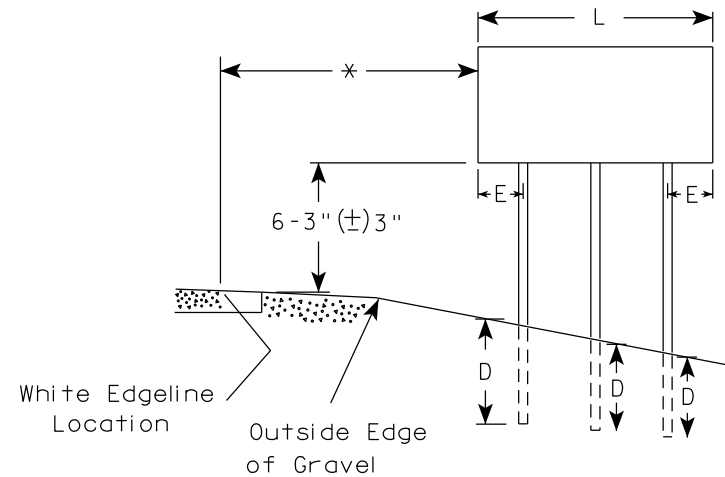
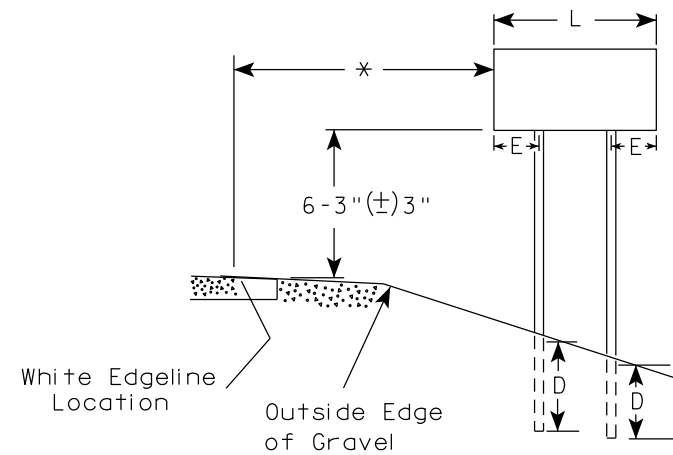
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

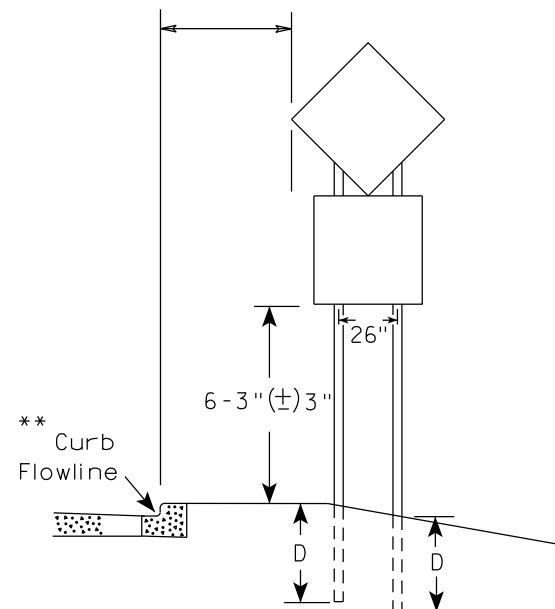
URBAN AREA



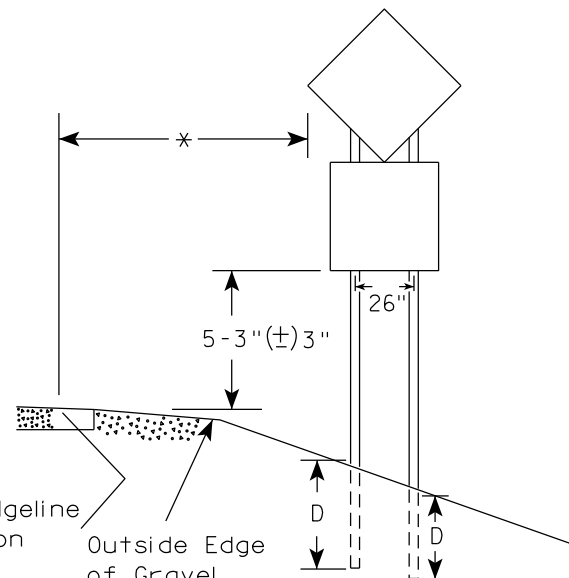
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

POST EMBEDMENT DEPTH

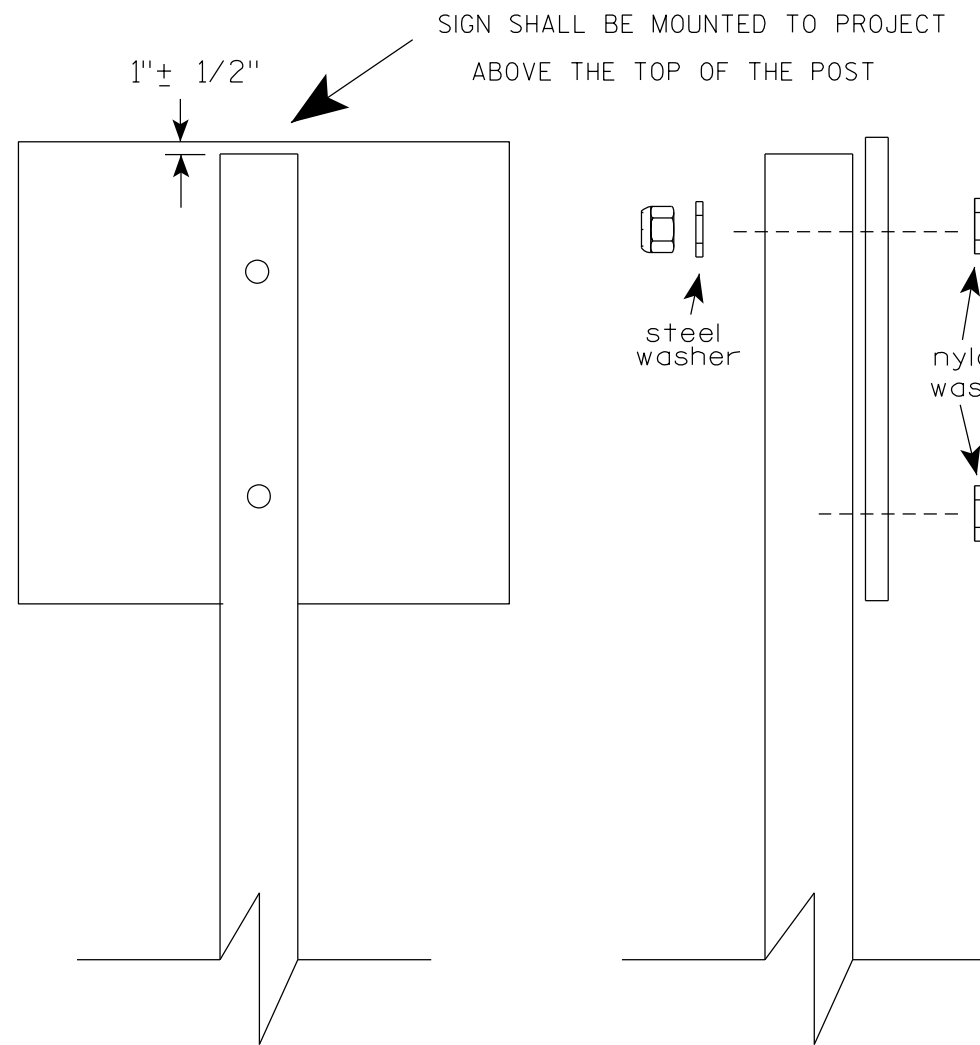
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

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 :

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

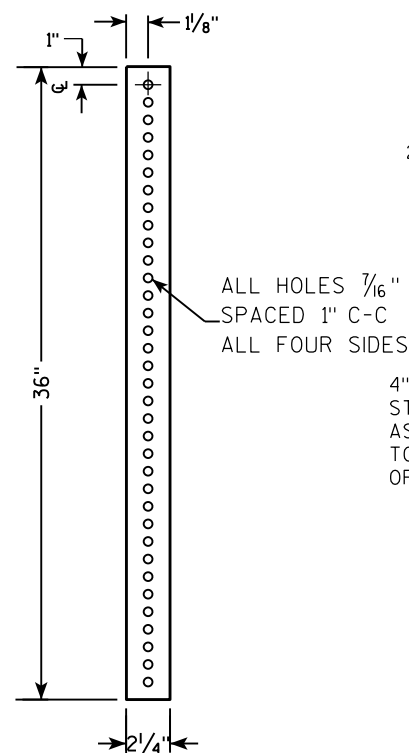
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- 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

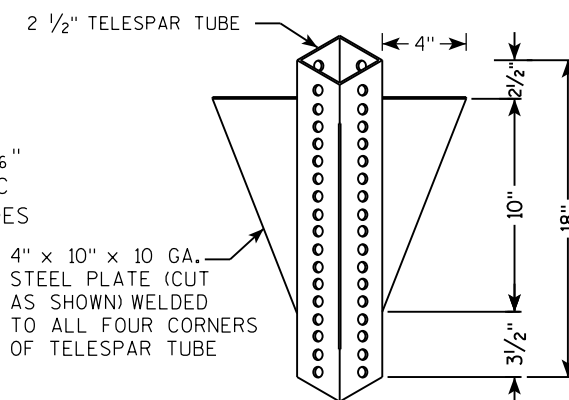
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

[illegible]

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

Side View Dimensions:

- Overall height: LENGTH SHOWN ON MISC. QTYS
- Section A-A: 36" (Total height of the main post section)
- Section B-B: 18" (Height of the upper section)
- Section C-C: 12" (Height of the lower section)

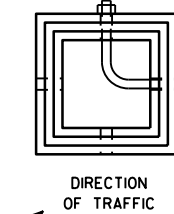
End View Details:

- Top Section:** 2" STEEL TUBULAR SQUARE UPPER SECTION. ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C. ALL FOUR SIDES.
- Sign Mounting:** SIGN (indicated by a dashed line). SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL.
- Anchor Bolts:** $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT (indicated by a dashed line).
- Base Section:** $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT (indicated by a dashed line).
- Soil Stabilizing Sleeve:** 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE).
- Post Section:** 2 1/4" SQUARE X 36" (indicated by a dashed line).

Assembly Notes:

- TELESCOPE PIECES FLUSH AT TOP
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C
- ALL FOUR SIDES
- $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- 2 1/4" SQUARE X 36"

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthaeus R. Rauch

for State Traffic Engineer

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

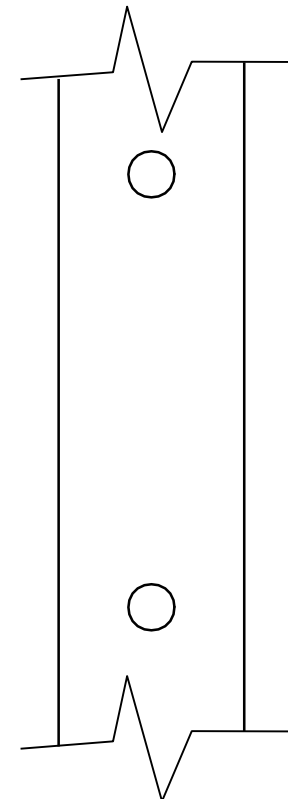
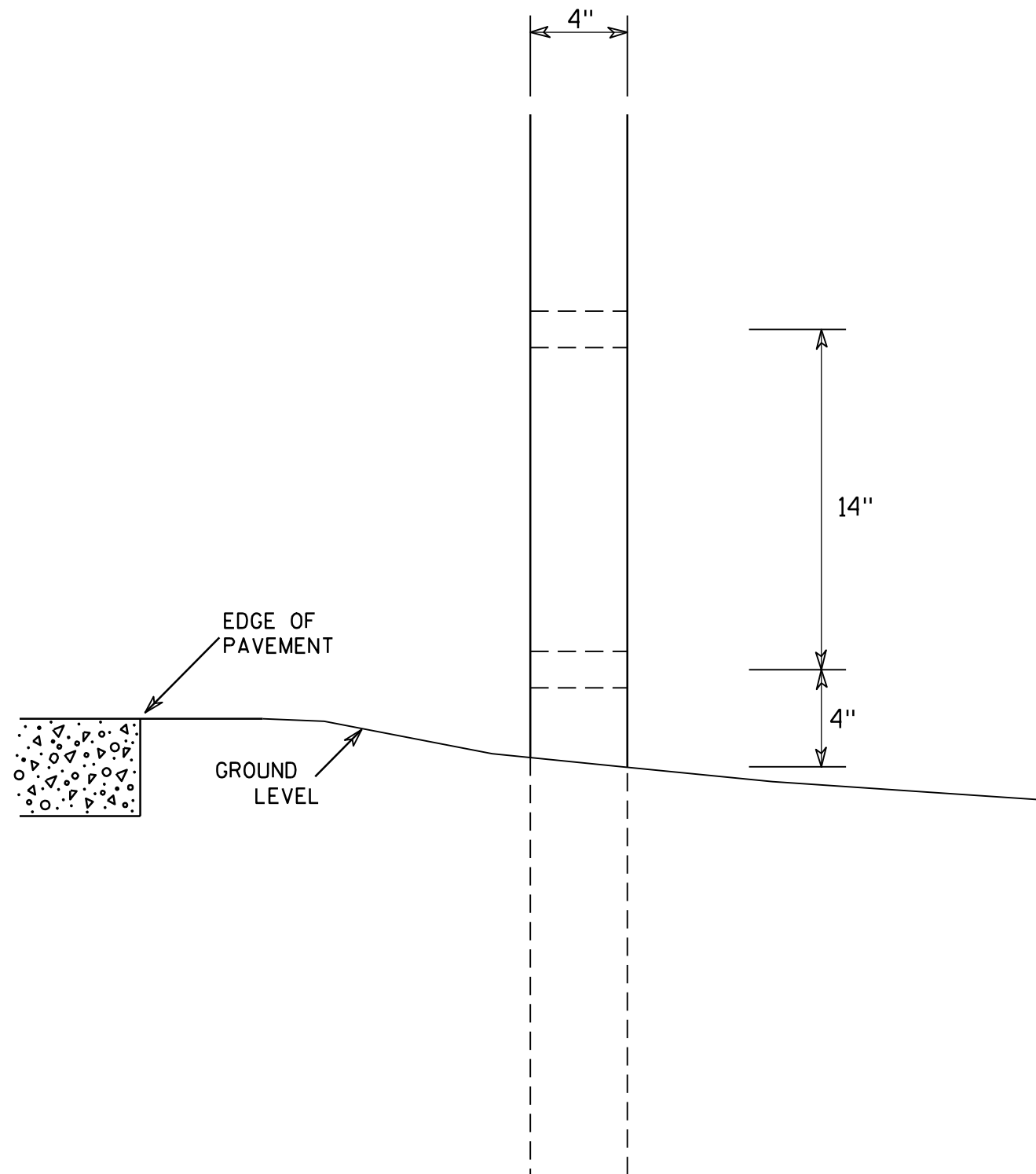
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

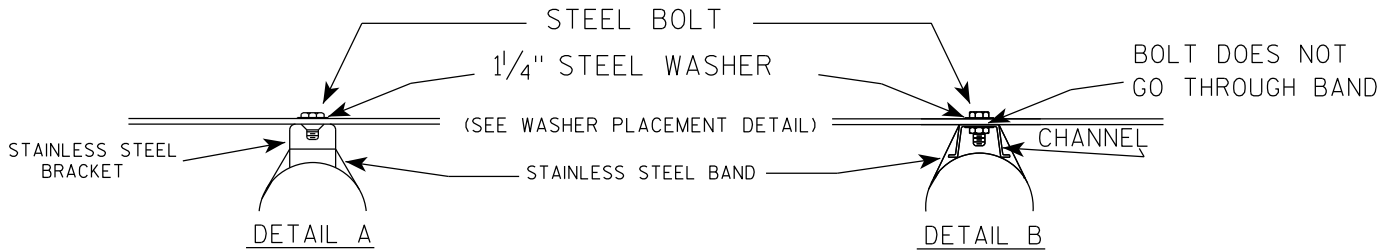
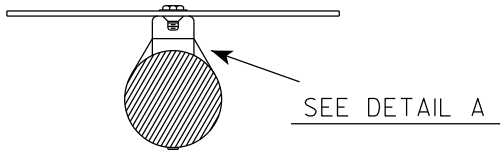
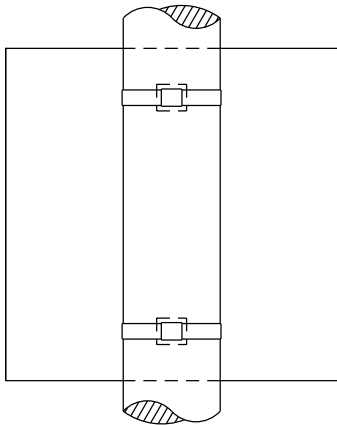
COUNTY:

SHEET NO:

E

BANDING

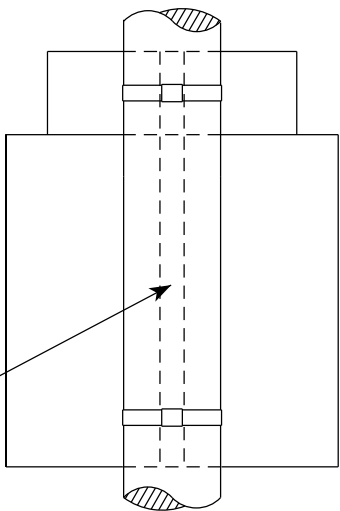
SINGLE SIGN



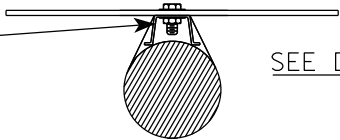
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " 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

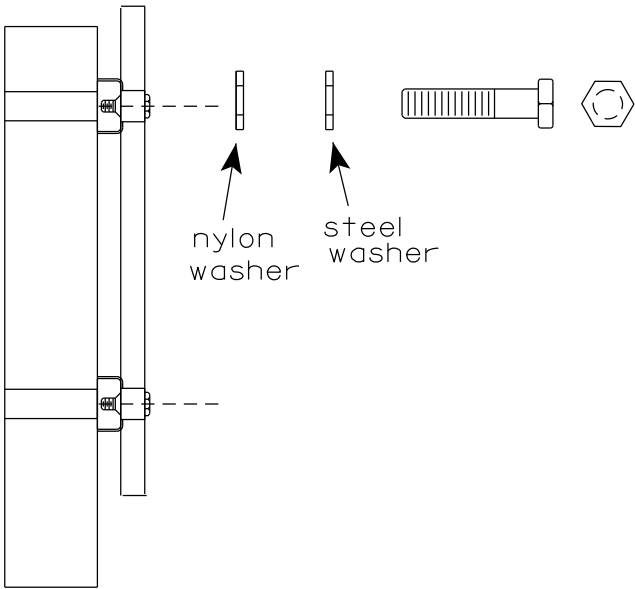
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



WASHER PLACEMENT

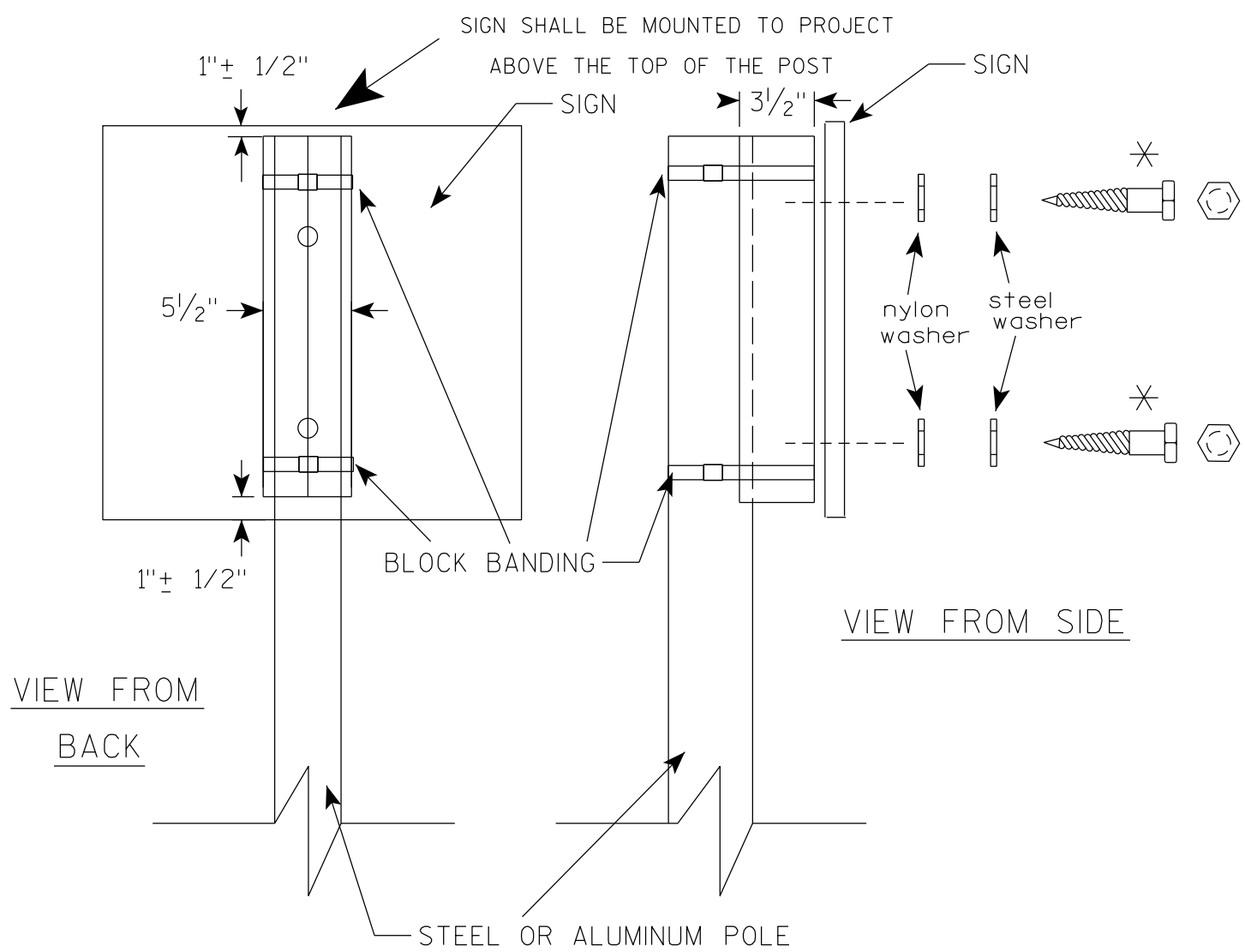


WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

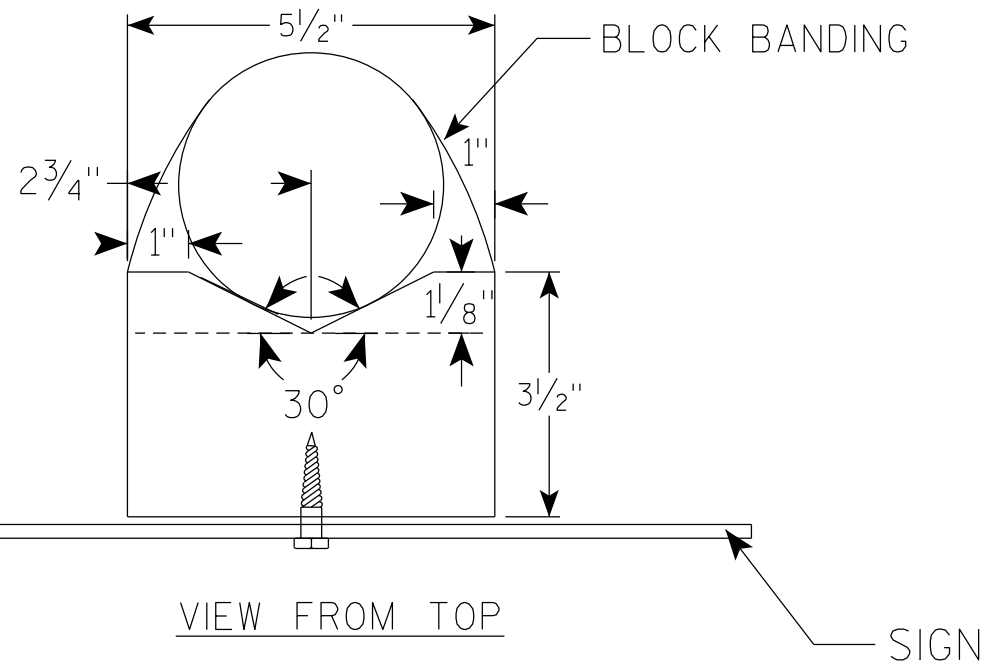
WISCONSIN DEPT OF TRANSPORTATION

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



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

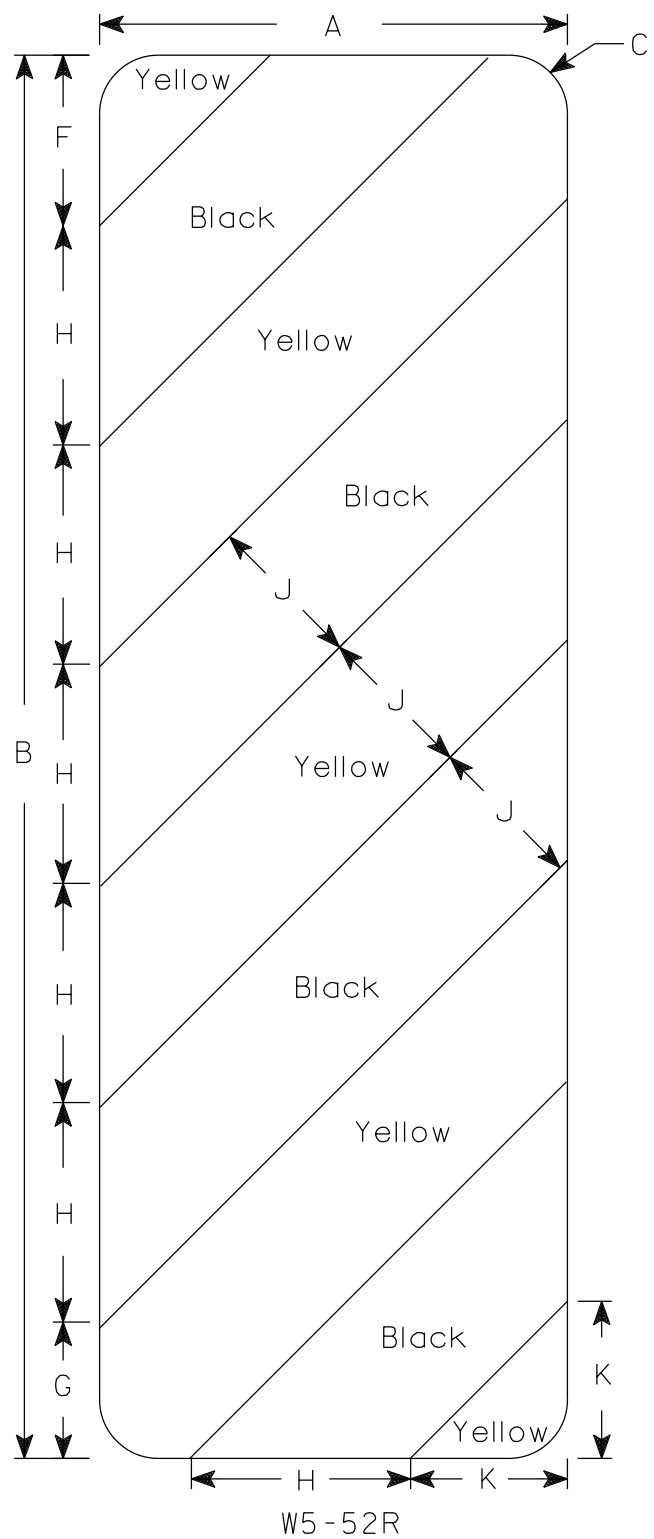
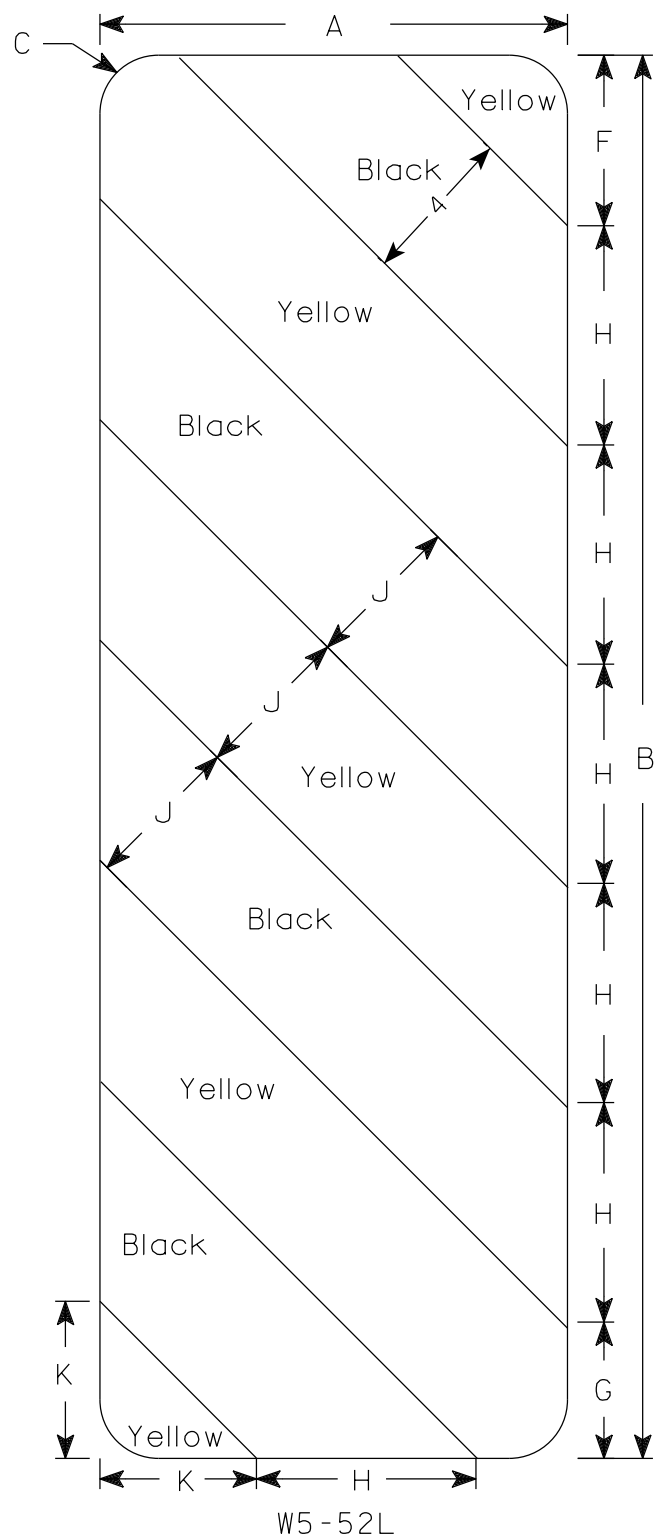
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

LEGEND

- COST OF EXCAVATION SHALL BE INCLUDED IN THE CONTRACT EACH PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-20-264".
- ⓧ

INDICATES WING NUMBER
- *

PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT.
- ECO-PASSAGE. SEE DETAIL ON SHEET 2.
- F.

FIXED BEARING

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.18
OPERATING RATING: RF = 1.54
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE $f'_c = 4,000$ PSI
ALL OTHER $f'_c = 3,500$ PSI
BAR STEEL REINFORCEMENT
GRADE 60 $f_y = 60,000$ PSI

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED 40'-0" LONG AT W. ABUT.
ESTIMATED 25'-0" LONG AT E. ABUT.

PILING AT E. ABUT. SHALL BE PRE-BORED 10'-0" MIN. BELOW THE BOTTOM OF ABUTMENT PRIOR TO DRIVING.

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

TRAFFIC DATA

FEATURE ON: WALNUT ROAD
ADT = 49 (2026)
ADT = 54 (2046)
R.D.S. = 35 MPH

HYDRAULIC DATA

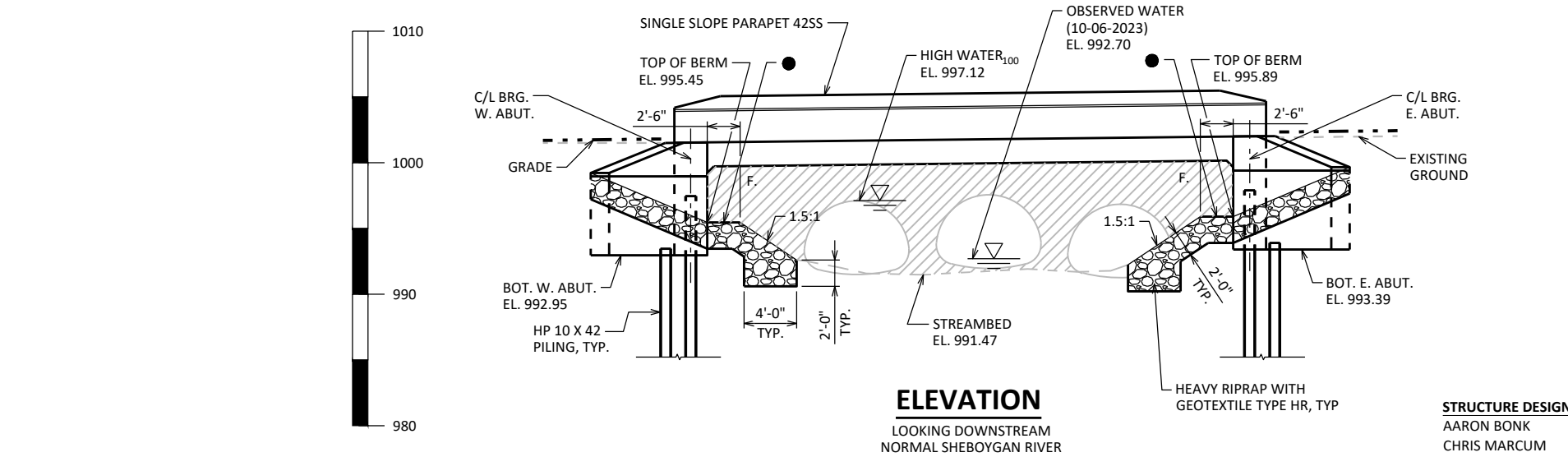
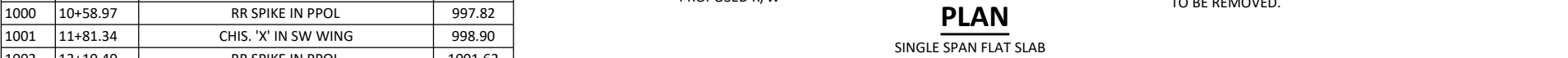
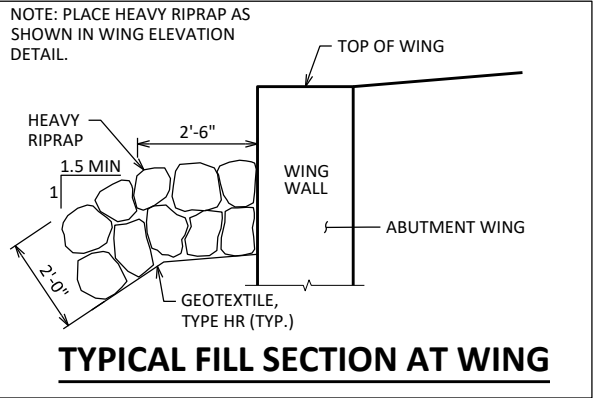
100-YEAR FREQUENCY:
 $Q_{100} = 690$ C.F.S.
 $V_{100} = 5.03$ F.P.S.
 $HW_{100} = EL. 997.12$
WATERWAY AREA = 137 SQ. FT.
DRAINAGE AREA = 10.4 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8
2-YEAR FREQUENCY:
 $Q_2 = 200$ C.F.S.
 $V_2 = 2.65$ F.P.S.
 $HW_2 = EL. 995.37$

LIST OF DRAWINGS:

- GENERAL PLAN & ELEVATION
- CROSS SECTION & QUANTITIES
- SUBSURFACE EXPLORATION
- WEST ABUTMENT
- WEST ABUTMENT DETAILS
- EAST ABUTMENT
- EAST ABUTMENT DETAILS
- SUPERSTRUCTURE
- SUPERSTRUCTURE DETAILS
- SINGLE SLOPE PARAPET 42SS

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
1000	10+58.97	RR SPIKE IN PPOL	997.82
1001	11+81.34	CHIS. 'X' IN SW WING	998.90
1002	13+10.40	RR SPIKE IN PPOL	1001.62



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.



STRUCTURE DESIGN CONTACTS:
AARON BONK (608) 261-0261
CHRIS MARCUM (715) 900-2599

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		08/05/25	DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-20-264			
WALNUT ROAD OVER SHEBOYGAN RIVER			
COUNTY	FOND DU LAC	TOWN	FOREST
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION			
DESIGNED BY	BOS	DESIGNED CK'D	BOS
DRAWN BY	ZRM	PLANS CK'D	CJM
GENERAL PLAN & ELEVATION			SHEET 1 OF 10

07/31/2025

I.D. 4816-00-72

DATE: 06/01/2025

SCALE = N.T.S.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-20-264 " 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.

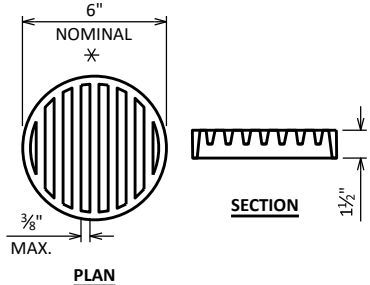
AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

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 THE ENTIRE EXPOSED TOP OF SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS AND FRONT FACE OF ABUTMENT TO 1'-0" PAST THE EDGE OF SLAB.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

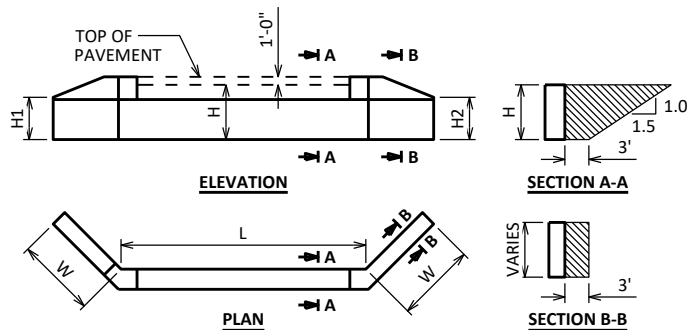
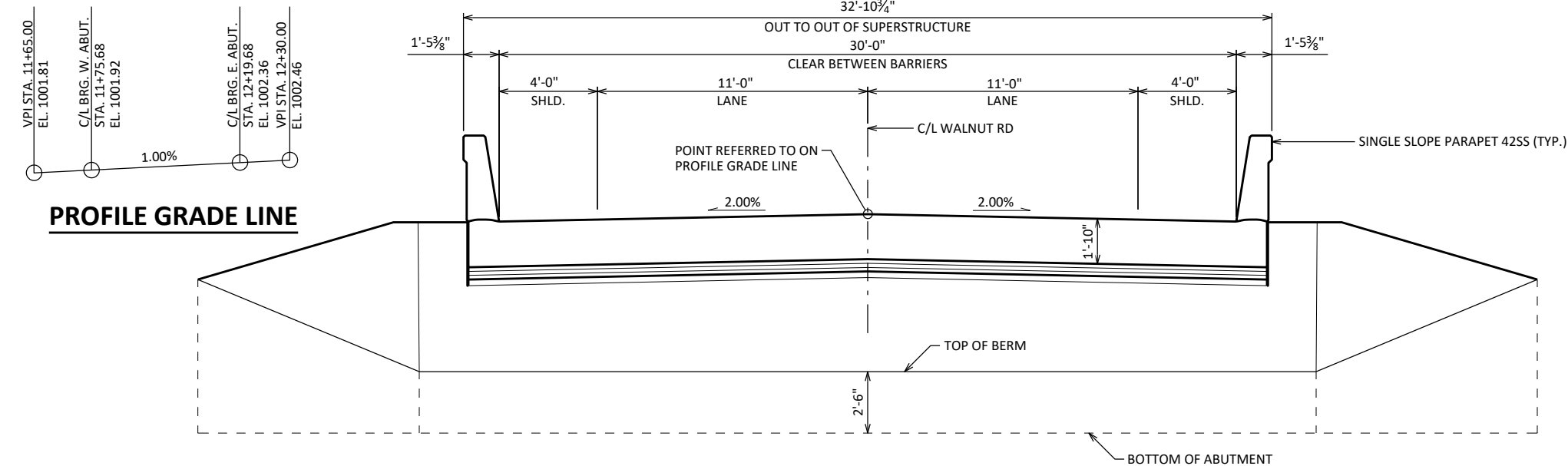


RODENT SHIELD DETAIL

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

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

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



ABUTMENT BACKFILL DIAGRAM

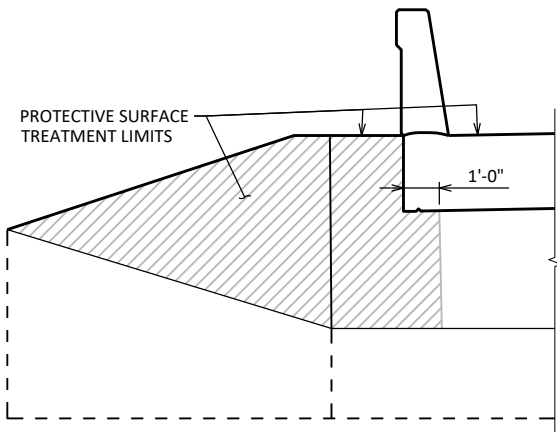
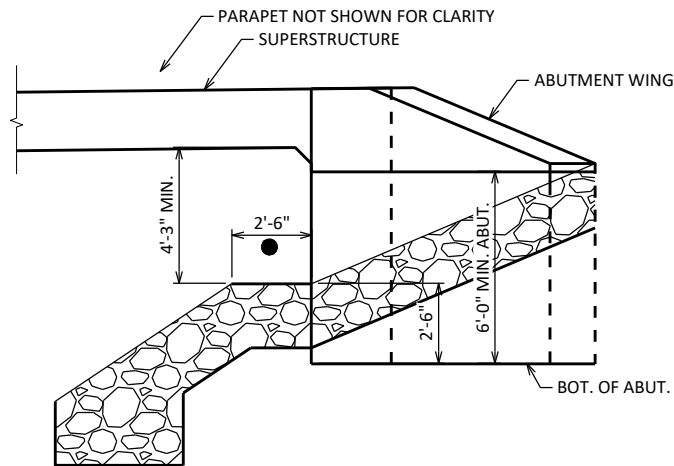
L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)$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

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS P-20-084	EACH	-	-	-	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-20-264	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	219	219	438
502.0100	CONCRETE MASONRY BRIDGES	CY	120	34	34	188
502.3200	PROTECTIVE SURFACE TREATMENT	SY	155	17	17	189
502.3210	PIGMENTED SURFACE SEALER	SY	46	-	-	46
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-	2,470	2,470	4,940
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	29,100	1,560	1,560	32,220
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	6	6	12
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	-	-	80	80
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	-	320	200	520
606.0300	RIPRAP HEAVY	CY	-	105	90	195
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	80	80	160
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	-	-	4
645.0111	GEOTEXTILE DF SCHEDULE A	SY	-	49	49	98
645.0120	GEOTEXTILE TYPE HR	SY	-	210	185	395
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	-	11	10	21
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				$\frac{1}{2}$ " & $\frac{3}{4}$ "
	NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER	SIZE				1"
	NAME PLATE	EACH				1

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

CROSS SECTION THRU ROADWAY

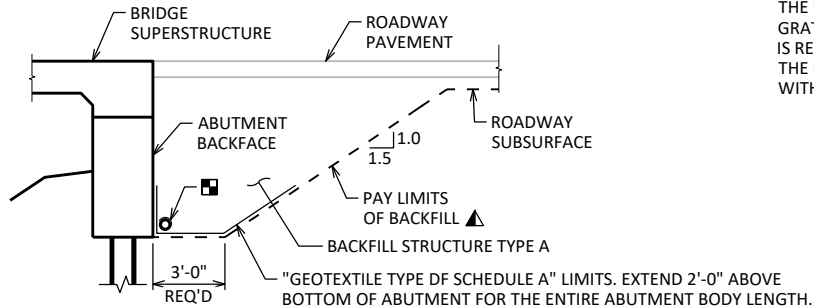
LOOKING UPSTATION
(PILING NOT SHOWN FOR CLARITY)PROTECTIVE SURFACE
TREATMENT DETAILS

ECO-PASSAGE DETAIL

BOTH ABUTMENTS SIMILAR

FILL VOIDS IN RIPRAP HEAVY WITH "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR" TO FULLY FILL ALL VOIDS AND LEAVE, ON AVERAGE, 2-INCHES ABOVE THE HIGHEST ROCK POINTS WHERE THEY ABUT EACH OTHER. PROVIDE LEVEL SURFACE OF THE ECO-PASSAGE.

THE TRANSITIONS OF THE AT-GRADE ECO-PASSAGE TO THE EDGES OF THE RIPRAP HEAVY SHALL BE GRADUAL WITH NO MORE THAN 2:1 SLOPE. SELECT CRUSHED MATERIAL SHALL BE COMPACTED ONCE IN PLACE.



TYPICAL SECTION THRU ABUTMENT

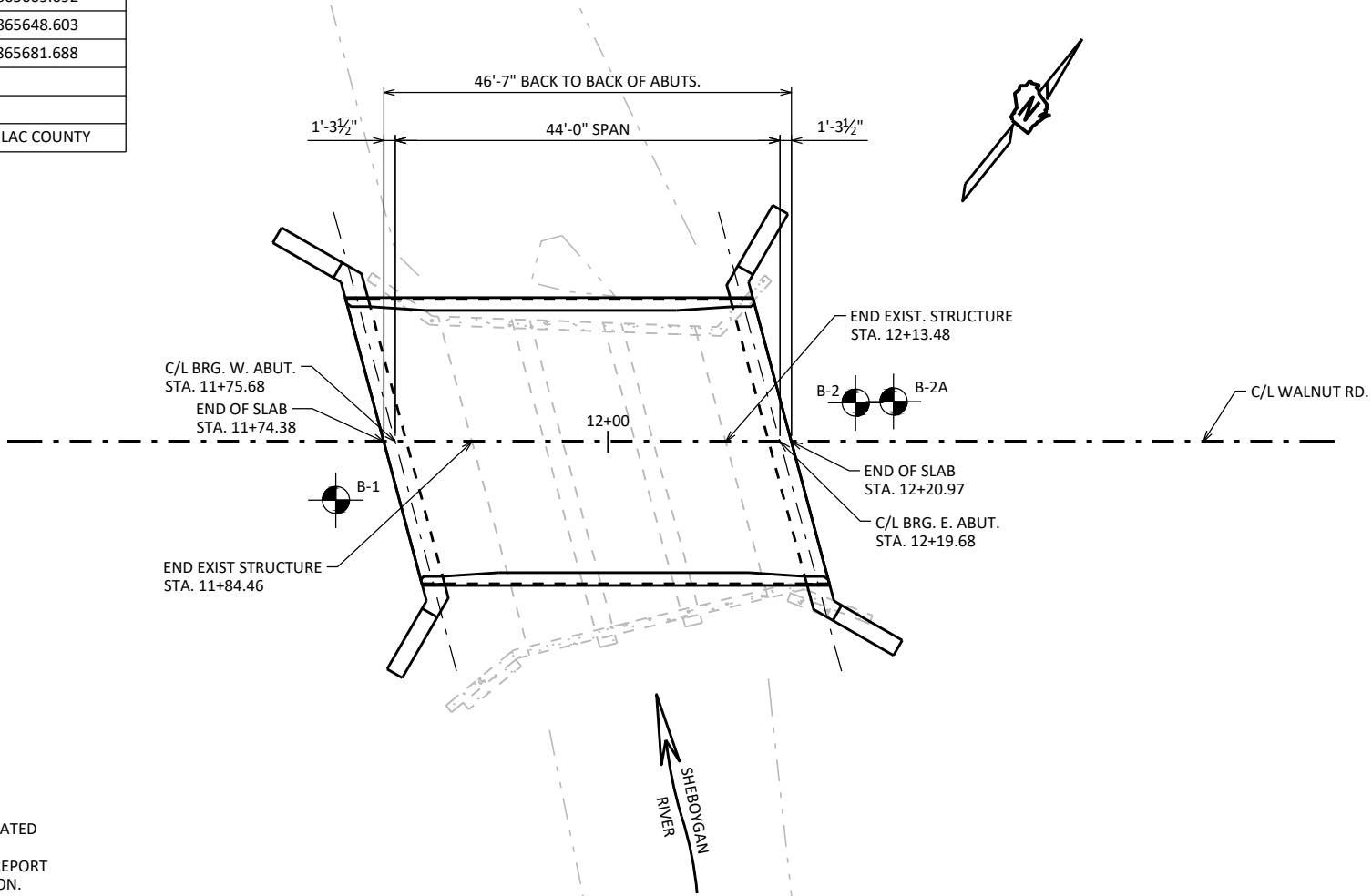
▲ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-20-264			
DRAWN BY		BOS	PLANS CK'D CJM
CROSS SECTION & QUANTITIES		SHEET 2 OF 10	

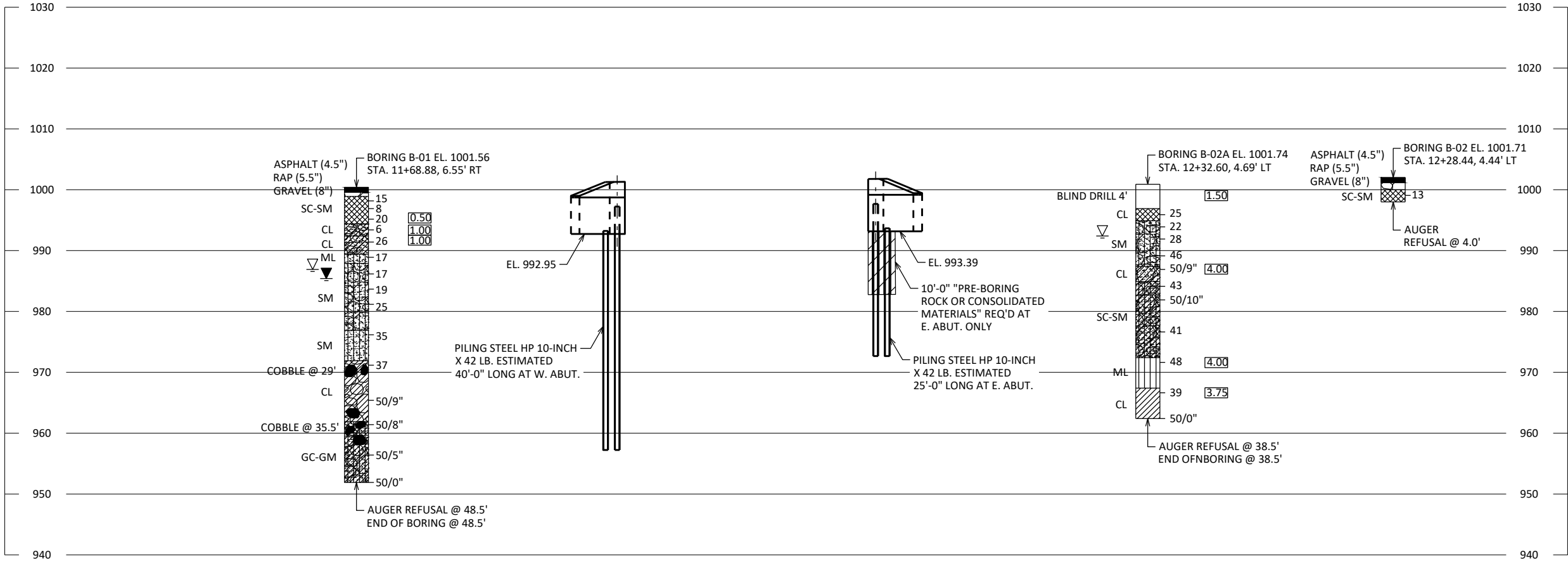
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	JULY 5, 2023	375035.177	865609.092
2	JULY 6, 2023	375081.080	865648.603
2A	JULY 6, 2023	375083.884	865681.688
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WISCRS NAD83(2011) FOND DU LAC COUNTY			



NOTES:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.



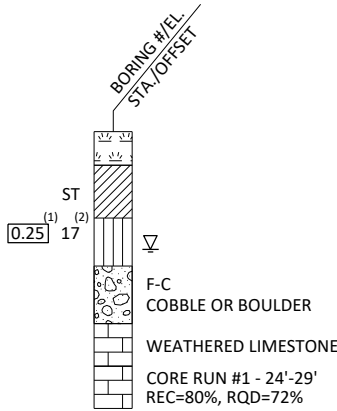
STATE PROJECT NUMBER

4816-00-73

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
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

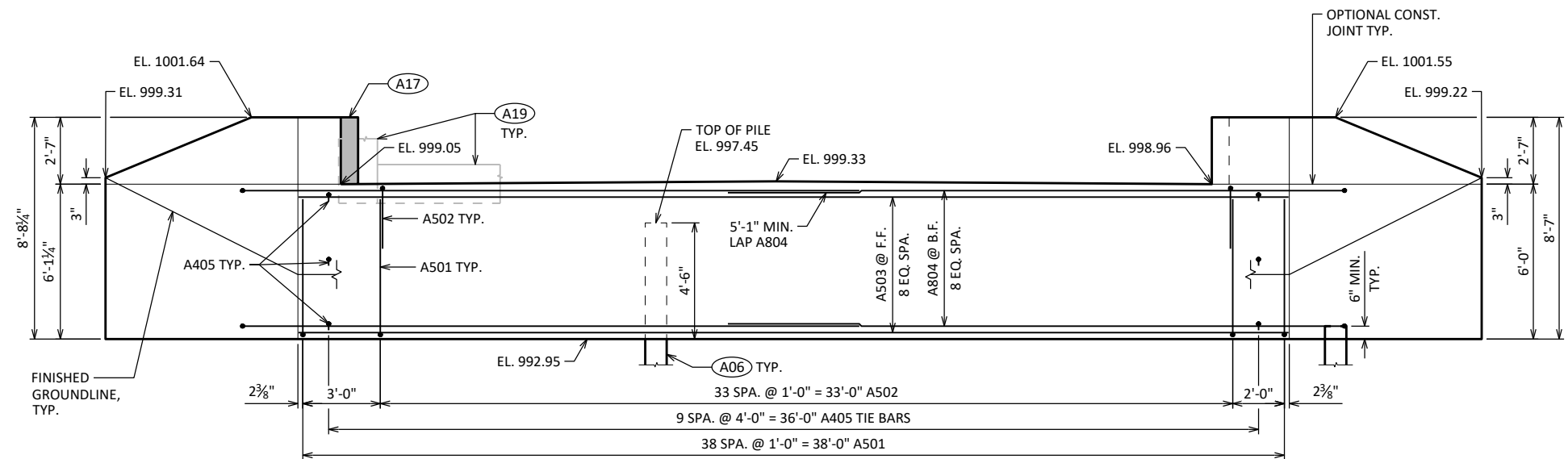
STRUCTURE B-20-264

DRAWN BY	ZRM	PLANS CK'D	CJM
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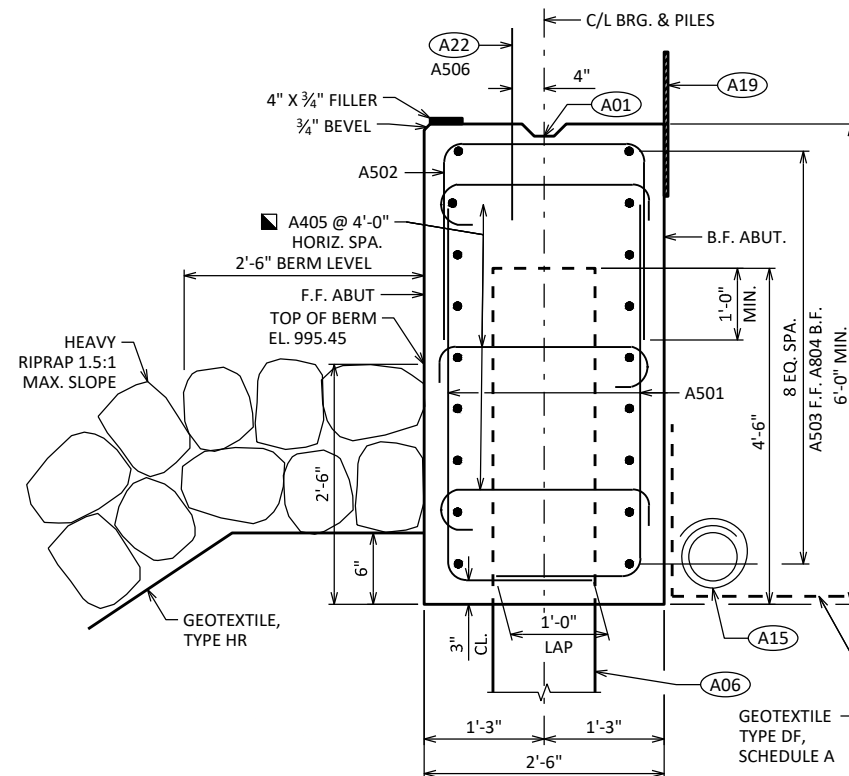
SUBSURFACE
EXPLORATION

SHEET 3 OF 10

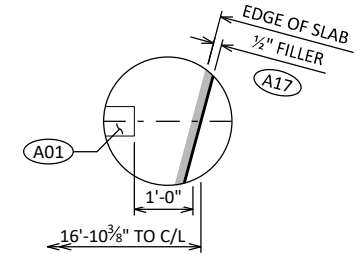
SCALE = N.T.S.



ELEVATION
LOOKING DOWNSTATION

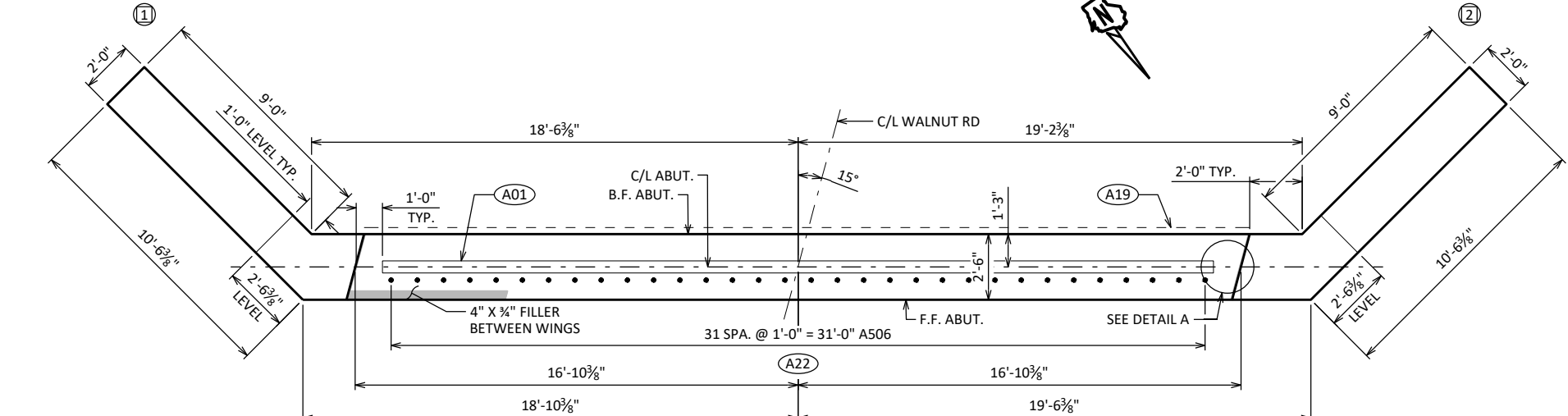


SECTION THRU BODY

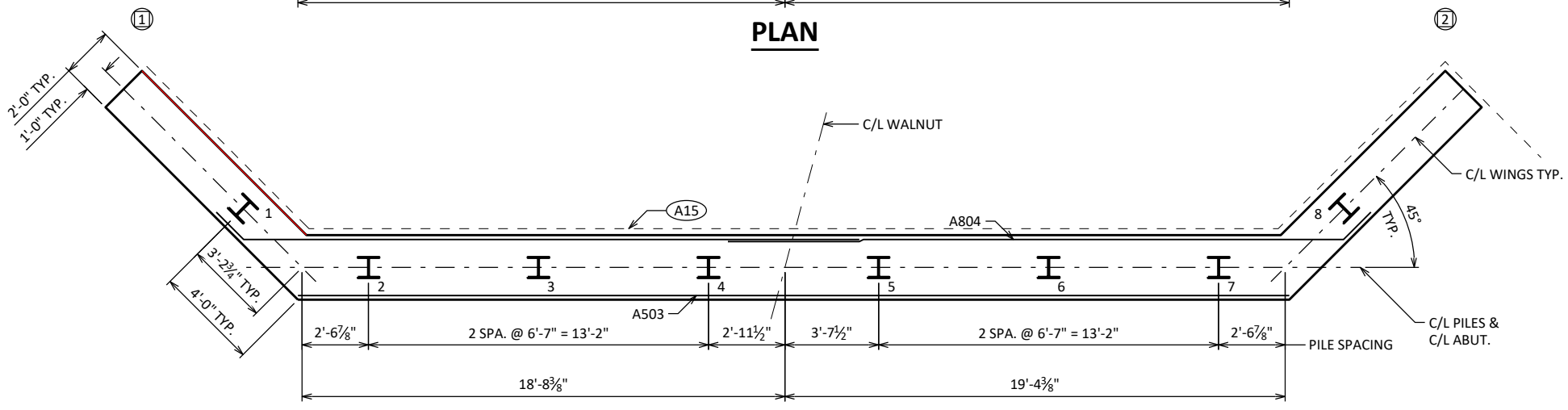


DETAIL A

- A01** CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.
 - A06** SUPPORT ABUTMENT ON HP 10 x 42 PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS 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 3/8" 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** A506 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.



PLAN



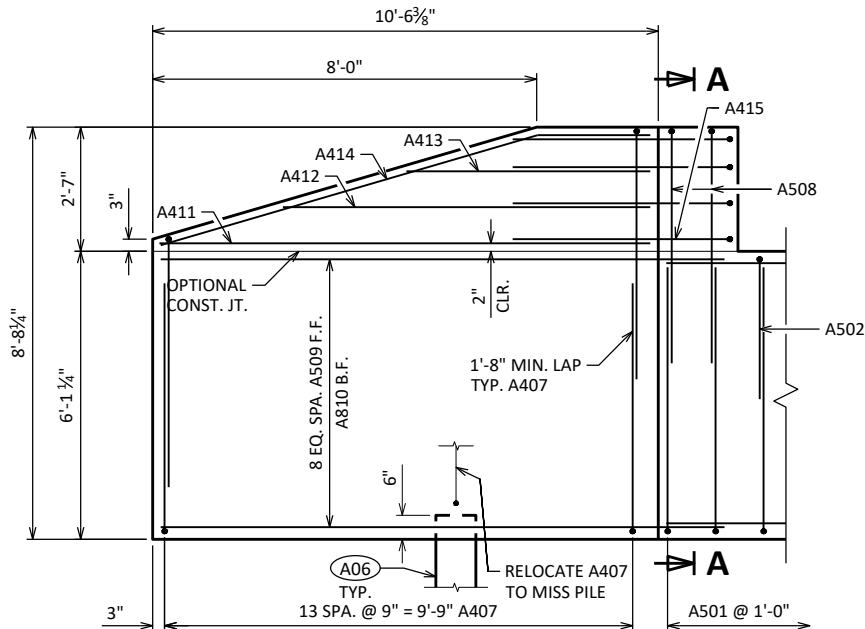
PILE PLAN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-20-264			
DRAWN BY		BOS	PLANS CK'D CJM
WEST ABUTMENT		SHEET 4 OF 10	

BILL OF BARS

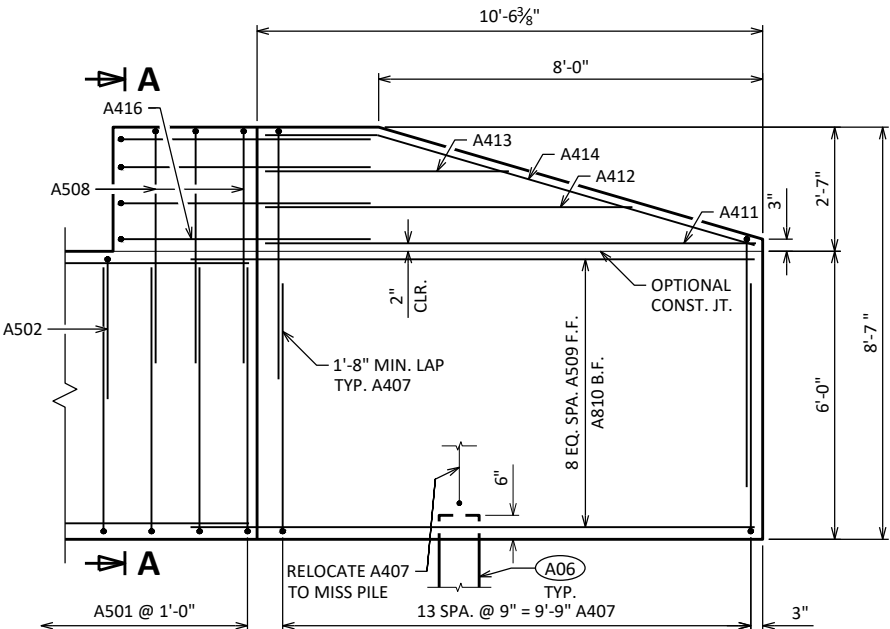
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		78	7'-0"	X		ABUT BODY STIRRUPS
A502		34	7'-9"	X		ABUT BODY STIRRUPS - TOP U-BAR
A503		9	38'-4"			ABUT BODY HORIZ. - F.F.
A804		18	25'-2"	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	56	11'-10"	X		WING STIRRUPS
A508	X	5	11'-7"	X		WING CORNER STIRRUPS
A509	X	18	11'-9"	X		WING LOWER HORIZ. - F.F.
A810	X	18	13'-3"	X		WING LOWER HORIZ. - B.F.
A411	X	4	10'-1"			WING UPPER HORIZ.
A412	X	4	7'-7"			WING UPPER HORIZ.
A413	X	4	5'-0"			WING UPPER HORIZ.
A414	X	4	9'-9"	X		WING TOP HORIZ.
A415	X	4	7'-8"	X		WING 1 UPPER HORIZ. CORNER
A416	X	4	9'-0"	X		WING 2 UPPER HORIZ. CORNER



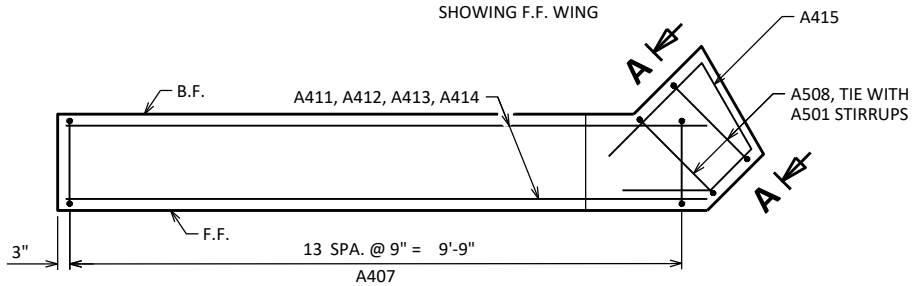
WING 1 ELEVATION

SHOWING F.F. WING



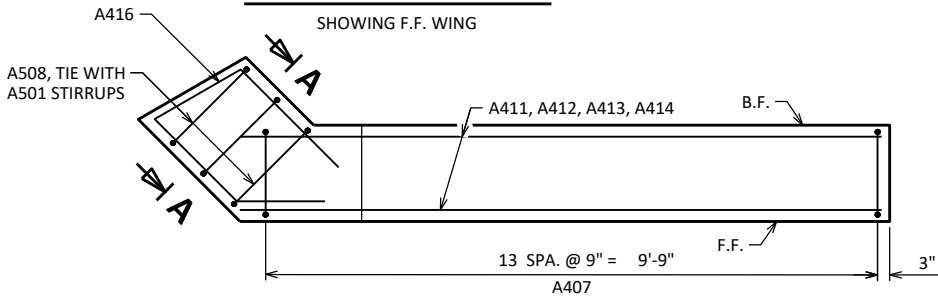
WING 2 ELEVATION

SHOWING F.F. WING



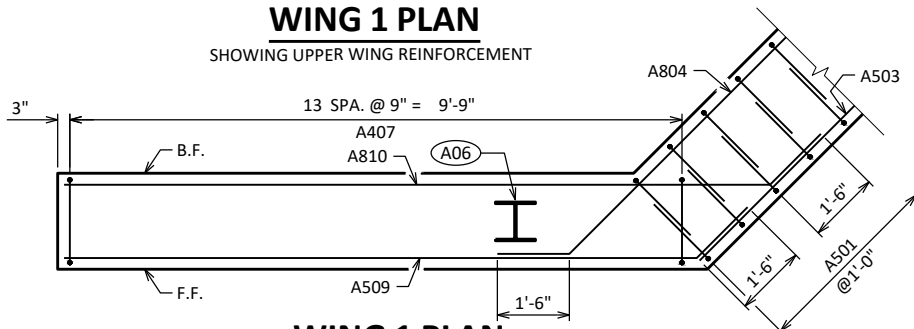
WING 1 PLAN

SHOWING UPPER WING REINFORCEMENT



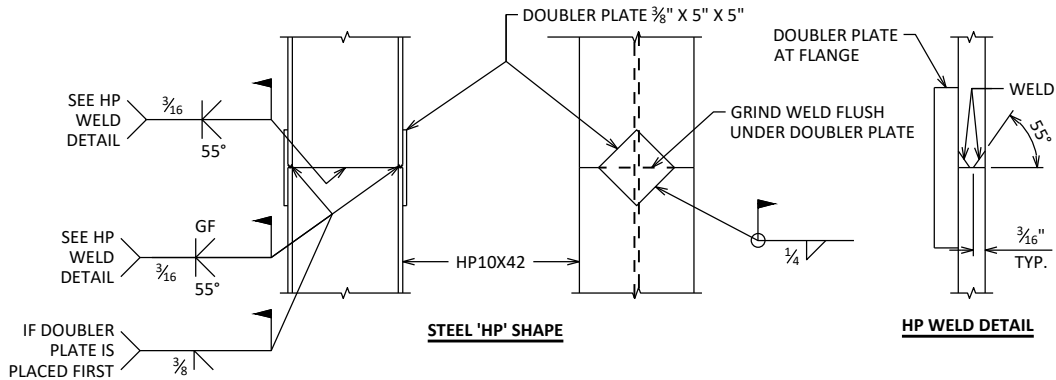
WING 2 PLAN

SHOWING UPPER WING REINFORCEMENT



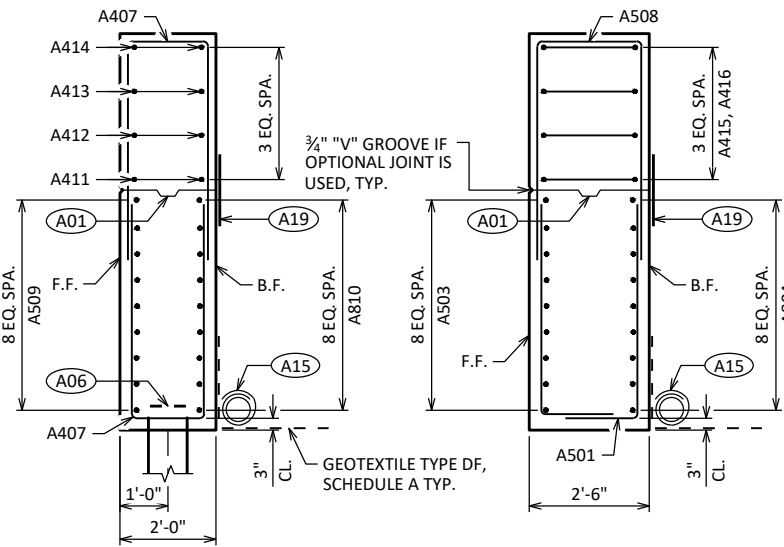
WING 1 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 2 SIMILAR



'HP' PILE DETAILS

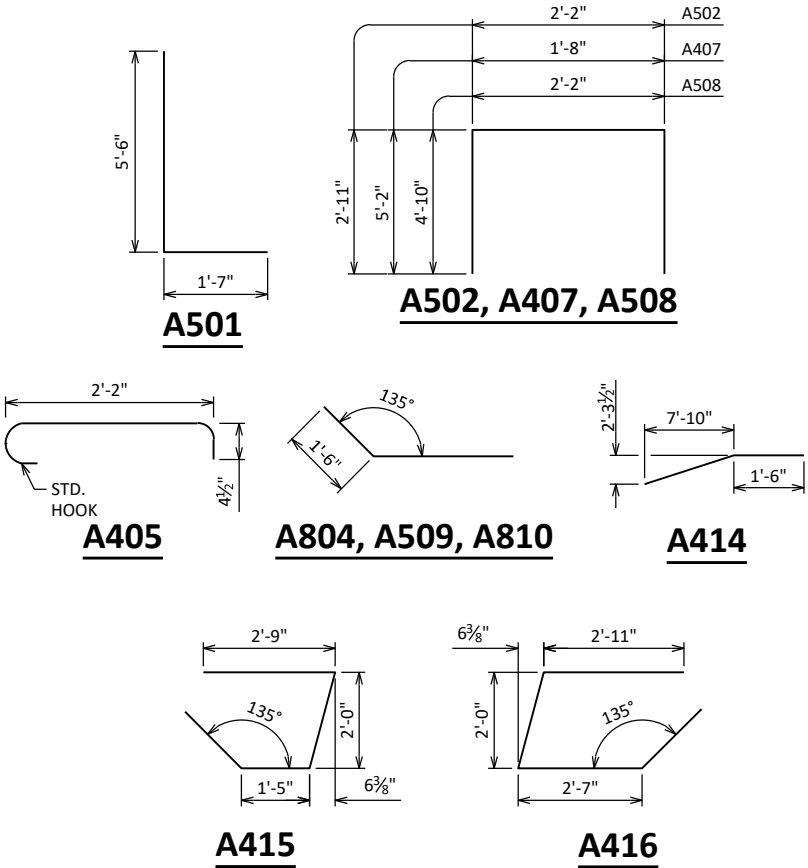
THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.0.0.0



SECTION THRU WING 1

TYPICAL BOTH WINGS

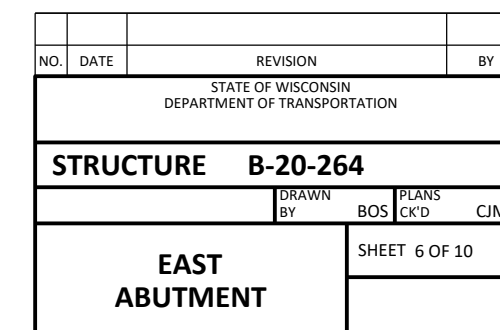
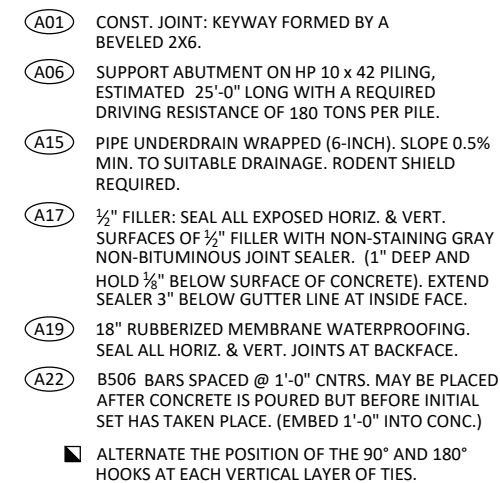
SECTION A-A



- 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 HP 10 x 42 PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS 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-20-264			
DRAWN BY		BOS	PLANS CK'D CJM
WEST ABUTMENT DETAILS		SHEET 5 OF 10	

SCALE =



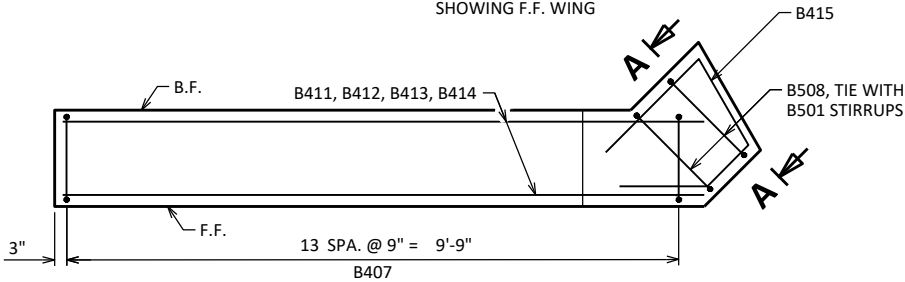
BILL OF BARS

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		78	7'-0"	X		ABUT BODY STIRRUPS
B502		34	7'-9"	X		ABUT BODY STIRRUPS - TOP U-BAR
B503		9	38'-4"			ABUT BODY HORIZ. - F.F.
B804		18	25'-2"	X		ABUT BODY HORIZ. - B.F.
B405		30	3'-0"	X		ABUT BODY TIE BARS
B506	X	32	2'-0"			ABUT BODY DOWEL BARS
B407	X	56	11'-10"	X		WING STIRRUPS
B508	X	5	11'-7"	X		WING CORNER STIRRUPS
B509	X	18	11'-9"	X		WING LOWER HORIZ. - F.F.
B810	X	18	13'-3"	X		WING LOWER HORIZ. - B.F.
B411	X	4	10'-1"			WING UPPER HORIZ.
B412	X	4	7'-7"			WING UPPER HORIZ.
B413	X	4	5'-0"			WING UPPER HORIZ.
B414	X	4	9'-9"	X		WING TOP HORIZ.
B415	X	4	7'-8"	X		WING 3 UPPER HORIZ. CORNER
B416	X	4	9'-0"	X		WING 4 UPPER HORIZ. CORNER

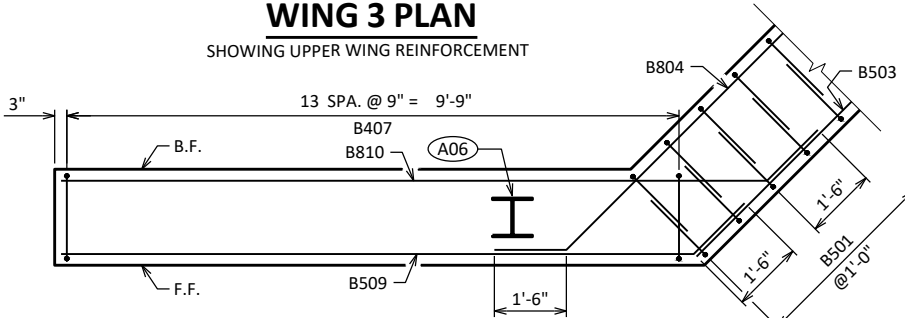
WING 3 ELEVATION

SHOWING F.F. WING



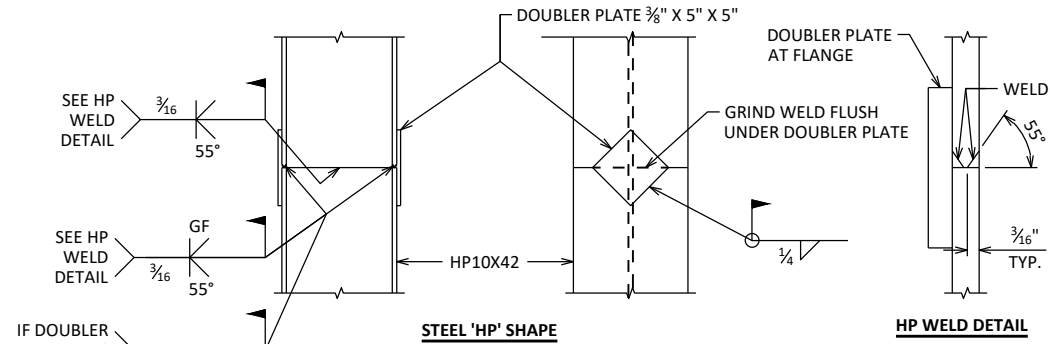
WING 3 PLAN

SHOWING UPPER WING REINFORCEMENT



WING 3 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 4 SIMILAR

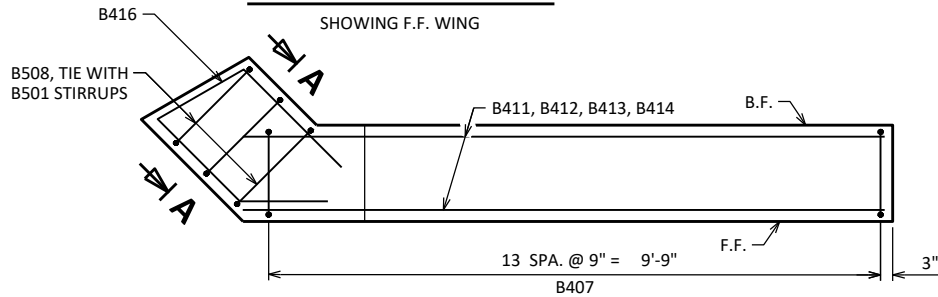


'HP' PILE DETAILS

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

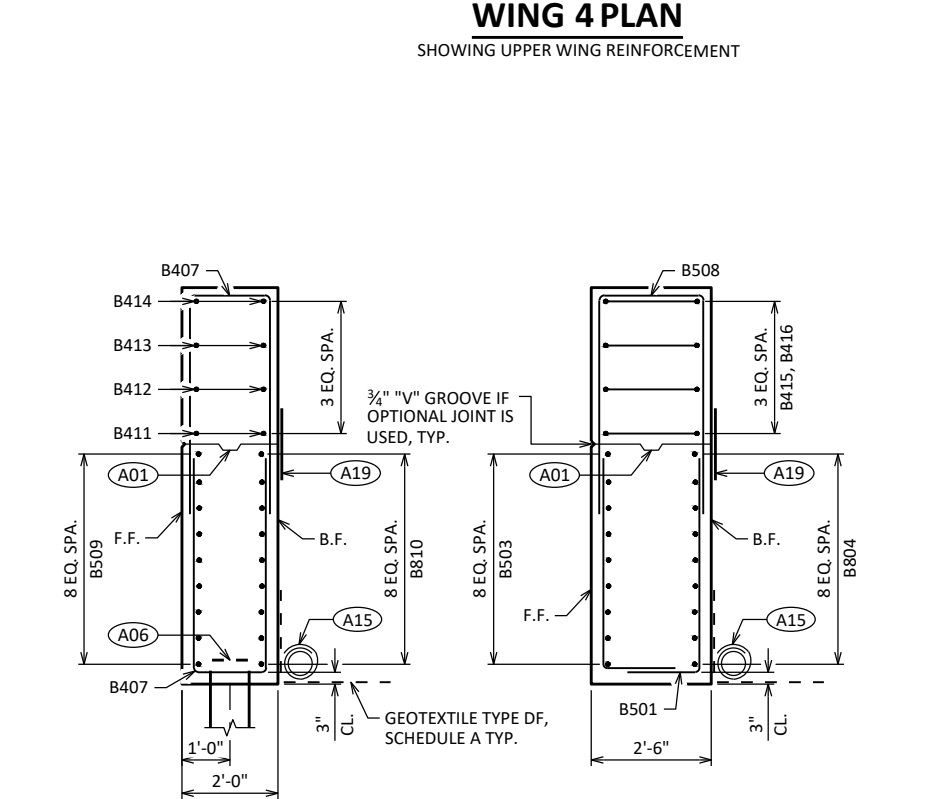
WING 4 ELEVATION

SHOWING F.F. WING



WING 4 PLAN

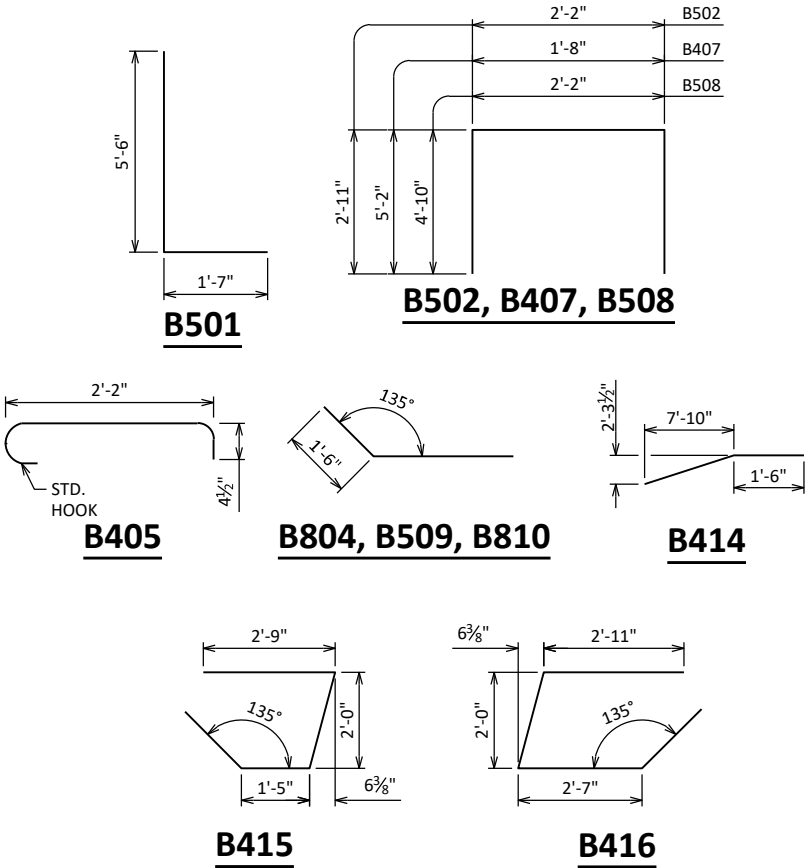
SHOWING UPPER WING REINFORCEMENT



SECTION THRU WING 3

TYPICAL BOTH WINGS

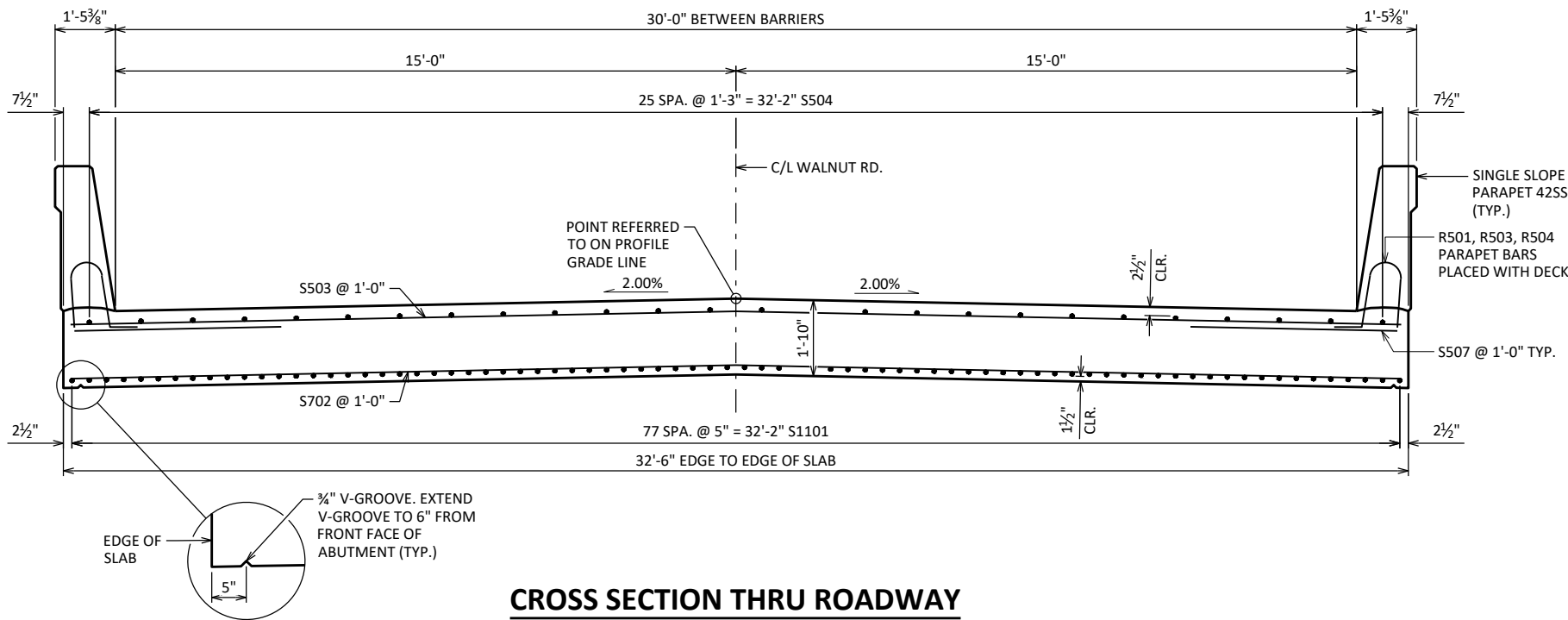
SECTION A-A



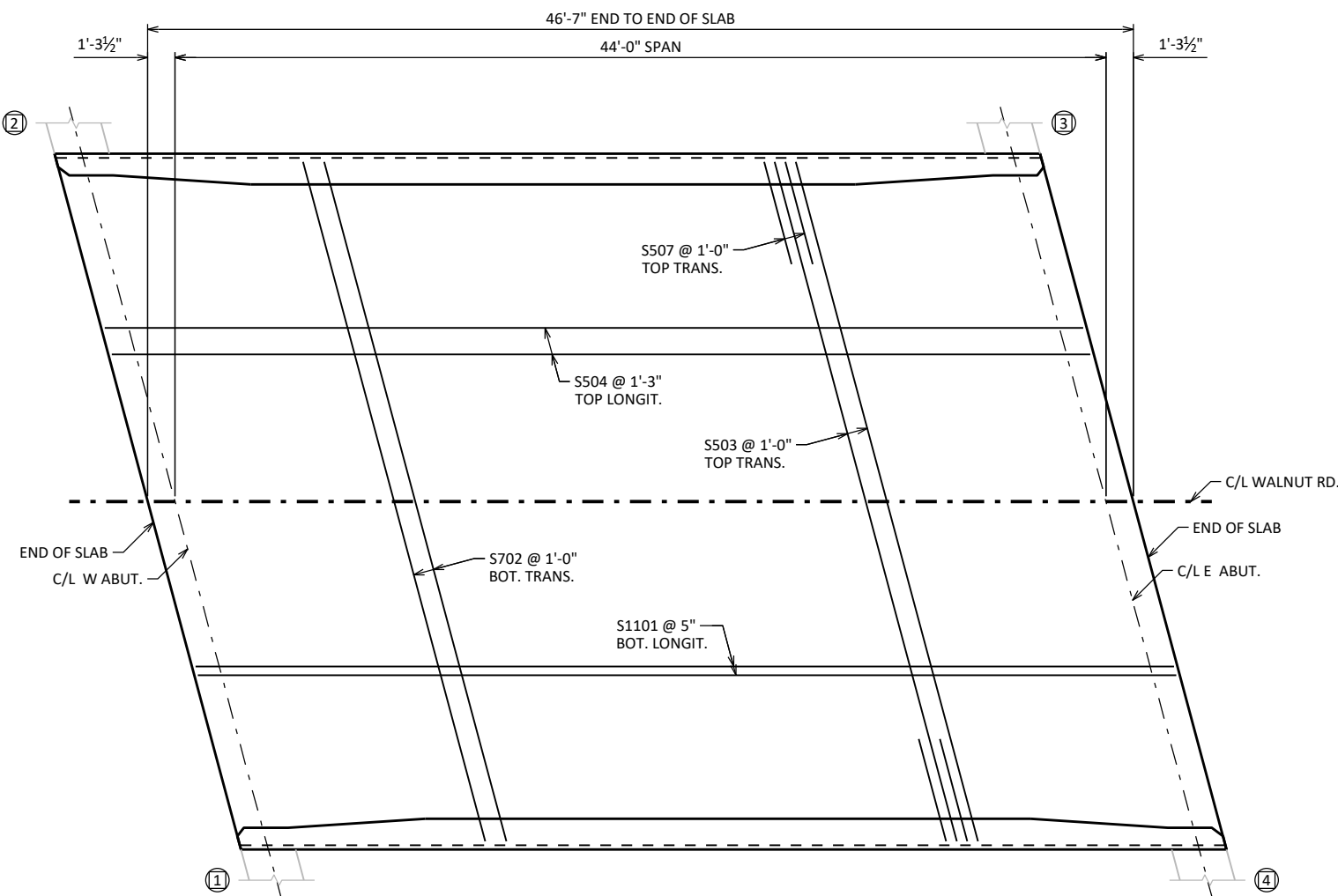
- A01 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE 3/4" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.
- A06 SUPPORT ABUTMENT ON HP 10 x 42 PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. 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-20-264			
DRAWN BY		BOS	PLANS CK'D CJM
EAST ABUTMENT DETAILS		SHEET 7 OF 10	

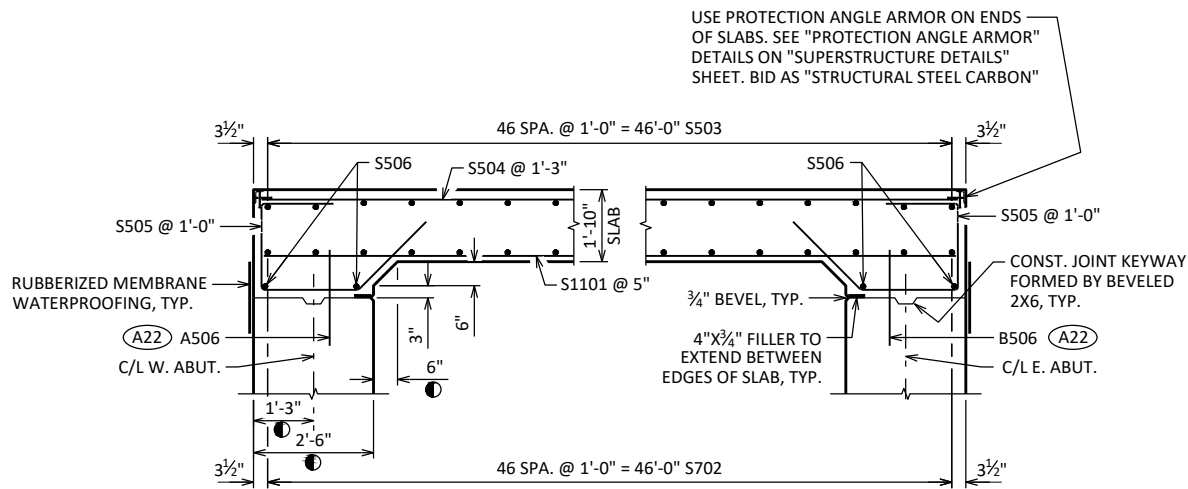
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CROSS SECTION THRU ROADWAY



PLAN



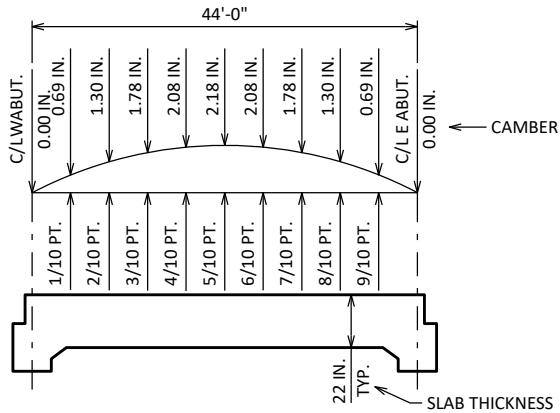
LONGITUDINAL SECTION

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.)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-20-264			
DRAWN BY		BOS	PLANS CK'D CJM
SUPERSTRUCTURE		SHEET 8 OF 10	



CAMBER AND SLAB THICKNESS DIAGRAM

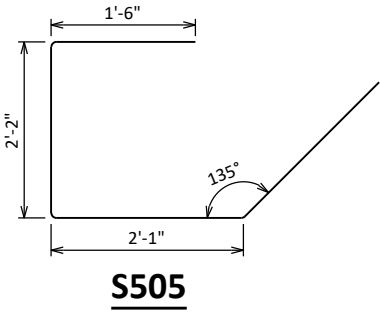
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

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. GUTTER	1001.58	1001.62	1001.66	1001.71	1001.75	1001.80	1001.84	1001.88	1001.93	1001.97	1002.02
CROWN	1001.92	1001.96	1002.00	1002.05	1002.09	1002.14	1002.18	1002.22	1002.27	1002.31	1002.36
S. GUTTER	1001.66	1001.70	1001.74	1001.79	1001.83	1001.88	1001.92	1001.96	1002.01	1002.05	1002.10



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
S1101	X	78	46'-3"			SLAB BOTTOM LONGITUDINAL
S702	X	47	33'-3"			SLAB BOTTOM TRANSVERSE
S503	X	47	33'-3"			SLAB TOP TRANSVERSE
S504	X	26	46'-3"			SLAB TOP LONGITUDINAL
S505	X	66	7'-6"	X		ABUTMENT DIAPHRAGM STIRRUPS
S506	X	4	33'-3"			ABUTMENT DIAPHRAGM LONGITUDINAL
S507	X	92	5'-0"			SLAB TOP EDGE TRANSVERSE

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 (+).

NO.

DATE

REVISION

BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-264

DRAWN BY

BOS

PLANS CK'D

CJM

SUPERSTRUCTURE
DETAILS

SHEET 9 OF 10

SCALE = N.T.S.

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

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

BUNDLE AND TAG EACH SERIES SEPARATELY.



WING 2 CORNER SHOWN. OTHERS SIMILAR



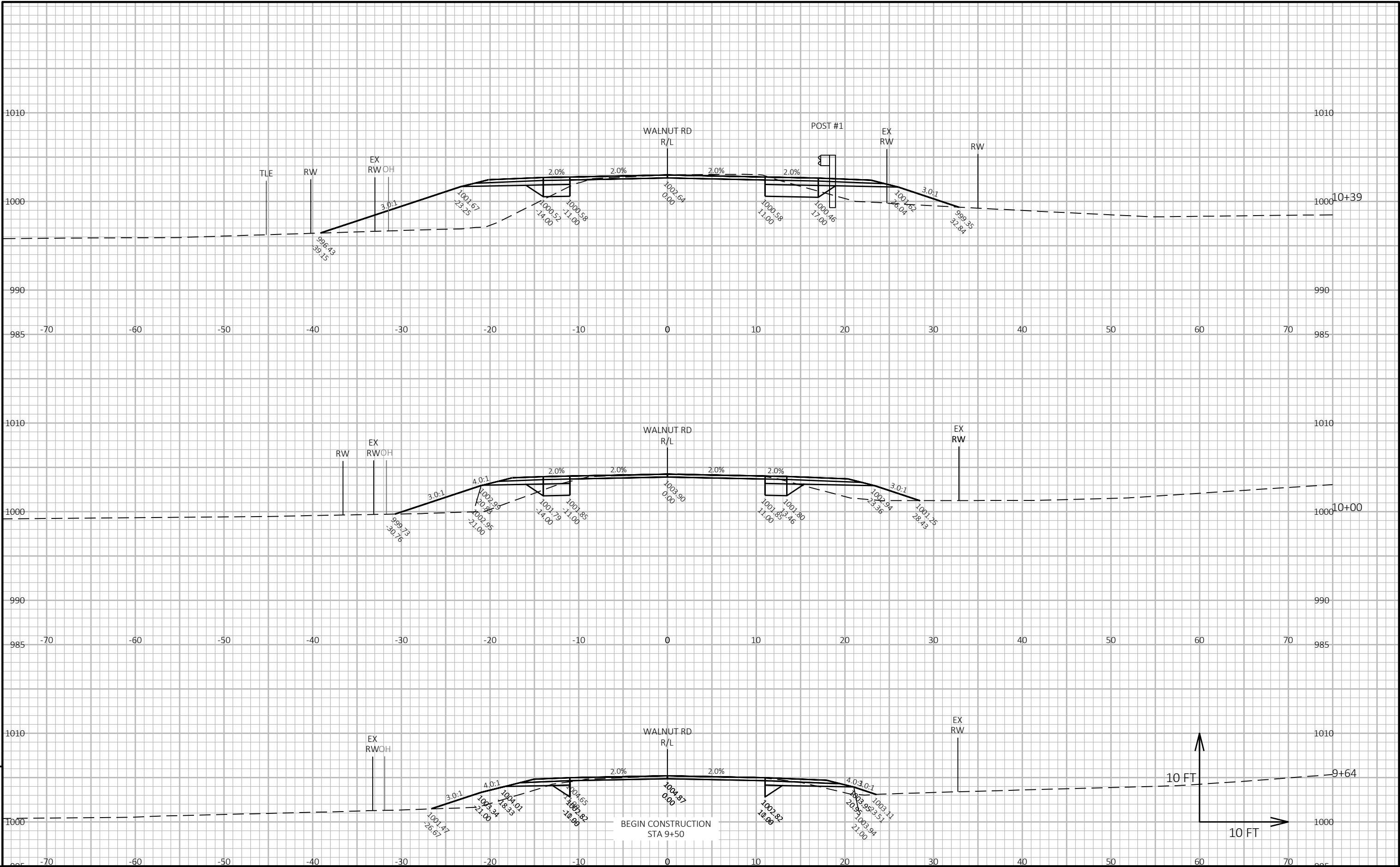
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED
IN ACCORDANCE WITH AASHTO M232 CLASS C.

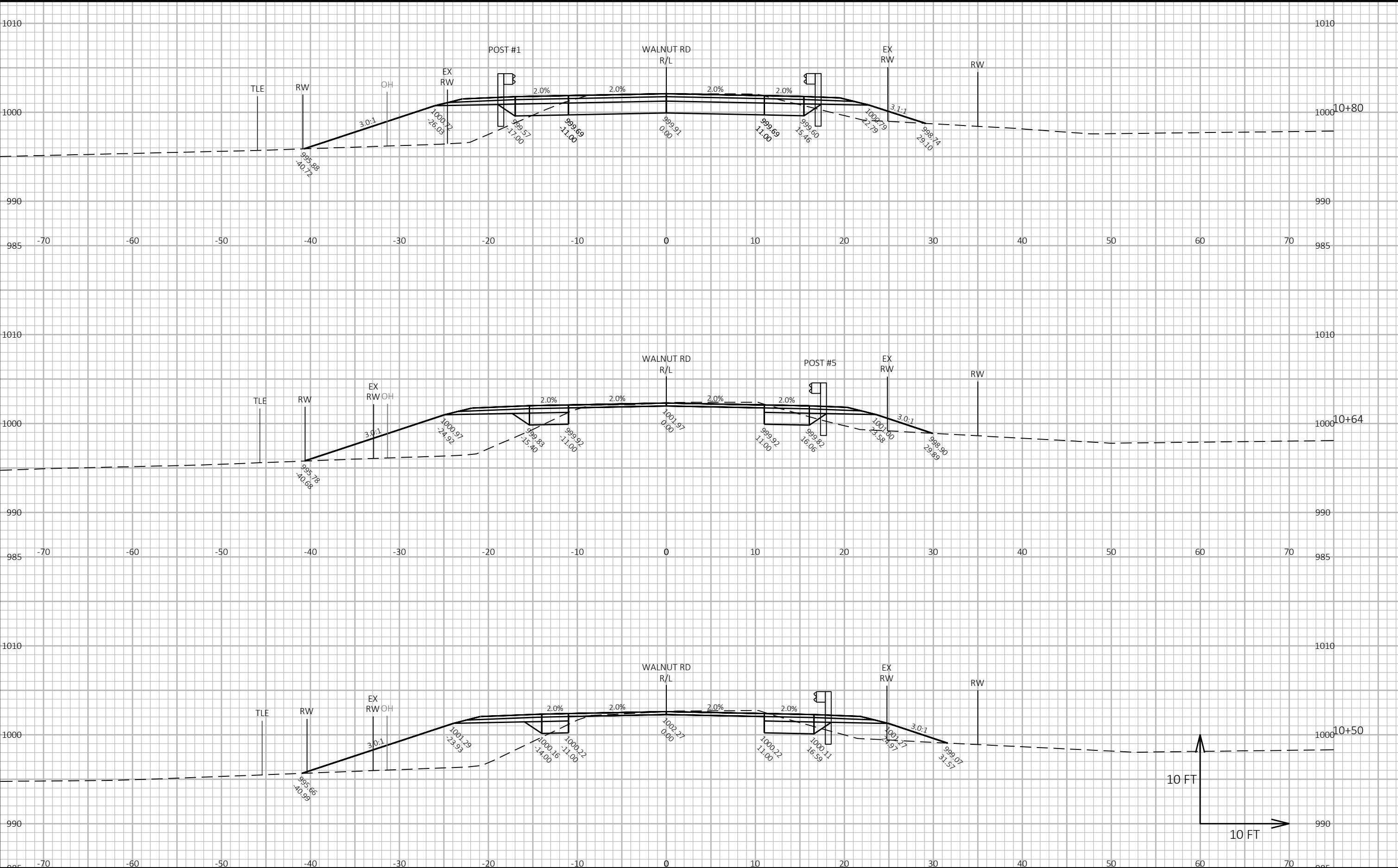
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

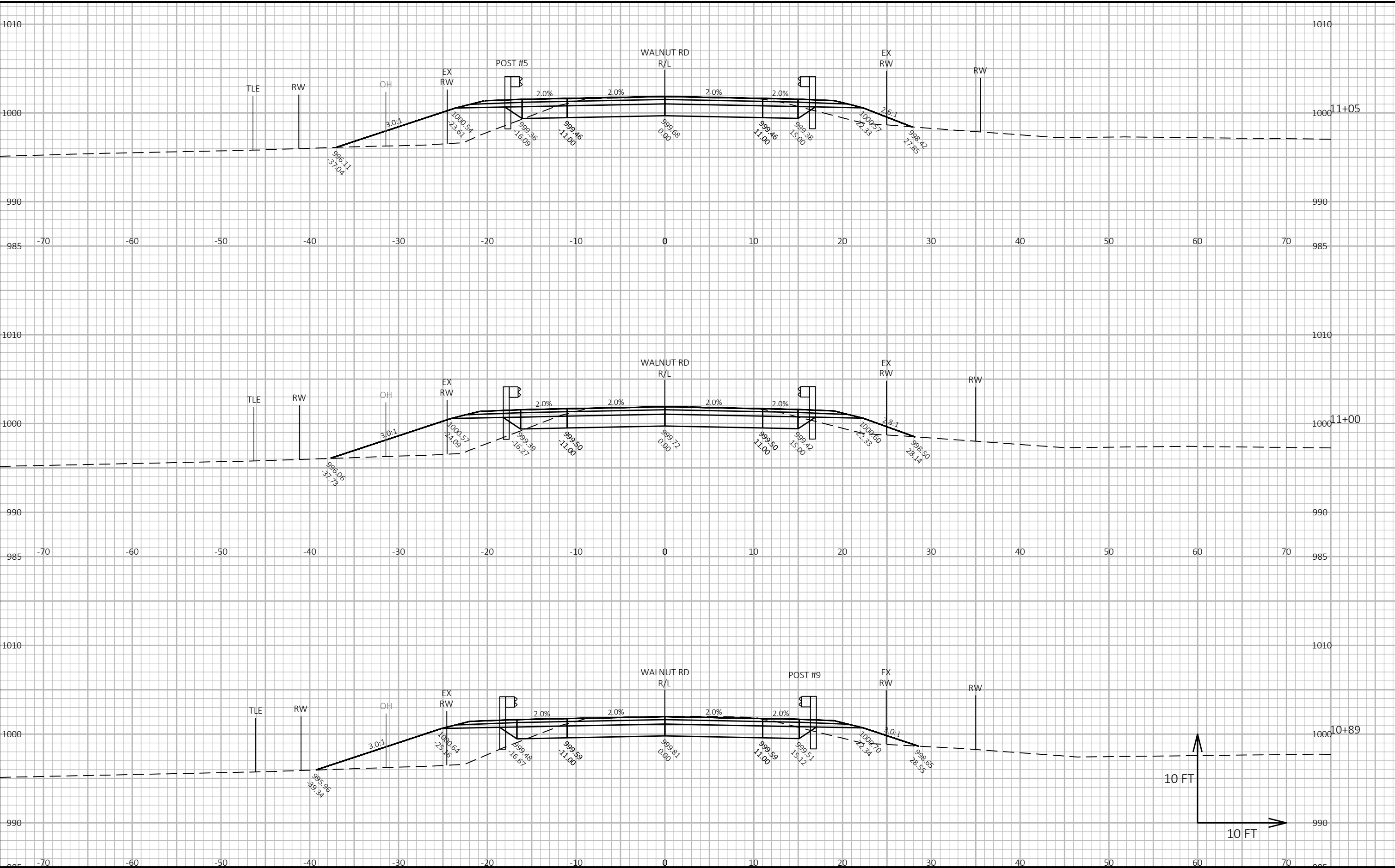
- CONST. JOINT - STRIKE OFF AS SHOWN
- USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▲ R501, R503, AND R504 BARS TO BE TIED TO SUPERSTRUCTURE STEEL BEFORE SUPERSTRUCTURE IS POURED.

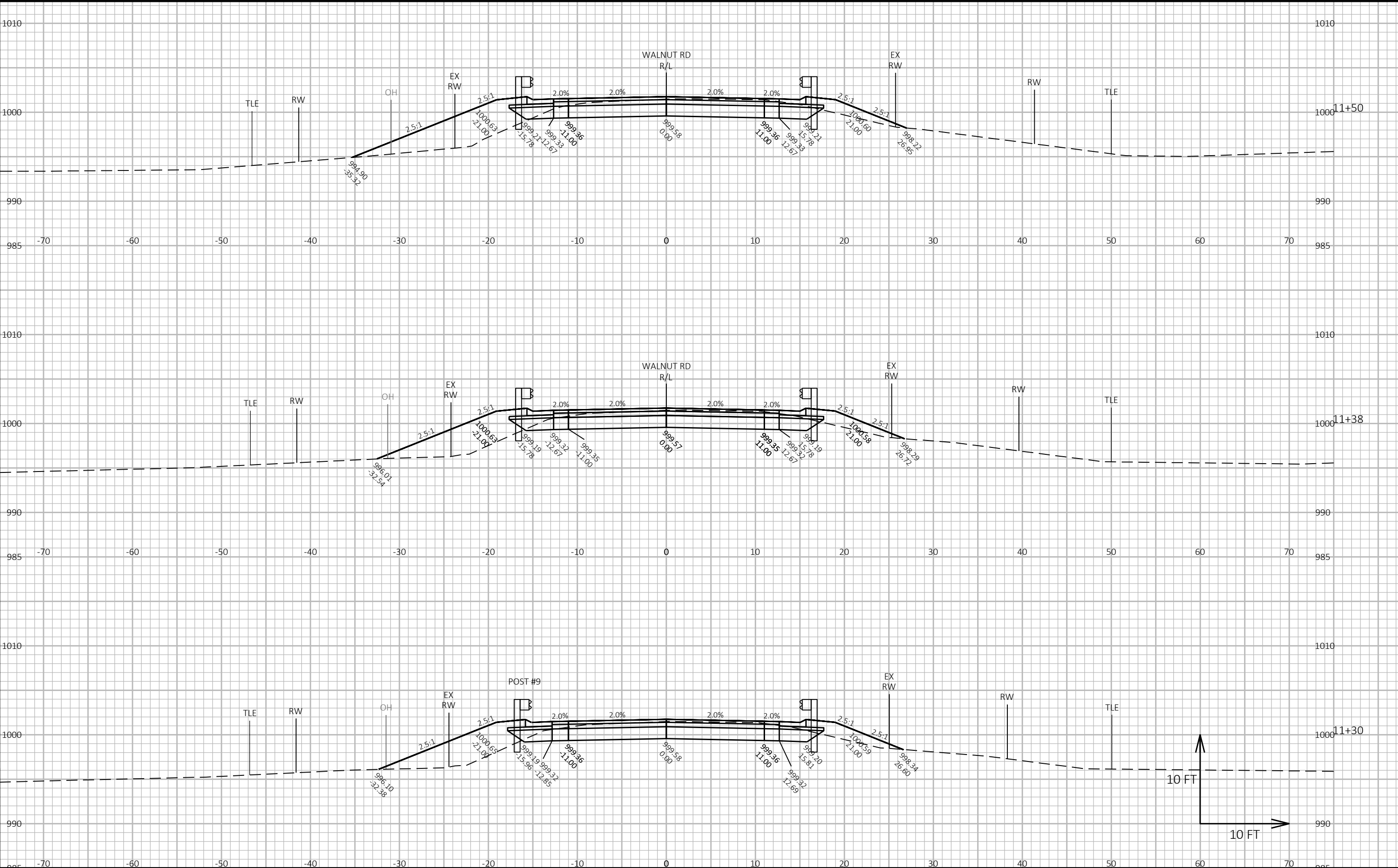
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-20-264	
		DRAWN BY	BOS
		PLANS CK'D	CJM
SINGLE SLOPE PARAPET 42SS		SHEET 10 OF 10	

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
09+50	950.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0
09+64	964.00	14.00	12.10	9.40	11.97	3	2	3	0	0	1
09+70	970.00	6.00	12.23	9.40	14.79	3	2	3	3	4	-2
09+80	980.00	10.00	15.26	9.40	20.66	5	3	7	8	13	-9
09+90	990.00	10.00	15.87	9.40	26.12	6	3	9	14	24	-17
10+00	1000.00	10.00	16.29	9.40	34.44	6	3	11	20	38	-28
10+10	1010.00	10.00	16.91	9.40	45.43	6	3	15	26	56	-43
10+20	1020.00	10.00	17.49	9.40	56.26	6	3	19	32	80	-64
10+30	1030.00	10.00	17.71	9.40	67.47	7	3	23	39	109	-89
10+40	1040.00	10.00	17.62	9.40	79.94	7	3	27	46	143	-119
10+50	1050.00	10.00	17.50	9.40	85.00	7	3	31	53	181	-153
10+60	1060.00	10.00	18.06	9.40	78.27	7	3	30	60	219	-187
10+70	1070.00	10.00	19.35	9.40	70.75	7	3	28	67	254	-218
10+80	1080.00	10.00	42.20	9.40	67.32	11	3	26	78	286	-242
10+90	1090.00	10.00	59.73	9.40	59.22	19	3	23	97	315	-255
11+00	1100.00	10.00	59.31	9.40	53.19	22	3	21	119	341	-262
11+10	1110.00	10.00	58.32	9.40	48.00	22	3	19	141	365	-267
11+20	1120.00	10.00	56.83	9.40	47.00	21	3	18	162	388	-272
11+30	1130.00	10.00	55.37	9.40	44.41	21	3	17	183	409	-275
11+40	1140.00	10.00	55.20	9.40	46.03	20	3	17	203	430	-279
11+50	1150.00	10.00	54.04	9.40	54.61	20	3	19	223	454	-286
11+60	1160.00	10.00	52.07	9.40	70.29	20	3	23	243	483	-298
11+70	1170.00	10.00	48.91	9.40	109.54	19	3	33	262	524	-323
11+85	1185.00	15.00	46.98	9.40	127.26	27	5	66	289	606	-383
12+14	1214.00	0.00	43.37	9.40	156.07	0	0	0	0	0	0
12+30	1230.00	16.00	42.58	9.40	78.21	25	5	69	25	86	-54
12+40	1240.00	10.00	47.05	9.40	49.71	17	3	24	42	116	-70
12+50	1250.00	10.00	48.26	9.40	39.41	18	3	17	60	138	-76
12+60	1260.00	10.00	50.43	9.40	29.78	18	3	13	78	154	-78
12+70	1270.00	10.00	57.86	9.40	23.80	20	3	10	98	166	-73
12+80	1280.00	10.00	66.80	9.40	24.24	23	3	9	121	178	-64
12+90	1290.00	10.00	77.08	9.40	24.66	27	3	9	148	189	-52
13+00	1300.00	10.00	52.55	9.40	20.45	24	3	8	172	199	-41
13+10	1310.00	10.00	64.96	9.40	17.67	22	3	7	194	208	-30
13+20	1320.00	10.00	67.20	9.40	16.11	24	3	6	218	215	-17
13+30	1330.00	10.00	64.00	9.40	16.50	24	3	6	242	223	-3
13+40	1340.00	10.00	61.75	9.40	18.63	23	3	7	265	231	8
13+50	1350.00	10.00	59.71	9.40	20.56	22	3	7	287	240	18
13+60	1360.00	10.00	58.42	9.40	40.38	22	3	11	309	254	24
13+70	1370.00	10.00	52.49	9.40	50.31	21	3	17	330	275	20
13+80	1380.00	10.00	45.54	9.40	52.39	18	3	19	348	299	12
13+90	1390.00	10.00	37.07	9.40	29.54	15	3	15	363	318	5
14+00	1400.00	10.00	28.94	9.40	15.00	12	3	8	375	328	4
14+10	1410.00	10.00	24.05	9.40	13.87	10	3	5	385	334	5
14+20	1420.00	10.00	15.05	9.40	5.91	7	3	4	392	339	4
14+21	1421.00	1.00	15.62	9.40	4.84	1	0	0	393	339	5





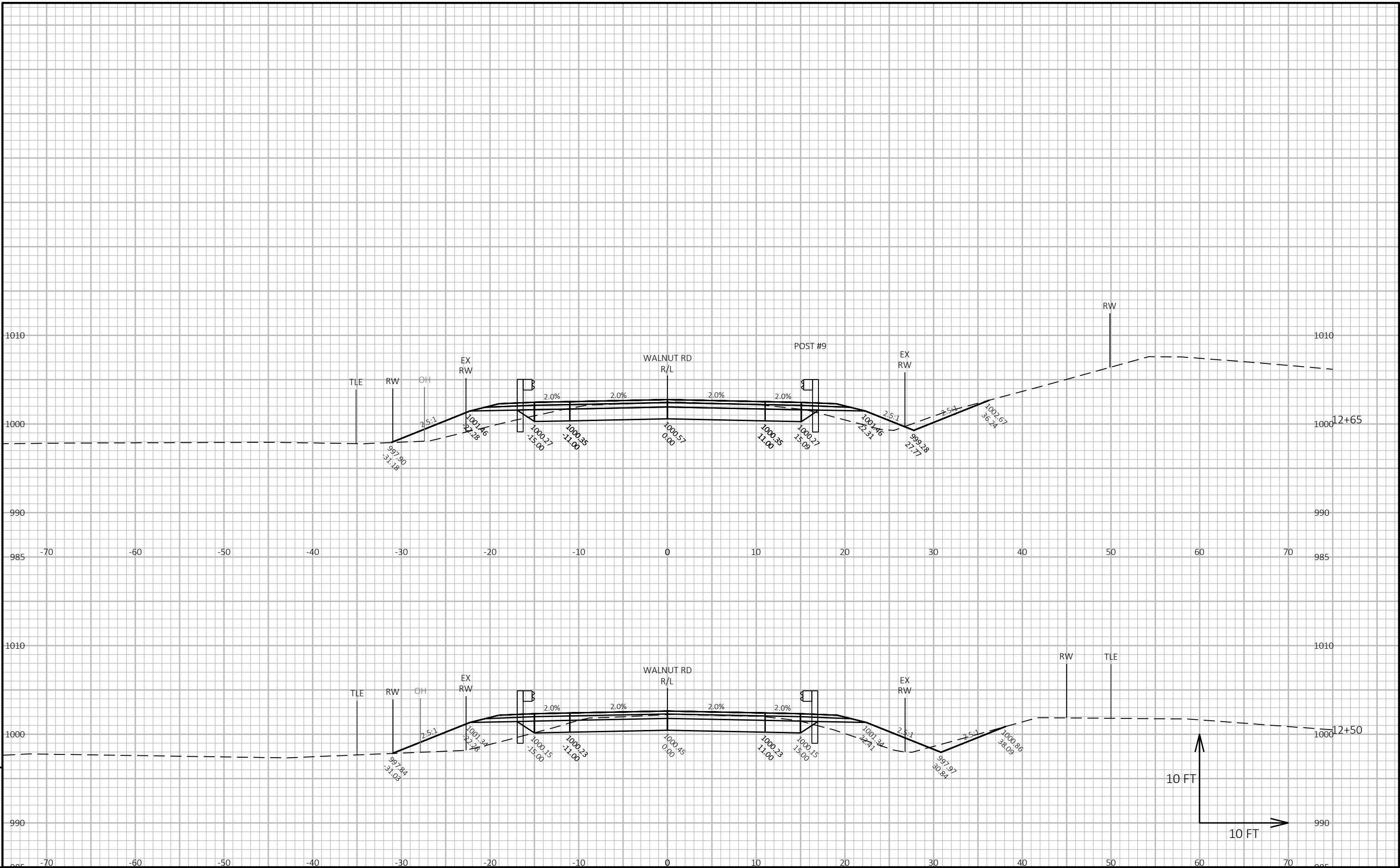


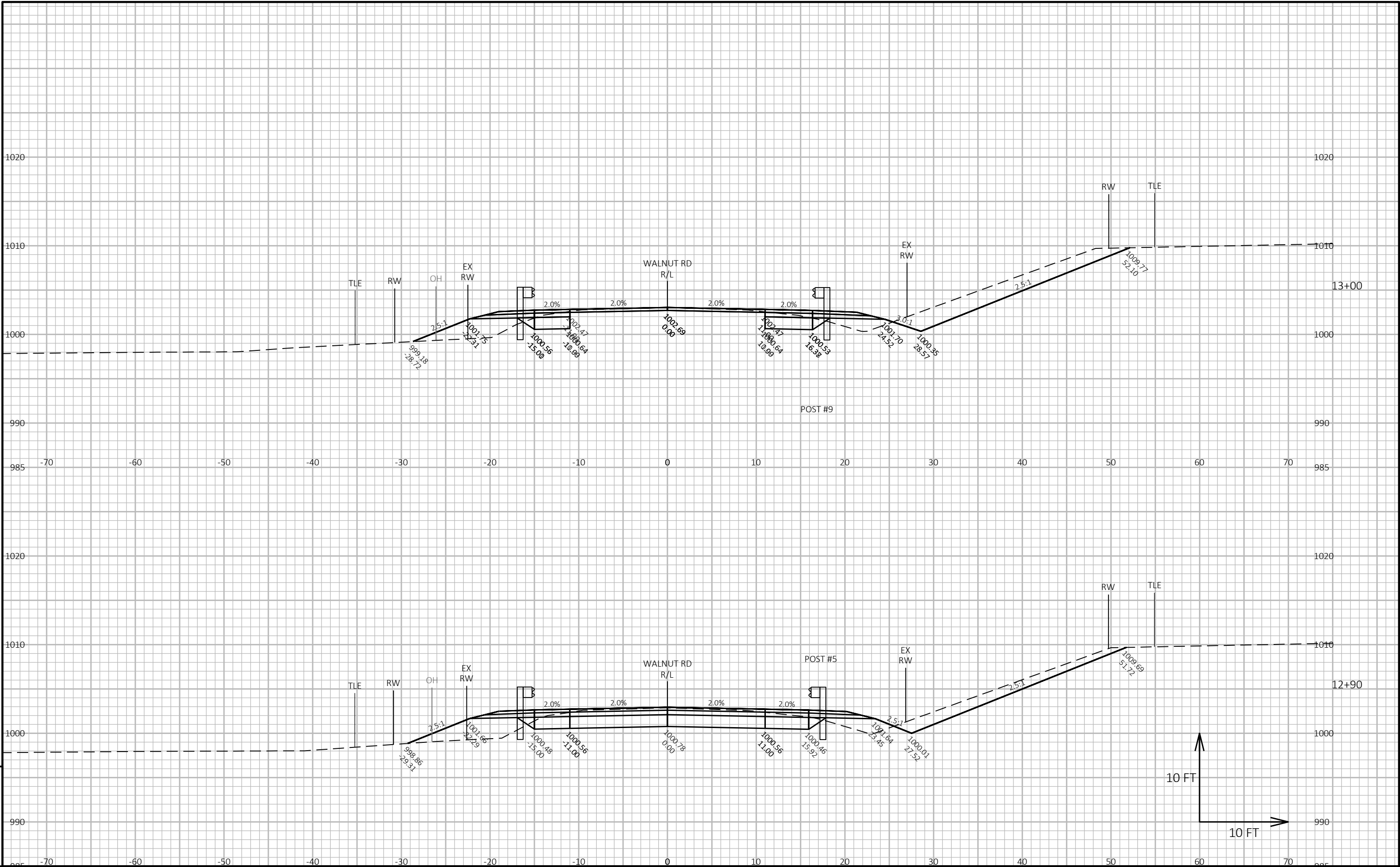


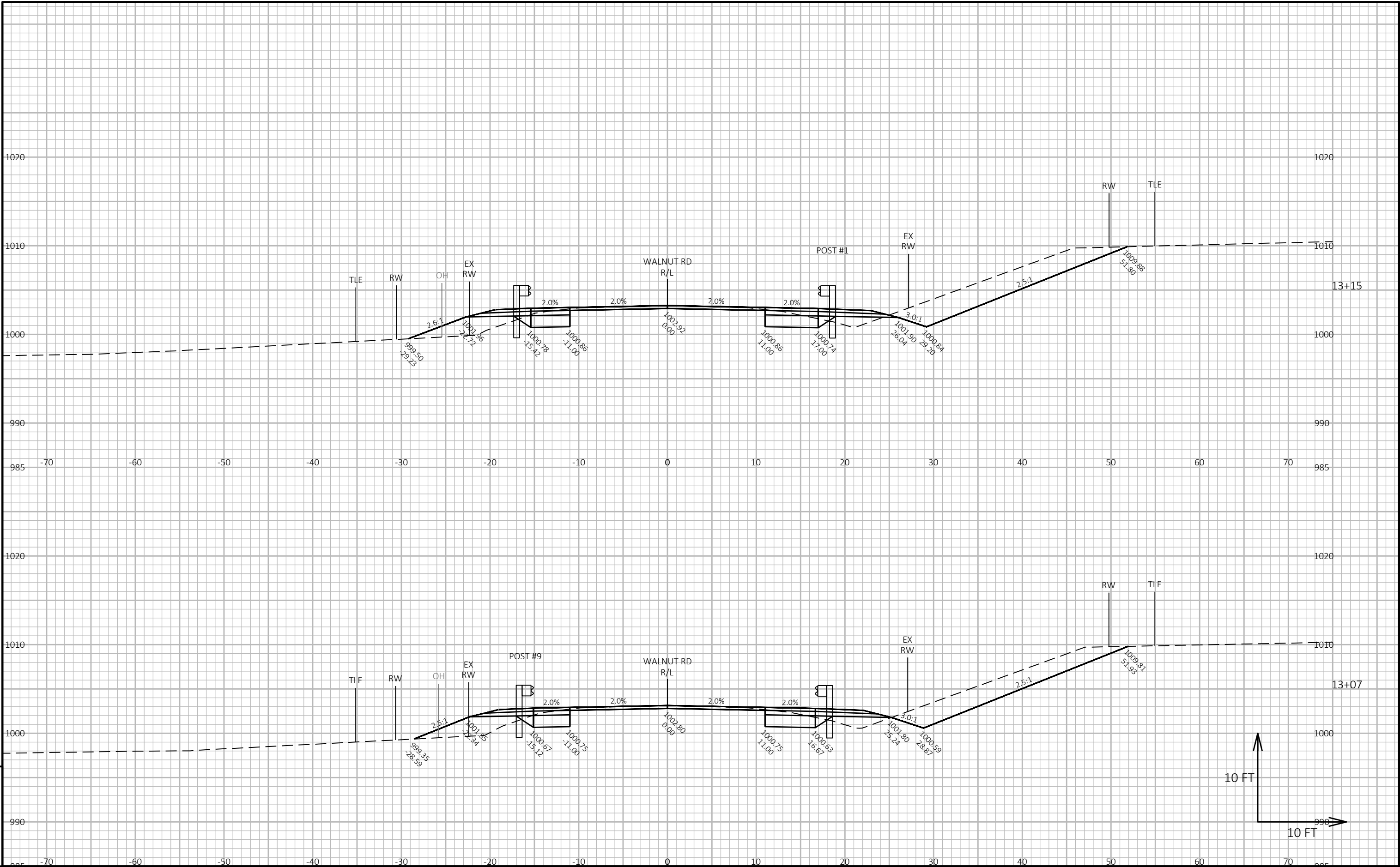
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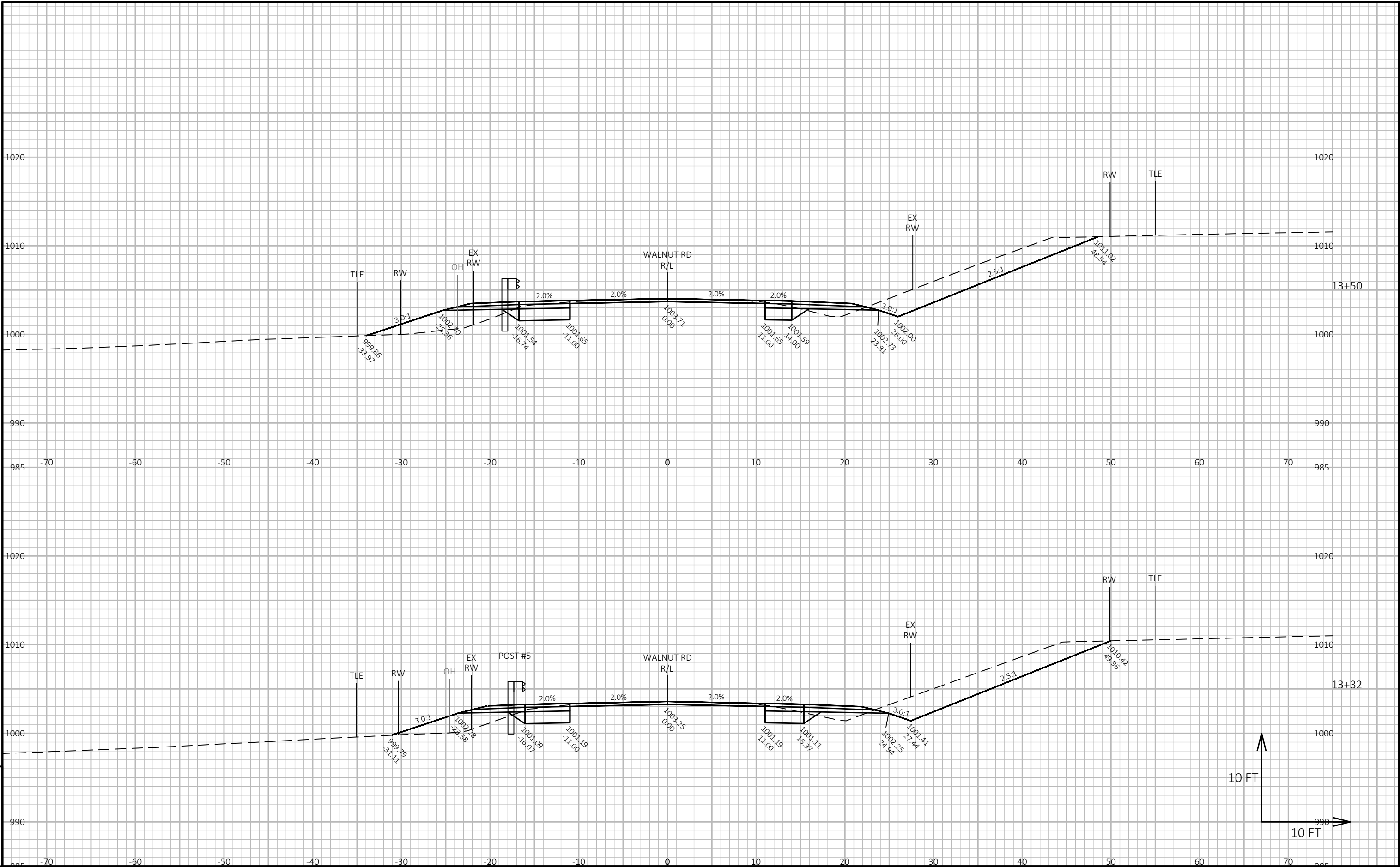
9

PROJECT NO: 4816-00-73	HWY: WALNUT ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: WALNUT ROAD	SHEET E
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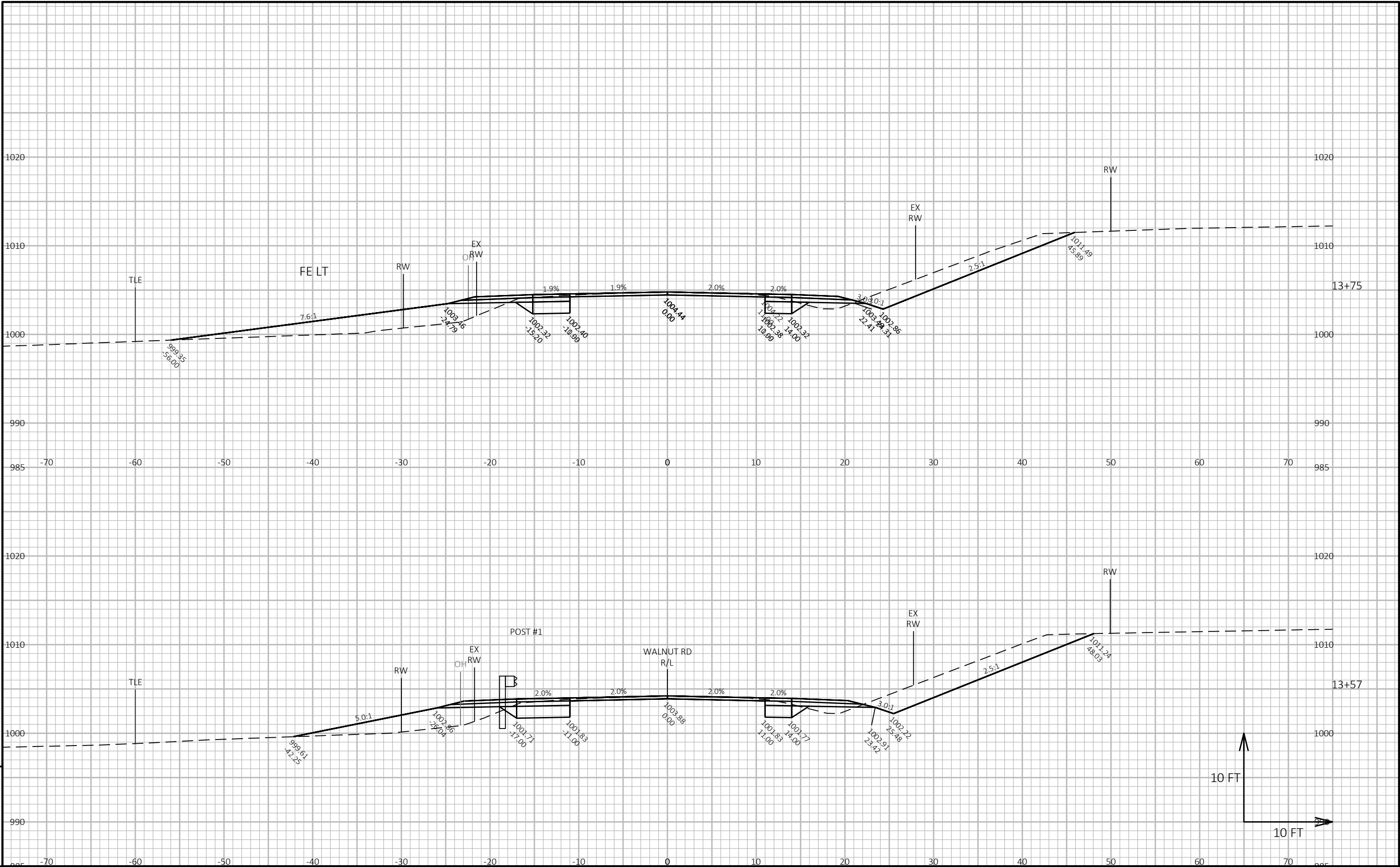


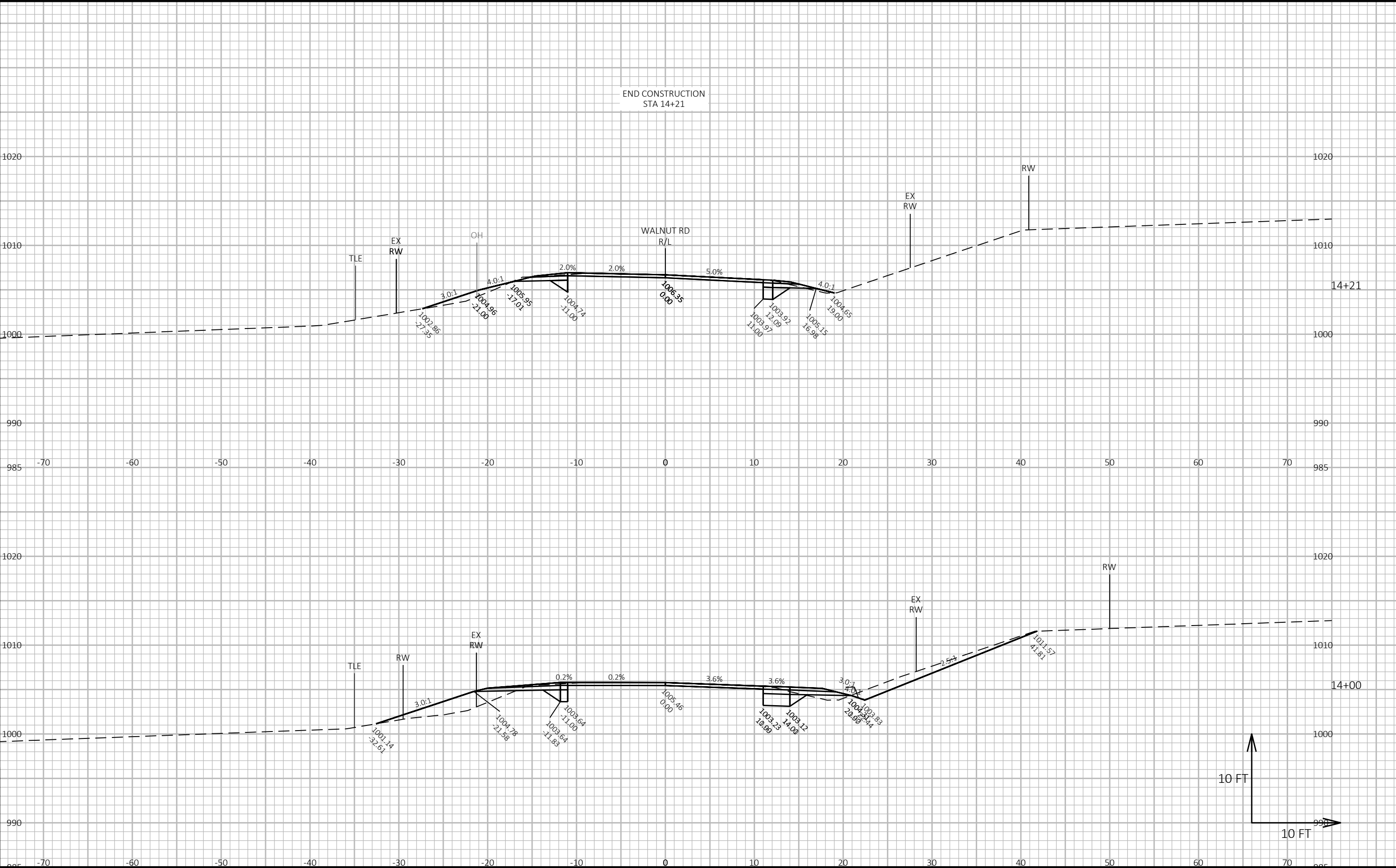




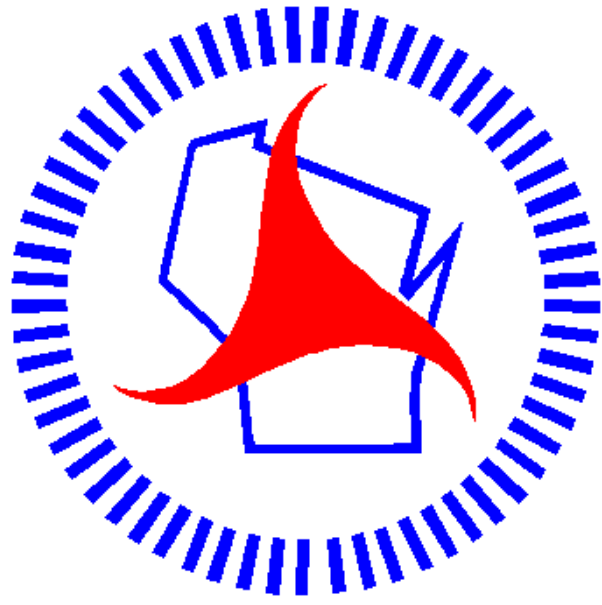


PROJECT NO: 4816-00-73	HWY: WALNUT ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: WALNUT ROAD	SHEET E
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Notes



Wisconsin Department of Transportation

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