

EAU PROJECT ID: 7847-04-70 WITH: N/A COUNTY: CLARK

JANUARY 2018
ORDER OF SHEETS

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

TOTAL SHEETS = 48

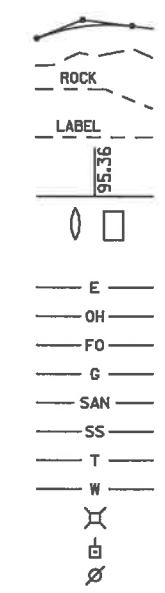


DESIGN DESIGNATION
A.A.D.T. (2017) = 1400
A.A.D.T. (2037) = 1700
D.H.V. = 213
D.D. = 60/40
T. = 17.2%
DESIGN SPEED = 60 MPH
ESALS = 400,000

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
- OVERHEAD UTILITY
- FIBER OPTIC
- GAS
- SANITARY SEWER
- STORM SEWER
- TELEPHONE
- WATER
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

USH 10 - CTH H
S BR YELLOW RIVER BRIDGE B-10-0235

CTH Y
CLARK COUNTY

STATE PROJECT NUMBER
7847-04-70

END PROJECT
STA 11+50.00
Y=381237.716
X=747466.304

STRUCTURE B-10-0235
STA 10+00.00

BEGIN PROJECT
STA 8+50.00
Y=380937.769
X=747471.894



TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, CLARK COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7847-04-70	WISC 2018061	1

ACCEPTED FOR
CLARK COUNTY
DATE 6-14-17 Randy J. Anderson

ORIGINAL PLANS PREPARED BY
Cedar corporation
MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com
800-472-7372

6.19.17

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor CEDAR CORPORATION
Designer CEDAR CORPORATION
Management Consultant Knight E/A, Inc.

APPROVED FOR THE DEPARTMENT
DATE 7/24/17 Ryan B. McKane
(Management Consultant 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.

EROSION CONTROL DEVICES TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO BRIDGE REMOVAL.

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS, BUT IS MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATION OF EBS WILL BE DETERMINED BY THE ENGINEER.

SHRINKAGE IS ESTIMATED AT 25%.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CLARK COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 10.

WHEN THE QUANTITY OF THE ITEM OF BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE BENCHMARK IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD88).

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE THE SLOPE INTERCEPTS.

DNR LIAISON

DNR WEST CENTRAL REGION HQ
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54702
(715) 839-1609
CHRIS WILLGER
christopher.j.willger@wisconsin.gov

DESIGN CONSULTANT

CEDAR CORPORATION
604 WILSON AVENUE
MENOMONIE, WI 54751
(715) 235-9081
TROY L. PETERSON, P.E.
troy.peterson@cedarcorp.com

CLARK COUNTY

HIGHWAY COMMISSIONER
CLARK COUNTY HIGHWAY DEPARTMENT
801 CLAY STREET
NEILLSVILLE, WI 54456
(715) 743-3680
RANDY ANDERSON
randy.anderson@co.clark.wi.us

UTILITIES

CLARK ELECTRIC COOP
124 N MAIN STREET
GREENWOOD, WI 54437
(715) 267-6188
RICK SUDA
rsuda@cecoop.com

WE ENERGIES
1921 8TH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
(715) 421-7249
RYAN MIENTKE
ryan.mientke@we-energies.com

TDS TELECOM
420 HEWETT STREET
NEILLSVILLE, WI 54456
(715) 937-2739
BRIAN ANDING
brian.anding@tdstelecom.com

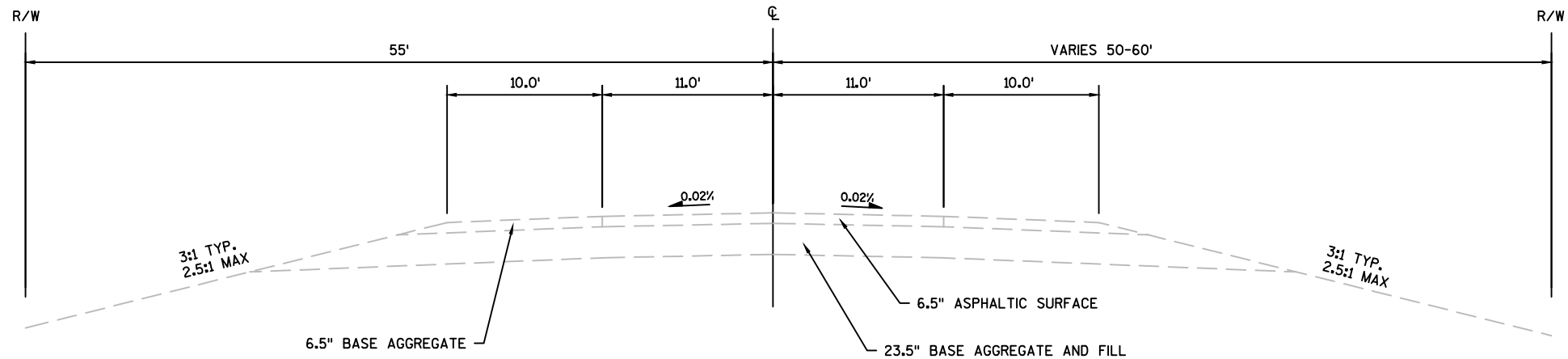
RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.09 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.04 ACRES

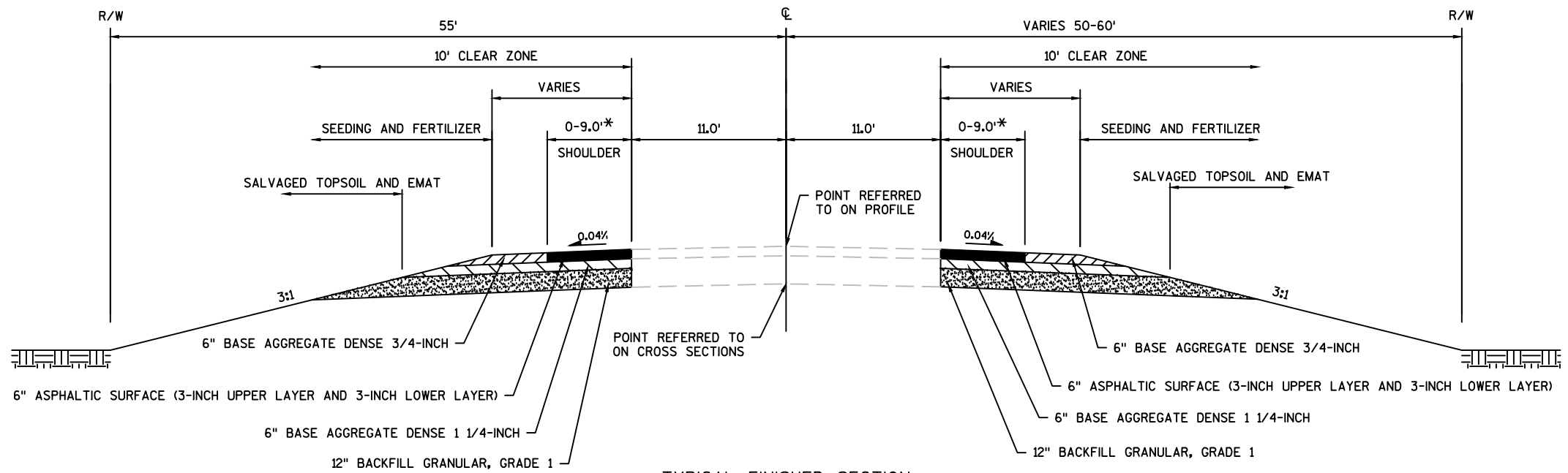


Dial 811 or (800)242-8511
www.DiggersHotline.com



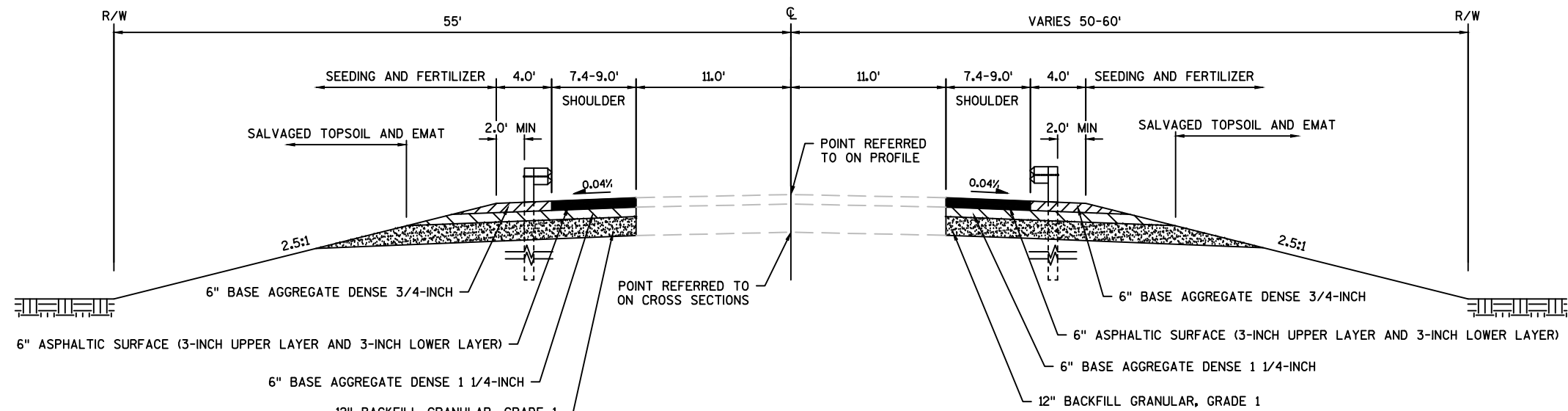
TYPICAL EXISTING SECTION

STA 8+50.00 TO STA 9+66.27
STA 10+34.68 TO STA 11+50.00



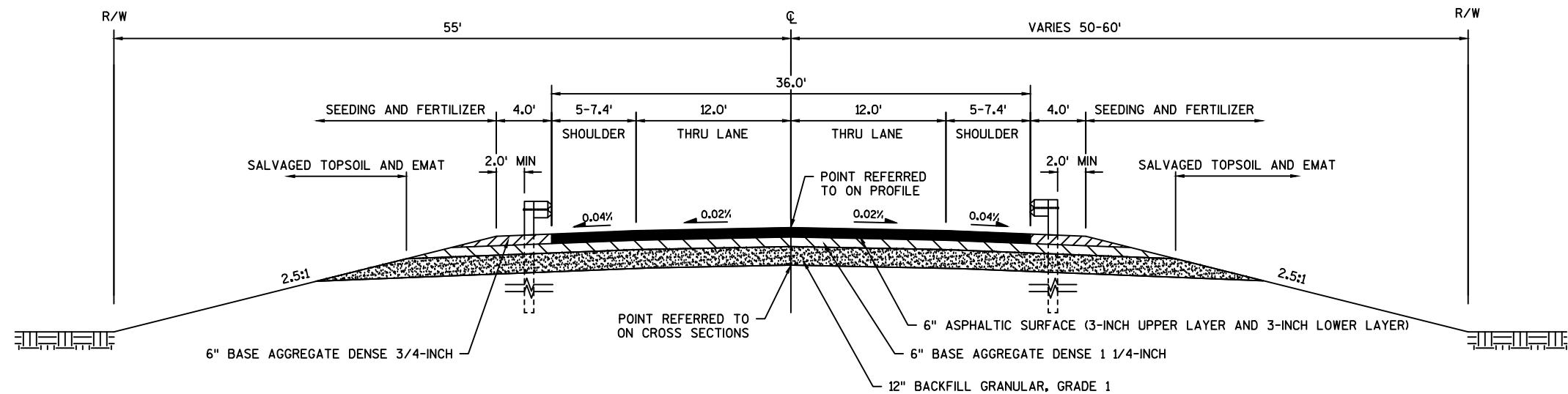
TYPICAL FINISHED SECTION

STA 7+40.34 TO STA 8+32.44
STA 11+67.58 TO STA 12+63.16
*0' STA 7+40.34 TO STA 7+89.76
STA 12+10.61 TO STA 12+63.16



TYPICAL FINISHED SECTION

STA 8+32.44 TO STA 8+50.00
STA 11+50.00 TO STA 11+67.58



TYPICAL FINISHED SECTION

STA 8+50.00 TO STA 9+58.57
STA 10+41.25 TO STA 11+50.00

Estimate Of Quantities

7847-04-70					
Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0008	204.0165	Removing Guardrail	LF	407.000	407.000
0010	205.0100	Excavation Common	CY	1,023.000	1,023.000
0012	206.1000	Excavation for Structures Bridges (structure) 01. B-10-235	LS	1.000	1.000
0014	206.5000	Cofferdams (structure) 01. B-10-235	LS	1.000	1.000
0016	209.1500	Backfill Granular Grade 1	TON	1,284.000	1,284.000
0018	210.1500	Backfill Structure Type A	TON	370.000	370.000
0020	213.0100	Finishing Roadway (project) 01. 7847-04-70	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	136.000	136.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	734.000	734.000
0026	455.0605	Tack Coat	GAL	60.000	60.000
0028	465.0105	Asphaltic Surface	TON	330.000	330.000
0030	502.0100	Concrete Masonry Bridges	CY	333.000	333.000
0032	502.3200	Protective Surface Treatment	SY	385.000	385.000
0034	505.0400	Bar Steel Reinforcement HS Structures	LB	6,910.000	6,910.000
0036	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	43,140.000	43,140.000
0038	513.4061	Railing Tubular Type M (structure) 01. B-10-235	LF	218.000	218.000
0040	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0042	550.0500	Pile Points	EACH	16.000	16.000
0044	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	275.000	275.000
0046	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	180.000	180.000
0048	606.0300	Riprap Heavy	CY	130.000	130.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0052	614.2300	MGS Guardrail 3	LF	100.000	100.000
0054	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0056	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0058	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7847-04-70	EACH	1.000	1.000
0060	619.1000	Mobilization	EACH	1.000	1.000
0062	624.0100	Water	MGAL	39.000	39.000
0064	625.0500	Salvaged Topsoil **P**	SY	1,189.000	1,189.000
0066	628.1504	Silt Fence	LF	905.000	905.000
0068	628.1520	Silt Fence Maintenance	LF	905.000	905.000
0070	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0072	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0074	628.2004	Erosion Mat Class I Type B	SY	1,189.000	1,189.000

Estimate Of Quantities

7847-04-70

Line	Item	Item Description	Unit	Total	Qty
0076	628.6005	Turbidity Barriers	SY	220.000	220.000
0078	629.0210	Fertilizer Type B **P**	CWT	0.800	0.800
0080	630.0110	Seeding Mixture No. 10 **P**	LB	18.000	18.000
0082	630.0200	Seeding Temporary **P**	LB	35.000	35.000
0084	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0086	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0088	638.2602	Removing Signs Type II	EACH	4.000	4.000
0090	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0092	642.5001	Field Office Type B	EACH	1.000	1.000
0094	643.0420	Traffic Control Barricades Type III	DAY	1,548.000	1,548.000
0096	643.0705	Traffic Control Warning Lights Type A	DAY	2,064.000	2,064.000
0098	643.0900	Traffic Control Signs	DAY	1,204.000	1,204.000
0100	643.5000	Traffic Control	EACH	1.000	1.000
0102	645.0111	Geotextile Type DF Schedule A	SY	54.000	54.000
0104	645.0120	Geotextile Type HR	SY	250.000	250.000
0106	646.1020	Marking Line Epoxy 4-Inch	LF	1,165.000	1,165.000
0108	646.9000	Marking Removal Line 4-Inch	LF	930.000	930.000
0110	650.4500	Construction Staking Subgrade	LF	261.000	261.000
0112	650.5000	Construction Staking Base	LF	261.000	261.000
0114	650.9910	Construction Staking Supplemental Control (project) 01. 7847-04-70	LS	1.000	1.000
0116	650.9920	Construction Staking Slope Stakes	LF	261.000	261.000
0118	690.0150	Sawing Asphalt	LF	284.000	284.000
0120	715.0502	Incentive Strength Concrete Structures	DOL	1,998.000	1,998.000
0122	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0124	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

3

3

DIVISION	STATIONING	LOCATION	205.0100 COMMON EXCAVATION (CY)	SALVAGED / UNUSABLE PAVEMENT MATERIAL (1)	AVAILABLE MATERIAL (CY) (2)	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/- (3)	208.0100 BORROW (CY)
			CUT				FACTOR 1.30		
1	8+00 - 9+59	SOUTH APPROACH	520	157	363	121	157	206	0
DIVISION 1 SUBTOTAL			520	157	363	121	157	206	0
2	10+41 - 12+00	NORTH APPROACH	503	157	346	58	76	270	0
DIVISION 2 SUBTOTAL			503	157	346	58	76	270	0
GRAND TOTAL			1023	314	709	179	233	476	
TOTAL COMMON EXCAVATION =			1023						0

- 1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- 2) AVAILABLE MATERIAL = CUT MINUS THE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 3) THE MASS ORDINATE = A + OR - QUANTITY CALCULATED FOR THE DIVISON. A POSITIVE QUANTITY INDICATES AN EXCESS OF MATERIAL.

REMOVING GUARDRAIL		
STATION - STATION	LOCATION	204.0165 LF
8+64 - 9+67	LT	104
8+65 - 9+67	RT	103
10+35 - 11+32	LT	100
10+36 - 11+35	RT	100
ITEM TOTAL		407

BASE AGGREGATE DENSE				
STATION - STATION	LOCATION	209.1500 BACKFILL GRANULAR GRADE 1 TON	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
8+00 - 9+59		663	72	375
10+41 - 12+00		621	64	359
ITEM TOTAL		1284	136	734

FINISHING ROADWAY		
PROJECT	LOCATION	213.0100 EACH
7847-04-70	CTH Y	1
ITEM TOTAL		1

CLEARING & GRUBBING			
STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
8+25	LT	0.25	0.25
9+57	LT	0.25	0.25
11+52	LT	0.25	0.25
12+38	LT	0.25	0.25
ITEM TOTALS		1	1

ASPHALTIC SURFACE			
STATION	LOCATION	455.0605* TACK COAT GAL	465.0105 TON
8+00 - 9+59		30	165
10+41 - 12+00		30	165
ITEM TOTAL		60	330

* APPLICATION RATE = 0.060 GAL/SY

NOTE: TABLE QUANTITIES ARE
CATEGORY 0010 UNLESS
OTHERWISE NOTED.

3

MGS GUARDRAIL

STATION - STATION	LOCATION	614.2300	614.2500	614.2610
		MGS GUARDRAIL 3 LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH
8+35 - 9+48	LT	25	40	1
8+35 - 9+48	RT	25	40	1
10+52 - 11+65	LT	25	40	1
10+52 - 11+65	RT	25	40	1
ITEM TOTALS		100	160	4

WATER

STATION - STATION	LOCATION	624.0100 MGAL	REMARKS
8+50 - 11+50	CTH Y	39	BASE COMPACTION DUST CONTROL
ITEM TOTALS		39	

SALVAGED TOPSOIL, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0500	629.0210	630.0110	630.0200
		SALVAGED TOPSOIL SY **P**	FERTILIZER TYPE B CWT **P**	SEEDING MIXTURE NO. 10 LB **P**	SEEDING TEMPORARY LB **P**
7+41 - 9+59	RT/LT	684	0.4	9	18
10+41 - 12+63	RT/LT	505	0.3	7	14
UNDISTRIBUTED		—	0.1	2	3
ITEM TOTAL		1189	0.8	18	35

P Pay Plan Quantity

MAINTENANCE AND REPAIR OF HAUL ROADS

STATION - STATION	LOCATION	618.0100 EACH
CATEGORY 0030 7847-04-70	CTH Y	1
ITEM TOTALS		1

MOBILIZATIONS

PROJECT	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
CATEGORY 0010 7847-04-70	0.25	3	2
CATEGORY 0020 7847-04-70	0.75	--	--
ITEM TOTALS	1	3	2

EROSION CONTROL ITEMS

STATION	LOCATION	628.1504	628.1520	628.2004	628.6005	REMARKS
		SILT FENCE LF	SILT FENCE MAINTENANCE LF	EROSION MAT CLASS 1 TYPE B SY	TURBIDITY BARRIER SY	
7+41 - 9+57	RT	235	235	302	--	
7+48 - 9+54	LT	230	230	382	--	
9+54 - 9+80		--	--	--	104	
10+11 - 10+41		--	--	--	116	
10+41 - 12+23	RT	200	200	193	--	
10+41 - 12+63	LT	240	240	312	--	
ITEM TOTALS		905	905	1189	220	

NOTE: TABLE QUANTITIES ARE
CATEGORY 0010 UNLESS
OTHERWISE NOTED.

3

PROJECT NO:7847-04-70

HWY:CTH Y

COUNTY:CLARK

MISCELLANEOUS QUANTITIES

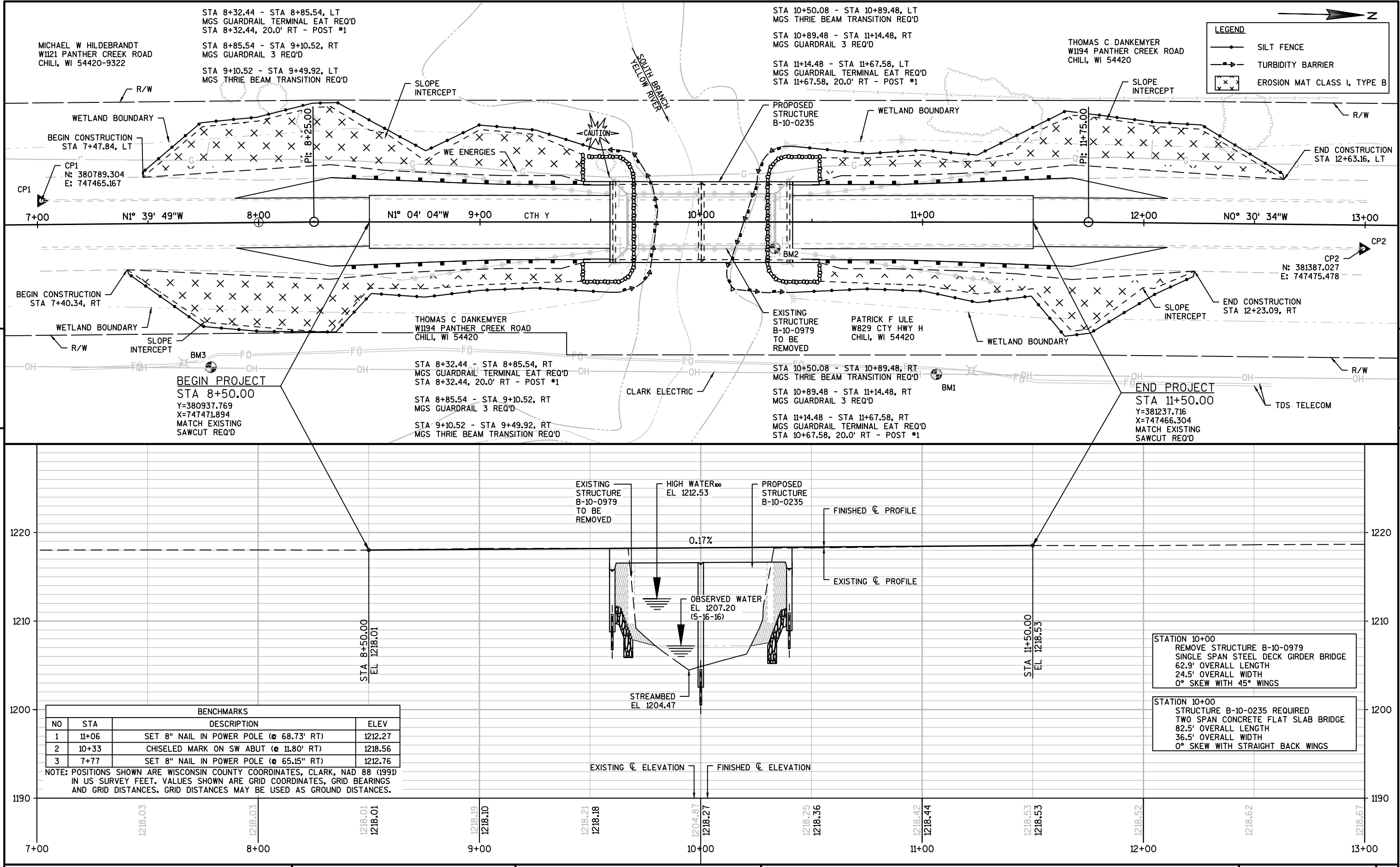
SHEET

E

3

3

SIGNING QUANTITIES <table><tr><th></th><th>637.2230 SIGNS TYPE II REFLECTIVE F SF</th><th>634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH</th><th>638.2602 REMOVING SIGNS TYPE II EACH</th><th>638.3000 REMOVING SMALL SIGN SUPPORTS EACH</th><th></th><th></th></tr><tr><th>LOCATION</th><th>SIGN CODE</th><th></th><th></th><th></th><th></th><th>REMARKS</th></tr><tr><td>NW BRIDGE CORNER</td><td>W5-52 R</td><td>3</td><td>1</td><td>1</td><td>1</td><td></td></tr><tr><td>SW BRIDGE CORNER</td><td>W5-52 L</td><td>3</td><td>1</td><td>1</td><td>1</td><td></td></tr><tr><td>NE BRIDGE CORNER</td><td>W5-52 L</td><td>3</td><td>1</td><td>1</td><td>1</td><td></td></tr><tr><td>SE BRIDGE CORNER</td><td>W5-52 R</td><td>3</td><td>1</td><td>1</td><td>1</td><td></td></tr><tr><td colspan="2">ITEM TOTAL</td><td>12</td><td>4</td><td>4</td><td>4</td><td></td></tr></table>								637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH			LOCATION	SIGN CODE					REMARKS	NW BRIDGE CORNER	W5-52 R	3	1	1	1		SW BRIDGE CORNER	W5-52 L	3	1	1	1		NE BRIDGE CORNER	W5-52 L	3	1	1	1		SE BRIDGE CORNER	W5-52 R	3	1	1	1		ITEM TOTAL		12	4	4	4		SAWING <table><tr><th>STATION</th><th>LOCATION</th><th>690.0150 ASPHALT LF</th></tr><tr><td>7+90 - 8+50</td><td>RT/LT</td><td>120</td></tr><tr><td>8+50</td><td></td><td>22</td></tr><tr><td>11+50</td><td></td><td>22</td></tr><tr><td>11+50 - 12+10</td><td>RT/LT</td><td>120</td></tr><tr><td colspan="2">ITEM TOTAL</td><td>284</td></tr></table>			STATION	LOCATION	690.0150 ASPHALT LF	7+90 - 8+50	RT/LT	120	8+50		22	11+50		22	11+50 - 12+10	RT/LT	120	ITEM TOTAL		284
	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH																																																																								
LOCATION	SIGN CODE					REMARKS																																																																						
NW BRIDGE CORNER	W5-52 R	3	1	1	1																																																																							
SW BRIDGE CORNER	W5-52 L	3	1	1	1																																																																							
NE BRIDGE CORNER	W5-52 L	3	1	1	1																																																																							
SE BRIDGE CORNER	W5-52 R	3	1	1	1																																																																							
ITEM TOTAL		12	4	4	4																																																																							
STATION	LOCATION	690.0150 ASPHALT LF																																																																										
7+90 - 8+50	RT/LT	120																																																																										
8+50		22																																																																										
11+50		22																																																																										
11+50 - 12+10	RT/LT	120																																																																										
ITEM TOTAL		284																																																																										
FIELD OFFICE <table><tr><th>PROJECT</th><th>642.5001 TYPE B EACH</th></tr><tr><td>7847-04-70</td><td>1</td></tr><tr><td colspan="2">ITEM TOTAL</td><td>1</td></tr></table>							PROJECT	642.5001 TYPE B EACH	7847-04-70	1	ITEM TOTAL		1	MARKING LINE <table><tr><th>STATION - STATION</th><th>LOCATION</th><th>646.1020 EPOXY 4-INCH LF</th><th>646.9000 MARKING REMOVAL LINE 4-INCH LF</th><th>REMARKS</th></tr><tr><td>7+90 - 12+10</td><td>EDGELINE</td><td>840</td><td>--</td><td>WHITE</td></tr><tr><td></td><td>CENTERLINE</td><td>325</td><td>930</td><td>REMOVE EXISTING NO PASSING CENTERLINE STRIPPING NORTH AND SOUTH OF BRIDGE AND REPLACE WITH YELLOW SKIPS</td></tr><tr><td colspan="2">ITEM TOTALS</td><td>1,165</td><td>930</td><td></td></tr></table>					STATION - STATION	LOCATION	646.1020 EPOXY 4-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	REMARKS	7+90 - 12+10	EDGELINE	840	--	WHITE		CENTERLINE	325	930	REMOVE EXISTING NO PASSING CENTERLINE STRIPPING NORTH AND SOUTH OF BRIDGE AND REPLACE WITH YELLOW SKIPS	ITEM TOTALS		1,165	930																																							
PROJECT	642.5001 TYPE B EACH																																																																											
7847-04-70	1																																																																											
ITEM TOTAL		1																																																																										
STATION - STATION	LOCATION	646.1020 EPOXY 4-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	REMARKS																																																																								
7+90 - 12+10	EDGELINE	840	--	WHITE																																																																								
	CENTERLINE	325	930	REMOVE EXISTING NO PASSING CENTERLINE STRIPPING NORTH AND SOUTH OF BRIDGE AND REPLACE WITH YELLOW SKIPS																																																																								
ITEM TOTALS		1,165	930																																																																									
TRAFFIC CONTROL <table><tr><th>STATION - STATION</th><th>643.5000 TRAFFIC CONTROL EACH</th><th>643.0420 BARRICADES TYPE III DAYS</th><th>643.0705 WARNING LIGHTS TYPE A DAYS</th><th>643.0900 SIGNS DAYS</th></tr><tr><td>CTH Y</td><td>1</td><td>1548</td><td>2064</td><td>1204</td></tr><tr><td colspan="5">ITEM TOTAL</td><td>1</td><td>1548</td><td>2064</td><td>1204</td></tr></table>							STATION - STATION	643.5000 TRAFFIC CONTROL EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS DAYS	CTH Y	1	1548	2064	1204	ITEM TOTAL					1	1548	2064	1204	CONSTRUCTION STAKING <table><tr><th>STATION - STATION</th><th>650.4500 SUBGRADE LF</th><th>650.5000 BASE LF</th><th>650.9910 SUPPLEMENTAL CONTROL LS</th><th>650.9920 SLOPE STAKES LF</th></tr><tr><td>8+50 - 11+50</td><td>261</td><td>261</td><td>--</td><td>261</td></tr><tr><td>PROJECT 7847-04-70</td><td>--</td><td>--</td><td>1</td><td>--</td></tr><tr><td colspan="5">ITEM TOTAL</td><td>261</td><td>261</td><td>1</td><td>261</td></tr></table> NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.					STATION - STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF	8+50 - 11+50	261	261	--	261	PROJECT 7847-04-70	--	--	1	--	ITEM TOTAL					261	261	1	261																						
STATION - STATION	643.5000 TRAFFIC CONTROL EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS DAYS																																																																								
CTH Y	1	1548	2064	1204																																																																								
ITEM TOTAL					1	1548	2064	1204																																																																				
STATION - STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF																																																																								
8+50 - 11+50	261	261	--	261																																																																								
PROJECT 7847-04-70	--	--	1	--																																																																								
ITEM TOTAL					261	261	1	261																																																																				
PROJECT NO: 7847-04-70		HWY: CTH Y		COUNTY: CLARK		MISCELLANEOUS QUANTITIES			SHEET	E																																																																		

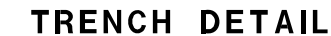


Standard Detail Drawing List

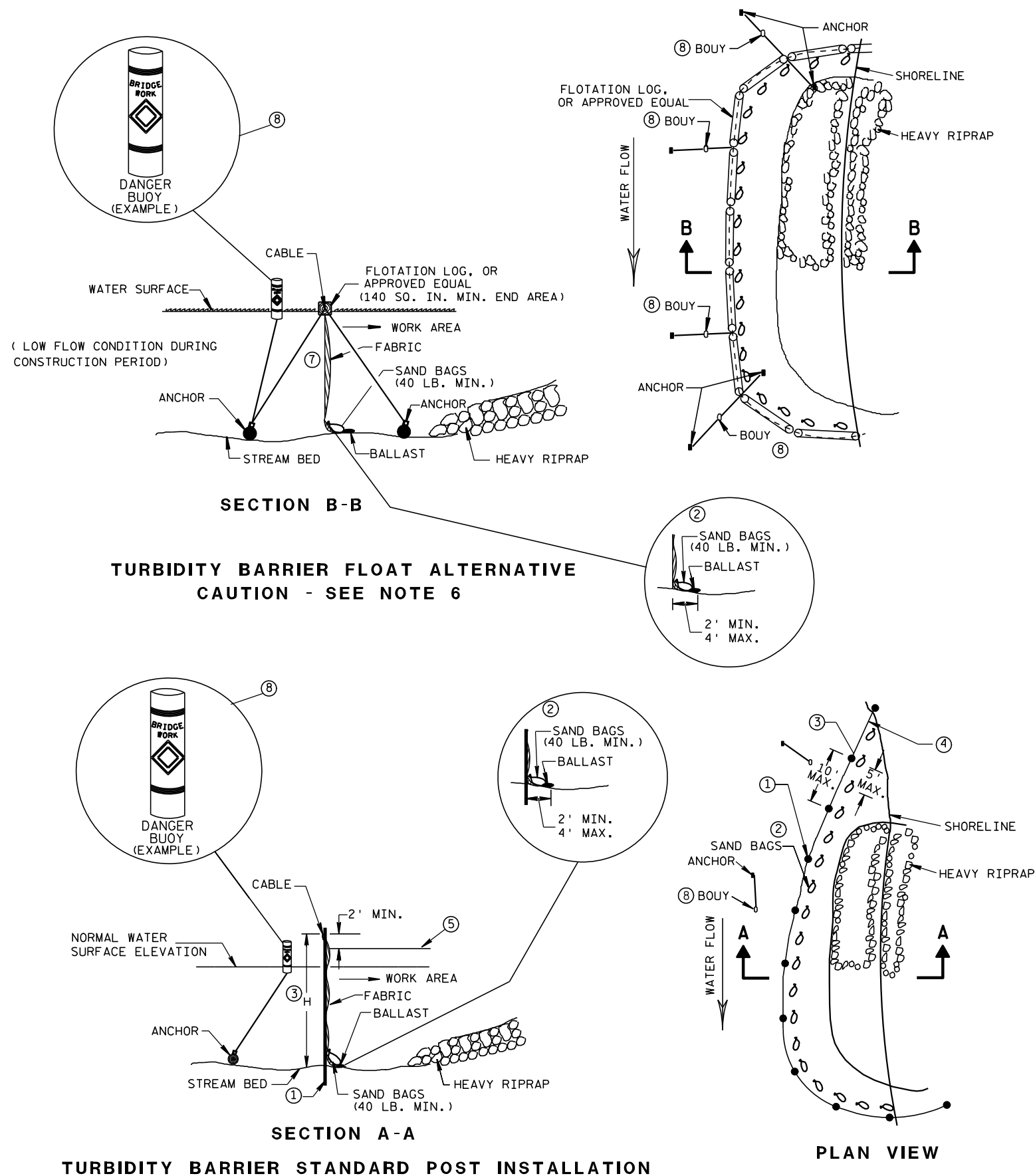
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES



- 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> <u>DATE</u>	<u>/S/ Beth Canestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER

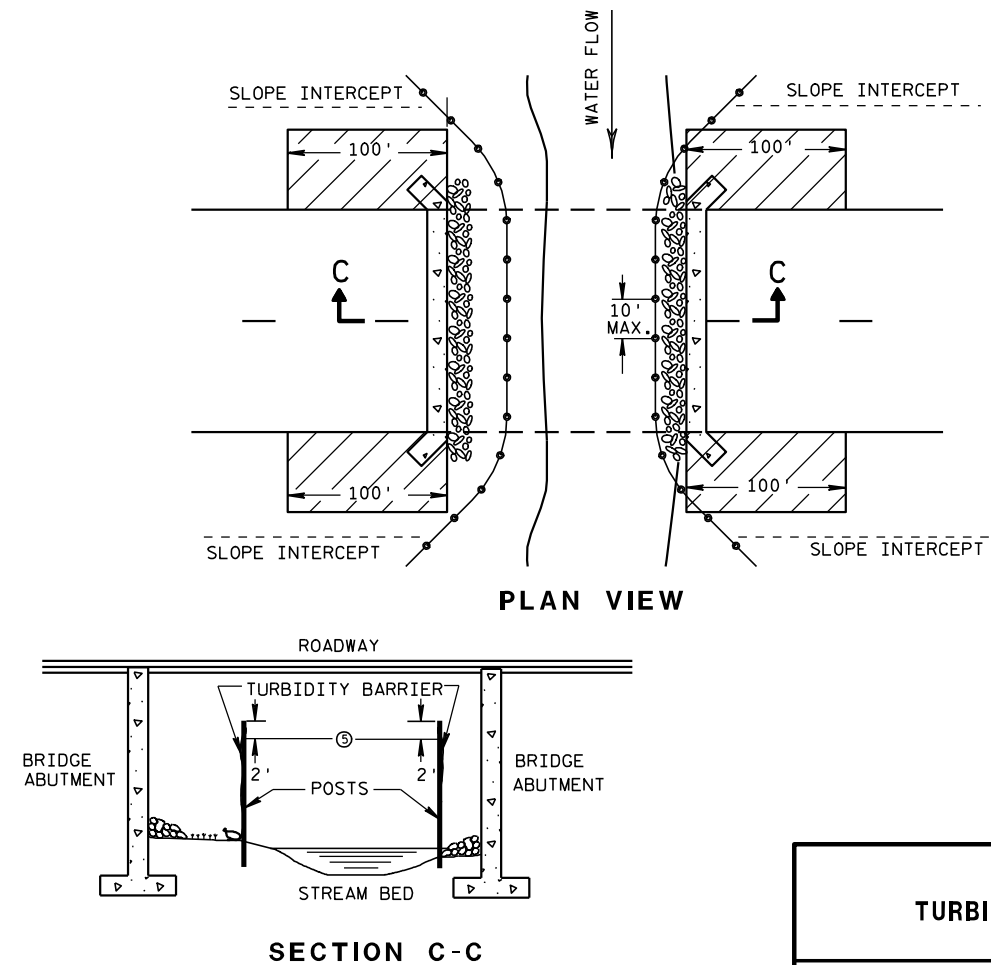


GENERAL NOTES

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

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

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SANDBAGS 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 FT., 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 02 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 BED ROCK 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.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

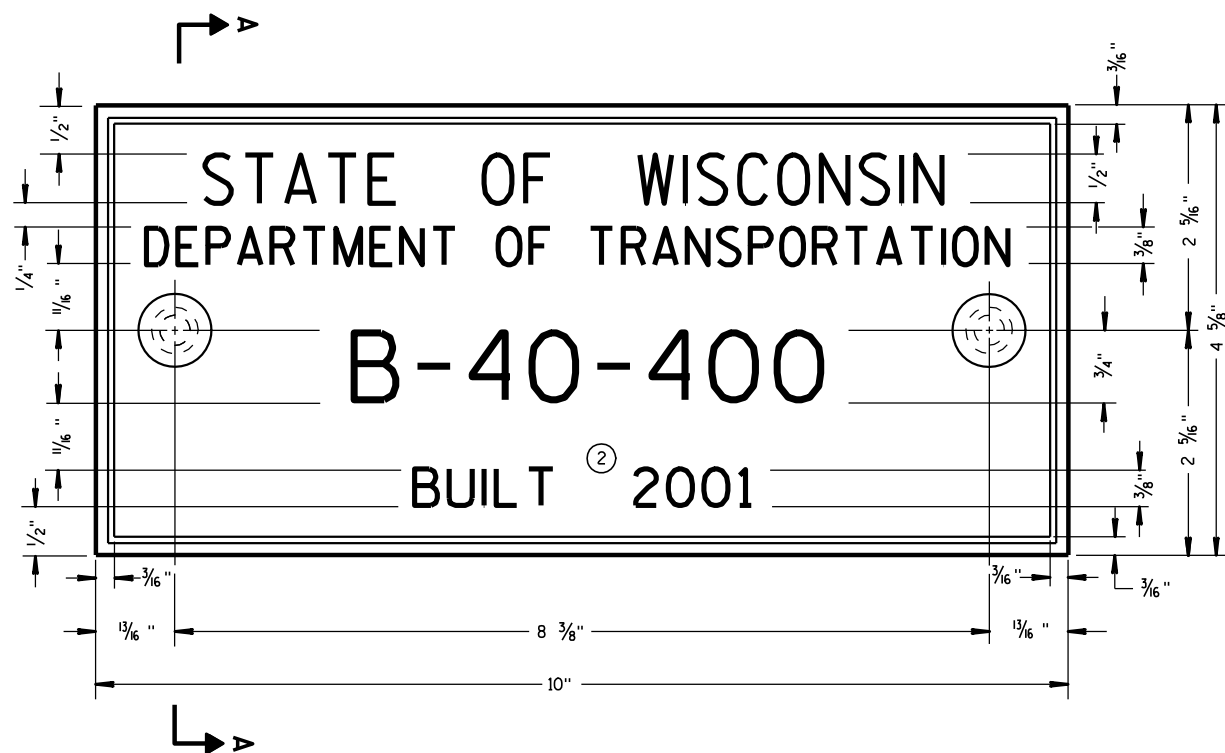
APPROVED

6/04/02

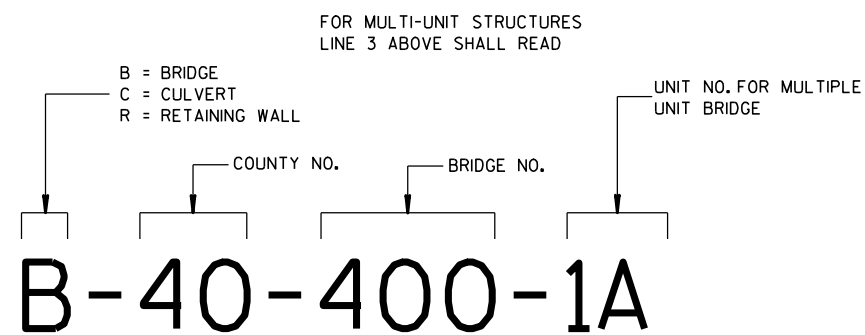
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



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



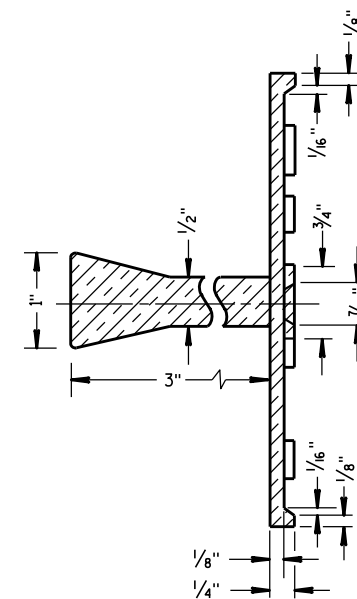
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

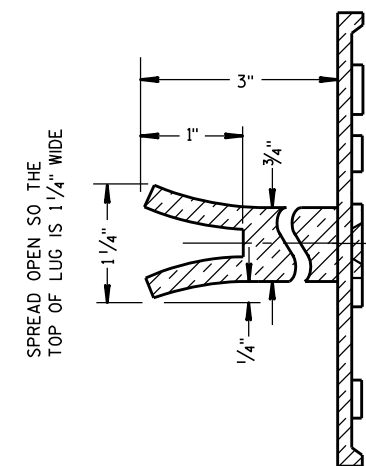
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

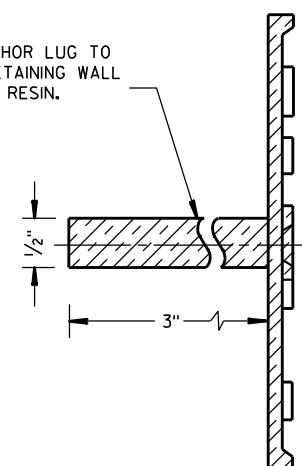


SECTION A-A



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

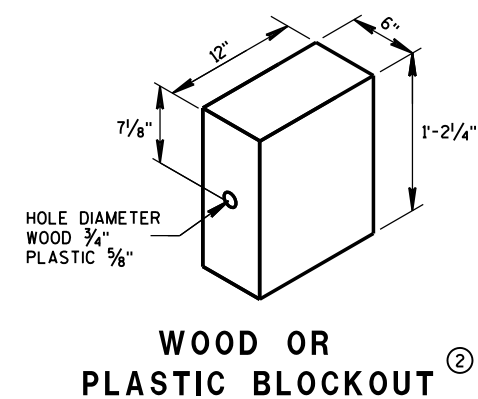
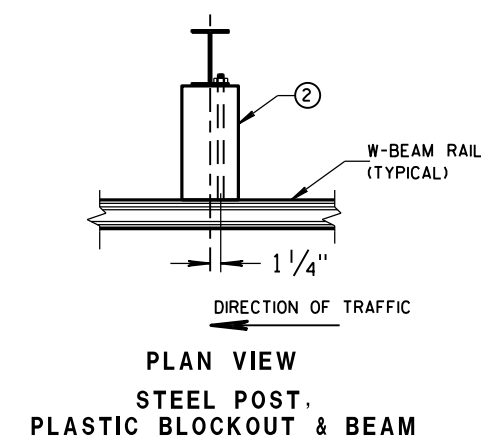
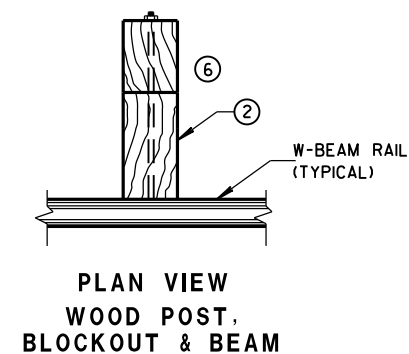
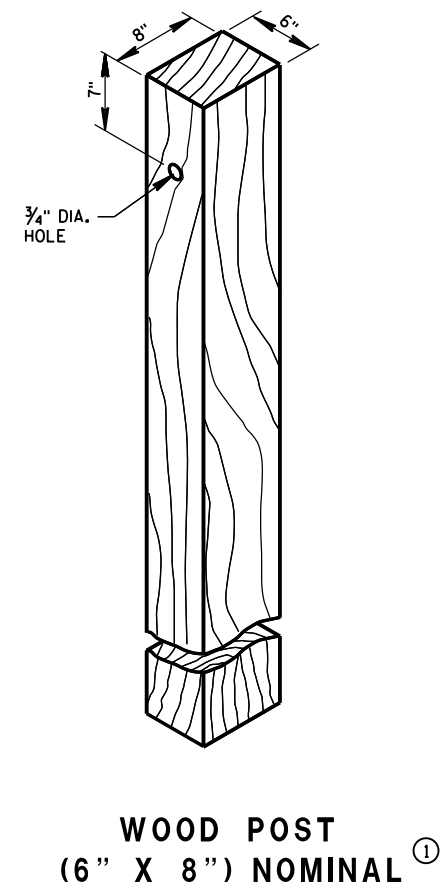
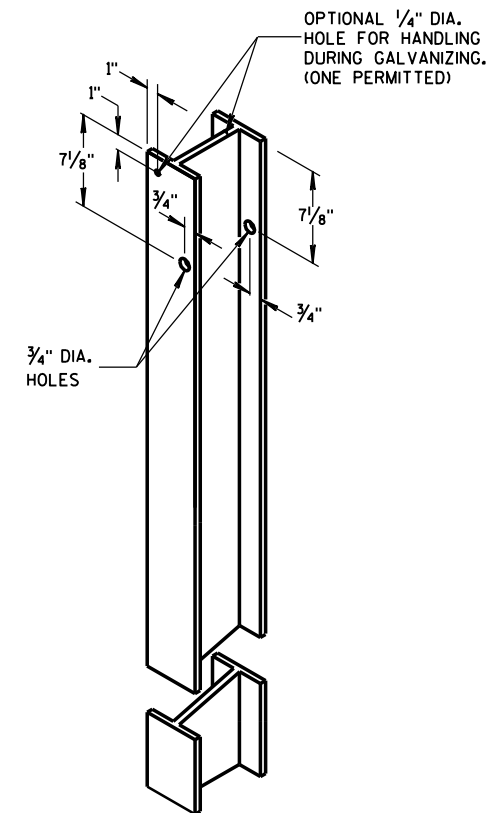
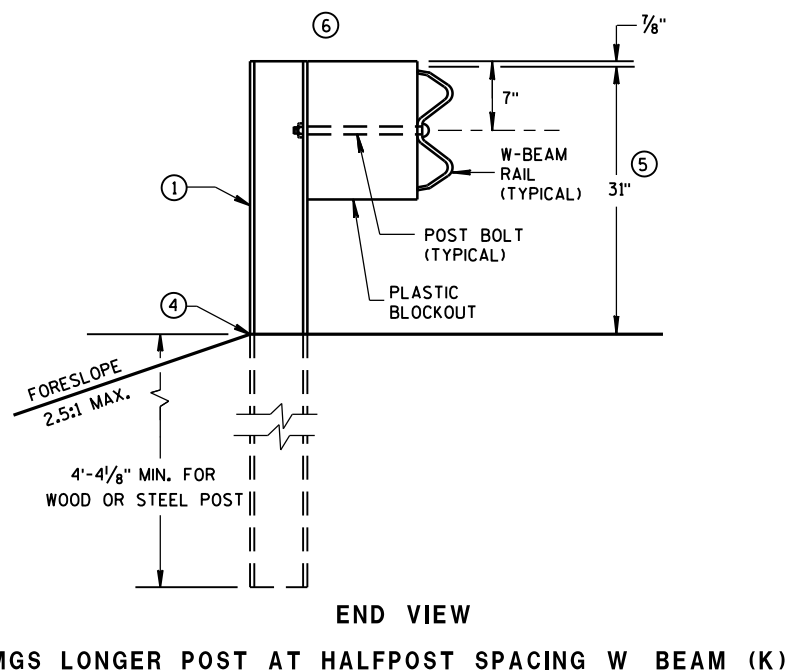
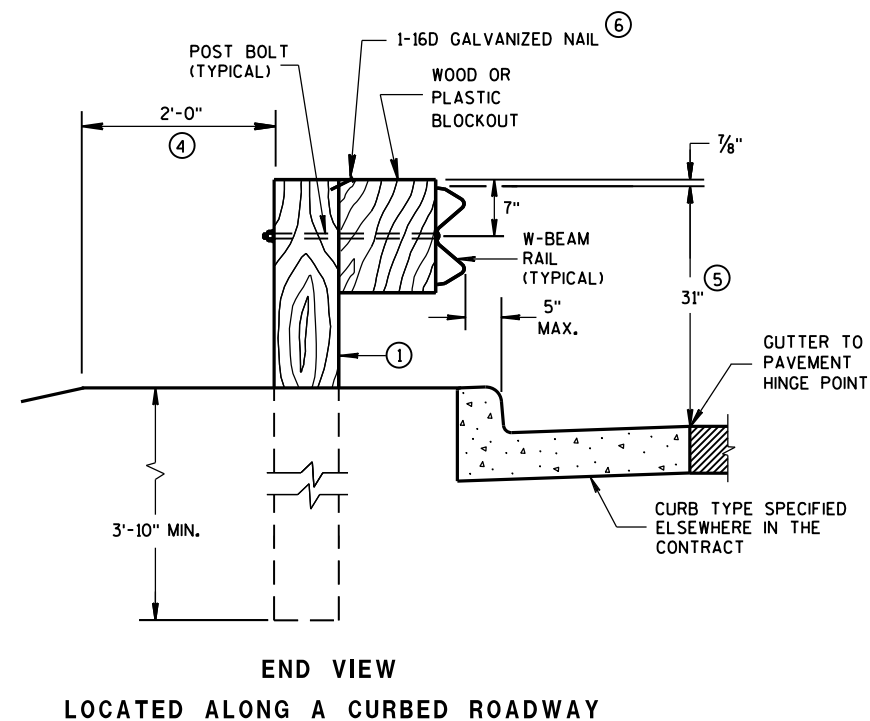
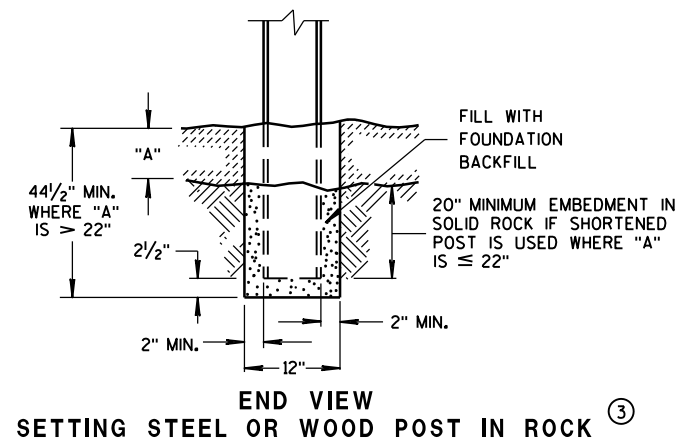
APPROVED

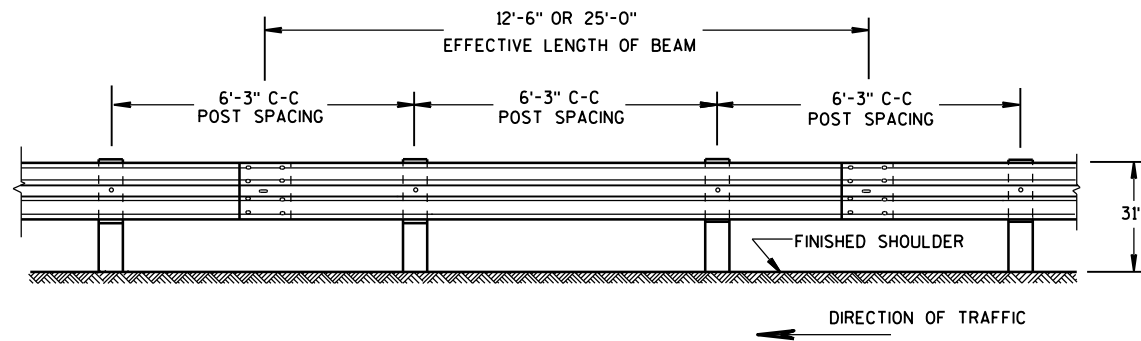
3/26/10
DATE

FHWA

/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER

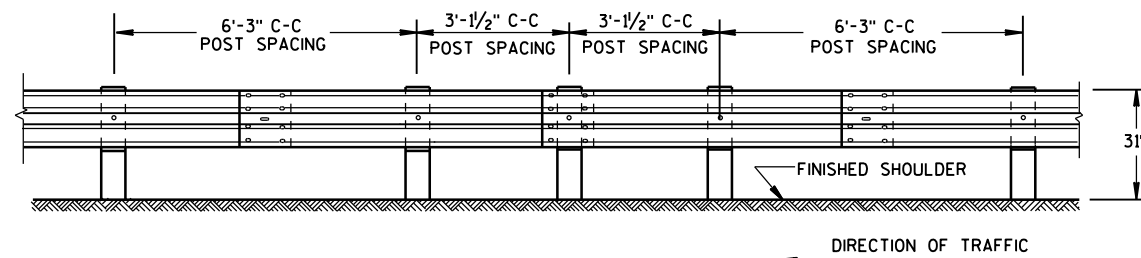
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. 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 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS TO THE 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 ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" 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.





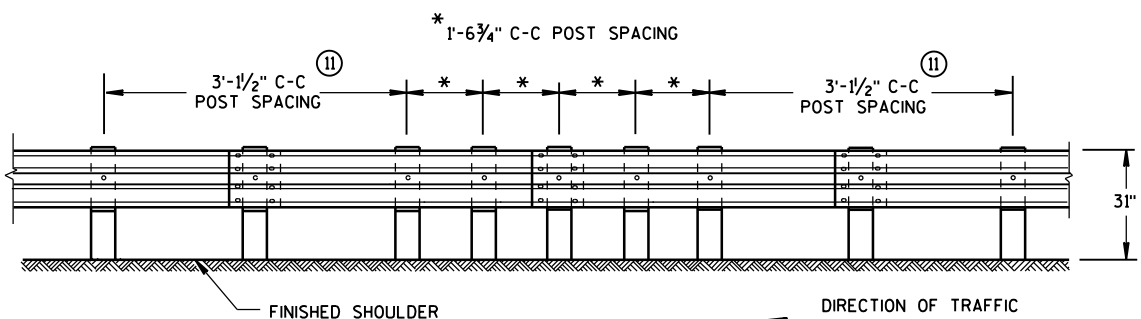
FRONT VIEW

POST SPACING STANDARD INSTALLATION



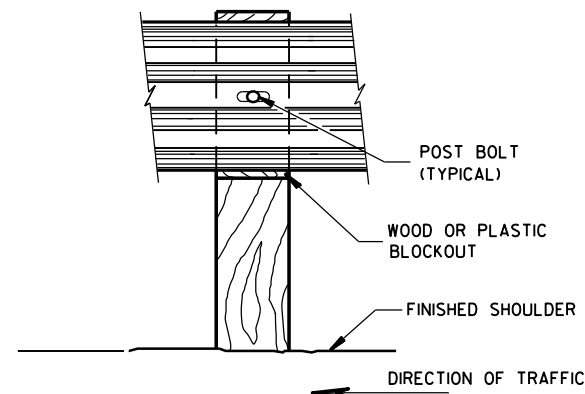
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

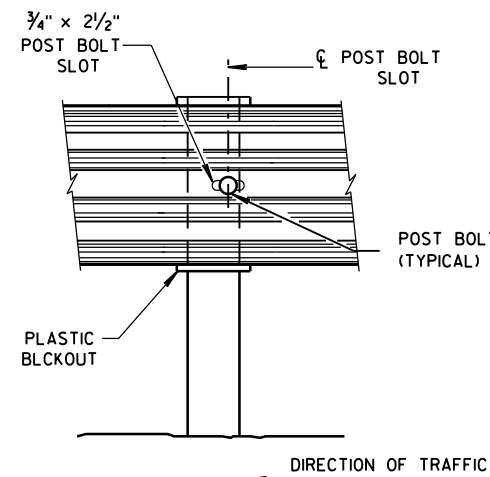


FRONT VIEW

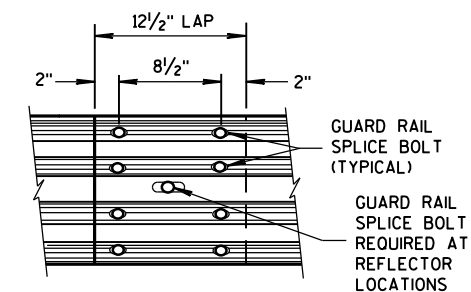
QUARTER POST SPACING (QS)



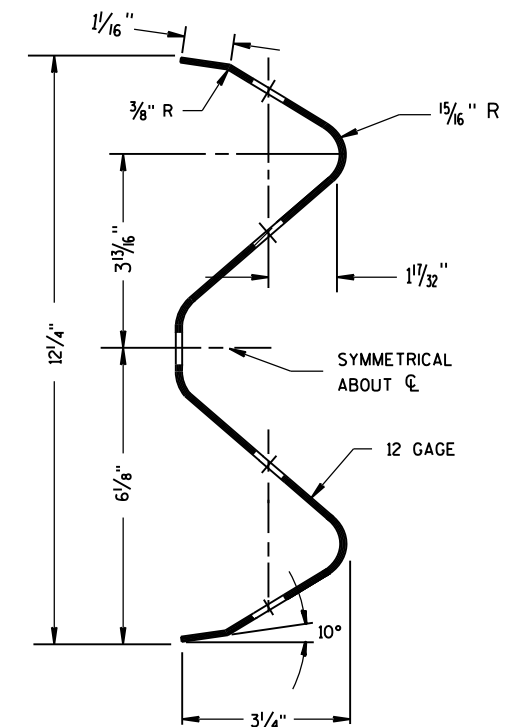
FRONT VIEW AT WOOD POST



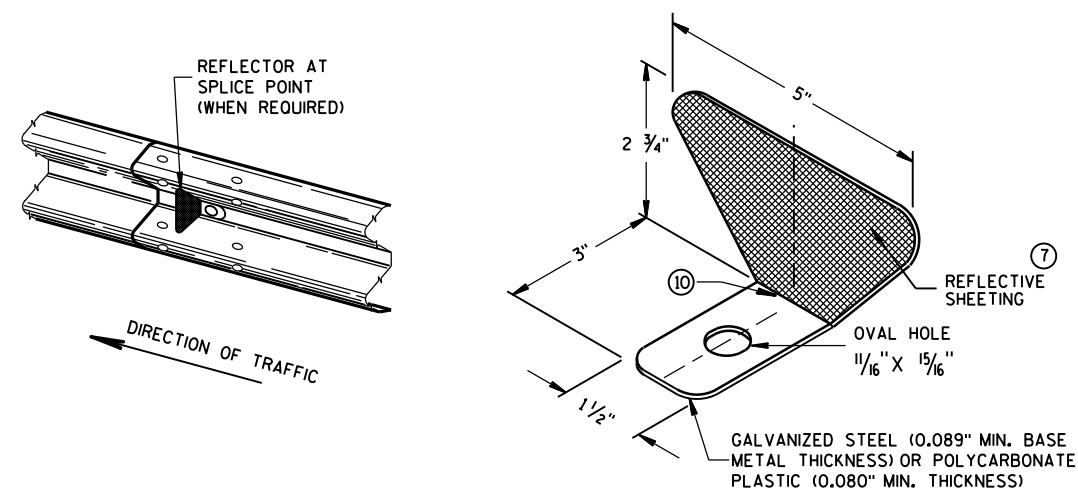
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

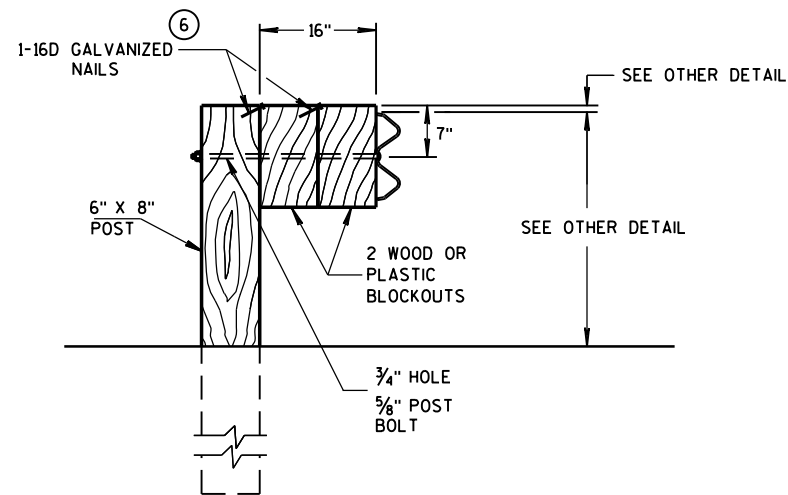
- ⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
 - ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
 - ⑩ PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
 - ⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑨	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ⑩	3
	> 200'	100' C-C	2	

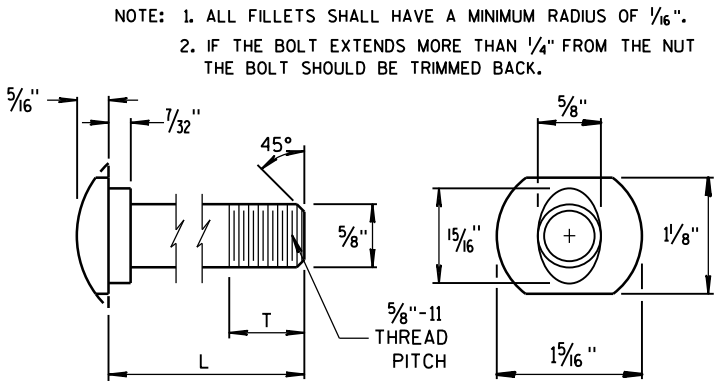
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

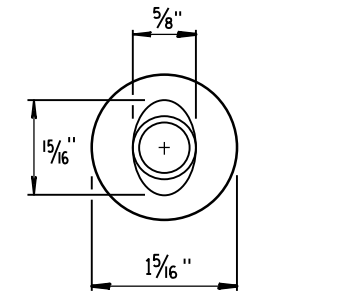


DETAIL FOR 16" BLOCKOUT DEPTH

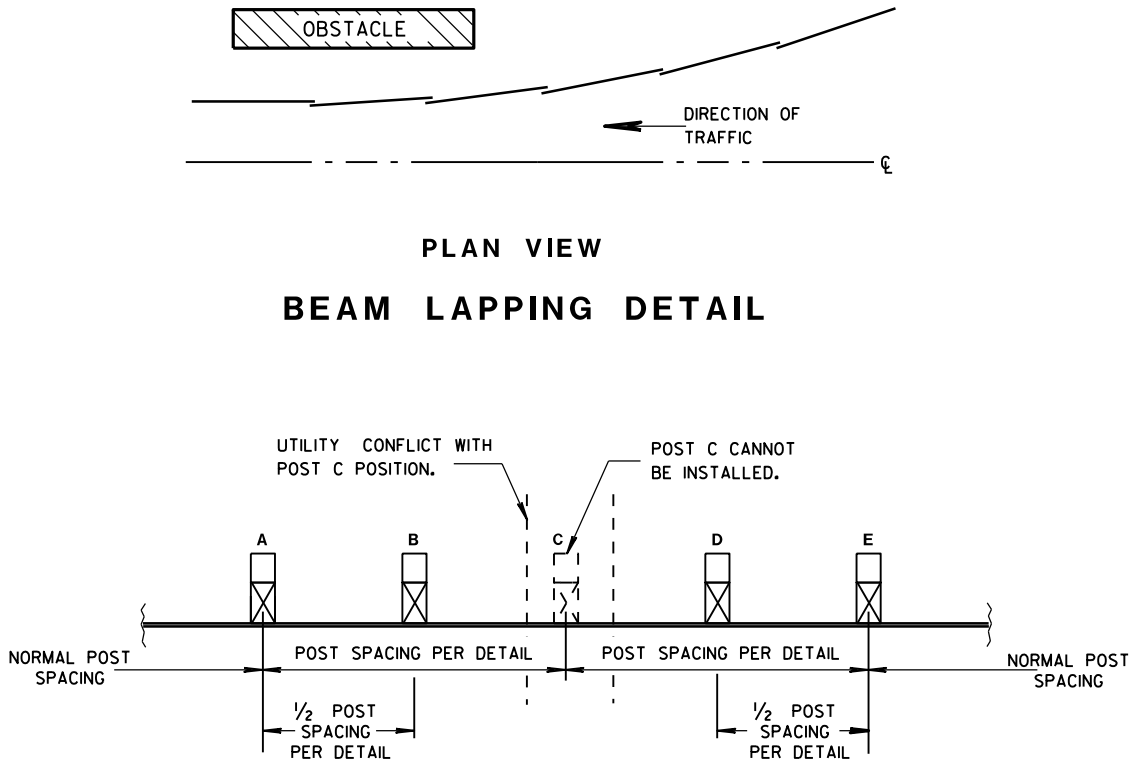
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



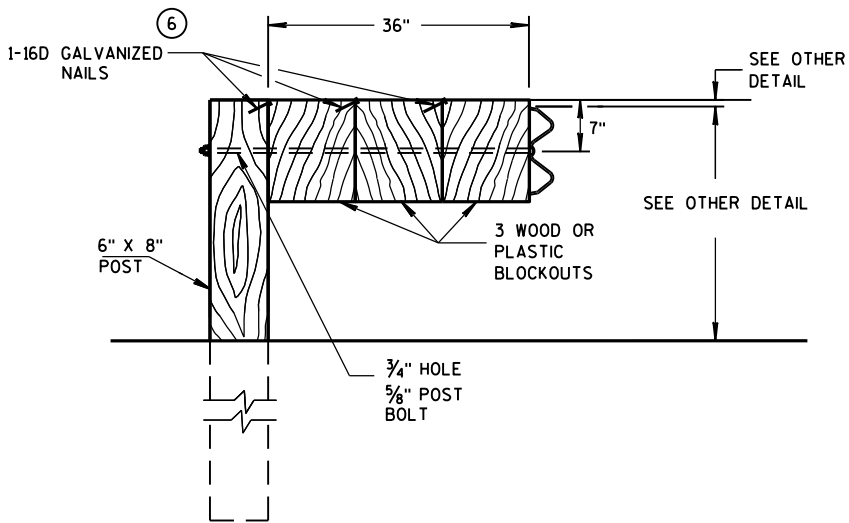
POST BOLT TABLE



ALTERNATE BOLT HEAD



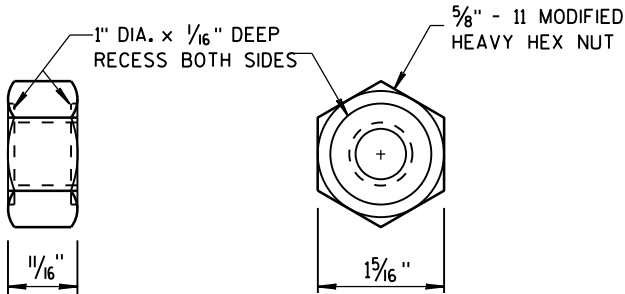
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



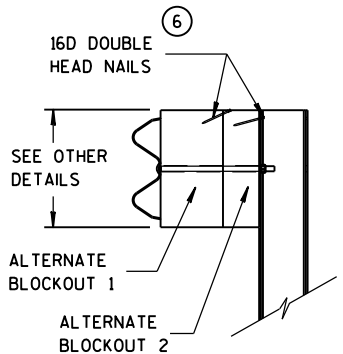
DETAIL FOR 36" BLOCKOUT DEPTH

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.

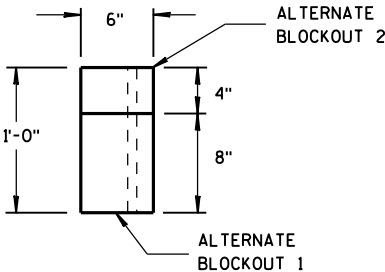
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

GENERAL NOTES

- (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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.
- (G) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

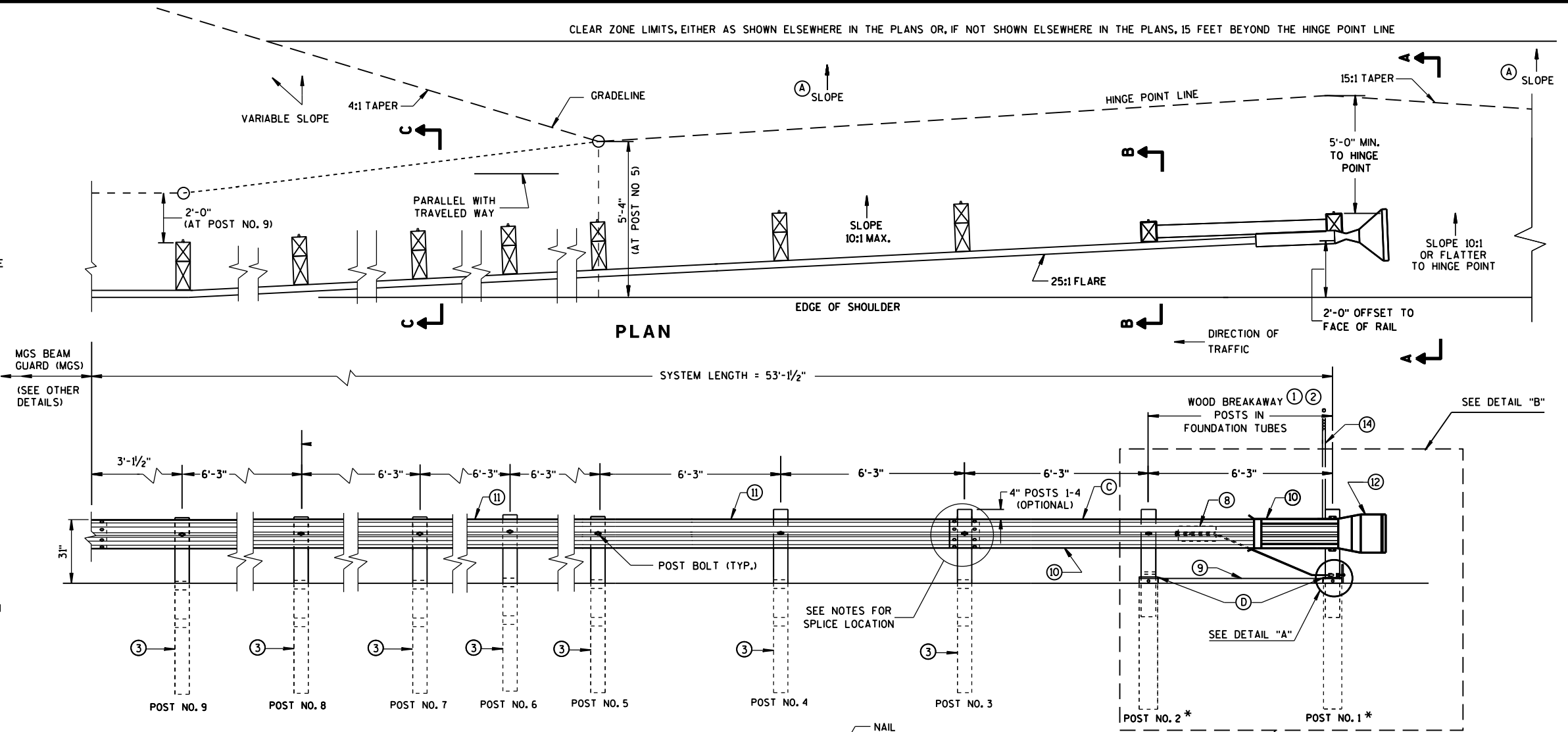
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

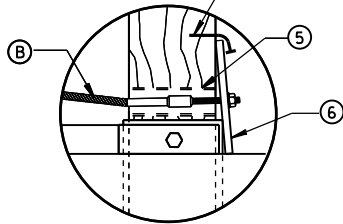
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

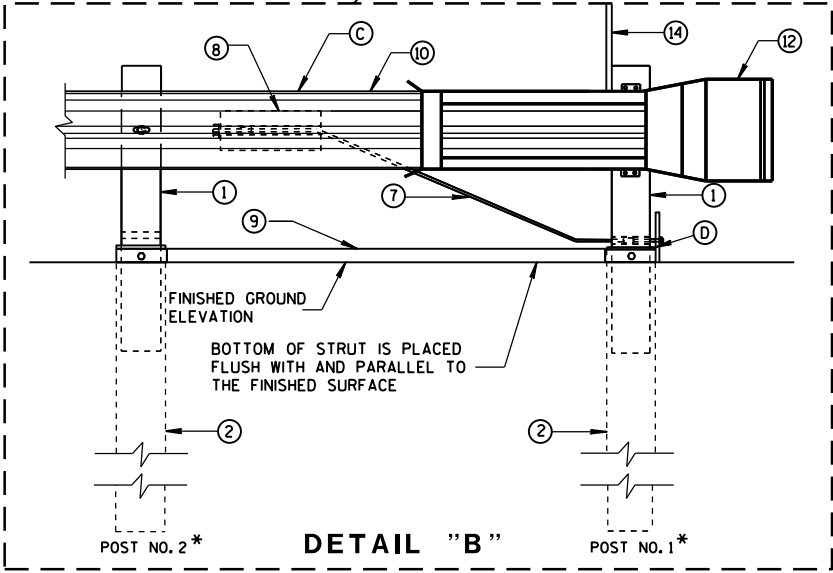
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



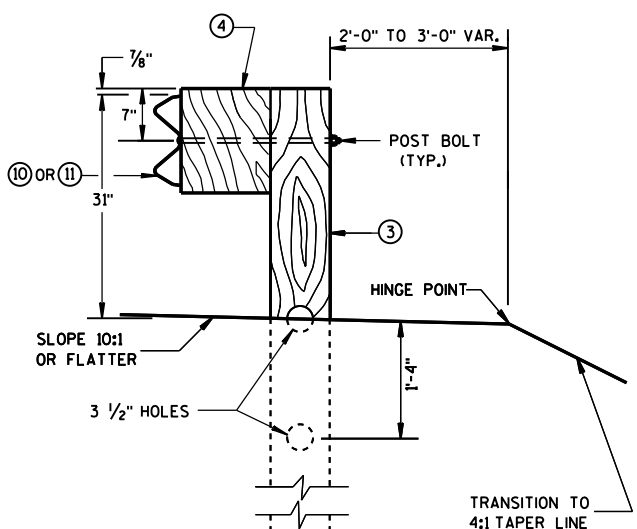
ELEVATION



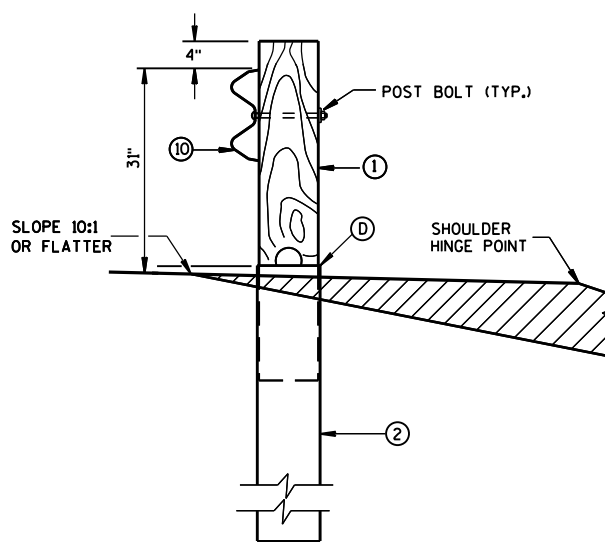
DETAIL "A"



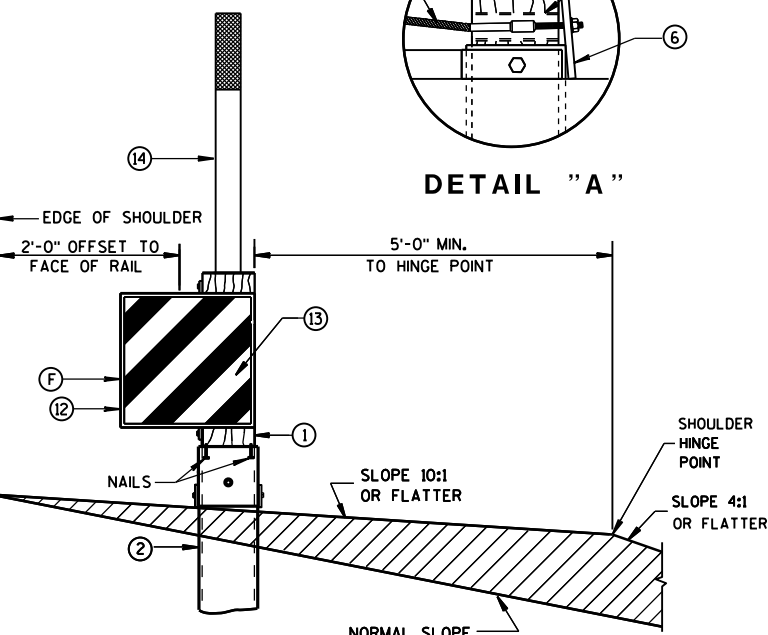
DETAIL "B"



SECTION C-C
TYPICAL AT POST NOS. 3-9



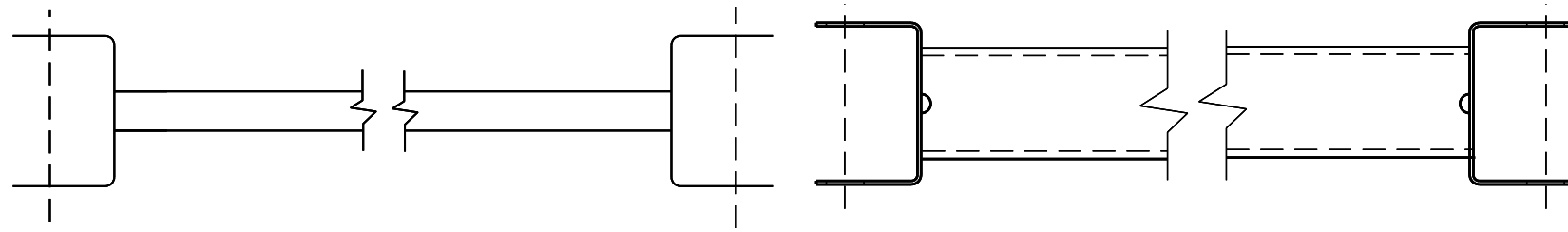
SECTION B-B
TYPICAL AT POST NO. 2*



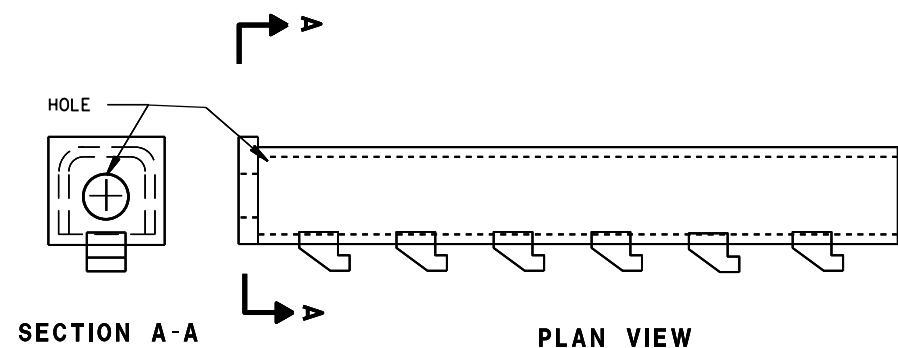
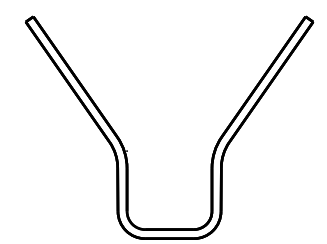
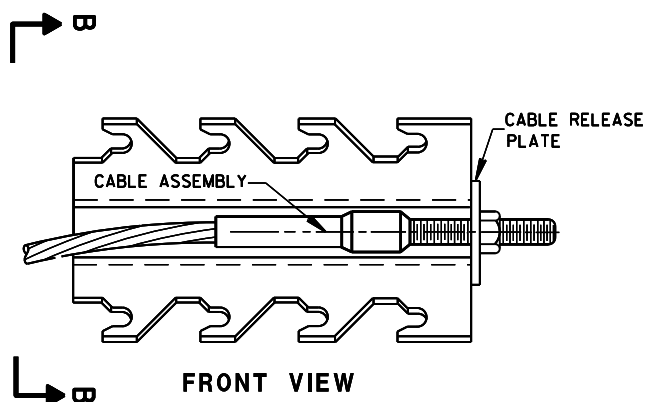
SECTION A-A
TYPICAL AT POST NO. 1*

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



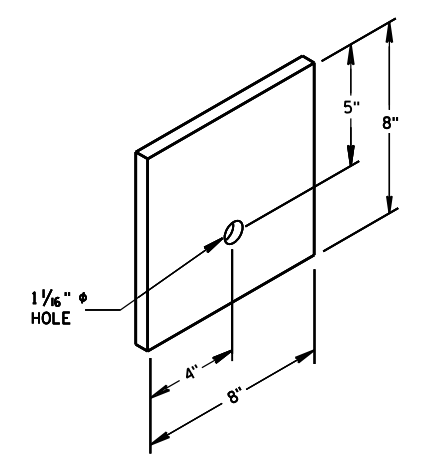
9 H
GENERIC GROUND STRUT



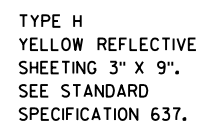
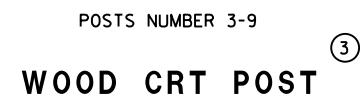
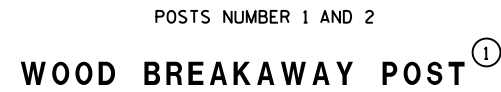
8 H
GENERIC ANCHOR CABLE BOX

BILL OF MATERIALS

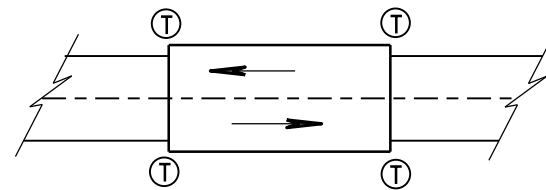
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



⑥
BEARING PLATE

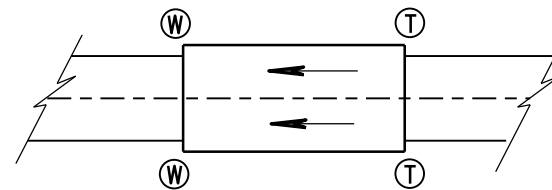


MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2014	/S/ Jerry H. Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



TWO WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION



ONE WAY TRAFFIC

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

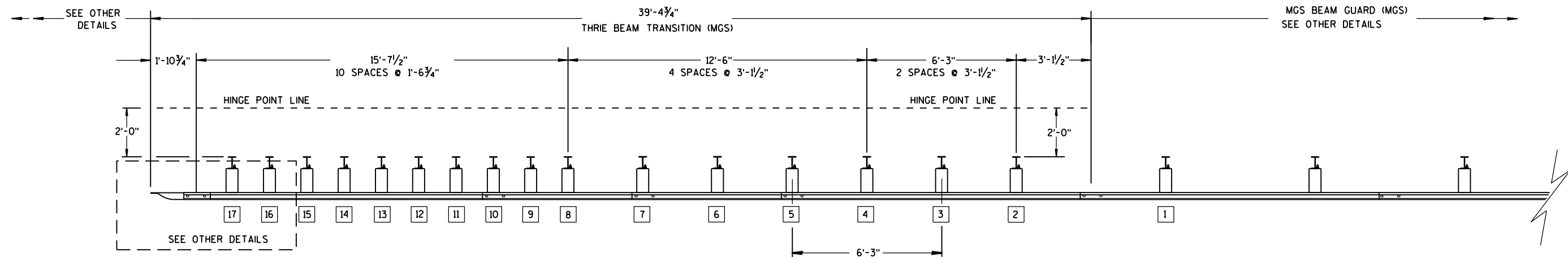
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

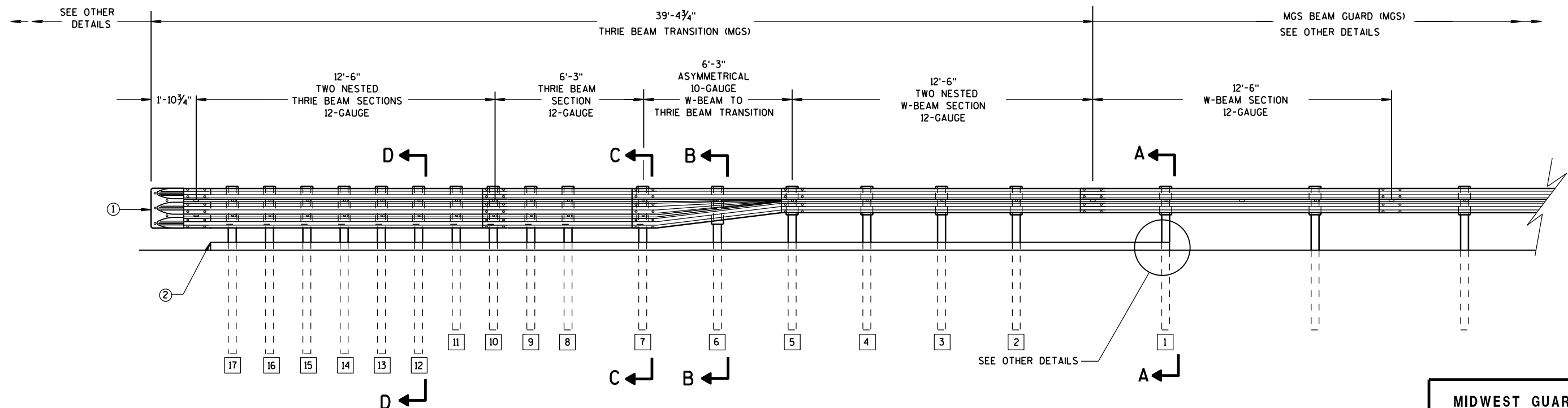
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



PLAN VIEW



ELEVATION VIEW

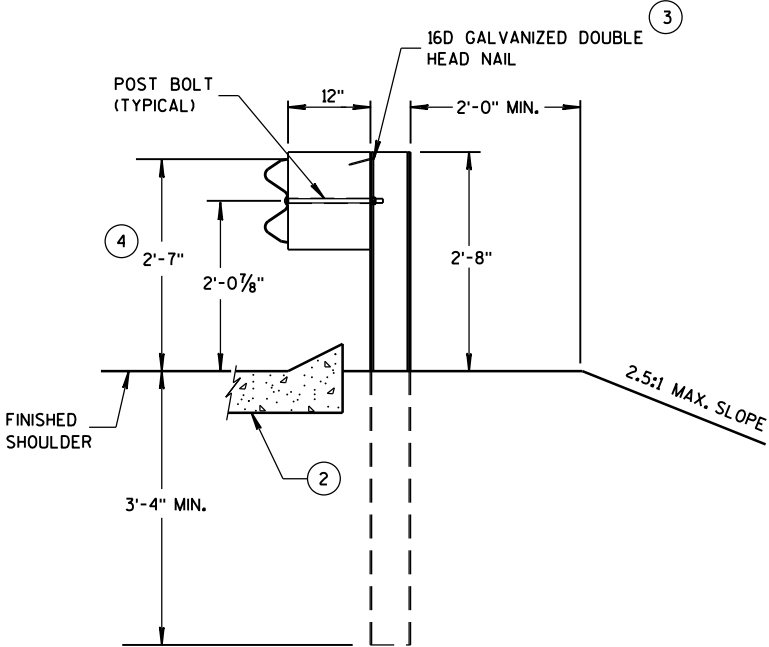
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

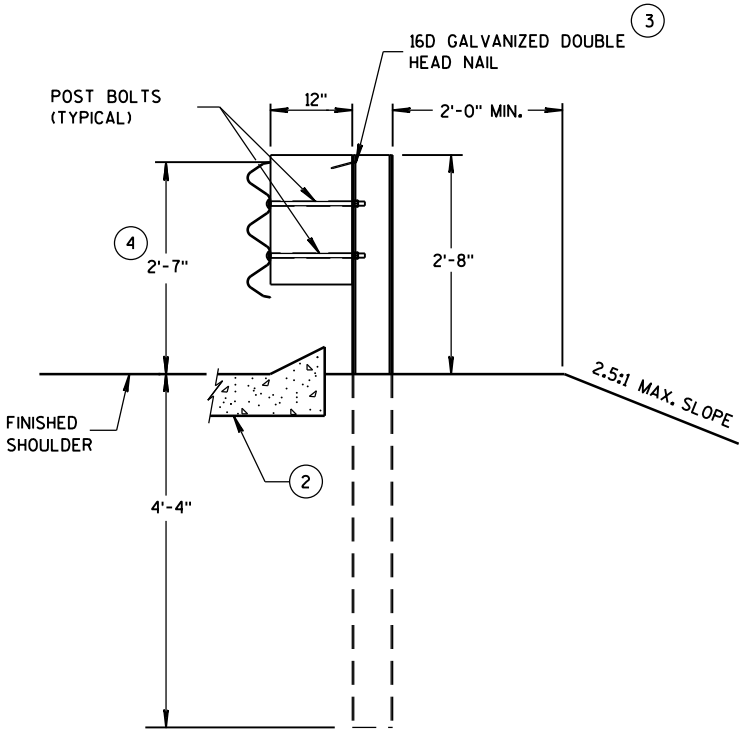
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

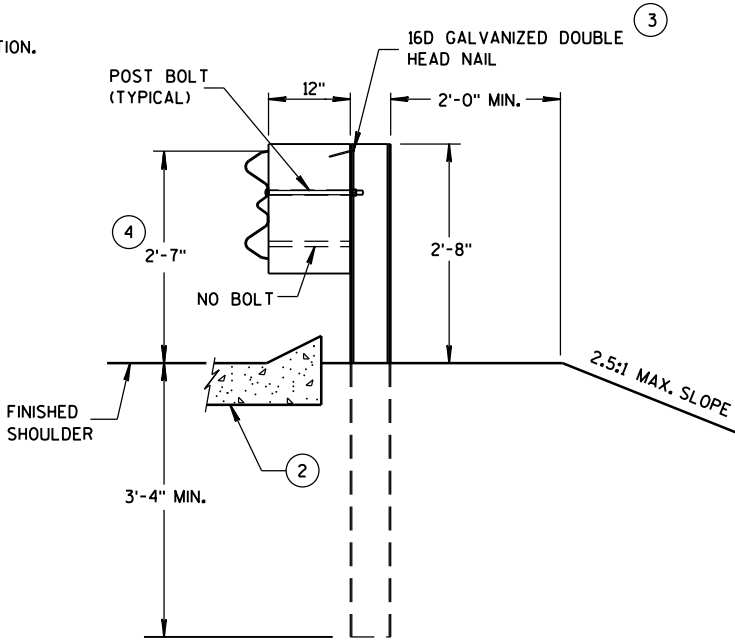
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



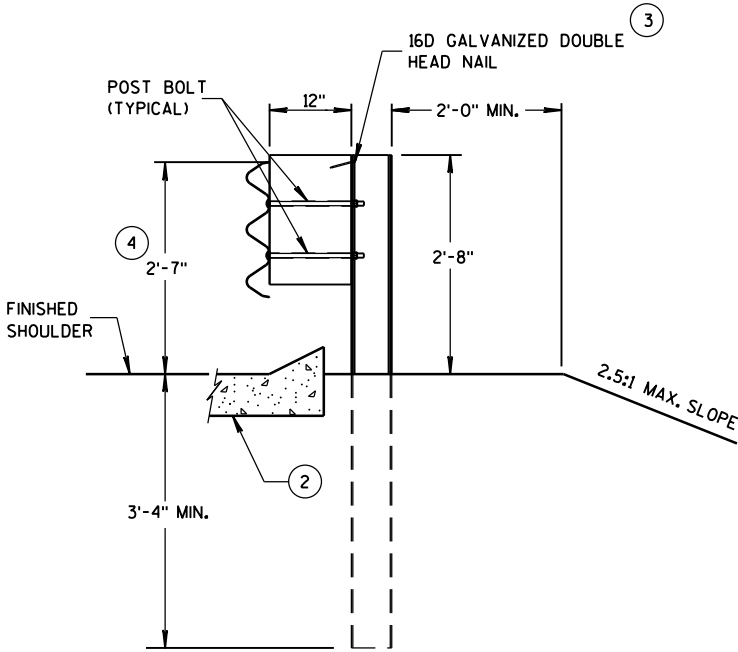
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

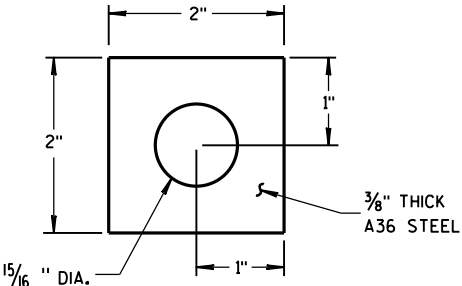
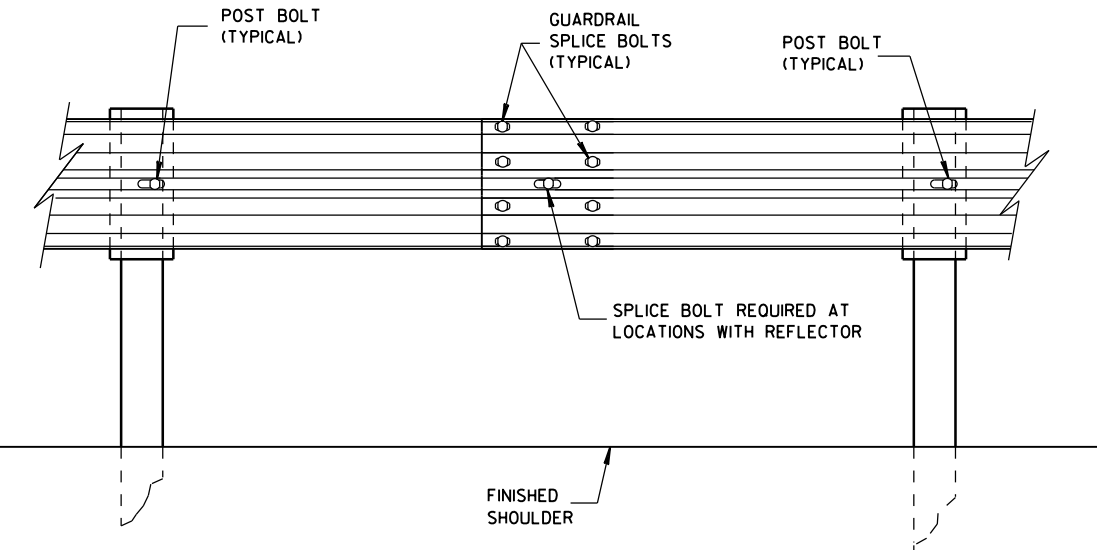
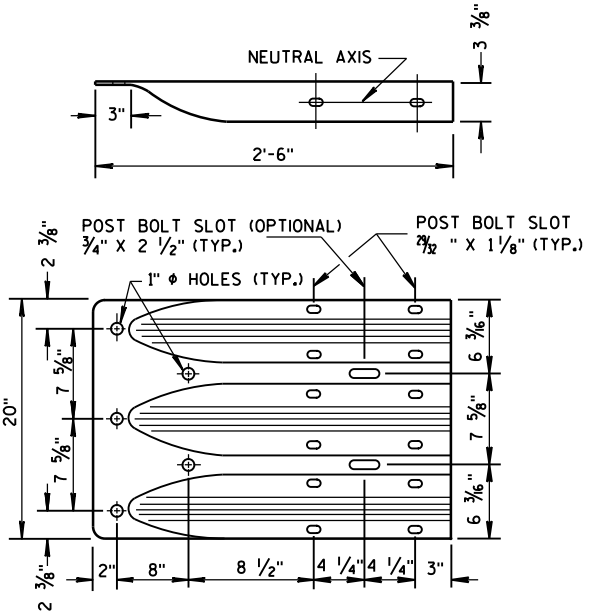


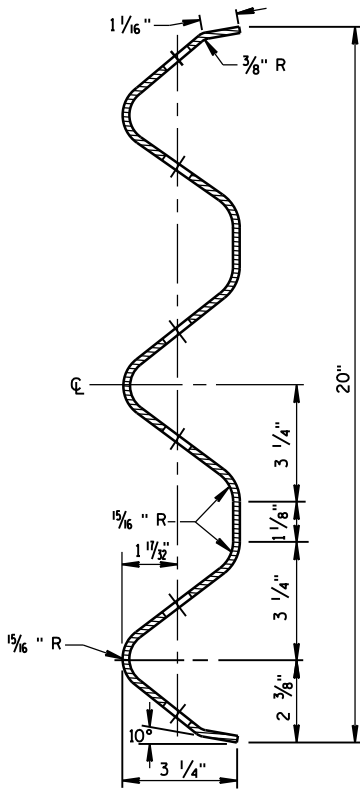
PLATE WASHER DETAIL



SPlice DETAIL



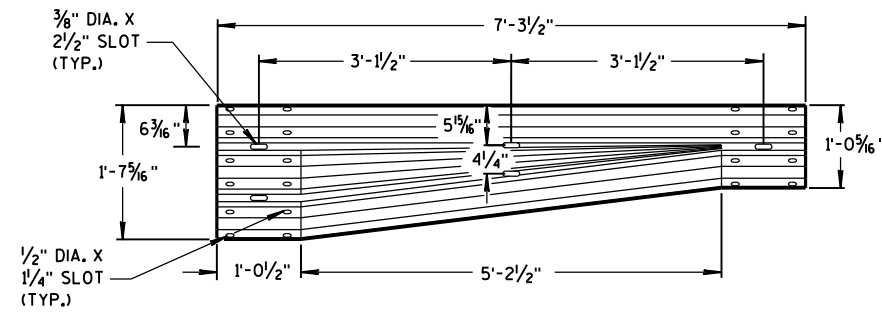
THRIE BEAM
TERMINAL CONNECTOR



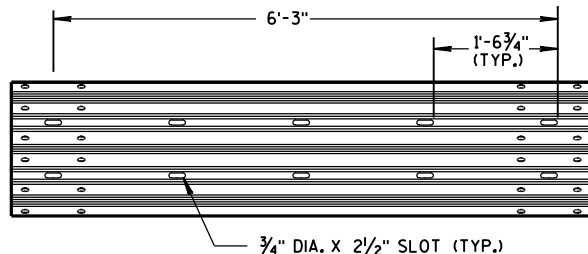
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

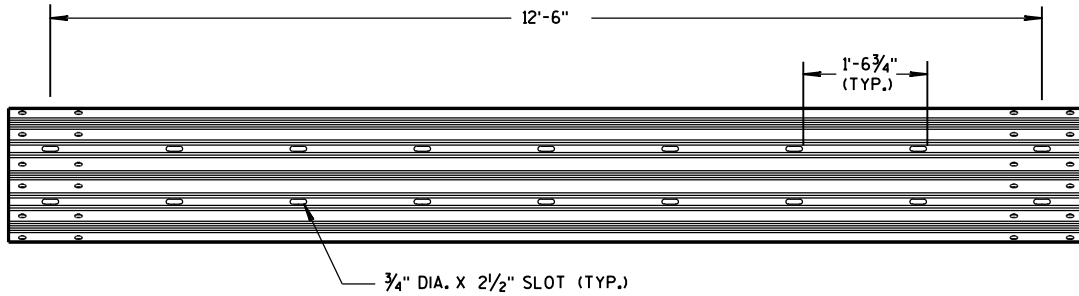
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



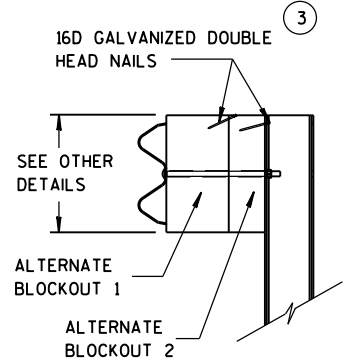
W-BEAM TO THRIE BEAM TRANSITION SECTION



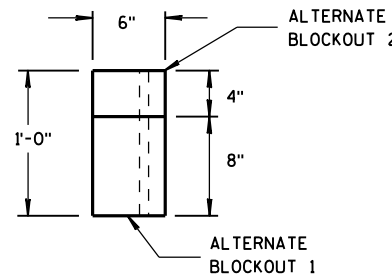
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

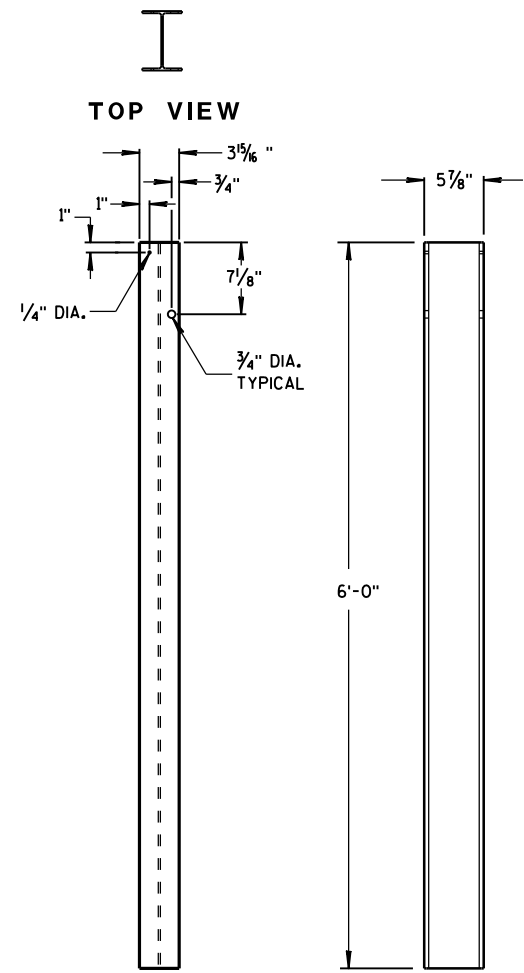


SIDE VIEW



TOP VIEW

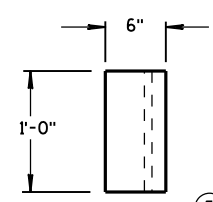
ALTERNATE WOOD BLOCKOUT DETAIL



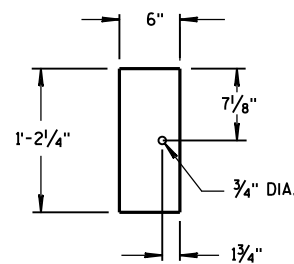
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

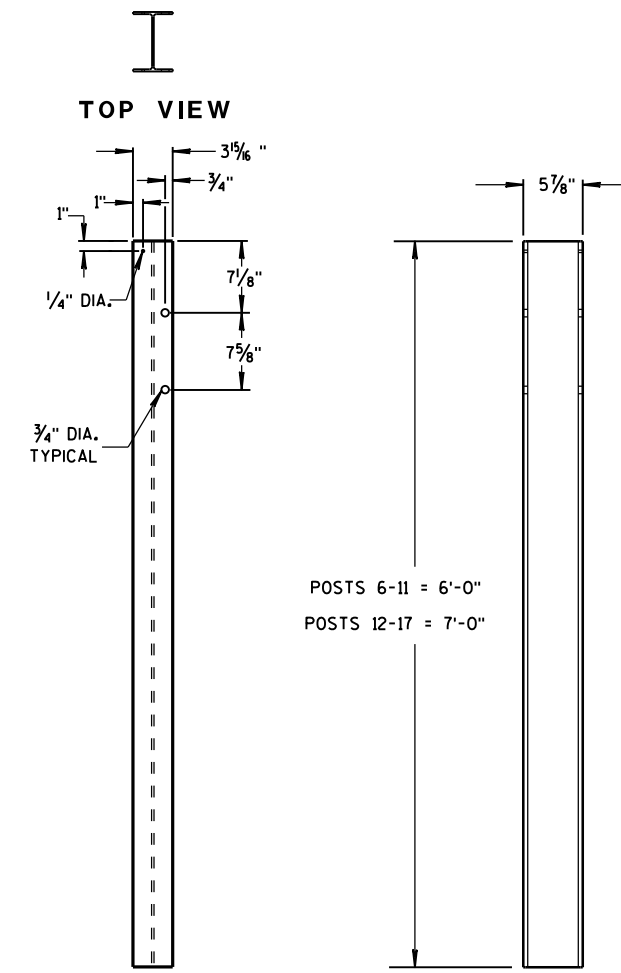


TOP VIEW



FRONT VIEW

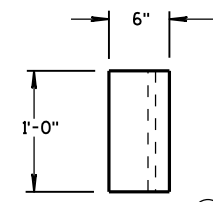
BLOCKOUT POSTS 1-5



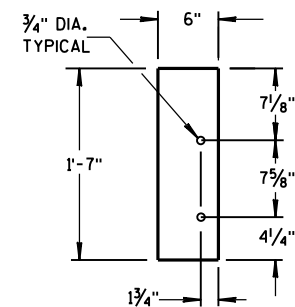
FRONT VIEW

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.

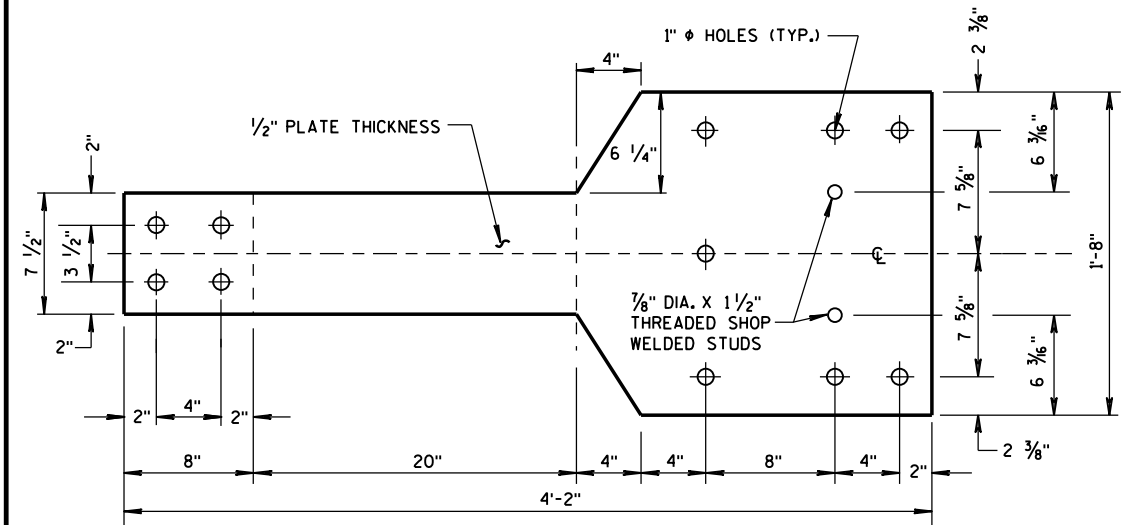
⑤ WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

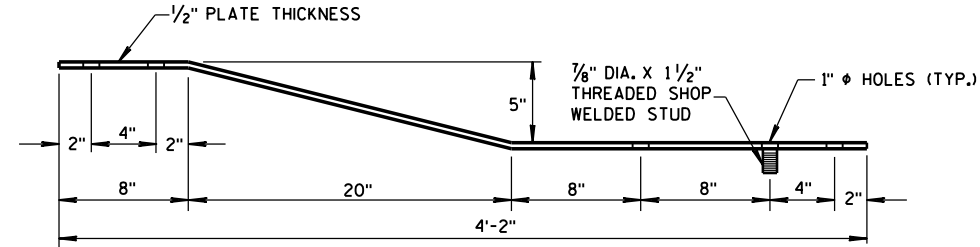
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

④ TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.

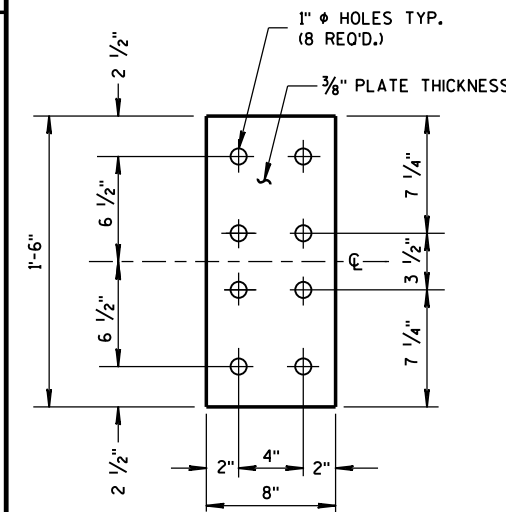


FRONT VIEW



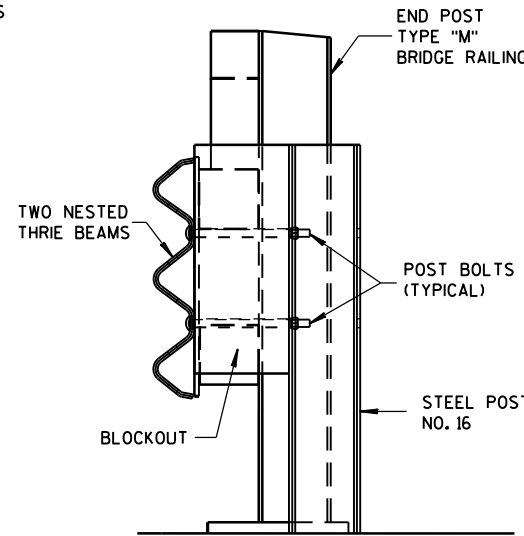
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

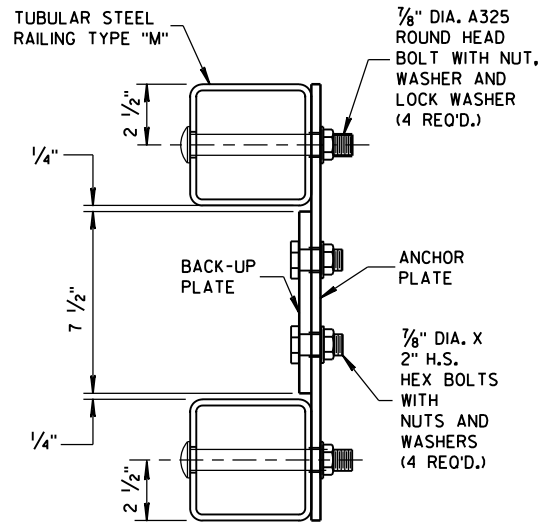


FRONT VIEW

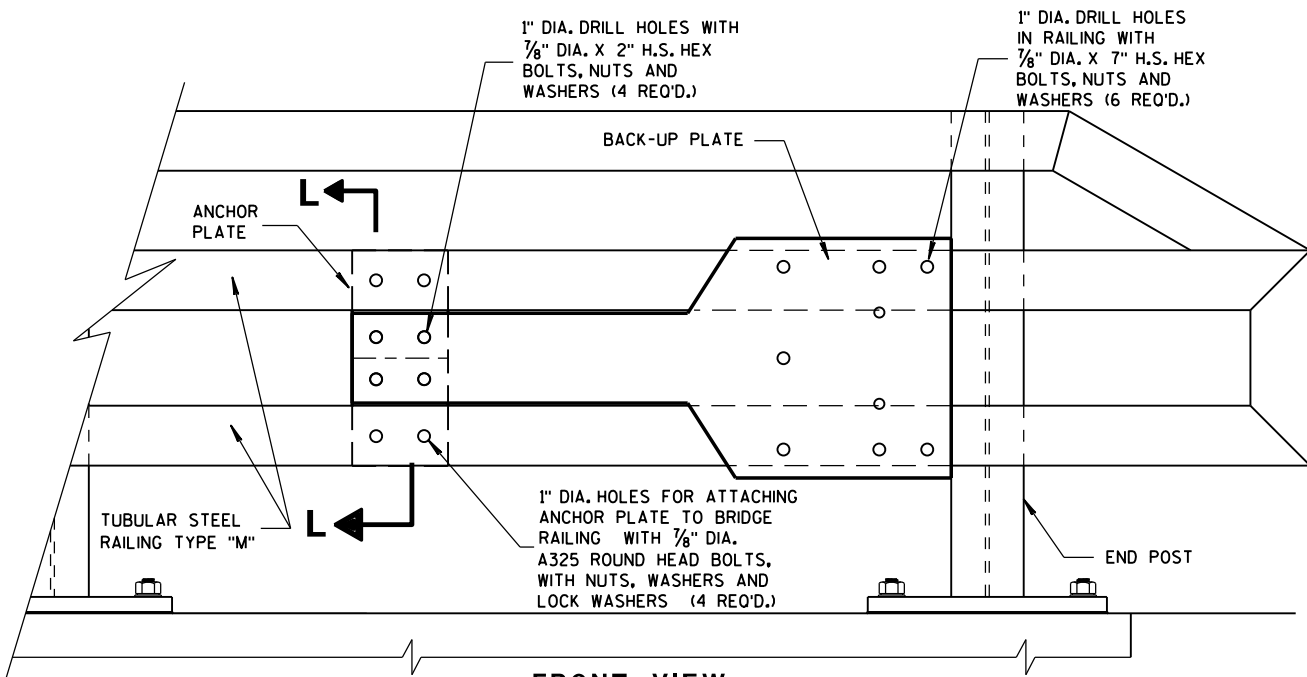
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

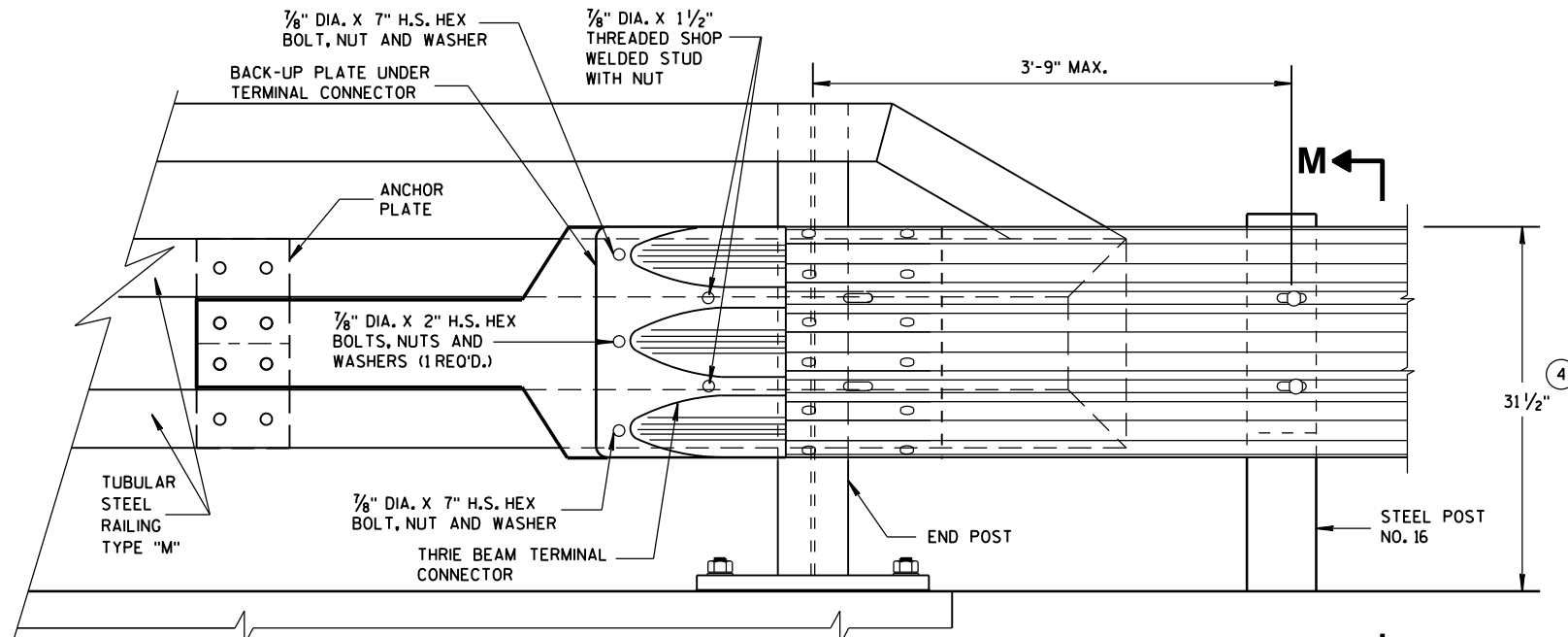


SECTION L-L

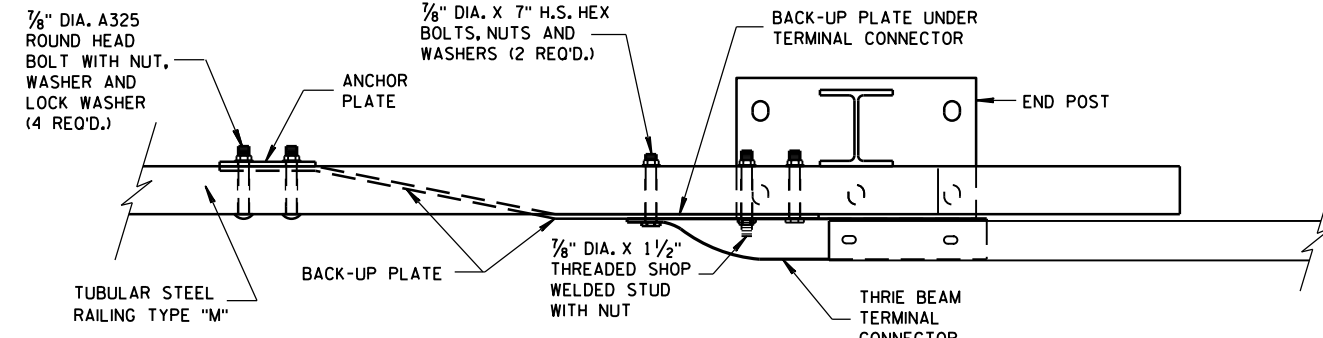


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



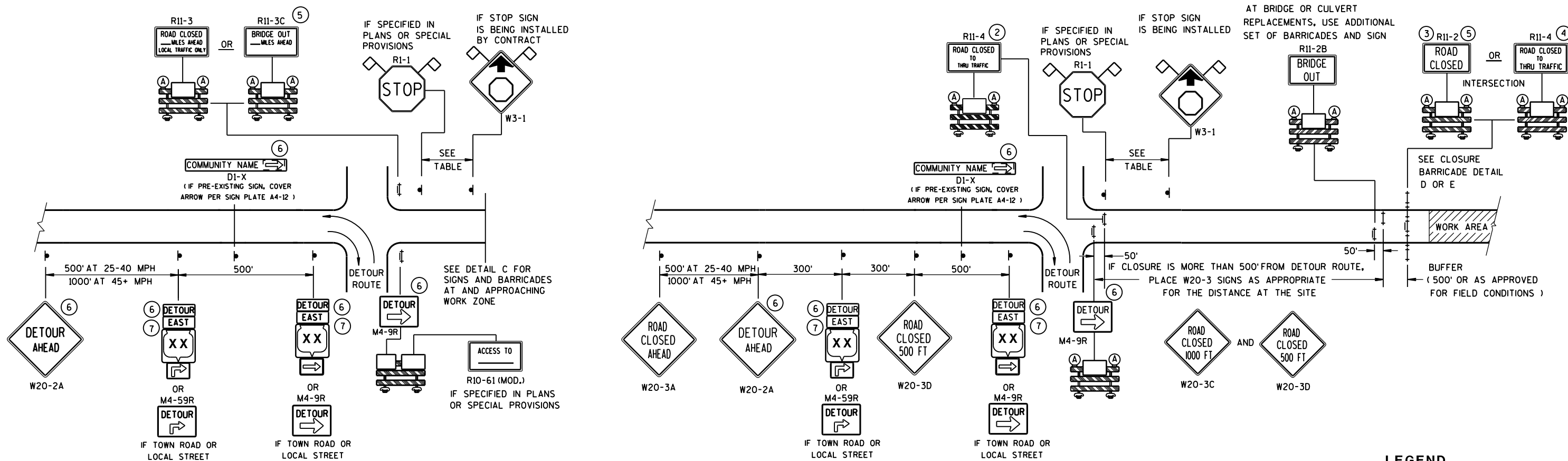
PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

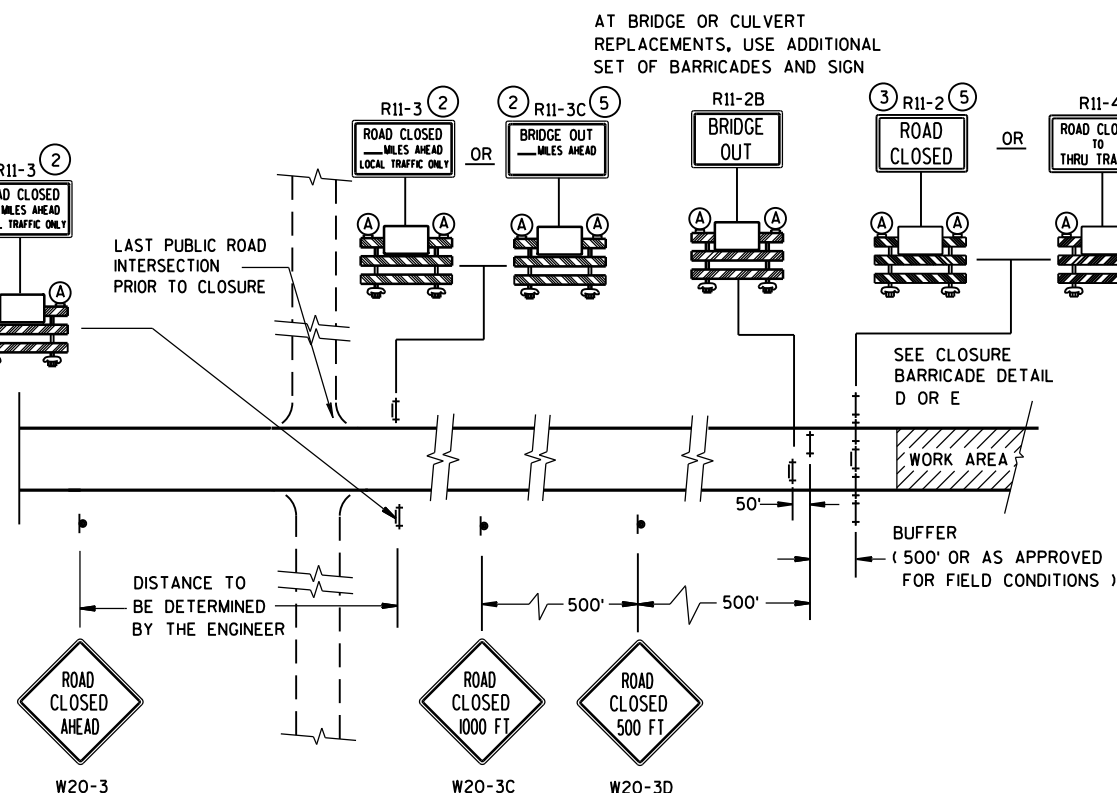
APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA
- DETOUR EAST M4-8 M3-X
- XX OR COUNTY XX OR XX M1-4 M1-5A M1-6
- OR M05-1 M06-1
- ◇ ◇ FLAGS, 16" X 16" MIN., (ORANGE)

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



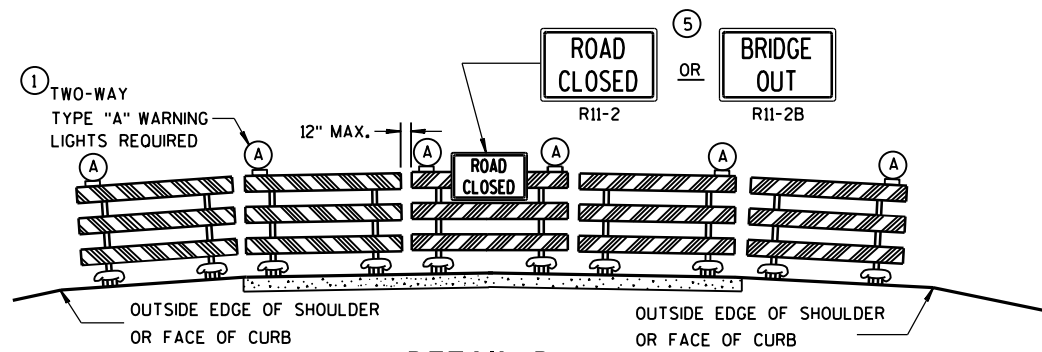
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

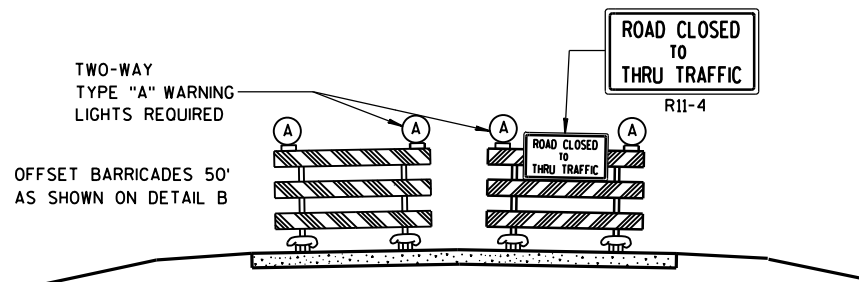
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)

M05-1 AND M06-1 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.

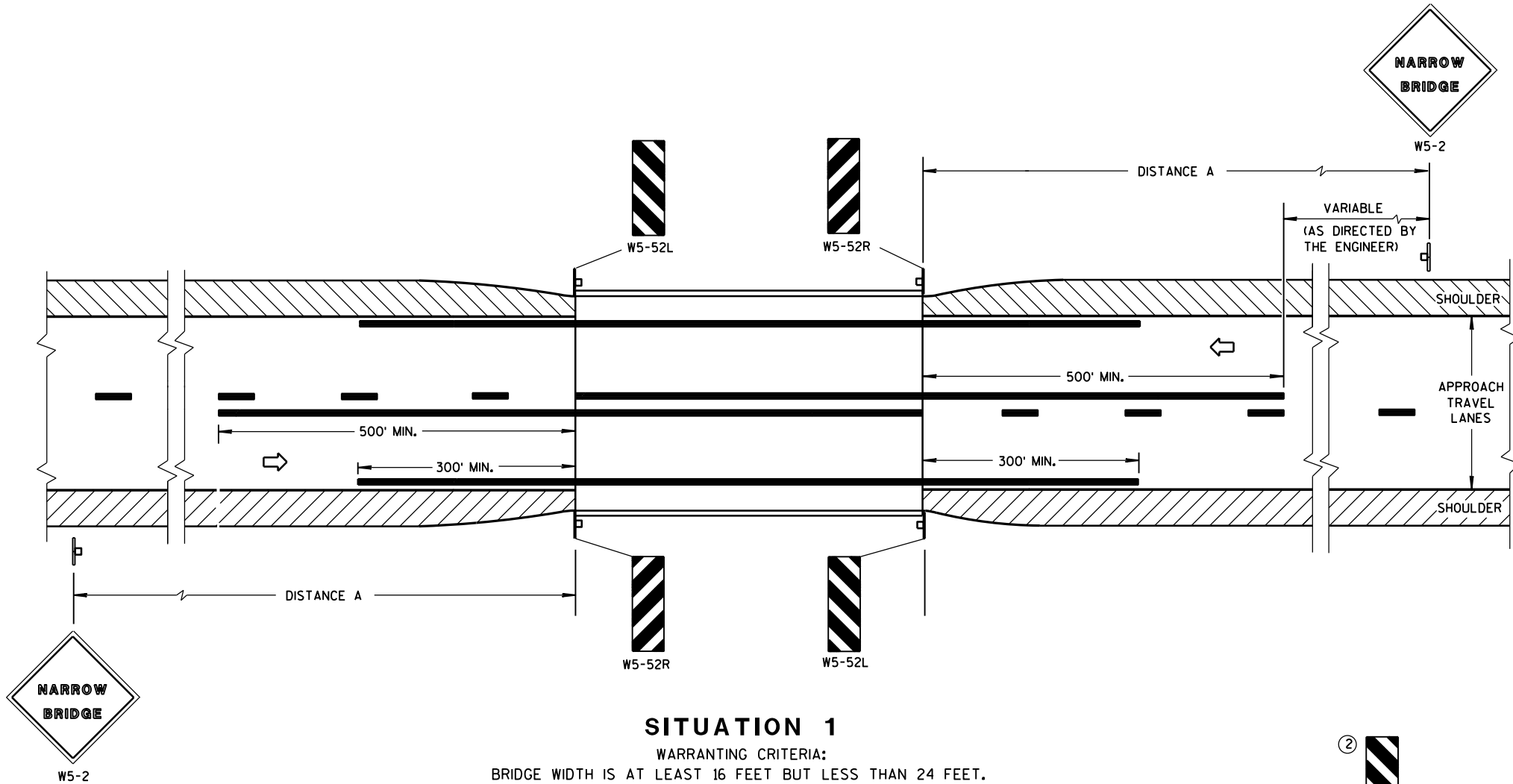
R1-1 SHALL BE 36" X 36".

- 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 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 LANE 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 MAINLINE CLOSURES

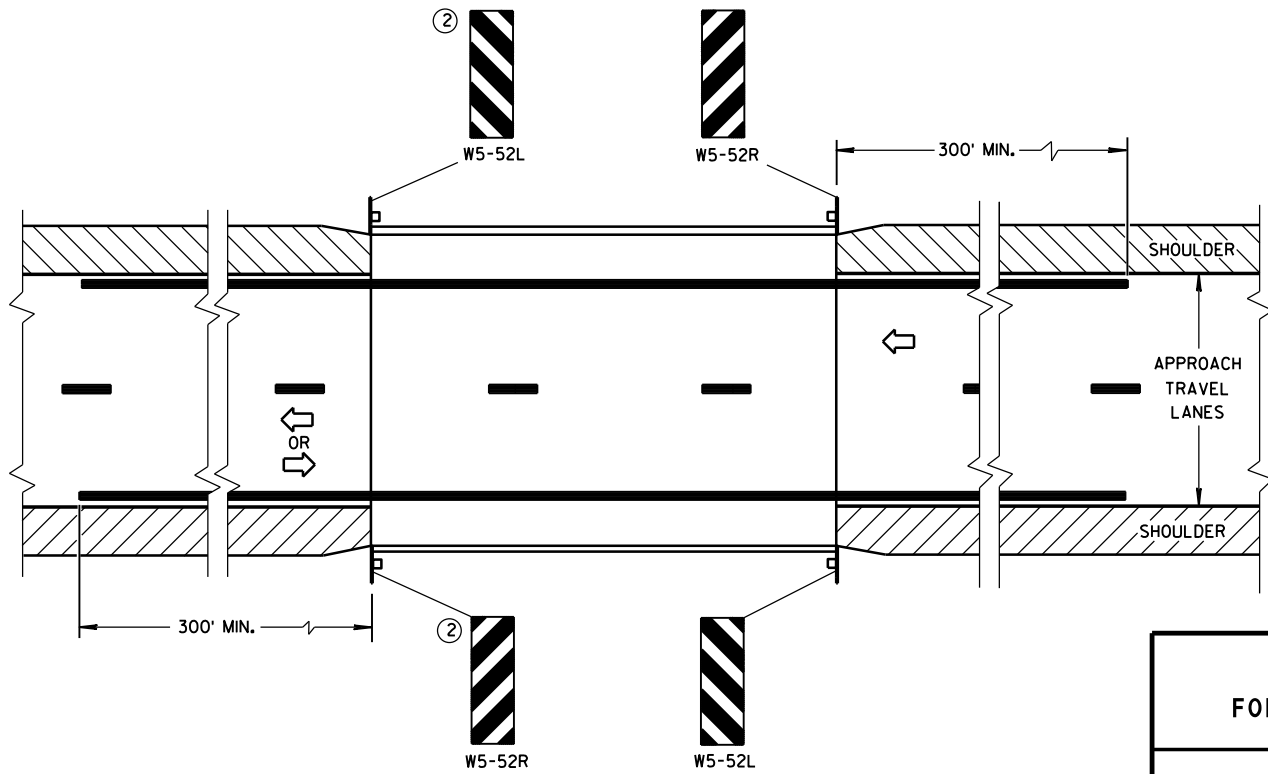
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'



GENERAL NOTES

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

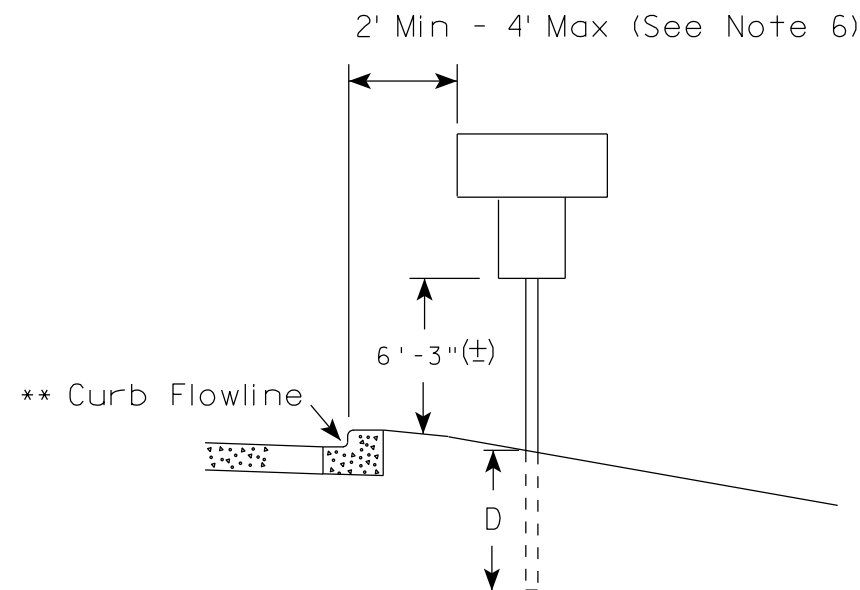
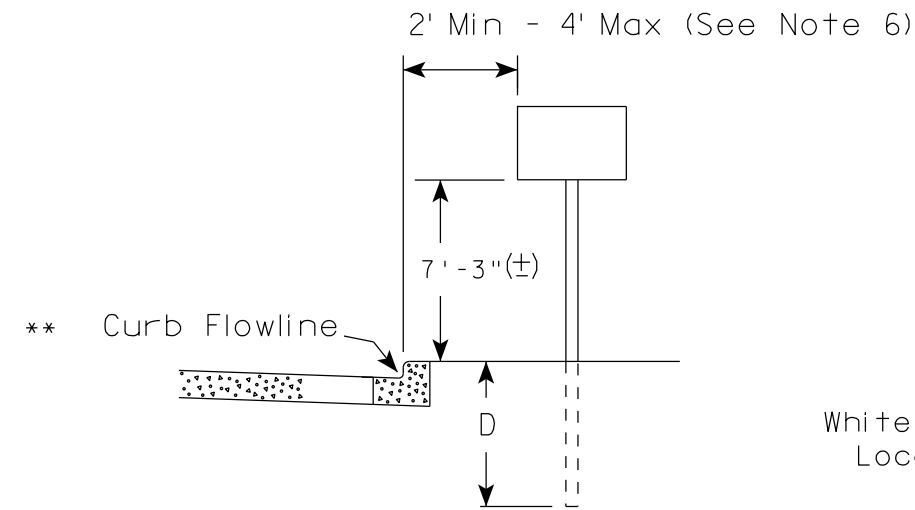
- ① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.
- ② OMIT ON ONE-WAY TRAVELLED WAYS.
- ③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

SIGNING & MARKING
FOR TWO LANE BRIDGES

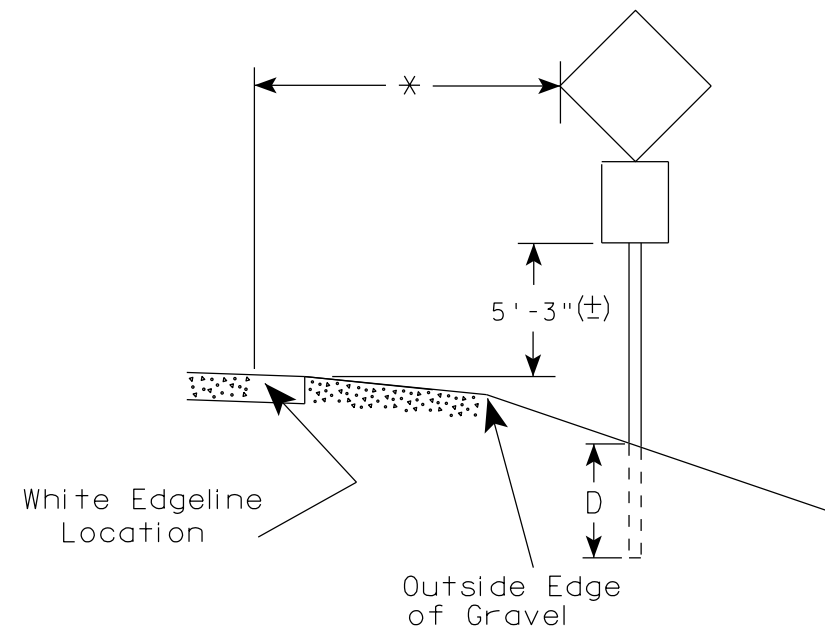
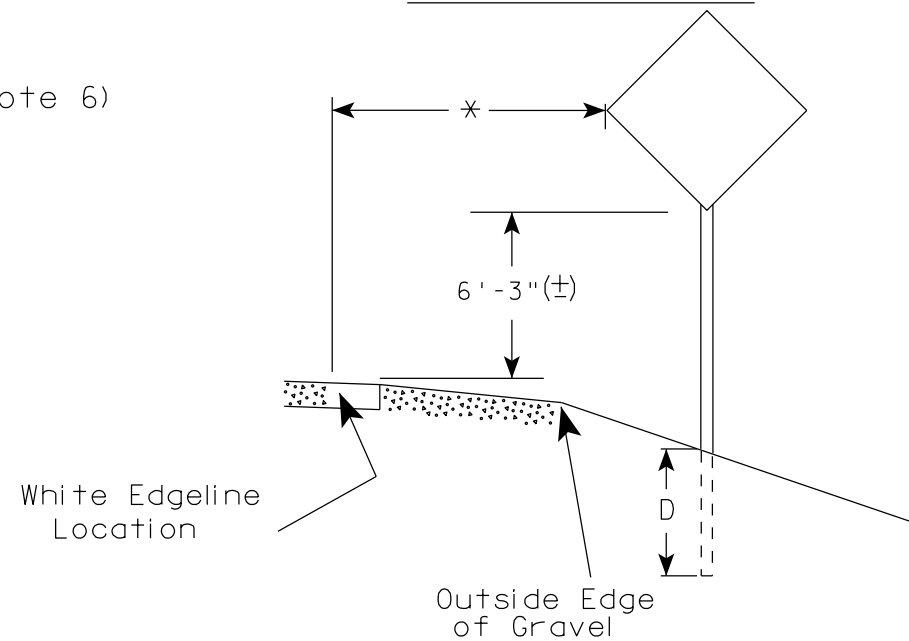
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'-3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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" (±).

POST EMBEDMENT DEPTH

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

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

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
For State Traffic Engineer

DATE 11/12/14

PLATE NO. A4-3.19

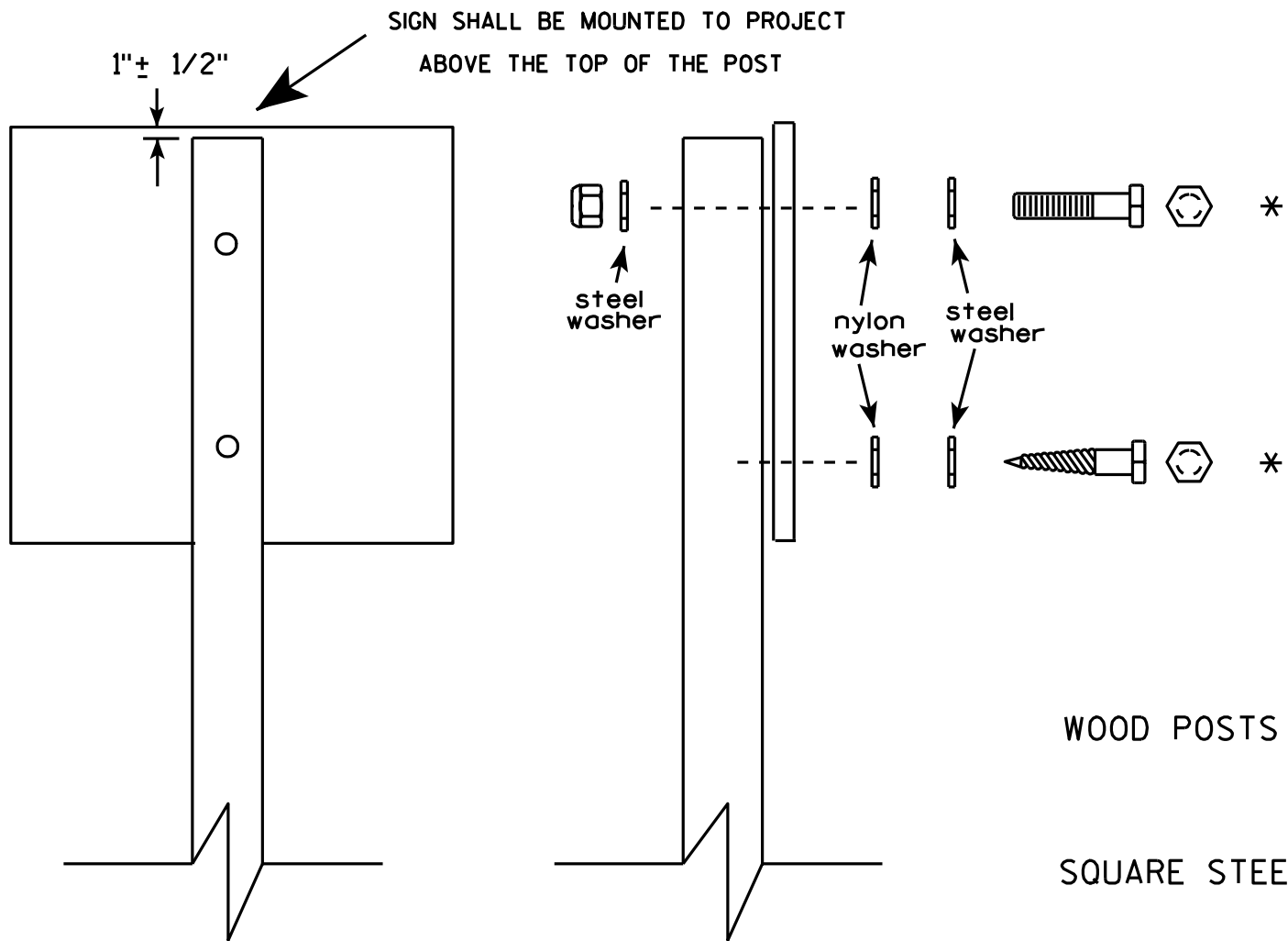
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

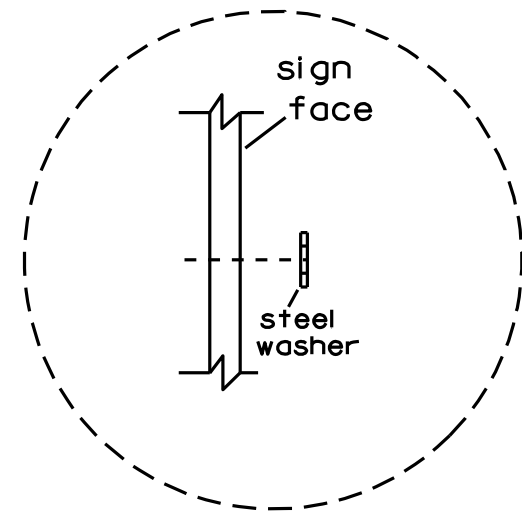


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

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

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

- WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.

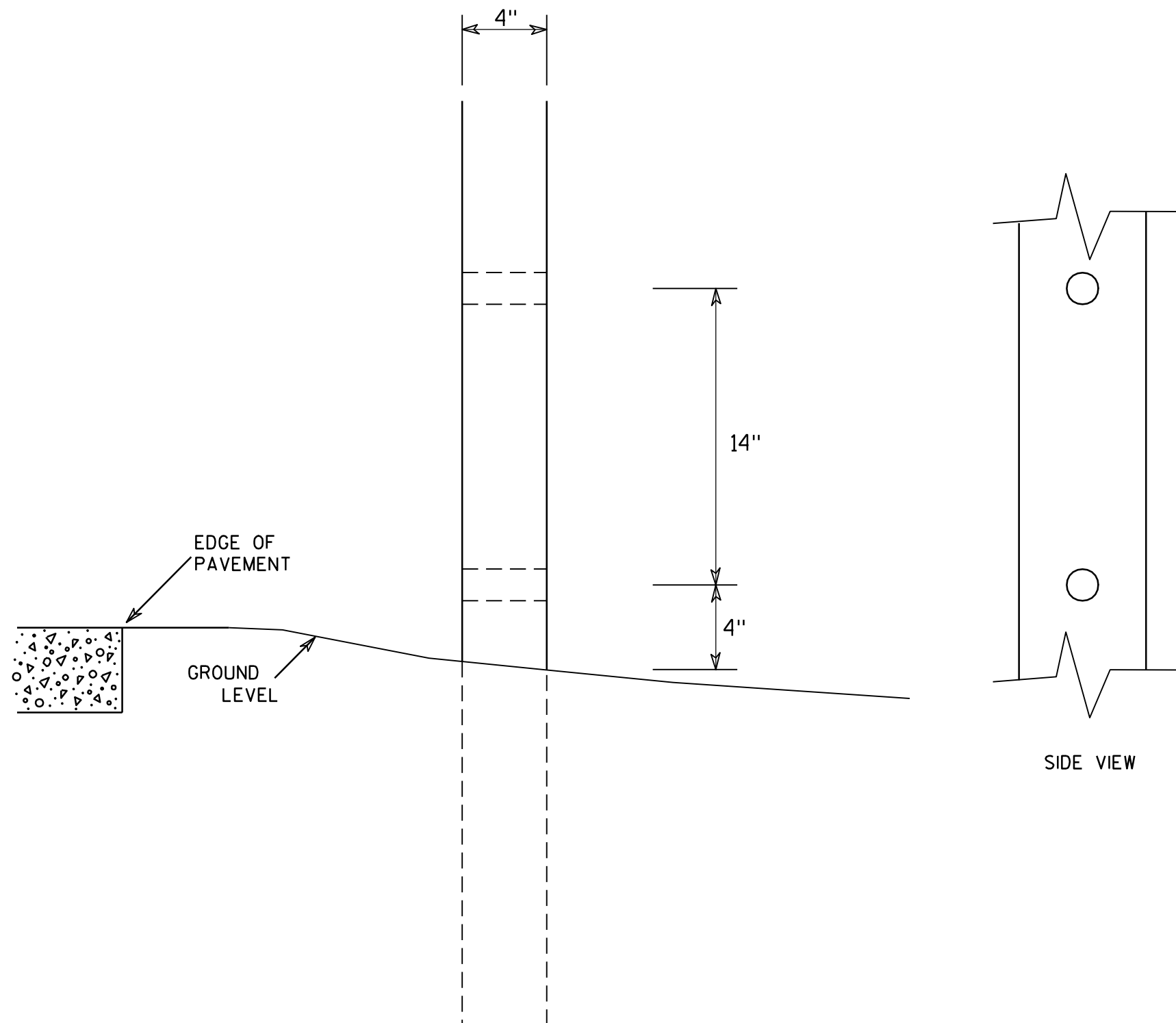


Washer Placement when Sign Has Other Than Type H or Type F Face

* 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 3/23/10	PLATE NO. A4-8.7

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

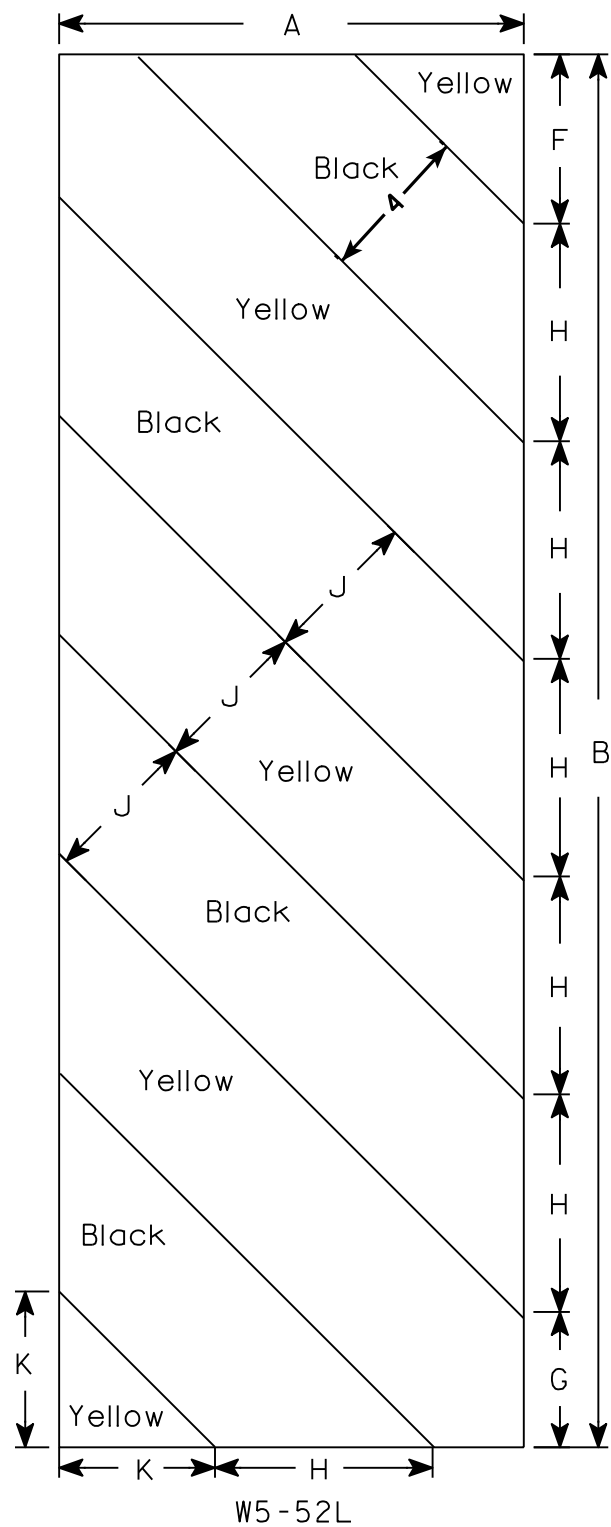
PROJECT NO:

HWY:

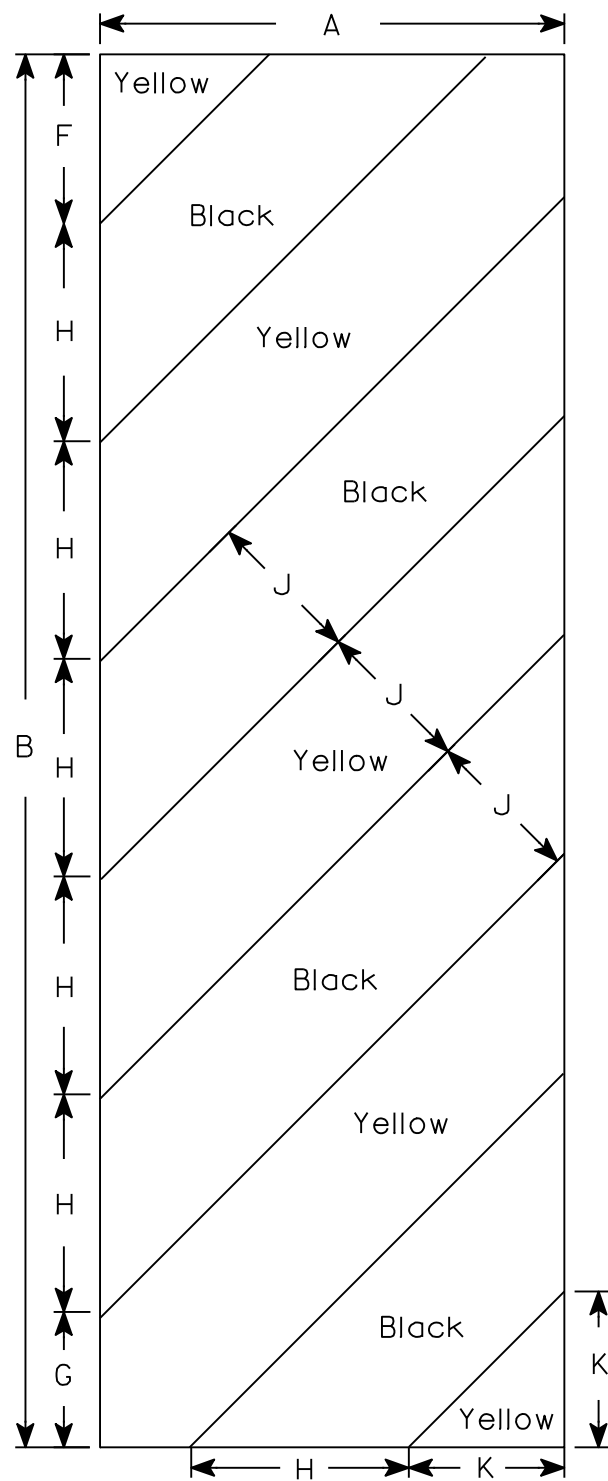
COUNTY:

SHEET NO:

E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

DESIGN DATA

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

LIVE LOAD:

DESIGN LOADING _____ HL = 93
INVENTORY RATING FACTOR _____ RF = 1.15
OPERATING RATING FACTOR _____ RF = 1.49
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) = 250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY _____
SLAB _____ f'c = 4,000 PSI
ALL OTHER _____ f'c = 3,500 PSI
BAR STEEL REINFORCEMENT, GRADE 60 _____ fy = 60,000 PSI

HYDRAULIC DATA

100 YEAR FREQUENCY
DRAINAGE AREA _____ 19.6 SQ MILES
Q₁₀₀ TOTAL _____ 2000 CFS
THRU STRUCTURE _____ 2000 CFS
VELOCITY - THRU STRUCTURE _____ 5.72 FPS
WATERWAY AREA THRU STRUCTURE _____ 350 SQ FT
HIGH WATER₁₀₀ ELEVATION _____ 1212.53 FT
SCOUR CRITICAL CODE = 5
2 YEAR FREQUENCY
Q₂ TOTAL _____ 620 CFS
HIGH WATER₂ ELEVATION _____ 1210.33 FT
VELOCITY₂ _____ 2.60 FPS

TRAFFIC DATA

AADT (2018) _____ 1400
AADT (2038) _____ 1700
DESIGN SPEED _____ 55 MPH

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10x42, WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS± PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED LENGTH 25' SOUTH ABUTMENT
ESTIMATED LENGTH 30' NORTH ABUTMENT

PIER TO BE SUPPORTED ON PILING STEEL HP 12x53, WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS± PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED LENGTH 30' PIER

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

LIST OF DRAWINGS

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

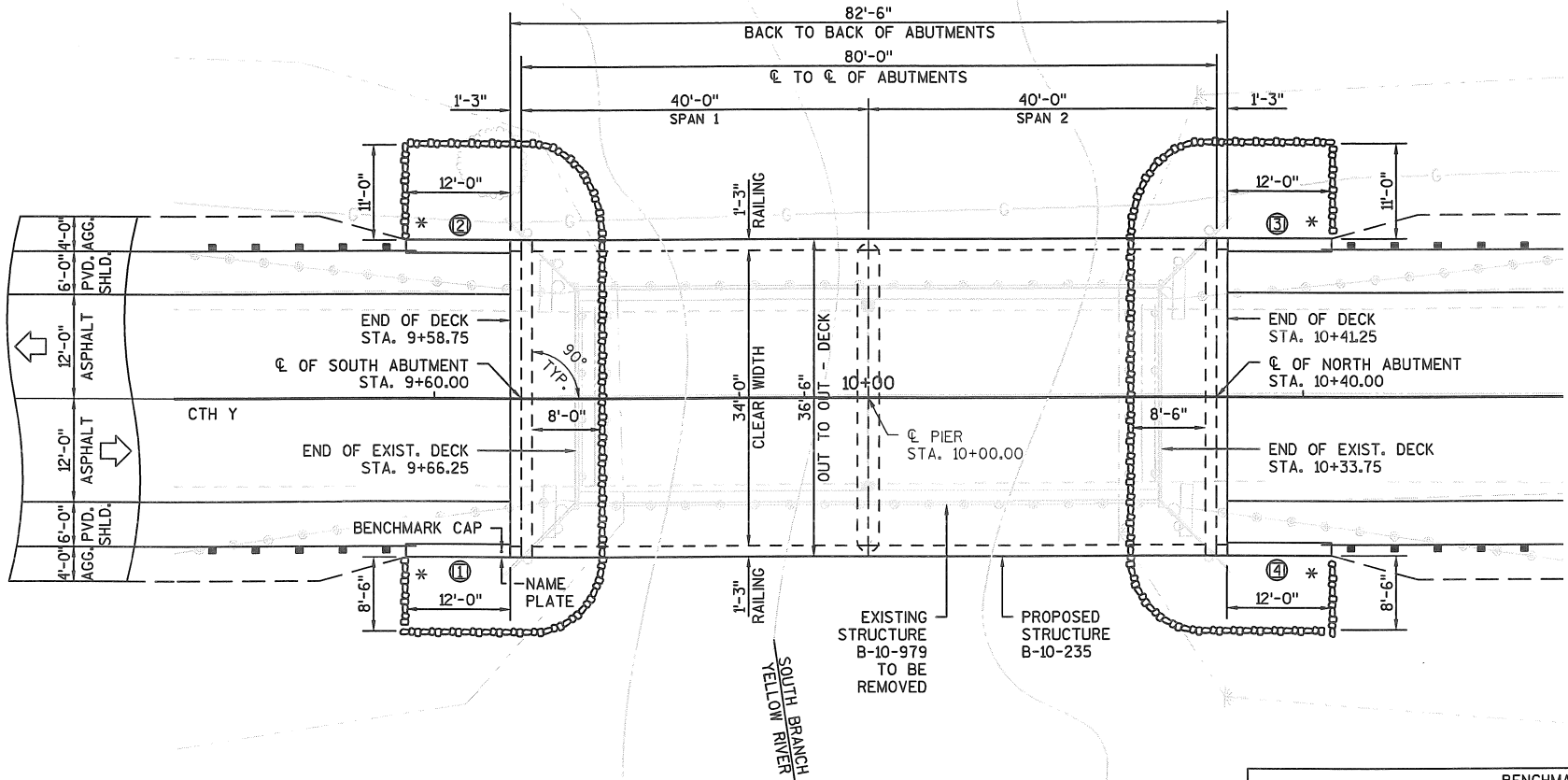
BRIDGE OFFICE CONTACT
WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT
TROY L. PETERSON
(715) 235-9081

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
Cedar corporation			
MENOMONIE - MADISON - GREEN BAY www.cedarcorp.com 800-472-7372			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher CHIEF STRUCTURES DESIGN ENGINEER		08/28/17 DATE
STRUCTURE B-10-235			
CTH Y OVER SOUTH BRANCH YELLOW RIVER			
COUNTY	CLARK	TOWNSHIP/VILLAGE	FREMONT
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	ATA	DESIGN CK'D. TLP	DRAWN BY NJT PLANS CK'D. TLP
GENERAL PLAN			SHEET 1 OF 10

I.D.

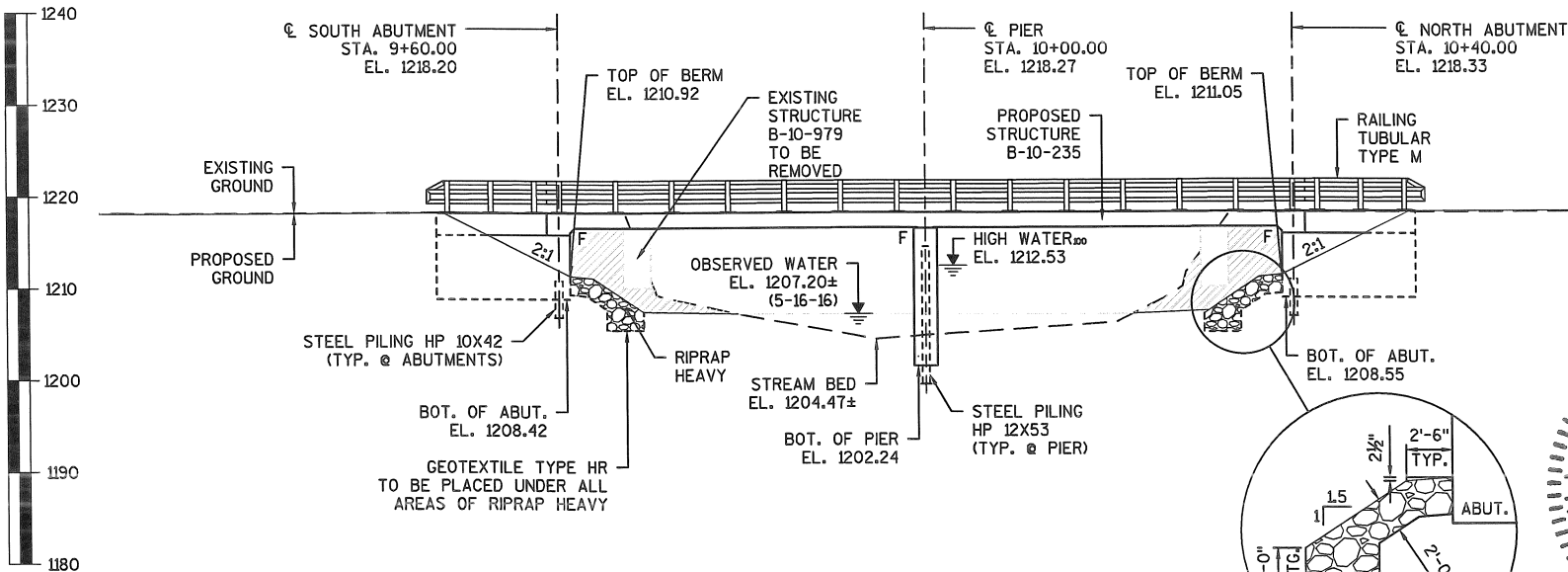
DATE:



PLAN
2 SPAN - CONCRETE FLAT SLAB

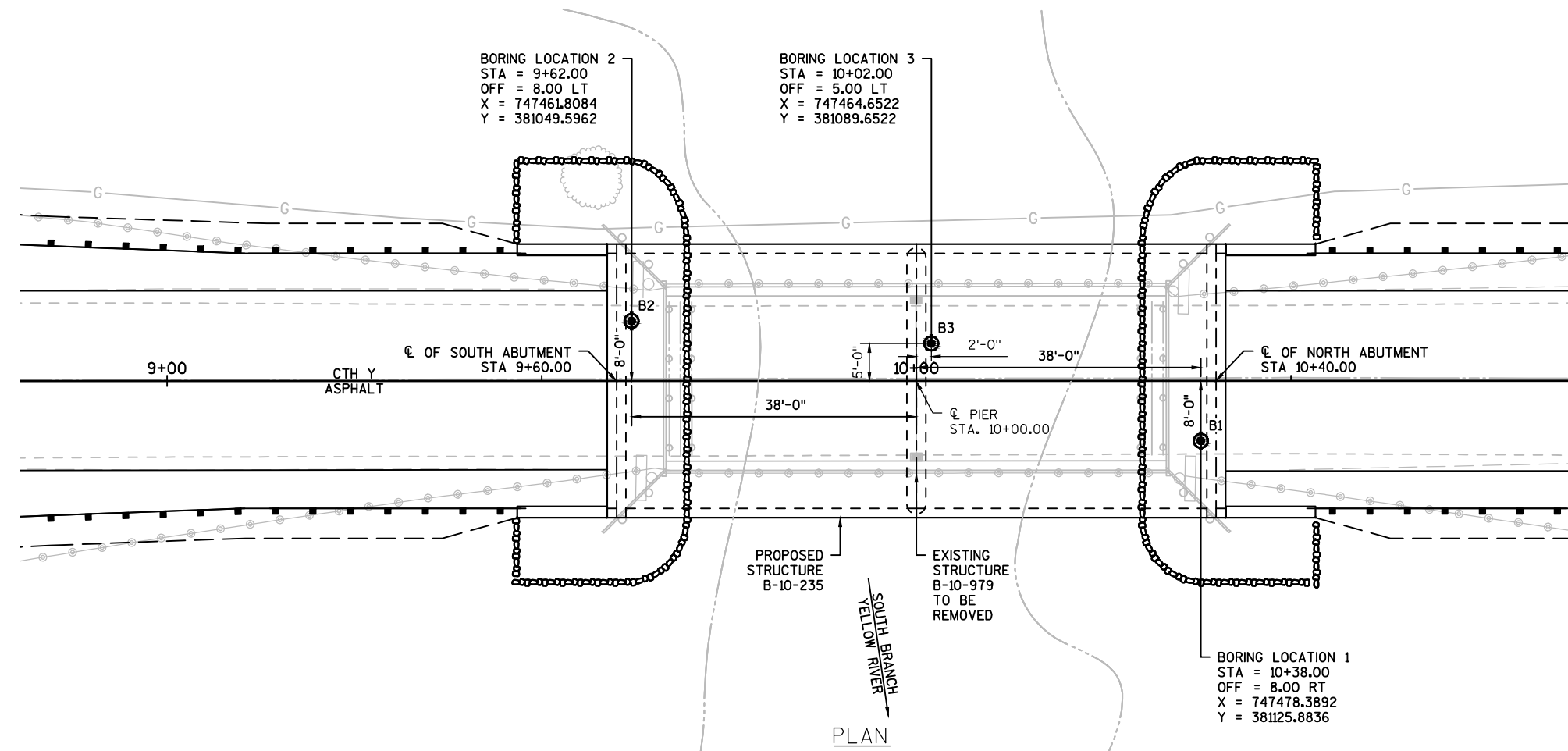
BENCHMARKS			
NO	STA.	DESCRIPTION	ELEV.
1	11+06±	SET 8" NAIL IN POWER POLE (@ 68.73' RT)	1212.27
2	10+33±	CHISELED MARK ON SW ABUT (@ 11.80' RT)	1218.56
3	7+77±	SET 8" NAIL IN POWER POLE (@ 65.15' RT)	1212.76

* PROVIDE FOR THRIE BEAM
GUARD RAIL ATTACHMENT
⊙ INDICATES WING NUMBER



ELEVATION
NORMAL TO SOUTH BRANCH YELLOW RIVER
(LOOKING UPSTREAM)





SUBSURFACE 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.

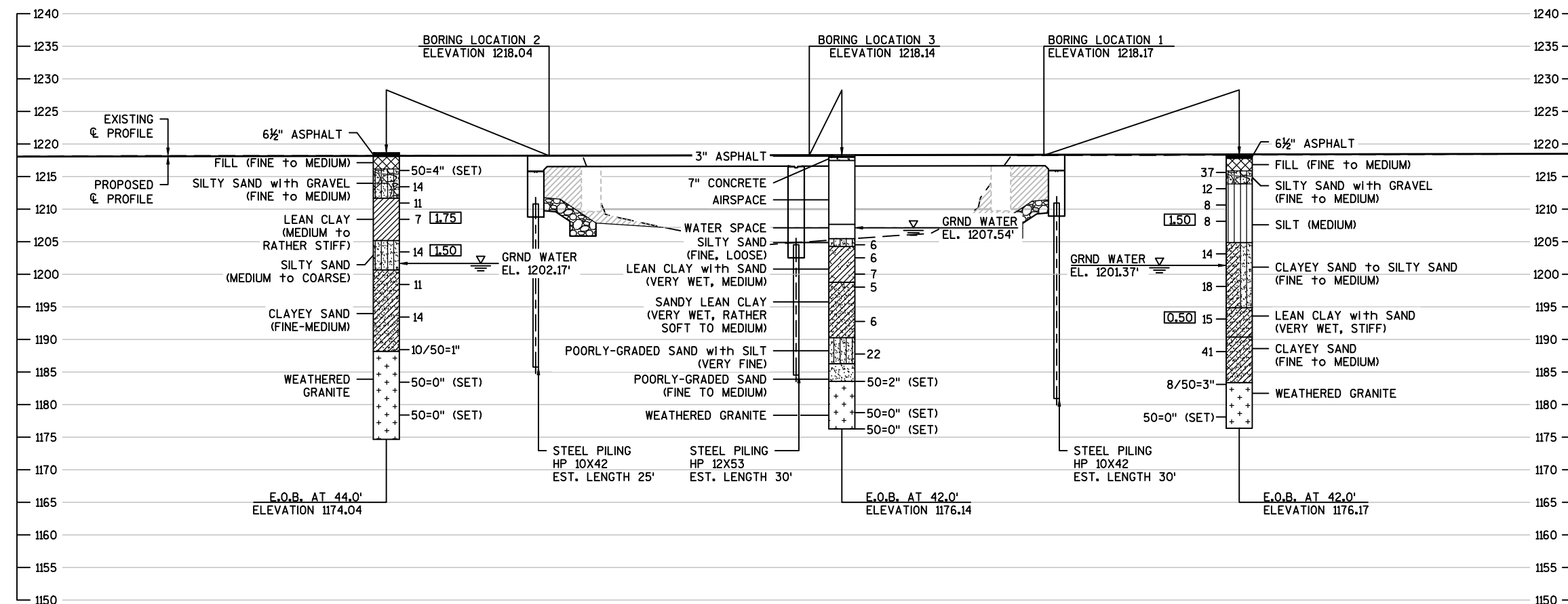
SOIL BORINGS COMPLETED BY:
CHOSEN VALLEY TESTING, INC.

WISCONSIN OFFICE
135 BUCKNER PLACE
LA CROSSE, WI 54603
(608) 782-5505

MINNESOTA OFFICE
1410 7TH STREET NW
ROCHESTER, MN 55901
(507) 281-0968

BORINGS 1 & 2
PERFORMED ON 1/4/2017

BORING 3
PERFORMED ON 3/20/2017



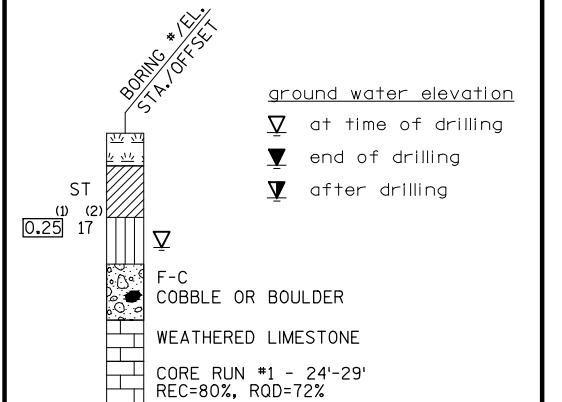
STATE PROJECT NUMBER

7847-04-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

ABBREVIATIONS

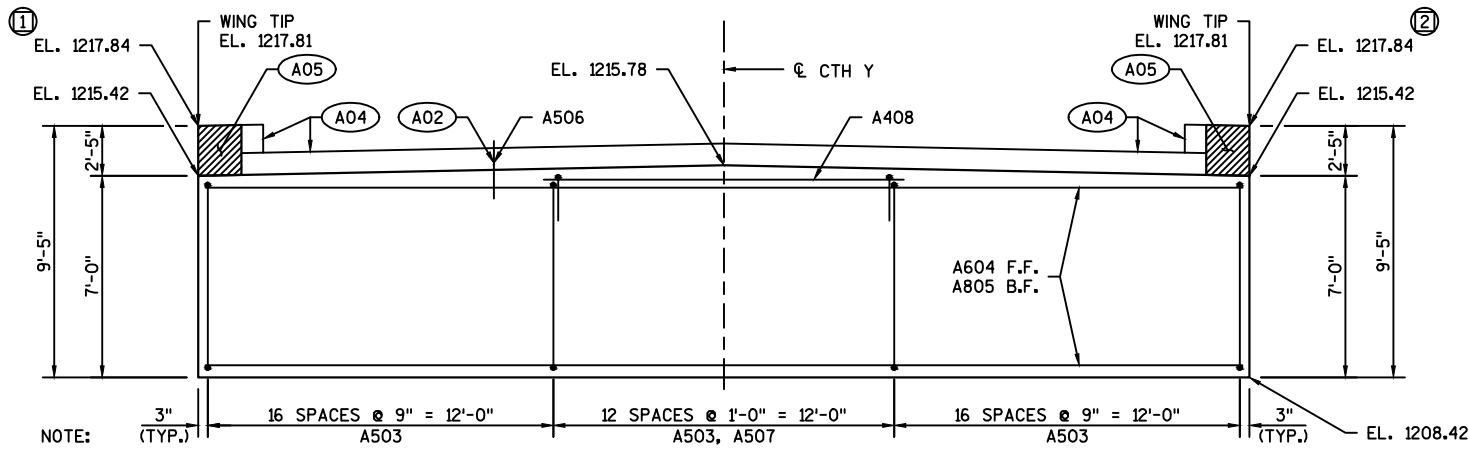
F-Fine	M-Medium	C-Coarse	st-shelby tube
--------	----------	----------	----------------

SUBSURFACE EXPLORATION FOR FOUNDATION
DESIGN AND BIDDERS INFORMATION

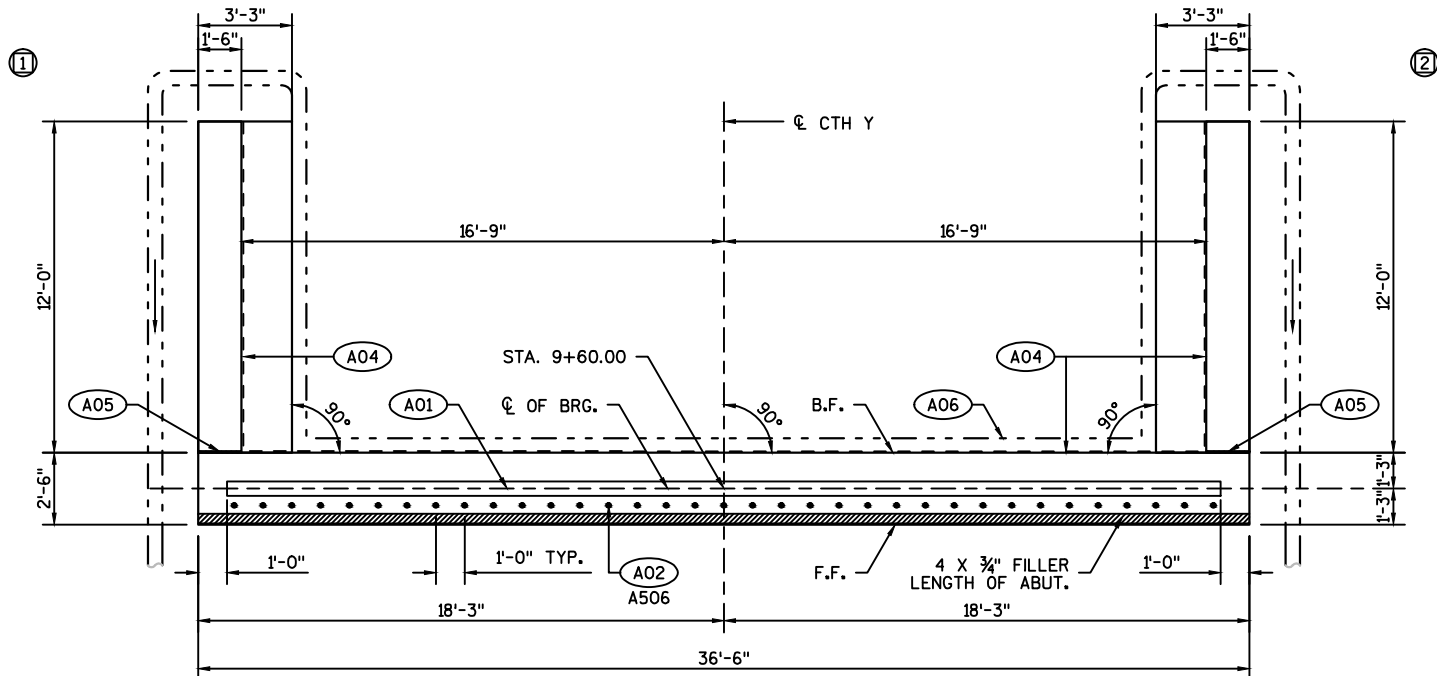
BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-235			
DRAWN BY NJT		PLANS CK'D. TLP	
SUBSURFACE EXPLORATION		SHEET 3 OF 10	

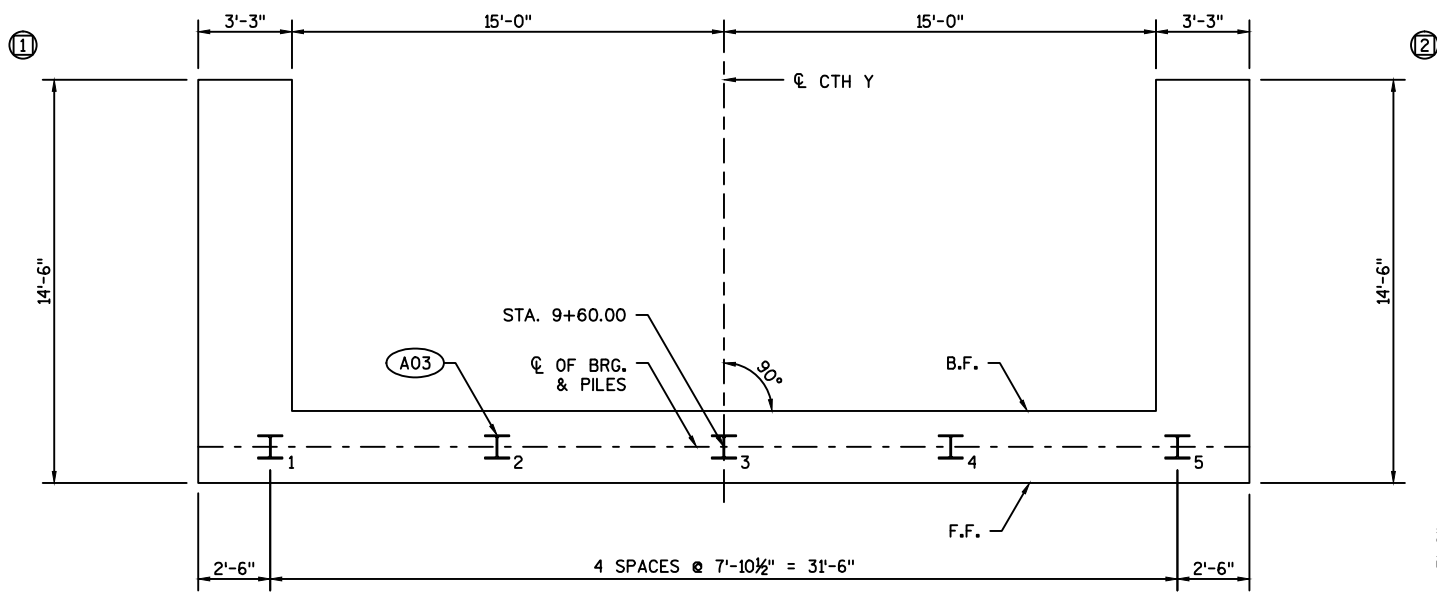
```
SCALE = ###
###
```



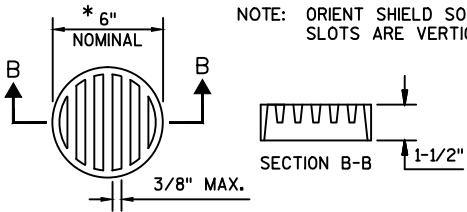
ELEVATION
(LOOKING SOUTH)



PLAN



PILE PLAN

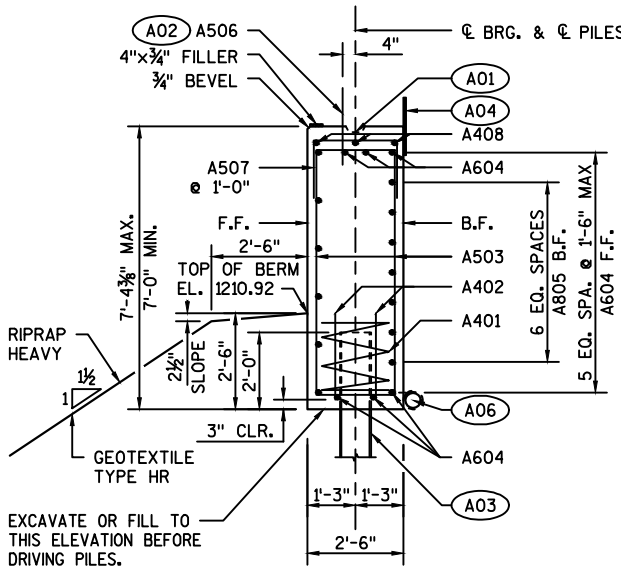


RODENT SHIELD DETAIL

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

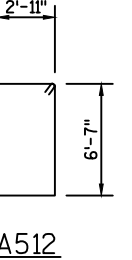
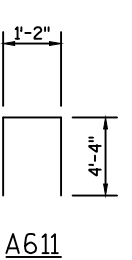
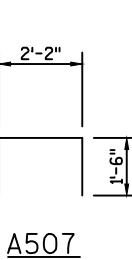
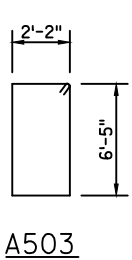
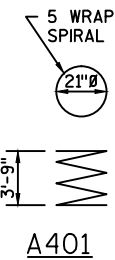
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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.



SECTION THRU BODY

ALL HORIZ BARS ARE A604 UNLESS OTHERWISE SPECIFIED



BILL OF BARS

2360* UNCOATED 1840* COATED

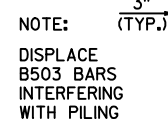
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401		5	28'-0"	X		BODY - ONE PER PILE
A402		10	2'-3"			BODY - TWO PER PILE
A503		45	17'-9"	X		BODY - STIRRUPS
A604		12	36'-2"			BODY - HORIZ.
A805		7	36'-2"			BODY - HORIZ. B.F.
A506	X	35	2'-0"			BODY - DOWELS
A507		13	4'-11"	X		BODY - VERT
A408		3	12'-8"			BODY - HORIZ. TOP
A609	X	4	11'-8"			WING 1 & 2 - HORIZ. TOP
A410	X	10	11'-8"			WING 1 & 2 - HORIZ. B.F. & F.F.
A611	X	34	9'-6"	X		WING 1 & 2 - VERT. TOP
A512	X	26	19'-7"	X		WING 1 & 2 - VERT. BASE
A513	X	16	13'-7"			WING 1 & 2 BASE HORIZ. F.F.
A614	X	14	13'-11"			WING 1 & 2 BASE HORIZ. B.F. & TOP
A615	X	4	13'-11"			WING 1 & 2 BASE HORIZ. TOP

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

LEGEND

- INDICATES WING NUMBER
- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" x 6".
- A02 A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- A03 STEEL PILING HP 10X42 WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. EST. LENGTH 25'-0".
- A04 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.
- A05 SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A06 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-235			
DRAWN BY NJT		PLANS TLP	
SOUTH ABUTMENT		SHEET 4 OF 10	



ELEVATION
(LOOKING NORTH)



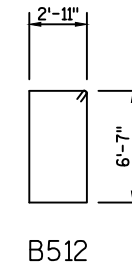
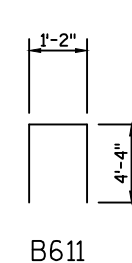
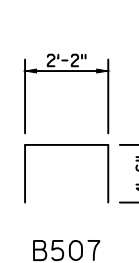
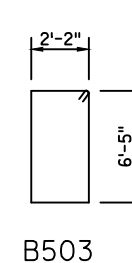
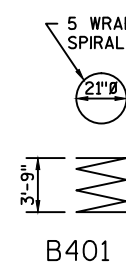
* DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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.



ALL HORIZ BARS ARE B604
UNLESS OTHERWISE SPECIFIED



2360# UNCOATED 1840# COATED

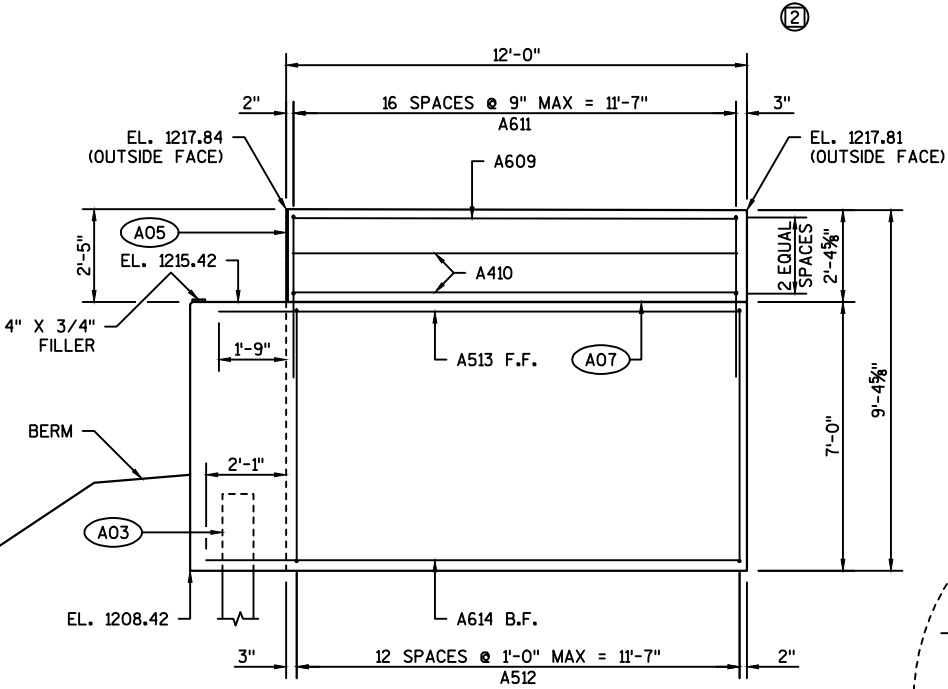
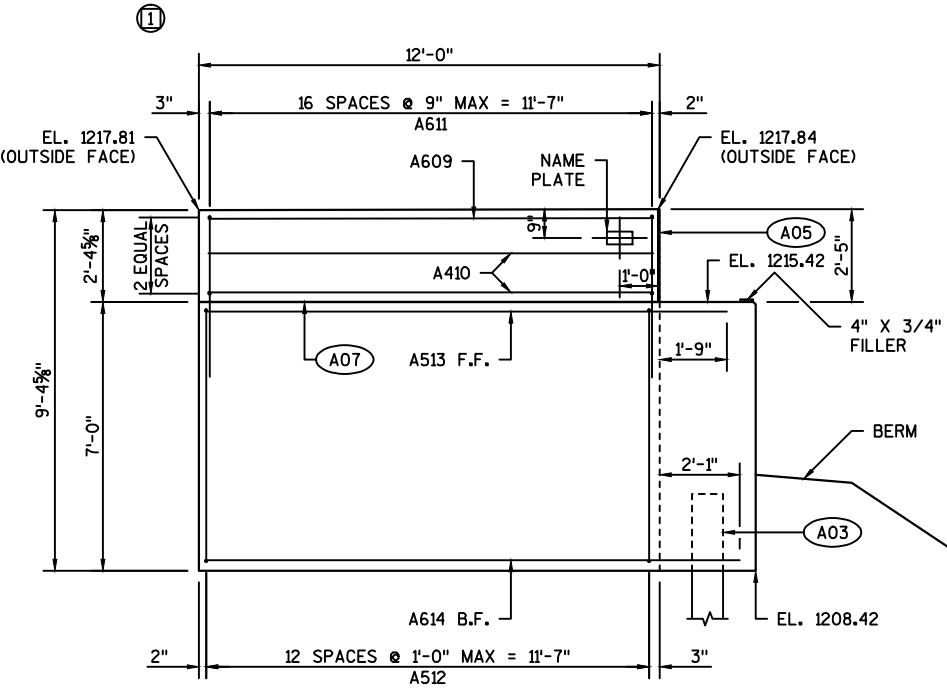
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B401		5	28'-0"	X		BODY - ONE PER PILE
B402		10	2'-3"			BODY - TWO PER PILE
B503		45	17'-9"	X		BODY - STIRRUPS
B604		12	36'-2"			BODY - HORIZ.
B805		7	36'-2"			BODY - HORIZ. B.F.
B506	X	35	2'-0"			BODY - DOWELS
B507		13	4'-11"	X		BODY - VERT
B408		3	12'-8"			BODY - HORIZ. TOP
B609	X	4	11'-8"			WING 3 & 4 - HORIZ. TOP
B410	X	10	11'-8"			WING 3 & 4 - HORIZ. B.F. & F.F.
B611	X	34	9'-6"	X		WING 3 & 4 - VERT. TOP
B512	X	26	19'-7"	X		WING 3 & 4 - VERT. BASE
B513	X	16	13'-7"			WING 3 & 4 BASE HORIZ. F.F.
B614	X	14	13'-11"			WING 3 & 4 BASE HORIZ. B.F. & T
B615	X	4	13'-11"			WING 3 & 4 BASE HORIZ. TOP

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

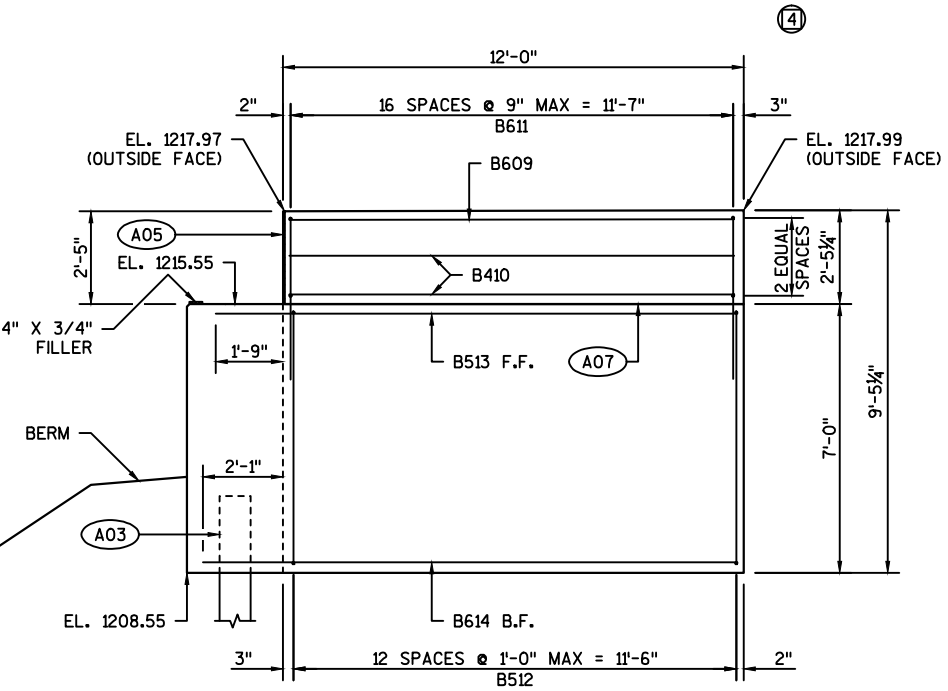
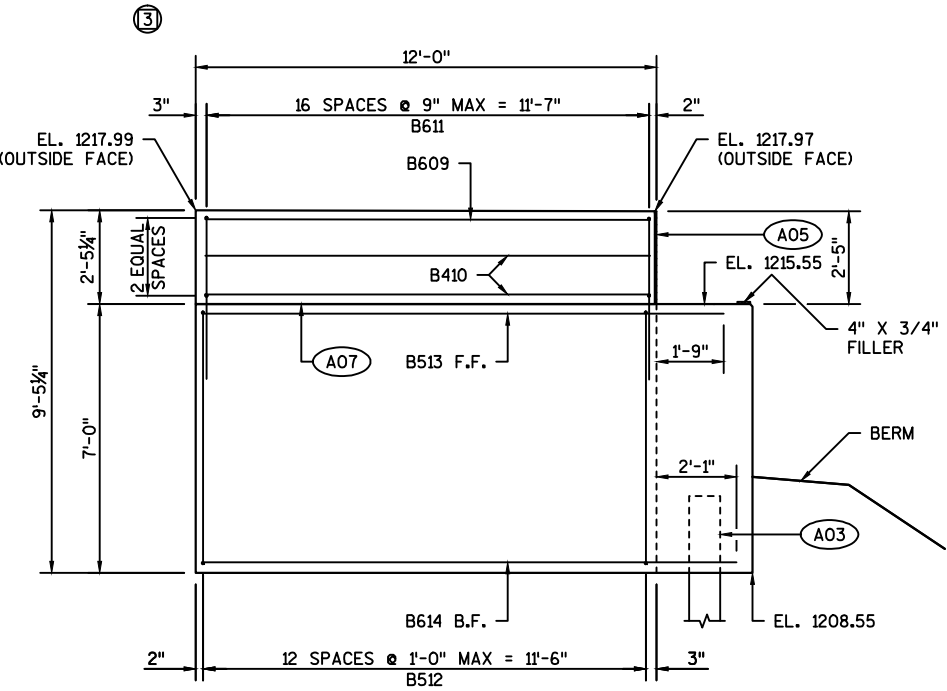
LEGEND

- INDICATES WING NUMBER
- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" x 6".
 - A02 B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
 - A03 STEEL PILING HP 10X42 WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
EST. LENGTH 30'-0".
 - A04 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.
 - A05 SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
 - A06 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

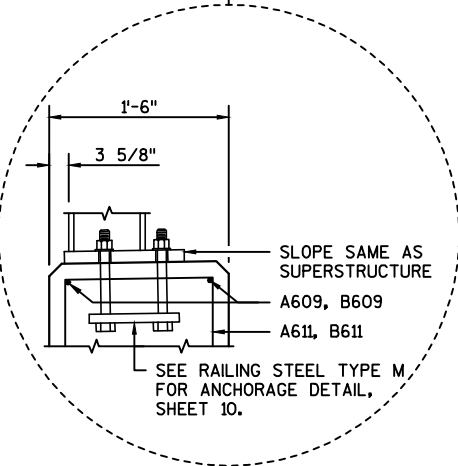
NO.	DATE	REVISION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-235			
DRAWN BY NJT		PLANS CHKD. TLF	
NORTH ABUTMENT		SHEET 5 OF	



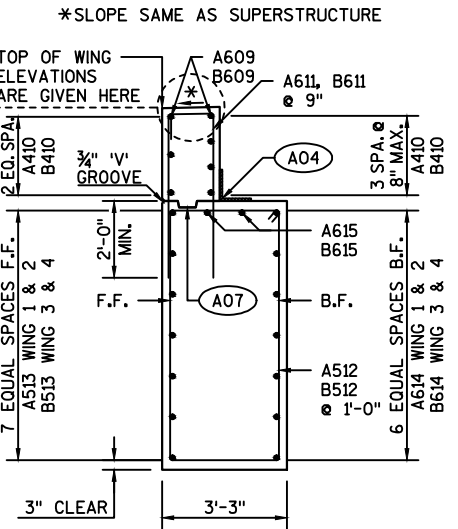
SOUTH ABUTMENT WINGS



NORTH ABUTMENT WINGS



SECTION AT TOP OF WING



TYPICAL SECTION THRU WING

NOTE: B.F. = BACK FACE
F.F. = FRONT FACE

LEGEND

- INDICATES WING NUMBER
- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" x 6".
- A03 STEEL PILING HP 10X42 WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
- A04 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.
- A05 SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A07 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6". (18" RMW @ B.F. & 3/4" 'V' GROOVE @ F.F. OF WING WALL IF JOINT IS USED).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-235			
DRAWN BY NJT		PLANS TLP	
ABUTMENT DETAILS		SHEET 6 OF 10	

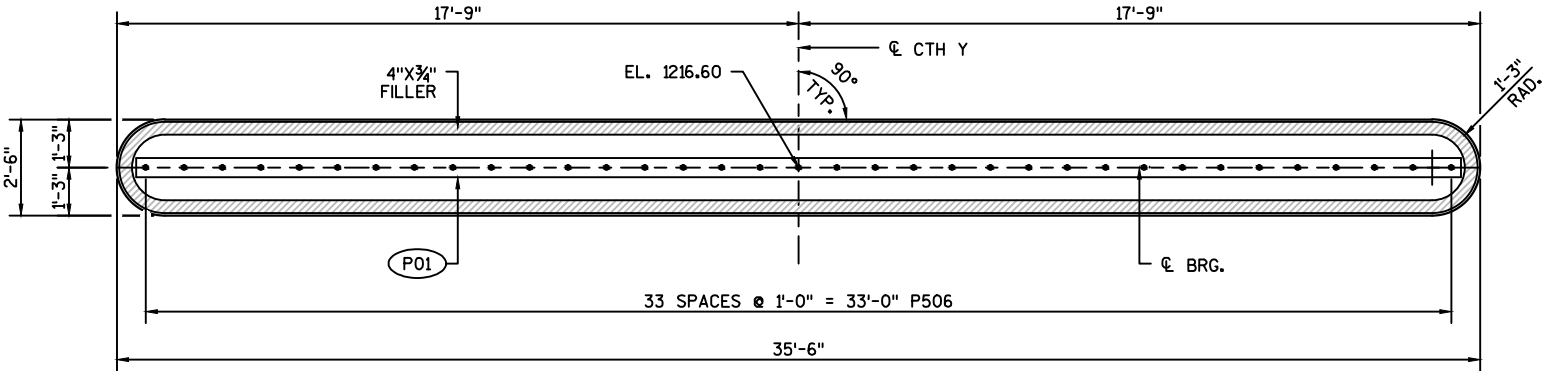
SCALE =

BILL OF BARS

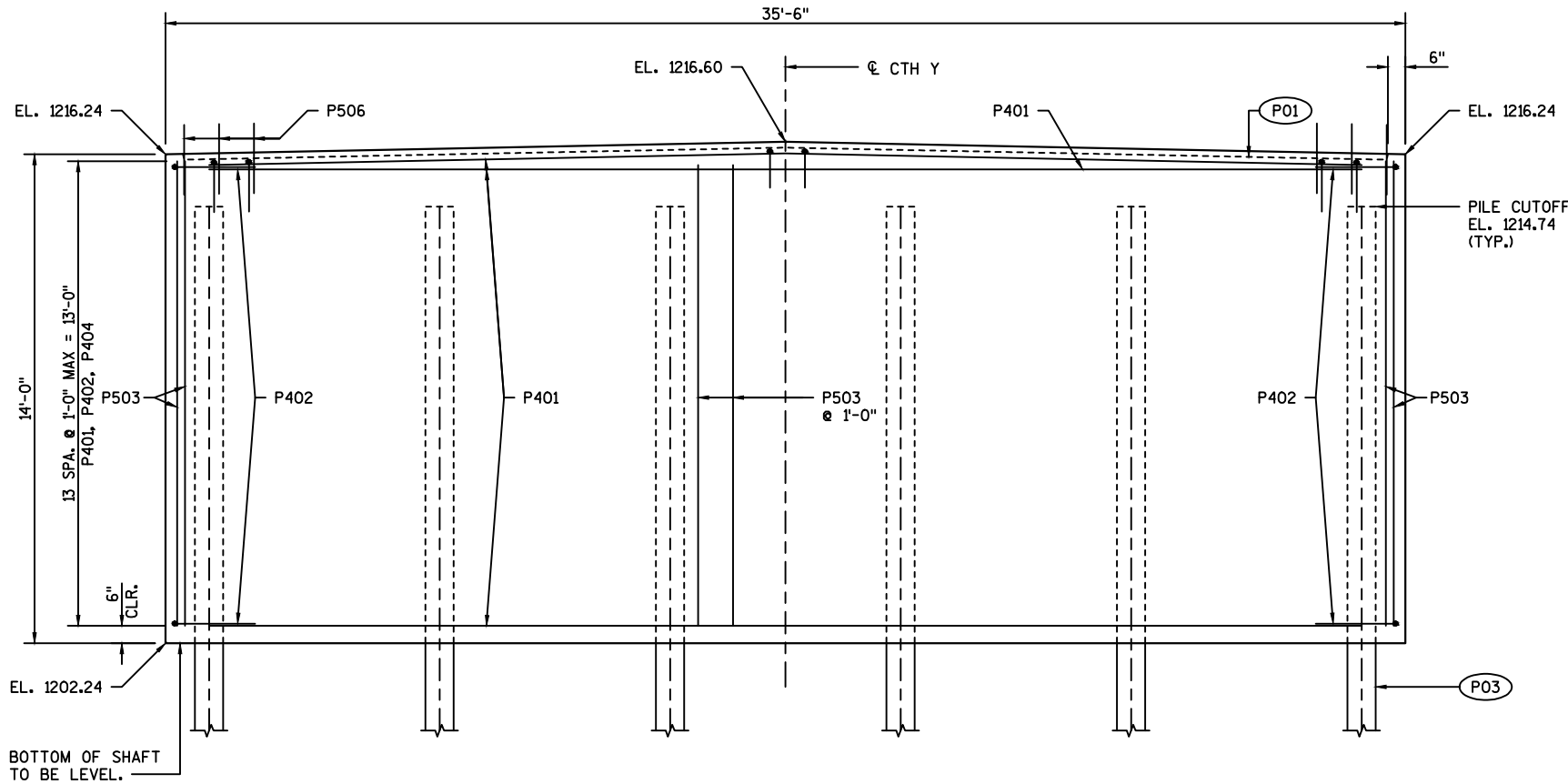
2190# UNCOATED

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

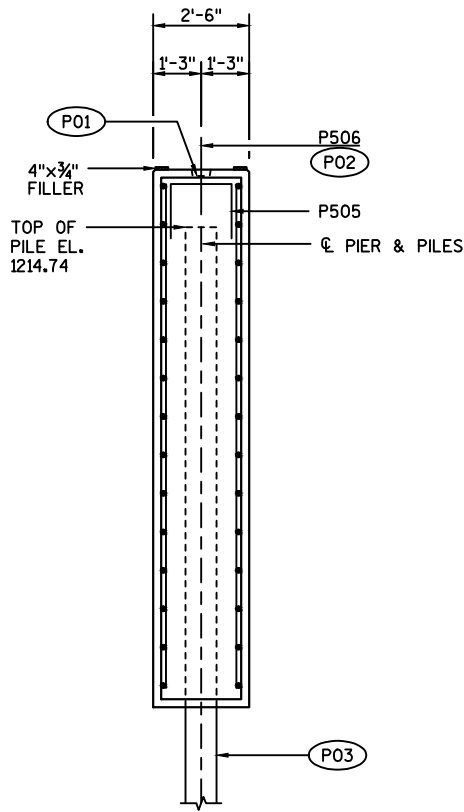
BAR MARK	COMT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
P401		28	33'-0"			SHAFT - HORIZ.
P402		56	6'-1"	X		SHAFT - HORIZ. - ENDS
P503		74	13'-3"			SHAFT - VERT.
P404		84	2'-8"	X		SHAFT - HORIZ. - TIE BARS AT PILES
P505		18	5'-3"	X		COLUMN TOP
P506		34	2'-0"			COLUMN DOWEL BARS



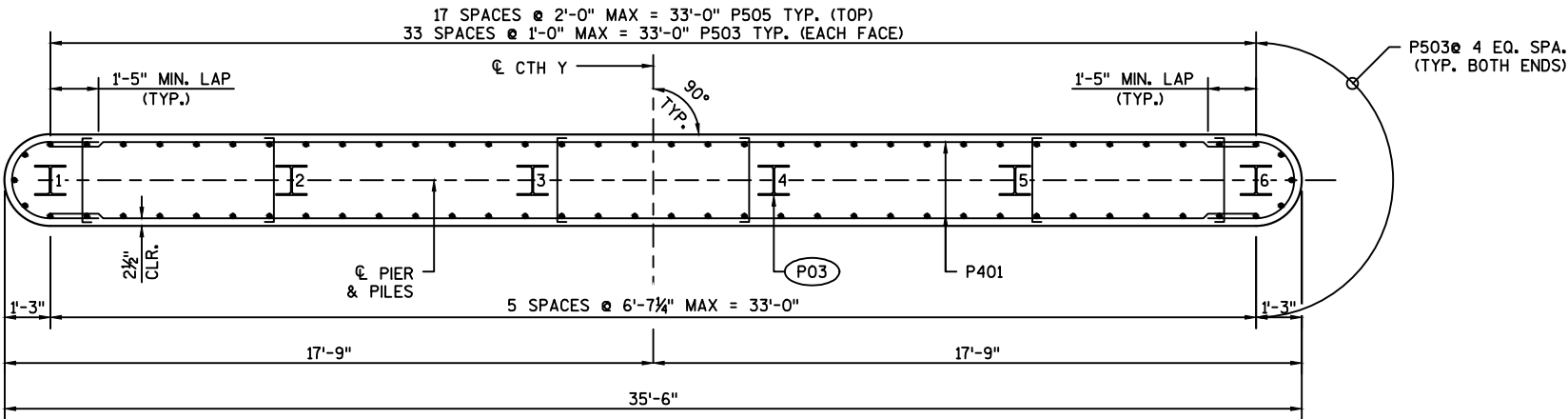
PLAN



ELEVATION
(LOOKING NORTH)



END VIEW



PILE PLAN

LEGEND

- P01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" x 6".
- P02 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- P03 STEEL PILING HP 12X53 WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. EST. LENGTH 30'-0".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-235			
DRAWN BY NJT		PLANS TLP	
PIER		SHEET 7 OF 10	

SCALE =

BILL OF BARS

39460* COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	74	4'-5"	X		AT END OF DECK
S502	X	74	3'-4"	X		AT END OF DECK
S503	X	88	36'-2"			SLAB, TOP, TRANSVERSE
S504	X	93	36'-2"			SLAB, BOTTOM, TRANSVERSE
S405	X	74	24'-5"			SLAB, TOP, LONGITUDINAL
S1006	X	73	29'-0"			SLAB, TOP, LONGITUDINAL
S907	X	80	44'-3"			SLAB, BOTTOM, LONGITUDINAL
S908	X	80	28'-3"			SLAB, BOTTOM, LONGITUDINAL
S609	X	56	12'-0"	X		AT RAIL POSTS
S610	X	16	5'-0"	X		AT END RAIL POSTS
S611	X	96	6'-0"			AT RAIL POSTS

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

GENERAL NOTES

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

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ϕ OF SUBSTRUCTURE UNITS.

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

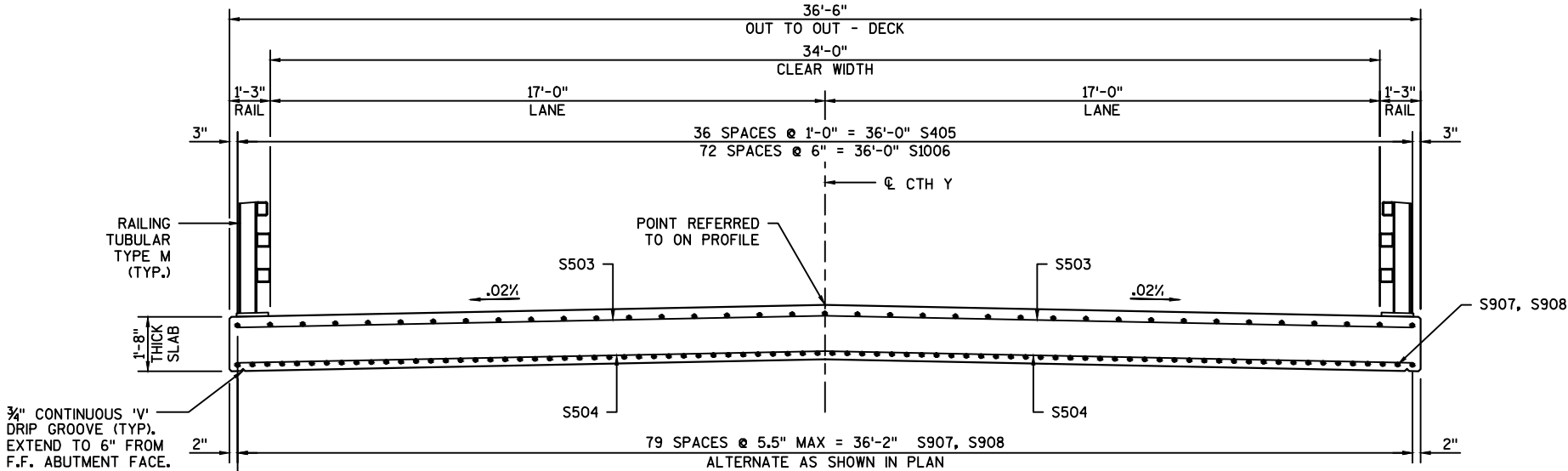
CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTIONS ONLY EQUAL APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATION AT THE ϕ OF ABUTMENTS, THE ϕ PIERS AND AT 5/10 PTS. TO VERIFY CAMBER, TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ϕ .

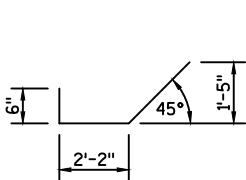
LEGEND

A01	KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" x 6".
A04	18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.

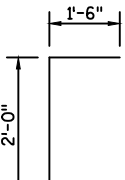
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-235			
DRAWN BY NJT		PLANS TLP	
SUPERSTRUCTURE		SHEET 8 OF 10	



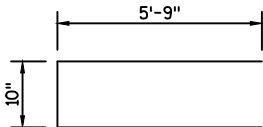
CROSS SECTION THRU RDWY



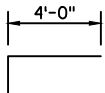
S501



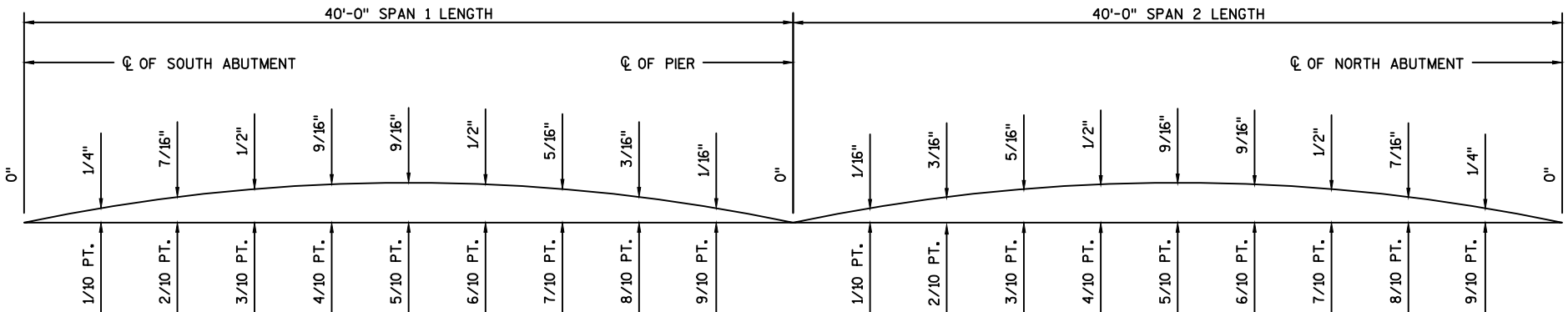
S502



S609



S610

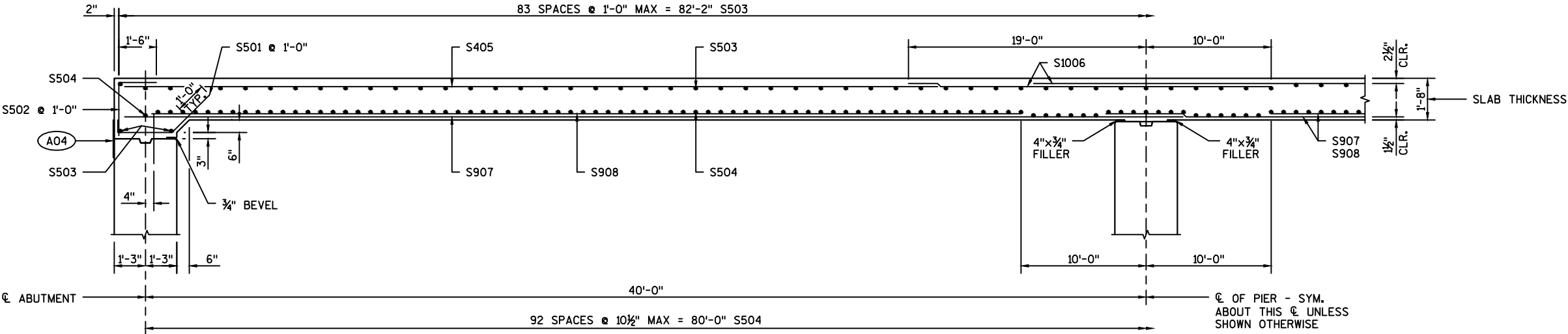


CAMBER DIAGRAM

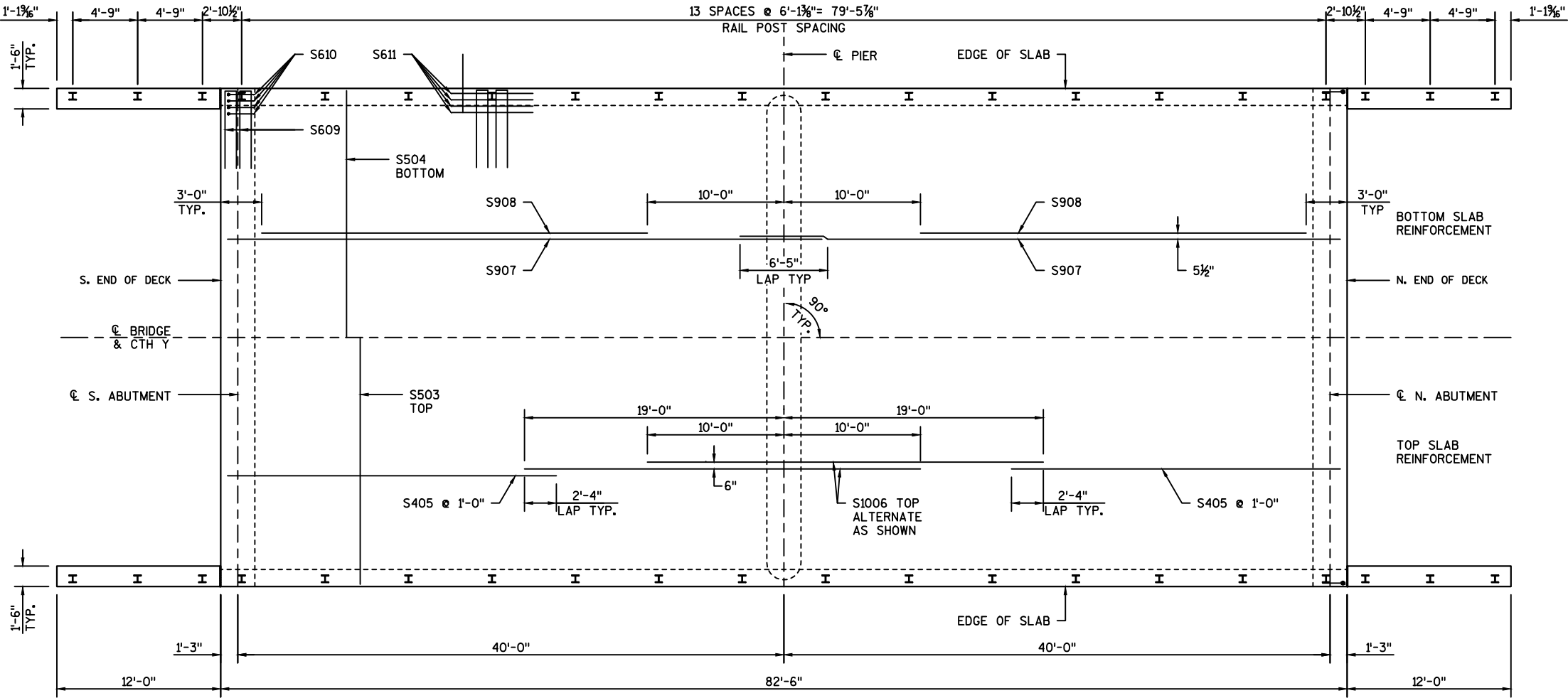
TOP OF DECK ELEVATIONS

LOCATION	ϕ OF S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	ϕ OF PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	ϕ OF N. ABUT.
SOUTH DECK EDGE	1217.83	1217.84	1217.84	1217.85	1217.86	1217.86	1217.87	1217.88	1217.88	1217.89	1217.90	1217.91	1217.91	1217.92	1217.93	1217.93	1217.94	1217.95	1217.95	1217.96	1217.97
ϕ OF BRIDGE DECK	1218.20	1218.20	1218.21	1218.22	1218.22	1218.23	1218.24	1218.25	1218.25	1218.26	1218.27	1218.27	1218.28	1218.29	1218.29	1218.30	1218.31	1218.32	1218.32	1218.33	1218.33
NORTH DECK EDGE	1217.83	1217.84	1217.84	1217.85	1217.86	1217.86	1217.87	1217.88	1217.88	1217.89	1217.90	1217.91	1217.91	1217.92	1217.93	1217.93	1217.94	1217.95	1217.95	1217.96	1217.97

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



PART LONGITUDINAL SECTION



PLAN

LEGEND

A04 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.

NO.	DATE	REVISION	BY
-----	------	----------	----

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-235

DRAWN BY NJT PLANS CK'D. TLP

SUPERSTRUCTURE DETAILS SHEET 9 OF 10

SCALE =

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE 'M' B-10-235" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 ksi. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

① W6 x 25 WITH 1½" x 1½" x 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

② PLATE 1½" x 11¾" x 1'-8" WITH 1½" x 1½" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

③ ASTM A449 - 1½" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)

④ 5½" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1½" DIA. HOLES FOR ANCHOR BOLTS NO. 3

⑤ TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

⑤A TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

⑥ ¾" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ¾" x 1½" x 1½" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

⑦ 1/2" THK. BACK-UP PLATE WITH 2 - ¾" x 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ¾" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

⑨ SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

⑩ ¾" x 3½" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

⑩A ¾" x 2½" x 2'-4" PLATE USED IN NO. 5, ¾" x 3½" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

⑪ ¾" φ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 5½" x 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 5½" x 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

⑫ ¾" DIA. x 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D.).

⑬ ¾" x 8" x 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

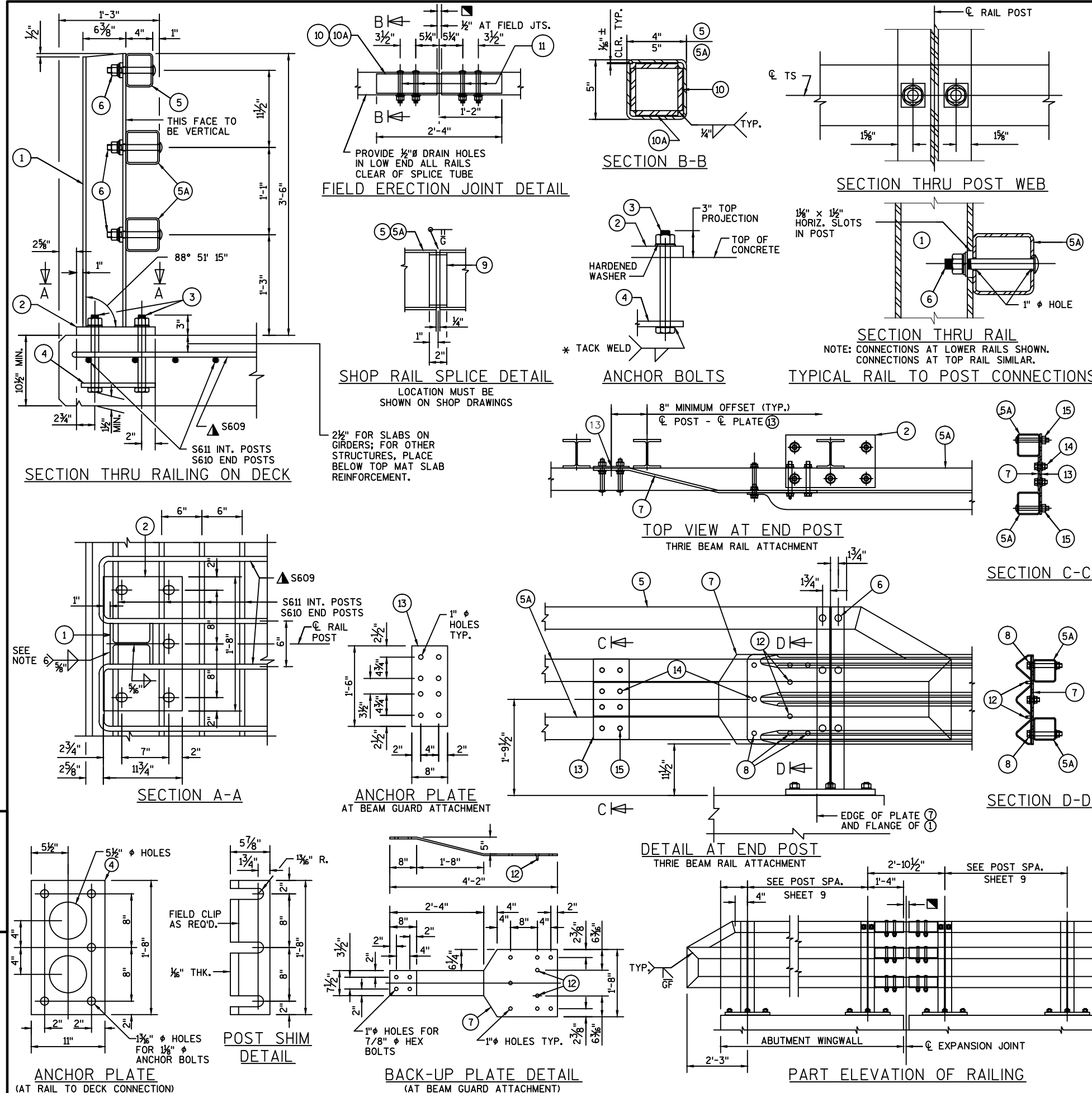
⑭ ¾" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

⑮ 1" φ HOLES IN TUBES NO. 5A FOR ¾" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

▲ TIE TO TOP MAT OF STEEL.

* FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTABILITY.

■ RDWY. OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & ½" OPENING FOR A1 ABUTMENT.

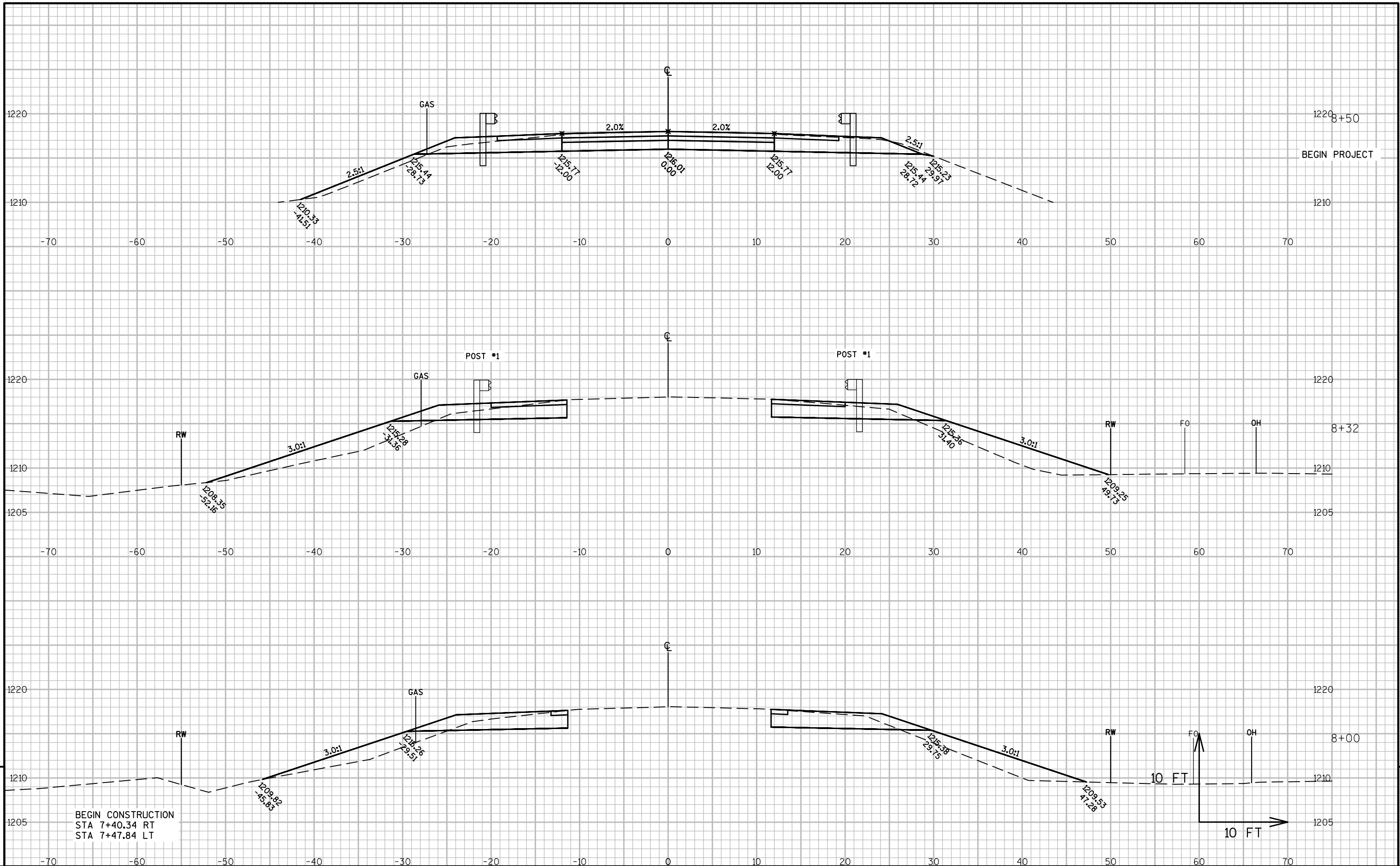


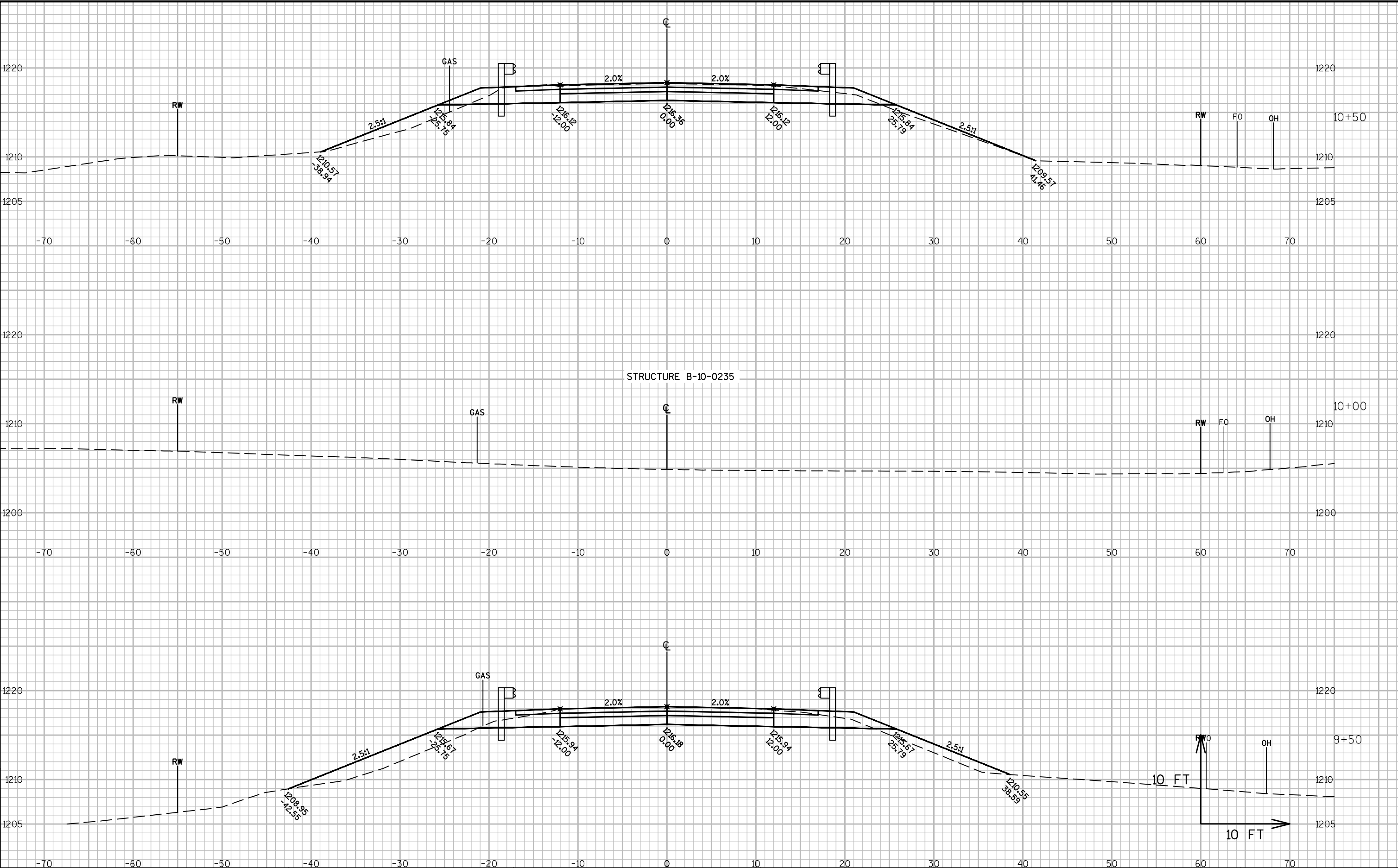
INCREMENTAL VOLUME								
				COMMON*		FILL		
		END AREA		1.0		1.3		MASS
DISTANCE	COMMON	FILL	RAW	ADJ	RAW	ADJ		HAUL
STATION	FT	SF	SF	CY	CY	CY	CY	CY
8+00	0	89.3	49.2	0.0	0.0	0.0	0.0	0.0
8+50	50	92.0	7.8	167.9	167.9	52.8	68.6	99.3
9+00	50	94.3	4.7	172.5	172.5	11.6	15.0	157.5
9+50	50	72.8	41.1	154.7	154.7	42.4	55.1	99.6
9+59	9	72.8	41.1	24.3	24.3	13.7	17.8	6.5

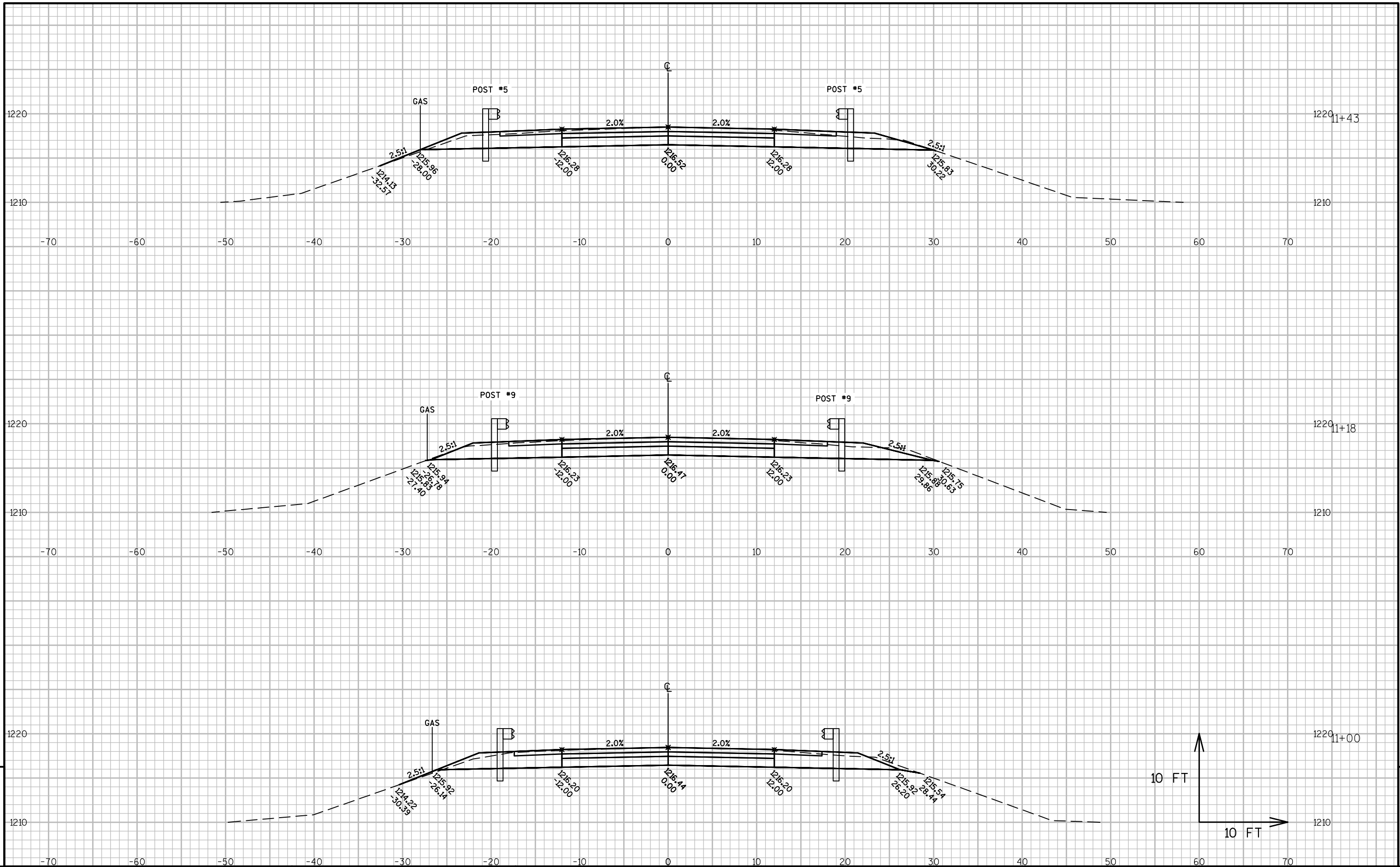
*SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT, SEE MQ TABLES

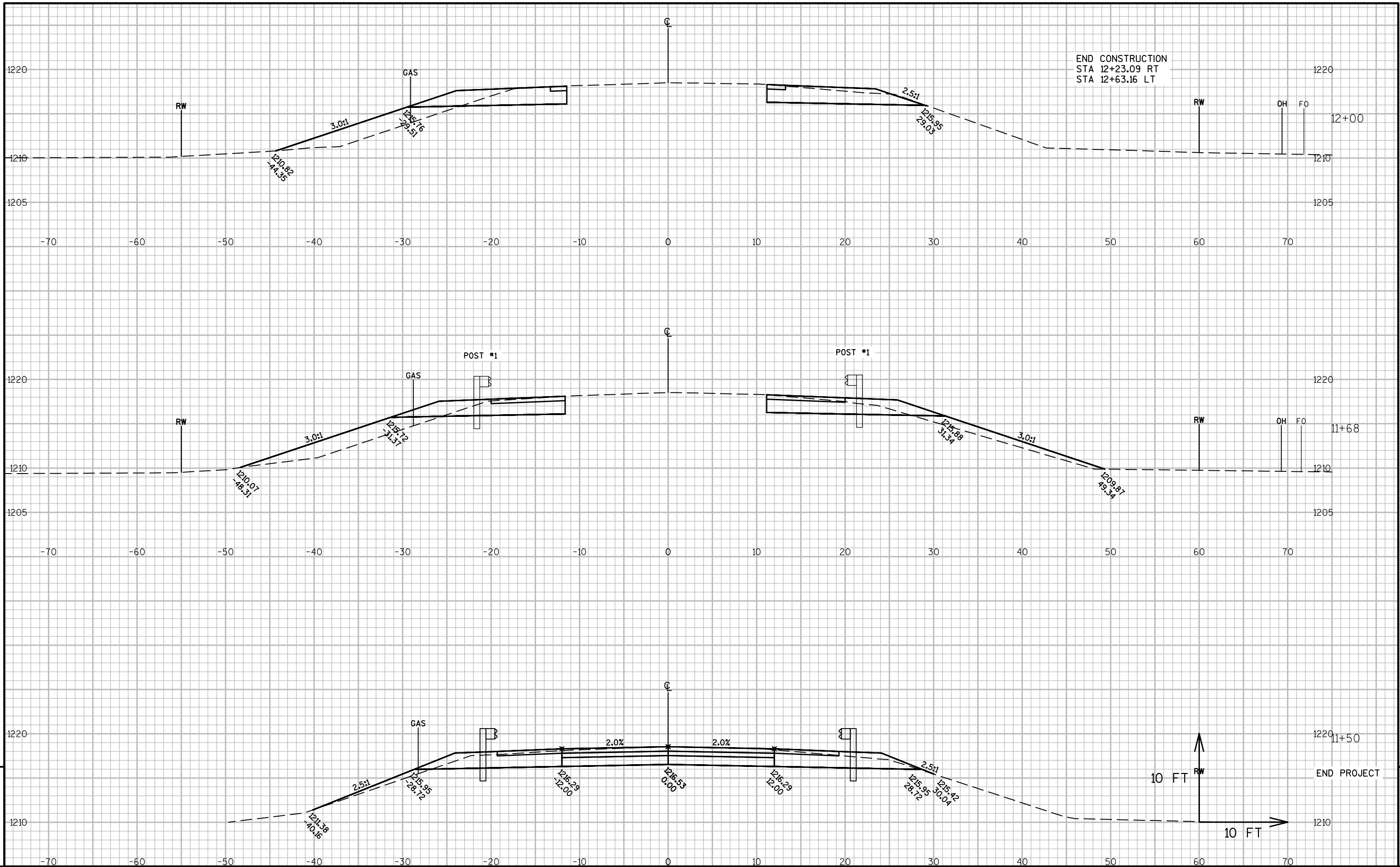
INCREMENTAL VOLUME								
				COMMON*		FILL		
		END AREA		1.0		1.3		MASS
	DISTANCE	COMMON	FILL	RAW	ADJ	RAW	ADJ	HAUL
STATION	FT	SF	SF	CY	CY	CY	CY	CY
10+41	0	76.5	19.2	0.0	0.0	0.0	0.0	0.0
10+50	9	76.5	19.2	25.5	25.5	6.4	8.3	17.2
11+00	50	87.5	0.5	151.9	151.9	18.2	23.7	128.1
11+50	50	86.8	4.4	161.4	161.4	4.5	5.9	155.5
12+00	50	90.4	27.2	164.1	164.1	29.3	38.0	126.0

*SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT, SEE MQ TABLES

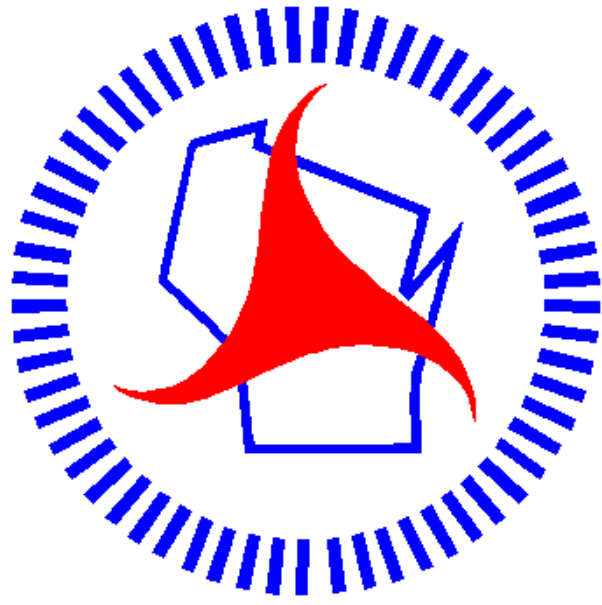








PROJECT NO: 7847-04-70	HWY: CTH Y	COUNTY: CLARK	CROSS SECTIONS: CTH Y	SHEET	E
------------------------	------------	---------------	-----------------------	-------	---



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>