

MAD
PROJECT ID: 5844-00-75
WITH: N/A
COUNTY: DANE

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 = 90



DESIGN DESIGNATION	5844-00-05
A.A.D.T.	2026 = 458
A.A.D.T.	2046 = 680
D.H.V.	= 68
D.O.	= 50/50
T.	= 14.1%
DESIGN SPEED	= 55 MPH
ESALS	= 150,000

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CTH J - STH 78

VERMONT CREEK BRIDGE, B-13-0928

CTH JJ

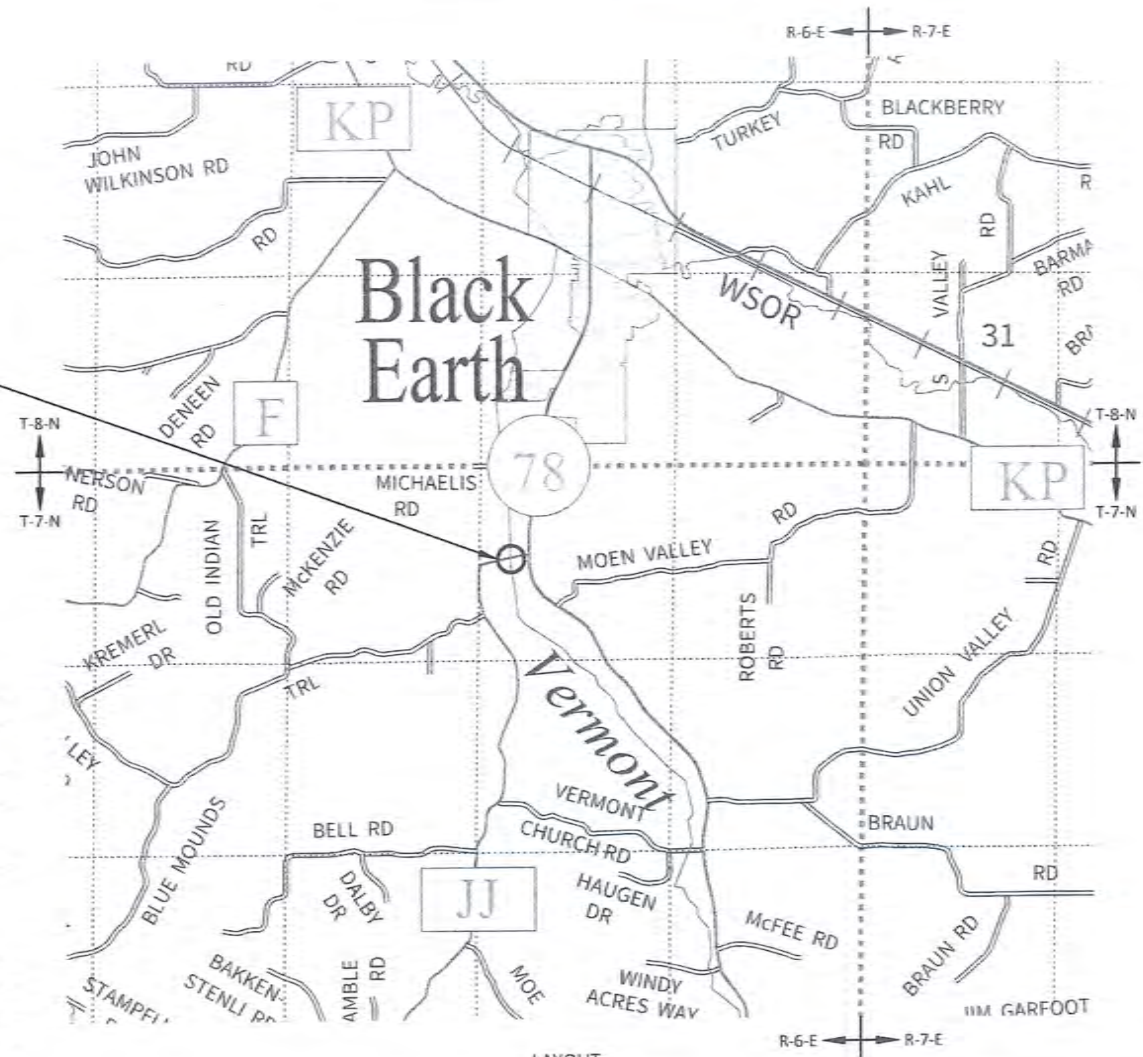
DANE COUNTY

STATE PROJECT NUMBER
5844-00-75

END PROJECT
STA 15+73.65

STRUCTURE B-13-0928
STA 13+83.49 - STA 14+17.99

BEGIN PROJECT
STA 12+39.15
X = 496,537.300
Y = 721,635.847



LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 0.063 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN
COORDINATE REFERENCE SYSTEM (WISCRS), DANE COUNTY,
NAD83 (2012), 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 PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5844-00-75	WISC 2026077	1

ACCEPTED FOR
DANE COUNTY
HIGHWAY DEPARTMENT
Date: 6/30/25
Signature: *Chenut Abongym*
HIGHWAY COMMISSIONER
(Title of Official)

ORIGINAL PLANS PREPARED BY
SRF
WISCONSIN
PROFESSIONAL ENGINEER
BRIAN M. GENSKOW
E-45795-6
MIDDLETON, WI
6/30/2025

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor: JT ENGINEERING
Designer: SRF CONSULTING GROUP, INC.
Project Manager: LORRAINE BETZEL
Regional Examiner: SW REGION
Regional Supervisor: KYLE HEMP

APPROVED FOR THE DEPARTMENT
DATE: 7/7/25
Signature: *Lorraine Betzel*
(Signature)

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.

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

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

TACK COAT CALCULATIONS ARE BASED ON AN APPLICATION RATE OF 0.05 GAL/SY.

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

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR’S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

PRIOR TO PLACING THE NEW BASE AGGREGATE DENSE COURSE OR PAVED SHOULDERS EXISTING UNCOMPACTED SHOULDER MATERIAL SHALL BE REMOVED OR DEPOSITED ON THE OUTER PORTION OF THE EXISTING SHOULDER OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR'S PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

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

PRIOR TO PLACEMENT OF BEAM GUARD THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

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

UTILITIES CONTACTS

VANGUARD ELECTRIC (BLACK EARTH UTILITIES)
ELECTRIC
KURT MEIER
714 BLUE MOUNDS STREET
BLACK EARTH, WI 53515
PHONE: (608) 767-2561
EMAIL: kmeier@vanguardelectric.org

TDS TELECOM
COMMUNICATIONS
LORIN MISSALL
525 JUNCTION ROAD
MADISON, WI 53717
PHONE: (608) 225-5913
EMAIL: Lorin.Missal@tdstelecom.com

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
PAVEMENT MARKING & SIGNING
DETOUR PLAN



DANE COUNTY

MARK MISUN
HIGHWAY DEPARTMENT
2302 FISH HATCHERY ROAD
MADISON, WI 53713
PHONE: (608) 575-2824
EMAIL: misun.mark@danecounty.gov

WISCONSIN DNR LIAISON

ERIC HEGGELUND
DNR SOUTH CENTRAL REGION HQ
2302 FISH HATCHERY ROAD
FITCHBURG, WI 53771
PHONE: (608) 228-7927
EMAIL: eric.heggelund@wisconsin.gov

WISDOT CONTACT

LORRAINE BETZEL
SW REGION
2101 WRIGHT STREET
MADISON, WI 53704
PHONE: (608) 246-3279
EMAIL: Lorraine.Betzel@dot.wi.gov

DESIGN CONSULTANT

BRIAN GENSKOW
SRF CONSULTING GROUP, INC.
1600 ASPEN COMMONS, SUITE 650
MIDDLETON, WI 53562
PHONE: (608) 298-5411
EMAIL: bgenskow@srfconsulting.com

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	LT	LEFT
AC	ACRE	LHF	LEFT HAND FORWARD
AGG	AGGREGATE	L	LENGTH OF CURVE
AH	AHEAD	LF	LINEAR FOOT
∠	ANGLE	LC	LONG CHORD OF CURVE
AADT	ANNUAL AVERAGE DAILY TRAFFIC	LS	LUMP SUM
AEW	APRON ENDWALL	MGAL	ONE THOUSAND GALLONS
ASPH	ASPHALTIC	MH	MANHOLE
BK	BACK	ML OR M/L	MATCH LINE
BC	BACK OF CURB	NOM	NOMINAL
BAD	BASE AGGREGATE DENSE	NC	NORMAL CROWN
BL OR B/L	BASE LINE	NB	NORTHBOUND
BM	BENCH MARK	NO	NUMBER
CB	CATCH BASIN	OD	OUTSIDE DIAMETER
CL OR C/L	CENTER LINE	PAVT	PAVEMENT
Δ	CENTRAL ANGLE OR DELTA	PLE	PERMANENT LIMITED EASEMENT
CE	COMMERCIAL ENTRANCE	PC	POINT OF CURVATURE
CONC	CONCRETE	PI	POINT OF INTERSECTION
CSW	CONCRETE SIDEWALK	PT	POINT OF TANGENCY
CONST	CONSTRUCTION	PCC	PORTLAND CEMENT CONCRETE
CP	CONTROL POINT	LB	POUND
CO	COUNTY	PSI	POUNDS PER SQUARE INCH
CTH	COUNTY TRUCK HIGHWAY	PE	PRIVATE ENTRANCE
CY	CUBIC YARD	PROJ	PROJECT
CP	CULVERT PIPE	PL	PROPERTY LINE
CPCA	CULVERT PIPE CORRUGATED ALUMINUM	PRW	PROPOSED RIGHT OF WAY
CPCPE	CULVERT PIPE CORRUGATED POLYETHYLENE	R	RADIUS
CPCPP	CULVERT PIPE CORRUGATED POLYPROPYLENE	RL OR R/L	REFERENCE LINE
CPCS	CULVERT PIPE CORRUGATED STEEL	REQD	REQUIRED
CPCSAC	CULVERT PIPE CORRUGATED STEEL ALUMINUM COATED	RT	RIGHT
CPCSPC	CULVERT PIPE CORRUGATED STEEL POLYMER COATED	RHF	RIGHT HAND FORWARD
CPRC	CULVERT PIPE REINFORCED CONCRETE	R/W	RIGHT OF WAY
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	RD	ROAD
CPS	CULVERT PIPE SALVAGED	RDWY	ROADWAY
CPT	CULVERT PIPE TEMPORARY	SHLDR	SHOULDER
C & G	CURB AND GUTTER	SW	SIDEWALK
D	DEGREE OF CURVE	SB	SOUTHBOUND
DHV	DESIGN HOUR VOLUME	SPECS	SPECIFICATIONS
DIA	DIAMETER	SF	SQUARE FEET
DD	DIRECTIONAL DISTRIBUTION	SY	SQUARE YARD
DE	DRAINAGE EASEMENT	SDD	STANDARD DETAIL DRAWINGS
DWY	DRIVEWAY	STH	STATE TRUNK HIGHWAY
EA	EACH	STA	STATION
EB	EASTBOUND	SSPC	STORM SEWER PIPE COMPOSITE
EL OR ELEV	ELEVATION	SSCPE	STORM SEWER PIPE CORRUGATED POLYETHYLENE
EMB	EMBANKMENT	SSCPP	STORM SEWER PIPE CORRUGATED POLYPROPYLENE
EW	ENDWALL	SSPNRC	STORM SEWER PIPE NON-REINFORCED CONCRETE
EAT	ENERGY ABSORBING TERMINAL	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
ESALS	EQUIVALENT SINGLE AXLE LOADS	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EXC	EXCAVATION	SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION
EXIST	EXISTING	SL OR S/L	SURVEY LINE
FERT	FERTILIZER	TEMP	TEMPORARY
FE	FIELD ENTRANCE	TI	TEMPORARY INTEREST
FL OR F/L	FLOW LINE	TLE	TEMPORARY LIMITED EASEMENT
FT	FOOT	TC	TOP OF CURB
FTMS	FREE TRAFFIC MANAGEMENT SYSTEM	TL OR T/L	TRANSIT LINE
HES	HIGH EARLY STRENGTH	T	TRUCKS (PERCENT OF)
HE	HIGHWAY EASEMENT	TYP	TYPICAL
CWT	HUNDRED WEIGHT	USH	UNITED STATES HIGHWAY
IN DIA	INCH DIAMETER	VAR	VARIABLE
INL	INLET	VC	VERTICAL CURVE
ID	INSIDE DIAMETER	VPC	VERTICAL POINT OF CURVATURE
INTERS	INTERSECTION	VPI	VERTICAL POINT OF INTERSECTION
IH	INTERSTATE HIGHWAY	VPT	VERTICAL POINT OF TANGENCY
INV	INVERT	W	WEST
JT	JOINT	WB	WESTBOUND

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 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 = 0.46 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.46 ACRES

PROJECT NO: 5844-00-75

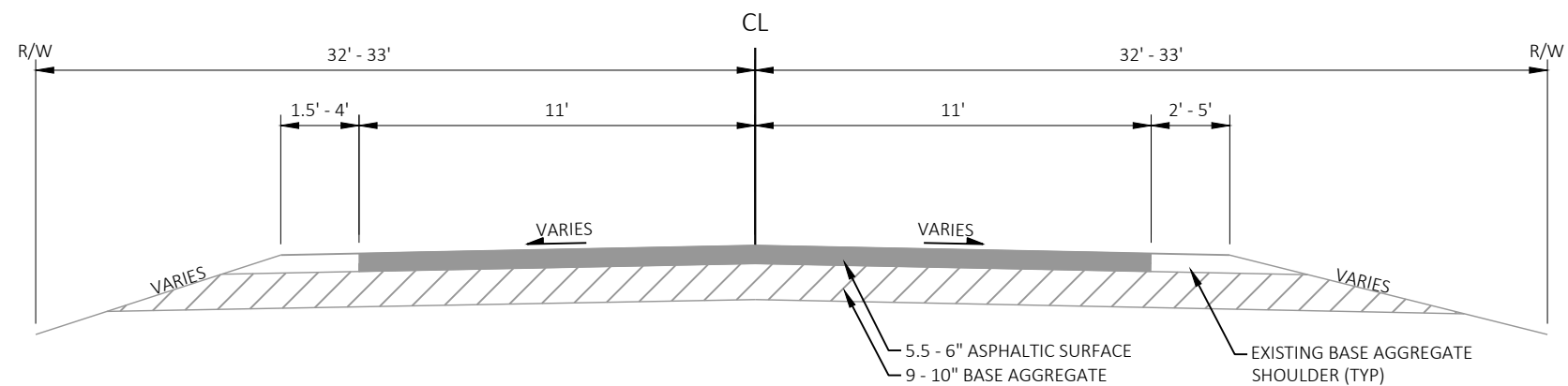
HWY: CTH JJ

COUNTY: DANE

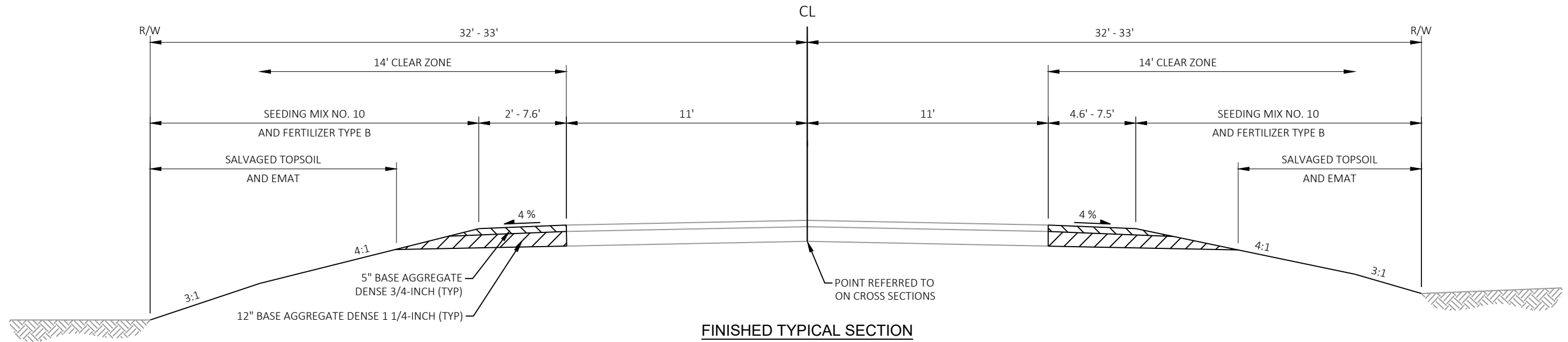
GENERAL NOTES

SHEET

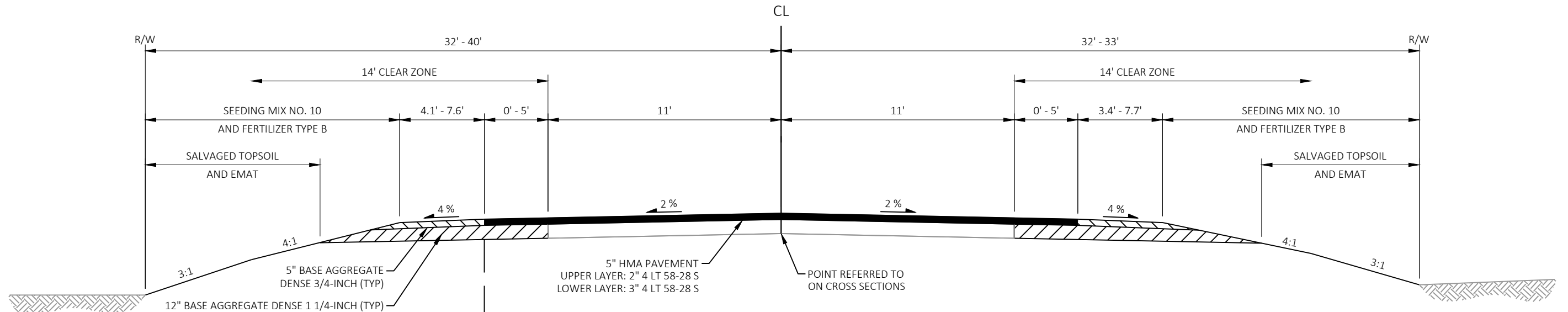
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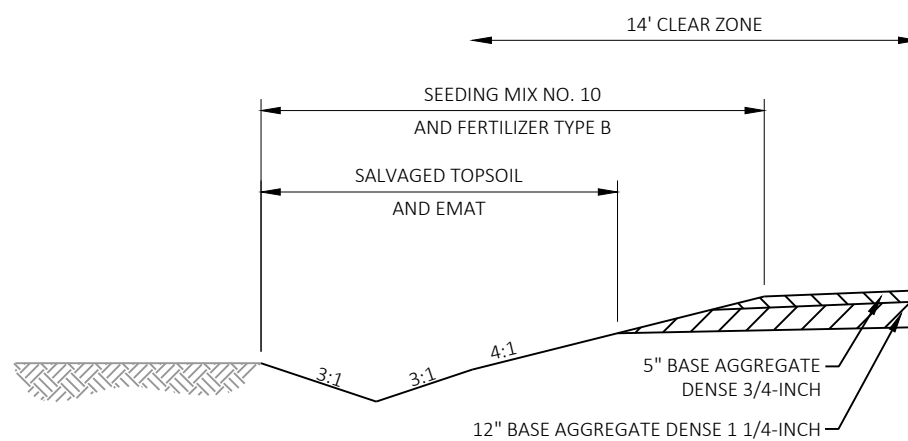
EXISTING TYPICAL SECTION
CTH JJ
STA 11+53.66 - STA 13+83.49
STA 14+17.99 - STA 16+04.31

**FINISHED TYPICAL SECTION**

CTH JJ
STA 11+53.66 - STA 12+39.15
STA 15+73.65 - STA 16+04.31

**FINISHED TYPICAL SECTION**

CTH JJ
STA 12+39.15 - STA 12+93.55
STA 15+45.47 - STA 15+73.65

**DITCH DETAIL**

STA 15+45.77 - STA 15+50.00

PROJECT NO: 5844-00-75

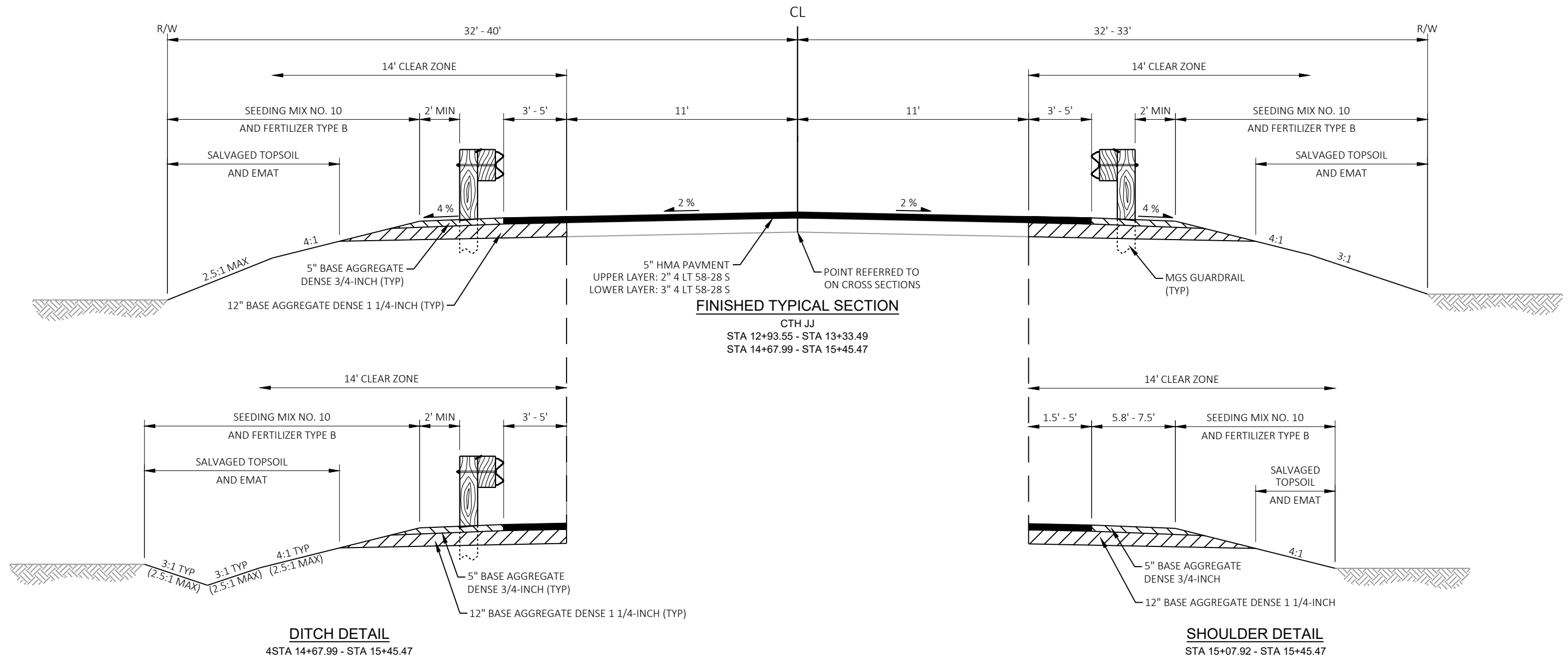
HWY: CTH JJ

COUNTY: DANE

TYPICAL SECTIONS

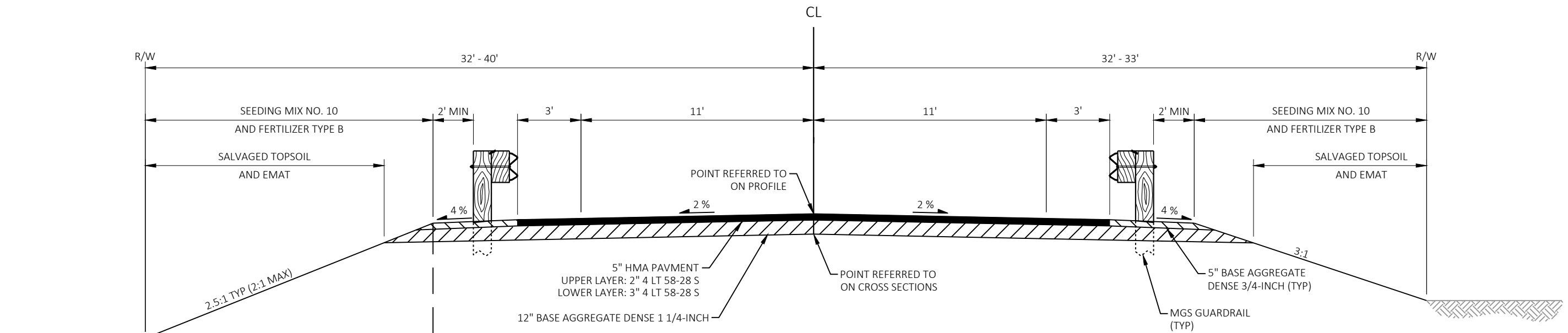
SHEET

E



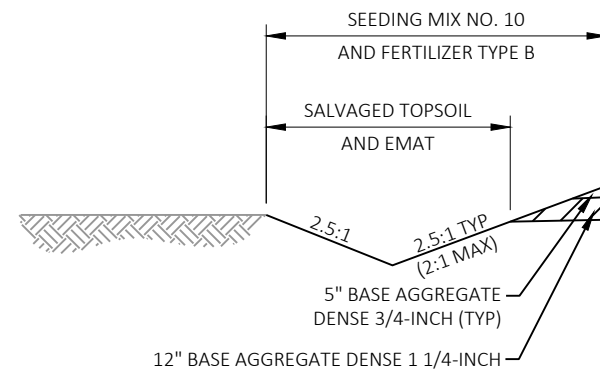
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2 |

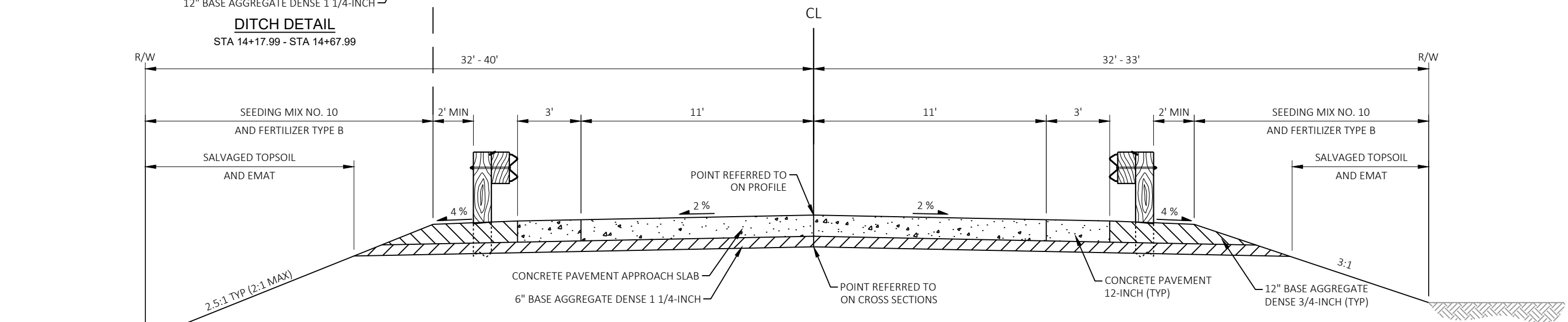


FINISHED TYPICAL SECTION

CTH JJ
STA 13+33.49 - STA 13+68.49
STA 14+32.99 - STA 14+67.99

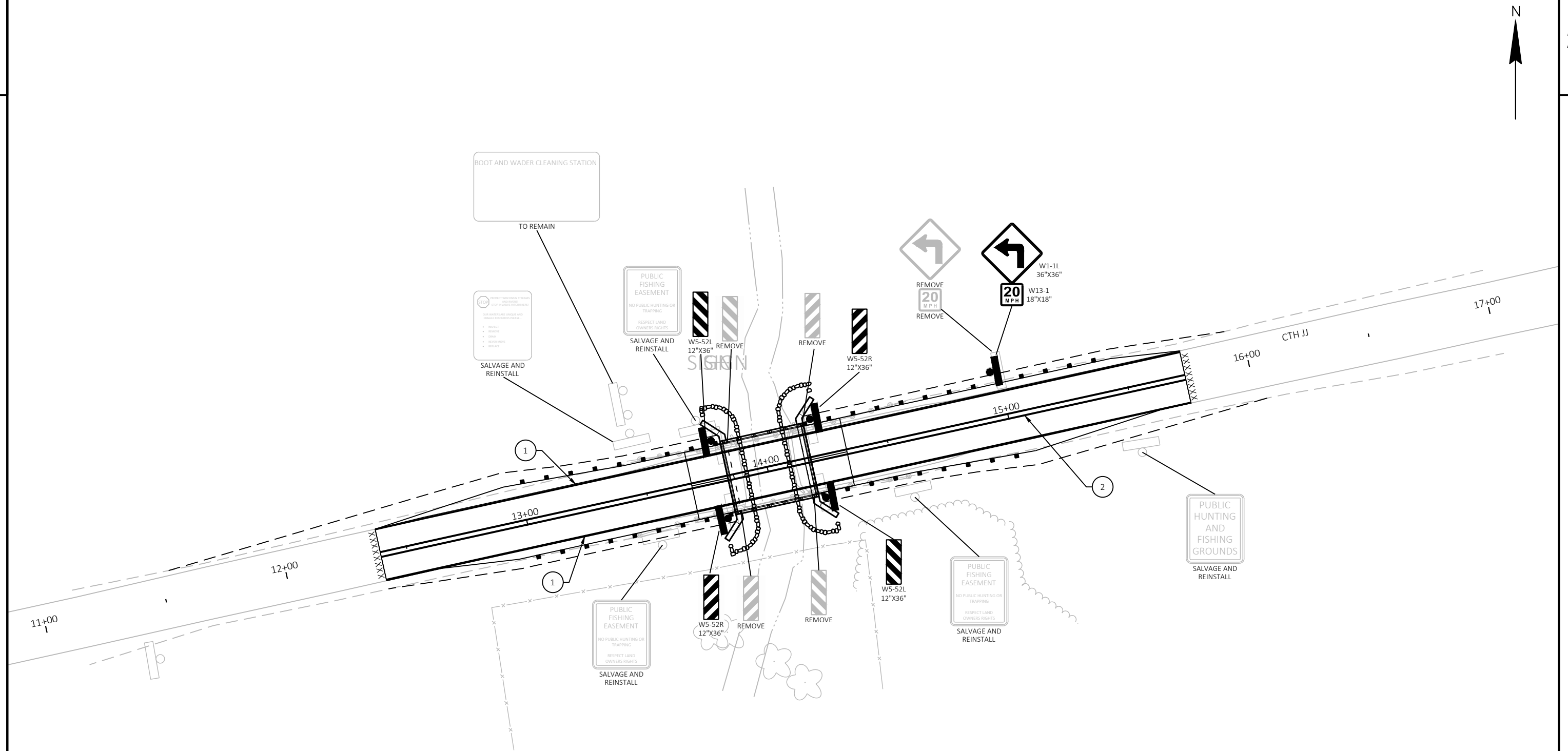


DITCH DETAIL
STA 14+17.99 - STA 14+67.99



FINISHED TYPICAL SECTION

CTH JJ
STA 13+68.49 - STA 13+83.49
STA 14+17.99 - STA 14+32.99



LEGEND	
①	MARKING LINE EPOXY 6-INCH (WHITE)
②	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
	EXISTING SIGN
	PROPOSED SIGN ON PERMANENT SUPPORT

DETOUR NOTES

DETOUR ROUTE SHALL BE USED DURING THE IMPROVEMENT OF CTH JJ. CTH JJ SHALL BE CLOSED TO THRU TRAFFIC FROM CTH J TO STH 78.

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

COVER ALL SIGNS WHICH MAY CONFLICT WITH THE CONSTRUCTION TRAFFIC PATTERN.

PLACE PRE-CONSTRUCTION MESSAGE SIGNS 7 DAYS PRIOR TO CONSTRUCTION. EXACT LOCATION TO BE APPROVED BY THE ENGINEER IN THE FIELD.

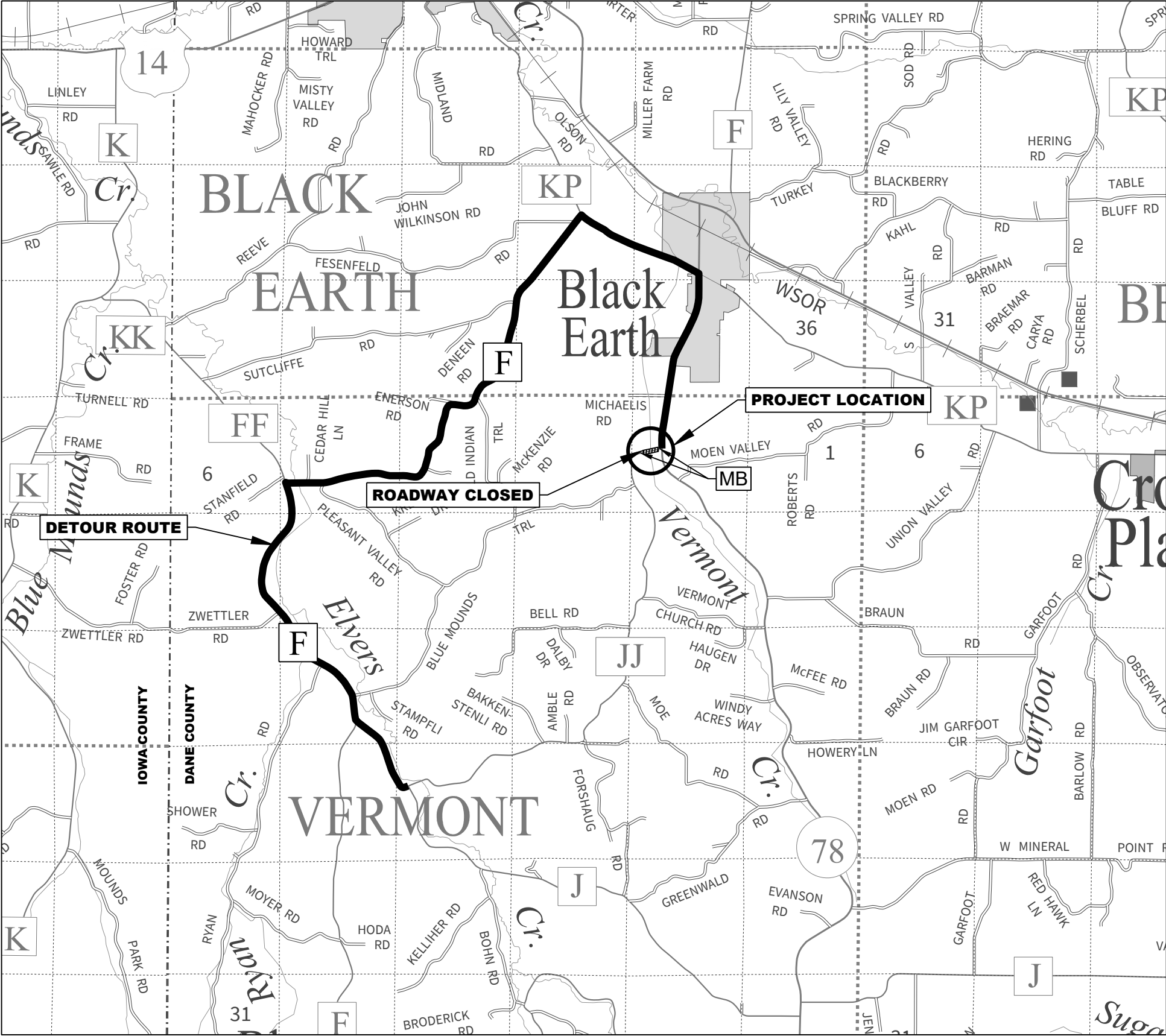
FRAME 1	FRAME 2
BRIDGE TO CLOSE	XXXDAY XX XX XX

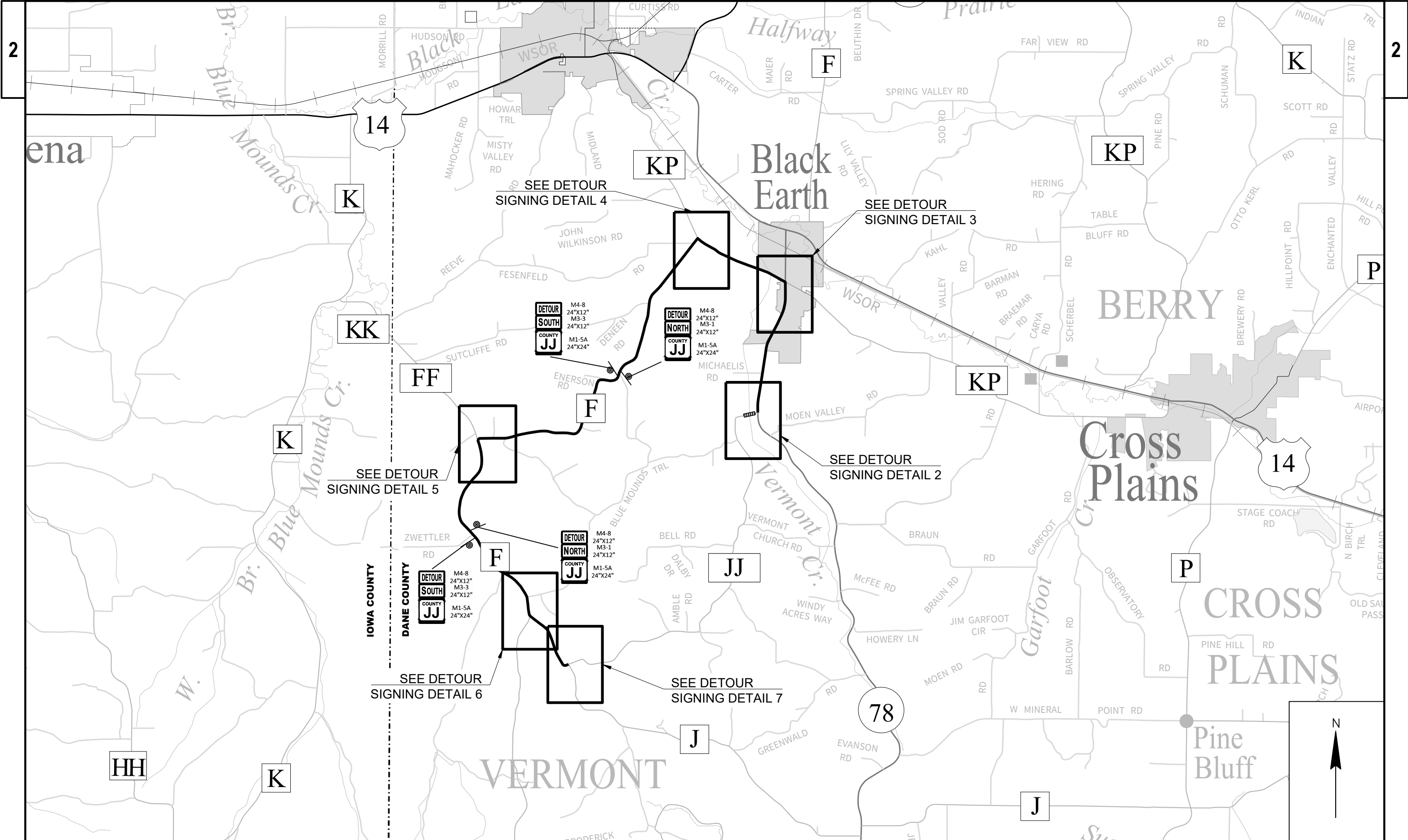
LEGEND

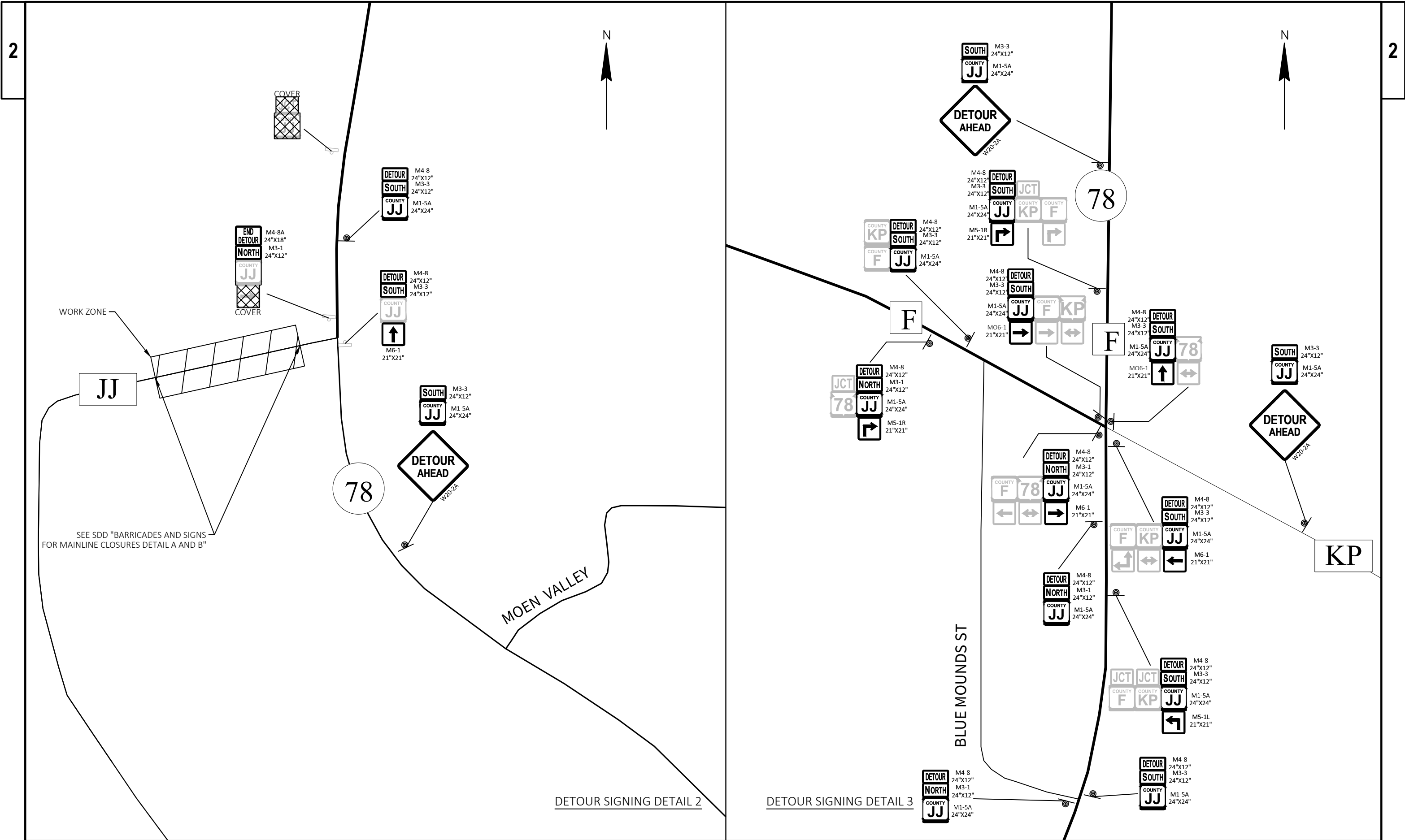
 WORK ZONE

 DETOUR ROUTE

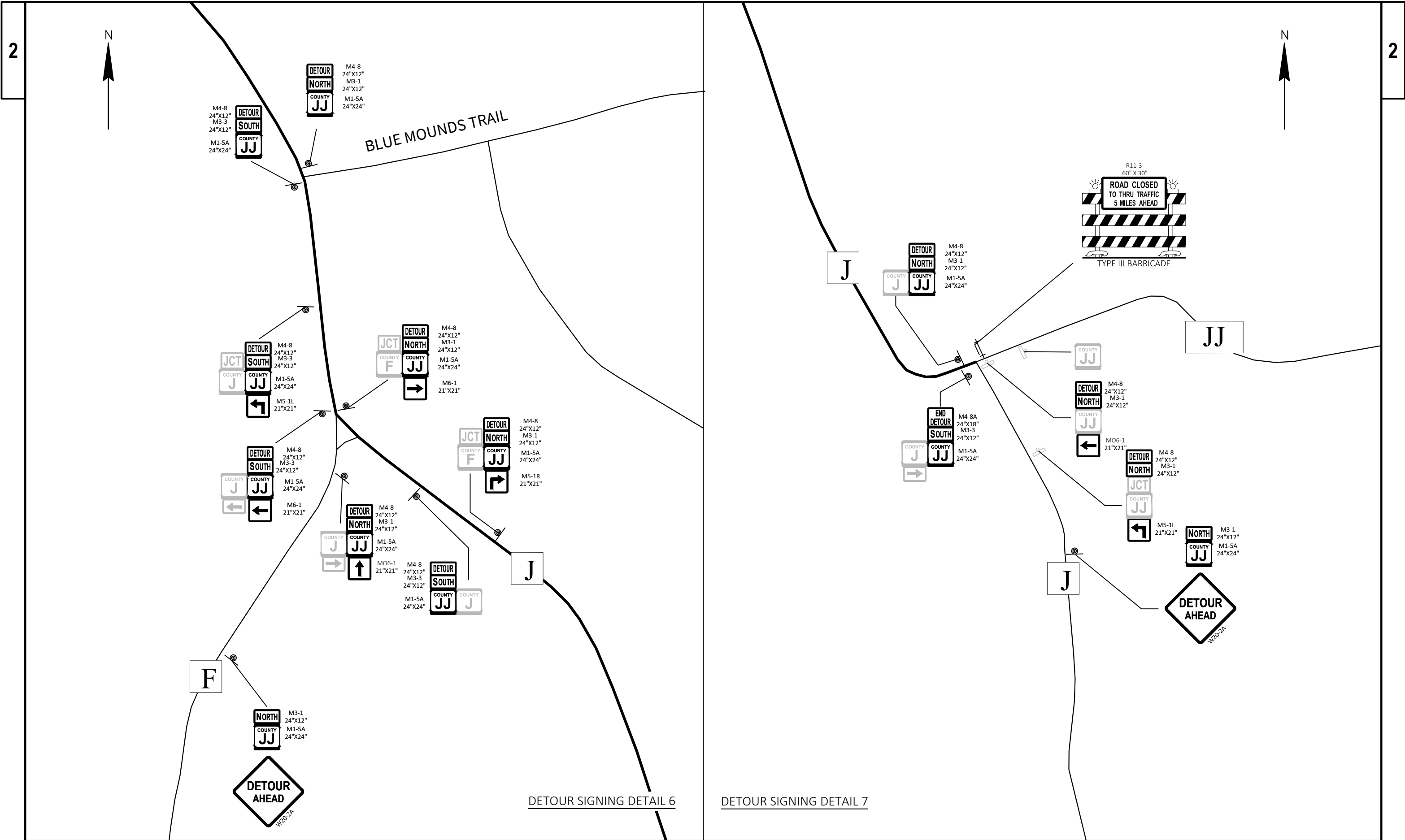
 PORTABLE CHANGEABLE MESSAGE SIGN











Estimate Of Quantities

5844-00-75

Line	Item	Item Description	Unit	Total	Qty
0002	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. P-13-0918	EACH	1.000	1.000
0004	204.0165	Removing Guardrail	LF	194.000	194.000
0006	205.0100	Excavation Common	CY	364.000	364.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-13-0928	EACH	1.000	1.000
0010	210.1500	Backfill Structure Type A	TON	296.000	296.000
0012	213.0100	Finishing Roadway (project) 01. 5844-00-75	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	145.000	145.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	703.000	703.000
0018	415.0120	Concrete Pavement 12-Inch	SY	22.000	22.000
0020	415.0410	Concrete Pavement Approach Slab	SY	74.000	74.000
0022	455.0605	Tack Coat	GAL	42.000	42.000
0024	460.2000	Incentive Density HMA Pavement	DOL	150.000	150.000
0026	460.5224	HMA Pavement 4 LT 58-28 S	TON	231.000	231.000
0028	502.0100	Concrete Masonry Bridges	CY	112.000	112.000
0030	502.3200	Protective Surface Treatment	SY	167.000	167.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	4,400.000	4,400.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	16,410.000	16,410.000
0036	513.4061	Railing Tubular Type M	LF	74.000	74.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0040	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	910.000	910.000
0042	606.0300	Riprap Heavy	CY	101.000	101.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	146.000	146.000
0046	614.2300	MGS Guardrail 3	LF	37.500	37.500
0048	614.2500	MGS Thrie Beam Transition	LF	158.000	158.000
0050	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0052	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5844-00-75	EACH	1.000	1.000
0054	619.1000	Mobilization	EACH	1.000	1.000
0056	624.0100	Water	MGAL	14.000	14.000
0058	625.0500	Salvaged Topsoil	SY	916.000	916.000
0060	628.1504	Silt Fence	LF	644.000	644.000
0062	628.1520	Silt Fence Maintenance	LF	644.000	644.000
0064	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0068	628.2008	Erosion Mat Urban Class I Type B	SY	799.000	799.000
0070	628.2027	Erosion Mat Class II Type C	SY	33.000	33.000
0072	628.6005	Turbidity Barriers	SY	123.000	123.000
0074	628.7504	Temporary Ditch Checks	LF	8.000	8.000
0076	629.0210	Fertilizer Type B	CWT	0.700	0.700
0078	630.0110	Seeding Mixture No. 10	LB	26.000	26.000
0080	630.0500	Seed Water	MGAL	22.000	22.000
0082	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	5.000	5.000
0084	637.2230	Signs Type II Reflective F	SF	23.250	23.250
0086	638.2602	Removing Signs Type II	EACH	5.000	5.000
0088	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0090	642.5001	Field Office Type B	EACH	1.000	1.000
0092	643.0420	Traffic Control Barricades Type III	DAY	938.000	938.000
0094	643.0705	Traffic Control Warning Lights Type A	DAY	1,876.000	1,876.000
0096	643.0900	Traffic Control Signs	DAY	11,993.000	11,993.000
0098	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000

Estimate Of Quantities

5844-00-75

Line	Item	Item Description	Unit	Total	Qty
0100	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0102	643.5000	Traffic Control	EACH	1.000	1.000
0104	645.0111	Geotextile Type DF Schedule A	SY	92.000	92.000
0106	645.0120	Geotextile Type HR	SY	155.000	155.000
0108	646.2020	Marking Line Epoxy 6-Inch	LF	1,340.000	1,340.000
0110	650.4500	Construction Staking Subgrade	LF	100.000	100.000
0112	650.5000	Construction Staking Base	LF	100.000	100.000
0114	650.6501	Construction Staking Structure Layout (structure) 01. B-13-0928	EACH	1.000	1.000
0116	650.9911	Construction Staking Supplemental Control (project) 01. 5844-00-75	EACH	1.000	1.000
0118	650.9920	Construction Staking Slope Stakes	LF	415.000	415.000
0120	690.0150	Sawing Asphalt	LF	44.000	44.000
0122	715.0502	Incentive Strength Concrete Structures	DOL	672.000	672.000
0124	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0126	999.2005.S	Maintaining Bird Deterrent System (station) 01. 14+00	EACH	1.000	1.000
0128	SPV.0060	Special 01. Salvage and Reinstall Signs	EACH	5.000	5.000
0130	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	8.000	8.000

REMOVING GUARDRAIL		
STATION - STATION	LOCATION	204.0165 LF
13+37 - 13+89	RT	52
13+45 - 13+90	LT	46
14+12 - 14+64	LT	51
14+14 - 14+58	RT	45
ITEM TOTAL		194

BASE AGGREGATE DENSE				
		305.0110 3/4-INCH	305.0120 1 1/4-INCH	
STATION - STATION	LOCATION	TON	TON	REMARKS
11+54 - 13+84		73	352	
14+99 - 16+04		72	351	
ITEM TOTALS		145	703	

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5)	MASS ORDINATE +/- (6)	WASTE	COMMENT
			CUT (2)				FACTOR 1.25			
DIVISION 1										
CTH JJ	12+00.00/16+00.00	CTH JJ	364	128	236	152	190	46	46	
DIVISION 1 SUBTOTAL			364	128	236	152	190	46	46	
GRAND TOTAL			364	128	236	152	190	46	46	
TOTAL COMMON EXC			364							

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(5) EXPANDED FILL FACTOR = 1.25
(6) 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.
(7) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

NOTE: TABLE QUANTITIES ARE
CATEGORY 0010 UNLESS
OTHERWISE NOTED

3

CONCRETE PAVEMENT			
STATION - STATION	LOCATION	415.0120 12-INCH SY	415.0410 APPROACH SLAB SY
CAT 0030			
13+69 - 13+84		11	37
14+18 - 14+33		11	37
ITEM TOTAL		22	74

HMA PAVEMENT ITEMS			
STATION - STATION	LOCATION	455.0605 * TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON
12+39 - 13+68		20	110
14+33 - 15+61		22	121
ITEM TOTAL		42	231

* APPLICATION RATE 0.05 GAL/SY

WATER		
STATION -STATION	LOCATION	624.0100 MGAL
11+53 - 13+83		7
14+18 - 16+04		7
ITEM TOTALS		14

3

MGS GUARDRAIL				
STATION - STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
12+94 -13+86	LT	--	39.4	1
12+94 -13+86	RT	--	39.4	1
14+15 - 15+46	LT	37.5	39.4	1
14+15 - 15+08	RT	--	39.4	1
ITEM TOTALS		37.5	158	4

EROSION CONTROL ITEMS							
STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS 1 TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF
11+53 - 13+83	RT/LT	405	405	464	--	63	--
14+18 - 16+04	RT/LT	239	239	335	33	60	8
ITEM TOTALS		644	644	799	33	123	8

TOPSOIL, FERTILIZER, AND SEEDING				
STATION - STATION	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB	630.0500 SEED WATER MGAL
11+53 - 13+83	464	0.3	13	11
14+18 - 16+04	368	0.3	10	9
UNDISTRIBUTED	84	0.1	3	2
ITEM TOTALS		916	0.7	22

EROSION CONTROL MOBILIZATIONS		
PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
5844-00-75	3	2
ITEM TOTAL	3	2

NOTE: TABLE QUANTITIES ARE
CATEGORY 0010 UNLESS
OTHERWISE NOTED

PROJECT NO: 5844-00-75

HWY: CTH JJ

COUNTY: DANE

MISCELLANEOUS QUANTITIES

SHEET

E

3

3

PERMANENT SIGNING										
STATION	OFFSET	LOCATION	SIGN CODE	SIGN SIZE (W x H) IN x IN	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	SPV.0060.01 SALVAGE AND REINSTALL SIGNS EACH	REMARKS
13+48	26' LT	CTH JJ	--	--	--	--	--	--	1	PROTECT WISCONSIN STREAMS
13+52	21' RT	CTH JJ	--	--	--	--	--	--	1	PUBLIC FISHING EASEMENT
13+76	26' LT	CTH JJ	--	--	--	--	--	--	1	PUBLIC FISHING EASEMENT
13+86	14' LT	NW BRIDGE CORNER	W5-52L	--	--	--	1	1	--	
13+80	16' LT	NW BRIDGE CORNER	W5-52L	12X36	1	3	--	--	--	
13+86	14' RT	SW BRIDGE CORNER	W5-52R	--	--	--	1	1	--	
13+80	16' RT	SW BRIDGE CORNER	W5-52R	12X36	1	3	--	--	--	
14+16	14' RT	SE BRIDGE CORNER	W5-52L	--	--	--	1	1	--	
14+21	16' RT	SE BRIDGE CORNER	W5-52L	12X36	1	3	--	--	--	
14+17	14' LT	NE BRIDGE CORNER	W5-52R	--	--	--	1	1	--	
14+21	16' LT	NE BRIDGE CORNER	W5-52R	12X36	1	3	--	--	--	
14+56	24' RT	CTH JJ	--	--	--	--	--	--	1	PUBLIC FISHING EASEMENT
14+97	19' LT	CTH JJ	W1-1L	36X36	1	9	1	1	--	
			W13-1	18X18		2.25				
15+50	26' RT	CTH JJ	--	--	--	--	--	--	1	PUBLIC HUNTING AND FISHING GROUNDS
ITEM TOTAL					5	23.25	5	5	5	

TRAFFIC CONTROL						
LOCATION	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS DAYS	643.0920 COVERING SIGNS TYPE II EACH	643.1050 SIGNS PCMS DAY	643.5000 TRAFFIC CONTROL EACH
PROJECT 5844-00-75	938	1876	11993	2	14	1
ITEM TOTALS	938	1876	11993	2	14	1

PAVEMENT MARKING			
STATION - STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH	
		SOLID WHITE LF	NO PASSING YELLOW LF
11+53 - 16+04	CL	--	670
11+53 - 16+04	RT/LT	670	--
ITEM TOTALS		670	670
		TOTAL 1340	

CONSTRUCTION STAKING						
	650.4500 SUBGRADE	650.5000 BASE	650.6501.01 STRUCTURE LAYOUT (B-13-0928)	650.9911.01 SUPPLEMENTAL CONTROL (5844-00-75)	650.9920 SLOPE STAKES	
STATION - STATION	LF	LF	EACH	EACH	LF	REMARKS
11+54 - 13+83	50	50	--	--	229	
14+18 - 16+04	50	50	--	--	186	
PROJECT 5844-00-75	--	--	1	1	--	
ITEM TOTALS	100	100	1	1	415	

SAWING		
STATION	LOCATION	690.0150 ASPHALT LF
12+39		22
15+74		22
ITEM TOTAL		44

NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CONTROL POINT TABLE					
POINT NUMBER	STA	X-COORD	Y-COORD	DESCRIPTION	ELEV
CP1	13+88, 27.5' RT	721786.987	496542.487	3/4" REBAR	821.51
CP2	14+22, 38.9' LT	721805.670	496614.607	3/4" REBAR	822.14

STA 12+93.55 - STA 13+46.64, LT
MGS GUARDRAIL TERMINAL EAT REQ'D
STA 12+93.55, 16.0' LT - POST #1

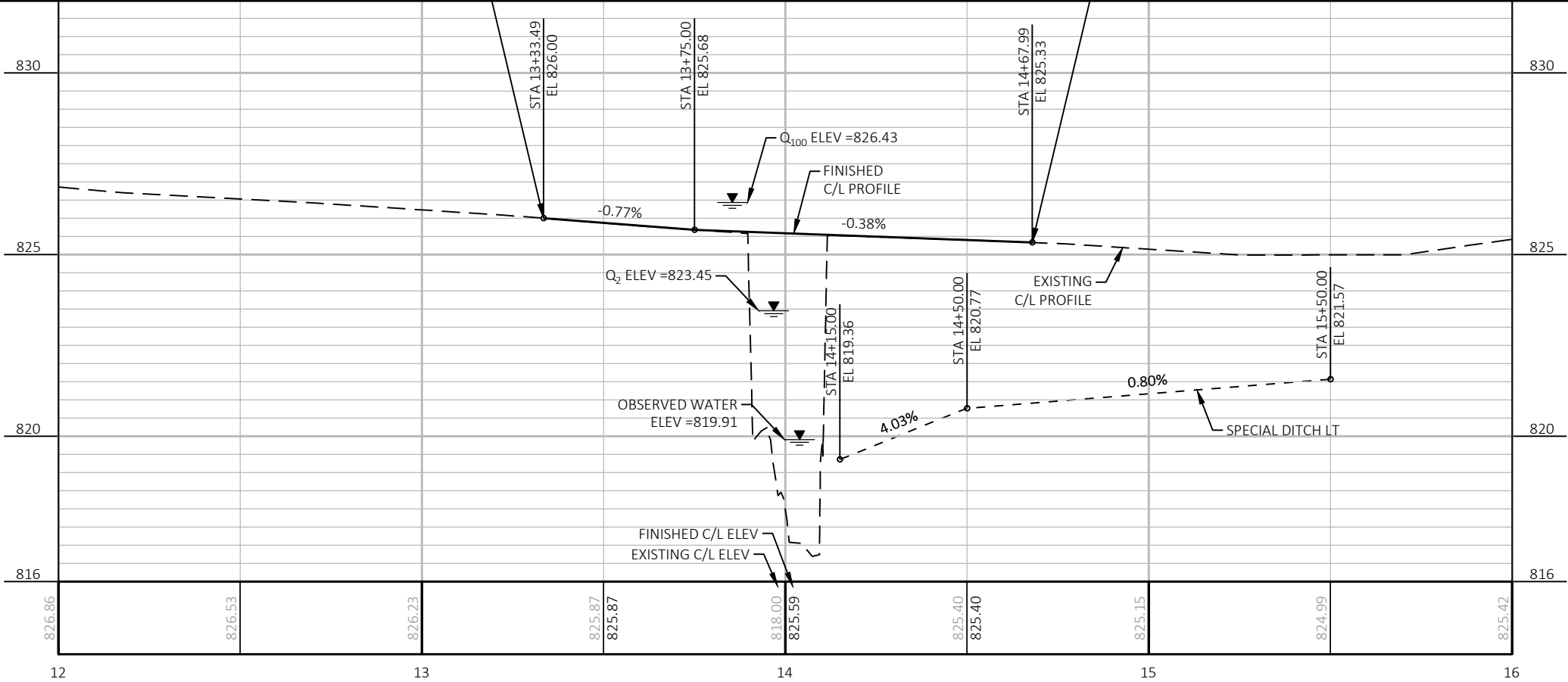
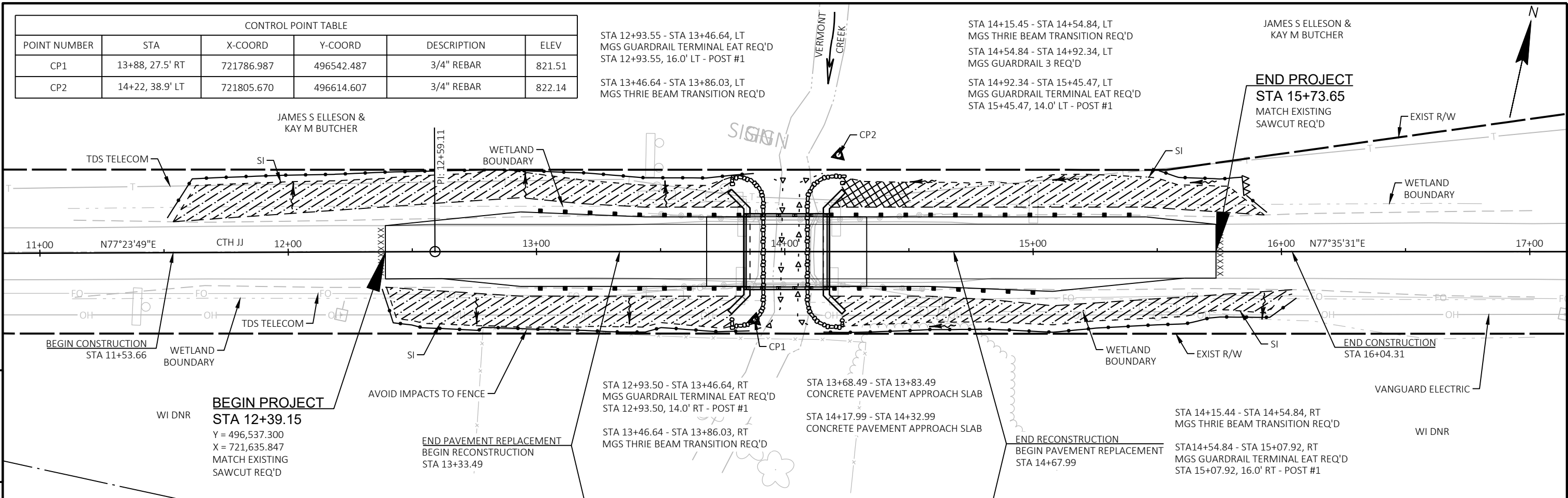
STA 13+46.64 - STA 13+86.03, LT
MGS THRIE BEAM TRANSITION REQ'D

STA 14+15.45 - STA 14+54.84, LT
MGS THRIE BEAM TRANSITION REQ'D
STA 14+54.84 - STA 14+92.34, LT
MGS GUARDRAIL 3 REQ'D

STA 14+92.34 - STA 15+45.47, LT
MGS GUARDRAIL TERMINAL EAT REQ'D
STA 15+45.47, 14.0' LT - POST #1

JAMES S ELLESON &
KAY M BUTCHER

END PROJECT
STA 15+73.65
MATCH EXISTING
SAWCUT REQ'D



LEGEND	
	EROSION MAT URBAN CLASS I, TYPE B
	EROSION MAT CLASS II, TYPE C
	RIPRAP HEAVY
	SILT FENCE
	TURBIDITY BARRIER
	TEMPORARY DITCH CHECK
	SURFACE WATER FLOW

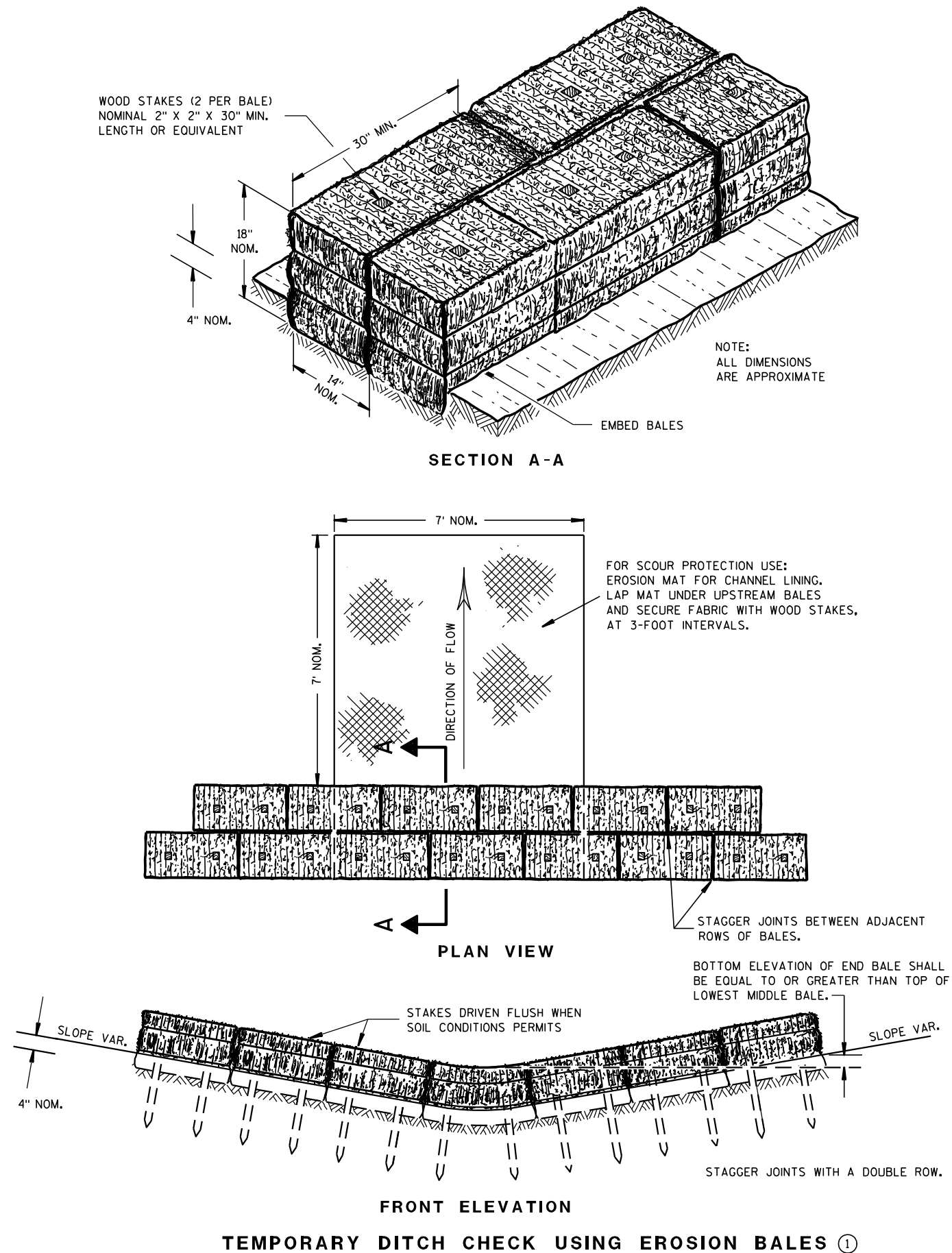
STA 14+00
STRUCTURE B-13-0928 REQUIRED
32' CONCRETE FLAT SLAB STRUCTURE
28' CLEAR ROADWAY
0° SKEW

STA 14+00
REMOVE STRUCTURE P-13-0918
SINGLE SPAN CONCRETE STRUCTURE
23' OVERALL LENGTH
26' OVERALL WIDTH

PROJECT NO: 5844-00-75	HWY: CTH JJ	COUNTY: DANE	PLAN AND PROFILE: CTH JJ	SHEET E
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Standard Detail Drawing List

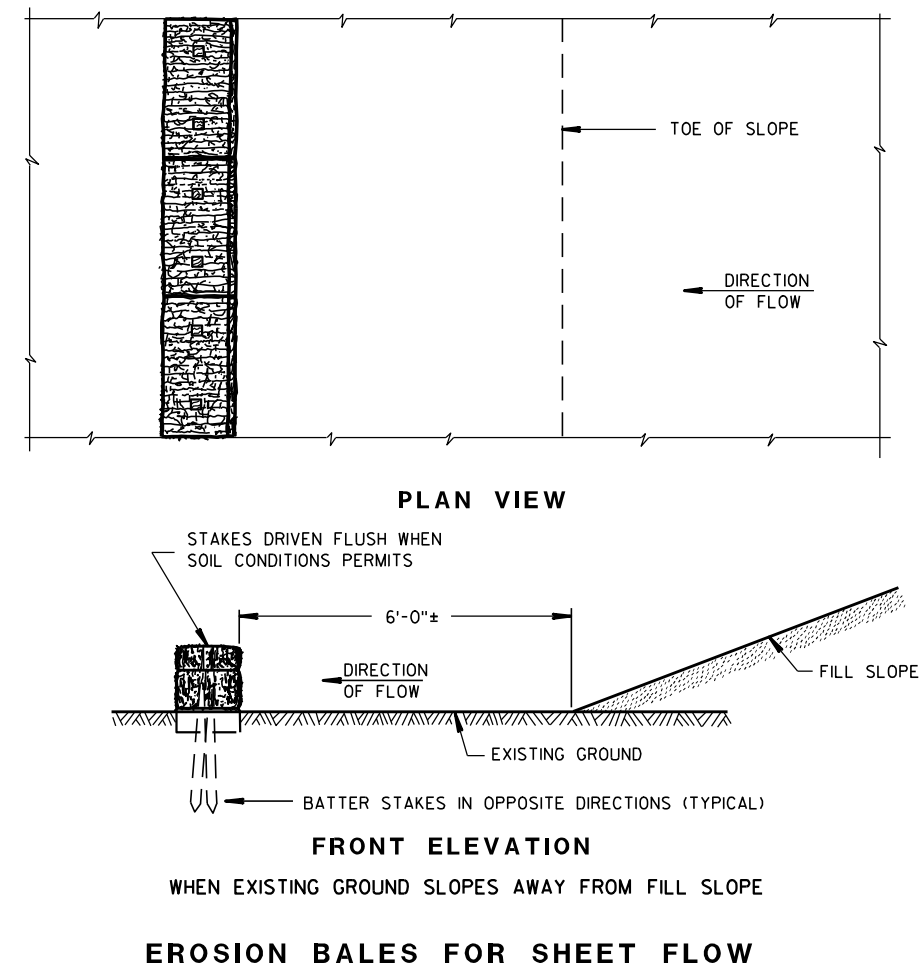
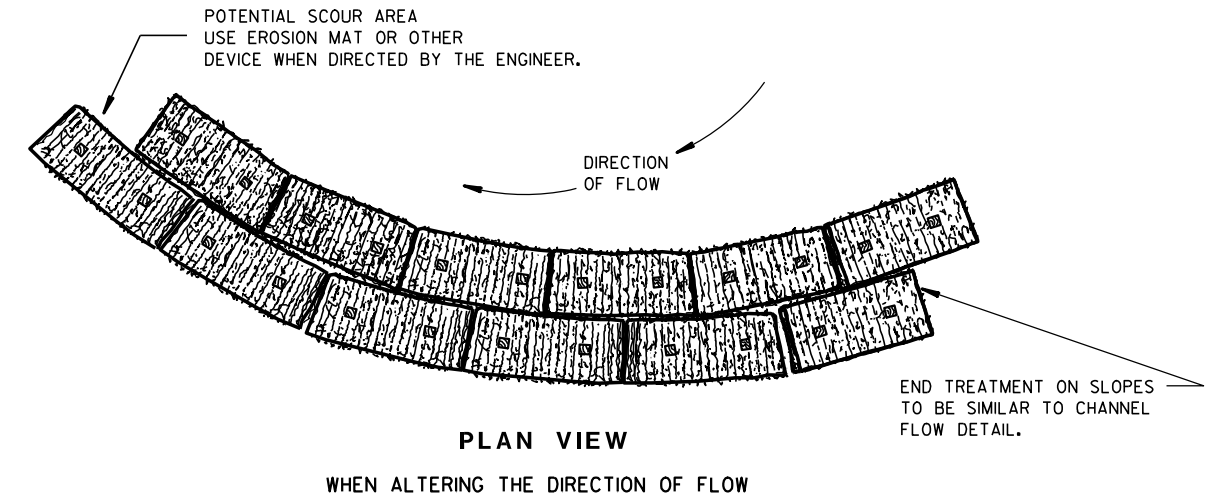
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C19-03	HMA LONGITUDINAL JOINTS
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)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



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

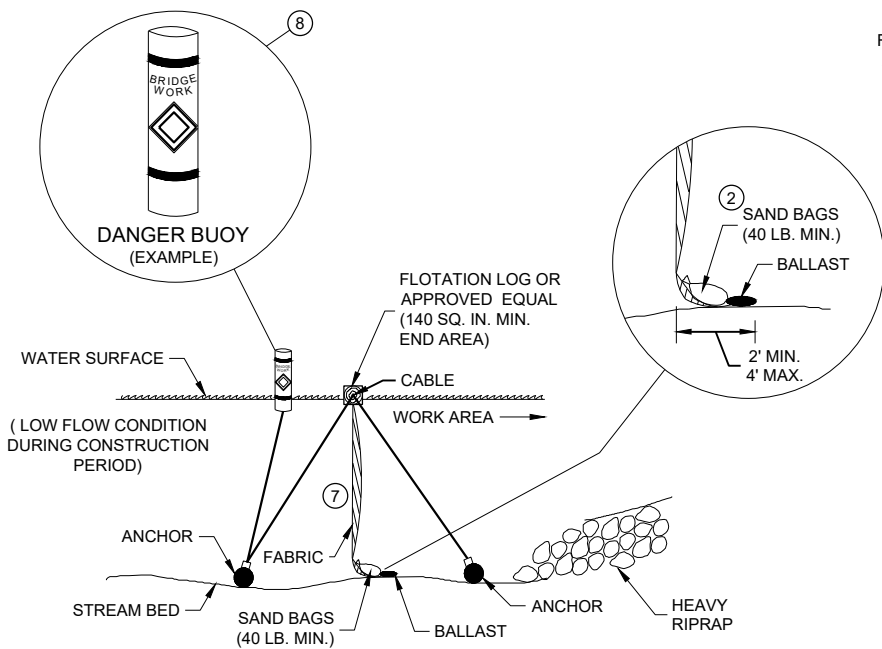
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

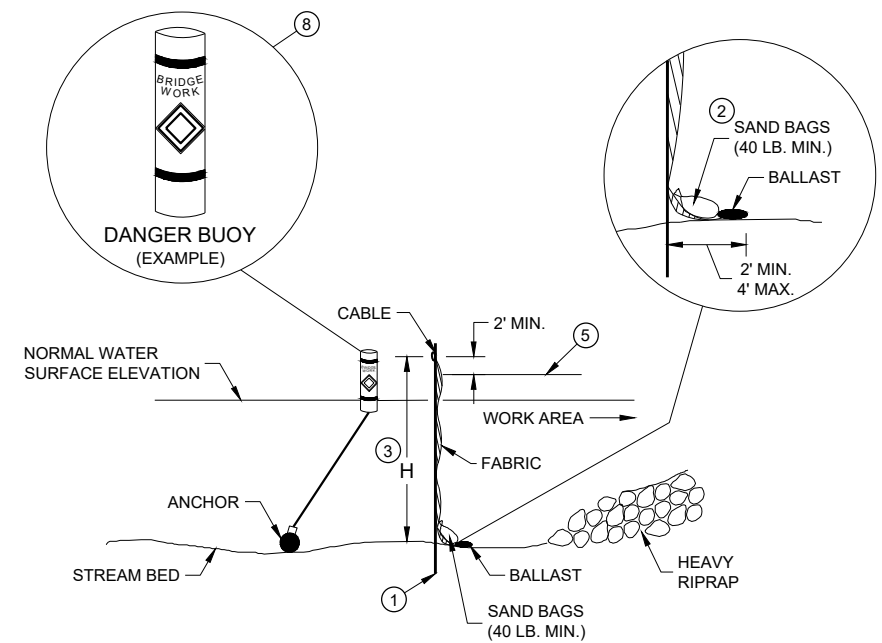
FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



SECTION B - B

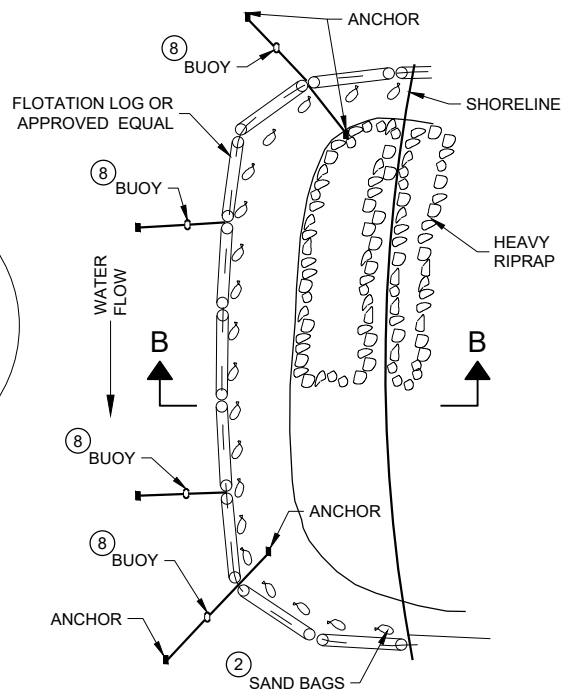
TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



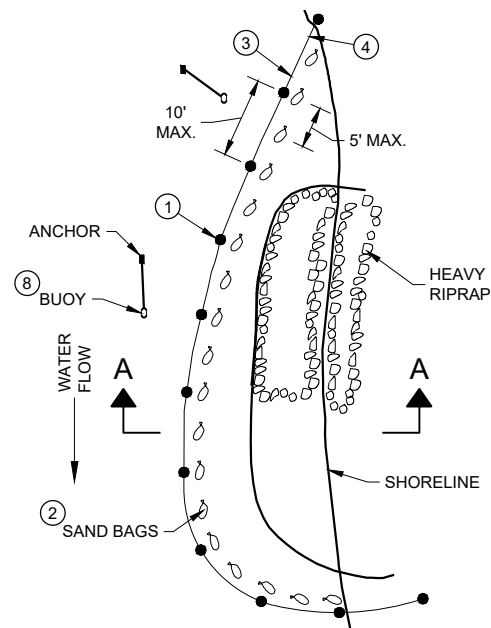
SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS



PLAN VIEW



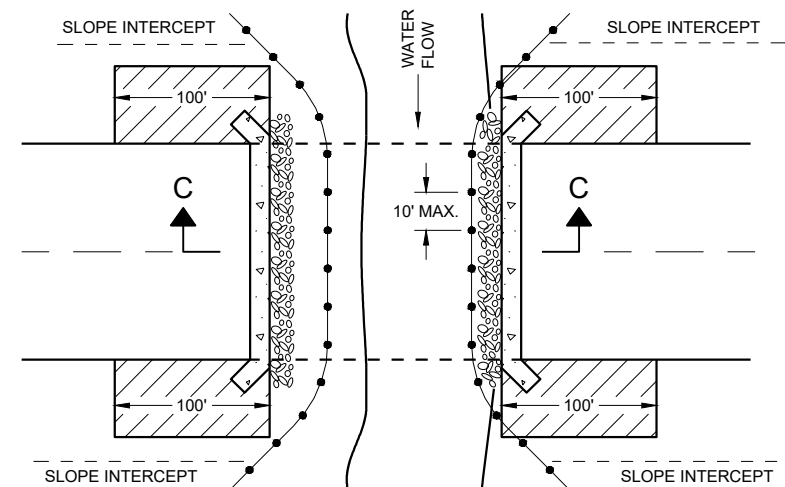
PLAN VIEW

GENERAL NOTES

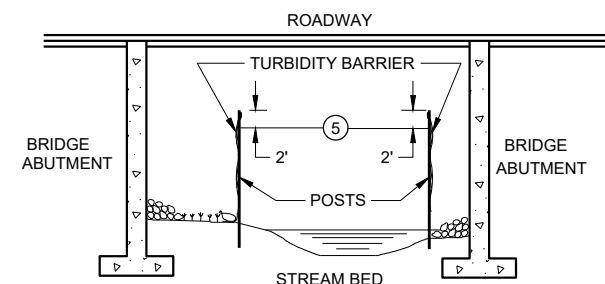
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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



PLAN VIEW



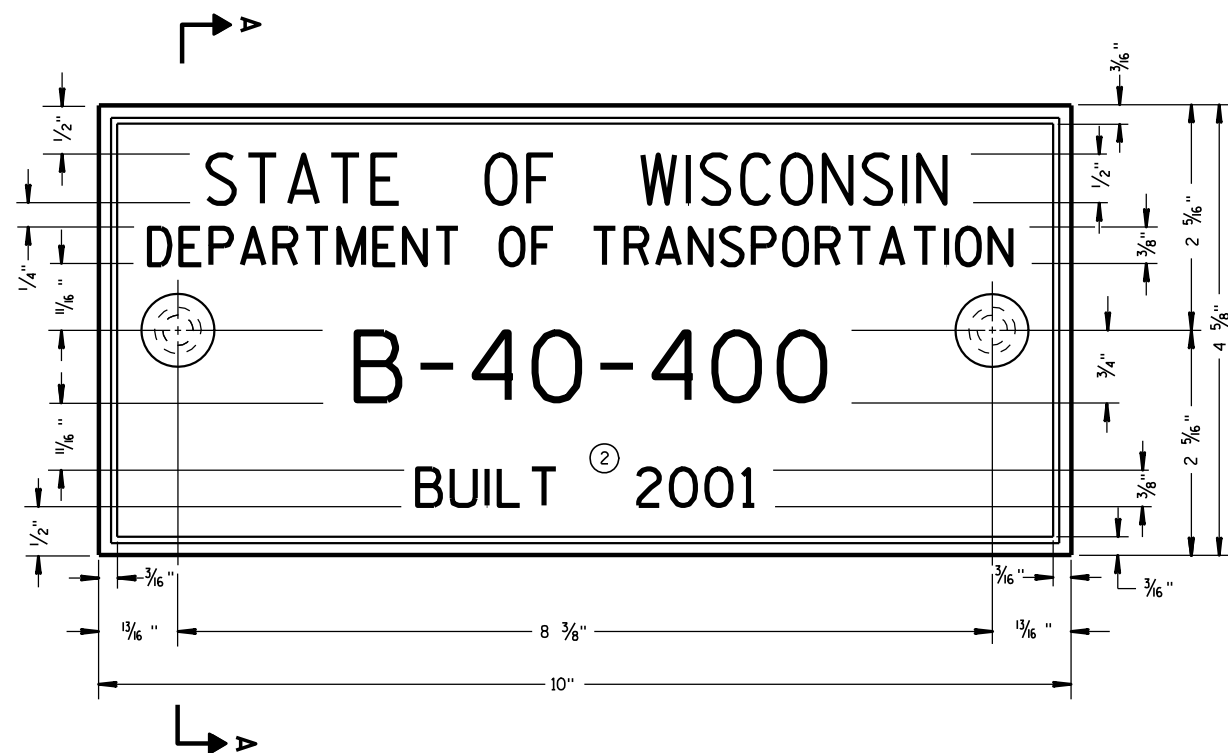
SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES

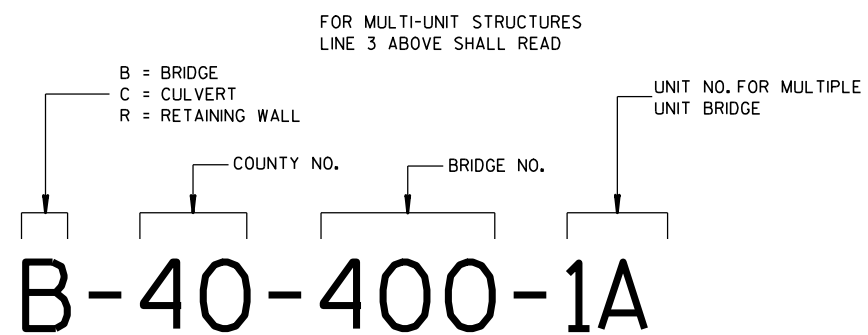
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



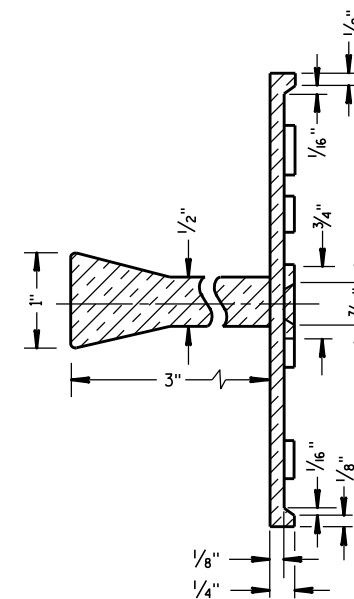
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

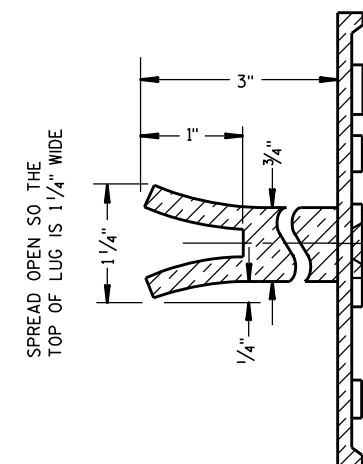
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

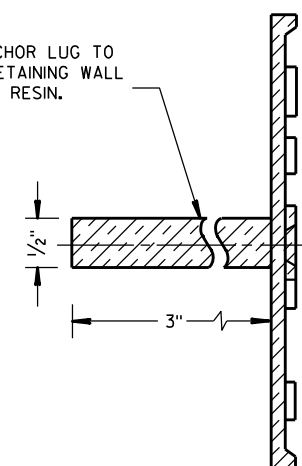


SECTION A-A



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

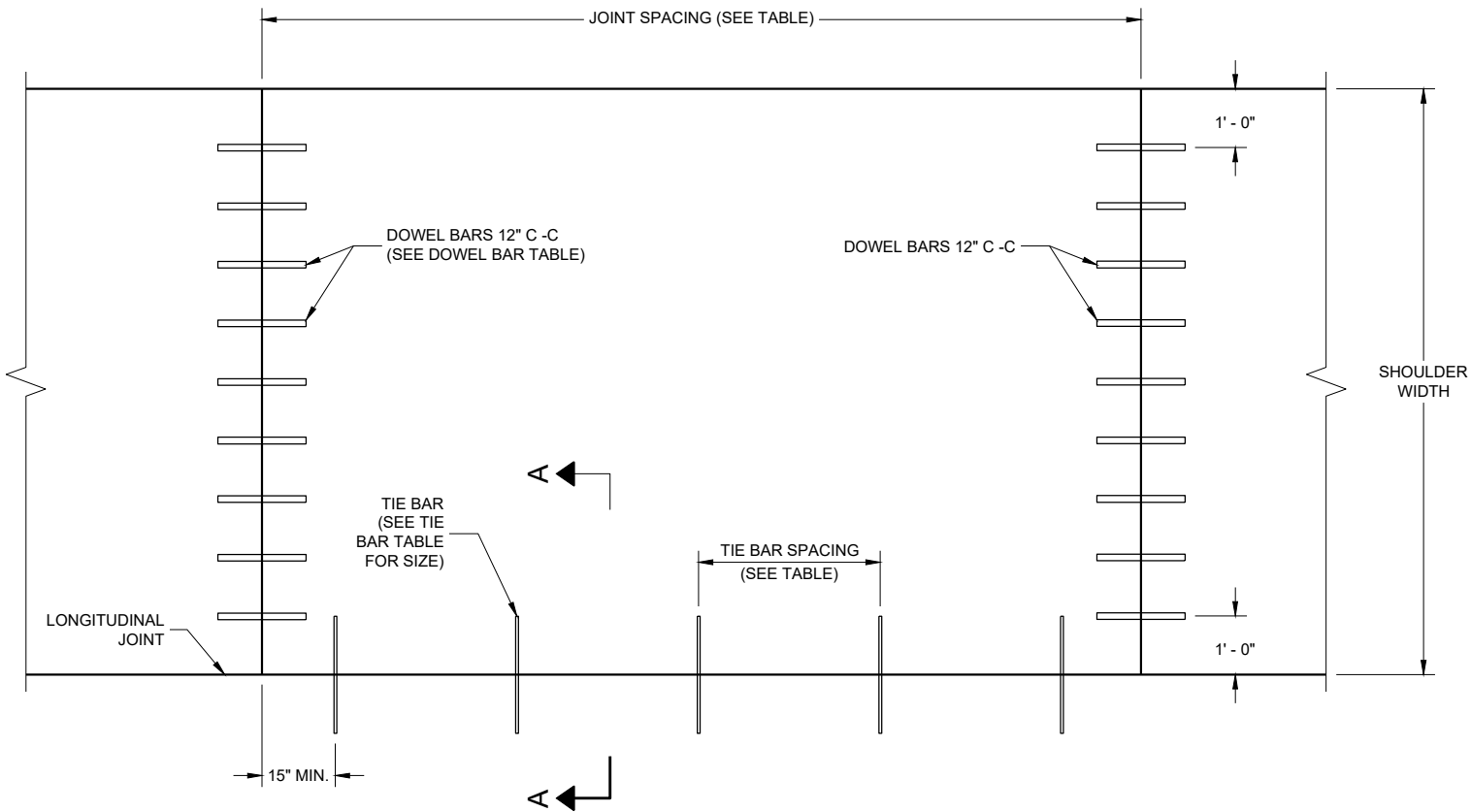
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10
DATE

FHWA

/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



PLAN VIEW
CONCRETE PAVEMENT SHOULDER

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
<10 ½"	NO. 4	30"	36"
>10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BATS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES).

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12"
7", 7 ½"	1"	14"
8" & ABOVE	1 ¼"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

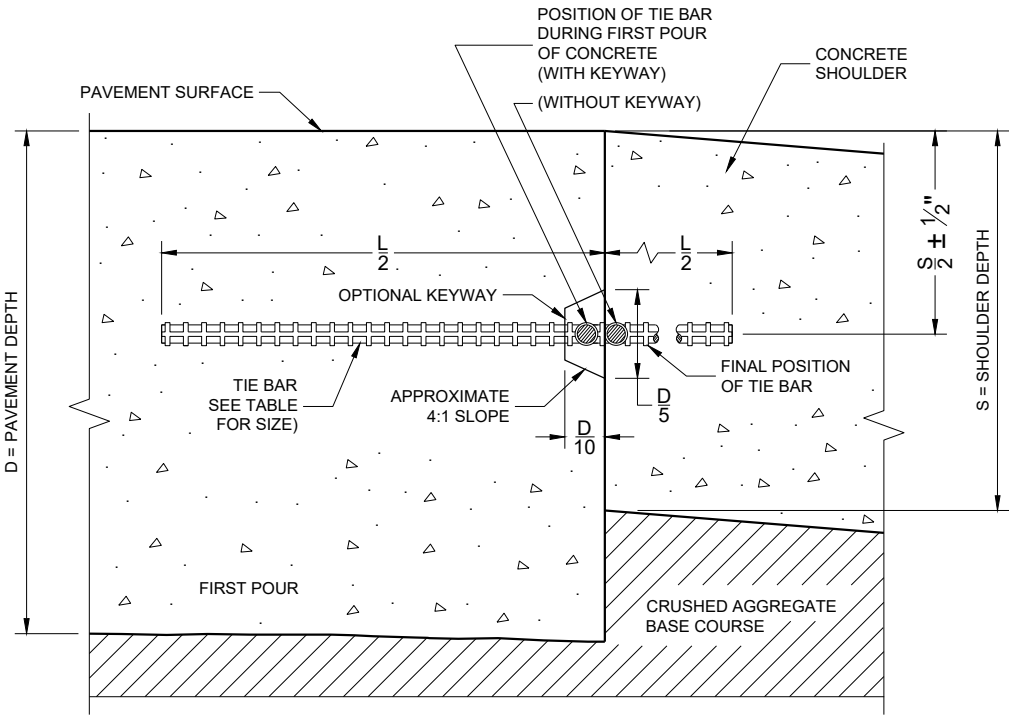
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

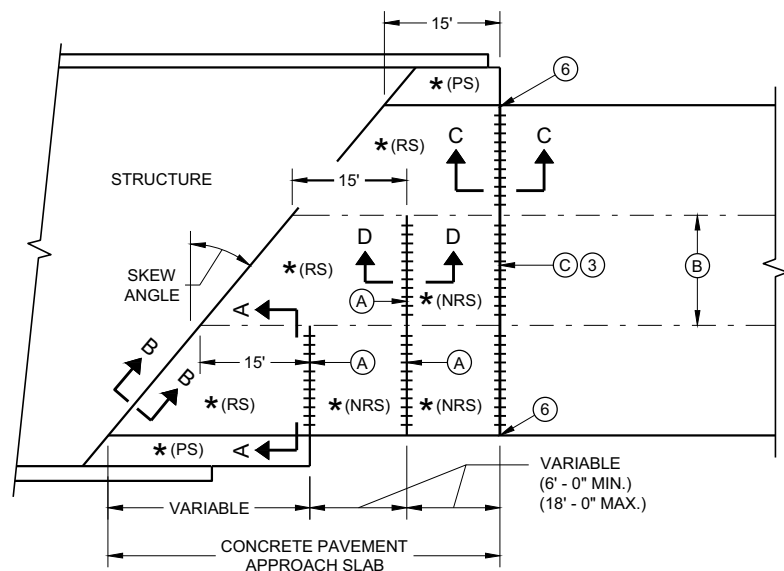


SECTION A - A
LONGITUDINAL CONSTRUCTION JOINT

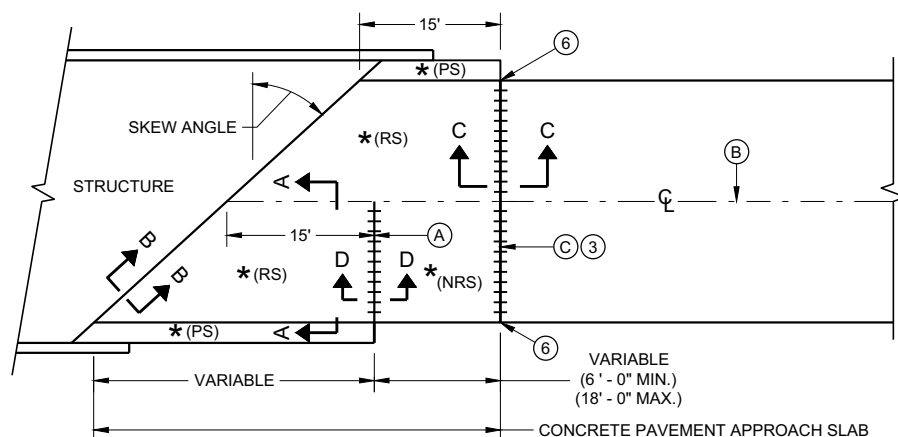
CONCRETE PAVEMENT
SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

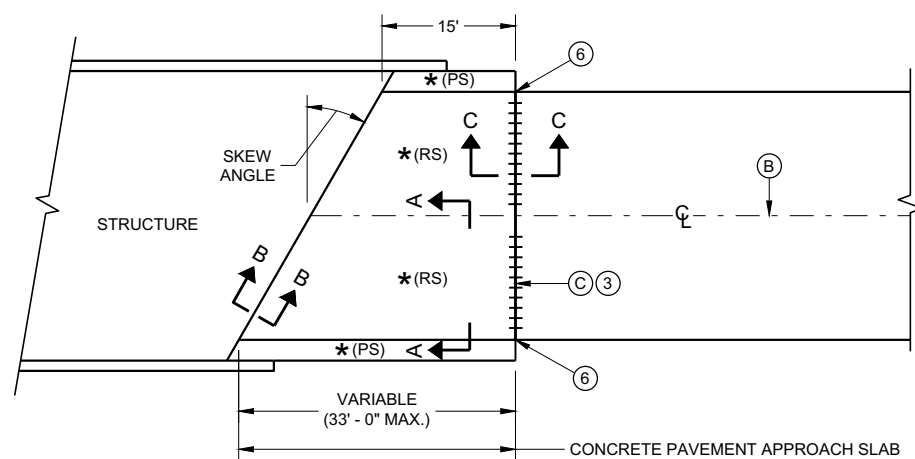
APPROVED
November 2022
DATE /S/ Peter Kemp
PAVEMENT SUPERVISOR
FHWA



**SKewed APPROACH
(PAVEMENT MORE THAN TWO LANES)**



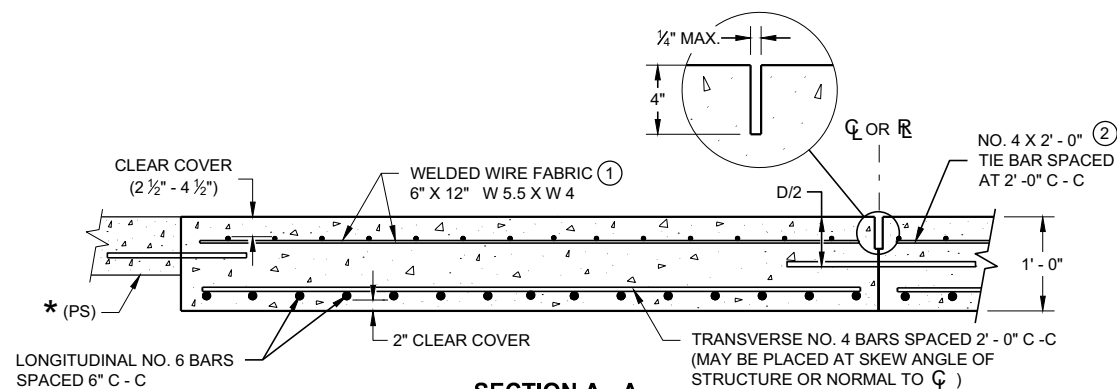
**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**



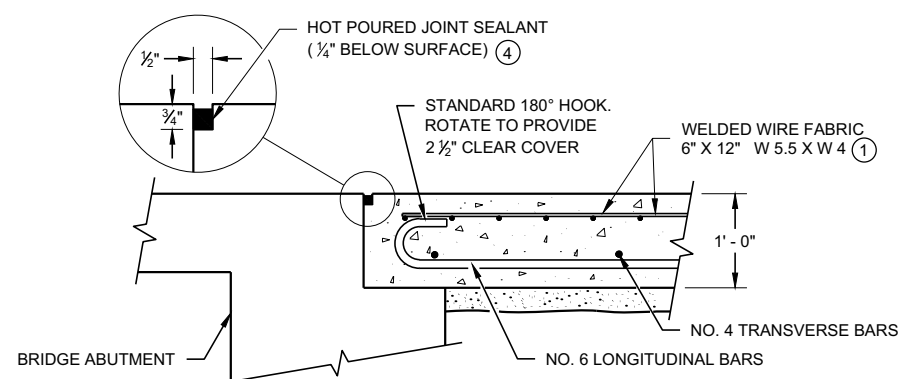
**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')**

APPROACH SLAB AND ADJACENT PAVEMENT

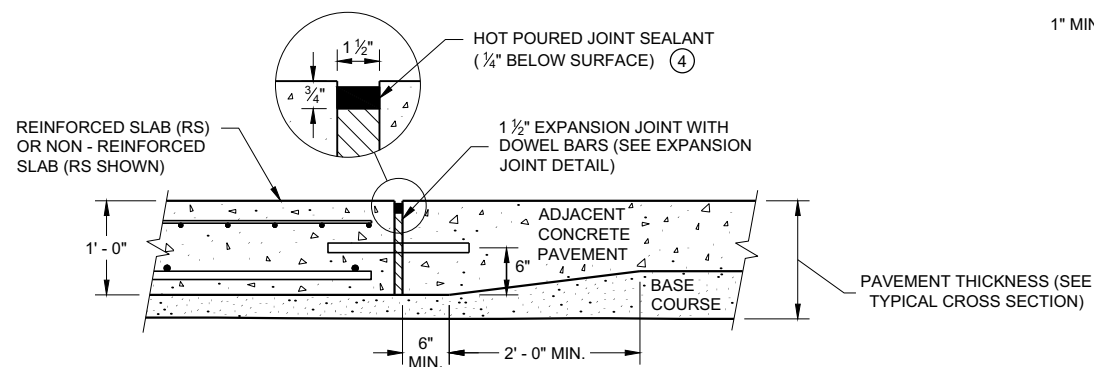
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



**SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT**



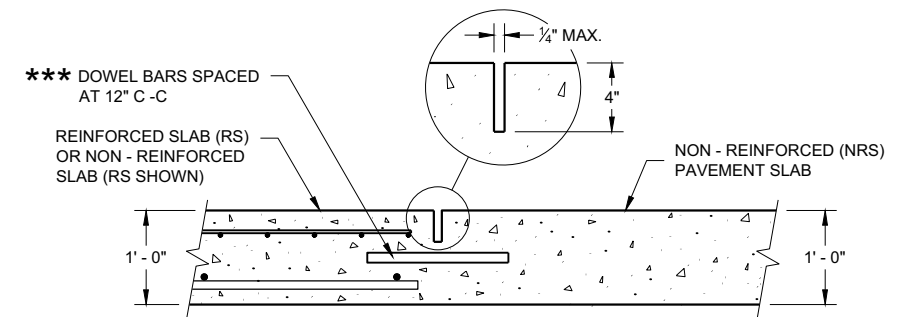
**SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**

GENERAL NOTES

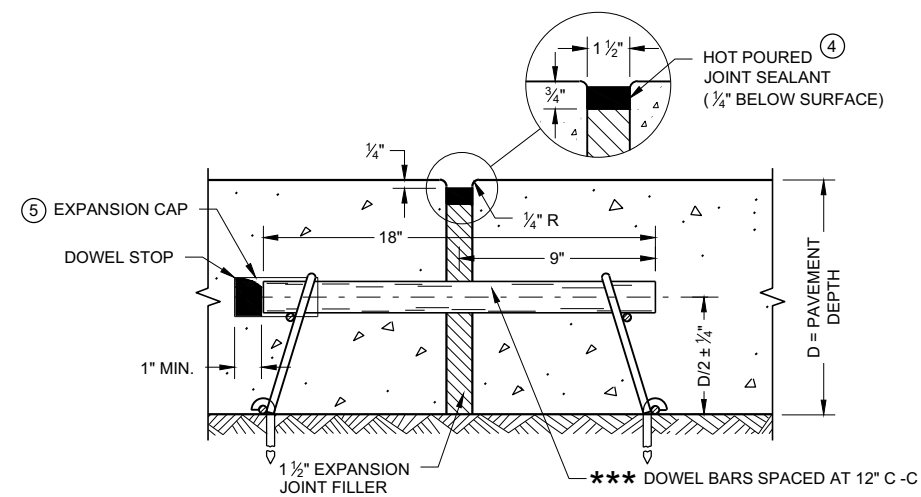
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
- ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- (A) STANDARD CONTRACTION JOINT NORMAL TO $\mathcal{C}$ OR $\mathcal{R}$.
- (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
- (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO $\mathcal{C}$ OR $\mathcal{R}$.



**SECTION D - D
CONTRACTION JOINT**



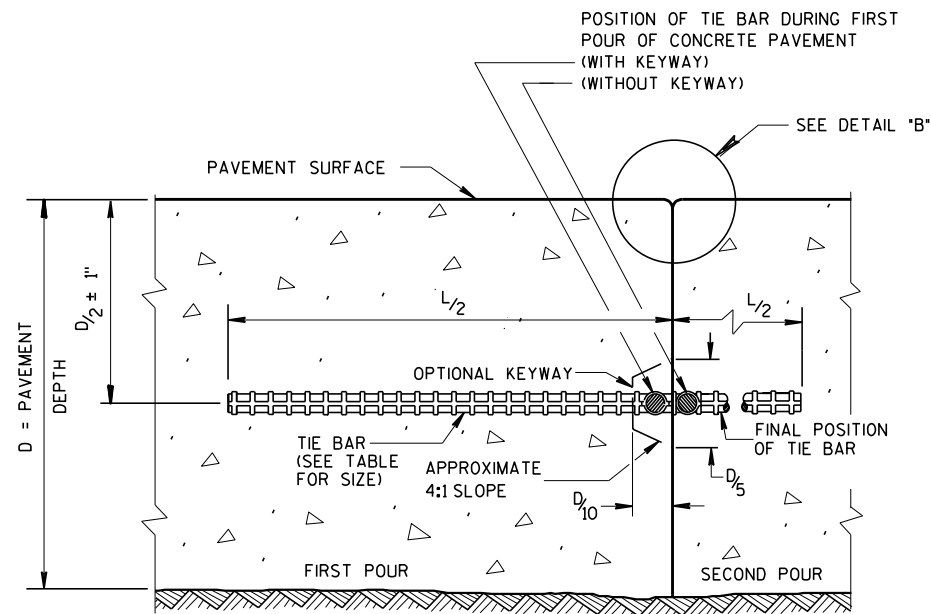
EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

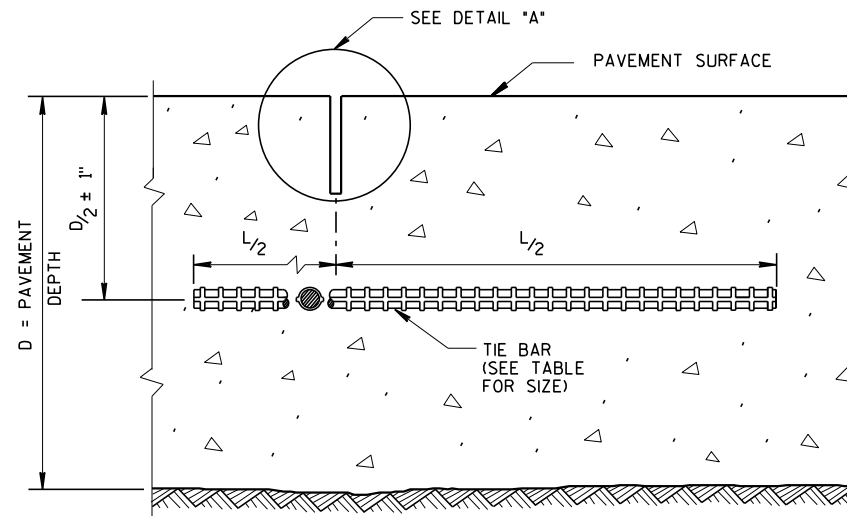
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR

FHWA



CONSTRUCTION JOINT



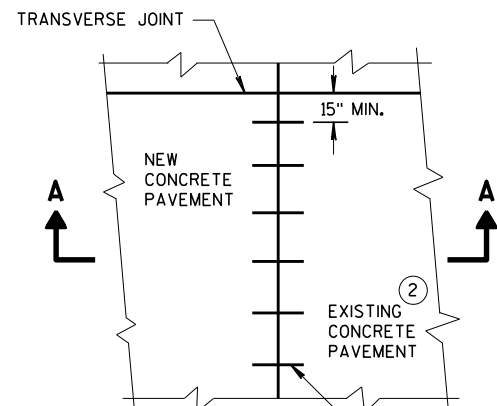
SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

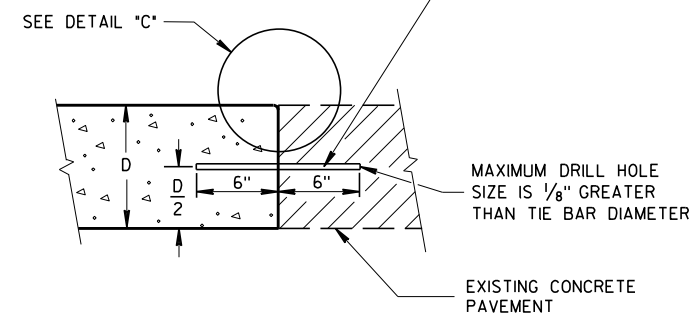
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

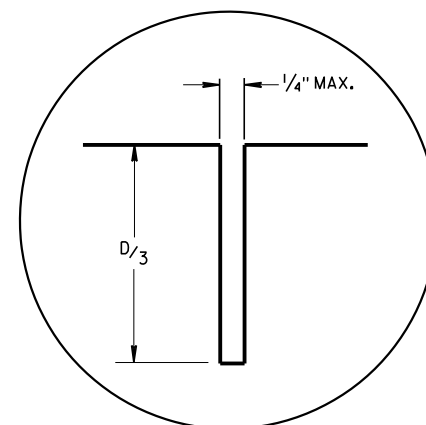


PLAN VIEW

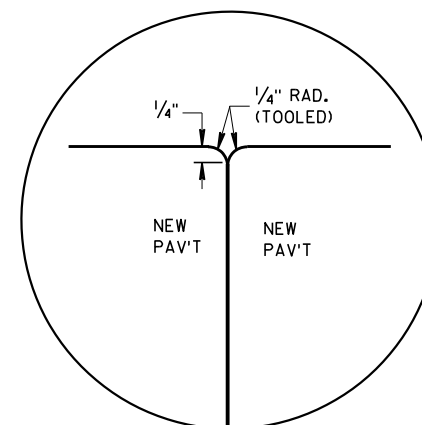
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



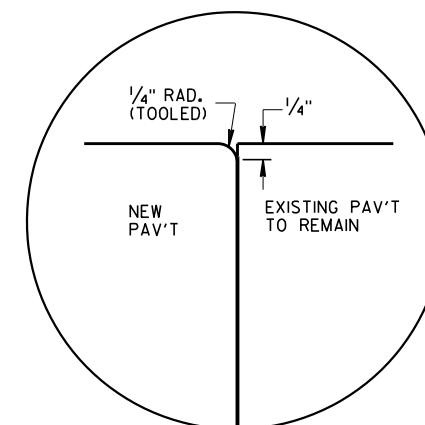
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



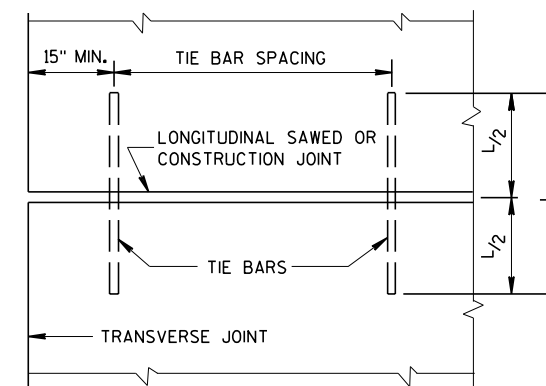
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

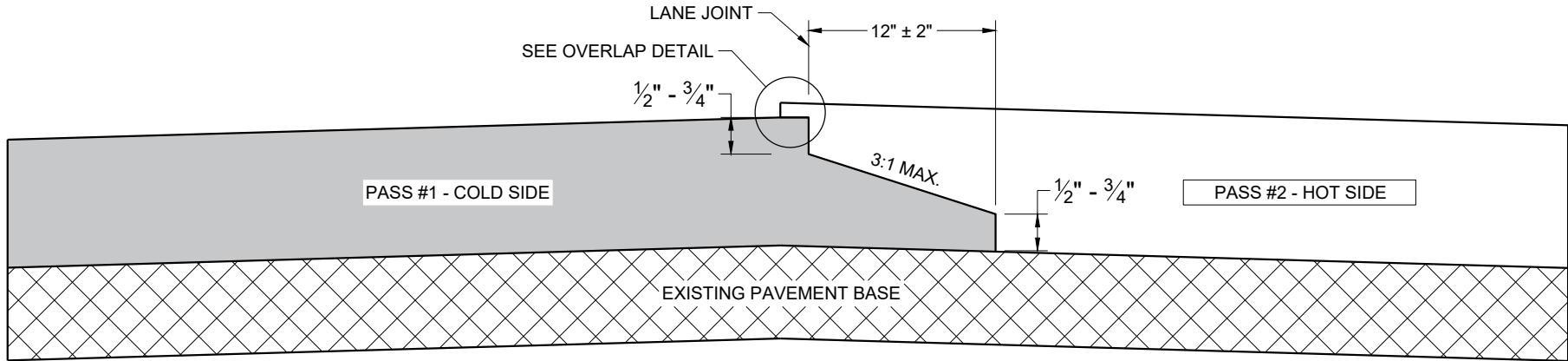
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

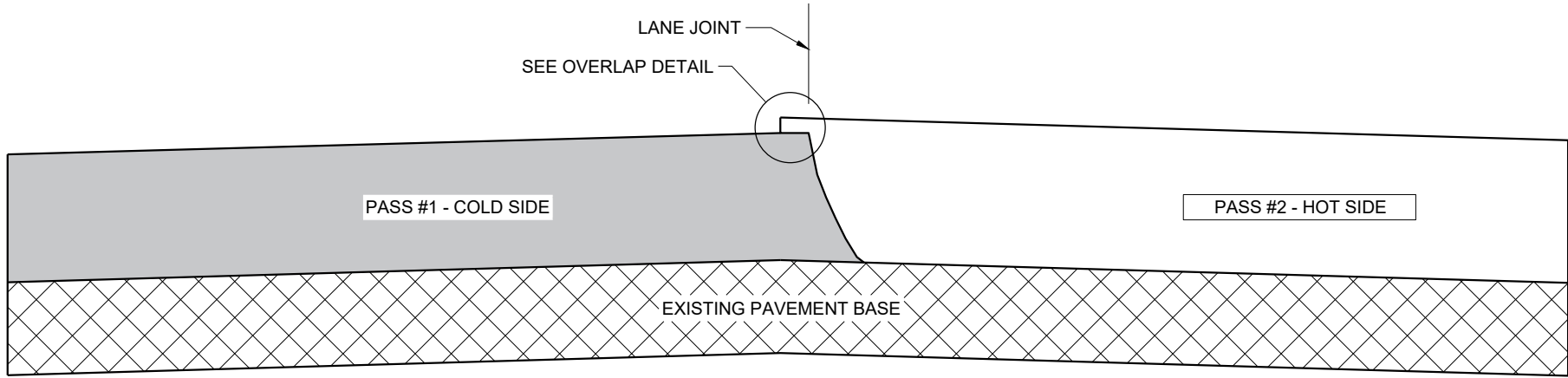


PLAN VIEW
SHOWING LOCATION OF TIE BARS

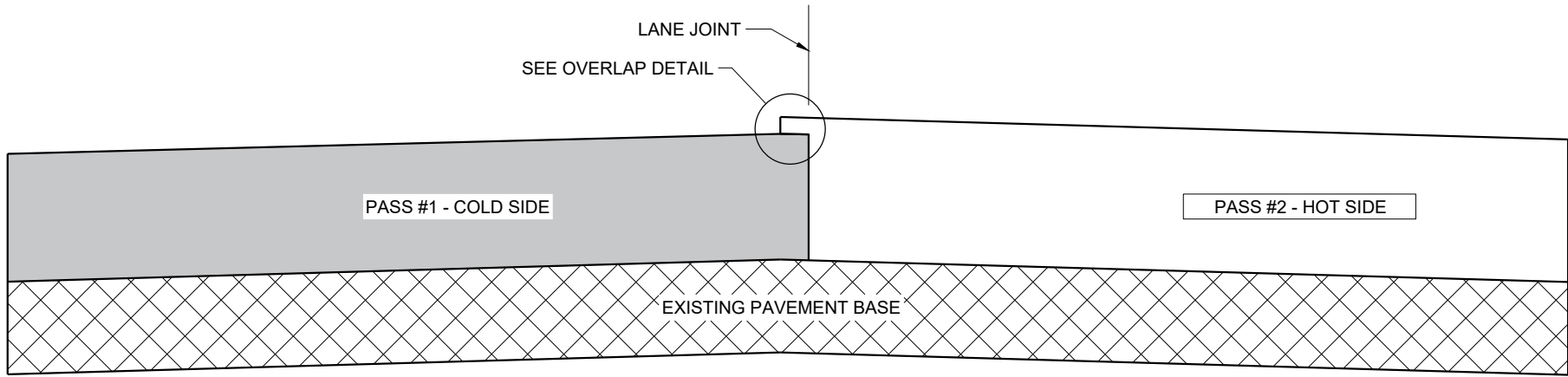
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/S/ Peter Kemp, P.E. PAVEMENT SUPERVISOR
FHWA	



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

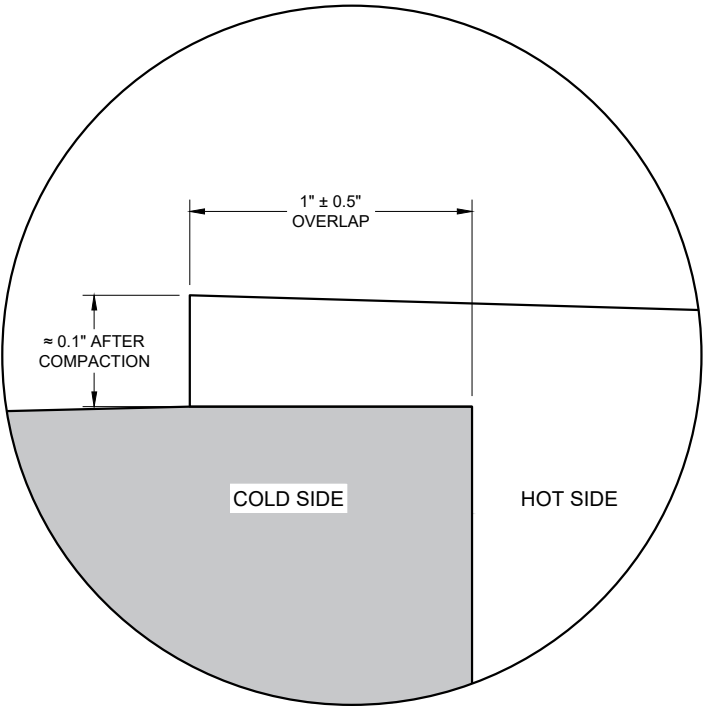
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY $0.1"$ AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO $2"$ FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



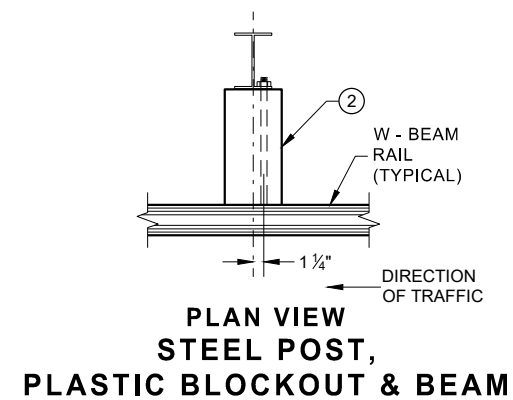
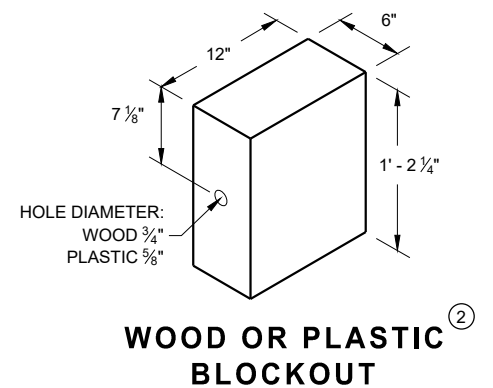
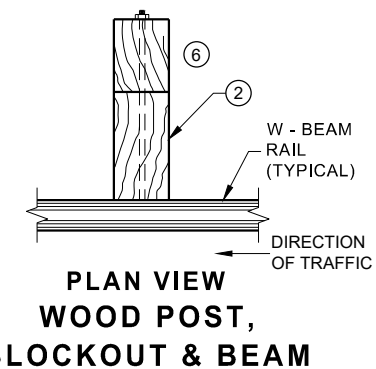
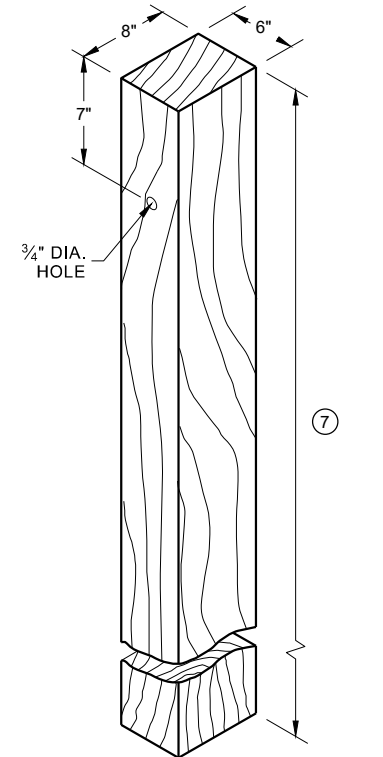
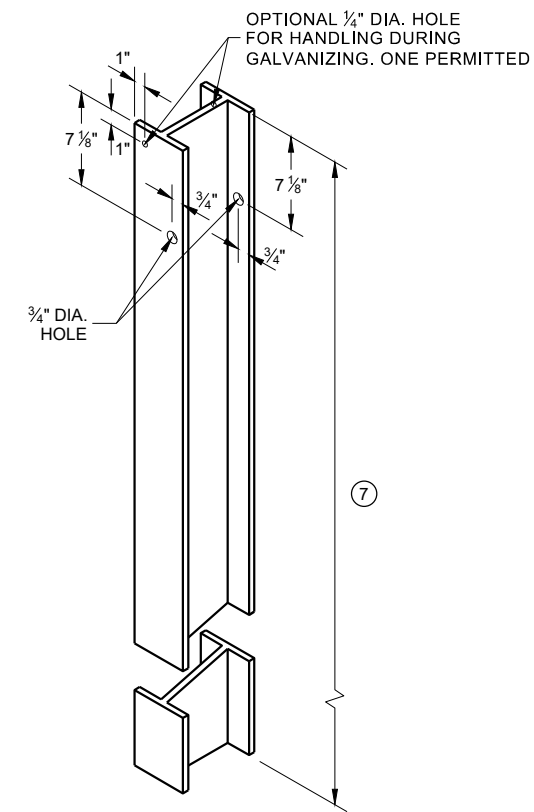
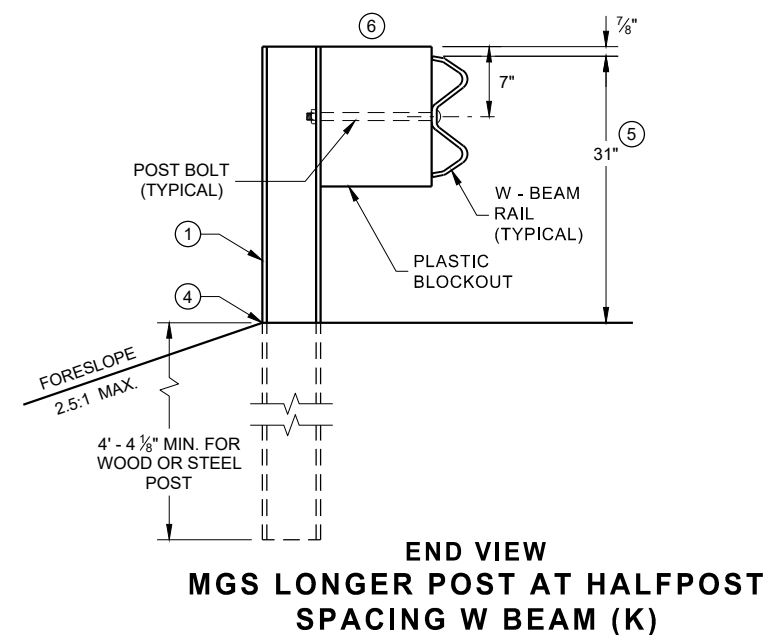
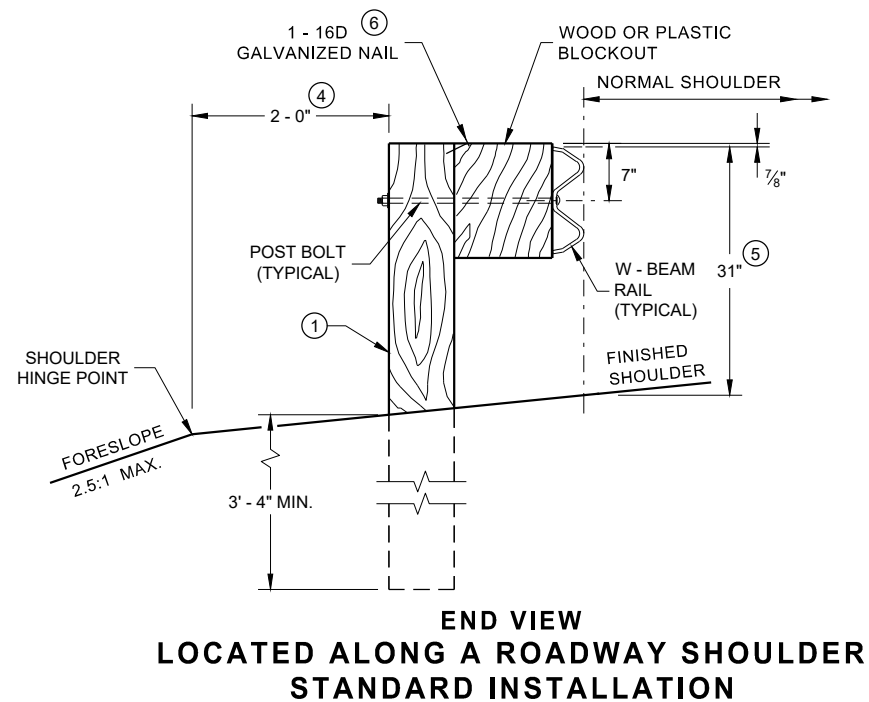
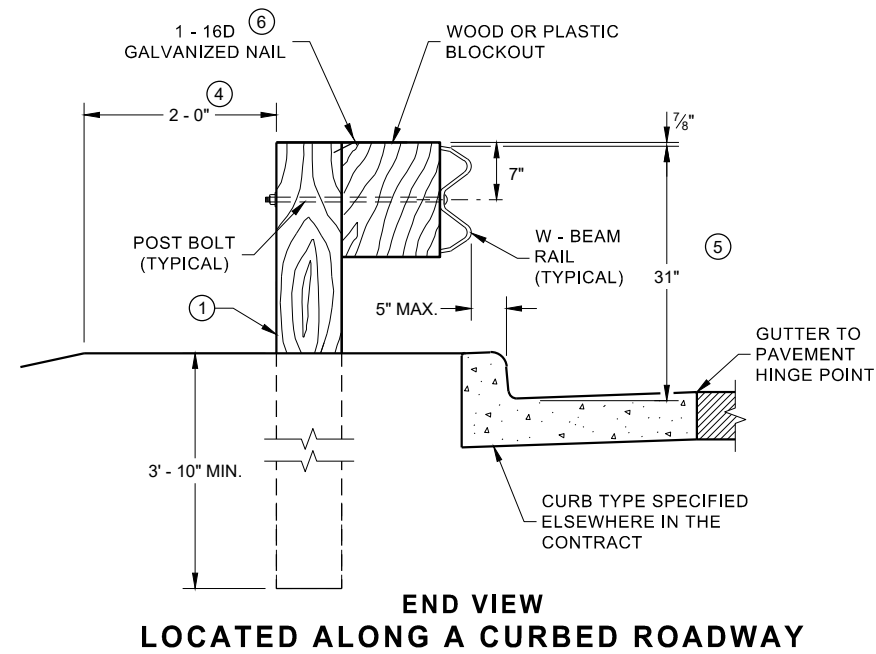
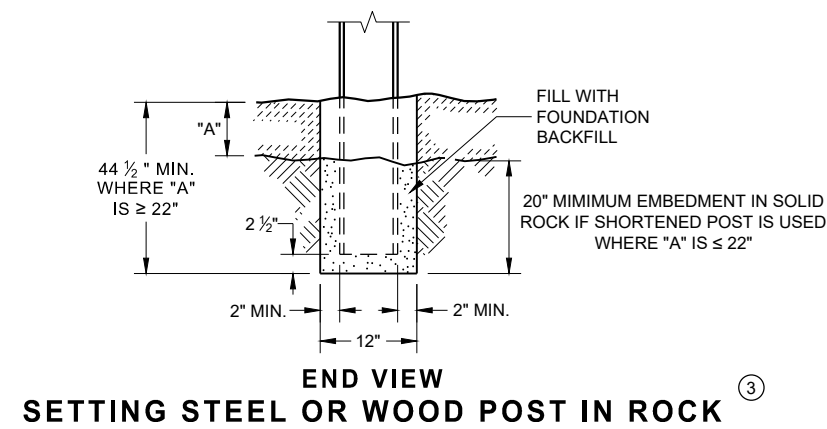
OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

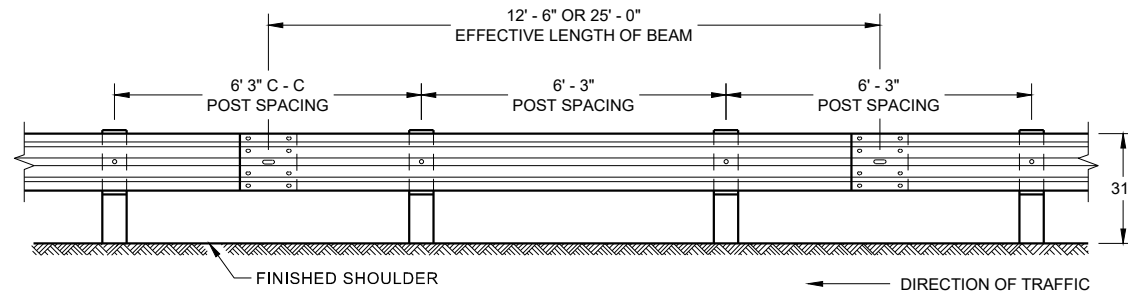
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA

- 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 THE 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".

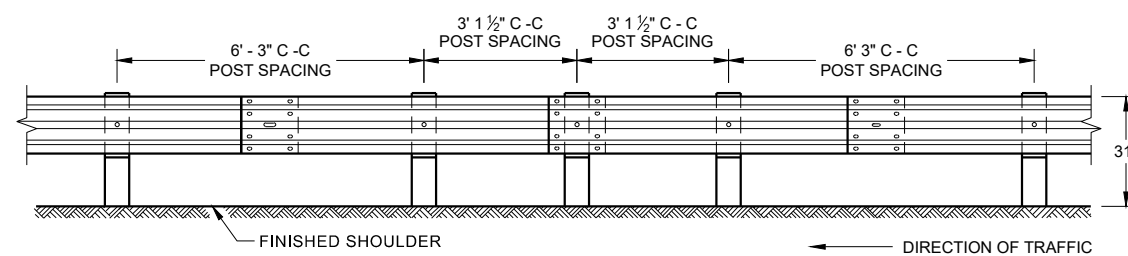


**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

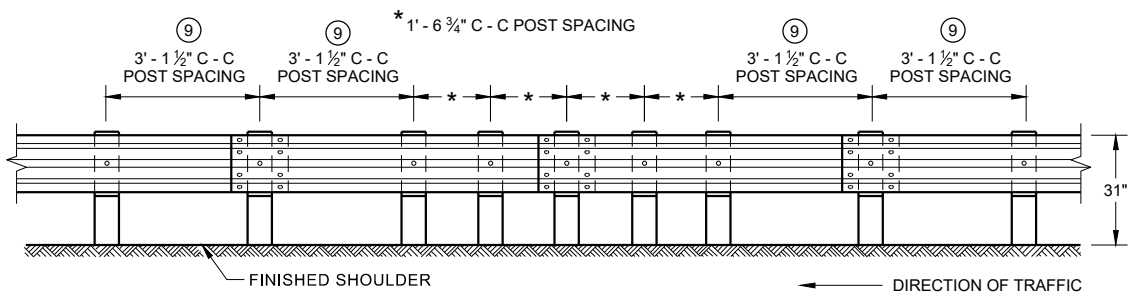
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



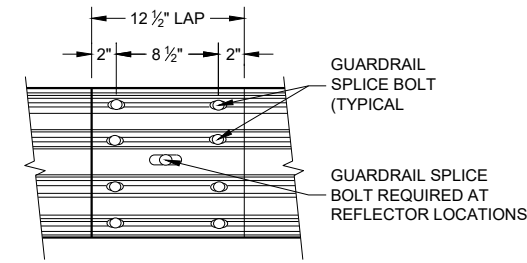
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



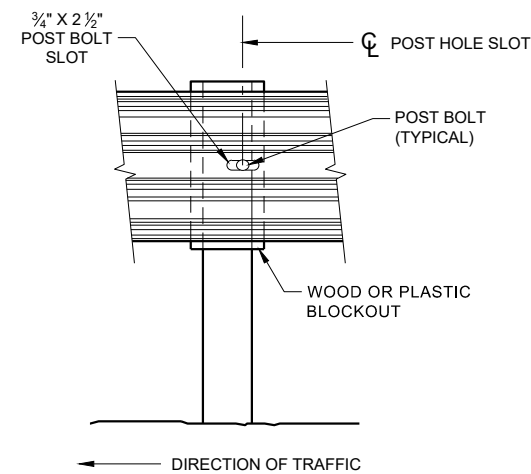
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



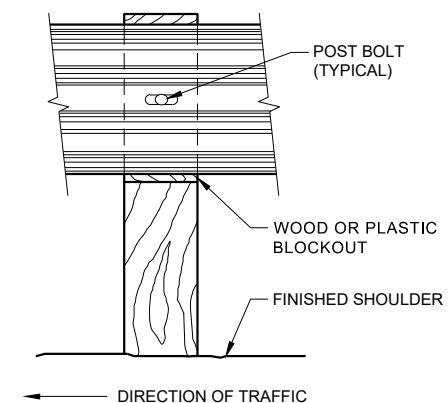
**FRONT VIEW
QUARTER POST SPACING (QS)**



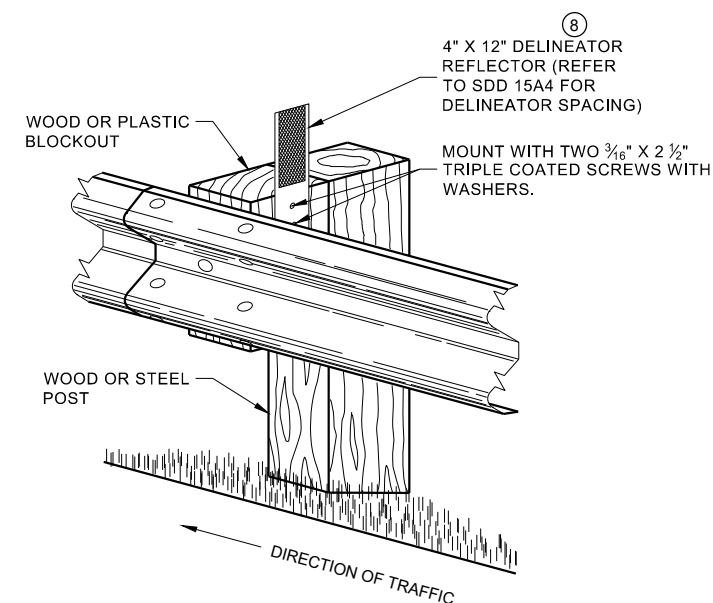
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



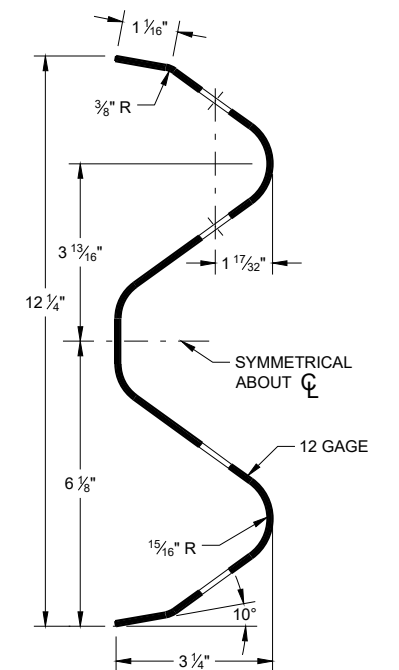
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

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



POST BOLT TABLE

Technical drawing of a circular object with concentric circles. The outermost circle has a diameter dimension of $1 \frac{5}{16}''$. Inside it is a smaller circle with a diameter dimension of $\frac{5}{8}''$. The distance between the top of the inner circle and the top of the outer circle is dimensioned as $\frac{15}{16}''$. The drawing includes a center crosshair on the inner circle.

ALTERNATE BOLT HEAD



PLAN VIEW
BEAM LAPPING DETAIL

OBSTACLE

DIRECTION OF TRAFFIC

UTILITY CONFLICT WITH POST C POSITION

POST C CANNOT BE INSTALLED

A B C D E

$\frac{1}{2}$ POST SPACING PER DETAIL

$\frac{1}{2}$ POST SPACING PER DETAIL

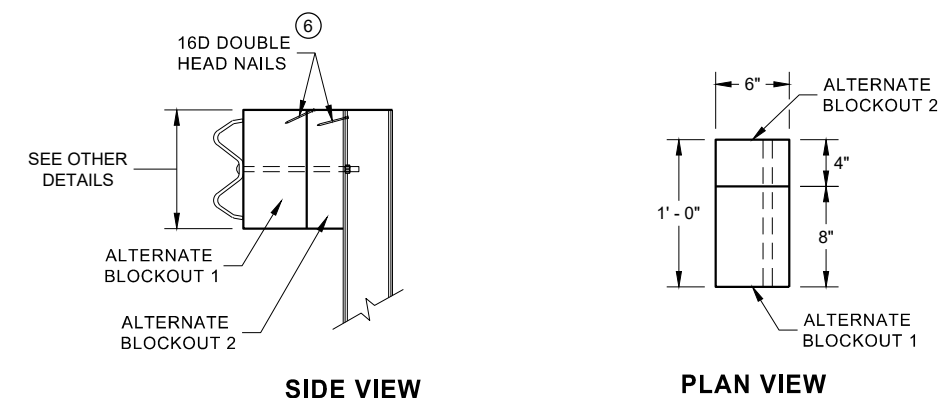
NORMAL POST SPACING

POST SPACING PER DETAIL

POST SPACING PER DETAIL

NORMAL POST SPACING

POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

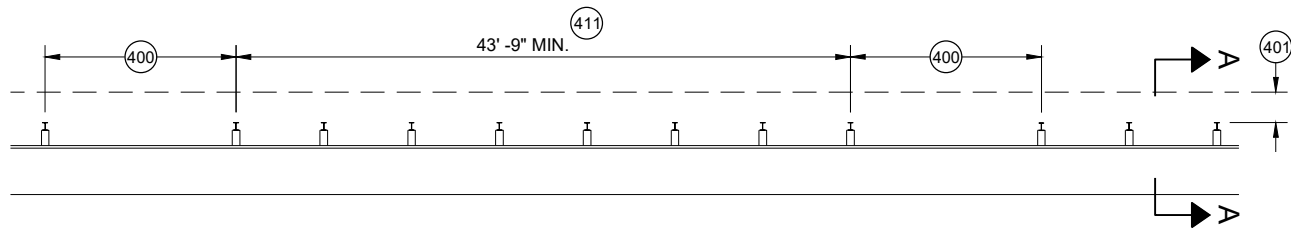


ALTERNATE WOOD BLOCKOUT DETAIL

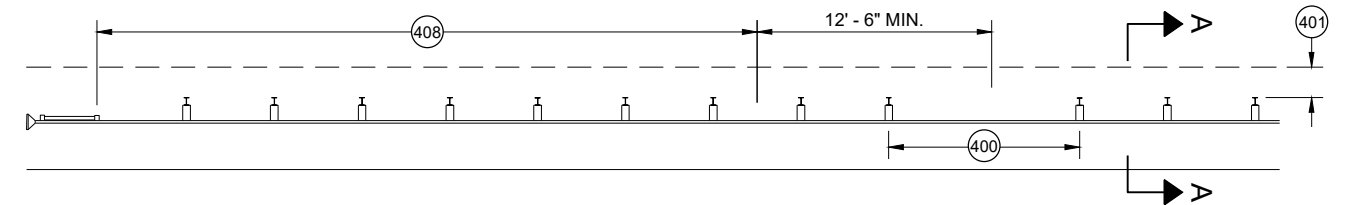
⑥ WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

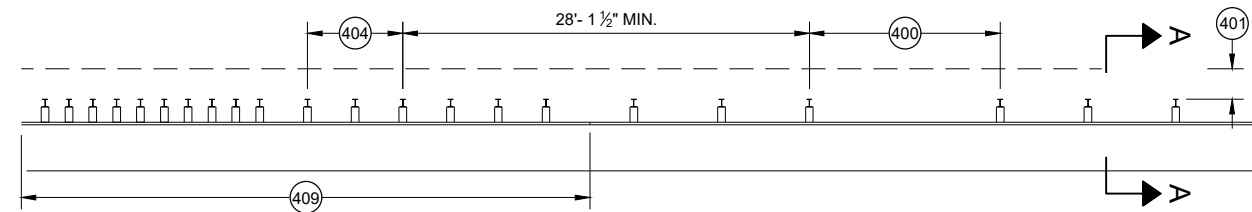
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



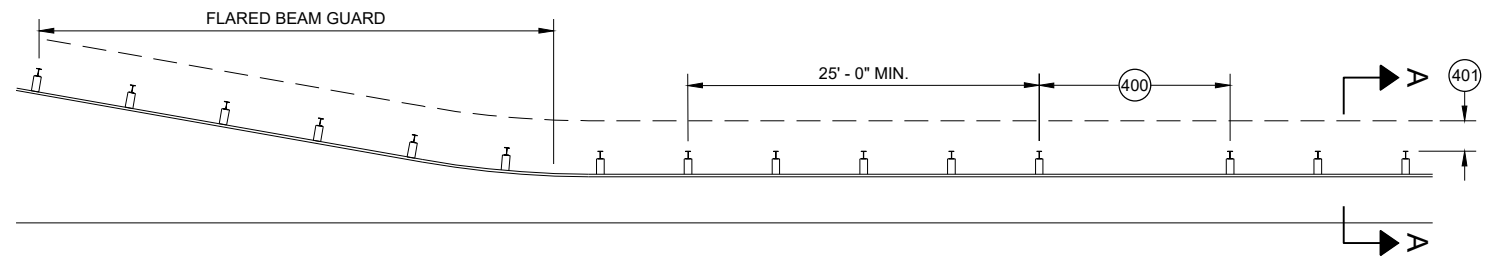
MISSING POST IN MGS GUARDRAIL



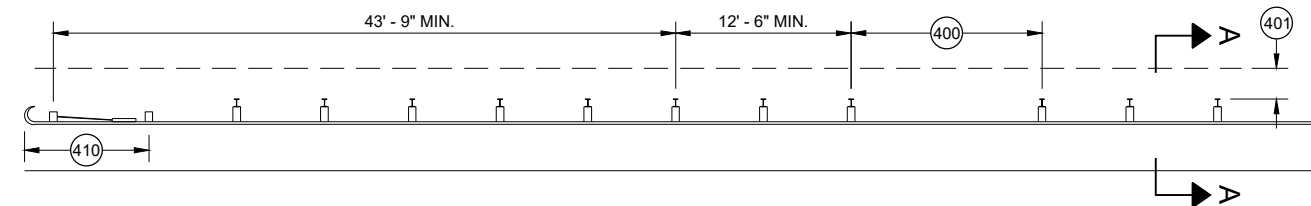
MISSING POST IN MGS GUARDRAIL NEAR EAT



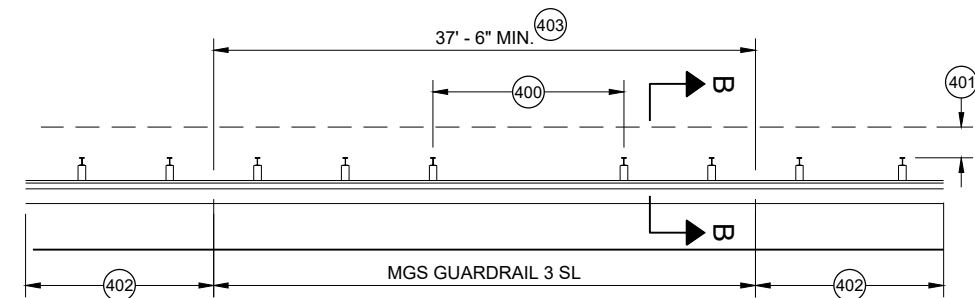
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

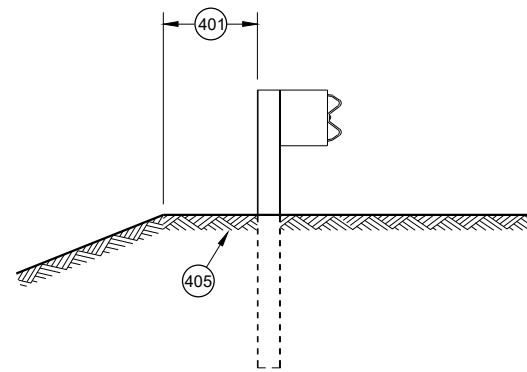


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

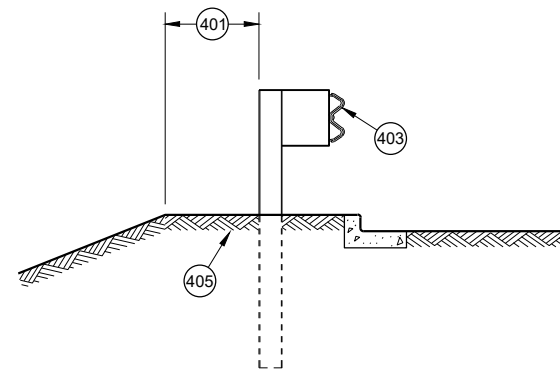


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (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

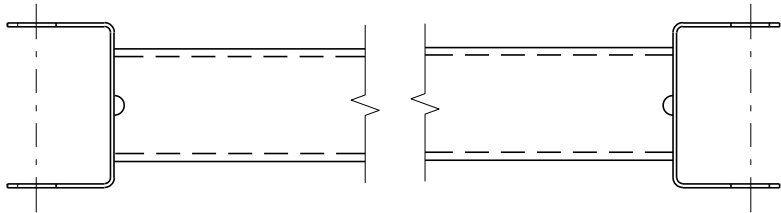
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. 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.

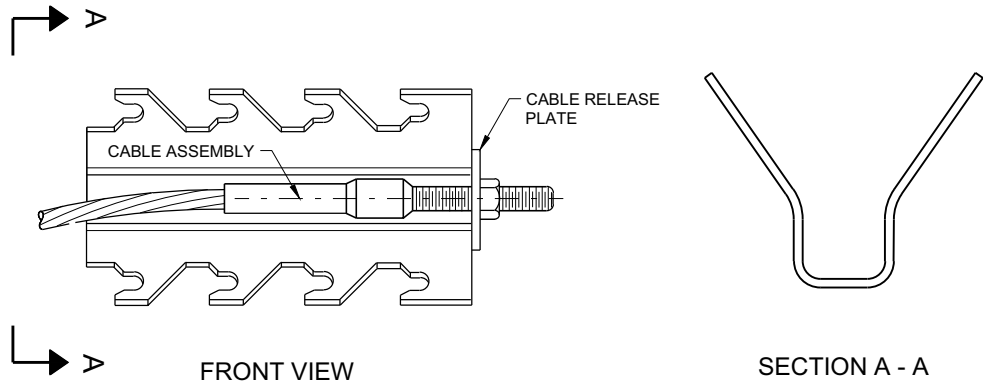


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

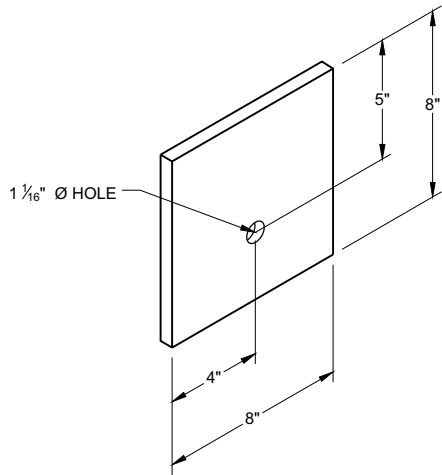


GENERIC GROUND STRUT^⑨ [Ⓔ]

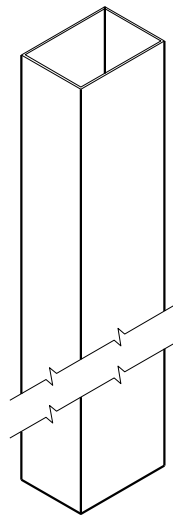
BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED 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



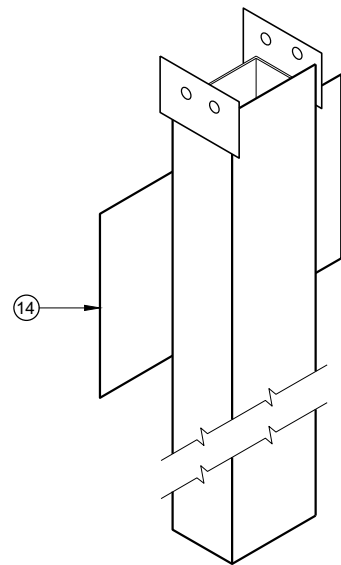
GENERIC ANCHOR CABLE BOX^⑨ [Ⓔ]



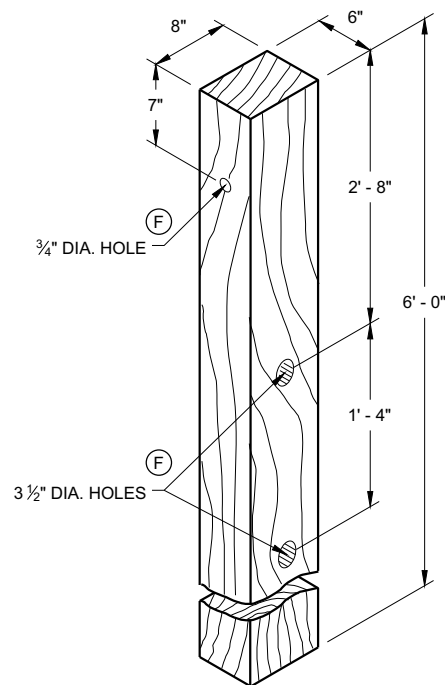
BEARING PLATE^⑥ [Ⓔ]



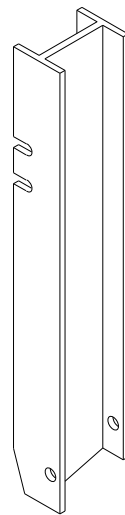
UPPER POST NO. 1 ⁽¹⁾ (E)



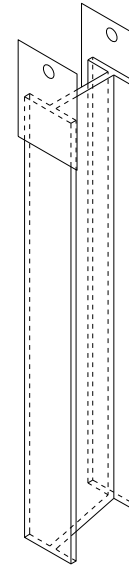
LOWER POST NO. 1 ⁽²⁾ (E)



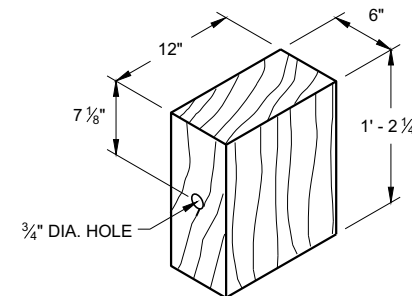
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



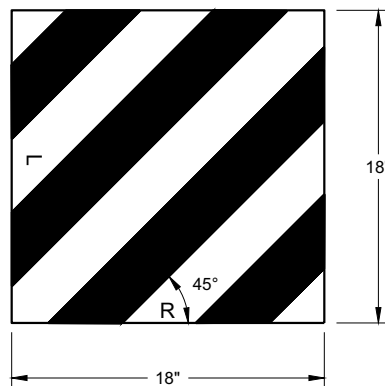
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



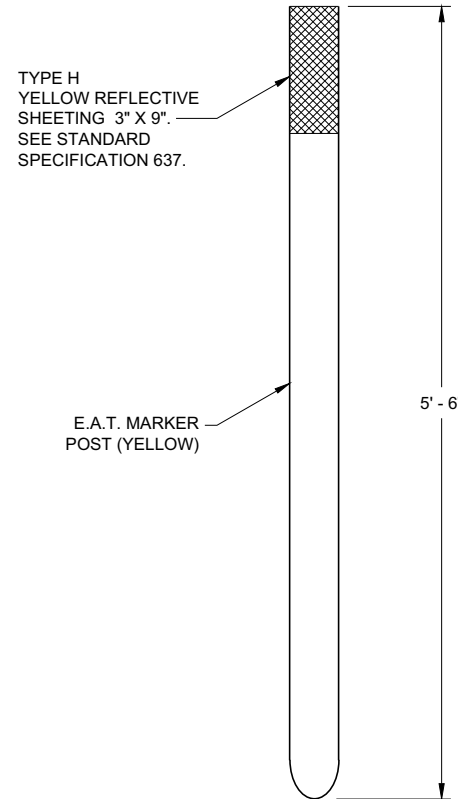
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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



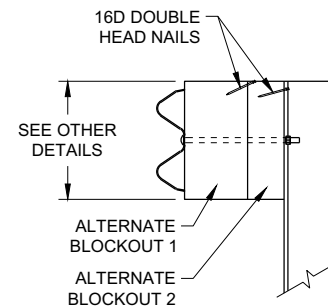
REFLECTIVE SHEETING DETAIL ^(E)



FRONT VIEW

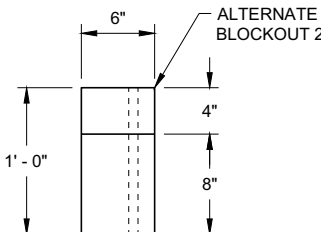
SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

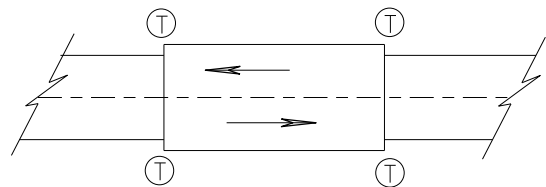


TOP VIEW

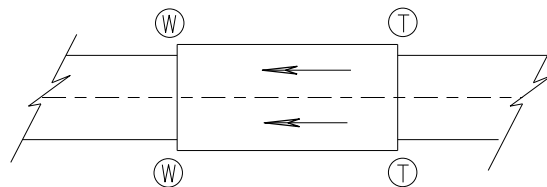
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

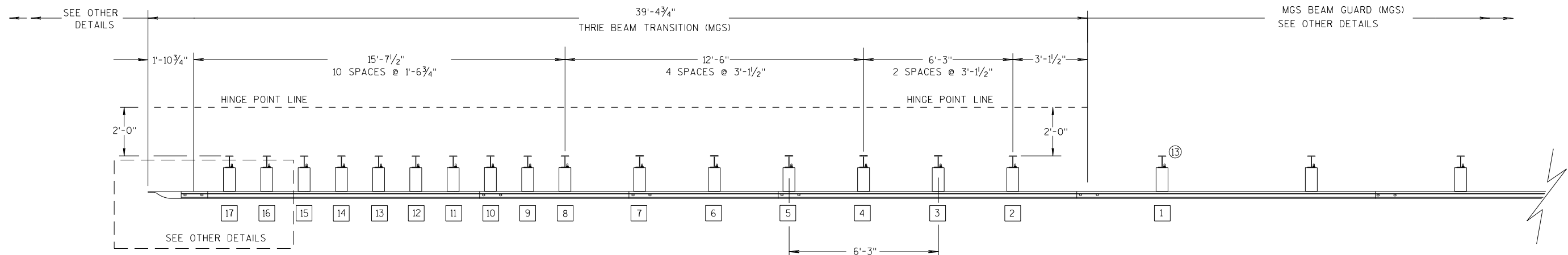
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

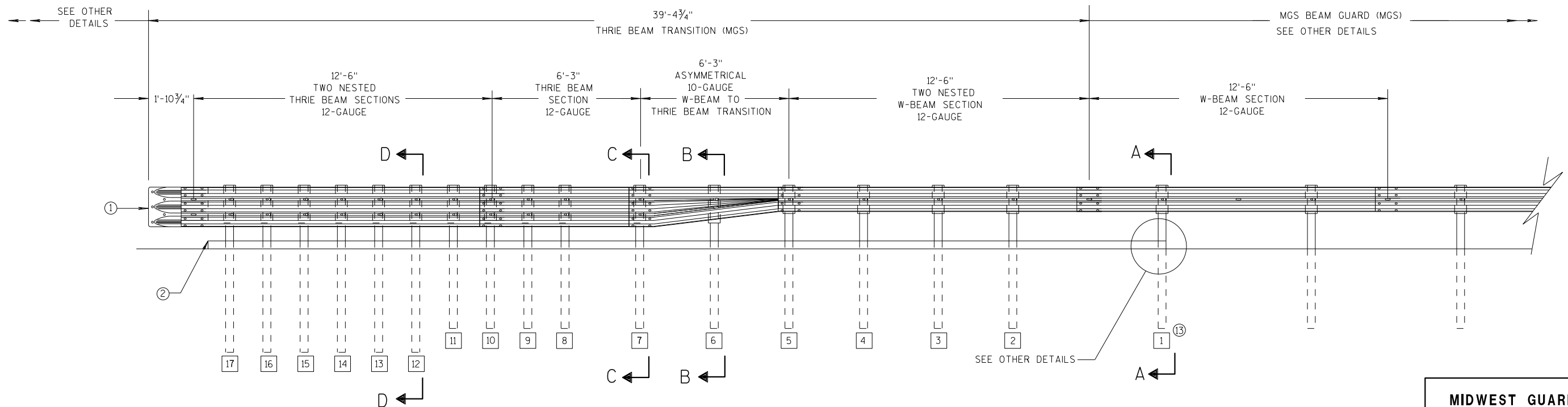
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

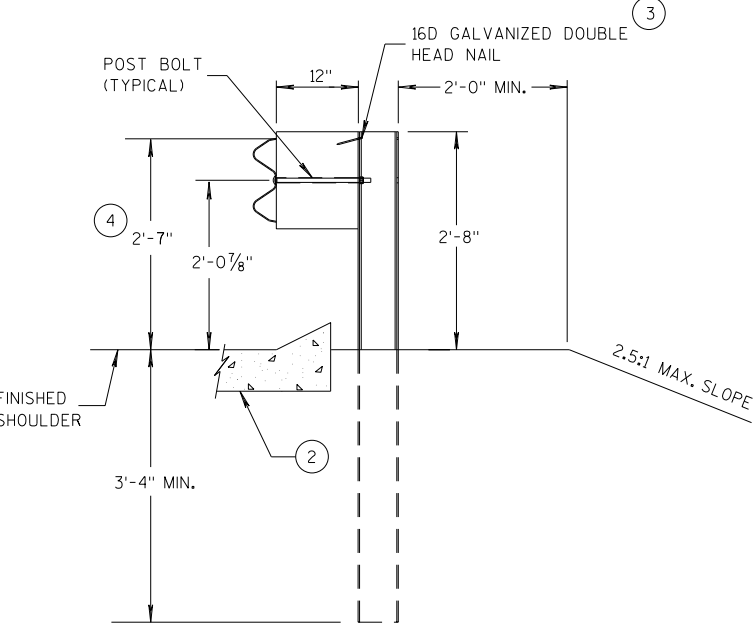
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

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

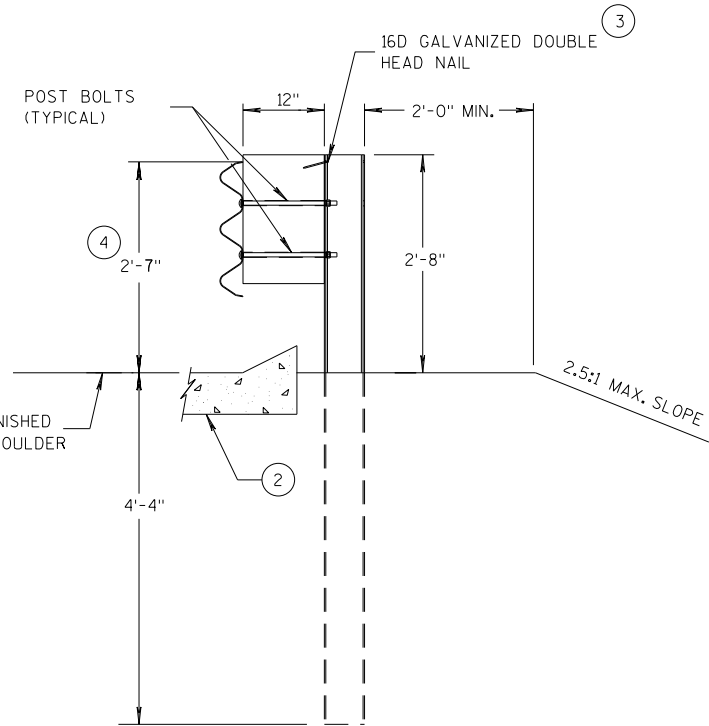
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

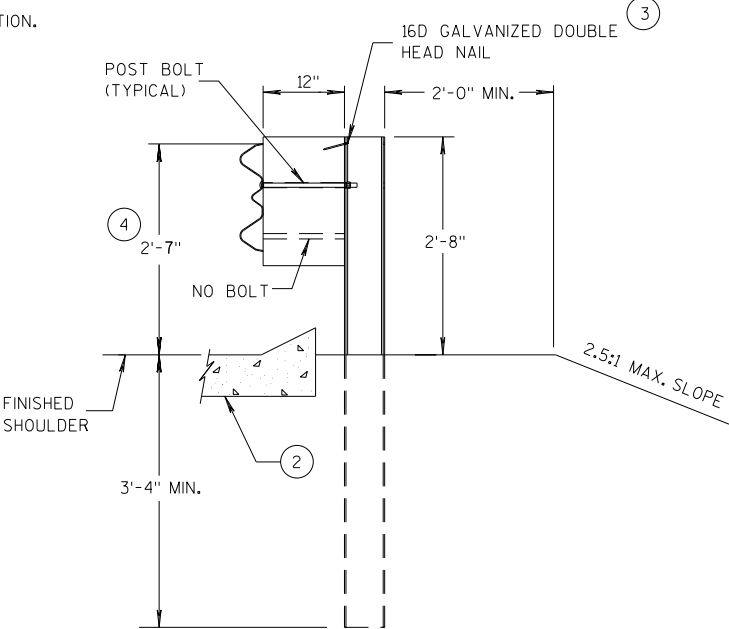
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm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



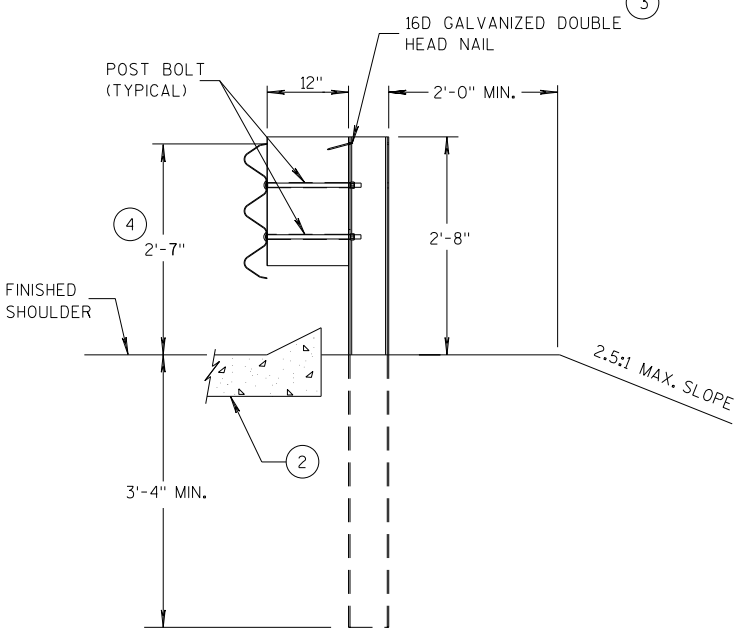
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

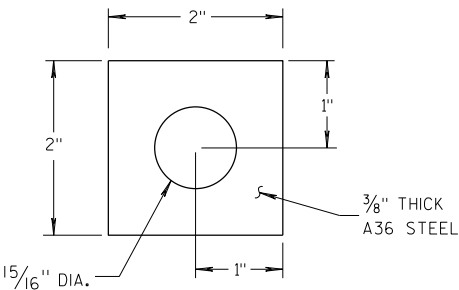
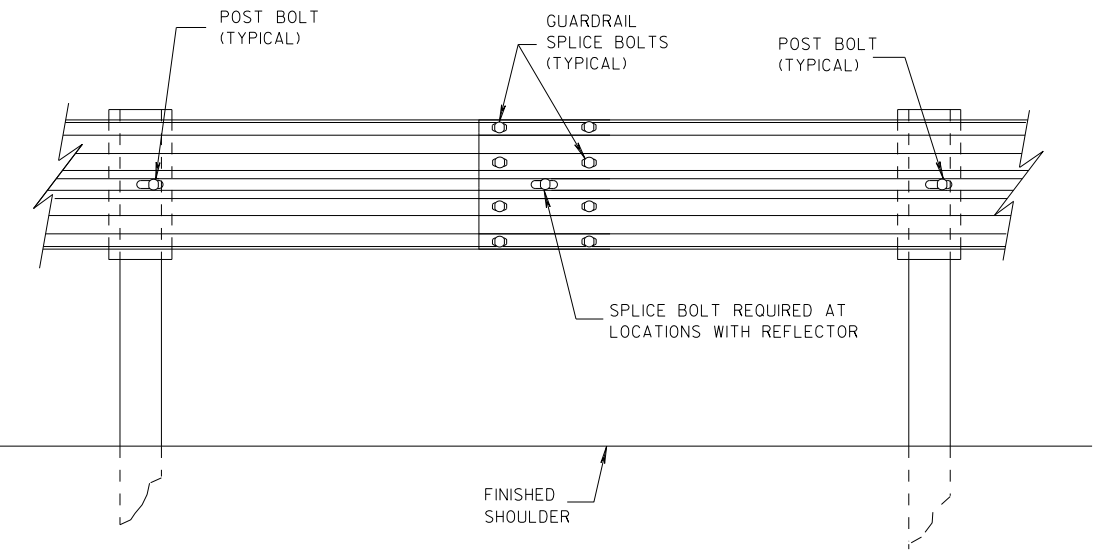
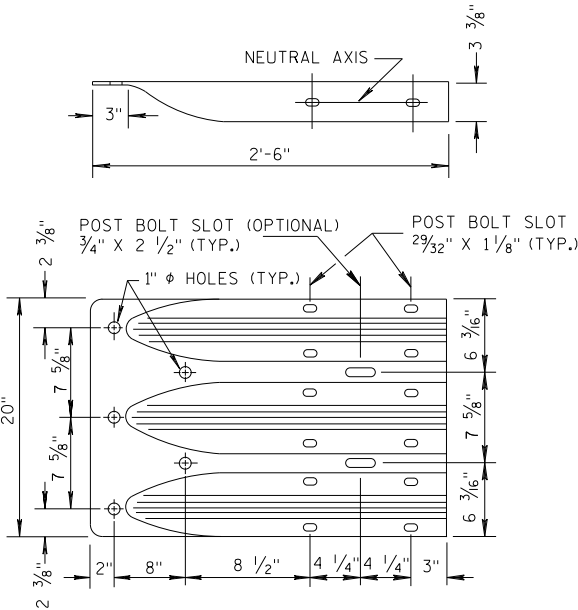


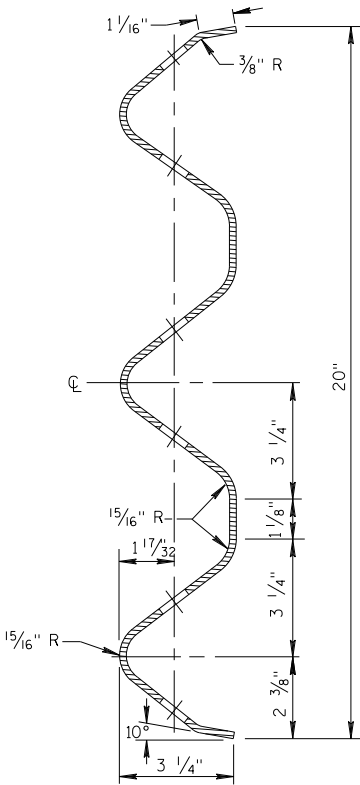
PLATE WASHER DETAIL



SPLICE DETAIL



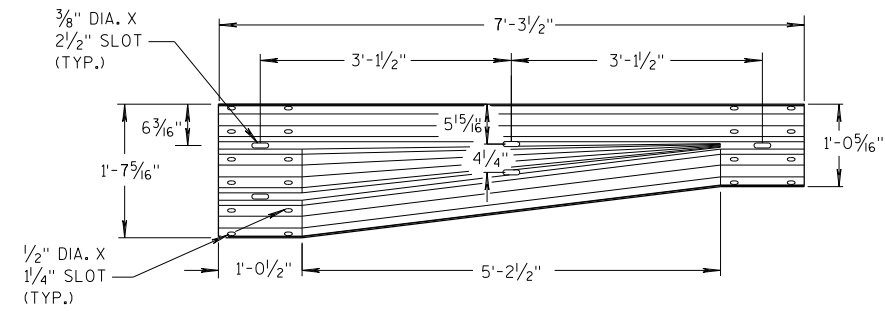
THRIE BEAM
TERMINAL CONNECTOR



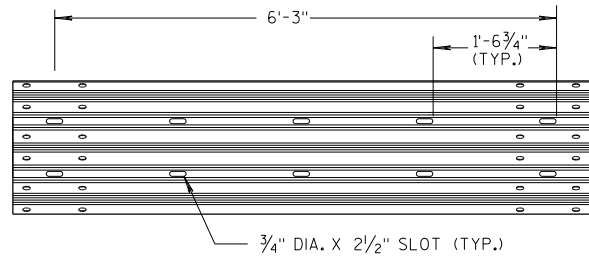
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

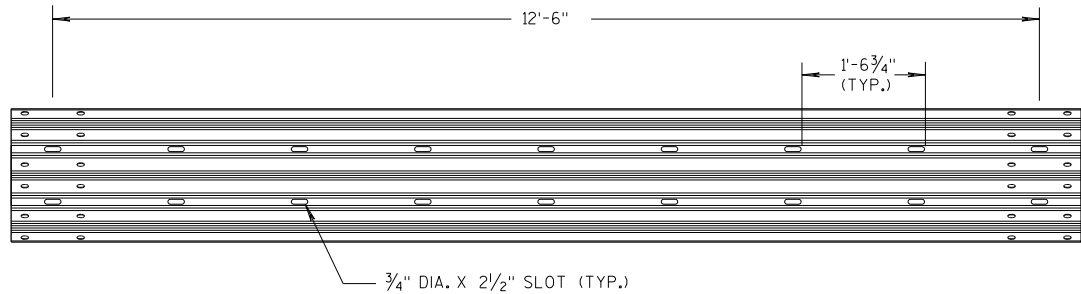
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



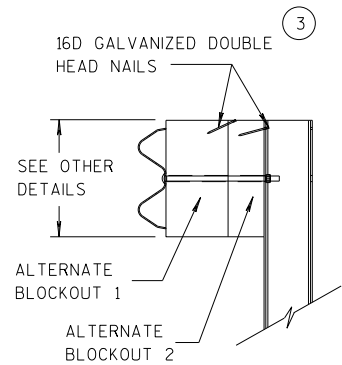
W-BEAM TO THRIE BEAM TRANSITION SECTION



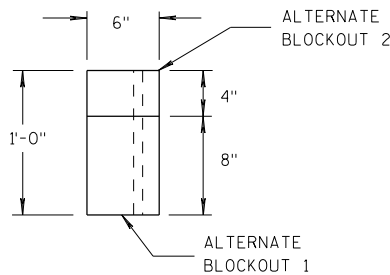
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

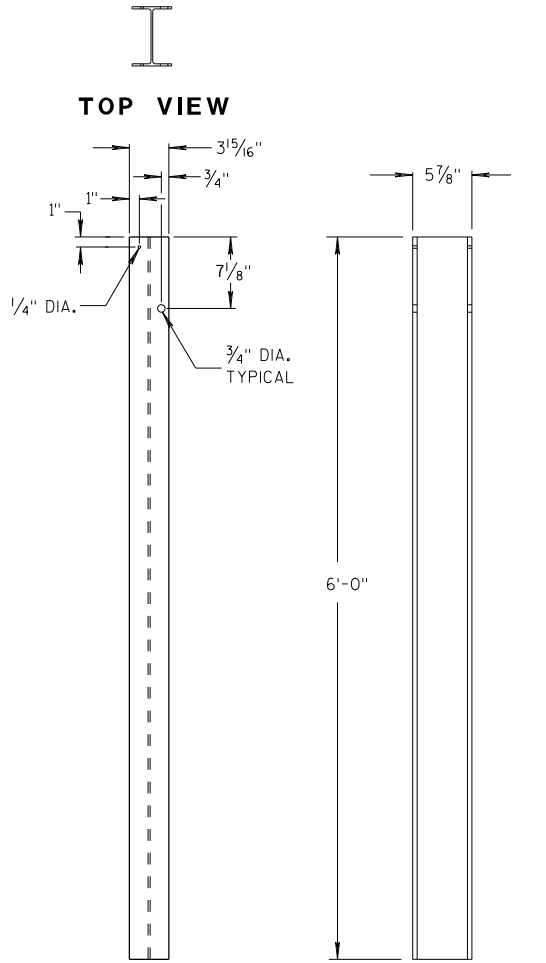


SIDE VIEW



TOP VIEW

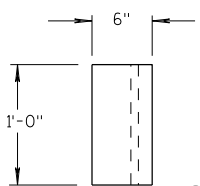
ALTERNATE WOOD BLOCKOUT DETAIL



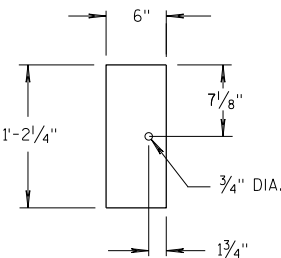
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

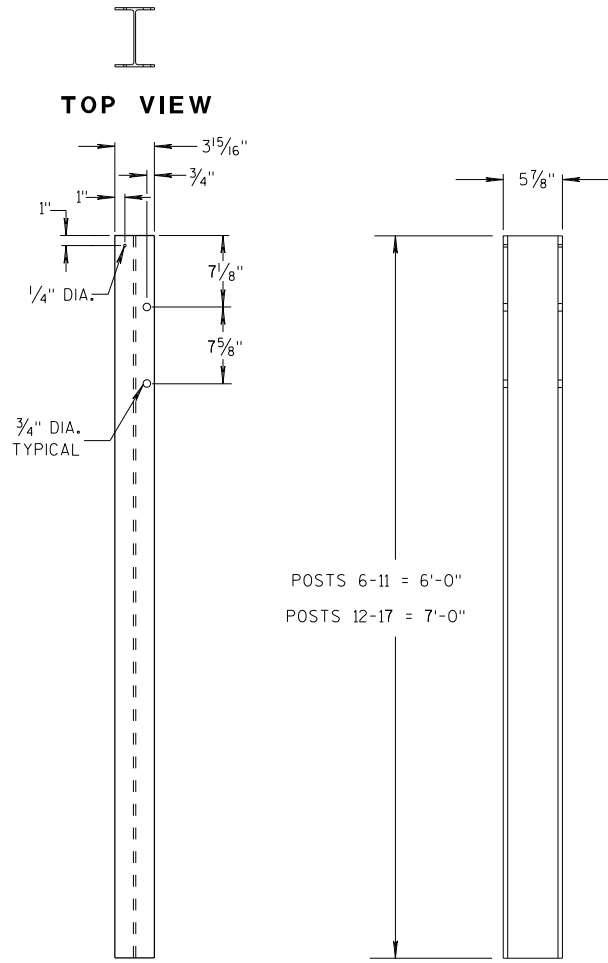


TOP VIEW



FRONT VIEW

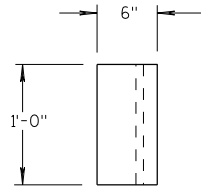
BLOCKOUT
POSTS 1-5



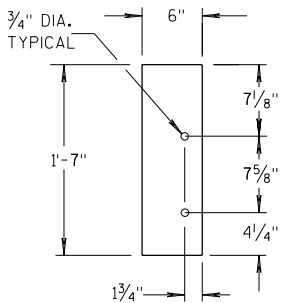
FRONT VIEW

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.

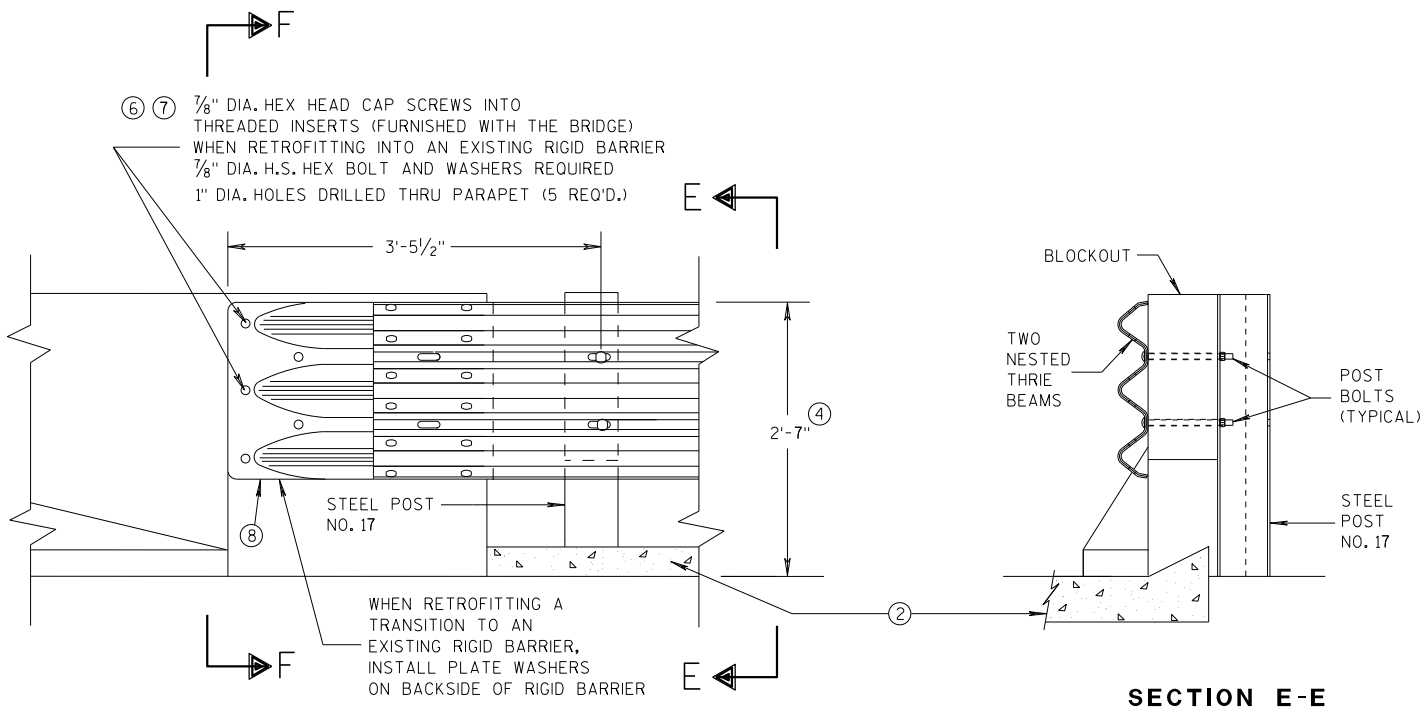
③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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.

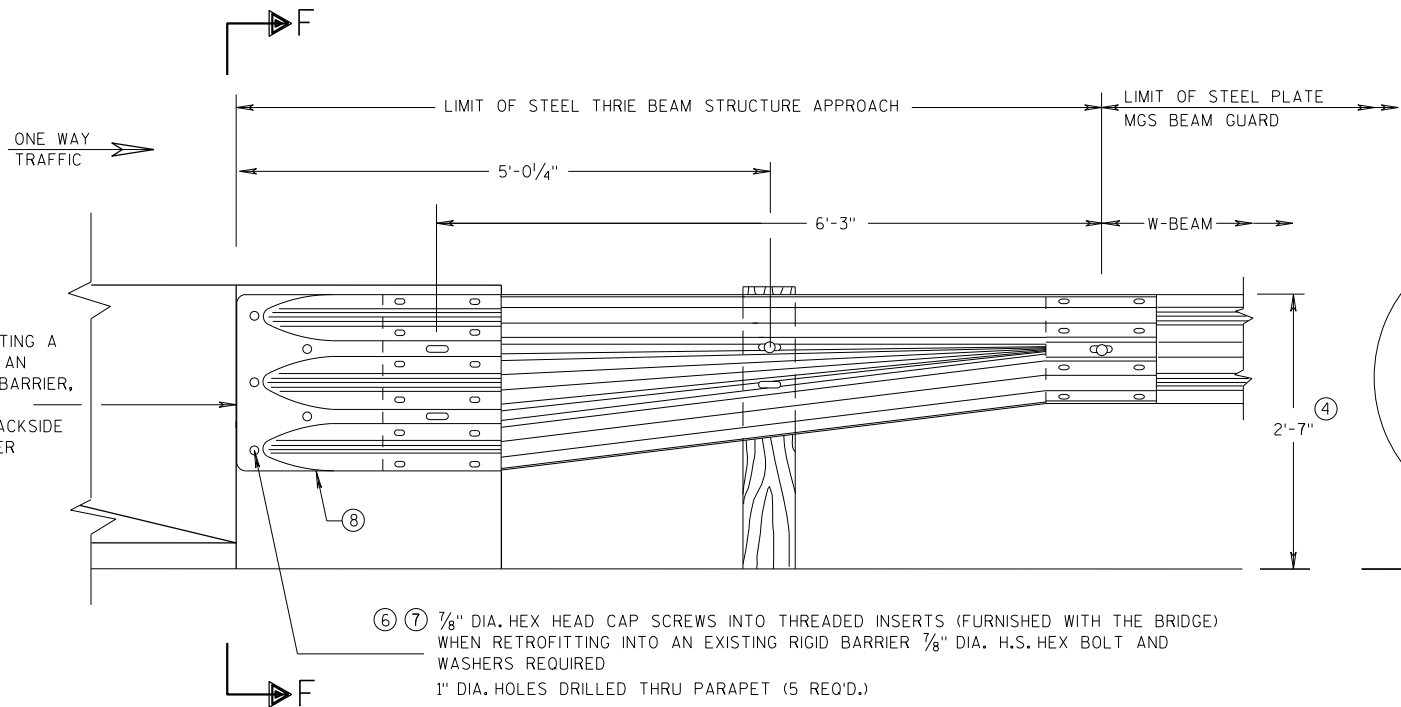
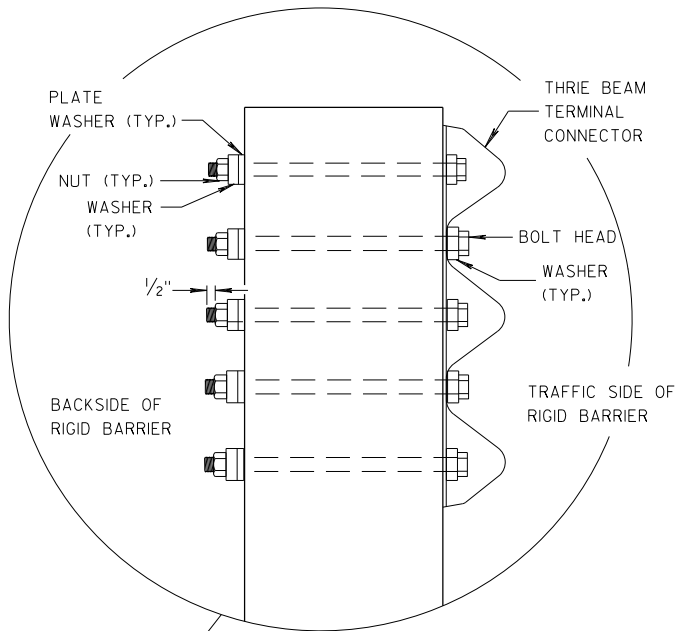
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

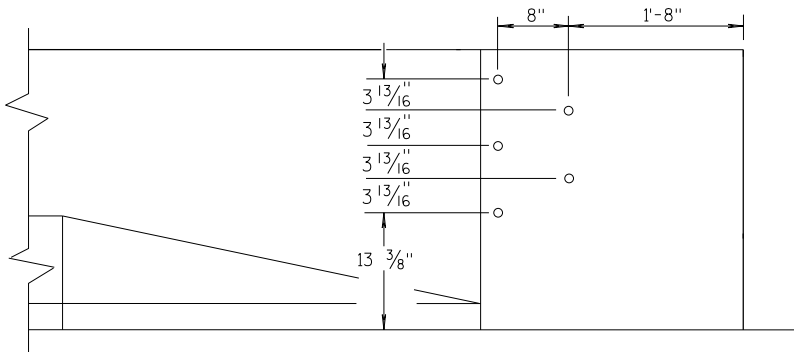


GENERAL NOTES

- 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".



SECTION F-F



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

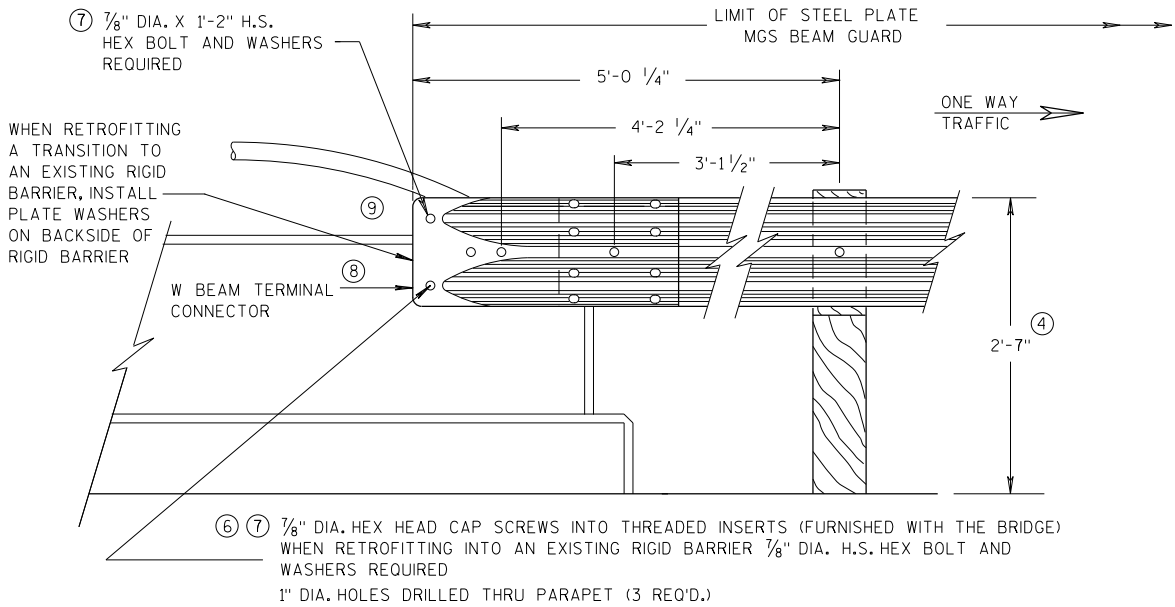
APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

GENERAL NOTES

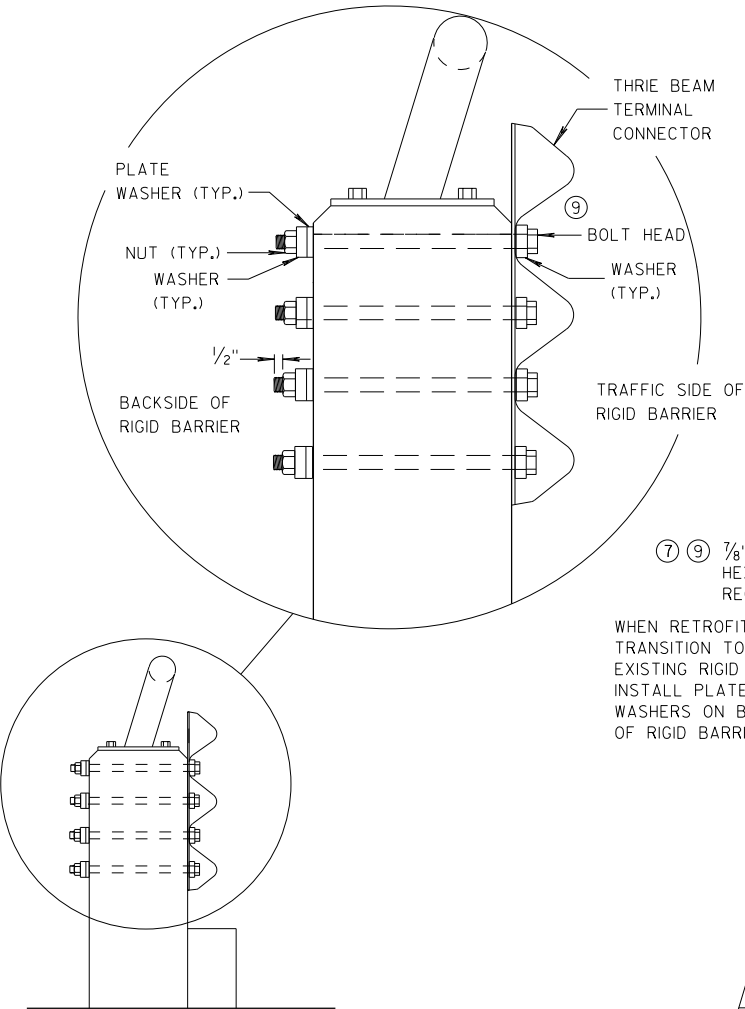
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ②
- OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④
- TOLERANCE FOR TOP OF BEAM IS ± 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".
- ⑨
- BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

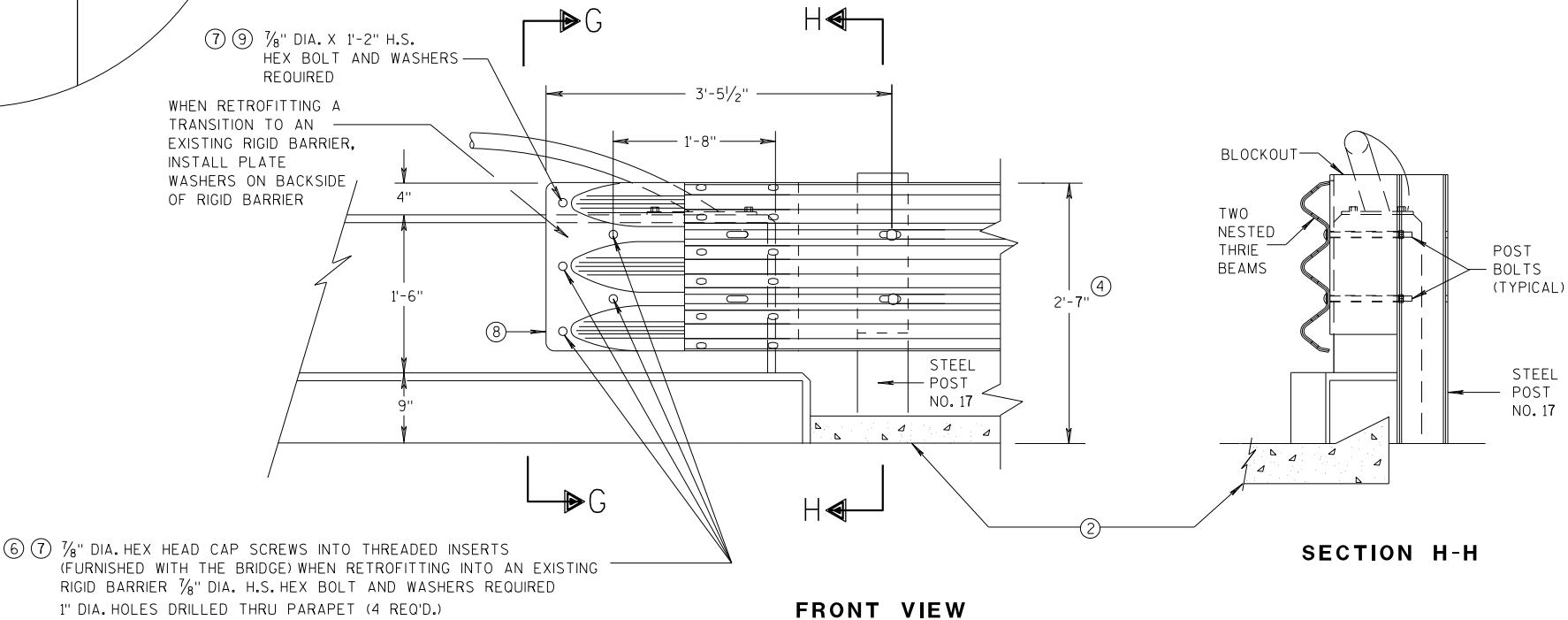


FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

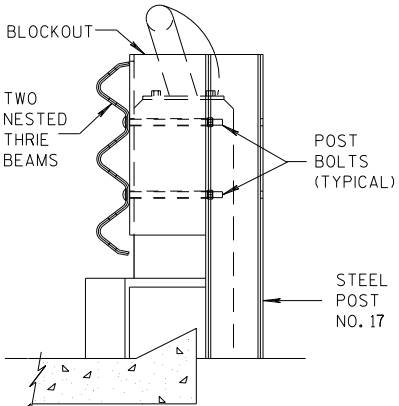


SECTION G-G



FRONT VIEW

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

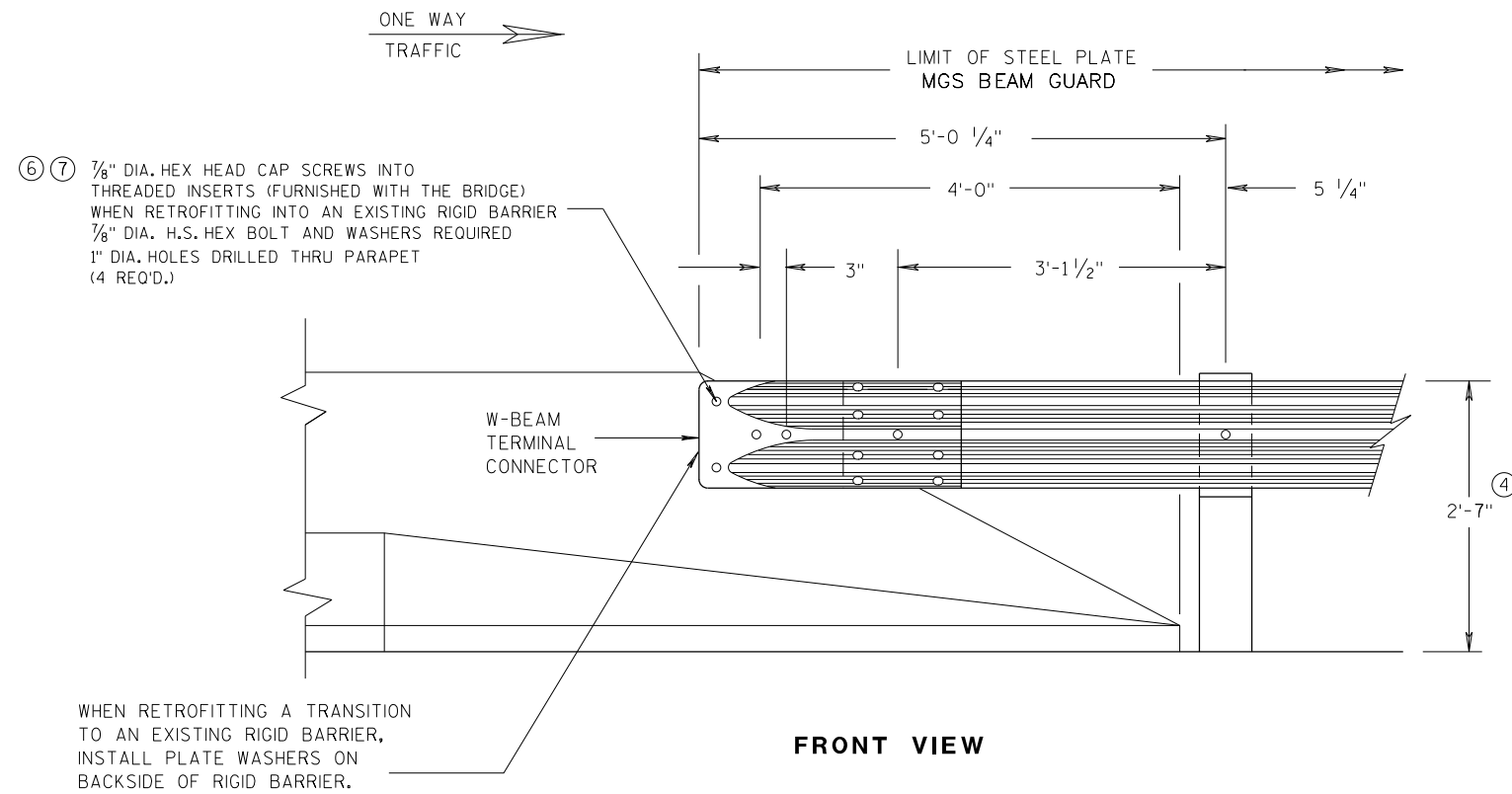


SECTION H-H

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

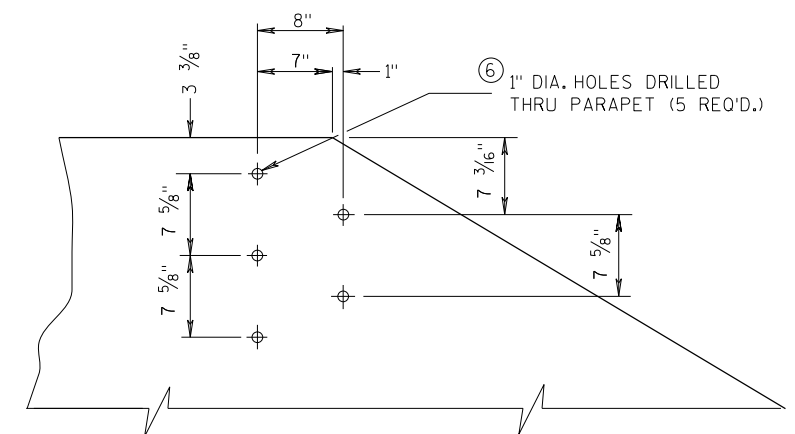
APPROVED
07/2018
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ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



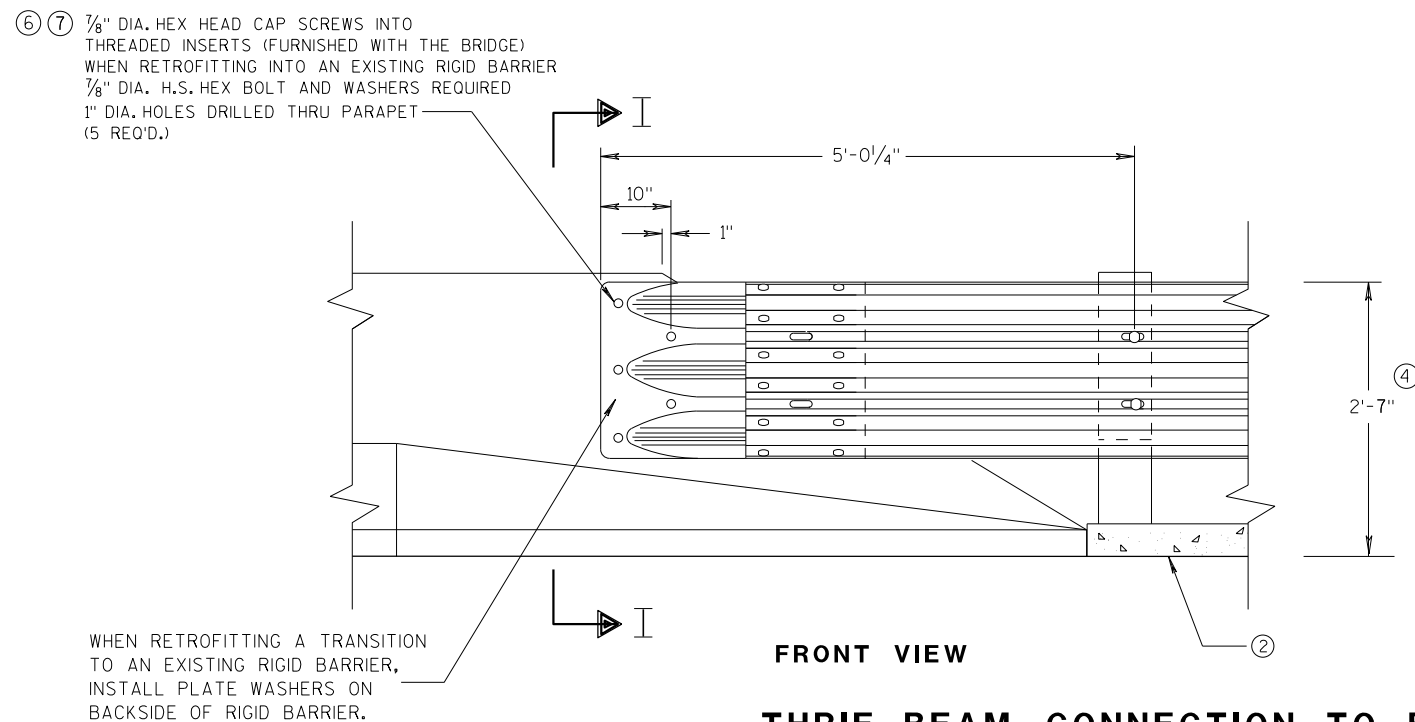
**W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS**
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

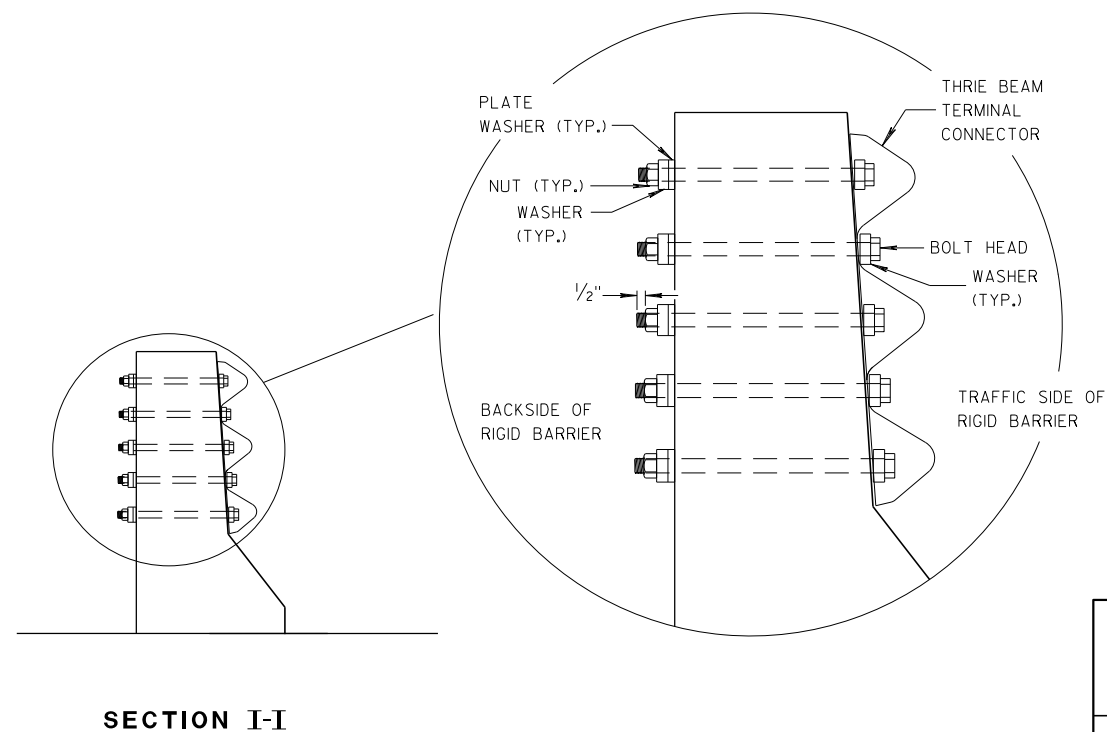
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH 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.



**DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION**



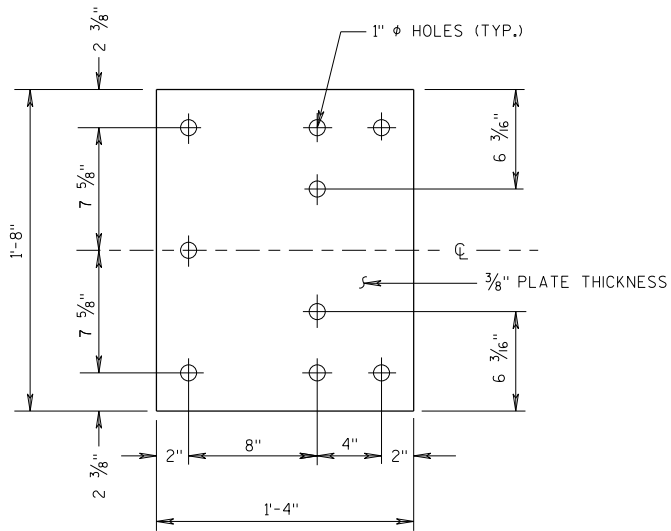
**THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS**



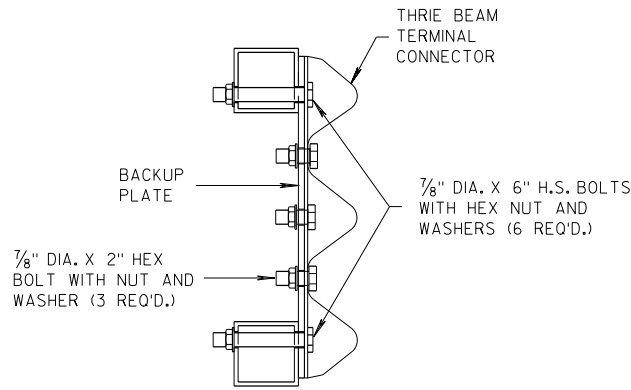
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

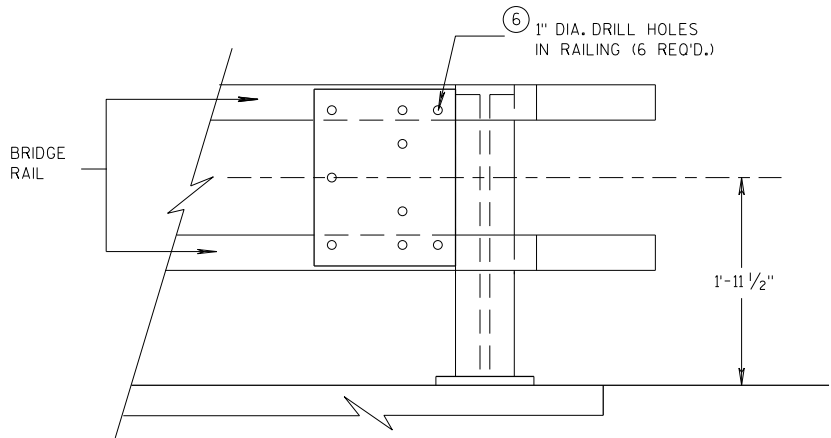
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ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



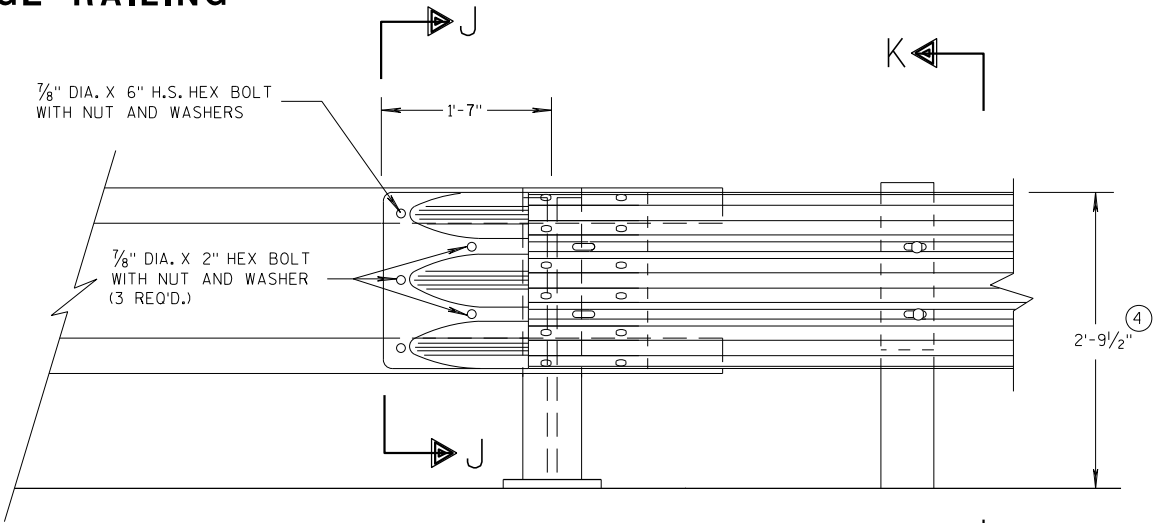
BACK-UP PLATE DETAIL



SECTION J-J

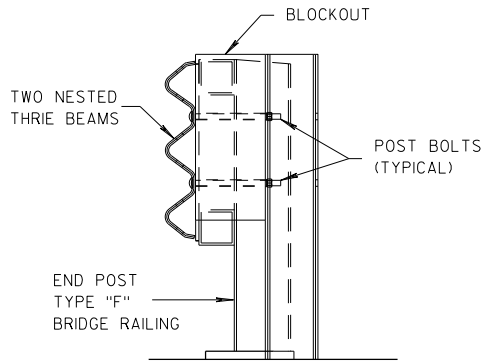


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

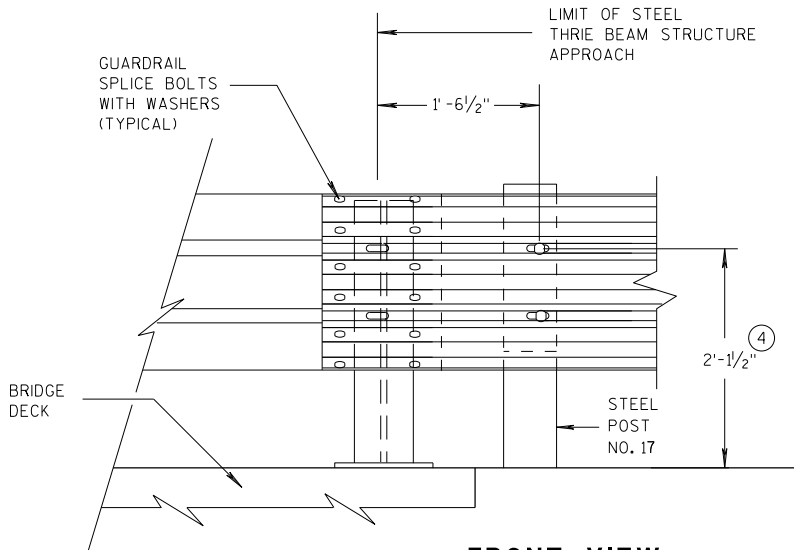
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



SECTION K-K

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.



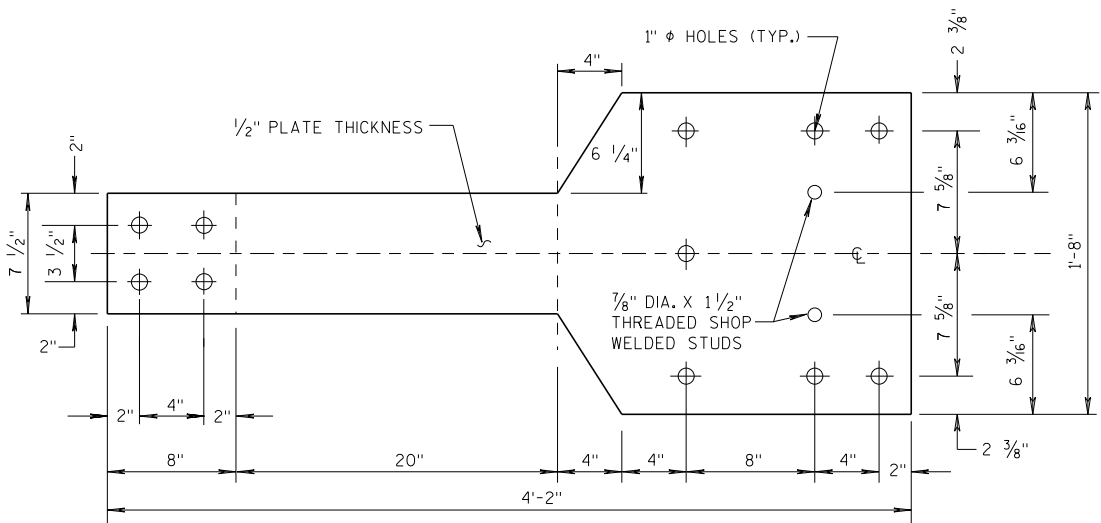
FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

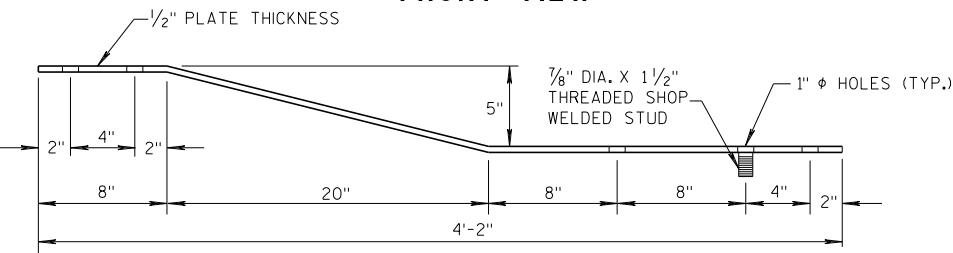
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018	/S/ Rodney Taylor
DATE	ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

GENERAL NOTES

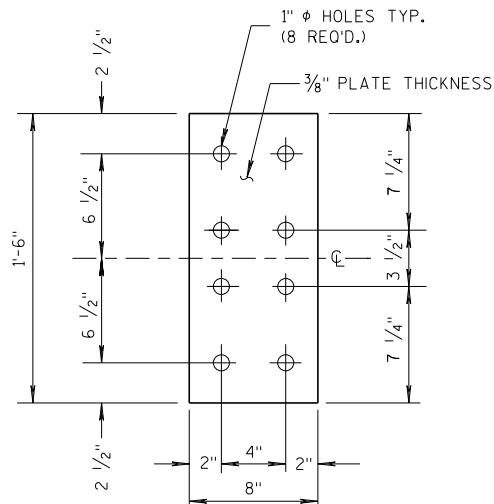
④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

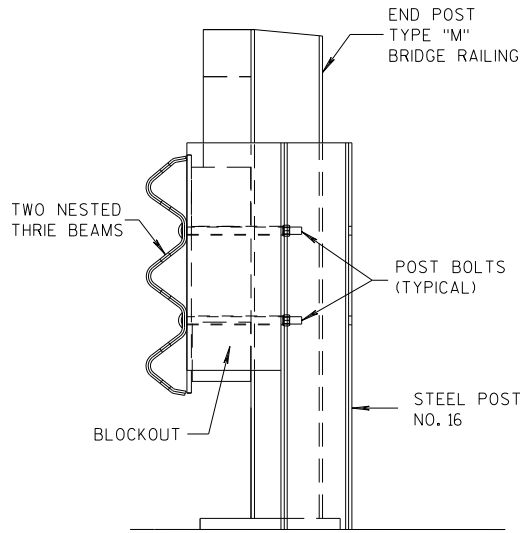


PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"

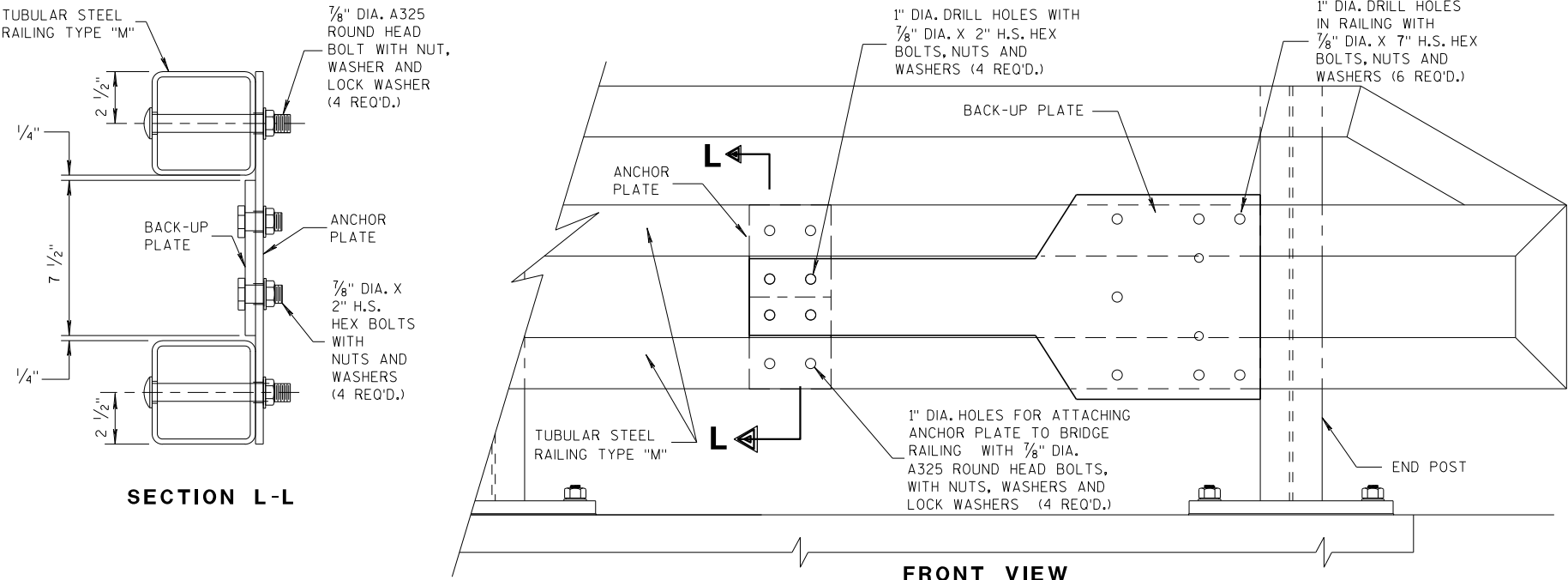


FRONT VIEW

ANCHOR
PLATE DETAIL,
TYPE "M"



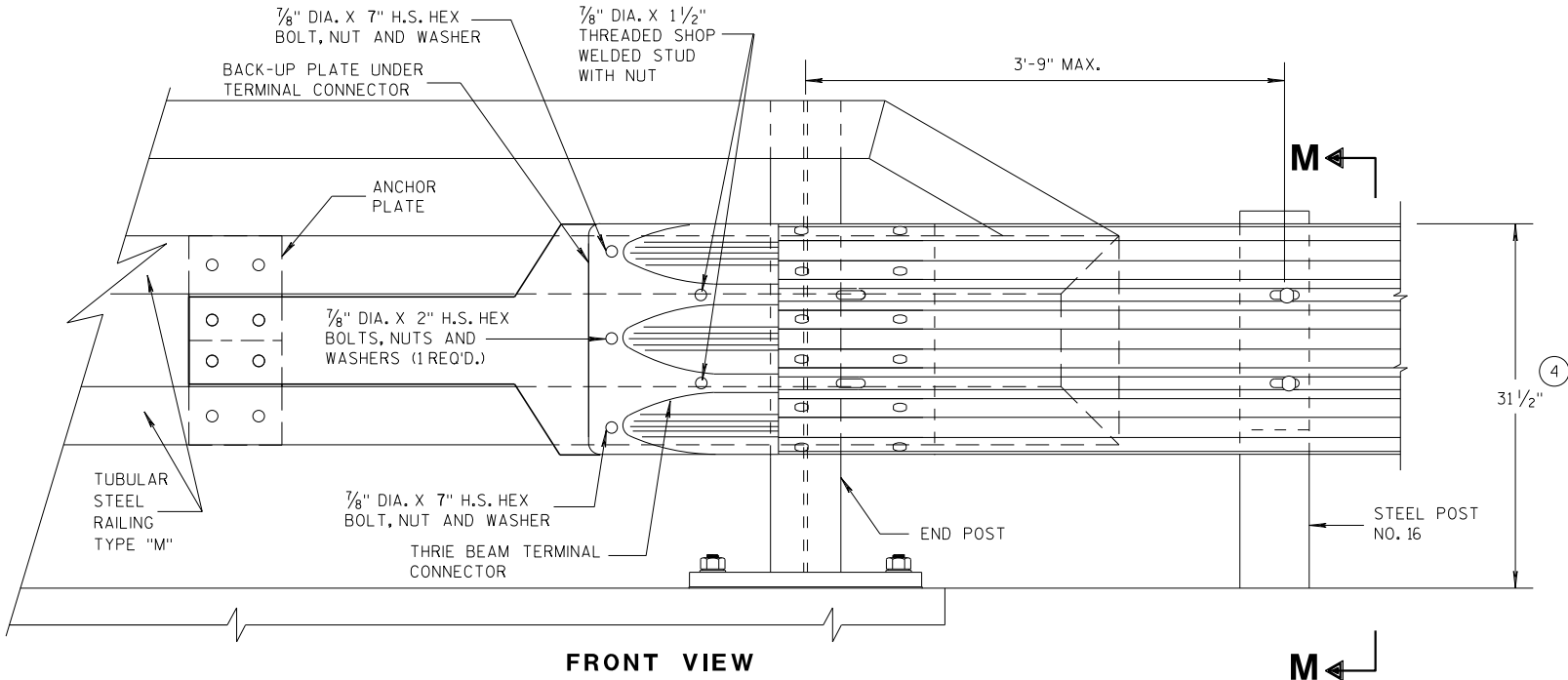
SECTION M-M



SECTION L-L

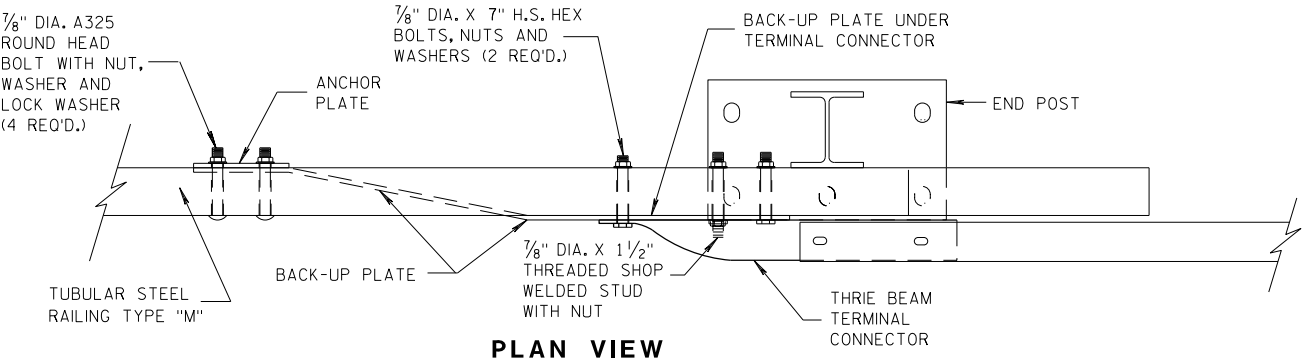
FRONT VIEW

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



FRONT VIEW

M



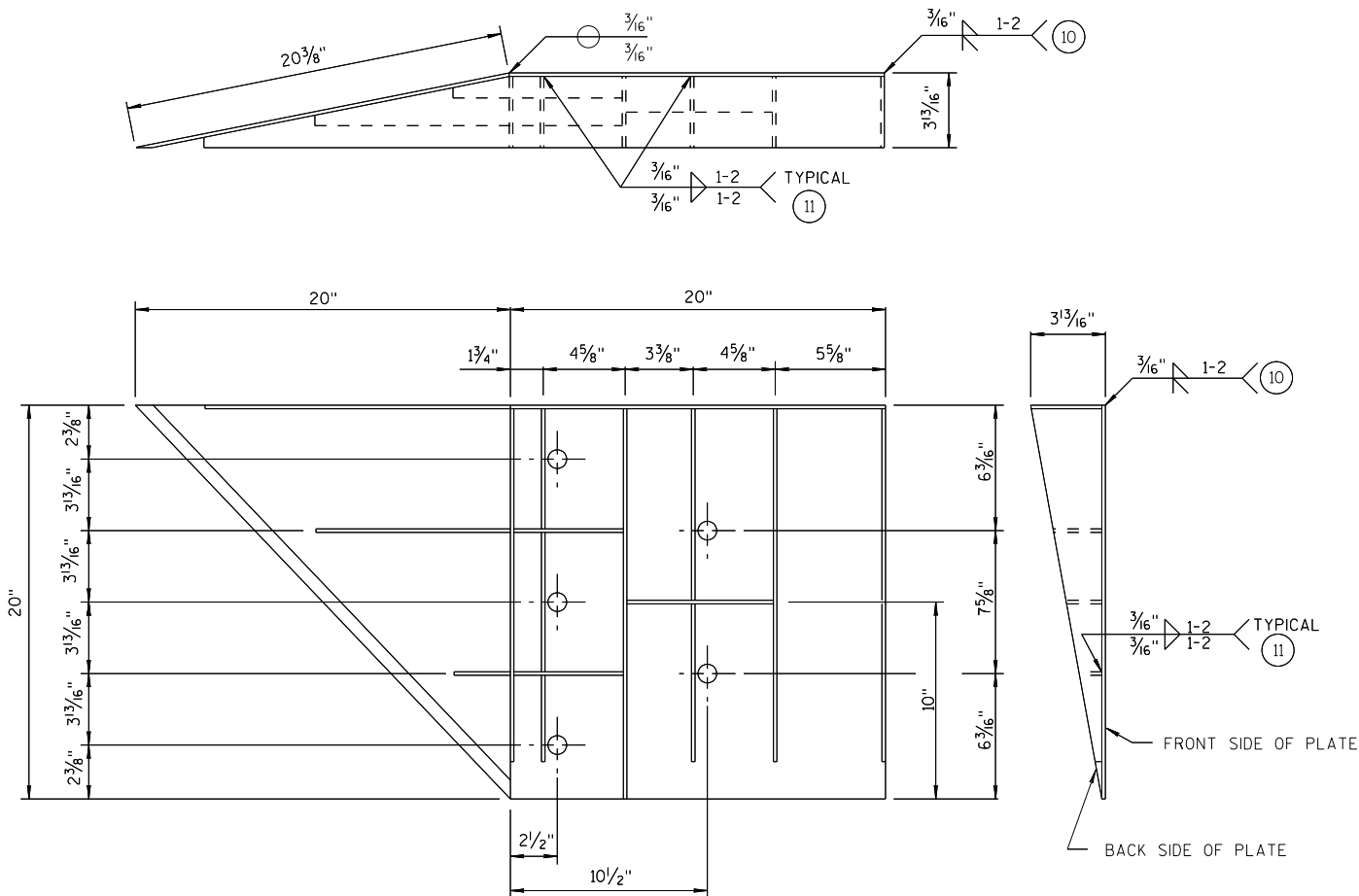
PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 3/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 1/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 3/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 3/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 3/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- ⑩ STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- ⑪ STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

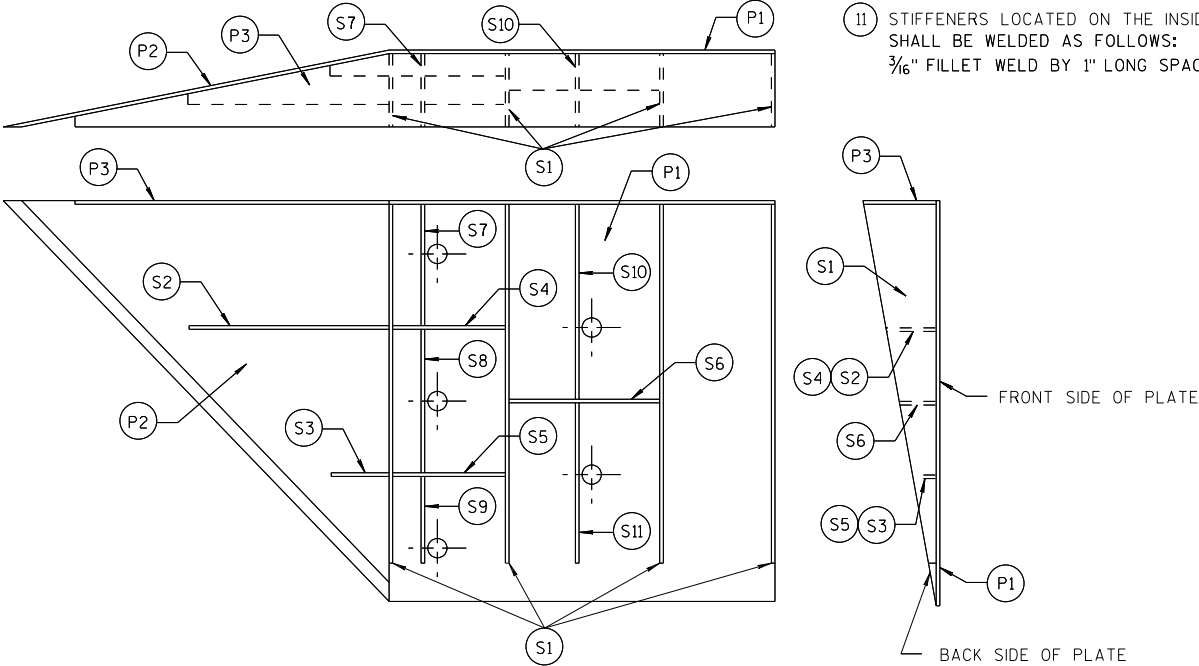


PLATE AND STIFFENER IDENTIFICATION

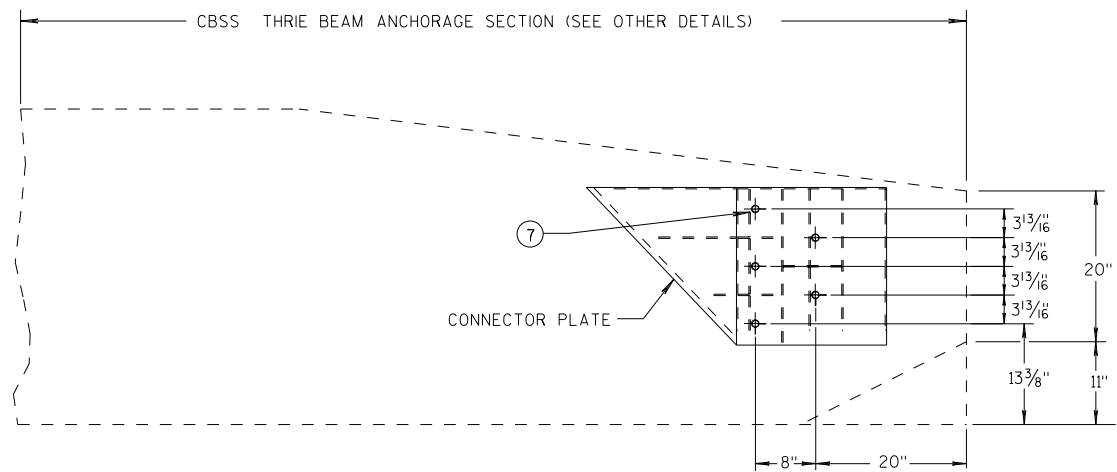
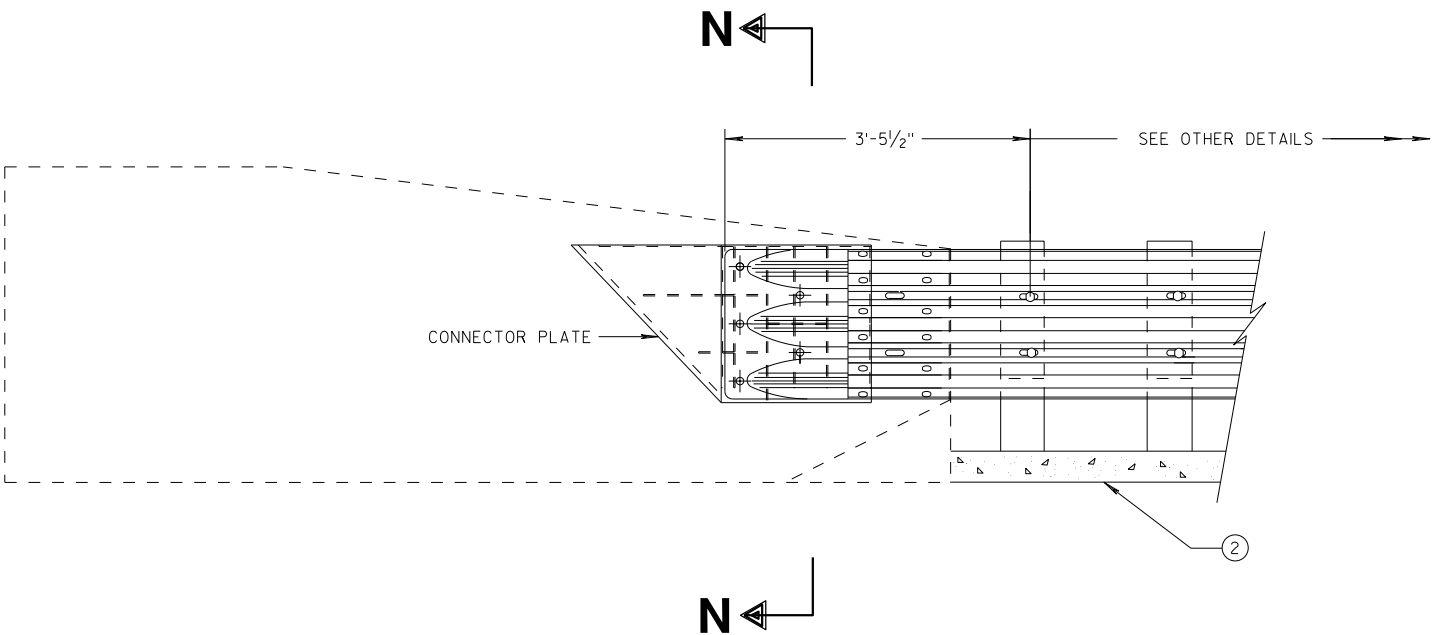
(VIEWED FROM BACK SIDE OF PLATE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



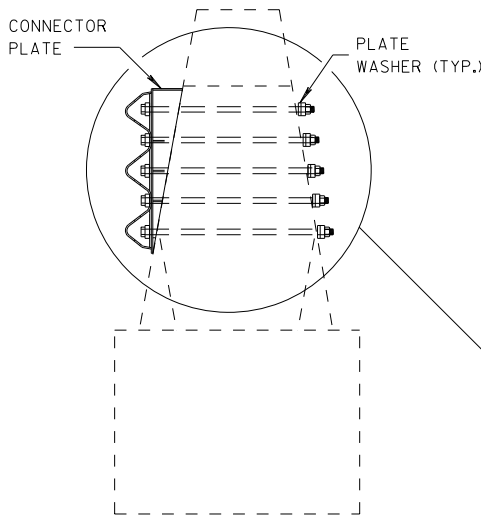
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

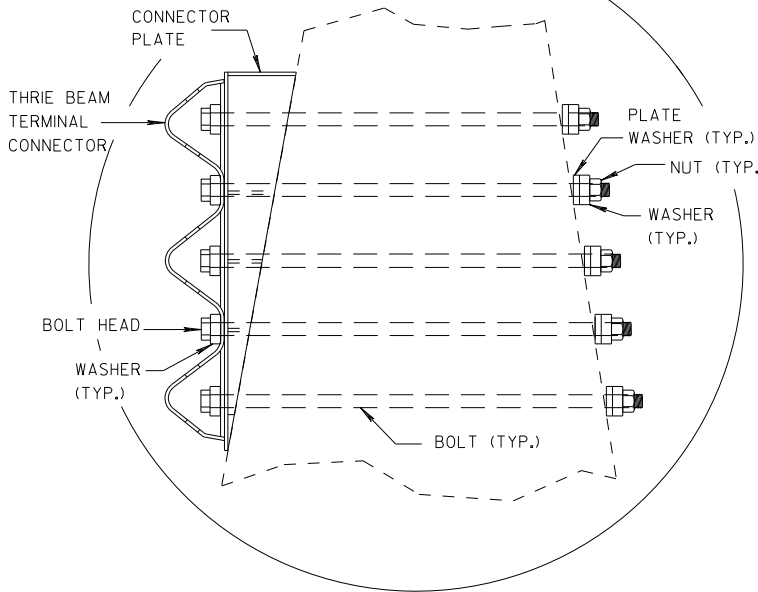
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(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.



SECTION N-N



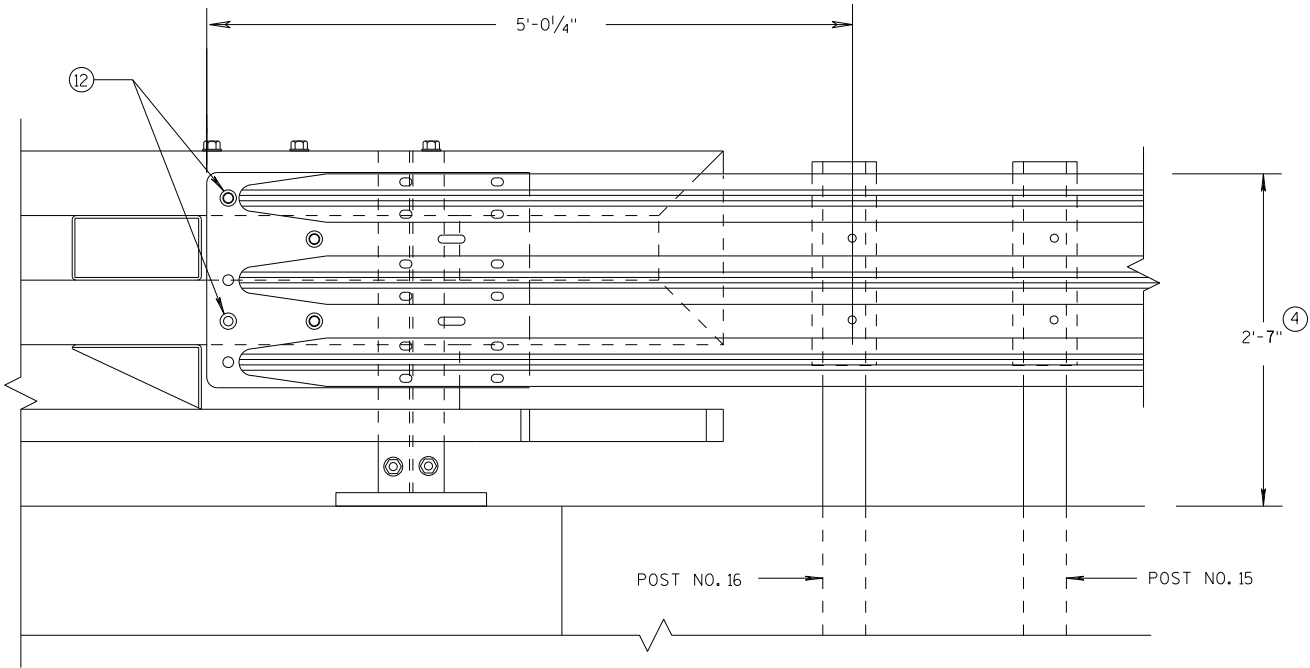
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

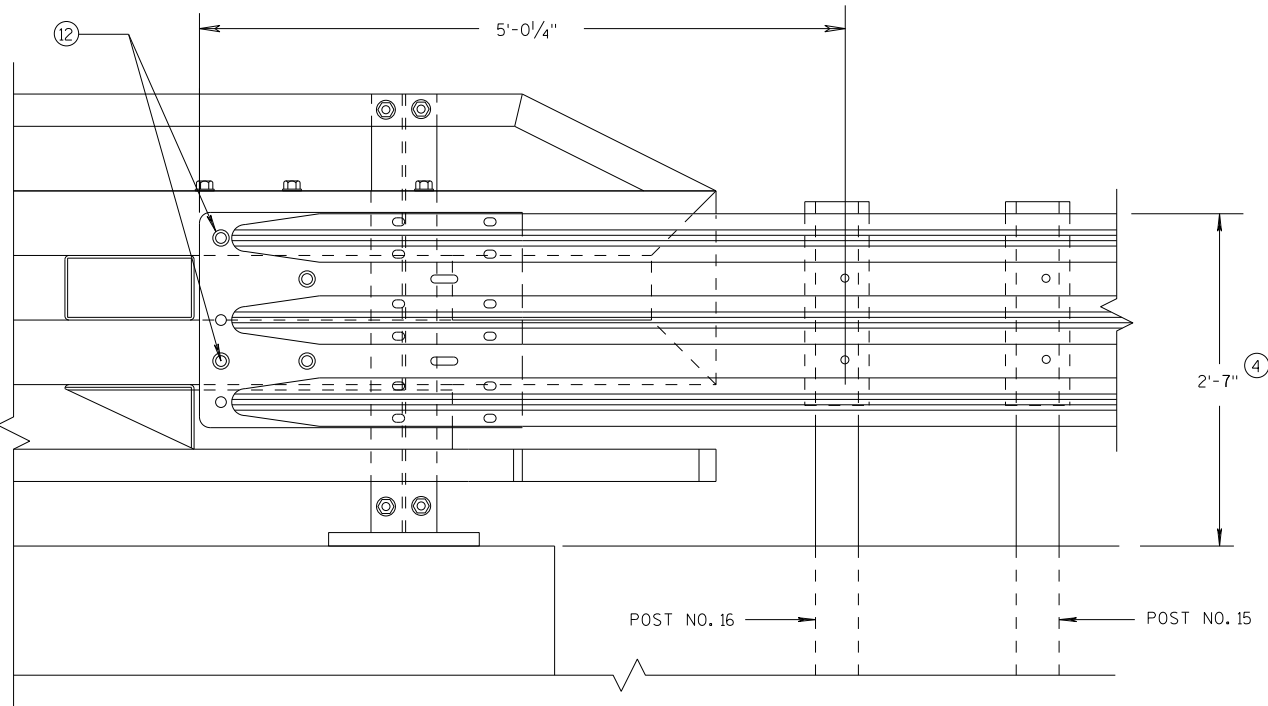
APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.



ELEVATION OF DETAIL AT NY3 END POST
THRIE BEAM RAIL ATTACHMENT

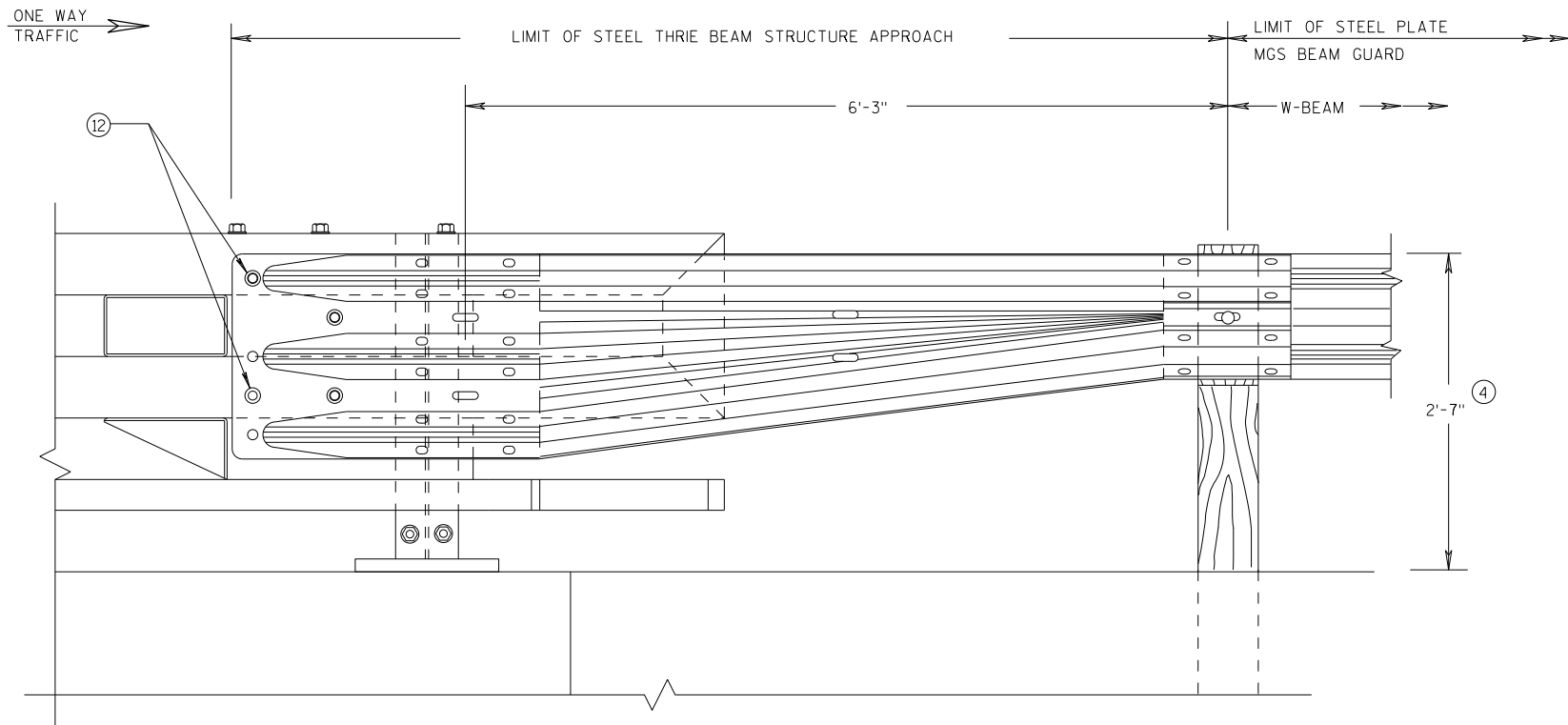


ELEVATION OF DETAIL AT NY4 END POST
THRIE BEAM RAIL ATTACHMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

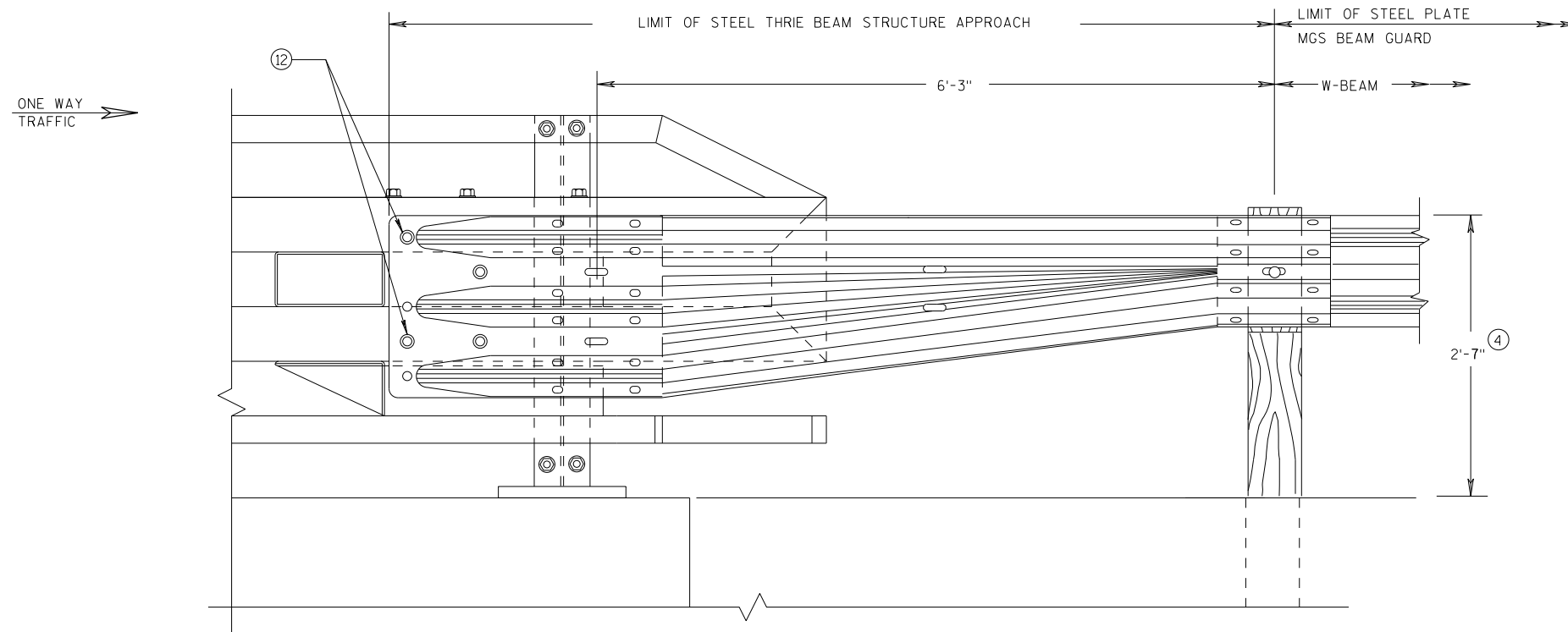
APPROVED
7/2018 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.

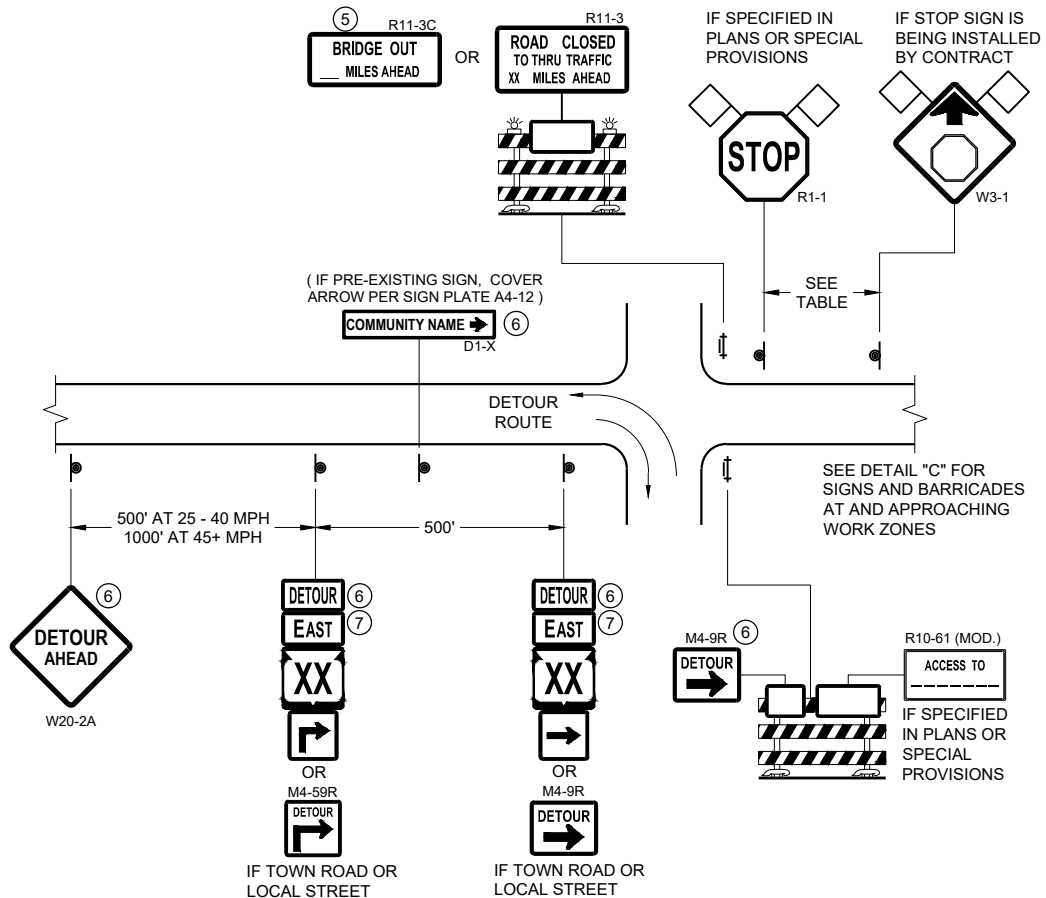


FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

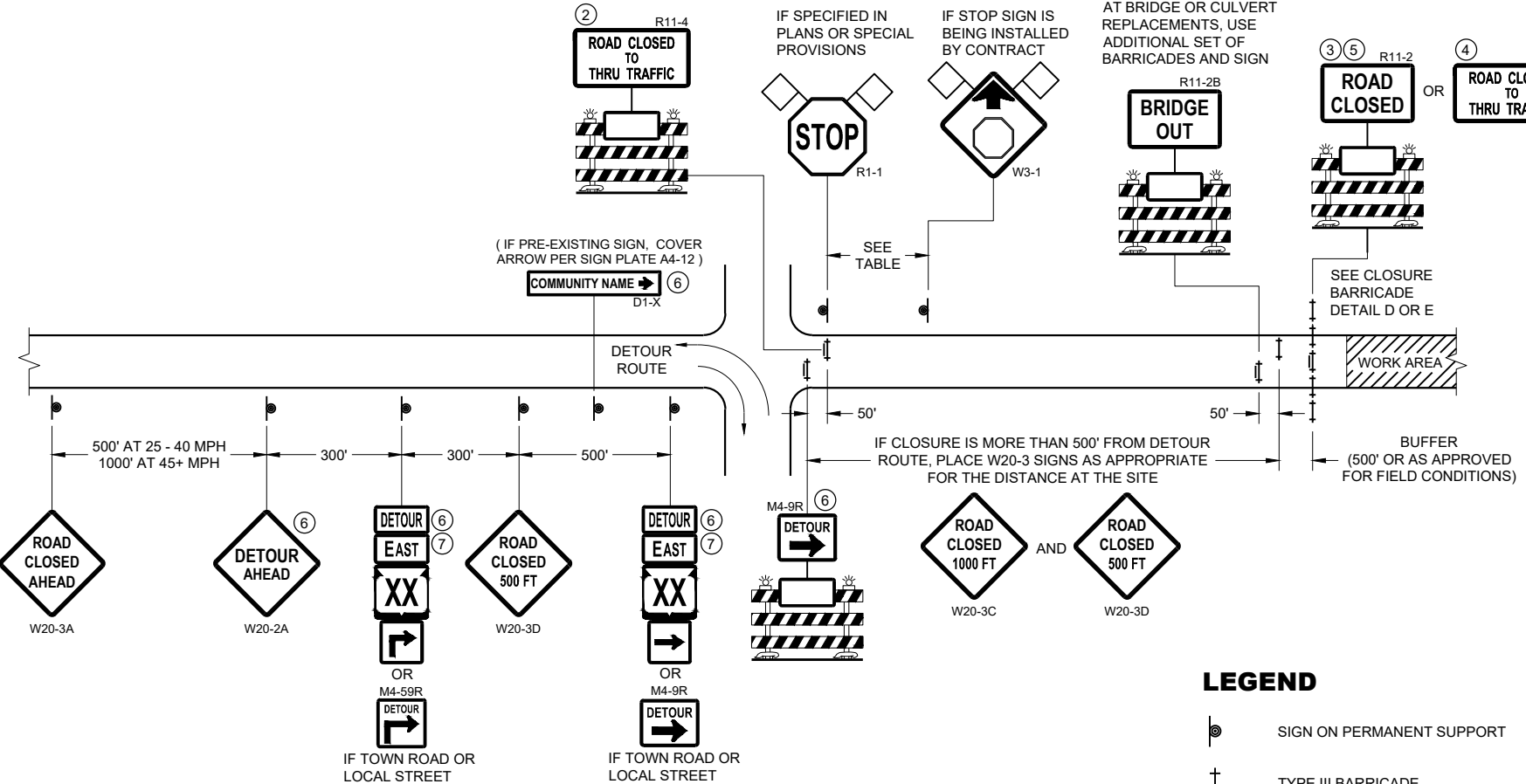
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

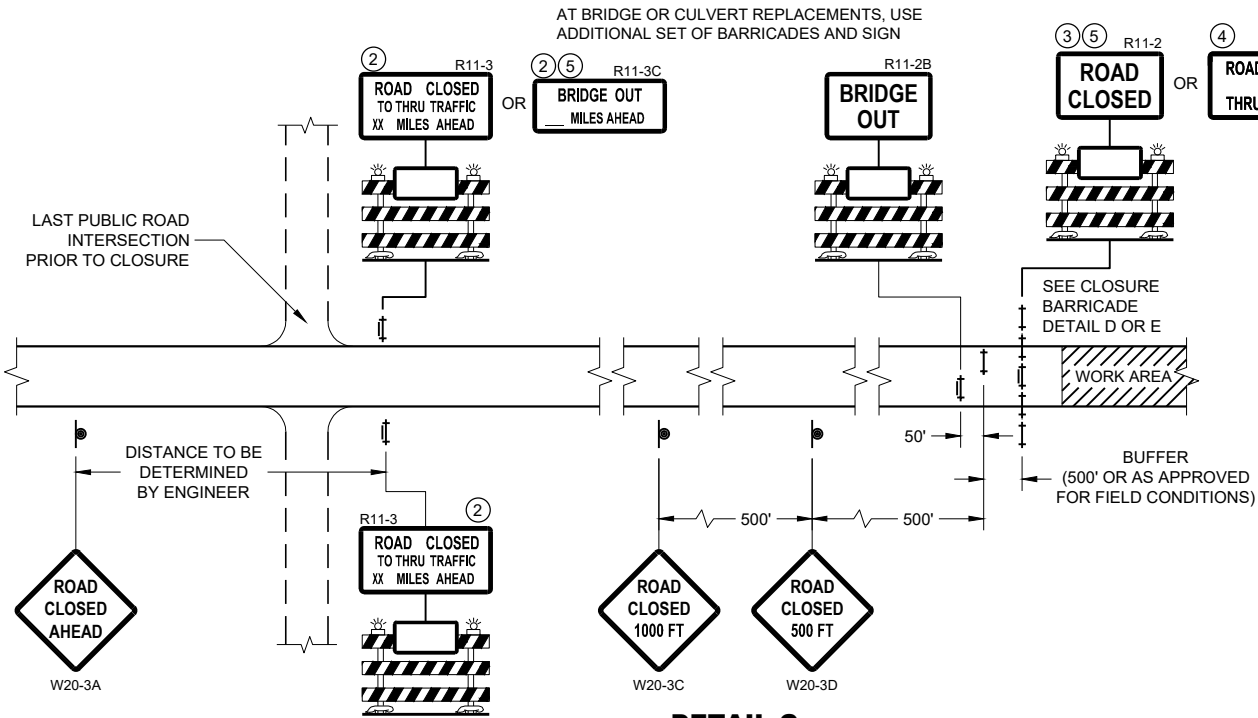
APPROVED
 7/2018
 DATE
 /S/ Rodney Taylor
 ROADWAY STANDARDS DEVELOPMENT
 UNIT SUPERVISOR
 FHWA



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



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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

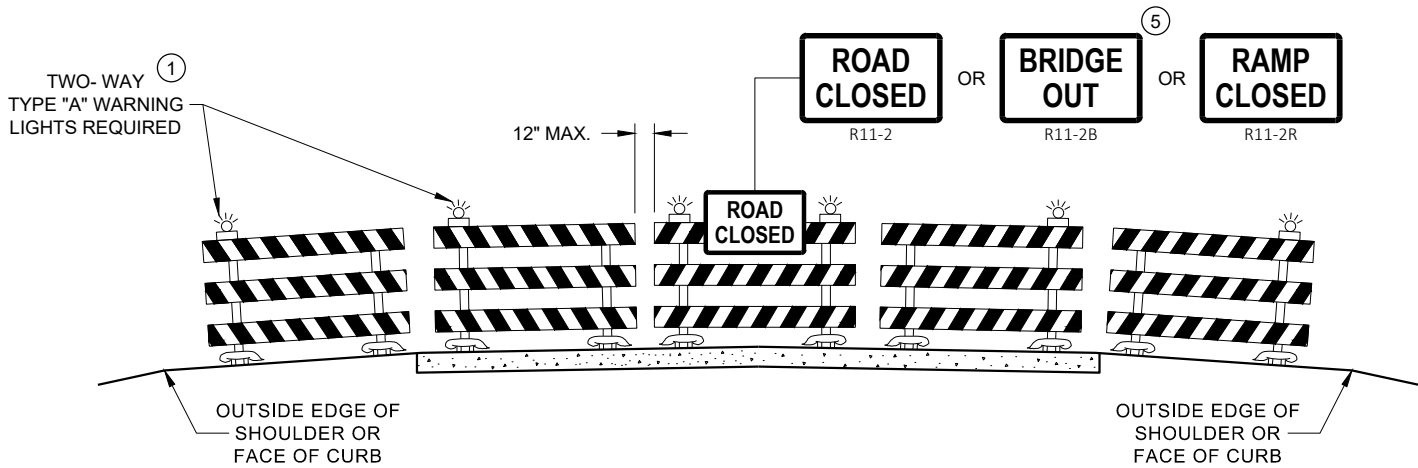
LEGEND

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

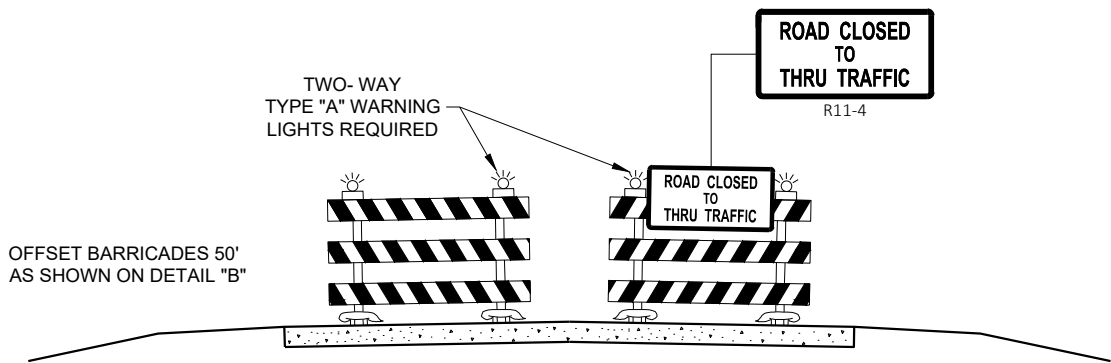
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

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"

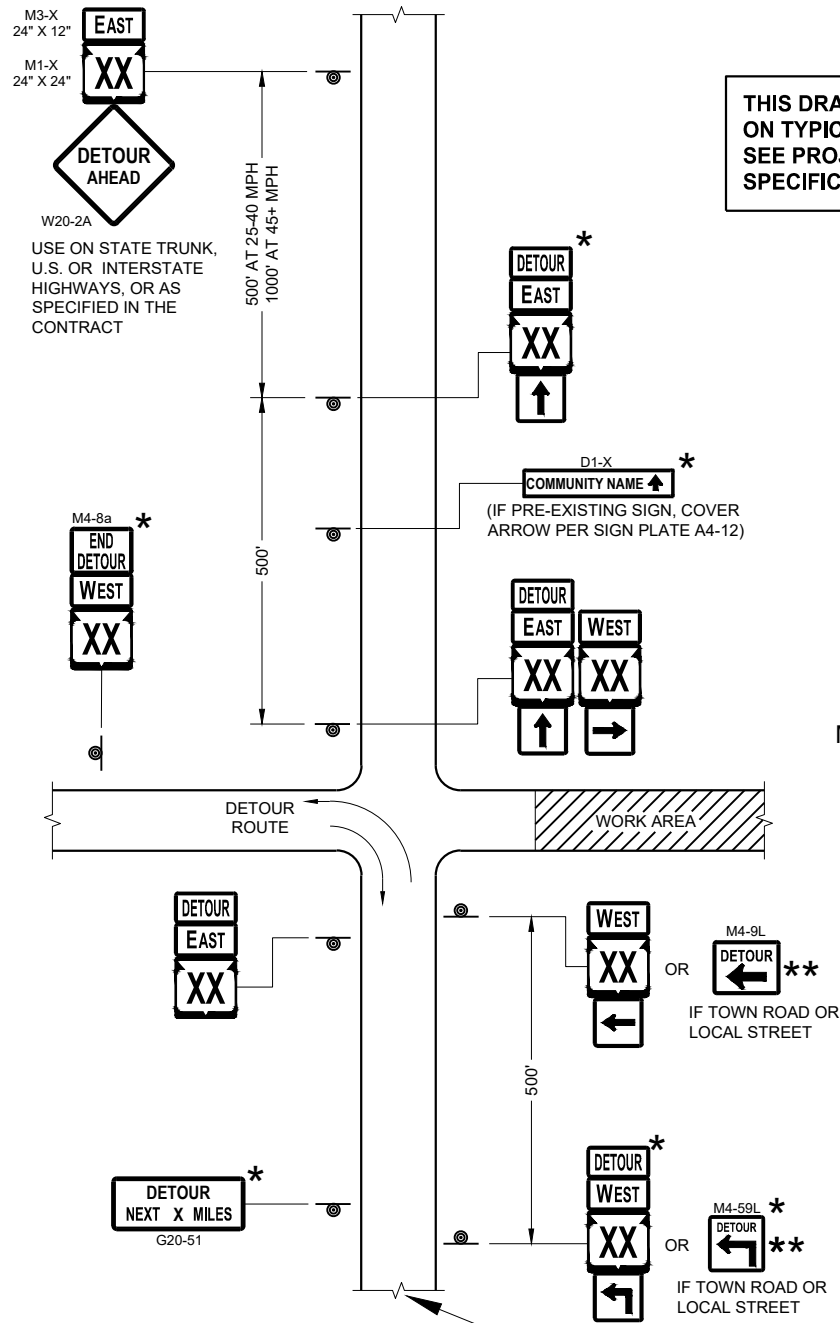
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS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

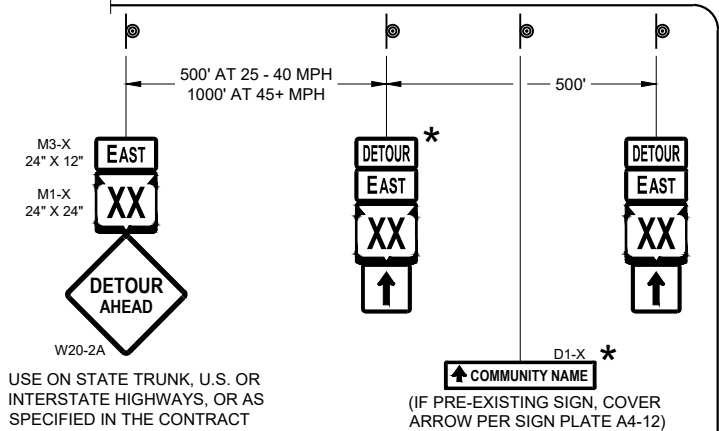
FHWA



SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F
DETOUR SIGNING

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST M4 - 8
- DETOUR WEST M3 - X
- DETOUR AHEAD M1 - 4 OR M1 - 6 OR M1 - 5A
- DETOUR NEXT X MILES M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

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. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

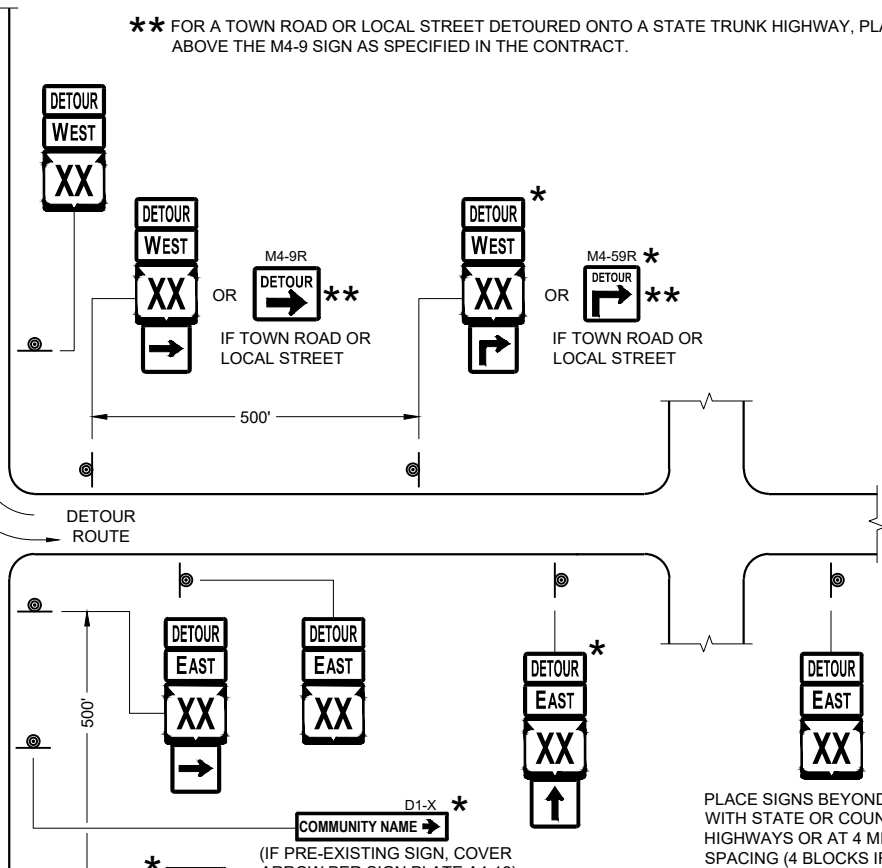
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- 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)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-9R SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



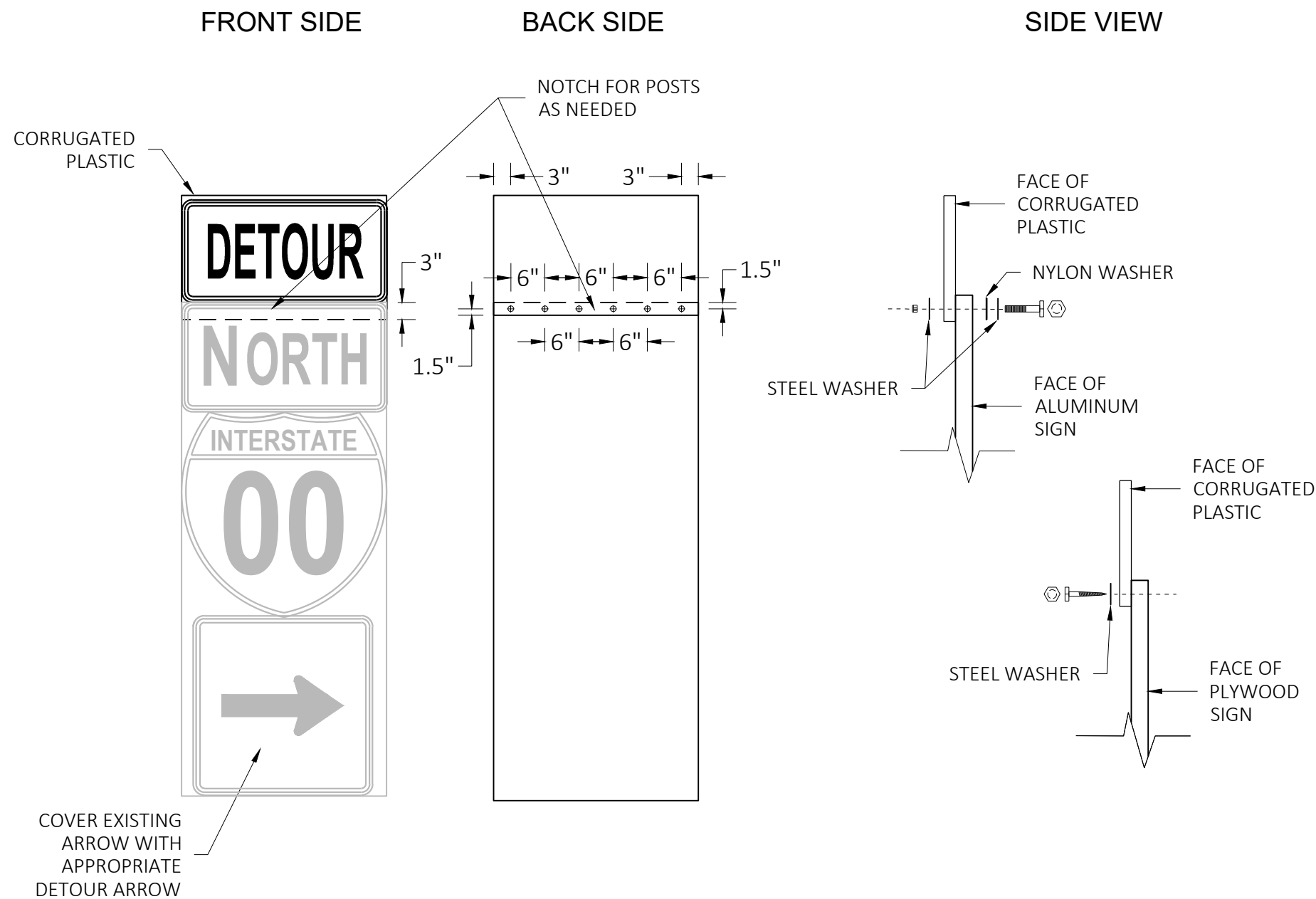
PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING
FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.

FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.

FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.

METAL WASHERS, NUTS, BOLTS AND LAGS 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, SC3

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.

PLYWOOD SIGNS:

LAG SCREWS - 5/16" x 1"

ALUMINUM SIGNS:

MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS

WASHERS:

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

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

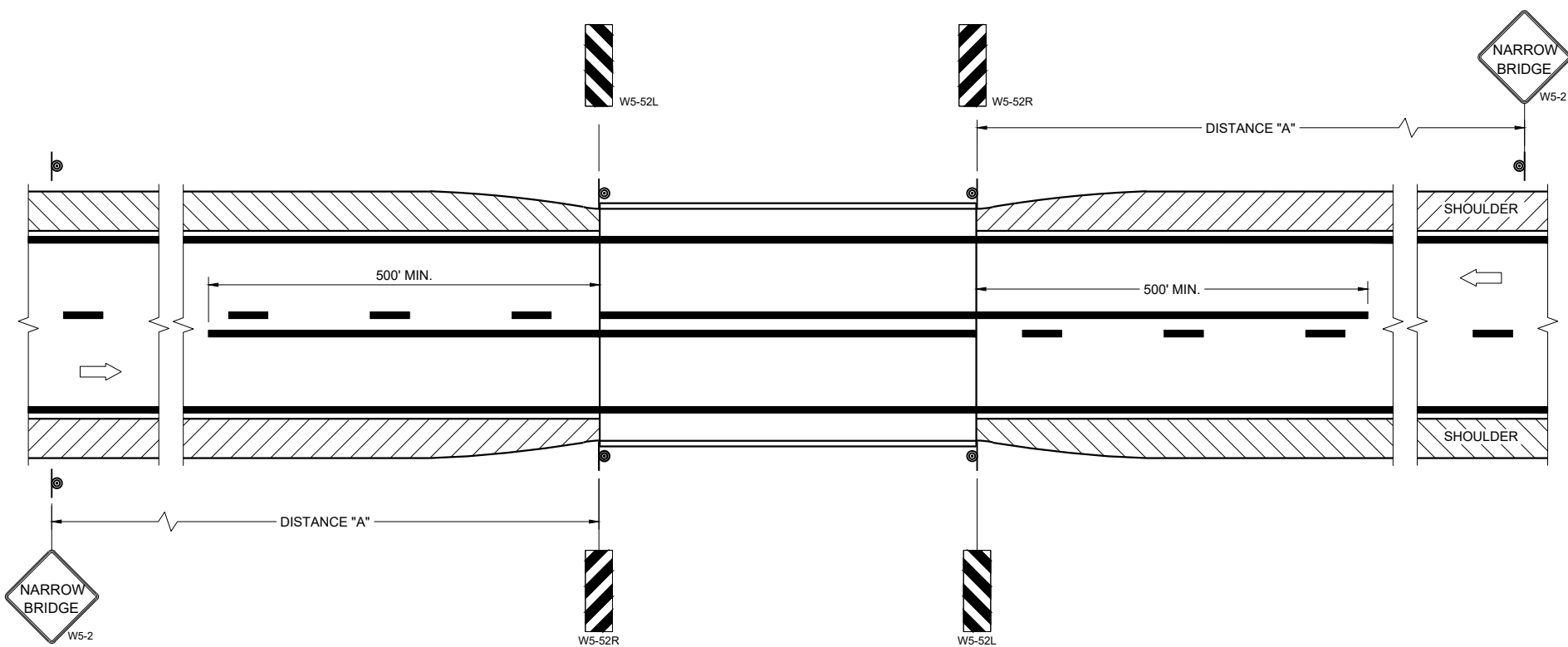
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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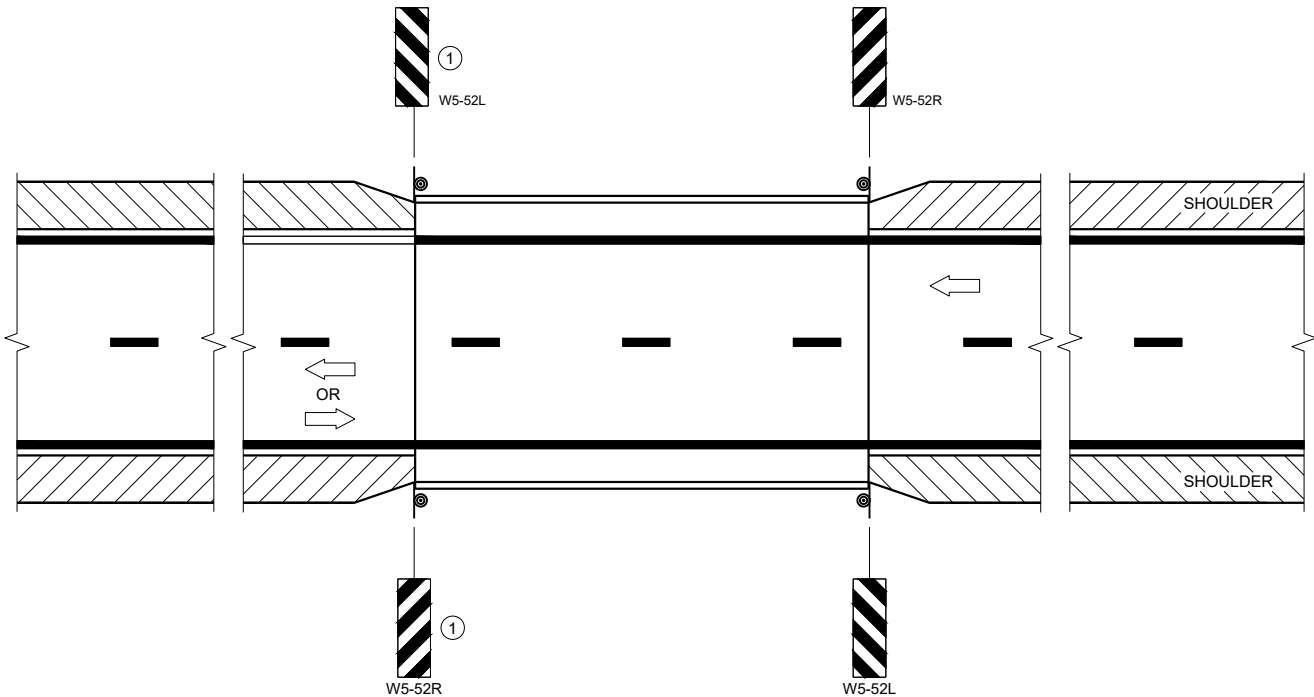
May 2023
DATE

FHWA

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



SITUATION 1
WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



SITUATION 2
WARRANTING CRITERIA:
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET

GENERAL NOTES

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

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

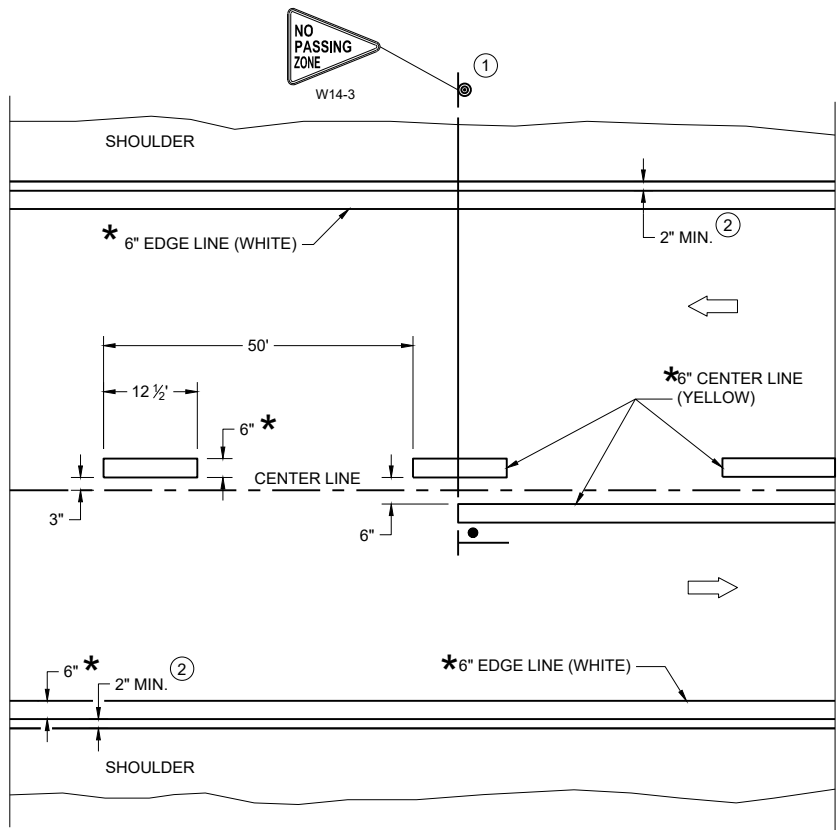
DISTANCE TABLE

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

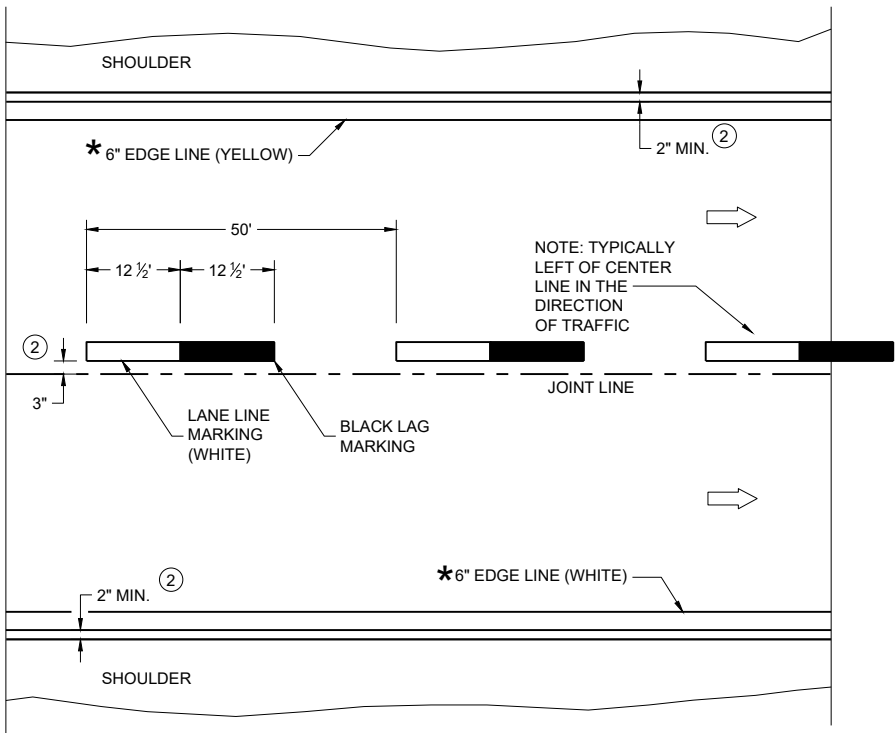
**SIGNING AND MARKING
FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

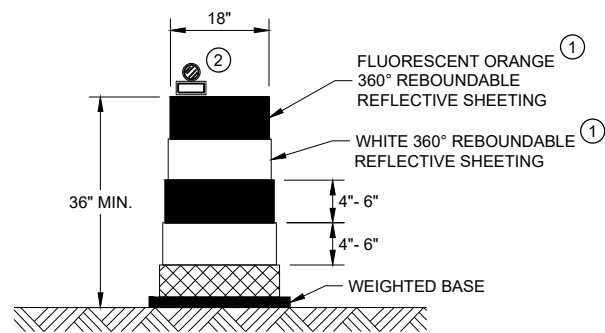
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

LEGEND

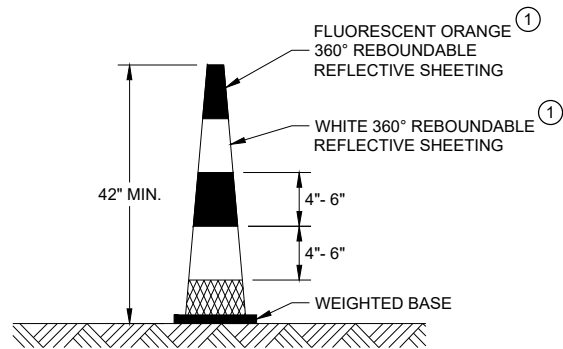
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

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



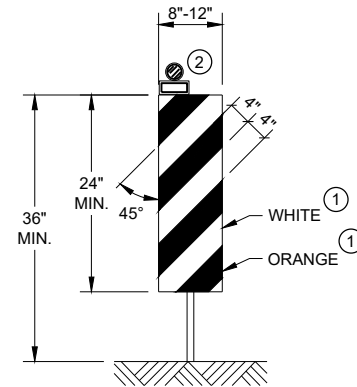
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



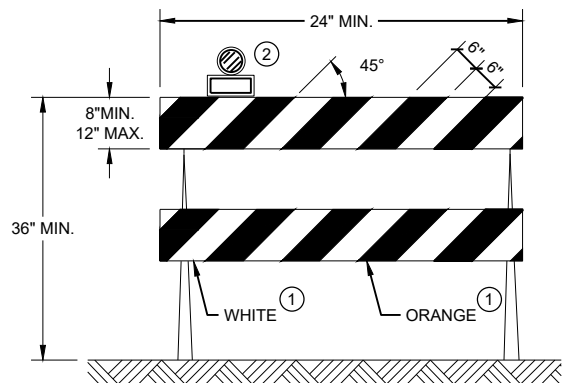
42" CONE

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



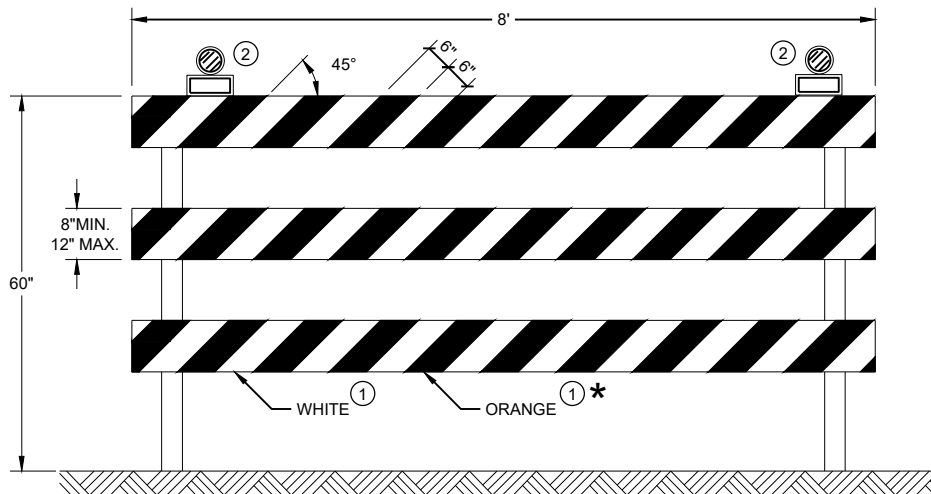
VERTICAL PANEL

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.

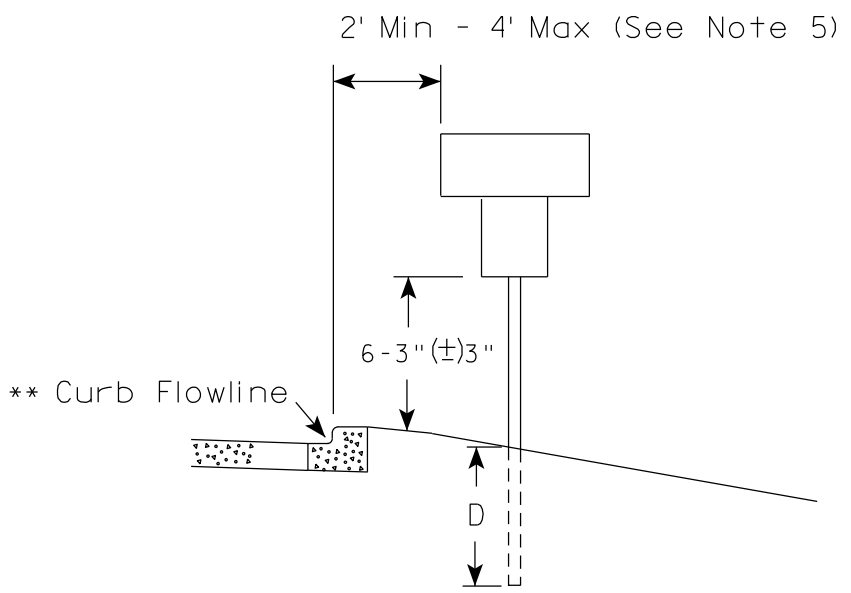
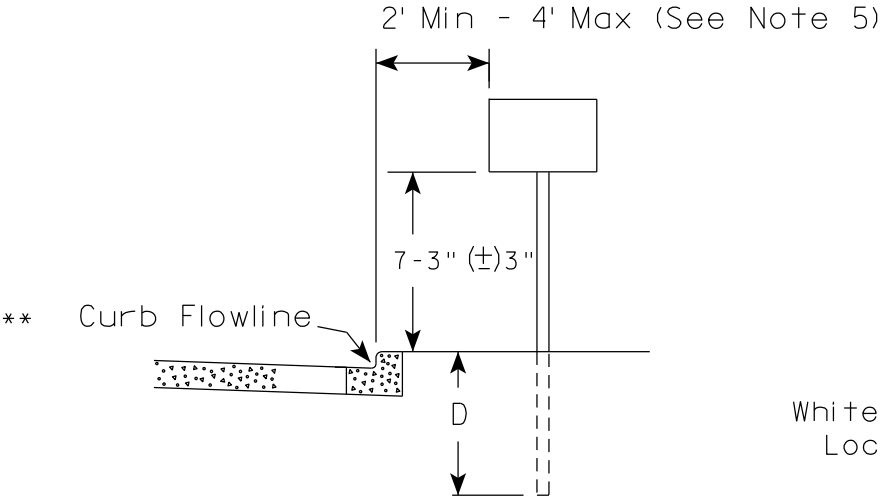
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

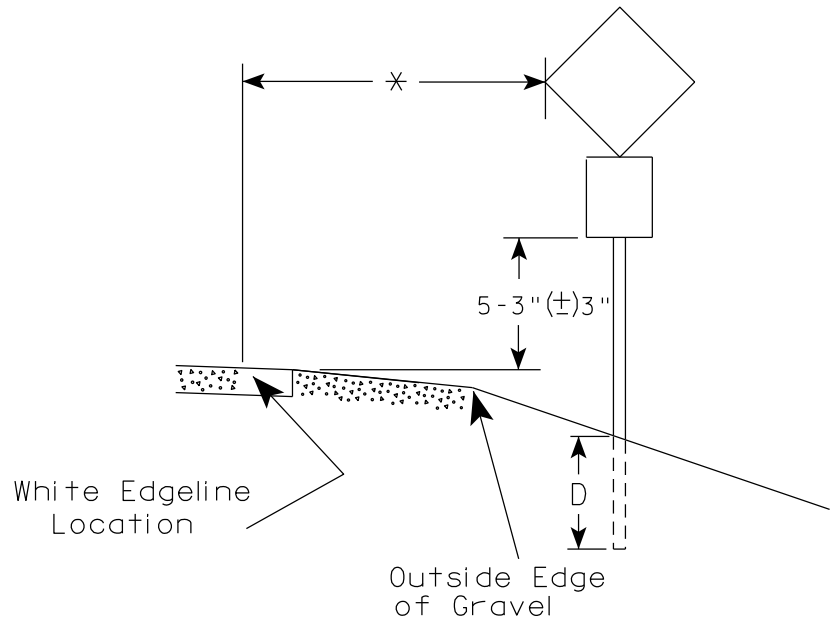
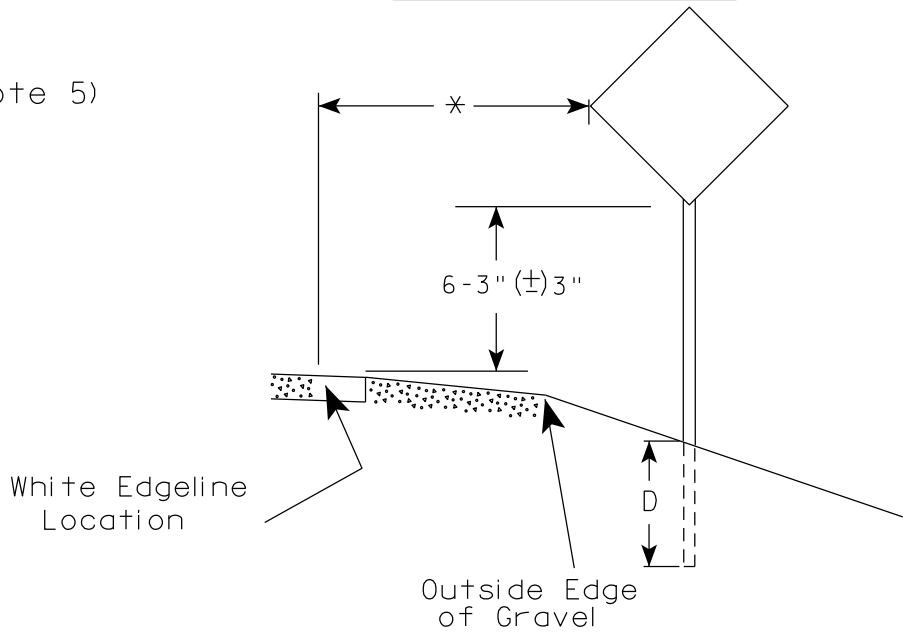
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



RURAL AREA (See Note 2)



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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 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".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the 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.

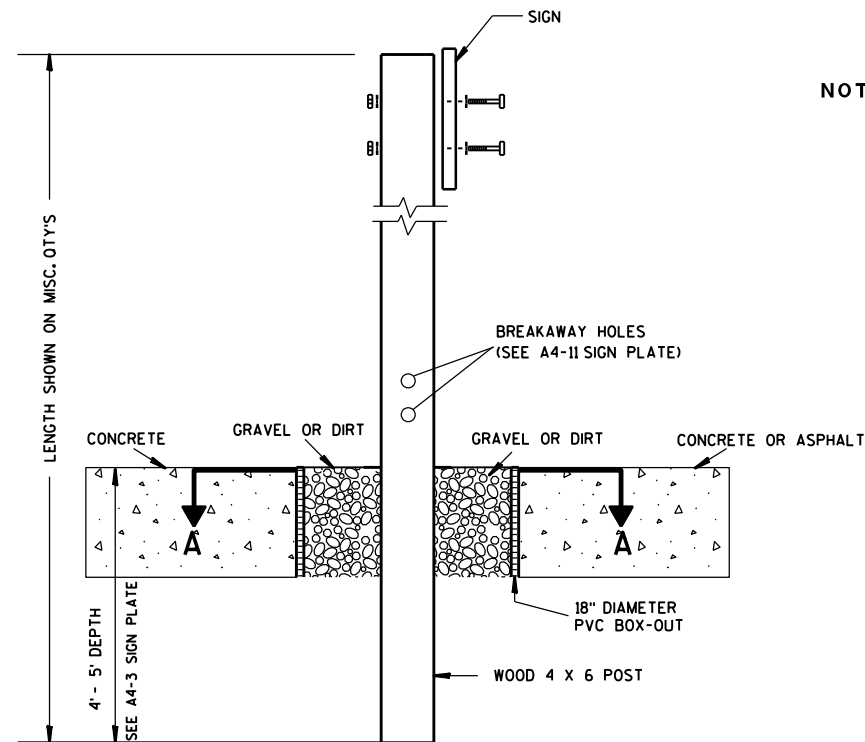
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

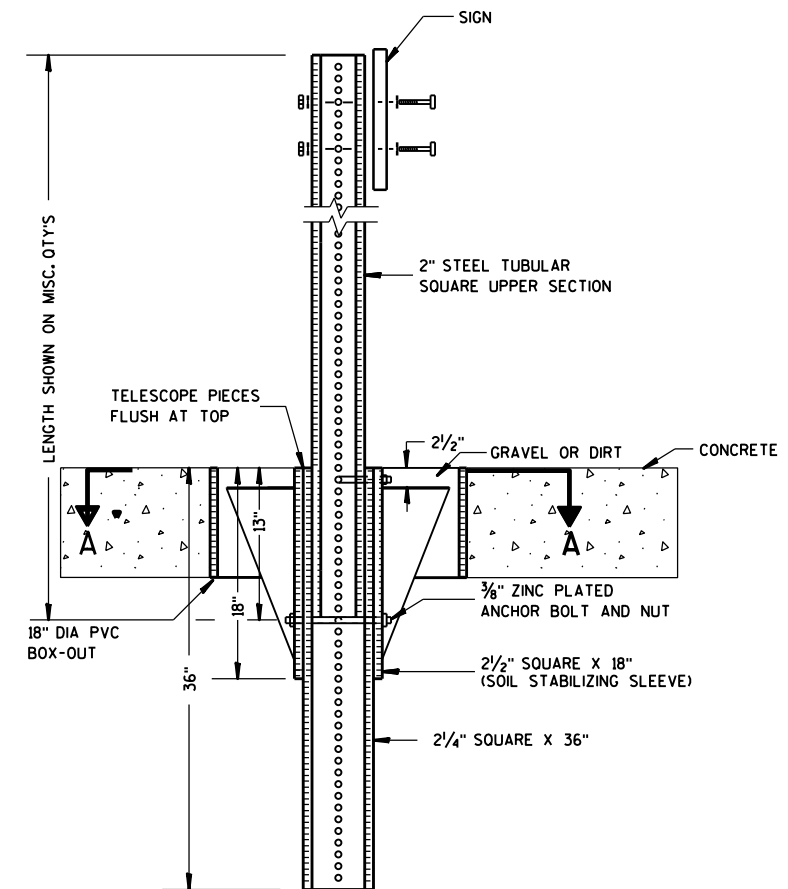
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

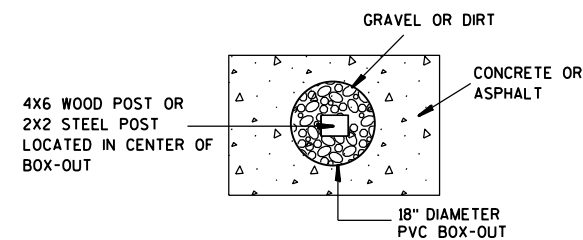
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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:

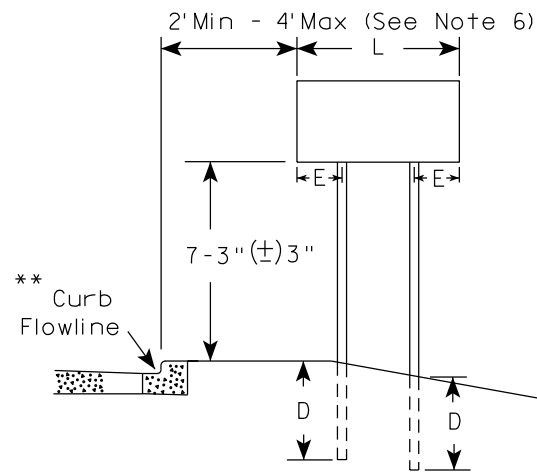
HWY:

COUNTY:

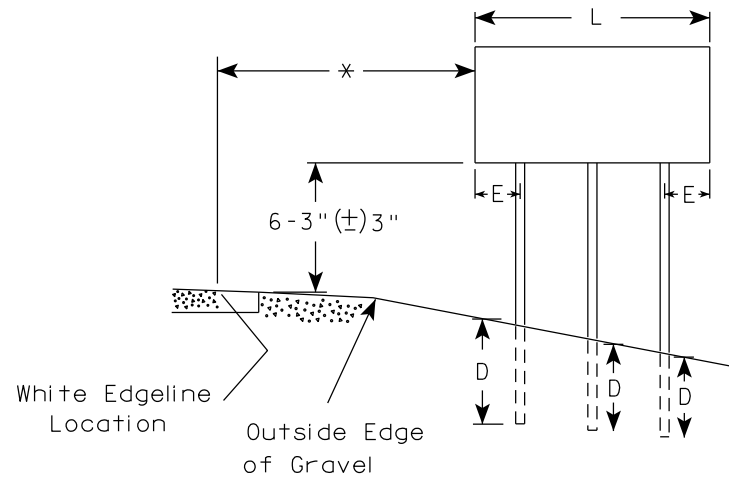
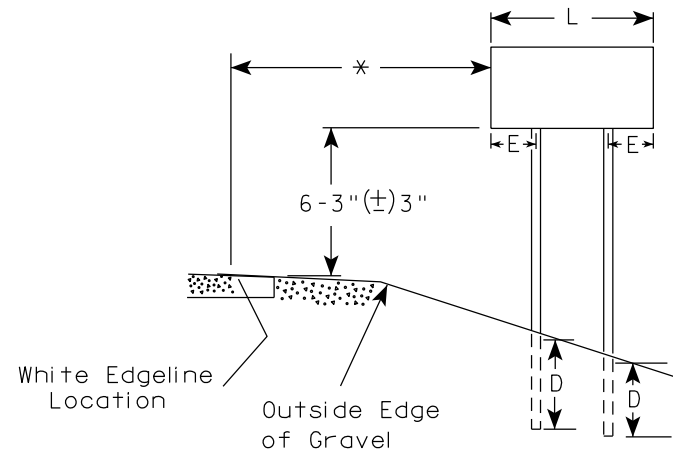
SHEET NO:

E

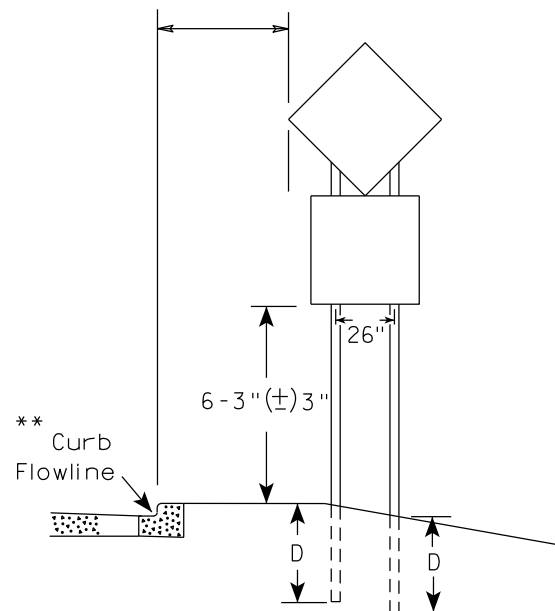
URBAN AREA



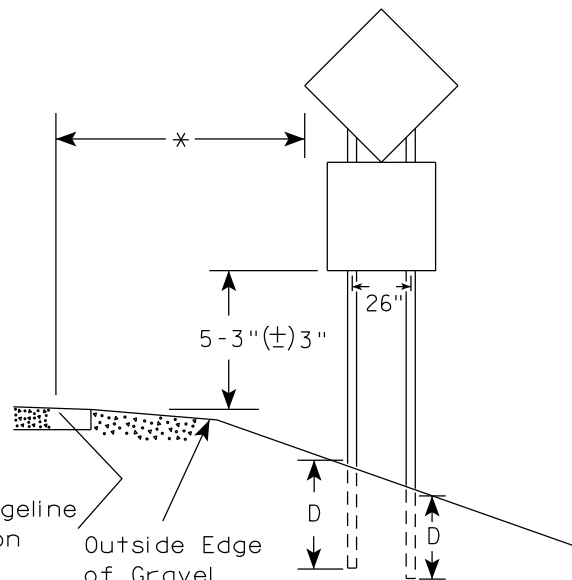
RURAL AREA (See Note 3)



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'

GENERAL NOTES

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

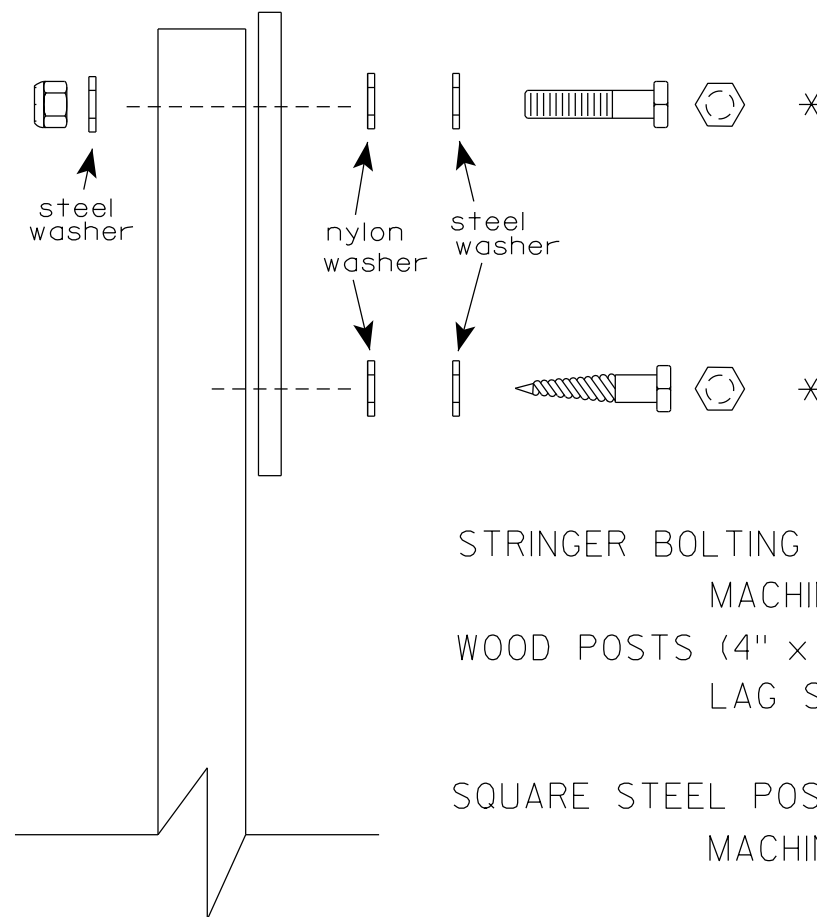
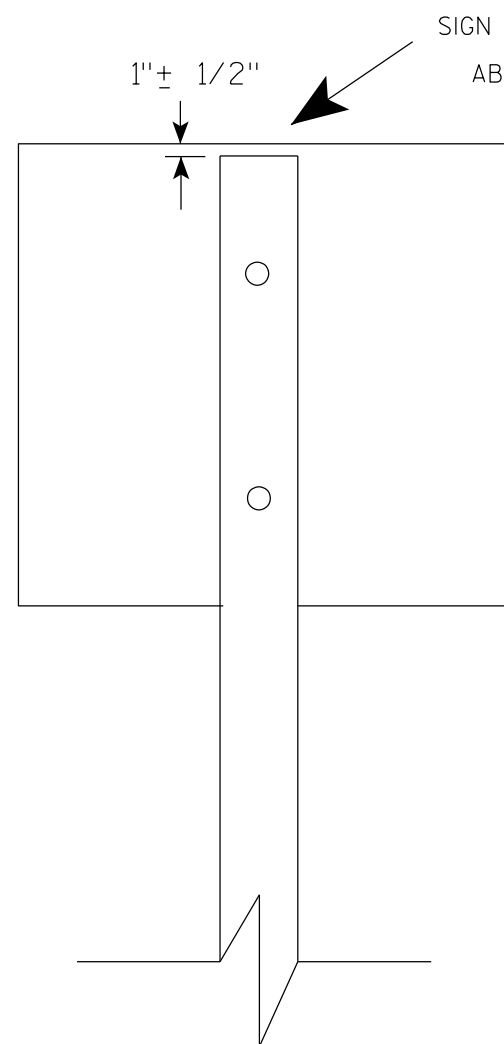
*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



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

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

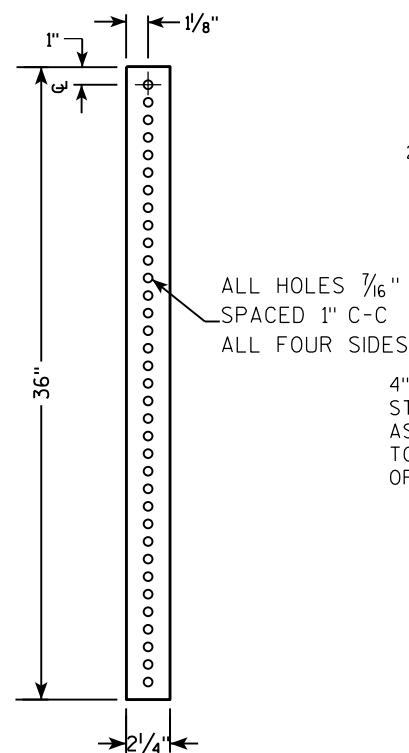
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

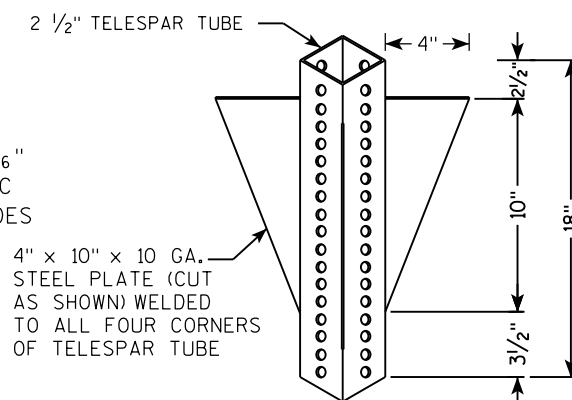
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

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



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

[illegible]

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

Side View Dimensions:

- Overall height: LENGTH SHOWN ON MISC. QTYS
- Top section height: 36"
- Section below top: 18"
- Section below that: 12"

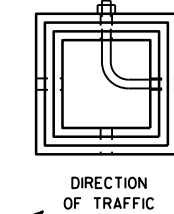
End View Dimensions:

- Top section width: 2"
- Section below top: 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- Bottom section width: 2 1/4" SQUARE X 36"

Labels and Specifications:

- SIGN
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- 2" STEEL TUBULAR SQUARE UPPER SECTION
- ALL HOLES 7/16" SPACED 1" C-C
- ALL FOUR SIDES
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
- TELESCOPE PIECES FLUSH AT TOP
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT

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:

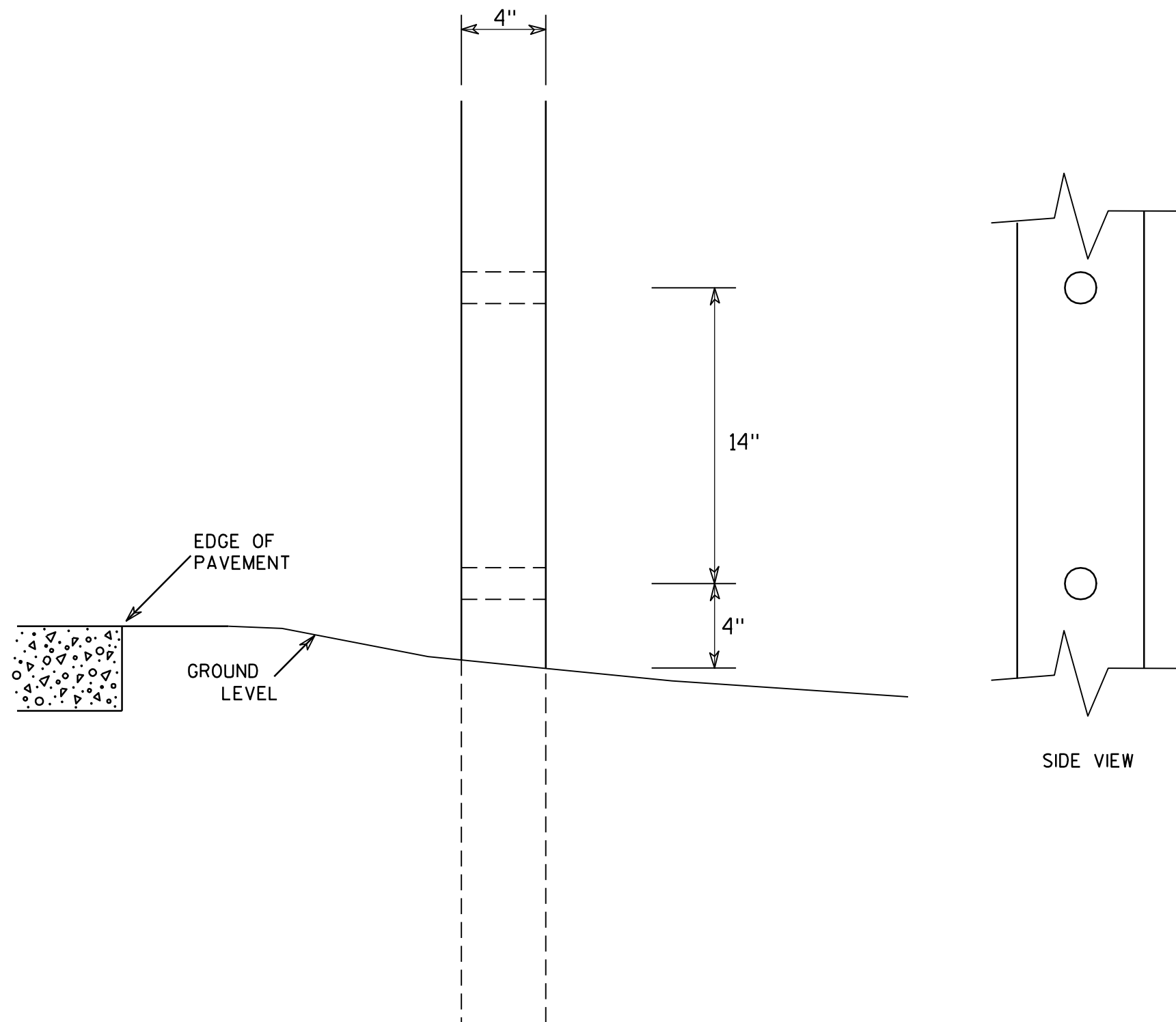
HWY:

COUNTY:

SHEET NO:

E

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

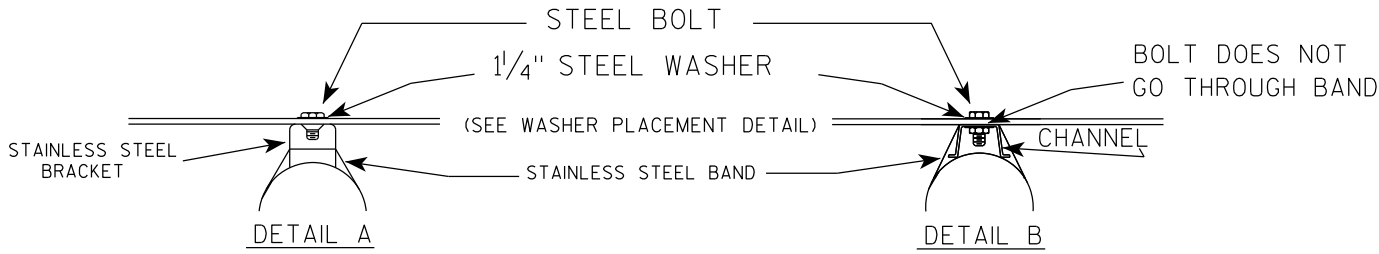
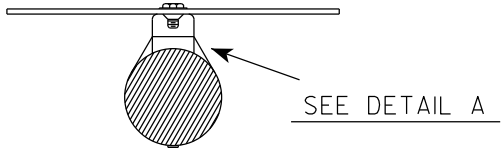
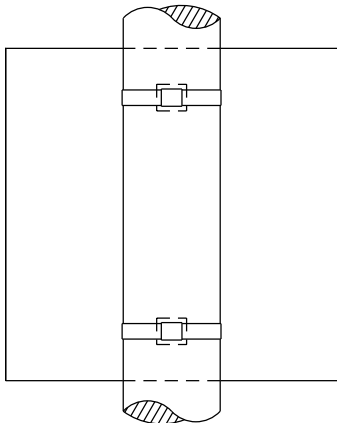
COUNTY:

SHEET NO:

E

BANDING

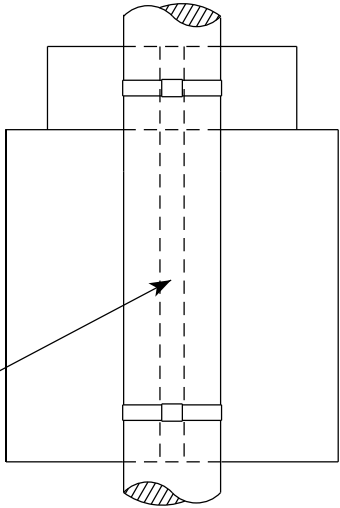
SINGLE SIGN



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

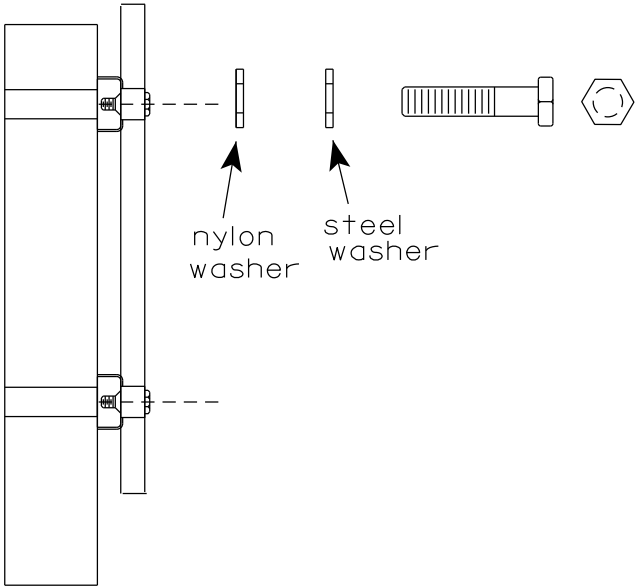
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT

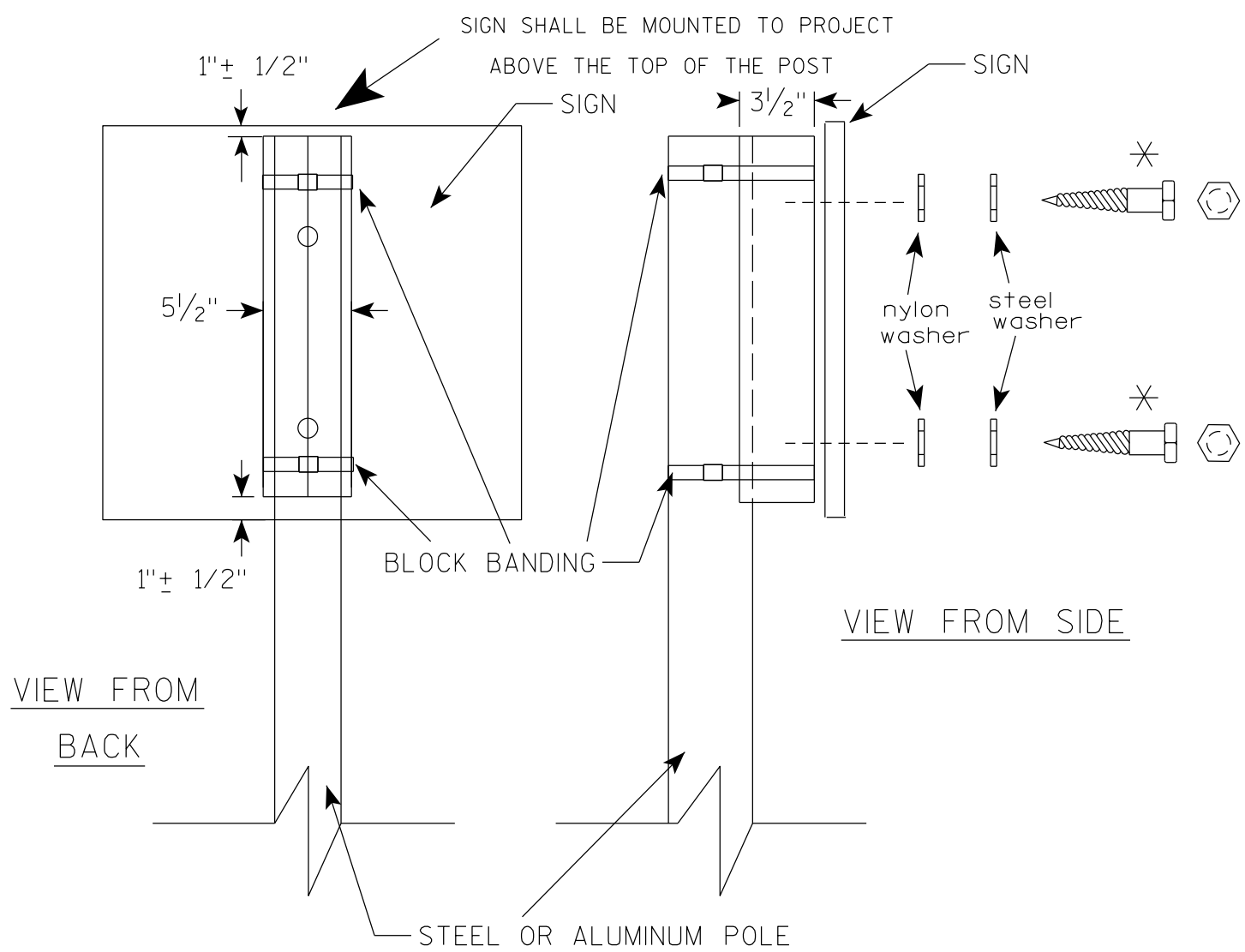


WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

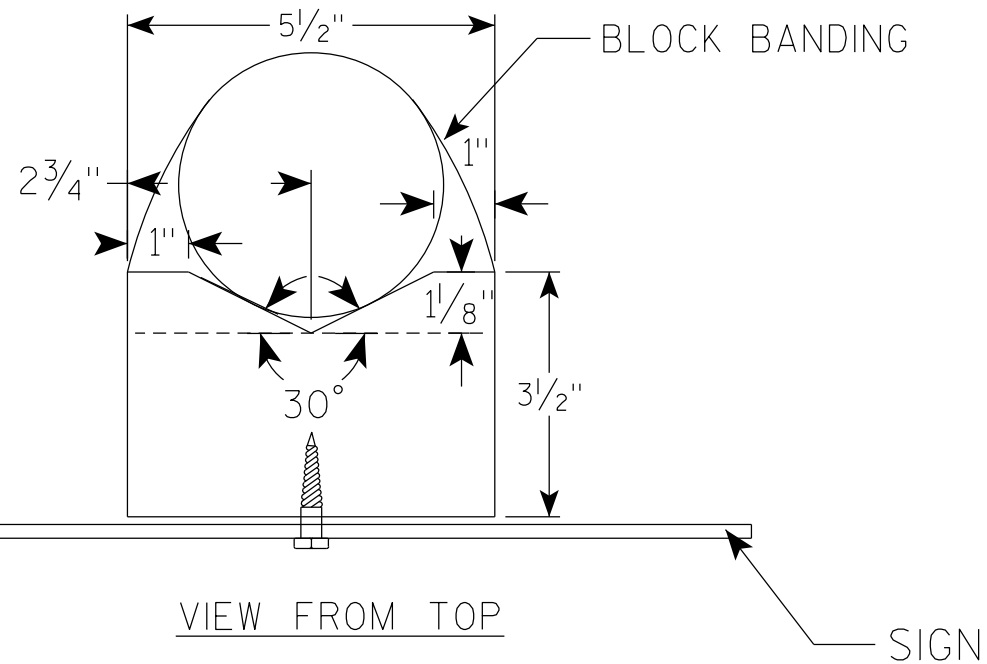
WISCONSIN DEPT OF TRANSPORTATION

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

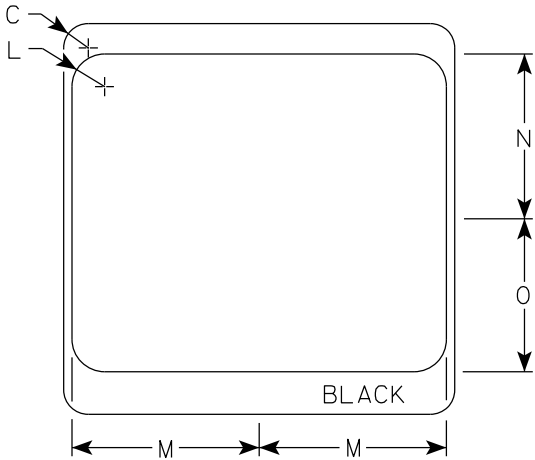
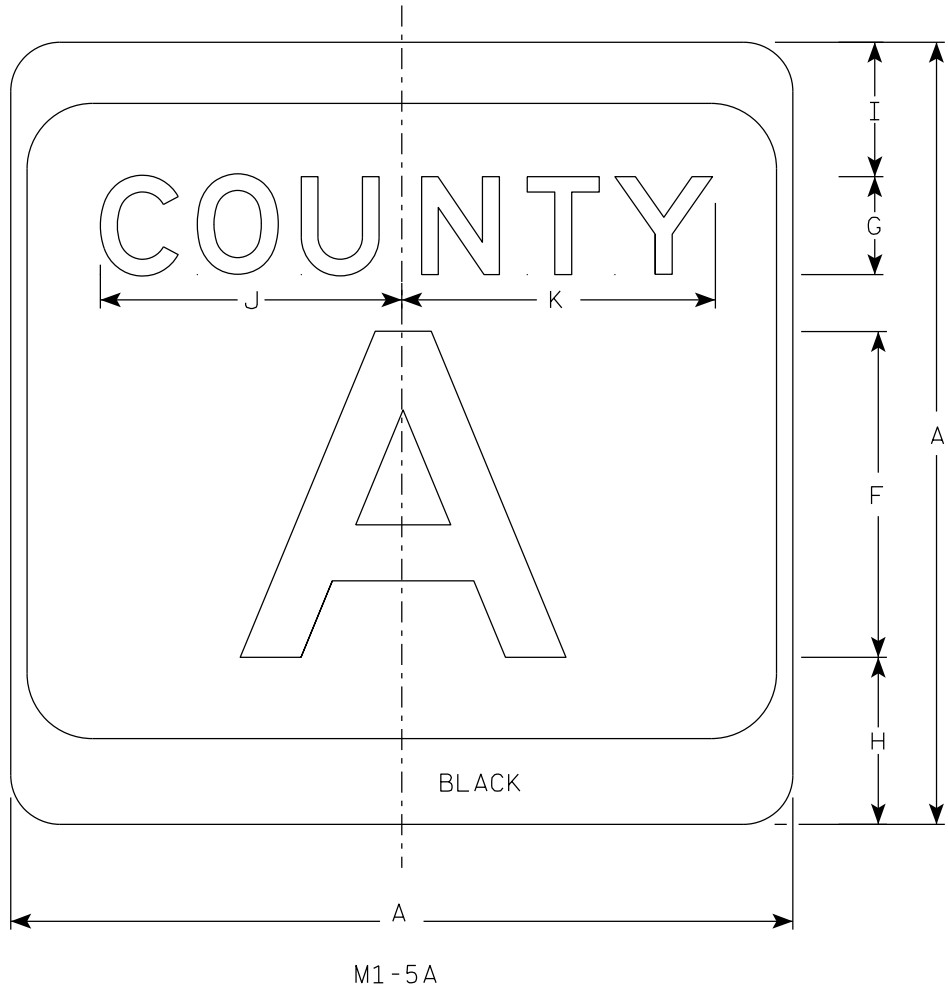
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO:

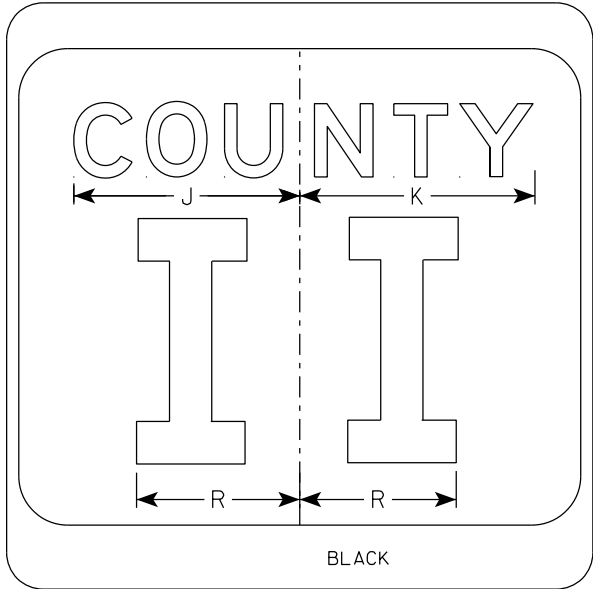
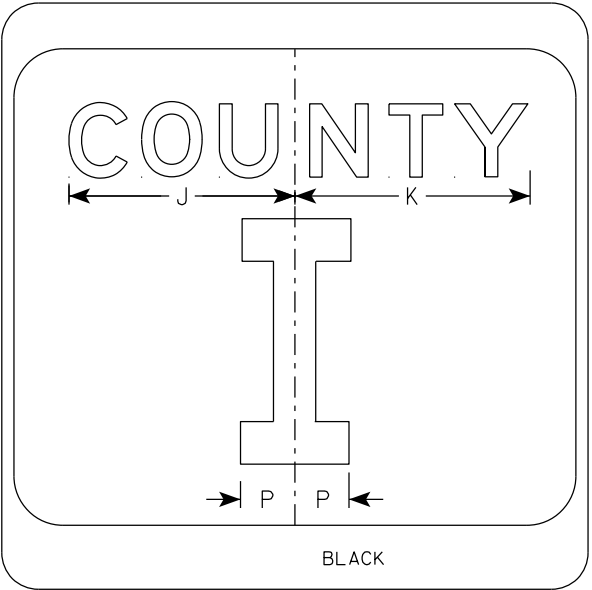
E

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White & Black
Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
Message Series D for 2 letters unless
message is too big then Series C.
Message Series C for 3 letters unless
message is too big then Series B.
5. Substitute appropriate letters & optically
center to achieve proper balance.



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																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

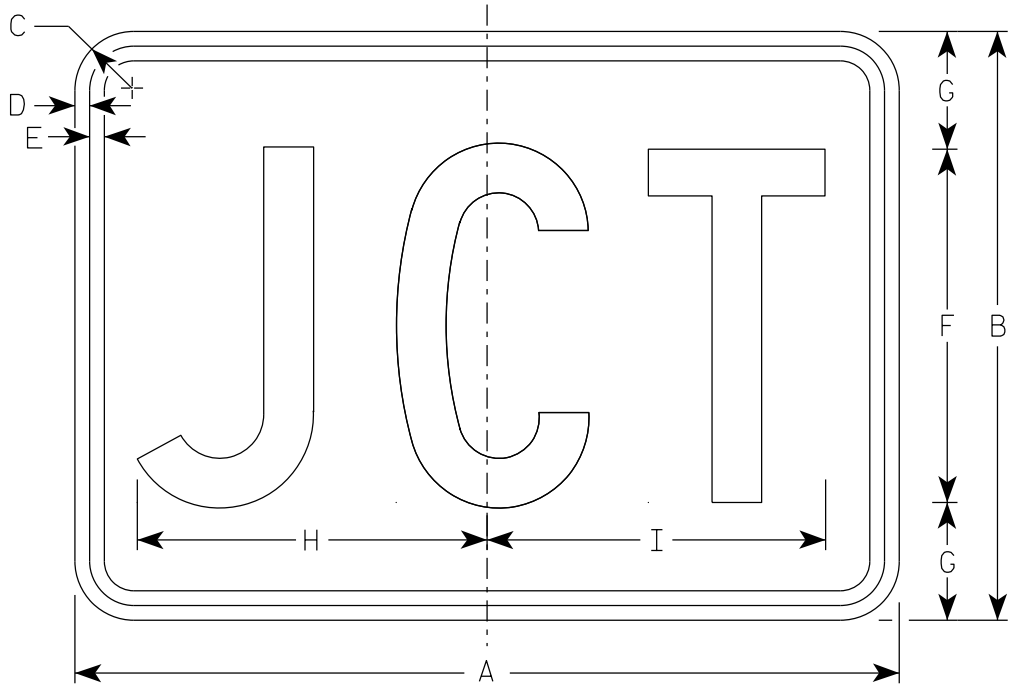
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

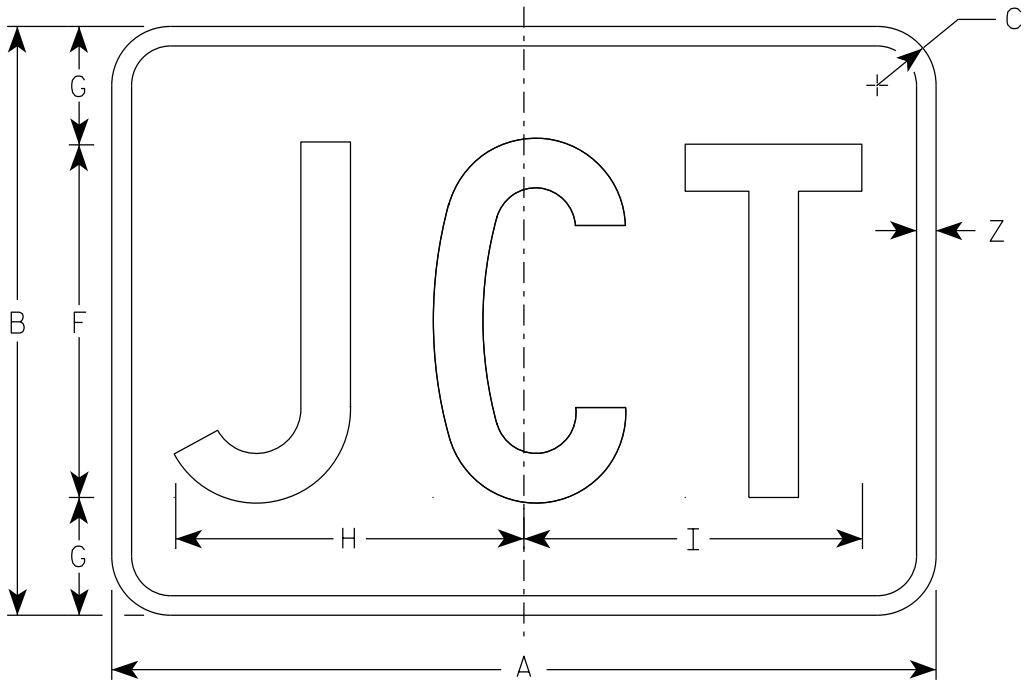
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - C
- 4. M2-1 Background - White
Message - Black
- MB2-1 Background - Blue
Message - White
- MK2-1 Background - Green
Message - White
- MM2-1 Background - White
Message - Green
- MN2-1 Background - Brown
Message - White
- MP2-1 Background - White
Message - Blue
- MR2-1 Background - Brown
Message - Yellow

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
2M	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
3	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
4	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
5	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
State Traffic Engineer

DATE 2/8/2023

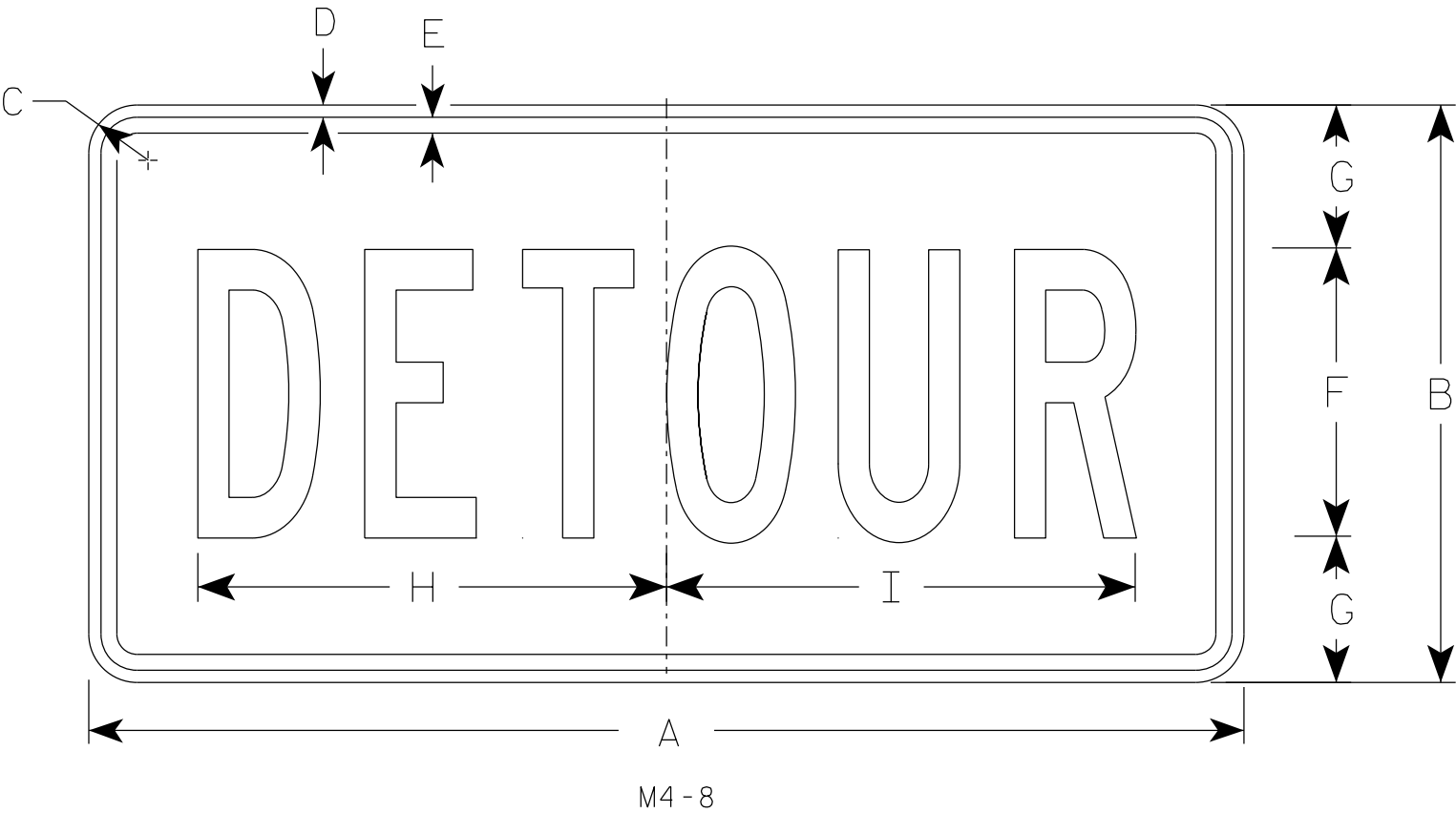
PLATE NO. M2-1.14

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - B
- 4. 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.



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																											
2	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

STANDARD SIGN

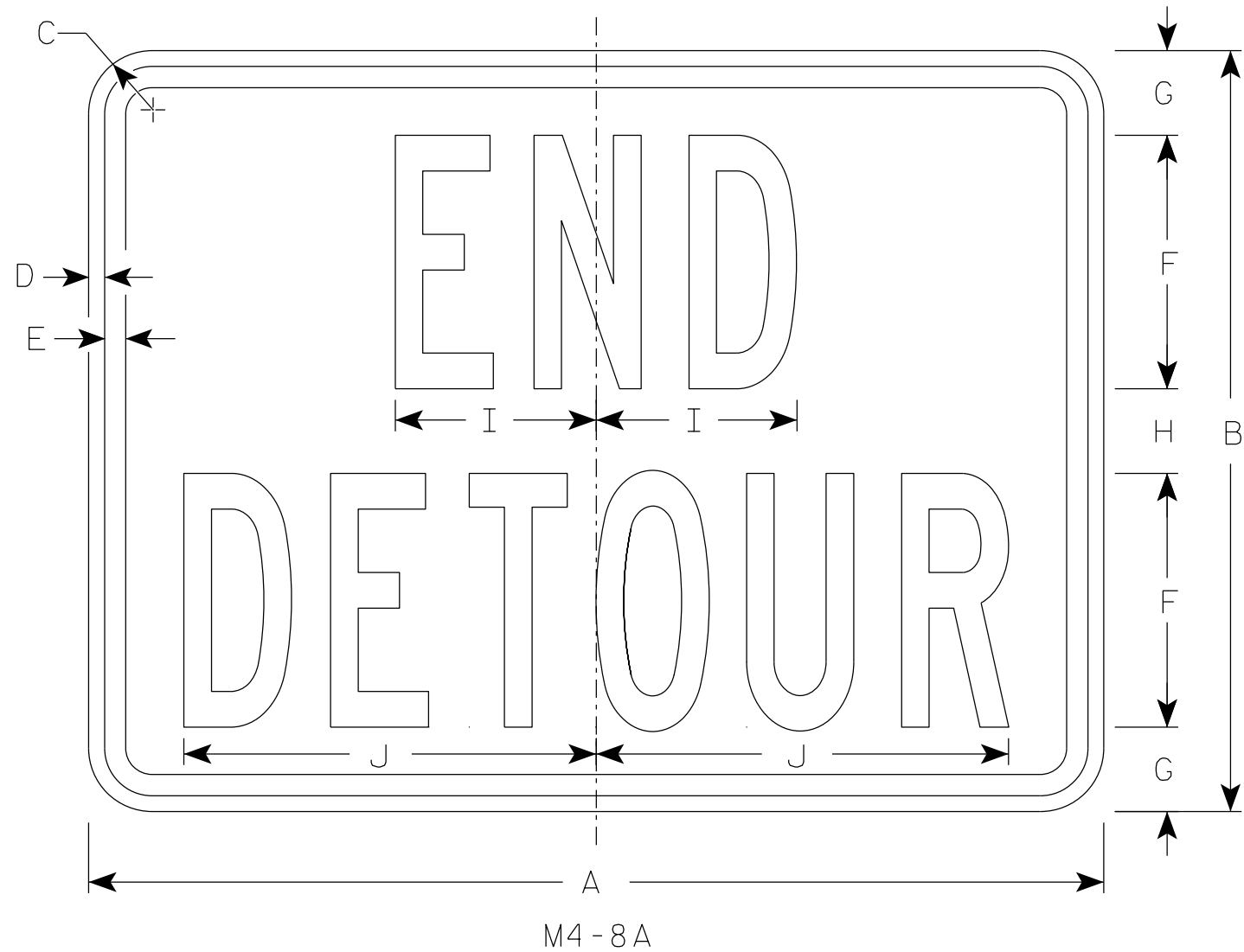
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - B
4. 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.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
2M	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
5	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0

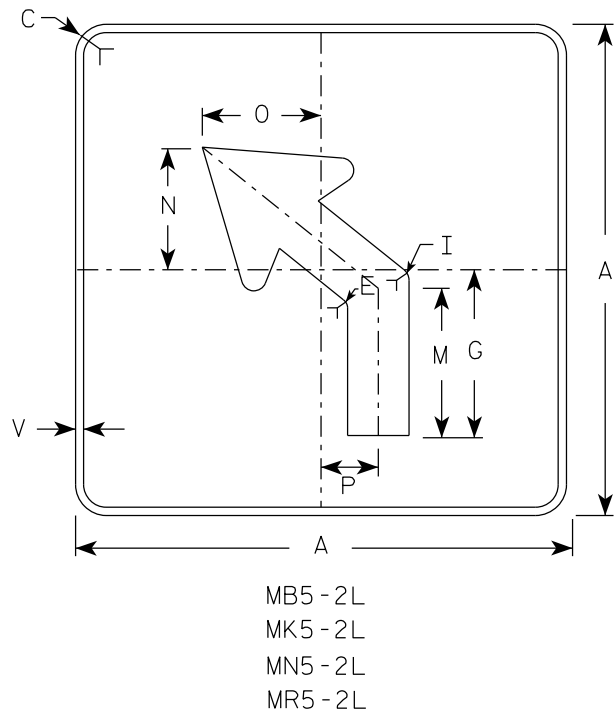
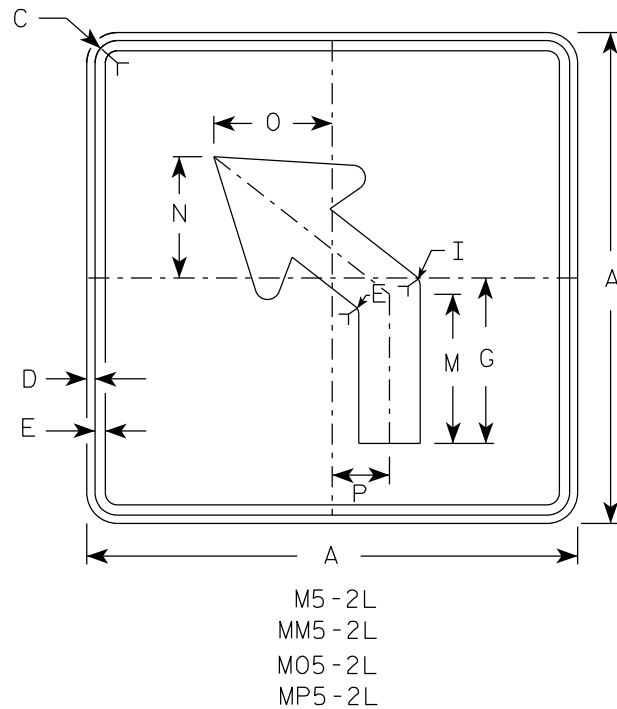
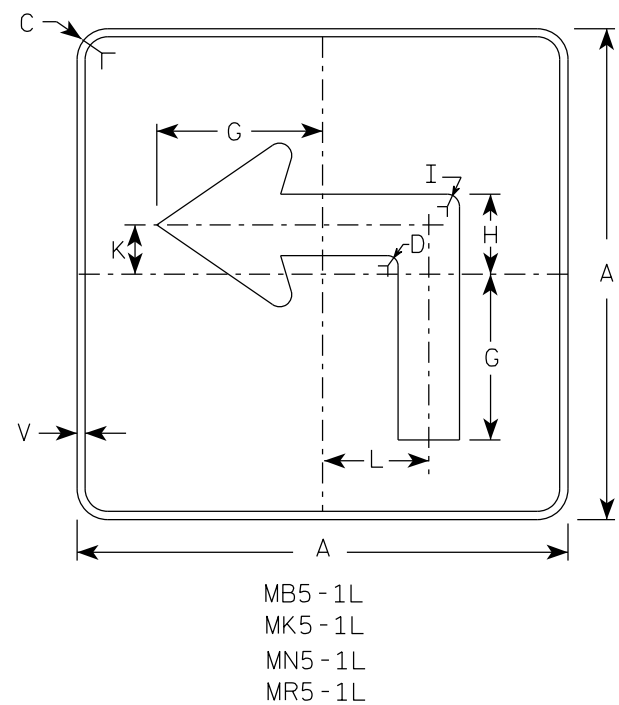
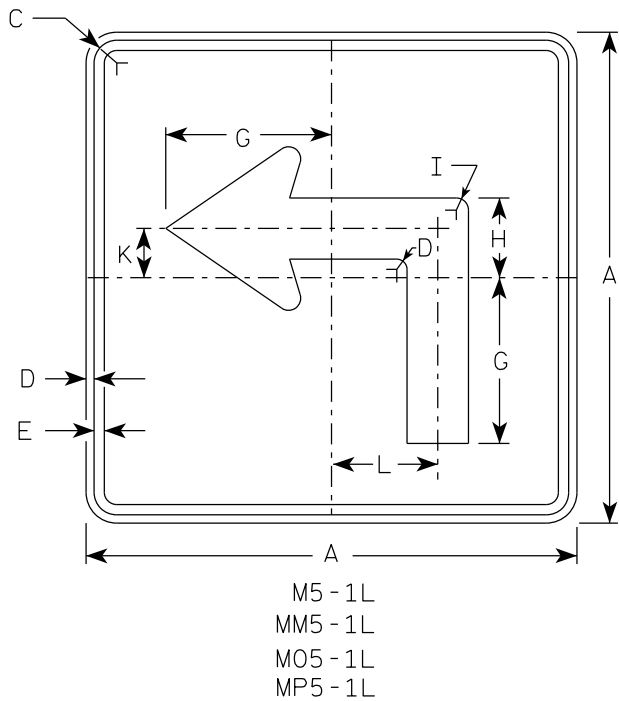
STANDARD SIGN

M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

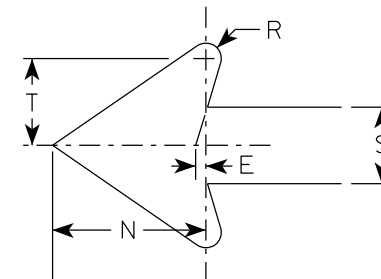
DATE 2/9/2023 PLATE NO. M4-8A.4



NOTES

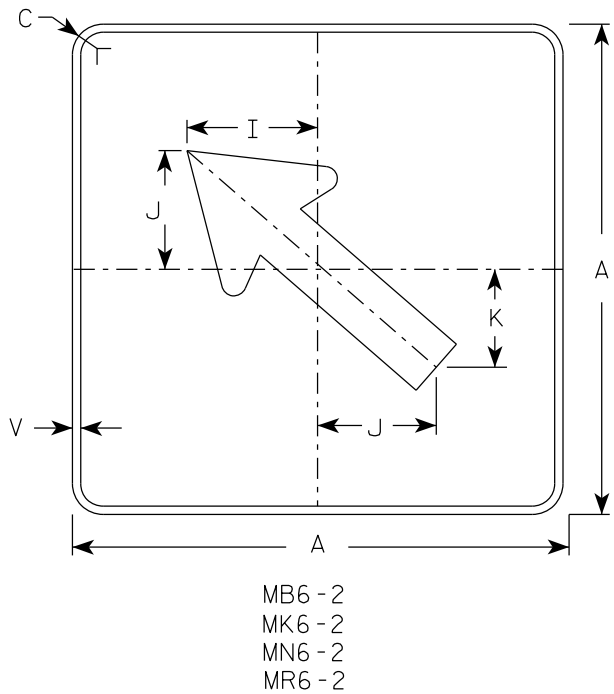
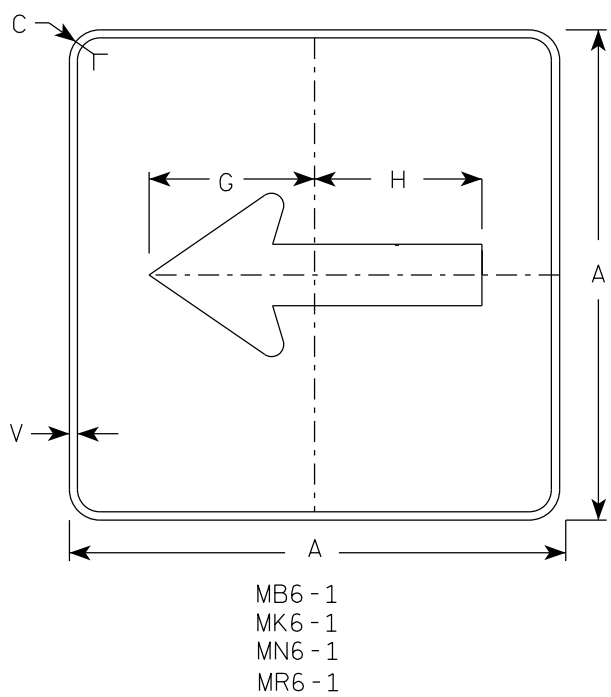
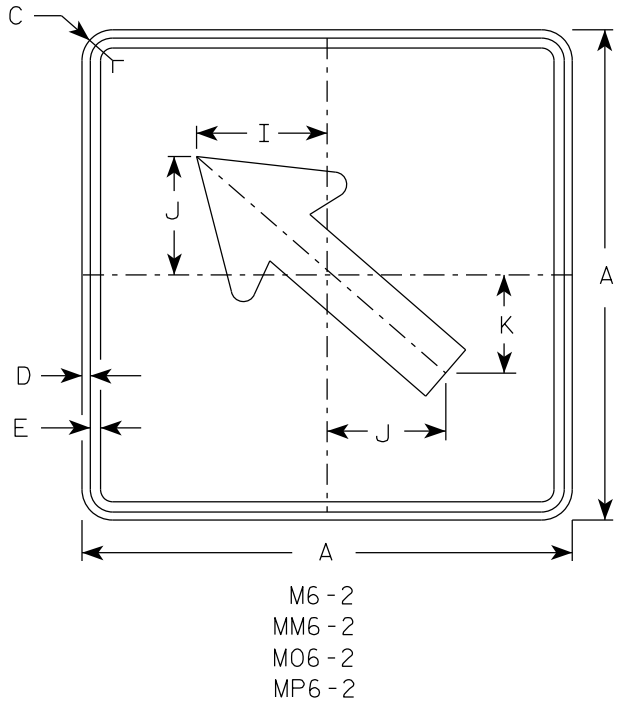
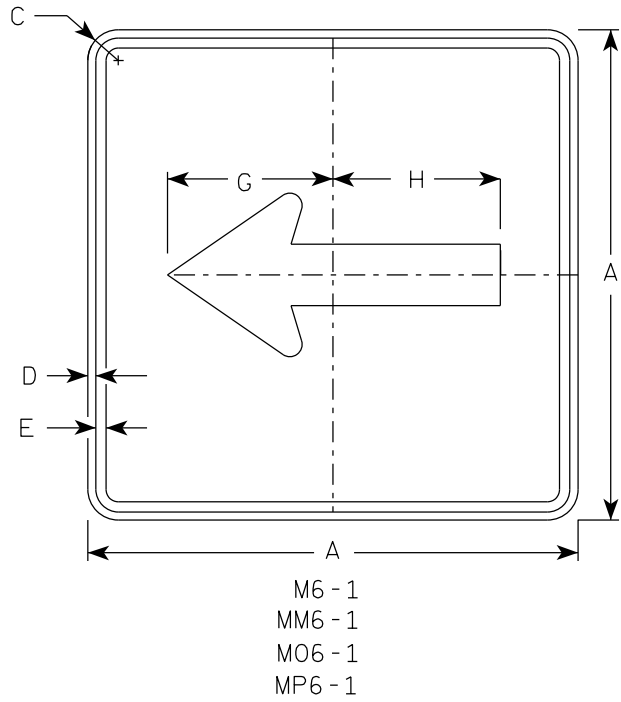
- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | | |
|-----------|-------|---|
| M5-1 and | M5-2 | Background - White |
| | | Message - Black |
| MB5-1 and | MB5-2 | Background - Blue |
| | | Message - White |
| MK5-1 and | MK5-2 | Background - Green |
| | | Message - White |
| MM5-1 and | MM5-2 | Background - White |
| | | Message - Green |
| MN5-1 and | MN5-2 | Background - Brown |
| | | Message - White |
| M05-1 and | M05-2 | Background - Orange - Type F Reflective |
| | | Message - Black |
| MP5-1 and | MP5-2 | Background - White |
| | | Message - Blue |
| MR5-1 and | MR5-2 | Background - Brown |
| | | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL

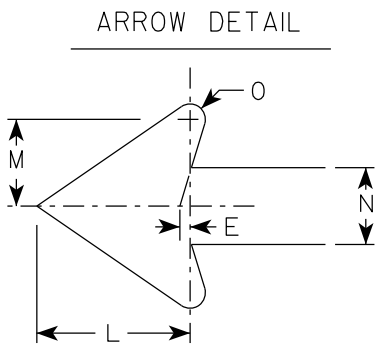


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
4	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
5	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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- NOTES
- Signs are Type II - Type H Reflective except as Shown
 - Color:
Background - See note 4
Message - See note 4
 - 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.
 - M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow



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	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2						3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2						3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2						6.25
4	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2						6.25
5	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2						6.25

PROJECT NO:

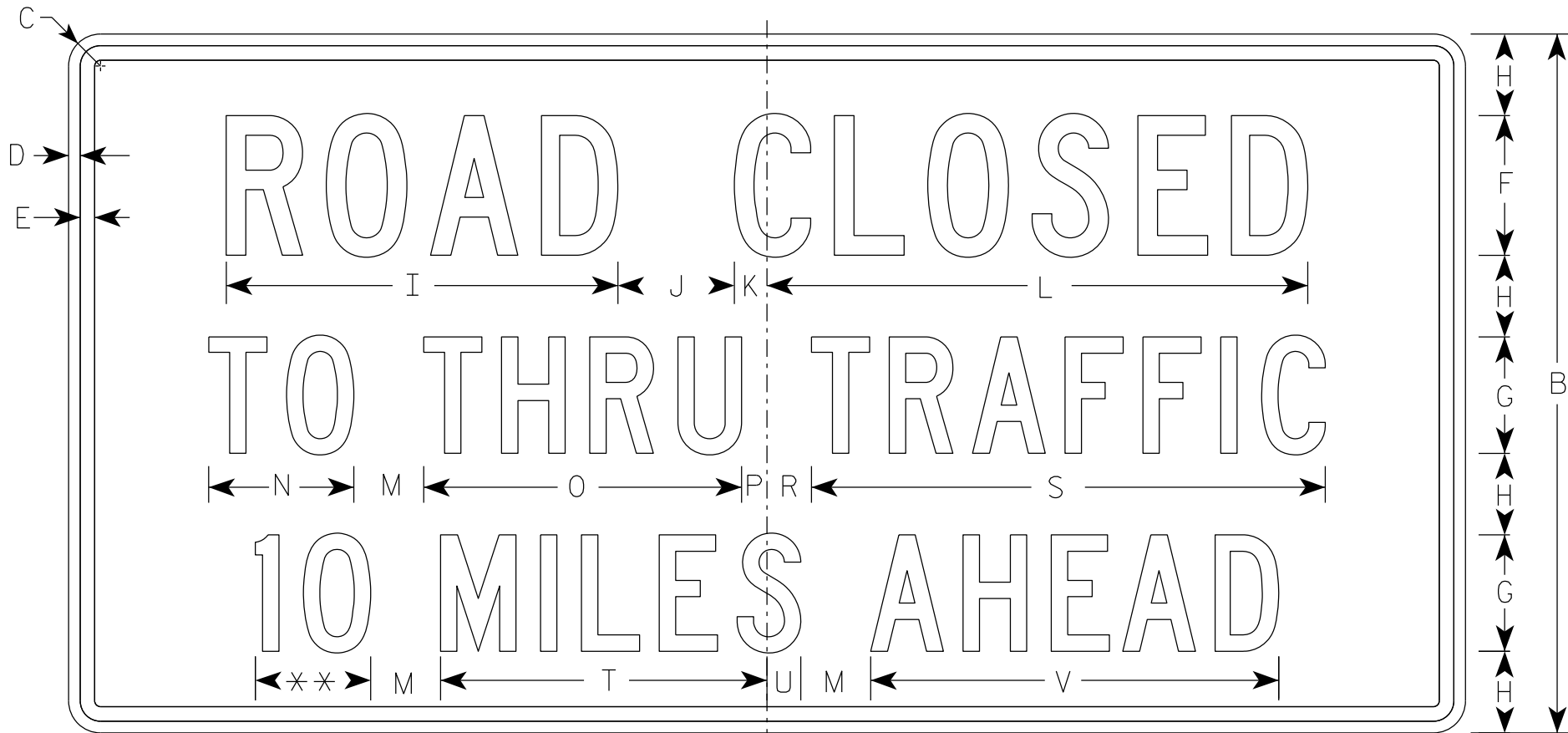
HWY:

COUNTY:

SHEET NO:

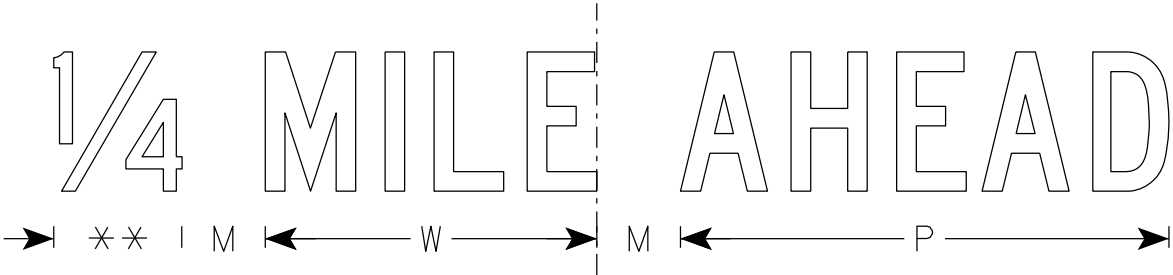
E

7



R11-3

** See Note 5



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	36	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

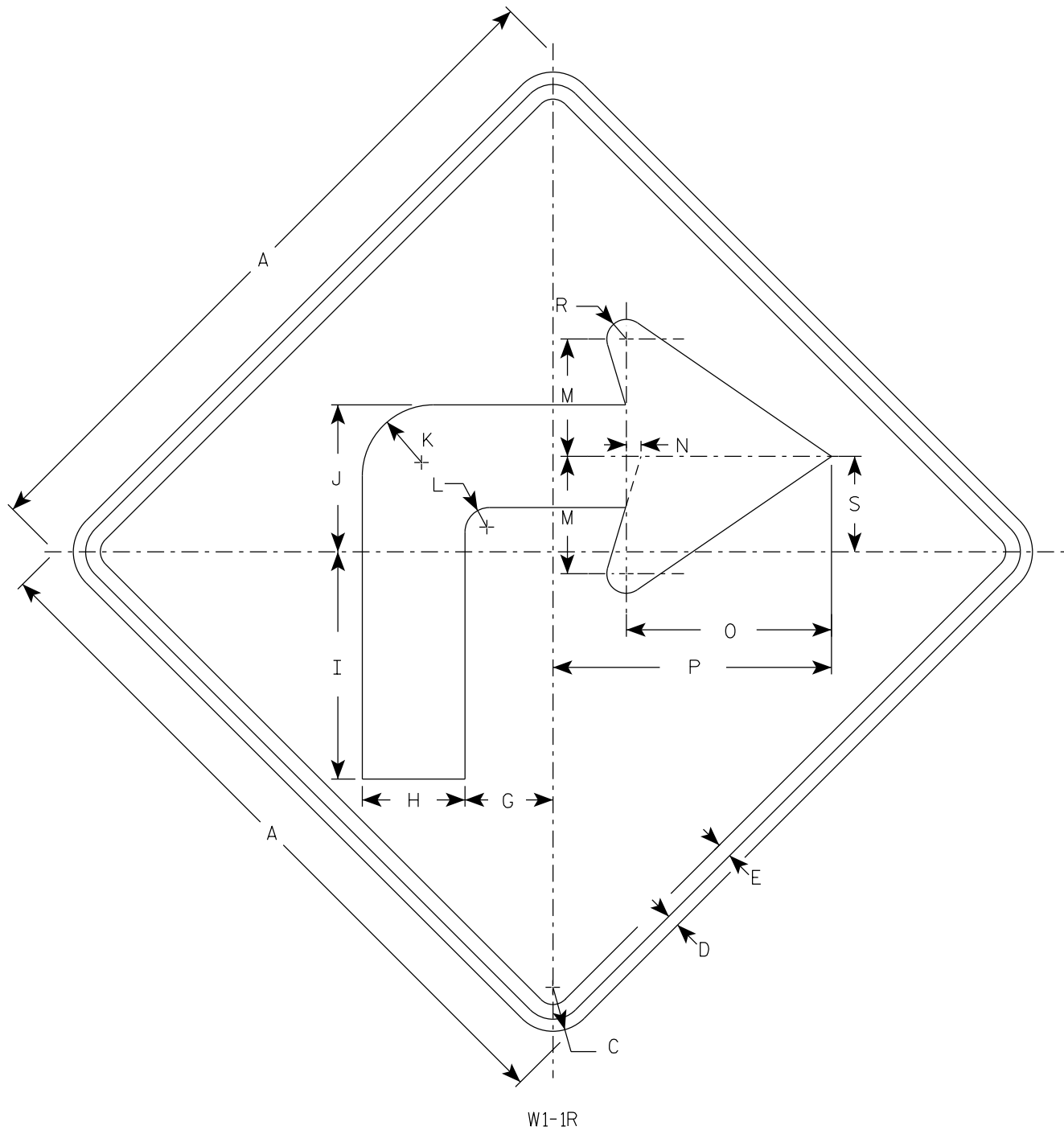
NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - C
4. 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.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

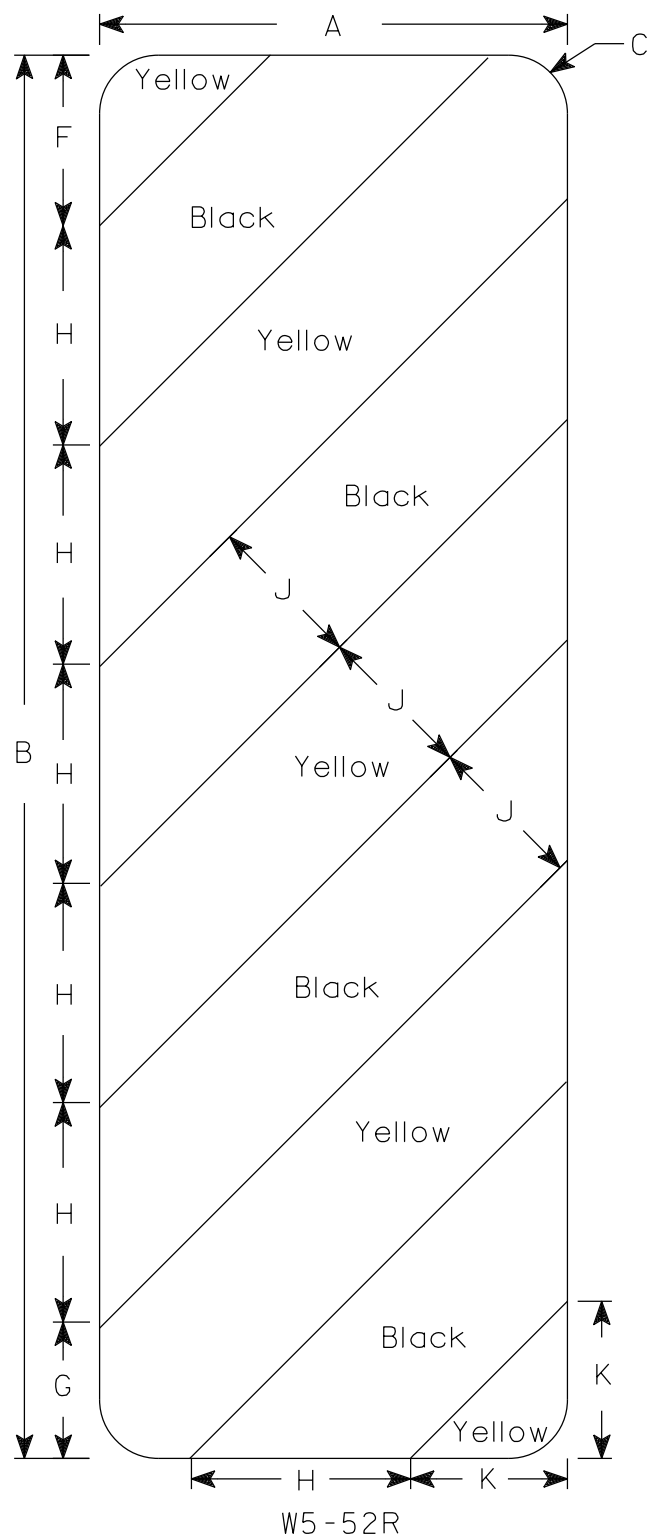
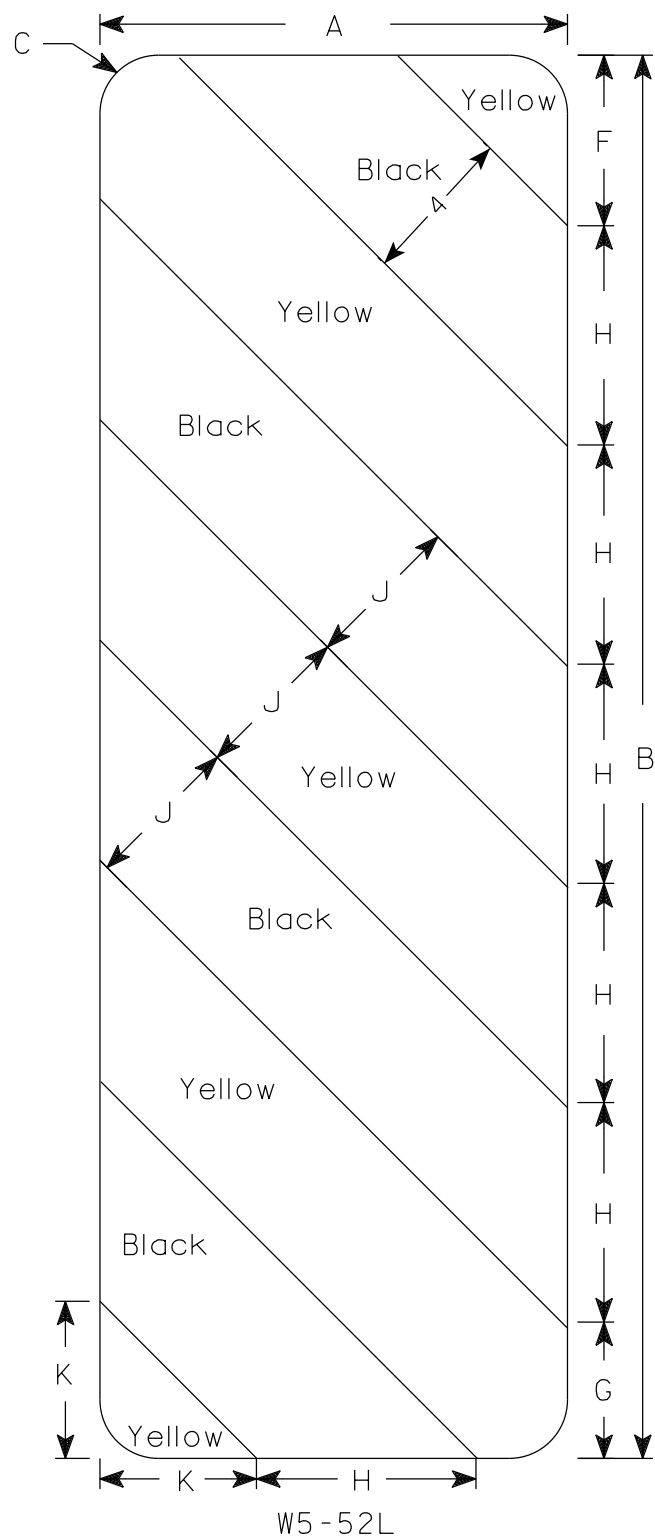
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		3	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		3	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/22/2023 PLATE NO. W1-1.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:		E
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NOTES

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

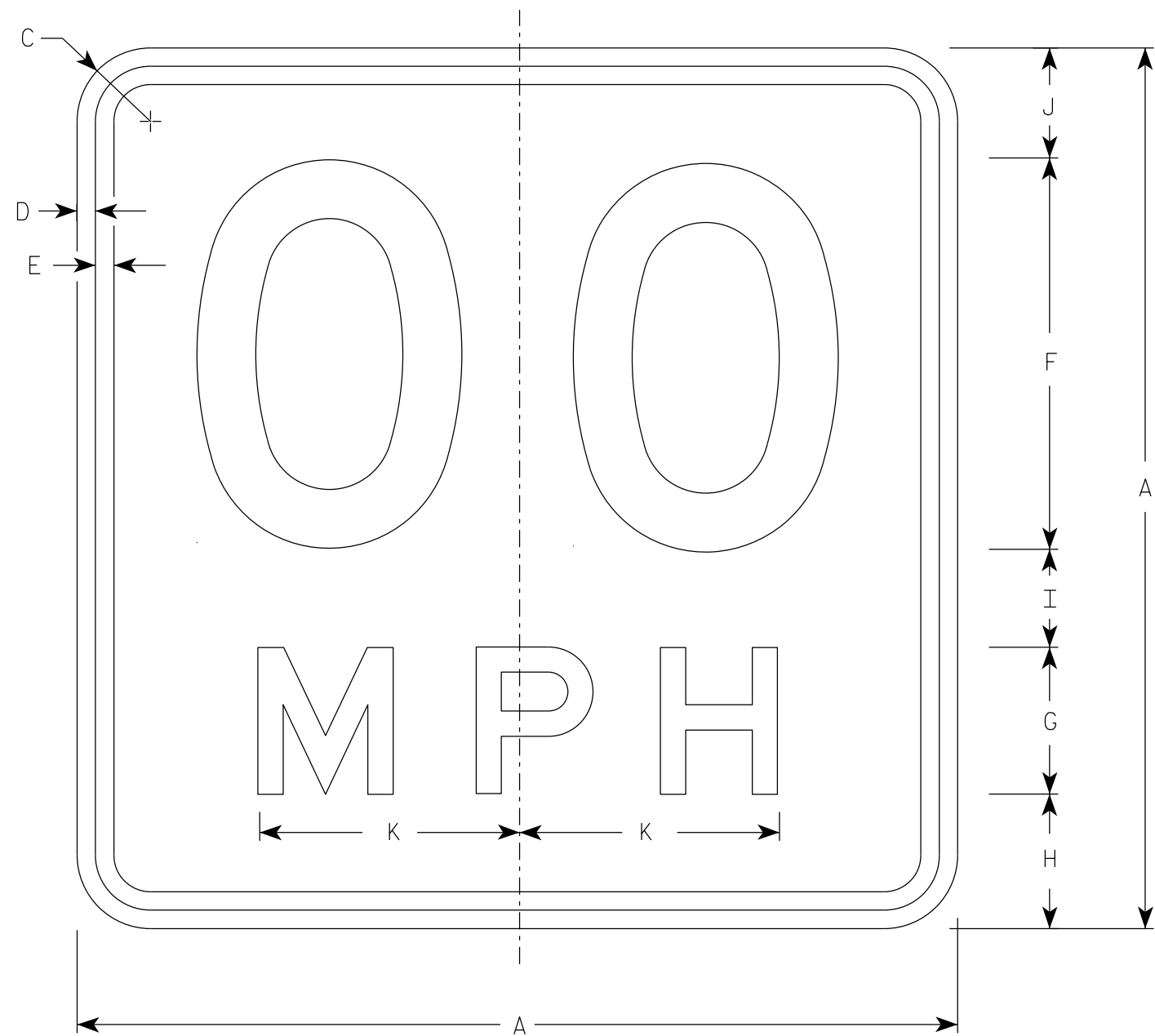
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4													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



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
Line 2 is Series E

W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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.
✱ 2S	1	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
	2	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
✱ 2M	3	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
	4	24		1 1/2	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8															4.00
	5	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8															9.00
	6	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8															9.00

STANDARD SIGN W13-1

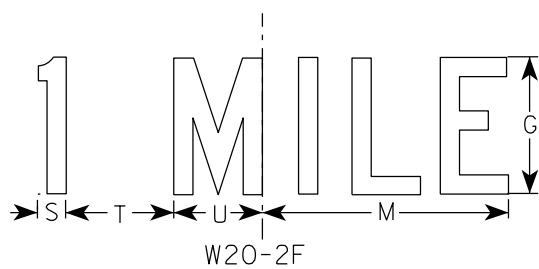
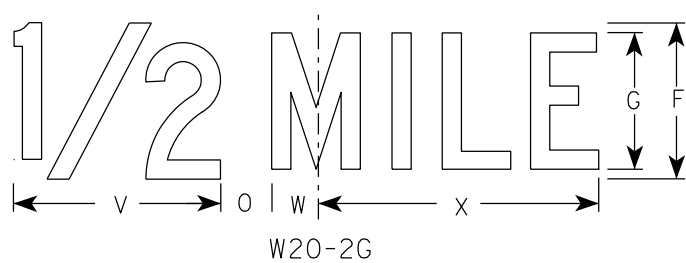
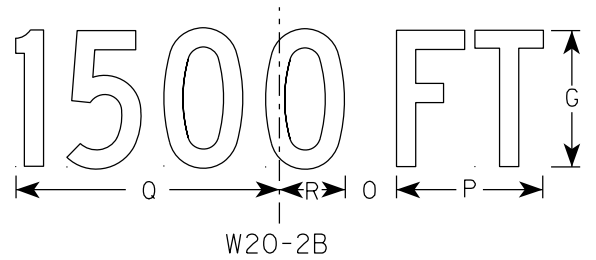
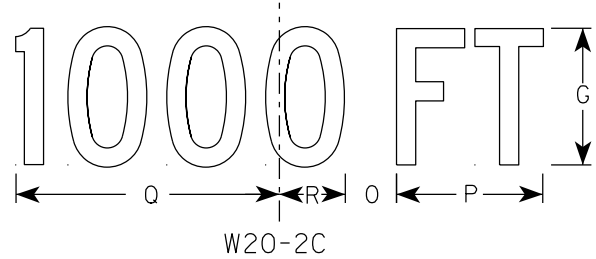
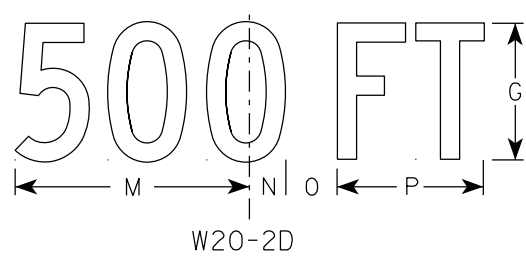
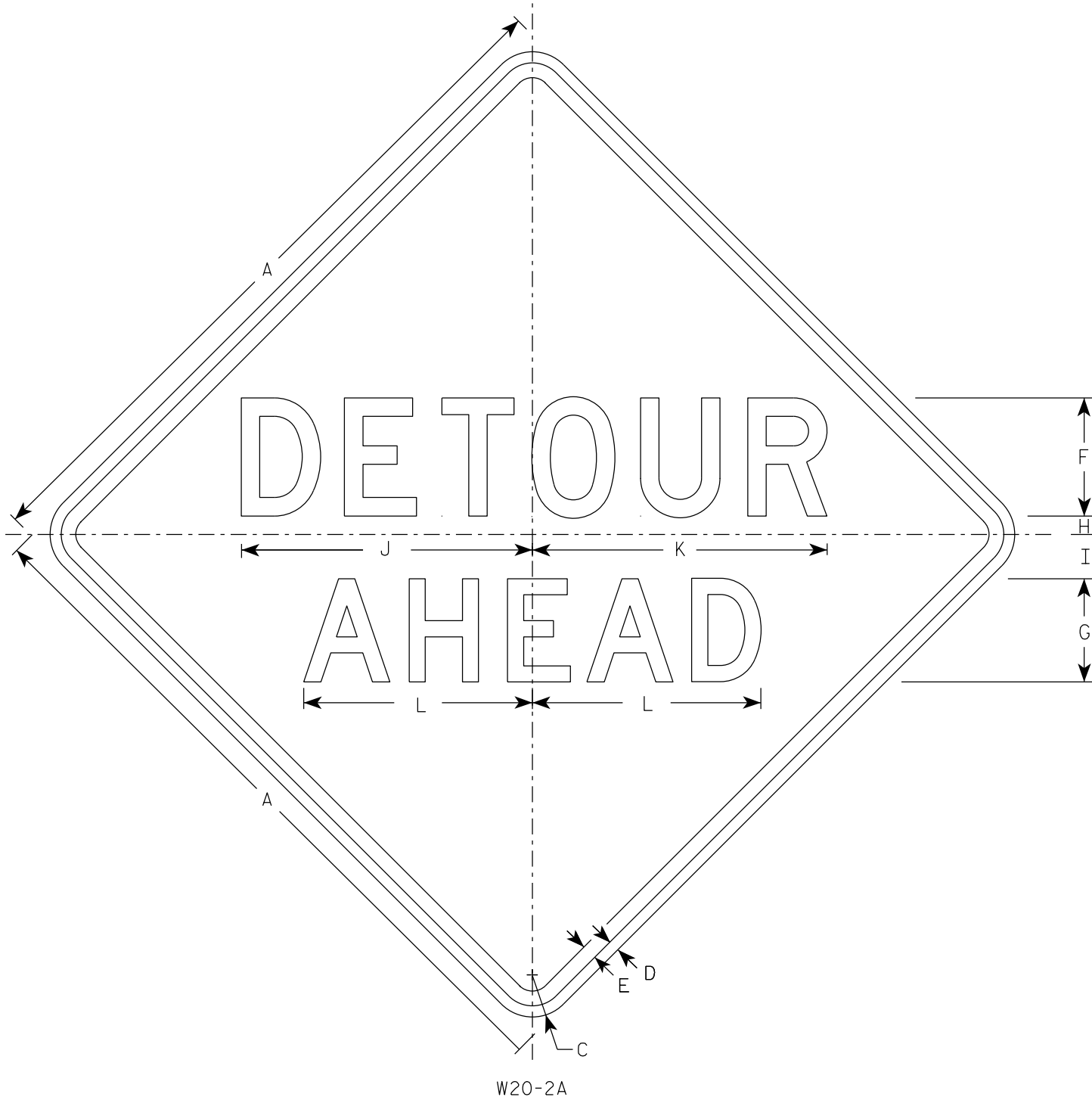
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W13-1.17

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W131.dgn PLOT DATE : 8-Jan 2024 11:07 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : \$\$.....plotscale.....\$\$ WISDOT/CADDs SHEET 42



NOTES

- Sign is Type II - Type F Reflective
- Color:
Background - Orange
Message - Black
- Message Series - See note 5
- 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.
- Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

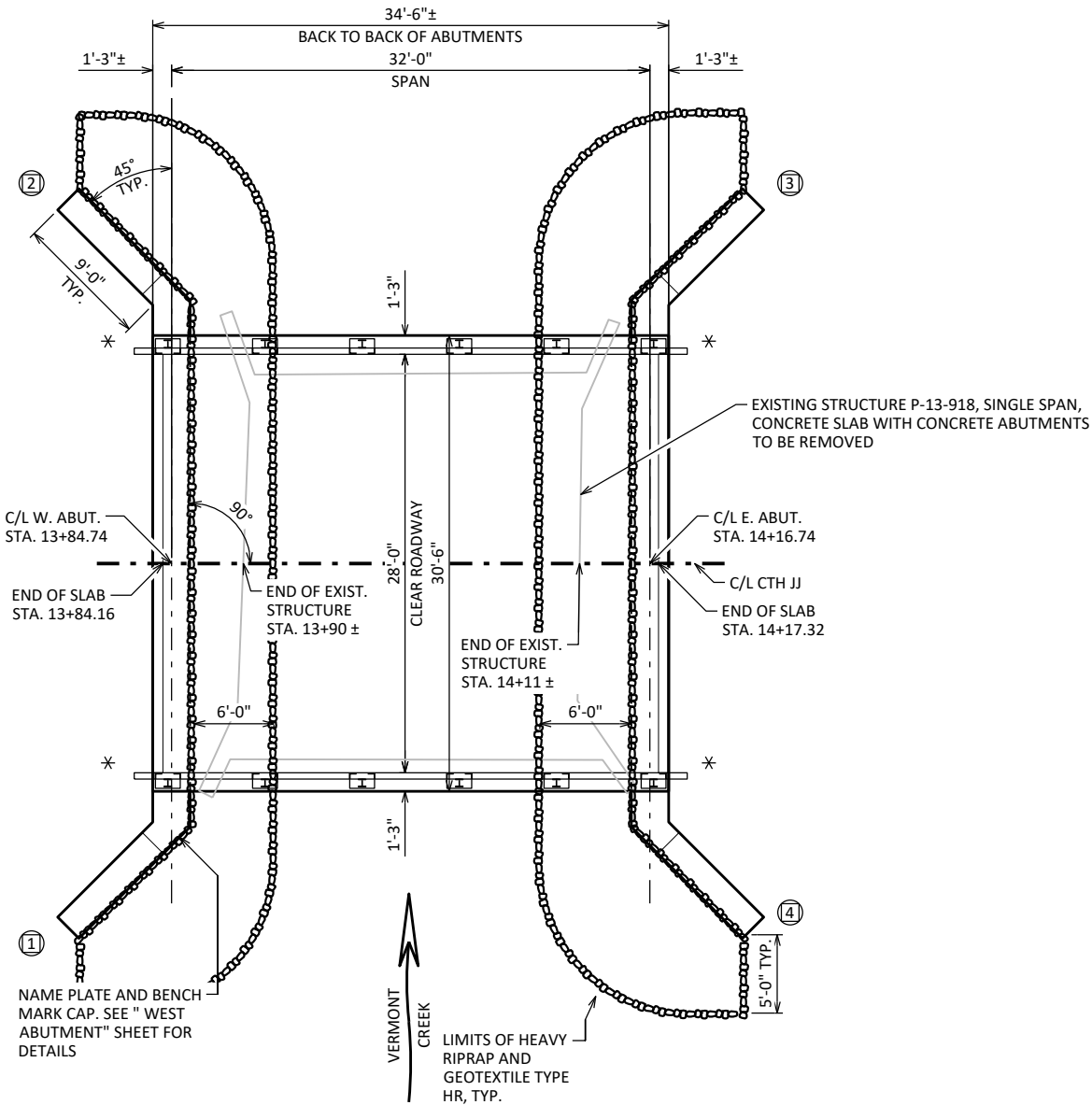
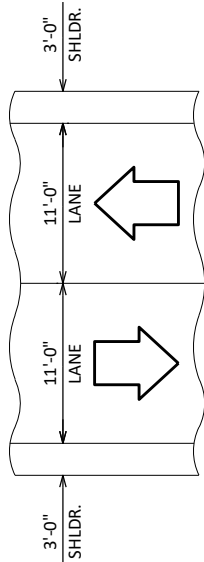
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	w	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN W20-2A,B,C,D,F & G	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 1/10/2024	PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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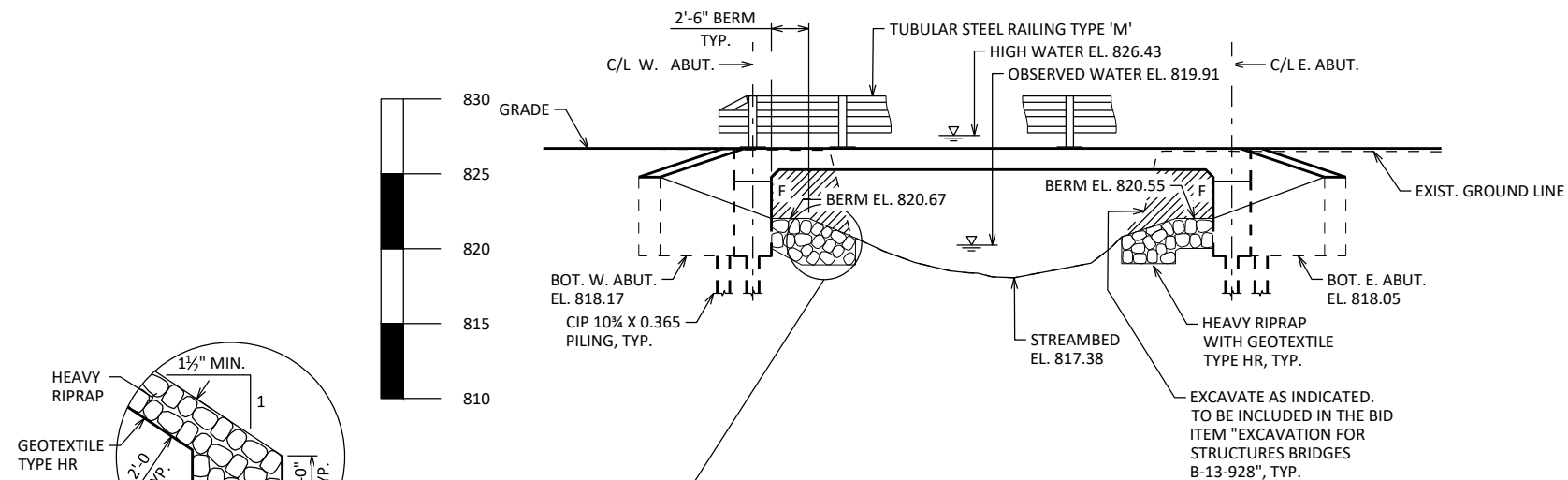
* PROVIDE FOR THRIE BEAM GUARD
RAIL ATTACHMENT.

Ⓢ INDICATES WING NUMBER



PLAN

SINGLE SPAN FLAT SLAB



ELEVATION

NORMAL TO WATERWAY

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0

STATE PROJECT NUMBER

5844-00-75

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.07
OPERATING RATING FACTOR: RF = 1.39
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 _____ $f'_c = 4,000$ P.S.I.
ALL OTHER _____ $f'_c = 3,500$ P.S.I.

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

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON CIP 10% X 0.365 PILING DRIVEN TO A REQUIRED
DRIVING RESISTANCE OF 130 TONS ++ PER PILE AS DETERMINED BY THE MODIFIED
GATES DYNAMIC FORMULA.
ESTIMATED 65 FEET LONG.

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

TRAFFIC VOLUME

CTH JJ
ADT = 458 (2026)
ADT = 680 (2046)
R.D.S. = 60 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY

$Q_{100} = 1840$ C.F.S.
VEL. = 7.8 F.P.S.
 $HW_{100} = EL. 826.43$
WATERWAY AREA = 126 SQ. FT.
DRAINAGE AREA = 12 SQ. MI.
 Q_{100} BRIDGE = 979 C.F.S.
 Q_{100} ROADWAY = 861 C.F.S.
SCOUR CRITICAL CODE = 5

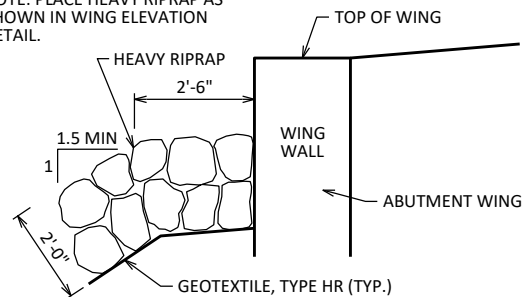
2 YEAR FREQUENCY

$Q_2 = 430$ C.F.S.
VEL. = 4.1 F.P.S.
 $HW_2 = EL. 823.45$

ROAD OVERTOPPING FREQUENCY

FREQUENCY = 10 YEARS
 $Q_{10} = 980$ C.F.S.
 $HW_{10} = EL. 824.89$

NOTE: PLACE HEAVY RIPRAP AS
SHOWN IN WING ELEVATION
DETAIL.



TYPICAL FILL SECTION AT WING

STRUCTURE DESIGN CONTACTS:

TIM BOROWSKI 608-298-5410
AARON BONK 608-261-0261

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



7/31/2025

NO. DATE REVISION BY



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED *[Signature]* JLR 08/04/25
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-928

CTH JJ OVER VERMONT CREEK

COUNTY DANE TOWN VERMONT

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION
DESIGNED BY TAB DESIGNED CK'D SMN DRAWN BY VCH PLANS CK'D TAB

GENERAL PLAN SHEET 1 OF 10

I.D.

DATE: 7/31/2025

SCALE = 12

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 ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-13-928 " SHALL BE THE EXISTING GROUNDLINE.

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

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

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

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

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

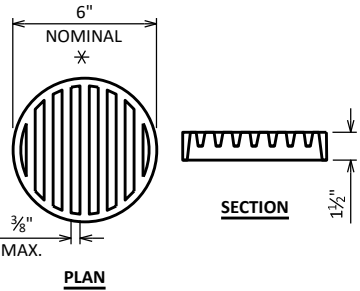
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

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

FILL VOIDS IN RIPRAP BERMS WITH "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR"

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
CP1	13+88, 27.5' RT	3/4" REBAR	821.51
CP2	14+22, 38.9' LT	3/4" REBAR	822.14



PLAN

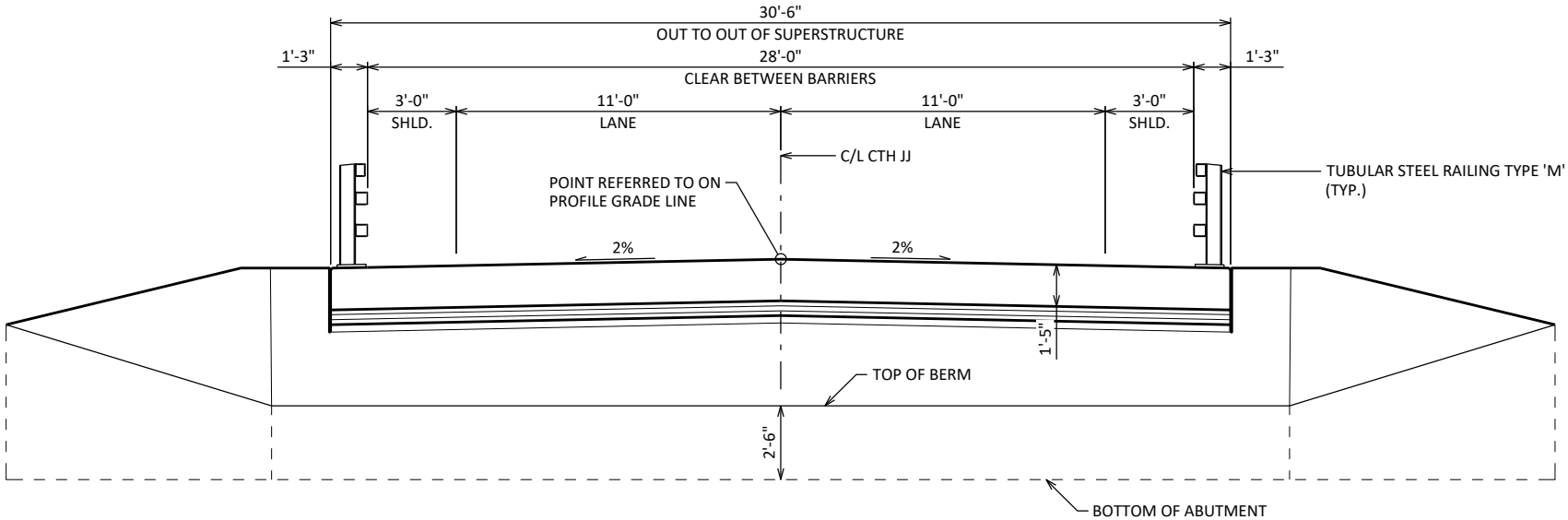
RODENT SHIELD DETAIL

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

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

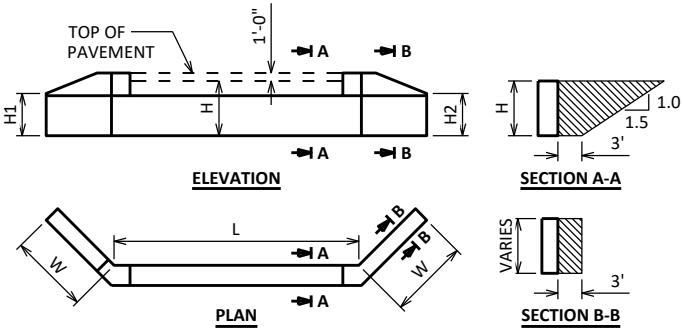
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-928			
DRAWN BY		VCH	PLANS CK'D TAB
CROSS SECTION & QUANTITIES		SHEET 2	



CROSS SECTION THRU ROADWAY

LOOKING UPSTATION
(PILING NOT SHOWN FOR CLARITY)

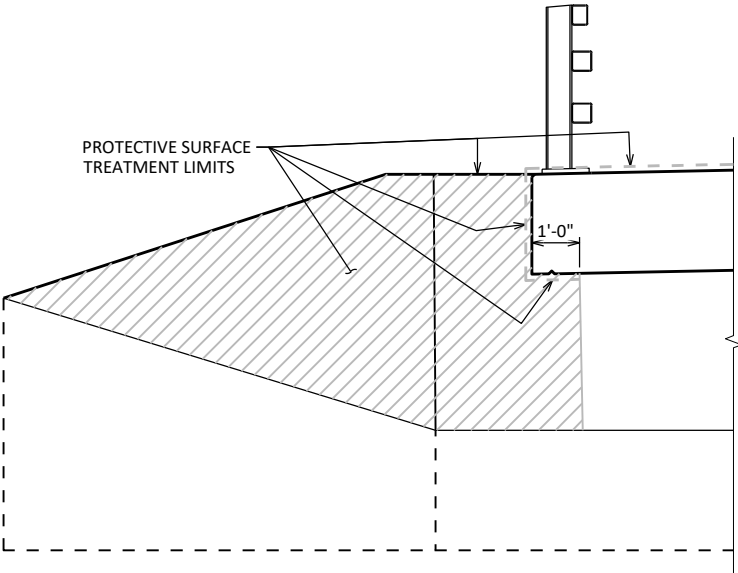


ABUTMENT BACKFILL DIAGRAM

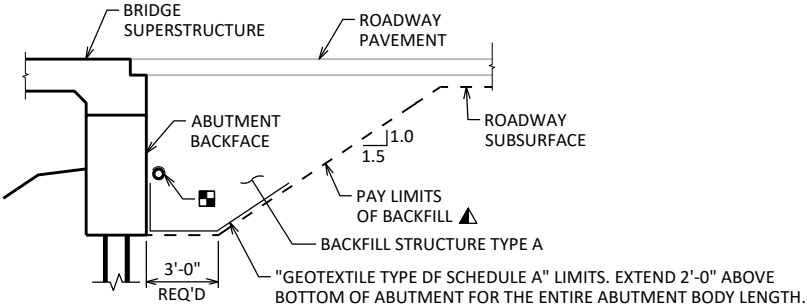
- L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
- H = AVERAGE ABUTMENT FILL HEIGHT (FT)
- H1 = WING 1 HEIGHT AT TIP (FT)
- H2 = WING 2 HEIGHT AT TIP (FT)
- W = WING LENGTH (FT)
- EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
- $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)$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

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	WEST ABUT.	EAST ABUT.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS P-13-918	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-13-928	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	148	148	296
502.0100	CONCRETE MASONRY BRIDGES	CY	58	27	27	112
502.3200	PROTECTIVE SURFACE TREATMENT	SY	139	14	14	167
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	2,200	2,200	4,400
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	13,450	1,480	1,480	16,410
513.4061	RAILING TUBULAR TYPE M	LF	74	---	---	74
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	6	6	12
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	---	455	455	910
606.0300	RIPRAP HEAVY	CY	---	49	52	101
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	73	73	146
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	46	46	92
645.0120	GEOTEXTILE TYPE HR	SY	---	75	80	155
SPV.0195	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	---	4	4	8
NON-BID ITEMS						
	FILLER	SIZE	---	---	---	½", ¾"



PROTECTIVE SURFACE
TREATMENT DETAILS

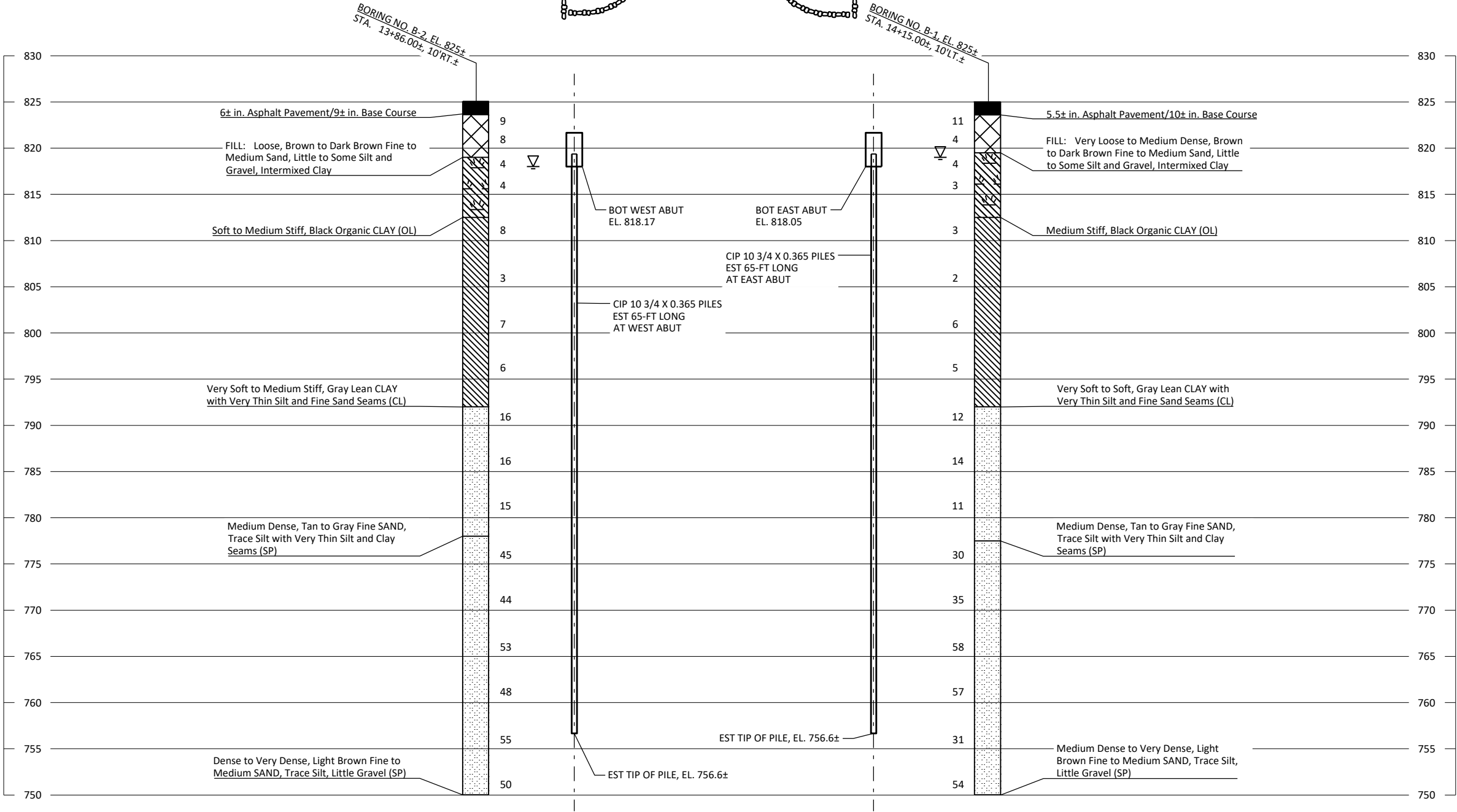
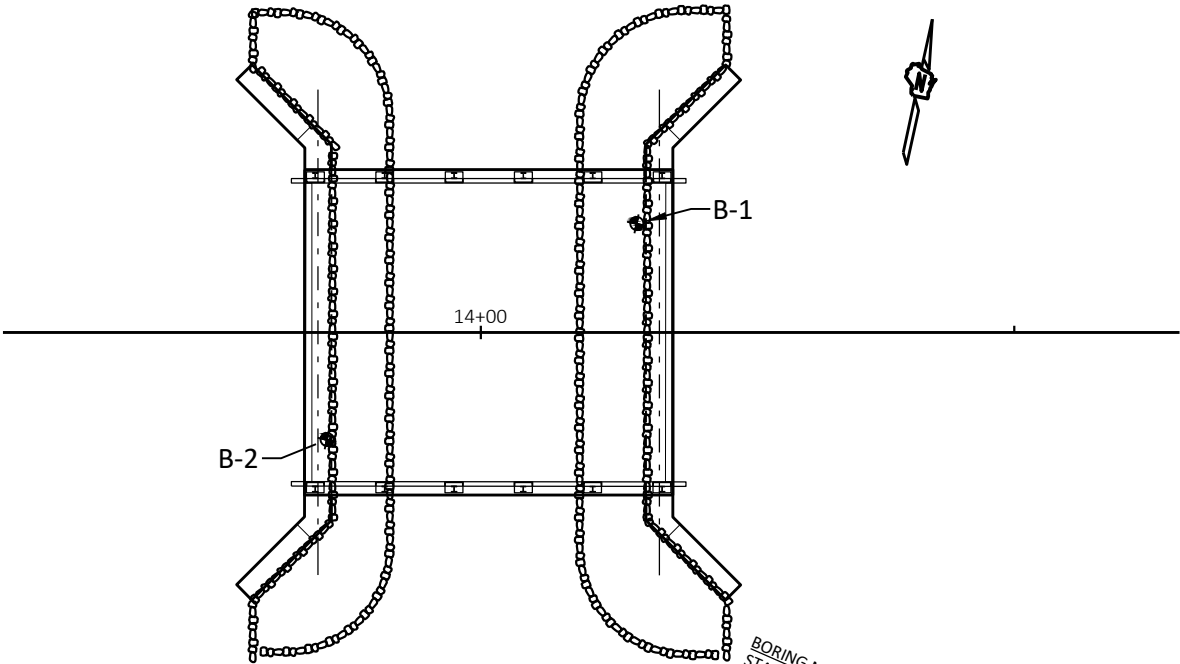


TYPICAL SECTION THRU ABUTMENT

▲ 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. PLACE DISCHARGE AT EL. 821.0+/-

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	9/30/2024	496585	721805
B-2	9/30/2024	496559	721781
BORINGS COMPLETED BY: CGC, INC.			
REPORT COMPLETED BY: CGC, INC.			
ALL COORDINATES REFERENCED TO WISCRS-Dane County, NAD83 (2011)			
BORING LOCATIONS ARE APPROXIMATE.			



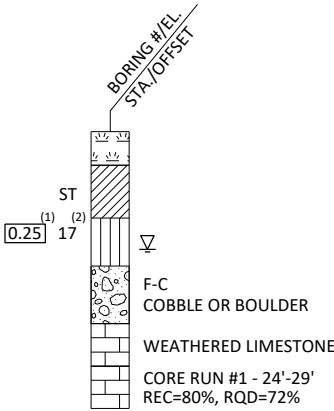
STATE PROJECT NUMBER

5844-00-75

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
STRUCTURES DESIGN SECTION

STRUCTURE B-13-928

DRAWN BY	VCH	PLANS CK'D	TAB
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SUBSURFACE
EXPLORATION

SHEET 3

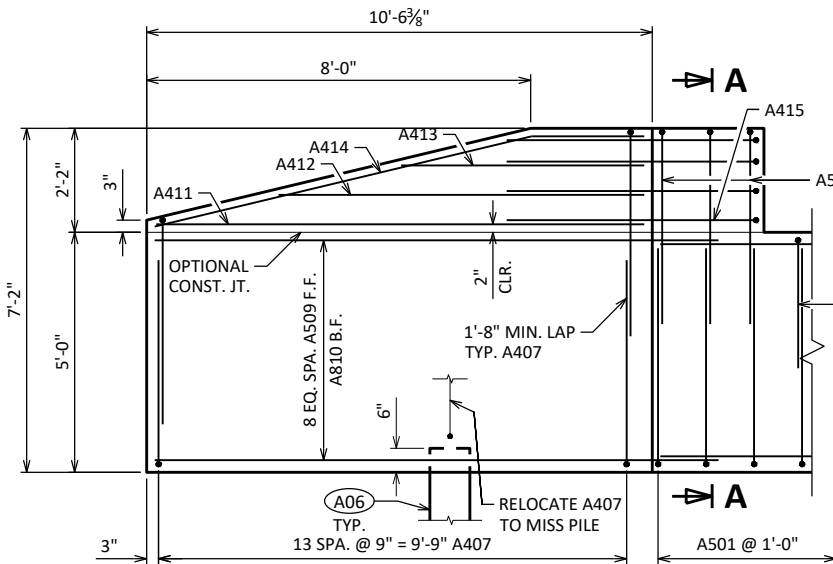


- | | | | |
|--|------|-----------------|---------------|
| NO. | DATE | REVISION | |
| STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE | | B-13-928 | |
| DRAWN
BY | | VCH | PLANS
CK'D |
| WEST
ABUTMENT | | SHEET 4 | |
| | | | |

BILL OF BARS

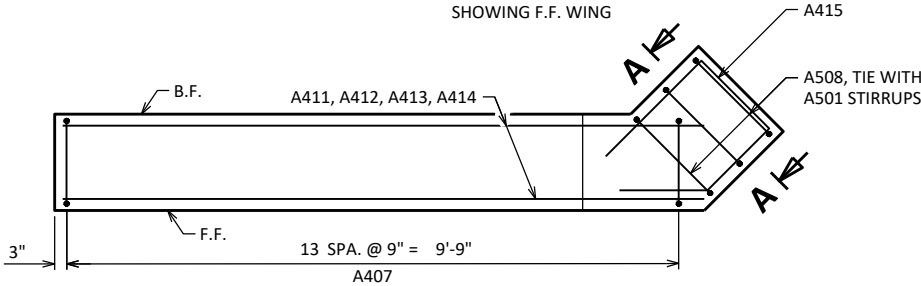
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		72	6'-0"	X		ABUT BODY STIRRUPS
A502		30	7'-3"	X		ABUT BODY STIRRUPS - TOP U-BAR
A503		9	35'-3"			ABUT BODY HORIZ. - F.F.
A804		18	23'-7"	X		ABUT BODY HORIZ. - B.F.
A405		30	3'-0"	X		ABUT BODY TIE BARS
A506	X	29	2'-0"			ABUT BODY DOWEL BARS
A407	X	56	10'-0"	X		WING STIRRUPS
A508	X	6	9'-11"	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'-6"			WING UPPER HORIZ.
A413	X	4	5'-0"			WING UPPER HORIZ.
A414	X	4	9'-7"	X		WING TOP HORIZ.
A415	X	4	8'-3"	X		WING 1 UPPER HORIZ. CORNER
A416	X	4	8'-4"	X		WING 2 UPPER HORIZ. CORNER



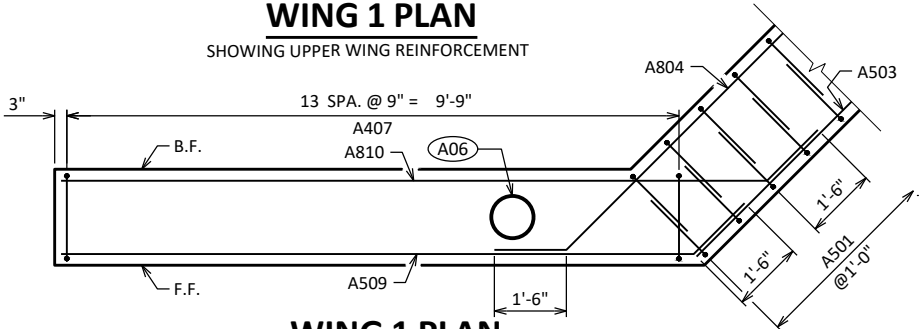
WING 1 ELEVATION

SHOWING F.F. WING



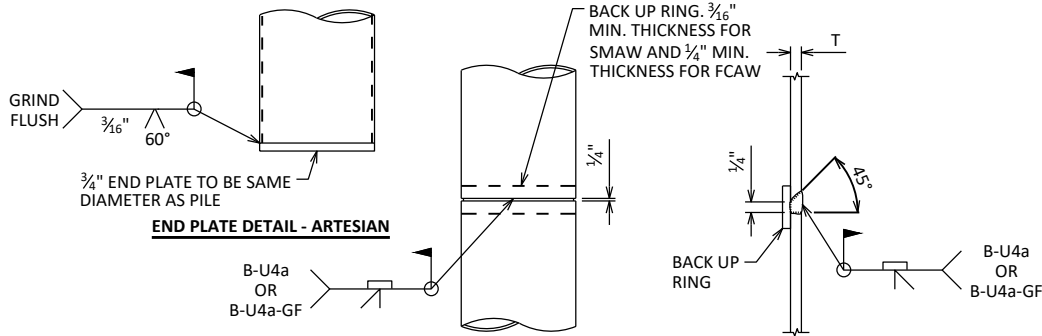
WING 1 PLAN

SHOWING UPPER WING REINFORCEMENT



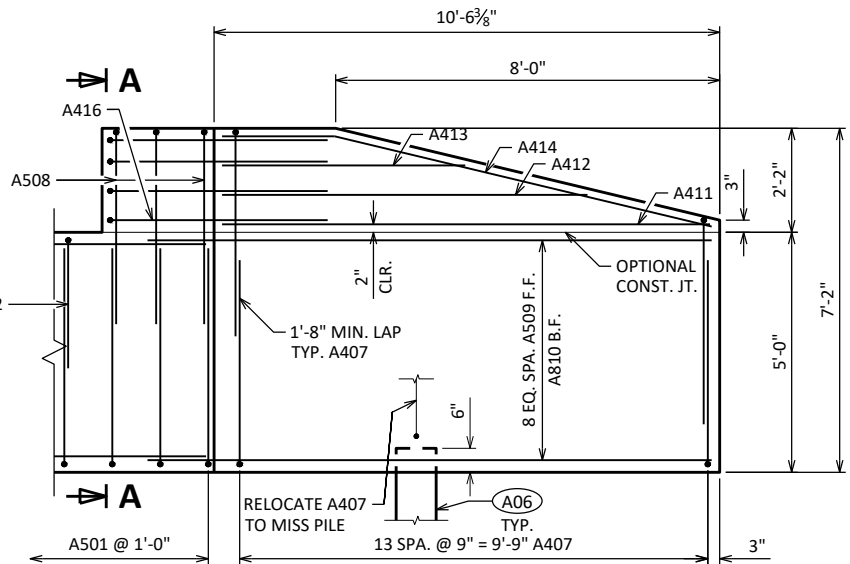
WING 1 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 2 SIMILAR



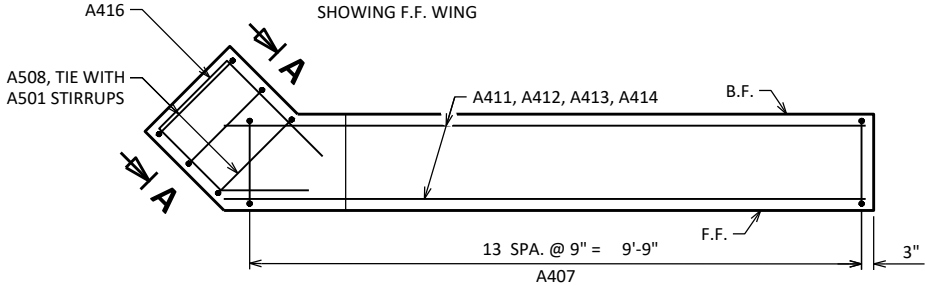
CIP PILE DETAILS

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0



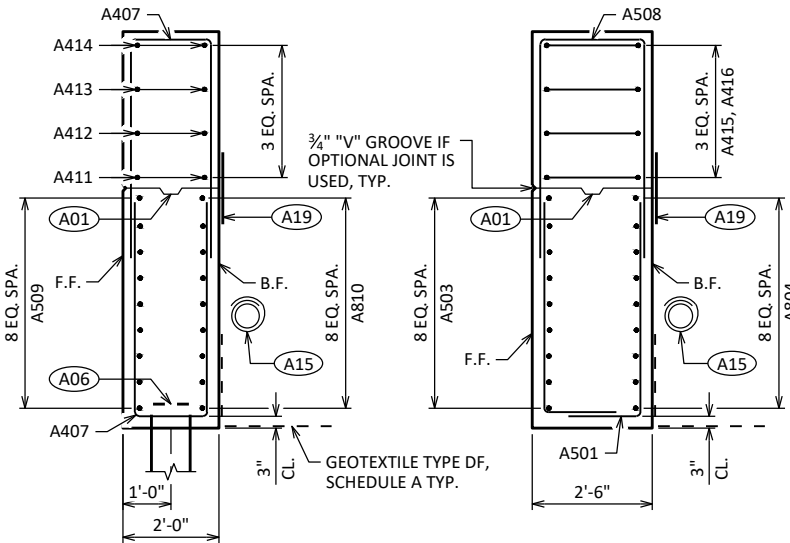
WING 2 ELEVATION

SHOWING F.F. WING



WING 2 PLAN

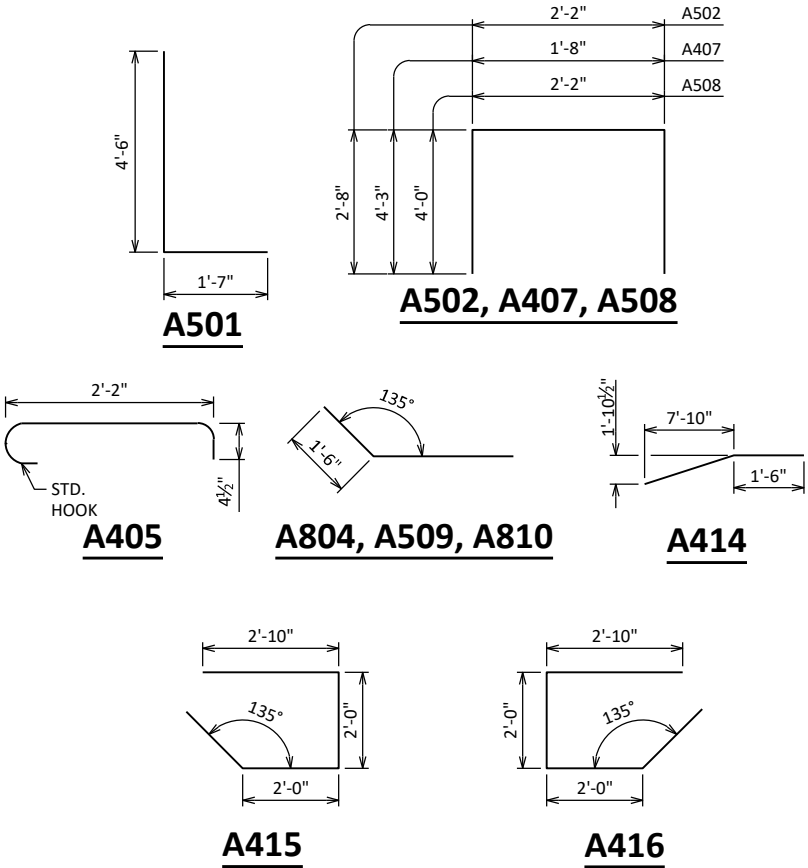
SHOWING UPPER WING REINFORCEMENT



SECTION THRU WING 1

TYPICAL BOTH WINGS

SECTION A-A



A405

A804, A509, A810

A414

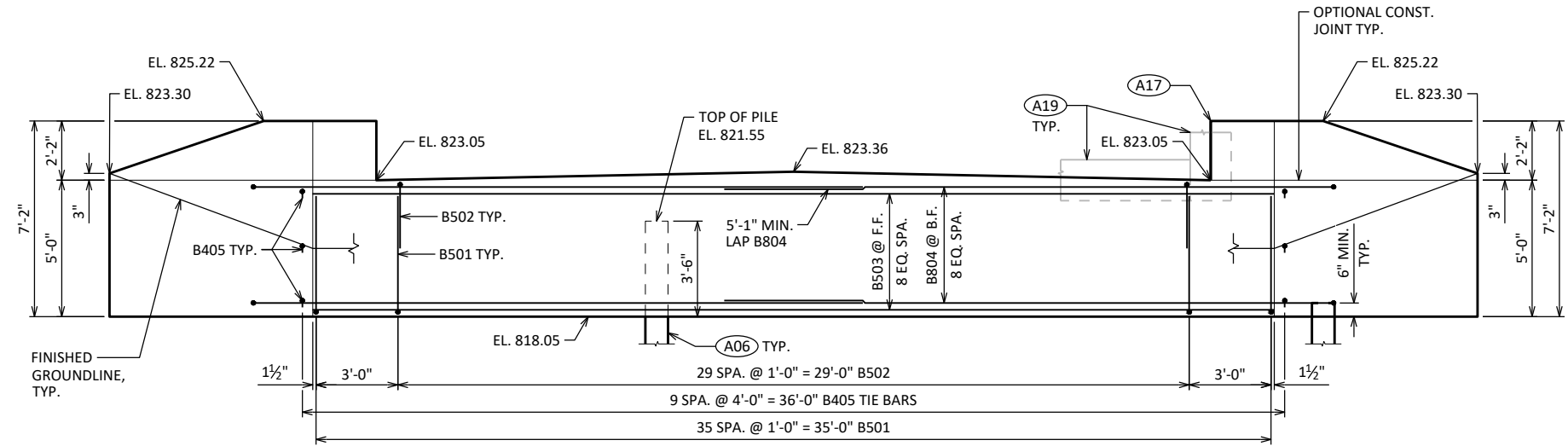
A415

A416

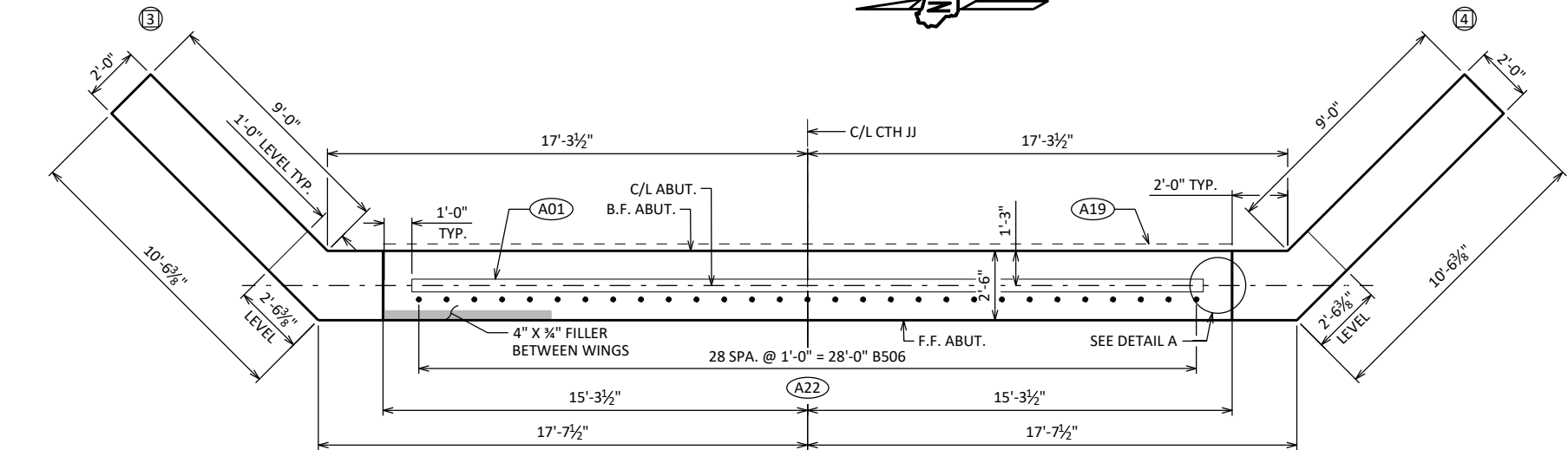
- A01 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE 3/4" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.
- A06 SUPPORT ABUTMENT ON CIP 10% X 0.365 PILING, ESTIMATED 65' LONG WITH A REQUIRED DRIVING RESISTANCE OF 130TONS PER PILE.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. DISCHARGE AT EL. 821.0±.
- 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-13-928			
DRAWN BY		VCH	PLANS CK'D TAB
WEST ABUTMENT DETAILS		SHEET 5	

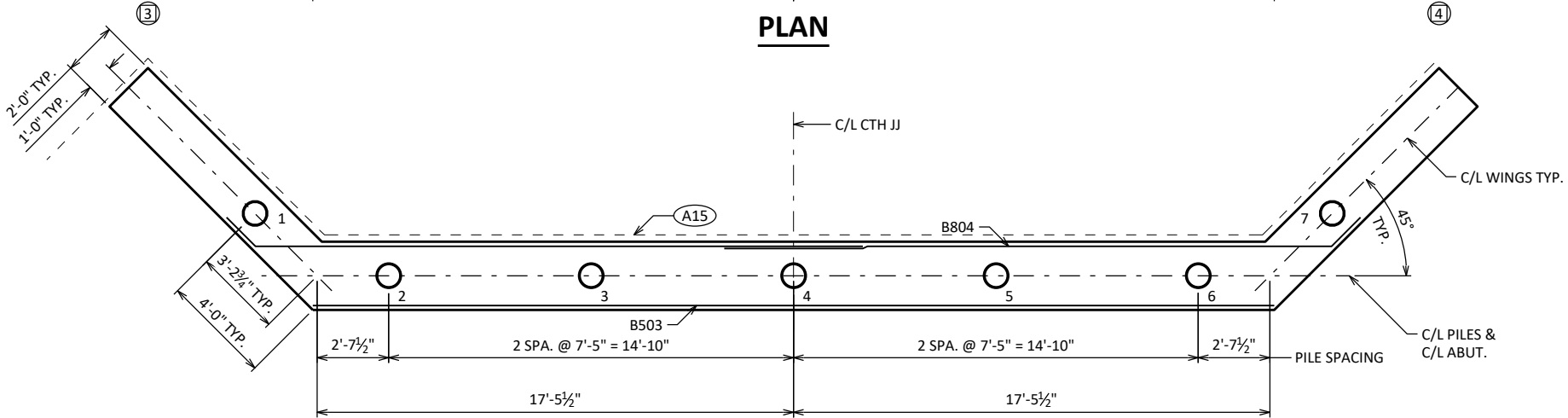
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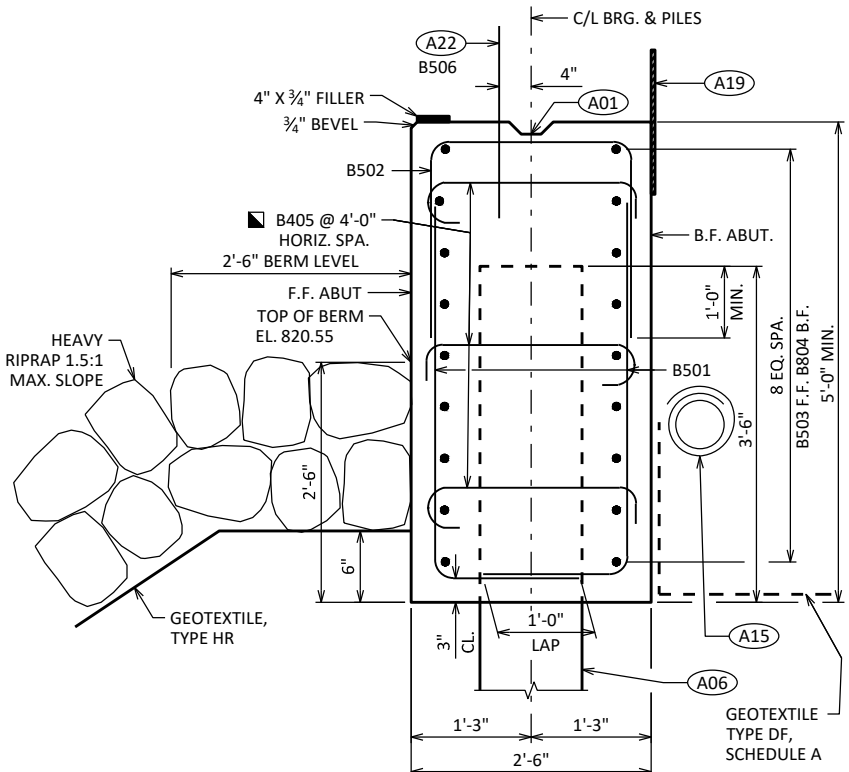
ELEVATION
LOOKING UPSTATION



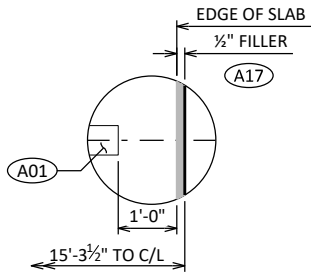
PLAN



PILE PLAN



SECTION THRU BODY



DETAIL A

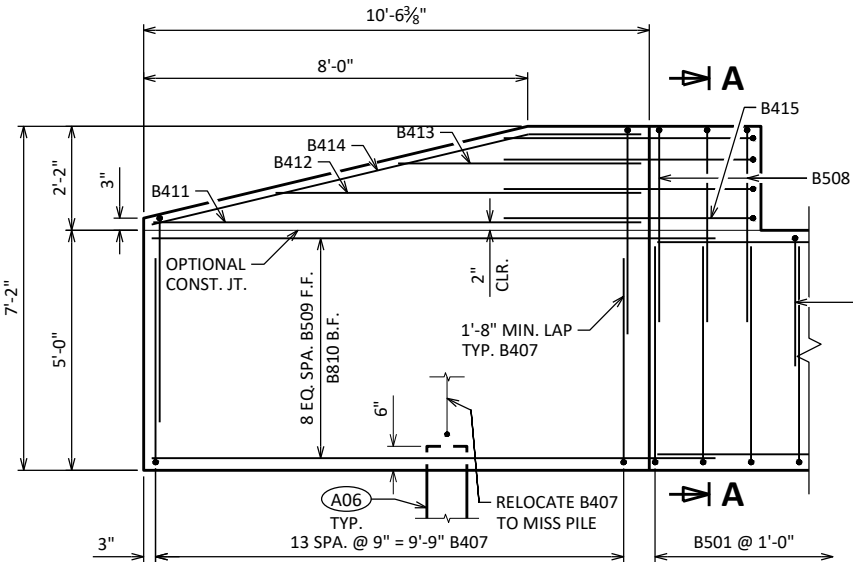
- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.
- (A06) SUPPORT ABUTMENT ON CIP 10% X 0.365 PILING, ESTIMATED 65' LONG WITH A REQUIRED DRIVING RESISTANCE OF 130TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. DISCHARGE AT EL. 821.0±
- (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) B506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-928			
DRAWN BY		VCH	PLANS CK'D TAB
EAST ABUTMENT		SHEET 6	

BILL OF BARS

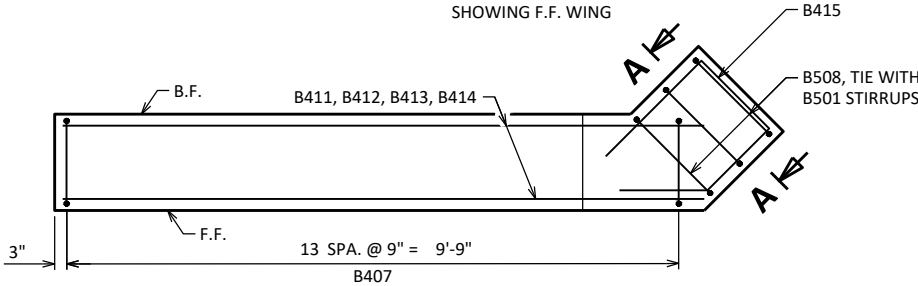
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

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B413	X	4	5'-0"			WING UPPER HORIZ.
B414	X	4	9'-7"	X		WING TOP HORIZ.
B415	X	4	8'-3"	X		WING 3 UPPER HORIZ. CORNER
B416	X	4	8'-4"	X		WING 4 UPPER HORIZ. CORNER



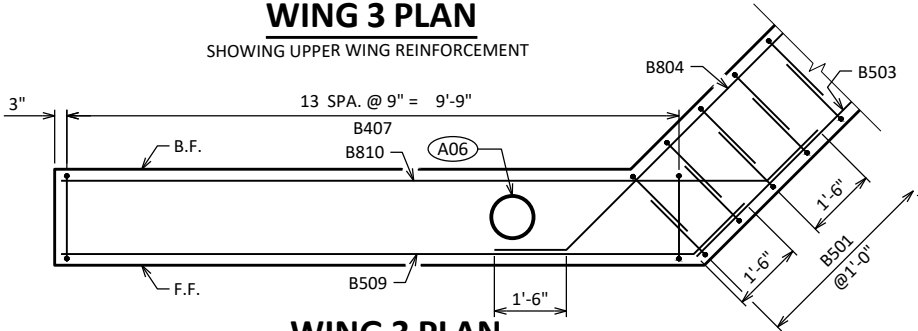
WING 3 ELEVATION

SHOWING F.F. WING



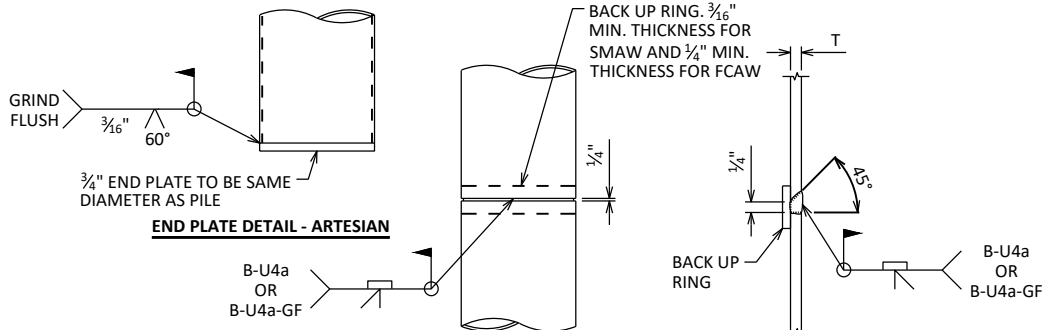
WING 3 PLAN

SHOWING UPPER WING REINFORCEMENT



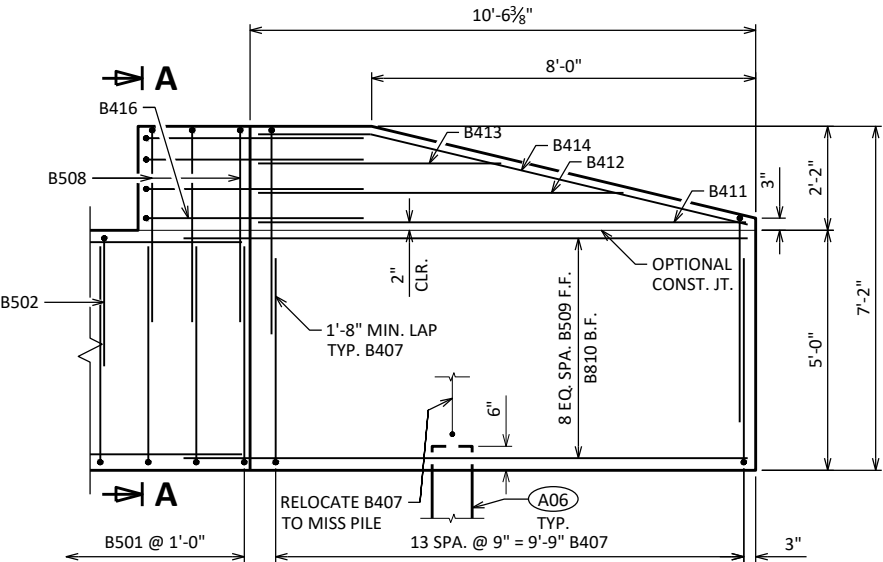
WING 3 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 4 SIMILAR



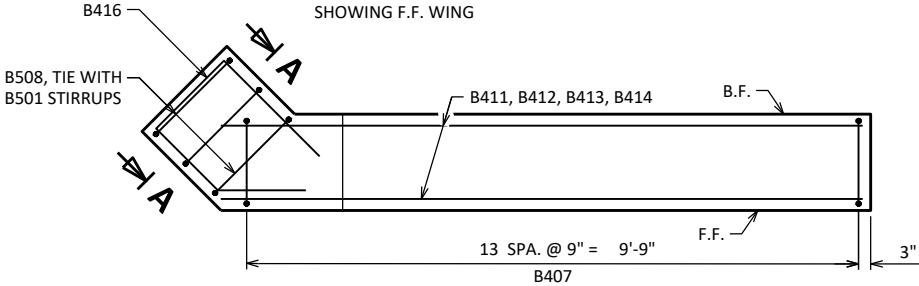
CIP PILE DETAILS

THIS SHEET WAS CREATED BY THE WISDOT BUREAU OF STRUCTURES STANDARD BRIDGE DESIGN TOOL VERSION 1.1.0.0



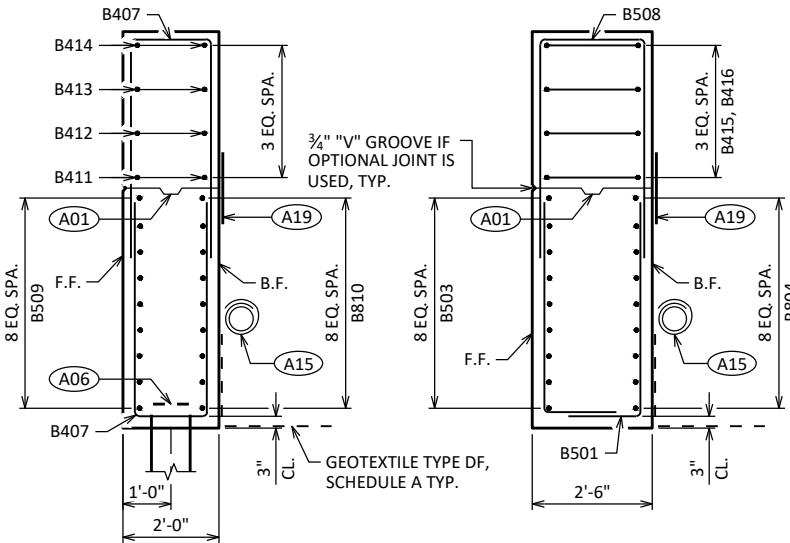
WING 4 ELEVATION

SHOWING F.F. WING



WING 4 PLAN

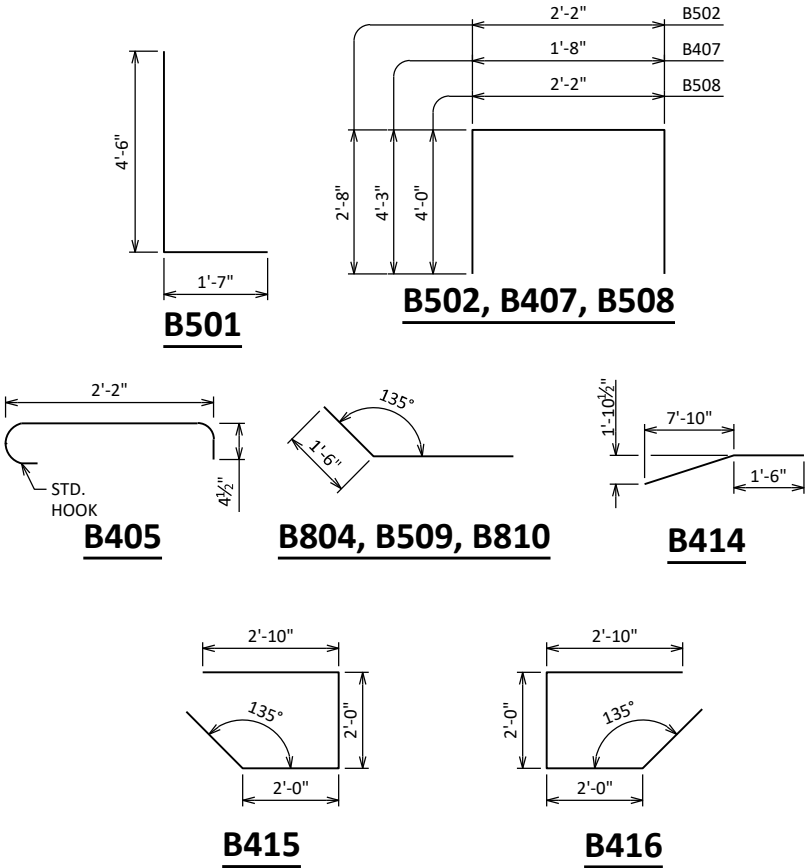
SHOWING UPPER WING REINFORCEMENT



SECTION THRU WING 3

TYPICAL BOTH WINGS

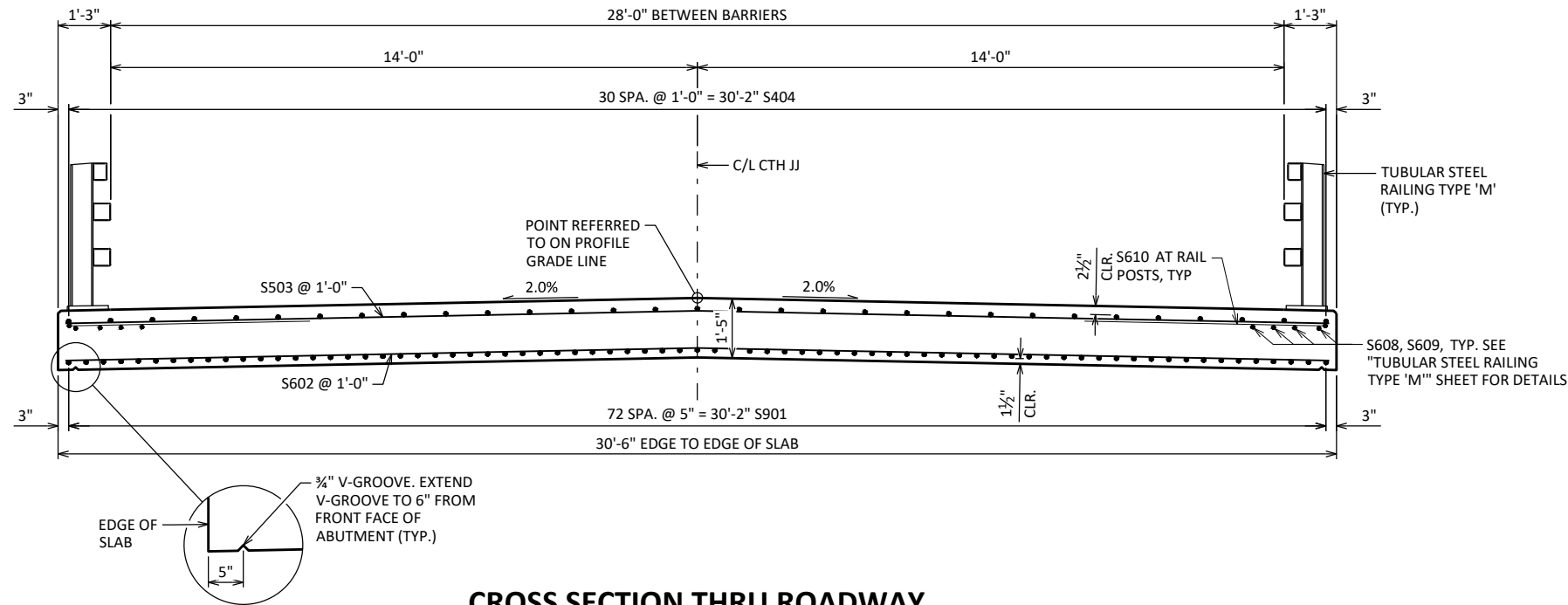
SECTION A-A



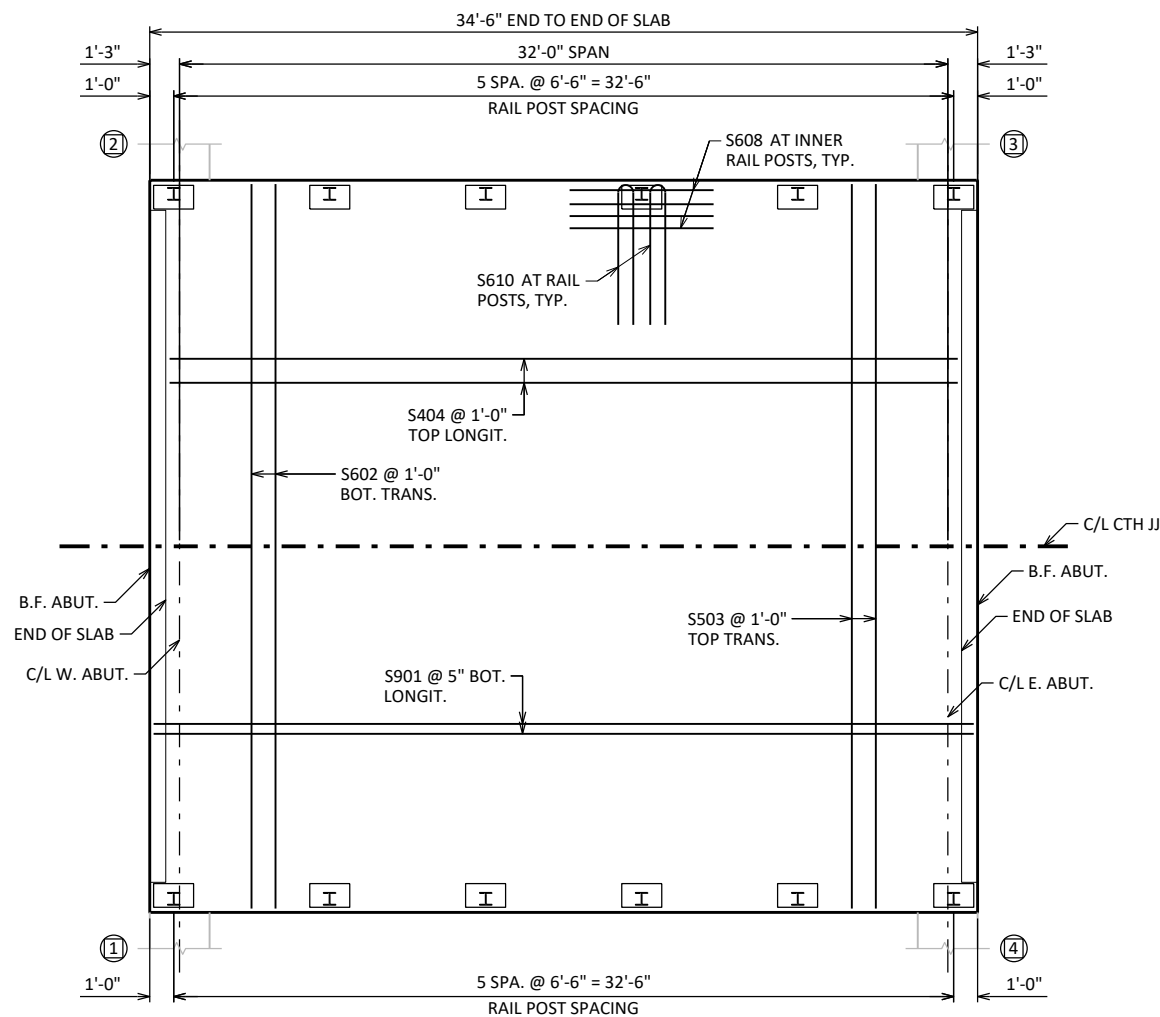
- A01 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE 3/4" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-928			
DRAWN BY		VCH	PLANS CK'D TAB
EAST ABUTMENT DETAILS		SHEET 7	

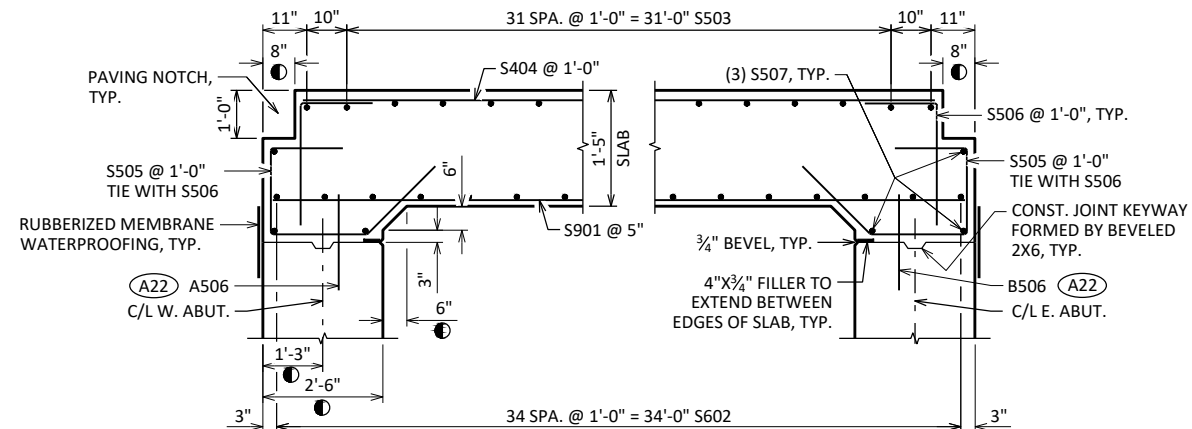
SCALE =



CROSS SECTION THRU ROADWAY



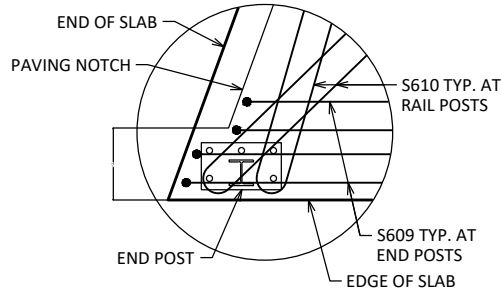
PLAN



LONGITUDINAL SECTION

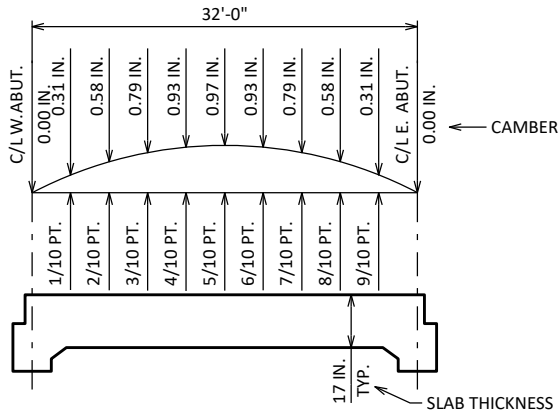
DIMENSIONS ARE GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED.

- MEASURED NORMAL TO THE C/L OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.
- A506, B506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)



END POST DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-928			
DRAWN BY		VCH	PLANS CK'D TAB
SUPERSTRUCTURE		SHEET 8	



CAMBER AND SLAB THICKNESS DIAGRAM

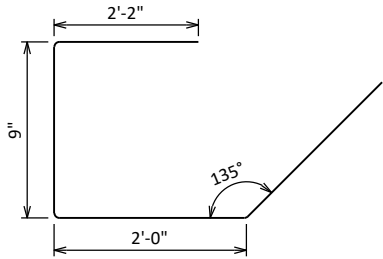
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

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

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

TOP OF SLAB ELEVATIONS

LOCATION	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
N. EDGE OF SLAB	825.34	825.33	825.31	825.30	825.29	825.28	825.27	825.25	825.24	825.23	825.22
CROWN OR R/L	825.64	825.63	825.62	825.61	825.59	825.58	825.57	825.56	825.55	825.53	825.52
S. EDGE OF SLAB	825.34	825.33	825.31	825.30	825.29	825.28	825.27	825.25	825.24	825.23	825.22



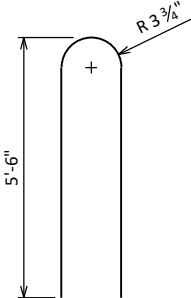
S505



S506



S609



S610

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
S901	X	73	34'-2"			SLAB BOTTOM LONGITUDINAL
S602	X	35	30'-2"			SLAB BOTTOM TRANSVERSE
S503	X	34	30'-2"			SLAB TOP TRANSVERSE
S404	X	31	32'-10"			SLAB TOP LONGITUDINAL
S505	X	62	6'-8"	X		ABUTMENT DIAPHRAGM STIRRUPS
S506	X	62	3'-2"	X		L-BARS @ ABUTMENT
S507	X	6	30'-2"			ABUTMENT DIAPHRAGM LONGITUDINAL
S608	X	32	6'-0"			SLAB TOP LONGIT. UNDER RAIL POSTS
S609	X	16	4'-8"	X		SLAB TOP LONGIT. UNDER RAIL END POSTS
S610	X	24	11'-3"	X		SLAB TOP HOOKS UNDER RAIL POSTS

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	ABUTMENT	5/10 PT.	ABUTMENT
N. EDGE OF SLAB			
CROWN OR R/L			
S. EDGE OF SLAB			

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 EDGE OF SLAB AND CROWN OR R/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

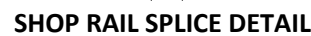
NOTES

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-13-928			
		DRAWN BY	PLANS CK'D TAB
SUPERSTRUCTURE DETAILS		SHEET 9	



SECTION THRU POST WEB



TYPICAL RAIL TO POST CONNECTIONS



SECTION C-C



ANCHOR PLATE

AT RAIL TO DECK CONNECTION



DETAIL

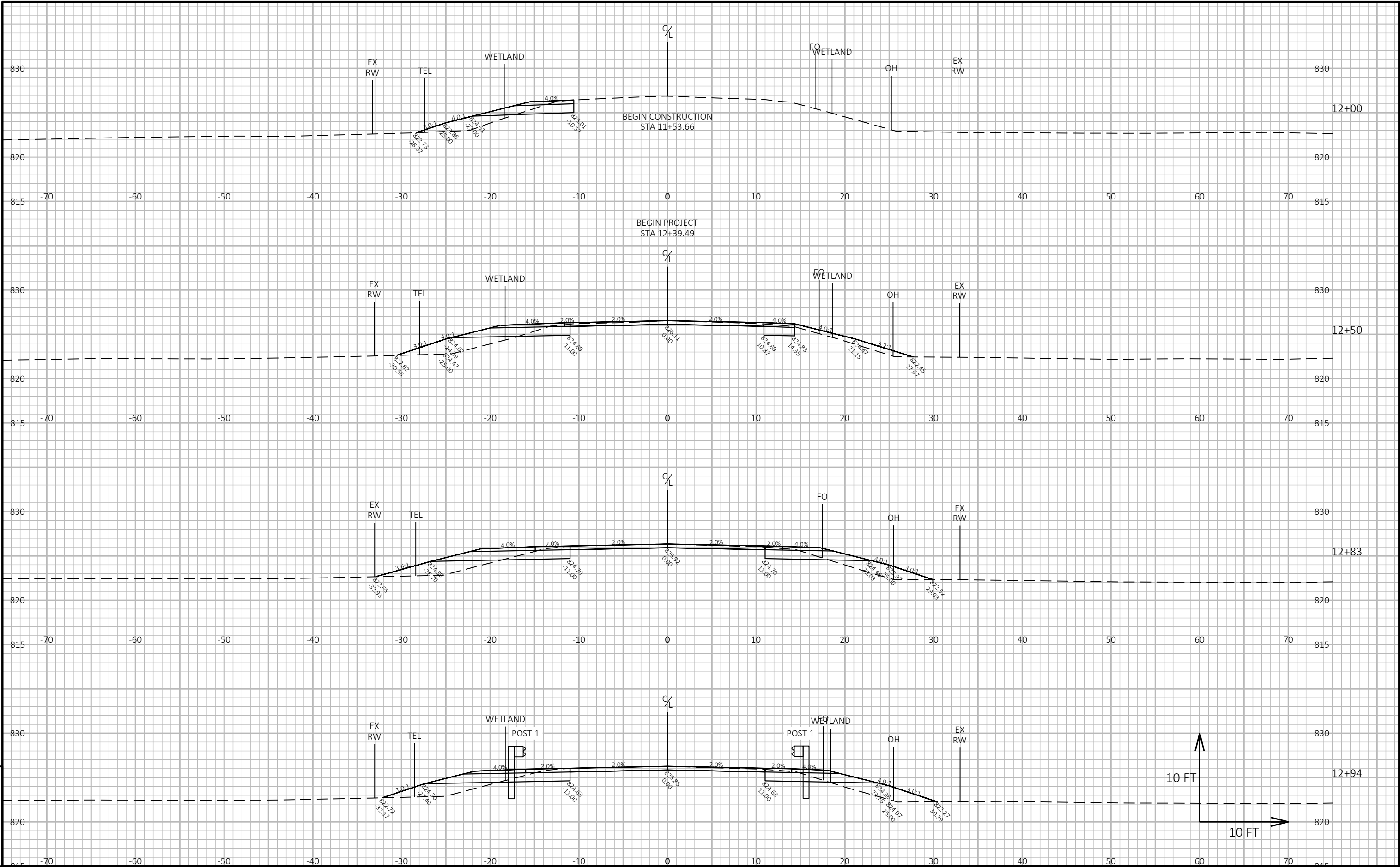


AT BEAM GUARD ATTACHMENT

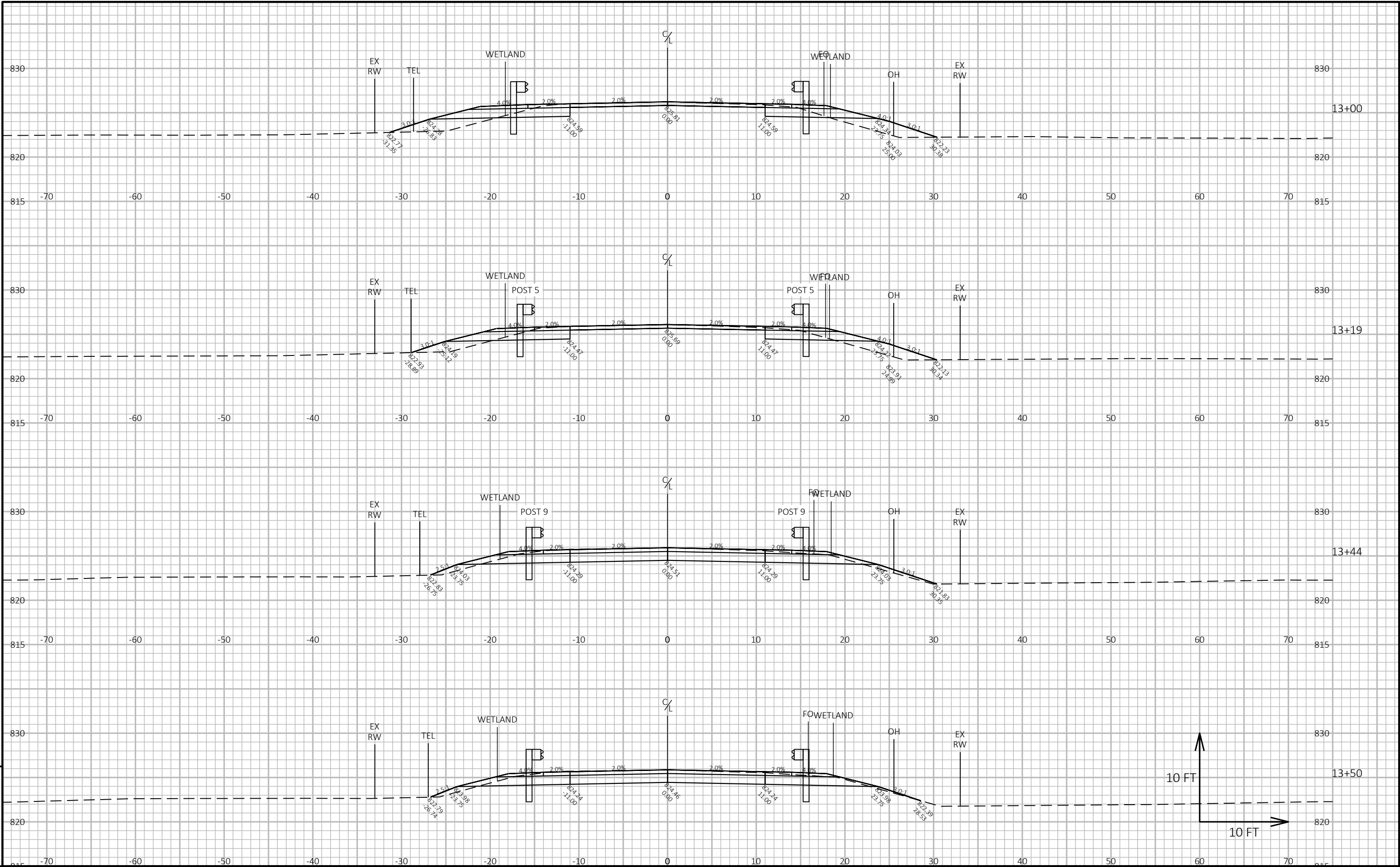
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-928			
DRAWN BY		VCH	PLANS CK'D TAB
TUBULAR STEEL RAILING TYPE 'M'		SHEET 10	

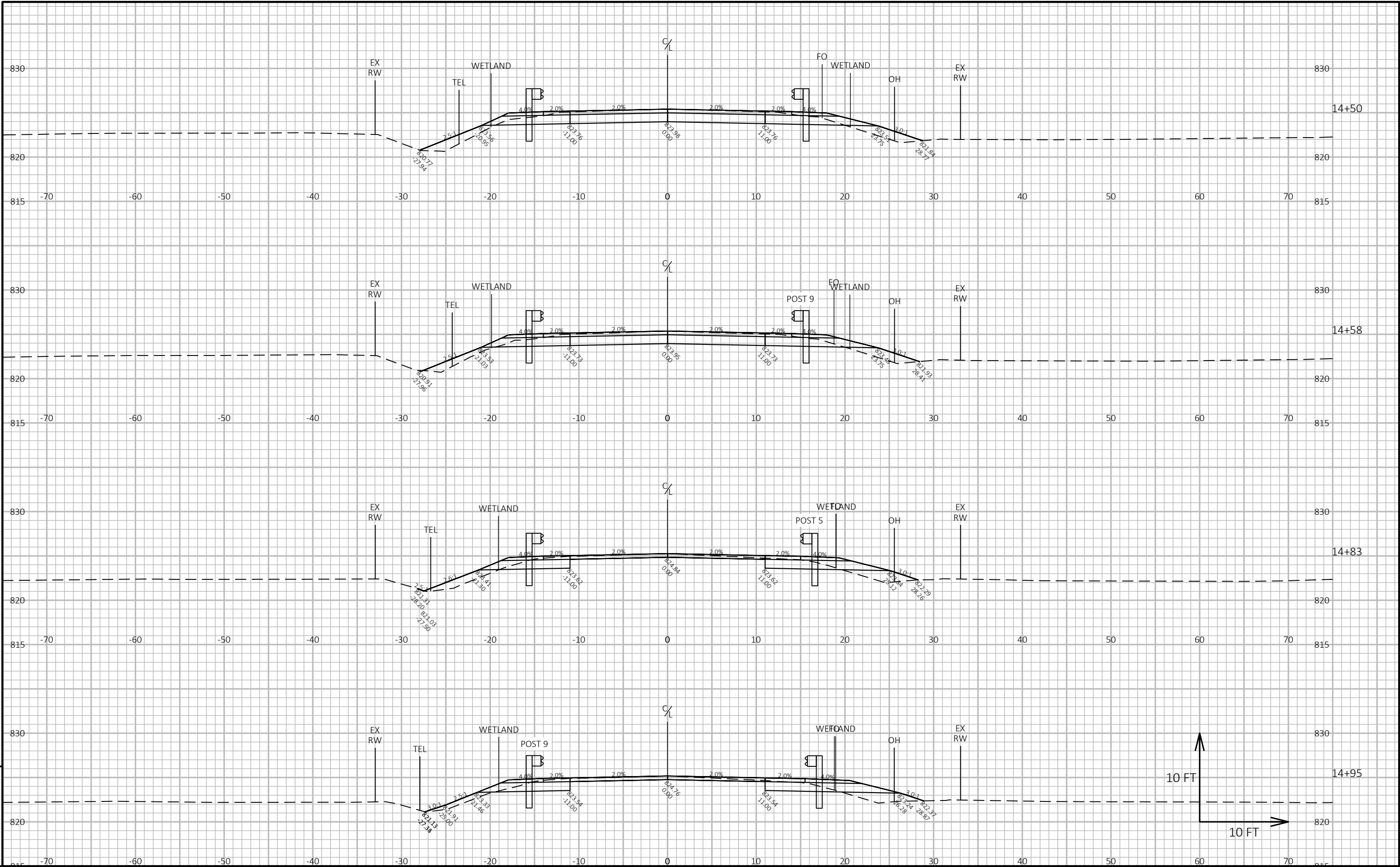
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1	1.25	
12+00.00	1200.00	0.00	5.73	0.00	9.05	0	0	0	0	0	0
12+50.00	1250.00	50.00	15.96	9.00	19.31	20	8	26	20	33	-21
12+83.08	1283.08	33.08	21.03	9.00	22.33	23	11	26	43	65	-41
12+93.81	1293.81	10.73	21.65	9.00	22.39	8	4	9	51	76	-48
13+00.00	1300.00	6.19	21.99	9.00	20.41	5	2	5	56	83	-52
13+18.52	1318.52	18.52	23.21	10.00	14.84	16	7	12	72	98	-58
13+43.50	1343.50	24.98	50.53	11.00	4.57	34	10	9	106	109	-45
13+50.00	1350.00	6.50	51.91	12.00	2.67	12	3	1	118	110	-37
13+83.49	1383.49	33.49	56.55	13.00	5.76	67	16	5	185	116	8
Bridge B-13-0928											
14+18.00	1418.00	0.00	48.42	15.00	12.55	0	0	0	185	116	8
14+50.00	1450.00	32.00	45.47	12.00	12.66	56	16	15	241	135	29
14+57.96	1457.96	7.96	44.36	12.00	10.46	13	4	3	254	139	34
14+82.94	1482.94	24.98	21.41	12.00	11.59	30	11	10	284	151	41
14+95.47	1495.47	12.53	21.21	12.00	9.44	10	6	5	294	158	39
15+00.00	1500.00	4.53	21.32	10.00	9.66	4	2	2	298	160	38
15+07.92	1507.92	7.92	21.76	10.00	10.38	6	3	3	304	164	37
15+20.47	1520.47	12.55	21.87	10.00	9.93	10	5	5	314	170	36
15+45.47	1545.47	25.00	22.28	10.00	8.20	20	9	8	334	180	37
15+50.00	1550.00	4.53	22.28	10.00	7.49	4	2	1	338	181	38
16+00.00	1600.00	50.00	6.22	0.00	0.24	26	9	7	364	190	46

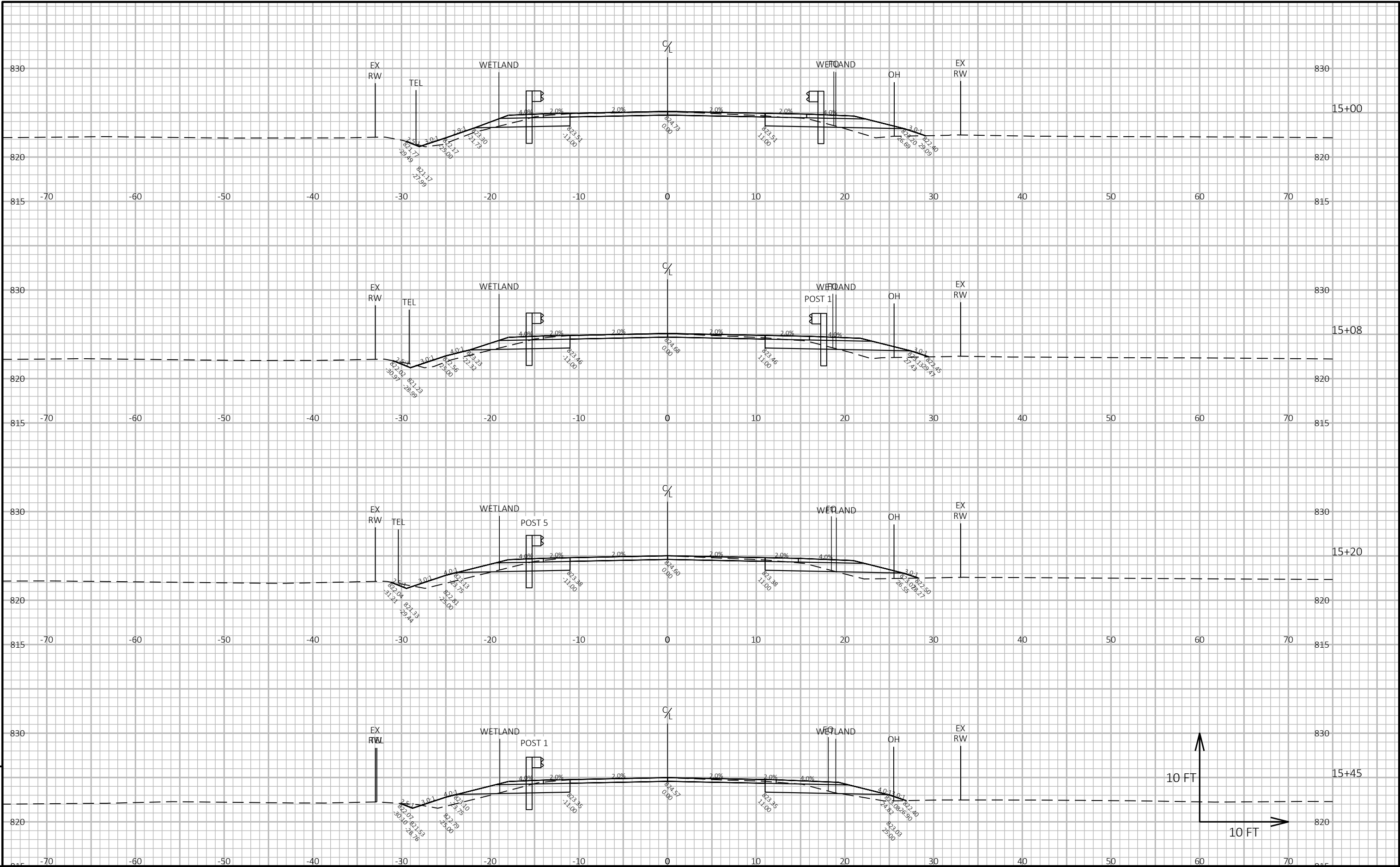
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME



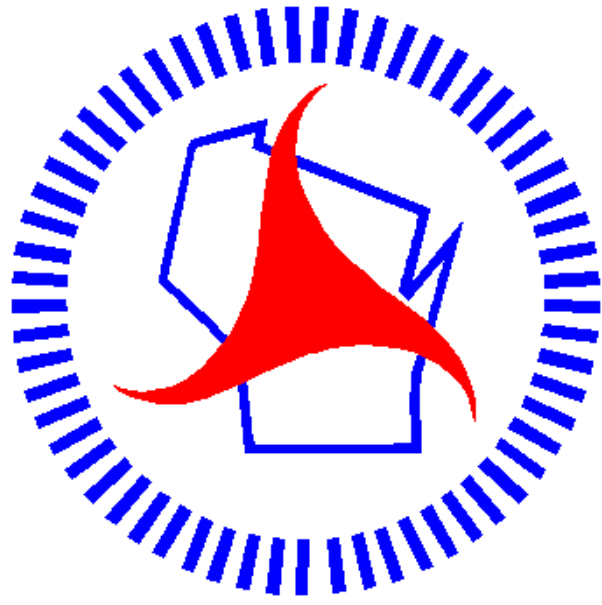
PROJECT NO: 5844-00-75	HWY: CTH JJ	COUNTY: DANE	CROSS SECTIONS: CTH JJ	SHEET	E
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Notes



Wisconsin Department of Transportation

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