

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control)
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 = 84

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T OF RUTLAND, LAKE KEGONSA ROAD

BADFISH CREEK BRIDGE, B-13-0885

LOCAL STREET
DANE COUNTY

STATE PROJECT NUMBER

5742-00-72

STATE PROJECT

5742-00-72

FEDERAL PROJECT

PROJECT

WISC 2024431

CONTRACT

1



DESIGN DESIGNATION

A.A.D.T.	2025	=	153
A.A.D.T.	2045	=	167
D.H.V.		=	28
D.D.		=	62/38
T.		=	7.8%
DESIGN SPEED		=	50 MPH
ESALS		=	52,000

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS

PROPERTY LINE

LOT LINE

LIMITED HIGHWAY EASEMENT

EXISTING RIGHT OF WAY

PROPOSED OR NEW R/W LINE

SLOPE INTERCEPT

REFERENCE LINE

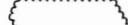
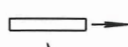
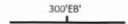
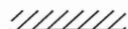
EXISTING CULVERT

PROPOSED CULVERT
(Box or Pipe)

COMBUSTIBLE FLUIDS

MARSH AREA

WOODED OR SHRUB AREA



PROFILE

GRADE LINE

ORIGINAL GROUND

MARSH OR ROCK PROFILE
(To be noted as such)

SPECIAL DITCH

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC

FIBER OPTIC

GAS

SANITARY SEWER

STORM SEWER

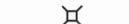
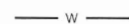
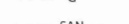
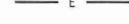
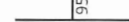
TELEPHONE

WATER

UTILITY PEDESTAL

POWER POLE

TELEPHONE POLE

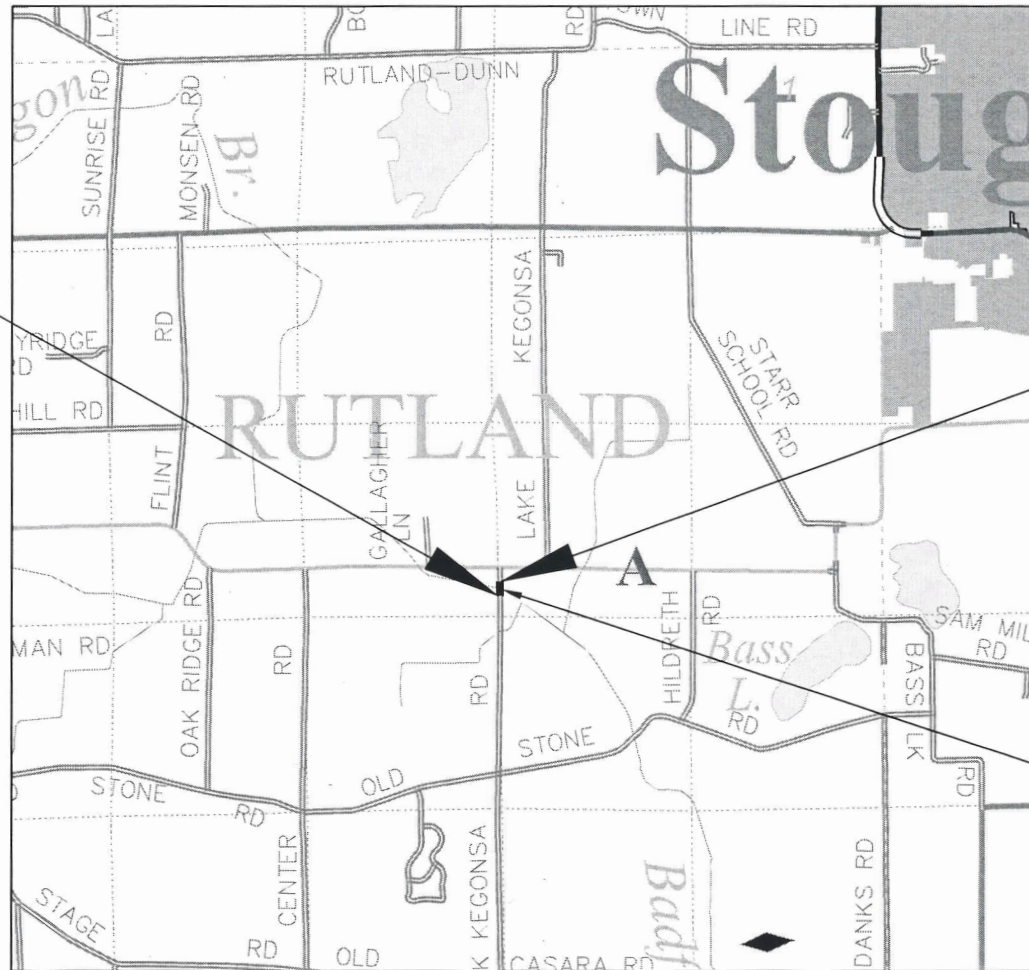


BEGIN PROJECT

STA 9+81.20

Y: 415965.69

X: 846462.59



R-10-E

T-5-N

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.064 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DANE NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A

ACCEPTED FOR

TOWN OF RUTLAND

4/15/24 Nancy Nedveck
(Signature and Title of Official)
Supervisor

ORIGINAL PLANS PREPARED BY



Elisa Becker 4/11/2024

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	STRAND ASSOCIATES, INC.
Designer	STRAND ASSOCIATES, INC.
Project Manager	LORRAINE BETZEL
Regional Examiner	SW REGION
Regional Supervisor	KYLE HEMP

APPROVED FOR THE DEPARTMENT

DATE: 4/17/24

Lorraine Betzel
(Signature)

E

GENERAL NOTES:

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

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER IN CONSULTATION WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

WETLANDS EXIST IN THE PROJECT AREA. DO NOT DISTURB AREAS OUTSIDE THE SLOPE INTERCEPTS.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED.

SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION.

GRADES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISITNG FIELD CONDITIONS.

EXISTING SIGNS SHALL REMAIN IN PLACE UNLESS MOVED AS PART OF THE PLAN OR THE ENGINEER APPROVES THE REMOVAL.

SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

ASPHALT BID/MIX SPECIFICATIONS		
	THICKNESS	BID/MIX SPECIFICATIONS
UPPER LAYER	1.75-INCH	4 LT 58-28 S
LOWER LAYER	2.25-INCH	3 LT 58-28 S

OTHER CONTACTS

DESIGN CONSULTANT

ELISA BECKER
STRAND ASSOCIATES, INC.
910 WEST WINGRA DR.
MADISON, WI 53715
(608) 251-4843
elisa.becker@strand.com

DNR LIASON

ERIC HEGGELUND
DNR SOUTH CENTRAL REGION
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PH: (608) 275-3301
eric.heggelund@wisconsin.gov

TOWN OF RUTLAND

KENT KNUTSON, TOWN CHAIR
TOWN OF RUTLAND
785 CENTER ROAD
STOUGHTON, WI 53589
(608) 335-9957
chairknutson@town.rutland.wi.us

WISDOT CONTACT

LORRAINE BETZEL
WISDOT SOUTHWEST REGION
2101 WRIGHT STREET
MADISON, WI 53704
(608) 246-3279
lorraine.betzel@dot.wi.gov

UTILITIES

** STOUGHTON UTILITIES - ELECTRIC

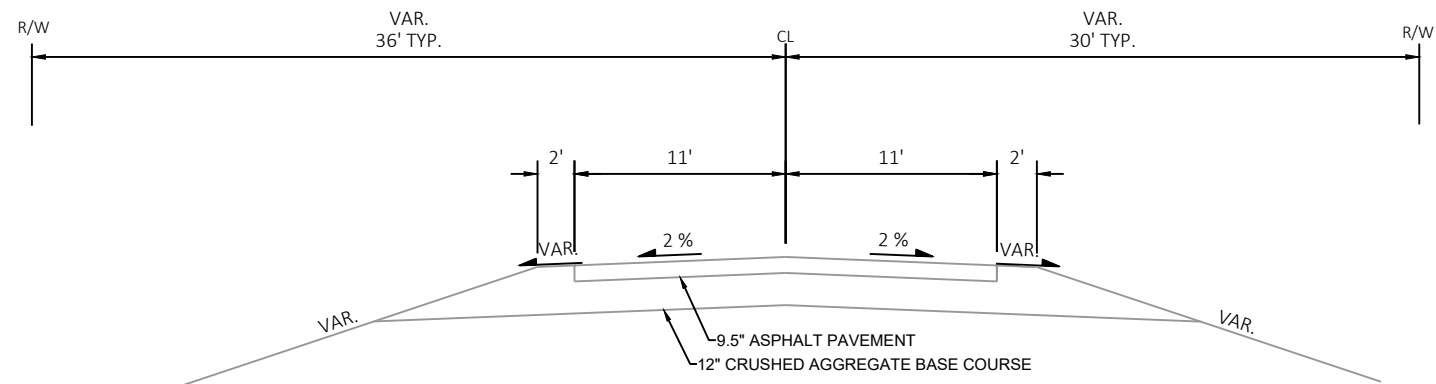
JILL M. WEISS
600 S 4TH STREET
STOUGHTON, WI 53589
608-877-7423
920-650-6888 (MOBILE)
jweiss@stoughtonutilities.com

** DENOTES DIGGERS HOTLINE MEMBER

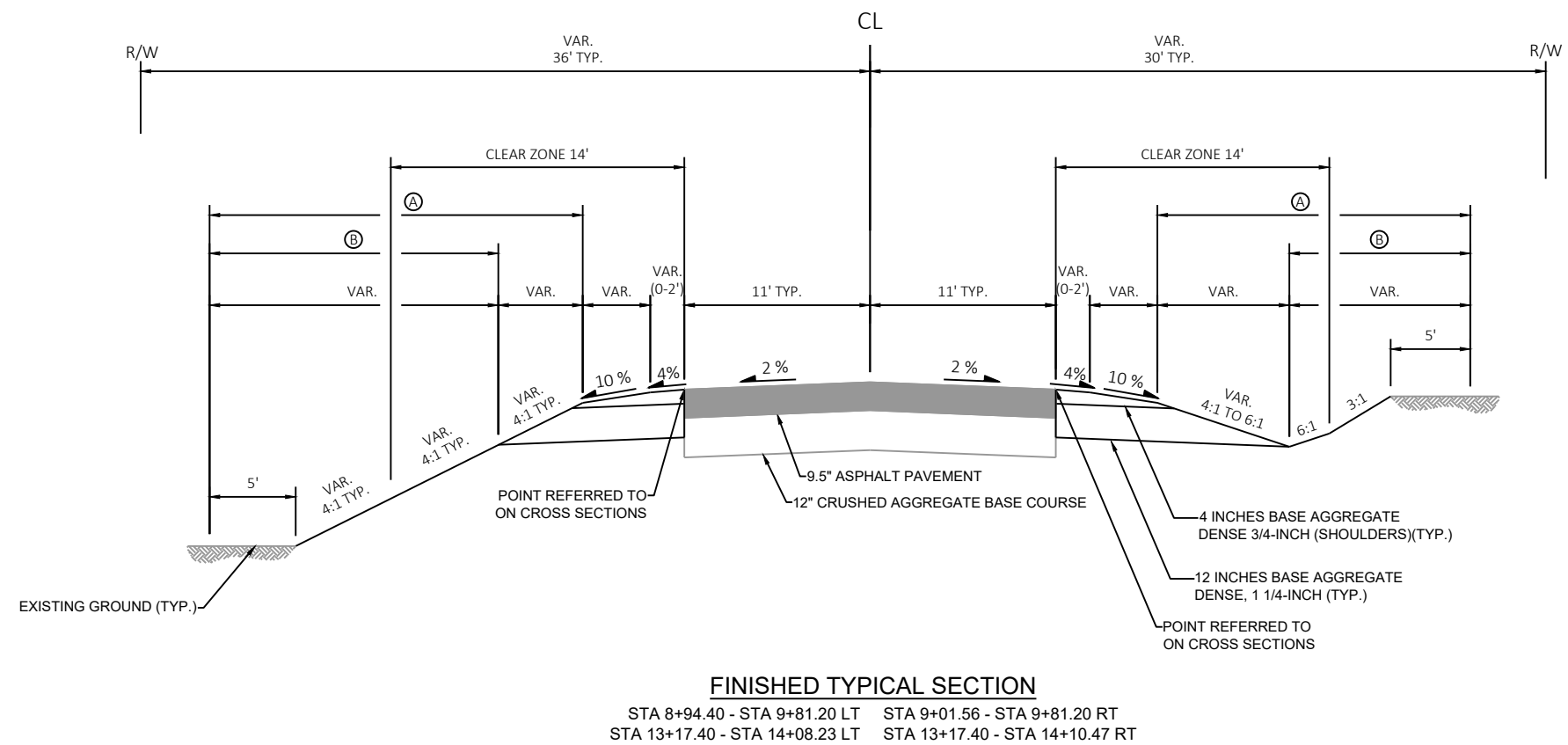
DIGGERSHOTLINE

Dial 811 or (800)242-8511

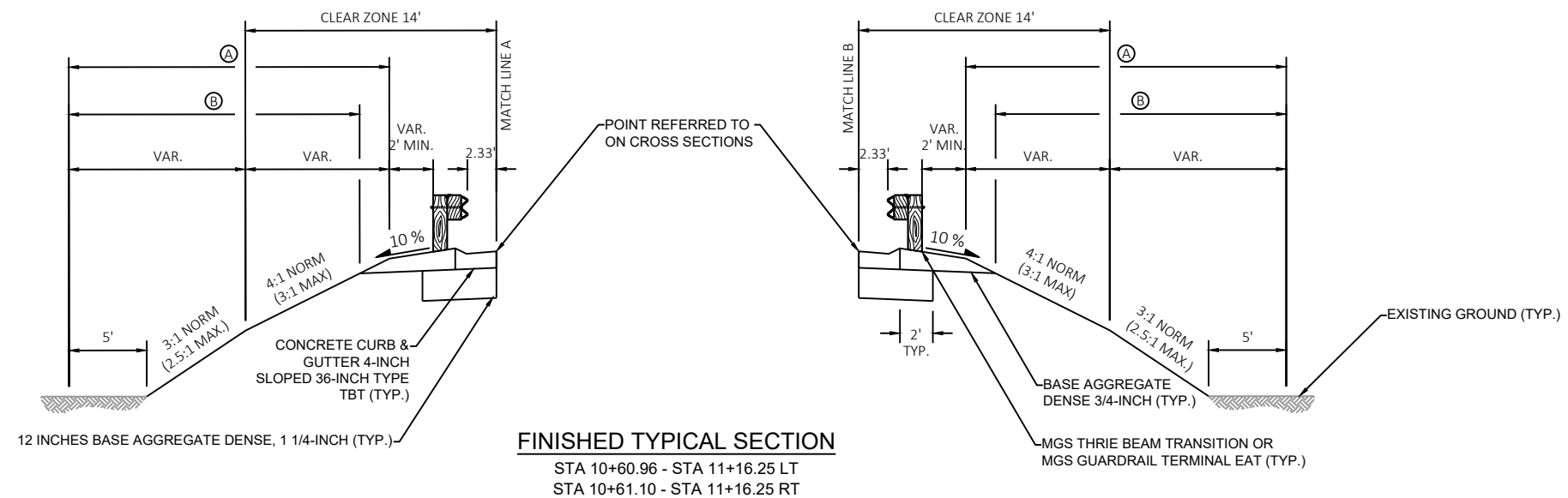
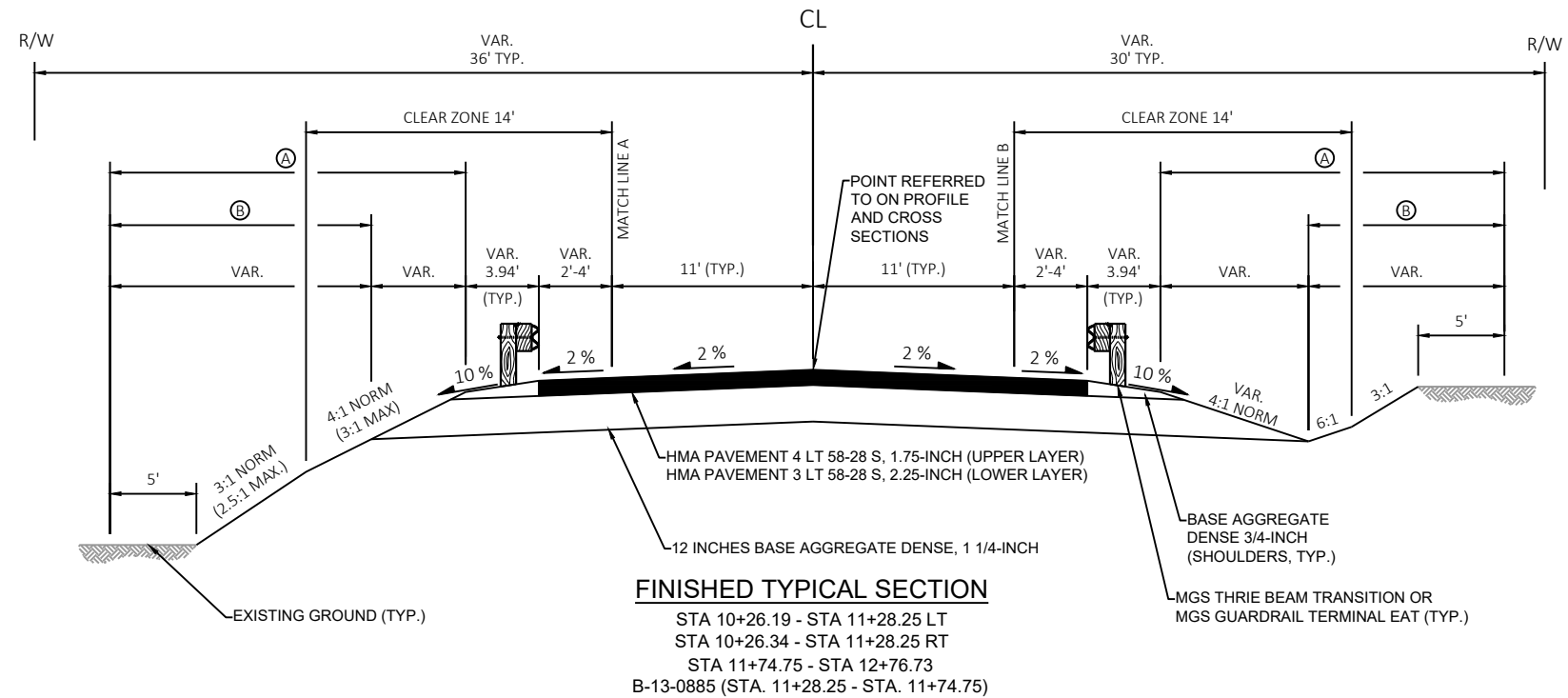
www.DiggersHotline.com



EXISTING TYPICAL SECTION
LAKE KEGONSA ROAD



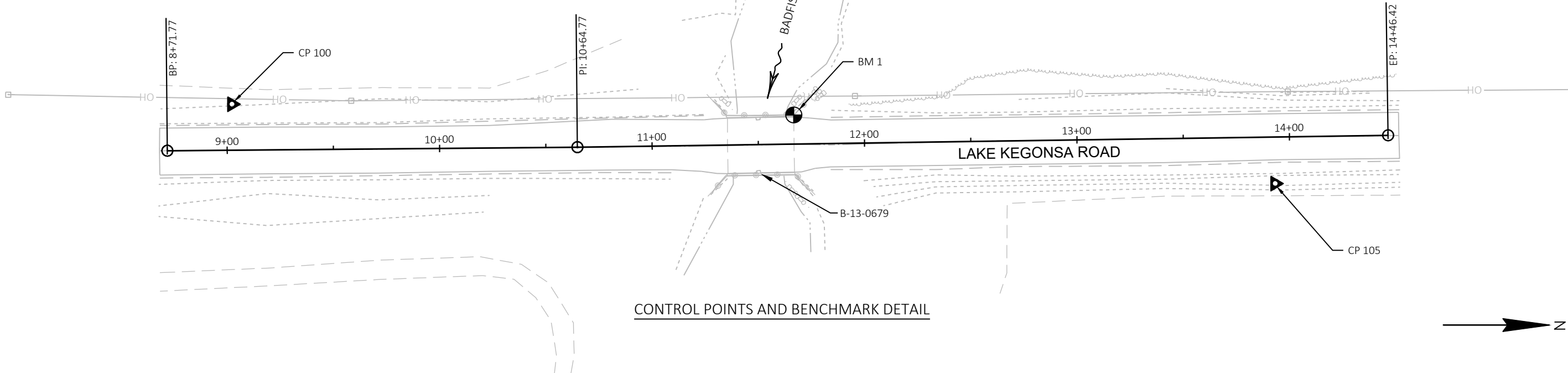
- (A) SEEDING MIXTURE NO. 20 OR SEEDING MIXTURE NO. 60; AND FERTILIZER TYPE A.
- (B) SALVAGED TOPSOIL AND MULCHING



- (A) SEEDING MIXTURE NO. 20 OR SEEDING MIXTURE NO. 60; AND FERTILIZER TYPE A.
- (B) SALVAGED TOPSOIL AND MULCHING

BENCH MARKS				
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 1	11+66.86	13.67' LT	885.14	CHISELED X ON NW CORNER OF EXISTING STRUCTURE

CONTROL POINTS					
NO.	STATION	OFFSET	Y	X	DESCRIPTION
CP 100	9+02.44	21.69' LT	415886.740	846441.612	$\frac{3}{4}$ REBAR
CP 105	13+92.94	21.91' RT	416377.706	846478.948	$\frac{3}{4}$ REBAR



RUNOFF COEFFICIENT TABLE

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

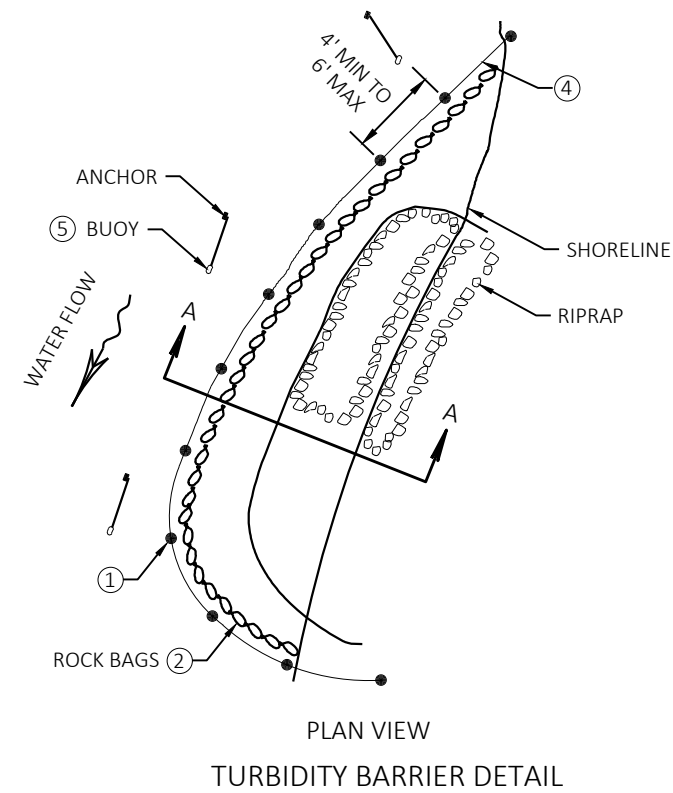
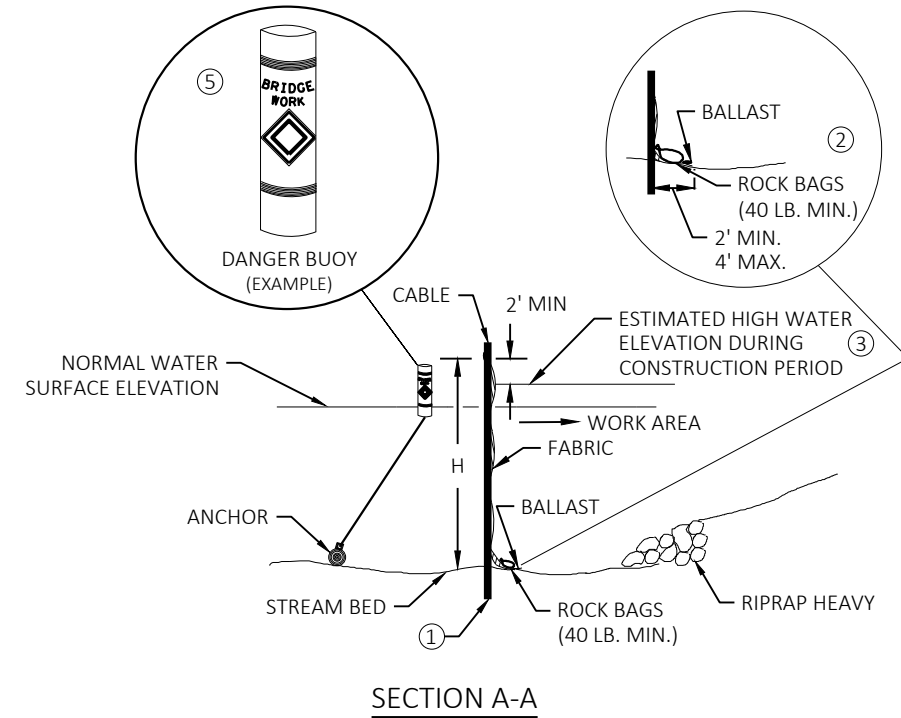
TOTAL PROJECT AREA = 0.847 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.538 ACRES

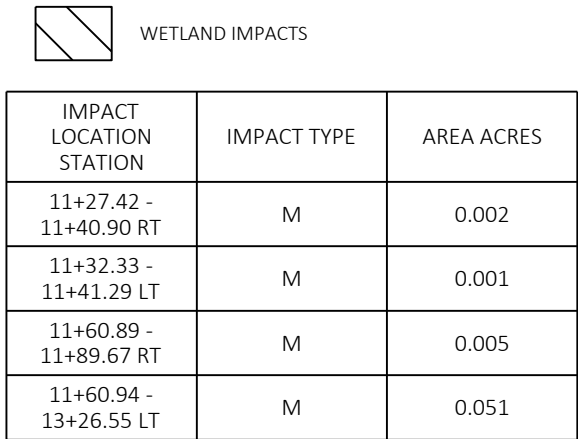
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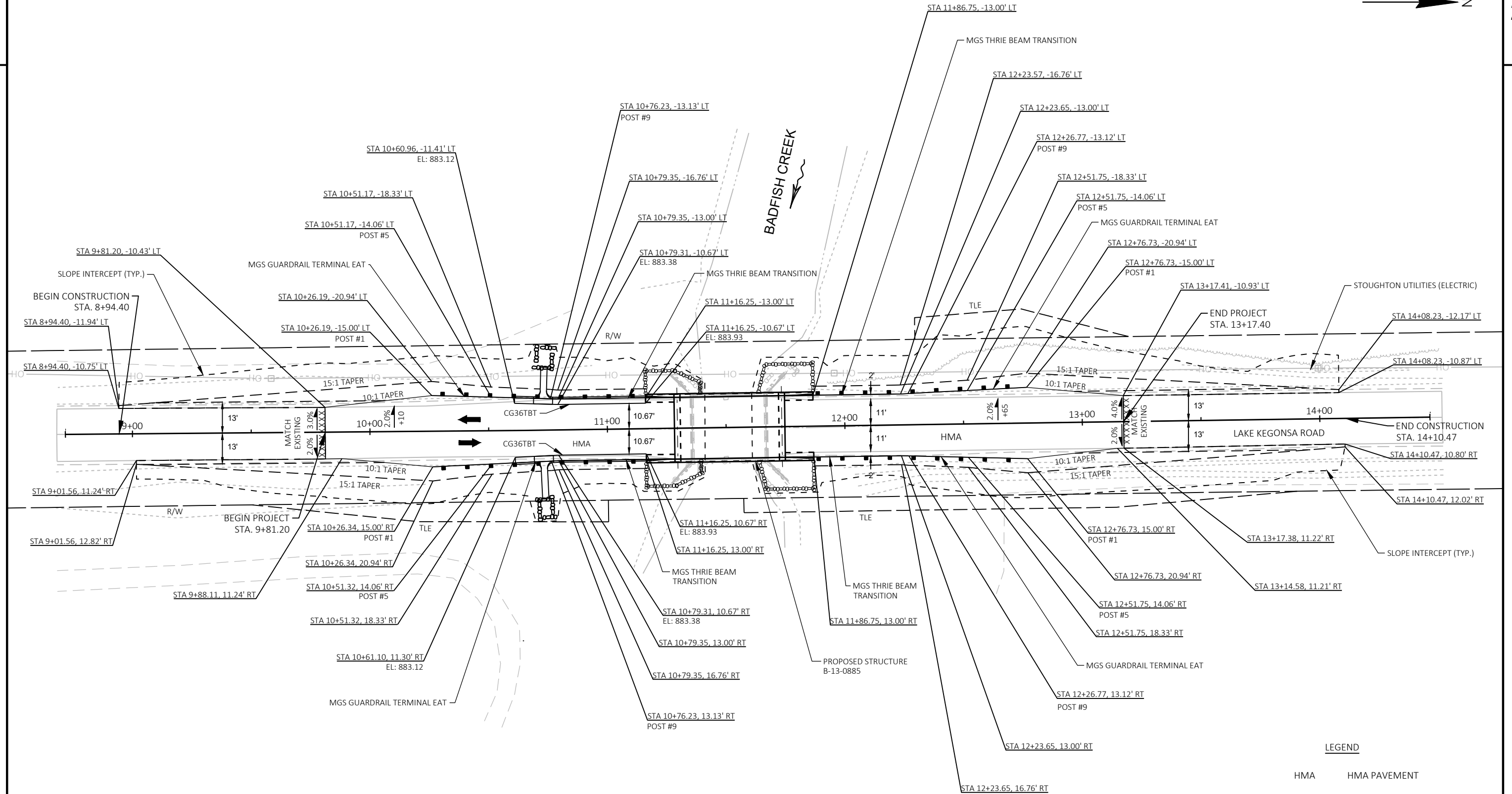
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEER'S 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 INSTALL A CONTINUOUS LINE OF ROCK BAGS TO ANCHOR THE BARRIER TO THE STREAM BED.
- ③ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2 FEET GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- 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 USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.







PROJECT NO: 5742-00-72

HWY: LAKE KEGONSA ROAD

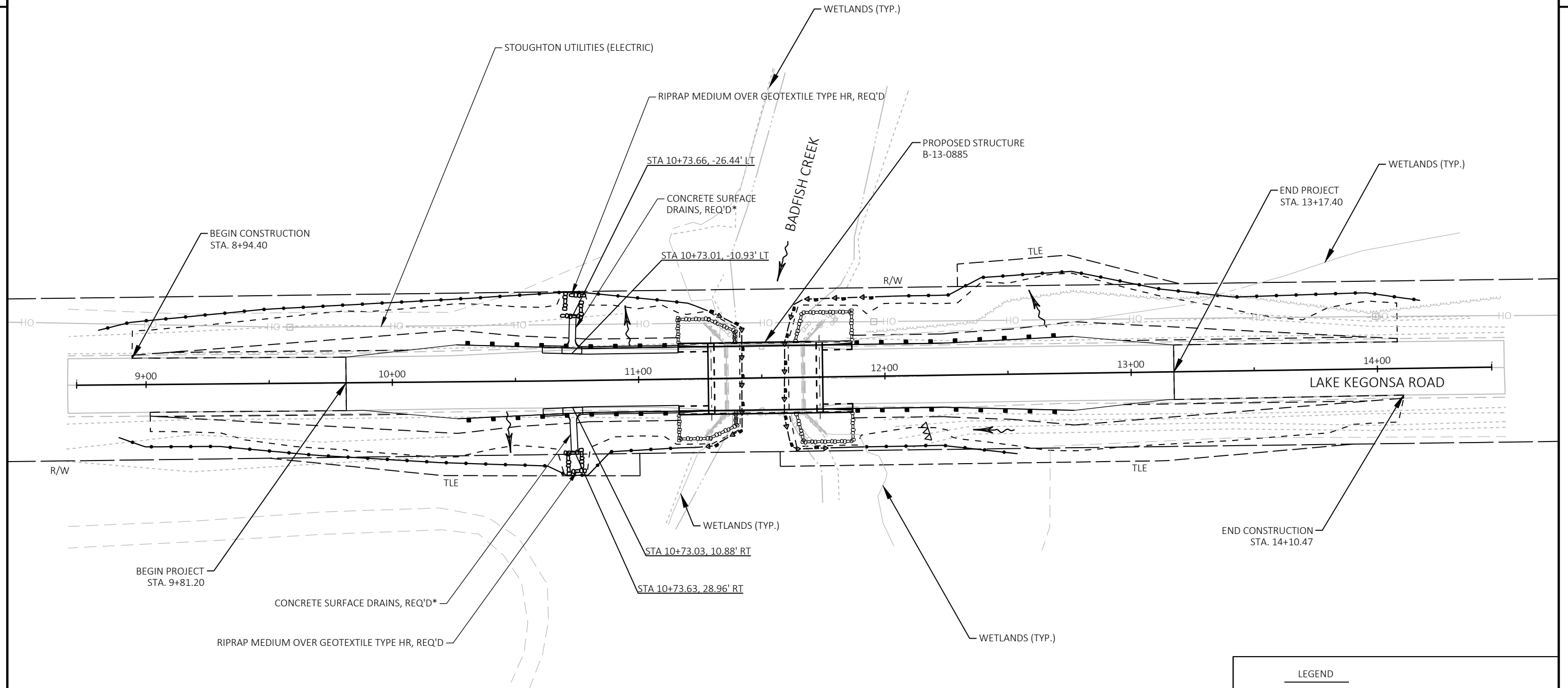
COUNTY: DANE

LAYOUT DETAIL

SHEET

E

NOTE: REMOVE SILT FENCE BELOW FLUME ONCE
FLUME AND RIPRAP ARE IN PLACE



*FINAL PLACEMENT OF THE CONCRETE
SURFACE DRAINS MUST MAINTAIN THE
MINIMUM POST SEPARATION DISTANCES
IN S.D.D. CONCRETE SURFACE DRAINS
FLUME TYPE AT STRUCTURES

LEGEND	
	SILT FENCE
	RIPRAP HEAVY (UNLESS OTHERWISE NOTED)
	SLOPE INTERCEPT
	TEMPORARY DITCH CHECK
	FLOW ARROW
	TURBIDITY BARRIER (SEE CONSTRUCTION DETAIL)

PROJECT NO: 5742-00-72

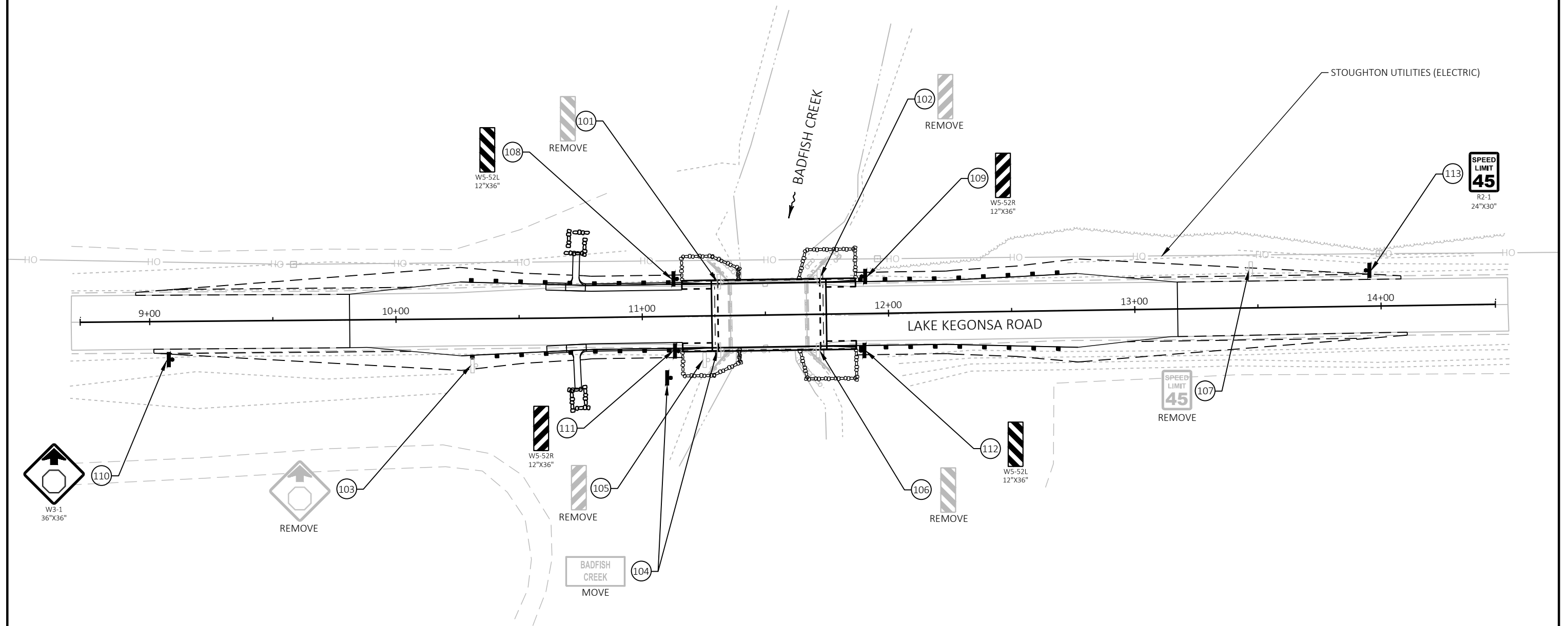
HWY: LAKE KEGONSA ROAD

COUNTY: DANE




EROSION CONTROL

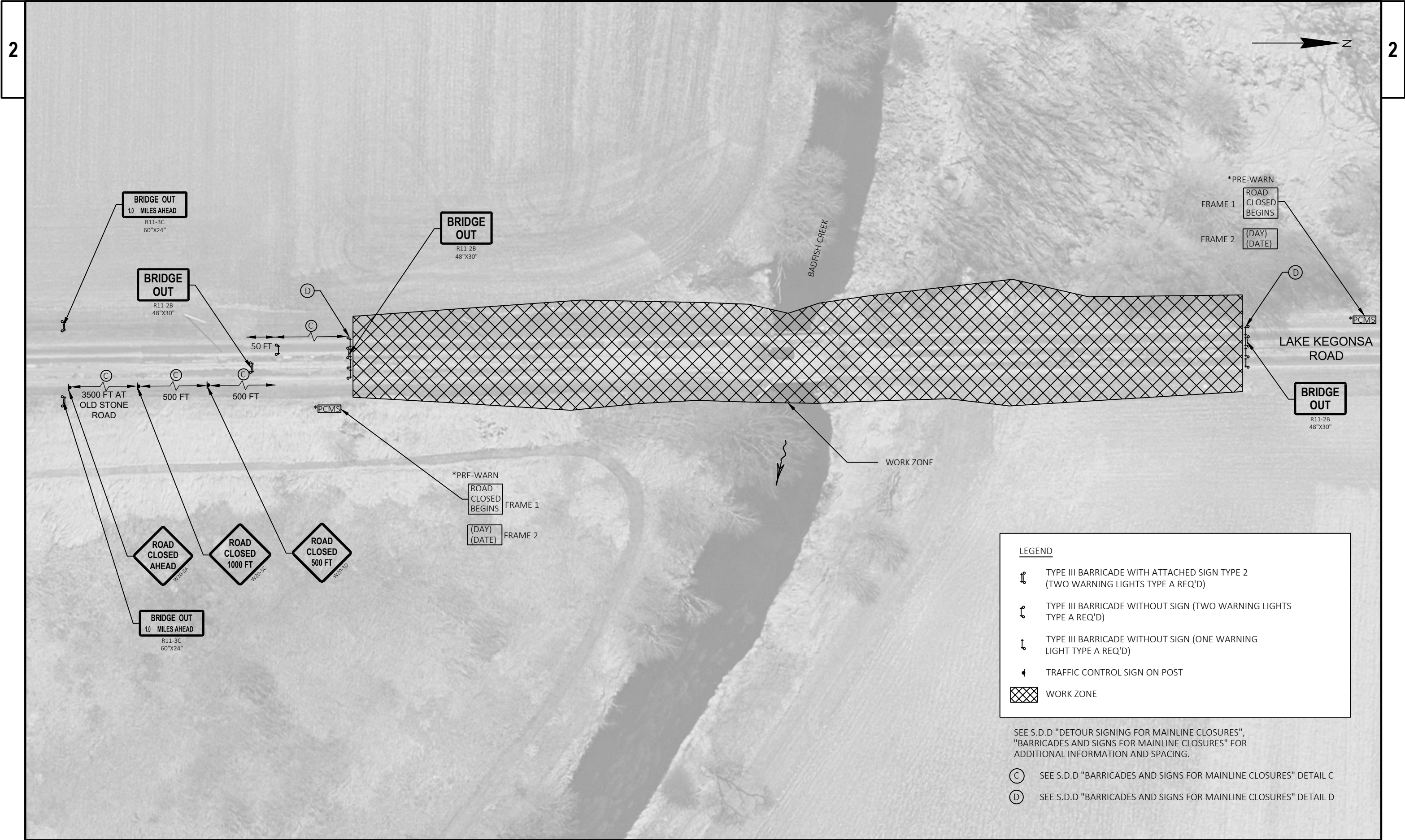
SHEET

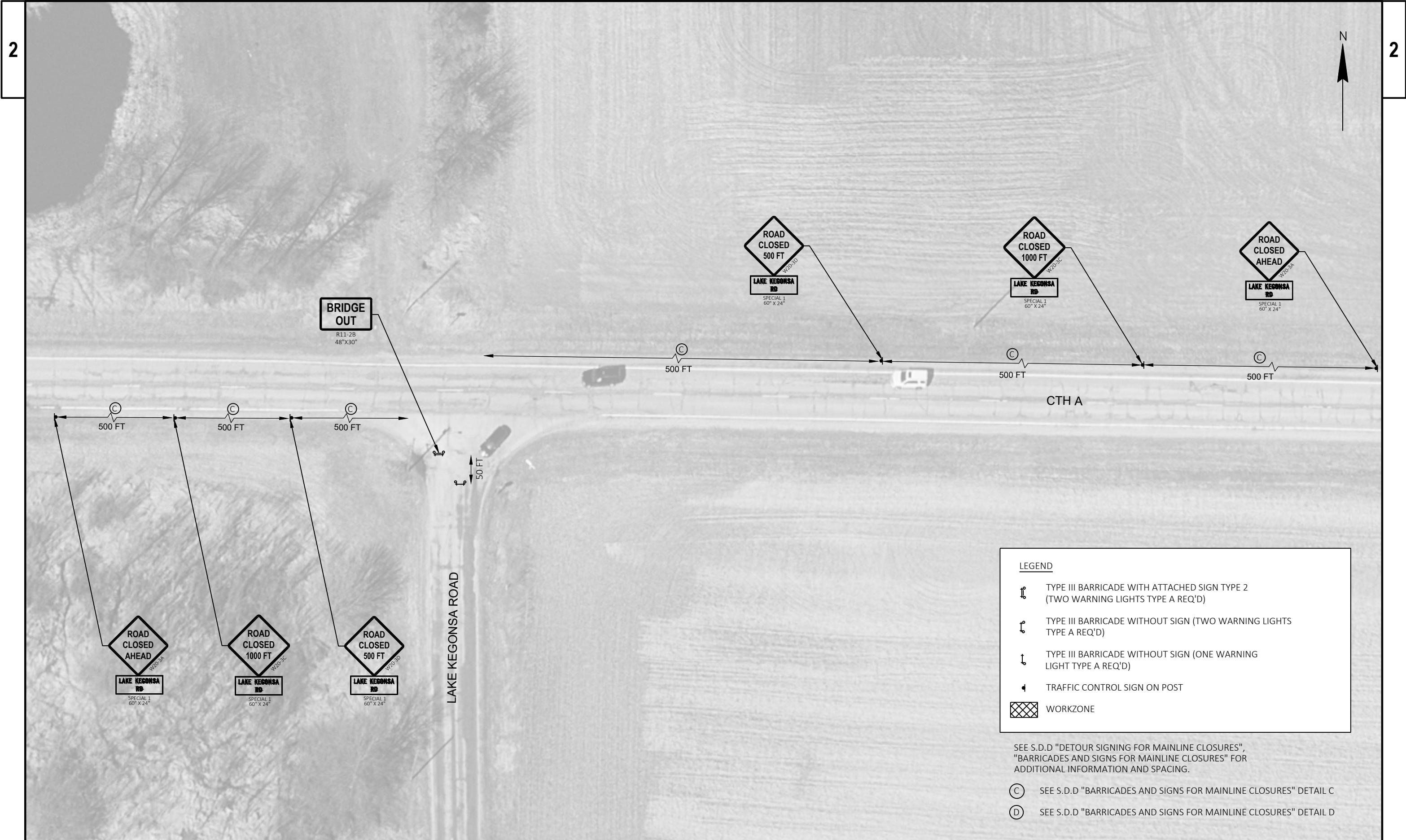
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LEGEND

-  PROPOSED SIGN ON WOOD POST
-  EXISTING SIGN ON WOOD POST
-  DESIGNATES SIGN ITEM NUMBER





Estimate Of Quantities

5742-00-72

Line	Item	Item Description	Unit	Total	Qty
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-13-679	EACH	1.000	1.000
0004	205.0100	Excavation Common	CY	589.000	589.000
0006	206.1001	Excavation for Structures Bridges (structure) 01. B-13-885	EACH	1.000	1.000
0008	210.1500	Backfill Structure Type A	TON	276.000	276.000
0010	213.0100	Finishing Roadway (project) 01. 5742-00-72	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	141.000	141.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,060.000	1,060.000
0016	312.0110	Select Crushed Material	TON	61.000	61.000
0018	455.0605	Tack Coat	GAL	41.000	41.000
0020	460.2000	Incentive Density HMA Pavement	DOL	130.000	130.000
0022	460.5223	HMA Pavement 3 LT 58-28 S	TON	104.000	104.000
0024	460.5224	HMA Pavement 4 LT 58-28 S	TON	82.000	82.000
0026	502.0100	Concrete Masonry Bridges	CY	183.000	183.000
0028	502.3200	Protective Surface Treatment	SY	134.000	134.000
0030	502.3210	Pigmented Surface Sealer	SY	70.000	70.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	3,400.000	3,400.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	25,010.000	25,010.000
0036	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0038	550.2104	Piling CIP Concrete 10 3/4 X 0.25-Inch	LF	480.000	480.000
0040	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	110.000	110.000
0042	602.3010	Concrete Surface Drains	CY	2.400	2.400
0044	606.0200	Riprap Medium	CY	5.400	5.400
0046	606.0300	Riprap Heavy	CY	152.000	152.000
0048	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	186.000	186.000
0050	614.2500	MGS Thrie Beam Transition	LF	158.000	158.000
0052	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0054	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5742-00-72	EACH	1.000	1.000
0056	619.1000	Mobilization	EACH	1.000	1.000
0058	624.0100	Water	MGAL	19.000	19.000
0060	625.0500	Salvaged Topsoil	SY	660.000	660.000
0062	627.0200	Mulching	SY	1,200.000	1,200.000
0064	628.1504	Silt Fence	LF	1,235.000	1,235.000
0066	628.1520	Silt Fence Maintenance	LF	1,840.000	1,840.000
0068	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0072	628.6005	Turbidity Barriers	SY	254.000	254.000
0074	628.7504	Temporary Ditch Checks	LF	40.000	40.000
0076	628.7560	Tracking Pads	EACH	2.000	2.000
0078	629.0205	Fertilizer Type A	CWT	0.900	0.900
0080	630.0120	Seeding Mixture No. 20	LB	28.000	28.000
0082	630.0160	Seeding Mixture No. 60	LB	4.000	4.000
0084	630.0300	Seeding Borrow Pit	LB	10.000	10.000
0086	630.0500	Seed Water	MGAL	38.000	38.000
0088	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	6.000	6.000
0090	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0092	637.2210	Signs Type II Reflective H	SF	5.000	5.000
0094	637.2230	Signs Type II Reflective F	SF	21.000	21.000
0096	638.2102	Moving Signs Type II	EACH	1.000	1.000
0098	638.2602	Removing Signs Type II	EACH	6.000	6.000

Estimate Of Quantities

5742-00-72

Line	Item	Item Description	Unit	Total	Qty
0100	638.3000	Removing Small Sign Supports	EACH	7.000	7.000
0102	642.5201	Field Office Type C	EACH	1.000	1.000
0104	643.0420	Traffic Control Barricades Type III	DAY	1,036.000	1,036.000
0106	643.0705	Traffic Control Warning Lights Type A	DAY	1,628.000	1,628.000
0108	643.0900	Traffic Control Signs	DAY	1,110.000	1,110.000
0110	643.1000	Traffic Control Signs Fixed Message	SF	60.000	60.000
0112	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0114	643.5000	Traffic Control	EACH	1.000	1.000
0116	645.0111	Geotextile Type DF Schedule A	SY	42.000	42.000
0118	645.0120	Geotextile Type HR	SY	285.000	285.000
0120	650.4500	Construction Staking Subgrade	LF	470.000	470.000
0122	650.5000	Construction Staking Base	LF	290.000	290.000
0124	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	110.000	110.000
0126	650.6501	Construction Staking Structure Layout (structure) 01. B-13-0885	EACH	1.000	1.000
0128	650.9911	Construction Staking Supplemental Control (project) 01. 5742-00-72	EACH	1.000	1.000
0130	650.9920	Construction Staking Slope Stakes	LF	470.000	470.000
0132	690.0150	Sawing Asphalt	LF	44.000	44.000
0134	715.0502	Incentive Strength Concrete Structures	DOL	1,098.000	1,098.000
0136	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 11+52	EACH	1.000	1.000
0138	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0140	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0142	SPV.0195	Special 01. Excavation, Hauling, and Disposal of Creosote Contaminated Soil	TON	320.000	320.000

EARTHWORK														
205.0100													312.0110	
					EXCAVATION COMMON (1)		AVAILABLE	AVAILABLE	EXPANDED EBS	UNEXPANDED	EXPANDED	MASS ORDINATE	WASTE	SELECT
					CUT (2)	EBS EXCAVATION (3)	EXCAVATION (4)	MATERIAL (5)	BACKFILL (6)	FILL	FILL (7)	+/- (8)	(9)	CRUSHED
					5% OF CUT				FACTOR	FACTOR				MATERIAL
CATEGORY	LOCATION	STATION	-	STATION	CY	CY	CY	CY	CY	CY	CY	CY	CY	TON
0010	LAKE KEGONSA ROAD	8+94.40	-	14+10.47	561	28	182	743	35	192	240	503	503	61
TOTALS						589	182	743	35	192	240	503	503	61

- 1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100.
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- 3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL.
- 4) AVAILABLE STRUCTURE EXCAVATION IS FOR INFORMATION ONLY AND IS INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES B-13-0885".
- 5) AVAILABLE MATERIAL = CUT + AVAILABLE STRUCTURE EXCAVATION.
- 6) EXPANDED EBS BACKFILL: THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. EBS BACKFILL EXPANSION FACTOR = 1.25.
- 7) EXPANDED FILL = (UNEXPANDED FILL)* EXPANDED FILL FACTOR. EXPANDED FILL FACTOR = 1.25.
- 8) MASS ORDINATE: MASS ORDINATE = CUT + AVAILABLE STRUCTURE EXCAVATION - EXPANDED FILL.
PLUS MASS ORDINATE QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS MASS ORDINATE QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- 9) WASTE = POSITIVE MASS ORDINATE, BORROW = NEGATIVE MASS ORDINATE.
- 10) SELECT CRUSHED MATERIAL IS USED FOR BACKFILL OF EBS.

BASE AGGREGATE SUMMARY				
		305.0110	305.0120	
		BASE AGGREGATE	BASE AGGREGATE	
		DENSE 3/4-INCH	DENSE 1 1/4-INCH	
CATEGORY	STATION - STATION	TON	TON	
0010	8+94 - 9+81	30	90	
	9+81 - 11+28	43	430	
	11+75 - 13+17	46	440	
	13+17 - 14+10	22	100	
TOTALS		141	1,060	

ASPHALTIC ITEMS				
		460.5223	460.5224	455.0605
		HMA PAVEMENT	HMA PAVEMENT	TACK
		3 LT 58-28 S	4 LT 58-28 S	COAT
CATEGORY	STATION - STATION	TON	TON	GAL
0010	9+81 - 11+28	51	40	20
	11+75 - 13+17	53	42	21
TOTALS		104	82	41

NOTE: HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LB/SY/IN.

FINISHING ROADWAY			
		213.0100	
CATEGORY	PROJECT	EACH	
0010	5742-00-72	1	

CONCRETE CURB & GUTTER			
		601.0588	
		CONCRETE	
		CURB & GUTTER	
		4-INCH SLOPED 36-INCH	
		TYPE TBT	
CATEGORY	STATION - STATION	LOCATION	LF
0010	10+61 - 11+16	LT/RT	110

CONCRETE SURFACE DRAIN SUMMARY					
		602.3010	606.0200	*	
		CONCRETE SURFACE	RIPRAP	645.0120	
		DRAINS	MEDIUM	GEOTEXTILE	
CATEGORY	STATION LOCATION	CY	CY	TYPE HR	
0010	10+73 LT	1.1	2.7	11	
	10+73 RT	1.3	2.7	11	
TOTALS		2.4	5.4	22	

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

GUARDRAIL SUMMARY				
		614.2610	614.2500	
		MGS	MGS	
		GUARDRAIL	THRIE BEAM	
		TERMINAL	TRANSITION	
		EAT	LF	
CATEGORY	STATION - STATION	LOCATION	EACH	
0010	10+26 - 11+19	LT/RT	2	79
	11+84 - 12+77	LT/RT	2	79
TOTALS			4	158

MAINTENANCE AND REPAIR OF HAUL ROADS		
		618.0100
CATEGORY	PROJECT	EACH
0030	5742-00-72	1

MOBILIZATION		
CATEGORY	PROJECT	619.1000 EACH
0010	5742-00-72	1

WATER			
CATEGORY	STATION - STATION	624.0100 MGAL	REMARKS
0010	8+94 - 14+10	3 16	DUST CONTROL COMPACTION
TOTAL		19	

FINISHING ITEMS									
CATEGORY	STATION - STATION	LOCATION	625.0500	627.0200	629.0205	630.0120	630.0160	630.0300	630.0500
			SALVAGED TOPSOIL SY	MULCHING SY	FERTILIZER TYPE A CWT	SEEDING MIXTURE NO. 20 LB	SEEDING MIXTURE NO. 60 LB	SEEDING BORROW PIT LB	SEED WATER MGAL
0010	8+94 - 11+28 11+75 - 14+10	LT/RT	330	330	0.3	13	---	---	11
		LT/RT	330	330	0.2	9	3	---	12
		WASTE SITE	---	300	0.2	---	---	8	7
		UNDISTRIBUTED	---	240	0.2	6	1	2	8
		TOTALS	660	1,200	0.9	28	4	10	38

SIGNING SUMMARY														
		637.2210	637.2230	634.0614	634.0616	638.2102	638.2602	638.3000						
CATEGORY	SIGN NO.	APPROX. STA.	LOC.	SIGN CODE	SIGN MESSAGE	SIGN SIZE (W x H)	SIGNS TYPE II	SIGNS TYPE II	POSTS WOOD 4x6-INCH		MOVING SIGNS	REMOVING SIGNS	REMOVING SMALL SIGN	REMARKS
						IN	REFLECTIVE H SF	REFLECTIVE F SF	x 14-FT EACH	x 16-FT EACH	TYPE II EACH	TYPE II EACH	SUPPORTS EACH	
0010	101	11+33	LT	W5-52L	CLEARANCE STRIPER DOWN RIGHT	12 x 36	---	---	---	---	---	1	1	REMOVE
	102	11+71	LT	W5-52R	CLEARANCE STRIPER DOWN LEFT	12 x 36	---	---	---	---	---	1	1	REMOVE
	103	10+32	RT	W3-1	STOP AHEAD	36 x 36	---	---	---	---	---	1	1	REMOVE
	104	11+32	RT	I3-1	BADFISH CREEK	--- x ---	---	---	1	---	1	---	1	MOVE TO STA 11+11 RT
	105	11+26	RT	W5-52R	CLEARANCE STRIPER DOWN LEFT	12 x 36	---	---	---	---	---	1	1	REMOVE
	106	11+70	RT	W5-52L	CLEARANCE STRIPER DOWN RIGHT	12 x 36	---	---	---	---	---	1	1	REMOVE
	107	13+46	LT	R2-1	SPEED LIMIT_ MPH	24 x 30	---	---	---	---	---	1	1	REMOVE
	108	11+14	LT	W5-52L	CLEARANCE STRIPER DOWN RIGHT	12 x 36	---	3.00	1	---	---	---	---	
	109	11+89	LT	W5-52R	CLEARANCE STRIPER DOWN LEFT	12 x 36	---	3.00	1	---	---	---	---	
	110	9+10	RT	W3-1	STOP AHEAD	36 x 36	---	9.00	---	1	---	---	---	
	111	10+15	RT	W5-52R	CLEARANCE STRIPER DOWN LEFT	12 x 36	---	3.00	1	---	---	---	---	
	112	11+89	RT	W5-52L	CLEARANCE STRIPER DOWN RIGHT	12 x 36	---	3.00	1	---	---	---	---	
	113	13+95	LT	R2-1	SPEED LIMIT_ MPH	24 x 30	5.00	---	1	---	---	---	---	45 MPH
TOTALS							5.00	21.00	6	1	1	6	7	

EROSION CONTROL						
			628.1504	628.1520	628.6005	628.7504
			SILT FENCE	SILT MAINTENANCE	TURBIDITY BARRIERS	TEMPORARY DITCH CHECKS
CATEGORY	STATION - STATION	LOCATION	LF	LF	SY	LF
0010	8+81 - 11+42 11+59 - 14+18	LT/RT	485	725	83	---
		LT/RT	290	430	120	20
		WASTE SITE	210	315	---	---
		UNDISTRIBUTED	250	370	51	20
		TOTALS	1,235	1,840	254	40

MOBILIZATIONS EROSION CONTROL				
CATEGORY	PROJECT	628.1905	628.1910	
		MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	
0010	5742-00-72	4	2	

TRACKING PADS		
CATEGORY	LOCATION	628.7560 EACH
0010	UNDISTRIBUTED	2

FIELD OFFICE TYPE C		
CATEGORY	PROJECT	642.5201 EACH
0010	5742-00-72	1

TRAFFIC CONTROL										
			643.0900		643.1050		643.0420		643.0705	
CATEGORY	TRAFFIC CONTROL OPERATIONS	DURATION (DAYS)	SIGNS		SIGNS PCMS		BARRICADES TYPE III		WARNING LIGHTS TYPE A	
			EACH	DAY	EACH	DAYS	EACH	DAY	EACH	DAY
0010	PRE WARNING CLOSURE	7	---	---	2	14	---	---	---	---
		74	15	1,110	---	---	14	1,036	22	1,628
		TOTALS	1,110		14		1,036		1,628	

CONSTRUCTION STAKING						
			650.4500	650.5000	650.5500	650.9920
CATEGORY	STATION - STATION	LOCATION	SUBGRADE	BASE	CURB GUTTER AND CURB & GUTTER	SLOPE
			LF	LF	LF	STAKES LF
0010	8+94 - 11+28	LT/RT	235	145	55	235
	11+75 - 14+10	LT/RT	235	145	55	235
	TOTALS		470	290	110	470

TRAFFIC CONTROL SIGNS FIXED MESSAGE		
CATEGORY	LOCATION	643.1000
		SF
0010	BRIDGE CLOSURE DETAIL - CTH A	60

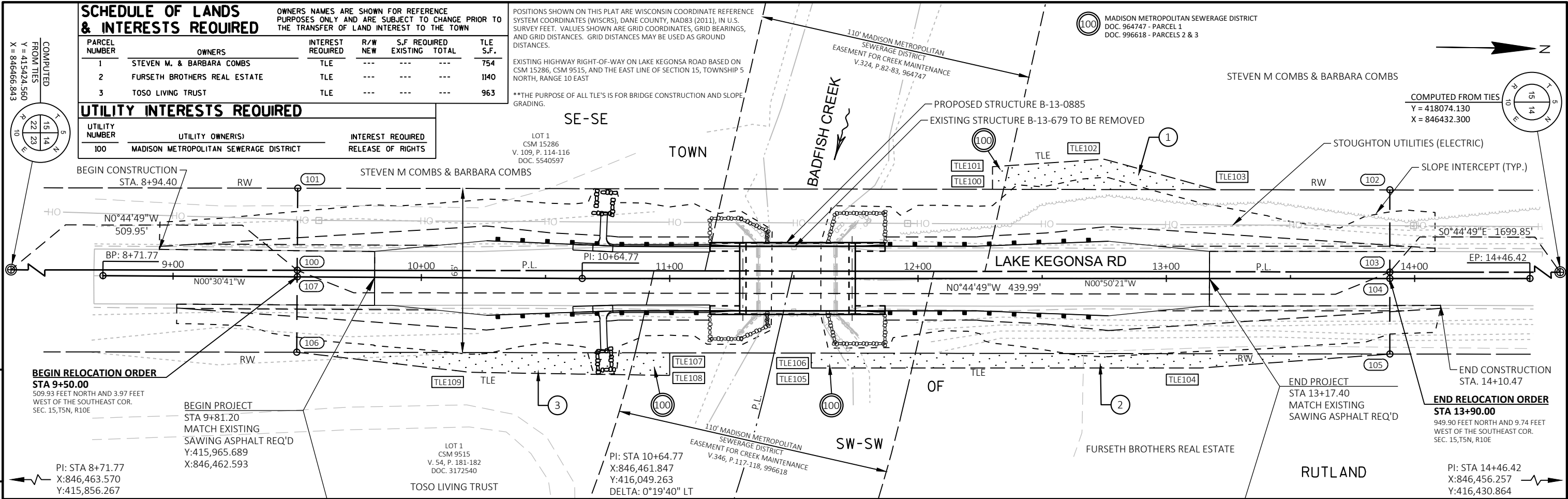
INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM		
CATEGORY	STATION	999.2000.S
		EACH
0010	11+52	1

EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL			
CATEGORY	STATION - STATION	LOCATION	SPV.0195.01
			TON
0010	12+04 - 12+42	LT/RT	160
	12+66 - 13+02	LT/RT	160
	TOTAL		320

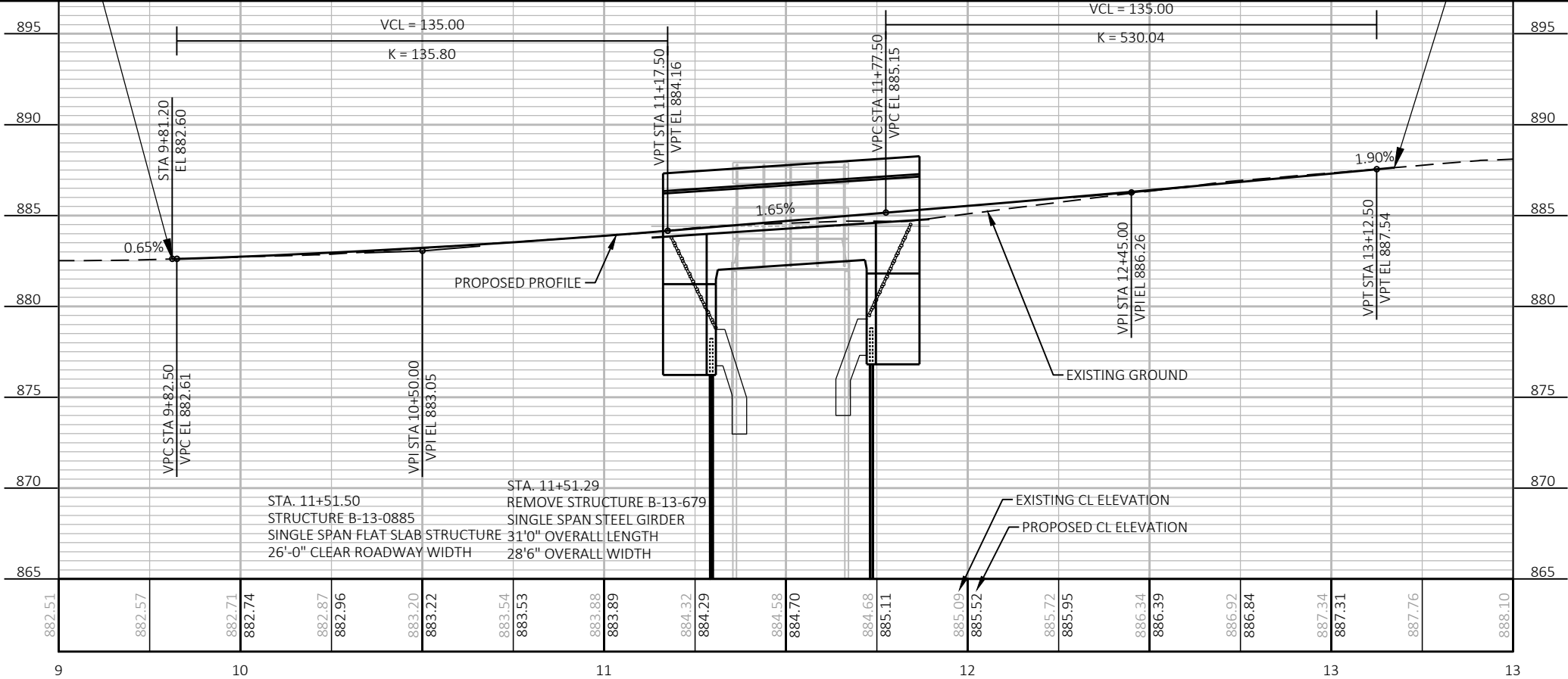
NOTE: CONTAMINATED SOIL WEIGHT CALCULATIONS BASED ON 1.7 TONS/CY.

TRAFFIC CONTROL		
CATEGORY	PROJECT	643.5000
		EACH
0010	5742-00-72	1

SAWING ASPHALT		
CATEGORY	LOCATION	690.0150
		LF
0010	9+81	22
	13+17	22
	TOTAL	44



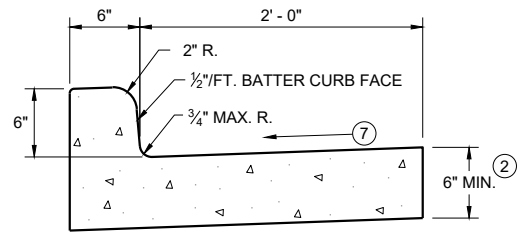
COURSE TABLE		
COURSE	BEARING	DISTANCE
100 - 101	S89° 29' 19"W	33.00'
101 - 102	N00° 44' 49"W	439.80'
102 - 103	N89° 10' 06"E	33.00'
103 - 104	N89° 10' 06"E	2.62'
104 - 105	N89° 10' 06"E	30.38'
105 - 106	S00° 44' 49"E	440.17'
106 - 107	S89° 29' 19"W	30.32'
107 - 100	S89° 29' 19"W	2.68'
101 - TLE100	N00° 44' 49"W	279.79'
TLE100 - TLE101	S89° 10' 46"W	9.12'
TLE101 - TLE102	N04° 39' 12"W	45.10'
TLE102 - TLE103	N14° 24' 16"E	46.64'
TLE103 - TLE100	S00° 44' 49"E	90.00'
TLE103 - 102	N00° 44' 49"W	70.01'
105 - TLE104	S05° 04' 17"E	76.21'
TLE104 - TLE105	S00° 50' 21"E	157.00'
TLE105 - TLE106	S89° 09' 39"W	6.00'
TLE106 - 105	N00° 44' 49"W	233.00'
TLE106 - TLE107	S00° 44' 49"E	57.00'
TLE107 - TLE108	N89° 09' 39"E	9.09'
TLE108 - TLE109	S00° 03' 30"W	80.23'
TLE109 - 106	S05° 44' 47"W	70.42'
106 - TLE107	N00° 44' 49"W	150.17'



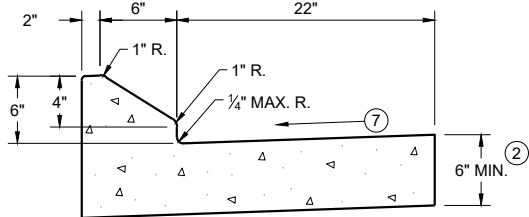
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	
100	9+50.00	-2.68'	415934.470	846460.196	
101	9+50.00	-35.68'	415934.176	846427.197	
102	13+90.01	-35.62'	416373.941	846421.463	
103	13+90.00	-2.62'	416374.420	846454.460	
104	13+90.00	0.00'	416374.458	846457.083	
105	13+90.00	30.38'	416374.899	846487.456	
106	9+50.00	30.32'	415934.765	846493.194	
107	9+50.00	0.00'	415934.494	846462.872	
TLE100	12+30.00	-35.88'	416213.943	846423.549	
TLE101	12+30.00	-45.00'	416213.812	846414.432	
TLE102	12+75.00	-48.00'	416258.764	846410.773	
TLE103	13+20.00	-35.74'	416303.939	846422.376	
TLE104	13+14.00	36.00'	416298.990	846494.193	
TLE105	11+57.00	36.00'	416142.007	846496.493	
TLE106	11+57.00	30.00'	416141.919	846490.494	
TLE107	11+00.00	29.91'	416084.924	846491.237	
TLE108	11+00.00	39.00'	416085.057	846500.327	
TLE109	10+20.00	38.00'	416004.830	846500.245	

Standard Detail Drawing List

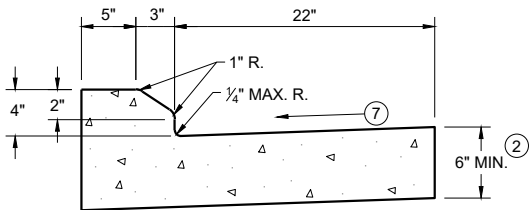
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E14-01	TRACKING PAD
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
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)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



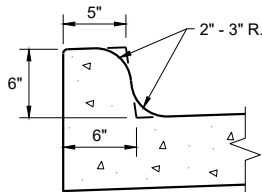
TYPES A^① & D



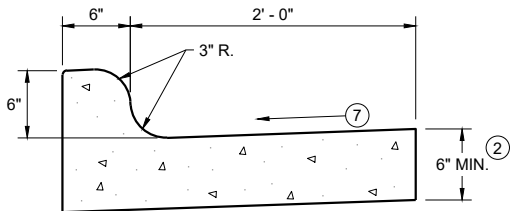
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

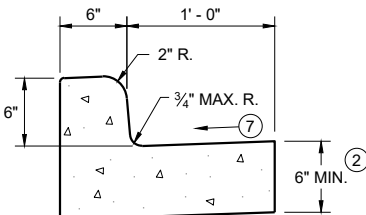


TYPES K^① & L
(OPTIONAL CURB SHAPE)



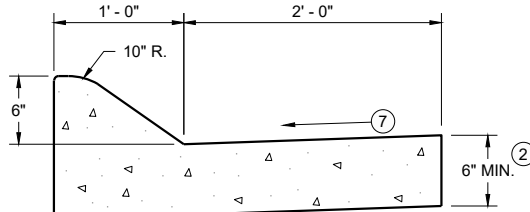
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

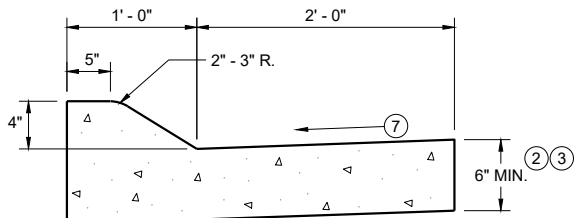


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

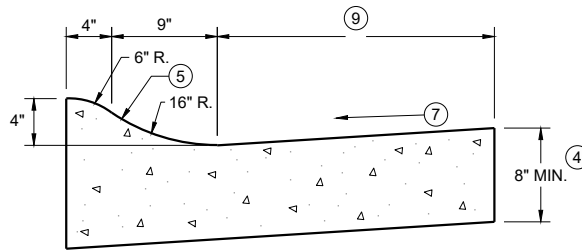


6" SLOPED CURB TYPES A^① & D



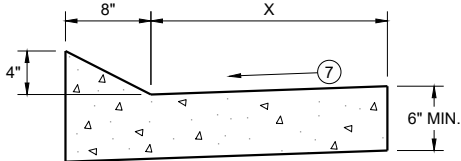
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

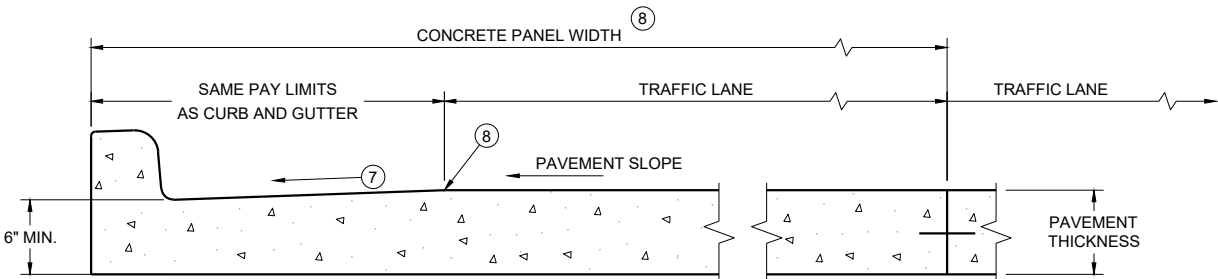


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

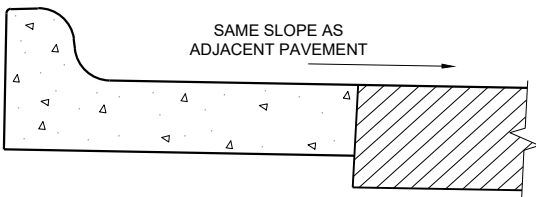
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

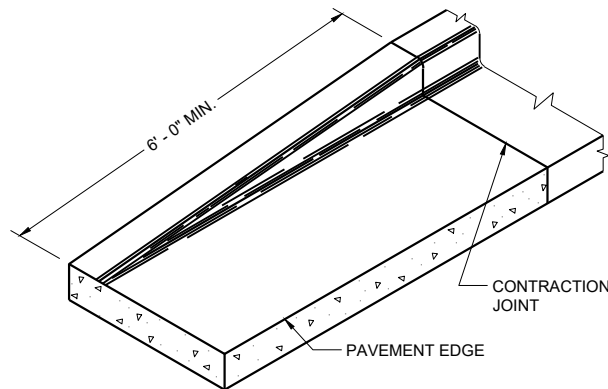
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

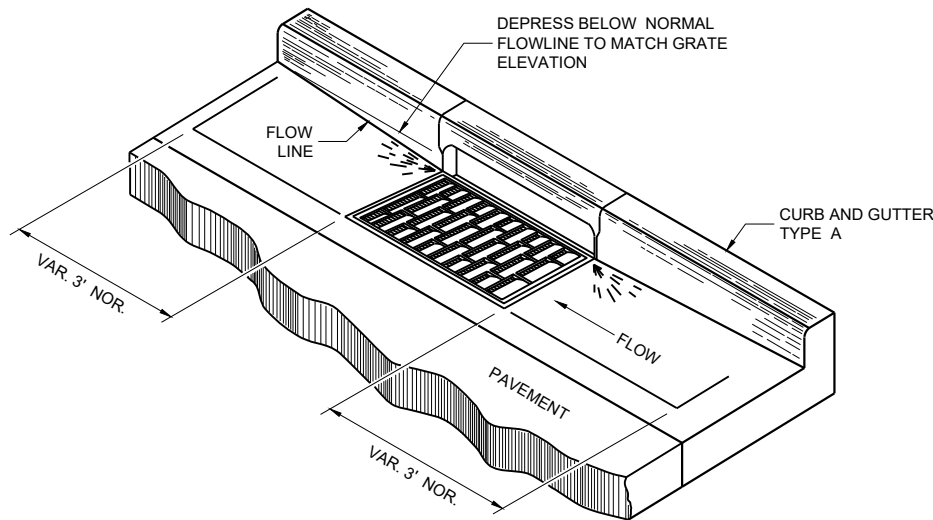
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

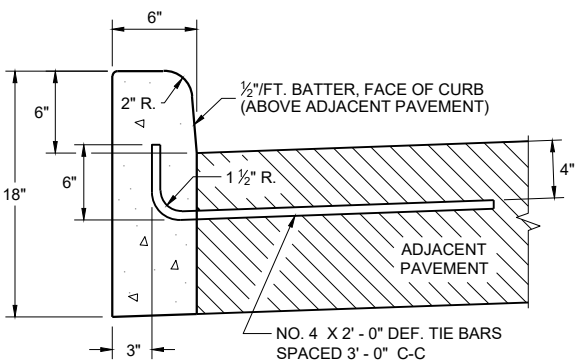


END SECTION CURB AND GUTTER

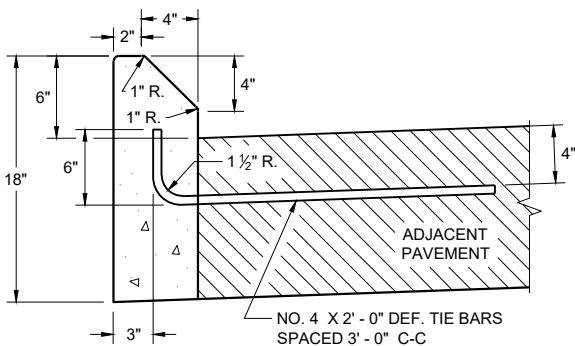


DETAIL OF CURB AND GUTTER AT INLETS

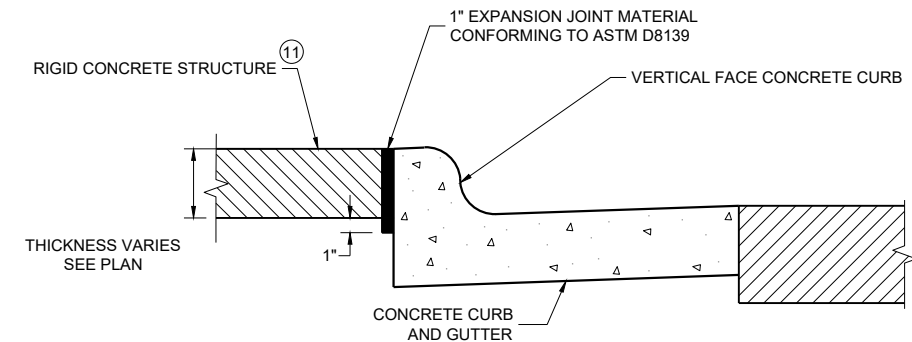
(TYPICAL H INLET COVER SHOWN)



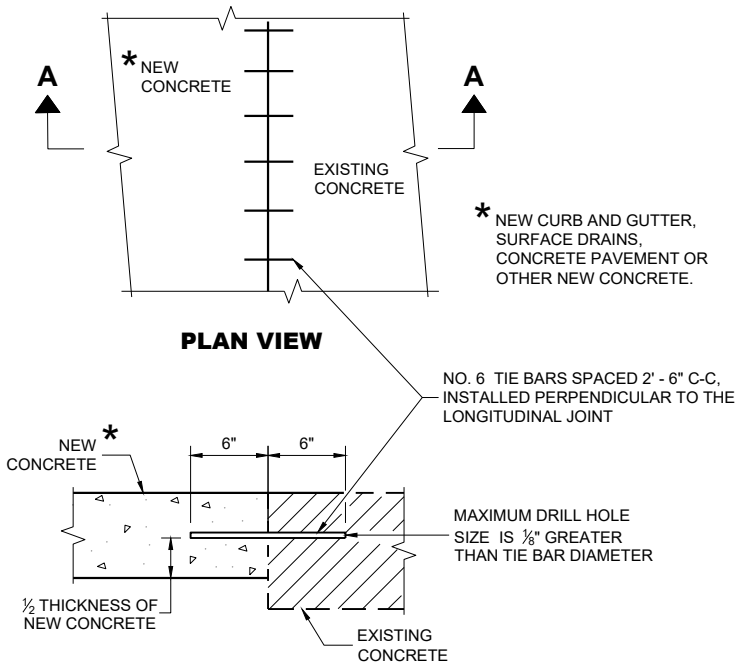
TYPES A^① & D



TYPES G^① & J
CONCRETE CURB



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



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

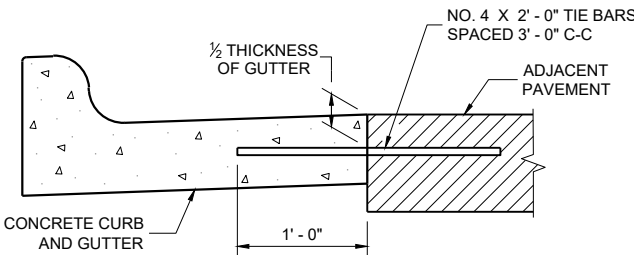
GENERAL NOTES

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

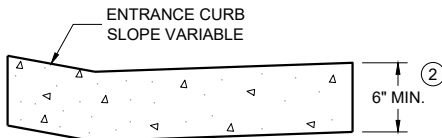
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

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



TYPICAL TIE BAR LOCATION^①



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

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

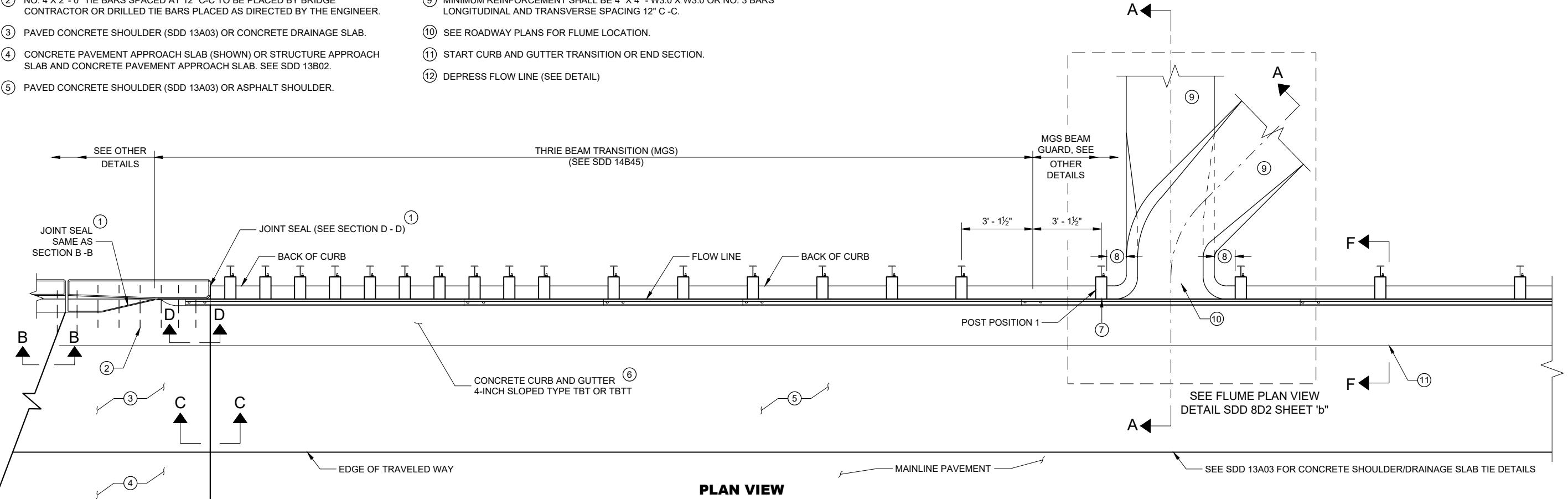
GENERAL NOTES

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

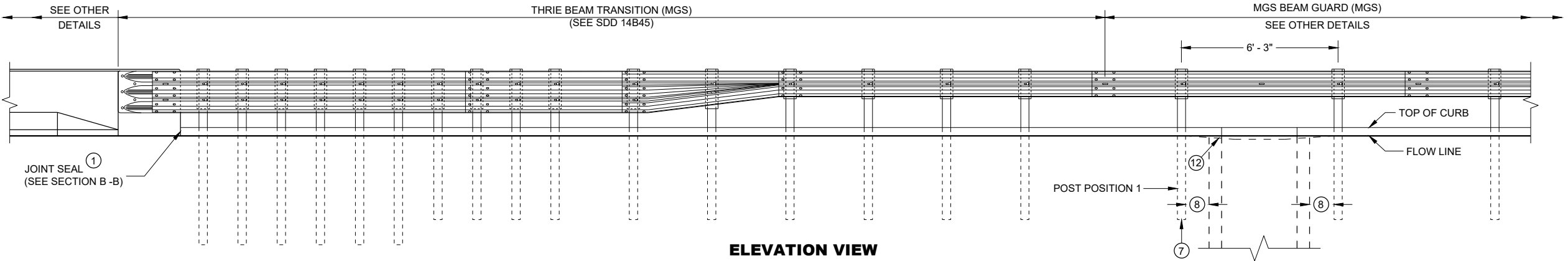
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- 1 USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
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- 3 PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- 4 CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- 5 PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

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



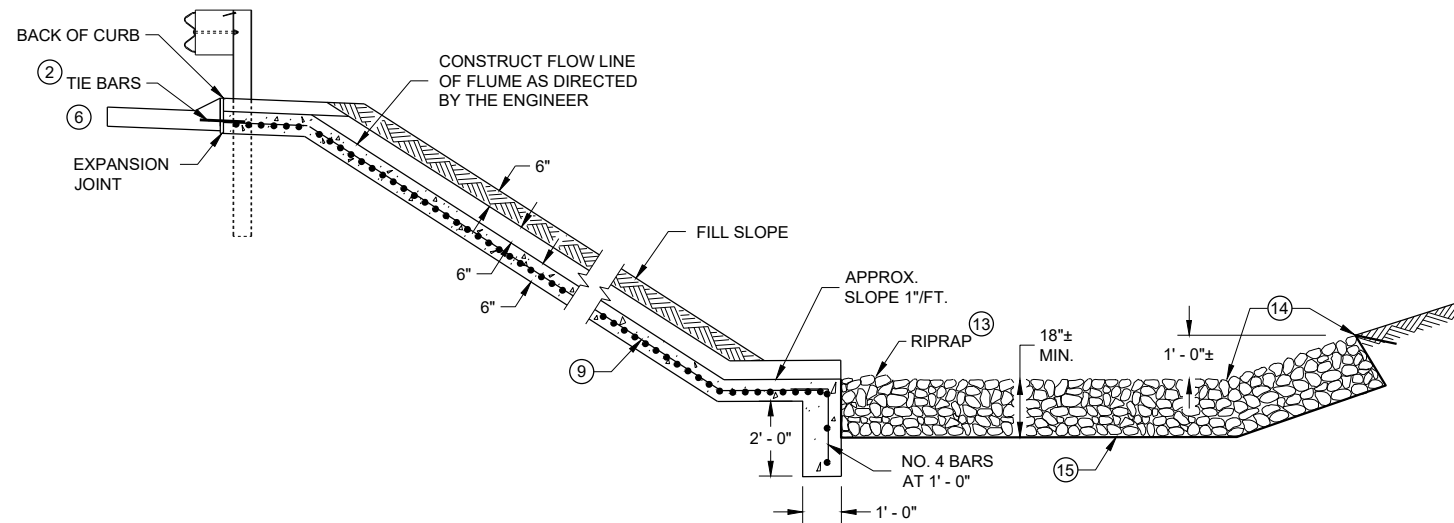
PLAN VIEW



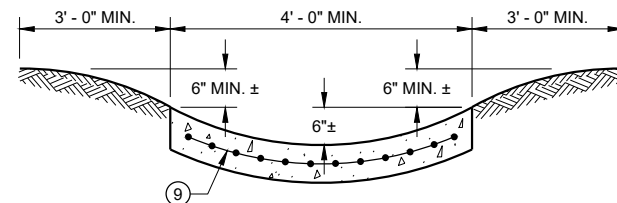
ELEVATION VIEW

CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES

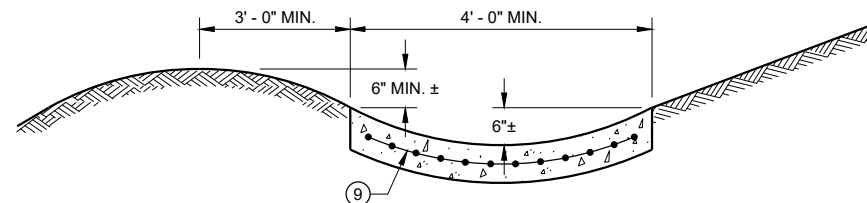
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



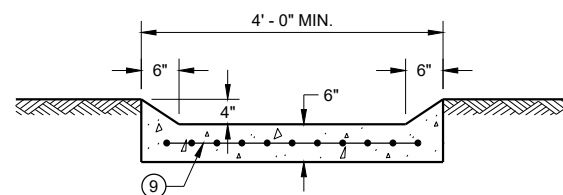
SECTION A - A



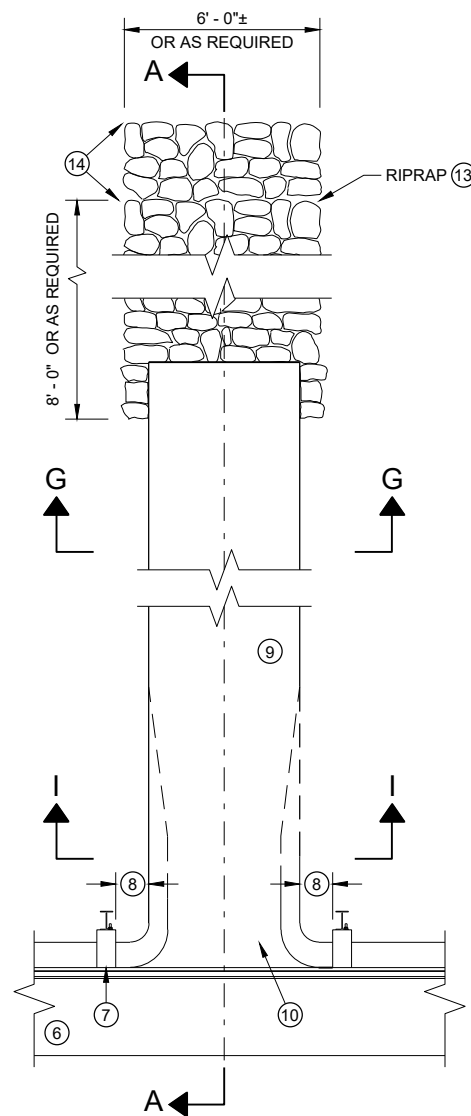
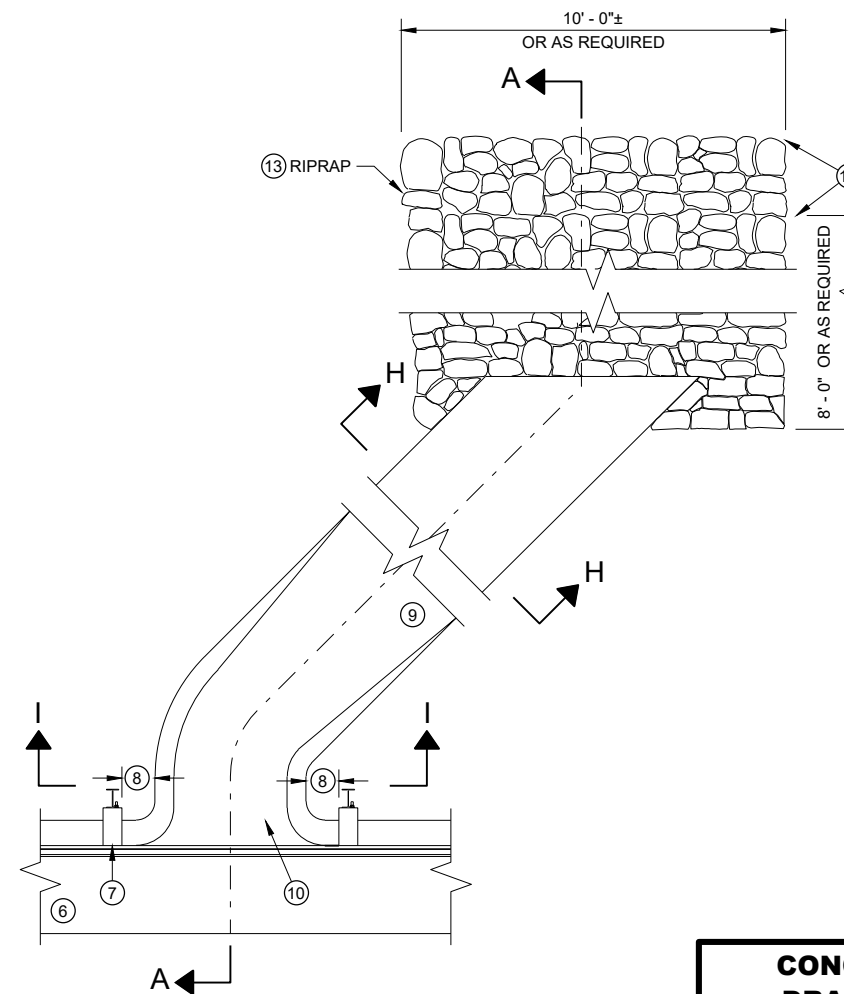
SECTION G - G



SECTION H - H



SECTION I - I

PLAN VIEW
PERPENDICULAR FLUMEPLAN VIEW
SKEWED FLUME

GENERAL NOTES

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

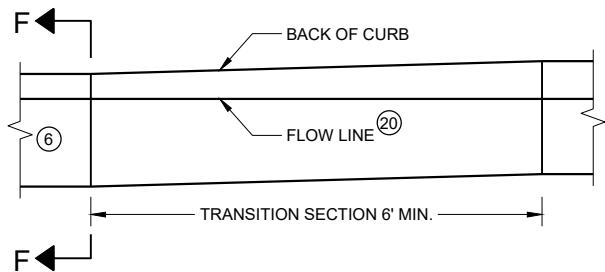
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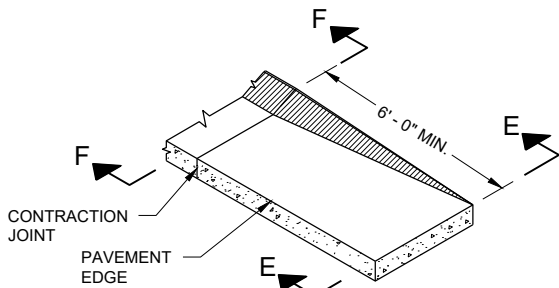
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY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

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

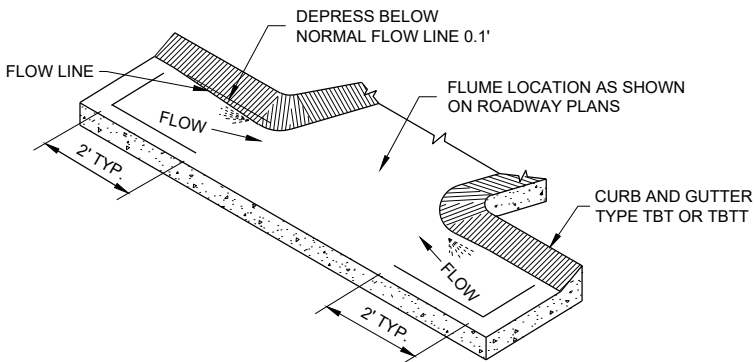
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



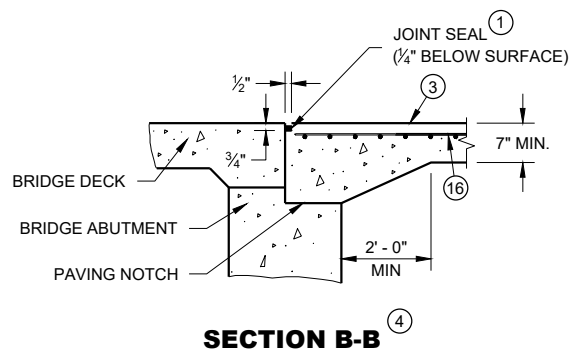
**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



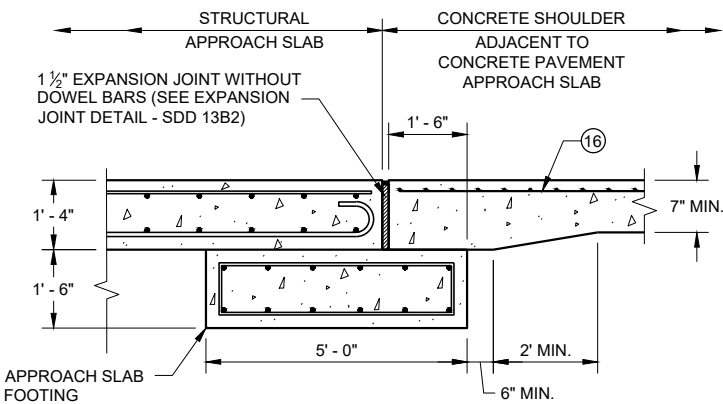
**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



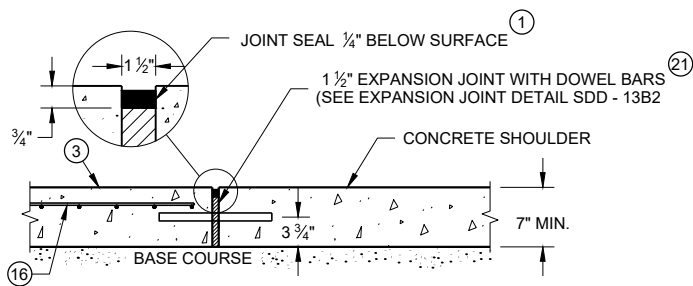
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**



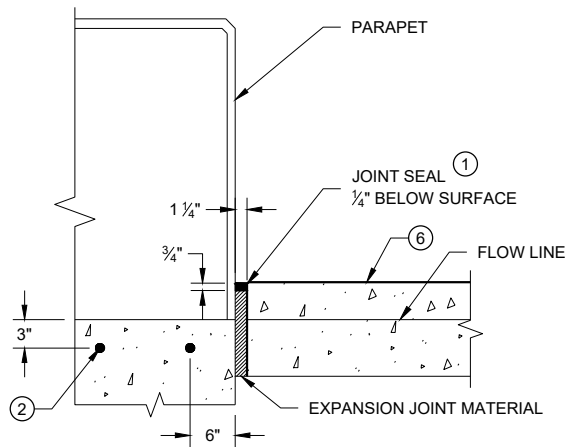
SECTION B-B



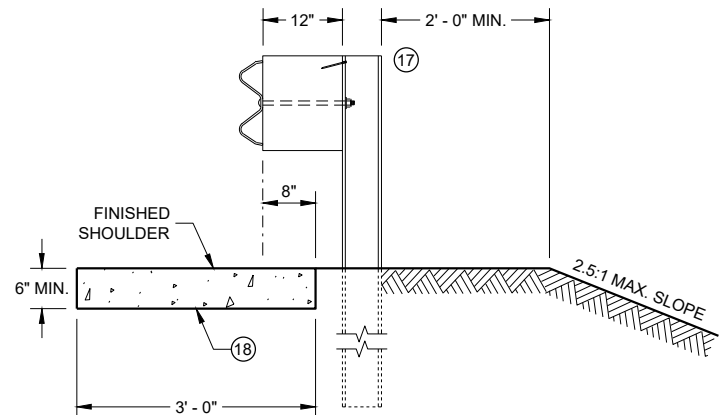
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



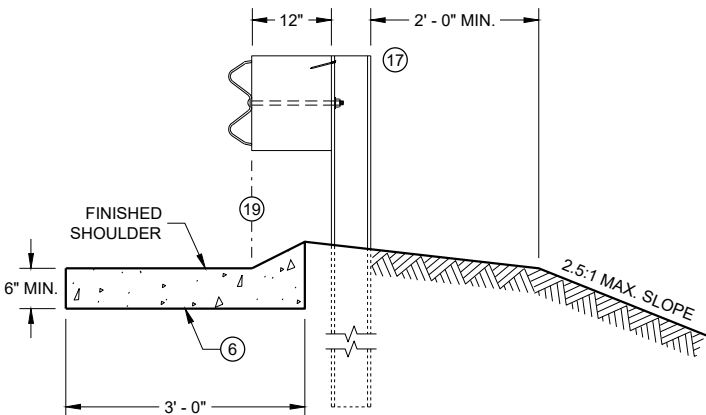
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

GENERAL NOTES

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

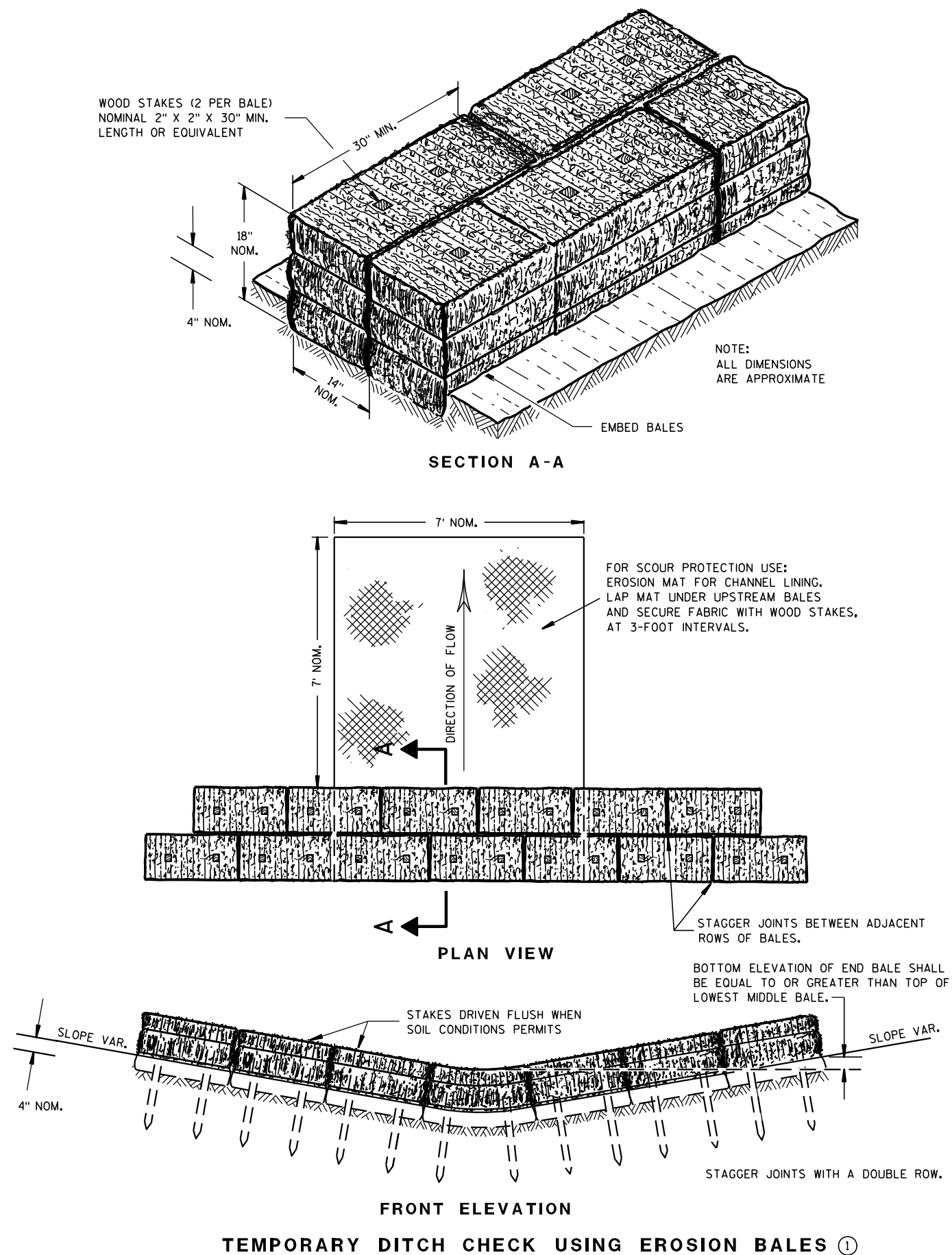
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- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

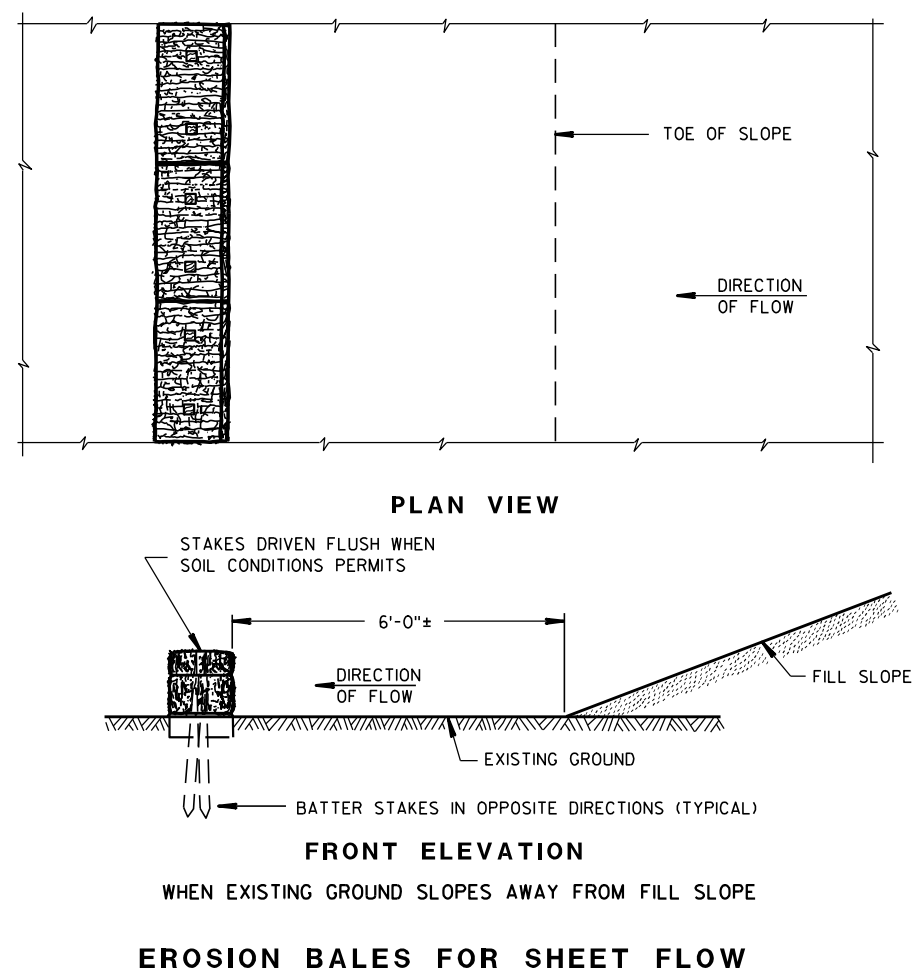
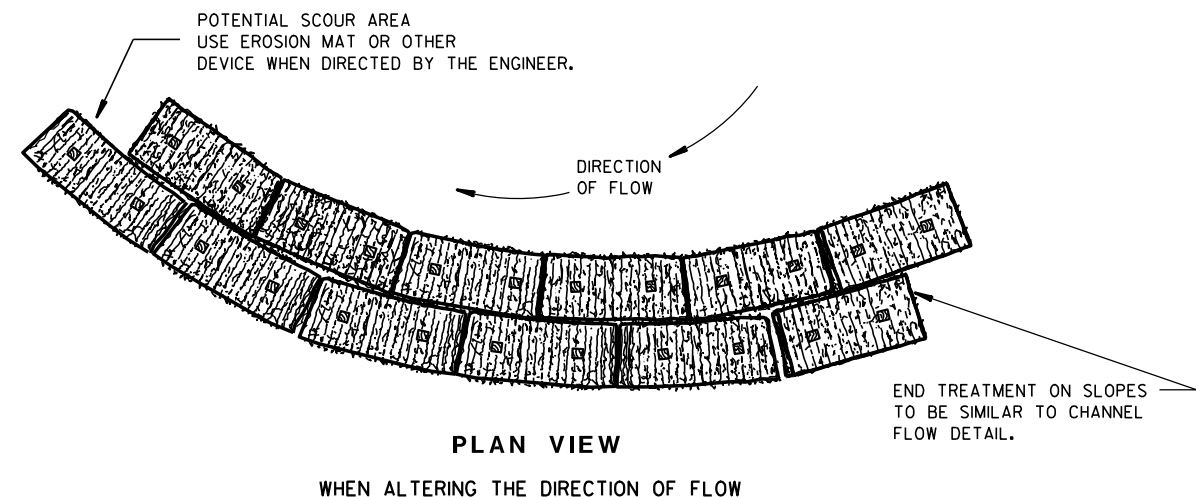
APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



GENERAL NOTES

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

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



TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

FHWA

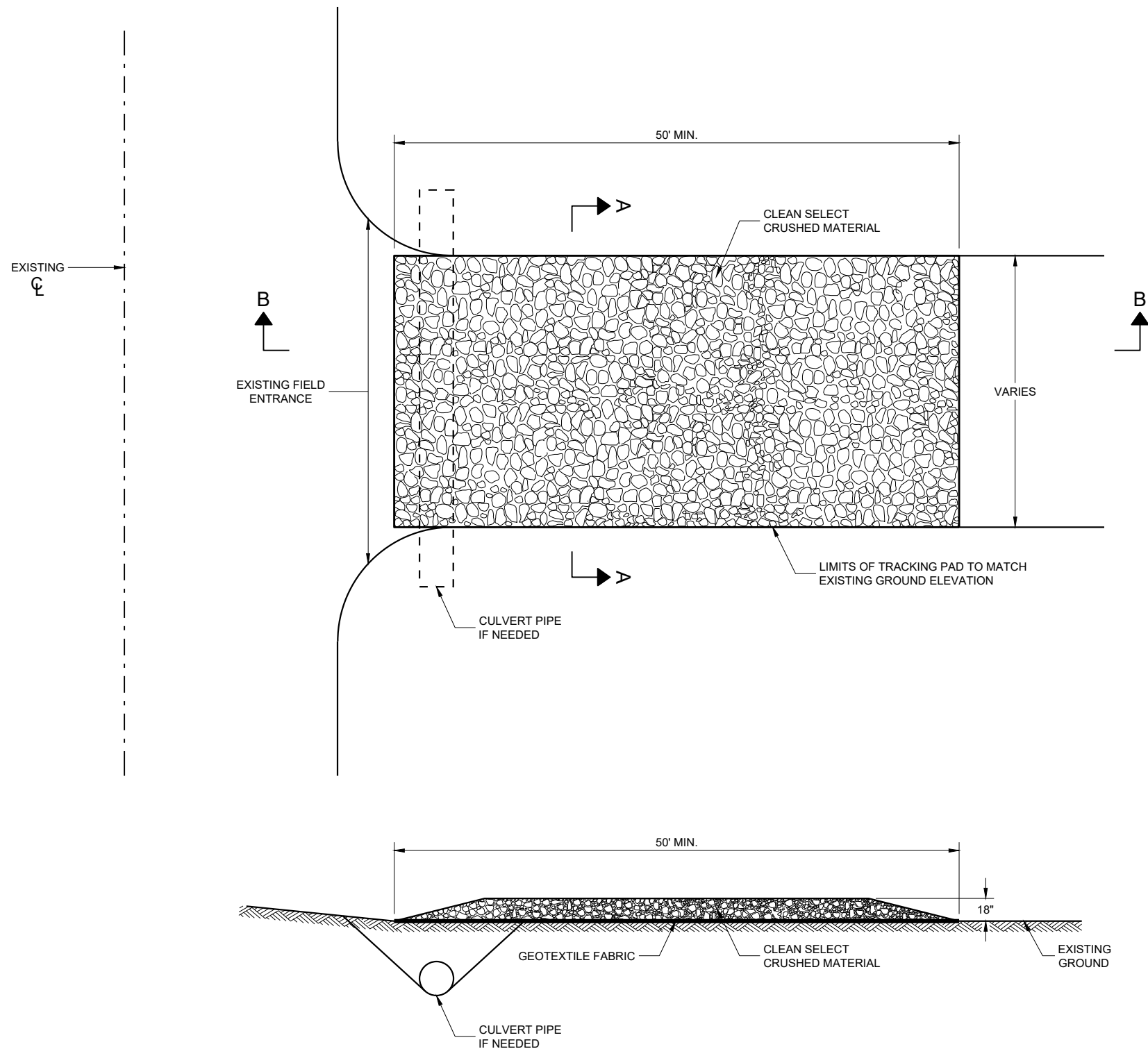
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



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



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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

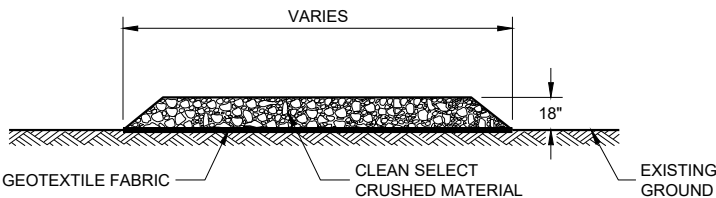
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011

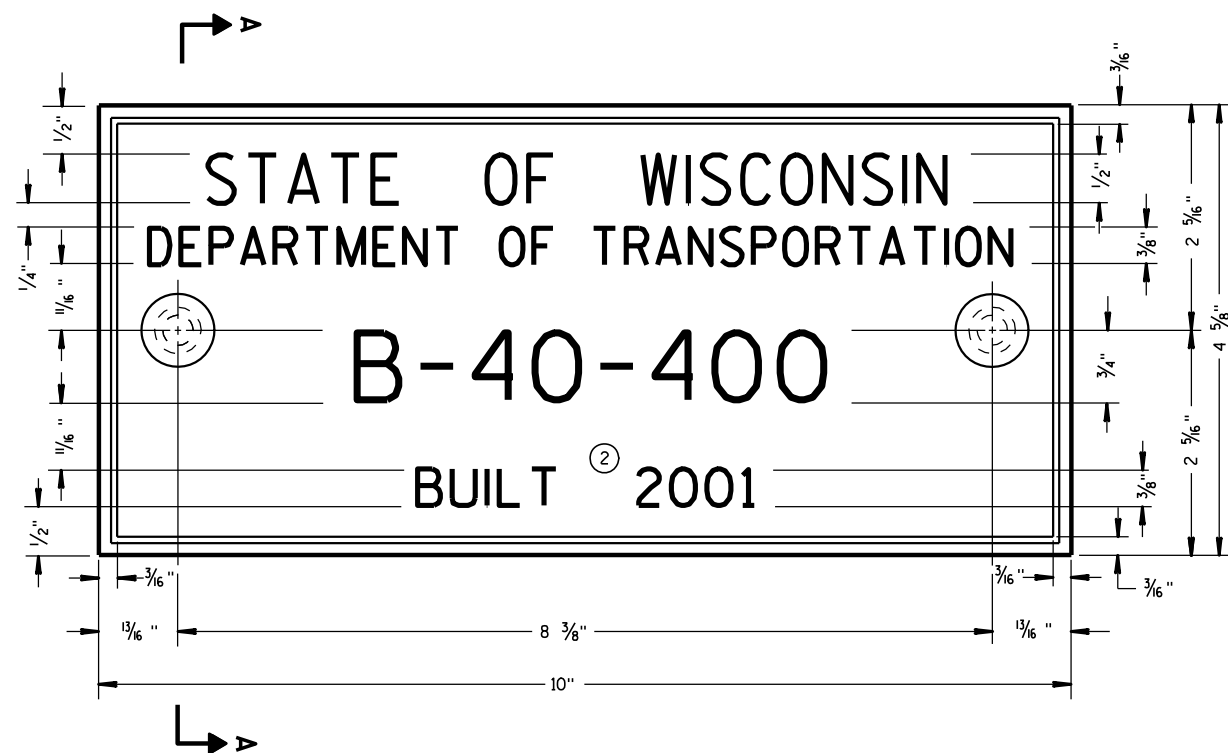
DATE

/S/ Jerry H. Zogg

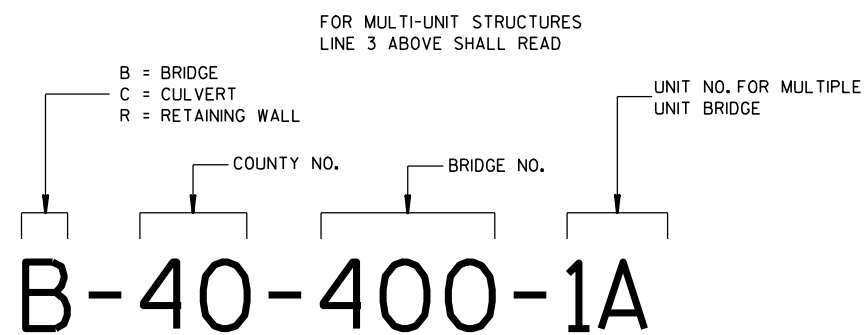
ROADWAY STANDARDS DEVELOPMENT

ENGINEER

FHWA



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



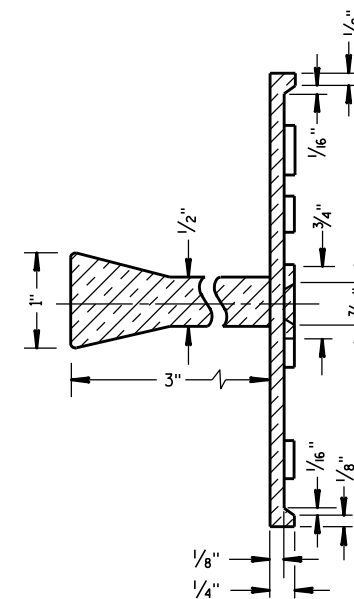
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

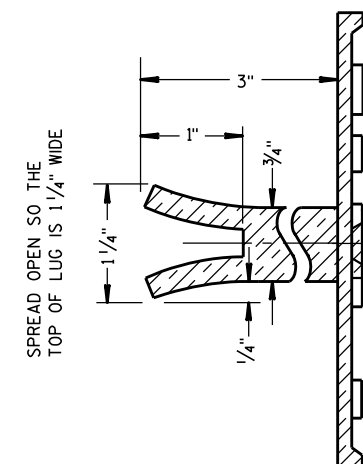
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

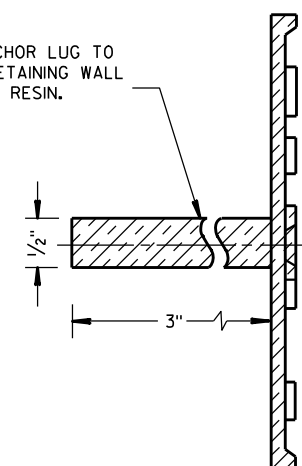


SECTION A-A



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

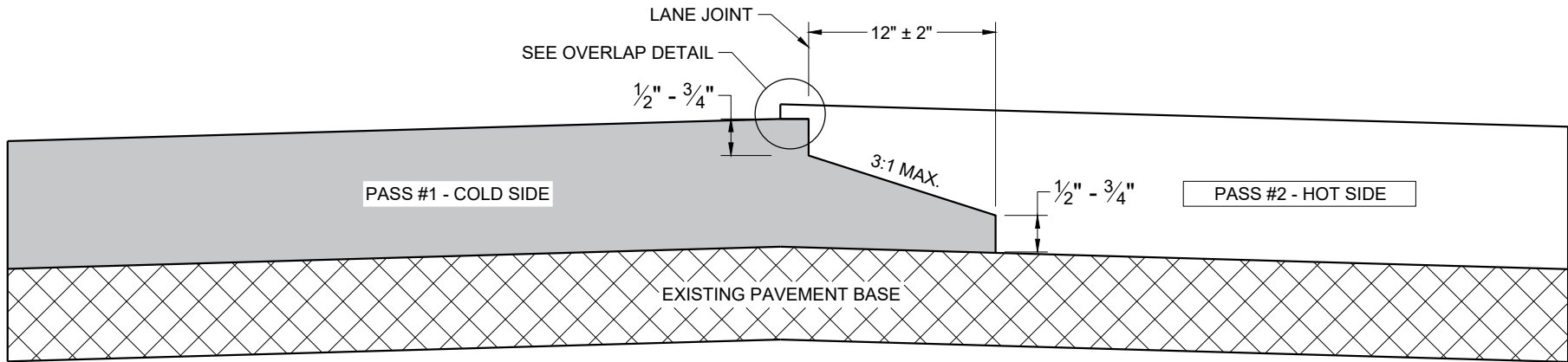
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

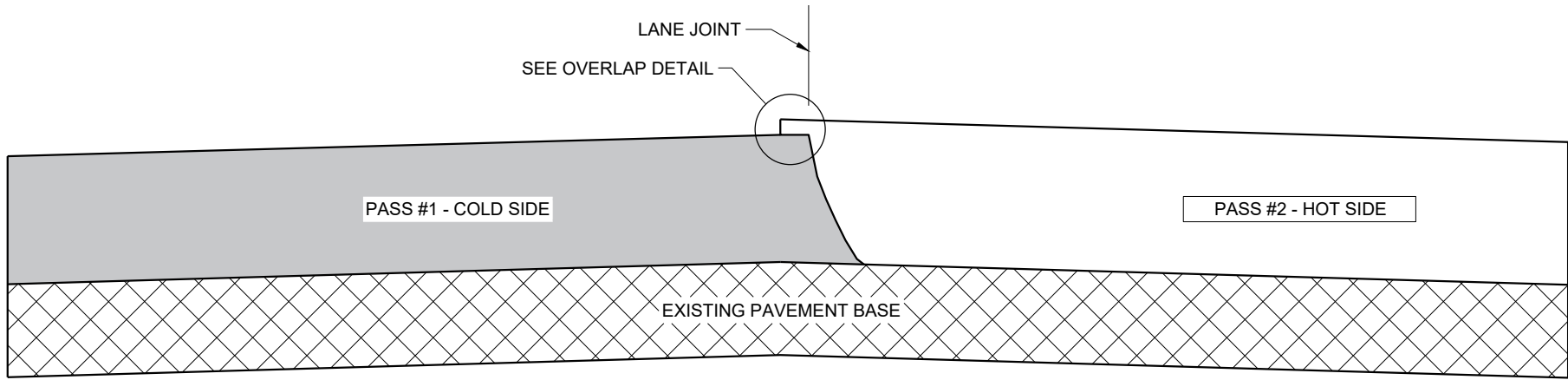
3/26/10
DATE

FHWA

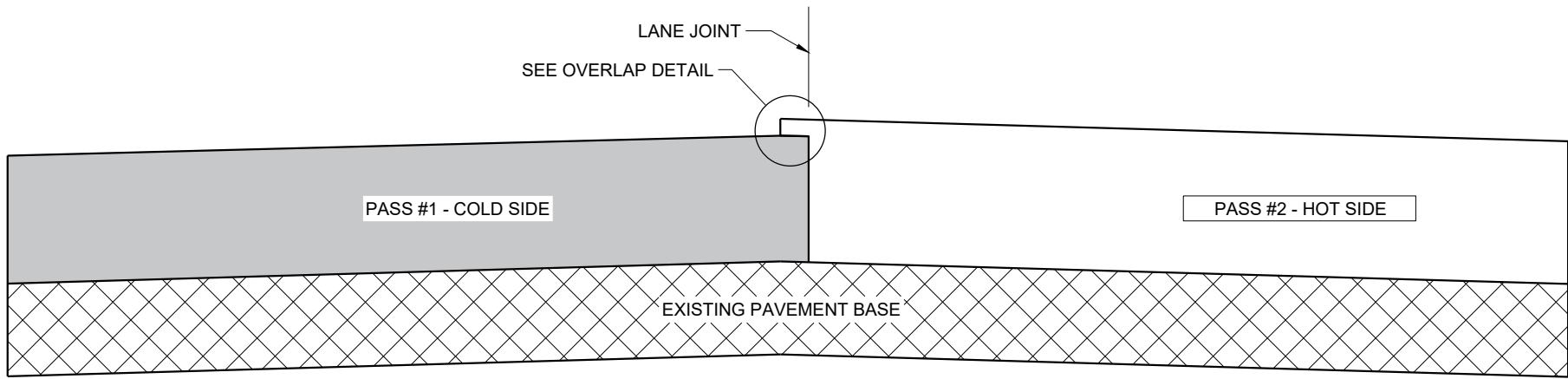
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



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

GENERAL NOTES

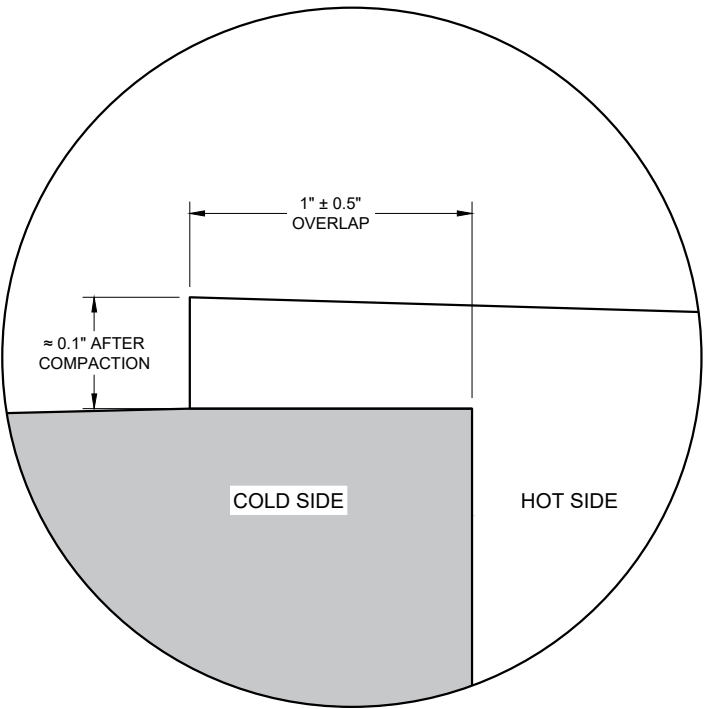
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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

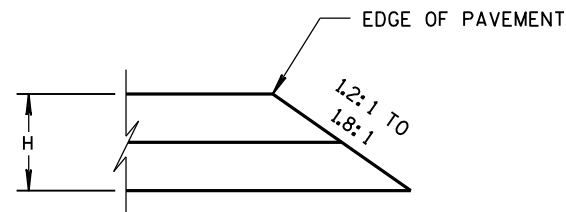


OVERLAP DETAIL (TYPICAL)

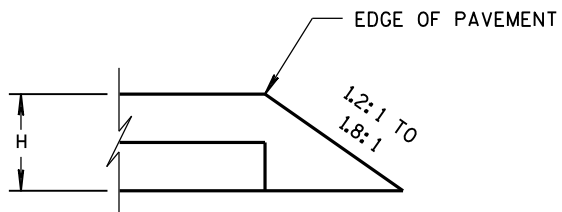
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

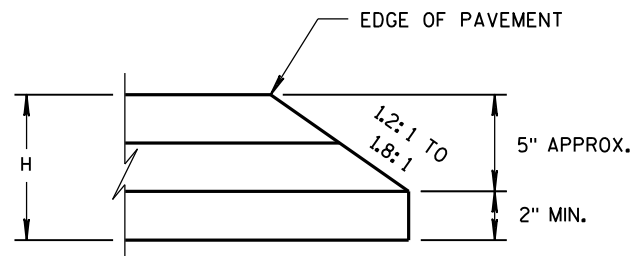
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



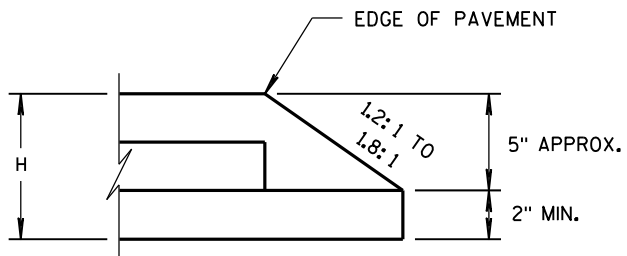
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

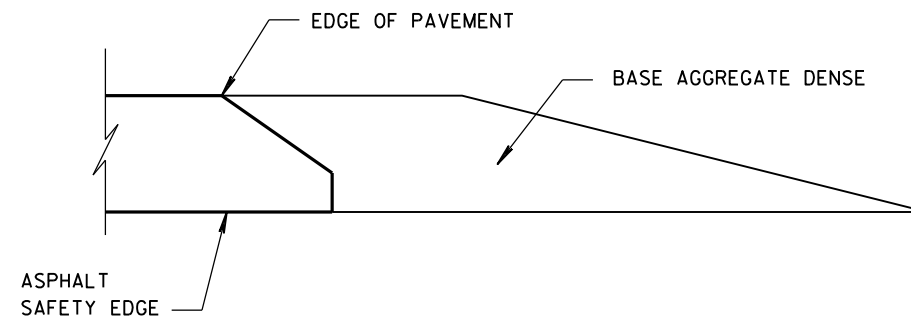


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

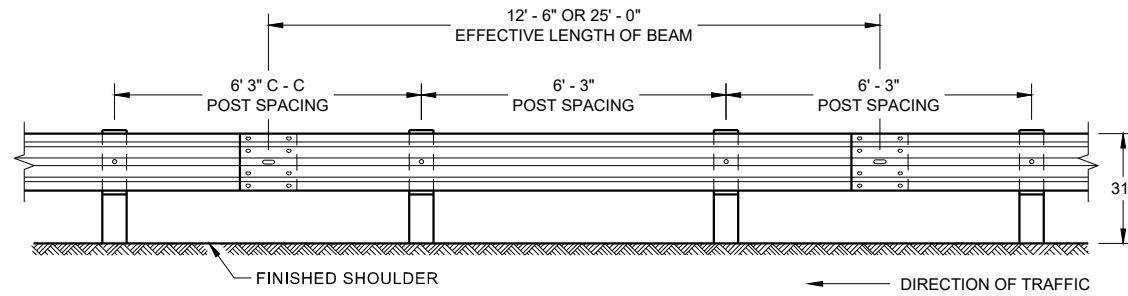
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE
FHWA

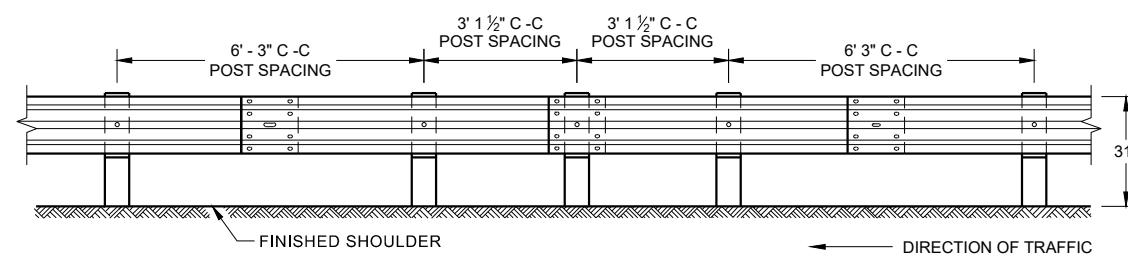
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

- SDD 14B42 - 07a**

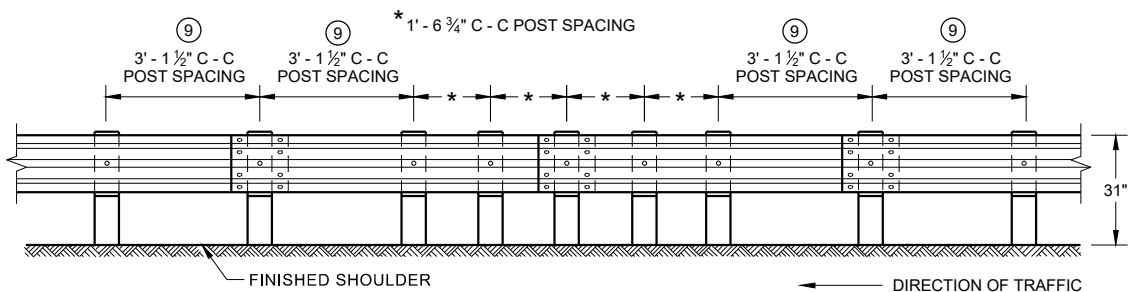




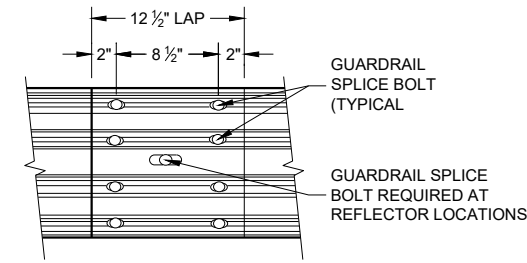
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



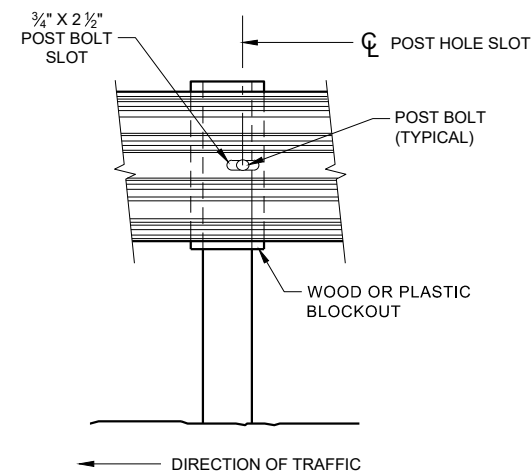
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



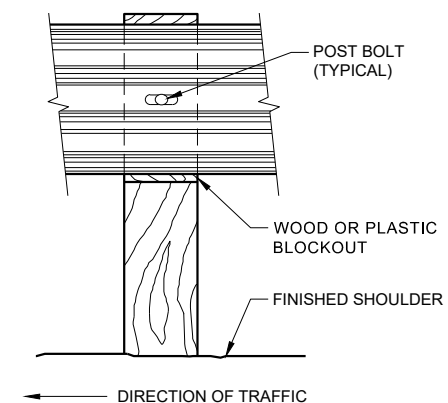
**FRONT VIEW
QUARTER POST SPACING (QS)**



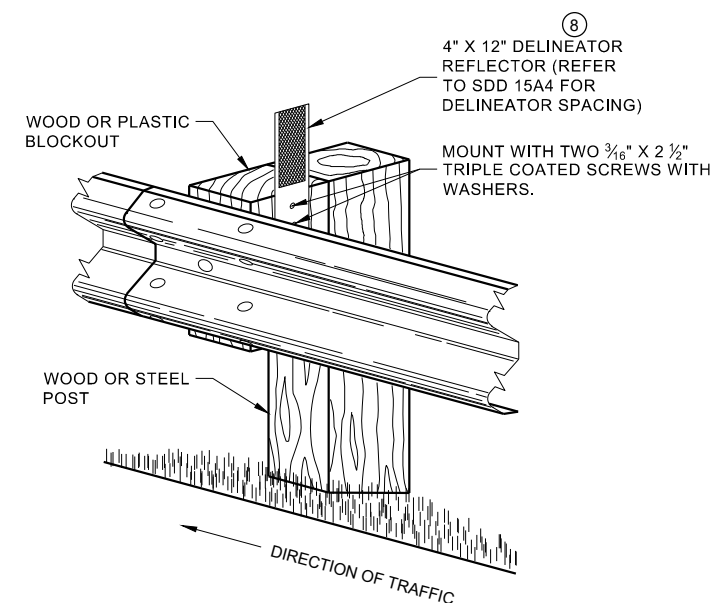
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



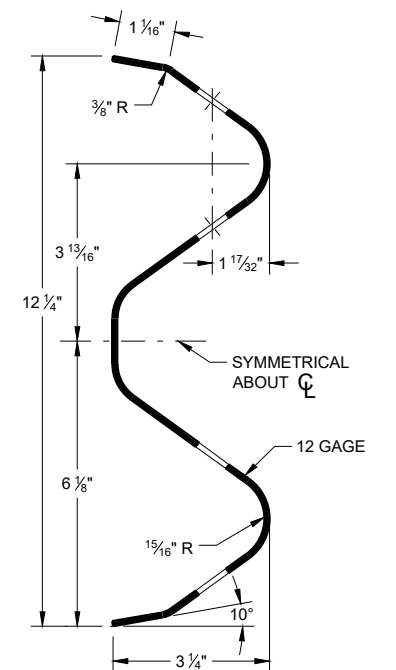
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

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

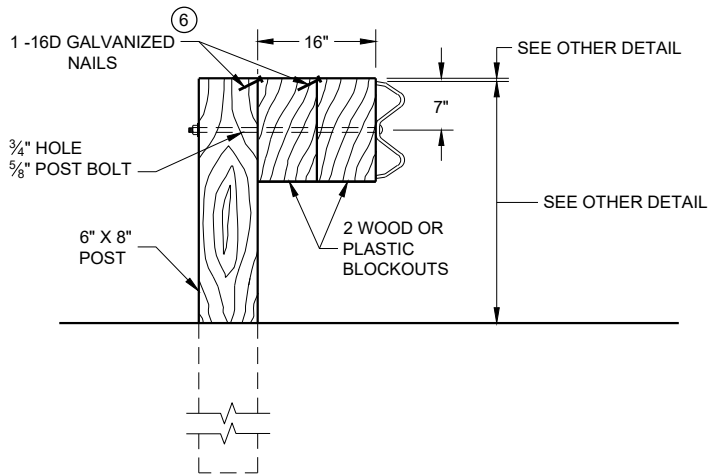
GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

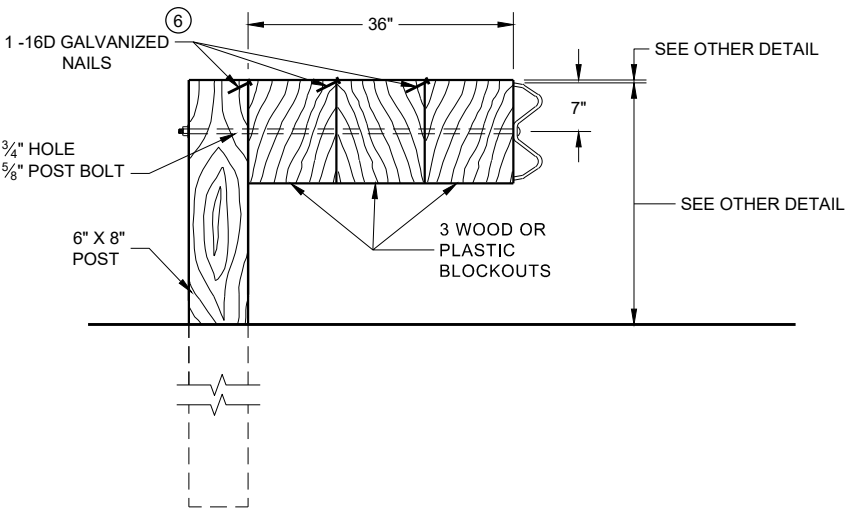
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

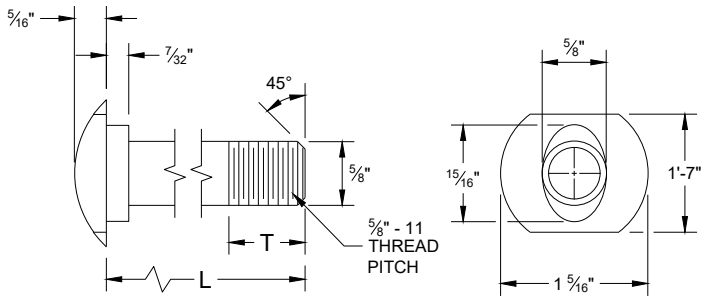
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

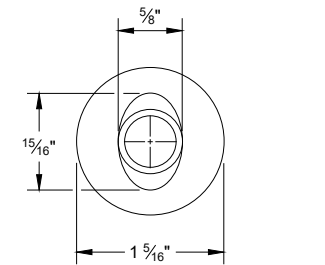
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT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

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

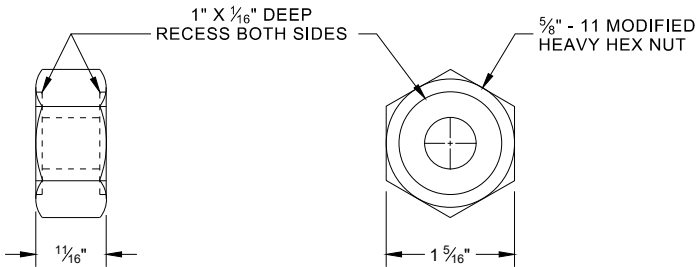


POST BOLT TABLE

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

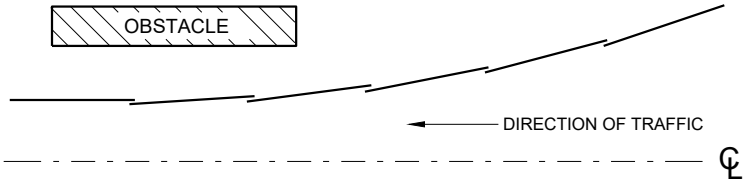


ALTERNATE BOLT HEAD

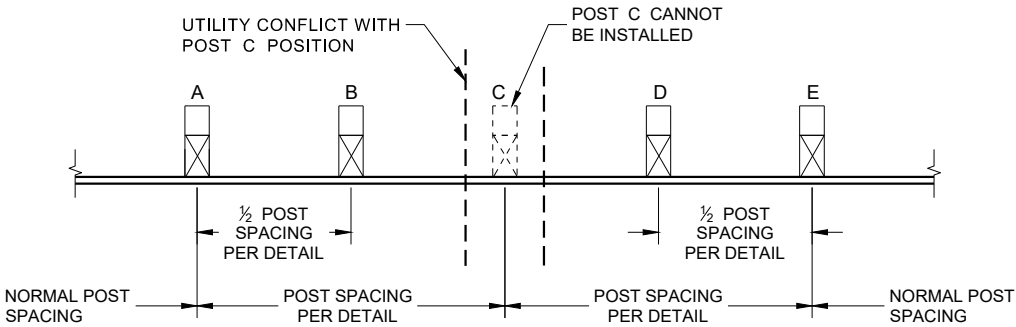


POST BOLT, SPLICE BOLT AND RECESS NUT

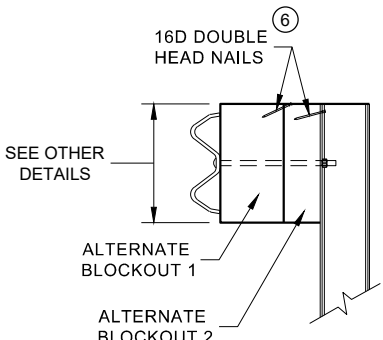
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



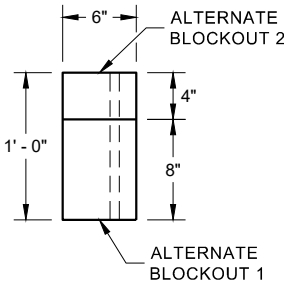
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

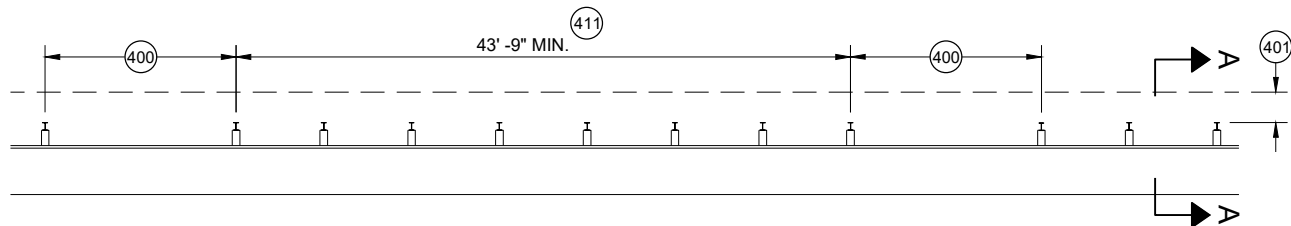


PLAN VIEW

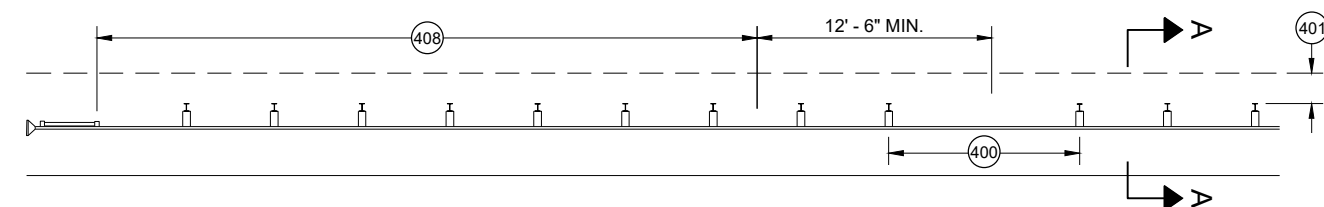
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

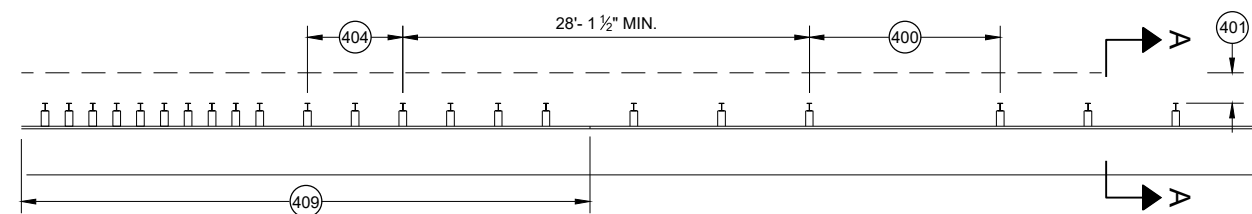
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



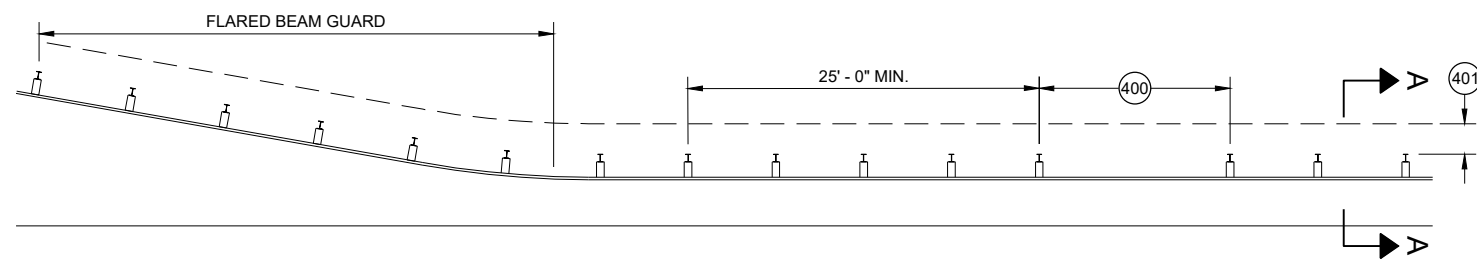
MISSING POST IN MGS GUARDRAIL



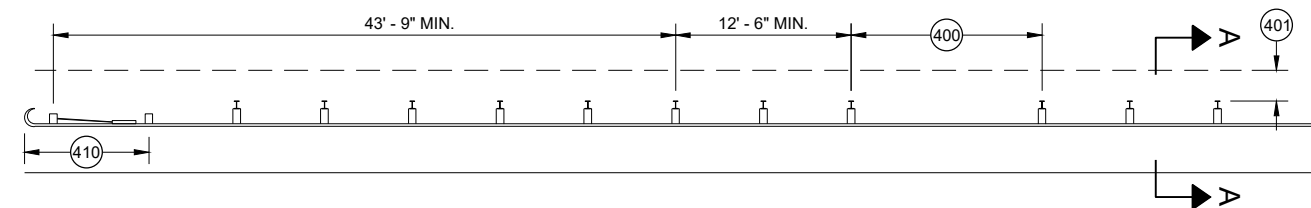
MISSING POST IN MGS GUARDRAIL NEAR EAT



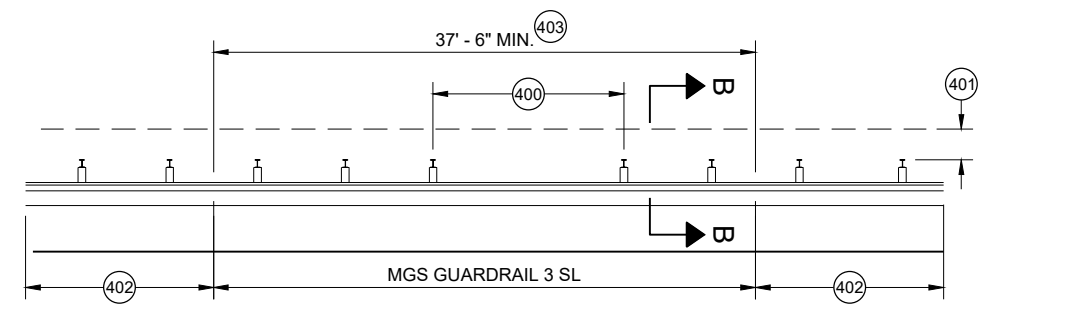
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

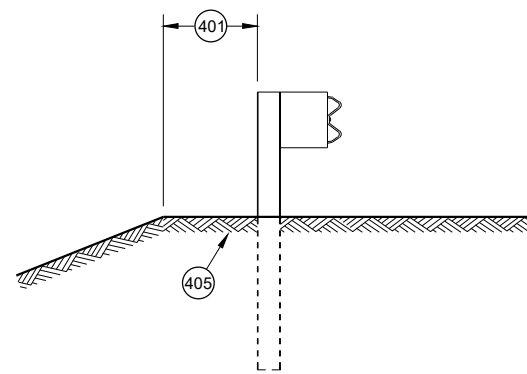


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

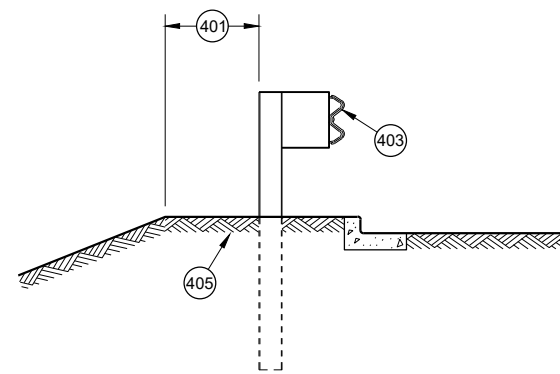


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

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



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

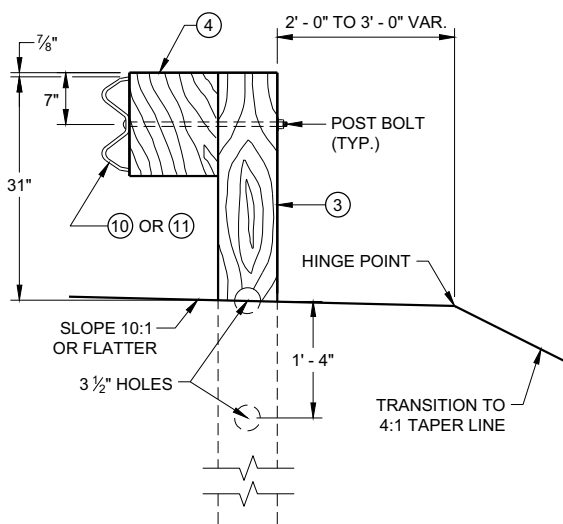
SEE SDD 14B42 FOR MORE INFORMATION.

*** DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.**

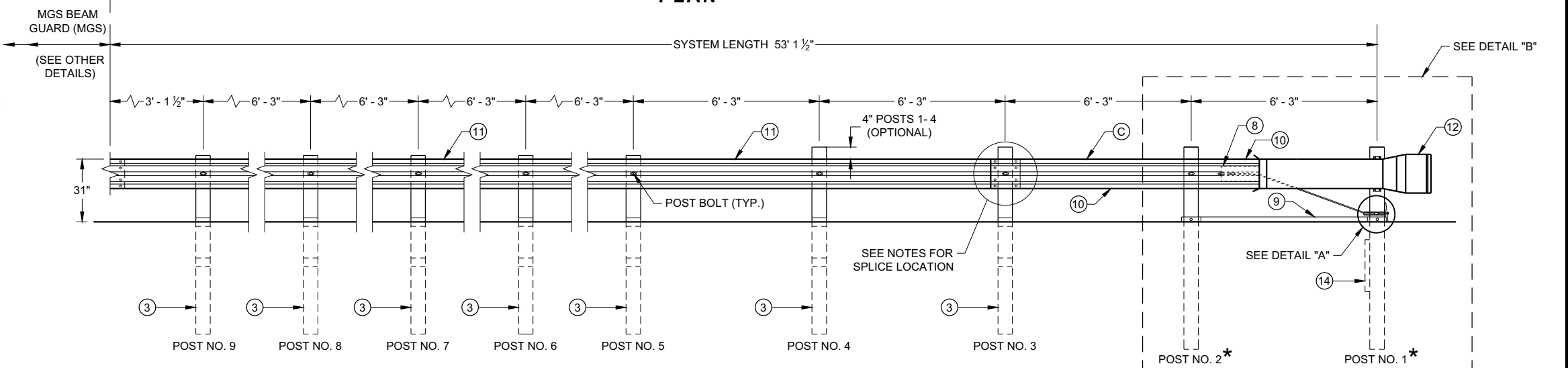
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH
END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

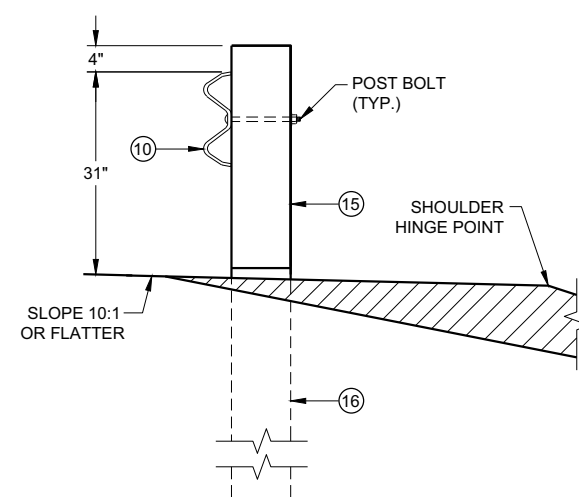
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



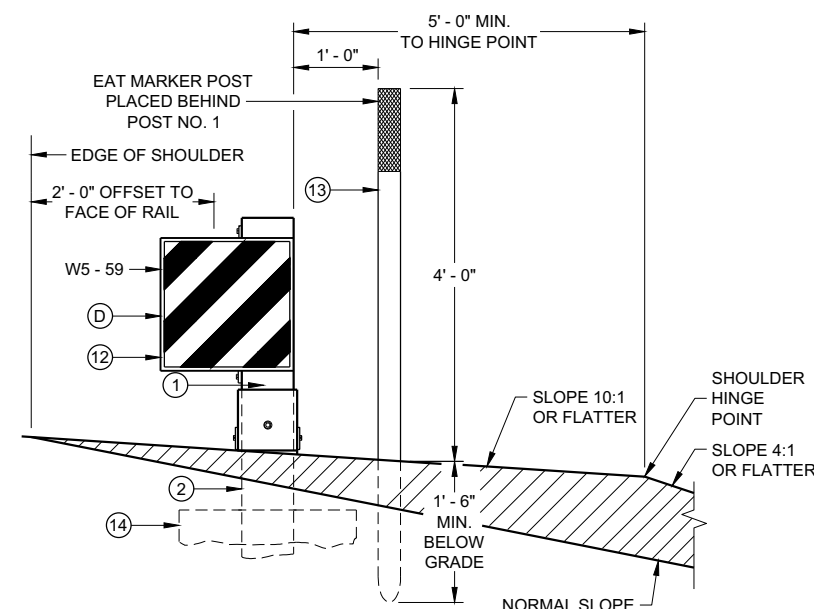
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



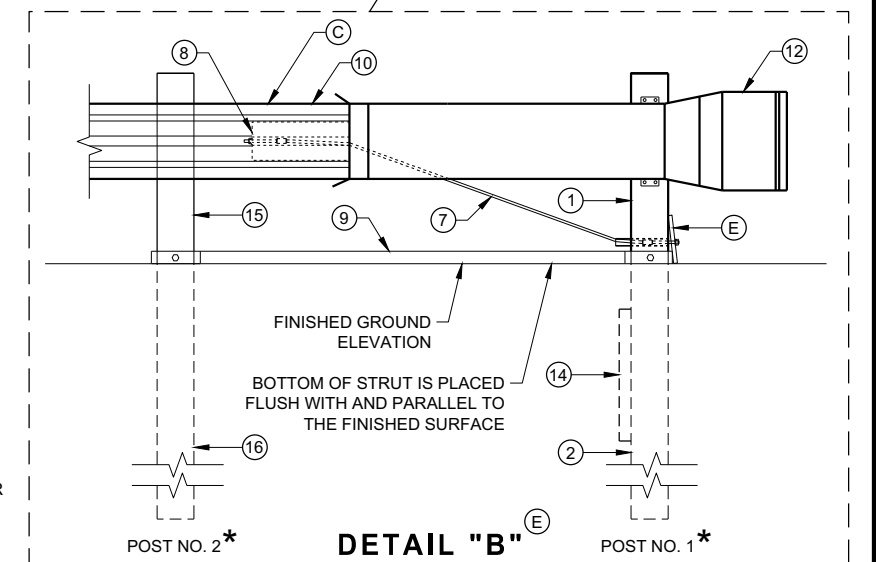
ELEVATION



SECTION B - B
TYPICAL AT POST NO. 2*



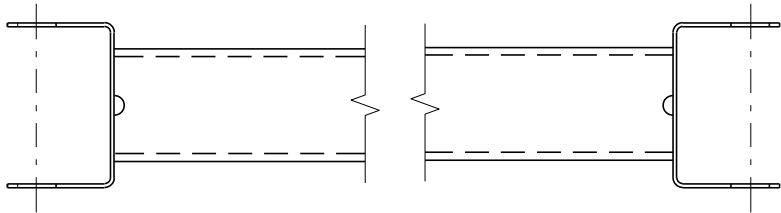
SECTION A - A
TYPICAL AT POST NO. 1*



DETAIL "B"

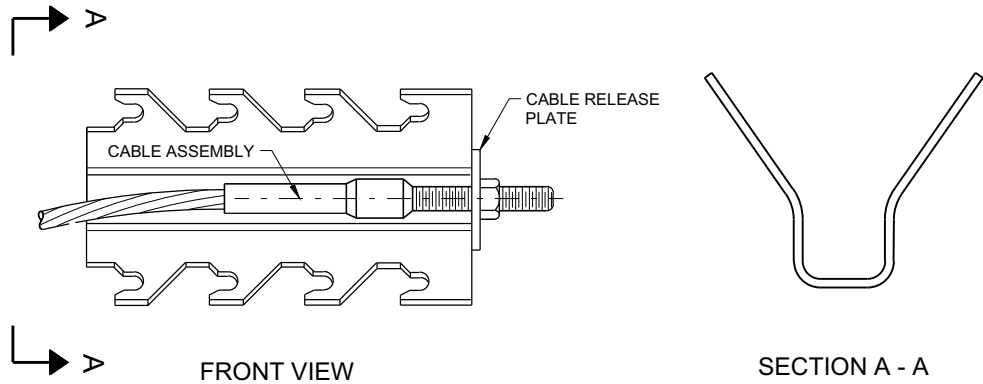
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

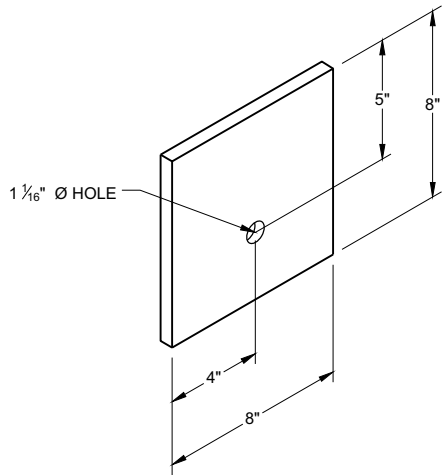


GENERIC GROUND STRUT⁹ ^E

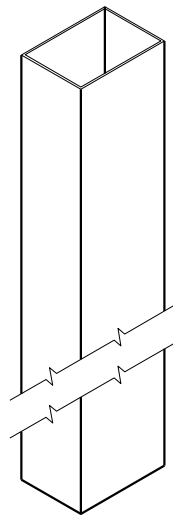
BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED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



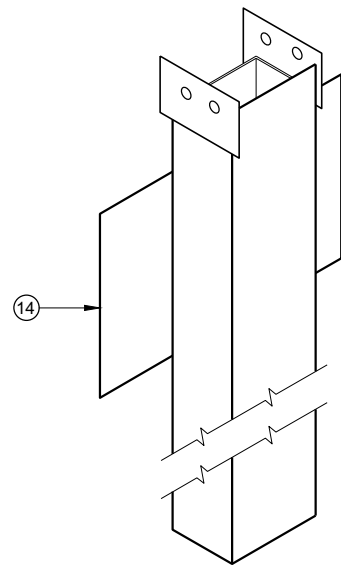
GENERIC ANCHOR CABLE BOX⁹ ^E



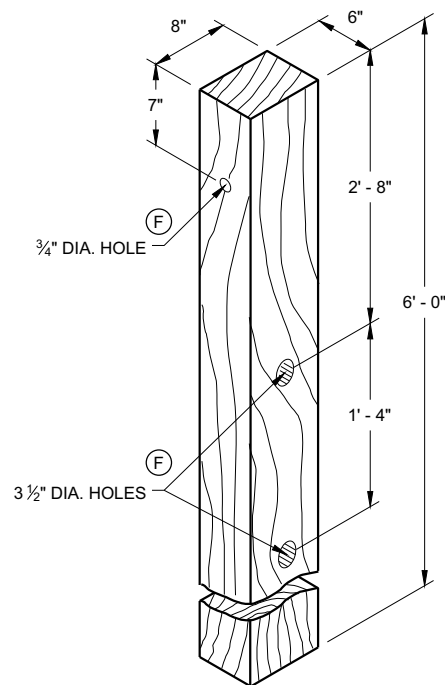
BEARING PLATE⁶ ^E



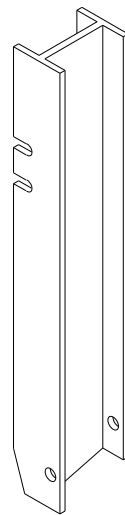
UPPER POST NO. 1 ⁽¹⁾ (E)



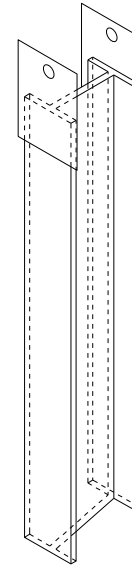
LOWER POST NO. 1 ⁽²⁾ (E)



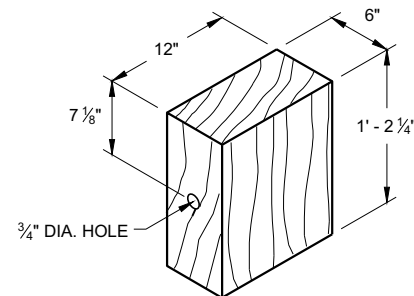
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



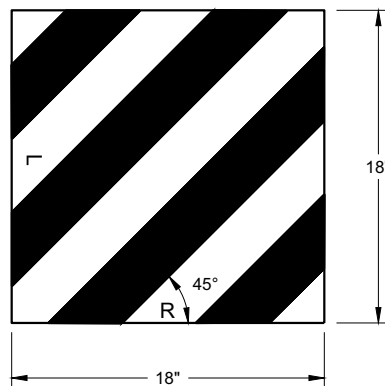
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



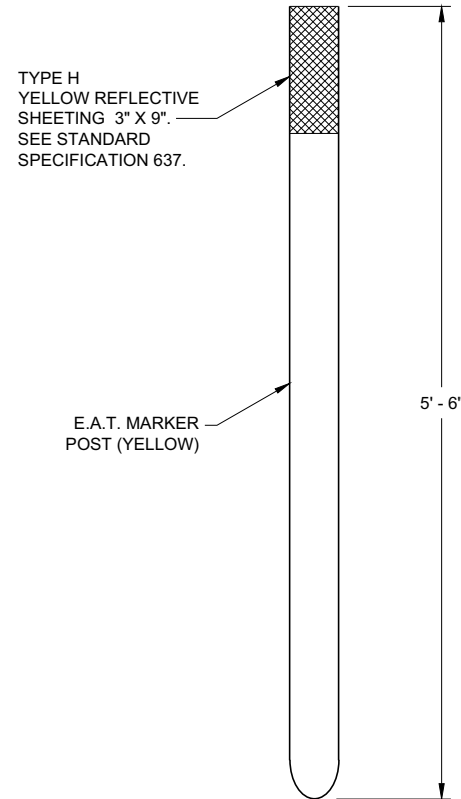
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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



REFLECTIVE SHEETING DETAIL ^(E)

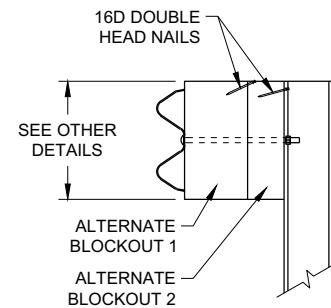


FRONT VIEW

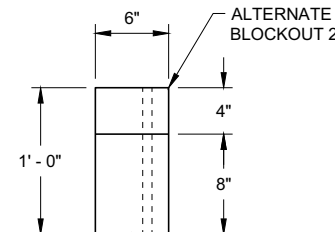


SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



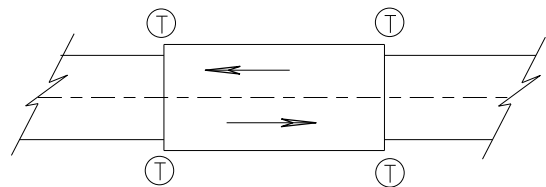
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

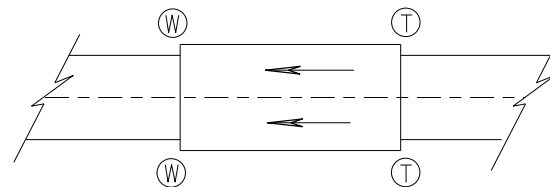
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

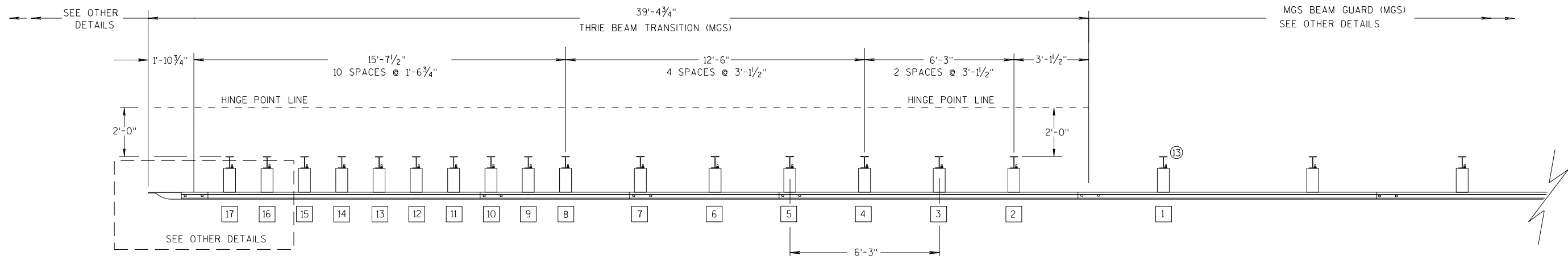
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

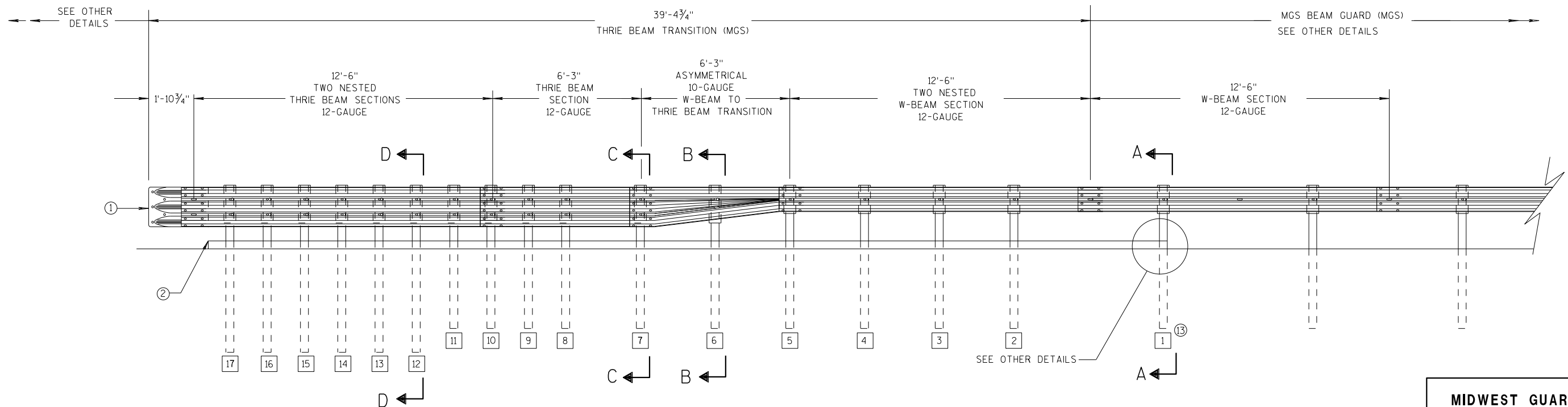
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

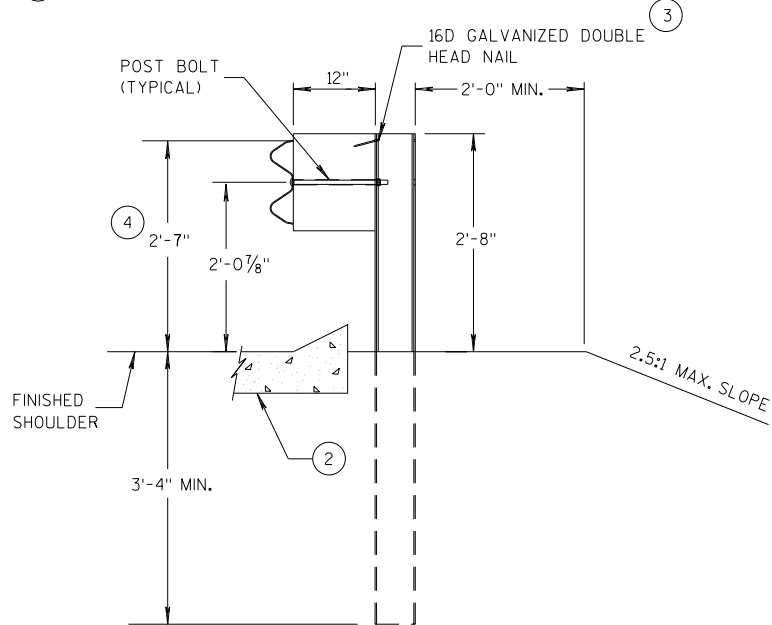
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

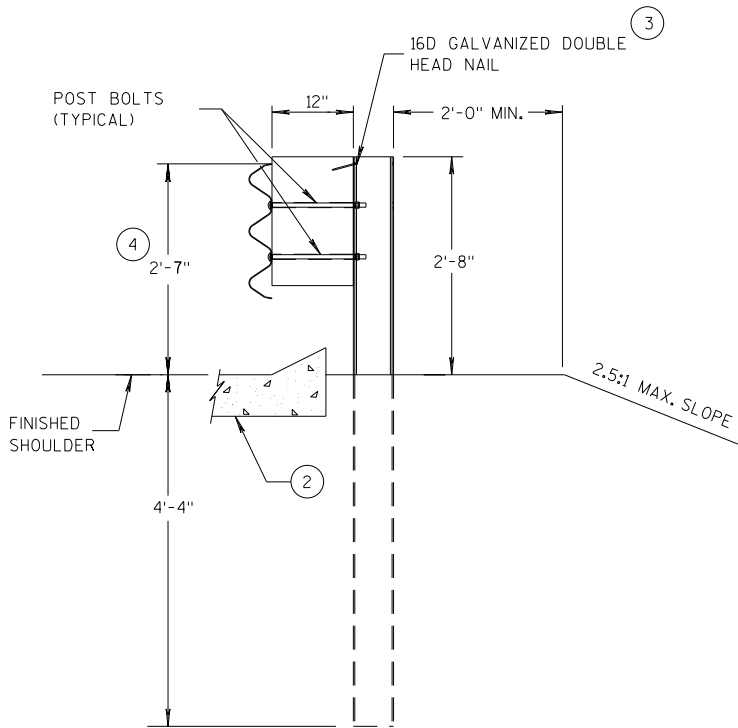
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

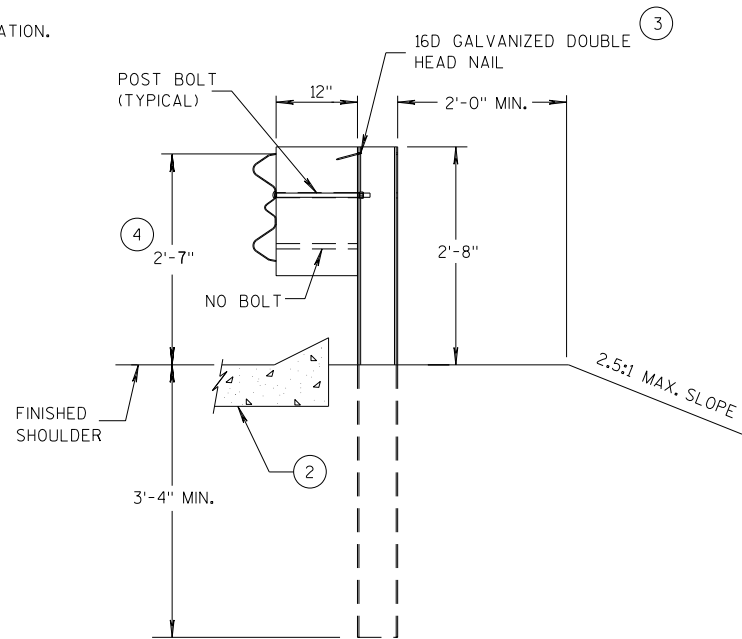
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm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



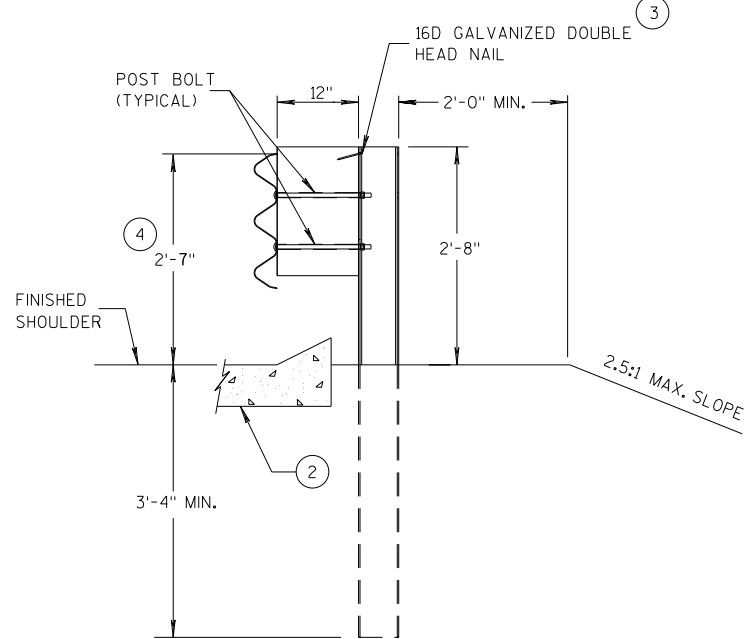
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

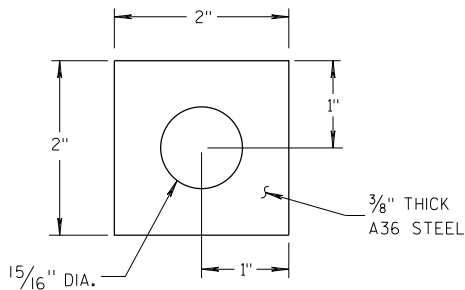
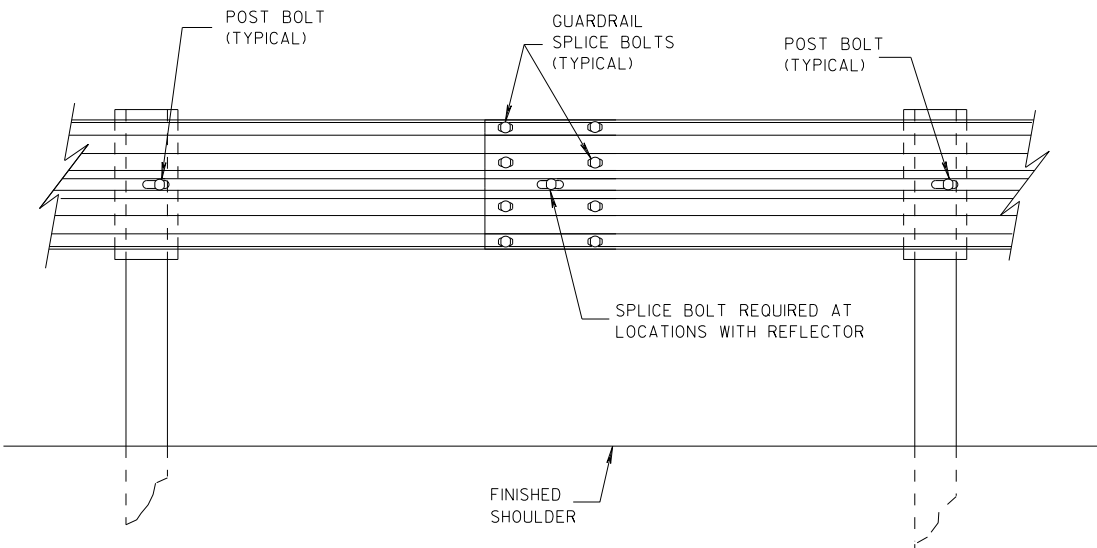
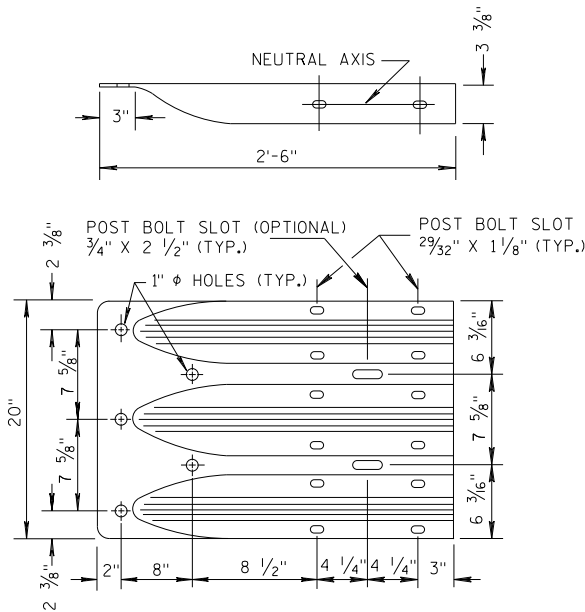


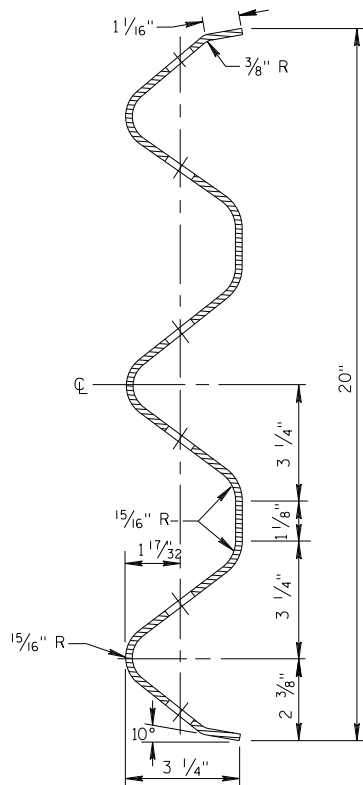
PLATE WASHER DETAIL



SPlice DETAIL



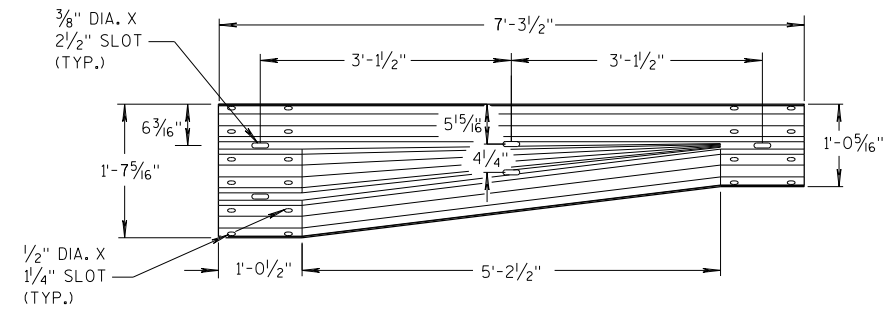
THRIE BEAM
TERMINAL CONNECTOR



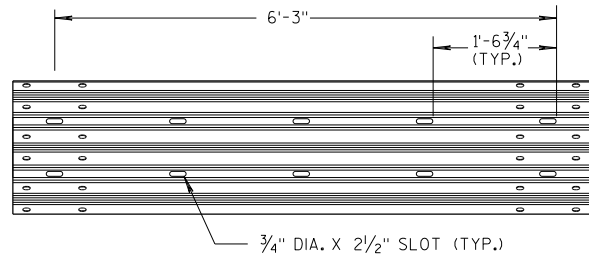
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

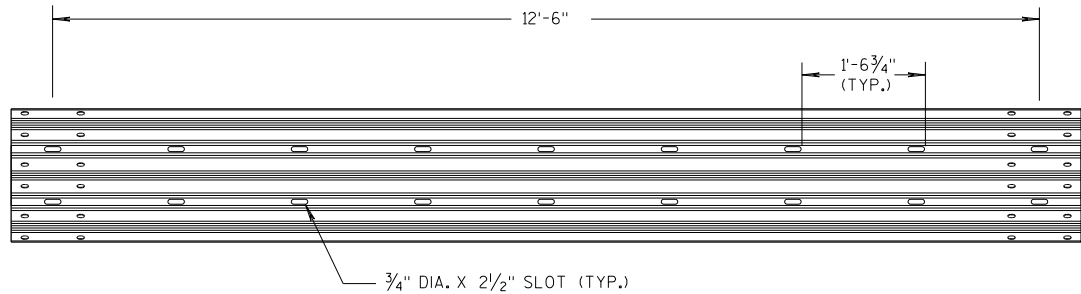
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



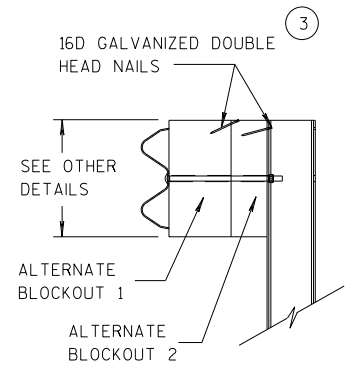
W-BEAM TO THRIE BEAM TRANSITION SECTION



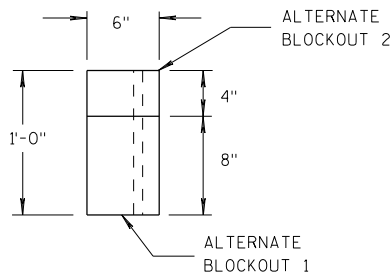
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

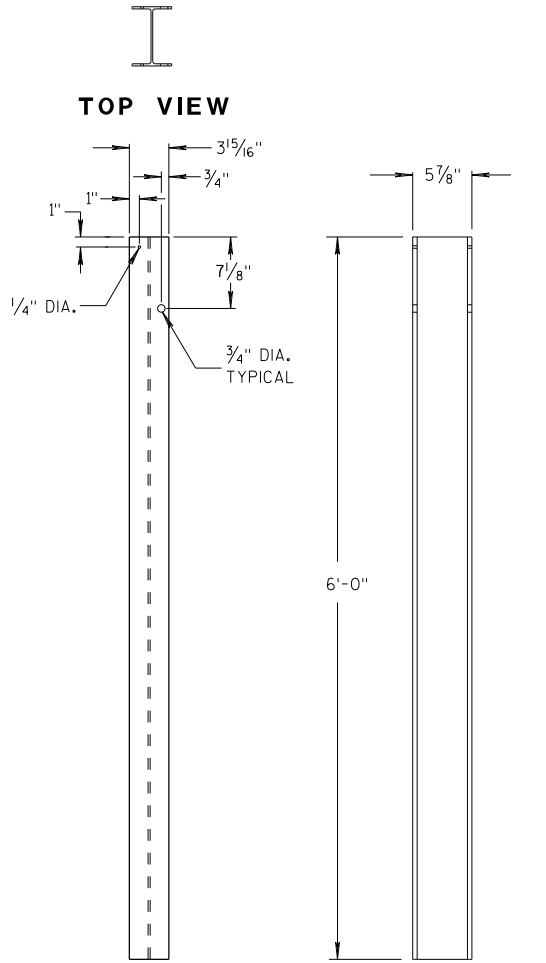


SIDE VIEW



TOP VIEW

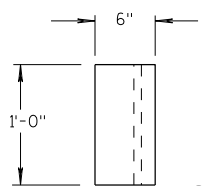
ALTERNATE WOOD BLOCKOUT DETAIL



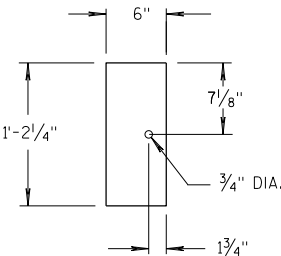
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

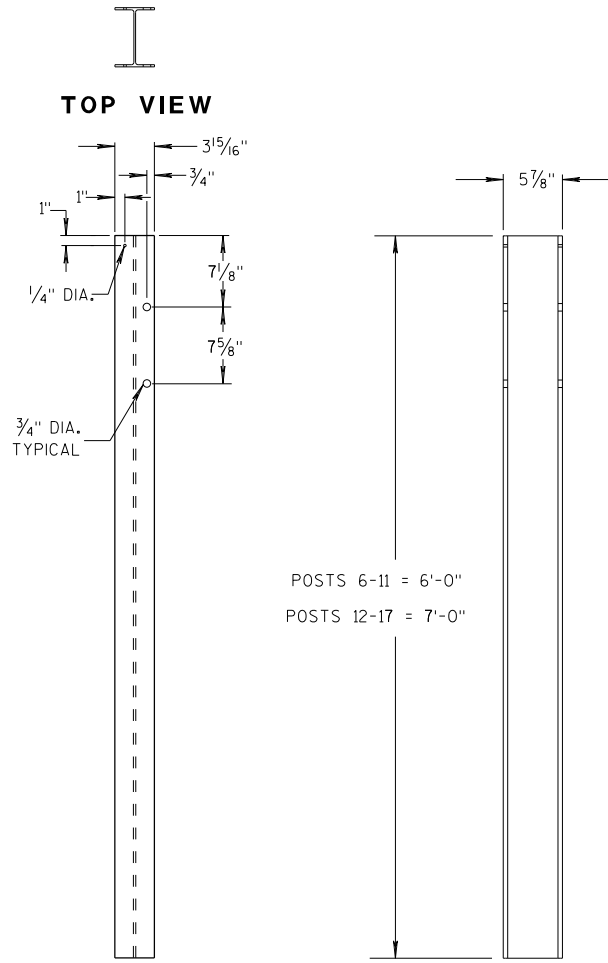


TOP VIEW



FRONT VIEW

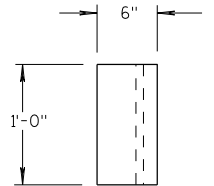
BLOCKOUT POSTS 1-5



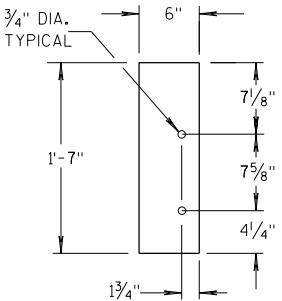
FRONT VIEW

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.

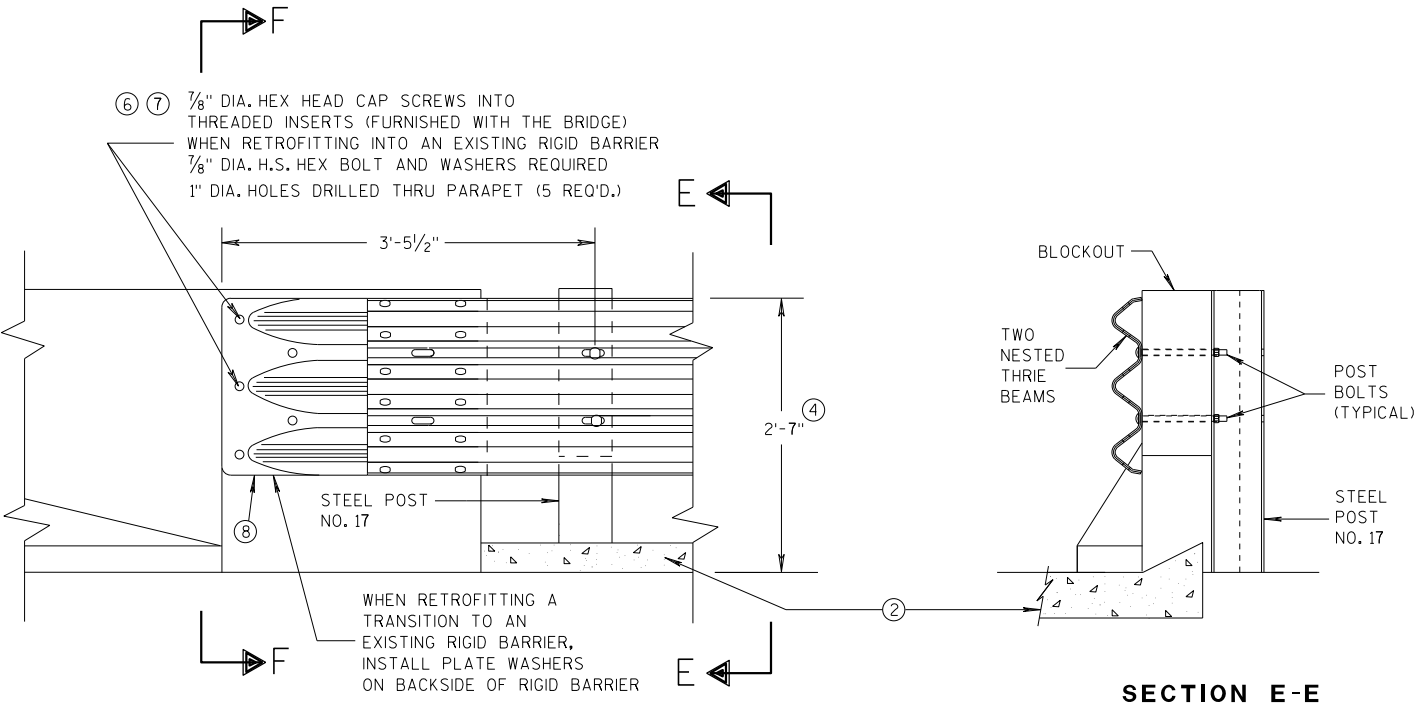
③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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.

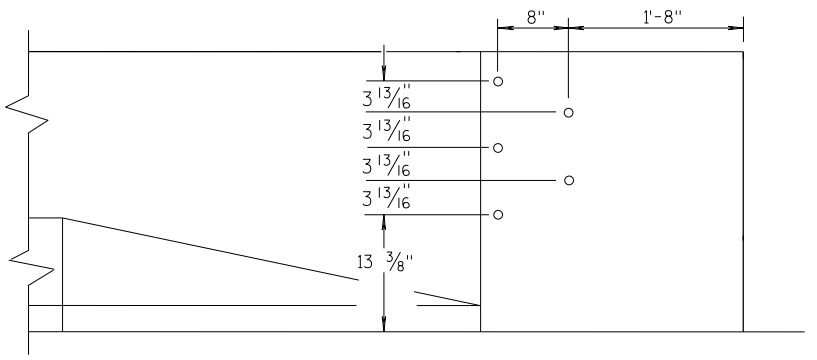
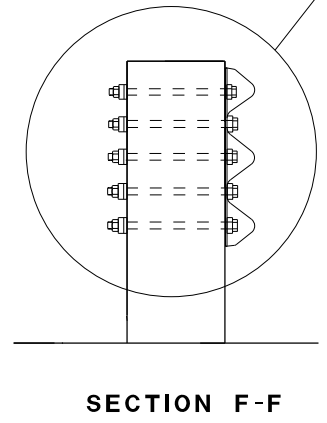
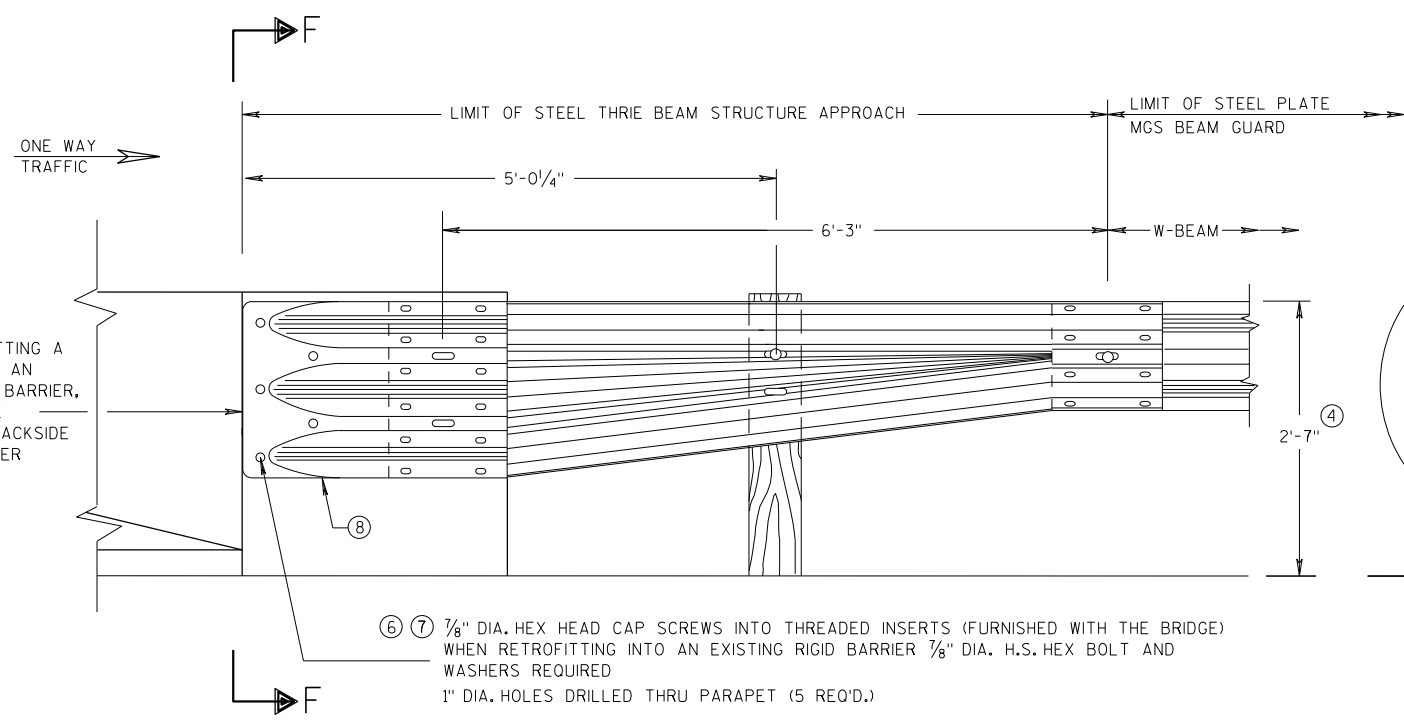
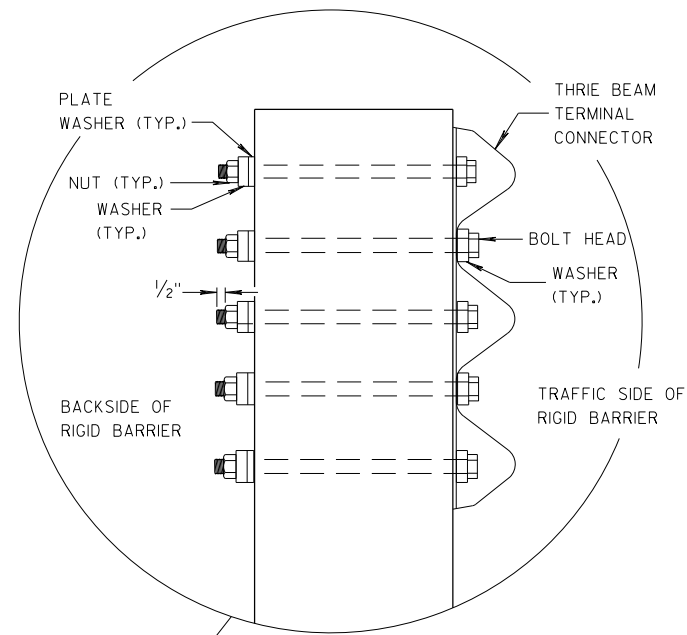
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

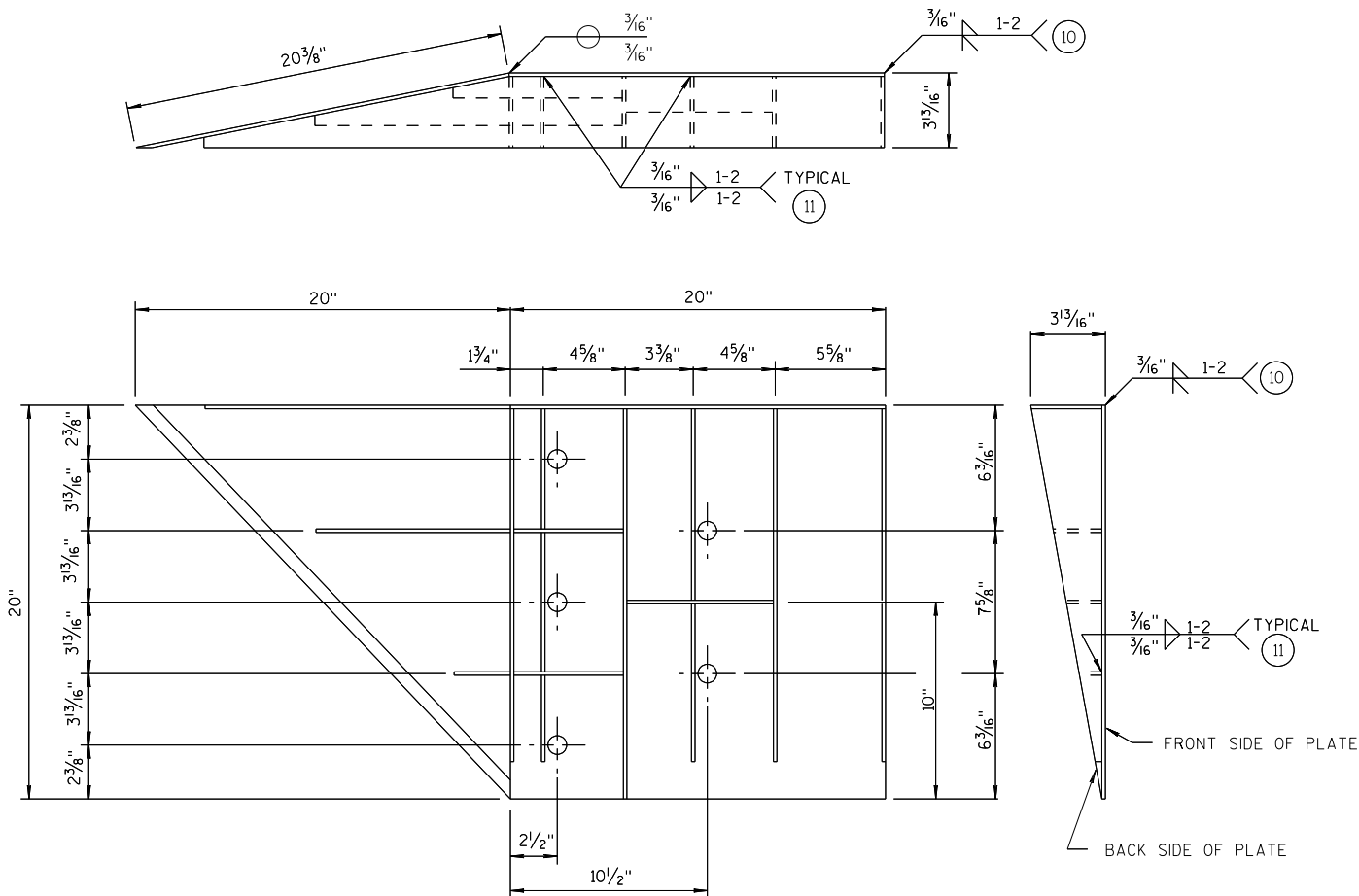


GENERAL NOTES

- 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".



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".

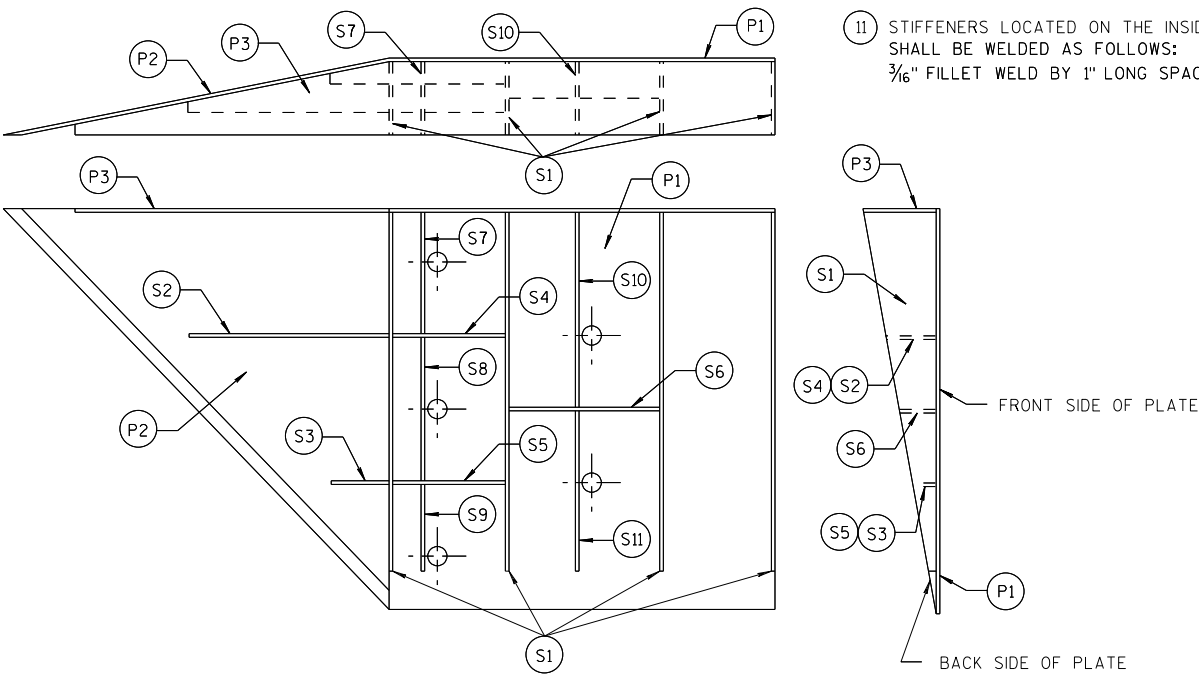


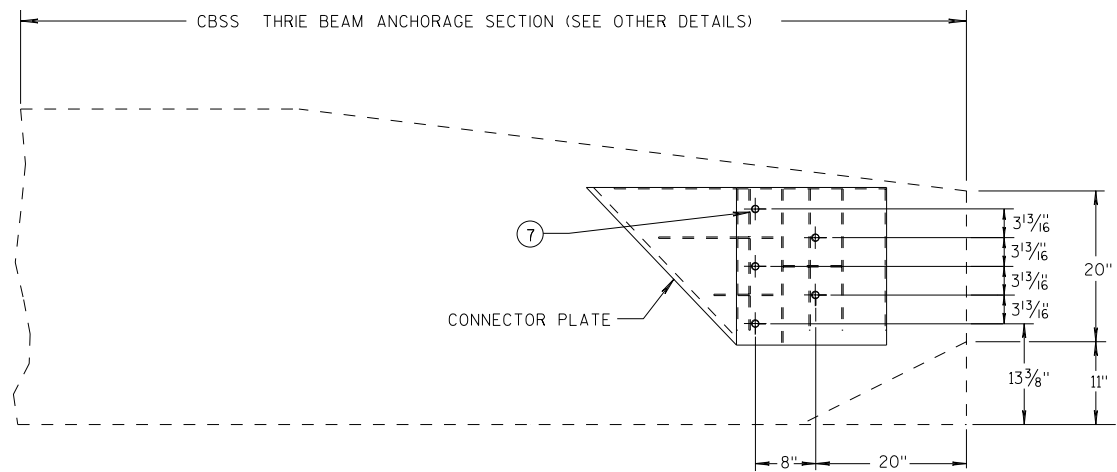
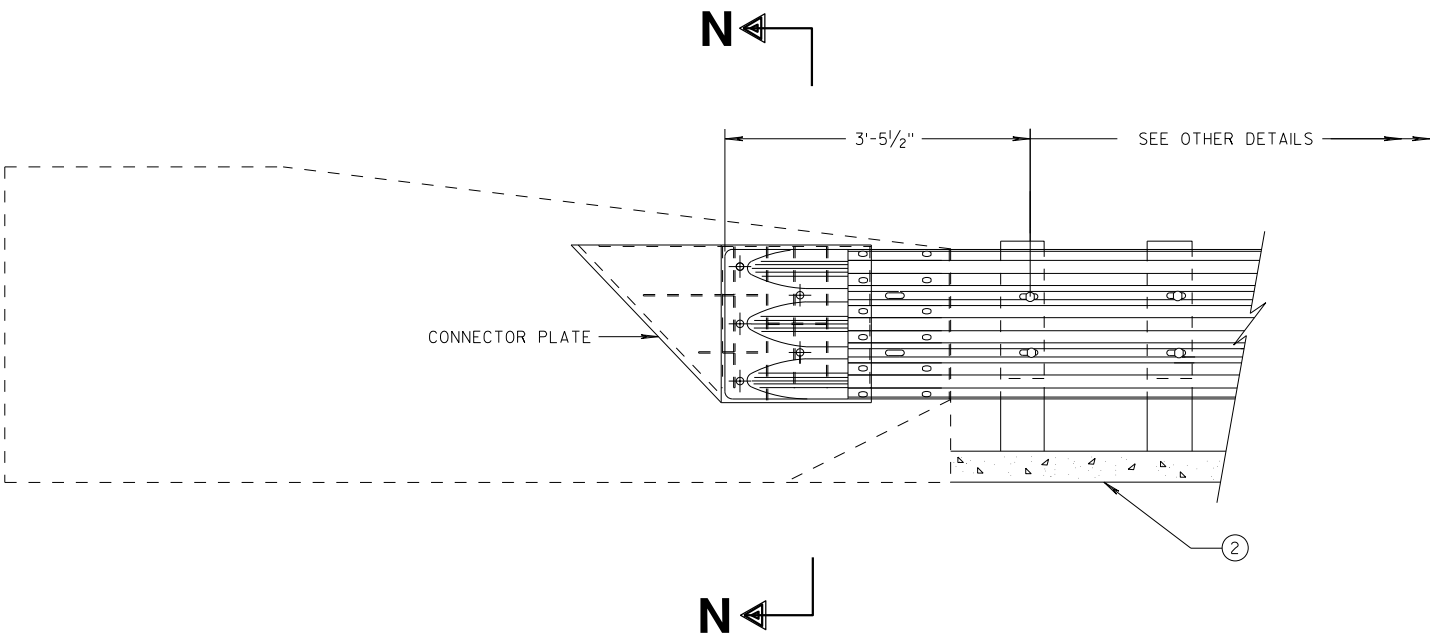
PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)

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



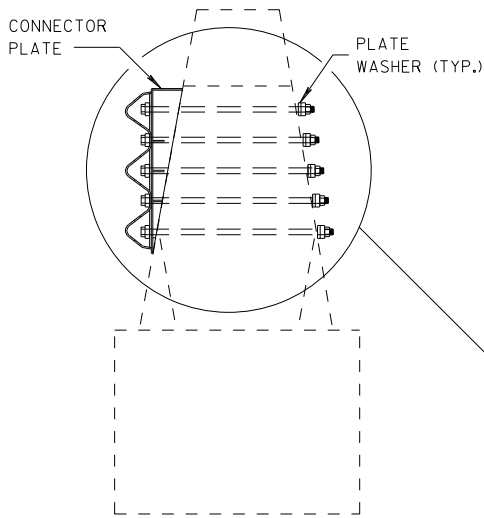
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

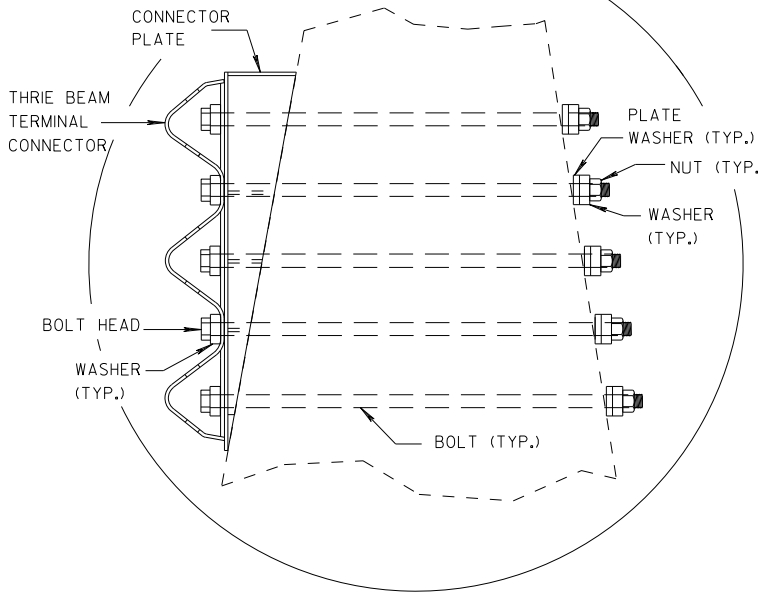
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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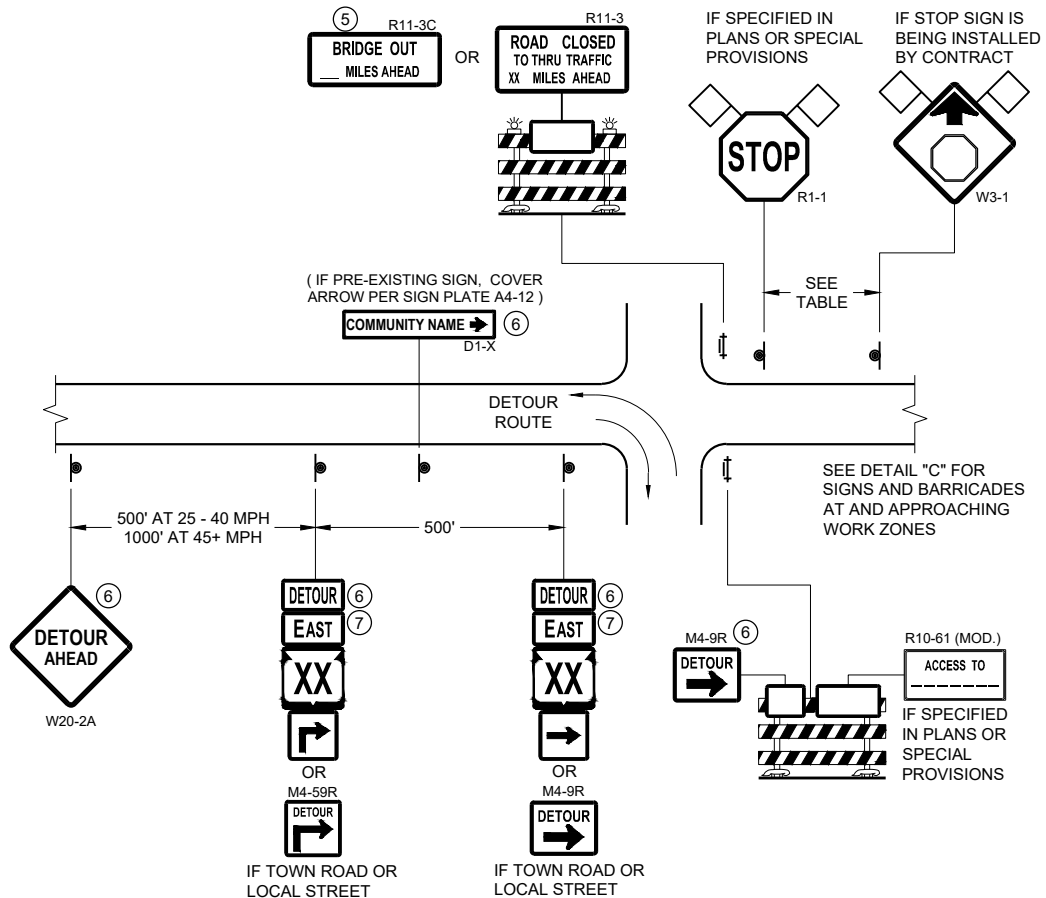
SECTION N-N



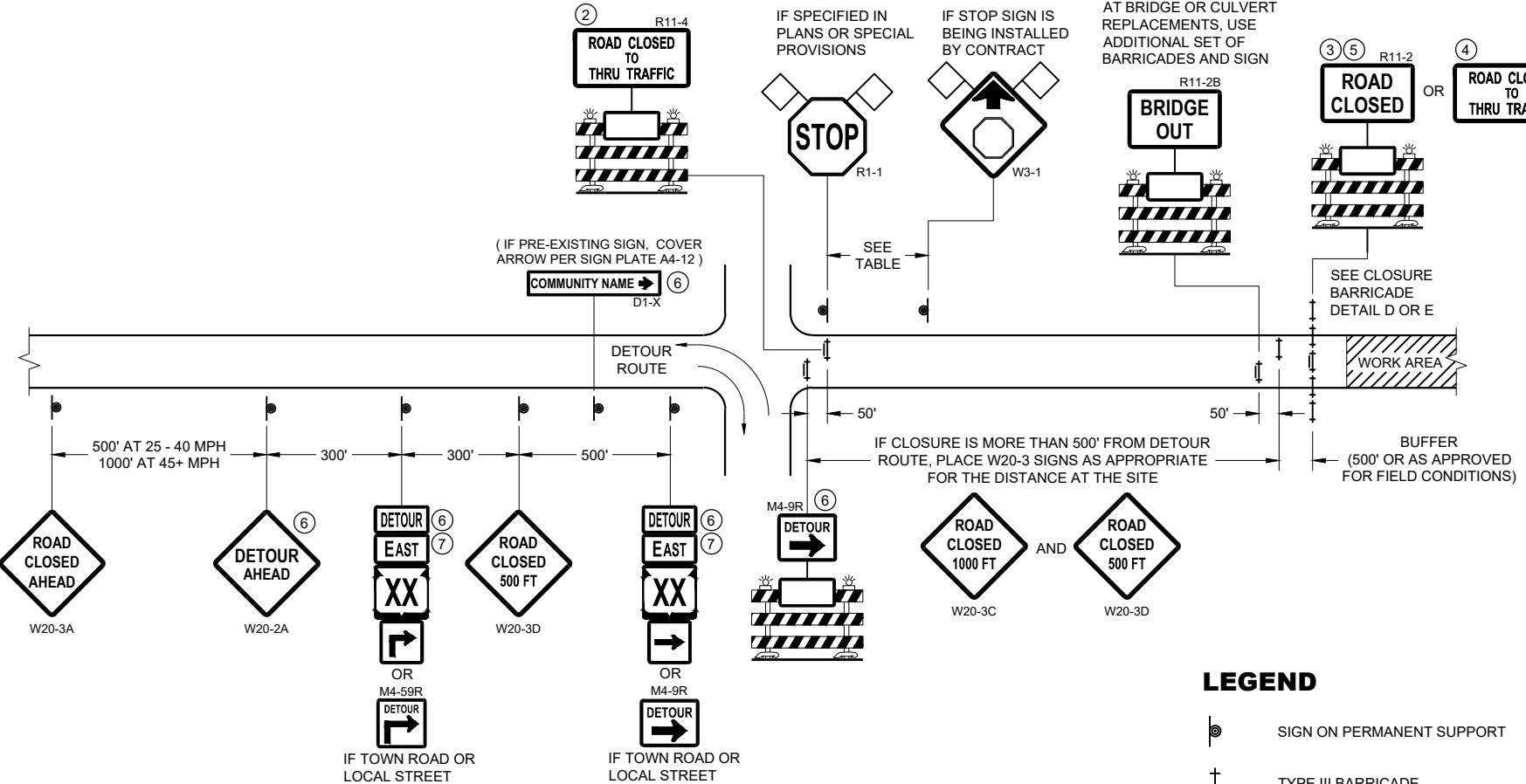
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



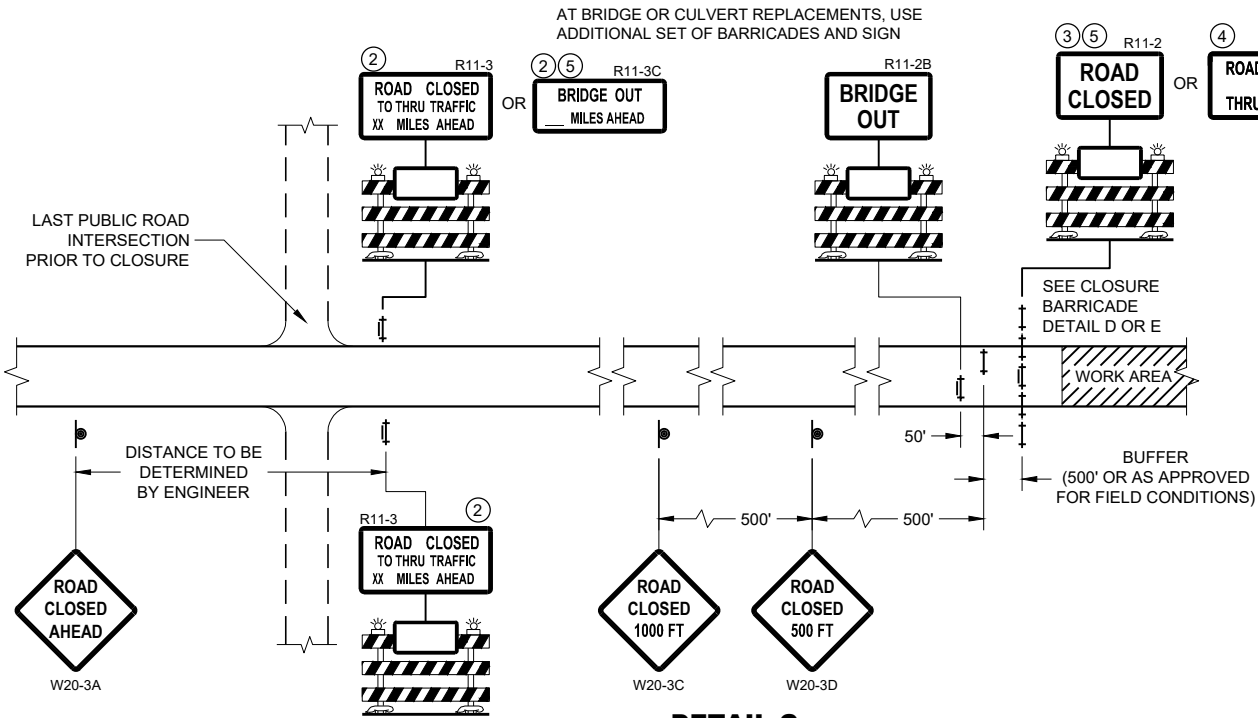
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



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

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

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



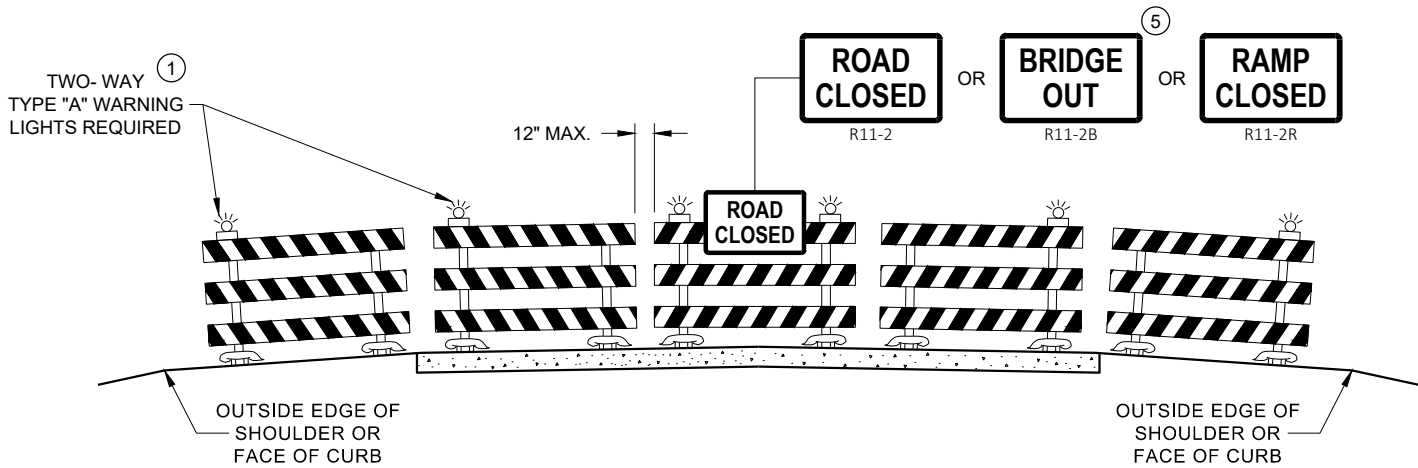
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

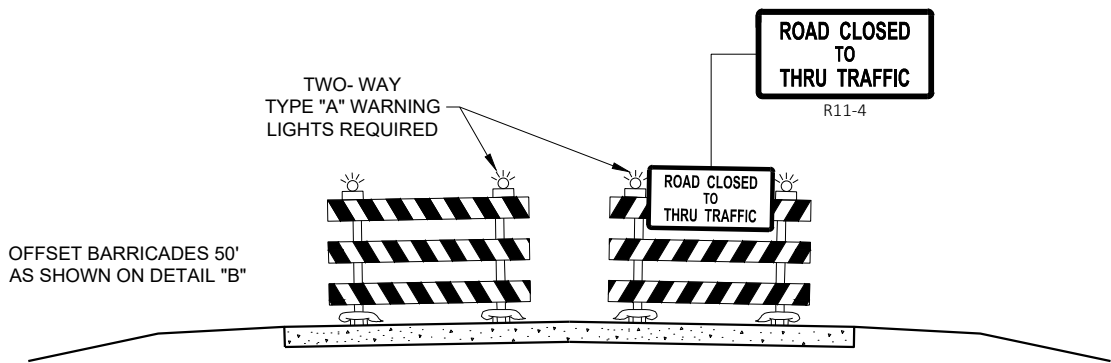
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

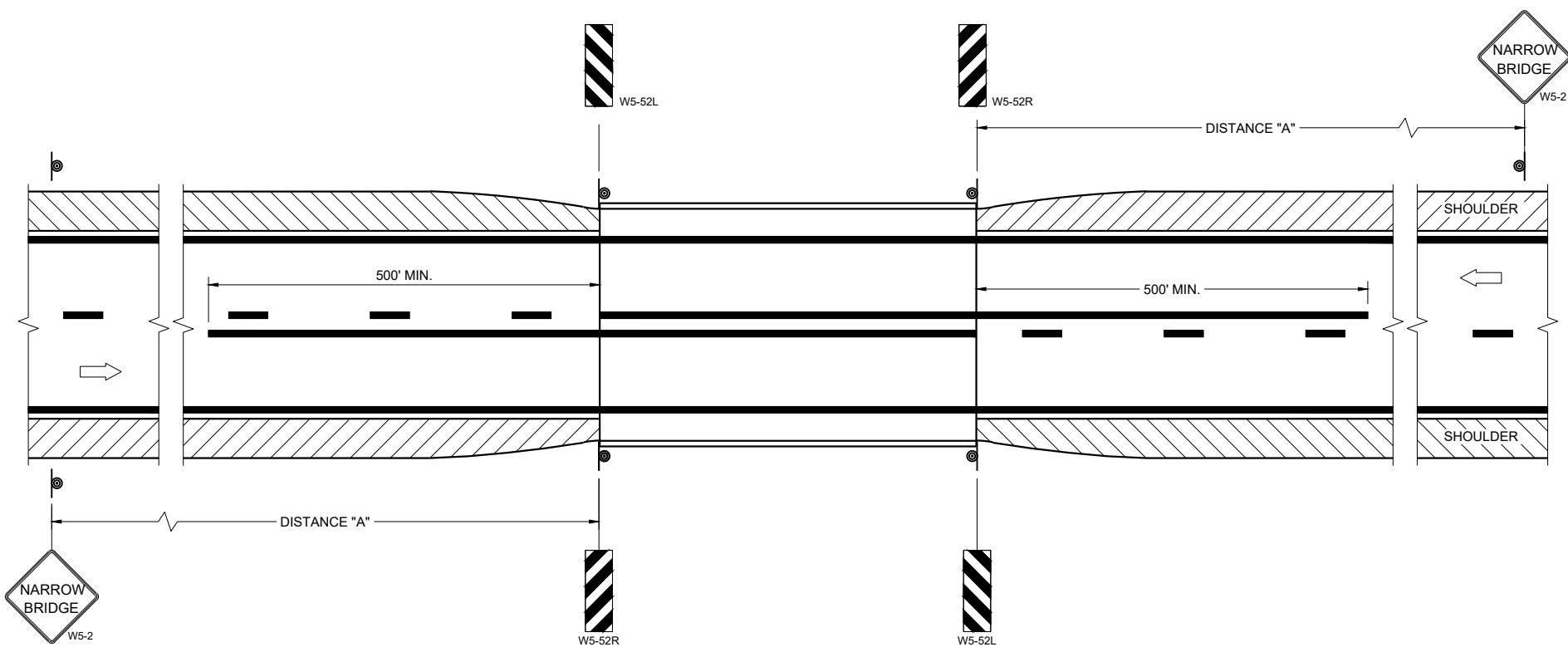
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

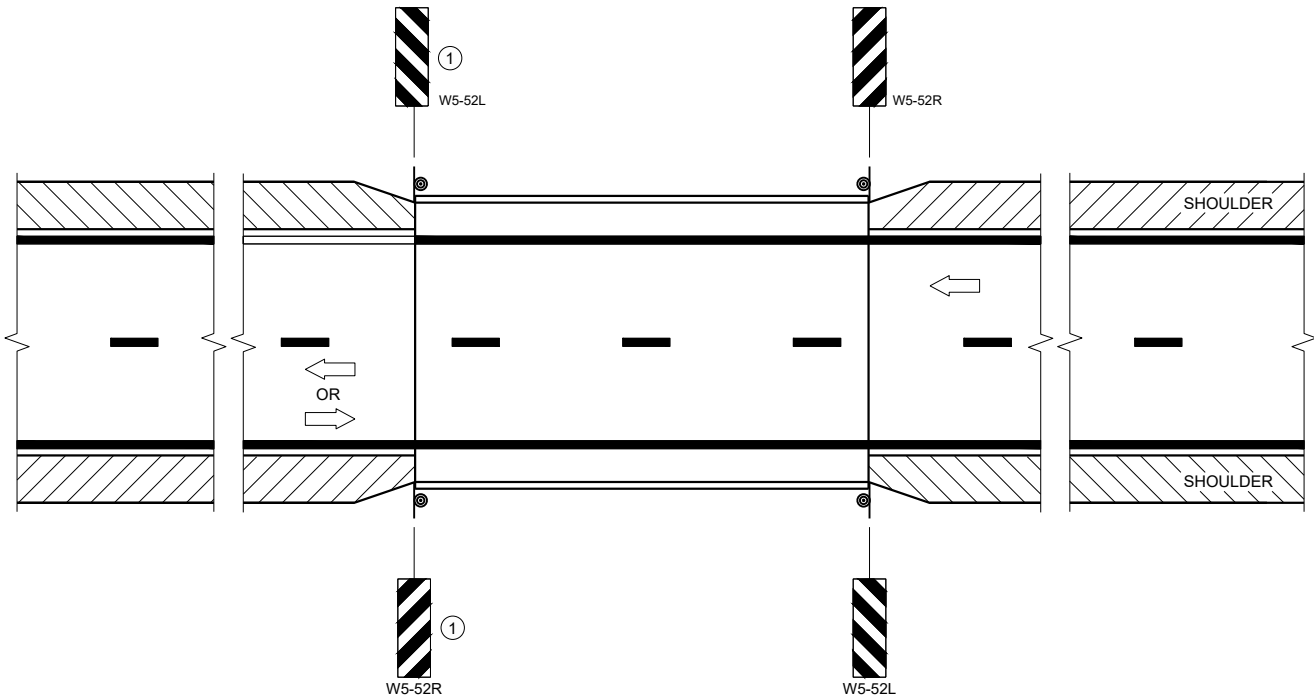
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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



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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

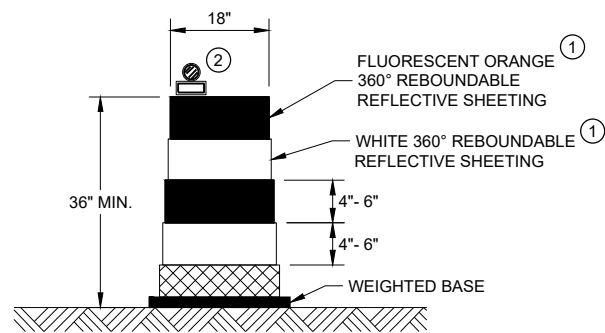
DISTANCE TABLE

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

**SIGNING AND MARKING
FOR TWO LANE BRIDGES**

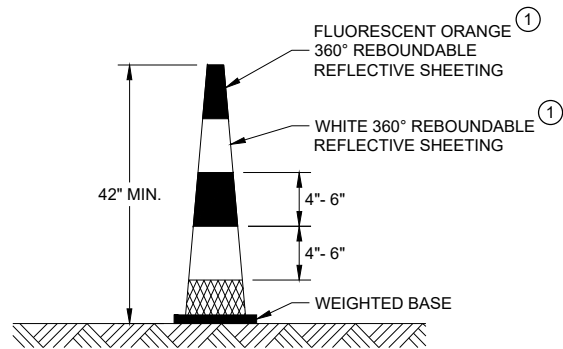
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



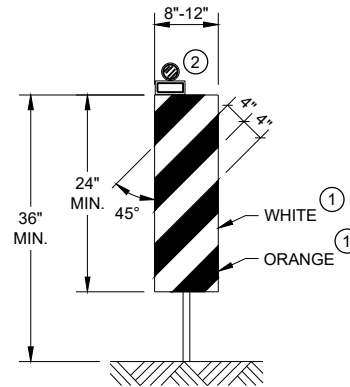
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



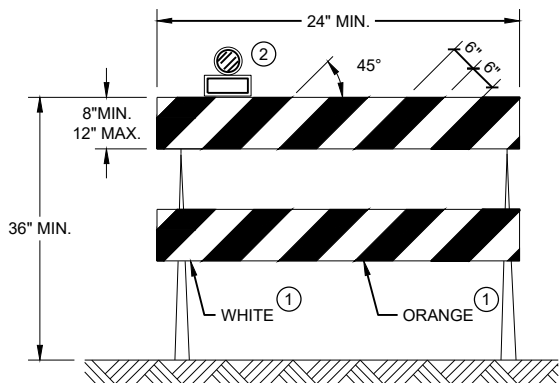
42" CONE

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



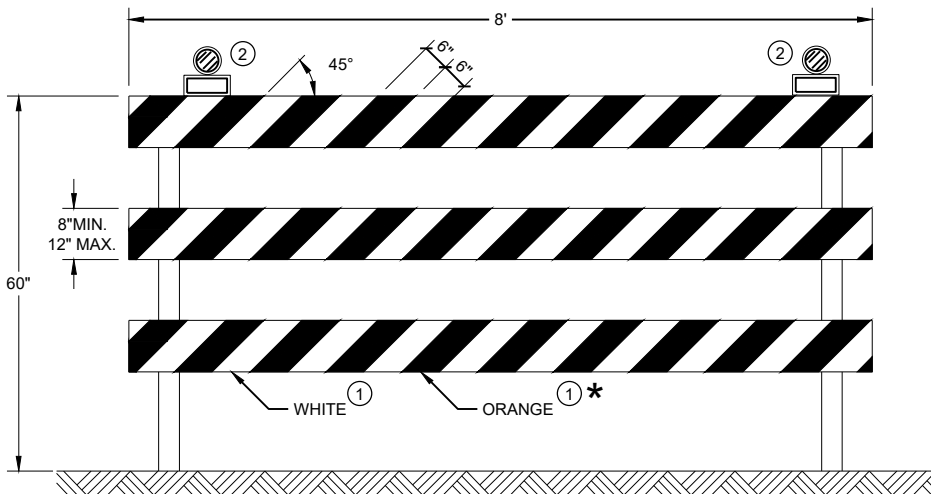
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

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

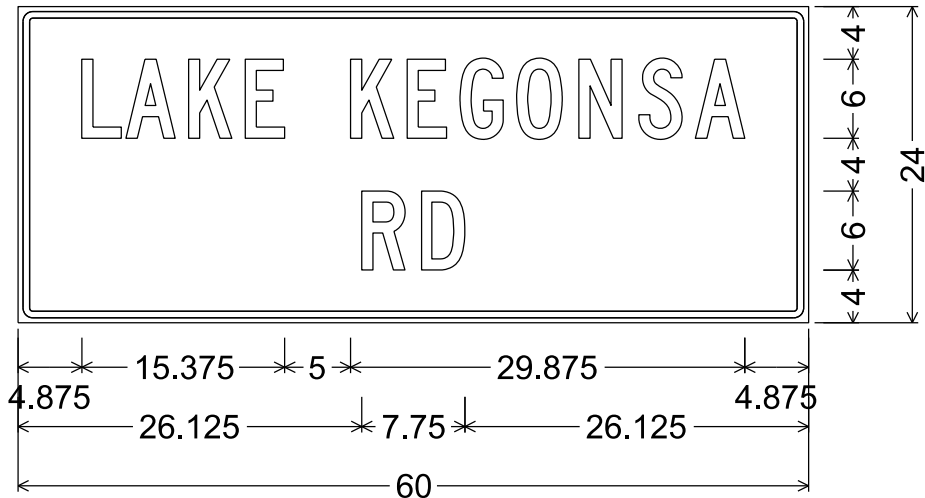
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

NOTES

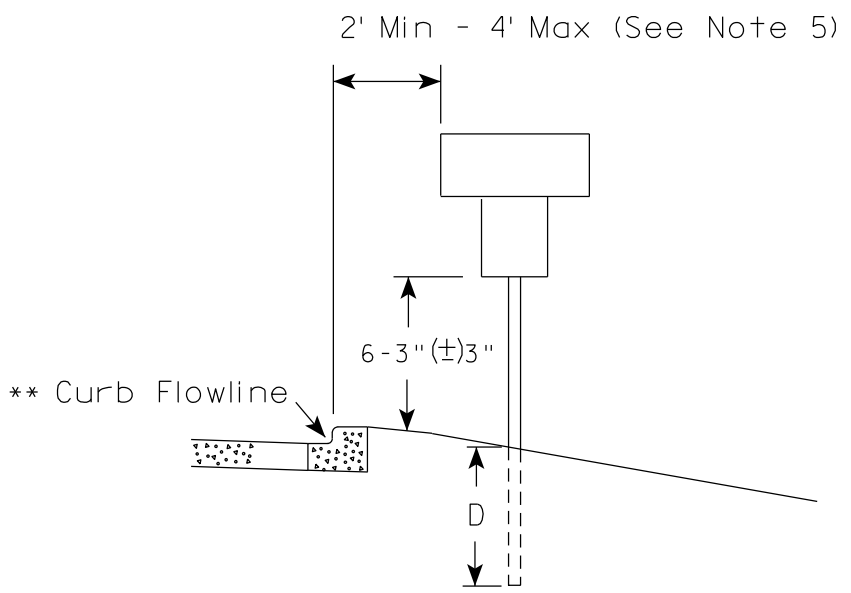
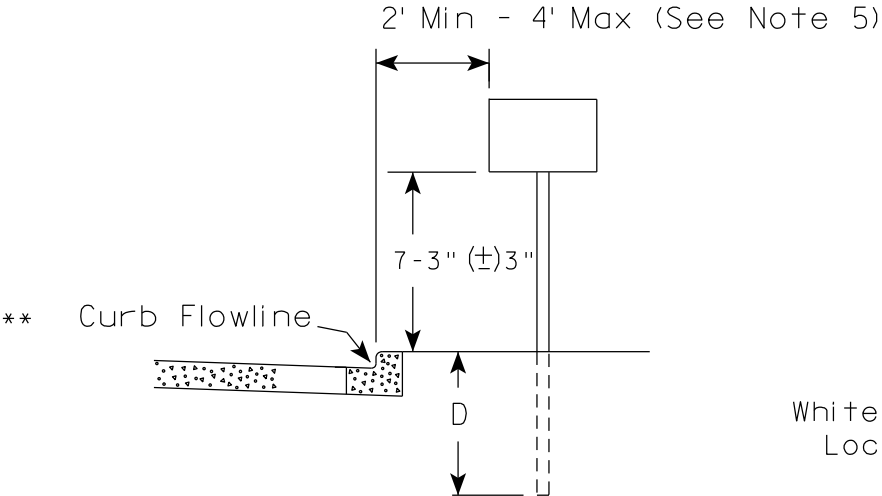
- 1. Fixed Message Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - C



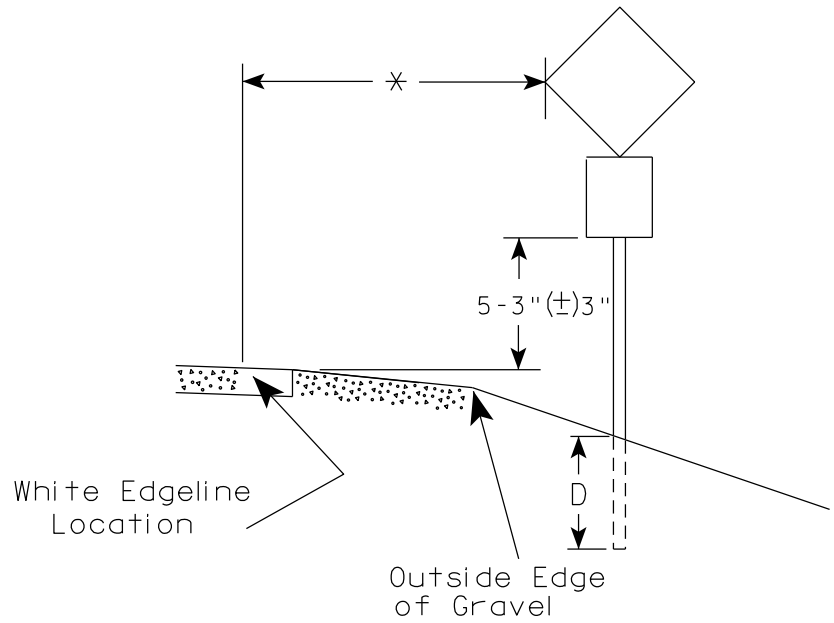
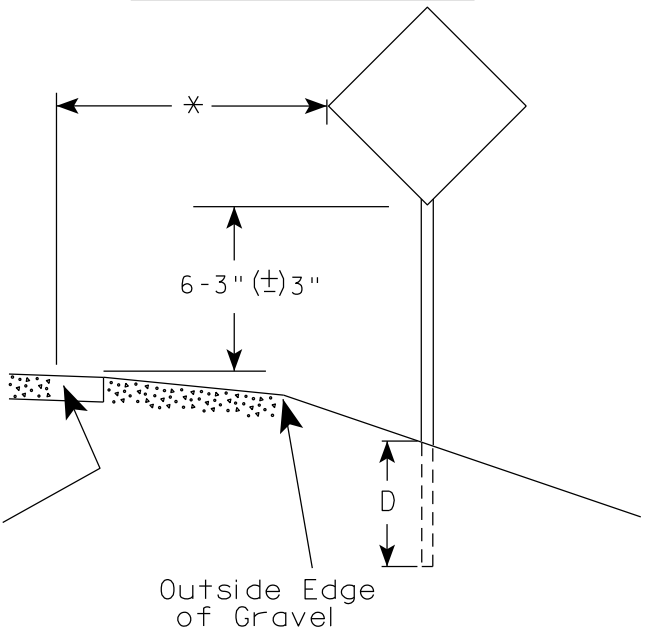
1.125" Radius, 0.500" Border, 0.375" Indent

SPECIAL 1
60" X 24"

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

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

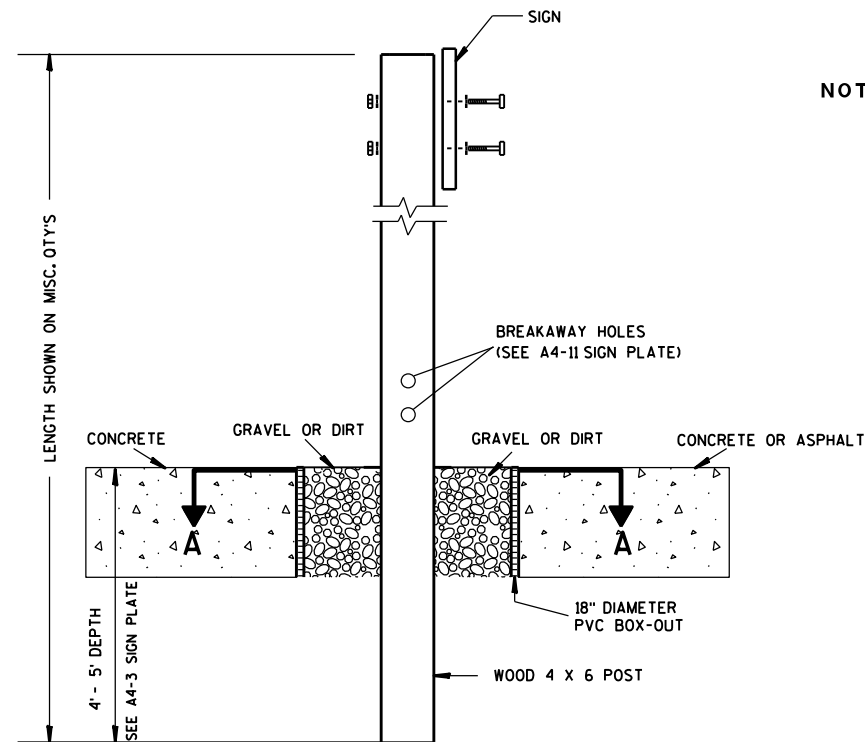
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

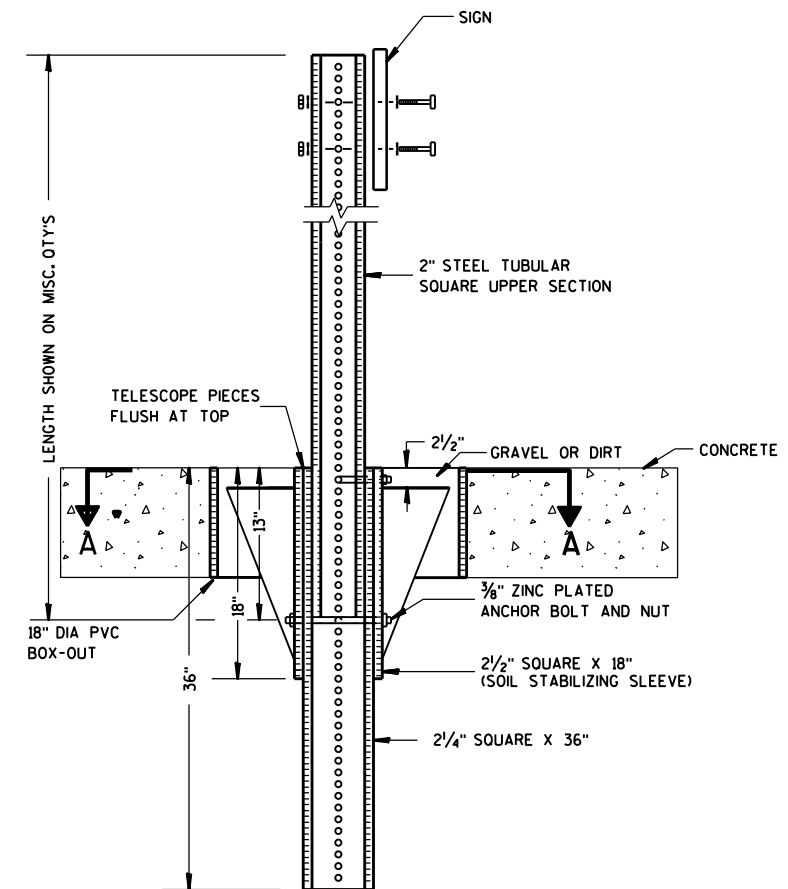
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

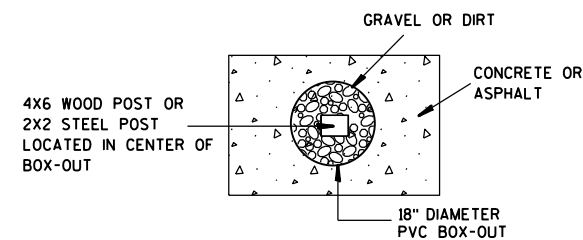
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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:

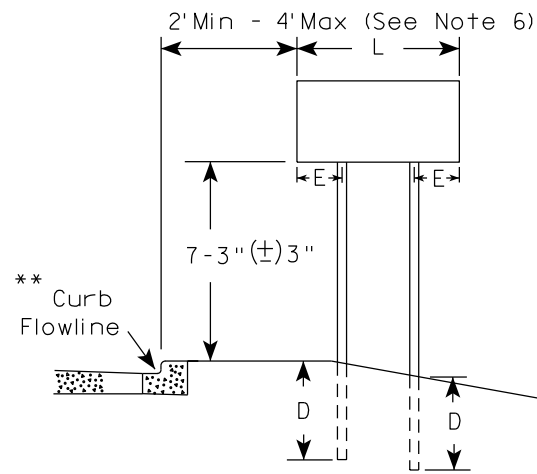
HWY:

COUNTY:

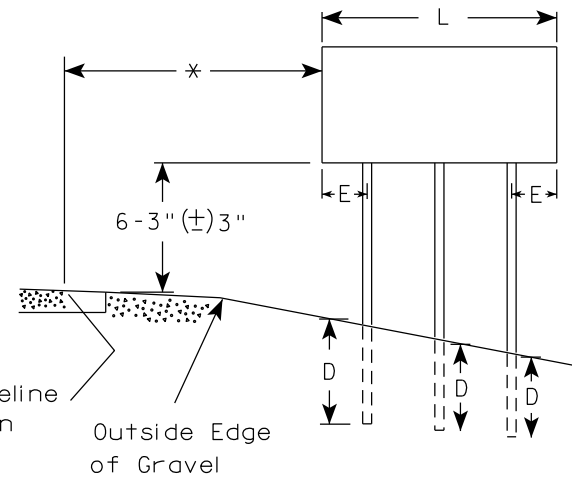
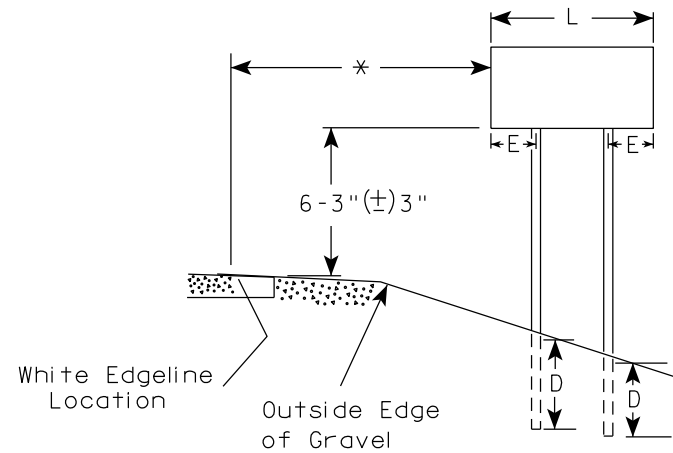
SHEET NO:

E

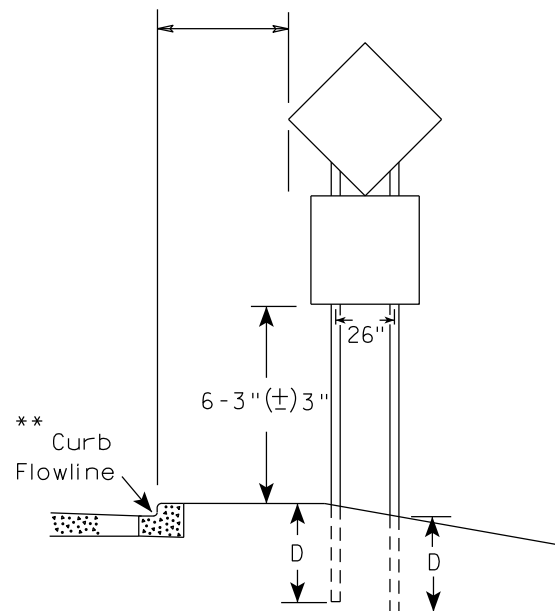
URBAN AREA



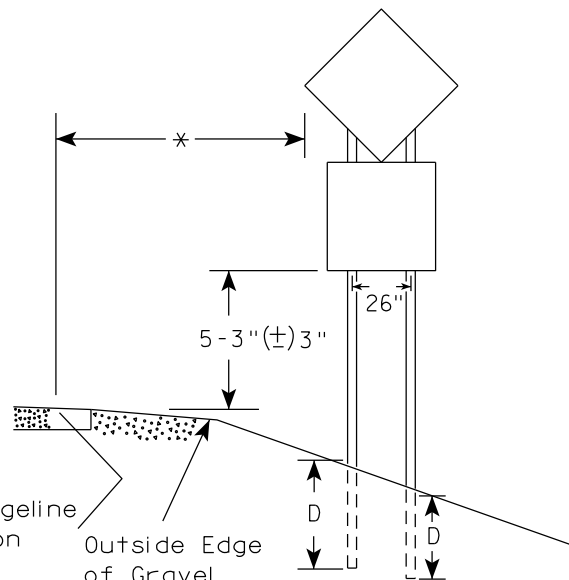
RURAL AREA (See Note 3)



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'

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

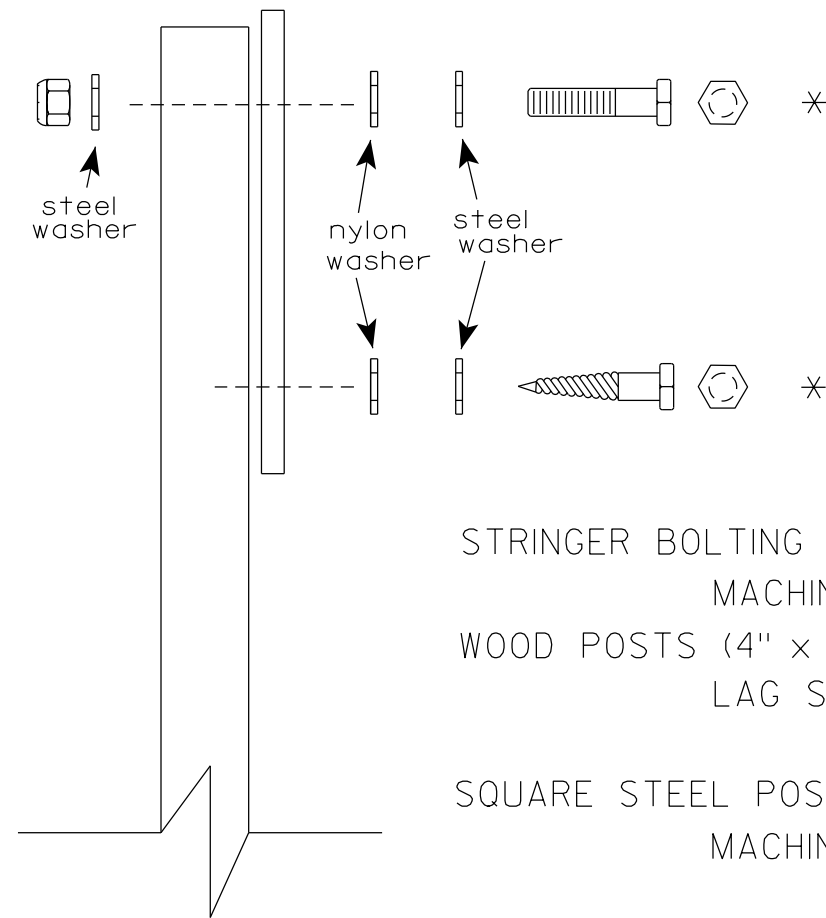
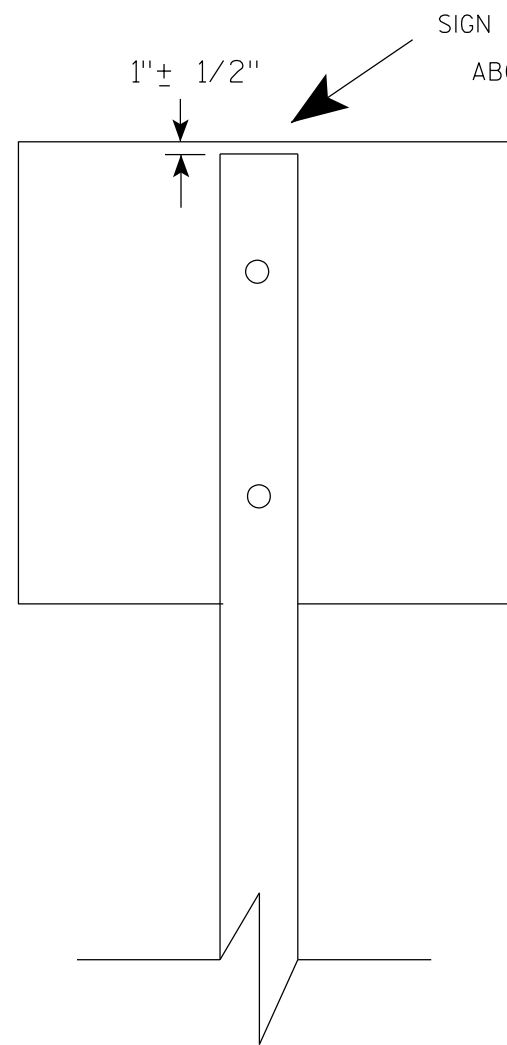
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

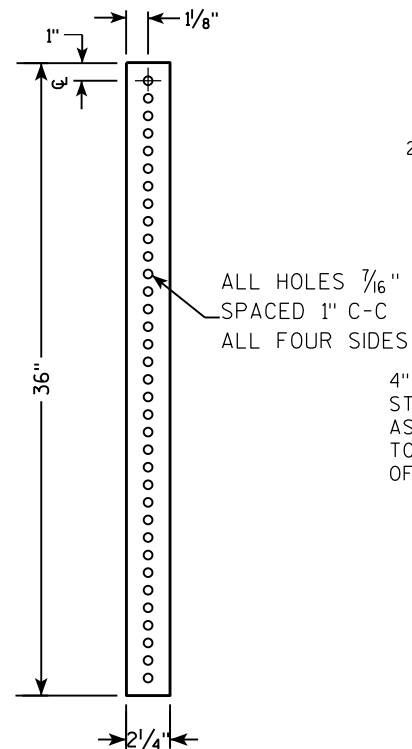
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- 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

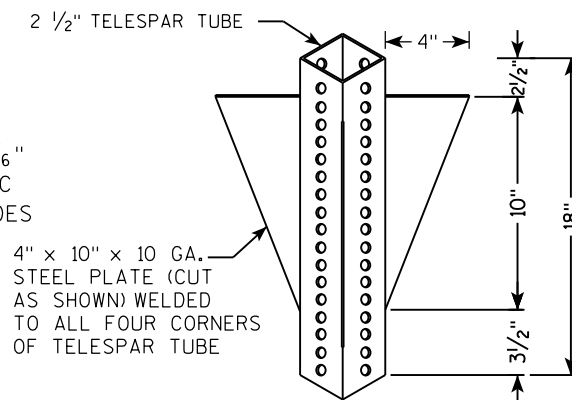
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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



LENGTH SHOWN ON MISC. QTY'S
 18" DIA SCHEDULE 40 PVC BOX-OUT
 TELESCOPE PIECES FLUSH AT TOP
 36"
 18"
 13"
 2 1/2"
 2 1/4" SQUARE X 36"
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 3/8" ZINC PLATED ANCHOR BOLT AND NUT
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
 2" STEEL TUBULAR SQUARE UPPER SECTION
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN
 2 1/2" GRAVEL OR DIRT

LENGTH SHOWN ON MISC. QTY'S

SIGN

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

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

TELESCOPE PIECES FLUSH AT TOP

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

2 $\frac{1}{2}$ " SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 $\frac{1}{4}$ " SQUARE X 36"

36"

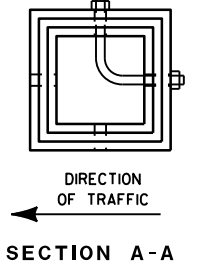
18"

12"

A

B

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

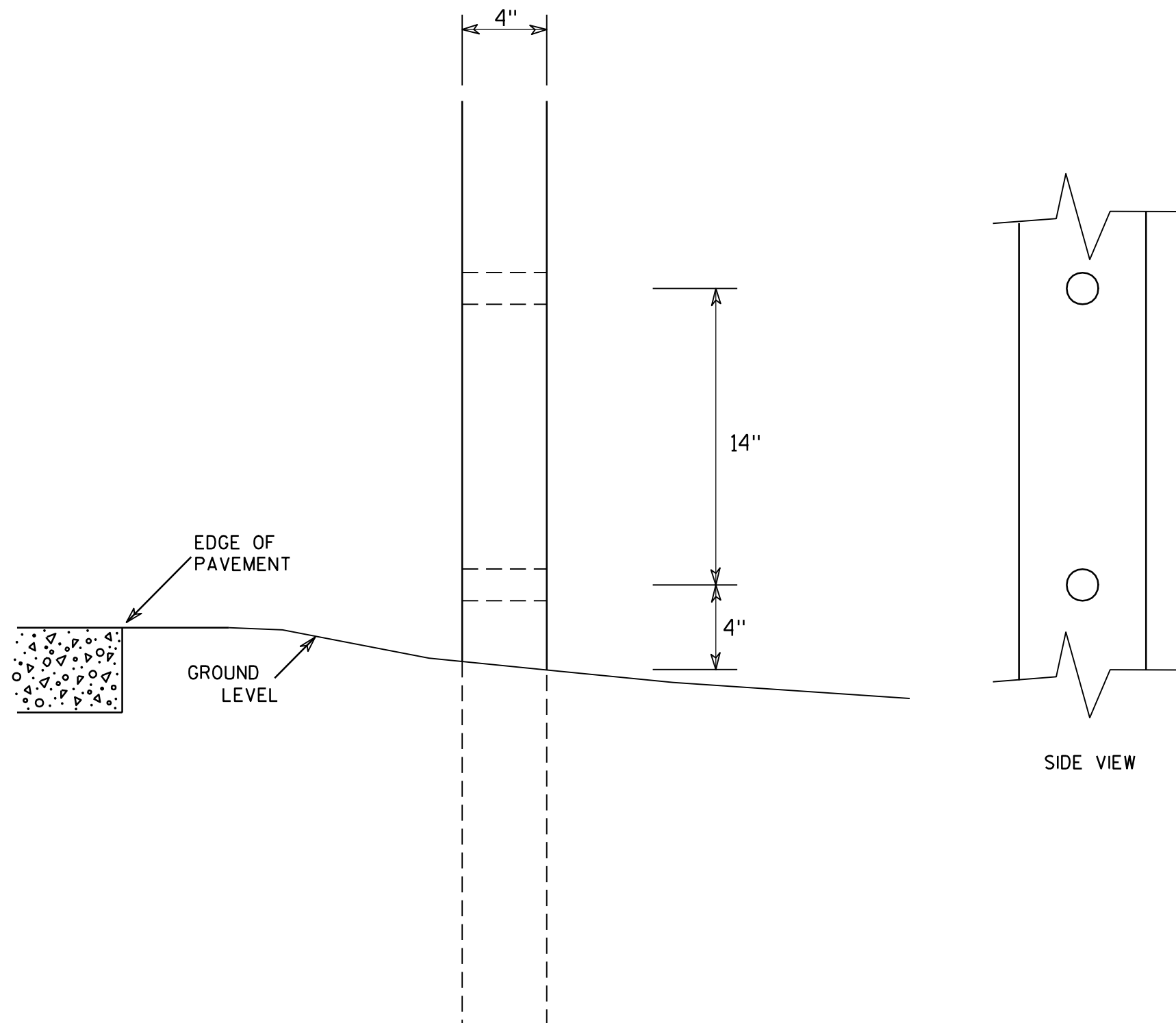
APPROVED Matthew R Rauch

for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

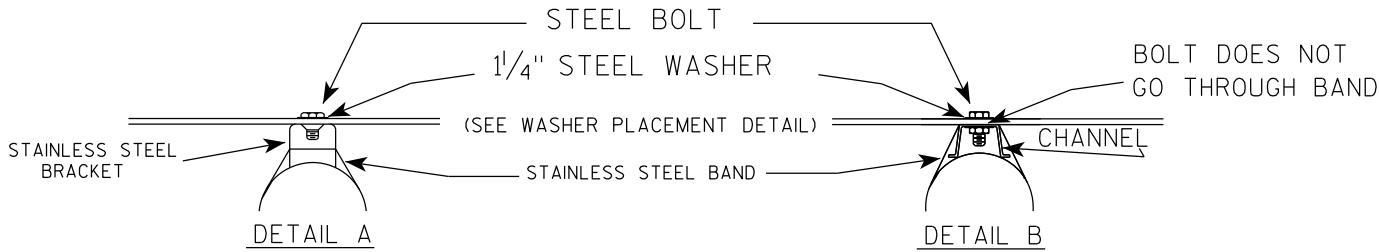
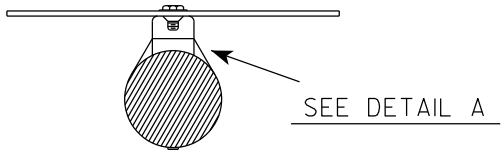
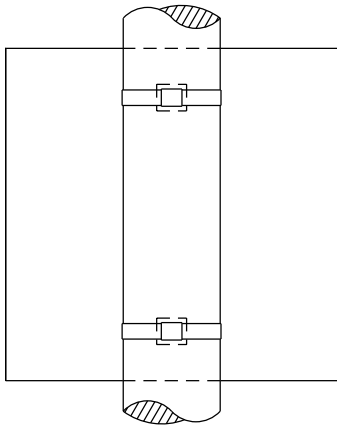
COUNTY:

SHEET NO:

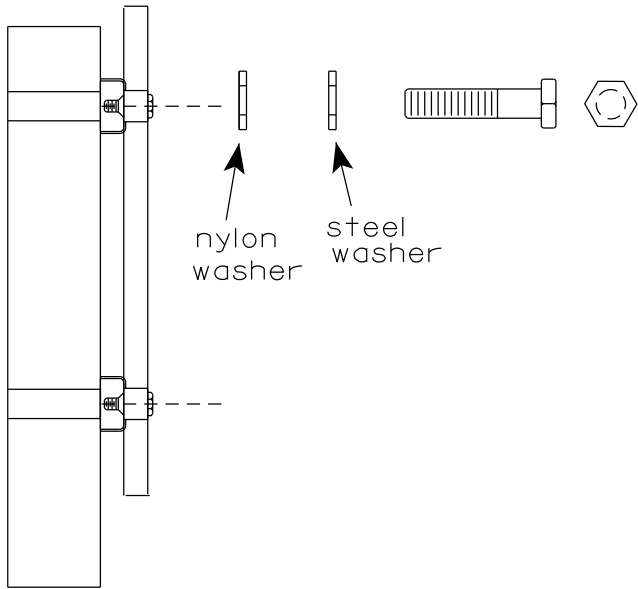
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

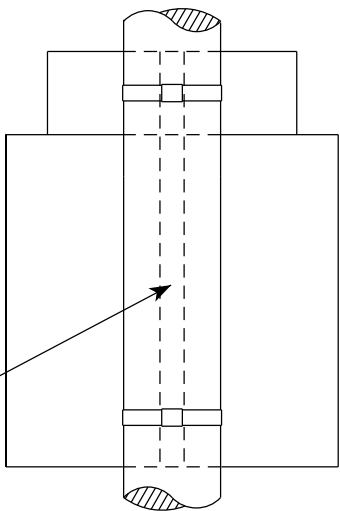


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

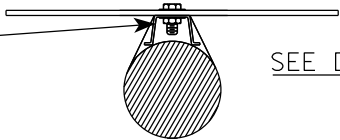
GENERAL NOTES

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 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



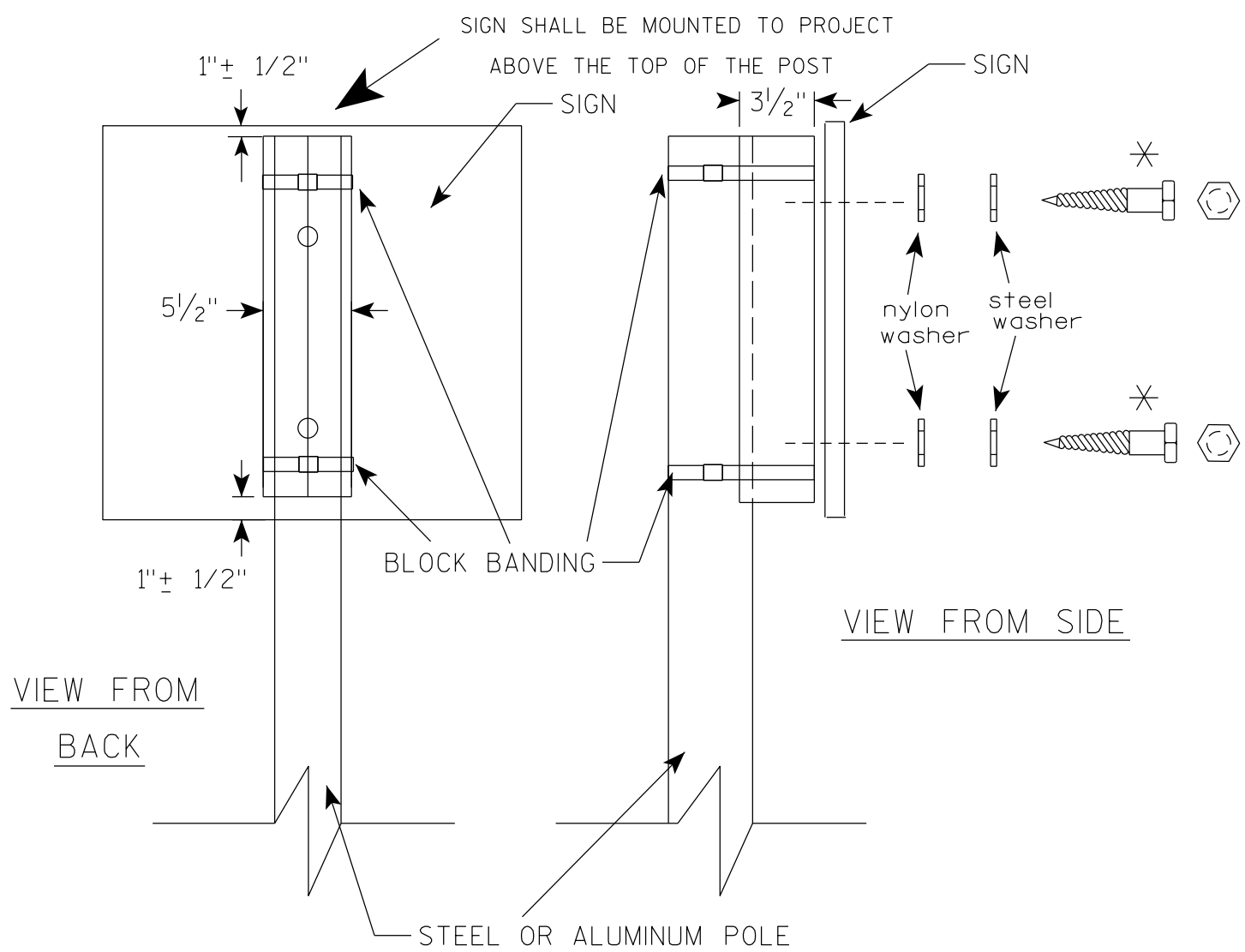
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

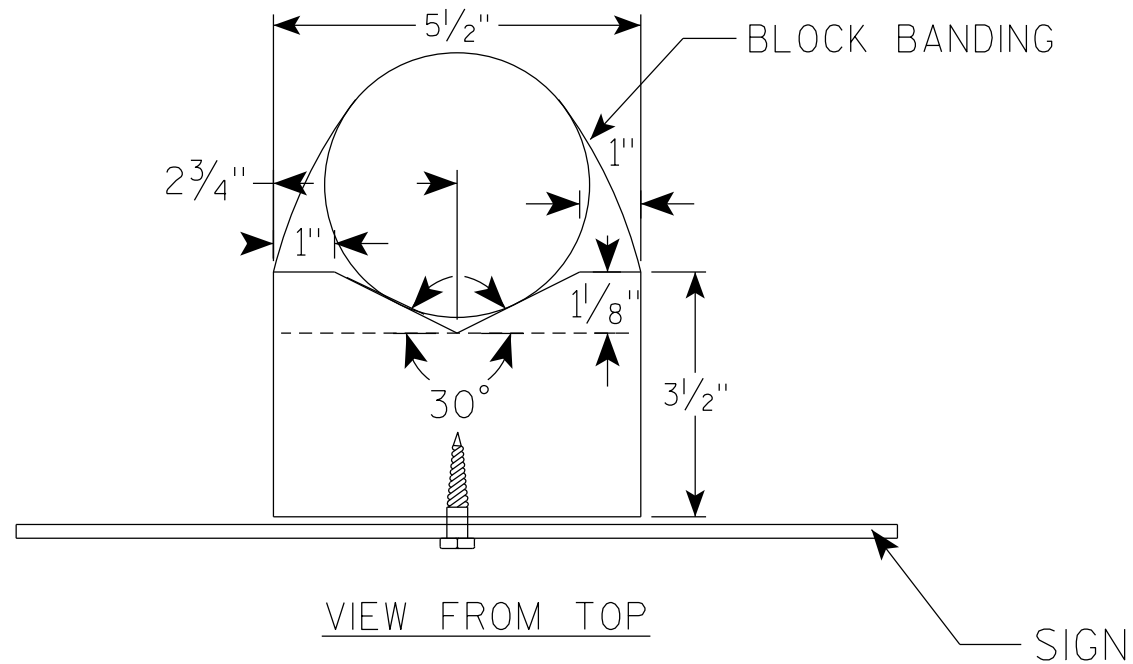
WISCONSIN DEPT OF TRANSPORTATION

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

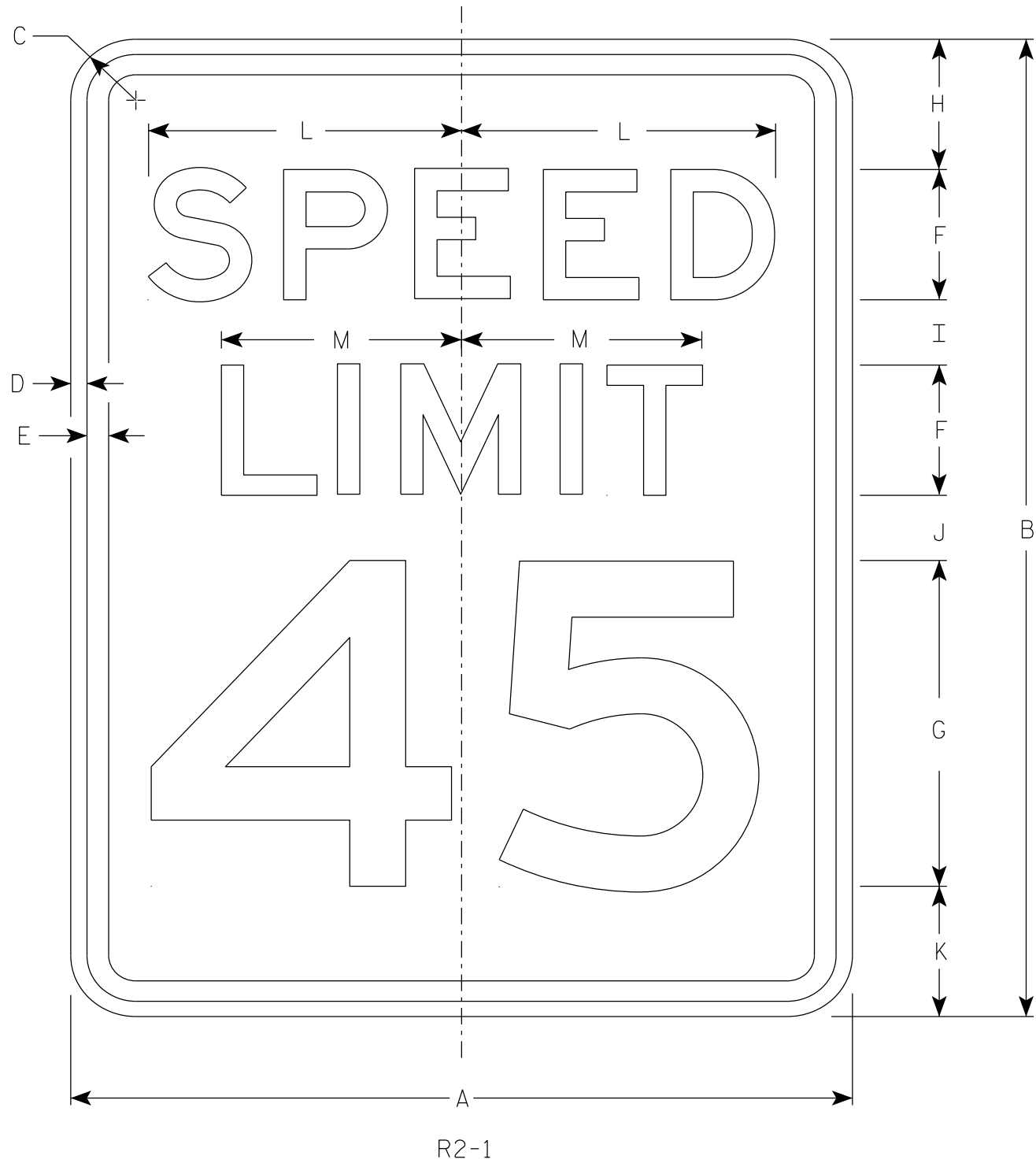
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO:

E

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - E
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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	18	24	1 1/2	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/2	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 7/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	3	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

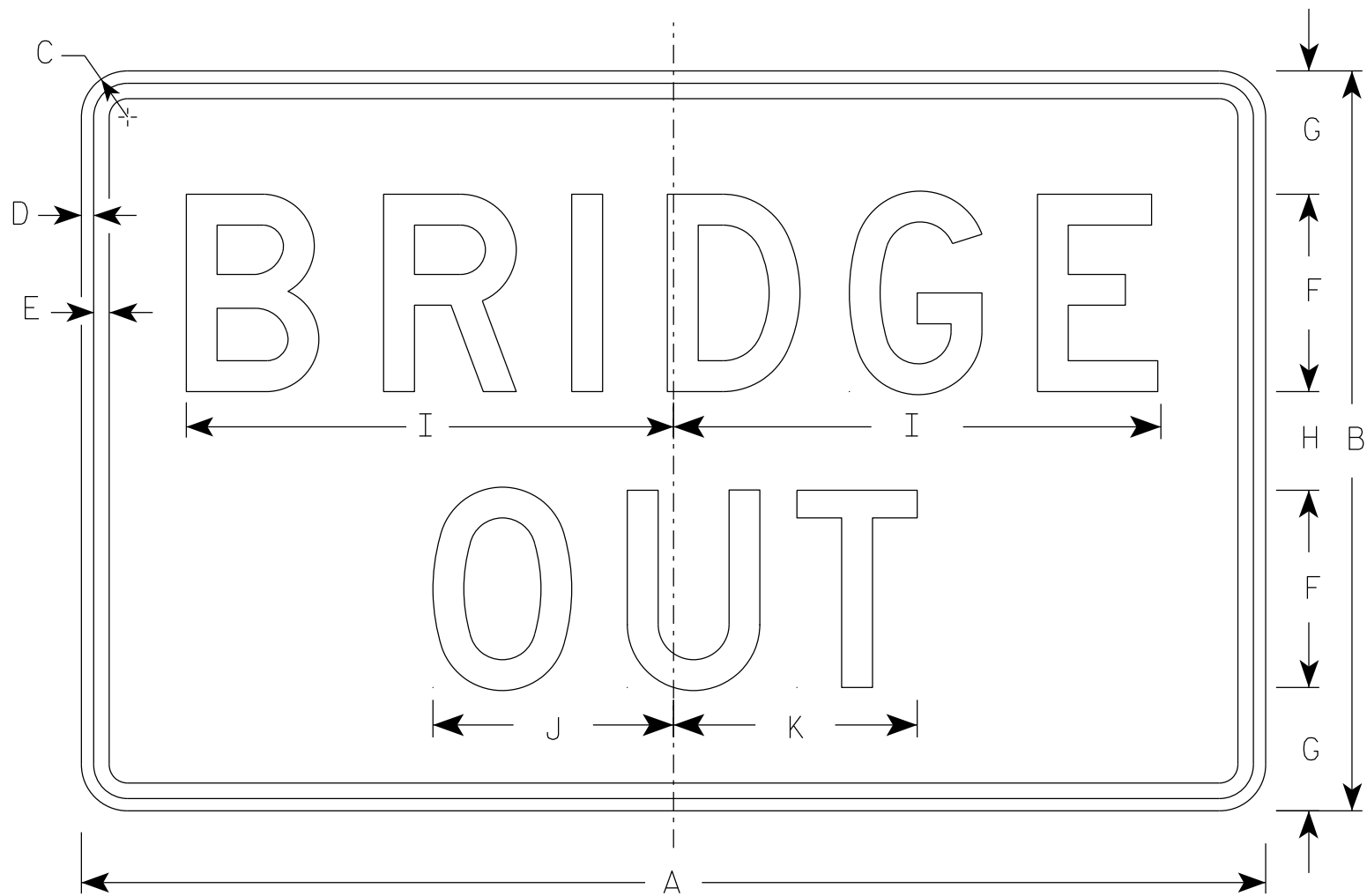
STANDARD SIGN

R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14



R11-2B

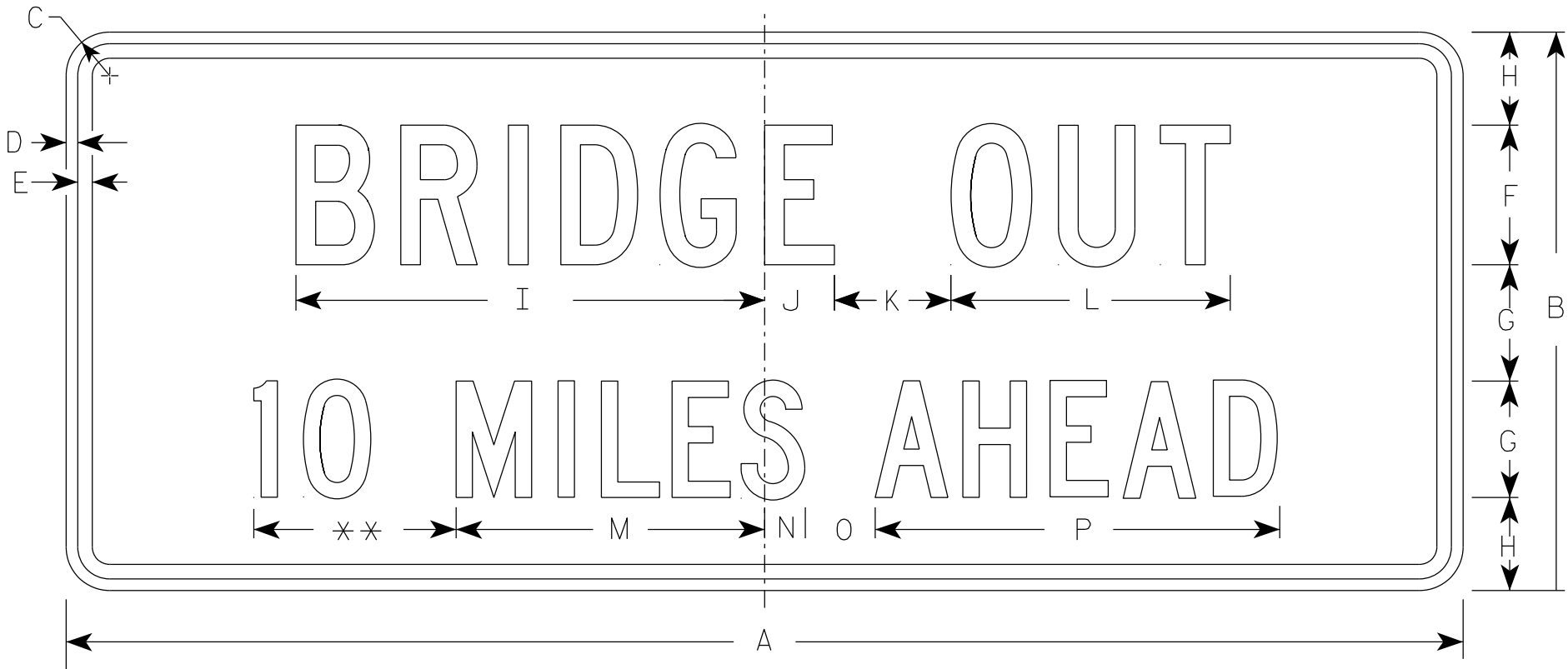
NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - D
- 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																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

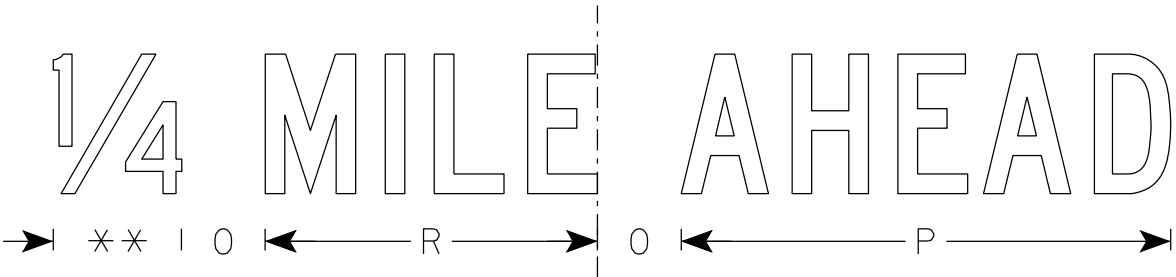
NOTES

- 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.



R11-3C

** 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	15	1 1/2	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 7/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 7/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

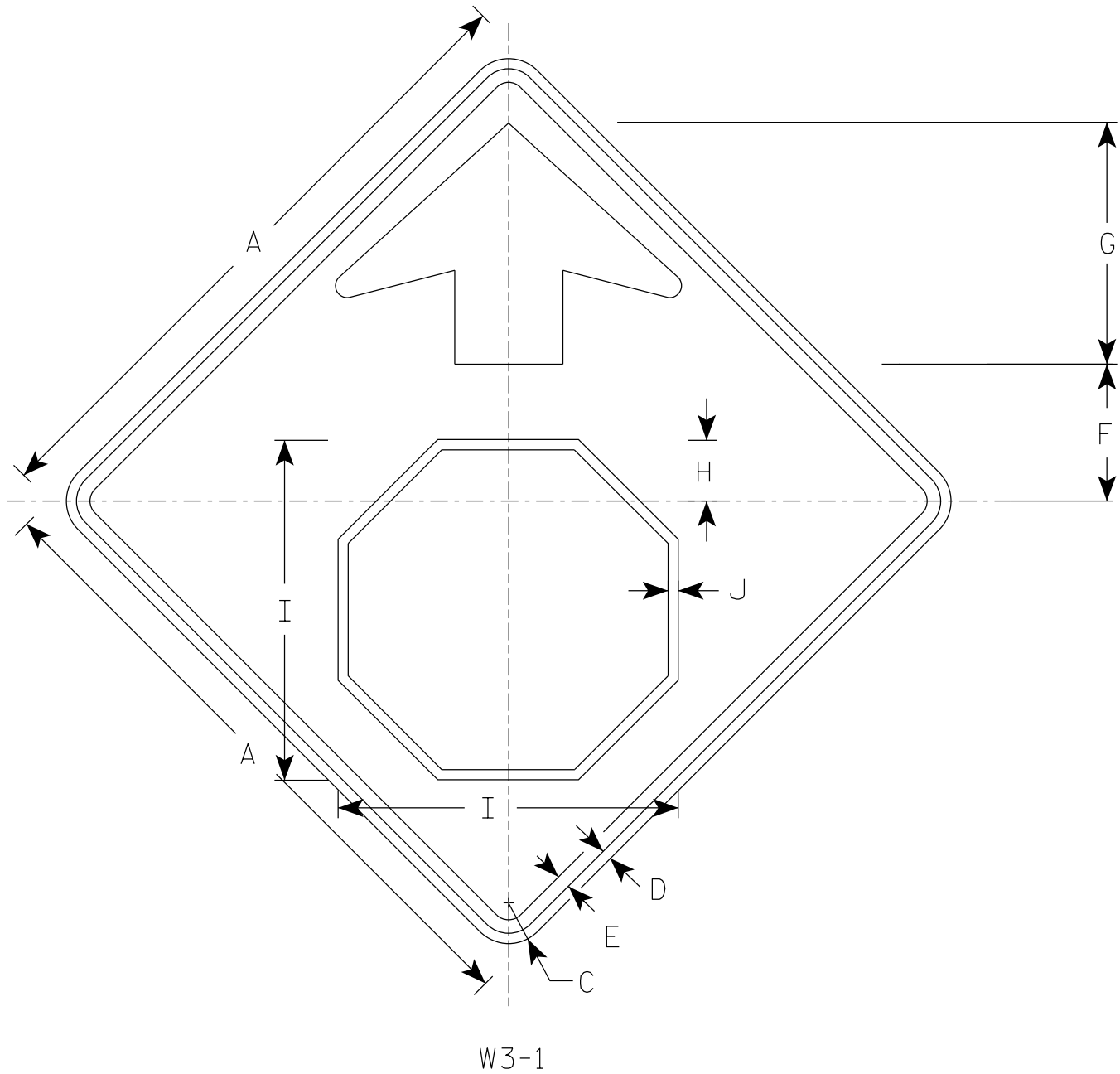
DATE 2/5/24 PLATE NO. R11-3C.4

PROJECT NO:

SHEET NO:

E

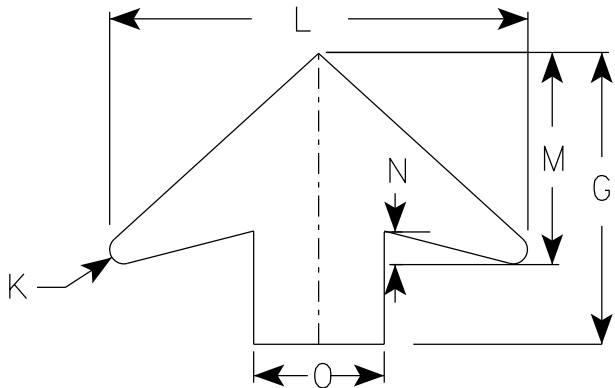
7



W3-1

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Arrow & Border - Black
 - Stop Symbol - White Border on Red Background



ARROW DETAIL

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	30		1 7/8	1/2	5/8	6 1/4	11 1/4	2 3/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		3	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		3	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN

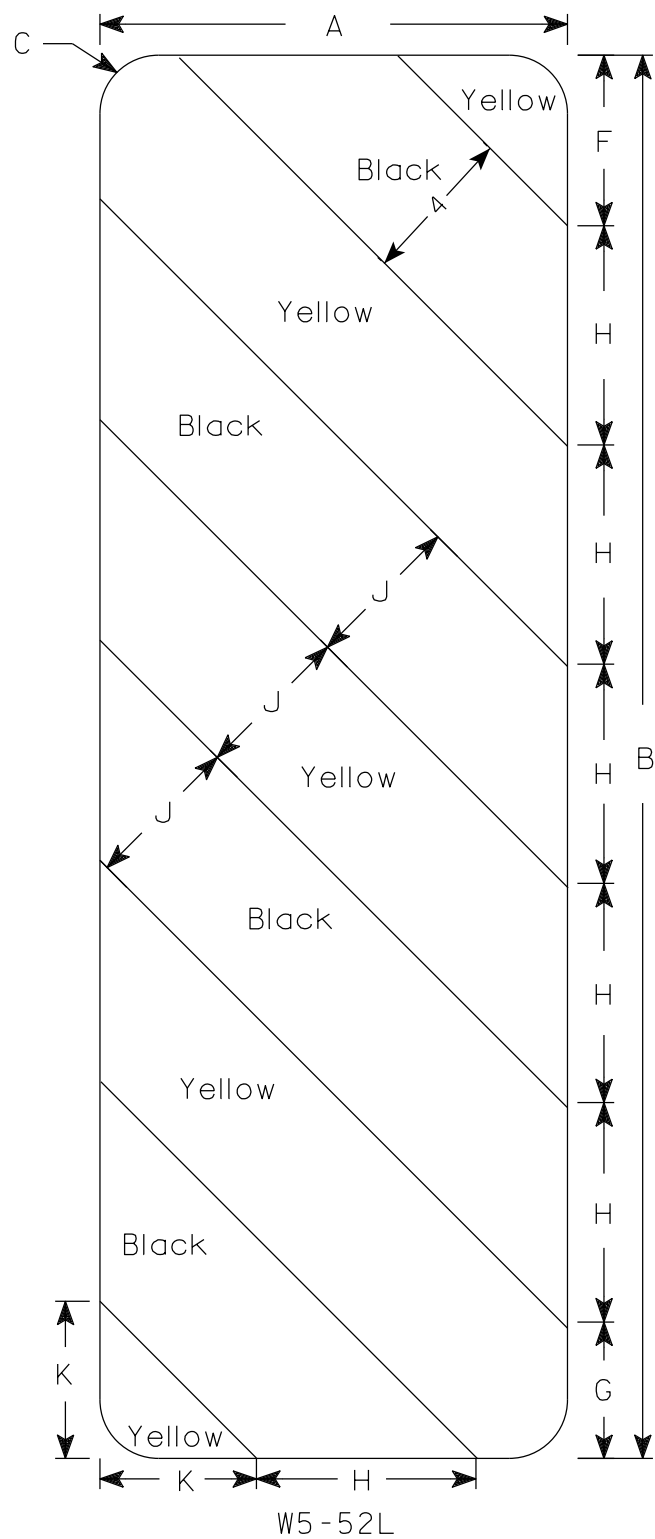
W3-1

WISCONSIN DEPT OF TRANSPORTATION

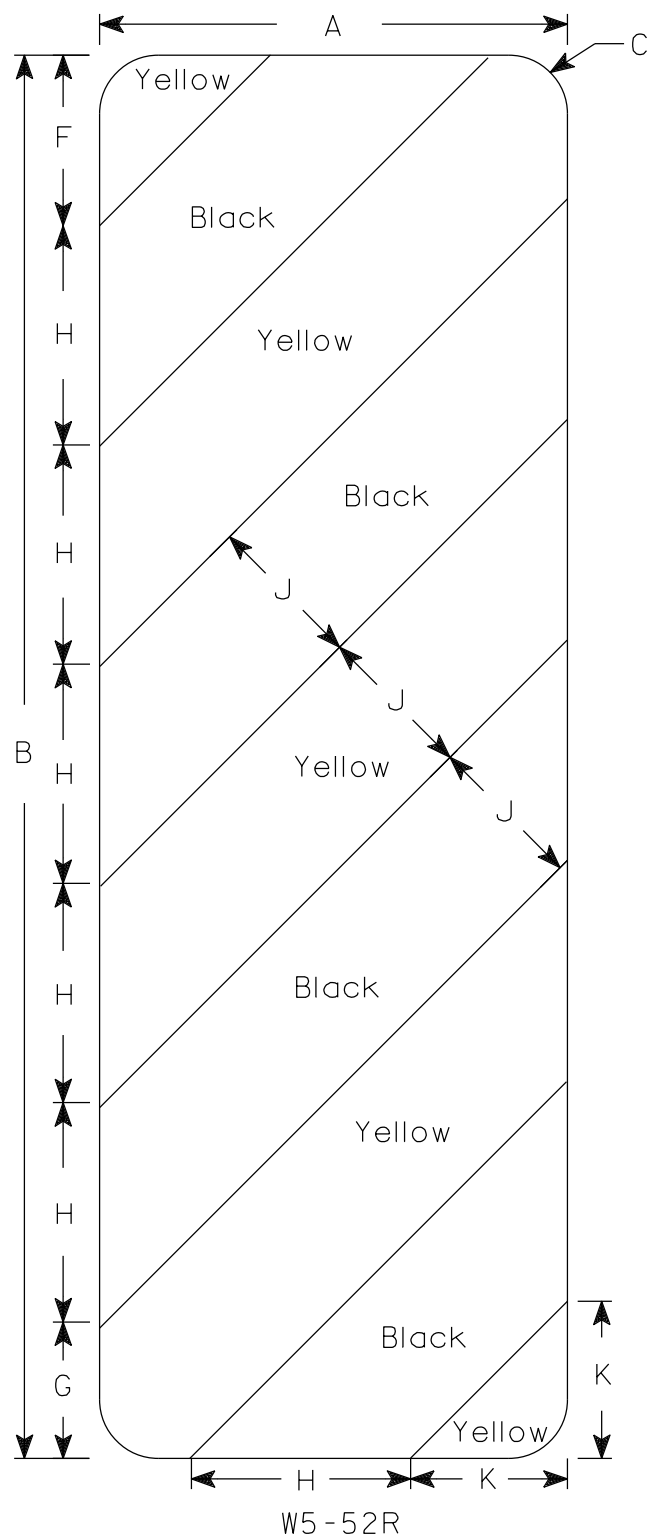
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/17/2023

PLATE NO. W3-1.13



W5-52L



W5-52R

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																											

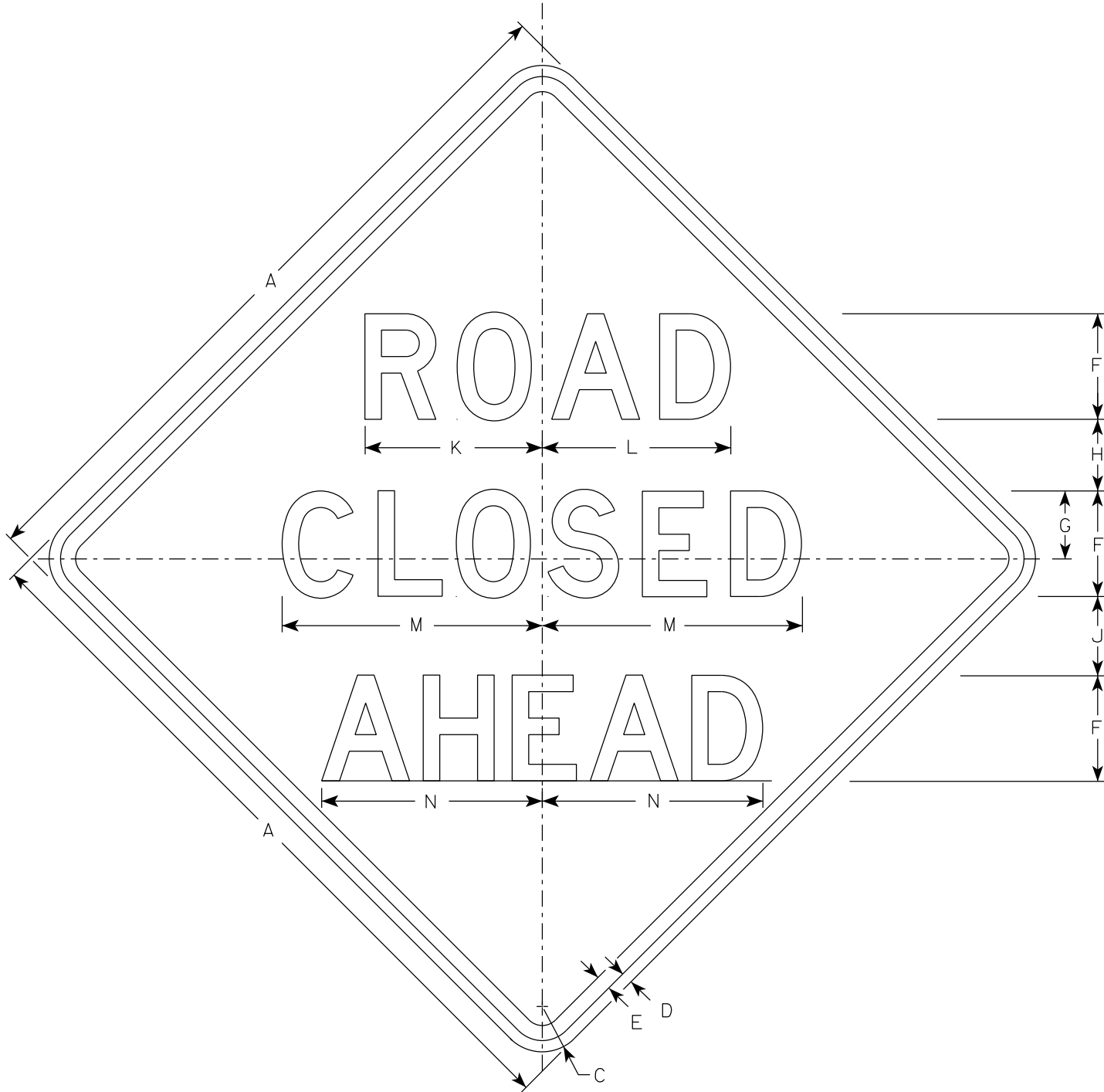
STANDARD SIGN

W5-52L & W5-52R

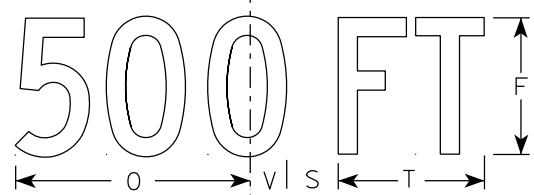
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

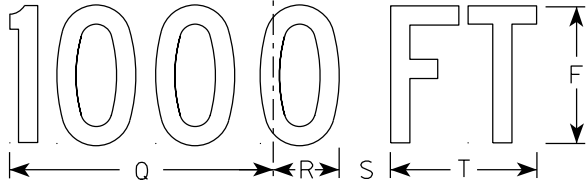
DATE 3/4/2024 PLATE NO. W5-52.10



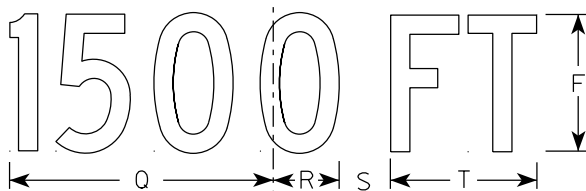
W20-3A



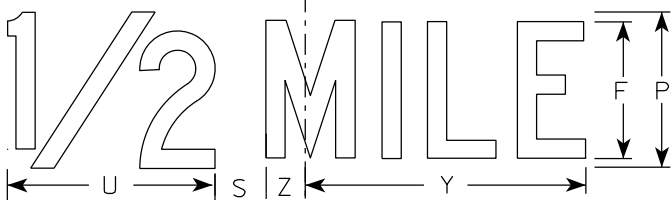
W20-3D



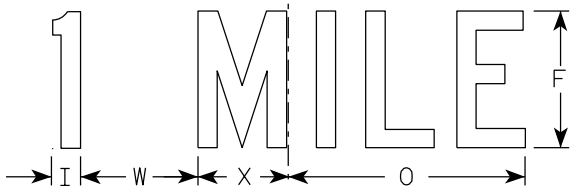
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
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. Lines 1 and 2 are Series D.
Line 3 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	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

$Q_2 = 751 \text{ C.F.S.}$
 $V_2 = 5.04 \text{ F.P.S.}$
 $HW_2 = \text{EL. } 878.63$

NO.	STATION	DESCRIPTION	ELEV.
1	11+66.87, 13.7' LT	CHISELED SQUARE TOP OF NW CURB	885.14

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

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.

BAR DIMENSIONS FOR BENDING ARE OUT-TO-OUT.

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-13-885" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENTS 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.

BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK.

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

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.

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

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.

LEGEND

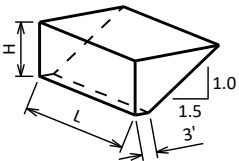
3/4" V-GROOVE REQ'D. EXTEND TO 6" FROM F.F. OF ABUT. DIAPHRAGMS.

PROTECTIVE SURFACE TREATMENT.

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

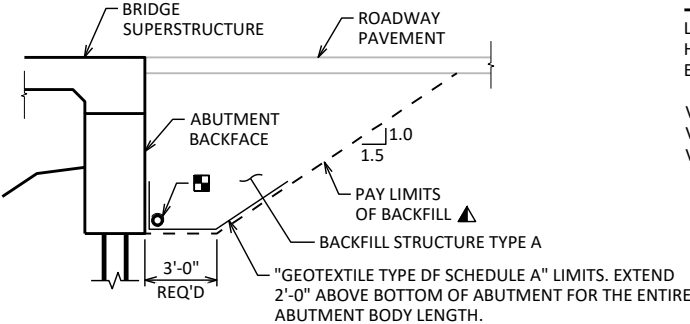
PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

PIGMENTED SURFACE SEALER.

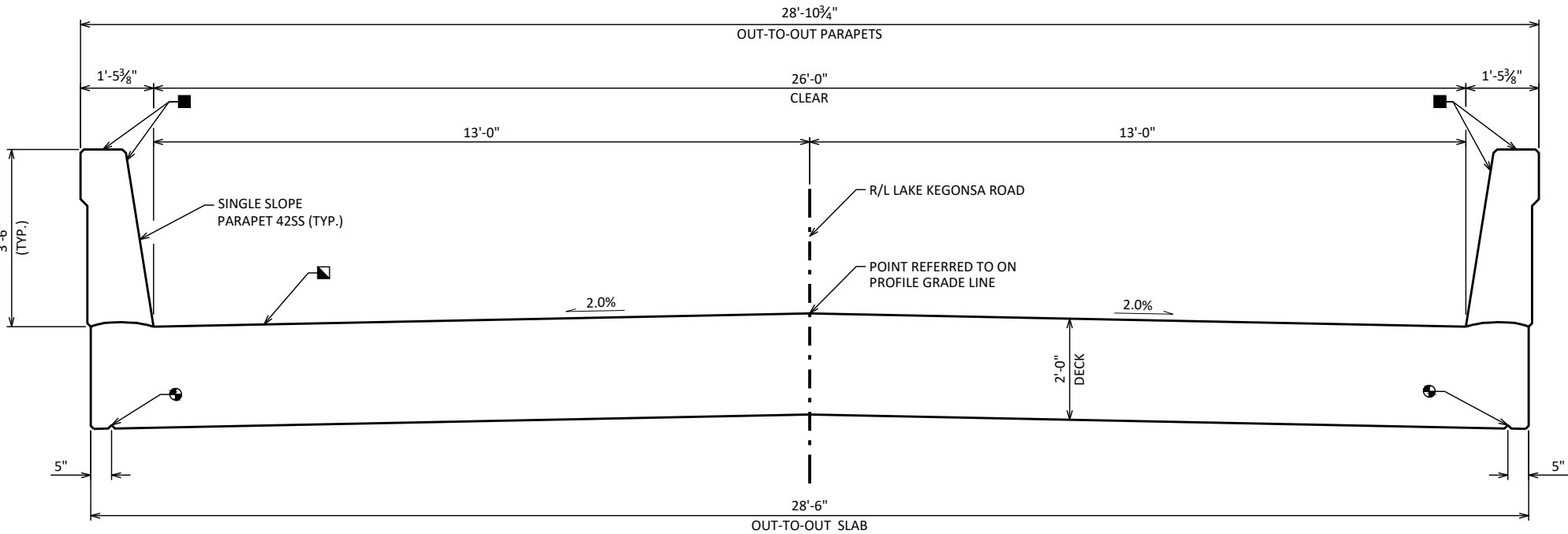


ABUTMENT BACKFILL DIAGRAM

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

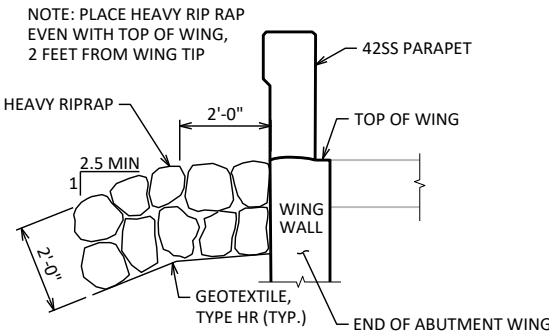


TYPICAL SECTION THRU ABUTMENT

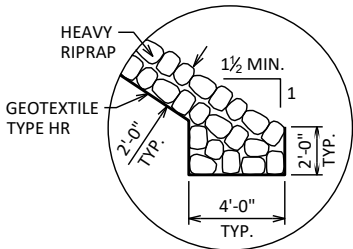


CROSS SECTION THRU SUPERSTRUCTURE

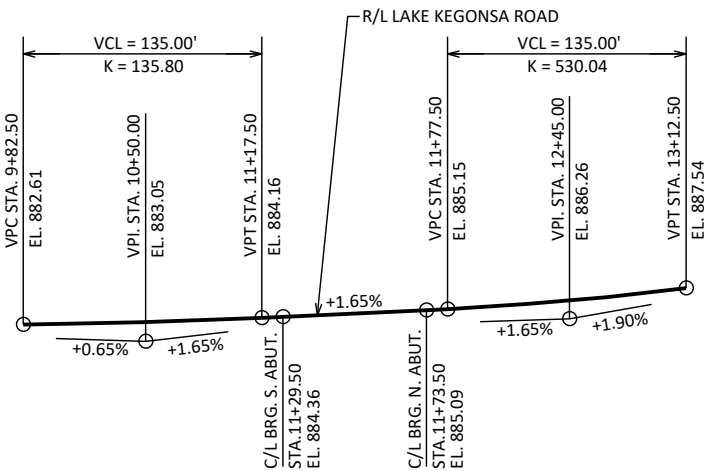
(LOOKING NORTH)



TYPICAL FILL SECTION AT WING TIPS



RIPRAP TOE DETAIL



PROFILE GRADE LINE

TOTAL ESTIMATED QUANTITES

BID ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPERS.	TOTAL
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-13-679	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-13-885	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	138	138	---	276
502.0100	CONCRETE MASONRY BRIDGES	CY	33.8	34.0	115.3	183
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	134	134
502.3210	PIGMENTED SURFACE SEALER	SY	12	12	46	70
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,700	1,700	---	3,400
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,320	2,350	20,340	25,010
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	---	18
550.2104	PILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	240	240	---	480
606.0300	RIPRAP HEAVY	CY	70	82	---	152
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	93	93	---	186
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	21	21	---	42
645.0120	GEOTEXTILE TYPE HR	SY	123	140	---	263
NON-BID ITEMS						
	NAME PLATE	EACH				1
	FILLER	SIZE				1/2" & 3/4"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-885			
DRAWN BY		ZHC	PLANS CK'D KRB
CROSS SECTION, QUANTITIES, NOTES, & DETAILS		SHEET 2	

SCALE =

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	10/22/2021	416,120.02	846,456.84
2	10/21/2021	416,167.94	846,472.36
BORINGS COMPLETED BY: ENGINEERING CONSULTING SERVICES (ECS)			
REPORT COMPLETED BY: ENGINEERING CONSULTING SERVICES (ECS)			
ALL COORDINAES REFERENCED TO DANE COUNTY COORDINATE SYSTEM			

BORINGS PERFORMED AND REPORT COMPLETED BY:
ENGINEERING CONSULTING SERVICES (ECS)
3695 N. 126TH STREET, UNIT C
BROOKFIELD, WI 53005

BORINGS WERE PERFORMED ON 10/21/2021 AND 10/22/2021.



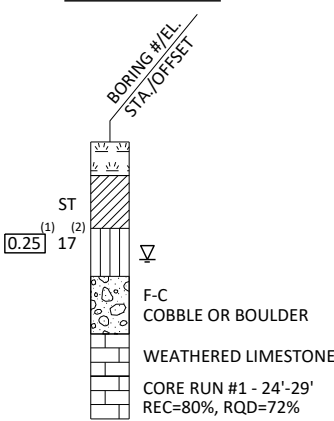
STATE PROJECT NUMBER

5742-00-72

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▼ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-885

DRAWN BY	ZHC	PLANS CK'D	KRB
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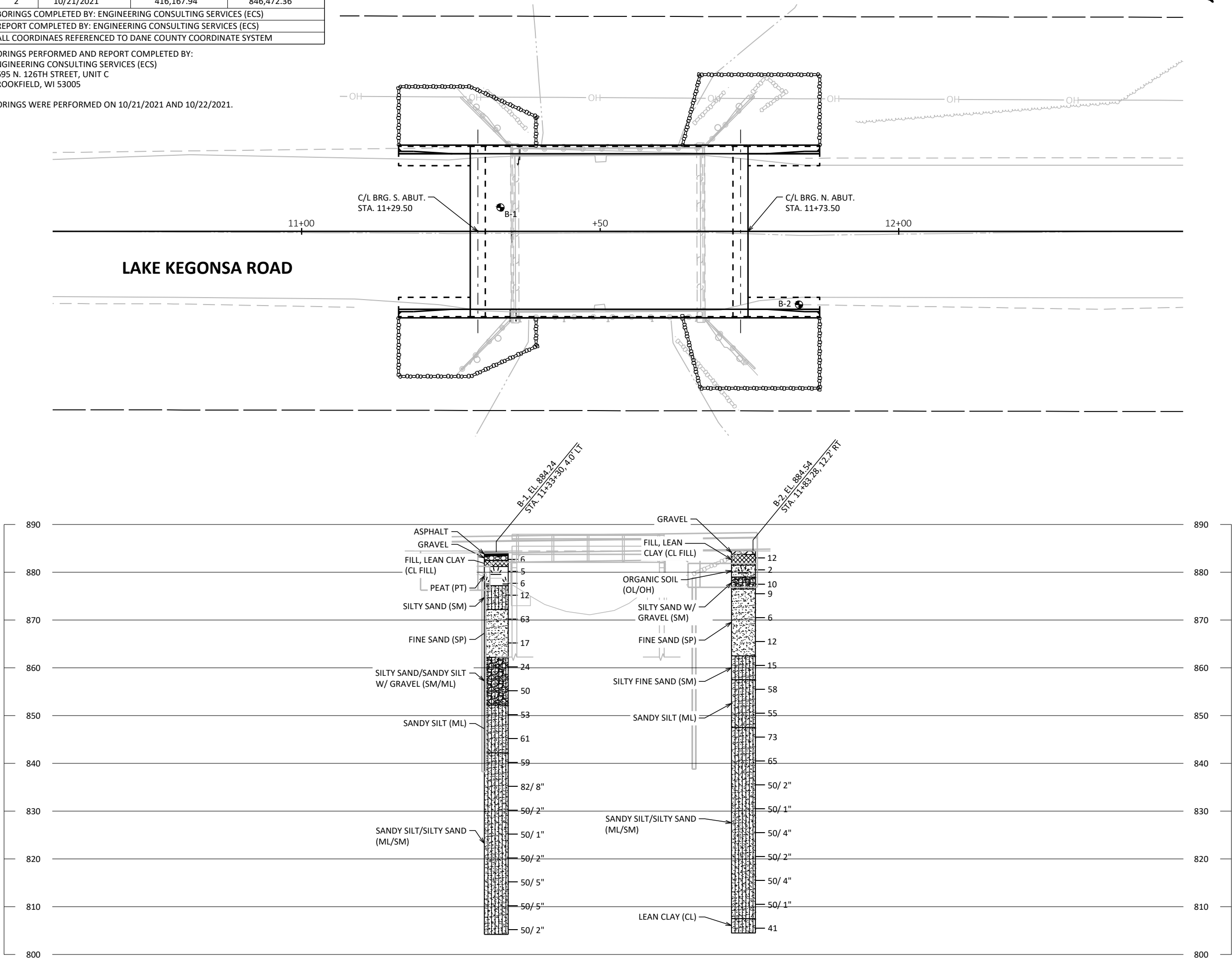
SUBSURFACE
EXPLORATION

SHEET 3

SCALE =

8

8



NOTES

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL 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 FINISHED ROADWAY SURFACE AT INSIDE FACE.

ADJUST A501 BARS INTERFERING WITH PILES.

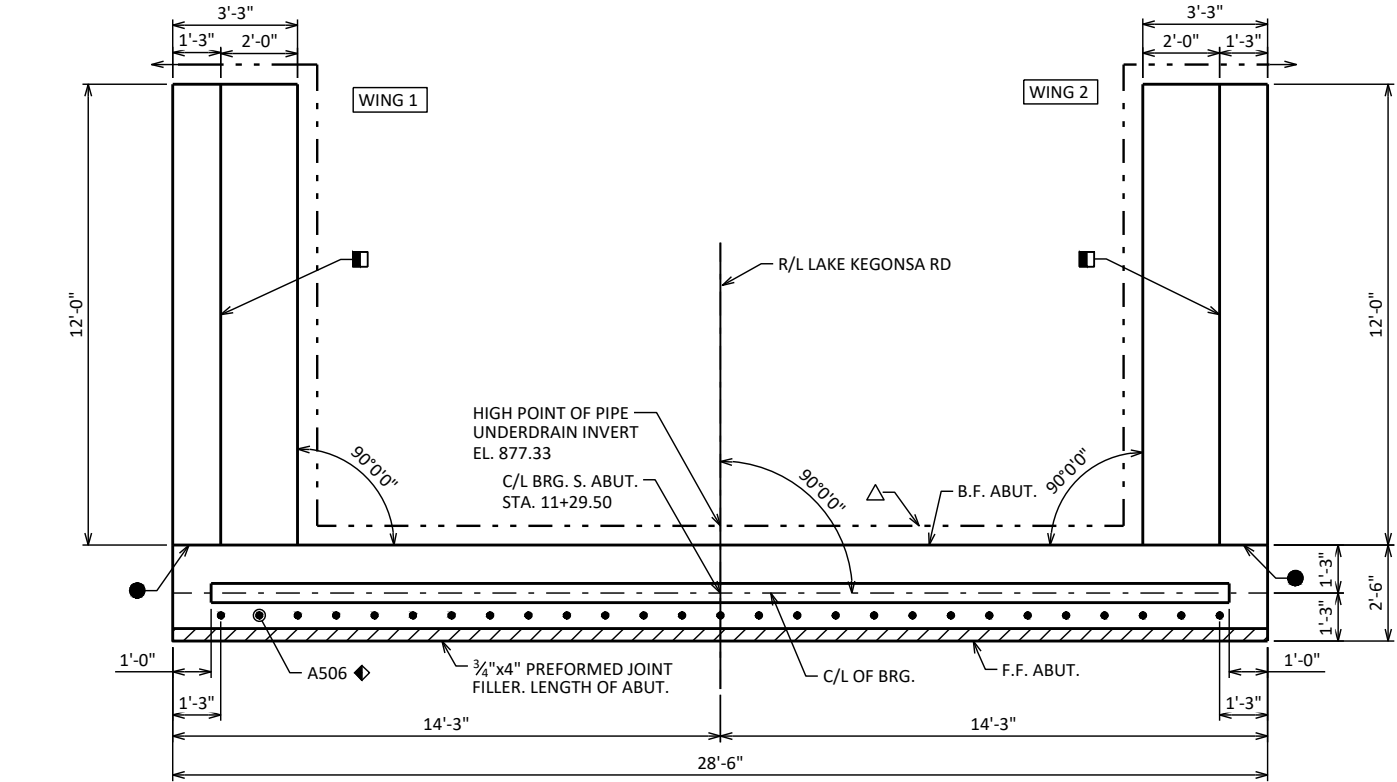
SEE THIS SHEET FOR PILE SPLICE DETAILS.

SEE SHEET 5 FOR REINFORCING DETAILS.

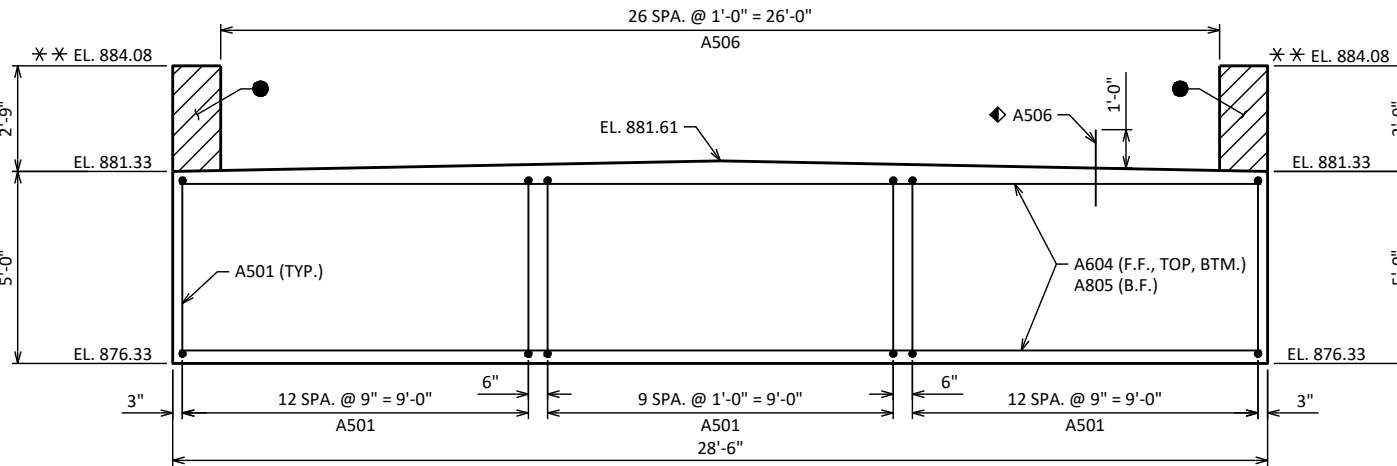
SOUTH ABUTMENT TO BE SUPPORTED ON PILING CIP 10.75 X 0.25-INCH WITH A REQUIRED DRIVING RESISTANCE OF 125 TONS PER PILE. ESTIMATED 40 FEET LONG EACH.

LEGEND

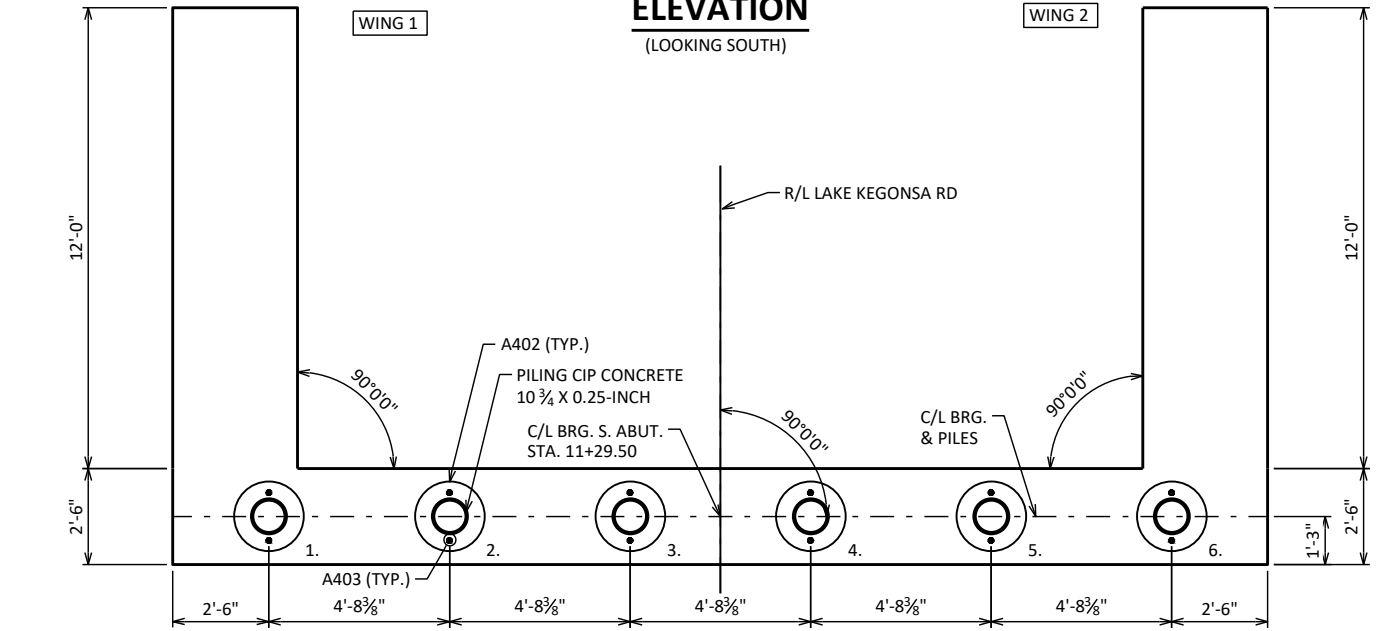
- 1/2" FILLER, EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- * * ELEVATION GIVEN AT B.F. ABUTMENT.
- △ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 877.33 AT R/L. ATTACH RODENT SHIELD AT ENDS OF PIPE. SEE DETAIL ON "NORTH ABUTMENT" SHEET.
- ◆ A506 BARS AT 1'-0" O.C. THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.



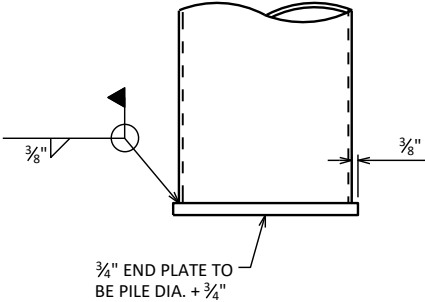
PLAN



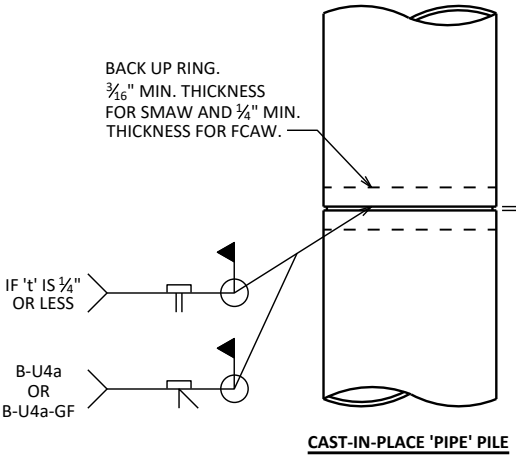
ELEVATION
(LOOKING SOUTH)



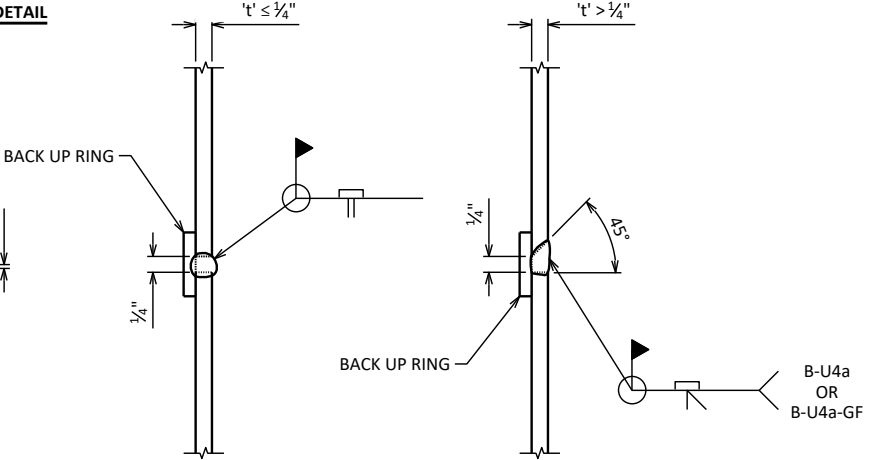
PILE PLAN



END PLATE DETAIL



CAST-IN-PLACE 'PIPE' PILE



C.I.P. WELD DETAIL

CIP PILE DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-885			
DRAWN BY ZHC		PLANS CK'D KRB	
SOUTH ABUTMENT			SHEET 4

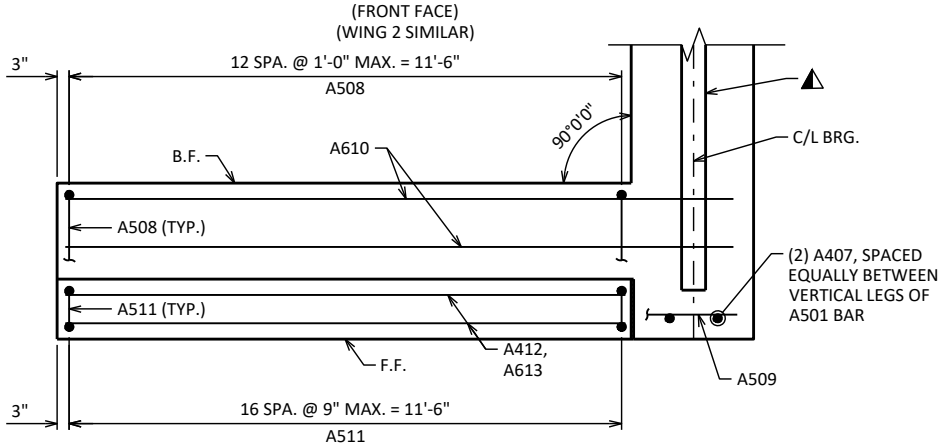
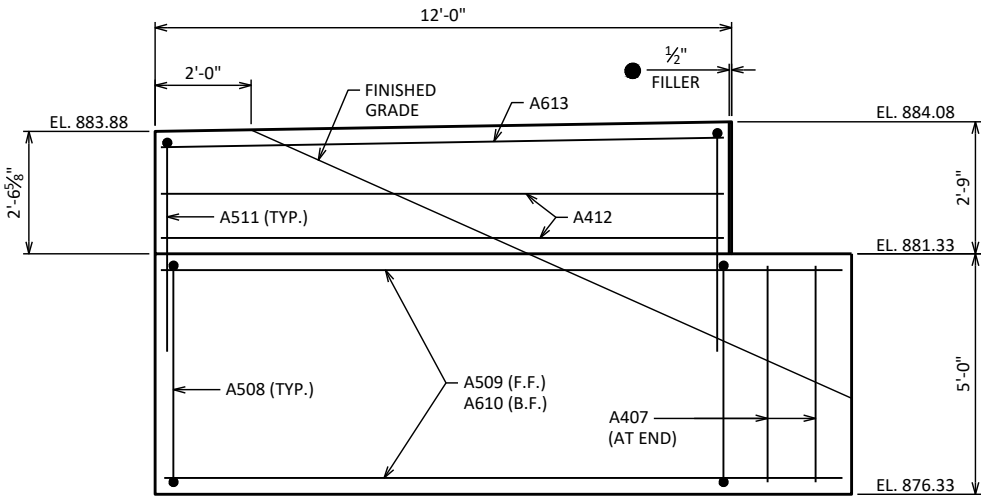
SCALE =

SOUTH ABUTMENT
BILL OF BARS

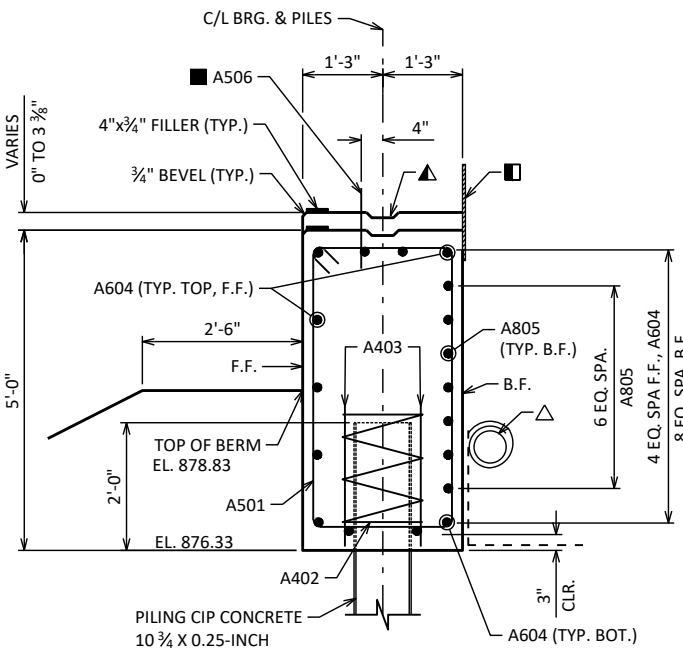
UNCOATED: 1,700 LBS
COATED: 1,510 LBS

BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
A501	36	14'-0"	X		LOWER BODY - VERT.
A402	6	28'-0"	X		LOWER BODY - PILES - SPIRAL
A403	12	2'-3"			LOWER BODY - PILES - VERT.
A604	11	28'-2"			LOWER BODY - TOP, BOT., & F.F. - HORIZ.
A805	7	30'-5"	X		LOWER BODY - B.F. - HORIZ.
A506	27	2'-0"		X	LOWER BODY - VERT. - TOP
A407	4	4'-7"			LOWER BODY - VERT. - ENDS
A508	26	15'-8"	X	X	LOWER WING - VERT. - WINGS 1 & 2
A509	12	14'-2"		X	LOWER WING - F.F. - HORIZ. - WINGS 1 & 2
A610	16	14'-2"		X	LOWER WING - B.F., TOP - HORIZ. - WINGS 1 & 2
A511	34	9'-10"	X	X	UPPER WING - VERT. - WINGS 1 & 2
A412	12	11'-7"		X	UPPER WING - F.F., B.F. - HORIZ. - WINGS 1 & 2
A613	4	11'-7"		X	UPPER WING - TOP - HORIZ. - WINGS 1 & 2

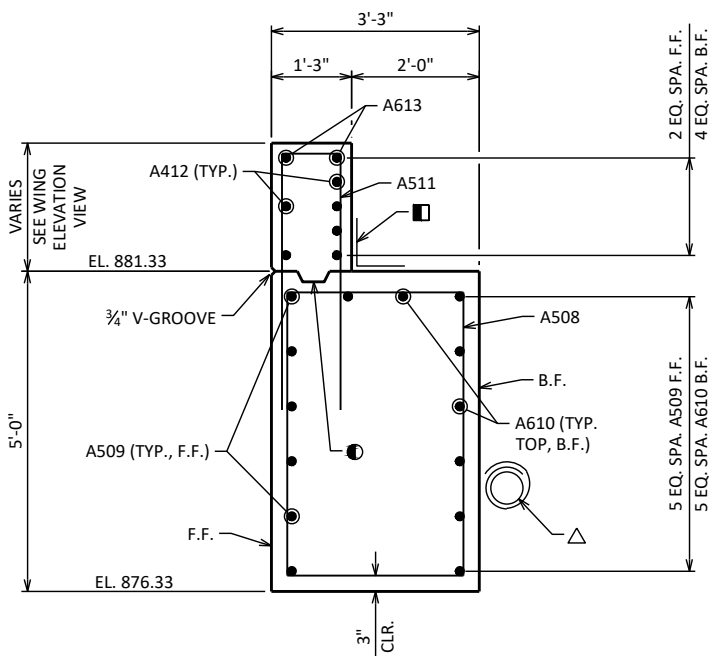
WING 1 ELEVATION



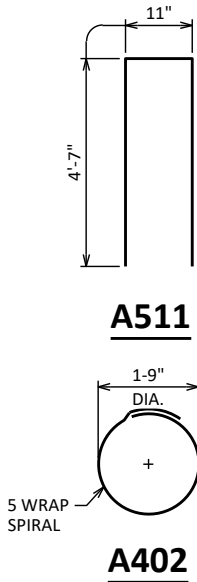
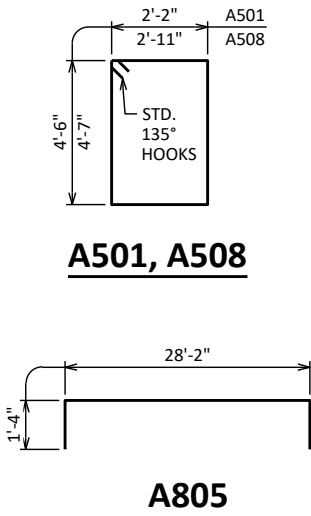
WING 1 PLAN



TYPICAL ABUTMENT SECTION



TYPICAL WING SECTION



LEGEND

- OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 1/2" FILLER TO EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL 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 FINISHED ROADWAY SURFACE AT INNER FACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".
- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 877.33 AT R/L. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN PER DETAIL ON "NORTH ABUTMENT" SHEET.
- THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-885			
DRAWN BY ZHC		PLANS CK'D KRB	
SOUTH ABUTMENT DETAILS		SHEET 5	

SCALE =

NOTES

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER 1" DEEP AND HOLD ⅝" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW FINISHED ROADWAY SURFACE AT INSIDE FACE.

ADJUST B501 BARS INTERFERING WITH PILES.

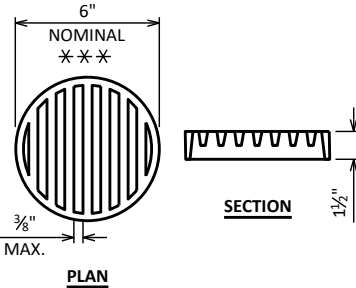
SEE SHEET 4 FOR PILE SPLICE DETAILS.

SEE SHEET 7 FOR REINFORCING DETAILS.

NORTH ABUTMENT TO BE SUPPORTED ON PILING CIP 10.75 X 0.25-INCH WITH A REQUIRED DRIVING RESISTANCE OF 125 TONS PER PILE. ESTIMATED 40 FEET LONG EACH.

LEGEND

- ½" FILLER, EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- * * ELEVATION GIVEN AT B.F. ABUTMENT.
- △ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 878.05 AT R/L. ATTACH RODENT SHIELD AT ENDS OF PIPE. SEE DETAIL THIS SHEET.
- ◆ B506 BARS AT 1'-0" O.C. THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

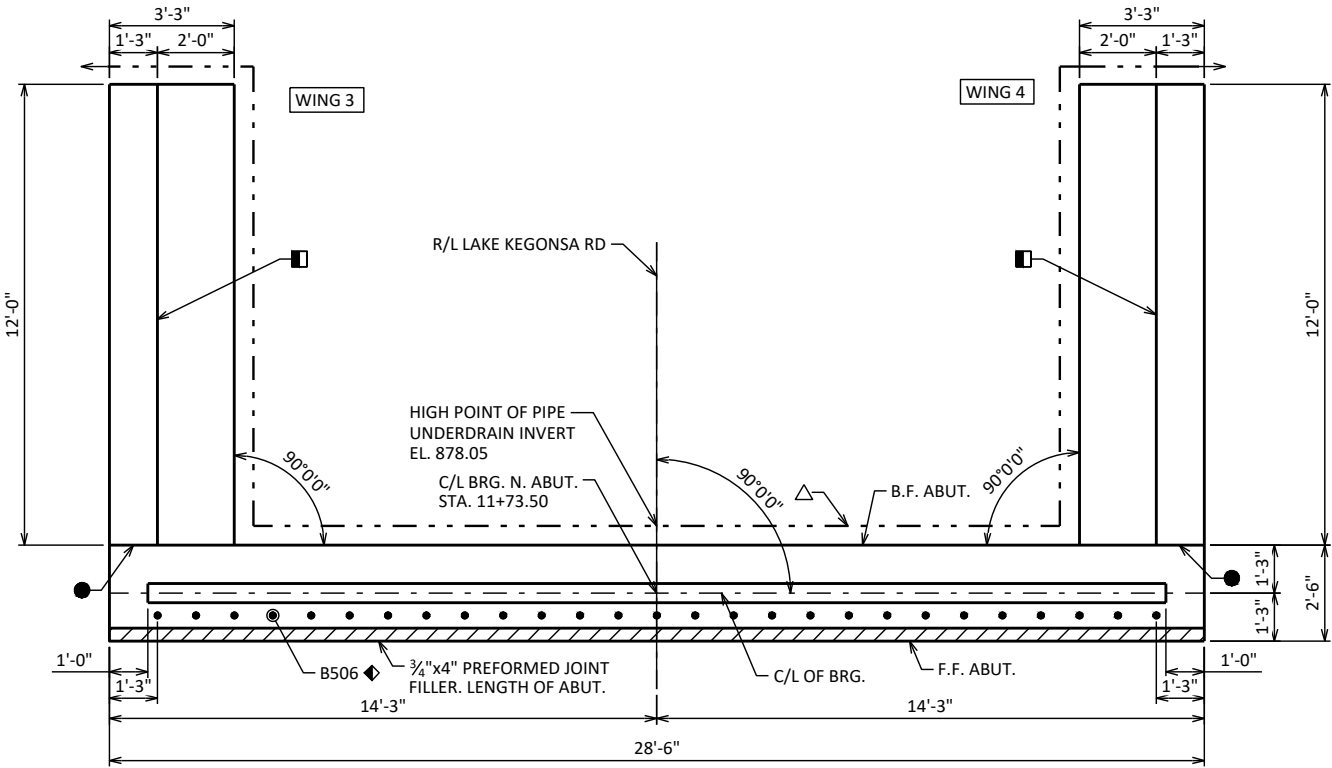


RODENT SHIELD DETAIL

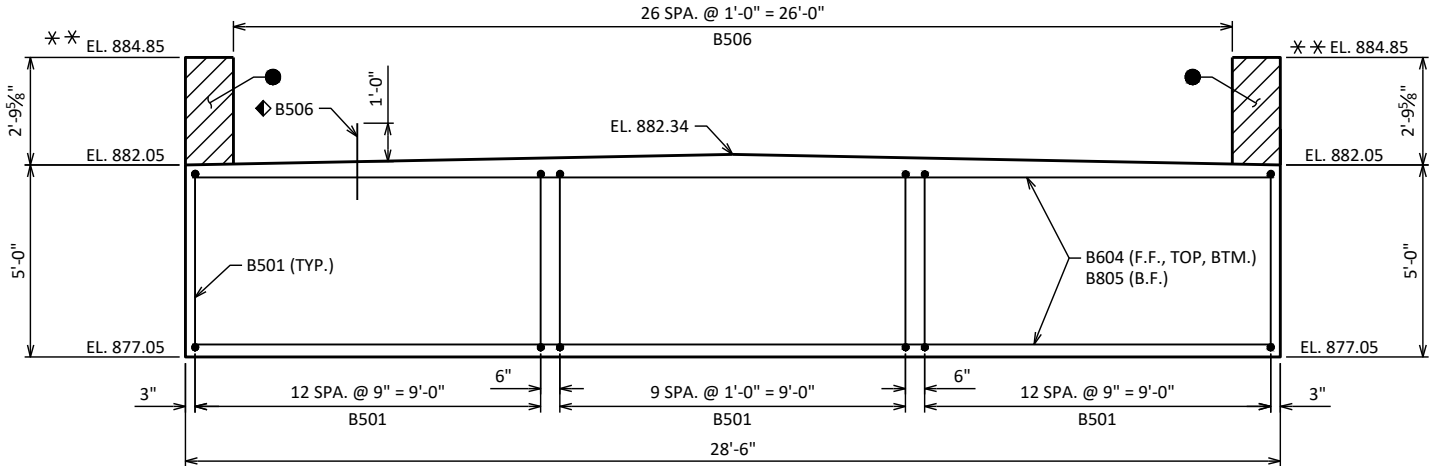
* * * DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

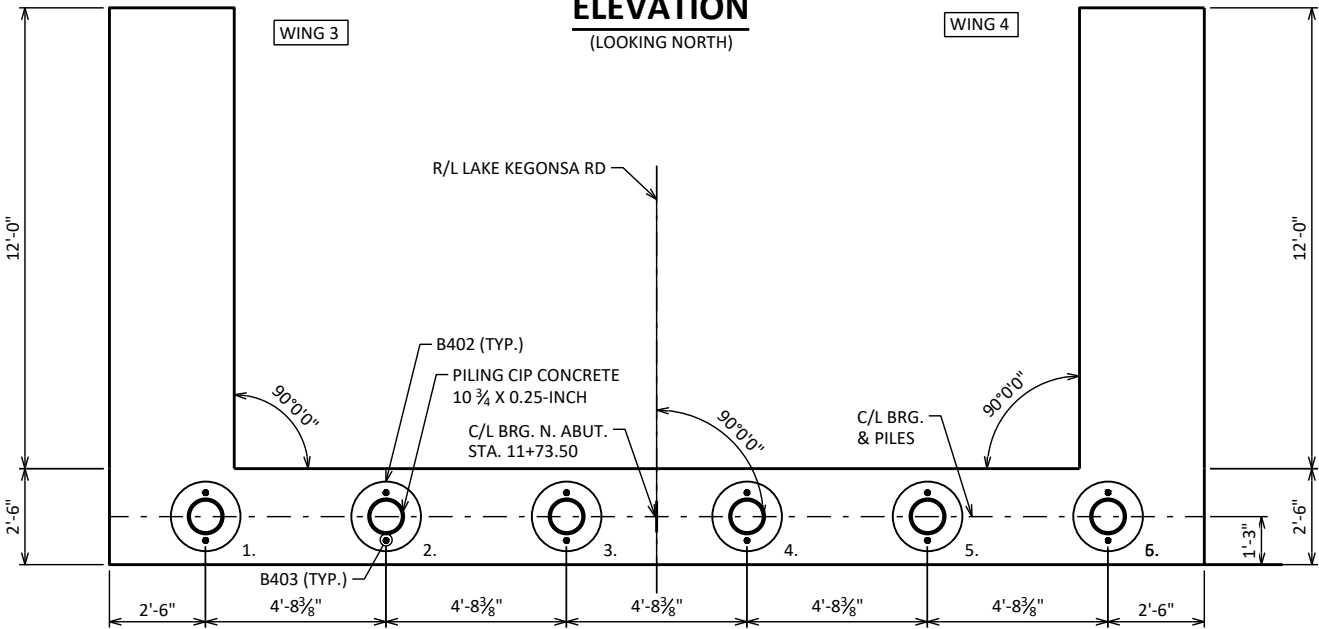
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH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



PLAN



ELEVATION
(LOOKING NORTH)



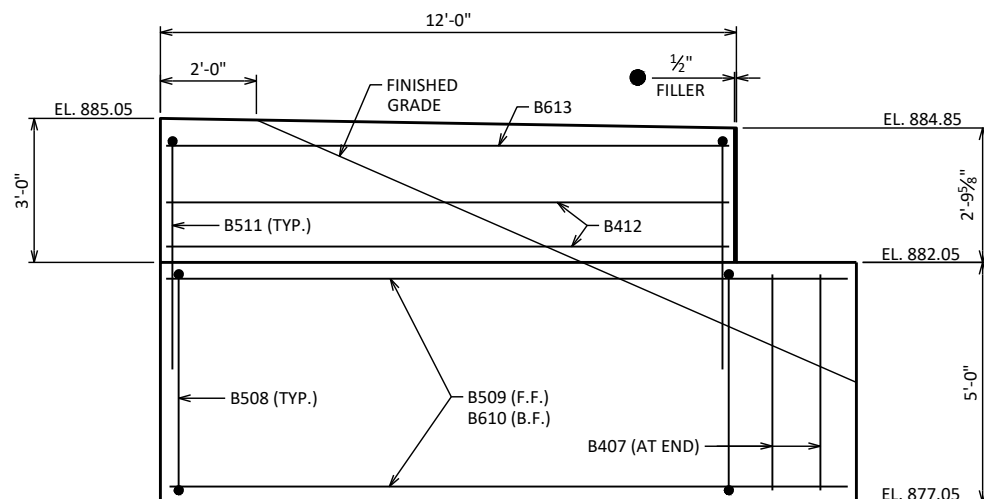
PILE PLAN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-885			
DRAWN BY ZHC		PLANS CK'D KRB	
NORTH ABUTMENT		SHEET 6	

SCALE =

UNCOATED: 1,700 LBS
COATED: 1,540 LBS

BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
B501	36	14'-0"	X		LOWER BODY - VERT.
B402	6	28'-0"	X		LOWER BODY - PILES - SPIRAL
B403	12	2'-3"			LOWER BODY - PILES - VERT.
B604	11	28'-2"			LOWER BODY - TOP, BOT., & F.F. - HORIZ.
B805	7	30'-5"	X		LOWER BODY - B.F. - HORIZ.
B506	27	2'-0"		X	LOWER BODY - VERT. - TOP
B407	4	4'-7"			LOWER BODY - VERT. - ENDS
B508	26	15'-8"	X	X	LOWER WING - VERT. - WINGS 3 & 4
B509	12	14'-2"		X	LOWER WING - F.F. - HORIZ. - WINGS 3 & 4
B610	16	14'-2"		X	LOWER WING - B.F., TOP - HORIZ. - WINGS 3 & 4
B511	34	10'-4"	X	X	UPPER WING - VERT. - WINGS 3 & 4
B412	14	11'-7"		X	UPPER WING - F.F., B.F. - HORIZ. - WINGS 3 & 4
B613	4	11'-7"		X	UPPER WING - TOP - HORIZ. - WINGS 3 & 4



WING 3 ELEVATION

(WING 4 SIMILAR)

3" 12 SPA. @ 1'-0" MAX. = 11'-6" B508

B.F. B610 90°/0°

B508 (TYP.)

C/L BRG.

(2) B407 SPACED EQUALLY BETWEEN VERTICAL LEGS OF B501 BAR

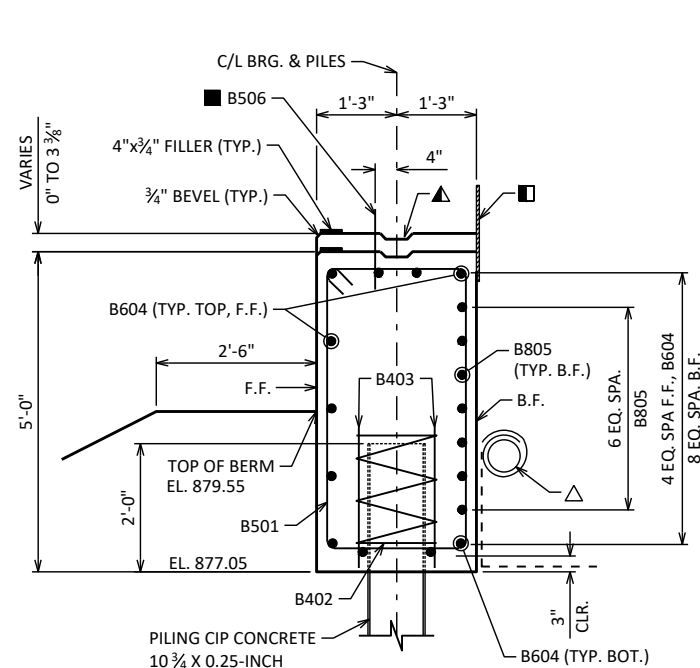
B511 (TYP.) B412, B613

F.F. B509

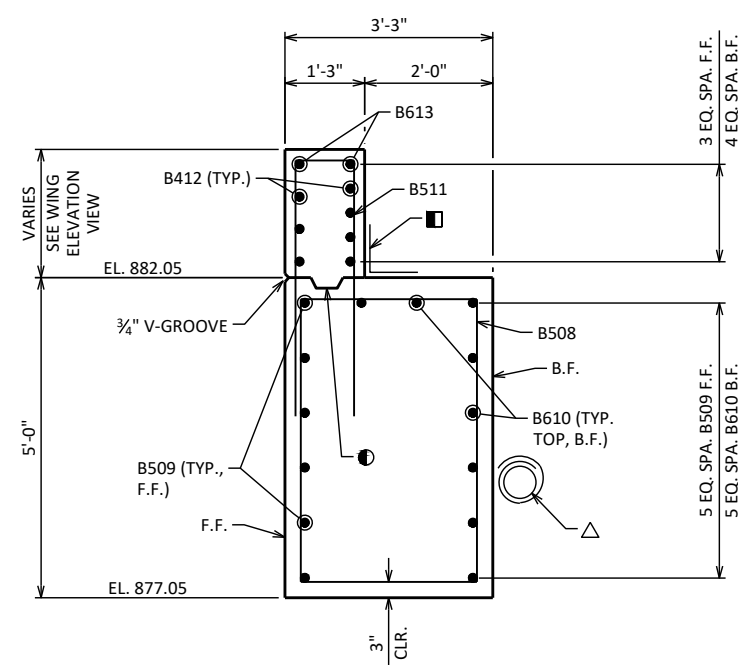
3" 16 SPA. @ 9" MAX. = 11'-6" B511

WING 3 PLAN

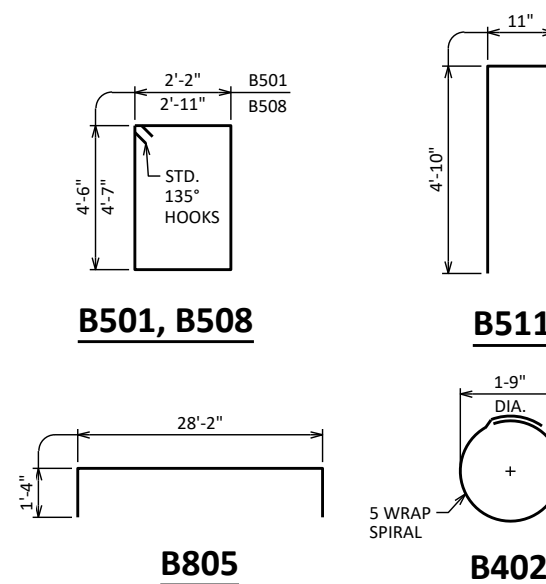
(WING 4 SIMILAR)



TYPICAL ABUTMENT SECTION



TYPICAL WING SECTION



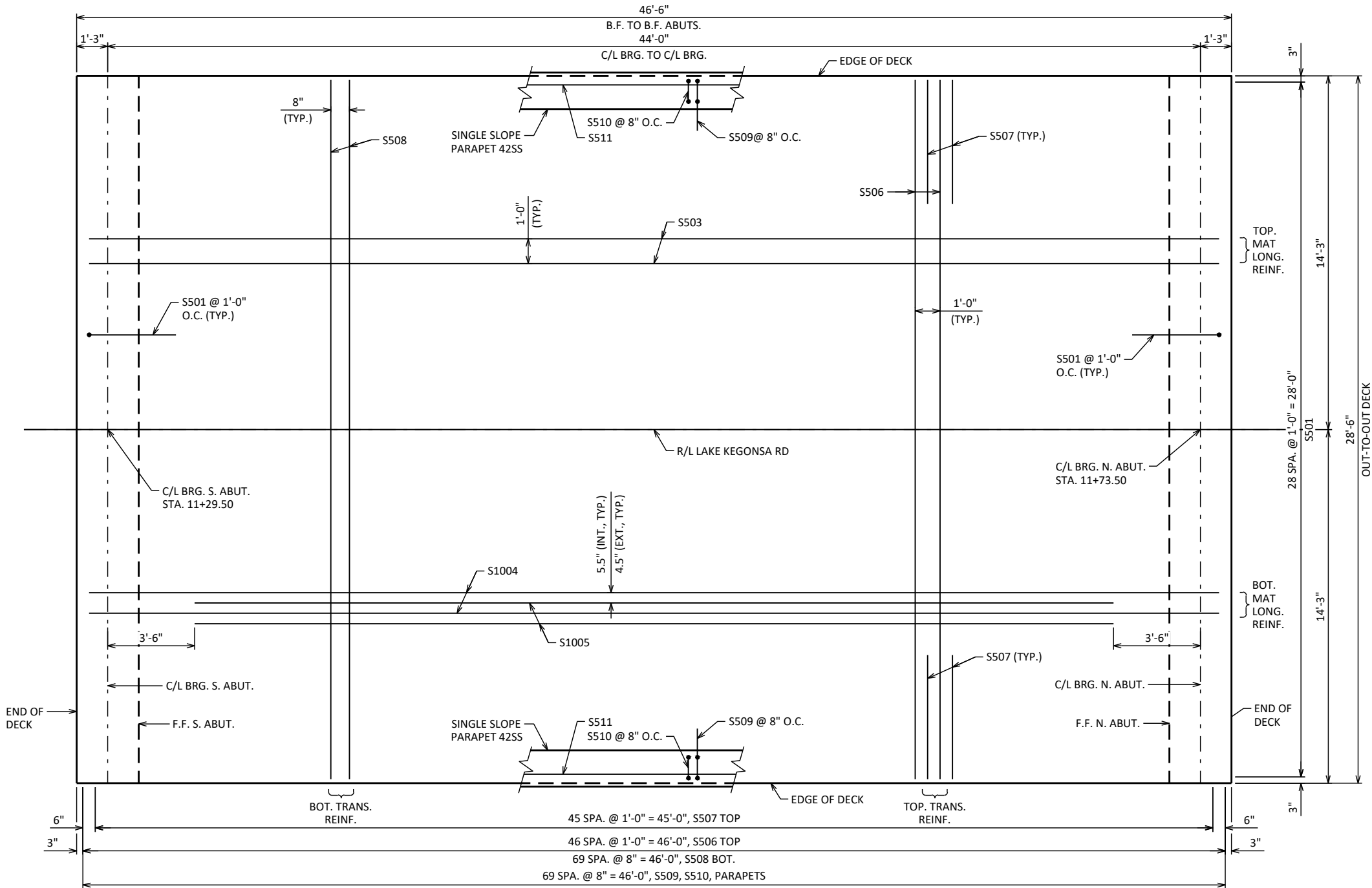
- **OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY WITH MEMBRANE ON BACKFACE.**
- **½" FILLER TO EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ½" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW FINISHED ROADWAY SURFACE AT INNER FACE.**
- **18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.**
- ▲ **KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".**
- △ **PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 878.05 AT R/L. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN PER DETAIL ON "NORTH ABUTMENT" SHEET.**
- **THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.**

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-885			
DRAWN BY		ZHC	PLANS CK'D KRB
NORTH ABUTMENT DETAILS		SHEET 7	

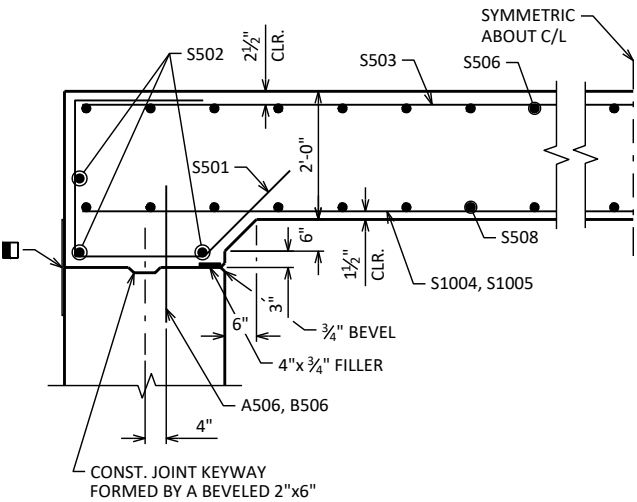
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LEGEND

18" RUBBERIZED MEMBRANE WATERPROOFING.



PLAN



HALF LONGITUDINAL SECTION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-885			
DRAWN BY ZHC		PLANS CK'D KRB	
SUPERSTRUCTURE			SHEET 8

SCALE =

NOTES

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 (+).

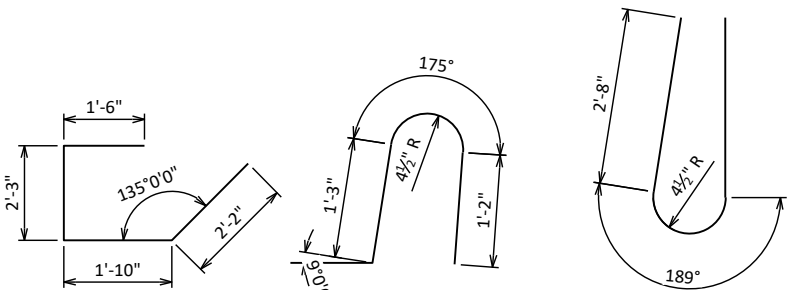
SURVEY TOP OF SLAB ELEVATIONS

	S. ABUT	5/10 PT.	N. ABUT.
WEST GUTTER LINE			
CROWN ON R/L			
EAST GUTTER LINE			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF ABUTMENTS AND AT 5/10 PT. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND R/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

CROSS SECTION THRU SUPERSTRUCTURE

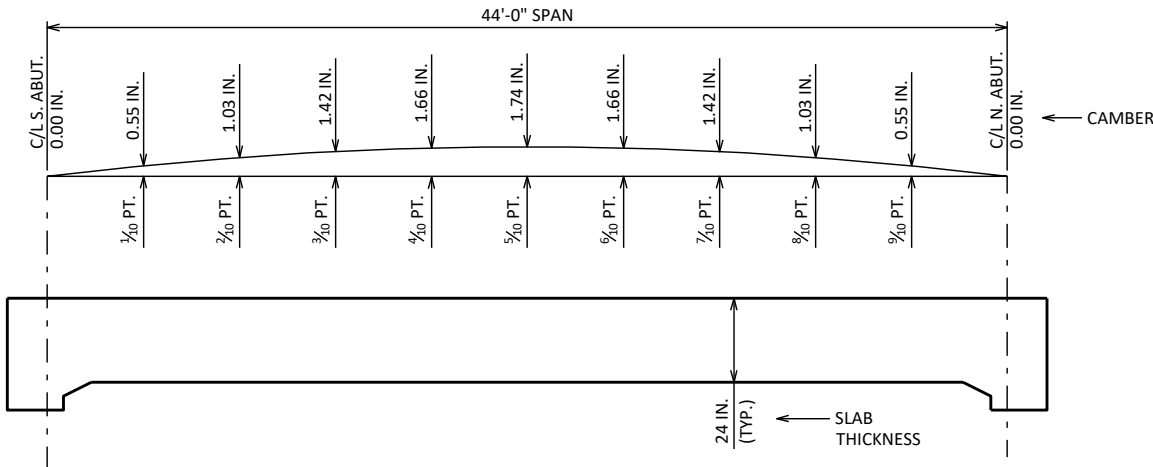
(LOOKING NORTH)



S501

S509

S510



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.

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

MINUS 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 DECK ELEVATIONS

LOCATION	WEST EDGE OF DECK		C/L BRIDGE		EAST EDGE OF DECK	
	14.25' LT		-		14.25' RT	
	STATION	ELEV.	STATION	ELEV.	STATION	ELEV.
C/L S. ABUT.	11+29.50	884.10	11+29.50	884.36	11+29.50	884.10
0.1L POINT	11+33.90	884.17	11+33.90	884.43	11+33.90	884.17
0.2L POINT	11+38.30	884.25	11+38.30	884.51	11+38.30	884.25
0.3L POINT	11+42.70	884.32	11+42.70	884.58	11+42.70	884.32
0.4L POINT	11+47.10	884.39	11+47.10	884.65	11+47.10	884.39
0.5L POINT	11+51.50	884.46	11+51.50	884.72	11+51.50	884.46
0.6L POINT	11+55.90	884.54	11+55.90	884.80	11+55.90	884.54
0.7L POINT	11+60.30	884.61	11+60.30	884.87	11+60.30	884.61
0.8L POINT	11+64.70	884.68	11+64.70	884.94	11+64.70	884.68
0.9L POINT	11+69.10	884.75	11+69.10	885.01	11+69.10	884.75
C/L N. ABUT.	11+73.50	884.83	11+73.50	885.09	11+73.50	884.83

ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS.

DECK ELEVATIONS AT INSIDE FACE OF PARAPETS ARE THE SAME AS AT THE EDGE OF DECK (DECK LEVEL UNDER PARAPET, SEE "SINGLE SLOPE PARAPET 42SS" SHEET FOR DETAIL).

SUPERSTRUCTURE

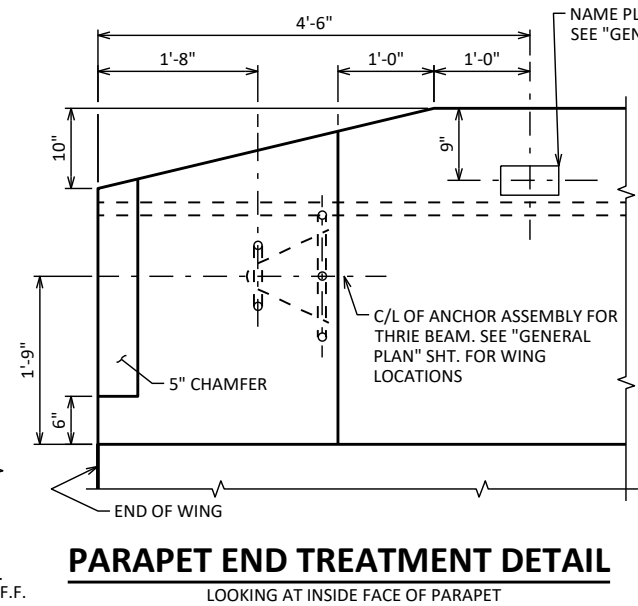
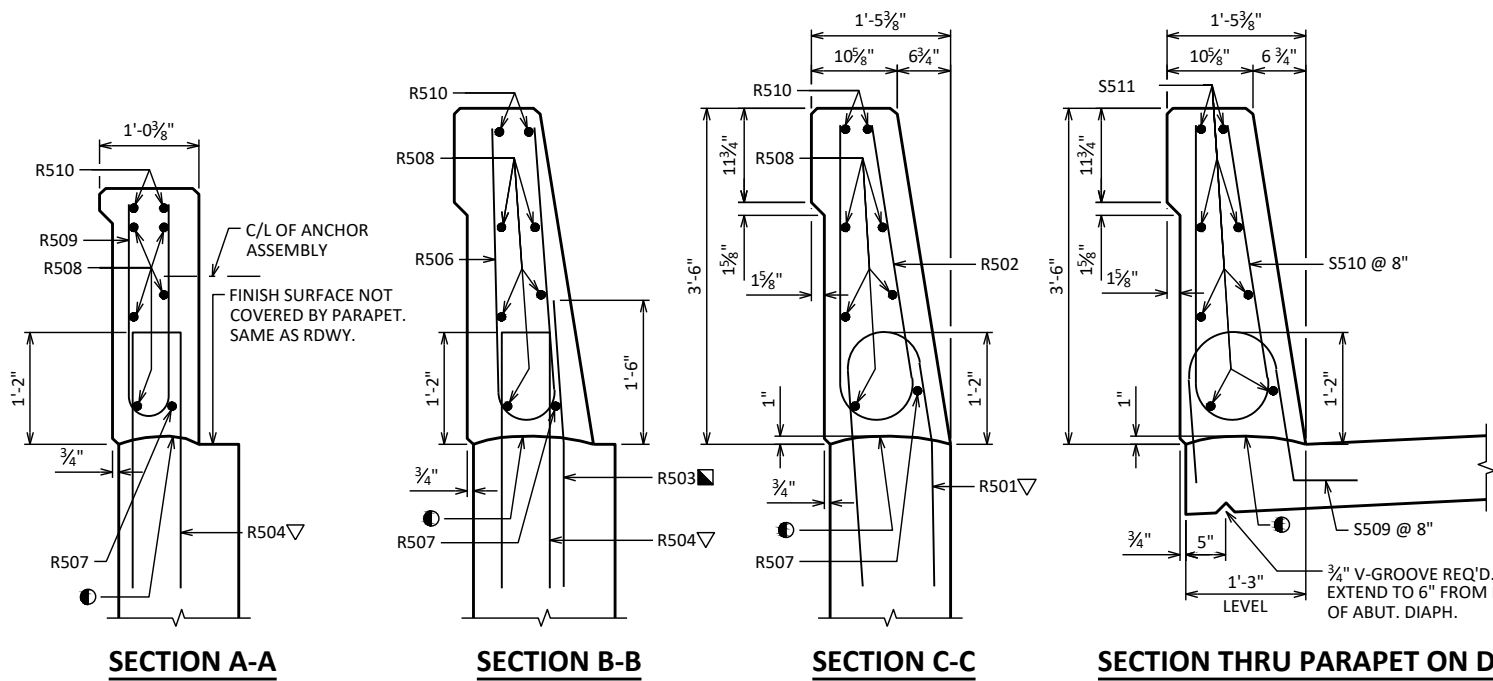
BILL OF BARS

BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
S501	58	7'-6"	X	X	SLAB AT ABUT. - VERT.
S502	6	28'-2"		X	SLAB AT ABUT. - HORIZ.
S503	29	46'-2"		X	SLAB - LONG. - TOP
S1004	34	46'-2"		X	SLAB - LONG. - BOTTOM
S1005	33	37'-0"		X	SLAB - LONG. - BOTTOM
S506	47	28'-2"		X	SLAB - TRANSVERSE - TOP
S507	92	5'-0"		X	SLAB - TRANSVERSE - TOP - EDGES
S508	70	28'-2"		X	SLAB - TRANSVERSE - BOTTOM
S509	140	4'-5"	X	X	PARAPET - VERT.
S510	140	6'-8"	X	X	PARAPET - VERT.
S511	16	46'-2"		X	PARAPET - HORIZ.

COATED: 20,340 LBS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-885			
	DRAWN BY	ZHC	PLANS CK'D KRB
SUPERSTRUCTURE DETAILS		SHEET 9	

SCALE =



**SINGLE SLOPE
PARAPET 42SS
BILL OF BARS**

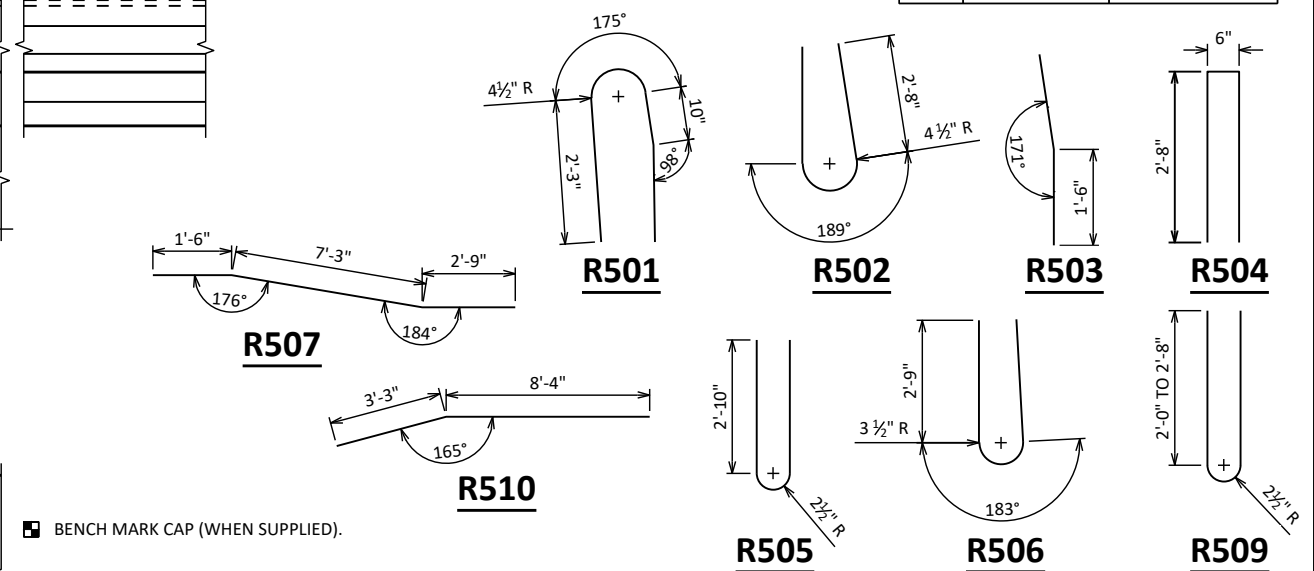
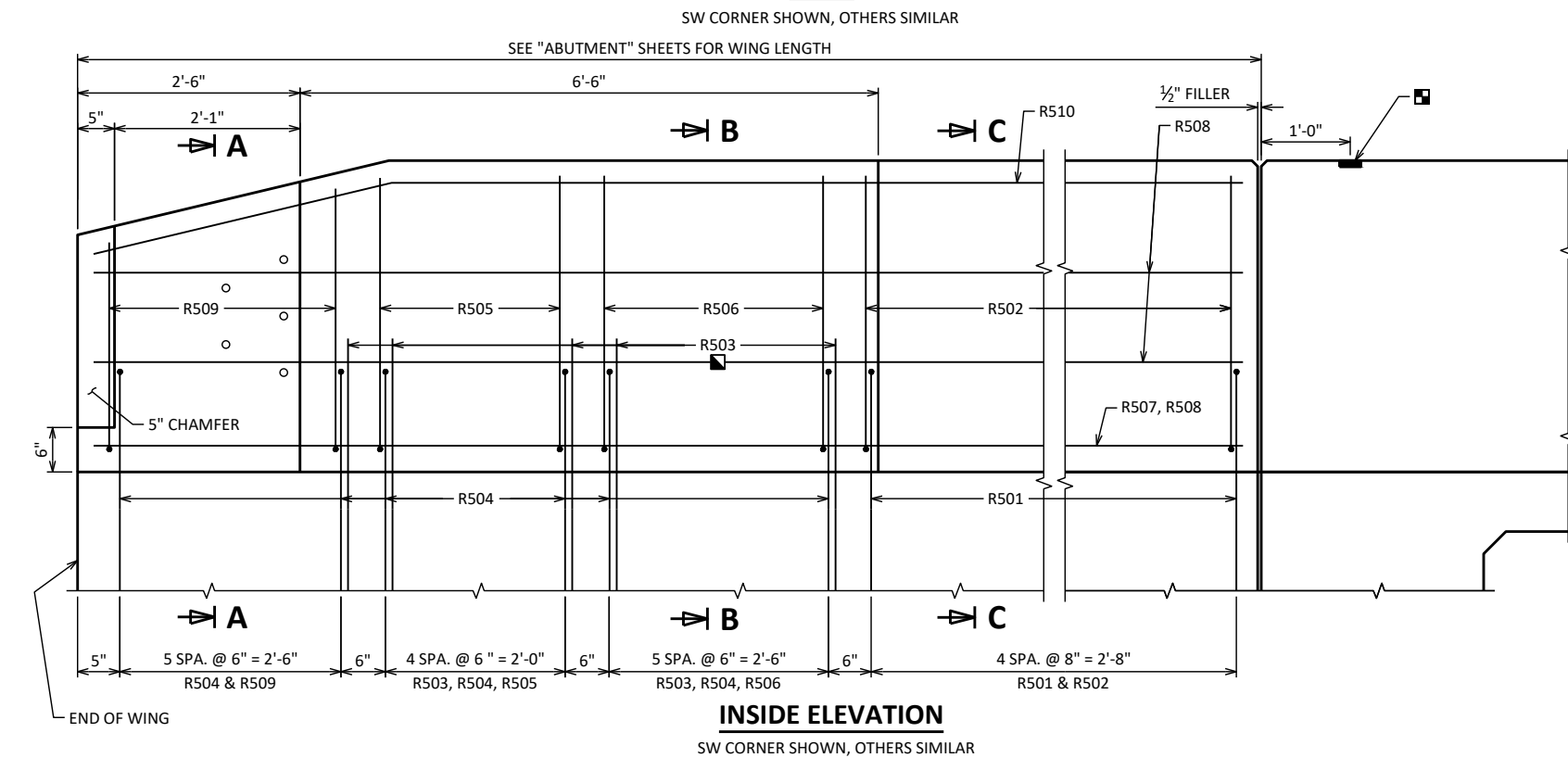
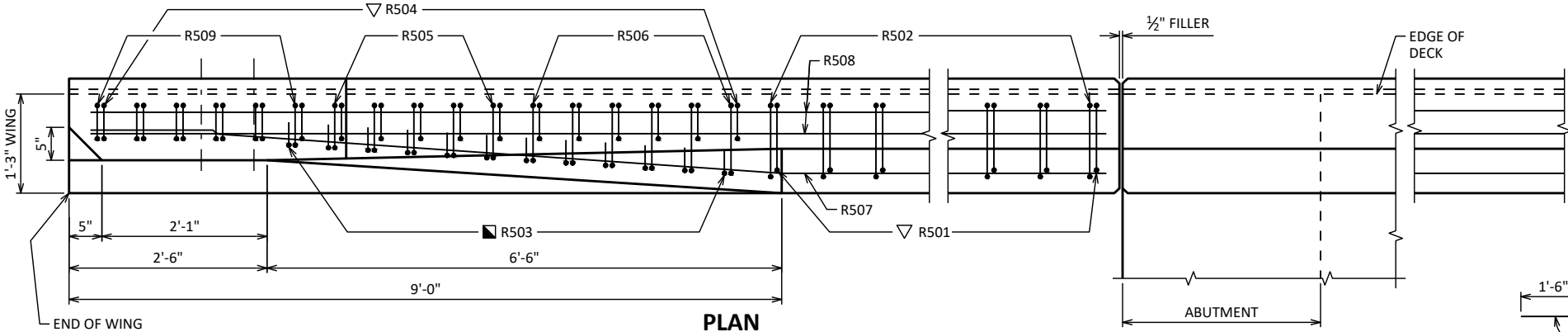
MARK	NO. REQ'D		LENGTH	BENT	COAT	LOCATION
	S. ABUT.	N. ABUT.				
R501	10	10	5'-10"	X	X	PARAPET - VERT.
R502	10	10	6'-8"	X	X	PARAPET - VERT.
R503	24	24	3'-0"	X	X	PARAPET - VERT.
R504	34	34	5'-7"	X	X	PARAPET - VERT.
R505	10	10	6'-5"	X	X	PARAPET - VERT.
R506	12	12	6'-6"	X	X	PARAPET - VERT.
R507	2	2	11'-6"	X	X	PARAPET - HORIZ.
R508	10	10	11'-7"		X	PARAPET - HORIZ.
R509	12	12	5'-5"	X	X	PARAPET - VERT.
R510	4	4	11'-7"	X	X	PARAPET - HORIZ.

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

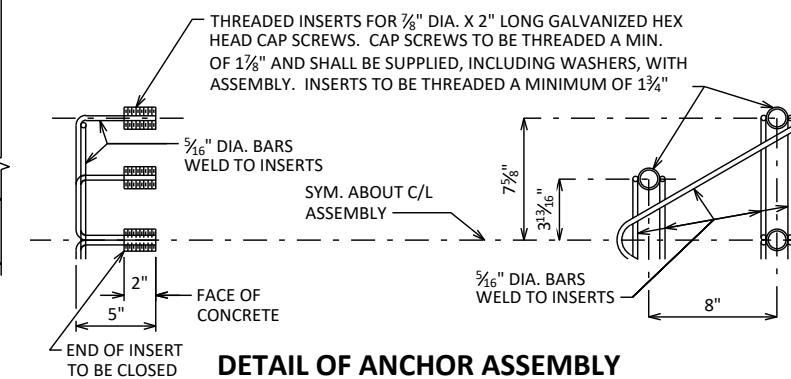
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"



■ BENCH MARK CAP (WHEN SUPPLIED).



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

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

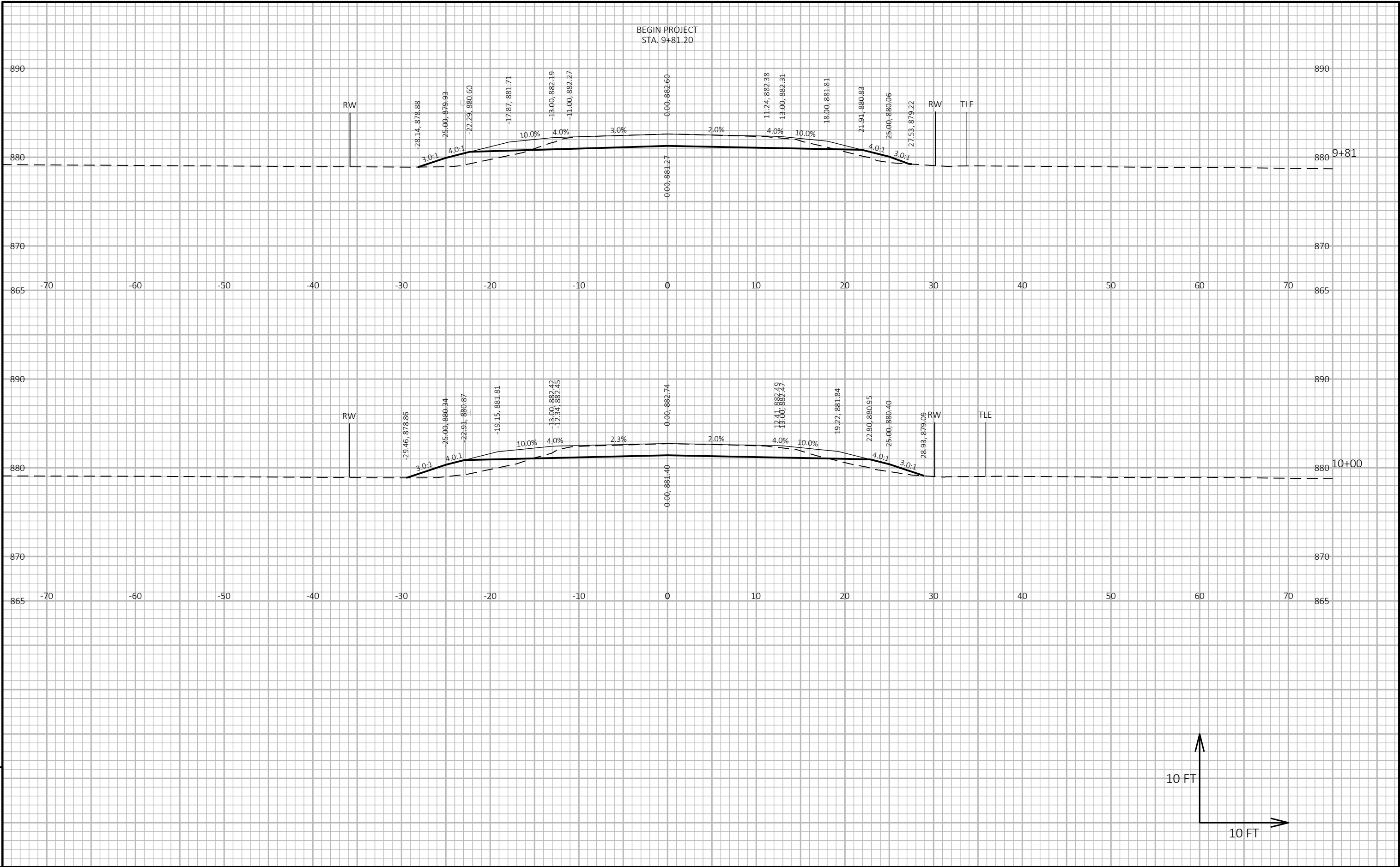
- CONST. JOINT - STRIKE OFF AS SHOWN
- R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

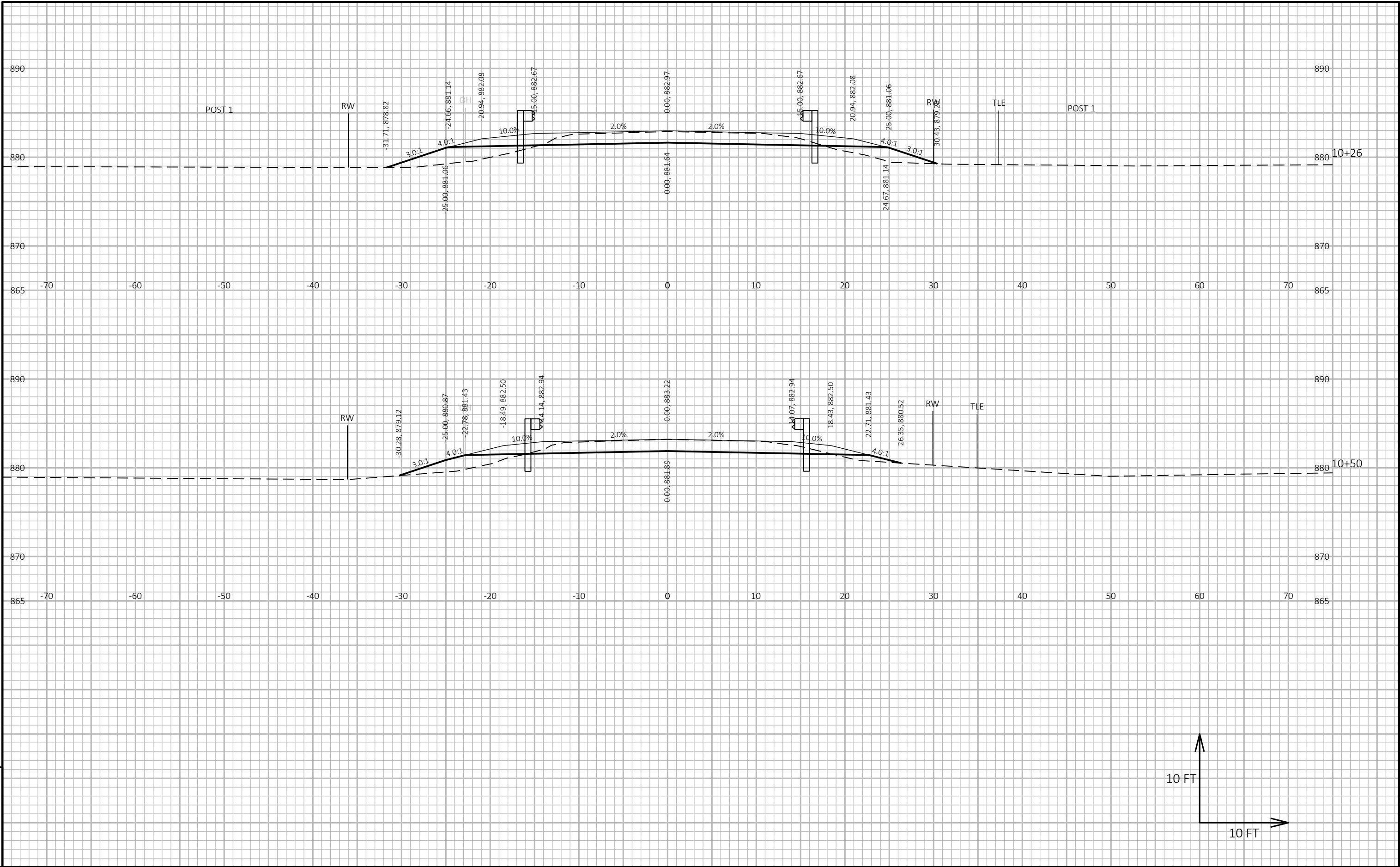
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-13-885			
DRAWN BY		ZHC	PLANS CK'D KRB
SINGLE SLOPE PARAPET 42SS		SHEET 10	

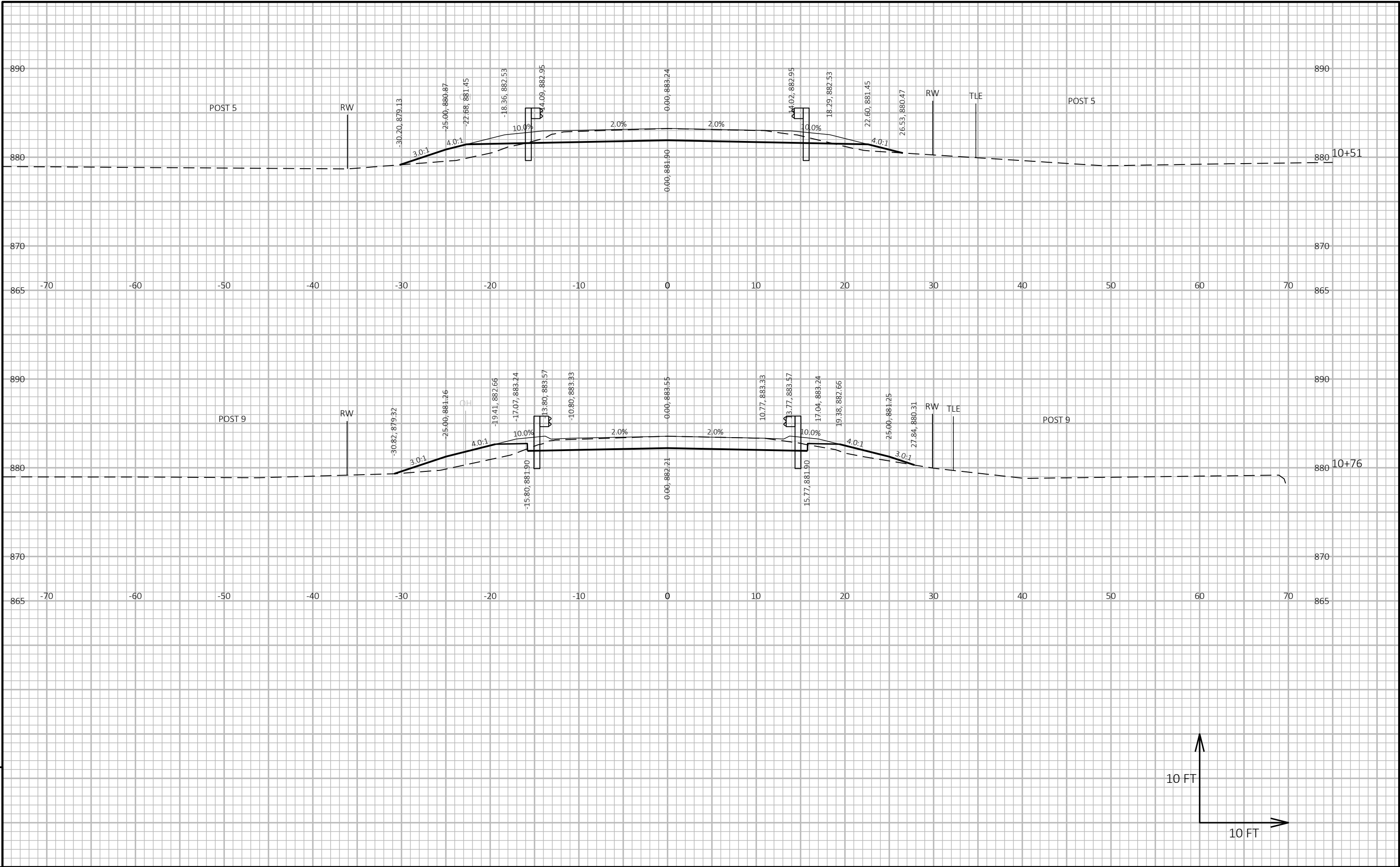
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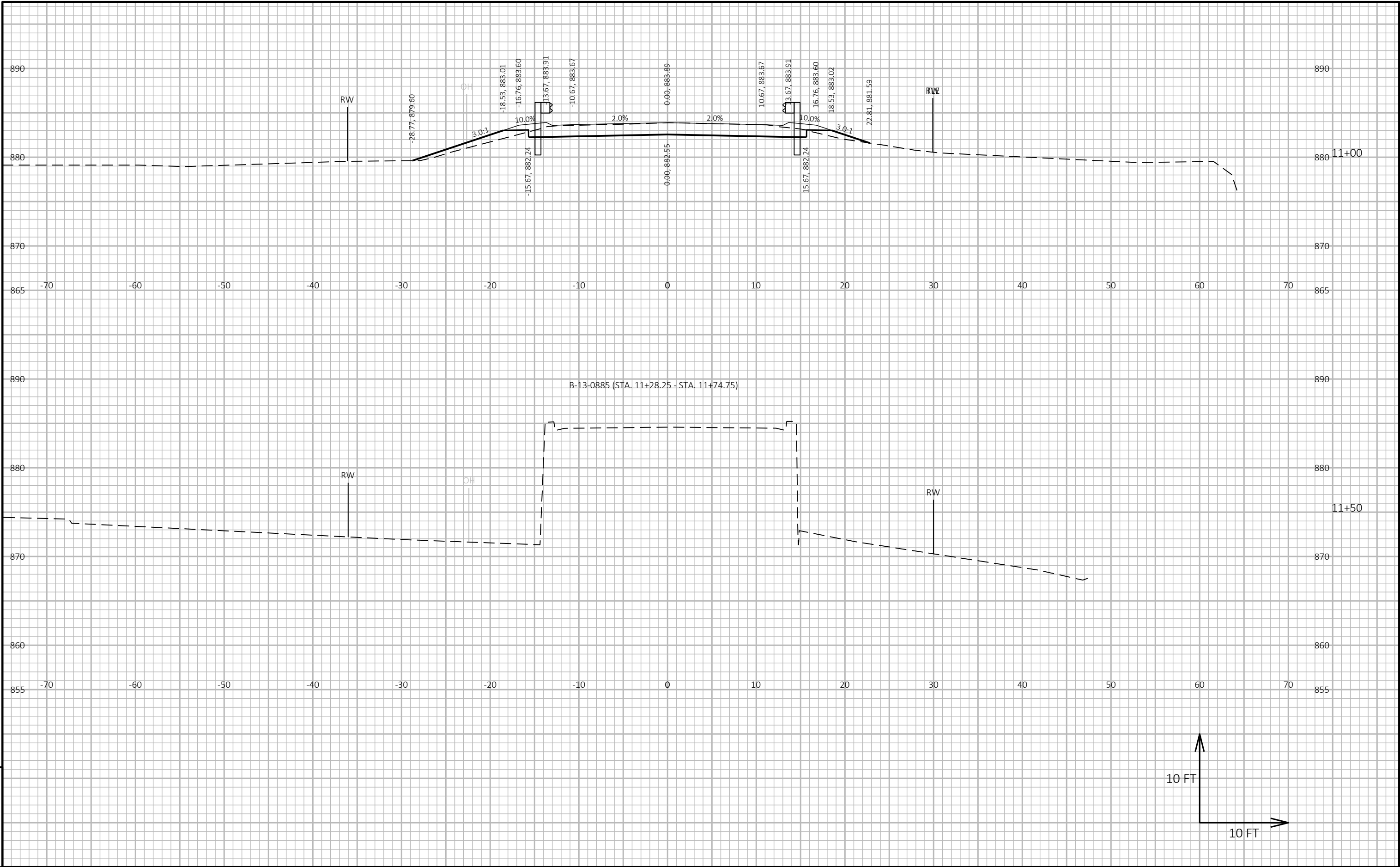
LAKE KEGONSA ROAD		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		MASS ORDINATE NOTE 3
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 2	EBS (5% OF CUT)	CUT NOTE 1	FILL NOTE 2	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	
9+02	---	10.7	1.5	0.5	0	0	0	0	0	0
9+50	48	10.6	6.4	0.5	19	7	1	19	9	10
9+81	31	38.2	13.9	1.9	28	12	1	47	23	24
10+00	19	36.4	19.6	1.8	26	12	1	73	38	35
10+26	26	34.1	28.9	1.7	34	24	2	108	68	40
10+50	24	37.4	15.4	1.9	31	19	2	139	92	47
10+51	1	37.5	15.3	1.9	2	1	0	141	93	48
10+76	25	38.1	24.2	1.9	35	18	2	176	116	60
11+00	24	38.9	11.0	1.9	34	16	2	209	135	75
11+28	28	42.8	0.0	2.1	43	6	2	252	142	110
11+75	---	24.5	0.0	1.2	0	0	0	252	142	110
12+00	25	26.1	4.0	1.3	24	2	1	276	144	131
12+27	27	34.6	9.8	1.7	30	7	2	306	153	153
12+50	23	46.5	25.0	2.3	35	15	2	341	172	169
12+52	2	47.4	25.6	2.4	3	2	0	344	174	170
12+77	25	57.9	32.4	2.9	49	27	2	392	207	185
13+00	23	54.6	10.8	2.7	48	19	2	441	231	210
13+17	17	52.6	4.1	2.6	35	5	2	475	237	239
13+50	33	19.5	0.4	1.0	44	3	2	519	240	279
14+00	50	19.8	0.0	1.0	36	0	2	555	240	315
14+08	8	18.9	0.0	0.9	6	0	0	561	240	321
COLUMN TOTALS					561	192	28			

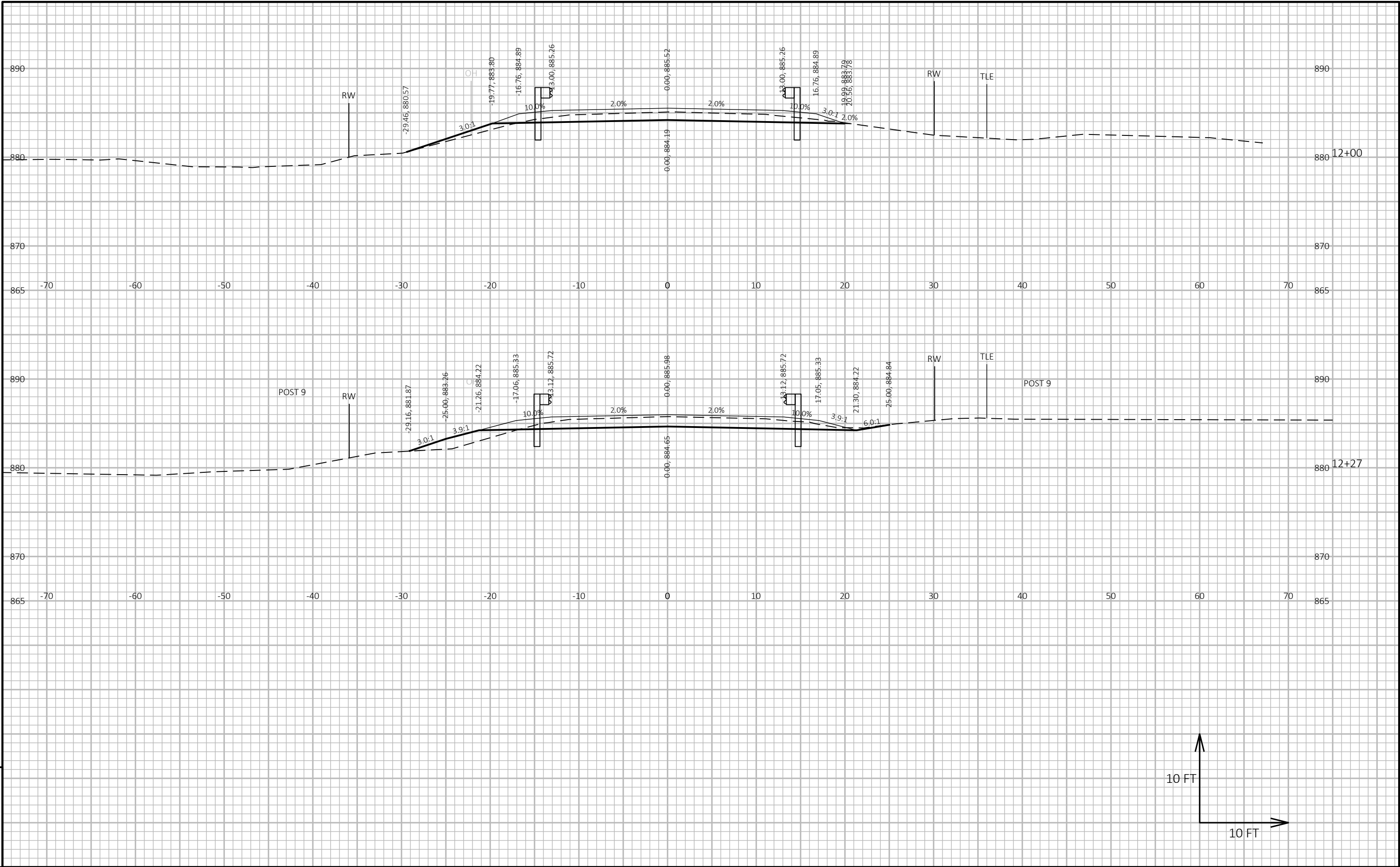
- NOTES:
- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL.
 - 2) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
 - 3) MASS ORDINATE: MASS ORDINATE = (CUT) - (FILL * FILL FACTOR)

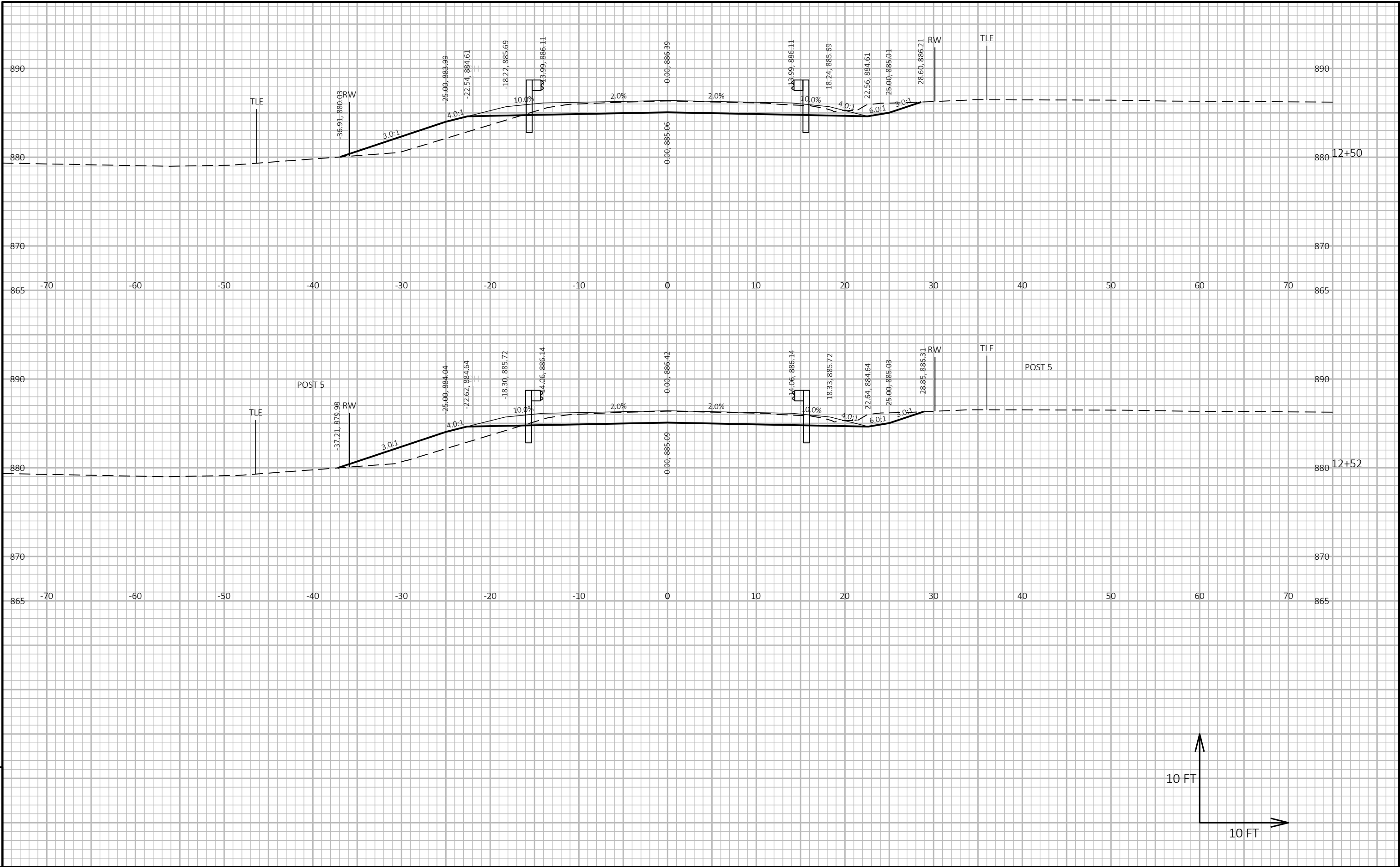


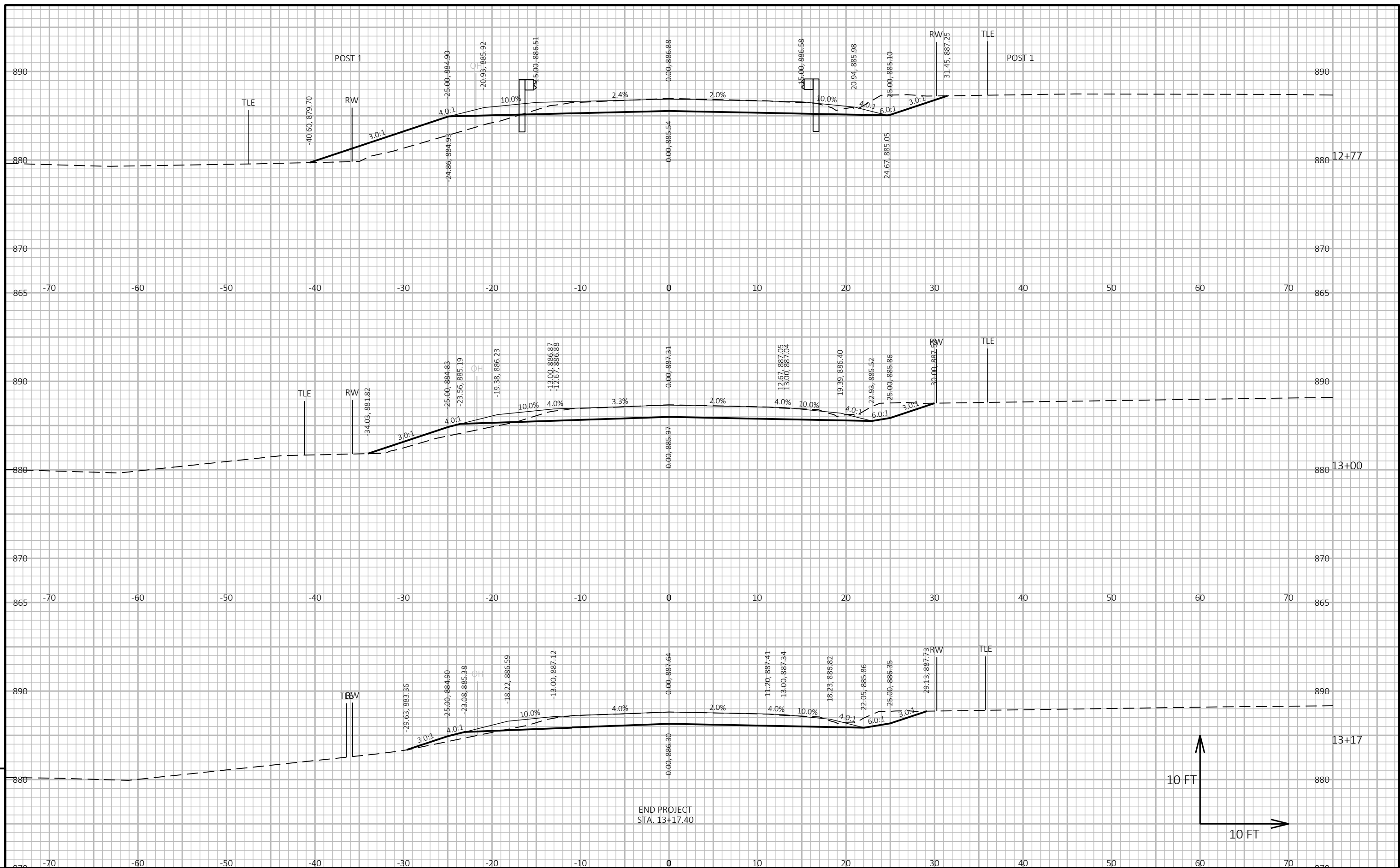












PROJECT NO:	5742-00-72
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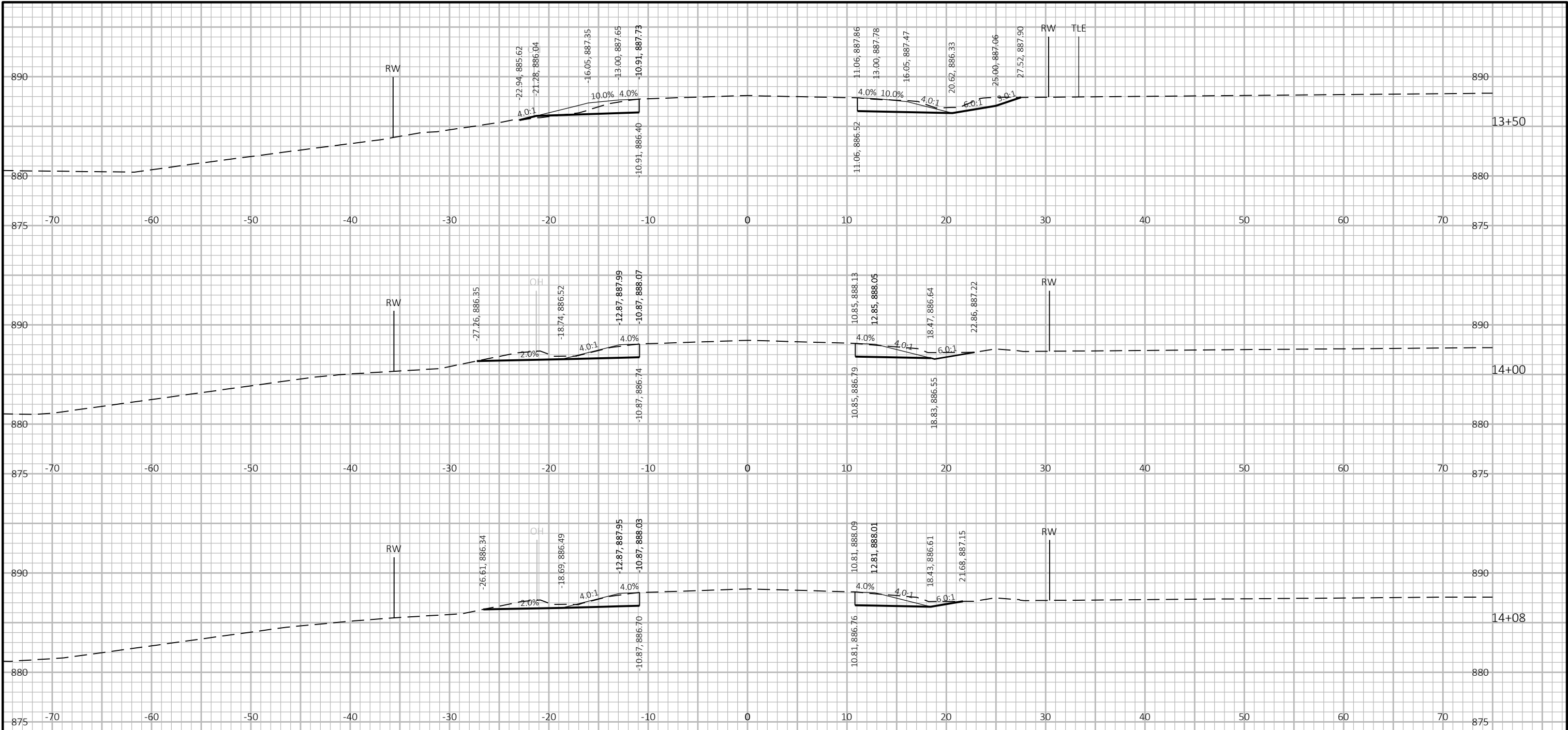
HWY: LAKE KEGONSA ROAD

COUNTY: DANE

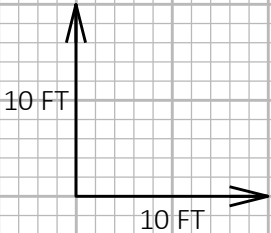
CROSS SECTIONS: LAKE KEGONSA ROAD

SHEET

■



END CONSTRUCTION
STA. 14+10.47



9

9

PROJECT NO: 5742-00-72	HWY: LAKE KEGONSA ROAD	COUNTY: DANE	CROSS SECTIONS: LAKE KEGONSA ROAD	SHEET E
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